

# SEXTON ENGINEERING ASSOCIATES, INC.

Consulting Engineers and Surveyors

## DRAINAGE STATEMENT

for

### WCPPUD POD F NEW SHOWGROUNDS

**WELLINGTON, FLORIDA** 

Prepared by

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**SEA PROJECT NO: 2242T17** 

December 14, 2023



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY

Michael F Sexton Date: 2023.12.14 16:37:37 -05'00'

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#### **DRAINAGE STATEMENT**

#### Introduction:

The 114.65-acre property is located at the southeast corner of Gene Mische Way and Gracida Street (40th Street South), the property is comprised of developed and undeveloped lots and Tract A. The property drains to the existing ACME canal system. An ACME Canal identified as C-24 is located along the south boundary of the subject property and within the north right of way of Gracida Street and ACME Canal C-4 along the east boundary of the subject property.

#### Project Description:

The POD F New Showgrounds are proposed as a Commercial Equestrian Arena located on a portion of Pod F of the Wellington Countryplace PUD together with the 18.22-acre Amenity Site of the proposed Wellington South project for a combined 132.87 acres. The showgrounds will include an International Arena, offices, vendor buildings, barns, covered arenas, sand rings, parking lots, and a stormwater management system.

#### Existing SFWMD Permit:

SFWMD ERP Permit No. 50-00548-S-204 was issued for a surface water management system to serve 238.4 acres of residential development known as Parcel B, Pod E, and F, Wellington Country Place PUD. The residential development is partially developed in Pod F under SFWMD Application No. 180529-15 and the remaining property within Pod E and Pod G has not been developed at this time. The approved stormwater permit for the referenced application established that:

"The lots and roads drain to roadway swales with drainage collection systems that pipe the runoff to the surface water management system consisting of three (3) interconnected wet detention ponds. These ponds provide water quality and water quantity prior to discharging into the existing lake to the north that is directly connected to the ACME canal system. The stormwater system will also connect to a wetland preserve area, after the wet detention ponds providing water quantity treatment."

A third interconnected wet detention pond and preserve area are within the Amenity Site of the proposed Wellington South project and will be part of the overall stormwater management system. This area is within the existing stormwater basin for POD F and part of the existing SFWMD Permit.

#### Drainage Methodology:

The surface water management design for the proposed project shall be based on the "Permit Criteria and Best Management Practices Manual for Works in the Village of Wellington" as revised in April 2010 and adopted by the Village of Wellington under Ordinance 2010-14 on June 8, 2010.

Based on the ACME Basin B Design Criteria for minimum flood protection, an applicant must demonstrate that the proposed project will provide a minimum of the established storage requirements as follows:

Storage at Elevation 16.0' NGVD

0.11 acre-feet/acre
0.86 acre-feet/acre

Storage at Elevation 17.0' NGVD 0.86 a

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Any reduction in soil storage shall be compensated for by excess site storage in order to provide an overall storage in excess of the ACME Basin B requirements.

Per the Village of Wellington and SFWMD permit criteria, the project shall provide the greater of 1" of water quality treatment over the drainage area, or 2.5" of water quality treatment times the percentage of imperviousness. Projects within ACME Basin B shall provide for a 50% increase in water quality treatment volume.

The POD F New Showground facility and the Amenity Site will function as a combined stormwater management system, as approved by the SFWMD. As such the interconnected wet detention ponds and the conservation area will provide the required flood protection before discharging into the ACME canal system. The required water quality treatment volume will only be stored within the interconnected wet detention ponds.

#### Conclusion:

The proposed stormwater management system for The POD F New Showgrounds project will provide the water quality treatment and water quantity storage required by the SFWMD and the ACME Improvement District within the limits of the proposed project. Approximately 8 acres of wet detention lakes shall provide the required water quality volume and an additional 8 acres of flood protection within the Conservation Easement area (Amenity Site) will provide the total required water quantity storage within the development to provide the required stormwater treatment and flood protection with an overflow drainage outfall to the existing ACME canal system (C-24 & C-4). All open space and canal maintenance areas shall be graded away from the top of bank of the ACME existing canals and proposed lakes along the property line to avoid direct discharge and comply with the SFWMD and the ACME Improvement District design criteria.