PART IV

TRANSPORTATION RESOURCE IMPACTS

QUESTION 21 – TRANSPORTATION

See State Comprehensive Plan (Chapter 187, F.S.) GOAL (11); POLICY (2) GOAL (12); POLICIES (3),(4) GOAL (16); POLICIES (1) GOAL (18); POLICIES (1),(3)(4),(6) GOAL (20); POLICIES (2),(3),(8),(9),(10),(12),(13),(15) GOAL (25); POLICY (5)
ROAD LINK/INTERSECTION: EXISTING LEVEL OF SERVICE: ADOPTED LEVEL OF SERVICE STANDARD: LEVEL OF SERVICE AFTER PROJECT BUILDOUT:

A. Using Map J or a table as a base, indicate existing conditions on the highway network within the study area (as previously defined on Map J), including AADT, peak-hour trips directional, traffic split, levels of service and maximum service volumes for the adopted level of service (LOS).Identify the assumptions used in this analysis, including "K" factor, directional "D" factor, facility type, number of lanes and existing signal locations.(If levels of service are based on some methodology other than the most recent procedures of the Transportation Research Board and FDOT, this should be agreed upon at the pre-application conference stage.)Identify the adopted LOS standards of the FDOT, appropriate regional planning council, and local government for roadways within the identified study area. Identify what improvements or new facilities within this study area are planned, programmed, or committed for improvement. Attach appropriate excerpts from published capital improvements plans, budgets and programs showing schedules and types of work and letters from the appropriate agencies stating the current status of the planned, programmed and committed improvements.

Preliminary Study Area

The preliminary study area was defined as the geographic area bounded by the following:

- **North: Broward/Palm Beach County Line**
- **East: Powerline Road**
- **South: Atlantic Boulevard**
- **West: University Drive**

Please refer to Map J-3. Roadway segments within those boundaries that are classified by Broward County as "Trafficways" were considered

The Adopted Level of Service standards for transportation facilities in Broward County's Comprehensive Plan were applied for the purposes of determining significant impact on the roadway segments within the study area. Broward County adopted a transit-oriented concurrency system that assigns a transit-based level of service to transportation facilities for the purposes of issuing development orders and permits, as defined in Policy 3.4.2 of the Broward County Comprehensive Plan. For the purposes of long-range transportation planning, more traditional level of service standards have been adopted, as defined in Policy 3.4.3. Therefore, for the purposes of determining significant impact, the level of service standards defined in Policy 3.4.3 have been applied.

Table 21-1 summarizes these roadway segments, the existing laneage, applicable roadway classification and generalized capacity based on generalized service volumes published in the Florida Department of Transportation (FDOT) *2007 Generalized Quality/Level of Service* Tables.

Final Study Area

The final study area was defined as roadways on which project traffic contributes five percent or more of the maximum peak hour directional service volume at the adopted level of service standard of the facility. The derivation of project traffic and the determination of the percent of project impacts for these uses are described in the responses to questions 21-B, 21-C, and 21-D. Please refer to Map J-3.

As agreed upon in the methodology, an A.M. peak hour roadway segment analysis was conducted for specific segments of Sample Road (State Road 7 to Florida's Turnpike) and State Road 7 (Sample Road to Wiles Road) to determine the project's significance. These roadway segments were analyzed to determine if project traffic contributes five percent or more of the maximum peak hour directional service volume at the adopted level of service standard of the facility. Where the project is determined to be significant based upon this A.M. peak hour analysis, an A.M. peak hour roadway segment analysis was performed for the subject corridor. This analysis is included in Appendix 21-N.

Existing Conditions

Existing conditions on the study roadways within the final study area were quantified. The evaluation of the facilities was conducted for the existing 100th highest hourly volume conditions using the existing geometric and operational conditions of the facilities.

Roadway Conditions

Peak direction hourly volumes for roadway segments in Broward County were

determined from actual 2007 count data obtained from Broward County and adjusted using the appropriate peak season conversion factor. Existing peak hour directional volumes were compared to the generalized roadway level of service volumes adopted by Broward County. The roadway volumes and associated generalized roadway levels of service are shown in Table 21-1. Relevant roadway traffic count data is included in Appendix 21-A.

Intersection Conditions

As agreed upon in the study methodology, the study area also includes intersections within the boundaries of the preliminary study area. These intersections are listed as follows:

- **SR 7/US 441 & Cullum Road/Turtle Creek Drive**
- **SR 7/US 441 & NW 40th Street**
- **SR 7/US 441 & Sample Road**
- **SR 7/US 441 & Wiles Road**
- **SR 7/US 441 & NW 54th Avenue/NW 31st Street**
- **Lyons Road & Wiles Road**
- **Sample Road & NW 62nd Avenue**
- **Sample Road & Lyons Road**
- **Sample Road & NW 54th Avenue**
- **Sample Road & Banks Road**
- **Banks Road and Wiles Road**
- **NW 40th Street & NW 54th Avenue**
- **Cullum Road & NW 54th Avenue**

In addition to the above intersections specifically defined in the study methodology, several additional intersections were analyzed based upon whether the project is significant on an approach and whether or not the 90% threshold of the level of service standard is met. These intersections are included in Table 21-2 and subsequent intersection analysis summary tables. Existing volumes within the final study area are shown in Figures I-2 through I-7 in Appendix 21-I.

Table 21-2 summarizes the existing level of service conditions at the study intersections. Appendix 21-A includes intersection turning movement count and traffic signal timing data. Appendix 21-B includes the intersection volume development summary worksheets that include adjustments to peak season conditions. It should be noted that adjustments to the turning movement volumes at the Sawgrass Expressway interchanges within the final study were performed to account for the existing geometry at these locations. Appendix 21-C includes summary intersection analysis worksheets for existing conditions.

Table 21-1
Peak Hour Roadway Conditions

Roadway From	Roadway To	Jurisdiction	Roadway Type	Roadway Class	Existing Laneage	Adopted LOS	Maximum Service Volume[1]	Maximum Directional Volume[1]	2007 AADT Volume[2]	Existing PM Peak Hour Volume[2]		Existing V/C Ratio		Existing LOS	
										NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Atlantic Boulevard															
University Drive	Riverside Drive	Broward County	Arterial	II	6LD	D	4,680	2,570	31,774	1,329	1,240	0.52	0.48	C	C
Riverside Drive	Ramblewood Drive	Broward County	Arterial	II	6LD	D	4,680	2,570	39,371	1,480	1,804	0.58	0.70	C	C
Ramblewood Drive	Rock Island Road	Broward County	Arterial	II	6LD	D	4,680	2,570	42,111	1,423	2,287	0.55	0.89	C	D
Rock Island Road	NW 66th Avenue	Broward County	Arterial	II	6LD	D	4,680	2,570	49,086	1,898	2,477	0.74	0.96	C	D
NW 66th Avenue	SR 7	Broward County	Arterial	II	6LD	D	4,680	2,570	49,086	1,898	2,477	0.74	0.96	C	D
SR 7	Banks Road	FDOT	Arterial	II	6LD	D	4,680	2,570	52,000	1,656	2,827	0.64	1.10	C	F
Banks Road	Lyons Road	FDOT	Arterial	II	6LD	D	4,680	2,570	52,000	1,656	2,827	0.64	1.10	C	F
Lyons Road	Florida's Turnpike	FDOT	Arterial	II	6LD	D	4,680	2,570	47,500	2,383	1,892	0.93	0.74	D	C
Florida's Turnpike	NW 31st Avenue	FDOT	Arterial	II	6LD	D	4,680	2,570	52,654	2,831	1,908	1.10	0.74	F	C
NW 31st Avenue	Powerline Road	FDOT	Arterial	II	6LD	D	4,680	2,570	52,654	2,831	1,908	1.10	0.74	F	C
Margate Boulevard															
Rock Island Road	NW 66th Avenue	City of Margate	Collector	-	4LD	D	2,070	1,140	8,917	254	752	0.22	0.66	C	D
NW 66th Avenue	SR 7	City of Margate	Collector	-	4LD	D	2,070	1,140	8,917	254	752	0.22	0.66	C	D
Coconut Creek Parkway/Hammondville Road															
SR 7	Banks Road	Broward County	Arterial	II	4LD	D	3,110	1,710	27,442	917	1,976	0.54	1.16	C	F
Banks Road	Lyons Road	Broward County	Arterial	II	4LD	D	3,110	1,710	27,442	917	1,976	0.54	1.16	C	F
Lyons Road	NW 31st Avenue-FTPK	Broward County	Arterial	II	4LD	D	3,110	1,710	25,417	907	1,549	0.53	0.91	C	D
NW 31st Avenue-FTPK	Powerline Road	City of Pompano Beach	Arterial	II	4LD	D	3,110	1,710	28,499	1,050	1,654	0.61	0.97	C	D
Royal Palm Boulevard/Copans Road															
University Drive	Riverside Drive	City of Coral Springs	Arterial	I	4LD	D	3,390	1,860	26,224	1,233	1,261	0.66	0.68	B	B
Riverside Drive	Rock Island Road	CS/Margate	Arterial	I	4LD	D	3,390	1,860	34,366	1,417	1,514	0.76	0.81	B	B
Rock Island Road	SR 7	City of Margate	Arterial	I	4LD	D	3,390	1,860	31,992	1,004	1,779	0.54	0.96	B	C
SR 7	Banks Road	Broward County	Arterial	I	4LD	D	3,390	1,860	29,603	1,087	1,739	0.58	0.93	B	C
Banks Road	Lyons Road	Broward County	Arterial	I	4LD	D	3,390	1,860	33,220	1,052	2,602	0.57	1.40	B	F
Lyons Road	Blount Road	Broward County	Arterial	I	4LD	D	3,390	1,860	33,220	1,052	2,602	0.57	1.40	B	F
Blount Road	Powerline Road	Broward County	Arterial	I	4LD	D	3,390	1,860	34,682	1,345	2,177	0.72	1.17	B	F
Sample Road															
University Drive	Riverside Drive	FDOT	Arterial	II	6LD	D	4,680	2,570	38,000	1,598	1,486	0.62	0.58	C	C
Riverside Drive	Rock Island Road	FDOT	Arterial	II	6LD	D	4,680	2,570	53,000	1,966	2,360	0.76	0.92	C	D
Rock Island Road	SR 7	FDOT	Arterial	II	6LD	D	4,680	2,570	47,500	1,484	2,323	0.58	0.90	C	D
SR 7	Banks Road	FDOT	Arterial	II	6LD	D	4,680	2,570	66,000	3,451	2,246	1.34	0.87	F	D
Banks Road	Lyons Road	FDOT	Arterial	II	6LD	D	4,680	2,570	66,000	3,451	2,246	1.34	0.87	F	D
Lyons Road	Florida's Turnpike	FDOT	Arterial	II	6LD	D	4,680	2,570	61,500	3,269	1,679	1.27	0.65	F	C
Florida's Turnpike	Blount Road	FDOT	Arterial	II	6LD	D	4,680	2,570	65,500	2,211	3,386	0.86	1.32	D	F
Blount Road	Powerline Road	FDOT	Arterial	II	6LD	D	4,680	2,570	65,500	2,211	3,386	0.86	1.32	D	F
Wiles Road															
University Drive	Riverside Drive	Broward County	Arterial	II	4LD	D	3,110	1,710	31,142	1,417	1,544	0.83	0.90	D	D
Riverside Drive	Rock Island Road	Broward County	Arterial	II	4LD	D	3,110	1,710	35,817	1,527	2,280	0.89	1.33	D	F
Rock Island Road	SR 7	Broward County	Arterial	II	4LD	D	3,110	1,710	34,970	1,260	2,093	0.74	1.22	C	F
SR 7	Lyons Road	Broward County	Arterial	I	4LD	D	3,390	1,860	16,863	677	988	0.36	0.53	B	B
Lyons Road	Powerline Road	Broward County	Arterial	I	UC	D	3,390	1,860	7,875	486	307	0.26	0.17	B	B
Sawgrass Expressway															
University Drive	SR 7	FDOT	Freeway	-	6LF	D	9,840	5,410	67,700	3,503	3,944	0.65	0.73	C	C
SR 7	Lyons Road	FDOT	Freeway	-	6LF	D	9,840	5,410	65,500	3,389	3,816	0.63	0.71	C	C
Lyons Road	Florida's Turnpike	FDOT	Freeway	-	6LF	D	9,840	5,410	68,600	3,550	3,996	0.66	0.74	C	C
SW 10th Street															
Florida's Turnpike	Powerline Road	FDOT	Arterial	II	6LD	D	4,680	2,570	35,600	1,843	2,073	0.72	0.81	C	C
Holmberg Road/Johnson Road															
University Drive	Riverside Drive	City of Parkland	Collector	-	2L	D	950	530	10,588	459	710	0.87	1.34	D	F
Riverside Drive	SR 7	City of Parkland	Collector	-	2L	D	1,390	760	16,391	898	1,384	1.18	1.82	F	F
SR 7	Lyons Road	City of Coconut Creek	Collector	-	2L	D	1,390	760	9,932	576	727	0.76	0.96	D	D
Hillsboro Boulevard															
Loxahatchee Road	SR 7	Broward County	Collector	-	4LD	D	2,070	1,140	10,674	598	576	0.52	0.51	C	C
SR 7	Lyons Road	FDOT	Arterial	I	6LD	D	5,080	2,790	24,000	939	1,425	0.34	0.51	B	B
Lyons Road	Powerline Road	FDOT	Arterial	I	6LD	D	5,080	2,790	39,500	1,300	2,826	0.47	1.01	B	F
University Drive															
Atlantic Boulevard	Royal Palm Boulevard	FDOT	Arterial	II	6LD	D	4,680	2,570	49,000	2,305	2,638	0.90	1.03	D	E
Royal Palm Boulevard	Sample Road	FDOT	Arterial	II	6LD	D	4,680	2,570	43,000	1,576	1,991	0.61	0.77	C	C
Sample Road	NW 40th Street	City of Coral Springs	Arterial	II	6LD	D	4,680	2,570	32,669	1,553	1,236	0.60	0.48	C	C
NW 40th Street	Wiles Road	City of Coral Springs	Arterial	II	4LD	D	3,110	1,710	29,641	1,208	1,225	0.71	0.72	C	C
Wiles Road	Sawgrass Expressway	City of Coral Springs	Arterial	II	4LD	D	3,110	1,710	28,966	1,214	1,310	0.71	0.77	C	C
Sawgrass Expressway	Holmberg Road	City of Parkland	Collector	-	4LD	D	2,070	1,140	14,922	940	641	0.82	0.56	D	D
Riverside Drive															
Atlantic Boulevard	Royal Palm Boulevard	Broward County	Arterial	-	4LD	D	2,070	1,140	26,189	1,175	1,258	1.03	1.10	E	E
Royal Palm Boulevard	Sample Road	Broward County	Arterial	-	4LD	D	2,070	1,140	21,124	937	1,061	0.82	0.93	D	D
Sample Road	Wiles Road	Broward County	Arterial	-	4LD	D	2,070	1,140	16,839	752	888	0.66	0.78	D	D
Wiles Road	Holmberg Road	Broward County	Arterial	-	4LD	D	2,070	1,140	13,200	735	751	0.64	0.66	D	D
Rock Island Road															
Atlantic Boulevard	Margate Boulevard	City of Margate	Arterial	II	4LD	D	3,110	1,710	37,068	2,214	2,016	1.29	1.18	F	F
Margate Boulevard	Royal Palm Boulevard	City of Margate	Arterial	II	4LD	D	3,110	1,710	26,893	1,155	1,142	0.68	0.67	C	C
Royal Palm Boulevard	Sample Road	City of Margate	Arterial	I	4LD	D	3,390	1,860	20,718	800	1,205	0.43	0.65	B	B
Sample Road	Wiles Road	City of Coral Springs	Arterial	I	4LD	D	3,390	1,860	9,034	403	603	0.22	0.32	B	B
NW 66th Avenue															
Atlantic Boulevard	NW 18th Streeet	City of Margate	Collector	-	2L	D	950	530	3,902	135	210	0.25	0.40	C	C
Turtle Creek Drive/Cullum Road															
Sample Road	SR 7	City of Coral Springs	Collector	-	4LD	D	2,070	1,140	14,992	668	663	0.59	0.58	D	D
SR 7	NW 54th Avenue	City of Coconut Creek	Collector	-	4LD	D	2,070	1,140	-	146	210	0.13	0.18	C	C
SR 7															
Atlantic Boulevard	Margate Boulevard	FDOT	Arterial	II	6LD	D	4,680	2,570	52,124	2,594	2,097	1.01	0.82	E	C
Margate Boulevard	Coconut Creek Parkway	FDOT	Arterial	II	6LD	D	4,680	2,570	52,124	2,594	2,097	1.01	0.82	E	C
Coconut Creek Parkway	NW 18th Streeet	FDOT	Arterial	II	6LD	D	4,680	2,570	52,124	2,594	2,097	1.01	0.82	E	C
NW 18th Street	Copans Road	FDOT	Arterial	II	6LD	D	4,680	2,570	50,500	2,099	1,951	0.82	0.76	C	C
Copans Road	Sample Road	FDOT	Arterial	II	6LD	D	4,680	2,570	50,000	2,142	1,877	0.83	0.73	D	C
Sample Road	Wiles Road	FDOT	Arterial	II	6LD	D	4,680	2,570	47,500	2,341	2,158	0.91	0.84	D	D
Wiles Road	Sawgrass Expressway	FDOT	Arterial	II	6LD	D	4,680	2,570	45,000	2,033	2,649	0.79	1.03	C	E
Sawgrass Expressway	Holmberg Road	FDOT	Arterial	II	6LD	D	4,680	2,570	55,500	2,186	2,929	0.85	1.14	D	F
Holmberg Road	Hillsboro Boulevard	FDOT	Arterial	II	6LD	D	4,680	2,570	55,500	2,186	2,929	0.85	1.14	D	F
Hillsboro Boulevard	Palm Beach County Line	FDOT	Arterial	II	6LD	D	4,680	2,570	50,000	2,136	2,561	0.83	1.00	D	D
Banks Road															
Atlantic Boulevard	Coconut Creek Parkway	Margate/CC	Collector	-	4LD	D	2,950	1,620	11,793	473	578	0.29	0.36	C	C
Coconut Creek Parkway	Copans Road	City of Margate	Collector	-	4LD	D	2,950	1,620	16,281	867	836	0.54	0.52	C	C
Copans Road	Sample Road	City of Margate	Collector	-	4LD	D	2,950	1,620	5,735	222	349	0.14	0.22	C	C
Sample Road	Wiles Road	City of Coconut Creek	Collector	-	NB	D	2,070	1,140		46[3]	51[3]	0.04	0.04	C	C
Lyons Road															
Atlantic Boulevard	NW 6th Manor	Broward County	Arterial	II	6LD	D	4,680	2,570	33,385	2,188	1,121	0.85	0.44	D	C
NW 6th Manor	Coconut Creek Parkway	Broward County	Arterial	II	4LD	D	3,110	1,710	33,385	2,188	1,121	1.28	0.66	F	C
Coconut Creek Parkway	Copans Road	City of Coconut Creek	Arterial	II	4LD	D	3,110	1,710	31,533	1,961	1,557	1.15	0.91	F	D
Copans Road	Sample Road	City of Coconut Creek	Arterial	II	4LD	D	3,110	1,710	31,843	1,908	1,439	1.12	0.84	F	D
Sample Road	Wiles Road	Broward County	Arterial	I	6LD	D	5,080	2,790	41,383	2,221	1,672	0.80	0.60	B	B
Wiles Road	Sawgrass Expressway	Broward County	Arterial	I	6LD	D	5,080	2,790	37,306	1,641	2,529	0.59	0.91	B	C
Sawgrass Expressway	Johnson Road	Broward County	Arterial	I	6LD	D	5,080	2,790	37,526	1,713	2,326	0.61	0.83	B	B
Johnson Road	Hillsboro Boulevard	Broward County	Arterial	I	6LD	D	5,080	2,790	39,100	1,866	2,407	0.67	0.86	B	C
Hillsboro Boulevard	Palm Beach County Line	Broward County	Arterial	I	6LD	D	5,080	2,790	36,311	1,907	2,569	0.68	0.92	B	C
Florida's Turnpike															
Atlantic Boulevard	Coconut Creek Parkway	FDOT	Freeway	-	8LF	D	13,600	7,480	89,300	4,263	3,845	0.57	0.51	B	B
Coconut Creek Parkway	Sample Road	FDOT	Freeway	-	8LF	D	13,600	7,480	92,100	4,397	3,966	0.59	0.53	B	B
Sample Road	Sawgrass Expressway	FDOT	Freeway	-	8LF	D	13,600	7,480	82,900	3,958	3,569	0.53	0.48	B	B
Sawgrass Expressway	Palm Beach County Line	FDOT	Freeway	-	6LF	D	10,050	5,530	97,500	4,655	4,198	0.84	0.76	C	B
NW 31st Ave-FTPK															
Atlantic Boulevard	Coconut Creek Parkway	FDOT	Collector	-	4LD	D	2,950	1,620	16,500	760	674	0.47	0.42	C	C
Blount Road															
Copans Road	Sample Road	Broward County	Collector	-	4LD	D	2,070	1,140	5,375	803	458	0.53	0.40	D	C
Powerline Road															
Atlantic Boulevard	Coconut Creek Parkway	FDOT	Arterial	I	6LD	D	5,080	2,790	39,500	1,659	1,916	0.59	0.69	B	B
Coconut Creek Parkway	Copans Road	FDOT	Arterial	I	6LD	D	5,080	2,790	39,359	2,239	1,969	0.80	0.71	B	B
Copans Road	Sample Road	FDOT	Arterial	I	6LD	D	5,080	2,790	34,500	1,757	1,443	0.63	0.52	B	B
Sample Road	Wiles Road	FDOT	Arterial	I	6LD	D	5,080	2,790	46,500	2,333	1,852	0.84	0.66	C	B
Wiles Road	SW 10th Street	FDOT	Arterial	I	6LD	D	5,080	2,790	28,500	1,599	1,445	0.57	0.52	B	B
SW 10th Street	Hillsboro Boulevard	FDOT	Arterial	II	4LD	D	3,110	1,710	35,500	2,159	1,288	1.26	0.75	F	C
Hillsboro Boulevard	Palm Beach County Line	FDOT	Arterial	II	4LD	D	3,110	1,710	34,000	1,706	1,354	1.00	0.79	D	C

Notes:

[1] Maximum Service Volume for LOS standard determined from 2007 Quality/Level of Service Generalized Tables published by the Florida Department of Transportation.
[2] Volumes determined using following: Broward County MPO Year 2007 Traffic Count Report, Broward County counts, and FDOT counts obtained from 2007 Florida Traffic Info DVD.
[3] Volumes derived from turning movement counts collected for analysis and adjusted by appropriate peak season factor.
UC= Under Construction
NB= Roadway segment not completely constructed

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Table 21-2
Existing PM Peak Hour
Intersection Level of Service

Intersection	Date Counted	Type of Signal Control	Intersection LOS	Intersection Delay (sec.)	Approach LOS			
					EB	WB	NB	SB
Sample Rd and Riverside Dr	9/23/2008	Signalized	E	56.6	E	D	D	E
Sample Rd and Holiday Springs Blvd	3/4/2009	Signalized	D	37.3	B	D	E	E
Sample Rd and Rock Island Rd	9/23/2008	Signalized	D	42.1	D	C	E	E
Sample Rd and Turtle Run Blvd	11/18/2008	Signalized	B	13.4	A	B	C	C
Sample Rd and NW 62nd Ave/Turtle Creek Dr	8/26/2008	Signalized	C	33.7	C	C	F	E
Sample Rd and SR 7	9/10/2008	Signalized	B	18.4	B	B	N/A	N/A
Sample Rd and NW 54th Ave	8/27/2008	Signalized	C	27.7	C	B	D	D
Sample Rd and Banks Rd	9/3/2008	Stop-Controlled	(1)	(1)	C(2)	C(2)	C	C
Sample Rd and Lyons Rd	8/27/2008	Signalized	F	83.4	D	C	F	F
Sample Rd and NW 42nd Ave	11/12/2008	Signalized	C	33.4	B	D	D	D
Sample Rd and Tradewinds Park Rd	11/12/2008	Signalized	A	9.5	B	A	E	E
Sample Rd and Florida's Turnpike	10/1/2008	Signalized	C	34.1	D	C	D	N/A
NW 40th St and NW 54th Ave	8/26/2008	Stop-Controlled	(1)	(1)	B	B	A(2)	A(2)
Wiles Rd and SR 7	8/26/2008	Signalized	E	64.6	D	F	D	F
Wiles Rd and Banks Rd	10/2/2008	Stop-Controlled	(1)	(1)	(3)	B(2)	C	N/A
Wiles Rd and Lyons Rd	8/26/2008	Signalized	D	38.3	F	E	C	C
Wiles Rd and Powerline Rd	11/20/2008	Signalized	C	29.3	C	D	C	C
NW 31st St and SR 7	8/27/2008	Signalized	C	34.7	E	E	C	C
NW 40th St and SR 7	9/3/2008	Stop-Controlled	(1)	(1)	N/A	C	(3)	(3)
Cullum Rd/Turtle Creek Dr and SR 7	8/27/2008	Signalized	C	20.9	F	D	B	B
Winston Park Blvd and SR 7	11/19/2008	Signalized	C	26.1	E	E	C	B
Sawgrass Expressway (NB) and SR 7	9/24/2008	Signalized	A	3.0	N/A	N/A	A	A
Sawgrass Expressway (SB) and SR 7	9/24/2008	Signalized	A	3.6	N/A	N/A	A	A
Coconut Creek Pkwy and Lyons Rd	9/24/2008	Signalized	E	67.1	D	E	F	E
Lyons Plaza and Lyons Rd	11/18/2008	Signalized	A	9.5	E	N/A	A	A
Wynmoor Way and Lyons Rd	11/18/2008	Signalized	B	18.5	E	E	B	A
Copans Rd and Lyons Rd	10/1/2008	Signalized	E	63.8	D	E	E	D
NW 34th St and Lyons Rd	11/18/2008	Signalized	A	9.4	E	E	A	A
Winston Park Blvd and Lyons Rd	11/18/2008	Signalized	D	42.5	E	E	D	D
Sawgrass Expressway (NB) and Lyons Rd (NB)	9/24/2008	Signalized	C	28.0	A	N/A	B	F
Sawgrass Expressway (NB) and Lyons Rd (SB)	9/24/2008	Signalized	B	16.4	D	N/A	N/A	B
Sawgrass Expressway (SB) and Lyons Rd (NB)	9/24/2008	Signalized	C	21.7	N/A	E	B	N/A
Sawgrass Expressway (SB) and Lyons Rd (SB)	9/24/2008	Signalized	B	18.3	N/A	A	E	B
Sawgrass Boulevard and Lyons Road	11/18/2008	Signalized	B	15.7	C	C	B	B
Holmberg Rd and Lyons Rd	11/18/2008	Signalized	C	22.4	C	C	B	C
Hillsboro Blvd and Lyons Rd	3/4/2009	Signalized	D	54.0	E	E	D	D

Notes:
(1) Overall LOS at two-way stop controlled or one way stop-controlled intersections is not defined.
(2) Approach reflects the left-turn movement only, the through movement operates under free-flow conditions.
(3) Approach operates under free-flow conditions. LOS is not defined.

Transit Service

Following is information on transit service adjacent to the site. Additional information including route maps, frequency, and ridership is included in Appendix 21-D.

Existing Broward County Transit

The following Broward County Transit bus routes currently serve the area of the proposed site:

- **Route 18 is generally a north/south route and offers service between the Golden Glades Park & Ride Lot in Miami-Dade County and Sandalfoot Cove Boulevard in Palm Beach County. This route traverses the County along SR 7/US 441 and operates seven days a week. Headways are kept at 15 minutes during weekday peak hours, 20 minutes on Saturdays, and 30 minutes on Sundays.**

- **Route 31 is generally a north/south route that offers service along NW 31st Avenue/Lyons Road between Broward Central Terminal and Hillsboro Boulevard. Route 31 operates seven days a week with headways at 20 minutes during weekday peak hours, 30 minutes on Saturdays, and 45 minutes on Sundays.**

- **Route 34 is generally an east/west route that offers service along Sample Road between Coral Ridge Drive and Federal Highway. Route 34 operates seven days a week with headways at 30 minutes during weekday peak hours, 40 minutes on Saturdays, and 60 minutes on Sundays.**

- **Route 441 Breeze is generally a north/south route that travels along SR 7/US 441 and offers service between the Golden Glades Park & Ride Lot in Miami-Dade County and Sample Road. This route has limited stops to reduce travel times and headways are kept at 30 minutes during the weekdays.**

Broward County Transit's (BCT) bus service is integrated with South Florida Regional Transportation Authority's (SFRTA) Tri-Rail service, which provides commuter rail service within Palm Beach County, Broward County, and Miami-Dade County. BCT Route 34, which primarily serves the Sample Road corridor and runs adjacent to the site, connects to Tri-Rail's Pompano Beach Station near Sample Road. The transit providers of both Palm Beach County and Miami-Dade County (Palm-Tran and Miami-Dade Transit) also provide transit connections to Tri-Rail stations allowing travel among locations throughout all three counties.

BCT also provides transit service to Fort Lauderdale-Hollywood International Airport via Route 1. Route 1 primarily serves the US 1/Federal Highway corridor south of

Broward Boulevard. Transfers from many bus routes to Route 1 occur at the Broward Central Terminal. Multiple routes to/from the proposed site connect to Route 1 via the Broward Central Terminal. Route 34, serving the proposed site and the Sample Road corridor, connects to Route 14 at Powerline Road. Route 14 serves the Powerline Road corridor and connects to Route 1 at the Broward Central Terminal.

City of Coconut Creek Community Bus Service

The City of Coconut Creek provides a local circulation minibus system for its residents. The hours of service for this service are 6:30 A.M. to 6:00 P.M. on Monday through Saturday, with no operation currently on Sundays. All of the minibuses are oriented to destinations within the City with connections to Broward County Transit (BCT) and City of Margate Inner-City Transit. Two (2) routes (N and S) provide service in the vicinity of the project. Route N connects with BCT's routes 14, 18, 31, 34, 83 and 441 Breeze. Route S connects with BCT's routes 18, 31, 34, 42, 60, 83 and 441 Breeze. Headways are kept at 60 minutes on both routes with no fare. The City monitors ridership on the routes monthly and continuously evaluates potential methods to improve upon the service provided to not only ensure the most efficient use of City financial resources, but also to enhance the service provided by both Broward County and the City of Margate.

City of Margate Inner-City Transit

The City of Margate provides a local circulation minibus system for its residents. The hours of service for this service are 6:30 A.M. to 6:30 P.M. on Monday through Saturday, with no operation currently on Sundays. All of the minibuses are oriented to destinations within the City with connections to Broward County Transit, City of Coconut Creek community bus service, and City of Coral Springs community bus service. Two (2) routes (A and B) provide service in the vicinity of the project. The system operates in conjunction with BCT's routes 18, 31, 34, 42, 60, 83 and 441 Breeze. Headways are kept at 60 minutes on both routes and the fare is $0.25 per trip. The City monitors ridership on the routes monthly and continuously evaluates potential methods to improve upon the service provided to not only ensure the most efficient use of City financial resources, but also to enhance the service provided by both Broward County and the City of Coconut Creek.

Existing Ridership

The Broward County Comprehensive Plan has determined a current modal split of 1.64 percent for trips using transit on a county-wide basis. The maps provided in the "Map J" section of this ADA (Question 9) show the current transit routes.

Based upon annual route ridership data provided by BCT, three (3) of the four (4) adjacent BCT transit routes have seen ridership increases over the last seven years. This information is summarized in Table 21-3 below.

Table 21-3
Average Growth Rates on Adjacent BCT Routes

Route	Average Growth Rate (FY 01/02-FY 07/08)
18	1.67%
31	-3.55%
34	10.39%
441 Breeze	1.65%

As indicated in the Table 21-4 below, the four (4) adjacent BCT routes are also expected to experience a significant growth in ridership from existing conditions (2008) through 2018. The ridership data is presented in the Broward County Transit Development Plan FY 2009-2018 and is Appendix 21-D.

Table 21-4
BCT Ridership Projections by Route, FY 2009 Through 2018

Bus Route	2008 Daily Ridership	2013 Projected Daily Ridership	% Change from 2008	2018 Projected Daily Ridership	% Change from 2008
18	14,511	18,728	29.0%	23,465	61.7%
31	3,836	4,614	20.2%	5,305	38.3%
34	2,890	3,393	17.4%	3,899	34.9%
441 Breeze	1,748	2,175	24.4%	2.579	47.5%

Three (3) of the adjacent BCT routes are ranked in the top 50% of the best performing routes, according the Broward County Transit Development Plan FY 2009-2018. BCT routes are ranked on a combination of several factors including: ridership, annual revenue miles, and allocated costs. Route 1 is the best performing route in the County and both Route 31 and Route 34 are in the top 20 best performing routes in the County. The actual rankings and information used in the rankings are included in Appendix 21-D.

The current level of transit ridership in the project vicinity is identified by ridership information provided by BCT. The data provided is from surveys conducted from January 11, 2009 to March 22, 2009. This information shows the daily boardings and alightings at the transit stops immediately adjacent to the project site. This information is summarized in Table 21-5 and this data is included in Appendix 21-D.

Table 21-5 BCT Existing Average Daily Weekday Boarding and Alightings			
Bus Route	**Average Daily Trips**		
	Boardings	**Alightings**	**Total Trips**
BCT 18	369	340	709
BCT 31	121	123	244
BCT 34	473	488	961
BCT 441 Breeze	83	77	160
Total	1,046	1,028	2,074

Historical ridership information for City of Coconut Creek and City of Margate community buses was obtained from BCT. Annual ridership information from year 2006 to year 2008 is provided in Table 21-6 below. An annual growth rate was also calculated for each route based upon the historical ridership data. As shown below, three of the four bus routes experienced positive growth since 2006, only the City of Margate Route A experienced a slight decline in ridership.

Table 21-6 Community Bus Historical Ridership				
Bus Route	**FY 2006 Passengers**	**FY 2007 Passengers**	**FY 2008 Passengers**	**Growth Rate**
Coconut Creek Route N	55,954	56,608	61,080	3.0%
Coconut Creek Route S	40,453	43,643	50,997	8.0%
Margate Route A	36,145	44,041	35,270	-0.8%
Margate Route B	18,612	27,150	25,449	11.0%

In addition to current transit service within the area, the following improvements are targeted by Broward County Transit to better serve the site:

<u>Programmed Transit Improvements</u>

The priority in the Transit Element of the Broward County MPO's *2030 Long Range Transportation Plan (LRTP)* (2007) and the *Transit Development Plan* (FY 2009 – 2018) is to enhance existing BCT fixed route local bus service and identify new premium transit routes for commuter service. The BCT Transit Development Plan for FY 2009-2018 includes one (1) improvement within the vicinity of the site: reduction in weekday headways on Route 34 from 30 minutes to 20 minutes (FY 2010). This information is included in Appendix 21-E.

Transit Enhancement Plans

The Transit Element of the LRTP involves continuing headway improvements on existing fixed routes with new routes to serve areas of high growth. In addition to increased service frequencies, the LRTP proposes significant improvement to transit travel times (compared to autos) through the implementation of Bus Rapid Transit (BRT) projects in the priority transit corridors. Instead of using tracks and trains, BRT operates on existing roads and uses cutting edge Intelligent Transportation System (ITS) devices to create a high performance transit system. By combining the quality and speed of rail transit with the flexibility of buses, BRT is being viewed as a lower cost alternative to light rail transit. A BRT system includes the following potential components:

- **Special Vehicle Design**
- **Specific Stop Spacing and Design**
- **On-board and In-station Information**
- **Signal Priority Treatments**
- **Separate Bus Lanes/Pullouts**
- **Electronic Fare Collection Techniques**

A BRT/Rapid Bus system is currently planned for the SR 7 corridor from Miami-Dade County to Palm Beach County. A rapid bus system is currently planned for the Sample Road corridor from Sawgrass Expressway to Pompano Square Mall. A rapid bus system differs from a BRT in that service is in mixed-traffic where a BRT typically has exclusive transit lanes. This information is included in Appendix 21-E.

Multimodal Information

Consistent with the *Guidelines and Performance Measures to Incorporate Transit and Other Multimodal Considerations into the FDOT DRI Review Process,* multimodal information was compiled consistent with Table 2 of the referenced document. The following sections summarize this information.

High-occupancy vehicle lanes

High-occupancy vehicle (HOV) lanes are not currently provided on a corridor within the preliminary study area. However, it should be noted that existing HOV facilities are provided on Interstate 95 east of the proposed development.

Transit service (rail and/or bus)

Refer to information previous presented as part of this response.

Bus rapid transit

Existing bus rapid transit service is not currently provided within the study area. However, Broward County's Long Range Transportation Plan (LRTP) includes operation of bus rapid transit along State Road 7 immediately west of the site. Rapid bus service is currently provided on the State Road 7 corridor up to Sample Road. It is the intent of the Applicant to integrate existing future transit service from State Road 7 within the development.

Multi-use trails, location and regional (off-road)

According to Broward County's Greenway System information, no major multi-use trails exist within the preliminary study area. It should be noted that several planned trails are anticipated to be constructed within the study area including the Creek/Springs Florida Power and Light (FPL) Right-of-Way (ROW) Trail, Rock Island FPL ROW Trail, Turnpike Greenway, and the Riverside Drive Canal Trail. Furthermore, the Creek/Springs FPL ROW Trail is proposed along the Cullum Road right-of-way between Lyons Road and State Road 7 within the project site. Maps and additional information regarding each route can be found at http://www.broward.org/greenways/.

Bicycle lanes (on-road)

Several roadways within the study area have bicycle facilities. Facilities range from marked bike lanes to paved shoulders. The following facilities were noted:

Marked Bicycle Lane

- **Wiles Road from State Road 7 to Florida's Turnpike**
- **Sample Road from University Drive to Rock Island Road**
- **Powerline Road from Coconut Creek Parkway to SW 10th Street**
- **Blount Road from Copans Road to Sample Road**
- **Hillsboro Boulevard from State Road 7 to Powerline Road**

Wide Curb Lane

- **State Road 7 from Sample Road to Wiles Road**
- **Sample Road from State Road 7 to Lyons Road**
- **Riverside Drive from Sample Road to Wiles Road**

Paved Shoulders

- **Sample Road from Lyons Road to Florida's Turnpike**
- **NW 31st Avenue from Atlantic Boulevard to Coconut Creek Parkway**

3' Underdesignated Bicycle Lane

- **Powerline Road from Atlantic Boulevard to Coconut Creek Parkway**

Existing bicycle level of service (LOS) conditions were examined for major roadways that are significantly impacted by the project. These roadways include portions of Sample Road, State Road 7, Wiles Road, and Lyons Road. The generalized capacity analysis was based on service criteria published in the Florida Department of Transportation (FDOT) *2007 Generalized Quality/Level of Service* Tables. Table 21-7 below summarizes this analysis.

Table 21-7
Existing Bicycle Mode Level of Service Analysis

Roadway	Segment	Paved Shoulder/Bicycle Lane Coverage	Existing PM peak hour volumes (# of lanes)	Level of Service (LOS)
Sample Rd	Riverside Drive to Florida's Turnpike	50-84%	EB-3,451(3) WB-2,360(3)	EB – LOS F WB –LOS E
Wiles Rd	Powerline Road to State Road 7	100%	EB-677(2) WB-988(2)	EB – LOS D WB – LOS D
Lyons Rd	Coconut Creek Parkway to Hillsboro Boulevard	0-49%	NB-1,961(2) SB-2,529(3)	NB –LOS F SB – LOS E
State Rd 7	Sample Road to Sawgrass Expressway	0-49%	NB-2,341(3) SB-2,649(3)	NB – LOS E SB – LOS F

Sidewalks/pedestrian facilities

An inventory of existing sidewalk facilities was performed within ¾ mile of the site boundaries consistent with typical multimodal planning practices. Sidewalk facilities exist on both sides of all major roadways within the area with few exceptions. Minor exceptions exist along both sides of State Road 7 south of Sample Road and on the west side of Lyons Road south of Sample Road, and pedestrian crossings do not exist at the intersection of State Road 7 and Sample Road. The applicable design and construction standards for both FDOT and Broward County were the basis of the design and construction of these sidewalks.

Existing sidewalk LOS conditions were examined for major roadways that are significantly impacted by the project. The generalized capacity analysis was based on service criteria published in the Florida Department of Transportation (FDOT) *2007 Generalized Quality/Level of Service* Tables These roadways include portions of

Sample Road, State Road 7, Wiles Road, and Lyons Road. Table 21-8 below summarizes this analysis.

Table 21-8
Existing Pedestrian Mode Level of Service Analysis

Roadway	Segment	Sidewalk Coverage	Existing PM peak hr volumes (# of lanes)	Level of Service (LOS)
Sample Road	Riverside Drive to Florida's Turnpike	85-100%	EB-3,451(3) WB-2,360(3)	EB – LOS D WB –LOS D
Wiles Road	Powerline Road to State Road 7	85-100%	EB-677(2) WB-988(2)	EB – LOS C WB – LOS C
Lyons Road	Coconut Creek Parkway to Hillsboro Boulevard	85-100%	NB-1,961(2) SB-2,529(3)	NB –LOS D SB – LOS D
State Road 7	Sample Road to Sawgrass Xpwy	85-100%	NB-2,341(3) SB-2,649(3)	NB – LOS D SB – LOS D

Parking management

No parking management programs were identified within the study area.

Transportation demand management – commuter assistance services

South Florida Commuter Services (SFCS) provides alternative transportation options for the residents/visitors within the study area. Options include carpooling, vanpooling, and park-n-ride information. SFCS provides information on each of these programs and the means for people to participate in these programs on its website http://www.1800234ride.com.

Broadband/wireless

Broadband/wireless services exist via private providers allowing for tele-work, telecommuting, teleconferencing, etc.

Baseline modal split of alternative modes

As noted previously, the Broward County Comprehensive Plan has determined a current modal split of 1.64 percent for trips using transit on a county-wide basis. The corridors adjacent to the site are served by a number of transit providers, including Broward County Transit, City of Margate, and City of Coconut Creek. In the future, transit service enhancements expected to occur throughout Broward County are projected to increase this split.

Planned, programmed or committed improvements to existing or new multimodal facilities

Refer to information previously presented as part of this response.

Existing level of service for transit or multimodal alternatives

Existing sidewalk LOS conditions were examined for adjacent major roadways based upon the existing sidewalk coverage and transit headways. These roadways include portions of Sample Road, State Road 7, Wiles Road, and Lyons Road. The generalized capacity analysis was based on service criteria published in the Florida Department of Transportation (FDOT) *2007 Generalized Quality/Level of Service* Tables Table 21-9 below summarizes this analysis.

Table 21-9
Existing Bus Mode Level of Service Analysis

Roadway	Sidewalk Coverage	Peak Period Buses per hour	Level of Service (LOS)
Sample Road	85-100%	EB-3 WB-3	EB – LOS C WB –LOS C
Wiles Road	85-100%	EB-1 WB-1	EB – LOS E WB – LOS E
Lyons Road	85-100%	NB-4 SB-4	NB –LOS C SB – LOS C
State Road 7	85-100%	NB-6 SB-6	NB – LOS B SB – LOS B

Land Use/Site Design

The proposed development includes a development mix that includes significant residential, retail, and employment uses. Additionally, site features focus on promoting pedestrian, bicycle and transit usage. For more information regarding the applicable design standards and site plan features, refer to Question 21I.

The proposed development is expected to have densities and intensities that support transit ridership. It is estimated that, excluding dedications for roadways, parks, wetlands and retention areas, the development will have a floor area ratio (FAR) in excess of 2.0. Furthermore, the proposed development will provide higher intensities along NW 54th Avenue and within the project's core area to promote alternative modes. As outlined within the responses to Question 21, the proposed development will have ample connectivity to adjacent development and the surrounding street network.

Programmed Roadway Improvements

A review of the current Transportation Improvement Program (TIP) FY 2008-2013 adopted by the Broward County Metropolitan Planning Organization was undertaken. The following roadway improvements that would enhance the roadway capacity were listed in the TIP within the study area:

- **Wiles Road: construction of new four-lane divided roadway from Lyons Road to Powerline Road (under construction)**
- **Banks Road: construction of new four-lane divided roadway from Wiles Road to Cullum Road (FY 2009-2010)**
- **Cullum Road: construction of new four-lane divided roadway from NW 54th Avenue to Lyons Road (FY 2009-2010)**
- **NW 40th Street: construction of new four-lane divided roadway from NW 54th Avenue to Lyons Road (FY 2009-2010)**
- **Banks Road: construction of two additional lanes resulting in four-lane divided roadway from NW 40th Street to Sample Road (FY 2010-2011)**
- **Banks Road: construction of new four-lane divided roadway from Cullum Road to NW 40th Street (FY 2010-2011)**
- **Florida's Turnpike: construction of two additional lanes resulting in eight-lane divided expressway from Atlantic Boulevard to Sawgrass Expressway (FY 2011-2012)**
- **Wiles Road: construction of two additional lanes resulting in six-lane divided roadway from SR 7 to Rock Island Road (FY 2011-2012)**
- **Johnson Road: construction of two additional lanes resulting in four-lane divided roadway from SR 7 to Lyons Road (FY 2011-2012)**
- **Sample Road: Intersection improvements at Rock Island Road including dual eastbound/westbound left-turn lanes and an eastbound right-turn lane (under construction)**

As agreed upon in the methodology, improvements to the roadway network which are funded for construction within the first three (3) fiscal years of the TIP were included in the analysis. Relevant tables have been included in Appendix 21-E.

B. Provide a projection of vehicle trips expected to be generated by this development. State all standards and assumptions used, including trip end generation rates by land use types, sources of data, modal split, persons per vehicle, etc., as appropriate. The acceptable methodology to be used for projecting trip generation (including the Florida Standard Urban Model Structure or the Institute of Transportation Engineers trip generation rates) shall be determined at the pre-application conference stage.

The expected trip generation for the subject project was determined in accordance with the agreed-upon study methodology. Trips were calculated using the equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation,* Seventh

Edition. The project trip generation was calculated for four (4) types of project land uses: residential condos/townhouses, residential high-rise condos/townhouses, retail, and office. The specific land use codes and independent variables used for the trip generation calculations are listed in Table 21-10.

Table 21-10
Basis of Trip Generation Calculations

Land Use	Independent Variable	Land Use Code
Residential	Dwelling Units	ITE 230: Residential Condominium/Townhouse
Residential	Dwelling Units	ITE 232: High-Rise Residential Condominium/ Townhouse
Retail	1,000 square feet gross leasable area	ITE 820: Shopping Center
Office	1,000 square feet gross floor area	ITE 710: General Office Building

The total gross trips calculated for the ultimate buildout conditions (Year 2020) are based on the development shown in Table 21-11.

Table 21-11
Development at Buildout

Land use Type			
Residential / Condos (dwelling units)	**High-Rise Residential / Condos (dwelling units)**	**Retail (sq. ft.)**	**Office (sq. ft.)**
100	3,650	1,625,000	525,000

The total gross P.M. peak hour trips generated during the build out year are shown in Table 21-12.

Table 21-12 Total Gross Trips			
Land Use	**P.M. Peak Hour**		
	Enter	**Exit**	**Total**
Residential	819	497	1,316
Retail	1892	2050	3942
Office	113	554	667
Total	2,824	3,101	5,925

The total gross trips generated represent the total vehicular demand for the project land uses and includes internal trips, external pass-by capture, external diverted trips, and external new trips. Details of the trip generation calculations as well as the components of the trip generation are shown in Appendix 21-F.

C. Estimate the internal/external split for the generated trips at the end of each phase of development as identified in (B) above. Use the format below and include a discussion of what aspects of the development (i.e., provision of on-site shopping and recreation facilities, on-site employment opportunities, etc.) will account for this internal/external split. Provide supporting documentation showing how splits were estimated, such as the results of the Florida Standard Urban Transportation Model Structure (FSUTMS) model application. Describe the extent to which the proposed design and land use mix will foster a more cohesive, internally supported project.

The proposed development program includes a mix of residential, retail, and office uses. All of the uses are internally connected through roadway and pedestrian connections. Vehicles can travel within the site without accessing the adjacent roadway network and several of the uses on site are expected to share parking facilities. Interaction among the proposed land uses was determined based on data and procedures established in the Institute of Transportation Engineers' *Trip Generation Handbook*, Second Edition. This data demonstrates that many of the uses proposed for this development tend to be complementary and may share common patrons. The intra-DRI internal capture trips are shown in Table 21-13. Details of the trip generation calculations as well as the components of the trip generation are shown in Appendix 21-F.

Table 21-13 Intra-DRI Internal Capture Trips			
Land Use	**P.M. Peak Hour**		
	Enter	**Exit**	**Total**
Residential	266	161	427
Retail	235	254	489
Office	14	70	84
Total	515	485	1,000

As agreed upon in the methodology, a credit for transit trips to and from the site was applied to the external trip generation potential of the site based upon a percentage of the generated volumes to account for the project's transit-related amenities. These credits were be applied for measures designed to reduce external vehicular trips, including but not limited to Traffic Demand Management (TDM) policies, pedestrian and bicycle amenities and local circulator shuttles. Credits for the transit-based and TDM measures equal 10% of the office and residential traffic plus 5% of the commercial retail traffic. The internal trips and transit/non-vehicular trips were subtracted from the generated volumes to determine the driveway trips for the buildout year. Table 21-14 summarizes the reductions taken for transit/non-vehicular modes of transportation.

Table 21-14 Transit/Non-Vehicular Mode Trips			
Land Use	**P.M. Peak Hour**		
	Enter	**Exit**	**Total**
Residential	82	50	132
Retail	95	102	197
Office	11	56	67
Total	188	208	396

Only the retail land use is expected to generate pass-by traffic. To determine the pass-by capture percentage for the retail development, the methodology outlined in the ITE *Trip Generation Handbook*, Second Edition was used. Table 21-15 shows the pass-by percentage used in the calculations for this component of the site.

Table 21-15 Pass-By Capture for Commercial Retail			
Percentage	**P.M. Peak Hour**		
	Enter	**Exit**	**Total**
17.39%	288	312	600

Gross volumes were reduced by both the transit/non-vehicular mode and pass-by capture reduction to obtain the net new volumes. These volumes are defined as new vehicular traffic entering/exiting the site. Table 21-16 presents the net new volumes. Details of the trip generation calculations are included in Appendix 21-F.

Table 21-16
Summary of Net New Volumes

Land Use	P.M. Peak Hour		
	Enter	Exit	Total
Residential	471	286	757
Retail	1,274	1,382	2,656
Office	88	428	516
Total	1,833	2,096	3,929

D. Provide a projection of total peak hour directional traffic, with the DRI, on the highway network within the study area at the end of each phase of development. If these projections are based on a validated FSUTMS, state the source, date and network of the model and of the TAZ projections. If no standard model is available or some other model or procedure is used, describe it in detail and include documentation showing its validity. Describe the procedure used to estimate and distribute traffic with full DRI development in sub zones at build out and at interim phase-end years. These assignments may reflect the effects of any new road or improvements which are programmed in adopted capital improvements programs and/or comprehensive plans to be constructed during DRI construction; however, the inclusion of such roads should be clearly identified. Show these link projections on maps or tables of the study area network, one map or table for each phase-end year. Describe how these conclusions were reached.

To evaluate 2020 conditions upon buildout of this project, increases in traffic volumes generated by both background traffic and project traffic were considered. The increases in background traffic volumes were determined based upon an overall historic growth rate and, if applicable, actual committed development traffic volumes. Following is a summary of the calculations that were undertaken.

<u>Background Growth</u>

An average annual growth rate for each roadway segment was determined based on the increase in traffic volumes over a seven-year period (2000 through 2007). An area-wide growth rate was calculated as an average of increases in traffic volumes on roadway segments within the study area. For the purposes of this calculation, the growth rate for toll expressways, Sawgrass Expressway and Florida's Turnpike, was calculated separately from that of surface streets. A 1.3 percent growth rate was calculated for surface streets and a 3.5 percent growth rate was calculated for toll

expressways. Growth rate data and the summary calculations are included in Appendix 21-G.

Committed Developments

Committed development information was supplied by the South Florida Regional Planning Council (SFRPC) and the cities where the individual projects were approved. The following is a list of committed developments and other approved DRIs that were considered in the analysis:

- **Downtown Coral Springs DRI**
- **Commerce Center of Coconut Creek DRI**
- **Seminole Coconut Creek Casino**
- **Cocomar Plaza**
- **Promenade at Coconut Creek**
- **Lyons Corporate Park DRI**
- **Sawgrass Exchange DRI**
- **Pompano Industrial Park DRI**
- **Coral Landings III**

Traffic volumes associated with these developments were determined for each of the roadway links within the final study area. Figures in Appendix 21-G illustrate the assignment of traffic to and from these committed developments.

To determine background traffic volumes, the increase in traffic resulting from the application of the growth rate was compared to the increase in traffic that would result from the committed development traffic plus half of the same growth rate. The larger of the two numbers was used in order to determine the overall background traffic increase.

Volumes for the proposed roadways and roadways under construction were extracted from the 2020 Southeast Florida Regional Planning Model (SERPM) zonal data discussed in the following section in more detail. The 2020 data was interpolated using 2005 and 2030 z-data. The appropriate factors were applied to calculate peak hour directional volumes. These calculations are included in Appendix 21-G. The following roadway volumes were extracted from the model:

- **Cullum Road (SR 7 to Lyons Road)**
- **Banks Road (Sample Road to Wiles Road**
- **Wiles Road (Lyons Road to Powerline Road)**

The volumes on Sample Road, SR 7, and Wiles Road in the 2020 SERPM model with the Wiles Road extension were compared to the volumes on the corresponding roadway segments in the model without the Wiles Road extension. This difference in

traffic was rerouted to/from Wiles Road (Lyons Road to Powerline Road) via SR 7 and Wiles Road (SR 7 to Lyons Road). Sample Road (Rock Island Road to Florida's Turnpike) was adjusted accordingly to reflect the rerouting of traffic.

Project Traffic

Project traffic distribution and assignment was determined using the Florida Standard Urban Transportation Model Structure (FSUTMS). Specifically, the Southeast Florida Regional Planning Model (SERPM) was utilized by prorating z-data between the year 2005 validation model and the year 2030 model to the year 2020. The roadway network in the year 2014 E+C model was utilized for the analysis. Socio-economic data representing the proposed buildout plan of development was added to the existing traffic analysis zone (TAZ) where the project is located. Project traffic was assigned to the roadway network consistent with the model output, with the exception that some of the traffic was reassigned to surrounding roadway links based on knowledge of the area and engineering judgment when deemed appropriate. Assignment to individual driveways was performed manually based on the location and configuration of the project access driveways. Relevant model output plots are included in Appendix 21-H.

Table 21-17 summarizes the assignment of project traffic to the significantly impacted roadway links within the final study area for the 2020 buildout year. The final study area is defined as those roadway links in this table that are determined to be significantly impacted by project traffic.

Table 21-17
Significant Impacts
Roadway Facilities in Broward County

Roadway		Committed Number of Lanes	Adopted LOS	Maximum Directional Volume[1]	PM Project Traffic						Significance		Significant Impact?	
					% Assign-ment	Net New Proposed Traffic	Direction (In/Out)		Traffic					
From	To						NB/EB	SB/WB	NB / EB	SB / WB	NB/EB	SB/WB	NB / EB	SB / WB
Atlantic Boulevard														
University Drive	Riverside Drive	6LD	D	2,570	1%	39	I	O	18	21	0.7%	0.8%	No	No
Riverside Drive	Ramblewood Drive	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
Ramblewood Drive	Rock Island Road	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
Rock Island Road	NW 66th Avenue	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
NW 66th Avenue	SR 7	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
SR 7	Banks Road	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
Banks Road	Lyons Road	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
Lyons Road	Florida's Turnpike	6LD	D	2,570	2%	79	O	I	42	37	1.6%	1.4%	No	No
Florida's Turnpike	NW 31st Avenue	6LD	D	2,570	2%	79	O	I	42	37	1.6%	1.4%	No	No
NW 31st Avenue	Powerline Road	6LD	D	2,570	1%	39	O	I	21	18	0.8%	0.7%	No	No
Margate Boulevard														
Rock Island Road	NW 66th Avenue	4LD	D	1,140	0%	0	I	O	0	0	0.0%	0.0%	No	No
NW 66th Avenue	SR 7	4LD	D	1,140	1%	39	I	O	18	21	1.6%	1.8%	No	No
Coconut Creek Parkway/Hammondville Road														
SR 7	Banks Road	4LD	D	1,710	1%	39	I	O	18	21	1.1%	1.2%	No	No
Banks Road	Lyons Road	4LD	D	1,710	0%	0	I	O	0	0	0.0%	0.0%	No	No
Lyons Road	NW 31st Avenue-FTPK	4LD	D	1,710	2%	79	O	I	42	37	2.5%	2.1%	No	No
NW 31st Avenue-FTPK	Powerline Road	4LD	D	1,710	2%	79	O	I	42	37	2.5%	2.1%	No	No
Royal Palm Boulevard/Copans Road														
University Drive	Riverside Drive	4LD	D	1,860	0%	0	I	O	0	0	0.0%	0.0%	No	No
Riverside Drive	Rock Island Road	4LD	D	1,860	0%	0	I	O	0	0	0.0%	0.0%	No	No
Rock Island Road	SR 7	4LD	D	1,860	1%	39	I	O	18	21	1.0%	1.1%	No	No
SR 7	Banks Road	4LD	D	1,860	1%	39	I	O	18	21	1.0%	1.1%	No	No
Banks Road	Lyons Road	4LD	D	1,860	0%	0	I	O	0	0	0.0%	0.0%	No	No
Lyons Road	Blount Road	4LD	D	1,860	3%	118	O	I	63	55	3.4%	3.0%	No	No
Blount Road	Powerline Road	6LD	D	2,790	2%	79	O	I	42	37	1.5%	1.3%	No	No
Sample Road														
University Drive	Riverside Drive	6LD	D	2,570	3%	118	I	O	55	63	2.1%	2.4%	No	No
Riverside Drive	Rock Island Road	6LD	D	2,570	9%	354	I	O	165	189	**6.4%**	**7.3%**	**Yes**	**Yes**
Rock Island Road	SR 7	6LD	D	2,570	11%	432	I	O	202	231	**7.8%**	**9.0%**	**Yes**	**Yes**
SR 7	Banks Road	3LD (EB)	D	2,570	5%	193	I/O	-	193	-	**7.5%**	-	**Yes**	-
SR 7	Banks Road	3LD (WB)	D	2,570	7%	271	-	I/O	-	271	-	**10.5%**	-	**Yes**
Banks Road	Lyons Road	3LD (EB)	D	2,570	10%	377	I/O	-	377	-	**14.7%**	-	**Yes**	-
Banks Road	Lyons Road	3LD (WB)	D	2,570	7%	287	-	I/O	-	287	-	**11.2%**	-	**Yes**
Lyons Road	Florida's Turnpike	6LD	D	2,570	7%	283	O	I	151	132	**5.9%**	**5.1%**	**Yes**	**Yes**
Florida's Turnpike	Blount Road	6LD	D	2,570	6%	236	O	I	126	110	4.9%	4.3%	No	No
Blount Road	Powerline Road	6LD	D	2,570	5%	196	O	I	105	92	4.1%	3.6%	No	No
Wiles Road														
University Drive	Riverside Drive	4LD	D	1,710	2%	79	I	O	37	42	2.1%	2.5%	No	No
Riverside Drive	Rock Island Road	4LD	D	1,710	4%	157	I	O	73	84	4.3%	4.9%	No	No
Rock Island Road	SR 7	6LD	D	2,570	5%	196	I	O	92	105	3.6%	4.1%	No	No
SR 7	Lyons Road	2LD (EB)	D	1,860	3%	126	I/O	-	126	-	**6.8%**	-	**Yes**	-
SR 7	Lyons Road	2LD (WB)	D	1,860	6%	236	-	I/O	-	236	-	**12.7%**	-	**Yes**
Lyons Road	Powerline Road	4LD	D	1,860	9%	354	O	I	189	165	**10.1%**	**8.9%**	**Yes**	**Yes**
Sawgrass Expressway														
University Drive	SR 7	6LF	D	5,410	2%	79	I	O	37	42	0.7%	0.8%	No	No
SR 7	Lyons Road	6LF	D	5,410	2%	79	I	O	37	42	0.7%	0.8%	No	No
Lyons Road	Florida's Turnpike	6LF	D	5,410	8%	314	O	I	168	147	3.1%	2.7%	No	No
SW 10th Street														
Florida's Turnpike	Powerline Road	6LD	D	2,570	6%	236	O	I	126	110	4.9%	4.3%	No	No
Holmberg Road/Johnson Road														
University Drive	Riverside Drive	2L	D	530	1%	39	I	O	18	21	3.5%	4.0%	No	No
Riverside Drive	SR 7	2L	D	760	1%	39	I	O	18	21	2.4%	2.8%	No	No
SR 7	Lyons Road	4LD	D	1,620	2%	79	I	O	37	42	2.3%	2.6%	No	No
Hillsboro Boulevard														
Loxahatchee Road	SR 7	4LD	D	1,140	1%	39	I	O	18	21	1.6%	1.8%	No	No
SR 7	Lyons Road	6LD	D	2,790	1%	39	I	O	18	21	0.7%	0.8%	No	No
Lyons Road	Powerline Road	6LD	D	2,790	1%	39	O	I	21	18	0.8%	0.7%	No	No
University Drive														
Atlantic Boulevard	Royal Palm Boulevard	6LD	D	2,570	0%	0	I	O	0	0	0.0%	0.0%	No	No
Royal Palm Boulevard	Sample Road	6LD	D	2,570	1%	39	I	O	18	21	0.7%	0.8%	No	No
Sample Road	NW 40th Street	6LD	D	2,570	0%	0	O	I	0	0	0.0%	0.0%	No	No
NW 40th Street	Wiles Road	4LD	D	1,710	0%	0	O	I	0	0	0.0%	0.0%	No	No
Wiles Road	Sawgrass Expressway	4LD	D	1,710	0%	0	O	I	0	0	0.0%	0.0%	No	No
Sawgrass Expressway	Holmberg Road	4LD	D	1,140	0%	0	O	I	0	0	0.0%	0.0%	No	No
Riverside Drive														
Atlantic Boulevard	Royal Palm Boulevard	4LD	D	1,140	2%	79	I	O	37	42	3.2%	3.7%	No	No
Royal Palm Boulevard	Sample Road	4LD	D	1,140	2%	79	I	O	37	42	3.2%	3.7%	No	No
Sample Road	Wiles Road	4LD	D	1,140	2%	79	O	I	42	37	3.7%	3.2%	No	No
Wiles Road	Holmberg Road	4LD	D	1,140	1%	39	O	I	21	18	1.8%	1.6%	No	No
Rock Island Road														
Atlantic Boulevard	Margate Boulevard	4LD	D	1,710	1%	39	I	O	18	21	1.1%	1.2%	No	No
Margate Boulevard	Royal Palm Boulevard	4LD	D	1,710	2%	79	I	O	37	42	2.1%	2.5%	No	No
Royal Palm Boulevard	Sample Road	4LD	D	1,860	2%	79	I	O	37	42	2.0%	2.3%	No	No
Sample Road	Wiles Road	4LD	D	1,860	0%	0	O	I	0	0	0.0%	0.0%	No	No
NW 66th Avenue														
Atlantic Boulevard	NW 18th Streeet	2LU	D	530	0%	0	I	O	0	0	0.0%	0.0%	No	No
Turtle Creek Drive/Cullum Road														
Sample Road	SR 7	4LD	D	1,140	1%	39	I	O	18	21	1.6%	1.8%	No	No
SR 7	Lyons Road	2L(EB)	D	1,140	5%	187	I/O	-	187	-	**16.4%**	-	**Yes**	-
SR 7	Lyons Road	2L (WB)	D	1,140	6%	232	-	I/O	-	232	-	**20.3%**	-	**Yes**
SR 7														
Atlantic Boulevard	Margate Boulevard	6LD	D	2,570	2%	79	I	O	37	42	1.4%	1.6%	No	No
Margate Boulevard	Coconut Creek Parkway	6LD	D	2,570	3%	118	I	O	55	63	2.1%	2.4%	No	No
Coconut Creek Parkway	NW 18th Streeet	6LD	D	2,570	2%	79	I	O	37	42	1.4%	1.6%	No	No
NW 18th Street	Copans Road	6LD	D	2,570	3%	118	I	O	55	63	2.1%	2.4%	No	No
Copans Road	Sample Road	6LD	D	2,570	4%	157	I	O	73	84	2.9%	3.3%	No	No
Sample Road	Wiles Road	3LD (NB)	D	2,570	6%	244	I/O	-	244	-	**9.5%**	-	**Yes**	-
Sample Road	Wiles Road	3LD (SB)	D	2,570	5%	185	-	I/O	-	185	-	**7.2%**	-	**Yes**
Wiles Road	Sawgrass Expressway	6LD	D	2,570	11%	432	O	I	231	202	**9.0%**	**7.8%**	**Yes**	**Yes**
Sawgrass Expressway	Holmberg Road	6LD	D	2,570	6%	236	O	I	126	110	4.9%	4.3%	No	No
Holmberg Road	Hillsboro Boulevard	6LD	D	2,570	5%	196	O	I	105	92	4.1%	3.6%	No	No
Hillsboro Boulevard	Palm Beach County Line	6LD	D	2,570	4%	157	O	I	84	73	3.3%	2.9%	No	No
Banks Road														
Atlantic Boulevard	Coconut Creek Parkway	4LD	D	1,620	0%	0	I	O	0	0	0.0%	0.0%	No	No
Coconut Creek Parkway	Copans Road	4LD	D	1,620	1%	39	I	O	18	21	1.1%	1.3%	No	No
Copans Road	Sample Road	4LD	D	1,620	3%	118	I	O	55	63	3.4%	3.9%	No	No
Sample Road	Wiles Road	2L (NB)	D	1,140	8%	314	I/O	-	314	-	**27.5%**	-	**Yes**	-
Sample Road	Wiles Road	2L (SB)	D	1,140	10%	376	-	I/O	-	376	-	**33.0%**	-	**Yes**
Lyons Road														
Atlantic Boulevard	NW 6th Manor	6LD	D	2,570	4%	157	I	O	73	84	2.9%	3.3%	No	No
NW 6th Manor	Coconut Creek Parkway	4LD	D	1,710	4%	157	I	O	73	84	4.3%	4.9%	No	No
Coconut Creek Parkway	Copans Road	4LD	D	1,710	7%	275	I	O	128	147	**7.5%**	**8.6%**	**Yes**	**Yes**
Copans Road	Sample Road	4LD	D	1,710	11%	432	I	O	202	231	**11.8%**	**13.5%**	**Yes**	**Yes**
Sample Road	Wiles Road	3LD (NB)	D	2,790	12%	483	I/O	-	483	-	**17.3%**	-	**Yes**	-
Sample Road	Wiles Road	3LD (SB)	D	2,790	8%	295	-	I/O	-	295	-	**10.6%**	-	**Yes**
Wiles Road	Sawgrass Expressway	6LD	D	2,790	19%	747	O	I	398	348	**14.3%**	**12.5%**	**Yes**	**Yes**
Sawgrass Expressway	Johnson Road	6LD	D	2,790	11%	432	O	I	231	202	**8.3%**	**7.2%**	**Yes**	**Yes**
Johnson Road	Hillsboro Boulevard	6LD	D	2,790	7%	275	O	I	147	128	**5.3%**	4.6%	**Yes**	No
Hillsboro Boulevard	Palm Beach County Line	6LD	D	2,790	5%	196	O	I	105	92	3.8%	3.3%	No	No
Florida's Turnpike														
Atlantic Boulevard	Coconut Creek Parkway	8LF	D	7,480	4%	157	I	O	73	84	1.0%	1.1%	No	No
Coconut Creek Parkway	Sample Road	8LF	D	7,480	4%	157	I	O	73	84	1.0%	1.1%	No	No
Sample Road	Sawgrass Expressway	8LF	D	7,480	5%	196	O	I	105	92	1.4%	1.2%	No	No
Sawgrass Expressway	Palm Beach County Line	6LF	D	5,530	7%	275	O	I	147	128	2.7%	2.3%	No	No
NW 31st Ave-FTPK														
Atlantic Boulevard	Coconut Creek Parkway	4LD	D	1,620	0%	0	I	O	0	0	0.0%	0.0%	No	No
Blount Road														
Copans Road	Sample Road	4LD	D	1,140	1%	39	I	O	18	21	1.6%	1.8%	No	No
Powerline Road														
Atlantic Boulevard	Coconut Creek Parkway	6LD	D	2,790	2%	79	I	O	37	42	1.3%	1.5%	No	No
Coconut Creek Parkway	Copans Road	6LD	D	2,790	2%	79	I	O	37	42	1.3%	1.5%	No	No
Copans Road	Sample Road	6LD	D	2,790	2%	79	I	O	37	42	1.3%	1.5%	No	No
Sample Road	Wiles Road	6LD	D	2,790	0%	0	O	I	0	0	0.0%	0.0%	No	No
Wiles Road	SW 10th Street	6LD	D	2,790	2%	79	O	I	42	37	1.5%	1.3%	No	No
SW 10th Street	Hillsboro Boulevard	4LD	D	1,710	4%	157	O	I	84	73	4.9%	4.3%	No	No
Hillsboro Boulevard	Palm Beach County Line	4LD	D	1,710	4%	157	O	I	84	73	4.9%	4.3%	No	No

Notes:

[1] Maximum Service Volume for LOS standard determined from 2007 Quality/Level of Service Generalized Tables published by the Florida Department of Transportation.

E. Assign the trips generated by this development as shown in (B) and (C) above and show, on separate maps or tables for each phase-end year, the DRI traffic on each link of the then-existing network within the study area. Include peak-hour directional trips. If local data is available, compare average trip lengths by purpose for the project and local jurisdiction. For the year of build out and at the end of each phase estimate the percent impact, in terms of peak hour directional DRI trips/ total peak hour directional trips and in terms of peak hour directional DRI trips/ existing peak hour service volume for desired LOS, on each regionally significant roadway in the study area. Identify facility type, number of lanes and projected signal locations for the regionally significant roads.

Table 21-18 summarizes the project traffic assignment, in percent, on roadway links and segments within the final study area for 2020 buildout conditions. Additionally, information related to facility type and number of lanes is included in this table. A summary roadway level of service has been determined for each of the roadway links considering total future traffic volumes at the buildout year in comparison to generalized level of service standards. Future total volumes within the final study area are shown in Figures I-8 through I-13 in Appendix 21-I.

In addition, trip interaction is expected to occur between the project site and the adjacent Commerce Center of Coconut Creek (CC) DRI. The CC DRI is located immediately southwest of the project site in the northeast quadrant of SR 7 and Sample Road. The development plan for the adjacent site includes significant retail, hotel, and office intensities along with the Seminole Tribe of Florida casino development. As a result, a portion of trips associated with the project site is expected to originate from or be destined to the CC DRI site via transit, pedestrian, bicycle, and vehicular modes. In order to estimate the interaction between the two (2) DRIs an internal capture analysis was performed based on data and procedures established in the Institute of Transportation Engineers' *Trip Generation Handbook*, Second Edition. The trip reduction associated with this interaction was in excess of 10 percent. As a result, a 10 percent reduction was applied to the net new external trips for the DRI as agreed to by the Florida Department of Transportation. Furthermore, mode split for each land use type was applied consistent with the DRI trip generation. A summary of this analysis is included in Appendix 21-F. The inter-DRI internal capture trips are shown in Table 21-19. The vehicular mode volumes for each land use are included as part of the driveway trip assignment presented in Appendices 21-B and 21-I.

Table 21-18
PM Peak Hour Link Analysis

Roadway		Committed Number of Lanes	Adopted LOS	Maximum Directional Volume	Project Traffic			Existing		Area-Wide Average Growth Rate	Background Growth (Area Growth Rate)		Committed Traffic		1/2 Growth Rate		Committed Traffic + 1/2 Growth Rate		2020 Background Traffic		Adjusted Background Volume[2]		2020 Total Peak Hour Volume		2020 V/C Ratio		2020 Level of Service	
								PM Peak Volumes																			
From	To				% Assignment	NB/EB Project Trips	SB/WB Project Trips	NB/EB	SB/WB		NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Sample Road																											
Riverside Drive	Rock Island Road	6LD	D	2,570	9%	165	189	1,966	2,360	1.3%	368	442	455	395	173	207	628	602	2,594	2,962	2,594	2,962	2,759	3,151	1.07	1.23	F	F
Rock Island Road	SR 7	6LD	D	2,570	11%	202	231	1,514	2,370	1.3%	284	444	374	300	133	208	507	508	2,021	2,933	1,922	2,766	2,124	2,997	0.83	1.17	D	F
SR 7	Banks Road	3LD (EB)	D	2,570	5%	190	-	3,451	-	1.3%	647	-	357	-	333	-	990	-	4,111	-	3,910	-	4,100	-	1.60	-	I	-
SR 7	Banks Road	3LD (WB)	D	2,570	7%	-	271	-	2,246	1.3%	-	421	-	399	-	197	-	596	-	2,842	-	2,680	-	2,951	-	1.15	-	F
Banks Road	Lyons Road	3LD (EB)	D	2,570	10%	377	-	3,451	-	1.3%	647	-	330	-	308	-	642	-	4,008	-	3,807	-	4,274	-	1.66	-	F	-
Banks Road	Lyons Road	3LD (WB)	D	2,570	7%	-	267	-	2,246	1.3%	-	421	-	379	-	197	-	576	-	2,821	-	2,660	-	2,947	-	1.15	-	F
Lyons Road	Florida's Turnpike	6LD	D	2,570	7%	151	132	3,336	1,713	1.3%	625	321	360	270	293	151	653	421	3,989	2,134	3,742	1,981	3,893	2,113	1.51	0.82	F	D
Wiles Road																											
SR 7	Lyons Road	2LD (EB)	D	1,860	3%	126	-	691	-	1.3%	129	-	42	-	61	-	103	-	820	-	860	-	986	-	0.53	-	B	-
SR 7	Lyons Road	2LD (WB)	D	1,860	6%	-	236	-	1,008	1.3%	-	189	-	51	-	89	-	140	-	1,197	-	1,265	-	1,501	-	0.81	-	B
Lyons Road	Powerline Road	4LD	D	1,860	9%	189	165	477	901	1.3%	89	96	70	49	42	26	112	75	1401[1]	1765[1]	1401[1]	1765[1]	1,590	1,930	0.85	1.04	C	F
Turtle Creek Drive/Cullum Road																											
SR 7	Lyons Road	2I (FR)	D	1,140	5%	187	-	146	-	1.3%	27	-	248	-	13	-	261	-	1802[1]	-	1802[1]	-	1,480	-	1.31	-	F	-
SR 7	Lyons Road	2L (WB)	D	1,140	6%	-	232	-	210	1.3%	-	39		358	-	18	-	376	-	1039[1]	-	1039[1]	-	1,265	-	1.11	-	E
SR 7																											
Sample Road	Wiles Road	3LD (NB)	D	2,570	6%	244	-	2,278	-	1.3%	427	-	180	-	200	-	380	-	2,705	-	2,658	-	3,082	-	1.20	-	F	-
Sample Road	Wiles Road	3LD (SB)	D	2,570	5%	-	185	-	2,100	1.3%	-	394	-	234	-	185	-	419	-	2,519	-	2,662	-	2,847	-	1.11	-	F
Wiles Road	Sawgrass Expressway	6LD	D	2,570	11%	231	202	2,033	2,649	1.3%	381	496	202	147	179	233	381	380	2,414	3,145	2,414	3,145	2,640	3,347	1.03	1.30	F	F
Banks Road																											
Sample Road	Wiles Road	2I. (NB)	D	1,140	8%	314	-	46	-	1.3%	9	-	82	-	4	-	86	-	451[1]	-	451[1]	-	765	-	0.67	-	D	-
Sample Road	Wiles Road	2I. (SB)	D	1,140	10%	-	376	-	51	1.3%	-	10	-	20	-	4	-	29	-	668[1]	-	668[1]	-	944	-	0.83	-	D
Lyons Road																											
Coconut Creek Parkway	Copans Road	4LD	D	1,710	7%	128	147	1,948	1,548	1.3%	364	289	90	107	171	186	261	248	2,807	1,832	2,807	1,832	2,436	1,979	1.42	1.16	F	F
Copans Road	Sample Road	4LD	D	1,710	11%	202	231	1,801	1,425	1.3%	354	267	141	186	166	120	307	311	2,245	1,736	2,245	1,736	2,447	1,967	1.43	1.15	F	F
Sample Road	Wiles Road	3LD (NB)	D	2,790	12%	403	-	2,266	-	1.3%	425	-	279	-	199	-	478	-	2,744	-	2,744	-	3,227	-	1.16	-	F	-
Sample Road	Wiles Road	3LD (SB)	D	2,790	8%	-	295	-	1,706	1.3%	-	320	-	267	-	150	-	407	-	2,113	-	2,113	-	2,408	-	0.86	-	C
Wiles Road	Sawgrass Expressway	6LD	D	2,790	19%	398	348	1,641	2,529	1.3%	308	474	175	156	144	222	319	378	1,960	3,003	1,960	3,003	2,358	3,351	0.85	1.20	C	F
Sawgrass Expressway	Johnson Road	6LD	D	2,790	11%	231	202	1,713	2,326	1.3%	321	436	109	107	151	204	260	311	2,034	2,762	2,034	2,762	2,265	2,964	0.81	1.06	D	F
Johnson Road	Hillsboro Boulevard	6LD	D	2,790	7%	147	128	1,866	2,407	1.3%	350	451	113	85	164	212	277	297	2,216	2,858	2,216	2,858	2,363	2,986	0.85	1.07	C	F

Notes:

[1] Background volumes taken from 2020 SERPM Model.
[2] Background volumes include adjustment for extension of Wiles Road.

Table 21-19 Inter-DRI Trip Assignment				
Land Use	**Mode of Travel**	**P.M. Peak Hour**		
		Enter	**Exit**	**Total**
Residential	Vehicular Mode (9%)	42	26	68
	Transit/Non-Vehicular Mode (1%)	5	3	8
Retail	Vehicular Mode (9.5%)	121	132	253
	Transit/Non-Vehicular Mode (0.5%)	6	7	13
Office	Vehicular Mode (9%)	8	39	47
	Transit/Non-Vehicular Mode (1%)	1	4	5
Total	Vehicular Mode	171	197	368
	Transit/Non-Vehicular Mode	12	14	26
		183	211	394

Additionally, the study intersections in this corridor were analyzed for total future traffic volumes as agreed upon in the study methodology. Table 21-20 summarizes the result of these analyses for 2020 buildout conditions. The intersection analysis worksheets for both 2020 non-project and total conditions are included in Appendices 21-J and 21-K, respectively.

Table 21-20
Buildout PM Peak Hour
Intersection and Approach Level of Service

Intersection	Non-Project						With Project					
	Intersection LOS	Intersection Delay (sec.)	Approach LOS				Intersection LOS	Intersection Delay (sec.)	Approach LOS			
			EB	WB	NB	SB			EB	WB	NB	SB
Sample Rd and Riverside Dr	F	88.8	F	F	E	E	F	100.5	F	F	E	E
Sample Rd and Holiday Springs Blvd	D	47.0	B	E	E	E	E	58.6	C	F	E	E
Sample Rd and Rock Island Rd	D	45.3	D	C	E	E	D	51.7	E	D	E	E
Sample Rd and Turtle Run Blvd	C	33.9	B	D	C	C	D	52.3	B	F	C	C
Sample Rd and NW 62nd Ave/Turtle Creek Dr	D	41.8	C	C	F	E	D	45.1	C	D	F	E
Sample Rd and SR 7	C	22.0	B	C	N/A	N/A	C	25.6	B	C	N/A	N/A
Sample Rd and NW 54th Ave[4]	E	56.9	C	C	D	F	D	37.4	D	E	C	D
Sample Rd and Banks Rd[4]	(1)	(1)	C[2]	E[2]	C	C	C	24.7	C	B	E	F
Sample Rd and Lyons Rd	F	115.8	D	D	F	F	F	146.8	E	D	F	F
Sample Rd and NW 42nd Ave	D	51.9	B	E	D	D	E	73.3	C	F	D	D
Sample Rd and Tradewinds Park Rd	B	12.1	B	A	E	E	B	18.0	C	B	E	E
Sample Rd and Florida's Turnpike	E	58.1	F	D	D	N/A	E	74.4	F	D	E	N/A
NW 40th St and NW 54th Ave	(1)	(1)	F	D	A[2]	A[2]	(1)	(1)	F	F	A[2]	A[2]
Wiles Rd and SR 7	F	100.4	D	F	F	F	F	131.0	D	F	F	F
Wiles Rd and Banks Rd[4]	(1)	(1)	(3)	B[2]	D	N/A	C	27.1	A	C	E	N/A
Wiles Rd and Lyons Rd	F	97.3	E	F	F	E	F	142.1	E	F	F	F
Wiles Rd and Powerline Rd	F	289.5	F	F	D	D	F	333.0	F	F	D	D
NW 31st St and SR 7	D	46.1	E	E	C	E	D	50.4	E	E	C	E
NW 40th St and SR 7	(1)	(1)	N/A	C	(3)	(3)	(1)	(1)	N/A	E	(3)	(3)
Cullum Rd/Turtle Creek Dr and SR 7	C	26.4	F	D	B	B	C	30.9	F	E	C	B
Winston Park Blvd and SR 7	C	34.9	E	F	C	C	C	39.4	E	F	D	C
Sawgrass Expressway (NB) and SR 7	A	3.3	N/A	N/A	A	A	A	3.5	N/A	N/A	A	A
Sawgrass Expressway (SB) and SR 7	A	4.2	N/A	N/A	A	A	A	4.8	N/A	N/A	A	A
Coconut Creek Pkwy and Lyons Rd	F	99.2	D	F	F	E	F	109.3	D	F	F	F
Lyons Plaza and Lyons Rd	B	13.4	E	N/A	B	A	B	14.7	E	N/A	B	A
Wynmoor Way and Lyons Rd	C	21.0	E	E	C	A	C	23.4	E	E	C	B
Copans Rd and Lyons Rd	F	100.5	D	F	F	E	F	120.1	D	F	F	F
NW 34th St and Lyons Rd	B	13.9	E	E	A	B	B	18.7	E	E	B	C
Winston Park Blvd and Lyons Rd	E	61.0	E	E	D	E	F	104.4	E	E	F	E
Sawgrass Expressway (NB) and Lyons Rd (NB)	E	56.3	A	N/A	C	F	D	54.7	A	N/A	C	F
Sawgrass Expressway (NB) and Lyons Rd (SB)	B	18.3	D	N/A	N/A	B	C	23.4	D	N/A	N/A	C
Sawgrass Expressway (SB) and Lyons Rd (NB)	C	25.3	N/A	E	B	N/A	C	28.3	N/A	E	B	N/A
Sawgrass Expressway (SB) and Lyons Rd (SB)	C	21.3	N/A	A	E	C	C	24.4	N/A	B	E	C
Sawgrass Boulevard and Lyons Road	D	49.1	C	C	B	E	E	66.9	C	C	B	F
Holmberg Rd and Lyons Rd	D	50.7	C	C	C	E	E	65.1	C	C	C	F
Hillsboro Blvd and Lyons Rd	E	65.7	E	F	D	D	E	67.6	E	F	D	D

Project Access Locations

Intersection	With Project					
	Intersection LOS	Intersection Delay (sec.)	Approach LOS			
			EB	WB	NB	SB
Cullum Road and Lyons Road	A	6.5	E	E	A	A
Jardin Driveway and Lyons Road	A	3.4	E	N/A	A	A
Uptown Driveway and Lyons Road	C	34.0	E	N/A	D	B
Fisherman's Landing Driveway and Lyons Road	C	21.4	A	C	N/A	F
Cullum Road and NW 54th Avenue	(1)	(1)	B[5]	B[5]	B[5]	B[5]
Cullum Road and Banks Road	(1)	(1)	B[5]	B[5]	B[5]	B[5]

Notes:
(1) Overall LOS at two-way stop controlled intersections, one way stop-controlled intersections, or traffic circles is not defined.
(2) Approach reflects the left-turn movement only, the through movement operates under free-flow conditions.
(3) Approach operates under free-flow conditions. LOS is not defined.
(4) Proposed signalization with project.
(5) LOS presented is worse LOS on each leg of traffic circle.

Additionally, a detailed analysis of the limited access ramps on significant roadways was prepared. The summary of the results are provided in Table 21-21. The project is not anticipated to be significant on any limited access ramps. Furthermore, all analyzed ramps are expected to meet adopted level of service standards.

Table 21-21
Limited Access Ramp Analysis
Intersection Level of Service - With Improvements

Intersection	Project Traffic	Significant[1]	Future Total Volume	Capacity
Sawgrass Expressway (NB on-ramp) and SR 7	42	No	458	1,761
Sawgrass Expressway (NB off-ramp) and SR 7 (NB)	0	No	688	1,761
Sawgrass Expressway (NB off-ramp) and SR 7 (SB)	37	No	233	1,761
Sawgrass Expressway (SB off-ramp) and SR 7 (NB)	0	No	332	1,761
Sawgrass Expressway (SB off-ramp) and SR 7 (SB)	37	No	397	1,761
Sawgrass Expressway (SB on-ramp) and SR 7	42	No	830	1,761
Sawgrass Expressway (NB) and Lyons Rd (NB)	126	No	683	1,761
Sawgrass Expressway (NB) and Lyons Rd (SB)	0	No	513	1,761
Sawgrass Expressway (SB) and Lyons Rd (NB)	110	No	783	1,761
Sawgrass Expressway (SB) and Lyons Rd (SB)	0	No	584	1,761
Turnpike Ramp (NB on-ramp) and Sample Road	189	No	2,152	3,244
Turnpike Ramp (NB off-ramp) and Sample Road	165	No	1,515	3,244

[1] Project traffic volumes on limited access facility ramps are determined to exceed 200 directional trips per lane.

F. Based on the assignment of trips as shown in (D) and (E) above, what modifications in the highway network (including intersections) will be necessary at the end of each phase of development, to attain and maintain local and regional level of service standards? Identify which of the above improvements are required by traffic not associated with the DRI at the end of each phase. For those improvements which will be needed earlier as a result of the DRI, indicate how much earlier. Where applicable, identify Transportation System Management (TSM) alternatives (e.g., signalization, one-way pairs, ridesharing, etc.) that will be used and any other measures necessary to mitigate other impacts such as increased maintenance due to a large number of truck movements.

For the intersections that were evaluated, all of the intersections that are projected to not meet level of service standards (i.e., those intersections that will be at LOS E or F), with the exception of Sample Road & Holiday Springs Boulevard, Sample Road & NW 42nd Avenue, Sawgrass Boulevard & Lyons Road, Holmberg Road & Lyons Road, are expected to be at LOS E or F without this project. Several of these deficiencies can be resolved with optimized signal timing. However, several mitigation measures have been identified to maintain intersection operation at an acceptable level of service.

Table 21-22 summarizes recommended intersection improvements to achieve adopted level of service standards. Note that signal timings were optimized throughout the study area. Table 21-23 summarizes the intersection level of service within the study area after recommended improvements. Relevant data is included in Appendix 21-L.

Table 21-22
Summary of Intersection Improvements

Intersection	Proposed Improvements
Sample Rd and Riverside Dr	EBRT, WBRT, WBLT, overlap phase for NBRT
Sample Rd and NW 54th Ave	SBLT, overlap phase for NBRT and SBRT
Sample Rd and Banks Rd	NBLT, NBT, SBLT, SBT
Sample Rd and Lyons Rd	EBLT, EBRT, WBT, 2 WBRT, 2 NBLT, NBT, SBLT, SBT, SBRT, overlap phase for
Sample Rd and NW 42nd Ave	EBT, WBT
Sample Rd and Florida's Turnpike	NBLT
Wiles Rd and SR 7	EBLT, WBLT, WBT, NBLT, SBRT, overlap phase for all approaches
Wiles Rd and Lyons Rd	EBLT, EBT, EBRT, WBLT, WBT, WBRT, NBLT, NBT, NBRT, SBLT, 2 SBRT, RT
Wiles Rd and Powerline Rd	EBLT, EBT, WBLT, 2 WBT, WBR, NBLT, NBT, NBRT, SBLT, SBT, overlap phase for
Coconut Creek Pkwy and Lyons Rd	WBT, NBT, SBT, overlap phase for WBRT and NBRT
Copans Rd and Lyons Rd	WBT, NBT, SBT
Winston Park Blvd and Lyons Rd	Restripe WB approach to WBLT, WBT, WBT/RT, Prot/Perm EB/WBLT
Hillsboro Blvd and Lyons Rd	overlap phase for WBRT and NBRT

Table 21-23
Buildout PM Peak Hour
Intersection Level of Service - With Improvements

Intersection	Intersection LOS	Intersection Delay (sec.)
Sample Rd and Riverside Dr	D	52.9
Sample Rd and Holiday Springs Blvd	D	54.5
Sample Rd and Rock Island Rd	D	48.5
Sample Rd and Turtle Run Blvd	D	52.3
Sample Rd and NW 62nd Ave/Turtle Creek Dr	D	45.1
Sample Rd and SR 7	C	25.6
Sample Rd and NW 54th Ave	D	54.9
Sample Rd and Banks Rd	C	25.6
Sample Rd and Lyons Rd	D	47.5
Sample Rd and NW 42nd Ave	B	17.5
Sample Rd and Tradewinds Park Rd	B	19.4
Sample Rd and Florida's Turnpike	D	49.1
NW 40th Street and NW 54th Avenue	D	37.4
Wiles Rd and SR 7	D	54.7
Wiles Rd and Banks Rd	C	29.4
Wiles Rd and Lyons Rd	D	52.9
Wiles Rd and Powerline Rd	D	54.8
NW 31st St and SR 7	D	51.5
Cullum Rd/Turtle Creek Dr and SR 7	C	32.7
Winston Park Blvd and SR 7	D	39.4
Sawgrass Expressway (NB) and SR 7	A	3.5
Sawgrass Expressway (SB) and SR 7	A	4.8
Coconut Creek Pkwy and Lyons Rd	D	54.9
Lyons Plaza and Lyons Rd	B	15.0
Wynmoor Way and Lyons Rd	C	24.2
Copans Rd and Lyons Rd	D	51.9
NW 34th St and Lyons Rd	B	16.1
Winston Park Blvd and Lyons Rd	D	54.3
Sawgrass Expressway (NB) and Lyons Rd (NB)	D	37.9
Sawgrass Expressway (NB) and Lyons Rd (SB)	C	21.9
Sawgrass Expressway (SB) and Lyons Rd (NB)	C	34.3
Sawgrass Expressway (SB) and Lyons Rd (SB)	C	23.7
Sawgrass Boulevard and Lyons Road	D	54.1
Holmberg Rd and Lyons Rd	D	52.7

Some of the significantly impacted roadway segments in Table 21-18 were shown to exceed the generalized level of service standards published by the Florida Department of Transportation in its *2007Generalized Quality/Level of Service* Tables. These generalized level of service tables do not take into account the specific operating characteristics of these roadways that affect the actual level of service on these roadway facilities. Therefore, to evaluate actual level of service conditions on the roadway segments that are projected to operate at LOS E or F when compared to the generalized LOS tables, a detailed arterial analysis was performed for these roadway segments. These analyses were performed taking into account the intersection improvements identified previously in order to determine whether or not the roadways are anticipated to operate at an acceptable level of service.

Arterial analysis worksheets provided using Synchro are included in Appendix 21-M. Table 21-24 summarizes the overall results of the analyses performed for each of the arterial segments.

Table 21-24
Arterial Level of Service With Improvements

Arterial Segment	Direction	Arterial Speed (mph)	Level of Service
Lyons Road from Coconut Creek Parkway to Hillsboro Boulevard	NB	18.5	D
	SB	18.0	D
SR 7 from NW 31st Street to Sawgrass Expressway	NB	26.6	D
	SB	22.5	D
Sample Road from Riverside Drive to Florida's Turnpike	EB	20.7	D
	WB	17.7	D
Wiles Road from SR 7 to Powerline Road	EB	24.4	C
	WB	23.8	C

This analysis demonstrates that, with the specific intersection improvements in place that are outlined in this analysis, the significantly impacted roadway segments are expected to operate at an acceptable level of service.

Transit Concurrency

As outlined in the Broward County Comprehensive Plan, Broward County has established three types of Concurrency Districts: Transit-Oriented Concurrency Districts, Community Design Concurrency Districts, and Standard Concurrency Districts. The project site lies within the "North Central District," which is a transit-oriented concurrency district. The North Central District is generally bounded on the east by Florida's Turnpike, on the south by Commercial Boulevard and NW 44th Street, on the west by Conservation Area, and on the north by Sawgrass Expressway and Palm Beach County. As defined in the Broward County Comprehensive Plan:

Policy 3.4.2 The concurrency management system shall establish the following transportation level of service (LOS) standards: Within the subject transit oriented concurrency districts, the transportation LOS standards, for the purpose of issuing development orders and permits, are to achieve and maintain the following by FY 2009:

- **Achieve headways of 30 minutes or less on 90 percent (90%) of routes.**
- **Establish at least one neighborhood transit center.**
- **Establish at least one additional community bus route.**
- **Expand coverage area to 53 percent (53%).**
- **Increase number of bus stop shelters by 30 percent.**
- **Maintain the maximum service volumes on arterial roadways within each District, as displayed below:**

Peak Hour Two Way Maximum Service Volumes	
Roadway Type	**Maximum Service Volumes**
Two-lane arterials	2,555
Four-lane arterials	5,442
Six-lane arterials	8,190
Eight-lane arterials	10,605

The Maximum Service Volumes are calculated from "Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Area", published by the Florida Department of Transportation, as 75% above the volumes for Class IV State Two-Way Arterials, for Level of Service E, for the Eastern Core District; and as 75% above the volumes for Class II State Two-Way Arterials, for Level of Service D, for all other districts.

Fourteen (14) separate Broward County transit routes currently travel at least a portion of the roadway network within some portion of the North Central Transit-Oriented Concurrency District. These routes and existing headways are listed in Table 21-25:

Table 21-25 Existing Transit Route Information		
Route	**Headway (peak hour)**	**Route includes a portion of a significantly impacted roadway?**
Route 2	20 min	No
Route 18	15 min	Yes
Route 31	20 min	Yes
Route 34	30 min	Yes
Route 42	30 min	No
Route 48	45 min	Yes
Route 55	40 min	No
Route 57	80 min	No
Route 60	20 min	No
Route 62	30 min	No
Route 81	30 min	No
Route 83	25 min	No
Route 88	30 min	No
Route 441 Breeze	30 min	Yes

Currently, 79 percent (79%) of the routes (11of the 14) that travel within at least a portion of the North Central District have headways of 30 minutes or less. Of the 5 routes that travel on at least a portion of a significantly impacted roadway, 80% (4 of 5) have headways of 30 minutes or less. The adopted level of service standard for this district requires that 90 percent (90%) of the routes in the district achieve headways of 30 minutes or less by 2009. This standard is currently not met.

Based upon Broward County's transit-oriented LOS requirements, the Applicant will be required to mitigate traffic generated by the site through the payment of Transit-Oriented Concurrency (TOC fees) based upon the number of trips generated by the site. According to the current rates, the TOC fee to be paid by the Applicant is approximately $6.1 million. It should be noted that Broward County is currently revising the Comprehensive Plan and Land Development Code to alter the current concurrency system. This new system will find both capital improvement transit projects and Broward County Traffic Engineering projects throughout each district. The fees are currently expected to be reduced by approximately one-third of the current rate.

The adopted level of service standards also require that a neighborhood transit center be established within this district. An enhancement that will be implemented by the Applicant is the consolidation of nearby existing bus stops into a transit "superstop"

on the east side of NW 54th Avenue adjacent to the site. This subject is further addressed in the response to Question 21-I. As described previously, the proposed DRI is located within the North Central District of Broward County's Transit Oriented Concurrency system. Within this system, transportation improvements are focused on the enhancement of transit capacity and service. In addition to the neighborhood center, the standards also require the expansion of the transit service area to 53 percent (53%) in the North Central District and that bus shelters countywide be increased by 30 percent (30%) by 2009.

G. Identify the anticipated number and general location of access points for driveways, median openings and roadways necessary to accommodate the proposed development. Describe how the applicant's access plan will minimize the impacts of the proposed development and preserve or enhance traffic flow on the existing and proposed transportation system. This information will assist the applicant and governmental agencies in reaching conceptual agreement regarding the anticipated access points. While the ADA may constitute a conceptual review for access points, it is not a permit application and, therefore, the applicant is not required to include specific design requirements (geometry) until the time of permit application.

The development will have direct or indirect access to all adjacent major roadways consisting of State Road 7, Wiles Road, Lyons Road, Sample Road, and numerous programmed roadway improvements including Banks Road and Cullum Road. Furthermore, all internal and external access points will include the appropriate pedestrian and bicycle facilities to provide connectivity to the adjacent transportation network. The following sections summarize access to the propose development.

Sample Road (via NW 54th Avenue)

Access to Sample Road is proposed via NW 54th Avenue. Project traffic will utilize several access points on internal roadways to access the existing full access signalized intersection located on Sample Road at NW 54th Avenue. Further information regarding access to NW 54th Avenue/Cullum Road is in this section. Additional access to Sample Road is proposed at Banks Road. As part of the development, Banks Road will be extended north to connect to Wiles Road as well as intersect with the Cullum Road extension to Wiles Road. Recognizing that Banks Road is classified as a Broward County Trafficway and a City Collector, the Applicant proposes to convert the existing directional median opening into a full access connection. A third full access connection is proposed at the existing median opening currently serving Fisherman's Drive along the south side of Sample Road. The proposed development plans to maintain the existing full access connection at this location.

State Road 7 (via Cullum Road/NW 40th Street)

Access to State Road 7 is proposed via Cullum Road and NW 40th Street. Project traffic

will utilize the existing full access signalized intersection located on State Road 7 at Cullum Road/Turtle Creek Drive. Access to State Road 7 from NW 40th Street is proposed to remain as a right-in/right-out connection. Additional information regarding access to NW 54th Avenue/Cullum Road is explained further in this section.

Wiles Road (via Banks Road)

Access is proposed via the existing northern leg of Banks Road that extends 100 feet south from Wiles Road near Monarch High School. The proposed development is expected to complete the southern section of Banks Road to Sample Road intersecting with Cullum Road. The existing full access intersection on Wiles Road at Bank Road will be maintained and signalized when warranted.

Lyons Road

Access to Lyons Road is proposed at three (3) locations. The northernmost access point is proposed via the extension/construction of Cullum Road from NW 54th Avenue to Lyons Road. The proposed full access connection aligns with a full median opening currently serving NW 42nd Drive. The southernmost access connection along Lyons Road is proposed to align with the existing full median opening serving the Riviera Pointe residential condominium development. An additional access connection is proposed at a full access median opening located at approximately 4150 Lyons Road between NW 42nd Drive and Riviera Pointe's access. The proposed development intends to maintain the existing median openings on this County maintained roadway and signalize them as warranted.

NW 54th Avenue/Cullum Road

Numerous access points to NW 54th Avenue and Cullum Road to serve specific development parcels within the project are proposed. It should be noted that the location and the uses which these driveways serve is preliminary at this time. Therefore, the analysis of project driveways was limited to a proposed roundabout intersection of Cullum Road and NW 54th Avenue. The detailed analysis of the driveway connections along the remainder of NW 54th Avenue will be performed during the permitting process as the City of Coconut Creek maintains the subject roadway.

Projected volumes at each point of access are shown in Figure I-2 and Figure I-8 in Appendix I. Table 21-13, provided earlier in this report, summarizes the projected level of service at each of the project access points with the proposed configuration. For stop-controlled intersections, no overall level of service is provided; therefore, the level of service reported is the level of service for the approach or movement with the highest delay.

H. If applicable, describe how the project will complement the protection of existing, or development of proposed, transportation corridors designated by local governments in their comprehensive plans. In addition, identify what commitments will be made to protect the designated corridors such as inter-local agreements, right-of-way dedication, building set-backs, etc.

The project will complement the protection of existing transportation corridors by dedicating the required right-of-way for portions of Cullum Road, Banks Road, and additional public streets within the development consistent with the City of Coconut Creek's MainStreet Standards, The Applicant will also provide additional right-of way as required at the proposed project access points along the adjacent roadways to provide for right-turn deceleration lanes into project driveways. No other right-of-way dedication is proposed.

I. What provisions, including but not limited to sidewalks, bicycle paths, internal shuttles, ridesharing and public transit, will be made for the movement of people by means other than private automobile? Refer to internal design, site planning, parking provisions, location, etc.

The following sections summarizing the design criteria, framework, and features of the proposed development as it relates to modes of travel other than single-occupant vehicles:

<u>Standards and Policies</u>

The DRI is located within the City of Coconut Creek's Main Street Regional Activity Center. As a result, the proposed development will adhere to the applicable standards included in the City of Coconut Creek's Comprehensive Plan and the MainStreet Design Standards. Although the conceptual site plan is in the preliminary stages, the final development order will be subject to the applicable policies and requirements outlined in both of these standards. Several of these policies address issues that are related to non-vehicular modes of transportation. The following sections summarize these policies.

City of Coconut Creek Comprehensive Plan

- **Future Land Use Element Policy II-9.2.2 In developing the designated MainStreet Regional Activity Center, as well as in evaluating future application of this land use category, the use of non-motorized transportation and mass transit to serve the area and reduce reliance upon automobile travel shall be encouraged. (B.C.P.C. 10.02.02).**

- **Future Land Use Element Policy II-9.2.3 To facilitate public transit access, the integrated transportation systems shall be encouraged to serve the MainStreet**

Regional Activity Center and shall be a consideration in evaluating the creation of additional Regional Activity Centers. (B.C.P.C. 10.02.03)

- **Future Land Use Element Policy II-9.2.4 To enhance pedestrian movement and safety, the separation of pedestrian and vehicular traffic shall be encouraged within any designated Regional Activity Center. (B.C.P.C. 10.02.04)**

- **Transportation Element Policy III-1.6 The City shall identify, seek matching funds and otherwise provide for the implementation of Transportation System Management (TSM) strategies designed to improve system efficiency and safety, such as improvements to road conditions and intersections, and computerized traffic signals by such means as requesting signalization timing reviews by Broward County Traffic Engineering, imposing development approval conditions through the development review and permitting process, and cooperating with Broward County and FDOT through courtesy permit and monitoring procedures.**

- **Transportation Element Policy III-1.7 The City shall support Transportation Demand Management (TDM) strategies to improve efficiency of the roadways by increasing the vehicle occupancy rate and reducing the number of per capita vehicle miles traveled on the roadway network. The City shall support regional ridesharing programs and other public and private ridesharing efforts, and encourage the development of ridesharing support services such as park and ride facilities and carpool and vanpool matching programs.**

MainStreet Design Standards

The following sections summarize the applicable portions of the MainStreet Design Standards. Full versions of these Standards, are available at the following website: http://www.coconutcreek.net/pdf/Final_Design_Standards.pdf.

Streetscapes

The MainStreet Design Standards outline the following design criteria for streetscapes:

- **4' wide bike lanes in applicable locations**
- **Adequate buffer planting including appropriately spaced shade trees and hedges**
- **Other streetscape amenities including benches, bike racks**
- **Bulb-outs in areas of parallel parking with appropriate shrubs and trees**
- **Reduced travel lane widths**
- **Appropriate lighting for banners, pedestrian lighting, and street lighting**

In response to these criteria, four (4) different roadway cross-sections within the proposed development are proposed:

- **Street Type A (126' ROW) – 13' Sidewalks, 20' Median, four 11' travel lanes, 18' 45-degree angled parking**
- **Street Type B (126 ROW) – 14' Sidewalks, 10' Median, four 11' travel lanes, 4' bike paths, 2 rows of 18' 45-degree parking**
- **Street Type C (174'to 214' ROW) – 19' Sidewalk along commercial edges, one 10' sidewalk along lakeside edge, 14' median, two 11' travel lanes, two 8'parallel parking, 90-'140' wide park**
- **Street Type D (73' ROW) – 14'-21' Sidewalks, two 11' travel lanes, two 8' parallel parking**

In addition, other pedestrian features outlined in the MainStreet Design Standards including pedestrian amenities (benches, trash receptacles, etc.), trees and plantings, pedestrian crossings, and lighting are proposed. Traffic calming features including roundabouts to slow traffic down and to encourage alternative modes of travel will also be considered where applicable. These criteria are designed to provide an enhanced pedestrian experience throughout the development.

Plazas

The MainStreet Design Standards outline the criteria for public plazas. This guidance includes providing habitable spaces during the summer months, responding to pedestrian circulation corridors and providing enhanced views. Requirements include the following:

- **Provide easy access to plazas by creating clear paths and well marked crosswalks**
- **Create a variety of seating and viewing opportunities**
- **Encourage programmed uses in the plaza area.**

These guidelines further the goals and objectives of making the proposed development extremely pedestrian and bicycle friendly. The proposed development will recognize the importance of plazas as it relates to encouraging alternative modes of travel within the site, making the development more attractive to visit and travel within the development without the use of a private automobile.

Buildings

The MainStreet Design Standards outline several principles for the buildings within the development. More specifically, the principles encourage the buildings to be linked to the street activities and provide pedestrian oriented uses on the street level. Additionally, a focus of these criteria is to require the majority of parking to be

provided behind buildings within screened parking garages.

As required by MainStreet Design Standards District Classification, the proposed architecture should employ appropriate building scale, massing and articulation. Specific building elements and dimensions define the architectural spatial qualities of the project. Attention to detail is encouraged at all areas and will be developed at the pedestrian level and areas of high visibility.

The Standards provide a variety of development density criteria depending on the Sub-District within the MainStreet area. Overall, the Standards encourage mixed-use development similar to more urbanized areas. In addition, the Standards provide for reduced maximum setbacks along transportation corridors in an effort to encourage pedestrian activity. Furthermore, the Standards outline requirements for awnings, canopies, or arcades along all commercial street frontage to provide pedestrians with additional protection from the weather.

Landscaping

A pedestrian/bicycle friendly environment through landscaping and site amenities creating pleasing and comfortable outdoor spaces is proposed. The landscape architecture concept will respond to the specific site and to the South Florida weather. Particular focus will be to shelter these modes of travel from the heat/sun by offering natural canopies to stimulate pedestrian movement.

Transit

In addition to the mix of land uses which provide a supportive environment for transit, a number of design elements will foster a virtual transit-oriented development are proposed. A key transit design feature is the proposed transit superstop located along the east side of NW 54th Avenue. The location of the proposed superstop along the perimeter ring road network for the Sample Road/State Road 7 urban interchange provides opportunities for site visitors, employees, and residents to access transit routes in all directions. Additionally, it will provide an important transfer point for existing transit riders to change routes. In addition to the three (3) conventional Broward County Transit routes (Routes 18, 31, and 34) and the two (2) community bus routes (Routes N and S), the superstop can be served by the existing Breeze Limited Stop Service currently operating on State Road 7 and a portion of the existing perimeter ring road network (NW 62nd Avenue). The Breeze Route currently terminates at the Sample Road/State Road 7 interchange.

A transit superstop represents a mid-range transit facility serving as a neighborhood focal point and/or community center. Superstops are facilities with a focus on community conveniences in commercial or mixed-use land types. Direct and convenient access to the Main Street at Coconut Creek will be provided at the large

entry plaza. Amenities, typical for a superstop type facility, are anticipated to be incorporated into the design. Typical superstop amenities include signage, specialty paving, passenger shelters, system maps/fare information, seating, vending machines, courtesy telephones, lighting, bicycle storage, bus bays, etc.

Additionally, a community shuttle service is planned when warranted. The Applicant plans to coordinate with the City of Coconut Creek and Broward County Transit to develop and implement a community shuttle service operating both within the development and to adjacent destinations. It is anticipated that the shuttle would also provide connections from various locations within the development to the proposed superstop to facilitate ridership transfers for residents, patrons, and employees.

Transportation Demand Management

In addition to the previously described design elements, travel management for the development will also be transit-oriented. Transportation Demand Management (TDM) is a term which describes a broad range of strategies for reducing the use of single occupant vehicles as the primary mode of transportation for commuters. These strategies typically focus on measures that can be implemented by individual employers or development managers, but the strategies can also be implemented on an area-wide basis through transportation management associations (TMA) or commuter assistance programs (CAP). Effective TDM programs have been shown to reduce vehicle trips by 5 percent (5%) to 15 percent (15%). South Florida Commuter Services (SFCS) is the regional CAP which provides assistance to commuters and businesses in Miami-Dade, Broward and Palm Beach Counties. The SFCS provides:

- **Work Plan Needs Assessment & Program Development**
- **Carpooling Programs**
- **Vanpooling Programs**
- **Emergency Ride Home Services**
- **Transit Trip Planning Services**
- **Employer Tax Benefit Assistance**

The following are some potential TDM strategies that could be implemented in order to reduce single occupant vehicle trips if agreed to by the Applicant and governing agencies:

- **A mixed-use development program which will encourage multi-purpose trips. Retail, entertainment, restaurant and other potential uses will provide commuter assistance to employees.**
- **A fully accessible internal pedestrian access system which will connect all uses directly to a major (superstop) transit facility.**

- **The superstop will provide a number of amenities which will encourage bicycle, pedestrian and transit usage. (Amenities previously listed)**
- **A parking supply and layout that will encourage multi-purpose trips.**
- **On-site management staff will be able to promote and/or coordinate ridesharing and/or vanpooling services as well as disseminate information on transit operations and other TDM services. Management will also have the ability to implement incentives such as priority parking for carpools and/or vanpools and emergency ride home services.**
- **Management staff will provide a liaison with South Florida Commuter Services (SFCS) to develop and maintain an effective TDM program.**
- **Connections will be made to the bicycle lanes on adjacent streets and bicycle racks will be provided on-site for bicycle storage.**