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DRAPER LAKE TRAFFIC ANALYSIS

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Introduction

This report summarizes the transportation concurrency analysis conducted for the Draper Lake project. This analysis has been completed in accordance with the *Walton County Land Development Code (LDC) Appendix C.3 – Transportation Concurrency Management System Methodology and Procedures*.

Proposed Land Development Plan

The Draper Lake project proposes approximately 70 Single family detached units, 6000 sf of Shopping Center and associated infrastructure (i.e. driveways, stormwater management) in Walton County, Florida. The total project site is approximately 35.19 acres. Generally, the site is located on the west of County Road 30A, between the intersections of Blue Pine Blvd and Triggerfish Road with CR 30A. The parcel is located within Section 1, Township 03 South, Range 20 West. The existing site vacant wooded.

Study Area

Project traffic was assigned onto concurrency roadway segments within a half mile driving radius of the site. **Figure 1** illustrates the study area. The study area is further described in the **Project Trip Distribution and Assignment** section of this report. Segments of the Walton County Transportation Concurrency Roadway Network within a half mile driving range of the subject site include the following:

Segment #	Road Name	Section	Segment Description	Direction
County Road 30-A				
C0030A.040-E	CR 30-A	US 98 (West End) to CR 393	Allen Loop (East) to CR 393	EB
C0030A.040-W	CR 30-A	CR 393 to US 98 (West End)	CR 393 to Allen Loop (East)	WB
C0030A.050-E	CR 30-A	CR 393 to CR 83	CR 393 to Acacia Street	EB
C0030A.050-W	CR 30-A	CR 83 to CR 393	Acacia Street to CR 393	WB
C0030A.060-E	CR 30-A	CR 393 to CR 83	Acacia Street to Village Boulevard	EB
C0030A.060-W	CR 30-A	CR 83 to CR 393	Village Boulevard to Acacia Street	WB
C0030A.070-E	CR 30-A	CR 393 to CR 83	Village Boulevard to CR 83	EB
C0030A.070-W	CR 30-A	CR 83 to CR 393	CR 83 to Village Boulevard	WB
C0030A.080-E	CR 30-A	CR 83 to Forest Dunes Boulevard	CR 83 to Forest Dunes Boulevard	EB
C0030A.080-W	CR 30-A	Forest Dunes Boulevard to CR 83	Forest Dunes Boulevard to CR 83	WB
County Road 393				
C0393.040-S	CR 393	US 98 (SR 30) to CR 30-A	US 98 (SR 30) to CR 30-A	SB
C0393.040-N	CR 393	CR 30-A to US 98 (SR 30)	CR 30-A to US 98 (SR 30)	NB
County Road 83				
C0083.020-S	CR 83	US 98 (SR 30) to CR 30-A	The Village to CR 30-A	SB
C0083.020-N	CR 83	CR 30-A to US 98 (SR 30)	CR 30-A to The Village	NB

Table 1 – Transportation Concurrency Roadway Network Segments

Existing PM Peak Hour Traffic Volume Conditions

Information regarding roadway characteristics such as adopted level of surface (LOS) standards, service volumes, existing counts, and committed trips were obtained from the Walton County Transportation Concurrency Management System. The following information obtained is pertinent to this traffic analysis.

Segment #	MSV @ LOS Peak Hr Direction	Peak Hr Direction 2009 FDOT Counts	Current Peak Hr Direction Committed Trips	Total Peak Hour Demand	Total Avail Capacity	Proposed Project Traffic	Remaining Capacity After Project	Peak Direction?
County Road 30-A								
C0030A.040-E	760	285	531	816	-56	8	-64	
C0030A.040-W	760	309	599	908	-148	13	-161	PD
C0030A.050-E	760	329	740	1069	-309	27	-336	
C0030A.050-W	760	356	664	1020	-260	17	-277	PD
C0030A.060-E	760	329	566	895	-135	28	-163	
C0030A.060-W	760	356	552	908	-148	18	-166	PD
C0030A.070-E	760	329	503	832	-72	18	-90	
C0030A.070-W	760	356	523	879	-119	27	-146	PD
C0030A.080-E	760	217	423	640	120	9	111	
C0030A.080-W	760	235	468	703	57	13	44	PD
County Road 393								
C0393.040-S	760	255	703	958	-198	14	-212	PD
C0393.040-N	760	236	670	906	-146	9	-155	
County Road 83								
C0083.020-S	760	112	157	269	491	14	477	
C0083.020-N	760	121	201	322	438	9	429	PD

Table 2 – CMS Traffic Data for Study Area Segments

Estimate of Site Generated Traffic

To determine the number of proposed trips the project will generate, standard trip generation rates and equations from the Institute for Transportation Engineers (ITE) *Trip Generation manual, Ninth Edition*, were used. **Table 3** presents the estimated proposed trip generation information for the PM peak hour for the proposed uses of the project site.

Project Trip Generation																				
ITE Land Use		Size	Units	Rate per 1,000 SF	Fitted Curve Equation	PM Pk Hr Trips	Directional Distribution				Internal Capture			Unadjusted External Trips		% New Trips	Adjusted External Trips		Total	
Code	Land Use Description						Entering	Exiting	Entering	Exiting	Entering	Exiting	Enter	Exit	Enter		Exit			
						% Trips		% Trips		% Trips		% Trips								
230	Single Family Detached Housing	70	UNIT	N/A	$Ln(T) = 0.9 Ln(X) + 0.51$	76.22	63%	48.02	37%	28.20	0%	0.00	0%	0.00	48.02	28.20	100%	48.02	28.20	76.22
820	Shopping Center	6000	SF	3.71		22.26	48%	10.68	52%	11.58	0%	0.00	0%	0.00	10.68	11.58	66%	7.05	7.64	14.69
TOTAL						98		59		40		0		0	59	40		55	36	91

Table 3 – PM Peak Hour Trip Generation - Proposed Uses

Project Trip Distribution and Assignment

County Road 83 and County Road 393 are the closest roadways in the Walton County Transportation Concurrency Management System. Project traffic from the proposed development conditions were assigned onto the external roadway system based on knowledge of travel patterns within the area. As required for transportation concurrency analyses, project traffic was distributed onto the roadway segments within a half mile radius of the access to the nearest concurrency system roadway. **Figure 1** illustrates the project traffic assignments. This figure also illustrates the 3% volume thresholds of the segments just outside of the traffic study area to show that trips generated do not exceed this threshold.

Roadway Segment Analysis

As required by the Walton County LDC for transportation concurrency analysis the project traffic was assigned and distributed to all roadway segments within ½ mile driving radius of each access point of the project. **Table 5** below presents the estimated proposed trip distribution for the PM peak hour.

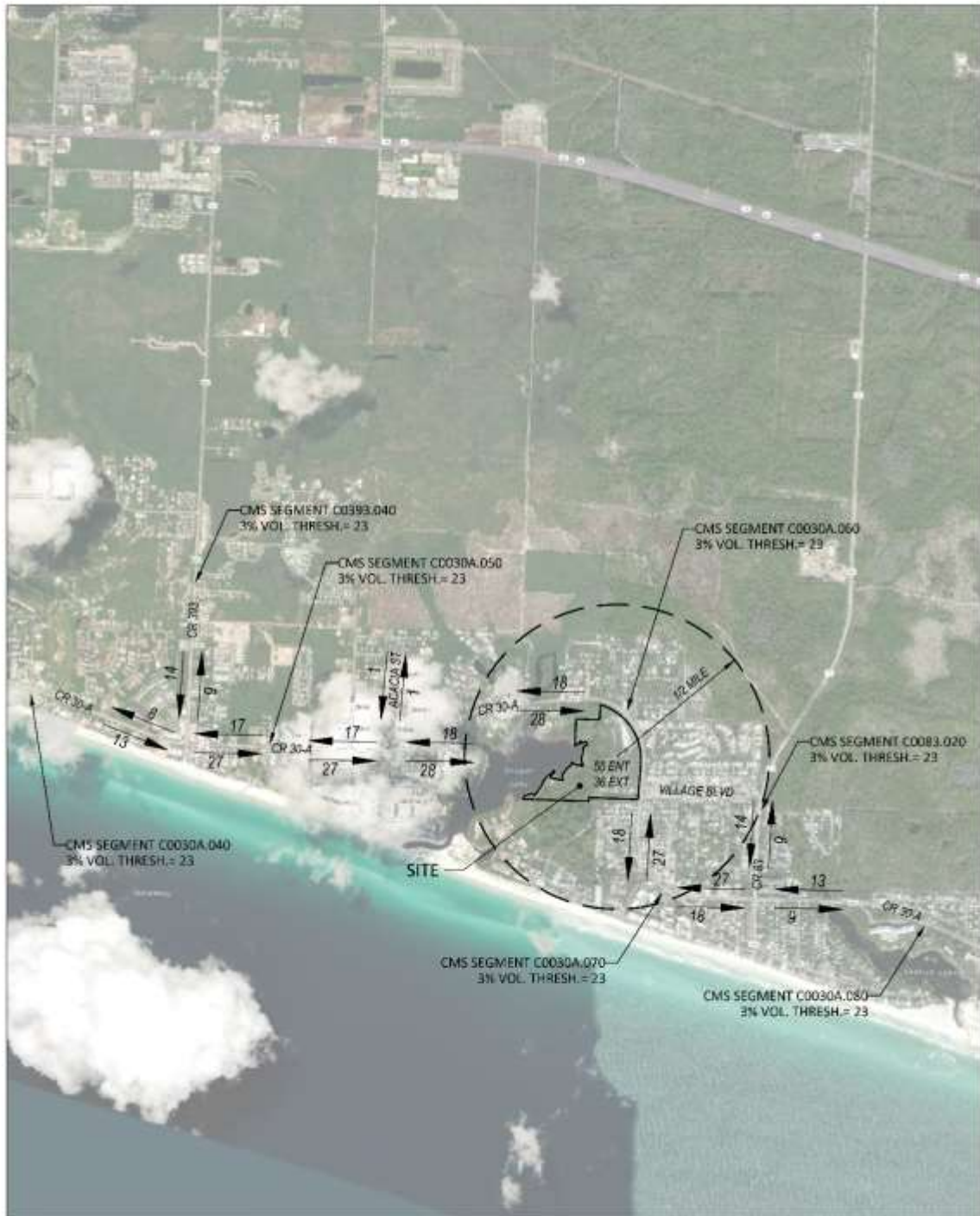


FIGURE 1
PM PEAK HOUR PROJECT TRAFFIC ASSIGNMENT

DRAPER LAKE

Figure 1 – PM Peak Hour Traffic Assignment

Segment #	Road Name	Section	Segment Description	Dir	Adopted LOS Standard	MSV @ LOS Peak Hr Direction	Peak Hr Direction 2009 FDOT Counts	Current Peak Hr Direction Committed Trips	Total Peak Hour Demand	Total Avail Capacity	Proposed Project Traffic	Project Traffic as a % of Capacity	3% Service Volume Threshold	Remaining Capacity After Project	Peak Direction?
County Road 30-A															
C0030A.040-E	CR 30-A	US 98 (West End) to CR 393	Allen Loop (East) to CR 393	EB	D	760	285	531	816	-56	8	1.05%	23	-64	
C0030A.040-W	CR 30-A	CR 393 to US 98 (West End)	CR 393 to Allen Loop (East)	WB	D	760	309	599	908	-148	13	1.71%	23	-161	PD
C0030A.050-E	CR 30-A	CR 393 to CR 83	CR 393 to Acacia Street	EB	D	760	329	740	1069	-309	27	3.55%	23	-336	
C0030A.050-W	CR 30-A	CR 83 to CR 393	Acacia Street to CR 393	WB	D	760	356	664	1020	-260	17	2.24%	23	-277	PD
C0030A.060-E	CR 30-A	CR 393 to CR 83	Acacia Street to Village Boulevard	EB	D	760	329	566	895	-135	28	3.68%	23	-163	
C0030A.060-W	CR 30-A	CR 83 to CR 393	Village Boulevard to Acacia Street	WB	D	760	356	552	908	-148	18	2.37%	23	-166	PD
C0030A.070-E	CR 30-A	CR 393 to CR 83	Village Boulevard to CR 83	EB	D	760	329	503	832	-72	18	2.37%	23	-90	
C0030A.070-W	CR 30-A	CR 83 to CR 393	CR 83 to Village Boulevard	WB	D	760	356	523	879	-119	27	3.55%	23	-146	PD
C0030A.080-E	CR 30-A	CR 83 to Forest Dunes Boulevard	CR 83 to Forest Dunes Boulevard	EB	D	760	217	423	640	120	9	1.18%	23	111	
C0030A.080-W	CR 30-A	Forest Dunes Boulevard to CR 83	Forest Dunes Boulevard to CR 83	WB	D	760	235	468	703	57	13	1.71%	23	44	PD
COUNTY ROAD 393															
C0393.040-S	CR 393	US 98 (SR 30) to CR 30-A	US 98 (SR 30) to CR 30-A	SB	D	760	255	703	958	-198	14	1.84%	23	-212	PD
C0393.040-N	CR 393	CR 30-A to US 98 (SR 30)	CR 30-A to US 98 (SR 30)	NB	D	760	236	670	906	-146	9	1.18%	23	-155	
COUNTY ROAD 83															
C0083.020-S	CR 83	US 98 (SR 30) to CR 30-A	The Village to CR 30-A	SB	D	760	112	157	269	491	14	1.84%	23	477	
C0083.020-N	CR 83	CR 30-A to US 98 (SR 30)	CR 30-A to The Village	NB	D	760	121	201	322	438	9	1.18%	23	429	PD

Table 4 – PM Peak Hour Trip Distribution

Conclusion

This analysis is a Transportation Concurrency Analysis performed to assess the impact of the proposed Draper Lake project on the surrounding streets. The development is estimated to generate a total of 93 trips during PM Peak Hour.

County Road 83 contain enough capacity to handle the trips generated by the proposed development.

The CR 30A and County Road 393 segments are already over capacity.