DR108-0006

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Osceola County Planning
Department

CENTER LAKE

Application for Development Approval

1st Request for Additional Information

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake

Development of Regional Impact

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

January 21, 2010

Mr. Phil Laurien, Executive Director
East Central Florida Regional Planning Council
631 North Wymore, Suite 100
Maitland, Florida 32751

Dear Mr. Laurien:

Rj Whidden and Associates, Inc. as Agent for Center Lake Properties, LLLP is pleased to submit this 1st response to your request for additional information relative to the Center Lake DRI project in accordance with Section 380.06, Florida Statues.

Since submittal of the original ADA, Center Lake Properties, LLLP has acquired title to an additional 134.1 acres of land lying westerly and adjacent to the original DRI Boundary. We are proposing a modification of the development program to include development entitlements for the total DRI property that includes the additional property. Additionally, the modified legal description includes approximately 173.2 acres lying below the safe development line of Center Lake. This land is under common ownership by deed to Pineloch Management Corp. Although this land is included in the DRI legal description, this application proposes no development entitlements for lands below the safe development line. This application accounts for such lands as "Lands Below the Safe Development Line" in the tabular data provided herein.

This response also accounts for a revised site inventory analysis. This is due to the inclusion of the additional property and to account for the negotiated "binding" jurisdictional determination that has been preformed by the jurisdictional agencies.

Due to the additional acreage, the binding jurisdictional determination and the modified development program, we have included modified responses to appropriate ADA Questions listed below to account for both the site inventory analysis and the revised development program. We understand and hereby agree that the reviewing agencies may reserve the opportunity for two additional requests for additional information relative to the revised development program and the additional property. After review of the site inventory analysis for the additional property presented herein, should any reviewing agency desire a site visit to the additional property we would be pleased to schedule such site visit by request at the earliest convenient time.

The following revised ADA Questions have been included in this first response for additional information:

Question 5 – Legal Description
Question 9 – Map Section
Question 10 – General Project Description
Question 11 – Revenue Generation Summary
Question 12 – Vegetation and Wildlife (Relative to the additional property only)
Question 13 – Wetlands (Relative to the additional property only)
Question 14 – Water (Relative to the additional property only)
Question 15 – Soils (Relative to the additional property only)

Question 16 – Floodplains (Relative to the additional property only)
Question 17 – Water Supply
Question 18 – Wastewater Management
Question 19 – Stormwater Management
Question 20 – Solid Waste / Hazardous Waste / Medical Waste
Question 21 – Transportation / Public Facilities
Question 22 - Transportation / Environmental and Natural Resources
Question 24 – Housing
Question 26 – Recreation

Revised requests for capacity analysis identifying the revised development program have been sent to all of the appropriate service providers. Copies of the revised capacity analysis request letters and any response received have been included in this response. For those agencies that have not yet responded to the revised request for capacity, we will provide their responses with future request for additional information.

This document has been provided to the individuals and agencies stated in the distribution list as provided by the East Central Florida Regional Planning Council on January 19, 2010. The transportation Appendix has been published under a separate cover and forwarded to the appropriate reviewing agencies. Additional copies of the transportation appendix can be made available upon request. As always, we look forward to working with you and the staff of the East Central Florida Regional Planning Council on this application.

Respectfully yours,

Rj Whidden, President

Center Lake

Development of Regional Impact

Table of Contents
Revised ADA Questions

Center Lake

Development of Regional Impact

Response to Agency Request for Additional Information

PART I
Applicant Information

Question 5 – Legal Description

5. Attach a legal description of the development site. Include section, township and range.

Please consult the revised Exhibit 1 – Legal Description, attached hereto for the Center Lake DRI, as prepared by Tinklepaugh Surveying Services, Inc.

PART II
General Section

Question 9 - Map Section

Map A **A general location map. Indicate the location of any urban service area boundaries and regional activity centers in relation to the project site.**

Map A - General Location Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009.
- RJWA files

Map B **A recent vertical aerial photo of the site showing project boundaries which reasonably reflects current conditions. Specify the date the photo was taken.**

Map B - Aerial Photograph was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Osceola County Property Appraiser's Aerial flown 2006
- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009.
- RJWA files

Map C **A topographic map with project boundaries identified (contour intervals from one to five feet should be determined in consultation with the appropriate regional planning council and other reviewing agencies at the pre-application conference). Delineate 100-year flood prone areas (including hurricane flood zones) and indicate major land surface features. If applicable, delineate the coastal construction control line.**

Map C - Topographic Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Topographic information is based on a Topographic Survey prepared by Tinklepaugh Surveying Services, Inc. dated October 10, 2007
- Osceola County Property Appraiser's Aerial flown 2006
- Flood plain data provided by VHB and taken from FIRM panel numbers 12097C0115F and 12097C0120F dated June 6, 2001.

Map D **A land use map showing existing and approved uses on and abutting the site. The uses shown should include existing on-site land uses, recreational areas, utility and drainage easements, wells, right-of-way, and historic, archaeological, scientific and architecturally significant resources and lands held for conservation purposes.**

Map D - Existing Land Use Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Osceola County Comprehensive Development Plan, Future Land Use Element, Future Land Use Map series

Map E **A soils map of the site, with an identification of the source of the information. The use of a source other than the most recently published U.S.D.A. Soil Conservation Service (SCS) soil surveys should be determined in consultation with the appropriate regional planning council and other reviewing agencies at the pre-application conference.**

Map E - Soils Classification Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Osceola County Property Appraiser's Aerial flown 2006
- Soils classifications prepared by Modica & Associates, Inc. and based on USDA Soils Conservation Service
- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009

Map F **A vegetation associations map indicating the total acreage of each association, based on the Level III vegetation types described in The Florida Land Use and Cover Classification System: A Technical Report, available from each regional planning council.**

Map F - Vegetation Associations Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Osceola County Property Appraiser's Aerial flown 2006
- Biological field surveys conducted by Modica & Associates, Inc.
- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009

Map G **A location map of all transects; trap grids, or other sampling stations used to determine the on-site status of significant wildlife and plant resources. Show locations of all observed significant wildlife and plant resources, and show location of suitable habitat for all significant resources expected to be on-site.**

Map G - Wildlife Resources Map was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Osceola County Property Appraiser's Aerial flown 2006
- Biological field surveys conducted by Modica & Associates, Inc.
- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009

Map H **A master development plan for the site. Indicate proposed land uses and locations, development phasing, major public facilities, utilities, preservation areas, easements, right-of-way, roads, and other significant elements such as transit stops, pedestrian ways, etc. This plan will provide the basis for discussion in Question 10-A as well as other questions in the ADA.**

Map H - Concept Plan was prepared by Rj Whidden and Associates, Inc. and is based upon the following sources:

- Wetland jurisdictional data provided by Modica & Associates, Inc.
- DRI Acreage Review and Wetland Information prepared by Tinklepaugh Surveying Services, Inc. dated December 24, 2009
- RJWA files

Map I-1,2 **A master drainage plan for the site. Delineate existing and proposed: drainage basins, flow direction, water retention areas, drainage structures, flow route offsite, drainage easements, waterways, and other major drainage features. (This information may be presented on two separate maps (existing and proposed), if desired).**

Map I-1 Pre-Development Drainage Map and Map I-2 Post Development Drainage Map were prepared by Rj Whidden and Associates, Inc. and are based upon the following sources:

- Drainage interpretations provided by VHB
- Osceola County Property Appraiser's Aerial flown 2006

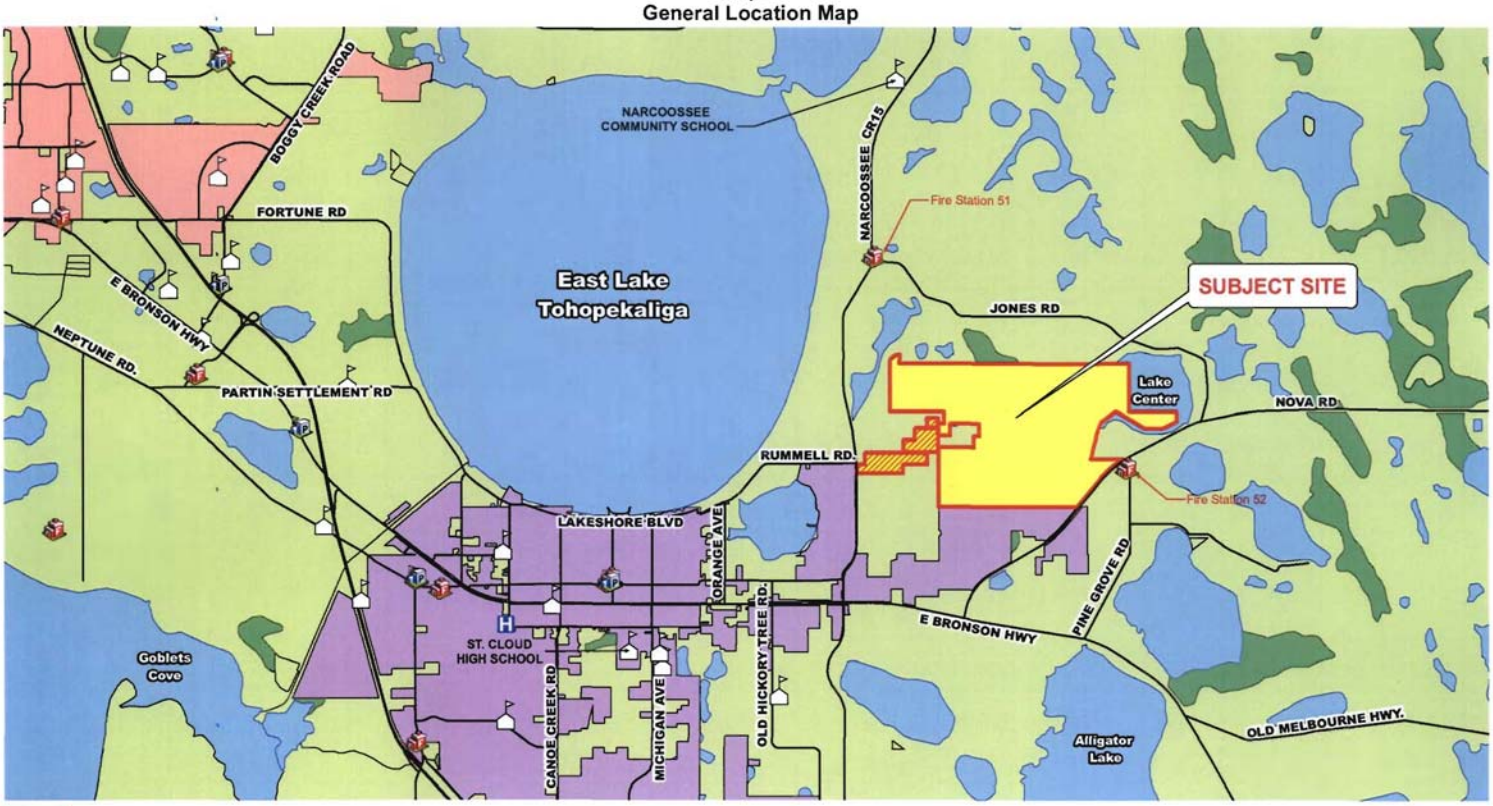
Map J **A map of the existing highway and transportation network within the study area. The study area includes the site, and locations of all transportation facilities that are substantially impacted. This area should be finally defined on the basis of the findings of the traffic impact analysis, including determinations of where the criteria for a substantial impact are met. Map J will become the base for the maps requested in Question 21.**

Map J Transportation Map - was prepared by Glatting Jackson et al and accepted by the East Central Florida Regional Planning Council at the project pre-application charrette held on April 4, 2008.

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map A
General Location Map



DRI Boundary
Additional Property
Kissimmee
St. Cloud

Legend

Hospitals
Law Enforcement Facilities
Public chools
Fire Stations

NOTE: All Hospital, Law Enforcement, Fire Station, and School Data shown hereon has downloaded from FGDL.Org.

0 1.5 Miles

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map B
Aerial Photograph

DRI Boundary

Additional Property

0 1 Miles

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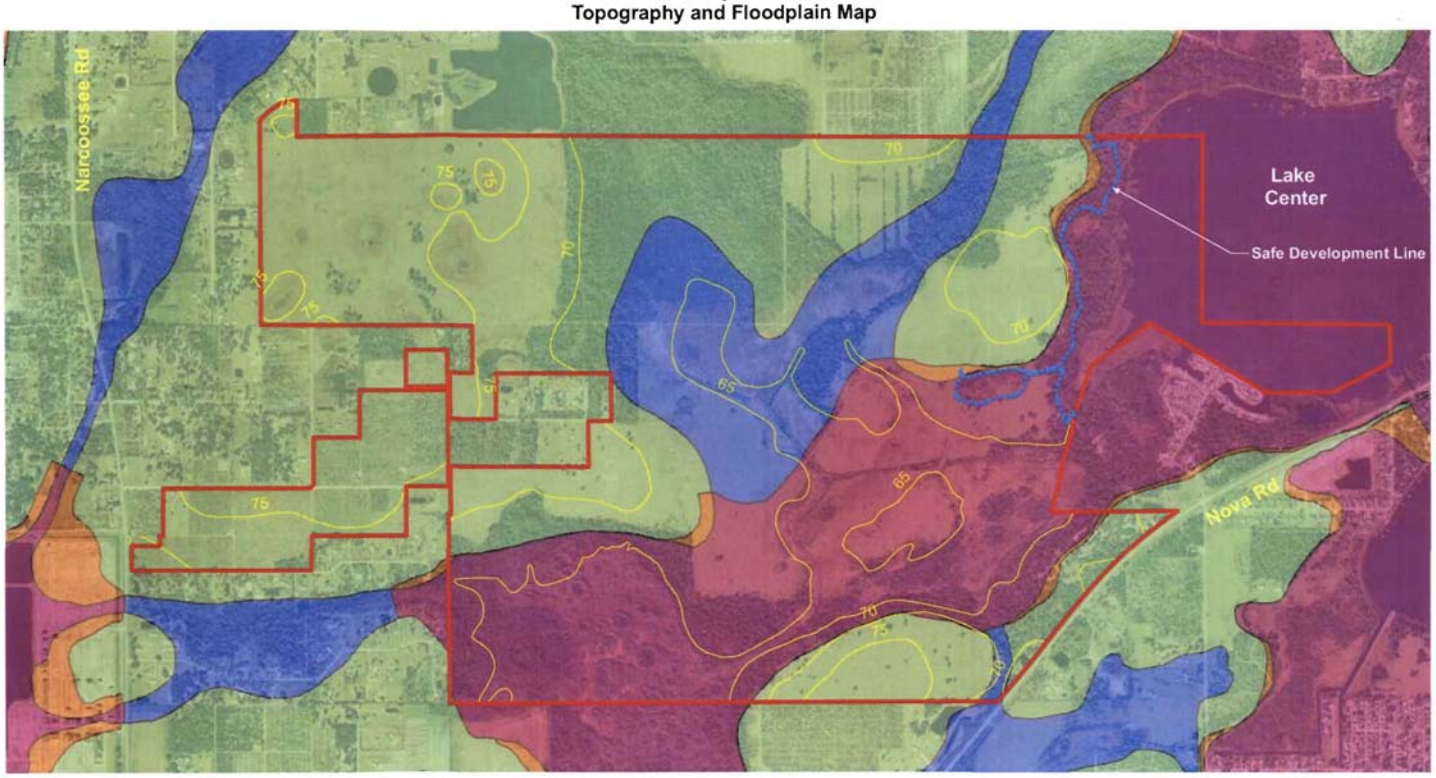
NOTE: Aerial Photograph was flown in the year 2008

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map C
Topography and Floodplain Map



DRI Boundary

Vanasse Hangen Brustlin, Inc.

Notes:
1) All Floodplain information shown Hereon was taken from FIRM panel numbers 12097C0115F and 12097C0120F Dated June 6th, 2001.
2) All Topographic information shown heron was taken from a survey provided by VHB.

Flood Zone Legend

A	FLOOD BASE ELEVATION NOT DETERMINED	261 ACRES
AE	BASE FLOOD ELEVATION = 66'	749 ACRES
X		
0.2 PCT ANNUAL CHANCE FLOOD HAZARD		

0 2,000 Feet

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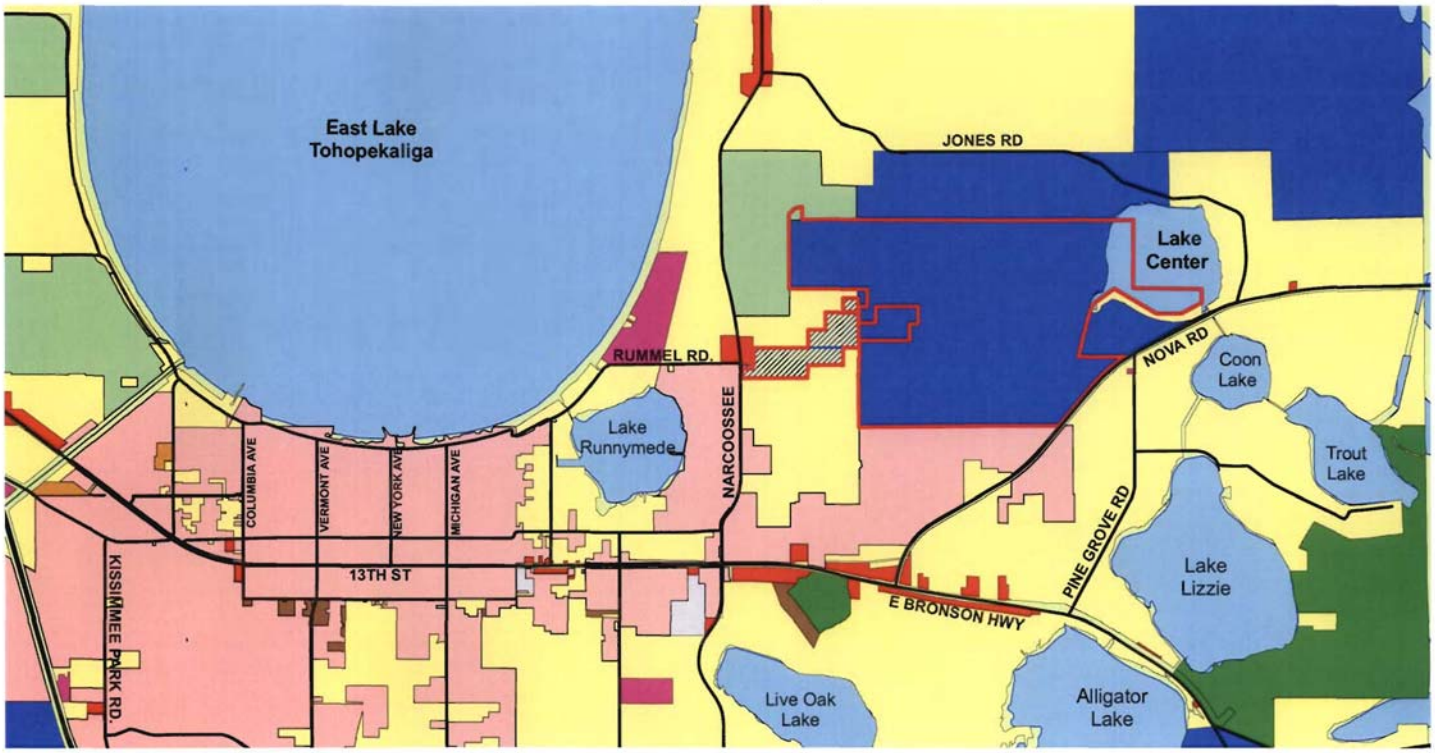
Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map D
Existing Land Use Map



DRI Boundary

Legend

- MIXED USE (PENDING)
- MIXED USE
- CONSERVATION
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- RURAL ENCLAVE
- COMMERCIAL
- INDUSTRIAL
- INSTITUTIONAL
- INCORPORATED

0 1 Miles

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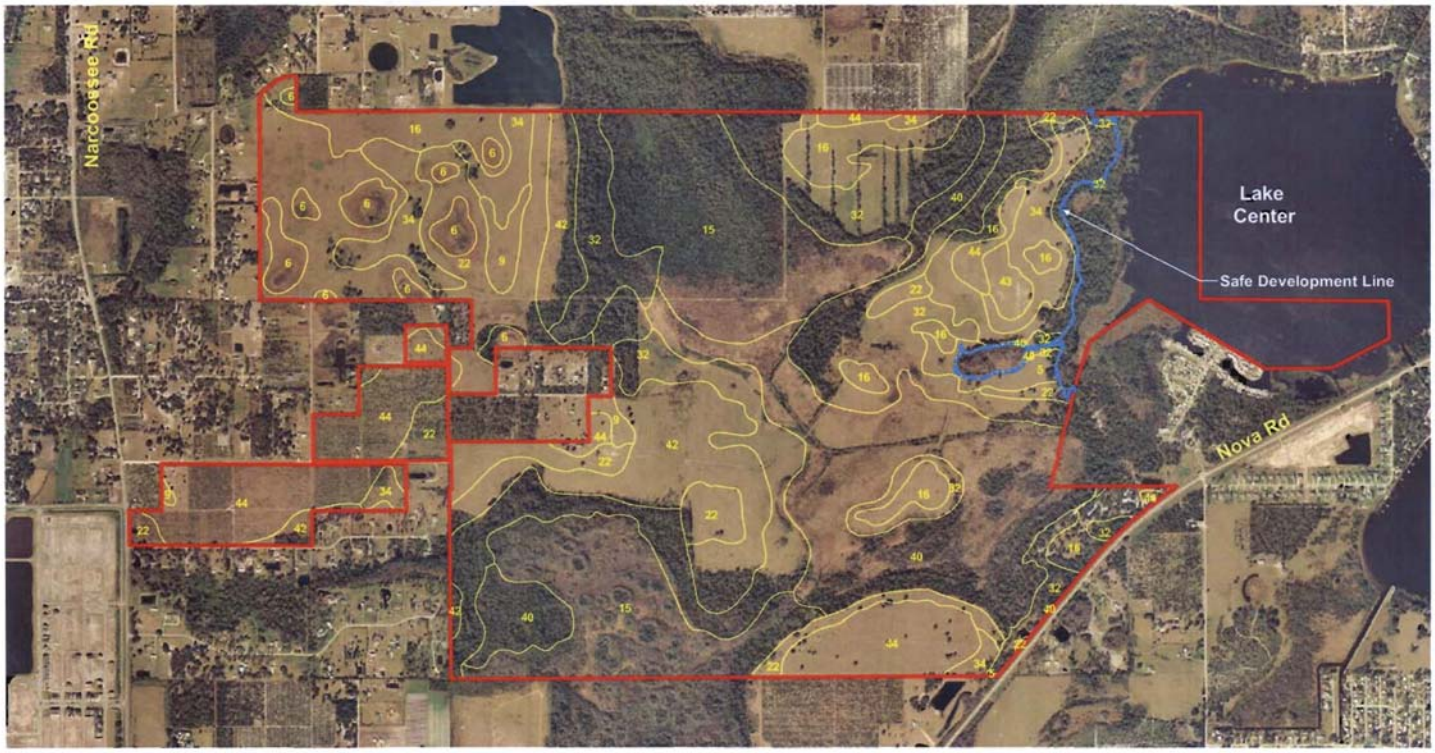
Note: All information hereon has been aquired from Osceola County , in Shape File Format. File name:FUTURELANDUSE2008

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map E
Soils Classifactions Map



DRI Boundary

Soils Legend

5 - Basinger Fine Sand
6 - Basinger Fine Sand Depressional
9 - Cassia Fine Sand
15 - Hontoon Muck
16 - Immokalee Fine Sand
22 - Myakka Fine Sand
32 - Placid Fine Sand, Depressional
34 - Pomello Fine Sand, 0 to 5% Slopes
40 - Samsula Muck
42 - Smyrna Fine Sand
43 - St. Lucie Fine Sand, 0 to 5% Slopes
44 - Tavares Fine Sand, 0 to 5% Slopes
99 - Water

Note: 1) Data format: ArcView shapefile.
Note: 2) Publisher and place: U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, Texas
Note: 3) Location of the data: http://SoilDataMart.nrcs.usda.gov/

0 2,000 Feet

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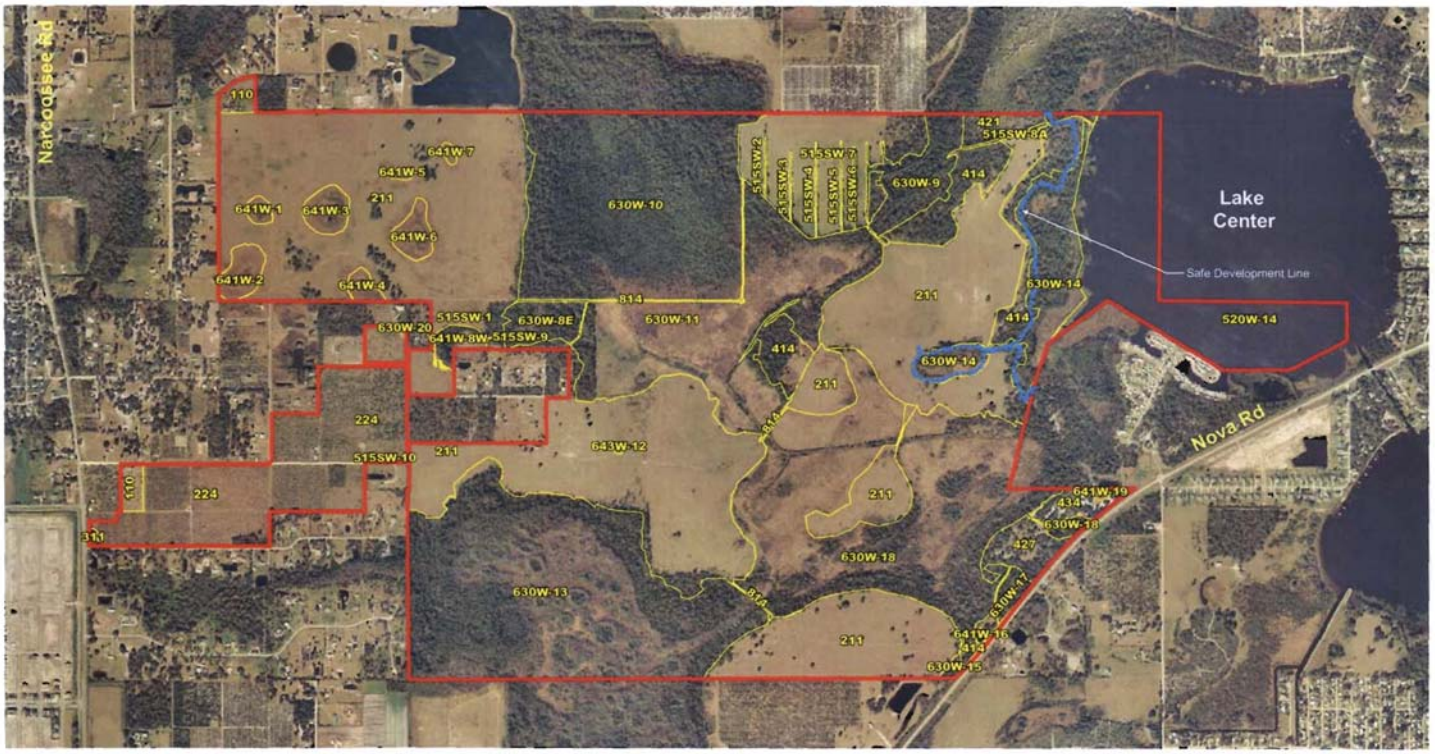
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map F
Vegetative Associations



DRI Boundary

Land Use Legend

110 - Residential, Low Density
211 - Improved Pastures
224 - Abbandoned Citrus
311 - Herbaceous
414 - Pine Mesic Oak
421 - Xeric Oak
427- Live Oak
434 - Hardwood Coniferous Mixed
515 - Ditch
520 - Lake
630 - Wetland Forested Mixed
641 Freshwater Marsh
643 - Wet Prairie
814 - Field Roads

Modica & Associates, Inc

Note: All FLUCCS information hereon has been provided by Modica & Associates, in Shapefile Format.

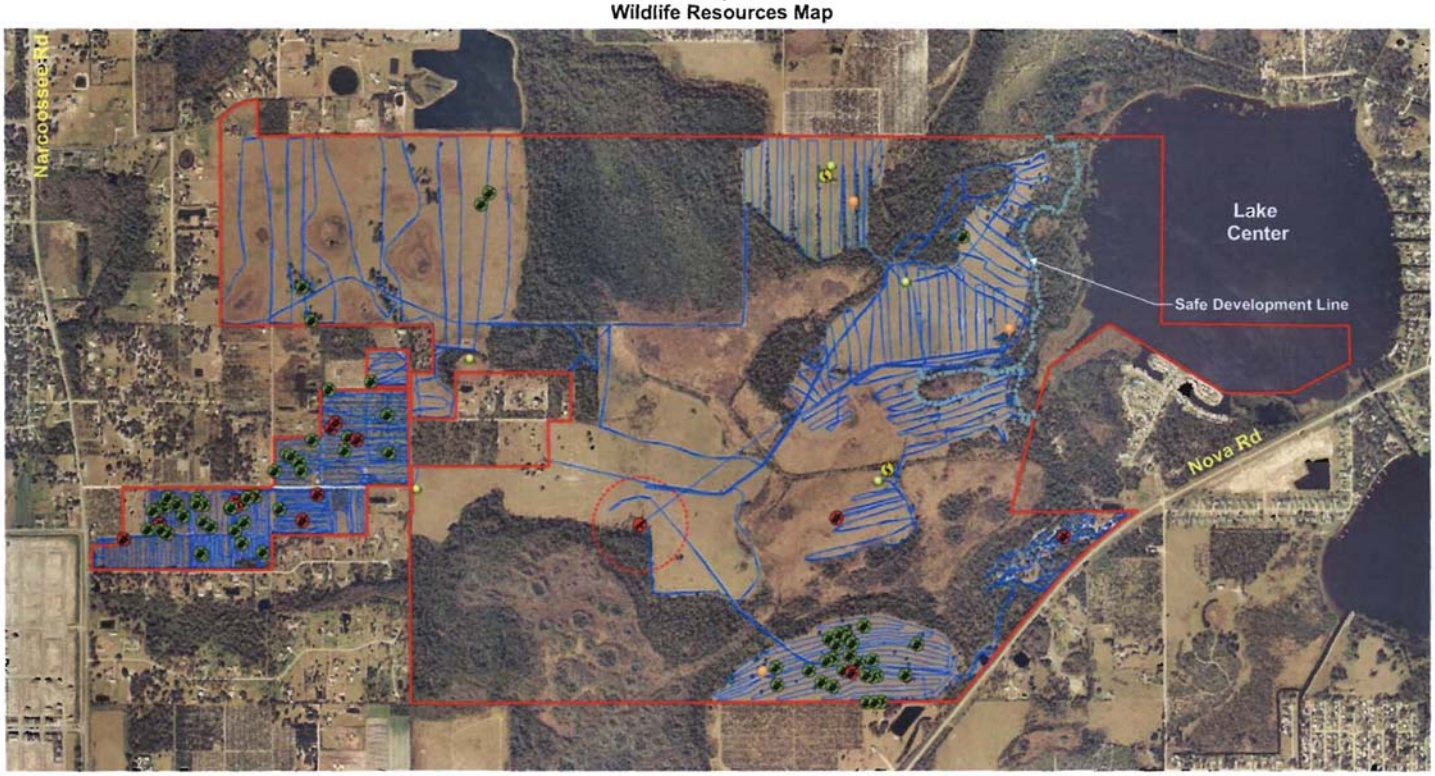
0 2,000 Feet

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map G
Wildlife Resources Map



DRI Boundary

Wildlife Legend

- Eagle Nest
- 660ft Eagle Protection Zone
- Wildlife Survey Transects
- SandHill Crane (Potential Nests, 2007 Survey)

Gopher Tortoise Burrows

status

- Active
- Inactive

Wildlife Observations

Wildlife

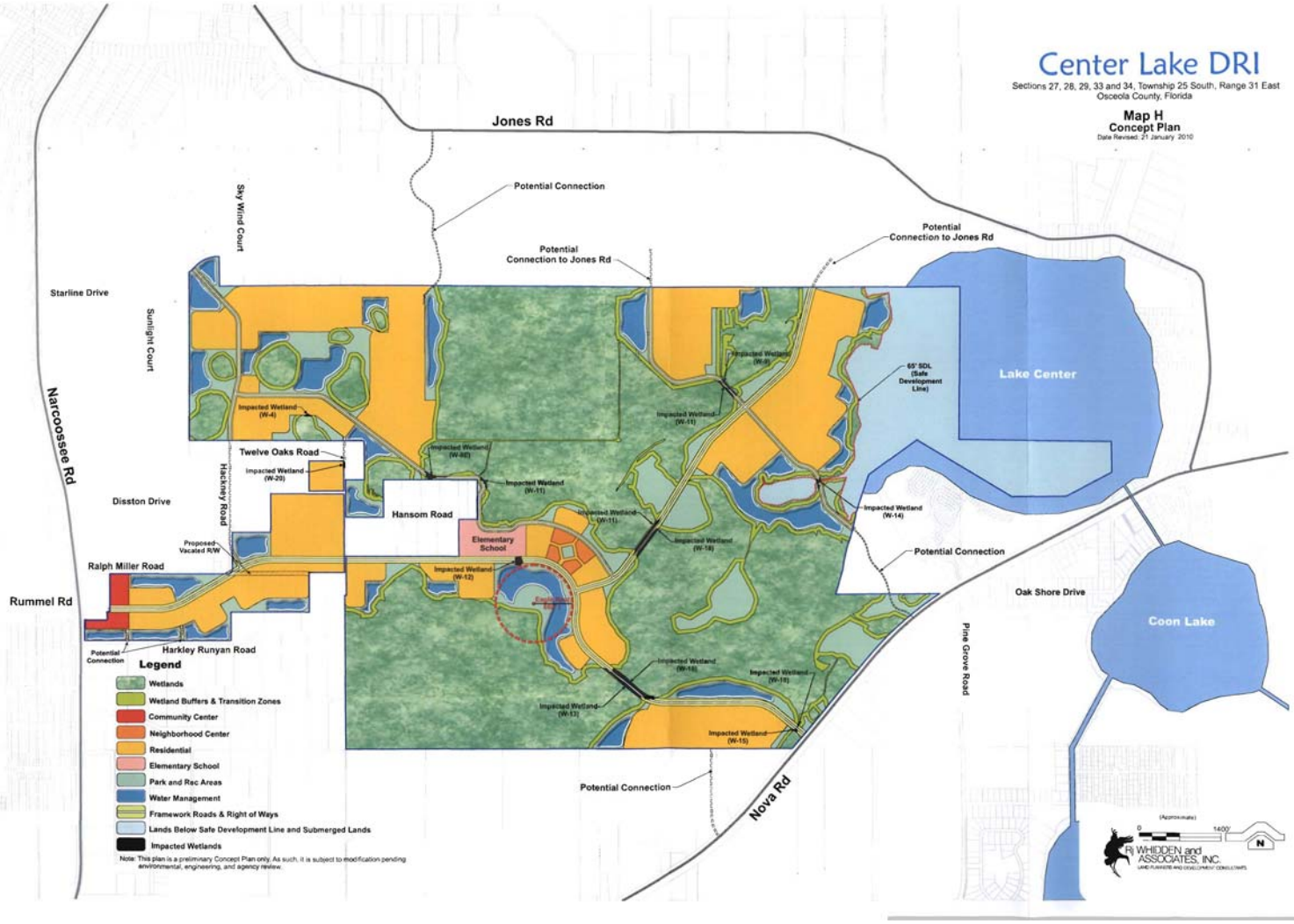
- Fox Squirrel
- Sandhill Crane

Modica & Associates, Inc.

Note: All Wildlife information hereon has been provided by Modica & Associates, in Shape File Format.

0 2,000 Feet

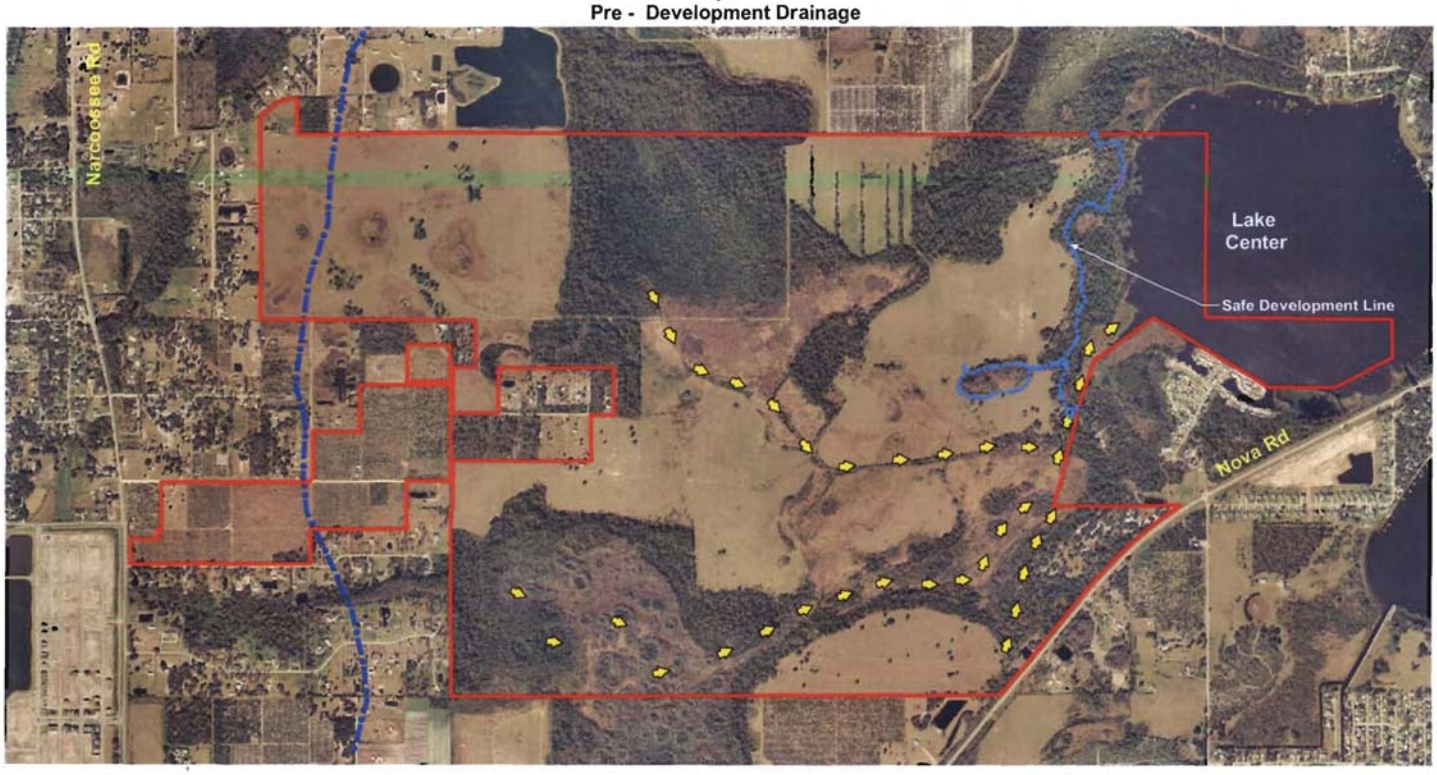
Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS


Center Lake DRI
Sections 27, 28, 29, 33 and 34, Township 25 South, Range 31 East
Osceola County, Florida
Map H
Concept Plan
Date Revised: 21 January 2010
Jones Rd
Potential Connection
Potential Connection to Jones Rd
Potential Connection to Jones Rd
Sky Wind Court
Starline Drive
Sunlight Court
Narcoossee Rd
Twelve Oaks Road
Hackney Road
Disston Drive
Hansom Road
Elementary School
Proposed Vacated R/W
Ralph Miller Road
Rummel Rd
Potential Connection
Harkley Runyan Road
Impacted Wetland (W-4)
Impacted Wetland (W-20)
Impacted Wetland (W-8E)
Impacted Wetland (W-11)
Impacted Wetland (W-11)
Impacted Wetland (W-12)
Impacted Wetland (W-8)
Impacted Wetland (W-11)
65' SDL (Safe Development Line)
Lake Center
Impacted Wetland (W-14)
Impacted Wetland (W-18)
Potential Connection
Oak Shore Drive
Coon Lake
Pine Grove Road
Impacted Wetland (W-16)
Impacted Wetland (W-19)
Impacted Wetland (W-13)
Impacted Wetland (W-15)
Potential Connection
Nova Rd
Legend
Wetlands
Wetland Buffers & Transition Zones
Community Center
Neighborhood Center
Residential
Elementary School
Park and Rec Areas
Water Management
Framework Roads & Right of Ways
Lands Below Safe Development Line and Submerged Lands
Impacted Wetlands
Note: This plan is a preliminary Concept Plan only. As such, it is subject to modification pending environmental, engineering, and agency review.
(Approximate)
0
1400'
N
WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map I - 1
Pre - Development Drainage



DRI Boundary

Legend

Basin Divide

Flow Direction

Kissimmee Hangen Bruestlin, Inc.

Note: All Drainage information hereon has been provided by VHB.

0 2,000 Feet

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map I - 2
Post Development Drainage

Basin and Ponds

Basins	Basin Area	Pond Area	Pond/Basin
1	68.63	11.30ac	0.16
2	157.63	22.71ac	0.14
3	283.34	33.52ac	0.12
4	21.16	-0-	-0-
5	152.21	29.98ac	0.20
6	64.74	12.85ac	0.20
7	14.67	-0-	-0-
8	13.82	3.58ac	0.26
9	127.46	20.81ac	0.16

Pond Breakdown

Basins	Ponds	Pond Area
1	1-A	7.56ac
1	1-B	3.74ac
2	2-A	18.42ac
2	2-B	2.20ac
2	2-C	2.09ac
3	3-A	1.71ac
3	3-B	4.45ac
3	3-C	4.57ac
3	3-D	3.99ac
3	3-E	8.47ac
3	3-F	1.94ac
3	3-G	6.25ac
3	3-H	3.85ac
4	-0-	-0-
5	5-A	12.47ac
5	5-B	4.70ac
5	5-C	7.12ac
5	5-D	4.48ac
5	5-E	1.26ac
6	6-A	8.40ac
6	6-B	4.45ac
7	-0-	-0-
8	8-A	3.58ac
9	9-A	2.81ac
9	9-B	4.38ac
9	9-C	5.50ac
9	9-D	3.38ac
9	9-E	2.61ac
9	9-F	2.13ac

Note: All Drainage information has been provided by VHB

Narcoossee Rd
Rummel Rd
Twelve Oaks Road
Hackney Prairie Road
Disston Drive
Proposed Vacated R/W
Nova Rd
Pine Grove Road
Oak Shore Drive
Potential Connection
65' SDL (Safe Development Line)
Lake Center
Coon Lake
Basin 1
Basin 2
Basin 3
Basin 4
Basin 5
Basin 6
Basin 7
Basin 8
Basin 9
Pond 1-A
Pond 1-B
Pond 2-A
Pond 2-B
Pond 2-C
Pond 3-A
Pond 3-B
Pond 3-C
Pond 3-D
Pond 3-E
Pond 3-F
Pond 3-G
Pond 3-H
Pond 5-A
Pond 5-B
Pond 5-C
Pond 5-D
Pond 5-E
Pond 6-A
Pond 6-B
Pond 8-A
Pond 9-A
Pond 9-B
Pond 9-C
Pond 9-D
Pond 9-E
Pond 9-F

Legend

Basin Divides
Flow Direction

Vanasse Hangen Brustlin, Inc.

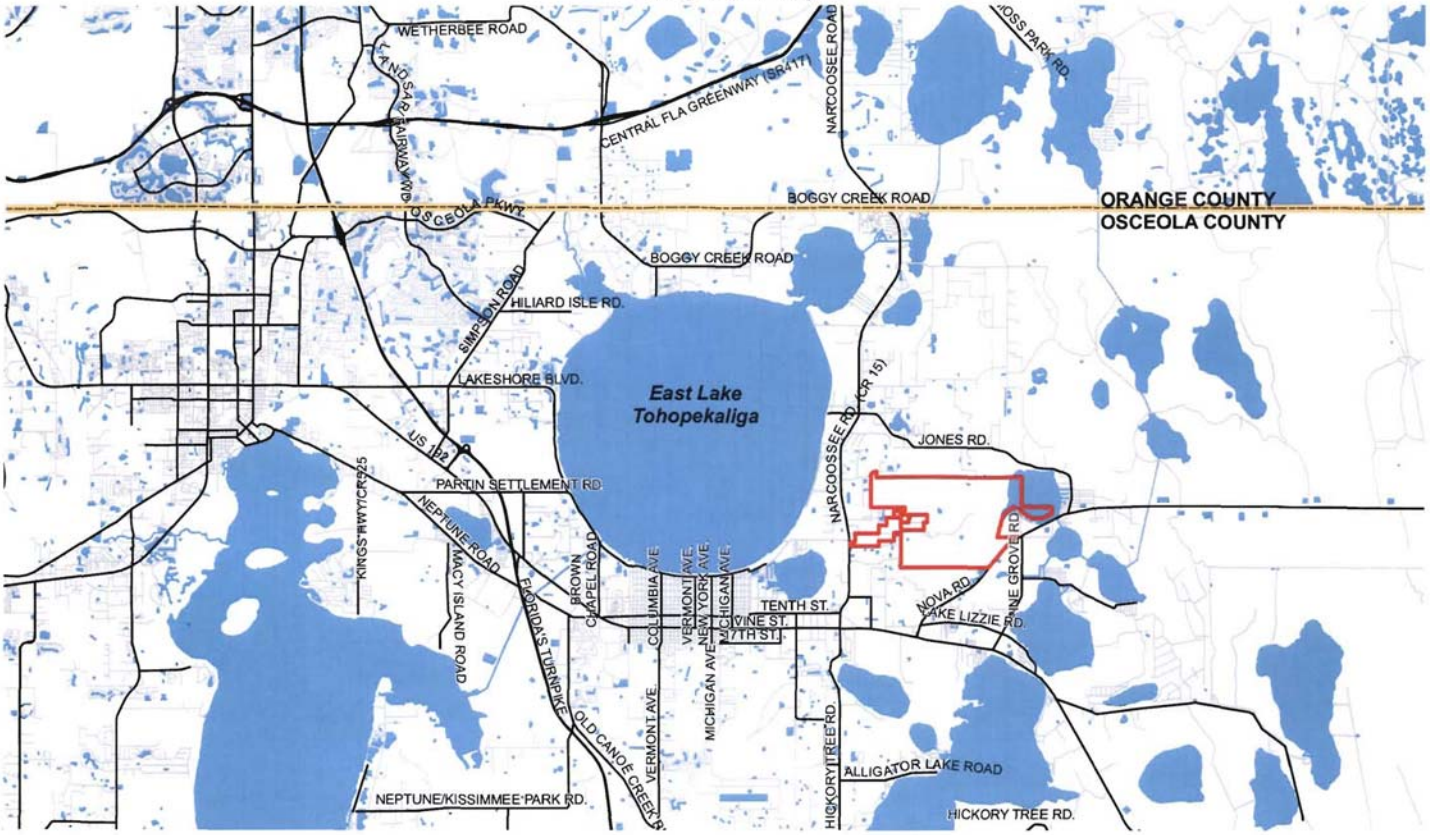
(Approximate)
0 1400
N

R. WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map J
Transportation Map



DRI Boundary

AECOM

0 2 Miles

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNING AND DEVELOPMENT CONSULTANTS (PA)

Question 10 - General Project Description

Part 1 - Specific Project Description

A. Describe and discuss in general terms all major elements of the proposed development in its completed form. Include in this discussion the proposed phases (or stages) of development (not to exceed five years), magnitude in the appropriate units from Chapter 28-24, F.A.C., where applicable, and expected beginning and completion dates for construction.

Location and Background:

The Center Lake DRI is proposed as a mixed use residential project consisting of approximately 2012.5 acres of land located within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25 South, Range 31 East, of Osceola County, Florida. This gross acreage reflects the additional 134.1 ac recently purchased by the applicant. The gross area also reflects approximately 173.2 acres of lands below the 65.0 msl safe development line that is under title to the applicant. It should be noted that although this revised application includes lands below the Safe Development Line, no development entitlements are proposed for such lands. Please consult the Map A - General Location Map and Map H - Concept Plan provided in Section 2 herein.

The site is located within an area of Osceola County referred to as Narcoossee that lies east of Narcoossee Road, west of Nova Road and south of Jones Road. It is bounded on the north by Starline Estates - Unit Two and by property owned by Deseret Farms. Lake Center and County Road 532 (Nova Road) form much of the east boundary. Harkley Runyun Road, Runnymede Ranch Land Unit Three and the south lines of said Sections 33, 34 and a portion of Section 32 form the south boundary. Narcoossee Road and vacant commercial land uses form part of the west boundary at the project's entrance. Narcoossee Road is the main corridor for Osceola County's trails system, connecting to Orange County.

Current Zoning and Land Use:

The subject site is presently zoned Agricultural/Conservation (A/C). A majority of the site is currently located within the Mixed Use Land Use District 7 of the Urban Expansion Area. The additional 134.1 acres are currently located within the Low Density Residential Land Use District. A Comprehensive Plan Amendment (CPA) has been submitted for the additional property and on December 21, 2009 was approved by the Osceola County Board of County Commissioners for transmittal to the Florida Department of Community Affairs. That CPA will expand the boundaries of Mixed Use District 7 so that the additional property will be included within the mixed use land use district and the Urban Expansion Area of the Urban Growth Boundary. It is anticipated that the CPA to expand Mixed Use District 7 will be scheduled for a final adoption hearing by Osceola County in the summer of 2010. This would allow the land uses and development program proposed by this application. The entire property is located within the Urban Growth Boundary for Osceola County. The Project is planned as a mixed-use traditional neighborhood development (TND).

Preliminary Concept:

The Center Lake DRI is planned as a sustainable community replete with an array of planned elements that will produce significant internal capture benefits. The ability to live, work, play and pray in an accessible pedestrian friendly manner, is the fundamental paradigm employed in the development concept. The concept focuses on TND design principals intended to produce a seamless, walk-able community with a mixed-use Community Center planned for the development's entrance near Narcoossee Road and a Neighborhood Center as the heart of social activity for the community. The Community Center has been located and planned for patronage from the development as well as from neighboring developments. All roads, paths and trails feed the Community Center and Neighborhood Center which are both planned for public areas, commons, shopping, offices, institutional facilities, houses of worship, and dwellings above and/or integrated with ground level commercial uses.

The Center Lake DRI is characterized by a large cohesive wetland community that covers approximately 871.9 acres that together with the 173.2 acres lying below the Safe Development Line for Center Lake form approximately 52% of the subject site. The 967.4 acre remainder is divided into six islands of upland developable acreage. These islands are planned to take advantage of the natural barrier of wetland vegetation that forms their boundaries. Despite the insular effect created by the geometry of the wetlands, connectivity to each neighborhood has been maximized to the greatest extent feasible. Each neighborhood is linked to one another by a linear park along a tree lined connecting boulevard that includes a meandering pedestrian and bike trail network.

The Center Lake DRI is planned for the following community features:

- Approximately 1,028 single family dwelling units and approximately 2,345 multifamily dwelling units for a total of up to 3,373 mixed residential dwelling units are proposed. They will consist of town homes, rentals, condominiums, cluster / courtyard housing, and detached single family residential units.

- Approximately 5.5 acres of commercial is planned near the project's entrance along Narcoossee Road. Approximately 15 acres of existing commercial land use lies adjacent to the development along Narcoossee Road. This land is not a part of the applicant's ownership and, therefore, not a part of this DRI. Together, these properties will function as a Community Center to serve both the project and neighboring developments. This application proposes 10,000 sf of office use, 70,000 sf of retail/service use and up to 130 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities, for the portion of the Community Center located within the DRI. These units are part of the overall unit count stated above. The Community Center will be linked to the entire development with both vehicular and pedestrian access along the main boulevard that traverses the development and provides connectivity from Narcoossee Road to Nova Road.

- An approximate 6.1 acre Neighborhood Center is located in the center of the development. Development within this Neighborhood Center will include 30,000 sf of community facilities, 10,000 sf of church/civic use, 60,000 sf of office uses and 100,000 sf of retail/service uses. Up to 170 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities along with parks, greens and common areas will also be included in the Neighborhood Center.

- The Applicant is proposing one elementary school site located nearby the Neighborhood Center. It is intended that this elementary school site will accommodate an "urban form" design for public education facilities. Although it is intended that the "urban form" is anticipated to serve the student demand of the development, it has been located along the main boulevard that connects Narcoossee Road and Nova Road so that access from outside of the development can be achieved, should the School Board of Osceola County wish to provide student stations for residents outside of the development.

- Pocket parks are located within easy walking distances of all residences. These pocket parks are provided so that parents can accompany their small children to areas where suitable playground equipment and shelters are available without having to drive. A 15.8 acre community sports park is planned near the east entrance of the project along Nova Road where it can also be utilized by the public. Field and court sports are anticipated for this feature.

- The main boulevards running from the perimeter of the DRI pass through the Community Center and Neighborhood Center. These boulevards are proposed with tree lined linear parks designed to encourage pedestrian and bike use within the community. A pedestrian and bicycle network will link all residential neighborhoods to the various parks, Neighborhood Center and the Community Center within the proposed DRI. This pedestrian and bicycle network will provide connectivity to public access facilities adjacent to the perimeter of the development.

- Many of the water management lakes and ponds proposed throughout the development are designed as center pieces for ancillary, passive parks.

- Jurisdictional wetlands are slated for preservation and protection. Minor impacts to jurisdictional wetlands of approximately 5.3 acres or 0.6% are proposed and are limited to facilitate the internal interconnected roadway network. From the aerial photography provided herein, a distinct geographical pattern is obvious for both onsite and offsite wetland features. Closer observation reveals that this wetland geometry results in six upland islands interconnected by existing ranch roads. This plan proposes to link these developable islands into a series of independent but interconnected neighborhoods within the greater community having a Neighborhood Center at its core.

- Houses of worship and day care facilities are anticipated uses within the proposed mixed-used development. These are internal capture generators that may occur and are planned for the Neighborhood Center but could occur anywhere within the development, pending compliance with local zoning ordinance. Except for within the Neighborhood Center and Community Center, any square footage that might be associated with these features is independent of any other square footage cited elsewhere herein.

- Infrastructure components such as roads, utilities and water management are provided within the proposed mixed-use development.

The Center Lake DRI is proposed to be developed in two phases over a period of ten years. Construction is anticipated to commence in 2011 with completion anticipated in 2020.

Proposed Development Program by Phase

Map H Concept Plan	Land Use	FAC 28-24.	Phase 1 2011 - 2015	Phase 2 2016-2020	Total Build-Out
SFR (1)	RES	.028	300 du	728 du	1028 sfr dus
MFR (2)	RES	.028	882 du	1463 du	2345 mfr dus
Community & Neighborhood Center	Retail / Service	.031	60,000 sf	110,000 sf	170,000 sf
Community & Neighborhood Center	Office	.020	30,000 sf	40,000 sf	70,000 sf
Neighborhood Center	Civic	N/A	10,000 sf	-0-	10,000 sf
Neighborhood Center	Community	N/A	30,000 sf	-0-	30,000 sf
1 Elem. School	Institutional	.024	970 Students	N/A	970 Students

1. 1,028 single family units include conventional detached single family and detached cluster/courtyard homes.
2. 2,345 multifamily units include apartments, rentals, condominiums, town homes and attached cluster/courtyard homes. Approximately 130 multifamily units are anticipated within the Community Center. Approximately 170 multifamily units are anticipated within the Neighborhood Center. Approximately 2,045 mixed multifamily units are anticipated within the remaining residential neighborhoods in the development.
3. *The multifamily units within the Community Center and the Neighborhood Center referenced above are a* residential workforce component that is part of the community concept.

B. Provide a breakdown of the existing and proposed land uses on the site for each phase of development through completion of the project. The developed land uses should be those identified in Section 380.0651, F.S. and Chapter 28-24, F.A.C. Use Level III of The Florida Land Use and Cover Classification System: A Technical Report (September 1985), available from each regional planning council. Refer to Maps D (Existing Land Use) and H (Master Plan). Use the format below and treat each land use category as mutually exclusive unless otherwise agreed to at the pre-application conference.

Table 10.B-1, below provides a comparison between the existing and proposed land uses.

Table 10-B-1
Existing and Proposed Land Use Comparison

FLUCCS CODE	LAND USE CATEGORY	EXISTING Acres(1)	PROPOSED Acres (2)	DIFFERENCE
Lands Above the Safe Development Line				
110	Residential, Low Density	9.8	322.8	+313.0
140	Commercial Community & Neighborhood Centers	-0-	11.6	+11.6
166	Water Management Tracts	-0-	135.9	+135.9
170	Institutional	-0-	12.8	+12.8
180	Parks, Recreation, and Open Space(3)	-0-	138.9	+138.9
211	Improved Pastures (4)	725.3	83.2	-642.1
224	Abandoned Citrus Grove	129.9	-0-	-129.9
311	Herbaceous	0.7	-0-	-0.7
414	Pine Mesic Oak	61.1	37.2	-23.9
421	Xeric Oak	8.3	3.7	-4.6
427	Live Oak	15.0	15.0	-0-
434	Hardwood Coniferous Mixed	8.5	8.5	-0-
515	Ditch	4.9	0.3	-4.6
630	Wetland Forested Mixed	831.5	826.7	-4.8
641	Freshwater Marsh	40.0	39.9	-0.1
643	Wet Prairie	0.4	-0-	-0.4
814	Roads and Right of Ways	3.9	202.8	+198.9
Sub Totals:		**1839.3**	**1839.3**	**-0-**
Lands Below the Safe Development Line				
211	Improved Pastures (4)	1.3	1.3	-0-
414	Pine Mesic Oak	2.5	2.5	-0-
421	Xeric Oak	0.1	0.1	-0-
515	Ditch	0.04	0.04	-0-
520	Lake	121.4	121.4	-0-
630	Wetland Forested Mixed	47.9	47.9	-0-
641	Freshwater Marsh	0.05	0.05	-0-
Sub Totals:		**173.2**	**173.2**	**-0-**
Totals:		**2012.5**	**2012.5**	**-0-**

Source: Rj Whidden and Associates, Inc. and Modica & Associates, Inc.

(1) Pre-Development Stage
(2) Post Development Stage
(3) Park acreage includes neighborhood and community parks exclusive of park lands within the Community Center and Neighborhood Center. Approximately 37 acres of natural communities located with proposed parks have been accounted for within the respective natural community category.
(4) Improved pasture lands to remain reflect lands adjacent to wetlands to be included in buffers and lands below the safe development line. These areas will be allowed to re-vegetate to their natural communities.

C. Briefly describe previous and existing activities on site. Identify any constraints or special planning considerations that these previous activities have with respect to the proposed development.

Previous and existing activities:

This area of Osceola County has remained rural in nature due to the large land holdings of the Center Lake Properties, LLLP and other similarly large nearby family ranches despite the fact it is essentially a gap between two merging growth patterns. The land presently operates as an active cattle ranch and citrus grove. The city limits of St. Cloud are now adjacent to the property on the south. Urban growth in unincorporated Osceola County and from the City of St. Cloud is rapidly expanding from the west and south. Suburban and rural ranchette development has occurred on the northwest.

Unique Site Constraints:

There are a number of constraints or design issues that influence the project concept and that are described below:

- Approximately 52% of the site is jurisdictional wetlands or lands below the safe development line for Center Lake. The developable uplands that remain are essentially islands. Within each of these, additional space is devoted to buffering the adjacent wetlands which presents geometric constraints. Mitigation will be required where wetlands will be impacted in order to provide access and linkage between the upland islands.

- TND is the design concept for the subject site. Seamless access to neighboring properties is a desired characteristic of TND. The large onsite wetland system extends offsite to the north and south effectively limiting desired interconnectivity.

- Areas to be developed within the 100 year floodplain will require compensating storage.

- An eagle's nest occurs within the proposed development. Its protection zone consumes a substantial portion of available uplands in a site already constrained by wetlands and lands below the safe development line that presently occupy 52% of the site.

- Roads in the region do not have adequate capacity to handle the development of this and other nearby slated projects at build-out. Offsite road improvements may be necessary. Onsite internal capture components such as park and ride facilities, employment centers, work based housing, schools, parks and recreation, entertainment, medical, and shopping are essential in order to offset external transportation trips and trip lengths.

- The Department has regulatory authority over sovereign submerged lands (SSL), or state-owned lands. Lake Center has been determined by the Department to be state-owned. The state claims ownership of all lands that fall waterward of the Ordinary High Water Line (OHWL) as established by the Department as the "safe development line." Any construction activities proposed waterward of the SSL line will require authorization from the Department. Such activities would include boardwalks, fishing piers, any type of excavation, placement of fill, etc. Authorizations for such activities are delegated to the District through Chapter 18-21.0051 F.A.C. This means that any such proposed features would be included in the ERP application submitted to the District, and the District is responsible for coordination with the Department for proper authorizations. There are no activities currently proposed within the sovereign lands associated with the Center Lake DRI.

D. If the development is proposed to contain a shopping center, describe the primary and secondary trade areas that the proposed shopping center will serve.

The Center Lake DRI will lie wholly within Mixed Use District 7 within the Urban Expansion Area of the Urban Growth Boundary once the pending Comprehensive Plan Amendment (CPA) is adopted by Osceola County. Please consult the revised Map D - Future Land Use Map provided in Question 9 herein that reflect the property's boundaries assuming the final adoption of the CPA. The mixed use district is intended to promote a balanced mix of activities including, residences, shops, schools, workplaces, parks, etc. Within the mixed use category, commercial and office must take the form of centers. Community Centers and Neighborhood Centers are required when market conditions clearly indicate a sufficient economic base exists to sustain a center. Residential development is required as part of a Community Center and Neighborhood Center. Community Centers provide retail and office development and may also include shopping centers with grocery stores, where Neighborhood Centers are intended to provide convenience retail and personal, business, professional and public services.

The Center Lake DRI is proposed to include a portion of a mixed-use Community Center located near the entrance to the project along Narccoossee Road. This portion of the Community Center is adjacent to approximately 15 acres of existing commercial land use. The existing commercial property is not under common ownership or in the control of the applicant and is therefore not included in this application. Together with the Community Center lands proposed by this application the commercial land uses could function as a Community Center defined by the Osceola County Future Land Use Element. The responsibility to enforce such function on lands not included with this application will lie with Osceola County through their Land Development Code. A Neighborhood Center is also proposed near the center of the project which will have access from Twelve Oaks Road and Nova Road.

Regional commercial facilities exist at the intersection of Narcoossee Road and US Highway 192 located approximately 1.5 miles south of the subject site. The Nova Road corridor has no other commercial facilities available to the residents of the area. The DRI is planned for a maximum of 170,000 square feet of retail/services, 70,000 sf of office, 10,000 sf of civic use, 30,000 sf of community facilities and institutional uses. A shopping center with grocery store may be included in the Community Center. Approximately 130 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities are planned for the Community Center. Approximately 170 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities are planned for the Neighborhood Center. In accordance with Future Land Use Element Policy 1.3.15, the following distribution of mix of uses shall be required within the Community Center and Neighborhood Center:

Use	Community Center	Neighborhood Center
Mutli-Family Residential	15% - 35%	0% - 20%
Commercial	50% - 70%	60% - 85%
Office	15% - 45%	10% - 30%
Public/Civic	10% - 20%	5% - 20%
Public / Park	05% - 10%	5% - 15%

The Community Center has a primary trade area of approximately 1624 existing households and approximately half of the 3373 proposed households by this application within its one-mile trade area. There are an additional 3496 existing households and the balance of proposed households by this application within its two-mile trade area. Its secondary trade area is passerby traffic that frequents Narcoossee Road which is a direct connector heading north to The Greenway Hwy 417 which leads to the City of Kissimmee, the Orlando International Airport and surrounding Orlando area and heading south to the City of St. Cloud. The project also has direct access to Nova Road that leads to the beaches of Melbourne and Cocoa Beach.

The Neighborhood Center has been centrally located to serve the 3373 households by this application, all of which are located within approximately 1 mile. The additional existing households in the area will also be served by this Neighborhood Center due to the interconnectivity provided to surrounding development. The Neighborhood Center has also been located with convenient access to the main boulevard that provides a through movement and connects the Narcoossee Road and Nova Road corridors. Through trips provide for a limited secondary trade area for the Neighborhood Center.

E. Describe, in general terms, how the demand for this project was determined.

The Center Lake DRI is located between the City of St. Cloud in Osceola County, Florida and the Innovation Way corridor along The Greenway Hwy 417 in Orange County, Florida. Osceola County, as well as the entire metropolitan Orlando area has historically experienced a rapid growth rate sparked by tourism and employment centers in neighboring Orange County.

Current population within Osceola County is nearing 260,000 residents. The projected growth in permanent population for the year 2025 is approximately 510,000 residents. Additionally, the current population of tourists within Osceola County of 150,000 per day is projected to increase by an additional 100,000 per day for a total of approximately 250,000 tourists per day by the year 2025. For this reason, Osceola County continues to experience a tremendous demand on residential housing units. The 9,377 persons expected to reside in Center Lake DRI represent approximately 4% of the anticipated population growth through 2025. Thus, the demand for the project is driven by current population growth trends. Since the general location of the Center Lake DRI has been left relatively untouched by urban development, it creates a prime opportunity to provide much demanded housing units between two urbanized areas. This affords the opportunity to respond to the housing demand and promote smart growth policies with urban development being located in an area that can be developed with an efficient use and expansion of urban services.

Part 2 - Consistency with Comprehensive Plan

A. Demonstrate how the proposed project is consistent with the local comprehensive plan and land development regulations. Indicate whether the proposed project will require an amendment to the adopted local comprehensive plan, including the capital improvement element. If so, please describe the necessary changes.

The majority of the Center Lake DRI is currently designated as Mixed Use Land Use District 7 within the Urban Expansion Area (UEA) of the Urban Growth Boundary (UGB) of Osceola County, Florida. A Comprehensive Land Use Plan Amendment (CPA) has been submitted to Osceola County and on December 21, 2009 was approved by the Board of County Commissioners (BOCC) for transmittal to the Florida Department of Community Affairs (DCA).

This CPA will expand Mixed Use District 7 to include the additional 134.1 acres that are now under common ownership by the applicant and have been included in this application. The adoption of the CPA is anticipated by the summer of 2010. Please consult the revised Map D Future Land Use Map provided in Question 9 herein that reflects the property's boundaries assuming the final adoption of the CPA. The following describes specific compliance with the Osceola County Comprehensive Plan assuming adoption of the CPA.

In accordance with Policy 1.1.3 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy encourages development that can be efficiently served by public facilities and services and requires minimum residential densities. The density proposed by the Center Lake DRI complies with the minimum density requirement of 5.0 dwelling units per acre for the Urban Infill Area.

In accordance with Policy 1.1.5 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy requires development within the UGB to connect to a regional service provider of central potable water and sanitary sewer systems. The Center Lake DRI complies with the requirement of this policy as it will require all development to connect to the regional service provider for central potable water and sewer.

In accordance with Policy 1.1.11 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy allows for development thresholds to be defined through the Development of Regional Impact review and approval process. This application for DRI review and its subsequent review and approval implements this policy.

In accordance with Policy 1.2.1 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy requires Traditional Neighborhood Design (TND) form of development within the UEA. The development program presented in this application complies with the requirement to develop with the TND form of development. Furthermore, the forthcoming Planned Development zoning application will meet the standards of the pending Osceola County Land Development "Smart" Code that will define TND design principles.

In accordance with Policy 1.2.3 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy requires development to promote sustainable land development. The development principles presented in this application are defined by a sustainable land development pattern that promotes the efficient use of infrastructure, protects the environment and is compatible with adjacent land uses.

In accordance with Policy 1.3.11 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy promotes a balanced mix of activities-residences, shops, schools, workplaces, parks, etc. The Center Lake DRI development program promotes a balanced mix of activities and meets the density and intensity standards required by this policy.

In accordance with Policy 1.3.12 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy requires that development activity supports and furthers the design characteristics associated with an urban form of development. The Center Lake DRI development program provides for an orderly framework for public and private development and supports the design characteristics required by this policy.

In accordance with Policy 1.3.13 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy establishes a hierarchy of commercial centers based upon their function, size and relationship to residential development. The Center Lake DRI development program proposes 280,000 sf of non-residential development within two centers strategically located and appropriately sized to serve the residents of the development and the immediate surrounding area.

In accordance with Policy 1.3.14 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy establishes development thresholds to achieve an appropriate mix of residential and non-residential uses within the Mixed Use Districts. The Center Lake DRI development program proposes 280,000 sf of non-residential development within two centers strategically located and appropriately sized to serve the residents of the development and the immediate surrounding area in accordance with this policy.

In accordance with Policy 1.3.15 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy establishes a distribution among the mix of uses within the Mixed Use Districts. The development program proposed for the Community Center and Neighborhood Center achieves the desired mix of uses in accordance with this policy.

In accordance with Policy 1.3.13 of the Future Land Use Element of the Osceola County Comprehensive Plan:

This policy establishes a hierarchy of commercial centers based upon their function, size and relationship to residential development. The Center Lake DRI development program proposes 280,000 sf of non-residential development within two centers strategically located and appropriately sized to serve the residents of the development and the immediate surrounding area.

B. Describe how the proposed development will meet goals and policies contained in the appropriate Regional Comprehensive Policy Plan.

In accordance with Article 3.1.1 of the ECFRPC Strategic Regional Policy Plan:

The size and scope of the development is such that a wide variety of price ranges and residential product types can be applied throughout. The Applicant intends to provide inclusive zoning techniques in the Osceola County PD zoning process that will encourage mixed residential housing components, seamless neighborhoods, and the elimination of neighborhoods segregated solely on the basis of income level.

In accordance with Article 4.2.1 of the ECFRPC Strategic Regional Policy Plan:

The Applicant of the proposed Center Lake DRI anticipates a development order condition that will require the installation of water-consuming plumbing fixtures in community facilities and commercial establishments that are consistent with the State Water Conservation Act (s.553.14, F.S.).

In accordance with Article 4.2.2 of the ECFRPC Strategic Regional Policy Plan:

The proposed development will employ re-use water as provided by the utility authority.

In accordance with Article 4.2.5 of the ECFRPC Strategic Regional Policy Plan:

The Applicant of the proposed development anticipates a development order condition requiring xeriscape landscape principles.

In accordance with Article 4.4 of the ECFRPC Strategic Regional Policy Plan:

The ECFRPC customarily recommends a development order condition that specifies a hierarchy water supply resource that utilizes the lowest quality water available and appropriate for the intended application.

In accordance with Article 4.5 of the ECFRPC Strategic Regional Policy Plan:

The Applicant of the proposed development anticipates a development order condition requiring xeriscape landscape principles.

In accordance with Article 4.7 of the ECFRPC Strategic Regional Policy Plan:

The applicant will engage in an inter-local agreement to extend services to the subject site. The City of St. Cloud presently provides service to development in the vicinity.

In accordance with Article 4.23 of the ECFRPC Strategic Regional Policy Plan:

The development does not propose any activities that would degrade wetland functions or deepwater habitat.

C. Describe how the proposed development will meet goals and policies contained in the State Comprehensive Plan (Chapter 187, F.S.), including, but not limited to, the goals addressing the following issues: housing, water resources, natural systems and recreational lands, land use, public facilities, transportation, and agriculture.

In accordance with F.S. 187.201 (5) (b) 2. a, b, and c:

The development proposes to reduce phosphate and nitrogen loading onto the property from the current cattle ranching operations that have occurred for several decades. Surface water presently discharges into the adjacent Center Lake. Reduction is a predictable result when agricultural operations are curtailed and agency rules are applied to development permitting.

In accordance with F.S. 187.201 (7) (b) 3, 5 and 10:

The applicant will engage in an interlocal agreement to extend services to the subject site. The City of St. Cloud presently provides service to developments in the vicinity of the DRI.

In accordance with F.S. 187.201 (7) (b) 8 and 10:

The applicant anticipates accepting a development order condition that requires the applicant to meet or exceed SFWMD rules and regulations relative to the upper chain of lakes and the Everglades Restoration Project.

In accordance with F.S. 187.201 (9) (b) 1, 2, 5, 6 and 7:

The Applicant for the development proposes to:

1) Conserve the live oak hammock as shown on Map H Concept Plan, provided in Question 9 herein. It is integrated into the linear park and central park network which focuses on maintaining the existing vegetation cover as a park facility.

2) Dedicate parks and conservation areas to the public.

5) Displace existing and ongoing agricultural practices with development that is subject to federal, state and local permitting requirements designed, among other intentions, to establish compatibility with onsite and nearby wildlife and natural systems.

6) Protect or restore ecological wetland functions for the future by buffering to meet or exceed agency requirements and ECFRPC standards for development order conditions; by providing for preservation of extended vegetative communities that border many of the conservation areas proposed on Map H Concept Plan provided in Question 9 herein; and by providing for maintenance of the volumes of surface water imported to existing stressed wetlands;

7) The Applicant anticipates accepting a development order condition that requires the applicant to meet or exceed SFWMD rules and regulations relative to the upper chain of lakes and the Everglades Restoration Project.

In accordance with F.S. 187.201 (10) (b) 2:

The applicant's traffic engineer provided a model which demonstrates that development of the DRI will not produce any adverse impacts to the air quality of the region.

In accordance with F.S. 187.201 (11) (b) 1, 3 and 6:

1) DRI development orders routinely include a condition that requires the use of energy saving appliances, devices and construction techniques for institutional, commercial and residential applications.

3) Traffic flow will be improved by providing a seamless boundary with the future development that could occur on presently vacant land to the east; by providing a mass transit stop; by providing a pedestrian and bicycle network that links all community facilities, commercial areas, institutional facilities and residential components; and by centralizing active and passive parks in areas within easy walking distance.

6) DRI development orders routinely include a condition that requires the use of energy saving appliances, devices and construction techniques for institutional, commercial and residential applications.

In accordance with F.S. 187.201 (15) (b) 1, 3, 5 and 6:

1) The development will provide inventory for approximately 9,377 persons of the additional 250,000 permanent resident population projected to move to Osceola County by the year 2025.

3) The development is a mixed residential DRI that proposes neighborhood commercial retail services in a mixed-use Community Center, inclusive zoning techniques, conservation of wetlands, habitat corridors, seamless boundaries, TND development standards, protection for natural areas, parks and linked bike and pedestrian trails.

5) The applicant anticipates accepting a development order condition that requires the applicant to meet or exceed SFWMD rules and regulations relative to the upper chain of lakes and the Everglades Restoration Project.

6) The applicant anticipates accepting a development order condition that requires the applicant to meet or exceed SFWMD rules and regulations relative to the upper chain of lakes and the Everglades Restoration Project.

In accordance with F.S. 187.201 (17) (b) 3, 4, 5, 6, 7, 8, 9 and 10:

The Applicant is exploring, and will participate in a program intended to recommend an impact fee structure for the financing of all public service impacts associated with new development, including schools and roads.

In accordance with F.S. 187.201 (18) (b) 6:

The *Florida Department of Historical Resources* issued a letter, attached as Exhibit 3 in the original ADA, based upon a survey conducted for historic and/or cultural resources, that the proposed development outside the possible sand mound will have no effect on cultural resources listed or eligible for listing in the NRHP, or otherwise of historical, architectural or archaeological value. Based on the information provided, DHR concurred with those determinations.

In accordance with F.S. 187.201 (18) (b) 13:

The Applicant for the development anticipates a development order condition that will require a ride share parking facility that will in all likelihood be planned within the mixed-use Community Center shown on Map H Concept Plan, provided in Question 9 herein.

13) The DRI process engages the participation and review of the agencies charged with developing state, local and regional transportation plans and programs.

In accordance with F.S. 187.201 (18) (b) 13:

Osceola County has recently adopted new impact fees for thoroughfare and public services facilities in the region.

In accordance with F.S. 187.201 (25) (b) 1, 4, 6 and 8:

The DRI process embraces the participation and review of the appropriate agencies, jurisdictional bodies, societies and organizations. The ECFRPC assumes the leadership role and coordinator of the participating agencies.

1) The ECFRPC has collaborated with the ACOE, SFWMD, Nature Conservancy, Audubon Society, developer and others to initiate the identification of all relevant issues for the sister DRIs proposed along the west edge of Lake Toho in this region.

2) The DRI process embraces the participation and review of the appropriate agencies, jurisdictional bodies, societies and organizations. The ECFRPC assumes the leadership role and coordinator of the participating agencies.

3) The DRI process embraces the participation and review of the appropriate agencies, jurisdictional bodies, societies and organizations. The ECFRPC assumes the leadership role and coordinator of the participating agencies.

Part 3 - Demographic and Employment Information

A. Complete the following Demographic and Employment Information tables.

Please consult Tables 10.3.A-1 and 10.3.A-2, below.

Table 10.3.A-1
Demographic Information Related to Population

Phase	Total Dwelling Units		Persons Per Household (1)	Total Population	Students per Household (2)		Total School Age Children	Elderly per House-hold (3)	Total Elderly
	Mixed SFR	Mixed MFR			SF 0.523	MF 0.341	SF & MF		
Phase 1	300	882	2.78	3286	157	301	458	0.32	378
Phase 2	728	1463	2.78	6091	381	499	880	0.32	701
Total	**1028**	**2345**	**2.78**	**9377**	**538**	**800**	**1338**	**0.32**	**1079**

Sources:
(1) Osceola County Comprehensive Plan
(2) Provided by Osceola County School Board
(3) 2004 Population Studies, Population by Age, Bureau of Economic and Business Research, University of Florida

Table 10.3.A-2
Estimated Employment Generated by Income Range

Phase	Under 10,000.00		$10,000 - $14,999		$15,000 - $19,999		$20,000 - $24,999		$25,000 - $29,999		$30,000 - $34,999		$35,000 - $39,999		Over $40,000	
	Con	Non	Con	Non	Con	Non	Con	Non	Con	Non	Con	Non	Con	Non	Con	Non
Phase 1	7	0	36	0	64	24	97	30	163	46	66	82	122	66	257	39
Phase 2	7	0	36	0	64	40	97	50	163	74	66	134	122	108	257	63
Total	7	0	72	0	128	64	194	80	326	120	132	216	244	174	514	102

Source: Rj Whidden & Assoc., Inc. – based on historic ES-202 wage and employment data for Osceola County, Florida and ECFRPC Affordable Housing Worksheet

Part 4 - Impact Summary

A. Summarize the impacts this project will have on natural resources.

The Center Lake DRI project site has been documented to contain approximately 871.9 acres of wetlands (excluding approximately 173.2 acres that fall below the 65-foot Safe Development Line) and a few species of listed wildlife. The conceptual design of the Center Lake DRI project targets the majority of the development within altered habitats such as improved pastures and grove lands, while preserving the wetland habitats and portions of other native habitats. The project design incorporates approximately 866.6 acres of wetland, approximately 113.8 acres of upland preservation within buffers, and approximately 37 acres of upland tree canopy within the park system. This totals approximately 1017.4 acres or 51% of the total area. There will be both upland and wetland preservation and enhancement activities as part of the mitigation plan. Project development will result in approximately 5.3 acres or approximately 0.6% of wetland impacts. These impacts will occur along existing field roads and to altered and lower quality portions of the wetlands while preserving the contiguous, higher quality wetlands.

Project development will also require relocation of the state protected gopher tortoise. The tortoises will be relocated to an upland preservation area within the project site. Should the on-site relocation area not meet standards required by Florida Fish & Wildlife Conservation Commission, tortoises affected by development will be relocated to an approved off-site recipient area. The active bald eagle nest has been avoided by project development and will be protected in the post-development condition.

B. Summarize public facility capital costs associated with project impacts using the following table:

No public facility capital costs will be incurred to support the Center Lake DRI development. Osceola County has recently adopted impact fees that assure that development pays for itself.

Question 11 - Revenue Generation Summary

A.1 Make the following projections by year, including the first and last year in which any construction and/or development takes place;

(a) yearly ad valorem tax receipts;
(b) yearly impact fees collected;
(c) yearly sales tax received by local government;

Please consult Tables 11.A.1.(a) – 1, 11.A.1.(b)-1, 11.A.1.(c) –1 and 11.A.1.(c) –2 below.

Table.A.1.(a).-1 Yearly Ad Valorem Tax Receipts - Residential

Phase One

YEAR	SF Units	Tax $	MF Units	Tax $	Comm. Sq.Ft.	Tax $	Office Sq.Ft.	Tax $	Total Tax $
2011	60	$215,784	176	$492,307	12,000	$11,508	6,000	$3,836	$723,435
2012	60	$215,784	176	$492,307	12,000	$11,508	6,000	$3,836	$723,435
2013	60	$215,784	176	$492,307	12,000	$11,508	6,000	$3,836	$723,435
2014	60	$215,784	176	$492,307	12,000	$11,508	6,000	$3,836	$723,435
2015	60	$215,784	178	$497,901	12,000	$11,508	6,000	$3,836	$729,029
Totals:	300	$1,078,920	882	$2,467,129	60,000	$57,540	30,000	$19,180	$3,662,769

Phase Two

YEAR	SF Units	Tax $	MF Units	Tax $	Comm. Sq.Ft.	Tax $	Office Sq.Ft.	Tax $	Total Tax $
2016	145	$521,478	292	$816,782	22,000	$21,099	8,000	$5,115	$1,364,474
2017	145	$521,478	292	$816,782	22,000	$21,099	8,000	$5,115	$1,364,474
2018	145	$521,478	292	$816,782	22,000	$21,099	8,000	$5,115	$1,364,474
2019	145	$521,478	292	$816,782	22,000	$21,099	8,000	$5,115	$1,364,474
2020	148	$532,267	295	$825,174	22,000	$21,099	8,000	$5,115	$1,383,655
Totals:	728	$2,618,179	1463	$4,092,302	110,000	$105,495	40,000	$25,575	$6,841,551

Based on $250,000 Single Family, $200,000 TH/Condo with $25,000 Homestead exemption, $60 per square foot Commercial, $40 per square foot Office, and 2009 Millage Rate of 15.9840. (Apartments are included with TH/Condos at $175,000 with no homestead exemption.)

Table 11.A.1.(b)-1 Estimated Yearly Impact Fees - Residential

Year	SF Units	MF Units	Non-Res Sq.ft. (1)	Road Fees (2)	Potable Water Fees (3)	Waste Water Fees (3)	School Fees (4)	Fire Fees (5)	Park Fees (6)
Phase One									
2011	60	176	18,000	$1,560,312	$453,712	$821,020	$1,794,260	$44,239	$174,923
2012	60	176	18,000	$1,560,312	$453,712	$821,020	$1,794,260	$44,239	$174,923
2013	60	176	18,000	$1,560,312	$453,712	$821,020	$1,794,260	$44,239	$174,923
2014	60	176	18,000	$1,560,312	$453,712	$821,020	$1,794,260	$44,239	$174,923
2015	60	178	18,000	$1,568,576	$457,557	$827,978	$1,807,690	$44,568	$176,281
Total	**300**	**882**	**90,000**	**$7,809,824**	**$2,272,405**	**$4,112,058**	**$8,984,730**	**$221,254**	**$875,973**
Phase Two									
2016	145	292	30,000	$2,956,564	$840,137	$1,520,279	$3,440,795	$80,917	$332,200
2017	145	292	30,000	$2,956,564	$840,137	$1,520,279	$3,440,795	$80,917	$332,200
2018	145	292	30,000	$2,956,564	$840,137	$1,520,279	$3,440,795	$80,917	$332,200
2019	145	292	30,000	$2,956,564	$840,137	$1,520,279	$3,440,795	$80,917	$332,200
2020	148	295	30,000	$2,980,668	$851,672	$1,541,153	$3,491,561	$81,905	$337,008
Total	**728**	**1463**	**150,000**	**$14,806,924**	**$4,212,220**	**$7,662,269**	**$17,254,741**	**$405,573**	**$1,655,808**

(1) Includes Commercial Retail/Service and Office
(2) Source: 2009 Osceola County Impact Fees effective March 26, 2007: Road - $8,034.54 per Single Family du; $4,132.04 per Multi-Family du; $19.50 per sf Commercial Retail
(3) Source: City of St. Cloud Potable Water and Wastewater Impact Fees effective 01/01/08: Water - $1,922.51 per du, Wastewater - $3,478.90 per du
(4) Source: 2009 Osceola County Impact Fees effective March 26, 2007:School - $10,207 per Single Family du, $6,715 per Multi-Family du
(5) Source: 2009 Osceola County Impact Fees effective March 26, 2007:Fire - $164.57 all residential, $0.30 per sf Commercial
(6) Source: 2009 Osceola County Impact Fees effective March 26, 2007:Parks - $923.73 per Single Family du, $678.97 per Multi-Family du

Table 11.A.1.(c)-1-Sales Tax from Construction Materials

Phase One

Year	Construction Costs (1)		Total Construction Cost	Material Costs @ 60% of Construction Cost	7% Sales Tax
	Residential	Non-Residential (2)			
2011	$25,100,000	$8,700,000	$33,800,000	$20,280,000	$1,419,600
2012	$25,100,000	$2,700,000	$27,800,000	$16,680,000	$1,167,600
2013	$25,100,000	$2,700,000	$27,800,000	$16,680,000	$1,167,600
2014	$25,100,000	$2,700,000	$27,800,000	$16,680,000	$1,167,600
2015	$25,300,000	$2,700,000	$28,000,000	$16,800,000	$1,176,000
				Phase One Total Tax $$	**$6,069,600**

Phase Two

Year	Construction Costs (1)		Total Construction Cost	Material Costs @ 60% of Construction Cost	7% Sales Tax
	Residential	Non-Residential (2)			
2016	$47,325,000	$4,500,000	$51,825,000	$31,095,000	$2,176,650
2017	$47,325,000	$4,500,000	$51,825,000	$31,095,000	$2,176,650
2018	$47,325,000	$4,500,000	$51,825,000	$31,095,000	$2,176,650
2019	$47,325,000	$4,500,000	$51,825,000	$31,095,000	$2,176,650
2020	$48,000,000	$4,500,000	$52,500,000	$31,500,000	$2,205,000
				Phase Two Total Tax $$	**$10,911,600**

1. Construction costs are based on 50% of proposed sales price for residential units and $150 per square foot for non-residential buildings.
2. Includes retail/service and office

Table 11.A.1.(c)-2
Sales Tax from Retail Sales

Phase One

Year	Sq. Ft. of Retail Area	Projected Gross Income	7% Sales Tax
2016	12,000	$2,400,000	$168,000
2017	12,000	$2,400,000	$168,000
2018	12,000	$2,400,000	$168,000
2019	12,000	$2,400,000	$168,000
2020	12,000	$2,400,000	$168,000
		Phase One Total Sales Tax $$	**$840,000**

Phase Two

Year	Sq. Ft. of Retail Area	Projected Gross Income	7% Sales Tax
2016	22,000	$4,400,000	$308,000
2017	22,000	$4,400,000	$308,000
2018	22,000	$4,400,000	$308,000
2019	22,000	$4,400,000	$308,000
2020	22,000	$4,400,000	$308,000
		Phase Two Total Sales Tax $$	**$1,540,000**

Based on $200 projected gross income per square foot of retail space per year.

1.(d) Yearly gasoline tax received by local government.

Phase One

Year	Residential Units		Average Daily Trips	Total Average Daily Miles	Gallons of Gasoline Consumed	Gasoline Tax $
	Single Family	Multi-Family				
2011	60	176	1,345	15,845	932	$270
2012	60	176	1,345	15,845	932	$270
2013	60	176	1,345	15,845	932	$270
2014	60	176	1,345	15,845	932	$270
2015	60	178	1,354	15,953	938	$272

Phase Two

2014	145	292	2,441	28,760	1,692	$491
2015	145	292	2,441	28,760	1,692	$491
2016	145	292	2,441	28,760	1,692	$491
2017	145	292	2,441	28,760	1,692	$491
2018	148	295	2,480	29,219	1,719	$499
Totals:	**1,028**	**2,345**	**18,987**	**223,592**	**13,153**	**$ 3,815**

Based on an ADT rate of 9.07 for single family homes, 4.55 for multi-family for Phase 1 and 8.58 for single family homes and 4.10 for townhome/condos/apartments for Phase 2, an average trip distance of 11.782 miles at an average of 17 miles per gallon with a $0.29 per gallon State and County gas tax.

1.(e) Yearly projections of any other funds by any other sources generated as a result of development of the proposed project within the region.

No other funds are anticipated to be generated by the development.

A.2 List all assumptions used to derive the above projections and estimates, show the methodologies used and describe the generally accepted accounting principles used in all assumptions, estimates and projections.

All assumptions have been identified as footnotes to the tables provided for individual revenue generations.

PART III
Environmental Resources Impact

Question 12 - Vegetation and Wildlife

A. Identify the dominant species and other unusual or unique features of the plant communities on Map F. Identify and describe the amount of all plant communities that will be preserved in a natural state following development on Map H.

Additional vegetative communities and agricultural land uses, classified using the *Florida Land Use Cover & Forms Classification System* (FLUCFCS), were identified within the 134.1 acre recently acquired parcel in the eastern portion of the DRI boundary. A total of fourteen (14) land use types are now mapped within the Center Lake DRI project limits. The following provides a general description all land uses and vegetative communities mapped within the DRI boundaries, including the recently acquired parcel.

110 – Residential Low Density

There are two single-family, rural residential lots on the project site, one in the northwestern corner and a second in the southwest corner of the site. The northwest residential site has a mobile home and several secondary structures including a storage shed and a work shed. The property has some ornamental landscaping. The pasture associated with the residential lot has been occupied by horses. The residential tract within the southwestern portion of the property comprises 4 acres, and contains two residential structures and a garage. Scattered remnant citrus specimens and ornamental species are present throughout the southwestern residential parcel.

211 – Improved Pasture

This cover type consists of agricultural land managed for the purpose of sustaining cattle. The primary vegetation within this vegetative community consists of bahia grass (*Paspalum notatum*), Bermuda grass (*Cynodon dactylon*), dog fennel (*Eupatorium capillifolium)*, flattop goldenrod (*Euthamia minor*), prickly pear (*Opuntia humifusa*), pawpaw (*Asimina* spp.), rattlebox (*Sesbania* spp.) and tropical soda apple (*Solanum capsicoides*). This community is the dominant upland habitat on-site. The northeast portion of the pasture was historically used for crops, including strawberries. A series of shallow ditches extend north to south through this portion of the pasture and appear to have been used for site drainage and/or irrigation.

Development is proposed within the improved pasture areas of the project site. Small portions of this community type may remain in the post-development condition within upland buffers to preserved wetlands.

224 – Abandoned Citrus

The majority of the recently acquired western tract consists of fallow agricultural land previously utilized for the cultivation of citrus (*Citrus* spp.). In some areas, citrus specimens remain in planted rows; in other areas, the specimens have been removed. In addition to remnant citrus, vegetative composition included an assortment of recently mowed grasses, forbs, and shrubs, such as bahia grass, beautyberry (*Callicarpa americana*), beggar-ticks (*Bidens alba*), Bermuda grass (*Cynodon dactylon*), blackberry (*Rubus* sp.) camphorweed (*Heterotheca subaxillaris*),

crabgrass (*Digitaria spp.*), creeping cucumber (*Melothria pendula*), dog fennel (*Eupatorium capillifolium*), grapevine (*Vitis rotundifolia*), hairy indigo (*Indigofera hirsuta*), lantana (*Lantana camara*), Mexican clover (*Richardia brasiliensis*), passion flower (*Passiflora incarnata*), pokeweed (*Phytolacca americana*), ragweed (*Ambrosia artesimiifolia*), and sand spur (*Cenchrus incertus*). Where present, trees included black cherry (*Prunus serotina*), cabbage palm (*Sabal palmetto*), camphor tree (*Cinnamomum camphora*), and laurel oak (*Quercus laurifolia).*

311 – Herbaceous

An herbaceous vegetative community is located in the southwestern corner of the recently acquired western tract. Vegetation predominantly includes bahia grass, blackberry, Bermuda grass, dog fennel, lantana, and pokeweed. Some live oak specimens are included within the delineation of this vegetative community.

414 – Pine Mesic Oak

This community type typically occurs as an upland fringe habitat between forested wetlands and pasture. This upland community type is characterized by a variety oaks and pines and has been disturbed as evidenced with the presence of blackberry, muscadine vine, hairy indigo, rattlebox and dog fennel in the groundcover.

421 – Xeric Oak

A small area of native xeric oak habitat remains in the northeastern portion of the property. This vegetative community is characterized by dense scrub oaks and other associated vegetation. Canopy species common to this community include sand live oak (*Quercus virginiana var. geminata*), myrtle oak (*Q. myrtifolia*), laurel oak (*Q. laurifolia*), slash pine (*Pinus elliottii*) and longleaf pine (*P. palustris*). The understory is generally comprised of dense assemblages of the aforementioned scrub oak species with a ground cover often found to support saw palmetto (*Serenoa repens*).

427 – Live Oak

An isolated live oak community is located in the eastern portion of the property. The upland community supports mature live oaks with a ground cover typically comprised of bahia grass, tropical soda apple, dog fennel, and flattop goldenrod.

434 – Hardwood Coniferous Mixed

This land cover classification is located in the eastern portion of the project site. The canopy of this upland community is comprised predominately of live oak and laurel oak with scattered slash pine and longleaf pine. Less common hardwoods include black cherry (*Prunus serotina*) and persimmon (*Diospyros virginiana*). Understory and ground cover plants include but are not limited to: saw palmetto, beautyberry, bracken fern, and shiny blueberry. Vines include catbrier (*Smilax auriculata*), Virginia creeper (*Parthenocissus quinquefolia*) and muscadine grape (*Vitis rotundifolia*).

515 – Ditch

A network of ditches is present within the improved pasture area in the northern portion of the site. Additional ditches are located in various locations throughout the project site, some of which facilitate a hydrologic connection between wetland systems. A roadside ditch was identified along Ralph Miller Road, within the recently acquired western parcel.

520 – Lake

The western and southern portions of Lake Center are included within the Center Lake DRI boundary. Areas included within this community classification are characterized by open water with varying densities of emergent aquatic plants such as spatterdock *(Nuphar luteum)* and fragrant water lily (*Nymphaea odorata*) within the shallow areas.

630 – Wetland Forested Mixed

The majority of the on-site wetland acreage is forested and contains a mixed canopy of hardwood and coniferous trees. Canopy species predominantly include pond pine (*Pinus serotina*), slash pine (*Pinus elliottii*), bald cypress, red maple (*Acer rubrum*), loblolly bay (*Gordonia lasianthus*), and sweet bay magnolia (*Magnolia virginiana*). Dahoon holly (*Ilex cassine*), buttonbush (*Cephalanthus occidentalis*) and wax myrtle (*Myrica cerifera*) were the most commonly observed understory plants. The ground strata of this community was found to support Virginia chain fern (*Woodwardia virginica*), netted chain fern (*Woodwardia aerolata*), cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), marsh fern (*Thelypteris palustris*), muscadine grape (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), blackberry (*Rubus betulifolius*), red root (*Lachnanthes caroliniana)*, and lizard's tail (*Saururus cernuus*).

641-Freshwater Marsh

Several freshwater marsh wetlands are scattered throughout the Center Lake Ranch project site. Additionally, some portions of the main wetland slough that extends through the central portion of the property consist of freshwater marsh. These herbaceous wetlands contain a mix of the following species: soft rush (*Juncus effusus*), spike rush (*Eleocharis baldwinii*), lemon bacopa (*Bacopa caroliniana*), spadeleaf (*Centella asiatica*), blue maidencane (*Amphicarpum muehlenbergianum*), buttonbush (*Cephalanthus occidentalis*), highbush blueberry (*Vaccinium* corymbosum), bushy bluestem (*Andropogon glomeratus*), pennywort (*Hydrocotyle umbellata*), beaksedge (*Rhynchospora* spp.) and rattlebox (*Sesbania* spp.). The perimeters of these wetlands contain longleaf pine (*Pinus palustris*), wax myrtle (*Myrica cerifera*) and blackberry (*Rubus* spp.).

643 – Wet Prairie

An isolated wetland is located within the improved pasture area in the west-central portion of the property. This wetland exhibits much of the same characteristics as the freshwater marshes, but tends to have a shorter period of inundation and contains a more grassy vegetative composition. Vegetation primarily includes blue maidencane, soft rush, spike rush, bushy bluestem and beaksedge.

814 – Field Roads

Several field roads are present within the DRI boundaries. Many of these roads facilitate access between upland areas. The Progress Energy easement is included within this land use designation. This easement runs east/west and north/south through the property.

The proposed site plan preserves almost 99% of the on-site wetlands. The majority of the development will be within the areas classified as pasture. Portions of the Pine Mesic Oak, Live Oak and other natural upland community types will be preserved in the post-development condition within planned community parks and along upland buffers to the wetlands.

B. **Discuss what survey methods were used to determine the absence or presence of state or federally listed wildlife and plants. (Sampling methodology should be agreed to by the regional planning council and other reviewing agencies at pre-application conference stage). State actual sampling times and dates, and discuss any factors that may have influenced the results of the sampling effort. Show on Map G the location of all transects, trap grids, or other sampling stations used to determine the on-site status of state or federally listed wildlife and plant resources.**

Modica & Associates, Inc. conducted surveys of the 134.1 acre acquisition parcel on March 6th and April 15th of 2009. On those dates, a qualitative review of the site was conducted to determine if any wildlife species using the property are listed as protected by the U.S. Fish and Wildlife Service (USFWS) or the Florida Fish and Wildlife Conservation Commission (FFWCC). Additionally, surveys were conducted for protected plant species. Vehicular and pedestrian transects were executed to visually inspect approximately 85% of the acquisition parcel.

Survey methods for the original main parcel of the DRI were provided in our previous submittal. Modica & Associates, Inc. biologists conducted additional inspections of the main parcel on various occasions during 2008 as part of an updated sandhill crane survey and 2009, primarily to facilitate agency review and approval of the onsite jurisdictional wetland boundaries. During 2009 no formal wildlife surveys were conducted, however approximately two weeks were spent on site as part of the Formal Jurisdictional Determination during which time wildlife observations occurred.

C. **List all state or federally listed wildlife and plant resources that were observed on the site and show location on Map G. Given the plant communities on-site, list any additional state or federally listed wildlife and plant resources expected to occur on the site and show the location of suitable habitat on Map G. Additionally, address any unique wildlife and plant resources, such as colonial bird nesting sites and migrating bird concentration areas. For species that are either observed or expected to utilize the site, discuss the known or expected location and population size on-site, existence (and extent, if known) of adjacent, contiguous habitat off-site, and any special habitat requirements of the species.**

Wildlife surveys of the recently acquired ±134 acre parcel were conducted by Modica & Associates, Inc. on March 5th and April 16th of 2009. These surveys documented the presence of one (1) listed species of wildlife; gopher tortoise (*Gopherus polyphemus*) burrows were identified throughout much of the acquisition parcel. The following provides a revised account of the estimated gopher tortoise population within the overall Center Lake DRI project site, including the ±134 acre additional parcel. Revised survey results are depicted on Map G.

A total of 87 viable gopher tortoise burrows have been identified on the Center Lake DRI property. The original DRI project site was surveyed for this species in May and June of 2006. The recently acquired ±134 acre western parcel was surveyed in April 2009.

Please note that gopher tortoise survey transects did not cover 100% of the onsite suitable gopher tortoise habitat. However, a project-wide burrow count was extrapolated based on the partial site survey in order to calculate the estimated gopher tortoise population. To achieve this, optimal and suboptimal gopher tortoise habitat acreages were calculated in ArcGIS based on notes from field observations, aerial photographic interpretation, and mapped soils data. Optimal habitat generally included areas mapped as FLUCFCS codes 110, 211, 224, 311, and 421; suboptimal habitat includes areas mapped as FLUCFCS codes 211, 414, 427, 434, and 814 (Map F). Additionally, the acreage of each gopher tortoise habitat type (optimal vs. suboptimal)

included within the gopher tortoise survey was calculated in ArcGIS by offsetting a 25 foot buffer on the GPS tracks recorded during the actual survey event (total survey transect width of 50 feet). Burrow counts were summed for each habitat type and data were extrapolated based on survey percentage to obtain an estimated burrow count for the overall project site. The following table presents these data and the estimated site wide burrow count.

Table 1. Tabulation of calculated project-wide gopher tortoise burrow count, estimated based on survey data collected by Modica & Associates, Inc. in 2006 and 2009.

	Optimal Habitat	Suboptimal Habitat
Habitat Acreage	221 ac	693 ac
Acreage Surveyed	164 ac	205 ac
Percent of Habitat Surveyed	74%	30%
# of Burrows Observed	80	7
Extrapolated Total # of Burrows	108	23
Estimated Total Burrow Count	131 burrows	

Our calculations estimated that there are 131 burrows within the Center Lake DRI site. This equates to a population density of 0.14 tortoises per acre of suitable habitat. In accordance with the new *Gopher Tortoise Permitting Guidelines* issued by the FFWCC in April 2009, the anticipated number of tortoises within a project site should be estimated by multiplying the total number of viable burrows by a conversion factor of 0.50. For the Center Lake DRI project site, this results in an estimated gopher tortoise population of approximately 65-66 tortoises.

No other listed species of flora or fauna were observed on the acquisition parcel. Additionally, no listed species of flora or fauna beyond those previously reported for the main parcel were documented during the various site inspections conducted in year 2008 and 2009.

D. Indicate what impact development of the site will pose to affected state or federally listed wildlife and plant resources.

The project has been designed to avoid impact to protected wildlife species with the exception of the gopher tortoise. Prior to commencement of development, the Developer shall obtain all necessary permits from the Florida Fish & Wildlife Conservation Commission (FFWCC) to address impacts to on-site gopher tortoise habitat. The permit applications shall be for relocation of tortoises and shall be consistent with the FFWCC's Gopher Tortoise Permitting Guidelines. The relocation effort may be permitted in phases as development and construction will proceed in phases.

E. Discuss what measures are proposed to be taken to mitigate impacts to state and federally listed wildlife and plant resources. If protection is proposed to occur on-site, describe what legal instrument will be used to protect the site, and what management actions will be taken to maintain habitat value. If protection is proposed to occur off-site, identify the proposed amount and type of lands to be mitigated as well as whether mitigation would be through a regional mitigation land bank, by acquisition of lands that adjoin existing public holdings, or by other means.

Regarding the impacts to the gopher tortoise, the applicant will relocate the tortoises to an approved recipient site. The current criteria call for any approved recipient site to have a conservation easement that highly restricts any activities which could impact the lands. This easement runs in perpetuity. No direct impacts to state and federally listed wildlife and plant species are proposed, with the exception of the relocation of the state-listed gopher tortoise in accordance with FFWCC regulations.

Question 13 - Wetlands

A. If there are wetlands on the site, discuss and specify the following:

A.1 Acreage and percentage of property that is currently wetlands. These wetlands should be shown on Map F, Vegetation Associations and identified by individual reference numbers. (Their numbers should be utilized in responding to the other sub-questions.)

The **Center Lake DRI** project site now comprises a total of 2,012.5± acres. Jurisdictional wetlands and surface waters located within the project now total 1,046.2± acres, or 52% of the project site. Onsite wetlands have been field delineated, surveyed, and field approved by the SFWMD and the ACOE. Twenty-one (21) wetlands and surface ten (10) waters are present within the property boundaries. Please note that the wetland identification scheme has been revised since our previous submittal. The following table presents the former and revised wetland identification scheme.

Table 1. Updated identification labels and acreages for jurisdictional wetlands and surface waters within the Center Lake Ranch DRI project boundaries.

Wetland ID	Previous Wetland Letter	Wetland Acreage
W-1	Wetland B	2.573
W-2	Wetland A	8.326
W-3	Wetland C	8.128
W-4	Wetland D	3.724
W-5	Wetland F	1.048
W-6	Wetland E	7.268
W-7	Wetland G	1.008
W-8E	Wetland H	14.091
W-8W	Wetland H	6.333
W-9	Wetland H	27.375
W-10	Wetland H	183.642
W-11	Wetland H	136.945
W-12	Wetland I	0.412
W-13	Wetland H	237.007
W-14	Wetland H	175.714
W-15	Wetland H	1.464
W-16	Wetland K	0.565
W-17	Wetland J	4.921
W-18	Wetland H	219.590
W-19	Wetland H	1.00
W-20	--	0.089
W-21	--	0.055
Total Wetland Acreage		**1,041.278**
SW-1	--	0.160
SW-2	Wetland H	0.457
SW-3	Wetland H	0.408
SW-4	Wetland H	0.613
SW-5	Wetland H	0.629
SW-6	Wetland H	0.719
SW-7	Wetland H	0.552
SW-8A	Wetland H	0.436
SW-8B	Wetland H	0.612
SW-9	Wetland H	0.072
SW-10	--	0.250
Total Surface Water Acreage		**4.908**
TOTAL WETLAND & SURFACE WATER ACREAGE		**1,046.186**

Habitat descriptions previously provided for wetlands located within the original DRI boundaries do not differ from our previous submittal. However, two (2) additional jurisdictional areas were identified within the ±134 acre recently acquired parcel. Descriptions for each additional jurisdictional area are provided below.

Wetland 20 - Wetland 20 consists of a historically altered forested wetland located in the northeastern corner of the recently acquired west parcel. This wetland extends offsite to the north and east. The onsite component of this wetland is of low to moderately low quality due to the historic excavation of a rim-ditch along its western extent. Invasive exotic species such as Chinese tallow (*Sapium sebiferum*) and primrose willow (*Ludwigia peruviana*) have become established along the excavated slopes the rim-ditch. Hydrological alterations resulting from construction of the rim-ditch appear to have affected vegetative composition within the non-excavated portion of the wetland, as evidenced by the encroachment of upland species including Caesar weed (*Urena lobada*) and bracken fern (*Pteridium aquilinum*).

The western limit of Wetland 20 was delineated at top-of-bank of the excavated rim-ditch. In addition to the exotic species listed above, vegetation within the excavated portion of the wetland included Carolina willow (*Salix caroliniana*), wax myrtle (*Myrica cerifera*), blackberry, pokeweed, and duckweed (*Lemna* sp.). The eastern portion of the delineated wetland supported a canopy of bald cypress (*Taxodium distichum*), Chinese tallow, wax myrtle and slash pine (*Pinus elliottii*). Understory and ground cover vegetation included, but was not limited to blackberry, bracken fern, Ceasar weed, cinnamon fern (*Osmunda cinnamomea*), grapevine, and pokeweed.

Surface Water 10 – Surface Water 10 is an isolated area of excavation located immediately north of Ralph Miller Road in the east-central portion of the recently acquired west parcel. The top of bank of Surface Water 10 supports scattered bahia grass, blackberry, dog fennel, elderberry, grapevine, and wax myrtle. Documented herbaceous vegetation within the lower elevations of the ditch include wetland consists of pennywort (*Hydrocotyle umbellate*), beaksedge (*Rhynchospora* sp.), little blue maidencane (*Amphicarpum muhlenbergianum*), and bushy bluestem (*Andropogon glomeratus*).

A.2 If there are wetlands on site, discuss and specify the historic hydro-periods and seasonal water elevations of on-site wetlands.

Osceola County has designated the 65-foot msl contour as a Safe Development Line for Center Lake. The county will not authorize any non-water dependent construction or use waterward of the 65-foot contour. Seasonal high water elevations throughout the remaining wetlands on the project site have not been established. The Ordinary High Water Line (limits of sovereignty) for Center Lake has been established by FDEP at 64.0' N.G.V.D.

A.3 Acreage and location of wetlands that are to be preserved in their natural or existing state, including proposed hydro periods, seasonal water elevations and methods for preservation.

Approximately 99% of the on-site wetland and surface water acreage will be preserved in its natural state in the post-development condition. These wetlands and their associated upland buffers will be placed under conservation easements dedicated to a regulatory agency during the Environmental Resource Permitting process (i.e. South Florida Water Management District). Final design and engineering of the stormwater management system will include a detailed modeling study that includes the existing seasonal high

water elevations based on biological indicators and a geotechnical study of the water table in the soils to ensure that the pre-development hydroperiods of the on-site wetlands will be maintained in the post-development condition.

A.4 If there are wetlands onsite, discuss and specify the acreage and location of areas to be enhanced, including proposed hydro-periods, seasonal water elevations and methods of enhancement.

There are several wetland enhancement opportunities throughout the Center Lake DRI property. A maintenance program will be implemented to control invasive and exotic vegetation within the wetland systems proposed for preservation to ensure a reduction of invasive or exotic vegetation as defined by the Florida Exotic Pest Plant Council at the date of permit issuance. This will ensure that the conservation areas will remain in optimal condition for use by wildlife.

At the time of permitting, the stormwater management system will be designed to incorporate appropriately sized and placed culverts under each of the roads where a wetland crossing occurs. Although some culverts are currently in place under existing field roads, the replacement and sizing of these culverts will consider the wetlands and the appropriate hydrological regime.

A.5 Actions taken to minimize or mitigate impacts on wetland areas, including maintaining the hydro period and providing buffers.

Wetland impacts have been greatly minimized during the conceptual site planning process. The Traditional Neighborhood Design was used to cluster development into the areas of the property that are altered habitats, mainly within the improved pastures. There are minimal wetland impacts proposed; approximately 99% of the onsite wetlands and surface waters will remain unimpacted. The majority of the proposed wetland impacts are associated with road crossings necessary to provide internal access between the different areas of development. To minimize impacts to the on-site wetlands, each of the road crossings have been designed along existing field roads. Culverts will be used under the road crossing to maintain adequate hydrology throughout the wetland systems. These culverts will also serve as wildlife crossings for fish, reptiles, amphibians and small mammals.

The conceptual plan incorporates buffering in accordance with Osceola Comprehensive Plan Chapter 9 Policy 1.4.12. along the boundaries of each wetland system. Much of the stormwater management system has been designed between the proposed development parcels and the wetlands. This design allows for additional buffering of wetland resources, as well as maintaining the hydroperiod of the wetland systems. The stormwater management ponds will be designed using the seasonal high water elevations established in the adjacent wetland systems to ensure that the appropriate volume and frequency of the post-development discharge of treated water from the ponds occurs equals that of the pre-development discharge.

Additionally, the wetlands and upland buffers will be placed under a Conservation Easement as required by the rules and regulations of the South Florida Water Management District in conjunction with the Environmental Resource Permitting requirements. This provides assurances to the regulatory agencies that sufficient measures are being taken to preserve and maintain the integrity and viability of the wetlands in the post-development condition, including minimizing secondary impacts.

A.6 If there are wetlands on site, discuss and specify the acreage and location of wetlands that will be disturbed or altered, including a discussion of the specific alterations and disturbances.

It is estimated, based on the conceptual plan, that project development will result in impacts to 9.9± acres of jurisdictional wetlands and surface waters, of which 5.3 acres consists of wetland impact and 4.6 acres consists of surface water impact. Approximately 46% (4.6 acres) of the overall jurisdictional area impact acreage consists of impacts to man-made agricultural ditches.

As indicated above, the majority of the wetland impact acreage is associated with road crossings for internal access. In an effort to minimize wetland impacts, most wetland road crossings will occur in locations where existing field roads traverse the wetland systems; impacts will result from expansion of the existing crossings. Additional wetland impacts consist of a roadway impact area located just north of the Elementary School Site. This wetland impact is necessary for proper design and curvature of the internal access road. The impact area consists of an herbaceous wetland that has been previously impacted due to historical agricultural activities.

Additional impacts to the series of upland-cut ditches in the northeastern portion of the property will be proposed for development of a neighborhood. These ditches were historically used for crop irrigation and are not considered natural wetland systems.

A.7 Precautions to be taken during construction to protect wetland areas.

The applicant will implement and maintain erosion and sediment control measures both prior to and during development activities. This practice will insure that no adverse water quality impacts to receiving waters and adjacent lands will occur during the proposed work. Control measures will retain sediment on-site and help prevent violations of State water quality standards. Best Management Practices (BMPs) incorporated will be in accordance with Chapter 6 of the Florida Land Development Manual: A guide to Sound Land and Water Management. The control measures to be used during the proposed work will consist of a combination of silt screens and floating turbidity barriers as appropriate.

A.8 If available, provide jurisdictional determinations.

A Formal Wetland Determination is in the final state of review with the SFWMD and the ACOE. These jurisdictional determinations include wetlands and surface waters associated with the additional ±134 acre parcel. Permit issuance is anticipated to occur within the next couple of months, pending SFWMD workload and review timeframes. However, please be advised that the wetland boundaries and acreages reported herein are based on a wetland delineation and survey that has been reviewed and approved by the SFWMD and the ACOE.

B. Provide any proposed plans (conceptual or specific) for created or enhanced wetland areas, including littoral lake slopes, buffers, vegetative species to be planted, etc.

The current site plan does not include any wetland creation.

Question 14 - Water

A. Describe the existing hydrologic conditions (both ground and surface water) on and abutting the site, including identification and discussion of any potential aquifer recharge areas. *Please identify and describe any Outstanding Florida Waters, Wild and Scenic* Rivers, Florida Aquatic Preserves or Florida Class I or II Waters that occur within, abutting or downstream of the site.

The groundwater within Center Lake DRI almost exclusively originates from precipitation, which percolates into the water table and ultimately recharges the groundwater reservoir. The surrounding land uses generally consist of undeveloped land with some residential development of varying densities. Portions of the surrounding undeveloped lands are under agricultural use. The Center Lake DRI project site is currently being used as a cattle ranch. The agricultural practices on-site, as well as within adjacent properties, results in a non-point source discharge to the project site's wetlands and surface waters. While this non-point source discharge may have a negative effect on the quality of the groundwater and surface water, it is assumed that the relative quality of both ground and surface water should generally be improved by removing the cattle operation combined with the proposed on-site preservation activities and the site plan. The existing hydrology of the onsite wetlands has been altered from their historic conditions as a result of the agricultural use of the property and surrounding areas of development (residential, roadways and drainage). The construction of the onsite field roads and ditches, and use of the pastures for crop farming has also resulted in an alteration of the natural drainage patterns. This alteration of the historic drainage patterns has resulted in decreased watershed basins to a number of the onsite wetlands. The reduced hydrology can be evidenced through the presence of opportunistic and transitional vegetation within the remaining onsite wetlands.

The Center Lake DRI project site does not contain any Outstanding Florida Waters, Wild and Scenic Rivers, Florida Aquatic Preserves or Florida Class I or II Waters, nor are any of these special classified waters located abutting or downstream of the project area. In accordance with Chapter 62-302.400(10) F.A.C., "the surface waters of the State of Florida are classified as Class III." Center Lake is a surface water of the state and is not further defined by rule as being anything other than Class III.

The proposed project site is located within the Alligator Lake Basin under the jurisdiction of the South Florida Water Management District (SFWMD). The site generally flows towards the east, to Lake Center. This is the first lake in a chain of Lakes that ultimately flow to Alligator Lake. The SCS Soil survey of Osceola County, indicates that project site is located in primarily areas of moderate to severe wetness with poorly drained soils. There are no existing aquifer recharge areas, within the study area.

B. Describe, in terms of appropriate water quality parameters, the existing ground and surface water quality conditions on and abutting the site. (The appropriate parameters and methodology should be agreed to by the regional planning council and other reviewing agencies at the pre-application conference stage.)

The predominant land uses in and around the project site are agricultural and residential; agricultural uses consist primarily of improved pastures and citrus farming. There are no point sources of pollution on this site. However, there are several non-point sources of pollution including the cattle which graze the site and the improved pastures which are periodically fertilized. Additionally, the ditches throughout the property receive runoff containing fertilizers, herbicides and insecticides from onsite and off-site agricultural practices. It is likely that a

percentage of these pollutants drain into the ditch network and into the onsite wetlands. The non-point sources likely have a negative effect on the onsite wetlands and surface waters but the degree of affect is not known. Also, there are not any known affects to the ground water from any of these sources.

In the current condition, the onsite wetlands and the associated ditches along with all surface water runoff discharge directly into Center Lake. This direct discharge does not contain any water quality treatment prior to discharging to the lake.

C. Describe the measures which will be used to mitigate (or avoid where possible) potential adverse effects upon ground and surface water quality, including any resources identified in Sub-question A.

The stormwater management system for Center Lake DRI has been conceptually designed to place the stormwater ponds along the perimeters of the wetlands throughout the property. The stormwater management system must be designed to meet state water quality standards in accordance with Chapter 17-302 F.A.C.

South Florida Water Management District (SFWMD) permitting requires that all surface water discharge meet state water quality standards. This will be accomplished by the construction of a permitted surface water management system. There will not be any discharge to wetlands or waters of the State prior to meeting state water quality standards and the US Clean Water Act. The wetland systems will not be used to meet the water quality requirements on this project.

The project will attempt to rectify the problem associated with on-site untreated runoff being directly discharged to Center Lake. All on-site contributions that would be identified as potential sources of pollution to the lake will be intercepted and treated to the levels established by SFWMD.

Additionally, the incorporation of deed restriction will be implemented to restrict fertilizers to low or no phosphorus type products. The use of abatement swales, treatment trains, deeper surface water management ponds, etc. will be investigated and implemented where both the developer and the permitting agencies agree on the benefits of the improvements.

In order to protect water resources during construction, the following specifications will be included in the construction documents:

1. Erosion and Sediment Control – All practicable and necessary efforts should be taken during construction to control and prevent erosion and the transportation of sediment to surface basins, surface water or onto other property by any of all of the following methods:

    1.1 Stormwater facilities are to be built as early in the construction phase as possible to ensure the treatment of storm water runoff. Temporary erosion and sediment control measures, however, such as berms, sediment basins, grassing, sodding, sand bagging, baled hay or straw, silt barriers, etc., must be provided and maintained until the permanent facilities are completed and operational.

    1.2 Re-vegetation and stabilization of disturbed ground surfaces should be accomplished as soon as is practical.

    1.3 All fill material placed around newly installed structures will be fully compacted.

1.4 Any construction equipment that leaks excessive amounts of fuel, oil, or hydraulic fluid is prohibited.

1.5 During construction, all sediment and erosion control measures will be in compliance with National Pollutant Discharge Elimination System (NPDES) guidelines.

2. All disturbed areas shall be graded for positive drainage and shall be stabilized.

Question 15 - Soils

A.1 Provide a description of each of the soils indicated on Map E utilizing the following format:

TABLE 15A.1-1 - SOILS DESCRIPTION AND INTERPRETATIONS

Soil Name and Map Symbol	Brief Soil Description	Seasonal High Water Table Depth & Duration	Permeability Rate (in. / hr)	Degree and Kind of Limitation for Proposed Uses	Degree and Kind of Limitation for Pond Embankments
Basinger fine sand (5)	Poorly drained, nearly level soil in flatwoods.	0 – 1.0 feet 9 months	> 20	Severe: wetness.	Severe: seepage, piping, unstable fill.
Basinger fine sand, depressional (6)	Poorly drained soil in shallow depressions and drainageways in flatwoods.	+2-1.0 feet 9 months	> 20	Severe: wetness, ponding.	Severe: seepage, piping, unstable fill.
Cassia fine sand (9)	Somewhat poorly drained soil on low ridges of flatwoods.	1.5 – 3.5 feet 6 months	6.0 – 20	Moderate: wetness.	Severe: seepage, unstable fill, piping.
Hontoon muck (15)	Very poorly drained soil in depressional areas, swamps and marshes.	+2-1.0 feet 12 months	6.0 – 20	Severe: excess humus, low strength, wetness.	Severe: compressible, low strength, excess humus.
Immokalee fine sand, (16)	Poorly drained soil in flatwoods.	0 – 1.0 feet 9 months	6.0 – 20	Severe: wetness.	Severe: seepage, piping, erodes easily.
Myakka fine sand (22)	Poorly drained soil in flatwoods.	0 – 1.0 feet 9 months	6.0 – 20	Severe: wetness.	Severe: seepage, piping, erodes easily.

Placid fine sand (32)	Very poorly drained soil in wet depressions and swamps in flatwoods.	+2-1.0 feet 9 months	6.0 – 20	Severe: wetness, ponding.	Severe: seepage, piping.
Pomello fine sand (34)	Moderately well drained soil in transitional areas between high sand ridges and flatwoods.	2.0 – 3.5 feet 4 months	2.0 – 6.0	Moderate: wetness.	Severe: seepage, piping, unstable fill.
Samsula muck (40)	Very poorly drained soil in marshes and swamps.	+2-1.0 feet 12 months	6.0 – 20	Severe: low strength, wetness.	Severe: excess humus, wetness.
Smyrna fine sand (42)	Poorly drained soil in flatwoods.	0 – 1.0 feet 3 months	6.0 – 20	Severe: wetness.	Severe: seepage, piping, unstable fill.
St. Lucie fine sand (43)	Excessively drained soil in sandy uplands and flatwoods.	> 6.0 feet	> 20	Slight	Severe: seepage, piping, unstable fill.
Tavares fine sand (44)	Moderately well drained soil in flatwoods.	3.5 – 6.0 feet 6 months	> 20	Slight	Severe: seepage, piping.

A.2 Describe the potential for subsidence and any unique geologic features (such as sand dunes, bluffs, sinkholes, springs, steep heads, etc.) on the site. Discuss what aspects of the site plan will be used to compensate for or take advantage of these features.

The potential for subsidence and any unique geological features is low. There are no known unique geological features that would have an impact on the site.

B. Where a soil presents a limitation to the type of use proposed in the development, state how the limitation will be overcome. Specify construction methods that would be used for building, road and parking lot foundations, and for lake and canal bank stabilization as relevant.

Suitable material from pond construction will be used on the site to elevate development areas where a high groundwater table exists. The fill material will be used to grade the site for proper drainage, conveyance, and control of surface water. This will allow for flood control and pollution abatement for surface water runoff.

The soil limitations associate the soils mapped for the Center Lake DRI were evaluated using the *Soil Survey of Osceola County Area Florida* as a guide. The limitations include shallow seasonal high groundwater conditions in some areas and the presence of muck (organic soils) in some areas. The soil conditions generally allow for conventional construction methods.

The limitations listed above could impact the construction and performance of underground utilities and roadway pavements. As such, the profiles of the roadways will be set so that the bottom of the base material will be above the anticipated seasonal high water table. In addition, appropriate engineering design practices including providing underdrains for roadways, placing fill material where necessary to provide percolation at higher elevations, and contouring the land to accommodate stormwater runoff and avoid standing water conditions will be used. The organic soils are weak and highly compressible and are not suitable for support of structures. Therefore, they will be exchanged with compacted granular fill.

C. **What steps will be taken during site preparation and construction to prevent or control wind and water soil erosion? Include a description of proposed plans for clearing and grading as related to erosion control.**

Best management practices will be utilized to control erosion and sedimentation and to minimize the erosion potential during each phase of construction. The clearing and removal of vegetative cover will occur only within the areas to be developed. Grading and contouring of land surfaces will be completed in a manner that minimizes the creation of steep side slopes. Slopes will be mulched or vegetated as soon as possible after clearing.

A variety of sediment control practices will be utilized to prevent stormwater runoff from discharge silt to adjacent water bodies. Berms or diversion structures will be constructed to reroute stormwater runoff. Certain vegetated buffer areas along the edges of wetlands and water bodies will be left intact to trap sediment produced during construction. In addition, settling or sediment basins will be created, as needed, to trap sediment produced during construction and carried in stormwater runoff. Silt control barriers such as silt fence and synthetic, bales will be placed appropriately to prevent siltation from occurring.

Throughout each phase of construction, open areas will be contoured appropriately to minimize stormwater runoff potential and vegetated to the occurrence of erosion.

D. **To what degree and in what location(s) will the development site be altered by fill material? If known, specify the source location and composition of the fill. Also identify the disposal location for any overburden or spoil.**

Fill will be placed throughout the development areas of the site. At this time since design documents have not been prepared, it is not known as to the depth of fill that will be placed. The project will be filled in accordance with a master grading plan for the project. The goal will be to balance the earthwork operations so that the fill requirements will be met from soil generated on-site from the ponds in the master stormwater system and from contouring the lower graded areas. AS a result, the vast majority of material for fill will be taken from the site. The only exceptions would be for special applications where granular materials may be required for certain backfilling operations such as trenches for pipes.

A designated location will be determined prior to construction for the disposal of any organic materials resulting from the clearing and earthwork operations within each phase of construction, as necessary.

Question 16 – Floodplains

A. Identify any pre- and post-development flood prone areas.

There are a number of existing wetlands and depressional areas within the limits of the project that would be classified as flood prone areas. These flood prone areas have been designated as either Zone A or Zone AE by the Federal Emergency Management Agency. Zone A is defined as areas of 100-year floodplain where base flood elevations have not been determined. Zone AE is defined as areas of 100-year floodplain where base flood elevations have been determined. The limits of the 100 year floodplain are shown on Map C Topographic Map. In the proposed condition most of these floodplain areas will remain.

B. Is any development proposed within a 100-year flood prone area as identified by the Federal Emergency Management Agency? If so, indicate the appropriate Flood Insurance Rate Map (FIRM) zone designations and their locations, etc.

Yes, a portion of the development is proposed within a 100-year flood prone area of Zone A and AE.

C. If any structures, roadways or utilities are proposed within the post-development 100-year flood prone area, identify their location and indicate what measures will be taken to mitigate the potential flood hazard and to maintain the 100-year floodplain storage volume.

See Illustrative Plan for location of roadways and other proposed structures within the post-development 100 year flood prone area. A stormwater management system will be designed as required by Osceola County and South Florida Water Management District (SFWMD). Compensating storage areas will be constructed and incorporated into the stormwater management system where appropriate to compensate for any impacts to the 100 year floodplain.

D. Discuss any potential increases in the off-site flooding due to the development of this project.

No off-site flooding will result from development of this project. The stormwater management system will be designed in accordance with Osceola County and SFWMD requirements. Post development discharges from the site will be less than or equal to pre-development discharges in accordance with the Osceola County and SFWMD criteria.

Question 17 – Water Supply

A.1. Provide a projection of the average daily potable and non-potable water demands at the end of each phase of development. If significant seasonal demand variations will occur, anticipated peaks and duration. Use the format below:

The projected average daily potable and non-potable water demands are shown by phase in Table 17-1. It is anticipated that the housing provide will be typical of the local market area with mixed-use and commercial uses within the project area. Therefore, we do not anticipate measureable seasonal demand variations to occur.

The generation rates are consistent with state standards applied to the region and by nearby utility providers. As a result, estimated needs should provide reasonable projections of the project's requirements.

Table 17-1 has been revised to conform to the current development program.

Table 17-1
Projection of Potable and Non-Potable Water Demands

Land Use	Development Program	Potable Water Demand (MGD)	Non-Potable Water Demand (MGD)		Total Water Demand (MGD)
			Irrigation	Other	
Phase One (2009-2013)					
Residential	300 mixed sfr	0.080	0.016	0	0.096
Residential	882 mixed mfr	0.236	0.047	0	0.283
Retail / Service	60,000 sf	0.006	0.003	0	0.009
Office	30,000 sf	0.003	0.002	0	0.005
Civic	10,000 sf	0.001	0.001	0	0.002
Community	30,000 sf	0.003	0.002	0	0.005
Institutional	970 students	0.010	0.015	0	0.025
Recreation	Clubhouse/Parks	0.001	0.030	0	0.031
	Subtotal:	**0.340**	**0.116**	**0**	**0.456**

Land Use	Development Program	Potable Water Demand (MGD)	Non-Potable Water Demand (MGD)		Total Water Demand (MGD)
			Irrigation	Other	
Phase Two (2014 - 2018)					
Residential	728 mixed sfr	0.195	0.039	0	0.234
Residential	1463 mixed mfr	0.392	0.078	0	0.470
Retail / Service	110,000 sf	0.011	0.004	0	0.015
Office	40,000 sf	0.004	0.003	0	0.007
Recreation	Clubhouse/Parks	0.001	0.037	0	0.038
	Subtotal:	**0.603**	**0.161**	**0**	**0.764**
	Grand Total:	**0.943**	**0.277**	**0**	**1.220**

A.2. Describe how this demand information was generated, including the identification of the consumption rates assumed in the analysis.

Table 17-1a

Calculation Basis for Potable and Non-Potable Water Demands

Water Demand Calculations		Irrigation Demand Calculations:	
Type of Establishment:	***Potable Demand***	***Residential areas:***	
Single-Family Residential	96 gpd/capita	# of detached dwellings:	3,073 du
Multi-Family Residential	96 gpd/capita	Total area of lots:	13,934,844 S.F.
Commercial:		Building pad S.F. per lot	1,200 S.F./du
Retail Service	0.1 gpd/gross s.f.	Impervious area:	3,687,600 S.F.
Office/Civic/Community	0.1 pd/gross s.f	Pervious area:	10,247,244 S.F.
Schools	10 gpd/student	Driveway, sidewalk, patio	2,049,449 S.F.
Recreation		*Total Pervious Area*	*188.20 acres*
2000 Census : Osceola 2.79 persons/household		Irrigated area (25% perv.):	47.05 acres
		School area:	
		Total area:	12.80 acres
		70% Pervious area:	*3.84 acres*
		Office/Retail areas:	
		Total area:	11.6 acres
		Assume 80% Pervious area:	*2.32 acres*
		Parks and Recreation areas:	
		Total Park	*175.9 acres*
		50% active parks	*87.95 acres*
		20% active parks irrigated	17.59 acres
		Irrigation amounts based upon Blaney-Criddle Eqn. for pervious areas (green space) within site	

Table 17-1and 17-1a is based upon Average Daily Flows. The water consumption rates are consistent with Osceola County and with the City of St. Cloud, Florida. Consumption rates used for these calculations are summarized in the above table. The table has been modified to reflect the revised development plan. In addition, the table now shows water demand calculations based upon the level of service (LOS) standards published in the Osceola County Comprehensive Plan, Potable Water Element.

B. Provide a breakdown of sources of water supply, both potable and non-potable, by development phase through project completion. Use the format below.

Table 17-2 below lists the sources of water supply for this project, both potable and non-potable. The irrigation for this project will be provided using the most responsible approach available to advance water conservation, and preservation of water levels of nearby Center Lake, such as xeriscaping, rainwater harvesting, and rain gardens. Storm-water runoff from on-site drainage lakes will be utilized as regulated by South Florida Water Management District.

On-site irrigation wells will be utilized for the first phase of construction. Reuse water is currently not available in the project area, and stormwater collection will not meet the required irrigation demand. By completion of the project's first phase, it is the intent to have reuse water from the City of St. Cloud available for the entire project. Green building practices, rainwater harvesting, rain gardens will remain active, while the need for the extraction well could be eliminated.

Table 17-2
Potable and Non-Potable Water Supply Sources

Category	On-Site Supply (MGD)		Off-Site Supply (MGD)
	Ground Water	Surface Water	
Phase One (2009-2013)			
Potable	0	0	0.340
Non-Potable - Irrigation	0.116	0	0
Subtotal:	**0.116**	**0**	**0.340**

Category	On-Site Supply (MGD)		Off-Site Supply (MGD)
	Ground Water	Surface Water	
Phase Two (2014 – 2018)			
Potable	0	0	0.603
Non-Potable - Irrigation	0	0	0.277
Subtotal:	**0**	**0**	**0.880**

Grand Total:	**0.116 – to be phased out**	**0**	**1.220**

C. If water wells exist on-site, locate them on Map H and specify those that will continue to be used. Also locate on Map H all proposed on-site wells. (For residential developments, if individual wells for each lot are proposed, simply indicate the number of units to be served, general locations, and any plans for eventual phase-out.) Indicate the diameter, depth, and pumping rates (average and maximum) for each of the existing wells and project this information for the proposed wells (for lots served by individual dual wells, this information may be grouped for projection purposes). Also provide a breakdown of the wells with regard to potable and non-potable sources.

The design parameters for an extraction well have not been established at this time. Detailed geotechnical investigation and hydraulics analyses have not been completed at this time. This information will be needed prior to establishing number, location, size and depth of such wells.

D. **If on-site water wells are used, will this result in interference with other water wells or result in adverse impacts to underlying or overlying aquifers? Document the assumptions underlying this response.**

The proposed water well will be for supplemental irrigation supply, and only for a portion of the first phase of the development. The permitting process with the SFWMD will warrant that if any wells were to be used, that they will not create an adverse impact to the aquifer or to nearby wells permitted to remain in service. Compliance with permit requirements will ensure monitoring and avoidance of adverse effects.

E. **Who will operate and maintain the internal water supply system after completion of the development?**

It is the applicant's intent for the operation and maintenance of the internal water supply infrastructure to be the responsibility of the City of St. Cloud.

F.1. **If an off-site water supply is planned, attach a letter from the agency or firm providing service outlining:**

(a) **The projected excess capacities of the water supply facilities to which connection will be made at present and for each phase through completion of the project,**

(b) **Any other commitments that have been made for this excess capacity,**

(c) **A statement of the agency or firm's ability to provide services at all times during and after development. (This agency must be supplied with the water demand and supply tables in paragraphs A and B above).**

Capacity Request letters have been revised to correspond to the current development program. Capacity Request letters have been issued to the City of St. Cloud Director of Environmental Utilities for potable water, wastewater and reclaimed water capacity. This letter is included in this submittal as Exhibit 7. A response letter to this request will be supplied upon receipt.

F.2. **If service cannot be provided at all times during and after development, identify the required capital improvements, timing, cost, and proposed responsible entity for each phase in which service is unavailable.**

G. **Please describe any water conservation methods or devices incorporated into the plan of development. What percentage of reduction is anticipated over conventional plans?**

Irrigation water conservation measures will be used when available to the site. Xeriscape plantings will be incorporated into the landscape plans where feasible, but the extent will be determined at the time of detailed planning and construction approvals with Osceola County.

In addition to reduced irrigation practices through low impact development and green building practices, the project will be designed to utilize reuse water for irrigation. As reuse water becomes available, irrigation with stormwater and extraction wells will be ternimated.

Potable water conservation will be provided through the use of water saving plumbing fixtures in selected applications. The public school will be a specific target for low-flow fixtures.

H. Indicate whether proposed water service will be provided within an established service area boundary.

This project is part of the City of St. Cloud's service area.

Question 18 - Wastewater Management

A. Provide, in the table given below, the projected wastewater generation at the end of each phase of development and proposed wastewater treatment. Identify the assumptions used to project this demand.

The projected average daily wastewater generation rates are shown by phase in Table 18-1. It is anticipated that the housing provide will be typical of the local market area with mixed-use and commercial uses within the project area. Therefore, we do not anticipate measureable seasonal demand variations to occur.

The generation rates are consistent with state standards applied to the region and by nearby utility providers. As a result, estimated needs should provide reasonable projections of the project's requirements.

Table 18-1
Wastewater Generation Projections

Land Use	Development Program	Generation Rate Factor	Wastewater Treatment ADF (MGD)	
			On-Site	Off-Site
Phase One 2009-2013				
Residential	300 mixed sfr	265 gpd/du	0	0.080
Residential	882 mixed mfr	265 gpd/du	0	0.234
Retail / Service	60,000 sf	125 gpd/s.f.	0	0.006
Office	30,000 sf	17.65 gpd/100sf	0	0.003
Civic	10,000 sf	17.65 gpd/100sf	0	0.001
Community	30,000 sf	17.65 gpd/100sf	0	0.003
Institutional	970 students	11.77 gpd/student	0	0.010
Recreational	Clubhouse/Parks		0	0.001
Subtotal:			**0**	**0.338**

Land Use	Development Program	Generation Rate Factor	Wastewater Treatment ADF (MGD)	
			On-Site	Off-Site
Phase Two 2014 – 2018				
Residential	728 mixed sfr	265 gpd/du	0	0.193
Residential	1463 mixed mfr	265 gpd/du	0	0.388
Retail / Service	100,000 sf	125 gpd/s.f.	0	0.011
Office	40,000 sf	17.65 gpd/100sf	0	0.004
Recreation	Clubhouse/Parks		0	0.001
Subtotal:			**0**	**0.597**
	Grand Total:		**0**	**0.935**

B. If applicable, generally describe the volumes, characteristics and pre-treatment techniques of any industrial or other effluents prior to discharge from proposed industrial-related use(s).

None of the land uses proposed within this project would generate industrial-strength wastewater substantially different from domestic waste and will not require pre-treatment. Uses within the commercial center would possibly require the use of grease/oil separators, sampling station, and sediment traps; all of which are components allowed by Osceola County and City of St. Cloud. None of the commercial uses would be comparable to an industrial-related use.

C.1. If off-site treatment is planned, identify the treatment facility and attach a letter from the agency or firm providing the treatment outlining present and projected excess capacity of the treatment and transmission facilities through build-out, any other commitments that have been made for this excess and a statement of ability to provide service at all times during or after development.

It is anticipated that wastewater treatment will be provided by the City of St. Cloud. The City of St. Cloud has been provided with the estimated projected demands for the development, for its use in determining the City's capacity if treatment throughout the life of the development. A letter from the director of Environmental Utilities has been requested and is attached hereto as Exhibit 7.

C.2. If service cannot be provided, identify the required capital improvements, cost, timing, and proposed responsible entity necessary to provide service at all times during and after development.

D. If septic tanks will be used on site, indicate the number of units to be served, general locations and any plans for eventual phase-out.

On-site septic systems ***will not be used*** for development activities, permanent or non-permanent. All sewage will be collected and transported to off-site wastewater treatment facilities.

E. Indicate whether proposed wastewater service will be provided within an established service area boundary.

This project is part of the City of St. Cloud's service area.

Question 19 – Stormwater Management

A. Describe the existing drainage patterns on-site as shown on Map I, including any potential flooding and erosion problems.

In general, stormwater runoff from the project drains to Lake Center. The nine major upland areas, in which the development will occur, are bounded by wetlands on at least one side. A series of stormwater ponds within each drainage basin will serve to collect and treat stormwater runoff prior to discharging into the adjoining wetland system. The interconnected wetland systems serve as the method for conveying the treated runoff to Lake Center. In locations where the wetland systems will be severed by proposed roadways, storm drainage networks will be installed beneath the roadway to provide proper surface water flow between wetland areas.

The plan identifies the need to maintain a 65' wide Safe Development Area adjacent to Lake Center. This practice, in addition to constructing the development within the limits of the upland area, will reduce the impact of the existing floodplain storage and erosion within the Lake Center basin. The retention of runoff within the proposed ponds is also intended to reduce impact to existing flood conditions. All proposed buildings will be constructed at an elevation above the flood plain, as determined by FEMA.

B. Describe the various elements of the proposed drainage system shown on Map I, including any wetlands to be used as part of the system, and discuss the design criteria (including stage-storage/stage discharge assumption) to be used for the various elements. Provide typical cross-sections (showing dimensions, slopes and control elevations) for any proposed lakes or swales. Identify the control elevation for all drainage structures. Include information as to what design storm will be used for what portions of the system.

As shown on Map I-1, the stormwater management system will consist of interconnected wet detention ponds that will be used to meet the water quality and water quantity standards set forth by Osceola County and the SFWMD. The dimensions, slopes, and control elevations are shown on the typical pond cross-section, included as Exhibit 19B-1. Since a detailed analysis has not been completed at this time, control elevations for the stormwater ponds have not been established at this time. Based on a preliminary review of the USGS topographical map and the SCS Soil survey of Osceola County, control elevations are expected to range between 60 and 65 feet. Final control elevations will be based on a geotechnical analysis and the edge of wetland elevations. The following is a summary of the design storms that will be used to design the system:

Description	Design Storm
Storm Sewer	10-year
Pond Design	10-year 72-hour
Finished Floor Elevations	100-year 72-hour

Osceola County is proposing to improve the intersection of Rummell Road and Narcoossee Road. Rummell Road will also be extended towards the east approximately 500 feet past the existing "T" intersection. As the project design advances, joint-use ponds for the Center Lake DRI and the intersection project may be considered to increase hydraulic efficiency of the design.

C. **From Map I, indicate the total number of acres in each drainage area and specify the acreage of any portions of drainage areas outside the site boundaries. Complete the following table for on-site drainage areas.**

Drainage Basin	Basin Area (acres)
Basin 1	68.6
Basin 2	157.6
Basin 3	283.3
Basin 4	21.2
Basin 5	152.2
Basin 6	64.7
Basin 7	14.7
Basin 8	13.8
Basin 9	127.5

D. **Specify and compare the volume and quality of run-off from the site in its existing condition to the anticipated run- off at the end of each phase of development. (The parameters to be used to define "quality" and methodology should be agreed to by the regional planning council and other reviewing agencies at the pre-application conference stage.) Identify any changes in timing or pattern of water flows between pre- and post-development conditions. Indicate major points of discharge and ultimate receiving water body(ies). Indicate what provisions will be incorporated in the design of the drainage system, including a summary description of any Best Management Practices to be utilized, to minimize any increase in run-off from the site and to minimize any degradation of water quality in the ultimate receiving body over that occurring in its pre-development state.**

The post-development runoff volume from the site will be less than the pre-development runoff volume from the site. In addition, the stormwater ponds will be permitted in accordance with the South Florida Water Management District (SFWMD) discharge design criteria. Since the proposed stormwater management system will meet the requirements set forth by SFWMD and Osceola County, the quality of the storm water leaving the site will meet state water quality standards. The ultimate receiving waters will be Lake Center. Compared to the pre-existing condition, control structures within the designed ponds and conveyance systems will delay the release of excess stormwater, thereby allowing suspended solids, excess nutrients such as nitrogen and phosphorus, and other potential pollutants to be removed from the stormwater discharge. The proposed stormwater ponds will be designed at such a size in order to provide storage of stormwater run-off and limit post-development discharge from exceeding pre-development discharge from the project. Lastly, the modeling techniques and design applications will comply with SFWMD requirements and incorporate best management practices in the treatment ponds and conveyance systems.

The Statewide Stormwater Treatment Rule is being developed by the Florida Department of Environmental Protection (FDEP) and the Water Management Districts throughout the State. The stormwater management facilities will provide treatment for nitrogen and phosphorus loadings. The project will demonstrate an equal or reduced rate of nitrogen and phosphorus loading in the post-development condition. A wet pond alone does not accomplish the required removal efficiency. Stormwater reuse and dry pre-treatment, in the form of dry retention, will be required in addition to the wet ponds. It is anticipated that pervious pavements, rain gardens, and underground dry retention systems, among others, will be used to obtain this retention volume.

E. Who will operate and maintain the drainage system after completion of the development?

The storm-water systems will be operated and maintained by an interim Community Development District, and then passed to the different homeowners associations, as they are created.

Question 20 – Solid Waste / Hazardous Waste / Medical Waste

A. Provide a projection of the average daily volumes of solid waste generated at the completion of each phase of development. Use the format below and identify the assumptions used in the projection.

Table 20-1 summarizes the solid waste generation projections for the development.

Table 20-1
Solid Waste Generation Projections

Phase One (20011-2015)

Land Use	Program	Generation Rate Factor (lbs/unit/day)	Domestic Solid Waste Generation			Industrial, Hazardous, Medical or Other Special Wastes
			Lbs/day	Tons/day	CY/day	
Residential	300 Single Family	6.68	2,004	1.00	8.23	0
Residential	882 Multi-Family	6.68	5,892	2.95	24.28	0
Retail/Services & Office	90,000 sf	3.0	2,700	1.35	11.11	0
Institutional	970 student stations	1.35	1,310	0.66	5.43	0
Civic/Community	40,000 sf	3.0	1,200	0.60	4.94	0
		Subtotal:	**13,106**	**6.56**	**53.99**	**0**

Phase Two (2016 - 2020)

Land Use	Program	Generation Rate Factor (lbs/unit/day)	Domestic Solid Waste Generation			Industrial, Hazardous, Medical or Other Special Wastes
			Lbs/day	Tons/day	CY/day	
Residential	728 Single Family	6.68	4,863	2.43	20.00	0
Residential	1,463 Multi-Family	6.68	9,773	4.89	40.24	0
Retail/Services & Office	150,000 sf	3.0	4,500	2.25	18.52	0
		Subtotal:	**19,136**	**9.57**	**78.76**	**0**

The following assumptions were used in the above-referenced estimates:

- Residential solid waste generation is 1.22 Tons/household/year as calculated by Osceola County Solid Waste Office
- Residential solid waste generation is 6.68 lbs/household/day and 0.028 cu. yards/household/day
- Non-Residential Retail/Services, Office and Civic/Community use solid waste generation is 3.0 lbs/100 SF
- Assume 1 cu. Yard per 180 students and 1.35 lbs/student/day

The following conversion rates were used:

- 1 cubic foot = 9 lbs of waste
- 1 cubic yard = 27 cubic feet
- 1 cubic yard = 9 lbs x 27 cubic feet = 243 lbs
- 1 Ton = 2,000 lbs = 8.23 cubic yards

B.1. Please specify the extent to which this project will contain laboratories, storage facilities, and warehouse space where hazardous materials may be generated or utilized. What types of hazardous waste or toxic materials are likely to be generated? Will a hazardous materials management plan be prepared covering all uses of hazardous materials on-site? If so, please discuss contents and enforcement provisions.

No laboratories, storage facilities, or warehouse space are planned or proposed that would generate hazardous waste or toxic materials.

B.2. Please discuss what measures will be taken to separate hazardous waste from the solid waste stream. What plans and facilities will be developed for hazardous or toxic waste handling, generation, and emergencies?

As stated in B.1. no hazardous waste is anticipated from this project. Residential household products containing hazardous household waste will be disposed of as directed by Osceola County Solid Waste Office by "bring household chemicals to the Bass Road Landfill "drop off at 750 S. Bass Road. A drop off is also conveniently for residents in the St. Cloud area, located at the St. Cloud transfer station at 2701 Peghorn Way. These facilities are operated and maintained by the County to provide for the proper processing and disposal of these chemicals. Residents can also bring chemicals to one of the Amnesty (collection) Days that are held at various locations throughout the year.

B.3. Please identify off-site disposal plans for hazardous waste generated by this development and provide assurance of proper disposal by a qualified contractor.

No hazardous waste will be generated by this development from laboratories, storage facilities, or warehouses. Therefore, no qualified contractor is required to provide off-site disposal.

B.4. What local and state regulations, permits and plans will regulate the generation and handling of hazardous waste at this development?

Hazardous wastes are regulated by the Federal regulations listed in Title 40 Code of Federal Regulations (CFR) Parts 260 through 279 and Florida Administrative Code (FAC) Rule 62-730.

C. For all waste disposal planned (on or off site), attach a copy of the letter from the developer describing the types and volumes of waste and waste disposal areas requested, and attach a letter from the agencies or firms providing services outlining:

C.1. The projected excess capacity of the facilities serving the development at present and for each phase through completion of the project,

C.2. Any other commitments that have been made for this excess capacity,

C.3. A statement of the agency's or firm's ability to provide service at all times during and after development (the agency or firm must be supplied with the solid waste generation table in (A) above).

The revised development program and solid waste projection were provided to Osceola County and the City of St. Cloud Solid Waste departments, along with a request for the serviceability of the proposed development. Copies of the response confirming serviceability from the Director of Solid Waste for Osceola County are attached hereto as Exhibit 2.

PART IV

Transportation Resource Impacts

Question 21 - Transportation

Page 55 (Insert Pages 21-1 thru 21-39)

PART 5 – Transportation Resource Impacts

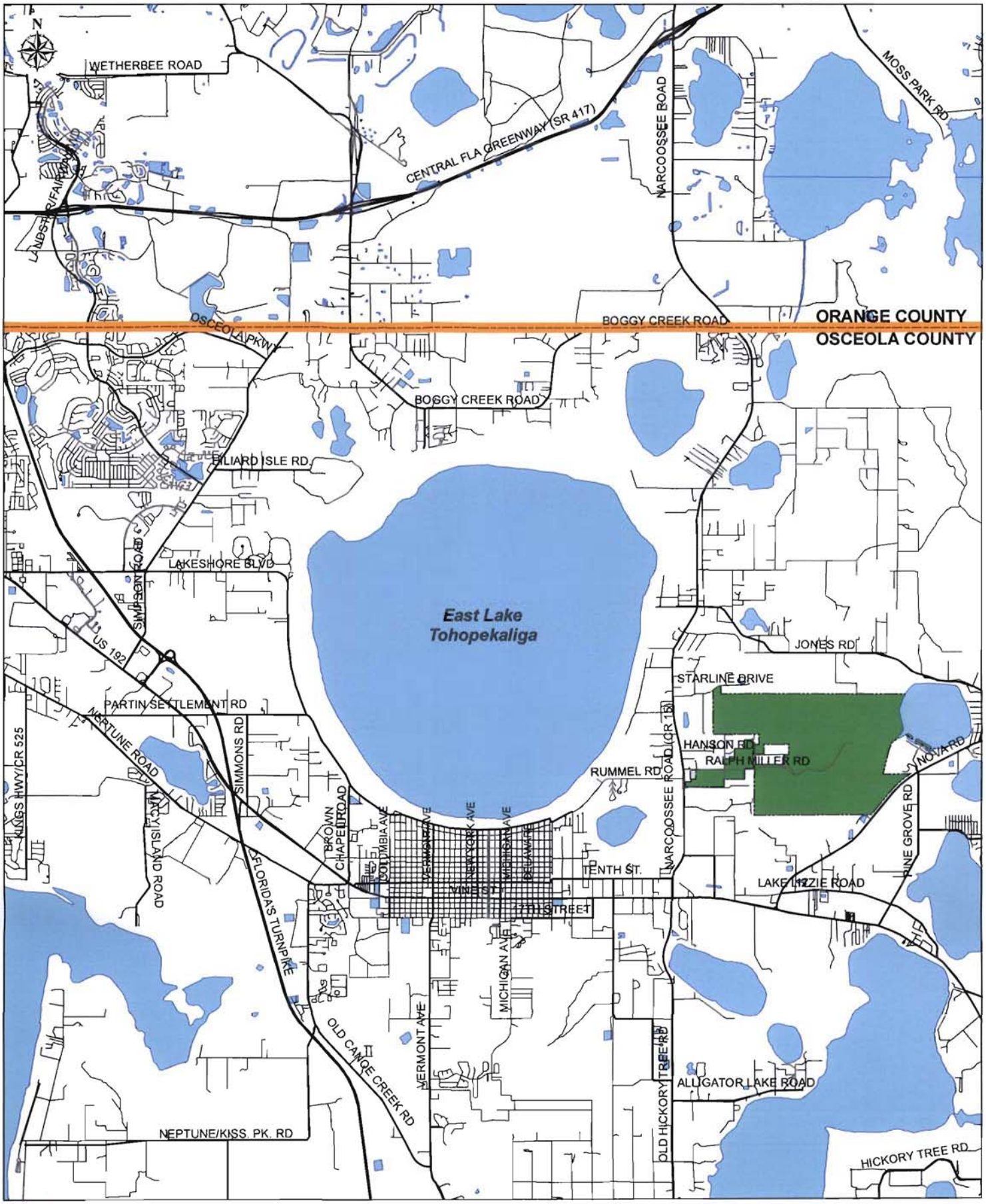
Question 21 – Public Facilities: Transportation

A. Using Map J or a table as a base, indicate existing conditions on the highway network within the study area (as previously defined by 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, 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.

Introduction

The Center Lake Ranch DRI is located north of US192 and adjacent to Nova Road with direct access to Narcoossee Road via Ralph Miller Road, in unincorporated Osceola County, Florida (Map J-1, Exhibit 21-A.1) The Center Lake Ranch DRI is a mixed-use development proposed for 3,553 residential units, 170,000 square feet of commercial/retail, 70,000 square feet of office, a 30,000 square foot community center, a 10,000 square foot church, and an elementary school. The proposed development program and phasing schedule are summarized in Table 21-A.1.

The methodology for this traffic analysis is outlined in a letter to Mr. Fred Milch, East Central Florida Regional Planning Council, dated June 23, 2008 (Appendix). This traffic analysis will (1) forecast total traffic volumes within the study area and identify improvements needed to serve those future volumes; (2) identify those forecasted trips which are expected to begin or end within the Center Lake Ranch DRI (i.e., "project trips"); and (3) calculate the significance of project traffic (project trips as a percentage of the maximum service volume at the adopted standard projected on each roadway facility and intersection within the primary impact area).



Site Boundary

0 2,000 4,000 6,000 8,000 Feet

Map J-1, Exhibit 21-A.1
Site Location Map and Primary Impact Area

Table 21-A.1

SUMMARY OF DEVELOPMENT PROGRAM AND PHASING PLAN

Center Lake Ranch DRI

Land Use	Intensity		
	Phase 1, Year 2015	Phase 2, Year 2020	Total
Single Family	300 DU	908 DU	1,208 DU
Multi-Family	440 DU	732	1,172 DU
Townhome	442 DU	731 DU	1,173 DU
Rec. Community Center	30 KSF	-	30 KSF
Elementary School	970 Stu	-	970 Stu
Church	10 KSF	-	10 KSF
Office	30 KSF	40 KSF	70 KSF
Retail	60 KSF	110 KSF	170 KSF

Source: Design + Planning AECOM

Table 21-A.2

SUMMARY OF EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

Center Lake Ranch DRI

Roadway	Segment From - To	E+C # of Lanes	Roadway Classification	LOS Std.	Daily Volume	Peak-Hour Ser. Vol. @ Std.	PM Peak-Hour Directional Volumes NB/EB	SB/WB	LOS	Capacity	K- Factor*	D- Factor	Count Date	Count Source	Count Station	Peak Dir.
Boggy Creek Road	Central Florida Greenway - Osceola/Orange Co. Line	2U	Urban Collector	E	20,530	1,860	1,181	478	D	679	0.0808	0.712	2008	Orange	206	NB
CR15	SR528 - Lake Nona Club Road	4LD	Principal Arterial	E	27,787	1,860	864	1,467	C	393	0.0839	0.6292	2008	Orange	7040	SB
	Lake Nona Club Road - SR 417	4LD	Principal Arterial	E	21,801	1,860	870	1,147	B	713	0.0925	0.5687	2008	Orange	6030	SB
	SR 417 - Tyson Road/Lake Nona Road C	2U	Principal Arterial	D	18,144	860	809	837	F	23	0.0907	0.5087	2008	Orange	6029	SB
	Tyson Road/Lake Nona Rd C - Lake Nona Rd E	2U	Principal Arterial	D	16,857	860	1,124	460	F	(264)	0.0940	0.7096	2008	Orange	7041	NB
	Lake Nona Road E - Boggy Creek Rd East	2U	Principal Arterial	D	16,857	860	1,124	460	F	(264)	0.0940	0.7096	2008	Orange	7041	NB
	Boggy Creek Rd E - Jones Rd	2U	Principal Arterial	D	18,298	860	563	1,093	F	(233)	0.0905	0.6600	2008	Osceola	551	SB
	Jones Rd - Rummel Rd	2U	Principal Arterial	D	19,364	1,130	713	945	D	185	0.0856	0.5700	2008	Osceola	539	SB
	Rummel Rd - 10th St	2U	Principal Arterial	D	16,192	860	635	777	D	83	0.0872	0.5500	2008	Osceola	541	SB
	10th St - US 192-441	2U	Principal Arterial	D	16,109	860	656	740	D	120	0.0867	0.5300	2008	Osceola	589	SB
Lakeshore Blvd	Fortune Rd - Partin Settlement Rd	2U	Urban Collector	D	8,482	760	302	434	C	326	0.0867	0.5900	2008	Osceola	416	SB
	Partin Settlement Rd. - Brown Chapel Rd.	2U	Urban Collector	D	11,760	760	831	356	F	(71)	0.1009	0.7000	2007	Osceola	417	EB
	Brown Chapel Rd. - Montana Ave.	2U	Urban Collector	D	7,981	760	474	278	C	286	0.0942	0.6300	2006	Osceola	516	EB
	Montana Ave. - Vermont Ave.	2U	Urban Collector	D	7,981	760	474	278	C	286	0.0942	0.6300	2006	Osceola	516	EB
	Vermont Ave. - Massachusetts Ave.	2U	Urban Collector	D	7,981	760	474	278	C	286	0.0942	0.6300	2006	Osceola	516	EB
	Massachusetts Ave. - Michigan Ave.	2U	Urban Collector	D	7,981	760	474	278	C	286	0.0942	0.6300	2006	Osceola	516	EB
	Michigan Ave. - Mississippi Ave.	2U	Urban Collector	D	7,981	760	474	278	C	286	0.0942	0.6300	2006	Osceola	516	EB
Nova Rd	US192 - Pine Grove Rd.	2U	Minor Arterial	D	5,090	1,130	272	174	B	858	0.0876	0.6100	2007	Osceola	542	EB
	Pine Grove Rd. - Orange County Line	2U	Minor Arterial	D	976	730	40	59	A	671	0.1014	0.6000	2008	Osceola	545	WB
Jones Road	Narcoossee Rd. - Site Access	2U	Urban Collector	D	1,168	530	72	54	C	458	0.1085	0.5700	2008	Osceola	554	EB
Hickory Tree Road	US 192 to Deer Run Road	2U	Urban Collector	D	4,955	1,120	179	269	C	851	0.0905	0.6000	2008	Osceola	540	SB
Rummel Road	Mississippi Ave - Narcoossee Rd	2U	Urban Collector	D	4,549	760	313	256	C	447	0.1250	0.5500	2007	Osceola	517	EB
US192	Bermuda Ave. - OBT	6LD	Principal Arterial	D	52,567	2,570	1,956	1,734	C	614	0.0702	0.5300	2007	FDOT	5016	EB
	OBT - Michigan Ave.	6LD	Principal Arterial	D	48,178	2,790	1,889	1,368	C	901	0.0676	0.5800	2007	FDOT	5017	EB
	Michigan Ave - Boggy Creek Rd	6LD	Principal Arterial	D	60,221	2,790	2,559	2,180	C	231	0.0787	0.5400	2008	Osceola	906	EB
	Boggy Creek Rd - Shady Ln	6LD	Principal Arterial	D	52,824	2,790	1,968	1,745	B	822	0.0703	0.5300	2008	Osceola	907	EB
	Shady Ln - Commerce Center Dr	4LD	Principal Arterial	D	45,198	1,860	1,678	1,612	C	182	0.0728	0.5100	2007	Osceola	925	EB
	Commerce Center Dr - Columbia/Budinger	4LD	Principal Arterial	D	48,985	1,860	1,576	2,089	F	(229)	0.0748	0.5700	2006	FDOT	105	WB
	Columbia/Budinger - Mississippi Ave	6LD	Principal Arterial	D	42,618	2,790	1,817	1,371	B	973	0.0748	0.5700	2007	FDOT	5021	EB
	Mississippi Ave - Narcoossee Rd	4LD	Principal Arterial	D	29,347	1,860	1,143	1,055	B	717	0.0749	0.5200	2008	Osceola	927	EB
	Narcoossee Rd - Nova Rd	4LD	Principal Arterial	D	24,778	3,230	1,068	805	B	2,162	0.0756	0.5700	2009	FDOT	255	EB
	Nova Rd - Pine Grove Rd.	4LD	Principal Arterial	D	19,051	3,230	839	775	A	2,391	0.0847	0.5200	2006	Osceola	909	EB
	Pine Grove Rd. - Old Melbourne Hwy.	4LD	Principal Arterial	D	19,051	3,230	839	775	A	2,391	0.0847	0.5200	2006	Osceola	909	EB

* Existing K-factors. Future year analyses will account for minimum K-factors from the FDOT LOS Handbook.

Source: Orange County Traffic Count Program
Osceola County Traffic Count Program
FDOT Traffic Information
Design + Planning AECOM

Table 21A.3

SUMMARY OF INTERSECTION LEVEL OF SERVICE, YEAR 2009

Center Lake Ranch DRI

Intersection	Intersection Control	LOS Standard	EXISTING CONDITIONS				
				APPROACH			
			OVERALL	EB	WB	NB	SB
CR 15/ SR 417 NB Ramps	Signal	LOS	B	D		B	B
		Delay (sec/veh)	16.9	37.1		15.7	10.2
		Queue Length (ft)		450		375	475
CR 15/ SR 417 SB Ramps	Signal	LOS	C		E	A	B
		Delay (sec/veh)	23.9		60.6	8.9	15.8
		Queue Length (ft)			725	50	75
CR 15/ Jones Rd.	TWSC	LOS	E	E	D	A	A
		Delay (sec/veh)	37.6	37.6	30.3	9.5	8.5
		Queue Length (ft)					
CR 15/ Boggy Creek Rd.	Signal	LOS	A	D		A	A
		Delay (sec/veh)	7.9	39.4		4.7	5.8
		Queue Length (ft)		100		125	75
CR 15/ Ralph Miller Rd.	TWSC	LOS	D		D		A
		Delay (sec/veh)	28.1		28.1		8.8
		Queue Length (ft)					
CR 15/ Rummel Rd.	Signal	LOS	A	D		A	A
		Delay (sec/veh)	7.6	36.6		4.3	4.6
		Queue Length (ft)		175		25	50
US 192/ Pine Grove Rd.	TWSC	LOS	E	A	A	E	C
		Delay (sec/veh)	36.7	9.0	8.7	36.7	16.5
		Queue Length (ft)					
US 192/ Nova Rd.	TWSC	LOS	B	A			B
		Delay (sec/veh)	11.7	9.6			11.7
		Queue Length (ft)					
US 192/ CR 15	Signal	LOS	C	C	C	C	D
		Delay (sec/veh)	31.6	28.7	29.8	31.8	40.1
		Queue Length (ft)		550	100	125	350
US 192/ Old Hickory Tree Rd.	Signal	LOS	B	B	B	D	C
		Delay (sec/veh)	13	10.6	11.3	35.4	33.1
		Queue Length (ft)		75	325	175	75
US 192/ Delaware Ave.	Signal	LOS	A	A	A	D	D
		Delay (sec/veh)	7.4	6.2	6.0	54.4	53.2
		Queue Length (ft)		250	225	100	50
US 192/ Michigan Ave. East	Signal	LOS	C	C	B	D	D
		Delay (sec/veh)	25.5	29.0	14.6	52.4	45
		Queue Length (ft)		725	375	375	200
US 192/ New York Ave.	Signal	LOS	B	A	A	D	D
		Delay (sec/veh)	10.7	9.1	8.1	49.8	50.2
		Queue Length (ft)		375	325	100	150
US 192/ Vermont Ave.	Signal	LOS	C	C	C	E	D
		Delay (sec/veh)	34	22.9	34.3	77.4	52
		Queue Length (ft)		800	525	425	300
US 192/ Columbia Ave./ Budinger Ave.	Signal	LOS	C	B	B	D	D
		Delay (sec/veh)	21.5	19.2	20.0	40.4	52.8
		Queue Length (ft)		600	25	125	150
US 192/ Neptune Rd.	Signal	LOS	C	C	B	D	D
		Delay (sec/veh)	23.1	28.1	13.7	41.1	48.5
		Queue Length (ft)		100	300	100	125
US 192/ Kissimmee Park Rd.	Signal	LOS	D	C	C	E	E
		Delay (sec/veh)	37.2	32.8	26.1	58.4	60.9
		Queue Length (ft)		325	300	350	275
US 192/ Commerce Center Dr.	Signal	LOS	C	C	C	D	D
		Delay (sec/veh)	31.4	30.4	22.3	50.3	50.4
		Queue Length (ft)		300	200	325	325
US 192/ Partin Settlement Rd.	Signal	LOS	D	D	E	C	D
		Delay (sec/veh)	39.9	49.5	63.6	22.4	44.9
		Queue Length (ft)		250	525	200	525
US 192/ Boggy Creek Rd.	Signal	LOS	C	C	C	D	B
		Delay (sec/veh)	21.4	21.6	22.0	36.9	18.5
		Queue Length (ft)		650	25	0	375
US 192/ Michigan Ave. North	Signal	LOS	E	D	E	E	E
		Delay (sec/veh)	60.1	54.4	58.4	58.5	75.1
		Queue Length (ft)		425	575	425	625
US 192/ Orange Blossom Trail	Signal	LOS	E	E	E	E	F
		Delay (sec/veh)	69.6	70.3	56.9	59.4	88.5
		Queue Length (ft)		1,300	900	250	925

Source: Design + Planning AECOM

Programmed Roadway Improvements

Road improvements that are planned or programmed within the vicinity of the Center Lake DRI are summarized in ***Table 21-A.4*** and graphically shown on Map J-2, ***Exhibit 21-A.2***. Improvements were identified from work programs and correspondence provided by state and local agencies. This analysis assumes only those capacity improvements contained in the first three years of approved capital improvement programs that are funded for construction.

Table 21-A.4

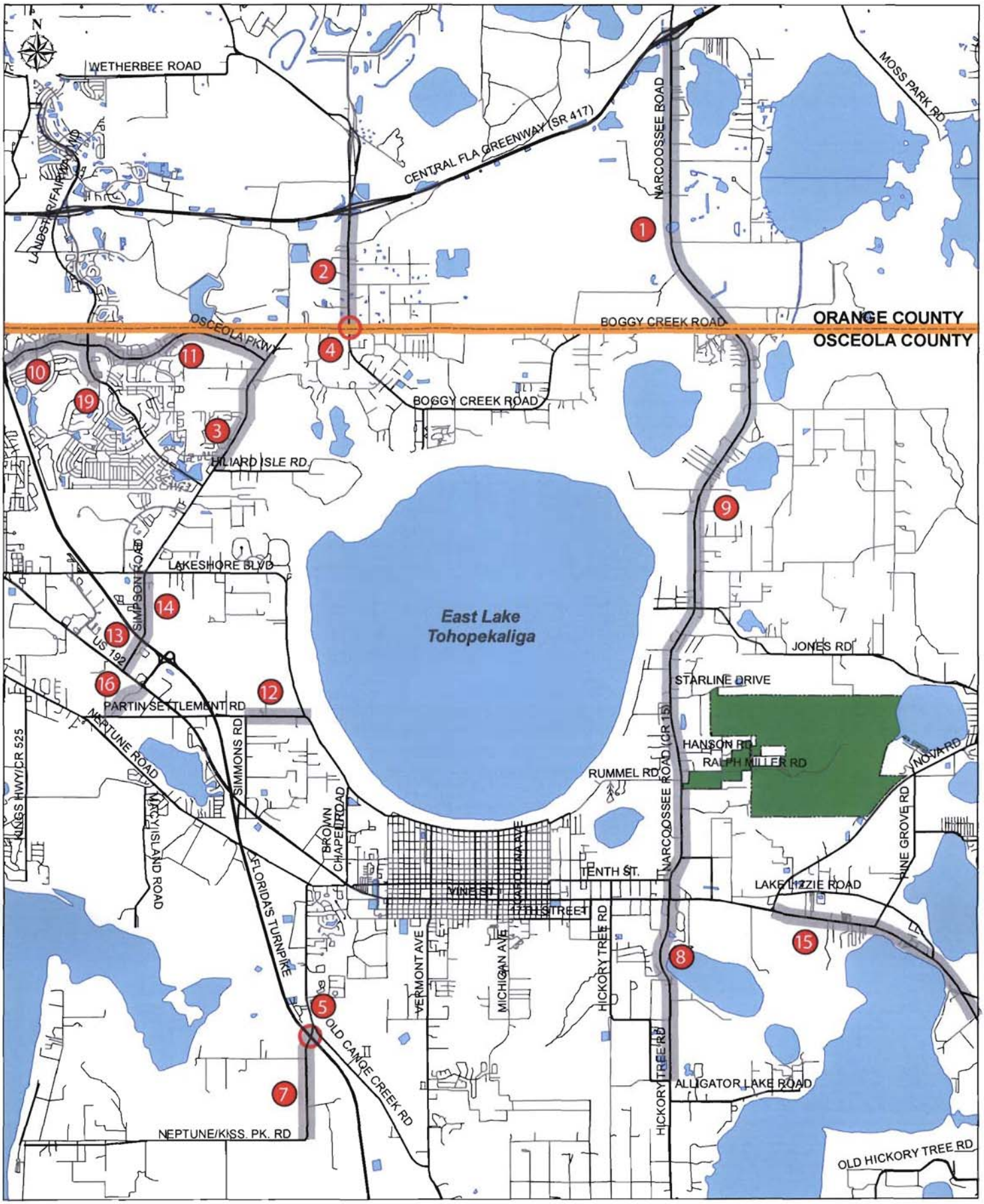
PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

Center Lake Ranch DRI

Map Reference	Roadway	Segment From - To	Improvement	Length (miles)	Phase	Completion Date	Responsible Agency	Status
1	CR 15 (Narcoossee Road)	Orange-Osceola County Line - SR 417	Widen to six lanes	3.8	CST	2011	Orange County	Programmed (TRIP)
2	Boggy Creek	SR 417 - County Line Road	Widen to four lanes	1.5	CST	2013	Orange County	Programmed
3	Boggy Creek	Hillard Isle Road - Orange County Line	Widen to four lanes	3.1	CST	2009	Osceola County	Constructed
4	Boggy Creek	Boggy Creek	Intersection Improvement	-	CST	2013	Orange County	Programmed
5	Florida's Turnpike	Ramps to/ from Sun Pass	Partial Interchange	0.7	CST	2006	Turnpike	Constructed
6	John Young Parkway	Carroll St. - Orange/Osceola County Line	Widen to six lanes	0.9	CST	2009	Osceola County	Programmed
7	Kissimmee Park Road	Neptune Rd. - Old Canoe Creek Rd.	Widen to four lanes	1.7	CST	2008	Osceola County	Constructed
8	Narcoossee Road (CR 15)	Hickory Tree Rd. - US 192	Create two lane highway	4.4	CST	2008	Osceola County	Constructed
9	Narcoossee Road (CR 15)	US 192 - Orange-Osceola County Line	Widen to four lanes	7.4	CST	2011	Osceola County	Programmed
10	Osceola Parkway	Florida's Turnpike - Buenaventura Blvd.	Widen to six lanes	1.6	CST	2009	Osceola County	Programmed
11	Osceola Parkway	Buenaventura Blvd. - Boggy Creek Rd.	Widen to four lanes	1.8	CST	2010	Osceola County	Programmed
12	Partin Settlement Road	Simmons Rd. - Lakeshore Blvd.	Widen to three lanes	0.7	CST	2008	Osceola County	Constructed
13	Simpson Road	US 192 - Florida's Turnpike	Widen to five lanes	0.4	CST	2013	Osceola County	Constructed
14	Simpson Road	Florida's Turnpike - Fortune Rd.	Widen to four lanes	0.8	CST	2013	Osceola County	Programmed
15	SR500/US192	CR532 - Hickory Tree Road	Widen to four lanes	5.7	CST	2006	FDOT	Constructed
15	Buenaventura Blvd.	Buttonwood Rd. - Orange/ Osceola county	Widen to six lanes	0.7	CST	2012	Osceola County	Programmed
16	Shady Lane	Partin Settlement Rd. - US 192	Widen to five lanes	0.6	CST	2010	Osceola County	Programmed

Notes: CST - construction

Source: *Transportation Improvement Program for the Orlando Urban Area, 2009/10 - 2013/14*
Design + Planning AECOM



Site Boundary

0 2,000 4,000 6,000 8,000 Feet

Map J-2, Exhibit 21-A.2
Planned and Programmed Improvements

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.**

Trip Generation

Trip generation for the Center Lake Ranch DRI land uses is based on formulas contained in the ITE Trip Generation Report, 8th Edition. Trip generation formulas for the Center Lake Ranch land uses are presented in ***Table 21-B.1***. Trip generation surveys for elementary schools are presented in **Table 5** of the methodology letter (Appendix***). Table 21-B.2*** shows the daily and afternoon peak-hour trip ends for Phase 1 (Year 2015) and Phase 2 (Year 2020) expected to be generated by the Center Lake Ranch development program. Map H shows the location of all parcels located within the Center Lake Ranch DRI.

Modal Split

The site is not currently served by any transit provider, therefore, no reduction in trips will be assumed in this analysis for mode split. The nearest LYNX bus stop is at U.S 192 and Crawford Avenue (Route 10) approximately 2.3 miles west of the site.

Pass-By Traffic

Pass-by trips come directly from the traffic stream passing the facility on the adjacent street system and do not require a diversion from another roadway. Pass-by trips are estimated at 5% (Phase 1) and 5% (Phase 2) of the total retail trip generation.

Table 21-B.1

TRIP GENERATION FORMULAS

Center Lake Ranch DRI

Land Use	ITE Code	Formula	Direction
Single Family Residential			
Daily	210	Ln(T) = 0.92 Ln(DU) + 2.71	- -
PM	210	Ln(T) = 0.90 Ln(DU) + 0.51	63% in
Multi-Family			
Daily	220	T = 6.06 (DU) +123.56	- -
PM	220	T = 0.55 (DU) + 17.65	65% in
Townhome			
Daily	230	Ln(T) = 0.87 Ln(DU) +2.46	- -
PM	230	Ln(T) = 0.82 Ln(DU) +0.32	67% in
Rec. Community Center			
Daily	495	T = 22.88 (KSF)	- -
PM	495	Ln(T) = 0.58 Ln(DU) +2.21	37% in
Elementary School			
Daily	Survey	T = 2.35 (Students)	- -
PM	Survey	T = 0.21 (Students)	31% in
Church			
Daily	560	T = 9.11 (KSF)	- -
PM	560	T = 0.34 (KSF) + 5.24	48% in
Office			
Daily	710	Ln(T) = 0.77 Ln(KSF) + 3.65	- -
PM	710	T = 1.12 (KSF) + 78.81	17% in
Retail			
Daily	820	Ln(T) = 0.65 Ln(KSF) +5.83	- -
PM	820	Ln(T) = 0.67 Ln(KSF) + 3.37	49% in

Source: ITE Trip Generation Report, Eighth Edition
Design + Planning AECOM

Table 21-B.2

SUMMARY OF NET EXTERNAL TRIP GENERATION

Center Lake Ranch DRI

Phase 1 (Year 2015)

Land Use	ITE Code	Intensity	Daily Trip Ends	Trip Rate	PM Peak-Hour Trip Ends					
					Total	Trip Rate	In %	In Trips	Out %	Out Trips
Single Family	210	300 DU	2,857	9.52	282	0.94	0.63	178	0.37	104
Multi-Family	220	440 DU	2,790	6.34	260	0.59	0.65	169	0.35	91
Townhomes	230	442 DU	2,344	5.30	203	0.46	0.67	136	0.33	67
Rec. Community Center	495	30 KSF	686	22.88	66	2.18	0.37	24	0.63	41
Elementary School	*	970 Stu	2,280	2.35	204	0.21	0.31	63	0.69	141
Church	560	10 KSF	91	2.35	9	0.86	0.48	4	0.52	4
Office	710	30 KSF	528	17.60	112	3.75	0.17	19	0.83	93
Retail	820	60.0 KSF	4,872	81.21	452	7.53	0.49	221	0.51	230
Total			16,448		1,587			815		773
Internal Capture	Daily 8.8%	PM Peak-Hr. 9.1%	1,449		145			72		72
Subtotal			14,999		1,443			743		700
Pass-By		5.0%	21		21			10		10
Mode Split			0		0			0		0
Net External			**14,978**		**1,422**			**733**		**690**

Phase 2, Cumulative (Year 2020)

Land Use	ITE Code	Intensity	Daily Trip Ends	Trip Rate	PM Peak-Hour Trip Ends					
					Total	Trip Rate	In %	In Trips	Out %	Out Trips
Single Family	210	1,208 DU	10,291	8.52	989	0.82	0.63	623	0.37	366
Multi-Family	220	1,172 DU	7,226	6.17	662	0.57	0.65	430	0.35	232
Townhomes	230	1,173 DU	5,478	4.67	453	0.39	0.67	303	0.33	149
Rec. Community Center	495	30 KSF	686	22.88	66	2.18	0.37	24	0.63	41
Elementary School	*	970 Stu	2,280	2.35	204	0.21	0.31	63	0.69	141
Church	560	10 KSF	91	2.35	9	0.86	0.48	4	0.52	4
Office	710	70 KSF	1,014	14.48	157	2.25	0.17	27	0.83	130
Retail	820	170.0 KSF	9,588	56.40	908	5.34	0.49	445	0.51	463
Total			36,654		3,447			1,920		1,527
Internal Capture	Daily 6.5%	PM Peak-Hr. 7.1%	2,368		244			122		122
Subtotal			34,286		3,203			1,798		1,405
Pass-By		5.0%	42		42			21		22
Mode Split			0		0			0		0
Net External			**34,244**		**3,161**			**1,777**		**1,383**

Source: ITE Trip Generation, 8th Edition; ITE Trip Generation Handbook, 2003
Design + Planning AECOM

Zonal Data

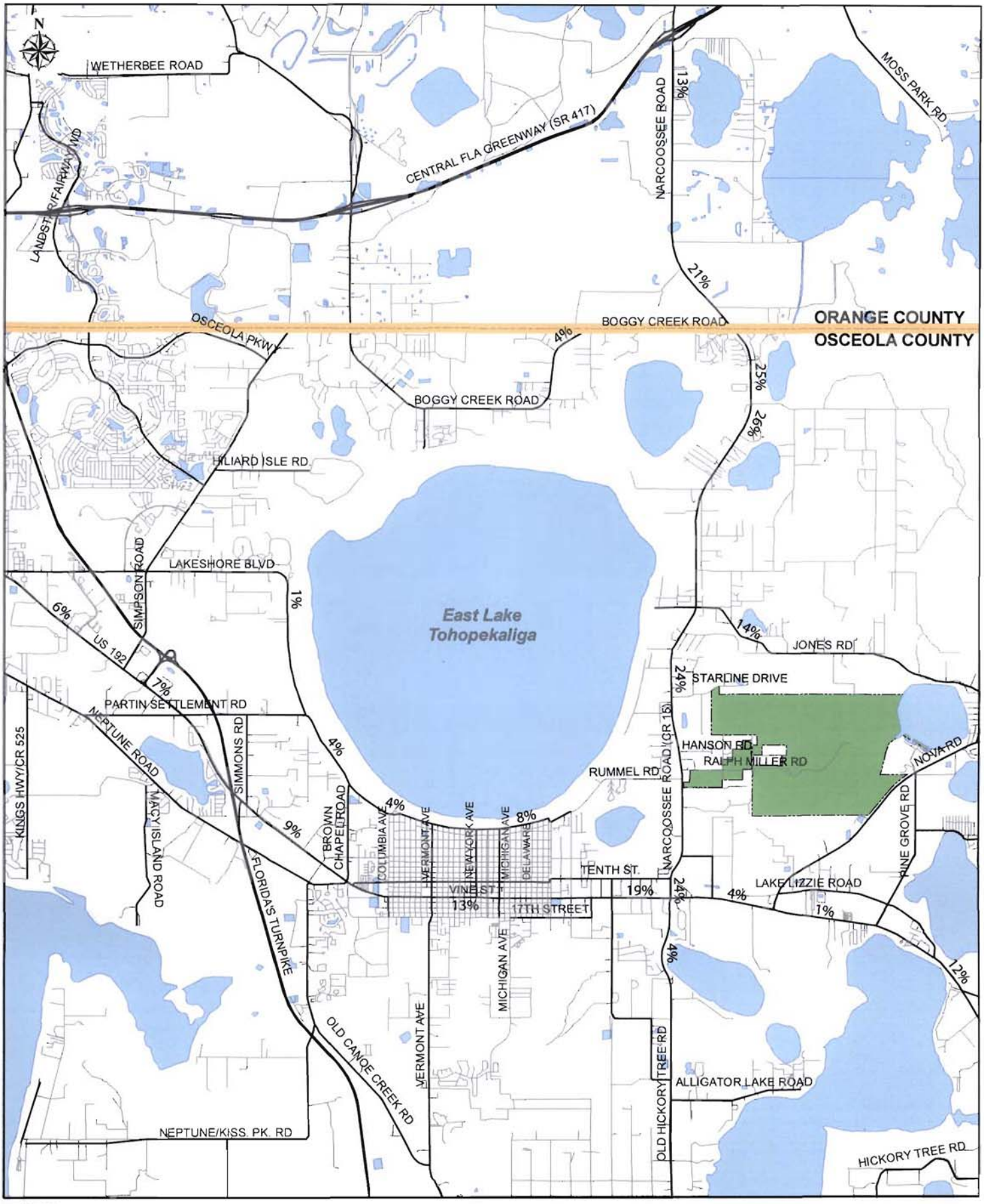
The population and employment for each phase year is presented below.

ZDATA 1:	Phase 1 Year 2015	Phase 2 Year 2020	Total
Single Family Dwelling Units	300	908	1,208
Single Family Population	750	2,270	3,020
Multi-Family Dwelling Units	882	1,463	2,345
Multi-Family Population	1,544	2,560	4,104
ZDATA 2:			
Industrial Employees	0	0	0
Commercial Employees	150	275	425
Service Employees	594	132	725
Total Employees	744	407	1,150
School Enrollment	970	0	970

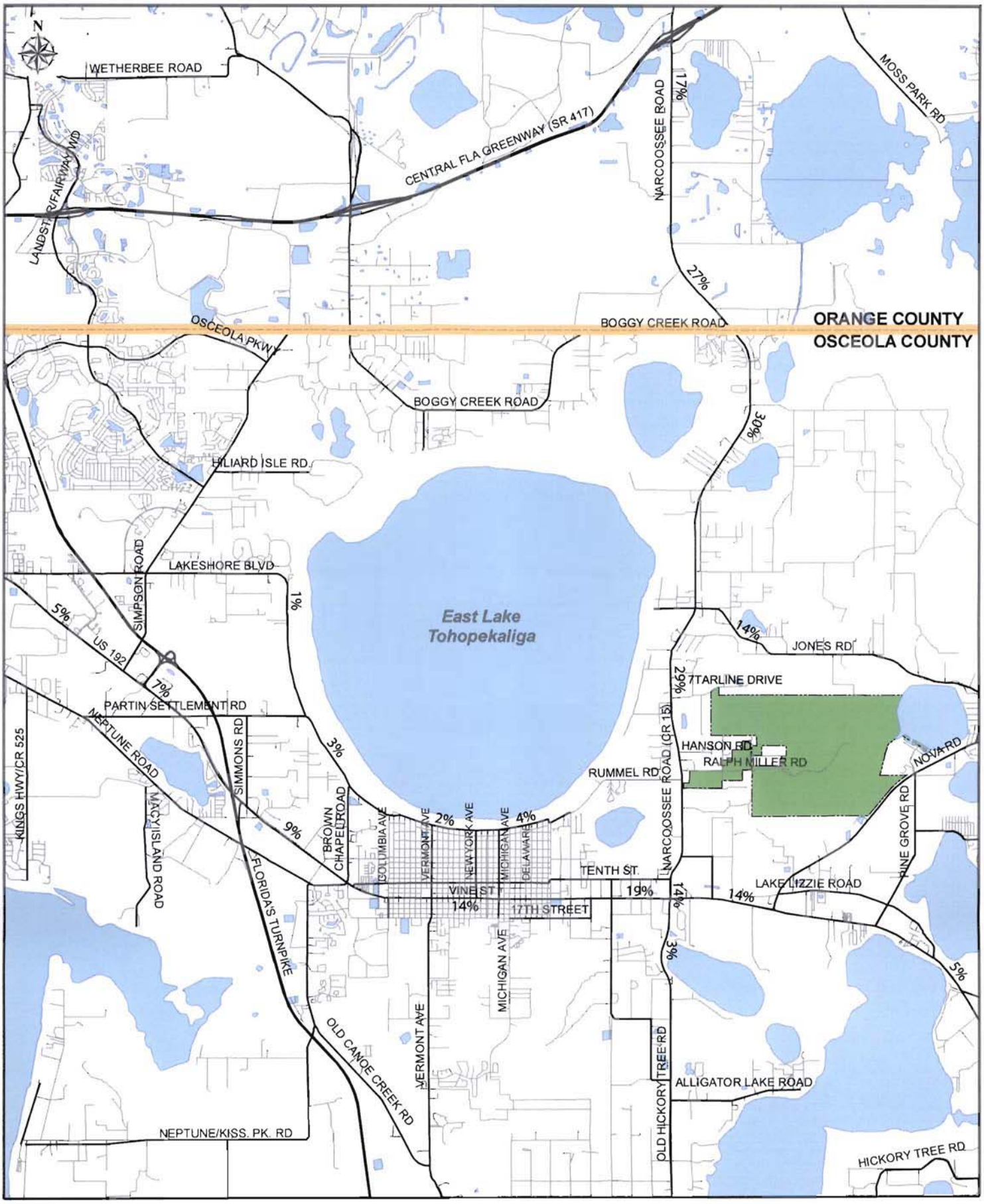
The conversion factors used to estimate population and employment are summarized in *Appendix D*.

Distribution

The distribution and assignment of external daily trip ends was produced by the model and reviewed for reasonableness. The resulting distribution is shown on Map J-4, ***Exhibit 21-B.1*** (Year 2015) and Map J-5, ***Exhibit 21-B.2*** (Year 2020).



Map J-4, Exhibit 21-B.1
Project Traffic Distribution, Year 2015



Site Boundary

0 2,000 4,000 6,000 8,000 Feet

Map J-5, Exhibit 21-B.2

Project Traffic Distribution, Year 2020

CENTER LAKE RANCH DRI

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.

Internal trips are those which begin and end within the project site. External trips have either and origin or destination outside the project site. Internal capture for the PM peak-hour was estimated based on information contained in the ITE Trip Generation Handbook at 9.12% (Phase 1 – ***Figure 21-C.1*** and ***Table 21-C.1***) and 7.08% (Phase 2 - ***Figure 21-C.2*** and ***Table 21-C.2)***

Figure 21-C.1

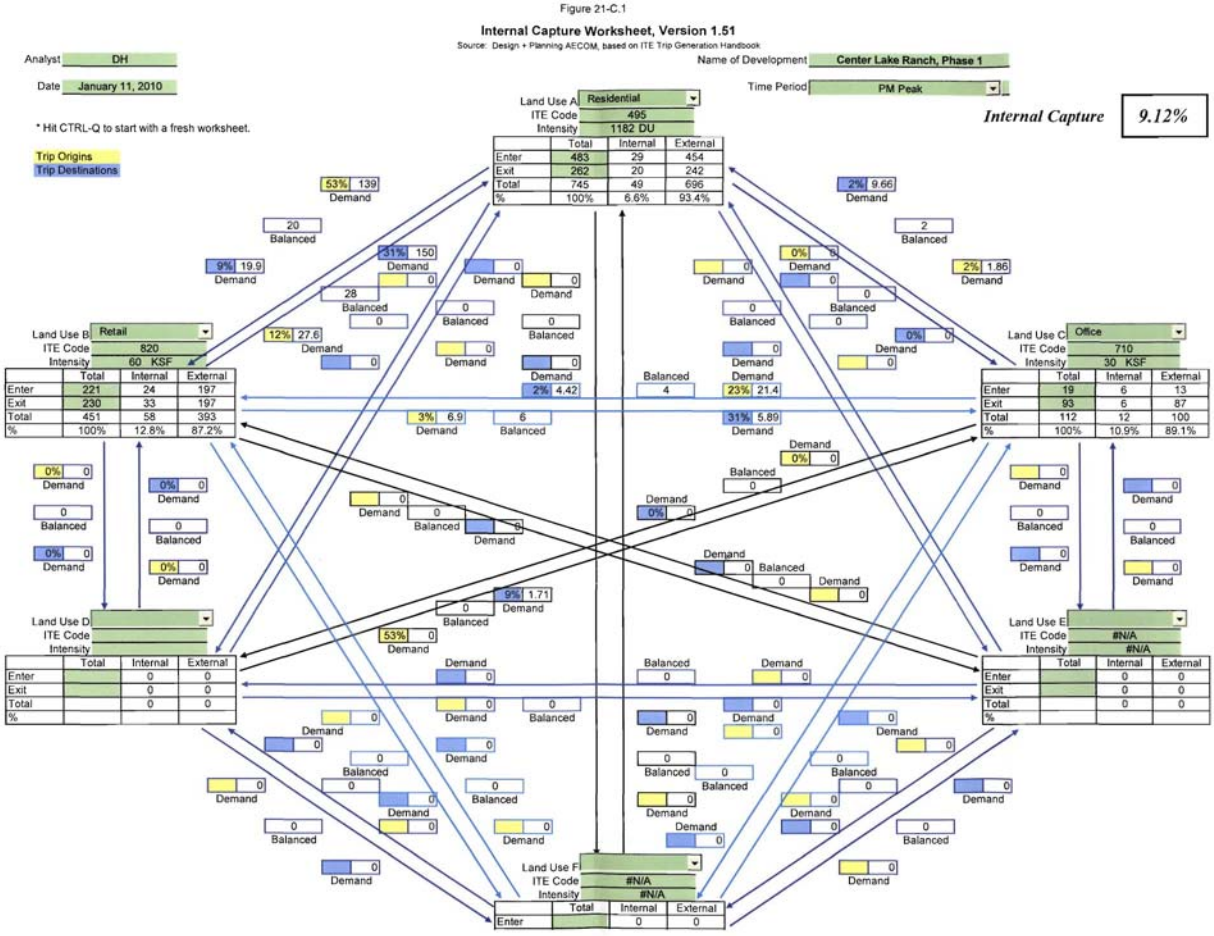

Internal Capture Worksheet, Version 1.51
Source: Design + Planning AECOM, based on ITE Trip Generation Handbook
Analyst DH
Date January 11, 2010
Name of Development Center Lake Ranch, Phase 1
Time Period PM Peak
Internal Capture 9.12%
* Hit CTRL-Q to start with a fresh worksheet.
Trip Origins
Trip Destinations
Land Use A: Residential
ITE Code 495
Intensity 1182 DU
Total Internal External
Enter 483 29 454
Exit 262 20 242
Total 745 49 696
% 100% 6.6% 93.4%
Land Use B: Retail
ITE Code 820
Intensity 60 KSF
Total Internal External
Enter 221 24 197
Exit 230 33 197
Total 451 58 393
% 100% 12.8% 87.2%
Land Use C: Office
ITE Code 710
Intensity 30 KSF
Total Internal External
Enter 19 6 13
Exit 93 6 87
Total 112 12 100
% 100% 10.9% 89.1%
Land Use D:
ITE Code
Intensity
Total Internal External
Enter 0 0
Exit 0 0
Total 0 0
%
Land Use E:
ITE Code #N/A
Intensity #N/A
Total Internal External
Enter 0 0
Exit 0 0
Total 0 0
%
Land Use F:
ITE Code #N/A
Intensity #N/A
Total Internal External
Enter 0 0

Table 21-C.1

TRIP GENERATION FORMULAS

Center Lake Ranch DRI, Phase 1

Net External Trips for Multi-Use Development								
	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	454	197	13	0	0	0	663	
Exit	242	197	87	0	0	0	525	
Total	696	393	100	0	0	0	1189	Int. Capture
Single-Use Trip Gen. Est.	745	451	112				1308	9.12%

Source: Design + Planning AECOM

Figure 21-C.2

Internal Capture Worksheet, Version 1.51

Source: Design + Planning AECOM, based on ITE Trip Generation Handbook

Analyst: DH

Date: January 11, 2010

Name of Development: Center Lake Ranch, Phase 2

Time Period: PM Peak

Internal Capture 7.08%

* Hit CTRL-Q to start with a fresh worksheet.

Trip Origins
Trip Destinations

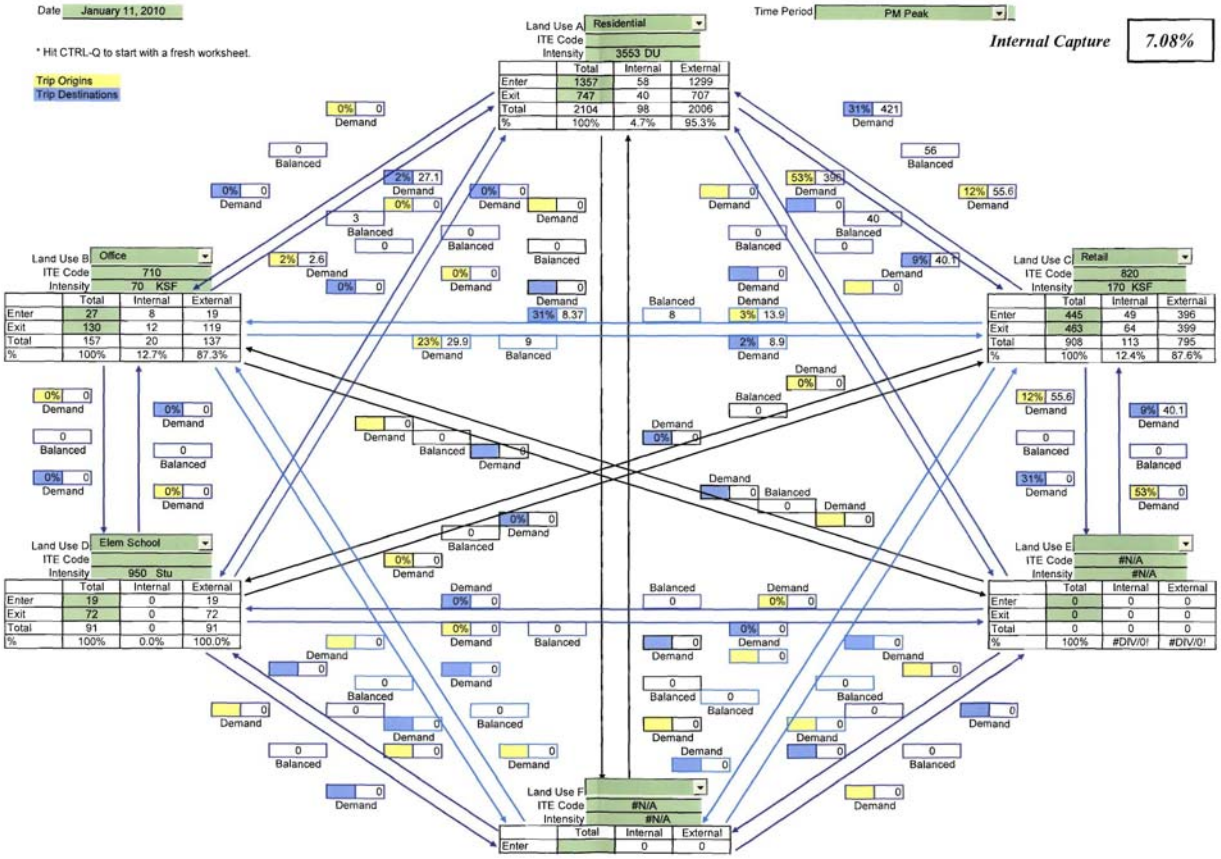


Table 21-C.2

TRIP GENERATION FORMULAS

Center Lake Ranch DRI, Phase 2

Net External Trips for Multi-Use Development								
	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	1299	19	396	19	0	0	1733	
Exit	707	119	399	72	0	0	1297	
Total	2006	137	795	91	0	0	3029	Int. Capture
Single-Use Trip Gen. Est.	2104	157	908	91	0		3260	7.08%

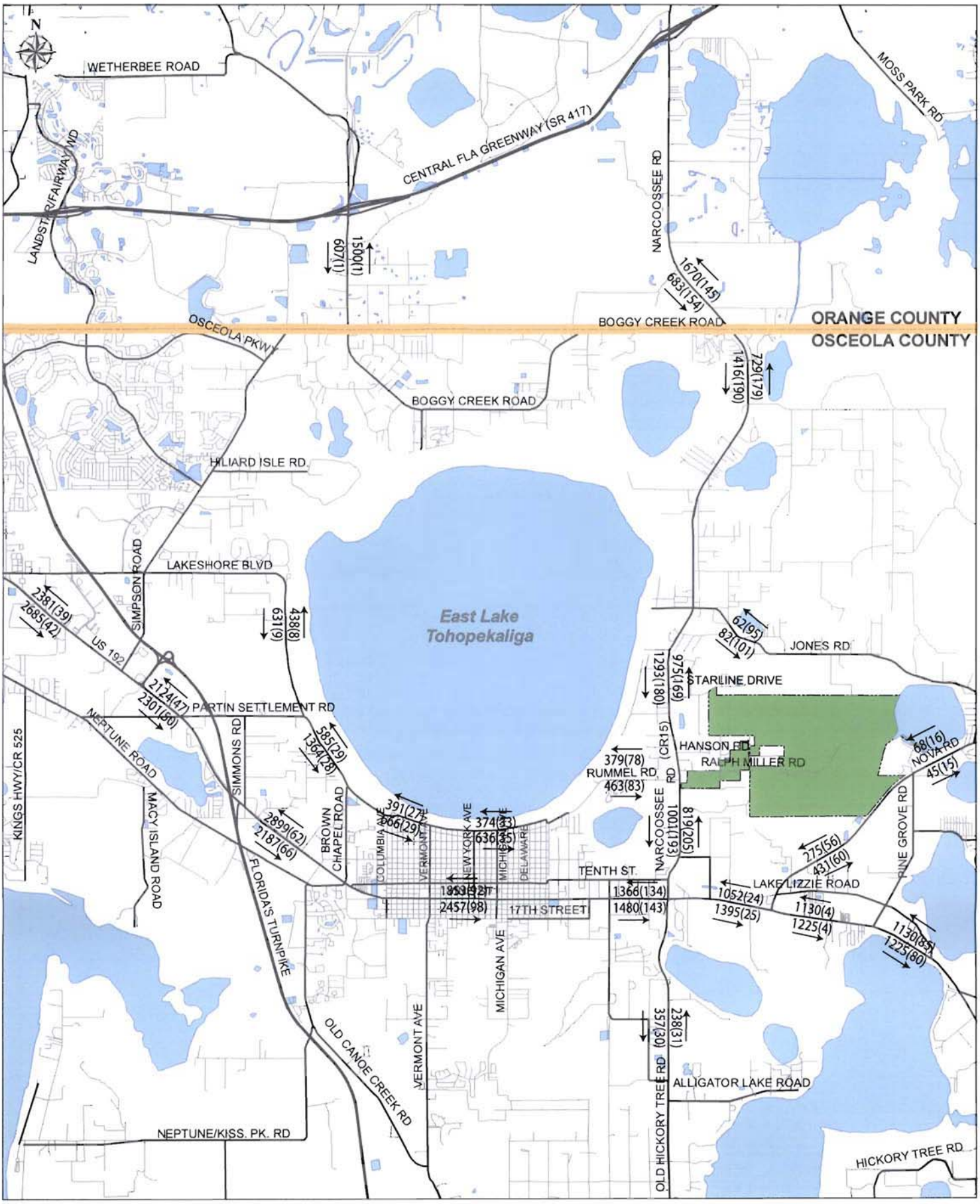
Source: Design + Planning AECOM

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 model and of TAZ projections. If no standard model is available and 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 subzones at buildout 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.**

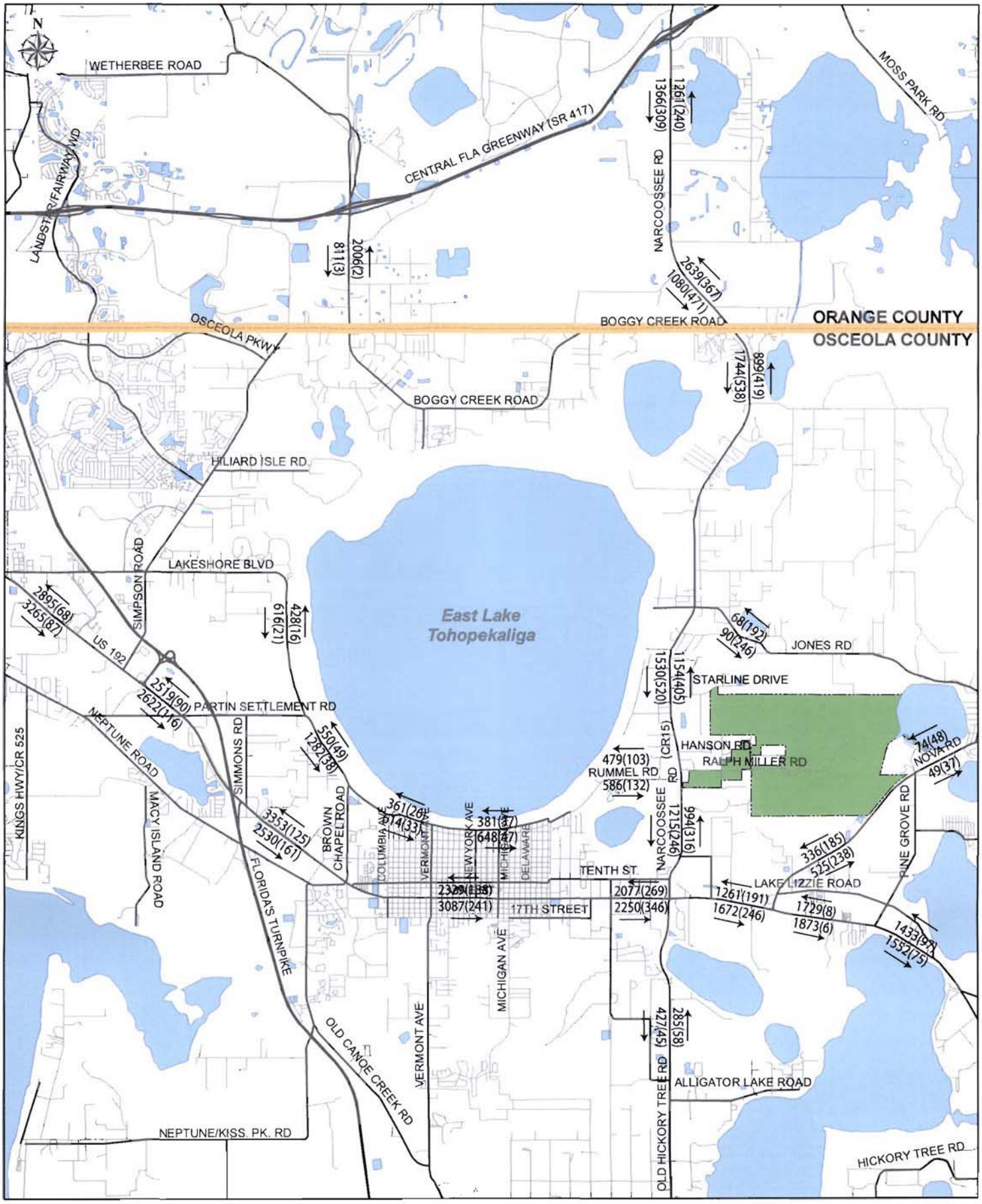
The transportation evaluation identifies transportation facilities where project traffic is significant and adverse in Year 2015 and 2020, consistent with the Osceola County Comprehensive Plan, Osceola County Land Development Regulations, and Florida Statutes. The Transportation Uniform Standard Rule (9J-2.045) defines significance as project traffic projected to be generated at the end of any stage of the proposed development, cumulatively with previous stages, utilizing five percent (5.0%) or more of the peak-hour level of service standard adopted in the applicable local government comprehensive plan (i.e., Significant), and adversity as a roadway facility projected to be operating below the adopted level of service standard at buildout of that stage or stages (i.e., Adverse).

Total PM peak-hour directional traffic, including Phase 1, of the Center Lake Ranch DRI (Year 2015), is presented on Map J-6, ***Exhibit 21-D.1***.

Total PM peak-hour directional traffic, including Phase 2 of the Center Lake Ranch DRI (Year 2020), is presented on Map J-7, ***Exhibit 21-D.2***.



Map J-6, Exhibit 21-D.1
PM Peak-Hour Directional Traffic, Year 2015



Map J-7, Exhibit 21-D.2
PM Peak-Hour Directional Traffic, Year 2020

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 buildout 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.**

The modeled peak-season volumes were factored by either 0.97 for segments in Orange County or 0.98 for segments in Osceola County (model output conversion factor - MOCF) to obtain the annual average daily traffic (AADT). Daily project traffic was subtracted from the future AADTs to obtain future background traffic. This background traffic was then compared to existing traffic. In cases where the growth (2009 to 2015 or 2020) was less than two percent (2.0%) per year or greater than 10% per year the future AADT was calculated by applying the historic growth rate (based on linear regression) to the existing AADT. If the historic growth rate was less than two percent (2.0%) per year, an annual growth of two percent was used (Appendix). The final AADT was then converted to PM peak-hour directional volumes by applying the appropriate K and D factors.

The assignment of PM peak-hour trips with one end in Phase 1 of the Center Lake Ranch development (Year 2015) is presented in ***Table 21-E.1***. Total PM peak-hour trip ends, facility type, and number of lanes are also reported. In addition, trips with one end in Phase 1 of the Center Lake Ranch development as a percentage of total peak-hour directional trips and of the adopted peak-hour directional service volume are shown. ***Table 21-E.2*** presents the intersection and ramp level of service for Year 2015. Analysis of intersections for the Year 2015 was based on the HCM operational analysis applied for afternoon peak-hour conditions. The Center Lake Ranch is considered significant if PM peak-hour trips with one end in Phase 1 of the Center Lake Ranch development are projected to represent 5 percent or more of the theoretical service volume at the adopted standard for each lane group following the ECFRPC staff guidelines. Computer printouts of the intersection analyses for Year 2015 are contained in *Appendix I* and are provided on computer disk.

The assignment of PM peak-hour trips with one end in Phase 2 of the Center Lake Ranch development (Year 2020) is presented in ***Table 21-E.3***. Total PM peak-hour trip ends, facility type, and number of lanes are also reported. In addition, trips with one end in Phase 2 of the Center Lake Ranch development as a percentage of total peak-hour directional trips and of the adopted peak-hour directional service volume are shown. No intersection analyses were conducted for Phase 2, Year 2020. The analysis of intersections for Phase 2 will be included in the Monitoring & Modeling study anticipated to be required prior to development commencing in that phase.

Exhibit 21.E-1 reflects the specific turning movements estimated for each intersection and site access drive within the project study area and on the external roadway system. Phase 1 volumes are shown for the identified study area intersections.

Table 21-E.1

SUMMARY OF ROADWAY SEGMENT CAPACITY

CENTER LAKE DRI, PHASE 1 YEAR 2015

Roadway	Segment From - To	E+C # of Lanes	Roadway Classification	LOS Std.	Peak-Hour Svc. Vol. @ Std.	Existing Background AADT	Annual Growth Rate	2015 Background Volume	K- Factor	D- Factor	Project Distribution	PM Peak-Hour Directional Volumes						LOS	Project as % of Total Traffic	Project as % of Service Volume	Significant?		Adverse?		Sig. & Adv?	
												Background		Project		Total					Peak	Off-pk	Peak	Off-pk	Peak	Off-pk
												NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB										
Boggy Creek Road	Central Florida Greenway - Osceola/Orange Co. Line	4LD	Urban Collector	E	1,860	20,530	2.00%	23,404	0.09	0.71	0.17%	1,500	607	1	1	1,501	608	B	0.05%	0.05%	0.05%	No	No	No	No	No	No
	SR528 - Lake Nona Club Road	4LD	Principal Arterial	E	1,860	27,787	6.31%	40,067	0.09	0.63	5.79%	1,337	2,269	40	42	1,377	2,311	F	2.22%	2.26%	2.15%	No	No	Yes	No	No	No
	Lake Nona Club Road - SR 417	4LD	Principal Arterial	E	1,860	21,801	9.48%	36,261	0.09	0.57	6.59%	1,447	1,908	45	48	1,492	1,956	C	2.70%	2.58%	2.42%	No	No	Yes	No	No	No
	SR 417 - Tyson Road/Lake Nona Road C	6LD	Principal Arterial	D	2,790	18,144	3.25%	22,271	0.09	0.52	13.11%	970	1,050	90	96	1,060	1,146	B	8.43%	3.44%	3.23%	No	No	No	No	No	No
	Tyson Road/Lake Nona Rd C - Lake Nona Rd E	6LD	Principal Arterial	D	2,790	16,857	6.93%	25,030	0.09	0.71	17.62%	1,670	683	122	129	1,792	812	B	9.64%	4.37%	4.62%	No	No	No	No	No	No
CR15	Lake Nona Road E - Boggy Creek Rd East	6LD	Principal Arterial	D	2,790	16,857	6.93%	25,030	0.09	0.71	21.04%	1,670	683	145	154	1,815	837	B	11.28%	5.20%	5.52%	Yes	Yes	No	No	No	No
	Boggy Creek Rd E - Jones Rd	4LD	Principal Arterial	D	1,860	18,298	4.22%	23,706	0.09	0.66	25.93%	729	1,416	179	190	908	1,606	C	14.66%	10.22%	9.62%	Yes	Yes	No	No	No	No
	Jones Rd - Rummel Rd	4LD	Principal Arterial	D	3,230	19,364	4.31%	25,203	0.09	0.57	24.52%	975	1,293	169	180	1,144	1,473	B	13.33%	5.57%	5.23%	Yes	Yes	No	No	No	No
	Rummel Rd - 10th St	4LD	Principal Arterial	D	1,860	16,192	3.55%	20,215	0.09	0.55	27.95%	819	1,001	205	193	1,024	1,194	B	17.95%	10.38%	11.02%	Yes	Yes	No	No	No	No
	10th St - US 192-441	4LD	Principal Arterial	D	1,860	16,109	2.10%	18,480	0.09	0.53	23.85%	782	881	175	165	957	1,046	B	16.97%	8.87%	9.41%	Yes	Yes	No	No	No	No
	Fortune Rd - Partin Settlement Rd	2U	Urban Collector	D	760	8,482	5.72%	11,881	0.09	0.59	1.21%	438	631	8	9	446	640	D	1.56%	1.18%	1.05%	No	No	No	No	No	No
	Partin Settlement Rd. - Brown Chapel Rd.	2U	Urban Collector	D	760	11,760	8.03%	19,316	0.10	0.70	4.00%	1,364	585	28	29	1,392	614	F	2.84%	3.68%	3.82%	No	No	Yes	No	No	No
	Brown Chapel Rd. - Montana Ave.	2U	Urban Collector	D	760	7,981	4.50%	11,216	0.09	0.63	3.93%	666	391	29	27	695	418	D	5.03%	3.82%	3.55%	No	No	No	No	No	No
Lakeshore Blvd	Montana Ave. - Vermont Ave.	2U	Urban Collector	D	760	7,981	7.30%	13,222	0.09	0.63	4.36%	785	461	32	30	817	491	D	4.74%	4.21%	3.95%	No	No	Yes	No	No	No
	Vermont Ave. - Massachusetts Ave.	2U	Urban Collector	D	760	7,981	3.82%	10,723	0.09	0.63	4.76%	636	374	35	33	671	407	D	6.31%	4.61%	4.34%	No	No	No	No	No	No
	Massachusetts Ave. - Michigan Ave.	2U	Urban Collector	D	760	7,981	3.82%	10,723	0.09	0.63	5.16%	636	374	38	36	674	410	D	6.83%	5.00%	4.74%	Yes	No	No	No	No	No
	Michigan Ave. - Mississippi Ave.	2U	Urban Collector	D	760	7,981	3.82%	10,723	0.09	0.63	8.02%	636	374	59	55	695	429	D	10.14%	7.76%	7.24%	Yes	Yes	No	No	No	No
Nova Rd	US192 - Pine Grove Rd.	2U	Minor Arterial	D	1,130	5,090	6.77%	7,846	0.09	0.61	8.13%	431	275	60	56	491	331	B	14.11%	5.31%	4.96%	Yes	No	No	No	No	No
	Pine Grove Rd. - Orange County Line	2U	Minor Arterial	D	730	976	2.00%	1,113	0.10	0.60	2.12%	45	68	15	16	60	84	A	21.55%	2.19%	2.05%	No	No	No	No	No	No
Jones Road	Narcoossee Rd. - Site Access	2U	Urban Collector	D	530	1,168	2.00%	1,332	0.11	0.57	13.72%	82	62	101	95	183	157	C	57.56%	19.06%	17.82%	Yes	Yes	No	No	No	No
Hickory Tree Road	US 192 to Deer Run Road	2U	Urban Collector	D	1,120	4,955	4.66%	6,571	0.09	0.60	4.30%	238	357	31	30	269	387	C	9.30%	2.68%	2.77%	No	No	No	No	No	No
Rummel Road	Mississippi Ave - Narcoossee Rd	2U	Urban Collector	D	760	4,549	6.01%	6,738	0.13	0.55	11.33%	463	379	83	78	546	457	C	16.05%	10.92%	10.26%	Yes	Yes	No	No	No	No
	Bermuda Ave. - OBT	6LD	Principal Arterial	D	2,570	52,567	4.95%	73,396	0.070	0.53	2.65%	2,731	2,422	19	18	2,750	2,440	E	0.71%	0.74%	0.70%	No	No	Yes	No	No	No
	OBT - Michigan Ave.	6LD	Principal Arterial	D	2,790	48,178	3.17%	60,404	0.068	0.58	4.17%	2,368	1,715	31	29	2,399	1,744	B	1.45%	1.11%	1.04%	No	No	No	No	No	No
	Michigan Ave - Boggy Creek Rd	6LD	Principal Arterial	D	2,790	60,221	3.97%	76,955	0.079	0.54	4.45%	3,270	2,786	33	31	3,303	2,817	F	1.05%	1.18%	1.11%	No	No	Yes	Yes	No	No
	Boggy Creek Rd - Shady Ln	6LD	Principal Arterial	D	2,790	52,824	5.20%	72,065	0.070	0.53	5.68%	2,685	2,381	42	39	2,727	2,420	C	1.57%	1.51%	1.40%	No	No	No	No	No	No
	Shady Ln - Commerce Center Dr	4LD	Principal Arterial	D	1,860	45,198	4.31%	60,794	0.073	0.52	6.80%	2,301	2,124	50	47	2,351	2,171	F	2.14%	2.69%	2.53%	No	No	Yes	Yes	No	No
US192	Commerce Center Dr - Columbia/Budinger	4LD	Principal Arterial	D	1,860	48,985	4.31%	68,001	0.075	0.57	8.98%	2,187	2,899	66	62	2,253	2,961	F	2.45%	3.33%	3.55%	No	No	Yes	Yes	No	No
	Columbia/Budinger - Mississippi Ave.	6LD	Principal Arterial	D	2,790	42,618	4.40%	57,617	0.075	0.57	13.30%	2,457	1,853	98	92	2,555	1,945	C	4.22%	3.51%	3.30%	No	No	No	No	No	No
	Mississippi Ave - Narcoossee Rd	4LD	Principal Arterial	D	1,860	29,347	4.21%	38,003	0.075	0.52	19.47%	1,400	1,366	143	134	1,623	1,500	B	8.87%	7.69%	7.20%	Yes	Yes	No	No	No	No
	Narcoossee Rd - Nova Rd	4LD	Principal Arterial	D	3,230	24,778	5.10%	32,366	0.076	0.57	3.45%	1,395	1,052	25	24	1,420	1,076	B	1.96%	0.77%	0.74%	No	No	No	No	No	No
	Nova Rd - Pine Grove Rd.	4LD	Principal Arterial	D	3,230	19,051	5.10%	27,803	0.085	0.52	0.51%	1,225	1,130	4	4	1,229	1,134	B	0.34%	0.12%	0.12%	No	No	No	No	No	No
	Pine Grove Rd. - Old Melbourne Hwy.	4LD	Principal Arterial	D	3,230	19,051	5.10%	27,803	0.085	0.52	11.53%	1,225	1,130	80	85	1,305	1,215	B	6.55%	2.48%	2.63%	No	No	No	No	No	No

Source: Orange County Traffic Count Program
Osceola County Traffic Count Program
FDOT Traffic Information
Design + Planning AECOM

Table 21-E.2

SUMMARY OF INTERSECTION LEVEL OF SERVICE, PHASE 1 (YEAR 2015)

Center Lake Ranch DRI

Intersection	Intersection Control	LOS Standard	EXISTING CONDITIONS					PHASE 1				
			APPROACH					APPROACH				
			OVERALL	EB	WB	NB	SB	OVERALL	EB	WB	NB	SB
CR 15/ SR 417 NB Ramps	Signal	LOS	B	D		B	B	C	D		B	C
		Delay (sec/veh)	16.9	37.1		15.7	10.2	27.8	54.1		18.8	24.5
		Queue Length (ft)		450		375	475		700		600	325
CR 15/ SR 417 SB Ramps	Signal	LOS	C		E	A	B	D		F	B	C
		Delay (sec/veh)	23.9		60.6	8.9	15.8	50.6		159.1	10.2	20.5
		Queue Length (ft)			725	50	75			1525	75	125
CR 15/ Jones Rd.	TWSC	LOS	E	E	D	A	A	F	F	F	B	B
		Delay (sec/veh)	37.6	37.6	30.3	9.5	8.5	197.6	180.9	197.6	11.1	10.2
		Queue Length (ft)							75	225		
CR 15/ Boggy Creek Rd.	Signal	LOS	A	D		A	A	B	D		B	A
		Delay (sec/veh)	7.9	39.4		4.7	5.8	17.2	42.3		20.0	7.7
		Queue Length (ft)		100		125	75		325		500	100
CR 15/ Ralph Miller Rd.	TWSC	LOS	D		D		A					
		Delay (sec/veh)	28.1		28.1		8.8					
		Queue Length (ft)										
CR 15/ Rummel Rd.	Signal	LOS	A	D		A	A					
		Delay (sec/veh)	7.6	36.6		4.3	4.6					
		Queue Length (ft)		175		25	50					
CR 15/ Rummel Rd./ Ralph Miller Rd.	Signal	LOS						C	F	C	B	C
		Delay (sec/veh)						26.0	85.4	27.0	13.3	23.0
		Queue Length (ft)							475	275	475	400
US 192/ Pine Grove Rd.	TWSC	LOS	E	A	A	E	C	E	B	A	E	E
		Delay (sec/veh)	36.7	9.0	8.7	36.7	16.5	35.9	10.3	9.3	35.9	35.4
		Queue Length (ft)							25		25	100
US 192/ Nova Rd.	TWSC	LOS	B	A			B	B	B			B
		Delay (sec/veh)	11.7	9.6			11.7	14.9	11.2			14.9
		Queue Length (ft)							50			50
US 192/ CR 15	Signal	LOS	C	C	C	C	D	F	F	D	C	F
		Delay (sec/veh)	31.6	28.7	29.8	31.8	40.1	88.1	94.2	40.5	34.1	139.7
		Queue Length (ft)		550	100	125	350		1400	175	125	1000
US 192/ Old Hickory Tree Rd.	Signal	LOS	B	B	B	D	C	B	B	B	D	C
		Delay (sec/veh)	13	10.6	11.3	35.4	33.1	15.4	13.0	13.8	36.5	33.3
		Queue Length (ft)		75	325	175	75		100	525	200	75
US 192/ Delaware Ave.	Signal	LOS	A	A	A	D	D	A	A	A	D	D
		Delay (sec/veh)	7.4	6.2	6.0	54.4	53.2	9.2	8.3	7.9	52.9	51.9
		Queue Length (ft)		250	225	100	50		425	375	100	50
US 192/ Michigan Ave. East	Signal	LOS	C	C	B	D	D	E	D	B	F	F
		Delay (sec/veh)	25.5	29.0	14.6	52.4	45	63.7	37.1	16.0	233.6	336.0
		Queue Length (ft)		725	375	375	200		1175	525	1150	800
US 192/ New York Ave.	Signal	LOS	B	A	A	D	D	B	B	A	D	D
		Delay (sec/veh)	10.7	9.1	8.1	49.8	50.2	11.9	10.5	9.4	50.8	51.2
		Queue Length (ft)		375	325	100	150		575	500	125	200
US 192/ Vermont Ave.	Signal	LOS	C	C	C	E	D	D	C	D	F	D
		Delay (sec/veh)	34	22.9	34.3	77.4	52	44.7	32.4	47.2	95.7	54.8
		Queue Length (ft)		800	525	425	300		1375	775	525	375
US 192/ Columbia Ave./ Budinger Ave.	Signal	LOS	C	B	B	D	D	C	C	C	D	D
		Delay (sec/veh)	21.5	19.2	20.0	40.4	52.8	25.8	22.8	26.5	41.0	53.8
		Queue Length (ft)		600	25	125	150		950	50	175	175
US 192/ Neptune Rd.	Signal	LOS	C	C	B	D	D	C	D	B	D	E
		Delay (sec/veh)	23.1	28.1	13.7	41.1	48.5	33.3	46.3	14.2	44.7	56.5
		Queue Length (ft)		100	300	100	125		125	400	450	250
US 192/ Kissimmee Park Rd.	Signal	LOS	D	C	C	E	E	D	E	C	E	E
		Delay (sec/veh)	37.2	32.8	26.1	58.4	60.9	50.9	59.8	29.8	60.9	63.6
		Queue Length (ft)		325.0	300.0	350.0	275		425	400	400	325
US 192/ Commerce Center Dr.	Signal	LOS	C	C	C	D	D	D	E	C	D	D
		Delay (sec/veh)	31.4	30.4	22.3	50.3	50.4	46.6	59.3	25.9	52.5	52.9
		Queue Length (ft)		300	200	325	325		425	250	350	350
US 192/ Partin Settlement Rd.	Signal	LOS	D	D	E	C	D	E	D	F	E	E
		Delay (sec/veh)	39.9	49.5	63.6	22.4	44.9	74.0	52.6	96.5	76.3	68.9
		Queue Length (ft)		250	525	200	525		375	800	375	675
US 192/ Boggy Creek Rd.	Signal	LOS	C	C	C	D	B	D	D	C	D	B
		Delay (sec/veh)	21.4	21.6	22.0	36.9	18.5	35.9	43.6	24.2	36.9	19.5
		Queue Length (ft)		650	25	0	375		1100	25	0	450
US 192/ Michigan Ave. North	Signal	LOS	E	D	E	E	E	F	E	E	E	F
		Delay (sec/veh)	60.1	54.4	58.4	58.5	75.1	102.3	71.9	77.6	61.7	202.6
		Queue Length (ft)		425	575	425	625		500	825	550	1300
US 192/ Orange Blossom Trail	Signal	LOS	E	E	E	E	F	F	F	E	E	F
		Delay (sec/veh)	69.6	70.3	56.9	59.4	88.5	160.2	145.8	65.1	71.7	292.2
		Queue Length (ft)		1,300	900	250	925		2050	1175	450	2375

Source: Design + Planning AECOM

Table 21-E.3

SUMMARY OF ROADWAY SEGMENT CAPACITY

CENTER LAKE DRI, PHASE 2 YEAR 2020

Roadway	Segment From - To	E+C # of Lanes	Roadway Classification	LOS Std.	Peak-Hour Svc. Vol. @ Std.	Existing Background AADT	Annual Growth Rate	2020 Background Volume	K- Factor	D- Factor	Project Distribution	PM Peak-Hour Directional Volumes							Project as % of Total Traffic	Project as % of Service Volume	Significant?		Adverse?		Sig. & Adv?	
												Background		Project		Total										
												NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	LOS			Peak	Off-pk	Peak	Off-pk	Peak	Off-pk
Boggy Creek Road	Central Florida Greenway - Osceola/Orange Co. Line	4LD	Urban Collector	E	1,860	20,530	4.37%	31,306	0.09	0.71	0.16%	2,006	811	2	3	2,008	814	C	0.18%	0.11%	No	No	Yes	No	No	No
CR15	SR528 - Lake Nona Club Road	4LD	Principal Arterial	E	1,860	27,787	9.13%	58,234	0.09	0.63	5.15%	1,943	3,298	71	91	2,014	3,389	F	3.00%	4.89%	3.82%	No	No	Yes	Yes	No	No
	Lake Nona Club Road - SR 417	4LD	Principal Arterial	E	1,860	21,801	3.22%	30,214	0.09	0.57	6.38%	1,205	1,589	88	113	1,293	1,702	C	6.71%	6.08%	4.73%	Yes	No	No	No	No	No
	SR 417 - Tyson Road/Lake Nona Road C	6LD	Principal Arterial	D	2,790	18,144	4.97%	28,961	0.09	0.52	17.37%	1,261	1,366	240	309	1,501	1,675	B	17.29%	11.08%	8.60%	Yes	Yes	No	No	No	No
	Tyson Road/Lake Nona Rd C - Lake Nona Rd E	6LD	Principal Arterial	D	2,790	16,857	11.23%	39,571	0.09	0.71	22.63%	2,639	1,080	313	402	2,952	1,482	D	16.12%	11.22%	14.41%	Yes	Yes	Yes	No	Yes	No
	Lake Nona Road E - Boggy Creek Rd East	6LD	Principal Arterial	D	2,790	16,857	11.23%	39,571	0.09	0.71	26.52%	2,639	1,080	367	471	3,006	1,551	F	18.39%	13.15%	16.88%	Yes	Yes	Yes	No	Yes	No
	Boggy Creek Rd E - Jones Rd	4LD	Principal Arterial	D	1,860	18,298	4.97%	29,203	0.09	0.66	30.30%	899	1,744	419	538	1,318	2,282	D	26.58%	28.92%	22.53%	Yes	Yes	Yes	No	Yes	No
	Jones Rd - Rummel Rd	4LD	Principal Arterial	D	3,230	19,364	4.50%	29,824	0.09	0.57	29.26%	1,154	1,530	405	520	1,559	2,050	C	25.63%	16.10%	12.54%	Yes	Yes	No	No	No	No
	Rummel Rd - 10th St	4LD	Principal Arterial	D	1,860	16,192	4.30%	24,552	0.09	0.55	17.76%	994	1,215	316	246	1,310	1,461	B	20.28%	13.23%	16.99%	Yes	Yes	No	No	No	No
	10th St - US 192-441	4LD	Principal Arterial	D	1,860	16,109	5.52%	26,787	0.09	0.53	14.38%	1,133	1,278	255	199	1,388	1,477	B	15.85%	10.70%	13.71%	Yes	Yes	No	No	No	No
Lakeshore Blvd	Fortune Rd - Partin Settlement Rd	2U	Urban Collector	D	760	8,482	3.07%	11,608	0.09	0.59	1.17%	428	616	16	21	444	637	D	3.42%	2.76%	2.11%	No	No	No	No	No	No
	Partin Settlement Rd. - Brown Chapel Rd.	2U	Urban Collector	D	760	11,760	4.18%	18,157	0.10	0.70	2.77%	1,282	550	38	49	1,320	599	F	4.53%	5.00%	6.45%	Yes	Yes	Yes	No	Yes	No
	Brown Chapel Rd. - Montana Ave.	2U	Urban Collector	D	760	7,981	2.12%	10,348	0.09	0.63	1.86%	614	361	33	26	647	387	D	5.71%	4.34%	3.42%	No	No	No	No	No	No
	Montana Ave. - Vermont Ave.	2U	Urban Collector	D	760	7,981	3.05%	11,392	0.09	0.63	2.06%	676	397	37	28	713	425	D	5.71%	4.87%	3.68%	No	No	No	No	No	No
	Vermont Ave. - Massachusetts Ave.	2U	Urban Collector	D	760	7,981	2.63%	10,919	0.09	0.63	2.49%	648	381	44	34	692	415	D	7.05%	5.79%	4.47%	Yes	No	No	No	No	No
	Massachusetts Ave. - Michigan Ave.	2U	Urban Collector	D	760	7,981	2.63%	10,919	0.09	0.63	2.65%	648	381	47	37	695	418	D	7.55%	6.18%	4.87%	Yes	No	No	No	No	No
	Michigan Ave. - Mississippi Ave.	2U	Urban Collector	D	760	7,981	2.63%	10,919	0.09	0.63	4.39%	648	381	78	61	726	442	D	11.91%	10.26%	8.03%	Yes	Yes	No	No	No	No
Nova Rd	US192 - Pine Grove Rd.	2U	Minor Arterial	D	1,130	5,090	6.76%	9,563	0.09	0.61	13.39%	525	336	238	185	763	521	C	32.95%	21.06%	16.37%	Yes	Yes	No	No	No	No
	Pine Grove Rd. - Orange County Line	2U	Minor Arterial	D	730	976	2.00%	1,210	0.10	0.60	2.69%	49	74	37	48	86	122	A	40.93%	6.58%	5.07%	Yes	Yes	No	No	No	No
Jones Road	Narcoossee Rd. - Site Access	2U	Urban Collector	D	530	1,168	2.00%	1,448	0.11	0.57	13.85%	90	68	246	192	336	260	D	73.60%	45.42%	36.23%	Yes	Yes	No	No	No	No
Hickory Tree Road	US 192 to Deer Run Road	2U	Urban Collector	D	1,120	4,955	4.89%	7,860	0.09	0.60	3.28%	285	427	58	45	343	472	C	12.65%	4.02%	5.18%	No	Yes	No	No	No	No
Rummel Road	Mississippi Ave - Narcoossee Rd	2U	Urban Collector	D	760	4,549	6.72%	8,522	0.13	0.55	7.44%	586	479	132	103	718	582	D	18.07%	17.37%	13.55%	Yes	Yes	No	No	No	No
US192	Bermuda Ave. - OBT	6LD	Principal Arterial	D	2,570	52,567	2.49%	69,574	0.070	0.53	2.23%	2,589	2,296	40	31	2,629	2,327	F	1.43%	1.56%	1.21%	No	No	Yes	No	No	No
	OBT - Michigan Ave.	6LD	Principal Arterial	D	2,790	48,178	3.95%	72,908	0.068	0.58	3.32%	2,859	2,070	59	46	2,918	2,116	F	2.09%	2.11%	1.65%	No	No	Yes	No	No	No
	Michigan Ave - Boggy Creek Rd	6LD	Principal Arterial	D	2,790	60,221	4.13%	90,094	0.079	0.54	3.41%	3,829	3,262	61	47	3,890	3,309	F	1.50%	2.19%	1.68%	No	No	Yes	Yes	No	No
	Boggy Creek Rd - Shady Ln	6LD	Principal Arterial	D	2,790	52,824	5.49%	87,618	0.070	0.53	4.90%	3,265	2,895	87	68	3,352	2,963	F	2.45%	3.12%	2.44%	No	No	Yes	Yes	No	No
	Shady Ln - Commerce Center Dr	4LD	Principal Arterial	D	1,860	45,198	4.33%	70,616	0.073	0.51	6.52%	2,622	2,519	116	90	2,738	2,609	F	3.85%	6.24%	4.84%	Yes	No	Yes	Yes	Yes	No
	Commerce Center Dr - Columbia/Budinger	4LD	Principal Arterial	D	1,860	48,985	4.33%	78,652	0.075	0.57	9.03%	2,530	3,353	161	125	2,691	3,478	F	4.64%	6.72%	8.66%	Yes	Yes	Yes	Yes	Yes	Yes
	Columbia/Budinger - Mississippi Ave	6LD	Principal Arterial	D	2,790	42,618	5.37%	72,396	0.075	0.57	13.56%	3,087	2,329	241	188	3,328	2,517	F	7.34%	8.64%	6.74%	Yes	Yes	Yes	No	Yes	No
	Mississippi Ave - Narcoossee Rd	4LD	Principal Arterial	D	1,860	29,347	8.07%	57,778	0.075	0.52	19.48%	2,250	2,077	346	269	2,596	2,346	B	12.44%	18.60%	14.46%	Yes	Yes	Yes	Yes	Yes	Yes
	Narcoossee Rd - Nova Rd	4LD	Principal Arterial	D	3,230	24,778	5.14%	38,800	0.076	0.57	13.83%	1,672	1,261	246	191	1,918	1,452	C	12.97%	7.62%	5.91%	Yes	Yes	No	No	No	No
	Nova Rd - Pine Grove Rd	4LD	Principal Arterial	D	3,230	19,051	8.80%	42,520	0.085	0.52	0.42%	1,873	1,729	6	8	1,879	1,737	C	0.39%	0.19%	0.25%	No	No	No	No	No	No
	Pine Grove Rd. - Old Melbourne Hwy.	4LD	Principal Arterial	D	3,230	19,051	6.07%	35,247	0.085	0.52	5.46%	1,552	1,433	75	97	1,627	1,530	B	5.45%	2.32%	3.00%	No	No	No	No	No	No

Source: Orange County Traffic Count Program
Osceola County Traffic Count Program
FDOT Traffic Information
Design + Planning AECOM

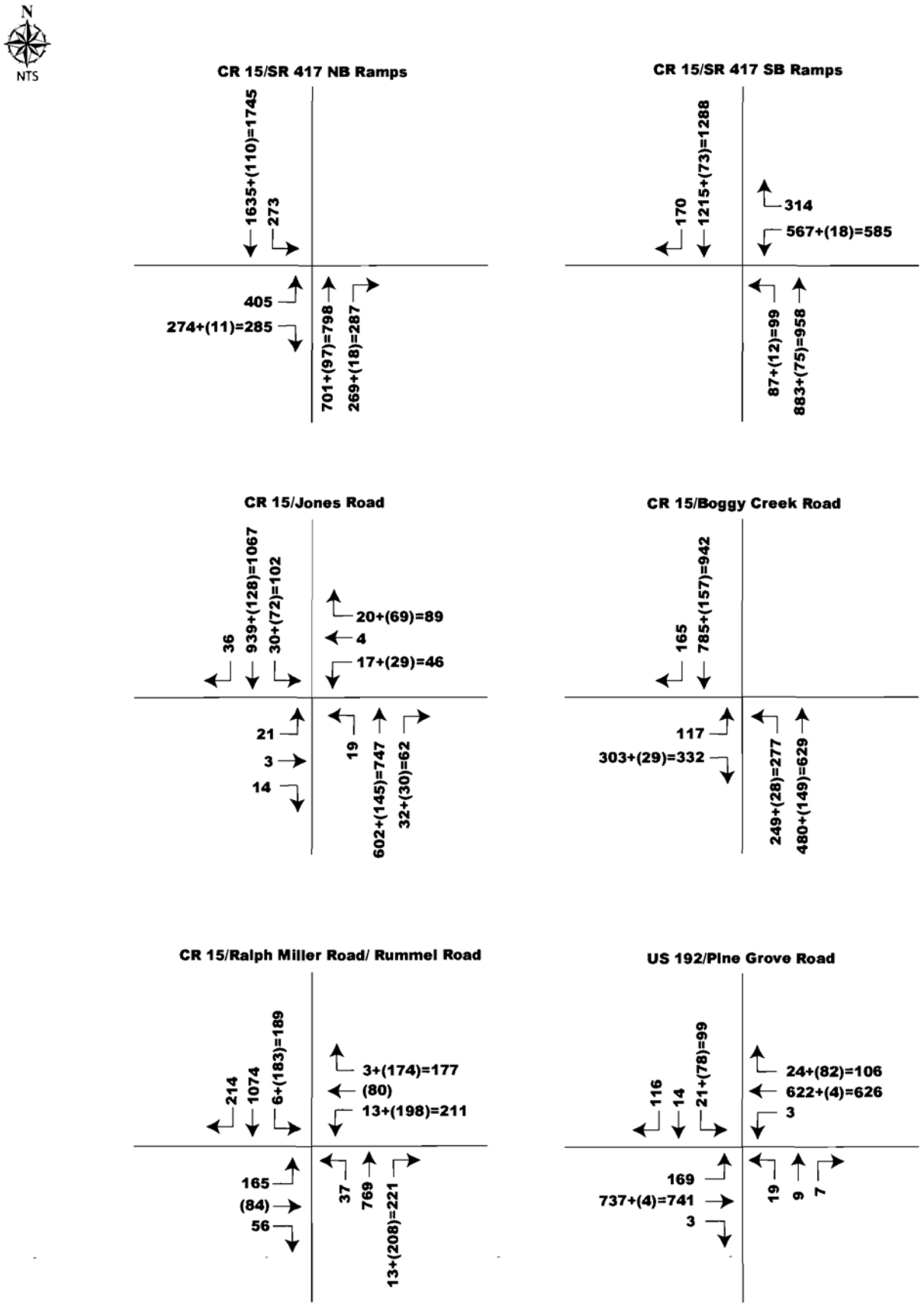


Exhibit 21.E-1

Intersection Turning Movments Counts, Phase 1, 2015

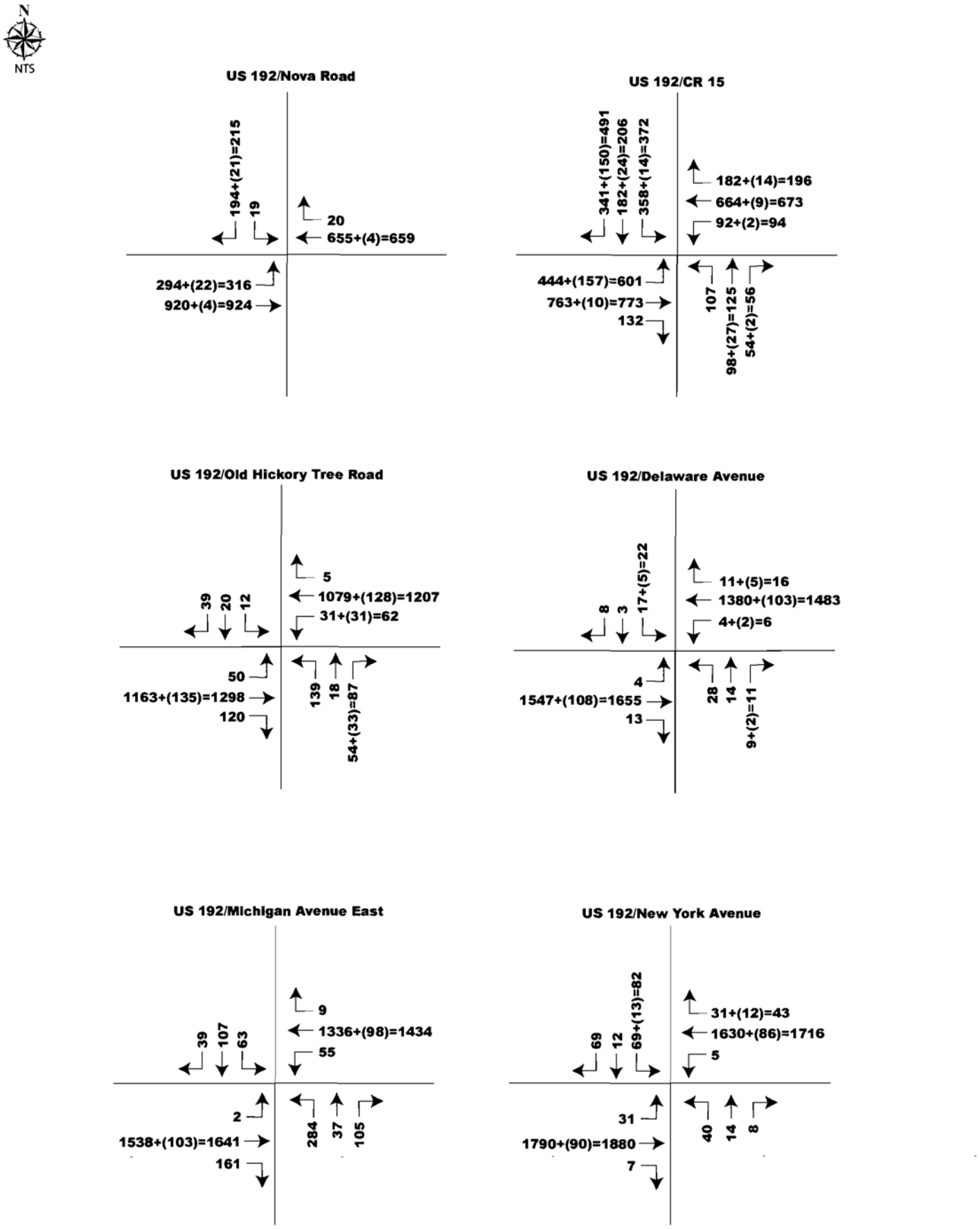
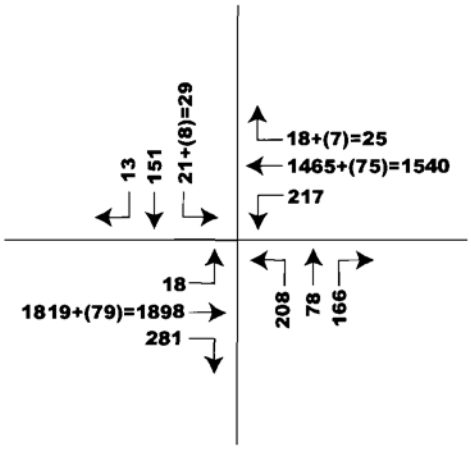


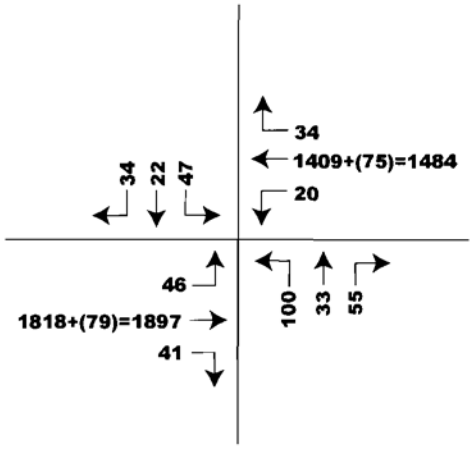
Exhibit 21.E-1A

Intersection Turning Movments Counts, Phase 1, 2015

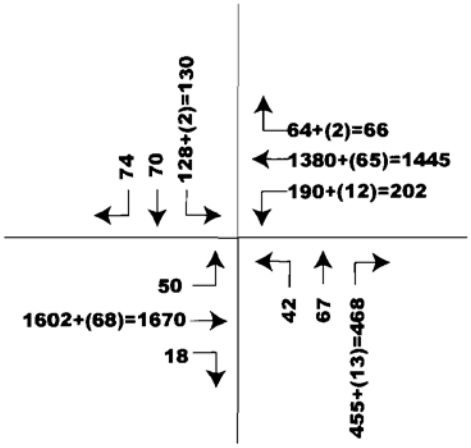
US 192/Vermont Avenue



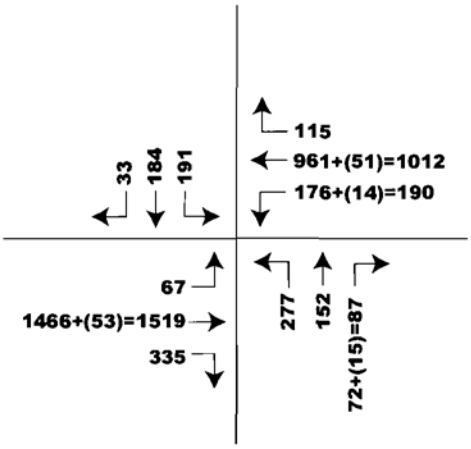
US 192/Columbia Avenue/Budinger Avenue



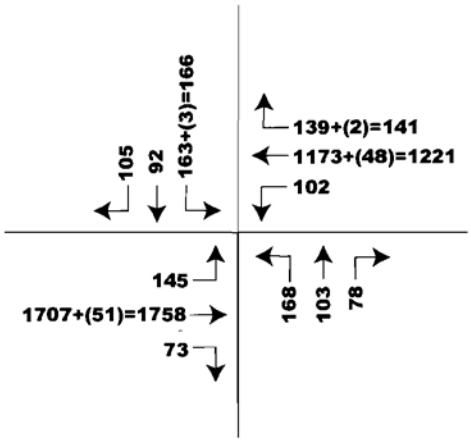
US 192/Neptune Road



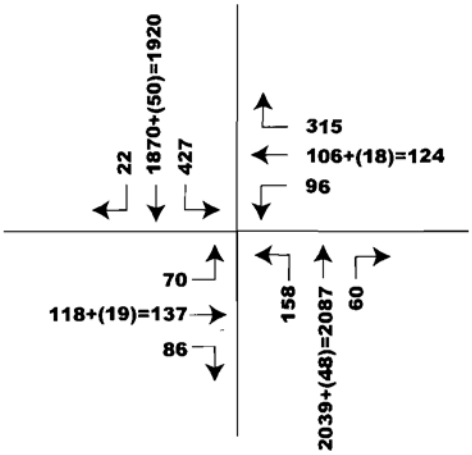
US 192/Kissimmee Park Road



US 192/Commerce Center Drive



US 192/Partin Settlement Road



LEGEND

xx(xx)=xx

- Total Traffic
- Project
- Background

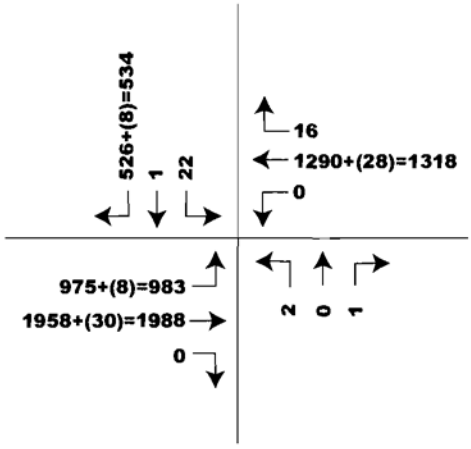
Exhibit 21.E-1B

Intersection Turning Movments Counts, Phase 1, 2015

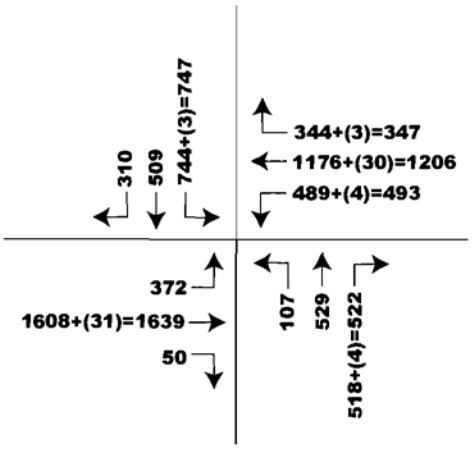
N

NTS

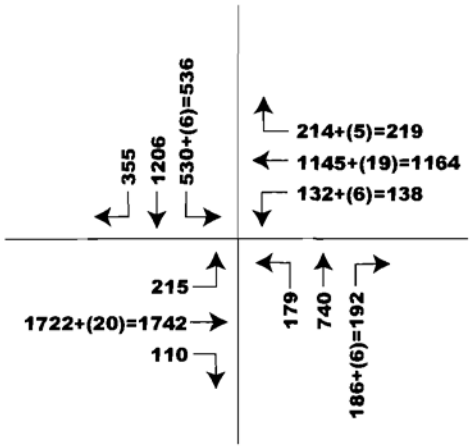
US 192/Boggy Creek Road



US 192/Michigan Avenue North



US 192/Orange Blossom Trail



LEGEND

xx(xx)=xx

- Total Traffic
- Project
- Background

Exhibit 21.E-1C

Intersection Turning Movments Counts, Phase 1, 2015

This evaluation projected significant and adverse impacts on the following roadway facilities:

Phase 1 (Year 2015)

Roadway Facilities:
None

Phase 2 (Year 2020)

Roadway Facilities:

- CR 15 from Tyson Road to Lake Nona Road E
- CR 15 from Lake Nona Road E to Boggy Creek Road East
- CR 15 from Boggy Creek Road East to Jones Road
- Lakeshore Blvd. from Partin Settlement Rd. to Brown Chapel Rd.
- US 192 from Commerce Center Drive to Columbia/Budinger
- US 192 from Columbia/Budinger to Mississippi Avenue

The following intersections within the study area for Phase 1 were shown to operate below the adopted level of service and had project traffic that is significant.

Phase 1 (Year 2015)

Intersections:

- CR 15/ Jones Road
- CR 15/ Ralph Miller Road/ Rummel Road
- US 192/ Pine Grove Road
- US 192/ CR 15
- US 192/ Kissimmee Park Road

F. **Based on the assignment of trips 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 facilities where project traffic is projected to be both significant and adverse, appropriate mitigation has been identified consistent with the adequate facilities provisions of the Osceola County Comprehensive Plan, the Osceola County Land Development Regulations, and the Florida Statutes.

There are no roadway segment improvements needed for Phase 1. A summary of project significance at intersections that operate below the adopted level of service is shown in ***Table 21-F.1***. Project significance is calculated for each lane group that is adverse. Of the thirteen intersections that operate at an adverse level of service in Phase 1, project traffic is significant at five of these locations. Intersection improvements needed in Year 2015 for locations where project trips are significant are shown in ***Table 21-F.2***.

An improvement need has been identified for the intersection of US 192 at Kissimmee Park Road which would add a second westbound left turn lane. This results in acceptable levels of service at the US 192/Kissimmee Park Road intersection and the Center Lake DRI is no longer significant at the US 192/Kissimmee Park Road intersection.

Needed improvements in Year 2020 are shown in ***Table 21-F.3*** (Roadway Facilities). Also shown are the projected LOS, improved LOS, and significance of trips with one end in the Center Lake Ranch development.

Based on the adequate facilities provision of the adopted Transportation Uniform Standard Rule (9J-2.045), projected significant and adverse impacts must be mitigated. According to the above, the Center Lake Ranch traffic impacts are considered significant and adverse on those roadway facilities where:

- Trips with one end in the Center Lake Ranch development are projected to equal or exceed five percent (5%) of the adopted peak-hour directional service volume (i.e., "significant"); and

- The projected level of service is below the acceptable standard established by the comprehensive plan for the jurisdiction in which the roadway facility is located (i.e., "adverse").

Table 21-F.1

SUMMARY OF INTERSECTION SIGNIFICANCE

Center Lake Ranch DRI

Intersection	Adverse Approach	Lane Group Capacity		Proj. Trips	Significance (Proj. Trips/LOS Cap.)	Project Significant?
		LOS E	LOS D*			
Narcoossee Road/Jones Road	EBLTR	57	39	0	0.0%	No
	WBLTR	133	91	98	**107.2%**	**Yes**
Narcoossee Road/ Ralph Miller/ Rummel Road	EBLT	273	188	84	**44.8%**	**Yes**
	SBL	207	142	183	**128.6%**	**Yes**
US 192/ Pine Grove	NBLTR	152	105	0	0.0%	No
	SBLT	175	120	78	**64.8%**	**Yes**
US 192/ Narcoossee Road	EBL	520	358	157	**43.9%**	**Yes**
	SBL	390	268	14	**5.2%**	**Yes**
	SBR	246	169	150	**88.7%**	**Yes**
US 192/ Kissimmee Park Road	EBL	202	139	0	0.0%	No
	EBT	1,548	1,064	53	4.98%	No
	WBL	274	188	14	**7.4%**	**Yes**
	NBL	255	175	0	0.0%	No
	NBLT	502	345	0	0.0%	No
	SBL	217	149	0	0.0%	No
	SBLTR	425	292	0	0.0%	No

* LOS D capacity calculated (LOS E capcity * 0.6875) for intersections in Osceola County

Source: Design + Planning AECOM

Table 21-F.2

SUMMARY OF INTERSECTION IMPROVEMENTS, PHASE 1

Center Lake Ranch DRI

Intersection	Intersection Control	LOS Standard	Phase 1					PHASE 1 (Improved)					Improvement*
			APPROACH					APPROACH					
			OVERALL	EB	WB	NB	SB	OVERALL	EB	WB	NB	SB	
CR 15/ Jones Rd.	TWSC	LOS	F	F	F	B	B	A	D	D	A	A	Signalize when warranted
		Delay (sec/veh)	197.6	180.9	197.6	11.1	10.2	8.4	37.5	44.1	4.4	6.4	
		Queue Length (ft)		75	225				50	200	250	450	
CR 15/ Rummel Rd./ Ralph Miller Rd.	Signal	LOS	C	F	C	B	C	B	D	D	A	B	Changed to EBL and EBRT; Signal and Phasing
		Delay (sec/veh)	26	85.4	27.0	13.3	23	16.8	38.6	42.8	8.5	10.3	
		Queue Length (ft)		475	275	475	400		275	375	400	250	
US 192/ Pine Grove Rd.	TWSC	LOS	E	B	A	E	E	C	C	C	C	C	Signalize when warranted
		Delay (sec/veh)	35.9	10.3	9.3		35.4	25.5	25.4	22.8	31.3	33.7	
		Queue Length (ft)		25	0		100		225	100	50	150	
US 192/ CR 15	Signal	LOS	F	F	D	C	F	C	C	D	C	D	Add EBL and a receiving lane
		Delay (sec/veh)	88.1	94.2	40.5	34.1	139.7	34.9	30.3	38.0	31.9	39.9	
		Queue Length (ft)		1,400	175	125	1,000		450	150	125	500	
US 192/ Kissimmee Park Rd.	Signal	LOS	D	E	C	E	E	D	E	C	E	E	Add WBL
		Delay (sec/veh)	50.9	59.8	29.8	60.9	63.6	50.0	59.1	27.9	60.9	63.6	
		Queue Length (ft)		425	400	400	325		425	200	400	325	

* Any geometric improvements assume optimization of timing and phasing
** 95% queue length
Source: Design + Planning AECOM

Table 21-F.3

SUMMARY OF ROADWAY IMPACTS

CENTER LAKE DRI, PHASE 2 (YEAR 2020)

Roadway	Segment From - To	E+C # of Lanes	Length (miles)	Peak-Hour Svc. Vol. @ Std.	Total PM PHPD Traffic	DRI PM PHPD Traffic	Project as % of Service Volume	Improvement	Improved Service Volume	Service Volume Increase	Project as % of Improved Service Volume	Improved LOS
CR 15	Tyson Road/Lake Nona Rd C - Lake Nona Rd E	6LD	1.05	2,790	2,952	313	11.22%	Eight lane equivalent	3,540	750	8.84%	B
	Lake Nona Road E - Boggy Creek Rd East	6LD	1.25	2,790	3,006	367	13.15%	Eight lane equivalent	3,540	750	10.37%	B
	Boggy Creek Rd E - Jones Rd	4LD	3.71	1,860	2,282	419	22.53%	Widen to six lanes	2,790	930	15.02%	B
Lakeshore Blvd.	Partin Settlement Rd. - Brown Chapel Rd.	2U	1.08	760	1,320	38	5.00%	Widen to four lanes	1,620	860	2.35%	D
US 192	Shady Ln - Commerce Center Dr	4LD	2.89	1,860	2,738	116	6.24%	Widen to six lanes	2,790	930	4.16%	D
	Commerce Center Dr - Columbia/Budinger	4LD	1.23	1,860	3,478	161	8.66%	Eight lane equivalent	3,540	1,680	4.55%	C
	Columbia/Budinger - Mississippi Ave	6LD	1.97	2,790	3,328	241	8.64%	Eight lane equivalent	3,540	750	6.81%	C

Source: Design + Planning AECOM

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.

Planned access for the Center Lake Ranch development site will be accommodated via Jones Road, Starline Drive, CR15 via Ralph Miller Road and Nova Road. (See Map H). Within the site, the proposed network will connect residential areas with non-residential areas. This network will, therefore, minimize the traffic impacts of this development on the external road network.

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 interlocal agreements, right-of-way dedication, building setbacks, etc.

The existing corridors (i.e., US 192, Florida's Turnpike, SR 417 and SR 528) will be protected by the requirements of the Land Development Regulations. The DRI transportation improvement program will be consistent with the Osceola County Comprehensive Plan throughout its buildout process.

The extension of a collector level road (Ralph Miller Road) through the site to an intersection with Nova Road will, in conjunction with Rummel Road west of Narcoossee Road, create a new parallel alternate route to US 192. This will enhance route choice for many travelers and help to minimize the growth of traffic for local trips using US 192.

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.**

Provisions will be made for the movement of people by means other than private automobile consistent with applicable local codes, at a minimum. The site planning and internal design of the project will endeavor to provide safe and convenient pedestrian/bicycle access ways as well as transit provisions. The site plan will include trails, bike ways and paths connecting residential uses with non-residential uses, in a design form consistent with traditional neighborhood principles.

Provisions for public transportation service will be incorporated into the final site plans based on the requirements, standards, and approved by Osceola County.

PART IV

Transportation Resource Impacts

Question 22 - Air

Page 56 – (Insert Pages 1 thru 35)

PART 5 – Transportation Resource Impacts

Question 22 – Environmental and Natural Resources: Air

A. Document the steps which will be taken to contain fugitive dust during site preparation and construction of the project. If site preparation includes demolition activities, provide a copy of any notice of demolition sent to the Florida Department of Environmental Regulation (FDER) as required by the National Emission Standards for Asbestos, 40 CFR Part 61, Subpart M.

Construction dust is generally composed of fairly coarse particles that settle out quickly and near the point of release. Nevertheless, where excess dust is likely to become a problem, effective dust control measures will be implemented according to the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction (2007). Specified measures include: 1) minimization of exposed erodible earth area to the extent possible; 2) stabilization of exposed earth with grass, mulch, pavement or other cover as early as possible; 3) periodic sweeping, or application of water or stabilizing agents to the working or hauling areas; 4) covering, shielding or stabilizing of stockpiled materials as necessary; and 5) the use of covered haul trucks.

If demolition is proposed as a part of construction, a notice of demolition will be sent to the Florida Department of Environmental Protection (FDEP), as outlined in Chapter 62-257 of the Florida Administrative Code (FAC).

Should open burning of land clearing debris become necessary, it will be conducted in such a manner as to minimize unconfined emissions and meet all local and state requirements. Open burning of wastes, where necessary, will be conducted in accordance with Chapter 62-256 of the FAC.

B. Specify structural or operational measures that will be implemented by the development to minimize air quality impacts (e.g., road widening and other traffic flow improvements on existing roadways, etc.). Any roadway improvements identified here should be consistent with those utilized in Question 21, Transportation.

Please refer to the response to Question 21 for planned roadway improvements. None of the proposed land uses include industries that qualify as a stationary source.

C. Complete Exhibit 22-1 for all substantially impacted intersections within the study area, as defined in Map J, and all parking facilities associated with the project. Using the guidance supplied or approved by the Florida Department of Environmental Regulation, determine if detailed air quality modeling for carbon monoxide (CO) is to be completed for any of the facilities listed in the table.

(1) Specify source type as either intersection, surface parking area, or parking deck. For each intersection provide an approach volume for each link. For each parking facility provide the total (incoming and outgoing) volume.

(2) These should be compatible with maximum service volumes utilized in Question 21, Transportation.

Exhibit 22-1 is attached for your review. Intersections shown include maximum peak traffic approach volumes.

D. **If detailed modeling is required, estimate the worst case one-hour and eight-hour CO concentrations expected for each phase through buildout for comparison with the state and federal ambient air quality standards. Utilize methodology supplied or approved by the Florida Department of Environmental Regulation for making such estimates. Submit all air quality modeling input and output data along with associated calculations to support the modeling and explain any deviations from guidance. Provide drawings of site geometry and coordinate information for each area modeled. Show the location of the sources and receptor sites. Modeling assumptions should consider federal, state, and local government programmed link and intersection improvements with respect to project phasing. Any roadway improvements utilized in the model should be consistent with those used in Question 21, Transportation. Provide verification of any assumptions in the modeling which consider such programmed improvements. It is recommended that air quality analyses be completed concurrently and in conjunction with the traffic analyses for the project.**

Federal and state laws and regulations, such as the Clean Air Act (CAA), require that project-level air quality analyses of roadway and Development of Regional Impact (DRI) level projects be conducted to ensure that no violations of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO) will occur. Indirect sources (such as DRIs) may attach enough traffic volume to contribute to localized concentrations of CO in excess of NAAQS. CO screening tests are a useful tool to demonstrate compliance with NAAQS.

The Florida Department of Environmental Protection (FDEP) has published Guidelines for Evaluating the Air Quality Impacts of Indirect Sources (Guidelines, DRAFT June 2002, updated December 20, 2004). These guidelines require that a screening analysis be conducted if projected traffic levels, compared to the no-build alternative, result in the 1) degradation of peak-hour level of service (LOS) for any roadway or intersection to category E or F in any future year, or 2) five percent (5%) or larger increase in peak-hour traffic volume on any future category E or F roadway or intersection while not actually degrading the LOS.

As indicated in the response to **Question 21** — Transportation, traffic analyses for the Center Lake Ranch project site include an evaluation of roadway segments and/or intersections where the project contributes greater than five percent or more of the adopted peak-hour/peak direction LOS volume. A total of four (4) intersections were evaluated because they were on roadway segments where traffic, projected to occur as a result of the development on the Center Lake Ranch project site, would be significant.

All of the four (4) intersections evaluated, are projected for LOS degradation to a level of E or F in either the A.M. and/or P.M. peak hour in the Year 2015 build scenario. These intersections are as follows:

- CR 15 and Jones Road
- US 192 and Pine Grove Road
- US 192 and Michigan Avenue North
- US 192 and Orange Blossom Trail

The Florida Department of Transportation (FDOT) CO Florida 2004 Update to Windows was utilized to accomplish these air quality-screening efforts. The modeling is done directly by United States Environmental Protection Agency (EPA) approved models MOBILE5a and CAL3QHC2 models that are embedded within CO Florida 2004, and which use mostly pre-set FDOT-approved values for many of the input parameters.

The CO Florida 2004 Screening Model requires that receptors be input as a part of the screening process. For each intersection type, CO Florida 2004 assumes a certain number of default receptors based on their distances of internal parameters and right-of-way distances as detailed in **Exhibit 22-2**.

The results of the CO Florida 2004 model show the maximum predicted one hour and eight hour CO concentration for each intersection in the build scenario (Year 2015), including the predicted background concentration. Summary sheets that document the inputs and predictions are included in **Exhibit 22-2.**

The predicted total one hour CO concentrations at the four (4) intersections modeled (**Exhibit 22-2**) ranges from 5.4 parts per million (ppm) to 9.1 ppm. The highest one hour concentration was predicted to occur at the intersection of US 192 and Michigan Ave North. None of these intersections are predicted to exceed the national one hour standard of 35 ppm.

The predicted total eight hour CO concentrations at the ten (10) intersections modeled ranges from 3.3 ppm to 5.5 ppm. The highest eight hour concentration was also predicted to occur at both the intersection of US 192 and Michigan Ave North and US 192 and Orange Blossom Trail. None of the intersections are predicted to exceed the national eight hour standard of 9 ppm

Both the one hour and eight hour predicted concentrations are within the national standards. Consequently, the traffic volumes forecasted to occur as a result of this project would not compromise national standards in air quality as predicted by the CO Florida Screening Model.

E. **If initial detailed modeling shows projected exceedance(s) of ambient air quality standards, identify appropriate mitigation measures and provide assurances that appropriate mitigating measures will be employed so as to maintain compliance with air quality standards. Submit further modeling demonstrating the adequacy of such measures.**

No detailed modeling is required for the Center Lake Ranch DRI for Phase 1. Therefore, no mitigation measures are anticipated to be required.

Exhibit 22-1

Intersection Analysis, Existing Conditions

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 02 Narcoossee-Jones 08PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2008
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: Jones Road
North/South Street: Narcoossee Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	423	19	36	728	24
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Hourly Flow Rate, HFR	5	440	19	37	758	25
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	14	2	23	14	4	6
Peak Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Hourly Flow Rate, HFR	14	2	23	14	4	6
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	5	37		39			24	
C(m) (vph)	844	1113		239			154	
v/c	0.01	0.03		0.16			0.16	
95% queue length	0.02	0.10		0.57			0.54	
Control Delay	9.3	8.3		23.0			32.6	
LOS	A	A		C			D	
Approach Delay				23.0			32.6	
Approach LOS				C			D	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 8/9/2008
Analysis Time Period: PM peak
Intersection: Narcoossee-RalphMiller 08PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2008
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: Ralph Miller Road
North/South Street: Narcoossee Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		581	9	5	793	
Peak-Hour Factor, PHF		0.92	0.92	0.92	0.92	
Hourly Flow Rate, HFR		631	9	5	861	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	7		3			
Peak Hour Factor, PHF	0.92		0.92			
Hourly Flow Rate, HFR	7		3			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		5		10				
C(m) (vph)		954		170				
v/c		0.01		0.06				
95% queue length		0.02		0.19				
Control Delay		8.8		27.5				
LOS		A		D				
Approach Delay				27.5				
Approach LOS				D				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 06 US192-PineGrove 08PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2008
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: US 192
North/South Street: Pine Grove Road
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	121	542	46	8	350	16
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	134	602	51	8	388	17
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						No
Lanes	1	1	0	0	1	1
Configuration	L	TR		LT	R	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	15	12	5	21	6	57
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	16	13	5	23	6	63
Percent Heavy Vehicles	0	0	0	21	0	3
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	1	1	0
Configuration		LTR		L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	LT		LTR		L		TR
v (vph)	134	8		34		23		69
C(m) (vph)	1165	943		233		198		570
v/c	0.12	0.01		0.15		0.12		0.12
95% queue length	0.39	0.03		0.50		0.39		0.41
Control Delay	8.5	8.9		23.1		25.6		12.2
LOS	A	A		C		D		B
Approach Delay				23.1			15.5	
Approach LOS				C			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 07 US192-Nova 08PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2008
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: US 192
North/South Street: Nova Road
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	225	700			396	22
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	236	736			416	23
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Raised curb			/ 2		
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				4		89
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				4		93
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	236						97	
C(m) (vph)	1132						773	
v/c	0.21						0.13	
95% queue length	0.78						0.43	
Control Delay	9.0						10.3	
LOS	A						B	
Approach Delay							10.3	
Approach LOS							B	

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 08 US192-CR15 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: CR 15 (Narcoossee Road)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	1	1	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	459	584	112	82	459	104	93	88	50	277	140	273
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			11			10			5			54

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru		A	A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru			A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		17.0	7.0	30.0				9.0	16.0		
Yellow		3.0	3.0	4.0				3.0	4.0		
All Red		0.0	0.0	2.0				0.0	2.0		

Cycle Length: 100.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	482	1787	0.97	0.27	69.6	E		
T	1419	3547	0.42	0.40	21.8	C	41.4	D
R	470	1568	0.22	0.30	26.5	C		
Westbound								
L	301	1770	0.28	0.17	36.7	D		
T	1064	3547	0.44	0.30	28.5	C	29.3	C
R	449	1495	0.21	0.30	26.4	C		
Northbound								
L	349	1805	0.27	0.31	25.8	C		
T	301	1881	0.30	0.16	37.6	D	32.6	C
R	248	1553	0.19	0.16	36.7	D		
Southbound								
L	395	1805	0.72	0.31	37.5	D		
T	304	1900	0.47	0.16	39.3	D	48.1	D
R	256	1599	0.87	0.16	67.2	E		

Intersection Delay = 39.3 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 15 US192-Neptune 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: Neptune Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	1	1	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	22	1263	12	142	1168	47	25	20	228	62	26	33
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			2			7			61			21

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left		A		
	Thru			A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru		A	A			Thru	A	A		
	Right		A	A			Right	A	A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		7.0	12.0	62.0				11.0	18.0		
Yellow		3.0	4.0	4.0				3.0	3.0		
All Red		0.0	0.0	2.0				0.0	1.0		

Cycle Length: 130.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	97	1805	0.24	0.05	60.2	E		
T	1675	3512	0.79	0.48	31.0	C	31.4	C
R	770	1615	0.01	0.48	17.9	B		
Westbound								
L	302	1787	0.49	0.17	50.2	D		
T	2067	3445	0.59	0.60	16.5	B	19.9	B
R	950	1583	0.04	0.60	10.7	B		
Northbound								
L	187	1351	0.14	0.14	49.5	D		
T	263	1900	0.08	0.14	48.9	D	65.4	E
R	224	1615	0.78	0.14	69.8	E		
Southbound								
L	378	1805	0.17	0.25	37.8	D		
T	468	1900	0.06	0.25	37.5	D	37.6	D
R	386	1568	0.03	0.25	37.3	D		

Intersection Delay = 28.8 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 16 US192-KissPark 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: Kissimmee Park Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	2	0	2	1	0
LGConfig	L	T	R	L	T	R	L	LTR		L	TR	
Volume	64	1347	283	127	860	86	265	125	57	165	136	25
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			28			9			6			3

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left		A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru	A			
	Right		A				Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		15.0	63.0					15.0	18.0		
Yellow		3.0	4.0					3.5	3.5		
All Red		1.0	2.0					1.0	1.0		

Cycle Length: 130.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	208	1805	0.32	0.12	53.7	D		
T	1736	3582	0.81	0.48	31.3	C	30.6	C
R	767	1583	0.35	0.48	21.0	C		
Westbound								
L	204	1770	0.65	0.12	61.9	E		
T	1719	3547	0.52	0.48	23.4	C	27.6	C
R	775	1599	0.10	0.48	18.2	B		
Northbound								
L	247	1787	0.72	0.14	63.7	E		
LTR	477	3443	0.59	0.14	54.4	D	58.0	E
Southbound								
L	401	3471	0.43	0.12	54.3	D		
TR	213	1850	0.77	0.12	72.1	E	63.0	E

Intersection Delay = 36.2 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/208
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 17 US192-CommerceCtr 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: Commerce Center Drive

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	115	1341	65	76	889	80	105	80	74	145	48	60
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			13			19			5			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		12.0	68.0					12.0	25.0		
Yellow		4.0	4.0					3.0	4.0		
All Red		1.0	2.0					0.0	1.0		

Cycle Length: 136.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	158	1787	0.76	0.09	79.7	E		
T	1791	3582	0.78	0.50	30.2	C	33.5	C
R	808	1615	0.07	0.50	17.6	B		
Westbound								
L	159	1805	0.50	0.09	61.6	E		
T	1756	3512	0.53	0.50	23.4	C	25.9	C
R	808	1615	0.08	0.50	17.7	B		
Northbound								
L	377	1805	0.29	0.31	35.2	D		
TR	325	1768	0.48	0.18	50.8	D	44.3	D
Southbound								
L	339	1805	0.45	0.31	36.8	D		
TR	321	1745	0.34	0.18	49.0	D	42.0	D

Intersection Delay = 32.5 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/7/2008
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 18 US192-NMichigan 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: Michigan North/Oak

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	1	2	1	2	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	439	1538	54	427	957	165	93	516	408	514	332	167
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			30			0			204			66

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	21.0	53.0				21.0	43.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	2.0				1.0	2.0		

Cycle Length: 160.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	456	3471	1.08	0.13	135.2	F		
T	1697	5124	1.02	0.33	80.0+	F	91.6	F
R	535	1615	0.05	0.33	36.4	D		
Westbound								
L	460	3505	1.04	0.13	123.2	F		
T	1665	5025	0.65	0.33	46.4	D	67.1	E
R	486	1468	0.38	0.33	41.4	D		
Northbound								
L	237	1805	0.44	0.13	65.4	E		
T	972	3618	0.60	0.27	52.0	D	53.3	D
R	430	1599	0.53	0.27	51.2	D		
Southbound								
L	460	3505	1.26	0.13	201.7	F		
T	511	1900	0.73	0.27	58.5	E	135.0	F
R	430	1599	0.26	0.27	46.4	D		

Intersection Delay = 86.3 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 19 US192-OBT 08PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2008
N/S St: Orange Blossom Trail

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	2	1	1	2	1
LGConfig	L	TR		L	TR		L	T	R	L	T	R
Volume	166	1372	74	118	936	157	71	452	129	280	637	228
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru	A	A		
	Right		A				Right	A	A		
	Peds						Peds				
WB	Left	A				SB	Left			A	
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		22.0	52.0					24.0	6.0	29.0	
Yellow		4.0	4.0					4.0	4.0	4.0	
All Red		1.0	2.0					0.0	0.0	1.0	

Cycle Length: 157.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	253	1805	0.69	0.14	72.1	E		
TR	1685	5088	0.90	0.33	57.4	E	58.9	E
Westbound								
L	253	1805	0.47	0.14	63.6	E		
TR	1647	4972	0.68	0.33	46.4	D	48.1	D
Northbound								
L	276	1805	0.30	0.15	59.6	E		
T	784	3618	0.66	0.22	58.4	E	57.6	E
R	350	1615	0.42	0.22	53.9	D		
Southbound								
L	330	1787	0.96	0.18	103.2	F		
T	899	3618	0.81	0.25	60.9	E	70.5	E
R	393	1583	0.66	0.25	57.1	E		

Intersection Delay = 59.0 (sec/veh) Intersection LOS = E

Intersection Analysis, Year 2013

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 02 Narcoossee-Jones 13PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2013
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: Jones Road
North/South Street: Narcoossee Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	955	83	181	1366	42
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Hourly Flow Rate, HFR	10	994	86	188	1422	43
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 2		
RT Channelized?						
Lanes	1	2	0	1	2	0
Configuration	L	T	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	68	4	144	15	4	7
Peak Hour Factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Hourly Flow Rate, HFR	70	4	150	15	4	7
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR			LTR	
v (vph)	10	188		224			26	
C(m) (vph)	467	653		243			71	
v/c	0.02	0.29		0.92			0.37	
95% queue length	0.07	1.19		8.05			1.39	
Control Delay	12.9	12.7		82.6			82.5	
LOS	B	B		F			F	
Approach Delay				82.6			82.5	
Approach LOS				F			F	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst:	kmah
Agency/Co.:	Glatting Jackson
Date Performed:	8/9/2008
Analysis Time Period:	PM peak
Intersection:	Narcoossee-RalphMiller 13PM
Jurisdiction:	Osceola County
Units: U. S. Customary	
Analysis Year:	
Project ID:	19670 - Center Lake Ranch DRI
East/West Street:	Ralph Miller Road
North/South Street:	Narcoossee Road
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		774	256	8	1015	
Peak-Hour Factor, PHF		0.92	0.92	0.92	0.92	
Hourly Flow Rate, HFR		841	278	8	1103	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Raised curb			/ 2		
RT Channelized?						
Lanes		2 0		1	2	
Configuration		T TR		L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	204		124			
Peak Hour Factor, PHF	0.92		0.92			
Hourly Flow Rate, HFR	221		134			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LR				
v (vph)		8		355				
C(m) (vph)		632		341				
v/c		0.01		1.04				
95% queue length		0.04		12.45				
Control Delay		10.8		95.7				
LOS		B		F				
Approach Delay				95.7				
Approach LOS				F				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 06 US192-PineGrove 13PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2013
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: US 192
North/South Street: Pine Grove Road
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	202	872	74	28	1203	171
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	224	968	82	31	1336	190
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	TWLTL			/ 2		
RT Channelized?						No
Lanes	1	2	0	1	2	1
Configuration	L	T	TR	L	T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17	13	6	119	7	73
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	18	14	6	132	7	81
Percent Heavy Vehicles	0	0	0	21	0	3
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	1	1	0
Configuration		LTR		L		TR

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR		L		TR
v (vph)	224	31		38		132		88
C(m) (vph)	443	671		0				288
v/c	0.51	0.05						0.31
95% queue length	2.79	0.15						1.26
Control Delay	21.1	10.6						22.9
LOS	C	B		F				C
Approach Delay								
Approach LOS								

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: kmah
Agency/Co.: Glatting Jackson
Date Performed: 07/07/2008
Analysis Time Period: PM peak
Intersection: 07 US192-Nova 13PM
Jurisdiction: Osceola County
Units: U. S. Customary
Analysis Year: 2013
Project ID: 19670 - Center Lake Ranch DRI
East/West Street: US 192
North/South Street: Nova Road
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	403	1057			998	62
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	424	1112			1050	65
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Raised curb		/ 2			
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				18		321
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				18		337
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	424						355	
C(m) (vph)	634						392	
v/c	0.67						0.91	
95% queue length	5.08						9.45	
Control Delay	21.4						57.7	
LOS	C						F	
Approach Delay							57.7	
Approach LOS							F	

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Inter.: 08 US192-CR15 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192
N/S St: CR 15 (Narcoossee Road)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	1	1	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	676	780	138	229	801	177	90	112	165	400	221	478
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			11			10			5			54

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru		A	A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru			A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		16.0	11.0	25.0				8.0	17.0		
Yellow		3.0	3.0	4.0				3.0	4.0		
All Red		0.0	0.0	2.0				0.0	2.0		

Cycle Length: 98.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	547	1787	1.26	0.31	165.2	F		
T	1412	3547	0.56	0.40	21.1	C	83.3	F
R	400	1568	0.32	0.26	30.1	C		
Westbound								
L	289	1770	0.81	0.16	55.3	E		
T	905	3547	0.90	0.26	47.6	D	46.8	D
R	381	1495	0.45	0.26	31.5	C		
Northbound								
L	283	1805	0.33	0.32	25.6	C		
T	326	1881	0.35	0.17	36.3	D	35.8	D
R	269	1553	0.61	0.17	41.3	D		
Southbound								
L	379	1805	1.08	0.32	103.7	F		
T	330	1900	0.68	0.17	43.8	D	175.1	F
R	277	1599	1.56	0.17	310.8	F		

Intersection Delay = 91.7 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak

Inter.: 15 US192-Neptune 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013

Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192
N/S St: Neptune Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	1	1	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	35	2065	19	303	2369	100	29	23	284	135	53	67
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			2			7			61			21

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left		A			NB	Left		A		
	Thru			A			Thru		A		
	Right			A			Right		A		
	Peds						Peds				
WB	Left	A		A		SB	Left	A	A		
	Thru			A	A		Thru	A	A		
	Right			A	A		Right	A	A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		7.0	12.0	66.0				7.0	18.0		
Yellow		3.0	4.0	4.0				3.0	3.0		
All Red		0.0	0.0	2.0				0.0	1.0		

Cycle Length: 130.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	97	1805	0.37	0.05	61.8	E		
T	1783	3512	1.21	0.51	122.6	F	120.7	F
R	820	1615	0.02	0.51	12.0	B		
Westbound								
L	302	1787	1.05	0.17	118.4	F		
T	2173	3445	1.14	0.63	79.6	E	81.3	F
R	999	1583	0.10	0.63	4.7	A		
Northbound								
L	182	1317	0.16	0.14	49.8	D		
T	263	1900	0.09	0.14	49.0	D	111.4	F
R	224	1615	1.04	0.14	125.8	F		
Southbound								
L	319	1805	0.44	0.22	44.4	D		
T	409	1900	0.13	0.22	41.4	D	43.2	D
R	338	1568	0.14	0.22	41.5	D		

Intersection Delay = 96.7 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Inter.: 16 US192-KissPark 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192
N/S St: Kissimmee Park Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	2	0	2	1	0
LGConfig	L	T	R	L	T	R	L	LTR		L	TR	
Volume	78	1697	343	335	2234	218	292	138	79	182	150	28
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			28			9			6			3

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left		A		
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru	A			
Right		A			Right	A			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	16.0	65.0				14.0	16.0		
Yellow	3.0	4.0				3.5	3.5		
All Red	1.0	2.0				1.0	1.0		

Cycle Length: 130.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	222	1805	0.36	0.12	53.4	D		
T	1791	3582	0.99	0.50	42.8	D	39.2	D
R	792	1583	0.41	0.50	16.1	B		
Westbound								
L	218	1770	1.60	0.12	347.9	F		
T	1774	3547	1.31	0.50	169.3	F	179.2	F
R	800	1599	0.27	0.50	14.6	B		
Northbound								
L	220	1787	0.90	0.12	91.2	F		
LTR	421	3424	0.77	0.12	64.0	E	74.3	E
Southbound								
L	374	3471	0.51	0.11	55.9	E		
TR	199	1849	0.91	0.11	98.2	F	76.6	E

Intersection Delay = 112.5 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/208
Period: PM peak
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

Inter.: 17 US192-CommerceCtr 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013
N/S St: Commerce Center Drive

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	1	1	2	1	1	1	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	150	1810	85	198	2366	210	116	88	81	162	53	66
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			13			19			5			2

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A				SB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		17.0	75.0					8.0	17.0		
Yellow		4.0	4.0					3.0	4.0		
All Red		1.0	2.0					0.0	1.0		

Cycle Length: 136.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	223	1787	0.70	0.13	66.4	E		
T	1975	3582	0.95	0.55	31.0	C	32.9	C
R	891	1615	0.08	0.55	9.8	A		
Westbound								
L	226	1805	0.91	0.13	95.5	F		
T	1937	3512	1.27	0.55	147.6	F	134.3	F
R	891	1615	0.22	0.55	10.7	B		
Northbound								
L	233	1805	0.52	0.22	46.6	D		
TR	221	1768	0.77	0.13	73.3	E	62.2	E
Southbound								
L	192	1805	0.88	0.22	86.7	F		
TR	218	1743	0.56	0.13	59.2	E	75.2	E

Intersection Delay = 88.9 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/7/2008
Period: PM peak

Inter.: 18 US192-NMichigan 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013

Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192

N/S St: Michigan North/Oak

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	1	2	1	2	1	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	478	1702	59	731	1652	284	102	568	456	635	407	205
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			30			0			204			66

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right		A			Right		A		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	21.0	53.0				21.0	43.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	2.0				1.0	2.0		

Cycle Length: 160.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	456	3471	1.18	0.13	170.2	F		
T	1697	5124	1.13	0.33	116.6	F	127.1	F
R	535	1615	0.06	0.33	35.1	D		
Westbound								
L	460	3505	1.78	0.13	431.3	F		
T	1665	5025	1.11	0.33	111.9	F	192.6	F
R	486	1468	0.66	0.33	47.1	D		
Northbound								
L	237	1805	0.49	0.13	66.0	E		
T	972	3618	0.66	0.27	53.6	D	55.5	E
R	430	1599	0.66	0.27	55.6	E		
Southbound								
L	460	3505	1.55	0.13	327.6	F		
T	511	1900	0.89	0.27	74.4	E	207.4	F
R	430	1599	0.36	0.27	47.9	D		

Intersection Delay = 156.2 (sec/veh) Intersection LOS = F

HCS+: Signalized Intersections Release 5.3

Analyst: kmah
Agency: Glatting Jackson
Date: 07/07/2008
Period: PM peak
Inter.: 19 US192-OBT 13PM
Area Type: All other areas
Jurisd: Osceola County
Year : 2013
Project ID: 19670 - Center Lake Ranch DRI
E/W St: US 192
N/S St: Orange Blossom Trail

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	0	1	3	0	1	2	1	1	2	1
LGConfig	L	TR		L	TR		L	T	R	L	T	R
Volume	268	2231	119	162	1251	213	78	497	149	314	701	251
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A	A	
Right		A			Right	A	A	
Peds					Peds			
WB Left	A				SB Left		A	
Thru		A			Thru		A	A
Right		A			Right		A	A
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	22.0	52.0				24.0	6.0	29.0
Yellow	4.0	4.0				4.0	4.0	4.0
All Red	1.0	2.0				0.0	0.0	1.0

Cycle Length: 157.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	253	1805	1.11	0.14	158.4	F		
TR	1685	5088	1.47	0.33	264.2	F	253.3	F
Westbound								
L	253	1805	0.65	0.14	69.8	E		
TR	1646	4971	0.91	0.33	56.0	E	57.3	E
Northbound								
L	276	1805	0.33	0.15	60.0	E		
T	784	3618	0.73	0.22	60.7	E	59.4	E
R	350	1615	0.49	0.22	55.0-	D		
Southbound								
L	330	1787	1.08	0.18	137.1	F		
T	899	3618	0.89	0.25	67.5	E	83.4	F
R	393	1583	0.73	0.25	60.6	E		

Intersection Delay = 144.0 (sec/veh) Intersection LOS = F

Exhibit 22-2

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: CR 15 and Jones Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	1589 veh/hour
Speed:	40

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	7.3	4.4
Default Rec 2	7.6	4.6
Default Rec 3	7.7	4.6
Default Rec 4	7.8	4.7
Default Rec 5	6.8	4.1
Default Rec 6	7.8	4.7
Default Rec 7	7.7	4.6
Default Rec 8	7.6	4.6
Default Rec 9	7.3	4.4
Default Rec 10	6.8	4.1

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: CR 15 and Ralph Miller Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F	
Reid Vapor Pressure:	11.5 psi	
Land Use:	Suburban	
Stability Class:	D	
Surface Roughness:	108	
Background Concentration:	1-hr = 3.3 ppm	8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	T Intersection
Max Traffic1:	1030 veh/hour
Traffic2:	328 veh/hour
Speed1:	40
Speed2:	35

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	4.9	3.0
Default Rec 2	5.1	3.1
Default Rec 3	5.0	3.0
Default Rec 4	4.1	2.5
Default Rec 5	4.6	2.8
Default Rec 6	5.5	3.3
Default Rec 7	5.5	3.3
Default Rec 8	4.6	2.8
Default Rec 9	4.2	2.5
Default Rec 10	4.3	2.6

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Pine Grove Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	1402 veh/hour
Speed:	35

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	6.9	4.2
Default Rec 2	7.4	4.5
Default Rec 3	7.5	4.5
Default Rec 4	7.7	4.6
Default Rec 5	6.5	3.9
Default Rec 6	7.7	4.6
Default Rec 7	7.5	4.5
Default Rec 8	7.4	4.5
Default Rec 9	6.9	4.2
Default Rec 10	6.5	3.9

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Nova Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	T Intersection
Max Traffic1:	1460 veh/hour
Traffic2:	339 veh/hour
Speed1:	55
Speed2:	50

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	5.9	3.6
Default Rec 2	6.2	3.7
Default Rec 3	5.5	3.3
Default Rec 4	4.6	2.8
Default Rec 5	5.1	3.1
Default Rec 6	6.6	4.0
Default Rec 7	6.6	4.0
Default Rec 8	5.2	3.1
Default Rec 9	4.5	2.7
Default Rec 10	4.9	3.0

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and CR 15
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F	
Reid Vapor Pressure:	11.5 psi	
Land Use:	Suburban	
Stability Class:	D	
Surface Roughness:	108	
Background Concentration:	1-hr = 3.3 ppm	8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	1594 veh/hour
Speed:	55

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	7.5	4.5
Default Rec 2	7.9	4.8
Default Rec 3	8.0	4.8
Default Rec 4	8.1	4.9
Default Rec 5	7.0	4.2
Default Rec 6	8.1	4.9
Default Rec 7	8.0	4.8
Default Rec 8	7.9	4.8
Default Rec 9	7.5	4.5
Default Rec 10	7.0	4.2

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Neptune Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F	
Reid Vapor Pressure:	11.5 psi	
Land Use:	Suburban	
Stability Class:	D	
Surface Roughness:	108	
Background Concentration:	1-hr = 3.3 ppm	8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	2772 veh/hour
Speed:	35

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	9.0	5.4
Default Rec 2	9.9	6.0
Default Rec 3	9.9	6.0
Default Rec 4	9.4	5.7
Default Rec 5	8.1	4.9
Default Rec 6	9.4	5.7
Default Rec 7	9.9	6.0
Default Rec 8	9.9	6.0
Default Rec 9	9.0	5.4
Default Rec 10	8.1	4.9

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Kissimmee Park Road
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	2787 veh/hour
Speed:	45

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	9.3	5.6
Default Rec 2	10.2	6.1
Default Rec 3	10.1	6.1
Default Rec 4	9.9	6.0
Default Rec 5	8.4	5.1
Default Rec 6	9.9	6.0
Default Rec 7	10.1	6.1
Default Rec 8	10.2	6.1
Default Rec 9	9.3	5.6
Default Rec 10	8.4	5.1

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Commerce Center Drive
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	2774 veh/hour
Speed:	40

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	9.0	5.4
Default Rec 2	9.9	6.0
Default Rec 3	10.0	6.0
Default Rec 4	9.6	5.8
Default Rec 5	8.2	4.9
Default Rec 6	9.6	5.8
Default Rec 7	10.0	6.0
Default Rec 8	9.9	6.0
Default Rec 9	9.0	5.4
Default Rec 10	8.2	4.9

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Michigan Ave. North
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	2667 veh/hour
Speed:	40

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	9.0	5.4
Default Rec 2	9.8	5.9
Default Rec 3	9.7	5.8
Default Rec 4	9.4	5.7
Default Rec 5	8.1	4.9
Default Rec 6	9.4	5.7
Default Rec 7	9.7	5.8
Default Rec 8	9.8	5.9
Default Rec 9	9.0	5.4
Default Rec 10	8.1	4.9

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

08-29-2008

CO Florida 2004

Project: Center Lake Ranch
Facility: US 192 and Orange Blossom Trail
Analyst: Kelli Muddle

Environmental Data:

Temperature:	48 F
Reid Vapor Pressure:	11.5 psi
Land Use:	Suburban
Stability Class:	D
Surface Roughness:	108
Background Concentration:	1-hr = 3.3 ppm 8-hr = 2.0 ppm

Project Data:

Region:	3: Central Florida
Year:	2013
Intersection Type:	4 x 4 Intersection
Max Approach Traffic Volume:	2618 veh/hour
Speed:	40

Receptor Data (all distances are in feet):

Receptor Name	East-West Distance from Intersection	North-South Distance from Intersection	Receptor Height
Default Rec 1	10	150	6
Default Rec 2	10	50	6
Default Rec 3	50	10	6
Default Rec 4	150	10	6
Default Rec 5	50	50	6
Default Rec 6	10	-150	6
Default Rec 7	10	-50	6
Default Rec 8	50	-10	6
Default Rec 9	150	-10	6
Default Rec 10	50	-50	6

RESULTS (including background CO):

Receptor Name	Max 1-Hr Conc (ppm)	Max 8-Hr Conc (ppm)
Default Rec 1	8.9	5.4
Default Rec 2	9.7	5.8
Default Rec 3	9.7	5.8
Default Rec 4	9.3	5.6
Default Rec 5	8.0	4.8
Default Rec 6	9.3	5.6
Default Rec 7	9.7	5.8
Default Rec 8	9.7	5.8
Default Rec 9	8.9	5.4
Default Rec 10	8.0	4.8

****
PROJECT PASSES - NO EXCEEDANCES OF NAAQ CO STANDARDS ARE PREDICTED
****

PART V
General Section

Question 24 - Housing

A.1 If the proposed development contains residential development, provide the following information on Table 1 for each phase of the development.

Table 24.A-1
Dwelling Units within Development by Phase

Phase One (2011– 2014)

Housing Costs	Number of Dwelling Units			
	Single Family	Town-homes	Apartments	Total
Rental - Occupied D.U.s (Gross $ Rent) Range	0	0	220 du @ $800 avg.	220 du
Owner-Occupied D.U.s (Dollar Value) Range	300 du @ $250,000 avg.	662 du @ $200,000 avg.	0	962 du
Total	**300 du**	**662 du**	**220 du**	**1182 du**

Phase Two (2015 - 2020)

Housing Costs	Number of Dwelling Units			
	Single Family	Town-homes	Apartments	Total
Rental - Occupied D.U.s (Gross $ Rent) Range	0	0	300 du @ $800 avg.	300 du
Owner-Occupied D.U.s (Dollar Value) Range	728 du @ $250,000 avg.	1163 du @ $200,000 avg.	0	1891 du
Total	**728 du**	**1163 du**	**300**	**2191 du**

Source: Applicant

A.2 What number and percent of lots will be sold without constructed dwelling units? What is the extent of improvements to be made on these lots prior to sale?

It is assumed that 100 percent of the lots will be sold to developers who would market the lots and sell them with a contract to construct the house. It is anticipated that all lots will be cleared, leveled and have connections available for all utilities, including water and sewer.

A.3 What will be the target market for the residential development (break down by number, percent and type the number of dwelling units to be marketed for retirees, families, etc.). What portion will be marketed as second or vacation homes?

The Center Lake DRI is designed as a mixed-use community. Marketing efforts are anticipated to target those households in all age groups with the income/net worth necessary for purchase. The majority of the development is anticipated to mirror the demographics already in Osceola County. It is anticipated the dwelling units will target the three demographics of the population: 75% will be Family, 20% will be Retirement, and 5% will be Vacation Homes.

Table 24.A.3-1
Target Market

Market Category	Single Family		Multi-Family	
	DU	%	DU	%
Typical Families	771	75%	1759	75%
Retirement	206	20%	469	20%
Vacation Homes	51	5%	117	5%

Source: Applicant

B. **Indicate and discuss the availability or projected availability of adequate housing and employment opportunities reasonably accessible to the development site. Housing opportunities should be described in terms of type, tenure, and cost range and location within the following circumscribed areas: adjacent, two miles, five miles, ten miles, and within the local jurisdiction or county. Employment opportunities should be described in terms of two digit SIC code numbers located within the local jurisdiction with estimated distances or transit times to the development site.**

As discussed in Question 10 herein, approximately 130 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities are planned for the Community Center and approximately 170 overhead and/or integrated work based apartments, condominiums or town homes together with associated amenities are planned for the Neighborhood Center. Please consult the revised ECFRPC DRI Housing Demand Calculation Model, attached hereto as Exhibit 3 that identifies a total of 636 employees. Of the total employees a total of 329 are considered heads of households. Of these employees considered heads of households only 131 employees are considered single worker households. The number of employee households with incomes in the low and very low income category is projected to be 146 single worker households, 31 two worker households and 4 three worker households. This represents a total number of 181 employees with household incomes in the low and very low income categories. A total of 300 work based housing units are proposed within the Community Center and Neighborhood Center and will provide ample opportunity to accommodate the affordable housing demand needs created by the proposed development.

C. **If displacement or relocation of existing residents will occur to the proposed development, identify the number of people that will be affected, any special needs of these people, and any provisions for addressing the effects of the relocation or displacement of these people, particularly in regards to their ability to find suitable replacement housing.**

There are no occupied residences on site; therefore, no displacement of residents will occur from the proposed development.

Question 26 – Recreation

A. Describe the recreational facilities and open space (including acreage) which will be provided on-site. Locate on Map H. Identify which of these areas or facilities will be open to the general public.

The Center Lake DRI is planned as a sustainable community replete with an array of planned elements that will produce significant internal capture benefits. The ability to live, work, play and pray in an accessible, pedestrian friendly manner, is the fundamental paradigm employed in the development concept. The concept focuses on TND design principals intended to produce a seamless, walk-able community with a mixed-use Community Center and a mixed-use Neighborhood Center as the heart of social activity for the community. All roads, paths and trails feed the centers which are planned for public areas, commons, shopping, offices, institutional facilities, houses of worship, and dwellings above and/or integrated with ground level commercial uses. The Neighborhood Center also includes a public square and green.

Pocket parks are located within easy walking distances of all residences. These are provided so that parents can accompany their small children to areas where suitable playground equipment and shelters are available without having to drive. A 15.8 acre central community sports park is planned near the east entrance of the project along Nova Road where it can also be utilized by the public. Field and court sports are anticipated for this feature.

The main boulevards running from the perimeter of the DRI pass through the Community Center and the Neighborhood Center. The main boulevard roadways are proposed as tree lined linear parks designed to encourage pedestrian and bike use within the community. A pedestrian and bicycle network will link all residential neighborhoods to the various community parks and the mixed-use centers within the proposed DRI.

A lakefront park is planned at the project's shoreline of Lake Center. The 11.5 acre park is planned as a passive recreational feature with an emphasis of tree canopy preservation along the shoreline. This park feature is linked to all other areas of the development through both vehicular and pedestrian/bicycle networks.

Many of the water management lakes and ponds proposed throughout the development are designed as center pieces for ancillary, passive parks.

The Center Lake DRI provides for a total of 175.9 acres of parks, commons and greens. Both passive and active recreational opportunities are proposed. Of the total park acreage 37.0 acres or 21% is comprised of existing upland tree communities proposed to be incorporated into the park system. Another 27.4 acres of upland tree communities are proposed for preservation within the buffer system. Tree canopied upland communities targeted for park lands and upland buffers include 37.2 acres of Pine Mesic Oak, 3.7 acres of Xeric Oak, 15.0 acres of Live Oak, and 8.5 acres of Hardwood Conifer Mixed. This represents 69% preservation of the tree canopy communities from the pre-development state.

B. Will the development remove from public access lands or waters previously used by residents of the region for hunting, fishing, boating or other recreation uses? Specify.

No public access lands exist within the Center Lake DRI development. The development will increase the opportunity for the residents to access Lake Center. A public regional park is proposed along the projects frontage with Nova Road. Additionally, the lakefront park and the neighborhood parks proposed will be linked by pedestrian and bicycle facilities connected to off site facilities that will provide the general public access to the extensive park system proposed by the development.

C. *Will parks and open space be dedicated to the city or county? If not, who will maintain the facilities?*

Recreational facilities within the school sites shall be made available to the residents of the community, subject to approval of the School Board of Osceola County. Although no commitments have been made to date, Osceola County has expressed public needs for recreational facilities at the pre-application conference. All of the neighborhood parks, linear parks and the lakefront park are anticipated to be owned and maintained by a Home Owners Association, a Community Development District or another authority acceptable to Osceola County.

D. Please describe how the proposed recreation and open space plan is consistent with local and regional policies.

The Osceola County Comprehensive Plan establishes a recreation requirement of 10 acres per 1000 persons. The Center Lake DRI proposes a total population of 9,377 people that would require 93.77 aces of parks. The 175.9 acres of park and recreation space planned for the Center Lake DRI exceeds the adopted level of service without any demand being placed on existing county park facilities. Additionally, open space and recreational amenities have been designed in consideration of, and for the enhancement and protection of the natural features, existing vegetation and wildlife considerations.

E. Does the project have the potential for impacting a recreation trail designation pursuant to Chapter 260, F.S., and Chapter 16D, F.A.C.? If so, describe the impact?

There are currently no recreational trail designations within the proximity of the Center Lake DRI that would be impacted by its development. If future trails are located or desired within the area, the proposed trails within the development could be incorporated into the routing of any designated trail system.

PART VI
Response to Agency request for additional Information

East Central Florida Regional Planning Council

Part II General Section

Question 9 – Map Section

1. **Map G – Please specify in the legend what species were observed. Please illustrate all transects, grid traps, or other sampling stations that were used to determine on-site status of state or listed species. All sightings from the wildlife section need to be identified on Map G.**

   Map G has been revised as requested.

2. **Map H – Please label the wetland impacts with acreages.**

   The revised Map H included in Question 9, herein has been modified to account for wetland impacts currently proposed by the applicant. The proposed impacts will accommodate the required connectivity of the six upland islands of development.

Question 10 – General Project Description

3. **Part 1 – Specific Project Description – Page 13 states that approximately 9.3 acres of wetlands will be impacted; however, Part 4 – Impact summary – page 24 states that there will be 13+/- acres of wetlands impacted. Table 10-B-1 Existing and Proposed Land Use Comparison indicates that the total amount of wetlands that will be impacted will be 9,3 acres. Please clarify the total amount of wetland acres that will be impacted**

   All referenced sections have been modified to account for the additional property, the modified development plan and the final jurisdictional wetland determination by the permitting agencies.

4. **Part 2 – Consistency with Comprehensive Plan – Please indicate if the project will require a comprehensive plan amendment, including the capital improvement element.**

   As stated in the modified Question 10 above, the applicant has submitted a Comprehensive Plan Amendment (CPA) for the additional 134.1 acres. This CPA will expand Mixed Use District 7 to include the additional property within the Mixed Use District. The Osceola County Board of County Commissioners approved transmittal of the CPA on December 21, 2009 with final adoption anticipated by the summer of 2010. No other CPA is necessary to execute the development plan proposed by this application.

5. **On page 14, the proposed Development Program by Phase table shows 200,000 square feet of community center which is described as retail/ service. The transportation section identifies 200,000 square feet of retail and 30,000 square feet of office. We are supportive of the 30,000 square feet of office as it adds to the land use mix. Please rectify tables.**

   As stated in revised Question 10 above, the revised development program includes a Community Center and a Neighborhood Center. Each center will have a mix of uses as described above and as required by the Osceola County Comprehensive Plan. The revised development program has also been accounted for in revised Question 21 – Transportation.

6. **The receiving site for the gopher tortoises is small and more prone to flooding than the site upon which most exist today. It is our recommendation that the southeastern site be preserved and that the area that was proposed for relocation of gopher tortoises be developed. While there may be some additional wetland impacts associated with the crossing to what was identified as the relocation site, it does not make sense to move the tortoises. Additionally, we are supportive of higher densities to accommodate the number of units on a smaller acreage. Please make this change to map H.**

   Please be advised that gopher tortoise relocation policies have changed since the time of our previous submittal. The FFWCC *Gopher Tortoise Permitting Guidelines* (Revised April 2009) require gopher tortoise recipient sites to comprise a minimum of 40 acres of contiguous suitable uplands. The previously proposed recipient site comprises less than 40 acres and therefore does not meet the acreage requirements for use as an onsite recipient site. However, the *Gopher Tortoise Permitting Guidelines* provide landowners with the option to relocate gopher tortoises from the development site to an offsite certified recipient area following receipt of the appropriate permits and under the direction of an FFWCC certified Authorized Agent. The applicant is proposing to relocate the tortoises to an approved offsite recipient site per the FFWCC guidelines.

Part III Environmental Resource Impacts

Question 12 – Vegetation and Wildlife

7. **American Bald Eagle – Page 32 – Please comment on and fully explain the protection zones regulations for American Bald Eagles.**

   As discussed in our previous submittal, wildlife surveys conducted by Modica & Associates, Inc. confirmed the presence of a bald eagle nest within the Center Lake Ranch project site (Map G). Additionally, the Florida Fish & Wildlife Conservation Commission (FFWCC) online *Eagle Nest Locator* revealed that bald eagle nest OS-106 has been documented by the state in this location. The FFWCC database further reveals that this nest has been documented active for nesting seasons 2005, 2006, 2007, 2008, and 2009.

   The *National Bald Eagle Management Guidelines*, set forth by the U.S. Fish & Wildlife Service (USFWS) in 2007, restrict human activity within two protection zones of a bald eagle nest: a 330-foot radius protection zone and a 660-foot radius protection zone. The size of the protection zone depends on, a) whether or not there is similar activity within 1-mile of the nest, and b) whether the development activity will be visible from the nest. The following table presents the recommended protection zone based on these conditions:

Table: Bald Eagle Protection Zone Radius, Based on *National Bald Eagle Management Guidelines*

	If there is no similar activity within 1 mile of the nest	***If there is similar activity closer than 1 mile from the nest***
If the activity will be visible from the nest (Non-Forested)	660 feet	660 feet, or as close as existing tolerated activity of similar scope.
If the activity will not be visible from the nest (Forested)	330 feet	330 feet

Because eagle nest OS-106 is located within non-forested habitat, the 660-foot radius protection zone will apply to this project.

The USFWS *Bald Eagle Monitoring Guidelines* recommend that no construction activities occur within the 330 or 660 foot radius protection zones during the nesting season (October 1 – May 15). However, the guidelines allow construction activities to occur within the 330-660 foot radius zone when construction is accompanied by monitoring of the nest in accordance with the monitoring guidelines. Monitoring must be conducted by an individual formally trained in the biological sciences who is experienced in recognizing and recording patterns of eagle behavior. Monitoring is to begin at the initiation of construction within the nesting season, and continue through fledging of the nest. Any construction activities resulting in disruption of normal nesting behavior must be suspended by the eagle nest monitor. Monthly monitoring reports must be submitted to the FFWCC and USFWS for the duration of monitoring.

In accordance with USFWS regulations, any construction activities within the 330-660 foot protection zone of nest OS-106 will be accompanied by the appropriate nest monitoring procedures.

8. Have Sandhill Cranes been observed on-site?

Florida sandhill cranes have been observed onsite (Map G). Nest locations depicted on Map G depict the results of a survey conducted by Modica & Associates, Inc. on April 9, 2007. The nests identified on Map G are presented as "Potential Nests" because they were not conclusively determined to be sandhill crane nests. In the locations depicted on Map G, Modica & Associates, Inc. biologists observed mats of vegetation resembling sandhill crane nests; however, no birds were observed on or within the vicinity of the nests. It is possible that these were remnants from a previous nesting year. A formal sandhill crane survey conducted in 2008 did not reveal any sandhill crane nests onsite. A formal survey was not been conducted during the 2009 nesting season; however, Modica & Associates, Inc. biologists were frequently present onsite during the 2009 nesting season and no nests were observed. Please note that sandhill crane nest site location often changes from year to year, as nest habitat selection is strongly influenced by fluctuations in hydrology.

If any active nests are documented, construction related disturbances will not be conducted within a 250-foot "Flushing Zone" surrounding the nest until the nest has fledged. This will reduce the potential for mortality due to nest abandonment.

9. **What is the total amount of gopher tortoise burrows that were observed on-site, and how many gopher tortoises are projected to be relocated? Please answer this with the current scenario from the ADA as well as the scenario that is recommended.**

A total of 87 viable gopher tortoise burrows have been identified on the Center Lake DRI property. The original DRI project site was surveyed for this species in May and June of 2006. The recently acquired ±134 acre western parcel was surveyed in April 2009. Revised survey results are depicted on Map G.

Please note that wildlife survey transects did not cover 100% of the onsite suitable gopher tortoise habitat. In order to estimate a project-wide burrow count, acreages of onsite optimal and suboptimal gopher tortoise habitat were calculated using ArcGIS software. The extent of optimal and suboptimal habitat acreages were calculated in ArcGIS based on notes from field observations, aerial photographic interpretation, and mapped soils data. Optimal habitat includes areas mapped as FLUCFCS codes 110, 211, 224, 311, and 421; suboptimal habitat includes areas mapped as FLUCFCS codes 211, 414, 427, 434, and 814. Additionally, the acreage of each habitat type included within the survey was calculated in ArcGIS by offsetting a 25 foot buffer on the GPS tracks that were recorded during the actual survey event (total survey transect width of 50 feet). Burrow counts were summed for each habitat type and data were extrapolated based on survey percentage to obtain an estimated burrow count for the overall project site. The following table presents these data and the estimated sitewide burrow count.

Table 9.1: Tabulation of calculated project-wide gopher tortoise burrow count, estimated based on survey data collected by Modica & Associates, Inc. in 2006 and 2009.

	Optimal Habitat	Suboptimal Habitat
Habitat Acreage	221 ac	693 ac
Acreage Surveyed	164 ac	205 ac
Percent of Habitat Surveyed	74%	30%
# of Burrows Observed	80	7
Extrapolated Total # of Burrows	108	23
Estimated Total Burrow Count	131 burrows	

Extrapolation of the partial survey data across 100% of the suitable habitat area results in an estimated 131 burrows onsite. In accordance with the new *Gopher Tortoise Permitting Guidelines* issued by the FFWCC in April 2009, the anticipated number of tortoises within a project site is calculated by multiplying the total number of viable burrows by a conversion factor of 0.50. This results in an estimated onsite gopher tortoise population of approximately 65-66 tortoises. We therefore estimate that approximately 65-66 tortoises will be relocated from the Center Lake Ranch project site.

10. **Please illustrate on Map G where the Sherman's Fox Squirrel(s) have been observed.**

The requested revisions have been made to Map G.

11. **The gopher tortoise preserve should be where there is the highest concentration of tortoises since they are there for a reason. Please make the area on the south side of the site the tortoise preserve. An access roadway can be located through this parcel and development may occur on the site that was identified as gopher tortoise preserve. Please make these changes to Map H.**

Please be advised that gopher tortoise relocation policies have changed since the time of our previous submittal. The FFWCC *Gopher Tortoise Permitting Guidelines* (Revised April 2009) require gopher tortoise recipient sites to comprise a minimum of 40 acres of contiguous suitable uplands. The previously proposed recipient site comprises less than 40 acres and therefore does not meet the acreage requirements for use as an onsite recipient site. However, the *Gopher Tortoise Permitting Guidelines* provide landowners with the option to relocate gopher tortoises from the development site to an offsite certified recipient area following receipt of the appropriate permits and under the direction of an FFWCC certified Authorized Agent. The applicant is proposing to relocate the tortoises to an approved offsite recipient site per the FFWCC guidelines.

Question 13: Wetlands

12. **When are the seasonal high water elevations projected to be established?**

Seasonal high water elevations will be established and reviewed by the SFWMD during the Environmental Resource Permitting process.

13. **The ECFRPC staff recommends that the upland buffers for the project be 25-foot minimum and 50-foot average. Please revise the conceptual plan to reflect these recommendations.**

Upland buffers shown on Map H have been designed to accommodate a 25 foot minimum, 50 foot average dimension as recommended by the ECFRPC and as required by the Osceola County Comprehensive Plan.

14. **Page 40 – A.6 – wetland impacts are projected to be approximately 13 +/-. Please refer to question 3 under General Project description that addresses ECFRPC Staff's concerns.**

All referenced sections have been modified to account for the additional property, the modified development plan and the final jurisdictional wetland determination by the permitting agencies.

15. **When is the Formal Wetland Determination expected to be completed?**

An application for Formal Wetland Determination is in the final state of review with the SFWMD and the ACOE. Permit issuance is anticipated to occur within the next couple of months, pending agency workload and review timeframes. However, please be advised that the wetland boundaries and acreages reported herein are based on a wetland delineation and survey that has been reviewed and approved by both agencies.

Question 16: Floodplain

16. **What portions of the project are proposed to have development within the 100-year flood prone areas?**

See response to Question 17 below

17. **What is the acreage of development within the flood prone areas?**

The acreage of floodplains within flood prone areas within the overall project boundary is 261 acres within A zones, and 749 acres within AE zones. Zone A is defined as areas of 100-year floodplain where base flood elevations have not been determined. Zone AE is defined as areas of 100-year floodplain where base flood elevations have been determined. As stated previously, efforts will be made to minimize impacts to the 100-year floodplain.

Question 17: Water Supply

18. **The ECFRPC has endorsed a recommendation that construction shall be designed, at a minimum, Water Star standards. (Developed By SJRWMD). Please comment on how the Center Lake DRI will achieve this recommendation.**

Osceola County is in the process of adopting a "Smartcode", which is anticipated to contain Low Impact Development practices within the Comprehensive Plan. The developer will be subject to compliance with such "Smartcode" ordinance. Additionally, the developer shall prepare a water conservation plan that conforms to the guidelines of the governing agency's (in this case, SFWMD) Consumptive Use Permit Application.

Part IV Transportation Resource Impacts

Question 21: Transportation Impacts

19. **The traffic analysis has an additional land use that is not included in the project description earlier in the ADA. The 30,000 square feet of office contributes to the mixed use character and should be retained. Corrections should be made to the remainder of the ADA.**

The revised development program for Phase I now contains 60,000 square feet of office.

20. **The townhouse trip rate is approximately 40% less than the apartment rate. Please confirm that the development will have townhomes and not rental apartments. We do notice that the housing section identifies rental units renting at approximately $800.00 per month. If this is the case, show documentation that he rented townhouses will exhibit the same trip rate as apartment rentals.**

The 442 townhomes included in Phase 1 of the development program will have the characteristics of townhomes as defined in ITE's Trip Generation Manual. Therefore, the ITE trip generation rates for townhomes was used.

21. **Please show the numbers supporting the passer-by rate as it relates to background traffic on the adjacent streets. Only retail adjacent to the non project streets can be counted toward this calculation.**

The Center Lake DRI will include a new public-use road that connects from Narcoossee Road to Nova Road. For the purpose of this study, a pass-by rate of 5% was assumed and this assumption was included in the approved methodology.

22. **The distribution maps do not add up to 100%. Please show all external project traffic on these figures and show directionally. Clearly identify access points to major external network roadways.**

The original distribution shown in Exhibits 21-B.1 and 21-B.2 did not account for 100% of traffic entering or exiting the site. More detailed cordon line graphics now appear in Appendix E which accounts for 100% of traffic entering or exiting the site.

23. **If Art-Plan is to be used, please show calculations and results.**

Noted.

24. **Provide transit routing to the site. How close is it now? What provisions will be made to accommodate transit and bring it to the site?**

Coordination with LYNX will occur when public transportation is implemented in this area of the county and an appropriate trip reduction factor will be applied in future analyses.

25. **Identify nearest bicycle facilties to the site. What provisions will be made to accommodate bicycle connections and bring trails and facilities to the site?**

There are currently no bicycle facilities within a reasonable distance to the site. Provisions will be made for the movement of people by means other than private automobile consistent with applicable local codes, at a minimum. The site planning and internal design of the project will endeavor to provide safe and convenient pedestrian/bicycle access ways as well as transit provisions. The site plan will include trails, bike ways and paths connecting residential uses with non-residential uses, in a design form consistent with traditional neighborhood principles.

Part V Human Resource Impacts

Question 24: Housing

26. **The ECFRPC is recommending that accessory Dwelling Units (ADU) will be a permitted use within the Center Lake DRI. The ADU's may be used as guest quarters or may be leased as dwelling units subservient to the single-family dwelling unit to which it is a part. ADU's will not be counted as part of the density calculation for the development, but they will be subject to school concurrency review. Trips shall be measured and mitigated to the extent required as part of the Monitoring and Modeling process that is agreed upon. Neither the Master Developer, nor its successor, will pay impact fees on the ADU's developed. ADU's will be counted as part of the inventory of affordable housing and may have separate utility infrastructure and metering. The ECFRPC Staff recommends that the ADUs be intermixed throughout the project and that at minimum 10% (approximately 110 dwelling units) of the total single-family dwelling units constructed have an ADU.**

As stated in revised Question 10 above, the developer anticipates a required mix of uses within the centers proposed as required by Osceola County. Additionally, Osceola County is in the process of adopting a "Smartcode" to implement the mixed-use policies of the Comprehensive Plan. The developer will be subject to compliance with such "Smartcode" ordinance. It is anticipated that the "Smartcode" will address the issue of ADUs. Any impacts associated with the development of ADUs will be accounted for with the appropriate application to include the agreed upon Monitoring and Modeling process.

Question 25: Police and Fire Protection

27. **Please provide letters of serviceability to the ECRPC when they are received.**

Letters of serviceability have been requested from the Osceola County Sheriffs Office and Osceola Counties EMS to address the modified development program proposed by this application attached hereto as Exhibit 4 and Exhibit 5. Once a response received, they will be forwarded to the ECFRPC.

28. **Please comment on the status of the anticipated new emergency service facilities and where they may be located.**

Osceola County Emergency Service Department has reviewed the original ADA and they have been notified of the modified development program. Osceola County currently has a "First Responder" agreement with the City of St. Cloud. No request has been made by Osceola County for new emergency service facilities for the area. Should Osceola County, or the City of St. Cloud desire such a facility location within the development, provisions for such facilities can be located within either the Community Center or the Neighborhood Center as both centers are required to provide for public/civic space.

Question 29: Energy

29. How will the Developer encourage homebuilders to adopt Energy Star or a similar program as a minimum standard for home appliances?

The developer shall provide educational and promotional programs to encourage sustainable development and green building practices to the home builder and home owners. This program will not mandate or enforce specific sustainable development and green building practices, but rather encourage these practices through communication and education.

30. Will the residential homes be constructed to FGBC or USGBC standards?

Residential construction standards should meet the Florida Green Building Coalition, or any other green building system that is approved by the Florida Department of Management Services and Osceola County. Osceola County is in the process of adopting a "Smartcode", which is anticipated to contain Green Building practices within the Comprehensive Plan. The developer will be subject to compliance with such "Smartcode" ordinance.

Center Lake

Development of Regional Impact

Advanced Ecological Solutions Inc

Ecological Elements Review

Part II General Section

Question 9 – Map Section

1. **Please revise Map G to breakdown the "wildlife observation" emblem to reflect specifically what wildlife occurred at each area (e.g. a symbol for fox squirrel sightings, a symbol for wading birds, etc.)**

   Map G has been revised as requested.

2. **Please revise Map G to identify the sandhill crane nest sites documented in the past.**

   Map G has been revised as requested.

Part III Environmental Resource Impacts

Question 12 – Vegetation and Wildlife

1. **The categories of vegetative communities do not quite match that identified on Map F or the existing Acres on Table 10-B-1. For instance, there is no Cypress (FLUCFCS 621) or Utility Easement (FLUCFCS 830) identified on the map or in the table. Please revise appropriately.**

   Table 10-B-1 has been revised and is included in response to Question 10, Part 1(B) in Section 2 of this submittal.

2. ***Please discuss how foraging and nesting areas for sandhill crane will be retained and protected in the post development condition. The ADA states that the wetlands utilized for nesting in 2007 will not be impacted. However, there was no discussion regarding preservation of foraging areas; the nest sites were not identified; and measures for protection of the nest sites and foraging areas were not presented.***

   Suitable sandhill crane nesting areas will be protected through preservation of 99% of the on-site wetlands. These wetlands will be protected by a conservation easement in the post-development condition. Additionally, some of the areas depicted as "Park and Rec Areas" on Map H will be managed in the post-development condition to provide foraging habitat for this species. Many of these areas currently exist as Improved Pasture. Habitat management efforts for this species are described in greater detail within the Habitat Management Plan. The Habitat Management Plan

(HMP) has been developed to incorporate measures to preserve and manage lands for suitable sandhill crane forage. Please refer to Exhibit 8 of this submittal for the HMP.

As previously reported, potential sandhill crane nests were observed during the 2007 survey. Mats of vegetation were observed in three areas on-site or in close proximity to the project boundaries. No birds were observed on or around the potential nests during the survey, but the general composition and location of the vegetative mats resembled sandhill crane nests. The 2007 potential nest sites have been depicted on Map G for reference. It is important to note that sandhill cranes do not typically nest in the same area every year; nesting sites vary annually based on hydrologic conditions. Modica & Associates, Inc. conducted a sandhill crane survey in 2008 and did not document any nest sites within the property boundaries, nor were any nests documented on the property in 2009.

3. **In review of the FWC April 2008 guidelines that are anticipated for implementation early this year for gopher tortoise relocations, the small island that is proposed for relocation of the gopher tortoises does not appear to meet the criteris even in size alone. In addition, the site is very low falling below the 70 contour and actually is within AE flood zone. With this being and island surrounded by even lower lands, if it were to completely flood, the tortoises have no higher ground to move in to. Therefore, as we stated in the pre-application meeting this area does not seem appropriate for accepting tortoises.**

   On site preservation is the preferred option for DRI's which contain sufficient habitat onsite to maintain viable populations. As was also suggested by several of the reviewing agencies at the pre-application meeting, the area of improved pasture along the southeastern portion of the property that currently contains the highest density of tortoises is the more appropriate location for the onsite preserve.

   Realizing that this parcel does provide access to Nova Road for the Development, it appears that an access skirting the buffer to the wetlands along the north side of the parcel could be designed allowing for the remainder or a sufficiently sized area of the remainder to be preserved for the gopher tortoise population. Please revise the site plan to accommodate onsite preservation in a location other than the island in the center of the wetland, preferably this area.

   It is understood that the FFWCC *Gopher Tortoise Permitting Guidelines* (Revised April 2009) require gopher tortoise recipient sites to comprise a minimum of 40 acres of contiguous habitat that meets specific habitat suitability requirements. It is agreed that the previously proposed recipient site does not meet the acreage, and potentially the habitat suitability, requirements for use as an onsite recipient site. However, the *Gopher Tortoise Permitting Guidelines* provide landowners with the option to relocate gopher tortoises from the development site to an offsite certified recipient area following receipt of the appropriate permits and under the direction of an FFWCC certified Authorized Agent. In lieu of onsite relocation, the applicant has elected to relocate the tortoises to an approved offsite recipient site in accordance with the FFWCC guidelines.

4. **A Habitat Management Plan (HMP) is necessary to be incorporated into the Development Order for assurance of the manner in which the onsite resources will be managed and maintained. Please provide a draft HMP that includes comprehensive management for the natural resources of the site (e.g. wetlands, uplands, gopher tortoise, sandhill crane, fox squirrel, etc). The HMP will be required to be incorporated into the Covenants and Restrictions and funded and implemented by the Community Development District or Homeowners Association.**

A draft Center Lake DRI Habitat Management Plan (HMP) is included as Exhibit 8 to this submittal. Provisions have been made to incorporate the HMP into the Covenants and Restrictions of the community, and for funding the management and monitoring proposed therein. It is acknowledged that implementation of the draft HMP will be a condition of the Development Order.

5. **Please incorporate into the HMP measures to plant longleaf pine or other suitable trees in common areas, parks and upland buffers to introduce future nesting trees for bald eagle. This measure has been incorporated into other DRI's in the Osceola area in effort to provide assurances that as these large scale developments occur across the country that future nest sites will be available even after build-out.**

   The applicant commits to planting suitable pine species in select common areas, parks and upland buffers as appropriate, to provide assurance that future bald eagle nest sites will be available after build-out. The project must balance preserving/introducing suitable nesting trees for the bald eagle as well as preserving suitable forage habitat for sandhill cranes. Trees suitable for bald eagle nesting may be most appropriate in the upland buffers adjacent to wetlands that currently exist as open pasture. This strategy will provide the recommended tree planting as well as provide upland buffer improvement to the wetland systems.

   Please refer to the draft Center Lake DRI HMP for detailed management strategies.

6. **At the pre-application meeting, there was a discussion regarding attempting to incorporate the recommendations from the Lake Tohopekaliga Environmental Working Group into the development design where applicable as a measure to show a step above the typical development. Attached is a summary of the recommendations for your use. Please discuss measures that you have been able to pull into the plan.**

   Development Order recommendations set forth in the document entitled *Summary of Findings and Development Order Recommendations from the Lake Tohopekaliga Environmental Working Group* were considered in the DRI project design and implemented, where applicable. The Center Lake DRI project is not located on the shore of Lake Toho and therefore some of the recommendations included within this document do not apply to the project. However, the project design is consistent with many of the other recommendations. As recommended by the Working Group, a Habitat Management Plan (HMP) was prepared that incorporates all applicable objectives relating to protection of wildlife habitat (See HMP - Exhibit 8). The HMP provides a detailed description of onsite and regional habitat connectivity, (including specific roadway design considerations) and species-specific wildlife management plans (including bald eagle, gopher tortoise, Sherman's fox squirrel, eastern indigo snake, and Florida sandhill crane). Additionally, the Center Lake DRI project maximizes conservation of the significant onsite wetland habitat resources and includes provisions for management of the preservation areas.

Question 13 – Wetlands

1. **The minimization of proposed wetland impacts for this project is greatly appreciated.**

   The applicant appreciates this acknowledgement.

2. **The use of culverts to maintain hydrology and for small mammal crossings through the road crossings of the wetlands is definitely a step toward minimization of impact. However, wildlife crossings for the three main crossings of Wetland H need to be designed to allow crossing by larger mammals such as deer. Wildlife crossings can be accomplished through use of box culverts or bridging. The details are not necessary in this review level, but a commitment to utilize such measures is necessary at this time to provide assurance that impact to the wildlife usage in these areas has been minimized.**

   In support of the need for larger capacity wildlife crossings, Wetlands H alone is over 800 acres. In addition the large wetlands of Center Lake are part of a system extending north and east and associated with Lake Hart, Lake Mary Jane and the headwaters of the Econlockhatchee River, providing extensive areas of wildlife corridors through the region. The Florida Greenways and Trails Council also identified the western side of Center Lake as the western limits of an expansive area of number 1 ranked Priority Ecological Greenways. The mapping resulted from a study to identify large intact landscapes important for conserving biodiversity and ecosystem services. Only a portion of this site is contained in that mapping; however, the proximity and the connectivity of the expansive system into this site further illustrates the need for maintaining the ability for wildlife movement through the site.

   The applicant commits to using appropriately sized box culverts or other such measures for the proposed roadway crossings through the expansive wetland slough located throughout the center of the property to ensure connectivity of the habitat and wildlife movement through the site. Each roadway crossing will be evaluated separately to determine what type of structure is most appropriate for the size and expanse of the roadway crossing. For example, smaller, secondary roadways that cross smaller, less expansive areas of the wetland may use smaller culverts to maintain hydrology, with at-grade wildlife crossings with speed deterrent devices (i.e. speed bumps, reduced speed limits and wildlife crossing signage), while the primary roadways that consist of a more significant linear crossing may use larger box culverts or bridging as appropriate.

   Recent discussions with Dr. Daniel Smith (professor, University of Central Florida and private consultant to many FDOT transportation projects) indicate that 8-foot pre-cast box culverts have been successfully used on State Road 46 for wildlife crossing structures. The specific design elements of each wetland crossing for the Center Lake project will consider hydrologic connectivity as well as biological concerns such as noise and lighting. Wildlife crossing signage and reduced speed limits may also be employed at appropriate wetland and wildlife corridor crossings. Please refer to the draft Center Lake DRI HMP for more information on these elements.

   The applicant acknowledges that the on-site wetland system provides significant wildlife habitat and is connected to off-site wildlife corridors that have been identified by conservation groups and regulatory agencies. The site plan allows for conservation of 99% of the on-site wetlands, with additional preservation of significant upland habitat contiguous with the expansive wetland preservation acreage. The mosaic of upland and wetland preservation will continue to provide significant habitat for both wetland and upland-dependent species in the post-development condition. Planning for appropriate wildlife crossings as discussed above should provide reasonable assurance that the project will preserve the significant wildlife corridors within the Center Lake DRI project site in the post-development condition.

3. **Map H depicts the Safe Development Line pointing to the red boundary line. The text under Question 13 – Wetlands, item A.2 states that the SDL is 65 feet NGVD. Map C depicts the**

65 foot contour extending well into the site over much of the large forested wetland area (Wetland H). There was some discussion at the pre-application meeting that the SDL was potentially not going to run internal to the site past a constricted channelized area along the eastern property line. What is the status of that determination? Please provide documentation from the County if the line does not follow the 65 foot contour internal to Wetland H.

This application has been modified to include all properties titled to the applicant. This includes property that lies below the 65' msl "safe development line" (SDL). The SDL has been established by policy within the Osceola County Comprehensive Plan. No development entitlements are proposed below the SDL by this application. Although lands interior to the development fall below the 65' msl elevation, they are not considered contiguous to Lake Center due to an existing berm located along the shoreline. Therefore, they are not considered by the Osceola County Comprehensive Plan as lands below the SDL established by policy. However, it should be noted that except for minor impacts due to required interior roadway connections this application proposes no development entitlements for internal lands below the 65' msl. Please consult revised Map H Concept Plan, and revised Map C Topography and Floodplain Map attached hereto in Question 9 above.

4. **Thank you for the commitment to include the upland buffers to the wetlands in a conservation easement over the wetlands and uplands. Please incorporate management measures for these areas into the HMP to provide assurance that these resources will be protected into the future.**

Please refer to the draft Center Lake DRI HMP (Exhibit 8) for details on management measures for the wetlands and associated upland buffers.

5. **As presented at the pre-application meeting, the buffers for the onsite wetlands need to be 25 foot minimum, 50 foot average for the wetlands 5 acres and larger; and 15 foot minimum, 25 foot average for wetlands smaller than 5 acres. Please revise the exhibits to reflect these larger buffers and revise the estimated upland preservation areas for the project.**

The requested revisions have been made to all appropriate exhibits.

6. **Has the permit been issued on the formal wetland determination? Are there changes anticipated to the wetland limits over that presented in the ADA?**

A Formal Wetland Determination is in the final states of review with the SFWMD and the ACOE. Permit issuance is anticipated to occur within the next couple of months, pending SFWMD workload and review timeframes. However, please be advised that the wetland boundaries and acreages reported herein are based on a wetland delineation and survey that has been reviewed and approved by the SFWMD and the ACOE.

7. **Has the US Army Corps of Engineers (ACOE) reviewed the wetland limits? If so, how do these limits compare to that of the SFWMD? If not, how closely do you anticipate the ACOE limits to mimic the SFWMD? Please provide a map of the ACOE wetland limits.**

As indicated above, both the ACOE and SFWMD have reviewed and approved the delineated and surveyed wetland limits. Both agencies agreed to the same wetland line. All wetland acreages and figures presented herein reflect the agency verified wetland limits.

Florida Department of Environmental Protection

Comments and Recommendations

Solid Waste

1. **The DRI has satisfactorily addressed municipal solid waste management**

   Acknowledged

Industrial Wastewater

2. **The development must comply with requirements of Rule 62-621.300(2) for any discharge of produced groundwater. Produced groundwater may be generated during building foundation installation, utility installation, construction, and/or expansion of the storm water management systems (retention/detention ponds), etc. The produced groundwater may be generated either open trench, well, or well point systems. Any area where construction dewatering will generate produced groundwater, a review and approval from DEP's Industrial Wastewater Program will be required.**

   Acknowledged. As the project design and construction proceeds, appropriate permits will be obtained from the corresponding agencies. The reviews and permits will be completed prior to any dewatering activities taking place.

Domestic Wastewater

3. **The applicant proposes to obtain a letter of service form the City of St. Cloud for sewer and reclaimed water for irrigation. The St. Cloud/Southside was recently expanded from 1.6 to 6.0 MGD, with abandonment of the 2.4 MGD Lakeshore WWTF. The first phase of the proposed project would need about 0.5 MGD of sewer capacity during the life of the current WWTF permit, and an additional 0.5 MGD for phase 2, which would not be needed until after the next permit renewal in 2012. The City likely has capacity for the first and maybe the second phase without any additional work; thus they should have time to address any additional needs during the next Capacity Analysis Report. The applicant proposes using potable water for irrigation until reclaimed water becomes available during the phase 2 construction. Other than the inherent problems with using potable water for irrigation, and the need for the collection/transmissions system permits, we have no other comments for domestic waste.**

   It is the proposed development's intent to receive its wastewater treatment and irrigation supply from the City of St. Cloud. The wastewater demands for the proposed development have now been revised to correspond with the revised development program. Table 18.1 has been revised and is included in the revised question 18 response.

   Capacity Request letters have been revised to correspond to the current development program. Capacity Request letters have been issued to the City of St. Cloud Director of Environmental

Utilities for wastewater and reclaimed water capacity. This letter is included in this submittal. A response letter to this request will be supplied upon receipt.

Potable Water

4. **The application is vague regarding the source of potable water. The applicant mentions the City of St. Cloud or a Community Development District. A community Development District would require DEP permitting. The DRI application requires proof that the water supplier can meet the water requirements of the project. There is no indication whether or not the applicant can satisfy all of the elements of Capacity Development that are necessary for a new community water system. These elements include technical, managerial, financial capabilities, etc. Additionally, they have not included a statement from the City of St. Cloud indicating the City is willing to commit the necessary resources to this project.**

   The applicant states the demand for potable water will be 1.97 MGF by 2013, and 3.8 MGD by 2018. The average flow for the City of St. Cloud in 2008 was 5.21 MGD. The permitted max-day operating capacity of the system is currently 17.67 MGD.

   It is the proposed development's intent to receive its potable water supply from the City of St. Cloud. A new community water system will not be sought.

   Capacity Request letters have been revised to correspond to the current development program. Capacity Request letters have been issued to the City of St. Cloud Director of Environmental Utilities for water capacity. This letter is included in this submittal. A response letter to this request will be supplied upon receipt.

   The potable water demands for the proposed development have now been revised to correspond with the revised development program. Tables 17.1, 17.2 have been revised and are included in the revised question 17 response.

Environmental Resources Permitting

5. **This project will be reviewed and permitted by South Florida Water Management District for all wetland impacts**

   Acknowledged.

South Florida Water Management District

Comments and Recommendations

Question 9 – Map Section

1. **On Map C, please provide the base flood elevations for the sections of the map labled "AE".**

   Base flood elevations for floodplains designated as Zone AE are now provided in Map C. The base flood elevation is 66 feet.

2. **Based on the direction of the flow illustrations on Map I-1, there appear to be off-site areas that will drain through the project site. Please delineate these areas, the approximate acreages, and the directions of flow.**

   There are 4 off-site areas that flow through the proposed projects. These areas have been delineated in Map I-1. The approximate acreages and directions of flow have been updated in Map I-1.

Question 12 – Vegetation and Wildlife

3. **Is the applicant planning to provide viable wildlife corridors on-site as well as connections to significant areas off-site? Will suitable habitat be maintained for listed species known to inhabit and utilize portions of the project site, particularly the marshes and scrub?**

   As discussed above, the applicant commits to using appropriately sized box culverts or other such measures for the proposed roadway crossings through the expansive wetland slough located throughout the center of the property to ensure connectivity of the habitat and wildlife movement through the site. Each roadway crossing will be evaluated separately to determine what type of structure is most appropriate for the size and expanse of the roadway crossing. For example, smaller, secondary roadways that cross smaller, less expansive areas of the wetland may use smaller culverts to maintain hydrology, with at-grade wildlife crossings with speed deterrent devices (i.e. speed bumps, reduced speed limits and wildlife crossing signage), while the primary roadways that consist of a more significant linear crossing may use larger box culverts or bridging as appropriate.

   Recent discussions with Dr. Daniel Smith (professor, University of Central Florida and private consultant to many FDOT transportation projects) indicate that 8-foot pre-cast box culverts have been successfully used on State Road 46 for wildlife crossing structures. The specific design elements of each wetland crossing for the Center Lake project will consider hydrologic connectivity as well as biological concerns such as noise and lighting. Wildlife crossing signage and reduced speed limits may also be employed at appropriate wetland and wildlife corridor crossings. Please refer to the draft Center Lake DRI HMP for more information on these elements.

The applicant acknowledges that the on-site wetland system provides significant wildlife habitat and is connected to off-site wildlife corridors that have been identified by conservation groups and regulatory agencies. The site plan allows for conservation of 99% of the on-site wetlands, with additional preservation of significant upland habitat contiguous with the expansive wetland preservation acreage. The mosaic of upland and wetland preservation will continue to provide significant habitat for both wetland and upland-dependent species in the post-development condition. Planning for appropriate wildlife crossings as discussed above should provide reasonable assurance that the project will preserve the significant wildlife corridors within the Center Lake DRI project site in the post-development condition.

4. **Has the applicant coordinated with the U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission in development of management plans for the various listed species located on the project site?**

The draft Center Lake DRI HMP included as Exhibit 9 to this submittal has been developed from an HMP template that has been reviewed and approved by FWC for two other DRI's. With this submittal, the enclosed draft HMP will be provided to all agencies for review and comment. Modica & Associates, Inc. will coordinate directly with appropriate FWC staff for comment and approval. The USFWS does not typically provide comment to this document.

Question 13 - Wetlands

5. **A comprehensive, long-term management plan should be developed for all areas (wetlands and uplands) that will be preserved as conservation.**

Please refer to the Center Lake DRI HMP (Exhibit 9) for long-term management and protection of the wetland and upland conservation areas.

6. **The application indicates that no water-dependent structures are proposed to be constructed on Lake Center at this time. As such, SFWMD staff recommends that appropriate language be incorporated into the home/property owner's association documents and the Habitat Management Plan. In Addition, signage should be installed along the lake informing future residents that lake access is not provided through this development.**

While the applicant does not presently plan to incorporate water-dependent structures into the development plan, there is an interest in maintaining the right for passive recreational use of the onsite conservation lands. It is not the intent of the applicant to provide motorized boat access to Lake Center; however, the applicant may consider other passive recreational uses of this natural amenity in the future.

7. **Please provide a mitigation plan for wetlands proposed for impact.**

Mitigation for proposed wetland impacts is anticipated to consist of on-site wetland and upland preservation. The mitigation plan may also incorporate wetland enhancement and upland buffer enhancement. The final details of the proposed mitigation plan cannot be provided until such time as a functional assessment (i.e. UMAM) of the wetland impact areas and proposed mitigation areas has been conducted and the mitigation plan has been reviewed and approved by the appropriate jurisdictional agencies (SFWMD and ACOE).

8. **What is the applicants intent regarding the Formal Wetland Determination application? Does the applicant intend to move forward with this application?**

   An application for Formal Wetland Determination is in the final states of review with the SFWMD and the ACOE. Permit issuance is anticipated to occur within the next couple of months, pending agency workload and review timeframes. However, please be advised that the wetland boundaries and acreages reported herein are based on a wetland delineation and survey that has been reviewed and approved by both agencies.

9. **According to the proposed roadway layout depicted on Map H, it appears that development of this project may result in future secondary and cumulative wetland impacts that were not addressed in the wetland impact discussion. Please revise the ADA to identify all secondary and cumulative impacts.**

   In accordance with Section 4.2.7 of the SFWMD Basis of Review, adverse secondary impacts will generally be prevented by providing an undisturbed upland buffer to the wetland systems. In each area of direct wetland impact (i.e. roadway crossings), secondary impacts will be assessed during the Environmental Resource Permit (ERP) process. All roadway crossings through wetlands and all impacts that result in partial impact to any system will be assessed for secondary impacts.

Question 14 - Water

10. **Please expand upon the discussion in subsection "A" regarding existing hydrological conditions on and abutting the site. The response should include a description of potential aquifer recharge areas, existing aguifers, on and off-site surface water flows, receiving bodies, etc.**

    The proposed project site is located within the Alligator Lake Basin under the jurisdiction of the South Florida Water Management District (SFWMD). The site generally flows towards the east, to Lake Center. This is the first lake in a chain of Lakes that ultimately flow to Alligator Lake. The SCS Soil survey of Osceola County, indicates that project site is located in primarily areas of moderate to severe wetness with poorly drained soils. There are no existing aquifer recharge areas, existing aquifers or surface waters.

Question 16 - Floodplains

11. **It appears that portions of the floodplain are proposed to be filled. How will floodplain conveyance be maintained in these areas?**

    Floodplain conveyance will be maintained by minimizing impacts to the floodplain areas. Any impact to a floodplain area will be compensated for with an equivalent volume. Floodplain compensation will be provided to any fill that may be placed in the floodplain between the seasonal high water elevation and the floodplain elevation. Likewise, any compensation that is provided will have to be provided between these two elevations. Detailed ground survey and detailed proposed graded elevations will be completed during the design of the project so that specific floodplain impacts and compensation will be calculated.

Question 17 – Water Supply

12. **The text in subsection "B" indicates that storm water or possibly existing wells will be used to meet the projects landscape irrigation demands until late in the projects second phase when reclaimed water will become available. This conflicts with Table 17-2, which indicates that on-site ground and surface water supply for phases 1 and 2 will be zero. Please revise.**

    Acknowledged. This has been revised to show the correct on-site/off-site sources and is included in the revised question 17 response. In addition, the tables presented now reflect the needed irrigation demand for the revised development plan.

13. **How was the non-potable water supply demand determined? The demand projections should be consist with the modified Blaney-Criddle Equation, pursuant to Section 2.3.2, Supplemental Irrigation Requirement, of the SFWMD's Water Use Basis of Review.**

    Acknowledged. The demand projections for non-potable water supply (irrigation supply) have been revised to use the Blaney-Criddle Equation. In addition, the tables presented in Question 17 have been modified to reflect the revised development plan. This has been revised and is included in the revised question 17 response.

14. **Will a central irrigation system be provided? Will it be designed to accommodate reclaimed water when it becomes available?**

    The developer shall construct and maintain a dual water distribution system to distribute both potable water and low-quality water, in this case reclaimed water from the City of St. Cloud wastewater treatment facility, to each water user within Center Lake DRI. The irrigation system will be designed to accommodate reuse when it becomes available.

15. **For Question 17.F.1 and 2, please provide a letter from the City of St. Cloud that addresses all applicable subsections of this question. In addition, please be advised that water supply facilities must be authorized concurrent with the proposed land use change, pursuant to chapter 163.3180, F.S. All issues related to infrastructure planning, water conservation, capital improvements, concurrency, and intergovernmental coordination should be addresses, pursuant to Rule 9J-5 and Chapter 163, F.S.**

    Acknowledged. Requests for capacity analysis identifying the revised development program have been sent simultaneously with this submittal to the City of St. Cloud's Director of Environmental Utilities. Copies of the revised capacity analysis requests have been included in this response.

Question 19 – Stormwater Management

16. **Please be advised that the design storm typically used in Osceola County is th 10-year 72-hour storm, not the 25 year storm as stated in 19-B. Please revise.**

    Agree. The pond design storm in subsection B of question 19 should reference the 10-yr 72-hour as the design storm. This has been revised and is included in the revised question 19 response.

17. **As required by Question 19-B, please identify the control elevations for all proposed drainage structures.**

The control elevations have not been established at this time because a detailed analysis has not been completed at this time. Detailed geotechnical analysis and edge of wetland topographical survey is necessary to establish precise control elevations. Based on the USGS topographical map and the SCS Soil survey of Osceola County, control elevations are expected to range between 60 and 65 feet.

18. **As required by Question 19-D, please provide a summary description of any proposed Best Management Practices to be utilized to enhance water quality attenuation and treatment. Unless more stringent criteria are in effect at the time of submittal of the Environmental Resource Permit (ERP) application, this project will be required to document that the post-development phosphorous loading is no more than the pre-treatment level, and that additional water quality treatment volumes (such as 50% additional treatment volume) or other comparable methodologies will be necessary to clearly show that the project will not degrade impaired water bodies located downstream.**

Agree. Water Quality criteria will be more stringent at submittal time of the permit applications. The Statewide Stormwater Treatment Rule is being developed by the Florida Department of Environmental Protection (FDEP) and the Water Management Districts throughout the State. The stormwater management facilities will provide treatment for nitrogen and phosphorus loadings. The project will demonstrate an equal or reduced rate of nitrogen and phosphorus loading in the post-development condition. A wet pond alone does not accomplish the required removal efficiency. Stormwater reuse and dry pre-treatment, in the form of dry retention, will be required in addition to the wet ponds. It is anticipated that pervious pavements, rain gardens, and underground dry retention systems, among others, will be used to obtain this retention volume.

19. **Please be advised that the SFWMD will not be responsible for operation and maintenance of the stormwater management system.**

Agree. SFWMD will not be responsible for the operation and maintenance of the stormwater management system.

Osceola County

Planning Comments

Question 9 – Map Section

20. **Provide for wildlife corridors connecting the large preservation areas and the lakefront; show these corridors on an appropriate map that combines the master plan with identified wildlife habitat and wetlands.**

As discussed above, the applicant commits to using appropriately sized box culverts or other such measures for the proposed roadway crossings through the expansive wetland slough located throughout the center of the property to ensure connectivity of the habitat and wildlife movement through the site. Each roadway crossing will be evaluated separately to determine what type of structure is most appropriate for the size and expanse of the roadway crossing. For example, smaller, secondary roadways that cross smaller, less expansive areas of the wetland may use smaller culverts to maintain hydrology, with at-grade wildlife crossings with speed deterrent devices (i.e. speed bumps, reduced speed limits and wildlife crossing signage), while the primary roadways that consist of a more significant linear crossing may use larger box culverts or bridging as appropriate.

Recent discussions with Dr. Daniel Smith (professor, University of Central Florida and private consultant to many FDOT transportation projects) indicate that 8-foot pre-cast box culverts have been successfully used on State Road 46 for wildlife crossing structures. The specific design elements of each wetland crossing for the Center Lake project will consider hydrologic connectivity as well as biological concerns such as noise and lighting. Wildlife crossing signage and reduced speed limits may also be employed at appropriate wetland and wildlife corridor crossings. Please refer to the draft Center Lake DRI HMP for more information on these elements and a depiction of the corridor locations.

21. **Map C; please recheck the elevation numbers of the topography lines.**

Map C was prepared based on survey information prepared by Tinklepaugh Surveying Service, Inc. The elevations shown have been confirmed by the surveyor. If Osceola County has information that is contrary to that presented please provide specific information so that a formal evaluation can be made.

22. **Map G; evaluate the conditions of the Gopher Tortoise Habitat Preserve shown on Map H, against the location in which the majority of the gopher tortoises currently reside shown on Map G. The preserve should be an equal or better habitat for the species. The evaluation of the Gopher Tortoise Habitat Preserve should take into account flood zones to ensure maximum survivability and allowance for tortoise migration.**

Please be advised that gopher tortoise relocation policies have changed since the time of our previous submittal. The FFWCC *Gopher Tortoise Permitting Guidelines* (Revised April 2009) require gopher tortoise recipient sites to comprise a minimum of 40 acres of contiguous suitable uplands. The previously proposed recipient site comprises less than 40 acres and therefore does not meet the acreage requirements for use as an onsite recipient site. However, the *Gopher Tortoise Permitting Guidelines* provide landowners with the option to relocate gopher tortoises from the development site to an offsite certified recipient area following receipt of the appropriate

permits and under the direction of an FFWCC certified Authorized Agent. The applicant is now proposing to relocate the tortoises to an approved offsite recipient site per the FFWCC guidelines.

23. **The roadway connection to Ralph Miller Road will not be permitted. Revise Map H to show a western roadway connection to Rummel Road, and revise traffic distribution maps J-4 and J-5, if necessary.**

All affected maps have been revised as requested.

24. **Revise Map H to show an additional future connection to property just east of Starline Estates – Unit Two.**

Map H has been revised as requested.

25. **Access to the Elementary School shall be provided off of Hansom Road. Revise Map H – Concept Plan to show the proposed Elementary School access.**

Please consult revised Map H Concept Plan, provided in Question 9 herein. The location of the school and the roadway network serving the school has been modified by this application. The new roadway network and school location has been maximized for accessibility for vehicular, bicycle and pedestrian access.

Part III Environmental Resource Impacts

Question 13 – Wetlands

26. **Pg 40; Question 13.A.5. - Replace 15 foot minimum, 25 foot average buffer with buffering in accordance with Osceola Comprehensive Plan Chapter 9 Policy 1.4.12. and that the needed buffering will be determined by UMAM scores in accordance with Policy 1.4.8 of the same chapter.**

The requested revision has been made.

Question 17 – Water Supply

27. **Pg. 50; Question 17 A.2 – Update the chart using the LOS from the proposed Osceola County Water Supply Work Plan.**

Acknowledged. The table presented in 17-A-2 has been modified to reflect the revised development plan. In addition, the table now shows water demand calculations based upon the level of service (LOS) standards published in the Osceola County Comprehensive Plan, Potable Water Element. This has been revised and is included in the revised question 17 response.

28. **Pg. 51; Question 17 B – It is stated "By the end of the project's second phase, it is the intent to have reuse water from the City of St. Cloud available for all irrigation uses within this project." In no case shall potable or individual private wells be used to irrigate public or private turf or landscape areas.**

    Agree. This has been revised and is included in the revised question 17 B response.

29. **Pg. 53; Question 17 G – It is stated "As reuse water becomes available, irrigation with potable water will be replaces or disallowed." In no case shall potable or individual private wells be used to irrigate public or private turf or landscape areas.**

    Agree. This has been revised and is included in the revised question 17 response.

30. **Pg. 53; Question 17 G – It is stated "Potable water conservation will be provided through the use of water saving plumbing fixtures in selected applications. The public school will be a specific target for low-flow fixtures." Water saving devices shall be installed throughout the Development, using such techniques as low flow fixtures.**

    Agree. Construction standards for the development should meet the USGBC LEED program, or another nationally-recognized green building system that is approved by the Florida Department of Management Services and Osceola County. Also, the Master Developer and developers shall implement water-conserving, green building design principles for landscapes and buildings to include xeriscaping and water reuse; and consideration of rain gardens, green roofs, cisterns, pervious pavers, etc.

Question 18 – Wastewater Management

31. **Pg.55; Question 18.D - "On-site septic disposal systems will not be used for permanent development activities." Please define non-permanent development activities. To what extent and capacity will the on-site septic disposal system be used?**

    Acknowledged. On-site septic systems ***will not be used*** for development activities, permanent or non-permanent. All sewage will be collected and transported to off-site wastewater treatment facilities. This has been revised and is included in the revised question 18 response.

Question 19 – Stormwater Management

32. **Pg. 57; Question 19.C- Drainage Area/Basin Area Chart. Please define Basin Area 3A; it is labeled on Map I-2 just north of Hansom Road.**

    Map I-2, Post Development Stormwater Master Plan has been revised to conform to the current development plan. This revision includes the additional 134.1 acres. There are now nine (9) basins, one through nine. Basin 3A has been removed.

Question 26 – Recreation

33. **Pg.70; Question 26.A - Refers to a "15.4 acre central community sports park", though section 26-B refers to the same facility as a "public regional park". While no universally accepted standards or definitions exist, the terms "community park" and "regional park" are not normally interchangeable, specifically because of the attraction value inherent to each facility. A community park typically serves residents from one or more local communities -- usually within a mile or two of the facility -- whereas a regional park has facilities or features that attract residents from throughout an entire region. So, for example, parking requirements may differ because park visitors typically travel greater distances to visit a regional park. Moreover, the sheer number of visitors generated by a regional park might warrant a larger facility, though this is not always the case. The Developer should work with the Osceola County Parks Division to determine the appropriate type of facilities to include in the proposed 15.4 acre park.**

Regardless of the proposed facility's designation it is intended that the proposed park will provide active recreational facilities that will serve the residents of the Center Lake DRI as well as residents from neighboring development. The applicant remains committed to work with the Osceola County Parks Division or any other agency that may desire to operate or locate facilities within the park. Commitments have been made with this application that zoning shall comply with the pending "Smartcode" adoption by Osceola County. The applicant expects that provisions for recreational facilities will be included in the "Smartcode" by ordinance.

34. **Pg.70; Question 26.A - "A pedestrian and bicycle network will link all residential neighborhoods to the various community parks and the community center within the proposed DRI", however, this same network should extend beyond merely connecting features within the DRI. Please ensure the pedestrian and bicycle network extends to the perimeter of the proposed DRI, including but not limited to where the boulevards meet existing County roads (specifically Nova Road, Ralph Miller Road, Star Line Drive, Hackney Road, and all points denoted as "future connections" on Map H.)**

It has always been and will remain the commitment of the applicant to provide vehicular, pedestrian and bicycle connectivity to the maximum extent practical, including connectivity to external public access networks adjacent to the development. Commitments have been made with this application that zoning shall comply with the pending "Smartcode" adoption by Osceola County. The applicant expects that provisions for multi-modal interconnectivity will be required by ordinance within the "Smartcode".

35. **All boulevards within the proposed development should have on-road bicycle lanes which shall extend at least 4' from the shoulder. They should be striped and marked as designated bike lanes.**

The applicant has committed to compliance with the pending "Smartcode" for development standards through the zoning process. The applicant expects that Osceola County will adopt provisions for roadway design by ordinance within the "Smartcode".

36. **Pg.70; Question 26.A - "All roads, paths and trails feed the community center which is planned for public areas, commons, shopping, offices, institutional facilities, houses of worship, and dwellings above...with ground level commercial uses". "Inverted-U" or**

"staple-type" bicycle racks will be required at all public-use buildings, including parking garages, in a ratio of one bicycle spot per six automobile parking spaces.

The applicant has committed to compliance with the pending "Smartcode" for development standards through the zoning process. The applicant expects that Osceola County will adopt provisions for bicycle racks at public use buildings by ordinance within the "Smartcode".

37. **Pg.71; Question 26.D - Calculates the amount of park acreage mandated by Chapter 14 of the County's Land Development Code as 91.74 (assuming 3,300 dwelling units). While it is commendable the Center Lake DRI proposes to exceed that amount by 30.16 acres (i.e. 121.9 proposed acres minus 91.74 mandated acres), it is nonetheless necessary to qualify the proposed park acreage as "useable recreation" acreage, which is also mandated by the LDC. For instance, according to Map H, linear park acreage is proposed along both sides of the boulevard that will provide access from Star Line Drive (see the northeast section of Map H.) In order for this acreage to qualify as "useable recreation" acreage, some feature or improvement must be incorporated, such as a trail and/or park benches. Similarly, the other park parcels scattered throughout the DRI must provide an element(s) of recreational value in order to qualify as usable recreational acreage.**

The applicant has committed to compliance with the pending "Smartcode" for development standards through the zoning process. The applicant expects that Osceola County will adopt provisions for recreation and park design by ordinance within the "Smartcode".

38. **Pg.71; Question 26.E - "Does the project have the potential for impacting a recreational trail designation?" The Developer's response was that "there are no recreational trail designations with the proximity of the Center Lake DRI..." However, please note that the answer does not accurately address the question. Moreover, there are trails that are currently being considered in close proximity to the project, some of which might potentially seek the official designation addressed in the question. For instance, the Florida Trail Association has recently considered realigning their proposed hiking trail to within two miles of the proposed Center Lake DRI. The improvements to Narcoossee Road also include plans for a trail, along the west, which would offer an important connection between Orange County and the City of St Cloud. Again, a trail of this magnitude would most certainly garner designation as a recognized trail. Thus, these facts should be considered, and noted as such in subsequent studies**

The applicant acknowledges that future recreational trails may or may not be located within the area, and that any such trails may seek the official designation addressed in the question. However, the applicant can not project which future trails may garner the official designation. The original answer does in fact address the specifics of the question. If Osceola County has information contrary to that provided with the applicant's response, please provide such information so that the applicant can address such contrary information in detail.

Regardless of future trail designations and any nearby locations, the trail network proposed by the applicant will provide connectivity to any public access trail at the perimeter of the development. All facilities proposed internal to the development are public and can accommodate any agency's desire to route future trails through the project. Therefore, the Center Lake DRI does not have a potential negative impact to any existing or future recreational trails. In fact, if future trails are located in the area and if they garner designation as a recognized trail, the ability to connect to the network proposed internal to the development will enhance any such facility.

Question 29 – Energy

39. **Pg. 74; Question 29.A -- In the second and fourth bullet points the word "encourage" is used. What steps will be taken to ensure that the developer has adequately "encouraged" the homebuilders to adopt Energy Star, or that the schools and other civic buildings be built to FGBC standards?**

The developer shall provide educational and promotional programs to encourage sustainable development and green building practices to the home builder and home owners. This program will not mandate or enforce specific sustainable development and green building practices, but rather encourage these practices through communication and education.

Residential construction standards should meet the Florida Green Building Coalition, or any other green building system that is approved by the Florida Department of Management Services and Osceola County. Osceola County is in the process of adopting a "Smartcode", which is anticipated to contain Green Building practices within the Comprehensive Plan. The developer will be subject to compliance with such "Smartcode" ordinance.

Clubhouses, community centers, and schools built by the Master Developer or any other Developer building within Center Lake DRI shall be built to USGBC LEED NC or Florida Green Building Coalition standards and certified, or certified through another acceptable conservation design program approved by Osceola County and the Florida Department of Management Services.

Part IV: Transportation Resource Impacts

Question 21 –Transportation

40. **Provide information on improvements necessary for Star Line Drive to handle traffic impacts from the proposed development.**

It is anticipated that Star Line Drive will be resurfaced and brought up to County loading standards as a two-lane facility within the existing right-of-way.

41. **Table 21-A.4**

- **Map Reference #8 – Neptune Road from Westchester Drive to Partin Settlement Road should be listed as constructed.**
  This segment is no longer listed in the Planned and Programmed Roadway Improvements table.

- **Map Reference #9 – Osceola Parkway from Florida's Turnpike to Buenaventura Boulevard should be listed as programmed.**
  Osceola Parkway from Florida's Turnpike to Buenaventura Boulevard is now listed as programmed.

- **Map Reference #14 – The improvement of Fortune Road/ Lakeshore Boulevard from Boggy Creek Road to Partin Settlement Road is not a part of the Capital Improvement Program.**
  The improvement of Fortune Road/ Lakeshore Boulevard from Boggy Creek Road to Partin Settlement Road has been removed.

42. **The distribution maps, Map J-4, Exhibit 21-B.1, and Map J-5, Exhibit 21-B.2 do not appear to account for 100% of the trips from the proposed Center Lake DRI. Revise distribution maps to account for 100% of trips from the development or explain.**

The original distribution shown in Exhibits 21-B.1 and 21-B.2 did not account for 100% of traffic entering or exiting the site. More detailed cordon line graphics now appear in Appendix E which accounts for 100% of traffic entering or exiting the site.

43. **The traffic distribution maps, Map J-4, Exhibit 21-B.1, and Map J-5, Exhibit 21-B.2 do not match the Significant and Adversity tables, 21-E.1, and Table 21-E.3. Revise the tables and/or distribution maps for consistency or explain the discrepancies.**

Map J-4 and Map J-5 show project traffic distribution as a percentage of the trips produced by the Center Lake DRI. The percentages in Tables 21-E.1 and 21-E.3 refer to the project traffic as a percentage of the total traffic.

44. **Page 21-32 – Intersections shown to operate below the adopted LOS were provided for Phase 1 (Year 2013) of the development, but were not provided for Phase 2 (Year 2018). Revise study to include these intersections, or explain this exclusion.**

It is stated in the approved methodology that intersection analyses would only be performed for Phase I. As it is common practice to only evaluate intersections for the first phase of the project for DRIs in the region, a M&M will be performed at a later date which will analyze the intersections for Phase II impacts.

45. **The heading for Table 21-F.1 states "Summary of Intersection Significance – Star Island/Resort World". Please revise.**

The heading was changed to read "Center Lake Ranch DRI."

46. **Proposed Development Program by phase is not consistent with the traffic analysis land uses. *Traffic analysis includes additional* 30 square feet of office space. Please revise and update as needed.**

The proposed development program has been revised with this submission and all traffic analyses are consistent with this updated program.

47. **Planned Programmed Improvements. Year 2013 link analysis shows the widening of Boggy Creek Road from Central Florida Greenway/SR 417 to Osceola/Orange County Line. This is outside the 3 year E+C for programmed improvements. Please provide justification for including this improvement in the 3 year programmed improvements.**

The improvement of Boggy Creek is scheduled to begin construction in 2011 which is within the 3 year time frame for being considered as a committed improvement.

48. **Pass-by traffic should be reduced from the total external trips (less internal capture).**

Pass- by traffic was reduced from the total external trips less internal capture. No changes have been made to the trip generation results.

49. **Please review intersection capacity analysis to assure that the v/c ratio does not exceed 1.0. The following is a list of intersections and pages (but is not inclusive) where the v/c exceeds 1.0:**

- **US 192 @ Old Hickory Tree Road: EBT v/c=1.02**
- **US 192 @ Delaware Avenue: EBT v/c=1.12**
- **US 192 @ Michigan Avenue (improved): EBT v/c=1.04**
- **US 192 @ Neptune Road (improved): EBT v/c=1.05 and WBT v/c=1.05**

The v/c ratios for all movements which are both significant and adverse do not exceed 1.0 with improvements. Only movements which are both significant and adverse were addressed in mitigation analyses.

50. **Proposed 2013 intersection improvements will require not only intersection lane additions/modifications but will also need signal modifications and/or the addition of receiving lanes for dual left turns.**

- **US 192 @ CR 15 will require adding a northbound receiving lane to accommodate the 2nd EBL and modify signal.**
- **US 192 @ Michigan Avenue will require the modify signal to accommodate the change in lane assignments on the NB approach.**
- **US 192 @ Neptune Road will require modifying the signal for dual westbound left turn lanes.**

US 192/ Neptune Road no long requires an additional turn lane. Any intersections with geometry changes are assumed to require signal timing and phasing modifications and this improvement will be included in cost estimated and proportionate share calculations.

The updated intersection improvements analysis has been included with this submission. Because of the changed development program and phase years, fewer intersections are significant and adverse and therefore, only five intersections will require any mitigation.

51. **Revise intersection capacity analysis for signalized intersection to provide for the all red and yellow intervals recommended by ITE and provided in the FDOT Traffic Engineering Manual.**

The red and yellow intervals used in the analyses are from the cycle phasing plans provided by the counties.

Capacity Confirmation

52. **Capacity Confirmations are needed from the following agencies**
    - **City of St. Cloud Director of Environmental Utilities for water capacity (pg.52)**
    - **City of St. Cloud for wastewater treatment (pg.55)**
    - **Osceola County and the City of St. Cloud for waste disposal (pg.60). States that the copies of letters submitted are attached, they are not attached.**
    - **Letters of serviceability from Osceola County Sheriff Bob Hansell and the Osceola County Emergency Services Department (pg.69)**
    - **Orlando Regional Hospital – St. Cloud (pg. 73)**

Capacity Request letters have been revised to correspond to the current development program. Capacity Request letters have been issued to the City of St. Cloud Director of Environmental Utilities for water capacity, wastewater treatment, and reuse water capacity. These letters are included in this submittal as Exhibit 7. Responses to these requests will be supplied upon receipt.

Capacity Request letters for solid waste collection and disposal have been revised to correspond to the current development program. Capacity Confirmation letters have been issued to Osceola County and to Waste Services of Florida. These letters are attached hereto as Exhibit 2.

Orange County – Public Works Division

Transportation Comments

We have reviewed the Transportation Analysis for the Center Lake Ranch DRI and have the following comments:

Page 21-5, Table 21-A.2 – Service volumes for Orange County's facilities should be consistent with FDOT's Generalized Tables. Please revise service volume for Boggy Creek Road from the Central Florida Greenway to the County Line.

The service volume for Boggy Creek from the Central Florida Greenway to the County Line was revised to be consistent with FDOT's Generalized Tables.

- **Pages 21-14 and 21-15 – The project's traffic distribution shown on Maps J-4 and J-5 does not add up to 100%. Please clarify.**

  The original distribution shown in Exhibits 21-B.1 and 21-B.2 did not account for 100% of traffic entering or exiting the site. More detailed cordon line graphics now appear in Appendix E which accounts for 100% of traffic entering or exiting the site.

- **Page 21-13, The ZDAT2 shows service employees for Phase 1 of the DRI, however, Tables 21-A.1 and 21-B.2 does not show office use in Phase 1. Please clarify.**

  According to the ITE Trip Generation Report, a school of 970 students attracts 485 service employees. Additionally, with this 2009 submission, office was added to the Phase I development program yielding a net of 594 service employees.

- **Page A17, Evaluation – The Boggy Creek and Meadow Woods DRIs should also be included in the list of projects to be considered in the development of the socio-economic data.**

  Boggy Creek DRI was included in the transportation model as TAZ's 229-231. Meadow Woods DRI was included as TAZ 503.

- **Page 21-18, Planned and Programmed Roadway Improvements – Based on the County's current CIP schedule, construction of Narcoossee Road is scheduled to begin in March 2009 and completed by March 2011; construction of Boggy Creek road is scheduled to begin October 2011 and completed by March 2013.**

  The completion date for Narcoossee Road has been corrected. The improvement of Boggy Creek is scheduled to begin construction in 2011 which is within the 3 year time frame for being considered as a committed improvement.

Planning Comments

At this time, Planning has not identified any significant impacts to Orange County's Comprehensive Policy Plan. The proposed DRI may, however, have an indirect effect on unincorporated residential communities in the Boggy Creek and Narcoossee Road areas of Orange County. Please note that continued coordination with the County's Transportation Planning Division is recommended due to the potential impacts on portions of Boggy Creek and Narcoossee Roads located within Orange County. Please let me know if you have any questions or if you need additional information.

Florida Department of Transportation

Question 21 - Transportation

Comments and Recommendations

1. **Appendix A - Methodology – Original comment: FDOT provided several methodology comments to the applicant in July 2008. These comments pertained to existing conditions data, use of minimum K&D factors, modeling, intersection analysis, and other topics. Many of the methodology comments originally provided by FDOT were not incorporated into the analysis. Please refer back to FDOT's July 2008 methodology comments when revising the analysis.**

   Many of the comments from the July 2008 document were repeated in the most recently issued FDOT comments. One comment that was not addressed from the July 2008 comments is FDOT-10, the comment referencing the current TIP. An additional Appendix which contains the TIP should rectify this outstanding comment. The 2009 reanalysis addresses all comments.

2. **21-5 – Existing Conditions - Original Comment: Table 21-A.2 shown on Page 21-5 contains a significant number of changes to the existing conditions data since methodology. In particular, many of the service volumes have been increased for individual roadway segments (although the corresponding number of lanes and LOS standards have not changed). The FDOT will defer to the local city/county regarding changes in service volumes require modification:**
   - **US 192 from Mississippi Ave to Narcoossee Rd – Table 21-A.2 currently shows a peak hour / peak direction service volumes of 2,790, which reflects a 6-lane capacity. Please adjust the service volume back to 1,860 (as it was shown in the methodology) to reflect the existing 4-lane cross-section.**

   The service volumes which appear in Table 21-A.2 were taken from either the Orange County or Osceola County Roadway Network Database. If the service volumes were not available through either of these two sources, then the service volumes were taken from FDOT's 2008 Traffic Information DVD.

   The Osceola County Existing Roadway Network Capacity updated on 6/9/09 now shows the service volume on US 192 from Mississippi Ave. to Narcoossee Rd. as 1,860. This update has been included in the submission.

3. **21-5 – Existing Traffic Volumes - Original Comment: The existing count data provided in Table 21-A.2 indicates that existing traffic volumes were obtained over a three year period (2006, 2007, and 2008) and represent a variety of sources (City, County, and FDOT). Per the methodology comments, please clearly document how these differing count years were rectified to a consistent 2008 "base" year.**

   Counts for each roadway segments were taken from the source with the most recent data and grown accordingly. Although the existing conditions analysis reflects data from several years, the historic growth procedure accounts for these varying years. The title of the table was changed to "Summary of Roadway Segment Level of Service, Existing Conditions" to avoid further confusion. A table comparing the historic and model growth rates now appears in Appendix F.

4. **21-5 – Existing Traffic Volumes - Original Comment: At the methodology stage it was requested that FDOT data be used for all segments of US 192 within the St. Cloud area since more count stations are available from this source. FDOT also provided the applicant with advance 2007 count data, which has subsequently been released on the 2007 Florida Traffic Information DVD.**

   FDOT also requested at methodology that the segments along US 192 be broken into smaller sub-segments. In the first version of the methodology, the portion of US 192 through St. Cloud (now shown as Columbia to Mississippi and Mississippi to Narcoossee) was previously shown as five segments. Given the lack of uniformity of traffic volumes along US 192 through this area, it is more appropriate to have the smaller subsections to more accurately reflect the actual roadway traffic conditions.

   For the section of US 192 from Columbia to Narcoossee, please revise the analysis to use smaller subsegments and utilize the FDOT data from the 2007Traffic Information CD, per the July 2008 FDOT methodology comments.

   The same roadway segment breakpoints were used as in the County's adopted concurrency table. Although there are more count stations available on the 2007 Florida Traffic Information DVD than from Osceola County's concurrency table, the counts available from Osceola County are more recent and therefore more accurate.

5. **21-5 – Programmed Improvements - Original Comment: FDOT reviewed the Planned and Programmed improvements listed in Table 21-A.4 against the projects shown in MetroPlan's TIP for years 2008-2012 and 2009-20013. It was noted that several of the programmed improvements listed in Table 21-A.4 have either have been removed from the 2009-2013 TIP or have construction funding beyond the three year horizon.**

   Given that the MetroPlan TIP can quickly become out of date, we ask that documentation of the committed improvements be provided in the form of the FDOT adopted work program or local government CIE's (per the requirements of FAC 9J-2.045). . Please either provide documentation indicating that funding is available for construction within the next three years or remove the following projects from the list of programmed improvements:

   - **Boggy Creek – Construction in 2013 is beyond the 3-year timeframe for being considered as a committed improvement.**
   - **Fortune Rd/Lake Shore Blvd – Per previous methodology comments, the construction dates for this improvement was not until the year 2011/2012 timeframe per the 2008-2012 TIP. This is beyond the 3-year window for consideration as a committed improvement. Additionally, the improvement could no longer be located in the 2009-2013 TIP and may have been removed.**
   - **Narcoossee Rd, from Jack Brack Rd to Orange/Osceola County line – 2009-2013 TIP shows construction in 2011/2012 fiscal year which is beyond the 3 year timeframe for being considered committed.**

   The improvement of Boggy Creek is scheduled to begin construction in 2011 which is within the 3 year time frame for being considered as a committed improvement.
   The segment of Fortune Road/ Lakeshore Blvd. was removed from MetroPlan's TIP and was therefore removed from Table 21-A.4 'Planned and Programmed Improvements.'
   The improvement of Narcoossee Road from US 192 to Rummel Road is scheduled to begin construction in 2009. The improvement of Narcoossee Road from US 192 to the Orange/

Osceola County line is scheduled to begin construction in 2010. Both segments will be under construction within the 3 year timeframe.

6. **21-8 – Programmed Improvements Narcoossee Road - Original Comment: Additional coordination is required regarding the status of the Narcoossee Road widening projects.**

Since the March 2008 methodology, FDOT has requested that additional information from the Local government CIE be provided to verify the funding commitments and timing of the Narcoossee Road projects (per the requirements of FAC 9J-2.045). To date, only information from the MetroPlan TIP has been provided, which the FDOT does not consider to be acceptable documentation. In the 2008-20012 TIP, the three segments of the project were lumped together making it impossible to differentiate which projects would be funded within the three-year timeframe for inclusion as a committed improvement. The 2009-2013 TIP now breaks up the three segments and shows the segment from Jack Brack to the County line as not occurring until the 2011/2012 fiscal year. To clarify the timing and funding commitment for all segments of the Narcoossee widening, please provide the additional local CIE documentation, as requested in the methodology comments.

The TRIP funding for the segment of Narcoossee Road from Rummel Road to Jack Brack Road has been deferred, but despite the deferral of TRIP funding for this segment of Narcoossee Road, the construction schedule for the 4-lane widening of Narcoossee from US 192 to the Orange County Line has not been changed. The 4-lane widening of Narcoossee Road from US 192 to the Orange County Line is still fully-funded within the 3-Year CIP for construction and construction will move forward as originally scheduled.

7. **21-10 – Pass-By -Original Comment: Within Table 21-B.2, there appears to be an error in the pass-by trip calculations currently shown (29 total trips does not equal 14 in + 3 out). Please check the calculations for pass-by and revise appropriately to correct the math errors.**

Additionally, as stated in the methodology, pass-by will only be allowed if the retail component of the development is fronting a regional roadway that carries non-project traffic. Based upon the Map H it does not appear that any commercial uses are proposed along Nova Road and therefore pass-by reductions do not seem appropriate.

Please remove the pass-by reduction from the analysis unless additional information can be provided to adequately justify the pass-by reductions.

There was an error with the outbound pass-by trip calculation which has been corrected.

8. **21-13, 21-14, 21-15 – Distribution – Original Comment: The distribution shown in Exhibits 21-B.1 and 21-B.2 do not appear to account for 100% of traffic entering or exiting the site. In addition, the lack of detail in the trip distribution figure does not allow for the tracking of the trip distribution as trips are being assigned to smaller roadways and neighborhoods.**

Please revise the trip distribution to provide more detail and ensure that the external trip distribution adds up to 100%. Project assignment for the intersection analysis could not be verified due to questions regarding the overall trip distribution. Revision of the trip distribution may affect the conclusions of the segment and intersection analyses. FDOT will provide more detailed review and comment of these areas at 1st Sufficiency.

The original distribution shown in Exhibits 21-B.1 and 21-B.2 did not account for 100% of traffic entering or exiting the site. More detailed cordon line graphics now appear in Appendix E which account for 100% of traffic entering or exiting the site.

9. **Modeling/ Distribution - Original Comment: Based upon a review of the model for year 2018, it appears that the trip distribution may not have been adjusted to reflect external trips only. Interaction (internal capture) between the 3 zones that represent the development result in only about 90% of the project traffic making it to the external roadway network. This may explain why the trip distribution figures do not add up to 100%.**

This distribution was applied by the applicant to the segment analysis using trip generation data that also accounted for internal capture. Therefore, if the information in the first paragraph (above) is correct, the analysis would be effectively double-counting internal capture reductions.

The 2013 model output files containing trip distribution information were not provided to FDOT to allow for review; however, it is presumed that the same issue is also occurring in the 2013 model scenario as was identified for 2018. Please adjust the 2013 model trip distribution as necessary to ensure that it is reflecting the distribution of external trips only.

10. **21-13, 21-14, 21-15 – Modeling / Distribution – Original Comment: Please provide additional information to explain the high capture of trips that is occurring immediately south of the site (in the area between Nova Road and Pine Grove Road).**

The high capture of trips that is occurring immediately south of the site is due to the fact that there is a major connection to the site and the model accordingly assigned a higher trip distribution rate.

11. **21-13, 21-14, 21-15 – Model Data - Original Comment: Within the model data, several inconsistencies were noted between the project development program and the values used in the ZDATA files.**

- **The development program shown In Table 21-A.1 indicates that there will be no office component in Phase 1. However, the table on Page 21-13 and the ZDATA 2 file in the 2013 model shows 475 service employees. Given the lack of office in Phase 1, it appears as though the service employees in the ZDATA 2 file should be zero for Phase 1.**
- **The 2018 ZDATA 1 input file shows a total single family population of 2,770. However, the calculations shown on Page 21-13 indicate that this number was supposed to be 2270. Please make the appropriate adjustments to update the ZDATA files and re-run the model.**

For the 1st Sufficiency please re-submit all revised model files, including outputs and scripts required to review and reproduce the analysis.

The development program and phase years for this submission have changed. All ZDATA files were updated accordingly and are included with this submission.
According to the ITE Trip Generation Report, a school of 970 students attracts 485 service employees. Additionally, with this 2009 submission, office was added to the Phase I development program yielding a net of 594 service employees.

The updated development program which includes 300 single family dwelling units corresponds to the single family population of 750.

12. **Tables 21-E.1 and 21-E.3 – K and D Factors Future Conditions Analysis - Original Comment: Please add two columns to Table 21-E.1 and 21-E.3 to show the "K" and "D" factors used in the calculation of the PM peak hour background volumes. Please also add a column to both tables that identifies the trip distribution percentage assigned to each roadway segment.**

Please note that for all FDOT facilities, the future conditions analysis must follow the guidance in the 2002 Quality/LOS Handbook regarding the use of minimum values for K100 (Page 67, Table 3-4), the use of a minimum D factor of 0.52 (Page 67) and the use of a maximum PHF of 0.95 (Page 68). The current analysis presented in the ADA analysis does not use minimum K&D factors.

Columns for "K", "D", and the trip distribution percentage were added to Tables 21-E.1 and 21-E.3.

The minimum values of "K" and "D" were used on all segments except for those along US 192. All future intersection analyses were adjusted to include a maximum PHF value of 0.95.

13. **Tables 21-E.1 and 21-E.3 – Future Daily Traffic Volumes - Original Comment: The background traffic volumes shown in future year segment analyses indicate a 10% to 15% decreases in traffic volume on several segments of US 192. Based upon Table 21.E-1 and 21.E-3 it appears that only model growth rates were considered in the analysis (i.e. the actual 2013 model volumes were used in the analysis instead of using existing counts grown by the appropriate model or historical growth factor). The growth rate calculations shown in Appendix E indicate that historical growth rates were supposed to be used for most of the US 192 segments to ensure that a minimum of 2% annual growth is used in the analysis per the methodology. Please revise all future year background traffic volumes such that the traffic volume growth corresponds to the rates indicated in Appendix E.**

We can find no instances in which the background traffic volumes in future year segment analyses indicated a decrease in traffic volumes. For every segment of the roadway segment analysis, a minimum 2% annual growth rate was assumed.

14. **Tables 21-E.1 and 21-E.3 – Future Peak Hour Direction Traffic Volumes - Original Comment: There appears to be some errors in the volume calculations within Tables 21-E.1 and 21-E.3 between the AADT and the calculated peak-hour/peak-direction volumes. An example location is the segment of Narcoossee Rd from 10th St to Rummel Rd. The Peak Hour, Peak Direction identified in the Table 21-E.1 is only 974 trips for an AADT is 43,441. Utilizing the FDOT minimum K and D factors the Peak Hour Peak Direction Volume should be 2,033. Please review all of the background volume calculations within the future conditions segment tables and make the necessary corrections.**

In the example provided, the AADT of 43,441 is the model background daily volume. This number is the daily volume, as predicted by the model, multiplied by the model conversion factor. The '2013 Background Volume' column was calculated using the 'Existing Background AADTs' grown by the 'Annual Growth Rate.' The annual growth rates are in Appendix F.

15. **Intersection Analysis - Original Comment: Given that other comments regarding trip distribution, pass-by volumes, and development of future intersection volumes will all**

have an impact on the intersection analysis - the FDOT will defer specific comments on the intersection impacts to the revised analysis at 1st Sufficiency. However, the following general comments were identified regarding the intersection analyses:

- **A maximum peak hour factor of 0.95 should be used for all intersections per the Q/LOS Handbook (page 68).**
  A maximum peak hour factor of 0.95 was used for all future intersection analyses.

- **Heavy vehicles and pedestrians should be included for all intersections in the analysis.**
  Heavy vehicles and pedestrians, as observed, were included in the HCS analyses.

- **Existing signal timings and phasing (based upon data from the maintaining agency, i.e. the actual signal timing sheets) shall be utilized under future conditions. If adjustments to the intersection timings or phasing are needed under the 2013 volume scenario, then an additional evaluation will be required to show the operations under the "improved" conditions. The project will be required to fund any proposed changes to signal timings or phasing as part of their mitigation.**

  The signal timings and phasing used in the intersection analyses are based on field observations which were collected over several cycles during peak hours. Because most signalized intersections analyzed are semi-actuated, it is appropriate to alter signal timings slightly to account for higher traffic volumes in future year analyses.

- **All revisions to timing and phasing (for the purposes of mitigation) assumed in the analyses along FDOT facilities, including US 192, must be consistent with FDOT policies as well as the context of the surrounding roadway system. Odd cycle lengths, such as 98 or 157 seconds are generally not used and would be only applicable under fully actuated (and non-coordinated) operations. Along US 192, the signal operations are presumed to be coordinated with a common cycle length during the p.m. peak hour.**
  Signal phasing plans and cycle lengths provided by the counties are now included in Appendix L. The future HCS analyses were revised to reflect the cycle length provided by the counties.

- **Arrival type 3 should be used for all exclusive turn lanes (since higher arrival types reflect improved platoon quality which is not applicable for the turn movements). Only the coordinated through lane groups (for example, the through movements along US 192) would have arrival types of 4.**
  The arrival type for exclusive turn lanes was changed to 3.

Within coordinated signal systems, intersection cycle lengths should be consistent – even with actuated control. Please verify the signal cycle lengths being used based upon the time of day plans from the maintaining agency for any coordinated facilities. Actual signal timings from the maintaining agencies shall be used in the analysis and must be provided

for review. Field measured timings may be shown for comparison, but should not be the primary source of timing data for the analysis.
The signal cycle lengths were verified and the analyses were changed to reflect actual signal timings from the maintaining agencies. Copies of the actual signal timings from maintaining agencies are included in Appendix L.

Please revise the existing conditions analysis and future conditions analysis to reflect the comments above. Table 21-A.3 (summary of 2008 LOS) will require updating to reflect any changes to the existing conditions analysis.
The existing and future conditions analyses were changed to reflect the comments. Table 21-A.3, Table 21-E.2, and Table 21-F.1 were changed to reflect the updated analyses.

16. **Table 21-F.1 – Intersection Significance – Original Comment: Per the ECFRPC methodology, intersection significance is tested for each individual lane group at the intersection based upon a 5% of the lane group capacity (from an HCS analysis of existing conditions). The analysis presented by the applicant in Table 21-F.1 shows only the "adverse approach". Please expand the significance test to show project significance for each of the individual lane groups, such that the projects impact to each of the study intersections is more transparent.**
Table 21-F.1 was revised to include the tests for adversity and intersection significance for intersections that contain both significant and adverse movements. An expanded version of this table which contains all study intersections is included in Appendix N.

Additionally, project significance on unsignalized intersections cannot be determined using the ECFRPC methodology. A follow-up meeting with FDOT to discuss the calculation of project significance is recommended to make sure that all parties have a common understanding of how the intersection significance will be calculated.
Noted.

17. **Table 21-F.1 and HCS Analysis – Intersections Analysis - Original Comment: In the summary of Intersection Significance in Table 21-F.1, US 192 at Pine Grove shows only the NB approach, which has no approach trips assigned to it. However the SB approach, which is carrying a significant number of project trips, is over-capacity with a LOS "F". Please revise the table to accurately reflect the project impacts.**
The revised Table 21-F.1 now includes intersections which contain both significant and adverse movements. All intersection movements are shown in the table in Appendix N.

For the evaluation of the signalized alternative at this intersection, the left-turn phasing for the mainline should be protected only and should utilize a reasonable cycle length that is consistent with FDOT policies and the upstream system in St. Cloud. A ninety second cycle length would be too short on US 192 in this area based upon feedback from FDOT traffic operations.
The eastbound and westbound left turns are protected only. The geometry of the northbound and southbound legs does allow for the permissive left movement. The cycle length for this intersection was increased to 100 seconds. This intersection would not become a part of a coordinated system as US 192/ CR 15, the nearest signalized intersection, is also not a part of a coordinated system.

18. **Table 21-F.2 - Intersections Analysis - Original Comment: In Table 21-F2, it is identified that signalization may be needed due to this project at US 192/Nova Road. The analysis should also evaluate the need for a second EB left turn lane and second receiving lane given that the project traffic will bring this movement to over 400 vehicles per hour.**

Any changes to the cycle length for future traffic conditions must utilize a reasonably cycle length that is consistent with FDOT policies and the upstream system in St. Cloud. A ninety second cycle length would be too short on US 192 in this area based upon feedback from FDOT traffic operations.
Per the updated trip generation and phase years, US 192/ Nova Rd. no longer requires a signal as a result of this project.

19. **36 - *Transportation Improvements - Original Comment: The proposed transportation* improvement at the intersection Ralph Miller Road / Narcoossee Road would place a signal approximately 300 ft from the existing signal at Rummel Road / Narcoossee Road. Additional coordination is required with the reviewing agencies regarding the applicability of signal spacing standards or to evaluate opportunities for intersection re-alignment. At a minimum, additional analysis is required to evaluate the potential interaction between these two signals – particularly related to queue storage.**

Ralph Miller will be realigned to connect to with Rummel Road and all future intersection analyses have been analyzed with this assumption.

20. **21-5 - Future Service Volume - Original Comment: Two new signals currently are proposed along US 192 (east of Narcoossee) as mitigation for Phase 1. The addition of these signals is likely to change the character of the roadway from Uninterrupted flow to an Arterial classification. This will result in a reduction in the service volumes on those segments and will need to be taken into consideration for future Phase 2 analyses.**

Per the updated trip generation and phase years, only one signal is proposed along US 192 east of Narcoossee. The predicted future volumes for the roadway segments adjacent to the intersection at US 192/ Pine Grove will operate well under the existing service volume. It is not likely that the addition of this signal will cause the surrounding roadway segments to operate adversely.

21. **Page 12 of ADA, Q1 Part 1 - Pedestrian and Bicycle Facilities - Original Comment: Under Question 1 of the ADA, the Center Lake DRI is identified as a "sustainable community" that will be "a seamless, walk-able community..." and that "All roads, paths and trails feed the Community Center..." Furthermore, as a wetland development on isolated uplands it will be, "linked to one another by a linear park along a tree lined connecting boulevard that includes a meandering pedestrian and bike trail network."**

FDOT will recommend that the development order recognize the DRI's commitment to bicycle/ pedestrian facilities and contain a condition requiring design guidelines for the pedestrian and bicycle facilities that would include requirements/ recognition for connections to external or adjacent bicycle/pedestrian facilities (including bike networks identified in the Osceola County Comprehensive plan). The design guidelines should also consider the use of canopies and shade trees along bicycle and pedestrian facilities, as well as provisions for bicycle parking at the village center, school and park sites. The development order should require commitments for the development to provide adequate bicycle parking facilities at the Community Center, elementary school, and at the parks or other potential trip generators within the community.

Noted.

22. **Multimodal Considerations - Original Comment: The current DRI plan mentions an internal system of roadways, sidewalks and bicycle facilities for the purpose of reducing traffic impacts to surrounding facilities. These options are very limited in terms of providing more viable means of transportation other than the automobile. In order to provide consistency with the Comprehensive Plan goals of providing for multi-modal opportunities for new development, the developer should coordinate with LYNX to determine whether opportunities are available for providing transit service to the proposed DRI. Pedestrian and bicycle pathways should provide easy access to a bus transportation system.**

The analysis was conducted such that it does not apply a trip reduction factor for bicycle and pedestrian facilities or for public transportation. Coordination with LYNX will occur when public transportation is implemented in this area of the county and an appropriate trip reduction factor will be applied in future analyses.

Army Corp of Engineers

Comments and Recommendations

I have reviewed the information (Center Lake ADA/DRI) package and do not have any additional questions at this time regarding wetlands or federally listed threatened or endangered species.

On a side note, I noticed in the package provided that the applicant is projecting Single family (SF) residences to have an average value of $300,000., that may be too high especially with the sales market the way it currently is? (I suspect that whoever reviews those values will notice.)

The applicant appreciates the concerns for marketability expressed by the Army Corp of Engineers. With the modified development program, updated market considerations have been included and are reflected in revised Question 11 above. The marketing information included herein is based on projections and anticipations of market conditions. These projections are subject to change as the market evolves throughout the 10 year build-out program.

Exhibit 1

Legal Description – Center Lake DRI

LOTS 4, 5, 6, 7, 8, 9, 17, 18, 19, 20, 21, 23, and 24 of FLORIDA AGRICULTURAL COMPANY'S SUBDIVISION of Section 32, Township 25 South, Range 31 East, as recorded in Plat Book A, Page 29, of the Public Records of Osceola County, Florida.

ALSO: Beginning at the Southwest corner of Lot 9 of the Florida Agricultural Company's Subdivision of Section 32 in Township 25 South, Range 31 East, and run thence West 491 feet to the East boundary line of the Kissimmee and Narcoossee Highway; thence run in a northerly direction along the East boundary line of the Kissimmee and Narcoossee Highway to a point due West of the Northwest corner of the said Lot 9; thence run due East to the Northwest corner of the said Lot 9; and thence run South along the West boundary of said Lot 9 to the Point of Beginning.

ALSO: LOT 11 of said FLORIDA AGRICULTURAL COMPANY'S SUBDIVISION as recorded in Plat Book A, Page 29, of the Public Records of Osceola County, Florida, LESS the North 323.7 ft. thereof.

ALSO: A strip of land twenty-five (25) feet in width lying between the South line of the said Florida Agricultural Company's Subdivision and a line beginning at a point on the West line of Lot 40 of Runnymede Ranchlands, Unit III, according to the plat thereof recorded in Plat Book 2, Pages 260-261, Osceola County, Florida, 0.5 feet North of the Southwest corner of said Lot 40 and running South 89° 58' 29" West along the Northerly right-of-way line of Harkley Runyan Road, a 70.5 foot right-of-way, to the Easterly right-of-way line of Narcoossee Road (State Road 15).

ALSO: The vacated 50.0 ft. platted road lying between Lots 6 and 7 on the West and Lot 8 on the East of Florida Agricultural Company's Subdivision of Section 32, Township 25 South, Range 31 East, as recorded in Plat Book A, Page 29, of the Public Records of Osceola County, Florida, per resolution recorded in O. R. Book 864, Page 1357 of the Public Records of Osceola County, Florida.

ALSO: The West one-half of the vacated platted road lying East of and contiguous to the East line of Lot 24 of Florida Agricultural Company's Subdivision of Section 32, Township 25 South, Range 31 East as recorded in Plat Book A, Page 29, of the Public Records of Osceola County, Florida, per resolution recorded in O. R. Book 106, Page 249, of the Public Records of Osceola County, Florida.

LESS THE FOLLOWING: (PARCEL 113 - NARCOOSSEE ROAD R/W)

A portion of lands described in Official Records Book 3138, Page 1935, of the Public Records of Osceola County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Lot 26, Runnymede Ranchlands Unit III, according to the plat thereof, as recorded in Plat Book 2, Pages 260 & 261, of the Public Records of Osceola County, Florida; thence North 00°00'00" East along the West line of said plat and the projection thereof, a distance of 70.50 feet to the Northwest corner of lands described in Official Records Book 1001, Page 1964, of the Public Records of Osceola County, Florida and the POINT OF BEGINNING; thence the following 4 calls along the East right of way line of Narcoossee Road (County Road 15) per Florida Department of Transportation maintained right of way map for Section 92050, as recorded in Osceola County Map Book 1, Pages 131 to 141; thence South 89°55'59" West, a distance of 7.70 feet; thence North 01°06'35" West, a distance of 122.28 feet; thence North 00°02'10" East, a distance of 78.35 feet to a point on a curve, concave to the West, having a Radius of 5769.58 feet and a Central Angle of 02°50'15"; thence run Northwesterly along the Arc of said curve, a distance of 285.74 feet (Chord Bearing = North 01°22'58" West, Chord Distance = 285.71 feet) to the end of said curve and to a point on the North line of lands described in Official Records Book 3138, Page 1935, of the Public Records of Osceola County, Florida; thence departing said East right of way line, North 89°57'31" East along said North line, a distance of 37.34 feet to a point on a non-tangent

curve, concave to the West, having a Radius of 11627.89 feet and a Central Angle of 01°19'54"; thence departing said North line, run Southeasterly along the Arc of said curve, a distance of 270.24 feet (Chord Bearing = South 00°38'47" East, Chord Distance = 270.23 feet) to the end of said curve; thence South 00°01'10" West, a distance of 216.01 feet to a point on the North line of lands described in Official Records Book 1001, Page 1964, of the Public Records of Osceola County, Florida; thence South 89°55'58" West along said North line, a distance of 23.40 feet to the POINT OF BEGINNING.

LESS THE FOLLOWING:

EXCHANGE PARCEL

A parcel of land being a portion of Section 32, Township 25 South, Range 31 East, Osceola County, Florida and being more particularly described as follows: Commence at the Northwest corner of Lot 26, RUNNYMEDE RANCHLANDS UNIT III, according to the plat thereof, as Recorded in Plat Book 2, Pages 260 & 261 of the Public Records of Osceola County, Florida; thence run N00°00'00"E, a distance of 70.50 feet; thence run N89°55'59"E, a distance of 23.40 feet to a point on the East Right of Way line of Narcoossee Road; thence along said East Right of Way line the following four (4) courses and distances; thence run N00°01'10"E, a distance of 216.01 feet to the Point of Curvature of a curve, concave to the West, having a Radius of 11,627.89 feet and a Central Angle of 00°18'40"; thence run Northerly along the Arc of said curve, a distance of 63.13 feet (Chord Bearing = N00°08'10"W, Chord = 63.13 feet) to a point; thence continue Northerly along the Arc of said 11,627.89 foot Radius curve, through a Central Angle of 00°23'39", a distance of 79.99 feet (Chord Bearing = N00°29'19"W, Chord = 79.99 feet) to the Point of Beginning; thence continue Northerly along the Arc of said 11,627.89 foot Radius curve, through a Central Angle of 00°37'35", a distance of 127.12 feet (Chord Bearing = N00°59'56"W, Chord = 127.11 feet) to a point; thence departing said East Right of Way line run N89°57'01"E, a distance of 381.27 feet; thence run S45°10'28"E, a distance of 7.99 feet to a point on a non-tangent curve, concave to the West, having a Radius of 12,014.61 feet and a Central Angle of 00°34'46"; thence run Southerly along the Arc of said curve, a distance of 121.51 feet (Chord Bearing = S00°57'17"E, Chord = 121.51 feet) to a point; thence run S44°39'50"W, a distance of 21.11 feet; thence run S89°57'31"W, a distance of 356.73 feet; thence run N45°20'44"W, a distance of 21.32 feet to the Point of Beginning.

SUBJECT TO THE FOLLOWING:

ACCESS EASEMENT

A parcel of land being a portion of Section 32, Township 25 South, Range 31 East, Osceola County, Florida and being more particularly described as follows: Commence at the Northwest corner of Lot 26, RUNNYMEDE RANCHLANDS UNIT III, according to the plat thereof, as Recorded in Plat Book 2, Pages 260 & 261 of the Public Records of Osceola County, Florida; thence run N00°00'00"E, a distance of 70.50 feet; thence run N89°55'59"E, a distance of 23.40 feet to a point on the East Right of Way line of Narcoossee Road; thence along said East Right of Way line the following three (3) courses and distances; thence run N00°01'10"E, a distance of 216.01 feet to the Point of Curvature of a curve, concave to the West, having a Radius of 11,627.89 feet and a Central Angle of 00°18'40"; thence run Northerly along the Arc of said curve, a distance of 63.13 feet (Chord Bearing = N00°08'10"W, Chord = 63.13 feet) to the Point of Beginning; thence continue Northerly along the Arc of said 11,627.89 foot Radius curve, through a Central Angle of 00°23'39", a distance of 79.99 feet (Chord Bearing = N00°29'19"W, Chord = 79.99 feet) to a point; thence departing said East Right of Way line, run S45°20'44"E, a distance of 21.32 feet; thence run N89°57'31"E, a distance of 356.73 feet; thence run N44°39'50"E, a distance of 21.11 feet to a point on a non-tangent curve, concave to the West, having a Radius of 12,014.61 feet and a Central Angle of 00°34'46"; thence run Northerly along the Arc of said curve, a distance of 121.51 feet (Chord Bearing = N00°57'17"W, Chord = 121.51 feet) to a point; thence run N45°10'28"W, a distance of 7.99 feet; thence run N89°57'01"E, a distance of 62.06 feet; thence run S44°57'20"W, a distance of 9.02 feet to a point on a non-tangent curve, concave to the West, having a Radius of 12,064.61 feet and a Central Angle of 00°52'56"; thence run Southerly along the Arc of said curve, a distance of 185.77 feet (Chord Bearing =

S00°47'41"E, Chord = 185.77 feet) to a point; thence run S89°57'31"W, a distance of 421.72 feet; thence run S44°48'52"W, a distance of 21.16 feet to the Point of Beginning.

SIGN TRACT"A"

A parcel of land being a portion of Section 32, Township 25 South, Range 31 East, Osceola County, Florida and being more particularly described as follows: Commence at the Northwest corner of Lot 26, RUNNYMEDE RANCHLANDS UNIT III, according to the plat thereof, as Recorded in Plat Book 2, Pages 260 & 261 of the Public Records of Osceola County, Florida; thence run N00°00'00"E, a distance of 70.50 feet; thence run N89°55'59"E, a distance of 23.40 feet to a point on the East Right of Way line of Narcoossee Road; thence along said East Right of Way line the following three (3) courses and distances; thence run N00°01'10"E, a distance of 216.01 feet to the Point of Curvature of a curve, concave to the West, having a Radius of 11,627.89 feet and a Central Angle of 01°19'54"; thence run Northerly along the Arc of said curve, a distance of 270.24 feet (Chord Bearing = N00°38'47"W, Chord = 270.24 feet) to the Point of Beginning; thence continue Northerly along said East Right of Way line and along said curve having a Radius of 11,627.89 feet through a Central Angle of 00°00'21", for a distance of 1.18 feet (Chord Bearing = N01°18'53"W, Chord = 1.18 feet) to a point; thence run N45°00'00"E, a distance of 41.73 feet; thence run S89°02'27"E, a distance of 3.00 feet; thence run S00°00'00"E, a distance of 11.09 feet; thence run S45°00'00"W, a distance of 27.62 feet; thence run S89°57'01"W, a distance of 12.95 feet to the Point of Beginning.

SIGN TRACT"B"

A parcel of land being a portion of Section 32, Township 25 South, Range 31 East, Osceola County, Florida and being more particularly described as follows: Commence at the Northwest corner of Lot 26, RUNNYMEDE RANCHLANDS UNIT III, according to the plat thereof, as Recorded in Plat Book 2, Pages 260 & 261 of the Public Records of Osceola County, Florida; thence run N00°00'00"E, a distance of 70.50 feet; thence run N89°55'59"E, a distance of 23.40 feet to a point on the East Right of Way line of Narcoossee Road; thence along said East Right of Way line the following five (5) courses and distances; thence run N00°01'10"E, a distance of 216.01 feet to the Point of Curvature of a curve, concave to the West, having a Radius of 11,627.89 feet and a Central Angle of 01°19'54"; thence run Northerly along the Arc of said curve, a distance of 270.24 feet (Chord Bearing = N00°38'47"W, Chord = 270.24 feet) to a point; thence continue Northerly along said East Right of Way line and along said curve having a Radius of 11,627.89 feet through a Central Angle of 00°00'21", for a distance of 1.18 feet (Chord Bearing = N01°18'53"W, Chord = 1.18 feet) to a point; thence continue Northerly along said East Right of Way line and along said curve having a Radius of 11,627.89 feet through a Central Angle of 00°51'20", for a distance of 173.63 feet (Chord Bearing = N01°44'44"W, Chord = 173.63 feet) to the Point of Beginning; thence continue Northerly along said East Right of Way line and along said curve having a Radius of 11,627.89 feet through a Central Angle of 00°00'21", for a distance of 1.18 feet (Chord Bearing = N02°10'34"W, Chord = 1.18 feet) to a point; thence departing said East Right of Way line, run N88°25'48"E, a distance of 12.97 feet; thence run S46°34'12"E, a distance of 28.73 feet; thence run S01°34'12"E, a distance of 11.17 feet; thence run S88°57'33"W, a distance of 3.00 feet; thence run N46°34'12"W, a distance of 42.82 feet to the Point of Beginning.

AND

Beginning at the Southwest corner of Lot 4, FLORIDA AGRICULTURE COMPANY'S SUBDIVISION, according to the Official Plat thereof as recorded in Plat Book "A", Page 29, of the Public Records of Osceola County, Florida, run West 330.0 feet; thence run North 660.0 feet; thence east 330.0 feet; thence run South 660.0 feet to the Point of Beginning, Less road right of way on the North.

AND
Lots 1, 2, 3, 4, 5, 6, 7, 9, 10, 16, 17, 18, 25, 26, 27, 28, 29, 30, 31, and 32, W. S. ALYEA'S SUBDIVISION, according to the plat thereof, as recorded in Plat Book 1, Page 69, Public Records of Osceola County, Florida.

AND
The South 1/2 of Section 27, Township 25 South, Range 31 East, Osceola County, Florida.
AND
The South 1/2 of Section 28, Township 25 South, Range 31 East, Osceola County, Florida.
AND
The Southeast 1/4 of Section 29, Township 25 South, Range 31 East, Osceola County, Florida.
AND
The South 1/2 and the Northeast 1/4 of Section 33, Township 25 South, Range 31 East, Osceola County, Florida.
AND
ALL of Section 34, Township 25 South, Range 31 East, lying Northerly of State Road S- 532 (Nova Road) Osceola County, Florida;
AND
Lot 19, Starline Estates Unit Two. Plat Book 2, Page 220, Public Records of Osceola County, Florida.

LESS AND EXCEPT: Lands set forth on the Plat of SHELTER COVE CONDOMINIUM, according to Condominium Book 1, Pages 20 through 33, Public Records of Osceola County, Florida; said lands are also described in Warranty Deed recorded in Official Records Book 224, Page 343.

PROPOSED VACATING OF A PORTION OF RALPH MILLER ROAD

That portion of Ralph Miller Road (being a full right of way width) lying south of Lot 21 and Lot 8, Florida Agricultural Company's Subdivision as per plat thereof as recorded in Plat Book "A", Page 29 of the Public Records of Osceola County, Florida.

Together with:

That portion of Ralph Miller Road (being a half right of way width) lying south of Lot 19, Florida Agricultural Company's Subdivision as per plat thereof as recorded in Plat Book "A", Page 29 of the Public Records of Osceola County, Florida.

Together with:

That portion of Ralph Miller Road described as follows: Begin at the Southwest corner of Lot 21, Florida Agricultural Company's Subdivision as per plat thereof as recorded in Plat Book "A", Page 29 of the Public Records of Osceola County, Florida and run Southwesterly to the Northeast corner of Lot 6, of the aforesaid Florida Agricultural Company's Subdivision; thence run Easterly along the Southerly right of way line of Ralph Miller Road to the Northwest corner of Lot 8; thence run Northerly for 50 feet to the Point of Beginning.

Vanasse Hangen Brustlin, Inc.
Attn: Anthony S. Call, P.E, Leed A P
225 E. Robinson Street, Suite 300
Orlando, FL. 32801

REF: Center Lake DRI / 61035. 01

Dear Mr. Call,

Pursuant to F.S. 380.06, concerning waste generations for your Center Lake D.R.I. Project, per our "Solid Waste Agreement "dated March 25th, 2002 and Board approved CU-00-0035, dated June 27th 2001, Omni Landfill, aka J.E.D. Solid Waste Facility, guarantees Osceola County 30 years of landfill capacity. This capacity is strictly reserved for the county's use. This guarantee was based on current Class 1 refuse volumes with normal growth figured in. Therefore, this capacity provides for present and future waste disposal service for your project.

Sincerely,

A Daniel Sheaffer
Director of Solid Waste
Osceola County
Kissimmee, Fl. 34746
407-962-1102
dshe@osceola.org

ECFRPC DRI Housing Demand Calculation Model

>> Just fill in the purple cells in Rows 4 and 31 and the purple column. All other numbers have been updated for you. <<

MODEL: OSCEOLA COUNTY **2008** **Median Income $59,200**

Very Low: less than $29,600 | Low: $29,600 to $47,360 | Moderate: $47,360 to $71,040

Land Use: Ret&Off | NAICS Code: 44-45 | Avg. Wage: $25,720 | Quarter: 3rd 2007 | (SEE NOTE BELOW)

Income Group	Wage Ranges Low	Wage Ranges High	Midpoint	Number of Employees	Total Wages	Heads of Household	Single Worker HHs	HH Income	2-Worker HHs	HH Income	3+ Worker HHs	HH Income
Very Low	$14,123	$17,499	$15,811	20	$316,220	7	4	$15,811	3	$27,527	1	$35,148
	$17,500	$19,999	$18,750	44	$824,978	16	8	$18,750	7	$32,643	1	$41,680
	$20,000	$22,499	$21,250	56	$1,189,972	21	10	$21,250	9	$36,995	2	$47,238
	$22,500	$24,999	$23,750	24	$569,988	9	4	$23,750	4	$41,348	1	$52,795
	$25,000	$27,499	$26,250	53	$1,391,224	20	10	$26,250	8	$45,700	2	$58,353
	$27,500	$29,599	$28,550	67	$1,912,817	25	12	$28,550	10	$49,705	2	$63,466
Low	$29,600	$32,499	$31,050	89	$2,763,406	49	19	$31,050	22	$54,057	8	$69,023
	$32,500	$34,999	$33,750	127	$4,286,187	70	27	$33,750	31	$58,758	12	$75,025
	$35,000	$37,499	$36,250	79	$2,863,711	44	17	$36,250	20	$63,110	7	$80,583
	$37,500	$39,999	$38,750	95	$3,681,203	53	20	$38,750	23	$67,463	9	$86,140
	$40,000	$42,499	$41,250	31	$1,278,735	17	7	$41,250	8	$71,815	3	$91,698
	$42,500	$44,999	$43,750	24	$1,049,988	13	5	$43,750	6	$76,168	2	$97,255
	$45,000	$47,359	$46,180	12	$554,154	7	3	$46,180	3	$80,399	1	$102,657
Moderate	$47,360	$49,999	$48,680	7	$340,757	5	2	$48,680	2	$84,751	1	$108,215
	$50,000	$52,499	$51,250	5	$256,248	3	1	$51,250	2	$89,225	1	$113,928
	$52,500	$54,999	$53,750	5	$268,748	3	1	$53,750	2	$93,578	1	$119,485
	$55,000	$57,499	$56,250	5	$281,248	3	1	$56,250	2	$97,930	1	$125,043
	$57,500	$59,999	$58,750	5	$293,748	3	1	$58,750	2	$102,283	1	$130,600
	$60,000	$62,499	$61,250	2	$122,499	1	0	$61,250	1	$106,635	0	$136,158
	$62,500	$64,999	$63,750	2	$127,499	1	0	$63,750	1	$110,988	0	$141,715
	$65,000	$67,499	$66,250	2	$132,499	1	0	$66,250	1	$115,340	0	$147,273
	$67,500	$71,039	$69,270	0	$0	0	0	$69,270	0	$120,598	0	$153,986
	$71,040	$72,499	$71,770	2	$143,539	2	1	$71,770	1	$124,951	0	$159,544
(A) Total employees and wages of this model:				636	$24,649,362	329	131		151		52	
(B) Total wages of 1000 employees at			$25,720	636	$16,357,920		Total wages plus 10%:		$17,993,712			

NOTE:

Source: Employment based on QCEW (ES-202) data from Agency for Workforce Housing

Rj WHIDDEN and
ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS
22 West Monument Avenue, Suite 4
Kissimmee, Florida 34741
Phone: 407.846.1880
Fax: 407.846.8829
Email: bob@rjwhidden.com

January 8, 2010

Mr. Bob Hansell, Sheriff
Osceola County Sheriff's Department
2601 East Irlo Bronson Memorial Highway
Kissimmee, Florida 34744

Re: **Center Lake DRI Application**
Question 25– Police and Fire Protection

Dear Mr. McAvoy:

This additional request for service is based on a modified development program due to an addition of 134.10 acres of land lying westerly and adjacent to the original DRI boundary being included in the Center Lake DRI.

The **Center Lake DRI** is proposed as a mixed use residential project consisting of approximately 2012.5 acres of land located within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25 South, Range 31 East of Osceola County, Florida. The site is located within an area of Osceola County referred to as Narcoossee that lies east of Narcoossee Road, west of Nova Road and south of Jones Road. It is bounded on the north by Starline Estates - Unit Two and by property owned by Deseret Farms. Lake Center and County Road 532 (Nova Road) form much of the east boundary. Harkley Runyun Road, Runnymede Ranch Land Unit Three and the south lines of said Sections 33, 34 and a portion of Section 32 form the south boundary. Narcoossee Road and vacant commercial land uses form part of the west boundary at the project's entrance. The project is planned for a total of 3,373 residential units (1,028 single family, 2,345 multi-family) 70,000 sf of office use, 170,000 sf of retail/service use, 10,000 sf of civic use, 30,000 sf of community facilities to include a pedestrian and bicycle network, pocket parks, community sports park and institutional uses included within a mixed-use community center and neighborhood center.

In order to comply with the requirements of F.S. 380.06, Question 25, of the DRI application for the **Center Lake DRI** project, we are requesting a letter from your facility. Your letter needs to state the following:

- acknowledge notice of the proposed development, and;
- indicate whether present facilities and manpower are capable of serving the project or
- specify the additional manpower/equipment necessary to serve the project

Attached is a copy of the Proposed Development Program for the **Center Lake DRI.** Please direct your letter to the undersigned at the above business address. If you have any questions, please contact our office at any time. You may fax your response directly to 407-846-8829.

Respectfully yours,

Rj Whidden and Associates, Inc.

Rj Whidden, President

CENTER LAKE DRI

The **Center Lake DRI** is proposed to be developed in two phases over a period of ten years. Construction is anticipated to commence in 2011 with completion anticipated in 2020.

Proposed Development Program by Phase

Map H Concept Plan	Land Use	FAC 28-24.	Phase 1 20011 - 2014	Phase 2 2015-2020	Total Build-Out
SFR (1)	RES	.028	300 du	728 du	1028 sfr dus
MFR (2)	RES	.028	882 du	1463 du	2345 mfr dus
Community & Neighborhood Center	Retail / Service	.031	60,000 sf	110,000 sf	170,000 sf
Community & Neighborhood Center	Office	.020	30,000 sf	40,000 sf	70,000 sf
Neighborhood Center	Civic	N/A	10,000 sf	-0-	10,000 sf
Neighborhood Center	Community	N/A	30,000 sf	-0-	30,000 sf
1 Elem. School	Institutional	.024	970 Students	N/A	970 Students

1. 1,028 single family units include conventional detached single family and detached cluster/courtyard homes.

2. 2,345 multifamily units include apartments, rentals, condominiums, town homes and attached cluster/courtyard homes. Approximately 130 multifamily units are anticipated within the Community Center. Approximately 170 multifamily units are anticipated within the Neighborhood Center. Approximately 2,045 mixed multifamily units are anticipated within the remaining residential neighborhoods in the development.

3. The multifamily units within the Community Center and the Neighborhood Center referenced above are a residential workforce component that is part of the community concept.

Rj WHIDDEN and
ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS
22 West Monument Avenue, Suite 4
Kissimmee, Florida 34741
Phone: 407.846.1880
Fax: 407.846.8829
Email: bob@rjwhidden.com

January 8, 2010

Deputy Chief Daniel G. McAvoy
Osceola County Fire Rescue & EMS
320 N. Beaumont Avenue
Kissimmee, Florida 34741

Re: **Center Lake DRI Application**
Question 25– Police and Fire Protection

Dear Mr. McAvoy:

This additional request for service is based on a modified development program due to an addition of 134.10 acres of land lying westerly and adjacent to the original DRI boundary being included in the Center Lake DRI.

The **Center Lake DRI** is proposed as a mixed use residential project consisting of approximately 2012.5 acres of land located within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25 South, Range 31 East of Osceola County, Florida. The site is located within an area of Osceola County referred to as Narcoossee that lies east of Narcoossee Road, west of Nova Road and south of Jones Road. It is bounded on the north by Starline Estates - Unit Two and by property owned by Deseret Farms. Lake Center and County Road 532 (Nova Road) form much of the east boundary. Harkley Runyun Road, Runnymede Ranch Land Unit Three and the south lines of said Sections 33, 34 and a portion of Section 32 form the south boundary. Narcoossee Road and vacant commercial land uses form part of the west boundary at the project's entrance. The project is planned for a total of 3,373 residential units (1,028 single family, 2,345 multi-family) 70,000 sf of office use, 170,000 sf of retail/service use, 10,000 sf of civic use, 30,000 sf of community facilities to include a pedestrian and bicycle network, pocket parks, community sports park and institutional uses included within a mixed-use community center and neighborhood center.

In order to comply with the requirements of F.S. 380.06, Question 25, of the DRI application for the **Center Lake DRI** project, we are requesting a letter from your facility. Your letter needs to state the following:

- acknowledge notice of the proposed development, and;
- indicate whether present facilities and manpower are capable of serving the project or
- specify the additional manpower/equipment necessary to serve the project

Attached is a copy of the Proposed Development Program for the **Center Lake DRI.** Please direct your letter to the undersigned at the above business address. If you have any questions, please contact our office at any time. You may fax your response directly to 407-846-8829.

Respectfully yours,

Rj Whidden and Associates, Inc.

Rj Whidden, President

CENTER LAKE DRI

The **Center Lake DRI** is proposed to be developed in two phases over a period of ten years. Construction is anticipated to commence in 2011 with completion anticipated in 2020.

Proposed Development Program by Phase

Map H Concept Plan	Land Use	FAC 28-24.	Phase 1 20011 - 2014	Phase 2 2015-2020	Total Build-Out
SFR (1)	RES	.028	300 du	728 du	1028 sfr dus
MFR (2)	RES	.028	882 du	1463 du	2345 mfr dus
Community & Neighborhood Center	Retail / Service	.031	60,000 sf	110,000 sf	170,000 sf
Community & Neighborhood Center	Office	.020	30,000 sf	40,000 sf	70,000 sf
Neighborhood Center	Civic	N/A	10,000 sf	-0-	10,000 sf
Neighborhood Center	Community	N/A	30,000 sf	-0-	30,000 sf
1 Elem. School	Institutional	.024	970 Students	N/A	970 Students

1. 1,028 single family units include conventional detached single family and detached cluster/courtyard homes.
2. 2,345 multifamily units include apartments, rentals, condominiums, town homes and attached cluster/courtyard homes. Approximately 130 multifamily units are anticipated within the Community Center. Approximately 170 multifamily units are anticipated within the Neighborhood Center. Approximately 2,045 mixed multifamily units are anticipated within the remaining residential neighborhoods in the development.
3. The multifamily units within the Community Center and the Neighborhood Center referenced above are a residential workforce component that is part of the community concept.

Rj WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS
22 West Monument Avenue, Suite 4
Kissimmee, Florida 34741
Phone: 407.846.1880
Fax: 407.846.8829
Email: bob@rjwhidden.com

January 8, 2010

Orlando Regional Healthcare – Orlando Regional St. Cloud Hospital
2906 17th Street
Saint Cloud, Florida 34769
Ph: 407 892 2135

Re: **Center Lake DRI Application**
Question 28– Health Care

Dear Mr. Aanonson:

This additional request for service is based on a modified development program due to an addition of 134.10 acres of land lying westerly and adjacent to the original DRI boundary being included in the Center Lake DRI.

The **Center Lake DRI** is proposed as a mixed use residential project consisting of approximately 2012.5 acres of land located within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25 South, Range 31 East of Osceola County, Florida. The site is located within an area of Osceola County referred to as Narcoossee that lies east of Narcoossee Road, west of Nova Road and south of Jones Road. It is bounded on the north by Starline Estates - Unit Two and by property owned by Deseret Farms. Lake Center and County Road 532 (Nova Road) form much of the east boundary. Harkley Runyun Road, Runnymede Ranch Land Unit Three and the south lines of said Sections 33, 34 and a portion of Section 32 form the south boundary. Narcoossee Road and vacant commercial land uses form part of the west boundary at the project's entrance. The project is planned for a total of 3,373 residential units (1,028 single family, 2,345 multi-family) 70,000 sf of office use, 170,000 sf of retail/service use, 10,000 sf of civic use, 30,000 sf of community facilities to include a pedestrian and bicycle network, pocket parks, community sports park and institutional uses included within a mixed-use community center and neighborhood center.

In order to comply with the requirements of F.S. 380.06, Question 28, of the DRI application for the **Center Lake DRI** project, we are requesting a letter from your facility. Your letter needs to state the following:

- acknowledge notice of the proposed development, and;
- indicate whether present facilities and manpower are capable of serving the project or
- specify the additional manpower/equipment necessary to serve the project

Attached is a copy of the Proposed Development Program for the **Center Lake DRI.** Please direct your letter to the undersigned at the above business address. If you have any questions, please contact our office at any time. You may fax your response directly to 407-846-8829.

Respectfully yours,

Rj Whidden and Associates, Inc.

Rj Whidden, President

CENTER LAKE DRI

The **Center Lake DRI** is proposed to be developed in two phases over a period of ten years. Construction is anticipated to commence in 2011 with completion anticipated in 2020.

Proposed Development Program by Phase

Map H Concept Plan	Land Use	FAC 28-24.	Phase 1 20011 - 2014	Phase 2 2015-2020	Total Build-Out
SFR (1)	RES	.028	300 du	728 du	1028 sfr dus
MFR (2)	RES	.028	882 du	1463 du	2345 mfr dus
Community & Neighborhood Center	Retail / Service	.031	60,000 sf	110,000 sf	170,000 sf
Community & Neighborhood Center	Office	.020	30,000 sf	40,000 sf	70,000 sf
Neighborhood Center	Civic	N/A	10,000 sf	-0-	10,000 sf
Neighborhood Center	Community	N/A	30,000 sf	-0-	30,000 sf
1 Elem. School	Institutional	.024	970 Students	N/A	970 Students

1. 1,028 single family units include conventional detached single family and detached cluster/courtyard homes.
2. 2,345 multifamily units include apartments, rentals, condominiums, town homes and attached cluster/courtyard homes. Approximately 130 multifamily units are anticipated within the Community Center. Approximately 170 multifamily units are anticipated within the Neighborhood Center. Approximately 2,045 mixed multifamily units are anticipated within the remaining residential neighborhoods in the development.
3. The multifamily units within the Community Center and the Neighborhood Center referenced above are a residential workforce component that is part of the community concept.

Transportation
Land Development
Environmental
Services

imagination | innovation | energy Creating results for our clients and benefits for our communities

January 13, 2010

Vanasse Hangen Brustlin, Inc.

Ref: 61035.01

Mr. Todd Swingle, P.E.
Director of Environmental Utilities
1300 Ninth Street
St. Cloud, FL 34769

Re: City of St Cloud Excess Capacity – Potable Water, Wastewater, Reclaimed Water

Dear Mr. Swingle,

Vanasse Hangen Brustlin, Inc. (VHB) is working in conjunction with RJ Whidden and Associates, Inc. as Agent for Pineloch Management Corporation to provide information for Center Lake Development of Regional Impact (DRI) Application for Development Approval (ADA) to Florida Department of Community Affairs. We are writing this letter to request information in support of the DRI Application.

The Center Lake DRI is proposed as a mixed use residential project consisting of approximately 2,012.5 acres of land located within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25S, Range 31E of Osceola County, Florida. More specifically, the project is located within an area of Osceola County referred to as Narcoossee that lies east of Narcoossee Road, west of Nova Road and south of Jones Road.

In brief, the mixed-use Center Lake DRI is proposed for a maximum of 3,373 mixed residential units, a mixed-use Community Center that includes retail-service, office, civic and community centers, an elementary school, a community sports park, pocket parks. The project is a two-phase DRI with commencement anticipated in 2011 and completion projected in 2020.

The tables below provide projections of the average daily water demand, irrigation (reclaimed) demand, and average daily wastewater generation for the project. As required by the DRI application process, I am submitting the following data for your review and response.

Landmark Center Two
225 E. Robinson Street, Suite 300
Orlando, Florida 32801
407.839.4006 ▪ FAX 407.839.4008
email: info@vhb.com
www.vhb.com

Table 17-1
Projection of Potable and Non-Potable Water Demands

Land Use	Development Program	Potable Water Demand (MGD)	Non-Potable Water Demand (MGD)		Total Water Demand (MGD)
			Irrigation	Other	
Phase One (2009-2013)					
Residential	300 mixed sfr	0.080	0.016	0	0.096
Residential	882 mixed mfr	0.236	0.047	0	0.283
Retail / Service	60,000 sf	0.006	0.003	0	0.009
Office	30,000 sf	0.003	0.002	0	0.005
Civic	10,000 sf	0.001	0.001	0	0.002
Community	30,000 sf	0.003	0.002	0	0.005
Institutional	970 students	0.010	0.015	0	0.025
Recreation	Clubhouse/Parks	0.001	0.030	0	0.031
	Subtotal:	**0.340**	**0.116**	**0**	**0.456**

Land Use	Development Program	Potable Water Demand (MGD)	Non-Potable Water Demand (MGD)		Total Water Demand (MGD)
			Irrigation	Other	
Phase Two (2014 - 2018)					
Residential	728 mixed sfr	0.195	0.039	0	0.234
Residential	1463 mixed mfr	0.392	0.078	0	0.470
Retail / Service	110,000 sf	0.011	0.004	0	0.015
Office	40,000 sf	0.004	0.003	0	0.007
Recreation	Clubhouse/Parks	0.001	0.037	0	0.038
	Subtotal:	**0.603**	**0.161**	**0**	**0.764**

Grand Total:	**0.943**	**0.277**	**0**	**1.220**

Table 17-1a
Calculation Basis for Potable and Non-Potable Water Demands

Water Demand Calculations		Irrigation Demand Calculations:		
		Residential areas:		
Type of Establishment:	***Potable Demand***	# of detached dwellings:	3,073 du	
Single-Family Residential	96 gpd/capita	Total area of lots:	13,934,844 S.F.	
Multi-Family Residential	96 gpd/capita	Building pad S.F. per lot	1,200 S.F./du	
		Impervious area:	3,687,600 S F	
Commercial:		Pervious area:	10,247,244 S F	
Retail Service	0 1 gpd/gross s f	Driveway, sidewalk, patio	2,049,449 S F	
Office/Civic/Community	0 1 gpd/gross s.f	*Total Pervious Area*	*188.20 acres*	
		Irrigated area (25% perv):	47.05 acres	
Schools	10 gpd/student	***School area:***		
		Total area:	12.80	acres
Recreation		*70% Pervious area:*	*3.84*	*acres*
2000 Census : Osceola 2 79 persons/household		***Office/Retail areas:***		
		Total area:	11.6	acres
		Assume 80% Pervious area:	*2.32*	*acres*
		Parks and Recreation areas:		
		Total Park	*175 9*	*acres*
		50% active parks	*87 95*	*acres*
		20% active parks irrigated	17 59	acres
		Irrigation amounts based upon Blaney-Criddle Eqn. for pervious areas (green space) within site		

Table 17-1and 17-1a is based upon Average Daily Flows. The water consumption rates are consistent with Osceola County and with the City of St. Cloud, Florida. Consumption rates used for these calculations are summarized in the above table The table has been modified to reflect the revised development plan. In addition, the table now shows water demand calculations based upon the level of service (LOS) standards published in the Osceola County Comprehensive Plan, Potable Water Element

Who will operate and maintain the internal water supply system after completion of the development?

*It is the applicant's intent for the operation and maintenance of the internal water supply infrastructure to be the responsibility of the City of St. Cloud – **Please confirm**.*

If an off-site water supply is planned, attach a letter from the agency or firm providing service outlining:

(a) **The projected excess capacities of the water supply facilities to which connection will be made at present and for each phase through completion of the project,**

(b) **Any other commitments that have been made for this excess capacity,**

(c) **A statement of the agency or firm's ability to provide services at all times during and after development.**

Table 18-1
Wastewater Generation Projections

Land Use	Development Program	Generation Rate Factor	Wastewater Treatment ADF (MGD)	
			On-Site	Off-Site
Phase One 2009-2013				
Residential	300 mixed sfr	265 gpd/du	0	0.080
Residential	882 mixed mfr	265 gpd/du	0	0.234
Retail / Service	60,000 sf	125 gpd/s.f.	0	0.006
Office	30,000 sf	17.65 gpd/100sf	0	0.003
Civic	10,000 sf	17.65 gpd/100sf	0	0.001
Community	30,000 sf	17.65 gpd/100sf	0	0.003
Institutional	970 students	11.77 gpd/student	0	0.010
Recreational	Clubhouse/Parks		0	0.001
Subtotal:			**0**	**0.338**

Land Use	Development Program	Generation Rate Factor	Wastewater Treatment ADF (MGD)	
			On-Site	Off-Site
Phase Two 2014 – 2018				
Residential	728 mixed sfr	265 gpd/du	0	0.193
Residential	1463 mixed mfr	265 gpd/du	0	0.388
Retail / Service	100,000 sf	125 gpd/s.f.	0	0.011
Office	40,000 sf	17.65 gpd/100sf	0	0.004
Recreation	Clubhouse/Parks		0	0.001
Subtotal:			**0**	**0.597**

Grand Total:		**0**	**0.935**

It is anticipated that wastewater treatment will be provided by the City of St Cloud - Please Confirm.

Given the information above, can you please respond via letter to the following questions?

What is projected excess capacity of the wastewater facilities that would be selected to provide water, wastewater and reclaimed service for this project?

Have any other commitments been made for the available wastewater capacity?

Will the City of St. Cloud be able to provide service at all times during and after development based on the information provided in the above tables?

Please forward the letter to me at the address listed above. If you should have any questions please contact me at (407) 839-4006, or email to me at acall@vhb.com.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC

Anthony S. Call

Anthony S. Call, P.E., LEED A.P.
Project Engineer

cc: John Adams, RJ Whidden and Associates
Richard Gonzalez, Pineloch Management

CENTER LAKE
DEVELOPMENT OF REGIONAL IMPACT

HABITAT MANAGEMENT PLAN

Prepared by:
Modica & Associates, Inc.
302 Mohawk Rd.
Clermont, FL 34715
352.394.2000

Prepared for:
Pineloch Management
102 West Pineloch Street, Suite 10
Orlando, FL 32806-6133

January 2010

CENTER LAKE
DEVELOPMENT OF REGIONAL IMPACT

HABITAT MANAGEMENT PLAN

EXECUTIVE SUMMARY

The Center Lake Development of Regional Impact (DRI) is a proposed mixed-use residential project situated on a 2,012.50-acre property generally located east of Narcoossee Road (SR 15), west of Nova Road (CR 532) and south of Jones Road. The property lies within Sections 27, 28, 29, 32, 33, 34 and 35 of Township 25 South, Range 31 East, in Osceola County, Florida (**Figure 1**). The property is surrounded by varying densities of residential uses, agricultural uses and commercial uses along the Narcoossee corridor.

Lake Center is located along the northeastern boundary of the Center Lake DRI project area. The extensive on-site wetlands are associated with Lake Center, which is part of the Alligator Chain of Lakes. This regional system is part of a "Priority Ecological Greenway" identified by the Florida Greenways and Trails Council that connects to the northeast with the headwaters of the Econlockhatchee River. Preservation and management habitat within this significant area is important for wildlife conservation and for water quality. The Center Lake DRI lies east of East Lake Tohopekaliga. Given the project's close proximity to this lake, this HMP was developed with consideration of the *Summary of Findings and Development Order Recommendations From the Lake Tohopekaliga Environmental Working Group* (Glatting 2006).

In preparation for the DRI review process, Modica & Associates, Inc. conducted numerous surveys throughout the Center Lake DRI property to document the presence of listed plant and wildlife species. Several species-specific surveys were conducted for protected wildlife species. Additionally, the jurisdictional wetland boundaries were established and reviewed by the South Florida Water Management District (SFWMD) and the U.S. Army Corps of Engineers (USACOE). The Center Lake DRI Concept Plan has been designed to avoid impacts to significant and unique natural resources, to protect and manage certain listed species, and to incorporate these unique characteristics into the master plan as amenities for the enjoyment and benefit of the community.

The Center Lake DRI is planned as a mixed-use community. The site plan has been designed with residential villages to be built on "islands" of development primarily in existing impacted areas of the property and surrounded by continuous, expansive conservation areas. Development of the Center Lake DRI Habitat Management Plan (HMP) is necessary to provide protection measures, monitoring guidelines and management techniques to preserve the ecological integrity and viability of the remaining on-site preservation areas and listed species of wildlife that inhabit, or have potential to inhabit these areas. The overall goal of the Center Lake HMP is to create a management

tool to outline goals and objectives that will provide and maintain perpetual upland and wetland habitat for optimal use by wildlife.

The Center Lake DRI project site contains approximately 1,046.69± acres of wetlands, consisting of 1,041.78± acres of wetlands and 4.91± acres of surface waters. The 1,041.78± acres of wetlands are inclusive of approximately 121.40± acres of Lake Center that fall below the 64.0' N.G.V.D. sovereign submerged land line. The site development plan proposes conservation of approximately 1,036.29± acres of wetlands and surface waters, 113.96± acres of upland buffers, and 138.90± acres of lands associated with Parks, Recreation and Open Space (**Figure 2**). The undisturbed wetlands, upland buffers and many of the habitats associated with the Open Space will be managed for listed wildlife species as outlined in this HMP. This HMP has been developed to serve as the guidance for preservation, maintenance and management of the lands slated for conservation within the Center Lake DRI and for the wildlife located within these lands. All un-impacted wetlands, surface waters, and upland buffers will be placed under conservation easement and managed for use by listed wildlife species, as outlined in this Habitat Management Plan (HMP).

The Center Lake DRI HMP is a binding management tool and subsequently will be incorporated into the Declaration of Covenants & Deed Restrictions of the Community Development District (CDD), the Master Property Owner's Association (MPOA) or the Homeowner's Association (HOA), whichever is developed for the property.

The Center Lake DRI HMP provides management goals and objectives for the conservation lands and provides species-specific conservation guidelines for the American bald eagle, Florida sandhill crane, little blue heron, Sherman's fox squirrel, gopher tortoise and its commensal species, American alligator and additional non-listed wildlife species. Specific conservation actions included within the HMP include mechanical and chemical management, monitoring & maintenance of conservation areas, educational outreach, conservation signage, and speed deterrent devices located along wetland road crossings.

CENTER LAKE
DEVELOPMENT OF REGIONAL IMPACT

HABITAT MANAGEMENT PLAN

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1.0 INTRODUCTION

The 2,012.50-acre Center Lake Development of Regional Impact (DRI) is generally located east of Narcoossee Road (SR 15), west of Nova Road (CR 532) and south of Jones Road (**Figure 1**). The Center Lake DRI project site is a phased, master planned, mixed use community containing varying densities of residential development as well as commercial and institutional uses (**Figure 2**). The proposed community will promote long-term sustainable development by providing a master plan that considers interconnectivity, walkability and environmental preservation. The gross acreage of the project site reflects lands that lie below the 65.0 mean sea level (msl) elevation, which is designated as the Safe Development Line in accordance with Policy 1.2.7 within the Conservation Element of Osceola County's Comprehensive Plan. No development is proposed for lands that lie below this Safe Development Line; however, these lands may be used for passive recreation purposes associated with the Center Lake development.

The Center Lake DRI property contains a variety of land uses and vegetative communities including a major wetland slough, scattered herbaceous marshes, open pastureland, and limited, small areas of pine mesic oak and hardwood-conifer forests. Modica & Associates, Inc. conducted numerous site inspections over a period of several years to verify the pre-development land uses and to document the wildlife use of the property within the different community types. Documentation of wildlife observations were recorded during each site inspection, and several species-specific wildlife surveys were conducted throughout the Center Lake DRI property.

Several species of protected wildlife were documented within the Center Lake DRI project site during recent surveys and by historical documentation. One of the development goals of the Center Lake DRI is to preserve and manage unimpacted natural areas for optimal use by listed wildlife species. The target species for wildlife management include the Sherman's fox squirrel, gopher tortoise, American bald eagle, Florida sandhill crane, American alligator and little blue heron. Although not documented on the project site, additional target species for wildlife management include the southeastern American kestrel and wading birds. With proper management, suitable habitat within the project site may attract these species.

This Habitat Management Plan (HMP) has been developed to serve as guidance for the preservation, maintenance and management of conservation lands and open spaces within the Center Lake DRI project site and for the wildlife located within these lands. This HMP includes specific recommendations for habitat management for long-term sustainability of listed species located within the Center Lake DRI project site.

Conservation areas to remain on-site in the post-development condition include unimpacted wetlands and surface waters and undisturbed upland buffers surrounding the unimpacted wetlands. Conservation areas are depicted on the enclosed Habitat Management Plan Map (**Figure 3**). Conservation areas will be preserved and managed for wildlife use as outlined in this HMP. In addition to the conservation areas, 138.90± acres lands associated with Parks, Recreation and Open Space will remain following development.

1.1 Community Types

In its pre-development condition, the Center Lake DRI project site contains of a variety of upland and wetland land uses and community types (**Figure 4**). On-site land uses and vegetative communities have been classified in accordance with the Florida Department of Transportation's *Florida Land Use, Cover and Forms Classification System, Level III* (FLUCFCS). A detailed description of each FLUCFCS community *contained within the limits of the conservation areas* addressed herein is provided below.

1.1.1 Uplands

Using data from aerial photography, published resources and by ground-truthing, the following land uses and vegetative communities have been documented within the limits of the conservation areas. Detailed descriptions of each vegetative community and land use are outlined below.

211 - Improved Pasture

In the pre-development site condition, this cover type is dominant on the Center Lake DRI property. It consists of agricultural land managed for the purpose of sustaining cattle. Dominant vegetative species include bahia grass (*Paspalum notatum*), Bermuda grass (*Cynodon dactylon*), dog fennel (*Eupatorium capillifolium)*, flattop goldenrod (*Euthamia minor*), prickly pear (*Opuntia humifusa*), pawpaw (*Asimina* spp.), rattlebox (*Sesbania* spp.) and tropical soda apple (*Solanum capsicoides*).

In the post-development condition, the improved pasture land use generally falls within the upland buffers to the protected wetlands, and within undisturbed open spaces. Following development and the removal of cattle, it is expected that shrubs will regenerate and become more dominant within these areas. These areas are expected to transition to the Upland Shrub and Brushland (FLUCFCS 320) vegetative community designation unless managed to create other types of habitat, or maintained as pasture to provide forage for sandhill cranes.

414 – Pine Mesic Oak

In the post-development site condition, this vegetative community type typically occurs as an upland fringe habitat located between forested wetlands and pasture. This upland community type is characterized by laurel oak (*Quercus laurifolia*), live oak (*Quercus virginicus*), and slash pine (Pinus elliotii). Many areas appear to have been historically disturbed as evidenced by a dominance of invasive vegetation such as blackberry (*Rubus* sp.), muscadine vine (*Vitis* sp.), hairy indigo (*Indigofera hirsuta*), rattlebox and dog fennel in the groundcover.

In the post-development condition, a significant portion of this on-site vegetative community will remain undisturbed within the upland buffers of the preserved wetlands. This habitat community will provide cover and forage for a variety of wildlife species.

421 - Xeric Oak

In the pre-development site condition, a small area of disturbed xeric oak habitat was identified in the northeastern portion of the property. The majority of this disturbed community is included within the development plan; however, portions will remain undisturbed, within the upland buffers of the preserved wetlands. This habitat community will provide cover and forage for a variety of wildlife species. Canopy species include sand live oak (*Quercus virginiana var. geminata*), myrtle oak (*Q. myrtifolia*), laurel oak, slash pine and longleaf pine (*P. palustris*). The understory is generally comprised of dense assemblages of the aforementioned scrub oak species with a ground cover often found to support saw palmetto (*Serenoa repens*).

427 – Live Oak

In the pre-development site condition, an isolated live oak community is located in the eastern portion of the property. This upland community supports mature live oaks with a ground cover typically comprised of bahia grass, tropical soda apple, dog fennel, blackberry, and flattop goldenrod. In the post-development condition, portions of this habitat will be preserved to provide wetland buffering and continued native upland habitat support.

434 - Hardwood – Conifer Mixed

This land cover classification is located in the eastern portion of the project site. The canopy of this upland community is comprised predominately of live oak and laurel oak with scattered slash pine and longleaf pine. Less common hardwoods include black cherry (*Prunus serotina*) and persimmon (*Diospyros virginiana*). Understory and ground cover plants include but are not limited to: saw palmetto, beautyberry, bracken fern, and shiny blueberry. Vines include catbrier (*Smilax auriculata*), Virginia creeper (*Parthenocissus quinquefolia*) and muscadine grape

(*Vitis rotundifolia*). Portions of this habitat will likewise be preserved to provide wetland buffering and continued native upland habitat support.

1.1.2 Wetlands and Surface Waters

In the pre-development condition, the 2,012.50± acre Center Lake DRI project site contains 1,046.69± acres of jurisdictional wetlands and surface waters. The conceptual site plan proposes impact to 5.30± acres of wetlands and 4.60± acres of surface waters. The total net acreage of wetlands and surface waters to remain on-site in the post development condition is 1,036.29± acres, or approximately 99% of the pre-development wetland acreage; this acreage is inclusive of 121.40± acres of Lake Center. All unimpacted jurisdictional wetlands and surface water areas will be preserved and managed in accordance with this HMP. Additionally, an undisturbed upland buffer of varying width and consisting of approximately 113.96± acres will be preserved surrounding the unimpacted jurisdictional areas to protect wildlife habitat and water quality and to provide continued upland habitat support.

The following sections provide a description of each wetland vegetative community type that will remain on-site in the post-development condition.

520 – Lake

Approximately 121.40± acres of the western and southern portions of Lake Center are included within the Center Lake DRI boundary and will remain undisturbed in the post-development condition. Areas included within this community classification are characterized by open water with varying densities of emergent aquatic plants such as spatterdock *(Nuphar luteum)* and fragrant water lily (*Nymphaea odorata*) within the shallow areas.

630 – Wetland Forested Mixed

The majority of the on-site wetland acreage is forested and contains a mixed canopy of hardwood and coniferous trees. Canopy species predominantly include pond pine (*Pinus serotina*), slash pine (*Pinus elliottii*), bald cypress, red maple (*Acer rubrum*), loblolly bay (*Gordonia lasianthus*), and sweet bay magnolia (*Magnolia virginiana*). Dahoon holly (*Ilex cassine*), buttonbush (*Cephalanthus occidentalis*) and wax myrtle (*Myrica cerifera*) were the most commonly observed understory plants. The ground strata of this community was found to support Virginia chain fern (*Woodwardia virginica*), netted chain fern (*Woodwardia areolata*), cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), marsh fern (*Thelypteris palustris*), muscadine grape (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), blackberry (*Rubus betulifolia*), red root (*Lachnanthes caroliniana)*, and lizard's tail (*Saururus cernuus*).

641 – Freshwater Marsh

Several freshwater marsh wetlands are scattered throughout the Center Lake Ranch project site. Additionally, some portions of the main wetland slough that extends through the central portion of the property consist of freshwater marsh. These herbaceous wetlands contain a mix of the following species: soft rush (*Juncus effusus*), spike rush (*Eleocharis baldwinii*), lemon bacopa (*Bacopa caroliniana*), spadeleaf (*Centella asiatica*), blue maidencane (*Amphicarpum muehlenbergianum*), buttonbush (*Cephalanthus occidentalis*), highbush blueberry (*Vaccinium* corymbosum), bushy bluestem (*Andropogon glomeratus*), pennywort (*Hydrocotyle umbellata*), beaksedge (*Rhynchospora* spp.) and rattlebox (*Sesbania* spp.), pickerelweed (*Pontederia cordata*) and duck potato (*Sagittaria* spp.). The perimeters of these wetlands contain longleaf pine (*Pinus palustris*), wax myrtle (*Myrica cerifera*) and blackberry (*Rubus* spp.).

1.2 Listed Species Occurrence

Early in the ecological assessment process, a qualitative review of the Center Lake DRI project site was conducted to determine if the Center Lake property provides suitable habitat for species of wildlife that are listed as protected by the U.S. Fish and Wildlife Service (USFWS) or the Florida Fish and Wildlife Conservation Commission (FWC), and for species of plants that are listed as protected by state, federal or local regulations. Modica & Associates, Inc. conducted various qualitative surveys throughout the Center Lake DRI property beginning in year 2005 and continuing through 2009.

Available database records were used to identify historically documented wildlife use and plant occurrence in the vicinity. To assist in documenting potential protected species throughout the property, the Florida Natural Areas Inventory (FNAI) Tracking List for Osceola County was obtained and reviewed.

1.2.1 Listed Wildlife

Listed wildlife databases accessed included the USFWS *Online Eagle Nest Locator* and the FWC *Waterbird Colony Locator* website.

Using this conceptual information, listed species of wildlife with potential for presence were identified and site inspections were conducted to determine the need and extent of formal surveys for each particular species. Species-specific quantitative surveys were conducted for the gopher tortoise in May and June 2006 and April 2009 and for sandhill cranes in 2007 and 2008. All site inspections were conducted using pedestrian and ATV transects. In addition to species-specific surveys, general wildlife surveys were conducted on numerous occasions throughout the years 2005 through 2009. The Wildlife Survey Map is provided as **Figure 5**. The following is a list of those species identified during the evaluation

as well as any direct observations of evidence of a particular species' presence (i.e. tracks, burrows, scat etc.). The species indicated in bold type are listed as protected by the USFWS and/or the FWC.

BIRDS

American crow (*Corvus brachyrhynchos*)
Bald eagle (*Haliaeetus leucocephalus*)
Barred owl (*Strix varia*)
Black vulture (*Coragyps atratus*)
Blue jay (*Cyanocitta cristata*)
Brown thrasher (*Toxostoma rufum*)
Carolina wren (*Thryothorus ludovicianus*)
Cattle egret (*Bubulcus ibis*)
Common nighthawk (*Chordeiles minor*)
Eastern meadowlark (*Sturnella magna*)
Florida sandhill crane (*Grus canadensis pratensis*)
Great blue heron (*Ardea herodias*)
Great crested flycatcher (*Myiarchus crinitus*)
Great egret (*Ardea alba*)
Killdeer (*Charadrius vociferous*)
Little blue heron (*Egretta caerulea*)
Loggerhead shrike (*Lanais ludovicianus*)
Mourning dove (*Zenaida macroura*)
Northern bobwhite (*Colinus virginianus*)
Northern cardinal (*Cardinalis cardinalis*)
Northern mockingbird (*Mimus polyglottos*)
Red-bellied Woodpecker (*Melanerpes carolinus*)
Red-headed woodpecker (*Melanerpes erythrocephalus*)
Red-shouldered hawk (Buteo lineatus)
Red-tailed hawk (*Buteo jamaicensis*)
Swallow-tailed kite (*Elanoides forficatus*)
Turkey vulture (*Cathartes aura*)
Wild turkey (*Meleagris gallopavo*)

MAMMALS

Gray squirrel (*Sciurus carolinensis*)
Nine-banded armadillo (*Dasypus novemcinctus*)
Raccoon (*Procyon lotor*)
White-tailed deer (*Odocoileus virginianus*)
Wild boar (*Sus scrofa*)
Sherman's Fox Squirrel *(Sciurus niger shermani)*

REPTILES & AMPHIBIANS

American Alligator *(Alligator mississippiensis)*
Black racer (*Coluber constrictor*)

Brown anole (*Anolis sagrei sagrei*)
Common garter snake (*Thamnophis sirtalis*)
Cricket frog (*Acris gryllis*)
Florida cooter (*Pseudemys floridana*)
Gopher tortoise (*Gopherus polyphemus*)
Green anole (*Anolis caroliniana*)
Green tree frog (*Hyla cinerea*)
Pig frog (*Rana grylio*)
Pygmy rattlesnake (*Sistrurus miliarius*)
Squirrel tree frog (*Hyla squirella*)

Six (6) species listed in the FWC's *Official Lists – Florida's Endangered Species, Threatened Species, and Species of Special Concern* (July 2009) were documented during our surveys. The occurrence of listed species is summarized in the below table.

Table 1. List of protected wildlife documented within the Center Lake DRI.

Scientific name	Common name	State status	Federal status	Typical Habitat
REPTILES & AMPHIBIANS				
Alligator mississippiensis	American Alligator			Lake, Swamp
Gopherus polyphemus	Gopher Tortoise	T	N	Sandhill, Scrub, Flatwoods, Pasture
MAMMALS				
Sciurus niger shermani	Sherman's Fox Squirrel	SSC	NL	Sandhill, Pine Flatwoods, Pasture
BIRDS				
Egretta caerulea and Eudocimus albus	Little Blue Heron and White Ibis	SSC	NL	Lake, Marsh, Swamp
Grus canadensis pratensis	Florida Sandhill Crane	T	NL	Marsh, Pasture
Haliaeetus leucocephalus	American Bald Eagle	T	NL	Lakes

NL=Not Listed; SSC=Species of Special Concern; T=Threatened; E=Endangered

1.2.2 Listed Plants

There are different agencies within the state of Florida that maintain a list of protected plant species; each of these agencies has different criteria for listing. Modica & Associates, Inc. accessed the Florida Administrative Code (F.A.C.)

Chapter 5B-40.0055 *Regulated Plant Index* as well as lists maintained by the USFWS, the Florida Department of Agriculture & Consumer Services (FDAC) Division of Forestry (DOF), and the FNAI tracking list to identify listed plant species with potential for occurrence on the Center Lake DRI project site. State regulations apply to harvesting protected plants and do not provide guidance or regulation on protection of plants related to development. The following protected plant species were documented within the Center Lake DRI project boundaries during general site inspections and wildlife surveys conducted by staff biologists with Modica & Associates, Inc.

PLANTS
Cinnamon fern (*Osmunda cinnamomea*)
Royal fern (*Osmunda regalis*)

Cinnamon fern and royal fern are both listed as "commercially exploited" (5B-40.005(c) F.A.C. These ferns are found in wetland habitats and were documented throughout many of the wetlands in the Center Lake DRI project site. The occurrences of listed plant species documented on the Center Lake DRI project site are listed in Table 2.

Table 2. List of protected plants documented within the Center Lake DRI.

Scientific name	Common name	State status	Federal status	Typical Habitat
PLANTS				
Osmunda cinnamomea	Cinnamon fern	CE	NL	Lake, Marsh, Swamp
Osmunda regalis	Royal fern	CE	NL	Lake, Marsh, Swamp

CE=Commercially Exploited, NL=Not Listed.

2.0 CONSERVATION GOALS & OBJECTIVES

The following goals outline the long-term intent to manage the Center Lake DRI conservation lands and the wildlife that occur therein. These goals and objectives will be reviewed annually as the HMP is implemented to ensure that the intent is still practical and necessary. Any modifications to the goals and objectives must be coordinated with the FWC and other jurisdictional agencies, as appropriate. Modified goals and objectives may only be implemented with approval from FWC.

Goal 1: Protect the natural communities within the Center Lake DRI conservation lands.

Objectives: A. Develop and record a legal instrument such as a Conservation Easement to protect the conservation areas, after receipt of all State and Federal Permits.

Objectives: B. Implement the Habitat Management Plan.

Goal 2: **Effectively manage the conservation lands to ensure sustainability of the native plants and animals naturally supported by the native habitats.**

Objectives:

A. Implement a monitoring program to document the quality of each of the community type within the conservation lands.

B. Monitor the presence of wildlife and the structural characteristics of vegetation and their habitats to ensure that the management objectives are adequate for the long-term survival of the target species.

C. Implement chemical and mechanical means to control or eradicate exotic vegetation listed in the Florida Exotic Pest Plant Council's *2007 List of Invasive Plant Species*, including but not limited to: cogon grass, tropical soda apple, Brazilian pepper, air potato.

D. Develop quantifiable vegetation management objectives for desired future conditions.

Goal 3: **Protect and maintain hydrologic regimes.**

Objectives: A. Conduct routine maintenance of drainage structures that provide connections between wetland crossings to ensure proper function.

Goal 4: **Provide quality recreational opportunities within the conservation areas while maintaining the integrity of the natural communities and protection of wildlife.**

Objectives:

A. Maintain a system of hiking trails and/or boardwalks throughout the conservation lands.

B. Establish an interpretive and educational kiosk at the main entry points of any planned hiking trails through the conservation lands and signage at any dedicated wildlife crossing.

C. Provide additional interpretive signage and educational materials highlighting the natural community types and listed species of wildlife within the conservation lands.

D. Conduct routine safety inspections and maintenance inspections to ensure trails, boardwalks and signage are in good condition and correct deficiencies as needed.

3.0 LIFE HISTORY OF LISTED WILDLIFE SPECIES

As previously mentioned, baseline wildlife surveys conducted throughout the Center Lake DRI project site documented the presence of six (6) species of protected wildlife. The protected status and life history information on the American alligator, Sherman's fox squirrel, American bald eagle, Florida sandhill crane, little blue heron, gopher tortoise and gopher tortoise commensals are detailed below. Information on the protected status and life history information on the southeastern American kestrel and wading birds are also included as these species have potential for occurrence on the Center Lake DRI property. Conservation recommendations or requirements specific to each of these species are also provided, as applicable. Based on the prevailing USFWS and FWC regulations, no specific management activities are required for the American bald eagle, American alligator and little blue heron. However, the HMP has been developed to provide provisions for conservation, enhancement, and maintenance of habitats used by each of these species. Should future changed site conditions or regulations warrant the need for additional species-specific management activities, the Center Lake DRI HMP can be amended as applicable.

3.1 American Alligator

The American Alligator (*Alligator mississippiensis*) is listed by the FWC as a "species of special concern" and by the USFWS as "threatened", primarily due to the similarity in appearance to the federally-listed American crocodile *(Crocodylus acutus)*, which is listed as "endangered" by the USFWS. American alligators occur throughout the southeastern United States with the western limits reaching into eastern Texas, and the northern limits reaching along the eastern coastline of North Carolina (FWC, 2009a). Female alligators rarely exceed a length of 9-feet, while male alligators may be as large as 14-feet. Alligators are considered opportunistic feeders, eating easily accessible food items ranging from small amphibians and fish to snakes and birds (FWC, 2009a).

3.1.1 Documented Presence

American alligators were observed in wetland and open water habitat areas on the project site during quantitative and qualitative field assessments. This species has been observed within the open water habitat associated with Lake Center. This species is known to occur throughout the Alligator Chain of Lakes and the

associated floodplain wetlands, and therefore a population of this species likely inhabits the Center Lake DRI conservation areas.

3.1.2 Threat Assessment

Protection of the American alligator is afforded by the FWC, primarily due to the similarity in appearance to the federally listed American crocodile. Threats to the species include destruction of habitat, poaching for their hides, and pollution of their native habitats.

3.2 Sherman's Fox Squirrel

The Sherman's fox squirrel (*Sciurus niger shermani*) is listed by the FWC as a "species of special concern" and is regulated by Chapter 68A-27.005 F.A.C. There are three subspecies of the fox squirrel in Florida. Fox squirrels range throughout the eastern United States; the Sherman's fox squirrel is the only sub-species of fox squirrel that occurs in central Florida. The Sherman's fox squirrel can be found throughout peninsular Florida with the exception of the southwestern counties of the panhandle. The home range of the Sherman's fox squirrel is about 75 acres. The fox squirrel's primary habitat is the longleaf pine, turkey oak, live oak, sandhill, and flatwood communities (FNAI, 2001). Fox squirrels depend on pine seeds as a major food source during the summer, and rely on acorns for the remainder of the year. Seasonal variation and low diversity of food and abundance of food resources contributes to the large home range of the fox squirrel (Kantola and Humphrey, 1990).

Nesting is typically conducted in oak and pine trees and is constructed of leaves and Spanish moss. There are typically two breeding seasons for the fox squirrel, winter and summer. The average litter size ranges between 2-4 individuals, with the winter litter typically being smaller than the summer litter (FNAI, 2001).

3.2.1 Documented Presence

There is currently no specific survey protocol for the Sherman's fox squirrel. However, several sightings of this species were documented, generally within the eastern portion of the property. The documented squirrel sightings occurred along one of the forested edges of the linear ditches in the northeastern pasture, along the forested edge of the wetlands associated with Lake Center, and within the forested uplands adjacent to wetland W-13 in the southeastern portion of the property (**Figure 5**). Each of these sightings occurred in habitat that contains mixed hardwoods, pines and oaks.

3.2.2 Threat Assessment

The greatest threat to the Sherman's fox squirrel is loss of habitat and degradation of habitat. This loss of habitat can be the result of development, logging and

other clear-cutting agricultural activities. The habitat degradation can be attributed to lack of land management and invasion of nuisance and exotic vegetation, each of which alters the vegetation structure of the habitat. Loss of habitat due to development can isolate populations and prevent dispersal and distribution.

Competition with the eastern gray squirrel may also serve as a threat or provide negative impact to Sherman's fox squirrels in developed communities. Sexton (1990) reports that fox squirrels prefer more open forests, while gray squirrels tend to inhabit extensive forests with heavy undergrowth. Habitat fragmentation, regardless of origin (i.e. development or agricultural use), can promote coexistence and subsequently competitive interaction between species. Nupp and Swihart (2001) determined that habitat fragmentation is the primary component influencing the presence or absence of any particular species, with interspecific interactions present as a secondary influence. They further conclude that interspecific interactions are largely a function of "the landscape in which they co-occur."

3.3 American Bald Eagle

The American bald eagle *(Haliaetus leucocephalus)* was officially delisted by the USFWS on July 9, 2007 (Federal Register Volume 72, No. 130). However, the bald eagle is still protected through the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). These laws and/or regulations prohibit, cumulatively, harassing, disturbing, harming, molesting, pursuing this species or destroying its nests. Additionally, the USFWS has prepared *National Bald Eagle Management Guidelines* (May 2007) to provide guidance to developers with properties containing bald eagle nests. These revised regulations provide protection to an active bald eagle nest at a given radius, based on whether the active nest is located within a forested system or in an open area such as pasture. Nests within a forested system will require a 330-foot protection zone and nests within open areas will require a 660-foot protection zone.

American bald eagles historically ranged throughout the contiguous United States and Alaska. A severe decline in the bald eagle population occurred in the lower 48 states between the 1870's and the 1970's. Currently, the largest breeding populations are found in Alaska and Canada. Other significant bald eagle populations occur in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes states and the Chesapeake Bay region (USFWS, 2007). Migration may be more common among younger eagles. By April, Florida's eagles begin to move north, following the coastline through Georgia, the Carolinas, and Virginia.

Bald eagles usually nest in tall, healthy pine trees near coastlines, rivers, large lakes and streams. Most of the nests in Florida are within one mile of the coast or a permanent body of water. Bald eagles are opportunistic feeders. While preferring fish, they will eat

many kinds of live prey, as well as carrion, and even frequent garbage dumps. Nests are found in mangrove swamps, the shoreline of lakes and rivers, pine flatwoods, hardwood swamps, and open prairies and pastureland with scattered tall trees (USFWS, 2007). Eagles are strongly attached to their nesting area and will often rebuild in the same tree or another tree nearby if the original nest is lost to a storm. Eagles mate for life, but a new mate will be sought should one of the pair die. Two or three eggs are laid during the nesting season, which is usually from October 1 to May 15; incubation is about 32 days.

3.3.1 Documented Presence

One active eagle nest was documented within the Center Lake DRI project boundaries. This nest was observed by Modica & Associates, Inc. during our preliminary site surveys beginning in 2005; this nest has also been documented as active by the FWC since 2005 and is identified as Eagle Nest **OS-106** on the FWC's *Online Eagle Nest Locator* database. The nest is located in the south-central portion of the property, along the northern edge of wetland W-13 (**Figure 5**). The FWC database was last updated during the 2009 nesting season, and also shows the nest as active during each nesting season beginning in 2005.

3.3.2 Threat Assessment

Bald eagles are sensitive to human activities, particularly during the breeding season. Disturbance from human activities can prevent successful breeding and can also prevent proper feeding. Bald eagles prefer particular roost sites based on their proximity to food source and shelter. Destruction or obstruction of roosting areas has a negative affect on bald eagles (USFWS, 2007).

3.4 Florida Sandhill Crane

The Florida Sandhill Crane (*Grus canadensis pratensis*) is listed as a "threatened" species by the FWC. This species occurs in peninsular Florida from the Everglades north to southern Georgia (Charlton and Ware counties) in and around the Okefenokee Swamp (Bennett 1989, Nesbitt and Williams 1990). Florida is home to two subspecies of Sandhill cranes, with the Florida sandhill crane (G. c. *pratensis*) being a non-migratory, year-round resident. The similar, non-migratory greater sandhill crane (G. c. *tabida*), winters in Florida, typically arriving in November and December, and migrates to the Great Lakes region during March and April for nesting (FWC 2009b). Sandhill cranes are monogamous; they breed during the late winter and early spring and construct nests on mats of vegetation in shallow wetlands and water bodies (FWC 2009b). Nesting season generally occurs between January and April, with the average laying date between late February and early Mary (Stys, 1997).

3.4.1 Documented Presence

The Florida sandhill crane was observed foraging within the pastures of the Center Lake DRI property during several investigations. Three potential nest sites were also documented during the 2007 sandhill crane nest survey conducted by Modica & Associates, Inc. (**Figure 5**). The Center Lake DRI property contains extensive freshwater marsh habitat, which provides potential nesting habitat for this species. The Florida sandhill crane typically constructs its nest within shallow wetland areas dominated by herbaceous vegetation, especially pickerelweed and maidencane. There are numerous herbaceous marshes on site that are suitable for nesting. Nesting season typically occurs between January and August of any given year. No nests were documented during the 2008 or the 2009 nesting seasons. However, Sandhill crane pairs have been observed on-site foraging.

3.4.2 Threat Assessment

Sandhill cranes are vulnerable to man-made hazards such as powerlines, fences and vehicular collisions. Additional threats include loss and degradation of suitable nesting habitat, nest predation, flooding, and abandonment due to disturbances.

3.5 Little Blue Heron

The Little Blue Heron (*Egretta caerulea*) receives protection from the FWC as "species of special concern". This small wading bird inhabits a variety of freshwater and estuarine habitats in the southeastern United States. The little blue heron is a medium-sized heron identified by its dark, dusky blue color and its dark bill (Cornell, 2009). The little blue heron typically feeds on small fish, amphibians and aquatic invertebrates while the white ibis typically feeds on insects (Cornell 2009).

3.5.1 Documented Presence

The little blue heron was observed within several of the wetland communities during our site inspections, typically within the forested and herbaceous wetlands and along the Lake Center shoreline. However, no nesting colonies (rookeries) have been documented within the Center Lake DRI wetlands. Further, the FWC's *Waterbird Colony Locator* website did not reveal any wading bird colonies within the project vicinity.

3.5.2 Threat Assessment

Primary threats include alteration of natural hydroperiods in wetlands used for foraging and exposure to pesticides and heavy metal contaminations. Illegal

killings may also occur since this species regularly forages at commercial fish farms and hatcheries (FNAI, 2001).

3.6 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed by the FWC as a "threatened" species and is regulated by Chapter 68A-27.004 F.A.C. The FWC has adopted a *Gopher Tortoise Management Plan* (September 2007), which is supplemented by the *Gopher Tortoise Permitting Guidelines* (April 2009). Together, these documents provide rules for protecting the tortoise and guidelines for permitting development on properties that contain gopher tortoises.

The gopher tortoise ranges throughout the entire state of Florida with the exception of the Everglades and the Keys. The tortoise also occurs within the lower Southeastern Coastal Plain including coastal South Carolina southward through the southern reaches of Georgia, Alabama, Mississippi and southeastern Louisiana (Auffenberg and Franz, 1982). Gopher tortoises commonly inhabit upland habitats with well-drained sandy soils associated with xeric pine-oak hammock, scrub, pine flatwoods, pastures and citrus groves. The diet of a gopher tortoise typically consists of broad-leaf grasses, wiregrass, wild fruits and other low-lying plants, particularly those in the legume family (Macdonald, 1986). The tortoise digs a burrow underground for refuge. A tortoise burrow is 15-feet in length and 6-feet in depth, on average (Hansen, 1963). Each tortoise may dig several burrows within its home range. Tortoises normally mate in April and May. Several weeks after mating, the female tortoise will lay an average of six eggs within the apron of the burrow. The incubation period is approximately 80-90 days, but varies geographically (Cox, et. al., 1987).

3.6.1 Documented Presence

A total of 87 viable gopher tortoise burrows have been identified on the Center Lake DRI property (**Figure 5**). The original DRI project site was surveyed for this species in May and June of 2006. The subsequently acquired ±134 acre western portion of the DRI site was surveyed in April 2009.

Please note that gopher tortoise survey transects did not cover 100% of the on-site suitable gopher tortoise habitat. However, a project-wide burrow count was extrapolated based on the partial site survey in order to calculate the estimated gopher tortoise population. To achieve this, optimal and suboptimal gopher tortoise habitat acreages were calculated in ArcGIS based on notes from field observations, aerial photographic interpretation, and mapped soils data. Optimal habitat generally included areas mapped as FLUCFCS codes 110, 211, 224, 311, and 421; suboptimal habitat includes areas mapped as FLUCFCS codes 211, 414, 427, 434, and 814 (**Figure 4**). Additionally, the acreage of each gopher tortoise habitat type (optimal vs. suboptimal) included within the gopher tortoise survey was calculated in ArcGIS by offsetting a 25 foot buffer on the GPS tracks

recorded during the actual survey event (total survey transect width of 50 feet). The survey results were then summed by gopher tortoise habitat type and an estimated burrow count for each habitat type was extrapolated based on survey percentage. The estimated burrow count for each habitat type was summed to obtain an estimated burrow count for the overall project site. The following table presents these data and the estimated site wide burrow count.

Table 3. Tabulation of calculated project-wide gopher tortoise burrow count, estimated based on survey data collected by Modica & Associates, Inc. in 2006 and 2009.

	Optimal Habitat	**Suboptimal Habitat**
Habitat Acreage	221 ac	693 ac
Acreage Surveyed	164 ac	205 ac
Percent of Habitat Surveyed	74%	30%
# of Burrows Observed	80	7
Extrapolated Total # of Burrows	108	23
Estimated Site-Wide Burrow Count	**131 burrows**	

Our calculations estimated that there are 131 burrows within the Center Lake DRI site. This equates to a population density of 0.14 tortoises per acre of suitable habitat. In accordance with the new *Gopher Tortoise Permitting Guidelines* issued by the FWC in April 2009, the anticipated number of tortoises within a project site should be estimated by multiplying the total number of viable burrows by a conversion factor of 0.50. For the Center Lake DRI project site, this results in an estimated gopher tortoise population of approximately 65-66 tortoises.

No other listed species of flora or fauna were observed on the acquisition parcel. Additionally, no listed species of flora or fauna beyond those previously reported for the main parcel were documented during the various site inspections conducted in year 2009.

3.6.2 Commensal Species

The gopher tortoise is considered a keystone species for the habitat it occupies, as the tortoise's burrow is used by many other species of wildlife including, but not limited to, the Eastern indigo snake (*Drymarchon corais couperi*), gopher frog (*Rana capito*) and Florida mouse (*Podomys floridanus*). The eastern indigo snake is listed by the FWC as a "threatened" species and the gopher frog and the Florida mouse are listed by the FWC as "species of special concern". These species are protected by state regulations relating to protected species, specifically Chapter 68A-27.004 F.A.C. Although not observed or documented during preliminary surveys, there is a reasonable likelihood that each of these species is present within the Center Lake DRI project site.

3.6.3 Threat Assessment

The greatest threat to the gopher tortoise and its commensal species is loss of habitat. Land development is typically pursued within the higher topographic elevations, which is also the preferred habitat for the gopher tortoise. Habitat fragmentation and isolation of populations is also a cause for population decline. The Upper Respiratory Tract Disease (URTS) also poses a threat to the longevity of the life span, and is highly contagious. The threats to gopher tortoises are also considered threats to the commensal species as they are dependent on the tortoise burrows for survival.

3.7 Potential for Other Listed Species of Wildlife

The Center Lake DRI project site provides suitable habitat for several other listed species of wildlife. The Florida Natural Areas Inventory (FNAI) Species Occurrence database listed by County was reviewed to determine which wildlife species have potential for occurrence in Osceola County. Although not documented on the Center Lake DRI project site during any of the site inspections conducted by Modica & Associates, Inc., the following species have potential for occurrence on-site.

3.7.1 Southeastern American Kestrel

The Southeastern American kestrel *(Falco sparverius paulus)* is the smallest falcon in the United States and is listed by the FWC as a "threatened" species. The kestrel is regulated through the U.S. Migratory Bird Treaty Act and by Chapter 68A-27.004 F.A.C. which prohibits the taking of birds, nests or eggs. The Southeastern American kestrel is a non-migratory resident subspecies of the American kestrel (*F. s. sparverius*). The American kestrel ranges throughout North America and is considered a northern migrant that occurs in Florida during the winter months, but does not nest in Florida. It is difficult to distinguish the two species on the basis of coloration and marking. The breeding range of the southeastern American kestrel (*F. s. paulus*) extends from southern portions of Louisiana, Mississippi, Alabama, Georgia, and South Carolina, and all of Florida except the most southern counties (Stys 1993).

The southeastern American kestrel prefers open habitats including pastures, open longleaf pine-turkey oak and Sandhill communities, grasslands, and open sites within suburban and residential areas. Kestrels require open land for their hunting activities. Common prey includes insects, small rodents, reptiles, and even small birds (Stys 1993). Kestrels are secondary cavity nesters and typically use abandoned nest cavities of woodpeckers. The majority of kestrel nests are in the cavities of dead trees with an unobstructed view of the surrounding habitat (FNAI 2001). However, kestrels have also been documented to nest in man-made nest boxes. Nesting activities, including courtship, typically begin at the end of

January. Three to five eggs are laid in mid-March to May with incubation lasting 29-31 days (Stys 1993).

The presence of extensive open pastures and relatively open woodlands within the Center Lake DRI project site provides habitat for this species. As no observations of kestrels have been documented during the numerous onsite inspections within the ranch, no formal surveys for this species have been conducted.

The post-development condition of the Center Lake DRI project site may contain suitable habitat for the southeastern American kestrel. The proposed open spaces and parks will provide potential foraging opportunities for kestrels and forested areas may provide nesting habitat.

3.7.2 Wading Birds

Due to the extensive herbaceous marshes, forested wetlands and frontage on Center Lake, the potential for presence of both listed and non-listed wading birds is high within the Center Lake DRI project. Species that are likely to occur on-site include, but are not limited to: wood stork (*Mycteria americana*), white ibis (*Eudocimus albus*), great egret (*Ardea alba*) and great blue heron (*Ardea herodias*). Additionally, the stormwater ponds planned for development throughout the project site will provide forage opportunity for these species.

4.0 CONSERVATION ACTIONS

The species of wildlife covered in this HMP are listed as endangered, threatened or species of special concern by the FWC and the USFWS and are protected by state and federal regulations. The preservation of large tracts of wetlands, as proposed in the Center Lake DRI project, will be beneficial to each of the species covered in this HMP, as well as other native, non-listed species of wildlife. The following table provides a summary of the native community types that will be preserved as part of the Center Lake DRI project.

Table 4. Center Lake DRI Conservation Areas

Conservation Land	Acreage
Jurisdictional Wetlands and Surface Waters	1,036.29
Upland Buffers (surrounding unimpacted wetlands)	113.96
Total Conservation Land	**1,150.25**

The 1,150.25± acres of conservation land shown in the above table will be placed under conservation easement in perpetuity, held by a state regulatory agency (i.e. SFWMD, FWC). No development will be allowed within the conservation areas, although limited boardwalks and passive recreation may be permissible as well as vegetative management

activities and maintenance to any of the existing surface waters/ditches that are associated with the drainage system.

The conservation actions described below are intended to ensure long-term sustainability of the on-site populations of those species. The proposed management practices are consistent with the requirements and long-term goals for the protection and maintenance of habitat communities found within the on-site conservation areas, to the best of our knowledge.

4.1 Species-Specific Management & Conservation Actions

The following information is provided for particular wildlife species documented within the project site for which certain management actions may benefit the continued presence and use of the conservation lands within the Center Lake DRI. Recommended conservation actions are provided to ensure long-term sustainability of the habitats known to support these species.

4.1.1 American Alligator

State regulations restrict the taking of active American alligator nests without a permit. No alligator nests have been documented within the development footprint and therefore regulatory action is not anticipated for this species. However, it is recommended that any alligator nests observed during conservation land monitoring events be documented using GPS technology and described within the appropriate annual monitoring reports. The status of any new nest identified should be updated in each monitoring report for the duration of the monitoring period.

It is likely that American alligators will inhabit stormwater ponds as well as natural wetland systems throughout the project in the post-development condition. Signage will be posted to warn residents and visitors of the potential presence of alligators, and to prohibit feeding of alligators. In the event that a resident alligator may become a nuisance, any concerned resident or property owner will be directed to contact the **FWC Nuisance Alligator Hotline (866-392-4286)**. Additionally, the FWC's *A Guide to Living with Alligators* brochure will become part of the educational materials to be provided to residents and property owners **(Exhibit 1)**.

4.1.2 Sherman's Fox Squirrel

Kantola and Humphreys (1990) report that the best habitats for the Sherman's fox squirrel are likely the edges of longleaf pine savannas and live oak forests. These habitats provide for seasonal food sources. The planned preservation of native forested communities within several of the Upland Management Areas (UMAs) and upland buffers will provide on-site habitat for use by this species following

development. Additionally, pine trees will be planted within several of the upland buffers to the wetlands. Much of the forested habitat along the eastern property will be preserved within the planned open space and within the upland buffers to wetlands.

Considering the real threat of interspecies competition, it is possible through land management to maintain suitable habitat within the Center Lake DRI for each the fox squirrel and the gray squirrel. By maintaining both open, upland forests and a more contiguous forest with more substantial undergrowth, suitable forage and nesting habitat can be provided for each species on the project site. A substantial amount of conservation lands and open space will be maintained in the post-development condition. A fair portion of the upland communities in the open space will contain the more open habitat preferred by the fox squirrel. Additionally, it is a management goal to maintain some of the upland buffers in a more pasture-like setting with a low density of pines to encourage forage by Sandhill cranes. These areas should also attract use and forage by the fox squirrel. By managing the preferred suitable habitat for the fox squirrel within the project site, continued use and existence of this species within the project site should continue.

4.1.3 American Bald Eagle

Protection of Eagle Nest OS-106 has been provided in accordance with *National Bald Eagle Management Guidelines* (USFWS, 2007) and with the *Bald Eagle Management Plan* (FWC, 2008). The nest lies within a relatively open area and therefore the 660-foot protection zone has been planned for this nest. No development is proposed within the 330-foot protection zone of this nest. In accordance with the *National Bald Eagle Management Guidelines* (USFWS, 2007), external construction and landscaping within 660 feet of the nest should be conducted outside of the breeding season (September through May). Any such activities proposed between 330 feet and 660 feet may require coordination with the FWC, and monitoring may be required.

4.1.3.1 Pine Planting

The appropriate species of pine trees will be planted in select upland buffers and UMAs to provide additional future nesting habitat for this species. The location and density of tree plantings will be determined during the Environmental Resource Permit (ERP) process.

4.1.3.2 Maintenance of Stormwater Pond

Maintenance of the stormwater pond planned between the 330-foot and the 660-foot buffer zone of Eagle Nest OS-106 shall be conducted in accordance with the restrictions for **Category F – Non-Motorized**

Recreation and Human Entry of the *National Bald Eagle Management Guidelines* (USFWS, 2007). The Guidelines state the following, with regard to the permissible extent of Category F activities within vicinity of a bald eagle nest:

> "No buffer is necessary around nest sites outside the breeding season. If the activity will be visible or highly audible from the nest, maintain a 330-foot buffer during the breeding season, particularly where eagles are unaccustomed to such activity."

As the habitat surrounding Eagle Nest OS-106 is relatively open, stormwater pond maintenance activities will be visible to the nest. Accordingly, any maintenance activities for the stormwater pond planned to occur during the breeding season (September through May) are strictly prohibited from occurring within the 330-foot buffer.

4.1.3.3 Nest Monitoring

During annual monitoring events required by the SFWMD permit, Eagle Nest OS-106 will be observed to document the status of nesting activity. It is recommended that surveys to document new bald eagle nests be conducted during conservation land monitoring events. Any new nests should be documented using GPS technology and described within the appropriate annual monitoring reports. The status of any new nest identified should be updated in each monitoring report for the duration of the monitoring period.

Any bald eagle nests identified on-site in the future should be protected in accordance with the *National Bald Eagle Management Guidelines* (USFWS, 2007) and with the *Bald Eagle Management Plan* (FWC, 2008).

4.1.4 Florida Sandhill Cranes

The Center Lake DRI conceptual plan provides for preservation of the majority of the freshwater marsh systems within the property. Additional protection of nesting habitat is afforded through the planned preservation of expanded upland buffers to these wetlands. The Habitat Management Plan Map (**Figure 3**) depicts that extensive open space and stormwater ponds are proposed along the boundaries of the upland buffers to many of the wetlands. These proposed post-development land uses will provide added buffer and protection to potential on-site nesting habitat for sandhill cranes. In addition to the 113.96± acres of upland buffers, the project design includes 138.90± acres of upland open space within the Parks & Recreational land use designations. This upland habitat will provide significant forage areas for this species in the post-development condition,

ensuring the long-term protection and sustainability of this species within the Center Lake DRI project.

4.1.4.1 Management for Forage Habitat

It is recommended that seasonal mowing be conducted within Upland Management Areas UMA-1, UMA-2A and UMA-2B to maintain significant forage habitat for sandhill cranes. These UMAs currently exist as improved pasture communities and will be targeted for maintenance as improved pasture in the post-development condition. Wildlife crossing signage will be erected at the roadway crossing that bisects UMA-2A and UMA-2B. Reduced speed limits and speed bumps may also be employed in this area; please refer to Section 4.4 of this HMP for details on these conservation elements.

4.1.4.2 Nest Monitoring

It is recommended that an annual sandhill crane nest survey be conducted in conjunction with the annual conservation land monitoring events. Any sandhill crane nests observed on the Center Lake DRI project site during these monitoring events shall be documented using GPS technology and will be described within the annual monitoring report. The status of any nest identified should be updated in each monitoring report for the duration of the monitoring requirements.

As recommended by Stys (1997), provisions for buffers around any documented sandhill crane nests that may be subject to disturbance during the breeding season will be provided. If any active nests are documented, construction related disturbances should not be conducted within a 250-foot "Flushing Zone" surrounding the nest until the nest has fledged. This will reduce the potential for mortality due to nest abandonment.

4.1.5 Little Blue Heron

Given the significant acreage of wetland habitat that will remain in the post-development condition, the proposed project is not expected to adversely affect any listed wading birds that have been documented on-site and no conservation actions are required. However, it is recommended that any wading bird rookeries observed on the Center Lake DRI project site during future conservation land monitoring events be documented using GPS technology and described within the annual monitoring report. The status of any new rookeries should be updated in each monitoring report for the duration of the monitoring requirements.

4.1.6 Gopher Tortoise

The FWC *Gopher Tortoise Permitting Guidelines* (April 2009) require land development projects that will affect gopher tortoise populations to pursue on-site or off-site relocation, and require mitigation fees to be paid to the FWC based on the relocation option chosen and the number of tortoises to be relocated. The Guidelines require that a 15% survey be conducted no more than 90 days prior to submittal of the relocation permit application, and that a 100% survey be conducted immediately prior to initiating the relocation efforts.

In accordance with FWC regulations, gopher tortoises located within the footprint of the Center Lake DRI development site must be relocated to an on-site or off-site recipient area, following receipt of the appropriate permits and completion of the required surveys. The FWC *Gopher Tortoise Permitting Guidelines* (Revised April 2009) require gopher tortoise recipient sites to comprise a minimum of 40 acres of contiguous suitable uplands. No habitat areas of sufficient acreage meeting the habitat suitability requirements of the FWC will remain on-site in the post-development condition. Therefore, the gopher tortoises located within the footprint of development will be relocated from the development site to an offsite certified recipient area following receipt of the appropriate permits and under the direction of an FWC certified Authorized Agent, in accordance with FWC guidelines.

As indicated above, it is estimated that a total of 131 tortoises will need to be relocated from the Center Lake DRI project site in order to facilitate development. It is important to note that gopher tortoises located within the preserved upland buffers and other open space areas that are outside of the footprint of development will not require relocation. The presence of this species within the upland preservation area is vital to the structure of the unique ecosystem, as their burrows are used by numerous commensal species. Therefore, relocation is not recommended unless the burrows will be impacted by development.

4.1.7 Southeastern American Kestrel

Kestrel nest boxes may be established to provide perching and nesting locations for the falcons. The most appropriate place for nest boxes would be upland management areas UMA-1, UMA-2A and UMA-2B as these areas will be maintained as open, improved pasture communities for sandhill crane foraging.

Nest boxes will be constructed as described in the FWC's Technical Report No. 13 (**Exhibit 2**). The nest boxes will be placed at a height of 7 meters, and will be located on poles, snags or live trees in close proximity to a roost tree, if present. The nest box opening will face a southerly to easterly direction, and the entrance will be unobstructed with a clear flight path. Additionally, each box will be placed more than 50 meters from any forest edge. Nest boxes will be cleaned and

repaired at least once a year, just prior to the kestrel-nesting season (December). Boxes shall be visually checked in April and May to determine if they are being used by other species (i.e. starlings) and shall be cleaned if such use is observed. Additional observations may be conducted during other regular monitoring events to be conducted for wetlands and other land management activities.

4.1.8 Wading Birds

No specific conservation actions are recommended for the potential wading birds that may occur on-site. Maintenance of the stormwater ponds and preservation and maintenance of the wetland habitats as provided in accordance with regulatory requirements will be sufficient to ensure protection and sustainability of suitable habitat for wading birds in the post-development condition.

4.2 Monitoring & Maintenance Plan

Successful implementation of the recommended conservation actions outlined above is directly contingent on implementing both a monitoring and a maintenance plan. The monitoring plan will document the wildlife use and habitat quality of the conservation lands. The maintenance plan will be used to control the habitat quality by implementing chemical and mechanical resources as applicable.

4.2.1 Vegetative Monitoring Plan

Monitoring of the Center Lake DRI conservation lands may consist of both qualitative and quantitative components. Monitoring activities will be conducted as specified by the SFWMD permit. During each monitoring event, the following general information will be collected: date of sampling event, person conducting the sampling event, analytical techniques and/or monitoring methodologies used and results of the monitoring event including photographs, qualitative summary of vegetative cover, wildlife observed, percent cover of nuisance and exotic species, hydrologic notes and recommended maintenance activities.

Qualitative vegetation monitoring will be conducted to assess the overall quality and health of each of the community types within the conservation lands. The condition of each strata of vegetation, wildlife use observations and the general health of the habitat will be evaluated and documented. This evaluation will be conducted by establishing representative monitoring transects within each of the community types of the conservation lands. The location and length of each transect will be established during the first monitoring event and will be approved by the appropriate regulatory agency. The following qualitative observations will be made within each community type: dominant vegetation within each strata, presence and spread of nuisance and exotic vegetation and wildlife observations. These observations will be recorded on field data sheets prepared for each transect

within each community type. The vegetative monitoring plan will be implemented for the duration specified within the SFWMD permit.

4.2.2 Wildlife Monitoring Plan

A wildlife monitoring program will be implemented as specified by the SFWMD permit to document the presence of wildlife use within the conservation lands. General wildlife observations will be documented within each of the common areas and community parks adjacent to development parcels. All other wildlife observations will be documented and listed in the annual monitoring reports. The wildlife monitoring plan will be implemented for the duration specified within the SFWMD permit.

4.2.3 Maintenance Plan

A maintenance program will be implemented for the conservation lands within the Center Lake DRI project area. Maintenance will be conducted as required by the SFWMD permit to ensure the integrity and viability of the conservation lands. Maintenance shall be conducted to ensure that invasive exotic vegetation (as defined by the Florida Exotic Pest Plant Council) will not exceed 10% within any one community type. The maintenance plan will be implemented for the duration specified within the SFWMD permit.

4.2.4 Reporting

The results of each monitoring event will be summarized in an Annual Monitoring Report to be submitted by December 31st of each respective year, or as required by the SFWMD permit. The monitoring reports will be submitted directly to ECFRPC, FWC, and any other agency that may request a copy. Annual reports will be provided for the duration specified within the SFWMD permit.

4.3 Educational Materials

The Center Lake DRI project area and adjacent public lands provide habitat for several listed wildlife species. The Center Lake DRI site plan involves preservation of significant acreage of both wetland and upland communities that provide habitat for these listed species. The long-term success of the HMP is dependent on education of the residents and public. From the construction workers to the future residents, a series of educational efforts must be undertaken to provide information on the basic natural history of the protected wildlife in the area and the associated regulatory protections and permits.

Wildlife preserves and conservation areas are generally accepted by the residents and public as an amenity and public asset for the community, especially if they can use and enjoy them. Educational materials will be developed in a manner to encourage people at

all levels to be aware of the potential wildlife presence and to protect the resources in written pamphlets and flyers, and on signs. The materials will include contact information for the FWC and any other responsible party potentially designated by the CDD/POA in case of wildlife interactions or if someone is breaking the law regarding protection of wildlife. Specific educational materials will be developed and provided to residents and property owners to warn against feeding of Florida sandhill cranes. Signage will be placed at appropriate locations to alert residents and property owners of the potential presence of this species. Speed deterrent devices such as speed humps and lowered speed limits on the secondary residential roads will be implemented to prevent automobile collisions with this species.

All educational materials will be developed with the assistance of the FWC and any other regulatory agency or conservation organization that may be appropriate for each aspect of the materials.

4.4 Conservation Signage

The primary purpose of conservation signs and displays is to inform the general public about the status of the conservation lands and to outline acceptable and unacceptable actions and activities in and around the preserves and associated protected wildlife. The secondary purpose of the signs is to educate the homeowners about the purpose of the preservation areas and protected wildlife and to encourage their positive support for conservation. The developer and its consultant with the assistance of the FWC will design educational signage describing the listed status of each of the wildlife species detailed within this HMP.

Appropriate signs will be erected throughout the project site, specifically at the following locations: the boundaries of the Scrub Preserve, along the wetland preservation areas. The signs will identify the areas as preservation and will identify the potential presence of wildlife.

4.5 Wildlife Crossings & Habitat Connectivity

Several roads are proposed to cross through wetland areas to facilitate access to upland development parcels (**Figure 3**). Each of these road crossings will exhibit speed deterrent devices such as posted reduced speed limits and/or speed bumps. Additionally, signage will be posted in these locations to alert drivers to the potential presence of wildlife crossing. Such efforts are anticipated to reduce vehicular mortality of wildlife. Under-road wildlife crossings will be provided through use of appropriately sized culverts. These culverts will also provide for hydrologic connectivity of the wetland through which the road crosses. During engineering design and the Environmental Resource Permitting (ERP) process, each of these crossings will be evaluated with specific consideration for wildlife use. Where appropriate, additional "dry-crossing" culverts may be recommended in addition to the culverts planned for hydrologic connectivity. These dry-culvert crossings will be designed for installation above the

seasonal high water elevations to allow for use by small mammals and reptiles, etc. that may not use the wet culverts.

The Center Lake DRI conceptual plan has been designed to accommodate post-development habitat connectivity within the site as well as between the site and offsite habitat areas. The Habitat Management Plan Map (**Figure 3**) depicts many wildlife corridors and habitat connectivity areas that will facilitate on-site and regional wildlife migration. Wetlands 9, 10, 13, 14, 17 and 18 are connected to offsite wetland habitat areas via uninterrupted natural wildlife corridors. Placement of the on-site wetlands under conservation easement will ensure maintenance of these corridors in perpetuity.

Additionally, the applicant commits to incorporating appropriately sized box culverts or other such measures within the roadway crossings that bisect the expansive wetland slough located through the center of the property, in order to ensure connectivity of the habitat and wildlife movement through the site. Specifically, such measures will be incorporated into design of the roadways which bisect Wetlands 13 & 18, Wetlands 18 & 11, and Wetlands 8-west & 8-east. Each roadway crossing will be evaluated separately during site design to determine what type of structure is most appropriate for the size and expanse of the roadway crossing. For example, smaller, secondary roadways that bisect less expansive wetlands may use smaller culverts to maintain hydrology, with at-grade wildlife crossings and speed deterrent devices (i.e. speed bumps, reduced speed limits and wildlife crossing signage) to facilitate connectivity. Conversely, primary roadways that entail a larger, more significant linear crossing may use large box culverts or bridging as appropriate to facilitate connectivity.

Recent discussions between Modica & Associates, Inc. staff and Dr. Daniel Smith (professor, University of Central Florida and private consultant to many FDOT transportation projects) indicate that 8-foot pre-cast box culverts have been successfully used on State Road 46 for wildlife crossing structures. The specific design elements of each wetland crossing for the Center Lake project will consider hydrologic connectivity as well as biological concerns such as noise and lighting. Wildlife crossing signage and reduced speed limits may also be employed at appropriate wetland and wildlife corridor crossings.

The applicant acknowledges that the on-site wetland systems provide significant wildlife habitat and connectivity with off-site wildlife corridors that have been identified by conservation groups and regulatory agencies. The site plan allows for conservation of 99% of the on-site wetlands, with additional preservation of significant upland habitat contiguous with the expansive wetland preservation acreage. A mosaic of upland and wetland preservation will continue to provide significant habitat for both wetland and upland-dependent species in the post-development condition. Planning for appropriate wildlife crossings as discussed above should provide reasonable assurance that the project will preserve the significant wildlife corridors within the Center Lake DRI project site in the post-development condition.

The wetlands within these on-site corridors are protected by upland buffers and stormwater ponds, and all proposed crossings will include appropriate signage and wildlife crossings. These conservation measures will ensure protection and sustainability of wildlife and their habitat within the project site.

5.0 OWNERSHIP & MANAGEMENT RESPONSIBILITY

The Center Lake DRI Application for Development Approval (ADA) is currently under review by the Central Florida Regional Planning Council. Ownership and management of the DRI will eventually become the responsibility of the Center Lake DRI Community Development District (CDD) or Master Property Owner's Association (MPOA). Until such time as the CDD or MPOA has been formed and becomes operational, the responsibility of monitoring and maintenance activities will remain with the Applicant. Once the CDD or MPOA becomes operational, management and maintenance responsibilities will be transferred from the Applicant to the CDD/MPOA.

It is the responsibility of the Applicant to incorporate by reference and attach as an appendix, this Center Lake DRI HMP into the Declaration of Covenants, Conditions & Restrictions or other community covenant as applicable. Furthermore, there must be specific language within these documents to require adequate fee assessments to provide the economic structure to perpetually support and implement the management activities outlined in this HMP.

The CDD/MPOA, as having financial responsibility for the monitoring and maintenance of the on-site conservation areas, will be responsible for selecting and retaining an environmental consultant(s) to conduct the Recommended Conservation Actions as detailed in Section 4.0 above. The environmental consultant shall be responsible for recommending any maintenance activities, informing each regulatory agency of needed activities, and coordinating the needed activities. The management and maintenance of the conservation areas will be carried out in accordance with this HMP and with the conditions of the conservation easement(s) that may be recorded over all or portions of the conservation areas in the future.

6.0 REFERENCES

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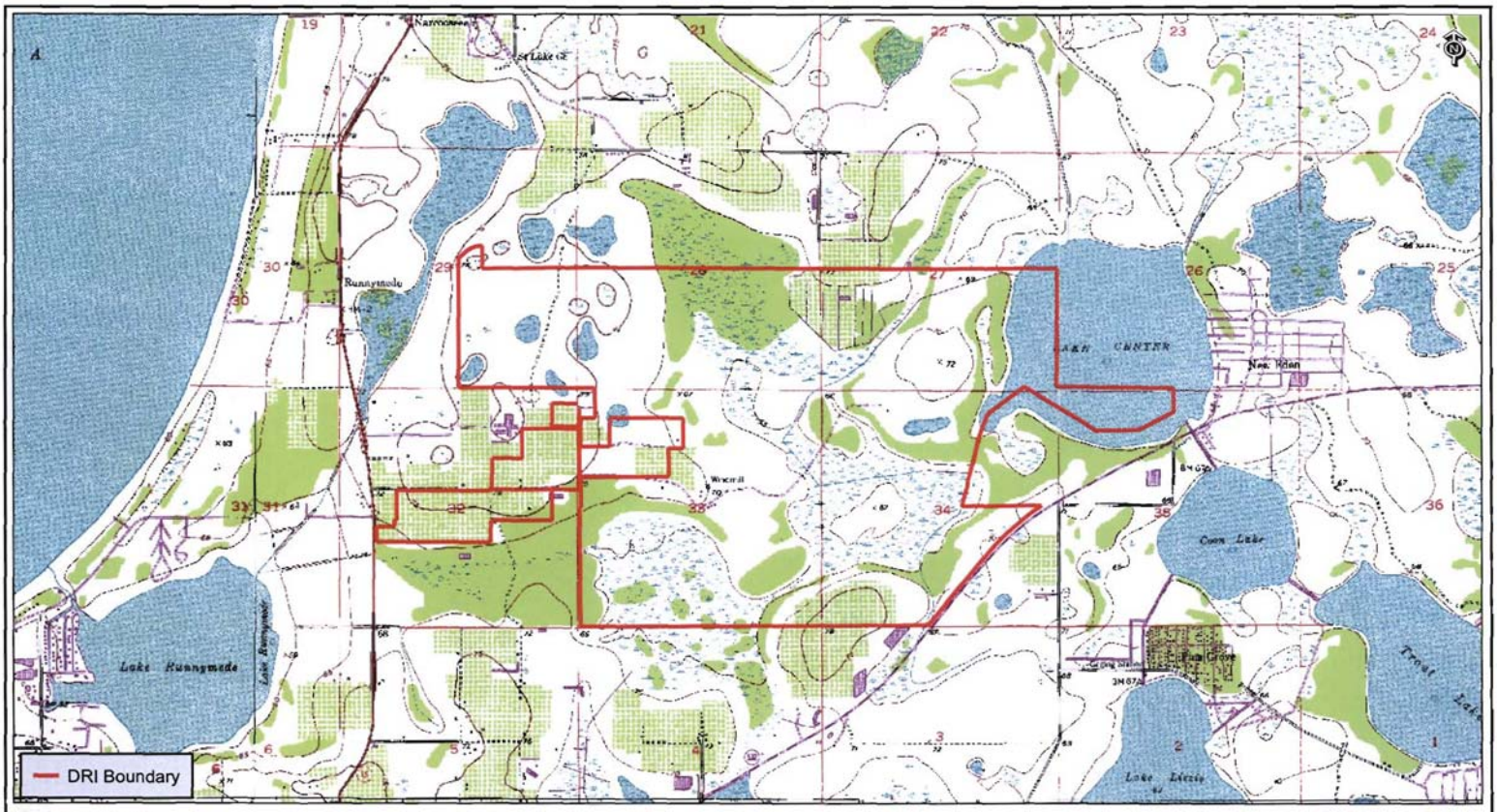
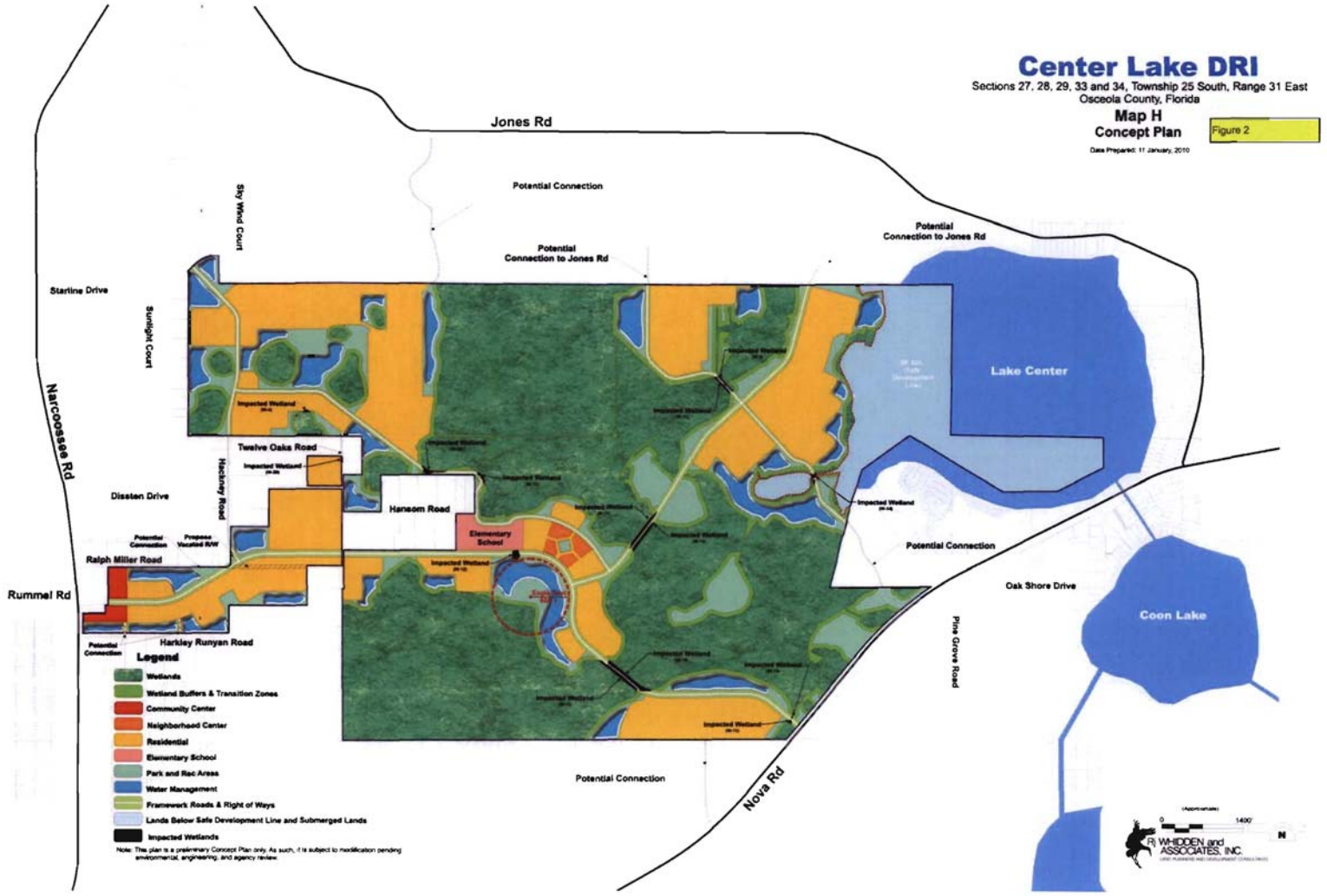
FIGURES



Center Lake DRI

Habitat Management Plan
Figure 1 - Location Map/USGS Topographic Map - Narcoossee Quadrangle
Sections 27, 28, 29, 33 and 34; T25S, R31E
Osceola County, Florida

Modica & Associates, Inc.
Environmental Planning, Design & Permitting
302 Mohawk Road
Minneola, Florida 34715
Phone: 352-394-2000
Fax: 352-394-1159
Email: environmental@modica.cc


Center Lake DRI
Sections 27, 28, 29, 33 and 34, Township 25 South, Range 31 East
Osceola County, Florida
Map H
Concept Plan
Figure 2
Date Prepared: 11 January, 2010
Jones Rd
Potential Connection
Potential Connection to Jones Rd
Potential Connection to Jones Rd
Sky Wind Court
Starline Drive
Sunlight Court
Narcoossee Rd
Twelve Oaks Road
Hackney Road
Disston Drive
Hansom Road
Elementary School
Potential Connection
Propose Vacated R/W
Ralph Miller Road
Rummel Rd
Potential Connection
Harkley Runyan Road
Lake Center
Potential Connection
Oak Shore Drive
Coon Lake
Pine Grove Road
Potential Connection
Nova Rd
Legend
Wetlands
Wetland Buffers & Transition Zones
Community Center
Neighborhood Center
Residential
Elementary School
Park and Rec Areas
Water Management
Framework Roads & Right of Ways
Lands Below Safe Development Line and Submerged Lands
Impacted Wetlands
Note: The plan is a preliminary Concept Plan only. As such, it is subject to modification pending environmental, engineering, and agency review.
(Approximate)
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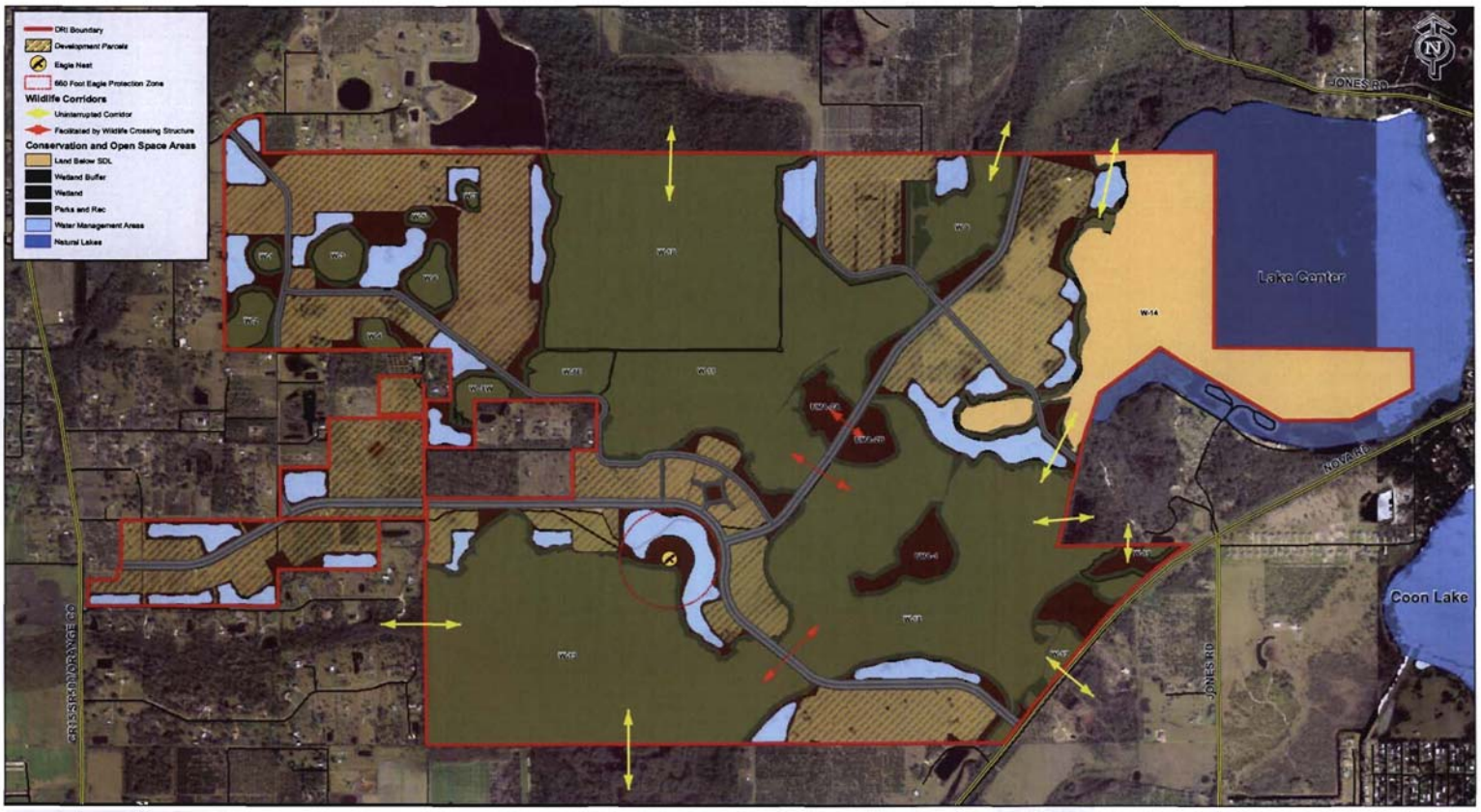
WHIDDEN and ASSOCIATES, INC.



Center Lake DRI

Habitat Management Plan
Figure 3 - Habitat Management Plan Map
Sections 27, 28, 29, 33 and 34, T25S, R31E
Osceola County, Florida

1,250 625 0 1,250 Feet

Modica & Associates, Inc.
Environmental Planning, Design & Permitting
302 Mohawk Road
Minneola, Florida 34715
Phone: 352-394-2000
Fax: 352-394-1159
Email: environmental@modica.cc

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map F
Vegetative Associations

Figure 4

DRI Boundary

Modica & Associates, Inc.

Note: All FLUCCS information hereon has been provided by Modica & Associates, in Shapefile Format.

Land Use Legend

110 - Residential, Low Density
211 - Improved Pastures
224 - Abbandoned Citrus
311 - Herbaceous
414 - Pine Mesic Oak
421 - Xeric Oak
427- Live Oak
434 - Hardwood Coniferous Mixed
515 - Ditch
520 - Lake
630 - Wetland Forested Mixed
641 Freshwater Marsh
643 - Wet Prairie
814 - Field Roads

0 2,000 Feet

WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

Center Lake DRI

Sections 27-29, 33, 34, Township 25 South, Range 31 East
Osceola County, Florida

Map G
Wildlife Resources Map

Figure 5

DRI Boundary

Wildlife Legend

- Eagle Nest
- 660ft Eagle Protection Zone
- Wildlife Survey Transects
- SandHill Crane (Potential Nests, 2007 Survey)

Gopher Tortoise Burrows

status

- Active
- Inactive

Wildlife Observations

Wildlife

- Fox Squirrel
- Sandhill Crane

Modica & Associates, Inc.

Note: All Wildlife information hereon has been provided by Modica & Associates, in Shape File Format.

0 2,000 Feet

RJ WHIDDEN and ASSOCIATES, INC.
LAND PLANNERS AND DEVELOPMENT CONSULTANTS

EXHIBITS

EXHIBITS

Living with alligators

In Florida, increasing numbers of people living and recreating near water have led to a steady rise in the number of alligator-related complaints. Although the majority of these complaints relate to alligators occurring in locations where they simply aren't wanted, a small number tragically involve bites to people. The FWC removes more than 7,000 nuisance alligators per year. Through removal of these alligators and increased public awareness, the rate of alligator bites has remained constant despite the increased potential for alligator-human interaction.

Alligators are an important part of Florida's heritage and play a valuable role in the ecology of our state's wetlands. A better understanding of these facts and a broader knowledge of alligator behavior will help ensure that people and alligators can continue to coexist.

Visit MyFWC.com/gators for more information about alligators and the latest statistics.

Tim Donovan

Call 1-866-FWC-GATOR (392-4286) to report nuisance alligators.

Janice Plain

Call 1-866-FWC-GATOR (392-4286) to report nuisance alligators.

Regional offices
Northwest Region, Panama City
850-265-3676

North Central Region, Lake City
386-758-0525

Northeast Region, Ocala
352-732-1225

Southwest Region, Lakeland
863-648-3200

South Region, West Palm Beach
561-625-5122

The FWC prohibits discrimination by race, color, nationality, age, sex or handicap. If you believe you have been discriminated against in any program, activity or facility of this agency, write to: Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600; or to: Office of Human Relations, USFWS, Department of Interior, Washington, D.C. 20240.

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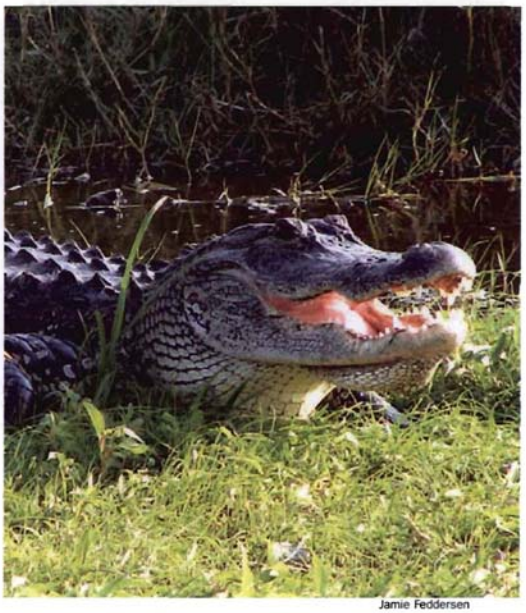
A guide to living with

Alligators



Jamie Feddersen

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Lizabeth West

Do not swim outside of posted swimming areas or in waters that may be inhabited by alligators.

About alligators

Alligators have inhabited Florida's marshes, swamps, rivers and lakes for many centuries. Meanwhile, Florida has experienced tremendous human population growth, with hundreds of people moving into the state daily. Many new residents seek waterfront homes, resulting in increased interactions between people and alligators, which are found in all 67 counties.

Although many Floridians have learned to coexist with alligators, the potential for conflict always exists. Because of their predatory nature and large size (up to 14 feet in length and weighing as much as 1,000 pounds), alligators sometimes target pets and livestock as prey. Unfortunately, people are occasionally bitten, and in rare instances, killed by large alligators. Since 1948, more than 300 unprovoked bites to people have been documented in Florida, with at least 22 resulting in deaths..

Over the past 10 years, the Florida Fish and Wildlife Conservation Commission (FWC) has received an average of more than 16,000 alligator-related complaints per year. Most of these complaints deal with alligators occurring in places such as backyard ponds, canals, ditches and streams, but other conflicts occur in garages, pools and in golf course ponds. In many cases, if left alone, alligators will eventually retreat to more-preferred, isolated areas away from people.

Safety tips

■ If you encounter an alligator over four feet in length that poses a threat to humans or property, call 1-866-FWC-GATOR (392-4286). The FWC will evaluate your complaint and, if necessary, send a contracted nuisance alligator trapper to remove it.

■ Be aware of the possibility of alligator attacks when in or near fresh or brackish waterbodies. Attacks may occur when people do not pay close enough attention to their surroundings when working or recreating near water.

■ Closely supervise children when they are playing in or around water. Never allow small children to play unsupervised near water.

■ Do not swim outside of posted swimming areas or in waters that might be inhabited by large alligators.

■ Alligators are most active between dusk and dawn. Therefore, swim only during daylight hours.

■ Leave alligators alone. State law prohibits killing, harassing or possessing alligators.

■ Never feed or entice alligators – it's dangerous and illegal. When fed, alligators overcome their natural wariness and learn to associate people with food.

■ Inform others that feeding alligators is illegal and creates problems for others who want to use the water for recreational purposes.

■ Dispose of fish scraps in garbage cans at boat ramps and fish camps. Do not throw them in the water. Although you are not intentionally feeding alligators when you do this, the end result can be the same.

Tim Donovan

A young alligator wanders onto a porch in a residential neighborhood.

■ Don't allow pets to swim, exercise or drink in or near waters that may contain alligators or in designated swimming areas. Dogs are more susceptible to being targeted than people, because dogs resemble the natural prey of alligators.

■ Never remove an alligator from its natural habitat or accept one as a pet. It is illegal and dangerous to do so. Handling even small alligators can result in injury.

■ Observe and photograph alligators only from a distance. Remember, they're an important part of Florida's natural history as well as an integral component of freshwater ecosystems.

■ Seek immediate medical attention if bitten by an alligator. Alligator bites can result in serious infection.

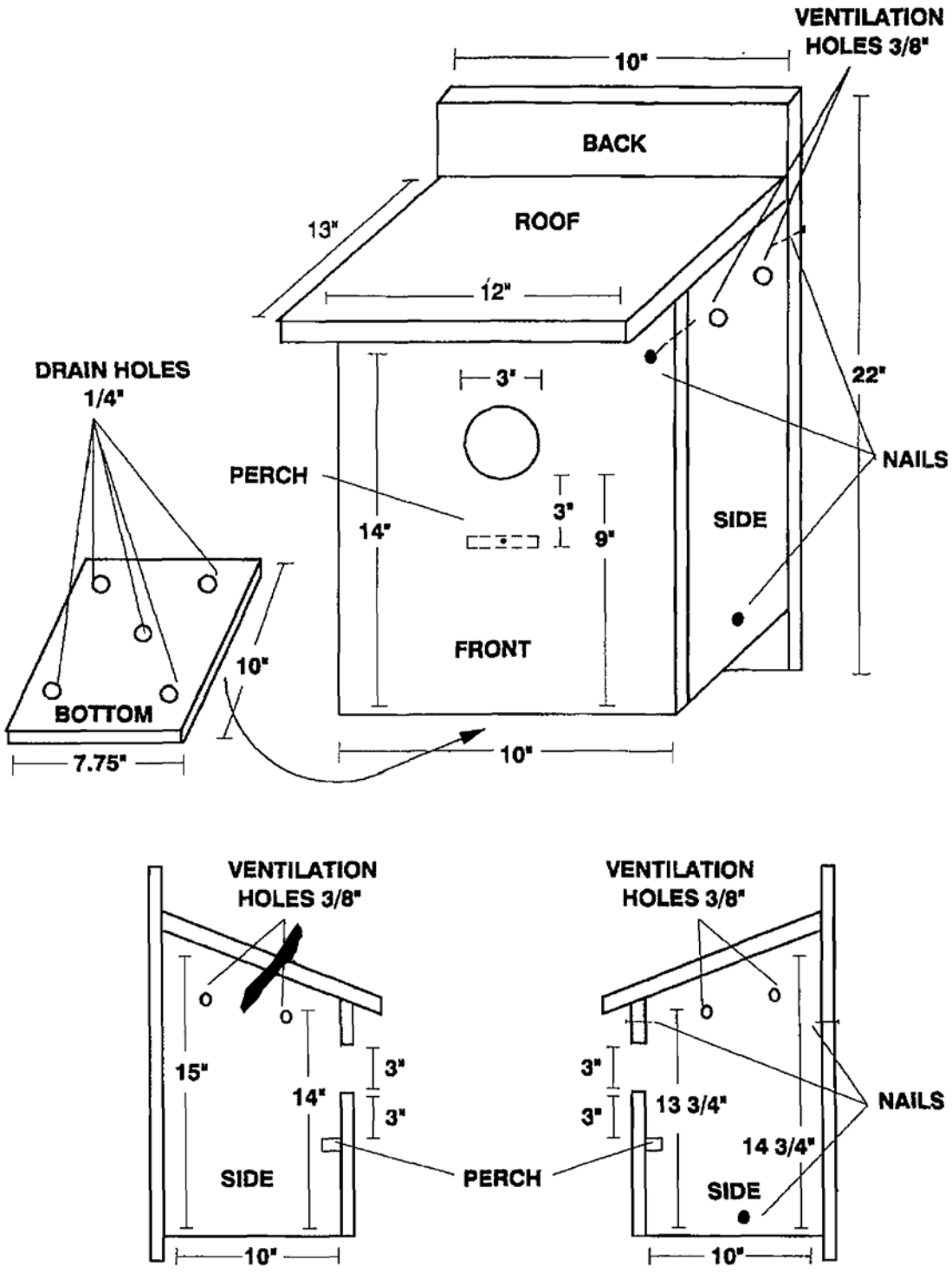


Figure 13. Kestrel nest box design. Half of the entrance cut-out is used for an inside perch, attached with a screw. Two nails at the top of one side panel act as hinges to swing the side open for cleaning. A single nail is used at the bottom to secure the side shut. Use 1 inch thick wood for construction.

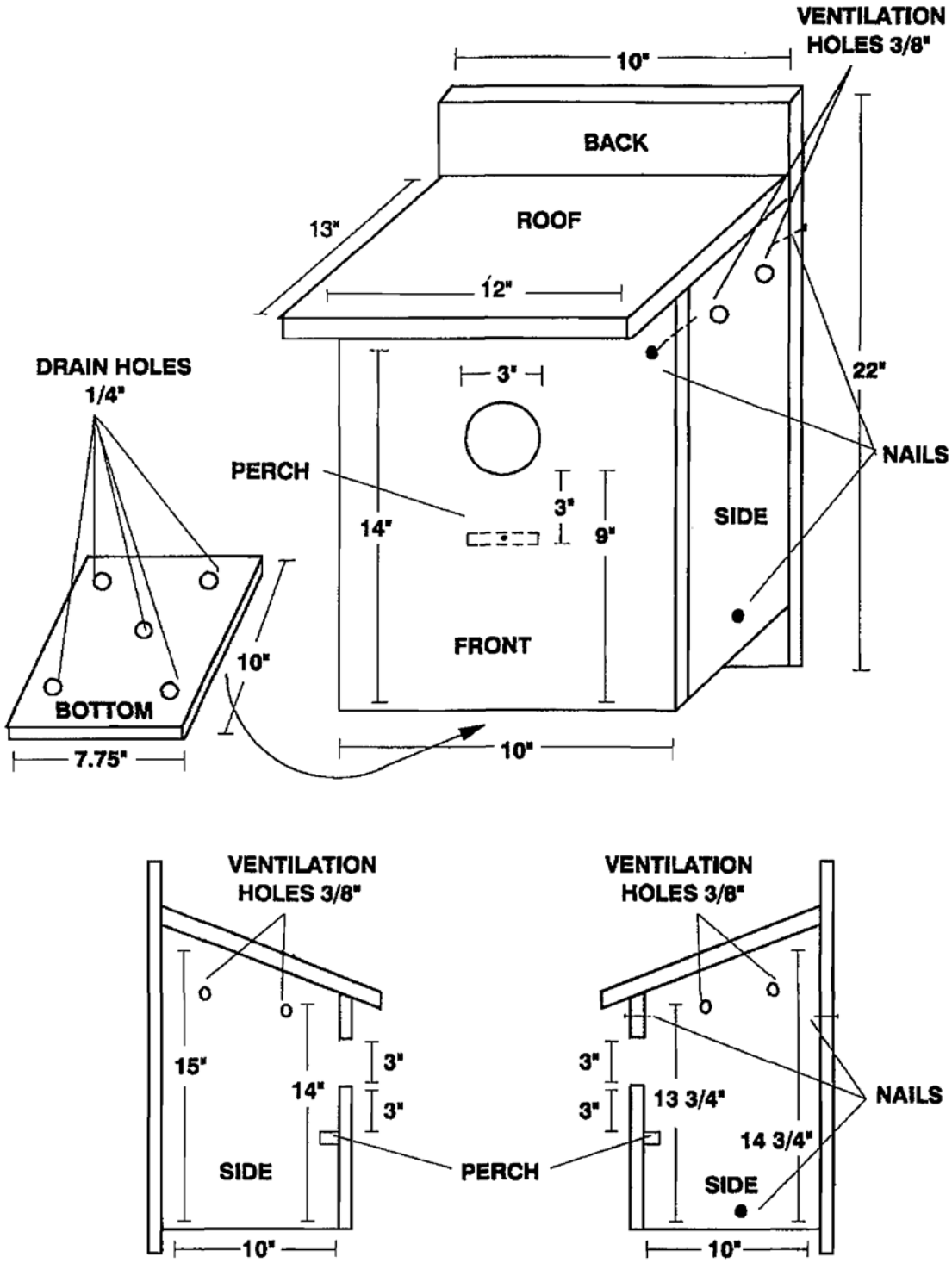


Figure 13. Kestrel nest box design. Half of the entrance cut-out is used for an inside perch, attached with a screw. Two nails at the top of one side panel act as hinges to swing the side open for cleaning. A single nail is used at the bottom to secure the side shut. Use 1 inch thick wood for construction.