

Ram Oakland Park

Traffic Analysis



Prepared For:

Bowman Consulting Group

City of Oakland Park

May 13, 2020

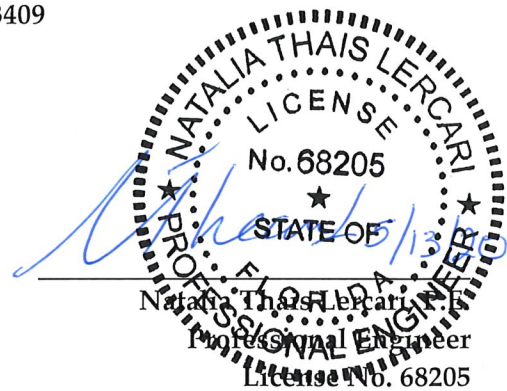
RAM OAKLAND PARK TRAFFIC ANALYSIS

Prepared For:

Bowman Consulting
301 SE Ocean Boulevard, Suite 301
Stuart, FL 34994

Prepared By:

McMahon Associates, Inc.
2090 Palm Beach Lakes Boulevard, Suite 400
West Palm Beach, FL 33409



State of Florida, Board of Professional Engineers
Certificate of Authorization No. 4908

May 2020

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 EXISTING (2019) CONDITIONS ANALYSIS	3
2.1 Roadway Characteristics	3
2.2 Intersection Characteristics.....	5
2.3 Data Collection – Turning Movement Counts	13
2.4 Traffic Volumes	13
2.5 Intersection Capacity Analysis	13
3.0 BACKGROUND (2022) CONDITIONS ANALYSIS	16
3.1 Background Growth Rate	16
3.2 Committed Development Traffic	16
3.3 Intersection Capacity Analysis	16
4.0 TOTAL (2022) CONDITIONS ANALYSIS.....	19
4.1 Project Trip Generation	19
4.2 Project Driveway Access	23
4.3 Project Trip Distribution	23
4.4 Project Trip Assignment	23
4.5 Intersection Capacity Analysis	36
4.6 Intersection Queues	36
5.0 QUEUING ANALYSIS	40
5.1 Residential Gate Queueing Analysis	40
6.0 PEDESTRIAN SITE CIRCULATION	42
7.0 PLANNED MULTI-MODAL PROJECTS	43
8.0 CONCLUSIONS AND RECOMMENDATIONS	44

LIST OF FIGURES

<u>TITLE</u>	<u>PAGE</u>
Figure 1 Site Location Map	2
Figure 2 Existing Lane Geometry	12
Figure 3 Existing (2019) Peak-Hour Traffic Volumes.....	14
Figure 4 Background (2022) Peak-Hour Traffic Volumes.....	17
Figure 5 Project Distribution (Residential) for Adjacent Intersections – Net New Trips.....	24
Figure 6 Project Distribution (Retail) for Adjacent Intersections – Net New Trips	25
Figure 7 Project Distribution (Residential) for Driveways – Net New Trips	26
Figure 8 Project Distribution (Retail) for Driveways – Net New Trips.....	27
Figure 9 Project Distribution (Retail) for Driveways – Pass-By Trips	28
Figure 10 Project Trips (Residential) for Adjacent Intersections – Net New Trips.....	29
Figure 11 Project Trips (Retail) for Adjacent Intersections – Net New Trips	30
Figure 12 Project Trips (Residential) for Driveways - Net New Trips	31
Figure 13 Project Trips (Retail) for Driveways – Net New Trips.....	32
Figure 14 Pass-By Trips (Retail) for Driveways	33
Figure 15 Total (2022) Peak-Hour Traffic Volumes – Adjacent Intersections	34
Figure 16 Total Trips (Residential and Retail) for Driveways	35
Figure 17 Proposed Lane Geometry - Driveways	37

LIST OF TABLES

<u>TITLE</u>	<u>PAGE</u>
Table 1 Existing (2019) Intersection Capacity Analysis Summary	15
Table 2 Background (2022) Intersection Capacity Analysis Summary	18
Table 3 Trip Generation Analysis – Daily	20
Table 4 Trip Generation Analysis – AM Peak Hour	21
Table 5 Trip Generation Analysis - PM Peak Hour	22
Table 6 Total (2022) Intersection Capacity Analysis Summary	38
Table 7 95 th Percentile Queues and Storage Lengths.....	39
Table 8 Trip Generation Analysis – Peak of the Generator	41

LIST OF APPENDICES

- Appendix A Site Plan, Traffic Methodology and FDOT Pre-App Letter
- Appendix B Traffic Volume Calculations
- Appendix C Existing Intersection Capacity Analysis Worksheets and Signal Timings
- Appendix D Background Intersection Capacity Analysis Worksheets
- Appendix E Total Intersection Capacity Analysis Worksheets
- Appendix F Queuing Analysis Information

1.0 INTRODUCTION

McMahon Associates, Inc. (McMahon) has performed a traffic analysis for the Ram Oakland Park project located generally in the southeast corner of SR-816/Oakland Park Boulevard and NE 6th Avenue, in the City of Oakland Park, Florida. The site plan is included in **Appendix A**. The site is currently vested for a 121,345-square foot Walmart Superstore. The proposed development, with an anticipated buildout year of 2022, will include the following:

- Apartment: 300 dwelling units
- Shopping Center: 5,750 square feet
- Supermarket: 23,013 square feet
- Fast-Food Restaurant without Drive-Through: 2,500 square feet

A traffic methodology meeting was held with City staff to establish the study intersections and proposed traffic methodology. The approved methodology letter, dated December 17, 2019, is attached in Appendix A. The land uses have been slightly modified since the approved traffic methodology. The study intersections include the following:

- Oakland Park Boulevard at Andrews Avenue
- Oakland Park Boulevard at NE 6th Avenue
- Oakland Park Boulevard at Dixie Highway
- NE 6th Avenue at NE 26th Street
- NE 6th Avenue at NE 38th Street
- Dixie Highway at NE 38th Street
- Oakland Park Boulevard at East Driveway
- NE 6th Avenue at North Driveway
- NE 6th Avenue at South Driveway

Figure 1 graphically depicts the site location, as well as the study intersection locations. This study evaluates the traffic impacts on the surrounding roadway network for existing, background (future without project), and total (future with project) traffic conditions.



Figure 1
Site Location Map
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

2.0 EXISTING (2019) CONDITIONS ANALYSIS

2.1 Roadway Characteristics

A field review was conducted to obtain relevant roadway characteristics, including roadway geometries, speed limit information, land uses, sidewalk information, street lighting, bicycle facilities, on-street parking and transit routes. The following information was collected for SR-816/Oakland Park Boulevard, NE 6th Avenue, Andrews Avenue, SR-811/Dixie Highway, NE 38th Street and NE 26th Street in the vicinity of the study intersections:

SR-816/Oakland Park Boulevard

- Six-lane, divided roadway
- Posted speed limit is 35 Miles Per Hour (MPH)
- Land uses along both sides are generally retail
- Sidewalk exists along both sides
- Street lighting is provided on the south side
- Bicycle (W11-1) signs with “SHARE THE ROAD” (W16-1P) plaques are provided for both the eastbound and westbound travel lanes
- No on-street parking
- Transit stops serving Broward County Bus Route #72 are provided on both sides

NE 6th Avenue

- Two-lane, undivided roadway
- Posted speed limit is 30 MPH
- Land uses along both sides generally include recreational, residential, retail, and auto care
- Sidewalk exists along both sides, south of SR-816, and along the east side, north of SR-816
- Street lighting is provided on the west side
- Paved shoulders are provided along both sides, generally between SR-816 and NE 29th Drive; Shared Bicycle Lane (Sharrow) markings are provided north of SR-816
- No on-street parking
- No transit stops

Andrews Avenue

- Five-lane roadway including a center, two-way, left turn lane, south of SR-816, and a four-lane, divided roadway with portions of a center, two-way, left turn lane, north of SR-816
- Posted speed limit is 35 MPH
- Land uses along both sides generally include retail, residential, and office
- Sidewalk exists along both sides
- Street lighting is provided on both sides
- Bicycle lanes are provided along both sides, north of SR-816
- No on-street parking
- Transit stops serving Broward County Bus Route #60 are provided along both sides

SR-811/Dixie Highway

- Four-lane, undivided roadway
- Posted speed limit is 35 MPH
- Land uses along both sides are generally retail and residential
- Sidewalk exists along both sides
- Street lighting is provided on both sides south of SR-816, on the west side between SR-816 and NE 38th Street, and on the east side north of NE 38th Street
- Sharrow markings are provided
- No on-street parking
- Transit stops serving Broward County Bus Route #50 are provided on both sides

NE 38th Street

- Two-lane, undivided roadway
- Posted speed limit is 25 MPH
- Land uses along both sides generally include residential, institutional, and retail
- Sidewalk exists along both sides
- Street lighting is provided on the north side
- Bicycle lanes are provided along both sides, west of NE 6th Avenue; Sharrow markings are provided between NE 6th Avenue and SR-811
- No on-street parking

- No transit stops

NE 26th Street

- Two-lane, undivided roadway
- Posted speed limit is 30 MPH
- Land uses along both sides generally include residential and institutional
- Sidewalk exists along both sides
- Street lighting is provided on the south side
- No bicycle lane or Sharrow markings
- No on-street parking
- No transit stops

2.2 Intersection Characteristics

Field reviews were conducted to obtain relevant intersection characteristics for the study intersections, excluding the proposed driveways. Intersection characteristics included intersection geometries, signal equipment information, signal phasing for exclusive left or right turn lanes, pedestrian features and equipment, exclusive turn lanes, special signs, and land uses adjacent to the study intersections. The following information was collected for the study intersections:

SR-816/Oakland Park Boulevard at Andrews Avenue



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with mast arm equipment
- Standard crosswalks exist across all four legs
- Pedestrian signal heads and push buttons exist for all four legs
- Pedestrian truncated domes exist on all corners of the intersection
- Video detection exists for all approaches
- Exclusive left turn lanes exist on all approaches
- Protected phasing is provided for all left turn movements
- The land uses adjacent to the intersection generally include office and retail

SR-816/Oakland Park Boulevard at NE 6th Avenue



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with mast arm equipment
- Special Emphasis Pedestrian crosswalks exist across the north, east and west legs; colored, stamped asphalt crosswalk exists across the south leg
- Pedestrian signal heads and push buttons exist for all four legs
- Pedestrian truncated domes exist on all corners of the intersection
- Video detection exists for all approaches
- Exclusive left turn lanes exist on all approaches
- Protected-permissive phasing is provided for the northbound and southbound left turn movements. Protected only phasing is provided for the eastbound and westbound left turn movements.
- The land uses adjacent to the intersection include retail
- “NO TURN ON RED” (R10-11a) sign mounted for the southbound right turn movement

SR-816/Oakland Park Boulevard at SR-811/Dixie Highway



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with mast arm equipment
- Colored, stamped asphalt crosswalks exist across all four legs
- Pedestrian signal heads and push buttons exist for all four legs
- Pedestrian truncated domes exist on all corners of the intersection
- Video detection exists for all approaches
- Exclusive left turn lanes exist on all approaches
- Protected-permissive phasing is provided for northbound, southbound and eastbound left turn movements; protected phasing is provided for the westbound left turn movement
- The land uses adjacent to the intersection include retail
- A railroad crossing exists immediately east of SR-811
- “NO TURN ON RED” (R10-11a) sign mounted for the westbound right turn movement
- Blank-out signs exist on the mast arms controlling northbound and southbound traffic

NE 26th Street at NE 6th Avenue



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with span wire equipment
- Standard crosswalks exist across all four legs
- Pedestrian signal heads and push buttons exist for all four legs
- No pedestrian truncated domes exist at the intersection
- Video detection exists for all approaches
- Exclusive left turn lanes exist on all approaches
- Permissive phasing is provided for all left turn movements
- The land uses adjacent to the intersection include residential and institutional

NE 38th Street at NE 6th Avenue



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with span wire equipment
- Colored, stamped asphalt crosswalks exist across all four legs
- Pedestrian signal heads and push buttons exist for all four legs
- Pedestrian truncated domes exist on all corners of the intersection
- Video detection exists for all approaches
- Exclusive right turn lane exists for the eastbound approach
- Permissive phasing is provided for all left turn movements
- The land uses adjacent to the intersection include residential and recreational

NE 38th Street at SR-811/Dixie Highway



Intersection characteristics include the following:

- Four-leg intersection
- Signalized with mast arm equipment
- Standard crosswalks exist across all four legs
- Pedestrian signal heads and push buttons exist for all four legs
- Pedestrian truncated domes exist on all corners of the intersection
- Video detection exists for all approaches
- Exclusive left turn lanes exist on all approaches
- Exclusive right turn lanes exist for the eastbound and westbound approaches
- Protected-permissive phasing is provided for all left turn movements
- The land uses adjacent to the intersection include retail and vacant land
- A railroad crossing exists immediately east of SR-811
- “NO TURN ON RED” (R10-11a and R10-11b) sign mounted for the eastbound and westbound right turn movements
- Blank-out signs exist on the mast arms controlling northbound and southbound

The existing lane geometry at the study intersections (excluding driveways) are shown on **Figure 2**.

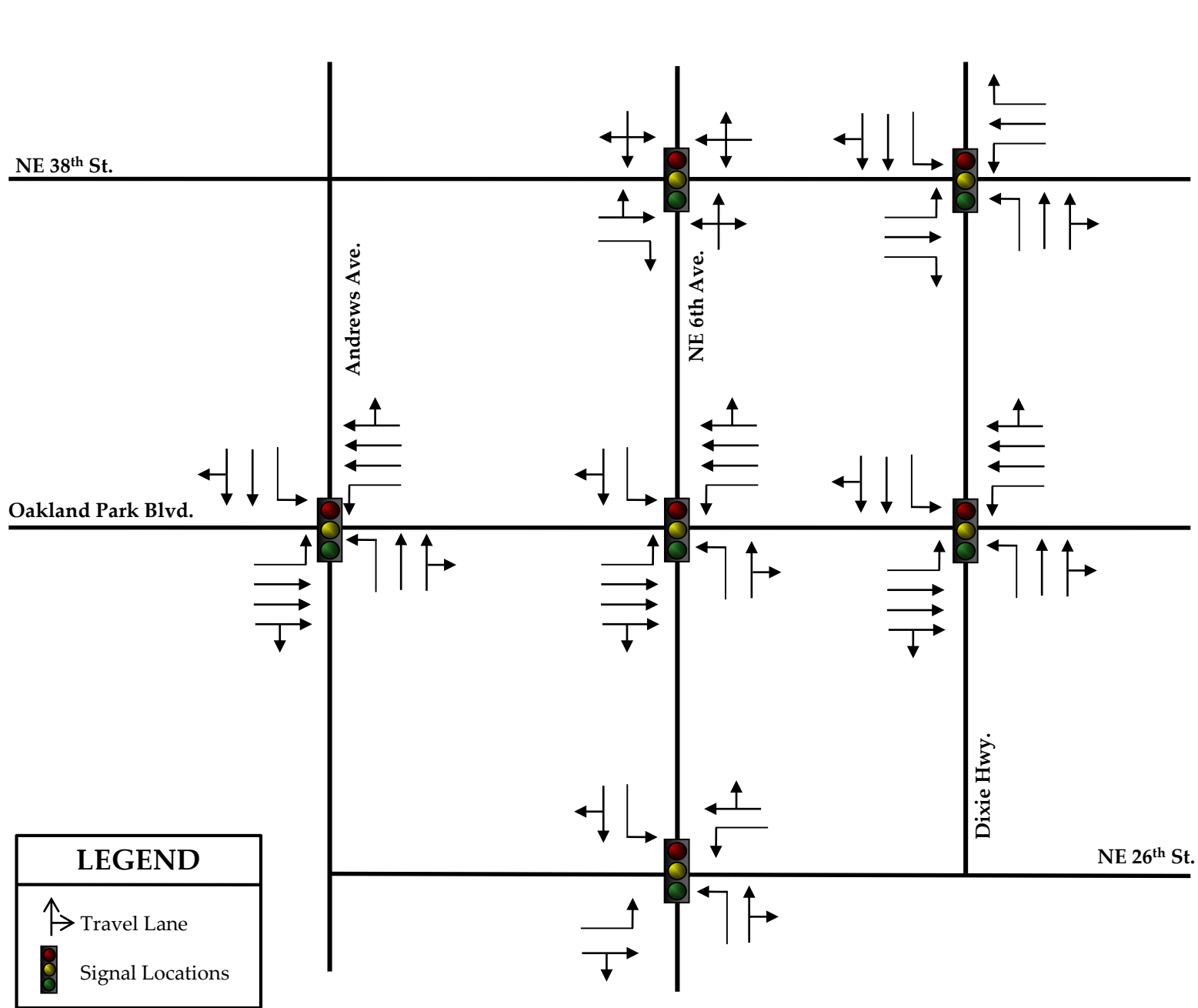


Figure 2
Existing Lane Geometry
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

2.3 Data Collection – Turning Movement Counts

Turning movement counts were collected at most of the study intersections on Thursday, November 7, 2019 from 7:00 to 9:00 AM and 4:00 to 6:00 PM, with the exception of the Dixie Highway/NE 38th Street intersection, which was collected on Tuesday, November 12, 2019. Individual intersection peak hour times were used in the analysis and balanced where necessary. The turning movement counts are included in **Appendix B**.

2.4 Traffic Volumes

A Peak Season Conversion Factor (PSCF) was applied to existing turning movement counts to estimate peak season data. The PSCF of 1.03 was based on the 2018 Florida Department of Transportation (FDOT) *Peak Season Factor Category Report*, attached in Appendix B. Table B-1 and Table B-2, included in Appendix B, summarize the AM and PM peak hour existing volume calculations, respectively. **Figure 3** graphically depicts the existing (2019) peak-hour, peak-season traffic volumes for the adjacent intersections.

2.5 Intersection Capacity Analysis

Intersection capacity analysis was performed for AM and PM peak hour conditions at the adjacent intersections, using the Synchro 10 software. The existing signal timings were obtained from Broward County for the signalized intersections and are included in **Appendix C**. Existing truck and peak hour factors were based on the collected data. The intersection capacity analysis worksheets are included in Appendix C.

Results of the AM and PM peak hour intersection capacity analyses are summarized in **Table 1**. Results of the analysis indicate that most intersections operate at an overall acceptable level of service with the exception of the Oakland Park Boulevard/Andrews Avenue intersection during the AM and PM peak hours, and the Oakland Park Boulevard/Dixie Highway intersection during the PM peak hour.

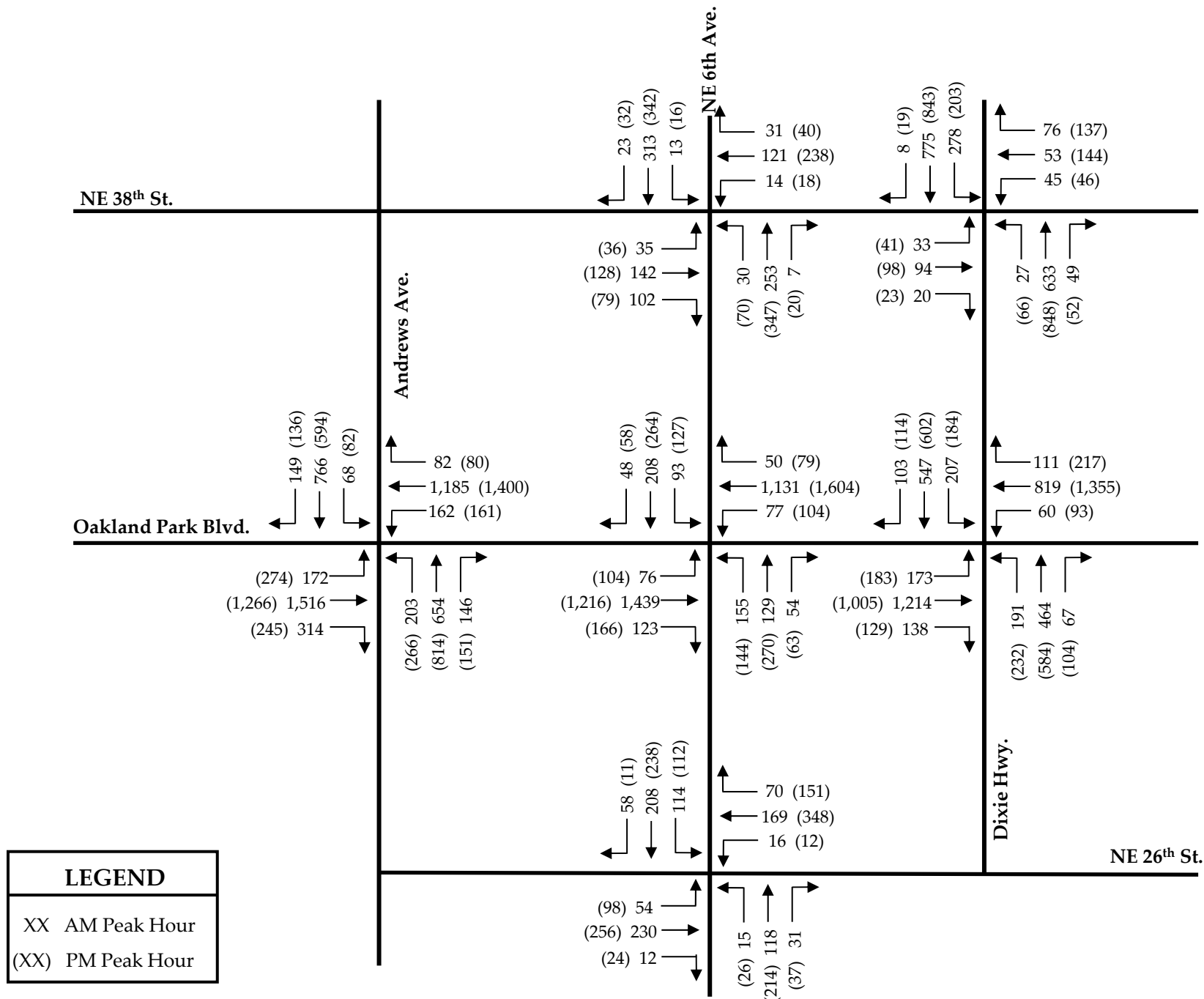


Figure 3
 Existing (2019) Peak-Hour Traffic Volumes
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

TABLE 1
EXISTING (2019) INTERSECTION CAPACITY ANALYSIS SUMMARY
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION		OVERALL		EB		WB		NB		SB	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Oakland Park Blvd. at Andrews Ave.	AM	79.9	E	67.0	E	86.1	F	78.9	E	97.3	F
	PM	83.8	F	62.0	E	81.7	F	109.1	F	95.1	F
Oakland Park Blvd. at NE 6 th Ave.	AM	47.0	D	42.2	D	36.9	D	66.3	E	81.3	F
	PM	46.3	D	41.8	D	36.4	D	57.2	E	88.1	F
Oakland Park Blvd. at Dixie Hwy.	AM	49.6	D	28.9	C	42.6	D	83.0	F	67.3	E
	PM	59.1	E	46.6	D	58.6	E	69.2	E	67.9	E
NE 6 th Ave. at NE 26 th St.	AM	11.1	B	10.2	B	9.0	A	10.2	B	13.6	B
	PM	13.8	B	10.8	B	13.6	B	15.2	B	15.9	B
NE 38 th St. at NE 6 th Ave.	AM	11.4	B	8.5	A	9.4	A	13.0	B	13.5	B
	PM	14.7	B	9.1	A	13.5	B	19.0	B	14.7	B
NE 38 th St. at Dixie Hwy.	AM	41.7	D	80.0	F	81.0	F	52.1	D	19.8	B
	PM	38.8	D	78.8	E	80.1	F	32.7	C	22.0	C

3.0 BACKGROUND (2022) CONDITIONS ANALYSIS

3.1 Background Growth Rate

Traffic volumes for background traffic conditions (future conditions without project traffic) were calculated for 2022 by applying a growth rate to existing volumes. The growth rate applied to each study roadway was based on a review of five-year, historical traffic volumes (2013 - 2018) obtained for the following count stations near the study intersections: Stations 86-0022, 86-5067, 86-9070, 86-0425, 86-5074, 86-9072, 86-9576 and 86-0212. The historical volume data is included in Appendix B. The calculated compound growth rate was calculated to be 1.12 percent.

3.2 Committed Development Traffic

Based on coordination with the City of Oakland Park and the City of Wilton Manors, five (5) committed development projects were included as part of the analysis: 1) 3411 N Federal Highway, 2) Round Corner Oakland Park, 3) West Dixie Redevelopment Project, 4) The Village at Wilton Manors, and 5) Starbucks Wilton Manors, excerpts of which are attached in Appendix B. Table B-1 and Table B-2, included in Appendix B, summarize the AM and PM peak hour background volume calculations, respectively. **Figure 4** depicts the background (2022) peak-hour, peak-season traffic volumes for the adjacent intersections.

3.3 Intersection Capacity Analysis

Intersection capacity analysis was performed for AM and PM peak hour conditions at the adjacent intersections, using the Synchro 10 software. Existing signal timings, peak hour factors and truck factors were maintained. The intersection capacity analysis worksheets are included in **Appendix D**.

Results of the AM and PM peak hour intersection capacity analyses are summarized in **Table 2**. Results of the analysis indicate that most intersections are expected to operate at an overall acceptable level of service with the exception of the Oakland Park Boulevard/Andrews Avenue intersection during the AM and PM peak hours, and the Oakland Park Boulevard/Dixie Highway intersection during the PM peak hour, similar to existing conditions.

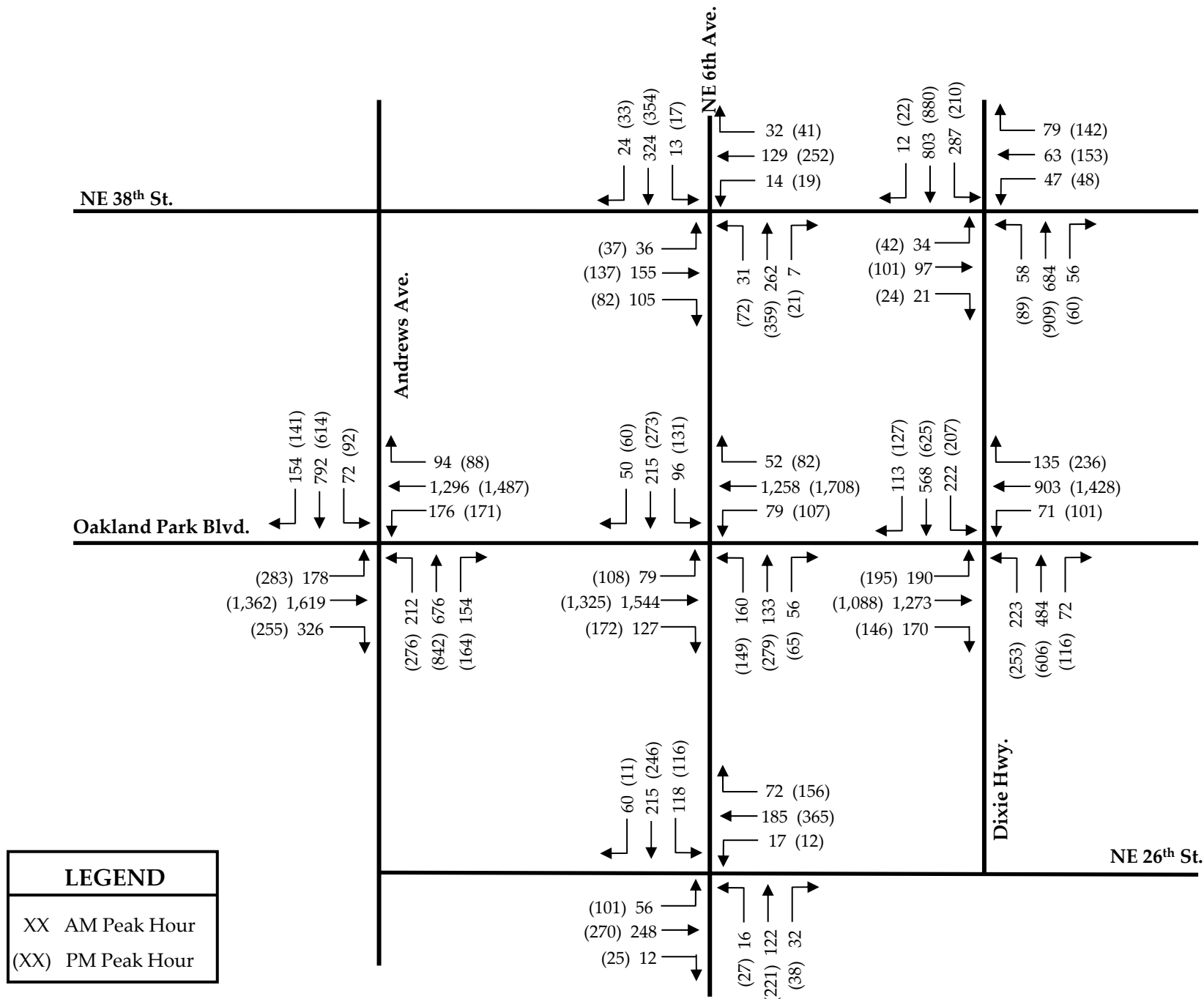


Figure 4
 Background (2022) Peak-Hour Traffic Volumes
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

TABLE 2
BACKGROUND (2022) INTERSECTION CAPACITY ANALYSIS SUMMARY
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION		OVERALL		EB		WB		NB		SB	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Oakland Park Blvd. at Andrews Ave.	AM	89.5	F	78.7	E	97.6	F	83.2	F	104.6	F
	PM	93.0	F	65.8	E	91.6	F	126.9	F	102.2	F
Oakland Park Blvd. at NE 6 th Ave.	AM	45.4	D	39.3	D	35.8	D	70.5	E	82.0	F
	PM	47.6	D	42.6	D	38.9	D	58.0	E	87.9	F
Oakland Park Blvd. at Dixie Hwy.	AM	54.6	D	34.0	C	49.2	D	95.6	F	63.3	E
	PM	65.0	E	45.5	D	60.8	E	84.3	F	81.9	F
NE 6 th Ave. at NE 26 th St.	AM	11.5	B	10.4	B	9.4	A	10.7	B	14.3	B
	PM	14.5	B	11.6	B	14.9	B	15.4	B	16.3	B
NE 38 th St. at NE 6 th Ave.	AM	11.8	B	8.7	A	9.6	A	13.6	B	14.0	B
	PM	15.5	B	9.3	A	14.0	B	20.6	C	15.4	B
NE 38 th St. at Dixie Hwy.	AM	46.5	D	79.8	E	81.2	F	60.5	E	22.8	C
	PM	40.5	D	78.5	E	80.3	F	35.2	D	24.3	C

4.0 TOTAL (2022) CONDITIONS ANALYSIS

4.1 Project Trip Generation

The site is currently vested for a 121,345-square foot Walmart Superstore. The proposed development, with an anticipated buildout year of 2022, will include the following:

- Apartment: 300 dwelling units
- Shopping Center: 5,750 square feet
- Supermarket: 23,013 square feet
- Fast-Food Restaurant without Drive-Through: 2,500 square feet

Trips generated by the vested development were based on the Walmart Oakland Park Traffic Analysis, dated September 2013, excerpts of which are attached in Appendix B. Trips generated by the proposed development were estimated based on trip generation rates and equations published in the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition. Internal capture percentages were based on the ITE, *Trip Generation Manual*, 9th Edition, as the information available from the 10th Edition yielded internal capture rates that appeared high. Internal capture tables are included in Appendix B. Pass-by information was obtained from the ITE, *Trip Generation Manual*, 10th Edition.

Table 3, Table 4, and Table 5 summarize the results of the daily, AM peak hour and PM peak hour trip generation analysis, respectively, for the proposed development. Results of the analysis indicate that the proposed development is expected to generate 3,267 net new daily trips, 159 net new AM peak hour trips, and 297 net new PM peak hour trips. This represents a decrease of 1,167 daily trips, a decrease of two (2) AM peak hour trips, and a decrease of 83 PM peak hour trips, when compared to the vested trips for the Walmart Superstore.

TABLE 3
TRIP GENERATION ANALYSIS - DAILY
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 50.75 (X)	50%	50%	3,079	3,079	6,158	0	0	0	0.0%	3,079	3,079	6,158	862	862	1,724	28%	2,217	2,217	4,434
SUBTOTAL						3,079	3,079	6,158	0	0	0	0.0%	3,079	3,079	6,158	862	862	1,724		2,217	2,217	4,434
PROPOSED USES																						
Multifamily Housing (Low-Rise)	220	12 DUs	T= 7.56 (X) - 40.86	50%	50%	25	25	50	7	6	13	26.0%	18	19	37	0	0	0	0%	18	19	37
Multifamily Housing (Mid-Rise)	221	288 DUs	T= 5.45 (X) - 1.75	50%	50%	784	784	1,568	223	182	405	25.8%	561	602	1,163	0	0	0	0%	561	602	1,163
Shopping Center	820	5,750 SF	Ln(T)= 0.68 Ln(X) + 5.57	50%	50%	431	431	862	72	79	151	17.5%	359	352	711	121	121	242	34%	238	231	469
Supermarket	850	23,013 SF	T= 106.78 (X)	50%	50%	1,229	1,228	2,457	207	224	431	17.5%	1,022	1,004	2,026	365	364	729	36%	657	640	1,297
Fast-Food Restaurant w/o Drive-Through ⁽⁴⁾	933	2,500 SF	T= 346.23 (X)	50%	50%	433	433	866	160	178	338	39.0%	273	255	528	114	113	227	43%	159	142	301
SUBTOTAL						2,902	2,901	5,803	669	669	1,338	23.1%	2,233	2,232	4,465	600	598	1,198		1,633	1,634	3,267
TOTAL						-177	-178	-355	669	669	1,338		-846	-847	-1,693	-262	-264	-526		-584	-583	-1,167

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

(4) Pass-By rates for LU 933 (High-Turnover (Sit-Down) Restaurant) used for LU 933.



TABLE 4
TRIP GENERATION ANALYSIS - AM
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 1.85 (X)	56%	44%	125	99	224	0	0	0	0.0%	125	99	224	32	31	63	28%	93	68	161
SUBTOTAL						125	99	224	0	0	0	0.0%	125	99	224	32	31	63		93	68	161
PROPOSED USES																						
Multifamily Housing (Low-Rise)	220	12 DUs	Ln(T)= 0.95 Ln(X) - 0.51	23%	77%	1	5	6	0	1	1	16.7%	1	4	5	0	0	0	0%	1	4	5
Multifamily Housing (Mid-Rise)	221	288 DUs	Ln(T)= 0.98 Ln(X) - 0.98	26%	74%	25	72	97	7	8	15	15.5%	18	64	82	0	0	0	0%	18	64	82
Shopping Center	820	5,750 SF	T= 0.94 (X)	62%	38%	3	2	5	1	1	2	40.0%	2	1	3	1	0	1	34%	1	1	2
Supermarket	850	23,013 SF	T= 3.82 (X)	60%	40%	53	35	88	9	10	19	21.6%	44	25	69	15	10	25	36%	29	15	44
Fast-Food Restaurant w/o Drive-Through ⁽⁴⁾	933	2,500 SF	T= 89.03 (X) - 157.40	60%	40%	39	26	65	11	8	19	29.2%	28	18	46	12	8	20	43%	16	10	26
SUBTOTAL						121	140	261	28	28	56	21.5%	93	112	205	28	18	46		65	94	159
TOTAL						-4	41	37	28	28	56		-32	13	-19	-4	-13	-17		-28	26	-2

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

(4) Pass-By rates for LU 932 (High-Turnover (Sit-Down) Restaurant) used for LU 933.



TABLE 5
TRIP GENERATION ANALYSIS - PM
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 4.35 (X)	49%	51%	259	269	528	0	0	0	0.0%	259	269	528	74	74	148	28%	185	195	380
SUBTOTAL						259	269	528	0	0	0	0.0%	259	269	528	74	74	148		185	195	380
PROPOSED USES																						
Multifamily Housing (Low-Rise)	220	12 DUs	Ln(T)= 0.89 Ln(X) - 0.02	63%	37%	6	3	9	2	1	3	33.3%	4	2	6	0	0	0	0%	4	2	6
Multifamily Housing (Mid-Rise)	221	288 DUs	Ln(T)= 0.96 Ln(X) - 0.63	61%	39%	74	48	122	21	17	38	31.1%	53	31	84	0	0	0	0%	53	31	84
Shopping Center	820	5,750 SF	Ln(T)= 0.74 Ln(X) + 2.89	48%	52%	32	34	66	4	5	9	13.6%	28	29	57	9	10	19	34%	19	19	38
Supermarket	850	23,013 SF	Ln(T)= 0.75 Ln(X) + 3.21	51%	49%	133	127	260	18	21	39	15.0%	115	106	221	41	39	80	36%	74	67	141
Fast-Food Restaurant w/o Drive-Through ⁽⁴⁾	933	2,500 SF	T= 28.34 (X)	50%	50%	36	35	71	10	11	21	29.6%	26	24	50	11	11	22	43%	15	13	28
SUBTOTAL						281	247	528	55	55	110	20.8%	226	192	418	61	60	121		165	132	297
TOTAL						22	-22	0	55	55	110		-33	-77	-110	-13	-14	-27		-20	-63	-83

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

(4) Pass-By rates for LU 932 (High-Turnover (Sit-Down) Restaurant) used for LU 933.



4.2 Project Driveway Access

The proposed development includes a retail component adjacent to Oakland Park Boulevard and a residential component located south of the retail component. All current access connections to the existing parcel will be closed. Access to the retail component is proposed via a right-in/right-out access to Oakland Park Boulevard (East Driveway), and a full access to NE 6th Avenue located at the north end of the residential component (North Driveway). Access to the residential component is proposed via the right-in/right-out access to Oakland Park Boulevard (same as the retail component) for residents only, and via a full access to NE 6th Avenue located at the south end of the residential component (South Driveway) for residents and visitors. The FDOT Pre-Application Letter for the Oakland Park Boulevard access is attached in Appendix A.

4.3 Project Trip Distribution

The project distribution was based on a review of the roadway characteristics for the surrounding roadway network, as well as the location of major roadways, and nearby land uses. The net new project distribution at the adjacent intersections are graphically shown on **Figure 5** and **Figure 6** for the residential and retail components, respectively. The net new project distribution at the driveways are graphically shown on **Figure 7** and **Figure 8**, for the residential and retail components, respectively. The pass-by project distribution is graphically shown on **Figure 9**.

4.4 Project Trip Assignment

The assignment of project trips at the adjacent intersections and project driveways was based on the project distribution and trip generation analyses. The net new project trips at the adjacent intersections are graphically shown on **Figure 10** and **Figure 11** for the residential and retail components, respectively. The net new project trips at the driveways are graphically shown on **Figure 12** and **Figure 13**, for residential and retail components, respectively. The pass-by project trips are graphically shown on **Figure 14**. Detailed calculations of traffic volumes for the AM and PM peak hours are summarized in Table B-1 and Table B-2, respectively, and are attached in Appendix B. Total (2022) peak hour traffic volumes are graphically depicted on **Figure 15** and **Figure 16**, for the adjacent intersection and driveways, respectively.

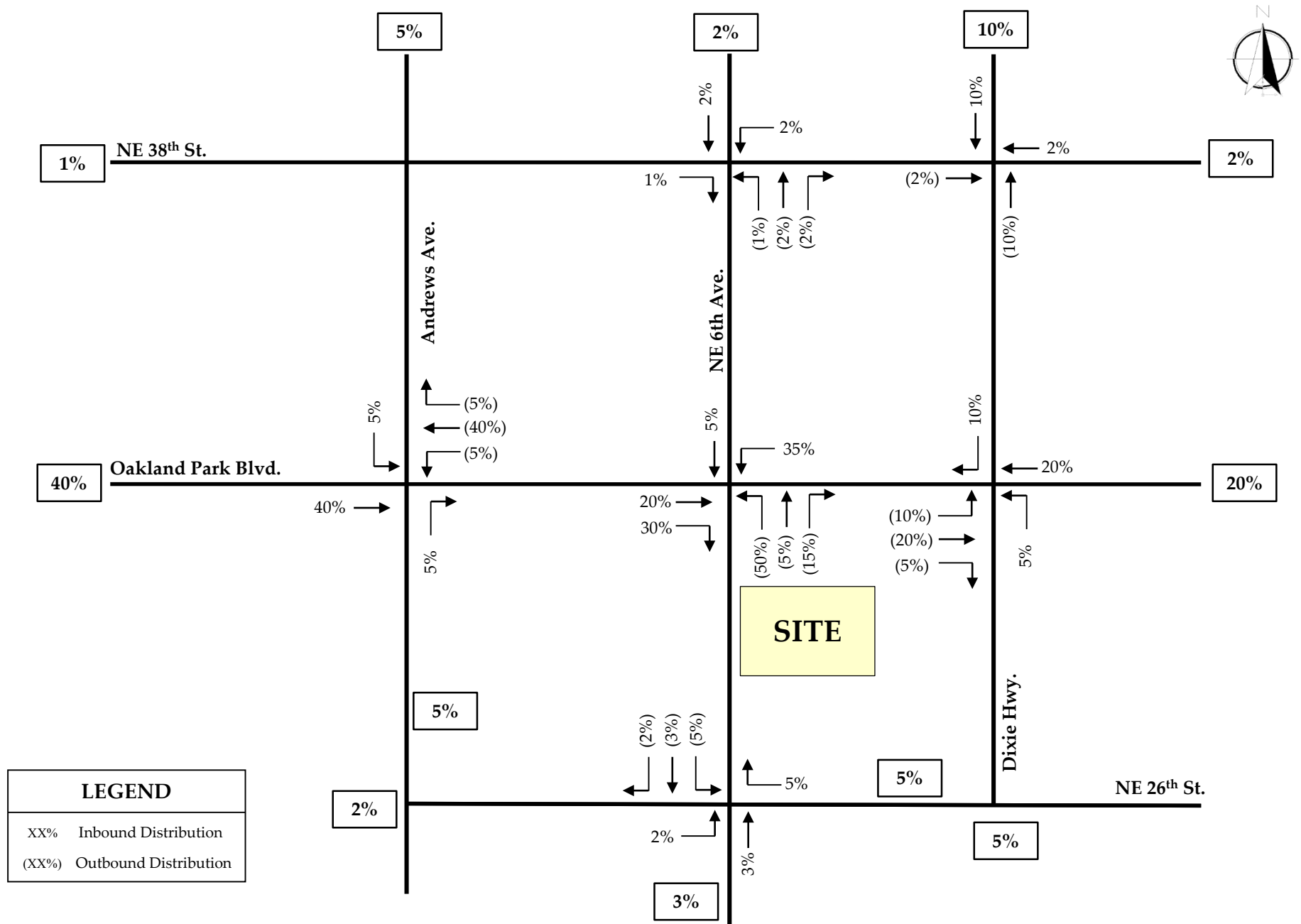


Figure 5
 Project Distribution (Residential) for Adjacent Intersections - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

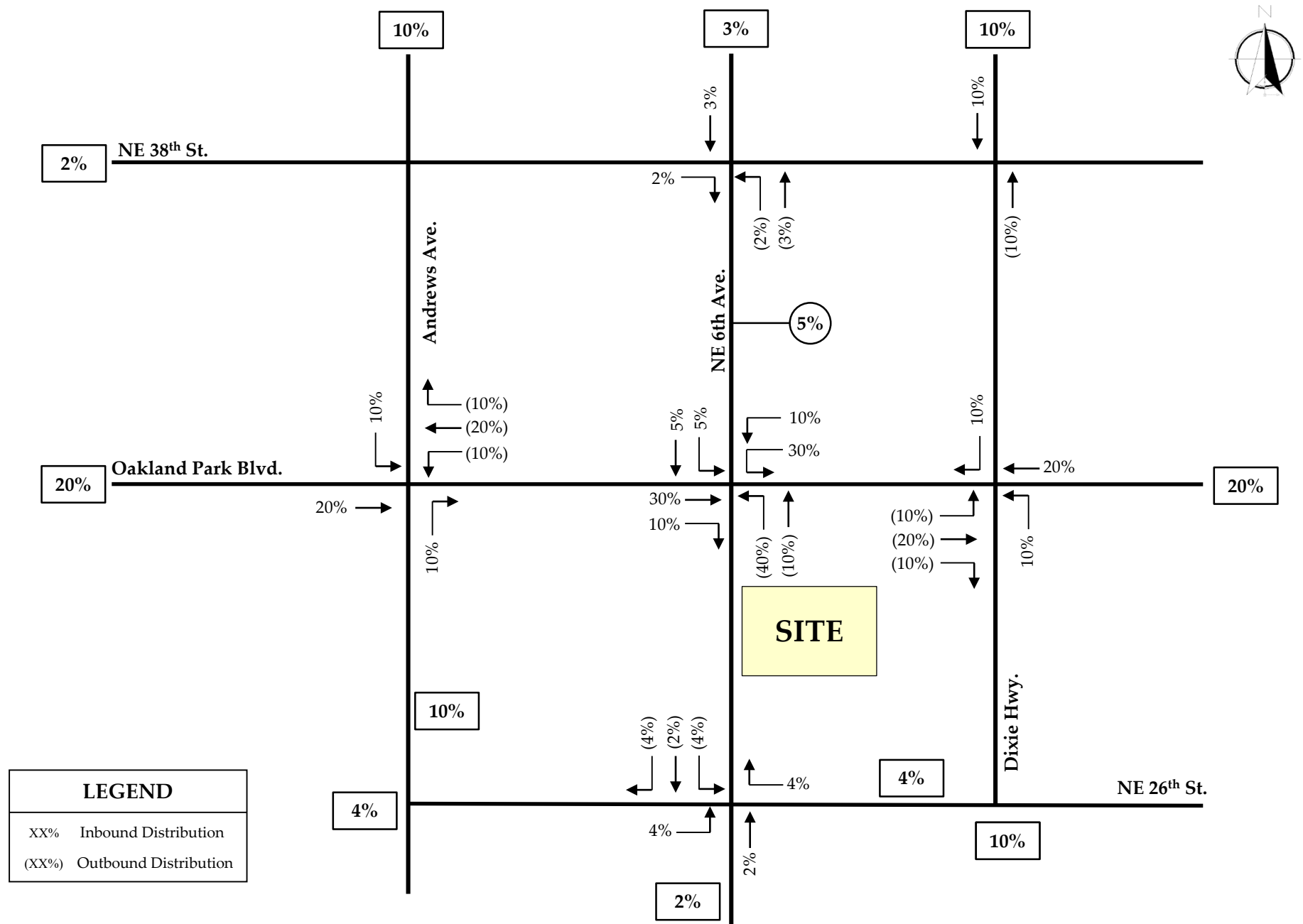


Figure 6
 Project Distribution (Retail) for Adjacent Intersections - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

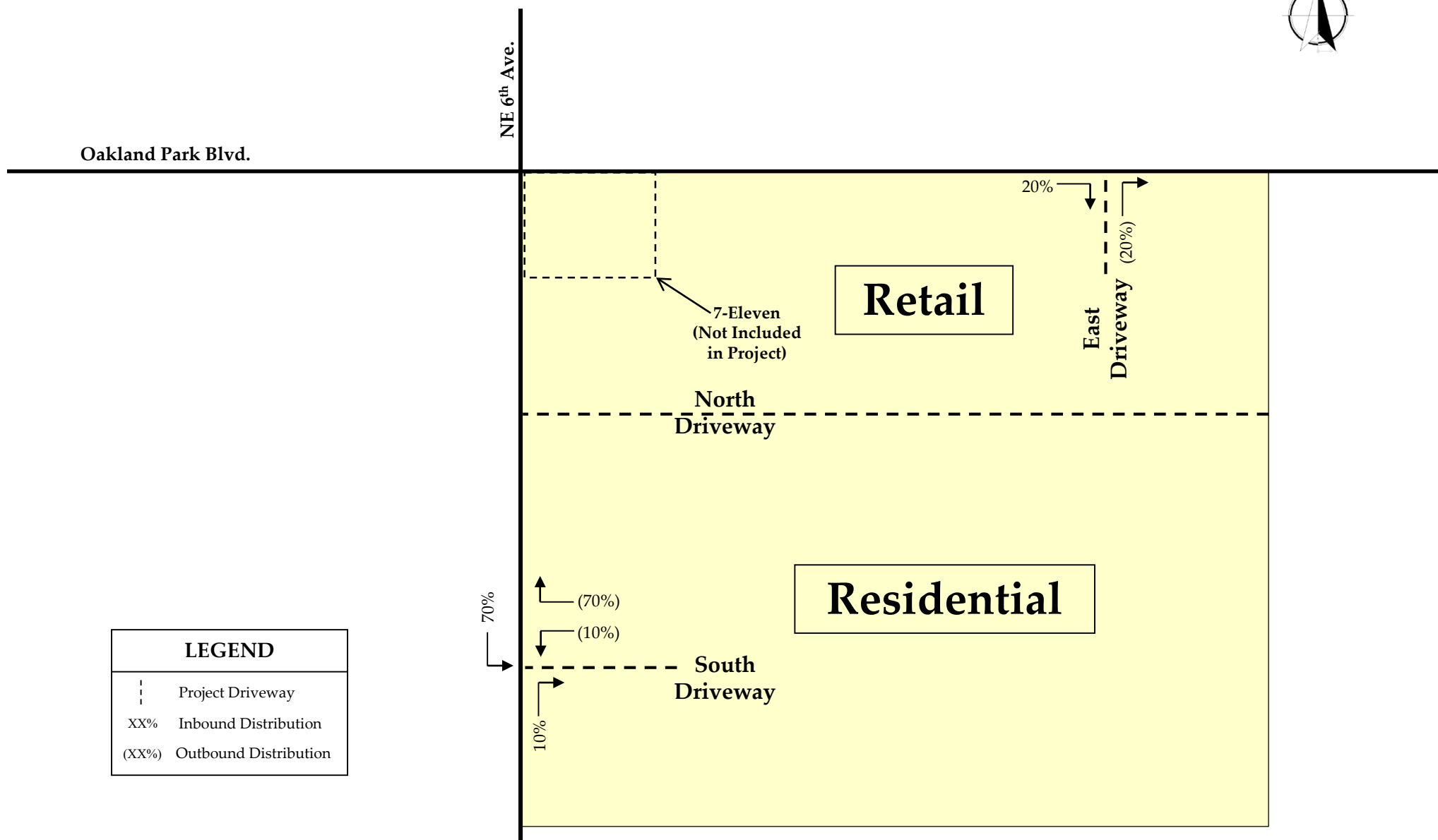


Figure 7
Project Distribution (Residential) for Driveways - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

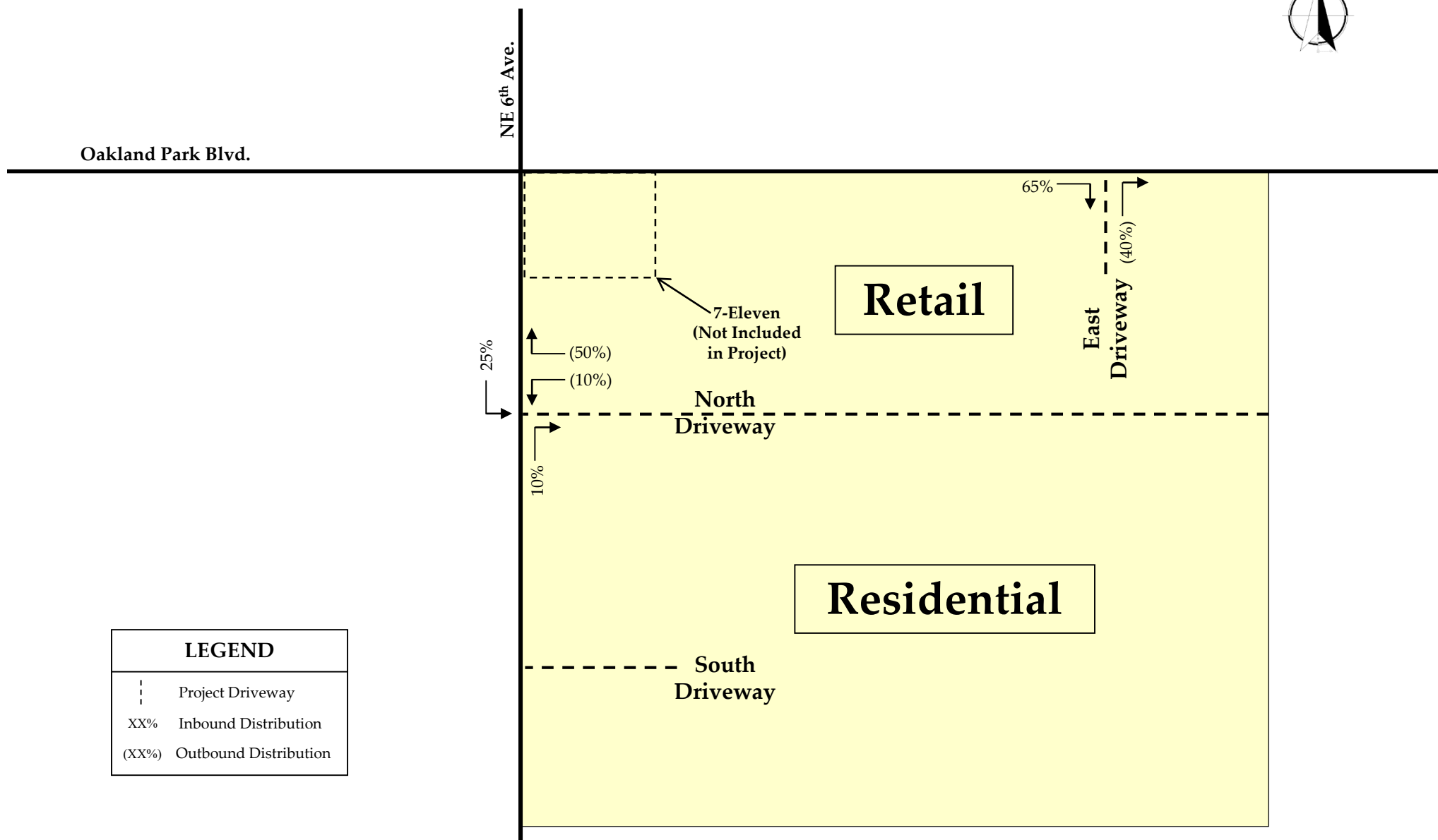


Figure 8
Project Distribution (Retail) for Driveways - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

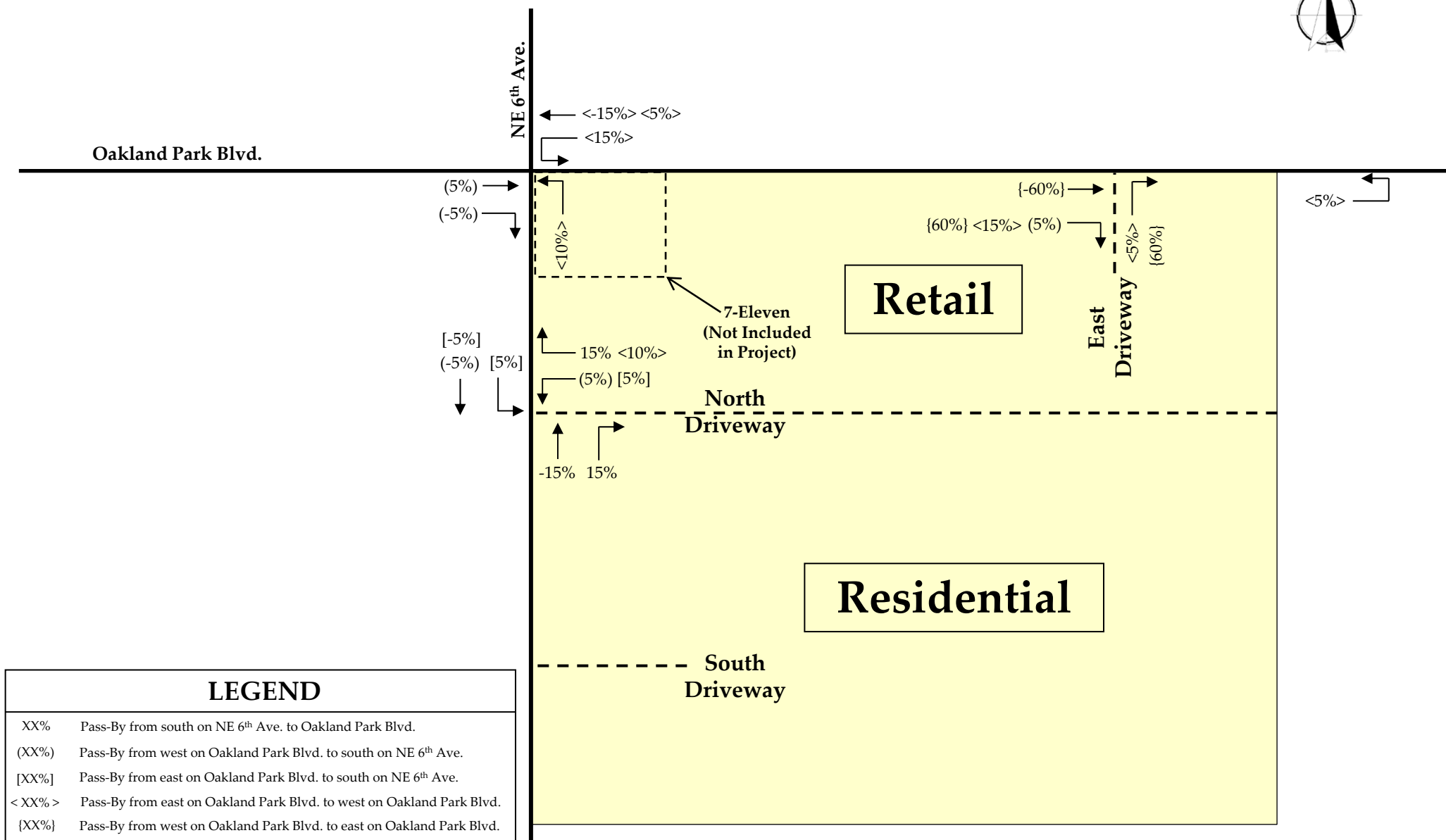


Figure 9
Project Distribution (Retail) for Driveways - Pass-By Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

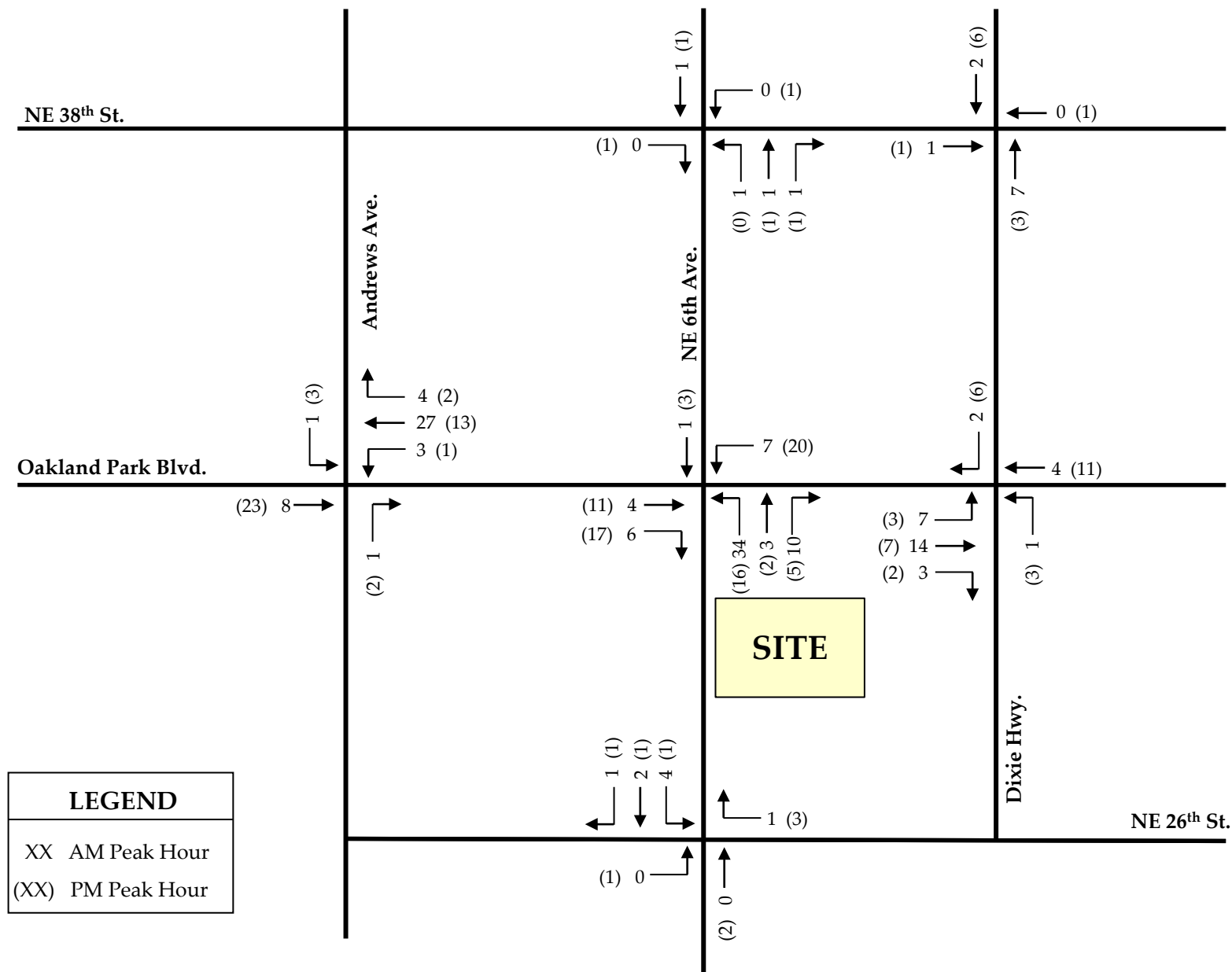


Figure 10
Project Trips (Residential) for Adjacent Intersections - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

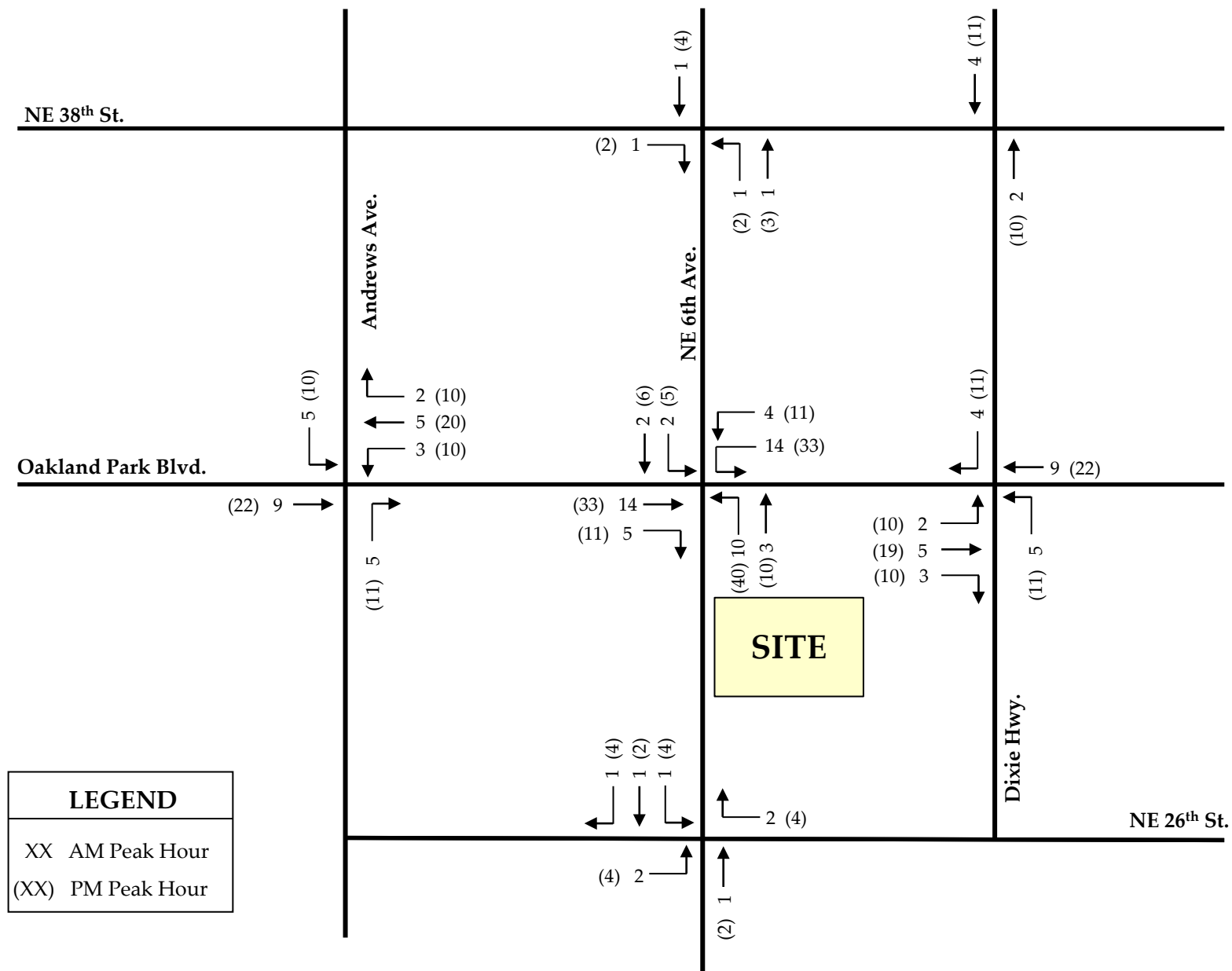


Figure 11
 Project Trips (Retail) for Adjacent Intersections - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

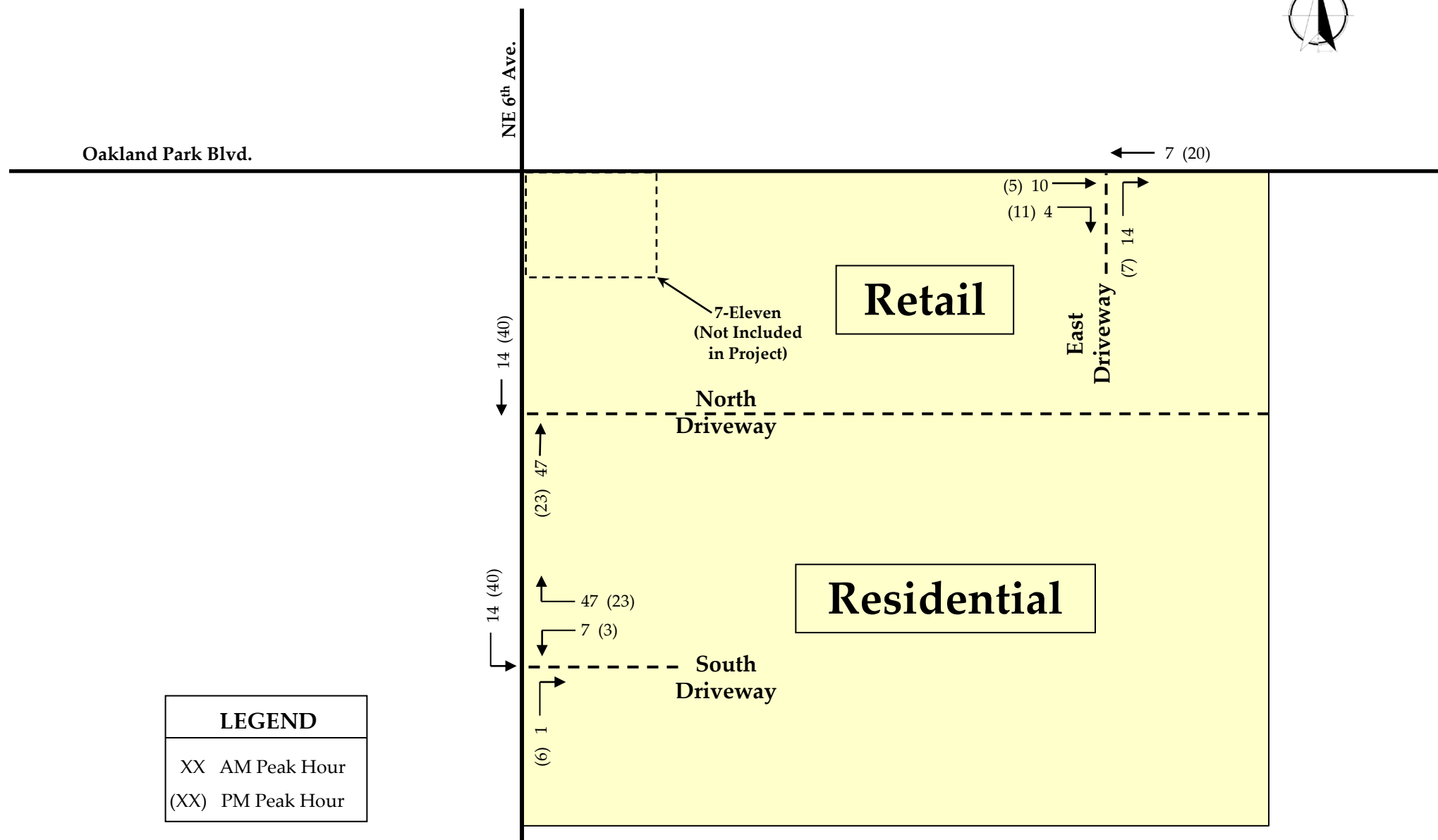


Figure 12
Project Trips (Residential) for Driveways - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

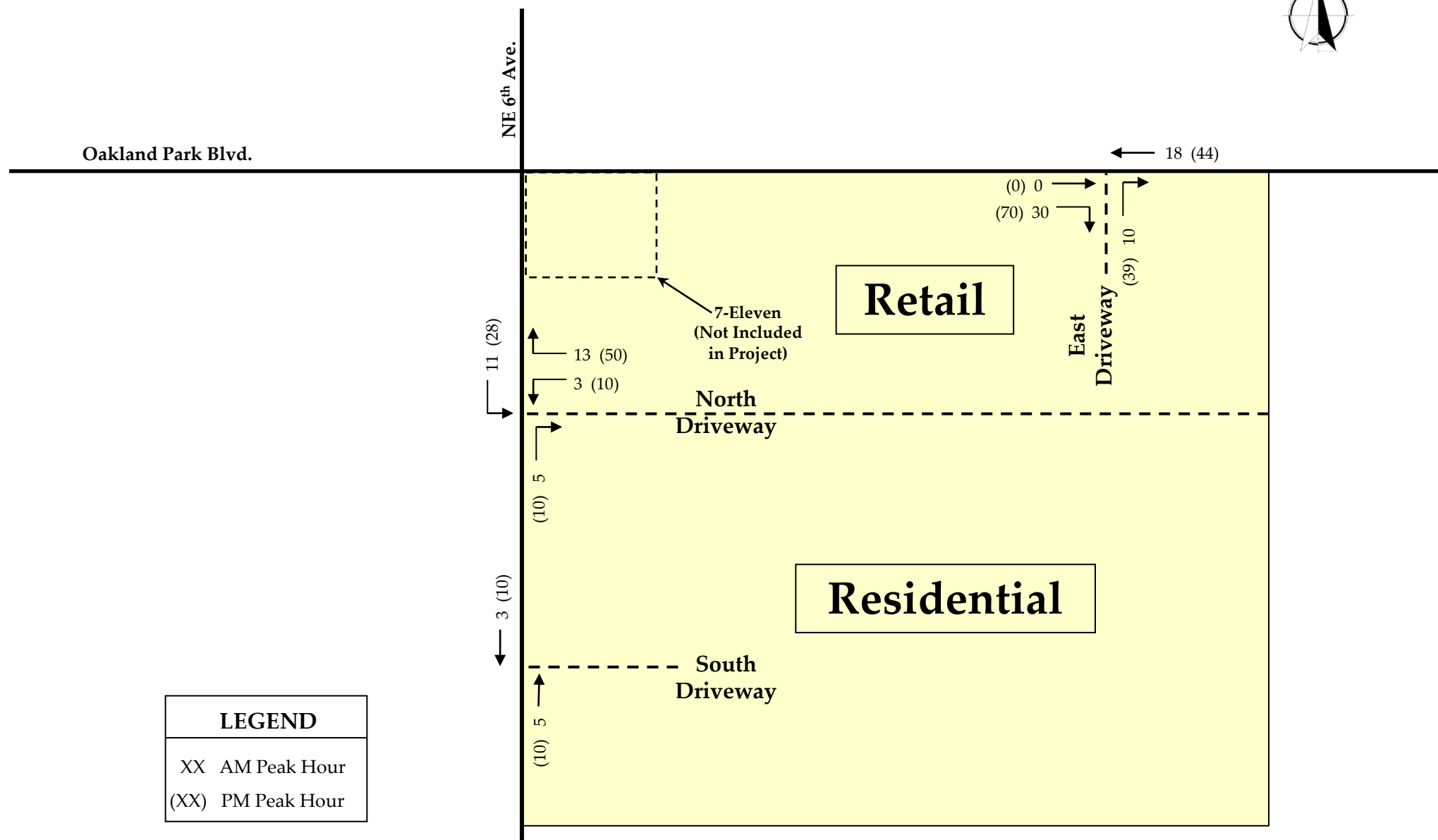


Figure 13
Project Trips (Retail) for Driveways - Net New Trips
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

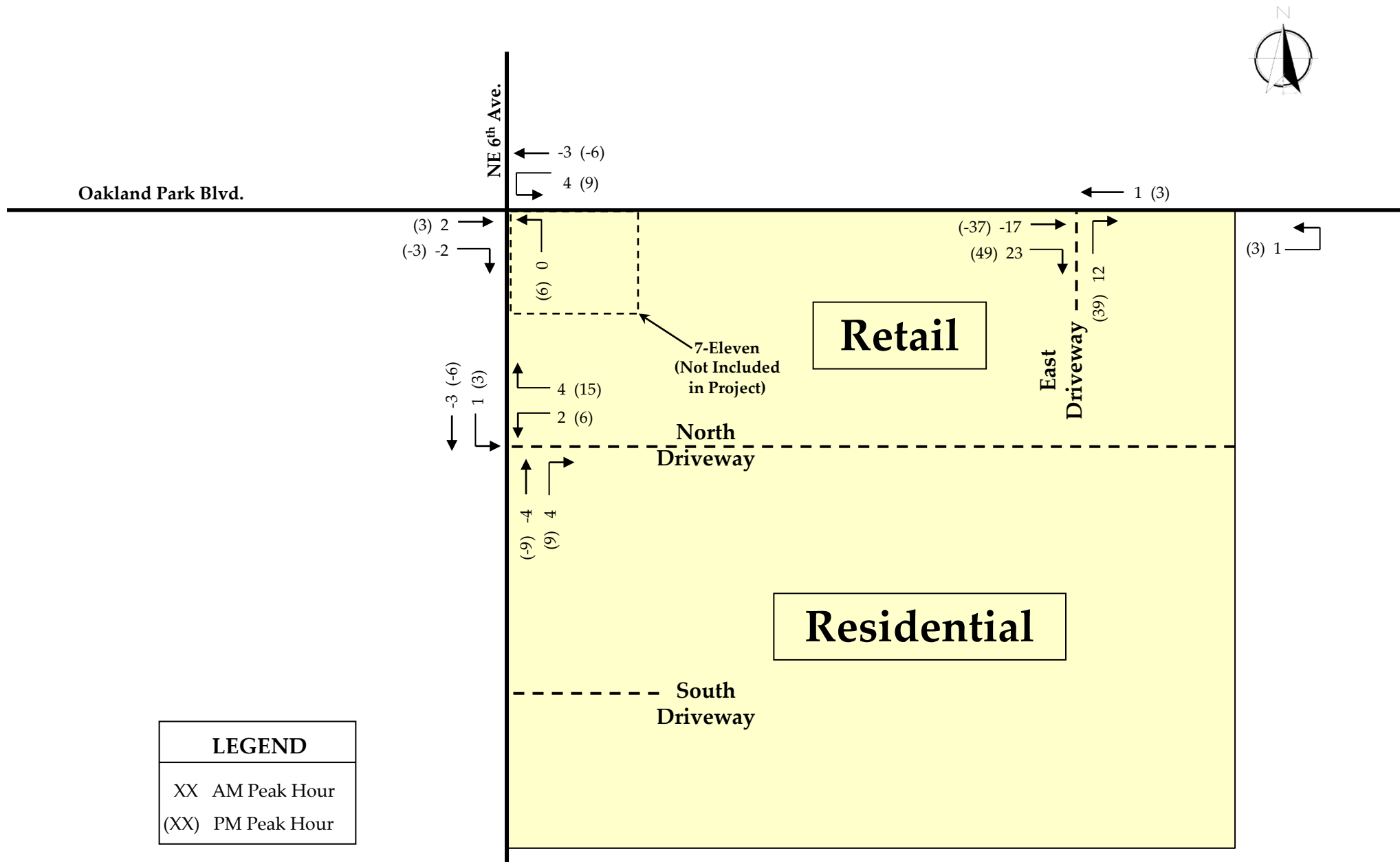


Figure 14
 Pass-By Trips (Retail) for Driveways
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

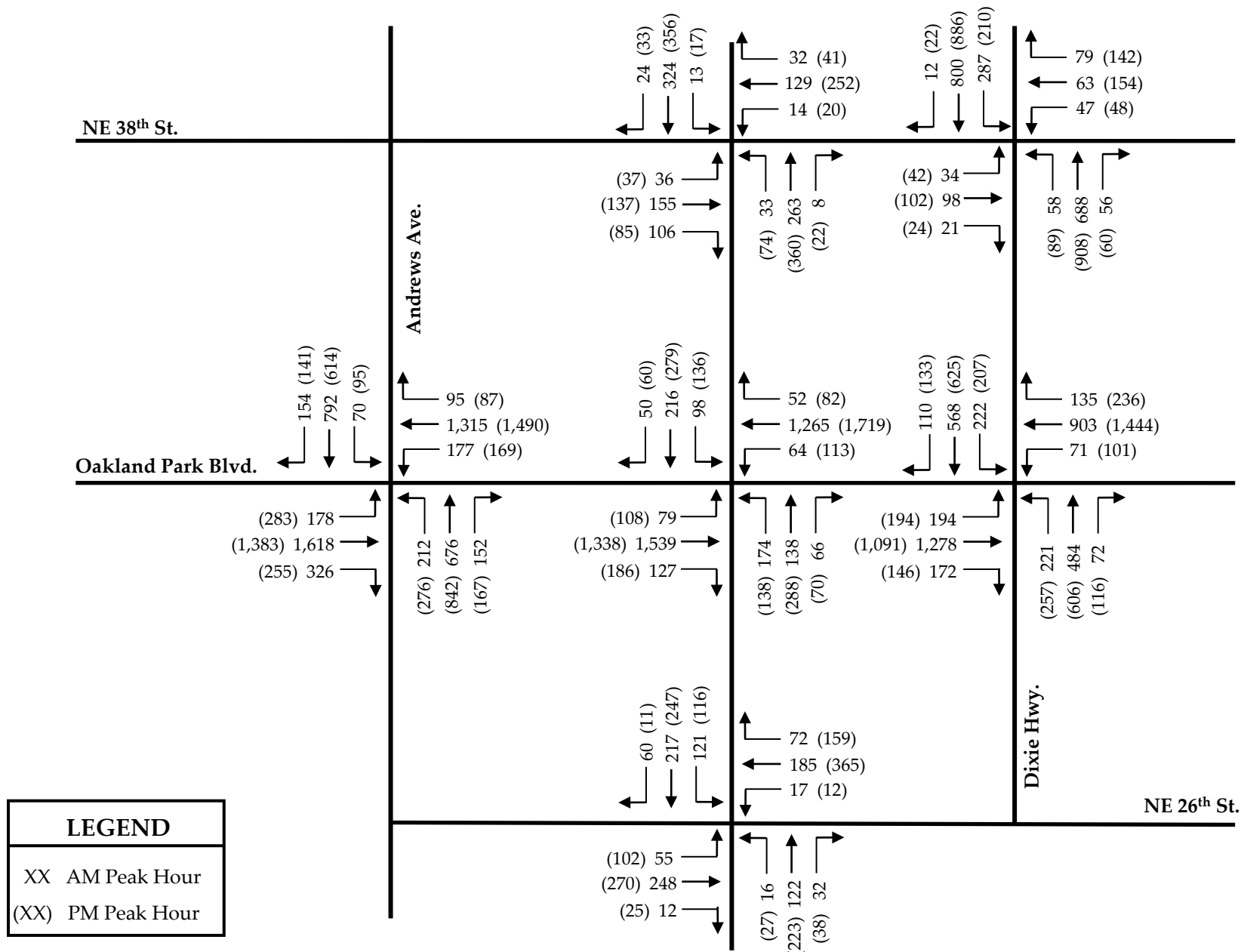


Figure 15
 Total (2022) Peak-Hour Traffic Volumes – Adjacent Intersections
RAM OAKLAND PARK TRAFFIC ANALYSIS
 City of Oakland Park, Florida

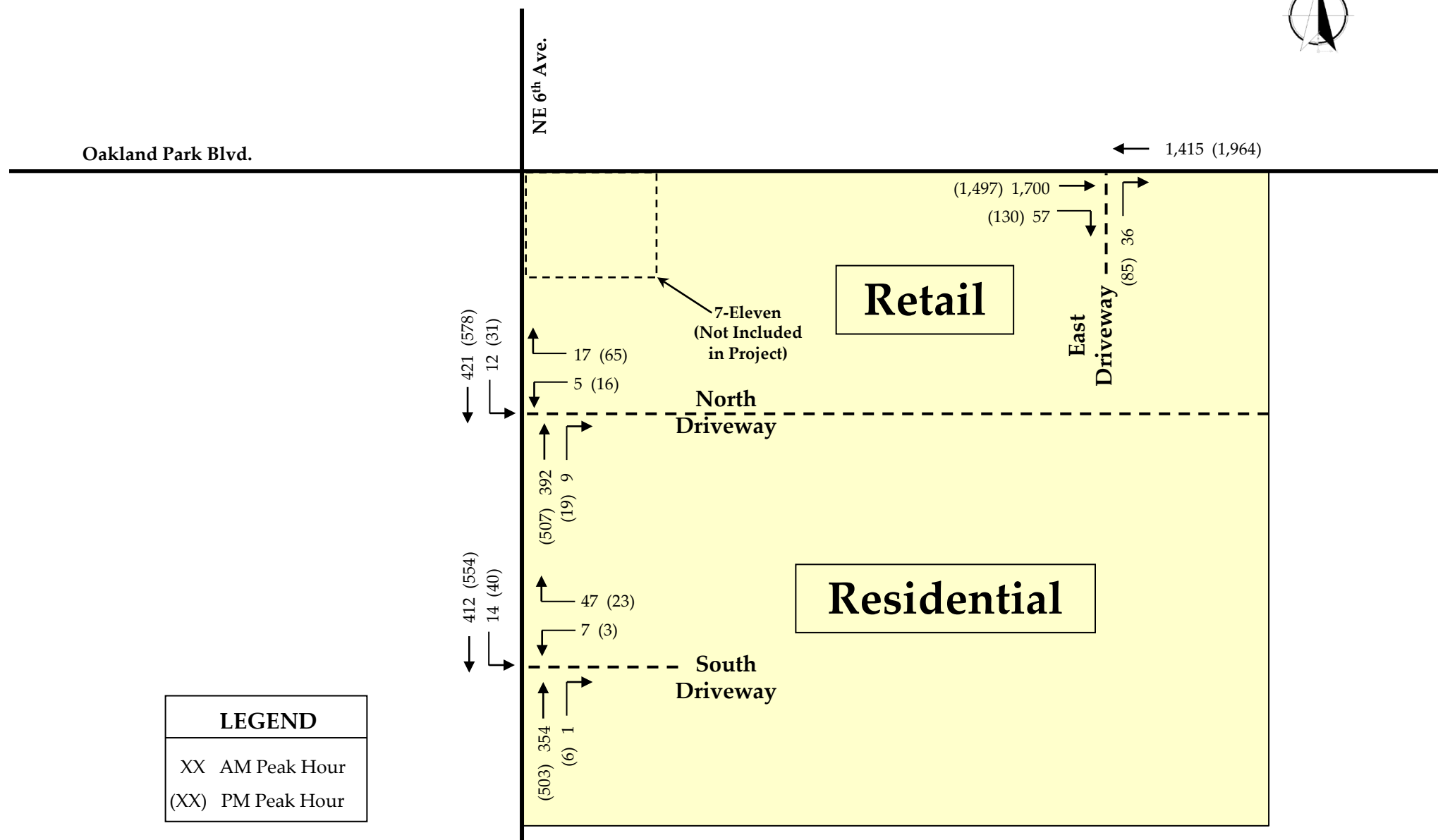


Figure 16
Total Trips (Residential and Retail) for Driveways
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

4.5 Intersection Capacity Analysis

Intersection capacity analysis was performed for AM and PM peak hour conditions at the adjacent intersections and proposed driveways, using the Synchro 10 software. Existing signal timings, peak hour factors and truck factors were maintained for most of the intersections. During the AM peak hour, signal optimization was performed for the Oakland Park Boulevard/NE 6th Avenue intersection and the Oakland Park Boulevard/Dixie Highway intersection. The signal optimization was approved by Broward County, as attached in **Appendix E**. The proposed lane geometry at the driveways is graphically depicted on **Figure 17**. The intersection capacity analysis worksheets are included in Appendix E.

Results of the AM and PM peak hour intersection capacity analyses are summarized in **Table 6**. Results of the analyses indicate that most intersections are expected to operate at an overall acceptable level of service, with the exception of the Oakland Park Boulevard/Andrews Avenue intersection during the AM and PM peak hours and the Oakland Park Boulevard/Dixie Highway intersection during the PM peak hour, similar to existing and background traffic conditions. Although some of the study intersections are expected to experience vehicular delays that exceed the acceptable level of service, the intersections are expected to experience similar delays and level of service failures without the addition of project traffic from the proposed development. In fact, the intersections that are projected to operate at an unacceptable level of service with the addition of traffic from the proposed development, currently operate at an unacceptable level of service.

4.6 Intersection Queues

Based on the intersection capacity analysis, 95th percentile queues from the Synchro 10 software were compared to existing and future storage lengths. The comparison is summarized in **Table 7**. Several queues during the AM and PM peak hours currently exceed the available storage length or are expected to exceed the available storage length for background traffic conditions. These same storage lengths will be exceeded at the buildout of the proposed development under total traffic conditions. Vehicular queues for total traffic conditions are generally similar to the vehicular queues for background traffic conditions.

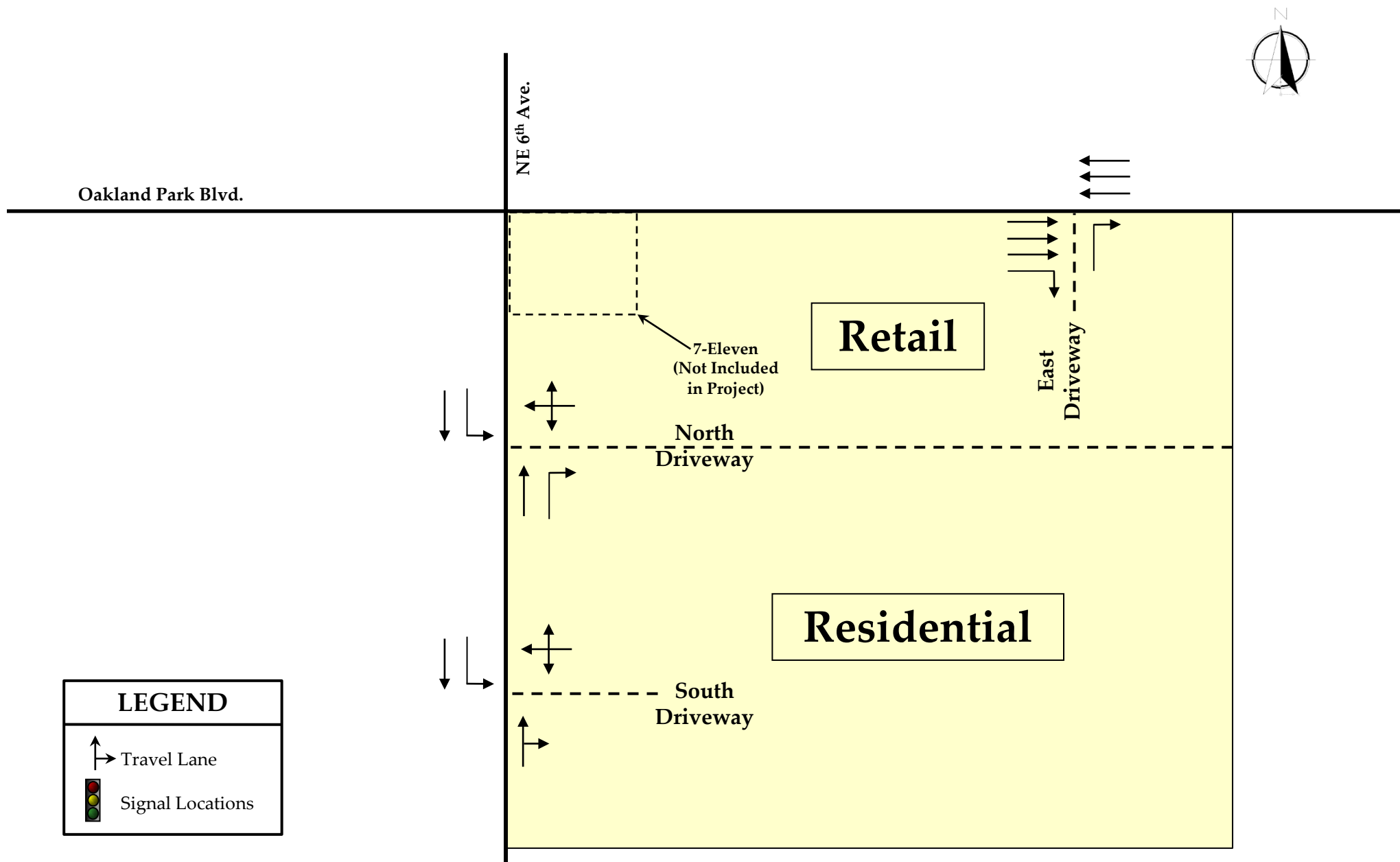


Figure 17
Proposed Lane Geometry - Driveways
RAM OAKLAND PARK TRAFFIC ANALYSIS
City of Oakland Park, Florida

TABLE 6
TOTAL (2022) INTERSECTION CAPACITY ANALYSIS SUMMARY
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION		OVERALL		EB		WB		NB		SB	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Oakland Park Blvd. at Andrews Ave.	AM*	90.4	F	78.6	E	100.8	F	82.9	F	104.6	F
	PM	93.6	F	66.0	E	91.8	F	128.9	F	102.3	F
Oakland Park Blvd. at NE 6 th Ave.	AM*	45.5	D	38.1	D	37.1	D	70.0	E	81.6	F
	PM	48.0	D	42.6	D	39.6	D	59.1	E	88.1	F
Oakland Park Blvd. at Dixie Hwy.	AM*	54.4	D	33.8	C	49.5	D	95.4	F	63.1	E
	PM	65.7	E	45.5	D	61.2	E	86.0	F	82.7	F
NE 6 th Ave. at NE 26 th St.	AM	11.6	B	10.5	B	9.4	A	10.6	B	14.4	B
	PM	14.6	B	11.7	B	15.1	B	15.6	B	16.3	B
NE 38 th St. at NE 6 th Ave.	AM	11.8	B	8.7	A	9.6	A	13.7	B	14.0	B
	PM	15.7	B	9.2	A	14.1	B	21.0	C	15.5	B
NE 38 th St. at Dixie Hwy.	AM	46.8	D	79.8	E	81.2	F	60.9	E	22.9	C
	PM	40.7	D	78.5	E	80.4	F	35.3	D	24.5	C
East Driveway at Oakland Park Blvd.	AM	0.3	A	0.0	A	0.0	A	22.9	C	-	-
	PM	0.5	A	0.0	A	0.0	A	23.1	C	-	-
North Driveway at NE 6 th Ave.	AM	0.4	A	-	-	12.0	B	0.0	A	0.2	A
	PM	1.2	A	-	-	14.3	B	0.0	A	0.4	A
South Driveway at NE 6 th Avenue	AM	0.9	A	-	-	11.7	B	0.0	A	0.3	A
	PM	0.6	A	-	-	12.6	B	0.0	A	0.6	A

* Includes signal optimization at Oakland Park Blvd. at NE 6th Ave., approved by Broward County

TABLE 7
95TH PERCENTILE QUEUES AND STORAGE LENGTHS
RAM OAKLAND PARK TRAFFIC ANALYSIS

TIME PERIOD	SCENARIO	EBLT		EBRT		WBLT		WBRT		NBLT		NBRT		SBLT		SBRT	
		Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)	Queue (ft)	Storage Length (ft)
Oakland Park Blvd. at Andrews Ave.																	
AM	Existing	290	500	-	-	433	320	-	-	454	225	-	-	140	390	-	-
	Background	299		-		472		-		481		-		145		-	
	Total	299		-		473		-		481		-		142		-	
PM	Existing	529	500	-	-	303	320	-	-	612	225	-	-	165	390	-	-
	Background	554		-		294		-		638		-		186		-	
	Total	554		-		288		-		638		-		196		-	
Oakland Park Blvd. at NE 6 th Ave.																	
AM	Existing	117	405	-	-	172	415	-	-	224	135	-	-	129	175	-	-
	Background	116		-		169		-		250		-		133		-	
	Total	116		-		121		-		263		-		132		-	
PM	Existing	167	405	-	-	144	415	-	-	189	135	-	-	168	175	-	-
	Background	162		-		141		-		202		-		172		-	
	Total	161		-		147		-		181		-		186		-	
Oakland Park Blvd. at Dixie Hwy.																	
AM	Existing	130	360	-	-	133	375	-	-	370	240	-	-	252	225	-	-
	Background	179		-		152		-		440		-		271		-	
	Total	191		-		152		-		440		-		272		-	
PM	Existing	338	360	-	-	184	375	-	-	427	240	-	-	213	225	-	-
	Background	375		-		197		-		531		-		276		-	
	Total	376		-		197		-		544		-		277		-	
NE 6 th Ave. at NE 26 th St.																	
AM	Existing	29	90	-	-	12	85	-	-	13	110	-	-	59	100	-	-
	Background	30		-		13		-		14		-		64		-	
	Total	30		-		13		-		14		-		66		-	
PM	Existing	60	90	-	-	10	85	-	-	20	110	-	-	62	100	-	-
	Background	67		-		11		-		20		-		65		-	
	Total	68		-		11		-		20		-		65		-	
NE 6 th Ave. at NE 38 th St.																	
AM	Existing	-	-	20	130	-	-	-	-	-	-	-	-	-	-	-	-
	Background	-		20		-		-		-		-		-		-	
	Total	-		21		-		-		-		-		-		-	
PM	Existing	-	-	19	130	-	-	-	-	-	-	-	-	-	-	-	-
	Background	-		19		-		-		-		-		-		-	
	Total	-		20		-		-		-		-		-		-	
NE 38 th St. at Dixie Hwy.																	
AM	Existing	72	75	44	75	87	140	135	25	25	90	-	-	318	230	-	-
	Background	73		45		91		140		46		-		411		-	
	Total	73		45		91		140		46		-		414		-	
PM	Existing	82	75	47	75	84	140	219	25	59	90	-	-	160	230	-	-
	Background	84		46		89		225		76		-		174		-	
	Total	84		46		89		225		76		-		174		-	

5.0 QUEUING ANALYSIS

5.1 Residential Gate Queueing Analysis

The residential portion of the development is proposed to have access via two (2) driveway connections. The main access into the residential development will be from NE 6th Avenue (South Driveway) and will serve both residents and visitors. A secondary access, for residents only, is proposed via Oakland Park Boulevard (East Driveway). Both driveway connections will be gated and, therefore, a gate queueing analysis was performed to ensure that adequate stacking is provided within the site at the gate entrance locations to avoid any potential spillback onto the adjacent roadways.

The NE 6th Avenue access will have one (1) inbound lane for residents with a distance of approximately 80 feet and one (1) inbound lane for visitors with a distance of approximately 60 feet before extending to the driveway entrance from NE 6th Avenue. These lanes can accommodate stacking for approximately three (3) vehicles for residents and two (2) to three (3) vehicles for visitors. The Oakland Park Boulevard access will have one (1) inbound lane for residents only with a distance of approximately 425 feet before blocking the main east/west drive isles that will serve the commercial development. This can accommodate approximately 17 vehicles.

Trip generation analysis was performed for the peak hour of the generator during weekday AM, weekday PM, Saturday peak and Sunday peak to determine the peak hour for the site, based on the ITE, *Trip Generation Manual*, 10th Edition. Results of the analysis, summarized in **Table 8**, indicate that the highest inbound volume will occur during the Sunday peak hour, where 74 vehicles will be expected to enter the site. An assumption was made that 90 percent of the vehicles (67 vehicles) entering the development during the peak hour would be residents, and the remaining 10 percent (7 vehicles) would be visitors. Of the resident trips, 52 vehicles will be expected to enter the site via the South Driveway and 15 vehicles will be expected to enter the site via the east driveway per the project distribution. Excerpts from ITE are attached in **Appendix F**.

Table 8 Trip Generation Analysis – Peak of the Generator

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS		
						IN	OUT	TOTAL
AM PEAK GENERATOR								
Multifamily Housing (Low-Rise)	220	12 DU	$\text{Ln}(T)=0.94 \text{ Ln}(X)-0.29$	28%	72%	2	6	8
Multifamily Housing (Mid-Rise)	221	288 DU	$\text{Ln}(T)=0.83 \text{ Ln}(X)-0.27$	27%	73%	23	61	84
PM PEAK GENERATOR								
Multifamily Housing (Low-Rise)	220	12 DU	$T=0.66 (X)+1.41$	59%	41%	5	4	9
Multifamily Housing (Mid-Rise)	221	288 DU	$\text{Ln}(T)=0.83 \text{ Ln}(X)-0.05$	60%	40%	63	42	105
SATURDAY GENERATOR								
Multifamily Housing (Low-Rise) ⁽²⁾	220	12 DU	$T=0.7 (X)$	49%	51%	4	4	8
Multifamily Housing (Mid-Rise)	221	288 DU	$T=0.42 (X)+6.73$	49%	51%	63	65	128
SUNDAY GENERATOR								
Multifamily Housing (Low-Rise) ⁽²⁾	220	12 DU	$T=0.67 (X)$	62%	38%	5	3	8
Multifamily Housing (Mid-Rise)	221	288 DU	$T=0.39 (X)$	62%	38%	69	43	112

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

(2) IN/OUT Split based on LU 221

The queue analysis was performed based on the methodology outlined in *Transportation and Land Development*, 1988, published by ITE, excerpts of which are attached in Appendix F. Processing rates were determined based on the processing rate for the resident lane and the processing rate for the visitor lane. Residents will be required to use a reader to open the gate. The assumed processing time for residents is 15 seconds (0.25 minutes) per vehicle. Visitors will be required to stop and use a call box to contact residents for entry. The assumed processing time for visitors is two (2) minutes per vehicle. In an effort to ensure that the available storage length for the gate areas is not exceeded, a 95 percent confidence level was used. The gate queueing analysis worksheets are attached in Appendix F.

Based on the analysis, the required storage for the resident lanes is zero (0) vehicles. The required storage for the visitor lane is one (1) vehicle, in addition to the vehicle being serviced. Therefore, the site will accommodate the expected queue stacking from the gates at both driveway connections.

6.0 PEDESTRIAN SITE CIRCULATION

The proposed development includes a retail component immediately adjacent to Oakland Park Boulevard and a residential component located south of the retail component. The site shall include a resort style pool area with outdoor lounge seating and covered pavilions with grille areas and the like. Other outdoor amenity spaces are also included such as a dog park, tot lot, multi-purpose lawn, a waterfront promenade, and a greenway promenade leading to the waterfront from Oakland Park Boulevard that will be all linked through a pedestrian walkway system in order to enhance and promote the pedestrian experience. Pedestrian walkways are provided throughout the residential and retail areas to facilitate an ease of pedestrian connectivity with all of the proposed buildings as well as to the expansive onsite amenities provided throughout the development for its residents and visitors. The pedestrian connection that is proposed between the residential and the retail development shall be gated and accessible via keycard access to residents, and via callbox for visitors, at all hours. Pedestrian walkways are also provided within the retail portion of the development connecting all uses within the retail site. At night, streetlamps and landscape lighting shall facilitate safe pedestrian circulation throughout the entire development. These pedestrian walkways will also connect to the proposed sidewalks and plazas along NE 6th Avenue and along Oakland Park Boulevard, as well provide access to the bus stop located along Oakland Park Boulevard, just east of NE 6th Avenue.

7.0 PLANNED MULTI-MODAL PROJECTS

Two (2) multi-modal studies have been completed that identified improvements near the proposed development. Proposed improvements near the study intersections include:

FDOT Oakland Park Boulevard Alternatives Analysis, dated April 2014

- Short-term improvements include revised transit schedule, traffic signal progression, bus stop upgrades at Andrews Avenue and Dixie Highway, bus Transit Signal Priority at Andrews Avenue and Dixie Highway, and bicycle lane and sidewalk continuity.
- Long-term improvements include installation of a Business Access and Transit (BAT) Lane along Oakland Park Boulevard between US 1 and University Drive, which involves using curb lane limited to buses, emergency vehicles and vehicles making right turns from Oakland Park Boulevard. Other long-term improvements include continued Local Bus Service for existing Route 72, all short-term improvements, and the addition of a limited-stop service in the curb lanes at Andrews Avenue and Dixie Highway.

City of Oakland Park Transit Mobility Plan, dated April 2017

- Pedestrian improvements include, but are not limited to, sidewalk infill, addition of treescape and landscaping, installation of benches, lighting improvements, and removal of sidewalk obstructions on NE 38th Street west of Dixie Highway.
- Bicycle improvements include, but are not limited to, expansion of a bikeshare system, installation of bicycle racks, a 10-foot shared-use path along the east side of Dixie Highway, and shared lane markings along NE 38th Street.
- Vehicular improvements include, but are not limited to, adopting a centralized parking management system, shifting most of the parking to be along Dixie Highway and NE 38th Street, and reducing neighborhood speeds to 15 MPH.
- Transit improvements include, but are not limited to, the implementation of a local circulator system, an additional bus bay along Dixie Highway north of Oakland Park Boulevard for Route #50, and a Tri-Rail Coastal Link station.

8.0 CONCLUSIONS AND RECOMMENDATIONS

McMahon has completed a traffic analysis for the Ram Oakland Park project located generally in the southeast corner of SR-816/Oakland Park Boulevard and NE 6th Avenue, in the City of Oakland Park, Florida. The site is currently vested for a 121,345-square foot Walmart Superstore. The proposed development, with an anticipated buildout year of 2022, will include the following: Apartment - 300 dwelling units, Shopping Center - 5,750 square feet, Supermarket – 23,013 square feet, and Fast-Food Restaurant without Drive-Through - 2,500 square feet.

Based on the analysis contained herein, the following can be concluded:

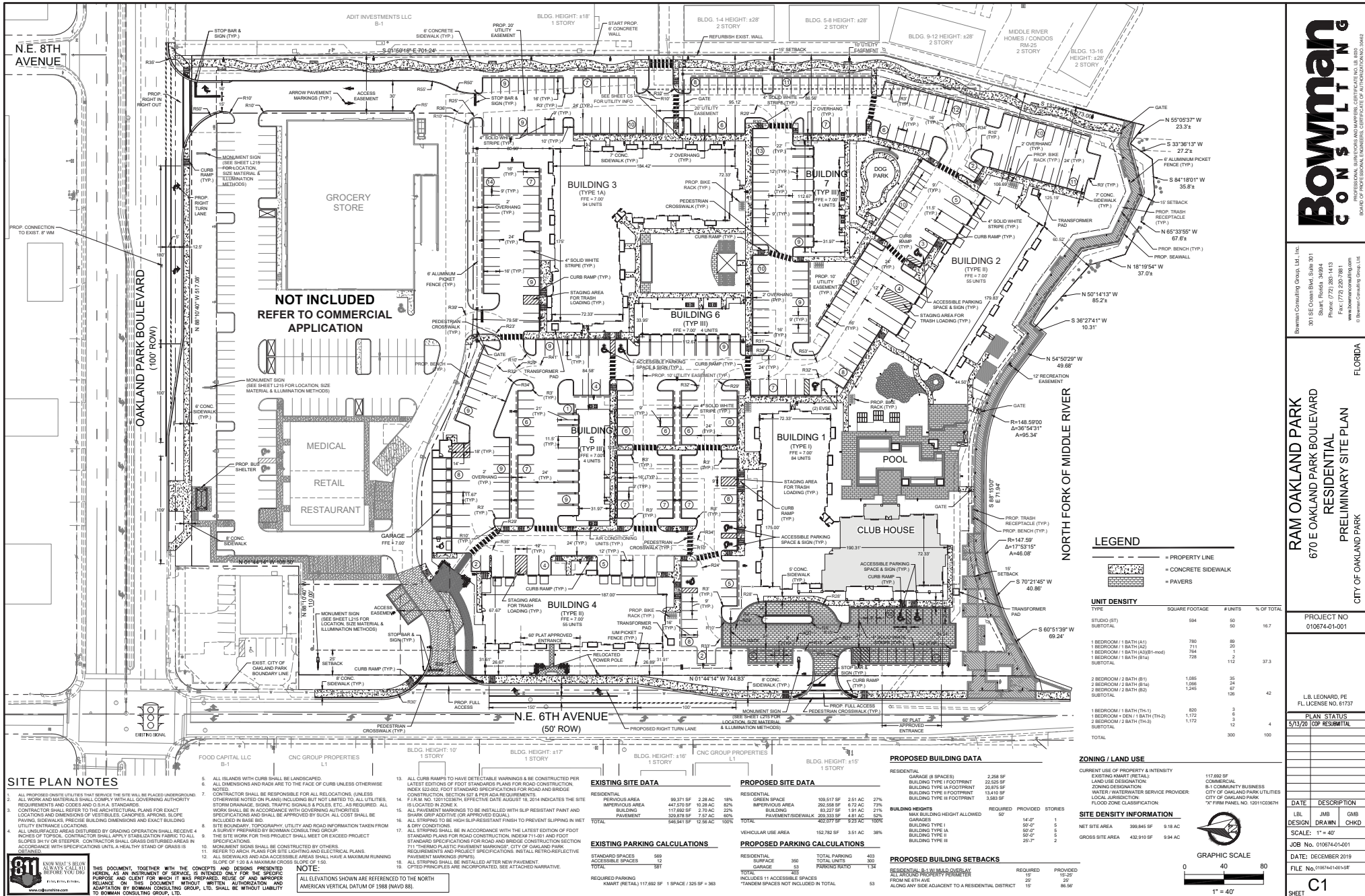
- The proposed development is expected to generate 3,267 net new daily trips, 159 net new AM peak hour trips, and 297 net new PM peak hour trips. This represents a decrease of 1,167 daily trips, a decrease of two (2) AM peak hour trips, and a decrease of 83 PM peak hour trips, when compared to the vested trips for the Walmart Superstore.
- Results of the intersection capacity analyses indicate that most intersections are expected to operate at an overall acceptable level of service with the exception of the Oakland Park Boulevard/Andrews Avenue intersection during the AM and PM peak hours, and the Oakland Park Boulevard/Dixie Highway intersection during the PM peak hour, in existing, background and total traffic conditions. Although some of the study intersections are expected to experience vehicular delays that exceed the acceptable level of service, the intersections are expected to experience similar delays and level of service failures without the addition of project traffic from the proposed development. In fact, the intersections that are projected to operate at an unacceptable level of service with the addition of traffic from the proposed development, currently operate at an unacceptable level of service.
- Review of the 95th percentile queues from the Synchro 10 software indicates that several queues during the AM and PM peak hours currently exceed the available storage length or are expected to exceed the available storage length for background traffic conditions. These same storage lengths will be exceeded at the buildout of the proposed development under total traffic conditions. Vehicular queues for total traffic conditions are generally similar to

the vehicular queues for background traffic conditions.

- The residential gate queueing analysis indicates that the site will accommodate the expected queue stacking from the gates at both driveway connections to the residential component.
- Pedestrian walkways are provided throughout the residential and retail areas to facilitate an ease of pedestrian connectivity with all of the proposed buildings as well as to the expansive onsite amenities provided throughout the development for its residents and visitors.

APPENDIX A

SITE PLAN AND TRAFFIC METHODOLOGY



SITE PLAN NOTES

- 1. ALL PROPOSED DRIVE UTILITIES THAT SERVE THE SITE SHALL BE PLACED UNDERGROUND.
- 2. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL GOVERNING AUTHORITY REQUIREMENTS AND CODES AND D.S.H.A. STANDARDS.
- 3. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, CANOPIES, AWNINGS, SLOPE PAVING, SIDEWALKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- 4. ALL UNPAVED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3:1 V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- 5. ALL ISLANDS WITH CURB SHALL BE LANDSCAPED.
- 6. ALL DIMENSIONS AND NOTATIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- 7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, UNLESS OTHERWISE NOTED ON PLANS INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM DRAINAGE, SIGNALS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS AND CODES AND D.S.H.A. STANDARDS.
- 8. ALL UTILITIES TO BE RELOCATED SHALL BE IDENTIFIED ON THE PLAN AND SHALL BE INCLUDED IN BASE BID.
- 9. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY PREPARED BY BOWMAN CONSULTING GROUP.
- 10. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED PROJECT SPECIFICATIONS.
- 11. MONUMENT SIGNS SHALL BE CONSTRUCTED BY OTHERS.
- 12. REFER TO ARCH PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS.
- 13. ALL SIDEWALKS AND ALL ACCESSIBLE AREAS SHALL HAVE A MAXIMUM SLOPE OF 1:12.
- 14. ALL SIDEWALKS AND ALL ACCESSIBLE AREAS SHALL HAVE A MAXIMUM SLOPE OF 1:12.
- 15. ALL ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- 16. ALL CURB RAMP TO HAVE DETECTABLE WARNING & BE CONSTRUCTED PER LATEST EDITION OF FOOT STANDARDS PLANS FOR ROAD CONSTRUCTION, INDEX 522.002.
- 17. ALL CURB RAMP TO HAVE DETECTABLE WARNING & BE CONSTRUCTED PER LATEST EDITION OF FOOT STANDARDS PLANS FOR ROAD CONSTRUCTION, INDEX 522.002.
- 18. ALL CURB RAMP TO HAVE DETECTABLE WARNING & BE CONSTRUCTED PER LATEST EDITION OF FOOT STANDARDS PLANS FOR ROAD CONSTRUCTION, INDEX 522.002.
- 19. ALL CURB RAMP TO HAVE DETECTABLE WARNING & BE CONSTRUCTED PER LATEST EDITION OF FOOT STANDARDS PLANS FOR ROAD CONSTRUCTION, INDEX 522.002.
- 20. ALL CURB RAMP TO HAVE DETECTABLE WARNING & BE CONSTRUCTED PER LATEST EDITION OF FOOT STANDARDS PLANS FOR ROAD CONSTRUCTION, INDEX 522.002.

EXISTING SITE DATA

PERVIOUS AREA	AREA	PERCENT
PERVIOUS AREA	69,371 SF	2.28 AC
IMPERVIOUS AREA	447,070 SF	10.28 AC
TOTAL	516,441 SF	12.56 AC

EXISTING PARKING CALCULATIONS

STANDARD SPACES	569
MINIMUM SPACES	381
REQUIRED PARKING	381

PROPOSED SITE DATA

PERVIOUS AREA	109,517 SF	2.51 AC
IMPERVIOUS AREA	292,588 SF	6.72 AC
TOTAL	402,105 SF	9.23 AC

PROPOSED PARKING CALCULATIONS

STANDARD SPACES	403
MINIMUM SPACES	265
REQUIRED PARKING	265

PROPOSED BUILDING DATA

RESIDENTIAL	2,258 SF
COMMERCIAL	2,258 SF
TOTAL	4,516 SF

PROPOSED BUILDING SETBACKS

RESIDENTIAL	15'
COMMERCIAL	15'
TOTAL	15'

LEGEND

PROPERTY LINE	—
CONCRETE SIDEWALK	—
PAVERS	—

UNIT DENSITY

TYPE	SQUARE FOOTAGE	# UNITS	% OF TOTAL
STUDIO (ST)	594	50	16.7
1 BEDROOM / 1 BATH (A1)	780	89	
1 BEDROOM / 1 BATH (A2)	711	71	
1 BEDROOM / 1 BATH (A3) (mod)	728	112	37.3
2 BEDROOM / 2 BATH (B1)	1,086	28	
2 BEDROOM / 2 BATH (B2)	1,245	128	42
1 BEDROOM / 1 BATH (TH-1)	820	3	
1 BEDROOM / 1 BATH (TH-2)	1,172	6	
1 BEDROOM / 2 BATH (TH-3)	1,172	12	4
TOTAL	300	400	

ZONING / LAND USE

CURRENT USE OF PROPERTY & INTENSITY	117,892 SF
EXISTING ZONING (RETAIL)	COMMERCIAL
PROPOSED ZONING	RESIDENTIAL
WATER / WASTEWATER SERVICE PROVIDER	CITY OF OAKLAND PARK UTILITIES
LOCAL JURISDICTION	CITY OF OAKLAND PARK
FLOOD ZONE CLASSIFICATION	AREA 1

SITE DENSITY INFORMATION

NET SITE AREA	399,845 SF	9.18 AC
GROSS SITE AREA	432,910 SF	9.94 AC

GRAPHIC SCALE



DATE	DESCRIPTION
JOB NO. 010674-01-001	
DATE: DECEMBER 2019	
FILE NO. 010674-01-001-SF	
C1	
SHEET	



Florida Department of Transportation

RON DESANTIS
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

KEVIN J. THIBAUT
SECRETARY

February 13, 2020

THIS PRE-APPLICATION LETTER IS VALID UNTIL – February 13, 2021
THIS LETTER IS NOT A PERMIT APPROVAL

Lisa Leonard
Bowman Consulting
301 SE Ocean Blvd Suite 301
Stuart, FL 34994

Dear Lisa Leonard:

RE: February 13, 2020- Pre-application Meeting for Category E Driveway
Broward County - Oakland Park, Urban; SR 816; Sec. # 86090; MP: 7.450
Access Class - 5; Posted Speed - 35; SIS - Yes; Ref. Project: FM: 429569.4-Urban Corridor Improvements-Binod Basnet
Request:
Access 1: Right-in/right-out driveway on the south side of SR 816, located approximately 595' east of NE 6th Avenue, adjacent to eastern property line.
• Access 1: Close existing driveway on the south side of SR 816, located approximately 150 feet east of NE 6th Avenue.
• Access 2: Close existing driveway on the south side of SR 816, located approximately 290 feet east of NE 6th Avenue.
• Access 3: Close existing driveway 3 on the south side of SR 816, located approximately 445 feet east of NE 6th Avenue.

SITE SPECIFIC INFORMATION

Project Name & Address: RAM Oakland Park – 670 E Oakland Park Blvd, Fort Lauderdale
Applicant/Property Owner: Walmart Stores East LP Parcel Size: 12.10 Acres
Development Size: 6,000 SF Service Station, 16 F.P. Gas Station, 1,500 SF Retail, 4,500 SF Restaurant, 298 Multifamily D.U.

WE APPROVE YOUR REQUEST

This decision is based on your presentation of the facts, site plan and survey - please see the conditions and comments below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:

- A minimum driveway length of 50 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided. If a gate is installed a minimum driveway length of 100 feet is required.
- A right turn lane is required and shall meet the minimum requirements in the Florida Design Manual (FDM) and shall provide a buffered bicycle lane. If the standard right turn lane requirement is not met, a Design Variation may be required to be submitted during permit review.
- A recorded cross access agreement or easement with the adjacent property to the west shall be provided prior to the Permit approval.
- **A traffic shall be submitted at the time of Permit. The study shall evaluate the project's impacts to the SR 816/NE 6th Avenue intersection and include queuing analysis to determine required turn lanes length at the intersection.**

Comments:

- All driveways not approved in this letter must be fully removed and the area restored.
- Drainage mitigation is required for any impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage). A Storm Water Pollution Prevention Plan must be submitted with the application for more than one acre of "disturbed area" as defined by the Florida Department of Environmental Protection (FDEP).
- The applicant shall donate the right-of-way to the Department if right-of-way dedication is required to implement the improvements.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway System and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. Note, this letter does not guarantee permit approval. The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: <https://osp.fdot.gov>; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.

Please contact the Access Management Manager - Tel. # 954-777-4363 or e-mail: D4AccessManagement@dot.state.fl.us with any questions regarding the Pre-Approval Letter and Permits Office - Tel. # 954-777-4383 with any questions regarding permits.

Sincerely,

Dalila Fernandez, P.E.
District Access Management Manager

cc: Roger Lemieux

File: S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2020-02-13\1. 86090 MP 7.450 SR 816_ RAM Oakland Park\86090 MP 7.450 SR 816_ RAM Oakland Park.docx

PRINCIPALS

Joseph J. DeSantis, P.E., PTOE
John S. DePalma
Casey A. Moore, P.E.
Gary R. McNaughton, P.E., PTOE
Christopher J. Williams, P.E.

ASSOCIATES

John J. Mitchell, P.E.
R. Trent Ebersole, P.E.
Matthew M. Kozsuch, P.E.
Maureen Chlebek, P.E., PTOE
Dean A. Carr, P.E.
Jason T. Adams, P.E., PTOE
Christopher K. Bauer, P.E., PTOE

FOUNDER

Joseph W. McMahon, P.E.

December 17, 2019

VIA E-MAIL

Jennifer Frastai
City of Oakland Park
5399 North Dixie Highway, Suite 3
Oakland Park, FL 33334

**RE: Ram Oakland Park Traffic Methodology Letter
McMahon Project No. L19456.01**

Dear Ms. Frastai:

Please accept this letter as the proposed Traffic Methodology Letter to be used for the Ram Oakland Park project located generally in the southeast corner of SR-816/Oakland Park Boulevard and NE 6th Avenue, in the City of Oakland Park, Florida. The site is currently vested for a 121,345-square foot Walmart Superstore. The approved site plan, development order conditions, and the Florida Department of Transportation (FDOT) access management letter are included as **Attachment A**. The proposed development, with an anticipated buildout year of 2022, will include 297 apartment units, a gas station with 16 vehicle fueling positions and 6,000 square feet of convenience market, 2,500 square feet of coffee shop with drive-through, 1,500 square feet of general retail space, and 2,000 square feet of fast food restaurant without drive-through. The site location is graphically shown on **Figure 1**.

Figure 1 Site Location



The study area for the project will include the following intersections:

- Oakland Park Boulevard at Andrews Avenue
- Oakland Park Boulevard at NE 6th Avenue
- Oakland Park Boulevard at Dixie Highway
- NE 6th Avenue at NE 26th Street
- NE 6th Avenue at NE 38th Street
- Dixie Highway at NE 38th Street
- East Driveway at Oakland Park Boulevard
- North Driveway at NE 6th Avenue
- South Driveway at NE 6th Avenue

Analysis Scenarios

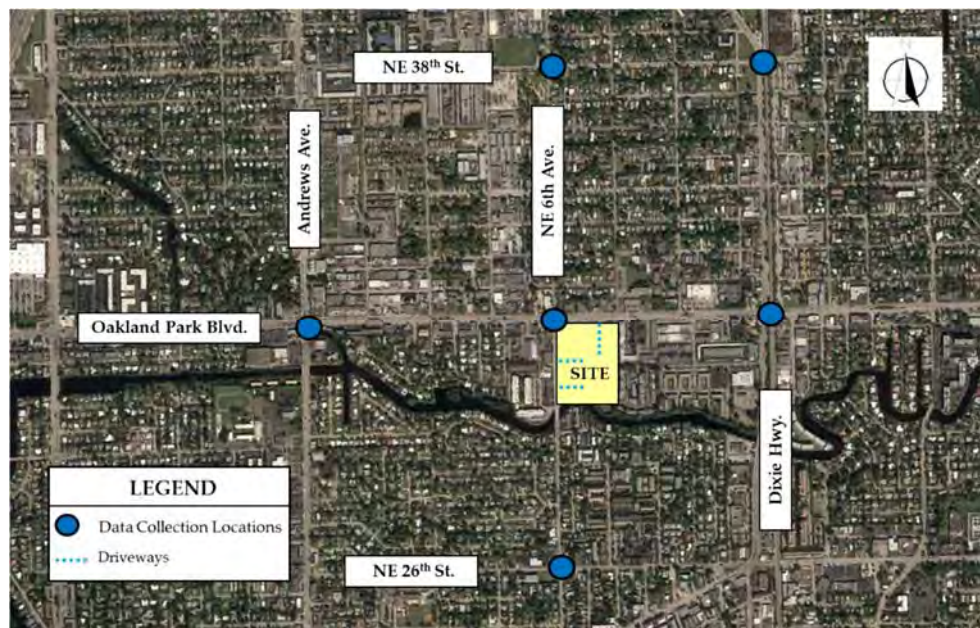
The analysis scenarios for this study are as follows:

- Existing Year: 2019
- Project buildout year (2022) without project trips (background traffic)
- Project buildout year (2022) with project trips (total traffic)

Data Collection

Turning movement counts were collected at the study intersections (excluding the future driveway connections) during peak hour conditions (7:00 AM – 9:00 AM and 4:00 PM to 6:00 PM) on Thursday, November 7, 2019. Turning movement counts separated out truck traffic. **Figure 2** depicts the locations where the turning movement counts were collected.

Figure 2 Locations for Data Collection



Existing Conditions Analysis

Collected counts will be adjusted to reflect peak season, AM and PM peak hour traffic volumes by applying a peak-season conversion factor obtained from the most recent 2018 FDOT *Peak Season Factor Category Report*. Intersection capacity analyses will be evaluated for the study intersections using the Synchro Software. The adopted level of service criteria will be Level of Service “D”. Synchro queues will be compared against the available storage lengths for the exclusive turn lanes at the study intersections.

Future Conditions Analysis – Background Traffic Conditions

Future background traffic volumes will be determined by applying a five-year, historical compound growth rate to existing volumes and adding traffic from committed development projects within the City of Oakland Park and the City of Wilton Manors. The historical growth rate was based on a review of volumes from FDOT Stations 86-0022, 86-5067, 86-9070, 86-0425, 86-5074, 86-9072, 86-9576, and 86-0212, excerpts of which are included in **Attachment B**. These include stations along Oakland Park Boulevard, NE 6th Avenue, SR-811 (Dixie Highway and Wilton Drive), and NE 38th Street near the project site. The station on Andrews Avenue south of Oakland Park Boulevard was not included as the characteristics of this roadway are different from NE 6th Avenue and it provides access to downtown Fort Lauderdale with a much higher growth rate than expected along NE 6th Avenue.

Trend analyses were also performed using linear, exponential and decaying exponential methods, the results of which are included in Attachment B. Given a project buildout year of 2022, and the availability for general growth in this area, the linear growth and exponential growth estimates appear high. The most applicable would be the decaying exponential. However, given that the compound growth rate would be less than one (1) percent, we recommend using the 1.12 percent areawide compound growth rate based on a review of 2013 and 2018 AADT for the proposed count station locations, as summarized in **Table 1**.

Table 1 Background Growth Calculation

FDOT STATION	LOCATION	2013 AADT	2018 AADT
86-0022	SR 816/Oakland Park Boulevard, E of Andrews Avenue	44,500	49,000
86-5067	SR 816/Oakland Park Boulevard, W of SR 811/Dixie Highway	38,000	40,000
86-9070	NE 6 th Avenue, N of SR 816/Oakland Park Boulevard	6,400	8,500
86-0425	SR 811/Dixie Highway, S of SR 816/Oakland Park Boulevard	19,700	20,400
86-5074	SR 811/Dixie Highway, 200' S of NE 38 th Street	21,500	23,000
86-9072	NW 38 th Street, E of Andrews Avenue	7,300	7,200
86-9576	NE 38 th Street, W of NE 16 th Avenue	5,000	5,800
86-0212	SR 811/Wilton Drive, S of NE 26 th Street	16,400	14,000
Total Areawide AADT		158,800	167,900
Areawide Compound Growth Rate		CGR = 1.12%	

Committed development information will be included in the analysis. This will include the following:

- Round Corner – Oakland Park (O project) – City of Oakland Park
- 3411 North Federal Highway (O2 project) – City of Oakland Park
- Oakland Park – West Dixie Lot Redevelopment Project – City of Oakland Park
- The Village at Wilton Manors – City of Wilton Manors
- Starbucks Wilton Manors – City of Wilton Manors

Intersection capacity analyses will be performed for the study intersections. Signal timings may be optimized for future conditions analyses with approval from Broward County Traffic Engineering Division (BCTED). Truck factors and peak hour factors will be based on existing data, which will be collected as part of the data collection effort. Synchro queues will be compared against the available storage lengths for the exclusive turn lanes at the study intersections.

Project Trip Generation

Trips associated with the vested use were based on the approved Walmart Traffic Analysis, excerpts of which are included in Attachment A. Trips for the proposed development were estimated using information contained in the Institute of Transportation Engineer's (ITE), *Trip Generation Manual*, 10th Edition. Pass-by percentages were also based on ITE, *Trip Generation Manual*, 10th Edition. Internal capture percentages were based on ITE, *Trip Generation Manual*, 9th Edition, as the information available from the 10th Edition yielded internal capture rates that appeared high. Based on the analysis, the proposed development is expected to generate a decrease of 873 daily trips, an increase of 160 AM peak hour trips, and a decrease of 91 PM peak hour trips, when compared to the vested use for the site. Excerpts from ITE, as well as the trip generation spreadsheets, are included in **Attachment C**.

Project Access

The Ram development includes a retail component immediately adjacent to Oakland Park Boulevard and a residential component located south of the retail component. All current access connections to the existing parcel along Oakland Park Boulevard and NE 6th Avenue will be closed. Access to the retail component is proposed via a right-in/right-out access connection to Oakland Park Boulevard (East Driveway), as well as a full access connection to NE 6th Avenue located at the north end of the residential component (North Driveway). Access to the residential component is proposed via the right-in/right-out access connection to Oakland Park Boulevard (same as the retail component), and via a full access connection to NE 6th Avenue located at the south end of the residential component (South Driveway).

Project Trip Distribution

Project trip distribution was based on a review of existing traffic volumes and roadway characteristics for the surrounding roadway network, as well as the location of major roadways, and nearby land uses. The proposed project distribution for the residential component (net new traffic), as well as the retail component (net new and pass-by traffic) is attached in **Attachment D**.

Future Conditions Analysis – Total Traffic Conditions

Future total traffic volumes will be determined by summing together project trips with background traffic volumes. Intersection capacity analyses will be performed for the study intersections and the proposed driveway connections. Signal timings may be optimized for future conditions analyses per BCTED approval. Truck factors and peak hour factors will be based on existing data, which will be collected as part of the data collection effort. Traffic mitigation will be proposed as necessary. Synchro queues will be compared against the available storage lengths for the exclusive turn lanes at the study intersections.

Queuing Analysis

Gate queuing analyses will be prepared for the visitor and resident access locations along Oakland Park Boulevard and NE 6th Avenue. To complete the queuing analysis, trip generation analyses will be performed for the peak hour of the generator during weekday AM, weekday PM, Saturday peak and Sunday peak conditions to determine the peak period based on the ITE, *Trip Generation Manual*, 10th Edition. The queue analysis will then be performed based on the methodology outlined in the *Transportation and Land Development*, 1988, published by ITE. The analysis will determine the required vehicular queue storage lengths.

Queuing analysis was performed for the fast food restaurant with drive through facility based on data collection at similar facilities. These included the following:

- Dunkin Donuts: 1601 E Sunrise Blvd, Fort Lauderdale, FL 33304
- Starbucks: 2309 N Federal Hwy, Fort Lauderdale, FL 33305

These locations were selected based on the following criteria: a) sites were located along major roadways with traffic volumes similar to Oakland Park Boulevard, b) sites had other Dunkin Donuts or Starbucks locations within a certain distance from them similar to the proposed Ram development site, c) sites were located in centers adjacent to other retail uses, and d) sites provided a drive-through facility with sufficient stacking within the site to avoid spillback onto the adjacent roadways to estimate a true demand.

Multimodal Documentation

McMahon will document the existing sidewalk, bicycle and transit facilities along the study roadways. McMahon will include reference to multimodal projects along Oakland Park Boulevard and along Dixie Highway, as appropriate.

Internal Site Walkability

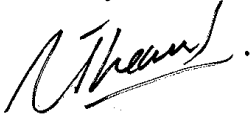
McMahon will document the proposed sidewalk connectivity locations within the site.

Report

The study methodology and findings will be summarized in a report.

Should you have any questions or comments regarding this methodology, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'N. Lercari', followed by a period.

Natalia T. Lercari, P.E.
Senior Project Manager

NTL/cec - Attachment

ATTACHMENT A

WALMART APPROVAL INFORMATION

DEVELOPMENT ORDER OF THE CITY OF OAKLAND PARK, FLORIDA

APPLICANT: Wal-Mart Stores East, L.P.

FOR PROPERTY LOCATED AT: 670 E. Oakland Boulevard, Oakland Park, FL

DATE OF COMMISSION MEETINGS: July 1, 2015 / July 22, 2015

TYPE OF ACTION SOUGHT: Conditional Use Approval for a Retail Store with over 40,000 square feet of sales area.

LEGAL DESCRIPTION:

LAUDERDALE HEIGHTS AMD PLAT 16-12 B PT BLK 1 DESC AS: COMM NW COR SEC 26-49-42, S 195, E 25 TO POB, CONT E 125, N 125, E 367.15, S 465, E 150 S 252.71, SW 273 TO INTERSECTION WITH APPROX WATER LINE OF N FORK OF MIDDLE RIVER, NW 23.3 M/L, SW 27.2 M/L, SW 35.8 M/L, NW 67.6 M/L, NW 37 M/L, NW 85.2 M/L, SW 10.31, NW 49.68 TO PI ON CUR, NWLY 95.34 W 71.94 TO PI ON CUR, SWLY 46.08, SW 40.86, SW 71.32, SW 4.75, SW 11.87 TO R/W/L, N 753 M/L TO POB

LAUDERDALE HEIGHTS AMEN PLAT 16-12 B POR BLK 1 DESC AS COMM AT NW COR OF SAID BLK 1, E 517.05, S 35 TO POB, CONT S 465, E 125, N 465, W 125 TO POB

LAUDERDALE HEIGHTS AMD PLAT 16-12 B BLK 1 S 125 OF N 160 OF E 50 OF W 175

THIS MATTER came to be heard before the Town Commission of the City of Oakland Park, Florida on July 1, 2015. The Commission having considered the action sought by the applicant and heard testimony from City staff, representatives and witnesses on behalf of the applicant, and members of the general public. After reviewing the record and hearing the sworn testimony of the witnesses, the Commission finds as follows:

1. The Applicant's application for conditional use is hereby:

 X **GRANTED** subject to the conditions set forth below

 DENIED

The conditions of approval as proffer and agreed to by the Applicant are:

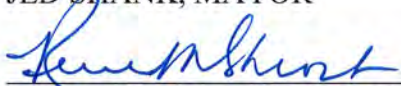
- a) Security: The Applicant agreed to coordinate with the Broward County Sheriff's Office (BSO) to incorporate on a tier basis security on the site.
- b) Access: The Applicant agreed that it shall grant a perpetual easement to the City at the time the building permit is pulled consisting of an easement ten (10) feet in width starting North of the existing seawall and continuing thereafter for the entire length of the site which lies adjacent to the Middle River.
- c) Greeter: A greeter shall be on premises on a daily basis for a minimum of eight (8) hours.

- d) Truck deliveries: Any and all truck deliveries to the site shall be limited to the hours between 7:00 a.m. and 9:00 p.m., in accordance with the citywide Noise Ordinance (Ch. 8, Article 2).
 - e) Landscaping: The Applicant shall post a Letter Of Credit (LOC) at the time the building permit is pulled in the amount of One Hundred Thousand (\$100,000.00) dollars.
 - f) Enhancement Buffer: The Applicant agreed to provide an enhanced buffer by either constructing a 6-8 foot high wall or 8 foot fence in place of the proposed 6 foot fence between the parking lot and adjacent commercial business on the east property line. The proposed gate on the Southeast corner of the property will be changed to continuous fencing without a gate no later than the date the Certificate of Occupancy is issued for the building.
 - g) Truck Traffic: The Applicant agreed that it shall prohibit southbound truck traffic on N.E. 6th Avenue. The Southwest corner of the site will have a right turn only sign posted. The Applicant agreed to modify the site plan to provide a truck spin to allow for the exclusive use of Oakland Park Blvd., for truck traffic. The applicant shall not allow any of its delivery trucks or service trucks to use N.E. 6th Avenue.
 - h) Tree Fund: The Applicant voluntarily agreed to make a monetary contribution in the amount of three hundred thousand (\$300,000.00) to the City's Tree fund to mitigate negative impacts on the City resulting from the Applicant's use of the site. The voluntary contribution shall be paid as a condition precedent to the issuance of a building permit.
2. This Order shall take effect immediately upon issuance by the Mayor.
3. All further development on the property shall be made in accordance with the terms and conditions of this Development Order which is issued nunc pro tunc.

DATED: September 9, 2015



JED SHANK, MAYOR



RENEE M. SHROUT, CITY CLERK



Florida Department of Transportation

RICK SCOTT
GOVERNOR

3400 West Commercial Blvd.
Fort Lauderdale, FL 33309

JIM BOXOLD
SECRETARY

February 16, 2018

THIS PRE-APPLICATION LETTER IS EXTENDED UNTIL – **February 16, 2019**
THIS LETTER IS NOT A PERMIT APPROVAL

Lisa Leonard
Bowman Consulting Group, Ltd.
301 SE Ocean Boulevard, Suite 301
Stuart, FL 34994

Dear Lisa Leonard:

RE: **February 16, 2018** - Pre-application Review for **Category E Driveway** Date of Pre-Application Meeting: **June 23, 2016**
Broward County - City of Oakland Park, Urban; SR 816 (South Side); Sec. # 86090; MP: 7.351
Access Class - 05; Posted Speed - 35 mph; SIS - N;
Request: Right-in/right-out driveway along East Oakland Park Blvd/SR 816 approximately 580 feet east of NE 6th Avenue.

SITE SPECIFIC INFORMATION

Project Name & Address: **Walmart Oakland Park – 670 E Oakland Park Boulevard, Oakland Park, FL**
Applicant/Property Owner: **Wal-Mart Stores East, LP**
Parcel Size: **12.11 Acres** Max. Sq.ft./Proposed LU: **130,000 S.F. Retail**

WE APPROVE YOUR REQUEST

This decision is based on your presentation of the facts, site plan and survey - please see the **conditions** and **comments** below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:

- A minimum driveway length of 50 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided.
- A right turn lane is required and must include space for a bicycle lane per current FDOT design standards.

Comments:

- Drainage mitigation is required for any impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage). A Storm Water Pollution Prevention Plan must be submitted with the application for more than one acre of "disturbed area" as defined by the Florida Department of Environmental Protection (FDEP).
- The applicant shall donate the right-of-way to the Department if right-of-way dedication is required to implement the improvements.
- All driveways not approved in this letter must be fully removed and the area restored.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway system and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Note, this letter does not guarantee permit approval.** The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: <https://gis.dot.state.fl.us/OneStopPermitting>; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.

Please contact Geysa Sosa, P.E. at the District Permits Office with any questions regarding permits – Tel. # 954-777-4377, Fax # 954-677-7893 or e-mail: geysa.sosa@dot.state.fl.us.

Sincerely,

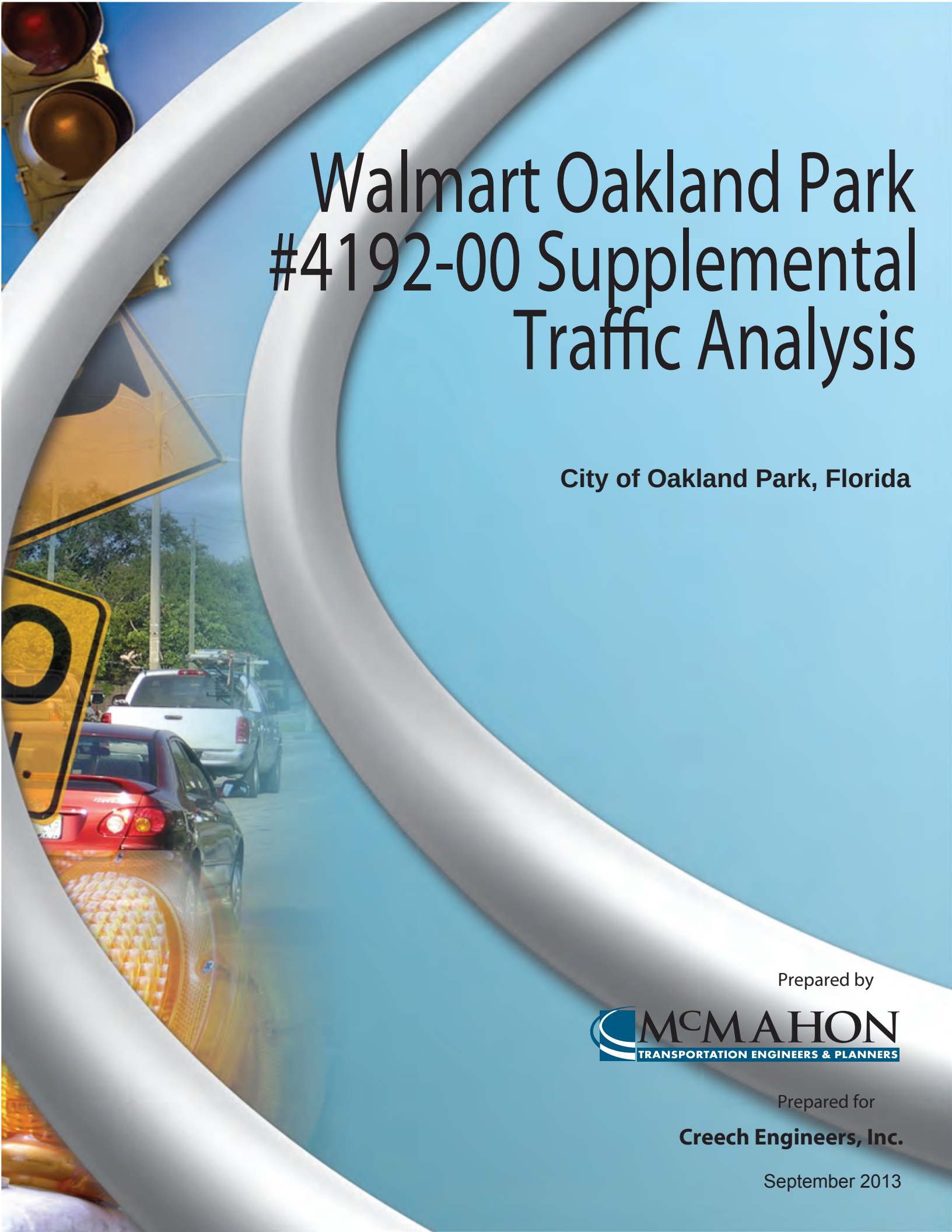
Aidin Massahi, Ph.D.

District Traffic Access Manager

GS/nyh

cc: Roger Lemieux

File: S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2016-06-23\86090 MP 7.351 SR 816 Walmart Oakland Park\86090 MP 7.351_SR 816_Oakland Park Commercial.docx



Walmart Oakland Park #4192-00 Supplemental Traffic Analysis

City of Oakland Park, Florida

Prepared by



Prepared for

Creech Engineers, Inc.

September 2013

TABLE 3
TRIP GENERATION ANALYSIS - ITE
WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS

DAILY

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS			
						IN	OUT	TOTAL			IN	OUT	TOTAL	
EXISTING USES														
Free Standing Discount Store	815	117,692 SF	T = 57.24 (X)	50%	50%	3,369	3,368	6,737	1,145	17%	2,797	2,795	5,592	
Bakery(3)	939	2,174 SF	T = 280.00 (X)	50%	50%	305	304	609	0	0%	305	304	609	
General Light Industrial(4)	110	13,357 SF	T = 6.97 (X)	50%	50%	47	46	93	0	0%	47	46	93	
SUBTOTAL						3,721	3,718	7,439	1,145		3,149	3,145	6,294	
PROPOSED USES														
Free Standing Discount Superstore	813	121,345 SF	T = 50.75 (X)	50%	50%	3,079	3,079	6,158	1,724	28%	2,217	2,217	4,434	
SUBTOTAL						3,079	3,079	6,158	1,724		2,217	2,217	4,434	
NET DIFFERENCE						-642	-639	-1,281	579		-932	-928	-1,860	

AM PEAK HOUR

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS		
						IN	OUT	TOTAL			IN	OUT	TOTAL
EXISTING USES													
Free Standing Discount Store	815	117,692 SF	T = 1.06 (X)	68%	32%	85	40	125	21	17%	75	29	104
Bakery(3)	939	2,174 SF	T = 70.22 (X)	47%	53%	72	81	153	0	0%	72	81	153
General Light Industrial(4)	110	13,357 SF	T = 0.92 (X)	88%	12%	11	1	12	0	0%	11	1	12
SUBTOTAL						168	122	290	21		158	111	269
PROPOSED USES													
Free Standing Discount Superstore	813	121,345 SF	T = 1.85 (X)	56%	44%	125	99	224	63	28%	94	67	161
SUBTOTAL						125	99	224	63		94	67	161
NET DIFFERENCE						-43	-23	-66	42		-64	-44	-108

PM PEAK HOUR

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS		
						IN	OUT	TOTAL			IN	OUT	TOTAL
EXISTING USES													
Free Standing Discount Store	815	117,692 SF	T = 4.98 (X)	50%	50%	293	293	586	100	17%	243	243	486
Bakery(3)	939	2,174 SF	T = 28.00 (X)	50%	50%	31	30	61	0	0%	31	30	61
General Light Industrial(4)	110	13,357 SF	T = 0.97 (X)	12%	88%	2	11	13	0	0%	2	11	13
SUBTOTAL						326	334	660	100		276	284	560
PROPOSED USES													
Free Standing Discount Superstore	813	121,345 SF	T = 4.35 (X)	49%	51%	259	269	528	148	28%	185	195	380
SUBTOTAL						259	269	528	148		185	195	380
NET DIFFERENCE						-67	-65	-132	48		-91	-89	-180

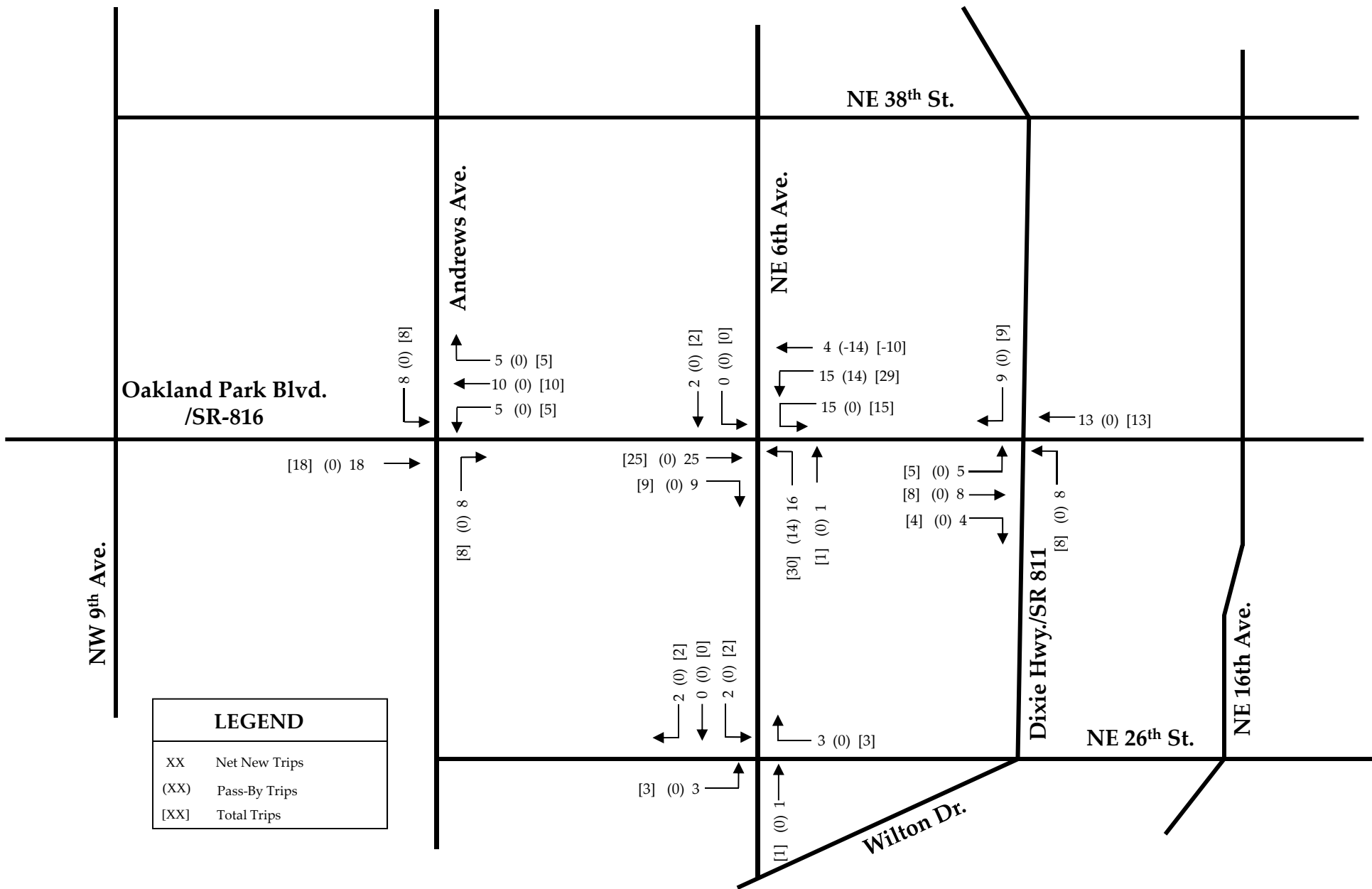
(1) Source: ITE Trip Generation Manual, 9th Edition.

(2) Source: ITE Trip Generation Manual, 9th Edition.

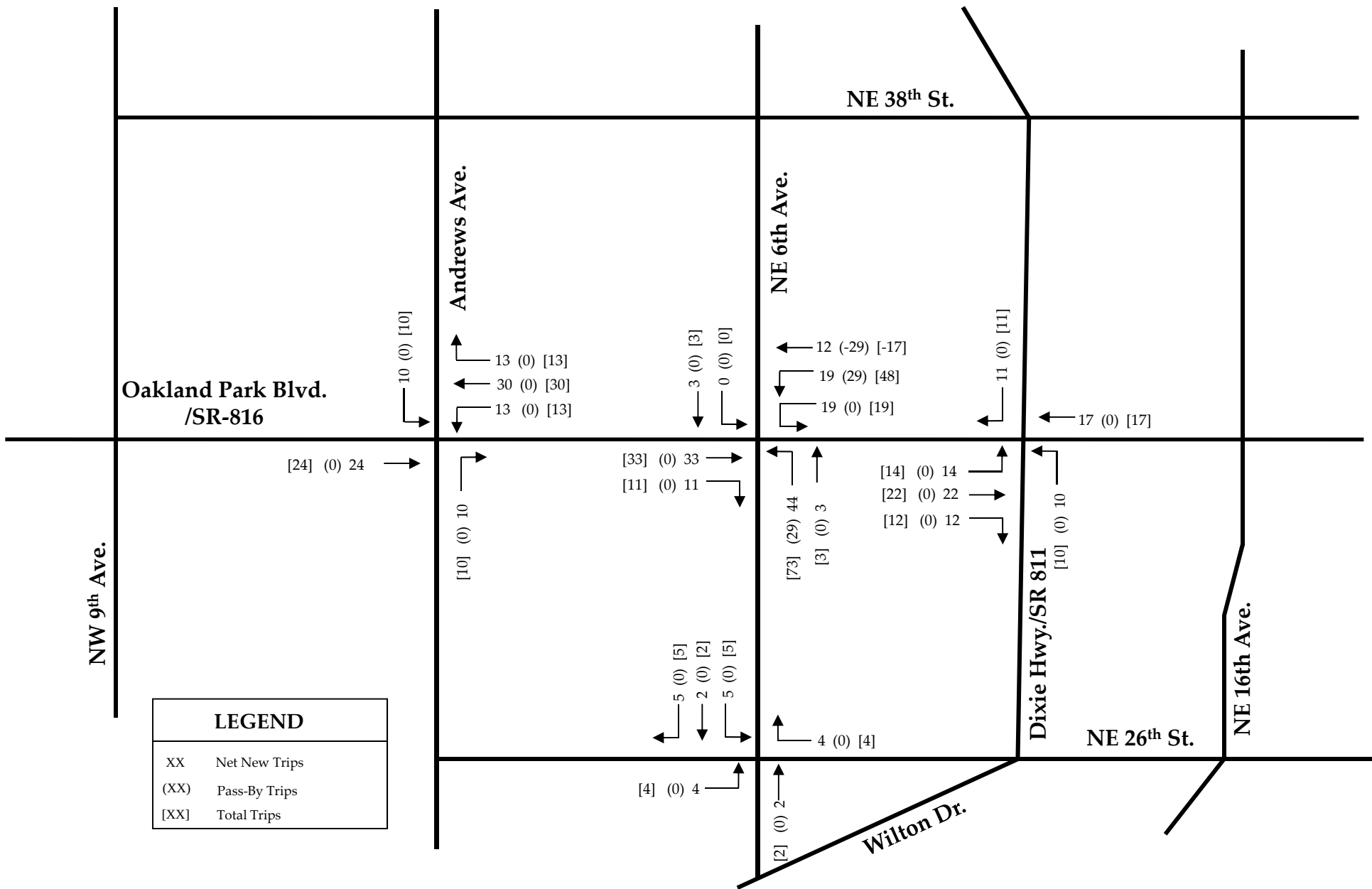
(3) Total Holsum Bakery building is 15,531 square feet. Sales portion is approximately 14 percent (15,531*0.14 = 2,174 square feet). Weekday rate T = 280.00(X) calculated based on PM peak hour rate being equal to 10 percent of daily rate.

(4) Total Holsum Bakery building is 15,531 square feet. Distribution portion is approximately 86 percent (15,531*0.86 = 13,357 square feet).





McMAHON
TRANSPORTATION ENGINEERS & PLANNERS



WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS



McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

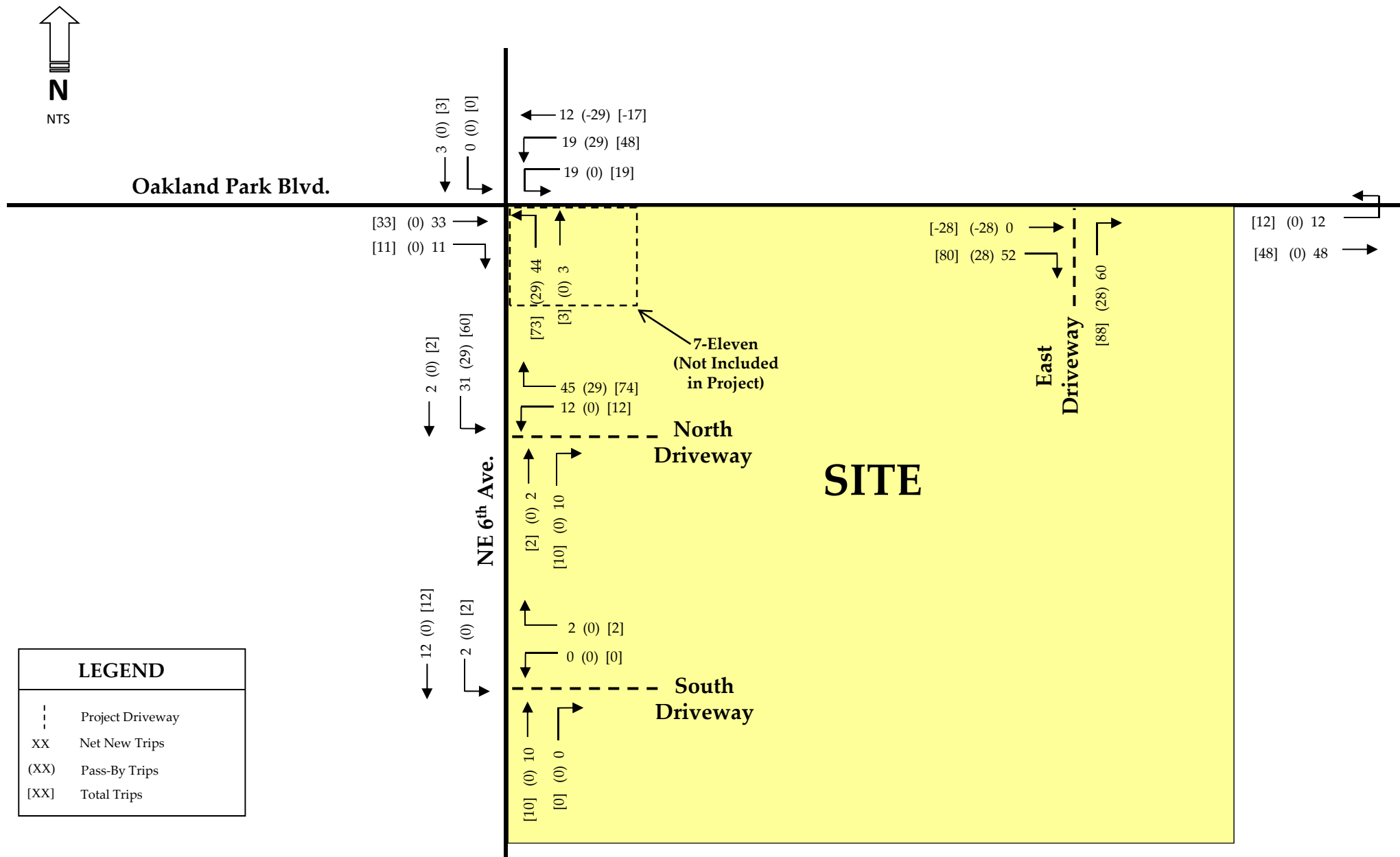
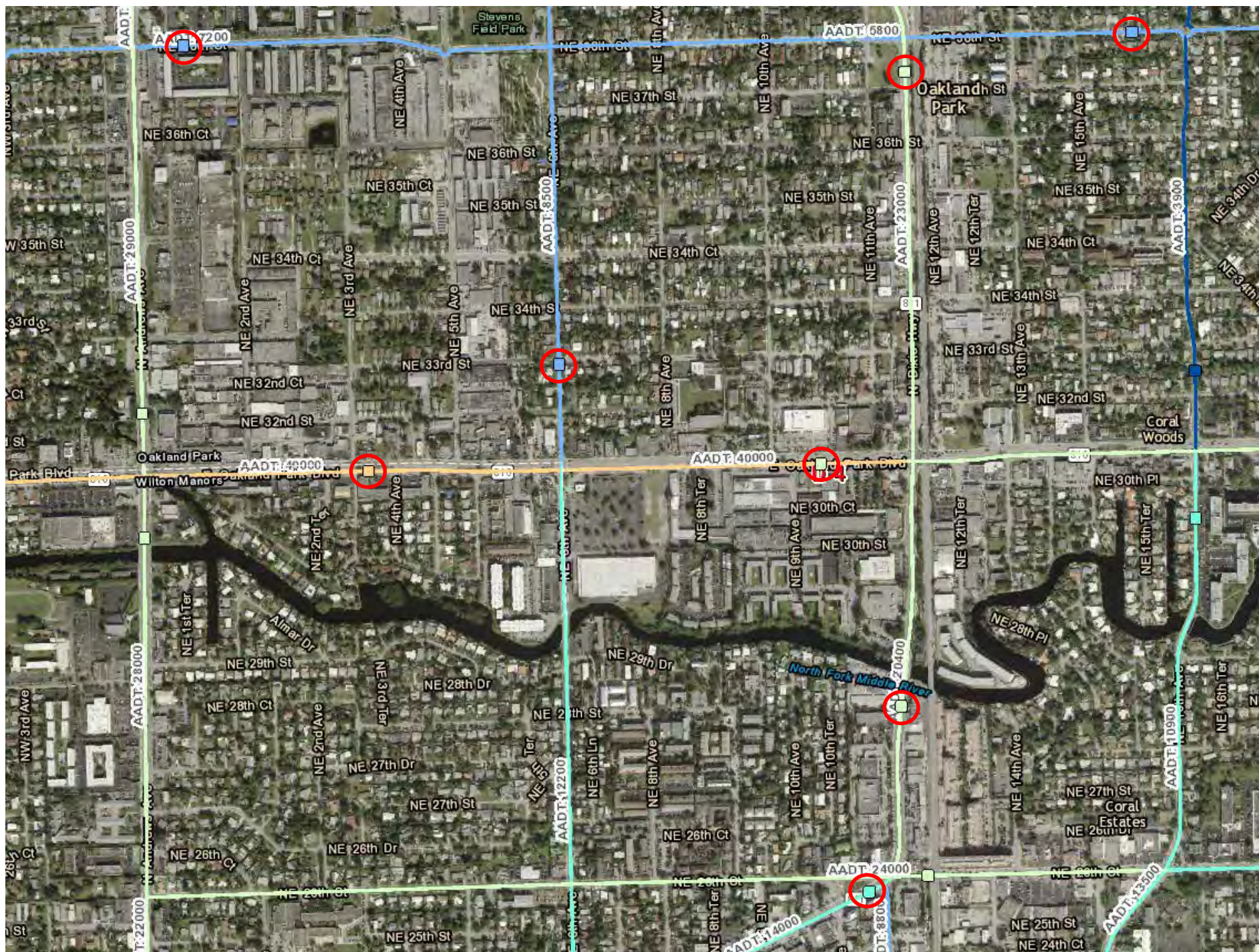


Figure 11
 Additional Driveway Trips – PM Peak Hour
WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS
 City of Oakland Park, Florida

ATTACHMENT B

GROWTH RATE INFORMATION



FDOT STATION	LOCATION	2013 AADT	2018 AADT
86-0022	SR 816/Oakland Park Boulevard, E of Andrews Avenue	44,500	49,000
86-5067	SR 816/Oakland Park Boulevard, W of SR 811/Dixie Highway	38,000	40,000
86-9070	NE 6 th Avenue, N of SR 816/Oakland Park Boulevard	6,400	8,500
86-0425	SR 811/Dixie Highway, S of SR 816/Oakland Park Boulevard	19,700	20,400
86-5074	SR 811/Dixie Highway, 200' S of NE 38 th Street	21,500	23,000
86-9072	NW 38 th Street, E of Andrews Avenue	7,300	7,200
86-9576	NE 38 th Street, W of NE 16 th Avenue	5,000	5,800
86-0212	SR 811/Wilton Drive, S of NE 26 th Street	16,400	14,000
Total Areawide AADT		158,800	167,900
Areawide Compound Growth Rate		CGR = 1.12%	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0022 - SR 816/OAKLAND PARK BLVD - E OF ANDREWS AVE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	49000	C	E 24500		W 24500	9.00	54.50	4.20
2017	42000	C	E 18000		W 24000	9.00	51.90	4.40
2016	49000	C	E 24500		W 24500	9.00	54.10	4.40
2015	45500	C	E 22500		W 23000	9.00	54.00	4.40
2014	48000	C	E 24500		W 23500	9.00	54.20	4.60
2013	44500	C	E 21500		W 23000	9.00	53.60	4.30
2012	50500	C	E 25500		W 25000	9.00	52.20	4.30
2011	44000	C	E 22000		W 22000	9.00	52.50	3.60
2010	47000	C	E 23500		W 23500	8.35	52.69	3.60
2009	44500	C	E 22500		W 22000	8.53	53.89	3.60
2008	46500	C	E 23000		W 23500	8.81	54.16	8.50
2007	48000	C	E 24500		W 23500	8.63	55.75	8.50
2006	48500	C	E 24500		W 24000	8.40	55.34	2.70
2005	50000	C	E 25000		W 25000	8.20	51.70	2.70
2004	48500	C	E 23500		W 25000	9.10	55.30	2.70
2003	52000	C	E 25500		W 26500	8.60	57.50	2.20

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: 5067 - SR 816/OAKLAND PARK BLVD - W OF SR 811/DIXIE HWY

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	40000	C	E 20000		W 20000	9.00	54.50	4.00
2017	49000	C	E 24000		W 25000	9.00	51.90	4.00
2016	42000	C	E 21000		W 21000	9.00	54.10	4.50
2015	38500	C	E 20000		W 18500	9.00	54.00	4.50
2014	44000	C	E 21000		W 23000	9.00	54.20	6.60
2013	38000	C	E 18000		W 20000	9.00	53.60	2.30
2012	42000	C	E 20000		W 22000	9.00	52.20	2.30
2011	41000	C	E 21500		W 19500	9.00	52.50	7.20
2010	40000	C	E 19500		W 20500	8.35	52.69	7.20
2009	39500	C	E 19500		W 20000	8.53	53.89	5.80
2008	39500	C	E 20500		W 19000	8.81	54.16	5.80
2007	41000	C	E 21000		W 20000	8.63	55.75	8.90
2006	45500	C	E 22500		W 23000	8.40	55.34	2.70
2005	46000	C	E 22500		W 23500	8.20	51.70	3.60
2004	44500	C	E 22500		W 22000	9.10	55.30	3.60
2003	44000	C	E 22000		W 22000	8.60	57.50	3.60

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: 9070 - NE 6 AVENUE, N OF OAKLAND PARK BLVD.

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	8500 S	N	4000	S	4500	9.00	54.50	6.00
2017	8500 F	N	4000	S	4500	9.00	51.90	6.20
2016	8500 C	N	4000	S	4500	9.00	54.10	2.90
2015	6600 V		0		0	9.00	54.00	3.40
2014	6500 R					9.00	54.20	7.40
2013	6400 T		0		0	9.00	53.60	7.60
2012	6400 S		0		0	9.00	52.20	5.90
2011	6400 F		0		0	9.00	52.50	6.30
2010	6400 C	N	0	S	0	8.35	52.69	9.30
2009	6600 F		0		0	8.53	53.89	5.30
2008	6800 C	N	0	S	0	8.81	54.16	6.50
2007	6400 C	N	0	S	0	8.63	55.75	4.80
2006	8800 C	N	0	S	0	8.40	55.34	2.90
2005	8200 C	N		S		8.20	51.70	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: 0425 - SR 811/OLD DIXIE HWY - S OF OAKLAND PARK BLVD

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2018	20400 C	N	10500	S 9900	9.00	54.50	3.60
2017	20900 C	N	11000	S 9900	9.00	51.90	3.60
2016	21500 C	N	11000	S 10500	9.00	54.10	6.80
2015	18600 C	N	9900	S 8700	9.00	54.00	6.80
2014	20300 C	N	10500	S 9800	9.00	54.20	6.80
2013	19700 C	N	10500	S 9200	9.00	53.60	5.80
2012	19600 C	N	10000	S 9600	9.00	52.20	4.60
2011	18400 C	N	9200	S 9200	9.00	52.50	4.60
2010	18700 C	N	9400	S 9300	8.35	52.69	4.60
2009	20500 C	N	10500	S 10000	8.53	53.89	2.40
2008	20400 C	N	10500	S 9900	8.81	54.16	2.40
2007	19900 C	N	9900	S 10000	8.63	55.75	3.40
2006	21000 C	N	10500	S 10500	8.40	55.34	4.40
2005	21500 C	N	10500	S 11000	8.20	51.70	3.30
2004	20000 C	N	10000	S 10000	9.10	55.30	4.10
2003	19700 C	N	10000	S 9700	8.60	57.50	4.20

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: 5074 - SR 811/DIXIE HWY - 200' S OF NE 38 ST

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2018	23000	C	N 11500	S 11500	9.00	54.50	2.40
2017	23000	C	N 12000	S 11000	9.00	51.90	5.90
2016	22000	C	N 11500	S 10500	9.00	54.10	5.90
2015	29500	C	N 14500	S 15000	9.00	54.00	5.90
2014	24000	C	N 11500	S 12500	9.00	54.20	5.20
2013	21500	C	N 11000	S 10500	9.00	53.60	5.20
2012	21200	C	N 11500	S 9700	9.00	52.20	5.60
2011	21500	C	N 11000	S 10500	9.00	52.50	5.60
2010	19000	C	N 9500	S 9500	8.35	52.69	5.60
2009	23000	C	N 11000	S 12000	8.53	53.89	7.10
2008	23500	C	N 11000	S 12500	8.81	54.16	7.10
2007	23000	C	N 11500	S 11500	8.63	55.75	3.30
2006	22500	C	N 11500	S 11000	8.40	55.34	4.40
2005	23500	C	N 12000	S 11500	8.20	51.70	5.80
2004	23000	C	N 11500	S 11500	9.10	55.30	5.80
2003	23500	C	N 11500	S 12000	8.60	57.50	5.80

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: 9072 - NW 38 STREET, E OF ANDREWS AVENUE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	7200 S	E	3700	W	3500	9.00	54.50	6.00
2017	7200 F	E	3700	W	3500	9.00	51.90	6.20
2016	7200 C	E	3700	W	3500	9.00	54.10	2.90
2015	7500 V		0		0	9.00	54.00	3.40
2014	7400 R					9.00	54.20	7.40
2013	7300 T		0		0	9.00	53.60	7.60
2012	7300 S		0		0	9.00	52.20	5.90
2011	7300 F		0		0	9.00	52.50	6.30
2010	7300 C	E	0	W	0	8.35	52.69	9.30
2009	6700 F		0		0	8.53	53.89	5.30
2008	6900 C	E	0	W	0	8.81	54.16	6.50
2007	7400 C	E	0	W	0	8.63	55.75	4.80
2006	8300 C	E	0	W	0	8.40	55.34	2.90
2005	8100 C	E		W		8.20	51.70	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: 9576 - NE 38TH STREET, W OF NE 16 AVENUE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
----	-----		-----		-----	-----	-----	-----	
2018	5800	T	E	3000	W	2800	9.00	54.50	6.00
2017	5800	S	E	3000	W	2800	9.00	51.90	6.20
2016	5800	F	E	3000	W	2800	9.00	54.10	2.90
2015	5800	C	E	3000	W	2800	9.00	54.00	3.40
2014	5000	X					9.00	54.20	7.40
2013	5000	X		0		0	9.00	53.60	7.60
2012	5000	T		0		0	9.00	52.20	5.90
2011	5000	S		0		0	9.00	52.50	6.30
2010	5000	F		0		0	8.35	52.69	9.30
2009	5000	C	E	0	W	0	8.53	53.89	5.30
2008	4800	C	E	0	W	0	8.81	54.16	6.50
2007	4100	C	E	0	W	0	11.68	57.46	4.80
2006	4100	C	E	0	W	0		2.90	

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: 0212 - SR 811/WILTON DR - S OF NE 26 ST

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	14000	C	N 7300		S 6700	9.00	54.50	4.00
2017	13400	C	N 7400		S 6000	9.00	51.90	4.00
2016	14600	C	N 7000		S 7600	9.00	54.10	4.00
2015	14000	C	N 7200		S 6800	9.00	54.00	5.10
2014	14900	C	N 7100		S 7800	9.00	54.20	5.10
2013	16400	C	N 8500		S 7900	9.00	53.60	5.10
2012	13800	C	N 6900		S 6900	9.00	52.20	2.80
2011	14500	C	N 7700		S 6800	9.00	52.50	2.80
2010	12100	C	N 6200		S 5900	8.35	52.69	2.80
2009	12100	C	N 6200		S 5900	8.53	53.89	7.30
2008	13900	C	N 7400		S 6500	8.81	54.16	7.30
2007	13300	C	N 6600		S 6700	8.63	55.75	2.90
2006	14500	C	N 7300		S 7200	8.40	55.34	4.40
2005	14800	C	N 7300		S 7500	8.20	51.70	3.60
2004	13600	C	N 6800		S 6800	9.10	55.30	3.60
2003	13800	C	N 7100		S 6700	8.60	57.50	3.60

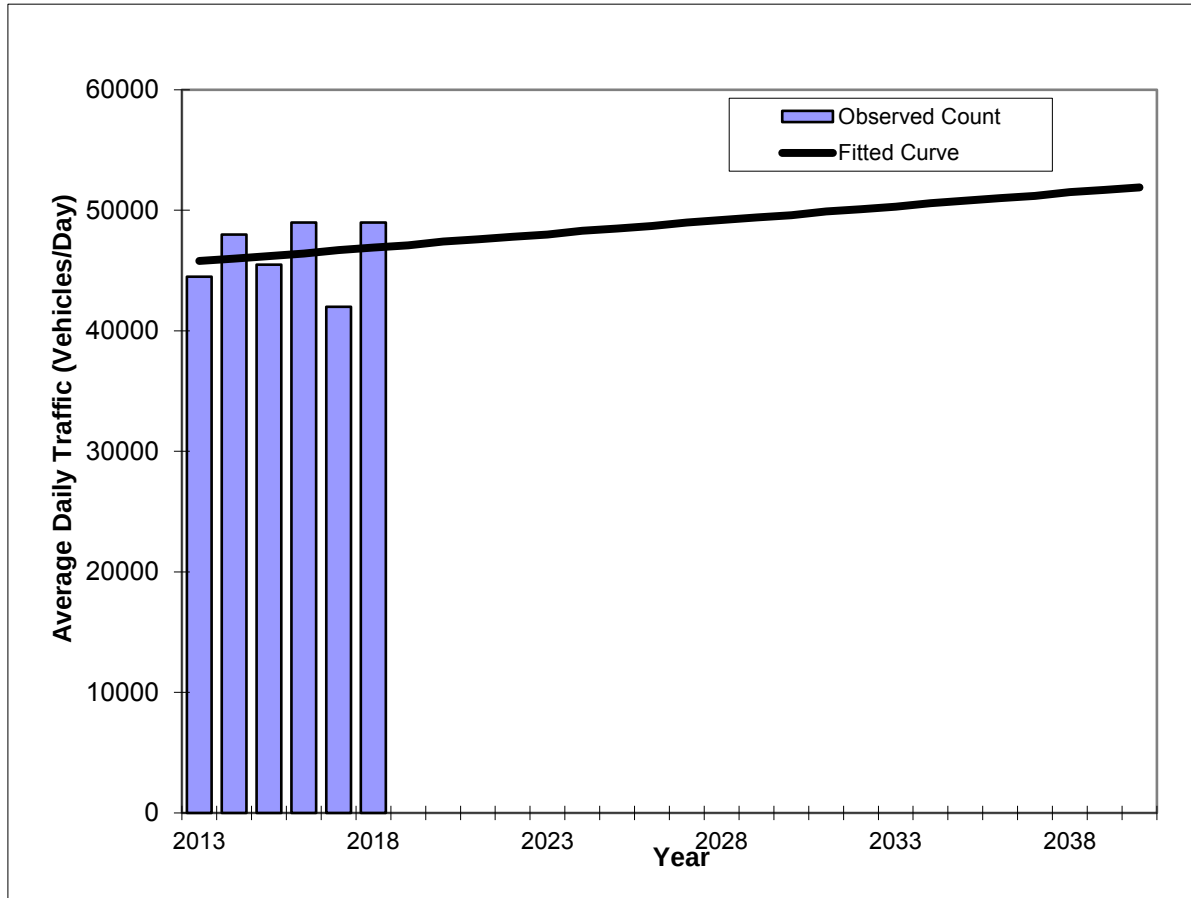
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V3.0

OAKLAND PARK BLVD -- E of Andrews Ave

FIN#	0
Location	3

County:	Broward (86)
Station #:	0022
Highway:	OAKLAND PARK BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	44500	45800
2014	48000	46000
2015	45500	46200
2016	49000	46400
2017	42000	46700
2018	49000	46900
2020 Opening Year Trend		
2020	N/A	47400
2021 Mid-Year Trend		
2021	N/A	47600
2022 Design Year Trend		
2022	N/A	47800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	229
Trend R-squared:	2.30%
Trend Annual Historic Growth Rate:	0.48%
Trend Growth Rate (2018 to Design Year):	0.48%
Printed:	10-Dec-19
Straight Line Growth Option	

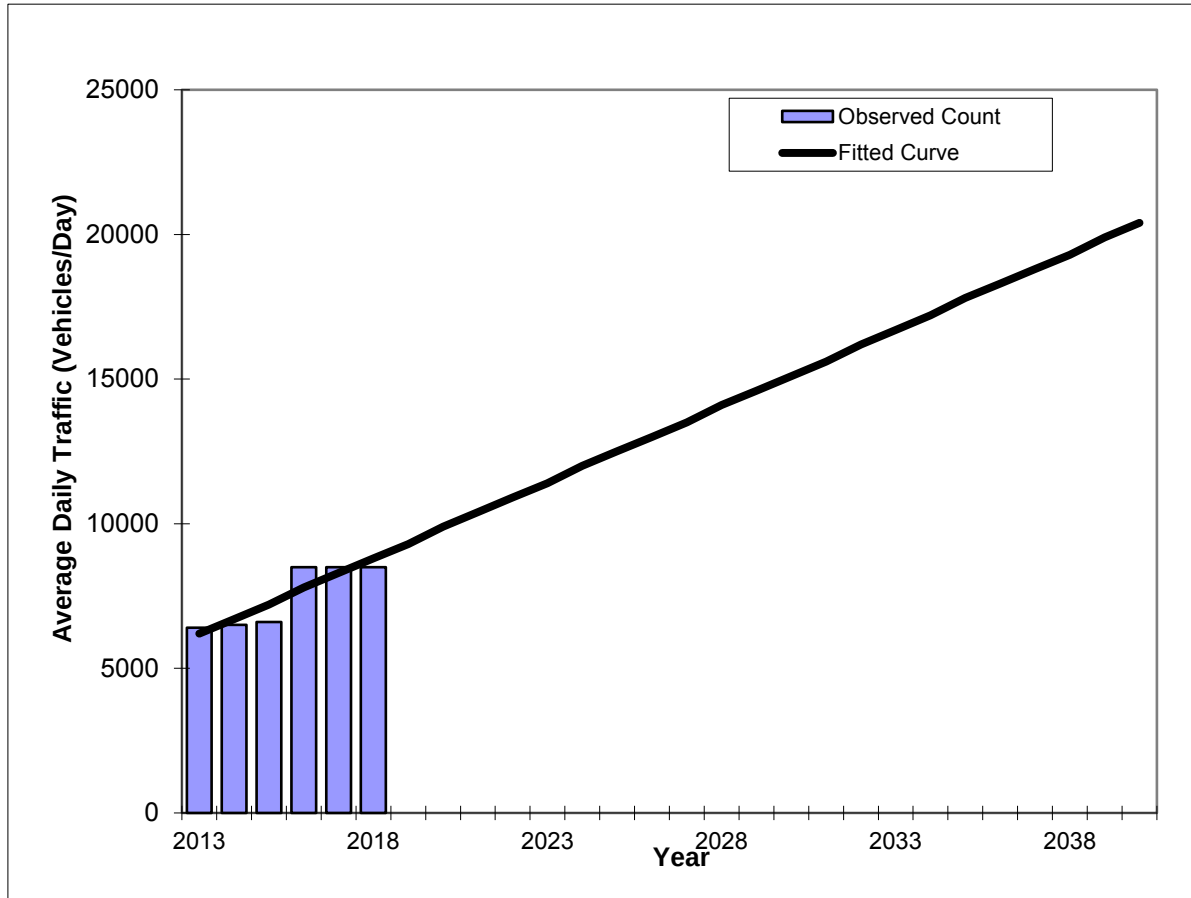
*Axle-Adjusted

Traffic Trends - V3.0

NE 6TH AVE -- N of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9070
Highway:	NE 6TH AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	6400	6200
2014	6500	6700
2015	6600	7200
2016	8500	7800
2017	8500	8300
2018	8500	8800
2020 Opening Year Trend		
2020	N/A	9900
2021 Mid-Year Trend		
2021	N/A	10400
2022 Design Year Trend		
2022	N/A	10900
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	526
Trend R-squared:	80.34%
Trend Annual Historic Growth Rate:	8.39%
Trend Growth Rate (2018 to Design Year):	5.97%
Printed:	10-Dec-19
Straight Line Growth Option	

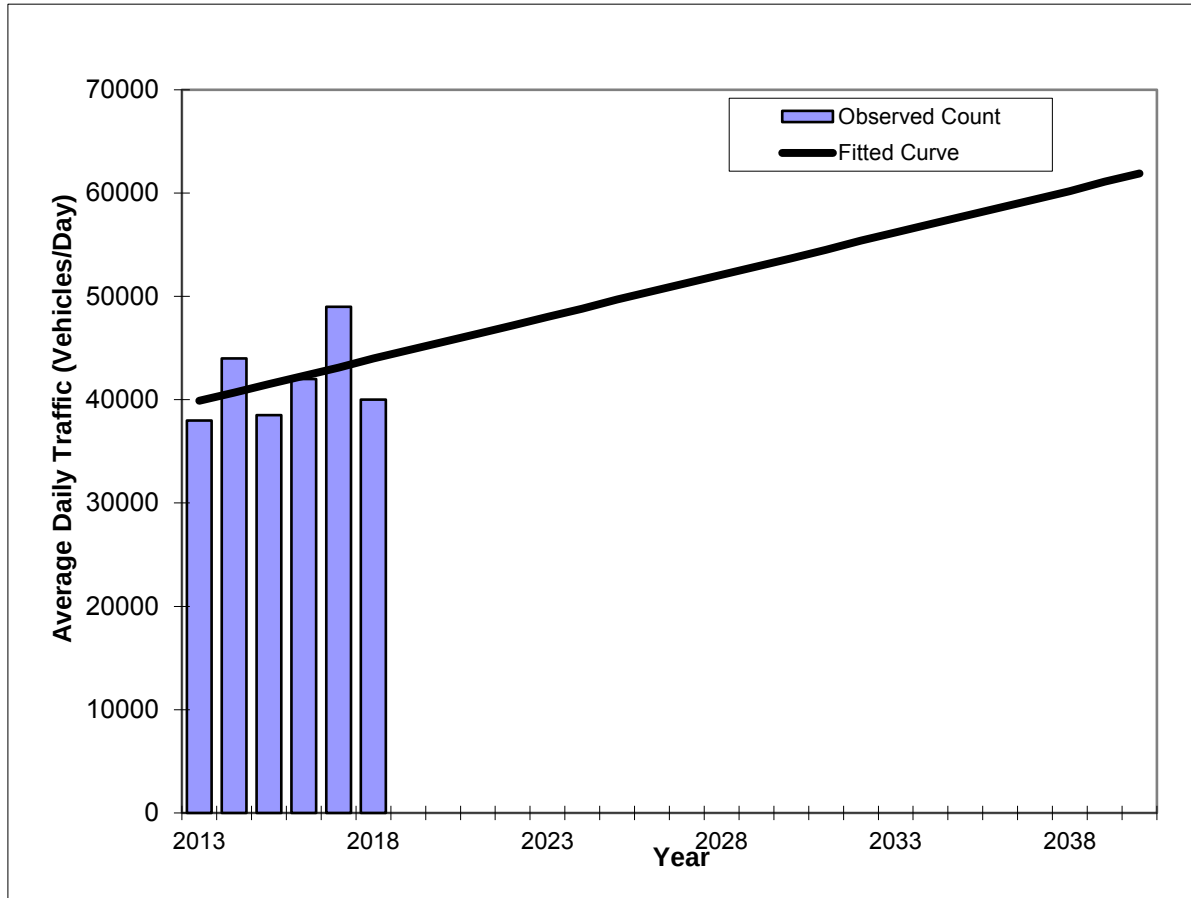
*Axle-Adjusted

Traffic Trends - V3.0

OAKLAND PARK BLVD -- W of Dixie Hwy

FIN#	0
Location	3

County:	Broward (86)
Station #:	5067
Highway:	OAKLAND PARK BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	38000	39900
2014	44000	40700
2015	38500	41500
2016	42000	42300
2017	49000	43100
2018	40000	44000
2020 Opening Year Trend		
2020	N/A	45600
2021 Mid-Year Trend		
2021	N/A	46400
2022 Design Year Trend		
2022	N/A	47200
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	814
Trend R-squared:	13.62%
Trend Annual Historic Growth Rate:	2.06%
Trend Growth Rate (2018 to Design Year):	1.82%
Printed:	10-Dec-19
Straight Line Growth Option	

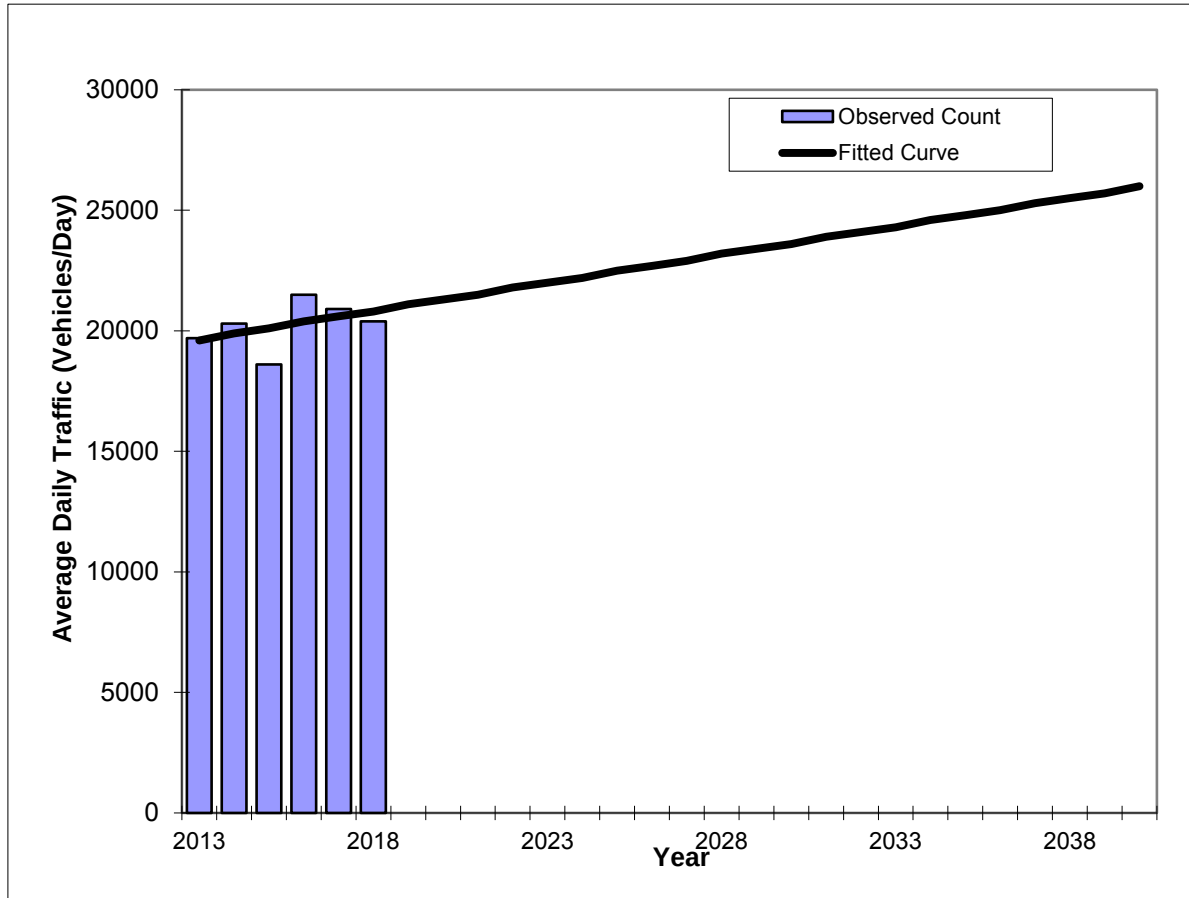
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- S of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0425
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	19700	19600
2014	20300	19900
2015	18600	20100
2016	21500	20400
2017	20900	20600
2018	20400	20800
2020 Opening Year Trend		
2020	N/A	21300
2021 Mid-Year Trend		
2021	N/A	21500
2022 Design Year Trend		
2022	N/A	21800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	234
Trend R-squared:	19.08%
Trend Annual Historic Growth Rate:	1.22%
Trend Growth Rate (2018 to Design Year):	1.20%
Printed:	10-Dec-19
Straight Line Growth Option	

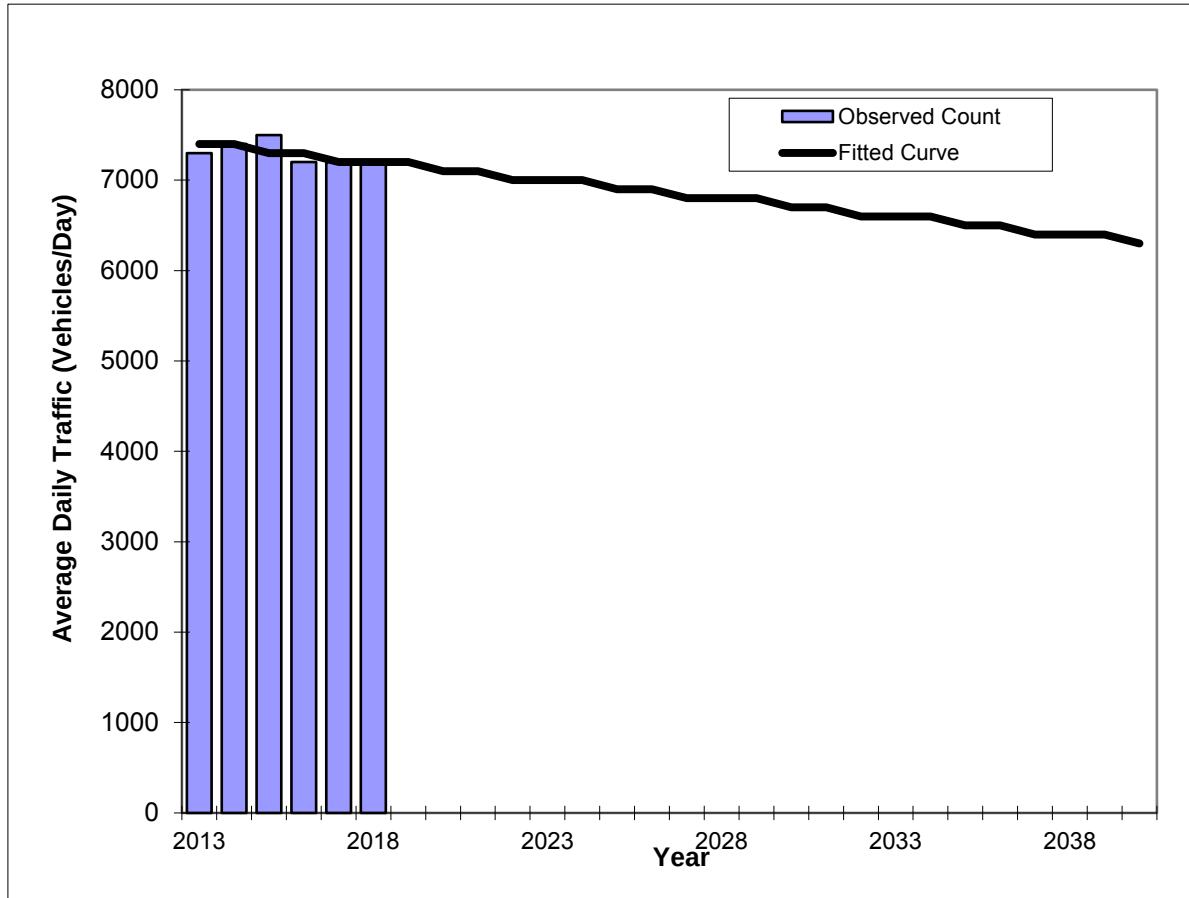
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- E of Andrews Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9072
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	7300	7400
2014	7400	7400
2015	7500	7300
2016	7200	7300
2017	7200	7200
2018	7200	7200
2020 Opening Year Trend		
2020	N/A	7100
2021 Mid-Year Trend		
2021	N/A	7100
2022 Design Year Trend		
2022	N/A	7000
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-40
Trend R-squared:	35.00%
Trend Annual Historic Growth Rate:	-0.54%
Trend Growth Rate (2018 to Design Year):	-0.69%
Printed:	10-Dec-19
Straight Line Growth Option	

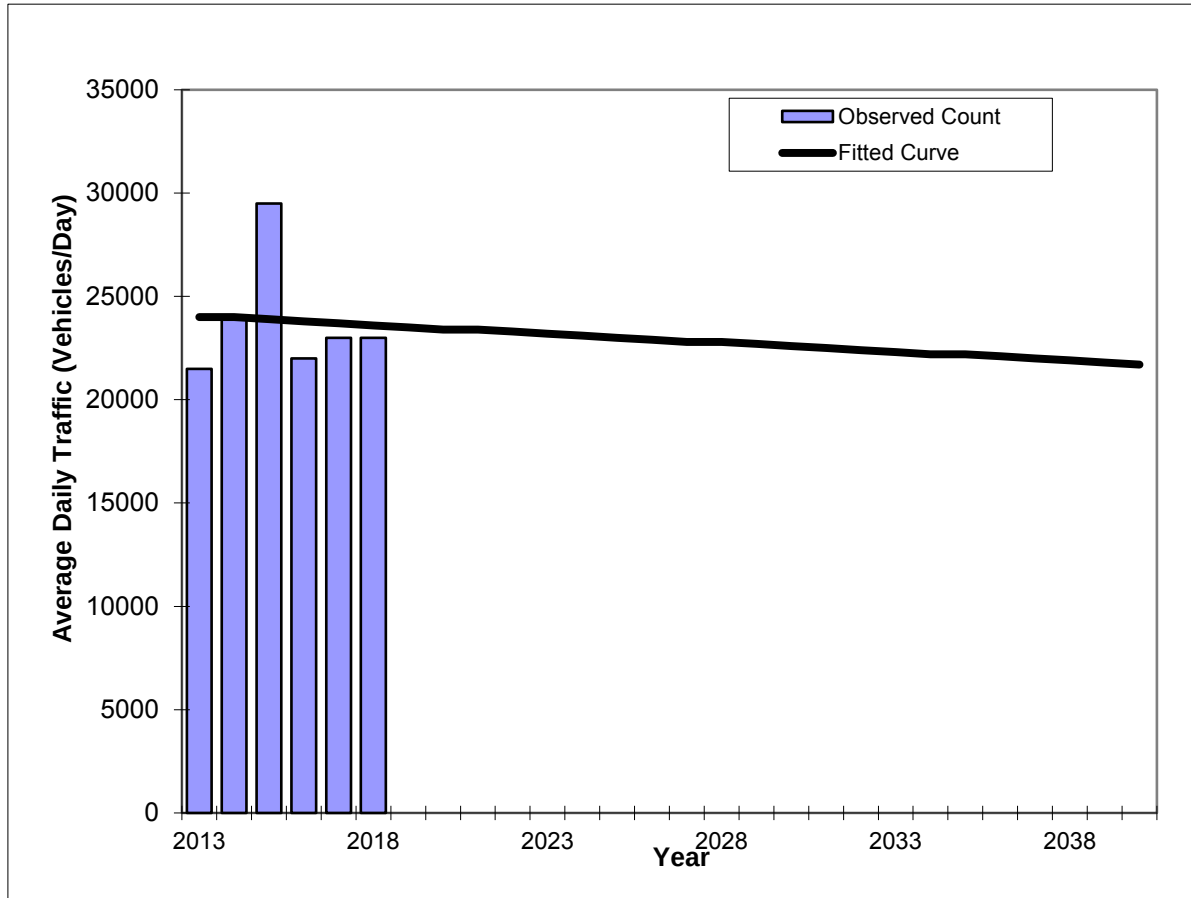
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- 200' S of NE 38 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	5074
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	21500	24000
2014	24000	24000
2015	29500	23900
2016	22000	23800
2017	23000	23700
2018	23000	23600
2020 Opening Year Trend		
2020	N/A	23400
2021 Mid-Year Trend		
2021	N/A	23400
2022 Design Year Trend		
2022	N/A	23300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-86
Trend R-squared:	0.30%
Trend Annual Historic Growth Rate:	-0.33%
Trend Growth Rate (2018 to Design Year):	-0.32%
Printed:	10-Dec-19
Straight Line Growth Option	

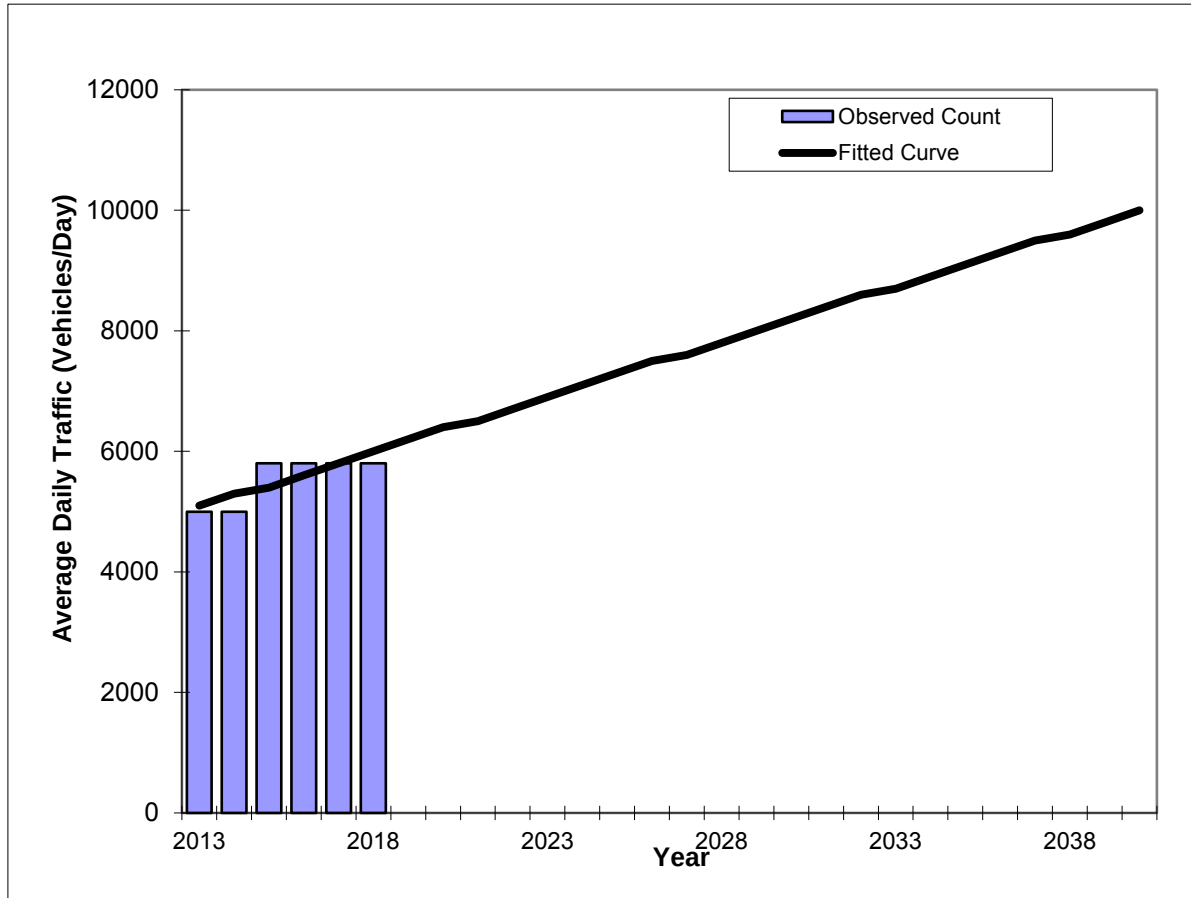
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- W of NE 16 Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9576
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	5000	5100
2014	5000	5300
2015	5800	5400
2016	5800	5600
2017	5800	5800
2018	5800	6000
2020 Opening Year Trend		
2020	N/A	6400
2021 Mid-Year Trend		
2021	N/A	6500
2022 Design Year Trend		
2022	N/A	6700
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	183
Trend R-squared:	68.57%
Trend Annual Historic Growth Rate:	3.53%
Trend Growth Rate (2018 to Design Year):	2.92%
Printed:	10-Dec-19
Straight Line Growth Option	

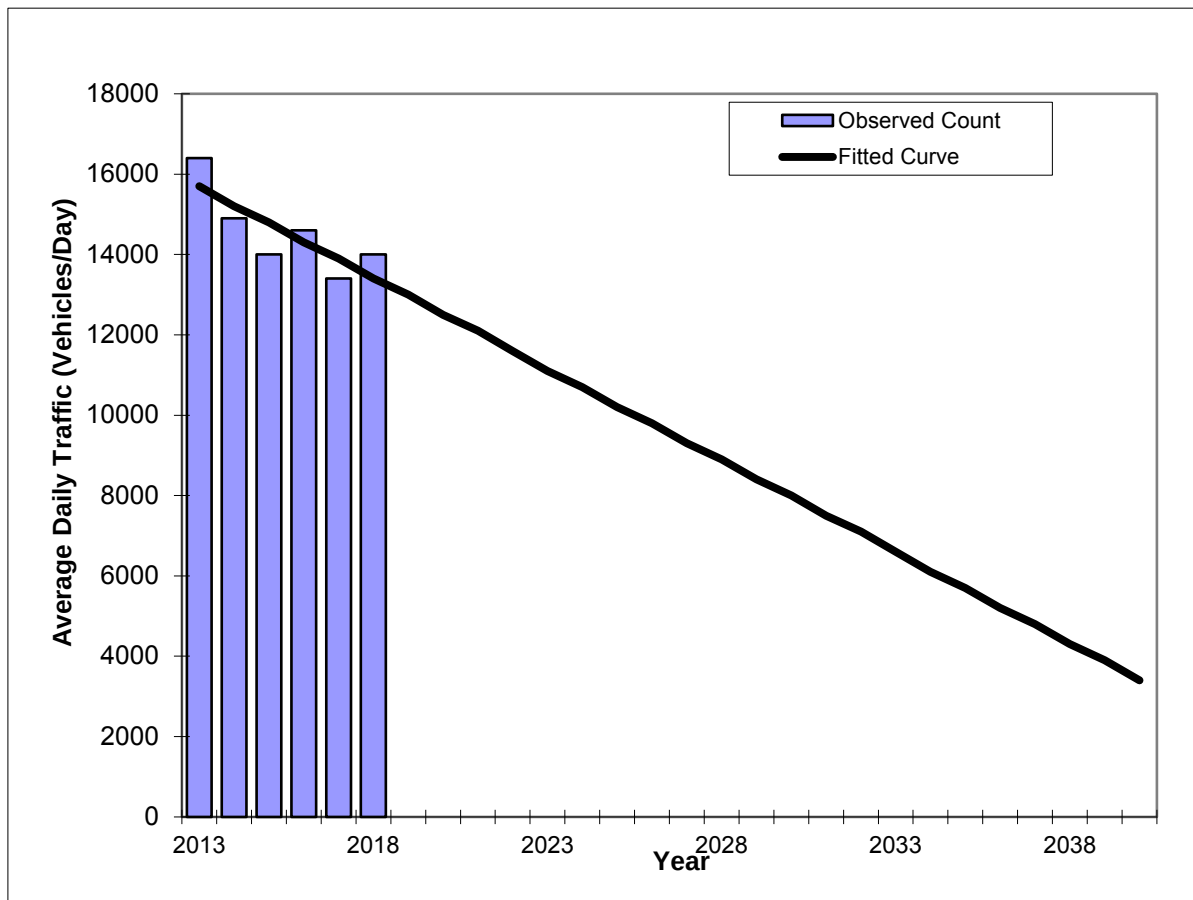
*Axle-Adjusted

Traffic Trends - V3.0

WILTON DRIVE -- S of NE 26 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0212
Highway:	WILTON DRIVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	16400	15700
2014	14900	15200
2015	14000	14800
2016	14600	14300
2017	13400	13900
2018	14000	13400
2020 Opening Year Trend		
2020	N/A	12500
2021 Mid-Year Trend		
2021	N/A	12100
2022 Design Year Trend		
2022	N/A	11600
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-454
Trend R-squared:	65.96%
Trend Annual Historic Growth Rate:	-2.93%
Trend Growth Rate (2018 to Design Year):	-3.36%
Printed:	10-Dec-19
Straight Line Growth Option	

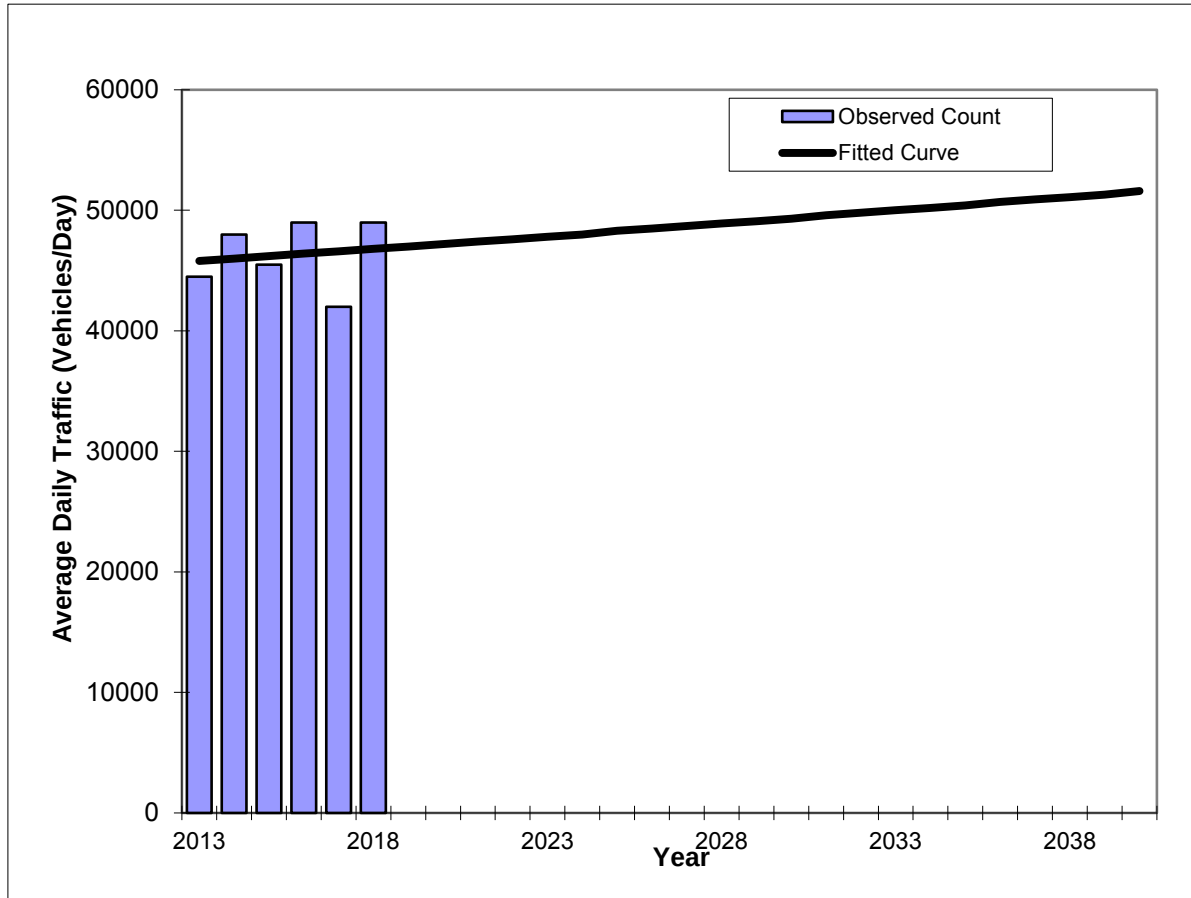
*Axle-Adjusted

Traffic Trends - V3.0

OAKLAND PARK BLVD -- E of Andrews Ave

FIN#	0
Location	3

County:	Broward (86)
Station #:	0022
Highway:	OAKLAND PARK BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	44500	45800
2014	48000	46000
2015	45500	46200
2016	49000	46400
2017	42000	46600
2018	49000	46800
2020 Opening Year Trend		
2020	N/A	47200
2021 Mid-Year Trend		
2021	N/A	47400
2022 Design Year Trend		
2022	N/A	47600
TRANPLAN Forecasts/Trends		

Trend R-squared:	1.80%
Compounded Annual Historic Growth Rate:	0.43%
Compounded Growth Rate (2018 to Design Year):	0.42%
Printed:	10-Dec-19
Exponential Growth Option	

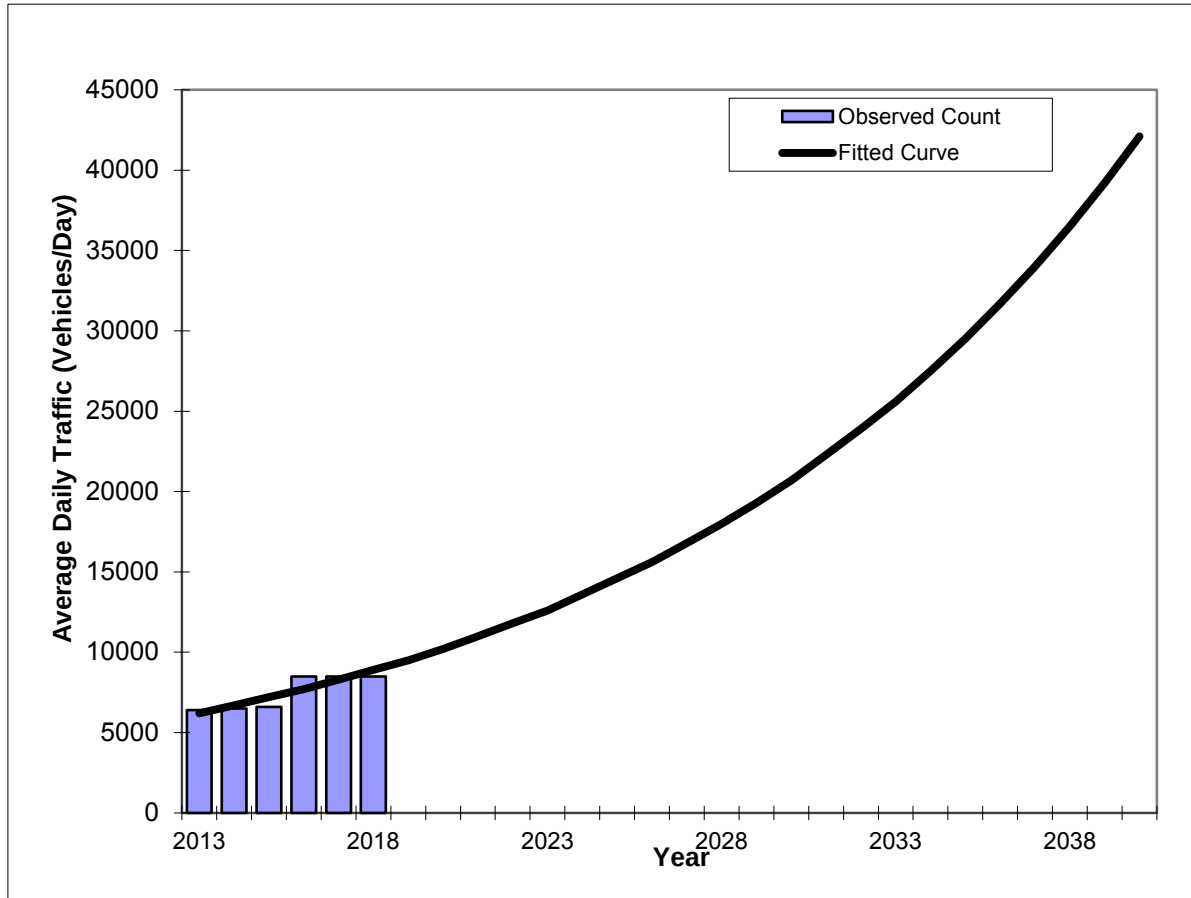
*Axle-Adjusted

Traffic Trends - V3.0

NE 6TH AVE -- N of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9070
Highway:	NE 6TH AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	6400	6200
2014	6500	6700
2015	6600	7200
2016	8500	7700
2017	8500	8300
2018	8500	8900
2020 Opening Year Trend		
2020	N/A	10200
2021 Mid-Year Trend		
2021	N/A	11000
2022 Design Year Trend		
2022	N/A	11800
TRANPLAN Forecasts/Trends		

Trend R-squared:	80.77%
Compounded Annual Historic Growth Rate:	7.50%
Compounded Growth Rate (2018 to Design Year):	7.31%
Printed:	10-Dec-19
Exponential Growth Option	

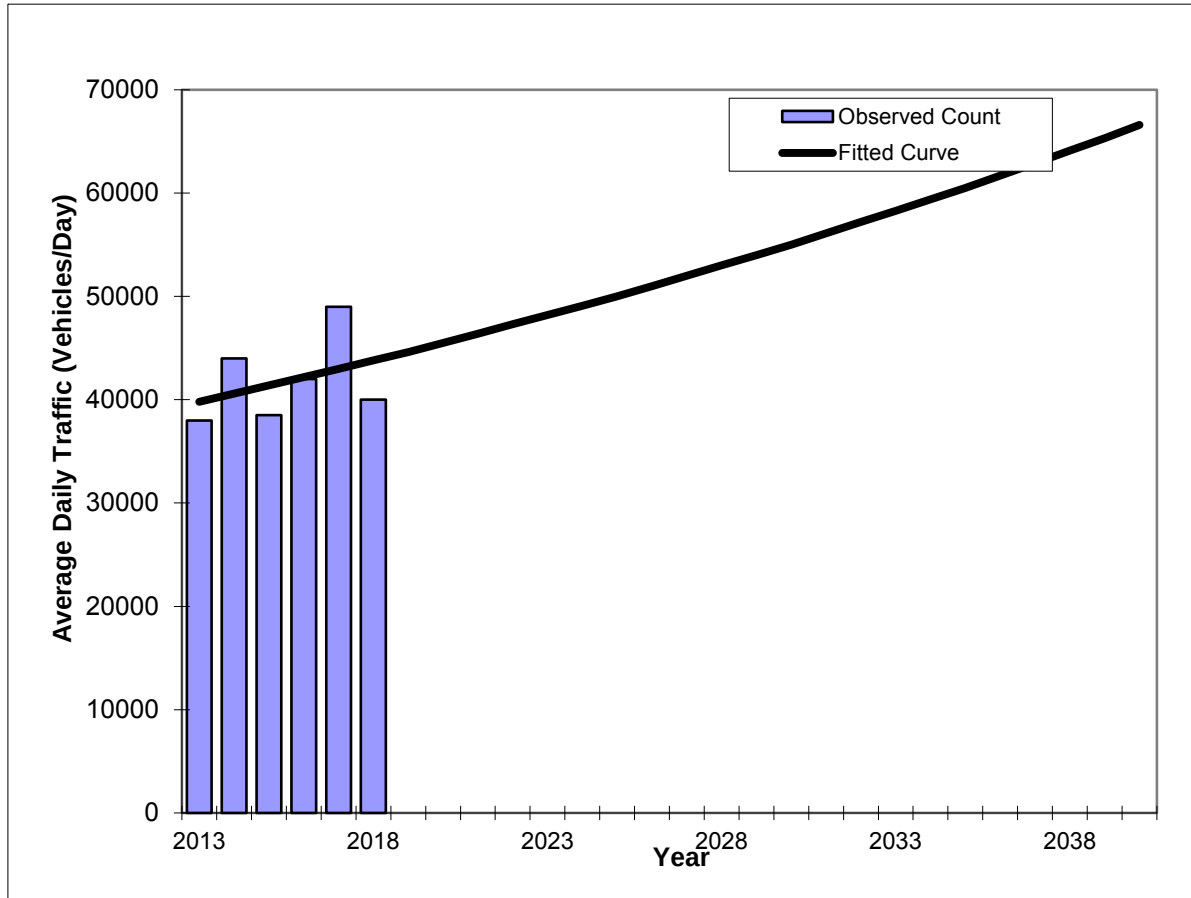
*Axle-Adjusted

Traffic Trends - V3.0

OAKLAND PARK BLVD -- W of Dixie Hwy

FIN#	0
Location	3

County:	Broward (86)
Station #:	5067
Highway:	OAKLAND PARK BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	38000	39800
2014	44000	40600
2015	38500	41400
2016	42000	42200
2017	49000	43000
2018	40000	43800
2020 Opening Year Trend		
2020	N/A	45500
2021 Mid-Year Trend		
2021	N/A	46400
2022 Design Year Trend		
2022	N/A	47300
TRANPLAN Forecasts/Trends		

Trend R-squared:	13.88%
Compounded Annual Historic Growth Rate:	1.93%
Compounded Growth Rate (2018 to Design Year):	1.94%
Printed:	10-Dec-19
Exponential Growth Option	

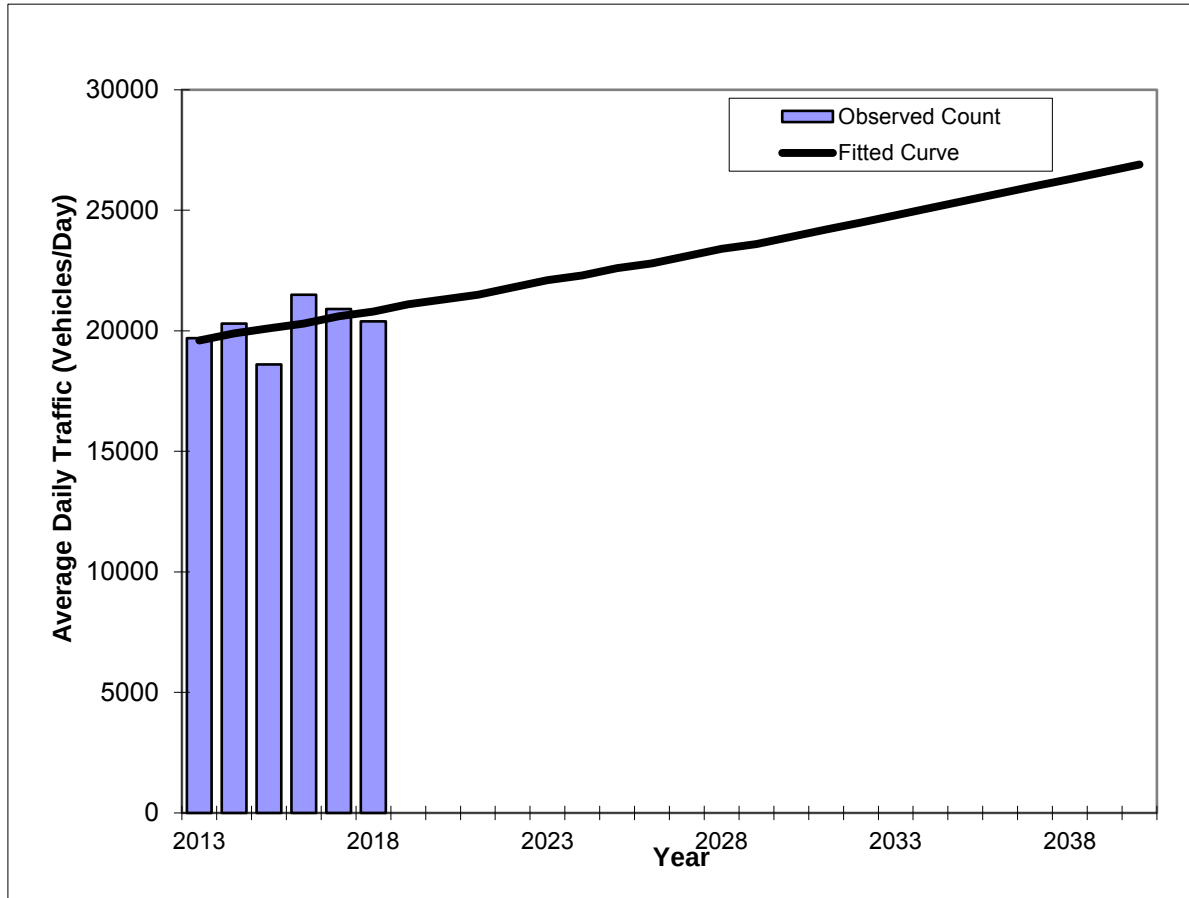
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- S of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0425
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	19700	19600
2014	20300	19900
2015	18600	20100
2016	21500	20300
2017	20900	20600
2018	20400	20800
2020 Opening Year Trend		
2020	N/A	21300
2021 Mid-Year Trend		
2021	N/A	21500
2022 Design Year Trend		
2022	N/A	21800
TRANPLAN Forecasts/Trends		

Trend R-squared:	18.76%
Compounded Annual Historic Growth Rate:	1.20%
Compounded Growth Rate (2018 to Design Year):	1.18%
Printed:	10-Dec-19
Exponential Growth Option	

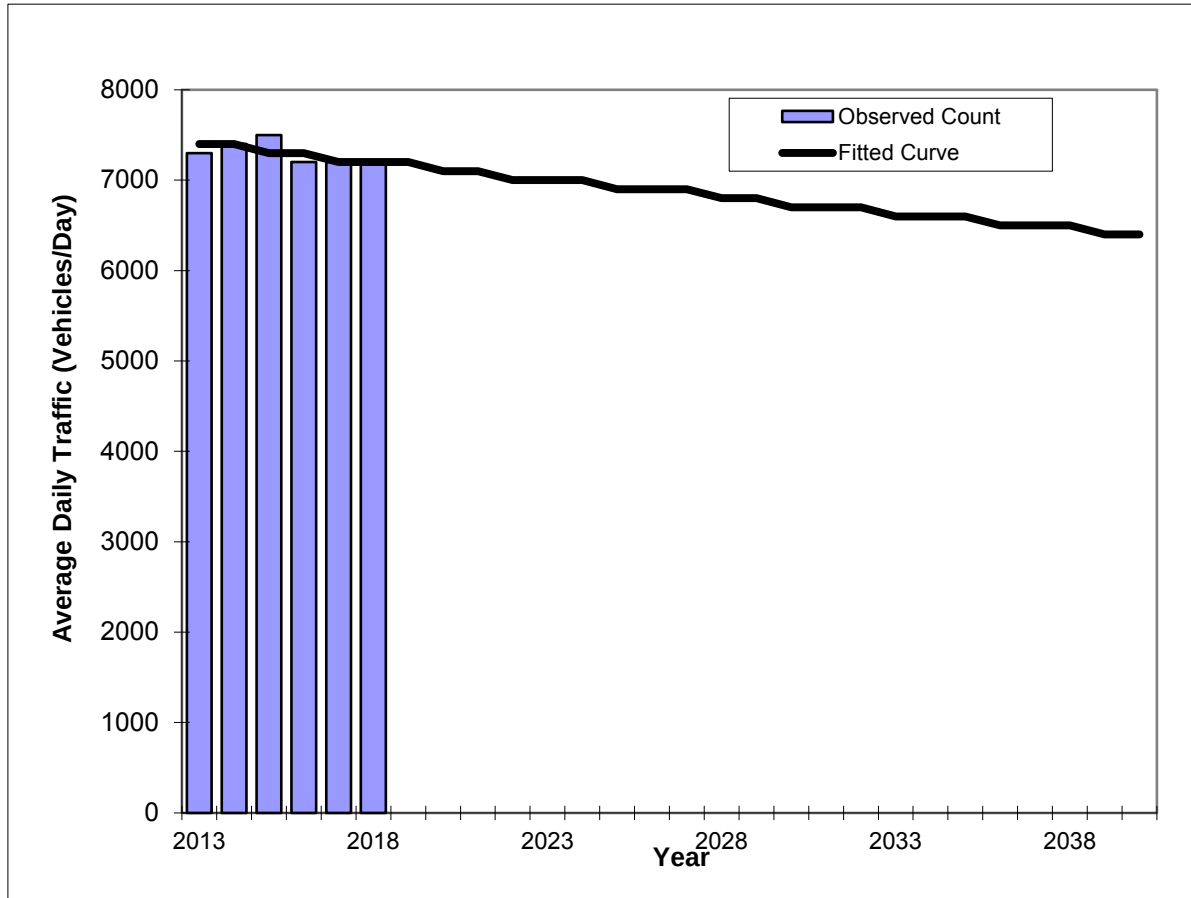
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- E of Andrews Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9072
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	7300	7400
2014	7400	7400
2015	7500	7300
2016	7200	7300
2017	7200	7200
2018	7200	7200
2020 Opening Year Trend		
2020	N/A	7100
2021 Mid-Year Trend		
2021	N/A	7100
2022 Design Year Trend		
2022	N/A	7000
TRANPLAN Forecasts/Trends		

Trend R-squared:	35.43%
Compounded Annual Historic Growth Rate:	-0.55%
Compounded Growth Rate (2018 to Design Year):	-0.70%
Printed:	10-Dec-19
Exponential Growth Option	

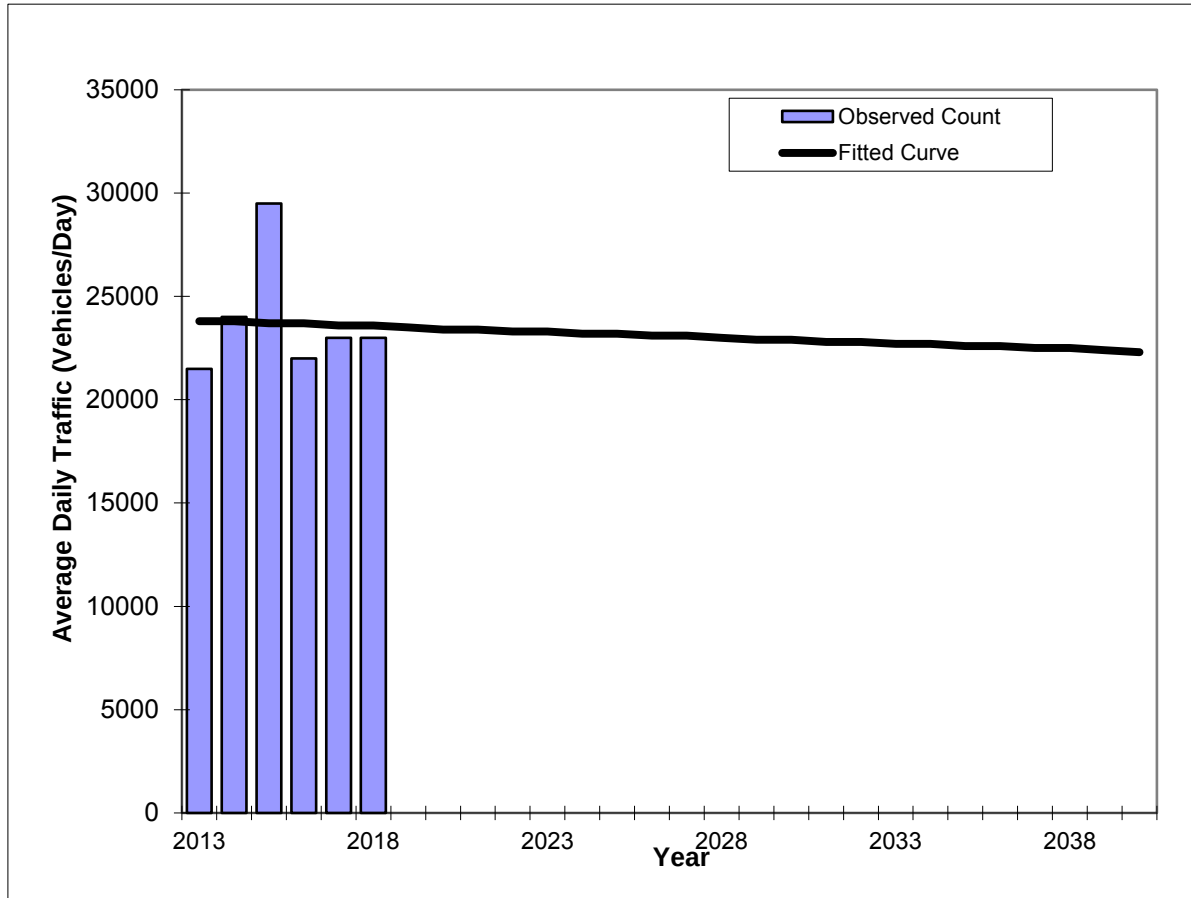
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- 200' S of NE 38 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	5074
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	21500	23800
2014	24000	23800
2015	29500	23700
2016	22000	23700
2017	23000	23600
2018	23000	23600
2020 Opening Year Trend		
2020	N/A	23400
2021 Mid-Year Trend		
2021	N/A	23400
2022 Design Year Trend		
2022	N/A	23300
TRANPLAN Forecasts/Trends		

Trend R-squared:	0.15%
Compounded Annual Historic Growth Rate:	-0.17%
Compounded Growth Rate (2018 to Design Year):	-0.32%
Printed:	10-Dec-19
Exponential Growth Option	

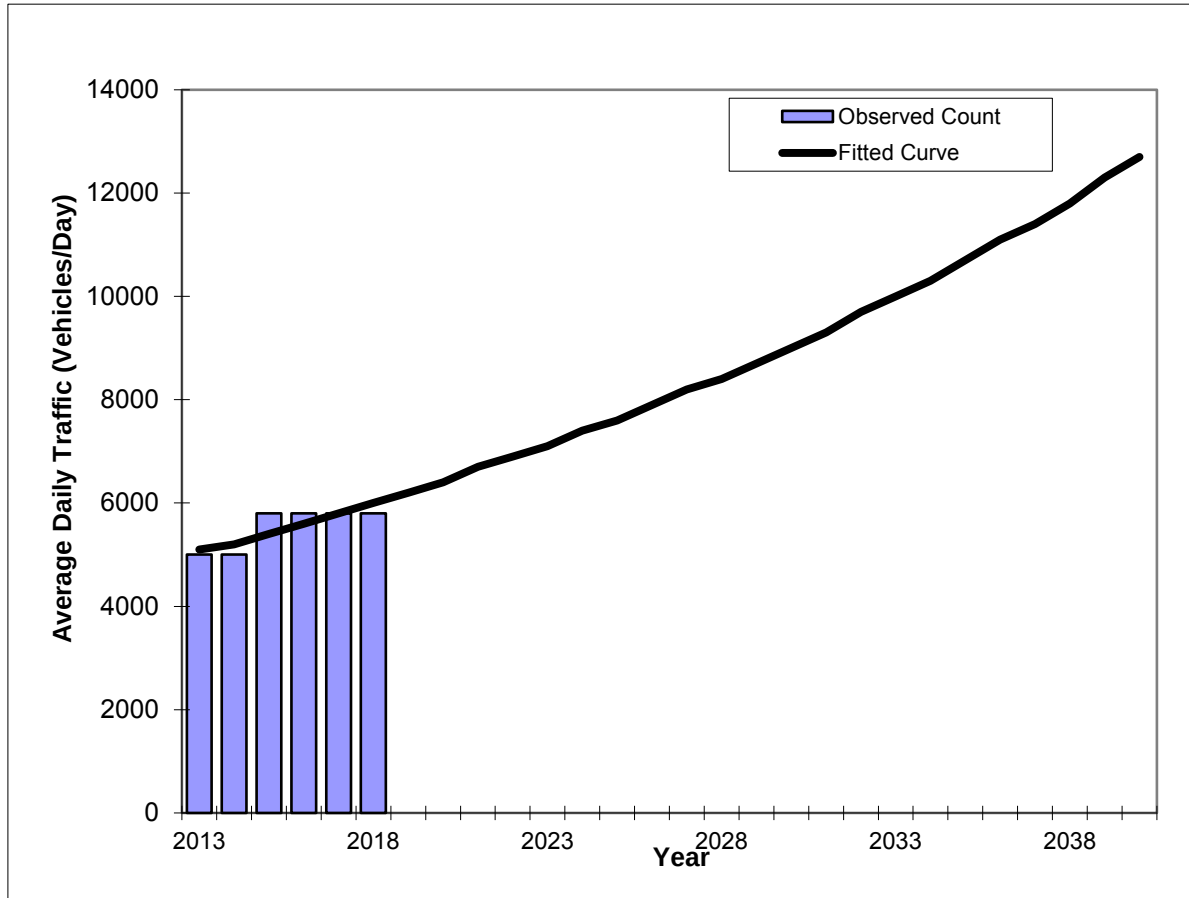
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- W of NE 16 Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9576
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	5000	5100
2014	5000	5200
2015	5800	5400
2016	5800	5600
2017	5800	5800
2018	5800	6000
2020 Opening Year Trend		
2020	N/A	6400
2021 Mid-Year Trend		
2021	N/A	6700
2022 Design Year Trend		
2022	N/A	6900
TRANPLAN Forecasts/Trends		

Trend R-squared:	68.57%
Compounded Annual Historic Growth Rate:	3.30%
Compounded Growth Rate (2018 to Design Year):	3.56%
Printed:	10-Dec-19
Exponential Growth Option	

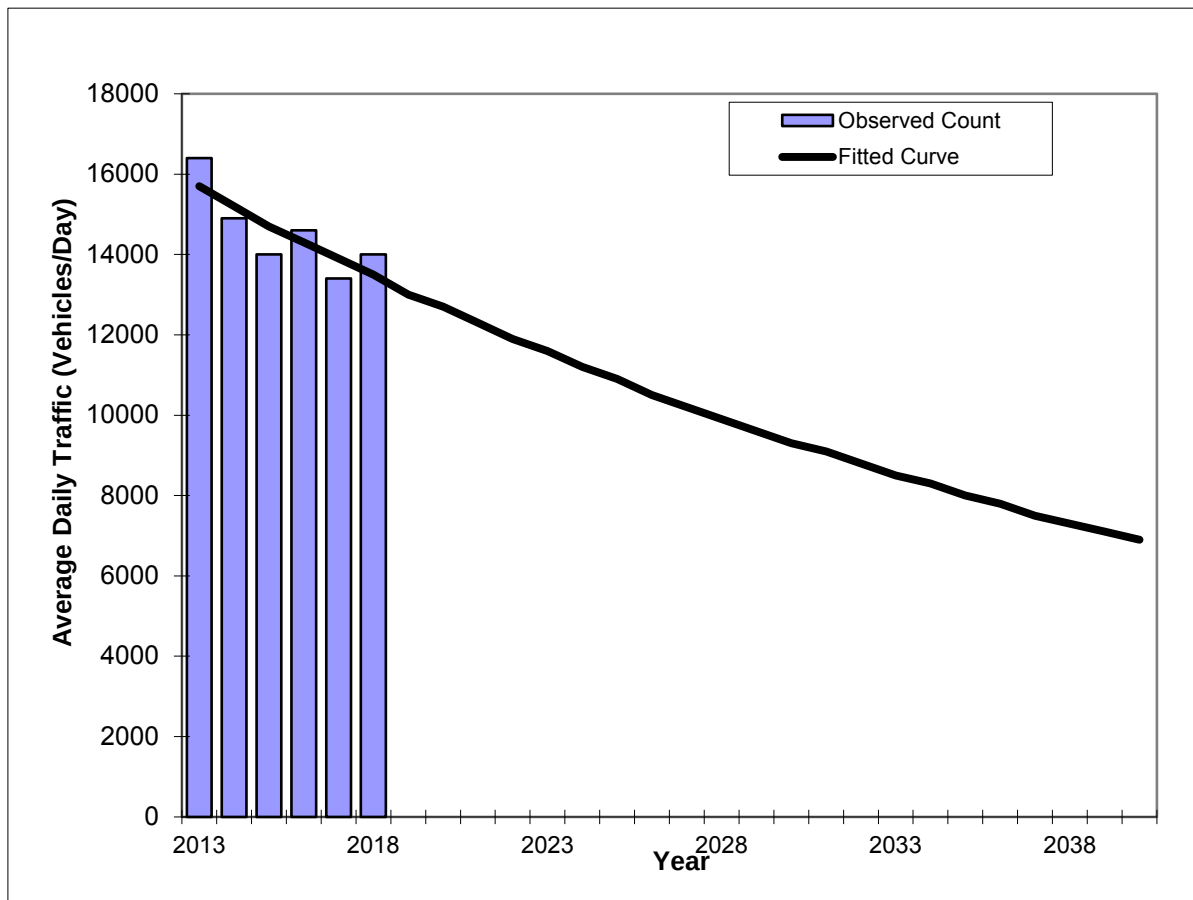
*Axle-Adjusted

Traffic Trends - V3.0

WILTON DRIVE -- S of NE 26 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0212
Highway:	WILTON DRIVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	16400	15700
2014	14900	15200
2015	14000	14700
2016	14600	14300
2017	13400	13900
2018	14000	13500
2020 Opening Year Trend		
2020	N/A	12700
2021 Mid-Year Trend		
2021	N/A	12300
2022 Design Year Trend		
2022	N/A	11900
TRANPLAN Forecasts/Trends		

Trend R-squared:	66.10%
Compounded Annual Historic Growth Rate:	-2.97%
Compounded Growth Rate (2018 to Design Year):	-3.10%
Printed:	10-Dec-19
Exponential Growth Option	

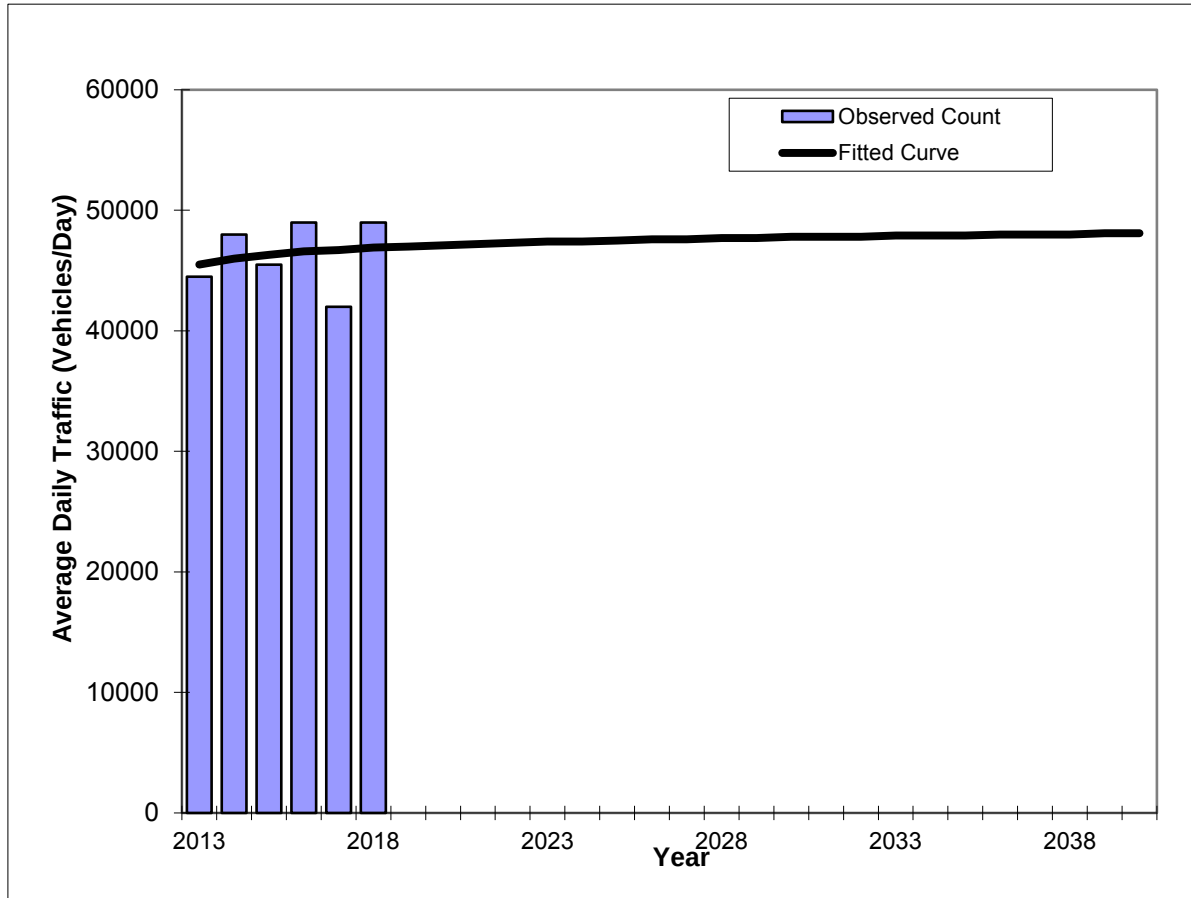
*Axle-Adjusted

Traffic Trends - V3.0

OAKLAND PARK BLVD -- E of Andrews Ave

FIN#	0
Location	3

County:	Broward (86)
Station #:	0022
Highway:	OAKLAND PARK BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	44500	45500
2014	48000	46000
2015	45500	46300
2016	49000	46600
2017	42000	46700
2018	49000	46900
2020 Opening Year Trend		
2020	N/A	47100
2021 Mid-Year Trend		
2021	N/A	47200
2022 Design Year Trend		
2022	N/A	47300
TRANPLAN Forecasts/Trends		

Trend R-squared:	3.46%
Compounded Annual Historic Growth Rate:	0.61%
Compounded Growth Rate (2018 to Design Year):	0.21%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

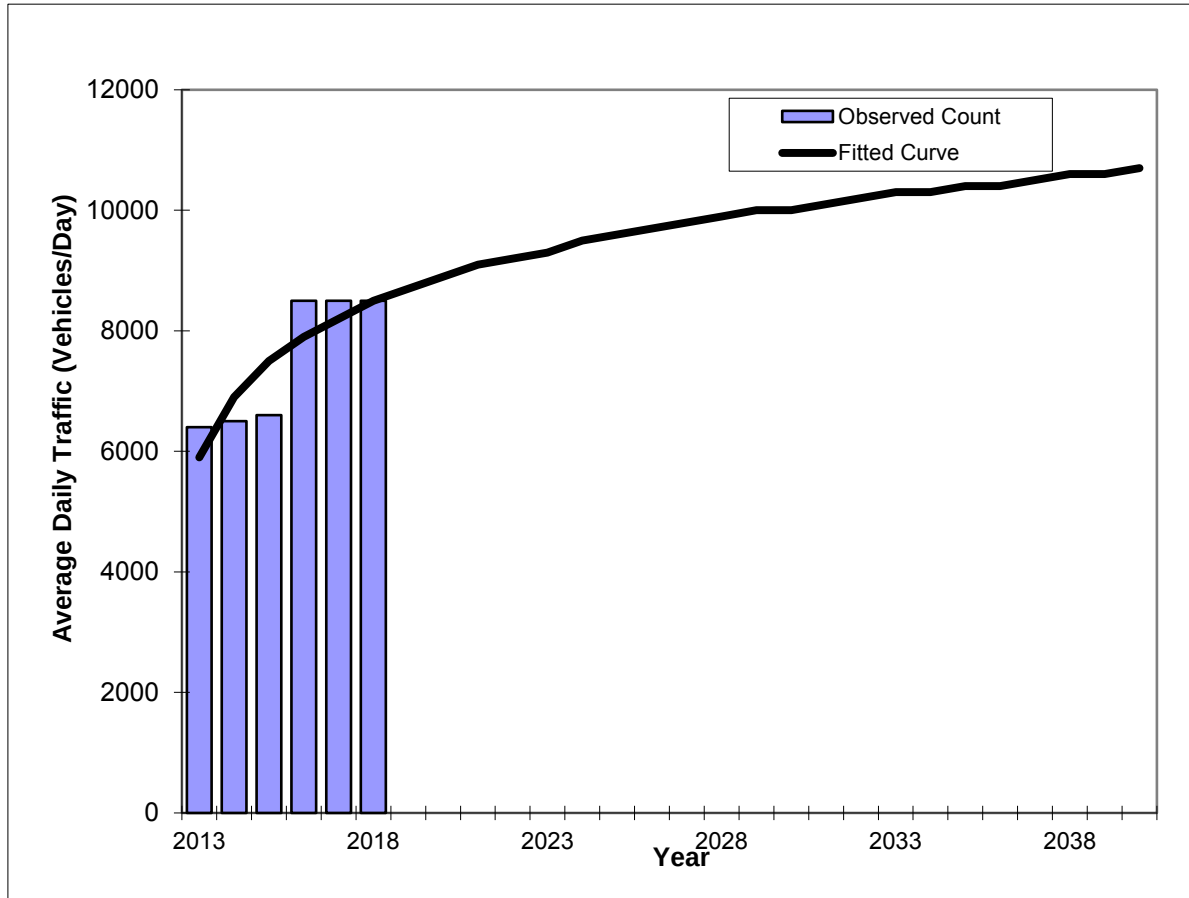
*Axle-Adjusted

Traffic Trends - V3.0

NE 6TH AVE -- N of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9070
Highway:	NE 6TH AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	6400	5900
2014	6500	6900
2015	6600	7500
2016	8500	7900
2017	8500	8200
2018	8500	8500
2020 Opening Year Trend		
2020	N/A	8900
2021 Mid-Year Trend		
2021	N/A	9100
2022 Design Year Trend		
2022	N/A	9200
TRANPLAN Forecasts/Trends		

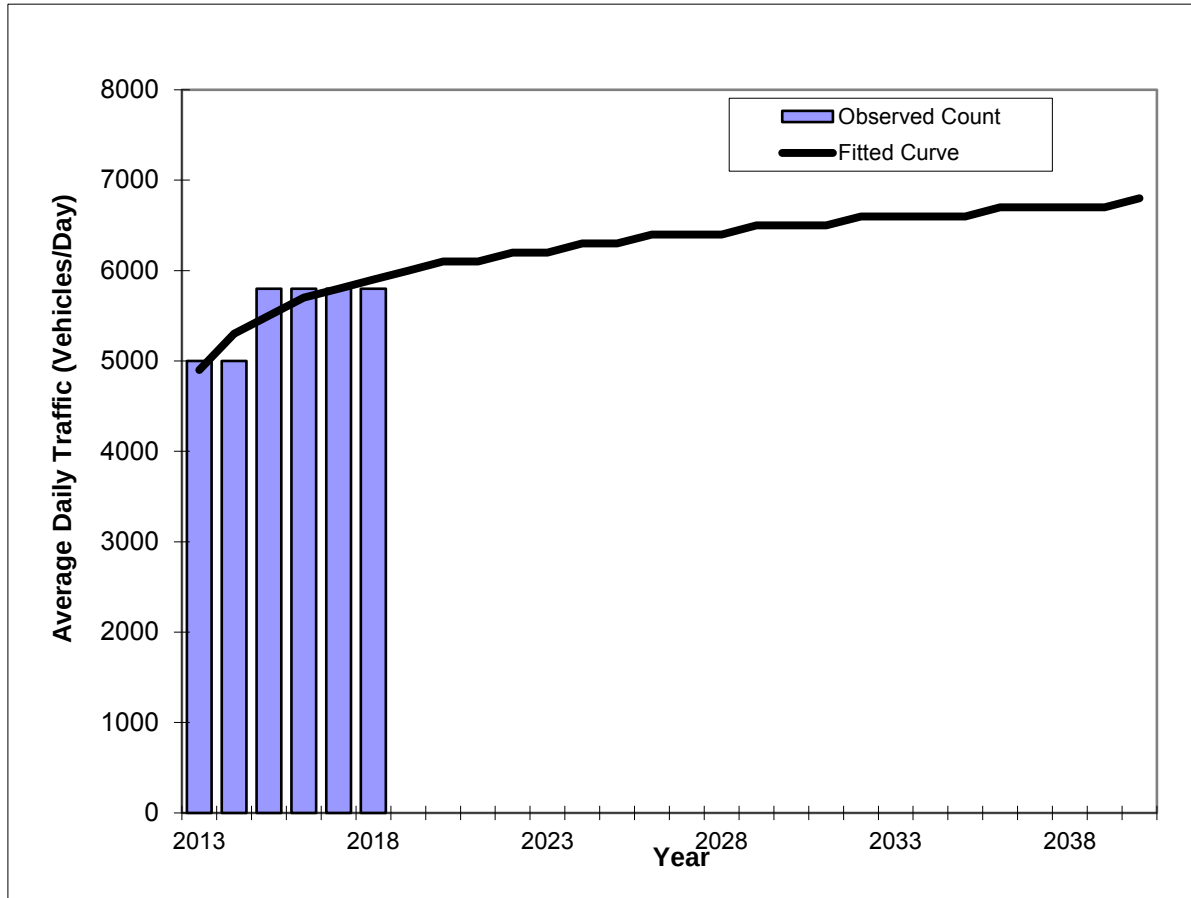
Trend R-squared:	72.97%
Compounded Annual Historic Growth Rate:	7.58%
Compounded Growth Rate (2018 to Design Year):	2.00%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

*Axle-Adjusted

Traffic Trends - V3.0 **NW/NE 38 ST -- W of NE 16 Ave.**

FIN#	0
Location	3

County:	Broward (86)
Station #:	9576
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	5000	4900
2014	5000	5300
2015	5800	5500
2016	5800	5700
2017	5800	5800
2018	5800	5900
2020 Opening Year Trend		
2020	N/A	6100
2021 Mid-Year Trend		
2021	N/A	6100
2022 Design Year Trend		
2022	N/A	6200
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.86%
Compounded Annual Historic Growth Rate:	3.78%
Compounded Growth Rate (2018 to Design Year):	1.25%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

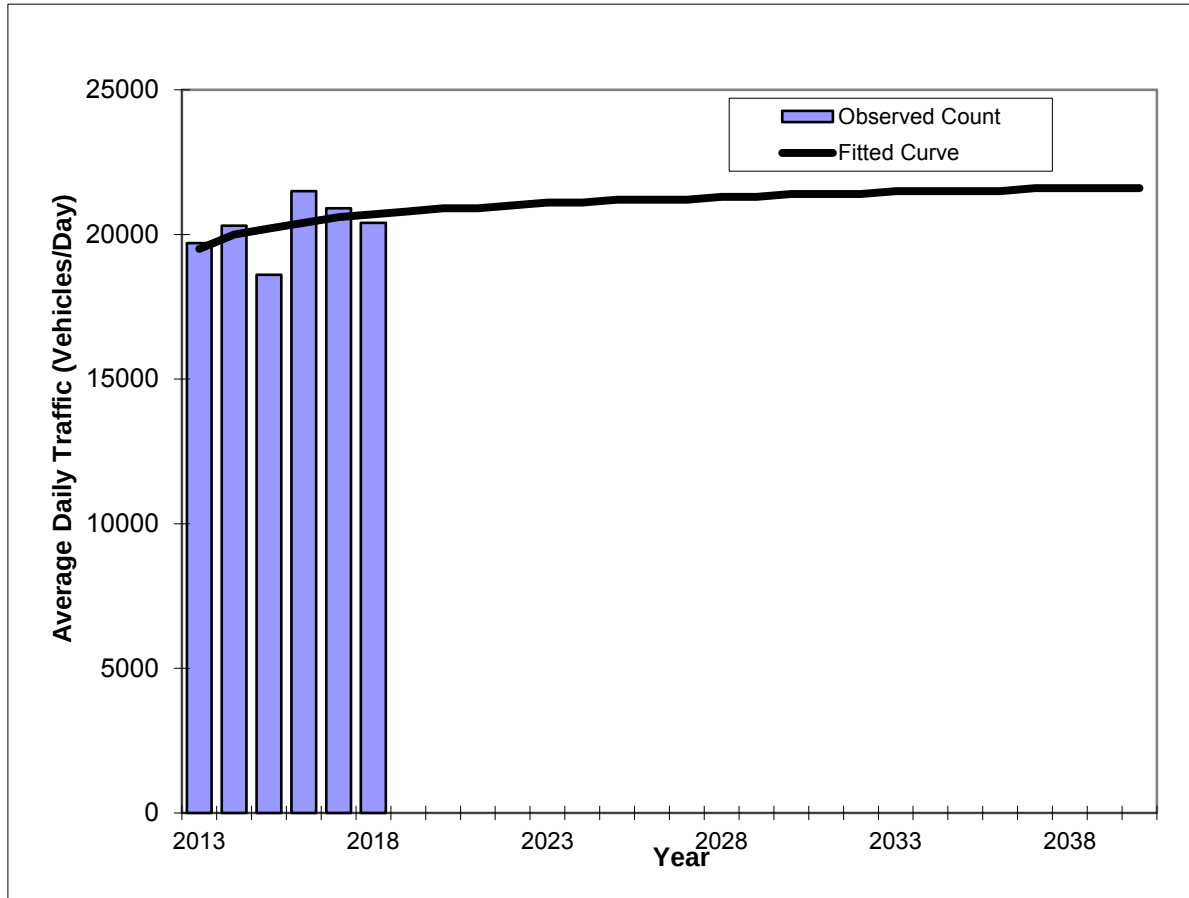
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- S of Oakland Park Blvd.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0425
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	19700	19500
2014	20300	20000
2015	18600	20200
2016	21500	20400
2017	20900	20600
2018	20400	20700
2020 Opening Year Trend		
2020	N/A	20900
2021 Mid-Year Trend		
2021	N/A	20900
2022 Design Year Trend		
2022	N/A	21000
TRANPLAN Forecasts/Trends		

Trend R-squared:	17.22%
Compounded Annual Historic Growth Rate:	1.20%
Compounded Growth Rate (2018 to Design Year):	0.36%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

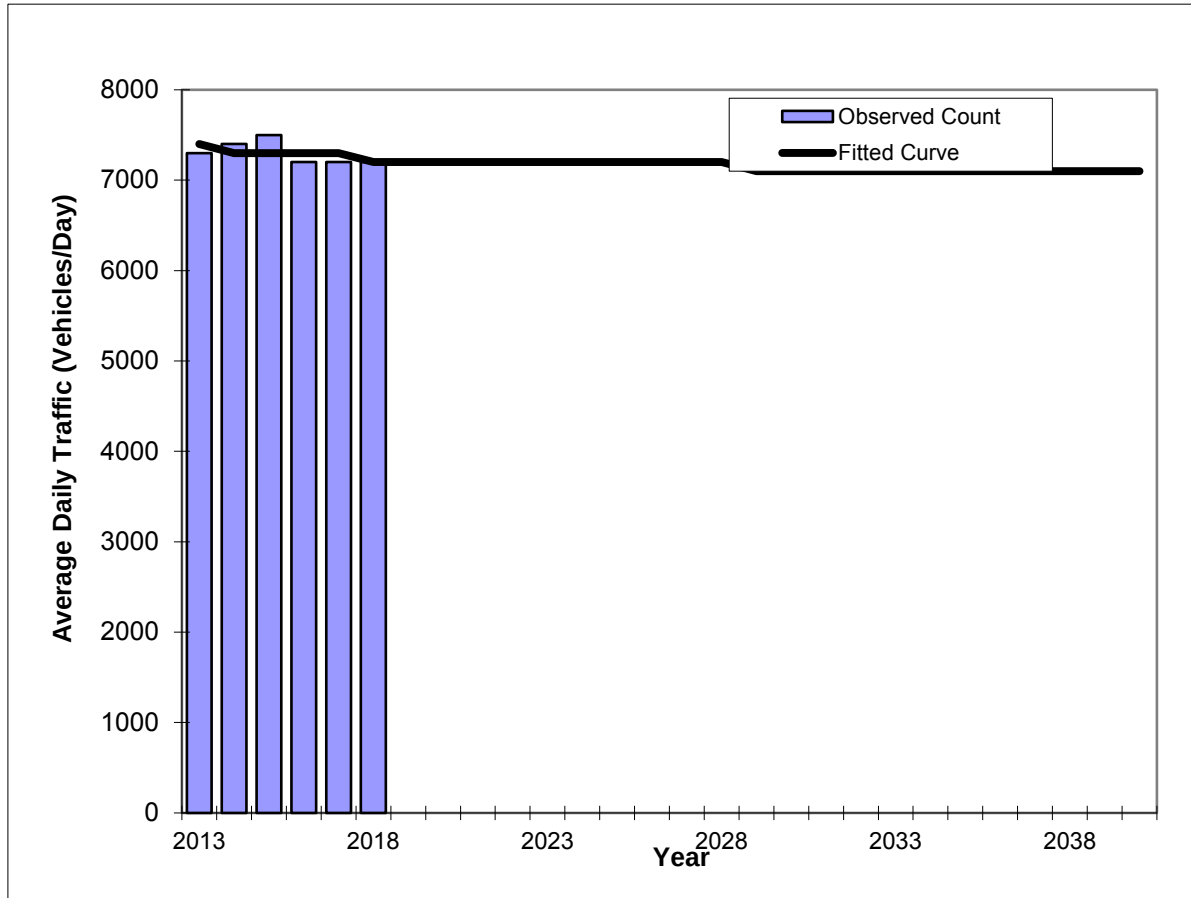
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- E of Andrews Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9072
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	7300	7400
2014	7400	7300
2015	7500	7300
2016	7200	7300
2017	7200	7300
2018	7200	7200
2020 Opening Year Trend		
2020	N/A	7200
2021 Mid-Year Trend		
2021	N/A	7200
2022 Design Year Trend		
2022	N/A	7200
TRANPLAN Forecasts/Trends		

Trend R-squared:	20.49%
Compounded Annual Historic Growth Rate:	-0.55%
Compounded Growth Rate (2018 to Design Year):	0.00%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

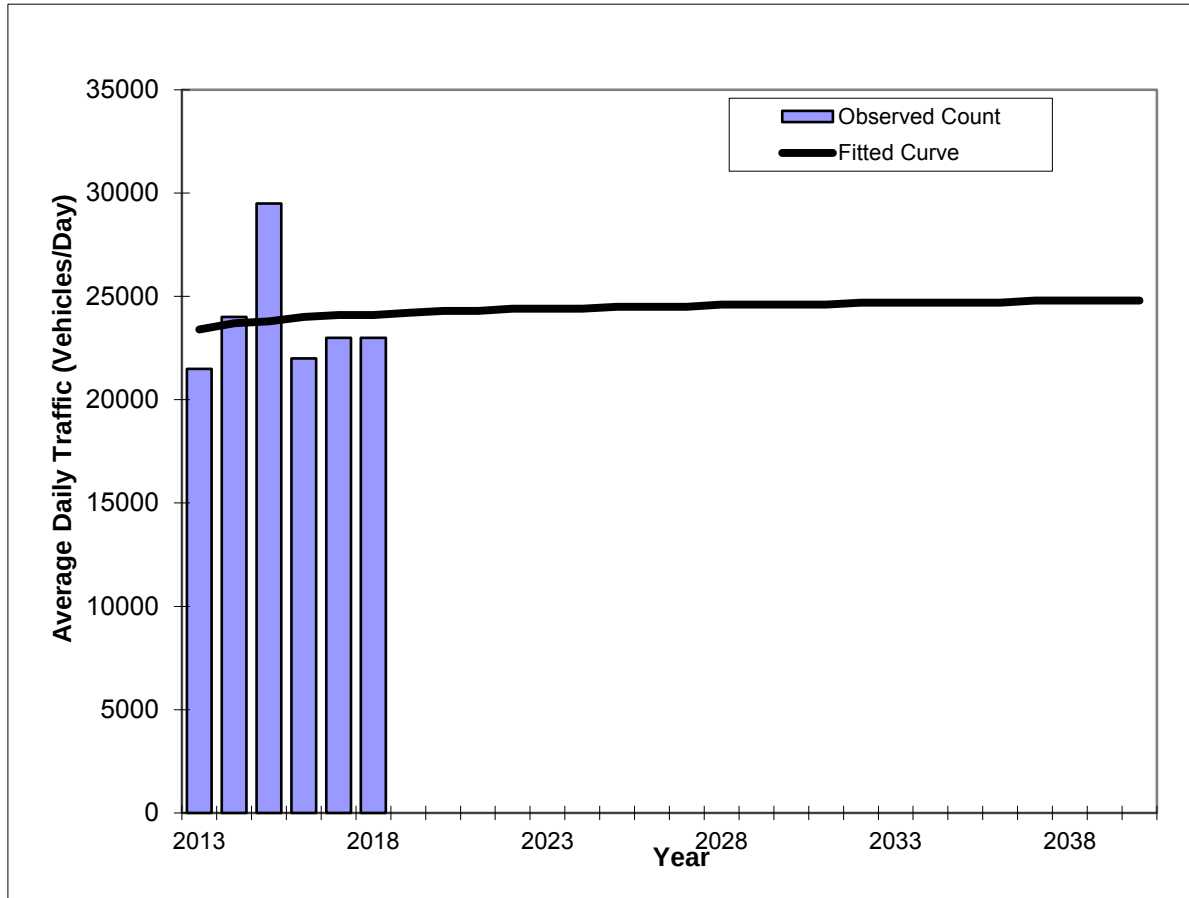
*Axle-Adjusted

Traffic Trends - V3.0

DIXIE HWY -- 200' S of NE 38 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	5074
Highway:	DIXIE HWY



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	21500	23400
2014	24000	23700
2015	29500	23800
2016	22000	24000
2017	23000	24100
2018	23000	24100
2020 Opening Year Trend		
2020	N/A	24300
2021 Mid-Year Trend		
2021	N/A	24300
2022 Design Year Trend		
2022	N/A	24400
TRANPLAN Forecasts/Trends		

Trend R-squared:	1.00%
Compounded Annual Historic Growth Rate:	0.59%
Compounded Growth Rate (2018 to Design Year):	0.31%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

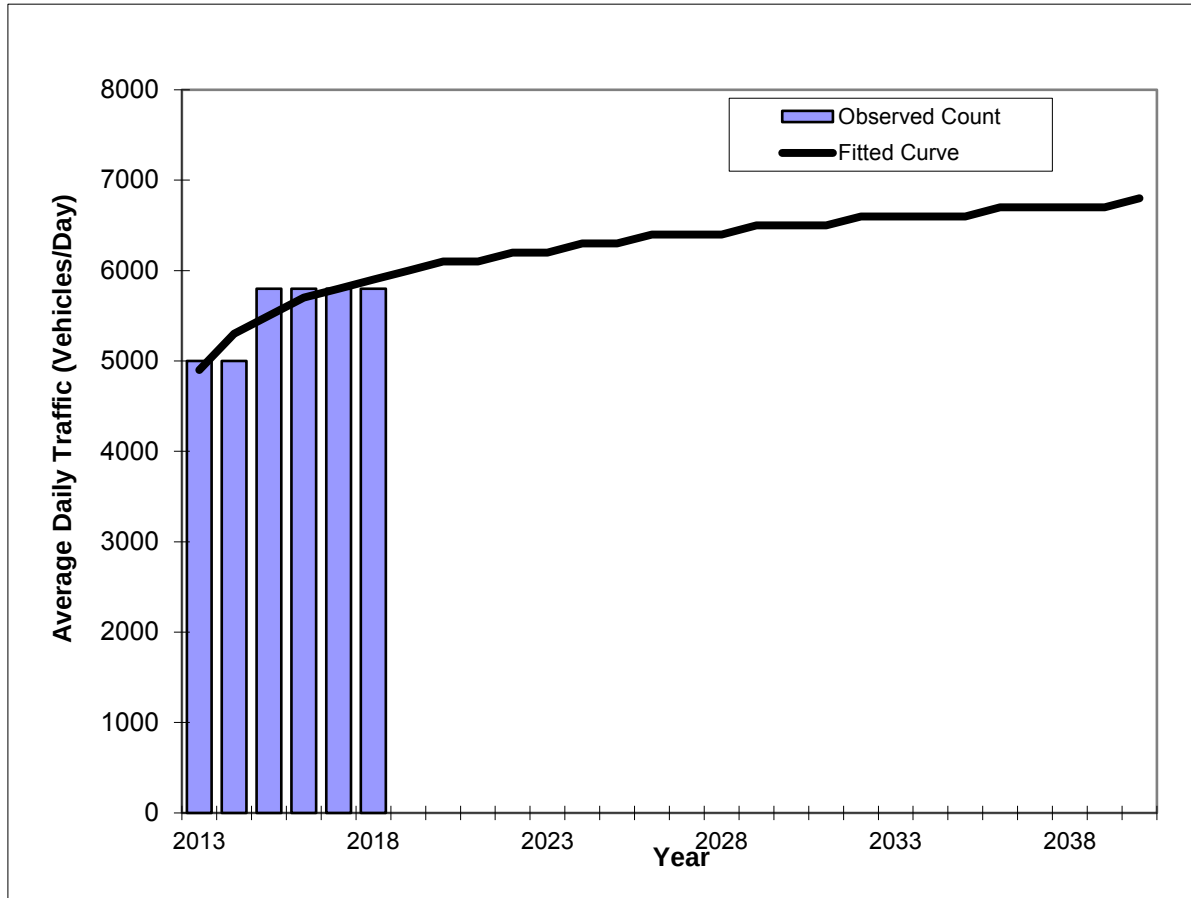
*Axle-Adjusted

Traffic Trends - V3.0

NW/NE 38 ST -- W of NE 16 Ave.

FIN#	0
Location	3

County:	Broward (86)
Station #:	9576
Highway:	NW/NE 38 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	5000	4900
2014	5000	5300
2015	5800	5500
2016	5800	5700
2017	5800	5800
2018	5800	5900
2020 Opening Year Trend		
2020	N/A	6100
2021 Mid-Year Trend		
2021	N/A	6100
2022 Design Year Trend		
2022	N/A	6200
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.86%
Compounded Annual Historic Growth Rate:	3.78%
Compounded Growth Rate (2018 to Design Year):	1.25%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

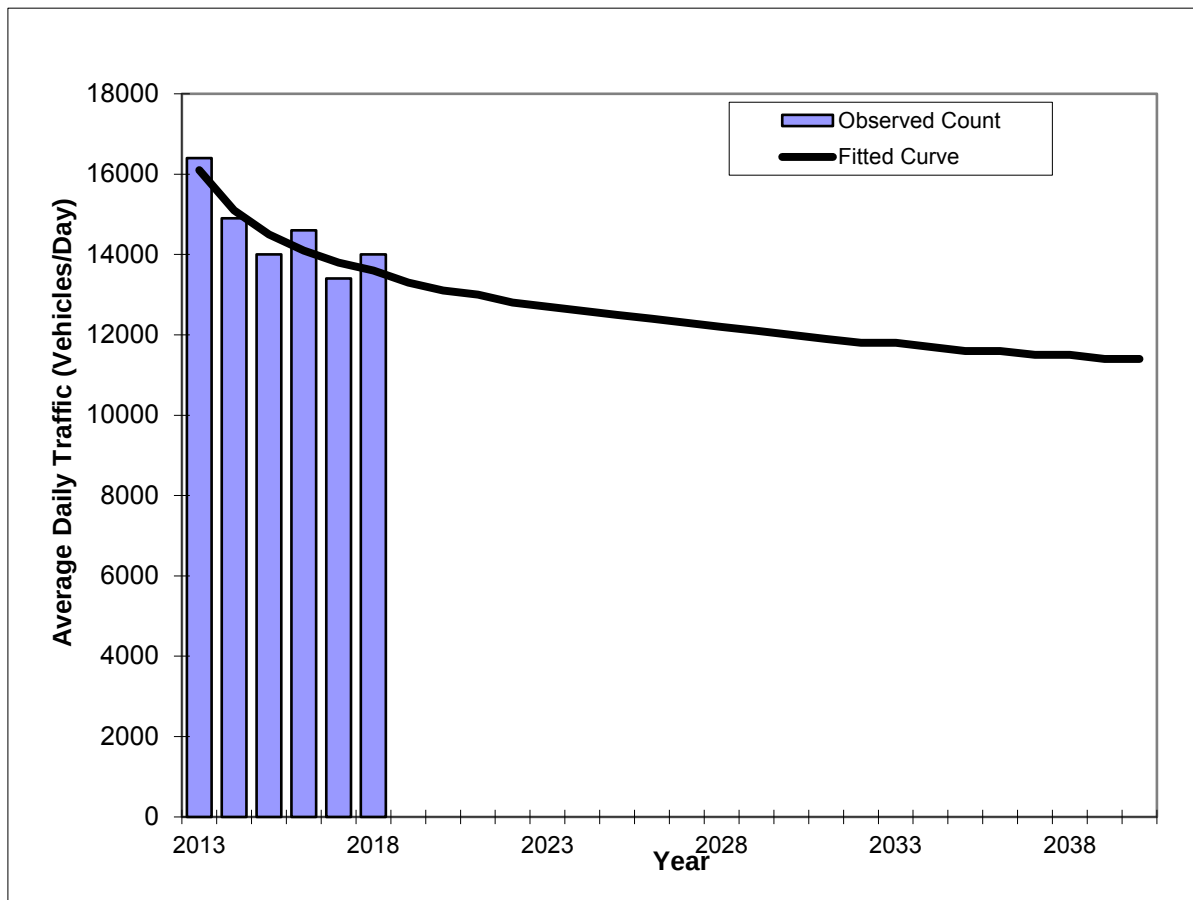
*Axle-Adjusted

Traffic Trends - V3.0

WILTON DRIVE -- S of NE 26 St.

FIN#	0
Location	3

County:	Broward (86)
Station #:	0212
Highway:	WILTON DRIVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	16400	16100
2014	14900	15100
2015	14000	14500
2016	14600	14100
2017	13400	13800
2018	14000	13600
2020 Opening Year Trend		
2020	N/A	13100
2021 Mid-Year Trend		
2021	N/A	13000
2022 Design Year Trend		
2022	N/A	12800
TRANPLAN Forecasts/Trends		

Trend R-squared:	81.43%
Compounded Annual Historic Growth Rate:	-3.32%
Compounded Growth Rate (2018 to Design Year):	-1.50%
Printed:	10-Dec-19
Decaying Exponential Growth Option	

*Axle-Adjusted

ATTACHMENT C

TRIP GENERATION INFORMATION

TRIP GENERATION ANALYSIS - DAILY
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 50.75 (X)	50%	50%	3,079	3,079	6,158	0	0	0	0.0%	3,079	3,079	6,158	862	862	1,724	28%	2,217	2,217	4,434
SUBTOTAL						3,079	3,079	6,158	0	0	0	0.0%	3,079	3,079	6,158	862	862	1,724		2,217	2,217	4,434
PROPOSED USES																						
Multifamily Housing (Mid-Rise)	221	297 DUs	T= 5.45 (X) - 1.75	50%	50%	809	808	1,617	418	365	783	48.4%	391	443	834	0	0	0	0%	391	443	834
Shopping Center	820	1,500 SF	Ln(T)= 0.68 Ln(X) + 5.57	50%	50%	173	173	346	42	42	84	24.3%	131	131	262	44	45	89	34%	87	86	173
Super Convenience Market/Gas Station ⁽⁴⁾	960	6,000 SF	T= 837.58 (X)	50%	50%	2,512	2,513	5,025	611	609	1,220	24.3%	1,901	1,904	3,805	1,066	1,065	2,131	56%	835	839	1,674
Fast-Food Restaurant w/o Drive-Through ⁽⁵⁾	933	2,000 SF	T= 346.23 (X)	50%	50%	346	346	692	128	142	270	39.0%	218	204	422	91	90	181	43%	127	114	241
Coffee/Donut Shop w/ Drive-Through ⁽⁶⁾	937	2,500 SF	T= 820.38 (X)	50%	50%	1,026	1,025	2,051	379	420	799	39.0%	647	605	1,252	306	307	613	49%	341	298	639
SUBTOTAL						4,866	4,865	9,731	1,578	1,578	3,156	32.4%	3,288	3,287	6,575	1,507	1,507	3,014		1,781	1,780	3,561
TOTAL						1,787	1,786	3,573	1,578	1,578	3,156		209	208	417	645	645	1,290		-436	-437	-873

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

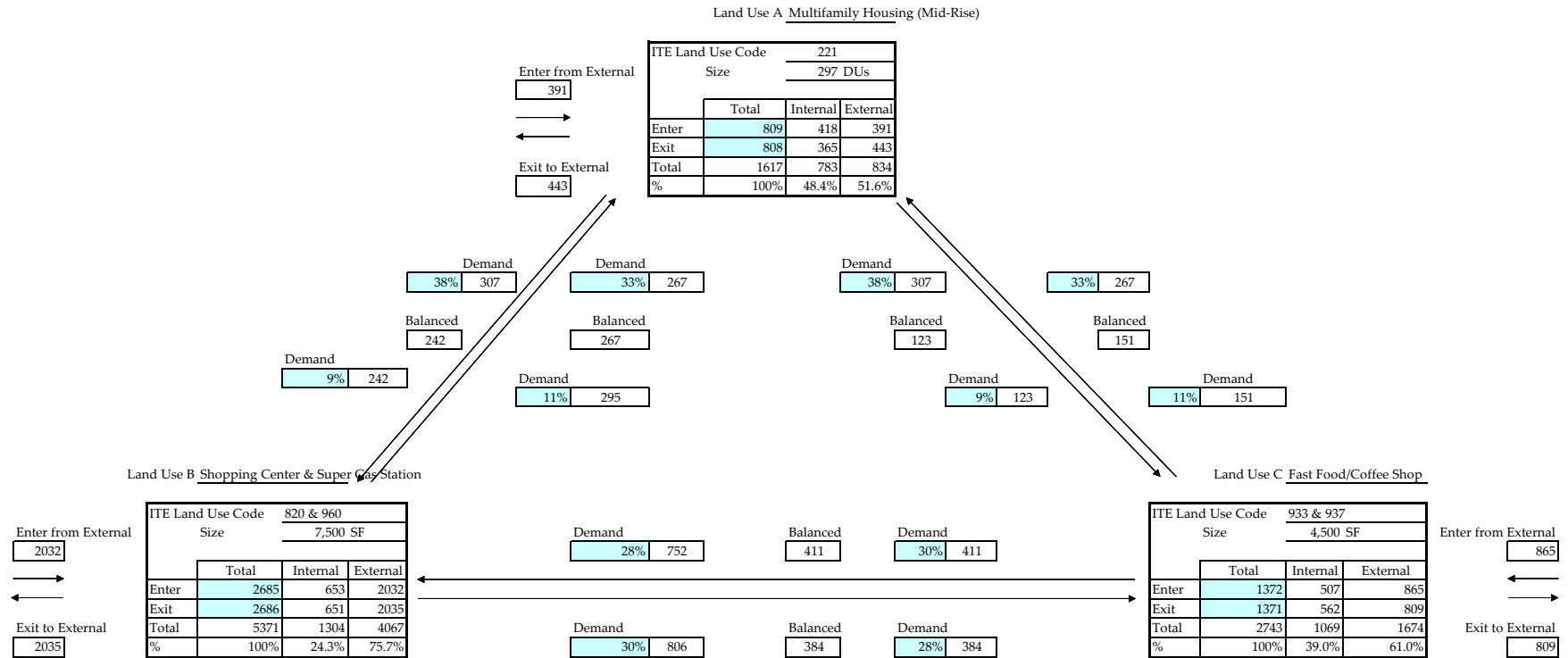
(4) Pass-By rates for LU 945 (Gasoline/Service Station with Convenience Market) used for LU 960.

(5) Pass-By rates for LU 932 (High-Turnover (Sit-Down) Restaurant) used for LU 933.

(6) Pass-By rates for LU 934 (Fast Food Restaurant with Drive-Through Window) used for LU 937.



**DAILY TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS**



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Total
Enter	391	2032	865	3288
Exit	443	2035	809	3287
Total	834	4067	1674	6575
Single-Use Trip Gen Estimate	1617	5371	2743	9731
				32.4%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 10th Edition.

TRIP GENERATION ANALYSIS - AM PEAK HOUR
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 1.85 (X)	56%	44%	125	99	224	0	0	0	0.0%	125	99	224	32	31	63	28%	94	67	161
SUBTOTAL						125	99	224	0	0	0	0.0%	125	99	224	32	31	63		94	67	161
PROPOSED USES																						
Multifamily Housing (Mid-Rise)	221	297 DUs	Ln(T)= 0.98 Ln(X) - 0.98	26%	74%	26	73	99	16	36	52	52.5%	10	37	47	0	0	0	0%	10	37	47
Shopping Center	820	1,500 SF	T= 0.93 (X)	62%	38%	1	0	1	0	0	0	0.0%	1	0	1	0	0	0	34%	1	0	1
Super Convenience Market/Gas Station ⁽⁴⁾	960	6,000 SF	T= 137.38 (X) - 264.53	50%	50%	280	280	560	48	33	81	14.5%	232	247	479	148	149	297	62%	84	98	182
Fast-Food Restaurant w/o Drive-Through ⁽⁵⁾	933	2,000 SF	T= 89.03 (X) - 157.40	60%	40%	13	8	21	4	1	5	23.8%	9	7	16	4	3	7	43%	5	4	9
Coffee/Donut Shop w/ Drive-Through ⁽⁶⁾	937	2,500 SF	T= 88.99 (X)	51%	49%	113	109	222	32	30	62	27.9%	81	79	160	39	39	78	49%	42	40	82
SUBTOTAL						433	470	903	100	100	200	22.1%	333	370	703	191	191	382		142	179	321
TOTAL						308	371	679	100	100	200		208	271	479	159	160	319		48	112	160

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

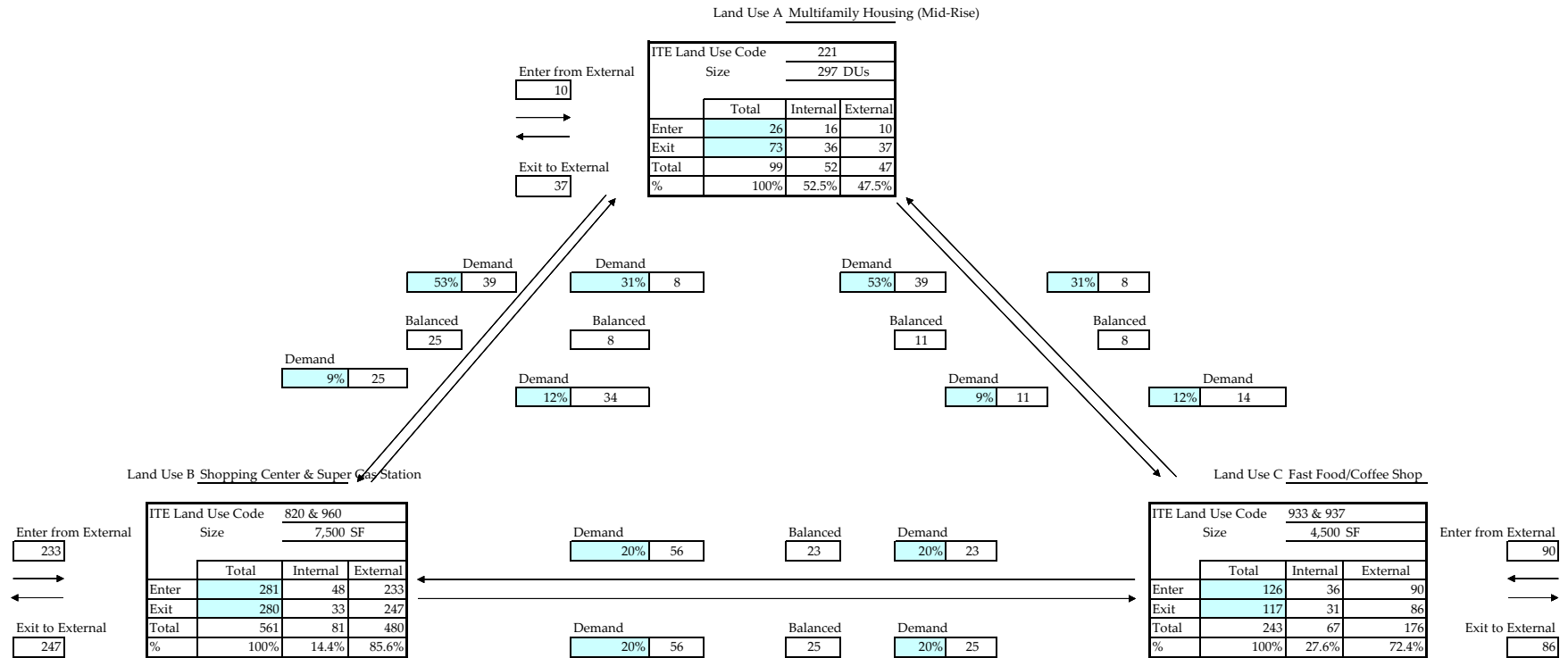
(4) Pass-By rates for LU 945 (Gasoline/Service Station with Convenience Market) used for LU 960.

(5) Pass-By rates for LU 932 (High-Turnover (Sit-Down) Restaurant) used for LU 933.

(6) Pass-By rates for LU 934 (Fast Food Restaurant with Drive-Through Window) used for LU 937.



**AM TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS**



Net External Trips for Multi-Use Development						
	Land Use A		Land Use B		Land Use C	Total
Enter	10		233		90	333
Exit	37		247		86	370
Total	47		480		176	703
Single-Use Trip Gen Estimate	99		561		243	903
						Internal Capture 22.1%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 10th Edition.

TRIP GENERATION ANALYSIS - PM PEAK HOUR
RAM OAKLAND PARK TRAFFIC ANALYSIS

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS			INTERNAL TRIPS ⁽²⁾				EXTERNAL TRIPS			PASS-BY ⁽¹⁾				NEW TRIPS		
						IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL
VESTED																						
Free Standing Discount Superstore ⁽³⁾	813	121,345 SF	T= 4.35 (X)	49%	51%	259	269	528	0	0	0	0.0%	259	269	528	74	74	148	28%	185	195	380
SUBTOTAL						259	269	528	0	0	0	0.0%	259	269	528	74	74	148		185	195	380
PROPOSED USES																						
Multifamily Housing (Mid-Rise)	221	297 DU's	Ln(T)= 0.96 Ln(X) - 0.63	61%	39%	77	49	126	34	27	61	48.4%	43	22	65	0	0	0	0%	43	22	65
Shopping Center	820	1,500 SF	Ln(T)= 0.74 Ln(X) + 2.89	48%	52%	12	12	24	2	2	4	16.7%	10	10	20	4	3	7	34%	6	7	13
Super Convenience Market/Gas Station ⁽⁴⁾	960	6,000 SF	T= 69.28 (X)	50%	50%	208	208	416	34	39	73	17.5%	174	169	343	96	96	192	56%	78	73	151
Fast-Food Restaurant w/o Drive-Through ⁽⁵⁾	933	2,000 SF	T= 28.34 (X)	50%	50%	29	28	57	8	9	17	29.8%	21	19	40	8	9	17	43%	13	10	23
Coffee/Donut Shop w/ Drive-Through ⁽⁶⁾	937	2,500 SF	T= 43.38 (X)	50%	50%	54	54	108	16	17	33	30.6%	38	37	75	19	19	38	50%	19	18	37
SUBTOTAL						380	351	731	94	94	188	25.7%	286	257	543	127	127	254		159	130	289
TOTAL						121	82	203	94	94	188		27	-12	15	53	53	106		-26	-65	-91

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

(2) ITE Trip Generation Manual, 9th Edition.

(3) ITE Trip Generation Manual, 9th Edition, per the Walmart Oakland Park Traffic Analysis, approved by the City of Oakland Park dated September 2013.

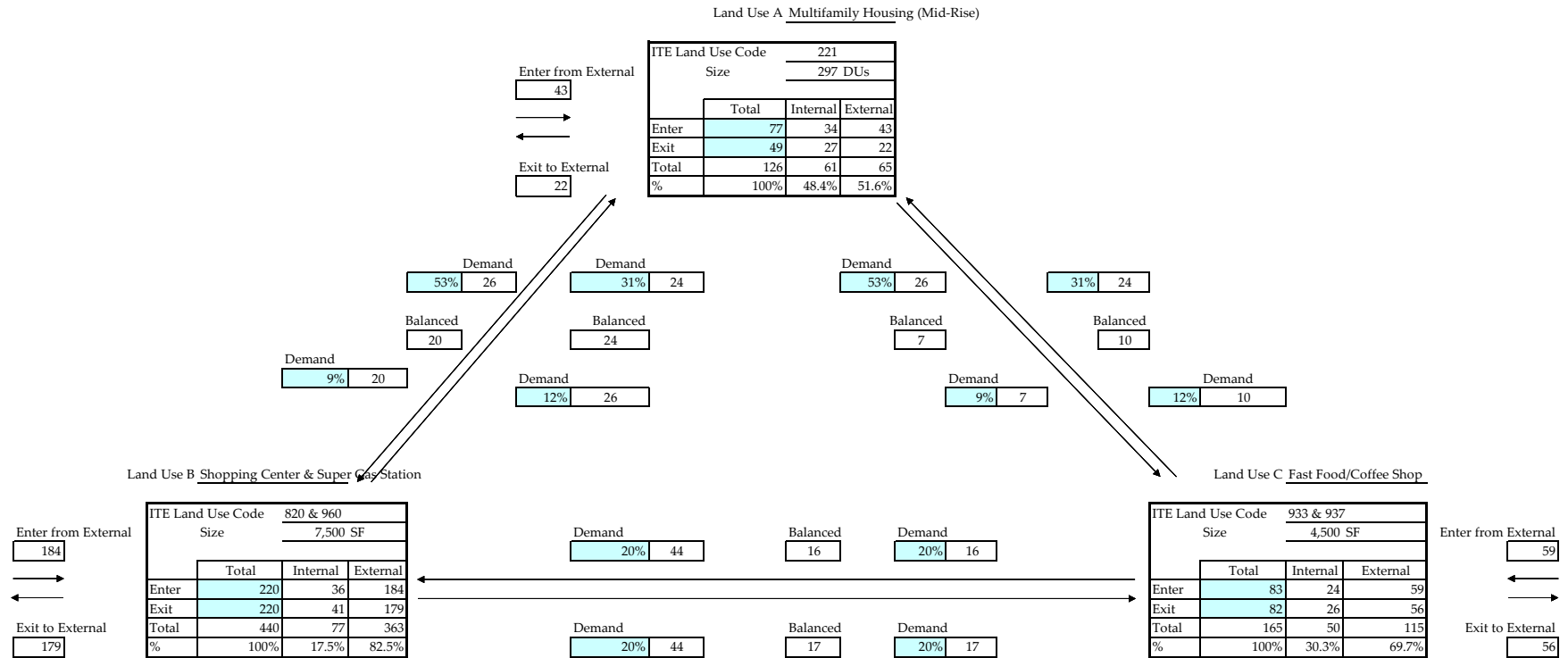
(4) Pass-By rates for LU 945 (Gasoline/Service Station with Convenience Market) used for LU 960.

(5) Pass-By rates for LU 932 (High-Turnover (Sit-Down) Restaurant) used for LU 933.

(6) Pass-By rates for LU 934 (Fast Food Restaurant with Drive-Through Window) used for LU 937.



**PM TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS**



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Total	
Enter	43	184	59	286	
Exit	22	179	56	257	
Total	65	363	115	543	
Single-Use Trip Gen Estimate	126	440	165	731	Internal Capture
					25.7%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 10th Edition.

Super Convenience Market/Gas Station (960)

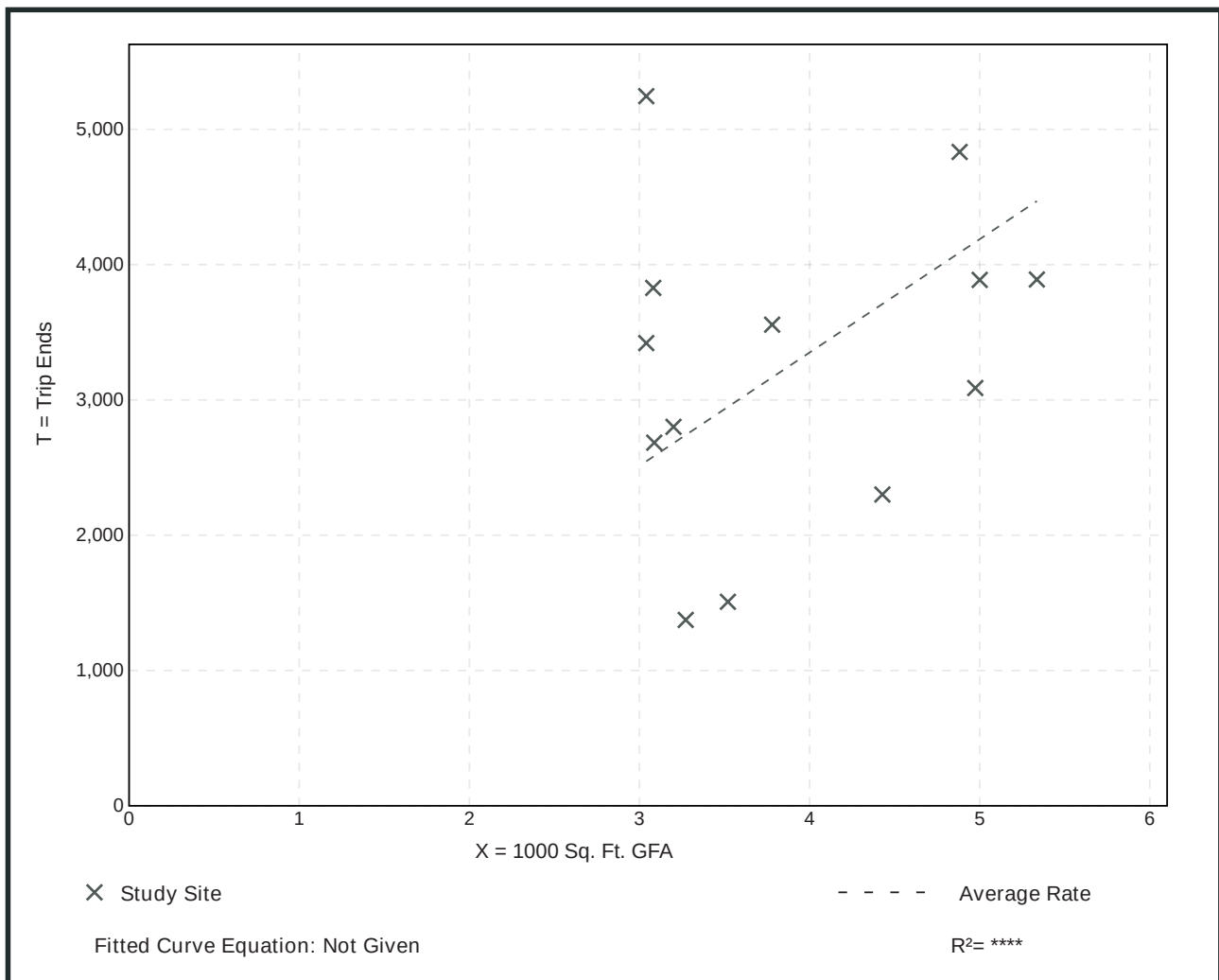
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 13
1000 Sq. Ft. GFA: 4
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
837.58	419.93 - 1725.33	334.67

Data Plot and Equation



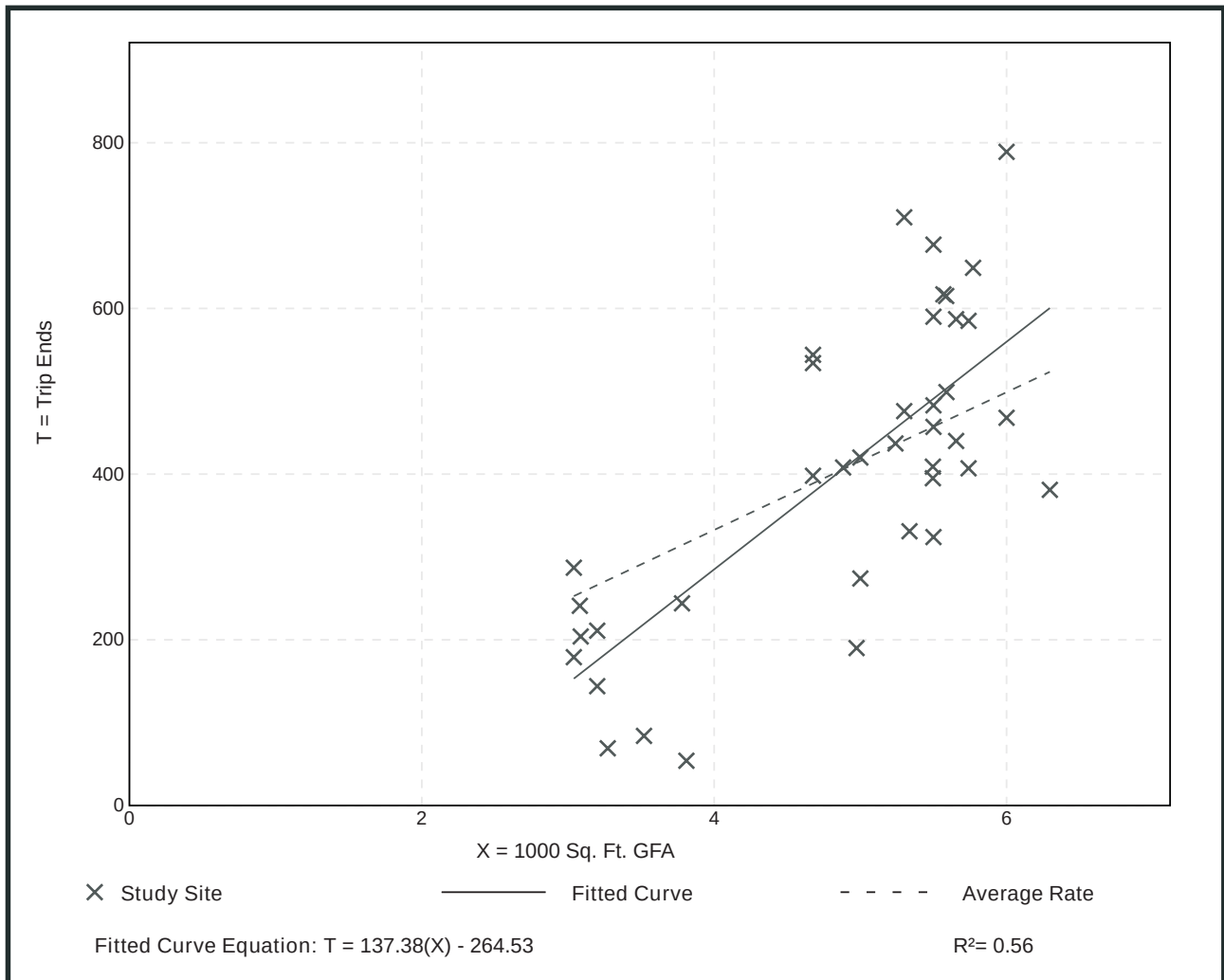
Super Convenience Market/Gas Station (960)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 39
 1000 Sq. Ft. GFA: 5
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
83.14	14.17 - 133.96	28.07

Data Plot and Equation



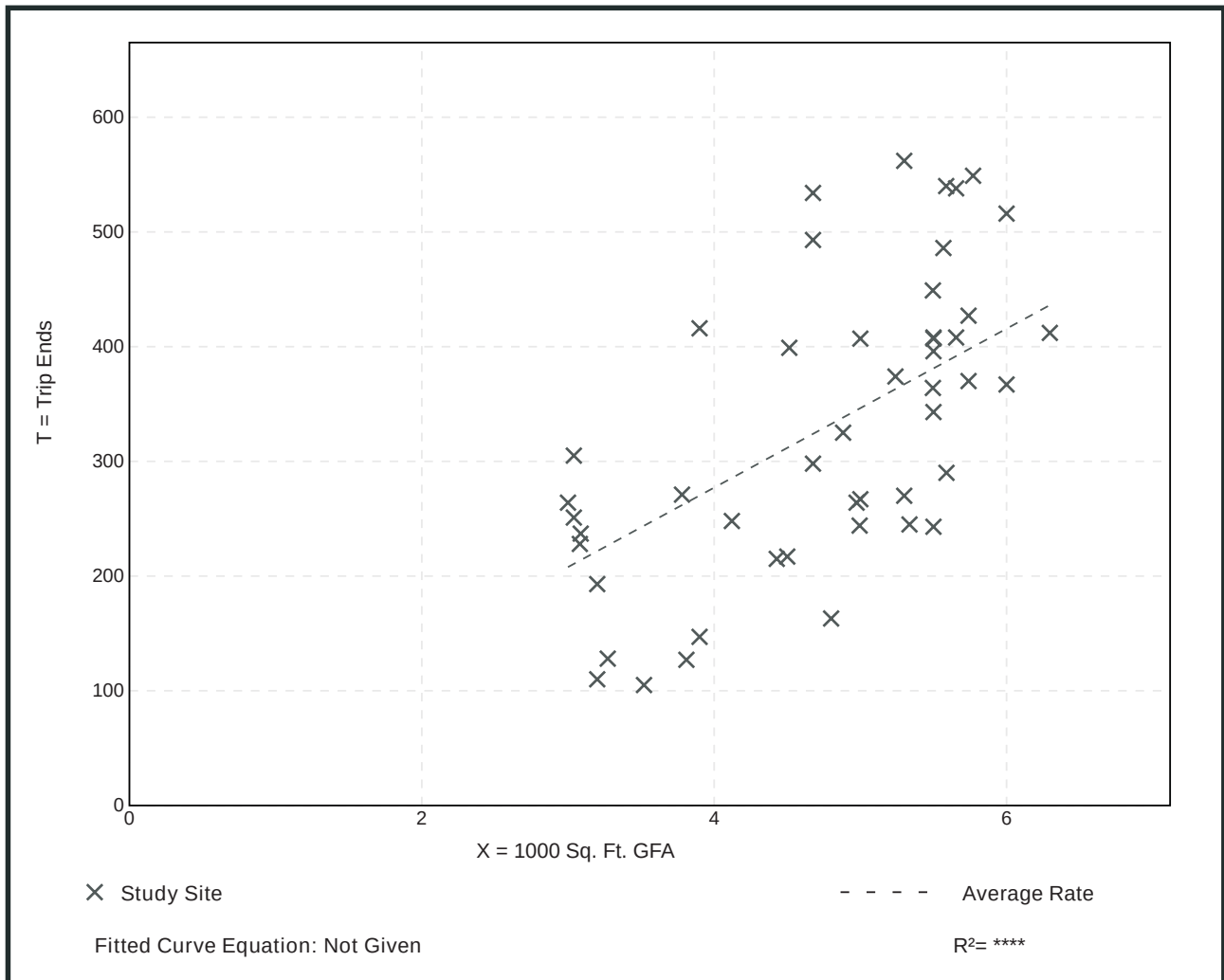
Super Convenience Market/Gas Station (960)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 48
 1000 Sq. Ft. GFA: 5
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
69.28	29.83 - 114.20	21.07

Data Plot and Equation



**Table E.36 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 944—Gasoline/Service Station**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	—	Chicago suburbs, IL	1987	48	3:00–7:00 p.m.	21	—	—	79	—	Kenig, O'Hara, Humes, Flock
—	—	Chicago suburbs, IL	1987	34	3:00–6:00 p.m.	25	—	—	75	—	Kenig, O'Hara, Humes, Flock
—	—	Chicago suburbs, IL	1987	42	3:00–6:00 p.m.	20	—	—	80	—	Kenig, O'Hara, Humes, Flock
2.3	6	Gaithersburg, MD	1992	55	4:00–6:00 p.m.	40	11	49	60	2,760	RBA
2.1	6	Bethesda, MD	1992	30	4:00–6:00 p.m.	53	20	27	47	1,060	RBA
1.7	6	Wheaton, MD	1992	18	4:00–6:00 p.m.	61	6	33	39	2,510	RBA
2.0	8	Gaithersburg, MD	1992	47	4:00–6:00 p.m.	62	23	15	38	2,635	RBA
1.2	6	Damascus, MD	1992	26	4:00–6:00 p.m.	58	11	31	42	1,020	RBA
0.3	12	Wheaton, MD	1992	52	4:00–6:00 p.m.	38	10	52	62	3,835	RBA

Average Pass-By Trip Percentage: 42

“—” means no data were provided

**Table E.37 Pass-By and Non-Pass-By Trips Weekday, AM Peak Period
Land Use Code 945—Gasoline/Service Station with Convenience Market**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
0.8	8	Louisville area, KY	1993	61	7:00–9:00 a.m.	60	15	25	40	4,000	Barton-Aschman Assoc.
0.6	8	Louisville, KY	1993	48	7:00–9:00 a.m.	68	13	19	32	1,307	Barton-Aschman Assoc.
0.7	10	Louisville, KY	1993	47	7:00–9:00 a.m.	67	11	22	33	1,105	Barton-Aschman Assoc.
0.7	8	Louisville area, KY	1993	—	7:00–9:00 a.m.	56	22	22	44	1,211	Barton-Aschman Assoc.
0.7	10	Louisville area, KY	1993	—	7:00–9:00 a.m.	46	42	12	54	1,211	Barton-Aschman Assoc.
0.3	—	Louisville area, KY	1993	75	7:00–9:00 a.m.	72	15	13	28	—	Barton-Aschman Assoc.
0.8	8	Silver Spring, MD	1992	36	7:00–9:00 a.m.	47	14	39	53	3,095	RBA
0.4	8	Derwood, MD	1992	46	7:00–9:00 a.m.	75	0	25	25	3,770	RBA
2.2	8	Kensington, MD	1992	31	7:00–9:00 a.m.	47	34	19	53	1,785	RBA
1	8	Silver Spring, MD	1992	35	7:00–9:00 a.m.	78	9	13	22	7,080	RBA

Average Pass-By Trip Percentage: 62

“—” means no data were provided

**Table E.38 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 945—Gasoline/Service Station with Convenience Market**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
0.8	8	Louisville area, KY	1993	83	4:00–6:00 p.m.	52	8	40	48	4,965	Barton- Aschman Assoc.
0.6	8	Louisville, KY	1993	60	4:00–6:00 p.m.	53	20	27	47	1,491	Barton- Aschman Assoc.
0.7	10	Louisville, KY	1993	—	4:00–6:00 p.m.	57	19	24	43	1,812	Barton- Aschman Assoc.
0.7	8	Louisville area, KY	1993	—	4:00–6:00 p.m.	72	7	21	28	2,657	Barton- Aschman Assoc.
0.7	10	Louisville area, KY	1993	—	4:00–6:00 p.m.	55	16	29	45	2,657	Barton- Aschman Assoc.
0.8	8	Silver Spring, MD	1992	36	4:00–6:00 p.m.	67	14	19	33	3,095	RBA
0.4	8	Derwood, MD	1992	46	4:00–6:00 p.m.	46	11	43	54	3,770	RBA
2.1	8	Kensington, MD	1992	31	4:00–6:00 p.m.	52	13	35	48	1,785	RBA
1	8	Silver Spring, MD	1992	35	4:00–6:00 p.m.	54	3	43	46	7,080	RBA

Average Pass-By Trip Percentage: 56

“—” means no data were provided

Multifamily Housing (Mid-Rise) (221)

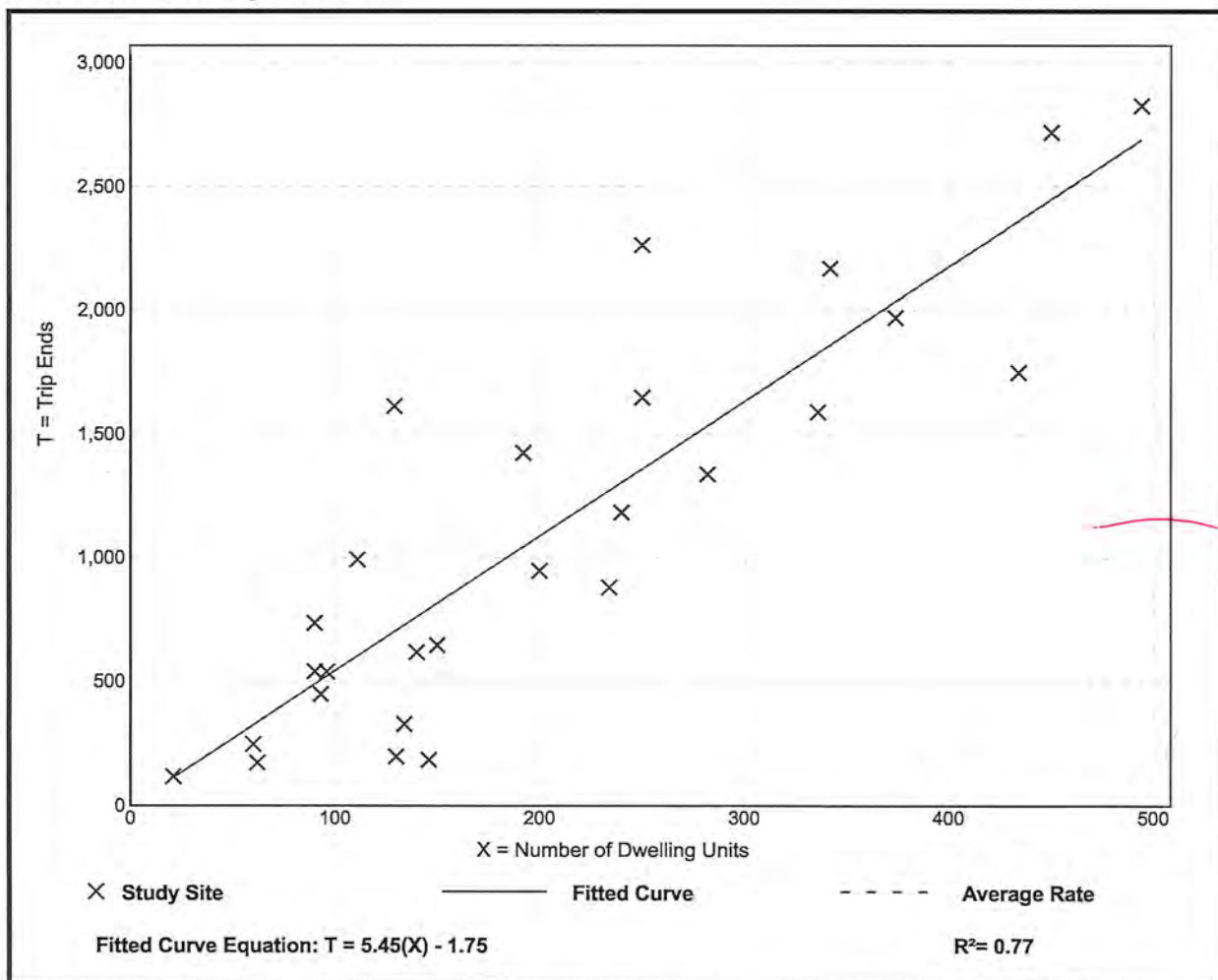
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

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

Setting/Location: General Urban/Suburban

Number of Studies: 53

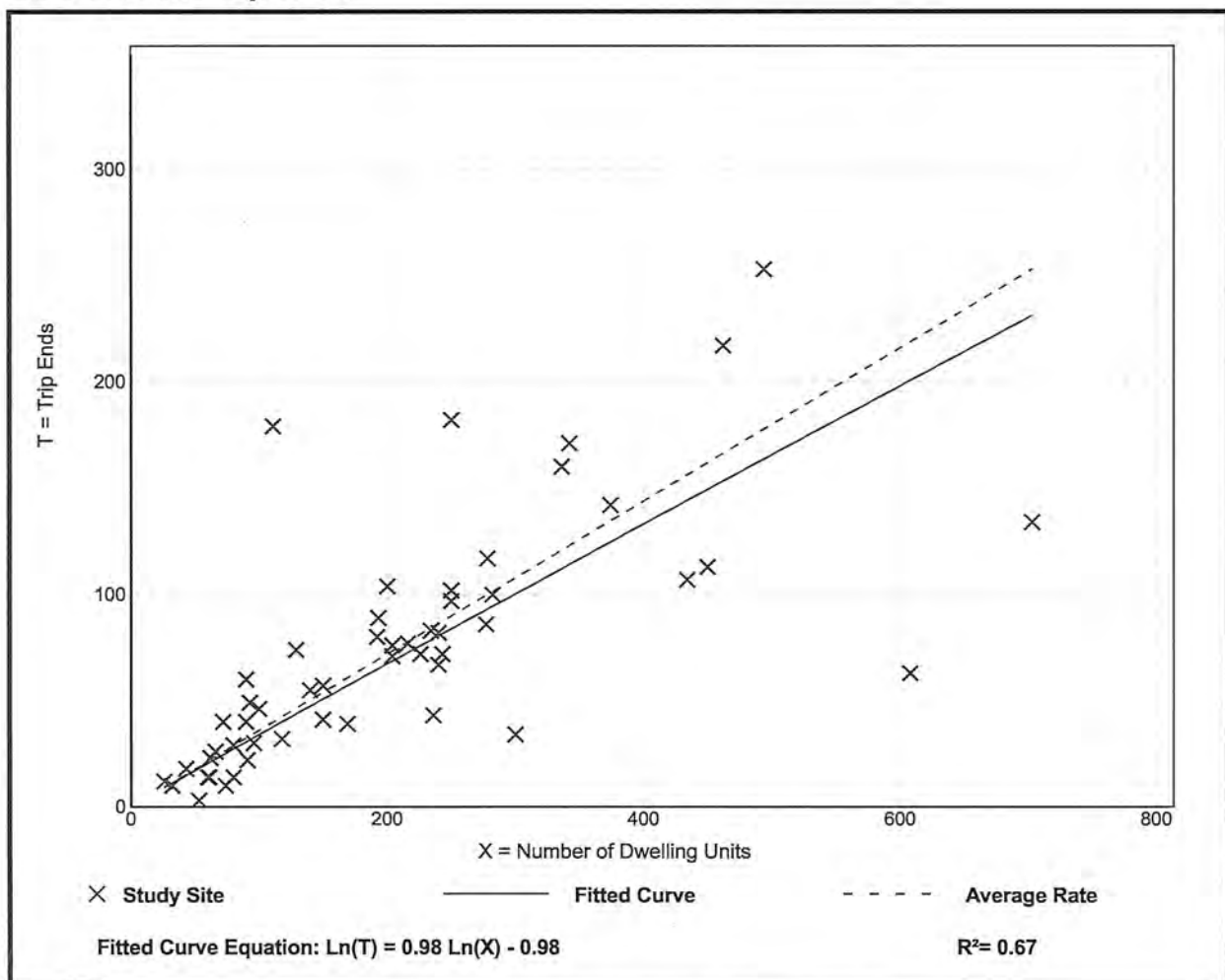
Avg. Num. of Dwelling Units: 207

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

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

Setting/Location: General Urban/Suburban

Number of Studies: 60

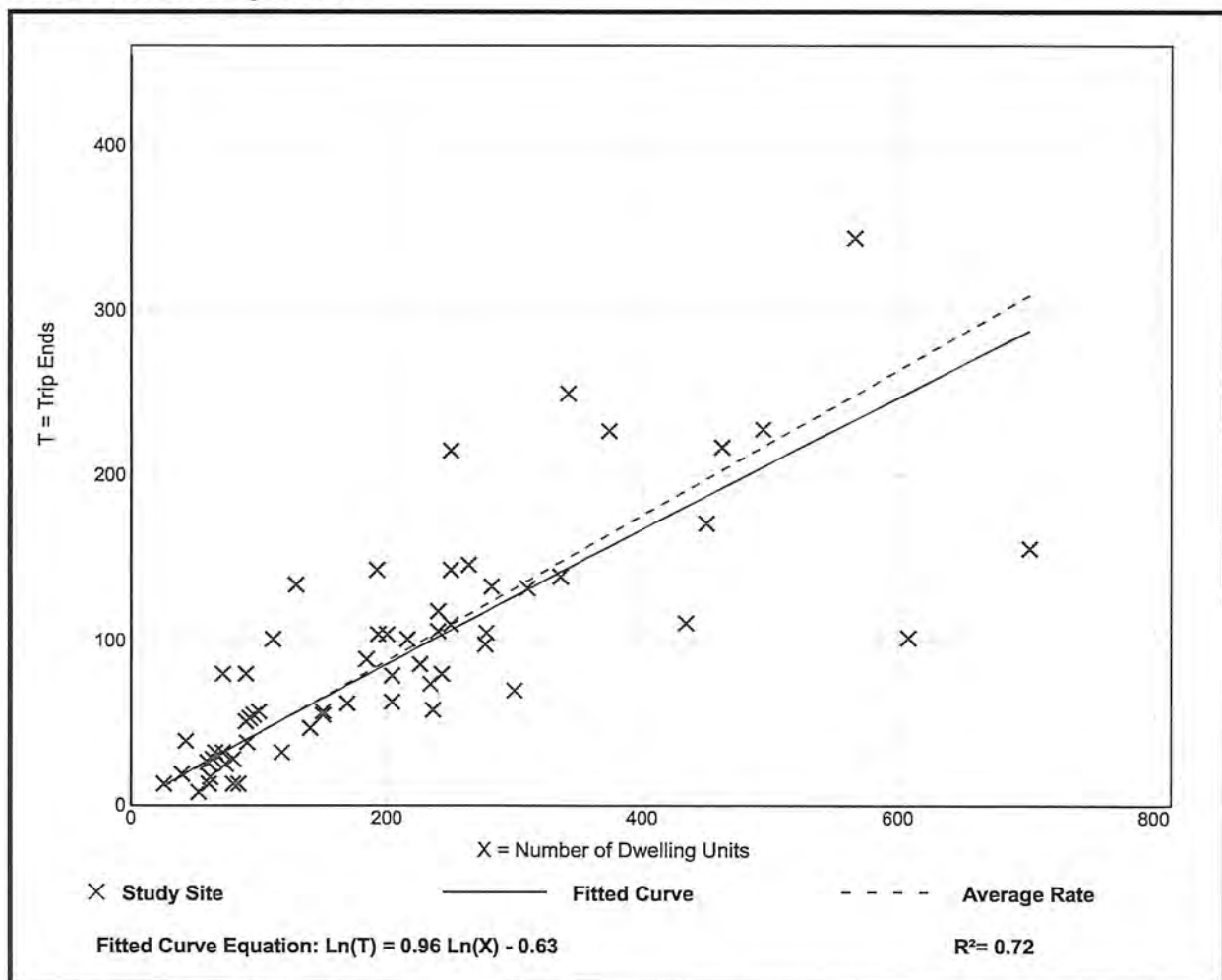
Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Shopping Center (820)

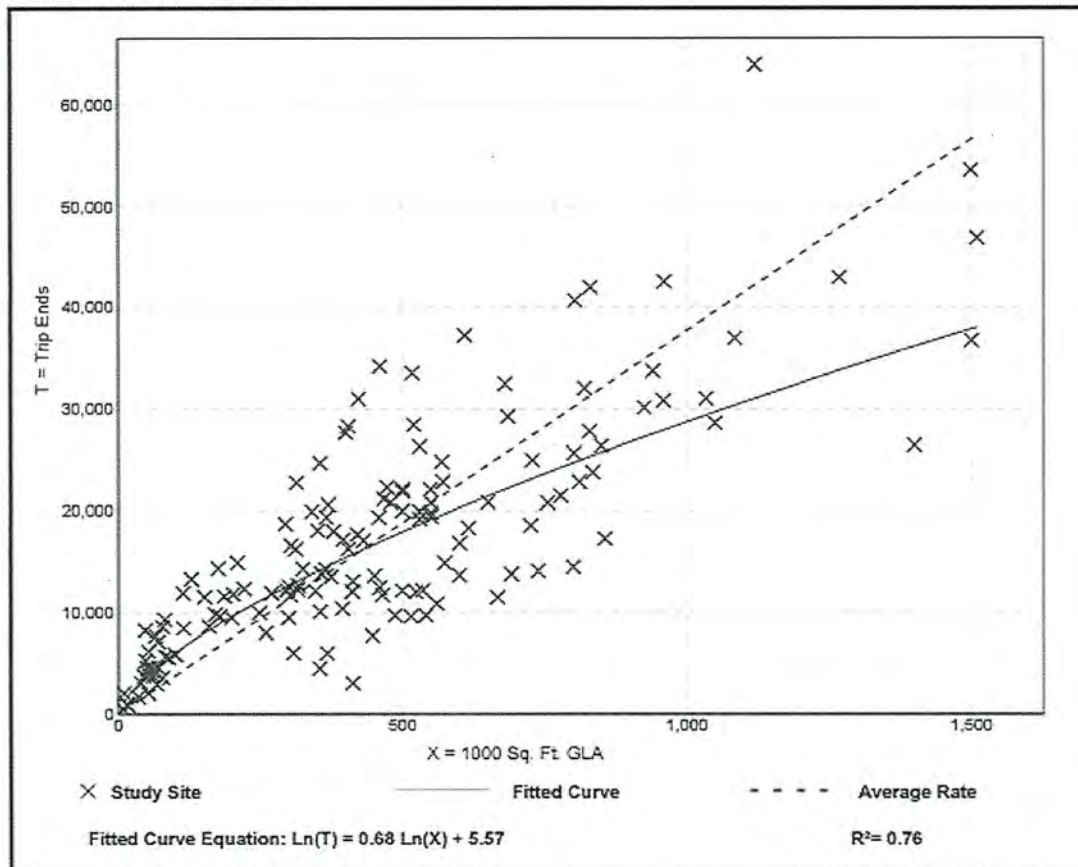
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



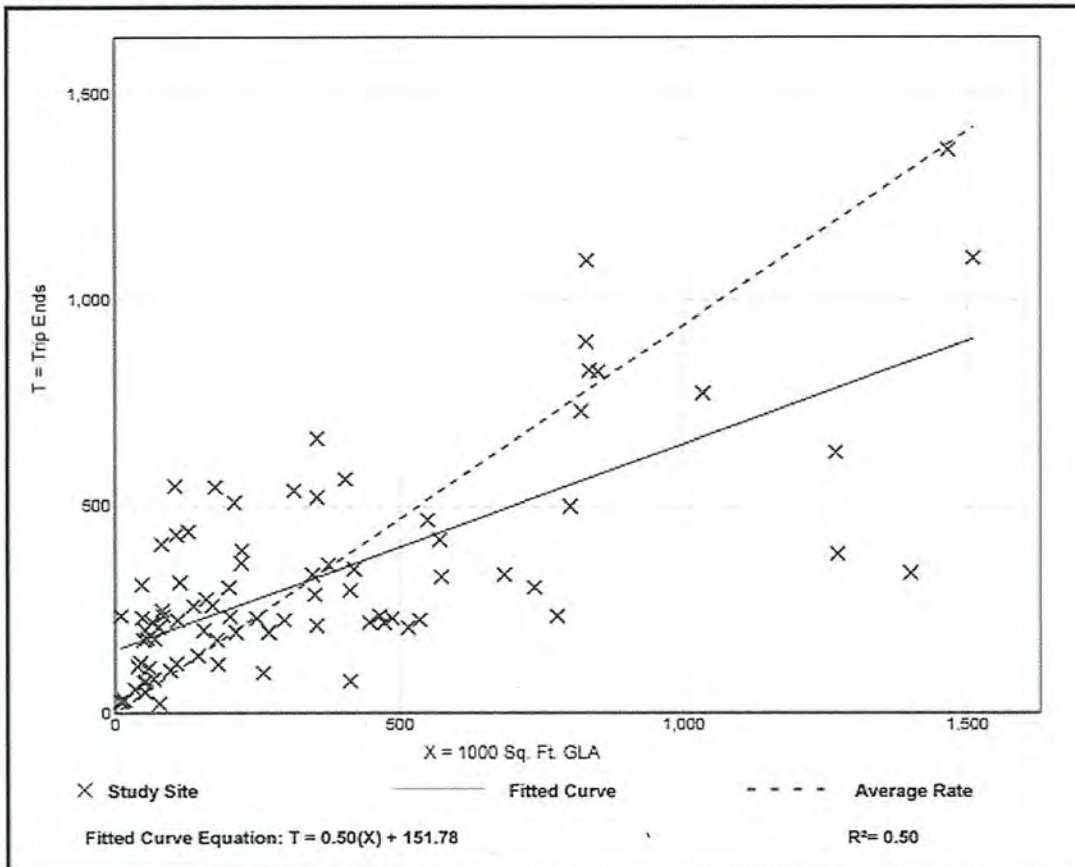
Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 84
 1000 Sq. Ft. GLA: 351
 Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 261
 1000 Sq. Ft. GLA: 327
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation

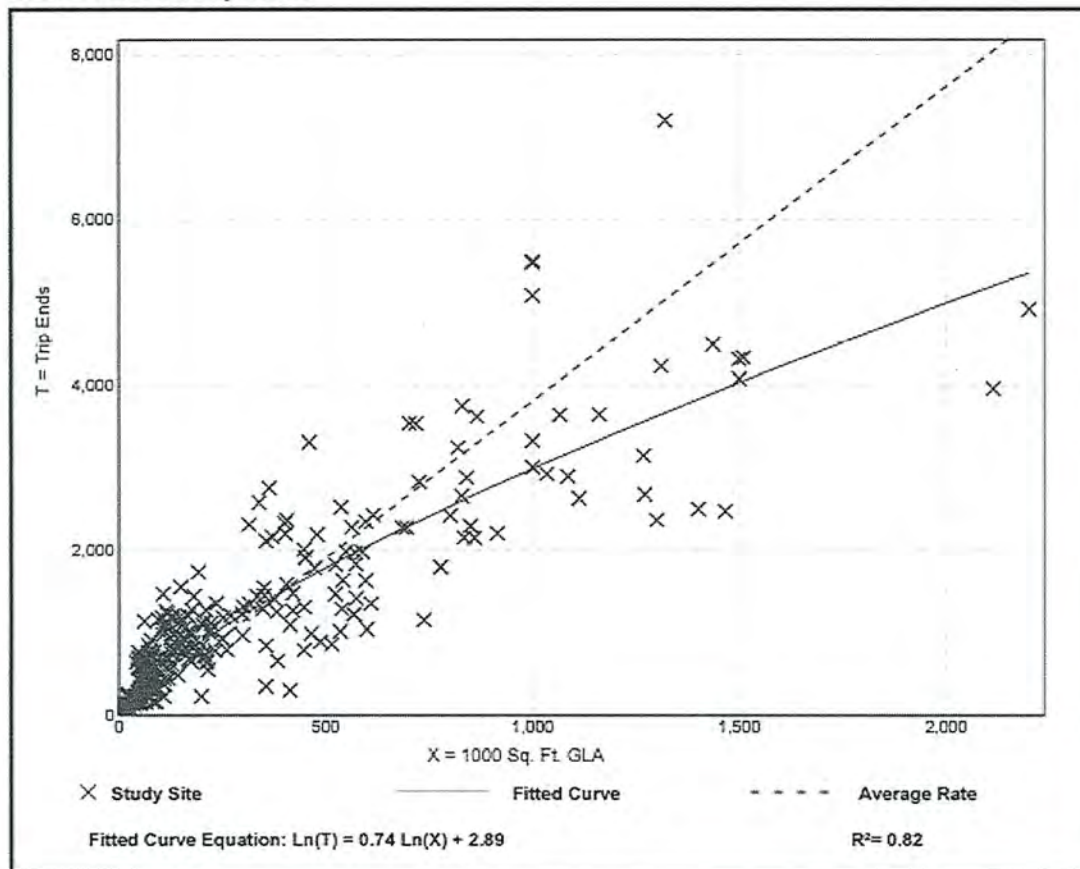


Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
921	Albany, NY	July & Aug. 1985	108	4:00–6:00 p.m.	23	42	35	77	—	60,950	Raymond Keyes Assoc.
108	Overland Park, KS	July 1988	111	4:30–5:30 p.m.	26	61	13	74	—	34,000	—
116	Overland Park, KS	Aug. 1985	123	4:30–5:30 p.m.	25	55	20	75	—	—	—
258	Greece, NY	June 1988	120	4:00–6:00 p.m.	38	62	—	62	—	23,410	Sear Brown
160	Greece, NY	June 1988	78	4:00–6:00 p.m.	29	71	—	71	—	57,306	Sear Brown
550	Greece, NY	June 1988	117	4:00–6:00 p.m.	48	52	—	52	—	40,783	Sear Brown
51	Boca Raton, FL	Dec. 1987	110	4:00–6:00 p.m.	33	34	33	67	—	42,225	Kimley-Horn and Assoc. Inc.
1,090	Rose Twp, PA	July 1988	411	2:00–6:00 p.m.	34	56	10	66	—	51,500	Wilbur Smith and Assoc.
97	Upper Dublin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	41	—	—	59	—	34,000	McMahon Associates
118	Tracyville Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	24	—	—	76	—	10,000	Booz Allen & Hamilton
122	Lansdale, NJ	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	20,000	Pennoni Associates
126	Boca Raton, FL	Winter 1988/89	—	4:00–6:00 p.m.	43	—	—	57	—	40,000	McMahon Associates
150	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	39	—	—	61	—	26,000	Booz Allen & Hamilton
153	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	50	—	—	50	—	65,000	McMahon Associates
153	Arden, DE	Winter 1988/89	—	4:00–6:00 p.m.	30	—	—	70	—	26,000	Orth-Rodgers & Assoc. Inc.
154	Doylestown, PA	Winter 1988/89	—	4:00–6:00 p.m.	32	—	—	68	—	29,000	Orth-Rodgers & Assoc. Inc.
164	Middletown Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	25,000	Booz Allen & Hamilton
168	Haddon Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	20	—	—	80	—	6,000	Pennoni Associates
205	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	55	—	—	45	—	62,000	McMahon Associates

Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
237	W. Windsor Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	48	—	—	52	—	45,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	44	—	—	56	—	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	—	4:00–6:00 p.m.	19	—	—	81	—	33,000	Wilbur Smith
150	Portland, OR	—	519	4:00–6:00 p.m.	68	6	26	32	—	25,000	Kittelson and Associates
150	Portland, OR	—	655	4:00–6:00 p.m.	65	7	28	35	—	30,000	Kittelson and Associates
780	Calgary, Alberta	Oct.–Dec. 1987	15,436	4:00–6:00 p.m.	20	39	41	80	—	—	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	35	—	—	65	—	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	178	3:30–6:15 p.m.	32	44	24	66	—	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	28	41	67	—	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

“—” means no data were provided

Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

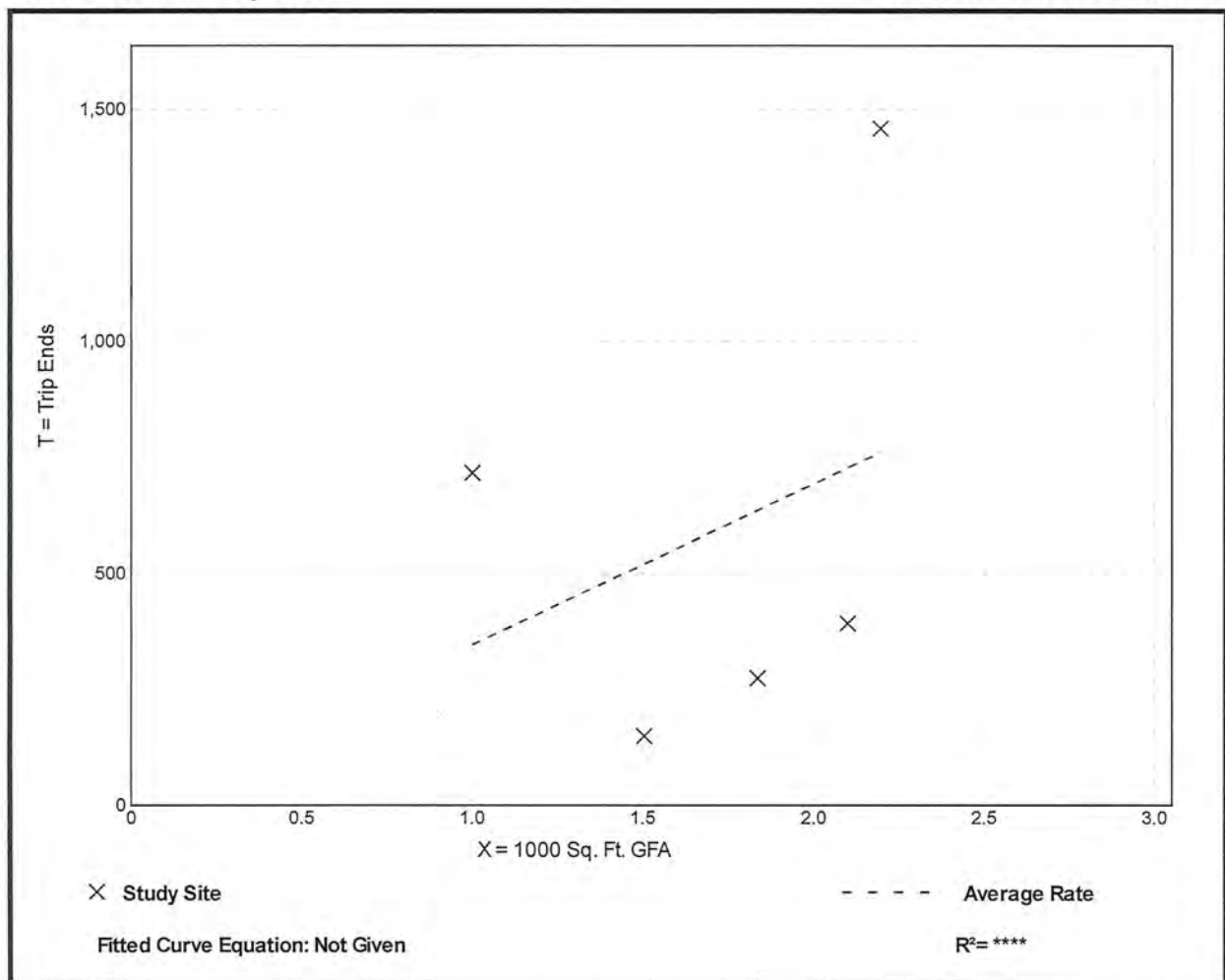
Setting/Location: General Urban/Suburban
Number of Studies: 5
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
346.23	99.73 - 716.00	288.36

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant without Drive-Through Window (933)

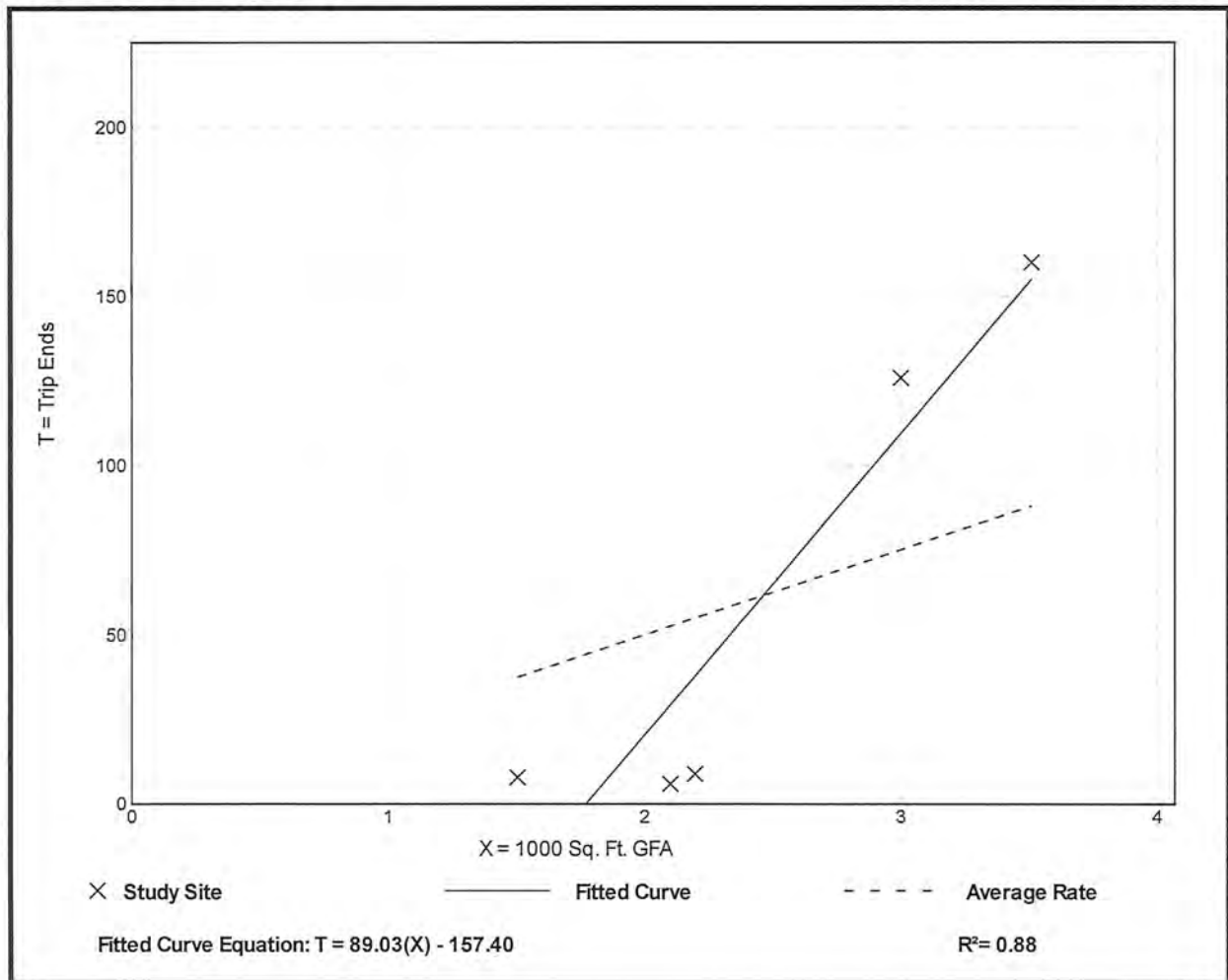
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 5
 1000 Sq. Ft. GFA: 2
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
25.10	2.86 - 45.58	22.36

Data Plot and Equation

Caution – Small Sample Size



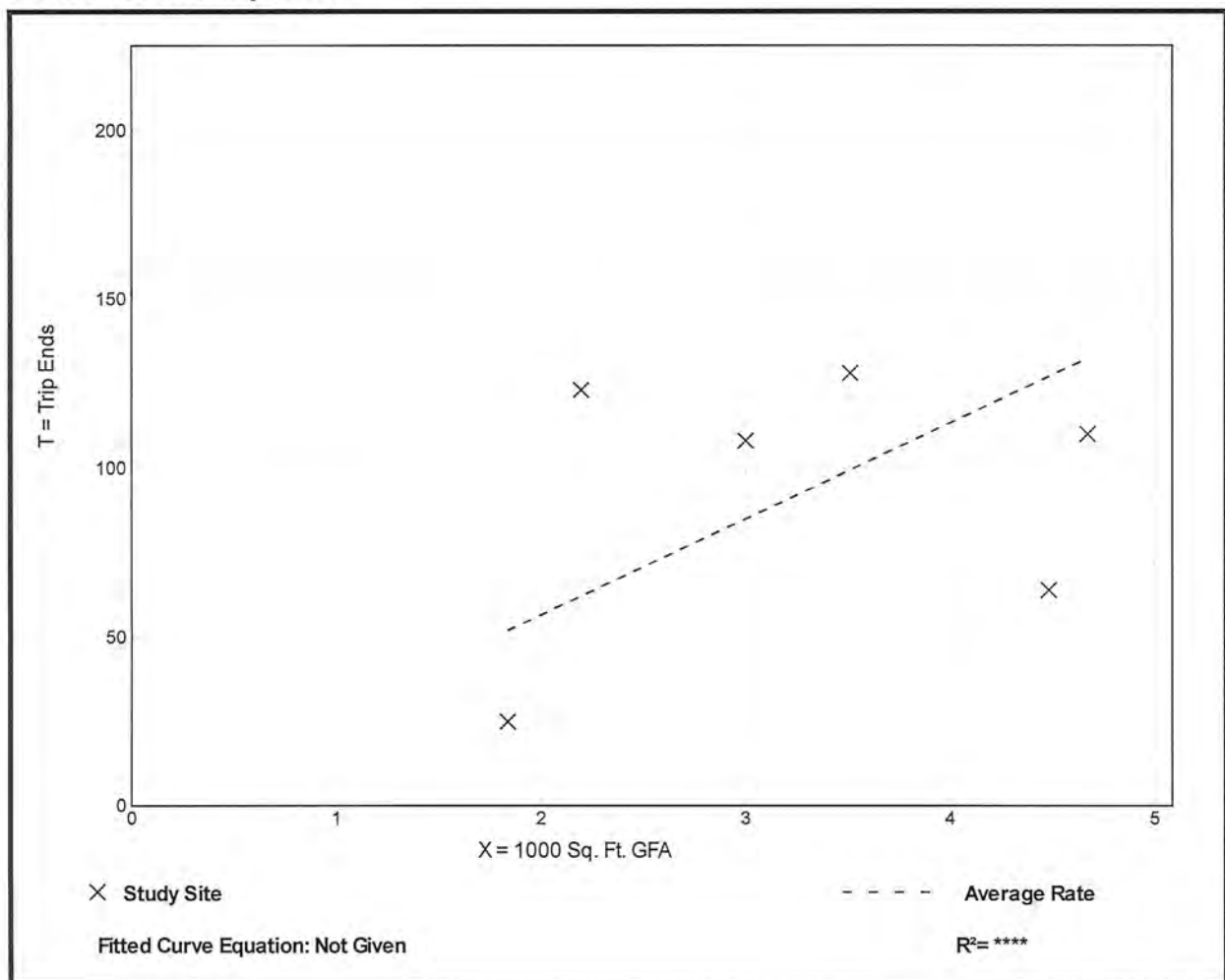
Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 6
 1000 Sq. Ft. GFA: 3
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
28.34	13.62 - 56.01	14.56

Data Plot and Equation



**Table E.30 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 932—High-Turnover (Sit-Down) Restaurant**

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS- BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	5.8	Orlando, FL	1992	150	2:00-6:00 p.m.	32	—	—	68	—	TPD Inc.
—	5	Caswellberry, FL	1992	65	2:00-6:00 p.m.	58	—	—	42	—	TPD Inc.
188	5.3	Louisville area, KY	1993	24	4:00-6:00 p.m.	50	37	13	50	1,615	Barton- Aschman Assoc.
189	2.9	Louisville area, KY	1993	41	4:00-6:00 p.m.	37	27	36	63	3,035	Barton- Aschman Assoc.
150	3.1	Louisville area, KY	1993	21	4:00-6:00 p.m.	38	29	33	62	2,580	Barton- Aschman Assoc.
250	7.1	New Albany, IN	1993	—	4:00-6:00 p.m.	23	23	54	77	1,565	Barton- Aschman Assoc.
—	8	Kissimmee, FL	1995	884	2:00-6:00 p.m.	40	39	21	60	—	TPD Inc.
—	11	Orlando, FL	1996	267	2:00-6:00 p.m.	38	43	19	62	—	TPD Inc.
—	12	Orlando, FL	1996	317	2:00-6:00 p.m.	29	51	20	71	—	TPD Inc.
—	4.8	Orlando, FL	1992	279	2:00-6:00 p.m.	63	—	—	37	—	TPD Inc.
—	5.7	Orlando, FL	1994	305	2:00-6:00 p.m.	57	—	—	43	—	TPD Inc.
—	6.2	Orlando, FL	1995	521	2:00-6:00 p.m.	48	43	11	54	—	TPD Inc.

Average Pass-By Trip Percentage: 43

—" means no data were provided

Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

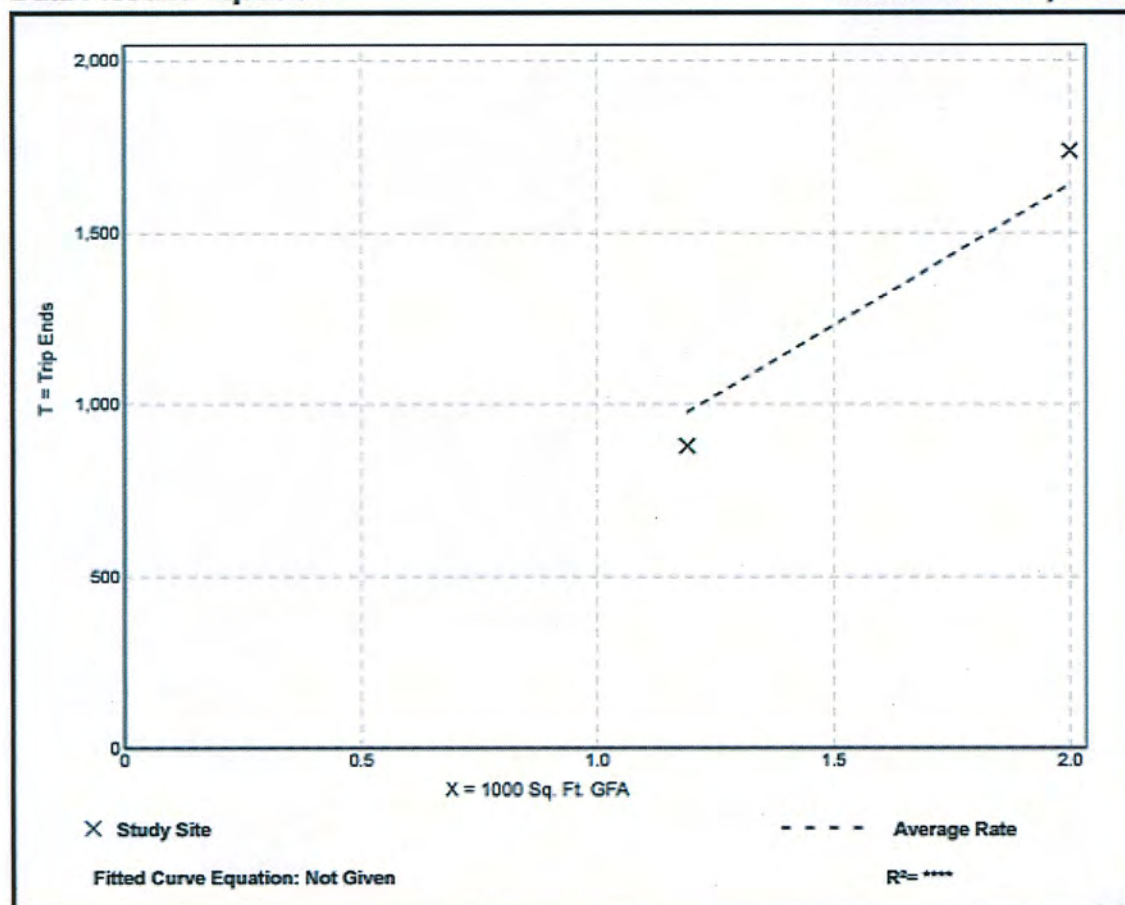
Setting/Location: General Urban/Suburban
Number of Studies: 2
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
820.38	738.66 - 869.00	*

Data Plot and Equation

Caution – Small Sample Size



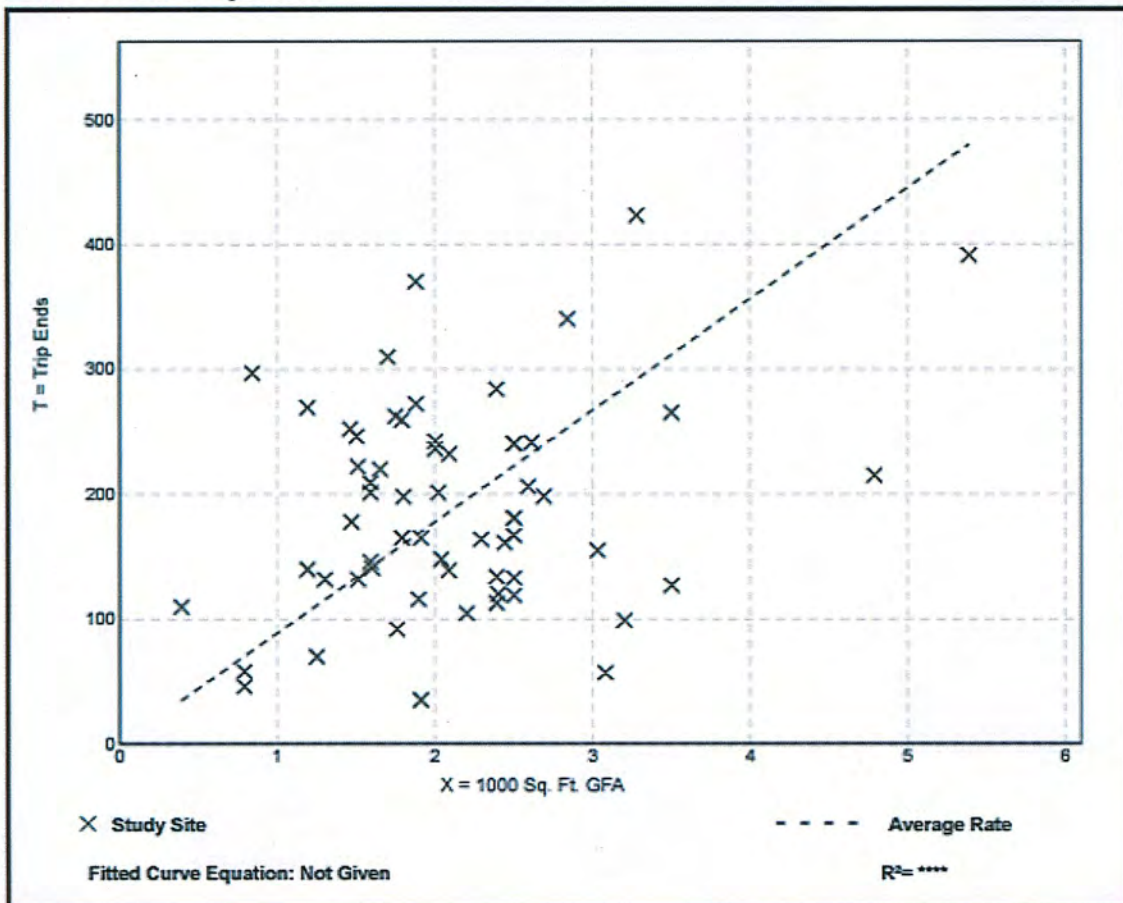
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 61
 1000 Sq. Ft. GFA: 2
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
88.99	18.32 - 353.57	48.19

Data Plot and Equation



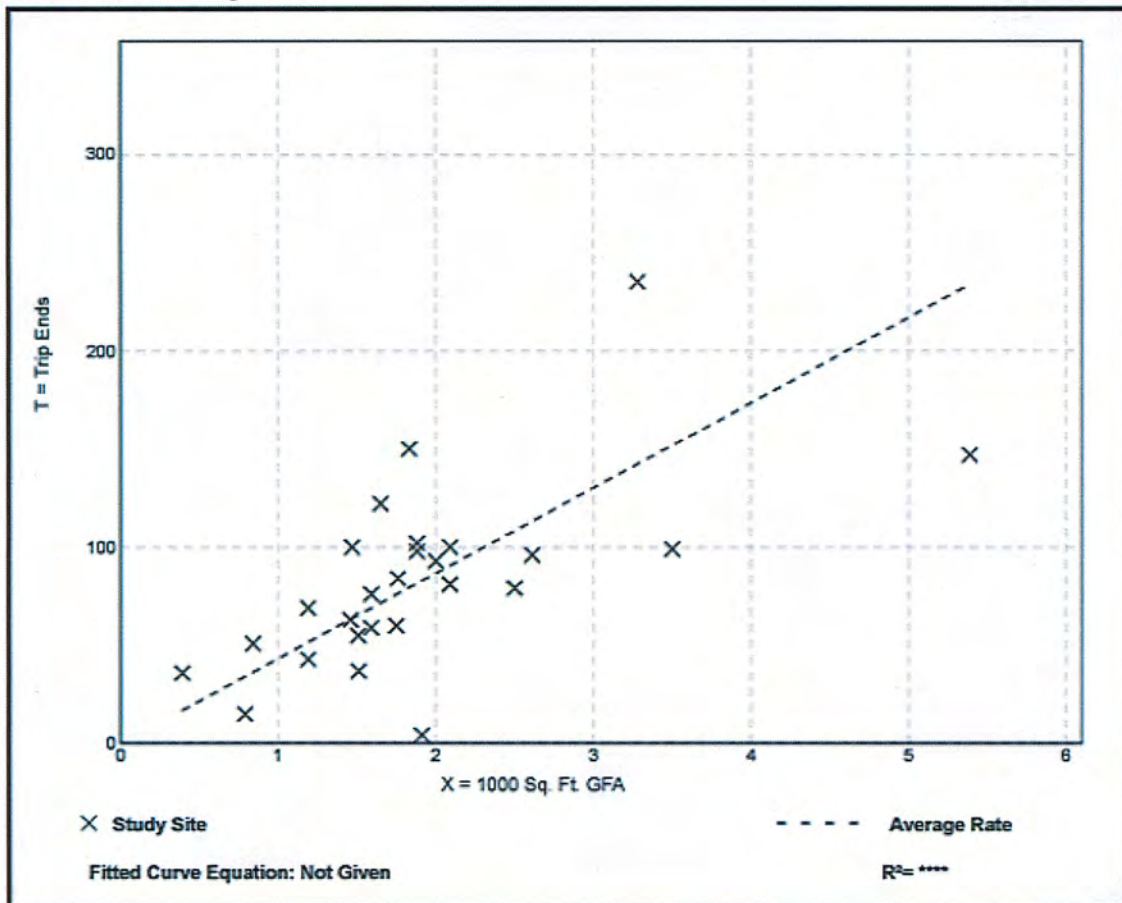
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 26
 1000 Sq. Ft. GFA: 2
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
43.38	2.09 - 92.31	18.88

Data Plot and Equation



**Table E.31 Pass-By and Non-Pass-By Trips Weekday, AM Peak Period
Land Use Code 934—Fast-Food Restaurant with Drive-Through Window**

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	<5	Chicago suburbs, IL	1987	84	7:00–9:00 a.m.	44	—	—	56	—	Kenig, O'Hara, Humes, Flock
88	1.4	Louisville area, KY	1993	—	7:00–9:00 a.m.	62	22	16	38	1,407	Barton-Aschman Assoc.
100	3.6	Louisville, KY	1993	—	7:00–9:00 a.m.	32	47	21	68	437	Barton-Aschman Assoc.
87	4.2	New Albany, IN	1993	—	7:00–9:00 a.m.	46	23	31	54	1,049	Barton-Aschman Assoc.
150	3.0	Louisville area, KY	1993	—	7:00–9:00 a.m.	43	14	43	57	2,903	Barton-Aschman Assoc.
—	3.3	varies	1996	—	6:00–9:00 a.m.	68	—	—	32	—	Oracle Engineering

Average Pass-By Trip Percentage: 49

“—” means no data were provided

**Table E.32 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 934—Fast-Food Restaurant with Drive-Through Window**

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS- BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	<2.6	Minneapolis, MN	1987	50	3:00–7:00 p.m.	25	27	48	75	—	—
—	<5.0	Chicago suburbs, IL	1987	80	3:00–6:00 p.m.	38	—	—	62	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	100	3:00–6:00 p.m.	55	—	—	45	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	150	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	225	3:00–6:00 p.m.	48	—	—	52	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	88	3:00–6:00 p.m.	35	—	—	65	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	84	3:00–6:00 p.m.	44	—	—	56	—	Kenig, O'Hara, Humes, Flock
88	1.3	Louisville area, KY	1993	—	4:00–6:00 p.m.	68	22	10	32	2,055	Barton-Aeschman Assoc.
120	1.9	Louisville area, KY	1993	33	4:00–6:00 p.m.	67	24	9	33	2,447	Barton-Aeschman Assoc.
87	4.2	New Albany, IN	1993	—	4:00–6:00 p.m.	56	25	19	44	1,632	Barton-Aeschman Assoc.
150	3.0	Louisville area, KY	1993	—	4:00–6:00 p.m.	31	31	38	69	4,250	Barton-Aeschman Assoc.
—	3.1	Kissimmee, FL	1995	28	2:00–6:00 p.m.	71	—	—	29	—	TPD Inc.
—	3.1	Apopka, FL	1996	29	2:00–6:00 p.m.	38	—	—	62	—	TPD Inc.
—	2.8	Winter Springs, FL	1995	47	2:00–6:00 p.m.	66	—	—	34	—	TPD Inc.
—	4.3	Longwood, FL	1994	304	2:00–6:00 p.m.	62	—	—	38	—	TPD Inc.
—	3.2	Altamonte Springs, FL	1996	202	2:00–6:00 p.m.	40	39	21	60	—	TPD Inc.
—	2.9	Winter Park, FL	1996	271	2:00–6:00 p.m.	41	41	18	59	—	TPD Inc.
—	3.3*	several	1996	varies	4:00–6:00 p.m.	62	—	—	38	—	Oracle Engineering

*Average of several combined studies.

Average Pass-By Trip Percentage: 50

“—” means no data were provided

Table 7.1 Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	p.m. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
from OFFICE	to Office	2%	1%	2%
	to Retail	20%	23%	22%
	to Residential	0%	2%	2%
from RETAIL	to Office	3%	3%	3%
	to Retail	29%	20%	30%
	to Residential	7%	12%	11%
from RESIDENTIAL	to Office	N/A	N/A	N/A
	to Retail	34%	53%	38%
	to Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A—Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

Table 7.2 Unconstrained Internal Capture Rates for Trip Destinations Within a Multi-Use Development

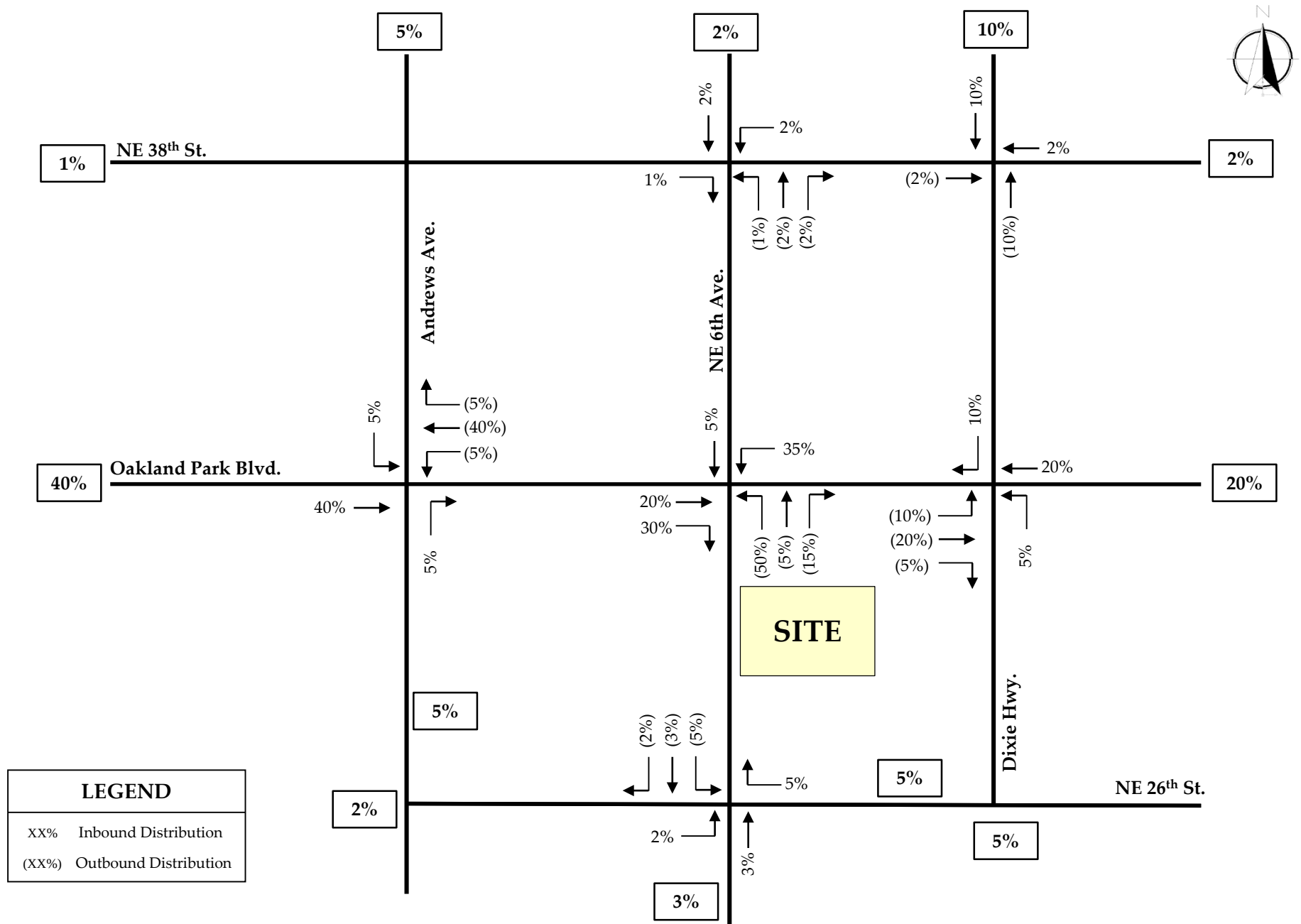
		WEEKDAY		
		MIDDAY PEAK HOUR	p.m. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
to OFFICE	from Office	6%	6%	2%
	from Retail	38%	31%	15%
	from Residential	0%	0%	N/A
to RETAIL	from Office	4%	2%	4%
	from Retail	31%	20%	28%
	from Residential	5%	9%	9%
to RESIDENTIAL	from Office	0%	2%	3%
	from Retail	37%	31%	33%
	from Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A—Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

ATTACHMENT D

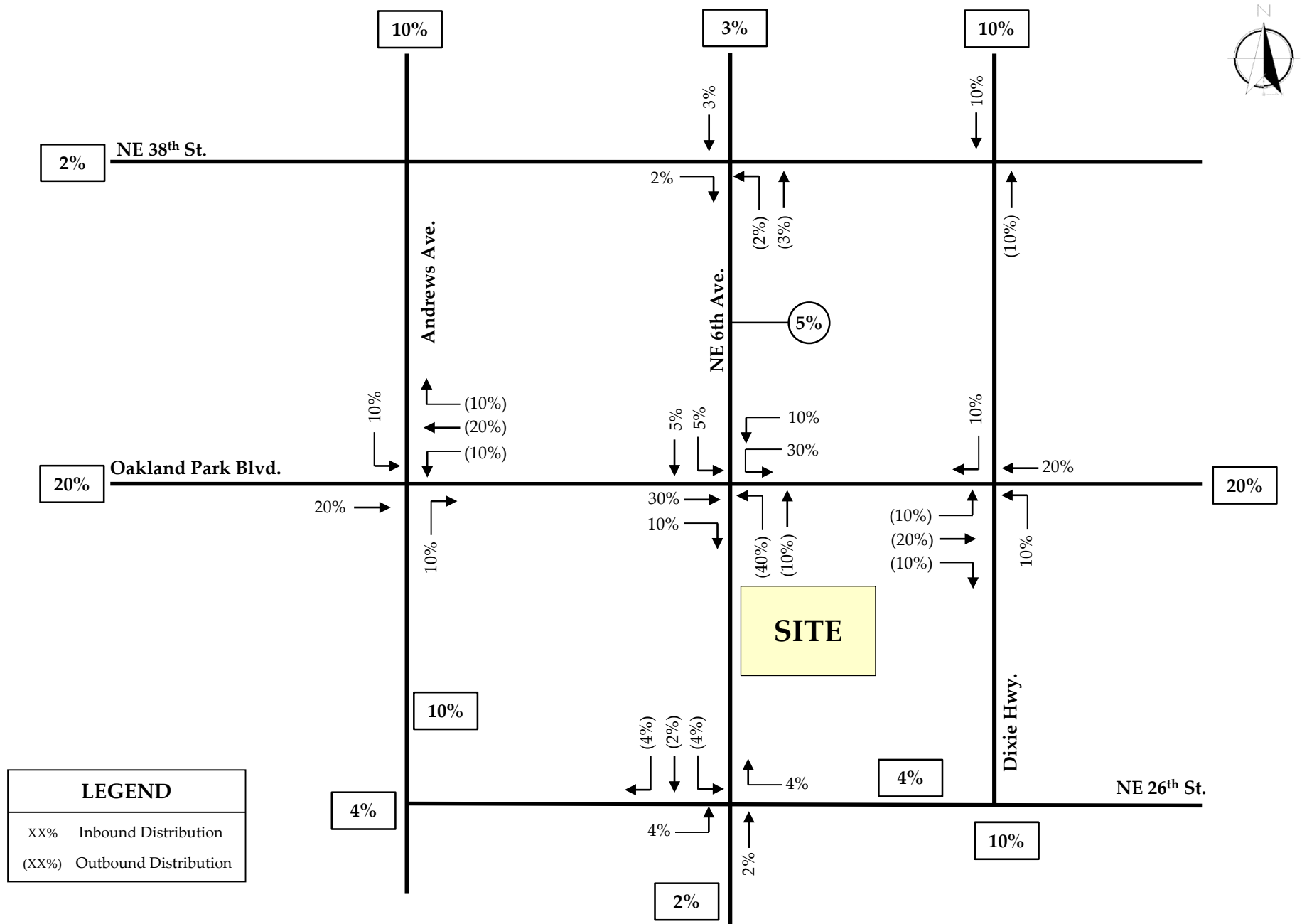
DISTRIBUTION INFORMATION



Project Distribution (Residential) for Adjacent Intersections - Net New Trips

RAM OAKLAND PARK TRAFFIC ANALYSIS

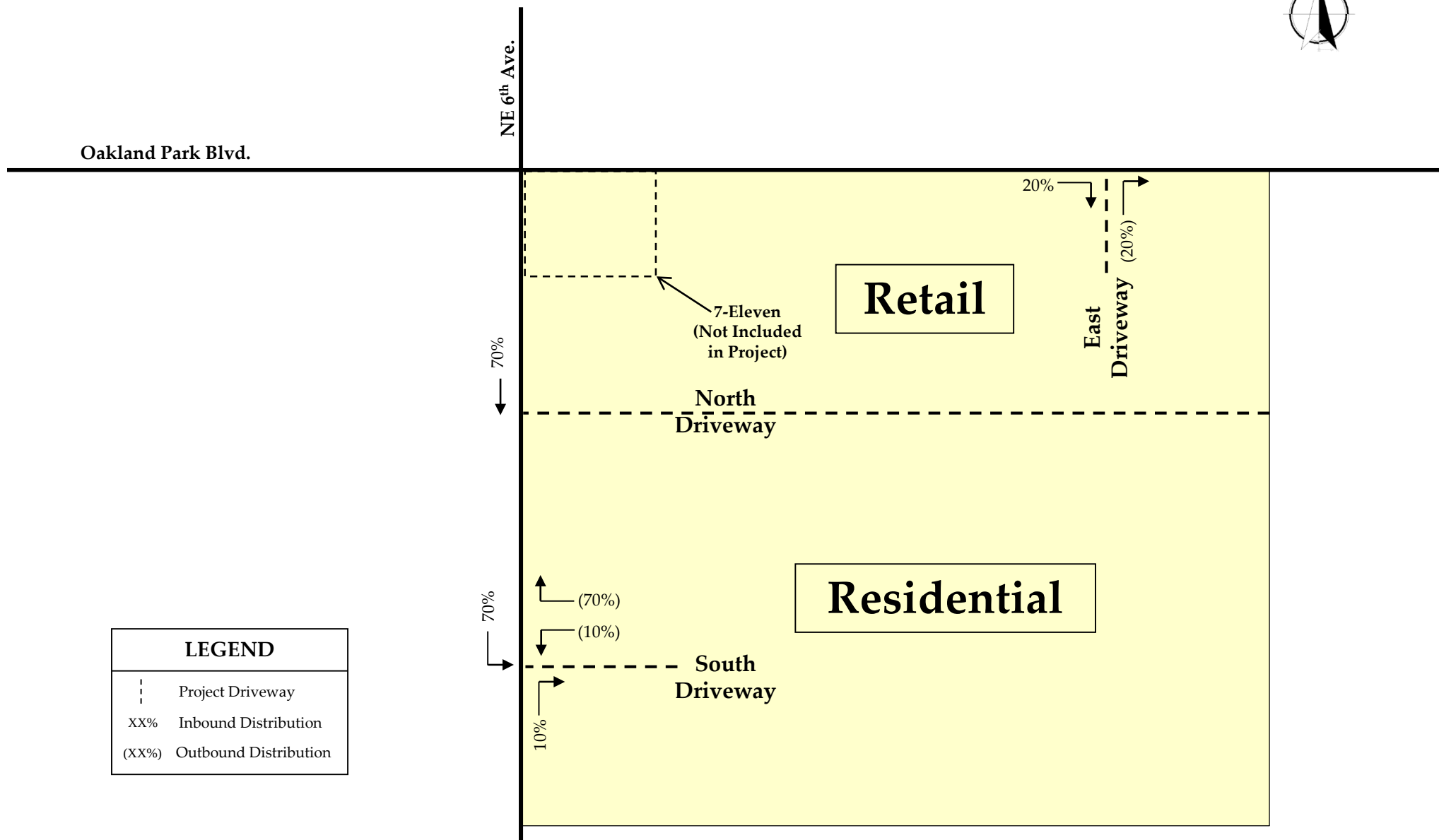
City of Oakland Park, Florida

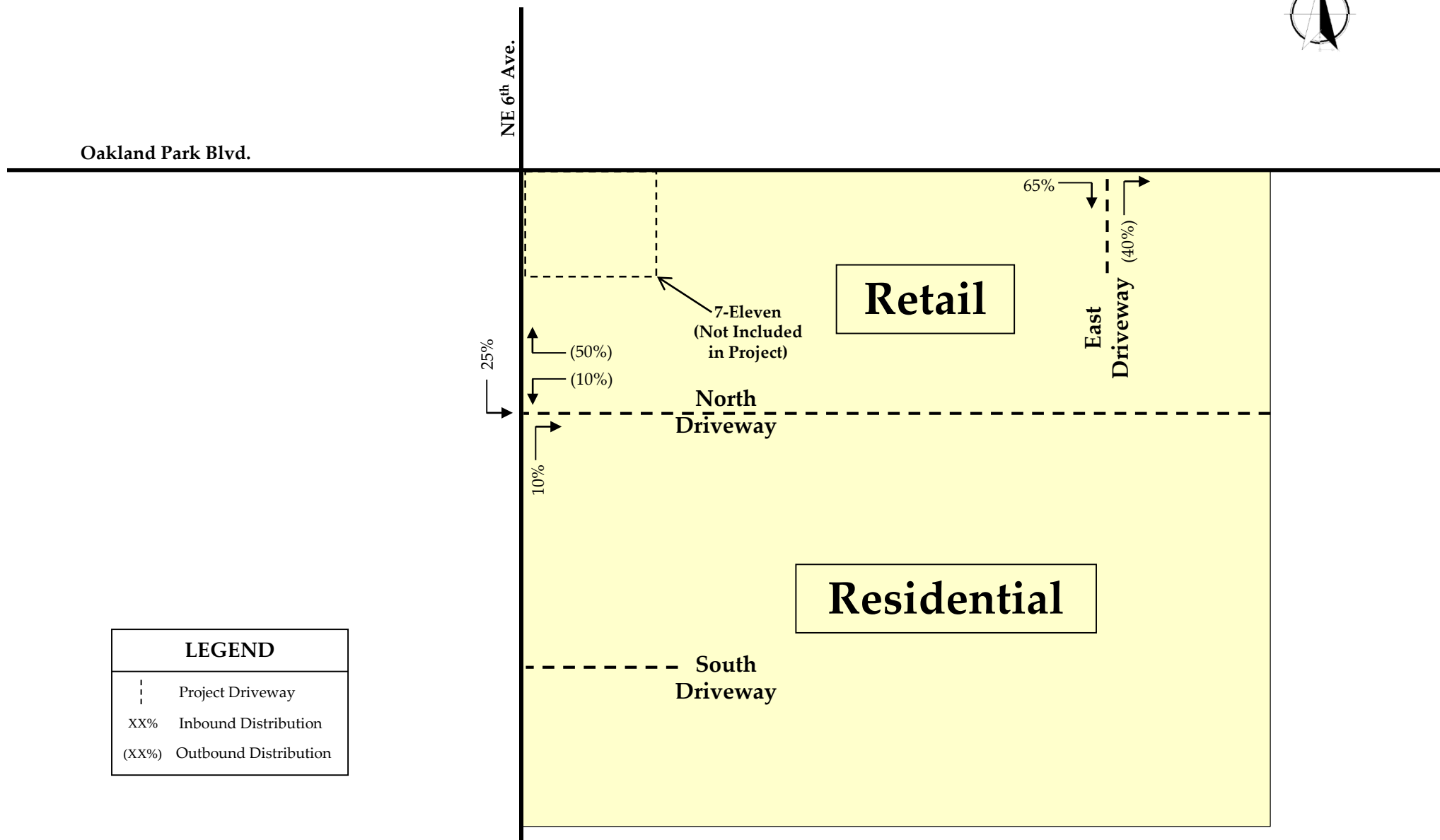


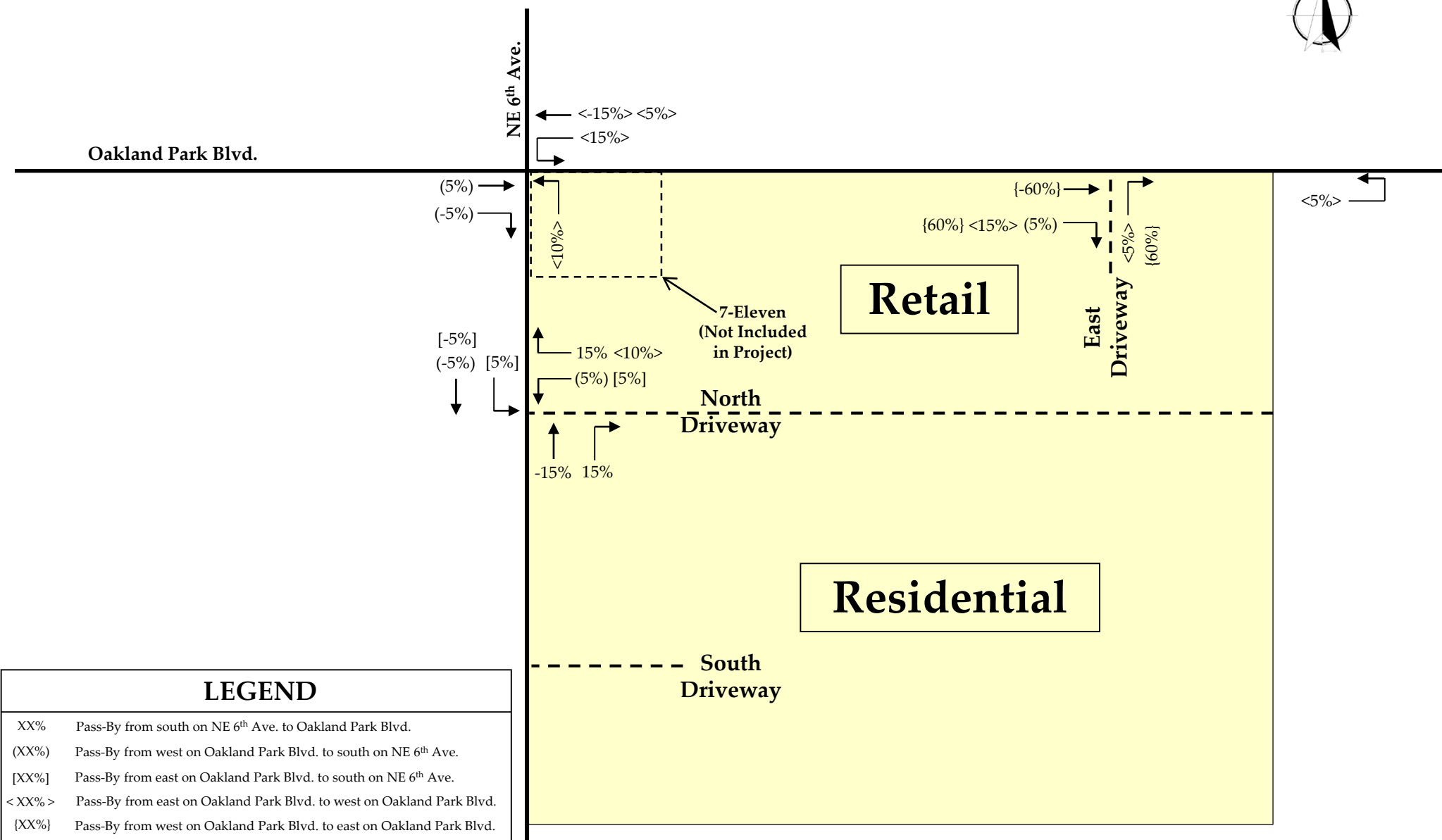
Project Distribution (Retail) for Adjacent Intersections - Net New Trips

RAM OAKLAND PARK TRAFFIC ANALYSIS

City of Oakland Park, Florida







LEGEND

XX%	Pass-By from south on NE 6 th Ave. to Oakland Park Blvd.
(XX%)	Pass-By from west on Oakland Park Blvd. to south on NE 6 th Ave.
[XX%]	Pass-By from east on Oakland Park Blvd. to south on NE 6 th Ave.
<XX%>	Pass-By from east on Oakland Park Blvd. to west on Oakland Park Blvd.
{XX%}	Pass-By from west on Oakland Park Blvd. to east on Oakland Park Blvd.

APPENDIX B

TRAFFIC VOLUME CALCULATIONS

TABLE B-1
AM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
Oakland Park Blvd. at Andrews Ave.	Collected Count (11/7/19)	20	147	1,472	305	5	152	1,150	80	1	196	635	142	0	66	744	145
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	21	151	1,516	314	5	157	1,185	82	1	202	654	146	0	68	766	149
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	22	156	1,568	325	5	162	1,225	85	1	209	676	151	0	70	792	154
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	7	0	0	4	17	4	0	0	0	1	0	1	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	6	0	0	5	21	5	0	0	0	2	0	1	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	11	0	0	0	7	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	27	0	0	0	26	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	22	156	1,619	326	5	171	1,296	94	1	211	676	154	0	72	792	154
	Project Net New Trips - Residential	0	0	8	0	0	3	27	4	0	0	0	1	0	1	0	0
	Project Net New Trips - Retail	0	0	9	0	0	3	5	2	0	0	0	5	0	5	0	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	-3	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	-18	0	0	-5	-10	-5	0	0	0	-8	0	-8	0	0
	2022 Total Peak-Season Traffic	22	156	1,618	326	5	172	1,315	95	1	211	676	152	0	70	792	154
Oakland Park Blvd. at NE 6 th Ave.	Collected Count (11/7/19)	20	53	1,397	119	11	64	1,098	49	0	150	125	52	0	90	202	47
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	21	55	1,439	123	11	66	1,131	50	0	155	129	54	0	93	208	48
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	22	57	1,488	127	11	68	1,169	52	0	160	133	56	0	96	215	50
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	9	0	0	0	25	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	9	0	0	0	31	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	11	0	0	0	7	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	27	0	0	0	26	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	22	57	1,544	127	11	68	1,258	52	0	160	133	56	0	96	215	50
	Project Net New Trips - Residential	0	0	4	6	0	7	0	0	0	34	3	10	0	0	0	1
	Project Net New Trips - Retail	0	0	14	5	14	4	0	0	0	10	3	0	0	2	2	0
	Project Pass-By Trips - Retail	0	0	2	-2	4	0	-3	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	-25	-9	-15	-29	10	0	0	-30	-1	0	0	0	-2	0
	2022 Total Peak-Season Traffic	22	57	1,539	127	14	50	1,265	52	0	174	138	66	0	98	216	50
Oakland Park Blvd. at Dixie Hwy.	Collected Count (11/7/19)	8	160	1,179	134	0	58	795	108	0	185	450	65	0	201	531	100
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	8	165	1,214	138	0	60	819	111	0	191	464	67	0	207	547	103
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	8	171	1,255	143	0	62	847	115	0	197	480	69	0	214	566	106
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	9	0	0	4	25	4	0	0	0	1	0	1	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	9	0	0	5	31	5	0	0	0	2	0	1	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	11	0	0	0	0	0	11	0	0	4	0	0	6	2	7
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	27	0	0	0	0	0	26	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	8	182	1,273	170	0	71	903	135	0	223	484	72	0	222	568	113
	Project Net New Trips - Residential	0	7	14	3	0	0	4	0	0	1	0	0	0	0	0	2
	Project Net New Trips - Retail	0	2	5	3	0	0	9	0	0	5	0	0	0	0	0	4
	Project Pass-By Trips - Retail	0	0	-6	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	-5	-8	-4	0	0	-13	0	0	-8	0	0	0	0	0	-9
	2022 Total Peak-Season Traffic	8	186	1,278	172	0	71	903	135	0	221	484	72	0	222	568	110

TABLE B-1
AM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
NE 6th Ave. at NE 26 th St.	Collected Count (11/7/19)	0	52	223	12	0	16	164	68	0	15	115	30	0	111	202	56
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	54	230	12	0	16	169	70	0	15	118	31	0	114	208	58
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	56	238	12	0	17	175	72	0	16	122	32	0	118	215	60
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	56	248	12	0	17	185	72	0	16	122	32	0	118	215	60
	Project Net New Trips - Residential	0	0	0	0	0	0	0	1	0	0	0	0	0	4	2	1
	Project Net New Trips - Retail	0	2	0	0	0	0	0	2	0	0	1	0	0	1	1	1
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
	Vested Trips - Walmart ⁽⁴⁾	0	-3	0	0	0	0	0	-3	0	0	-1	0	0	-2	0	-2
	2022 Total Peak-Season Traffic	0	55	248	12	0	17	185	72	0	16	122	32	0	121	217	60
NE 38 th St. at NE 6 th Ave.	Collected Count (11/7/19)	0	34	138	99	0	14	117	30	0	29	246	7	0	13	304	22
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	35	142	102	0	14	121	31	0	30	253	7	0	13	313	23
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	36	147	105	0	14	125	32	0	31	262	7	0	13	324	24
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	8	0	0	0	4	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	36	155	105	0	14	129	32	0	31	262	7	0	13	324	24
	Project Net New Trips - Residential	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0
	Project Net New Trips - Retail	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	-2	0
	2022 Total Peak-Season Traffic	0	36	155	106	0	14	129	32	0	33	263	8	0	13	324	24
NE 38 th St. at Dixie Hwy.	Collected Count (11/12/19)	0	32	91	19	0	44	51	74	0	26	615	48	0	270	752	8
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	33	94	20	0	45	53	76	0	27	633	49	0	278	775	8
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	34	97	21	0	47	55	79	0	28	655	51	0	287	801	8
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	0	0	0	0	8	0	0	30	20	5	0	0	0	4
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	34	97	21	0	47	63	79	0	58	684	56	0	287	803	12
	Project Net New Trips - Residential	0	0	1	0	0	0	0	0	0	0	7	0	0	0	2	0
	Project Net New Trips - Retail	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	0	0	0	0	0	0	0	0	-5	0	0	0	-9	0
	2022 Total Peak-Season Traffic	0	34	98	21	0	47	63	79	0	58	688	56	0	287	800	12

TABLE B-1
AM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
East Driveway at Oakland Park Blvd.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	1,597	0	-	-	1,258	-	-	-	-	0	-	-	-	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	1.12%	1.12%	-	-	1.12%	-	-	-	-	1.12%	-	-	-	-
	Existing plus CGR Increase	-	-	1,651	0	-	-	1,301	-	-	-	-	0	-	-	-	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	9	0	-	-	25	-	-	-	-	0	-	-	-	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	9	0	-	-	31	-	-	-	-	0	-	-	-	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	11	0	-	-	7	-	-	-	-	0	-	-	-	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	0	0	-	-	0	-	-	-	-	0	-	-	-	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	27	0	-	-	26	-	-	-	-	0	-	-	-	-
	2022 Background Peak-Season Traffic	-	-	1,707	0	-	-	1,389	-	-	-	-	0	-	-	-	-
	Project Net New Trips - Residential	-	-	10	4	-	-	7	-	-	-	-	14	-	-	-	-
	Project Net New Trips - Retail	-	-	0	30	-	-	18	-	-	-	-	10	-	-	-	-
	Project Pass-By Trips - Retail	-	-	-17	23	-	-	1	-	-	-	-	12	-	-	-	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	0	0	-	-	0	-	-	-	-	0	-	-	-	-
	2022 Total Peak-Season Traffic	-	-	1,700	57	-	-	1,415	-	-	-	-	36	-	-	-	-
North Driveway at NE 6 th Ave.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	-	-	0	0	0	0	-	-	338	0	0	0	397	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	-	-	1.12%	1.12%	-	1.12%	-	-	1.12%	1.12%	1.12%	1.12%	1.12%	-
	Existing plus CGR Increase	-	-	-	-	0	0	-	0	-	-	349	0	0	0	410	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Background Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	349	0	0	0	410	-
	Project Net New Trips - Residential	-	-	-	-	0	0	-	0	-	-	47	0	0	0	14	-
	Project Net New Trips - Retail	-	-	-	-	0	3	-	13	-	-	0	5	0	11	0	-
	Project Pass-By Trips - Retail	-	-	-	-	0	2	-	4	-	-	-4	4	0	1	-3	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Total Peak-Season Traffic	-	-	-	-	0	5	-	17	-	-	392	9	0	12	421	-
South Driveway at NE 6 th Ave.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	338	0	0	0	397	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	-	-	1.12%	1.12%	-	1.12%	-	-	1.12%	1.12%	1.12%	1.12%	1.12%	-
	Existing plus CGR Increase	-	-	-	-	0	0	-	0	-	-	349	0	0	0	410	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Background Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	349	0	0	0	410	-
	Project Net New Trips - Residential	-	-	-	-	0	7	-	47	-	-	0	1	0	14	0	-
	Project Net New Trips - Retail	-	-	-	-	0	0	-	0	-	-	5	0	0	0	3	-
	Project Pass-By Trips - Retail	-	-	-	-	0	0	-	0	-	-	0	0	0	0	-1	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Total Peak-Season Traffic	-	-	-	-	0	7	-	47	-	-	354	1	0	14	412	-

(1) Peak Season Conversion Factor obtained from 2018 FDOT Florida Traffic Online.

(2) Compound growth rate of 1.12% based on review of available historical traffic counts for Station #86-0022, #86-5067, #86-9070, #86-0425, #86-5074, #86-9072, #86-9576 and #86-0212.

(3) Committed developments based on coordination with the Cities of Oakland Park and Wilton Manors.

(4) Walmart Oakland Park #4192-00 Supplemental Traffic Analysis, prepared by McMahon Associates, Inc., September 2013.

Balanced Volumes



TABLE B-2
PM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
Oakland Park Blvd. at Andrews Ave.	Collected Count (11/7/19)	29	237	1,229	238	5	151	1,359	78	0	258	790	147	0	80	577	132
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	30	244	1,266	245	5	156	1,400	80	0	266	814	151	0	82	594	136
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	31	252	1,309	253	5	161	1,448	83	0	275	842	156	0	85	614	141
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	11	0	0	1	3	1	0	0	0	2	0	2	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	23	0	0	4	14	4	0	0	0	6	0	5	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	6	0	0	0	9	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	31	252	1,362	255	5	166	1,487	88	0	276	842	164	0	92	614	141
	Project Net New Trips - Residential	0	0	23	0	0	1	13	2	0	0	0	2	0	3	0	0
	Project Net New Trips - Retail	0	0	22	0	0	10	20	10	0	0	0	11	0	10	0	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	-24	0	0	-13	-30	-13	0	0	0	-10	0	-10	0	0
	2022 Total Peak-Season Traffic	31	252	1,383	255	5	164	1,490	87	0	276	842	167	0	95	614	141
Oakland Park Blvd. at NE 6 th Ave.	Collected Count (11/7/19)	29	72	1,181	161	8	93	1,557	77	0	140	262	61	0	123	256	56
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	30	74	1,216	166	8	96	1,604	79	0	144	270	63	0	127	264	58
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	31	77	1,257	172	8	99	1,659	82	0	149	279	65	0	131	273	60
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	15	0	0	0	5	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	34	0	0	0	22	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	6	0	0	0	9	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	31	77	1,325	172	8	99	1,708	82	0	149	279	65	0	131	273	60
	Project Net New Trips - Residential	0	0	11	17	0	20	0	0	0	16	2	5	0	0	3	0
	Project Net New Trips - Retail	0	0	32	11	33	11	0	0	0	40	10	0	0	5	6	0
	Project Pass-By Trips - Retail	0	0	3	-3	9	0	-6	0	0	6	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	-33	-11	-19	-48	17	0	0	-73	-3	0	0	0	-3	0
	2022 Total Peak-Season Traffic	31	77	1,338	186	31	82	1,719	82	0	138	288	70	0	136	279	60
Oakland Park Blvd. at Dixie Hwy.	Collected Count (11/7/19)	31	147	976	125	0	90	1,316	211	0	225	567	101	1	178	584	111
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	32	151	1,005	129	0	93	1,355	217	0	232	584	104	1	183	602	114
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	33	156	1,039	133	0	96	1,401	224	0	240	604	108	1	189	622	118
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	15	0	0	1	5	1	0	0	0	2	0	2	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	34	0	0	4	22	4	0	0	0	6	0	6	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	6	0	0	0	0	0	7	0	0	2	0	0	9	3	9
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	13	0	0	0	0	0	13	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	33	162	1,088	146	0	101	1,428	236	0	253	606	116	1	206	625	127
	Project Net New Trips - Residential	0	3	7	2	0	0	11	0	0	3	0	0	0	0	0	6
	Project Net New Trips - Retail	0	10	19	10	0	0	22	0	0	11	0	0	0	0	0	11
	Project Pass-By Trips - Retail	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	-14	-22	-12	0	0	-17	0	0	-10	0	0	0	0	0	-11
	2022 Total Peak-Season Traffic	33	161	1,091	146	0	101	1,444	236	0	257	606	116	1	206	625	133

TABLE B-2
PM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
NE 6th Ave. at NE 26 th St.	Collected Count (11/7/19)	0	95	249	23	0	12	338	147	0	25	208	36	0	109	231	11
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	98	256	24	0	12	348	151	0	26	214	37	0	112	238	11
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	101	265	25	0	12	360	156	0	27	221	38	0	116	246	11
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	101	270	25	0	12	365	156	0	27	221	38	0	116	246	11
	Project Net New Trips - Residential	0	1	0	0	0	0	0	3	0	0	2	0	0	1	1	1
	Project Net New Trips - Retail	0	4	0	0	0	0	0	4	0	0	2	0	0	4	2	4
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	-4	0	0	0	0	0	-4	0	0	-2	0	0	-5	-2	-5
	2022 Total Peak-Season Traffic	0	102	270	25	0	12	365	159	0	27	223	38	0	116	247	11
NE 38 th St. at NE 6 th Ave.	Collected Count (11/7/19)	0	35	124	77	0	17	231	39	0	68	337	19	0	16	332	31
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	36	128	79	0	18	238	40	0	70	347	20	0	16	342	32
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	37	132	82	0	19	246	41	0	72	359	21	0	17	354	33
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	37	137	82	0	19	252	41	0	72	359	21	0	17	354	33
	Project Net New Trips - Residential	0	0	0	1	0	1	0	0	0	0	1	1	0	0	1	0
	Project Net New Trips - Retail	0	0	0	2	0	0	0	0	0	2	3	0	0	0	4	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	0	0	0	0	0	0	0	0	-3	0	0	0	-3	0
	2022 Total Peak-Season Traffic	0	37	137	85	0	20	252	41	0	74	360	22	0	17	356	33
NE 38 th St. at Dixie Hwy.	Collected Count (11/12/19)	0	40	95	22	1	44	140	133	0	64	823	50	0	197	818	18
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
	2019 Existing Peak-Season Traffic	0	41	98	23	1	45	144	137	0	66	848	52	0	203	843	19
	Compound Growth Rate (CGR) ⁽²⁾	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%	1.12%
	Existing plus CGR Increase	0	42	101	24	1	47	149	142	0	68	877	54	0	210	872	20
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	0	0	0	0	0	0	4	0	0	21	27	6	0	0	0	2
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2022 Background Peak-Season Traffic	0	42	101	24	1	47	153	142	0	89	909	60	0	210	880	22
	Project Net New Trips - Residential	0	0	1	0	0	0	1	0	0	0	3	0	0	0	6	0
	Project Net New Trips - Retail	0	0	0	0	0	0	0	0	0	0	10	0	0	0	11	0
	Project Pass-By Trips - Retail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vested Trips - Walmart ⁽⁴⁾	0	0	0	0	0	0	0	0	0	0	-14	0	0	0	-11	0
	2022 Total Peak-Season Traffic	0	42	102	24	1	47	154	142	0	89	908	60	0	210	886	22

TABLE B-2
PM TRAFFIC VOLUME CALCULATIONS
RAM OAKLAND PARK TRAFFIC ANALYSIS

INTERSECTION	SCENARIO	TRAFFIC VOLUMES															
		EBUT	EBLT	EBTH	EBRT	WBUT	WBLT	WBTH	WBRT	NBUT	NBLT	NBTH	NBRT	SBUT	SBLT	SBTH	SBRT
East Driveway at Oakland Park Blvd.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	1,414	0	-	-	1,787	-	-	-	-	0	-	-	-	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	1.12%	1.12%	-	-	1.12%	-	-	-	-	1.12%	-	-	-	-
	Existing plus CGR Increase	-	-	1,462	0	-	-	1,848	-	-	-	-	0	-	-	-	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	15	0	-	-	5	-	-	-	-	0	-	-	-	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	34	0	-	-	22	-	-	-	-	0	-	-	-	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	6	0	-	-	9	-	-	-	-	0	-	-	-	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	0	0	-	-	0	-	-	-	-	0	-	-	-	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	13	0	-	-	13	-	-	-	-	0	-	-	-	-
	2022 Background Peak-Season Traffic	-	-	1,529	0	-	-	1,897	-	-	-	-	0	-	-	-	-
	Project Net New Trips - Residential	-	-	5	11	-	-	20	-	-	-	-	7	-	-	-	-
	Project Net New Trips - Retail	-	-	0	70	-	-	44	-	-	-	-	39	-	-	-	-
	Project Pass-By Trips - Retail	-	-	-37	49	-	-	3	-	-	-	-	39	-	-	-	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	0	0	-	-	0	-	-	-	-	0	-	-	-	-
	2022 Total Peak-Season Traffic	-	-	1,497	130	-	-	1,964	-	-	-	-	85	-	-	-	-
North Driveway at NE 6 th Ave.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	-	-	0	0	0	0	-	-	477	0	0	0	526	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	-	-	1.12%	1.12%	-	1.12%	-	-	1.12%	1.12%	1.12%	1.12%	1.12%	-
	Existing plus CGR Increase	-	-	-	-	0	0	-	0	-	-	493	0	0	0	544	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Background Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	493	0	0	0	544	-
	Project Net New Trips - Residential	-	-	-	-	0	0	-	0	-	-	23	0	0	0	40	-
	Project Net New Trips - Retail	-	-	-	-	0	10	-	50	-	-	0	10	0	28	0	-
	Project Pass-By Trips - Retail	-	-	-	-	0	6	-	15	-	-	-9	9	0	3	-6	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Total Peak-Season Traffic	-	-	-	-	0	16	-	65	-	-	507	19	0	31	578	-
South Driveway at NE 6 th Ave.	Collected Count (11/7/19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Peak-Season Conversion Factor (PSCF) ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2019 Existing Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	477	0	0	0	526	-
	Compound Growth Rate (CGR) ⁽²⁾	-	-	-	-	1.12%	1.12%	-	1.12%	-	-	1.12%	1.12%	1.12%	1.12%	1.12%	-
	Existing plus CGR Increase	-	-	-	-	0	0	-	0	-	-	493	0	0	0	544	-
	Committed Development Trips - 3411 N Federal Hwy ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Round Corner Oakland Park ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - West Dixie Redevelopment Project ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - The Village at Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Committed Development Trips - Starbucks Wilton Manors ⁽³⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Background Peak-Season Traffic	-	-	-	-	0	0	-	0	-	-	493	0	0	0	544	-
	Project Net New Trips - Residential	-	-	-	-	0	3	-	23	-	-	0	6	0	40	0	-
	Project Net New Trips - Retail	-	-	-	-	0	0	-	0	-	-	10	0	0	0	10	-
	Project Pass-By Trips - Retail	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	Vested Trips - Walmart ⁽⁴⁾	-	-	-	-	0	0	-	0	-	-	0	0	0	0	0	-
	2022 Total Peak-Season Traffic	-	-	-	-	0	3	-	23	-	-	503	6	0	40	554	-

(1) Peak Season Conversion Factor obtained from 2018 FDOT Florida Traffic Online.

(2) Compound growth rate of 1.12% based on review of available historical traffic counts for Station #86-0022, #86-5067, #86-9070, #86-0425, #86-5074, #86-9072, #86-9576 and #86-0122.

(3) Committed developments based on coordination with the Cities of Oakland Park and Wilton Manors.

(4) Walmart Oakland Park #4192-00 Supplemental Traffic Analysis, prepared by McMahon Associates, Inc., September 2013.

Balanced Volumes



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & ANDREWS AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: S. SALVO & R. MARTINEZ
SIGNALIZED

File Name : OAKLANDR
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	ANDREWS AVENUE From North				OAKLAND PARK BOULEVARD From East				ANDREWS AVENUE From South				OAKLAND PARK BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	15	118	35	1	24	263	15	0	49	93	14	2	29	330	64	1052
07:15	0	19	151	37	0	19	229	12	0	49	111	33	7	36	342	83	1128
07:30	0	21	183	41	2	33	343	19	0	49	159	44	5	37	388	68	1392
07:45	0	16	188	35	0	41	295	33	0	48	165	39	2	42	380	83	1367
Total	0	71	640	148	3	117	1130	79	0	195	528	130	16	144	1440	298	4939
08:00	0	15	202	30	0	36	246	11	1	50	165	30	5	38	362	79	1270
08:15	0	14	171	39	3	42	266	17	0	49	146	29	8	30	342	75	1231
08:30	0	23	189	30	5	31	270	26	0	47	173	39	10	37	360	62	1302
08:45	0	20	174	29	1	41	288	22	0	40	126	43	3	44	389	56	1276
Total	0	72	736	128	9	150	1070	76	1	186	610	141	26	149	1453	272	5079
16:00	0	25	109	39	3	53	293	27	0	51	199	28	6	66	312	52	1263
16:15	0	26	124	39	5	45	322	21	0	53	196	34	6	60	286	57	1274
16:30	0	29	129	41	2	35	374	23	0	62	175	46	8	61	268	52	1305
16:45	0	21	144	31	1	48	344	24	0	61	200	41	8	54	263	56	1296
Total	0	101	506	150	11	181	1333	95	0	227	770	149	28	241	1129	217	5138
17:00	0	22	134	34	2	32	312	22	0	60	183	44	9	63	302	64	1283
17:15	0	13	155	30	0	41	351	18	0	66	221	37	6	67	291	60	1356
17:30	0	20	140	37	1	32	378	15	0	72	210	32	9	46	319	59	1370
17:45	0	25	148	31	2	46	318	23	0	60	176	34	5	61	317	55	1301
Total	0	80	577	132	5	151	1359	78	0	258	790	147	29	237	1229	238	5310
Grand Total	0	324	2459	558	28	599	4892	328	1	866	2698	567	99	771	5251	1025	20466
Apprch %	0	9.7	73.6	16.7	0.5	10.2	83.7	5.6	0	21	65.3	13.7	1.4	10.8	73.5	14.3	
Total %	0	1.6	12	2.7	0.1	2.9	23.9	1.6	0	4.2	13.2	2.8	0.5	3.8	25.7	5	
LIGHT VEHICLES	0	317	2405	545	28	577	4728	320	1	851	2646	551	96	743	5084	999	19891
% LIGHT VEHICLES	0	97.8	97.8	97.7	100	96.3	96.6	97.6	100	98.3	98.1	97.2	97	96.4	96.8	97.5	97.2
HEAVY VEHICLES	0	7	54	13	0	22	164	8	0	15	52	16	3	28	167	26	575
% HEAVY VEHICLES	0	2.2	2.2	2.3	0	3.7	3.4	2.4	0	1.7	1.9	2.8	3	3.6	3.2	2.5	2.8

Traffic Survey Specialists, Inc.

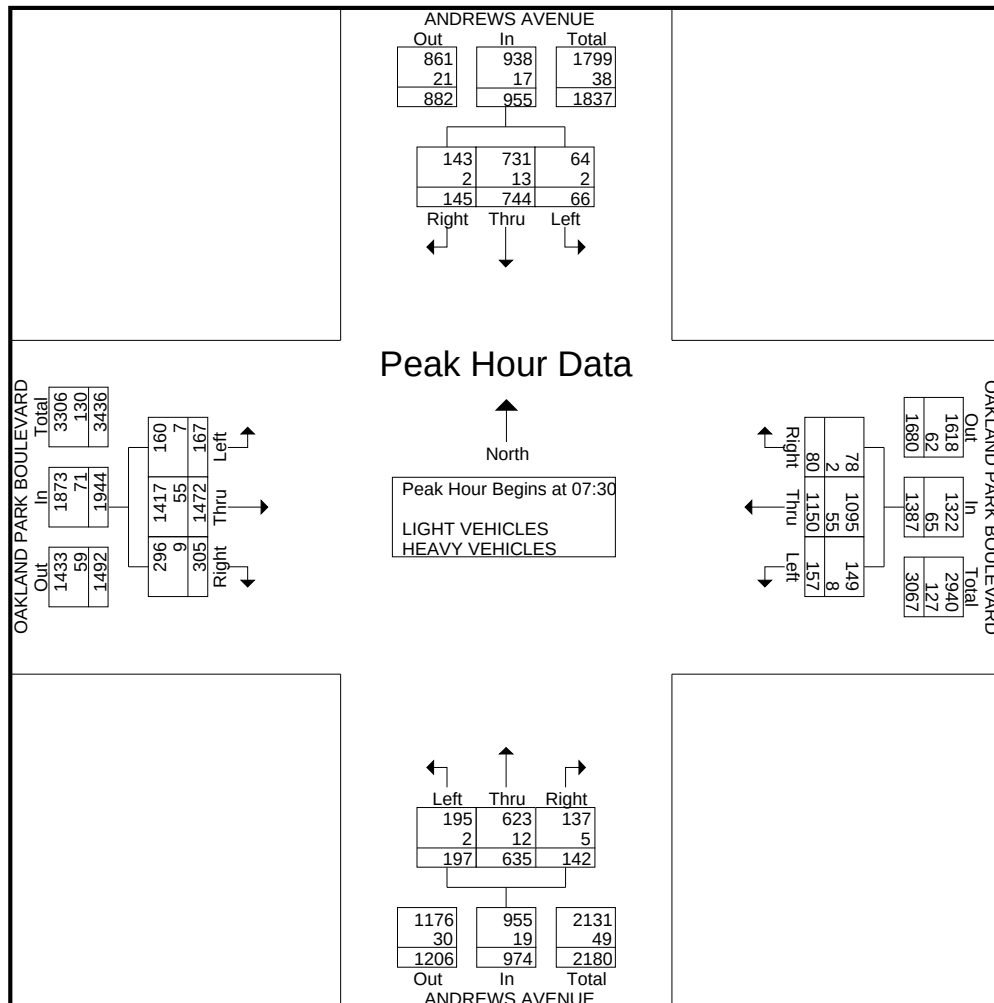
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & ANDREWS AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: S. SALVO & R. MARTINEZ
SIGNALIZED

File Name : OAKLANDR
Site Code : 00190187
Start Date : 11/7/2019
Page No : 2

	ANDREWS AVENUE From North					OAKLAND PARK BOULEVARD From East					ANDREWS AVENUE From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	21	183	41	245	2	33	343	19	397	0	49	159	44	252	5	37	388	68	498	1392
07:45	0	16	188	35	239	0	41	295	33	369	0	48	165	39	252	2	42	380	83	507	1367
08:00	0	15	202	30	247	0	36	246	11	293	1	50	165	30	246	5	38	362	79	484	1270
08:15	0	14	171	39	224	3	42	266	17	328	0	49	146	29	224	8	30	342	75	455	1231
Total Volume	0	66	744	145	955	5	152	1150	80	1387	1	196	635	142	974	20	147	1472	305	1944	5260
% App. Total	0	6.9	77.9	15.2		0.4	11	82.9	5.8		0.1	20.1	65.2	14.6		1	7.6	75.7	15.7		
PHF	.000	.786	.921	.884	.967	.417	.905	.838	.606	.873	.250	.980	.962	.807	.966	.625	.875	.948	.919	.959	.945
LIGHT VEHICLES	0	64	731	143	938	5	144	1095	78	1322	1	194	623	137	955	18	142	1417	296	1873	5088
% LIGHT VEHICLES	0	97.0	98.3	98.6	98.2	100	94.7	95.2	97.5	95.3	100	99.0	98.1	96.5	98.0	90.0	96.6	96.3	97.0	96.3	96.7
HEAVY VEHICLES	0	2	13	2	17	0	8	55	2	65	0	2	12	5	19	2	5	55	9	71	172
% HEAVY VEHICLES	0	3.0	1.7	1.4	1.8	0	5.3	4.8	2.5	4.7	0	1.0	1.9	3.5	2.0	10.0	3.4	3.7	3.0	3.7	3.3



Traffic Survey Specialists, Inc.

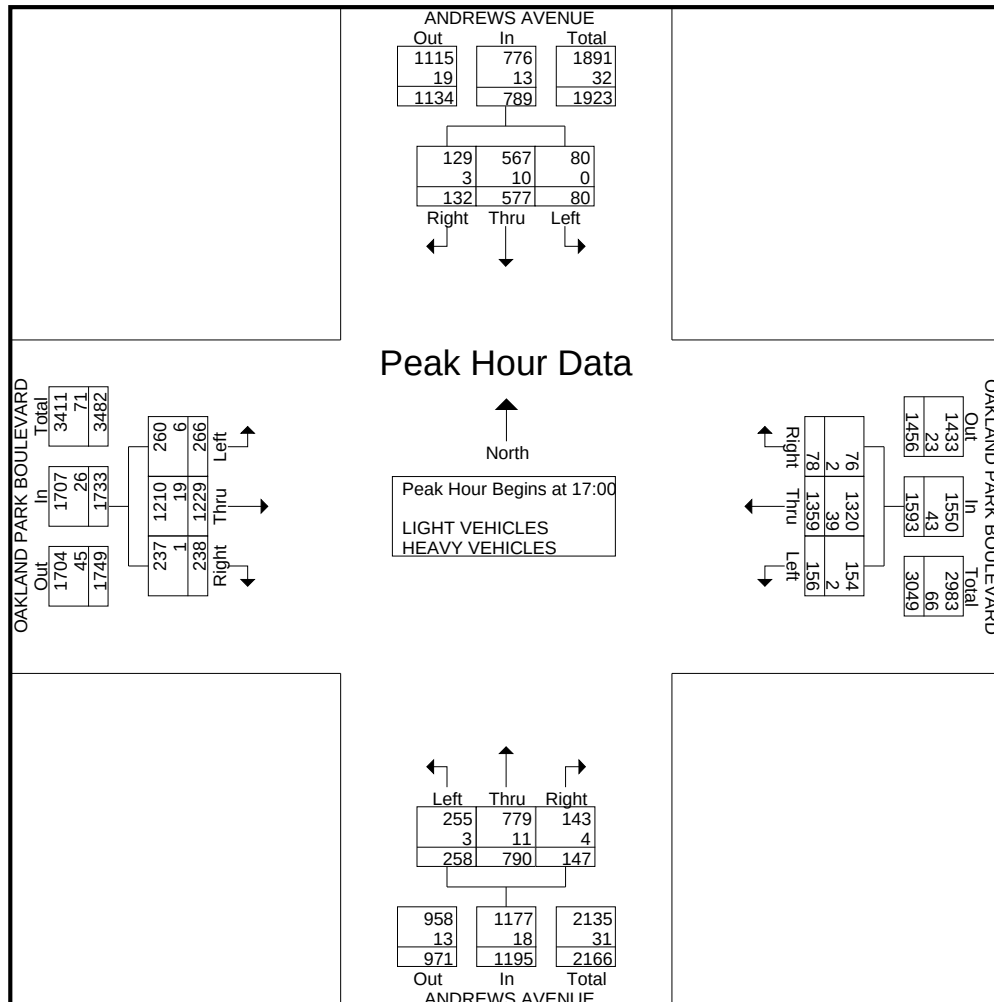
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & ANDREWS AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: S. SALVO & R. MARTINEZ
SIGNALIZED

File Name : OAKLANDR
Site Code : 00190187
Start Date : 11/7/2019
Page No : 3

	ANDREWS AVENUE From North					OAKLAND PARK BOULEVARD From East					ANDREWS AVENUE From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	22	134	34	190	2	32	312	22	368	0	60	183	44	287	9	63	302	64	438	1283
17:15	0	13	155	30	198	0	41	351	18	410	0	66	221	37	324	6	67	291	60	424	1356
17:30	0	20	140	37	197	1	32	378	15	426	0	72	210	32	314	9	46	319	59	433	1370
17:45	0	25	148	31	204	2	46	318	23	389	0	60	176	34	270	5	61	317	55	438	1301
Total Volume	0	80	577	132	789	5	151	1359	78	1593	0	258	790	147	1195	29	237	1229	238	1733	5310
% App. Total	0	10.1	73.1	16.7		0.3	9.5	85.3	4.9		0	21.6	66.1	12.3		1.7	13.7	70.9	13.7		
PHF	.000	.800	.931	.892	.967	.625	.821	.899	.848	.935	.000	.896	.894	.835	.922	.806	.884	.963	.930	.989	.969
LIGHT VEHICLES	0	80	567	129	776	5	149	1320	76	1550	0	255	779	143	1177	29	231	1210	237	1707	5210
% LIGHT VEHICLES	0	100	98.3	97.7	98.4	100	98.7	97.1	97.4	97.3	0	98.8	98.6	97.3	98.5	100	97.5	98.5	99.6	98.5	98.1
HEAVY VEHICLES	0	0	10	3	13	0	2	39	2	43	0	3	11	4	18	0	6	19	1	26	100
% HEAVY VEHICLES	0	0	1.7	2.3	1.6	0	1.3	2.9	2.6	2.7	0	1.2	1.4	2.7	1.5	0	2.5	1.5	0.4	1.5	1.9



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & ANDREWS AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: S. SALVO & R. MARTINEZ
SIGNALIZED

File Name : OAKLANDR
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- PEDESTRIANS

	ANDREWS AVENUE From North				OAKLAND PARK BOULEVARD From East				ANDREWS AVENUE From South				OAKLAND PARK BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	3
07:15	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	6
07:30	4	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	7
07:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	4	0	1	0	0	0	2	0	1	0	1	0	7	0	1	0	17
08:00	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
08:15	2	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	7
08:30	4	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	6
08:45	2	0	2	0	3	0	2	0	1	0	0	0	2	0	0	0	12
Total	8	0	2	0	4	0	3	0	3	0	0	0	6	0	1	0	27
16:00	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3
16:30	1	0	2	0	2	0	0	0	1	0	0	0	1	0	0	0	7
16:45	2	0	0	0	1	0	0	0	1	0	0	0	4	0	1	0	9
Total	3	0	2	0	4	0	0	0	2	0	0	0	8	0	2	0	21
17:00	2	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	5
17:15	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3
17:30	1	0	0	0	2	0	2	0	0	0	1	0	0	0	0	0	6
17:45	6	0	2	0	2	0	1	0	0	0	2	0	0	0	0	0	13
Total	10	0	3	0	4	0	4	0	1	0	3	0	2	0	0	0	27
Grand Total	25	0	8	0	12	0	9	0	7	0	4	0	23	0	4	0	92
Apprch %	75.8	0	24.2	0	57.1	0	42.9	0	63.6	0	36.4	0	85.2	0	14.8	0	
Total %	27.2	0	8.7	0	13	0	9.8	0	7.6	0	4.3	0	25	0	4.3	0	

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MARISA CRUZ (V)
SIGNALIZED

File Name : OAKL6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	NE 6TH AVENUE From North				OAKLAND PARK BOULEVARD From East				NE 6TH AVENUE From South				OAKLAND PARK BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	10	18	5	0	9	222	6	0	29	22	5	0	13	276	18	633
07:15	0	14	43	8	0	4	268	1	0	36	32	5	5	10	290	18	734
07:30	0	17	34	11	4	8	304	10	0	55	33	8	6	23	385	40	938
07:45	0	32	41	10	4	17	282	20	0	33	38	11	4	5	366	25	888
Total	0	73	136	34	8	38	1076	37	0	153	125	29	15	51	1317	101	3193
08:00	0	20	59	10	1	23	284	9	0	34	32	11	5	14	316	30	848
08:15	0	21	68	16	2	16	228	10	0	28	22	22	5	11	330	24	803
08:30	0	25	50	15	2	15	262	8	0	34	33	17	3	17	350	38	869
08:45	0	31	47	13	1	6	259	10	0	35	37	10	4	8	365	33	859
Total	0	97	224	54	6	60	1033	37	0	131	124	60	17	50	1361	125	3379
16:00	0	23	54	20	4	20	352	22	0	28	54	13	1	21	308	29	949
16:15	0	26	48	12	1	18	343	21	0	33	53	12	5	27	267	31	897
16:30	0	23	51	14	1	27	397	17	0	40	61	9	6	10	318	31	1005
16:45	0	27	40	13	3	24	368	12	0	28	65	16	5	21	263	31	916
Total	0	99	193	59	9	89	1460	72	0	129	233	50	17	79	1156	122	3767
17:00	0	35	67	12	4	27	411	17	0	48	63	14	7	21	304	43	1073
17:15	0	25	64	18	1	26	389	24	0	23	77	9	8	22	283	38	1007
17:30	0	36	66	15	2	21	398	18	0	35	64	18	5	16	290	44	1028
17:45	0	27	59	11	1	19	359	18	0	34	58	20	9	13	304	36	968
Total	0	123	256	56	8	93	1557	77	0	140	262	61	29	72	1181	161	4076
Grand Total	0	392	809	203	31	280	5126	223	0	553	744	200	78	252	5015	509	14415
Apprch %	0	27.9	57.6	14.5	0.5	4.9	90.6	3.9	0	36.9	49.7	13.4	1.3	4.3	85.7	8.7	
Total %	0	2.7	5.6	1.4	0.2	1.9	35.6	1.5	0	3.8	5.2	1.4	0.5	1.7	34.8	3.5	
LIGHT VEHICLES	0	381	798	198	31	272	5020	218	0	542	730	199	78	244	4906	501	14118
% LIGHT VEHICLES	0	97.2	98.6	97.5	100	97.1	97.9	97.8	0	98	98.1	99.5	100	96.8	97.8	98.4	97.9
HEAVY VEHICLES	0	11	11	5	0	8	106	5	0	11	14	1	0	8	109	8	297
% HEAVY VEHICLES	0	2.8	1.4	2.5	0	2.9	2.1	2.2	0	2	1.9	0.5	0	3.2	2.2	1.6	2.1

Traffic Survey Specialists, Inc.

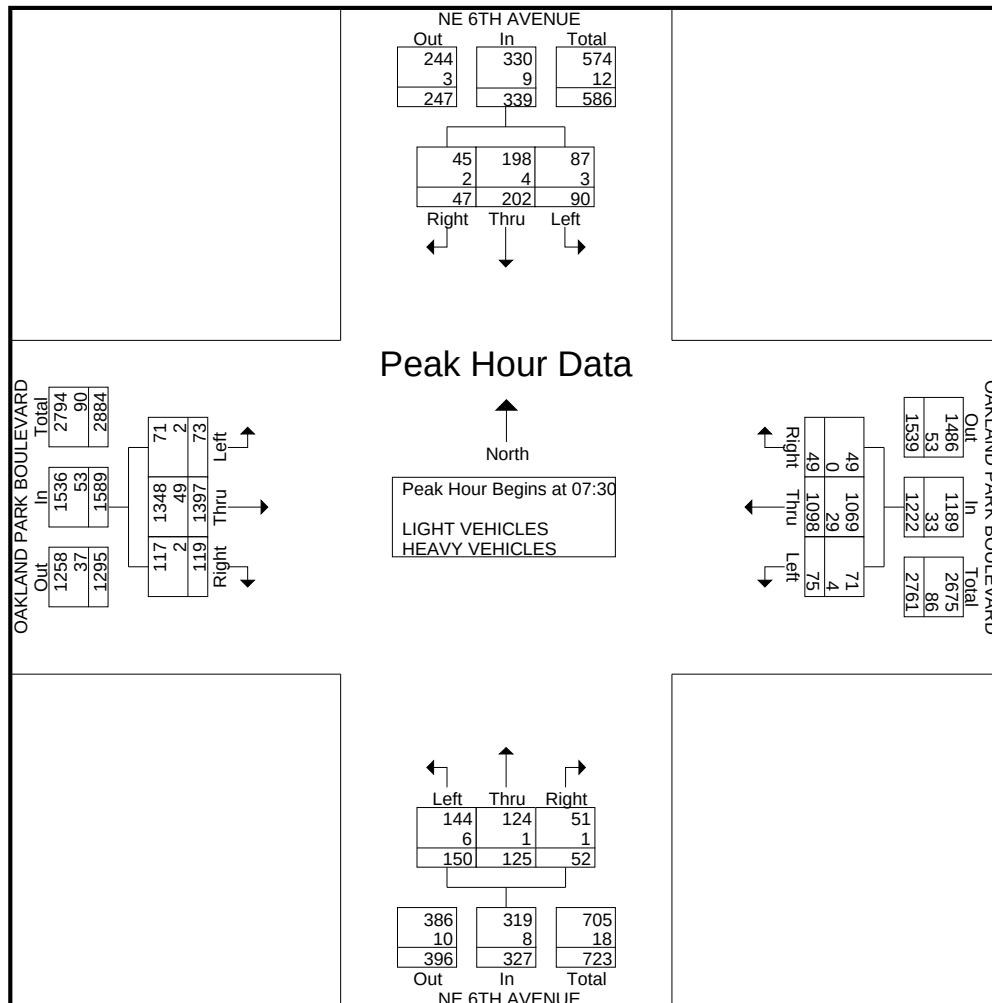
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MARISA CRUZ (V)
SIGNALIZED

File Name : OAKL6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 2

	NE 6TH AVENUE From North					OAKLAND PARK BOULEVARD From East					NE 6TH AVENUE From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	17	34	11	62	4	8	304	10	326	0	55	33	8	96	6	23	385	40	454	938
07:45	0	32	41	10	83	4	17	282	20	323	0	33	38	11	82	4	5	366	25	400	888
08:00	0	20	59	10	89	1	23	284	9	317	0	34	32	11	77	5	14	316	30	365	848
08:15	0	21	68	16	105	2	16	228	10	256	0	28	22	22	72	5	11	330	24	370	803
Total Volume	0	90	202	47	339	11	64	1098	49	1222	0	150	125	52	327	20	53	1397	119	1589	3477
% App. Total	0	26.5	59.6	13.9		0.9	5.2	89.9	4		0	45.9	38.2	15.9		1.3	3.3	87.9	7.5		
PHF	.000	.703	.743	.734	.807	.688	.696	.903	.613	.937	.000	.682	.822	.591	.852	.833	.576	.907	.744	.875	.927
LIGHT VEHICLES	0	87	198	45	330	11	60	1069	49	1189	0	144	124	51	319	20	51	1348	117	1536	3374
% LIGHT VEHICLES	0	96.7	98.0	95.7	97.3	100	93.8	97.4	100	97.3	0	96.0	99.2	98.1	97.6	100	96.2	96.5	98.3	96.7	97.0
HEAVY VEHICLES	0	3	4	2	9	0	4	29	0	33	0	6	1	1	8	0	2	49	2	53	103
% HEAVY VEHICLES	0	3.3	2.0	4.3	2.7	0	6.3	2.6	0	2.7	0	4.0	0.8	1.9	2.4	0	3.8	3.5	1.7	3.3	3.0



Traffic Survey Specialists, Inc.

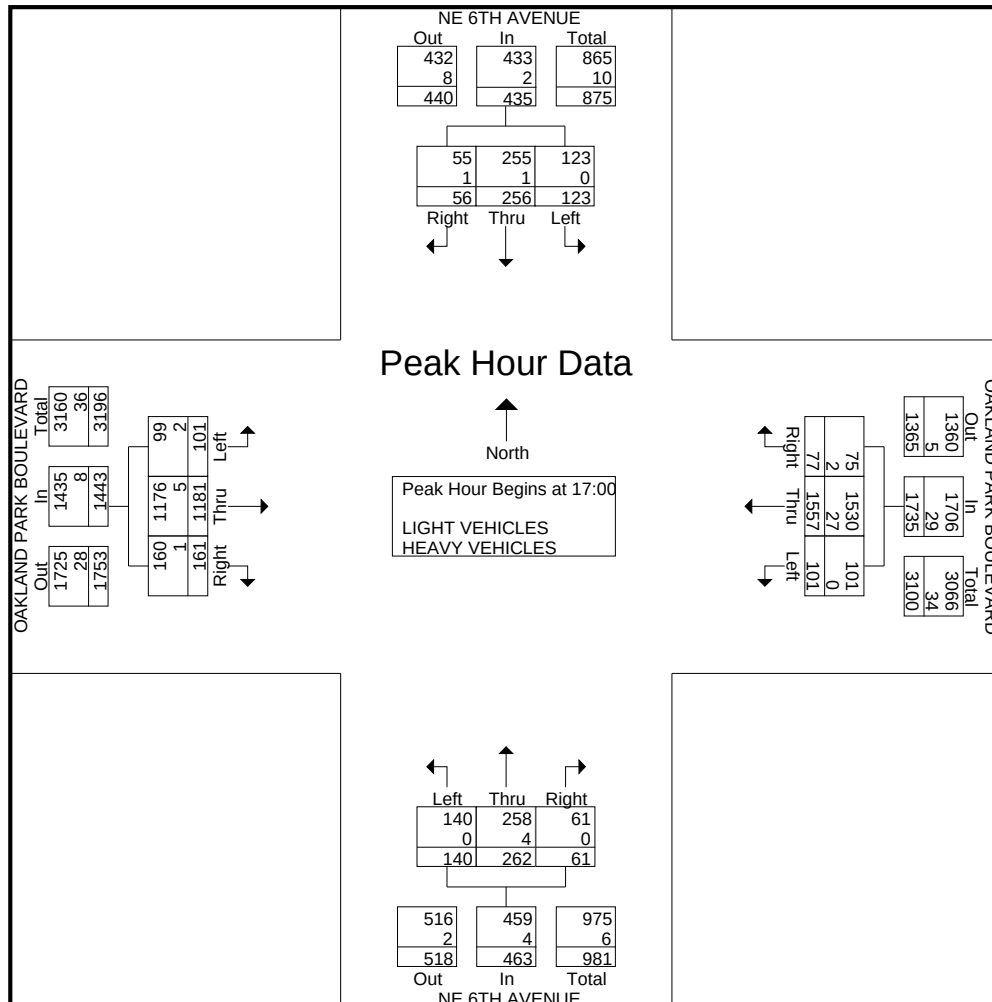
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MARISA CRUZ (V)
SIGNALIZED

File Name : OAKL6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 3

	NE 6TH AVENUE From North					OAKLAND PARK BOULEVARD From East					NE 6TH AVENUE From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	35	67	12	114	4	27	411	17	459	0	48	63	14	125	7	21	304	43	375	1073
17:15	0	25	64	18	107	1	26	389	24	440	0	23	77	9	109	8	22	283	38	351	1007
17:30	0	36	66	15	117	2	21	398	18	439	0	35	64	18	117	5	16	290	44	355	1028
17:45	0	27	59	11	97	1	19	359	18	397	0	34	58	20	112	9	13	304	36	362	968
Total Volume	0	123	256	56	435	8	93	1557	77	1735	0	140	262	61	463	29	72	1181	161	1443	4076
% App. Total	0	28.3	58.9	12.9		0.5	5.4	89.7	4.4		0	30.2	56.6	13.2		2	5	81.8	11.2		
PHF	.000	.854	.955	.778	.929	.500	.861	.947	.802	.945	.000	.729	.851	.763	.926	.806	.818	.971	.915	.962	.950
LIGHT VEHICLES	0	123	255	55	433	8	93	1530	75	1706	0	140	258	61	459	29	70	1176	160	1435	4033
% LIGHT VEHICLES	0	100	99.6	98.2	99.5	100	100	98.3	97.4	98.3	0	100	98.5	100	99.1	100	97.2	99.6	99.4	99.4	98.9
HEAVY VEHICLES	0	0	1	1	2	0	0	27	2	29	0	0	4	0	4	0	2	5	1	8	43
% HEAVY VEHICLES	0	0	0.4	1.8	0.5	0	0	1.7	2.6	1.7	0	0	1.5	0	0.9	0	2.8	0.4	0.6	0.6	1.1



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MARISA CRUZ (V)
SIGNALIZED

File Name : OAKL6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- PEDESTRIANS

	NE 6TH AVENUE From North				OAKLAND PARK BOULEVARD From East				NE 6TH AVENUE From South				OAKLAND PARK BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
07:15	0	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	4
07:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
07:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	1	0	2	0	2	0	3	0	0	0	1	0	1	0	10
08:00	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3
08:15	1	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	7
08:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
08:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	3
Total	1	0	1	0	1	0	3	0	3	0	1	0	2	0	3	0	15
16:00	1	0	0	0	3	0	1	0	1	0	0	0	0	0	1	0	7
16:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3
16:30	0	0	2	0	0	0	1	0	0	0	0	0	0	0	2	0	5
16:45	0	0	1	0	1	0	2	0	0	0	0	0	1	0	0	0	5
Total	2	0	3	0	4	0	4	0	2	0	0	0	1	0	4	0	20
17:00	2	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	5
17:15	1	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	5
17:30	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	4
17:45	1	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	5
Total	4	0	1	0	4	0	4	0	2	0	2	0	0	0	2	0	19
Grand Total	7	0	6	0	11	0	13	0	10	0	3	0	4	0	10	0	64
Apprch %	53.8	0	46.2	0	45.8	0	54.2	0	76.9	0	23.1	0	28.6	0	71.4	0	
Total %	10.9	0	9.4	0	17.2	0	20.3	0	15.6	0	4.7	0	6.2	0	15.6	0	

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: M. CRUZ & L. PALOMINO
SIGNALIZED

File Name : OAK_DIXI
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	DIXIE HIGHWAY From North				OAKLAND PARK BOULEVARD From East				DIXIE HIGHWAY From South				OAKLAND PARK BOULEVARD From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	22	69	14	0	7	182	8	0	35	53	5	2	28	187	31	643
07:15	0	25	90	17	0	7	197	10	0	46	92	4	0	26	154	19	687
07:30	0	54	128	35	0	16	194	24	0	50	124	20	1	59	281	29	1015
07:45	0	53	128	27	0	14	211	24	0	44	128	12	3	48	320	40	1052
Total	0	154	415	93	0	44	784	66	0	175	397	41	6	161	942	119	3397
08:00	0	47	130	20	0	12	225	27	0	52	85	15	3	25	309	42	992
08:15	0	47	145	18	0	16	165	33	0	39	113	18	1	28	269	23	915
08:30	0	31	123	24	0	14	210	38	0	44	92	13	1	25	296	30	941
08:45	0	72	163	22	1	25	172	34	0	50	121	20	1	39	279	35	1034
Total	0	197	561	84	1	67	772	132	0	185	411	66	6	117	1153	130	3882
16:00	0	39	93	19	0	19	315	58	0	56	135	27	7	34	267	34	1103
16:15	0	44	124	24	0	16	317	56	0	39	93	20	5	29	237	47	1051
16:30	0	43	117	26	0	21	321	47	0	64	157	25	6	34	266	38	1165
16:45	0	54	111	30	0	16	298	40	0	44	141	30	7	45	206	35	1057
Total	0	180	445	99	0	72	1251	201	0	203	526	102	25	142	976	154	4376
17:00	1	42	145	27	0	22	334	62	0	56	167	27	7	35	261	36	1222
17:15	0	45	141	34	0	29	349	49	0	56	143	25	5	45	251	26	1198
17:30	0	47	150	24	0	22	340	51	0	62	121	25	11	32	240	26	1151
17:45	0	44	148	26	0	17	293	49	0	51	136	24	8	35	224	37	1092
Total	1	178	584	111	0	90	1316	211	0	225	567	101	31	147	976	125	4663
Grand Total	1	709	2005	387	1	273	4123	610	0	788	1901	310	68	567	4047	528	16318
Apprch %	0	22.9	64.6	12.5	0	5.5	82.3	12.2	0	26.3	63.4	10.3	1.3	10.9	77.7	10.1	
Total %	0	4.3	12.3	2.4	0	1.7	25.3	3.7	0	4.8	11.6	1.9	0.4	3.5	24.8	3.2	
LIGHT VEHICLES	1	692	1933	368	1	270	4023	601	0	765	1861	306	68	546	3928	515	15878
% LIGHT VEHICLES	100	97.6	96.4	95.1	100	98.9	97.6	98.5	0	97.1	97.9	98.7	100	96.3	97.1	97.5	97.3
HEAVY VEHICLES	0	17	72	19	0	3	100	9	0	23	40	4	0	21	119	13	440
% HEAVY VEHICLES	0	2.4	3.6	4.9	0	1.1	2.4	1.5	0	2.9	2.1	1.3	0	3.7	2.9	2.5	2.7

Traffic Survey Specialists, Inc.

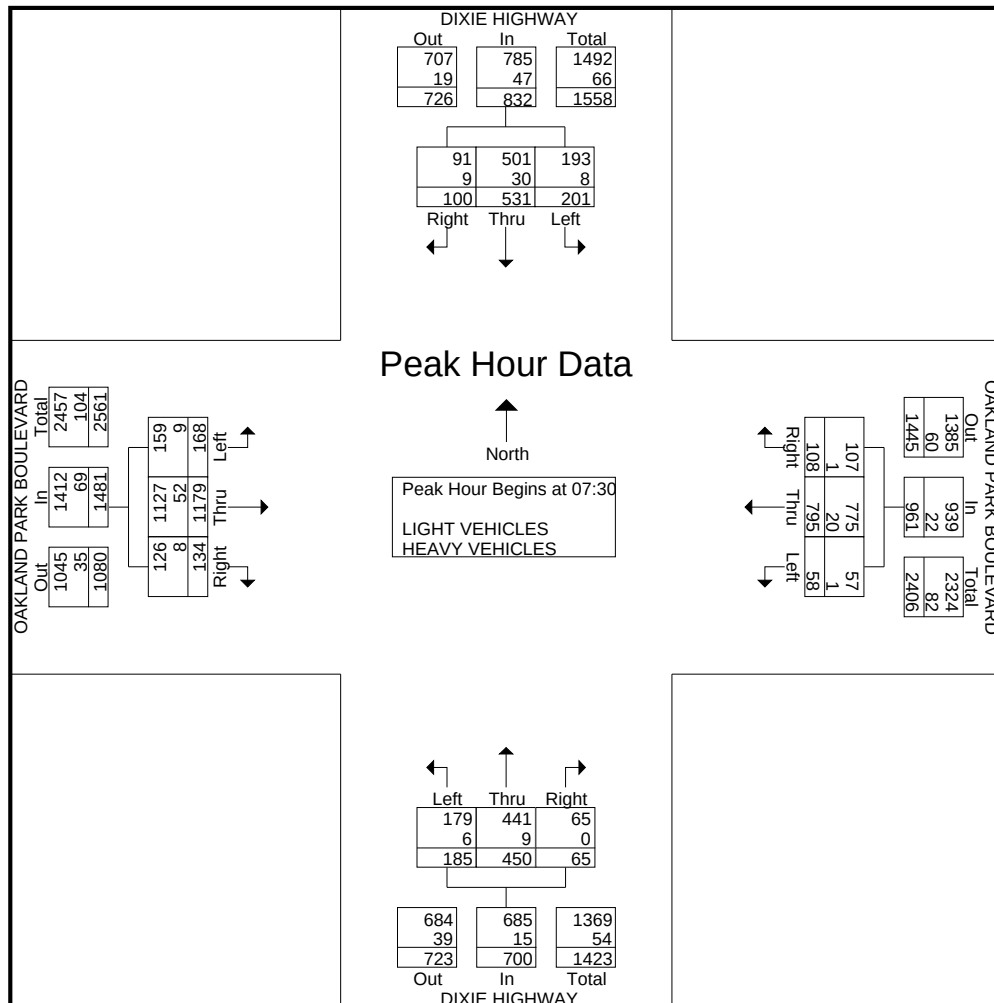
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: M. CRUZ & L. PALOMINO
SIGNALIZED

File Name : OAK_DIXI
Site Code : 00190187
Start Date : 11/7/2019
Page No : 2

	DIXIE HIGHWAY From North					OAKLAND PARK BOULEVARD From East					DIXIE HIGHWAY From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	54	128	35	217	0	16	194	24	234	0	50	124	20	194	1	59	281	29	370	1015
07:45	0	53	128	27	208	0	14	211	24	249	0	44	128	12	184	3	48	320	40	411	1052
08:00	0	47	130	20	197	0	12	225	27	264	0	52	85	15	152	3	25	309	42	379	992
08:15	0	47	145	18	210	0	16	165	33	214	0	39	113	18	170	1	28	269	23	321	915
Total Volume	0	201	531	100	832	0	58	795	108	961	0	185	450	65	700	8	160	1179	134	1481	3974
% App. Total	0	24.2	63.8	12		0	6	82.7	11.2		0	26.4	64.3	9.3		0.5	10.8	79.6	9		
PHF	.000	.931	.916	.714	.959	.000	.906	.883	.818	.910	.000	.889	.879	.813	.902	.667	.678	.921	.798	.901	.944
LIGHT VEHICLES	0	193	501	91	785	0	57	775	107	939	0	179	441	65	685	8	151	1127	126	1412	3821
% LIGHT VEHICLES	0	96.0	94.4	91.0	94.4	0	98.3	97.5	99.1	97.7	0	96.8	98.0	100	97.9	100	94.4	95.6	94.0	95.3	96.1
HEAVY VEHICLES	0	8	30	9	47	0	1	20	1	22	0	6	9	0	15	0	9	52	8	69	153
% HEAVY VEHICLES	0	4.0	5.6	9.0	5.6	0	1.7	2.5	0.9	2.3	0	3.2	2.0	0	2.1	0	5.6	4.4	6.0	4.7	3.9



Traffic Survey Specialists, Inc.

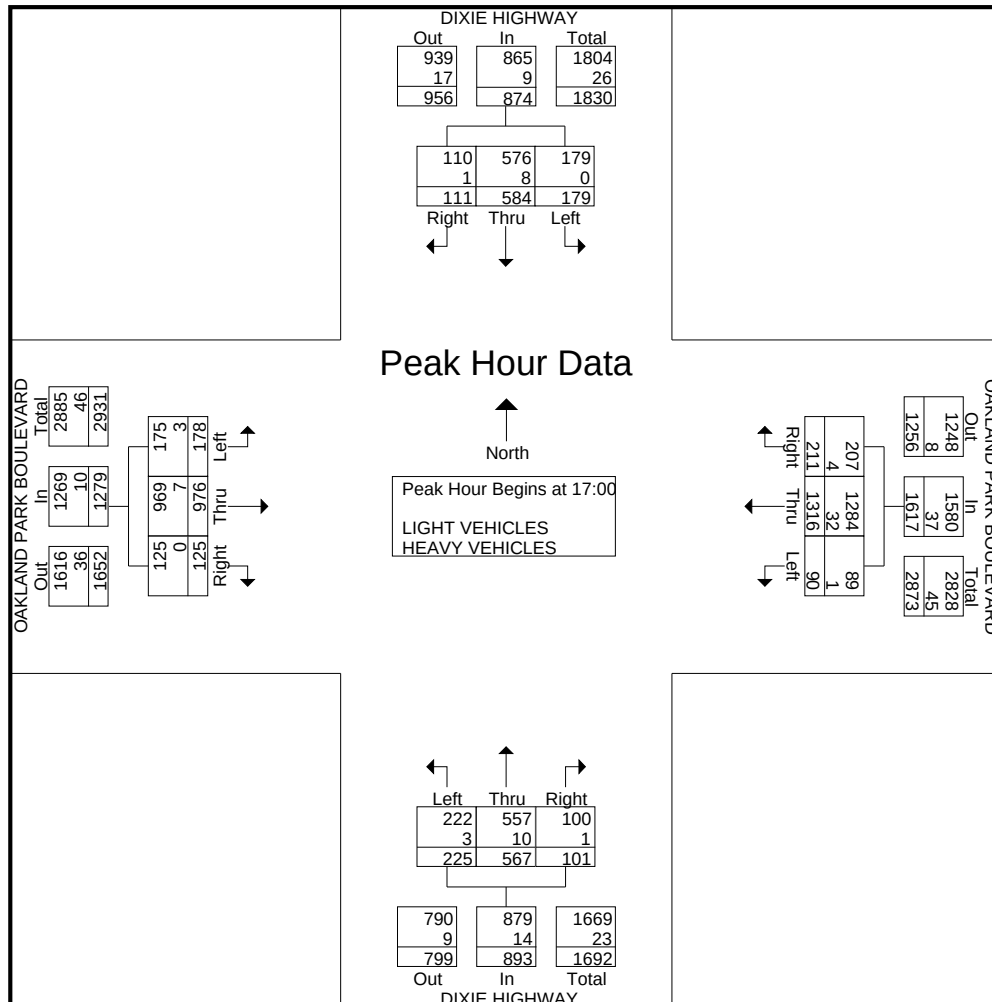
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: M. CRUZ & L. PALOMINO
SIGNALIZED

File Name : OAK_DIXI
Site Code : 00190187
Start Date : 11/7/2019
Page No : 3

	DIXIE HIGHWAY From North					OAKLAND PARK BOULEVARD From East					DIXIE HIGHWAY From South					OAKLAND PARK BOULEVARD From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	1	42	145	27	215	0	22	334	62	418	0	56	167	27	250	7	35	261	36	339	1222
17:15	0	45	141	34	220	0	29	349	49	427	0	56	143	25	224	5	45	251	26	327	1198
17:30	0	47	150	24	221	0	22	340	51	413	0	62	121	25	208	11	32	240	26	309	1151
17:45	0	44	148	26	218	0	17	293	49	359	0	51	136	24	211	8	35	224	37	304	1092
Total Volume	1	178	584	111	874	0	90	1316	211	1617	0	225	567	101	893	31	147	976	125	1279	4663
% App. Total	0.1	20.4	66.8	12.7		0	5.6	81.4	13		0	25.2	63.5	11.3		2.4	11.5	76.3	9.8		
PHF	.250	.947	.973	.816	.989	.000	.776	.943	.851	.947	.000	.907	.849	.935	.893	.705	.817	.935	.845	.943	.954
LIGHT VEHICLES	1	178	576	110	865	0	89	1284	207	1580	0	222	557	100	879	31	144	969	125	1269	4593
% LIGHT VEHICLES	100	100	98.6	99.1	99.0	0	98.9	97.6	98.1	97.7	0	98.7	98.2	99.0	98.4	100	98.0	99.3	100	99.2	98.5
HEAVY VEHICLES	0	0	8	1	9	0	1	32	4	37	0	3	10	1	14	0	3	7	0	10	70
% HEAVY VEHICLES	0	0	1.4	0.9	1.0	0	1.1	2.4	1.9	2.3	0	1.3	1.8	1.0	1.6	0	2.0	0.7	0	0.8	1.5



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

OAKLAND PARK BOULEVARD & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: M. CRUZ & L. PALOMINO
SIGNALIZED

File Name : OAK_DIXI
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- PEDESTRIANS

	DIXIE HIGHWAY From North				OAKLAND PARK BOULEVARD From East				DIXIE HIGHWAY From South				OAKLAND PARK BOULEVARD From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	3
07:15	1	0	2	0	0	0	1	0	1	0	1	0	3	0	0	0	9
07:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
07:45	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	3
Total	1	0	2	0	0	0	4	0	3	0	1	0	4	0	2	0	17
08:00	0	0	1	0	0	0	0	0	1	0	1	0	4	0	1	0	8
08:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	2	0	1	0	4	0	1	0	9
16:00	1	0	2	0	0	0	0	0	0	0	1	0	4	0	1	0	9
16:15	1	0	2	0	0	0	1	0	1	0	0	0	1	0	4	0	10
16:30	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	4
Total	3	0	4	0	0	0	2	0	1	0	1	0	7	0	5	0	23
17:00	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3
17:15	2	0	1	0	0	0	0	0	2	0	0	0	1	0	1	0	7
17:30	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	3
17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	3	0	2	0	0	0	0	0	5	0	0	0	3	0	2	0	15
Grand Total	7	0	9	0	0	0	6	0	11	0	3	0	18	0	10	0	64
Apprch %	43.8	0	56.2	0	0	0	100	0	78.6	0	21.4	0	64.3	0	35.7	0	
Total %	10.9	0	14.1	0	0	0	9.4	0	17.2	0	4.7	0	28.1	0	15.6	0	

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 26TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MELISSA INOJOSA
SIGNALIZED

File Name : 26ST_6AV
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	NE 6TH AVENUE From North				NE 26TH STREET From East				NE 6TH AVENUE From South				NE 26TH STREET From West				Int. Total
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
07:00	0	13	28	5	0	0	39	15	0	0	14	2	0	3	24	1	144
07:15	0	18	37	7	0	1	29	14	0	1	33	6	0	2	27	1	176
07:30	0	25	41	10	0	4	41	20	0	2	42	4	0	3	33	0	225
07:45	0	25	50	8	0	6	44	24	0	3	31	9	0	9	30	0	239
Total	0	81	156	30	0	11	153	73	0	6	120	21	0	17	114	2	784
08:00	0	24	58	23	0	3	39	19	0	5	20	7	0	16	61	3	278
08:15	0	29	54	15	0	5	51	8	0	2	31	7	0	15	68	7	292
08:30	0	33	40	10	0	2	30	17	0	5	33	7	0	12	64	2	255
08:45	0	29	49	12	0	5	23	15	0	3	29	6	0	10	47	6	234
Total	0	115	201	60	0	15	143	59	0	15	113	27	0	53	240	18	1059
16:00	0	26	38	16	0	5	54	39	0	4	50	8	0	14	46	5	305
16:15	0	16	51	20	0	5	64	32	0	5	48	4	0	18	52	5	320
16:30	0	18	58	15	0	6	91	33	0	5	39	3	0	18	61	4	351
16:45	0	20	42	21	0	1	68	27	0	4	72	7	0	20	73	6	361
Total	0	80	189	72	0	17	277	131	0	18	209	22	0	70	232	20	1337
17:00	0	24	75	22	0	3	73	50	0	5	56	7	0	20	68	7	410
17:15	0	25	57	33	0	0	83	40	0	6	42	8	0	27	62	6	389
17:30	0	28	47	35	0	5	102	29	0	3	54	12	0	30	64	6	415
17:45	0	32	52	22	0	4	80	28	0	11	56	9	0	18	55	4	371
Total	0	109	231	112	0	12	338	147	0	25	208	36	0	95	249	23	1585
Grand Total	0	385	777	274	0	55	911	410	0	64	650	106	0	235	835	63	4765
Apprch %	0	26.8	54.1	19.1	0	4	66.2	29.8	0	7.8	79.3	12.9	0	20.7	73.7	5.6	
Total %	0	8.1	16.3	5.8	0	1.2	19.1	8.6	0	1.3	13.6	2.2	0	4.9	17.5	1.3	
LIGHT VEHICLES	0	383	758	267	0	54	894	402	0	63	638	105	0	228	823	63	4678
% LIGHT VEHICLES	0	99.5	97.6	97.4	0	98.2	98.1	98	0	98.4	98.2	99.1	0	97	98.6	100	98.2
HEAVY VEHICLES	0	2	19	7	0	1	17	8	0	1	12	1	0	7	12	0	87
% HEAVY VEHICLES	0	0.5	2.4	2.6	0	1.8	1.9	2	0	1.6	1.8	0.9	0	3	1.4	0	1.8

Traffic Survey Specialists, Inc.

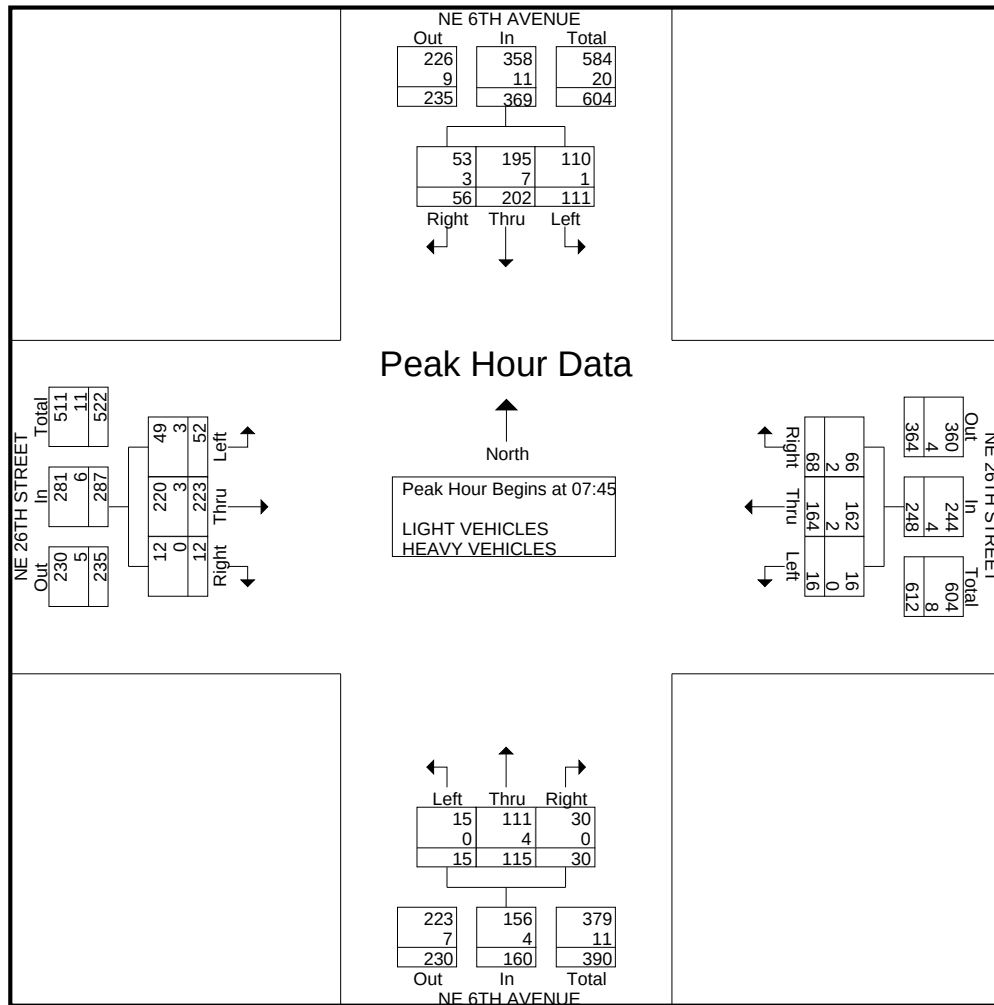
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 26TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MELISSA INOJOSA
SIGNALIZED

File Name : 26ST_6AV
Site Code : 00190187
Start Date : 11/7/2019
Page No : 2

	NE 6TH AVENUE From North					NE 26TH STREET From East					NE 6TH AVENUE From South					NE 26TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	25	50	8	83	0	6	44	24	74	0	3	31	9	43	0	9	30	0	39	239
08:00	0	24	58	23	105	0	3	39	19	61	0	5	20	7	32	0	16	61	3	80	278
08:15	0	29	54	15	98	0	5	51	8	64	0	2	31	7	40	0	15	68	7	90	292
08:30	0	33	40	10	83	0	2	30	17	49	0	5	33	7	45	0	12	64	2	78	255
Total Volume	0	111	202	56	369	0	16	164	68	248	0	15	115	30	160	0	52	223	12	287	1064
% App. Total	0	30.1	54.7	15.2		0	6.5	66.1	27.4		0	9.4	71.9	18.8		0	18.1	77.7	4.2		
PHF	.000	.841	.871	.609	.879	.000	.667	.804	.708	.838	.000	.750	.871	.833	.889	.000	.813	.820	.429	.797	.911
LIGHT VEHICLES	0	110	195	53	358	0	16	162	66	244	0	15	111	30	156	0	49	220	12	281	1039
% LIGHT VEHICLES	0	99.1	96.5	94.6	97.0	0	100	98.8	97.1	98.4	0	100	96.5	100	97.5	0	94.2	98.7	100	97.9	97.7
HEAVY VEHICLES	0	1	7	3	11	0	0	2	2	4	0	0	4	0	4	0	3	3	0	6	25
% HEAVY VEHICLES	0	0.9	3.5	5.4	3.0	0	0	1.2	2.9	1.6	0	0	3.5	0	2.5	0	5.8	1.3	0	2.1	2.3



Traffic Survey Specialists, Inc.

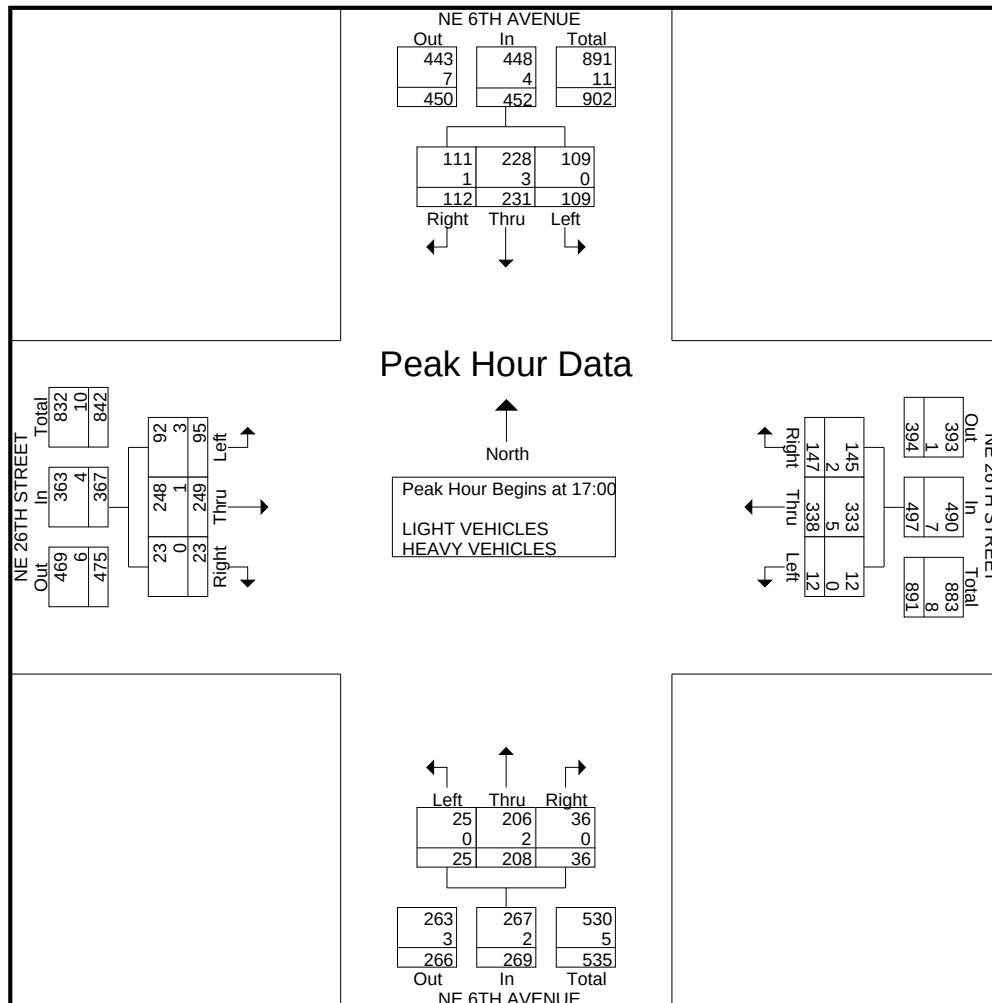
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 26TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MELISSA INOJOSA
SIGNALIZED

File Name : 26ST_6AV
Site Code : 00190187
Start Date : 11/7/2019
Page No : 3

	NE 6TH AVENUE From North					NE 26TH STREET From East					NE 6TH AVENUE From South					NE 26TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	24	75	22	121	0	3	73	50	126	0	5	56	7	68	0	20	68	7	95	410
17:15	0	25	57	33	115	0	0	83	40	123	0	6	42	8	56	0	27	62	6	95	389
17:30	0	28	47	35	110	0	5	102	29	136	0	3	54	12	69	0	30	64	6	100	415
17:45	0	32	52	22	106	0	4	80	28	112	0	11	56	9	76	0	18	55	4	77	371
Total Volume	0	109	231	112	452	0	12	338	147	497	0	25	208	36	269	0	95	249	23	367	1585
% App. Total	0	24.1	51.1	24.8		0	2.4	68	29.6		0	9.3	77.3	13.4		0	25.9	67.8	6.3		
PHF	.000	.852	.770	.800	.934	.000	.600	.828	.735	.914	.000	.568	.929	.750	.885	.000	.792	.915	.821	.918	.955
LIGHT VEHICLES	0	109	228	111	448	0	12	333	145	490	0	25	206	36	267	0	92	248	23	363	1568
% LIGHT VEHICLES	0	100	98.7	99.1	99.1	0	100	98.5	98.6	98.6	0	100	99.0	100	99.3	0	96.8	99.6	100	98.9	98.9
HEAVY VEHICLES	0	0	3	1	4	0	0	5	2	7	0	0	2	0	2	0	3	1	0	4	17
% HEAVY VEHICLES	0	0	1.3	0.9	0.9	0	0	1.5	1.4	1.4	0	0	1.0	0	0.7	0	3.2	0.4	0	1.1	1.1



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 26TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: MELISSA INOJOSA
SIGNALIZED

File Name : 26ST_6AV
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- PEDESTRIANS

Start Time	NE 6TH AVENUE From North				NE 26TH STREET From East				NE 6TH AVENUE From South				NE 26TH STREET From West				Int. Total
	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	
07:15	0	0	1	0	1	0	0	0	3	0	0	0	1	0	1	0	7
07:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	1	0	1	0	0	0	3	0	1	0	1	0	1	0	8
08:15	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	5
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	0	4
Total	0	0	0	0	2	0	0	0	5	0	0	0	1	0	2	0	10
16:00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
16:15	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	4
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
16:45	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	3
Total	2	0	0	0	2	0	2	0	0	0	2	0	1	0	1	0	10
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	2	0	0	0	1	0	0	0	2	0	1	0	6
17:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
17:45	1	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	5
Total	1	0	1	0	3	0	0	0	2	0	0	0	5	0	2	0	14
Grand Total	3	0	2	0	8	0	2	0	10	0	3	0	8	0	6	0	42
Apprch %	60	0	40	0	80	0	20	0	76.9	0	23.1	0	57.1	0	42.9	0	
Total %	7.1	0	4.8	0	19	0	4.8	0	23.8	0	7.1	0	19	0	14.3	0	

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
SIGNALIZED

File Name : 38ST6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	NE 6TH AVENUE From North				NE 38TH STREET From East				NE 6TH AVENUE From South				NE 38TH STREET From West				
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Int. Total
07:00	0	2	34	4	0	3	17	6	0	8	42	2	0	10	22	13	163
07:15	0	3	61	6	0	2	11	4	0	7	42	0	0	3	25	20	184
07:30	0	6	79	6	0	2	34	10	0	5	58	0	0	10	30	35	275
07:45	0	4	83	5	0	6	29	10	0	12	64	6	0	9	35	36	299
Total	0	15	257	21	0	13	91	30	0	32	206	8	0	32	112	104	921
08:00	0	2	63	6	0	1	26	6	0	6	63	0	0	7	32	15	227
08:15	0	1	79	5	0	5	28	4	0	6	61	1	0	8	41	13	252
08:30	0	4	67	6	0	7	31	7	0	4	54	3	0	9	40	13	245
08:45	0	5	65	4	0	3	22	4	0	5	48	3	0	12	28	10	209
Total	0	12	274	21	0	16	107	21	0	21	226	7	0	36	141	51	933
16:00	0	2	73	6	0	3	40	11	0	8	83	0	0	3	28	11	268
16:15	0	4	52	5	0	6	45	7	0	15	86	6	0	3	35	14	278
16:30	0	4	67	4	0	4	46	5	0	13	75	7	0	9	30	11	275
16:45	0	1	52	13	0	6	48	9	0	10	70	3	0	13	30	19	274
Total	0	11	244	28	0	19	179	32	0	46	314	16	0	28	123	55	1095
17:00	0	5	86	12	0	2	62	11	0	22	77	6	0	7	32	16	338
17:15	0	5	79	5	0	4	63	11	0	17	94	1	0	9	35	23	346
17:30	0	4	97	3	0	5	68	9	0	12	91	7	0	8	36	19	359
17:45	0	2	70	11	0	6	38	8	0	17	75	5	0	11	21	19	283
Total	0	16	332	31	0	17	231	39	0	68	337	19	0	35	124	77	1326
Grand Total	0	54	1107	101	0	65	608	122	0	167	1083	50	0	131	500	287	4275
Apprch %	0	4.3	87.7	8	0	8.2	76.5	15.3	0	12.8	83.3	3.8	0	14.3	54.5	31.3	
Total %	0	1.3	25.9	2.4	0	1.5	14.2	2.9	0	3.9	25.3	1.2	0	3.1	11.7	6.7	
LIGHT VEHICLES	0	52	1084	98	0	64	591	122	0	166	1057	49	0	125	490	277	4175
% LIGHT VEHICLES	0	96.3	97.9	97	0	98.5	97.2	100	0	99.4	97.6	98	0	95.4	98	96.5	97.7
HEAVY VEHICLES	0	2	23	3	0	1	17	0	0	1	26	1	0	6	10	10	100
% HEAVY VEHICLES	0	3.7	2.1	3	0	1.5	2.8	0	0	0.6	2.4	2	0	4.6	2	3.5	2.3

Traffic Survey Specialists, Inc.

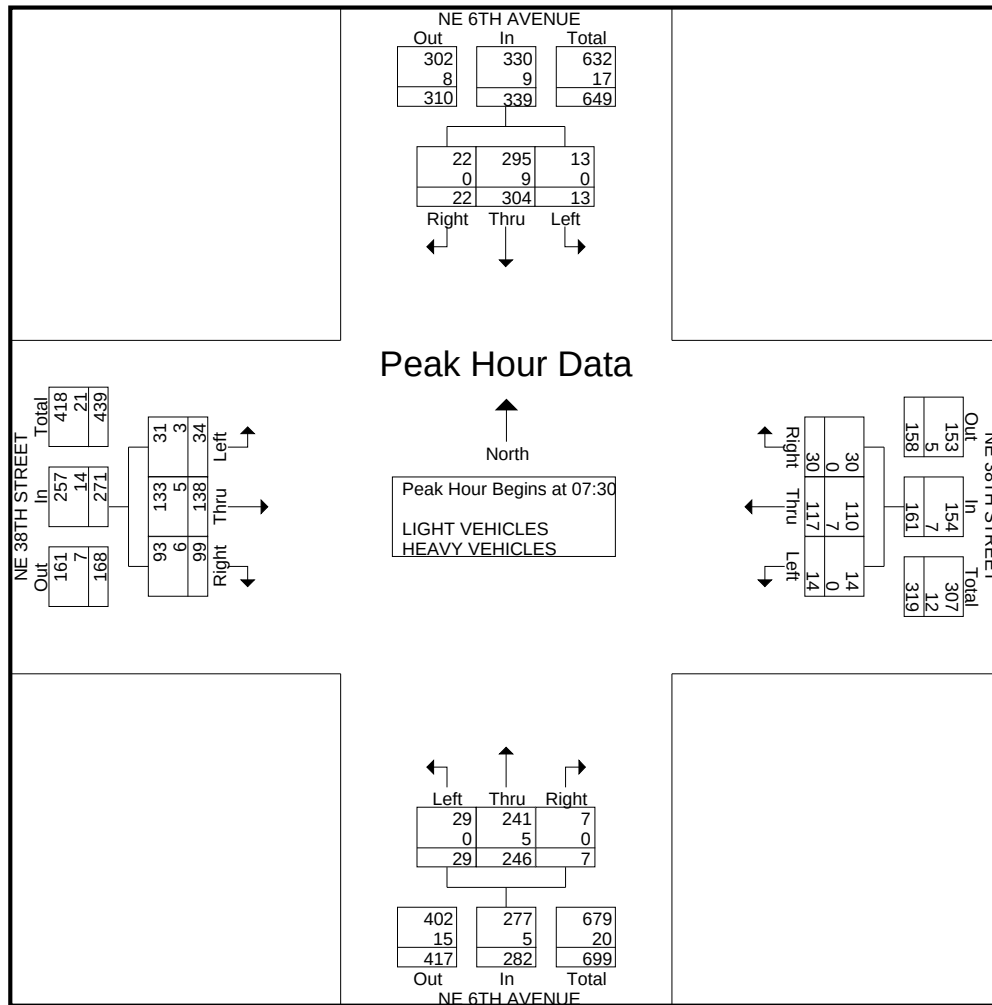
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
SIGNALIZED

File Name : 38ST6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 2

	NE 6TH AVENUE From North					NE 38TH STREET From East					NE 6TH AVENUE From South					NE 38TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	6	79	6	91	0	2	34	10	46	0	5	58	0	63	0	10	30	35	75	275
07:45	0	4	83	5	92	0	6	29	10	45	0	12	64	6	82	0	9	35	36	80	299
08:00	0	2	63	6	71	0	1	26	6	33	0	6	63	0	69	0	7	32	15	54	227
08:15	0	1	79	5	85	0	5	28	4	37	0	6	61	1	68	0	8	41	13	62	252
Total Volume	0	13	304	22	339	0	14	117	30	161	0	29	246	7	282	0	34	138	99	271	1053
% App. Total	0	3.8	89.7	6.5		0	8.7	72.7	18.6		0	10.3	87.2	2.5		0	12.5	50.9	36.5		
PHF	.000	.542	.916	.917	.921	.000	.583	.860	.750	.875	.000	.604	.961	.292	.860	.000	.850	.841	.688	.847	.880
LIGHT VEHICLES	0	13	295	22	330	0	14	110	30	154	0	29	241	7	277	0	31	133	93	257	1018
% LIGHT VEHICLES	0	100	97.0	100	97.3	0	100	94.0	100	95.7	0	100	98.0	100	98.2	0	91.2	96.4	93.9	94.8	96.7
HEAVY VEHICLES	0	0	9	0	9	0	0	7	0	7	0	0	5	0	5	0	3	5	6	14	35
% HEAVY VEHICLES	0	0	3.0	0	2.7	0	0	6.0	0	4.3	0	0	2.0	0	1.8	0	8.8	3.6	6.1	5.2	3.3



Traffic Survey Specialists, Inc.

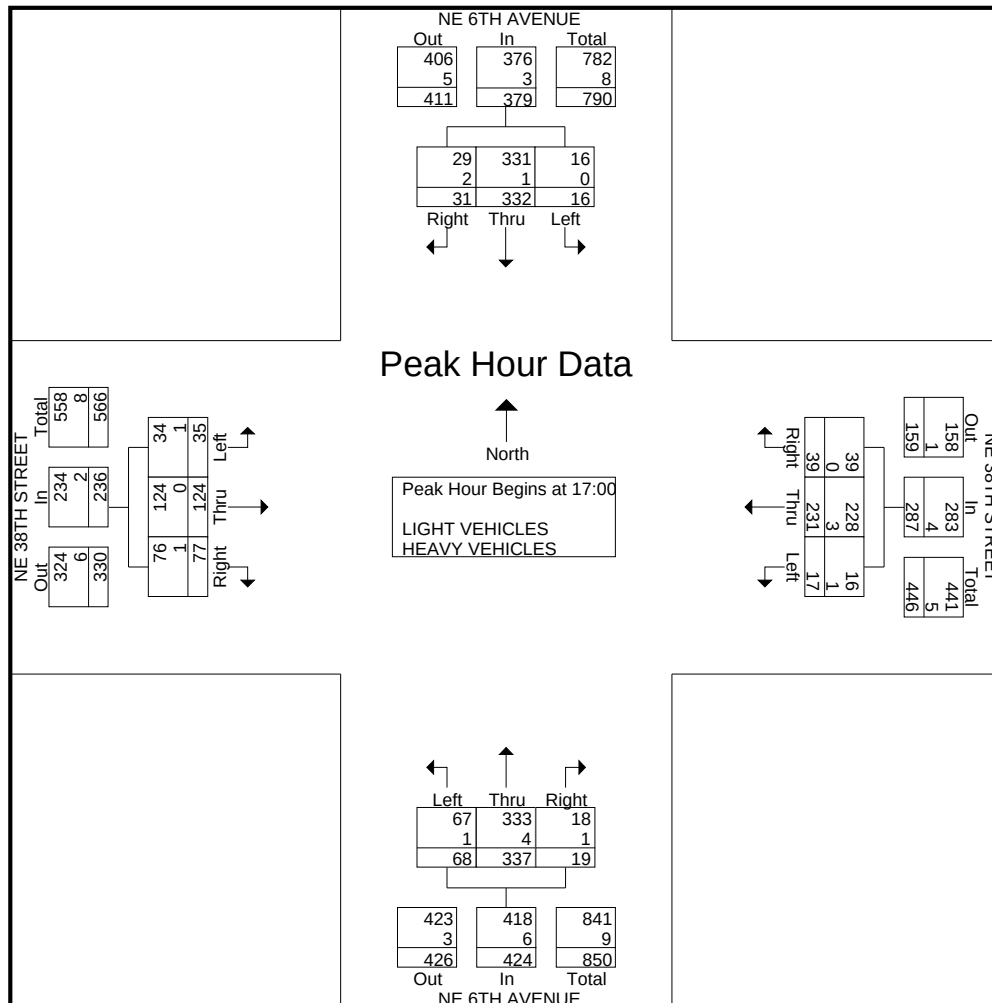
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
SIGNALIZED

File Name : 38ST6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 3

	NE 6TH AVENUE From North					NE 38TH STREET From East					NE 6TH AVENUE From South					NE 38TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	5	86	12	103	0	2	62	11	75	0	22	77	6	105	0	7	32	16	55	338
17:15	0	5	79	5	89	0	4	63	11	78	0	17	94	1	112	0	9	35	23	67	346
17:30	0	4	97	3	104	0	5	68	9	82	0	12	91	7	110	0	8	36	19	63	359
17:45	0	2	70	11	83	0	6	38	8	52	0	17	75	5	97	0	11	21	19	51	283
Total Volume	0	16	332	31	379	0	17	231	39	287	0	68	337	19	424	0	35	124	77	236	1326
% App. Total	0	4.2	87.6	8.2		0	5.9	80.5	13.6		0	16	79.5	4.5		0	14.8	52.5	32.6		
PHF	.000	.800	.856	.646	.911	.000	.708	.849	.886	.875	.000	.773	.896	.679	.946	.000	.795	.861	.837	.881	.923
LIGHT VEHICLES	0	16	331	29	376	0	16	228	39	283	0	67	333	18	418	0	34	124	76	234	1311
% LIGHT VEHICLES	0	100	99.7	93.5	99.2	0	94.1	98.7	100	98.6	0	98.5	98.8	94.7	98.6	0	97.1	100	98.7	99.2	98.9
HEAVY VEHICLES	0	0	1	2	3	0	1	3	0	4	0	1	4	1	6	0	1	0	1	2	15
% HEAVY VEHICLES	0	0	0.3	6.5	0.8	0	5.9	1.3	0	1.4	0	1.5	1.2	5.3	1.4	0	2.9	0	1.3	0.8	1.1



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & NE 6TH AVENUE
FT LAUDERDALE, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
SIGNALIZED

File Name : 38ST6AVE
Site Code : 00190187
Start Date : 11/7/2019
Page No : 1

Groups Printed- PEDESTRIANS

Start Time	NE 6TH AVENUE From North				NE 38TH STREET From East				NE 6TH AVENUE From South				NE 38TH STREET From West				Int. Total
	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	
07:00	0	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	4
07:15	1	0	0	0	5	0	4	0	3	0	1	0	0	0	0	0	14
07:30	1	0	0	0	1	0	2	0	8	0	0	0	4	0	0	0	16
07:45	1	0	0	0	0	0	0	0	3	0	1	0	1	0	0	0	6
Total	3	0	0	0	6	0	7	0	16	0	2	0	6	0	0	0	40
08:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
08:30	2	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	6
08:45	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	3
Total	2	0	0	0	3	0	3	0	4	0	1	0	0	0	0	0	13
16:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
16:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
16:30	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	3
16:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	3	0	1	0	1	0	1	0	0	0	0	0	7
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	1	0	3	0	0	0	2	0	0	0	6
17:30	5	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	8
17:45	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	4
Total	5	0	0	0	1	0	4	0	6	0	1	0	2	0	0	0	19
Grand Total	11	0	0	0	13	0	15	0	27	0	5	0	8	0	0	0	79
Apprch %	100	0	0	0	46.4	0	53.6	0	84.4	0	15.6	0	100	0	0	0	
Total %	13.9	0	0	0	16.5	0	19	0	34.2	0	6.3	0	10.1	0	0	0	

Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

File Name : 38STDIXI
Site Code : 00190187
Start Date : 11/12/2019
Page No : 1

Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

	DIXIE HIGHWAY From North				NE 38TH STREET From East				DIXIE HIGHWAY From South				NE 38TH STREET From West				Int. Total
Start Time	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
07:00	0	16	125	3	0	6	7	12	0	0	131	5	0	4	6	2	317
07:15	0	32	162	1	0	6	8	15	0	3	133	6	0	4	8	2	380
07:30	0	48	170	3	0	6	5	19	0	3	208	11	0	6	14	6	499
07:45	0	66	177	2	0	12	21	23	0	8	155	11	0	8	24	4	511
Total	0	162	634	9	0	30	41	69	0	14	627	33	0	22	52	14	1707
08:00	0	74	188	1	0	8	7	11	0	5	165	12	0	8	26	9	514
08:15	0	66	192	4	0	7	7	17	0	7	139	14	0	11	21	5	490
08:30	0	64	195	1	0	17	16	23	0	6	156	11	0	5	20	1	515
08:45	1	77	193	2	0	10	11	16	0	7	159	7	0	6	20	1	510
Total	1	281	768	8	0	42	41	67	0	25	619	44	0	30	87	16	2029
16:00	0	42	147	1	0	9	20	22	0	7	197	10	0	5	12	1	473
16:15	0	44	208	2	0	11	24	34	0	12	198	15	0	6	27	3	584
16:30	0	46	161	8	0	5	31	28	0	11	171	11	0	4	25	11	512
16:45	0	48	208	6	0	11	23	37	0	12	202	8	0	9	23	7	594
Total	0	180	724	17	0	36	98	121	0	42	768	44	0	24	87	22	2163
17:00	0	48	209	3	0	13	38	30	0	21	211	11	0	6	18	4	612
17:15	0	46	186	6	1	5	46	45	0	19	214	12	0	11	33	7	631
17:30	0	55	215	3	0	15	33	21	0	12	196	19	0	14	21	4	608
17:45	0	39	195	7	0	9	46	22	0	8	131	12	0	6	35	5	515
Total	0	188	805	19	1	42	163	118	0	60	752	54	0	37	107	20	2366
Grand Total	1	811	2931	53	1	150	343	375	0	141	2766	175	0	113	333	72	8265
Apprch %	0	21.4	77.2	1.4	0.1	17.3	39.5	43.2	0	4.6	89.7	5.7	0	21.8	64.3	13.9	
Total %	0	9.8	35.5	0.6	0	1.8	4.2	4.5	0	1.7	33.5	2.1	0	1.4	4	0.9	
LIGHT VEHICLES	1	798	2841	50	1	149	340	365	0	137	2679	173	0	107	320	67	8028
% LIGHT VEHICLES	100	98.4	96.9	94.3	100	99.3	99.1	97.3	0	97.2	96.9	98.9	0	94.7	96.1	93.1	97.1
HEAVY VEHICLES	0	13	90	3	0	1	3	10	0	4	87	2	0	6	13	5	237
% HEAVY VEHICLES	0	1.6	3.1	5.7	0	0.7	0.9	2.7	0	2.8	3.1	1.1	0	5.3	3.9	6.9	2.9

Traffic Survey Specialists, Inc.

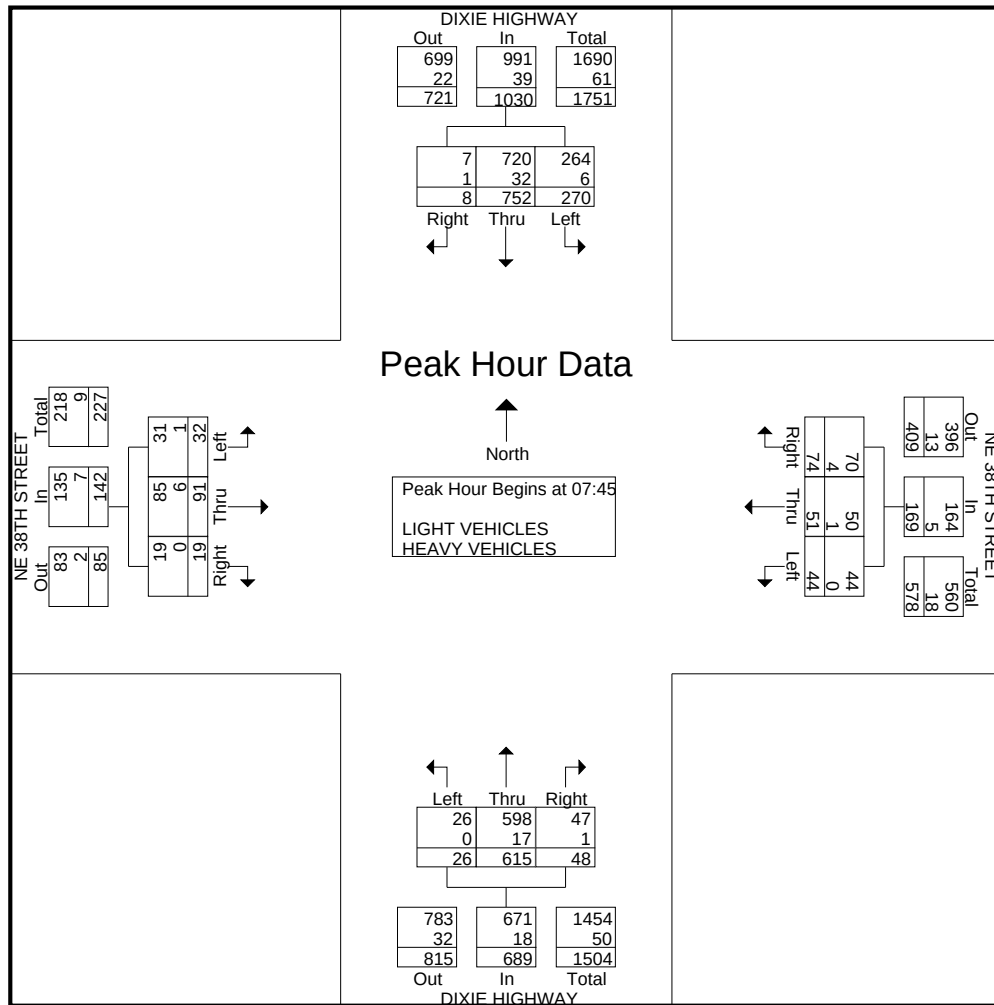
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

File Name : 38STDIXI
Site Code : 00190187
Start Date : 11/12/2019
Page No : 2

	DIXIE HIGHWAY From North					NE 38TH STREET From East					DIXIE HIGHWAY From South					NE 38TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	66	177	2	245	0	12	21	23	56	0	8	155	11	174	0	8	24	4	36	511
08:00	0	74	188	1	263	0	8	7	11	26	0	5	165	12	182	0	8	26	9	43	514
08:15	0	66	192	4	262	0	7	7	17	31	0	7	139	14	160	0	11	21	5	37	490
08:30	0	64	195	1	260	0	17	16	23	56	0	6	156	11	173	0	5	20	1	26	515
Total Volume	0	270	752	8	1030	0	44	51	74	169	0	26	615	48	689	0	32	91	19	142	2030
% App. Total	0	26.2	73	0.8		0	26	30.2	43.8		0	3.8	89.3	7		0	22.5	64.1	13.4		
PHF	.000	.912	.964	.500	.979	.000	.647	.607	.804	.754	.000	.813	.932	.857	.946	.000	.727	.875	.528	.826	.985
LIGHT VEHICLES	0	264	720	7	991	0	44	50	70	164	0	26	598	47	671	0	31	85	19	135	1961
% LIGHT VEHICLES	0	97.8	95.7	87.5	96.2	0	100	98.0	94.6	97.0	0	100	97.2	97.9	97.4	0	96.9	93.4	100	95.1	96.6
HEAVY VEHICLES	0	6	32	1	39	0	0	1	4	5	0	0	17	1	18	0	1	6	0	7	69
% HEAVY VEHICLES	0	2.2	4.3	12.5	3.8	0	0	2.0	5.4	3.0	0	0	2.8	2.1	2.6	0	3.1	6.6	0	4.9	3.4



Traffic Survey Specialists, Inc.

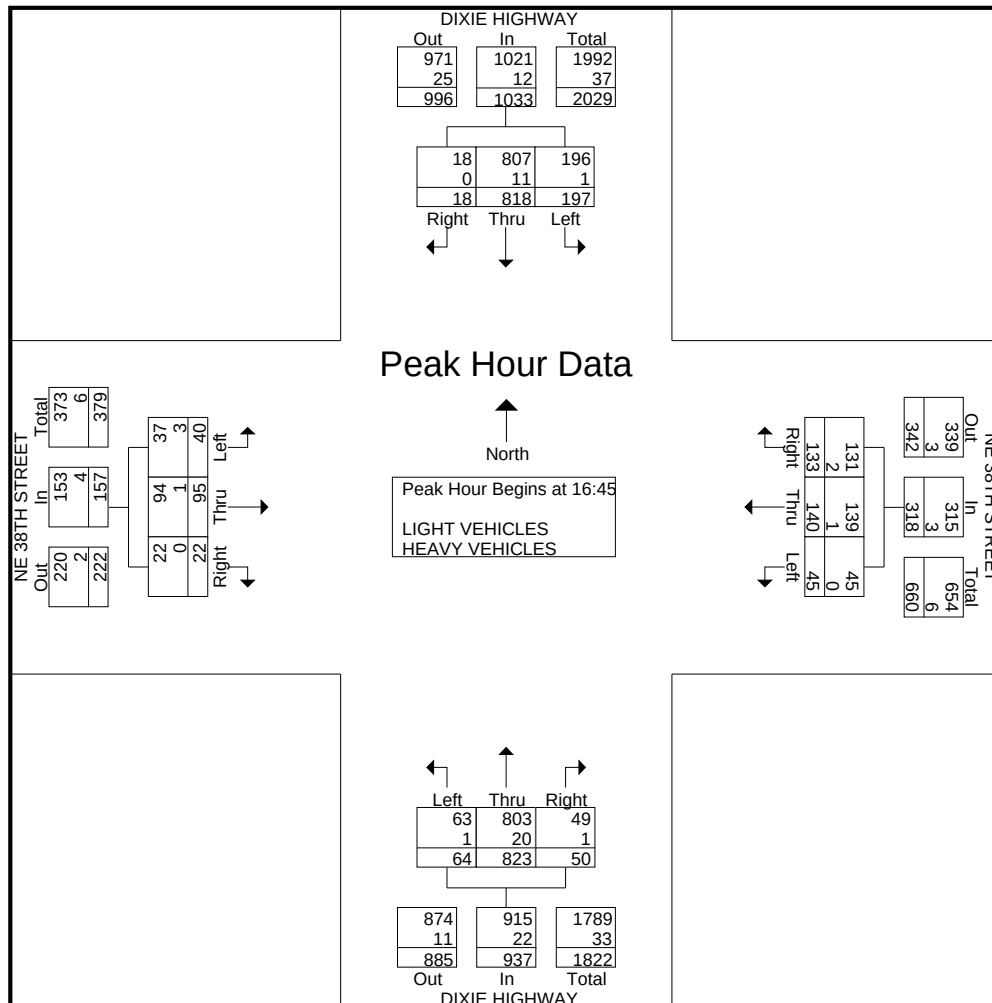
Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

File Name : 38STDIXI
Site Code : 00190187
Start Date : 11/12/2019
Page No : 3

	DIXIE HIGHWAY From North					NE 38TH STREET From East					DIXIE HIGHWAY From South					NE 38TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	48	208	6	262	0	11	23	37	71	0	12	202	8	222	0	9	23	7	39	594
17:00	0	48	209	3	260	0	13	38	30	81	0	21	211	11	243	0	6	18	4	28	612
17:15	0	46	186	6	238	1	5	46	45	97	0	19	214	12	245	0	11	33	7	51	631
17:30	0	55	215	3	273	0	15	33	21	69	0	12	196	19	227	0	14	21	4	39	608
Total Volume	0	197	818	18	1033	1	44	140	133	318	0	64	823	50	937	0	40	95	22	157	2445
% App. Total	0	19.1	79.2	1.7		0.3	13.8	44	41.8		0	6.8	87.8	5.3		0	25.5	60.5	14		
PHF	.000	.895	.951	.750	.946	.250	.733	.761	.739	.820	.000	.762	.961	.658	.956	.000	.714	.720	.786	.770	.969
LIGHT VEHICLES	0	196	807	18	1021	1	44	139	131	315	0	63	803	49	915	0	37	94	22	153	2404
% LIGHT VEHICLES	0	99.5	98.7	100	98.8	100	100	99.3	98.5	99.1	0	98.4	97.6	98.0	97.7	0	92.5	98.9	100	97.5	98.3
HEAVY VEHICLES	0	1	11	0	12	0	0	1	2	3	0	1	20	1	22	0	3	1	0	4	41
% HEAVY VEHICLES	0	0.5	1.3	0	1.2	0	0	0.7	1.5	0.9	0	1.6	2.4	2.0	2.3	0	7.5	1.1	0	2.5	1.7



Traffic Survey Specialists, Inc.

Delray Beach, Florida

Phone (561) 272-3255 www.trafficsurveyspecialists.com

NE 38TH STREET & DIXIE HIGHWAY
FT LAUDERDALE, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

File Name : 38STDIXI
Site Code : 00190187
Start Date : 11/12/2019
Page No : 1

Groups Printed- PEDESTRIANS

	DIXIE HIGHWAY From North				NE 38TH STREET From East				DIXIE HIGHWAY From South				NE 38TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:15	0	0	1	0	0	0	1	0	2	0	0	0	0	0	0	0	4
07:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3
07:45	1	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	5
Total	1	0	1	0	2	0	2	0	2	0	3	0	1	0	1	0	13
08:00	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
08:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	4
08:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	3	0	1	0	2	0	1	0	1	0	1	0	0	0	0	0	9
16:00	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	3
16:15	0	0	3	0	0	0	1	0	1	0	2	0	0	0	0	0	7
16:30	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	4	0	2	0	2	0	2	0	3	0	0	0	0	0	13
17:00	0	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	4
17:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	5
Grand Total	5	0	7	0	6	0	6	0	5	0	7	0	2	0	2	0	40
Apprch %	41.7	0	58.3	0	50	0	50	0	41.7	0	58.3	0	50	0	50	0	
Total %	12.5	0	17.5	0	15	0	15	0	12.5	0	17.5	0	5	0	5	0	

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8601 CEN.-W OF US1 TO SR7

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

* PEAK SEASON

25-FEB-2019 16:26:26

830UPD

4_8601_PKSEASON.TXT

FDOT STATION	LOCATION	2013 AADT	2018 AADT
86-0022	SR 816/Oakland Park Boulevard, E of Andrews Avenue	44,500	49,000
86-5067	SR 816/Oakland Park Boulevard, W of SR 811/Dixie Highway	38,000	40,000
86-9070	NE 6 th Avenue, N of SR 816/Oakland Park Boulevard	6,400	8,500
86-0425	SR 811/Dixie Highway, S of SR 816/Oakland Park Boulevard	19,700	20,400
86-5074	SR 811/Dixie Highway, 200' S of NE 38 th Street	21,500	23,000
86-9072	NW 38 th Street, E of Andrews Avenue	7,300	7,200
86-9576	NE 38 th Street, W of NE 16 th Avenue	5,000	5,800
86-0212	SR 811/Wilton Drive, S of NE 26 th Street	16,400	14,000
Total Areawide AADT		158,800	167,900
Areawide Compound Growth Rate		CGR = 1.12%	

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0022 - SR 816/OAKLAND PARK BLVD - E OF ANDREWS AVE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	49000	C	E 24500		W 24500	9.00	54.50	4.20
2017	42000	C	E 18000		W 24000	9.00	51.90	4.40
2016	49000	C	E 24500		W 24500	9.00	54.10	4.40
2015	45500	C	E 22500		W 23000	9.00	54.00	4.40
2014	48000	C	E 24500		W 23500	9.00	54.20	4.60
2013	44500	C	E 21500		W 23000	9.00	53.60	4.30
2012	50500	C	E 25500		W 25000	9.00	52.20	4.30
2011	44000	C	E 22000		W 22000	9.00	52.50	3.60
2010	47000	C	E 23500		W 23500	8.35	52.69	3.60
2009	44500	C	E 22500		W 22000	8.53	53.89	3.60
2008	46500	C	E 23000		W 23500	8.81	54.16	8.50
2007	48000	C	E 24500		W 23500	8.63	55.75	8.50
2006	48500	C	E 24500		W 24000	8.40	55.34	2.70
2005	50000	C	E 25000		W 25000	8.20	51.70	2.70
2004	48500	C	E 23500		W 25000	9.10	55.30	2.70
2003	52000	C	E 25500		W 26500	8.60	57.50	2.20

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: 5067 - SR 816/OAKLAND PARK BLVD - W OF SR 811/DIXIE HWY

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	40000	C	E 20000		W 20000	9.00	54.50	4.00
2017	49000	C	E 24000		W 25000	9.00	51.90	4.00
2016	42000	C	E 21000		W 21000	9.00	54.10	4.50
2015	38500	C	E 20000		W 18500	9.00	54.00	4.50
2014	44000	C	E 21000		W 23000	9.00	54.20	6.60
2013	38000	C	E 18000		W 20000	9.00	53.60	2.30
2012	42000	C	E 20000		W 22000	9.00	52.20	2.30
2011	41000	C	E 21500		W 19500	9.00	52.50	7.20
2010	40000	C	E 19500		W 20500	8.35	52.69	7.20
2009	39500	C	E 19500		W 20000	8.53	53.89	5.80
2008	39500	C	E 20500		W 19000	8.81	54.16	5.80
2007	41000	C	E 21000		W 20000	8.63	55.75	8.90
2006	45500	C	E 22500		W 23000	8.40	55.34	2.70
2005	46000	C	E 22500		W 23500	8.20	51.70	3.60
2004	44500	C	E 22500		W 22000	9.10	55.30	3.60
2003	44000	C	E 22000		W 22000	8.60	57.50	3.60

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: 9070 - NE 6 AVENUE, N OF OAKLAND PARK BLVD.

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	8500 S	N	4000	S	4500	9.00	54.50	6.00
2017	8500 F	N	4000	S	4500	9.00	51.90	6.20
2016	8500 C	N	4000	S	4500	9.00	54.10	2.90
2015	6600 V		0		0	9.00	54.00	3.40
2014	6500 R					9.00	54.20	7.40
2013	6400 T		0		0	9.00	53.60	7.60
2012	6400 S		0		0	9.00	52.20	5.90
2011	6400 F		0		0	9.00	52.50	6.30
2010	6400 C	N	0	S	0	8.35	52.69	9.30
2009	6600 F		0		0	8.53	53.89	5.30
2008	6800 C	N	0	S	0	8.81	54.16	6.50
2007	6400 C	N	0	S	0	8.63	55.75	4.80
2006	8800 C	N	0	S	0	8.40	55.34	2.90
2005	8200 C	N		S		8.20	51.70	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: 0425 - SR 811/OLD DIXIE HWY - S OF OAKLAND PARK BLVD

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2018	20400 C	N	10500	S 9900	9.00	54.50	3.60
2017	20900 C	N	11000	S 9900	9.00	51.90	3.60
2016	21500 C	N	11000	S 10500	9.00	54.10	6.80
2015	18600 C	N	9900	S 8700	9.00	54.00	6.80
2014	20300 C	N	10500	S 9800	9.00	54.20	6.80
2013	19700 C	N	10500	S 9200	9.00	53.60	5.80
2012	19600 C	N	10000	S 9600	9.00	52.20	4.60
2011	18400 C	N	9200	S 9200	9.00	52.50	4.60
2010	18700 C	N	9400	S 9300	8.35	52.69	4.60
2009	20500 C	N	10500	S 10000	8.53	53.89	2.40
2008	20400 C	N	10500	S 9900	8.81	54.16	2.40
2007	19900 C	N	9900	S 10000	8.63	55.75	3.40
2006	21000 C	N	10500	S 10500	8.40	55.34	4.40
2005	21500 C	N	10500	S 11000	8.20	51.70	3.30
2004	20000 C	N	10000	S 10000	9.10	55.30	4.10
2003	19700 C	N	10000	S 9700	8.60	57.50	4.20

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: 5074 - SR 811/DIXIE HWY - 200' S OF NE 38 ST

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2018	23000	C	N 11500	S 11500	9.00	54.50	2.40
2017	23000	C	N 12000	S 11000	9.00	51.90	5.90
2016	22000	C	N 11500	S 10500	9.00	54.10	5.90
2015	29500	C	N 14500	S 15000	9.00	54.00	5.90
2014	24000	C	N 11500	S 12500	9.00	54.20	5.20
2013	21500	C	N 11000	S 10500	9.00	53.60	5.20
2012	21200	C	N 11500	S 9700	9.00	52.20	5.60
2011	21500	C	N 11000	S 10500	9.00	52.50	5.60
2010	19000	C	N 9500	S 9500	8.35	52.69	5.60
2009	23000	C	N 11000	S 12000	8.53	53.89	7.10
2008	23500	C	N 11000	S 12500	8.81	54.16	7.10
2007	23000	C	N 11500	S 11500	8.63	55.75	3.30
2006	22500	C	N 11500	S 11000	8.40	55.34	4.40
2005	23500	C	N 12000	S 11500	8.20	51.70	5.80
2004	23000	C	N 11500	S 11500	9.10	55.30	5.80
2003	23500	C	N 11500	S 12000	8.60	57.50	5.80

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: 9072 - NW 38 STREET, E OF ANDREWS AVENUE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	7200 S	E	3700	W	3500	9.00	54.50	6.00
2017	7200 F	E	3700	W	3500	9.00	51.90	6.20
2016	7200 C	E	3700	W	3500	9.00	54.10	2.90
2015	7500 V		0		0	9.00	54.00	3.40
2014	7400 R					9.00	54.20	7.40
2013	7300 T		0		0	9.00	53.60	7.60
2012	7300 S		0		0	9.00	52.20	5.90
2011	7300 F		0		0	9.00	52.50	6.30
2010	7300 C	E	0	W	0	8.35	52.69	9.30
2009	6700 F		0		0	8.53	53.89	5.30
2008	6900 C	E	0	W	0	8.81	54.16	6.50
2007	7400 C	E	0	W	0	8.63	55.75	4.80
2006	8300 C	E	0	W	0	8.40	55.34	2.90
2005	8100 C	E		W		8.20	51.70	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: 9576 - NE 38TH STREET, W OF NE 16 AVENUE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	5800	T	E 3000		W 2800	9.00	54.50	6.00
2017	5800	S	E 3000		W 2800	9.00	51.90	6.20
2016	5800	F	E 3000		W 2800	9.00	54.10	2.90
2015	5800	C	E 3000		W 2800	9.00	54.00	3.40
2014	5000	X				9.00	54.20	7.40
2013	5000	X		0	0	9.00	53.60	7.60
2012	5000	T		0	0	9.00	52.20	5.90
2011	5000	S		0	0	9.00	52.50	6.30
2010	5000	F		0	0	8.35	52.69	9.30
2009	5000	C	E	0	W 0	8.53	53.89	5.30
2008	4800	C	E	0	W 0	8.81	54.16	6.50
2007	4100	C	E	0	W 0	11.68	57.46	4.80
2006	4100	C	E	0	W 0		2.90	

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

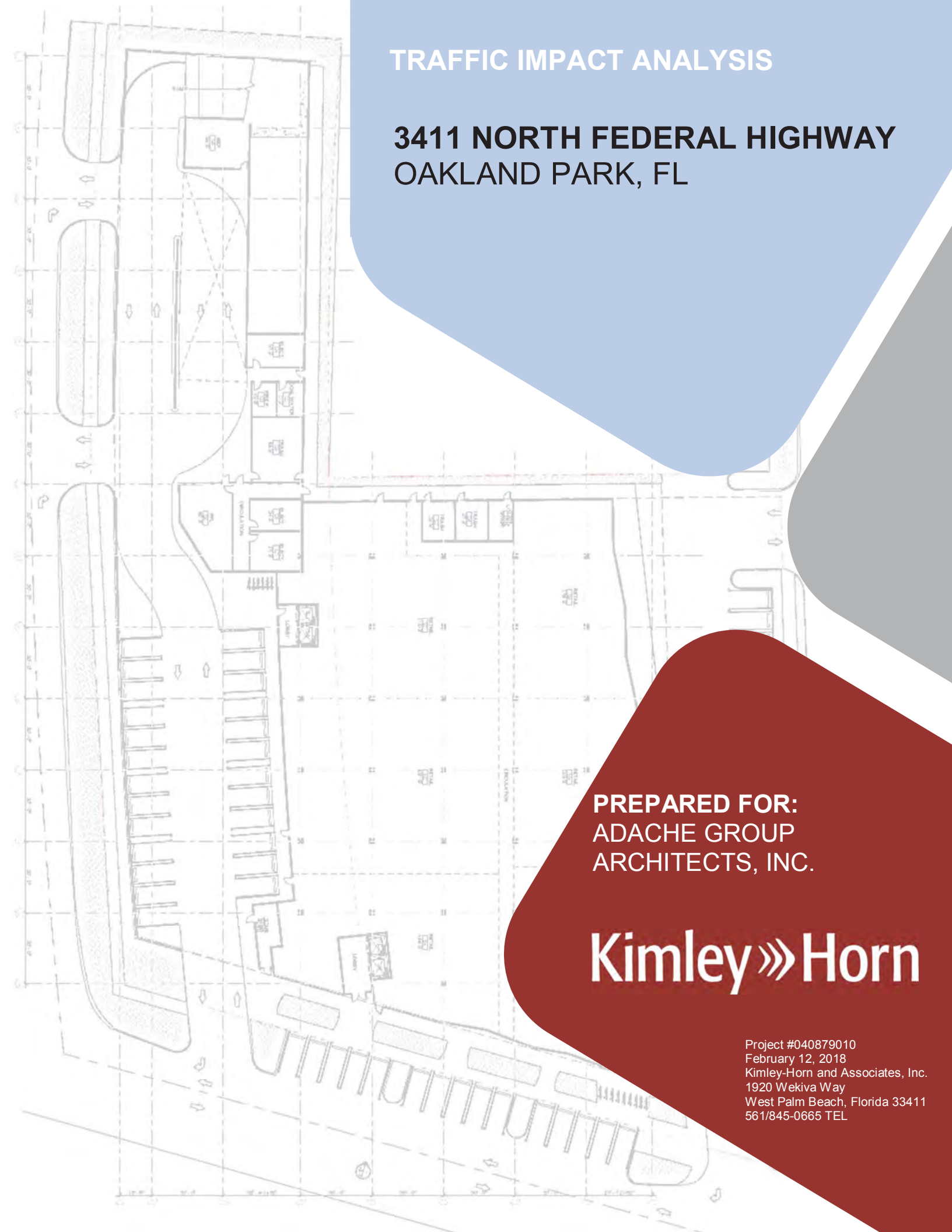
FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0212 - SR 811/WILTON DR - S OF NE 26 ST

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2018	14000	C	N 7300		S 6700	9.00	54.50	4.00
2017	13400	C	N 7400		S 6000	9.00	51.90	4.00
2016	14600	C	N 7000		S 7600	9.00	54.10	4.00
2015	14000	C	N 7200		S 6800	9.00	54.00	5.10
2014	14900	C	N 7100		S 7800	9.00	54.20	5.10
2013	16400	C	N 8500		S 7900	9.00	53.60	5.10
2012	13800	C	N 6900		S 6900	9.00	52.20	2.80
2011	14500	C	N 7700		S 6800	9.00	52.50	2.80
2010	12100	C	N 6200		S 5900	8.35	52.69	2.80
2009	12100	C	N 6200		S 5900	8.53	53.89	7.30
2008	13900	C	N 7400		S 6500	8.81	54.16	7.30
2007	13300	C	N 6600		S 6700	8.63	55.75	2.90
2006	14500	C	N 7300		S 7200	8.40	55.34	4.40
2005	14800	C	N 7300		S 7500	8.20	51.70	3.60
2004	13600	C	N 6800		S 6800	9.10	55.30	3.60
2003	13800	C	N 7100		S 6700	8.60	57.50	3.60

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



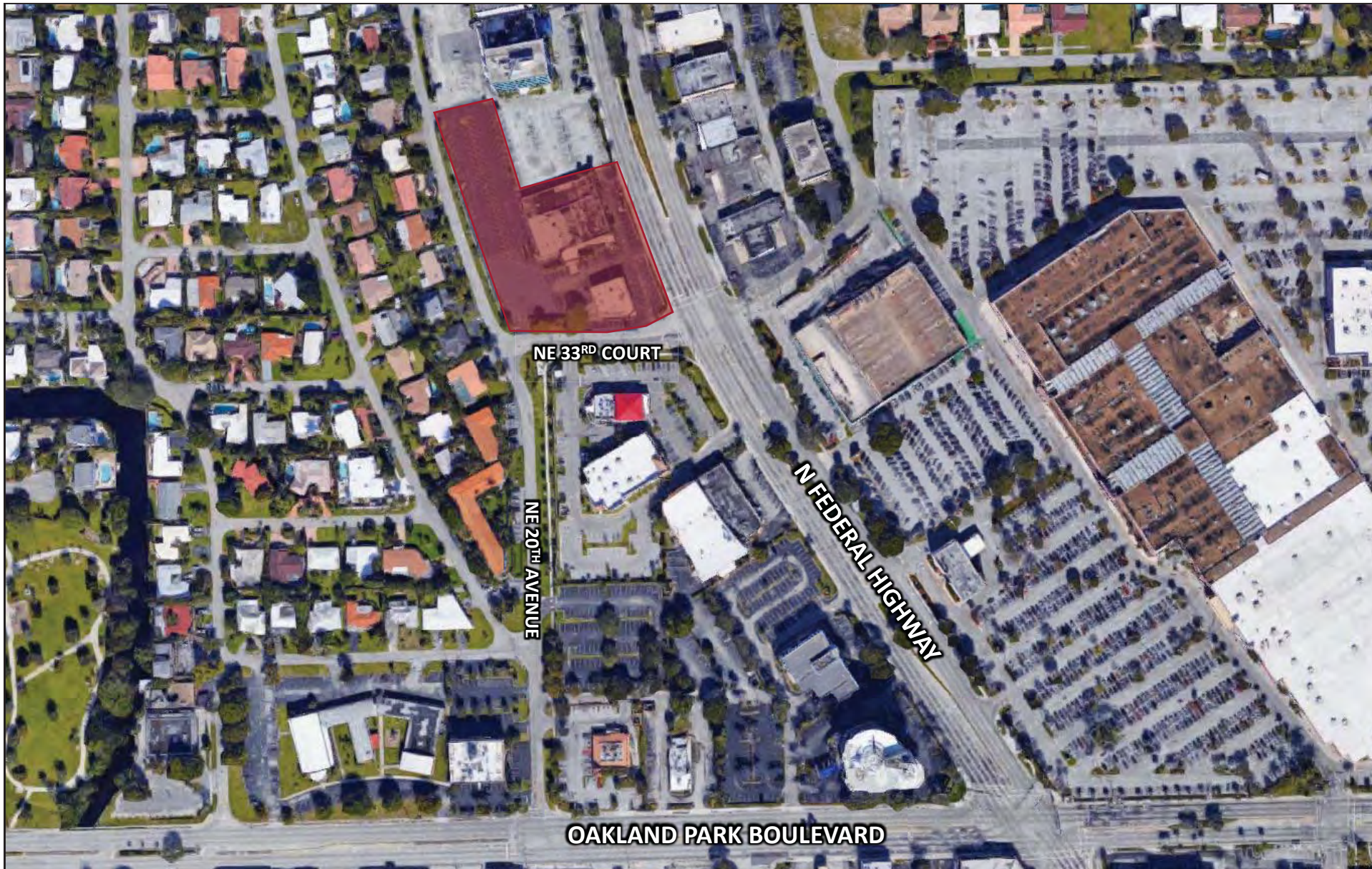
TRAFFIC IMPACT ANALYSIS

**3411 NORTH FEDERAL HIGHWAY
OAKLAND PARK, FL**

**PREPARED FOR:
ADACHE GROUP
ARCHITECTS, INC.**

Kimley»Horn

Project #040879010
February 12, 2018
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL



LEGEND



PROJECT SITE

FIGURE 1
SITE LOCATION
3411 NORTH FEDERAL
Kimley»Horn

TABLE 1 WEEKDAY TRIP GENERATION 3411 NORTH FEDERAL - OAKLAND PARK							
LAND USE		AM PEAK HOUR			PM PEAK HOUR		
		TOTAL	IN	OUT	TOTAL	IN	OUT
Existing Development							
Adult Cabaret (440)	15,624 s.f.	0	0	0	46	21	25
General Commercial Retail (820)	7,257 s.f.	7	4	3	78	37	41
	Subtotal	7	4	3	124	58	66
Internal Capture		AM	PM				
Adult Cabaret (440)	0.0% 6.5%	0	0	0	3	2	1
General Commercial Retail (820)	0.0% 3.8%	0	0	0	3	1	2
	Subtotal	0	0	0	6	3	3
Pass-By Traffic							
General Commercial Retail (820)	34%	2	1	1	27	13	14
	Subtotal	2	1	1	27	13	14
	Driveway Volumes	7	4	3	118	55	63
Existing External Trips		5	3	2	91	42	49
Proposed Development							
Specialty Retail (826)	20,101 s.f.	14	9	5	70	31	39
Apartment (220)	235 units	107	25	82	126	79	47
	Subtotal	121	34	87	196	110	86
Internal Capture		AM	PM				
Specialty Retail (826)	14.3% 18.6%	2	1	1	13	3	10
Apartment (220)	1.9% 10.3%	2	1	1	13	10	3
	Subtotal	4	2	2	26	13	13
Pass-By Traffic							
Specialty Retail (826)	34%	4	3	1	19	10	9
	Subtotal	4	3	1	19	10	9
	Driveway Volumes	117	32	85	170	97	73
Proposed External Trips		113	29	84	151	87	64
Trip Differential (Proposed - Existing):		108	26	82	60	45	15
AM Peak Hour							
General Commercial Retail (820)	[ITE]	=	0.94 trips / 1,000 s.f. (62% in, 38% out)				
Specialty Retail (826)	[ITE]	=	0.7 trips / 1,000 s.f. (62% in, 38% out)**				
Apartment (220)	[ITE]	=	Ln(T) = 0.95*Ln(units) - 0.51 (23% in, 77% out)				
PM Peak Hour							
Adult Cabaret (440)	[ITE]	=	2.93 trips / 1,000 s.f. (46% in, 54% out)				
General Commercial Retail (820)	[ITE]	=	Ln(T) = 0.74*Ln(X) + 2.89 (48% in, 52% out)				
Specialty Retail (826)	[ITE]	=	2.40(X) + 21.48 (44% in, 56% out)				
Apartment (220)	[ITE]	=	Ln(T) = 0.89*Ln(units) - 0.02 (63% in, 37% out)				
Pass-By							
General Commercial Retail (820)	[ITE]	=	34%				
Specialty Retail (826)	[ITE]	=	34%***				

**AM Peak Hour rate calculated as follows: (PM ITE LU 826 rate)*(AM ITE LU 820 rate/PM ITE LU 820 rate)

***Average Pass-by rate for ITE LU 820

Trip Distribution

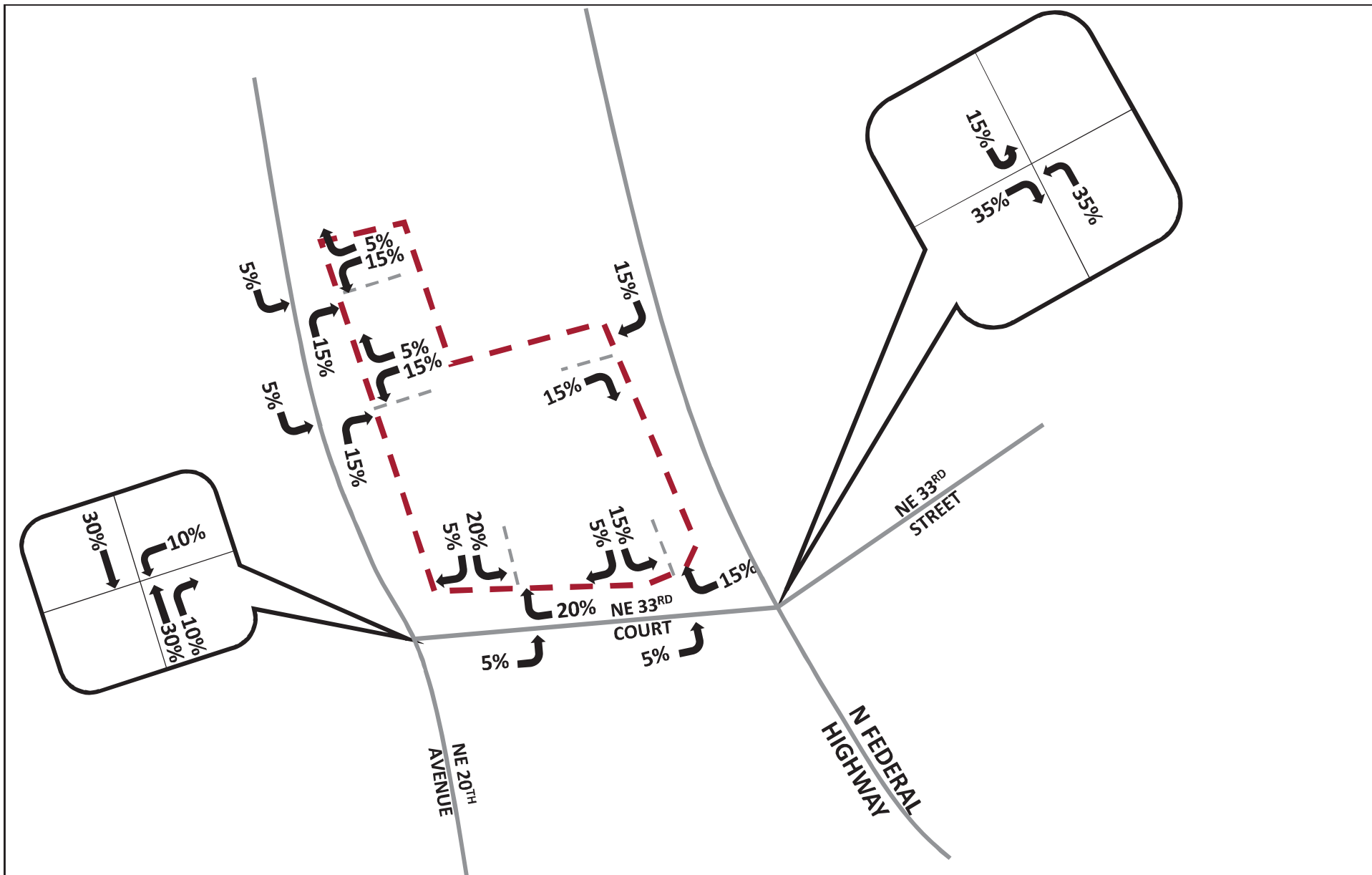
Trip distribution is the pairing of trip ends from the subject site with other land uses in the area. These trips were assigned to the surrounding roadways based upon a review of the roadway network proposed to be in place at the time of buildout and its travel time characteristics.

The distribution according to cardinal directions is:

NORTH	-	25 percent
SOUTH	-	25 percent
EAST	-	10 percent
WEST	-	40 percent

Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns and the traffic distribution. *Figure 2* illustrates the roadway link assignment. The AM and PM peak hour trips for the project were then assigned to the surrounding roadway network projected to be in place by 2023.

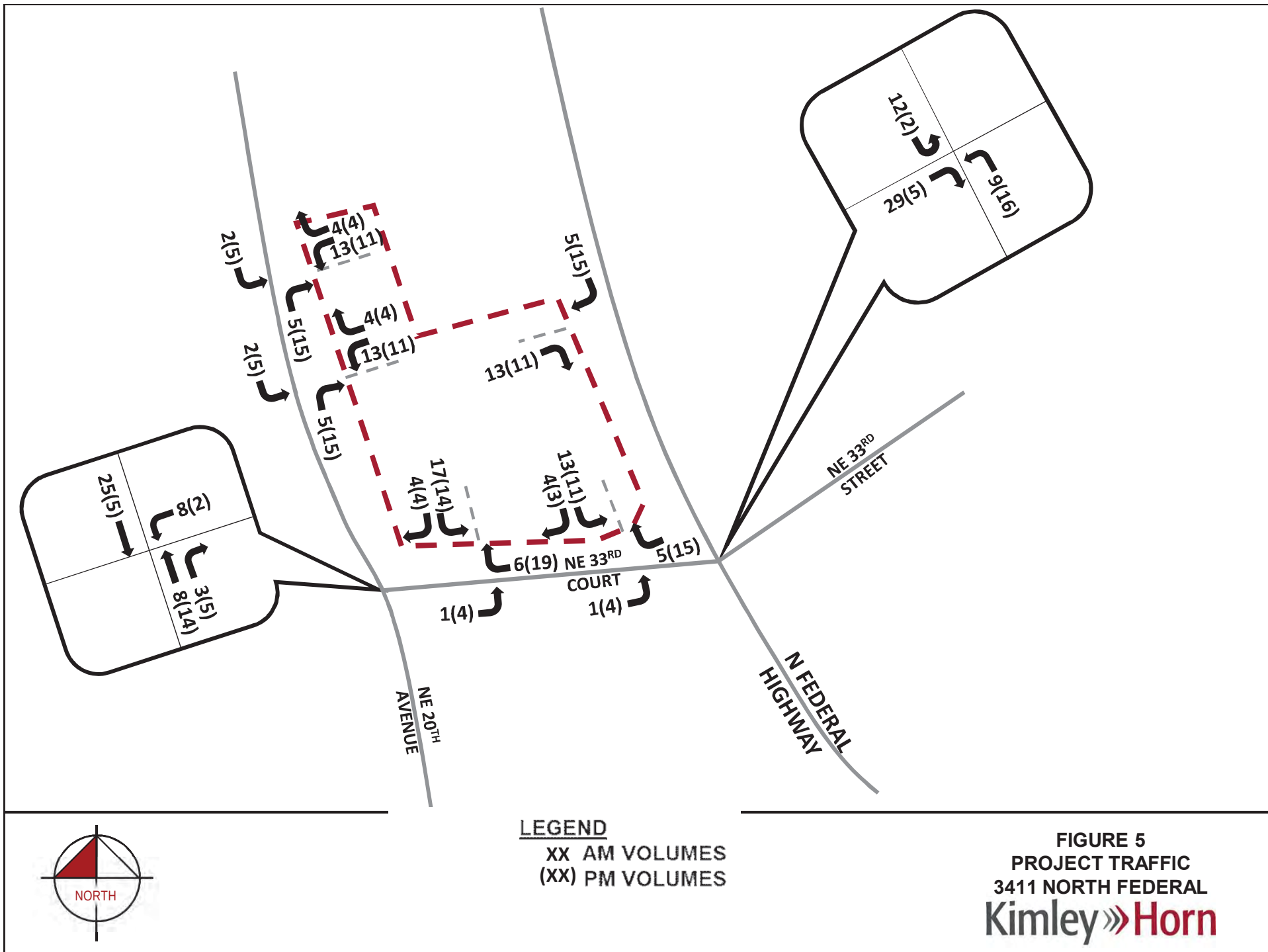


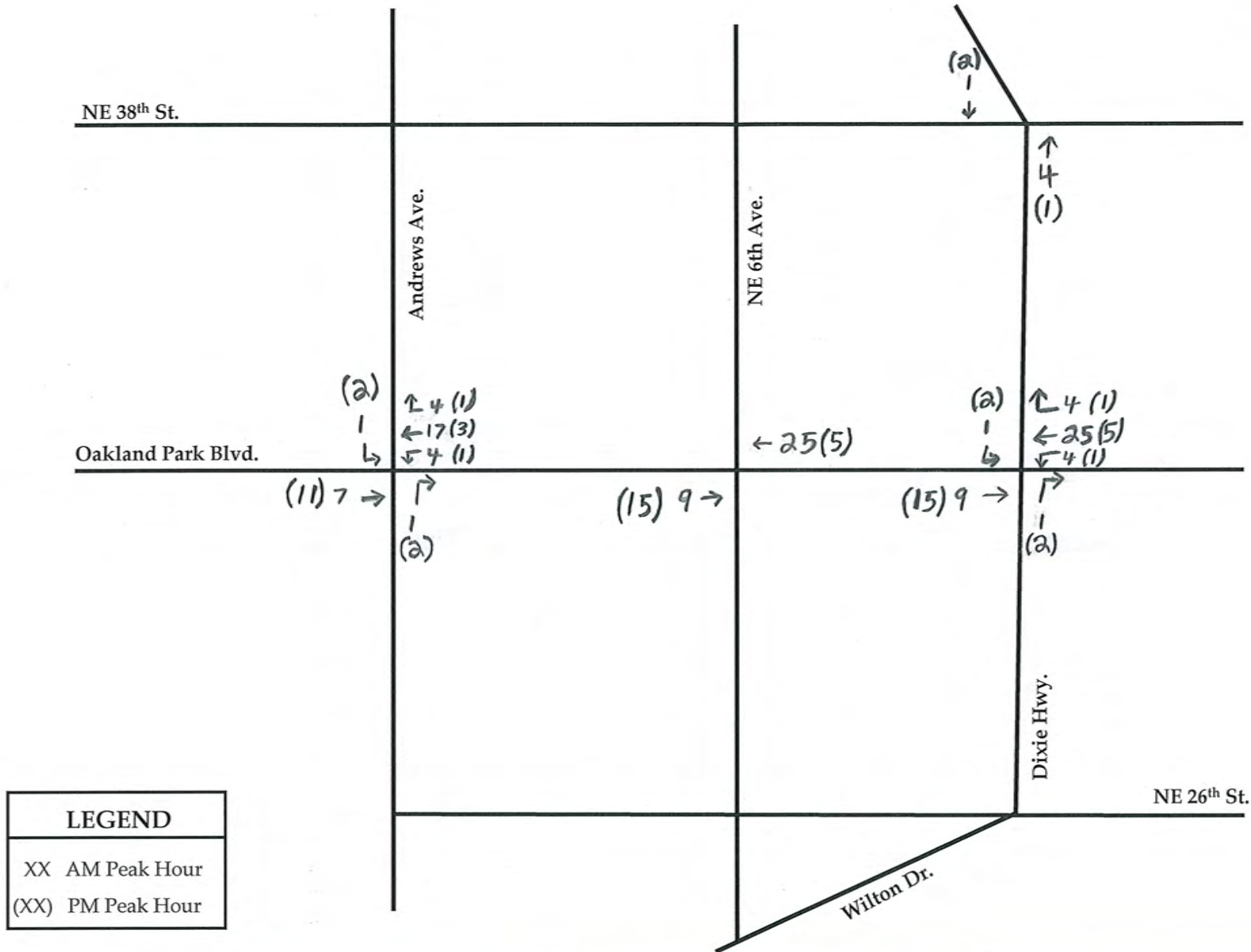
LEGEND



PROJECT SITE

FIGURE 2
SITE TRAFFIC ASSIGNMENT
3411 NORTH FEDERAL
Kimley»Horn





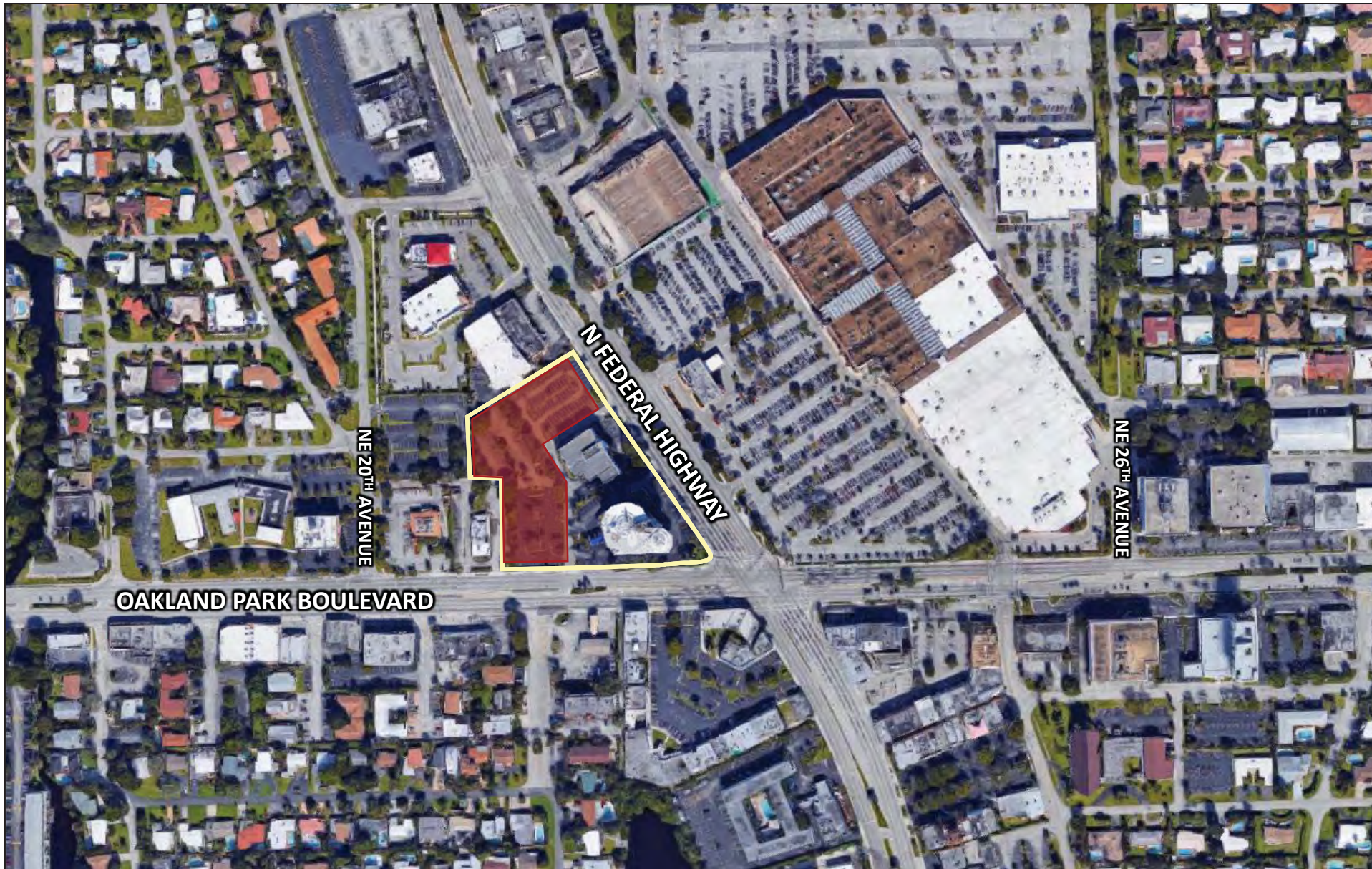
TRAFFIC IMPACT ANALYSIS

ROUND CORNER – OAKLAND PARK OAKLAND PARK, FL

PREPARED FOR:
ADACHE GROUP
ARCHITECTS, INC.

Kimley»Horn

Project #040879008
January 22, 2018
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL



LEGEND



AFFECTED AREA OF PROJECT DEVELOPMENT



OVERALL SITE

FIGURE 1
SITE LOCATION
OAKLAN PARK – ROUND CORNER

Kimley»Horn

TABLE 1 WEEKDAY TRIP GENERATION ROUND CORNER - OAKLAND PARK										
LAND USE	INTENSITY		DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR			
				TOTAL	IN	OUT	TOTAL	IN	OUT	
Existing Development										
General Office (710)	97,128 s.f.		1,284	187	165	22	187	32	155	
High-Turnover Sit Down Restaurant (932)	2,588 s.f.		329	28	15	13	25	15	10	
		Subtotal	1,613	215	180	35	212	47	165	
Pass-By Traffic										
High-Turnover Sit Down Restaurant (932)	43%		141	12	6	6	11	6	4	
		Subtotal	141	12	6	6	11	6	4	
		Driveway Volumes	1,613	215	180	35	212	47	165	
Existing External Trips			1,472	203	174	29	201	41	161	
Proposed Development										
Specialty Retail (826)	19,761 s.f.		883	14	9	5	69	30	39	
Apartment (220)	247 units		1,620	125	25	100	154	100	54	
General Office (710)	97,128 s.f.		1,284	187	165	22	187	32	155	
High-Turnover Sit Down Restaurant (932)	2,588 s.f.		329	28	15	13	25	15	10	
		Subtotal	4,116	354	214	140	435	177	258	
Internal Capture										
	Daily	AM	PM							
Specialty Retail (826)	10.0%	14.3%	10.1%	88	2	1	1	7	3	4
Apartment (220)	5.4%	1.6%	4.5%	88	2	1	1	7	4	3
			Subtotal	176	4	2	2	14	7	7
Pass-By Traffic										
Specialty Retail (826)		34%		270	4	3	1	21	9	12
High-Turnover Sit Down Restaurant (932)		43%		141	12	6	6	11	6	4
			Subtotal	411	16	9	7	32	15	16
		Driveway Volumes	3,940	350	212	138	421	170	251	
Proposed External Trips			3,529	334	203	131	389	155	235	
Trip Differential (Proposed - Existing):			2,057	131	29	102	188	114	74	
Daily Trips										
Specialty Retail (826)	[ITE]	=	42.78(X) + 37.66							
Apartment (220)	[ITE]	=	6.06*(units) + 123.56							
General Office (710)	[ITE]	=	Ln(T)=0.76*Ln(X)+3.68							
High-Turnover Sit Down Restaurant (932)	[ITE]	=	127.15(X)							
AM Peak Hour										
Specialty Retail (826)	[ITE]	=	0.7 trips / 1,000 s.f. (62% in, 38% out)*							
Apartment (220)	[ITE]	=	0.49*(units) + 3.73 (20% in, 80% out)							
General Office (710)	[ITE]	=	Ln(T)=0.80*Ln(X)+1.57 (88% in, 12% out)							
High-Turnover Sit Down Restaurant (932)	[ITE]	=	10.81(X) (55% in, 45% out)							
PM Peak Hour										
Specialty Retail (826)	[ITE]	=	2.40(X) + 21.48 (44% in, 56% out)							
Apartment (220)	[ITE]	=	0.55*(units) + 17.65 (65% in, 35% out)							
General Office (710)	[ITE]	=	1.12(X) + 78.45 (17% in, 83% out)							
High-Turnover Sit Down Restaurant (932)	[ITE]	=	9.85(X) (60% in, 40% out)							
Pass-By										
Specialty Retail (826)	[ITE]	=	34%**							
High-Turnover Sit Down Restaurant (932)	[ITE]	=	43%							

AM Peak Hour rate calculated as follows: (PM ITE LU 826 rate)(AM ITE LU 820 rate/PM ITE LU 820 rate)

**Average Pass-by rate for ITE LU 820

Trip Distribution

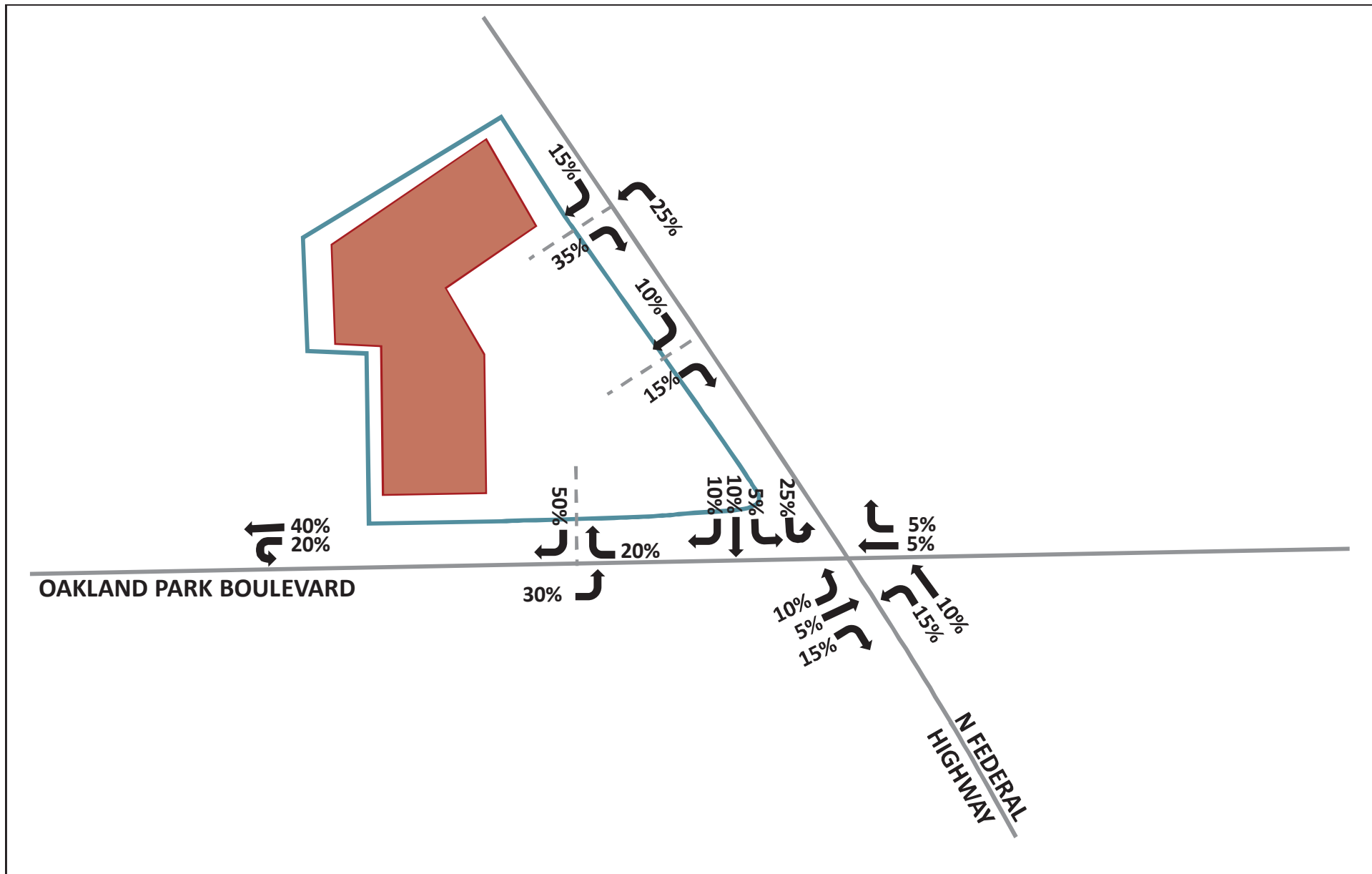
Trip distribution is the pairing of trip ends from the subject site with other land uses in the area. These trips were assigned to the surrounding roadways based upon a review of the roadway network proposed to be in place at the time of buildout and its travel time characteristics.

The distribution according to cardinal directions is:

NORTH	-	25 percent
SOUTH	-	25 percent
EAST	-	10 percent
WEST	-	40 percent

Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns and the traffic distribution. *Figure 2* illustrates the roadway link assignment. The AM and PM peak hour trips for the project were then assigned to the surrounding roadway network projected to be in place by 2022.

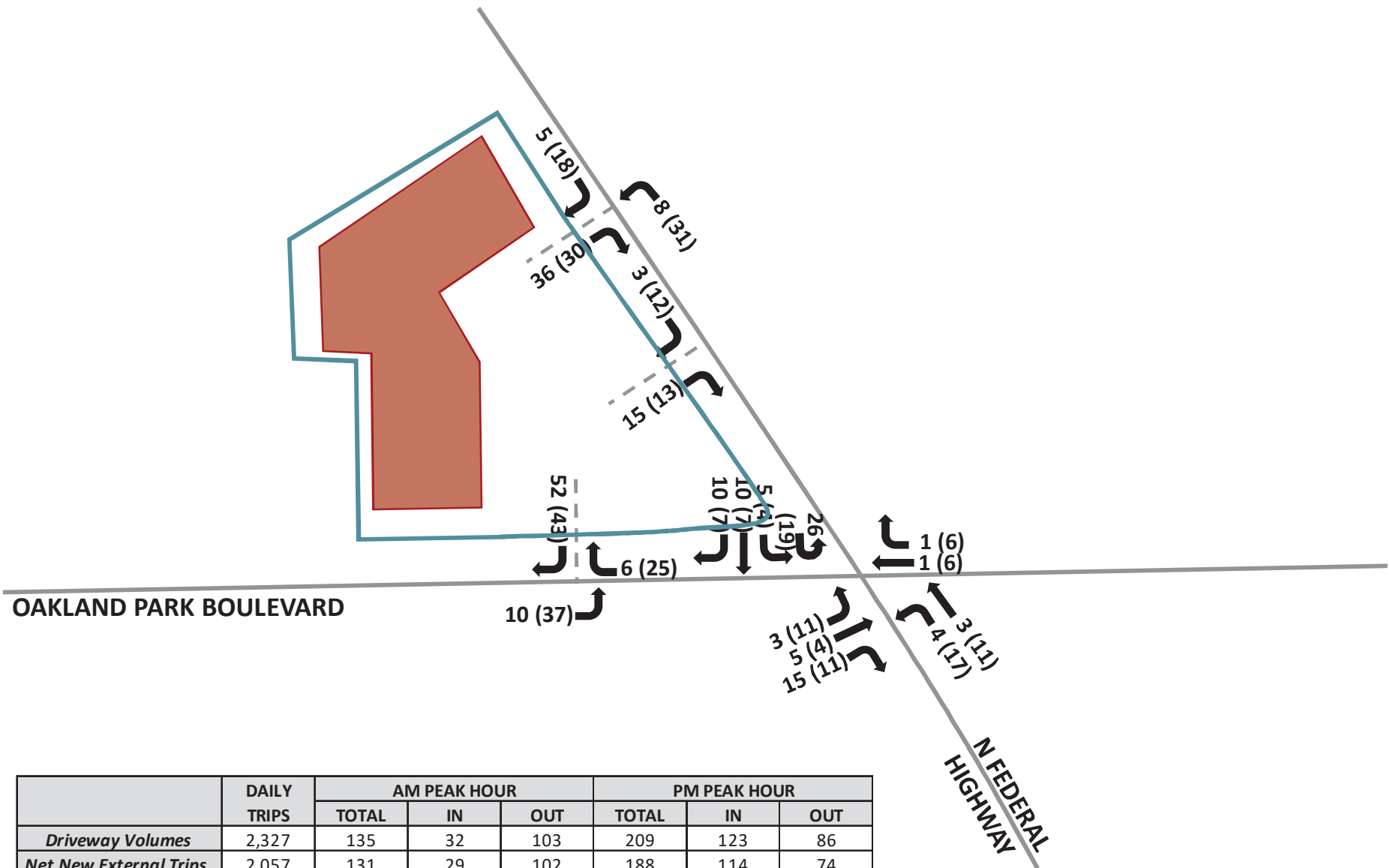


LEGEND
 AFFECTED AREA OF PROJECT DEVELOPMENT



OVERALL SITE

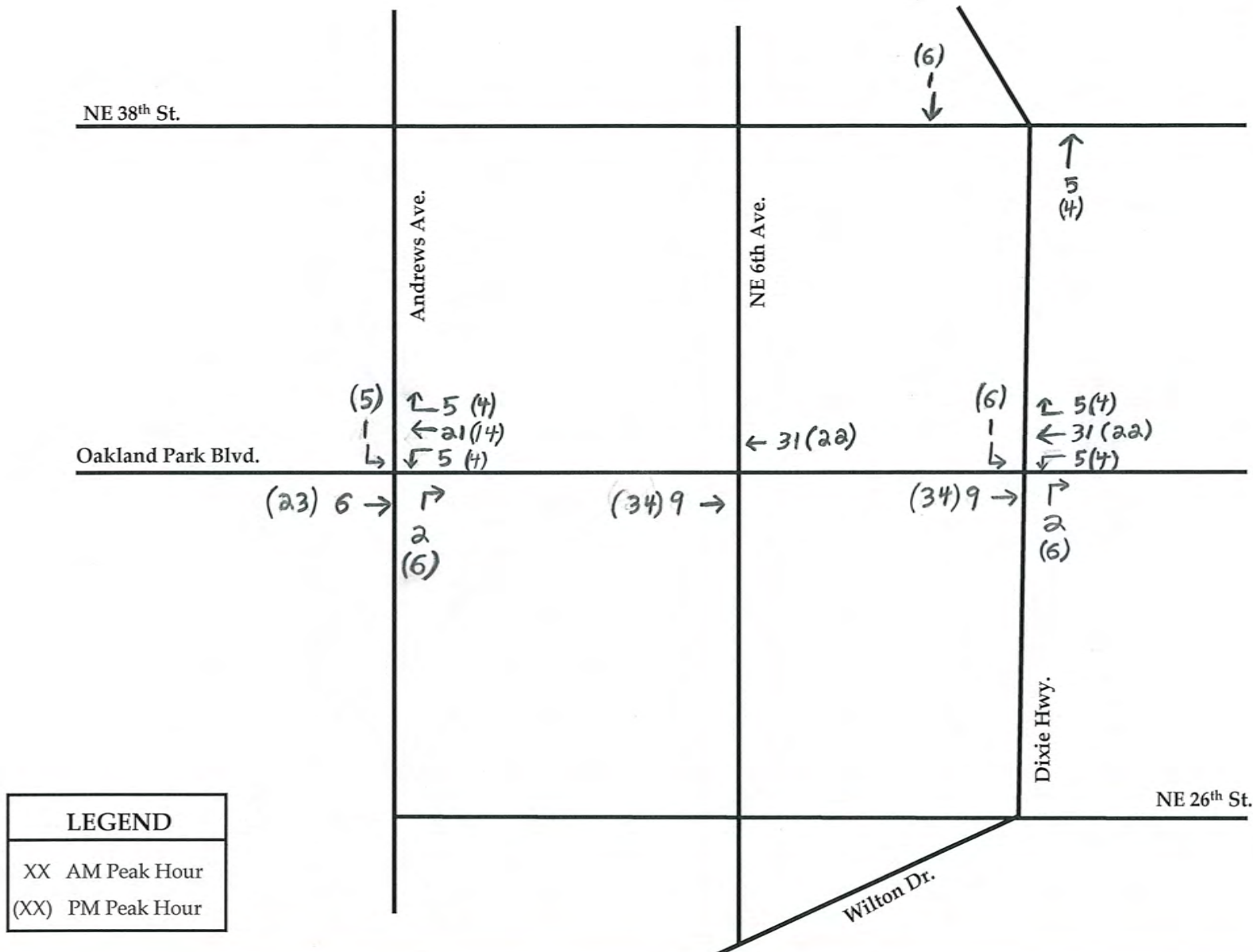
FIGURE 2
 SITE TRAFFIC ASSIGNMENT
 OAKLAND PARK - ROUND CORNER
 Kimley»Horn



LEGEND

XX AM VOLUMES
(XX) PM VOLUMES

FIGURE 5
PROJECT TRAFFIC
OAKLAND PARK - ROUND CORNER
Kimley»Horn





October 22, 2018

Mr. Mark Dubrow
Integra Investments, LLC
150 SE 2nd Avenue, Suite 800
Miami, FL 33131

**Re: Oakland Park – West Dixie Lot Redevelopment Project
Trip Generation and Circulation Analysis**

Dear Mr. Dubrow:

Kimley-Horn and Associates, Inc. has completed a trip generation analysis for the proposed development generally bounded by N Dixie Highway to the east, NE 11th Avenue to the west, NE 39th Street to the north, and NE 37th Street to the south in Oakland Park, Florida. The site proposed for development is currently vacant. The proposed development contains 101 residential units, 30,998 square feet of government office space, and 32,537 square feet of retail. Please note that the proposed government office space accounts for the relocation of the existing Oakland Park City Hall government office space currently located at 3650 NE 12th Avenue (approximately 500 feet southeast of the project site). The trips attributable to the relocated government office space were conservatively included in the trip generation calculations. A site plan is included in Attachment A.

TRIP GENERATION ANALYSIS

Trip generation for the proposed land uses was performed using Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition. The trip generation characteristics for the proposed land uses were based on ITE Land Use Code (LUC) 221 (Multifamily Housing [Mid-Rise]), LUC 730 (Government Office Building), and LUC 820 (Shopping Center).

A multimodal (public transit, bicycle, and pedestrian) factor based on US Census *Means of Transportation to Work* data was reviewed for the census tract in the vicinity of the development. The US Census data indicated that there is a 21.3 percent (21.3%) multimodal factor within the vicinity of the development. It is expected that some residents, employees, and patrons will choose to walk or use public transit to and from the proposed development.

Internal capture is expected between the complementary land uses within the project. Internal capture trips for the project were determined based upon methodology contained in the ITE's *Trip Generation Handbook*, 3rd Edition. Internal capture rates of 10.4 percent (10.4%) for the A.M. peak hour trip generation and 25.3 percent (25.3%) for the P.M. peak hour trip generation are expected for the proposed development.

Pass-by capture trip rates were determined based on average rates provided in the ITE's *Trip Generation Handbook*, 3rd Edition. The pass-by rate for the shopping center land use is 34 percent (34%) during the P.M. peak hour.

The proposed development is expected to generate 120 weekday A.M. peak hour trips and 103 weekday P.M. peak hour trips. Detailed trip generation calculations are contained in Attachment B.

VEHICULAR AND PEDESTRIAN CIRCULATION

Access to the proposed development will be provided via one (1) left-in/left-out driveway along NE 37th Street providing access to a 343-space parking garage. The parking garage will serve the residential, office, and retail components of the development.

A drop-off/pick-up area is proposed on the north side of NE 38th Street between NE 11th Avenue and N Dixie Highway, adjacent to the residential lobby. Pedestrian crosswalks will be provided at the termini of NE 38th Street between NE 11th Avenue and N Dixie Highway and pedestrian sidewalks will be provided along the perimeter of the development to allow for pedestrian circulation to/from the residential lobby, parking garage, and different land uses within the development.

Access to the government office space will be provided through a lobby along the south side of NE 38th Street between NE 11th Avenue and N Dixie Highway. Access to the residential units is provided through a residential lobby along the north side of NE 38th Street between NE 11th Avenue and N Dixie Highway. Access to the retail spaces will be provided from the perimeter of the development via a pedestrian sidewalk.

The site will be served by two (2) loading areas. One (1) loading area will be provided along the north side of NE 37th Street between NE 11th Avenue and N Dixie Highway and one (1) loading area will be provided along the east side of NE 11th Avenue between NE 38th Street and NE 39th Street.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Omar Kanaan, P.E.

Attachments



Omar Kanaan, P.E.

Florida Registration Number 81433
Kimley-Horn and Associates, Inc.
600 North Pine Island Road, Suite 450
Plantation, Florida 33324
CA # 00000696

K:\FTL_TPTO\142026001-Integra Oakland & W Dixie Lot\Correspondence\Letter\10 22 18 Trip Generation Letter.docx

Attachment A
Conceptual Site Plan



Oakland Park, Florida

Scale: 1" = 50'

December 12, 2017



No copies, transmissions, reproductions, or electronic revisions of any portions of these drawings in whole or in part be made without the express written permission of Zyscovich Architects. All designs indicated in these drawings are property of Zyscovich Architects. All copyrights reserved © 2017.

ZYSCOVICH
ARCHITECTS

100 N Biscayne Blvd. 27th Fl
Miami, FL 33132 2304
t 305.372.5222 f 305.577.4521

e info@zyscovich.com
w www.zyscovich.com

Attachment B
Trip Generation Calculations

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION ⁽¹⁾		BASELINE TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW TRIPS				
Land Use		ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total	
GROUP 1	1	Multifamily Housing (Mid-Rise)	10	221	101	du	26%	74%	9	26	35	21.3%	7	7	21	28	0.0%	0	7	21	28	0.0%	0	7	21	28
	2	Government Office Building	10	730	30.998	ksf	75%	25%	78	26	104	21.3%	22	61	21	82	8.5%	7	59	16	75	0.0%	0	59	16	75
	3	Shopping Center	10	820	32.537	ksf	62%	38%	19	12	31	21.3%	7	15	9	24	29.2%	7	10	7	17	0.0%	0	10	7	17
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									
	11																									
ITE Land Use Code		Rate or Equation				Total:		106	64	170	21.3%	36	83	51	134	10.4%	14	76	44	120	0.0%	0	76	44	120	
221		LN(Y) = 0.98*LN(X)+0.98				Note:		⁽¹⁾ Multimodal reduction based on census tract data from the US Census Bureau's Means of Transportation to Work survey.																		
730		Y=3.34(X)																								
820		Y=0.94(X)																								

Note: ⁽¹⁾Multimodal reduction based on census tract data from the US Census Bureau's *Means of Transportation to Work* survey.

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			MULTIMODAL REDUCTION ⁽¹⁾		BASELINE TRIPS			INTERNAL CAPTURE		EXTERNAL TRIPS			PASS-BY CAPTURE		NET NEW TRIPS				
Land Use		ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	MR Trips	In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total	
GROUP 2	1	Multifamily Housing (Mid-Rise)	10	221	101	du	61%	39%	27	18	45	21.3%	10	21	14	35	48.6%	17	10	8	18	0.0%	0	10	8	18
	2	Government Office Building	10	730	30.998	ksf	25%	75%	13	39	52	21.3%	11	10	31	41	17.1%	7	8	26	34	0.0%	0	8	26	34
	3	Shopping Center	10	820	32.537	ksf	48%	52%	60	64	124	21.3%	26	47	51	98	20.4%	20	38	40	78	34.0%	27	25	26	51
	4																									
	5																									
	6																									
	7																									
	8																									
	9																									
	10																									
	11																									
ITE Land Use Code		Rate or Equation				Total:		100	121	221	21.3%	47	78	96	174	25.3%	44	56	74	130	21.3%	27	43	60	103	
221		LN(Y) = 0.96*LN(X)+0.63				Note:		⁽¹⁾ Multimodal reduction based on census tract data from the US Census Bureau's <i>Means of Transportation to Work</i> survey.																		
730		LN(Y) = 0.97*LN(X)+0.62																								
820		Y=3.81(X)																								

Note: ⁽¹⁾Multimodal reduction based on census tract data from the US Census Bureau's *Means of Transportation to Work* survey.

Internal Capture Reduction Calculations

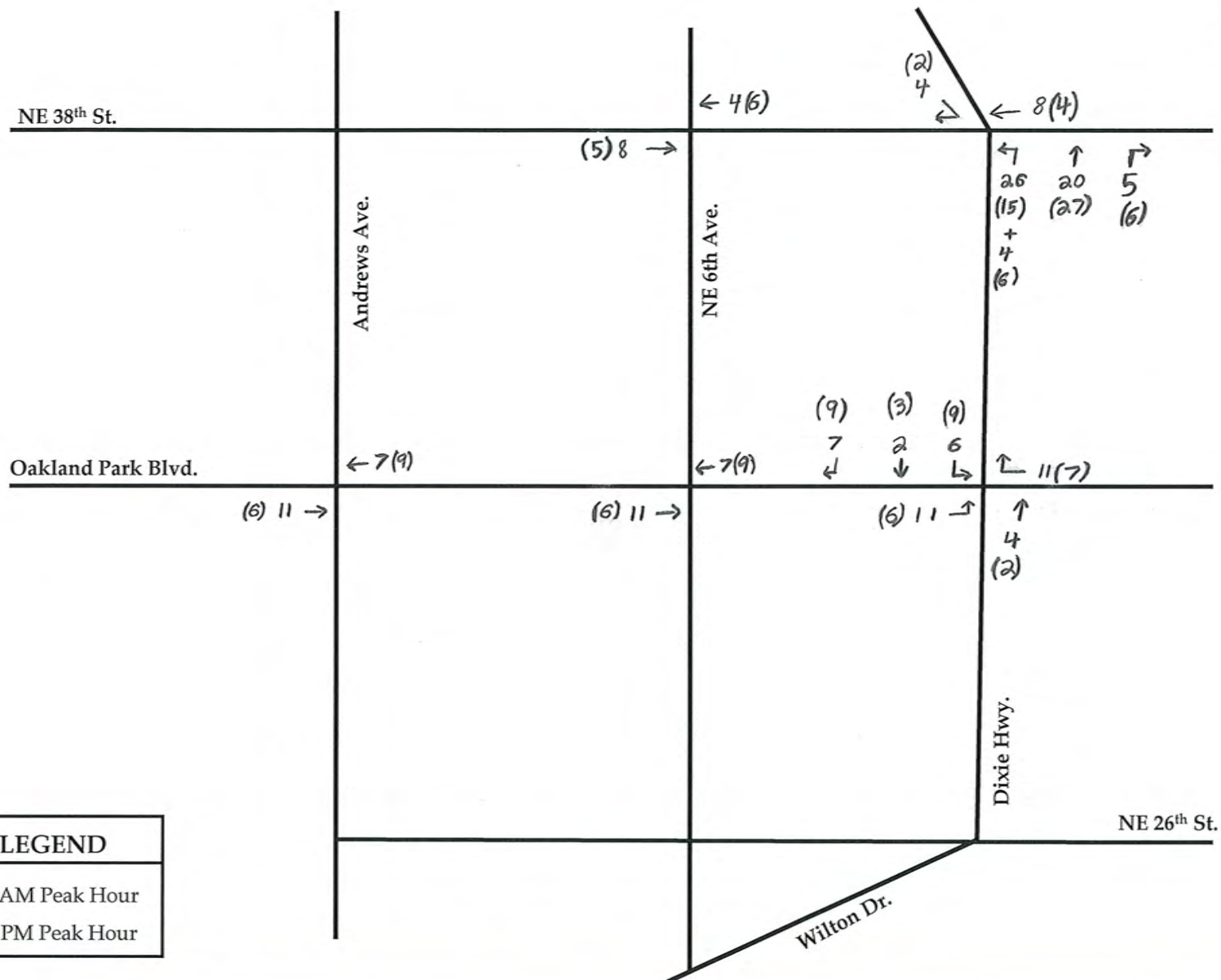
Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook* , 3rd Edition, published by the Institute of Transportation Engineers

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

SUMMARY (PROPOSED)

A.M. PEAK GROSS TRIP GENERATION					
INPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit		
	Office	61	21	10	31
	Retail	15	9	47	51
	Restaurant				
	Cinema/Entertainment				
	Residential	7	21	21	14
	Hotel				
		83	51	78	96
INTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	2	5	2	5
	Retail	5	2	9	11
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	0	0
	Residential	0	0	11	6
	Hotel	0	0	0	0
		7	7	22	22
OUTPUT	Total % Reduction	10.4%		25.3%	
	Office	8.5%		17.1%	
	Retail	29.2%		20.4%	
	Restaurant				
	Cinema/Entertainment				
	Residential	0.0%		48.6%	
	Hotel				
EXTERNAL TRIPS					
OUTPUT	Land Use	A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit
	Office	59	16	8	26
	Retail	10	7	38	40
	Restaurant	0	0	0	0
	Cinema/Entertainment	0	0	0	0
	Residential	7	21	10	8
	Hotel	0	0	0	0
		76	44	56	74





LEGEND

XX AM Peak Hour

(XX) PM Peak Hour

COPY

The Village at Wilton Manors

NE 22nd Drive
Wilton Manors, Florida

TRAFFIC STUDY

prepared for:
New Urban Communities

KBP CONSULTING, INC.

November 2017
Updated June 2018

TRIP GENERATION

A trip generation analysis has been conducted for the proposed development at this site. The analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10th Edition)*. The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. According to the referenced ITE report, the most appropriate land use category and corresponding equations for the proposed development are as follows:

Multi-Family Housing (Low-Rise) – ITE Land Use #220

- Weekday: $T = 7.56 (X) - 40.86$
where T = number of trips and X = number of dwelling units
- AM Peak Hour: $\ln(T) = 0.95 \ln(X) - 0.51$ (23% in / 77% out)
- PM Peak Hour: $\ln(T) = 0.89 \ln(X) - 0.02$ (63% in / 37% out)

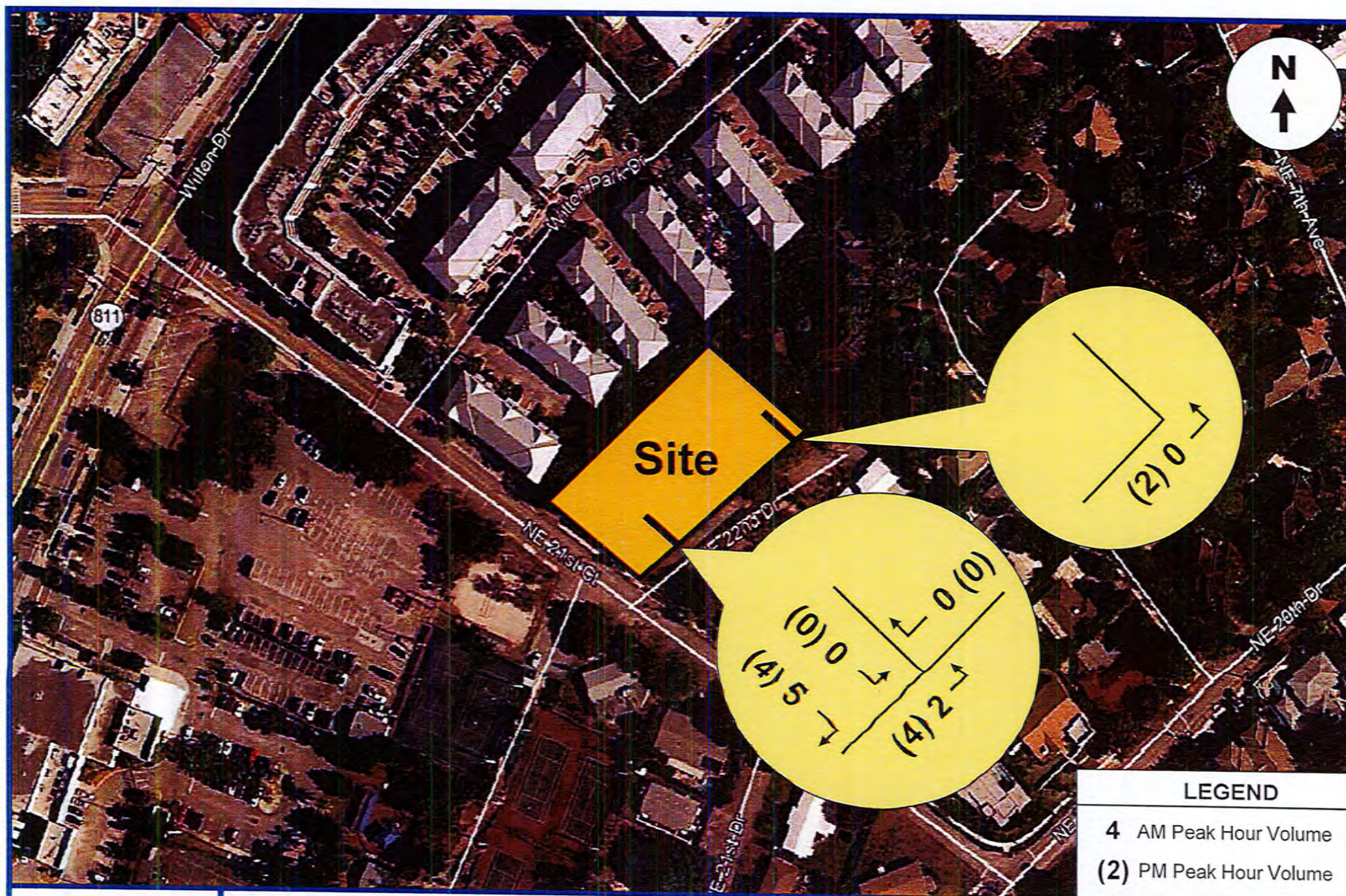
Utilizing the above-listed trip generation equations from the referenced ITE document, a trip generation analysis was undertaken for the proposed residential community. The results of this effort are documented in Table 1 below.

Table 1 Trip Generation Summary The Village at Wilton Manors - Wilton Manors, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
<i>Proposed</i> Multi-family Housing (Low-Rise)	14 DU	65	2	5	7	6	4	10
Total		65	2	5	7	6	4	10

Compiled by: KBP Consulting, Inc. (June 2018).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition).

As indicated in Table 1 above, the proposed residential development is anticipated to generate 65 daily vehicle trips, seven (7) AM peak hour vehicle trips (2 inbound and 5 outbound) and 10 vehicle trips (6 inbound and 4 outbound) during the typical afternoon peak hour.



KBP
CONSULTING, INC.

Project Traffic Driveway Volumes

FIGURE 2
The Village at Wilton Manors
Wilton Manors, Florida



NE 38th St.

Andrews Ave.

NE 6th Ave.

Oakland Park Blvd.

25% ↘

↙
(25%)

Dixie Hwy.

NE 26th St.

LEGEND

XX% Inbound Distribution

(XX%) Outbound Distribution

25% ↘

↗ (25%)

↙ (25%)

↗ 25% NE 21 Ct.

50% →

↘ 25%

↙ 25%

↗ (25%)

↙ (25%)

↗ (25%)

↙ (25%)

↗ (25%)

↙ (25%)

↗ (25%)

↙ (25%)

↗ (25%)

↙ (25%)



NE 38th St.

Andrews Ave.

NE 6th Ave.

Oakland Park Blvd.

(a) 1 ↘
↙ 2
(1)

Dixie Hwy.

NE 26th St.

LEGEND

XX AM Peak Hour

(XX) PM Peak Hour

(a) ↗ 2(1)
↘ 1(1)

NE 21 Ct.

(3) 1 →

Wilton Dr.

↖ 2(1)
↗ 1(1)
↘ 2(1)
↙ 1(1)

TRAFFIC IMPACT ANALYSIS

STARBUCKS WILTON MANORS
WILTON MANORS, FLORIDA

COPY



PREPARED FOR:
ELION PARTNERS

Kimley»Horn

Kimley-Horn #140493001
July 1, 2019
CA 00000696
Kimley-Horn and Associates, Inc.
1920 Wekiva Way
West Palm Beach, Florida 33411
561/845-0665 TEL



LEGEND



SITE LOCATION

FIGURE 1
SITE LOCATION
STARBUCKS WILTON MANORS
KH 140493001

Kimley»Horn

Traffic Generation

The project traffic volumes evaluated in this analysis are defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The proposed site will include 2,280 square feet of coffee shop with drive-through window use.

Trip Generation

The trip generation potential of the proposed development was calculated based upon trip generation rates and equations published for Land Use 937 (Coffee/Donut Shop with Drive-Through Window) by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 10th Edition*. Excerpts from the *Trip Generation Manual, 10th Edition* are included in *Appendix C. Table 1* summarizes the trip generation potential for the daily, AM peak hour, and PM peak hour scenarios. As shown in *Table 1*, the proposed development will generate 1,870 net new external daily trips, 203 net new external AM peak hour trips (104 in, 99 out), and 99 net new external PM peak hour trips (50 in, 49 out).

Table 1: Trip Generation

Table 1: Trip Generation

TRIP GENERATION POTENTIAL								
Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Scenario								
Coffee/Donut Shop	2.28 KSF	1870	203	104	99	99	50	49
	Subtotal	1870	203	104	99	99	50	49
Total Driveway Volumes		1,870	203	104	99	99	50	49
Net New External Trips		1,870	203	104	99	99	50	49
Land Use	Daily	AM Peak Hour			PM Peak Hour			Pass By
Coffee/Donut Shop w/ Drive-Through [ITE937]	T = 820.38 trips / 1,000 SF	T = 88.99 trips / 1,000 SF (51% in, 45% out)			T = 43.38 trips / 1,000 SF (50% in, 50% out)			n/a

Traffic Distribution

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. The trip distribution was derived from existing turning movement counts at nearby driveways.

The trip distribution according to cardinal directions is:

North	—	29%
South	—	37%
East	—	24%
West	—	10%

Traffic Assignment

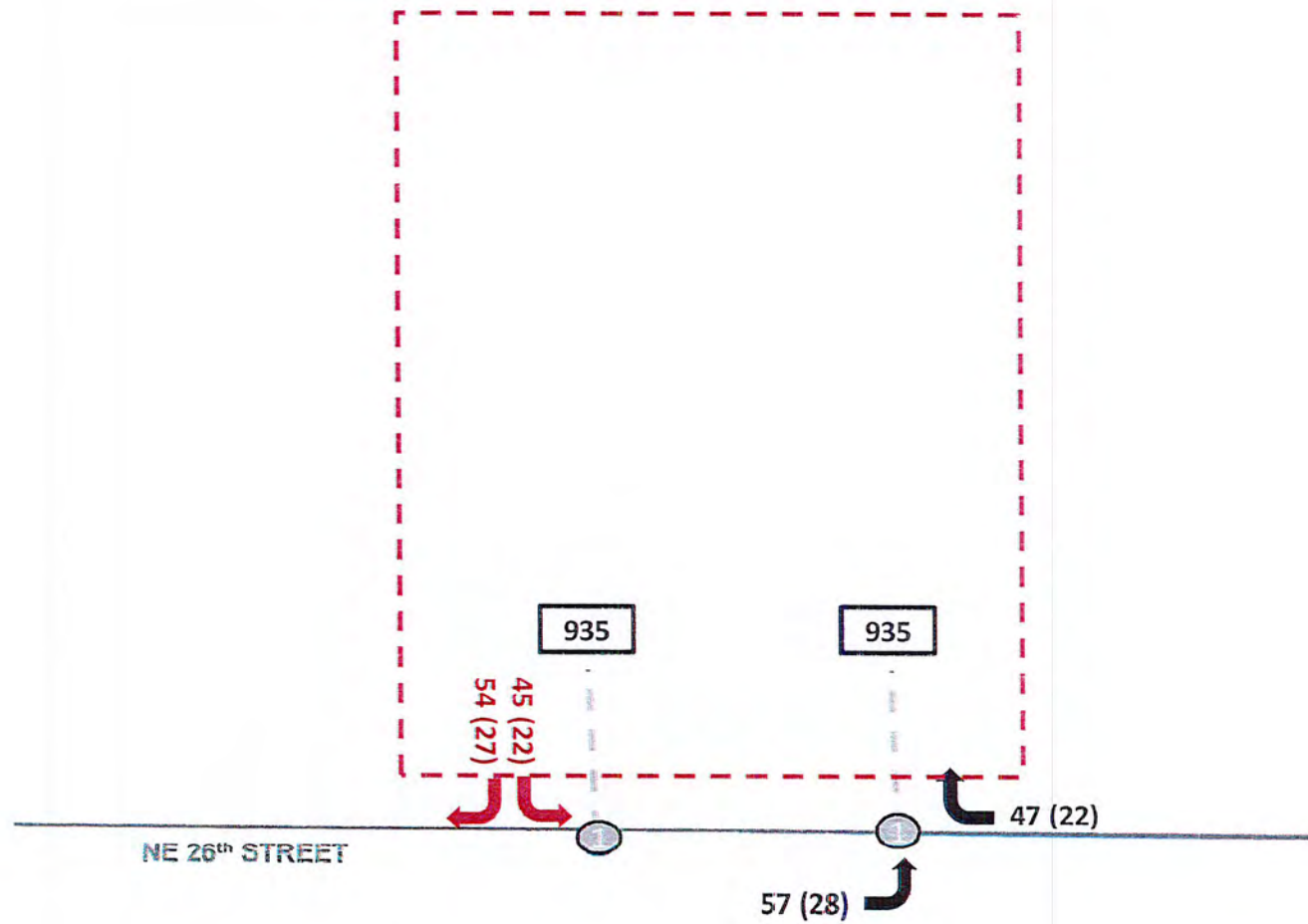
The daily and peak hour trips for the project were assigned to the surrounding roadway network proposed to be in place for each respective analysis year. *Figure 2* illustrates the project traffic assignment to the surrounding roadway network.



LEGEND
 SITE LOCATION
 INBOUND ASSIGNMENT
 OUTBOUND ASSIGNMENT

FIGURE 2
 TRAFFIC ASSIGNMENT
 STARBUCKS WILTON MANORS
 KH 140493001

Kimley»Horn



LEGEND

XX%	AM (PM) INBOUND VOLUME
XX%	AM (PM) OUTBOUND VOLUME
XX	DAILY DRIVEWAY VOLUMES

FIGURE 3
DRIVEWAY VOLUMES
STARBUCKS WILTON MANORS
KH 140493001

Kimley»Horn



NE 38th St.

Andrews Ave.

NE 6th Ave.

Oakland Park Blvd.

← 26 (13)

← 26 (13)

(13) 27 →

(13) 27 →

(13) 27 →

← 26 (13)

Dixie Hwy.

← 10 (5)

NE 26th St.

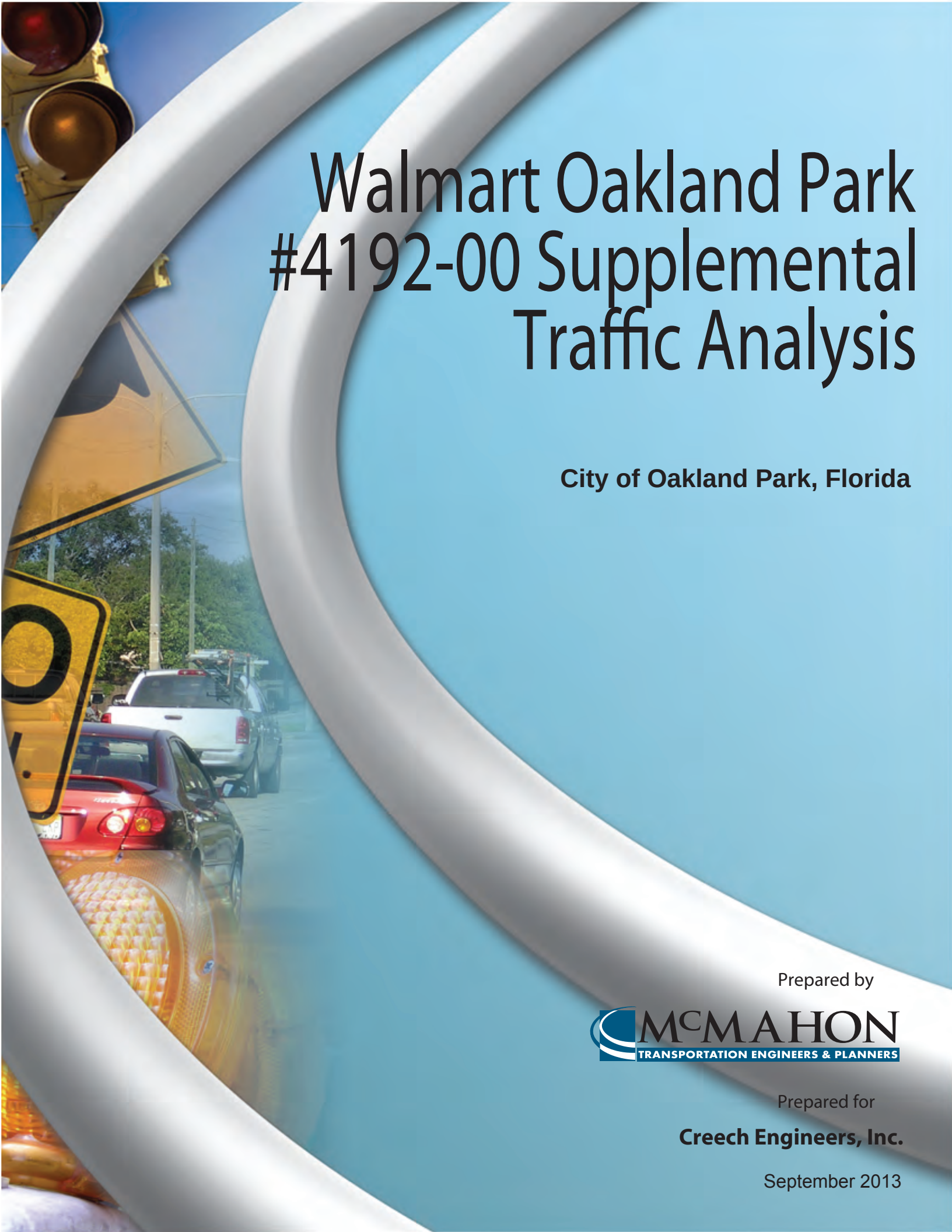
(5) 10 →

Wilton Dr.

LEGEND

XX AM Peak Hour

(XX) PM Peak Hour



Walmart Oakland Park #4192-00 Supplemental Traffic Analysis

City of Oakland Park, Florida

Prepared by



Prepared for

Creech Engineers, Inc.

September 2013

TABLE 3
TRIP GENERATION ANALYSIS - ITE
WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS

DAILY

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS			
						IN	OUT	TOTAL			IN	OUT	TOTAL	
EXISTING USES														
Free Standing Discount Store	815	117,692 SF	T = 57.24 (X)	50%	50%	3,369	3,368	6,737	1,145	17%	2,797	2,795	5,592	
Bakery(3)	939	2,174 SF	T = 280.00 (X)	50%	50%	305	304	609	0	0%	305	304	609	
General Light Industrial(4)	110	13,357 SF	T = 6.97 (X)	50%	50%	47	46	93	0	0%	47	46	93	
SUBTOTAL						3,721	3,718	7,439	1,145		3,149	3,145	6,294	
PROPOSED USES														
Free Standing Discount Superstore	813	121,345 SF	T = 50.75 (X)	50%	50%	3,079	3,079	6,158	1,724	28%	2,217	2,217	4,434	
SUBTOTAL						3,079	3,079	6,158	1,724		2,217	2,217	4,434	
NET DIFFERENCE						-642	-639	-1,281	579		-932	-928	-1,860	

AM PEAK HOUR

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS		
						IN	OUT	TOTAL			IN	OUT	TOTAL
EXISTING USES													
Free Standing Discount Store	815	117,692 SF	T = 1.06 (X)	68%	32%	85	40	125	21	17%	75	29	104
Bakery(3)	939	2,174 SF	T = 70.22 (X)	47%	53%	72	81	153	0	0%	72	81	153
General Light Industrial(4)	110	13,357 SF	T = 0.92 (X)	88%	12%	11	1	12	0	0%	11	1	12
SUBTOTAL						168	122	290	21		158	111	269
PROPOSED USES													
Free Standing Discount Superstore	813	121,345 SF	T = 1.85 (X)	56%	44%	125	99	224	63	28%	94	67	161
SUBTOTAL						125	99	224	63		94	67	161
NET DIFFERENCE						-43	-23	-66	42		-64	-44	-108

PM PEAK HOUR

LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE (1)	IN	OUT	TOTAL TRIPS			PASS-BY(2)		NEW TRIPS		
						IN	OUT	TOTAL			IN	OUT	TOTAL
EXISTING USES													
Free Standing Discount Store	815	117,692 SF	T = 4.98 (X)	50%	50%	293	293	586	100	17%	243	243	486
Bakery(3)	939	2,174 SF	T = 28.00 (X)	50%	50%	31	30	61	0	0%	31	30	61
General Light Industrial(4)	110	13,357 SF	T = 0.97 (X)	12%	88%	2	11	13	0	0%	2	11	13
SUBTOTAL						326	334	660	100		276	284	560
PROPOSED USES													
Free Standing Discount Superstore	813	121,345 SF	T = 4.35 (X)	49%	51%	259	269	528	148	28%	185	195	380
SUBTOTAL						259	269	528	148		185	195	380
NET DIFFERENCE						-67	-65	-132	48		-91	-89	-180

(1) Source: ITE Trip Generation Manual, 9th Edition.

(2) Source: ITE Trip Generation Manual, 9th Edition.

(3) Total Holsum Bakery building is 15,531 square feet. Sales portion is approximately 14 percent (15,531*0.14 = 2,174 square feet). Weekday rate T = 280.00(X) calculated based on PM peak hour rate being equal to 10 percent of daily rate.

(4) Total Holsum Bakery building is 15,531 square feet. Distribution portion is approximately 86 percent (15,531*0.86 = 13,357 square feet).



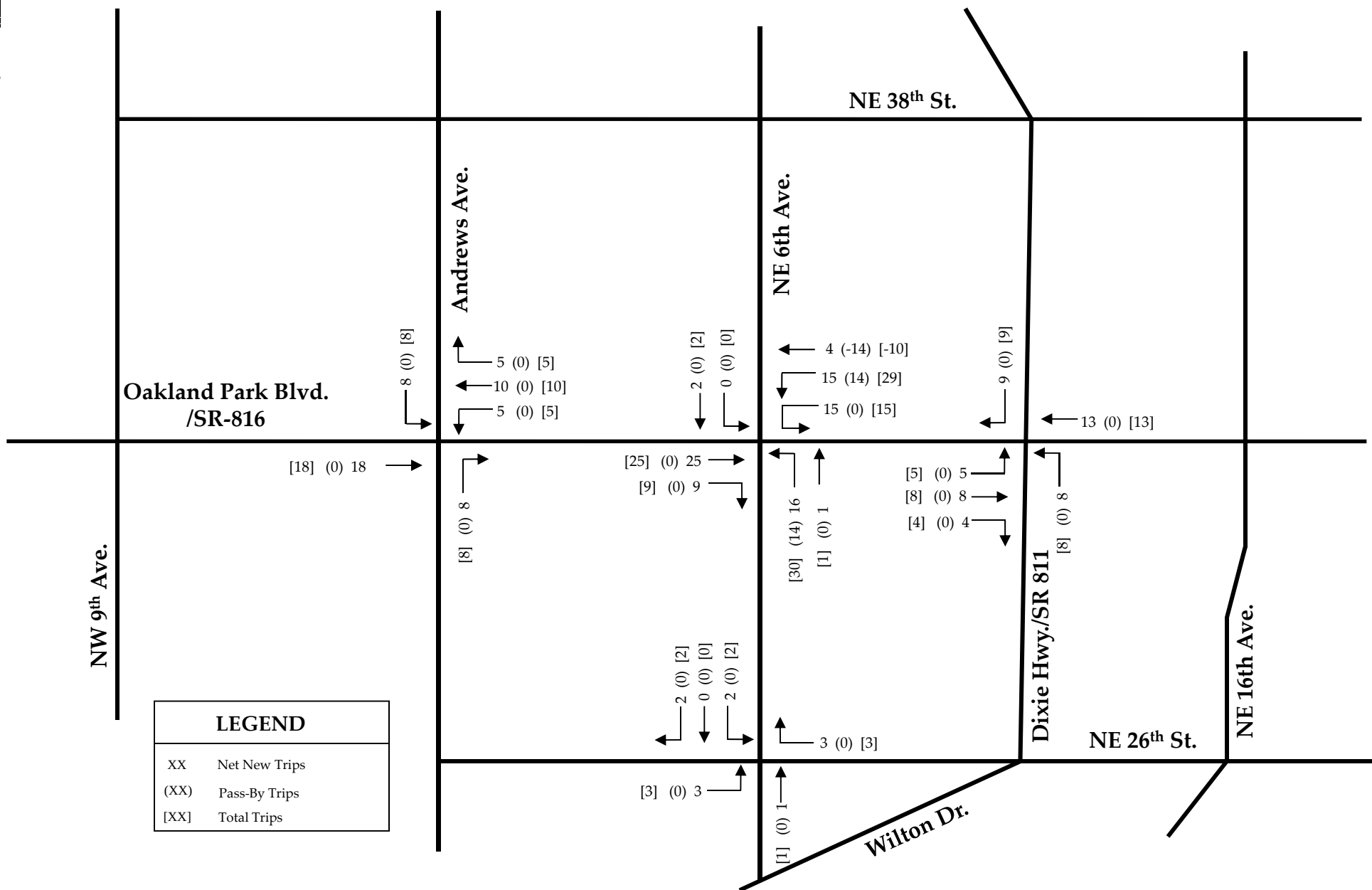


Figure 8
 Additional Project Trips – AM Peak Hour
WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS
 City of Oakland Park, Florida

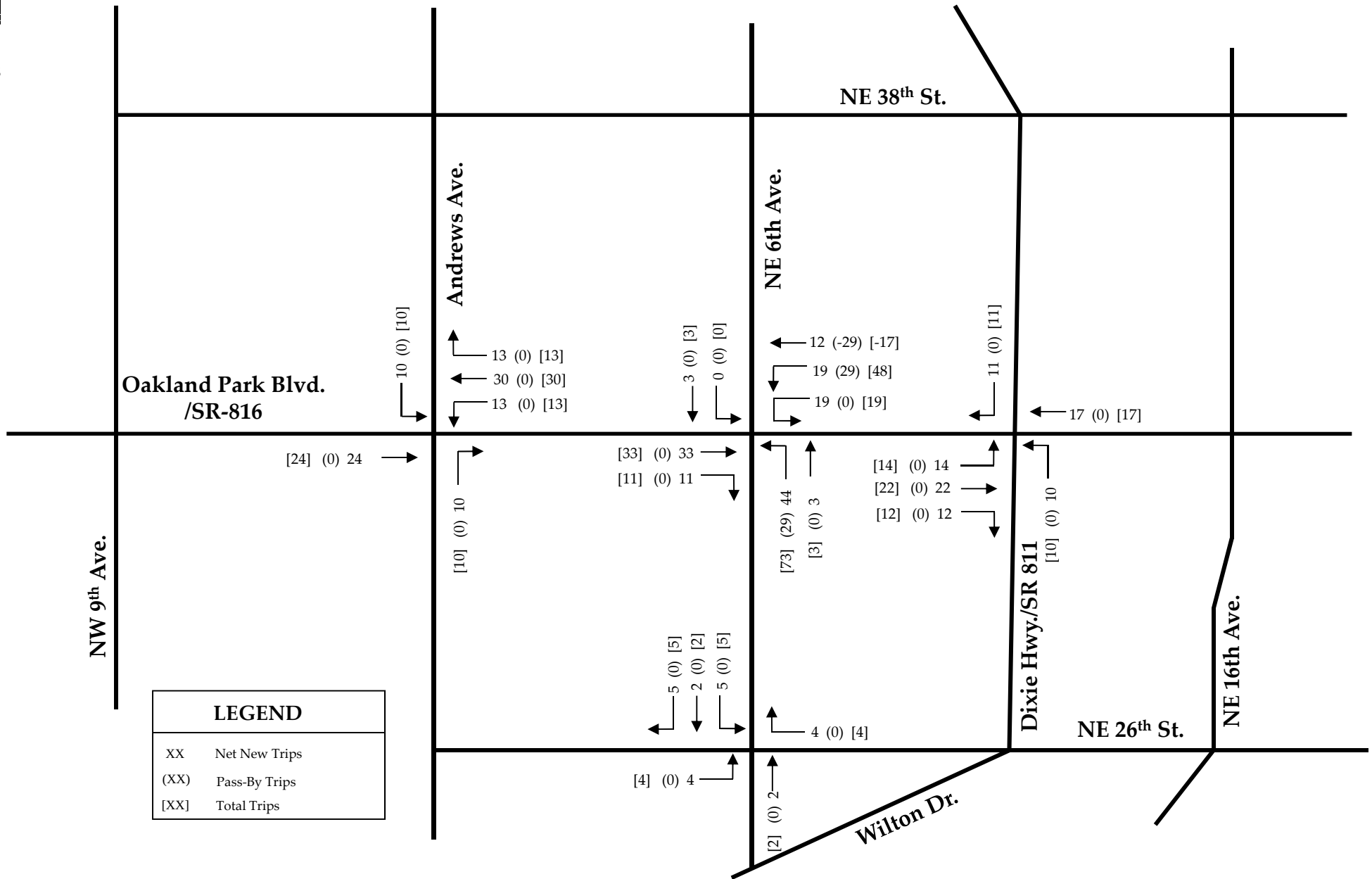


Figure 10
 Additional Project Trips – PM Peak Hour
WALMART OAKLAND PARK #4192-00 TRAFFIC ANALYSIS
 City of Oakland Park, Florida

Multifamily Housing (Low-Rise) (220)

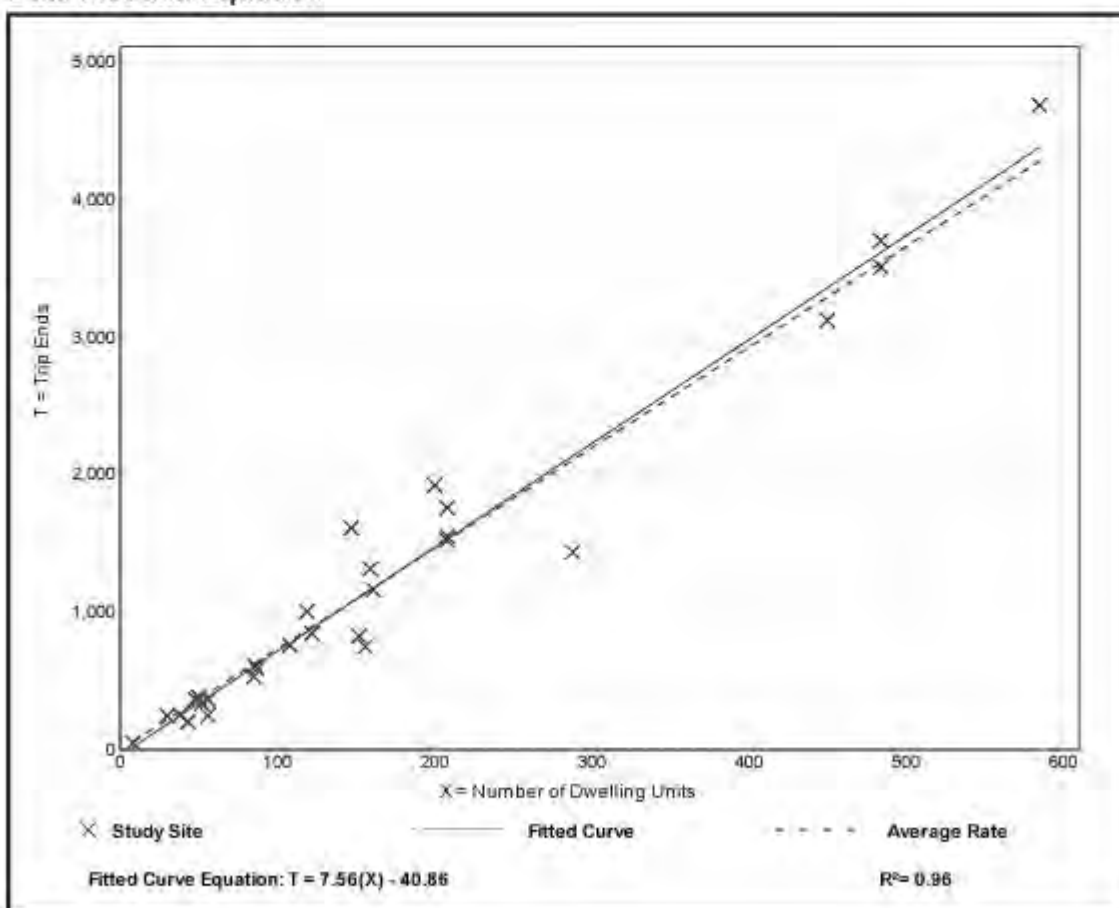
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 42

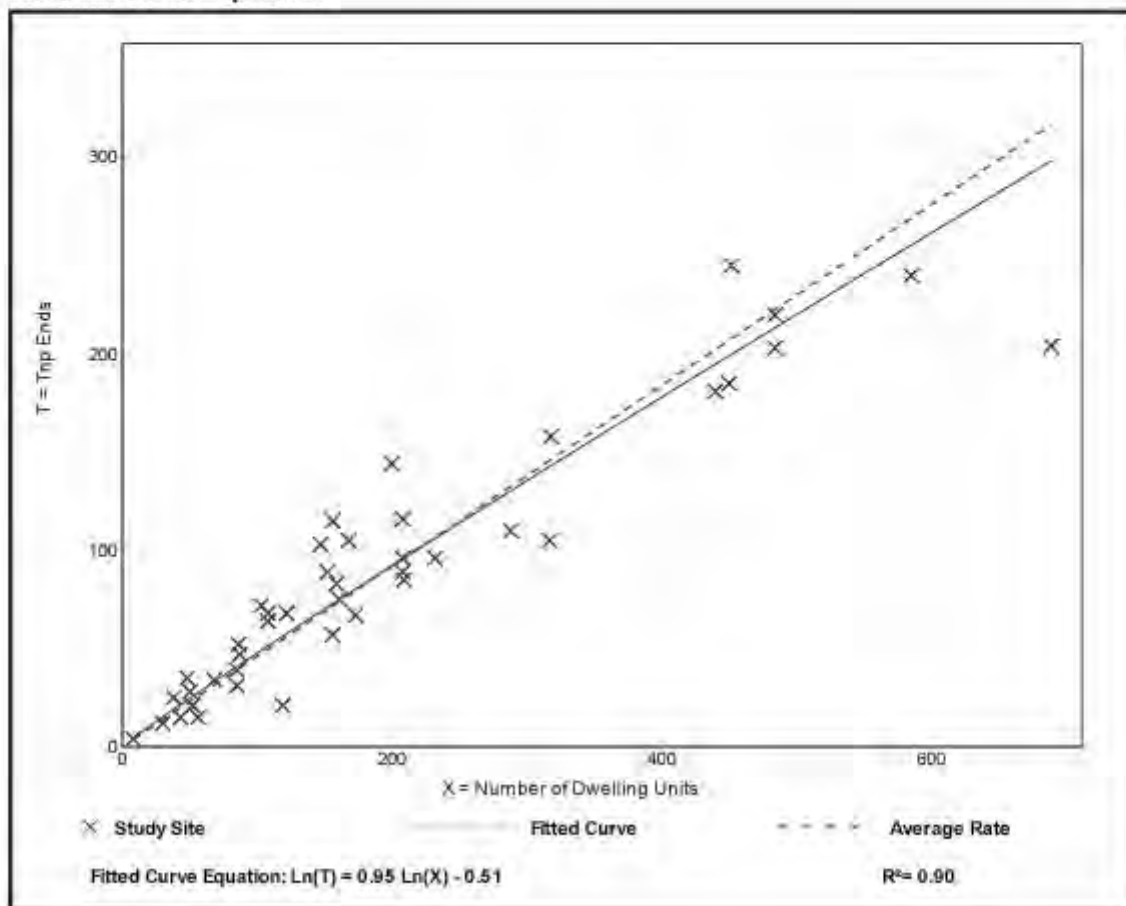
Avg. Num. of Dwelling Units: 199

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

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

Setting/Location: General Urban/Suburban

Number of Studies: 50

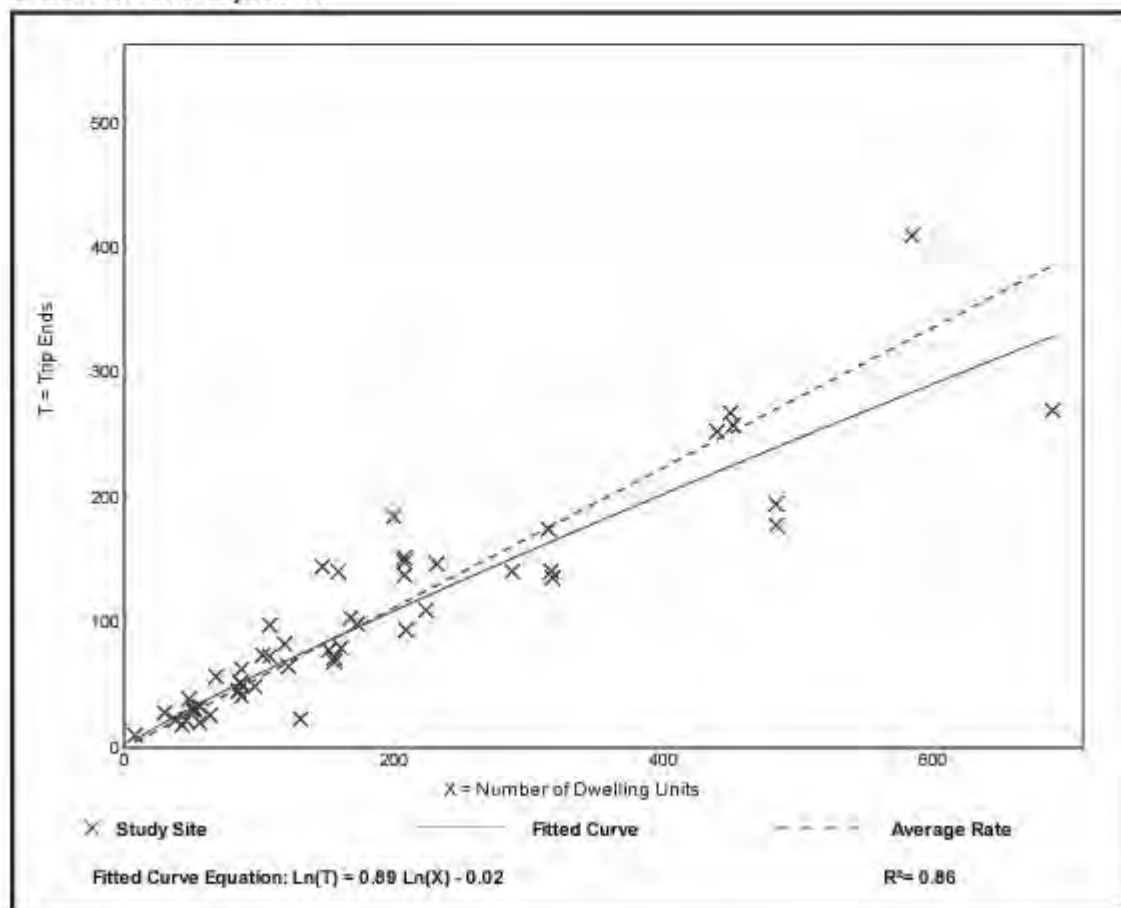
Avg. Num. of Dwelling Units: 187

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

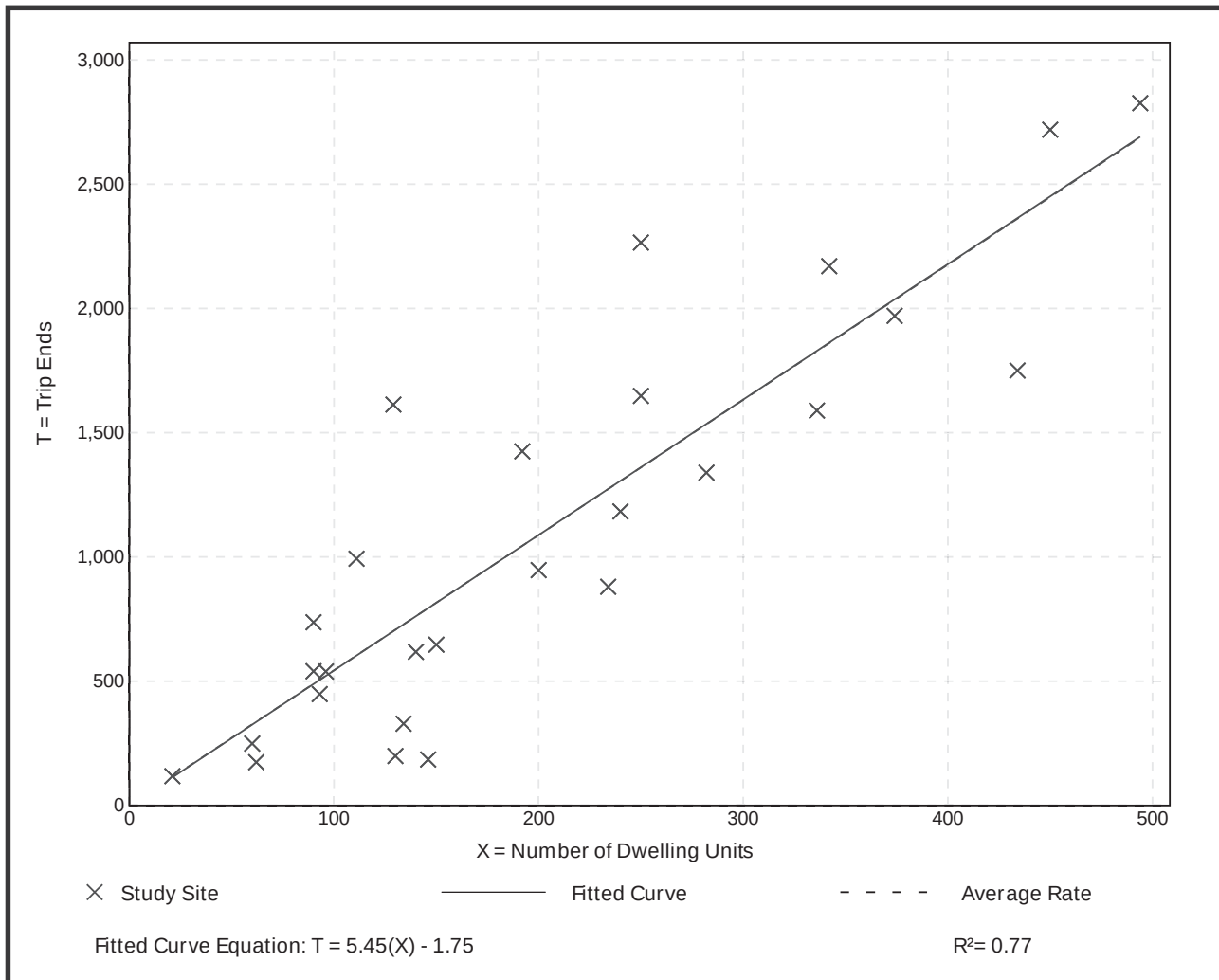
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



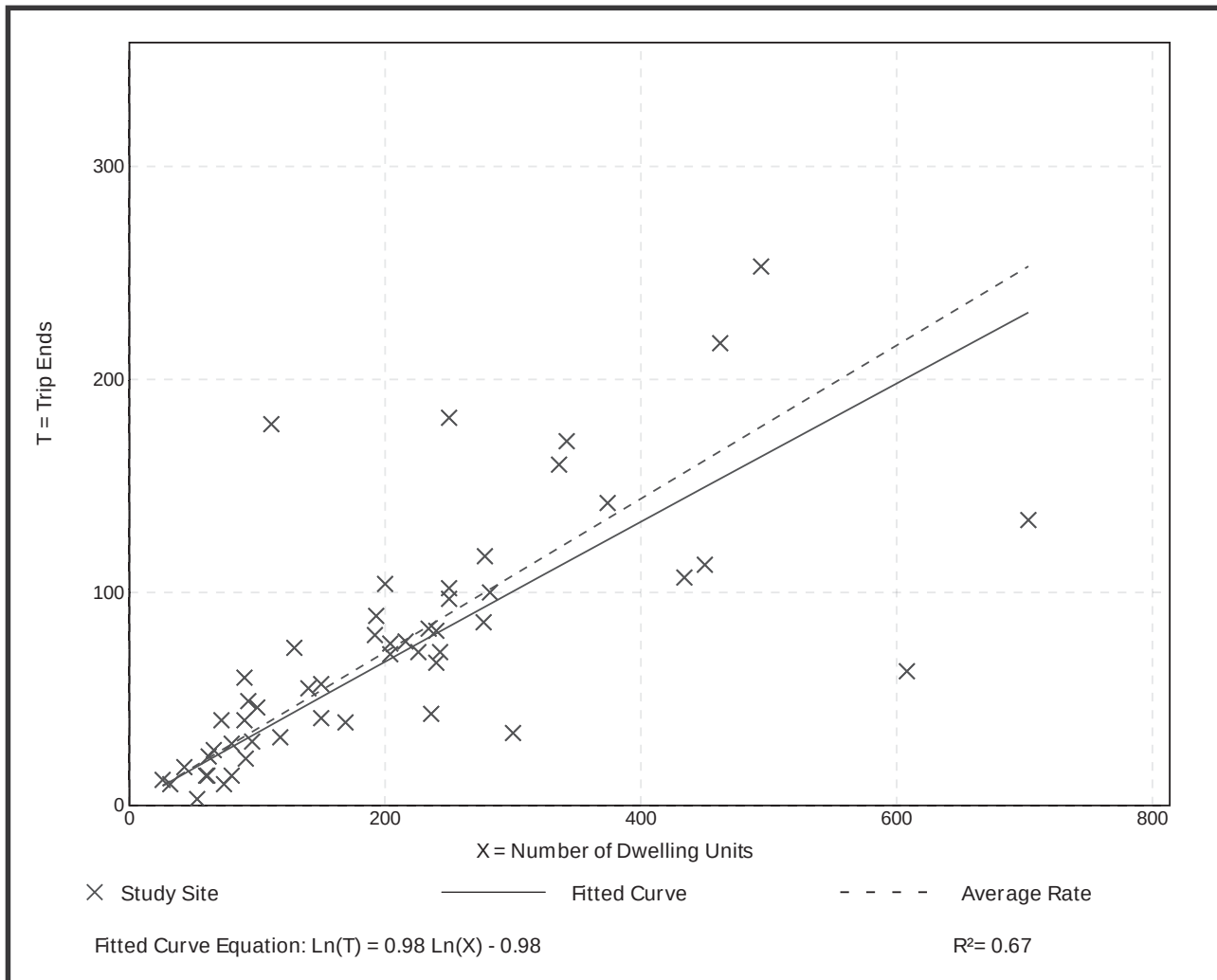
Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 53
 Avg. Num. of Dwelling Units: 207
 Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



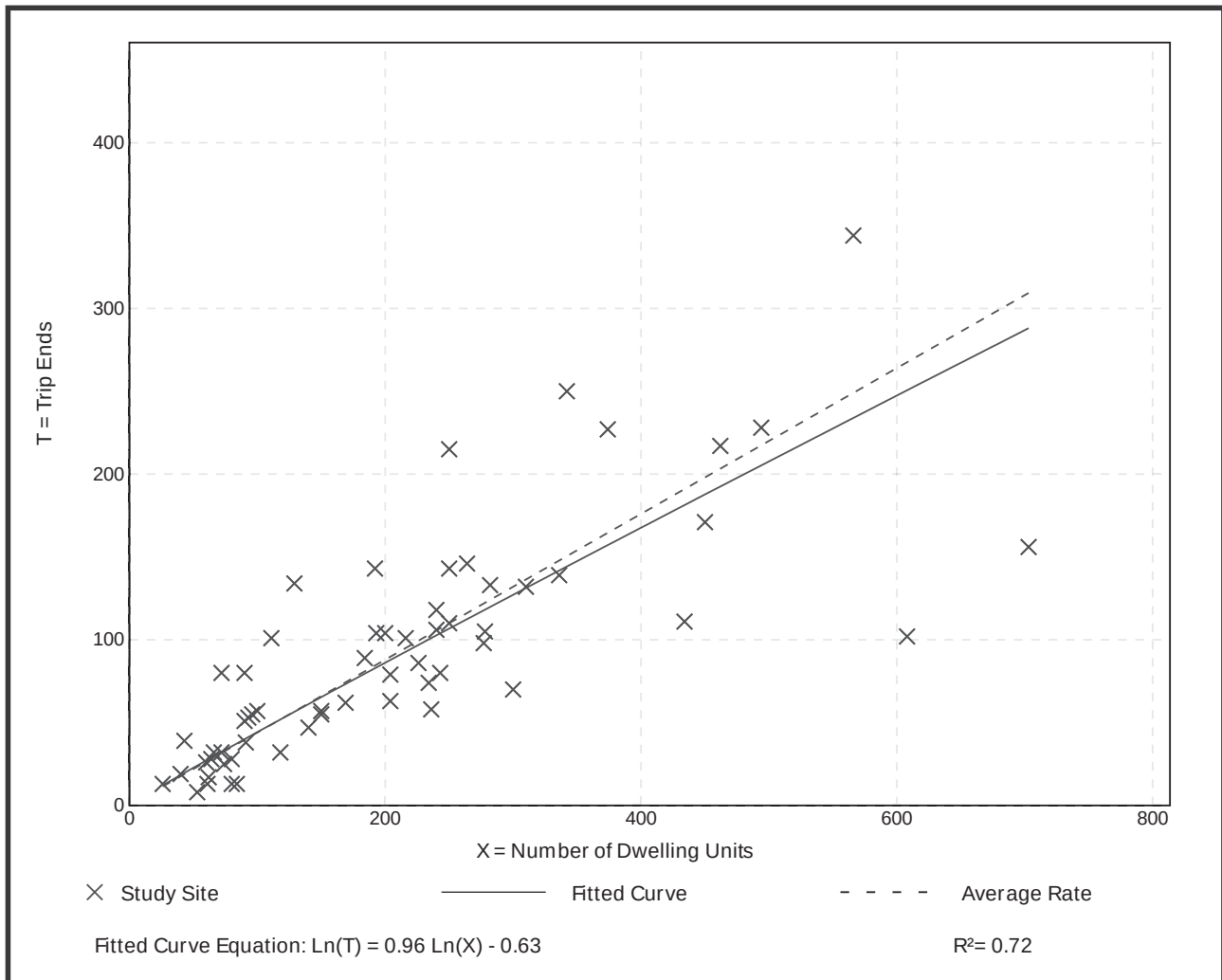
Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 60
 Avg. Num. of Dwelling Units: 208
 Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Shopping Center (820)

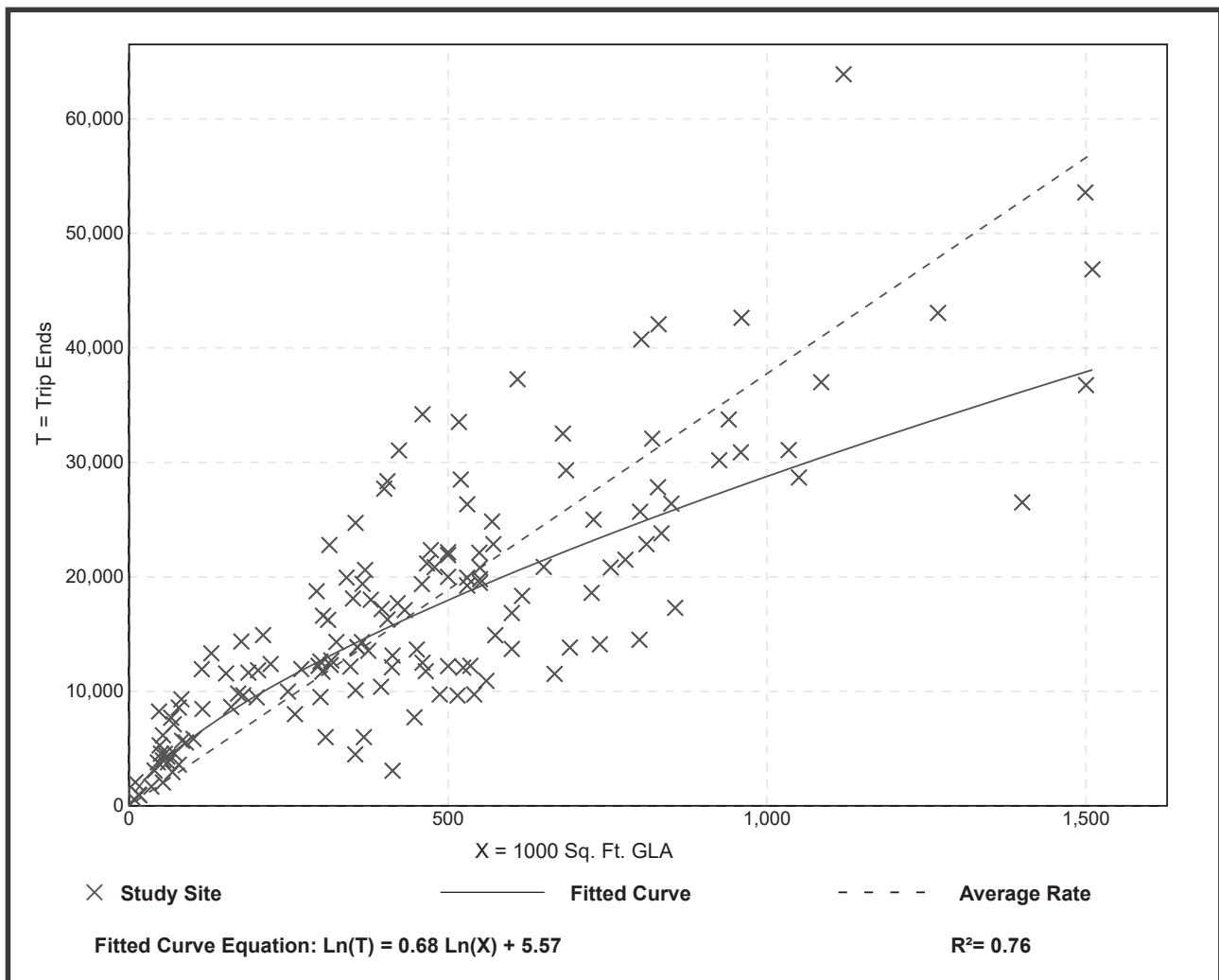
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



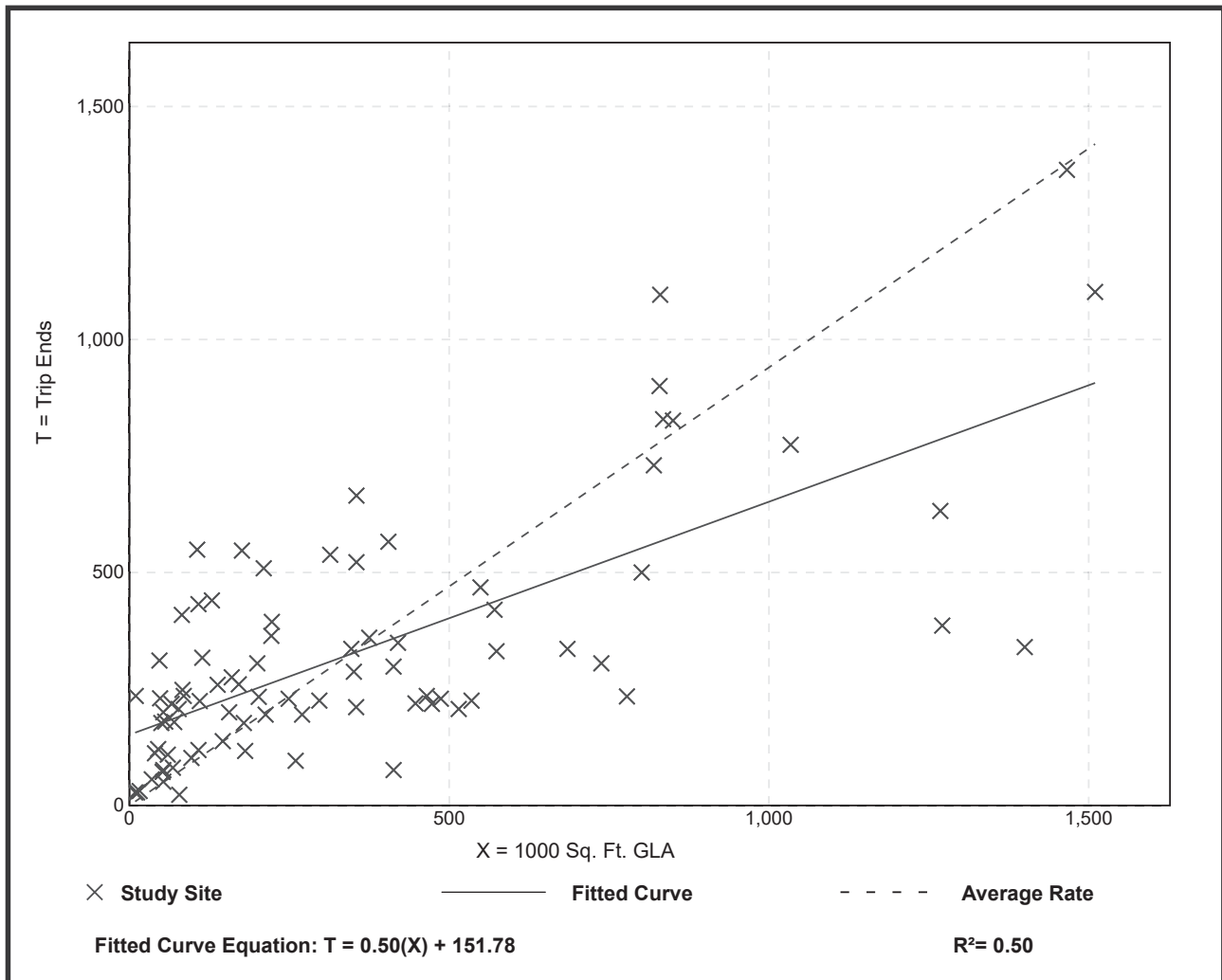
Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 84
 1000 Sq. Ft. GLA: 351
 Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



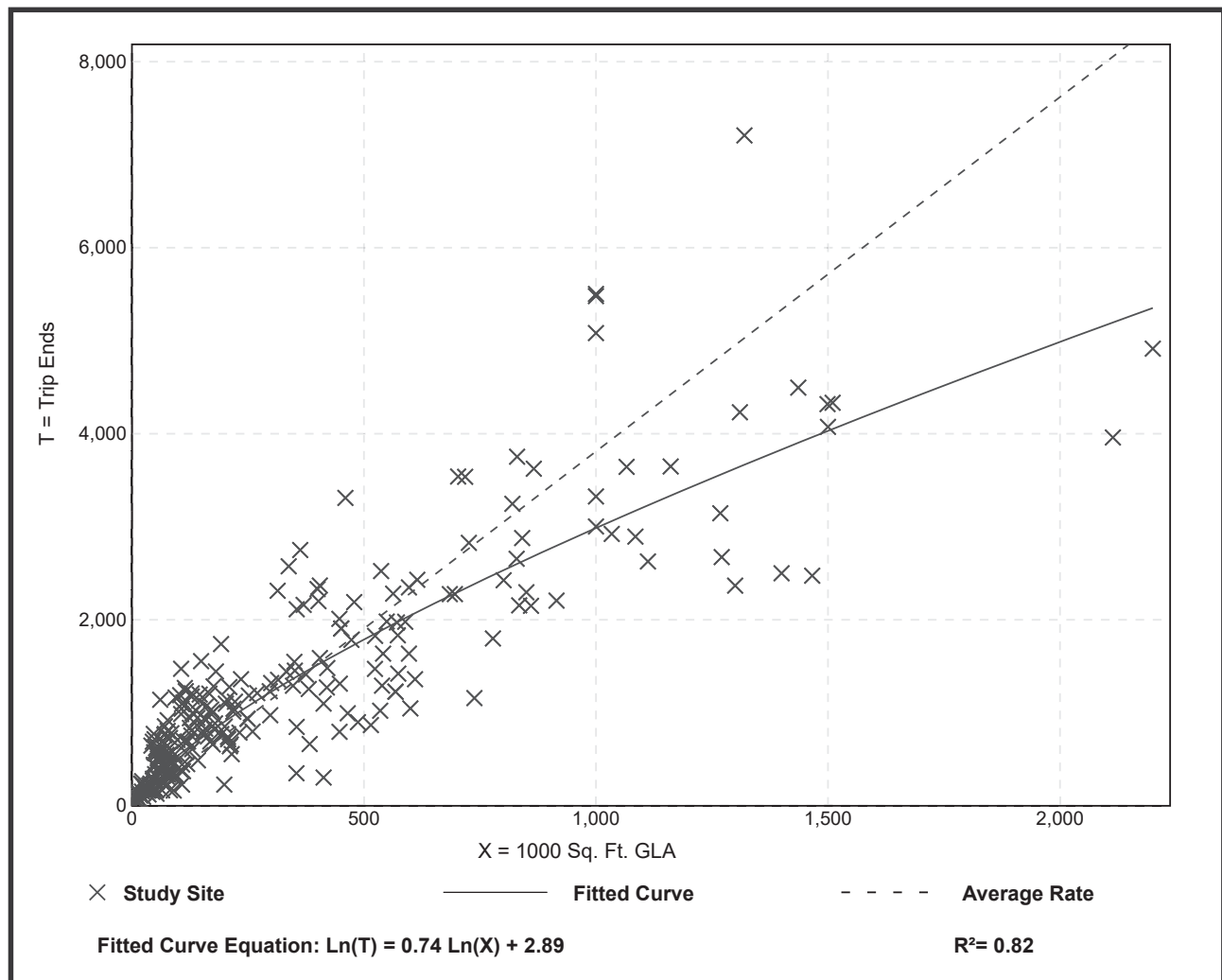
Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 261
 1000 Sq. Ft. GLA: 327
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

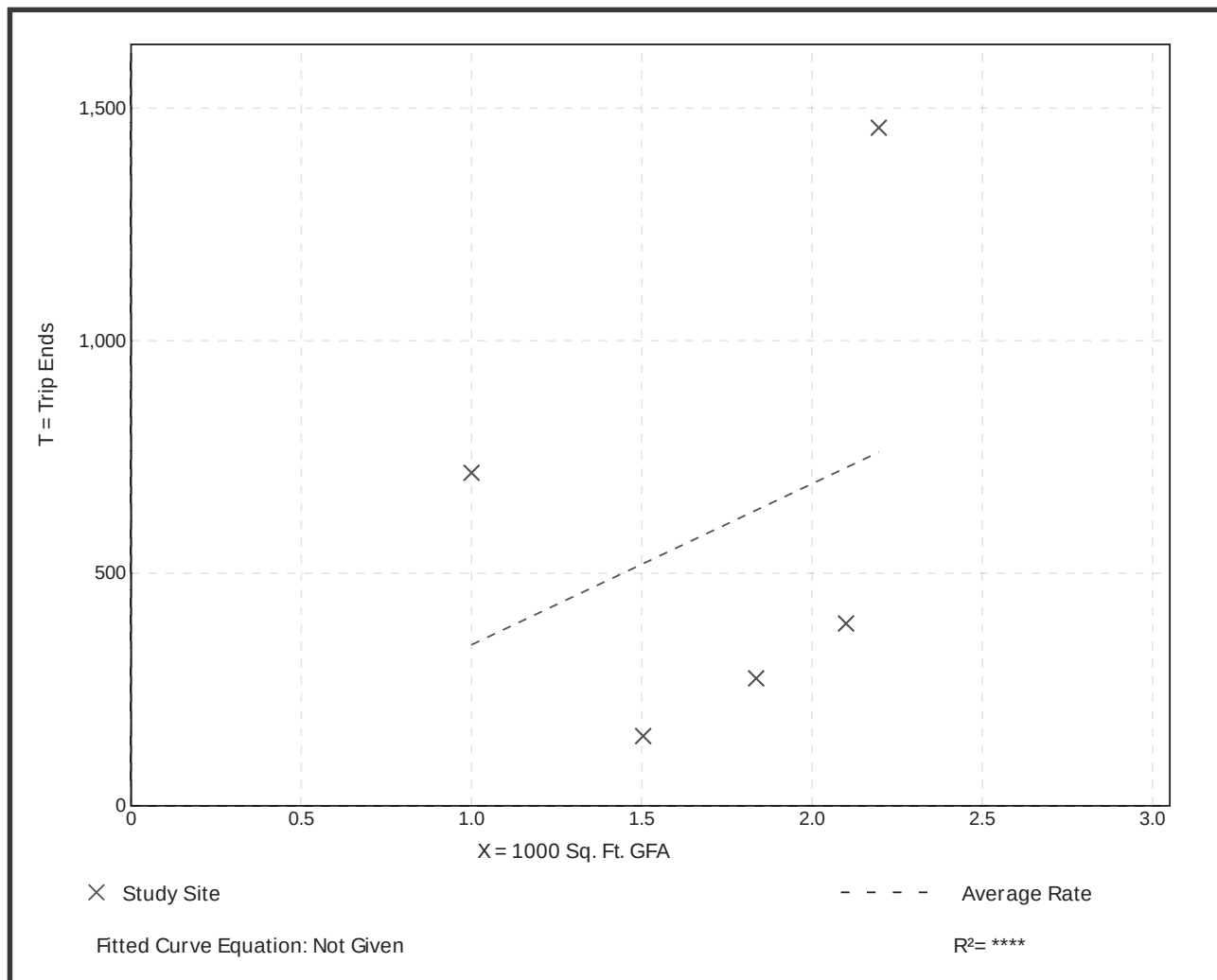
Setting/Location: General Urban/Suburban
Number of Studies: 5
1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
346.23	99.73 - 716.00	288.36

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant without Drive-Through Window (933)

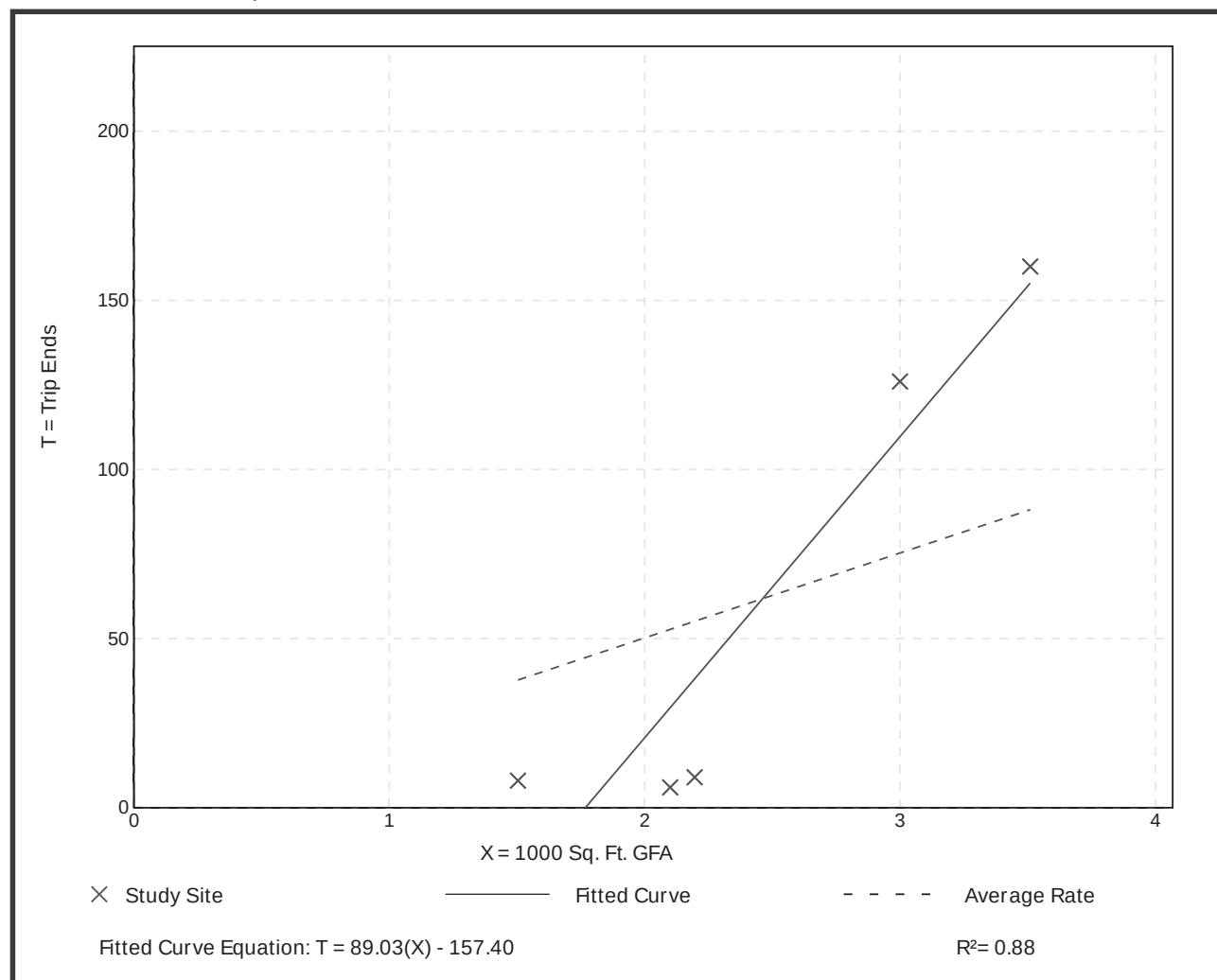
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 5
 1000 Sq. Ft. GFA: 2
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
25.10	2.86 - 45.58	22.36

Data Plot and Equation

Caution – Small Sample Size



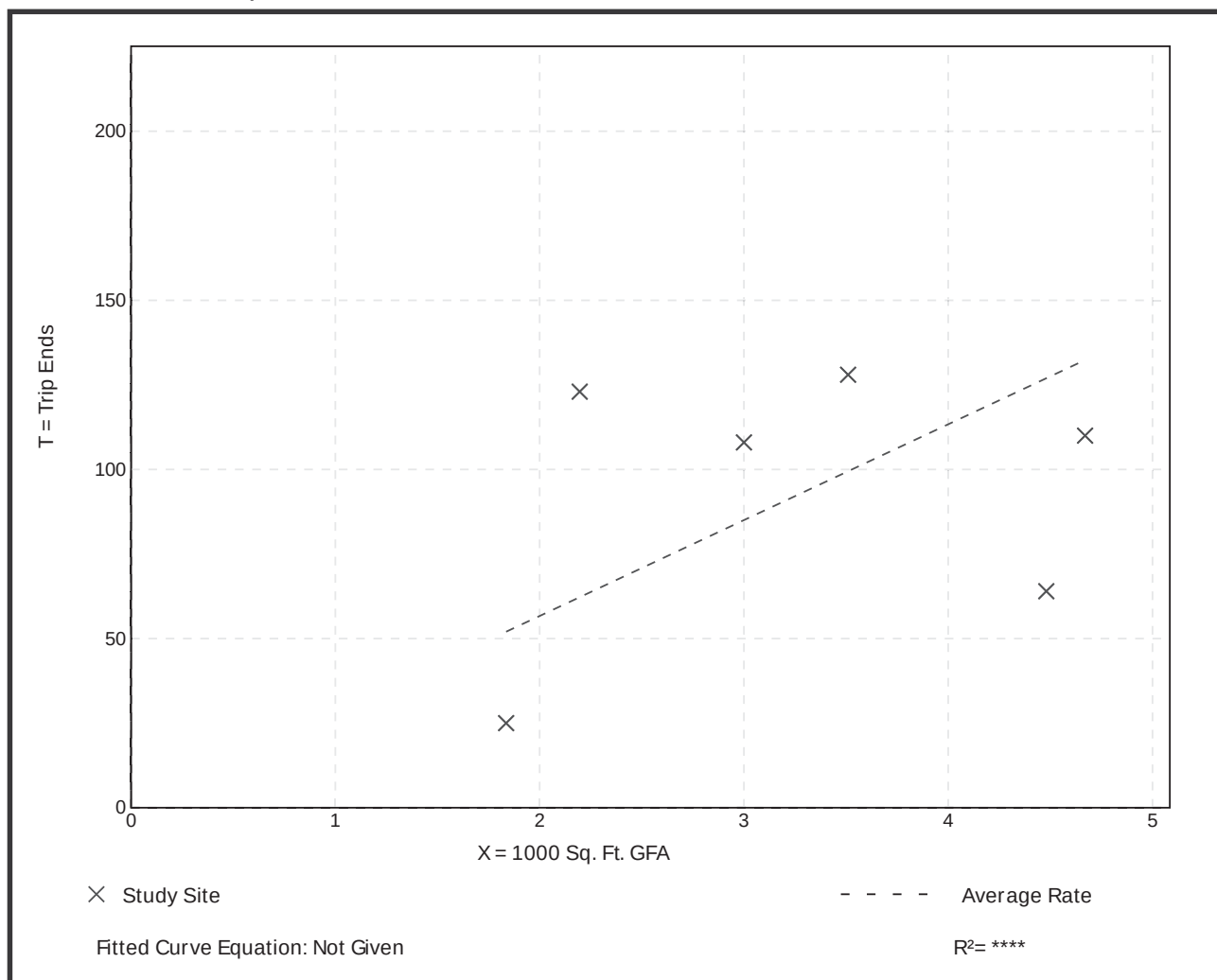
Fast-Food Restaurant without Drive-Through Window (933)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 6
 1000 Sq. Ft. GFA: 3
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
28.34	13.62 - 56.01	14.56

Data Plot and Equation



Supermarket (850)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

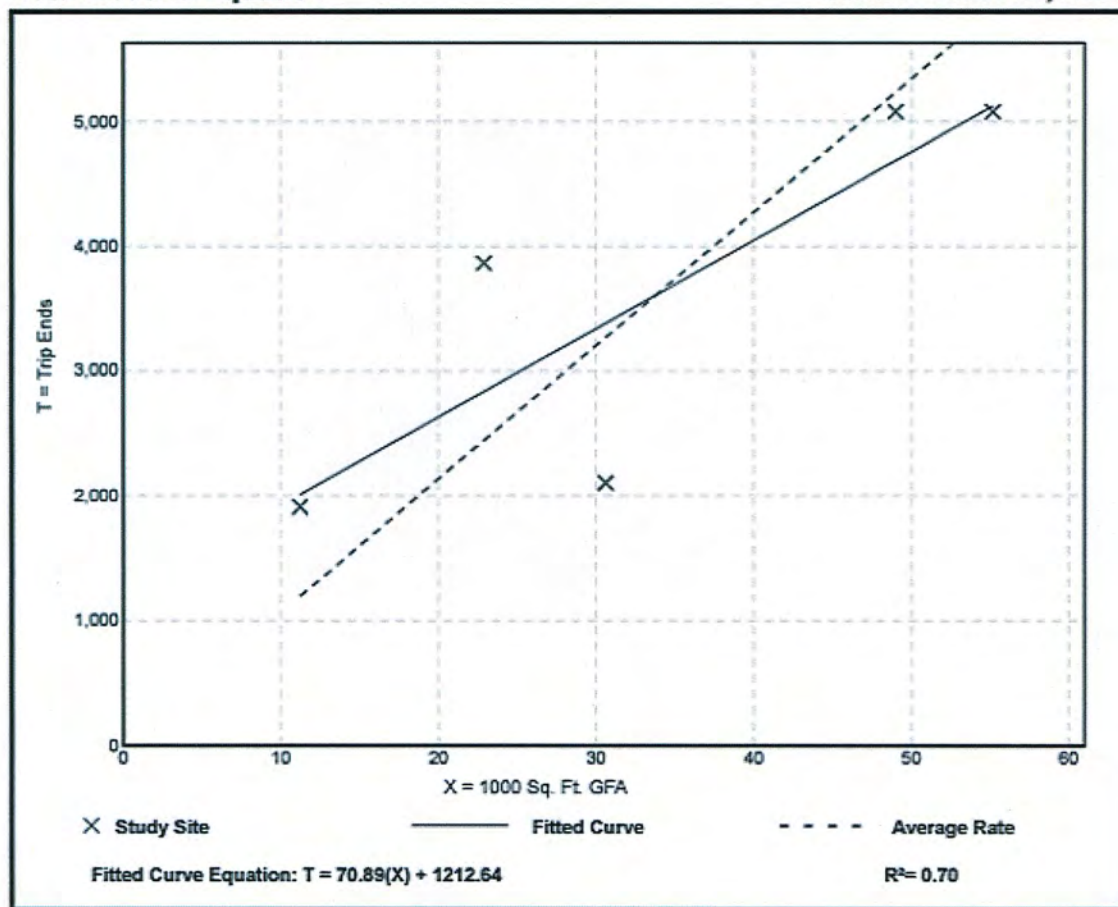
Setting/Location: General Urban/Suburban
Number of Studies: 5
1000 Sq. Ft. GFA: 34
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
106.78	68.67 - 170.24	37.56

Data Plot and Equation

Caution – Small Sample Size



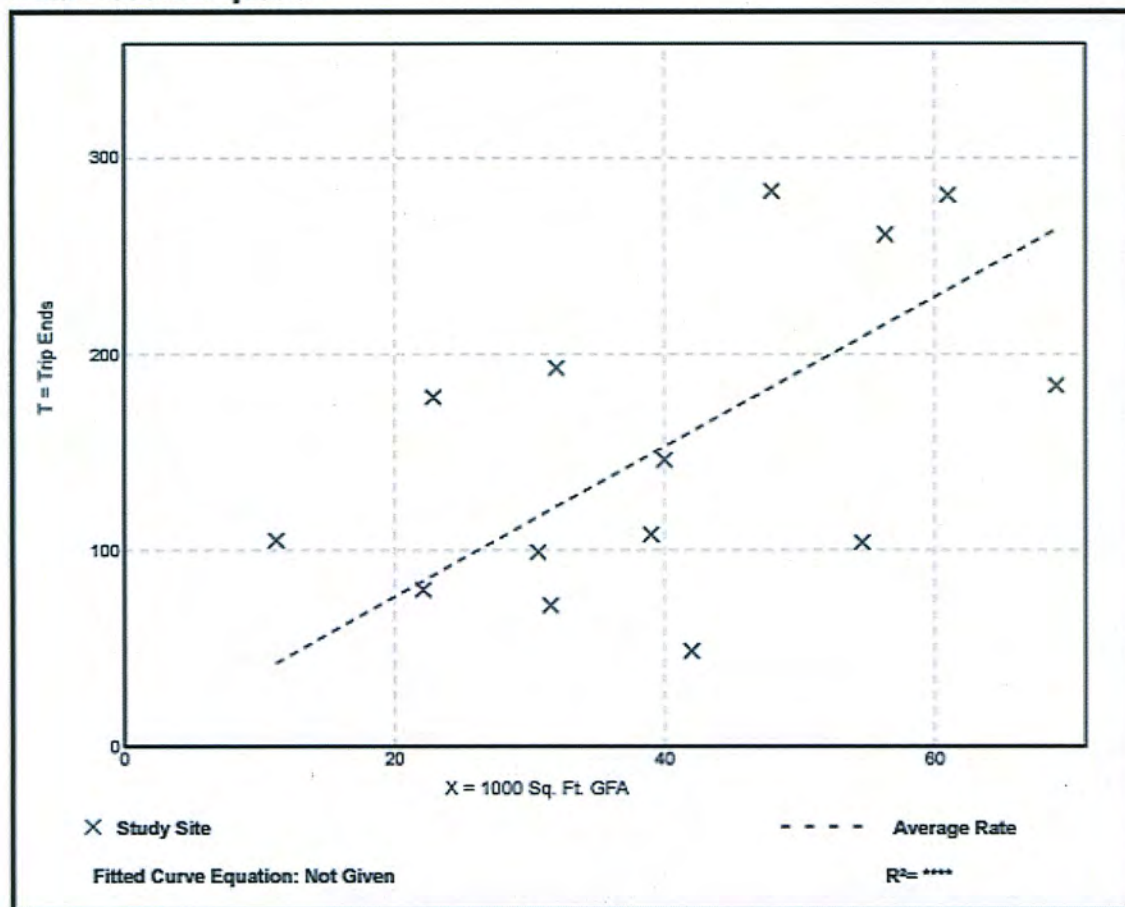
Supermarket (850)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 14
 1000 Sq. Ft. GFA: 40
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.82	1.17 - 9.35	1.89

Data Plot and Equation



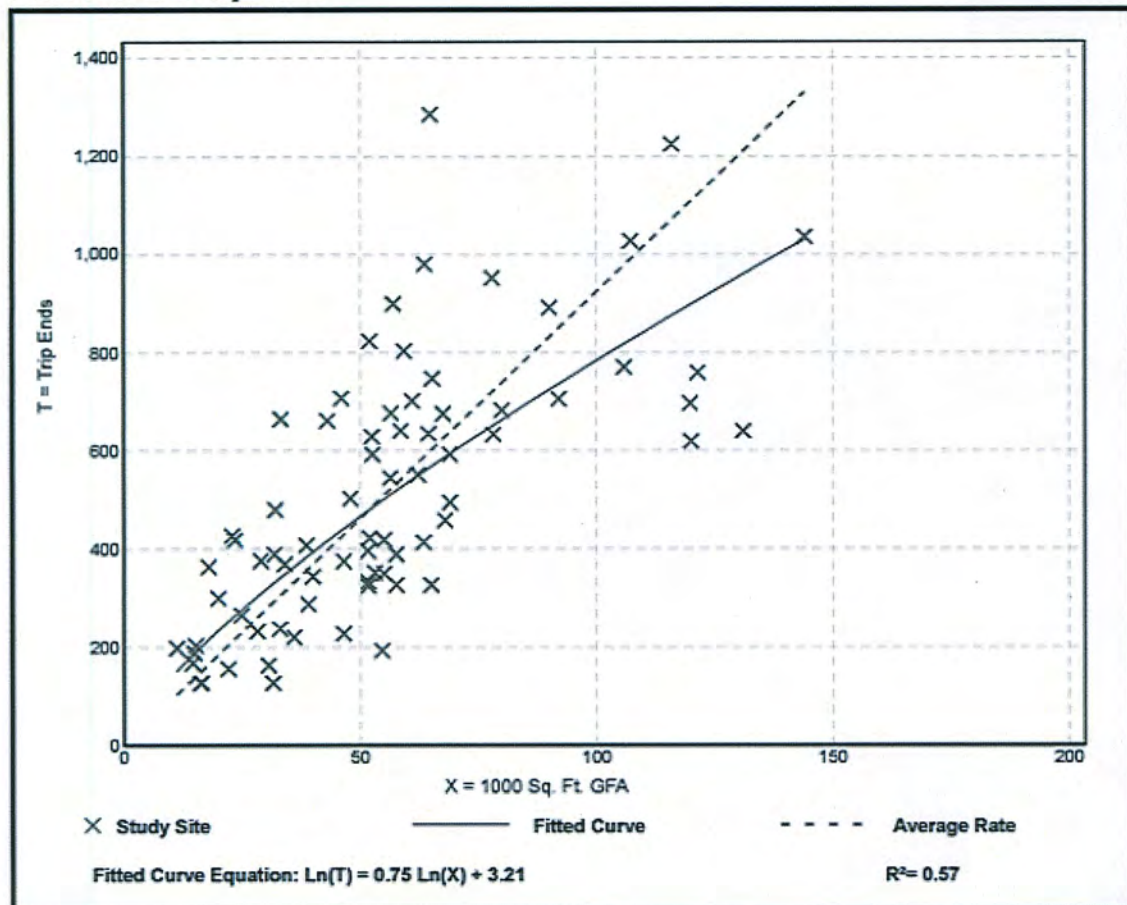
Supermarket (850)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 73
 1000 Sq. Ft. GFA: 55
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.24	3.53 - 20.30	3.69

Data Plot and Equation



**Table E.13 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 850—Supermarket**

SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			AVERAGE DAILY TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL		
30	Overland Park, KS	1987	40	4:30–5:30 p.m.	32	48	20	68	—	—
<25	Chicago suburbs, IL	1987	155	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
<25	Chicago suburbs, IL	1987	191	3:00–6:00 p.m.	57	—	—	43	—	Kenig, O'Hara, Humes, Flock
<25	Chicago suburbs, IL	1987	113	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
34	Omaha, NE	—	—	4:00–6:00 p.m.	44	29	27	56	15,200	University of Nebraska—Lincoln
66	Omaha, NE	—	—	4:00–6:00 p.m.	23	30	47	77	63,000	University of Nebraska—Lincoln
70	Omaha, NE	—	—	4:00–6:00 p.m.	26	30	44	74	34,300	University of Nebraska—Lincoln
31	Omaha, NE	—	—	4:00–6:00 p.m.	19	36	45	81	48,700	University of Nebraska—Lincoln
31	Omaha, NE	—	—	4:00–6:00 p.m.	28	40	32	72	23,500	University of Nebraska—Lincoln
55	Omaha, NE	—	—	4:00–6:00 p.m.	27	35	38	73	27,200	University of Nebraska—Lincoln
65	Omaha, NE	—	—	4:00–6:00 p.m.	25	25	50	75	44,700	University of Nebraska—Lincoln
31	Orlando, FL	1993	440	2:00–6:00 p.m.	35	—	—	65	—	TPD Inc.

Average Pass-By Trip Percentage: 36

“—” means no data were provided

**Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM
Peak Period Land Use Code 820—Shopping Center**

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
921	Albany, NY	July & Aug. 1985	196	4:00–6:00 p.m.	23	42	35	77	—	60,950	Raymond Keyes Assoc.
108	Overland Park, KS	July 1988	111	4:30–5:30 p.m.	26	61	13	74	—	34,000	—
118	Overland Park, KS	Aug. 1988	123	4:30–5:30 p.m.	25	55	20	75	—	—	—
256	Greece, NY	June 1988	120	4:00–6:00 p.m.	38	62	—	62	—	23,410	Sear Brown
160	Greece, NY	June 1988	78	4:00–6:00 p.m.	29	71	—	71	—	57,306	Sear Brown
550	Greece, NY	June 1988	117	4:00–6:00 p.m.	48	52	—	52	—	40,763	Sear Brown
51	Boca Raton, FL	Dec. 1987	110	4:00–6:00 p.m.	33	34	33	67	—	42,225	Kimley-Horn and Assoc. Inc.
1,090	Ross Twp, PA	July 1988	411	2:00–8:00 p.m.	34	56	10	66	—	51,500	Wilbur Smith and Assoc.
97	Upper Dublin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	41	—	—	59	—	34,000	McMahon Associates
118	Tredyffrin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	24	—	—	76	—	10,000	Booz Allen & Hamilton
122	Lawnside, NJ	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	20,000	Pennoni Associates
126	Boca Raton, FL	Winter 1988/89	—	4:00–6:00 p.m.	43	—	—	57	—	40,000	McMahon Associates
150	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	39	—	—	61	—	26,000	Booz Allen & Hamilton
153	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	50	—	—	50	—	85,000	McMahon Associates
153	Arden, DE	Winter 1988/89	—	4:00–6:00 p.m.	30	—	—	70	—	26,000	Orth-Rodgers & Assoc. Inc.
154	Doylestown, PA	Winter 1988/89	—	4:00–6:00 p.m.	32	—	—	68	—	29,000	Orth-Rodgers & Assoc. Inc.
164	Middletown Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	25,000	Booz Allen & Hamilton
166	Haddon Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	20	—	—	80	—	6,000	Pennoni Associates
205	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	55	—	—	45	—	62,000	McMahon Associates

**Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 820—Shopping Center**

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
237	W. Windsor Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	48	—	—	52	—	46,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	44	—	—	56	—	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	—	4:00–6:00 p.m.	19	—	—	81	—	33,000	Wilbur Smith
150	Portland, OR	—	519	4:00–6:00 p.m.	68	6	26	32	—	25,000	Kittelson and Associates
150	Portland, OR	—	655	4:00–6:00 p.m.	65	7	28	35	—	30,000	Kittelson and Associates
760	Calgary, Alberta	Oct.-Dec. 1987	15,436	4:00–6:00 p.m.	20	39	41	80	—	—	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	35	—	—	65	—	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	176	3:30–6:15 p.m.	32	44	24	68	—	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	26	41	67	—	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

“—” means no data were provided

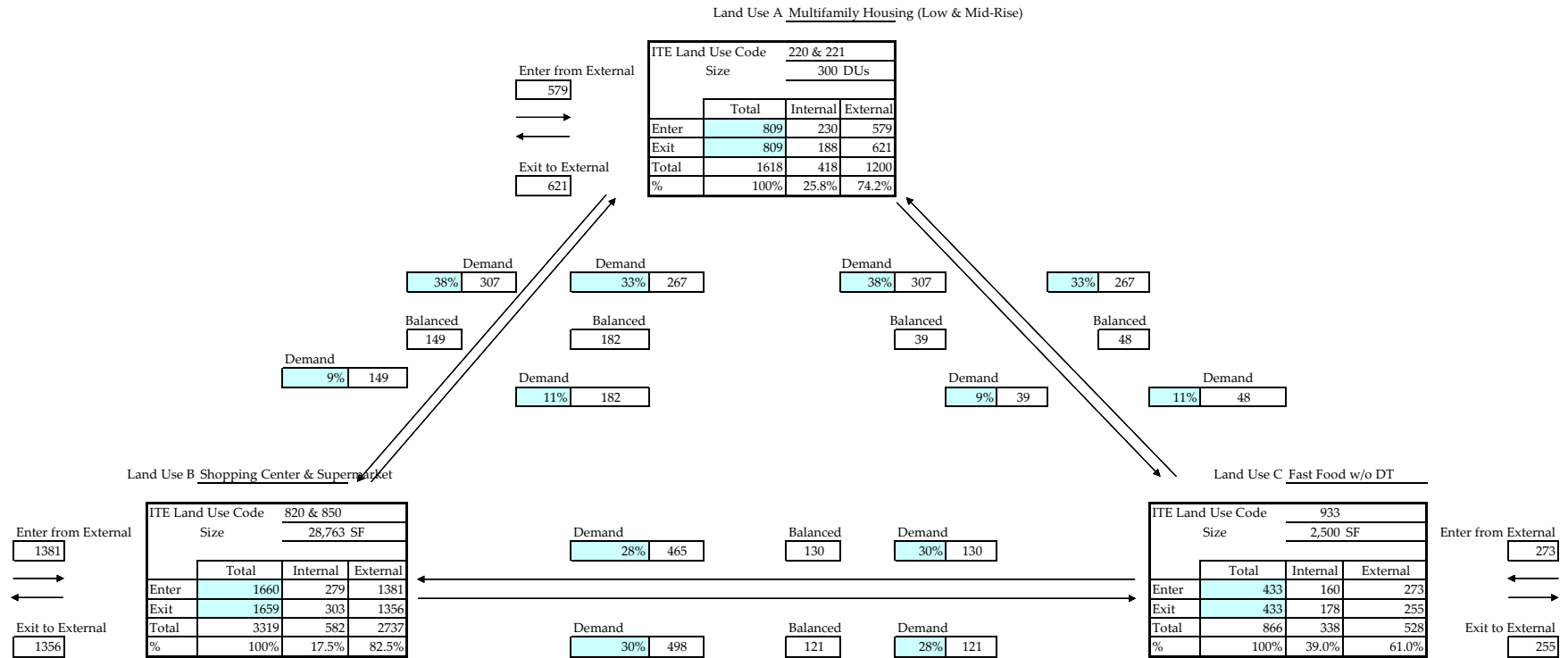
**Table E.30 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 932—High-Turnover (Sit-Down) Restaurant**

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS- BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	5.8	Orlando, FL	1992	150	2:00–6:00 p.m.	32	—	—	68	—	TPD Inc.
—	5	Casselberry, FL	1992	65	2:00–6:00 p.m.	58	—	—	42	—	TPD Inc.
168	5.3	Louisville area, KY	1993	24	4:00–6:00 p.m.	50	37	13	50	1,615	Barton- Aschman Assoc.
169	2.9	Louisville area, KY	1993	41	4:00–6:00 p.m.	37	27	36	63	3,935	Barton- Aschman Assoc.
150	3.1	Louisville area, KY	1993	21	4:00–6:00 p.m.	38	29	33	62	2,580	Barton- Aschman Assoc.
250	7.1	New Albany, IN	1993	—	4:00–6:00 p.m.	23	23	54	77	1,565	Barton- Aschman Assoc.
—	8	Kissimmee, FL	1995	664	2:00–6:00 p.m.	40	39	21	60	—	TPD Inc.
—	11	Orlando, FL	1996	267	2:00–6:00 p.m.	38	43	19	62	—	TPD Inc.
—	12	Orlando, FL	1996	317	2:00–6:00 p.m.	29	51	20	71	—	TPD Inc.
—	4.6	Orlando, FL	1992	276	2:00–6:00 p.m.	63	—	—	37	—	TPD Inc.
—	5.7	Orlando, FL	1994	308	2:00–6:00 p.m.	57	—	—	43	—	TPD Inc.
—	6.2	Orlando, FL	1995	521	2:00–6:00 p.m.	46	43	11	54	—	TPD Inc.

Average Pass-By Trip Percentage: 43

“—” means no data were provided

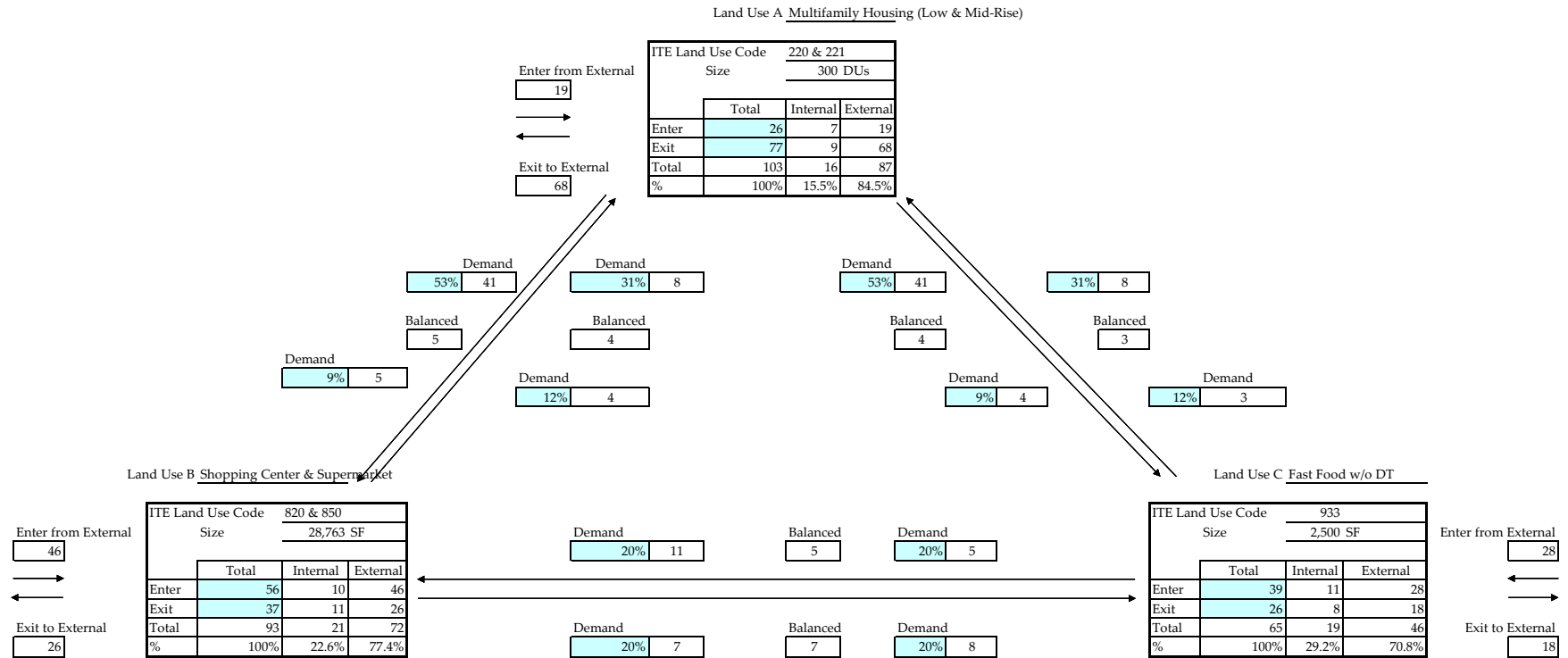
**DAILY TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS**



Net External Trips for Multi-Use Development						
	Land Use A		Land Use B		Land Use C	Total
Enter	579		1381		273	2233
Exit	621		1356		255	2232
Total	1200		2737		528	4465
Single-Use Trip Gen Estimate	1618		3319		866	5803
						Internal Capture
						23.1%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 9th Edition.

**AM TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS**

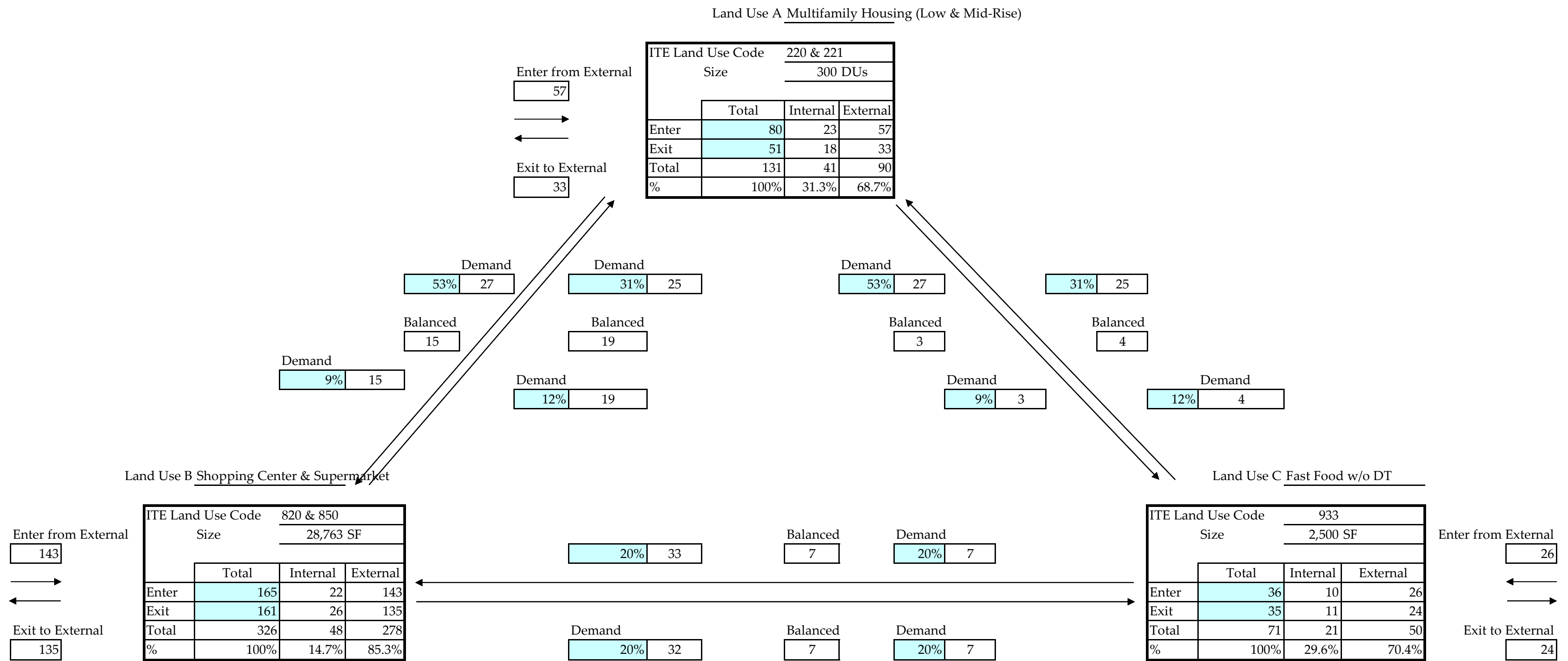


Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Total
Enter	19	46	28	93
Exit	68	26	18	112
Total	87	72	46	205
Single-Use Trip Gen Estimate	103	93	65	261
				Internal Capture 21.5%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 9th Edition.

PM TRIP INTERNAL CAPTURE
RAM OAKLAND PARK TRAFFIC ANALYSIS



Net External Trips for Multi-Use Development						
	Land Use A		Land Use B		Land Use C	Total
Enter	57		143		26	226
Exit	33		135		24	192
Total	90		278		50	418
Single-Use Trip Gen Estimate	131		326		71	528

Internal Capture
20.8%

Source: McMahon Associates, Inc. based on Templates from the ITE Trip Generation Manual, 9th Edition.

APPENDIX C

EXISTING INTERSECTION CAPACITY ANALYSIS WORKSHEETS AND SIGNAL TIMINGS



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1149	Initial Operation Date	1/12/72
Controller Type	2070 LN	System Number	1149
Modification Number	16	Modification Date	04/08/2014
Drawing/Project No		FPL Grid Number	87683083601
Intersection	OAKLAND PARK BLVD(SR 816) and ANDREWS AVENUE		
Municipality	OAKLAND PARK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.2	1.5	3.0	1.5	2.2
Maximum Green I	20	50	20	40	20	50	20	40
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		28		23		28		23
Permissive	NO		NO		NO		NO	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

Attachment

NOTES:

1. DUAL ENTRY HARDWIRED NORTH/SOUTH.
2. MOD. 16 UPDATES PEDESTRIAN CLEARANCE TIMES.

Submitted By _____ Approved By _____

Station : 1149 - Oakland Park Blvd & Andrews Ave (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		23		28		23		28								
Min Green	5	10	5	15	5	10	5	6								
Gap Ext	1.5	3	1.5	2.2	1.5	3	1.5	2.2								
Max1	20	50	20	40	20	50	20	40								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON		ON		ON		ON		ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

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

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

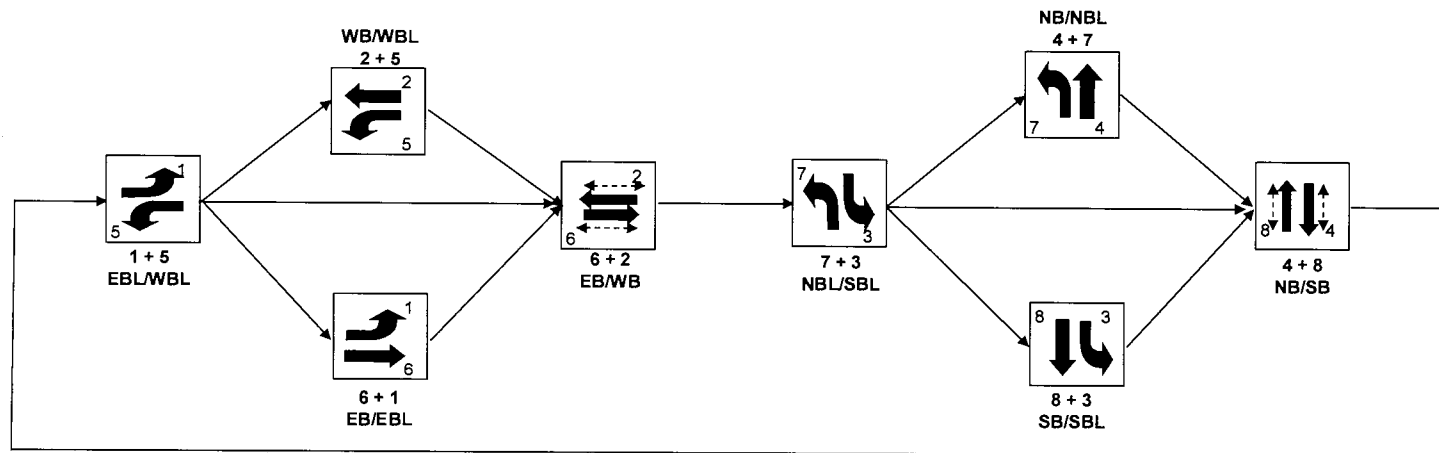
Coordination

[illegible]

[illegible][illegible]

User Comments:

Sequence of Operation for (1149), Oakland Park Blvd (SR 816) and Andrews Avenue Oakland Park



←-----→ Denotes pedestrian signal

TRAFFIC ENGINEERING DIVISION

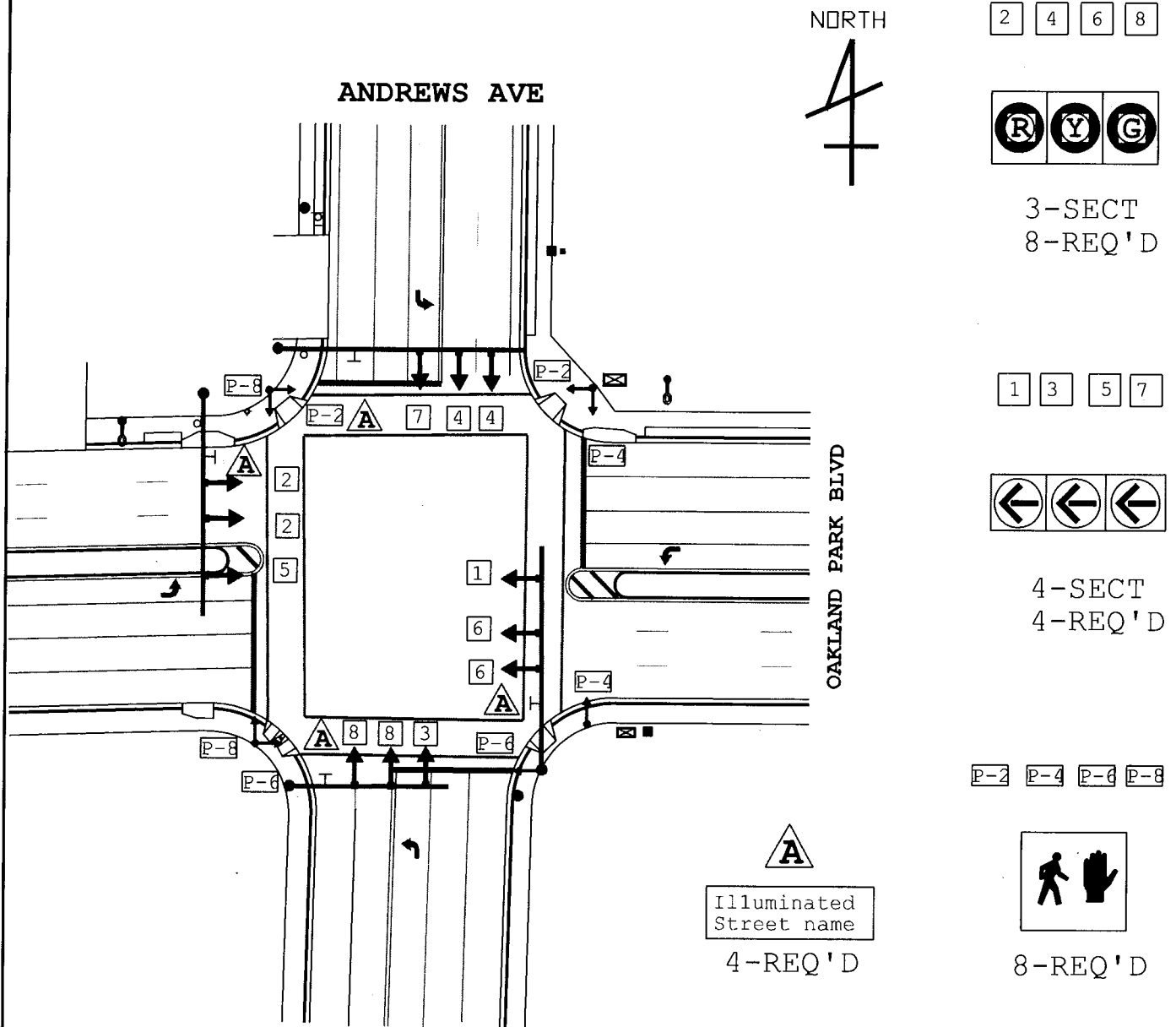
SIGNALIZED INTERSECTION

LOCATION OAKLAND PARK BLVD AND ANDREWS AVE

ORDER NO FDOT ISSUE DATE --- REVISION NO. 3 COMPLETION DATE 6/24/09

DWG. NO. 12-06-02-01 FILE NO. 1149 CITY OAKLAND PARK SCALE: 1" = 50'

DWN BY: RIO



1. INTERSECTION REBUILD UNDER FDOT PROJ. NO. 4137951
2. VIDEO DETECTION



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1114	Initial Operation Date	UNKNOWN
Controller Type	2070 LN	System Number	1114
Modification Number	14	Modification Date	W.O.
Drawing/Project No	DES. GRP. 1	FPL Grid Number	87683603604
Intersection	OAKLAND PARK BLVD (SR 816) and NE 6 AVENUE		
Municipality	OAKLAND PARK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	4	10	4	6	4	10	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	12	50	12	30	12	50	12	30
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		17		27		17		27
Permissive	NO		YES		NO		YES	
Flash Operation	RED	YELLOW		RED	RED	YELLOW		RED

Attachment _____

NOTES:

1. DUAL ENTRY NORTH/SOUTH.
2. MOD. 14 CONVERT EAST/WEST LEFT TURN MOVEMENT TO PROTECTED ONLY SIGNAL OPERATION VIA WORK ORDER: WOIT2019070686

Submitted By _____ Approved By _____

Station : 1114 - Oakland Park Blvd & NE 6 Ave (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		17		27		17		27								
Min Green	4	10	4	6	4	10	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	30	12	50	12	30								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Cal																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence						
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
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							
Exit 2							
Exit 3							
Exit 4							

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

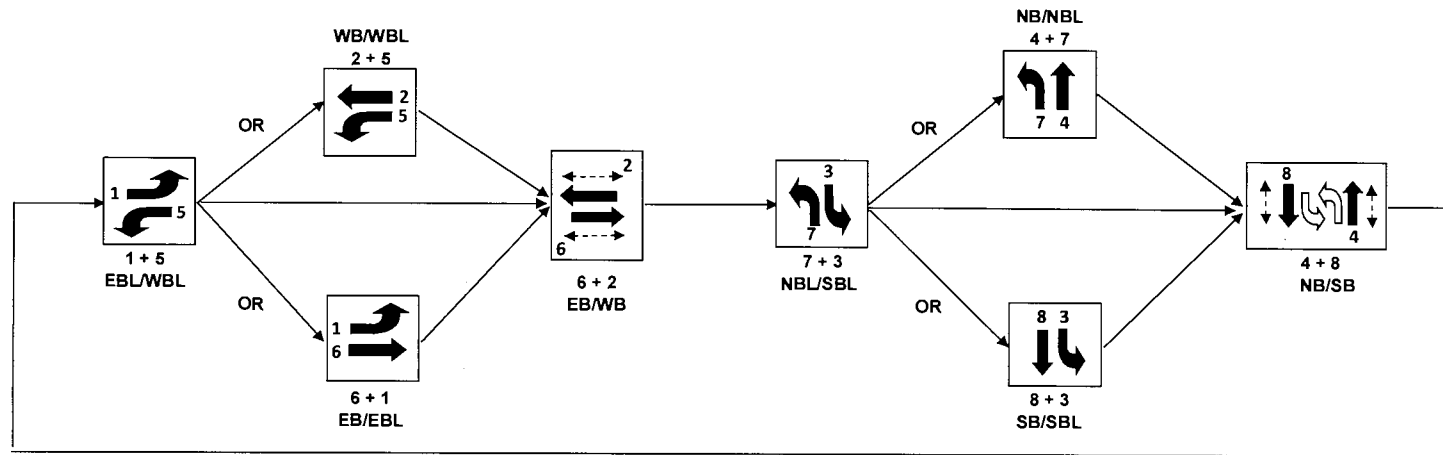
Coordination

[illegible]

[illegible][illegible]

User Comments:

Sequence of Operation for (1114) Oakland Park Blvd (SR 816) and NE 6 Ave



 PERMISSIVE LEFT

TRAFFIC ENGINEERING DIVISION

SIGNALIZED INTERSECTION

LOCATION : OAKLAND PARK BLVD AND NE 6 AVE

ORDER NO _____ **ISSUE DATE** _____ **REVISION NO.** _____ **COMPLETION DATE** 07/17/2019

DWG. NO. 12-06-05-01 **FILE NO.** 1114 **CITY** OAKLAND PARK

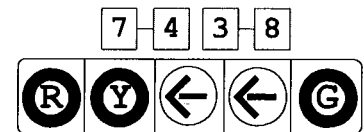
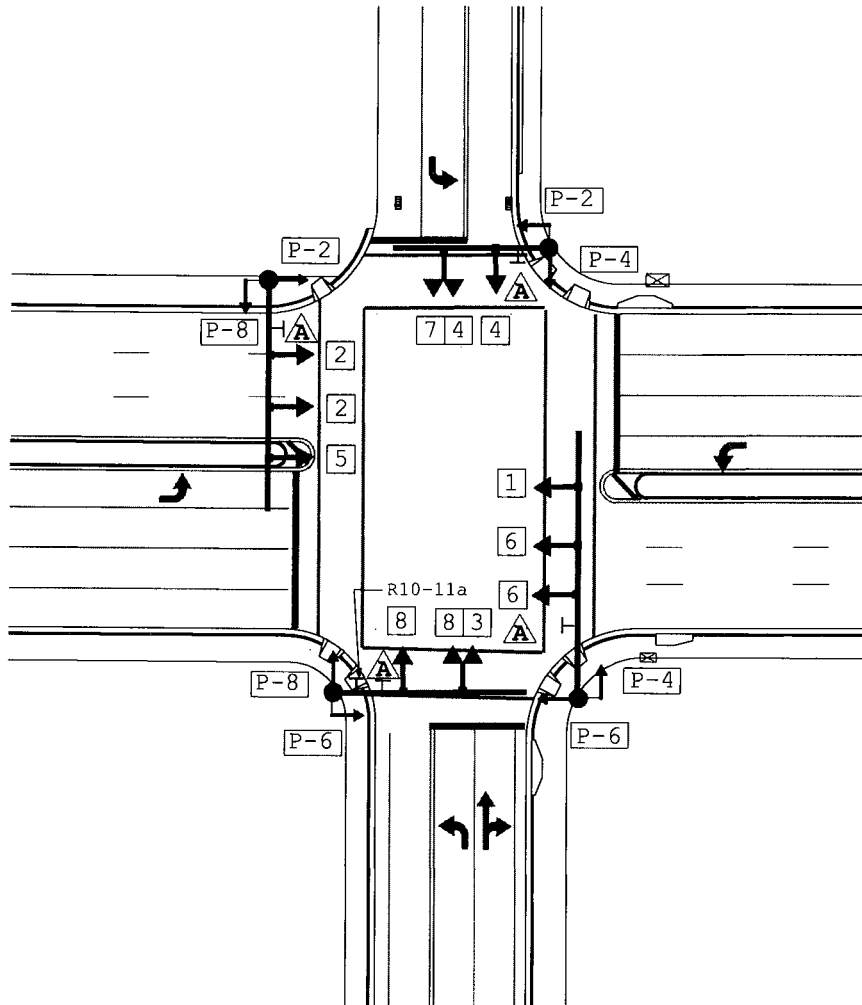
DWN BY: LPATTERSON



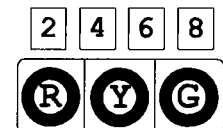
1" = 50'

NE 6 AVE

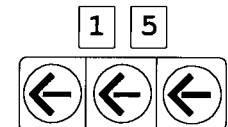
OAKLAND PARK BLVD



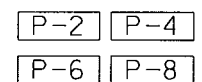
5-SECT
1-WAY
2-REQ'D



3-SECT
1-WAY
6-REQ'D



3-SECT
1-WAY
2-REQ'D



8-REQ'D



Illuminated
Street name

4-REQ'D



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1113	Initial Operation Date	UNKNOWN
Controller Type	2070 LN	System Number	1113
Modification Number	11	Modification Date	01/07/2015
Drawing/Project No	413795-1-52-01	FPL Grid Number	87783043704
Intersection	OAKLAND PARK BLVD (SR 816) and DIXIE HWY. (SR 811)		
Municipality	OAKLAND PARK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	4	10	4	6	5	10	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.5	1.5	3.0	1.5	2.5
Maximum Green I	15	50	15	35	20	50	15	35
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN.	OFF	OFF	OFF	MIN.	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		22		28		22		28
Permissive	YES		YES		NO		YES	
Flash Operation		YELLOW		RED	RED	YELLOW		RED

Attachment _____

NOTES:

1. SPECIAL ANTI-BACKDOWN DIODE CIRCUITRY WITH 4.0 SECOND RED REVERT.
2. DUAL ENTRY HARDWIRED NORTH/SOUTH.
3. RAILROAD PREEMPTION SEQUENCE:
 - a)TIME BEFORE PREEMPTION=3 SECONDS;
 - b)TRACK CLEARANCE = NOT USED;
 - c)ACTIVE PHASES IN PREEMPTION (2070 DWELL PHASES) = EBL, NB, NBL, SB, SB-PED, NB-PED (PHASES 1,4,7 & 8, P4,P8);
 - d)RETURN TO WB/WBL (PHASES 2 AND 5)
4. MOD. 11 UPDATES PEDESTRIAN VALUES AS PART OF FDOT REBUILD PROJECT.

Submitted By _____

Approved By _____

Station : 1113 - Oakland Park Blvd & Dixie Hwy (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		22		28		22		28								
Min Green	4	10	4	6	5	10	4	6								
Gap Ext	1.5	3	1.5	2.5	1.5	3	1.5	2.5								
Max1	15	50	15	35	20	50	15	35								
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert		4				4										
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit				60				60								
Dynamic Max Step				25				25								
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk																
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	3					
Min Duration						
Min Green		6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						1
Min Dwell	10	8	8	8	8	8
Max Presence		180	180	180	180	180
Track Veh 1						9
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	1	2	3	2	4	1
Dwell Cyc Veh 2	4	6	8	5	7	6
Dwell Cyc Veh 3	7					
Dwell Cyc Veh 4	8					
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	2	3	4	2	4	2
Exit 2	5	7	8	6	8	6
Exit 3						
Exit 4						

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

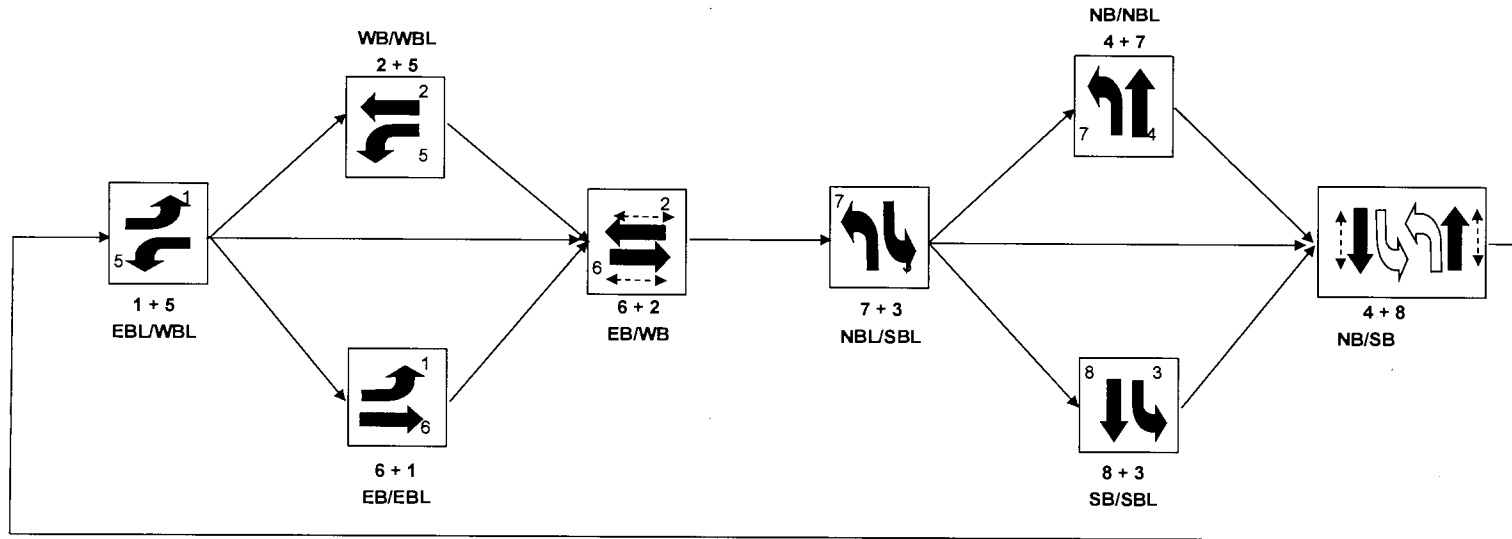
Coordination

[illegible]

[illegible][illegible]

User Comments:

Sequence of Operation for (1113), Oakland Park Blvd (SR 816) and Dixie Hwy (SR 811) Oakland Park

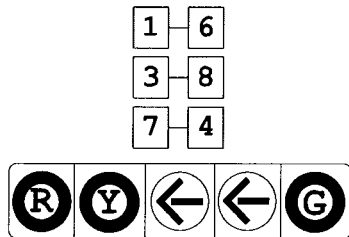


BROWARD COUNTY TRAFFIC ENGINEERING DIVISION

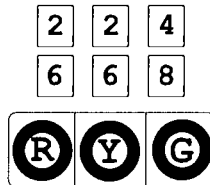
LOCATION Oakland Park Blvd & Dixie Hwy

ORDER NO. _____ ISSUE DATE _____ REVISION NO. Mod 11 COMPLETION DATE _____

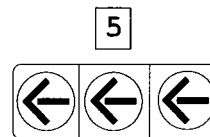
DWG. NO. _____ FILE NO. 1113 CITY OAKLAND PARK SCALE: 1" = 50'



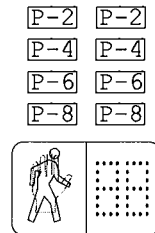
5-SECT
1-WAY
3-REQ'D



3-SECT
1-WAY
6-REQ'D



3-SECT
1-WAY
1-REQ'D



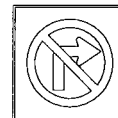
8-REQ'D



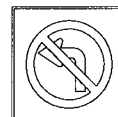
Illuminated
Street Name

4-REQ'D

Dixie Hwy



BLANK OUT
R3-1
1-REQ'D

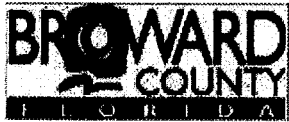


BLANK OUT
R3-2
1-REQ'D



1-REQ'D





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	2206	Initial Operation Date	10/69
Controller Type	2070 LN	System Number	2206
Modification Number	6	Modification Date	05/22/2012
Drawing/Project No	DSN. GRP. 3	FPL Grid Number	87682478202
Intersection	NE 26 STREET and NE 6 AVENUE		
Municipality	WILTON MANORS		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	2,6		4,8					
Direction	E/W		N/S					
Initial Green(MIN)	15		8					
Vehicle Ext.(GAP)	3.0		2.5					
Maximum Green I	30		30					
Maximum Green II								
Yellow Clearance	4.0		4.0					
All Red Clearance	1.0		1.0					
Phase Recall	MIN		OFF					
Detector Delay								
Walk	7		5					
Pedestrian Clearance	7		7					
Permissive								
Flash Operation	RED		RED					

Attachment

NOTES:

1. MOD. 6 DEPLOYS SIGNAL ONTO ATMS.NOW.

Submitted By _____

Approved By _____

Station : 2206 - NE 26 St & NE 6 Ave (Standard File)

Phase	1	2 (ET)	3	4 (ST)	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7		5												
Ped Clearance		7		7												
Min Green		15		8												
Gap Ext		3		2.5												
Max1		30		30												
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		1		1					1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable		ON		ON												
Auto Flash Entry				ON												
Auto Flash Exit		ON														
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON														
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON														
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						
Dwell Cyc Veh 2						
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							
Exit 2							
Exit 3							
Exit 4							

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

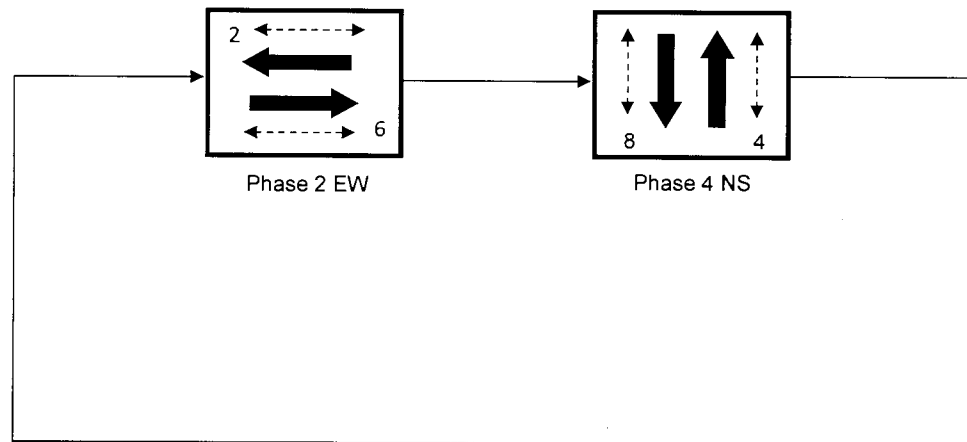
Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqne	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											Easy															
		100	254																							
																						</				

[illegible][illegible]

User Comments:

Sequence of Operation
NE 26 Street and NE 6 Avenue (2206)
Wilton Manors



BROWARD COUNTY TRAFFIC ENGINEERING DIVISION
TRAFFIC SIGNAL LOCATION SKETCH

LOCATION **NE 26 STREET & NE 6 AVENUE**

ORDER NO. -- ISSUE DATE --- REVISION NO. -- COMPLETION DATE **03/14/14**

DWG. NO. **14-03-08-01** FILE NO. **2206** CITY **WILTON MANORS** SCALE: 1" = 50'

DWN BY: SRAMOUTAR

NORTH



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



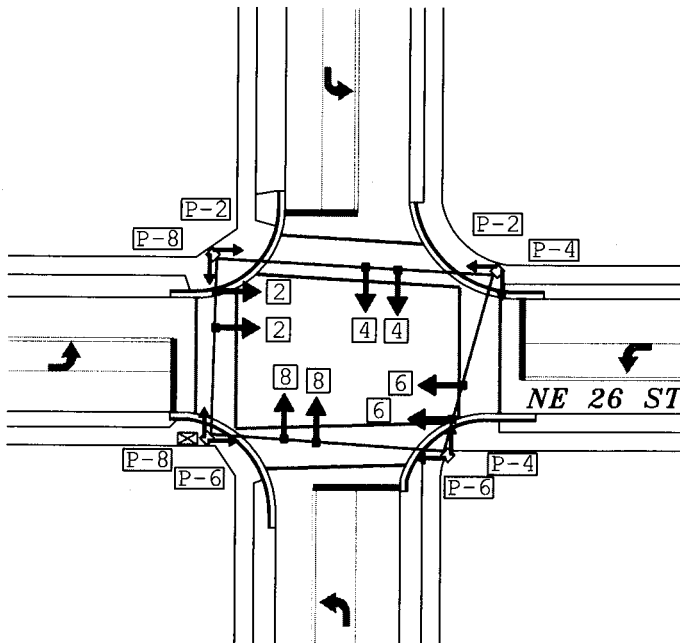
8-REQ'D

2 4 6 8



3-SECT
8-REQ'D

NE 6 AVE



VIDEO DETECTION



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1122	Initial Operation Date	2/19/80
Controller Type	2070 LN	System Number	1122
Modification Number	9	Modification Date	05/22/2012
Drawing/Project No	GRP 4	FPL Grid Number	87683589008
Intersection	NE 38 STREET and NE 6 AVENUE		
Municipality	OAKLAND PARK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2,6		4,8				
Direction		E/W		N/S				
Initial Green(MIN)		12		12				
Vehicle Ext.(GAP)		3.0		2.0				
Maximum Green I		25		25				
Maximum Green II								
Yellow Clearance		4.0		4.0				
All Red Clearance		1.0		1.0				
Phase Recall		MIN		OFF				
Detector Delay								
Walk		7		7				
Pedestrian Clearance		10		10				
Permissive								
Flash Operation		YELLOW		RED				

Attachment

NOTES:

1. MOD. 9 DEPLOYS SIGNAL ONTO ATMS.NOW.

Submitted By _____ Approved By _____

Station : 1122 - NE 38 St & NE 6 Ave (Oakland Park) (Standard File)

Phase	1	2 (ET)	3	4 (ST)	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7		7												
Ped Clearance		10		10												
Min Green		12		12												
Gap Ext	1	3	1	2	1	1	1	1								
Max1		25		25												
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1	1.5	1	1.5	1.5	1.5	1.5	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		ON												
Auto Flash Entry				ON												
Auto Flash Exit		ON														
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON														
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON														
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	ON	ON	ON	ON	ON	ON
Override Higher Preempt	ON	ON	ON	ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell						
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
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						
Exit 2						
Exit 3						
Exit 4						

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

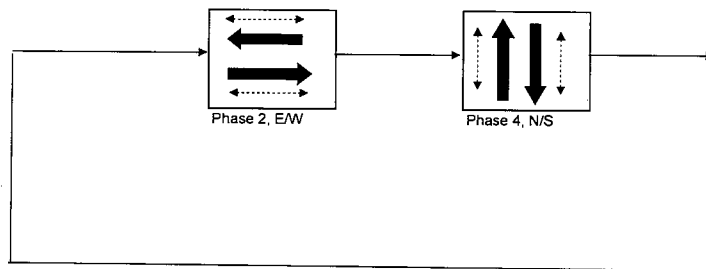
Coordination

[illegible]

[illegible][illegible]

User Comments:

Sequence of Operation
NE 38 Street and NE 6 Avenue
Intersection Number A-122



BROWARD COUNTY TRAFFIC ENGINEERING DIVISION
TRAFFIC SIGNAL LOCATION SKETCH

LOCATION **NE 38 STREET & NE 6 AVENUE**

ORDER NO. --- ISSUE DATE --- REVISION NO. --- COMPLETION DATE ---

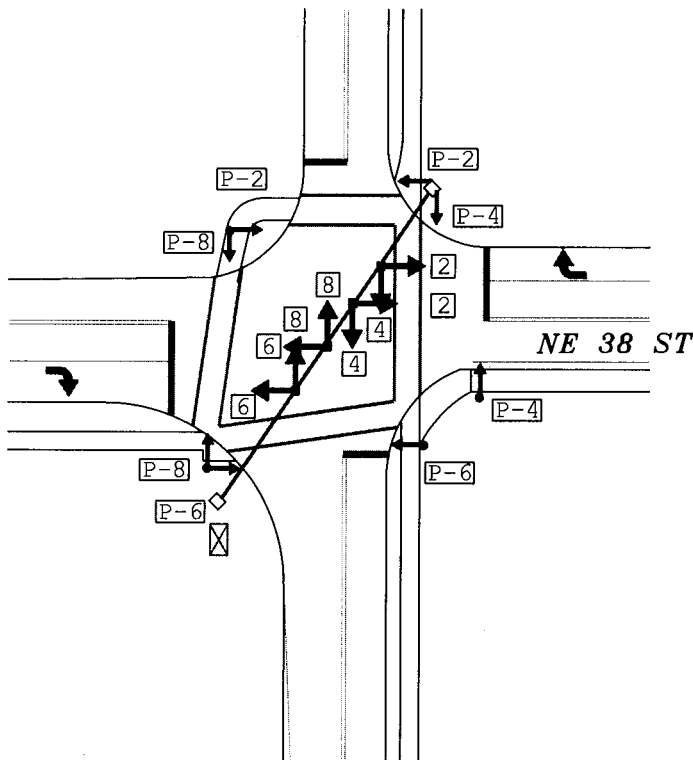
DWG. NO. **13-01-01-01** FILE NO. **1122** CITY **OAKLAND PARK** SCALE: 1' = 50'

DWN BY: **LARRY**

NORTH



NE 6 AVE

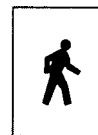


2 4 6 8



3-SECT
8-REQ'D

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



8-REQ'D

VIDEO DETECTION



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1154	Initial Operation Date	UNKNOWN
Controller Type	2070 LN	System Number	1154
Modification Number	10	Modification Date	01/18/2018
Drawing/Project No	DES.GRP. 2	FPL Grid Number	87783016308
Intersection	DIXIE HIGHWAY (SR 811) and NE 38 STREET		
Municipality	OAKLAND PARK		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3,8	4,7	5	6		
Direction	SBL	NB	WB	EB	NBL	SB		
Initial Green(MIN)	4	12	6	6	4	12		
Vehicle Ext.(GAP)	1.5	3.0	2.5	2.5	1.5	3.0		
Maximum Green I	12	35	25	25	12	35		
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0		
All Red Clearance	2.0	2.0	3.0	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay								
Walk		7	7	7		7		
Pedestrian Clearance		19	19	18		19		
Permissive	YES				YES			
Flash Operation		YELLOW	RED	RED		YELLOW		

Attachment 1154-10 SOP.pdf

NOTES:

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. PRE-EMPTION SEQUENCE:
 - (A) TRACK CLEARANCE = 5 SECONDS GREEN, 4 SECONDS YELLOW; WESTBOUND.
 - (B) DWELL = PHASE 2 & 6 (NORTH/SOUTH).
 - (C) EXIT TO PHASE 3 (WESTBOUND, MAX RECALL).
3. MOD. 10 UPDATES NOTES AND PRE-EMPTION.

Submitted By _____ Approved By _____

Station : 1154 - Dixie Hwy & NE 38 St (Oakland Park) (Standard File)

Phase	1 (SL)	2 (NT)	3 (WR)	4 (ER)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7	7	7	7										
Ped Clearance		19	19	18		19										
Min Green	4	12	6	6	4	12										
Gap Ext	1.5	3	2.5	2.5	1.5	3										
Max1	12	35	25	25	12	35										
Max2																
Yellow Clr	4	4	4	4	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	3	2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

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						
Min Duration						
Min Green			6	6	6	6
Min Walk						
Ped Clear						
Track Green	5					
Min Dwell			8	8	8	8
Max Presence			180	180	180	180
Track Veh 1	3					
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						

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 Cye Ped8						
Exit 1	3		2	4	2	1
Exit 2			6		6	5
Exit 3						
Exit 4						

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

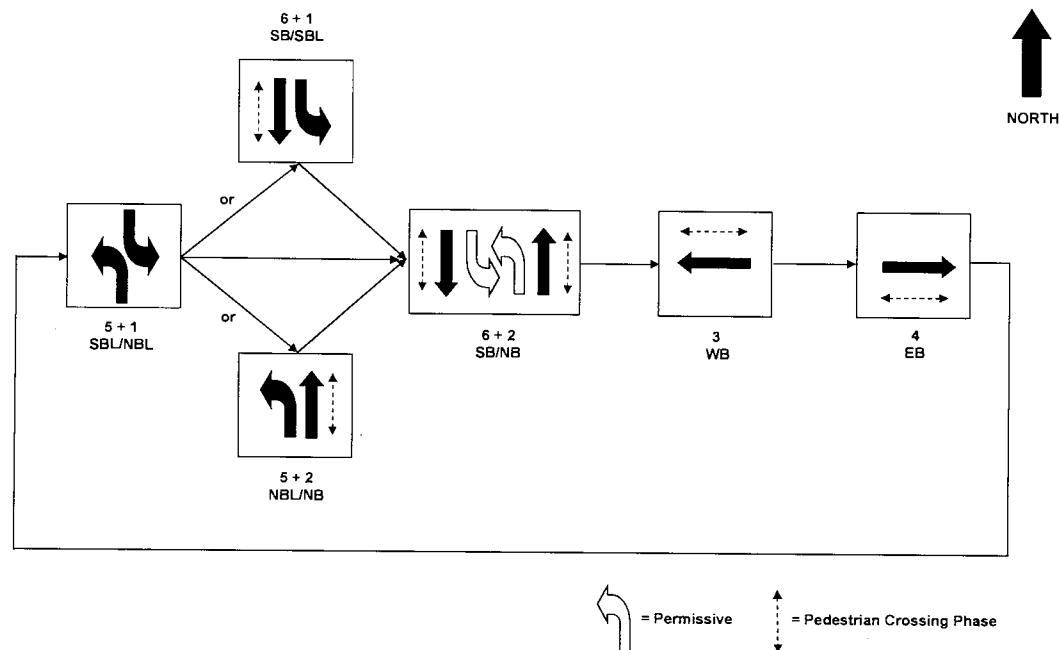
Coordination

[illegible]

[illegible][illegible]

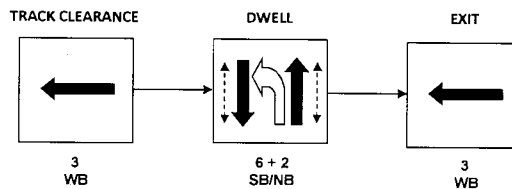
User Comments:

Sequence of Operation Dixie Highway (SR 811) and NE 38 Street Intersection Number 1154 (Oakland Park)



RAILROAD PREEMPTION SEQUENCE:

- (A) TRACK CLEARANCE = 5 SECONDS GREEN, 4 SECONDS YELLOW; WESTBOUND
- (B) DWELL = PHASE 2 & 6 (NORTH/SOUTH);
- (C) EXIT TO PHASE 3 (WESTBOUND, MAX RECALL).

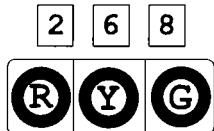


BROWARD COUNTY TRAFFIC ENGINEERING DIVISION

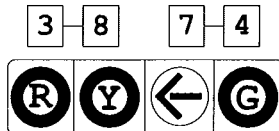
LOCATION **Dixie Highway & NE 38 Street**

ORDER NO. _____ ISSUE DATE _____ REVISION NO. **Mod 9** COMPLETION DATE _____

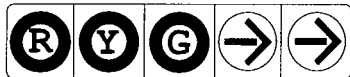
DWG. NO. _____ FILE NO. **1154** CITY **OAKLAND PARK** SCALE: 1" = 50'



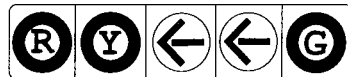
3-SECT
1-WAY
3-REQ'D



4-SECT
1-WAY
2-REQ'D



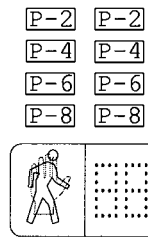
5-SECT
1-WAY
1-REQ'D



5-SECT
1-WAY
2-REQ'D



3-SECT
1-WAY
1-REQ'D



1-WAY
8-REQ'D



Dixie Hwy



Ram Oakland Park Traffic Analysis
1: Andrews Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	1516	314	162	1185	82	203	654	146	68	766	149
Future Volume (vph)	172	1516	314	162	1185	82	203	654	146	68	766	149
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.974			0.990			0.973			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4858	0	1719	4891	0	1770	3444	0	1770	3454	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4858	0	1719	4891	0	1770	3444	0	1770	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			6			15			12	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	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)	179	1579	327	186	1362	94	209	674	151	70	790	154
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	1906	0	186	1456	0	209	825	0	70	944	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	39.0	79.0		21.0	61.0		26.0	54.0		26.0	54.0	
Total Split (%)	21.7%	43.9%		11.7%	33.9%		14.4%	30.0%		14.4%	30.0%	
Maximum Green (s)	33.0	73.0		15.0	55.0		20.0	48.0		20.0	48.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	22.5	73.0		15.0	65.5		20.0	57.0		11.0	48.0	
Actuated g/C Ratio	0.12	0.41		0.08	0.36		0.11	0.32		0.06	0.27	
v/c Ratio	0.83	0.96		1.30	0.82		1.07	0.75		0.65	1.02	
Control Delay	105.0	63.5		233.1	67.3		154.6	59.7		108.3	96.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	105.0	63.5		233.1	67.3		154.6	59.7		108.3	96.5	
LOS	F	E		F	E		F	E		F	F	
Approach Delay		67.0			86.1			78.9			97.3	
Approach LOS		E			F			E			F	
Queue Length 50th (ft)	210	792		~285	432		~271	455		83	~611	
Queue Length 95th (ft)	290	#875		m#433	686		#454	559		140	#752	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	318	1988		143	1784		196	1100		196	929	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.56	0.96		1.30	0.82		1.07	0.75		0.36	1.02	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 110 (61%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.30

Intersection Signal Delay: 79.9

Intersection LOS: E

Intersection Capacity Utilization 102.4%

ICU Level of Service G

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.

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

Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
2: NE 6th Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	1439	123	77	1131	50	155	129	54	93	208	48
Future Volume (vph)	76	1439	123	77	1131	50	155	129	54	93	208	48
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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988			0.994			0.956			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4975	0	1752	5006	0	1770	1781	0	1752	1793	0
Flt Permitted	0.950			0.950			0.163			0.473		
Satd. Flow (perm)	1752	4975	0	1752	5006	0	304	1781	0	873	1793	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		10			5			11				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			2169			2590			3110	
Travel Time (s)		50.5			42.3			58.9			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.85	0.85	0.85	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	3%	3%
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)	87	1654	141	82	1203	53	182	152	64	115	257	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	1795	0	82	1256	0	182	216	0	115	316	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	22.0	91.0		17.0	86.0		20.0	52.0		20.0	52.0	
Total Split (%)	12.2%	50.6%		9.4%	47.8%		11.1%	28.9%		11.1%	28.9%	
Maximum Green (s)	16.0	85.0		11.0	80.0		14.0	46.0		14.0	46.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	12.4	92.0		11.6	91.2		56.4	40.5		48.0	36.2	
Actuated g/C Ratio	0.07	0.51		0.06	0.51		0.31	0.22		0.27	0.20	
v/c Ratio	0.72	0.70		0.73	0.49		0.80	0.53		0.40	0.88	
Control Delay	98.1	39.5		92.5	33.3		71.1	62.3		46.9	93.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	98.1	39.5		92.5	33.3		71.1	62.3		46.9	93.8	
LOS	F	D		F	C		E	E		D	F	
Approach Delay		42.2			36.9			66.3			81.3	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	106	424		97	433		158	211		96	367	
Queue Length 95th (ft)	m117	320		m#172	m533		#224	277		129	403	
Internal Link Dist (ft)		2510			2089			2510			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	155	2554		119	2539		228	463		312	458	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.56	0.70		0.69	0.49		0.80	0.47		0.37	0.69	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 140 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 47.0

Intersection LOS: D

Intersection Capacity Utilization 77.3%

ICU Level of Service D

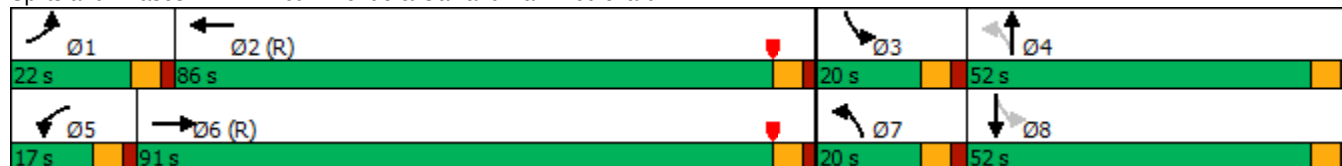
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
3: Dixie Highway & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	1214	138	60	819	111	191	464	67	207	547	103
Future Volume (vph)	173	1214	138	60	819	111	191	464	67	207	547	103
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.985			0.982			0.981			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	4866	0	1770	4994	0	1770	3472	0	1703	3324	0
Flt Permitted	0.184			0.950			0.194			0.143		
Satd. Flow (perm)	333	4866	0	1770	4994	0	361	3472	0	256	3324	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		12						8			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2169			1000			1700			3110	
Travel Time (s)		42.3			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	6%	6%	6%
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)	192	1349	153	66	900	122	212	516	74	216	570	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	1502	0	66	1022	0	212	590	0	216	677	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		11.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	30.0	67.0		23.0	60.0		16.0	42.0		48.0	74.0	
Total Split (%)	16.7%	37.2%		12.8%	33.3%		8.9%	23.3%		26.7%	41.1%	
Maximum Green (s)	24.0	61.0		17.0	54.0		10.0	36.0		42.0	68.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis
3: Dixie Highway & Oakland Park Boulevard

Existing (2019)
Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	101.9	85.5		10.6	78.7		52.3	38.3		63.0	45.9	
Actuated g/C Ratio	0.57	0.48		0.06	0.44		0.29	0.21		0.35	0.26	
v/c Ratio	0.60	0.65		0.63	0.47		0.99	0.79		0.82	0.79	
Control Delay	17.2	30.3		107.9	38.4		106.1	74.7		66.6	67.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.2	30.3		107.9	38.4		106.1	74.7		66.6	67.6	
LOS	B	C		F	D		F	E		E	E	
Approach Delay		28.9			42.6			83.0			67.3	
Approach LOS		C			D			F			E	
Queue Length 50th (ft)	77	550		78	301		185	353		190	398	
Queue Length 95th (ft)	130	708		133	422		#370	411		252	413	
Internal Link Dist (ft)		2089			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	374	2317		167	2184		214	748		431	1264	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.51	0.65		0.40	0.47		0.99	0.79		0.50	0.54	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 32 (18%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 49.6

Intersection LOS: D

Intersection Capacity Utilization 79.7%

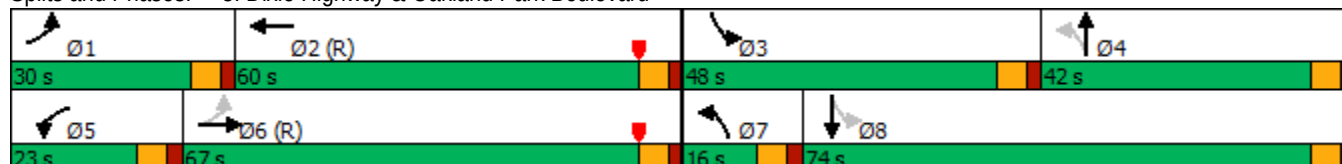
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	230	12	16	169	70	15	118	31	114	208	58
Future Volume (vph)	54	230	12	16	169	70	15	118	31	114	208	58
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993			0.956			0.969			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1781	0	1752	1787	0	1752	1784	0
Flt Permitted	0.586			0.575			0.557			0.651		
Satd. Flow (perm)	1092	1850	0	1071	1781	0	1027	1787	0	1201	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			42			27			29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			2590	
Travel Time (s)		21.9			22.7			20.5			58.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.89	0.89	0.89	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%
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)	68	288	15	19	201	83	17	133	35	130	236	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	303	0	19	284	0	17	168	0	130	302	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		21.0	21.0		21.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Existing (2019)
Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	16.8	16.8		16.8	16.8		12.2	12.2		12.2	12.2	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.31	0.31		0.31	0.31	
v/c Ratio	0.15	0.38		0.04	0.36		0.05	0.29		0.35	0.53	
Control Delay	9.3	10.4		8.6	9.0		10.0	10.2		13.5	13.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.3	10.4		8.6	9.0		10.0	10.2		13.5	13.7	
LOS	A	B		A	A		A	B		B	B	
Approach Delay	10.2			9.0			10.2			13.6		
Approach LOS	B			A			B			B		
Queue Length 50th (ft)	8	37		2	29		2	20		19	43	
Queue Length 95th (ft)	29	97		12	88		13	62		59	112	
Internal Link Dist (ft)	884			920			820			2510		
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	716	1216		703	1183		674	1182		788	1180	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.25		0.03	0.24		0.03	0.14		0.16	0.26	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 39.4

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 11.1

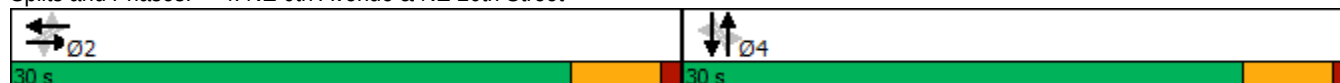
Intersection LOS: B

Intersection Capacity Utilization 63.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	142	102	14	121	31	30	253	7	13	313	23
Future Volume (vph)	35	142	102	14	121	31	30	253	7	13	313	23
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.975			0.997			0.991	
Flt Protected		0.990			0.996			0.995			0.998	
Satd. Flow (prot)	0	1791	1538	0	1774	0	0	1848	0	0	1824	0
Flt Permitted		0.910			0.966			0.930			0.980	
Satd. Flow (perm)	0	1647	1538	0	1721	0	0	1727	0	0	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		28			3			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	2%	2%	2%	3%	3%	3%
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)	41	167	120	16	139	36	35	294	8	14	340	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	120	0	191	0	0	337	0	0	379	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		13.7	13.7		13.7			14.2			14.2	
Actuated g/C Ratio		0.36	0.36		0.36			0.37			0.37	
v/c Ratio		0.35	0.19		0.30			0.52			0.56	
Control Delay		11.5	3.5		9.4			13.0			13.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		11.5	3.5		9.4			13.0			13.5	
LOS		B	A		A			B			B	
Approach Delay		8.5			9.4			13.0			13.5	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		27	0		20			46			52	
Queue Length 95th (ft)		74	20		62			118			141	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		883	880		935			928			964	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.24	0.14		0.20			0.36			0.39	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 38.1

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 11.4

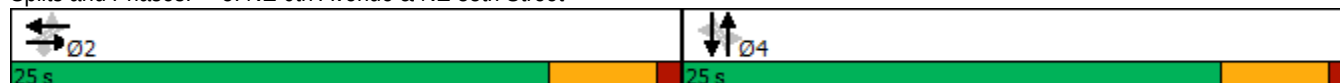
Intersection LOS: B

Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: NE 6th Avenue & NE 38th Street



Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	94	20	45	53	76	27	633	49	278	775	8
Future Volume (vph)	33	94	20	45	53	76	27	633	49	278	775	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1200	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)	75		75	140		25	90		0	230		0
Storage Lanes	1		1	1		1	1		0	1		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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.989			0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1810	1538	1752	1845	1568	1752	3466	0	1096	3464	0
Flt Permitted	0.950			0.950			0.350			0.167		
Satd. Flow (perm)	1719	1810	1538	1752	1845	1568	646	3466	0	193	3464	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								5			1	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		2169			1000			3110			550	
Travel Time (s)		59.2			27.3			60.6			10.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	3%	3%	3%	3%	3%	3%	4%	4%	4%
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)	40	113	24	60	71	101	28	666	52	284	791	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	113	24	60	71	101	28	718	0	284	799	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	45.0	45.0	45.0	24.0	53.0		24.0	53.0	
Total Split (%)	23.8%	23.8%	15.0%	28.1%	28.1%	28.1%	15.0%	33.1%		15.0%	33.1%	
Maximum Green (s)	32.0	32.0	18.0	38.0	38.0	38.0	18.0	47.0		18.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Existing (2019)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	14.9	14.9	25.7	15.2	15.2	15.2	52.2	47.4		110.9	102.0	
Actuated g/C Ratio	0.09	0.09	0.16	0.10	0.10	0.10	0.33	0.30		0.69	0.64	
v/c Ratio	0.25	0.67	0.10	0.36	0.41	0.68	0.11	0.70		0.62	0.36	
Control Delay	69.4	88.9	55.6	72.4	73.7	91.4	19.1	53.4		30.9	15.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.4	88.9	55.6	72.4	73.7	91.4	19.1	53.4		30.9	15.8	
LOS	E	F	E	E	E	F	B	D		C	B	
Approach Delay	80.0			81.0			52.1			19.8		
Approach LOS	F			F			D			B		
Queue Length 50th (ft)	40	116	22	60	71	104	9	327		166	204	
Queue Length 95th (ft)	72	166	44	87	100	135	25	426		318	306	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	343	362	373	416	438	372	388	1079		458	2209	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.12	0.31	0.06	0.14	0.16	0.27	0.07	0.67		0.62	0.36	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 13 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 41.7

Intersection LOS: D

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	53 s	45 s	38 s
 Ø5	 Ø6 (R)		
24 s	53 s		

Ram Oakland Park Traffic Analysis
1: Andrews Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	1266	245	161	1400	80	266	814	151	82	594	136
Future Volume (vph)	274	1266	245	161	1400	80	266	814	151	82	594	136
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.976			0.992			0.977			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4963	0	1752	4996	0	1770	3458	0	1770	3440	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4963	0	1752	4996	0	1770	3458	0	1770	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			5			12			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.93	0.93	0.93	0.92	0.92	0.92	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	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)	277	1279	247	173	1505	86	289	885	164	85	612	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	277	1526	0	173	1591	0	289	1049	0	85	752	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	35.0	73.0		30.0	68.0		31.0	56.0		21.0	46.0	
Total Split (%)	19.4%	40.6%		16.7%	37.8%		17.2%	31.1%		11.7%	25.6%	
Maximum Green (s)	29.0	67.0		24.0	62.0		25.0	50.0		15.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	28.9	70.0		20.7	61.7		25.3	53.4		11.9	40.0	
Actuated g/C Ratio	0.16	0.39		0.12	0.34		0.14	0.30		0.07	0.22	
v/c Ratio	0.98	0.78		0.86	0.93		1.17	1.01		0.73	0.97	
Control Delay	120.2	51.4		101.9	79.5		172.1	91.7		114.5	92.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	120.2	51.4		101.9	79.5		172.1	91.7		114.5	92.9	
LOS	F	D		F	E		F	F		F	F	
Approach Delay		62.0			81.7			109.1			95.1	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	331	578		213	561		~406	~690		100	462	
Queue Length 95th (ft)	#529	651		m#303	709		#612	#863		165	#600	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	285	1945		233	1724		248	1034		147	775	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.97	0.78		0.74	0.92		1.17	1.01		0.58	0.97	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 114 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.17

Intersection Signal Delay: 83.8

Intersection LOS: F

Intersection Capacity Utilization 99.5%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

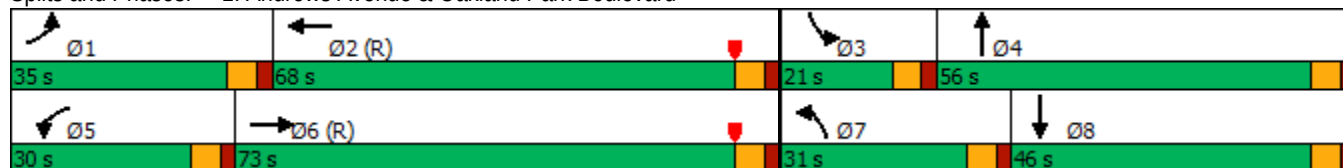
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
2: NE 6th Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	1216	166	104	1604	79	144	270	63	127	264	58
Future Volume (vph)	104	1216	166	104	1604	79	144	270	63	127	264	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2300	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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.982			0.993			0.972			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4994	0	1770	5050	0	1770	2192	0	1770	1812	0
Flt Permitted	0.950			0.950			0.130			0.168		
Satd. Flow (perm)	1770	4994	0	1770	5050	0	242	2192	0	313	1812	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		17			5			*75				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			2169			2590			3110	
Travel Time (s)		50.5			42.3			58.9			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	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)	108	1267	173	111	1706	84	155	290	68	137	284	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	1440	0	111	1790	0	155	358	0	137	346	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	24.0	83.0		24.0	83.0		27.0	46.0		27.0	46.0	
Total Split (%)	13.3%	46.1%		13.3%	46.1%		15.0%	25.6%		15.0%	25.6%	
Maximum Green (s)	18.0	77.0		18.0	77.0		21.0	40.0		21.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	14.3	87.6		14.5	87.8		56.7	40.2		51.1	37.4	
Actuated g/C Ratio	0.08	0.49		0.08	0.49		0.32	0.22		0.28	0.21	
v/c Ratio	0.77	0.59		0.78	0.73		0.72	0.65		0.69	0.92	
Control Delay	102.8	37.3		105.6	32.1		61.5	55.3		60.3	99.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	102.8	37.3		105.6	32.1		61.5	55.3		60.3	99.1	
LOS	F	D		F	C		E	E		E	F	
Approach Delay		41.8			36.4			57.2			88.1	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	131	293		119	738		132	304		115	399	
Queue Length 95th (ft)	m167	m341		m144	829		189	424		168	#571	
Internal Link Dist (ft)		2510			2089			2510			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	177	2438		177	2466		257	570		270	406	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.61	0.59		0.63	0.73		0.60	0.63		0.51	0.85	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 136 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 46.3

Intersection LOS: D

Intersection Capacity Utilization 83.9%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard

Ø1	Ø2 (R)	Ø3	Ø4
24 s	83 s	27 s	46 s
Ø5	Ø6 (R)	Ø7	Ø8
24 s	83 s	27 s	46 s

Ram Oakland Park Traffic Analysis
3: Dixie Highway & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	1005	129	93	1355	217	232	584	104	184	602	114
Future Volume (vph)	183	1005	129	93	1355	217	232	584	104	184	602	114
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.983			0.979			0.977			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4999	0	1770	4979	0	1770	3458	0	1770	3454	0
Flt Permitted	0.054			0.950			0.118			0.156		
Satd. Flow (perm)	101	4999	0	1770	4979	0	220	3458	0	291	3454	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		15						9			11	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2169			1000			1700			3110	
Travel Time (s)		42.3			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.89	0.89	0.89	0.99	0.99	0.99
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)	195	1069	137	98	1426	228	261	656	117	186	608	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	195	1206	0	98	1654	0	261	773	0	186	723	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		16.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	24.0	79.0		23.0	78.0		29.0	29.0		49.0	49.0	
Total Split (%)	13.3%	43.9%		12.8%	43.3%		16.1%	16.1%		27.2%	27.2%	
Maximum Green (s)	18.0	73.0		17.0	72.0		23.0	23.0		43.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	91.1	74.0		13.3	70.1		72.6	51.6		63.1	46.0	
Actuated g/C Ratio	0.51	0.41		0.07	0.39		0.40	0.29		0.35	0.26	
v/c Ratio	0.92	0.58		0.75	0.85		0.92	0.78		0.77	0.81	
Control Delay	98.1	38.3		113.4	55.3		81.8	64.9		57.2	70.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	98.1	38.3		113.4	55.3		81.8	64.9		57.2	70.7	
LOS	F	D		F	E		F	E		E	E	
Approach Delay		46.6			58.6			69.2			67.9	
Approach LOS		D			E			E			E	
Queue Length 50th (ft)	177	483		115	642		233	447		147	431	
Queue Length 95th (ft)	#338	543		184	705		#427	#600		213	514	
Internal Link Dist (ft)		2089			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	217	2073		167	1991		289	997		473	891	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.90	0.58		0.59	0.83		0.90	0.78		0.39	0.81	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 40 (22%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 59.1

Intersection LOS: E

Intersection Capacity Utilization 94.3%

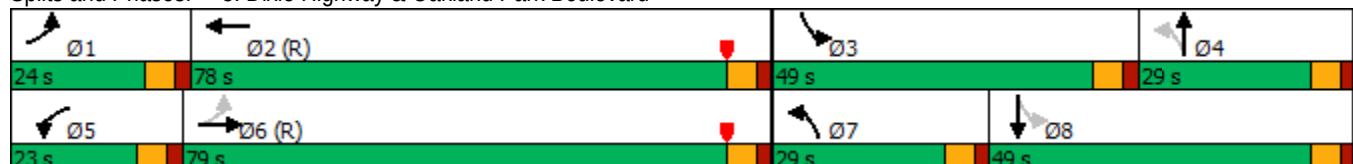
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	256	24	12	348	151	26	214	37	112	238	11
Future Volume (vph)	98	256	24	12	348	151	26	214	37	112	238	11
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.987			0.955			0.978			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	1779	0	1770	1822	0	1770	1850	0
Flt Permitted	0.340			0.575			0.583			0.557		
Satd. Flow (perm)	633	1839	0	1071	1779	0	1086	1822	0	1038	1850	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			45			18			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			2590	
Travel Time (s)		21.9			22.7			20.5			58.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88	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)	107	278	26	13	382	166	30	243	42	120	256	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	304	0	13	548	0	30	285	0	120	268	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		17.0	17.0		17.0	17.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Existing (2019)
Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	20.0	20.0		20.0	20.0		13.3	13.3		13.3	13.3	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.30	0.30		0.30	0.30	
v/c Ratio	0.37	0.36		0.03	0.65		0.09	0.51		0.38	0.48	
Control Delay	13.7	9.8		8.2	13.7		12.3	15.5		16.6	15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.7	9.8		8.2	13.7		12.3	15.5		16.6	15.6	
LOS	B	A		A	B		B	B		B	B	
Approach Delay	10.8			13.6			15.2			15.9		
Approach LOS	B			B			B			B		
Queue Length 50th (ft)	16	42		2	85		5	53		23	52	
Queue Length 95th (ft)	60	114		10	226		20	113		62	113	
Internal Link Dist (ft)	884			920			820			2510		
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	379	1105		641	1083		650	1098		621	1110	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.28	0.28		0.02	0.51		0.05	0.26		0.19	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 43.8

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 13.8

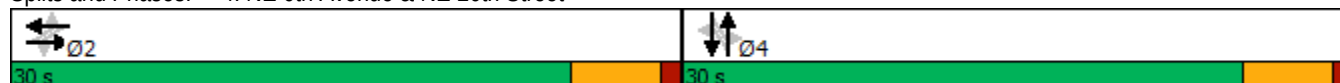
Intersection LOS: B

Intersection Capacity Utilization 76.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	128	79	18	238	40	70	347	20	16	342	32
Future Volume (vph)	36	128	79	18	238	40	70	347	20	16	342	32
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.982			0.994			0.989	
Flt Protected		0.989			0.997			0.992			0.998	
Satd. Flow (prot)	0	1842	1583	0	1824	0	0	1837	0	0	1839	0
Flt Permitted		0.870			0.975			0.887			0.972	
Satd. Flow (perm)	0	1621	1583	0	1783	0	0	1642	0	0	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		19			6			11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91
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)	41	145	90	21	274	46	74	365	21	18	376	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	186	90	0	341	0	0	460	0	0	429	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		15.2	15.2		15.2			16.2			16.2	
Actuated g/C Ratio		0.36	0.36		0.36			0.39			0.39	
v/c Ratio		0.31	0.14		0.52			0.72			0.61	
Control Delay		11.8	3.5		13.5			19.0			14.7	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		11.8	3.5		13.5			19.0			14.7	
LOS		B	A		B			B			B	
Approach Delay		9.1			13.5			19.0			14.7	
Approach LOS		A			B			B			B	
Queue Length 50th (ft)		31	0		58			81			70	
Queue Length 95th (ft)		69	19		117			#207			165	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		796	823		886			810			886	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.23	0.11		0.38			0.57			0.48	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 41.7

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 14.7

Intersection LOS: B

Intersection Capacity Utilization 86.7%

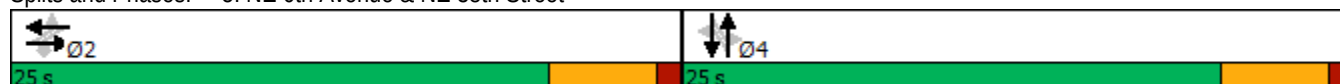
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: NE 6th Avenue & NE 38th Street



Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	98	23	46	144	137	66	848	52	203	843	19
Future Volume (vph)	41	98	23	46	144	137	66	848	52	203	843	19
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)	75			75	140			25	90	0	230	0
Storage Lanes	1			1	1			1	1	0	1	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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850				0.850		0.991		0.997	
Flt Protected	0.950			0.950				0.950				0.950
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1770	3507	0	1770	3529	0
Flt Permitted	0.950			0.950				0.295				0.188
Satd. Flow (perm)	1752	1845	1568	1770	1863	1583	550	3507	0	350	3529	0
Right Turn on Red			No				No		Yes		Yes	
Satd. Flow (RTOR)							4				1	
Link Speed (mph)	25				25				35		35	
Link Distance (ft)	2169				1000				3110		550	
Travel Time (s)	59.2				27.3				60.6		10.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	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)	53	127	30	56	176	167	69	883	54	214	887	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	127	30	56	176	167	69	937	0	214	907	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	42.0	42.0	42.0	24.0	56.0		24.0	56.0	
Total Split (%)	23.8%	23.8%	15.0%	26.3%	26.3%	26.3%	15.0%	35.0%		15.0%	35.0%	
Maximum Green (s)	32.0	32.0	18.0	35.0	35.0	35.0	18.0	50.0		18.0	50.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Existing (2019)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	15.9	15.9	28.4	22.1	22.1	22.1	82.8	76.3		103.1	90.6	
Actuated g/C Ratio	0.10	0.10	0.18	0.14	0.14	0.14	0.52	0.48		0.64	0.57	
v/c Ratio	0.31	0.69	0.11	0.23	0.69	0.77	0.21	0.56		0.52	0.45	
Control Delay	69.9	88.6	53.2	61.4	78.6	87.9	16.0	33.9		18.0	23.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.9	88.6	53.2	61.4	78.6	87.9	16.0	33.9		18.0	23.0	
LOS	E	F	D	E	E	F	B	C		B	C	
Approach Delay	78.8			80.1			32.7			22.0		
Approach LOS	E			F			C			C		
Queue Length 50th (ft)	52	131	27	53	179	171	25	362		86	280	
Queue Length 95th (ft)	82	167	47	84	225	219	59	536		160	425	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	350	369	390	387	407	346	461	1674		415	1998	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.15	0.34	0.08	0.14	0.43	0.48	0.15	0.56		0.52	0.45	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 136 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 38.8

Intersection LOS: D

Intersection Capacity Utilization 69.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	56 s	42 s	38 s
 Ø5	 Ø6 (R)		
24 s	56 s		

APPENDIX D

BACKGROUND INTERSECTION CAPACITY ANALYSIS WORKSHEETS

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	178	1619	326	176	1296	94	212	676	154	72	792	154
Future Volume (vph)	178	1619	326	176	1296	94	212	676	154	72	792	154
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.975			0.990			0.972			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4863	0	1719	4891	0	1770	3440	0	1770	3454	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4863	0	1719	4891	0	1770	3440	0	1770	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			7			15			12	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	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)	185	1686	340	202	1490	108	219	697	159	74	816	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	2026	0	202	1598	0	219	856	0	74	975	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	39.0	79.0		21.0	61.0		26.0	54.0		26.0	54.0	
Total Split (%)	21.7%	43.9%		11.7%	33.9%		14.4%	30.0%		14.4%	30.0%	
Maximum Green (s)	33.0	73.0		15.0	55.0		20.0	48.0		20.0	48.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	23.1	73.0		15.0	64.9		20.0	56.6		11.4	48.0	
Actuated g/C Ratio	0.13	0.41		0.08	0.36		0.11	0.31		0.06	0.27	
v/c Ratio	0.83	1.02		1.41	0.90		1.12	0.78		0.66	1.05	
Control Delay	105.0	76.3		269.7	75.9		167.4	61.6		108.2	104.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	105.0	76.3		269.7	75.9		167.4	61.6		108.2	104.4	
LOS	F	E		F	E		F	E		F	F	
Approach Delay		78.7			97.6			83.2			104.6	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	217	~916		~325	600		~295	480		87	~651	
Queue Length 95th (ft)	299	#1002		m#472	#793		#481	589		145	#794	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	318	1988		143	1768		196	1091		196	929	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	1.02		1.41	0.90		1.12	0.78		0.38	1.05	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 110 (61%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.41

Intersection Signal Delay: 89.5

Intersection LOS: F

Intersection Capacity Utilization 106.8%

ICU Level of Service G

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.

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

Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	1544	127	79	1258	52	160	133	56	96	215	50
Future Volume (vph)	79	1544	127	79	1258	52	160	133	56	96	215	50
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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.989			0.994			0.955			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4981	0	1752	5006	0	1770	1779	0	1752	1793	0
Flt Permitted	0.950			0.950			0.155			0.456		
Satd. Flow (perm)	1752	4981	0	1752	5006	0	289	1779	0	841	1793	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		10			4			11				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			2169			2590			3110	
Travel Time (s)		50.5			42.3			58.9			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.85	0.85	0.85	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	3%	3%
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)	91	1775	146	84	1338	55	188	156	66	119	265	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	1921	0	84	1393	0	188	222	0	119	327	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	22.0	91.0		17.0	86.0		20.0	52.0		20.0	52.0	
Total Split (%)	12.2%	50.6%		9.4%	47.8%		11.1%	28.9%		11.1%	28.9%	
Maximum Green (s)	16.0	85.0		11.0	80.0		14.0	46.0		14.0	46.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	12.7	91.4		11.9	90.6		56.2	40.8		48.9	37.0	
Actuated g/C Ratio	0.07	0.51		0.07	0.50		0.31	0.23		0.27	0.21	
v/c Ratio	0.74	0.76		0.73	0.55		0.86	0.54		0.41	0.89	
Control Delay	97.8	36.5		92.9	32.4		79.7	62.8		47.3	94.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	97.8	36.5		92.9	32.4		79.7	62.8		47.3	94.6	
LOS	F	D		F	C		E	E		D	F	
Approach Delay		39.3			35.8			70.5			82.0	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	111	387		100	487		163	218		99	380	
Queue Length 95th (ft)	m116	m331		m#169	m582		#250	286		133	418	
Internal Link Dist (ft)		2510			2089			2510			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	155	2534		121	2522		219	462		309	458	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.59	0.76		0.69	0.55		0.86	0.48		0.39	0.71	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 140 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 45.4

Intersection LOS: D

Intersection Capacity Utilization 80.3%

ICU Level of Service D

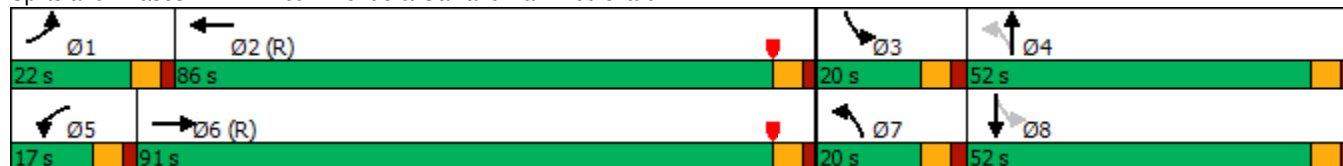
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1273	170	71	903	135	223	484	72	222	568	113
Future Volume (vph)	190	1273	170	71	903	135	223	484	72	222	568	113
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982			0.981			0.981			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	4851	0	1770	4989	0	1770	3472	0	1703	3321	0
Flt Permitted	0.138			0.950			0.213			0.135		
Satd. Flow (perm)	250	4851	0	1770	4989	0	397	3472	0	242	3321	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		14						8			15	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2169			1000			1700			3110	
Travel Time (s)		42.3			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	6%	6%	6%
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)	211	1414	189	78	992	148	248	538	80	231	592	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	211	1603	0	78	1140	0	248	618	0	231	710	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		11.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	30.0	67.0		23.0	60.0		16.0	42.0		48.0	74.0	
Total Split (%)	16.7%	37.2%		12.8%	33.3%		8.9%	23.3%		26.7%	41.1%	
Maximum Green (s)	24.0	61.0		17.0	54.0		10.0	36.0		42.0	68.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Background (2022)

Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	98.6	80.7		11.8	72.1		52.6	39.7		66.6	50.2	
Actuated g/C Ratio	0.55	0.45		0.07	0.40		0.29	0.22		0.37	0.28	
v/c Ratio	0.69	0.73		0.67	0.57		1.15	0.80		0.82	0.76	
Control Delay	29.5	34.6		108.5	45.2		149.0	74.2		65.1	62.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.5	34.6		108.5	45.2		149.0	74.2		65.1	62.7	
LOS	C	C		F	D		F	E		E	E	
Approach Delay		34.0			49.2			95.6			63.3	
Approach LOS		C			D			F			E	
Queue Length 50th (ft)	86	682		92	376		~279	368		198	395	
Queue Length 95th (ft)	m179	772		152	508		#440	428		271	421	
Internal Link Dist (ft)		2089			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	337	2183		167	1997		216	779		434	1263	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.63	0.73		0.47	0.57		1.15	0.79		0.53	0.56	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 32 (18%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 54.6

Intersection LOS: D

Intersection Capacity Utilization 84.2%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

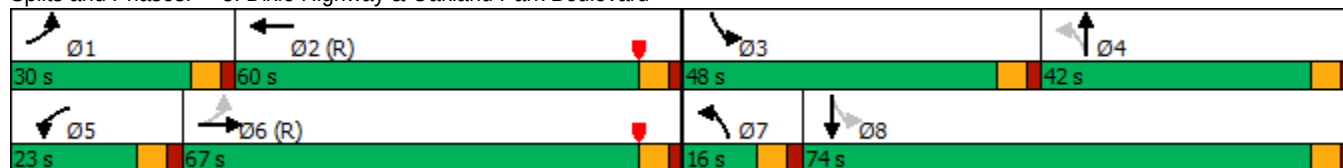
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	248	12	17	185	72	16	122	32	118	215	60
Future Volume (vph)	56	248	12	17	185	72	16	122	32	118	215	60
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993			0.958			0.969			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1785	0	1752	1787	0	1752	1784	0
Flt Permitted	0.574			0.564			0.536			0.648		
Satd. Flow (perm)	1069	1850	0	1051	1785	0	989	1787	0	1195	1784	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			40			27			29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			2590	
Travel Time (s)		21.9			22.7			20.5			58.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.89	0.89	0.89	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%
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)	70	310	15	20	220	86	18	137	36	134	244	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	325	0	20	306	0	18	173	0	134	312	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		21.0	21.0		21.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis

4: NE 6th Avenue & NE 26th Street

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	17.5	17.5		17.5	17.5		12.6	12.6		12.6	12.6	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.31	0.31		0.31	0.31	
v/c Ratio	0.15	0.41		0.04	0.39		0.06	0.30		0.36	0.54	
Control Delay	9.4	10.6		8.7	9.4		10.6	10.7		14.1	14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.4	10.6		8.7	9.4		10.6	10.7		14.1	14.4	
LOS	A	B		A	A		B	B		B	B	
Approach Delay		10.4			9.4			10.7			14.3	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	8	41		2	33		2	21		20	45	
Queue Length 95th (ft)	30	106		13	97		14	67		64	122	
Internal Link Dist (ft)		884			920			820			2510	
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	687	1191		675	1161		636	1158		768	1157	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.27		0.03	0.26		0.03	0.15		0.17	0.27	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 40.5

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 11.5

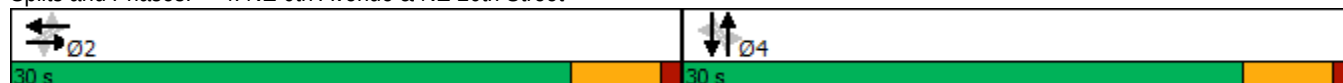
Intersection LOS: B

Intersection Capacity Utilization 64.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	155	105	14	129	32	31	262	7	13	324	24
Future Volume (vph)	36	155	105	14	129	32	31	262	7	13	324	24
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.975			0.997			0.991	
Flt Protected		0.991			0.996			0.995			0.998	
Satd. Flow (prot)	0	1793	1538	0	1774	0	0	1848	0	0	1824	0
Flt Permitted		0.912			0.967			0.928			0.981	
Satd. Flow (perm)	0	1650	1538	0	1722	0	0	1723	0	0	1793	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124		27			3			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	2%	2%	2%	3%	3%	3%
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)	42	182	124	16	148	37	36	305	8	14	352	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	224	124	0	201	0	0	349	0	0	392	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Background (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		14.1	14.1		14.1			14.4			14.4	
Actuated g/C Ratio		0.36	0.36		0.36			0.37			0.37	
v/c Ratio		0.37	0.19		0.31			0.54			0.58	
Control Delay		11.7	3.4		9.6			13.6			14.0	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		11.7	3.4		9.6			13.6			14.0	
LOS		B	A		A			B			B	
Approach Delay		8.7			9.6			13.6			14.0	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		29	0		22			48			54	
Queue Length 95th (ft)		79	20		65			125			148	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		873	872		924			913			953	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.26	0.14		0.22			0.38			0.41	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 38.7

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: NE 6th Avenue & NE 38th Street

														
25 s														

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	97	21	47	63	79	58	684	56	287	803	12
Future Volume (vph)	34	97	21	47	63	79	58	684	56	287	803	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1200	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%				0%				0%			
Storage Length (ft)	75			75	140			25	90	0	230	0
Storage Lanes	1			1	1			1	1	0	1	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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850				0.850		0.989			
Flt Protected	0.950			0.950				0.950				0.950
Satd. Flow (prot)	1719	1810	1538	1752	1845	1568	1752	3466	0	1096	3464	0
Flt Permitted	0.950			0.950				0.339				0.105
Satd. Flow (perm)	1719	1810	1538	1752	1845	1568	625	3466	0	121	3464	0
Right Turn on Red			No				No		Yes			
Satd. Flow (RTOR)									5		1	
Link Speed (mph)	25				25				35		35	
Link Distance (ft)	2169				1000				3110		550	
Travel Time (s)	59.2				27.3				60.6		10.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	3%	3%	3%	3%	3%	3%	4%	4%	4%
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)	41	117	25	63	84	105	61	720	59	293	819	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	117	25	63	84	105	61	779	0	293	831	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	45.0	45.0	45.0	24.0	53.0		24.0	53.0	
Total Split (%)	23.8%	23.8%	15.0%	28.1%	28.1%	28.1%	15.0%	33.1%		15.0%	33.1%	
Maximum Green (s)	32.0	32.0	18.0	38.0	38.0	38.0	18.0	47.0		18.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis

6: Dixie Highway & NE 38th Street

Background (2022)

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	15.2	15.2	27.1	15.6	15.6	15.6	48.8	42.8		110.2	100.3	
Actuated g/C Ratio	0.10	0.10	0.17	0.10	0.10	0.10	0.30	0.27		0.69	0.63	
v/c Ratio	0.25	0.68	0.10	0.37	0.47	0.69	0.26	0.84		0.64	0.38	
Control Delay	69.1	89.1	54.1	72.1	75.5	91.2	23.2	63.5		38.9	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.1	89.1	54.1	72.1	75.5	91.2	23.2	63.5		38.9	17.1	
LOS	E	F	D	E	E	F	C	E		D	B	
Approach Delay	79.8			81.2			60.5			22.8		
Approach LOS	E			F			E			C		
Queue Length 50th (ft)	41	121	22	63	85	108	23	389		209	221	
Queue Length 95th (ft)	73	170	45	91	115	140	46	470		#411	334	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	343	362	376	416	438	372	364	1022		457	2171	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.12	0.32	0.07	0.15	0.19	0.28	0.17	0.76		0.64	0.38	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 13 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 46.5

Intersection LOS: D

Intersection Capacity Utilization 71.0%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	53 s	45 s	38 s
 Ø5	 Ø6 (R)		
24 s	53 s		

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			  			  	
Traffic Volume (vph)	283	1362	255	171	1487	88	276	842	164	92	614	141
Future Volume (vph)	283	1362	255	171	1487	88	276	842	164	92	614	141
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.976			0.992			0.976			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4963	0	1752	4996	0	1770	3454	0	1770	3440	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4963	0	1752	4996	0	1770	3454	0	1770	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			6			12			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.93	0.93	0.93	0.92	0.92	0.92	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	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)	286	1376	258	184	1599	95	300	915	178	95	633	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	1634	0	184	1694	0	300	1093	0	95	778	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	35.0	73.0		30.0	68.0		31.0	56.0		21.0	46.0	
Total Split (%)	19.4%	40.6%		16.7%	37.8%		17.2%	31.1%		11.7%	25.6%	
Maximum Green (s)	29.0	67.0		24.0	62.0		25.0	50.0		15.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	29.0	69.6		21.4	62.0		25.0	52.4		12.6	40.0	
Actuated g/C Ratio	0.16	0.39		0.12	0.34		0.14	0.29		0.07	0.22	
v/c Ratio	1.00	0.85		0.88	0.98		1.22	1.08		0.77	1.00	
Control Delay	127.0	55.0		97.1	91.0		191.7	109.1		118.2	100.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	127.0	55.0		97.1	91.0		191.7	109.1		118.2	100.2	
LOS	F	E		F	F		F	F		F	F	
Approach Delay		65.8			91.6			126.9			102.2	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	~345	650		228	660		~433	~762		112	~485	
Queue Length 95th (ft)	#554	717		m#294	#795		#638	#921		#186	#634	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	285	1932		233	1724		245	1014		147	775	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.00	0.85		0.79	0.98		1.22	1.08		0.65	1.00	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 114 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 93.0

Intersection LOS: F

Intersection Capacity Utilization 103.1%

ICU Level of Service G

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.

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

Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	1325	172	107	1708	82	149	279	65	131	273	60
Future Volume (vph)	108	1325	172	107	1708	82	149	279	65	131	273	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2300	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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.983			0.993			0.972			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4999	0	1770	5050	0	1770	2192	0	1770	1812	0
Flt Permitted	0.950			0.950			0.123			0.159		
Satd. Flow (perm)	1770	4999	0	1770	5050	0	229	2192	0	296	1812	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		16			5			*75				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			2169			2590			3110	
Travel Time (s)		50.5			42.3			58.9			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	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)	113	1380	179	114	1817	87	160	300	70	141	294	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	1559	0	114	1904	0	160	370	0	141	359	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	24.0	83.0		24.0	83.0		27.0	46.0		27.0	46.0	
Total Split (%)	13.3%	46.1%		13.3%	46.1%		15.0%	25.6%		15.0%	25.6%	
Maximum Green (s)	18.0	77.0		18.0	77.0		21.0	40.0		21.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	14.7	85.9		14.7	86.0		58.0	41.2		52.6	38.5	
Actuated g/C Ratio	0.08	0.48		0.08	0.48		0.32	0.23		0.29	0.21	
v/c Ratio	0.78	0.65		0.79	0.79		0.74	0.66		0.70	0.93	
Control Delay	101.5	38.4		102.1	35.1		63.4	55.7		60.3	98.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	101.5	38.4		102.1	35.1		63.4	55.7		60.3	98.8	
LOS	F	D		F	D		E	E		E	F	
Approach Delay		42.6			38.9			58.0			87.9	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	137	319		123	829		133	314		116	411	
Queue Length 95th (ft)	m162	m390		m141	m876		202	446		172	#603	
Internal Link Dist (ft)		2510			2089			2510			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	177	2395		177	2416		256	574		268	409	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.64	0.65		0.64	0.79		0.63	0.64		0.53	0.88	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 136 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 47.6

Intersection LOS: D

Intersection Capacity Utilization 87.1%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard

24 s	83 s	27 s	46 s
24 s	83 s	27 s	46 s

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	195	1088	146	101	1428	236	253	606	116	207	625	127
Future Volume (vph)	195	1088	146	101	1428	236	253	606	116	207	625	127
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982			0.979			0.976			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4994	0	1770	4979	0	1770	3454	0	1770	3451	0
Flt Permitted	0.053			0.950			0.084			0.103		
Satd. Flow (perm)	99	4994	0	1770	4979	0	156	3454	0	192	3451	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		16						10			12	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		2169			1000			1700			3110	
Travel Time (s)		42.3			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.89	0.89	0.89	0.99	0.99	0.99
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)	207	1157	155	106	1503	248	284	681	130	209	631	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	1312	0	106	1751	0	284	811	0	209	759	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		16.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	24.0	79.0		23.0	78.0		29.0	29.0		49.0	49.0	
Total Split (%)	13.3%	43.9%		12.8%	43.3%		16.1%	16.1%		27.2%	27.2%	
Maximum Green (s)	18.0	73.0		17.0	72.0		23.0	23.0		43.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	92.3	75.0		13.9	71.1		69.6	47.8		62.2	43.0	
Actuated g/C Ratio	0.51	0.42		0.08	0.40		0.39	0.27		0.35	0.24	
v/c Ratio	0.96	0.63		0.78	0.89		1.03	0.88		0.89	0.91	
Control Delay	101.8	36.6		115.4	57.5		115.7	73.3		84.5	81.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	101.8	36.6		115.4	57.5		115.7	73.3		84.5	81.2	
LOS	F	D		F	E		F	E		F	F	
Approach Delay		45.5			60.8			84.3			81.9	
Approach LOS		D			E			F			F	
Queue Length 50th (ft)	198	536		125	700		~317	484		190	458	
Queue Length 95th (ft)	#375	601		197	766		#531	#685		276	#572	
Internal Link Dist (ft)		2089			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	217	2090		167	1991		276	925		454	833	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.95	0.63		0.63	0.88		1.03	0.88		0.46	0.91	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 40 (22%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 65.0

Intersection LOS: E

Intersection Capacity Utilization 99.0%

ICU Level of Service F

Analysis Period (min) 15

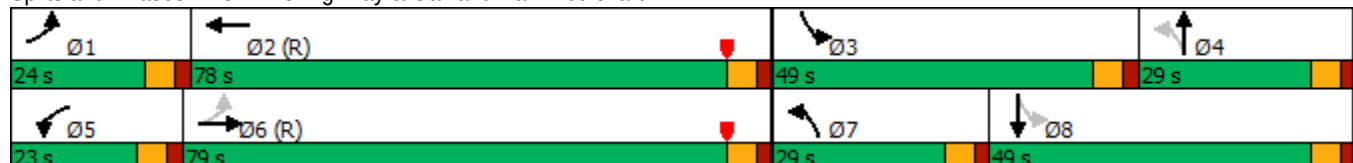
~ Volume exceeds capacity, queue is theoretically infinite.

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: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	270	25	12	365	156	27	221	38	116	246	11
Future Volume (vph)	101	270	25	12	365	156	27	221	38	116	246	11
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.987			0.955			0.978			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	1779	0	1770	1822	0	1770	1852	0
Flt Permitted	0.316			0.561			0.564			0.538		
Satd. Flow (perm)	589	1839	0	1045	1779	0	1051	1822	0	1002	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			44			18			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			2590	
Travel Time (s)		21.9			22.7			20.5			58.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88	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)	110	293	27	13	401	171	31	251	43	125	265	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	320	0	13	572	0	31	294	0	125	277	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		17.0	17.0		17.0	17.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis

4: NE 6th Avenue & NE 26th Street

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	20.8	20.8		20.8	20.8		13.9	13.9		13.9	13.9	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.31	0.31		0.31	0.31	
v/c Ratio	0.41	0.38		0.03	0.68		0.10	0.51		0.41	0.48	
Control Delay	15.4	10.3		8.6	15.0		12.4	15.8		17.3	15.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.4	10.3		8.6	15.0		12.4	15.8		17.3	15.9	
LOS	B	B		A	B		B	B		B	B	
Approach Delay		11.6			14.9			15.4			16.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	17	46		2	93		6	60		26	59	
Queue Length 95th (ft)	67	126		11	#257		20	116		65	116	
Internal Link Dist (ft)		884			920			820			2510	
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	340	1066		603	1046		607	1060		578	1072	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.32	0.30		0.02	0.55		0.05	0.28		0.22	0.26	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 45.2

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.5

Intersection LOS: B

Intersection Capacity Utilization 78.5%

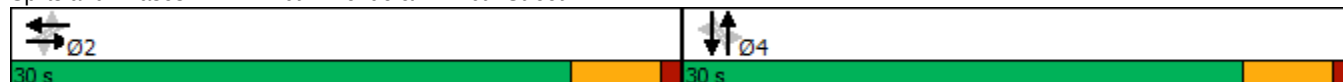
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	137	82	19	252	41	72	359	21	17	354	33
Future Volume (vph)	37	137	82	19	252	41	72	359	21	17	354	33
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.982			0.994			0.989	
Flt Protected		0.990			0.997			0.992			0.998	
Satd. Flow (prot)	0	1844	1583	0	1824	0	0	1837	0	0	1839	0
Flt Permitted		0.872			0.974			0.882			0.970	
Satd. Flow (perm)	0	1624	1583	0	1782	0	0	1633	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			93		18			6			11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91
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)	42	156	93	22	290	47	76	378	22	19	389	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	93	0	359	0	0	476	0	0	444	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Background (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		15.6	15.6		15.6			16.6			16.6	
Actuated g/C Ratio		0.37	0.37		0.37			0.39			0.39	
v/c Ratio		0.33	0.15		0.54			0.74			0.63	
Control Delay		12.1	3.5		14.0			20.6			15.4	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		12.1	3.5		14.0			20.6			15.4	
LOS		B	A		B			C			B	
Approach Delay		9.3			14.0			20.6			15.4	
Approach LOS		A			B			C			B	
Queue Length 50th (ft)		35	0		66			88			76	
Queue Length 95th (ft)		74	19		124			#240			173	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		784	812		869			791			868	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.25	0.11		0.41			0.60			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 42.5

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 89.1%

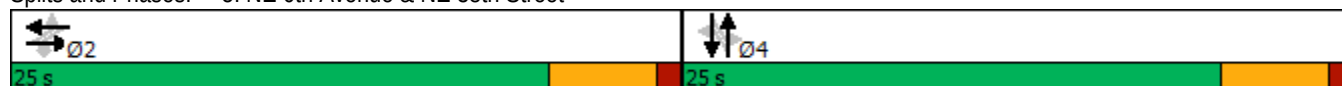
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: NE 6th Avenue & NE 38th Street



Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Background (2022)

Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	101	24	48	153	142	89	909	60	210	880	22
Future Volume (vph)	42	101	24	48	153	142	89	909	60	210	880	22
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)	75		75	140		25	90		0	230		0
Storage Lanes	1		1	1		1	1		0	1		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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt	0.850			0.850			0.991			0.996		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1770	3507	0	1770	3525	0
Flt Permitted	0.950			0.950			0.271			0.157		
Satd. Flow (perm)	1752	1845	1568	1770	1863	1583	505	3507	0	292	3525	0
Right Turn on Red	No			No			Yes			Yes		
Satd. Flow (RTOR)							4			2		
Link Speed (mph)	25			25			35			35		
Link Distance (ft)	2169			1000			3110			550		
Travel Time (s)	59.2			27.3			60.6			10.7		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	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)	55	131	31	59	187	173	93	947	63	221	926	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	131	31	59	187	173	93	1010	0	221	949	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	42.0	42.0	42.0	24.0	56.0		24.0	56.0	
Total Split (%)	23.8%	23.8%	15.0%	26.3%	26.3%	26.3%	15.0%	35.0%		15.0%	35.0%	
Maximum Green (s)	32.0	32.0	18.0	35.0	35.0	35.0	18.0	50.0		18.0	50.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Background (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	16.2	16.2	30.1	22.7	22.7	22.7	82.1	74.3		102.1	88.3	
Actuated g/C Ratio	0.10	0.10	0.19	0.14	0.14	0.14	0.51	0.46		0.64	0.55	
v/c Ratio	0.31	0.70	0.11	0.24	0.71	0.77	0.29	0.62		0.57	0.49	
Control Delay	69.7	88.6	51.2	61.0	79.5	87.7	17.2	36.9		20.5	25.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.7	88.6	51.2	61.0	79.5	87.7	17.2	36.9		20.5	25.2	
LOS	E	F	D	E	E	F	B	D		C	C	
Approach Delay	78.5			80.3			35.2			24.3		
Approach LOS	E			F			D			C		
Queue Length 50th (ft)	54	135	27	56	190	178	35	412		91	306	
Queue Length 95th (ft)	84	170	46	89	236	225	76	606		174	477	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	350	369	394	387	407	346	433	1630		392	1945	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.36	0.08	0.15	0.46	0.50	0.21	0.62		0.56	0.49	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 136 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 40.5

Intersection LOS: D

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	56 s	42 s	38 s
 Ø5	 Ø6 (R)		
24 s	56 s		

APPENDIX E

**TOTAL INTERSECTION CAPACITY ANALYSIS
WORKSHEETS**

Lercari, Natalia

From: Kleinedler, John <JKLEINEDLER@broward.org>
Sent: Thursday, May 07, 2020 10:42 AM
To: Lercari, Natalia
Subject: [CAUTION: SUSPECT SENDER] RE: Proposed Signal Timing changes for RAM project

Good morning –

These timings are within an acceptable range, we don't have any concerns with them.

John Kleinedler, PE
Broward County Traffic Engineering
954.847.2753
jkleinedler@broward.org

From: Lercari, Natalia <nlercari@mcmahonassociates.com>
Sent: Thursday, May 7, 2020 9:41 AM
To: Kleinedler, John <JKLEINEDLER@broward.org>
Subject: Proposed Signal Timing changes for RAM project

External Email

Good Morning John,

Hope you are staying safe through this crisis!

I am emailing you again about modified signal timings that we are proposing for the Oakland Park Boulevard/NE 6th Avenue intersection. Previously the site was proposing a mix of residential, retail and a gas station. Now the site is proposing a mix of residential, retail and a supermarket so the trips have been significantly reduced. However, minor signal optimization was still required at the Oakland Park Boulevard/NE 6th Avenue intersection for AM Peak Hour conditions only, similar to before.

Would you please review the attached optimized signal timings and confirm that Broward County is ok with the proposed timings? We will include your email in the appendices of the report.

Thanks John!

Natalia Lercari, P.E., LEED Green Associate | Senior Project Manager
O: 561.840.8650 x 4105

2090 Palm Beach Lakes Blvd., Suite 400
West Palm Beach, FL 33409
nlercari@mcmahonassociates.com

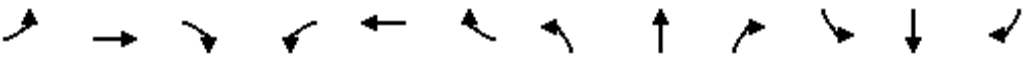
THE RIBBON IS CUT!
Click Below to See McMahon's NEW WEBSITE!

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	1618	326	177	1315	95	212	676	152	70	792	154
Future Volume (vph)	178	1618	326	177	1315	95	212	676	152	70	792	154
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.975			0.990			0.972			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	4863	0	1719	4891	0	1770	3440	0	1770	3454	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	4863	0	1719	4891	0	1770	3440	0	1770	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			6			15			12	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	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)	185	1685	340	203	1511	109	219	697	157	72	816	159
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	2025	0	203	1620	0	219	854	0	72	975	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	39.0	79.0		21.0	61.0		26.0	54.0		26.0	54.0	
Total Split (%)	21.7%	43.9%		11.7%	33.9%		14.4%	30.0%		14.4%	30.0%	
Maximum Green (s)	33.0	73.0		15.0	55.0		20.0	48.0		20.0	48.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	23.1	73.0		15.0	64.9		20.0	56.8		11.2	48.0	
Actuated g/C Ratio	0.13	0.41		0.08	0.36		0.11	0.32		0.06	0.27	
v/c Ratio	0.83	1.02		1.42	0.92		1.12	0.78		0.65	1.05	
Control Delay	105.0	76.2		270.9	79.5		167.4	61.3		108.3	104.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	105.0	76.2		270.9	79.5		167.4	61.3		108.3	104.4	
LOS	F	E		F	E		F	E		F	F	
Approach Delay		78.6			100.8			82.9			104.6	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	217	~915		~323	647		~295	477		85	~651	
Queue Length 95th (ft)	299	#1001		m#473	#815		#481	586		142	#794	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	318	1988		143	1767		196	1095		196	929	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	1.02		1.42	0.92		1.12	0.78		0.37	1.05	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 110 (61%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.42

Intersection Signal Delay: 90.4

Intersection LOS: F

Intersection Capacity Utilization 106.9%

ICU Level of Service G

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.

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

Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard

Ø1	Ø2 (R)	Ø3	Ø4
39 s	61 s	26 s	54 s
Ø5	Ø6 (R)	Ø7	Ø8
21 s	79 s	26 s	54 s

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	1539	127	64	1265	52	174	138	66	98	216	50
Future Volume (vph)	79	1539	127	64	1265	52	174	138	66	98	216	50
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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.989			0.994			0.951			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	4981	0	1752	5006	0	1770	1771	0	1752	1793	0
Flt Permitted	0.950			0.950			0.151			0.437		
Satd. Flow (perm)	1752	4981	0	1752	5006	0	281	1771	0	806	1793	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		10			4			13				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			640			298			3110	
Travel Time (s)		50.5			12.5			6.8			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.85	0.85	0.85	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	3%	3%	3%
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)	91	1769	146	68	1346	55	205	162	78	121	267	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	1915	0	68	1401	0	205	240	0	121	329	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	22.0	88.0		17.0	83.0		23.0	52.0		23.0	52.0	
Total Split (%)	12.2%	48.9%		9.4%	46.1%		12.8%	28.9%		12.8%	28.9%	
Maximum Green (s)	16.0	82.0		11.0	77.0		17.0	46.0		17.0	46.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	12.7	91.4		10.1	88.8		58.6	41.9		49.8	37.2	
Actuated g/C Ratio	0.07	0.51		0.06	0.49		0.33	0.23		0.28	0.21	
v/c Ratio	0.74	0.76		0.69	0.57		0.87	0.57		0.42	0.89	
Control Delay	100.4	35.1		93.6	34.4		78.5	62.8		46.0	94.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	100.4	35.1		93.6	34.4		78.5	62.8		46.0	94.7	
LOS	F	D		F	C		E	E		D	F	
Approach Delay		38.1			37.1			70.0			81.6	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	111	351		81	519		180	237		101	382	
Queue Length 95th (ft)	m116	m330		m#121	m590		#263	308		132	420	
Internal Link Dist (ft)		2510			560			218			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	155	2533		111	2472		238	462		331	458	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.59	0.76		0.61	0.57		0.86	0.52		0.37	0.72	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 140 (78%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 45.5

Intersection LOS: D

Intersection Capacity Utilization 80.2%

ICU Level of Service D

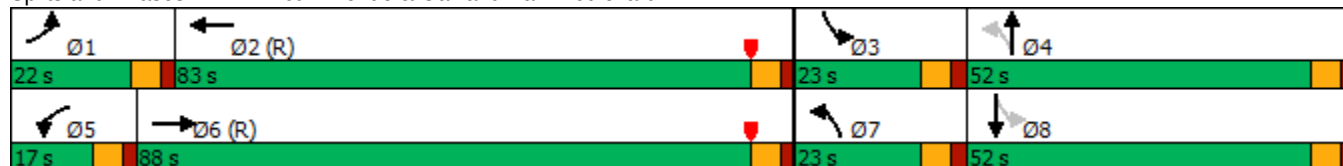
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	194	1278	172	71	903	135	221	484	72	222	568	110
Future Volume (vph)	194	1278	172	71	903	135	221	484	72	222	568	110
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982			0.981			0.981			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	4851	0	1770	4989	0	1770	3472	0	1703	3324	0
Flt Permitted	0.137			0.950			0.219			0.134		
Satd. Flow (perm)	248	4851	0	1770	4989	0	408	3472	0	240	3324	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		14						8			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1529			1000			1700			3110	
Travel Time (s)		29.8			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	6%	6%	6%
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)	216	1420	191	78	992	148	246	538	80	231	592	115
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	1611	0	78	1140	0	246	618	0	231	707	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		11.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	30.0	67.0		23.0	60.0		16.0	42.0		48.0	74.0	
Total Split (%)	16.7%	37.2%		12.8%	33.3%		8.9%	23.3%		26.7%	41.1%	
Maximum Green (s)	24.0	61.0		17.0	54.0		10.0	36.0		42.0	68.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Total (2022) - Optimized

Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	98.7	80.9		11.8	71.8		52.2	39.6		66.6	50.4	
Actuated g/C Ratio	0.55	0.45		0.07	0.40		0.29	0.22		0.37	0.28	
v/c Ratio	0.70	0.74		0.67	0.57		1.14	0.80		0.82	0.75	
Control Delay	31.1	34.1		108.5	45.4		147.7	74.6		65.4	62.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.1	34.1		108.5	45.4		147.7	74.6		65.4	62.4	
LOS	C	C		F	D		F	E		E	E	
Approach Delay		33.8			49.5			95.4			63.1	
Approach LOS		C			D			F			E	
Queue Length 50th (ft)	105	661		92	378		~269	368		198	394	
Queue Length 95th (ft)	m191	779		152	508		#440	428		272	420	
Internal Link Dist (ft)		1449			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	337	2188		167	1988		215	776		433	1264	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.64	0.74		0.47	0.57		1.14	0.80		0.53	0.56	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 32 (18%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 54.4

Intersection LOS: D

Intersection Capacity Utilization 84.1%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

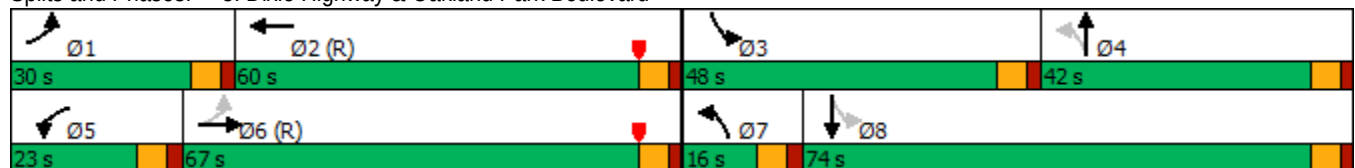
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Total (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	248	12	17	185	72	16	122	32	121	217	60
Future Volume (vph)	55	248	12	17	185	72	16	122	32	121	217	60
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993			0.958			0.969			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1785	0	1752	1787	0	1752	1786	0
Flt Permitted	0.574			0.564			0.532			0.648		
Satd. Flow (perm)	1069	1850	0	1051	1785	0	981	1787	0	1195	1786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			40			27			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			1380	
Travel Time (s)		21.9			22.7			20.5			31.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.89	0.89	0.89	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%
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)	69	310	15	20	220	86	18	137	36	138	247	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	325	0	20	306	0	18	173	0	138	315	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	23.0	23.0		23.0	23.0		21.0	21.0		21.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Total (2022)
Timing Plan: AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	17.5	17.5		17.5	17.5		12.7	12.7		12.7	12.7	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.31	0.31		0.31	0.31	
v/c Ratio	0.15	0.41		0.04	0.39		0.06	0.30		0.37	0.55	
Control Delay	9.5	10.7		8.8	9.5		10.6	10.6		14.2	14.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.5	10.7		8.8	9.5		10.6	10.6		14.2	14.5	
LOS	A	B		A	A		B	B		B	B	
Approach Delay	10.5			9.4			10.6			14.4		
Approach LOS	B			A			B			B		
Queue Length 50th (ft)	8	41		2	34		2	21		21	45	
Queue Length 95th (ft)	30	107		13	98		14	67		66	123	
Internal Link Dist (ft)	884			920			820			1300		
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	685	1188		674	1159		629	1156		766	1155	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.27		0.03	0.26		0.03	0.15		0.18	0.27	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 40.6

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 11.6

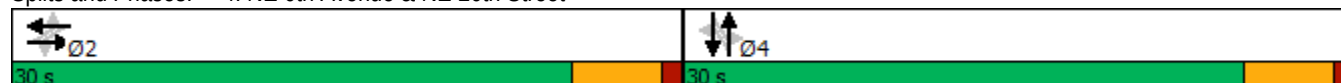
Intersection LOS: B

Intersection Capacity Utilization 65.0%

ICU Level of Service C

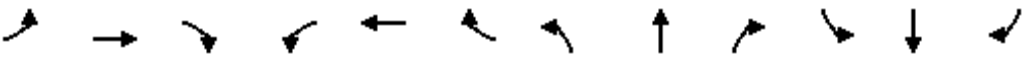
Analysis Period (min) 15

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Total (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰			↰	
Traffic Volume (vph)	36	155	106	14	129	32	33	263	8	13	324	24
Future Volume (vph)	36	155	106	14	129	32	33	263	8	13	324	24
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.975			0.997			0.991	
Flt Protected		0.991			0.996			0.995			0.998	
Satd. Flow (prot)	0	1793	1538	0	1774	0	0	1848	0	0	1824	0
Flt Permitted		0.912			0.967			0.926			0.980	
Satd. Flow (perm)	0	1650	1538	0	1722	0	0	1720	0	0	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			125		27			3			9	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.87	0.87	0.87	0.86	0.86	0.86	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	2%	2%	2%	3%	3%	3%
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)	42	182	125	16	148	37	38	306	9	14	352	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	224	125	0	201	0	0	353	0	0	392	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Total (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		14.1	14.1		14.1			14.4			14.4	
Actuated g/C Ratio		0.36	0.36		0.36			0.37			0.37	
v/c Ratio		0.37	0.20		0.31			0.55			0.59	
Control Delay		11.7	3.4		9.6			13.7			14.0	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		11.7	3.4		9.6			13.7			14.0	
LOS		B	A		A			B			B	
Approach Delay		8.7			9.6			13.7			14.0	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		29	0		22			49			54	
Queue Length 95th (ft)		79	21		65			127			148	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		873	873		924			912			952	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.26	0.14		0.22			0.39			0.41	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 38.7

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 11.8

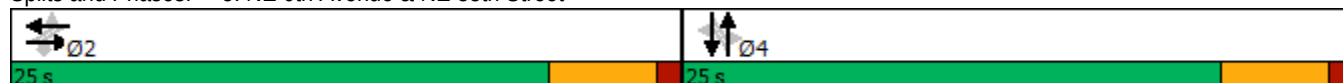
Intersection LOS: B

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5: NE 6th Avenue & NE 38th Street



Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Total (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	98	21	47	63	79	58	688	56	287	800	12
Future Volume (vph)	34	98	21	47	63	79	58	688	56	287	800	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1200	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)	75		75	140		25	90		0	230		0
Storage Lanes	1		1	1		1	1		0	1		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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.989			0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1810	1538	1752	1845	1568	1752	3466	0	1096	3464	0
Flt Permitted	0.950			0.950			0.340			0.102		
Satd. Flow (perm)	1719	1810	1538	1752	1845	1568	627	3466	0	118	3464	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								5			1	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		2169			1000			3110			550	
Travel Time (s)		59.2			27.3			60.6			10.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	3%	3%	3%	3%	3%	3%	4%	4%	4%
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)	41	118	25	63	84	105	61	724	59	293	816	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	118	25	63	84	105	61	783	0	293	828	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	45.0	45.0	45.0	24.0	53.0		24.0	53.0	
Total Split (%)	23.8%	23.8%	15.0%	28.1%	28.1%	28.1%	15.0%	33.1%		15.0%	33.1%	
Maximum Green (s)	32.0	32.0	18.0	38.0	38.0	38.0	18.0	47.0		18.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Total (2022)
Timing Plan: AM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	15.3	15.3	27.3	15.6	15.6	15.6	48.8	42.8		110.1	100.2	
Actuated g/C Ratio	0.10	0.10	0.17	0.10	0.10	0.10	0.30	0.27		0.69	0.63	
v/c Ratio	0.25	0.68	0.10	0.37	0.47	0.69	0.26	0.84		0.64	0.38	
Control Delay	68.9	89.0	54.0	72.1	75.5	91.2	23.2	63.9		39.3	17.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	68.9	89.0	54.0	72.1	75.5	91.2	23.2	63.9		39.3	17.1	
LOS	E	F	D	E	E	F	C	E		D	B	
Approach Delay	79.8			81.2			60.9			22.9		
Approach LOS	E			F			E			C		
Queue Length 50th (ft)	41	122	22	63	85	108	23	392		210	221	
Queue Length 95th (ft)	73	171	45	91	115	140	46	473		#414	334	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	343	362	377	416	438	372	364	1021		455	2168	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.12	0.33	0.07	0.15	0.19	0.28	0.17	0.77		0.64	0.38	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 13 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 46.8

Intersection LOS: D

Intersection Capacity Utilization 71.1%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	53 s	45 s	38 s
 Ø5	 Ø6 (R)		
24 s	53 s		

Ram Oakland Park Traffic Analysis
7: East Driveway & Oakland Park Boulevard

Total (2022)
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗		↑↑↑		↗
Traffic Vol, veh/h	1700	57	0	1415	0	36
Future Vol, veh/h	1700	57	0	1415	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	92	94	94	92	92
Heavy Vehicles, %	3	2	2	3	2	2
Mvmt Flow	1809	62	0	1505	0	39
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	905
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	240
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	240
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		22.9	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	240	-	-	-		
HCM Lane V/C Ratio	0.163	-	-	-		
HCM Control Delay (s)	22.9	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile O(veh)	0.6	-	-	-		

Ram Oakland Park Traffic Analysis
8: NE 6th Avenue & North Driveway

Total (2022)
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	17	392	9	12	421
Future Vol, veh/h	5	17	392	9	12	421
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	85	92	92	86
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	5	18	461	10	13	490
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	977	461	0	0	471	0
Stage 1	461	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	278	600	-	-	1091	-
Stage 1	635	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	274	600	-	-	1091	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	589	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12	0		0.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	540	1091	-	
HCM Lane V/C Ratio	-	-	0.044	0.012	-	
HCM Control Delay (s)	-	-	12	8.3	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Ram Oakland Park Traffic Analysis
9: NE 6th Avenue & South Driveway

Total (2022)
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	47	354	1	14	412
Future Vol, veh/h	7	47	354	1	14	412
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	85	92	92	86
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	8	51	416	1	15	479
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	926	417	0	0	417	0
Stage 1	417	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	298	636	-	-	1142	-
Stage 1	665	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	636	-	-	1142	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.7	0		0.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 596		1142	-	
HCM Lane V/C Ratio	-	- 0.098		0.013	-	
HCM Control Delay (s)	-	- 11.7		8.2	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0.3		0	-	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	283	1383	255	169	1490	87	276	842	167	95	614	141
Future Volume (vph)	283	1383	255	169	1490	87	276	842	167	95	614	141
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)	500		0	320		0	225		0	390		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.977			0.992			0.975			0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4968	0	1752	4996	0	1770	3451	0	1770	3440	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4968	0	1752	4996	0	1770	3451	0	1770	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			5			13			14	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1430			2590			2228			1212	
Travel Time (s)		27.9			50.5			43.4			23.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.93	0.93	0.93	0.92	0.92	0.92	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	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)	286	1397	258	182	1602	94	300	915	182	98	633	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	1655	0	182	1696	0	300	1097	0	98	778	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	6.0		5.0	6.0	
Minimum Split (s)	11.0	41.0		11.0	41.0		11.0	36.0		11.0	36.0	
Total Split (s)	35.0	73.0		30.0	68.0		31.0	56.0		21.0	46.0	
Total Split (%)	19.4%	40.6%		16.7%	37.8%		17.2%	31.1%		11.7%	25.6%	
Maximum Green (s)	29.0	67.0		24.0	62.0		25.0	50.0		15.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	

Ram Oakland Park Traffic Analysis

1: Andrews Avenue & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.2		1.5	2.2	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		28.0			28.0			23.0			23.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	29.0	69.7		21.3	62.0		25.0	52.2		12.8	40.0	
Actuated g/C Ratio	0.16	0.39		0.12	0.34		0.14	0.29		0.07	0.22	
v/c Ratio	1.00	0.85		0.88	0.98		1.22	1.09		0.78	1.00	
Control Delay	127.0	55.4		96.6	91.3		191.7	111.7		118.8	100.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	127.0	55.4		96.6	91.3		191.7	111.7		118.8	100.2	
LOS	F	E		F	F		F	F		F	F	
Approach Delay		66.0			91.8			128.9			102.3	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	~345	660		225	659		~433	~772		115	~485	
Queue Length 95th (ft)	#554	730		m288	#796		#638	#927		#196	#634	
Internal Link Dist (ft)		1350			2510			2148			1132	
Turn Bay Length (ft)	500			320			225			390		
Base Capacity (vph)	285	1938		233	1724		245	1010		147	775	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.00	0.85		0.78	0.98		1.22	1.09		0.67	1.00	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 114 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 93.6

Intersection LOS: F

Intersection Capacity Utilization 103.2%

ICU Level of Service G

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.

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

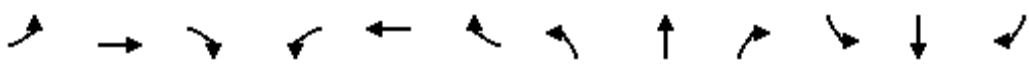
Splits and Phases: 1: Andrews Avenue & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	1338	186	113	1719	82	138	288	70	136	279	60
Future Volume (vph)	108	1338	186	113	1719	82	138	288	70	136	279	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2300	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)	405		0	415		0	135		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.982			0.993			0.971			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4994	0	1770	5050	0	1770	2190	0	1770	1812	0
Flt Permitted	0.950			0.950			0.133			0.115		
Satd. Flow (perm)	1770	4994	0	1770	5050	0	248	2190	0	214	1812	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		17			5			*75				
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2590			640			298			3110	
Travel Time (s)		50.5			12.5			6.8			70.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.94	0.94	0.94	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)	113	1394	194	120	1829	87	148	310	75	146	300	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	1588	0	120	1916	0	148	385	0	146	365	0
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		10.0	40.0		10.0	40.0	
Total Split (s)	24.0	83.0		24.0	83.0		27.0	46.0		27.0	46.0	
Total Split (%)	13.3%	46.1%		13.3%	46.1%		15.0%	25.6%		15.0%	25.6%	
Maximum Green (s)	18.0	77.0		18.0	77.0		21.0	40.0		21.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	

Ram Oakland Park Traffic Analysis

2: NE 6th Avenue & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.0		1.5	2.0	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		17.0			17.0			27.0			27.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	14.7	85.6		15.1	86.1		56.1	40.5		54.3	39.6	
Actuated g/C Ratio	0.08	0.48		0.08	0.48		0.31	0.22		0.30	0.22	
v/c Ratio	0.78	0.67		0.81	0.79		0.71	0.70		0.76	0.92	
Control Delay	101.1	38.4		103.9	35.6		60.8	58.4		68.1	96.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	101.1	38.4		103.9	35.6		60.8	58.4		68.1	96.1	
LOS	F	D		F	D		E	E		E	F	
Approach Delay		42.6			39.6			59.1			88.1	
Approach LOS		D			D			E			F	
Queue Length 50th (ft)	138	326		129	832		123	335		121	417	
Queue Length 95th (ft)	m161	m397		m147	m878		181	473		186	#608	
Internal Link Dist (ft)		2510			560			218			3030	
Turn Bay Length (ft)	405			415			135			175		
Base Capacity (vph)	177	2385		177	2418		259	565		252	416	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.64	0.67		0.68	0.79		0.57	0.68		0.58	0.88	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 136 (76%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 48.0

Intersection LOS: D

Intersection Capacity Utilization 87.0%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: NE 6th Avenue & Oakland Park Boulevard

Ø1	Ø2 (R)	Ø3	Ø4
24 s	83 s	27 s	46 s
Ø5	Ø6 (R)	Ø7	Ø8
24 s	83 s	27 s	46 s

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	194	1091	146	101	1444	236	257	606	116	207	625	133
Future Volume (vph)	194	1091	146	101	1444	236	257	606	116	207	625	133
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)	360		0	375		0	240		0	225		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.982			0.979			0.976			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4994	0	1770	4979	0	1770	3454	0	1770	3447	0
Flt Permitted	0.053			0.950			0.084			0.102		
Satd. Flow (perm)	99	4994	0	1770	4979	0	156	3454	0	190	3447	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		16						10			13	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1529			1000			1700			3110	
Travel Time (s)		29.8			19.5			33.1			60.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.89	0.89	0.89	0.99	0.99	0.99
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)	206	1161	155	106	1520	248	289	681	130	209	631	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	206	1316	0	106	1768	0	289	811	0	209	765	0
Turn Type	pm+pt	NA		Prot	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	10.0		5.0	10.0		4.0	6.0		4.0	6.0	
Minimum Split (s)	10.0	35.0		16.0	35.0		10.0	41.0		10.0	41.0	
Total Split (s)	24.0	79.0		23.0	78.0		29.0	29.0		49.0	49.0	
Total Split (%)	13.3%	43.9%		12.8%	43.3%		16.1%	16.1%		27.2%	27.2%	
Maximum Green (s)	18.0	73.0		17.0	72.0		23.0	23.0		43.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	

Ram Oakland Park Traffic Analysis

3: Dixie Highway & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	1.5	3.0		1.5	3.0		1.5	2.5		1.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		22.0			22.0			28.0			28.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	92.4	75.1		13.9	71.3		69.5	47.8		62.2	43.0	
Actuated g/C Ratio	0.51	0.42		0.08	0.40		0.39	0.27		0.35	0.24	
v/c Ratio	0.96	0.63		0.78	0.90		1.05	0.88		0.89	0.92	
Control Delay	102.0	36.7		115.4	58.0		121.1	73.5		85.2	82.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	102.0	36.7		115.4	58.0		121.1	73.5		85.2	82.0	
LOS	F	D		F	E		F	E		F	F	
Approach Delay		45.5			61.2			86.0			82.7	
Approach LOS		D			E			F			F	
Queue Length 50th (ft)	196	530		125	711		~330	484		191	462	
Queue Length 95th (ft)	#376	593		197	776		#544	#685		277	#578	
Internal Link Dist (ft)		1449			920			1620			3030	
Turn Bay Length (ft)	360			375			240			225		
Base Capacity (vph)	218	2092		167	1991		275	923		454	833	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.94	0.63		0.63	0.89		1.05	0.88		0.46	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 40 (22%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 65.7

Intersection LOS: E

Intersection Capacity Utilization 99.7%

ICU Level of Service F

Analysis Period (min) 15

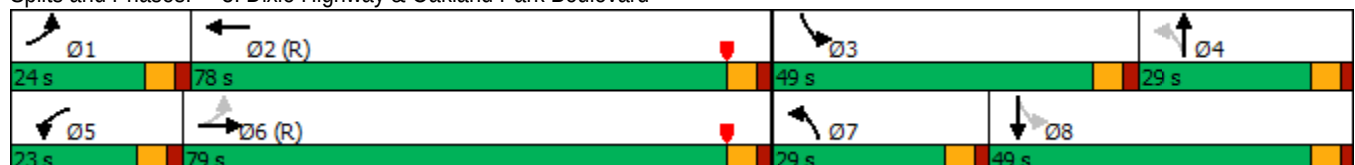
~ Volume exceeds capacity, queue is theoretically infinite.

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: 3: Dixie Highway & Oakland Park Boulevard



Ram Oakland Park Traffic Analysis
4: NE 6th Avenue & NE 26th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	270	25	12	365	159	27	223	38	116	247	11
Future Volume (vph)	102	270	25	12	365	159	27	223	38	116	247	11
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)	90		0	85		0	110		0	100		0
Storage Lanes	1		0	1		0	1		0	1		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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.987			0.954			0.978			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	1777	0	1770	1822	0	1770	1852	0
Flt Permitted	0.313			0.561			0.562			0.534		
Satd. Flow (perm)	583	1839	0	1045	1777	0	1047	1822	0	995	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			45			17			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			1000			900			1380	
Travel Time (s)		21.9			22.7			20.5			31.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.88	0.88	0.88	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)	111	293	27	13	401	175	31	253	43	125	266	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	320	0	13	576	0	31	296	0	125	278	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		17.0	17.0		17.0	17.0	
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	

Ram Oakland Park Traffic Analysis

4: NE 6th Avenue & NE 26th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.5	2.5		2.5	2.5	
Time Before Reduce (s)	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	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	20.9	20.9		20.9	20.9		14.0	14.0		14.0	14.0	
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.31	0.31		0.31	0.31	
v/c Ratio	0.41	0.38		0.03	0.68		0.10	0.52		0.41	0.48	
Control Delay	15.7	10.3		8.7	15.2		12.4	15.9		17.4	15.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.7	10.3		8.7	15.2		12.4	15.9		17.4	15.9	
LOS	B	B		A	B		B	B		B	B	
Approach Delay		11.7			15.1			15.6			16.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	17	46		2	95		6	61		27	59	
Queue Length 95th (ft)	68	127		11	#264		20	117		65	116	
Internal Link Dist (ft)		884			920			820			1300	
Turn Bay Length (ft)	90			85			110			100		
Base Capacity (vph)	335	1061		601	1041		602	1055		572	1067	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.33	0.30		0.02	0.55		0.05	0.28		0.22	0.26	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 45.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.6

Intersection LOS: B

Intersection Capacity Utilization 78.8%

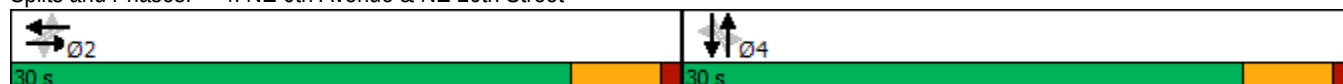
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: NE 6th Avenue & NE 26th Street



Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶	↷		↶			↶			↶	
Traffic Volume (vph)	37	137	85	20	252	41	74	360	22	17	356	33
Future Volume (vph)	37	137	85	20	252	41	74	360	22	17	356	33
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)	0		130	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.982			0.994			0.989	
Flt Protected		0.990			0.997			0.992			0.998	
Satd. Flow (prot)	0	1844	1583	0	1824	0	0	1837	0	0	1839	0
Flt Permitted		0.873			0.973			0.879			0.970	
Satd. Flow (perm)	0	1626	1583	0	1780	0	0	1628	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97		18			6			11	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		2000			2169			3110			550	
Travel Time (s)		54.5			59.2			70.7			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.95	0.95	0.95	0.91	0.91	0.91
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)	42	156	97	23	290	47	78	379	23	19	391	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	97	0	360	0	0	480	0	0	446	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Detector Phase	2	2	2	2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	20.0	20.0	20.0	20.0	20.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	

Ram Oakland Park Traffic Analysis
5: NE 6th Avenue & NE 38th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	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	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		15.7	15.7		15.7			16.8			16.8	
Actuated g/C Ratio		0.37	0.37		0.37			0.39			0.39	
v/c Ratio		0.33	0.15		0.54			0.75			0.63	
Control Delay		12.1	3.4		14.1			21.0			15.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		12.1	3.4		14.1			21.0			15.5	
LOS		B	A		B			C			B	
Approach Delay		9.2			14.1			21.0			15.5	
Approach LOS		A			B			C			B	
Queue Length 50th (ft)		36	0		67			90			77	
Queue Length 95th (ft)		74	20		125			#243			174	
Internal Link Dist (ft)		1920			2089			3030			470	
Turn Bay Length (ft)			130									
Base Capacity (vph)		782	811		865			786			865	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.25	0.12		0.42			0.61			0.52	

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 42.7

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 89.6%

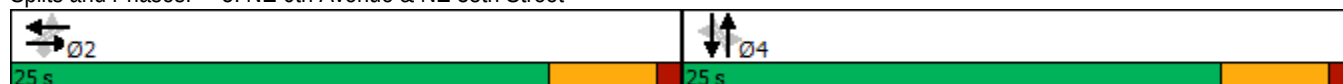
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: NE 6th Avenue & NE 38th Street



Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	102	24	48	154	142	89	908	60	210	886	22
Future Volume (vph)	42	102	24	48	154	142	89	908	60	210	886	22
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)	75		75	140		25	90		0	230		0
Storage Lanes	1		1	1		1	1		0	1		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	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850			0.991			0.996
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	1568	1770	1863	1583	1770	3507	0	1770	3525	0
Flt Permitted	0.950			0.950			0.267			0.157		
Satd. Flow (perm)	1752	1845	1568	1770	1863	1583	497	3507	0	292	3525	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)							4				2	
Link Speed (mph)	25		25		25		35		35			
Link Distance (ft)	2169		1000		1000		3110		3110		550	
Travel Time (s)	59.2		27.3		27.3		60.6		60.6		10.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	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%		0%		0%	
Adj. Flow (vph)	55	132	31	59	188	173	93	946	63	221	933	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	132	31	59	188	173	93	1009	0	221	956	0
Turn Type	Split	NA	pm+ov	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4	5	3	3		5	2		1	6	
Permitted Phases			4			3	2			6		
Detector Phase	4	4	5	3	3	3	5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	4.0	6.0	6.0	6.0	4.0	12.0		4.0	12.0	
Minimum Split (s)	31.0	31.0	10.0	33.0	33.0	33.0	10.0	32.0		10.0	32.0	
Total Split (s)	38.0	38.0	24.0	42.0	42.0	42.0	24.0	56.0		24.0	56.0	
Total Split (%)	23.8%	23.8%	15.0%	26.3%	26.3%	26.3%	15.0%	35.0%		15.0%	35.0%	
Maximum Green (s)	32.0	32.0	18.0	35.0	35.0	35.0	18.0	50.0		18.0	50.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	3.0	3.0	3.0	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	
Total Lost Time (s)	6.0	6.0	6.0	7.0	7.0	7.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	3.0	

Ram Oakland Park Traffic Analysis
6: Dixie Highway & NE 38th Street

Total (2022)
Timing Plan: PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Gap (s)	2.5	2.5	1.5	2.5	2.5	2.5	1.5	3.0		1.5	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	
Time To Reduce (s)	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		None	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	18.0	18.0		19.0	19.0	19.0		19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0			0	
Act Effect Green (s)	16.3	16.3	30.3	22.7	22.7	22.7	82.2	74.2		102.0	88.1	
Actuated g/C Ratio	0.10	0.10	0.19	0.14	0.14	0.14	0.51	0.46		0.64	0.55	
v/c Ratio	0.31	0.71	0.10	0.24	0.71	0.77	0.29	0.62		0.57	0.49	
Control Delay	69.6	88.6	51.0	61.0	79.8	87.7	17.3	36.9		20.5	25.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.6	88.6	51.0	61.0	79.8	87.7	17.3	36.9		20.5	25.4	
LOS	E	F	D	E	E	F	B	D		C	C	
Approach Delay	78.5			80.4			35.3			24.5		
Approach LOS	E			F			D			C		
Queue Length 50th (ft)	54	136	27	56	191	178	35	412		91	310	
Queue Length 95th (ft)	84	172	46	89	237	225	76	605		174	483	
Internal Link Dist (ft)	2089			920			3030			470		
Turn Bay Length (ft)	75		75	140		25	90			230		
Base Capacity (vph)	350	369	394	387	407	346	429	1628		392	1941	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.36	0.08	0.15	0.46	0.50	0.22	0.62		0.56	0.49	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 136 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 40.7

Intersection LOS: D

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Dixie Highway & NE 38th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	56 s	42 s	38 s
 Ø5	 Ø6 (R)		
24 s	56 s		

Ram Oakland Park Traffic Analysis
7: East Driveway & Oakland Park Boulevard

Total (2022)
Timing Plan: PM Peak

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑	↗		↑↑↑↑		↗
Traffic Vol, veh/h	1497	130	0	1964	0	85
Future Vol, veh/h	1497	130	0	1964	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	92	94	94	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1559	141	0	2089	0	92
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	780
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	290
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	290
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		23.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	290	-	-	-		
HCM Lane V/C Ratio	0.319	-	-	-		
HCM Control Delay (s)	23.1	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	1.3	-	-	-		

Ram Oakland Park Traffic Analysis
8: NE 6th Avenue & North Driveway

Total (2022)
Timing Plan: PM Peak

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔		↑	↗		↑
Traffic Vol, veh/h	16	65	507	19	31	578
Future Vol, veh/h	16	65	507	19	31	578
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	93	92	92	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	71	545	21	34	622
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1235	545	0	0	566	0
Stage 1	545	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	195	538	-	-	1006	-
Stage 1	581	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	185	538	-	-	1006	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.3	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	475	1006	-	
HCM Lane V/C Ratio	-	-	0.185	0.033	-	
HCM Control Delay (s)	-	-	14.3	8.7	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile O(veh)	-	-	0.7	0.1	-	

Ram Oakland Park Traffic Analysis
9: NE 6th Avenue & South Driveway

Total (2022)
Timing Plan: PM Peak

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	23	503	6	40	554
Future Vol, veh/h	3	23	503	6	40	554
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	93	92	92	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	25	541	7	43	596
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1227	545	0	0	548	0
Stage 1	545	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	197	538	-	-	1021	-
Stage 1	581	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	185	538	-	-	1021	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.6	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		499	1021	
HCM Lane V/C Ratio	-	-		0.057	0.043	
HCM Control Delay (s)	-	-		12.6	8.7	
HCM Lane LOS	-	-		B	A	
HCM 95th %tile Q(veh)	-	-		0.2	0.1	

APPENDIX F

QUEUEING ANALYSIS INFORMATION

Multifamily Housing (Low-Rise)

(220)

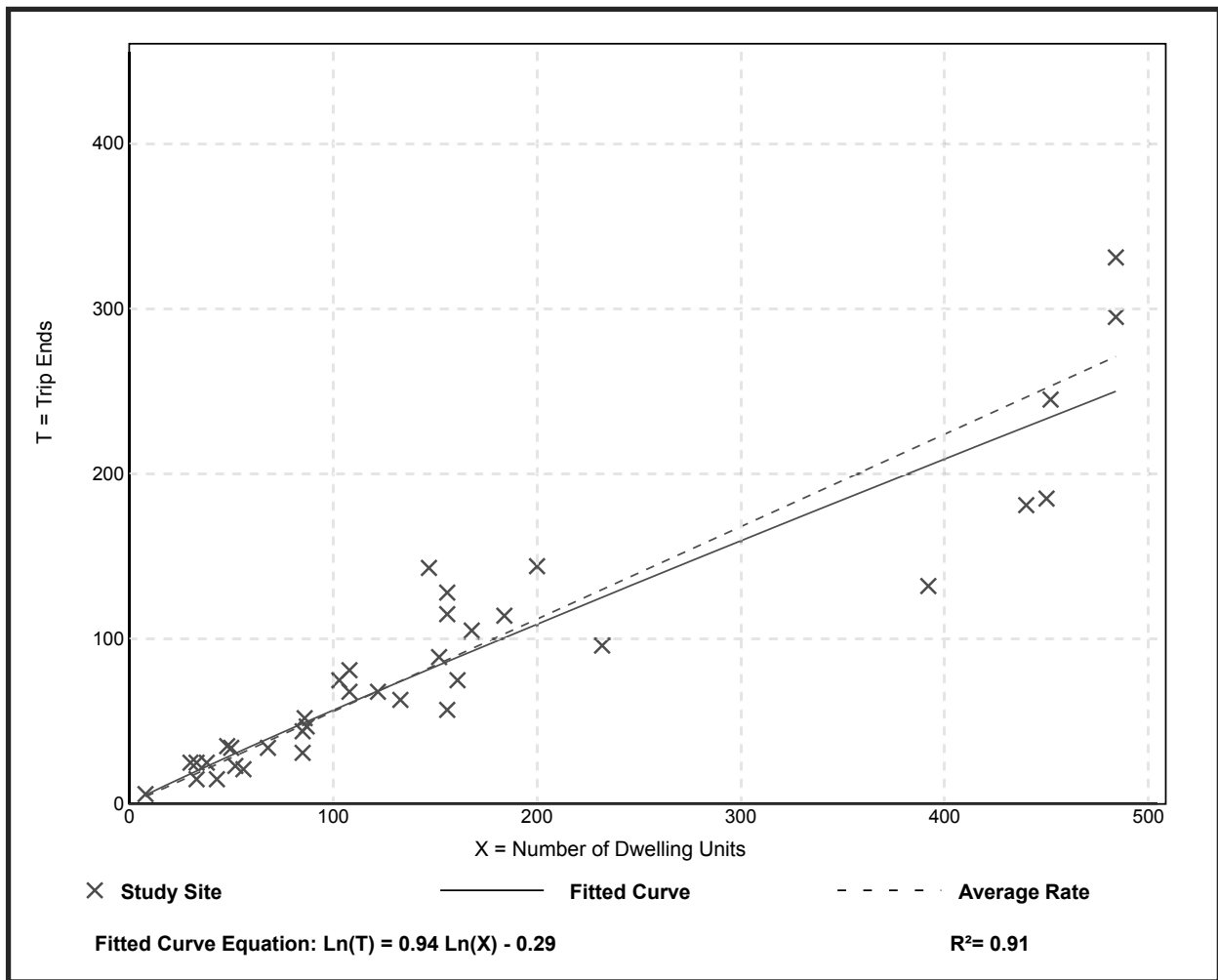
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. Num. of Dwelling Units: 161
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.34 - 0.97	0.15

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

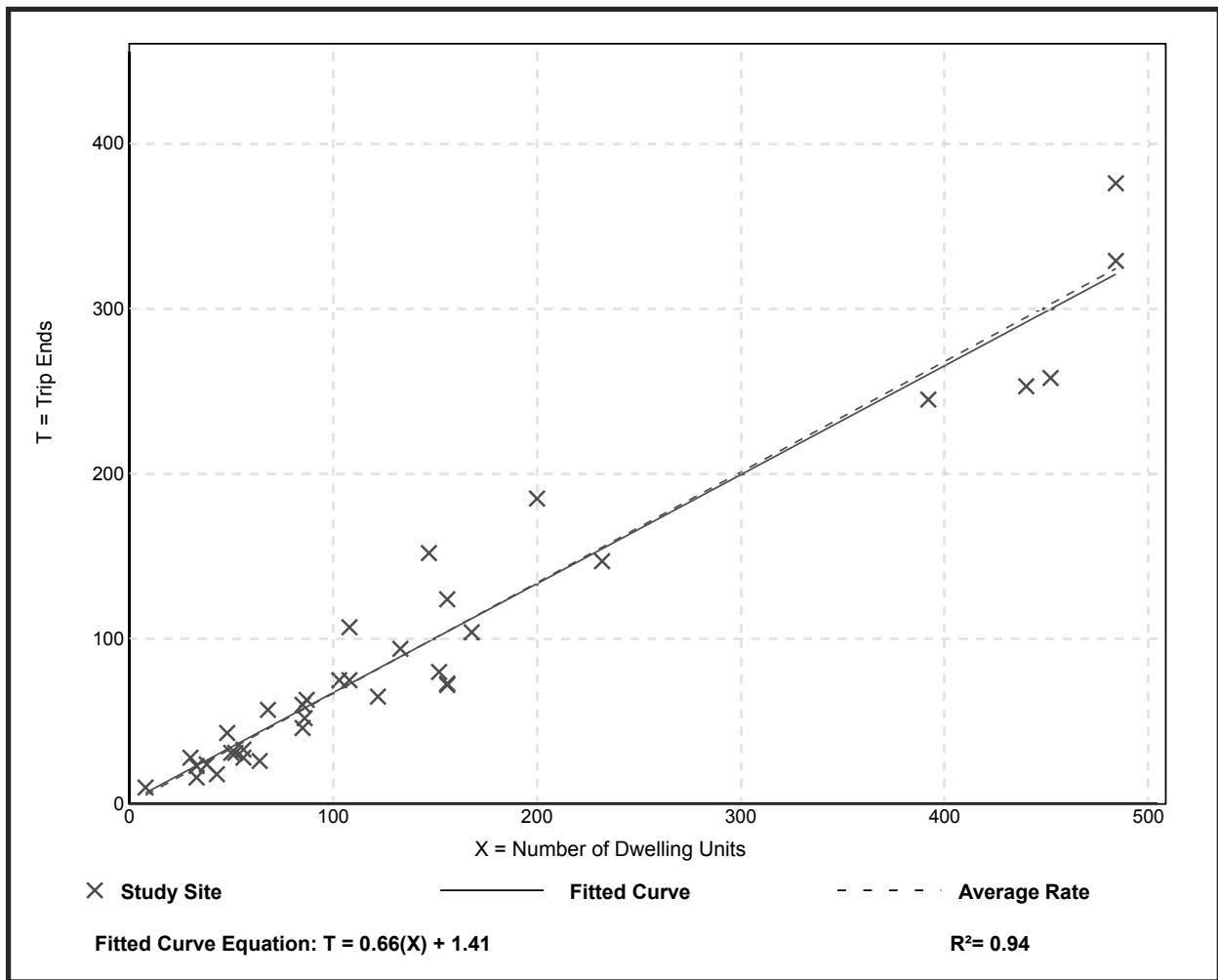
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 35
Avg. Num. of Dwelling Units: 146
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.67	0.41 - 1.25	0.14

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

Avg. Num. of Dwelling Units: 89

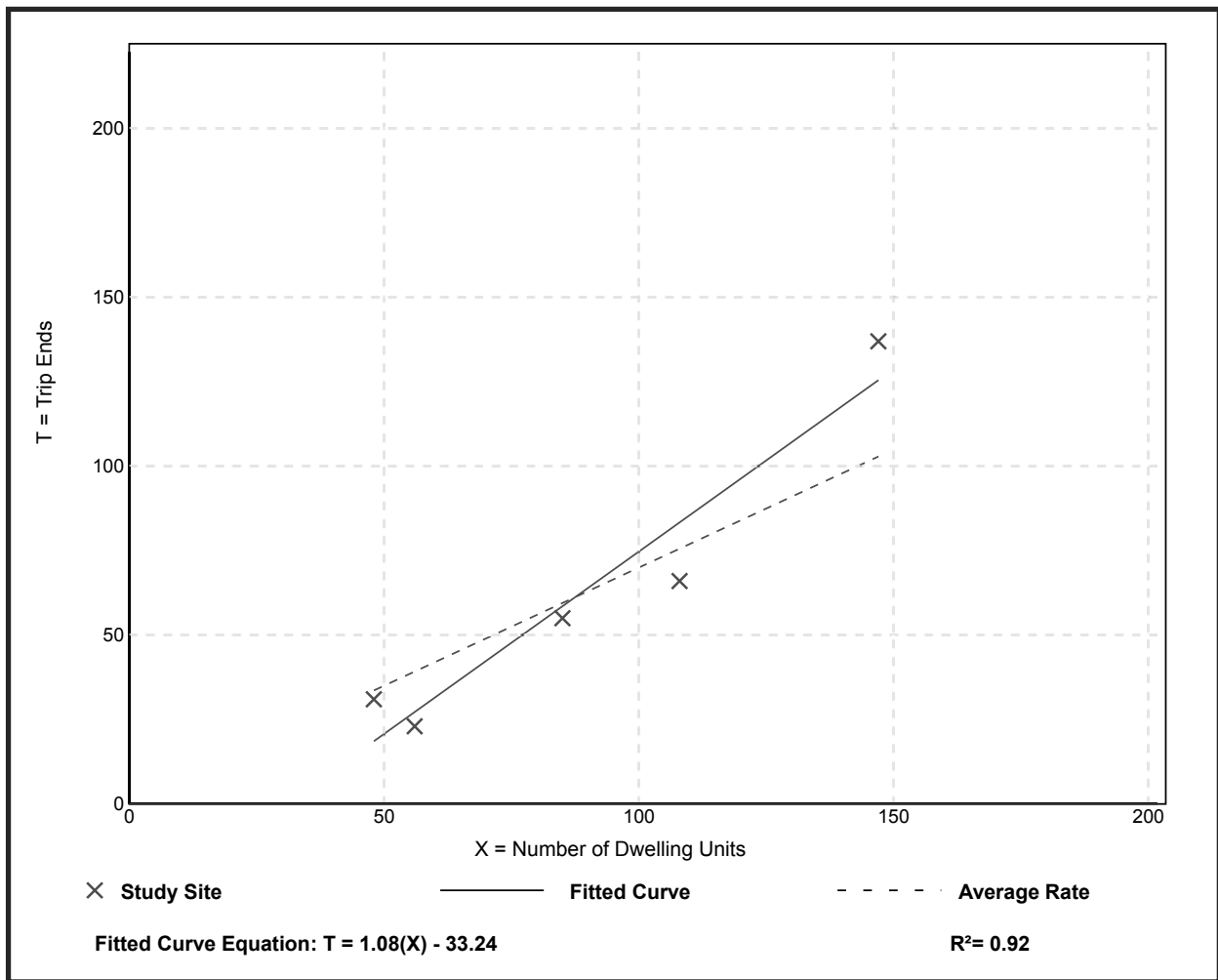
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.41 - 0.93	0.20

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

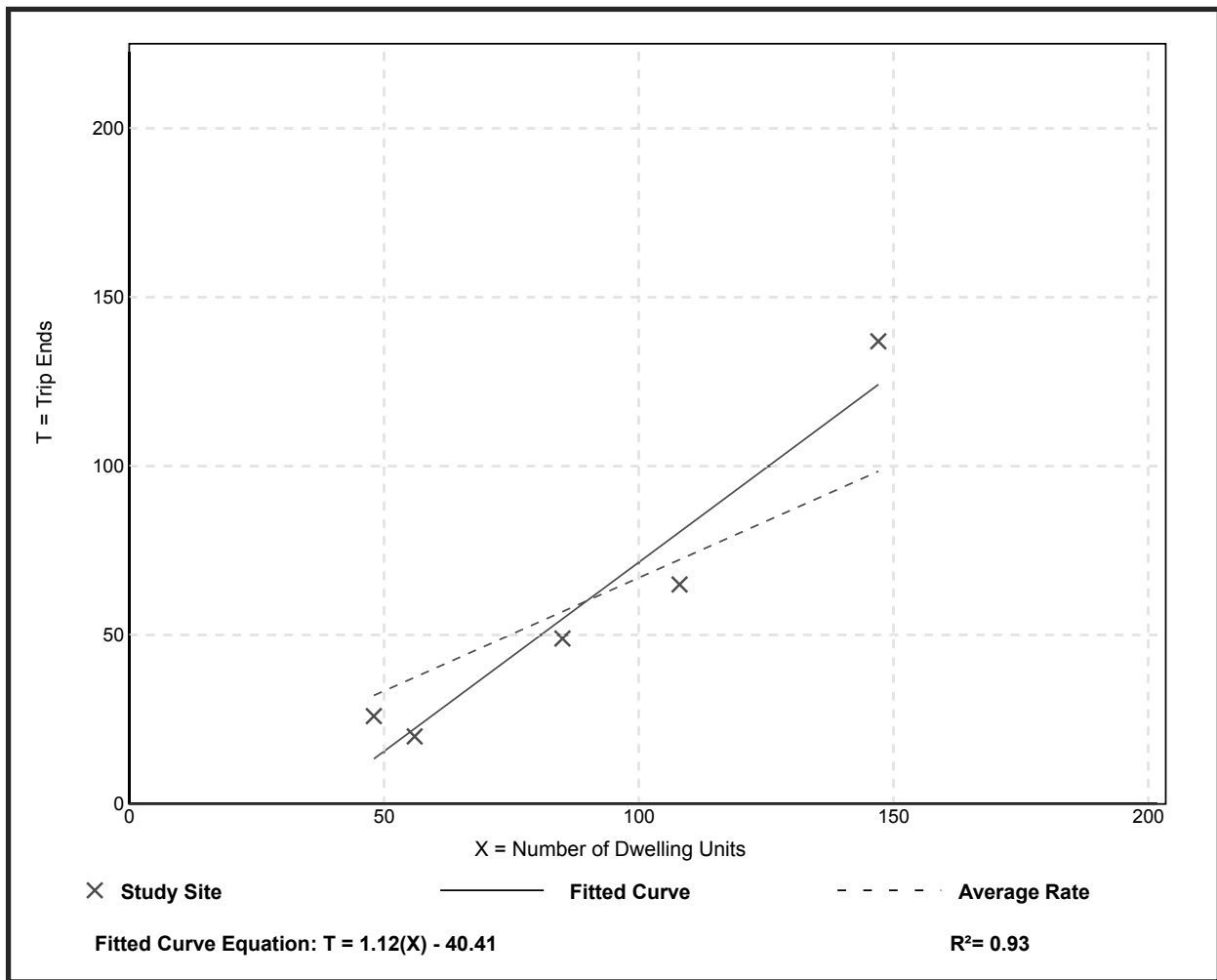
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Dwelling Units: 89
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.67	0.36 - 0.93	0.22

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) (221)

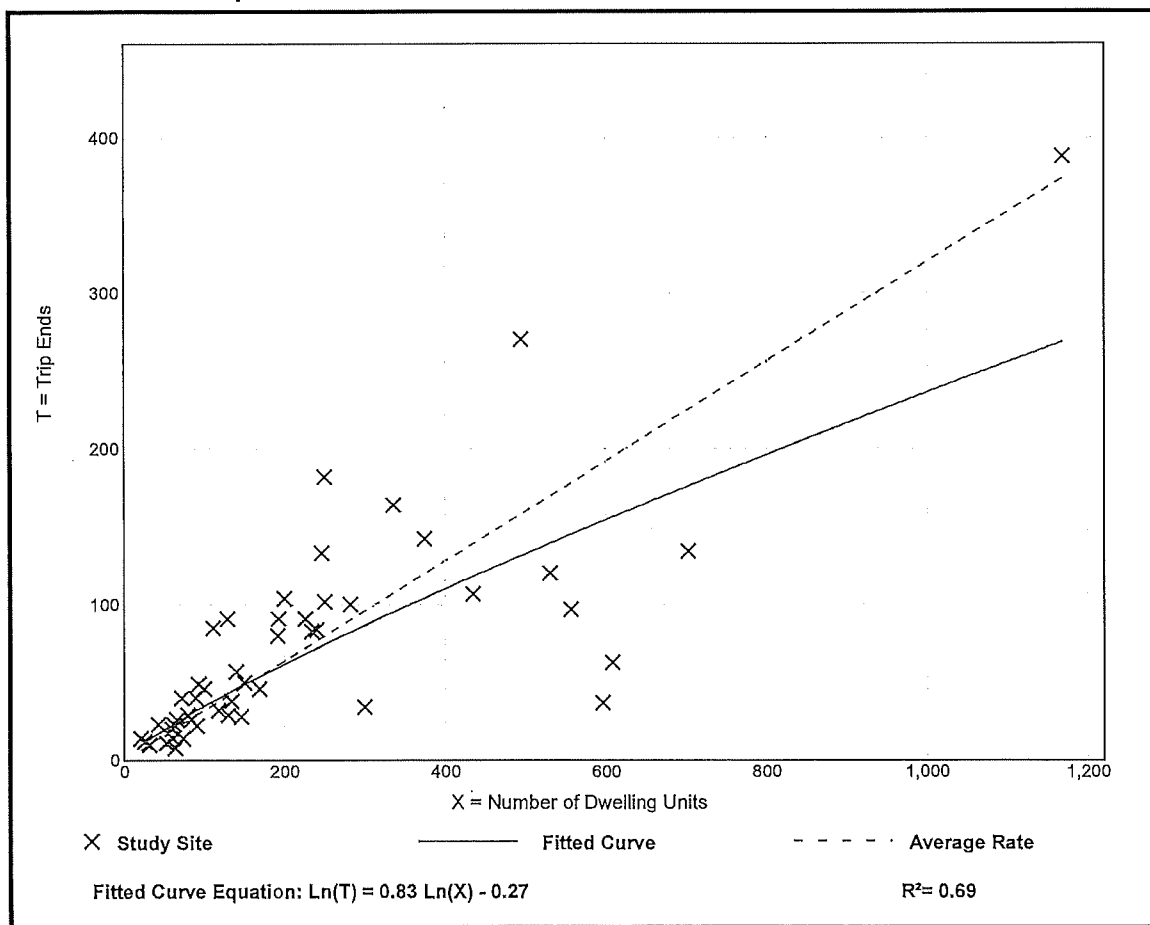
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 48
Avg. Num. of Dwelling Units: 225
Directional Distribution: 27% entering, 73% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.06 - 0.77	0.17

Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

Multifamily Housing (Mid-Rise) (221)

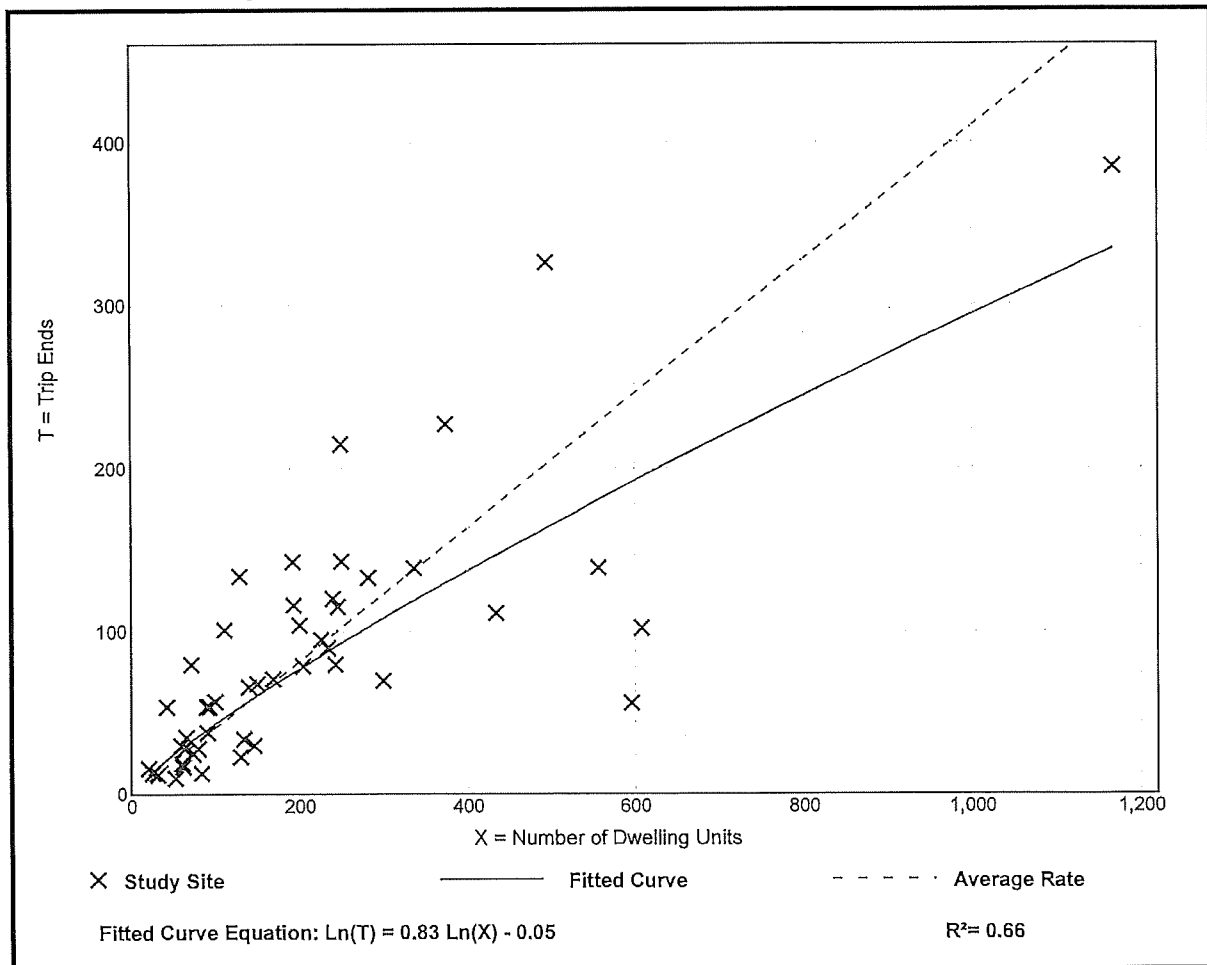
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 47
Avg. Num. of Dwelling Units: 211
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.09 - 1.26	0.22

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

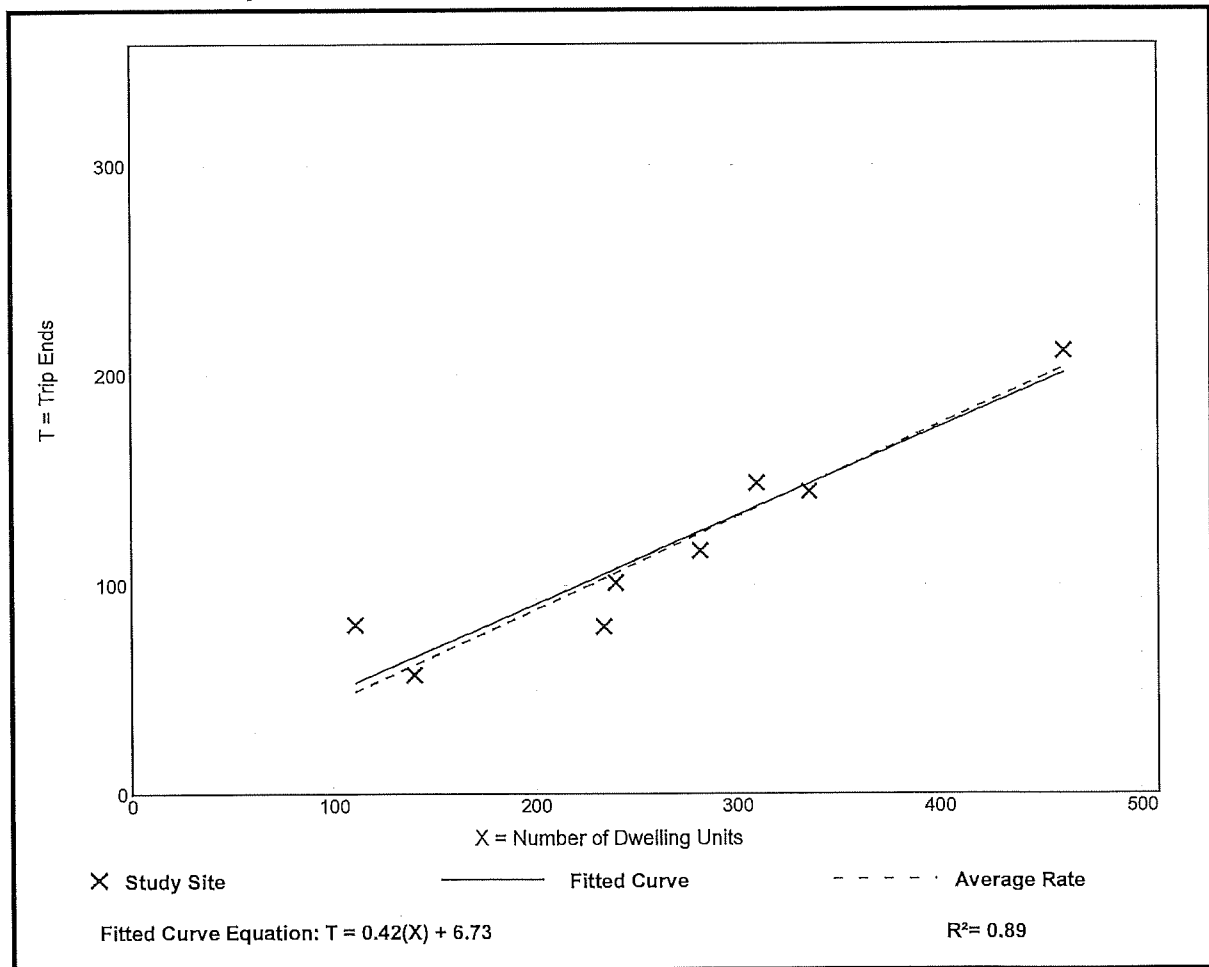
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Dwelling Units: 264
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.34 - 0.73	0.08

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

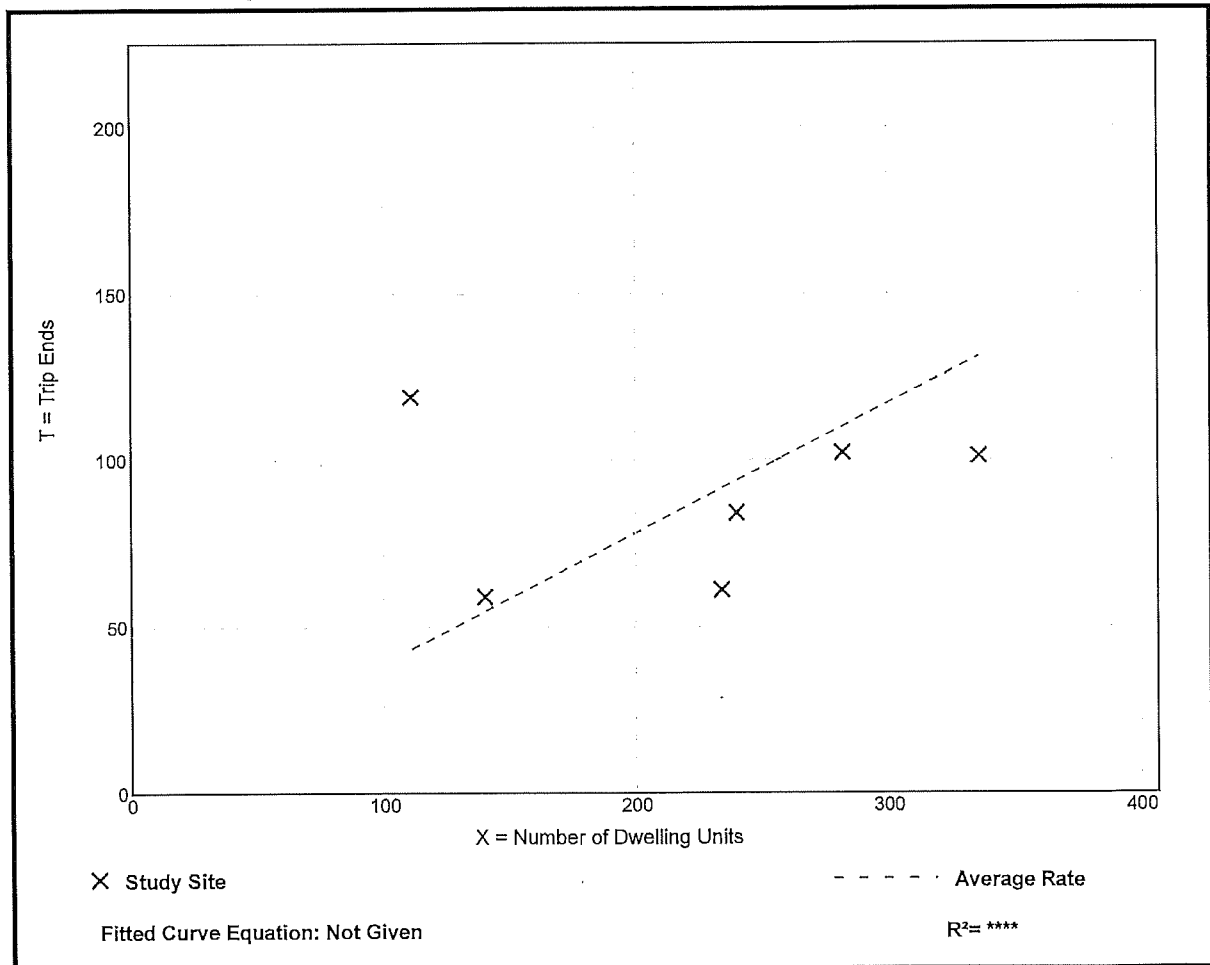
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 224
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.26 - 1.07	0.23

Data Plot and Equation



Required Storage:

South Driveway (Residents)

$$M = \frac{[\ln P(x > M) - \ln QM]}{\ln \rho} - 1$$

coefficient of utilization:

$$\rho = q/NQ$$

$$\rho = \frac{52}{(1) 240} = 0.2167$$

Required Storage with 95% confidence level $[P(x > M)]$:

$$M = \frac{\ln(.05) - \ln(0.2167)}{\ln(0.2167)} - 1 = -1 \text{ vehicles}$$

without rounding = -0.04 vehicles

q is the demand rate. For this analysis,

$$q = 52 \text{ veh/hr.}$$

N is the number of lanes. For this analysis,

$$N = 1 \text{ Lane}$$

Q is the processing rate per hour for each lane. For this analysis,

$$\text{Processing Time: } 15 \text{ sec} * 1 \text{ min}/60 \text{ sec} = 0.25 \text{ min}$$

$$\text{Total Time: } 0.25 \text{ min}$$

$$Q = \frac{1 \text{ process}}{\text{process time}} * \frac{60 \text{ min}}{1 \text{ hr}} \Rightarrow \frac{1 \text{ process} * 60 \text{ min}}{0.25} \Rightarrow 240 \text{ processes/hr}$$

Q_M is a table value obtained from Table 8-11 based on ρ and N.

[Table 8-11 \(page 6 of pdf\)](#)

From Table:	N = 1	and	$\rho = 0.2000$	=>	0.2000
From Table:	N = 1	and	$\rho = 0.3000$	=>	0.3000

$$Q_M = 0.2000 + \frac{(0.3000 - 0.2000) * (0.2167 - 0.2000)}{(0.3000 - 0.2000)} = 0.2167$$

Required Storage:

East Driveway (Residents)

$$M = \frac{[\ln P(x > M) - \ln QM]}{\ln \rho} - 1$$

coefficient of utilization:

$$\rho = q/NQ$$

$$\rho = \frac{15}{(1) 240} = 0.0625$$

Required Storage with 95% confidence level [P(x > M)]:

$$M = \frac{\ln (.05) - \ln (0.0625)}{\ln (0.0625)} - 1 = -1 \text{ vehicles}$$

without rounding = -0.92 vehicles

q is the demand rate. For this analysis,

$$q = 15 \text{ veh/hr.}$$

N is the number of lanes. For this analysis,

$$N = 1 \text{ Lane}$$

Q is the processing rate per hour for each lane. For this analysis,

$$\text{Processing Time: } 15 \text{ sec} * 1 \text{ min}/60 \text{ sec} = 0.25 \text{ min}$$

$$\text{Total Time: } 0.25 \text{ min}$$

$$Q = \frac{1 \text{ process}}{\text{process time}} * \frac{60 \text{ min}}{1 \text{ hr}} \Rightarrow \frac{1 \text{ process} * 60 \text{ min}}{0.25} \Rightarrow 240 \text{ processes/hr}$$

Q_M is a table value obtained from Table 8-11 based on ρ and N.

[Table 8-11 \(page 6 of pdf\)](#)

From Table:	N = 1	and	ρ = 0.0000	=>	0.0000
From Table:	N = 1	and	ρ = 0.1000	=>	0.1000

$$Q_M = 0.0000 + \frac{(0.1000 - 0.0000) * (0.0625 - 0.0000)}{(0.1000 - 0.0000)} = 0.0625$$

Required Storage:

South Driveway (Visitors)

$$M = \frac{[\ln P(x > M) - \ln QM]}{\ln \rho} - 1$$

coefficient of utilization:

$$\rho = q/NQ$$

$$\rho = \frac{7}{(1) 30} = 0.2333$$

Required Storage with 95% confidence level [P(x > M)]:

$$M = \frac{\ln (.05) - \ln (0.2333)}{\ln (0.2333)} - 1 = 1 \text{ vehicles}$$

without rounding = 0.06 vehicles

q is the demand rate. For this analysis,

$$q = 7 \text{ veh/hr.}$$

N is the number of lanes. For this analysis,

$$N = 1 \text{ Lane}$$

Q is the processing rate per hour for each lane. For this analysis,

$$\text{Processing Time: } 120 \text{ sec} * 1 \text{ min}/60 \text{ sec} = 2 \text{ min}$$

$$\text{Total Time: } 2.00 \text{ min}$$

$$Q = \frac{1 \text{ process}}{\text{process time}} * \frac{60 \text{ min}}{1 \text{ hr}} \Rightarrow \frac{1 \text{ process} * 60 \text{ min}}{2.00} \Rightarrow 30 \text{ processes/hr}$$

Q_M is a table value obtained from Table 8-11 based on ρ and N.

[Table 8-11 \(page 6 of pdf\)](#)

From Table:	N = 1	and	ρ = 0.2000	=>	0.2000
From Table:	N = 1	and	ρ = 0.3000	=>	0.3000

$$Q_M = 0.2000 + \frac{(0.3000 - 0.2000) * (0.2333 - 0.2000)}{(0.3000 - 0.2000)} = 0.2333$$

Transportation and Land Development

Vergil C. Stover / Frank J. Koppke



Institute of Transportation Engineers

TABLE 8-10
Queueing System Equations

Equation Number	Variable	Equation
(8-1)	Coefficient of utilization	$\rho = \frac{q}{NQ}$
(8-2)	Probability of no customers in the system	$P(0) = \left[\sum_{n=0}^{N-1} \frac{\left(\frac{q}{Q}\right)^n}{n!} + \frac{\left(\frac{q}{Q}\right)^N}{N!(1-\rho)} \right]^{-1}$
(8-3)	Mean number in the queue	$E(m) = \left[\frac{\rho \left(\frac{q}{Q}\right)^N}{N!(1-\rho)^2} \right] P(0)$
(8-4)	Mean number in the system	$E(n) = E(m) + \frac{q}{Q}$
(8-5)	Mean wait time in queue (hours)	$E(w) = \frac{E(m)}{q}$
(8-6)	Mean time in the system (hours)	$E(t) = E(w) + \frac{1}{Q}$ $= E(w) + \text{Avg } (t)$
(8-7)	Proportion of customers who wait	$P[E(w) > 0] = \left[\frac{\left(\frac{q}{Q}\right)^N}{N!(1-\rho)} \right] P(0)$
(8-8)	Probability of a queue exceeding a length M	$P(x > M) = (\rho^{N+1}) P[E(w) > 0]$
(8-9a)	Queue storage required	$M = \left[\frac{\ln P(x > M) - \ln E(w) > 0}{\ln \rho} \right] - 1$
(8-9b)*	Queue storage required	$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right] - 1$

* Q_M is a statistic which is a function of the utilization rate and the number of service channels (service positions); see Table 8-11. The table of Q_M values and use of Equation (8-9b) greatly simplifies the calculations compared to those using Equations (8-9a).

Use of the equations and the graphs may be illustrated by the following example of a drive-in bank.

Conditions:

Number of drive-in windows, $N = 3$

Demand on the system, $q = 70$

Service capacity per channel, $Q = 28.6$ for an average service time, $\text{Avg } (t) = 2.1$ minutes

Solution Using Graphs:

- Coefficient of utilization $= 70/(3)(28.6) = 0.816$
- Probability that there are customers waiting in the system, Figure 8-6:
 $P(0) = 0.05$
- Expected average number of customers waiting in the queue, Figure 8-7:
 $E(m)/N = 1.0$; and the average number $E(m) = (3)(1.0) = 3$

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8-9b) given in Table 8-10 and repeated below for convenience.

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right] - 1$$

where:

M = queue length which is exceeded p percent of the time

N = number of service channels (drive-in positions)

Q = service rate per channel (vehicles per hour)

$\rho = \frac{\text{demand rate}}{\text{service rate}} = \frac{q}{NQ}$ = utilization factor

q = demand rate on the system (vehicles per hour)

Q_M = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8.11)



TABLE 8-11

Table of Q_M Values

	$N = 1$	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	.1000	.0182	.0037	.0008	.0000	0.0000	0.0000
.2	.2000	.0666	.0247	.0096	.0015	.0002	.0000
.3	.3000	.1385	.0700	.0370	.0111	.0036	.0011
.4	.4000	.2286	.1411	.0907	.0400	.0185	.0088
.5	.5000	.3333	.2368	.1739	.0991	.0591	.0360
.6	.6000	.4501	.3548	.2870	.1965	.1395	.1013
.7	.7000	.5766	.4923	.4286	.3359	.2706	.2218
.8	.8000	.7111	.6472	.5964	.5178	.4576	.4093
.9	.9000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$$\rho = \frac{q}{NQ} = \frac{\text{arrival rate, total}}{(\text{number of channels})(\text{service rate per channel})}$$

N = number of channels (service positions)

Solution

Step 1: $Q = \frac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3 \text{ services per hour}$

Step 2: $q = (110 \text{ veh/45 min}) \times (60 \text{ min/hr}) = 146.7 \text{ vehicles per hour}$

Step 3: $\rho = \frac{q}{NQ} = \frac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_M = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_M values (see Table 8-11).

Step 5: The acceptable probability of the queue, M , being longer than the storage, 18 spaces in this example, was stated to be 5%. $P(x > M) = 0.05$, and:

$$M = \left[\frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956} \right] - 1 = \left[\frac{-2.996 - (-0.314)}{-0.110} \right] - 1$$

$$= 24.38 - 1 = 23.38, \text{ say } 23 \text{ vehicles.}$$