

Transportation Impact Analysis

107th Avenue Expansion, City of Sweetwater, Florida

Final Report

Submitted to

Florida Department of Transportation

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1. INTRODUCTION

The Florida Department of Transportation has developed plans to widen SW 107th Avenue between West Flagler Street and SW 8th Street from the current four lanes to six lanes. Recently, there have been proposals to develop an area in the City of Sweetwater into a college town. The study area is adjacent to Florida International University (FIU) main campus, as indicated by the rectangular area shown in Figure 1.1. The study area is bound to the north by West Flagler Street, east by SW 107th Avenue, south by SW 8th Street, and west by SW 110th Avenue. The proposed new development/redevelopment is made up of offices, apartments or condominiums, restaurants, book store, stores, coffee shops, etc. Different development scenarios were created in this study, and their impacts on traffic on 107th Avenue and in the surrounding area were analyzed. The analyses also included pedestrian and bicycle connectivity in the area, as well as access to transit services and the FIU circulator that connects the main campus to the Engineering Center.



Figure 1.1 Satellite Image of the Study Area

In the remainder of this report, Chapter 2 describes the methodology of the analysis. Chapter 3 discusses the data that are collected and used in this study. Chapter 4 analyzes the existing traffic conditions. Chapter 5 estimates the traffic impacts from the new developments and future traffic conditions, as well as roadway levels of service. Chapter 6 addresses issues related to non-motorized modes and access to transit services. Finally, Chapter 7 provides conclusions and recommendations.

2. METHODOLOGY DEVELOPMENT

The methodology employed for studying the traffic impact of the proposed redevelopment is described in this chapter. Section 2.1 defines the study area and the traffic analysis zones. Section 2.2 defines the analysis years, i.e., the base year and forecast year. Section 2.3 explains the overall procedure of the analysis and describes the method used to estimate background traffic.

2.1 Study Area and Traffic Analysis Zones

The study area and the TAZ boundaries are shown in Figure 2.1. The study area where redevelopment is propose is located in TAZ 824, as defined in the 2015 Miami-Dade County FSUTMS model. TAZ 824 extends from SW 107th Avenue westward to SW 114th Avenue. Because the proposed redevelopment site is within one block west of SW 109th Avenue and does not occur through the entire zone, TAZ 824 is divided into three new TAZs, which are renumbered as TAZ 824a, TAZ 1468, and TAZ 1469. TAZ 824a represents the part of the original TAZ 824 where no new development is assumed. TAZs 1468 and 1469 represent the areas inside the original TAZ 824 where new development is assumed to occur in the future. These two TAZs make up the study area, with TAZ 1468 on the east side of SW 109 Avenue and TAZ 1469 on the west side of SW 109 Avenue to SW 110 Avenue.



Figure 2.1 Study Area and TAZ Boundaries

2.2 Analysis Years

The base year for this study is 2005. The year 2015 is chosen as the target year.

2.3 Analysis Methodology

This study follows the procedures outlined in the Florida Department of Transportation’s Site Impact Analysis Manual, as well as the 2007 edition of the ITE Trip Generation Manual and the 2005/2015 FSUTMS model. The study involved an analysis of the existing conditions, creation of different growth scenarios, and analysis of the traffic impact of the new developments.

Figure 2.2 illustrates the overall methodology for the site impact analysis. Both the manual method and FSUTMS models are used in this analysis. The manual method is applied to calculate trip generation based on daily trip rates from the 7th edition of the ITE Trip Generation Manual. Internal captures are estimated by using diagrammatical depiction. Link distribution percentages method is applied to obtain the percentages of traffic from the study area that are distributed to selected facilities (i.e., network link). These percentages are obtained from both the base year and forecast year FSUTMS models, and are subsequently applied in the manual calculation of trips from the study area that are distributed to the selected facilities. The base year percentage of trips from the study area for a given network link is used in estimating the background traffic for that facility for the future year. The future year trip percentage from the study area for a given network link is used to calculate the development trips on the given network link, which are added to the background traffic to obtain the total traffic on the link for the future year.

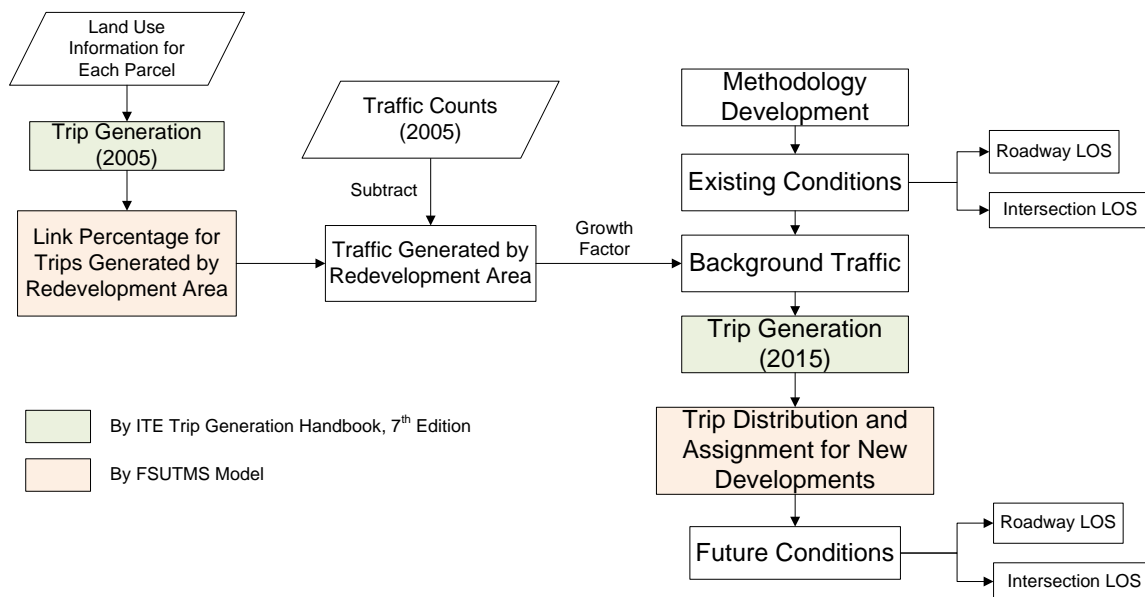


Figure 2.2 Methodology Flowchart

One of the analysis steps is estimating background traffic, which is the traffic in the future year without the redevelopment. Because the study area is expected to be redeveloped, some of the existing land use will be replaced by new developments, while the remaining land use will be unchanged. This means that the traffic from the land use that is to be replaced by the new development would no longer be generated in the future year and will need to be subtracted from the future year background traffic. The following equations describe the procedure for calculating the background traffic for the future year for a given facility (or at a given count station):

$$T = T_u + T_m \quad (1)$$

$$T_m^e = T_m - T_m^i \quad (2)$$

$$t_B = F \times (t_c - T_m^e \times P) \quad (3)$$

where T = Trip generation for the base year,
 T_m = Trip generated by the changed land use for the base year,
 T_u = Trip generated by the unchanged land use for the base year,
 T_m^e = External trips from the changed land use for the base year,
 T_m^i = Internal trips from the changed land use for the base year,
 t_B = Background traffic,
 F = Growth factor,
 t_c = Traffic counts from count station in the base year, and
 P = Link percentage of trips generated by redevelopments for the base year.

Equation (1) states that the base year vehicle trips are made up of two parts: trips generated from the land use that remains unchanged (T_u) and those from the land use that is to be changed in 2015 (T_m). Equation (2) states that in the base year, external trips generated from the land use to be changed are the difference between the total trips and internal trips. The background traffic for a given count station can be calculated using Equation (3). In the equation, P is the percentage of the base year traffic from the land use that is to be changed that uses (or is assigned to) the road where the count station is located. P is obtained from the 2005 FSUTMS model, which is run with TAZ 824 split into three new zones: 824a (land use unchanged), 1468 (some of the land use changed), and 1469 (some of the land use changed). The term $T_m^e \times P$ is therefore the external trips from the land use in the base year that will be replaced in the future at the given count station. Finally, the background traffic at the given location, t_B , is obtained by first subtracting the external trips generated from the land use that is to be replaced from the base year traffic counts, then multiplying this difference by a growth factor, F , which is assumed based on the projected growth in the region.

3. DATA COLLECTION AND PROCESSING

To assess the existing conditions and potential impact from the proposed development of the study area, various data including roadway geometry, traffic data, land use data, employment data, traffic analysis zone boundary, ridership of the FIU Campus Area Transit Service (CATS), and future growth projections were obtained. The following sections provide a brief description of each type of data.

3.1 Base Year Traffic Data for Selected Facilities

In the vicinity of the study area, there are four FDOT traffic count stations. They are located on SW 107th Avenue and SW 8th Street and include 871218, 871090, 872580, and 870090. Their locations are described in Table 3.1. Traffic counts from these stations were obtained from the 2006 Annual Average Daily Traffic Report, published by the FDOT.

Table 3.1 Locations of Four Count Stations in the Vicinity of the Study Area

Station No.	Location
871218	NW 107th Avenue, 200' N of NW 7th Street
871090	SW 107th Avenue, 200' S of SW 8th Street
872580	SW 107th Avenue, 200' S of Flagler Street
870090	SW 8th Street, 200' E of SW 109th Avenue

3.2 FSUTMS Input Files for the 2005 FSUTMS Model

Because the original TAZ 824 was split into three TAZs, input files for the FSUTMS model need to be modified to reflect the changes in the TAZ structure. Tables 3.2 provides the household data for TAZ 824 from the original ZDATA1a file, and Table 3.3 gives the employment data from the ZDATA2 files.

Table 3.2 ZDATA1A for TAZ 824

	HHWOC ¹	HHWC ²	VEHWOC ³	VEHWC ⁴	WRKWOC ⁵	WRKWC ⁶	PWOC ⁷	PWC ⁸
TAZ 824	1,564	1,159	2,278	2,507	1,748	1,866	3,433	4,883

- 1: Households without Children
- 2: Households with Children
- 3: Vehicles in Households without Children
- 4: Vehicles in Households with Children
- 5: Workers in Households without Children
- 6: Workers in Households with Children
- 7: Persons in Households without Children
- 8: Persons in Households with Children

Table 3.3 ZDATA2 for TAZ 824

	Industrial Employment	Commercial Employment	Service Employment	Total Employment
TAZ 824	80	430	291	801

3.3 Existing Land Use

Existing land use, illustrated in Figure 3.1, was obtained from the FIU Metropolitan Center. In the study area, the dominant land use is currently multi-family residential. The study area also contains commercial properties and offices.

To estimate trip generation based on the ITE Trip Generation Manual, parcel level information on land use is needed. The Miami-Dade County Property Search Engine (http://www.miamidade.gov/pa/property_search.asp) was used to obtain detailed information on the land use of each property in the study area.

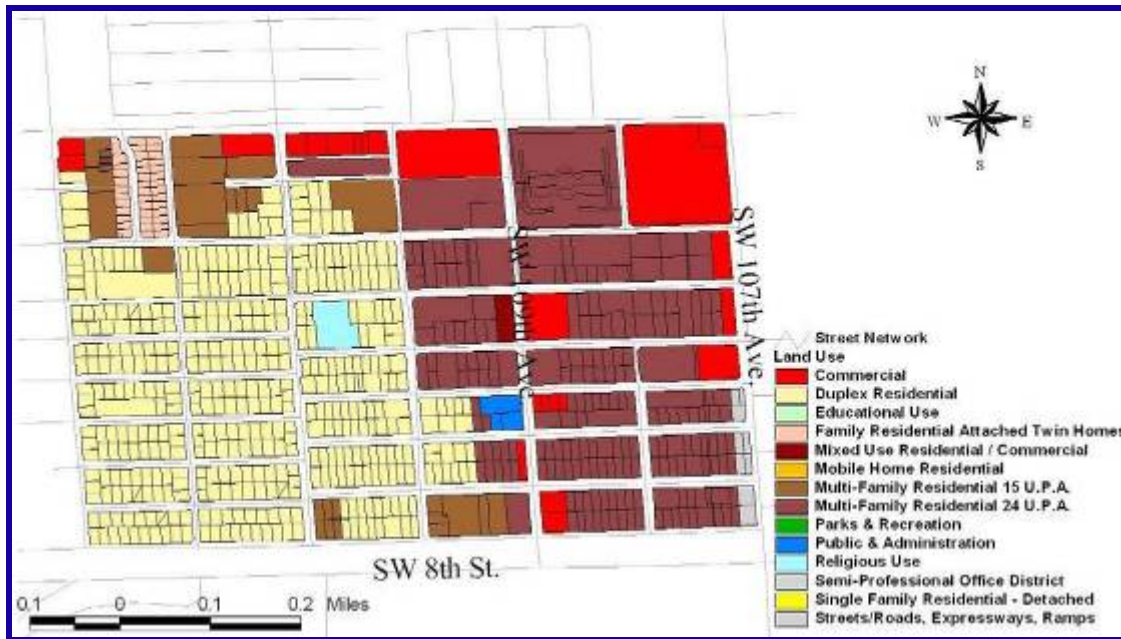


Figure 3.1 Existing Land Use in TAZ 824

3.4 Employment Data

Similarly to residential properties, information on non-residential land use is also required for estimating trip generation using the ITE manual. Employment data, including employment type and employment size by business location, were obtained from the 2005 InfoUSA database of business establishments, which was purchased by the FDOT. The data were used to modify the ZDATA2 file. The original employment data were in ASCII format and were geocoded based on the Miami-Dade County street map. Figure 3.2 shows the geocoded employment data in the original TAZ 824. The database contains information on name, street address, SIC code, and employment size at the address of a business establishment.

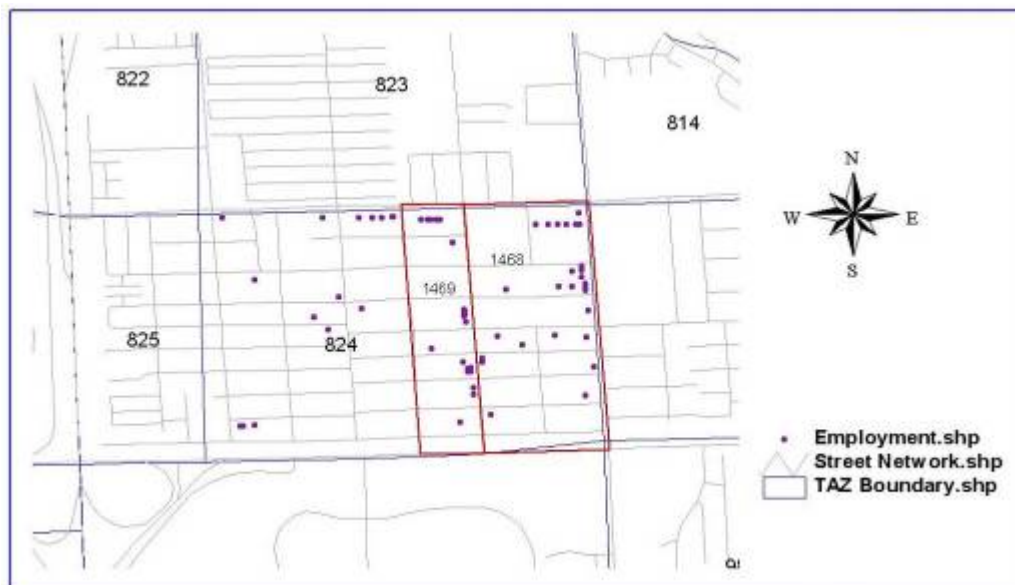


Figure 3.2 Geocoded Employment Data in TAZ 824

3.5 Street Network and Transit Bus Routes

There are five MetroBus Routes, including 11, 51, 71, 137, and 212. These routes provide transit services in and around the study area. Figure 3.3 shows the street network and the MetroBus Routes.

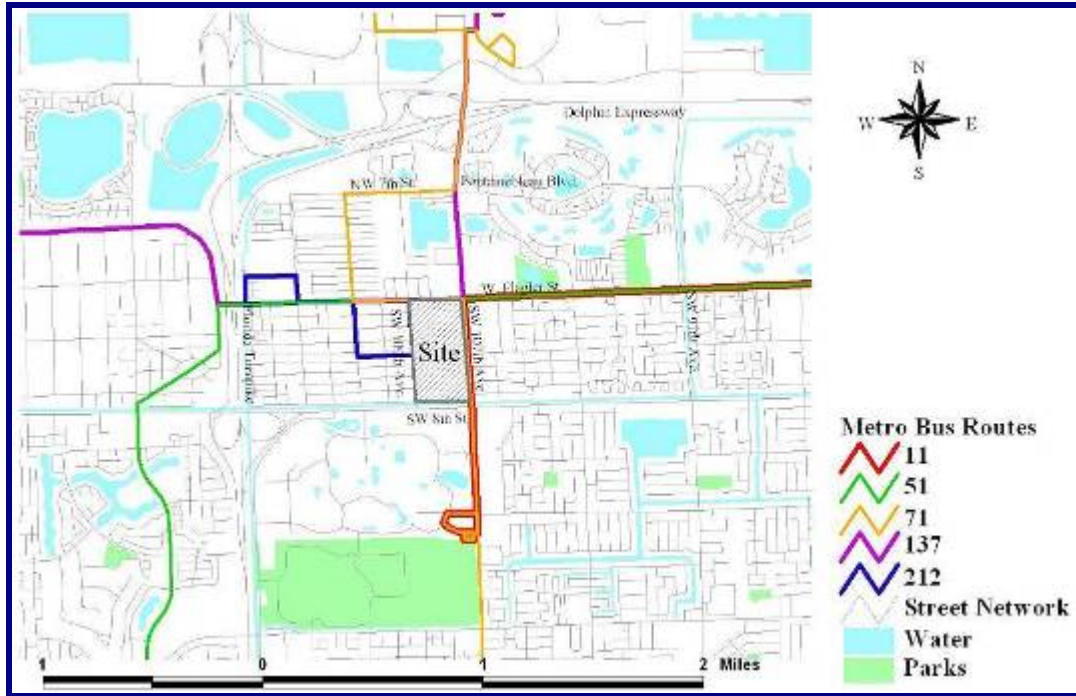


Figure 3.3 Street Network and Metro Bus Routes around the Study Area

3.6 Campus Area Transit Service (CATS)

CATS is a shuttle service between the University Park (UP) campus, located on the southwest corner of SW 107th Avenue and SW 8th Street, and the Engineering Center (EC) located on the northeast corner of NW 107th Avenue and West Flagler Street. The shuttle fleet consists of two buses running on 100-percent biodiesel fuel. The current CATS schedule, which combines the schedules of the two buses, and the headway are presented in Table 3.4. The route is shown in Figure 3.4, with stops at the bookstore at the Graham Center on the UP campus, through the Engineering and Computer Science (ECS) building on the UP campus, and finally to the Engineering Center.

Figures 3.5 through 3.9 show the average ridership of CATS Monday through Friday by hour. The boarding counts were conducted over five weeks from August 27 to September 28, 2007 at three stops: the engineering campus (EC), Engineering and Computer Science building on the main campus (ECS), and Graham Center (GC). It appears that 10 AM, 1 PM, and 3 PM were three peaks during the day.

Table 3.4 CATS Schedule

Bus Stop	ECS	EC	Headway
7:05 AM	7:10 AM	7:30 AM	
7:50 AM	7:55 AM	8:10 AM	0:45
8:25 AM	8:30 AM	8:50 AM	0:35
9:05 AM	9:10 AM	9:25 AM	0:40
9:10 AM	9:15 AM	9:35 AM	0:05
9:40 AM	9:45 AM	10:00 AM	0:30
9:50 AM	9:55 AM	10:10 AM	0:10
10:15 AM	10:20 AM	10:35 AM	0:25
10:25 AM	10:30 AM	10:50 AM	0:10
11:25 AM	11:30 AM	11:50 AM	1:00
12:05 PM	12:10 PM	12:25 PM	0:40
12:40 PM	12:45 PM	1:00 PM	0:35
1:05 PM	1:10 PM	1:25 PM	0:25
1:20 PM	1:25 PM	1:45 PM	0:15
1:45 PM	1:50 PM	2:05 PM	0:25
2:05 PM	2:10 PM	2:25 PM	0:20
2:20 PM	2:25 PM	2:40 PM	0:15
2:35 PM	2:40 PM	2:55 PM	0:15
2:55 PM	3:00 PM	3:20 PM	0:20
3:10 PM	3:15 PM	3:35 PM	0:15
3:35 PM	3:40 PM	3:55 PM	0:25
3:45 PM	3:50 PM	4:05 PM	0:10
4:05 PM	4:10 PM	4:25 PM	0:20
4:40 PM	4:45 PM	5:00 PM	0:35
5:15 PM	5:20 PM	5:35 PM	0:35
6:15 PM	6:20 PM	6:40 PM	1:00
7:00 PM	7:05 PM	7:20 PM	0:45
7:40 PM	7:45 PM	7:55 PM	0:40
8:10 PM	8:15 PM	8:35 PM	0:30
8:35 PM*	8:40 PM*	8:50 PM*	0:25
9:05 PM*	9:10 PM*	9:30 PM*	0:30
9:45 PM*	9:50 PM*	10:10 PM*	0:40

* Service not available Friday evenings

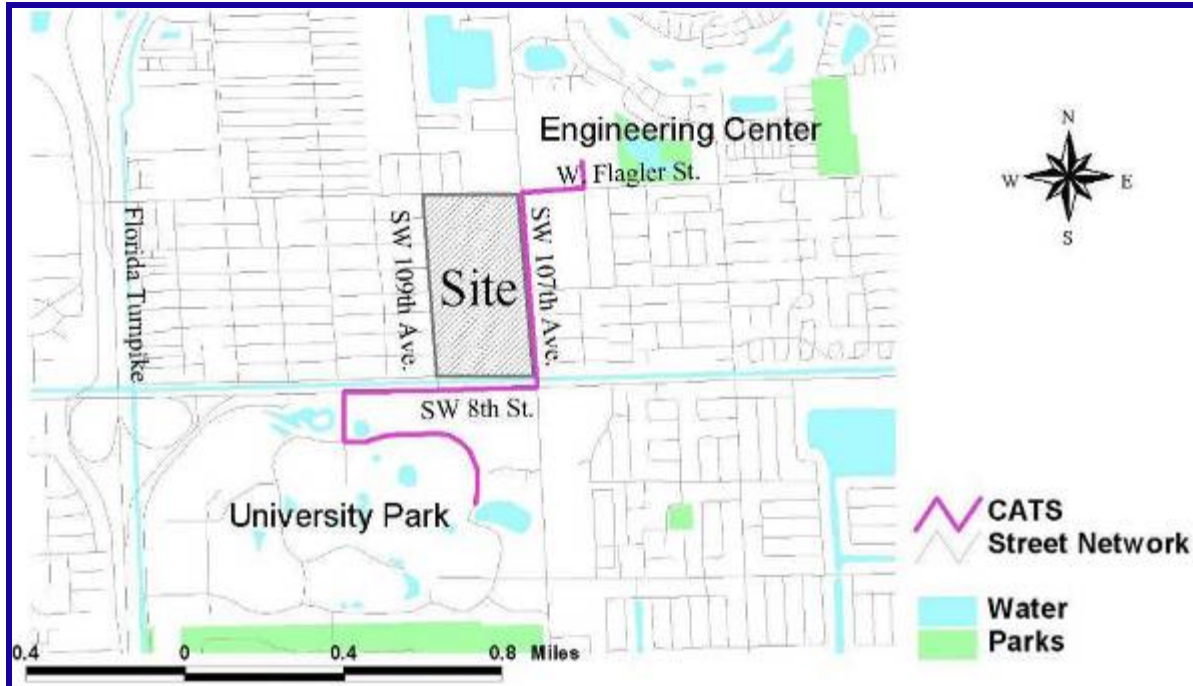


Figure 3.4 CATS Route

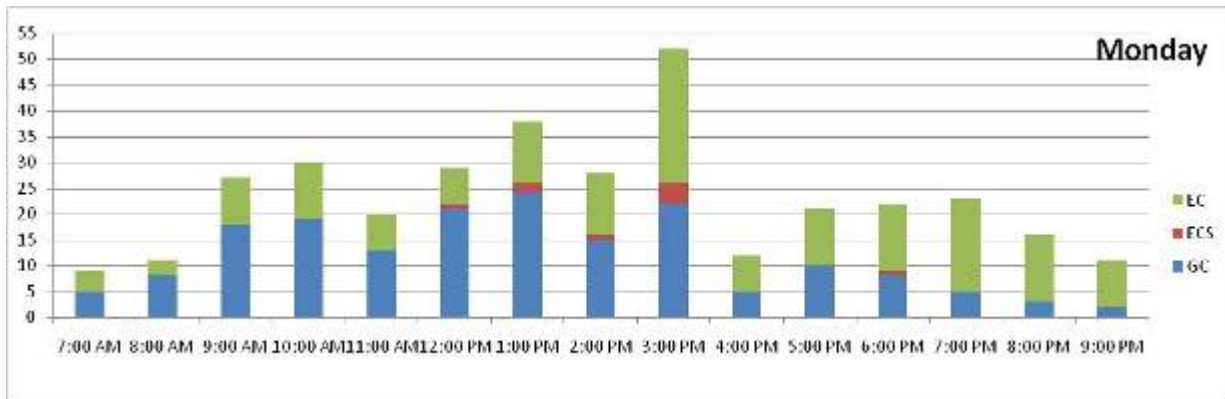


Figure 3.5 CATS Ridership on Monday

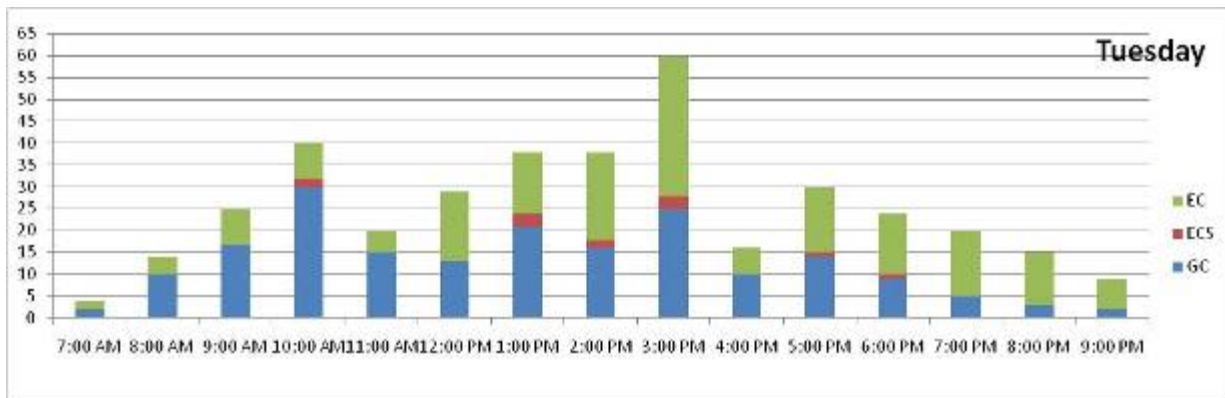


Figure 3.6 CATS Ridership on Tuesday

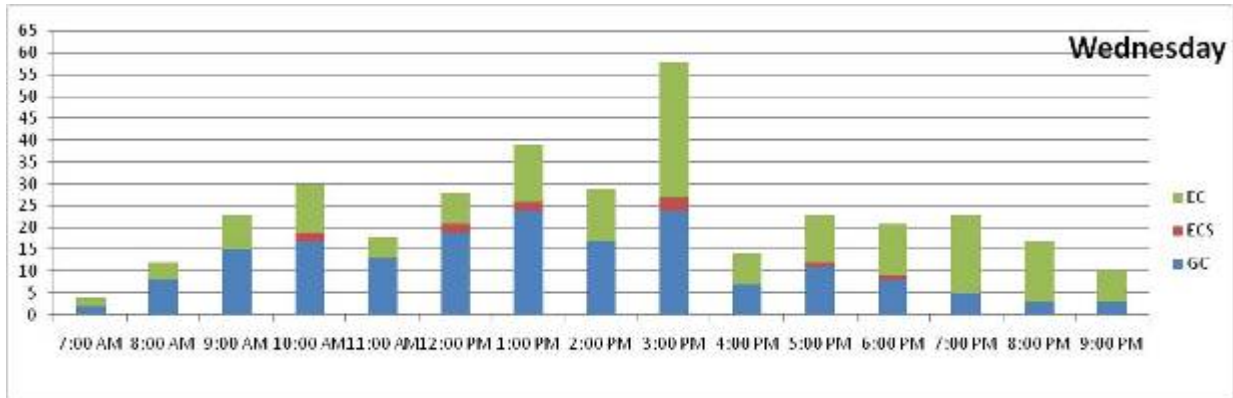


Figure 3.7 CATS Ridership on Wednesday

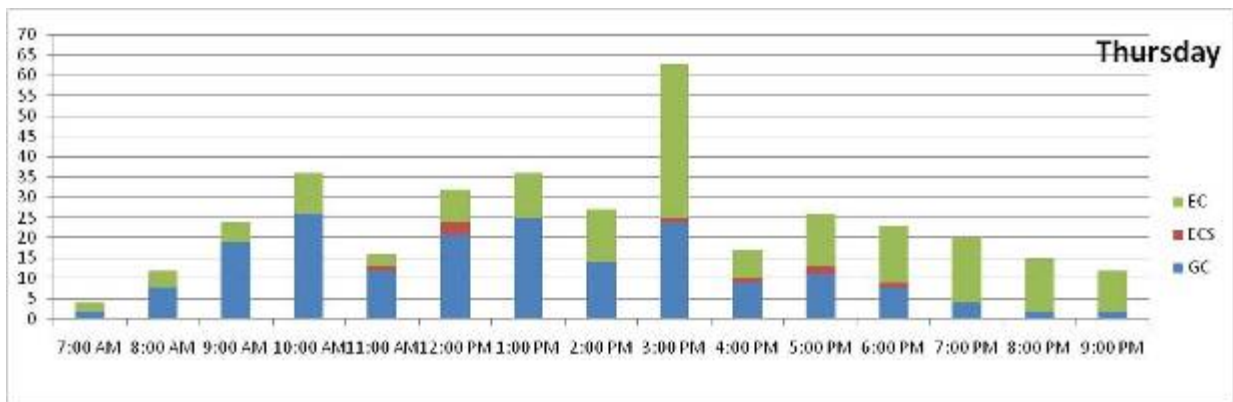


Figure 3.8 CATS Ridership on Thursday

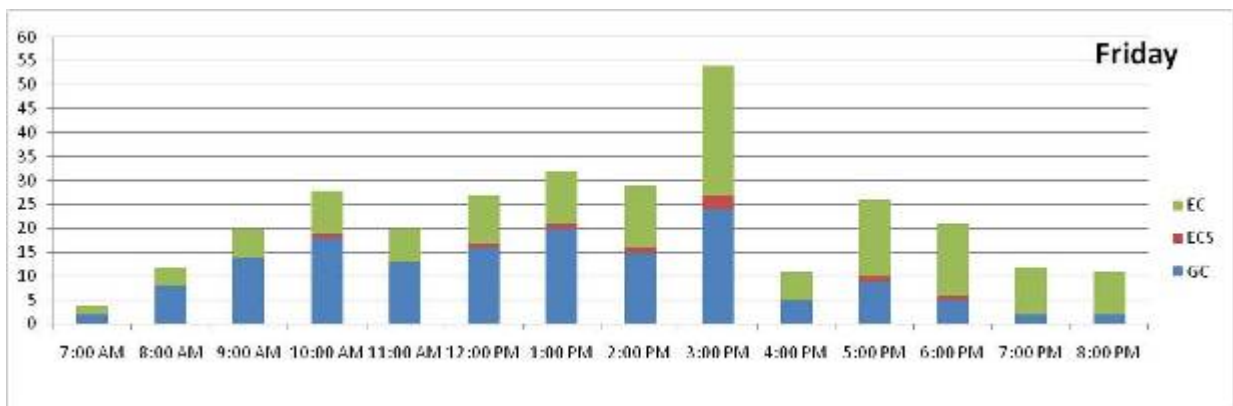


Figure 3.9 CATS Ridership on Friday

3.7 Future Growth

According to the 2030 Miami-Dade Long Range Transportation Plan, the population of Miami-Dade County is expected to exceed three million and its employment base to surpass 1.5 million by 2030. Miami-Dade County is divided into six planning areas, as shown in Figure 3.10. The study area falls into the Northwest transportation planning area, where travel demand is expected to increase significantly. The total trips are projected to grow 45% in the Northwest Transportation Planning Area by 2030, compared to 43% countywide. Figure 3.11 shows

countywide increases in demographic and transportation measures. Figure 3.12 presents these increases in the Northwest Transportation Planning Area.

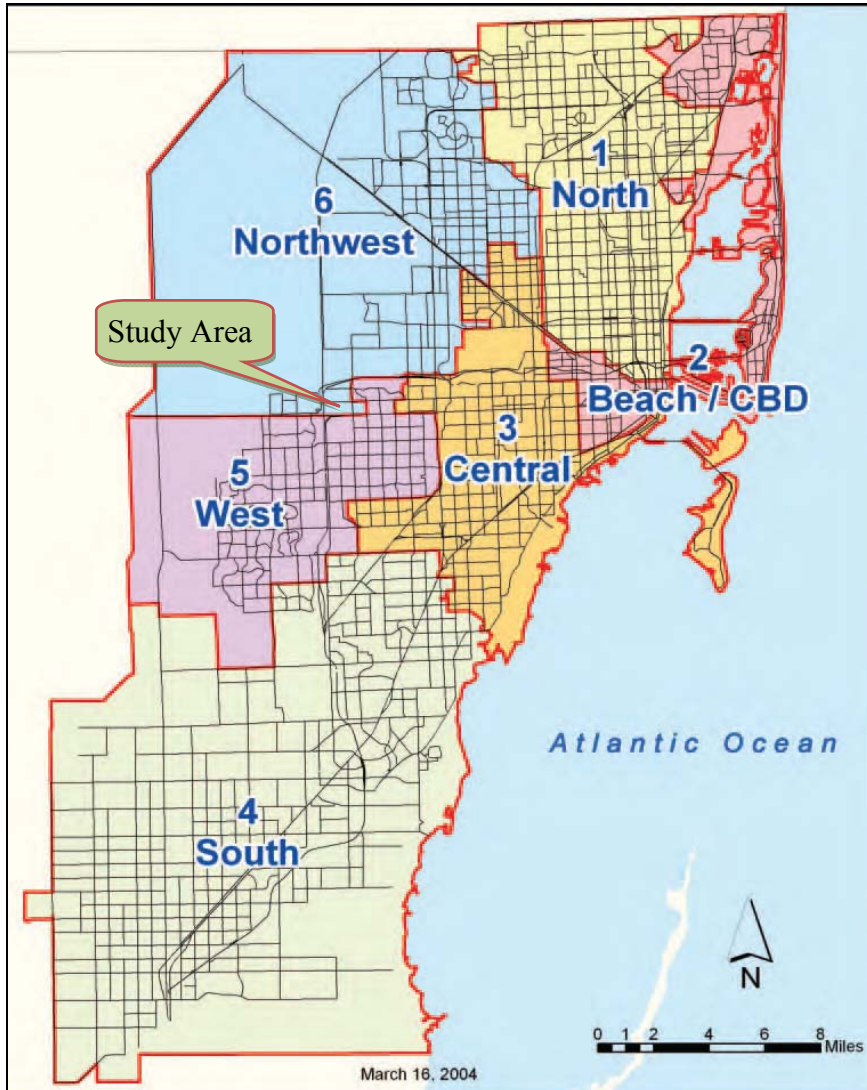


Figure 3.10 Miami-Dade County Planning Areas (Source: 2030 Miami-Dade Long Range Transportation Plan)

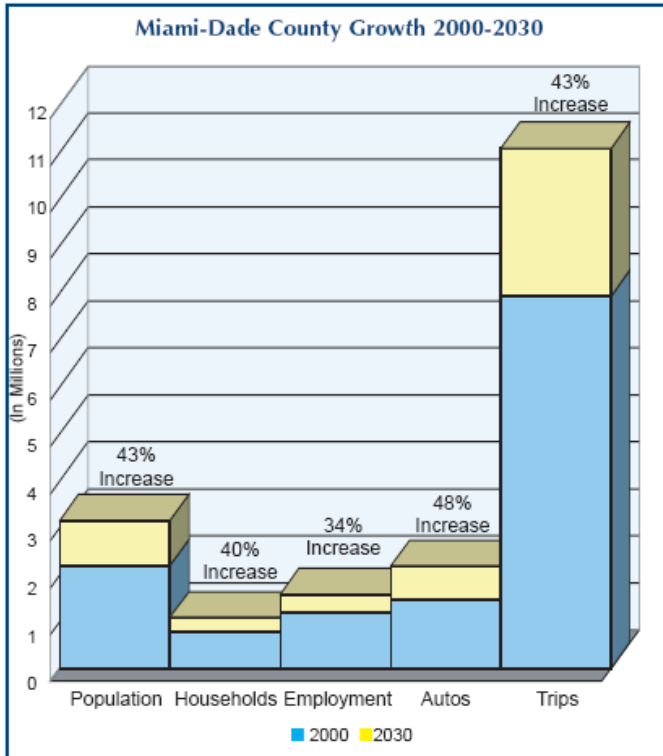


Figure 3.11 Growth in Miami-Dade County (Source: 2030 Miami-Dade Long Range Transportation Plan)

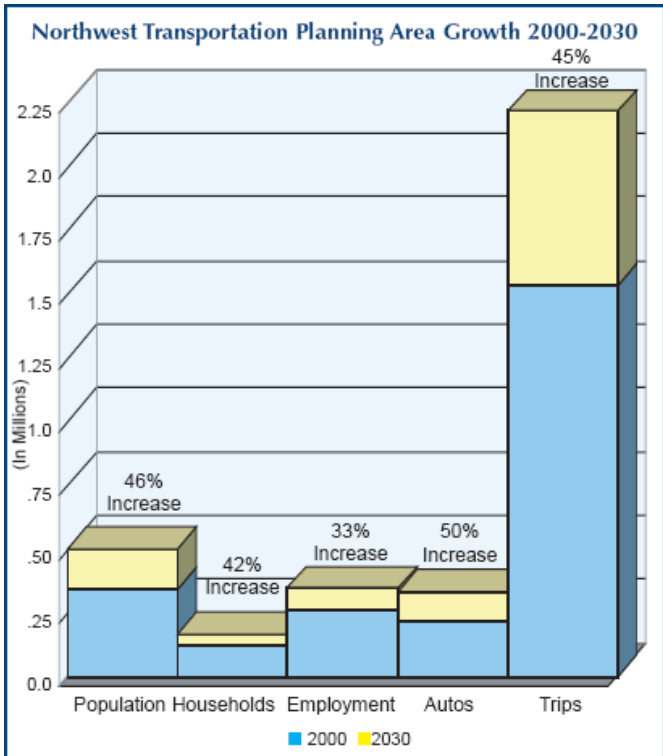


Figure 3.12 Growth in the Northwest Transportation Planning Area (Source: 2030 Miami-Dade Long Range Transportation Plan)

4. ANALYSIS OF EXISTING TRAFFIC CONDITIONS

The base year levels of service for roadways and intersections are analyzed and summarized in the following two sections.

4.1 Roadway Levels of Service

There are four traffic count stations (871218, 871090, 872580, and 870090) in the vicinity of the study area, as described earlier in Table 3.1. Traffic counts from these count stations were obtained from the 2006 Annual Average Daily Traffic Report, published by the FDOT. The level of service (LOS) at each station was analyzed using Table 4-7 of the FDOT’s Quality/Level of Service Handbook. NW/SW 107th Ave is a four-Lane Arterial Class II facility, and SW 8th Street is an eight-Lane Arterial II facility. Table 4.1 provides the average annual daily traffic (AADT) and the LOS at these stations. The K, D, and T factors in the table are, respectively, the 30th-highest hourly traffic of the year, directional distribution factor, and truck factor.

Table 4.1 Roadway Levels of Service (2005)

Station No.	Location	K Factor	D Factor	T Factor	AADT ¹	DDHV ²	LOS ³	LOS D ⁴	LOS E ⁴	LOS F ⁴
871218	NW 107th Avenue, 200' N of NW 7th Street	7.39	58.66	5.55	73,000	3,165	F	1,360	1,710	1,800
871090	SW 107th Avenue, 200' S of SW 8th Street	7.39	58.66	4.89	51,500	2,230	F	1,360	1,710	1,800
872580	SW 107th Avenue, 200' S of Flagler Street	7.39	58.66	4.89	38,000	1,646	D	1,360	1,710	1,800
870090	SW 8th Street, 200' E of SW 109th Avenue	7.39	58.66	4.10	56,000	2,425	C	2,790	3,330	3,500

1. Source: 2006 Annual Average Daily Traffic Report, Florida Department of Transportation

2. Directional Design Hourly Volume (DDHV) = AADT × K × D

3. Table 4-7 of the FDOT’s Quality/Level of Service Handbook (4-Lane / 8-Lane Arterial Class II)

4. Minimum threshold volume for LOS D, E, and F in Table 4-7 of the FDOT’s Quality/Level of Service Handbook

4.2 Intersection Levels of Service

Turning movement counts were obtained from Table 6.2 in the 2006 SR 985/SW 107th Avenue PD&E Study Final Report (FDOT District VI). This table is reproduced as Table 4.2 below, with the LOS for the intersection of SW 109th Avenue and SW 8th Street added. The LOS was calculated using the HCS 2000 software. The signal plans used in the analysis were provided by the Miami-Dade County Public Works Department.

Table 4.2 Signalized Intersection Levels of Service (2005)

Intersection	Peak Hour	Delay (sec/veh)	LOS
SW 107th Avenue and W Flagler Street	AM	107.2	F
	PM	83.1	F
SW 107th Avenue and SW 4th Street	AM	17.7	B
	PM	22.9	C
SW 107th Avenue and SW 8th Street	AM	62.7	E
	PM	89.7	F
SW 109th Avenue and SW 8th Street	AM	125.8	F
	PM	132.4	F

Delays and LOS were also analyzed for unsignalized intersections using the HCS 2000 software, and are summarized in Table 4.3. Because all cross streets are two-lane local roads, the movement LOS is the same as the approach LOS.

Table 4.3 Unsignalized Intersection Levels of Service along SW 107th Avenue

Intersection	Peak Hour Begins	Delay (sec/veh)	Movement LOS	Approach LOS
Eastbound of SW 2nd Street	7:15 AM	285.4	F	F
	5:00 PM	52.0	F	F
Eastbound of SW 3rd Street	7:15 AM	65.5	F	F
	4:30 PM	71.6	F	F
Eastbound of SW 5th Street	7:00 AM	35.9	E	E
	5:00 PM	45.6	E	E
Westbound of SW 5th Street	7:00 AM	15.5	C	C
	5:00 PM	16.5	C	C
Eastbound of SW 6th Street	7:00 AM	29.8	D	D
	5:00 PM	28.0	D	D
Westbound of SW 6th Street	7:00 AM	42.6	E	E
	5:00 PM	48.3	E	E
Eastbound of SW 7th Street	7:00 AM	21.1	C	C
	5:00 PM	35.0	D	D
Eastbound of SW 7th Terrace	7:15 AM	29.8	D	D
	5:00 PM	28.1	D	D
Westbound of SW 7th Terrace	7:00 AM	49.5	E	E
	5:00 PM	101.3	F	F

5. ANALYSIS OF BACKGROUND TRAFFIC

This chapter describes the computation of the background traffic for 2015. As mentioned in Section 2.3, traffic in the network for the future year is made up of two parts: (1) background traffic, which is the result of regional growth in population and employment based on the anticipated future network, and (2) traffic that would result from the redevelopment in the study area. The background traffic is generated by unchanged land use for the future year in the study area, which is estimated by applying a growth factor to the traffic generated by the unchanged parcels for the current year. Section 5.1 discusses trip generation for 2005 by using the Institute of Transportation Engineer (ITE) Trip Generation Handbook. The internal captures are calculated based on all of the residential, retail, and office land uses for each TAZ. The FSUTMS model is applied to calculate the link percentage of the total trips generated by TAZs 1468 and 1469, which is described in Section 5.2. Finally, Section 5.3 presents the calculation of background traffic.

5.1 Trip Generation for 2005

The Institute of Transportation Engineer (ITE) Trip Generation Handbook, 7th Edition, provides trip generation rates for different types of land uses. There are 13 land use types in the study area. These land use types and their corresponding measure units (third column), ITE trip generation

rates (fourth column), the total intensity (quantity as measure by the given unit) within the study area (fifth column) and the total trips are summarized in Table 5.1. Trips generated by each TAZ are calculated for each parcel within the original TAZ 824. The detailed trip generation data are provided in Tables A.1 through A.2 in Appendix A.

Table 5.1 Weekday Trip Generation Rates by Land Use

Land Use	ITE Code	Intensity	Unit	Trip Generation Rate	Trips
Single-Family Detaching Housing	210	175	DU ¹	9.57	1,675
Residential Condominium/Townhouse	230	1444	DU ¹	5.86	8,462
Apartment	220	952	DU ¹	6.72	6,397
Low-Rise Apartment	221	9	DU ¹	6.59	59
Fast-Food Restaurant without Drive-Through Window	933	3	TSF GFA ²	716.00	2,491
Drinking Place	936	4	TSF GFA ²	11.34	44
Shopping Center	820	108	TSF GLA ³	42.94	4,635
Specialty Retail Center	814	122	TSF GLA ³	44.32	5,396
Gasoline/Service Station with Convenience Market	945	10	Fuel Position	162.78	1,628
Drive-in Bank	912	24	TSF GFA ²	246.49	6,032
Government Office Building	730	24	TSF GFA ²	68.93	1,632
Automobile Care Center	942	4	TSF OGLA ⁴	3.38	15
Church	560	64	TSF GFA ²	9.11	587
Total					39,052

1. DU: Dwelling unit
2. TSF GFA: Thousand square feet gross floor area
3. TSF GLA: Thousand square feet gross leasable area
4. TSF OGLA: Thousand square feet Occupied gross leasable area

Table 5.2 summarizes the base trip generation for each TAZ, which is obtained by multiplying the entering and leaving trip rates from the ITE trip generation manual, both of which are 50%, by the land use intensity (third column of Table 5.1). The numbers of trips are summed for each zone.

Table 5.2 Total Trips from TAZs 824a, 1468, and 1469

TAZ	IN	OUT	TOTAL
1468	10,851	10,851	21,702
1469	3,701	3,701	7,403
824a	4,974	4,974	9,948
Total	19,526	19,526	39,052

Because of the mixed land use, some trips will be served by attractions in the same TAZ zone. Three kinds of land use are assumed to generate internal trips: residential, retail, and office. Table 5.3 provides the total and internal trips for these three kinds of land uses for TAZ 824a,

TAZ 1468, and TAZ 1469. The internal trips are used to determine the internal capture trips for the three zones. The internal capture trips are calculated following the procedure described in the *FDOT Transportation and Growth Management 2008* report. The calculations of the internal capture trips for TAZs 824a, 1468, and 1469 are illustrated, respectively, in Appendix B, Figures B.1 through B.3. From these diagrams, the percentages of internal capture trips between residential, retail, and office land uses for each of the three TAZs are obtained.

Table 5.3 Total, Internal, and External Trips for TAZs 824a, 1468, and 1469 Generated by Residential, Retail, and Office Land use

Existing Land Use	Total Trips			Internal Trips			
	In	Out	Total	In	Out	Total	%
<i>TAZ 1468</i>							
Residential	3,573	3,573	7,145	446	361	807	11.3%
Retail	4,012	4,012	8,023	416	479	895	11.2%
Office	251	251	501	38	60	98	19.5%
Total	7,836	7,836	15,669	900	900	1,800	
<i>TAZ 1469</i>							
Residential	1,293	1,293	2,586	214	166	380	14.7%
Retail	1,843	1,843	3,687	240	258	498	3.5%
Office	565	565	1,130	55	85	140	12.4%
Total	3,701	3,701	7,403	509	509	1,018	
<i>TAZ 824a</i>							
Residential	3,431	3,431	6,862	137	112	250	3.6%
Retail	1,249	1,249	2,499	112	137	250	10%
Office	0	0	0	0	0	0	0%
Total	4,680	4,680	9,361	249	249	500	

External trips for each TAZ are obtained by excluding the internal capture trips (IN, OUT, and TOTAL) shown in Table 5.3 from the total trips shown in Table 5.2 trips (IN, OUT, and TOTAL). The results are given in Table 5.4.

Table 5.4 External Trips for Study Area

TAZ	IN	OUT	TOTAL
1468	9,951	9,952	19,903
1469	3,192	3,192	6,385
824a	4,707	4,704	9,411
Total	17,850	17,848	35,698

5.2 Trip Distribution and Assignment for 2005

The 2005 Miami Dade FSUTMS model is used for trip distribution analysis to obtain the traffic data for the base year. Figure 5.1 shows the model network around the study area. The four network links, colored in green in the figure, correspond to the four count stations (871218, 872580, 870090, and 871090) in the vicinity of the study area. TAZs 1468 and 1469 are defined as the selected zones for tracking the development trips.

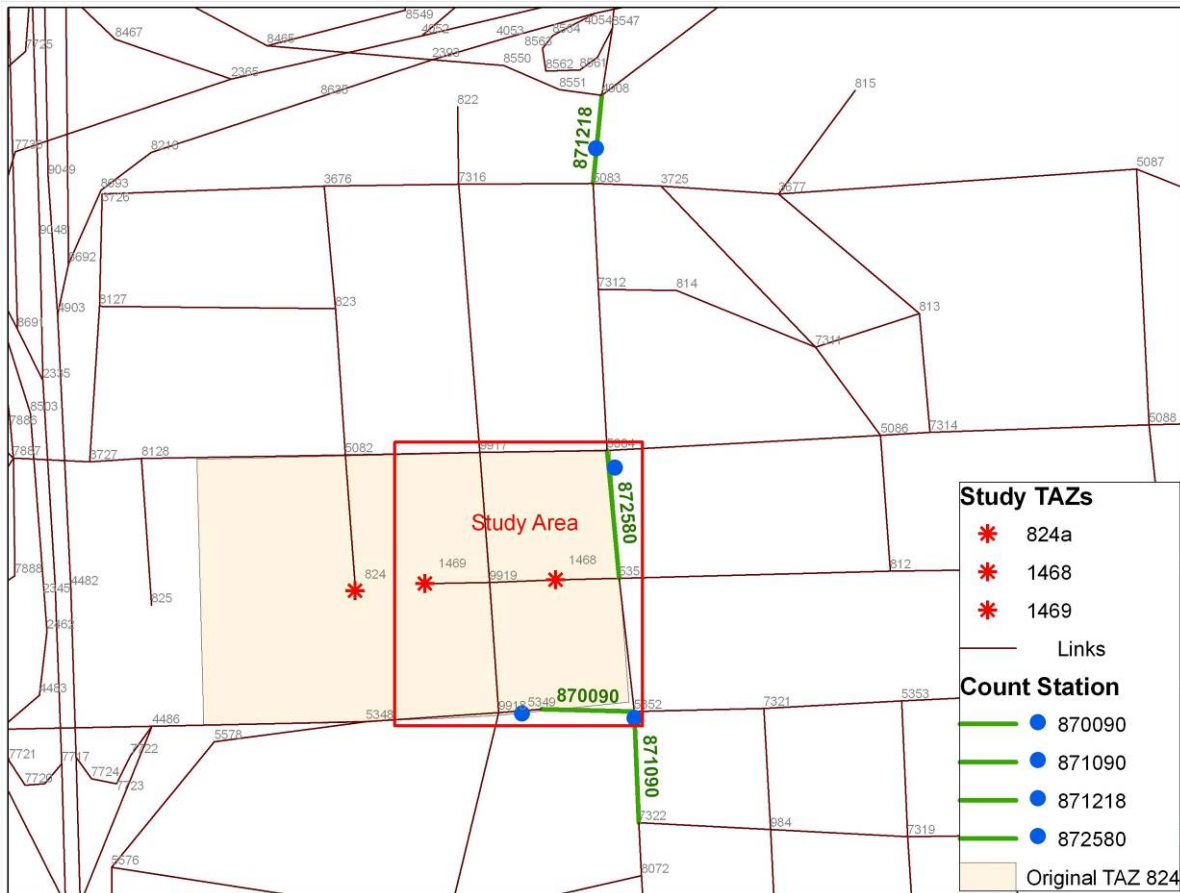


Figure 5.1 2005 Model Network for the Study Area and Its Vicinity

Because the original TAZ 824 is divided into three zones (TAZs 824a, 1468, and 1469), the input files for the FSUTMS model are modified as shown in Table 5.5 and Table 5.6. The ZDATA1 file is modified based on the information on residential properties in the new TAZs, which is from the property tax database. The ZDATA2 file is revised based on the distribution for each kind of employment within the new TAZs, which is obtained from the 2005 InfoUSA database by summing the industrial, commercial, and service employments for each TAZ.

Table 5.5 ZDATA1A Data from the 2005 Miami-Dade County Model

	HHWOC ¹	HHWC ²	VEHWOC ³	VEHWC ⁴	WRKWOC ⁵	WRKWC ⁶	PWOC ⁷	PWC ⁸
TAZ 824a	640	474	932	1,025	715	763	1,404	1,997
TAZ 1468	670	497	976	1,074	749	799	1,471	2,092
TAZ 1469	254	188	370	408	284	303	558	794

- 1: Households without Children
- 2: Households with Children
- 3: Vehicles in Households without Children
- 4: Vehicles in Households with Children
- 5: Workers in Households without Children
- 6: Workers in Households with Children
- 7: Persons in Households without Children
- 8: Persons in Households with Children

Table 5.6 ZDATA2 Data from the 2005 Miami-Dade County Model

	Employment			
	Industrial	Commercial	Service	Total
TAZ 824a	32	86	66	176
TAZ 1468	17	262	129	416
TAZ 1469	31	82	96	209

Because it has been assumed that there will not be any land use changes in TAZ 824a in the future year, the select zone analysis only tracks trips generated by TAZs 1468 and 1469. The link volumes from the model output are given in Table 5.7. Node A and Node B are the end nodes of the centroid connectors for each zone. Because the three links are all centroid connectors, the trips on these links are generated by selected zones, the number of trips for purpose 1 (PURP1) always equals to purpose 3 (PURP3), and purpose 2 (PURP2) always equals to purpose 4 (PURP4).

Table 5.7 Redevelopment Trips from the 2005 Miami-Dade County Model

TAZ	Node-A	Node-B	PURP1 ¹	PURP2 ²	PURP3 ³	PURP4 ⁴	Generation
1468	1468	5351	785	225	785	225	3,245
	5351	1468	753	233	753	233	
	1468	9919	442	167	442	167	
	9919	1468	469	171	469	171	
1469	1469	9919	582	138	582	138	1,463
	9919	1469	595	148	595	148	
Total							4,708

1. PURP1: Total Drive-alone trips from all zones
2. PURP2: Total HOV2+ trips from all zones
3. PURP3: Total Drive-alone trips from selected zones
4. PURP4: Total HOV2+ trips from selected zones

The network links corresponding to the four count stations (871218, 872580, 870090, and 871090) in the study area are 4908-5083, 5084-5351, 5349-5352, and 5352-7322. Link volumes obtained from the model output after the traffic assignment step are given in Table 5.8. The last column in the table gives the link volume generated by the study area as a percentage of the total external trips from the study area. The distribution result from the FSUTMS model shows that 26.70% of the trips generated from TAZs 1468 and 1469 use the section of NW 107th Avenue north of NW 7th street. About 24% of the trips generated from the same zones use the section of SW 107th Avenue south of Flagler Street. However, south of SW 8th Street, this percentage decreases to 13.28%. About 10% of the trips use the section of SW 8th Street west of SW 107th Avenue.

Table 5.8 Study Area Trips on Selected Network Links from the 2005 FSUTMS Model

Station No.	Location	Node-A	Node-B	Trips from Study Area	% of Total Trips from Study Area
871218	NW 107th Avenue, 200' N of NW 7th Street	4908	5083	1,257	26.70%
872580	SW 107th Avenue, 200' S of Flagler Street	5084	5351	1,101	23.39%
870090	SW 8th Street, 200' E of SW 109th Avenue	5349	5352	4,92	10.45%
871090	SW 107th Avenue, 200' S of SW 8th Street	5352	7322	6,25	13.28%

5.3 Background Traffic for 2015

Future land use data were developed and obtained from the FIU Metropolitan Center. Figure 5.2 shows the proposed mixed-use parcels and the unchanged parcels within the study area. The City of Sweetwater would like to have mixed-use development along SW 107th Avenue, SW 109th Avenue, West Flagler Street, and SW 7th Terrace to make Sweetwater into a “college town”. Part of the existing land use will be replaced by mixed-use development, while the land use in the rest of the study area will remain unchanged. The traffic generated from the unchanged parcels in the study area for future year 2015 is the background traffic in this analysis, which is the traffic expected from overall growth and other developments that is expected without the redevelopment considered in this study.

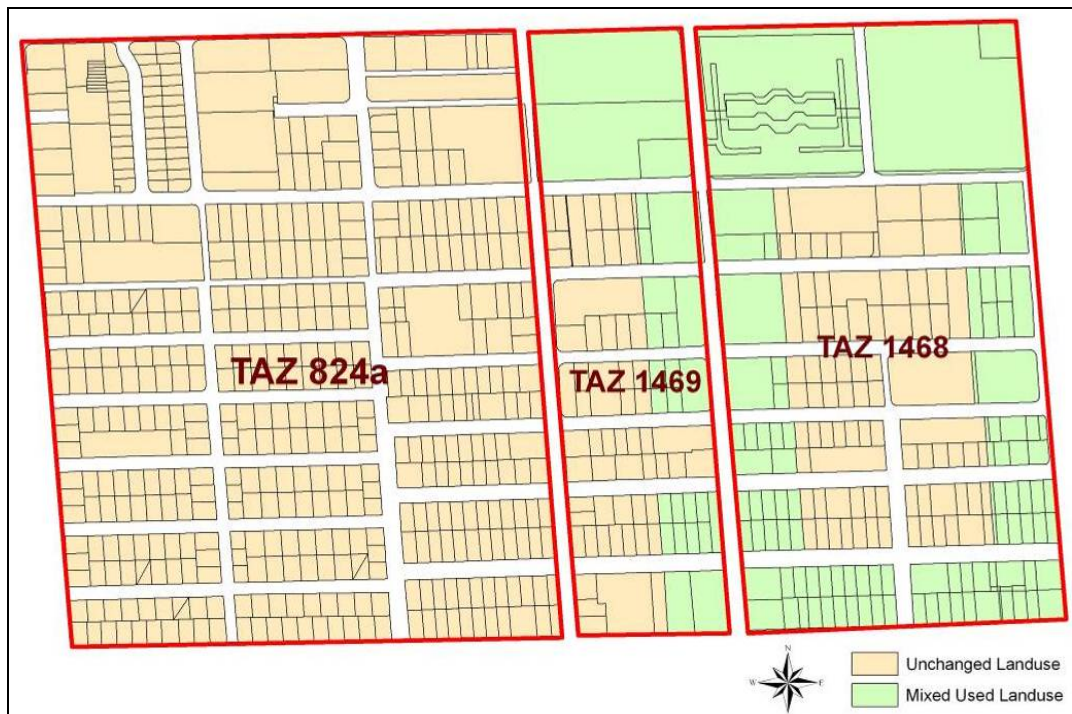


Figure 5.2 Future Land Use for Study Area

The methodology applied to estimate background traffic for 2015 is described in Section 2.3. It involves first excluding the traffic from the parcels that are proposed for redevelopment in the study area from the total traffic in 2005, and then applying a growth factor to the 2005 traffic to obtain the 2015 background traffic. The external trips generated in 2005 from parcels that are assumed to be redeveloped in 2015 are given in Table 5.9. Detailed parcel information is provided in Table A.1, and Table A.2 in Appendix A.

Table 5.9 External Trips from Parcels to be Redeveloped in TAZs 1468 and 1469 (2005)

TAZ	IN	OUT	TOTAL
1468	5,700	5,678	11,378
1469	2,278	2,290	4,568
Total	7,978	7,968	15,946

By applying the percentages obtained from the FSUTMS model output, which are shown in the last column of Table 5.8, to the total redevelopment trips (15,946) from TAZs 1468 and 1469, given in Table 5.9, the trips generated from the redeveloped parcels are loaded onto the links where the four count stations are located. The numbers of trips on the four links from the redeveloped parcels are provided in the fourth column of Table 5.10. By subtracting these trips from the traffic counts, the 2005 background traffic is obtained, as shown in the second last column in Table 5.10.

As previously mentioned, travel demand is expected to increase significantly by 2030 and the total trips are projected to grow by 45% from the 2000 level in the Northwest Transportation Planning Area between 2000 and 2030 (*2030 Miami-Dade Long Range Transportation Plan*). For the ten year period between 2005 and 2015, one third of the 30-year growth (45%) is assumed, which is 15% of the growth between 2000 and 2030. Applying the 15% growth rate to the 2005 background traffic, given in the sixth column of Table 5.10, the background traffic for 2015 is obtained, which is provided in the last column of the table.

Table 5.10 Background Traffic for 2015

Station No.	Location	% of Total Trips from Study Area	Trips (2005 ¹)	AADT	Background Traffic 2005	Background traffic 2015
871218	NW 107th Avenue, 200' N of NW 7th Street	26.70%	4,257	73,000	68,743	79,054
872580	SW 107th Avenue, 200' S of Flagler Street	23.39%	3,729	38,000	34,271	39,412
870090	SW 8th Street, 200' E of SW 109th Avenue	10.45%	1,666	56,000	54,334	62,484
871090	SW 107th Avenue, 200' S of SW 8th Street	13.28%	2,117	51,500	49,383	56,791

1. Total trips from areas that are to be redeveloped for the future scenarios.

6. ANALYSIS OF FUTURE CONDITIONS

The future year in the analysis is 2015. Future development trips are estimated based on the trip rates from the 7th edition of the ITE Trip Generation Manual based on three redevelopment scenarios. Development trips are distributed to network links using the link percentage method,

with link percentages obtained from the 2015 FSUTMS model. Traffic conditions are evaluated for each of the assumed redevelopment densities, as well as the expansion of SW 107th Avenue from four to six lanes. In this chapter, Sections 6.1 and 6.2 describe, respectively, the employment and population projections. Based on the new development, Section 6.3 estimates the trip generation for 2015. Section 6.4 describes the calculation for link percentages obtained from the FSUTMS model, and Section 6.5 discusses the LOS for intersections in the future year.

6.1 Employment Projection

FIU Metropolitan Center provided an employment projection based on the mixed land use district scenario, with limited business district zoning (BU-1A). It is assumed that with the creation of mixed-use corridors, the city would gain 23 new businesses, and nearly half of them would be retail stores. Future employment is calculated based on the following assumptions:

- ✓ 100 feet of depth along the corridor to attract businesses typical to the area,
- ✓ Future businesses will exist only on the ground level of any newly built structure, and
- ✓ Future businesses will be similar to existing ones both in their type and in the number of persons employed (retail or office and employing 3-4 persons each).

Of the 23 new businesses, 15 are assumed to be in TAZ 1468, and eight are assumed to be in TAZ 1469 on the west side of SW 109th Avenue. The 23 new businesses are assigned a land use type based on the existing land use types, such as retail stores, restaurants, offices, clinics, and banks.

6.2 Population Projection

While there is only one projection for future employment, three population projections are created based on different residential densities. The combination of the employment projection with three population projections results in three different growth scenarios. The first scenario is based on the lowest population projection with a residential density of 50 units per acre for the entire mixed-use area. The second scenario is based on the assumption of 75 residential units per acre. The third scenario assumes 105 units per acre. Around 27 acres of land will be changed to mixed-use, with 20 acres located within TAZ 1468 and seven acres in TAZ 1469. Replacing the existing 331 units in TAZ 1468 and 188 units in TAZ 1469, the numbers of new housing units for the study area are shown in Table 6.1.

Table 6.1 Housing Units for Different Scenarios

Scenario	Density (Units per Acre)	Units in TAZ 1468	Units in TAZ 1469
1 (Low)	50	1,012	354
2 (Medium)	75	1,514	530
3 (High)	105	2,116	741

6.3 Trip Generation for 2015

New trips are calculated based on the ITE Trip Generation Handbook, which are provided in Tables 6.2 and 6.3, respectively, for TAZs 1468 and 1469. Each record represents a redeveloped parcel. The type of future land use and the ITE land use code are given in the third and fourth columns. The unit measure of each new development is shown in the fifth column, which is in

either thousand square feet gross floor area (TSF GFA) or thousand square feet gross leasable area (TSF GLA). The redevelopment is assumed to be mixed residential and commercial use and zoned as limited business district (BU-1A), with the first floor being commercial and above floors residential. According to the Miami Dade County zoning code (Zoning Information for Limited Business District by Miami Dade County, Department of Planning & Zoning), the Floor Area Ratio (FAR) is 0.40. This ratio is used to estimate the gross floor area or gross leasable area of the new developments. Column seven in Table 6.2 shows the GFA/GLA in 1000 square feet. Applying the trip rates in the 8th column, the new trips generated by new development are obtained and are provided in the last column.

Table 6.2 Trips from New Businesses in TAZ 1468

Parcel	TAZ	Future Land Use	ITE Code	Unit	Area (sq-ft)	GFA/GLA (1000 sq-ft)	Trip Rate	Trips
1	1468	Retail	814	TSF GFA	17,829	7.13	44.32	316
2	1468	Retail	814	TSF GLA	13,820	5.53	44.32	245
3	1468	Services	912	TSF GFA	20,326	8.13	156.48	1272
4	1468	Office	710	TSF GFA	19,998	8.00	11.01	88
5	1468	Retail	814	TSF GLA	11,583	4.63	44.32	205
6	1468	Restaurant	933	TSF GFA	22,627	9.05	716.00	6480
7	1468	Restaurant	931	TSF GFA	25,060	10.02	89.95	902
8	1468	Restaurant	933	TSF GFA	19,497	7.80	716.00	5584
9	1468	Restaurant	933	TSF GFA	18,428	7.37	716.00	5278
10	1468	Restaurant	931	TSF GFA	14,925	5.97	89.95	537
11	1468	Restaurant	936	TSF GFA	19,263	7.71	11.34	87
12	1468	Retail	814	TSF GLA	9,995	4.00	44.32	177
13	1468	Retail	814	TSF GLA	13,605	5.44	44.32	241
14	1468	Retail	814	TSF GLA	12,136	4.85	44.32	215
15	1468	Retail	853	TSF GFA	12,882	5.15	845.60	4357

Table 6.3 Trips from New Businesses in TAZ 1469

Parcel	TAZ	Future Land Use	ITE Code	Unit	Area (sq-ft)	GFA/GLA (1000 sq-ft)	Trip Rate	Trips
1	1469	Retail	814	TSF GLA	13,874	5.55	44.32	246
2	1469	Retail	814	TSF GLA	14,155	5.66	44.32	251
3	1469	Office	710	TSF GFA	11,224	4.49	11.01	49
4	1469	Medical	630	TSF GFA	23,875	9.55	31.45	300
5	1469	Restaurant	933	TSF GFA	24,022	9.61	716.00	6880
6	1469	Retail	814	TSF GLA	13,864	5.55	44.32	246
7	1469	Retail	814	TSF GLA	13,524	5.41	44.32	240
8	1469	Office	710	TSF GFA	9,608	3.84	11.01	42

Combining trips from both TAZs 1468 and 1469, the total trips generated by all the new businesses are given in Table 6.4.

Table 6.4 Trips from All New Businesses

Land Use	TAZ 1468	TAZ 1469
Retail/Restaurant	24625	7862
Office	88	92
Services	1272	0
Medical	0	300

Internal captures are calculated for each of the development scenarios using the diagrammatical depiction method. The diagrams are provided in Appendix B. Table 6.5 summarizes the internal captures between residential, retail, and office land use for each scenario.

Table 6.5 Internal Trips for Three Scenarios

TAZ	Existing Land Use	Total Trips			Internal Trips			
		In	Out	Total	In	Out	Total	% of Total
<i>Low Density Scenario</i>								
1468	Residential	5,886	5,886	11,772	1,401	1,146	2,547	21.64%
	Retail	12,733	12,733	25,465	1,156	1,407	2,563	10%
	Office	44	44	88	7	11	17	20%
1469	Residential	1,674	1,674	3,348	445	354	798	23.85%
	Retail	3,931	3,931	7,862	488	524	1,012	13%
	Office	611	611	1,222	92	147	238	20%
<i>Medium Density Scenario</i>								
1468	Residential	7,572	7,572	15,145	1,401	1,146	2,547	16.82%
	Retail	12,733	12,733	25,465	1,156	1,407	2,563	10%
	Office	44	44	88	7	11	17	20%
1469	Residential	2,265	2,265	4,531	445	354	798	17.62%
	Retail	3,931	3,931	7,862	488	524	1,012	13%
	Office	611	611	1,222	92	147	238	20%
<i>High Density Scenario</i>								
1468	Residential	9,595	9,595	19,190	1,401	1,146	2,547	13.27%
	Retail	12,733	12,733	25,465	1,156	1,407	2,563	10%
	Office	44	44	88	7	11	17	20%
1469	Residential	2,974	2,974	5,948	445	354	798	13.42%
	Retail	3,931	3,931	7,862	488	524	1,012	13%
	Office	611	611	1,222	92	147	238	20%

Table 6.6 summarizes the total external trips for the three scenarios from the new developments in TAZs 1468 and 1469.

Table 6.6 Total External Trips from New Developments in TAZs 1468 and 1469

TAZ	Scenario								
	Low Density			Medium Density			High Density		
	In	Out	Total	In	Out	Total	In	Out	Total
1468	14,459	14,360	28,819	16,014	15,939	31,953	17,940	17,882	35,822
1469	4,506	4,530	9,036	5,063	5,095	10,158	5,750	5,786	11,535
Total	18,965	18,890	37,855	21,077	21,033	42,111	23,689	23,668	47,357

6.4 Trip Distribution and Assignment for Future Year

The link distribution percentages method is applied for distribution and assignment of the development trips. The percentage of trips from redevelopment on a given network link is obtained by dividing the number of trips from the redeveloped area assigned to this link by the total number of trips generated from the redeveloped area. The total trips from the redeveloped area and the number of redevelopment trips on a given link are obtained from the FSUTMS model. To run the model, the original ZDATA1 file is modified based on the low, medium, and high residential density scenarios, and ZDATA2 file is modified based on the future projection of employment. The records for TAZs 1468 and 1469 in the ZDATA1 and ZDATA2 files are shown in Tables 6.7 and 6.8. The roadway network of the 2015 FSUTMS model is shown in Figure 6.1.

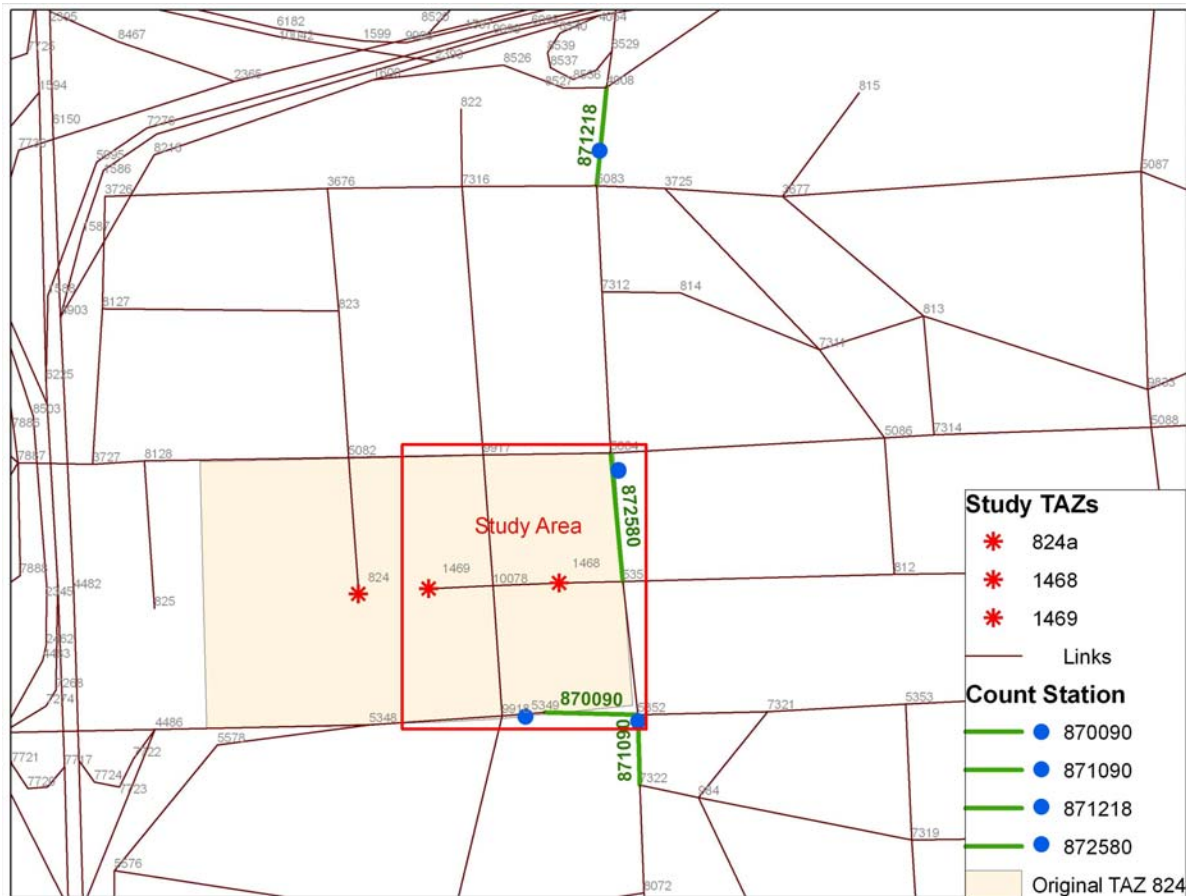


Figure 6.1 2015 Model Network for Study Area

Table 6.7 ZDATA1A for Model 2015

TAZs	HHWOC ¹	HHWC ²	VEHWOC ³	VEHWC ⁴	WRKWOC ⁵	WRKWC ⁶	PWOC ⁷	PWC ⁸
<i>Low Development Scenario</i>								
TAZ 824a	690	537	1,032	1,184	782	868	1,520	2,271
TAZ 1468	1,385	1,078	2,072	2,378	1,569	1,743	3,051	4,559
TAZ 1469	506	394	757	869	573	637	1,115	1,665
<i>Medium Development Scenario</i>								
TAZ 824a	690	537	1,032	1,184	782	868	1,520	2,271
TAZ 1468	1,714	1,334	2,563	2,942	1,941	2,157	3,775	5,640
TAZ 1469	621	484	929	1,066	704	782	1,368	2,045
<i>High Development Scenario</i>								
TAZ 824a	690	537	1,032	1,184	782	868	1,520	2,271
TAZ 1468	2,108	1,641	3,153	3,619	2,388	2,653	4,643	6,937
TAZ 1469	759	591	1,136	1,304	860	956	1,673	2,499

- 1: Households without Children
- 2: Households with Children
- 3: Vehicles in Households without Children
- 4: Vehicles in Households with Children
- 5: Workers in Households without Children
- 6: Workers in Households with Children
- 7: Persons in Households without Children
- 8: Persons in Households with Children

Table 6.8 ZDATA2 for Model 2015 for All Scenarios

	Industrial Employment	Commercial Employment	Service Employment	Total Employment
TAZ 824a	30	90	76	196
TAZ 1468	17	323	156	495
TAZ 1469	30	105	121	255

The FSUTMS model was run with the three sets of the ZDATA files and with the select zone method. From the model output, trips generated by TAZ 1468 and TAZ 1469 are obtained and are shown in Tables 6.9. In this table, Node A and Node B give the end nodes of the centroid connectors for each zone. The redevelopment trips on the four selected links where count stations are located are given in Table 6.10. The percentages of link traffic of the total trips from the redeveloped area are given in the last column in the table and are based on the trips from the FSUTMS model output.

Table 6.9 Trip Generated from Study Area by Miami Model 2015

TAZ	Node-A	Node-B	PURP1	PURP2	PURP3	PURP4	Generation
<i>Low Density Scenario</i>							
1468	1468	5351	1,076	287	1,076	287	4,857
	5351	1468	764	265	764	265	
	1468	10078	867	231	867	231	
	10078	1468	1,090	277	1,090	277	
1469	1469	10078	747	276	747	276	2,146
	10078	1469	885	238	885	238	
Total							7,003
<i>Medium Density Scenario</i>							
1468	1468	5351	1,121	320	1,121	320	5,055
	5351	1468	1,142	292	1,142	292	
	1468	10078	810	283	810	283	
	10078	1468	792	295	792	295	
1469	1469	10078	917	254	917	254	2,354
	10078	1469	914	269	914	269	
Total							7,409
<i>High Density Scenario</i>							
1468	1468	5351	1,213	345	1,213	345	5482
	5351	1468	1,261	318	1,261	318	
	1468	10078	870	303	870	303	
	10078	1468	842	330	842	330	
1469	1469	10078	955	277	955	277	2450
	10078	1469	948	270	948	270	
Total							7,932

Table 6.10 Development Traffic from the 2015 Miami-Dade County Model

	Station No.	Location	Node A	Node B	Development Traffic	% of Total Trips from Study Area
<i>Low Development Scenario</i>	871218	NW 107th Avenue, 200' N of NW 7th Street	4908	5083	1,142	16.31%
	872580	SW 107th Avenue, 200' S of Flagler Street	5084	5351	1,589	22.69%
	870090	SW 8th Street, 200' E of SW 109th Avenue	5349	5352	490	7.00%
	871090	SW 107th Avenue, 200' S of SW 8th Street	5352	7322	786	11.22%
<i>Medium Development Scenario</i>	871218	NW 107th Avenue, 200' N of NW 7th Street	4908	5083	1,184	15.98%
	872580	SW 107th Avenue, 200' S of Flagler Street	5084	5351	1,665	22.47%
	870090	SW 8th Street, 200' E of SW 109th Avenue	5349	5352	505	6.82%
	871090	SW 107th Avenue, 200' S of SW 8th Street	5352	7322	766	10.34%
<i>High Development Scenario</i>	871218	NW 107th Avenue, 200' N of NW 7th Street	4908	5083	1,269	16.00%
	872580	SW 107th Avenue, 200' S of Flagler Street	5084	5351	1,802	22.72%
	870090	SW 8th Street, 200' E of SW 109th Avenue	5349	5352	510	6.43%
	871090	SW 107th Avenue, 200' S of SW 8th Street	5352	7322	856	10.79%

To estimate the development trips loaded onto the nearby roadway network links, the percentages in the last column of Table 6.10 are multiplied by the total external trips calculated based on the ITE trip generation manual, which are given in the shaded cells in the last row of Table 6.6. The LOS for each section of the road, together with the threshold values for LOS D, E and F, are shown in Table 6.11 for each of the scenarios. Table 4-1 of the FDOT's Quality/Level of Service Handbook is used to determine the link LOS, which is based on annual average daily volumes for urbanized areas. In the 2015 scenarios, NW/SW 107th Ave is a six-lane Arterial Class II facility, and SW 8th Street is an eight-lane Arterial Class II facility.

Table 6.11 Traffic Volumes Estimated for 2015 and LOS for the Four Count Stations

Station No.	Location	Background	New Trips ³	Total Volume	LOS ¹	LOS D ²	LOS E ²	LOS F ²
<i>Low Density Scenario</i>								
871218	NW 107th Avenue, 200' N of NW 7th Street	79,054	6,173	85,227	F	40,300	49,200	51,800
872580	SW 107th Avenue, 200' S of Flagler Street	39,412	8,589	48,001	D	40,300	49,200	51,800
870090	SW 8th Street, 200' E of SW 109th Avenue	62,484	2,649	65,132	E	53,300	63,800	67,000
871090	SW 107th Avenue, 200' S of SW 8th Street	56,791	4,249	61,039	F	40,300	49,200	51,800
<i>Medium Density Scenario</i>								
871218	NW 107th Avenue, 200' N of NW 7th Street	79,054	6,730	85,783	F	40,300	49,200	51,800
872580	SW 107th Avenue, 200' S of Flagler Street	39,412	9,463	48,875	D	40,300	49,200	51,800
870090	SW 8th Street, 200' E of SW 109th Avenue	62,484	2,870	65,354	E	53,300	63,800	67,000
871090	SW 107th Avenue, 200' S of SW 8th Street	56,791	4,354	61,144	F	40,300	49,200	51,800
<i>High Density Scenario</i>								
871218	NW 107th Avenue, 200' N of NW 7th Street	79,054	7,576	86,630	F	40,300	49,200	51,800
872580	SW 107th Avenue, 200' S of Flagler Street	39,412	10,759	50,170	E	40,300	49,200	51,800
870090	SW 8th Street, 200' E of SW 109th Avenue	62,484	3,045	65,529	E	53,300	63,800	67,000
871090	SW 107th Avenue, 200' S of SW 8th Street	56,791	5,111	61,901	F	40,300	49,200	51,800

1: Table 4-1 of the FDOT's Quality/Level of Service Handbook

2: Minimum threshold volumes for LOS D, E, and F in Table 4-1 of the FDOT's Quality/Level of Service Handbook

3: Apply the percentage of total trips from study area (Table 6.10) to total external trips from new developments (Table 6.6)

6.5 Intersection Levels of Service

The base year movement volumes for the intersections along SW 107th Avenue are obtained from the 2006 FDOT PD&E Traffic Study Report. The data for the intersection of SW 8th Street and SW 109th Avenue are provided in Appendix C. For the future development scenarios, the FDOT approved TURNS5 software is used to obtain initial turning movement volumes, which are then manually adjusted to better reflect real world conditions. The input to TURNS5 software includes turning movements for 2005 and the traffic assignment output (AADT) from the 2005 and 2015 FSUTMS models for each approach of the intersections. The turning movements for future year are obtained based on the approach volumes from the software output for the future year and applying the current year turning movement percentages to these volumes.

The levels of service for the major intersections in the vicinity of the study areas are analyzed based on the three future redevelopment scenarios using the TRANSYT-7F software. The analyses are based on two different assumptions about future signal plans: (1) signal plans will be the same as they are today, which are synchronized; and (2) signal plans are optimized based on the future traffic volumes, with each intersection being treated as isolated. Table 6.12 provides the average delay and LOS for each intersection for each of the three scenarios based on each of the assumed signal plans. Although optimizing the signal plans seems to suggest improvements in the LOS of the intersections, in reality these improvements may not be completely achievable. This is because the signal plans along 107th Avenue are synchronized, therefore optimization of signal plans for all intersections individually cannot be guaranteed. The actual intersection levels of service and average delays for these intersections are likely to fall between the two values provided in Table 6.12.

Table 6.12 2015 Intersection LOS for PM Peak

Intersection	Scenario	2015 (Existing Signals Plans ¹)		2015 (Optimized Signal Plans ²)		2005	
		Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
SW 107th Av & W. Flagler St	1 (Low)	95.3	F	53.0	D	83.1	F
SW 107th Av & W. Flagler St	2 (Medium)	93.0	F	52.3	D		
SW 107th Av & W. Flagler St	3 (High)	92.8	F	52.1	D		
SW 107th Av & SW 4th St	1 (Low)	46.6	D	26.2	C	22.9	C
SW 107th Av & SW 4th St	2 (Medium)	49.9	D	26.7	C		
SW 107th Av & SW 4th St	3 (High)	50.2	D	27.0	C		
SW 107th Av & SW 8th St	1 (Low)	77.8	E	62.6	E	89.7	F
SW 107th Ave & SW 8th St	2 (Medium)	79.7	E	64.2	E		
SW 107th Av & SW 8th St	3 (High)	81.7	F	66.4	E		
SW 109th Av & SW 8th St	1 (Low)	383.8	F	268.0	F	132.4	F
SW 109th Av & SW 8th St	2 (Medium)	385.4	F	281.0	F		
SW 109th Av & SW 8th St	3 (High)	408.8	F	280.0	F		

1: Assuming existing signal plan

2: Optimized signal plans from Transit-7F

In general, the average delays at intersections along SW 107th Avenue can be expected to decrease after two more lanes are added. The exception is the intersection at SW 4th Street, where delays will increase, although not significantly enough to cause serious deterioration in the

LOS. The LOS for the intersection at West Flagler Street will likely approach LOS E. Currently, delays are quite significant for left turn movements in the eastbound and westbound directions, as well as for the through traffic in the westbound direction. This condition may be improved somewhat if the signal plan is carefully studied and adjusted accordingly. The intersection at SW 8th Street will improve in terms of both average delays and LOS. However, the LOS for critical movements at this intersection will still be F, which are the left turns in the northbound, southbound, and westbound directions, as well as the right turn in the eastbound direction. Currently, inadequate storage space for the turning bays in the northbound and southbound directions is responsible for a large proportion of the delays for the intersection.

The LOS for the intersection of SW 8th Street and SW 109th Avenue will remain at F, and delays will become much worse. This intersection will not benefit from the expansion of SW 107th Avenue. Furthermore, the increased density along SW 109th Avenue will put additional stress on this intersection. Optimization of the signal plan can alleviate the stress at this intersection to a limited degree. Significant improvement in the LOS will require lengthening the turning bays for the north leg of SW 109th Avenue. The current turning bays are unable to accommodate the existing traffic and generate spillback that results in significant delays. Aside from optimizing the signal plans, widening the bridge at the intersection to add an additional lane or lengthening the turning bays or both can improve the LOS for this intersection. However, these improvements will incur significant cost because of the need for widening the bridge or acquiring land to increase the right of way to allow longer turning bays.

7. TRANSIT, PEDESTRIAN, AND BICYCLE CONSIDERATIONS

In this section, transit, pedestrian, and bicycle network and facilities are considered. Section 7.1 discusses the FIU Campus Area Transit Service (CATS). Section 7.2 describes a proposed pedestrian/bicycle connector between the FIU Engineering Center and the University Park campus. Section 7.2 proposes a pedestrian/bicycle network in the City of Sweetwater and discusses the needed improvements. Section 7.3 examines the existing pedestrian access to transit in the city and proposes additional transit stops to improve access to transit services within the City of Sweetwater, as well as transit connectivity between the city and FIU.

7.1 FIU Campus Area Transit Service

The FIU Campus Area Transit Service (CATS) provides a transit alternative to faculty, staff, and students traveling between the main campus at SW 107th Avenue and SW 8th Street and the Engineering Center at West Flagler and 107th Avenue. The shuttle schedules are given in Table 3.3. Currently, the CATS buses operate at headways ranging mostly from 10 minutes to 45 minutes. The irregular and long headways, combined with unreliable running time, make the shuttle service unreliable and affect the service quality, which further discourage people from using the service. The headway needs to be reduced to 10 to 15 minutes during peak periods to make it more attractive to users. The headway also needs to be made more regular, because constant headways help users plan their trips and reduce uncertainty of the departure time. Should the shuttle services be improved, marketing is also necessary to familiarize users with the operation of the system. Detailed information about the service needs to be made conveniently available on both the university and College of Engineering and Computer Science web sites and in the form of pamphlets and posters. Potential increase in ridership may be determined through a Stated Preference survey of students, staff, and faculty at the Engineering Center.

7.2 Pedestrian/ Bicycle Corridor between FIU Main Campus and Engineering Center

Due to the short distance between the FIU University Park main campus and the engineering center, non-motorized modes such as walking and particularly bicycling are variable alternatives to travel by driving. These modes are also attractive to a certain degree because parking on the University Park campus is limited, making it difficult to find a parking space. Currently, bicycle use is not what it could be between the University Park campus and Engineering Center. There are several possible reasons, including safety concerns, the lack of an attractive corridor, and a lack of bicycles for faculty and students who have to drive to work or school but may be interested in using bicycles to commute between the two campuses.

Improvements may be made by the inclusion of a safe and pleasant pedestrian/bicycle path as part of a planned bicycle network. It is proposed that the path connects the FIU Engineering Center campus at West Flagler Street and SW 105th Avenue, via SW 105th Place, SW 4th Street, and SW 109th Avenue to the University Park campus. A pedestrian/bicycle bridge may be built at SW 108th Avenue and SW 8th Street. This path provides a link to the Sweetwater City Hall and proposed mixed developments along SW 109th Avenue, which will be important as an integral component of the College Town plan. The proposed pedestrian bicycle paths, colored yellow, are illustrated in Figure 7.1. Modification of the SW 105th Avenue and SW 4th Street will be minimal, but landscaping will be required to provide shade. This is discussed in the next section. To encourage their use, the proposed paths, if constructed, will need to be clearly marked and signed to raise the awareness by both pedestrians/bicyclists and drivers.



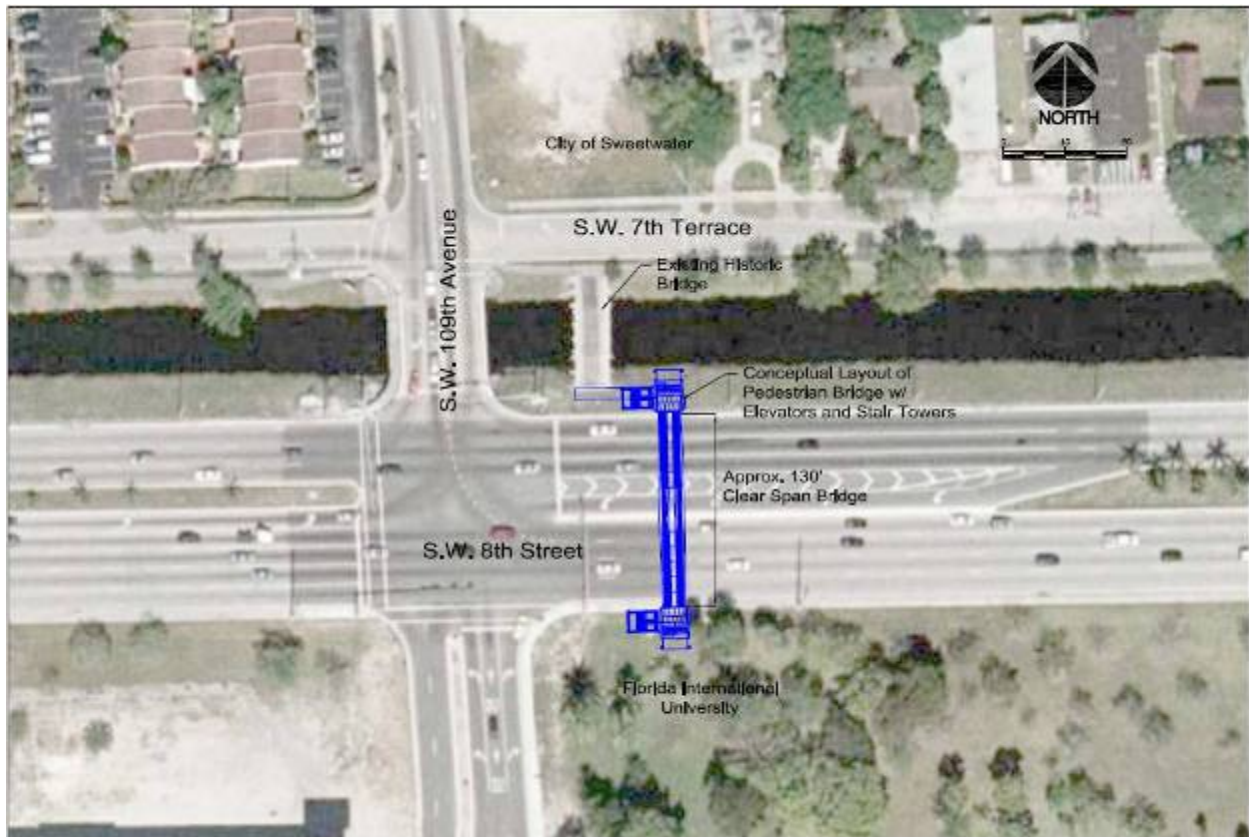
Figure 7.1 Proposed Pedestrian/Bicycle Path between FIU University Park Campus and Engineering Center

This pedestrian/bicycle path will not only encourage employees and students to travel between the two campuses, but also encourage local residents to use non-motorized modes to travel within the city, and enhance the appeal of the neighborhood. Because of the local nature of this proposed facility and the regional nature of the SW 107th Avenue corridor as a major urban arterial that carries mostly through traffic, the benefits of the proposed facility in terms of

reducing congestion on SW 107th Avenue and SW 109th Avenue will not be significant. However, the benefits of the proposed pedestrian/bicycle facilities will be an important component in the multimodal transportation system in the proposed College Town, which will encourage transit use and non-motorized travel modes.

To address the issue of the lack of bicycles for people who have to drive or take transit to work or school, the establishment of a bicycle-sharing program similar to the station car programs in California may be investigated in the future. At present, the university may consider to improve the bicycle parking facilities on both the main campus and engineering campus. For instance, more bicycle racks at convenient locations may be added and covers may be provided to protect the bicycles from rain.

To connect the pedestrian/bicycle path(s) with the FIU main campus, a pedestrian bridge has been proposed. Compared with another proposal involving a tunnel, of which the cost will be rather prohibitive, the pedestrian bridge is more economically feasible and has less impact on the environment and the neighborhood. T.Y.Lin International/H.J.Ross is currently working under contract with the City of Sweetwater to provide engineering support for the planning of the college town. The firm has developed preliminary concepts and construction cost estimates for a pedestrian bridge over SW 8th Street near SW 109th Avenue. The conceptual plan, provided by T.Y.Lin International/H.J.Ross, is illustrated in Figure 7.2. The bridge will have a 130-foot clear span, 10-foot width, and two staircase towers with elevators on either side, as well as a moderate level of architecturally decorative accompaniment. Conceptual construction cost (includes contingency) is estimated at \$3M and conceptual engineering and soft costs (includes geotechnical, surveying, and public involvement) is estimated at \$750,000. These estimates do not include any right-of-way acquisition that may be required for construction. The required right-of-way acquisition will need to be studied and determined.



TYLIN INTERNATIONAL | HJ ROSS

Conceptual F.I.U. to City of Sweetwater Pedestrian Bridge Layout

Figure 7.2 Conceptual FIU to City of Sweetwater Pedestrian Bridge Layout (source: T.Y.Lin Internation/HJRoss)

Although there have been proposals to build a pedestrian bridge at SW 107th Avenue and W. Flagler Street, at present, the pedestrian traffic is relative low to justify the high cost. Pedestrian signals are available at the intersections at W. Flagler Street and SW 105th Place, W. Flagler Street and 107th Avenue, and SW 4th Street and SW 107th Avenue. These pedestrian signals should allow the pedestrians and bicyclists to cross W. Flagler Street with a reasonable level of safety.

7.3 Evaluation of Conditions of the Proposed Pedestrian/Bicycle Corridor

In this section, the conditions of the proposed pedestrian/bicycle corridor are assessed based on the following criteria:

- Personal safety
- Personal security
- Architectural interest
- Sidewalk width
- Pavement condition/maintenance
- Pathway or sidewalk shade

- Pedestrian scale lighting and amenities
- Presence of other pedestrians
- Conditions at intersections

Safety

According to the Miami-Dade County pedestrian/bicyclist crash database, there have been two crash records for the period between 1996 and 2004 within the City of Sweetwater proper, and only one was within the study area. The database was provided by the Miami-Dade County Metropolitan Planning Organization (MPO). The crash occurred at 6:45 pm, Friday, January 30, 1998 at SW 109th Avenue and SW 3rd Street. The accident involved one vehicle and one pedestrian (aged 13 at the time). The pedestrian sustained incapacitating injuries. Among the engineering students, pedestrian and bicyclist safety has always been a concern, as is true generally in Southeast Florida. Beside problems with driver behaviors, such as the rushing through of yellow lights or the running of red lights, the lack of clearly marked pedestrian/bicycle facilities also contribute to the unsafe environment for pedestrians and bicyclists. At night, visibility of pedestrians and bicyclists is poor. It is difficult for drivers to see pedestrians or bicyclists on sidewalks or medians.

Along the proposed pedestrian/bicycle corridor, all signalized intersections have pedestrian signals. At the unsignalized intersections, most cross streets (SW 5th Street, 6th Street, SW 7th Street, SW 7th Terrace and SW 108th Avenue) have stop signs. The land use along the corridor is generally residential and there are no driveways with heavy traffic.

In addition to traffic law enforcement, driver education, and pedestrian/bicyclist education, another important improvement to pedestrian/bicycle safety would be clear marking and signage to indicate the presence of a pedestrian/bicycle corridor. Special pavers or pavement markings may be added at major crossing points such as SW 107th Avenue at SW 4th Street and at the intersection of SW 109th Avenue and SW 4th Street.

Personal Security

According to the FBI crime statistics, Sweetwater is rather safe. Table 7.1 gives the 2007 crime rates by municipality in Miami-Dade County. The crime rates are the numbers of crimes per 10,000 residents. Violent crimes include homicide, rape, robbery, and assault. Property crimes include burglary, larceny, motor vehicle theft, and arson. Sweetwater is ranked 14th among the 34 municipalities in terms of violent crime rate, and 11th in terms of property crime rate. For crime prevention, the City of Sweetwater Police Department also has a Special Tactic Team that operates undercover at night. Security or the perception of security may be improved by adding pedestrian scale lighting in the proposed corridor.

Table 7.1 Crime Rates in Miami-Dade County

Rank	City	Population	Violent Crime Rates					Property Crime Rates				
			Violent Crime	Homicide	Rape	Robbery	Assault	Property Crime	Burglary	Larceny	Motor Vehicle Theft	Arson
1	Indian Creek Village	39	0.0	0.0	0.0	0.0	0.0	512.8	0.0	512.8	0.0	0.0
2	Bal Harbour Village	3,211	0.0	0.0	0.0	0.0	0.0	227.3	18.7	202.4	6.2	0.0
3	Key Biscayne	9,968	2.0	0.0	0.0	0.0	2.0	259.8	18.1	227.7	14.0	6.0
4	North Bay Village	8,279	12.1	0.0	1.2	4.8	6.0	254.9	43.5	175.1	36.2	0.0
5	Golden Beach	893	22.4	0.0	0.0	11.2	11.2	179.2	67.2	78.4	33.6	0.0
6	Bay Harbor Island	4,996	24.0	0.0	0.0	4.0	20.0	168.1	64.1	84.1	20.0	0.0
7	Village of Pinecrest	19,027	24.2	0.0	1.1	8.9	14.2	406.8	45.2	345.8	15.8	0.0
8	Aventura	30,782	25.0	0.0	0.6	15.9	8.4	613.3	37.0	555.8	20.5	0.3
9	Sunny Isles Beach	15,190	28.3	0.0	2.0	7.9	18.4	420.0	99.4	287.7	32.9	0.0
10	Hialeah Gardens	19,705	28.4	0.0	1.0	11.2	16.2	479.1	121.3	296.4	61.4	2.0
11	Coral Gables	42,794	30.8	0.2	1.9	12.4	16.4	512.9	94.4	390.7	27.8	0.2
12	Virginia Gardens	2,221	31.5	0.0	0.0	22.5	9.0	252.1	36.0	198.1	18.0	0.0
13	Miami Springs	12,860	35.0	0.0	2.3	17.1	15.6	397.4	80.9	272.2	44.3	0.8
14	Sweetwater	13,436	36.5	0.0	1.5	8.2	26.8	171.2	33.5	92.3	45.4	1.5
15	Miami Lakes	22,139	41.6	0.0	0.0	14.9	26.6	461.6	53.8	341.0	66.9	0.0
16	Palmetto Bay	23,287	42.5	0.4	1.7	14.6	25.8	454.3	64.4	353.0	36.9	0.0
17	Surfside	4,599	43.5	0.0	2.2	10.9	30.4	334.9	65.2	245.7	23.9	0.0
18	West Miami	5,725	43.7	0.0	5.2	5.2	33.2	291.7	106.6	165.9	19.2	0.0
19	Biscayne Park	3,049	49.2	0.0	0.0	9.8	39.4	186.9	121.4	49.2	16.4	0.0
20	Cutler Bay	40,468	52.4	0.2	1.2	20.3	30.6	536.2	74.9	422.6	38.8	0.5
21	Hialeah	215,853	59.0	0.3	1.9	23.3	33.4	442.2	83.8	280.0	78.5	1.3
22	El Portal	2,384	62.9	0.0	0.0	21.0	41.9	415.3	218.1	167.8	29.4	0.0
23	Doral	21,356	63.7	0.0	3.7	14.0	45.9	1,379.0	165.3	1,083.1	130.6	0.9
24	Miami Shores	9,814	66.2	0.0	1.0	39.7	25.5	717.3	216.0	438.1	63.2	1.0
25	South Miami	11,071	68.6	0.0	0.0	26.2	42.5	668.4	99.4	514.0	55.1	0.0
26	North Miami Beach	38,790	119.9	0.0	7.2	58.0	54.7	590.9	174.5	381.0	35.3	3.1
27	Miami Beach	86,742	123.6	0.5	6.7	51.6	64.8	899.8	156.1	646.4	97.3	1.3
28	North Miami	57,368	136.5	1.6	5.2	68.2	61.5	713.5	149.4	479.0	85.1	1.9
29	Miami	410,252	149.2	1.9	1.4	61.8	84.0	516.3	117.7	304.2	94.5	4.3
30	Homestead	58,074	153.3	1.2	1.4	64.6	86.1	446.5	158.4	233.8	54.2	0.5
31	Medley	1,043	191.8	0.0	9.6	57.5	124.6	3,844.7	1,064.2	2,425.7	354.7	28.8
32	Miami Gardens	98,762	192.9	2.4	6.2	69.5	114.8	770.1	168.9	496.5	104.7	1.5
33	Florida City	9,704	269.0	0.0	4.1	98.9	165.9	1,355.1	288.5	991.3	75.2	2.1
34	Opa Locka	15,695	347.9	7.6	4.5	181.6	154.2	1,029.6	474.7	379.1	175.9	0.6

Source: FBI Uniform Crime Reports (2007). <http://www.fbi.gov/ucr/ucr.htm#cius>

Architectural Interest

There is generally a lack of architectural interest in the proposed corridor. However, the land use of the proposed corridor is mostly residential, which is more comfortable for pedestrians and bicyclists than strip malls, gas stations, etc. There is also a park at the intersection of SW 105thPlace and SW 4th Street, which may be improved to be more visually pleasing with additional landscaping.

Sidewalk Width

Figure 7.3 displays the sidewalk width on the north and east sides of the streets, while Figure 7.4 shows that of the south and west sides of the streets. Presently, sidewalk widths are generally adequate.

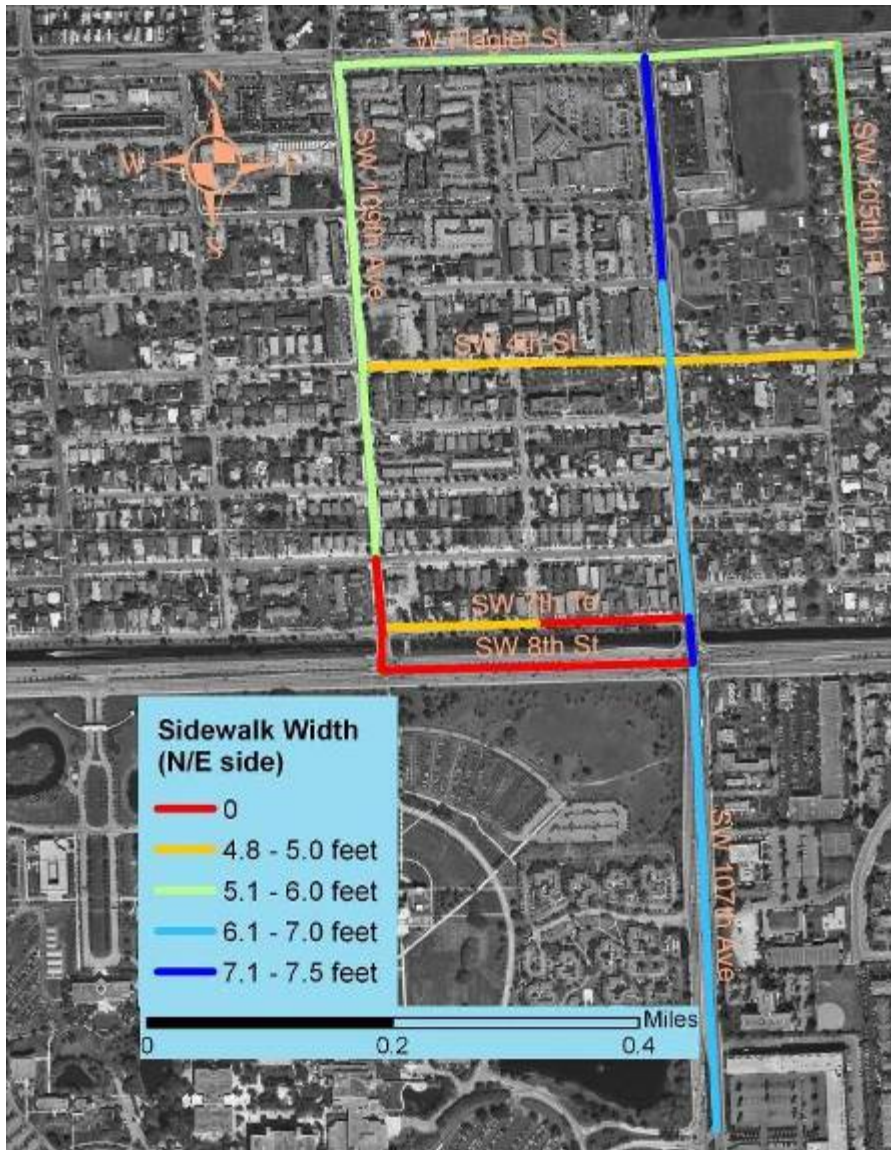


Figure 7.3 Sidewalk Widths on the North and East Sides of Streets



Figure 7.4 Sidewalk Widths on the South and West Sides of Streets

Pavement Condition and Maintenance

The sidewalks are in general clean. The pavement conditions of sidewalks on local streets, including SW 105th Place, SW 4th Street, and section of SW 7th Terrace, have cracks and uneven surfaces and need improvements. The pavement conditions are shown in Figure 7.5 and 7.6, respectively, for the north and east sides of the streets and for the south and west sides.



Figure 7.5 Pavement Conditions on North and East Sides of Streets

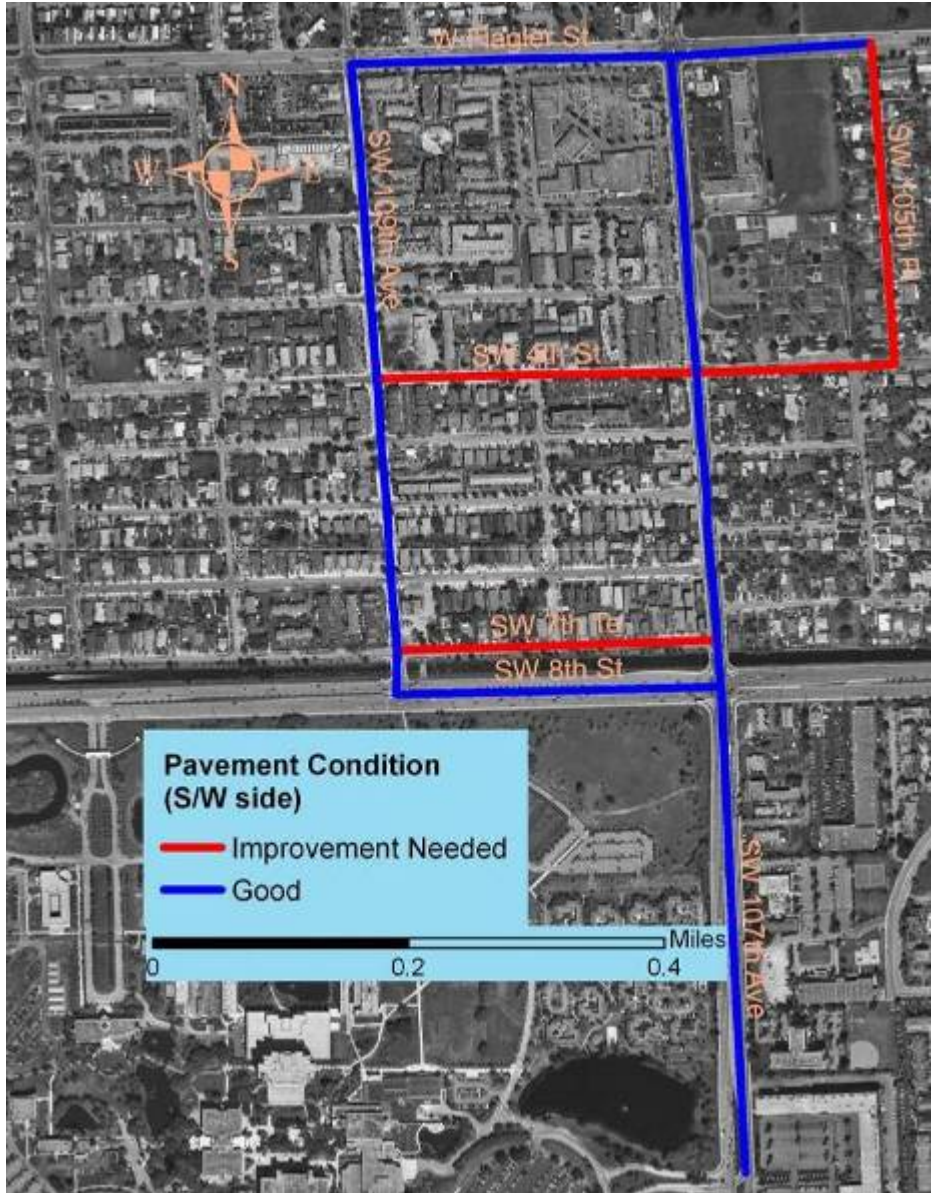


Figure 7.6 Pavement Conditions on South and West Sides of Streets

Pathway or Sidewalk Shade

Figures 7.7 and 7.8 are maps showing the shade availability. Figure 7.7 shows the approximate percentage of a street section with shades on the north and east sides of the streets. Figure 7.8 shows the same but for the south and west sides of the streets. It can be seen that there is generally a lack of tree shades in the proposed pedestrian/bicycle corridor. Streets that have above 40% of shade are sections of W. Flagler Street (which is not in the proposed corridor), part of SW 4th Street, and SW 7th Terrace.

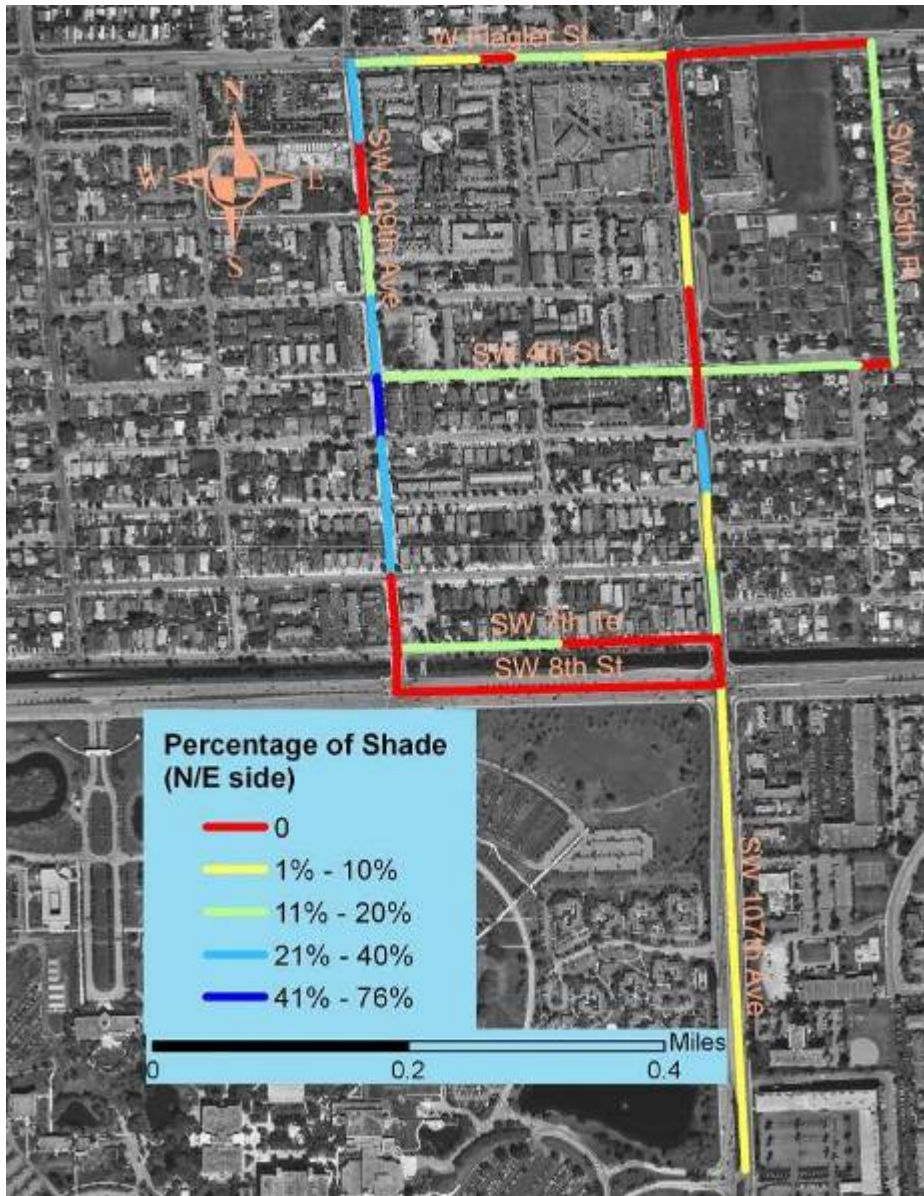


Figure 7.7 Percentage of Streets Shaded on the North and East Sides of Streets

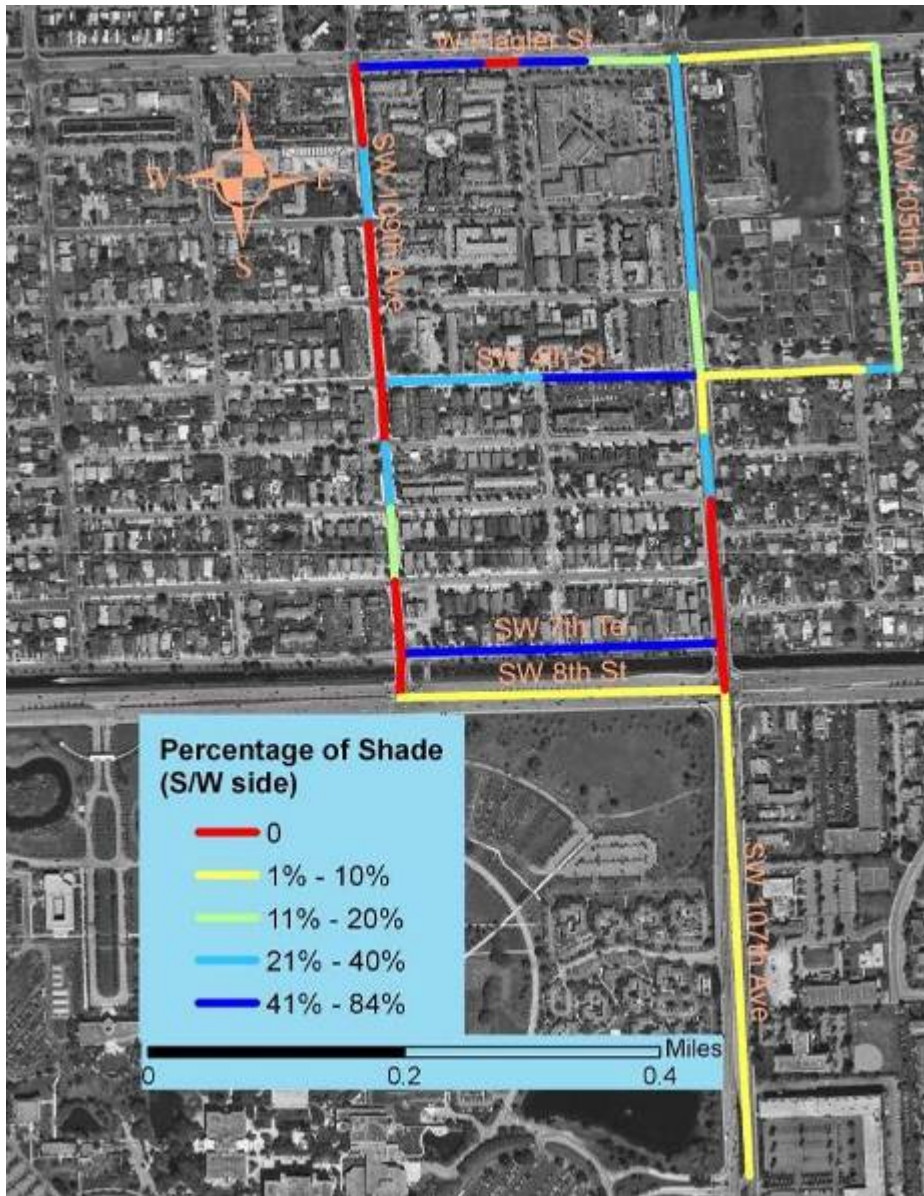


Figure 7.8 Percentage of Streets Shaded on the South and West Sides of Streets

Pedestrian Scale Lighting and Amenities

There are no pedestrian scale lighting or other amenities in the corridor except on SW 8th Terrace. The addition of pedestrian scale lighting will improve both security and safety. Benches and rain shelters may also be added. To reduce the cost, such amenities may be added at one transit bus stop on SW 4th Street between SW 107th Avenue and SW 109th Avenue.

Presence of Other Pedestrians

There are no other pedestrians in the proposed corridor.

Conditions at Intersections

As has been previously mentioned, all signalized intersections are equipped with pedestrian signals, and at the unsignalized intersections there are stop signs for the cross streets. All the sidewalks have ramps at intersections.

To provide an overall condition assessment for each street in the corridor, the criteria discussed above are combined to arrive at a level of service (LOS). The methodology proposed by Dixon (1996) was adopted with minor modifications. Dixon's method was applied in Gainesville, Florida to develop bicycle and pedestrian LOS performance measures based on a point scale system, in which a certain number of points are assigned to a facility based on the criteria of facility, conflicts, amenities, motor-vehicle LOS, maintenance (i.e., condition) of the facility, and connection or support to travel demand management (TDM) or multimodal transportation (Multi-Modal). In this study, one more category of "Architectural Interest" is added. Table 7.2 gives the pedestrian/Bicycle LOS performance measure point system used in this analysis. Table 7.3 gives the pedestrian LOS criteria based on this point system.

Table 7.4 presents the pedestrian LOS analysis results for both sides of the street segments in the proposed pedestrian/bicycle corridor. The values assigned to each criterion for each street segment are provided in Appendix E. Most streets have a pedestrian LOS of C or D.

Table 7.2 Bicycle and Pedestrian LOS Performance Measures Point System

Performance Measures		
Category	Criterion	Points
Pedestrian Facility Provided (Max. Value = 10)	Not Continuous or Non-existent	0
	Continuous on One Side	4
	Continuous on Both Sides	6
	Min. 1.53m (5') Wide & barrier Free	2
	Sidewalk Width > 1.53m (5')	1
	Off-Street/Parallel Alternative Facility	1
Conflicts (Max. Value = 4)	Driveways & Side Streets	1
	Ped. Signal Delay 40 Sec. or Less	0.5
	Reduced Turn Conflict Implementation	0.5
	Cross Width 18.3m (60') or Less	0.5
	Posted Speed 56 kph (34.8 mph) or Less	0.5
	Medians Present	1
Amenities (Max. Value = 2)	Buffer Not Less Than 1m (3.5')	1
	Benches or Pedestrian Scale Lighting	0.5
	Shade Trees	0.5
Motor Vehicle LOS (Max. Value = 2)	LOS = E, F, OR 6 or More Travel Lanes	0
	LOS = D and < 6 Travel Lanes	1
	LOS = A, B, C, and <6 Travel Lanes	2
Maintenance (Max. Value = 2)	Major or Frequent Problems	-1
	Minor or Infrequent Problems	0
	No Problems	2
TDM/Multi-Modal (Max. Value = 1)	No Support	0
	Support Exists	1
Architectural Interest (Max. Value = 5)	Spectacular	5
	Very Nice	4
	Good	3
	Fair	2
	Poor	1
Max. Points		26

Table 7.3 Pedestrian LOS Definition

Level of Service	Score
A	(22, 26]
B	(19, 22]
C	(16, 19]
D	(12, 16]
E	(8, 12]
F	≤ 8

Table 7.4 Pedestrian LOS for the Study Area

Segment	From	To	Side	Level of Service
W. Flagler ST	SW 105th Place	SW 107th Avenue	N	C
			S	C
	SW 107th Avenue	SW 109th Avenue	N	D
			S	C
SW 4TH ST	SW 105th Place	SW 107th Avenue	N	D
			S	D
	SW 107th Avenue	SW 107th Avenue	N	D
			S	D
SW 7TH TE	SW 107th Avenue	SW 107th Avenue	N	E
			S	D
SW 8TH ST	SW 107th Avenue	SW 107th Avenue	N	F
			S	C
SW 105TH AVE	W. Flagler Street	SW 4th Street	E	D
			W	D
SW 107TH AVE	W. Flagler Street	SW 4th Street	E	C
			W	C
	SW 4th Street	SW 7th Terrace	E	C
			W	C
	SW 7th Terrace	SW 8th Street	E	C
			W	C
	SW 8th Street	SW 16th Street	E	C
			W	C
SW 109TH AVE	W. Flagler Street	SW 4th Street	E	C
			W	C
	SW 4th Street	SW 7th Terrace	E	D
			W	D
	SW 7th Terrace	SW 8th Street	E	F
			W	D

7.4 Pedestrian and Bicycle Network in the City of Sweetwater

In addition to the above proposed pedestrian/bicycle connector between the Engineering Center and FIU main campus, a network of pedestrian/bicycle paths within the City of Sweetwater is also proposed. The network is shown in Figure 7.9.

Although research has shown that distance to a destination is a factor that most likely influences a person's decision to walk rather than drive, Southworth (2005) points out that a number of studies have concluded that the "qualities of the path network" also play a role in a person's decision to walk to a destination. A visual survey of the city's existing pedestrian sidewalk network was conducted July 2008 to identify key improvements that need to be implemented if the proposed pedestrian/bicycle network is adopted.

Table 7.5 summarizes the existing conditions of roadway segments that are part of the proposed pedestrian/bicycle network within the City of Sweetwater. Based on the conditions observed, two key issues warranting attention prior to adopting the proposed pedestrian/bicycle network are parking within the right-of-way (in the swale area) and landscape beautification along existing sidewalks. It is not uncommon for local governing agencies to enact ordinances that require property owners to keep sidewalks clear of garbage and debris as they may impede pedestrian flow along sidewalks (Bowman *et al.* 1994). Accordingly, the city may consider enacting an ordinance that prohibits parking within the rights-of-way in swale areas and on sidewalks. Moreover, the City may also consider implementing sidewalk beautification projects that incorporate shade trees within the swale area to not only further discourage parking on the swale areas, but also provide shade to pedestrians and create an aesthetically pleasing green network that promotes pedestrian and bicycle activities. The City's existing linear grid-like street network, with minimal occurrences of cul-de-sacs is ideal for creating a pedestrian/bicycle network that provides direct access to key points of interest in the area. Alignment of the proposed pedestrian/bicycle network was selected based on the "directness of the route" to destination land uses such as schools, parks, the College Town Center, as well as FIU University Park Campus and FIU Engineering Center. Overall, the proposed pedestrian/bicycle network consists of a total of 4.87 miles, with 71% of the proposed segments consisting of a length of less than ½ mile (2,640 feet) and providing access to both Miami-Dade County bus stops as well as Sweetwater Circulator stops. The proposed pedestrian network provides links to other modes of transit, such as bus stops within a 0.25- to 0.5-mile walk, and as a result, will not only encourage more pedestrian activities and transit use, but may also result in a reduction in car use and congestion.

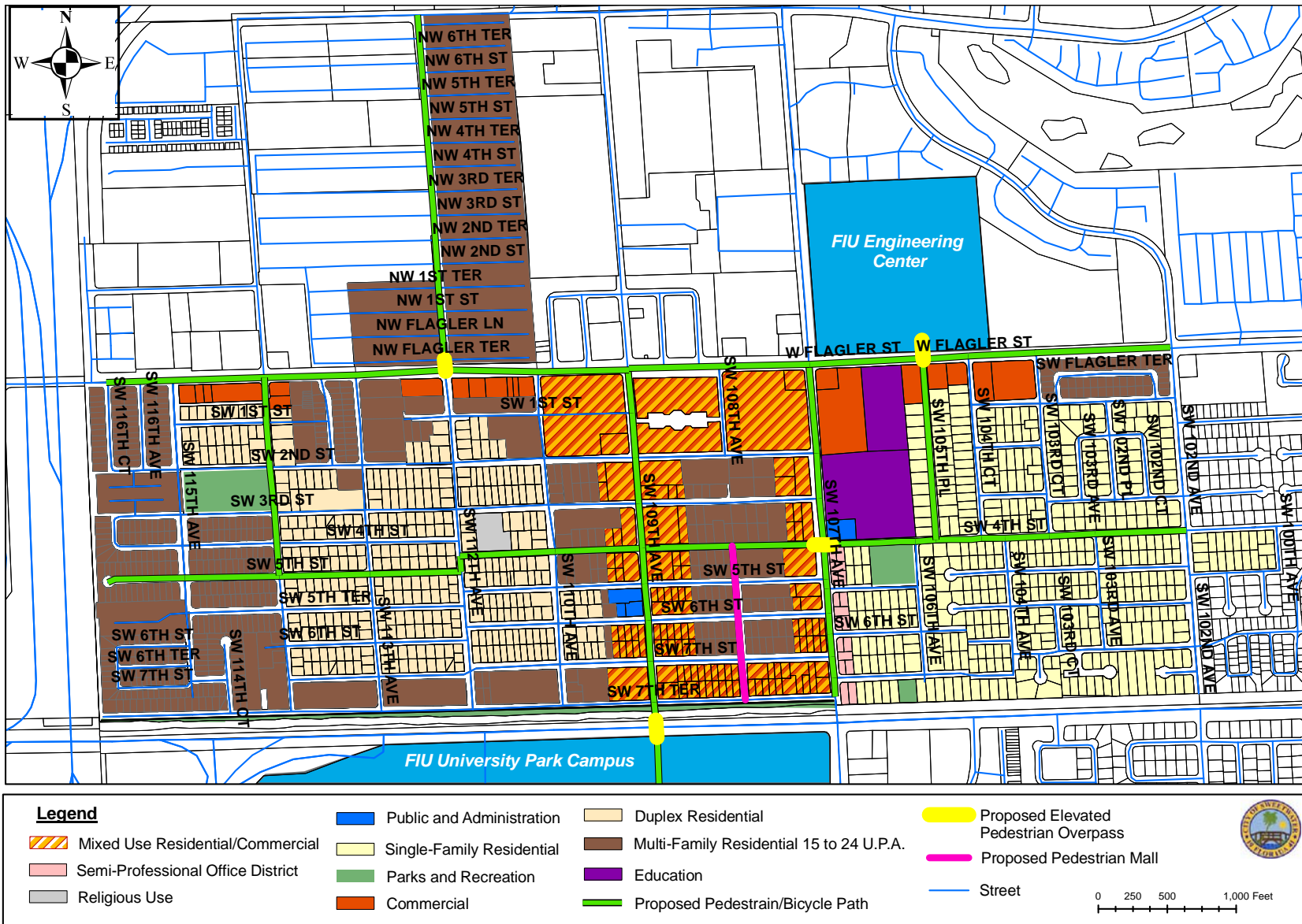


Figure 7.9 Proposed Citywide Pedestrian/Bicycle Network

Table 7.5 Existing Conditions of Roadway Segments in the Proposed Citywide Pedestrian/Bicycle Network

<i>East/West Roadways</i>				
Name	Sidewalks (One Side)	Sidewalks (Both Sides)	Parking on Swale Area	Swale Landscaping Condition
SW 7th Ter. (West of SW 107th Av.)		X	X	Poor (along the north side) Excellent (along linear park)
SW 5th St.		X	X	Good (along both sides)
SW 4th St. (West of SW 107th Av.)		X	X	Poor (along both sides)
SW 4th St. (East of SW 107th Av.)	X	X	X	Fair (along both sides)
West Flagler St.		X		Poor (along both sides)
<i>North/South Roadways</i>				
SW 105th Pl.		X		Fair (along both sides)
SW 107th Av.		X		Poor (along both sides)
SW 109th Av.	X	X		Fair (along both sides)
SW 112nd Av.		X		Poor (along both sides)
SW 114th Av.		X	X	Fair (along both sides)

The proposed pedestrian/bicycle network also features a pedestrian mall along SW 108 Avenue in the form of a linear park, where automobile use is prohibited to allow for additional green space that can serve as a gathering place for future residents of the proposed multi-family developments in the College Town Center. Improved pedestrian connectivity to city-owned parks is paramount to creating a “walkable” city.

The proposed pedestrian/bicycle network also provides links to Ronselli Park, James M. Beasley Linear Park, and Carlow Park. As illustrated in Figure 6.10, the city’s existing parks are within the target acceptable walking distance range of 1,312’ to 1,500’ of most areas within the city boundary. Areas within the city that are not within acceptable walking distances of city-owned parks include the northeast and southeast portions of the city. However, these areas may benefit from extension of the city’s circulator system as a means of providing alternative transportation to the city’s parks.

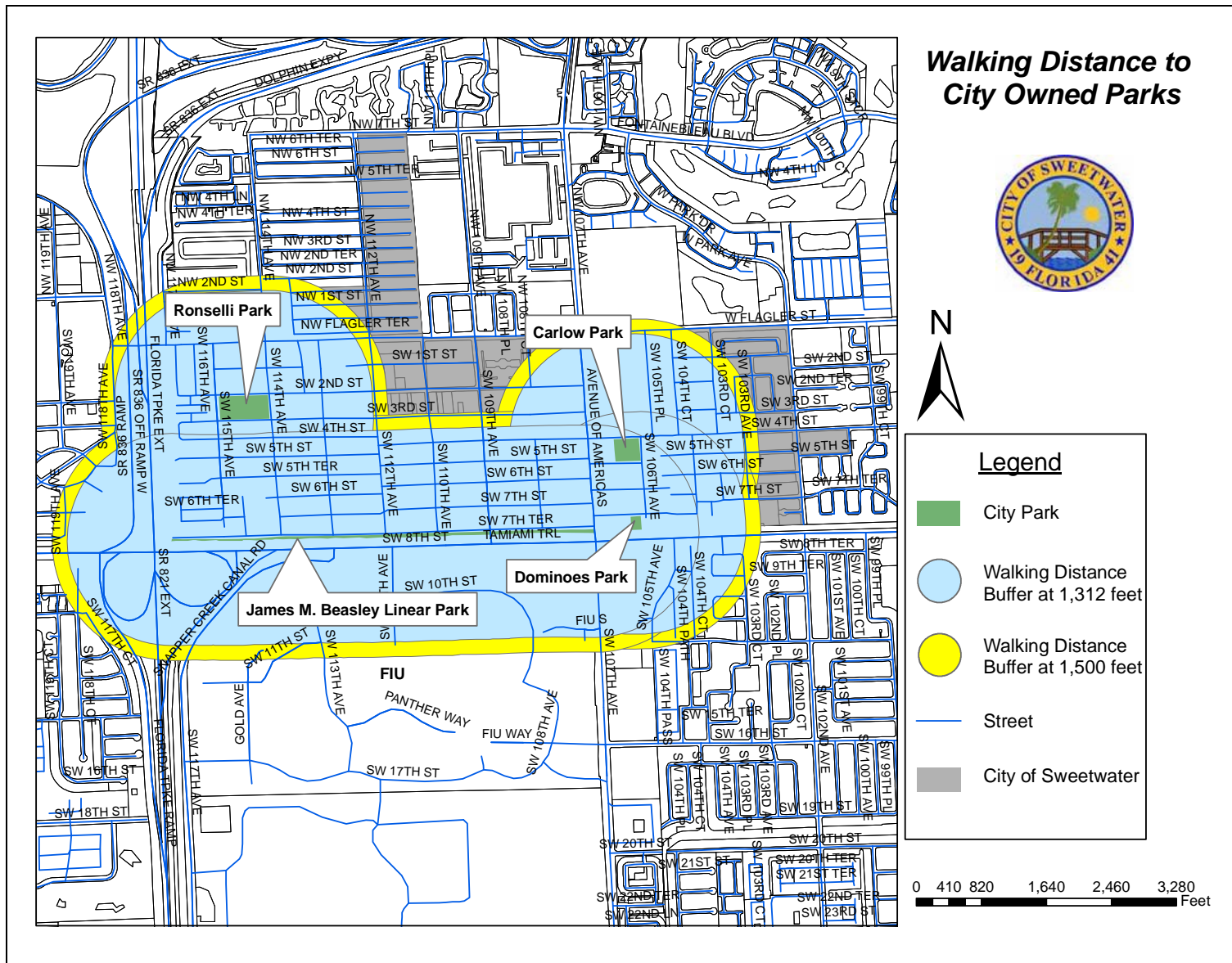


Figure 7.10 Walking Distance to City-Owned Parks

7.5 Pedestrian Transit Access

Pedestrian accessibility to transit stops is a hallmark of the walkable city. Therefore, existing transit stops within the City of Sweetwater were evaluated to identify which portions of the city exhibited acceptable walking distances to transit stops and which did not. Existing mass transit in the City of Sweetwater consists of Miami-Dade County Bus Routes 11, 51, 71, and 212 as well as the City of Sweetwater Circulator. The 2006 Miami-Dade County Bus Stop data were obtained from FIU’s GIS-RS Center. Bus stop data for the City of Sweetwater Circulator were obtained from the City of Sweetwater Transit Office and digitized into a shapefile for analysis in ArcView. Buffers of 1,312 feet (400 meters) and 1,500 feet (457.2 meters) were applied to both county and city bus stops to identify those areas within the City that are not within acceptable walking distance of existing transit stops. Figure 7.11 illustrates the walking distances to Miami-Dade County operated bus stops within the City of Sweetwater, and Figure 7.12 the walking distances to City of Sweetwater Circulator stops. Based on the analysis conducted, the southeast and southwest portions of the city exhibit unacceptable walking distances (greater than 1,500’) to the existing Miami-Dade County bus stops and city circulator stops. Moreover, the city’s existing circulator route lacks convenient stops in both the FIU Engineering Center and FIU University Park Campus. In an effort to address these deficiencies, a total of five additional stops are proposed for the city’s circulator system. Figure 7.13 illustrates the location of the five proposed additional stops for the city’s circulator system and respective walking distances. The proposed stops may lead to an increase in ridership and decrease in automobile use due to improved accessibility in terms of shorter walking distances to the transit stops for residents residing in the southwest and southeast portions of the city. Moreover, the proposed circulator stops located at the intersections of SW 2nd Street and SW 107th Avenue and SW 7th Terrace and SW 114th Avenue address future land uses that introduce increased population density in the form of multi-family development and mixed use corridors by bringing circulator stops closer to said areas and thereby encouraging transit use. Figure 7.14 depicts the proposed circulator stops in relation to the city’s adopted future land use map and Table 6.6 summarizes benefits associated with implementation of the proposed circulator stops.

Table 7.6 City of Sweetwater Circulator Proposed Additional Stops

<i>Location</i>	<i>Benefit</i>
FIU Engineering Center	Improved transit access for students and faculty
SW 2nd St. and SW 107th Av. Intersection	Improved transit access to proposed mixed use corridor along SW 107 Avenue Improved transit access for proposed high density residential developments within the College Town District
SW 4th St. and SW 102th Av. Intersection	Improved transit access for residents residing in the southeast portion of the City
SW 7th Ter. and SW 114th Av. Intersection	Improved transit access for residents residing in high density residential areas located in the southwest portion of the City Improved access to James M. Beasley Linear Park
FIU University Park Campus	Improved transit access for students and faculty

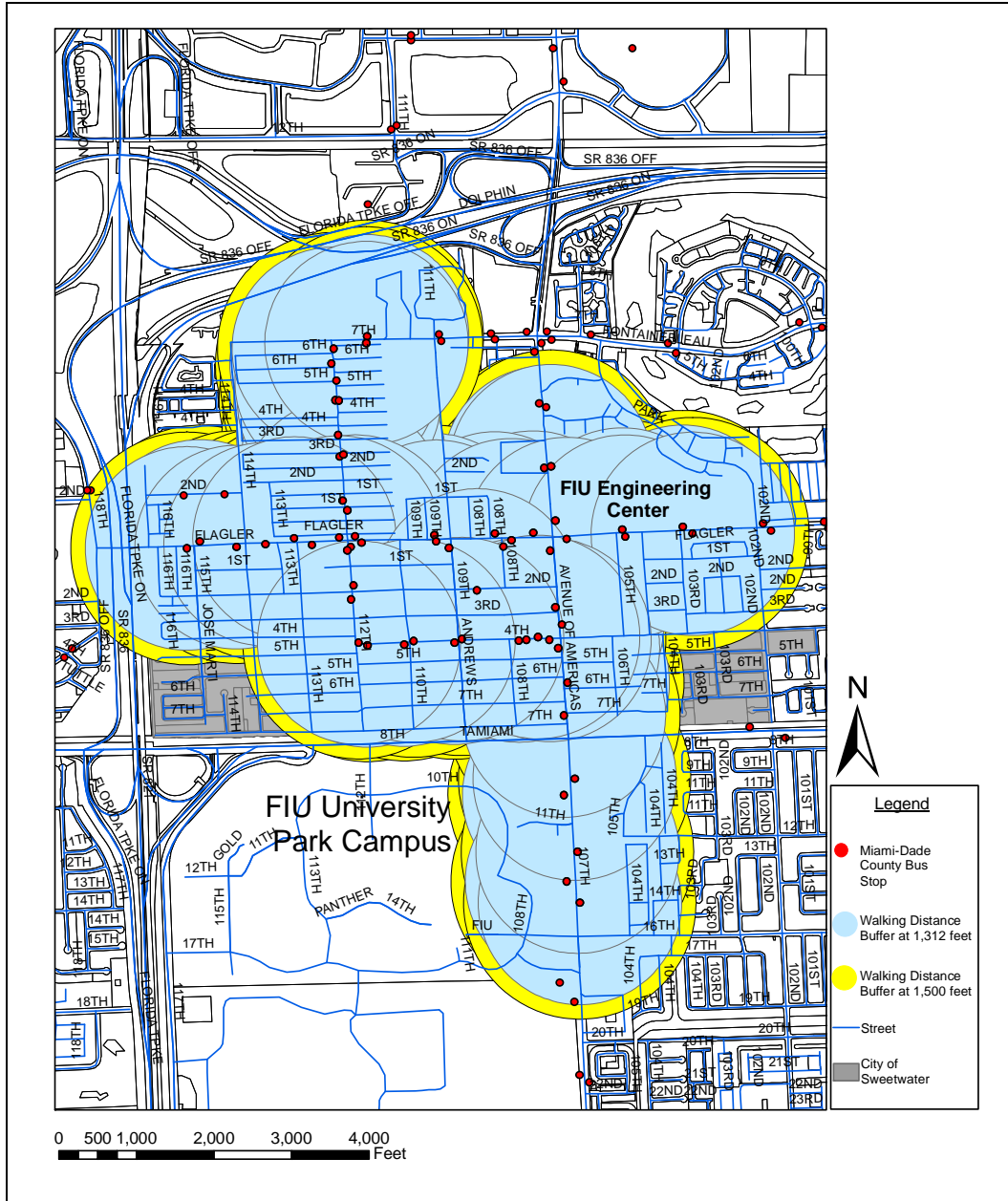


Figure 7.11 Walking Distance to County Operated Bus Stops in City of Sweetwater

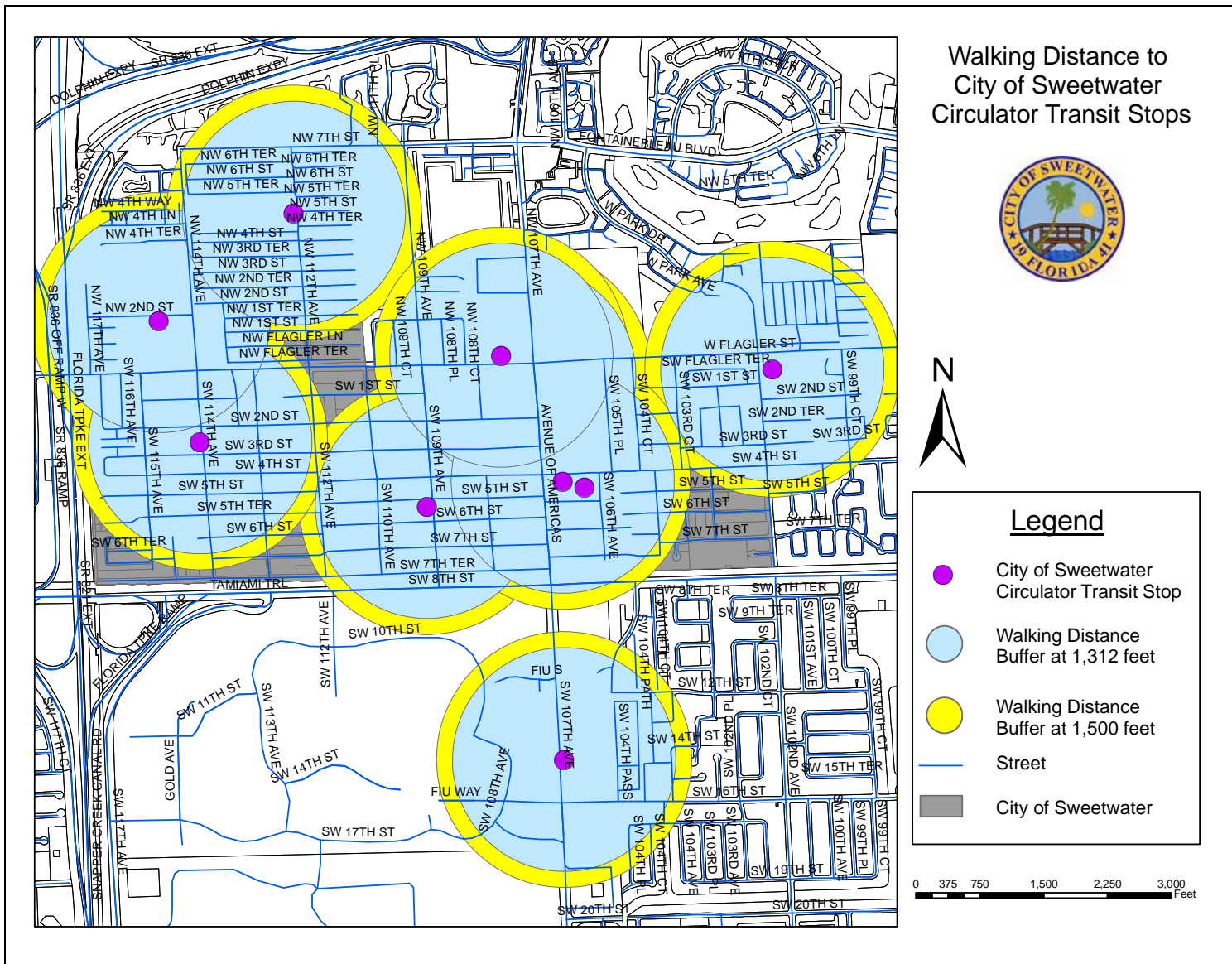


Figure 7.12 Walking Distance to City of Sweetwater Circulator Transit Stops

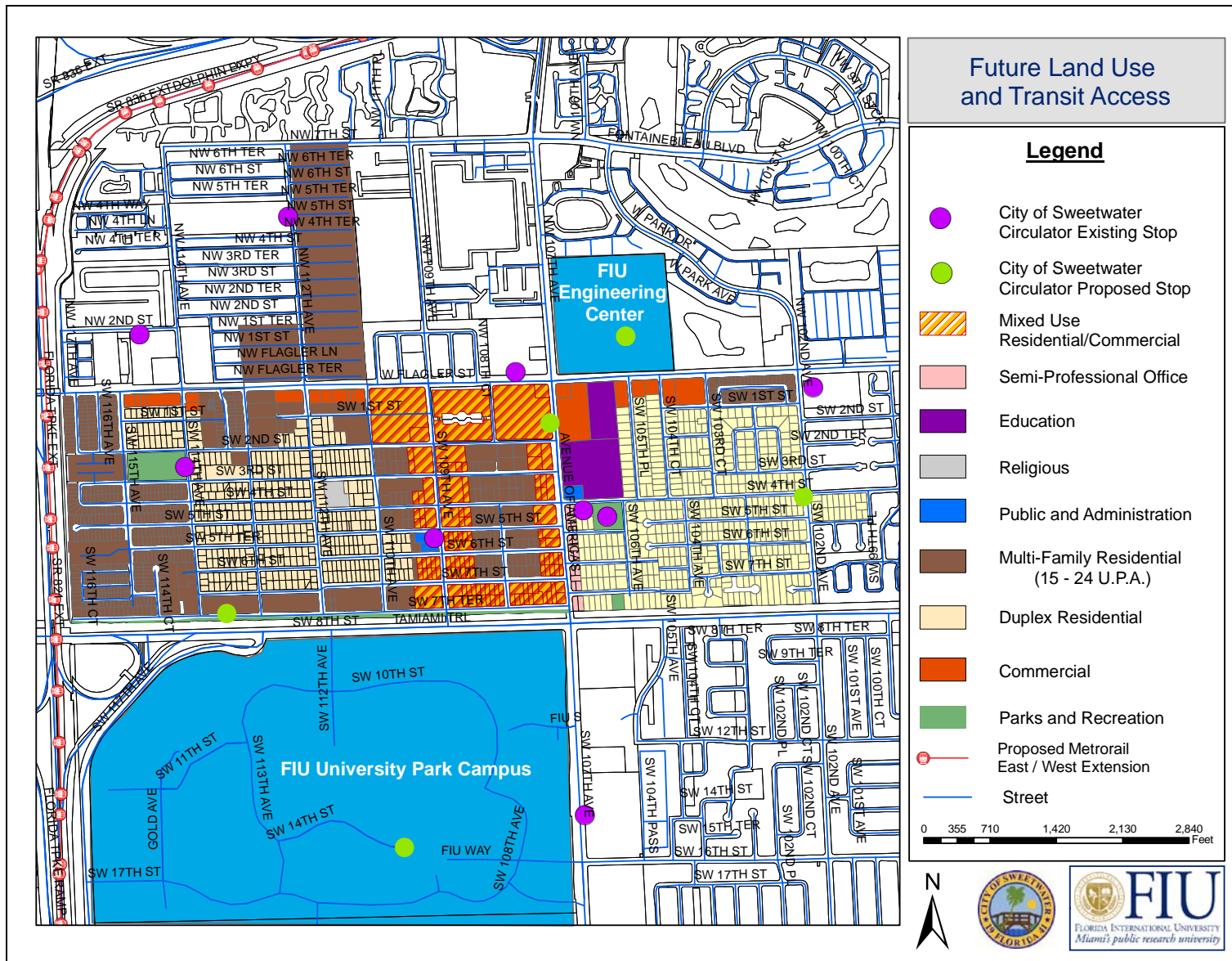


Figure 7.14 Proposed Transit Stops and City's Adopted Future Land Use

8. CONCLUSIONS

In this report, the existing conditions of land use, traffic conditions, transit services, and pedestrian and bicycle facilities are described. Three future growth scenarios are created based upon different assumptions of growth rates. The impact of the developments represented by the three scenarios has been analyzed following the FDOT site impact analysis procedures, with the aid of the ITE Trip Generation Manual and Miami-Dade County FSUTMS models (base year 2005 and future year 2015). The analysis results show that even with the widening of 107th Avenue between West Flagler Street and SW 8th Street, there will still be serious congestion. The level of service for the roadway segments of NW 107th Avenue will be F and D in the future year, and the LOS for SW 8th Street east of SW 109th Avenue will remain at E, as in year 2005. The LOS does not vary between the three redevelopment scenarios, because the differences in the numbers of total daily trips are relatively small (within 1,000). Although the road is assumed to be expanded to six lanes, the growth in background traffic will be such that the volumes will exceed the capacity. The LOS of SW 8th Street will deteriorate from C to E, because of the growth in traffic in general and due to the redevelopment and because no expansion is planned for SW 8th Street.

For the two major intersections on SW 107th Avenue at West Flagler Street and SW 8th Street, the intersection levels of service will improve due to the expansion of SW 107th Avenue. However, the LOS for the intersection of SW 8th Street and SW 109th Avenue will remain at F, although the delay during the afternoon peak period will more than double. To improve this intersection performance, in addition to optimizing the signal plans, lengthening the turning bays on the north leg of SW 109th Avenue will be necessary, especially for the right turn lane. This, however, will incur significant cost because of the need to acquire additional right of way.

The congestion in the area is mostly caused by through traffic, as opposed to local traffic, which will not be relieved significantly unless other effective transit alternatives, such as a Metrorail extension, are implemented. Although feasibility studies have been conducted on a new Metrorail connection between the Miami International Airport and FIU main campus, no definite plans have been developed and accepted at this time. Other less expensive transit alternatives may also be considered. For instance, a bus rapid transit link, similar to the South Dade Busway, can connect the FIU main campus with the Airport West area and a Metrorail station, therefore providing fast and reliable access to the two major employment centers in the county. Such a link can potentially carry a large amount of traffic, reduce the congestion levels in the study area, and encourage travelers to switch from driving alone to using transit. As demand for transit increases, a Metrorail option may become more viable in the future. Other possible ways to improve transit services to increase transit use include optimizing transit routes to minimize transfers and adopting transit signal priorities, which will reduce the delays to transit vehicles at intersections thus improving transit level of service and reliability.

A pedestrian/bicycle corridor has been proposed in this study. Improvements are needed to make the corridor visible, safe, comfortable, and aesthetically pleasing. The connectivity between the City of Sweetwater and FIU main campus can be significantly improved through the addition of a pedestrian bridge. Compared to other alternatives such as tunnels or crosswalks, a pedestrian

bridge is a compromise between cost, environmental impact, pedestrian safety, and vehicular traffic impact.

Opportunities exist for the City of Sweetwater to strengthen its economic vitality and at the same time improve its accessibility if a college town is realized and excellent pedestrian, bicycle, and transit connections are provided in the area. Although the population density will increase, a large portion will be FIU related. Students and faculty who live in the college town will be able to travel between the city and FIU campuses using modes other than driving alone. A proportion of the existing student population may also be attracted to the college town, thus eliminating some of the existing commuting trips. The mixed land use, enhanced by the pedestrian-friendly environment, will further help reduce the number of trips that would otherwise occur on the arterial roadways.

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APPENDIX A. TRIP GENERATION TABLES

Table A.1 Trip Generation Table for TAZs 1468, 1469, and 824a for 2005

EXISTING CONDITION									2005																								
ZONE	TAZ	CLUC	EXISTING LAND USE	CHANGE	LIVING_UNITS	ADJ_SOFT	LOT_SIZE	EMPSIZE	Existing Land Use	Existing Description	ITE Code	Unit	Intensity	Trip Generation Rate	TOTAL TRIPS			INTERNAL TRIPS			EXTERNAL TRIPS			PASS-BY TRIPS		NEW TRIPS							
															Weekday	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL		
1	1468	0001	RESIDENTIAL- SINGLE FAMILY		2	3853	18600		Residential	Single-Family Detaching Housing	210	DU	2	9.57	10	10	19	1	1	2	11.3%	8	9	17	0	0.0%	8	9	17				
1	1468	0002	MULTIFAMILY- DUPLEX		7	6524	24600		Residential	Residential Condominium/Townhouse	230	DU	7	5.86	21	21	41	3	2	5	11.3%	18	18	36	0	0.0%	18	18	36				
1	1468	0003	MULTIFAMILY- APARTMENTS		270	185283	321072	2	Residential	Apartment	220	DU	270	6.72	907	907	1814	113	92	205	11.3%	794	816	1609	0	0.0%	794	816	1609				
1	1468	0007	RESIDENTIAL- CONDOMINIUM		21				Residential	Residential Condominium/Townhouse	230	DU	21	5.86	62	62	123	8	6	14	11.3%	54	55	109	0	0.0%	54	55	109				
1	1468	0001	RESIDENTIAL- SINGLE FAMILY	1	3	4129	18900		Residential	Single-Family Detaching Housing	210	DU	3	9.57	14	14	29	2	1	3	11.3%	13	13	25	0	0.0%	13	13	25				
1	1468	0002	MULTIFAMILY- DUPLEX	1	14	13206	43500		Residential	Residential Condominium/Townhouse	230	DU	14	5.86	41	41	82	5	4	9	11.3%	36	37	73	0	0.0%	36	37	73				
1	1468	0003	MULTIFAMILY- APARTMENTS	1	158	100416	235222	3	Residential	Apartment	220	DU	158	6.72	531	531	1062	66	54	120	11.3%	465	477	942	0	0.0%	465	477	942				
1	1468	0007	RESIDENTIAL- CONDOMINIUM	1	34				Residential	Residential Condominium/Townhouse	230	DU	34	5.86	100	100	199	12	10	23	11.3%	87	90	177	0	0.0%	87	90	177				
1	1468	0009	MIXED USE- RESIDENTIAL		3	2430	6300		Residential	Residential Condominium/Townhouse	230	DU	3	5.86	9	9	18	1	1	2	11.3%	8	8	16	0	0.0%	8	8	16				
1	1468	0011	RETAIL	1	0	3479	22511	1	Retail	Fast-Food Restaurant without Drive-Through Window	933	TSF GFA	3	716.00	1245	1245	2491	129	149	278	11.2%	1116	1097	2213	0	0.0%	1116	1097	2213				
1	1468	0011	RETAIL	1	0	49872	326422	39	Retail	Shopping Center	820	TSF GLA	50	42.94	1071	1071	2142	111	128	239	11.2%	960	943	1903	0	0.0%	960	943	1903				
1	1468	0011	RETAIL	1	0	16008	40772	9	Retail	Specialty Retail Center	814	TSF GLA	16	44.32	355	355	709	37	42	79	11.2%	318	312	630	0	0.0%	318	312	630				
1	1468	0013	OFFICE BUILDING	1	0	24472	48932	20	Services	Drive-in Bank	912	TSF GFA	24	246.49	3016	3016	6032	FALSE	FALSE	0	0.0%	3016	3016	6032	0	0.0%	3016	3016	6032				
1	1468	0018	COMMERCIAL- CONDOMINIUM	1	0	22448		25	Retail	Specialty Retail Center	814	TSF GLA	22	44.32	497	497	995	52	59	111	11.2%	446	438	884	0	0.0%	446	438	884				
1	1468	0026	SERVICE STATION- AUTOMOTIVE	1	0	6270	17000	1	Retail	Gasoline/Service Station with Convenience Market	945	Fuel Position	10	162.78	814	814	1628	84	97	182	11.2%	729	717	1446	0	0.0%	729	717	1446				
					612				Residential						1893	1893		212	171	383					8067	8048	16113			8067	8048	16113	
						89328			Retail							3982	3982		413	475	428												
						34221			Office						6	6		0	0	0	458												
2	1468	0001	RESIDENTIAL- SINGLE FAMILY		4	5896	31760	1	Residential	Single-Family Detaching Housing	210	DU	4	9.57	19	19	38	2	2	4	11.3%	17	17	34	0	0.0%	17	17	34				
2	1468	0002	MULTIFAMILY- DUPLEX		18	18043	53200		Residential	Residential Condominium/Townhouse	230	DU	18	5.86	53	53	105	7	5	12	11.3%	46	47	94	0	0.0%	46	47	94				
2	1468	0003	MULTIFAMILY- APARTMENTS		217	151888	346640	1	Residential	Apartment	220	DU	217	6.72	729	729	1458	91	74	165	11.3%	638	655	1293	0	0.0%	638	655	1293				
2	1468	0007	RESIDENTIAL- CONDOMINIUM		46				Residential	Residential Condominium/Townhouse	230	DU	234	5.86	686	686	1371	86	69	155	11.3%	600	616	1216	0	0.0%	600	616	1216				
2	1468	0081	VACANT LAND		0	0	8400																										
2	1468	0001	RESIDENTIAL- SINGLE FAMILY		2	3552	17500		Residential	Single-Family Detaching Housing	210	DU	2	9.57	10	10	19	1	1	2	11.3%	8	9	17	0	0.0%	8	9	17				
2	1468	0002	MULTIFAMILY- DUPLEX	1	18	19348	56000	1	Residential	Residential Condominium/Townhouse	230	DU	18	5.86	53	53	105	7	5	12	11.3%	46	47	94	0	0.0%	46	47	94				
2	1468	0003	MULTIFAMILY- APARTMENTS	1	73	52798	131635		Residential	Apartment	220	DU	73	6.72	245	245	491	31	25	55	11.3%	215	220	435	0	0.0%	215	220	435				
2	1468	0007	RESIDENTIAL- CONDOMINIUM	1	215				Residential	Residential Condominium/Townhouse	230	DU	217	5.86	79	79	158	10	8	18	11.3%	69	71	140	0	0.0%	69	71	140				
2	1468	0011	RETAIL	1	0	3853	19500	1	Retail	Drinking Place	936	TSF GFA	4	11.34	22	22	44	2	3	5	11.2%	20	19	39	0	0.0%	20	19	39				
2	1468	0013	OFFICE BUILDING	1	0	7270	72310		Office	Government Office Building	730	TSF GFA	7	68.93	251	251	501	38	60	98	19.5%	213	190	403	0	0.0%	213	190	403				
2	1468	0019	COMMERCIAL- MIXED USE	1	2	0	0	0	Residential	Residential Condominium/Townhouse	230	DU	2	5.86	6	6	12	1	1	1	11.3%	5	5	10	0	0.0%	5	5	10				
2	1468	0019	COMMERCIAL- MIXED USE	1	0	4413	9866	3	Retail	Automobile Care Center	942	TSF OGLA	4	3.38	7	7	15	1	0	1	5.2%	7	7	14	0	0.0%	7	7	14				
2	1468	0080	VACANT LAND- GOVERNMENTAL	1	0	0	9300																										
2	1468	0081	VACANT LAND	1	0	0	31200																										
					595				Residential						1875	1875		205	190	425						1884	1906	3790			1884	1906	3790
						7270			Retail						25	25		3	3	6													
						8266			Office						261	261		38	60	98													
3	1469	0001	RESIDENTIAL- SINGLE FAMILY		4	5471	31125		Residential	Single-Family Detaching Housing	210	DU	4	9.57	19	19	38	3	2	6	14.7%	16	17	33	0	0.0%	16	17	33				
3	1469	0001	RESIDENTIAL- SINGLE FAMILY		2	2779	7277		Residential	Single-Family Detaching Housing	210	DU	2	9.57	10	10	19	2	1	3	14.7%	8	8	16	0	0.0%	8	8	16				
3	1469	0001	RESIDENTIAL- SINGLE FAMILY		4	7346	35280		Residential	Single-Family Detaching Housing	210	DU	4	9.57	19	19	38	3	2	6	14.7%	16	17	33	0	0.0%	16	17	33				
3	1469	0002	MULTIFAMILY- DUPLEX		30	32725	103875		Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	15	11	26	14.7%	73	77	150	0	0.0%	73	77	150				
3	1469	0002	MULTIFAMILY- DUPLEX		2	2497	8308		Residential	Residential Condominium/Townhouse	230	DU	2	5.86	6	6	12	1	1	2	14.7%	5	5	10	0	0.0%	5	5	10				
3	1469	0002	MULTIFAMILY- DUPLEX		20	20785	66580		Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	10	8	17	14.7%	49	51	100	0	0.0%	49	51	100				
3	1469	0003	MULTIFAMILY- APARTMENTS		41	40038	86453		Residential	Apartment	220	DU	41	6.72	138	138	276	23	18	40	14.7%	115	120	235	0	0.0%	115	120	235				
3	1469	0007	RESIDENTIAL- CONDOMINIUM		20				Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	10	8	17	14.7%	49	51	100	0	0.0%	49	51	100				
3	1469	0007	RESIDENTIAL- CONDOMINIUM		30			1	Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	15	11	26	14.7%	73	77	150	0	0.0%	73	77	150				
3	1469	0040	MUNICIPAL		0	16400	24034	3	Office	Government Office Building	730	TSF GFA	16	68.93	565	565	1130	55	85	140	12.4%	510	480	990	0	0.0%	510	480	990				
3	1469	0080	VACANT LAND- GOVERNMENTAL		0	0	980																										
3	1469	0080	VACANT LAND- GOVERNMENTAL		0	0	7500																										

EXISTING CONDITION									2005																				
ZONE	TAZ	CLUC	EXISTING LAND USE	CHANGE	LIVING_UNITS	ADJ_SOFT	LOT_SIZE	EMP_SIZE	Existing Land Use	Existing Description	ITE Code	Unit	Intensity	Trip Generation Rate Weekday	TOTAL TRIPS			INTERNAL TRIPS				EXTERNAL TRIPS			PASS-BY TRIPS		NEW TRIPS		
															IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL		
4	824	0001	RESIDENTIAL- SINGLE FAMILY		30	39860	225395		Residential	Single-Family Detaching Housing	210	DU	30	9.57	144	144	287	6	5	10	3.6%	138	139	277	0	0.0%	138	139	277
4	824	0002	MULTIFAMILY- DUPLEX		146	155049	483094		Residential	Residential Condominium/Townhouse	230	DU	146	5.86	428	428	856	17	14	31	3.6%	411	414	824	0	0.0%	411	414	824
4	824	0003	MULTIFAMILY- APARTMENTS		12	11096	27500		Residential	Apartment	220	DU	12	6.72	40	40	81	2	1	3	3.6%	39	39	78	0	0.0%	39	39	78
4	824	0003	MULTIFAMILY- APARTMENTS		63	56119	74732		Residential	Apartment	220	DU	63	6.72	212	212	423	8	7	15	3.6%	203	205	408	0	0.0%	203	205	408
4	824	0007	RESIDENTIAL- CONDOMINIUM		44				Residential	Residential Condominium/Townhouse	230	DU	44	5.86	129	129	258	5	4	9	3.6%	124	125	248	0	0.0%	124	125	248
4	824	0011	RETAIL		0	18796	59270	12	Retail	Specialty Retail Center	814	TSF GLA	19	44.32	417	417	833	43	53	96	11.5%	373	364	737	0	0.0%	373	364	737
4	824	0019	COMMERCIAL- MIXED USE		0	10074	16200	13	Retail	Specialty Retail Center	814	TSF GLA	10	44.32	223	223	446	23	28	51	11.5%	200	195	395	0	0.0%	200	195	395
4	824	0041	EDUCATIONAL- PRIVATE		1	1035	9100		Residential	Single-Family Detaching Housing	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9
4	824	0044	RELIGIOUS		0	1	644000	1	Institutional	Church	560	TSF GFA	64	9.11	293	293	587	FALSE	FALSE	0	0.0%	293	293	587	0	0.0%	293	293	587
4	824	0057	PARSONAGE		1	841	6000		Residential	Single-Family Detaching Housing	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9
4	824	0080	VACANT LAND- GOVERNMENTAL		0	0	2800											FALSE	FALSE										
4	824	0081	VACANT LAND		0	0	5400											FALSE	FALSE										
4	824	0081	VACANT LAND		0	0	10300											FALSE	FALSE										
4	824	0001	RESIDENTIAL- SINGLE FAMILY	1	1	1736	6250		Residential	Single-Family Detaching Housing	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9
4	824	0002	MULTIFAMILY- DUPLEX	1	38	37468	118750		Residential	Residential Condominium/Townhouse	230	DU	38	5.86	111	111	223	4	4	8	3.6%	107	108	215	0	0.0%	107	108	215
4	824	0003	MULTIFAMILY- APARTMENTS	1	8	8821	25000		Residential	Apartment	220	DU	8	6.72	27	27	54	1	1	2	3.6%	26	26	52	0	0.0%	26	26	52
					344				Residential						1105	1105		41	38	80		1927	1921	3848			1927	1921	3848
						28870			Retail						640	640		68	81	149									
						64400			Institutional						293	293		FALSE	FALSE	0									
5	824	0001	RESIDENTIAL- SINGLE FAMILY		52	80409	328138		Residential	Single-Family Detaching Housing	210	DU	52	9.57	249	249	498	10	8	18	3.6%	239	241	480	0	0.0%	239	241	480
5	824	0001	RESIDENTIAL- SINGLE FAMILY		1	1321	11400		Residential	Single-Family Detaching Housing	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9
5	824	0002	MULTIFAMILY- DUPLEX		146	143529	482494	3	Residential	Residential Condominium/Townhouse	230	DU	146	5.86	428	428	856	17	14	31	3.6%	411	414	824	0	0.0%	411	414	824
5	824	0002	MULTIFAMILY- DUPLEX		4	3110	18300		Residential	Residential Condominium/Townhouse	230	DU	4	5.86	12	12	23	0	0	1	3.6%	11	11	23	0	0.0%	11	11	23
5	824	0003	MULTIFAMILY- APARTMENTS		3	3877	8400		Residential	Apartment	220	DU	3	6.72	10	10	20	0	0	1	3.6%	10	10	19	0	0.0%	10	10	19
5	824	0007	RESIDENTIAL- CONDOMINIUM		94				Residential	Residential Condominium/Townhouse	230	DU	94	5.86	275	275	551	11	9	20	3.6%	264	266	531	0	0.0%	264	266	531
5	824	0011	RETAIL		0	20176	35756	12	Retail	Specialty Retail Center	814	TSF GLA	20	44.32	447	447	894	46	57	103	11.5%	401	391	791	0	0.0%	401	391	791
5	824	0081	VACANT LAND		0	0	6133											FALSE	FALSE										
6	824	0001	RESIDENTIAL- SINGLE FAMILY		21	32096	122564		Residential	Single-Family Detaching Housing	210	DU	21	9.57	100	100	201	4	3	7	3.6%	96	97	194	0	0.0%	96	97	194
6	824	0001	RESIDENTIAL- SINGLE FAMILY		39	50634	138448		Residential	Single-Family Detaching Housing	210	DU	39	9.57	187	187	373	7	6	14	3.6%	179	180	360	0	0.0%	179	180	360
5	824	0001	RESIDENTIAL- SINGLE FAMILY	1	4	5336	24000		Residential	Single-Family Detaching Housing	210	DU	4	9.57	19	19	38	1	1	1	3.6%	18	19	37	0	0.0%	18	19	37
5	824	0002	MULTIFAMILY- DUPLEX	1	30	27987	91555		Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	4	3	6	3.6%	84	85	169	0	0.0%	84	85	169
					384				Residential						1373	1373		56	46	100		1719	1718	3437			1719	1718	3437
						20176			Retail						447	447		46	57	103									
6	824	0002	MULTIFAMILY- DUPLEX		168	166728	545629	1	Residential	Residential Condominium/Townhouse	230	DU	168	5.86	492	492	984	20	16	36	3.6%	473	476	949	0	0.0%	473	476	949
6	824	0003	MULTIFAMILY- APARTMENTS		28	28329	115279		Residential	Apartment	220	DU	28	6.72	94	94	188	4	3	7	3.6%	90	91	181	0	0.0%	90	91	181
6	824	0003	MULTIFAMILY- APARTMENTS		24	16942	25939		Residential	Apartment	220	DU	24	6.72	81	81	161	3	3	6	3.6%	77	78	155	0	0.0%	77	78	155
6	824	0007	RESIDENTIAL- CONDOMINIUM		8				Residential	Residential Condominium/Townhouse	230	DU	8	5.86	23	23	47	1	1	2	3.6%	23	23	45	0	0.0%	23	23	45
6	824	0007	RESIDENTIAL- CONDOMINIUM		37				Residential	Residential Condominium/Townhouse	230	DU	37	5.86	108	108	217	4	4	8	3.6%	104	105	209	0	0.0%	104	105	209
6	824	0010	RESIDENTIAL- TOWNHOUSE		1	1258	4579		Residential	Residential Condominium/Townhouse	230	DU	1	5.86	3	3	6	0	0	0	3.6%	3	3	6	0	0.0%	3	3	6
6	824	0010	RESIDENTIAL- TOWNHOUSE		10	13014	10038		Residential	Residential Condominium/Townhouse	230	DU	10	5.86	29	29	59	1	1	2	3.6%	28	28	56	0	0.0%	28	28	56
6	824	0011	RETAIL		0	7335	14940	13	Retail	Specialty Retail Center	814	TSF GLA	7	44.32	163	163	325	17	21	37	11.5%	146	142	288	0	0.0%	146	142	288
6	824	0080	VACANT LAND- GOVERNMENTAL		0	0	0											FALSE	FALSE										
6	824	0081	VACANT LAND		0	0	8400											FALSE	FALSE										
6	824	0001	RESIDENTIAL- SINGLE FAMILY	1	2	3708	6098		Residential	Single-Family Detaching Housing	210	DU	2	9.57	10	10	19	0	0	1	3.6%	9	9	18	0	0.0%	9	9	18
6	824	0002	MULTIFAMILY- DUPLEX	1	34	33285	103430	3	Residential	Residential Condominium/Townhouse	230	DU	34	5.86	100	100	199	4	3	7	3.6%	96	96	192	0	0.0%	96	96	192
6	824	0003	MULTIFAMILY- APARTMENTS	1	4	3509	6097		Residential	Apartment	220	DU	4	6.72	13	13	27	1	0	1	3.6%	13	13	26	0	0.0%	13	13	26
6	824	0081	VACANT LAND	1	0	0	13685											FALSE	FALSE										
					316				Residential						954	954		33	31	65		1061	1064	2126			1061	1064	2126
						7335			Retail						163	163		17	21	37									

Table A.2 Trip Generation Table for TAZs 1468 and 1469 for Low Density Scenario (2015)

EXISTING CONDITION											2015																							
ZONE	TAZ	CLUC	EXISTING LAND USE	FUTURE LAND USE	CHANGE	COUNT	LIVING_UNITS	ADJ_SOFT	LOT_SIZE	EMPSIZE	Future Land Use	Future Description	ITE Code	Unit	Intensity	Trip Generation Rate	TOTAL TRIPS			INTERNAL TRIPS			EXTERNAL TRIPS			PASS-BY TRIPS		NEW TRIPS						
																Weekday	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL		
1	1468	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		2	2	3653	18600		Residential	Single Family Homes	210	DU	2	9.57	10	10	19	2	1	3	0.16409	8	8	16			8	8	16			
1	1468	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		4	7	6524	24600		Residential	Residential Condominium/Townhouse	230	DU	7	5.86	21	21	41	4	3	7	0.16409	17	17	34			17	17	34			
1	1468	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		22	270	185,263	321072	2	Residential	Apartment	220	DU	270	6.72	907	907	1814	164	134	298	0.16409	743	773	1517			743	773	1517			
1	1468	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		1	21				Residential	Residential Condominium/Townhouse	230	DU	21	5.86	62	62	123	11	9	20	0.16409	50	52	103			50	52	103			
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	3479	22511	1	Retail	Fast-Food Restaurant without Drive-Thru	933	TSF GFA	1	716.00	400	400	799	36	44	80	0.10063	363	355	719			363	355	719			
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	49872	326422	39	Retail	Shopping Center	820	TSF GLA	1	42.94	21	21	41	2	2	4	0.10063	19	18	37			19	18	37			
1	1468	0001	RESIDENTIAL- SINGLE FAMILY	Mixed Use Residential / Commercial		1	3	4129	18900		Residential				1012	6.72	3400	3400	6801	614	502	1116	0.16409	2786	2898	5685			2786	2898	5685			
1	1468	0002	MULTIFAMILY- DUPLEX	Mixed Use Residential / Commercial		1	7	14	13206	43500		Retail			FAR=0.3	9234	9234	18469	838	1021	1859	0.10063	8396	8214	16610			8396	8214	16610				
1	1468	0003	MULTIFAMILY- APARTMENTS	Mixed Use Residential / Commercial		1	23	158	100416	235222	3	Office			FAR=0.3	33	33	66	5	8	13	0.195	28	25	53			28	25	53				
1	1468	0007	RESIDENTIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	2	34			Services					477	477	954	FALSE	FALSE	0	0	477	477	954			477	477	954				
1	1468	0009	MIXED USE- RESIDENTIAL	Mixed Use Residential / Commercial		1	1	3	2430	6300																								
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	16008	40772	9																							
1	1468	0013	OFFICE BUILDING	Mixed Use Residential / Commercial		1	1	0	24472	48932	20																							
1	1468	0018	COMMERCIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	1	0	22448		25																							
1	1468	0026	SERVICE STATION- AUTOMOTIVE	Mixed Use Residential / Commercial		1	1	0	6270	17000	1																							
								512			Residential						4399	4399	8798					12888	12840	25728			12888	12840	25728			
								89328			Retail						9659	9659	19309								Modified	11687.9	11614	23302				
								34221			Office						33	33	66															
2	1468	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		4	4	5896	31760	1	Residential	Single Family Homes	210	DU	4	9.57	19	19	38	3	3	6	16.4%	16	16	32			16	16	32			
2	1468	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		9	18	18043	53200		Residential	Residential Condominium/Townhouse	230	DU	18	5.86	53	53	105	10	8	17	16.4%	43	45	88			43	45	88			
2	1468	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		34	217	151888	346640	1	Residential	Apartment	220	DU	217	6.72	729	729	1458	132	108	239	16.4%	597	621	1219			597	621	1219			
2	1468	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		3	46				Residential	Residential Condominium/Townhouse	230	DU	234	5.86	686	686	1371	124	101	225	16.4%	562	584	1146			562	584	1146			
2	1468	0081	VACANT LAND	Multi-Family Residential 24 U.P.A.		1	0	0	8400																									
2	1468	0001	RESIDENTIAL- SINGLE FAMILY	Mixed Use Residential / Commercial		1	2	3552	17500																									
2	1468	0002	MULTIFAMILY- DUPLEX	Mixed Use Residential / Commercial		1	9	18	19348	59000	1																							
2	1468	0003	MULTIFAMILY- APARTMENTS	Mixed Use Residential / Commercial		1	19	73	52798	131635																								
2	1468	0007	RESIDENTIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	3	215																										
2	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	3653	19500	1																							
2	1468	0013	OFFICE BUILDING	Mixed Use Residential / Commercial		1	1	0	7270	72310																								
2	1468	0019	COMMERCIAL- MIXED USE	Mixed Use Residential / Commercial		1	2	0	0	0	0																							
2	1468	0019	COMMERCIAL- MIXED USE	Mixed Use Residential / Commercial		1	1	0	4413	9866	3																							
2	1468	0080	VACANT LAND- GOVERNMENTAL	Mixed Use Residential / Commercial		1	2	0	0	9300																								
2	1468	0081	VACANT LAND	Mixed Use Residential / Commercial		1	4	0	31200																									
								593			Residential						1487	1487	2973	268	219	486		1248	1267	2485			1248	1267	2485			
								7271			Retail						0	0	0	0	0	0					Modified	0	0	0				
								8204			Office						0	0	0	0	0	0												
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Duplex Residential		4	4	5471	31125		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	4	3	7	18.0%	15	16	31			15	16	31			
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.		1	2	2779	7277		Residential	Single Family Homes	210	DU	2	9.57	10	10	19	2	2	3	18.0%	8	8	16			8	8	16			
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		4	4	7346	35280		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	4	3	7	18.0%	15	16	31			15	16	31			
3	1469	0002	MULTIFAMILY- DUPLEX	Duplex Residential		15	30	32725	103875		Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	18	14	32	18.0%	70	74	144			70	74	144			
3	1469	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.		1	2	2497	8308		Residential	Residential Condominium/Townhouse	230	DU	2	5.86	6	6	12	1	1	2	18.0%	5	5	10			5	5	10			
3	1469	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		10	20	20765	66580		Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	12	9	21	18.0%	47	49	96			47	49	96			
3	1469	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		9	41	40038	86453		Residential	Apartment	220	DU	41	6.72	138	138	276	28	22	50	18.0%	110	116	226			110	116	226			
3	1469	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 15 U.P.A.		2	20				Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	12	9	21	18.0%	47	49	96			47	49	96			
3	1469	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		3	30				Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	18	14	32	18.0%	70	74	144			70	74	144			
3	1469	0040	MUNICIPAL	Public & Administration		1	0	16400	24034	3	Office	Government Office Building	730	TSF GFA	16	68.93	565	565	1130	83	122	206	18.2%	482	443	925			482	443	925			
3	1469	0080	VACANT LAND- GOVERNMENTAL	Multi-Family Residential 24 U.P.A.		1	0	0	980																									
3	1469	0080	VACANT LAND- GOVERNMENTAL	Public & Administration		1	0	0	7500																									
3	1469	0081	VACANT LAND	Multi-Family Residential 24 U.P.A.		1	0																											

Table A.4 Trip Generation Table for TAZs 1468 and 1469 for High Density Scenario (2015)

EXISTING CONDITION											2015																								
ZONE	TAZ	CLUC	EXISTING LAND USE	FUTURE LAND USE	CHANGE	COUNT	LIVING_UNITS	ADJ_SQFT	LOT_SIZE	EMPSIZE	Future Land Use	Future Description	ITE Code	Unit	Intensity	Trip Generation Rate	TOTAL TRIPS			INTERNAL TRIPS				EXTERNAL TRIPS			PASS-BY TRIPS		NEW TRIPS						
																Weekday	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
1	1468	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		2	2	3953	18600		Residential	Single Family Homes	210	DU	2	9.57	10	10	19	1	1	2	0.10065	9	9	17				9	9	17			
1	1468	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		4	7	6524	24800		Residential	Residential Condominium/Townhouse	230	DU	7	5.86	21	21	41	2	2	4	0.10065	18	19	37				18	19	37			
1	1468	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		22	270	185283	321072	2	Residential	Apartment	220	DU	270	6.72	907	907	1814	100	82	183	0.10065	807	825	1632				807	825	1632			
1	1468	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		1	21				Residential	Residential Condominium/Townhouse	230	DU	21	5.86	82	82	123	7	6	12	0.10065	55	56	111				55	56	111			
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	3478	22511	1	Retail	Fast-Food Restaurant without Drive-Thru	933	TSF GFA	1	716.00	400	400	799	36	44	80	0.10063	363	355	719				363	355	719		
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	49872	326422	39	Retail	Shopping Center	820	TSF GLA	1	42.94	21	21	41	2	2	4	0.10063	19	18	37				19	18	37		
1	1468	0001	RESIDENTIAL- SINGLE FAMILY	Mixed Use Residential / Commercial		1	3	3	4129	16900		Residential				2116	6.72	7110	7110	14220	787	844	1431	0.10065	6322	6466	12788				6322	6466	12788		
1	1468	0002	MULTIFAMILY- DUPLEX	Mixed Use Residential / Commercial		1	7	14	13206	43500		Retail						9234	9234	18468	838	1021	1859	0.10063	8396	8214	16610				8396	8214	16610		
1	1468	0003	MULTIFAMILY- APARTMENTS	Mixed Use Residential / Commercial		1	23	158	100416	235222	3	Office						33	33	66	6	8	13	0.195	26	25	53				26	25	53		
1	1468	0007	RESIDENTIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	2	34				Services						477	477	954	FALSE	FALSE	0	0	477	477	954				477	477	954		
1	1468	0009	MIXED USE- RESIDENTIAL	Mixed Use Residential / Commercial		1	1	3	2430	6300																									
1	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	16008	40772																									
1	1468	0013	OFFICE BUILDING	Mixed Use Residential / Commercial		1	1	0	24472	48932																									
1	1468	0018	COMMERCIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	1	0	22448																										
1	1468	0026	SERVICE STATION- AUTOMOTIVE	Mixed Use Residential / Commercial		1	1	0	6270	17000																									
								512			Residential						8108	8108	16217					16494	16464	32958				16494	16464	32958			
									88328		Retail							9668	9668	19309							Modified	16223.9	15162	30406.86					
									34221		Office							33	33	66															
2	1468	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		4	4	5896	31760		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	2	2	4	10.1%	17	17	34				17	17	34			
2	1468	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		9	18	18043	53200		Residential	Residential Condominium/Townhouse	230	DU	18	5.86	53	53	105	6	5	11	10.1%	47	48	95				47	48	95			
2	1468	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		34	217	151888	348640	1	Residential	Apartment	220	DU	217	6.72	729	729	1458	81	66	147	10.1%	648	663	1311				648	663	1311			
2	1468	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		3	46				Residential	Residential Condominium/Townhouse	230	DU	234	5.86	886	886	1371	76	62	138	10.1%	610	624	1233				610	624	1233			
2	1468	0081	VACANT LAND	Multi-Family Residential 24 U.P.A.		1	0	0	8400																										
2	1468	0001	RESIDENTIAL- SINGLE FAMILY	Mixed Use Residential / Commercial		1	2	2	3552	17500																									
2	1468	0002	MULTIFAMILY- DUPLEX	Mixed Use Residential / Commercial		1	9	18	19348	56000	1																								
2	1468	0003	MULTIFAMILY- APARTMENTS	Mixed Use Residential / Commercial		1	19	73	52798	131635																									
2	1468	0007	RESIDENTIAL- CONDOMINIUM	Mixed Use Residential / Commercial		1	3	215																											
2	1468	0011	RETAIL	Mixed Use Residential / Commercial		1	1	0	3853	19500	1																								
2	1468	0013	OFFICE BUILDING	Mixed Use Residential / Commercial		1	1	0	7270	72310																									
2	1468	0019	COMMERCIAL- MIXED USE	Mixed Use Residential / Commercial		1	1	2	0	0	0																								
2	1468	0019	COMMERCIAL- MIXED USE	Mixed Use Residential / Commercial		1	1	0	4413	9866	3																								
2	1468	0080	VACANT LAND- GOVERNMENTAL	Mixed Use Residential / Commercial		1	2	0	9300																										
2	1468	0081	VACANT LAND	Mixed Use Residential / Commercial		1	4	0	31200																										
								696			Residential						1487	1487	2973	168	136	299		1322	1362	2674				1322	1362	2674			
									7274		Retail																Modified	0	0	0					
									8266		Office																								
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Duplex Residential		4	4	5471	31125		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	2	2	4	10.1%	17	17	34				17	17	34			
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.		1	2	2779	7277		Residential	Single Family Homes	210	DU	2	9.57	10	10	19	1	1	2	10.1%	8	9	17				8	9	17			
3	1469	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 24 U.P.A.		4	4	7346	35280		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	2	2	4	10.1%	17	17	34				17	17	34			
3	1469	0002	MULTIFAMILY- DUPLEX	Duplex Residential		15	30	32725	103875		Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	10	8	18	10.1%	78	80	158				78	80	158			
3	1469	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.		1	2	2497	8308		Residential	Residential Condominium/Townhouse	230	DU	2	5.86	6	6	12	1	1	1	10.1%	5	5	11				5	5	11			
3	1469	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 24 U.P.A.		10	20	20785	66580		Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	7	5	12	10.1%	52	53	105				52	53	105			
3	1469	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		9	41	40038	86453		Residential	Apartment	220	DU	41	6.72	138	138	276	18	12	28	10.1%	122	125	248				122	125	248			
3	1469	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 15 U.P.A.		2	20				Residential	Residential Condominium/Townhouse	230	DU	20	5.86	59	59	117	7	5	12	10.1%	52	53	105				52	53	105			
3	1469	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 24 U.P.A.		3	30				Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	10	8	18	10.1%	78	80	158				78	80	158			
3	1469	0040	MUNICIPAL	Public & Administration		1	0	16400	24034		Office	Government Office Building	730	TSF GFA	16	68.93	565	565	1130	83	122	206	18.2%	482	443	925				482	443	925			
3	1469	0080	VACANT LAND- GOVERNMENTAL	Multi-Family Residential 24 U.P.A.		1	0	0	980																										
3	1469	0080	V																																

Table A.5 Trip Generation Table for TAZ 824a for all Scenarios (2015)

EXISTING CONDITION											2015																					
ZONE	TAZ	CLUC	EXISTING LAND USE	FUTURE LAND USE	CHANGE	COUNT	LIVING_UNITS	ADJ_SQFT	LOT_SIZE	EMPSIZE	Future Land Use	Future Description	ITE Code	Unit	Intensity	Trip Generation Rate	TOTAL TRIPS			INTERNAL TRIPS				EXTERNAL TRIPS			PASS-BY		NEWTRIPS			
																Weekday	IN	OUT	TOTAL	IN	OUT	TOTAL	%	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
4	824	0001	RESIDENTIAL- SINGLE FAMILY	Duplex Residential		30	30	39860	225395		Residential	Single Family Homes	210	DU	30	9.57	144	144	287	6	5	10	3.6%	138	139	277	0	0.0%	138	139	277	
4	824	0002	MULTIFAMILY- DUPLEX	Duplex Residential		73	146	155049	483094		Residential	Residential Condominium/Townhouse	230	DU	146	5.86	428	428	856	17	14	31	3.6%	411	414	824	0	0.0%	411	414	824	
4	824	0003	MULTIFAMILY- APARTMENTS	Duplex Residential		4	12	11096	27500		Residential	Apartment	220	DU	12	6.72	40	40	81	2	1	3	3.6%	39	39	78	0	0.0%	39	39	78	
4	824	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 24 U.P.A.		1	63	56119	74732		Residential	Apartment	220	DU	63	6.72	212	212	423	8	7	15	3.6%	203	205	408	0	0.0%	203	205	408	
4	824	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 15 U.P.A.		1	44				Residential	Residential Condominium/Townhouse	230	DU	44	5.86	129	129	258	5	4	9	3.6%	124	125	248	0	0.0%	124	125	248	
4	824	0011	RETAIL	Commercial		4	0	18796	59270		12	Retail	Specialty Retail Center	814	TSF GLA	19	44.32	417	417	833	43	53	96	11.5%	373	364	737	0	0.0%	373	364	737
4	824	0019	COMMERCIAL- MIXED USE	Commercial		1	0	10074	16200		13	Retail	Specialty Retail Center	814	TSF GLA	10	44.32	223	223	446	23	28	51	11.5%	200	195	395	0	0.0%	200	195	395
4	824	0041	EDUCATIONAL- PRIVATE	Duplex Residential		1	1	1035	9100		Residential	Single Family Homes	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9	
4	824	0044	RELIGIOUS	Religious Use		1	0	1	644000	1	Institutional	Church	560	TSF GFA	64	9.11	293	293	587	FALSE	FALSE	0	0.0%	293	293	587	0	0.0%	293	293	587	
4	824	0057	PARSONAGE	Duplex Residential		1	1	841	6000		Residential	Single Family Homes	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9	
4	824	0080	VACANT LAND- GOVERNMENTAL	Duplex Residential		1	0	0	2800											FALSE	FALSE											
4	824	0081	VACANT LAND	Commercial		1	0	0	5400											FALSE	FALSE											
4	824	0081	VACANT LAND	Duplex Residential		2	0	0	10300											FALSE	FALSE											
4	824	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.	1	1	1	1736	6250		Residential	Single Family Homes	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9	
4	824	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.	1	19	38	37468	118750		Residential	Residential Condominium/Townhouse	230	DU	38	5.86	111	111	223	4	4	8	3.6%	107	108	215	0	0.0%	107	108	215	
4	824	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 15 U.P.A.	1	3	8	8821	25000		Residential	Apartment	220	DU	8	6.72	27	27	54	1	1	2	3.6%	26	26	52	0	0.0%	26	26	52	
							34	28974	84406		Residential						1106	1106		41	35	80		1922	1921	3843			1922	1921	3843	
											Residential						840	840		88	81	147										
											Institutional						293	293		FALSE	FALSE	0										
5	824	0001	RESIDENTIAL- SINGLE FAMILY	Duplex Residential		51	52	80408	328138		Residential	Single Family Homes	210	DU	52	9.57	249	249	498	10	8	18	3.6%	239	241	480	0	0.0%	239	241	480	
5	824	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.		1	1	1321	11400		Residential	Single Family Homes	210	DU	1	9.57	5	5	10	0	0	0	3.6%	5	5	9	0	0.0%	5	5	9	
5	824	0002	MULTIFAMILY- DUPLEX	Duplex Residential		73	146	143529	482494	3	Residential	Residential Condominium/Townhouse	230	DU	146	5.86	428	428	856	17	14	31	3.6%	411	414	824	0	0.0%	411	414	824	
5	824	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.		2	4	3110	16300		Residential	Residential Condominium/Townhouse	230	DU	4	5.86	12	12	23	0	0	1	3.6%	11	11	23	0	0.0%	11	11	23	
5	824	0003	MULTIFAMILY- APARTMENTS	Duplex Residential		1	3	3877	8400		Residential	Apartment	220	DU	3	6.72	10	10	20	0	0	1	3.6%	10	10	19	0	0.0%	10	10	19	
5	824	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 15 U.P.A.		5	94				Residential	Residential Condominium/Townhouse	230	DU	94	5.86	275	275	551	11	9	20	3.6%	264	266	531	0	0.0%	264	266	531	
5	824	0011	RETAIL	Commercial		1	0	20176	35756		12	Retail	Specialty Retail Center	814	TSF GLA	20	44.32	447	447	894	46	57	103	11.5%	401	391	791	0	0.0%	401	391	791
5	824	0081	VACANT LAND	Duplex Residential		1	0	0	6133											FALSE	FALSE											
6	824	0001	RESIDENTIAL- SINGLE FAMILY	Duplex Residential		20	21	32098	122564		Residential	Single Family Homes	210	DU	21	9.57	100	100	201	4	3	7	3.6%	96	97	194	0	0.0%	96	97	194	
6	824	0001	RESIDENTIAL- SINGLE FAMILY	Family Residential Attached Twin Homes		39	39	50634	138448		Residential	Single Family Homes	210	DU	39	9.57	187	187	373	7	6	14	3.6%	179	180	360	0	0.0%	179	180	360	
5	824	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.	1	4	4	5336	24000		Residential	Single Family Homes	210	DU	4	9.57	19	19	38	1	1	1	3.6%	18	19	37	0	0.0%	18	19	37	
5	824	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.	1	15	30	27987	91555		Residential	Residential Condominium/Townhouse	230	DU	30	5.86	88	88	176	4	3	6	3.6%	84	85	169	0	0.0%	84	85	169	
							394	20176			Residential						1373	1373		52	46	100		1719	1718	3437			1719	1718	3437	
											Retail						447	447		46	57	103										
6	824	0002	MULTIFAMILY- DUPLEX	Duplex Residential		84	168	166728	545629	1	Residential	Residential Condominium/Townhouse	230	DU	168	5.86	492	492	984	20	16	36	3.6%	473	476	949	0	0.0%	473	476	949	
6	824	0003	MULTIFAMILY- APARTMENTS	Duplex Residential		2	28	28328	115279		Residential	Apartment	220	DU	28	6.72	94	94	188	4	3	7	3.6%	90	91	181	0	0.0%	90	91	181	
6	824	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 15 U.P.A.		1	24	16942	25939		Residential	Apartment	220	DU	24	6.72	81	81	161	3	3	6	3.6%	77	78	155	0	0.0%	77	78	155	
6	824	0007	RESIDENTIAL- CONDOMINIUM	Duplex Residential		1	8				Residential	Residential Condominium/Townhouse	230	DU	8	5.86	23	23	47	1	1	2	3.6%	23	23	45	0	0.0%	23	23	45	
6	824	0007	RESIDENTIAL- CONDOMINIUM	Multi-Family Residential 15 U.P.A.		2	37				Residential	Residential Condominium/Townhouse	230	DU	37	5.86	108	108	217	4	4	8	3.6%	104	105	209	0	0.0%	104	105	209	
6	824	0010	RESIDENTIAL- TOWNHOUSE	Family Residential Attached Twin Homes		1	1	1258	4579		Residential	Residential Condominium/Townhouse	230	DU	1	5.86	3	3	6	0	0	0	3.6%	3	3	6	0	0.0%	3	3	6	
6	824	0010	RESIDENTIAL- TOWNHOUSE	Multi-Family Residential 15 U.P.A.		10	10	13014	10038		Residential	Residential Condominium/Townhouse	230	DU	10	5.86	29	29	59	1	1	2	3.6%	28	28	56	0	0.0%	28	28	56	
6	824	0011	RETAIL	Commercial		1	0	7335	14940		13	Retail	Specialty Retail Center	814	TSF GLA	7	44.32	163	163	325	17	21	37	11.5%	146	142	288	0	0.0%	146	142	288
6	824	0080	VACANT LAND- GOVERNMENTAL	Family Residential Attached Twin Homes		1	0	0	0											FALSE	FALSE											
6	824	0081	VACANT LAND	Duplex Residential		1	0	0	8400											FALSE	FALSE											
6	824	0001	RESIDENTIAL- SINGLE FAMILY	Multi-Family Residential 15 U.P.A.	1	2	2	3708	6098		Residential	Single-Family Detaching Housing	210	DU	2	9.57	10	10	19	0	0	1	3.6%	9	9	18	0	0.0%	9	9	18	
6	824	0002	MULTIFAMILY- DUPLEX	Multi-Family Residential 15 U.P.A.	1	17	34	33285	103430	3	Residential	Residential Condominium/Townhouse	230	DU	34	5.86	100	100	199	4	3	7	3.6%	96	96	192	0	0.0%	96	96	192	
6	824	0003	MULTIFAMILY- APARTMENTS	Multi-Family Residential 15 U.P.A.	1	1	4	3509	6097		Residential	Apartment	220	DU	4	6.72	13															

APPENDIX B. INTERNAL TRIP CAPTURE DIAGRAM

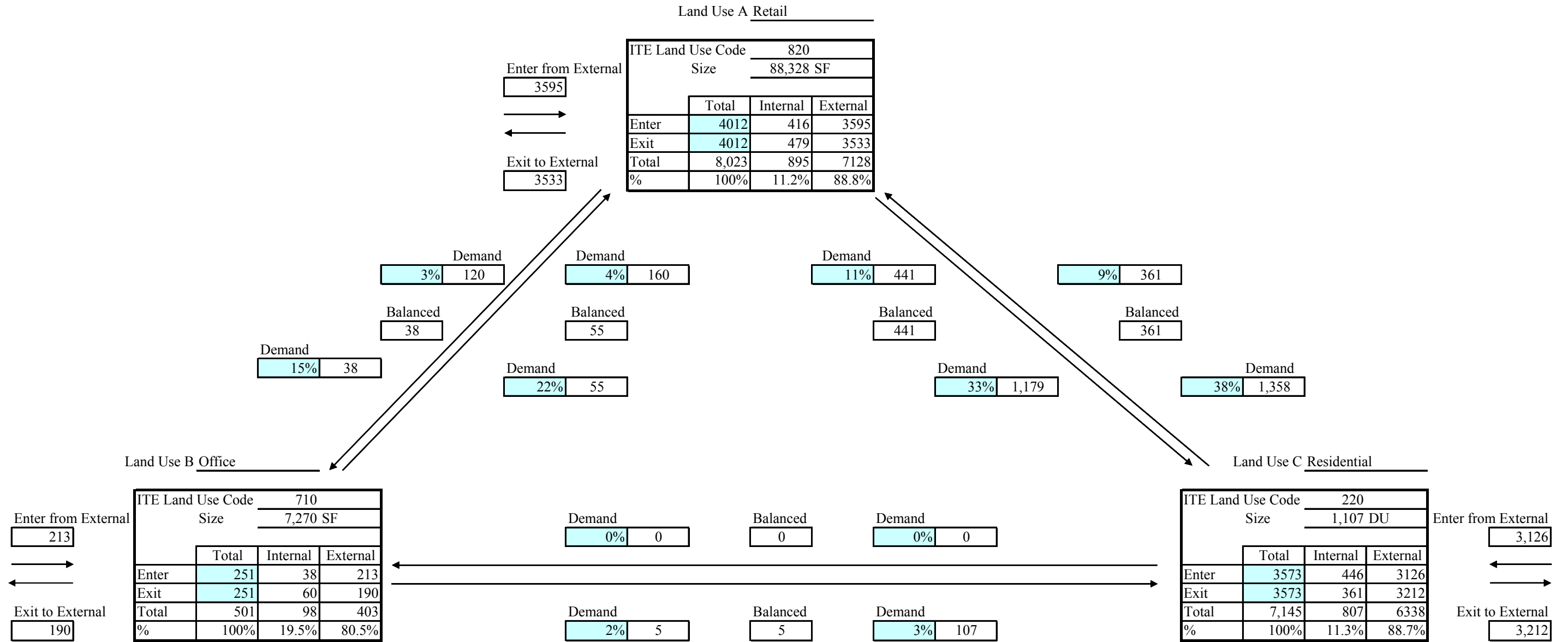


Figure B.1 Internal Trip Capture Diagram for TAZ 1468 in 2005

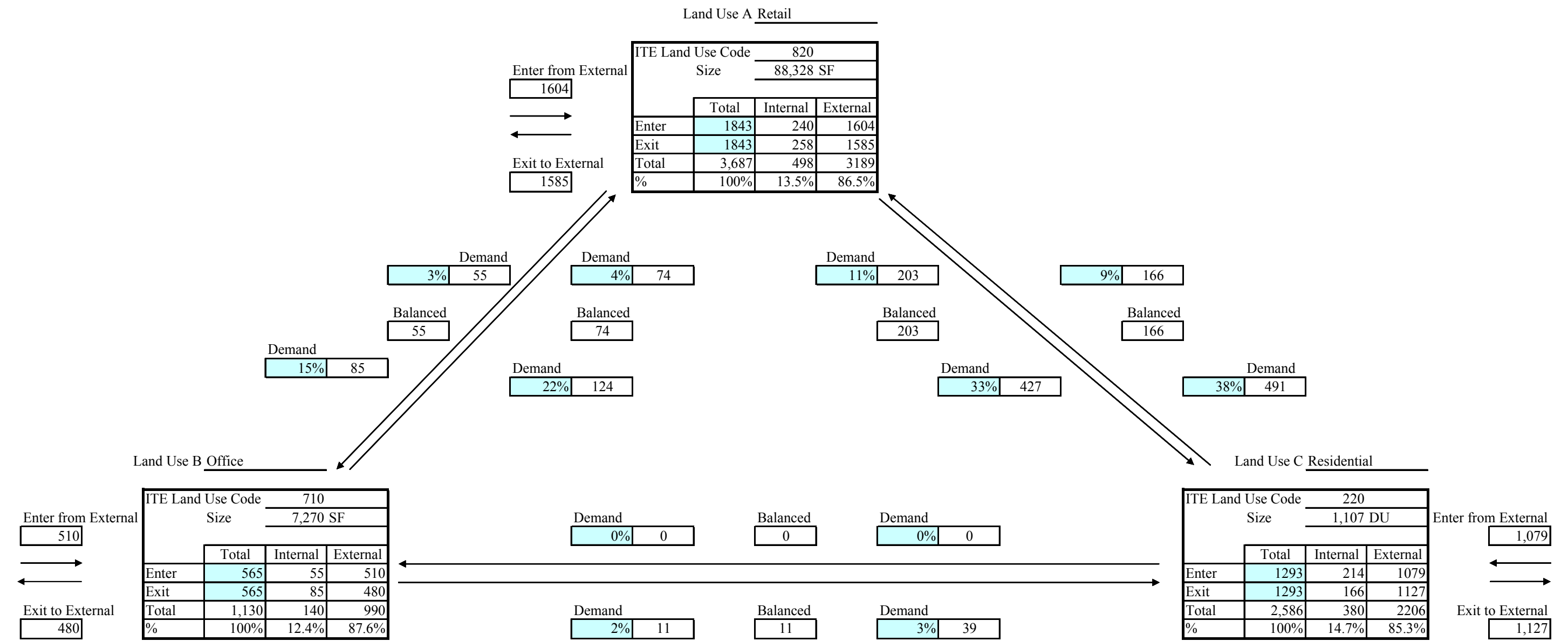


Figure B.2 Internal Trip Capture Diagram for TAZ 1469 in 2005

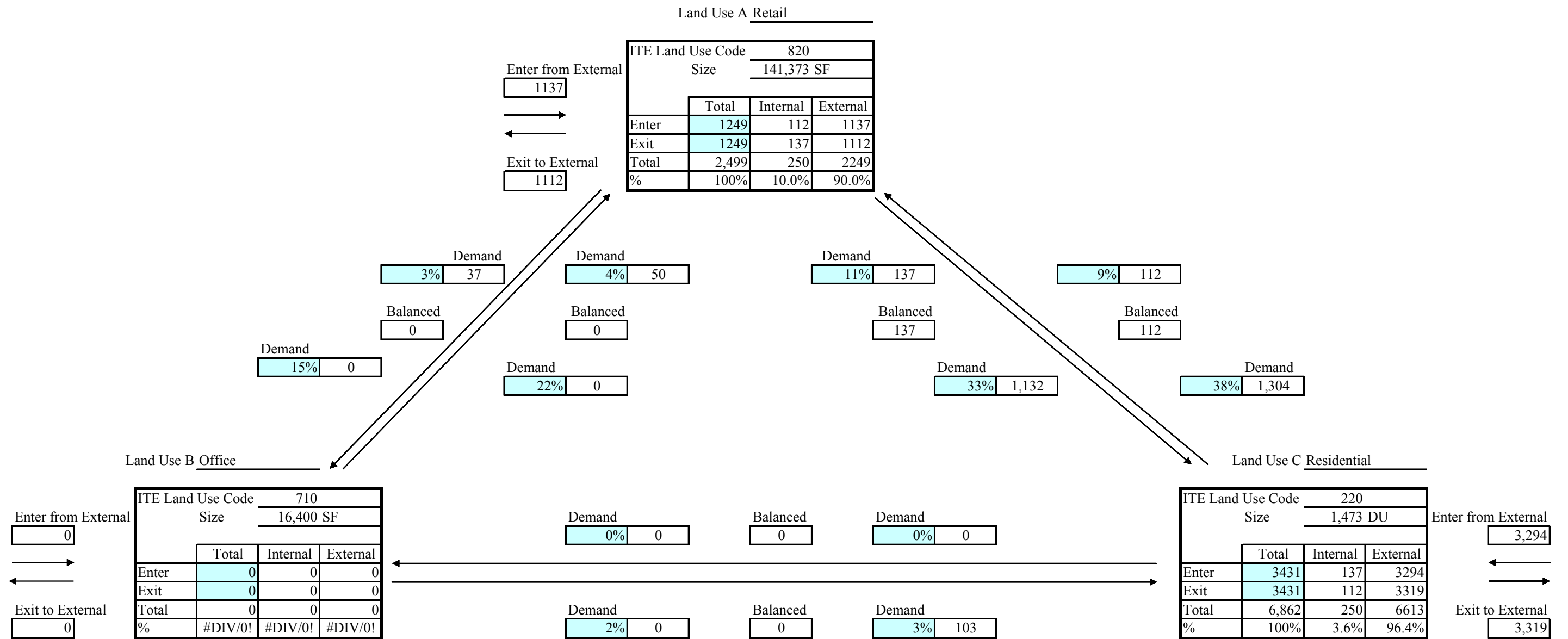


Figure B.3 Internal Trip Capture Diagram for TAZ 824a in 2005

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1468)

Time Period Daily

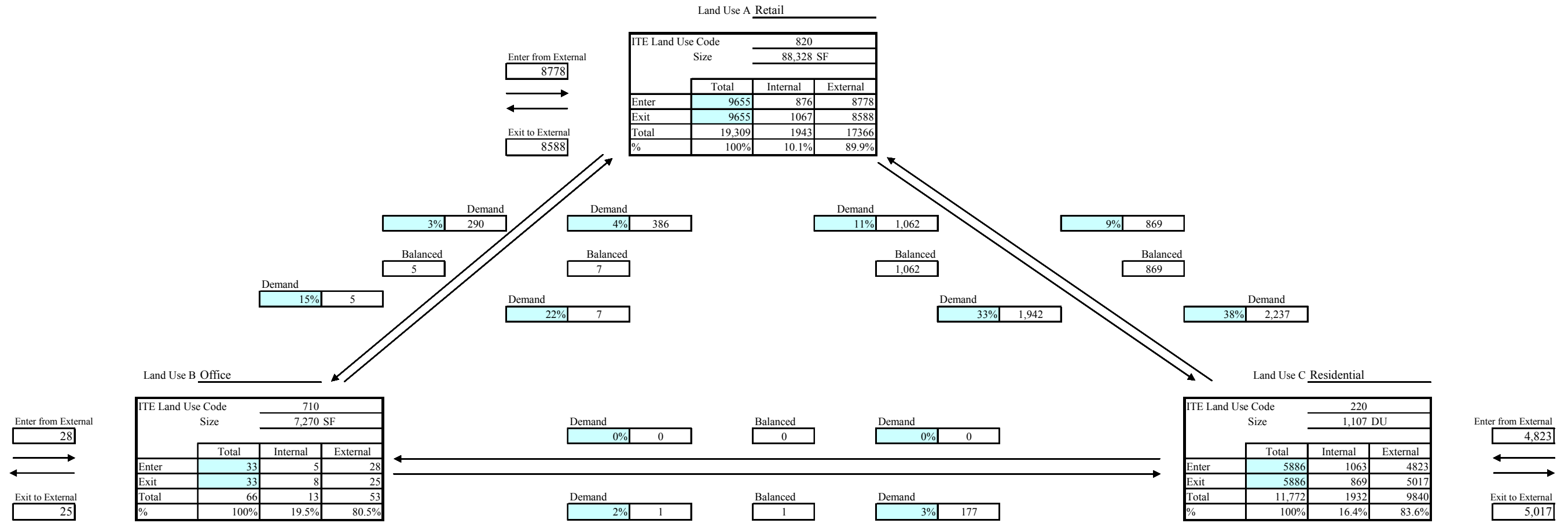


Figure B.4 Internal Trip Capture Diagram for TAZ 1468 for Low Density Scenario in 2015

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1469)

Time Period Daily

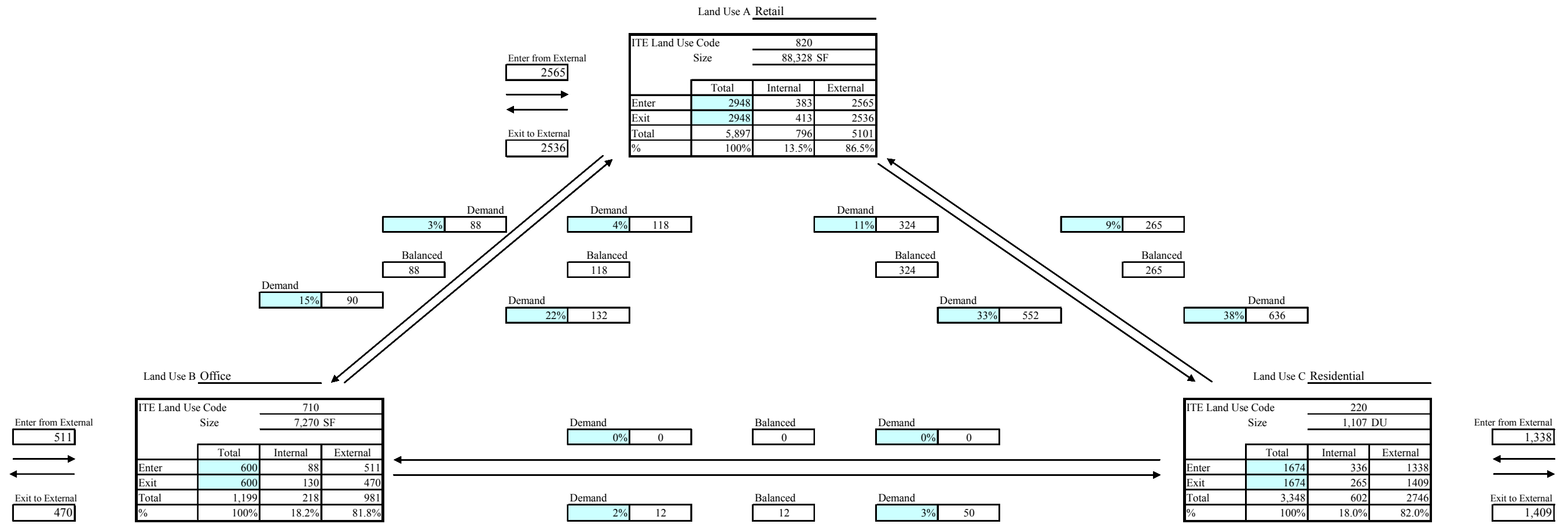


Figure B.5 Internal Trip Capture Diagram for TAZ 1469 for Low Density Scenario in 2015

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1468)

Time Period Daily

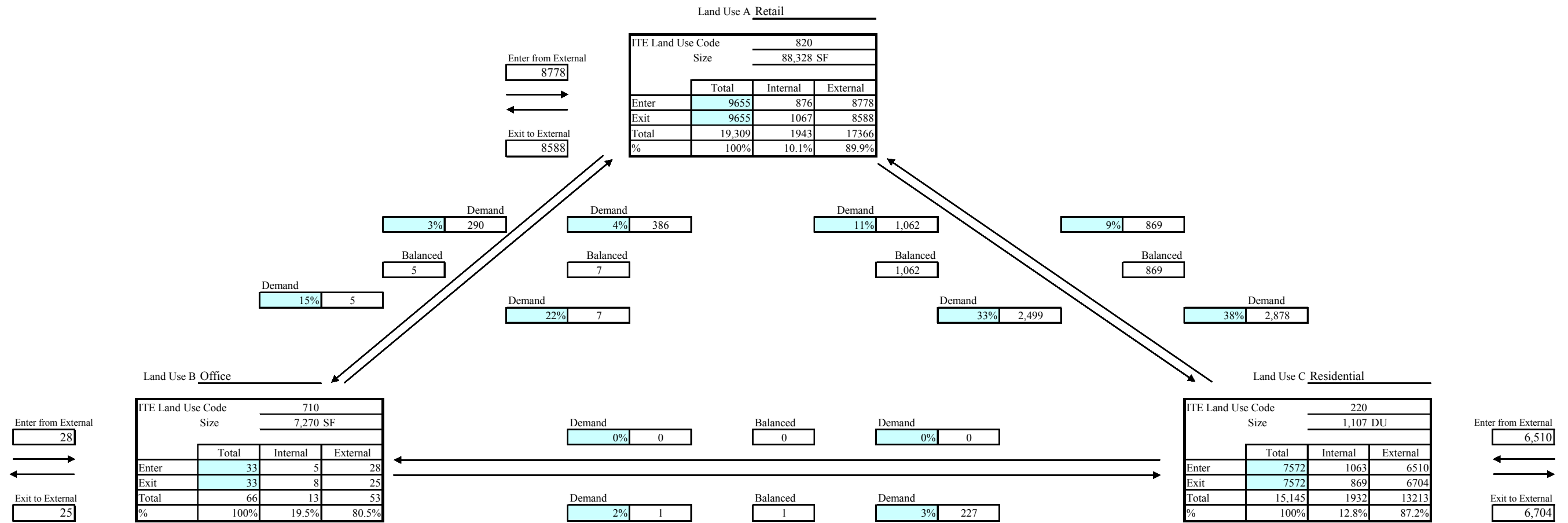


Figure B.6 Internal Trip Capture Diagram for TAZ 1468 for Medium Density Scenario in 2015

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1469)

Time Period Daily

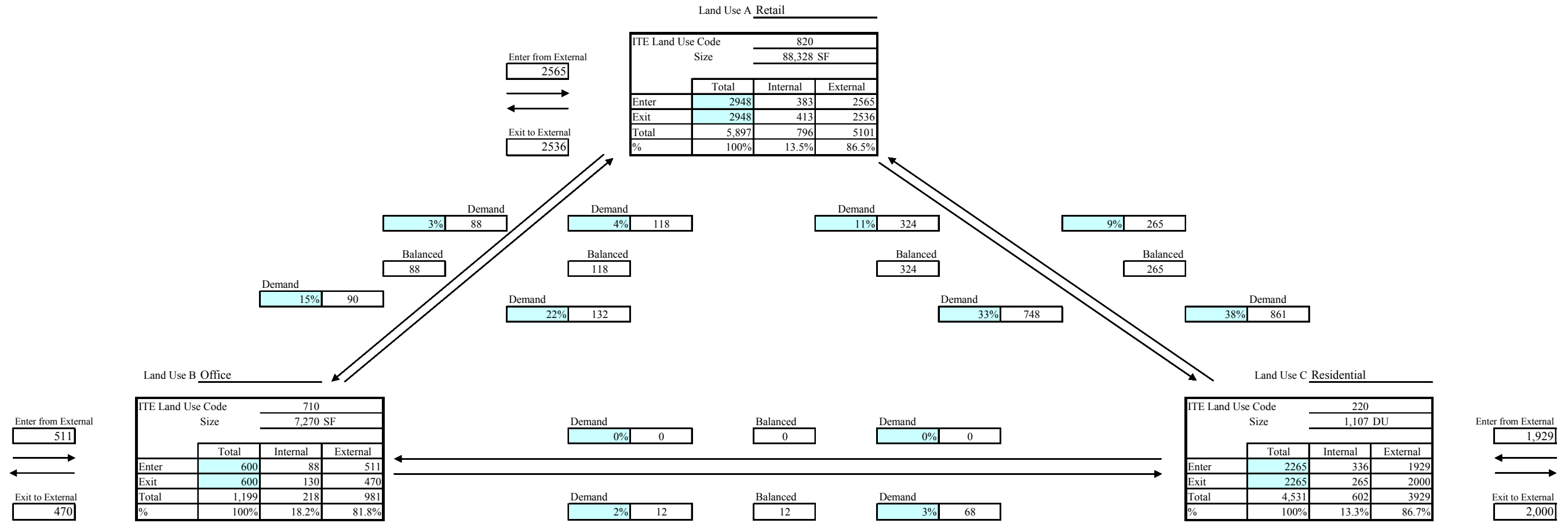


Figure B.7 Internal Trip Capture Diagram for TAZ 1469 for Medium Density Scenario in 2015

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1468)

Time Period Daily

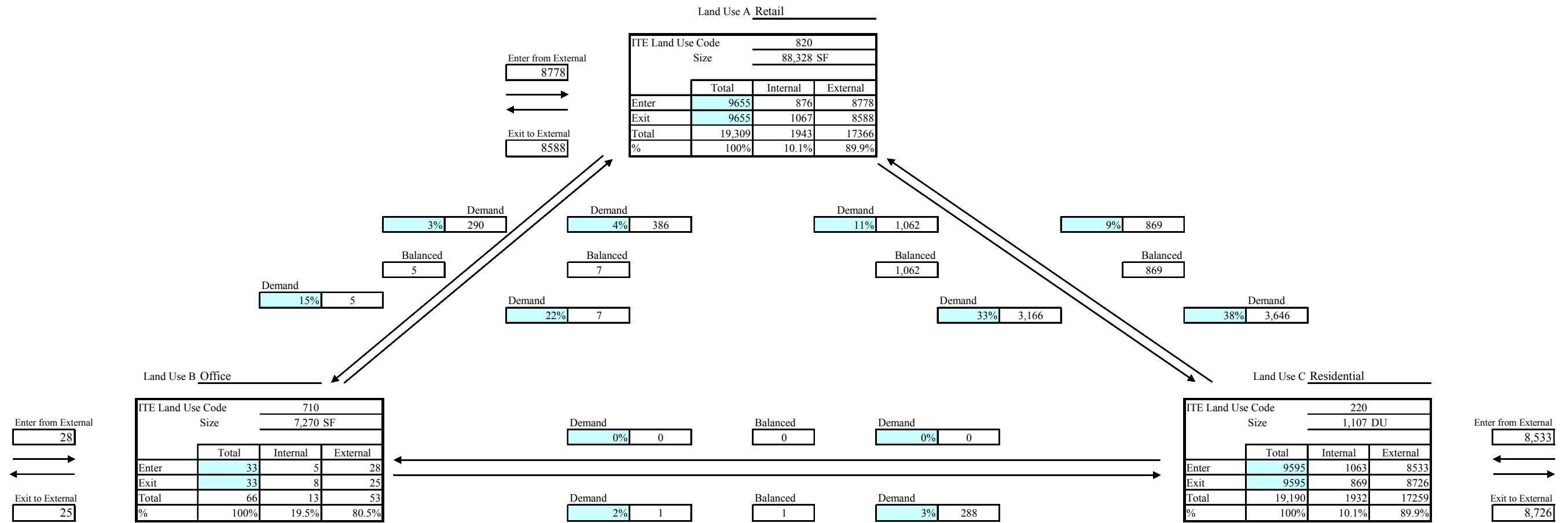


Figure B.8 Internal Trip Capture Diagram for TAZ 1468 for High Density Scenario in 2015

TRIP INTERNAL CAPTURE - SWEETWATER (TAZ1469)

Time Period Daily

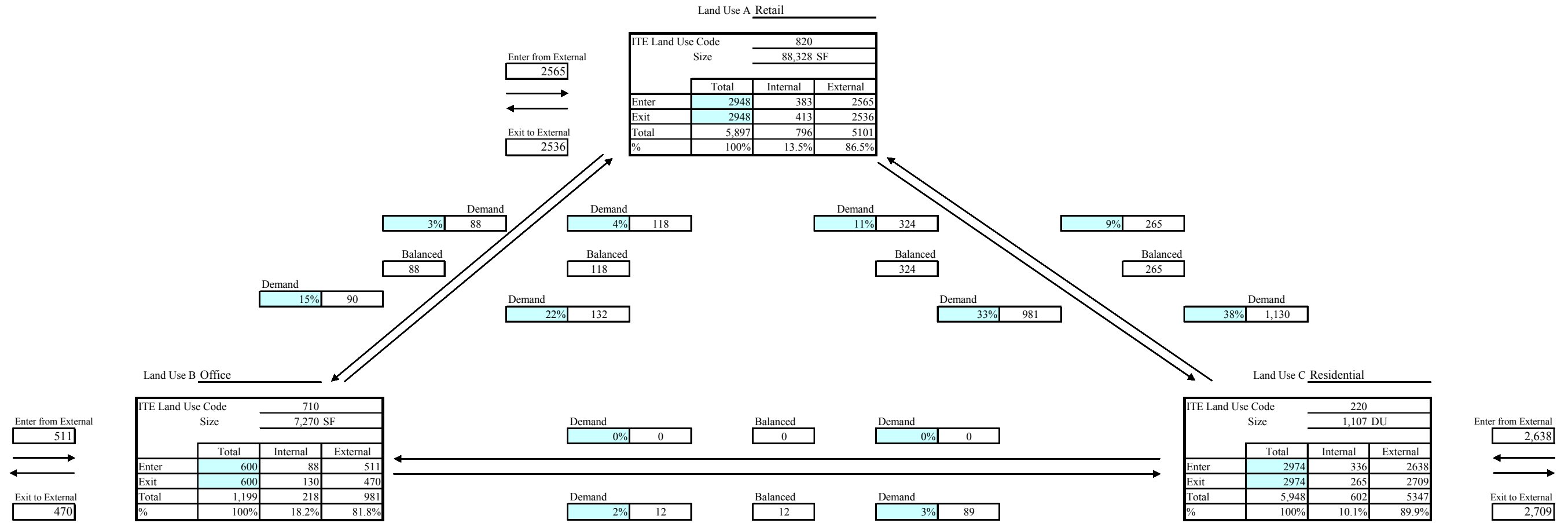


Figure B.9 Internal Trip Capture Diagram for TAZ 1469 for High Density Scenario in 2015

McMAHON
710 NW 107 Avenue, Suite 110
Miami, FL 33172

305-222-1945 File Name : SW 8th Street & 119th Avenue-41806

Site Code : 06269.11

Start Date : 4/18/2006

Page No : 3

Start Time	SW 109th AVENUE Southbound				SW 8th STREET Westbound				SW 109th AVENUE Northbound				SW 8th STREET Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	81	27	62	170	26	400	52	498	44	20	81	125	0	363	83	446	1239
05:00 PM	191	25	63	219	17	489	27	533	45	21	55	121	0	395	98	493	1566
05:15 PM	101	20	66	187	29	498	22	549	30	15	60	105	0	324	82	406	1247
05:30 PM	109	19	85	213	16	425	30	471	30	9	25	64	0	343	77	420	1168
Total Volume	422	91	276	789	88	1832	131	2051	149	65	201	415	0	1425	340	1765	5020
% App. Total	53.5	11.5	35		4.3	69.3	6.4		35.9	15.7	48.4		0	60.7	19.3		
PHF	805	843	812	901	759	920	630	934	929	774	824	830	000	902	857	895	919
Pass. Vehicles	420	91	272	783	88	1819	131	2038	148	65	199	412	0	1406	340	1748	4979
% Pass. Vehicles	99.5	100	98.6	99.2	100	99.3	100	99.4	99.3	100	99.0	99.3	0	98.7	100	98.9	99.2
Trucks	2	0	4	6	0	13	0	13	1	0	2	3	0	19	0	19	41
% Trucks	0.5	0	1.4	0.8	0	0.7	0	0.6	0.7	0	1.0	0.7	0	1.3	0	1.1	0.8

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

Start Time	04:45 PM				05:00 PM				04:30 PM				04:45 PM			
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total
+0 mins	81	27	62	170	17	489	27	533	27	14	52	93	0	363	83	446
+15 mins	191	25	63	219	29	498	22	549	44	20	81	125	0	395	98	493
+30 mins	101	20	66	187	16	425	30	471	45	21	55	121	0	324	82	406
+45 mins	109	19	85	213	22	463	23	508	30	15	60	105	0	343	77	420
Total Volume	422	91	276	789	84	1875	102	2061	146	70	228	444	0	1425	340	1765
% App. Total	53.5	11.5	35		4.1	91	4.9		32.9	15.8	51.4		0	60.7	19.3	
PHF	805	843	812	901	724	941	890	939	811	833	934	888	000	902	857	895
Pass. Vehicles	420	91	272	783	84	1859	102	2045	145	70	225	440	0	1406	340	1748
% Pass. Vehicles	99.5	100	98.6	99.2	100	99.1	100	99.2	99.3	100	98.7	99.1	0	98.7	100	98.9
Trucks	2	0	4	6	0	16	0	16	1	0	3	4	0	19	0	19
% Trucks	0.5	0	1.4	0.8	0	0.9	0	0.8	0.7	0	1.3	0.9	0	1.3	0	1.1

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305-222-1945 File Name : SW 8th Street & 109th Avenue-041906

Site Code : 06269.11

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Groups Printed- Pass. Vehicles - Trucks

Start Time	SW 109th AVENUE Southbound				SW 8th STREET Westbound				SW 109th AVENUE Northbound				SW 8th STREET Eastbound				Peak Total	Truck Total	Int. Total				
	Right	Thru	Left	Pevs	Right	Thru	Left	Pevs	Right	Thru	Left	Pevs	Right	Thru	Left	Pevs							
07:00 AM	51	14	112	0	177	15	221	3	0	239	1	1	1	2	3	18	651	64	0	733	2	1152	1154
07:15 AM	63	6	100	0	169	28	224	10	0	262	4	2	2	0	8	47	641	57	0	645	0	1094	1094
07:30 AM	88	16	114	0	218	18	211	14	0	243	3	3	6	0	12	62	516	62	0	640	0	1113	1113
07:45 AM	87	27	115	0	229	18	292	21	0	331	3	8	10	1	21	52	454	79	0	595	1	1186	1187
Total	289	63	441	0	793	79	948	48	0	1075	11	14	19	3	44	179	2162	262	0	2603	3	4515	4518
08:00 AM	107	34	72	0	203	18	240	28	2	286	6	10	9	2	25	50	500	85	1	635	5	1149	1154
08:15 AM	82	30	94	0	196	13	269	29	0	311	4	7	10	3	21	28	431	111	0	570	3	1099	1101
08:30 AM	47	14	74	0	135	29	253	29	0	311	3	6	8	0	17	60	447	81	0	588	0	1051	1051
08:45 AM	54	18	80	0	152	35	266	31	0	332	9	9	13	2	31	79	446	86	0	610	2	1125	1127
Total	290	76	320	0	686	95	1028	117	2	1240	22	32	40	7	94	217	1823	363	1	2403	10	4423	4433
*** BREAK ***																							
04:00 PM	75	14	55	0	144	0	8	0	0	8	0	0	2	0	2	23	388	59	0	470	0	624	624
04:15 PM	86	36	54	0	176	17	407	21	1	445	38	15	38	3	91	31	369	70	0	470	4	1182	1186
04:30 PM	80	29	69	0	191	24	417	27	0	469	37	20	52	0	109	58	347	56	0	461	0	1219	1219
04:45 PM	88	18	46	0	153	23	461	56	0	540	35	14	47	0	96	41	353	62	0	456	0	1245	1245
Total	330	97	224	0	654	64	1293	104	1	1461	110	49	139	3	298	153	1457	247	0	1657	4	4270	4274
05:00 PM	112	20	57	0	189	19	415	44	0	478	42	19	62	0	123	23	390	99	0	471	0	1261	1261
05:15 PM	76	17	63	0	146	22	435	35	0	492	27	17	50	3	94	21	297	85	0	373	3	1105	1108
05:30 PM	69	17	47	0	153	26	498	12	0	536	43	10	42	3	95	15	328	56	0	395	3	1180	1183
05:45 PM	108	20	76	0	204	24	428	18	2	470	36	15	33	2	84	20	306	34	0	360	4	1118	1122
Total	365	74	233	0	692	91	1776	109	2	1976	148	61	167	8	396	79	1318	203	0	1600	10	4664	4674

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Start Time	SW 109th AVENUE Southbound				SW 8th STREET Westbound				SW 109th AVENUE Northbound				SW 8th STREET Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	88	16	114	218	18	211	14	243	3	3	6	12	62	516	62	640	1113
07:45 AM	87	27	115	229	18	292	21	311	3	8	10	21	52	454	79	595	1166
08:00 AM	107	24	72	203	18	240	29	286	6	10	9	25	50	500	85	635	1149
08:15 AM	82	20	94	196	13	269	29	311	4	7	10	21	38	431	111	570	1038
Total Volume	364	87	395	846	67	1012	92	1171	16	28	35	79	192	1901	337	2430	4526
% App. Total	43	10.3	46.7		5.7	86.4	7.9		20.3	35.4	44.3		7.9	76.2	13.9		
PHF	0.90	0.06	0.99	0.94	0.91	0.86	0.93	0.84	0.67	0.00	0.85	0.90	0.74	0.92	0.99	0.90	0.90
Pass. Vehicles	364	84	395	843	67	988	91	1126	15	25	30	70	187	1877	337	2401	4440
% Pass. Vehicles	100	96.6	100	99.6	100	96.7	98.9	96.2	93.8	89.3	85.7	88.6	97.4	98.7	100	98.8	99.1
Trucks	0	3	0	3	0	44	1	45	1	3	5	9	5	24	0	29	86
% Trucks	0	3.4	0	0.4	0	4.3	1.1	3.8	6.3	10.7	14.3	11.4	2.6	1.3	0	1.2	1.9

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				08:00 AM				07:00 AM			
-0 mins	88	16	114	218	18	240	28	286	6	10	9	25	18	551	64	733
+15 mins	87	27	115	229	13	289	29	311	4	7	10	21	47	541	57	645
+30 mins	107	24	72	203	29	253	29	311	3	6	8	17	62	516	62	640
+45 mins	82	20	94	196	35	266	31	332	9	9	13	31	52	454	79	595
Total Volume	364	87	395	846	95	1028	117	1240	22	32	40	94	179	2162	282	2603
% App. Total	43	10.3	46.7		7.7	82.9	9.4		23.4	34	42.6		6.9	69.1	10.1	
PHF	0.90	0.06	0.99	0.94	0.79	0.95	0.94	0.94	0.11	0.00	0.89	0.90	0.72	0.90	0.99	0.90
Pass. Vehicles	364	84	395	843	95	986	117	1197	21	30	35	86	174	2136	282	2572
% Pass. Vehicles	100	96.6	100	99.6	100	95.8	100	96.5	95.5	93.8	87.5	91.5	97.2	99.8	100	98.8
Trucks	0	3	0	3	0	43	0	43	1	2	5	8	5	26	0	31
% Trucks	0	3.4	0	0.4	0	4.2	0	3.5	4.5	6.2	12.5	8.5	2.8	1.2	0	1.2

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Start Time	SW 109th AVENUE Southbound				SW 8th STREET Westbound				SW 109th AVENUE Northbound				SW 8th STREET Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	86	36	54	176	17	407	21	445	38	15	38	91	31	369	70	470	1182
04:30 PM	83	29	69	181	24	417	27	468	37	20	52	109	58	347	56	461	1219
04:45 PM	89	18	46	153	23	461	66	540	35	14	47	96	41	353	62	456	1245
05:00 PM	112	20	57	189	19	415	44	478	42	19	62	123	23	390	58	471	1261
Total Volume	370	103	226	699	83	1700	148	1931	152	68	199	419	153	1489	246	1888	4507
% App. Total	52.9	14.7	32.3		4.3	88	7.7		36.3	16.2	47.5		8.2	78.5	13.2		
PHF	0.85	0.15	0.19	0.25	0.65	0.92	0.61	0.94	0.05	0.00	0.02	0.62	0.69	0.95	0.79	0.96	
Pass. Vehicles	369	100	223	692	83	1684	148	1915	151	66	198	415	153	1426	246	1825	4487
% Pass. Vehicles	99.7	97.1	98.7	99.0	100	99.1	100	99.2	99.3	97.1	99.5	99.0	100	97.7	100	98.2	98.8
Trucks	1	3	3	7	0	16	0	16	1	2	1	4	0	33	0	33	60
% Trucks	0.3	2.9	1.3	1.0	0	0.9	0	0.8	0.7	2.9	0.5	1.0	0	2.3	0	1.8	1.2

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				04:30 PM				04:15 PM			
-0 mins	86	36	54	176	23	461	66	540	37	20	52	109	31	369	70	470
+15 mins	83	29	69	181	19	415	44	478	35	14	47	96	58	347	56	461
+30 mins	89	18	46	153	22	435	35	492	42	19	62	123	41	353	62	456
+45 mins	112	20	57	189	26	488	12	536	27	17	50	94	23	390	58	471
Total Volume	370	103	226	699	90	1809	147	2046	141	70	211	422	153	1489	246	1888
% App. Total	52.9	14.7	32.3		4.4	88.4	7.2		33.4	16.6	50		8.2	78.5	13.2	
PHF	0.85	0.15	0.19	0.25	0.65	0.98	0.65	0.94	0.39	0.05	0.05	0.68	0.69	0.95	0.79	0.96
Pass. Vehicles	369	100	223	692	90	1797	147	2034	141	68	210	419	153	1426	246	1825
% Pass. Vehicles	99.7	97.1	98.7	99	100	99.3	100	99.4	100	97.1	99.5	99.3	100	97.7	100	98.2
Trucks	1	3	3	7	0	12	0	12	0	2	1	3	0	33	0	33
% Trucks	0.3	2.9	1.3	1	0	0.7	0	0.6	0	2.9	0.5	0.7	0	2.3	0	1.8

APPENDIX D. TURNING MOVEMENT COUNTS

The following counts at signalized intersections along 107th Avenue between SW 8th Street and SW 109th Avenue were obtain form the SR 985/SW 107th Avenue PD&E Study, Florida Department of Transportation District 6 (FDOT 2006, Table 2).

**TABLE 2
SUMMARY OF TURNING MOVEMENT COUNTS
APRIL 18, 2006**

Cross Street	Peak Hour	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
SW 8th Street	AM	200	716	414	203	680	168	249	1447	624	306	902	176
	PM	228	1163	329	281	1348	290	261	850	524	455	1159	361
SW 4th Street	AM	8	1261	35	37	781	16	51	104	20	64	57	61
	PM	49	1299	60	47	1463	41	31	46	40	103	118	54
W. Flagler Street	AM	43	1147	68	202	713	83	489	1130	102	104	334	225
	PM	232	883	150	308	1544	228	187	690	76	190	817	154

APPENDIX E. TURNING MOVEMENT COUNTS AT UNSIGNALIZED INTERSECTIONS

(Source: SR 985/SW 107th Avenue PD&E Study, Florida Department of Transportation District 6, Appendix L)

Start Time	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 2ND ST Eastbound					SW 2ND ST Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	13	524	0	4	541	0	113	5	0	118	14	0	15	1	30	0	0	0	0	0	689
07:15 AM	8	506	1	2	517	0	162	12	0	174	20	0	13	0	33	0	0	0	0	0	724
07:30 AM	15	623	0	0	638	1	220	3	0	224	27	0	24	0	51	0	0	1	0	1	914
07:45 AM	15	462	0	0	477	2	243	6	0	251	16	0	20	1	37	0	0	0	0	0	765
Total	51	2115	1	6	2173	3	738	26	0	767	77	0	72	2	151	0	0	1	0	1	3092
08:00 AM	9	587	0	0	596	0	196	7	2	205	18	0	21	1	40	0	0	0	0	0	841
08:15 AM	20	483	2	0	505	3	146	9	0	158	16	0	15	2	33	0	0	0	1	1	697
08:30 AM	19	461	0	1	481	2	169	12	2	185	13	0	19	6	38	0	0	0	0	0	704
08:45 AM	18	576	0	0	594	1	236	8	1	246	12	0	19	2	33	0	0	0	2	2	875
Total	66	2107	2	1	2176	6	747	36	5	794	59	0	74	11	144	0	0	0	3	3	3117
04:00 PM	11	546	0	0	557	2	350	19	0	371	3	0	14	0	17	0	0	2	1	3	948
04:15 PM	23	455	0	0	478	3	359	13	2	377	8	0	18	2	28	0	0	0	0	0	883
04:30 PM	12	589	2	1	604	0	328	10	1	339	3	0	9	1	13	0	0	1	1	2	958
04:45 PM	14	479	0	0	493	3	245	7	2	257	1	0	5	2	8	0	0	0	0	0	758
Total	60	2069	2	1	2132	8	1282	49	5	1344	15	0	46	5	66	0	0	3	2	5	3547
05:00 PM	18	668	0	0	686	2	316	23	3	344	3	0	22	4	29	1	0	2	1	4	1063
05:15 PM	28	647	3	0	678	1	317	10	0	328	3	0	21	0	24	0	0	3	0	3	1033
05:30 PM	24	468	1	2	495	1	353	8	0	362	4	0	15	0	19	0	0	0	2	2	878
05:45 PM	26	469	0	5	500	0	312	13	2	327	4	0	15	2	21	0	0	0	1	1	849
Total	96	2252	4	7	2359	4	1298	54	5	1361	14	0	73	6	93	1	0	5	4	10	3823
Grand Total	273	8543	9	15	8840	21	4065	165	15	4266	165	0	265	24	454	1	0	9	9	19	13579
Approach %	3.1	96.6	0.1	0.2		0.5	95.3	3.9	0.4		36.3	0	58.4	5.3		5.3	0	47.4	47.4		
Total %	2	62.9	0.1	0.1	65.1	0.2	29.9	1.2	0.1	31.4	1.2	0	2	0.2	3.3	0	0	0.1	0.1	0.1	
Passenger Cars	262	8420	9	15	8706	20	3960	157	15	4152	156	0	255	24	435	1	0	9	9	19	13312
% Passenger Cars	96	98.6	100	100	98.5	95.2	97.4	95.2	100	97.3	94.5	0	96.2	100	95.8	100	0	100	100	100	98
Heavy Vehicles	11	123	0	0	134	1	105	8	0	114	9	0	10	0	19	0	0	0	0	0	267
% Heavy Vehicles	4	1.4	0	0	1.5	4.8	2.6	4.8	0	2.7	5.5	0	3.8	0	4.2	0	0	0	0	0	2

Start Time	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 2ND ST Eastbound					SW 2ND ST Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	506	1	2	517	0	162	12	0	174	20	0	13	0	33	0	0	0	0	0	724
07:30 AM	15	623	0	0	638	1	220	3	0	224	27	0	24	0	51	0	0	1	0	1	914
07:45 AM	15	462	0	0	477	2	243	6	0	251	16	0	20	1	37	0	0	0	0	0	765
08:00 AM	9	587	0	0	596	0	196	7	2	205	18	0	21	1	40	0	0	0	0	0	841
Total Volume	47	2178	1	2	2228	3	821	28	2	854	81	0	78	2	161	0	0	1	0	1	3244
% App. Total	2.1	97.8	0	0.1		0.4	96.1	3.3	0.2		50.3	0	48.4	1.2		0	0	100	0		
PHF	.783	.874	.250	.250	.873	.375	.845	.583	.250	.851	.750	.000	.813	.500	.789	.000	.000	.250	.000	.250	.887

Time	07:15 AM					07:15 AM					07:15 AM					08:00 AM					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
+0 mins.	8	506	1	2	517	0	162	12	0	174	20	0	13	0	33	0	0	0	0	0	724
+15 mins.	15	623	0	0	638	1	220	3	0	224	27	0	24	0	51	0	0	0	1	1	914
+30 mins.	15	462	0	0	477	2	243	6	0	251	16	0	20	1	37	0	0	0	0	0	765
+45 mins.	9	587	0	0	596	0	196	7	2	205	18	0	21	1	40	0	0	0	2	2	841
Total Volume	47	2178	1	2	2228	3	821	28	2	854	81	0	78	2	161	0	0	0	3	3	3244
% App. Total	2.1	97.8	0	0.1		0.4	96.1	3.3	0.2		50.3	0	48.4	1.2		0	0	0	100		
PHF	.783	.874	.250	.250	.873	.375	.845	.583	.250	.851	.750	.000	.813	.500	.789	.000	.000	.000	.375	.375	

	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 2ND ST Eastbound					SW 2ND ST Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	668	0	0	686	2	316	23	3	344	3	0	22	4	29	1	0	2	1	4	1063
05:15 PM	28	647	3	0	678	1	317	10	0	328	3	0	21	0	24	0	0	3	0	3	1033
05:30 PM	24	468	1	2	495	1	353	8	0	362	4	0	15	0	19	0	0	0	2	2	878
05:45 PM	26	469	0	5	500	0	312	13	2	327	4	0	15	2	21	0	0	0	1	1	849
Total Volume	96	2252	4	7	2359	4	1298	54	5	1361	14	0	73	6	93	1	0	5	4	10	3823
% App. Total	4.1	95.5	0.2	0.3		0.3	95.4	4	0.4		15.1	0	78.5	6.5		10	0	50	40		
PHF	.857	.843	.333	.350	.860	.500	.919	.587	.417	.940	.875	.000	.830	.375	.802	.250	.000	.417	.500	.625	.899

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM					05:00 PM					05:00 PM					05:00 PM					
+0 mins.	12	589	2	1	604	2	316	23	3	344	3	0	22	4	29	1	0	2	1	4	
+15 mins.	14	479	0	0	493	1	317	10	0	328	3	0	21	0	24	0	0	3	0	3	
+30 mins.	18	668	0	0	686	1	353	8	0	362	4	0	15	0	19	0	0	0	2	2	
+45 mins.	28	647	3	0	678	0	312	13	2	327	4	0	15	2	21	0	0	0	1	1	
Total Volume	72	2383	5	1	2461	4	1298	54	5	1361	14	0	73	6	93	1	0	5	4	10	
% App. Total	2.9	96.8	0.2	0		0.3	95.4	4	0.4		15.1	0	78.5	6.5		10	0	50	40		
PHF	.643	.892	.417	.250	.897	.500	.919	.587	.417	.940	.875	.000	.830	.375	.802	.250	.000	.417	.500	.625	.899

Groups Printed- Passenger Cars - Heavy Vehicles																					
	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 3RD ST Eastbound					SW 3RD ST Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	528	0	0	535	0	125	3	1	129	12	0	8	1	21	1	0	0	0	1	686
07:15 AM	3	500	0	1	504	0	172	3	1	176	14	0	5	0	19	0	0	0	0	0	699
07:30 AM	3	633	0	2	638	0	239	2	0	241	8	0	11	3	22	0	0	0	1	1	902
07:45 AM	1	474	0	0	475	0	263	0	0	263	3	0	5	0	8	0	0	0	3	3	749
Total	14	2135	0	3	2152	0	799	8	2	809	37	0	29	4	70	1	0	0	4	5	3036
08:00 AM	2	591	0	0	593	0	214	3	0	217	7	0	9	2	18	0	0	0	1	1	829
08:15 AM	3	492	0	4	499	0	156	5	1	162	11	0	2	2	15	0	0	0	5	5	681
08:30 AM	1	476	0	0	477	0	187	1	1	189	4	0	4	1	9	0	0	0	1	1	676
08:45 AM	5	588	0	0	593	0	251	3	0	254	6	0	4	0	10	0	0	0	3	3	860
Total	11	2147	0	4	2162	0	808	12	2	822	28	0	19	5	52	0	0	0	10	10	3046
03:45 PM	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
04:00 PM	6	546	0	0	552	0	356	8	0	364	3	0	4	3	10	0	0	0	1	1	927
04:15 PM	9	476	0	0	485	0	374	3	0	377	2	0	4	2	8	0	0	0	1	1	871
04:30 PM	7	602	0	2	611	0	333	3	0	336	2	0	5	0	7	0	0	0	3	3	957
04:45 PM	7	492	0	1	500	0	247	3	0	250	1	0	2	1	4	0	0	0	3	3	757
Total	29	2116	0	3	2148	0	1310	17	0	1327	8	0	15	6	29	0	0	0	8	8	3512
05:00 PM	6	686	0	1	693	0	332	6	0	338	2	0	5	1	8	0	0	0	3	3	1042
05:15 PM	6	673	0	0	679	0	335	3	0	338	4	0	1	0	5	0	0	0	2	2	1024
05:30 PM	9	485	0	0	494	0	363	5	1	369	7	0	4	1	12	0	0	0	1	1	876
05:45 PM	8	490	0	0	498	0	323	4	0	327	5	0	5	1	11	0	0	0	2	2	838
Total	29	2334	0	1	2364	0	1353	18	1	1372	18	0	15	3	36	0	0	0	8	8	3780
Grand Total	83	8741	0	11	8835	0	4270	55	5	4330	91	0	78	18	187	1	0	0	30	31	13383
Approch %	0.9	98.9	0	0.1		0	98.6	1.3	0.1		48.7	0	41.7	9.6		3.2	0	0	96.8		
Total %	0.6	65.3	0	0.1	.66	0	31.9	0.4	0	.32.4	0.7	0	0.6	0.1	1.4	0	0	0	0.2	0.2	
Passenger Cars	83	8811	0	11	8705	0	4159	53	5	4217	91	0	71	18	180	1	0	0	30	31	13133
% Passenger Cars	100	98.5	0	100	98.5	0	97.4	96.4	100	97.4	100	0	91	100	96.3	100	0	0	100	100	98.1
Heavy Vehicles	0	130	0	0	130	0	111	2	0	113	0	0	7	0	7	0	0	0	0	0	250
% Heavy Vehicles	0	1.5	0	0	1.5	0	2.6	3.6	0	2.6	0	0	9	0	3.7	0	0	0	0	0	1.9

SW 107TH AVE Northbound, SW 107TH AVE Southbound, SW 6TH ST Eastbound, SW 6TH ST Westbound. Start Time, Left, Thru, Right, Peds, App. Total, Int. Total. Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1. Peak Hour for Entire Intersection Begins at 07:00 AM. 07:00 AM, 07:15 AM, 07:30 AM, 07:45 AM. Total Volume, % App. Total, PHF.

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

07:00 AM, 07:15 AM, +0 mins., +15 mins., +30 mins., +45 mins., Total Volume, % App. Total, PHF.

SW 107TH AVE Northbound, SW 107TH AVE Southbound, SW 6TH ST Eastbound, SW 6TH ST Westbound. Start Time, Left, Thru, Right, Peds, App. Total, Int. Total. Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1. Peak Hour for Entire Intersection Begins at 05:00 PM. 05:00 PM, 05:15 PM, 05:30 PM, 05:45 PM. Total Volume, % App. Total, PHF.

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

04:45 PM, 05:00 PM, +0 mins., +15 mins., +30 mins., +45 mins., Total Volume, % App. Total, PHF.

Groups Printed- Passenger Cars - Heavy Vehicles

SW 107TH AVE Northbound, SW 107TH AVE Southbound, SW 6TH ST Eastbound, SW 6TH ST Westbound. Start Time, Left, Thru, Right, Peds, App. Total, Int. Total. 07:00 AM, 07:15 AM, 07:30 AM, 07:45 AM, Total. 08:00 AM, 08:15 AM, 08:30 AM, 08:45 AM, Total. 04:00 PM, 04:15 PM, 04:30 PM, 04:45 PM, Total. 05:00 PM, 05:15 PM, 05:30 PM, 05:45 PM, Total. Grand Total, Apprch %, Total %, Passenger Cars, % Passenger Cars, Heavy Vehicles, % Heavy Vehicles.

Start Time	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 6TH ST Eastbound					SW 6TH ST Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	12	355	0	0	367	0	203	0	3	206	11	0	15	1	27	0	0	0	0	0	600
07:15 AM	9	357	0	0	366	0	203	2	1	206	3	0	12	0	15	0	0	0	0	0	587
07:30 AM	12	315	0	0	327	0	256	1	1	258	2	0	15	0	17	0	0	0	0	0	602
07:45 AM	16	288	0	0	304	0	253	1	2	256	2	0	13	0	15	0	0	0	0	0	575
Total Volume	49	1315	0	0	1364	0	915	4	7	926	18	0	55	1	74	0	0	0	0	0	2364
% App. Total	3.6	96.4	0	0		0	98.8	0.4	0.8		24.3	0	74.3	1.4		0	0	0	0		
PHF	.766	.921	.000	.000	.929	.000	.894	.500	.583	.897	.409	.000	.917	.250	.685	.000	.000	.000	.000	.000	.982

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM					07:00 AM					07:00 AM					07:00 AM					
+0 mins.	12	355	0	0	367	0	203	0	3	206	11	0	15	1	27	0	0	0	0	0	600
+15 mins.	9	357	0	0	366	0	203	2	1	206	3	0	12	0	15	0	0	0	0	0	587
+30 mins.	12	315	0	0	327	0	256	1	1	258	2	0	15	0	17	0	0	0	0	0	602
+45 mins.	16	288	0	0	304	0	253	1	2	256	2	0	13	0	15	0	0	0	0	0	575
Total Volume	49	1315	0	0	1364	0	915	4	7	926	18	0	55	1	74	0	0	0	0	0	2364
% App. Total	3.6	96.4	0	0		0	98.8	0.4	0.8		24.3	0	74.3	1.4		0	0	0	0		
PHF	.766	.921	.000	.000	.929	.000	.894	.500	.583	.897	.409	.000	.917	.250	.685	.000	.000	.000	.000	.000	.982

Start Time	SW 107TH AVE Northbound					SW 107TH AVE Southbound					SW 6TH ST Eastbound					SW 6TH ST Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	29	336	0	0	365	0	374	3	3	380	1	0	3	0	4	0	0	0	0	0	749
05:15 PM	28	338	0	0	366	0	290	8	1	299	1	0	6	0	7	0	0	0	0	0	672
05:30 PM	29	342	0	0	371	0	339	2	2	343	3	0	12	0	15	0	0	0	0	0	729
05:45 PM	27	341	0	0	368	0	376	4	2	382	0	0	6	0	6	0	0	0	0	0	756
Total Volume	113	1357	0	0	1470	0	1379	17	8	1404	5	0	27	0	32	0	0	0	0	0	2906
% App. Total	7.7	92.3	0	0		0	98.2	1.2	0.6		15.6	0	84.4	0		0	0	0	0		
PHF	.974	.992	.000	.000	.991	.000	.917	.531	.667	.919	.417	.000	.563	.000	.533	.000	.000	.000	.000	.000	.961

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					04:15 PM					05:00 PM					04:00 PM					
+0 mins.	29	336	0	0	365	0	372	5	4	381	1	0	3	0	4	0	0	0	0	0	749
+15 mins.	28	338	0	0	366	0	329	3	2	334	1	0	6	0	7	0	0	0	0	0	672
+30 mins.	29	342	0	0	371	0	304	5	1	310	3	0	12	0	15	0	0	0	0	0	729
+45 mins.	27	341	0	0	368	0	374	3	3	380	0	0	6	0	6	0	0	0	0	0	756
Total Volume	113	1357	0	0	1470	0	1379	16	10	1405	5	0	27	0	32	0	0	0	0	0	2906
% App. Total	7.7	92.3	0	0		0	98.1	1.1	0.7		15.6	0	84.4	0		0	0	0	0		
PHF	.974	.992	.000	.000	.991	.000	.922	.600	.625	.922	.417	.000	.563	.000	.533	.000	.000	.000	.000	.000	.961

APPENDIX F. VOLUME FORCAST FOR SIGNALIZED INTERSECTIONS

Intersections	Scenario	Peak Hour	NB			SB			EB			WB		
			L	T	R	L	T	R	L	T	R	L	T	R
107_Flagler	Low	AM	46	1239	73	201	708	82	526	1216	110	151	485	327
		PM	251	954	162	306	1534	227	201	743	82	276	1188	224
107_Flagler	Medium	AM	47	1258	75	204	720	84	525	1212	109	150	482	325
		PM	254	968	164	311	1559	230	201	740	82	274	1179	222
107_Flagler	High	AM	47	1241	74	200	706	82	520	1201	108	150	482	324
		PM	251	955	162	305	1528	226	199	733	81	274	1178	222
107_4 TH St.	Low	AM	9	1370	38	40	843	17	65	133	26	94	84	90
		PM	53	1411	65	51	1580	44	40	59	51	152	174	80
107_4 TH St.	Medium	AM	9	1388	39	41	857	18	71	144	28	97	86	92
		PM	54	1430	66	52	1605	45	43	64	55	155	178	81
107_4 TH St.	High	AM	9	1366	38	41	861	18	77	157	30	95	85	91
		PM	53	1407	65	52	1614	45	47	70	61	154	176	81
107_8 TH St.	Low	AM	228	817	472	219	734	181	256	1485	640	315	929	181
		PM	260	1327	375	303	1454	313	268	872	538	469	1194	372
107_8 TH St.	Medium	AM	229	818	473	224	749	185	255	1481	639	319	940	183
		PM	261	1329	376	310	1486	320	267	870	536	474	1208	376
107_8 TH St.	High	AM	231	826	478	220	738	182	262	1520	655	324	956	187
		PM	263	1341	379	305	1463	315	274	893	550	482	1228	383
109_8 TH St.	Low	AM	228	817	472	219	734	181	256	1485	640	315	929	181
		PM	260	1327	375	303	1454	313	268	872	538	469	1194	372
109_8 TH St.	Medium	AM	229	818	473	224	749	185	255	1481	639	319	940	183
		PM	261	1329	376	310	1486	320	267	870	536	474	1208	376
109_8 TH St.	High	AM	231	826	478	220	738	182	262	1520	655	324	956	187
		PM	263	1341	379	305	1463	315	274	893	550	482	1228	383

APPENDIX G. PEDESTRIAN/BICYCLE LOS DATA

Performance Measures			W. Flagler Street				SW 4th Street			
Category	Criterion	Points	SW 105th Ave - SW 107th Ave		SW 107th Ave - SW 109th Ave		SW 105th Ave - SW 107th Ave		SW 107th Ave - SW 109th Ave	
			N	S	N	S	N	S	N	S
Pedestrian Facility	Not Continuous or Non-existent	0								
	Continuous on One Side	4								
	Continuous on Both Sides	6	6	6	6	6	6	6	6	6
	Min. 1.53m (5') Wide & barrier Free	2	0	0	0	0	0	0	0	0
	Sidewalk Width > 1.53m (5')	1	1	1	1	1	0	0	0	0
	Off-Street/Parallel Alternative Facility	1	0	1	0	1	0	1	0	0
Conflicts	Driveways & Sidestreets	1	1	1	1	1	1	1	1	1
	Ped. Signal Delay 40 Sec. or Less	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Reduced Turn Conflict Implementation	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Cross Width 18.3m (60') or Less	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Posted Speed 56 kph (34.8 mph) or Less	0.5	0	0	0	0	0.5	0.5	0.5	0.5
	Medians Present	1	1	1	0	0	0	0	0	0
Amenities	Buffer Not Less Than 1m (3.5')	1	0	1	0	1	0	0	0	0
	Benches or Pedestrian Scale Lighting	0.5	0	0	0	0	0	0	0	0
	Shade Trees	0.5	0	0	0	0	0	0	0	0
Motor Vehicle LOS	LOS = E, F, OR 6 or More Travel Lanes	0	0	0	0	0				
	LOS = D and < 6 Travel Lanes	1								
	LOS = A, B, C, and <6 Travel Lanes	2					2	2	2	2
Maintenance	Major or Frequent Problems	-1								
	Minor or Infrequent Problems	0					0	0	0	0
	No Problems	2	2	2	2	2				
TDM/Multi-Modal	No Support	0					0	0	0	0
	Support Exists	1	1	1	1	1				
Architectural Interest	Excellent	5								
	Very Good	4								
	Good	3	3					3		3
	Fair	2			2	2	2		2	
	Poor	1		1						
Score			16.5	16.5	14.5	16.5	13	15	13	14
LOS			C	C	D	C	D	D	D	D

Performance Measures			SW 7th Terrace		SW 8th Street		SW 105th Ave	
Category	Criterion	Points	SW 107th Ave - SW 109th Ave		SW 107th Ave - SW 109th Ave		W. Flagler Street - SW 4th Street	
			N	S	N	S	E	W
Pedestrian Facility	Not Continuous or Non-existent	0			0			
	Continuous on One Side	4	4	4		4		
	Continuous on Both Sides	6					6	6
	Min. 1.53m (5') Wide & barrier Free	2	0	0	0	2	0	0
	Sidewalk Width > 1.53m (5')	1	0	1	0	1	0	0
	Off-Street/Parallel Alternative Facility	1	0	1	0	0	1	1
Conflicts	Driveways & Sidestreets	1	1	1		1	1	1
	Ped. Signal Delay 40 Sec. or Less	0.5	0.5	0.5		0.5	0.5	0.5
	Reduced Turn Conflict Implementation	0.5	0.5	0.5		0.5	0.5	0.5
	Cross Width 18.3m (60') or Less	0.5	0.5	0.5		0.5	0.5	0.5
	Posted Speed 56 kph (34.8 mph) or Less	0.5	0.5	0.5		0.5	0.5	0.5
	Medians Present	1	0	0		1	0	0
Amenities	Buffer Not Less Than 1m (3.5')	1	0	0		0	1	1
	Benches or Pedestrian Scale Lighting	0.5	0	0		0	0	0
	Shade Trees	0.5	0	0		0	0	0
Motor Vehicle LOS	LOS = E, F, OR 6 or More Travel Lanes	0			0	0		
	LOS = D and < 6 Travel Lanes	1						
	LOS = A, B, C, and <6 Travel Lanes	2	2	2			2	2
Maintenance	Major or Frequent Problems	-1						
	Minor or Infrequent Problems	0	0	0			0	0
	No Problems	2				2		
TDM/Multi-Modal	No Support	0	0	0			0	0
	Support Exists	1				1		
Architectural Interest	Excellent	5						
	Very Good	4				4		
	Good	3	3	3	3		3	3
	Fair	2						
	Poor	1						
Score			12	14	3	18	16	16
LOS			E	D	F	C	D	D

Performance Measures			SW 107th Ave							
Category	Criterion	Points	W. Flagler St - SW 4th St		SW 4th St- SW 7th Terr		SW 7th Terr - SW 8th St		SW 8Th St - SW 16th St	
			E	W	E	W	E	W	E	W
Pedestrian Facility	Not Continuous or Non-existent	0								
	Continuous on One Side	4								
	Continuous on Both Sides	6	6	6	6	6	6	6	6	6
	Min. 1.53m (5') Wide & barrier Free	2	2	2	2	2	2	2	2	2
	Sidewalk Width > 1.53m (5')	1	1	1	1	1	1	1	1	1
	Off-Street/Parallel Alternative Facility	1	0	0	0	0	0	0	0	0
Conflicts	Driveways & Sidestreets	1	1	1	1	1	1	1	1	1
	Ped. Signal Delay 40 Sec. or Less	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Reduced Turn Conflict Implementation	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Cross Width 18.3m (60') or Less	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Posted Speed 56 kph (34.8 mph) or Less	0.5	0	0	0	0	0	0	0	0
	Medians Present	1	1	1	1	1	0	0	1	1
Amenities	Buffer Not Less Than 1m (3.5')	1	0	0	0	0	0	0	0	0
	Benches or Pedestrian Scale Lighting	0.5	0	0	0	0	0	0	0	0
	Shade Trees	0.5	0	0	0	0	0	0	0	0
Motor Vehicle LOS	LOS = E, F, OR 6 or More Travel Lanes	0							0	0
	LOS = D and < 6 Travel Lanes	1	1	1	1	1	1	1		
	LOS = A, B, C, and <6 Travel Lanes	2								
Maintenance	Major or Frequent Problems	-1								
	Minor or Infrequent Problems	0								
	No Problems	2	2	2	2	2	2	2	2	2
TDM/Multi-Modal	No Support	0								
	Support Exists	1	1	1	1	1	1	1	1	1
Architectural Interest	Excellent	5								
	Very Good	4								
	Good	3								3
	Fair	2			2	2	2	2	2	
	Poor	1	1	1						
Score			17.5	17.5	18.5	18.5	17.5	17.5	17.5	18.5
LOS			C	C	C	C	C	C	C	C

Performance Measures			SW 109th Ave					
Category	Criterion	Points	W. Flagler St - SW 4th St		SW 4th St - SW 7th Terr		SW 7th Terr - SW 8th St	
			E	W	E	W	E	W
Pedestrian Facility	Not Continuous or Non-existent	0					0	
	Continuous on One Side	4			4	4		4
	Continuous on Both Sides	6	6	6				
	Min. 1.53m (5') Wide & barrier Free	2	0	0	0	0	0	0
	Sidewalk Width > 1.53m (5')	1	1	1	0	1	0	1
	Off-Street/Parallel Alternative Facility	1	1	1	0	1	0	0
Conflicts	Driveways & Sidestreets	1	1	1	1	1		1
	Ped. Signal Delay 40 Sec. or Less	0.5	0.5	0.5	0.5	0.5		0.5
	Reduced Turn Conflict Implementation	0.5	0.5	0.5	0.5	0.5		0.5
	Cross Width 18.3m (60') or Less	0.5	0.5	0.5	0.5	0.5		0.5
	Posted Speed 56 kph (34.8 mph) or Less	0.5	0.5	0.5	0.5	0.5		0.5
	Medians Present	1	0	0	0	0		0
Amenities	Buffer Not Less Than 1m (3.5')	1	1	1	0	1		0
	Benches or Pedestrian Scale Lighting	0.5	0	0	0	0		0
	Shade Trees	0.5	0	0	0	0		0
Motor Vehicle LOS	LOS = E, F, OR 6 or More Travel Lanes	0						
	LOS = D and < 6 Travel Lanes	1						
	LOS = A, B, C, and <6 Travel Lanes	2	2	2	2	2	2	2
Maintenance	Major or Frequent Problems	-1						
	Minor or Infrequent Problems	0						
	No Problems	2	2	2	2	2		2
TDM/Multi-Modal	No Support	0	0	0	0	0		0
	Support Exists	1						
Architectural Interest	Excellent	5						
	Very Good	4						
	Good	3						
	Fair	2	2	2	2			
	Poor	1				1	1	1
Score			18	18	13	15	3	13
LOS			C	C	D	D	F	D