

Traffic Impact Analysis

Walden Lake

Plant City, Florida

Technical Addendum #2

July 2015

Prepared by:



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CONSULTING

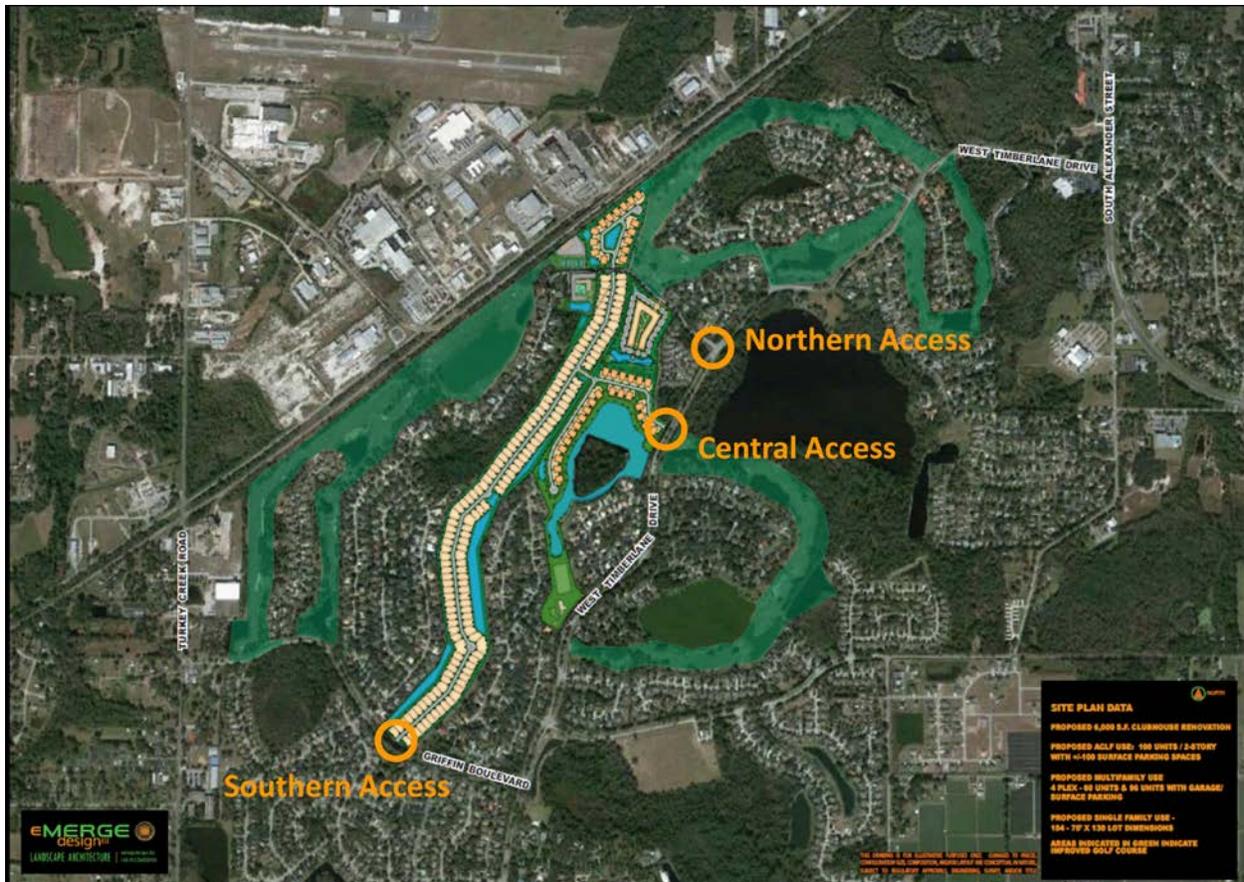
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Background Plus Project Analyses of Internal Intersections

The final report for the Walden Lake traffic impact analysis, dated January 2015, included background level of service analyses for three intersections of Timberlane Drive internal to the Walden Lake development: Clubhouse Drive, Griffin Boulevard (north), and Griffin Boulevard (south). These three intersections were not analyzed in the “background plus project” scenario because of the absence of internal trip distribution and the expectation that increases in delay would be minimal. At the request of City staff an internal trip distribution was created for this technical addendum, with the resulting trips assigned and the intersections re-analyzed.

Trips generated by the proposed residential development will access the surrounding roadway network via three access points, as shown in the accompanying graphic: the intersections of Timberlane Drive and Clubhouse Drive (northern access), Timberlane Drive and a proposed/unnamed east-west street (central access), and Griffin Boulevard and a proposed/unnamed north-south street (southern access). The proposed distribution to these access points during the AM and PM peak periods, developed in consultation with City staff, is shown in the following table. As directed by City staff, this distribution was developed under the assumption that the central access will operate as a right-in/right-out only access; if a full access is ultimately created, more trips will use this access and the impacts to the intersection of Timberlane Drive and Clubhouse Drive will be lessened.



	Northern	Central	Southern
Enter from Alexander	5%	70%	25%
Enter from Turkey Creek	75%	0%	25%
Enter from Griffin	25%	0%	75%
Enter from Trapnell	85%	0%	15%
Exit to Alexander	95%	0%	5%
Exit to Turkey Creek	10%	15%	75%
Exit to Griffin	25%	65%	10%
Exit to Trapnell	25%	60%	15%

AM and PM peak hour net project trips (shown in Table 3 of the original report) were assigned to the three internal intersections based on this distribution and added to the background traffic. The results of the ensuing capacity analyses are shown in the following table, which is an updated version of Table 5 from the original report.

Intersection Name	Movement	AM Peak Period		PM Peak Period	
		Background	with Project	Background	with Project
Clubhouse Dr @ Timberlane Dr	NB LT EB LR	A B	A B	A B	A B
	Overall	N/A	N/A	N/A	N/A
Griffin Blvd @ Timberlane Dr North	NB L SB L WB LTR EB LTR	A A B B	A A B B	A A B B	A A B B
	Overall	N/A	N/A	N/A	N/A
Griffin Blvd @ Timberlane Dr South	NB LT EB LR	A B	A B	A B	A B
	Overall	N/A	N/A	N/A	N/A

These results indicate that while delays increase in all cases, and in a couple of instances nearly increase to the point of dropping one LOS letter grade, all movement levels of service remain unchanged with the addition of project traffic.

In addition, a final analysis was conducted for the intersection of Timberlane Drive and Clubhouse Drive as a worst case scenario in which all AM peak hour exiting traffic was assumed to turn left from Clubhouse Drive and all AM peak hour entering traffic was assumed to pass the intersection and use one of the other two access points; this leads to 189 additional eastbound left turning vehicles conflicting with 55 additional southbound through vehicles. The resulting level of service for the Clubhouse Drive eastbound approach is "C," with a volume-to-capacity ratio of 0.52 (i.e., abundant capacity) and a 95th percentile queue of 2.99 vehicles.