

Draft

Pump Station S-523A Summary of Hydraulic Design Data

Revisions:

- 27 December 2000 – Original submission.

XY Coordinate¹ – 837360 518920

Location: Northeastern corner of Bird Drive Recharge Area, on C-504S at the Ring Levee.

Purpose/Operational Intent: Seepage Control

- Control water surface elevation in seepage collection canal C-504S for the Recharge Area.

Design Condition: Seepage Control 200 cfs

Pump Station Capacity Criteria:

- The design pump rate was determined by Modflow, a groundwater model.

Number of Pumps 3

Pump Mix Type and Size

Electric 3 @ 70 cfs

Mix Criteria:

- The pump station will have three bays; three identical 70-cfs pumps.
- The pump mix allows for intermediate flow values dependent on variable seepage rates corresponding to variable stages within the Recharge Area.

Control:

Manned & Remote by SCADA

Design Heads (ft.)

Normal (5.5 HW to 8.00 TW)

2.50 feet

Maximum (4.00 HW to 10.00 TW)

6.00 feet

Intake Water Surface Elevations

Maximum Non-Pumping

7.50 ft-NGVD

Maximum Pumping

7.50 ft-NGVD

Start Pumping

5.50 ft-NGVD

Normal Drawdown

4.5 to 5.0 ft-NGVD

Minimum Drawdown

4.00 ft-NGVD

Minimum Non-Pumping

3.00 ft-NGVD

Channel Invert

-2.50 ft-NGVD

Discharge Water Surface Elevations

Maximum Non-Pumping

10.0 ft-NGVD

Maximum Pumping

10.0² ft-NGVD

Normal Pumping

8.00 ft-NGVD

Minimum Pumping

5.00 ft-NGVD

Minimum Non-Pumping

3.00 ft-NGVD

Channel Invert

-8.50 ft-NGVD

Notes:

- ¹ XY coordinates system used is NAD 83, Florida east, state plane
- All elevations are in feet, NGVD (National Geodetic Vertical Datum of 1929)
- ² Pump Discharges into a Ring Levee system for distribution.
- Diesel generator is required for control station operations and electric pumps in cases of power outage.

Data Compiled from:

- Selected Plan features and model results.