



DATE: May 24, 2016

TO: Mr. Michael Schenk, P.E., City Engineer, City of Plant City

FROM: Derek L. Doughty, P.E., Engineering Manager / Vice President, Applied Sciences

SUBJECT: Visions Golf Application Review Support Services – Conceptual Modification
ASCI Project No. 91504.00

The City of Plant City (City) retained the services of Applied Sciences (Reviewer) to assist with the review of stormwater elements submitted in conjunction with the rezoning application of Visions Golf LLC within the Villages of Walden Lake (PB 2014-06). Information previously provided by the City included Plats, Construction Plans and As-Builts and Rezoning Application Data. A Technical Memorandum was previously provided to the City on June 29, 2015, summarizing Applied Sciences review observations.

On February 12, 2016, the City forwarded to Applied Sciences a Revised Walden Lake CU Modification plan dated February 4, 2016 for review. On April 4, 2016, the City forwarded to Applied Sciences an additional Revised Walden Lake CU Modification plan dated April 1st, 2016. The following is a summary of that review:

1. Observations by Reviewer:

The revised Walden Lake CU Modification plan provided for review is limited to a one page document which includes no specific details pertaining to any stormwater elements of the planned development. A note pertaining to the Development Requirements for Storm Retention and Drainage states “Storm water, drainage and retention requirements shall meet the specifications of the approved Walden Lake Master Drainage Plan on file with the Plant City Engineering Office.” It is suggested that this note be expanded to include the following:

- ... along with the specifications and requirements of the City of Plant City, Southwest Florida Water Management District, Hillsborough County Environmental Protection Commission and any other agency having jurisdiction over the stormwater, drainage and retention for the proposed development.

The following outlines several potential conditions that could be included in any form of zoning approval. Each of the items listed have the potential to impact the adjoining properties if not properly addressed during the design and permitting process:

1. Maintenance of Offsite Drainage Patterns

(Note: For the purposes of this document, “adjacent properties” mean properties that are adjacent to the Visions Golf LLC property but under separate ownership. “Subject property” means the property owned by Visions Golf LLC that is the subject of this rezoning.)

Portions of the adjacent properties are currently graded and drained in a manner that directs stormwater runoff towards specific locations within the subject property, such as a stormwater pipe, or to a wetland conservation area which is shared between the adjacent and subject properties. The 30' Buffer with Landscape Berm Example included within the provided plan depicts a 4'-5' high rolling berm with planted hedges and trees proposed between the existing homes and the proposed homes. This berm, as depicted, would appear to block the drainage from the adjacent properties.

The following note is recommended to be added to the plan to address the maintenance of offsite drainage patterns:

- Sufficient information must be provided during the design of the construction plans to identify and preserve existing conveyances, or provide alternate conveyance facilities for the offsite contributing areas and to demonstrate no adverse impact to any adjacent properties.

2. Hydrologic and Hydraulic Modeling

As has been identified previously, the available, existing hydrologic and hydraulic modeling within the general vicinity of the proposed project lacks the level of detail necessary to make sufficient determinations related to adverse impacts. Sub-basin delineations, model connectivity, conveyance and storage must be refined to provide the needed resolution. Ownership and Control also needs to be demonstrated over any and all proposed impact areas.

The following note(s) are recommended to be added to the plan to address the necessary Hydrologic and Hydraulic modeling:

- Hydrologic and hydraulic calculations for existing and proposed conditions should be sufficiently detailed to effectively identify specific elevations at, or near, the property boundaries in order for impact assessments to adjacent/offsite properties to be appropriately made. Accurate simulations of existing, and



proposed conditions, flood stages which address model connectivity, existing and future storm sewer collection systems, existing and future natural conveyances, historic storage volumes and any proposed loss thereto, must be adequately included in the design calculations.

- Ownership and control over any structures proposed for modification and over all areas proposed for any resulting increased stage must be demonstrated along with acceptance of the increased flood risks associated with any proposed increases in flood stage as a condition of design approval.
- The proposed development must follow the Southwest Florida Water Management District (SWFWMD) and the City of Plant City regulatory guidelines as appropriate, as well as those associated with any other regulatory agency having jurisdiction with respect to stormwater attenuation design.

3. Wetland and/or Surface Water Impacts

Notes are included on the submitted plan pertaining to the Development Requirements for Environmentally Sensitive, Recreations and Open Space Areas. These notes make reference to “the appropriate regulatory agencies” and “the appropriate jurisdictional agencies”, with respect to identifying jurisdictional areas and applicable rules and regulations.

The following note is recommended for addition to the plan to address the Wetland and/or Surface Water Impacts:

- Wetlands and other surface waters proposed for impact by the development must follow the Hillsborough County Environmental Protection Commission (EPC), Southwest Florida Water Management District (SWFWMD), and the US Army Corps of Engineers (ACOE) regulatory guidelines as appropriate, as well as those associated with any other regulatory agency having jurisdiction, with respect to avoidance, elimination, reduction of, and mitigation for wetland and surface water impacts.

4. Water Quality

Adequate treatment volumes must be provided within the subject property to provide treatment for the entire project area and all contributing off-site flows. The designer should be aware that additional treatment may be required for offsite contributing drainage should those waters be routed through proposed stormwater treatment facilities. In addition, the receiving waters are classified as being “impaired”, therefore a



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requirement for Net Environmental Improvement is expected.

The following note is recommended to be added to the plan to address Water Quality:

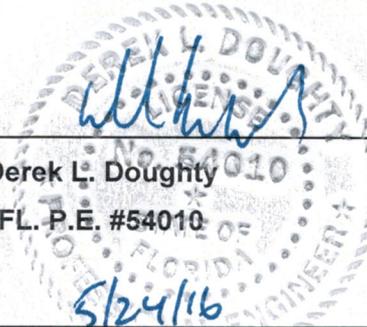
- The proposed development must follow the Southwest Florida Water Management District (SWFWMD) regulatory guidelines as appropriate, as well as those associated with any other regulatory agency having jurisdiction, with respect to Water Quality Treatment.

Sincerely,

APPLIED SCIENCES CONSULTING, INC.



Derek L. Doughty, P.E.
Vice President – Engineering Manager



Derek L. Doughty
FL. P.E. #54010

Date:

5/24/16

