



# SEXTON ENGINEERING ASSOCIATES, INC.

Consulting Engineers and Surveyors

## EQUESTRIAN VILLAGE STORM WATER MANAGEMENT PLAN

August 22, 2013

### Project Description

The 59-acre property known as Parcel 1 of Equestrian Village is located at the northeast corner of Pierson Road and South Shore Boulevard in Wellington and is part of the Wellington Planned Unit Development (PUD).

The property was formerly a part of the Palm Beach Polo Stadium, which consisted of a polo stadium, four polo fields and equestrian support facilities. The storm water management system was permitted for construction under the original permit for ACME Units of Development 1 and 2 on March 16, 1978 (SFWMD ERP No. 50-00548-S, App Nos. 27833 and 09227-B0, with periodic modifications to the overall system. The property is located within Basin A of the Village of Wellington's (VOW) surface water management system.

A portion of the subject property has been redeveloped into a dressage complex including equestrian arenas, stables, parking areas and other equestrian support facilities. These recent improvements have been permitted under SFWMD ERP No. 50-0548-S-203 issued May 20, 2013 and VOW Land Development Permit No. 2011-1304. Additional improvements will be presented to the VOW for engineering approvals as required by the VOW Land Development Regulations.

### Surface Water Management Design

All redeveloped portions of the property shall be designed to provide surface water management improvements to meet all South Florida Water Management District (SFWMD) and Village of Wellington regulations.

#### *SFWMD Permit:*

The property was permitted under the original permit for ACME Units of Development 1 and 2 on March 16, 1978 (SFWMD ERP No. 50-00548-S, App. Nos. 27833 and 09227-B), and is located within Basin A of the Village of Wellington's surface water management system. The permitted design elevations for Basin A are as follows:

Maintained Water Elevation	= 12.0 feet NGVD
Minimum Road Elevation	= 16.0 feet NGVD
Minimum Finished Floor Elevation	= 17.5 feet NGVD

#### *Water Quality:*

Under SFWMD Permit No. 50-00548-S, approximately 340 ac-ft of water or 0.5 inch over Unit of Development 1 was retained in the system before discharging via pumps into the C-51 canal. This property is located in what was formerly known as Unit of Development 1. Per SFWMD criteria, the redeveloped portions of the property shall provide the greater of 1 inch of water quality treatment over the drainage area, or 2.5 inches of water quality treatment over the project imperviousness area. Therefore, 0.5 inch shall be subtracted from these volumes based on the existing water quality treatment by the existing storm water management system.

*Water Quantity:*

Based on Chapter 40E-41, F.A.C., Surface Water Management Basin and Related Criteria, developments in the C-51 Basin must provide minimum flood protection including no net encroachment into the floodplain. Any water storage volume removed from the floodplain must be accommodated by an equal volume of open storage compensation. Compensation for any reduction in soil storage also shall be accommodated on site.

*Design Methodology:*

Runoff from redeveloped portions of the property shall drain to onsite surface water management improvements for water quality treatment prior to discharging into the onsite lake along the north and east perimeter of the property. The lake was constructed as part of the Unit of Development 1 under SFWMD Permit No. 50-00548-S and discharges to the ACME C-23 Canal, which runs adjacent to the south property line. The canal is part of Basin A of the ACME Improvement District surface water management system.

The event parking area to the west of the covered arena shall provide for an alternate surface treatment consisting of a turf reinforcement grid product to provide a porous and durable parking surface to reduce runoff and increase soil storage.

Portions of the property that are not redeveloped will continue to drain as previously permitted where water quality treatment has been provided for as part of the existing surface water management system.

*Conclusion:*

The proposed Subdivision is located within an existing Planned Unit Development with an existing Surface Water Management System. The existing surface water management system includes portions of drainage canals and lakes that will be maintained by the Property Owners Association in accordance with the SFWMD and Village of Wellington permit requirements. Additionally all redeveloped property will be permitted as modifications to the existing permits in accordance with the SFWMD and Village of Wellington standards.



Steven M. Pawlyk, P.E.  
FL Reg. No. 61800  
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