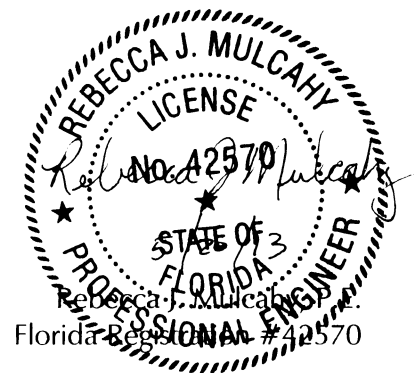


**HIGHLAND DUNES PUD  
CONCURRENCY TRAFFIC IMPACT ANALYSIS**

**Prepared for**

**PBA Holdings, Inc.**

**PINDER TROUTMAN CONSULTING, INC.  
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**#PTC13-006  
February 19, 2013  
Revised March 22, 2013  
Revised May 20, 2013**

**HIGHLAND DUNES PUD  
EXECUTIVE SUMMARY**

It is proposed to develop a mixed use project on the north side of Southern Boulevard approximately 2.5 miles west of Seminole Pratt Whitney Road in unincorporated Palm Beach County. This traffic analysis presents the following information:

**CONCURRENCY TRAFFIC PERFORMANCE STANDARDS (TPS)**

◆ The proposed uses are shown below:

Land Use	Proposed Plan
Residential – Single Family	1,880 DUs
Residential – Multi-Family (Workforce Housing)	120 DUs
Elementary School	970 Students
Specialty Retail	50,000 SF

A 24-acre public civic site is contained within Highland Dunes which will be addressed under separate cover.

◆ The trip generation is detailed below:

TRIPS		
Daily	AM Peak Hour	PM Peak Hour
18,651	1,518	1,502

◆ Anticipated buildout of Year 2021.

◆ The project meets the Countywide Traffic Performance Standards with proportionate share payments of \$9,826,367 phased towards improvements to Southern Boulevard including the six (6) laning from Binks Forest Drive to Palms West Parkway, eight (8) laning from Palms West Parkway to Royal Palm Beach Boulevard and intersection improvements at Forest Hill Boulevard and Royal Palm Beach Boulevard.

# HIGHLAND DUNES PUD

## CONCURRENCY TRAFFIC IMPACT ANALYSIS

### Introduction

Pinder Troutman Consulting, Inc. (PTC) has been retained to conduct a traffic impact analysis for a proposed mixed use development in unincorporated Palm Beach County. The purpose of this study is to determine if the proposed development meets the requirements of Article 12, Traffic Performance Standards (TPS), of the Palm Beach County Unified Land Development Code (ULDC).

### Site Data

The site, which has previously been known as Lazy F Ranch, is located on the north side of Southern Boulevard approximately 2.5 miles west of Seminole Pratt Whitney Road as shown on Exhibit 1. The following uses are proposed:

1,880 DUs	Residential – Single Family
120 DUs	Residential – Multi Family (Workforce Housing)
50,000 SF	Specialty Retail
970 Students	Public Elementary School

A 24-acre public civic site is contained within Highland Dunes which will be addressed under separate cover. Access to the proposed development will be via two connections to Southern Boulevard. One connection is at a full median opening with the second connection as a right-in/right-out only. Issues related to driveway location, turn lanes and geometrics will be addressed during final design. Any reference to intersection geometrics is conceptual in nature and subject to final design and approval by others. Year 2021 conditions were examined. The Property Control Numbers (PCN) for the site are:

00-40-43-27-00-000-3000  
00-40-43-28-00-000-9000  
00-40-43-33-00-000-1000  
00-40-43-34-00-000-3000

## **Existing (2012) Traffic Conditions**

The 2012 peak season peak hour directional volumes for the surrounding roadway network as compiled by the Palm Beach County Traffic Division were utilized in this report. Traffic count data is included in Appendix A.

## **Project Traffic**

### **Trip Generation**

The daily and peak hour trip generation rates were obtained from Palm Beach County and the Institute of Transportation Engineers (ITE), Trip Generation, 9<sup>th</sup> Edition. Exhibit 2 provides the daily, AM and PM peak hour trip generation data for the proposed development. The internalization matrices, which include the uses within the civic site, are provided in Appendix B. For Traffic Performance Standards purposes, based on the new external peak hour trip generation of 1,518, the radius of development influence is four (4) miles.

### **Trip Distribution and Assignment**

A directional distribution, which was developed based on a review of land use patterns and existing travel patterns, is shown on Exhibit 3A. Additionally, transportation model runs were performed in support of the distribution and are included in Appendix B. Exhibit 3B shows the assignment of AM and PM peak hour project traffic, as well as the project impact percentage (% of peak hour directional service volume).

## **Future Traffic Conditions**

### **Roadway Improvements**

A review was undertaken of the FDOT Transportation Improvement Program and the Palm Beach County Five Year Road Program. The widening (from two lanes to four lanes divided) of Seminole Pratt Whitney Road from Southern Boulevard to Okeechobee Boulevard, and from Okeechobee Boulevard to Sycamore Drive is currently under construction. There is a FDOT Project Development & Environmental (PD&E) Study being finalized for Southern Boulevard from C.R. 880 to Forest Hill Boulevard. FDOT anticipates design to begin for the six-laning of Southern Boulevard from Lion Country Safari Road to Forest Hill Boulevard.

However, there are no funds allocated in the Five Year Work Program for construction of this roadway.

### **Background Traffic**

Historic growth trends and committed development traffic must be analyzed in the projection of future background traffic volumes. Historic growth data is provided on Exhibit 4 for the surrounding roadway links. Since the areawide historic growth is negative, historic growth was not utilized in the projection of future traffic.

Committed development data, compiled by Palm Beach County, was reviewed and is included in Appendix C. Total traffic includes existing traffic, significant committed development traffic, 0.50% background growth and Project traffic.

### **Traffic Performance Standards Analysis**

#### **Test 1 (Intersection Analysis)**

Major intersections at the termini of the significantly impacted project-accessed link and major intersections for which a proposed development adds more than 10% of the total traffic on any link connecting a major intersection are required to be analyzed. Seven intersections were analyzed as shown on Exhibit 5 and are included in Appendix D. Because Southern Boulevard is a Strategic Intermodal System (SIS) facility, those intersections were analyzed using the Highway Capacity Software. Three of the intersections meet the adopted standards with the existing lane configurations. The other four intersections require improvements as described on Exhibit 5.

#### **Test 1 (Link Analysis)**

The second part of Test 1 examines if any roadway links required to be analyzed are projected to operate below adopted level of service standards. Roadway links are required to be analyzed where the project impact is greater than 1% of LOS D inside the radius of development influence and greater than 5% of LOS D outside the radius. Exhibit 6 shows future AM and PM peak hour directional traffic conditions for the analyzed roadway links. The following links of Southern Boulevard are not projected to meet the adopted standards:

- Binks Forest Drive to Big Blue Trace; Eastbound/Westbound; AM and PM Peak Hours
- Big Blue Trace to Palms West; Eastbound/Westbound; AM and PM Peak Hours
- Palms West to Forest Hill Boulevard; Westbound; PM Peak Hour
- Forest Hill Boulevard to Cypress Head; Eastbound; AM Peak Hour; Westbound; PM Peak Hour
- Cypress Head to Royal Palm Beach Boulevard; Eastbound; AM Peak Hour; Westbound; PM Peak Hour

Article 12 states that “An applicant may choose to satisfy the transportation concurrency requirements of Palm Beach County by making a proportionate fair-share contribution.” House Bill 7207 states, “If any road is determined to be transportation deficient without the project traffic under review, the costs of correcting that deficiency shall be removed from the project’s proportionate-share calculation.” It is our opinion that no proportionate share payment is required on links with a background deficiency. Therefore, there are several links where no proportionate share payment is required of this project. However, the County does not agree with this position. Exhibit 7A provides the proportionate share analysis for the roadway links based on the County’s methodology. There are two required intersection improvements that are beyond the proposed Southern Boulevard widening projects. Exhibit 7B provides the proportionate share analysis for these additional intersection improvements. With these proportionate share payments, which are impact fee creditable, the transportation concurrency requirement is satisfied.

### **Test 2 (Five Year Analysis)**

This test examines traffic conditions at the end of the fifth year of the FDOT Five Year Transportation Improvement Program. A Test 2 analysis is required for any roadway link within the radius of development influence where the project impact is greater than 3% of LOS E, and outside the radius where the project impact is greater than 5% of LOS E. As shown on Exhibit 8, there are several roadway links that are significantly impacted. Exhibit 9 provides the five year analysis of the significantly impacted links. As with Test 1, there are several links of Southern Boulevard that are not projected to meet the adopted standards.

However, as demonstrated on Exhibit 7A, a proportionate share payment satisfies the transportation concurrency requirement of Palm Beach County. Therefore, with the proportionate share payments, the requirements of Test 2 are met.

### **Driveway Volumes**

AM and PM peak hour project driveway volumes at Southern Boulevard are provided on Exhibit 10A. Internal commercial and residential driveway volumes are provided on Exhibits 10B and 10C, respectively. While the public civic site is seeking concurrency under separate cover, the driveway volumes presented in this report include the public civic site volumes.

Based on the volumes at the main driveway, the following auxiliary lanes are required for buildout conditions at the main driveway:

- Southbound – Two left turn lanes and one right turn lane
- Eastbound – One left turn lane
- Westbound – One right turn lane

With two southbound left turn lanes, a traffic signal is required. Therefore, a traffic signal should be installed when warranted. An analysis of this driveway at buildout conditions was completed and is provided in Appendix E. The intersection is projected to operate at adopted level of service standards.

### **Project Phasing**

Building permits have to be phased to the Southern Boulevard proportionate share payments detailed on Exhibits 7A and 7B. See Exhibit 11 for phasing calculations and Appendix F for phased land development scenarios for these payments. The phasing is summarized below.

- No building permits for more than 276 single family dwelling units (or development generating an equivalent number of external PM peak hour inbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$3,073,307 to widen Southern Boulevard from Big Blue Trace to Palms West Parkway from a 4-lane divided highway to a 6-lane divided highway.

- No building permits for more than 596 single family dwelling units and 120 multi family dwelling units (or development generating an equivalent number of external PM peak hour inbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$1,150,294 to widen Southern Boulevard from Forest Hill Boulevard to Cypress Head from a 6-lane divided highway to an 8-lane divided highway.
- No building permits for more than 636 single family dwelling units and 120 multi family dwelling units (or development generating an equivalent number of external PM peak hour inbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$688,981 to widen Southern Boulevard from Cypress Head to Royal Palm Beach Boulevard from a 6-lane divided highway to an 8-lane divided highway.
- No building permits for more than 752 single family dwelling units and 120 multi family dwelling units (or development generating an equivalent number of external PM peak hour inbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$4,713,470 to widen Southern Boulevard from Binks Forest Drive to Big Blue Trace from a 4-lane divided highway to a 6-lane divided highway.
- No building permits for more than 910 single family dwelling units and 120 multi family dwelling units (or development generating an equivalent number of external AM peak hour outbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$143,954 to add a third westbound left turn lane at the Southern Boulevard / Forest Hill Boulevard / Crestwood Boulevard intersection.
- No building permits for more than 1,665 single family dwelling units and 120 multi family dwelling units (or development generating an equivalent number of external PM peak hour inbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$37,415 to widen Southern Boulevard from Palms West Parkway to Forest Hill Boulevard from a 6-lane divided highway to a 8-lane divided highway.
- No building permits for more than 1,815 single family dwelling units, 120 multi-family dwelling units, a 970 student elementary school and 50,000 SF of specialty retail (or development generating an equivalent number of external AM peak hour outbound trips) shall be issued until the Property Owner makes a proportionate share payment in the amount of \$18,947 to add a third southbound left turn lane at the Southern Boulevard / Royal Palm Beach Boulevard intersection.

## **Conclusions**

This analysis shows that the proposed development, with the Proportionate Share payments for several links and intersections of Southern Boulevard, meets all of the requirements of the Traffic Performance Standards of Palm Beach County.



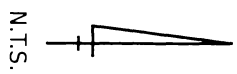
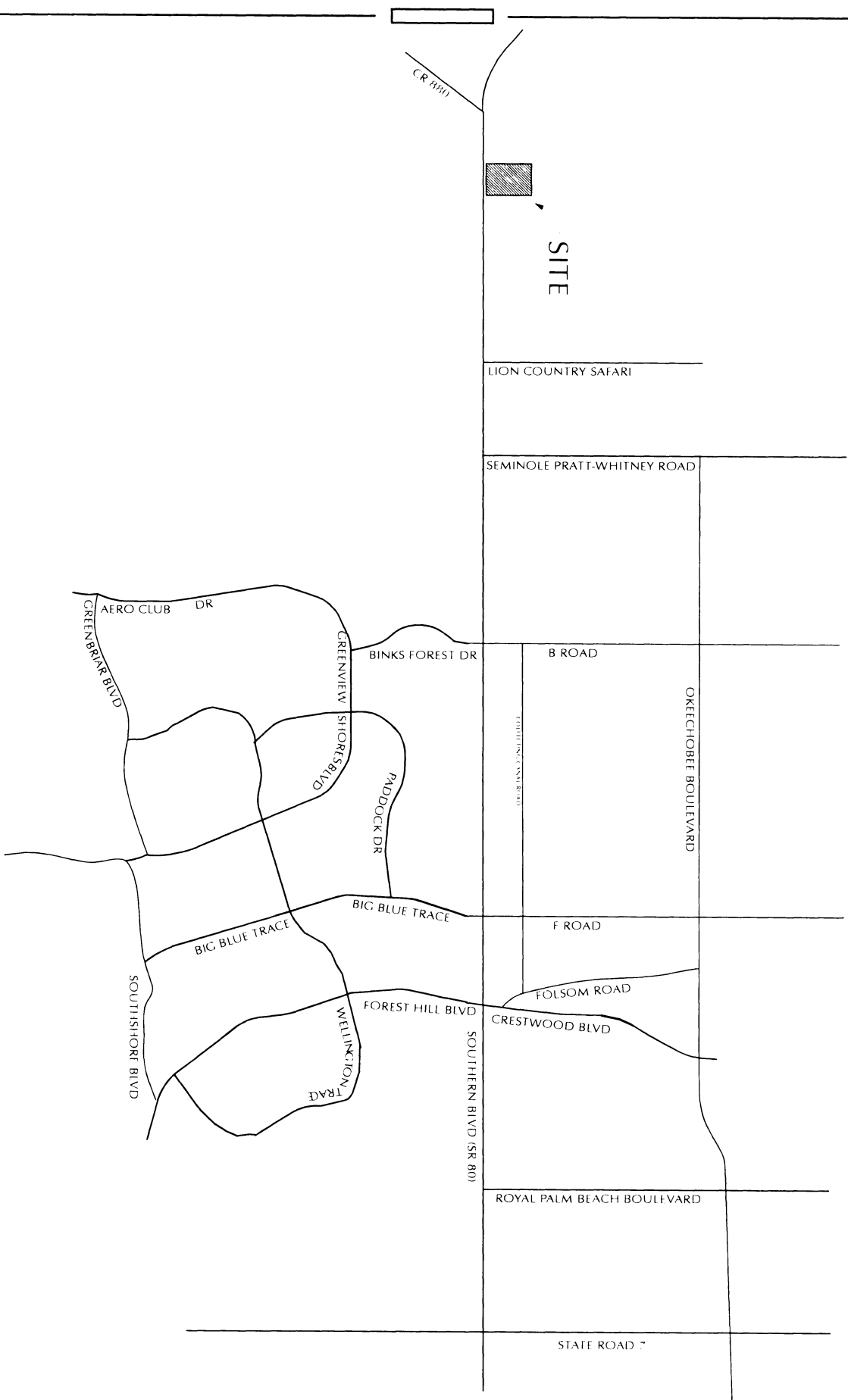
## **EXHIBITS**

HIGHLAND DUNES

EXHIBIT 1  
PROJECT LOCATION



1/24/13  
13-006



**Exhibit 2  
Highland Dunes  
Trip Generation**

**DAILY**

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips	Internal Trips (2)		External Trips			Pass-by Trips (3)	New External Trips			
Residential Single Family	210	1,880 DUs	10 /DU	18,800	2,086	11.1%	16,714			-	0%	16,714		
Residential Multi Family	230	120 DUs	7 /DU	840	93	11.1%	747			-	0%	747		
School - Elementary	520	970 Students	1.29 /Student	1,251	408	32.6%	843			-	0%	843		
Specialty Retail	826	50,000 SF	$T = 42.78(X) + 37.66$	2,177	1,830	84.1%	347			-	0%	347		
<b>TOTALS</b>				23,068	4,417	19.1%	18,651					18,651		

**AM Peak Hour**

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips (2)		External Trips			Pass-by Trips (3)		New Trips		
				In	Out	Total			In	Out	Total			In	Out	Total
Residential Single Family	210	1,880 DUs	$T = 0.70(X) + 9.74 (25/75)$	332	994	1,326	165	12.5%	260	901	1,161	-	0%	260	901	1,161
Residential Multi Family	230	120 DUs	$\ln(T) = 0.80\ln(X) + 0.26 (17/83)$	10	50	60	7	12.5%	8	45	53	-	0%	8	45	53
School - Elementary	520	970 Students	0.45 /Student (55/45)	240	197	437	137	31.5%	166	134	300	-	0%	166	134	300
Specialty Retail (4)	826	50,000 SF	0.96 /1000SF (62/38)	30	18	48	44	91.5%	3	1	4	-	0%	3	1	4
<b>TOTALS</b>				612	1,259	1,871	353	18.9%	437	1,081	1,518			437	1,081	1,518

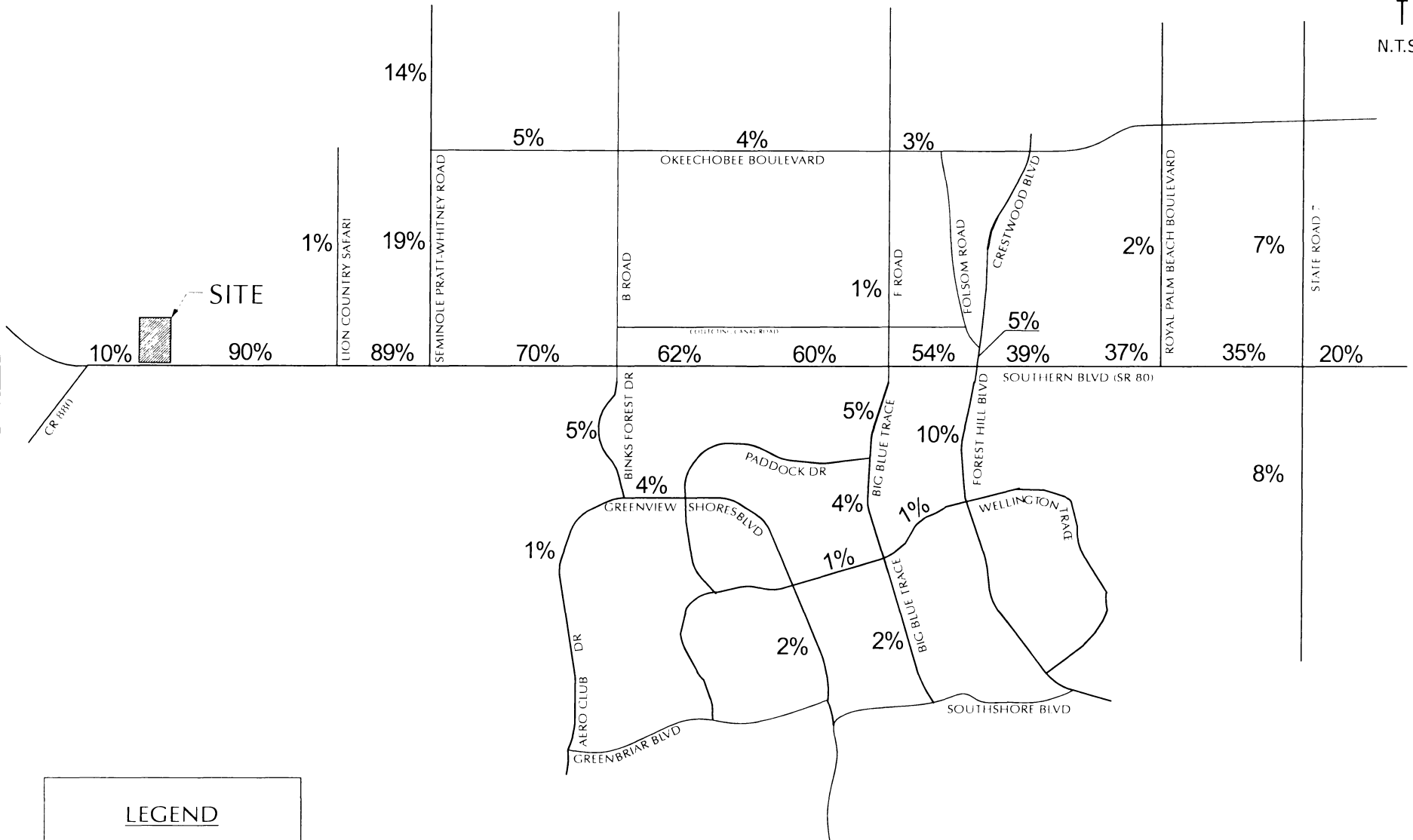
**PM Peak Hour**

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips			Internal Trips (2)		External Trips			Pass-by Trips (3)		New Trips		
				In	Out	Total			In	Out	Total			In	Out	Total
Residential Single Family	210	1,880 DUs	$\ln(T) = 0.90\ln(X) + 0.51 (63/37)$	928	545	1,473	155	10.5%	844	474	1,318	-	0%	844	474	1,318
Residential Multi Family	230	120 DUs	$\ln(T) = 0.82\ln(X) + 0.32 (67/33)$	47	23	70	7	10.5%	43	20	63	-	0%	43	20	63
School - Elementary	520	970 Students	0.15 /Student (49/51)	72	74	146	48	33.1%	48	50	98	-	0%	48	50	98
Specialty Retail	826	50,000 SF	$T = 2.40(X) + 21.48 (44/56)$	62	79	141	118	83.6%	10	13	23	-	0%	10	13	23
<b>TOTALS</b>				1,109	721	1,830	328	17.9%	945	557	1,502			945	557	1,502

- (1) Source: Institute of Transportation Engineers (ITE), *Trip Generation*, 9th Edition.
- (2) See Appendix B for internalization, which includes public civic site.
- (3) Given the remote location of the Site and the high internalization, no pass-by rates were used.
- (4) No AM peak hour data available for Specialty Retail. Used ITE Code 820.



N.T.S.



**LEGEND**  
30% - PERCENT DISTRIBUTION

HIGHLAND DUNES

EXHIBIT 3A  
PROJECT TRAFFIC DISTRIBUTION

PTC

3.19.13  
13-006

Exhibit 3B  
Highland Dunes  
Project Traffic Assignment

AM Peak Hour

Roadway	Link	Lanes	Class	Dir	Project Traffic		Total Project Impact	LOS D Service Vol. (1)	Significant Impact?
					% Dist.	Pk Hour Trips			
Big Blue Trace (4)	South Shore Blvd to Wellington Trace	2L	I	NB	2%	9	0.99%	880	No
				SB	2%	22	2.46%	880	No
	Wellington Trace to Paddock Dr	2L	I	NB	4%	17	1.99%	880	No
				SB	4%	43	4.91%	880	No
Binks Forest Drive (4)	Paddock Dr to Southern Blvd (3)	2/4L	I	NB	5%	22	2.48%	880	No
				SB	5%	54	2.76%	1960	No
Crestwood Blvd	Greenview Shores Blvd to Southern Blvd	4LD	I	NB	5%	22	1.11%	1960	YES
				SB	5%	54	2.76%	1960	YES
Folsom Rd	Southern Blvd to Folsom Rd	6LD	I	NB	5%	54	1.84%	2940	No
				SB	5%	22	0.74%	2940	No
	Folsom Rd to Okeechobee Blvd	4LD	I	NB	4%	43	2.21%	1960	No
Forest Hill Blvd				SB	4%	17	0.89%	1960	No
	Crestwood Blvd to Okeechobee Blvd	2L	Unint.	NB	1%	11	0.95%	1140	No
Greenview Shores Blvd (4)				SB	1%	4	0.38%	1140	No
	Wellington Trace to Southern Blvd	6LD	II	NB	10%	44	1.63%	2680	No
Okeechobee Blvd				SB	10%	108	4.03%	2680	No
	South Shore Blvd to Wellington Trace	4LD	I	NB	2%	9	0.45%	1960	No
Seminole Pratt Whitney Rd				SB	2%	22	1.10%	1960	No
	Wellington Trace to Binks Forest Dr	2L	I	NB	4%	17	1.99%	880	No
				SB	4%	43	4.91%	880	No
Southern Blvd	Seminole Pratt Whitney Rd to B Road	2L	Unint.	EB	5%	54	4.74%	1140	No
				WB	5%	22	1.92%	1140	No
	B Road to 140th (E Road)	2L	Unint.	EB	4%	43	3.79%	1140	No
				WB	4%	17	1.53%	1140	No
Wellington Trace (4)	140th (E Road) to Crestwood Blvd	2L	Unint.	EB	3%	32	2.84%	1140	No
				WB	3%	13	1.15%	1140	No
Forest Hill Blvd	Southern Blvd to Okeechobee Blvd	4LD	I	NB	19%	205	10.48%	1960	YES
				SB	19%	83	4.24%	1960	YES
Greenview Shores Blvd (4)	Okeechobee Blvd to Sycamore Dr	4LD	Unint.	NB	14%	151	4.56%	3320	No
				SB	14%	61	1.84%	3320	No
Wellington Trace (4)	CR 700 to CR 880 (2)	4LD	Unint.	EB	10%	44	1.40%	3130	YES
				WB	10%	108	3.45%	3130	YES
Forest Hill Blvd	CR 880 to Site (2)	4LD	Unint.	EB	10%	44	1.40%	3130	YES
				WB	10%	108	3.45%	3130	YES
Wellington Trace (4)	Site to Lion Country Safari (2)	4LD	I	EB	90%	973	54.05%	1800	YES
				WB	90%	393	21.85%	1800	YES
Forest Hill Blvd	Lion Country Safari to Seminole Pratt (2)	4LD	I	EB	89%	962	53.45%	1800	YES
				WB	89%	389	21.61%	1800	YES
Forest Hill Blvd	Seminole Pratt to Binks Forest Dr	4LD	I	EB	70%	757	38.61%	1960	YES
				WB	70%	306	15.61%	1960	YES
Forest Hill Blvd	Binks Forest Dr to Big Blue Tr	4LD	I	EB	62%	670	34.19%	1960	YES
				WB	62%	271	13.82%	1960	YES
Forest Hill Blvd	Big Blue Trace to Palms West Pkwy	4LD	II	EB	54%	584	32.98%	1770	YES
				WB	54%	236	13.33%	1770	YES
Forest Hill Blvd	Palms West Pkwy to Forest Hill Blvd	6LD	II	EB	54%	584	21.78%	2680	YES
				WB	54%	236	8.81%	2680	YES
Forest Hill Blvd	Forest Hill Blvd to Cypress Head	6LD	I	EB	39%	422	14.34%	2940	YES
				WB	39%	170	5.80%	2940	YES
Forest Hill Blvd	Cypress Head to Royal Palm Beach Blvd	6LD	I	EB	37%	400	13.60%	2940	YES
				WB	37%	162	5.50%	2940	YES
Forest Hill Blvd	Royal Palm Beach Blvd to SR 7	8LD	I	EB	35%	378	9.60%	3940	YES
				WB	35%	153	3.88%	3940	No
Forest Hill Blvd	SR 7 to Sansbury's Way	8LD	I	EB	20%	216	5.49%	3940	YES
				WB	20%	87	2.22%	3940	No
Forest Hill Blvd	Pioneer Rd to Southern Blvd	8LD	I	NB	8%	35	0.89%	3940	No
				SB	8%	86	2.19%	3940	No
Forest Hill Blvd	Southern Blvd to Belvedere Rd	8LD	II	NB	7%	76	2.11%	3590	No
				SB	7%	31	0.85%	3590	No
Wellington Trace (4)	Greenview Shores Blvd to Big Blue Trace	4LD	I	EB	1%	11	0.55%	1960	No
				WB	1%	4	0.22%	1960	No
Wellington Trace (4)	Big Blue Trace to Forest Hill Blvd	4LD	I	EB	1%	11	0.55%	1960	No
				WB	1%	4	0.22%	1960	No

(1) Source: 2009 FDOT Quality / LOS Handbook.

(2) LOS D service volume is based on "Transitioning Area" for this SIS facility.

(3) One lane northbound and two lanes southbound.

(4) Wellington Roadway. Local Road Level of Service analysis not required per PBC UDC Article 12, Section A.3.A.2. Shaded roadway links are outside the radius of influence. Significance level is 5%.

**Exhibit 3B  
Highland Dunes  
Project Traffic Assignment**

**PM Peak Hour**

Roadway	Link	Lanes	Class	Dir	Project Traffic		Total Project Impact	LOS D Service Vol. (1)	Significant Impact?
					% Dist.	Pk Hour Trips			
Big Blue Trace (4)	South Shore Blvd to Wellington Trace	2L	I	NB	2%	19	2.15%	880	No
				SB	2%	11	1.27%	880	No
	Wellington Trace to Paddock Dr	2L	I	NB	4%	38	4.30%	880	No
				SB	4%	22	2.53%	880	No
Binks Forest Drive (4)	Paddock Dr to Southern Blvd (3)	2/4L	I	NB	5%	47	5.37%	880	YES
				SB	5%	28	1.42%	1960	No
Crestwood Blvd	Greenview Shores Blvd to Southern Blvd	4LD	I	NB	5%	47	2.41%	1960	YES
				SB	5%	28	1.42%	1960	YES
Folsom Rd	Southern Blvd to Folsom Rd	6LD	I	NB	5%	28	0.95%	2940	No
				SB	5%	47	1.61%	2940	No
Forest Hill Blvd	Folsom Rd to Okeechobee Blvd	4LD	I	NB	4%	22	1.14%	1960	No
				SB	4%	38	1.93%	1960	No
Greenview Shores Blvd (4)	Crestwood Blvd to Okeechobee Blvd	2L	Unint.	NB	1%	6	0.49%	1140	No
				SB	1%	9	0.83%	1140	No
Okeechobee Bvd	Wellington Trace to Southern Blvd	6LD	II	NB	10%	95	3.53%	2680	No
				SB	10%	56	2.08%	2680	No
Seminole Pratt Whitney Rd	South Shore Blvd to Wellington Trace	4LD	I	NB	2%	19	0.96%	1960	No
				SB	2%	11	0.57%	1960	No
	Wellington Trace to Binks Forest Dr	2L	I	NB	4%	38	4.30%	880	No
				SB	4%	22	2.53%	880	No
Southern Blvd	Seminole Pratt Whitney Rd to B Road	2L	Unint.	EB	5%	28	2.44%	1140	No
				WB	5%	47	4.14%	1140	No
	B Road to 140th (E Road)	2L	Unint.	EB	4%	22	1.95%	1140	No
				WB	4%	38	3.32%	1140	No
Wellington Trace (4)	140th (E Road) to Crestwood Blvd	2L	Unint.	EB	3%	17	1.47%	1140	No
				WB	3%	28	2.49%	1140	No
	Southern Blvd to Okeechobee Blvd	4LD	I	NB	19%	106	5.40%	1960	YES
				SB	19%	180	9.16%	1960	YES
Southern Blvd	Okeechobee Blvd to Sycamore Dr	4LD	Unint.	NB	14%	78	2.35%	3320	No
				SB	14%	132	3.98%	3320	No
	CR 700 to CR 880 (2)	4LD	Unint.	EB	10%	95	3.02%	3130	YES
				WB	10%	56	1.78%	3130	YES
	CR 880 to Site (2)	4LD	Unint.	EB	10%	95	3.02%	3130	YES
				WB	10%	56	1.78%	3130	YES
	Site to Lion Country Safari (2)	4LD	I	EB	90%	501	27.85%	1800	YES
				WB	90%	851	47.25%	1800	YES
	Lion Country Safari to Seminole Pratt (2)	4LD	I	EB	89%	496	27.54%	1800	YES
				WB	89%	841	46.73%	1800	YES
	Seminole Pratt to Binks Forest Dr	4LD	I	EB	70%	390	19.89%	1960	YES
				WB	70%	662	33.75%	1960	YES
	Binks Forest Dr to Big Blue Tr	4LD	I	EB	62%	345	17.62%	1960	YES
				WB	62%	586	29.89%	1960	YES
	Big Blue Trace to Palms West Pkwy	4LD	II	EB	54%	301	16.99%	1770	YES
				WB	54%	510	28.83%	1770	YES
	Palms West Pkwy to Forest Hill Blvd	6LD	II	EB	54%	301	11.22%	2680	YES
				WB	54%	510	19.04%	2680	YES
	Forest Hill Blvd to Cypress Head	6LD	I	EB	39%	217	7.39%	2940	YES
				WB	39%	369	12.54%	2940	YES
Cypress Head to Royal Palm Beach Blvd	6LD	I	EB	37%	206	7.01%	2940	YES	
			WB	37%	350	11.89%	2940	YES	
Royal Palm Beach Blvd to SR 7	8LD	I	EB	35%	195	4.95%	3940	No	
			WB	35%	331	8.39%	3940	YES	
SR 7 to Sansbury's Way	8LD	I	EB	20%	111	2.83%	3940	No	
			WB	20%	189	4.80%	3940	No	
SR 7	Pioneer Rd to Southern Blvd	8LD	I	NB	8%	76	1.92%	3940	No
				SB	8%	45	1.13%	3940	No
Wellington Trace (4)	Southern Blvd to Belvedere Rd	8LD	II	NB	7%	39	1.09%	3590	No
				SB	7%	66	1.84%	3590	No
Greenview Shores Blvd	Greenview Shores Blvd to Big Blue Trace	4LD	I	EB	1%	6	0.28%	1960	No
				WB	1%	9	0.48%	1960	No
	Big Blue Trace to Forest Hill Blvd	4LD	I	EB	1%	6	0.28%	1960	No
				WB	1%	9	0.48%	1960	No

(1) Source: 2009 FDOT Quality / LOS Handbook.  
(2) LOS D service volume is based on "Transitioning Area" for this SIS facility.  
(3) One-lane northbound and two lanes southbound.  
(4) Wellington Roadway. Local Road Level of Service analysis not required per PBC UDC Article 12, Section A 3.A.2.  
Shaded roadway links are outside the radius of influence. Significance level is 5%.

**Exhibit 4**  
**Highland Dunes**  
**Historic Growth**

Roadway	Link	Peak Season Daily Traffic Volumes		Growth Rate
		2009	2012	
Big Blue Trace	South Shore Blvd to Wellington Trace	12,706	11,860	-2.27% /Year
	Wellington Trace to Southern Blvd	11,521	11,407	-0.33% /Year
Binks Forest Drive	Greenview Shores Blvd to Southern Blvd	9,067	9,114	0.17% /Year
Crestwood Blvd	Southern Blvd to Folsom Rd	25,869	24,213	-2.18% /Year
	Folsom Rd to Okeechobee Blvd	17,862	16,946	-1.74% /Year
Folsom Rd	Crestwood Blvd to Okeechobee Blvd	4,844	4,659	-1.29% /Year
Forest Hill Blvd	Wellington Trace to Southern Blvd	35,937	34,067	-1.77% /Year
Greenview Shores Blvd	South Shore Blvd to Wellington Trace	16,823	17,404	1.14% /Year
Okeechobee Bvd	Seminole Pratt Whitney Rd to 140th (E Rd) (1)	10,747	8,752	-9.76% /Year
	140th (E Road) to Crestwood Blvd	14,254	13,962	-0.69% /Year
Seminole Pratt Whitney Rd	Southern Blvd to Okeechobee Blvd (1)	12,632	13,133	1.96% /Year
	Okeechobee Blvd to Sycamore Dr (2)	18,051	17,383	-3.70% /Year
Southern Blvd	CR 880 to Lion Country Safari	16,585	13,813	-5.91% /Year
	Lion Country Safari to Seminole Pratt	23,112	18,500	-7.15% /Year
	Seminole Pratt to Binks Forest Dr	32,183	25,048	-8.02% /Year
	Binks Forest Dr to Big Blue Tr	32,120	33,763	1.68% /Year
	Big Blue Trace to Forest Hill Blvd	43,777	42,972	-0.62% /Year
	Forest Hill Blvd to Cypress Head	52,215	53,757	0.97% /Year
	Cypress Head to Royal Palm Beach Blvd	51,088	52,734	1.06% /Year
	Royal Palm Beach Blvd to SR 7	61,396	N/A	N/A /Year
SR 7	SR 7 to Sansbury's Way	53,262	61,843	5.11% /Year
	Pioneer Rd to Southern Blvd	51,852	51,355	-0.32% /Year
Wellington Trace	Southern Blvd to Belvedere Rd	44,566	48,293	2.71% /Year
	Greenview Shores Blvd to Big Blue Trace	23,009	23,806	1.14% /Year
	Big Blue Trace to Forest Hill Blvd	21,499	21,401	-0.15% /Year
<b>Areawide</b>		635,581	630,185	-0.28% /Year

(1) Utilized available 2009-2011 volumes.

(2) Utilized available 2009-2010 volumes.

**Exhibit 5**  
**Highland Dunes**  
**Test 1 Intersection Analysis (1)**

Intersection	Existing Geometrics (2)				Proposed Geometrics (If Needed)			
	2021 AM Peak Hour		2021 PM Peak Hour		2021 AM Peak Hour		2021 PM Peak Hour	
	Intersection Delay (sec)	LOS	Intersection Delay (sec)	LOS	Intersection Delay (sec)	LOS	Intersection Delay (sec)	LOS
Southern Blvd / CR 880 (3)	29.2	D	14.6	B	--	--	--	--
Southern Blvd / Seminole Pratt Whitney Rd	37.8	D	27.0	C	--	--	--	--
Southern Blvd / Binks Forest Dr (4)	45.4	D	80.7	F	--	--	46.5	D
Southern Blvd / Big Blue Trace (4)	63.4	E	87.7	F	36.7	D	43.3	D
Southern Blvd / Forest Hill Blvd (5)	92.6	F	107.9	F	53.4	D	52.6	D
Southern Blvd / Royal Palm Beach Blvd (6)	122.4	F	97.5	F	32.7	C	34.0	C
Okeechobee Blvd / Seminole Pratt Whitney Rd	907 (critical sum)	UNDER CAPACITY	1066 (critical sum)	UNDER CAPACITY	--	--	--	--

(1) See Appendix D for intersection capacity analyses. Southern Boulevard intersections require HCS analyses because they are on the Strategic Intermodal System (SIS.)

(2) May include revised signal timing. See Appendix D.

(3) Unsignalized intersection. Highest minor street delay reported.

(4) Improvements include six-laning of Southern Boulevard (to be mitigated by the proportionate Share payment shown on Exhibit 7A).

(5) Improvements include eight-laning of Southern Boulevard (to be mitigated by the Proportionate Share payment shown on Exhibit 7A) plus third westbound left turn lane, to be mitigated by the Proportionate Share payment shown on Exhibit 7B.

(6) Improvements include eight-laning of Southern Boulevard (to be mitigated by the Proportionate Share payment shown on Exhibit 7A) plus third southbound left turn lane, to be mitigated by the Proportionate Share payment shown on Exhibit 7B.



**Exhibit 6  
 Highland Dunes  
 Test 1 Link Analysis - Year 2021**

Roadway	Link	Dir	AM PEAK HOUR									
			Existing (2012) (1)	Committed Dev. Analysis (2)			Total Bkgd.	Meets Std?	Project	Total (2021)	Service Volume	Meets Std?
				Projects	Growth	Total						
Binks Forest Drive (4)	Greenview Shores Blvd to Southern Blvd	NB	666	48	31	79	745	Yes	22	767	1,960	Yes
	Greenview Shores Blvd to Southern Blvd	SB	344	20	16	36	380	Yes	54	434	1,960	Yes
Seminole Pratt Whitney Rd	Southern Blvd to Okeechobee Blvd (3)	NB	278	-	14	14	292	Yes	205	497	1,960	Yes
	Southern Blvd to Okeechobee Blvd (3)	SB	839	83	43	126	965	Yes	83	1,048	1,960	Yes
Southern Blvd	CR 700 to CR 880 (5)	EB	378	36	17	53	431	Yes	44	475	3,130	Yes
	CR 700 to CR 880 (5)	WB	876	-	40	40	916	Yes	108	1,024	3,130	Yes
	CR 880 to Site	EB	378	36	17	53	431	Yes	44	475	3,130	Yes
	CR 880 to Site	WB	876	-	40	40	916	Yes	108	1,024	3,130	Yes
	Site to Lion Country Safari	EB	378	36	17	53	431	Yes	973	1,404	1,800	Yes
	Site to Lion Country Safari	WB	876	-	40	40	916	Yes	393	1,309	1,800	Yes
	Lion Country Safari to Seminole Pratt	EB	581	36	27	63	644	Yes	962	1,606	1,800	Yes
	Lion Country Safari to Seminole Pratt	WB	1,044	-	48	48	1,092	Yes	389	1,481	1,800	Yes
	Seminole Pratt to Binks Forest Dr	EB	1,091	159	50	209	1,300	Yes	757	2,057	1,960	Yes (6)
	Seminole Pratt to Binks Forest Dr	WB	938	114	43	157	1,095	Yes	306	1,401	1,960	Yes
	Binks Forest Dr to Big Blue Tr	EB	1,544	92	71	163	1,707	Yes	670	2,377	1,960	NO
	Binks Forest Dr to Big Blue Tr	WB	1,564	240	72	312	1,876	Yes	271	2,147	1,960	NO
	Big Blue Trace to Palms West Pkwy	EB	1,913	52	88	140	2,053	NO	584	2,637	1,770	NO
	Big Blue Trace to Palms West Pkwy	WB	1,565	196	72	268	1,833	NO	236	2,069	1,770	NO
	Palms West Pkwy to Forest Hill Blvd	EB	1,913	41	88	129	2,042	Yes	584	2,626	2,680	Yes
	Palms West Pkwy to Forest Hill Blvd	WB	1,565	168	72	240	1,805	Yes	236	2,041	2,680	Yes
	Forest Hill Blvd to Cypress Head	EB	2,863	100	131	231	3,094	NO	422	3,516	2,940	NO
	Forest Hill Blvd to Cypress Head	WB	1,486	110	68	178	1,664	Yes	170	1,834	2,940	Yes
	Cypress Head to Royal Palm Beach Blvd	EB	2,776	15	127	142	2,918	Yes	400	3,318	2,940	NO
	Cypress Head to Royal Palm Beach Blvd	WB	1,467	103	67	170	1,637	Yes	162	1,799	2,940	Yes
Royal Palm Beach Blvd to SR 7	EB	3,178	98	146	244	3,422	Yes	378	3,800	3,940	Yes	
SR 7 to Sansbury's Way	EB	3,344	132	154	286	3,630	Yes	216	3,846	3,940	Yes	

- (1) Count data from Palm Beach County. See Appendix A.
- (2) Committed development data from County TPS Database. See Appendix C.
- (3) Utilized 2011 count.
- (4) Wellington Roadway. Local Road Level of Service analysis not required per PBC ULDC Article 12, Section A.3.A.2.
- (5) Utilized adjacent link count and committed development data.
- (6) Without school and workforce housing, meets LOS D standard (total traffic volume = 1931). With school and workforce housing, meets 130% LOS D standard.

**Exhibit 6**  
**Highland Dunes**  
**Test 1 Link Analysis - Year 2021**

Roadway	Link	Dir	PM PEAK HOUR									
			Existing (2012) (1)	Committed Dev. Analysis (2)			Total Bkgd.	Meets Std?	Project	Total (2021)	Service Volume	Meets Std?
				Projects	Growth	Total						
Big Blue Trace (4)	Paddock Dr to Southern Blvd	NB	324	105	15	120	444	Yes	47	491	880	Yes
Binks Forest Drive (4)	Greenview Shores Blvd to Southern Blvd	NB	382	154	18	172	554	Yes	47	601	1,960	Yes
	Greenview Shores Blvd to Southern Blvd	SB	426	175	20	195	621	Yes	28	649	1,960	Yes
Seminole Pratt Whitney Rd	Southern Blvd to Okeechobee Blvd (3)	NB	689	147	35	182	871	Yes	106	977	1,960	Yes
	Southern Blvd to Okeechobee Blvd (3)	SB	521	137	27	164	685	Yes	180	865	1,960	Yes
Southern Blvd	CR 700 to CR 880 (5)	EB	823	-	38	38	861	Yes	95	956	3,130	Yes
	CR 700 to CR 880 (5)	WB	386	-	18	18	404	Yes	56	460	3,130	Yes
	CR 880 to Site	EB	823	-	38	38	861	Yes	95	956	3,130	Yes
	CR 880 to Site	WB	386	-	18	18	404	Yes	56	460	3,130	Yes
	Site to Lion Country Safari	EB	823	73	38	111	934	Yes	501	1,435	1,800	Yes
	Site to Lion Country Safari	WB	386	78	18	96	482	Yes	851	1,333	1,800	Yes
	Lion Country Safari to Seminole Pratt	EB	1,044	73	48	121	1,165	Yes	496	1,661	1,800	Yes
	Lion Country Safari to Seminole Pratt	WB	463	78	21	99	562	Yes	841	1,403	1,800	Yes
	Seminole Pratt to Binks Forest Dr	EB	1,091	211	50	261	1,352	Yes	390	1,742	1,960	Yes
	Seminole Pratt to Binks Forest Dr	WB	1,007	230	46	276	1,283	Yes	662	1,945	1,960	Yes
	Binks Forest Dr to Big Blue Tr	EB	1,553	424	71	495	2,048	NO	345	2,393	1,960	NO
	Binks Forest Dr to Big Blue Tr	WB	1,463	375	67	442	1,905	Yes	586	2,491	1,960	NO
	Big Blue Trace to Palms West Pkwy	EB	1,670	341	77	418	2,088	NO	301	2,389	1,770	NO
	Big Blue Trace to Palms West Pkwy	WB	1,845	328	85	413	2,258	NO	510	2,768	1,770	NO
	Palms West Pkwy to Forest Hill Blvd	EB	1,670	331	77	408	2,078	Yes	301	2,379	2,680	Yes
	Palms West Pkwy to Forest Hill Blvd	WB	1,845	299	85	384	2,229	Yes	510	2,739	2,680	NO
	Forest Hill Blvd to Cypress Head	EB	1,892	278	87	365	2,257	Yes	217	2,474	2,940	Yes
	Forest Hill Blvd to Cypress Head	WB	2,699	281	124	405	3,104	NO	369	3,473	2,940	NO
	Cypress Head to Royal Palm Beach Blvd	EB	1,862	226	85	311	2,173	Yes	206	2,379	2,940	Yes
	Cypress Head to Royal Palm Beach Blvd	WB	2,667	173	122	295	2,962	NO	350	3,312	2,940	NO
Royal Palm Beach Blvd to SR 7	WB	2,705	363	124	487	3,192	Yes	331	3,523	3,940	Yes	

- (1) Count data from Palm Beach County. See Appendix A.
- (2) Committed development data from County TPS Database. See Appendix C.
- (3) Utilized 2011 count.
- (4) Wellington Roadway. Local Road Level of Service analysis not required per PBC ULDC Article 12, Section A.3.A.2.
- (5) Utilized adjacent link count and committed development data.

**Exhibit 7A  
Highland Dunes  
Proportionate Share Analysis (1)  
Year 2021**

AM PEAK HOUR																	
Roadway	Link	Exist. Lanes	Dir	Service Volume	Prop. Lanes	New Service Volume	Capacity Created	Cost of Improve. (2)	2021 Bkgd Traffic	Bkgd Def.	Bkgd Share Of Cost	FDOT Cost of Bkgd Deficiency	Project Traffic	Mitig. Project Traffic	Total Traffic	Project Share Of Cost	Prop Share Calculation
Southern Blvd	Binks Forest to Big Blue Tr	4LD	EB	1960	6LD	2940	980	\$4,872,574	1707	-253	-25.8%	\$ -	670	417	2377	42.6%	\$ 2,073,330
			WB	1960		2940	980	\$4,872,574	1876	-84	-8.6%	\$ -	271	187	2147	19.1%	\$ 929,767
	Big Blue Tr to Palms West Pkwy	4LD	EB	1770	6LD	2680	910	\$2,556,407	2053	283	31.1%	\$ 795,014	584	584	2637	64.2%	\$ 1,640,595
			WB	1770		2680	910	\$2,556,407	1833	63	6.9%	\$ 176,982	236	236	2069	25.9%	\$ 662,980
	Palms West Pkwy to Forest Hill	6LD	EB	2680	8LD	3590	910	\$577,075	2042	-638	-70.1%	\$ -	584	0	2626	0.0%	\$ -
			WB	2680		3590	910	\$577,075	1805	-875	-96.2%	\$ -	236	0	2041	0.0%	\$ -
	Forest Hill to Cypress Head	6LD	EB	2940	8LD	3940	1000	\$1,454,228	3094	154	15.4%	\$ 223,951	422	422	3516	42.2%	\$ 613,684
			WB	2940		3940	1000	\$1,454,228	1664	-1276	-127.6%	\$ -	170	0	1834	0.0%	\$ -
	Cypress Head to Royal Palm Beach	6LD	EB	2940	8LD	3940	1000	\$946,402	2918	-22	-2.2%	\$ -	400	378	3318	37.8%	\$ 357,740
			WB	2940		3940	1000	\$946,402	1637	-1303	-130.3%	\$ -	162	0	1799	0.0%	\$ -

PM PEAK HOUR																	
Roadway	Link	Exist. Lanes	Dir	Service Volume	Prop. Lanes	New Service Volume	Capacity Created	Cost of Improve. (2)	2021 Bkgd Traffic	Bkgd Def.	Bkgd Share Of Cost	FDOT Cost of Bkgd Deficiency	Project Traffic	Mitig. Project Traffic	Total Traffic	Project Share Of Cost	Prop Share Calculation
Southern Blvd	Binks Forest to Big Blue Tr	4LD	EB	1960	6LD	2940	980	\$4,872,574	2048	88	9.0%	\$ 437,537	345	345	2393	35.2%	\$ 1,715,345
			WB	1960		2940	980	\$4,872,574	1905	-55	-5.6%	\$ -	586	531	2491	54.2%	\$ 2,640,140
	Big Blue Tr to Palms West Pkwy	4LD	EB	1770	6LD	2680	910	\$2,556,407	2088	318	34.9%	\$ 893,338	301	301	2389	33.1%	\$ 845,581
			WB	1770		2680	910	\$2,556,407	2258	488	53.6%	\$ 1,370,908	510	510	2768	56.0%	\$ 1,432,712
	Palms West Pkwy to Forest Hill	6LD	EB	2680	8LD	3590	910	\$577,075	2078	-602	-66.2%	\$ -	301	0	2379	0.0%	\$ -
			WB	2680		3590	910	\$577,075	2229	-451	-49.6%	\$ -	510	59	2739	6.5%	\$ 37,415
	Forest Hill to Cypress Head	6LD	EB	2940	8LD	3940	1000	\$1,454,228	2257	-683	-68.3%	\$ -	217	0	2474	0.0%	\$ -
			WB	2940		3940	1000	\$1,454,228	3104	164	16.4%	\$ 238,493	369	369	3473	36.9%	\$ 536,610
	Cypress Head to Royal Palm Beach	6LD	EB	2940	8LD	3940	1000	\$946,402	2173	-767	-76.7%	\$ -	206	0	2379	0.0%	\$ -
			WB	2940		3940	1000	\$946,402	2962	22	2.2%	\$ 20,821	350	350	3312	35.0%	\$ 331,241

<b>Total of Highest Prop Share Payment</b>	<b>\$ 9,663,466</b>
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**NOTE:** HB 7207 states, "If any road is determined to be transportation deficient without the project traffic under review, the costs of correcting that deficiency shall be removed from the project's proportionate-share calculation". It is our opinion that no proportionate share payment is required on links with a background deficiency.

(1) See Exhibit 6 for traffic volume data.

(2) Cost based on the following:

Per Mile Cost	Directional Cost	Source	Link
\$9,745,148	\$4,872,574	PD&E Study	Binks to Big Blue
\$5,112,814	\$2,556,407	PD&E Study	Big Blue to Palms W
\$4,616,596	\$2,308,298	FDOT Long Range Estimation System (Urban, 6LD to 8LD)	Palms West Pkwy to Forest Hill
\$4,616,596	\$2,308,298	FDOT Long Range Estimation System (Urban, 6LD to 8LD)	Forest Hill to Cypress
\$4,616,596	\$2,308,298	FDOT Long Range Estimation System (Urban, 6LD to 8LD)	Cypress to RPB Blvd

**Actual prop share payments will be based on prop share percentage multiplied by Certified Engineer's Cost Estimate at the time of payment.**

**Exhibit 7B**  
**Highland Dunes**  
**Intersection Proportionate Share Analysis (1)**

<b><u>Southern Blvd &amp; Forest Hill Blvd - PM Peak Hour</u></b>	
Total Volume w/Existing Lanes (2)	8183
Total Volume w/Proposed Improvements (2)	9746
Add'l Capacity of Improvement	1563
Project Trips in Intersection	225
Project's % of Add'l Capacity	14.4%
Estimated Cost of Improvement	\$1,000,000
Project's Prop Share Payment	\$143,954
<b><u>Southern Blvd &amp; Royal Palm Beach Blvd - AM Peak Hour</u></b>	
Total Volume w/Existing Lanes (2)	6506
Total Volume w/Proposed Improvements (2)	6981
Add'l Capacity of Improvement	475
Project Trips in Intersection	30
Project's % of Add'l Capacity	6.3%
Estimated Cost of Improvement	\$300,000
Project's Prop Share Payment	\$18,947
<b>Total Intersection Prop Share Payment</b>	<b>\$162,901</b>

(1) See Appendix D.

(2) Total approach volumes through intersection at which point the level of service of the intersection goes from D to E.

**Actual prop share payments will be based on prop share percentage multiplied by Certified Engineer's Cost Estimate at the time of payment.**

**Exhibit 8  
Highland Dunes  
Project Traffic Assignment - Test 2**

**AM Peak Hour**

Roadway	Link	Lanes	Class	Dir	Project Traffic		Total Project Impact	LOS E Service Vol. (1)	Significant Impact?
					% Dist.	Pk Hour Trips			
Big Blue Trace (4)	South Shore Blvd to Wellington Trace	2L	I	NB	2%	9	0.99%	880	No
				SB	2%	22	2.46%	880	No
	Wellington Trace to Paddock Dr	2L	I	NB	4%	17	1.99%	880	No
				SB	4%	43	4.91%	880	No
Binks Forest Drive (4)	Paddock Dr to Southern Blvd (3)	2/4L	I	NB	5%	22	2.48%	880	No
				SB	5%	54	2.76%	1960	No
Crestwood Blvd	Greenview Shores Blvd to Southern Blvd	4LD	I	NB	5%	22	1.11%	1960	No
				SB	5%	54	2.76%	1960	No
Folsom Rd	Southern Blvd to Folsom Rd	6LD	I	NB	5%	54	1.84%	2940	No
				SB	5%	22	0.74%	2940	No
Forest Hill Blvd	Folsom Rd to Okeechobee Blvd	4LD	I	NB	4%	43	2.21%	1960	No
				SB	4%	17	0.89%	1960	No
Greenview Shores Blvd (4)	Crestwood Blvd to Okeechobee Blvd	2L	Unint.	NB	1%	11	0.75%	1440	No
				SB	1%	4	0.30%	1440	No
Okeechobee Bvd	Wellington Trace to Southern Blvd	6LD	II	NB	10%	44	1.54%	2830	No
				SB	10%	108	3.82%	2830	No
Seminole Pratt Whitney Rd	South Shore Blvd to Wellington Trace	4LD	I	NB	2%	9	0.45%	1960	No
				SB	2%	22	1.10%	1960	No
	Wellington Trace to Binks Forest Dr	2L	I	NB	4%	17	1.99%	880	No
				SB	4%	43	4.91%	880	No
Southern Blvd	Seminole Pratt Whitney Rd to B Road	2L	Unint.	EB	5%	54	3.75%	1440	No
				WB	5%	22	1.52%	1440	No
	B Road to 140th (E Road)	2L	Unint.	EB	4%	43	3.00%	1440	No
				WB	4%	17	1.21%	1440	No
Wellington Trace (4)	140th (E Road) to Crestwood Blvd	2L	Unint.	EB	3%	32	2.25%	1440	No
				WB	3%	13	0.91%	1440	No
Big Blue Trace (4)	Southern Blvd to Okeechobee Blvd	4LD	I	NB	19%	205	10.48%	1960	YES
				SB	19%	83	4.24%	1960	YES
Forest Hill Blvd	Okeechobee Blvd to Sycamore Dr	4LD	Unint.	NB	14%	151	4.03%	3760	No
				SB	14%	61	1.63%	3760	No
Cypress Head	CR 700 to CR 880 (2)	4LD	Unint.	EB	10%	44	1.23%	3550	No
				WB	10%	108	3.05%	3550	YES
Royal Palm Beach Blvd	CR 880 to Site (2)	4LD	Unint.	EB	10%	44	1.23%	3550	No
				WB	10%	108	3.05%	3550	YES
Forest Hill Blvd	Site to Lion Country Safari (2)	4LD	I	EB	90%	973	54.05%	1800	YES
				WB	90%	393	21.85%	1800	YES
Forest Hill Blvd	Lion Country Safari to Seminole Pratt (2)	4LD	I	EB	89%	962	53.45%	1800	YES
				WB	89%	389	21.61%	1800	YES
Forest Hill Blvd	Seminole Pratt to Binks Forest Dr	4LD	I	EB	70%	757	38.61%	1960	YES
				WB	70%	306	15.61%	1960	YES
Forest Hill Blvd	Binks Forest Dr to Big Blue Tr	4LD	I	EB	62%	670	34.19%	1960	YES
				WB	62%	271	13.82%	1960	YES
Forest Hill Blvd	Big Blue Trace to Palms West Pkwy	4LD	II	EB	54%	584	31.22%	1870	YES
				WB	54%	236	12.62%	1870	YES
Forest Hill Blvd	Palms West Pkwy to Forest Hill Blvd	6LD	II	EB	54%	584	20.63%	2830	YES
				WB	54%	236	8.34%	2830	YES
Forest Hill Blvd	Forest Hill Blvd to Cypress Head	6LD	I	EB	39%	422	14.34%	2940	YES
				WB	39%	170	5.80%	2940	YES
Forest Hill Blvd	Cypress Head to Royal Palm Beach Blvd	6LD	I	EB	37%	400	13.60%	2940	YES
				WB	37%	162	5.50%	2940	YES
Forest Hill Blvd	Royal Palm Beach Blvd to SR 7	8LD	I	EB	35%	378	9.60%	3940	YES
				WB	35%	153	3.88%	3940	No
Forest Hill Blvd	SR 7 to Sansbury's Way	8LD	I	EB	20%	216	5.49%	3940	YES
				WB	20%	87	2.22%	3940	No
Forest Hill Blvd	Pioneer Rd to Southern Blvd	8LD	I	NB	8%	35	0.89%	3940	No
				SB	8%	86	2.19%	3940	No
Forest Hill Blvd	Southern Blvd to Belvedere Rd	8LD	II	NB	7%	76	2.00%	3780	No
				SB	7%	31	0.81%	3780	No
Forest Hill Blvd	Greenview Shores Blvd to Big Blue Trace	4LD	I	EB	1%	11	0.55%	1960	No
				WB	1%	4	0.22%	1960	No
Forest Hill Blvd	Big Blue Trace to Forest Hill Blvd	4LD	I	EB	1%	11	0.55%	1960	No
				WB	1%	4	0.22%	1960	No

(1) Source: 2009 FDOT Quality / LOS Handbook.  
(2) LOS E service volume is based on "Transitioning Area" for this SIS facility.  
(3) One lane northbound and two lanes southbound.  
(4) Wellington Roadway - Local Road Level of Service analysis not required per PBC ULDC Article 12, Section A.3.A.2  
Shaded roadway links are outside the radius of influence. Significance level is 5%.

**Exhibit 8  
Highland Dunes  
Project Traffic Assignment - Test 2**

PM Peak Hour

Roadway	Link	Lanes	Class	Dir	Project Traffic		Total Project Impact	LOS E Service Vol. (1)	Significant Impact?
					% Dist.	Pk Hour Trips			
Big Blue Trace (4)	South Shore Blvd to Wellington Trace	2L	I	NB	2%	19	2.15%	880	No
				SB	2%	11	1.27%	880	No
	Wellington Trace to Paddock Dr	2L	I	NB	4%	38	4.30%	880	No
				SB	4%	22	2.53%	880	No
Binks Forest Drive (4)	Paddock Dr to Southern Blvd (3)	2/4L	I	NB	5%	47	5.37%	880	YES
				SB	5%	28	1.42%	1960	No
Crestwood Blvd	Greenview Shores Blvd to Southern Blvd	4LD	I	NB	5%	47	2.41%	1960	No
				SB	5%	28	1.42%	1960	No
Crestwood Blvd	Southern Blvd to Folsom Rd	6LD	I	NB	5%	28	0.95%	2940	No
				SB	5%	47	1.61%	2940	No
Folsom Rd	Folsom Rd to Okeechobee Blvd	4LD	I	NB	4%	22	1.14%	1960	No
				SB	4%	38	1.93%	1960	No
Forest Hill Blvd	Crestwood Blvd to Okeechobee Blvd	2L	Unint.	NB	1%	6	0.39%	1440	No
				SB	1%	9	0.66%	1440	No
Greenview Shores Blvd (4)	Wellington Trace to Southern Blvd	6LD	II	NB	10%	95	3.34%	2830	No
				SB	10%	56	1.97%	2830	No
Okeechobee Blvd	South Shore Blvd to Wellington Trace	4LD	I	NB	2%	19	0.96%	1960	No
				SB	2%	11	0.57%	1960	No
	Wellington Trace to Binks Forest Dr	2L	I	NB	4%	38	4.30%	880	No
				SB	4%	22	2.53%	880	No
Seminole Pratt Whitney Rd	Seminole Pratt Whitney Rd to B Road	2L	Unint.	EB	5%	28	1.93%	1440	No
				WB	5%	47	3.28%	1440	No
	B Road to 140th (E Road)	2L	Unint.	EB	4%	22	1.55%	1440	No
				WB	4%	38	2.63%	1440	No
Southern Blvd	140th (E Road) to Crestwood Blvd	2L	Unint.	EB	3%	17	1.16%	1440	No
				WB	3%	28	1.97%	1440	No
	Southern Blvd to Okeechobee Blvd	4LD	I	NB	19%	106	5.40%	1960	YES
				SB	19%	180	9.16%	1960	YES
Southern Blvd	Okeechobee Blvd to Sycamore Dr	4LD	Unint.	NB	14%	78	2.07%	3760	No
				SB	14%	132	3.52%	3760	No
	CR 700 to CR 880 (2)	4LD	Unint.	EB	10%	95	2.66%	3550	No
				WB	10%	56	1.57%	3550	No
	CR 880 to Site (2)	4LD	Unint.	EB	10%	95	2.66%	3550	No
				WB	10%	56	1.57%	3550	No
	Site to Lion Country Safari (2)	4LD	I	EB	90%	501	27.85%	1800	YES
				WB	90%	851	47.25%	1800	YES
	Lion Country Safari to Seminole Pratt (2)	4LD	I	EB	89%	496	27.54%	1800	YES
				WB	89%	841	46.73%	1800	YES
	Seminole Pratt to Binks Forest Dr	4LD	I	EB	70%	390	19.89%	1960	YES
				WB	70%	662	33.75%	1960	YES
	Binks Forest Dr to Big Blue Tr	4LD	I	EB	62%	345	17.62%	1960	YES
				WB	62%	586	29.89%	1960	YES
	Big Blue Trace to Palms West Pkwy	4LD	II	EB	54%	301	16.08%	1870	YES
				WB	54%	510	27.29%	1870	YES
	Palms West Pkwy to Forest Hill Blvd	6LD	II	EB	54%	301	10.63%	2830	YES
				WB	54%	510	18.03%	2830	YES
	Forest Hill Blvd to Cypress Head	6LD	I	EB	39%	217	7.39%	2940	YES
				WB	39%	369	12.54%	2940	YES
Cypress Head to Royal Palm Beach Blvd	6LD	I	EB	37%	206	7.01%	2940	YES	
			WB	37%	350	11.89%	2940	YES	
Royal Palm Beach Blvd to SR 7	8LD	I	EB	35%	195	4.95%	3940	No	
			WB	35%	331	8.39%	3940	YES	
SR 7 to Sansbury's Way	8LD	I	EB	20%	111	2.83%	3940	No	
			WB	20%	189	4.80%	3940	No	
SR 7	Pioneer Rd to Southern Blvd	8LD	I	NB	8%	76	1.92%	3940	No
				SB	8%	45	1.13%	3940	No
Wellington Trace (4)	Southern Blvd to Belvedere Rd	8LD	II	NB	7%	39	1.03%	3780	No
				SB	7%	66	1.75%	3780	No
Wellington Trace (4)	Greenview Shores Blvd to Big Blue Trace	4LD	I	EB	1%	6	0.28%	1960	No
				WB	1%	9	0.48%	1960	No
Wellington Trace (4)	Big Blue Trace to Forest Hill Blvd	4LD	I	EB	1%	6	0.28%	1960	No
				WB	1%	9	0.48%	1960	No

(1) Source: 2009 FDOT Quality / LOS Handbook.  
(2) LOS E service volume is based on "Transitioning Area" for this SIS facility.  
(3) One lane northbound and two lanes southbound.  
(4) Wellington Roadway. Local Road Level of Service analysis not required per PBC U/LDC Article 12, Section A.3.A.2.  
Shaded roadway links are outside the radius of influence. Significance level is 5%.

**Exhibit 9**  
**Highland Dunes**  
**Test 2 Link Analysis - Year 2017**

Roadway	Link	Dir	AM PEAK HOUR									
			Existing (2012) (1)	Committed Dev. Analysis (2)			Total Bkgd.	Meets Std?	Project	Total (2017)	LOS E Volume	Meets Std?
				Projects	Growth	Total						
Seminole Pratt Whitney Rd	Southern Blvd to Okeechobee Blvd (3)	NB	278	-	8	8	286	Yes	205	491	1,960	Yes
	Southern Blvd to Okeechobee Blvd (3)	SB	839	83	25	108	947	Yes	83	1,030	1,960	Yes
Southern Blvd	CR 700 to CR 880	WB	876	-	22	22	898	Yes	108	1,006	3,130	Yes
	CR 880 to Site	WB	876	-	22	22	898	Yes	108	1,006	3,550	Yes
	Site to Lion Country Safari	EB	378	36	10	46	424	Yes	973	1,397	1,800	Yes
	Site to Lion Country Safari	WB	876	-	22	22	898	Yes	393	1,291	1,800	Yes
	Lion Country Safari to Seminole Pratt	EB	581	36	15	51	632	Yes	962	1,594	1,800	Yes
	Lion Country Safari to Seminole Pratt	WB	1,044	-	26	26	1,070	Yes	389	1,459	1,800	Yes
	Seminole Pratt to Binks Forest Dr	EB	1,091	159	28	187	1,278	Yes	757	2,035	1,960	Yes (4)
	Seminole Pratt to Binks Forest Dr	WB	938	114	24	138	1,076	Yes	306	1,382	1,960	Yes
	Binks Forest Dr to Big Blue Tr	EB	1,544	87	39	126	1,670	Yes	670	2,340	1,960	NO
	Binks Forest Dr to Big Blue Tr	WB	1,564	240	39	279	1,843	Yes	271	2,114	1,960	NO
	Big Blue Trace to Palms West Pkwy	EB	1,913	52	48	100	2,013	NO	584	2,597	1,870	NO
	Big Blue Trace to Palms West Pkwy	WB	1,565	196	40	236	1,801	Yes	236	2,037	1,870	NO
	Palms West Pkwy to Forest Hill Blvd	EB	1,913	41	48	89	2,002	Yes	584	2,586	2,830	Yes
	Palms West Pkwy to Forest Hill Blvd	WB	1,565	168	40	208	1,773	Yes	236	2,009	2,830	Yes
	Forest Hill Blvd to Cypress Head	EB	2,863	100	72	172	3,035	NO	422	3,457	2,940	NO
	Forest Hill Blvd to Cypress Head	WB	1,486	109	38	147	1,633	Yes	170	1,803	2,940	Yes
	Cypress Head to Royal Palm Beach Blvd	EB	2,776	15	70	85	2,861	Yes	400	3,261	2,940	NO
	Cypress Head to Royal Palm Beach Blvd	WB	1,467	102	37	139	1,606	Yes	162	1,768	2,940	Yes
Royal Palm Beach Blvd to SR 7	EB	3,178	97	80	177	3,355	Yes	378	3,733	3,940	Yes	
SR 7 to Sansbury's Way	EB	3,344	131	84	215	3,559	Yes	216	3,775	3,940	Yes	

- (1) Count data from Palm Beach County. See Appendix A.
- (2) Committed development data from County TPS Database plus Palm Beach State College Study and Groves Town Center. See Appendix C.
- (3) Utilized 2011 count.
- (4) Without school and workforce housing, meets LOS D standard (total traffic volume = 1909). With school and workforce housing, meets 130% LOS D standard.

**Exhibit 9**  
**Highland Dunes**  
**Test 2 Link Analysis - Year 2017**

Roadway	Link	Dir	PM PEAK HOUR									
			Existing (2012) (1)	Committed Dev. Analysis (2)			Total Bkgd.	Meets Std?	Project	Total (2017)	LOS E Volume	Meets Std?
				Projects	Growth	Total						
Big Blue Trace (4)	Paddock Dr to Southern Blvd	NB	324	105	8	114	438	Yes	47	485	880	Yes
Seminole Pratt Whitney Rd	Southern Blvd to Okeechobee Blvd (3)	NB	689	147	21	168	857	Yes	106	963	1,960	Yes
	Southern Blvd to Okeechobee Blvd (3)	SB	521	137	16	153	674	Yes	180	854	1,960	Yes
Southern Blvd	Site to Lion Country Safari	EB	823	73	21	94	917	Yes	501	1,418	1,800	Yes
	Site to Lion Country Safari	WB	386	78	10	88	474	Yes	851	1,325	1,800	Yes
	Lion Country Safari to Seminole Pratt	EB	1,044	73	26	99	1,143	Yes	496	1,639	1,800	Yes
	Lion Country Safari to Seminole Pratt	WB	463	78	12	90	553	Yes	841	1,394	1,800	Yes
	Seminole Pratt to Binks Forest Dr	EB	1,091	211	28	239	1,330	Yes	390	1,720	1,960	Yes
	Seminole Pratt to Binks Forest Dr	WB	1,007	230	25	255	1,262	Yes	662	1,924	1,960	Yes
	Binks Forest Dr to Big Blue Tr	EB	1,553	424	39	463	2,016	NO	345	2,361	1,960	NO
	Binks Forest Dr to Big Blue Tr	WB	1,463	375	37	412	1,875	Yes	586	2,461	1,960	NO
	Big Blue Trace to Palms West Pkwy	EB	1,670	341	42	383	2,053	NO	301	2,354	1,870	NO
	Big Blue Trace to Palms West Pkwy	WB	1,845	328	47	375	2,220	NO	510	2,730	1,870	NO
	Palms West Pkwy to Forest Hill Blvd	EB	1,670	331	42	373	2,043	Yes	301	2,344	2,830	Yes
	Palms West Pkwy to Forest Hill Blvd	WB	1,845	299	47	346	2,191	Yes	510	2,701	2,830	Yes
	Forest Hill Blvd to Cypress Head	EB	1,892	277	48	325	2,217	Yes	217	2,434	2,940	Yes
	Forest Hill Blvd to Cypress Head	WB	2,699	280	68	348	3,047	NO	369	3,416	2,940	NO
	Cypress Head to Royal Palm Beach Blvd	EB	1,862	225	47	272	2,134	Yes	206	2,340	2,940	Yes
	Cypress Head to Royal Palm Beach Blvd	WB	2,667	172	67	239	2,906	Yes	350	3,256	2,940	NO
Royal Palm Beach Blvd to SR 7	WB	2,705	352	68	420	3,125	Yes	331	3,456	3,940	Yes	

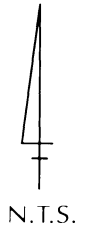
(1) Count data from Palm Beach County. See Appendix A.

(2) Committed development data from County TPS Database plus Palm Beach State College Study and Groves Town Center. See Appendix C.

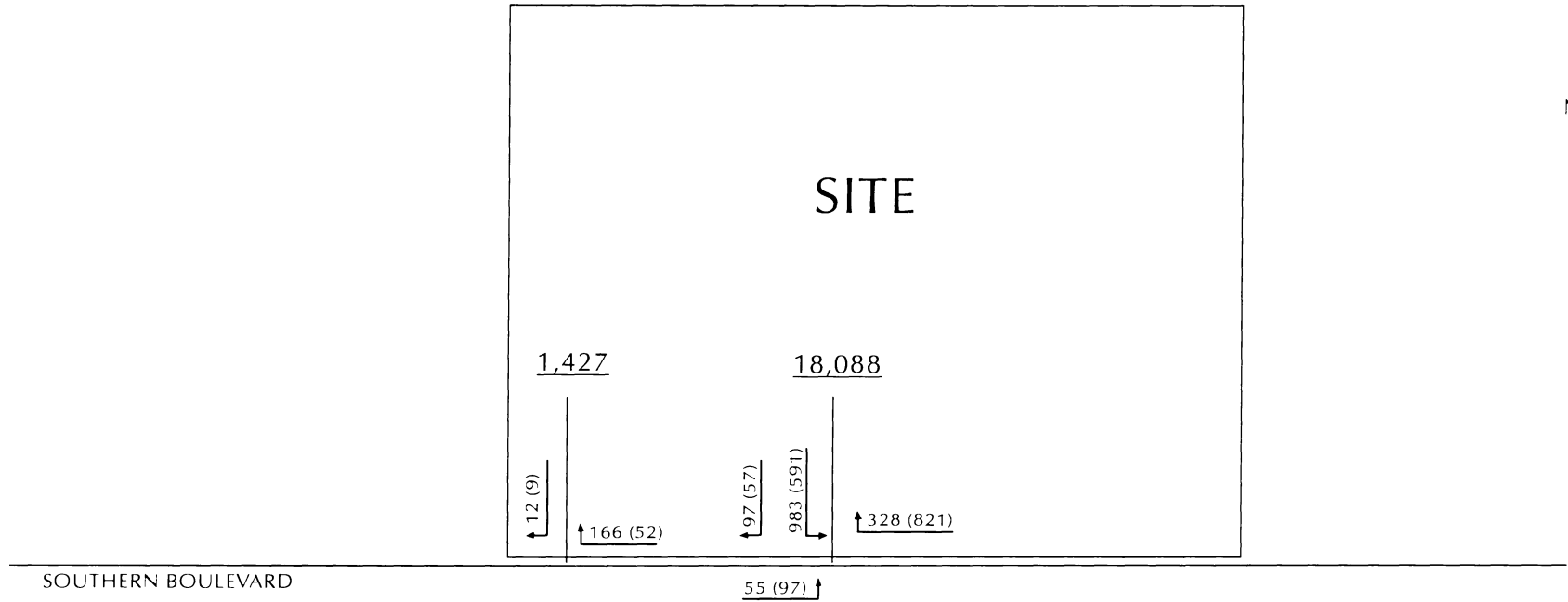
(3) Utilized 2011 count.

(4) Wellington Roadway. Local Road Level of Service analysis not required per PBC ULDC Article 12, Section A.3.A.2.





SITE



SOUTHERN BOULEVARD

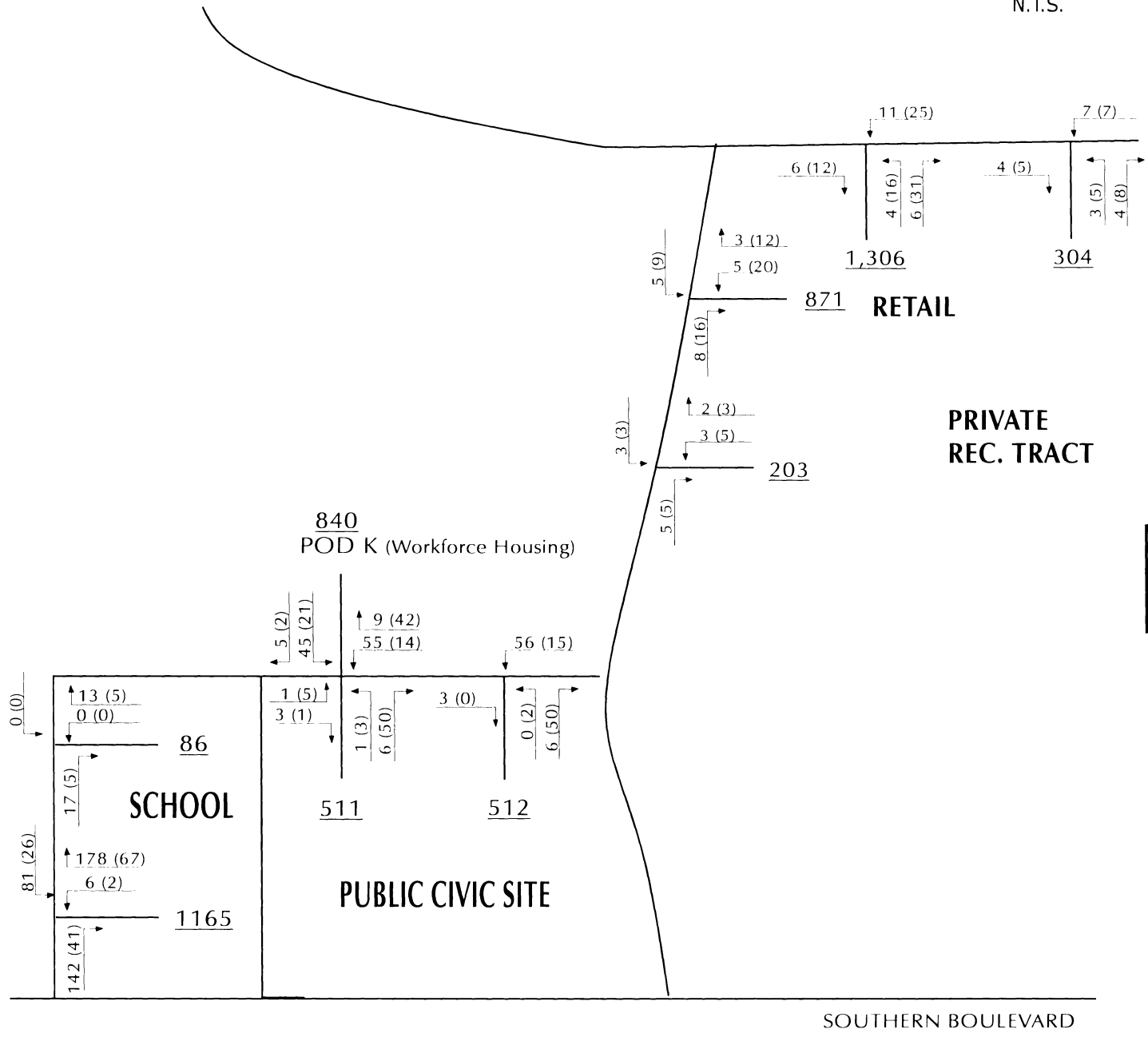
<u>LEGEND</u>	
55	-AM PEAK HOUR
(97)	-PM PEAK HOUR
<u>18088</u>	-ADT

3/19/13  
13-006

HIGHLAND  
DUNES

EXHIBIT 10A  
EXTERNAL PROJECT DRIVEWAY VOLUMES





SOUTHERN BOULEVARD

**LEGEND**

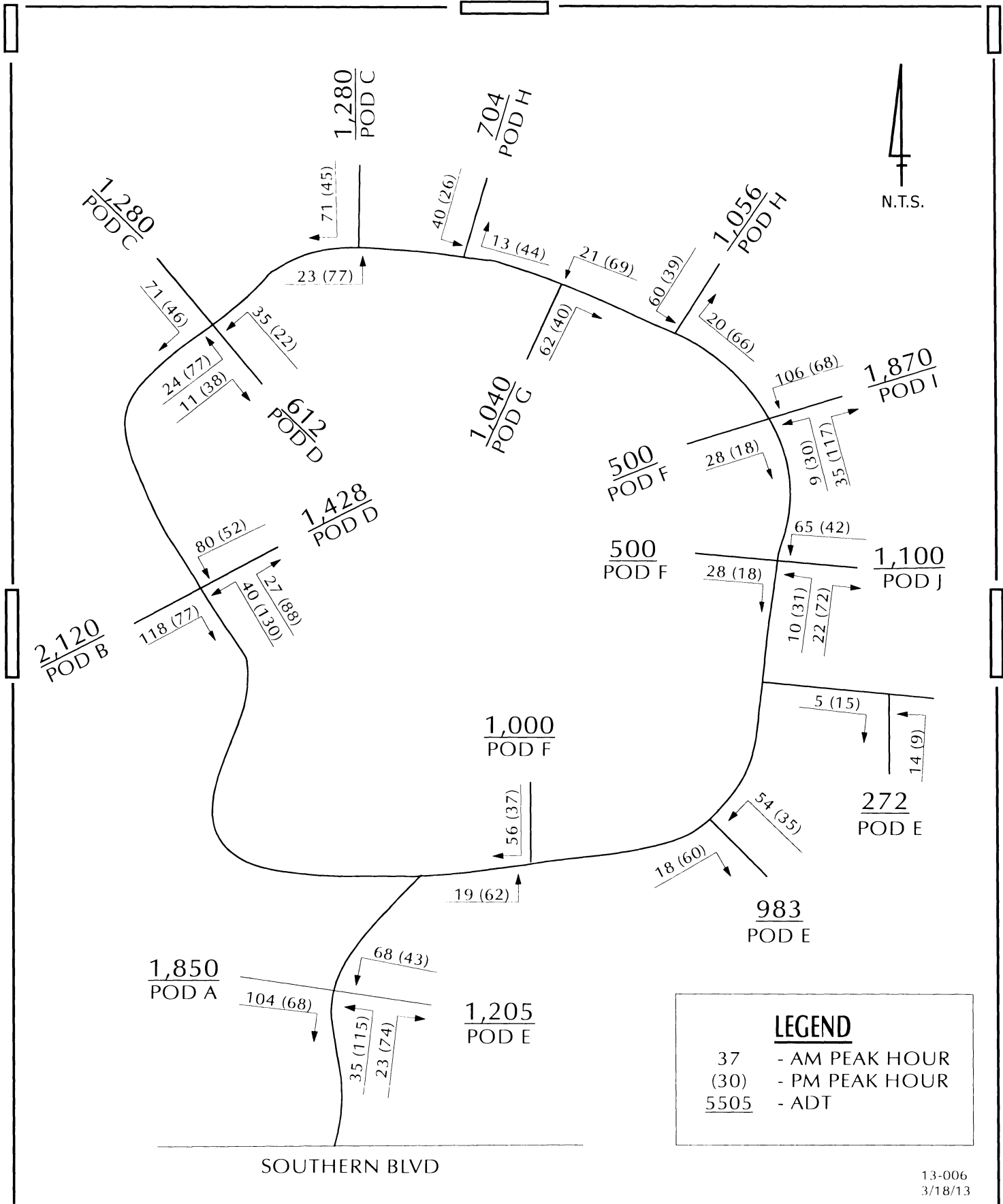
- 81 - AM PEAK HOUR
- (26) - PM PEAK HOUR
- 1165 - ADT

05-17-13  
13-006

**HIGHLAND  
DUNES**

**EXHIBIT 10B  
INTERNAL PROJECT DRIVEWAY  
VOLUMES - NON-RESIDENTIAL**

**PTC**



HIGHLAND  
DUNES

EXHIBIT 10C  
INTERNAL PROJECT DRIVEWAY  
VOLUMES - RESIDENTIAL



**Exhibit 11  
 Highland Dunes  
 Project Phasing**

Link - Southern Blvd from Binks Forest Dr to Big Blue Tr					Potential Development Scenarios (1)	
Based on Impact	% Assignment to Link	62%			Residential Single Family	752 DUs
	Phased Volume Allowed on Link (1% of 1960)	20			Residential Multi Family	120 DUs
	Phased New External Peak Hour Directional Trips Allowed	32				
Based on capacity		<b>AM - EB</b>	<b>AM - WB</b>	<b>PM - EB</b>	<b>PM - WB</b>	
	Existing	1,544	1,564	1,553	1,463	
	Year 2021	2,377	2,147	2,393	2,491	
	Reserve (1960 - Existing)	416	396	407	497	
	Total Growth	833	583	840	1,028	
	% Growth Allowed ( Reserve/Total Growth)	50%	68%	<b>48%</b>	<b>48%</b>	
	Net New External Peak Hour Directional Trips Generated	1,081	437	<b>557</b>	<b>945</b>	
Phased New External Peak Hour Directional Trips Allowed	541	297	<b>267</b>	<b>454</b>		

Link - Southern Blvd from Big Blue Trace to Palms West Pkwy					Potential Development Scenarios (1)	
Based on Impact *	% Assignment to Link	54%			Residential Single Family	276 DUs
	Phased Volume Allowed on Link (5% of 1770)	89				
	Phased New External Peak Hour Directional Trips Allowed	<b>165</b>				

\* Capacity already exceeded in AM and PM Peak Hour.

Link - Southern Blvd from Palms West Pkwy to Forest Hill Blvd					Potential Development Scenarios (1)	
Based on Impact	% Assignment to Link	54%			Residential Single Family	1,665 DUs
	Phased Volume Allowed on Link (5% of 1960)	98			Residential Multi Family	120 DUs
	Phased New External Peak Hour Directional Trips Allowed	181				
Based on capacity		<b>AM - EB</b>	<b>AM - WB</b>	<b>PM - EB</b>	<b>PM - WB</b>	
	Existing				1,845	
	Year 2021				2,739	
	Reserve (2680 - Existing)				835	
	Total Growth				894	
	% Growth Allowed ( Reserve/Total Growth)				<b>93%</b>	
	Net New External Peak Hour Directional Trips Generated				<b>945</b>	
Phased New External Peak Hour Directional Trips Allowed				<b>879</b>		

**Exhibit 11  
 Highland Dunes  
 Project Phasing**

Link - Southern Blvd from Forest Hill Blvd to Cypress Head			Potential Development Scenarios (1)	
Based on Impact	% Assignment to Link	39%	Residential Single Family	596 DUs
	Phased Volume Allowed on Link (5% of 2940)	147	Residential Multi Family	120 DUs
	Phased New External Peak Hour Directional Trips Allowed	<b>377</b>		
Based on capacity		<b>AM - EB</b>	<b>PM - WB</b>	
	Existing	2,863	2,699	
	Year 2021	3,516	3,473	
	Reserve (2940 - Existing)	77	241	
	Total Growth	653	774	
	% Growth Allowed ( Reserve/Total Growth)	12%	31%	
	Net New External Peak Hour Directional Trips Generated	1,081	945	
	Phased New External Peak Hour Directional Trips Allowed	130	293	

Link - Southern Blvd from Cypress Head to Royal Palm Beach Blvd			Potential Development Scenarios (1)	
Based on Impact	% Assignment to Link	37%	Residential Single Family	636 DUs
	Phased Volume Allowed on Link (5% of 2940)	147	Residential Multi Family	120 DUs
	Phased New External Peak Hour Directional Trips Allowed	<b>397</b>		
Based on capacity		<b>AM - EB</b>	<b>PM - WB</b>	
	Existing	2,776	2,667	
	Year 2021	3,318	3,312	
	Reserve (2940 - Existing)	164	273	
	Total Growth	542	645	
	% Growth Allowed ( Reserve/Total Growth)	30%	42%	
	Net New External Peak Hour Directional Trips Generated	1,081	945	
	Phased New External Peak Hour Directional Trips Allowed	324	397	

**Exhibit 11  
 Highland Dunes  
 Project Phasing**

<b>Intersection - Southern Blvd / Forest Hill Blvd / Crestwood Blvd</b>				<b>Potential Development Scenarios (1)</b>		
<b>Based on Impact</b>	<b>AM Approach</b>			<b>East</b>	<b>West</b>	
		% Assignment to Approach		39%	54%	
		Total AM Approach Volume		1,793	2,887	Residential Single Family 910 DUs
		Phased Volume Allowed on Link (10% of Approach Vol.)		179	289	Residential Multi Family 120 DUs
		Phased New External Peak Hour Directional Trips Allowed		459	<b>535</b>	
		Net New External Peak Hour Directional Trips Generated		437	<b>1,081</b>	
		% of Total Project		105%	<b>49%</b>	
	<b>PM Approach</b>			<b>East</b>	<b>West</b>	
		% Assignment to Approach		39%	54%	
		Total PM Approach Volume		3,598	2,538	
		Phased Volume Allowed on Link (10% of Approach Vol.)		360	254	
		Phased New External Peak Hour Directional Trips Allowed		923	470	
		Net New External Peak Hour Directional Trips Generated		945	557	
		% of Total Project		98%	84%	

<b>Intersection - Southern Blvd / Royal Palm Beach Blvd</b>				<b>Potential Development Scenarios (1)</b>		
<b>Based on Impact</b>	<b>AM Approach</b>			<b>East</b>	<b>West</b>	
		% Assignment to Approach		35%	37%	
		Total AM Approach Volume		1,794	3,778	Residential Single Family 1,815 DUs
		Phased Volume Allowed on Link (10% of Approach Vol.)		179	378	Residential Multi Family 120 DUs
		Phased New External Peak Hour Directional Trips Allowed		511	<b>1,022</b>	Elementary School 970 Stud.
		Net New External Peak Hour Directional Trips Generated		437	<b>1,081</b>	Specialty Retail 50,000 SF
		% of Total Project		117%	<b>95%</b>	
	<b>PM Approach</b>			<b>East</b>	<b>West</b>	
		% Assignment to Approach		35%	37%	
		Total PM Approach Volume		3,274	2,715	
		Phased Volume Allowed on Link (10% of Approach Vol.)		327	272	
		Phased New External Peak Hour Directional Trips Allowed		934	735	
		Net New External Peak Hour Directional Trips Generated		945	557	
		% of Total Project		99%	132%	

(1) See Appendix F.