Draft Location Hydraulic Report

Florida Department of Transportation

District One

State Road (SR) 70 Project Development and Environment (PD&E) Study

W. of SR 31 to SE Highlands County Line Rd.

DeSoto County, Florida

Financial Management Number: 451942-1-22-01

ETDM Number: 14569

Date: October 2025

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

DRAFT LOCATION HYDRAULIC REPORT

STATE ROAD (SR) 70
FROM W. OF SR 31 TO SE HIGHLANDS COUNTY LINE RD.

DESOTO COUNTY, FLORIDA

Financial Management Number: 451942-1-22-01

Federal Aid Project Number: 1502-018-P

ETDM Number: 14569

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October 2025

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) Study to evaluate the proposed widening of approximately 16.7 miles of State Road (SR) 70 from west of SR 31 to SE Highlands County Line Road in unincorporated DeSoto County, Florida.

The proposed action is to increase the capacity of the existing two-lane undivided roadway by widening it to a four-lane divided roadway, with the inclusion of safety and operational improvements as needed to accomplish the project Purpose and Need. The project will include the construction of wildlife crossing features, roadway signing and pavement markings, and stormwater management facilities including treatment ponds and floodplain compensation sites.

The purpose of this Location Hydraulic Report (LHR) is to describe the proposed improvements along SR 70 and determine whether the proposed project will encroach upon the base floodplain. Additionally, this LHR will discuss measures to minimize or offset floodplain impacts and evaluate the adequacy of extending or replacing existing drainage structures crossing SR 70.

The floodplain impacts caused by the proposed roadway improvements were analyzed and there is floodplain encroachment located along the project corridor. Eleven floodplain compensation (FPC) sites are proposed to mitigate the floodplain impacts. Additionally, ten cross drain structures will be replaced or modified to avoid floodplain stage increases and backflow conditions.

The proposed hydraulics will perform in a manner equal to or better than the existing conditions due to the mitigation measures including the FPC sites and replacement or modification of the existing cross drain structures. The floodplain stages will not be increased, and the cross drains will have adequate capacity as to not impact headwaters nor cause backflow or roadway overtopping that is not already present in the existing condition. The project will not impact the current capability to provide emergency services or evacuation. Therefore, the level of encroachment is determined to be not significant.

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1 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) study to evaluate options for widening State Road (SR) 70 in DeSoto County. The project limits cover approximately 16.7 miles of State Road (SR) 70 from west of SR 31 (Mile Post (MP) 14.973) to SE Highlands County Line Road (MP 31.763), as needed to accommodate roadway tie-ins. The project is located in Sections 32-36 of Township 37 South, Range 25 East; Sections 31-36 of Township 37 South, Range 26 East; Sections 31-36 of Township 37 South, Range 27 East; Sections 1-5 of Township 38 South, Range 25 East; Sections 1-6 of Township 38 South, Range 26 East; and Sections 1-6 of Township 38 South, Range 27 East. The project limits are shown in **Figure 1-1**.

The objective of this PD&E study is to evaluate widening the existing two-lane undivided roadway to a four-lane divided roadway. The project will include the construction of shared use paths, wildlife crossing features, roadway signing and pavement markings, and stormwater management facilities, including treatment ponds and floodplain compensation sites.

This project has been evaluated for its potential effects on various social, cultural, natural, and physical resources. In addition to resource-specific technical reports produced for this study, the project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14569.

Upon completion, this study will meet all requirements of the National Environmental Policy Act of 1969 (NEPA) as administered for the FDOT by the FDOT Office of Environmental Management (OEM) and the requirements of other federal and state laws to qualify the proposed project for federal-aid funding.

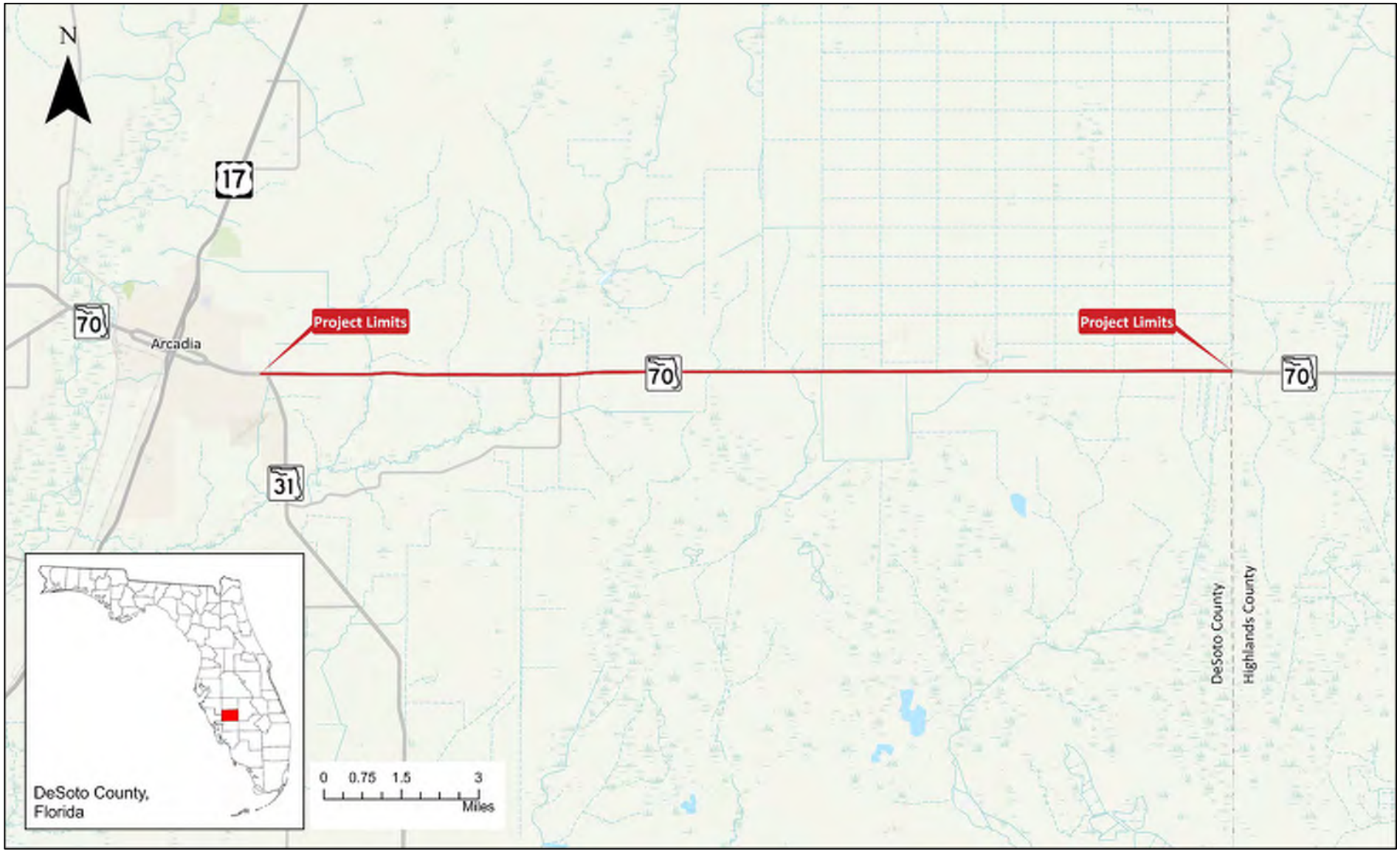
1.2 Purpose and Need

The purpose of this project is to address roadway and traffic safety conditions on SR 70 from west of SR 31 to SE Highlands County Line Road in unincorporated DeSoto County. Other goals of the project are to maintain important east-west connectivity within the regional transportation network and accommodate freight activity within the area.

1.3 Existing Facility

SR 70 is part of Florida's Strategic Intermodal System (SIS) highway network and designated state hurricane evacuation route network. As part of the National Highway System, SR 70 is critical in the transportation network as it facilitates local and regional traffic and the movement of goods/freight. SR 70 is functionally classified as "Rural Principal Arterial – Other" within the project area, and the

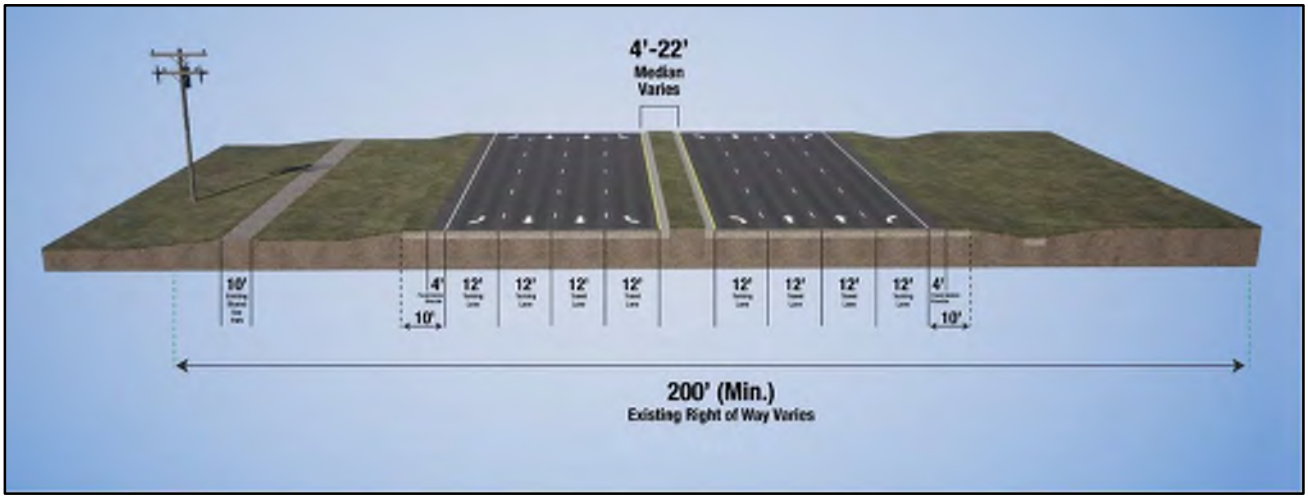
Figure 1-1: Project Location Map



project segment of the roadway has an existing context classification of C2-Rural. The posted speed limit on the corridor is generally 60 miles per hour (mph) with slower speeds ranging from 40 mph to 55 mph west of SR 31 to west of Townsend Road.

This segment of SR 70 consists of two existing roadway typical sections. From west of SR 31 to west of Townsend Road, SR 70 is a four-lane divided facility with 12-foot travel lanes and ten-foot outside shoulders (four feet paved). The travel lanes are separated by a raised grass median and intermittent right and left turn lanes. A portion of a ten-foot shared-use path is present on the northern side of the roadway, extending from west of SR 31 to west of Townsend Road (**Figure 1-2**). No designated bicycle lanes are present on either side of the facility.

Figure 1-2: Existing SR 70 Roadway Typical Section from west of SR 31 to west of Townsend Road



From west of Townsend Road to SE Highlands County Line Road, SR 70 becomes a two-lane undivided facility with 12-foot travel lanes and twelve-foot outside shoulders (five feet paved) (see **Figure 1-3**). There are no shared use path or designated bicycle facilities along this portion.

The existing typical section for the SR 70 bridges over Whidden Creek (aka Mare Branch) and Joshua Creek consists of two 12-foot travel lanes with guardrail and traffic railings (**Figure 1-4**). There are no shared use path or designated bicycle facilities at these locations.

Existing right-of-way (ROW) along the project portion of SR 70 is generally 200 feet in width, but ranges from approximately 180 feet to 220 feet in width from west of SR 31 to CR 760, and from 200 feet to 350 feet in width from CR 760 to SE Highlands County Line Road; it is generally wider to the north than south along the eastern end.

Figure 1-3: Existing SR 70 Roadway Typical Section from west of Townsend Road to SE Highlands County Line Road

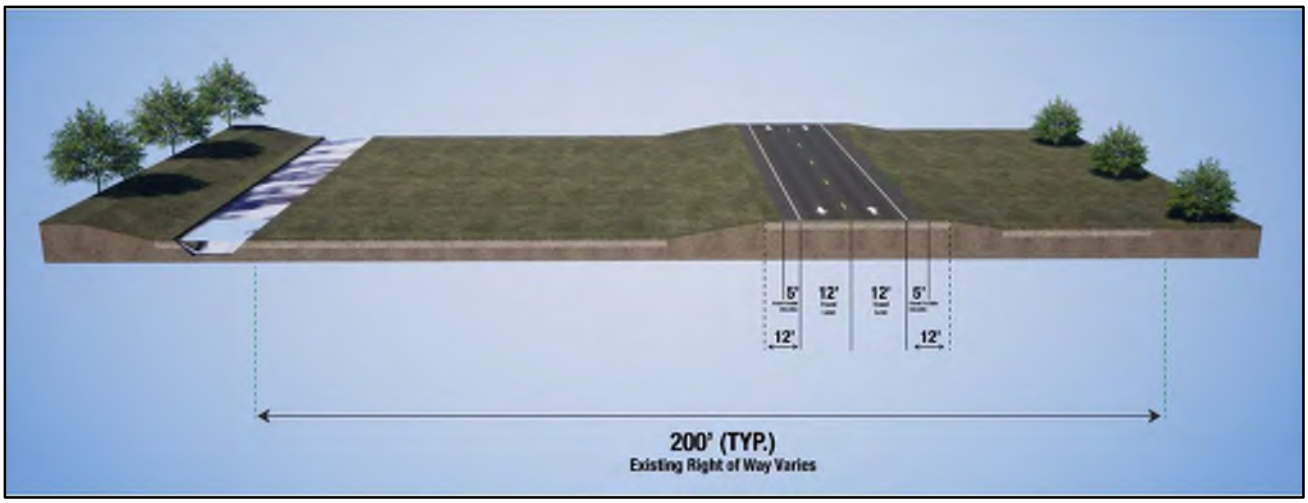
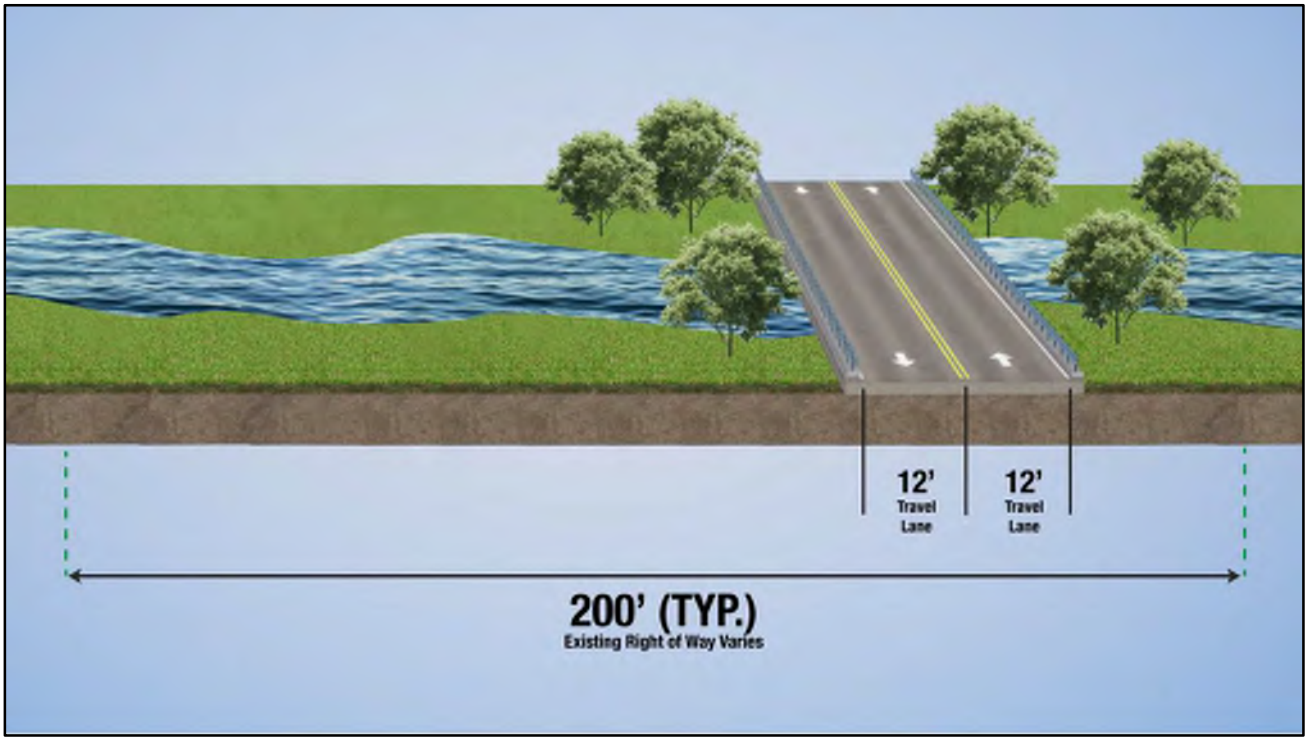


Figure 1-4: SR 70 Typical Section for Existing Bridges Over Whidden Creek and Joshua Creek



There are two bridges and five concrete bridge culverts along the corridor where lakes, streams, or wetlands intersect with the roadway. In addition, there are seven smaller concrete box culverts located along the project area. The two bridges and five concrete bridge culverts are as follows:

- SR 70 Concrete Bridge:

    - SR 70 over Whidden Creek (No. 040024)
    - SR 70 over Joshua Creek (No. 040027)
- SR 70 Concrete Bridge Culvert:
    - SR 70 over Tiger Bay (No. 040031)
    - SR 70 over Mossy Gully (No. 040032)
    - SR 70 over DCI Canal (No. 040033)
    - SR 70 over Long Point Marsh (No. 040037)
    - SR 70 over Parker Creek (No. 040940)

A full discussion of the existing roadway conditions can be found in the Preliminary Engineering Report (PER), prepared under separate cover.

1.4 Proposed Improvements

To meet the Purpose and Need, the Preferred Alternative will widen SR 70 from two to four lanes throughout the study limits. The Preferred Alternative includes milling and resurfacing of portions of the existing roadway, along with construction of the westbound lanes to the north of the existing travel lanes.

From west of SR 31 to east of Siesta Boulevard, the Preferred Alternative will mill and resurface the existing roadway and shared use path, as consistent with **Figure 1-2**.

The Preferred Alternative from east of Siesta Boulevard to west of Joshua Creek (**Figure 1-5**) generally consists of four 12-foot travel lanes, a 40-foot width median that includes 8-foot inside shoulders (4-foot paved), and 10-foot outside shoulders (five-foot paved). Improvements proposed within these limits will primarily consist of intermittent milling/resurfacing and widening/ reconstruction of the existing lanes as the new eastbound lanes and widening/new construction of the new westbound lanes. A new ten-foot shared use path will be constructed adjacent to the northern right-of-way (ROW) line from the Toby's RV Resort entrance to the new westbound bridge over Joshua Creek.

The Preferred Alternative for the bridges over Whidden Creek and Joshua Creek (**Figure 1-6**) include four 12-foot travel lanes (two in each direction) with six-foot paved inside shoulders and ten-foot paved outside shoulders. Concrete barriers would be implemented on both shoulders. The westbound bridge will have a 14-foot shared use path with a concrete barrier separating pedestrian and bicycle users from the travel lane and a railing at the outside edge of the bridge. At Joshua Creek, the shared use path will switch from the north to the south side of SR 70 via a bicycle and pedestrian underpass under the reconstructed SR 70 bridges over Joshua Creek.

Figure 1-5: SR 70 Preferred Alternative from west of SR 31 to west of Joshua Creek

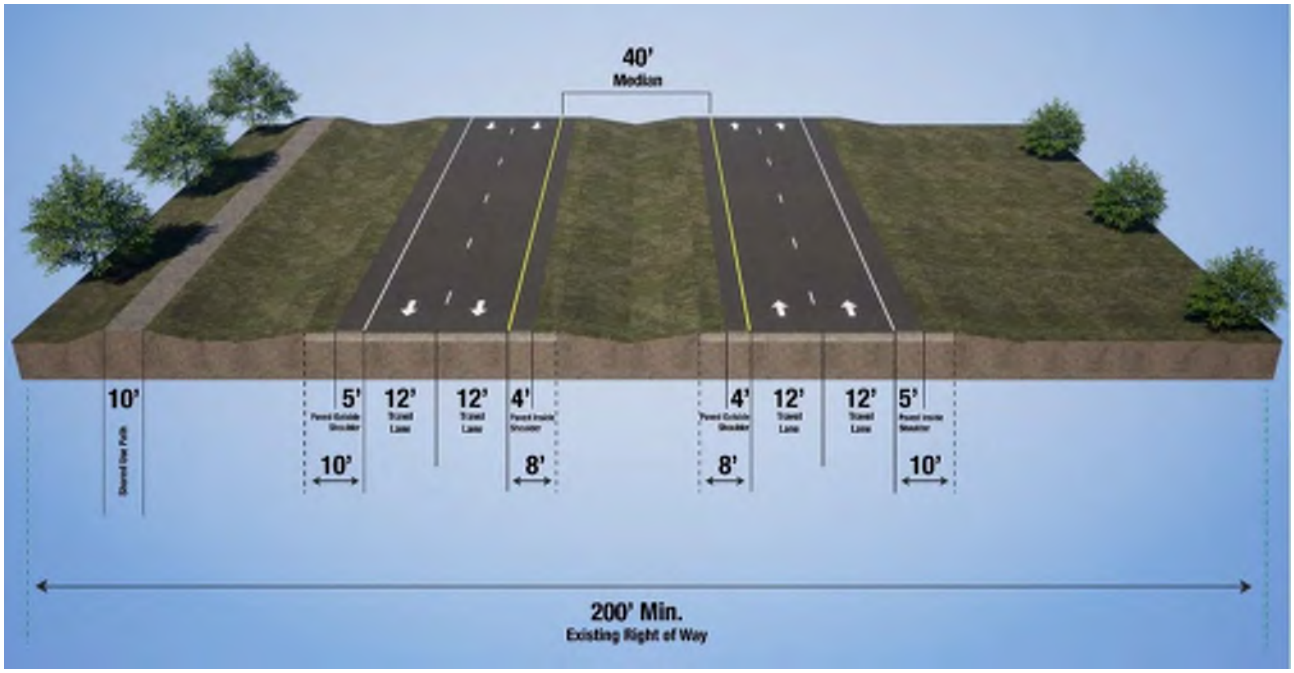
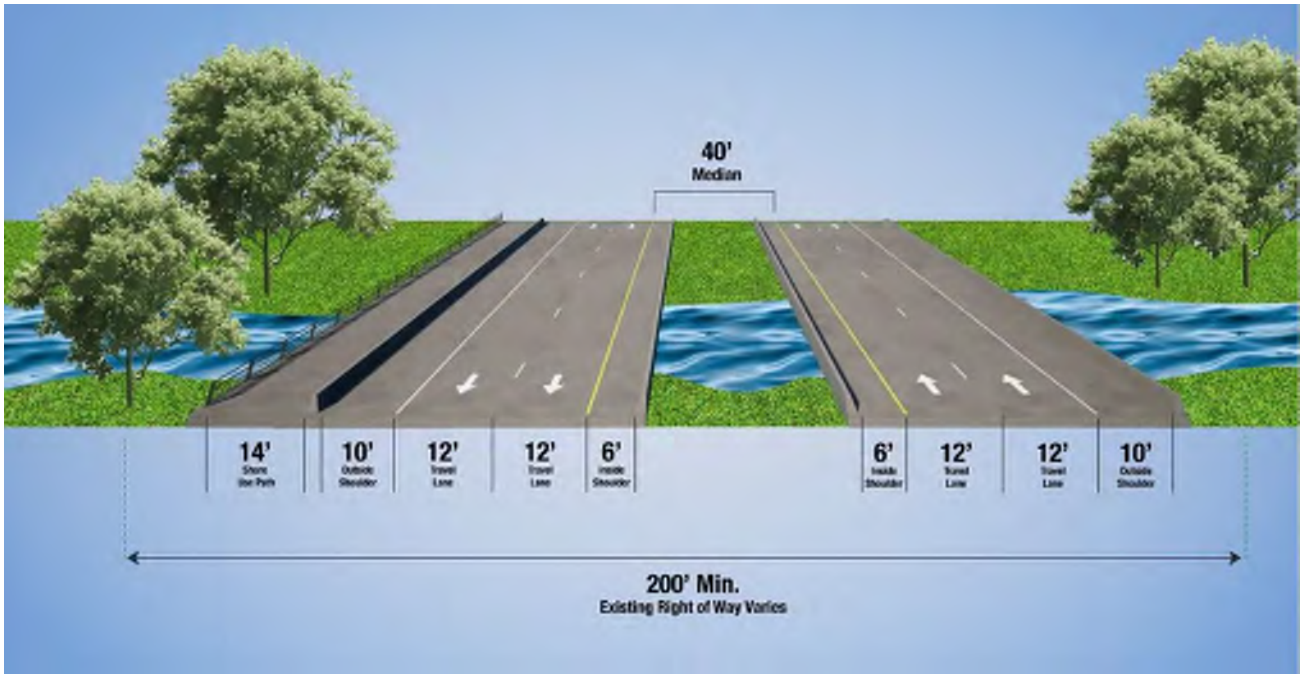
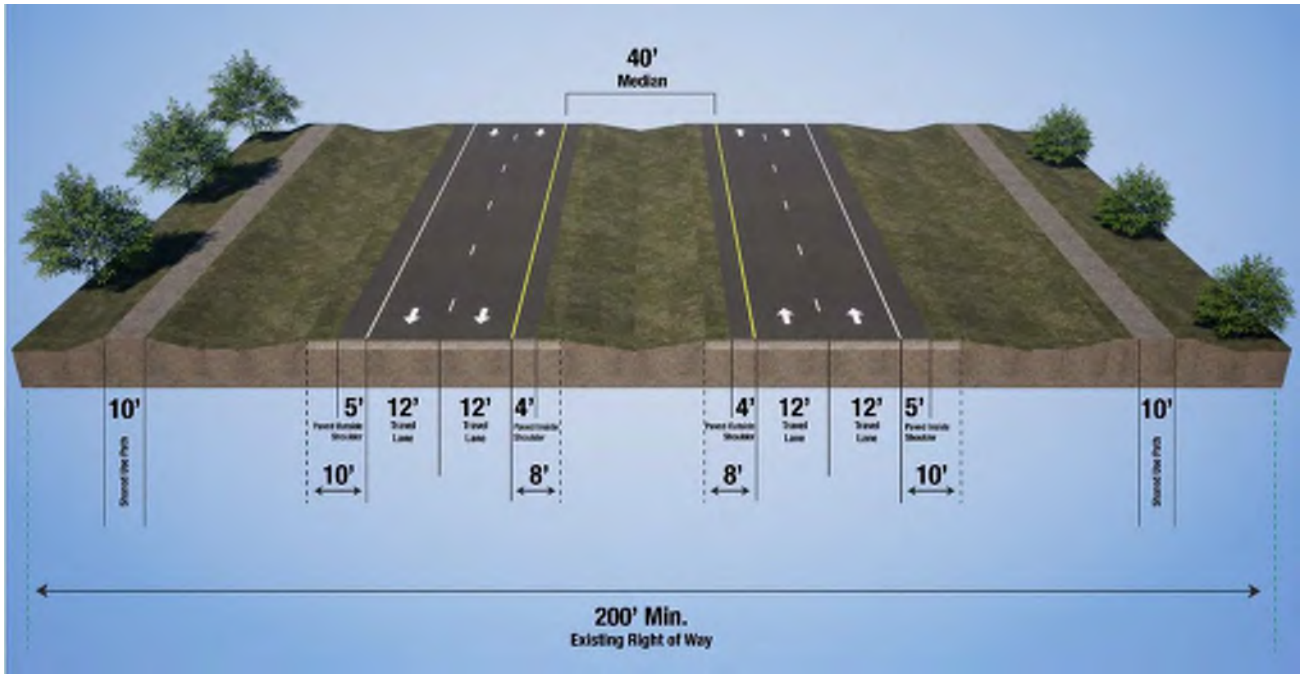


Figure 1-6: Preferred Alternative for SR 70 Bridges Over Whidden Creek and Joshua Creek



The Preferred Alternative east of Joshua Creek to CR 760 (**Figure 1-7**) features the construction of new westbound lanes to the north of the existing lanes, consisting of four 12-foot travel lanes (two in each direction) with an open median of 40 feet that includes eight-foot inside shoulders (four-foot paved), and ten-foot outside shoulders (five-foot paved). Between Joshua Creek and CR 760 two new ten-foot shared use paths will be constructed adjacent to both the northern and southern ROW lines. Along the north side of SR 70, the shared use path will end opposite the CR 760 intersection, while the shared use path adjacent to the southern ROW line will continue eastward.

Figure 1-7: SR 70 Preferred Alternative from east of Joshua Creek to CR 760



The Preferred Alternative from CR 760 to SE Highlands County Line Road (**Figure 1-8**) features the construction of new westbound lanes to the north of the existing lanes, consisting of four 12-foot travel lanes (two in each direction) with an open median of 40 feet that includes eight-foot inside shoulders (four-foot paved) and ten-foot outside shoulders (five-foot paved). A guardrail will be constructed adjacent to the westbound lanes and existing canal.

Between CR 760 and SE Highlands County Line Road, SR 70 has five additional bridge culvert crossings at Tiger Bay, Mossy Gully, DCI Canal, Long Point Marsh, and Parker Creek. The Preferred Alternative proposes new bridges (**Figure 1-9**) at each of these locations, including four 12-foot travel lanes (two in each direction) with six-foot paved inside shoulders and ten-foot paved outside shoulders. Concrete barriers would be implemented on both shoulders. The eastbound bridge will have a 14-foot shared use path with a concrete barrier separating pedestrian and bicycle users from the travel lane and a railing at the outside edge of the bridge.

Figure 1-8: SR 70 Preferred Alternative from CR 760 to SE Highlands County Line Road

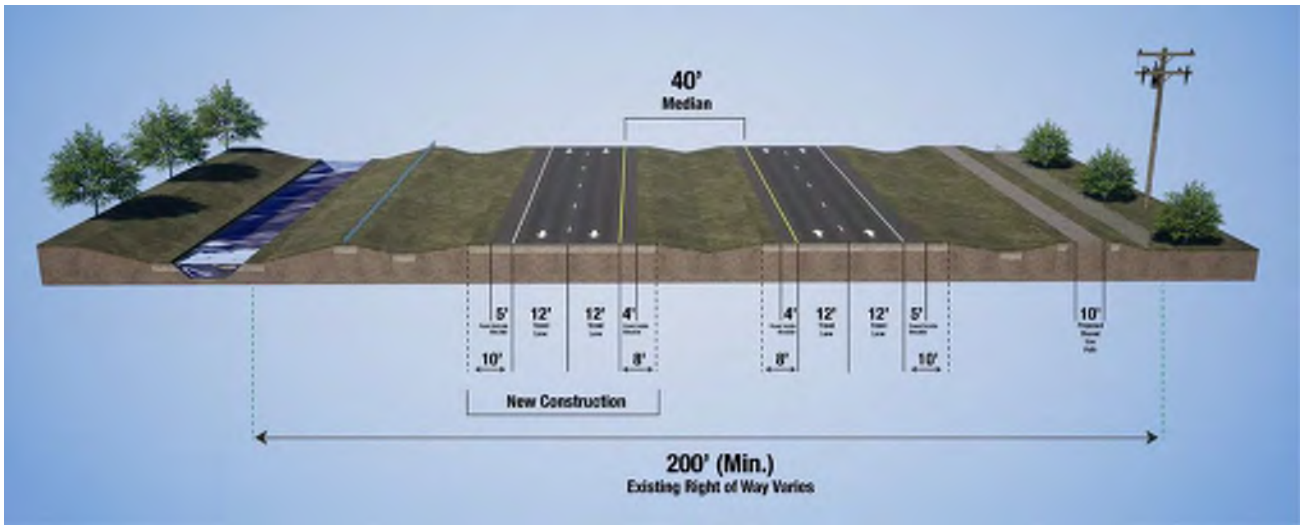
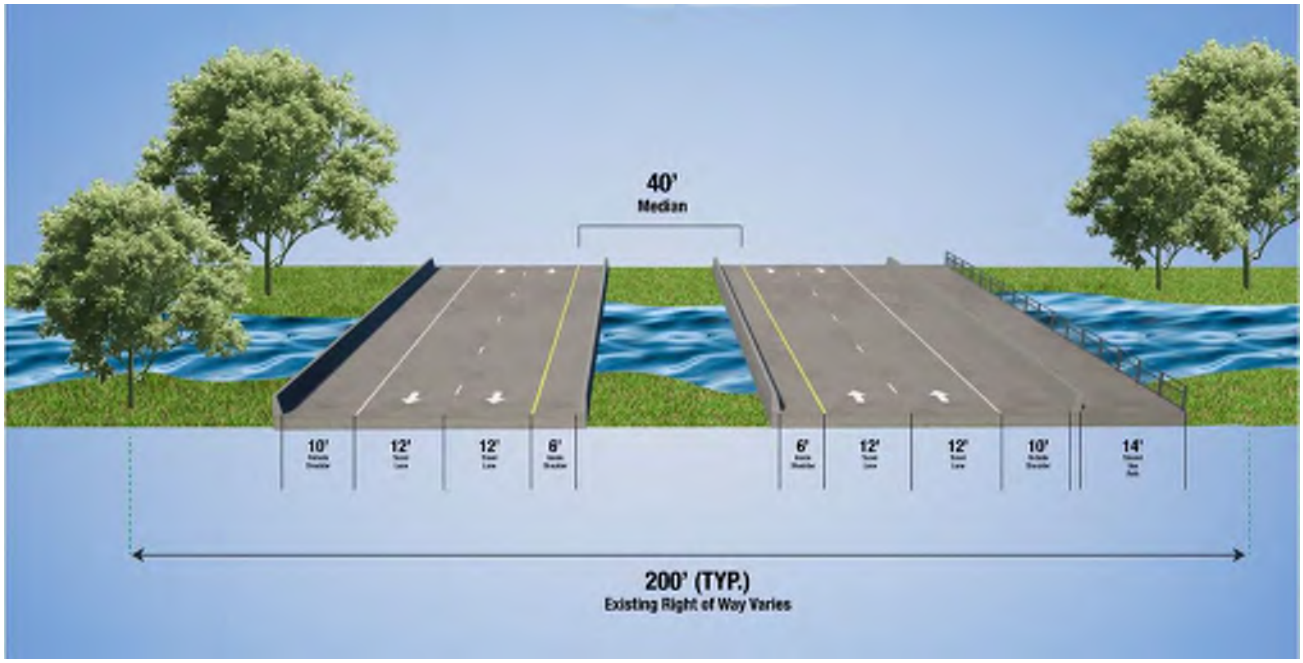


Figure 1-9: Preferred Alternative for SR 70 Bridges from CR 760 to SE Highlands County Line Road



The project will include the construction of wildlife crossing features at the seven major bridge crossings, roadway signing and pavement markings, and stormwater management facilities including treatment ponds and floodplain compensation sites. The Concept Plans have been provided in **Appendix 1.**

2 Drainage Reference and Resource Information

2.1 Data Sources

Correspondence and Meetings

- Drainage Kickoff Meeting (May 13, 2024)

Technical Reference and Regulation Material

- FDOT Drainage Manual (January 2025)
- FDOT Drainage Design Guide (January 2024)
- SWFWMD Environmental Resource Permit (ERP) Applicant's Handbook Volume I (June 2024)
- SWFWMD ERP Applicant's Handbook Volume II (June 2018)

Aerial Photography, Maps, Plan, and Survey

- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Desoto County Soil Survey (2024)
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) – Community-Panel No.:, 12027C0179C, 12027C0185C, 12027C0205C, 12027C0210C, and 12027C0230C, effective November 6, 2013
- 2024 FDOT Aerial Photography & Google Earth Pro
- Contours derived from LiDAR, USGS, 2018
- Existing topographic survey data
- USDA Natural Resources Conservation Service (NRCS)
- USGS Quadrangle Maps
- National Wetlands Inventory (NWI) Wetlands Data
- Desoto County Property Lines
- FDOT Efficient Transportation Decision Making (ETDM) Environmental Screening Tool (EST)

Reports and Studies

- FEMA Flood Insurance Study Number 12027CV000B (Revised October 7, 2021)
- Pond Siting Report (September 2025)
- Draft Natural Resources Evaluation Report (September 2025)

3 Existing Drainage

3.1 Watershed Descriptions

The existing drainage patterns were determined using topographic survey data, United States Geological Survey (USGS) quadrangle maps, and LiDAR contours. The offsite stormwater runoff is generally conveyed from north to south through the nineteen (19) existing cross drains and two (2) bridges within the project limits. A map of the regional waterbodies is included in **Appendix 2**. Refer to **Table 3-1** for a description of the existing cross drains.

Table 3-1 Cross Drain Summary

No	Station	Existing Description	Proposed Description
CD 1	4014+62.27	8′ x 6′ CBC	No Change
CD 2	4014+77.89	2- 48″ RCP	No change
CD 3	4177+65.30	2-8′ x 6′ CBC	Need Evaluation
CD 4	4201+67.22	3- 42″ RCP	Need Evaluation
CD 5	4297+04.56	3-48″ RCP	Need Evaluation
CD 6	4384+50.22	2- 6′ x 7′ CBC	Need Evaluation
CD 7	4418+95.65	3- 10′ x 7′ CBC	Replaced by Bridge
CD 8	4440+38.36	24″ RCP	No Change
CD 9	4489+35.49	4- 12′ x 8′ CBC	Replaced by Bridge
CD 10	4517+42.13	3- 8′ x 9′ CBC	Replaced by Bridge
CD 11	4572+61.48	8′ x 6′ CBC	Need Evaluation
CD 12	4595+39.13	4′ x 5′ CBC	Need Evaluation
CD 13	4598+10.45	8′ x 5′ CBC	Need Evaluation
CD 14	4629+38.27	9′ x 7′ CBC	Need Evaluation
CD 15	4669+82.63	4-10′ x 7′ CBC	Replaced by Bridge
CD 16	4724+09.97	8′ x 4′ CBC	Need Evaluation
CD 17	4793+45.68	2-9′ x 5′ CBC	Need Evaluation
CD 18	4846+37.03	4-12′ x 7′ CBC	Replaced by Bridge
CD 19	4891+13.12	2-8′ x 5′ CBC	No Change

*All changes to the CD are discussed in Section 4.

3.2 Soil Characteristics

A review of the USDA NRCS DeSoto County Soil Survey was conducted to assess the general soil characteristics within the project area. The survey provides hydrologic soil group (HSG) classifications, estimated seasonal high groundwater table (SHGWT) depths, and drainage characteristics that influence the performance of stormwater management facilities (SMFs) and Flood Plain Compensation (FPCs). **Table 3-2** summarizes the primary soil types, HSG classifications, and estimated SHGWT depths for each drainage basin. A soils map is included in **Appendix 2.**

Table 3-2 Project Soil Conditions

Proposed Begin STA	Proposed End STA	Map Unit	Soil Name	Hydrologic Soil Group	Estimated SHGWT Depth (ft)
4002+30	4066+00	2	Ancolte Sand	A/D	0
		3	Basinger Sand	A/D	0 - 1
		20	Immokalee Sand	B/D	0.5 - 1.5
		25	Ona Sand	B/D	0.5 - 1.5
		31	Pompano Sand	A/D	0.25 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
4066+00	4163+75	3	Basinger Sand	A/D	0 - 1
		4	Basinger Sand	A/D	0
		13	EauGallie Sand	A/D	0.5 - 1.5
		14	Farmton Sand	B/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		23	Malabar Sand	A/D	0
		25	Ona Sand	B/D	0.5 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
		42	Zolfo Sand	A	1.5 - 3.5
4163+75	4210+05	2	Ancolte Sand	A/D	0
		14	Farmton Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
		41	Wabasso Sand	A/D	0.5 - 1.5
4210+05	4279+56	2	Ancolte Sand	A/D	0
		3	Basinger Sand	A/D	0 - 1
		13	EauGallie Sand	A/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
		41	Wabasso Sand	A/D	0.5 - 1.5
		42	Zolfo Sand	A	1.5 - 3.5
4279+42	4364+43	3	Basinger Sand	A/D	0 - 1
		13	EauGallie Sand	A/D	0.5 - 1.5
		14	Farmton Sand	B/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		24	Myakka Sand	A/D	0.5 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
4364+43	4419+00	14	Farmton Sand	B/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		23	Malabar Sand	A/D	0
4419+00	4489+26	13	EauGallie Sand	A/D	0.5 - 1.5
		14	Farmton Sand	B/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5
4489+26	4516+91	13	EauGallie Sand	A/D	0.5 - 1.5
		14	Farmton Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
4516+91	4615+32	14	Farmton Sand	B/D	0.5 - 1.5
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		22	Malabar Sand	A/D	0.5 - 1.5
		24	Myakka Sand	A/D	0.5 - 1.5
		26	Pineda-Pineda Sand	A/D	0.5 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5

Proposed Begin STA	Proposed End STA	Map Unit	Soil Name	Hydrologic Soil Group	Estimated SHGWT Depth (ft)
4615+32	4669+62	3	Basinger Sand	A/D	0 - 1
		20	Immokalee Sand	B/D	0.5 - 1.5
		21	Malabar Sand	A/D	0.25 - 1.5
		24	Myakka Sand	A/D	0.5 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5
4669+62	4761+70	20	Immokalee Sand	B/D	0.5 - 1.5
		24	Myakka Sand	A/D	0.5 - 1.5
		32	Punta Sand	A/D	0.5 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5
4761+70	4845+62	3	Basinger Sand	A/D	0 - 1
		20	Immokalee Sand	B/D	0.5 - 1.5
		36	Smyrna Sand	A/D	0.5 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5
4845+62	4906+08	12	Basinger Sand	A/D	0 - 1
		20	Immokalee Sand	B/D	0.5 - 1.5
		20	Samsula Muck	A/D	0
		24	Myakka Sand	A/D	0.5 - 1.5
		34	Samsula Muck	A/D	0
		39	Smyrna Sand	A/D	0.5 - 1.5
		40	Valkaria Sand	A/D	0.25 - 1.5

3.3 Geotechnical Investigation

To support the FPC site selection process, Tierra, Inc. conducted geotechnical borings at each proposed FPC location. These investigations provided site-specific verification of SHGWT elevations.

The preliminary geotechnical borings data, along with the DeSoto County Soil Survey, is included in **Appendix 6** for reference.

3.4 FEMA Floodplain Information

The project site is located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community-Panel Numbers 12027C0179C, 12027C0185C, 12027C0205C, 12027C0210C, and 12027C0230C (effective date November 6, 2013) in DeSoto County. The proposed alignment also impacts several areas designated as Zone A, which are areas of the 100-year floodplain where the base flood elevation has not been determined.

The project has two FEMA regulatory floodways: i) Whidden Branch and ii) Joshua Creek. At SR 70, the 100-year floodway elevation for Whidden Branch and Joshua Creek is approximately 57.2-feet and 63.0 feet, respectively. Both Floodways merge on the South of SR70, where the base flood elevation is approximately 43.5 feet. The western portion of the project, from west of SR 31 to NE Four Mile Grade, outfalls into Joshua Creek. The conflux of Joshua Creek and the Peace River is approximately 5.3 miles southwest of the SR 70 and SR 31 intersection. The eastern portion of the project, from NE Four Mile Grade to SE Highlands County Line Road, outfalls into Prairie Creek.

The conflux of Prairie Creek and the Peace River is approximately 18 miles southwest of the SR 70 and SR 31 intersection near the Charlotte Harbor estuary. A map of the flood zones based on the FEMA Firm is included in **Appendix 2**.

3.5 Flooding Problem

There is no documented historical records of the roadway flooding or overtopping. However, the proposed improvements will encroach upon the floodplain based on review of the FEMA Firm. Floodplain impacts will be mitigated as described later in Section 4.3. Therefore, the proposed improvements will not adversely affect designated floodplains.

4 Proposed Drainage

4.1 Floodplain Impacts

Stormwater runoff from SR 70 will be collected and conveyed to stormwater management facilities through roadside swales. These stormwater management facilities will provide water quality (treatment) and water quantity (attenuation). The design of the drainage and stormwater facilities will comply with the standards set forth by the FDOT Drainage Manual, FDOT Drainage Design Guide, and the SWFWMD ERP Applicant's Handbook II. For more information regarding the proposed drainage design, refer to the SR 70 PD&E Study Pond Siting Report (HNTB).

Impacts to the 100-year floodplain will occur in three ways:

1. Transverse impacts resulting from the cross drain extensions and bridge widening.
2. Longitudinal impacts resulting from the road widening in areas of the 100-year floodplain.
3. Impacts due to stormwater management facilities located adjacent to wetland and storage areas.

4.2 Cross Drain

A total of ten CD structures will be evaluated as part of the proposed design, with five existing culverts planned for replacement with bridge structures (CD7, CD9, CD10, CD15, and CD18). The two existing bridges and these five existing bridge culverts will be replaced as bridges, which will be described in a separate Bridge Hydraulics Report. Between STA. 4006+64.47 and STA. 4043+00.00, the proposed work consists solely of milling and resurfacing within the existing roadway profile. Therefore, no modifications are required to CD 1 and CD 2. Between STA. 4043+00.00 to 4980+15.00, the proposed work consists of milling, resurfacing, and new construction of lanes. There will be no modification for CD 19 since it is beyond the limits of new construction. CD 8 which connects the permitted linear pond on the north of SR 70 to the ditch on the south side of SR 70 will be abandoned or removed, and the contributing stormwater runoff will be redirected to a proposed stormwater management facility. The offsite drainage flow pattern on the south side of SR 70 will be maintained and conveyed overland to the Tiger Bay canal to the west. The ten cross drains to be modified or replaced have been analyzed in the existing and proposed conditions using the modeling program HY-8. For culvert extensions, existing slopes were maintained. Refer to **Table 4-1** and **Table 4-2** for the Cross Drain Headwaters Elevation and Flood Data Table, respectively. Refer to **Appendix 3** for the Cross Drain Analysis and **Appendix 5** for cross drain photos.

Table 4-1 Cross Drain Headwater Elevation

Cross Drain	Existing Structures	Proposed Structures	Headwater Elevation (feet)					
			Pre-Condition			Post-Condition		
			50 Yr Storm	100 Yr Storm	500 Yr Storm	50 Yr Storm	100 Yr Storm	500 Yr Storm
CD 3	2-8′ x 6′ CBC	2- 9' x 5' CBC	62.75	63.45	65.31	62.38	62.75	64.08
CD 4	3- 42″ RCP	3- 4' x 3' CBC	64.20	64.47	65.42	64.09	64.31	65.08
CD 5	3-48″ RCP	3- 4' x 3 CBC	64.32	64.66	65.82	64.26	64.55	65.57
CD 6	2- 6′ x 7′ CBC	8' x 5' CBC	71.28	71.29	71.61	71.20	71.29	71.60
CD 11	8′ x 6′ CBC	9' x 5' CBC	78.85	79.11	79.98	78.77	78.98	79.91
CD 12	4′ x 5′ CBC	5' x 4' CBC	79.14	79.33	80.18	79.12	79.27	79.86
CD 13	8′ x 5′ CBC	2- 6' x 4' CBC	79.21	79.44	80.30	79.19	79.39	80.02
CD 14	9′ x 7′ CBC	2- 6' x 5' CBC	77.59	77.79	78.77	77.59	77.79	78.75
CD 16	8′ x 4′ CBC	2- 5' x3' CBC	82.92	83.04	83.63	82.93	83.05	83.67
CD 17	2-9′ x 5′ CBC	2- 5' x 4' CBC	83.25	83.51	83.91	83.27	83.40	84.02

Table 4-2 Flood Data Table

No.	Design Flood		Base Flood		Overtopping Flood				Greatest Flood		
	2% Prob.	50 YR Freq.	1% Prob.	100 YR Freq.							
	Discharge	Stage	Discharge	Stage	Discharge	Stage	Prob %	Freq. Yr.	Discharge	Stage	Prob %
CD 3	518.00	62.38	626.00	62.75					909.00	64.08	0.2
CD 4	137.00	64.09	166.00	64.31					242.00	65.08	0.2
CD 5	199.00	64.26	242.00	64.55					354.00	65.57	0.2
CD 6	246.00	71.20	299.00	71.29					437.00	71.60	0.2
CD 11	193.99	78.77	256.60	78.98					439.52	79.91	0.2
CD 12	48.97	79.12	75.43	79.27	118.97	79.68	0.43	235			
CD 13	125.47	79.19	180.46	79.39	237.47	79.68	0.58	172			
CD 14	234.29	77.59	306.30	77.79					528.61	78.75	0.2
CD 16	61.50	82.93	95.36	83.05					188.93	83.67	0.2
CD 17	234.29	83.27	316.44	83.40					548.49	84.02	0.2

*Unit: Discharge in cfs, Stage in (feet)

NOTE: THE HYDRAULIC DATA IS SHOWN FOR INFORMATIONAL PURPOSES ONLY, TO INDICATE THE FLOOD DISCHARGES AND WATER SURFACE ELEVATIONS WHICH MAY BE ANTICIPATED IN ANY GIVEN YEAR. THIS DATA WAS GENERATED USING HIGHLY VARIABLE FACTORS DETERMINED BY A STUDY OF THE WATERSHED. MANY JUDGEMENTS AND ASSUMPTIONS ARE REQUIRED TO ESTABLISH THESE FACTORS. THE RESULTANT HYDRAULIC DATA IS SENSITIVE TO CHANGES, PARTICULARLY OF ANTECEDENT CONDITIONS, URBANIZATION, CHANNELIZATION, AND LAND USE. USERS OF THIS DATA ARE CAUTIONED AGAINST THE ASSUMPTION OF PRECISION WHICH CAN NOT BE ATTAINED. DISCHARGES ARE IN CUBIC FEET PER SECOND AND STAGES ARE IN FEET, NAVD, 1988.

4.3 Floodplain Compensation (FPC)

The FEMA 100-year floodplain shapes were used to determine encroachment into the floodplain. The low edge of pavement was used as the 100-year floodplain elevation for most of the project since there is no history of the roadway flooding, and the impacts are within Zone A, which means that no base flood elevations have been determined. At three locations, the low edge of pavement is considerably higher than the surrounding area; therefore, the contour elevation that best fits the floodplain shape or the upstream culvert's crown elevation was considered to determine the 100-year floodplain elevation instead of the low edge of pavement. Where the floodplain is longitudinal along SR 70, the floodplain encroachment has been subdivided into segments based on increments of one-half a foot elevation to account for changes along the roadway profile. The project will impact nine separate floodplain areas (not including the Whidden Branch and Joshua Creek floodways as described below) crossing within the roadway's proposed right-of-way, and a total of 12 subdivided floodplain areas.

The floodplain mitigation alternatives presented in this report are analyzed using the 'cup-for-cup' compensation methodology. Storage was based on a comparison of the total volume filled within the 100-year floodplain versus the total volume excavated for floodplain compensation. During project permitting, floodplain compensation volumes will be compared to impact volumes in half-foot elevation increments to demonstrate equivalent storage, as required by the SWFWMD. Hydrologic and hydraulic modeling will be required where equivalent storage cannot be demonstrated in half-foot increments.

Additional modeling of the pre-condition stages versus the post-condition stages will be performed for the Whidden Branch and Joshua Creek regulatory floodways and will be presented under a separate Bridge Hydraulic Report to demonstrate no-rise. Therefore, no FPC sites have been developed for the floodplain encroachment within the right-of-way at these two locations.

The project will impact existing floodplain compensation areas within the SR 70 right-of-way. The total permitted floodplain compensation volume being impacted is 0.60 acre-feet. The portion of the floodplain impact within the FEMA floodplain shape is already being accounted for in the floodplain encroachment calculations; therefore, only the existing floodplain compensation areas outside of the FEMA floodplain shapes are listed. See **Table 4-3** for a list of existing floodplain compensation areas that are being impacted.

Table 4-3 Existing Floodplain Compensation Areas Impacted

Project Begin STA	Project End STA	Permit Begin STA	Permit End STA	Permit No.	Total Existing FPC Vol. (Ac-Ft) [1]	Subdivided Existing FPC Vol. (Ac-Ft) [2]	Area outside of FEMA Floodplain (%)	Additional Required FPC Vol. (Ac-Ft) [3]
4623+16	4629+26	1421+00	1427+10	33219.000	0.60	0.402	53	0.213
4629+48	4634+16	1427+32	1431+99	33219.000				
4720+47	4723+77	1518+20	1521+50	33219.000		0.198	55	0.109
4724+40	4731+27	1522+13	1529+01	33219.000				

[1] Total permitted floodplain compensation volume being impacted.

[2] Prorated permitted floodplain compensation volume based on permitted calculations.

[3] Permitted floodplain compensation volume impacted outside of FEMA floodplain shape. (Volume inside shape already accounted for in floodplain encroachment volume calculations.)

Considered Alternatives

"Cup for Cup" Approach: Floodplain encroachment volumes from the proposed roadway section were estimated between the lowest level of encroachment (the maximum of the average SHGWT elevation and the lowest level of fill) and 100-year floodplain elevation using the OpenRoads Designer three-dimensional computer-aided design software. Encroachment volumes were based on the topographical survey taken within the right-of-way. FPC sites were evaluated and were sized with the bottom elevation equal to the average estimated SHGWT elevations based on the geotechnical borings and surveyed biological indicators (stain lines). See **Table 4-4** for a list of all floodplain encroachment volumes.

Modeling: While no hydrologic and hydraulic modeling has been performed in this study, it is anticipated that modeling will be required during the permit phase of the project. Equivalent storage cannot be demonstrated at one-half foot increments for FPC sites where the SHGWT elevation is above the lowest level of encroachment by more than one-half foot. Therefore, modeling will be required on a case-by-case basis to demonstrate that floodplain impacts will not adversely affect the storage stages during the 100-year and all lesser flood events. Refer to the floodplain calculations in **Appendix 4**.

Furthermore, some runoff volume from the impacted areas will be redirected away from the floodplains to the stormwater management facilities. This will result in a reduction of the floodplain impact caused by the roadway fill. Therefore, modeling can be utilized to refine, reduce, or eliminate FPC sites.

Table 4-4 Floodplain Impact Summary

Floodplain Name	Floodplain Location (CL Construction)		100-year Floodplain Elevation (ft, NAVD)	Impact Volume (ac-ft)	Preferred Floodplain Compensation Site
	From Station	To Station			
FIA 1001	4299+15	4302+37	66.83	1.20	FPC 1001A
FIA 1002	4344+20	4348+78	69.65	3.86	FPC 1002-NA & FPC 1002-SB
FIA 1003	4486+79	4491+33	77.65	6.97	FPC 1003A
FIA 1004-1	4515+79	4517+41	77.50	1.84	FPC 1004B
FIA 1004-2	4517+41	4540+24	78.00	34.04	
FIA 1005	4540+24	4579+86	78.50	42.25	FPC 1005C
FIA 1006	4579+86	4602+93	79.00	17.46	FPC 1006A
FIA 1007	4626+96	4632+77	80.00	5.10	FPC 1007C
FIA 1008	4668+48	4675+40	79.87	1.84	FPC 1008A
FIA 1009	4721+21	4726+87	82.84	2.16	FPC 1009C
FIA 1010	4840+07	4891+13	84.00	48.55	FPC 1010B

4.3.1 FPC 1001A

Floodplain 1001A is a depression near the northern canal within the proposed SR 70 right-of-way northwest of the SR 70 and NE Guynn Avenue intersection. The SR 70 roadway crosses the 100-year floodplain from Station 4299+15 to Station 4302+37, resulting in a total encroachment volume of 1.2 acre-feet. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1001A is an offsite compensation site (2.16 acres) located in a pasture northwest of the SR 70 and NE Guynn Avenue intersection. The site is directly adjacent to the SR 70 right-of-way; however, access from NE Guynn Avenue is recommended to avoid crossing the canal to the north that runs along SR 70. A side drain will be needed under the access road to maintain the flow along the ditch on NE Guynn Avenue. An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 63.40 feet. The site will provide 1.30 acre-feet of FPC in 0.6 feet of depth for encroachment and will be constructed to connect directly with the depression along the canal in the floodplain.

4.3.2 FPC 1002-NA & FPC 1002-SB

Floodplain 1002-NA is a floodplain within the proposed SR 70 right-of-way east of the SR 70 and SE Turkey Hammock Road intersection. The SR 70 roadway crosses the 100-year floodplain from Station 4344+20 to Station 4348+78, resulting in a total encroachment volume of 3.86 acre-feet. The roadway corridor will impact 2.83 acre-feet and 1.03 acre-feet of the 100-year floodplain on the north and south

sides of the existing road, respectively. There is no cross drain at this location, and the roadway will impact both the north and south sides of SR 70. Therefore, a floodplain compensation site is needed on both sides of the road. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1002-NA is an offsite compensation site (1.54 acres) located in pasture northeast of the SR 70 and SE Turkey Hammock Road intersection. The FPC is setback approximately 125 feet from the SR 70 right-of-way, and a drainage access easement will be required for this site. A culvert will be needed under the access road to maintain the flow through the canal on the north side of SR 70. An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 66.60 feet. The site will provide 2.89 acre-feet of FPC in 1.88 feet of depth for encroachment and will be constructed to connect directly with the east side of the floodplain.

FPC 1002-SB is an offsite compensation site (0.62 acres) located in herbaceous land southeast of the SR 70 and SE Turkey Hammock Road intersection. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 240 feet from the SR 70 right-of-way, and a drainage access easement will be required for this site. An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 67.00 feet. The site will provide 1.07 acre-feet of FPC in 1.73 feet of depth for encroachment and will be constructed to connect directly with the east side of the floodplain.

4.3.3 FPC 1003A

Floodplain 1003A is the Mossy Gully channel crossing within the proposed SR 70 right-of-way east of the SR 70 and NE Four Mile Grade intersection. The SR 70 roadway crosses the 100-year floodplain from Station 4486+79 to Station 4491+33, resulting in a total encroachment volume of 6.97 acre-feet. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1003A is an offsite compensation site (5.68 acres) located in a pasture southeast of the SR 70 and NE Four Mile Grade intersection. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 270 feet from the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 71.23 feet. The site will provide 7.08 acre-feet of FPC in 1.25 feet of depth for encroachment and will be constructed to connect directly with the east side of the floodplain.

4.3.4 FPC 1004B

The contiguous floodplain is divided into four segments based on increments of one-half a foot as the low edge of pavement elevation drops from west to east. Floodplain 1004 is the lowest two of the four floodplain segments that run longitudinally with the SR 70 corridor. Floodplain 1004-1 starts at the west end of the floodplain just west of the cross drain near 4 Mile Grade Road. The low edge of pavement elevation and the assumed 100-year floodplain elevation of Floodplain 1004-1 is 77.50 feet.

Floodplain 1004B starts approximately 162 feet east of the west end of the floodplain near the cross drain under SR 70 at 4 Mile Grade Road and extends approximately 2,283 feet to the east near the main entrance to the DeSoto Correctional Institution. The low edge of pavement elevation and the assumed 100-year floodplain elevation of Floodplain 1004-2 is 78.00 feet. The roadway corridor will impact 1.84 acre-feet and 34.04 acre-feet of the 100-year floodplain within Floodplain 1004-1 and 1004-2, respectively. The total floodplain encroachment volume into Floodplain 1004 is 35.88 acre-feet. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

The area surrounding the floodplain is constrained to the south by the DeSoto Correctional Institution and to the northeast by Florida Power and Light Company and DeSoto Recycling and Disposal Waste Management Facility. Therefore, FPC 1004B is an offsite compensation site (26.73 acres) located northeast of the SR 70 and 4 Mile Grade Road intersection. The site is located on property owned by Alico, Inc., a major citrus grower in the region. The site mainly consists of tree crops associated with the citrus company. The FPC is setback approximately 880 feet from the SR 70 right-of-way, and a drainage access easement for a driveway and culvert to maintain the flow through the canal will be required for this site.

Alternatively, an existing driveway access further to the west near 4520+25 could allow access to the FPC site and avoid additional impacts to the canal north of SR 70. The work will avoid impacting the existing privately owned internal driveway along the southern boundary of the site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 74.06 feet. The site will provide 38.49 acre-feet of FPC in 1.44 feet of depth for encroachment and will be constructed to connect directly with the secondary canal to the east of the site. It is recommended that an evaluation of the existing conveyance between the canal north of SR 70 and the proposed FPC be performed to determine whether there is sufficient capacity to prevent any adverse flood impacts. A piped connection has been assumed to connect the site with the floodplain, but this may not be needed if the existing conveyance is sufficient.

4.3.5 FPC 1005C

Floodplain 1005C is the third floodplain segment that runs longitudinally with the SR 70 corridor. Floodplain 1005C starts at the end of Floodplain 1004-2 near the main entrance to the DeSoto Correctional Institution (STA. 4540+24) and extends approximately 3,462 feet to the east before the first entrance to the DeSoto Recycling and Disposal Waste Management Facility (STA. 4579+86). The low edge of pavement elevation and the assumed 100-year floodplain elevation of Floodplain 1005 is 78.50 feet. The roadway corridor will impact 42.25 acre-feet of the 100-year floodplain. The area surrounding the floodplain is constrained to the south by the DeSoto Correctional Institution and to the northeast by Florida Power and Light Company and DeSoto Recycling and Disposal Waste Management Facility. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1005C is an offsite compensation site (33.66 acres) located in tree crops northeast of the SR 70 and 4 Mile Grade Road intersection. The site is located on property owned by Alico, Inc., a major citrus grower in the region. The FPC is setback approximately 1,560 feet from the SR 70 right-of-way and a drainage access easement for a driveway and culvert to maintain the flow through the canal will be required for this site. Alternatively, an existing driveway access further to the west near 4520+25 could allow access to the FPC site and avoid additional impacts to the canal north of SR 70. The existing privately owned internal driveways will be impacted, but the site can be bypassed via the existing eastward passage south of the site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 74.74 feet. The site will provide 42.41 acre-feet of FPC in 1.26 feet of depth for encroachment and will be constructed to connect directly with the secondary canal to the east of the site. It is recommended that an evaluation of the existing conveyance between the canal north of SR 70 and the proposed FPC be performed to determine whether there is sufficient capacity to prevent any adverse flood impacts. A piped connection has been assumed to connect the site with the floodplain, but this may not be needed if the existing conveyance is sufficient.

4.3.6 FPC 1006A

Floodplain 1006A is the fourth floodplain segment that runs longitudinally with the SR 70 corridor. Floodplain 1006A starts at the end of Floodplain 1005 before the first entrance to the DeSoto Recycling and Disposal Waste Management Facility (STA. 4579+86) and extends approximately 2,307 feet to the east to beyond the first entrance to the DeSoto Recycling and Disposal Waste Management Facility and DeSoto Correctional Institution property (STA.4602+93). The low edge of pavement elevation and the assumed 100-year floodplain elevation of Floodplain 1006 is 79.00 feet. The roadway corridor will impact 17.46 acre-feet of the 100-year floodplain. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

The area surrounding the floodplain is constrained to the southwest by the DeSoto Correctional Institution and to the north by Florida Power and Light Company and DeSoto Recycling and Disposal Waste Management Facility.

FPC 1006A is an offsite compensation site (15.74 acres) located in pasture and open lands southeast of the SR 70 and NE Four Mile Grade intersection, just east of the DeSoto Correctional Institution property. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 320 feet south of the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 75.51 feet. The site will provide 20.30 acre-feet of FPC in 1.29 feet of depth for encroachment and will be constructed to connect directly with the east side of the floodplain. The layout of the FPC is atypical in that the southern edge is bound by an isolated depression to avoid additional wetland impacts.

4.3.7 FPC 1007C

Floodplain 1007C is a channel crossing within the proposed SR 70 right-of-way near the middle of the DeSoto Recycling and Disposal Waste Management Facility property. The SR 70 roadway crosses the 100-year floodplain from Station 4626+96 to Station 4632+77, resulting in a total encroachment volume of 5.10 acre-feet. Additionally, the project will impact the existing floodplain compensation areas between stations 4623+16 to 4634+16 and will require an additional 0.21 acre-feet of storage for a total of 5.31 acre-feet of floodplain compensation required. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1007C is an offsite compensation site (3.37 acres) located in pasture south of SR 70 near the middle of the DeSoto Recycling and Disposal Waste Management Facility property. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 225 feet south of the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 75.13 feet. The site will provide 6.30 acre-feet of FPC in 1.87 feet of depth for encroachment and will be constructed to connect directly with the west side of the floodplain.

4.3.8 FPC 1008A

Floodplain 1008A is a channel crossing within the proposed SR 70 right-of-way near the eastern end of the DeSoto Recycling and Disposal Waste Management Facility property. The SR 70 roadway crosses the 100-year floodplain from Station 4668+48 to Station 4675+40, resulting in a total encroachment volume of 1.84 acre-feet. The downstream top of bank elevation is approximately 79 feet, and the assumed 100-year floodplain elevation is 79.87 feet based on the best fit of the floodplain shape. The roadway corridor will impact 1.84 acre-feet of the 100-year floodplain. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1008A is an offsite compensation site (1.72 acres) located in pasture south of SR 70 near the eastern end of the DeSoto Recycling and Disposal Waste Management Facility property. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 300 feet south of the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 78.50 feet. The site will provide 2.36 acre-feet of FPC in 1.37 feet of depth for encroachment and will be constructed to connect directly with the east side of the floodplain.

4.3.9 FPC 1009C

Floodplain 1009C is a channel crossing within the proposed SR 70 right-of-way east of the SR 70 and SE Lake Browning Grade intersection. The SR 70 roadway crosses the 100-year floodplain from Station 4721+21 to Station 4726+87, resulting in a total encroachment volume of 2.16 acre-feet. The downstream top of bank elevation is approximately 83 feet, and the assumed 100-year floodplain elevation is 82.84 feet based on the best fit of the floodplain shape. Additionally, the project will impact the existing floodplain compensation areas between stations 4720+47 to 4731+27 and will require an additional 0.11 acre-feet of storage for a total of 2.27 acre-feet of floodplain compensation required. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1009C is an offsite compensation site (1.56 acres) located in a pasture southeast of the SR 70 and SE Lake Browning Grade intersection. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 175 feet south of the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 81.30 feet. The site will provide 2.40 acre-feet of FPC in 1.54 feet of depth for encroachment and will be constructed to connect directly with the west side of the floodplain.

4.3.10 FPC 1010B

Floodplain 1010B runs along the roadway corridor before crossing within the proposed SR 70 right-of-way west of the SR 70 and SE Highlands County Line Road intersection near station 4846+24. The floodplain shape does not follow the topographical contour lines, and the low edge of pavement elevation of 85.64 near station 4860+20 is significantly higher than the surrounding areas outside of the floodplain shape. Therefore, the floodplain elevation was based on the characteristics of the existing four side-by-side, 12-foot-wide by 7-foot-high box culverts crossing SR 70. The highest crown elevation of the upstream end of the box culvert is approximately 82.67 feet, and the top of the headwall elevation is approximately 84.95 feet. The assumed 100-year floodplain elevation is 84.00 feet and is between the upstream crown and headwall elevation from Station 4840+07 to Station 4891+13. The roadway corridor will impact 48.55 acre-feet of the 100-year floodplain. Refer to the floodplain calculations in **Appendix 4** and the floodplain map in **Appendix 7**.

FPC 1010B is an offsite compensation site located in a pasture southwest of the SR 70 and SE Highlands County Line Road, just west of the channel crossing SR 70. A strip of private property and a buried FGT line runs between the south side of the SR 70 right-of-way and the proposed FPC site. The FPC is setback approximately 225 feet south of the SR 70 right-of-way, and a drainage access easement will be required for this site.

An average of the site-specific data provided by Tierra, Inc. estimates the SHGWT to be at an elevation of 80.78 feet. The site will provide 51.97 acre-feet of FPC in 1.32 feet of depth for encroachment and will be constructed to connect directly with the western side of the floodplain.

4.4 Project Classification

The floodplain is located in a non-urbanized, low-density land use area with encroachments classified as "minimal". Minimal encroachments on a floodplain occur when there is floodplain involvement, but the impacts on human life, transportation facilities, and natural and beneficial floodplain values are not significant and can be resolved with minimal effort. Normally, these minimal efforts to address the impacts will consist of applying the Department's drainage design standards and following the Water Management District's procedures to achieve results that will not increase or significantly change the flood elevations and/or limits.

4.5 Risk Evaluation

There is no change in the flood “Risk” associated with this project. The floodplain is located in a non-urbanized, low-density area with encroachments classified as "minimal".

4.6 PD&E Manual Requirements with Minimal Encroachment

The following items must be addressed per Part 2, Chapter 13.2.2.5, FDOT Project Development & Environment Manual, to document the anticipated impacts and risks associated with encroachment classified as “minimal”.

1. The history of flooding of the existing facilities and/or measures to minimize any impacts due to the proposed improvements.
    - ✓ Existing flooding issues along the study limits appear to be due to insufficient outfall capacity and tailwater issues outside of the project limits.
    - ✓ Based on field visits, the cross drains within the project study limits were found to be in acceptable to good conditions (See Appendix 5 for Cross Drain Photos).
    - ✓ Floodplain compensation areas will be constructed to mitigate the loss of storage due to the proposed improvements. The project will have no adverse impact on the existing condition.
2. Determination of whether the encroachment is longitudinal or transverse, and if it is a longitudinal encroachment, an evaluation and discussion of practicable avoidance alternatives.
    - ✓ There will be both longitudinal and transverse impacts to the floodplain due to the proposed increase in the number of travel lanes. Maximum allowable roadway embankment slopes will be used to minimize longitudinal impacts.
    - ✓ The extension or replacement of the existing cross drains will produce transverse floodplain impacts.
    - ✓ With the existing roadway bisecting these areas of floodplain, there are no economically feasible avoidance alternatives.

3. The practicability of avoidance alternatives and/or measures to minimize impacts.

    - ✓ The project design will make every effort to minimize the floodplain impacts resulting from the required roadway fill. The maximum allowable roadway embankment slopes will be used within the floodplain areas to minimize the floodplain impacts. Floodplain impacts will be compensated by constructing floodplain compensation areas. Ten floodplain compensation areas are identified for the proposed roadway widening.

4. Impact of the proposed improvements on emergency services and evacuation.

    - ✓ The proposed cross drains and floodplain compensation areas will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or in emergency evacuation routes.

5. Impacts of the proposed improvement on the base flood, likelihood of flood risk, overtopping, location of overtopping, backwater, etc.

    - ✓ The proposed cross drains and floodplain compensation areas will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk or overtopping.

6. Determination of the impact of the proposed improvements on regulatory floodways, if any, and documentation of coordination with FEMA and local agencies to determine the project's consistency with the regulatory floodway.

    - ✓ Whidden Branch and Joshua Creek are regulatory floodways in Zone AE. At SR 70, the 100-year floodway elevation for Whidden Branch and Joshua Creek is approximately 57.2-feet and 63.0-feet, respectively. A No-rise Certification meeting the National Flood Insurance Program Requirements, 60.3 (d)(3), will be required to demonstrate that the project will not increase flood heights.

7. The impacts on natural and beneficial floodplain values, and measures to restore and preserve these values (this information may also be addressed as part of the wetland impact evaluation and recommendations).

    - ✓ Although unavoidable wetland and other surface water (OSW) impacts will occur as a result of the project, these sites are located within or adjacent to the existing roadway ROW and have generally been previously disturbed by agricultural and residential development, roadway and utility corridor construction, maintenance activities and the invasion of nuisance/exotic species. Wetlands and OSWs within the proposed stormwater management facilities and floodplain compensation sites have generally been previously disturbed by agricultural development. Wetlands to be impacted by the

proposed improvements include bay swamps, stream and lake swamps (bottomlands), mixed wetland hardwoods, wetland forested mixed, wetland scrub, freshwater marshes, and wet prairies. Manmade, excavated ditches and channels have been identified as OSWs. Wetland impacts will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 22 United States Code (U.S.C.) § 1344. Refer to the SR 70 PD&E Study Natural Resources Evaluation (NRE) Report (HNTB) for an evaluation of wetland impacts and mitigation measures.

8. Consistency of the proposed improvements with the local floodplain development plan or the land use elements in the Comprehensive Plan, and the potential of encouraging development in the base floodplain.

    ✓ The project will remain consistent with local floodplain development plans. The project will not support base floodplain development that is incompatible with existing floodplain management programs.

9. A map showing the project, location, and impacted floodplains. Copies of applicable FIRM maps should be included in the appendix.

    ✓ An exhibit based on the FIRM maps is included in **Appendix 2**.

10. Results of any and all project risk assessments performed.

    ✓ The proposed cross drains and floodplain compensation areas will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk.

5 Conclusion

5.1 Conclusion

The widening of the SR 70 roadway will result in an insignificant change in the capacity to carry floodwater. This change will cause no increases in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will be no significant change in potential interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

APPENDIX 1

PD&E CONCEPT PLAN

BEGIN PROJECT
BEGIN SR 70 MILLING AND RESURFACING
STA. 4006+64.47

POLK AVE

CANAL AVE

FRONT ST

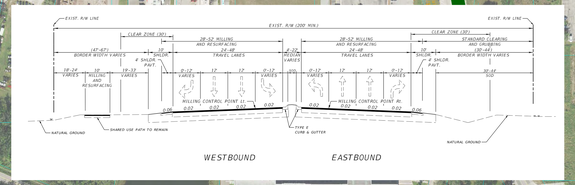
SIESTA BLVD

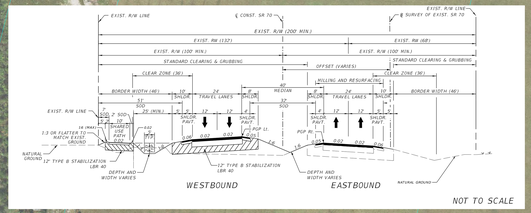
BEGIN ROADWAY WIDENING
STA. 4043+00.00

EXISTING OLD SR 18/
MAHON AVE LINEAR PATH

PROPOSED SHARED
USE PATH (10')

MATCHLINE STA. 4070+80.00





LEGEND
- MILLING & RESURFACING
- WIDENING/RECONSTRUCTION
- EXIST. R/W
- PAVED SHOULDERS
- EXIST. PATH REMOVAL

TOBY'S RV PARK

EXISTING OLD SR 18/
MAHON AVE LINEAR PATH

EXISTING GAS MAIN
FGT

WHIDDEN CREEK / MARE BRANCH

PROPOSED OVERHEAD ELECTRIC
FPL

NE HANSEL AVE

PROPOSED SHARED
USE PATH (10')

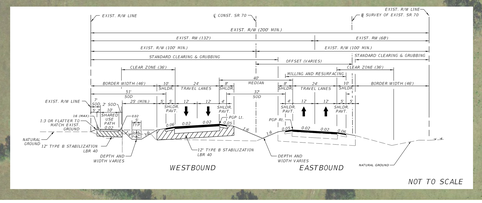
NE WILDWOOD AVE

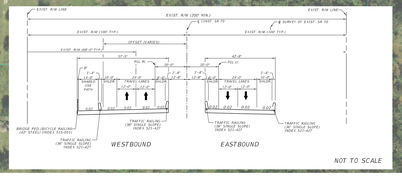
TOWNSEND RD

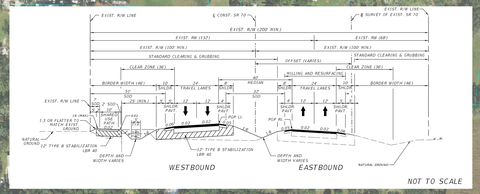
SE HANSEL AVE

MATCHLINE STA. 4070+80.00

MATCHLINE STA. 4114+60.00







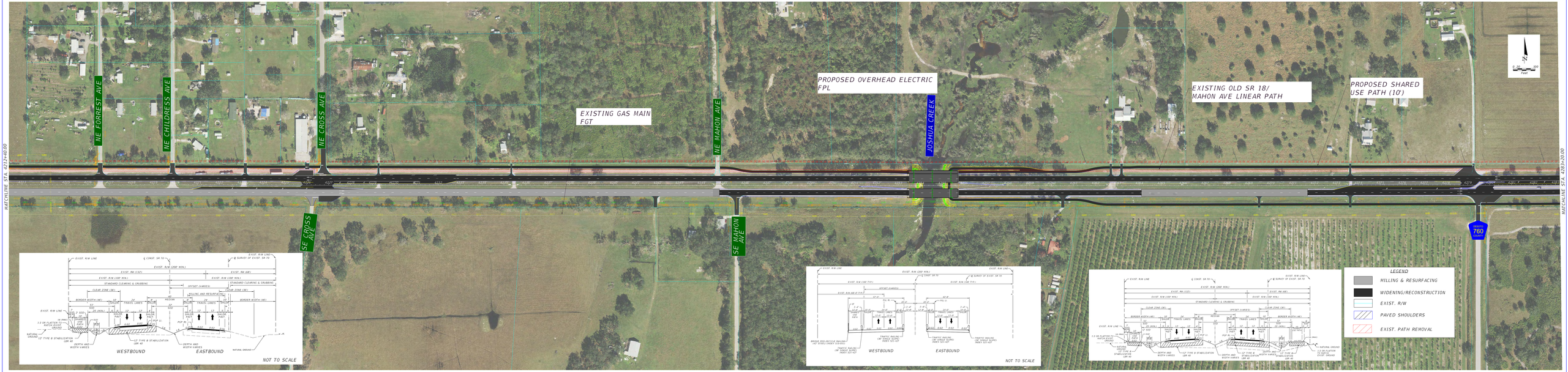
LEGEND
- MILLING & RESURFACING
- WIDENING/RECONSTRUCTION
- EXIST. R/W
- PAVED SHOULDERS
- EXIST. PATH REMOVAL

PROFESSIONAL ENGINEER
WILLIAM LEON, P.E.
LICENSE NUMBER 79530
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	09/GOTO	439042-22-28

SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE
ENVIRONMENTAL EXHIBIT

SHEET NO.
1
OF SHEETS
1



PROFESSIONAL ENGINEER	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
	SR 70	OKEECHO	439042-22-28		7

EXISTING OLD SR 18/
MAHON AVE LINEAR PATH

PROPOSED OVERHEAD ELECTRIC
FPL

NE QUINN AVE

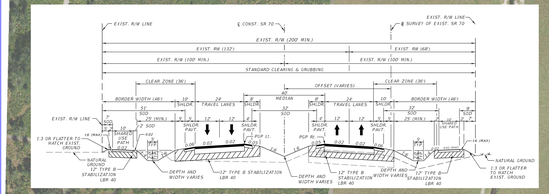
MATCHLINE STA. 4283+20.00

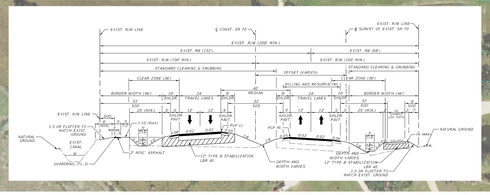
EXISTING GAS MAIN
FGT

PROPOSED SHARED
USE PATH (10')

SE TURKEY HAMMOCK RD

MATCHLINE STA. 4334+00.00





LEGEND

- MILLING & RESURFACING
- WIDENING/RECONSTRUCTION
- EXIST. R/W
- PAVED SHOULDERS
- EXIST. PATH REMOVAL

MATCHLINE STA. 4334+00.00

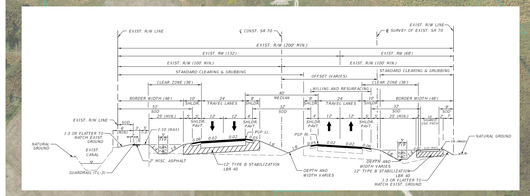
TIGER BAY

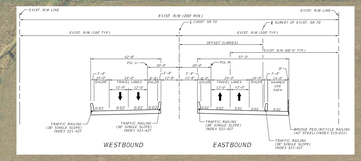
MATCHLINE STA. 4424+80.00

PROPOSED SHARED
USE PATH (10')

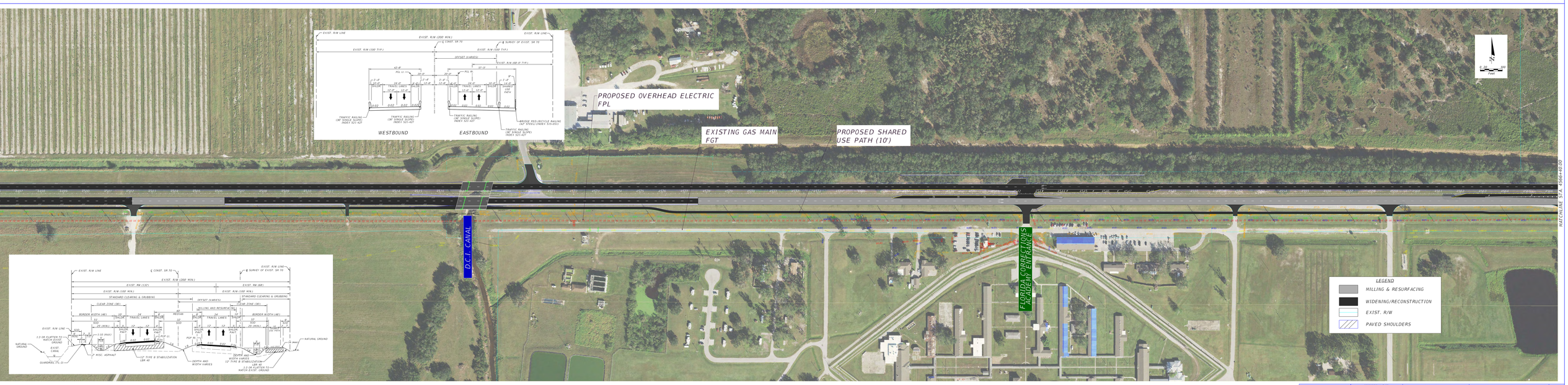
PROPOSED OVERHEAD ELECTRIC
FPL

EXISTING GAS MAIN
FGT

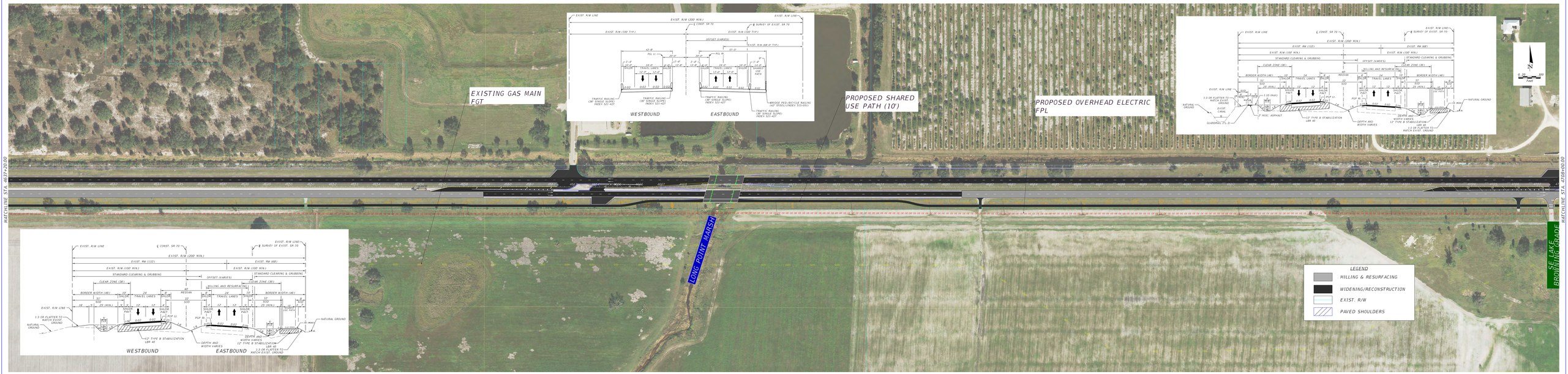




PROFESSIONAL TYPE	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
MCCLAIN LEON, P.E. LICENSE NUMBER 78536 STATE OF FLORIDA	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
1000 W. CRESCENT AVE SUITE 11, CRESCENT AVE	SR 70	DESOTO	439042-22-28		7



PROFESSIONAL TYPE		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
NICOLAS LEON, P.E. LICENSE NUMBER 79530		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
1409 KINGSLEY AVE ORANGE PARK, FL 32073		SR 70	DESOTO	439042-22-28		4



PROFESSIONAL TYPE	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
MCGLAD LEON, P.E. LICENSE NUMBER 78539 STATE OF FLORIDA	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		1
863 W. DRANEY AVE BARTOW, FL 33830	SR 70	DESOTO	439042-22-28		TOTAL SHEETS 1

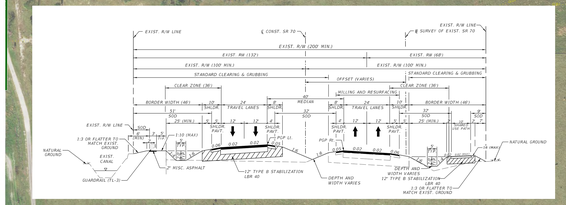
MATCHLINE STA. 4708+00.00

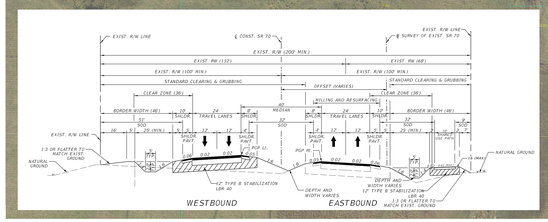
MATCHLINE STA. 4798+00.00

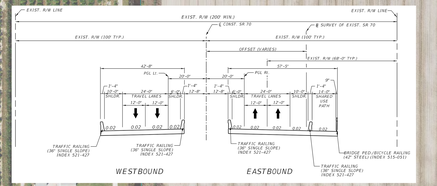
EXISTING GAS MAIN
FGT

PROPOSED SHARED
USE PATH (10')

PROPOSED OVERHEAD ELECTRIC
FPL



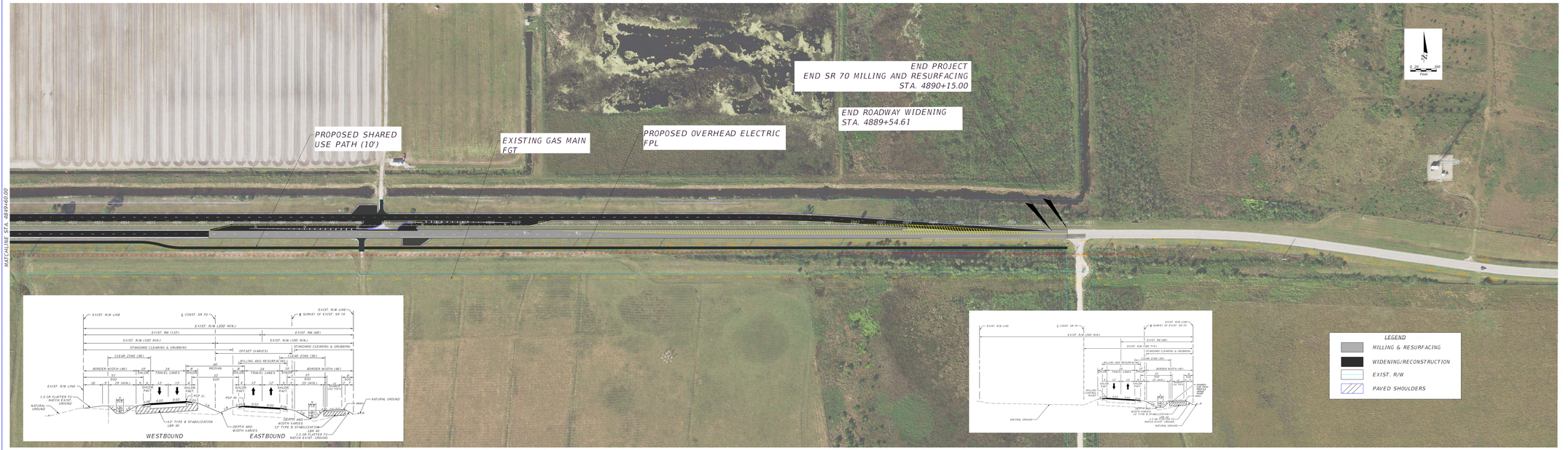




LEGEND
- MILLING & RESURFACING
- WIDENING/RECONSTRUCTION
- EXIST. R/W
- PAVED SHOULDERS

PARKER CREEK

PROFESSIONAL TYPE	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
REGINA LEON, P.E. LICENSE NUMBER 78536	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
1725 U.S. HIGHWAY 441 SW/FOR FT. PIERCE	SR 70	OKEECHOBEE	439642-22-28		



LEGEND

- MILLING & RESURFACING
- WIDENING/RECONSTRUCTION
- EXIST. R/W
- PAVED SHOULDERS

PROFESSIONAL TYPE	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SR 70 FROM WEST OF SR 31 TO HIGHLANDS COUNTY LINE ENVIRONMENTAL EXHIBIT	SHEET NO.
	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
	SR 70	DESOTO	439042-22-28		7

APPENDIX 2

EXHIBITS

Exhibit 1: WBIDs/Watershed Map

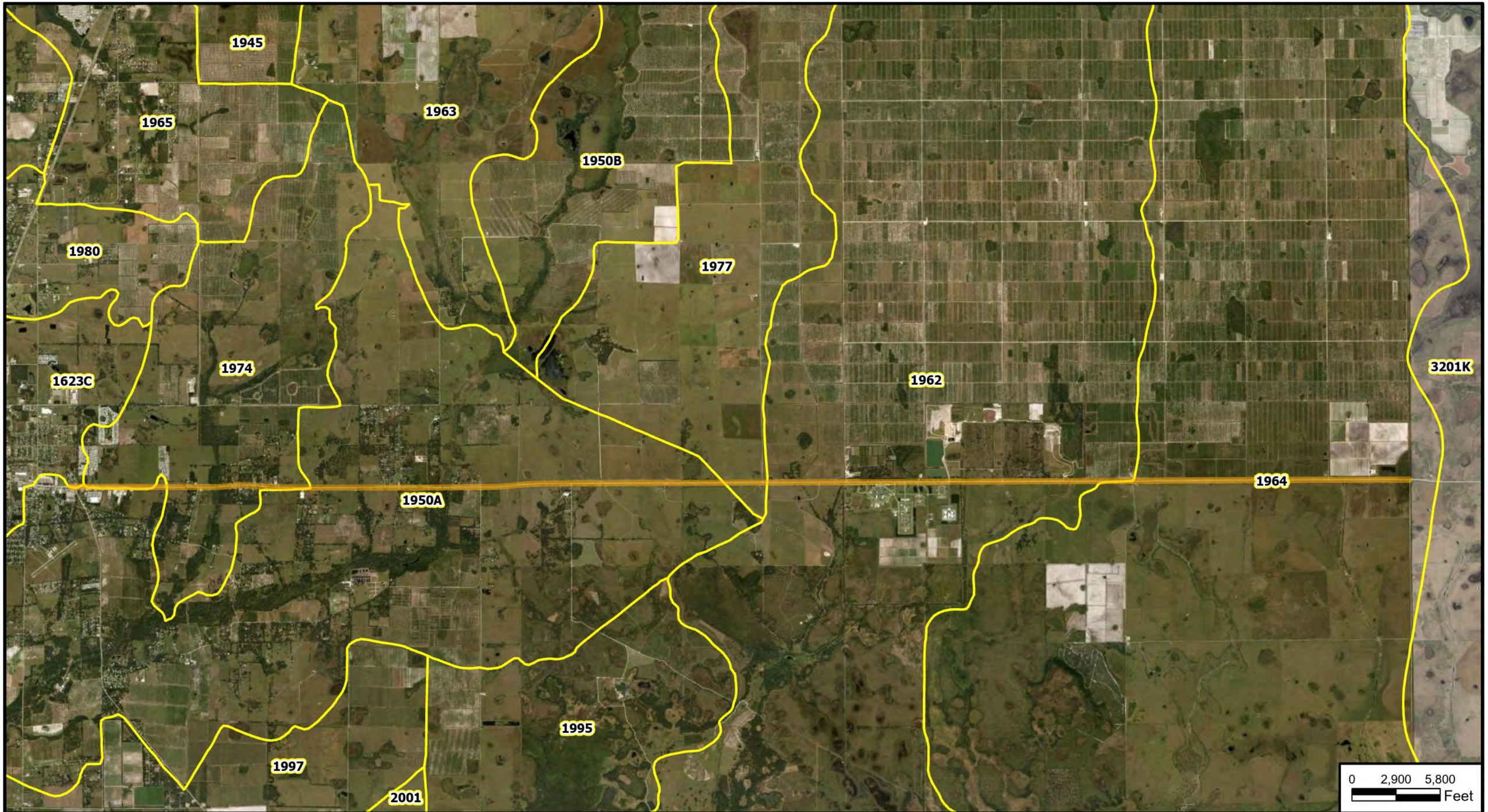
Exhibit 2: FDOT Straight-Line Diagram

Exhibit 3: Soils Map

Exhibit 4: FEMA Firm Map

Exhibit 5: Land Use Map

Exhibit 6: Water Management District Location Map



Prepared For : D1

FDOT

Pond Siting Report

S.R. 70 from West of S.R. 31 to the Highlands County Line
(M.P. 14.973-31.763)
Desoto County, Florida
FPID: 451942-2-52-01

Legend

Project Limits

WBIDs

N

Exhibit 1

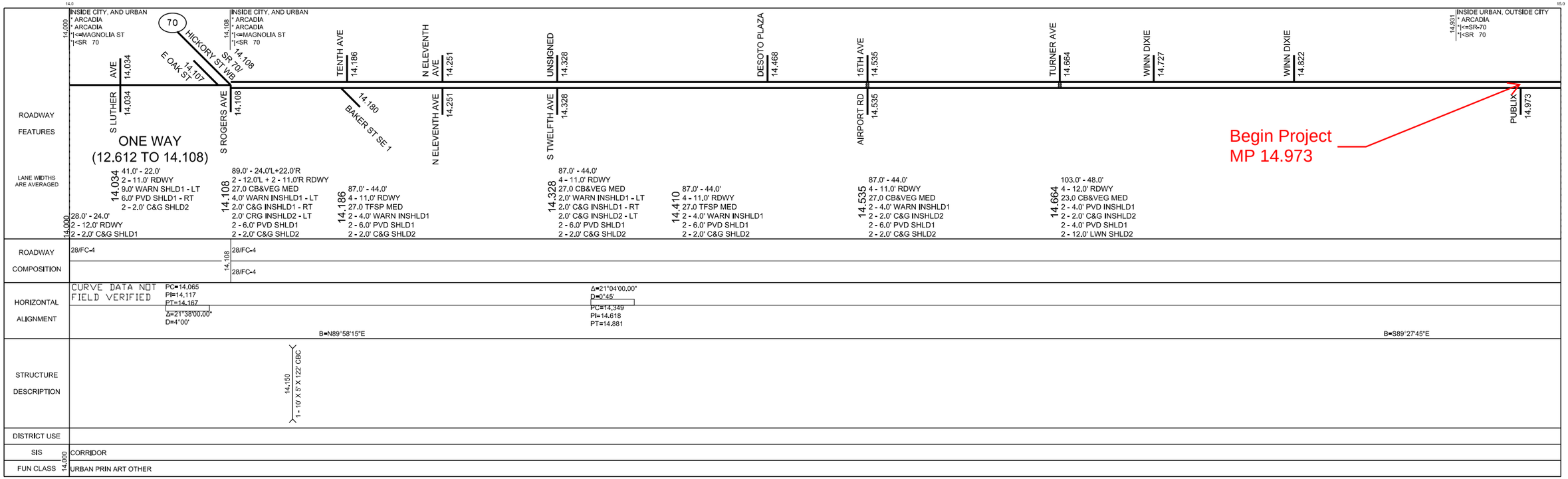
WBIDs/Watershed Map

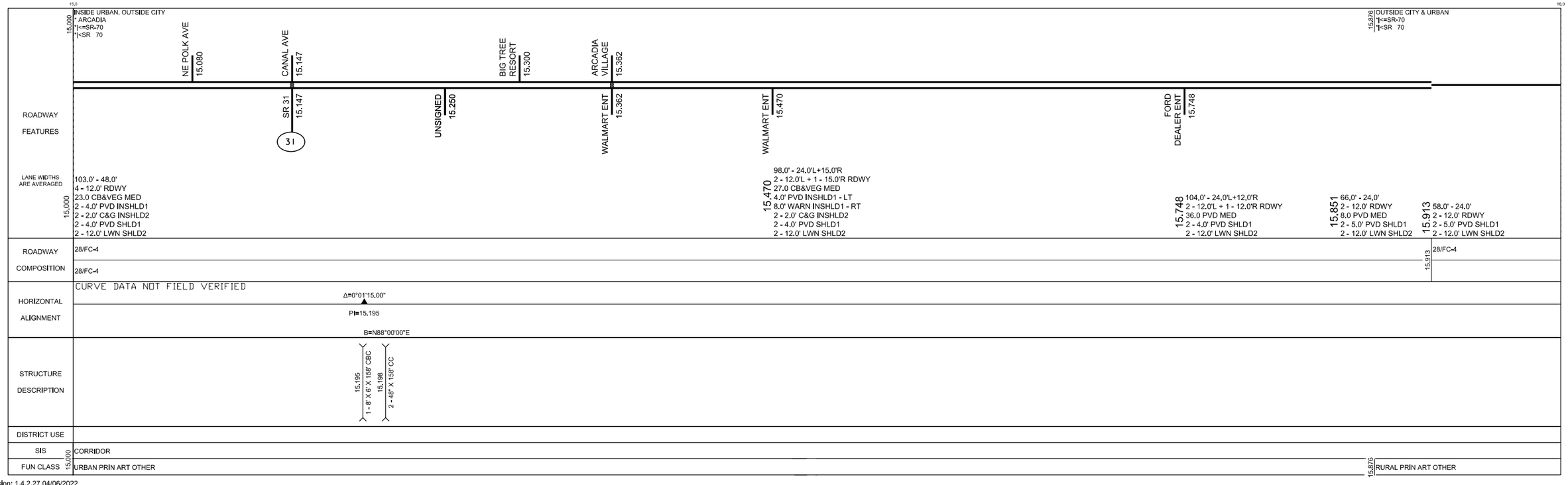
	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/14/2022	04/06/2022	14.685	15.470	11/15/2024	12/02/24(CONST)
BY	FTE	FTE				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 70	DESOTO	01	04040000	4 OF 8





Version: 1.4.2.27 04/06/2022

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/14/2022	04/06/2022				
BY	FTE	FTE				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 70	DESOTO	01	04040000	5 OF 8

16.0 — 17.0 — 18.0

ROADWAY FEATURES

16.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

TOBYS RV ENT 16.259

SE TOWNSEND AVE 16.673

CREEK

WHIDDEN

NE HANSEL AVE 17.182

NE WILDWOOD AVE 17.474

NE MANLEY RD 17.683

LANE WIDTHS ARE AVERAGED

16.000 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

16.132 71.0' - 12.0'L+13.0'R
1 - 12.0'L + 1 - 13.0'R RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

16.354 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

16.605 58.0' - 24.0'
2 - 12.0' RDWY
5.0' PVD SHLD1 - LT
5.0' WARN SHLD1 - RT
2 - 12.0' LWN SHLD2

16.919 58.0' - 24.0'
2 - 12.0' RDWY
5.0' WARN SHLD1 - LT
5.0' PVD SHLD1 - RT
2 - 12.0' LWN SHLD2

17.201 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

28/FC-4 | 16.132 | 28/FC-4 / 28/FC-4 | 16.354 | 28/FC-4

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

Δ=4°58'45.00"
D=0°19'00.00
PC=16.767
PI=16.912
PT=17.044

B=N80°00'00"E

PC=17.157
PI=17.282
PT=17.403
Δ=9°57'30.00"
D=45°35'00.00

B=S87°00'00"E

PC=17.513
PI=17.658
PT=17.793
Δ=4°58'45.00"
D=19°53'00.00

B=N85°00'00"E

STRUCTURE DESCRIPTION

16.896 — #0024 121.4' BR — 16.919

DISTRICT USE

SIS 16.000 CORRIDOR

FUN CLASS 16.000 RURAL PRIN ART OTHER

18.0 — 19.0 — 20.0

ROADWAY FEATURES

18.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

SE WALSTON AVE 18.182

NE FORREST AVE 18.998

NE CHILDRESS AVE 19.060

NE CROSS AVE 19.184

SE CROSS AVE 19.184

NE MAHON AVE 19.535

SE MAHON AVE 19.548

JOSHUA CREEK

LANE WIDTHS ARE AVERAGED

18.000 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

19.421 58.0' - 24.0'
2 - 12.0' RDWY
5.0' PVD SHLD1 - LT
5.0' WARN SHLD1 - RT
2 - 12.0' LWN SHLD2

19.728 58.0' - 24.0'
2 - 12.0' RDWY
5.0' WARN SHLD1 - LT
5.0' PVD SHLD1 - RT
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

28/FC-4

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

PI=18.704
Δ=0°03'00.00"
B=N89°59'15"E

STRUCTURE DESCRIPTION

18.270 — 2 - 8' X 5' X 88' CBC

18.726 — 3 - 42" X 92' CC

19.705 — #0027 121.4' BR — 19.728

DISTRICT USE

SIS CORRIDOR

FUN CLASS 18.000 RURAL PRIN ART OTHER

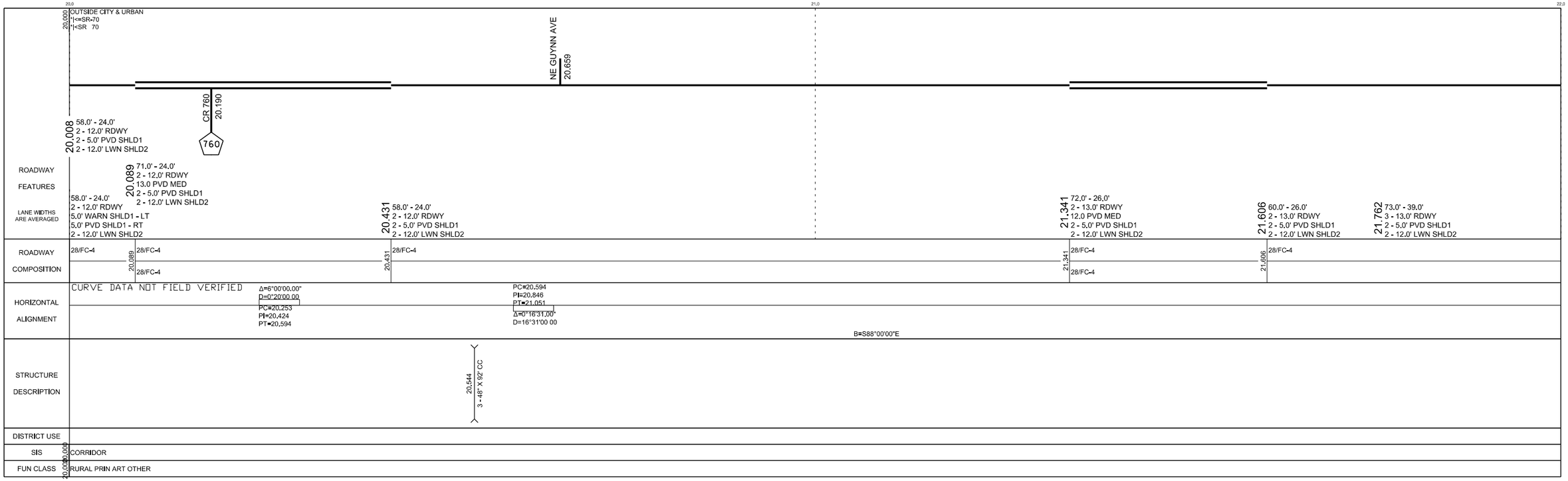
Version: 1.4.2.27 04/06/2022

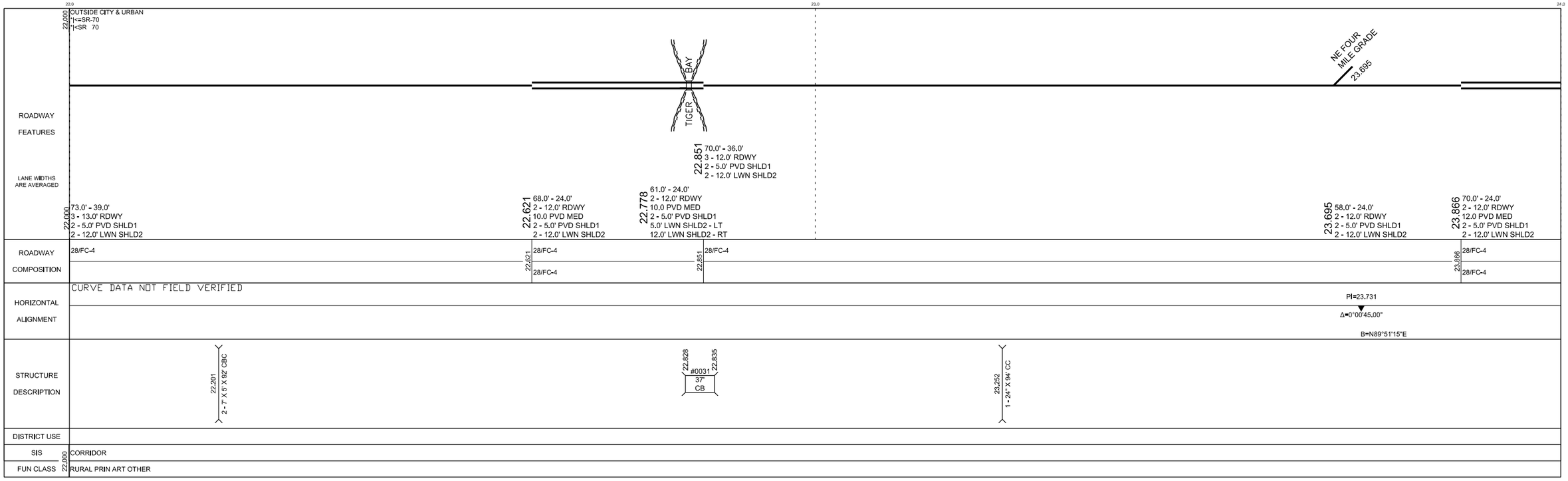
	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/14/2022	04/06/2022				
BY	FTE	FTE				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 70	DESOTO	01	04040000	6 OF 8





	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/14/2022	04/06/2022				
BY	FTE	FTE				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 70	DESOTO	01	04040000	7 OF 8

24.0 25.0 26.0

ROADWAY FEATURES

24.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

GULLY
MOSSY
CANAL
DCI
ORANGE-CO ENT 24.750
DESOTO CORRECT INST 25.166
DESOTO CORRECT INST 25.347
DESOTO CORRECT INST 25.478
DESOTO WORK CAMP 25.631

LANE WIDTHS ARE AVERAGED

24.000 70.0' - 24.0'
2 - 12.0' RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

24.141 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

25.373 69.0' - 24.0'
2 - 12.0' RDWY
11.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

25.631 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

25.805 70.0' - 24.0'
2 - 12.0' RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

28/FC-4
28/FC-4

24.141 28/FC-4
28/FC-4

25.373 28/FC-4
28/FC-4

25.631 28/FC-4

25.805 28/FC-4
28/FC-4

HORIZONTAL ALIGNMENT

STRUCTURE DESCRIPTION

24.160 #0032 100.3' CB 24.179

24.691 #0033 26.4' CB 24.696

25.764 1 - 8' X 5' X 80' CBC

DISTRICT USE

SIS CORRIDOR

24.000 **FUN CLASS** RURAL PRIN ART OTHER

26.0 27.0 28.0

ROADWAY FEATURES

26.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

26.016 UNSIGNED
MARSH
LONG POINT

LANE WIDTHS ARE AVERAGED

26.000 70.0' - 24.0'
2 - 12.0' RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

26.120 60.0' - 24.0'
2 - 12.0' RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 7.0' LWN SHLD2

26.258 71.0' - 24.0'
2 - 12.0' RDWY
13.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

26.520 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

26.669 70.0' - 36.0'
3 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

27.281 71.0' - 12.0'L+13.0'R
1 - 12.0'L + 1 - 13.0'R RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

27.571 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

28/FC-4
28/FC-4

26.520 28/FC-4

27.281 28/FC-4
28/FC-4

27.571 28/FC-4

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

PI=26.705
Δ=0°00'30.00"
B=N89°51'45"E

Δ=0°03'15.00"
PI=27.722
B=N89°48'30"E

STRUCTURE DESCRIPTION

26.201 1 - 5' X 4' X 84' CBC

26.253 1 - 8' X 4' X 85' CBC

26.846 1 - 8' X 4' X 85' CBC

27.573 #0037 47.5' CB 27.582

DISTRICT USE

SIS CORRIDOR

26.000 **FUN CLASS** RURAL PRIN ART OTHER

Version: 1,4,2,27 04/06/2022

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/14/2022	04/06/2022				
BY	FTE	FTE				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 70	DESOTO	01	04040000	8 OF 8

28.0 29.0 30.0

ROADWAY FEATURES

28.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

LANE WIDTHS ARE AVERAGED

28.000 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

28.473 66.0' - 24.0'
2 - 12.0' RDWY
8.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

28.594 70.0' - 36.0'
3 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

29.467 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

29.632 71.0' - 24.0'
2 - 12.0' RDWY
13.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

29.897 51.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
5.0' LWN SHLD2 - LT
12.0' LWN SHLD2 - RT

29.975 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

28.000 28/FC-4
28.473 28/FC-4
28/FC-4
28.594 28/FC-4
29.632 28/FC-4
28/FC-4
29.897 28/FC-4

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

Δ=0°03'00.00"
PI=28.759
B=N89°45'30"E

Δ=0°00'30.00"
PI=29.756
B=N89°45'00"E

STRUCTURE DESCRIPTION

28.638 1 - 8' X 4' X 88' CBC

29.953 1 - 8' X 4' X 86' CBC

DISTRICT USE

SIS 28.000 CORRIDOR

FUN CLASS 28.000 RURAL PRIN ART OTHER

30.0 31.0

ROADWAY FEATURES

30.000 OUTSIDE CITY & URBAN
*|<=SR-70
*|<SR 70

PARKER CREEK

End Project
MP 31.763

SE HGHLNDS CO LN RD 31.763 HIGHLANDS CO LINE

GPS COORDINATES
LAT: 27.20968
LONG:-81.56293

LANE WIDTHS ARE AVERAGED

30.000 58.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 12.0' LWN SHLD2

END MP: 031.770
NET ROADWAY ID LENGTH: 31.770

ROADWAY COMPOSITION

28/FC-4

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

PI=30.772
Δ=0°10'45.00"
B=N89°55'45"3

STRUCTURE DESCRIPTION

30.916 #0940 47.5' CB 30.925

DISTRICT USE

SIS 30.000 CORRIDOR — CORRIDOR 31.770

FUN CLASS 30.000 RURAL PRIN ART OTHER

Version: 1.4.2.27 04/06/2022

N

0 1,400 2,800 Feet

Prepared For : D1

FDOT

Location Hydraulic Report

S.R. 70 from West of S.R. 31 to the Highlands County Line
(M.P. 14.973-31.763)
Desoto County, Florida
FPID: 451942-2-52-01

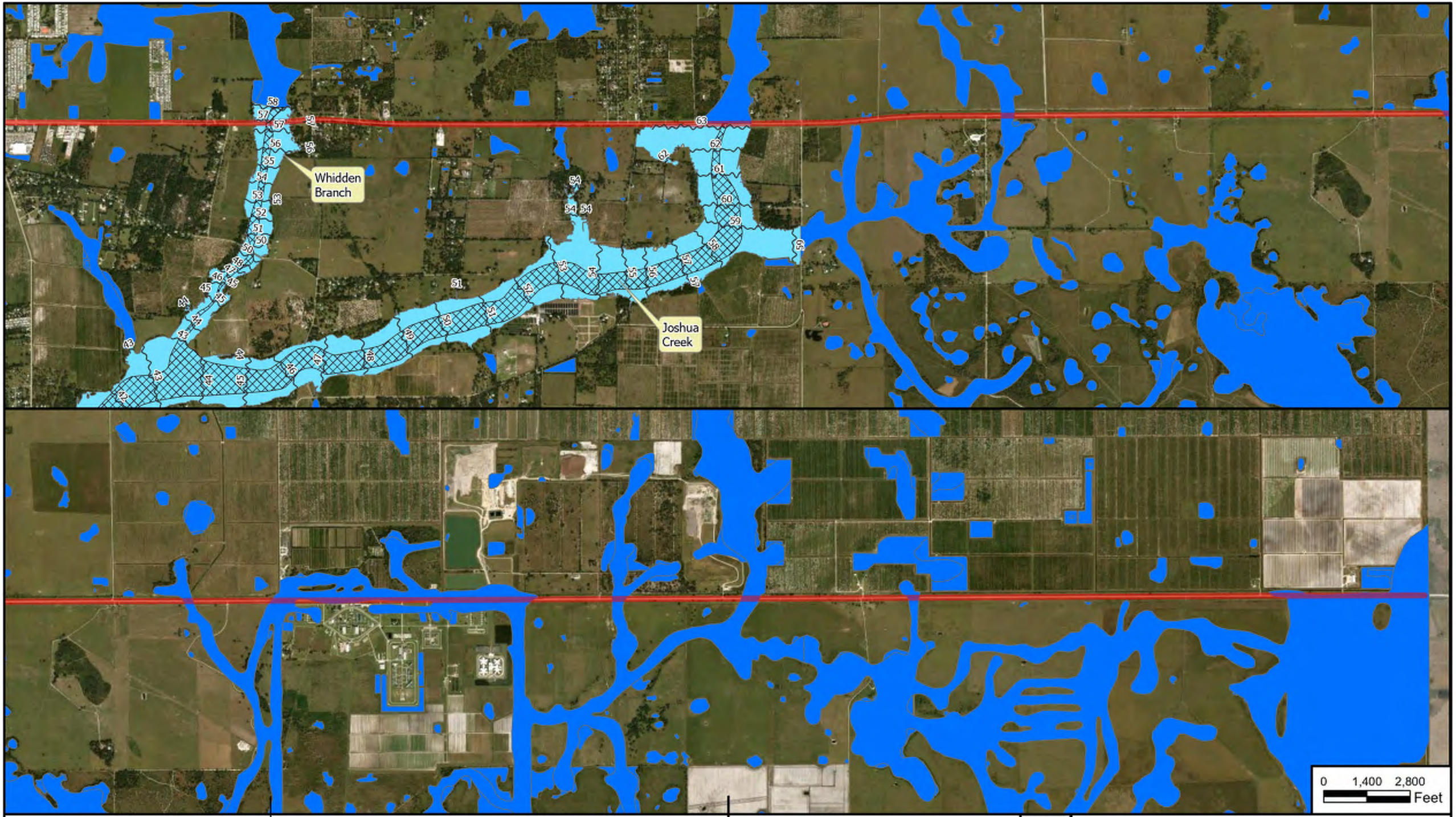
Legend

Project Limits
Project Limits

SOIL

10,A/D
10,C/D
11,A/D
12,A/D
13,A/D
14,B/D
15,A/D
16,A/D
17,A/D
18,C/D
19,C/D
2,A/D
20,A/D
20,B/D
21,A/D
22,A/D
23,A/D
24,A/D
25,B/D
26,A/D
27,C/D
28,A/D
29,C/D
3,A/D
30,A
31,A/D
32,A/D
34,A/D
35,A/D
36,A/D
37,A
39,A/D
4,A/D
40,A/D
41,A/D
42,A
5,A/D
6,B/D
7,A/D
7,B/D
8,A/D
8,B/D
9,A
99,

Exhibit 3
Soils Map



Prepared For : D1

FDOT

Location Hydraulic Report

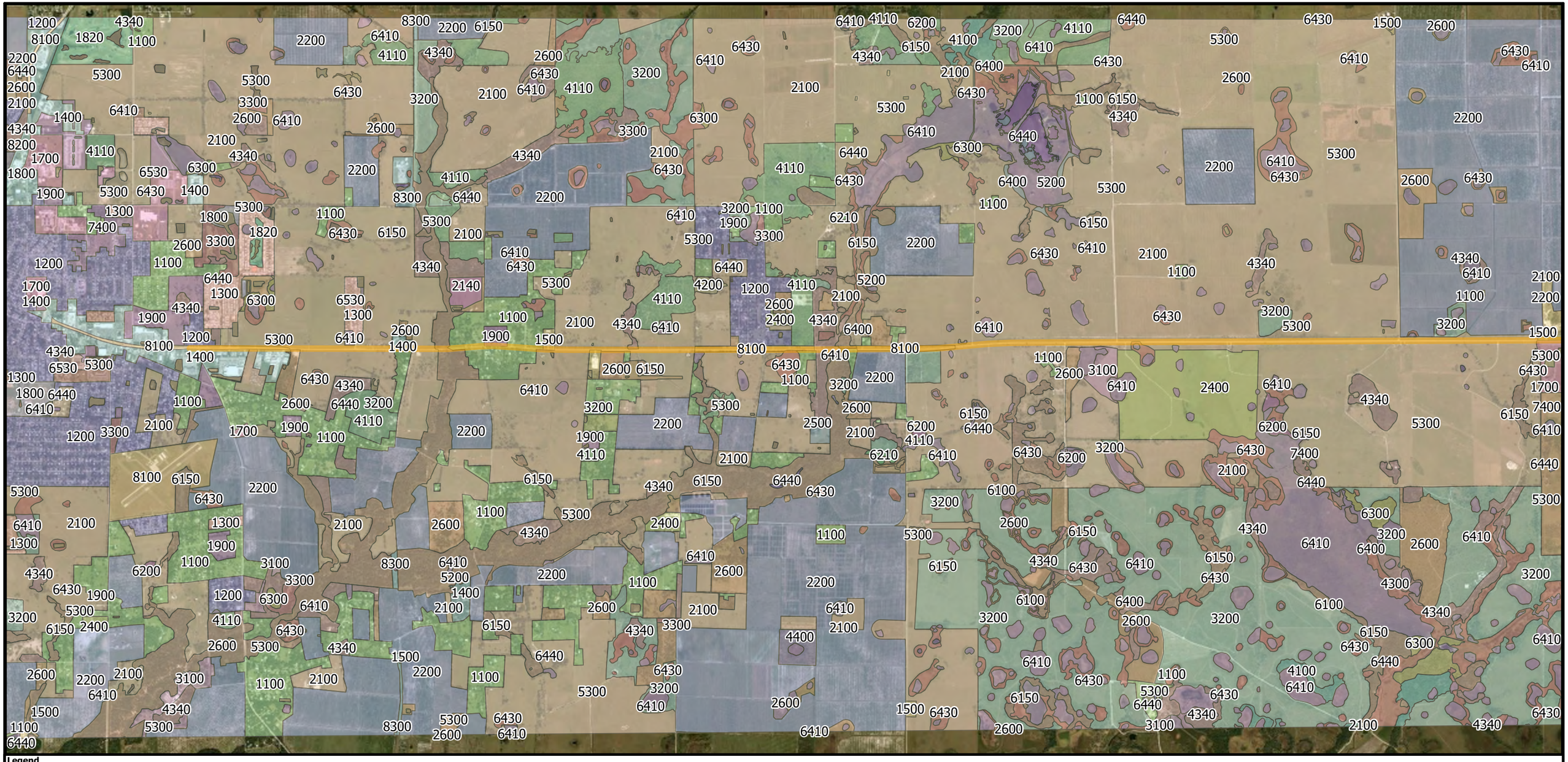
S.R. 70 from West of S.R. 31 to the Highlands County Line
(M.P. 14.973-31.763)
Desoto County, Florida
FPID: 451942-2-52-01

Legend
Project Limits
Flood Zone
A
AE
Regulatory Floodway
Cross Sections w/BFE

N

Exhibit 4

FEMA Firm Map
Panels 12027C0179C, 12027C0185C, 12027C0205C, 12027C0210C, and 12027C0230C
(Effective 11-6-13)



Legend

Project Limits
- Project Limits

Land Use Descriptions
- 1100,Residential Low Density
- 1200,Residential Medium Density
- 1300,Residential High Density
- 1400,Commercial and Services
- 1500,Industrial
- 1700,Institutional
- 1800,Recreational
- 1820,Recreational
- 1900,Open Land
- 2100,Cropland and Pastureland
- 2110,Cropland and Pastureland
- 2120,Cropland and Pastureland
- 2140,Cropland and Pastureland
- 2200,Tree Crops
- 2400,Nurseries and Vineyards
- 2500,Specialty Farms
- 2600,Other Open Lands <Rural>
- 3100,Herbaceous
- 3200,Shrub and Brushland
- 3300,Mixed Rangeland
- 4100,Upland Coniferous Forests
- 4110,Upland Coniferous Forests
- 4200,Upland Hardwood Forests
- 4300,Upland Mixed Forests
- 4340,Upland Mixed Forests
- 4400,Tree Plantations
- 5100,Streams and Waterways
- 5200,Lakes
- 5300,Reservoirs
- 6100,Wetland Hardwood Forests
- 6150,Wetland Hardwood Forests
- 6172,Wetland Hardwood Forests
- 6200,Wetland Coniferous Forests
- 6210,Wetland Coniferous Forests
- 6300,Wetland Forested Mixed
- 6400,Vegetated Non-Forested Wetlands
- 6410,Vegetated Non-Forested Wetlands
- 6430,Vegetated Non-Forested Wetlands
- 6440,Vegetated Non-Forested Wetlands
- 6530,Non-Vegetated Wetlands
- 7400,Disturbed Lands
- 8100,Transportation
- 8200,Communications
- 8300,Utilities

Prepared For : D1

FDOT

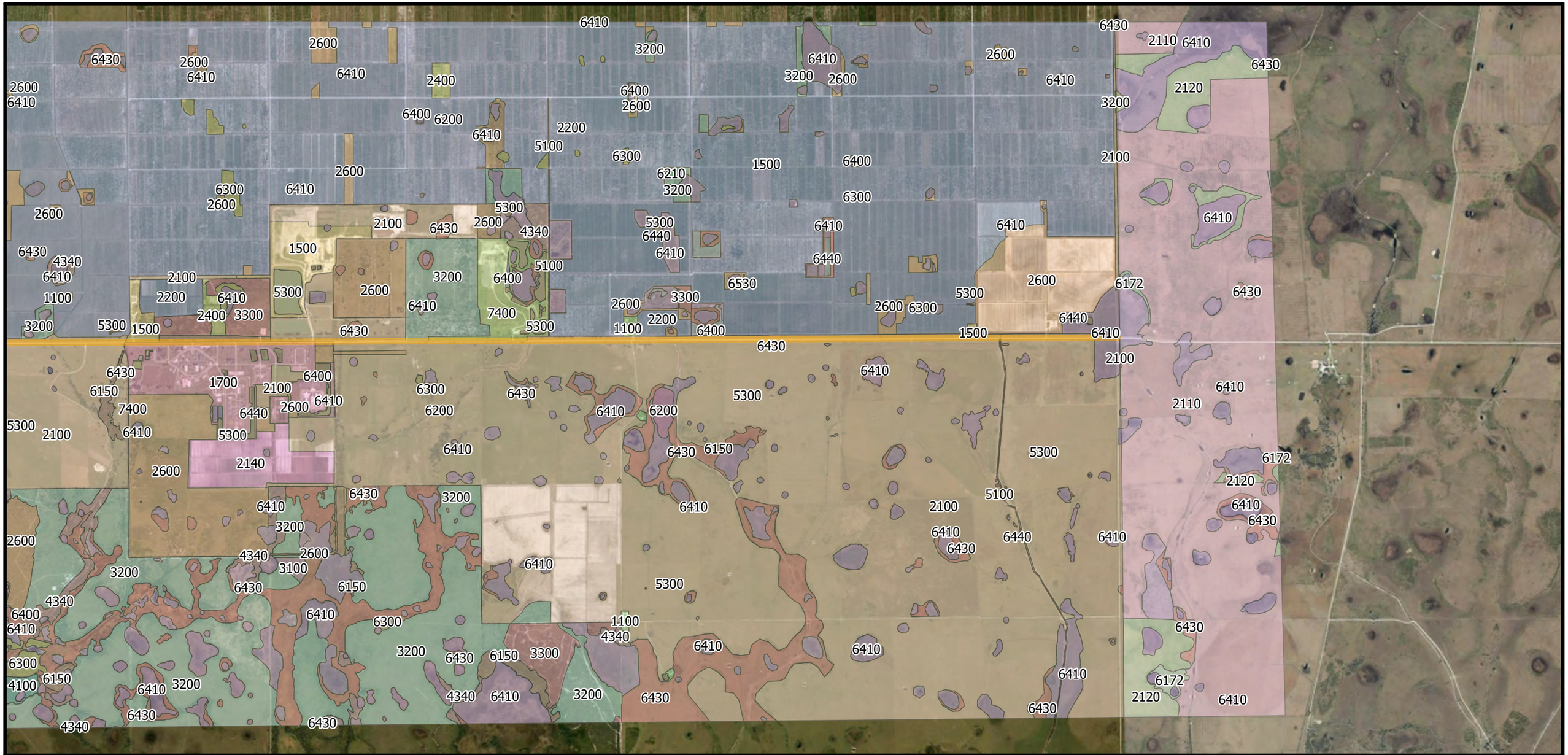
Pond Siting Report

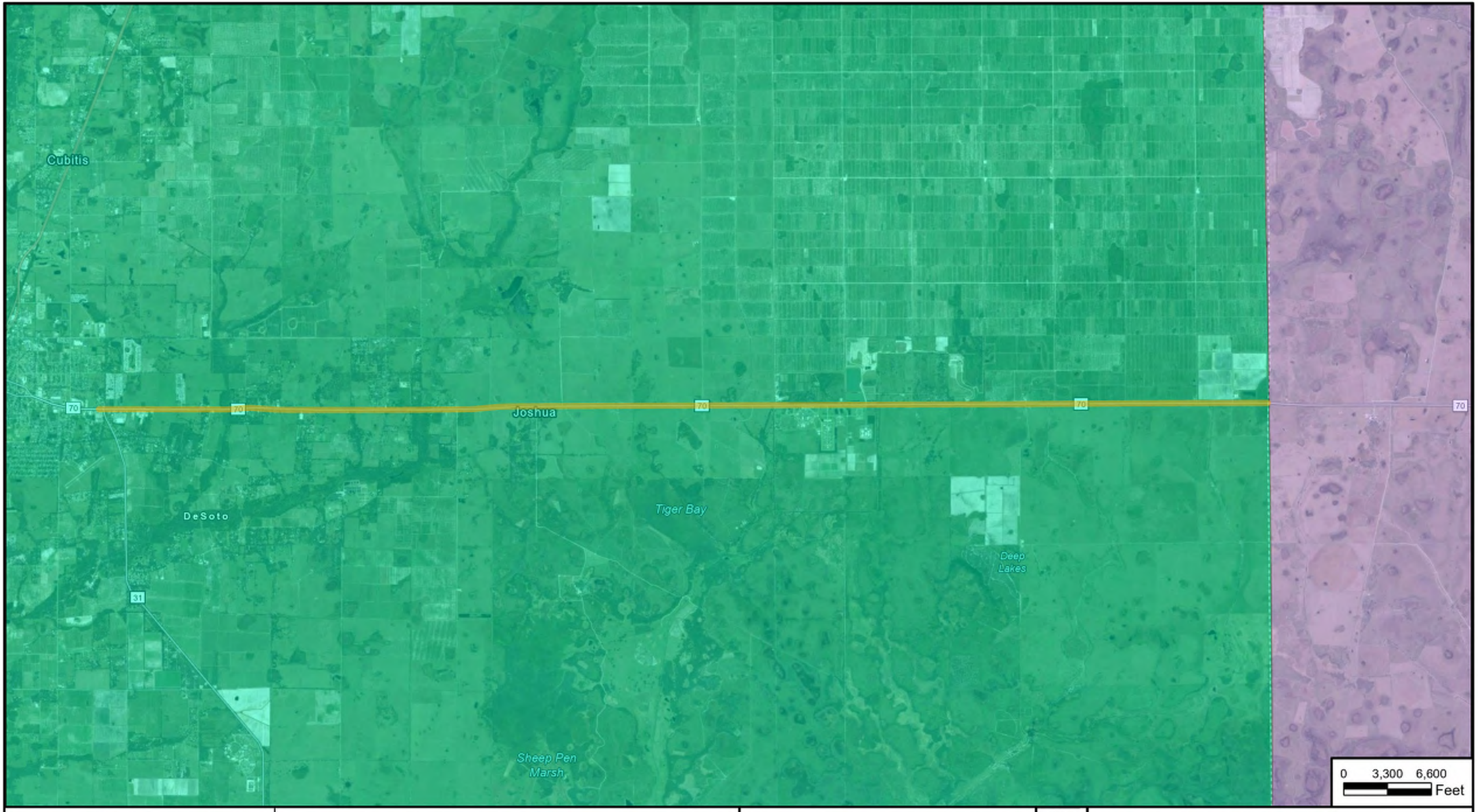
S.R. 70 from West of S.R. 31 to the Highlands County Line
(M.P. 14.973-31.763)
Desoto County, Florida
FPID: 451942-2-52-01

0 1,750 3,500 Feet

N

Exhibit 5
Sheet 1 of 2
Land Use Map


6410 3200 6430 2600 6410 2400 6400 6200 2200 5100 6300 1500 6400 6210 3200 6300 5300 2100 6430 2600 4340 6440 6410 6530 3300 7400 2200 1100 6400 1700 2100 6400 6300 6200 6150 2140 3100 6172 2120 2110 6430 6410 6440 6150 6300 6400 6410 6430 6440 6410 6430 6440 6410 6430 6440



Prepared For : D1

FDOT

Pond Siting Report

S.R. 70 from West of S.R. 31 to the Highlands County Line
(M.P. 14.973-31.763)
Desoto County, Florida
FPID: 451942-2-52-01

Legend

Project Limits

NAME

SFWMD

SWFWMD

N

Exhibit 6

Water Management District
Location Map

APPENDIX 3

CROSS DRAIN ANALYSIS

HY-8 Culvert Analysis Report

- **PRE CONDITION**
- **PROPOSED CONDITION**

Overtopping Storm Event Calculations

- **CD 12**
- **CD 13**

HY-8 Existing Culvert Analysis Report

Crossing 4177+65.60

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 518.00 cfs
Design Flow: 626.00 cfs
Maximum Flow: 909.00 cfs

Table 1 - Summary of Culvert Flows at crossing: 4177+65.60

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
62.75	518.00	518.00	0.00	1
63.00	557.10	557.10	0.00	1
63.26	596.20	596.20	0.00	1
63.45	626.00	626.00	0.00	1
63.76	674.40	674.40	0.00	1
64.01	713.50	713.50	0.00	1
64.26	752.60	752.60	0.00	1
64.52	791.70	791.70	0.00	1
64.78	830.80	830.80	0.00	1
65.05	869.90	869.90	0.00	1
65.31	909.00	908.75	0.10	12
65.31	908.03	908.03	0.00	Overtopping

Rating Curve Plot for crossing: 4177+65.60

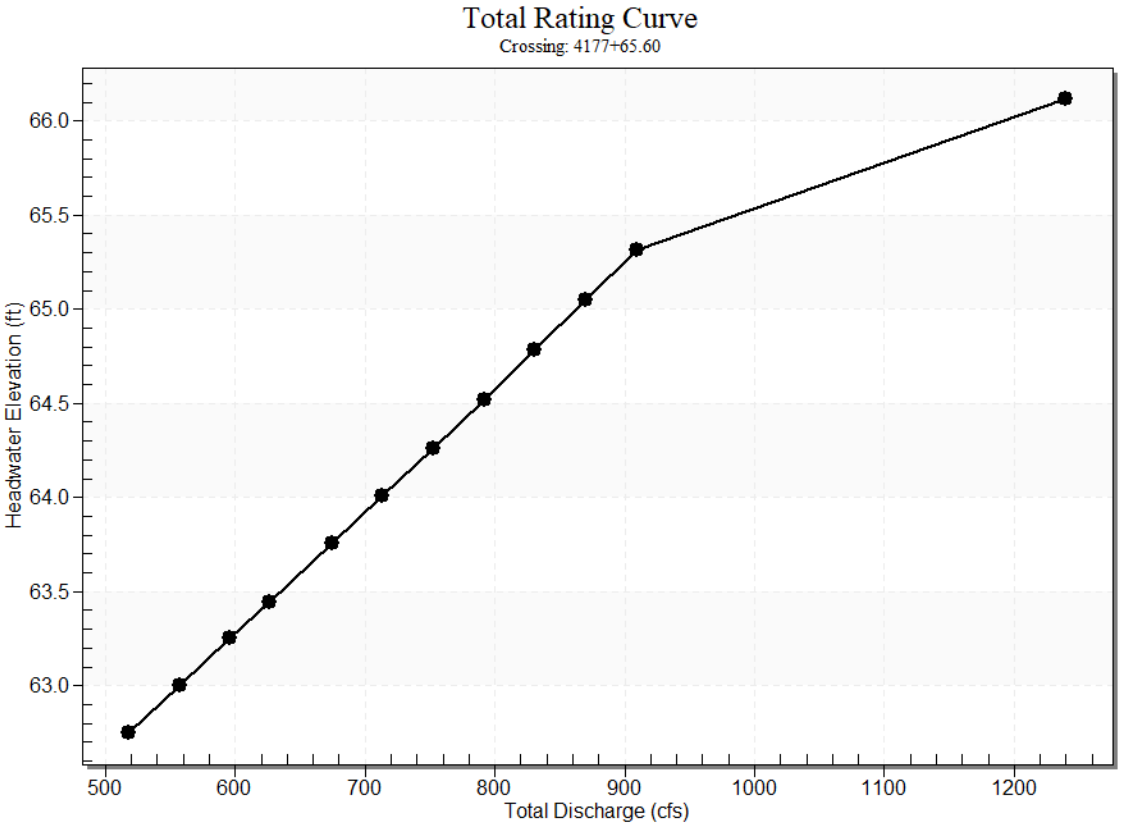
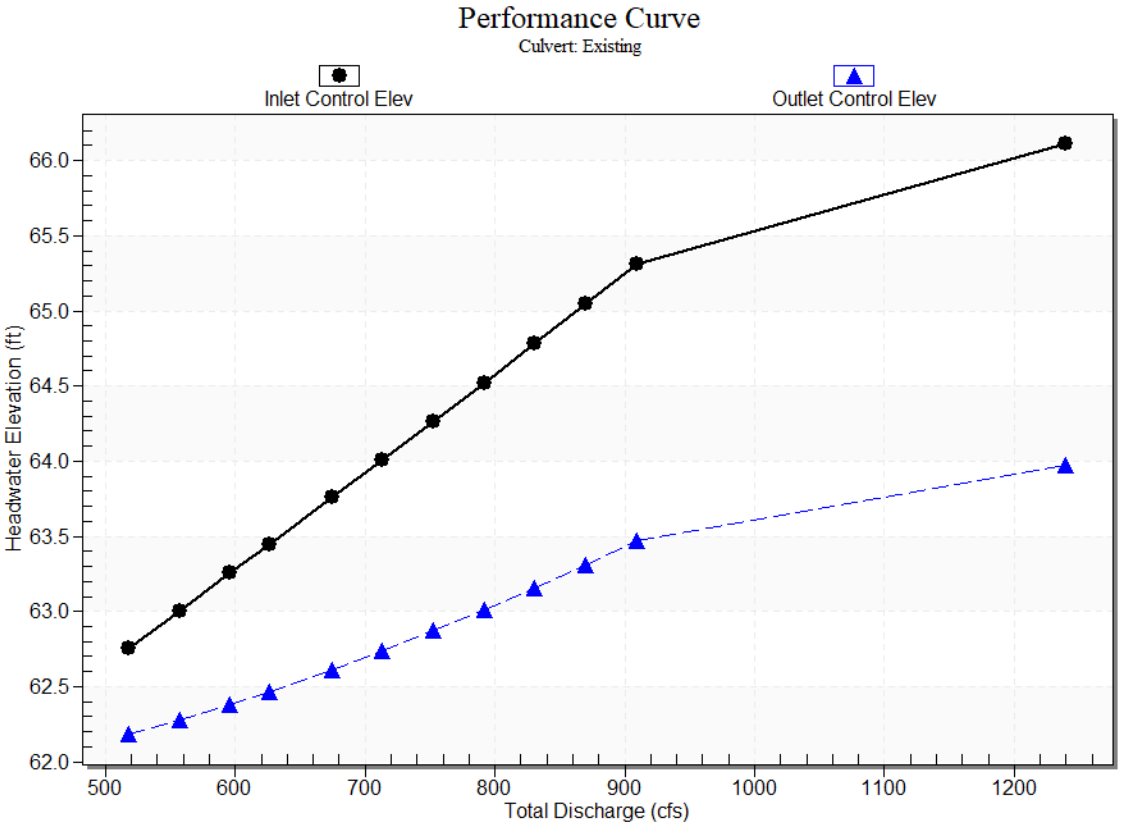


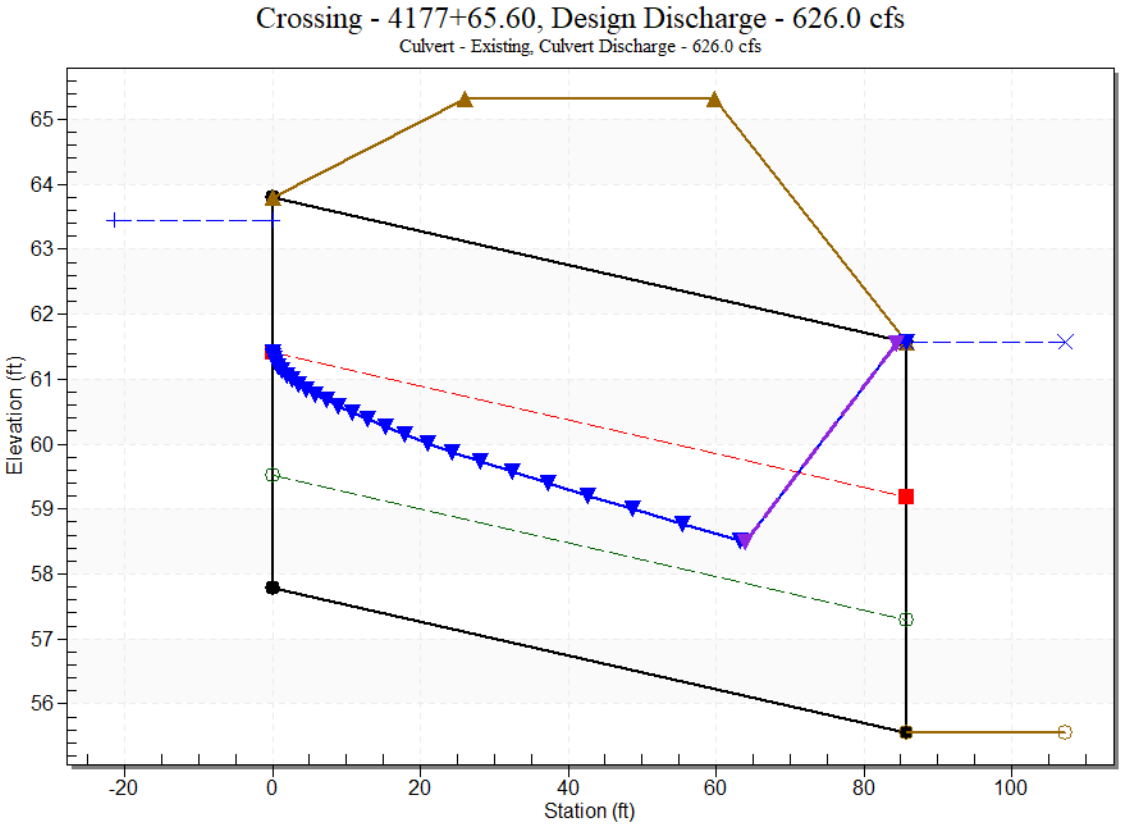
Table 2 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
518.00	518.00	62.75	4.96	4.391	0.83	1-JS1f	1.52	3.19	6.00	6.00	5.40	0.00
557.10	557.10	63.00	5.21	4.488	0.87	1-JS1f	1.59	3.35	6.00	6.00	5.80	0.00
596.20	596.20	63.26	5.47	4.593	0.91	1-JS1f	1.67	3.51	6.00	6.00	6.21	0.00
626.00	626.00	63.45	5.66	4.677	0.94	1-JS1f	1.73	3.62	6.00	6.00	6.52	0.00
674.40	674.40	63.76	5.97	4.823	0.99	1-S2n	1.82	3.81	2.39	6.00	17.61	0.00
713.50	713.50	64.01	6.22	4.948	1.04	5-S2n	1.89	3.95	2.50	6.00	17.83	0.00
752.60	752.60	64.26	6.47	5.081	1.08	5-S2n	1.96	4.10	2.61	6.00	18.03	0.00
791.70	791.70	64.52	6.73	5.221	1.12	5-S2n	2.03	4.24	2.72	6.00	18.22	0.00
830.80	830.80	64.78	6.99	5.368	1.17	5-S2n	2.10	4.37	2.82	6.00	18.41	0.00
869.90	869.90	65.05	7.26	5.522	1.21	5-S2n	2.17	4.51	2.92	6.00	18.59	0.00
909.00	908.75	65.31	7.52	5.682	1.25	5-S2n	2.23	4.64	3.03	6.00	18.76	0.00
1239.55	1020.19	66.12	8.33	6.180	1.39	5-S2n	2.42	5.02	3.32	6.00	19.23	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 57.79 ft
Outlet Station: 85.85 ft
Outlet Elevation: 55.56 ft
Number of Barrels: 2

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 8.00 ft
Barrel Rise: 6.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (crossing: 4177+65.60)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
518.00	61.56	6.00
557.10	61.56	6.00
596.20	61.56	6.00
626.00	61.56	6.00
674.40	61.56	6.00
713.50	61.56	6.00
752.60	61.56	6.00
791.70	61.56	6.00
830.80	61.56	6.00
869.90	61.56	6.00
909.00	61.56	6.00

Tailwater Channel Data for Crossing: 4177+65.60

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 61.56 ft

Roadway Data for crossing: 4177+65.60

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 65.31 ft
Roadway Surface: Paved
Roadway Top Width: 33.73 ft

Crossing 4201+67.22

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 137.00 cfs
Design Flow: 166.00 cfs
Maximum Flow: 242.00 cfs

Table 4 - Summary of Culvert Flows at crossing: 4201+67.22

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
64.20	137.00	137.00	0.00	1
64.29	147.50	147.50	0.00	1
64.39	158.00	158.00	0.00	1
64.47	166.00	166.00	0.00	1
64.61	179.00	179.00	0.00	1
64.73	189.50	189.50	0.00	1
64.85	200.00	200.00	0.00	1
64.98	210.50	210.50	0.00	1
65.12	221.00	221.00	0.00	1
65.27	231.50	231.50	0.00	1
65.42	242.00	242.00	0.00	1
67.57	338.95	338.95	0.00	Overtopping

Rating Curve Plot for crossing: 4201+67.22

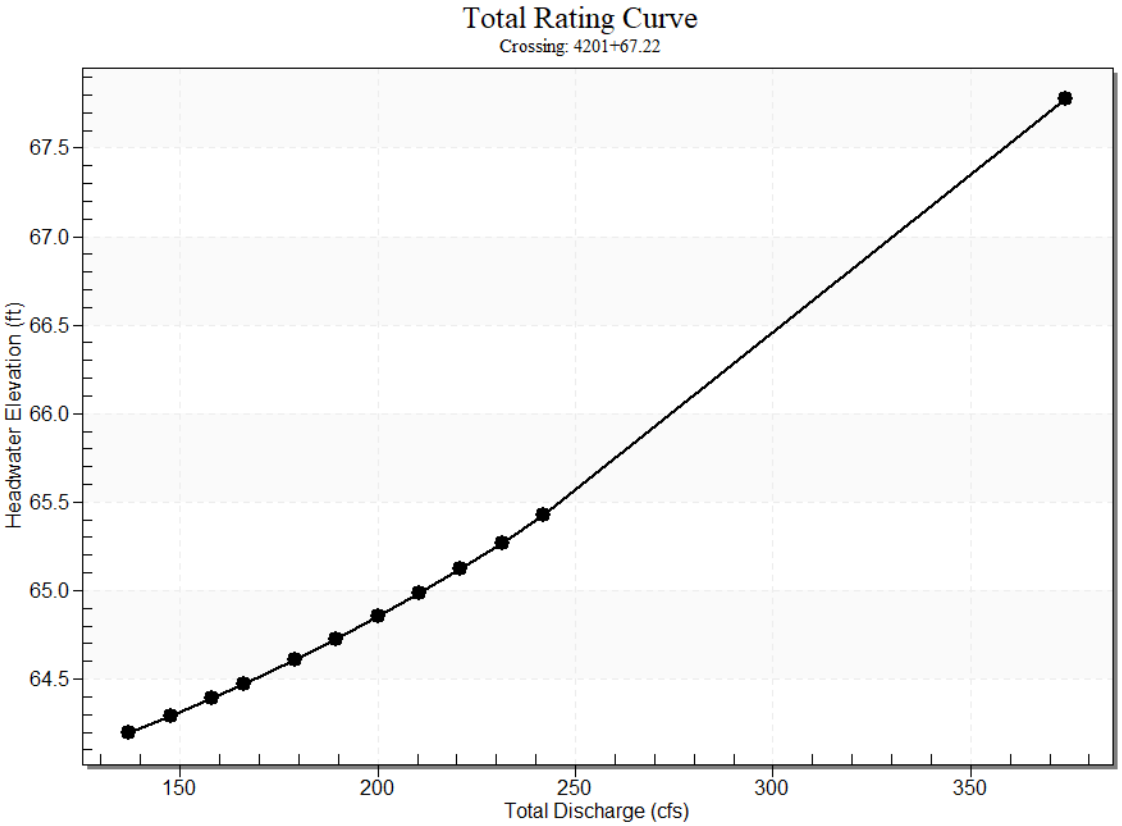
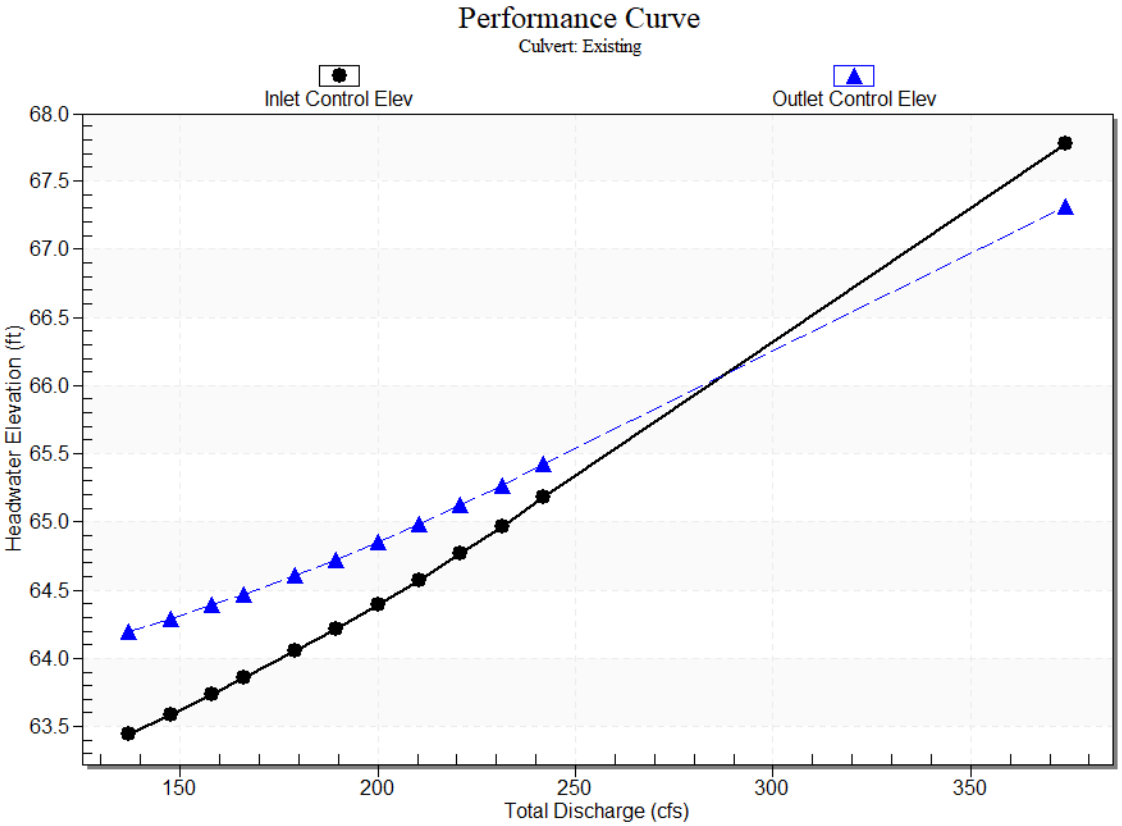


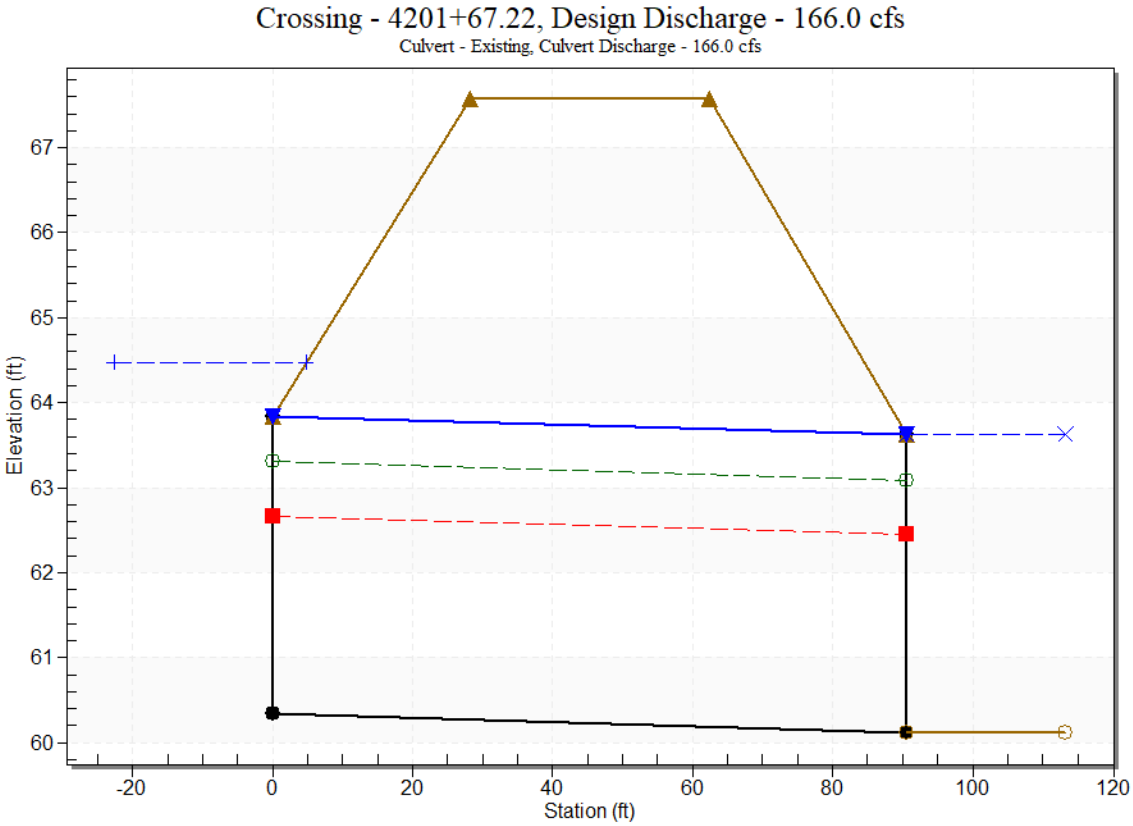
Table 5 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
137.00	137.00	64.20	3.10	3.858	1.10	4-FFf	2.48	2.11	3.50	3.50	4.75	0.00
147.50	147.50	64.29	3.25	3.950	1.13	4-FFf	2.63	2.19	3.50	3.50	5.11	0.00
158.00	158.00	64.39	3.40	4.049	1.16	4-FFf	2.81	2.27	3.50	3.50	5.47	0.00
166.00	166.00	64.47	3.51	4.129	1.18	4-FFf	2.97	2.33	3.50	3.50	5.75	0.00
179.00	179.00	64.61	3.71	4.267	1.22	4-FFf	3.50	2.42	3.50	3.50	6.20	0.00
189.50	189.50	64.73	3.88	4.386	1.25	4-FFf	3.50	2.49	3.50	3.50	6.57	0.00
200.00	200.00	64.85	4.05	4.512	1.29	4-FFf	3.50	2.56	3.50	3.50	6.93	0.00
210.50	210.50	64.98	4.23	4.645	1.33	4-FFf	3.50	2.62	3.50	3.50	7.29	0.00
221.00	221.00	65.12	4.43	4.784	1.37	4-FFf	3.50	2.69	3.50	3.50	7.66	0.00
231.50	231.50	65.27	4.63	4.931	1.41	4-FFf	3.50	2.75	3.50	3.50	8.02	0.00
242.00	242.00	65.42	4.84	5.084	1.45	4-FFf	3.50	2.80	3.50	3.50	8.38	0.00
374.00	346.11	67.78	7.44	6.969	2.12	4-FFf	3.50	3.21	3.50	3.50	11.99	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 60.34 ft
Outlet Station: 90.65 ft
Outlet Elevation: 60.12 ft
Number of Barrels: 3

Culvert Data Summary - Existing

Barrel Shape: Circular
Barrel Diameter: 3.50 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: Beveled Edge (1:1) (Ke=0.2)
Inlet Depression: None

Table 6 - Downstream Channel Rating Curve (crossing: 4201+67.22)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
137.00	63.62	3.50
147.50	63.62	3.50
158.00	63.62	3.50
166.00	63.62	3.50
179.00	63.62	3.50
189.50	63.62	3.50
200.00	63.62	3.50
210.50	63.62	3.50
221.00	63.62	3.50
231.50	63.62	3.50
242.00	63.62	3.50

Tailwater Channel Data for Crossing: 4201+67.22

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 63.62 ft

Roadway Data for crossing: 4201+67.22

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 67.57 ft
Roadway Surface: Paved
Roadway Top Width: 34.13 ft

Crossing 4297+11.54

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 199.00 cfs
Design Flow: 242.00 cfs
Maximum Flow: 354.00 cfs

Table 7 - Summary of Culvert Flows at crossing: 4297+11.54

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
64.32	199.00	199.00	0.00	1
64.43	214.50	214.50	0.00	1
64.55	230.00	230.00	0.00	1
64.66	242.00	242.00	0.00	1
64.82	261.00	261.00	0.00	1
64.97	276.50	276.50	0.00	1
65.12	292.00	292.00	0.00	1
65.28	307.50	307.50	0.00	1
65.45	323.00	323.00	0.00	1
65.62	338.50	338.50	0.00	1
65.82	354.00	354.00	0.00	1
67.53	440.04	440.04	0.00	Overtopping

Rating Curve Plot for crossing: 4297+11.54

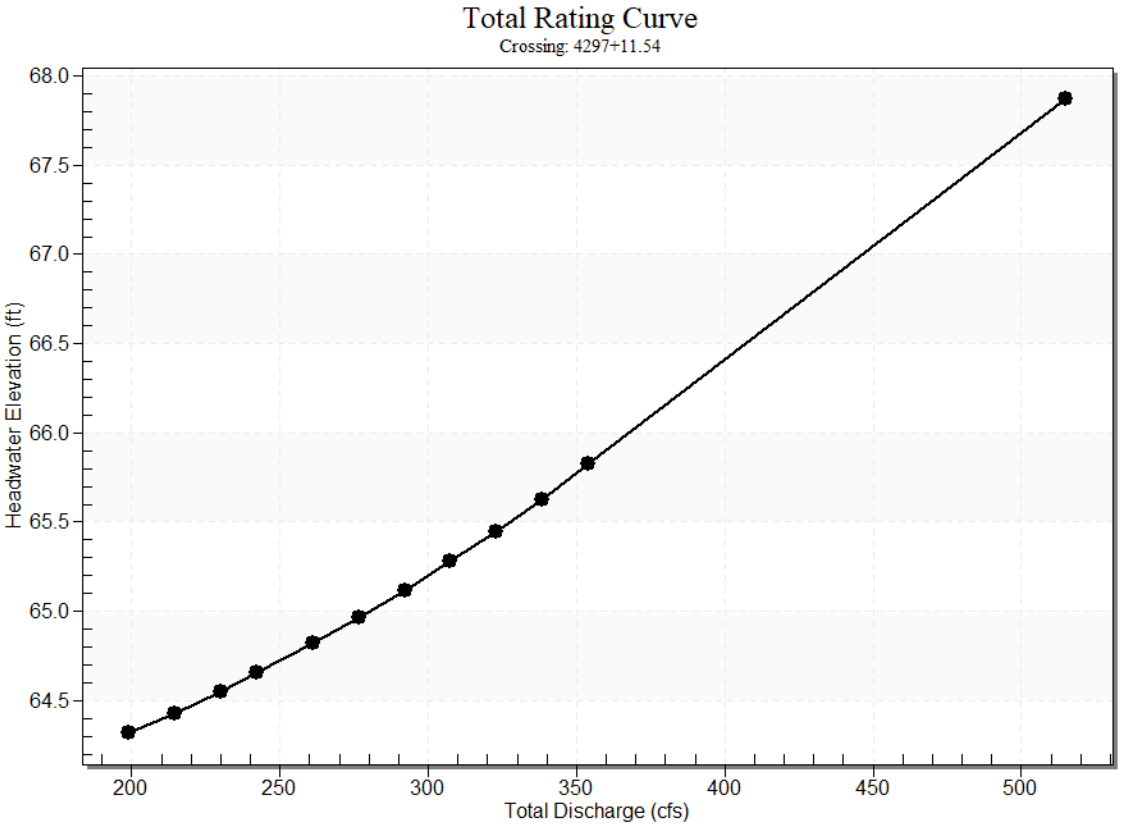
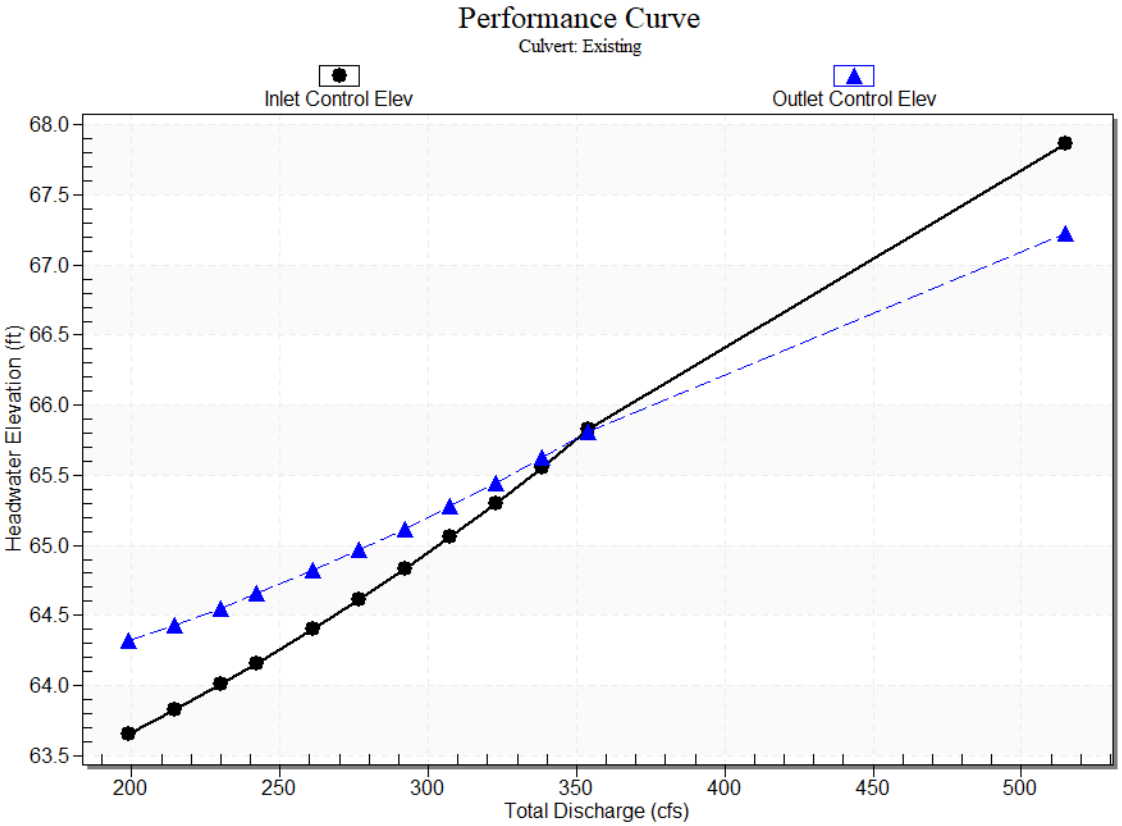


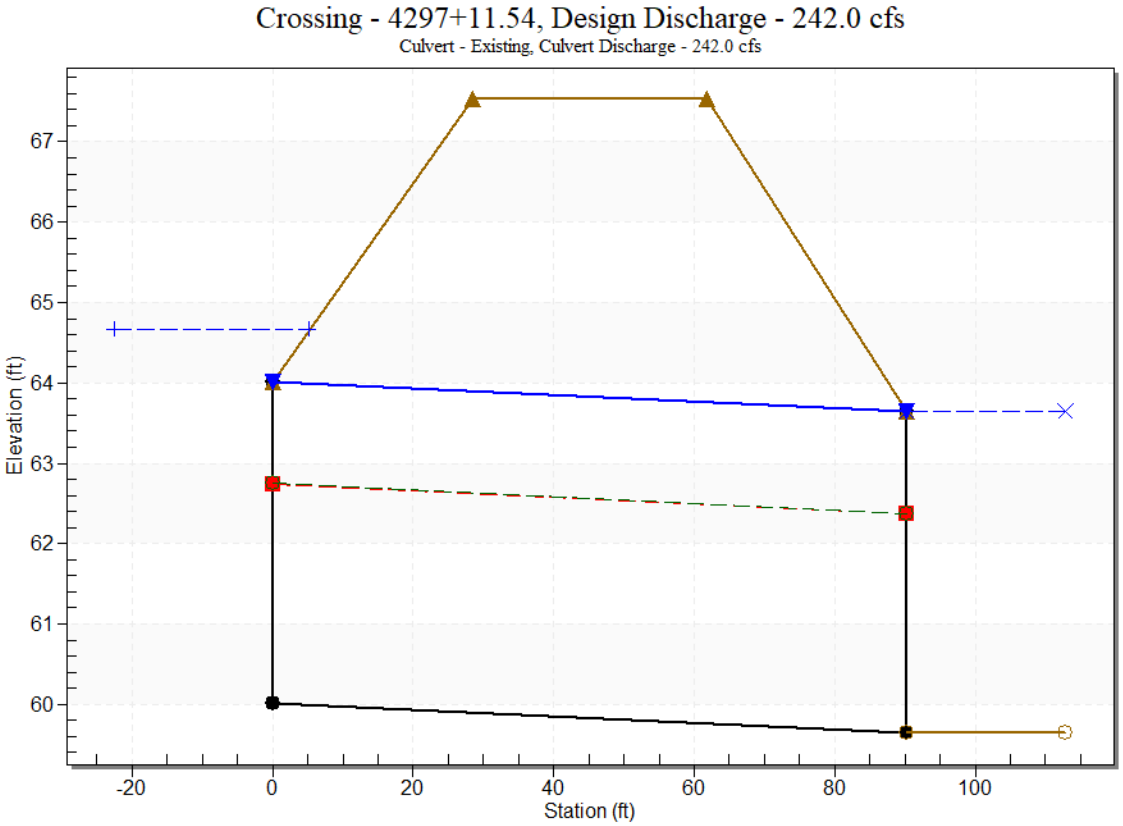
Table 8 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
199.00	199.00	64.32	3.63	4.301	1.08	1-S1f	2.38	2.46	4.00	4.00	5.28	0.00
214.50	214.50	64.43	3.81	4.409	1.10	1-S1f	2.50	2.56	4.00	4.00	5.69	0.00
230.00	230.00	64.55	3.99	4.526	1.13	1-S1f	2.63	2.65	4.00	4.00	6.10	0.00
242.00	242.00	64.66	4.14	4.639	1.16	4-FFf	2.73	2.72	4.00	4.00	6.42	0.00
261.00	261.00	64.82	4.38	4.804	1.20	4-FFf	2.89	2.83	4.00	4.00	6.92	0.00
276.50	276.50	64.97	4.59	4.947	1.24	4-FFf	3.03	2.91	4.00	4.00	7.33	0.00
292.00	292.00	65.12	4.81	5.099	1.27	4-FFf	3.19	2.99	4.00	4.00	7.75	0.00
307.50	307.50	65.28	5.04	5.259	1.31	4-FFf	3.39	3.07	4.00	4.00	8.16	0.00
323.00	323.00	65.45	5.28	5.428	1.36	4-FFf	4.00	3.14	4.00	4.00	8.57	0.00
338.50	338.50	65.62	5.54	5.604	1.40	4-FFf	4.00	3.21	4.00	4.00	8.98	0.00
354.00	354.00	65.82	5.80	5.789	1.45	4-FFf	4.00	3.27	4.00	4.00	9.39	0.00
514.91	455.35	67.87	7.85	7.203	1.96	4-FFf	4.00	3.61	4.00	4.00	12.08	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 60.02 ft
Outlet Station: 90.32 ft
Outlet Elevation: 59.65 ft
Number of Barrels: 3

Culvert Data Summary - Existing

Barrel Shape: Circular
Barrel Diameter: 4.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: Beveled Edge (1:1) (Ke=0.2)
Inlet Depression: None

Table 9 - Downstream Channel Rating Curve (crossing: 4297+11.54)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
199.00	63.65	4.00
214.50	63.65	4.00
230.00	63.65	4.00
242.00	63.65	4.00
261.00	63.65	4.00
276.50	63.65	4.00
292.00	63.65	4.00
307.50	63.65	4.00
323.00	63.65	4.00
338.50	63.65	4.00
354.00	63.65	4.00

Tailwater Channel Data for Crossing: 4297+11.54

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 63.65 ft

Roadway Data for crossing: 4297+11.54

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 67.53 ft
Roadway Surface: Paved
Roadway Top Width: 33.47 ft

Crossing 4384+54.40

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 246.00 cfs
Design Flow: 299.00 cfs
Maximum Flow: 437.00 cfs

Table 10 - Summary of Culvert Flows at crossing: 4384+54.40

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
71.28	246.00	246.00	0.00	1
71.33	265.10	265.10	0.00	1
71.27	284.20	284.20	0.00	1
71.29	299.00	299.00	0.00	1
71.34	322.40	322.40	0.00	1
71.38	341.50	341.50	0.00	1
71.42	360.60	360.60	0.00	1
71.46	379.70	379.70	0.00	1
71.51	398.80	398.80	0.00	1
71.56	417.90	417.90	0.00	1
71.61	437.00	437.00	0.00	1
73.27	855.67	855.67	0.00	Overtopping

Rating Curve Plot for crossing: 4384+54.40

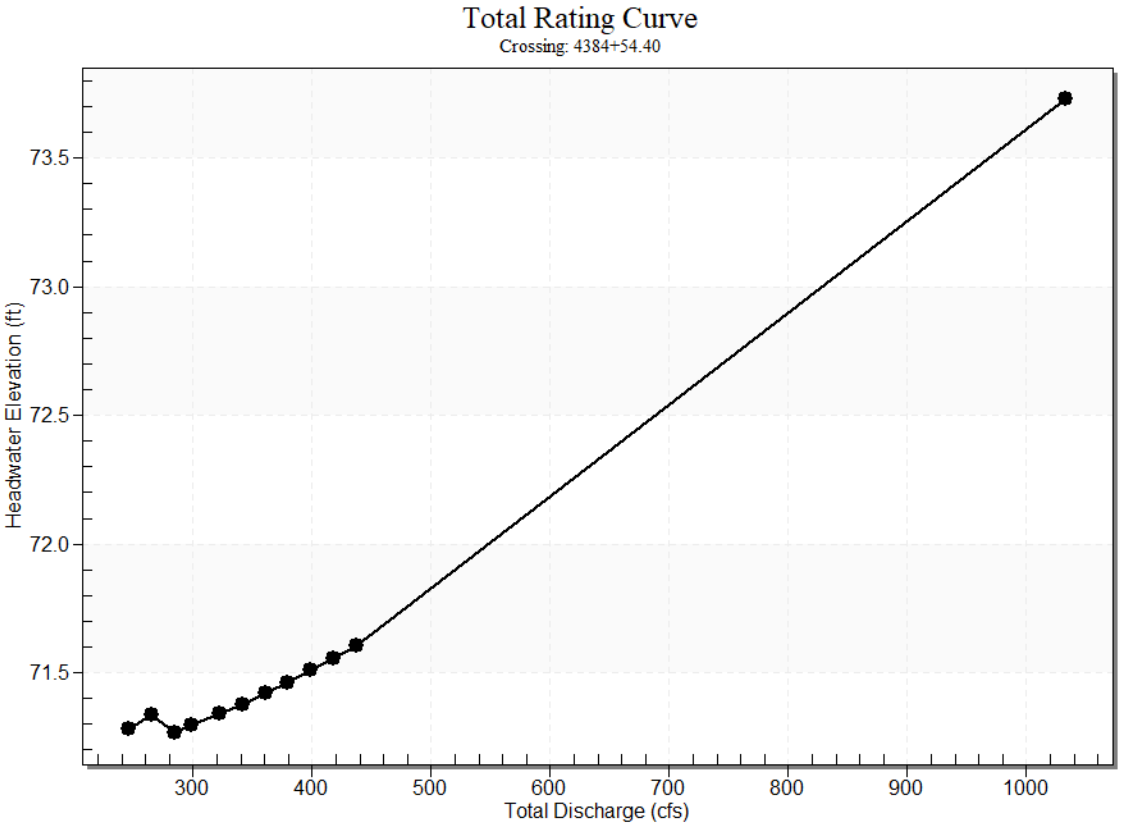
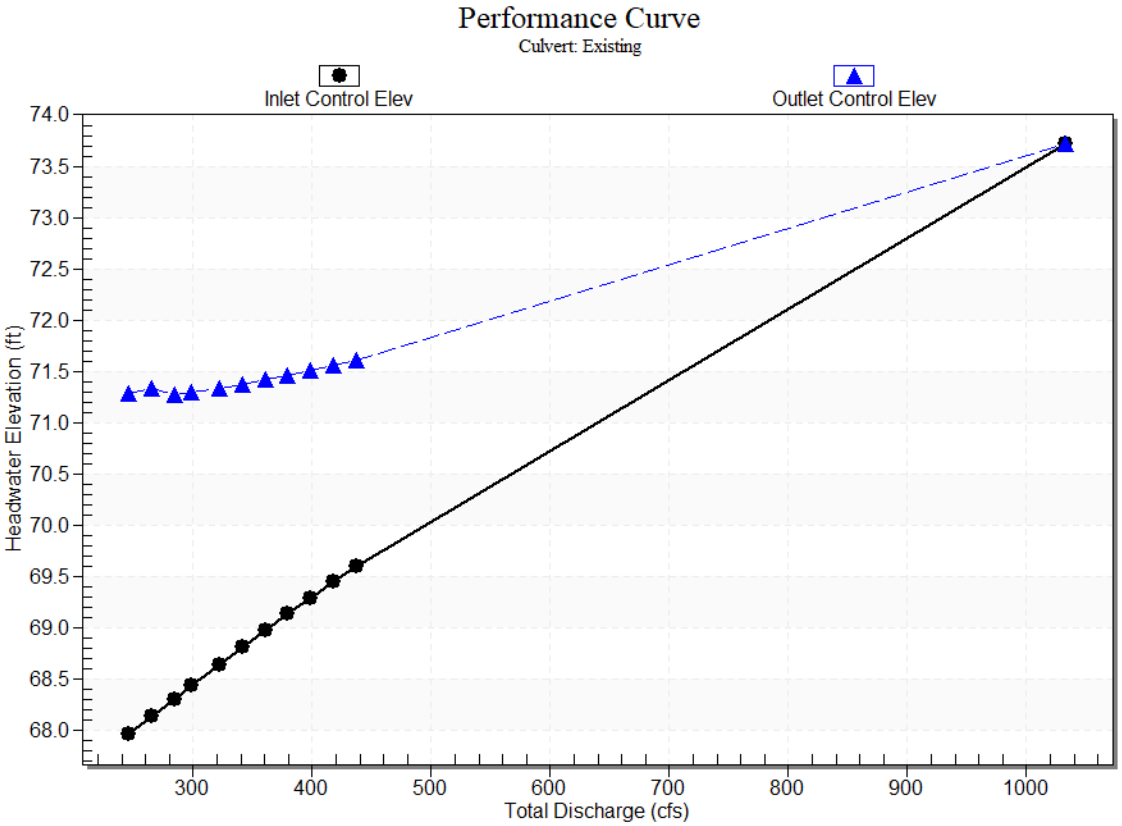


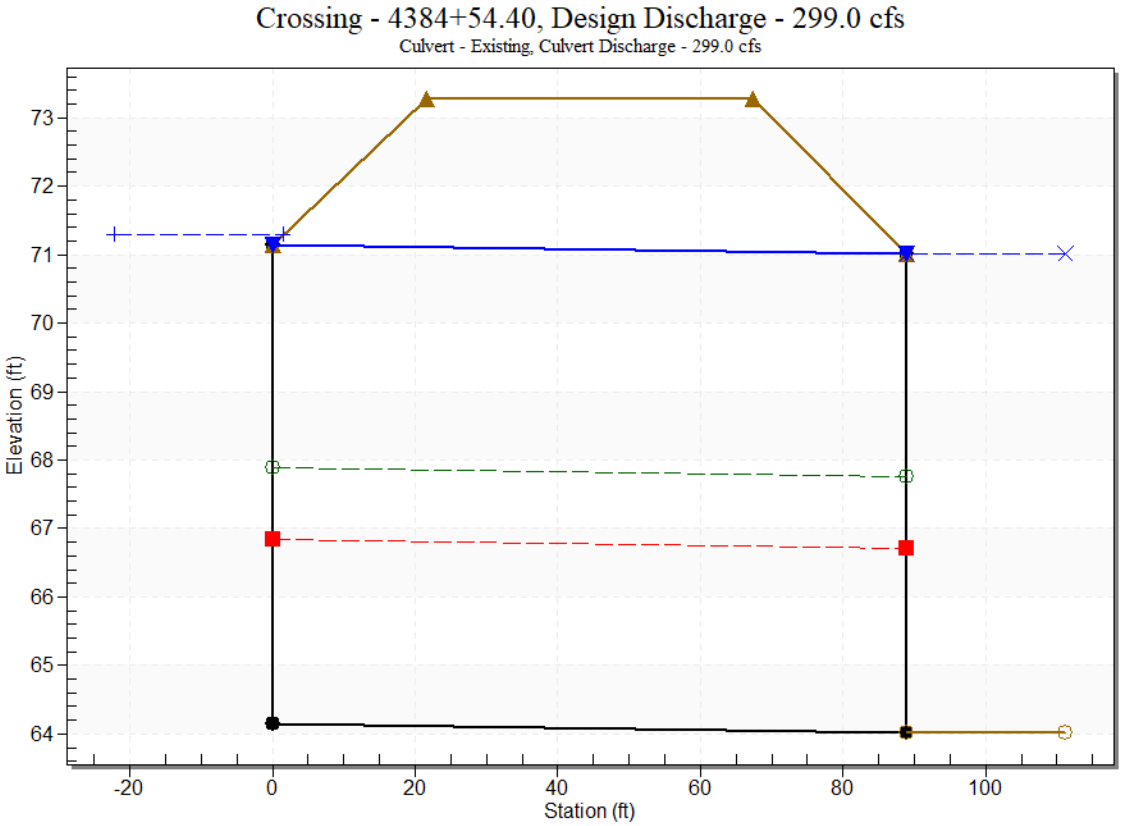
Table 11 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
246.00	246.00	71.28	3.80	7.134	1.02	3-M1f	3.22	2.35	7.00	7.00	2.93	0.00
265.10	265.10	71.33	3.98	7.185	1.03	3-M1f	3.41	2.47	7.00	7.00	3.16	0.00
284.20	284.20	71.27	4.15	7.118	1.02	4-FFf	3.60	2.59	7.00	7.00	3.38	0.00
299.00	299.00	71.29	4.28	7.145	1.02	4-FFf	3.74	2.68	7.00	7.00	3.56	0.00
322.40	322.40	71.34	4.49	7.189	1.03	4-FFf	3.97	2.82	7.00	7.00	3.84	0.00
341.50	341.50	71.38	4.65	7.228	1.03	4-FFf	4.15	2.93	7.00	7.00	4.07	0.00
360.60	360.60	71.42	4.82	7.270	1.04	4-FFf	4.33	3.04	7.00	7.00	4.29	0.00
379.70	379.70	71.46	4.98	7.313	1.04	4-FFf	4.51	3.14	7.00	7.00	4.52	0.00
398.80	398.80	71.51	5.14	7.359	1.05	4-FFf	4.69	3.25	7.00	7.00	4.75	0.00
417.90	417.90	71.56	5.29	7.407	1.06	4-FFf	4.86	3.35	7.00	7.00	4.97	0.00
437.00	437.00	71.61	5.45	7.457	1.07	4-FFf	5.04	3.45	7.00	7.00	5.20	0.00
1032.91	938.90	73.73	9.57	9.578	1.37	4-FFf	7.00	5.75	7.00	7.00	11.18	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 64.15 ft
Outlet Station: 89.00 ft
Outlet Elevation: 64.02 ft
Number of Barrels: 2

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 6.00 ft
Barrel Rise: 7.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 12 - Downstream Channel Rating Curve (crossing: 4384+54.40)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
246.00	71.02	7.00
265.10	71.02	7.00
284.20	71.02	7.00
299.00	71.02	7.00
322.40	71.02	7.00
341.50	71.02	7.00
360.60	71.02	7.00
379.70	71.02	7.00
398.80	71.02	7.00
417.90	71.02	7.00
437.00	71.02	7.00

Tailwater Channel Data for Crossing: 4384+54.40

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 71.02 ft

Roadway Data for crossing: 4384+54.40

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 73.27 ft
Roadway Surface: Paved
Roadway Top Width: 45.84 ft

Crossing 4572+61.46

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 193.99 cfs
Design Flow: 256.60 cfs
Maximum Flow: 439.52 cfs

Table 13 - Summary of Culvert Flows at crossing: 4572+61.46

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
78.85	193.99	193.99	0.00	1
78.94	218.54	218.54	0.00	1
79.05	243.10	243.10	0.00	1
79.11	256.60	256.60	0.00	1
79.29	292.20	292.20	0.00	1
79.43	316.75	316.75	0.00	1
79.58	341.31	341.31	0.00	1
79.74	365.86	364.50	1.17	9
79.83	390.41	378.19	12.16	7
79.91	414.97	389.00	25.91	6
79.98	439.52	398.48	40.91	5
79.71	360.74	360.74	0.00	Overtopping

Rating Curve Plot for crossing: 4572+61.46

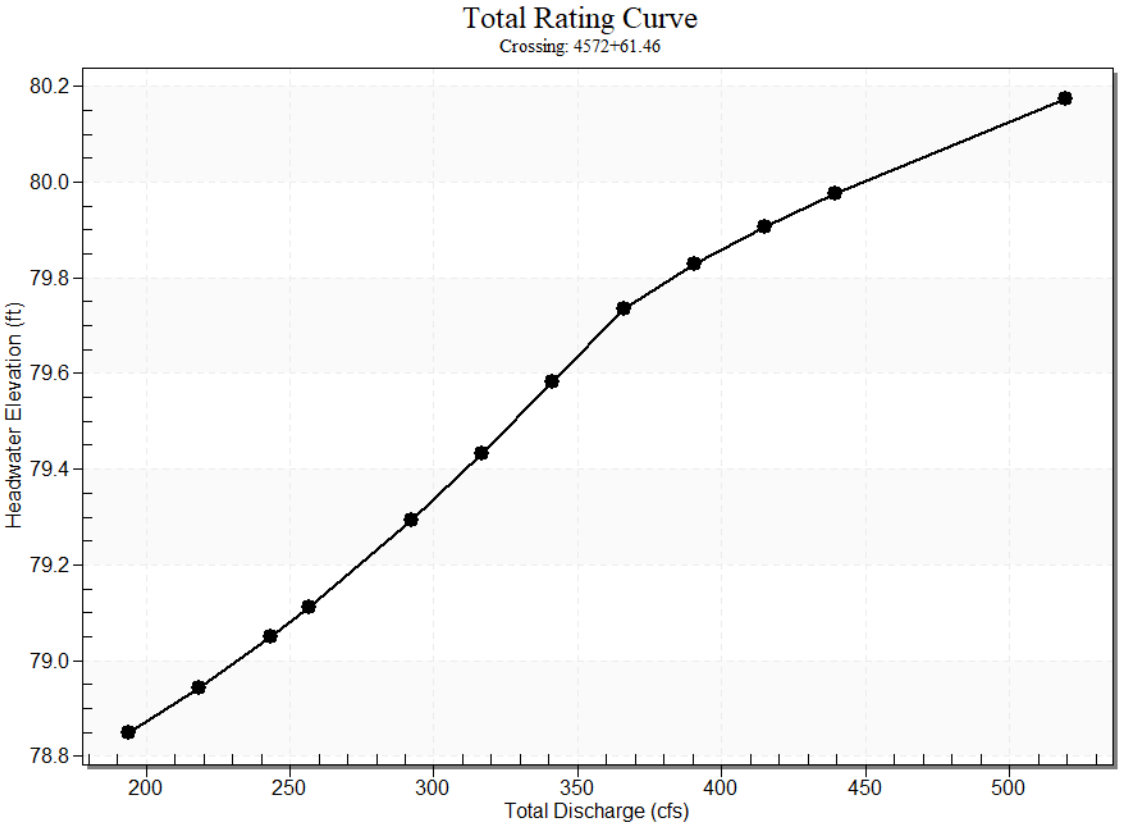
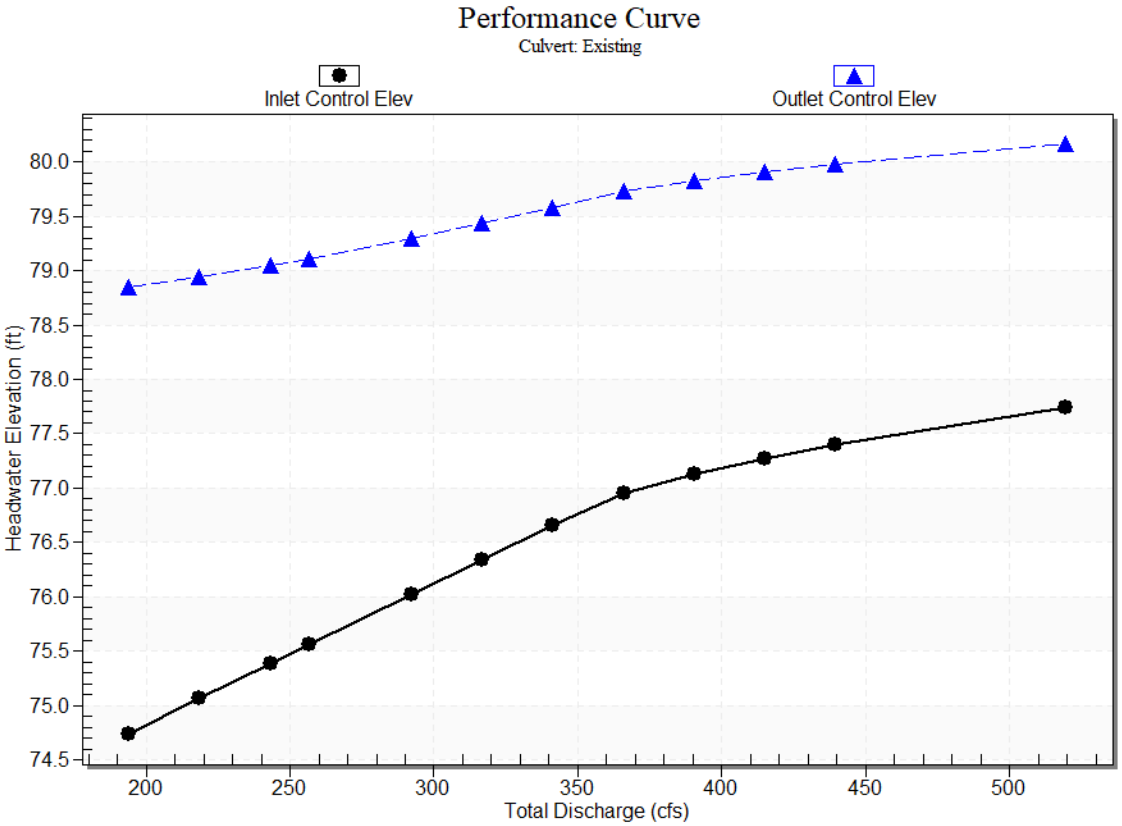


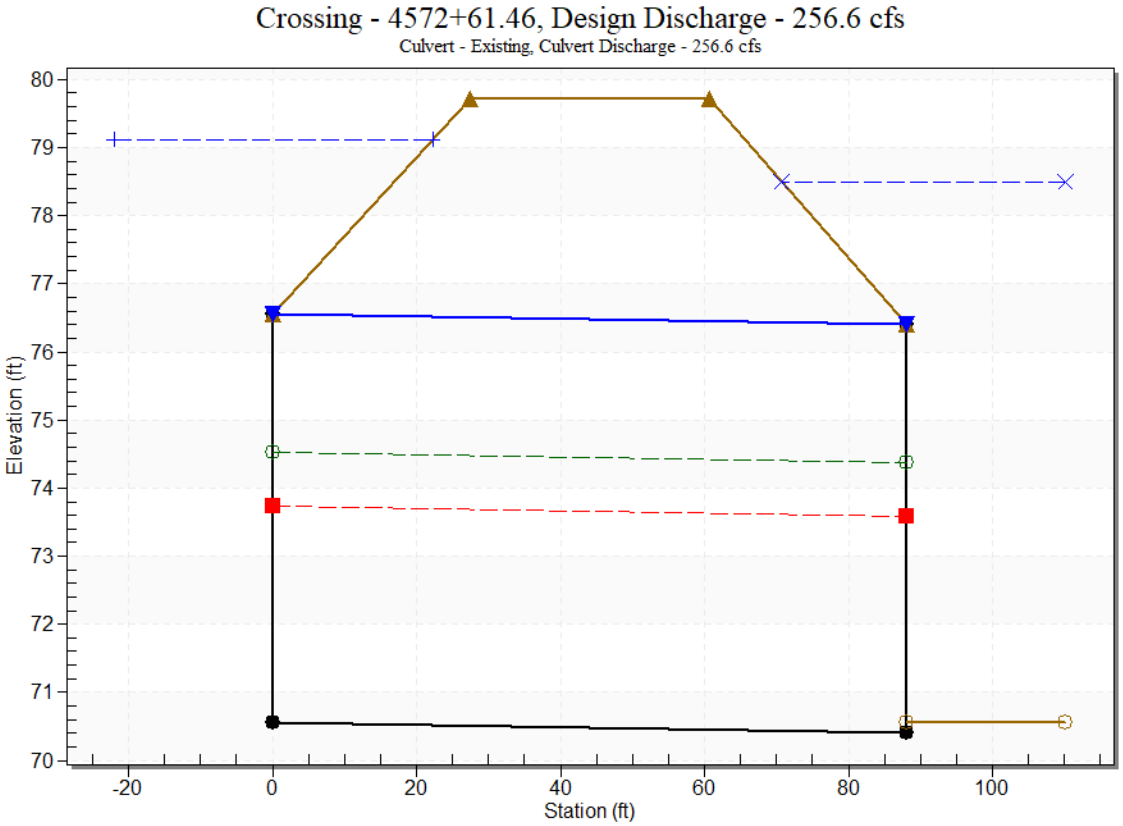
Table 14 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
193.99	193.99	78.85	4.17	8.290	1.38	4-FFf	3.22	2.63	6.00	7.94	4.04	0.00
218.54	218.54	78.94	4.50	8.384	1.40	4-FFf	3.51	2.85	6.00	7.94	4.55	0.00
243.10	243.10	79.05	4.83	8.489	1.41	4-FFf	3.80	3.06	6.00	7.94	5.06	0.00
256.60	256.60	79.11	5.00	8.552	1.43	4-FFf	3.96	3.17	6.00	7.94	5.35	0.00
292.20	292.20	79.29	5.46	8.734	1.46	4-FFf	4.37	3.46	6.00	7.94	6.09	0.00
316.75	316.75	79.43	5.78	8.873	1.48	4-FFf	4.64	3.65	6.00	7.94	6.60	0.00
341.31	341.31	79.58	6.09	9.023	1.50	4-FFf	4.92	3.84	6.00	7.94	7.11	0.00
365.86	364.50	79.74	6.39	9.175	1.53	4-FFf	5.17	4.01	6.00	7.94	7.59	0.00
390.41	378.19	79.83	6.57	9.270	1.54	4-FFf	5.32	4.11	6.00	7.94	7.88	0.00
414.97	389.00	79.91	6.71	9.347	1.56	4-FFf	5.44	4.19	6.00	7.94	8.10	0.00
439.52	398.48	79.98	6.84	9.416	1.57	4-FFf	5.55	4.26	6.00	7.94	8.30	0.00
519.43	424.22	80.17	7.18	9.613	1.60	4-FFf	5.83	4.44	6.00	7.94	8.84	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 70.56 ft
Outlet Station: 88.14 ft
Outlet Elevation: 70.41 ft
Number of Barrels: 1

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 8.00 ft
Barrel Rise: 6.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 15 - Downstream Channel Rating Curve (crossing: 4572+61.46)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
193.99	78.50	7.94
218.54	78.50	7.94
243.10	78.50	7.94
256.60	78.50	7.94
292.20	78.50	7.94
316.75	78.50	7.94
341.31	78.50	7.94
365.86	78.50	7.94
390.41	78.50	7.94
414.97	78.50	7.94
439.52	78.50	7.94

Tailwater Channel Data for Crossing: 4572+61.46

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 78.50 ft

Roadway Data for crossing: 4572+61.46

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 79.71 ft
Roadway Surface: Paved
Roadway Top Width: 33.13 ft

Crossing 4595+39.13

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 48.97 cfs
Design Flow: 75.43 cfs
Maximum Flow: 157.62 cfs

Table 16 - Summary of Culvert Flows at crossing: 4595+39.13

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
79.14	48.97	48.97	0.00	1
79.21	59.84	59.84	0.00	1
79.33	75.43	75.43	0.00	1
79.39	81.56	81.56	0.00	1
79.50	92.43	92.43	0.00	1
79.62	103.30	103.30	0.00	1
79.76	114.16	114.16	0.00	1
79.91	125.03	125.03	0.00	1
80.06	135.89	134.86	0.91	13
80.13	146.75	139.06	7.62	7
80.18	157.62	142.21	15.37	6
80.04	133.51	133.51	0.00	Overtopping

Rating Curve Plot for crossing: 4595+39.13

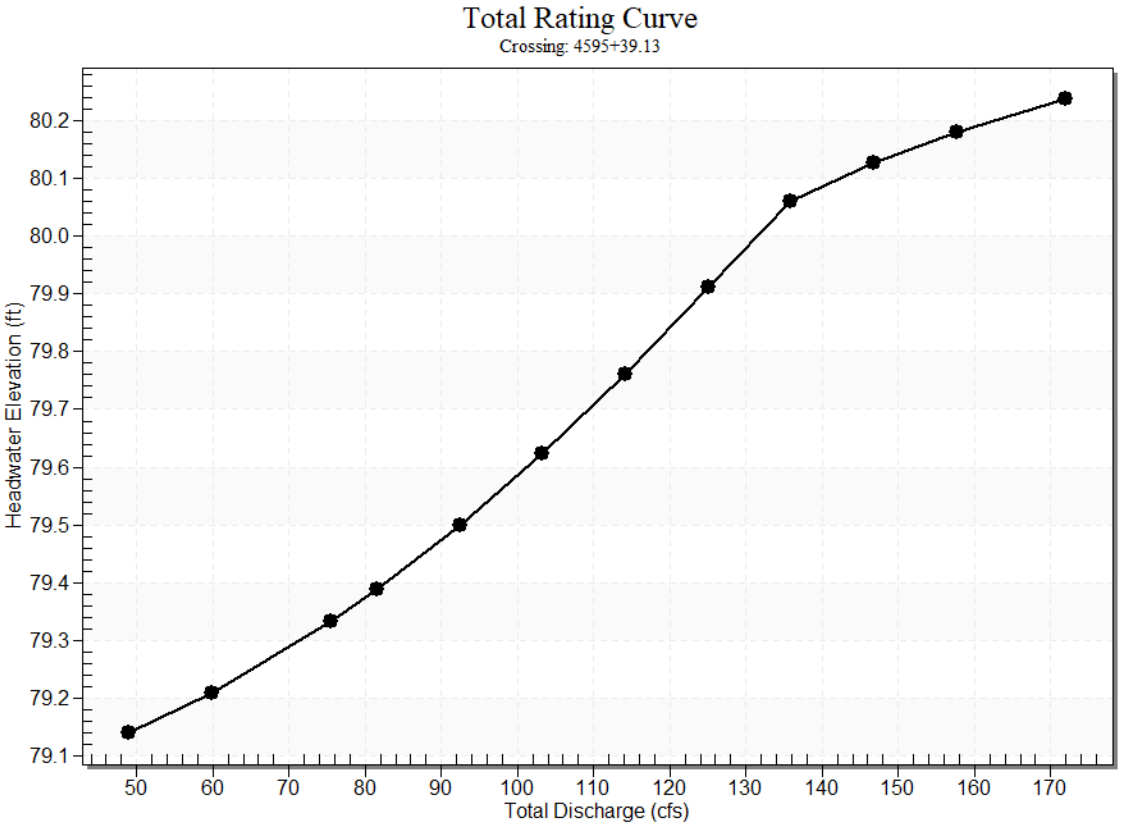
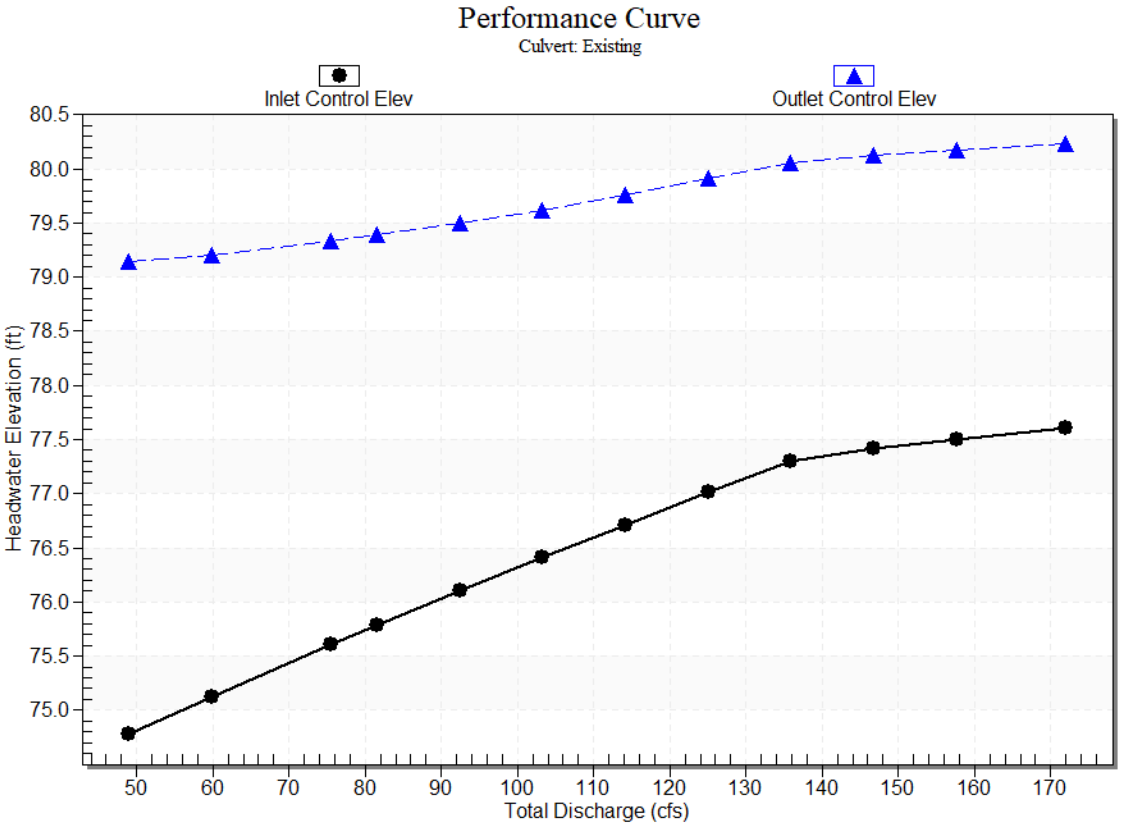


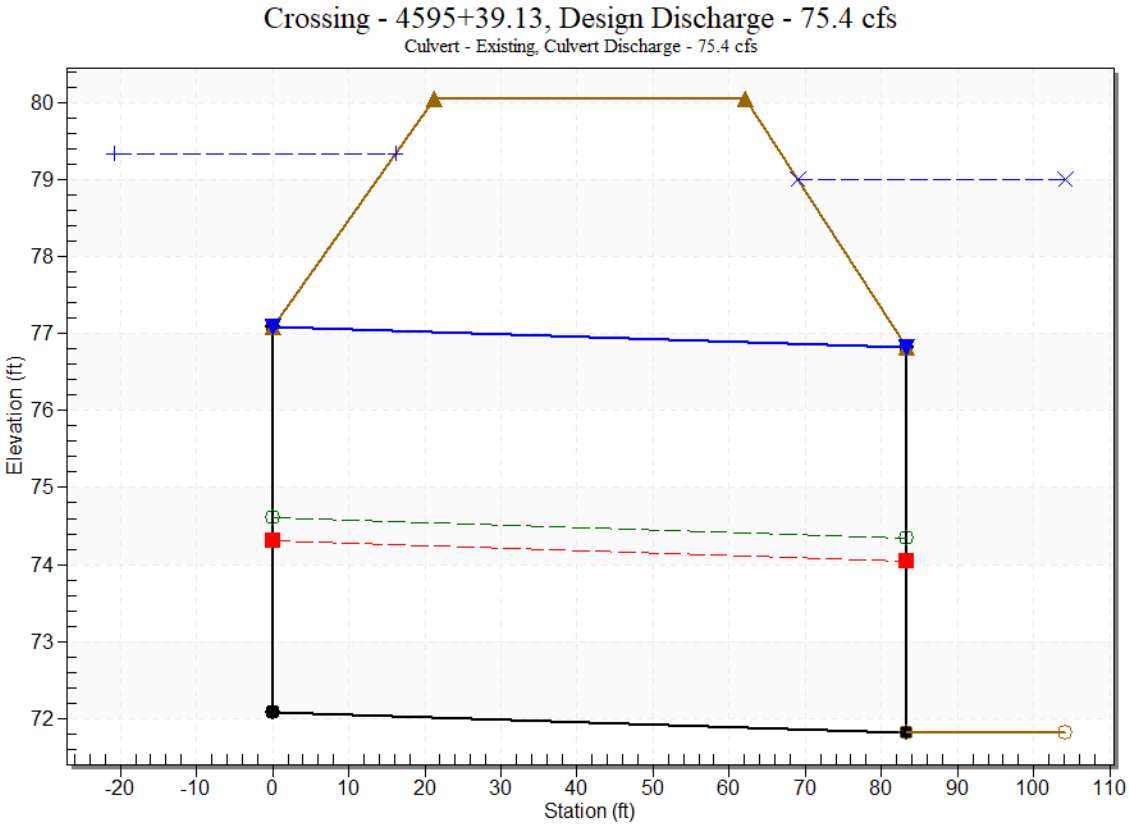
Table 17 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
48.97	48.97	79.14	2.69	7.060	1.41	4-FFf	1.82	1.67	5.00	7.18	2.45	0.00
59.84	59.84	79.21	3.04	7.129	1.43	4-FFf	2.12	1.91	5.00	7.18	2.99	0.00
75.43	75.43	79.33	3.52	7.252	1.45	4-FFf	2.53	2.23	5.00	7.18	3.77	0.00
81.56	81.56	79.39	3.70	7.308	1.46	4-FFf	2.69	2.35	5.00	7.18	4.08	0.00
92.43	92.43	79.50	4.02	7.418	1.48	4-FFf	2.96	2.55	5.00	7.18	4.62	0.00
103.30	103.30	79.62	4.33	7.542	1.51	4-FFf	3.24	2.75	5.00	7.18	5.16	0.00
114.16	114.16	79.76	4.63	7.680	1.54	4-FFf	3.51	2.94	5.00	7.18	5.71	0.00
125.03	125.03	79.91	4.94	7.832	1.57	4-FFf	3.77	3.12	5.00	7.18	6.25	0.00
135.89	134.86	80.06	5.22	7.981	1.60	4-FFf	4.01	3.28	5.00	7.18	6.74	0.00
146.75	139.06	80.13	5.34	8.048	1.61	4-FFf	4.12	3.35	5.00	7.18	6.95	0.00
157.62	142.21	80.18	5.43	8.100	1.62	4-FFf	4.19	3.40	5.00	7.18	7.11	0.00
171.95	145.68	80.24	5.52	8.158	1.63	4-FFf	4.28	3.45	5.00	7.18	7.28	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 72.08 ft
Outlet Station: 83.38 ft
Outlet Elevation: 71.82 ft
Number of Barrels: 1

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 4.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 18 - Downstream Channel Rating Curve (crossing: 4595+39.13)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
48.97	79.00	7.18
59.84	79.00	7.18
75.43	79.00	7.18
81.56	79.00	7.18
92.43	79.00	7.18
103.30	79.00	7.18
114.16	79.00	7.18
125.03	79.00	7.18
135.89	79.00	7.18
146.75	79.00	7.18
157.62	79.00	7.18

Tailwater Channel Data for Crossing: 4595+39.13

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 79.00 ft

Roadway Data for crossing: 4595+39.13

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 80.04 ft
Roadway Surface: Paved
Roadway Top Width: 40.90 ft

Crossing 4598+11.14

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 125.47 cfs
Design Flow: 180.46 cfs
Maximum Flow: 349.99 cfs

Table 28 - Summary of Culvert Flows at crossing: 4598+11.14

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
79.21	125.47	125.47	0.00	1
79.30	147.92	147.92	0.00	1
79.44	180.46	180.46	0.00	1
79.51	192.83	192.83	0.00	1
79.63	215.28	215.28	0.00	1
79.77	237.73	237.73	0.00	1
79.92	260.18	260.18	0.00	1
80.07	282.63	280.86	1.68	10
80.16	305.09	292.47	12.55	7
80.24	327.54	301.60	25.86	6
80.30	349.99	309.69	40.21	5
80.04	276.65	276.65	0.00	Overtopping

Rating Curve Plot for crossing: 4598+11.14

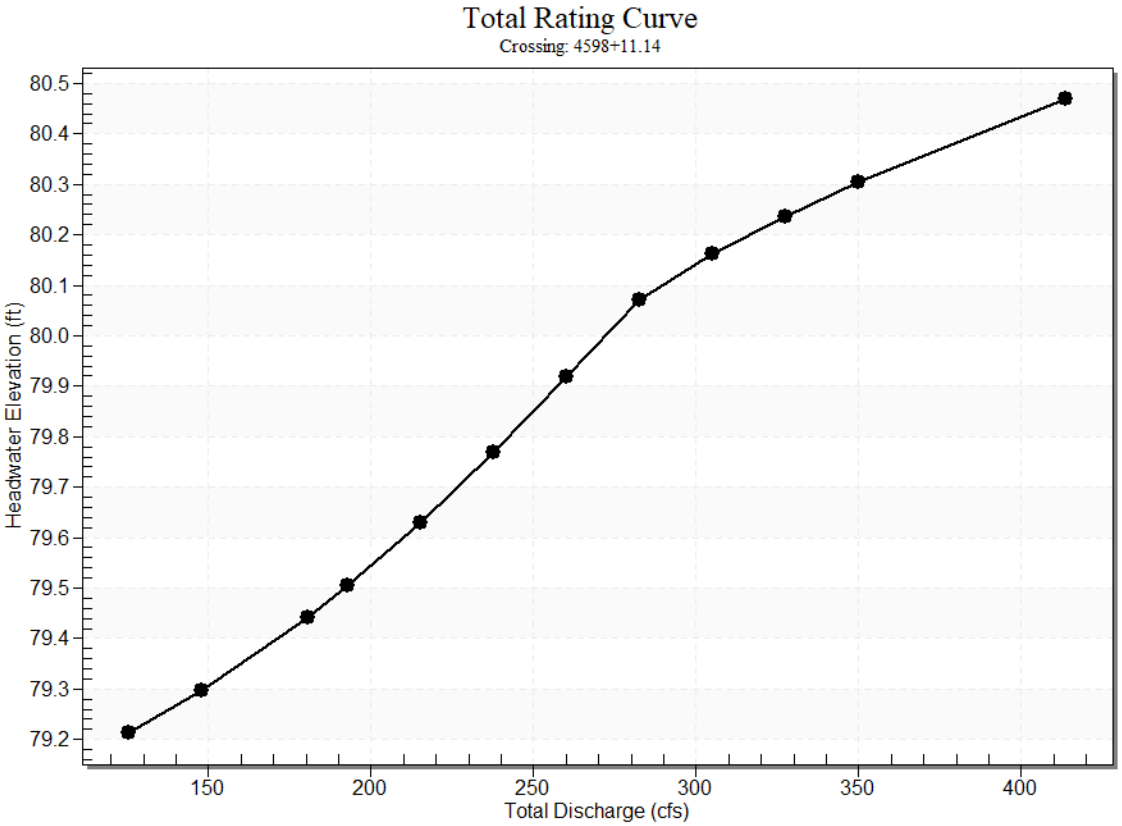
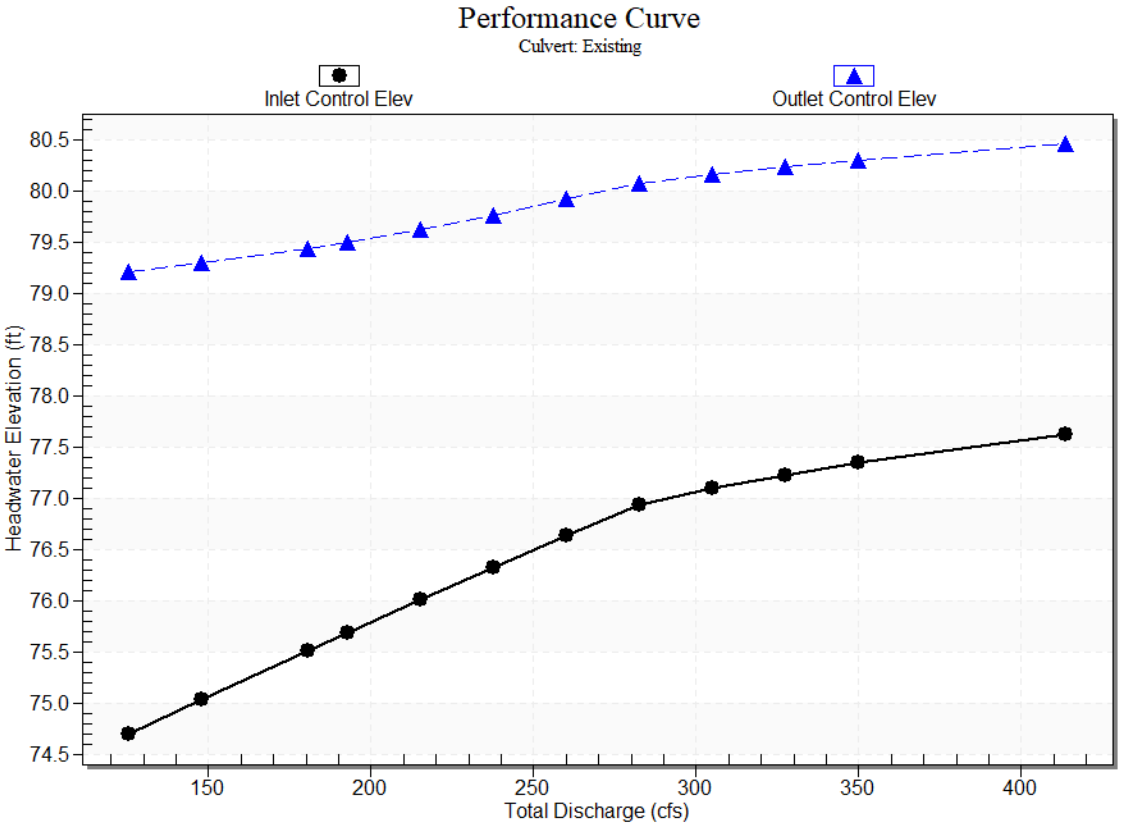


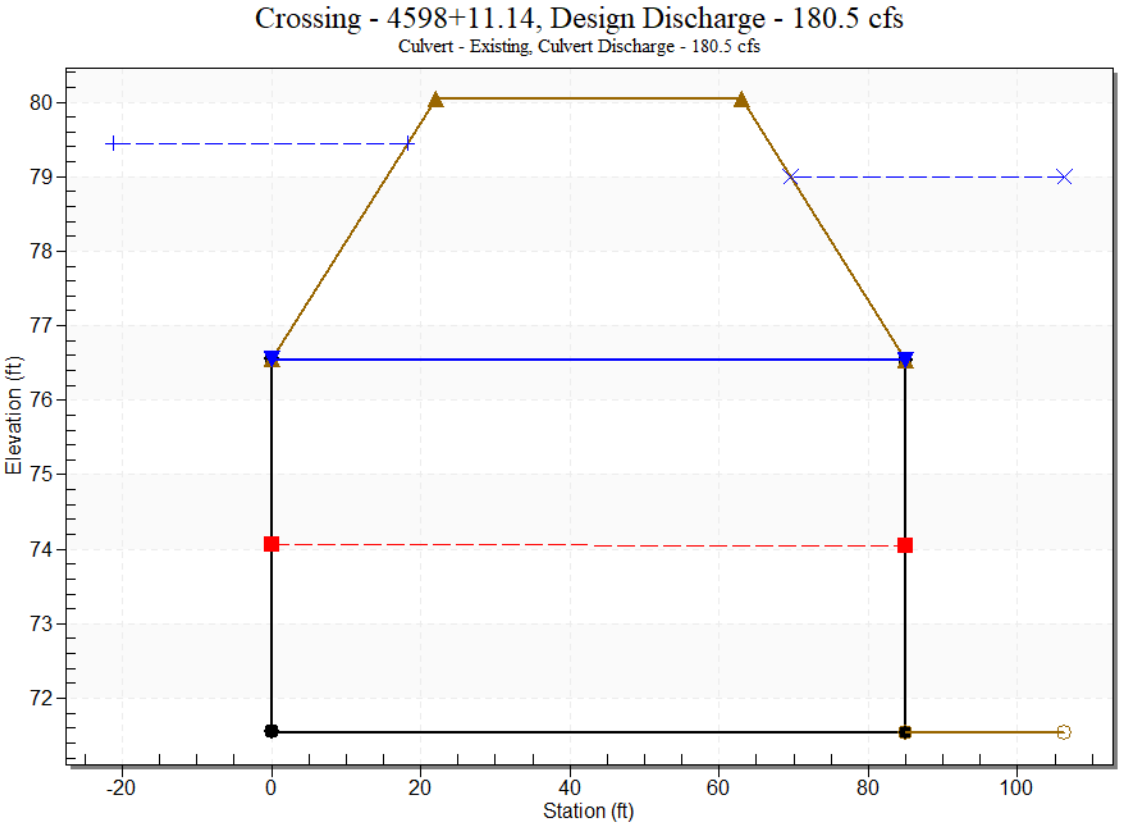
Table 29 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
125.47	125.47	79.21	3.14	7.664	1.53	4-FFf	-1.00	1.97	5.00	7.46	3.14	0.00
147.92	147.92	79.30	3.49	7.747	1.55	4-FFf	-1.00	2.20	5.00	7.46	3.70	0.00
180.46	180.46	79.44	3.96	7.892	1.58	4-FFf	-1.00	2.51	5.00	7.46	4.51	0.00
192.83	192.83	79.51	4.14	7.955	1.59	4-FFf	-1.00	2.62	5.00	7.46	4.82	0.00
215.28	215.28	79.63	4.46	8.080	1.62	4-FFf	-1.00	2.82	5.00	7.46	5.38	0.00
237.73	237.73	79.77	4.77	8.218	1.64	4-FFf	-1.00	3.02	5.00	7.46	5.94	0.00
260.18	260.18	79.92	5.09	8.370	1.67	4-FFf	-1.00	3.20	5.00	7.46	6.50	0.00
282.63	280.86	80.07	5.38	8.522	1.70	4-FFf	-1.00	3.37	5.00	7.46	7.02	0.00
305.09	292.47	80.16	5.55	8.612	1.72	4-FFf	-1.00	3.46	5.00	7.46	7.31	0.00
327.54	301.60	80.24	5.68	8.686	1.74	4-FFf	-1.00	3.53	5.00	7.46	7.54	0.00
349.99	309.69	80.30	5.80	8.753	1.75	4-FFf	-1.00	3.60	5.00	7.46	7.74	0.00
413.62	328.79	80.47	6.08	8.919	1.78	4-FFf	-1.00	3.74	5.00	7.46	8.22	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 71.55 ft
Outlet Station: 85.06 ft
Outlet Elevation: 71.54 ft
Number of Barrels: 1

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 8.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 30 - Downstream Channel Rating Curve (crossing: 4598+11.14)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
125.47	79.00	7.46
147.92	79.00	7.46
180.46	79.00	7.46
192.83	79.00	7.46
215.28	79.00	7.46
237.73	79.00	7.46
260.18	79.00	7.46
282.63	79.00	7.46
305.09	79.00	7.46
327.54	79.00	7.46
349.99	79.00	7.46

Tailwater Channel Data for Crossing: 4598+11.14

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 79.00 ft

Roadway Data for crossing: 4598+11.14

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 80.04 ft
Roadway Surface: Paved
Roadway Top Width: 40.90 ft

Crossing 4629+38.27

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 234.29 cfs
Design Flow: 306.30 cfs
Maximum Flow: 528.61 cfs

Table 19 - Summary of Culvert Flows at crossing: 4629+38.27

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
77.59	234.29	234.29	0.00	1
77.67	263.72	263.72	0.00	1
77.79	306.30	306.30	0.00	1
77.85	322.59	322.59	0.00	1
77.95	352.02	352.02	0.00	1
78.06	381.45	381.45	0.00	1
78.19	410.88	410.88	0.00	1
78.32	440.31	440.31	0.00	1
78.46	469.75	469.75	0.00	1
78.61	499.18	499.18	0.00	1
78.77	528.61	528.61	0.00	1
80.95	789.66	789.66	0.00	Overtopping

Rating Curve Plot for crossing: 4629+38.27

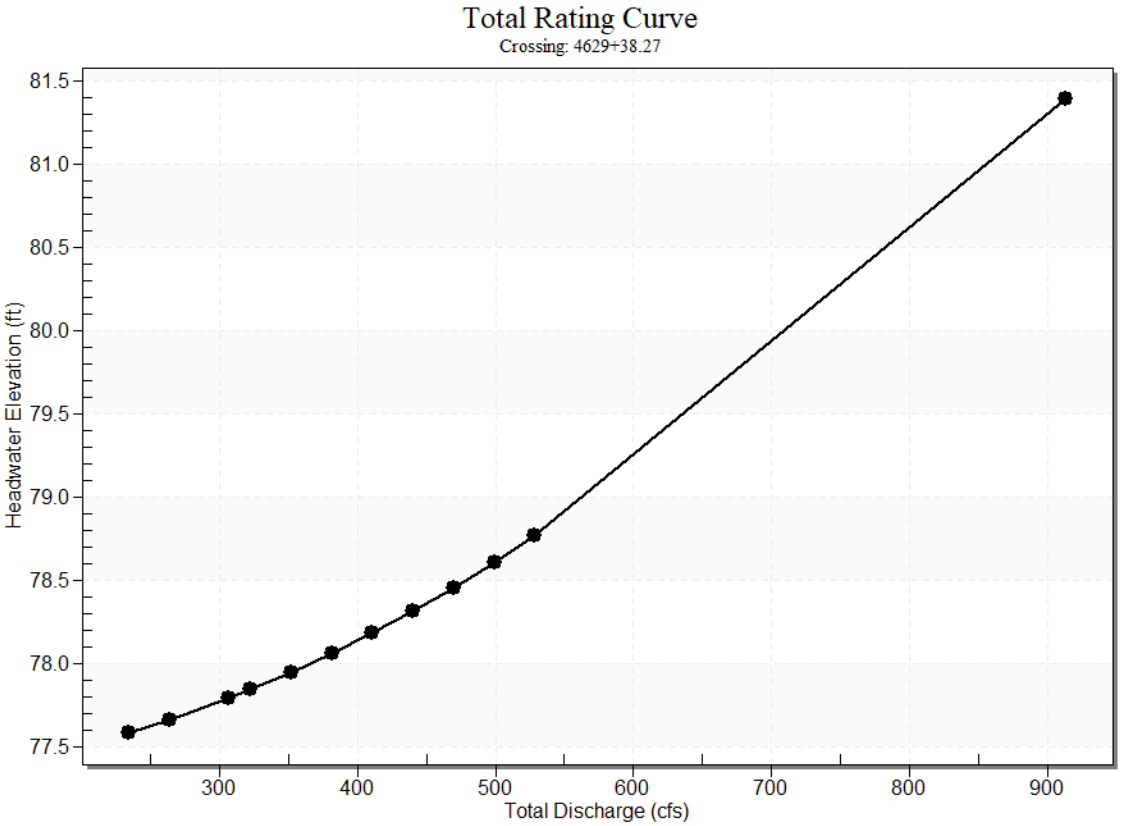
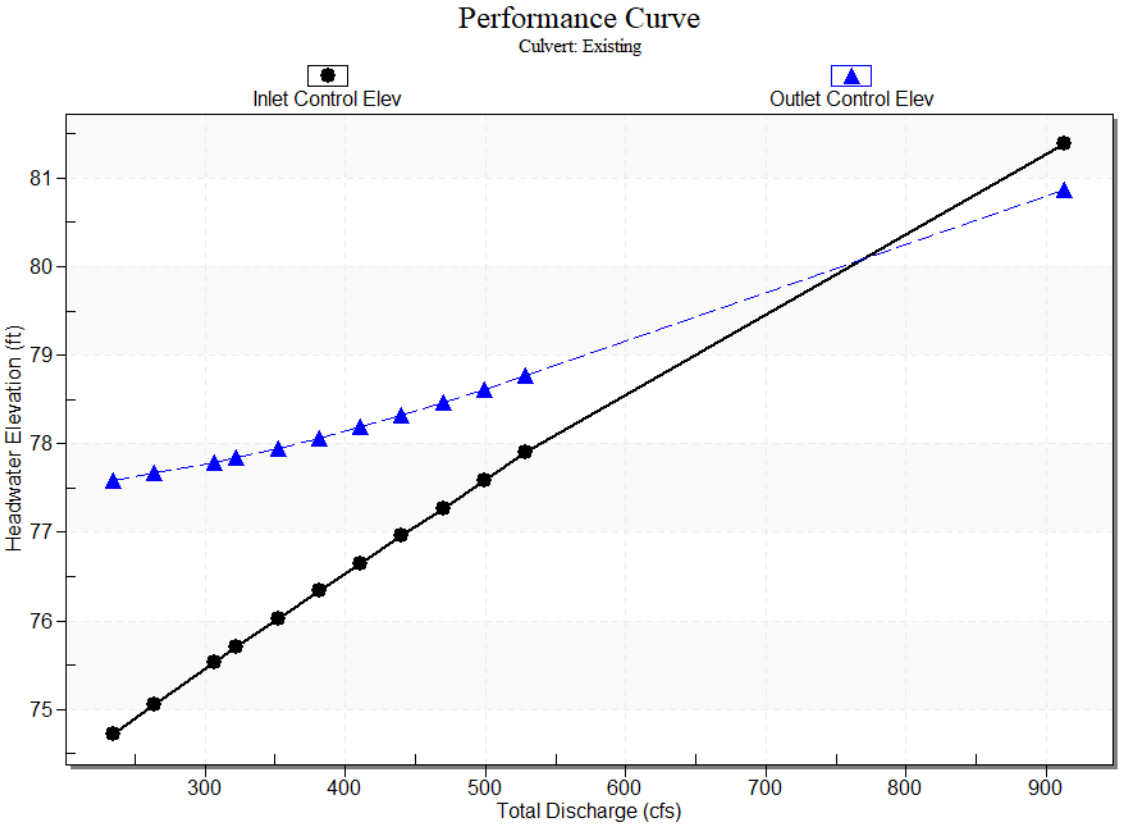


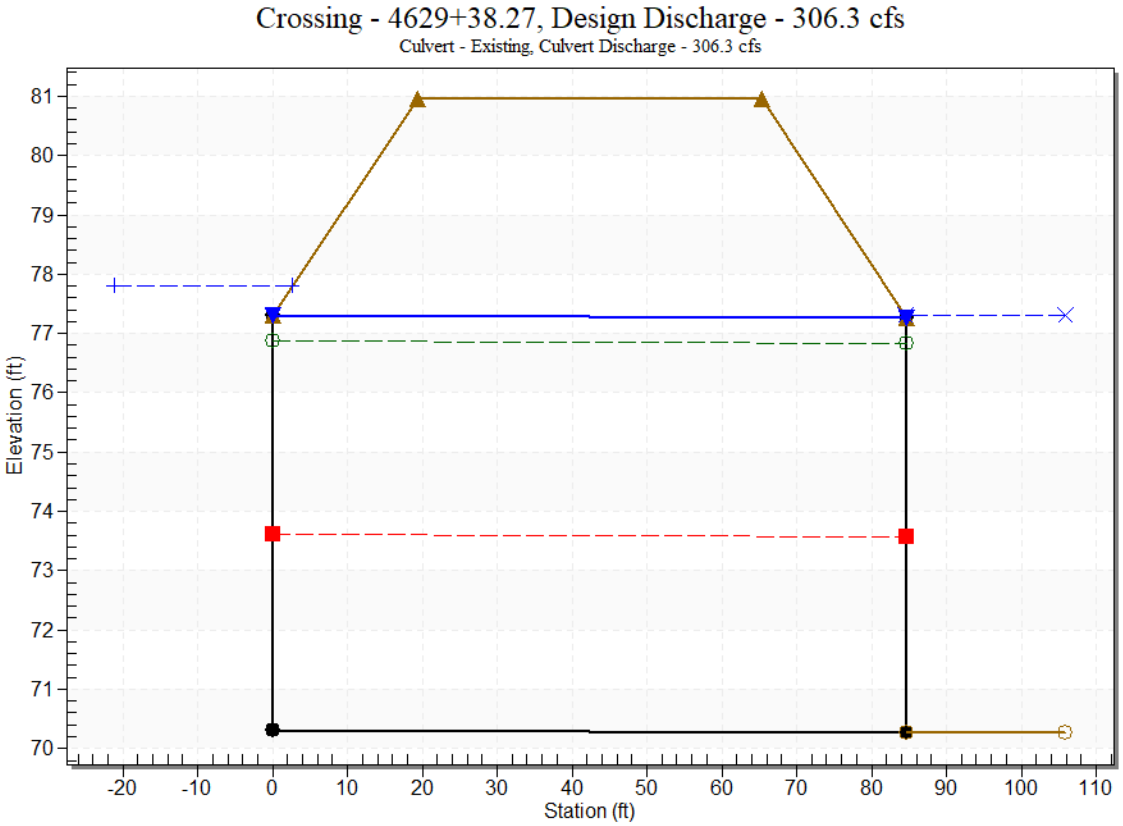
Table 20 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
234.29	234.29	77.59	4.40	7.279	1.04	4-FFf	5.33	2.76	7.00	7.03	3.72	0.00
263.72	263.72	77.67	4.74	7.356	1.05	4-FFf	5.84	2.99	7.00	7.03	4.19	0.00
306.30	306.30	77.79	5.22	7.483	1.07	4-FFf	6.56	3.30	7.00	7.03	4.86	0.00
322.59	322.59	77.85	5.40	7.537	1.08	4-FFf	7.00	3.42	7.00	7.03	5.12	0.00
352.02	352.02	77.95	5.72	7.641	1.09	4-FFf	7.00	3.62	7.00	7.03	5.59	0.00
381.45	381.45	78.06	6.03	7.755	1.11	4-FFf	7.00	3.82	7.00	7.03	6.05	0.00
410.88	410.88	78.19	6.34	7.877	1.13	4-FFf	7.00	4.02	7.00	7.03	6.52	0.00
440.31	440.31	78.32	6.65	8.009	1.14	4-FFf	7.00	4.20	7.00	7.03	6.99	0.00
469.75	469.75	78.46	6.96	8.150	1.16	4-FFf	7.00	4.39	7.00	7.03	7.46	0.00
499.18	499.18	78.61	7.27	8.300	1.19	4-FFf	7.00	4.57	7.00	7.03	7.92	0.00
528.61	528.61	78.77	7.59	8.459	1.21	4-FFf	7.00	4.75	7.00	7.03	8.39	0.00
913.05	823.40	81.39	11.08	10.553	1.58	4-FFf	7.00	6.38	7.00	7.03	13.07	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 70.31 ft
Outlet Station: 84.76 ft
Outlet Elevation: 70.27 ft
Number of Barrels: 1

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 9.00 ft
Barrel Rise: 7.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 21 - Downstream Channel Rating Curve (crossing: 4629+38.27)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
234.29	77.30	7.03
263.72	77.30	7.03
306.30	77.30	7.03
322.59	77.30	7.03
352.02	77.30	7.03
381.45	77.30	7.03
410.88	77.30	7.03
440.31	77.30	7.03
469.75	77.30	7.03
499.18	77.30	7.03
528.61	77.30	7.03

Tailwater Channel Data for Crossing: 4629+38.27

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 77.30 ft

Roadway Data for crossing: 4629+38.27

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 80.95 ft
Roadway Surface: Paved
Roadway Top Width: 46.01 ft

Crossing 4724+09.97

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 61.50 cfs
Design Flow: 95.36 cfs
Maximum Flow: 188.93 cfs

Table 22 - Summary of Culvert Flows at crossing: 4724+09.97

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
82.92	61.50	61.50	0.00	1
82.96	74.24	74.24	0.00	1
83.01	86.99	86.99	0.00	1
83.04	95.36	95.36	0.00	1
83.12	112.47	112.47	0.00	1
83.19	125.22	125.22	0.00	1
83.26	137.96	137.96	0.00	1
83.34	150.70	150.70	0.00	1
83.43	163.44	163.44	0.00	1
83.53	176.19	176.19	0.00	1
83.63	188.93	188.93	0.00	1
86.73	378.56	378.56	0.00	Overtopping

Rating Curve Plot for crossing: 4724+09.97

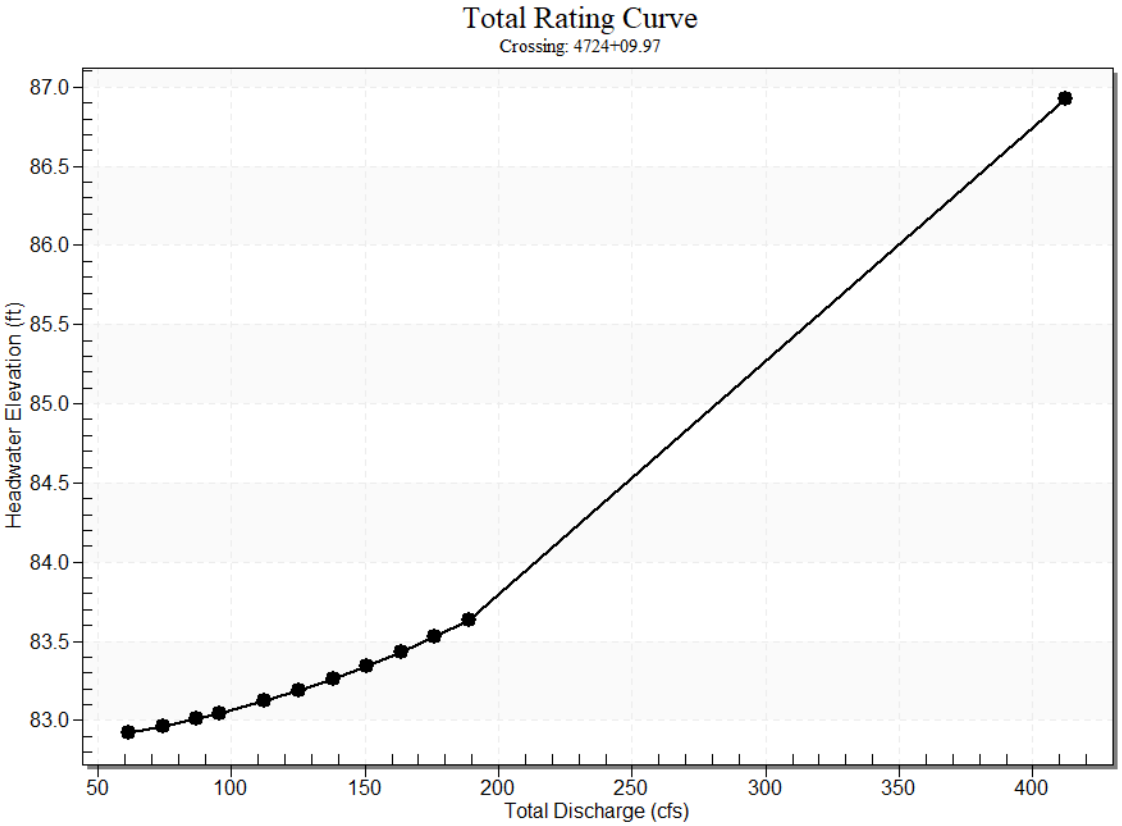
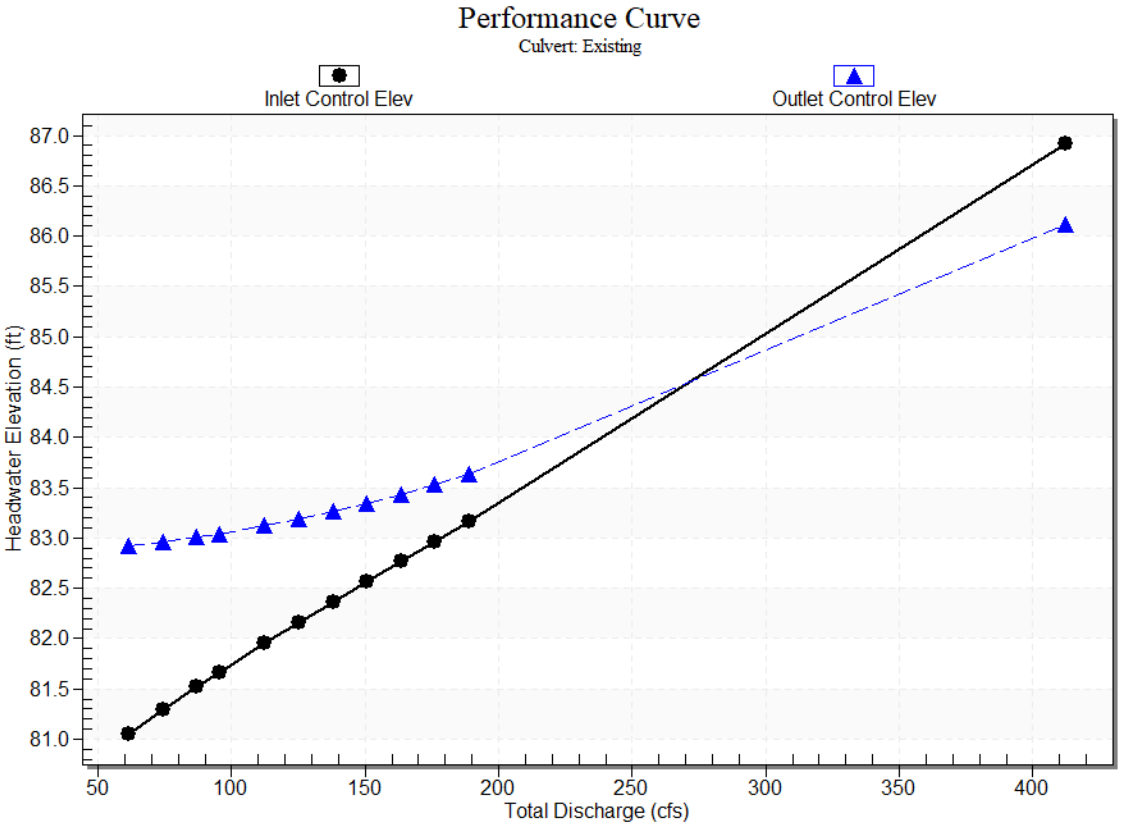


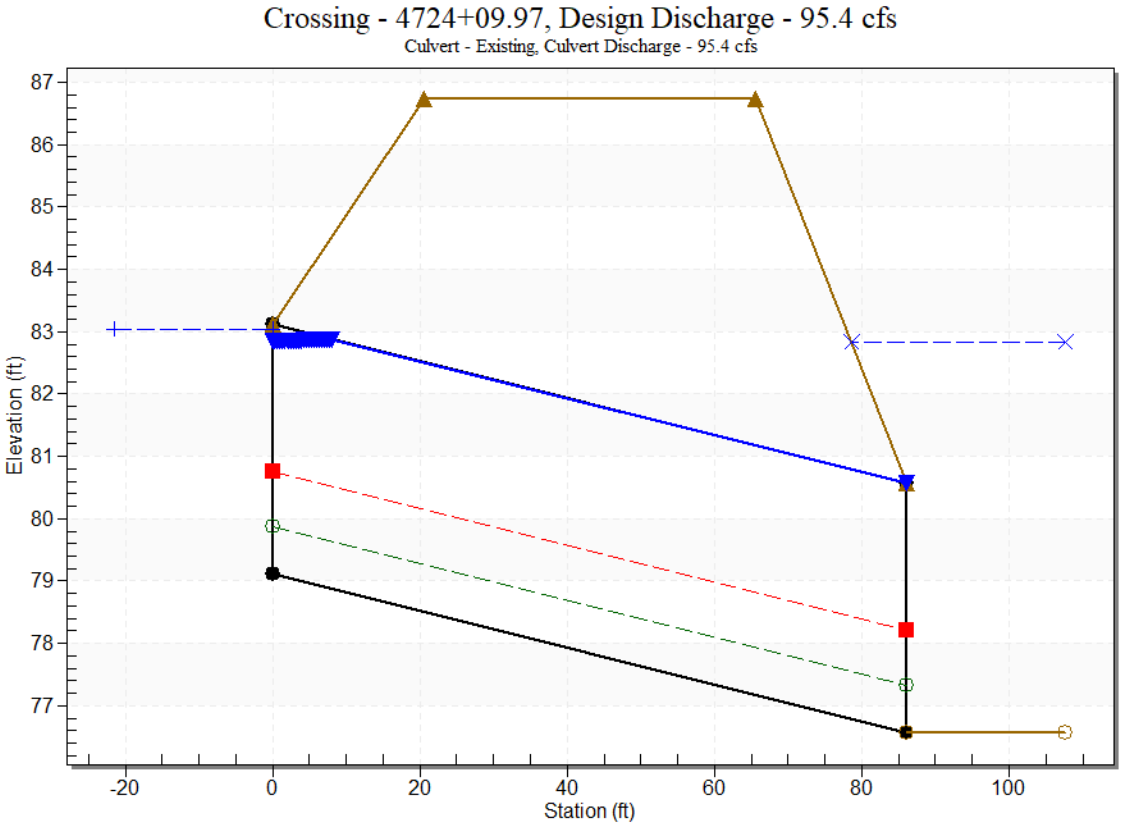
Table 23 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
61.50	61.50	82.92	1.94	3.814	0.95	1-S1f	0.57	1.22	4.00	6.27	1.92	0.00
74.24	74.24	82.96	2.18	3.853	0.96	1-S1f	0.64	1.39	4.00	6.27	2.32	0.00
86.99	86.99	83.01	2.41	3.898	0.97	1-S1f	0.71	1.54	4.00	6.27	2.72	0.00
95.36	95.36	83.04	2.55	3.932	0.98	1-S1f	0.76	1.64	4.00	6.27	2.98	0.00
112.47	112.47	83.12	2.84	4.011	1.00	1-S1f	0.84	1.83	4.00	6.27	3.51	0.00
125.22	125.22	83.19	3.05	4.079	1.02	1-S1f	0.90	1.97	4.00	6.27	3.91	0.00
137.96	137.96	83.26	3.25	4.153	1.04	1-S1f	0.96	2.10	4.00	6.27	4.31	0.00
150.70	150.70	83.34	3.45	4.235	1.06	1-S1f	1.02	2.23	4.00	6.27	4.71	0.00
163.44	163.44	83.43	3.65	4.324	1.08	1-S1f	1.07	2.35	4.00	6.27	5.11	0.00
176.19	176.19	83.53	3.85	4.419	1.10	1-S1f	1.13	2.47	4.00	6.27	5.51	0.00
188.93	188.93	83.63	4.06	4.522	1.13	1-S1f	1.18	2.59	4.00	6.27	5.90	0.00
412.21	386.79	86.92	7.81	7.008	1.95	4-FFf	1.91	4.00	4.00	6.27	12.09	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 79.11 ft
Outlet Station: 86.16 ft
Outlet Elevation: 76.57 ft
Number of Barrels: 1

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 8.00 ft
Barrel Rise: 4.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 24 - Downstream Channel Rating Curve (crossing: 4724+09.97)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
61.50	82.84	6.27
74.24	82.84	6.27
86.99	82.84	6.27
95.36	82.84	6.27
112.47	82.84	6.27
125.22	82.84	6.27
137.96	82.84	6.27
150.70	82.84	6.27
163.44	82.84	6.27
176.19	82.84	6.27
188.93	82.84	6.27

Tailwater Channel Data for Crossing: 4724+09.97

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 82.84 ft

Roadway Data for crossing: 4724+09.97

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 86.73 ft
Roadway Surface: Paved
Roadway Top Width: 45.13 ft

Crossing 4793+50.90

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 234.29 cfs
Design Flow: 316.44 cfs
Maximum Flow: 548.49 cfs

Table 25 - Summary of Culvert Flows at crossing: 4793+50.90

Headwater Elevation (ft)	Total Discharge (cfs)	Existing Discharge (cfs)	Roadway Discharge (cfs)	Iterations
83.25	234.29	234.29	0.00	1
83.38	265.71	265.71	0.00	1
83.46	297.13	297.13	0.00	1
83.51	316.44	316.44	0.00	1
83.46	359.97	359.97	0.00	1
83.52	391.39	391.39	0.00	1
83.59	422.81	422.81	0.00	1
83.66	454.23	454.23	0.00	1
83.74	485.65	485.65	0.00	1
83.82	517.07	517.07	0.00	1
83.91	548.49	548.49	0.00	1
86.72	1052.02	1052.02	0.00	Overtopping

Rating Curve Plot for crossing: 4793+50.90

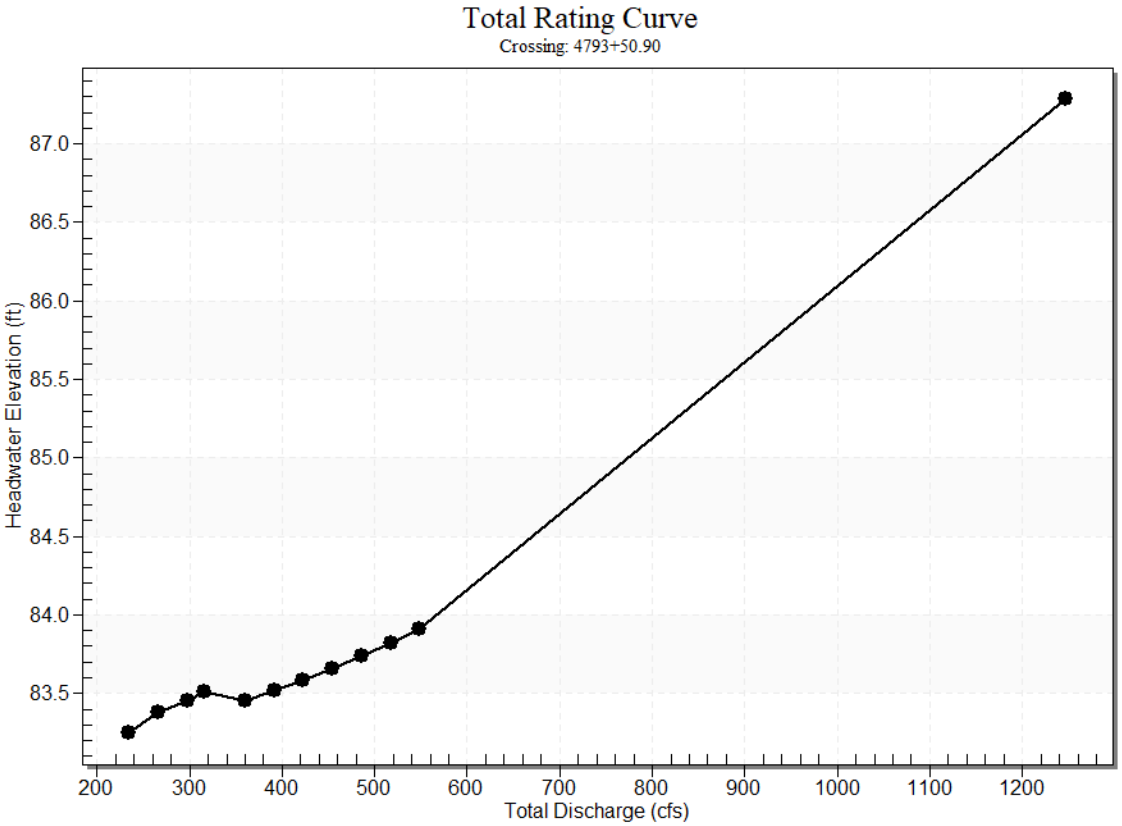
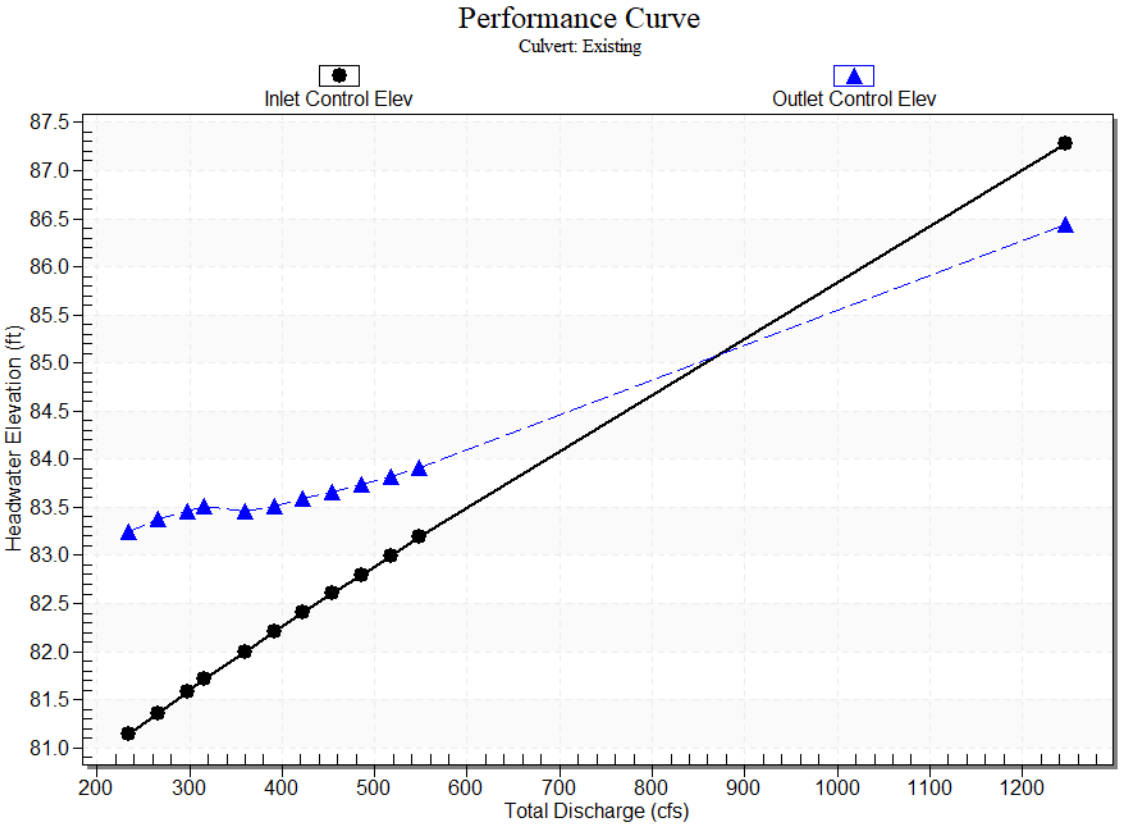


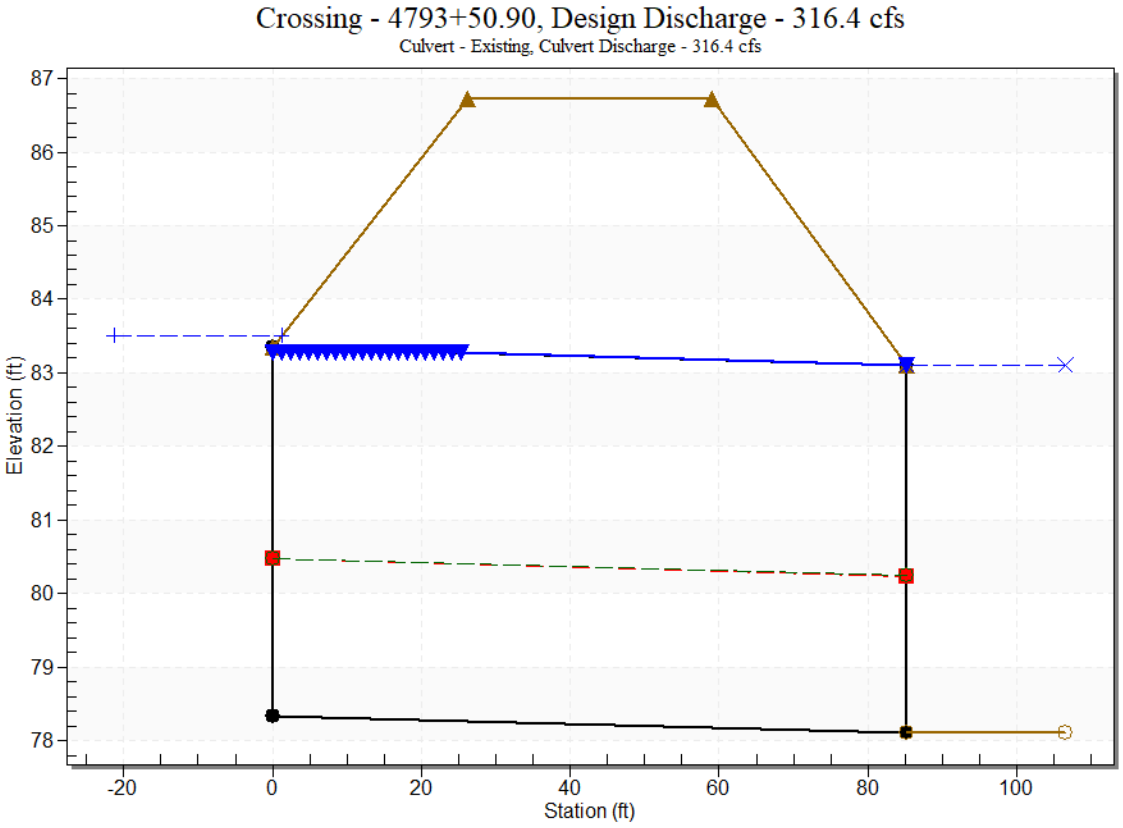
Table 26 - Culvert Summary Table: Existing

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
234.29	234.29	83.25	2.80	4.911	0.98	1-S1f	1.74	1.74	5.00	5.00	2.60	0.00
265.71	265.71	83.38	3.02	5.038	1.01	3-M1f	1.89	1.89	5.00	5.00	2.95	0.00
297.13	297.13	83.46	3.24	5.117	1.02	3-M1f	2.04	2.04	5.00	5.00	3.30	0.00
316.44	316.44	83.51	3.37	5.170	1.03	3-M1f	2.13	2.13	5.00	5.00	3.52	0.00
359.97	359.97	83.46	3.66	5.115	1.02	4-FFf	2.33	2.32	5.00	5.00	4.00	0.00
391.39	391.39	83.52	3.86	5.178	1.04	4-FFf	2.47	2.45	5.00	5.00	4.35	0.00
422.81	422.81	83.59	4.06	5.246	1.05	4-FFf	2.61	2.58	5.00	5.00	4.70	0.00
454.23	454.23	83.66	4.26	5.319	1.06	4-FFf	2.74	2.70	5.00	5.00	5.05	0.00
485.65	485.65	83.74	4.46	5.398	1.08	4-FFf	2.88	2.83	5.00	5.00	5.40	0.00
517.07	517.07	83.82	4.66	5.482	1.10	4-FFf	3.01	2.95	5.00	5.00	5.75	0.00
548.49	548.49	83.91	4.85	5.571	1.11	4-FFf	3.14	3.07	5.00	5.00	6.09	0.00
1246.57	1118.26	87.28	8.94	8.100	1.79	4-FFf	5.00	4.93	5.00	5.00	12.43	0.00

Culvert Performance Curve Plot: Existing



Water Surface Profile Plot for Culvert: Existing



Site Data - Existing

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 78.34 ft
Outlet Station: 85.27 ft
Outlet Elevation: 78.11 ft
Number of Barrels: 2

Culvert Data Summary - Existing

Barrel Shape: Concrete Box
Barrel Span: 9.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 27 - Downstream Channel Rating Curve (crossing: 4793+50.90)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
234.29	83.11	5.00
265.71	83.11	5.00
297.13	83.11	5.00
316.44	83.11	5.00
359.97	83.11	5.00
391.39	83.11	5.00
422.81	83.11	5.00
454.23	83.11	5.00
485.65	83.11	5.00
517.07	83.11	5.00
548.49	83.11	5.00

Tailwater Channel Data for Crossing: 4793+50.90

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 83.11 ft

Roadway Data for crossing: 4793+50.90

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 86.72 ft
Roadway Surface: Paved
Roadway Top Width: 33.00 ft

HY-8 Proposed Culvert Analysis Report

Crossing 4177+65.60

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 518.00 cfs
Design Flow: 626.00 cfs
Maximum Flow: 909.00 cfs

Table 1 - Summary of Culvert Flows at crossing: 4177+65.60

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
62.38	518.00	518.00	0.00	1
62.51	557.10	557.10	0.00	1
62.64	596.20	596.20	0.00	1
62.75	626.00	626.00	0.00	1
62.95	674.40	674.40	0.00	1
63.11	713.50	713.50	0.00	1
63.29	752.60	752.60	0.00	1
63.47	791.70	791.70	0.00	1
63.66	830.80	830.80	0.00	1
63.87	869.90	869.90	0.00	1
64.08	909.00	909.00	0.00	1
65.17	1088.64	1088.64	0.00	Overtopping

Rating Curve Plot for crossing: 4177+65.60

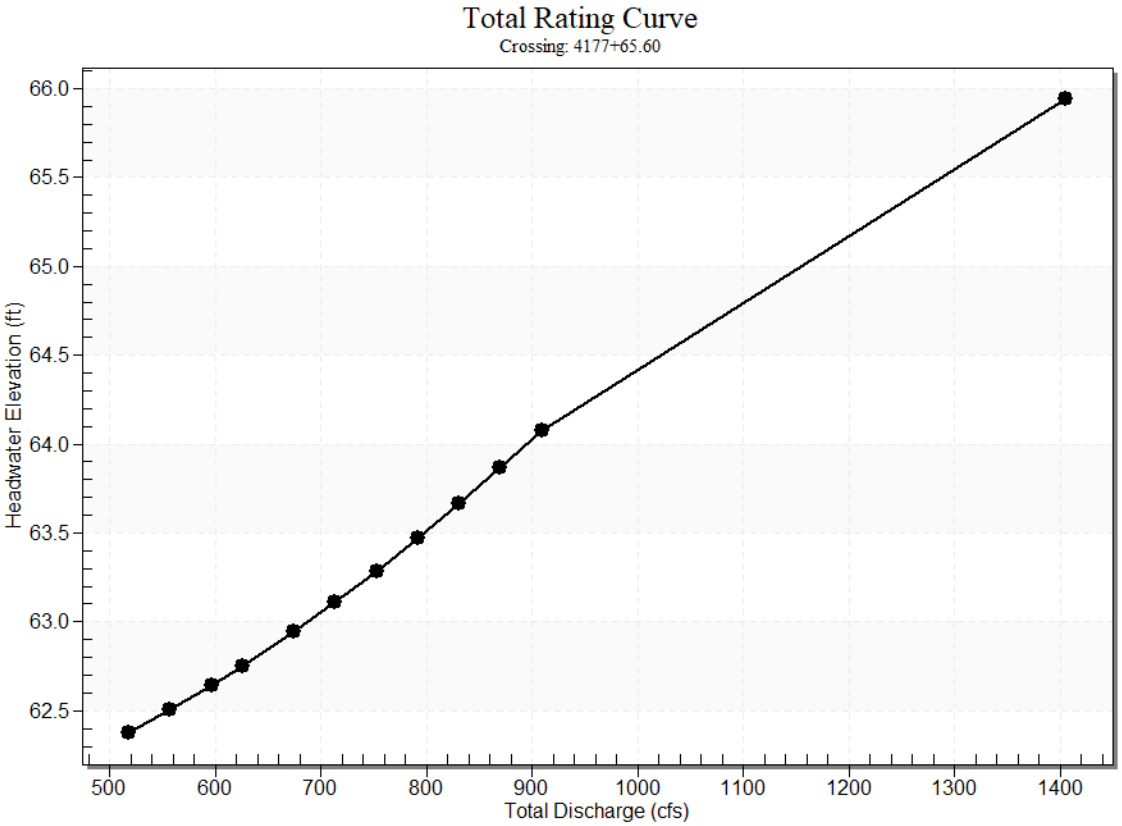
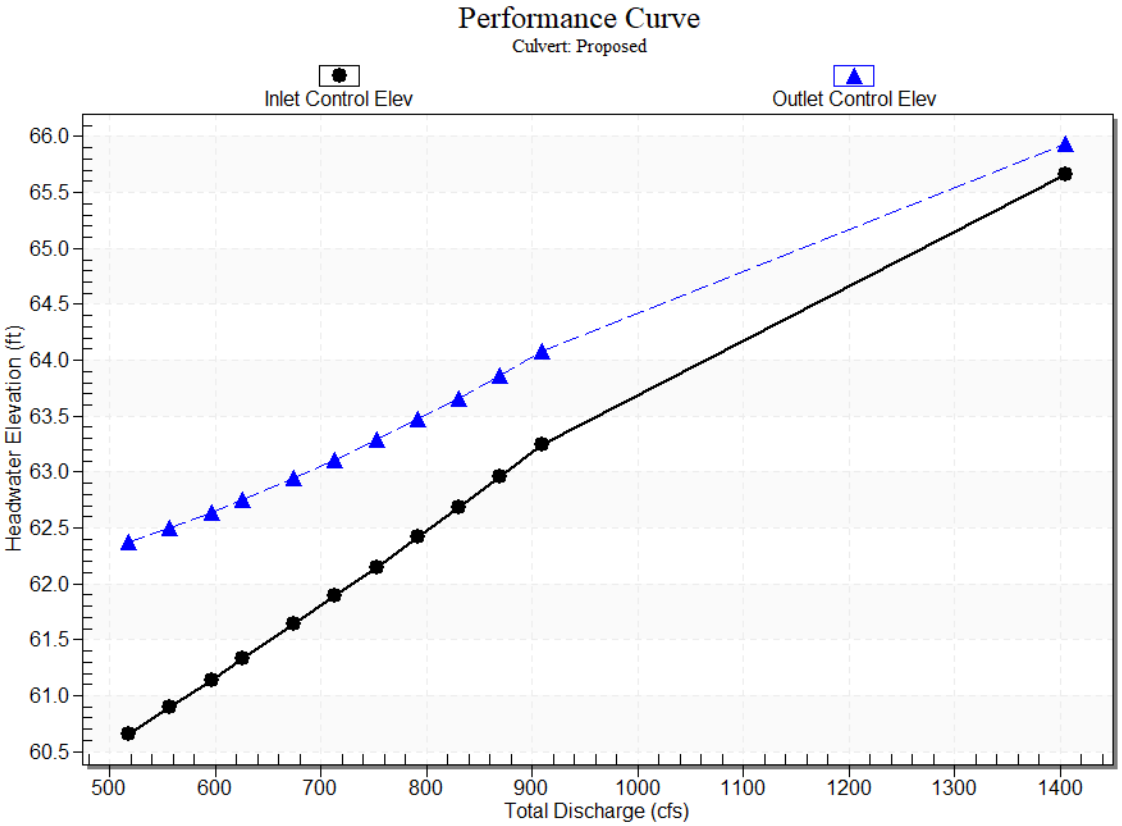


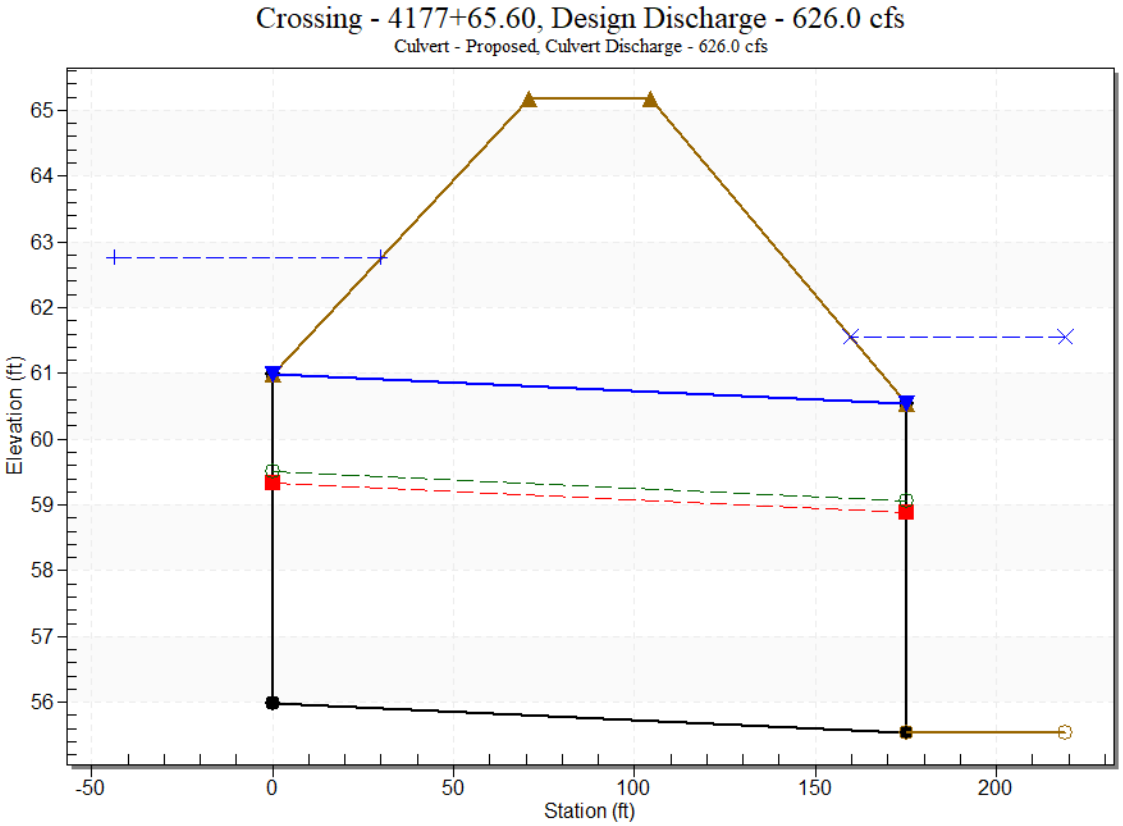
Table 2 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
518.00	518.00	62.38	4.66	6.387	1.28	4-FFf	3.07	2.95	5.00	6.02	5.76	0.00
557.10	557.10	62.51	4.91	6.515	1.30	4-FFf	3.23	3.10	5.00	6.02	6.19	0.00
596.20	596.20	62.64	5.15	6.653	1.33	4-FFf	3.39	3.24	5.00	6.02	6.62	0.00
626.00	626.00	62.75	5.34	6.764	1.35	4-FFf	3.52	3.35	5.00	6.02	6.96	0.00
674.40	674.40	62.95	5.65	6.955	1.39	4-FFf	3.71	3.52	5.00	6.02	7.49	0.00
713.50	713.50	63.11	5.90	7.121	1.42	4-FFf	3.87	3.65	5.00	6.02	7.93	0.00
752.60	752.60	63.29	6.16	7.295	1.46	4-FFf	4.02	3.79	5.00	6.02	8.36	0.00
791.70	791.70	63.47	6.42	7.479	1.50	4-FFf	4.18	3.92	5.00	6.02	8.80	0.00
830.80	830.80	63.66	6.70	7.672	1.53	4-FFf	4.33	4.04	5.00	6.02	9.23	0.00
869.90	869.90	63.87	6.97	7.875	1.58	4-FFf	4.48	4.17	5.00	6.02	9.67	0.00
909.00	909.00	64.08	7.26	8.087	1.62	4-FFf	4.63	4.29	5.00	6.02	10.10	0.00
1404.82	1199.35	65.94	9.68	9.952	1.99	4-FFf	5.00	5.00	5.00	6.02	13.33	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 55.99 ft
Outlet Station: 175.33 ft
Outlet Elevation: 55.54 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 9.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (crossing: 4177+65.60)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
518.00	61.56	6.02
557.10	61.56	6.02
596.20	61.56	6.02
626.00	61.56	6.02
674.40	61.56	6.02
713.50	61.56	6.02
752.60	61.56	6.02
791.70	61.56	6.02
830.80	61.56	6.02
869.90	61.56	6.02
909.00	61.56	6.02

Tailwater Channel Data for Crossing: 4177+65.60

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 61.56 ft

Roadway Data for crossing: 4177+65.60

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 65.17 ft
Roadway Surface: Paved
Roadway Top Width: 33.73 ft

Crossing 4201+67.22

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 137.00 cfs
Design Flow: 166.00 cfs
Maximum Flow: 242.00 cfs

Table 4 - Summary of Culvert Flows at crossing: 4201+67.22

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
64.09	137.00	137.00	0.00	1
64.16	147.50	147.50	0.00	1
64.24	158.00	158.00	0.00	1
64.31	166.00	166.00	0.00	1
64.42	179.00	179.00	0.00	1
64.52	189.50	189.50	0.00	1
64.62	200.00	200.00	0.00	1
64.72	210.50	210.50	0.00	1
64.84	221.00	221.00	0.00	1
64.96	231.50	231.50	0.00	1
65.08	242.00	242.00	0.00	1
67.16	377.11	377.11	0.00	Overtopping

Rating Curve Plot for crossing: 4201+67.22

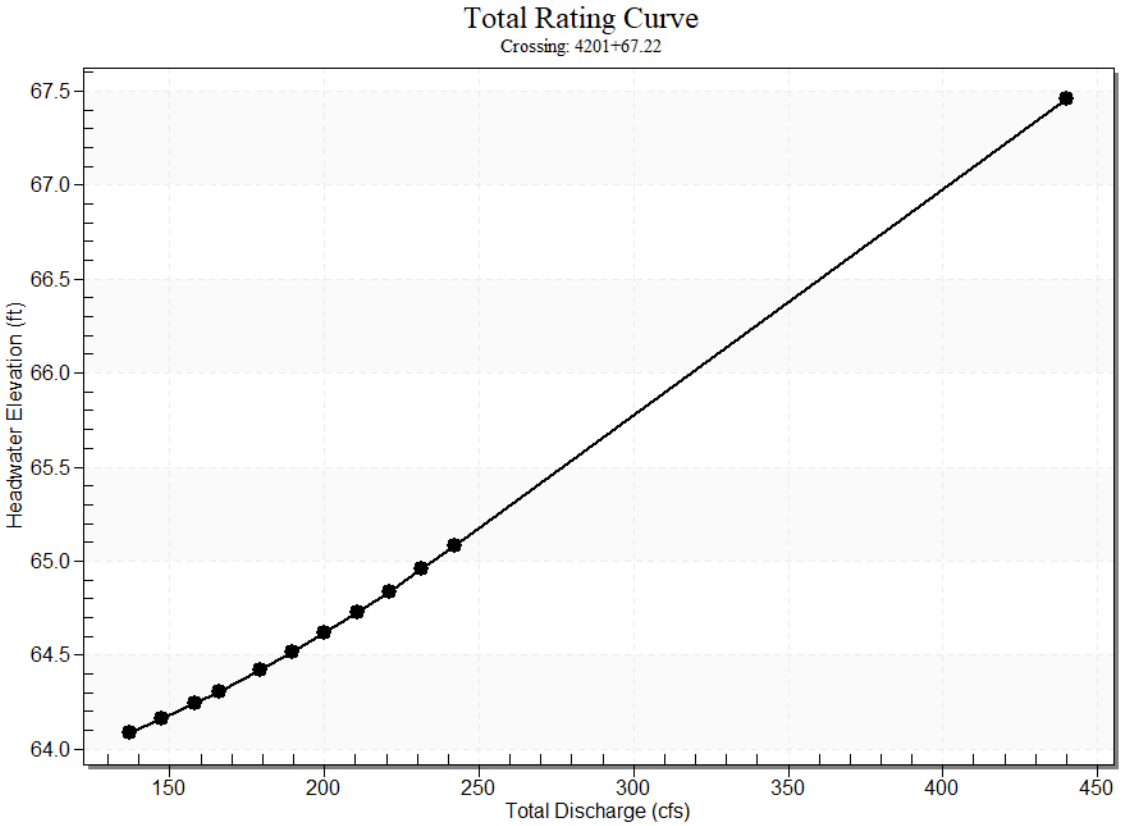
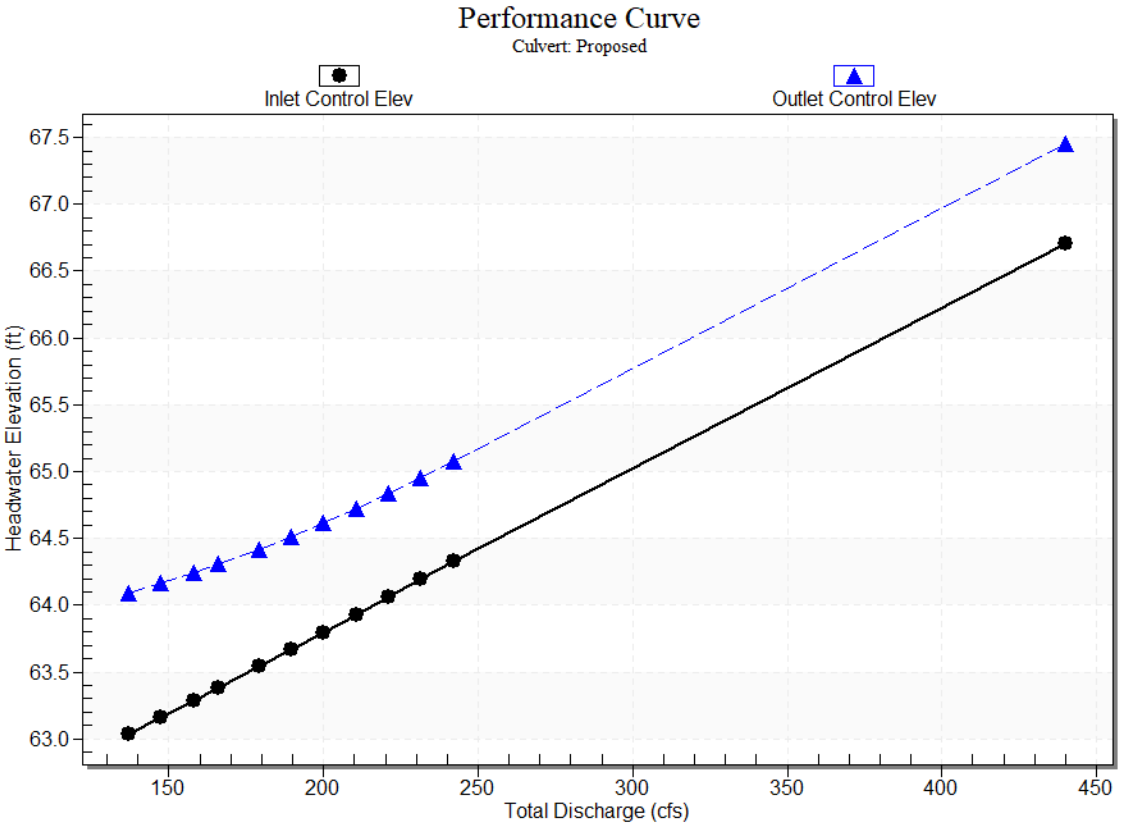


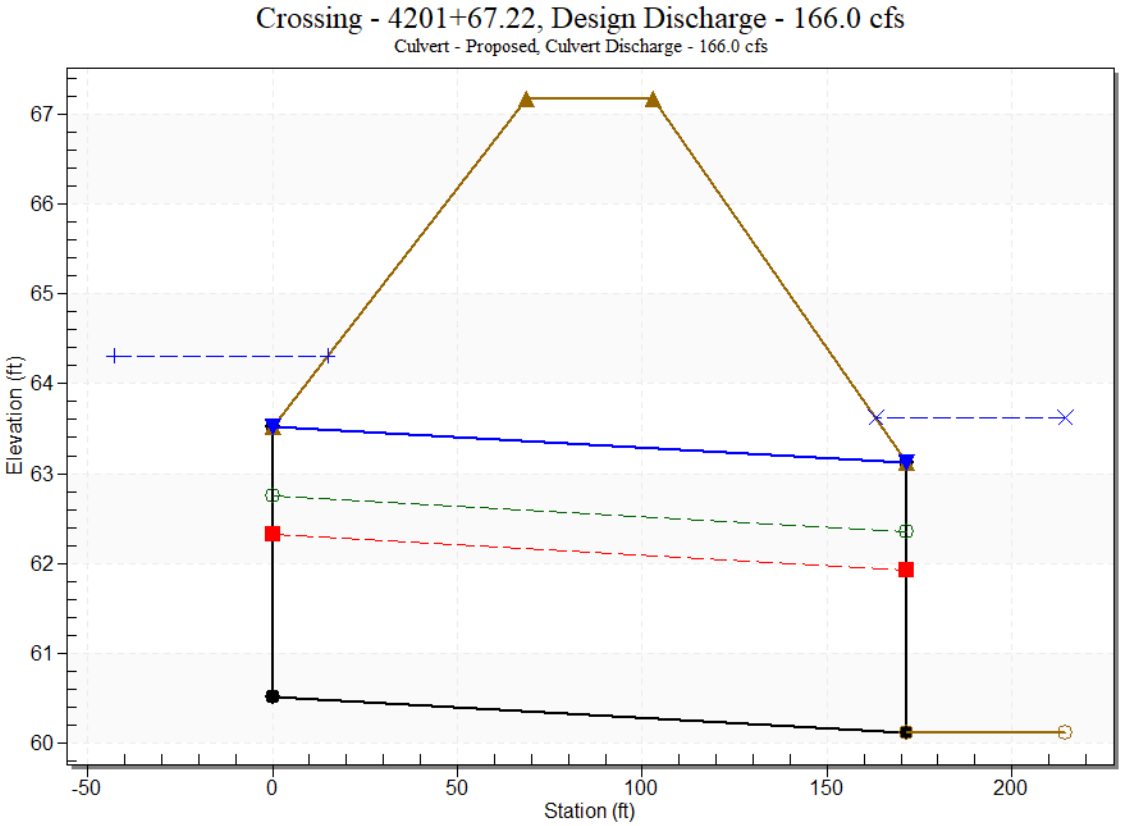
Table 5 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
137.00	137.00	64.09	2.51	3.568	1.19	4-FFf	1.93	1.59	3.00	3.50	3.81	0.00
147.50	147.50	64.16	2.64	3.642	1.21	4-FFf	2.04	1.67	3.00	3.50	4.10	0.00
158.00	158.00	64.24	2.77	3.722	1.24	4-FFf	2.15	1.75	3.00	3.50	4.39	0.00
166.00	166.00	64.31	2.86	3.787	1.26	4-FFf	2.23	1.81	3.00	3.50	4.61	0.00
179.00	179.00	64.42	3.02	3.899	1.30	4-FFf	2.36	1.90	3.00	3.50	4.97	0.00
189.50	189.50	64.52	3.15	3.995	1.33	4-FFf	2.47	1.98	3.00	3.50	5.26	0.00
200.00	200.00	64.62	3.28	4.097	1.37	4-FFf	2.57	2.05	3.00	3.50	5.56	0.00
210.50	210.50	64.72	3.41	4.205	1.40	4-FFf	2.68	2.12	3.00	3.50	5.85	0.00
221.00	221.00	64.84	3.54	4.317	1.44	4-FFf	2.78	2.19	3.00	3.50	6.14	0.00
231.50	231.50	64.96	3.67	4.436	1.48	4-FFf	2.88	2.26	3.00	3.50	6.43	0.00
242.00	242.00	65.08	3.81	4.560	1.52	4-FFf	3.00	2.33	3.00	3.50	6.72	0.00
440.00	392.35	67.46	6.19	6.937	2.31	4-FFf	3.00	3.00	3.00	3.50	10.90	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 60.52 ft
Outlet Station: 171.67 ft
Outlet Elevation: 60.12 ft
Number of Barrels: 3

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 4.00 ft
Barrel Rise: 3.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 6 - Downstream Channel Rating Curve (crossing: 4201+67.22)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
137.00	63.62	3.50
147.50	63.62	3.50
158.00	63.62	3.50
166.00	63.62	3.50
179.00	63.62	3.50
189.50	63.62	3.50
200.00	63.62	3.50
210.50	63.62	3.50
221.00	63.62	3.50
231.50	63.62	3.50
242.00	63.62	3.50

Tailwater Channel Data for Crossing: 4201+67.22

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 63.62 ft

Roadway Data for crossing: 4201+67.22

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 67.16 ft
Roadway Surface: Paved
Roadway Top Width: 34.13 ft

Crossing 4297+11.54

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 199.00 cfs
Design Flow: 242.00 cfs
Maximum Flow: 354.00 cfs

Table 7 - Summary of Culvert Flows at crossing: 4297+11.54

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
64.26	199.00	199.00	0.00	1
64.35	214.50	214.50	0.00	1
64.46	230.00	230.00	0.00	1
64.55	242.00	242.00	0.00	1
64.69	261.00	261.00	0.00	1
64.82	276.50	276.50	0.00	1
64.95	292.00	292.00	0.00	1
65.10	307.50	307.50	0.00	1
65.25	323.00	323.00	0.00	1
65.40	338.50	338.50	0.00	1
65.57	354.00	354.00	0.00	1
67.19	481.04	481.04	0.00	Overtopping

Rating Curve Plot for crossing: 4297+11.54

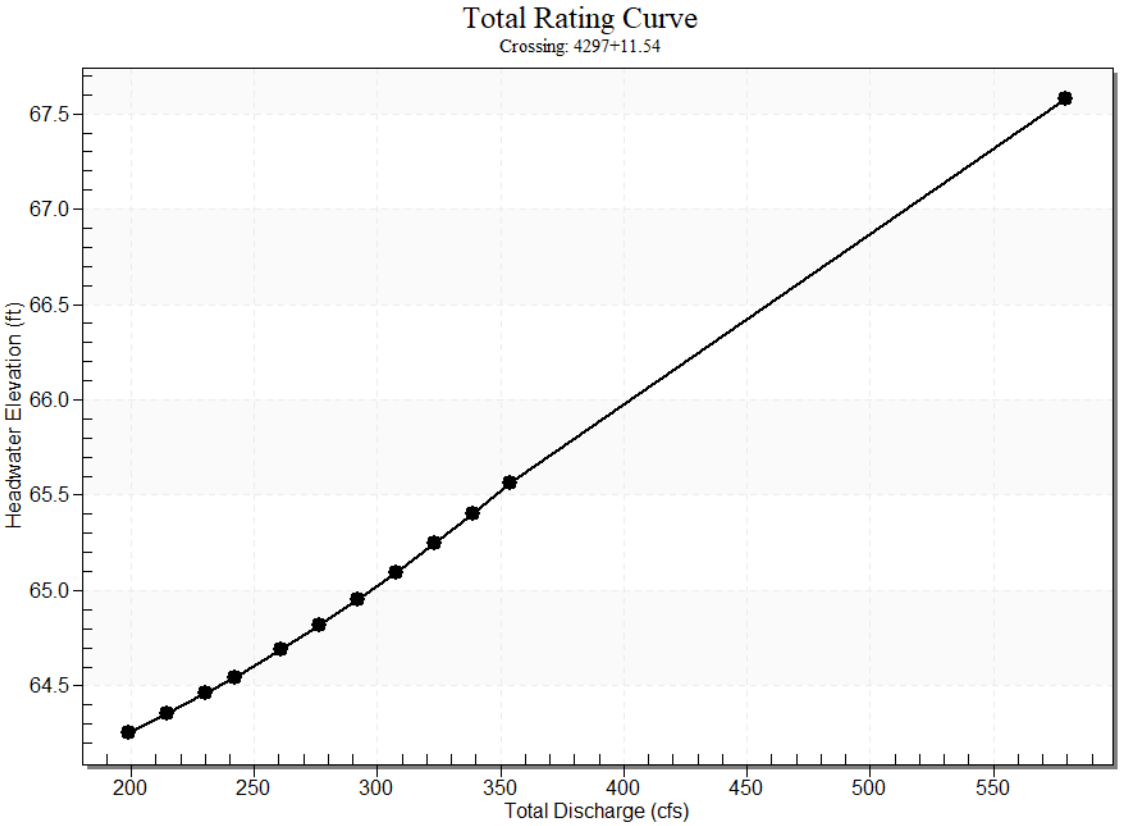
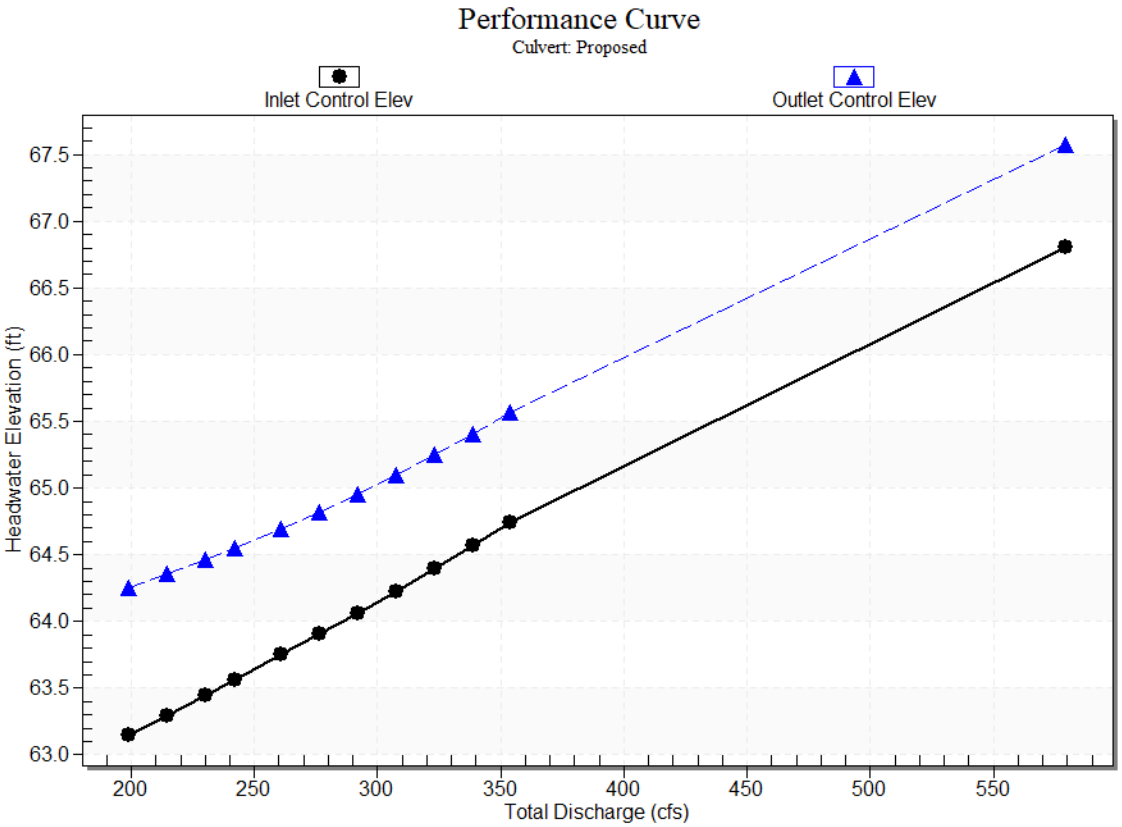


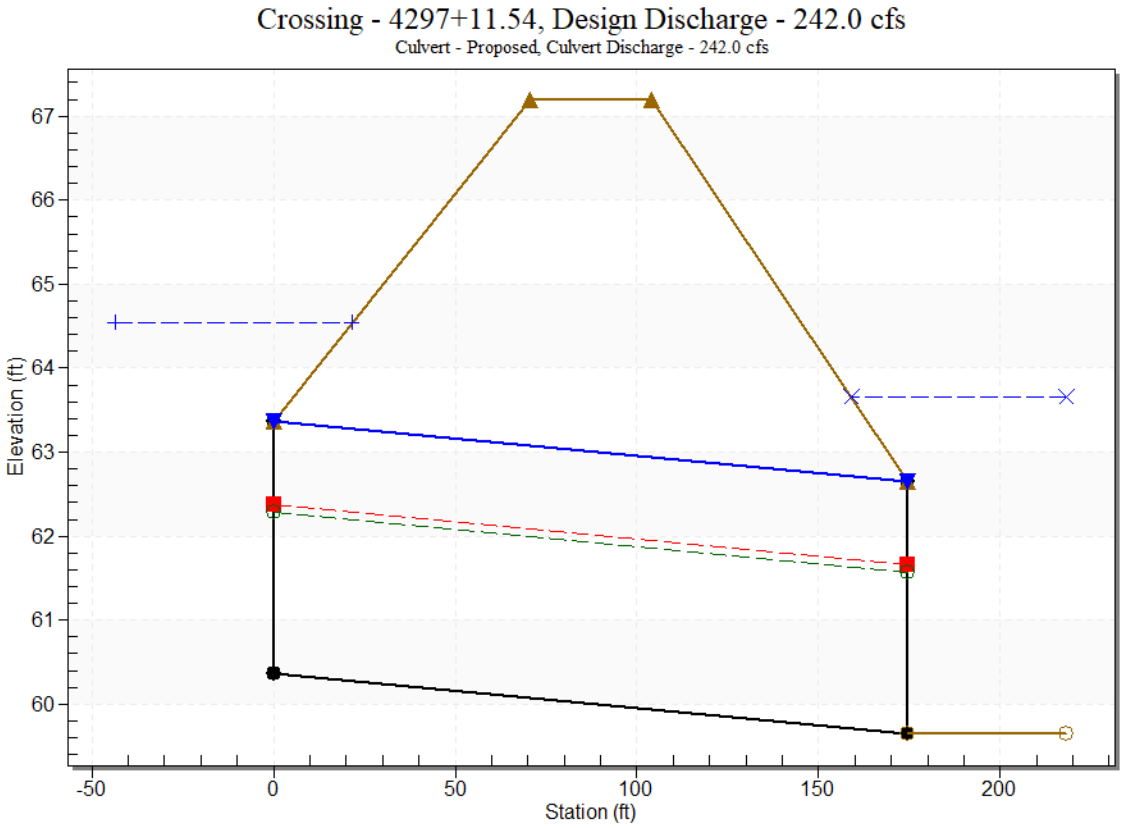
Table 8 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
199.00	199.00	64.26	2.78	3.890	1.30	4-FFf	1.67	1.76	3.00	4.00	4.42	0.00
214.50	214.50	64.35	2.93	3.988	1.33	4-FFf	1.76	1.85	3.00	4.00	4.77	0.00
230.00	230.00	64.46	3.08	4.093	1.36	4-FFf	1.85	1.94	3.00	4.00	5.11	0.00
242.00	242.00	64.55	3.20	4.180	1.39	4-FFf	1.92	2.01	3.00	4.00	5.38	0.00
261.00	261.00	64.69	3.38	4.326	1.44	4-FFf	2.03	2.11	3.00	4.00	5.80	0.00
276.50	276.50	64.82	3.54	4.454	1.48	4-FFf	2.12	2.19	3.00	4.00	6.14	0.00
292.00	292.00	64.95	3.70	4.588	1.53	4-FFf	2.20	2.27	3.00	4.00	6.49	0.00
307.50	307.50	65.10	3.86	4.730	1.58	4-FFf	2.29	2.35	3.00	4.00	6.83	0.00
323.00	323.00	65.25	4.03	4.880	1.63	4-FFf	2.38	2.43	3.00	4.00	7.18	0.00
338.50	338.50	65.40	4.20	5.037	1.68	4-FFf	2.46	2.51	3.00	4.00	7.52	0.00
354.00	354.00	65.57	4.38	5.201	1.73	4-FFf	2.54	2.59	3.00	4.00	7.87	0.00
579.27	506.65	67.58	6.44	7.211	2.40	4-FFf	3.00	3.00	3.00	4.00	11.26	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 60.37 ft
Outlet Station: 174.67 ft
Outlet Elevation: 59.65 ft
Number of Barrels: 3

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 5.00 ft
Barrel Rise: 3.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 9 - Downstream Channel Rating Curve (crossing: 4297+11.54)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
199.00	63.65	4.00
214.50	63.65	4.00
230.00	63.65	4.00
242.00	63.65	4.00
261.00	63.65	4.00
276.50	63.65	4.00
292.00	63.65	4.00
307.50	63.65	4.00
323.00	63.65	4.00
338.50	63.65	4.00
354.00	63.65	4.00

Tailwater Channel Data for Crossing: 4297+11.54

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 63.65 ft

Roadway Data for crossing: 4297+11.54

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 67.19 ft
Roadway Surface: Paved
Roadway Top Width: 33.47 ft

Crossing 4384+54.40

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 246.00 cfs
Design Flow: 299.00 cfs
Maximum Flow: 437.00 cfs

Table 1 - Summary of Culvert Flows at crossing: 4384+54.40

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
71.20	246.00	246.00	0.00	1
71.23	265.10	265.10	0.00	1
71.26	284.20	284.20	0.00	1
71.29	299.00	299.00	0.00	1
71.34	322.40	322.40	0.00	1
71.37	341.50	341.50	0.00	1
71.41	360.60	360.60	0.00	1
71.46	379.70	379.70	0.00	1
71.50	398.80	398.80	0.00	1
71.55	417.90	417.90	0.00	1
71.60	437.00	437.00	0.00	1
73.35	876.26	876.26	0.00	Overtopping

Rating Curve Plot for crossing: 4384+54.40

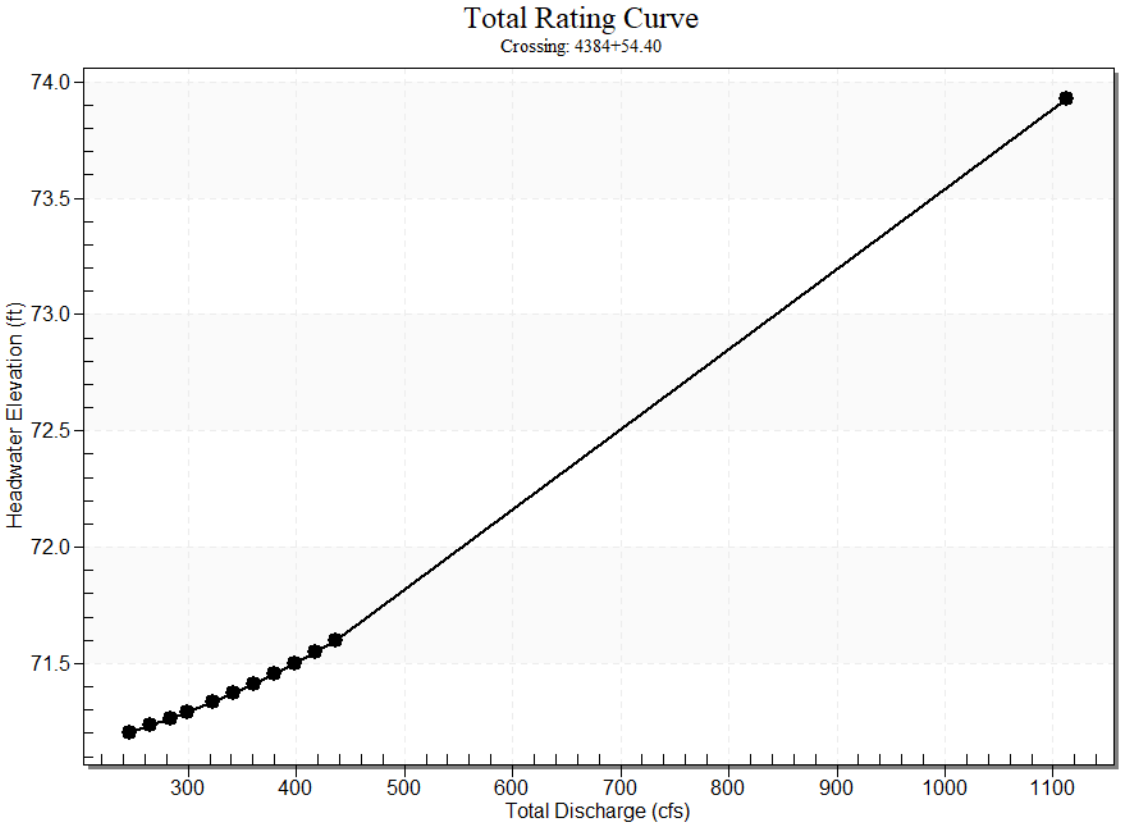
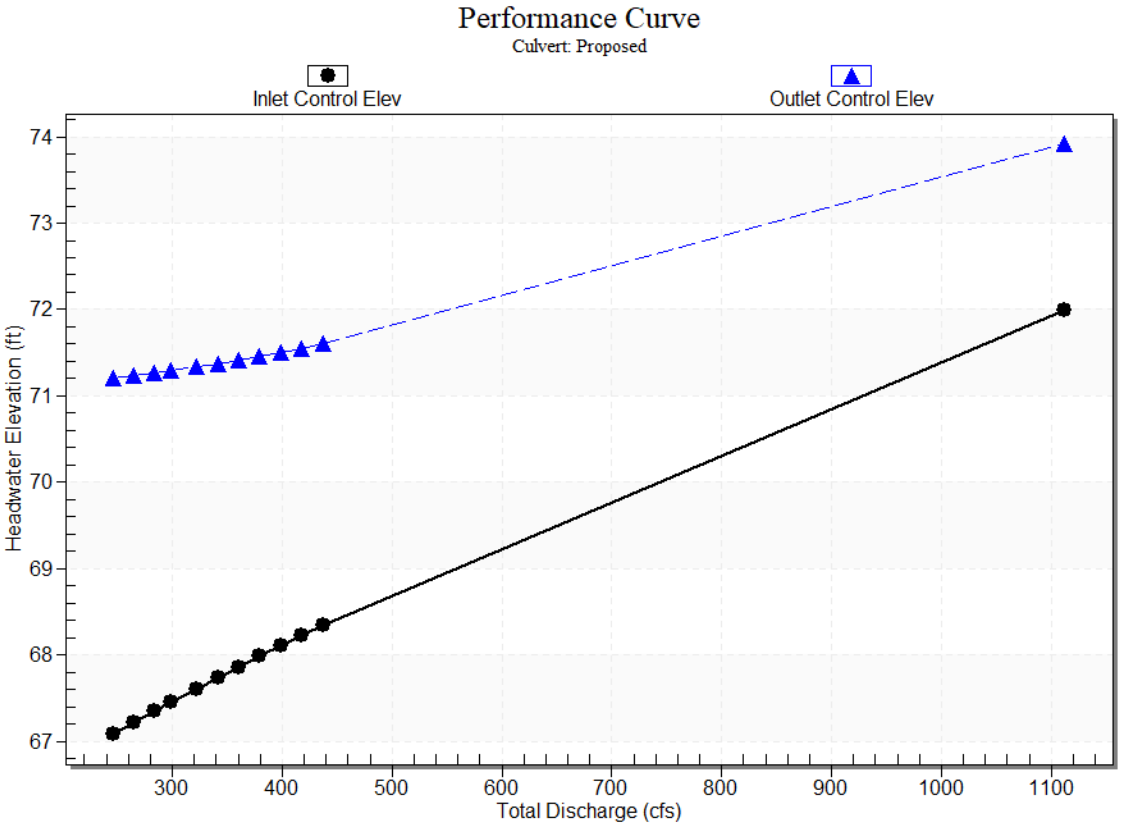


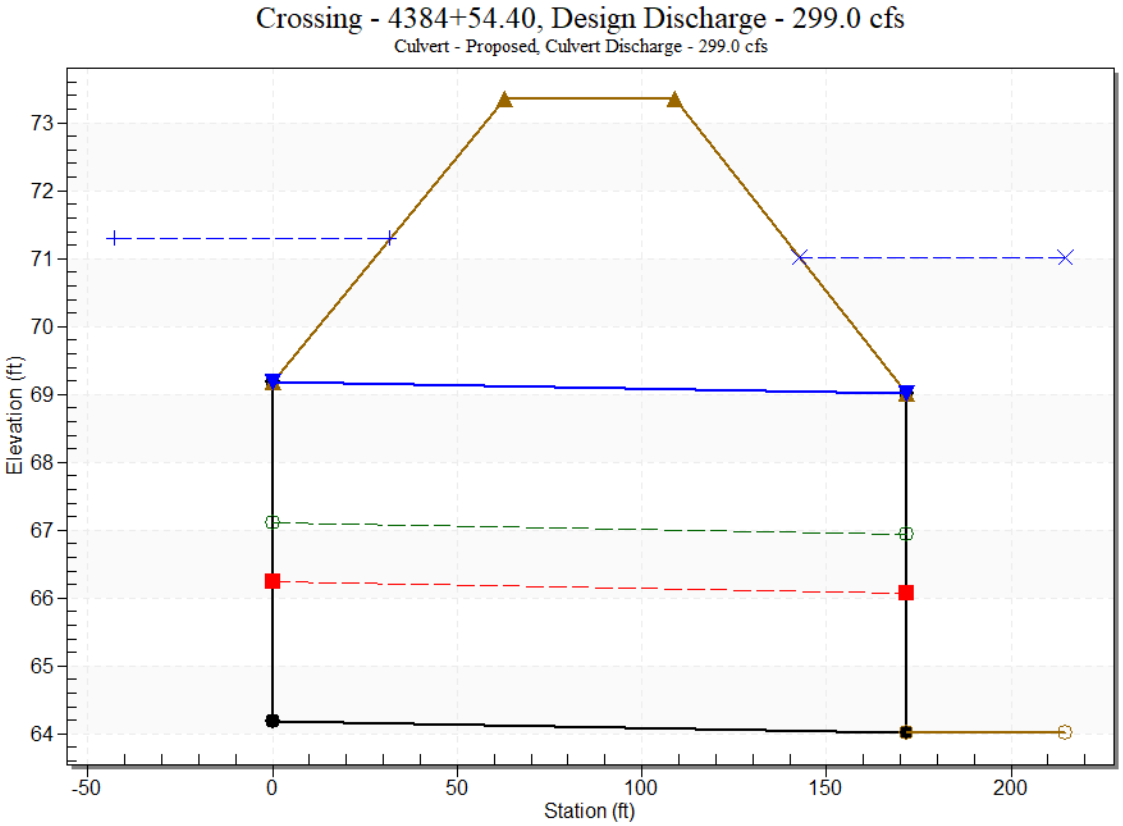
Table 2 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
246.00	246.00	71.20	2.89	7.013	1.40	4-FFf	2.54	1.80	5.00	7.00	2.73	0.00
265.10	265.10	71.23	3.02	7.043	1.41	4-FFf	2.67	1.89	5.00	7.00	2.95	0.00
284.20	284.20	71.26	3.15	7.075	1.41	4-FFf	2.81	1.98	5.00	7.00	3.16	0.00
299.00	299.00	71.29	3.26	7.101	1.42	4-FFf	2.91	2.05	5.00	7.00	3.32	0.00
322.40	322.40	71.34	3.41	7.145	1.43	4-FFf	3.07	2.15	5.00	7.00	3.58	0.00
341.50	341.50	71.37	3.54	7.184	1.44	4-FFf	3.20	2.24	5.00	7.00	3.79	0.00
360.60	360.60	71.41	3.67	7.224	1.44	4-FFf	3.33	2.32	5.00	7.00	4.01	0.00
379.70	379.70	71.46	3.79	7.267	1.45	4-FFf	3.46	2.40	5.00	7.00	4.22	0.00
398.80	398.80	71.50	3.91	7.312	1.46	4-FFf	3.58	2.48	5.00	7.00	4.43	0.00
417.90	417.90	71.55	4.04	7.359	1.47	4-FFf	3.71	2.56	5.00	7.00	4.64	0.00
437.00	437.00	71.60	4.16	7.409	1.48	4-FFf	3.83	2.64	5.00	7.00	4.86	0.00
1112.36	979.18	73.93	7.80	9.736	1.95	4-FFf	5.00	4.51	5.00	7.00	10.88	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 64.19 ft
Outlet Station: 171.84 ft
Outlet Elevation: 64.02 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 9.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (crossing: 4384+54.40)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
246.00	71.02	7.00
265.10	71.02	7.00
284.20	71.02	7.00
299.00	71.02	7.00
322.40	71.02	7.00
341.50	71.02	7.00
360.60	71.02	7.00
379.70	71.02	7.00
398.80	71.02	7.00
417.90	71.02	7.00
437.00	71.02	7.00

Tailwater Channel Data for Crossing: 4384+54.40

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 71.02 ft

Roadway Data for crossing: 4384+54.40

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 73.35 ft
Roadway Surface: Paved
Roadway Top Width: 45.84 ft

Crossing 4572+61.46

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 193.99 cfs
Design Flow: 256.60 cfs
Maximum Flow: 439.52 cfs

Table 7 - Summary of Culvert Flows at crossing: 4572+61.46

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
78.77	193.99	193.99	0.00	1
78.85	218.54	218.54	0.00	1
78.93	243.10	243.10	0.00	1
78.98	256.60	256.60	0.00	1
79.12	292.20	292.20	0.00	1
79.23	316.75	316.75	0.00	1
79.35	341.31	341.31	0.00	1
79.48	365.86	365.86	0.00	1
79.61	390.41	390.41	0.00	1
79.76	414.97	414.97	0.00	1
79.91	439.52	439.52	0.00	1
81.11	598.42	598.42	0.00	Overtopping

Rating Curve Plot for crossing: 4572+61.46

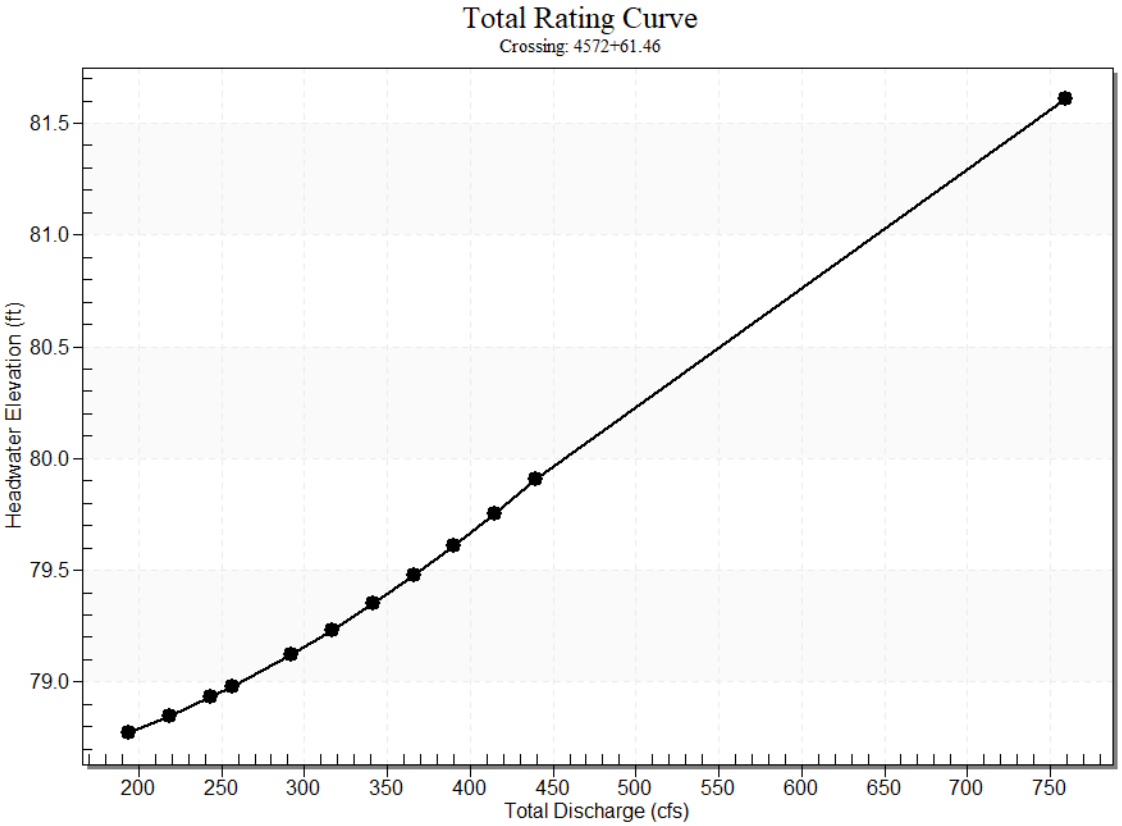
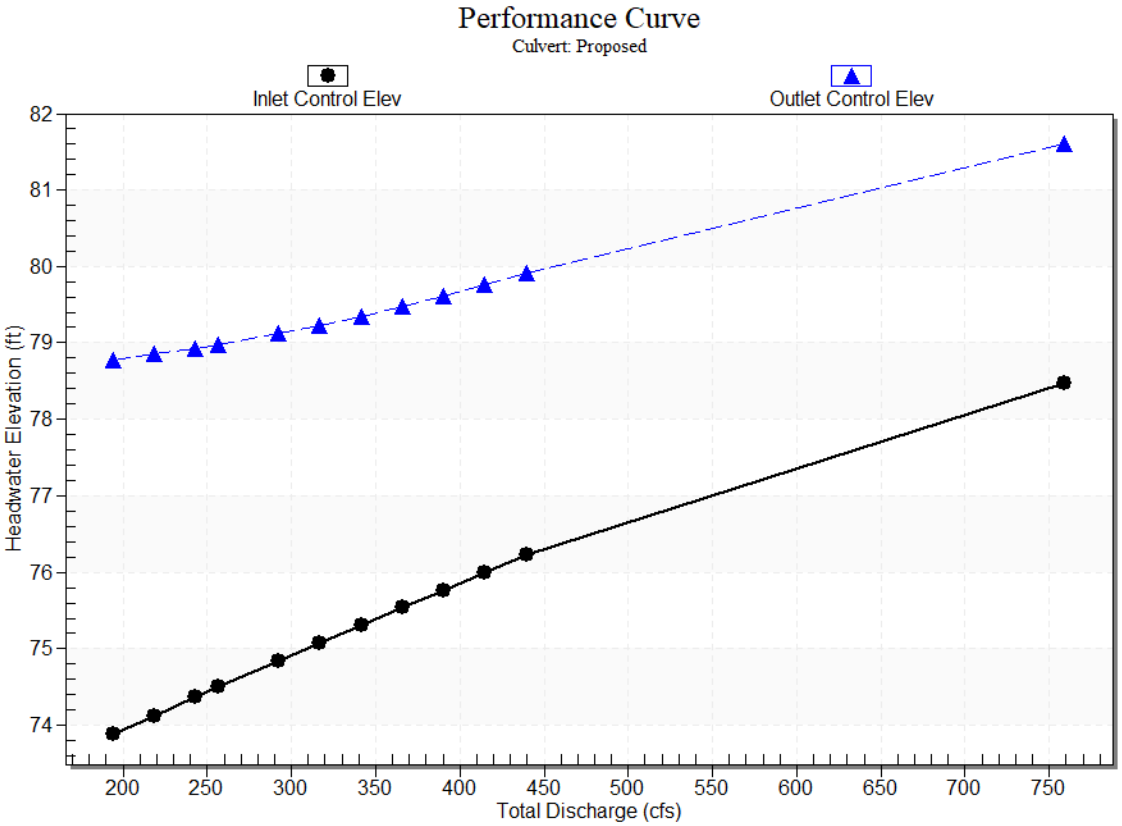


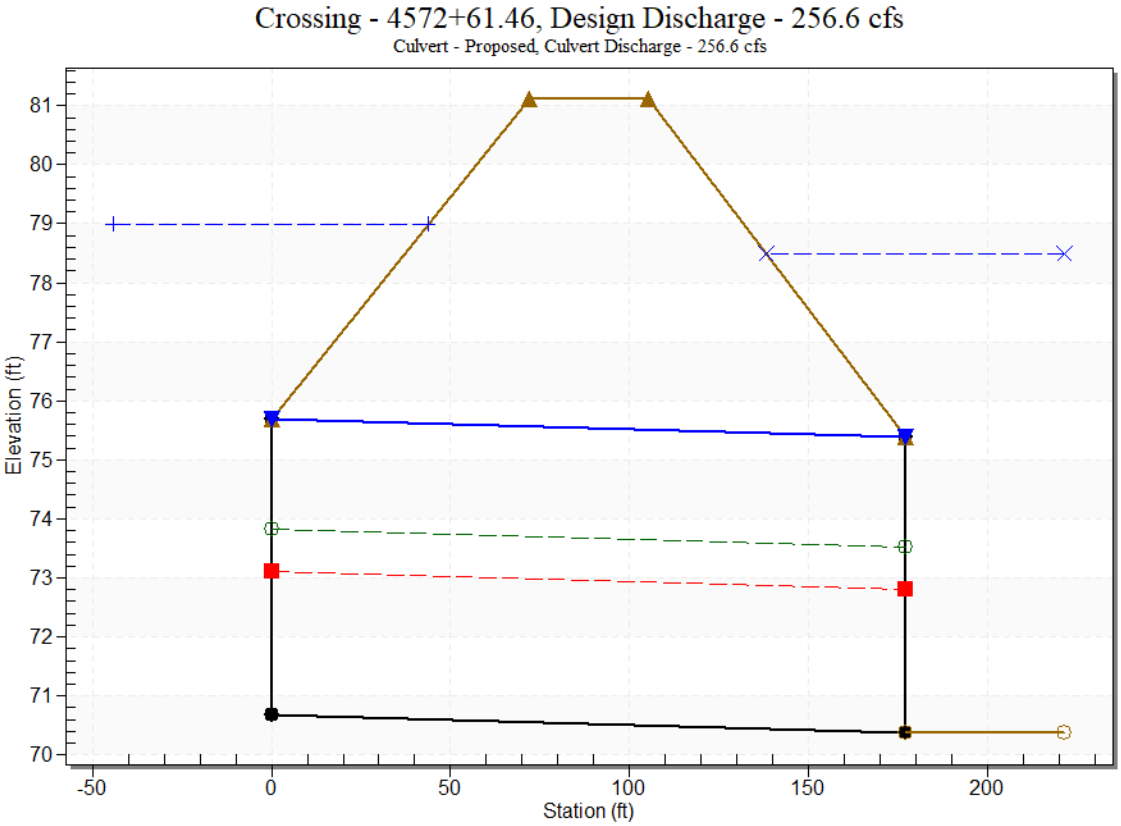
Table 8 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
193.99	193.99	78.77	3.20	8.094	1.62	4-FFf	2.56	2.01	5.00	8.12	3.23	0.00
218.54	218.54	78.85	3.45	8.168	1.63	4-FFf	2.79	2.18	5.00	8.12	3.64	0.00
243.10	243.10	78.93	3.69	8.251	1.65	4-FFf	3.02	2.34	5.00	8.12	4.05	0.00
256.60	256.60	78.98	3.82	8.300	1.66	4-FFf	3.15	2.42	5.00	8.12	4.28	0.00
292.20	292.20	79.12	4.16	8.442	1.69	4-FFf	3.47	2.64	5.00	8.12	4.87	0.00
316.75	316.75	79.23	4.40	8.551	1.71	4-FFf	3.70	2.79	5.00	8.12	5.28	0.00
341.31	341.31	79.35	4.63	8.669	1.73	4-FFf	3.91	2.93	5.00	8.12	5.69	0.00
365.86	365.86	79.48	4.86	8.796	1.76	4-FFf	4.13	3.07	5.00	8.12	6.10	0.00
390.41	390.41	79.61	5.09	8.931	1.79	4-FFf	4.35	3.20	5.00	8.12	6.51	0.00
414.97	414.97	79.76	5.32	9.075	1.82	4-FFf	4.56	3.34	5.00	8.12	6.92	0.00
439.52	439.52	79.91	5.55	9.228	1.85	4-FFf	4.78	3.47	5.00	8.12	7.33	0.00
759.17	652.99	81.61	7.80	10.928	2.19	4-FFf	5.00	4.51	5.00	8.12	10.88	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 70.68 ft
Outlet Station: 177.34 ft
Outlet Elevation: 70.38 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 6.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 9 - Downstream Channel Rating Curve (crossing: 4572+61.46)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
193.99	78.50	8.12
218.54	78.50	8.12
243.10	78.50	8.12
256.60	78.50	8.12
292.20	78.50	8.12
316.75	78.50	8.12
341.31	78.50	8.12
365.86	78.50	8.12
390.41	78.50	8.12
414.97	78.50	8.12
439.52	78.50	8.12

Tailwater Channel Data for Crossing: 4572+61.46

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 78.50 ft

Roadway Data for crossing: 4572+61.46

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 81.11 ft
Roadway Surface: Paved
Roadway Top Width: 33.13 ft

Crossing 4595+39.13

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 48.97 cfs
Design Flow: 75.43 cfs
Maximum Flow: 157.62 cfs

Table 10 - Summary of Culvert Flows at crossing: 4595+39.13

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
79.12	48.97	48.97	0.00	1
79.17	59.84	59.84	0.00	1
79.27	75.43	75.43	0.00	1
79.32	81.56	81.56	0.00	1
79.41	92.43	92.43	0.00	1
79.51	103.30	103.30	0.00	1
79.63	114.16	114.16	0.00	1
79.72	125.03	122.53	2.42	9
79.78	135.89	127.06	8.74	6
79.82	146.75	130.84	15.82	5
79.86	157.62	134.10	23.47	5
79.68	118.97	118.97	0.00	Overtopping

Rating Curve Plot for crossing: 4595+39.13

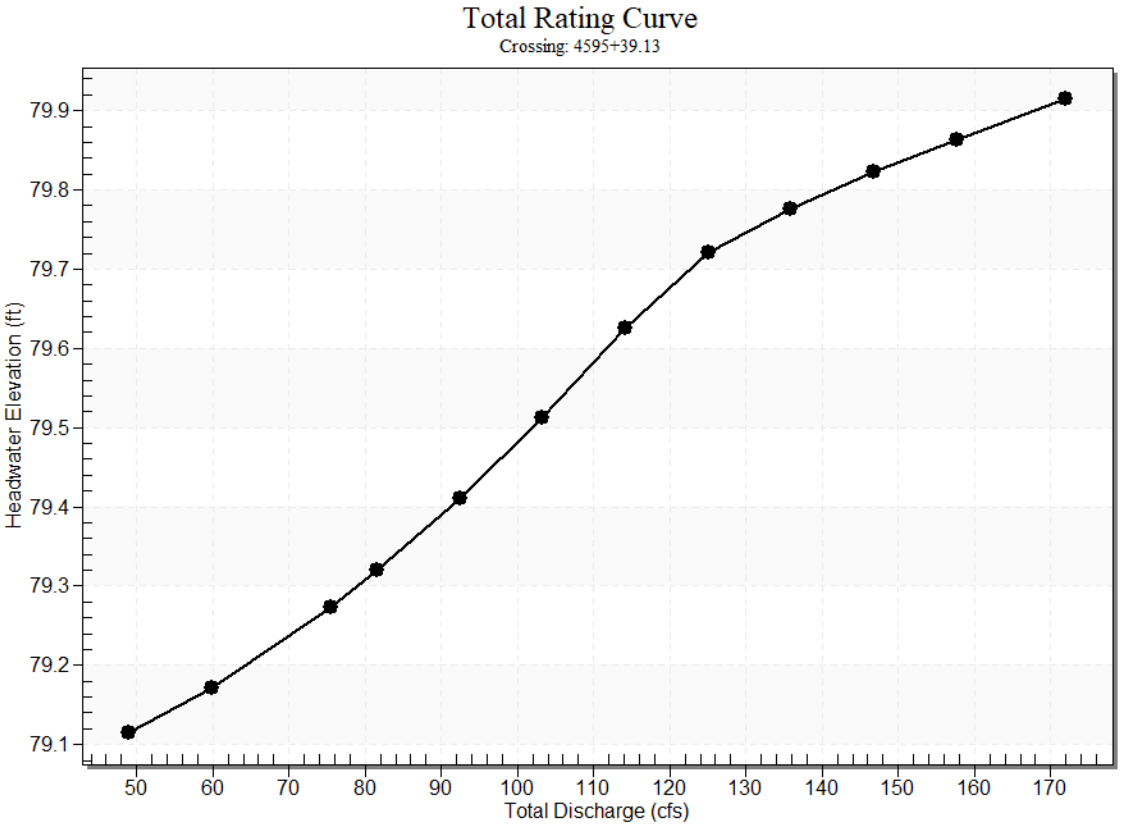
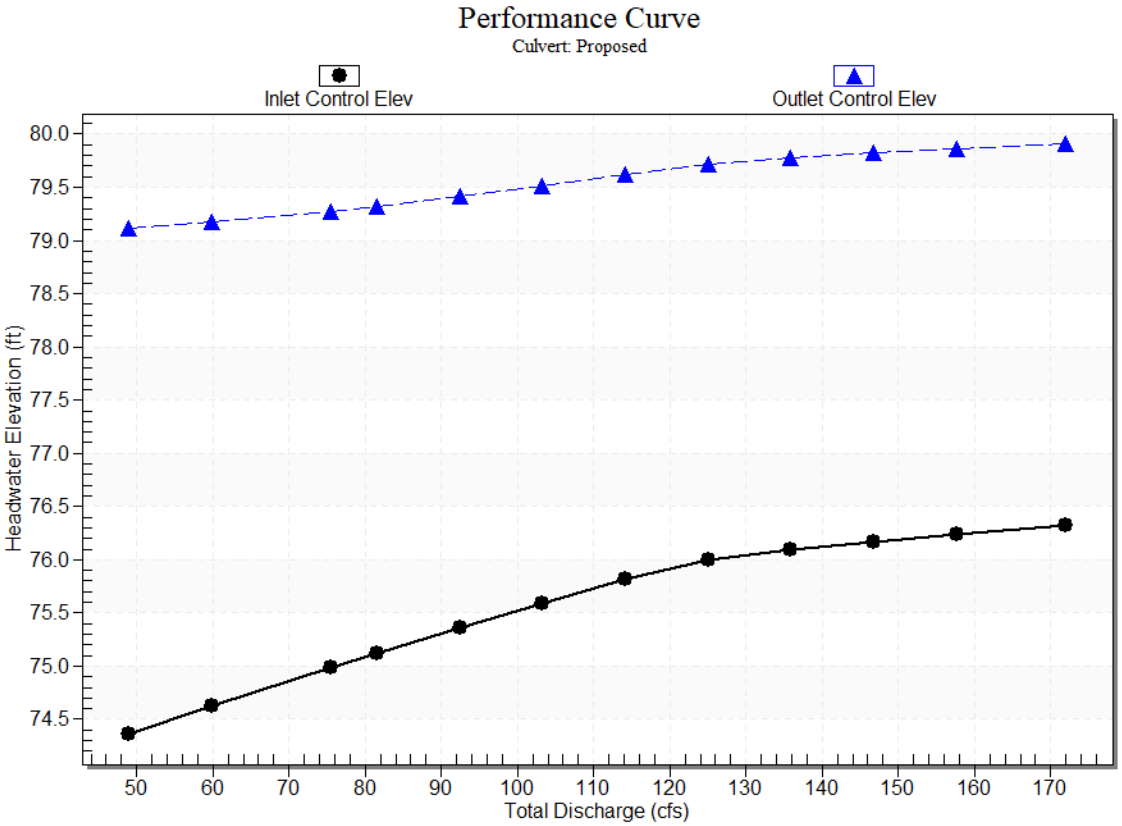


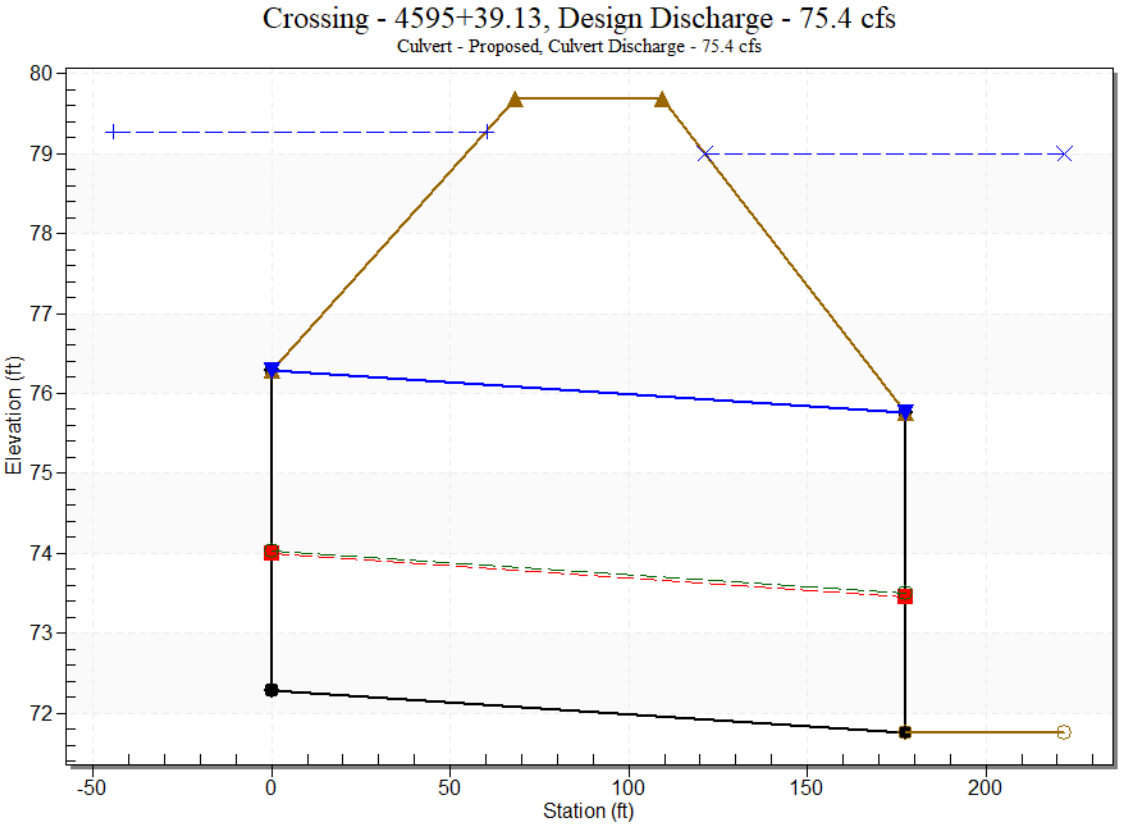
Table 11 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
48.97	48.97	79.12	2.07	6.825	1.71	4-FFf	1.29	1.27	4.00	7.24	2.04	0.00
59.84	59.84	79.17	2.33	6.882	1.72	4-FFf	1.48	1.46	4.00	7.24	2.49	0.00
75.43	75.43	79.27	2.69	6.983	1.75	4-FFf	1.74	1.70	4.00	7.24	3.14	0.00
81.56	81.56	79.32	2.83	7.030	1.76	4-FFf	1.83	1.79	4.00	7.24	3.40	0.00
92.43	92.43	79.41	3.07	7.120	1.78	4-FFf	2.00	1.95	4.00	7.24	3.85	0.00
103.30	103.30	79.51	3.30	7.223	1.81	4-FFf	2.17	2.10	4.00	7.24	4.30	0.00
114.16	114.16	79.63	3.53	7.336	1.83	4-FFf	2.33	2.24	4.00	7.24	4.76	0.00
125.03	122.53	79.72	3.71	7.431	1.86	4-FFf	2.46	2.35	4.00	7.24	5.11	0.00
135.89	127.06	79.78	3.80	7.485	1.87	4-FFf	2.52	2.41	4.00	7.24	5.29	0.00
146.75	130.84	79.82	3.88	7.532	1.88	4-FFf	2.58	2.45	4.00	7.24	5.45	0.00
157.62	134.10	79.86	3.95	7.574	1.89	4-FFf	2.63	2.49	4.00	7.24	5.59	0.00
171.95	137.98	79.91	4.03	7.625	1.91	4-FFf	2.68	2.54	4.00	7.24	5.75	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 72.29 ft
Outlet Station: 177.67 ft
Outlet Elevation: 71.76 ft
Number of Barrels: 1

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 6.00 ft
Barrel Rise: 4.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 12 - Downstream Channel Rating Curve (crossing: 4595+39.13)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
48.97	79.00	7.24
59.84	79.00	7.24
75.43	79.00	7.24
81.56	79.00	7.24
92.43	79.00	7.24
103.30	79.00	7.24
114.16	79.00	7.24
125.03	79.00	7.24
135.89	79.00	7.24
146.75	79.00	7.24
157.62	79.00	7.24

Tailwater Channel Data for Crossing: 4595+39.13

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 79.00 ft

Roadway Data for crossing: 4595+39.13

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 79.68 ft
Roadway Surface: Paved
Roadway Top Width: 40.90 ft

Crossing 4598+11.14

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 125.47 cfs
Design Flow: 180.46 cfs
Maximum Flow: 349.99 cfs

Table 4 - Summary of Culvert Flows at crossing: 4598+11.14

Headwater Elevation (ft)	Total Discharge (cfs)	4598+11.14 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
79.19	125.47	125.47	0.00	1
79.26	147.92	147.92	0.00	1
79.39	180.46	180.46	0.00	1
79.45	192.83	192.83	0.00	1
79.56	215.28	215.28	0.00	1
79.68	237.73	237.51	0.00	9
79.77	260.18	252.50	7.62	7
79.84	282.63	263.82	18.75	6
79.90	305.09	273.77	31.21	5
79.96	327.54	282.68	44.80	5
80.02	349.99	290.83	59.13	5
79.68	237.47	237.47	0.00	Overtopping

Rating Curve Plot for crossing: 4598+11.14

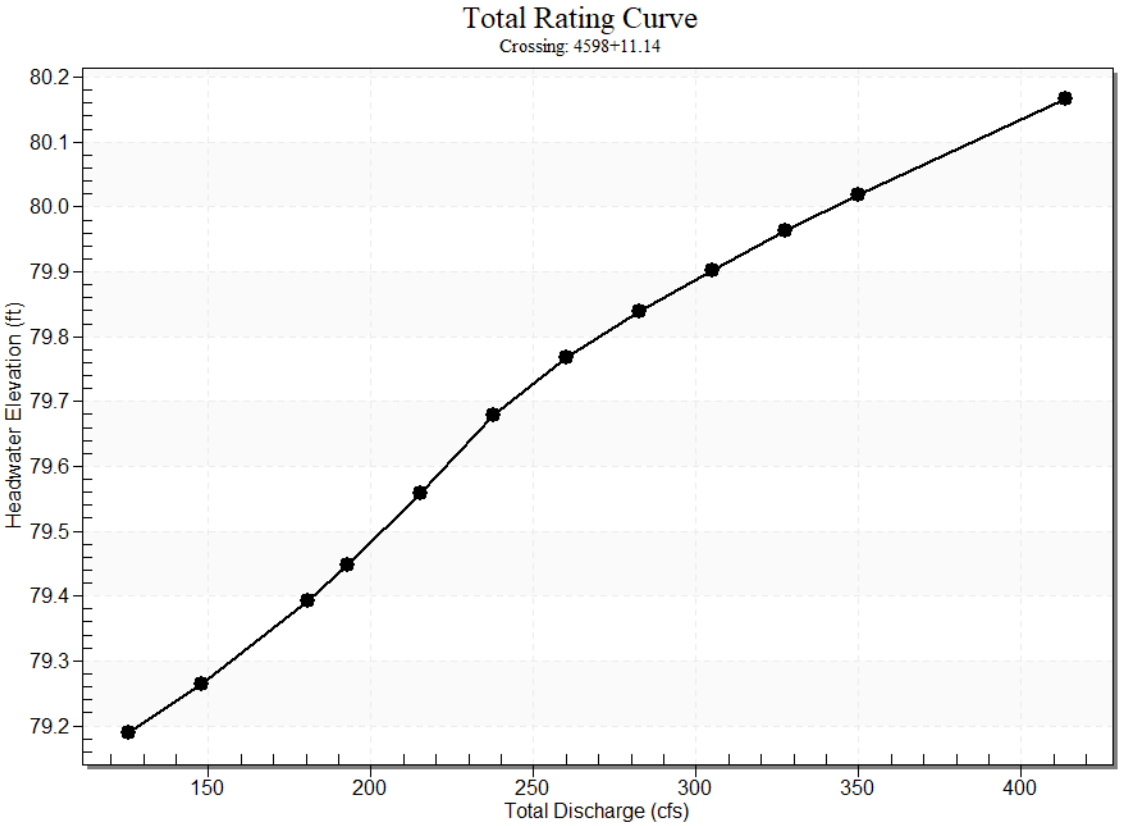
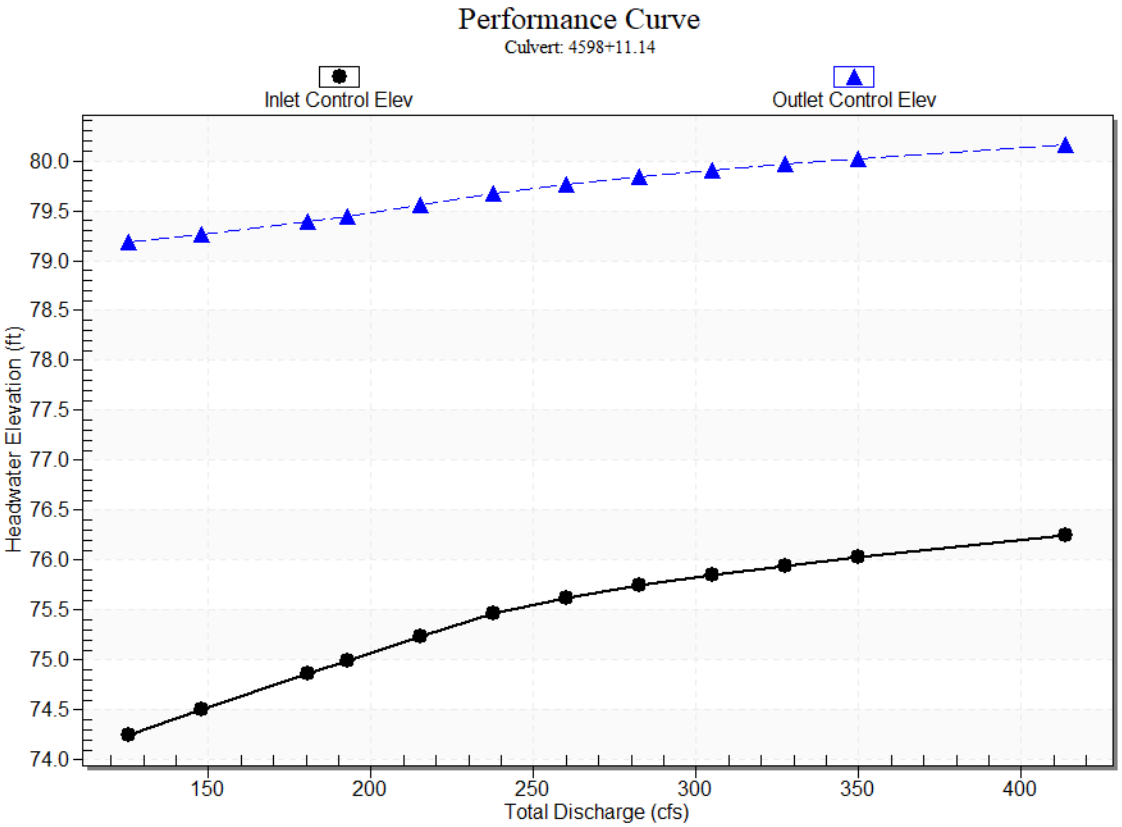


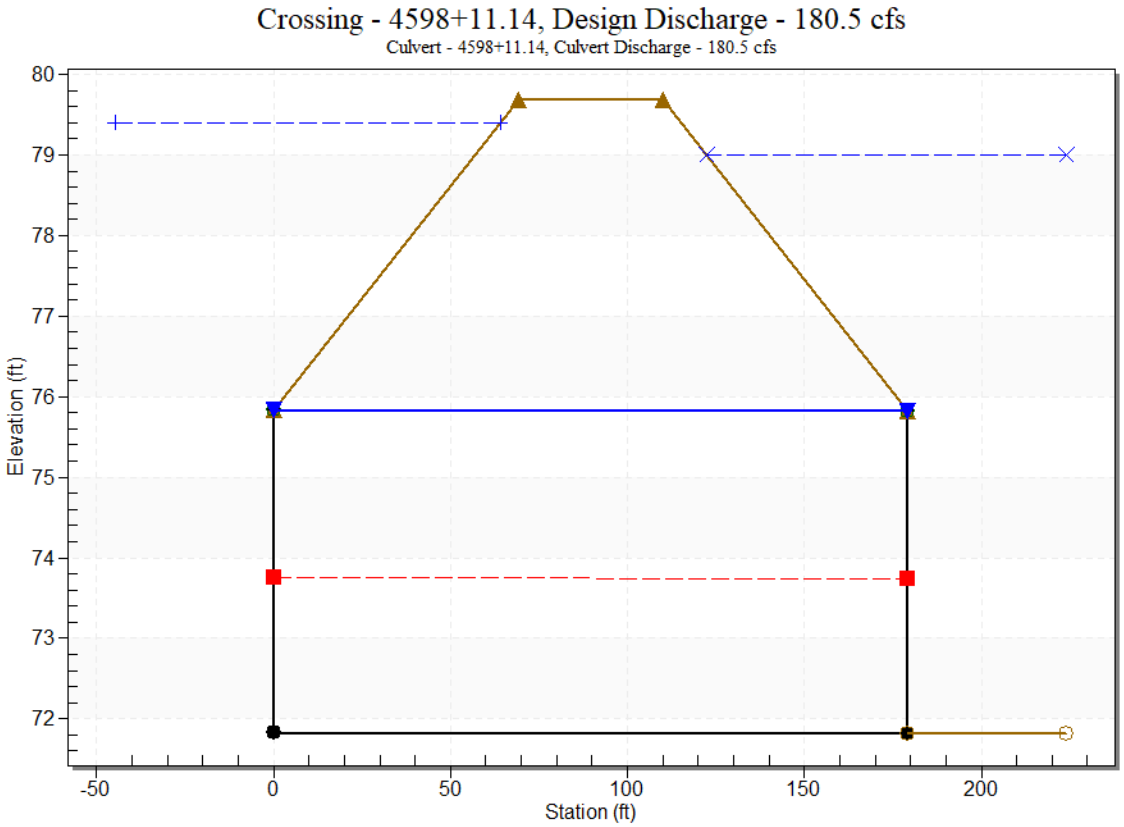
Table 5 - Culvert Summary Table: 4598+11.14

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
125.47	125.47	79.19	2.41	7.354	1.84	4-FFf	4.00	1.50	4.00	7.18	2.61	0.00
147.92	147.92	79.26	2.67	7.428	1.86	4-FFf	4.00	1.68	4.00	7.18	3.08	0.00
180.46	180.46	79.39	3.03	7.556	1.89	4-FFf	4.00	1.92	4.00	7.18	3.76	0.00
192.83	192.83	79.45	3.16	7.612	1.90	4-FFf	4.00	2.00	4.00	7.18	4.02	0.00
215.28	215.28	79.56	3.40	7.722	1.93	4-FFf	4.00	2.15	4.00	7.18	4.48	0.00
237.73	237.51	79.68	3.63	7.843	1.96	4-FFf	4.00	2.30	4.00	7.18	4.95	0.00
260.18	252.50	79.77	3.79	7.932	1.98	4-FFf	4.00	2.40	4.00	7.18	5.26	0.00
282.63	263.82	79.84	3.91	8.002	2.00	4-FFf	4.00	2.47	4.00	7.18	5.50	0.00
305.09	273.77	79.90	4.01	8.067	2.02	4-FFf	4.00	2.53	4.00	7.18	5.70	0.00
327.54	282.68	79.96	4.11	8.127	2.03	4-FFf	4.00	2.58	4.00	7.18	5.89	0.00
349.99	290.83	80.02	4.19	8.183	2.05	4-FFf	4.00	2.63	4.00	7.18	6.06	0.00
413.62	311.15	80.17	4.41	8.330	2.08	4-FFf	4.00	2.75	4.00	7.18	6.48	0.00

Culvert Performance Curve Plot: 4598+11.14



Water Surface Profile Plot for Culvert: 4598+11.14



Site Data - 4598+11.14

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 71.84 ft
Outlet Station: 179.33 ft
Outlet Elevation: 71.82 ft
Number of Barrels: 2

Culvert Data Summary - 4598+11.14

Barrel Shape: Concrete Box
Barrel Span: 6.00 ft
Barrel Rise: 4.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 6 - Downstream Channel Rating Curve (crossing: 4598+11.14)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
125.47	79.00	7.18
147.92	79.00	7.18
180.46	79.00	7.18
192.83	79.00	7.18
215.28	79.00	7.18
237.73	79.00	7.18
260.18	79.00	7.18
282.63	79.00	7.18
305.09	79.00	7.18
327.54	79.00	7.18
349.99	79.00	7.18

Tailwater Channel Data for Crossing: 4598+11.14

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 79.00 ft

Roadway Data for crossing: 4598+11.14

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 79.68 ft
Roadway Surface: Paved
Roadway Top Width: 40.90 ft

Crossing 4629+38.27

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 234.29 cfs
Design Flow: 306.30 cfs
Maximum Flow: 528.61 cfs

Table 1 - Summary of Culvert Flows at crossing: 4629+38.27

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
77.59	234.29	234.29	0.00	1
77.66	263.72	263.72	0.00	1
77.79	306.30	306.30	0.00	1
77.84	322.59	322.59	0.00	1
77.95	352.02	352.02	0.00	1
78.06	381.45	381.45	0.00	1
78.18	410.88	410.88	0.00	1
78.31	440.31	440.31	0.00	1
78.45	469.75	469.75	0.00	1
78.60	499.18	499.18	0.00	1
78.75	528.61	528.61	0.00	1
80.32	761.66	761.66	0.00	Overtopping

Rating Curve Plot for crossing: 4629+38.27

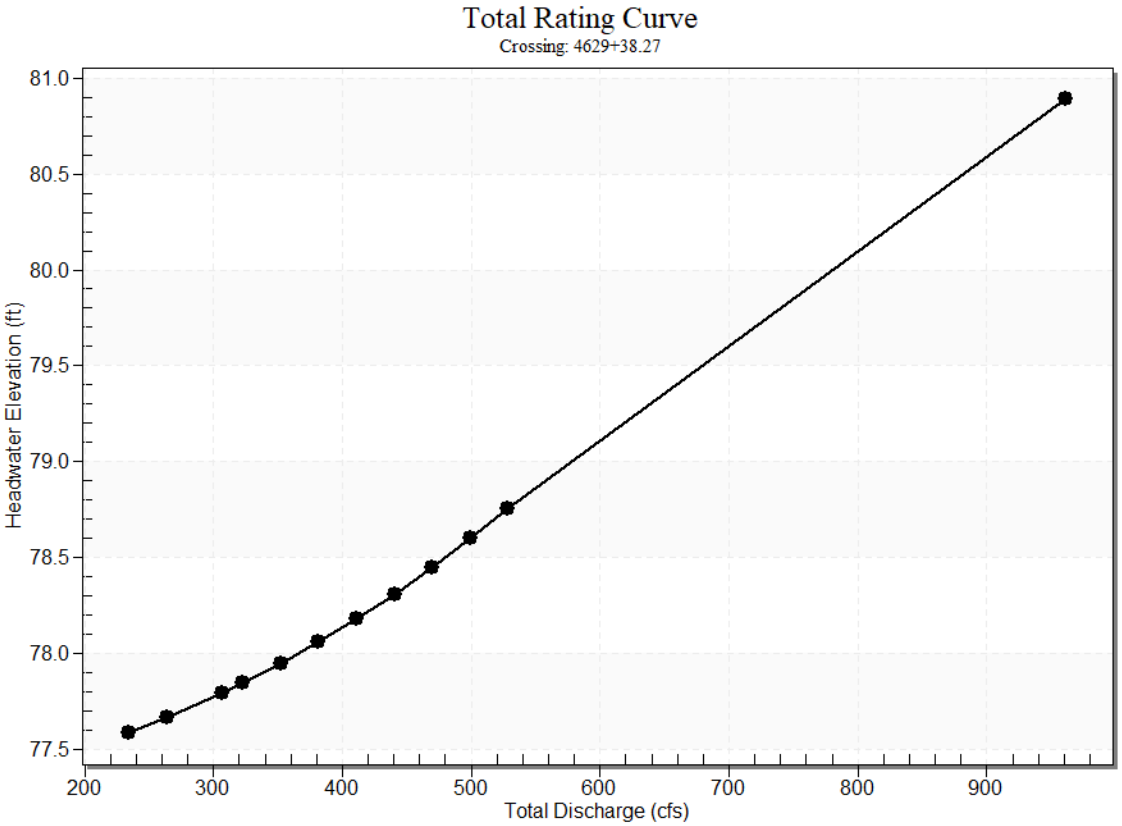
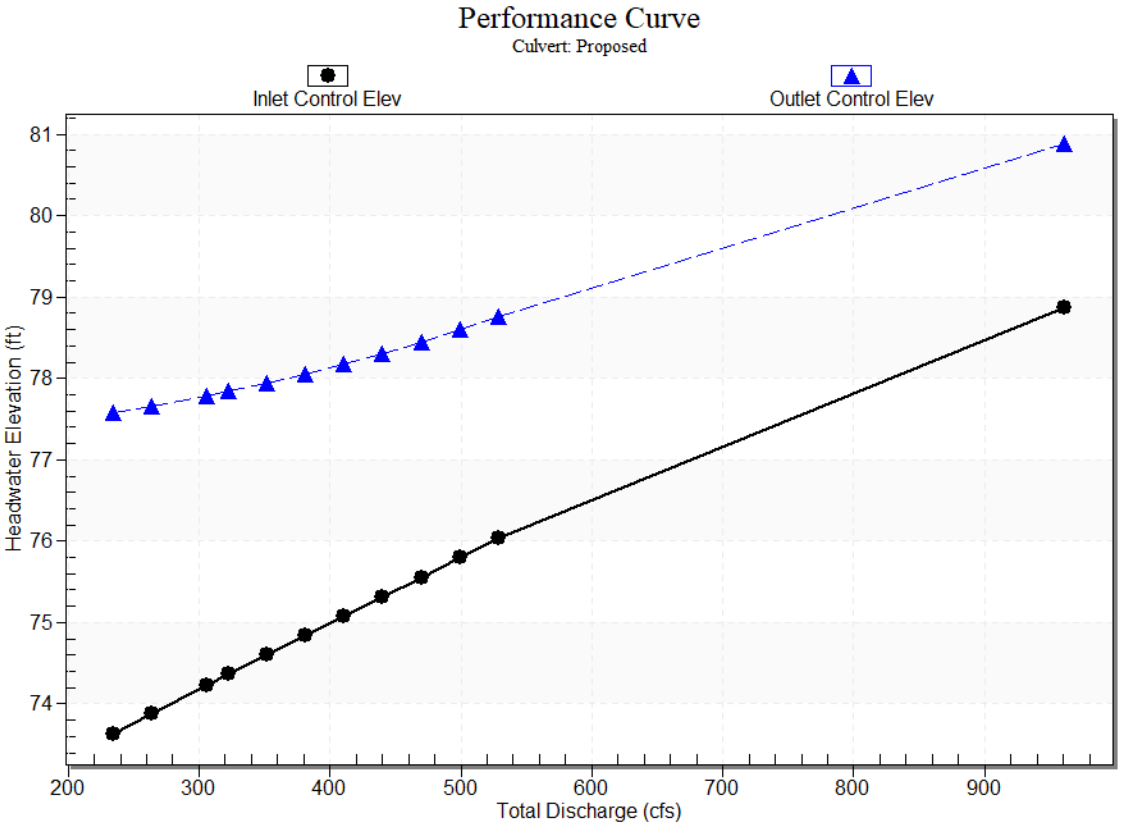


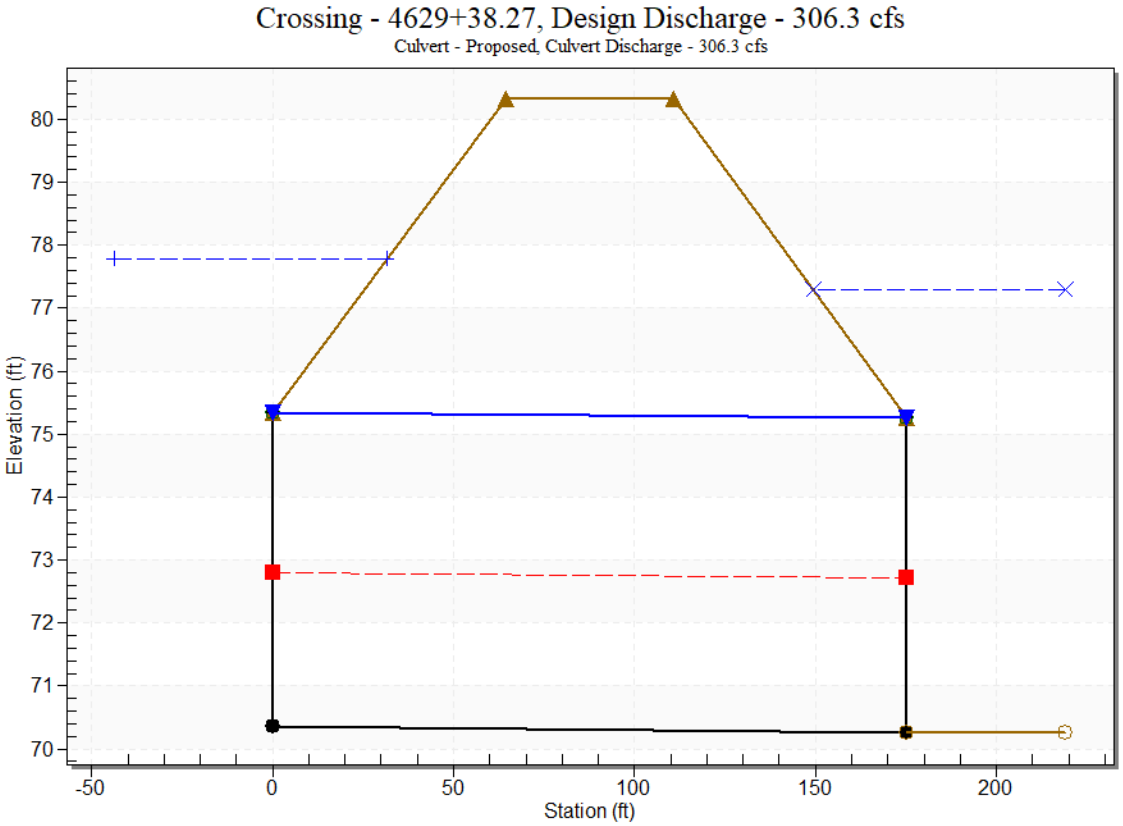
Table 2 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
234.29	234.29	77.59	3.27	7.236	1.45	4-FFf	3.98	2.06	5.00	7.04	3.35	0.00
263.72	263.72	77.66	3.53	7.312	1.46	4-FFf	4.36	2.23	5.00	7.04	3.77	0.00
306.30	306.30	77.79	3.88	7.438	1.49	4-FFf	5.00	2.46	5.00	7.04	4.38	0.00
322.59	322.59	77.84	4.02	7.492	1.50	4-FFf	5.00	2.55	5.00	7.04	4.61	0.00
352.02	352.02	77.95	4.26	7.595	1.52	4-FFf	5.00	2.70	5.00	7.04	5.03	0.00
381.45	381.45	78.06	4.49	7.707	1.54	4-FFf	5.00	2.85	5.00	7.04	5.45	0.00
410.88	410.88	78.18	4.73	7.829	1.57	4-FFf	5.00	2.99	5.00	7.04	5.87	0.00
440.31	440.31	78.31	4.97	7.959	1.59	4-FFf	5.00	3.13	5.00	7.04	6.29	0.00
469.75	469.75	78.45	5.20	8.099	1.62	4-FFf	5.00	3.27	5.00	7.04	6.71	0.00
499.18	499.18	78.60	5.44	8.247	1.65	4-FFf	5.00	3.41	5.00	7.04	7.13	0.00
528.61	528.61	78.75	5.69	8.405	1.68	4-FFf	5.00	3.54	5.00	7.04	7.55	0.00
961.11	830.52	80.89	8.52	10.541	2.11	4-FFf	5.00	4.78	5.00	7.04	11.86	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 70.35 ft
Outlet Station: 175.33 ft
Outlet Elevation: 70.26 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 7.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (crossing: 4629+38.27)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
234.29	77.30	7.04
263.72	77.30	7.04
306.30	77.30	7.04
322.59	77.30	7.04
352.02	77.30	7.04
381.45	77.30	7.04
410.88	77.30	7.04
440.31	77.30	7.04
469.75	77.30	7.04
499.18	77.30	7.04
528.61	77.30	7.04

Tailwater Channel Data for Crossing: 4629+38.27

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 77.30 ft

Roadway Data for crossing: 4629+38.27

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 80.32 ft
Roadway Surface: Paved
Roadway Top Width: 46.01 ft

Crossing 4724+09.97

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 61.50 cfs
Design Flow: 95.36 cfs
Maximum Flow: 188.93 cfs

Table 4 - Summary of Culvert Flows at crossing: 4724+09.97

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
82.93	61.50	61.50	0.00	1
82.97	74.24	74.24	0.00	1
83.02	86.99	86.99	0.00	1
83.05	95.36	95.36	0.00	1
83.13	112.47	112.47	0.00	1
83.20	125.22	125.22	0.00	1
83.28	137.96	137.96	0.00	1
83.37	150.70	150.70	0.00	1
83.46	163.44	163.44	0.00	1
83.56	176.19	176.19	0.00	1
83.67	188.93	188.93	0.00	1
86.17	379.05	379.05	0.00	Overtopping

Rating Curve Plot for crossing: 4724+09.97

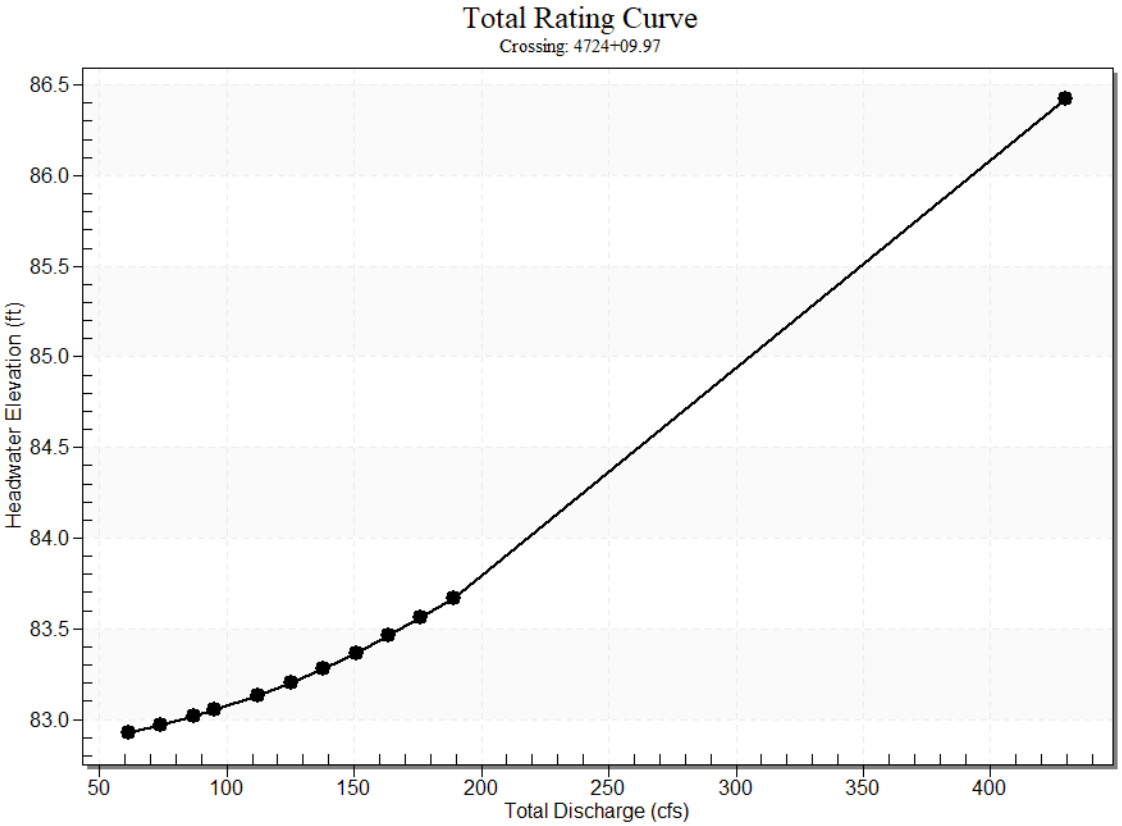
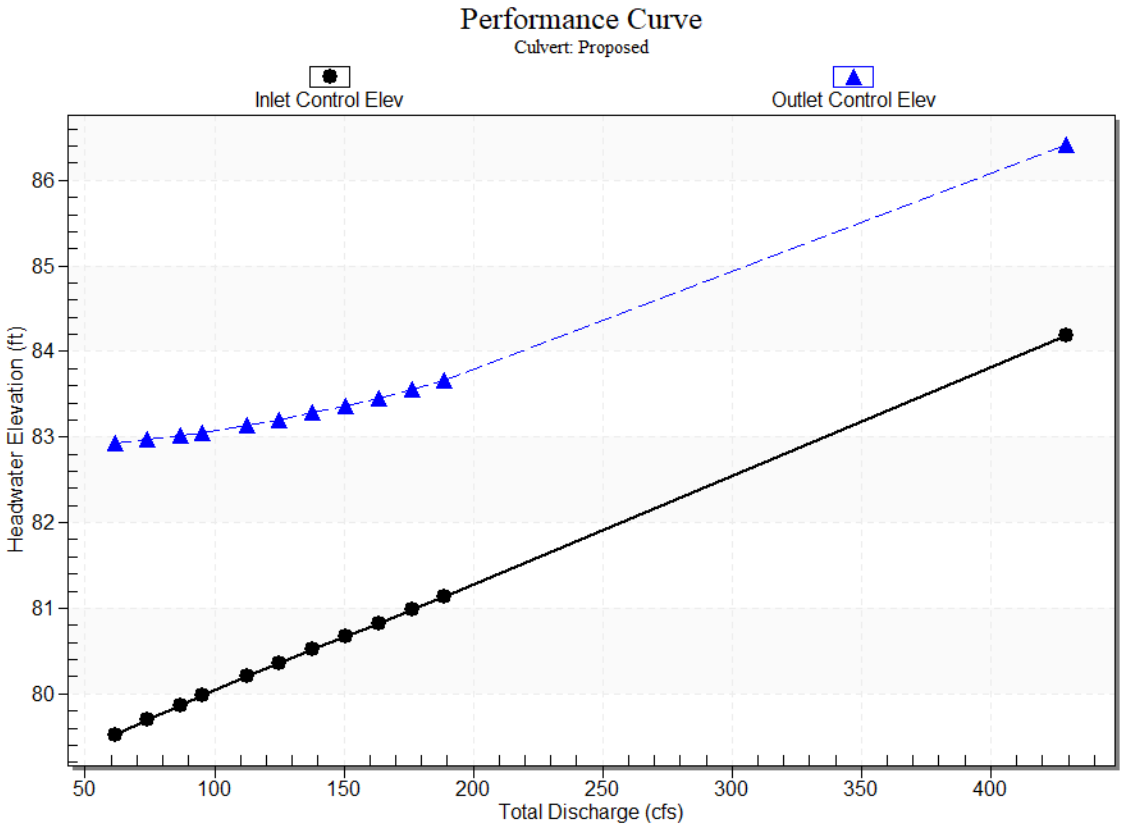


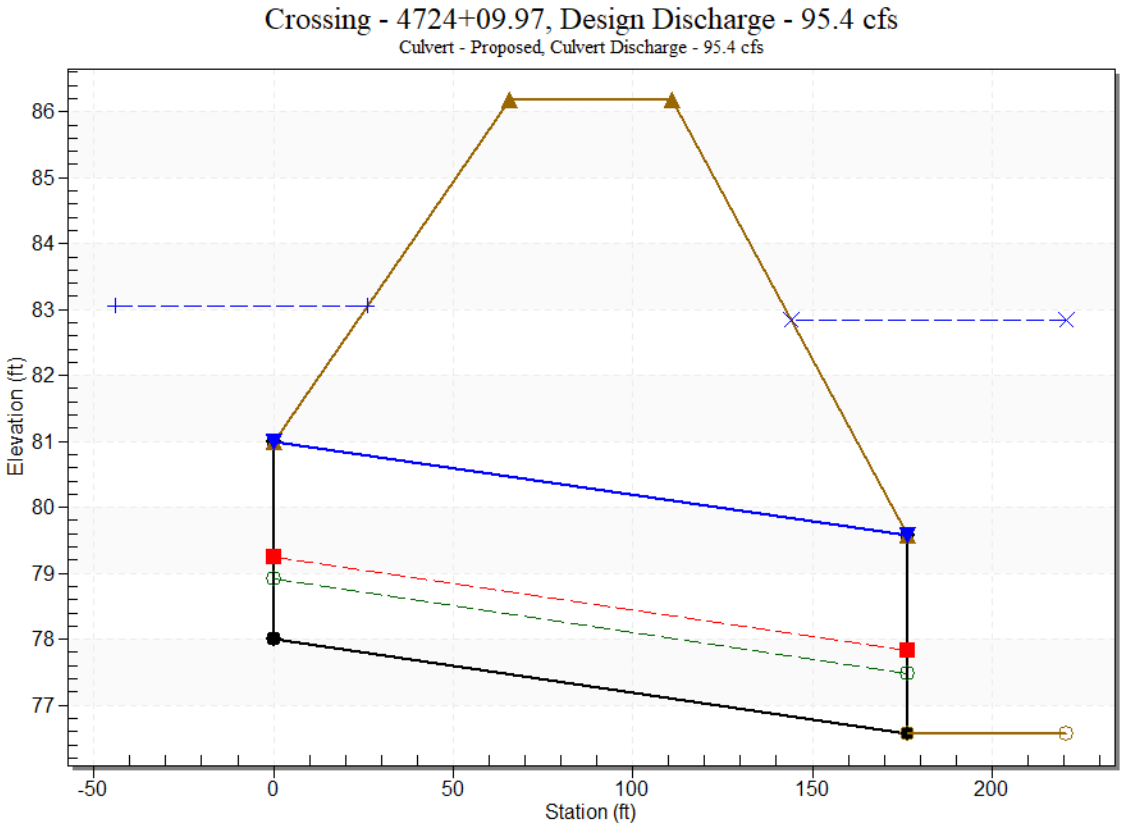
Table 5 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
61.50	61.50	82.93	1.51	4.928	1.64	4-FFf	0.68	0.93	3.00	6.27	1.71	0.00
74.24	74.24	82.97	1.69	4.968	1.66	4-FFf	0.77	1.06	3.00	6.27	2.06	0.00
86.99	86.99	83.02	1.87	5.016	1.67	4-FFf	0.85	1.18	3.00	6.27	2.42	0.00
95.36	95.36	83.05	1.98	5.051	1.68	4-FFf	0.91	1.25	3.00	6.27	2.65	0.00
112.47	112.47	83.13	2.20	5.134	1.71	4-FFf	1.01	1.40	3.00	6.27	3.12	0.00
125.22	125.22	83.20	2.36	5.204	1.73	4-FFf	1.09	1.50	3.00	6.27	3.48	0.00
137.96	137.96	83.28	2.52	5.282	1.76	4-FFf	1.16	1.60	3.00	6.27	3.83	0.00
150.70	150.70	83.37	2.67	5.367	1.79	4-FFf	1.23	1.70	3.00	6.27	4.19	0.00
163.44	163.44	83.46	2.82	5.460	1.82	4-FFf	1.30	1.79	3.00	6.27	4.54	0.00
176.19	176.19	83.56	2.98	5.561	1.85	4-FFf	1.37	1.88	3.00	6.27	4.89	0.00
188.93	188.93	83.67	3.13	5.669	1.89	4-FFf	1.44	1.97	3.00	6.27	5.25	0.00
429.39	392.78	86.42	6.19	8.422	2.81	4-FFf	2.41	3.00	3.00	6.27	10.91	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 78.00 ft
Outlet Station: 176.67 ft
Outlet Elevation: 76.57 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 6.00 ft
Barrel Rise: 3.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 6 - Downstream Channel Rating Curve (crossing: 4724+09.97)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
61.50	82.84	6.27
74.24	82.84	6.27
86.99	82.84	6.27
95.36	82.84	6.27
112.47	82.84	6.27
125.22	82.84	6.27
137.96	82.84	6.27
150.70	82.84	6.27
163.44	82.84	6.27
176.19	82.84	6.27
188.93	82.84	6.27

Tailwater Channel Data for Crossing: 4724+09.97

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 82.84 ft

Roadway Data for crossing: 4724+09.97

Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 86.17 ft
Roadway Surface: Paved
Roadway Top Width: 45.13 ft

Crossing 4793+50.90

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow
Minimum Flow: 234.29 cfs
Design Flow: 316.44 cfs
Maximum Flow: 548.49 cfs

Table 1 - Summary of Culvert Flows at crossing: 4793+50.90

Headwater Elevation (ft)	Total Discharge (cfs)	Proposed Discharge (cfs)	Roadway Discharge (cfs)	Iterations
83.27	234.29	234.29	0.00	1
83.31	265.71	265.71	0.00	1
83.36	297.13	297.13	0.00	1
83.40	316.44	316.44	0.00	1
83.48	359.97	359.97	0.00	1
83.55	391.39	391.39	0.00	1
83.62	422.81	422.81	0.00	1
83.71	454.23	454.23	0.00	1
83.80	485.65	485.65	0.00	1
83.90	517.07	517.07	0.00	1
84.02	548.49	548.49	0.00	1
86.70	1049.38	1049.38	0.00	Overtopping

Rating Curve Plot for crossing: 4793+50.90

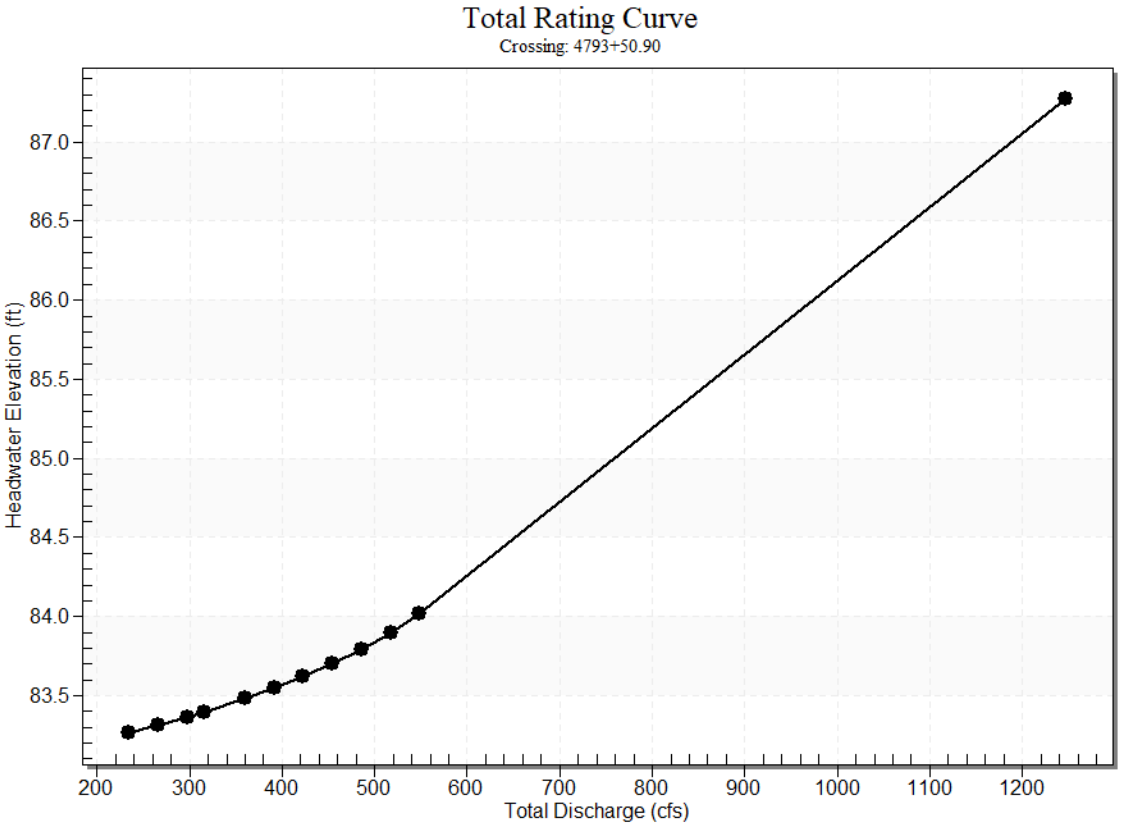
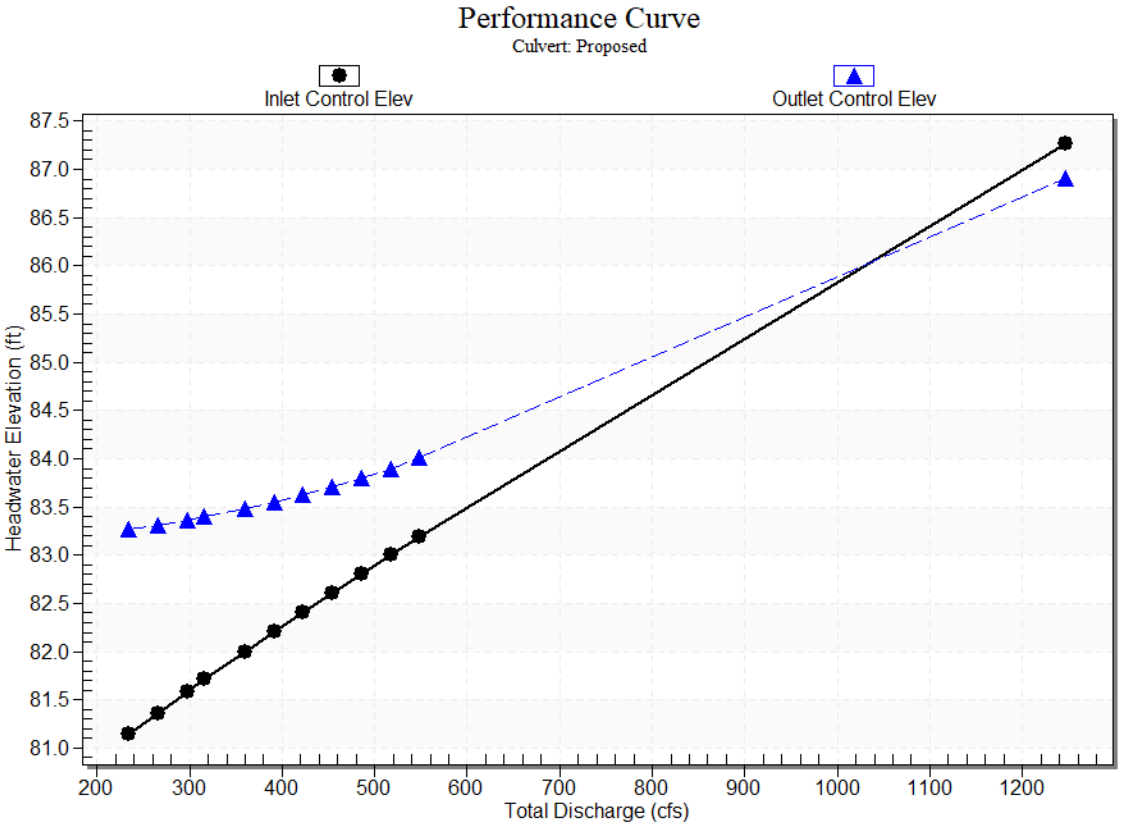


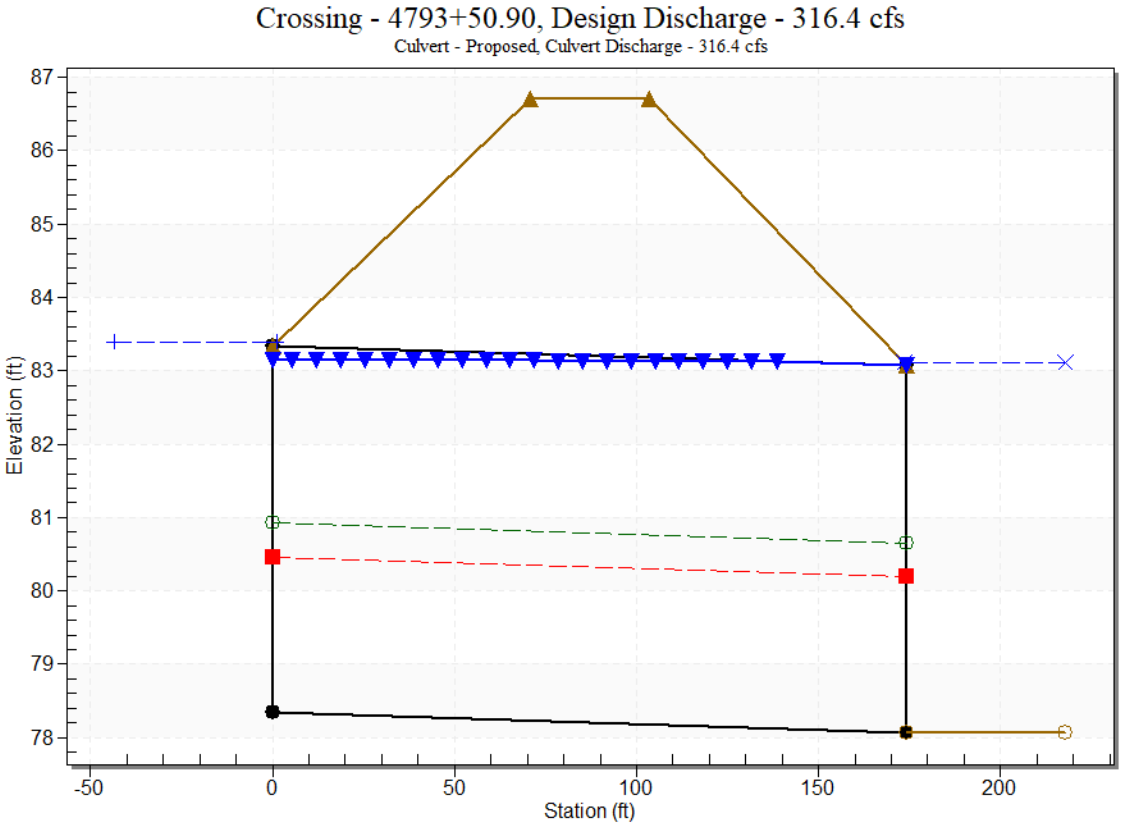
Table 2 - Culvert Summary Table: Proposed

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	HW / D (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
234.29	234.29	83.27	2.80	4.927	0.99	3-M1f	2.10	1.74	5.00	5.04	2.60	0.00
265.71	265.71	83.31	3.02	4.972	0.99	3-M1f	2.29	1.89	5.00	5.04	2.95	0.00
297.13	297.13	83.36	3.24	5.023	1.00	3-M1f	2.47	2.04	5.00	5.04	3.30	0.00
316.44	316.44	83.40	3.37	5.057	1.01	3-M1f	2.59	2.13	5.00	5.04	3.52	0.00
359.97	359.97	83.48	3.66	5.142	1.03	3-M1f	2.83	2.32	5.00	5.04	4.00	0.00
391.39	391.39	83.55	3.87	5.210	1.04	3-M1f	3.01	2.45	5.00	5.04	4.35	0.00
422.81	422.81	83.62	4.07	5.285	1.06	3-M1f	3.18	2.58	5.00	5.04	4.70	0.00
454.23	454.23	83.71	4.26	5.366	1.07	3-M1f	3.35	2.70	5.00	5.04	5.05	0.00
485.65	485.65	83.80	4.46	5.455	1.09	3-M1f	3.51	2.83	5.00	5.04	5.40	0.00
517.07	517.07	83.90	4.66	5.555	1.11	3-M1f	3.68	2.95	5.00	5.04	5.75	0.00
548.49	548.49	84.02	4.85	5.677	1.14	3-M1f	3.84	3.07	5.00	5.04	6.09	0.00
1246.57	1116.38	87.27	8.93	8.561	1.79	4-FFf	5.00	4.93	5.00	5.04	12.40	0.00

Culvert Performance Curve Plot: Proposed



Water Surface Profile Plot for Culvert: Proposed



Site Data - Proposed

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 78.34 ft
Outlet Station: 174.34 ft
Outlet Elevation: 78.07 ft
Number of Barrels: 2

Culvert Data Summary - Proposed

Barrel Shape: Concrete Box
Barrel Span: 9.00 ft
Barrel Rise: 5.00 ft
Barrel Material: Concrete
Embedment: 0.00 in
Barrel Manning's n: 0.0120
Culvert Type: Straight
Inlet Configuration: 1:1 Bevel Headwall (Ke=0.2)
Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (crossing: 4793+50.90)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)
234.29	83.11	5.04
265.71	83.11	5.04
297.13	83.11	5.04
316.44	83.11	5.04
359.97	83.11	5.04
391.39	83.11	5.04
422.81	83.11	5.04
454.23	83.11	5.04
485.65	83.11	5.04
517.07	83.11	5.04
548.49	83.11	5.04

Tailwater Channel Data for Crossing: 4793+50.90

Tailwater Channel Option: Enter Constant Tailwater Elevation
Constant Tailwater Elevation: 83.11 ft

Roadway Data for crossing: 4793+50.90

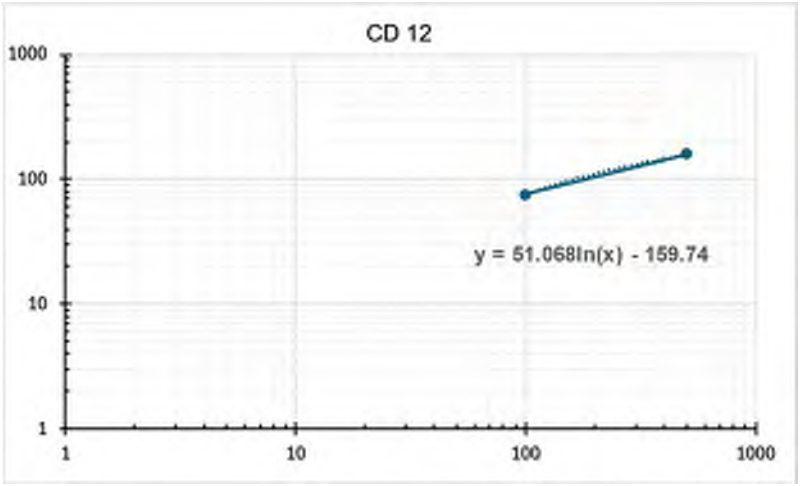
Roadway Profile Shape: Constant Roadway Elevation
Crest Length: 100.00 ft
Crest Elevation: 86.70 ft
Roadway Surface: Paved
Roadway Top Width: 33.00 ft

Existing														HY8 Output					
Sta	Culvert Type	Culvert Size	Length	US Inv	DS Inv	Slope	Drainage Area (acres)	Equation	Drainage Area (miles^2)	ST	Q_{50}	Q_{100}	Q_{500}	Q_{50}	Q_{100}	Q_{500}	$Stage_{50}$	$Stage_{100}$	$Stage_{500}$
4177+65.60	Box	(2) 8'W x 6'H	85.85	57.79	55.56	0.025976	1588.16	Regression	2.4815	10.28800625	518	626	909	518.00	626.00	908.75	62.75	63.45	65.31
4201+67.22	Circular	(3) 42"	90.65	60.34	60.12	0.002427	155.24	Regression	0.2425625	8.084256635	137	166	242	137.00	166.00	242.00	64.20	64.47	65.42
4297+11.54	Circular	(3) 48"	90.32	60.02	59.65	0.004097	216.32	Regression	0.338	4.978735207	199	242	354	199.00	242.00	354.00	64.32	64.66	65.82
4384+54.40	Box	(2) 6'W x 7'H	89	64.15	64.02	0.001461	304.5	Regression	0.47578125	4.922824302	246	299	437	246.00	299.00	437.00	71.28	71.29	71.61
4572+61.46	Box	8'W x 6'H	88.14	70.56	70.41	0.001702	Q generated from HY8 based on bridge class crossing at sta 4517+50				193.99	256.60	439.52	193.99	256.60	398.48	78.85	79.11	79.98
4595+39.13	Box	4'W x 5'H	83.38	72.08	71.82	0.003118					48.97	75.43	157.62	48.97	75.43	142.21	79.14	79.33	80.18
4598+11.14	Box	8'W x 5'H	85.06	71.55	71.54	0.000118					125.47	180.46	349.99	125.47	180.46	309.69	79.21	79.44	80.30
4629+38.27	Box	9'W x 7'H	84.76	70.31	70.27	0.000472					234.29	306.30	528.61	234.29	306.30	528.61	77.59	77.79	78.77
4724+09.97	Box	8'W x 4'H	86.16	79.11	76.57	0.02948	Q generated from HY8 based on bridge class crossing at sta 4846+50				61.50	95.36	188.93	61.50	95.36	188.93	82.92	83.04	83.63
4793+50.90	Box	(2) 9'W x 5'H	85.27	78.34	78.11	0.002697					234.29	316.44	548.49	234.29	316.44	548.49	83.25	83.51	83.91
4517+54.96	**Bridge/Box**	(3) 8'W x 9'H	57.84	66.22	66.07	0.002593	12495.5347	Regression	19.52427297	5.3766	2294.85	2773.24	4068.78	1692.28	1954.21	2593.08	74.77	75.64	77.95
4846+36.30	**Bridge/Box**	(4) 12'W x 7'H	57.3	75.6	75.53	0.001222	13495.8042	Regression	21.08719406	8.9157	2010.38	2423.92	3536.20	1714.21	2012.25	2798.57	81.05	81.66	83.17

Proposed														HY8 Output					
Sta	Culvert Type	Culvert Size	Length	US Inv	DS Inv	Slope	Drainage Area (acres)	Equation	Drainage Area (miles^2)	ST	Q_{50}	Q_{100}	Q_{500}	Q_{50}	Q_{100}	Q_{500}	$Stage_{50}$	$Stage_{100}$	$Stage_{500}$
4177+65.60	Box	(2) 9'W x 5'H	175.33	55.99	55.54	0.002567	1588.16	Regression	2.4815	10.28800625	518	626	909	518.00	626.00	909.00	62.38	62.75	64.08
4201+67.22	Box	(3) 4'W x 3'H	171.67	60.52	60.12	0.00233	155.24	Regression	0.2425625	8.084256635	137	166	242	137.00	166.00	242.00	64.09	64.31	65.08
4297+11.54	Box	(3) 4'W x 3'H	174.67	60.37	59.65	0.004122	216.32	Regression	0.338	4.978735207	199	242	354	199.00	242.00	354.00	64.26	64.55	65.57
4384+54.40	Box	(2) 9'W x 5'H	171.84	64.19	64.02	0.000989	304.5	Regression	0.47578125	4.922824302	246	299	437	246.00	299.00	437.00	71.20	71.29	71.60
4572+61.46	Box	(2) 6'W x 5'H	177.34	70.68	70.38	0.001692	Q generated from HY8 based on bridge class crossing at sta 4517+50				193.99	256.60	439.52	193.99	256.60	439.52	78.77	78.98	79.91
4595+39.13	Box	6'W x 4'H	177.67	72.29	71.757	0.003					48.97	75.43	157.62	48.97	75.43	134.10	79.12	79.27	79.86
4598+11.14	Box	(2) 6'W x 4'H	179.33	71.836	71.818	0.0001					125.47	180.46	349.99	125.47	180.46	290.83	79.19	79.39	80.02
4629+38.27	Box	(2) 6'W x 5'H	175.33	70.35	70.262	0.000502					234.29	306.30	528.61	234.29	306.30	528.61	77.59	77.79	78.75
4724+09.97	Box	(2) 6'W x3'H	176.67	78	76.57	0.008094	Q generated from HY8 based on bridge class crossing at sta 4846+50				61.50	95.36	188.93	61.50	95.36	188.93	82.93	83.05	83.67
4793+50.90	Box	(2) 9'W x 5'H	174.34	78.54	78.07	0.002696					234.29	316.44	548.49	234.29	316.44	548.49	83.27	83.40	84.02

Note: Flows to each cross drain generated using USGS Regression Equations - Natural Flow Conditions - Region 4

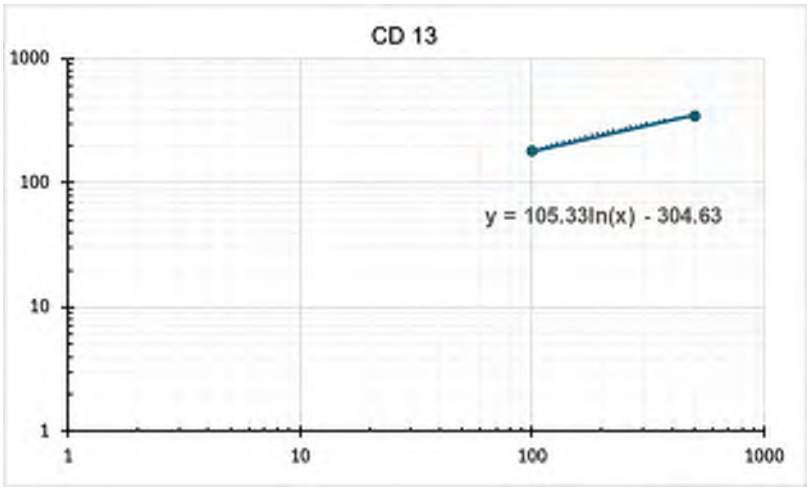
CD-12 Overtopping Storm Event Calculations: 4595+39.13



Storm (yr)	Q (cfs)
50	48.97
100	75.43
500	157.62

Overtopping Discharge (cfs)	118.97
Overtopping Storm Event (yr)	235
PROBABILITY	0.43

CD-13 Overtopping Storm Event Calculations: 4598+10.45



Storm (yr)	Q (cfs)
50	125.47
100	180.46
500	349.99

Overtopping Discharge (cfs)	237.47
Overtopping Storm Event (yr)	172
PROBABILITY	0.58

APPENDIX 4

FLOODPLAIN CALCULATIONS

Floodplain Encroachment Calculations for Proposed Roadway Improvements

FIA #	Start STA.	End STA.	Side EB	100 Yr Elevation (feet, NAVD 88)	Borehole Name/ SHW	Borehole SHWL EL. (feet, NAVD 88)	Avg SHWL (ft)	Impacted Volume (Fill) 100 Yr-stage (acre-ft)	Impacted Volume (Fill) SHWL (acre-ft)	FPC Required (acre-ft)
FIA 1001	4299+15	4302+37	LT	66.83	SH10-5	62.50	62.50	1.21	0.01	**1.20**
FIA 1002-N	4344+20	4348+78	LT	69.65	SH10-14 SH10-15	65.50 65.90	65.70	2.83	0.00	**2.83**
FIA 1002-S	4344+20	4348+78	RT	69.65	SH10-14 SH10-15	65.50 65.90	65.70	1.03	0.00	**1.03**
FIA 1003	4486+79	4491+33	LT/RT	77.65	SH10-43 WLPT-596-R-3 SHW 3 WLPT-584-R-15	71.30 72.30 68.80 73.00	71.35	7.84	0.86	**6.97**
FIA 1004-1	4515+79	4517+41	LT/RT	77.50	SH10-48 SH10-49	72.00 72.30	72.15	3.42	1.31	**1.84**
FIA 1004-2	4517+41	4540+24	LT/RT	78.00	SH10-48 SH10-49 SH10-50 SH10-51 SH10-52 SH10-53	72.00 72.30 72.40 72.40 71.50 72.10	72.12	35.35	1.31	**34.04**
FIA 1005	4540+24	4579+86	LT/RT	78.50	SH10-54 SH10-55 SH10-56 SH10-57 SH10-58 SH10-59 SH10-60 SH10-61	71.90 72.00 71.20 72.80 72.00 73.30 73.20 73.50	72.49	43.03	0.78	**42.25**
FIA 1006	4579+86	4602+93	LT/RT	79.00	SH10-62 SH10-63 SH10-64 SH10-65 SH10-66	73.20 73.90 74.60 75.10 74.60	74.28	17.61	0.14	**17.46**
FIA 1007	4626+96	4632+77	LT/RT	80.00	SH10-71	75.80	75.80	5.42	0.33	**5.10**
FIA 1008	4668+48	4675+40	LT/RT	79.87	SH10-79 SH10-80	78.20 79.10	78.65	2.58	0.74	**1.84**
FIA 1009	4721+21	4726+87	LT/RT	82.84	SH10-90 SHW-824 SHW 6 POND 10-AB-35	81.50 80.60 78.00 79.40	79.88	3.06	0.89	**2.16**
FIA 1010	4840+07	4891+13	LT/RT	84.00	SH10-104 SH10-114 SH10-115 SH10-116 SH10-117 SH10-118 SH10-119 SH10-120 SH10-121 SH10-122 SH10-123 SH10-124	81.80 80.6 80.3 80.3 80.5 80.8 80.9 81.3 81.3 79.7 79.6 80	80.65	59.22	10.66	**48.55**
SMF 1005B	4531+46	4535+24	LT	78.00	Note [1]	Note [1]	72.12	0.38	0.00	**0.38**
Exist. FPC 1	4623+16	4629+26	LT	N/A	N/A	N/A	N/A	N/A	N/A	**0.402**
Exist. FPC 2	4629+48	4634+16	LT	N/A	N/A	N/A	N/A	N/A	N/A	
Exist. FPC 3	4720+47	4723+77	LT	N/A	N/A	N/A	N/A	N/A	N/A	**0.198**
Exist. FPC 4	4724+40	4731+27	LT	N/A	N/A	N/A	N/A	N/A	N/A	

Note:
[1] SHWL based on borings from FIA 1004-2

Floodplain Compensation Calculations														
FIA						FPC								
FPC Name	Avg SHWL @ FIA (ft)	Lowest Level of Fill (ft)	100-YR Floodplain EL. (ft)	FIA (acre-ft)	FPC Required (acre-ft) [1]	Bottom Elevation (ft)	Avg SHWL Elevation (ft)	Top Elevation (ft)	Avg Exist. Ground Elevation (ft)	Depth (ft)	Bottom Area (acre)	Top Area (acre)	Average Area (acre)	FPC Provided (acre-ft)
FPC 1001A	62.50	62.30	66.83	1.20	1.20	63.40	63.40	64.00	64.00	0.60	2.66	1.66	2.16	1.30
FPC 1002-N	65.70	65.47	69.65	2.83	2.83	66.60	66.60	68.48	68.48	1.88	2.51	0.56	1.54	2.89
FPC 1002-SB	65.70	65.83	69.65	1.03	1.03	67.00	67.00	68.73	68.73	1.73	0.89	0.35	0.62	1.07
FPC 1003A	71.35	65.99	77.65	6.97	6.97	71.23	71.23	72.48	72.48	1.25	5.66	5.70	5.68	7.08
FPC 1004B	72.15	62.34	77.50	1.84	35.88	74.06	74.06	75.50	75.50	1.44	30.09	23.38	26.73	38.49
FPC 1005C	72.49	71.18	78.50	42.25	42.25	74.74	74.74	76.00	76.00	1.26	37.88	29.44	33.66	42.41
FPC 1006A	74.28	70.51	79.00	17.46	17.46	75.51	75.51	76.80	76.80	1.29	17.33	14.14	15.74	20.30
FPC 1007C	75.80	71.15	80.00	5.10	5.31	75.13	75.13	77.00	77.00	1.87	3.82	2.92	3.37	6.30
FPC 1008A	78.65	71.29	79.87	1.84	1.84	78.50	78.50	79.87	80.00	1.37	2.22	1.22	1.72	2.36
FPC 1009C	79.88	73.14	82.84	2.16	2.27	81.30	81.30	82.84	83.00	1.54	1.51	1.61	1.56	2.40
FPC 1010B	80.65	72.77	84.00	48.55	48.55	80.78	80.78	82.10	82.10	1.32	43.42	35.32	39.37	51.97

Note:

[1] FPC 1007 and FPC 1009 include additional required compensation volume of 0.213 ac-ft and 0.109 ac-ft, respectively to mitigate impacts to existing FPC areas.

Site Specific Estimated Seasonal High Water Level - Elevations												
FPC	boring 2	boring 3	boring 4	boring 5	boring 6	boring 7	boring 8	boring 9	boring 10	boring 11	boring 12	AVG SHWL EL
FPC 1001A												**63.40**
FPC 1002-NA	66.60	67.10										**66.60**
FPC 1002-SB	67.50											**67.00**
FPC 1003A	71.00	71.60										**71.23**
FPC 1004B	74.10	73.20	73.10	73.80	75.00	72.70	72.70	74.90	75.10	75.20	74.9	**74.06**
FPC 1005C	75.00	74.90	75.20	74.90	75.10	74.00						**74.74**
FPC 1006A	75.00	76.20	75.70	75.00	75.60	75.50	75.60					**75.51**
FPC 1007C	74.90	75.10										**75.13**
FPC 1008A												**78.50**
FPC 1009C												**81.30**
FPC 1010B	81.10	81.20	80.40	81.30	81.10							**80.78**

Site Specific Estimated Seasonal High Water Level - Borings											
FPC	boring 2	boring 3	boring 4	boring 5	boring 6	boring 7	boring 8	boring 9	boring 10	boring 11	boring 12
FPC 1001A											
FPC 1002-NA	PBA-71	PBA-72									
FPC 1002-SB	PBA-74										
FPC 1003A	PBA-97	PBA-96									
FPC 1004B	PBA-111	PBA-112	PBA-113	PBA-114	PBA-115	PBA-116	PBA-117	PBA-118	PBA-119	PBA-120	PBA-121
FPC 1005C	PBA-115	PBA-118	PBA-120	PBA-121	PBA-119	PBA-110					
FPC 1006A	PBA-135	PBA-137	PBA-139	PBA-138	PBA-142	PBA-143	PBA-144				
FPC 1007C	PBA-147	PBA-148									
FPC 1008A											
FPC 1009C											
FPC 1010B	PBA-195	PBA-193	PBA-196	PBA-192	PBA-194						

APPENDIX 5

CROSS DRAIN PHOTOS

Exhibit 1.1: CD 3 SR 70 Facing North-East

Exhibit 1.2: CD 3 SR 70 Facing South-East

Exhibit 5.3: CD 4 SR 70 Facing North-East

Exhibit 5.4: CD 4 SR 70 Facing South-East

Exhibit 5.5: CD 5 SR 70 Facing North-West

Exhibit 5.6: CD 5 SR 70 Facing South-West

Exhibit 5.7: CD 6 SR 70 Facing North-West

Exhibit 5.8 CD 6 SR 70 Facing South-East

Exhibit 5.9 CD 11 SR 70 Facing South

Exhibit 5.10 CD 11 SR 70 Facing North

Exhibit 5.11 CD 12 SR 70 Facing South-East

Exhibit 5.12 CD 12 SR 70 Facing North-West

Exhibit 5.13 CD 13 SR 70 Facing North-East

Exhibit 5.14 CD 13 SR 70 Facing South-East

Exhibit 5.15 CD 14 SR 70 Facing North-East

Exhibit 5.16 CD 14 SR 70 Facing South-East

Exhibit 5.17 CD 15 SR 70 Facing South-West

Exhibit 5.18 CD 15 SR 70 Facing North-East

Exhibit 5.19 CD 16 SR 70 Facing North-East

Exhibit 5.20 CD 16 SR 70 Facing South-East

Exhibit 5.21 CD 17 SR 70 Facing North-West

Exhibit 5.22 CD 18 SR 70 Facing North-West

APPENDIX 6

DESOTO COUNTY SOIL SURVEY AND GEOTECHNICAL REPORTS

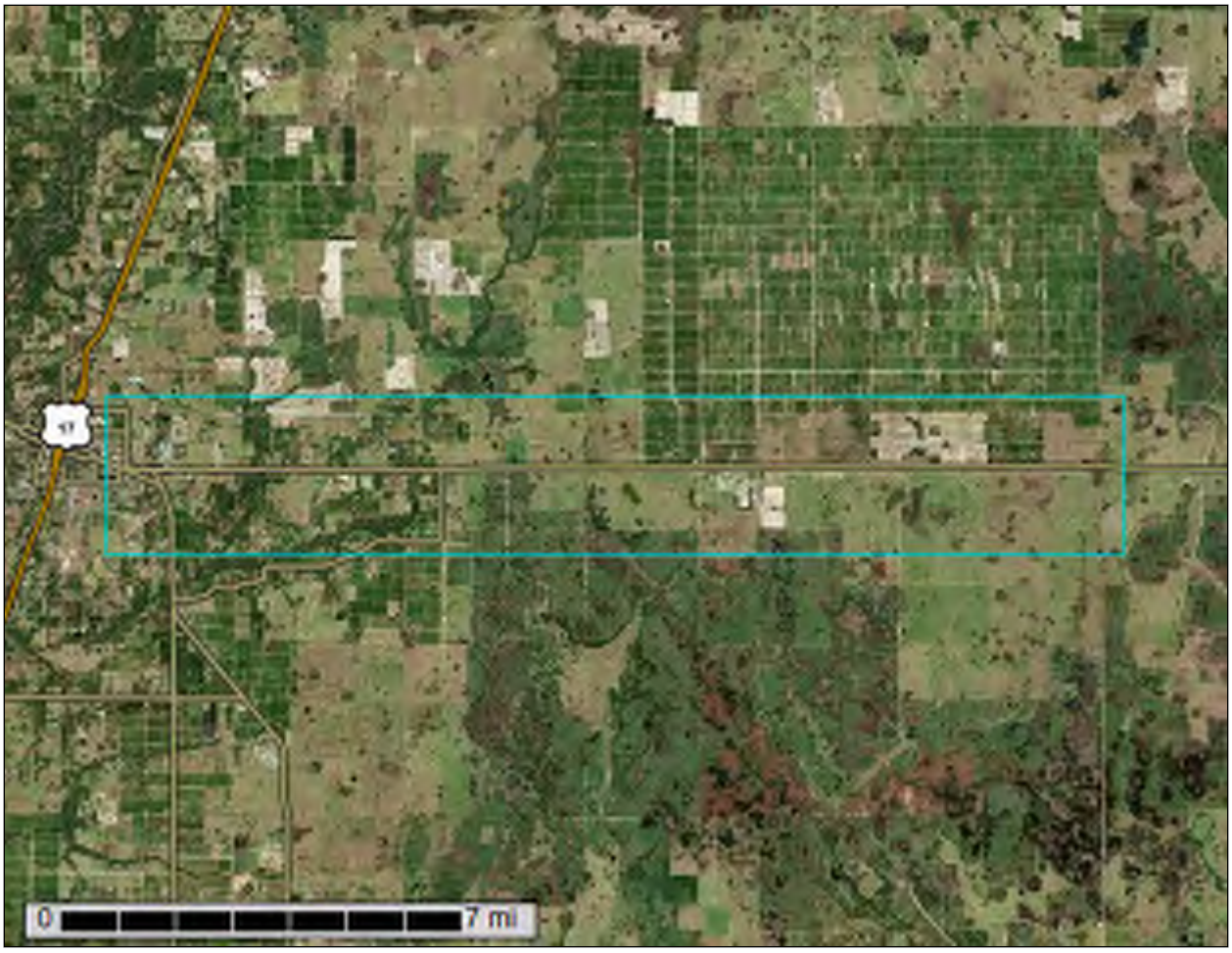
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for De Soto County, Florida, and Highlands County, Florida



May 15, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

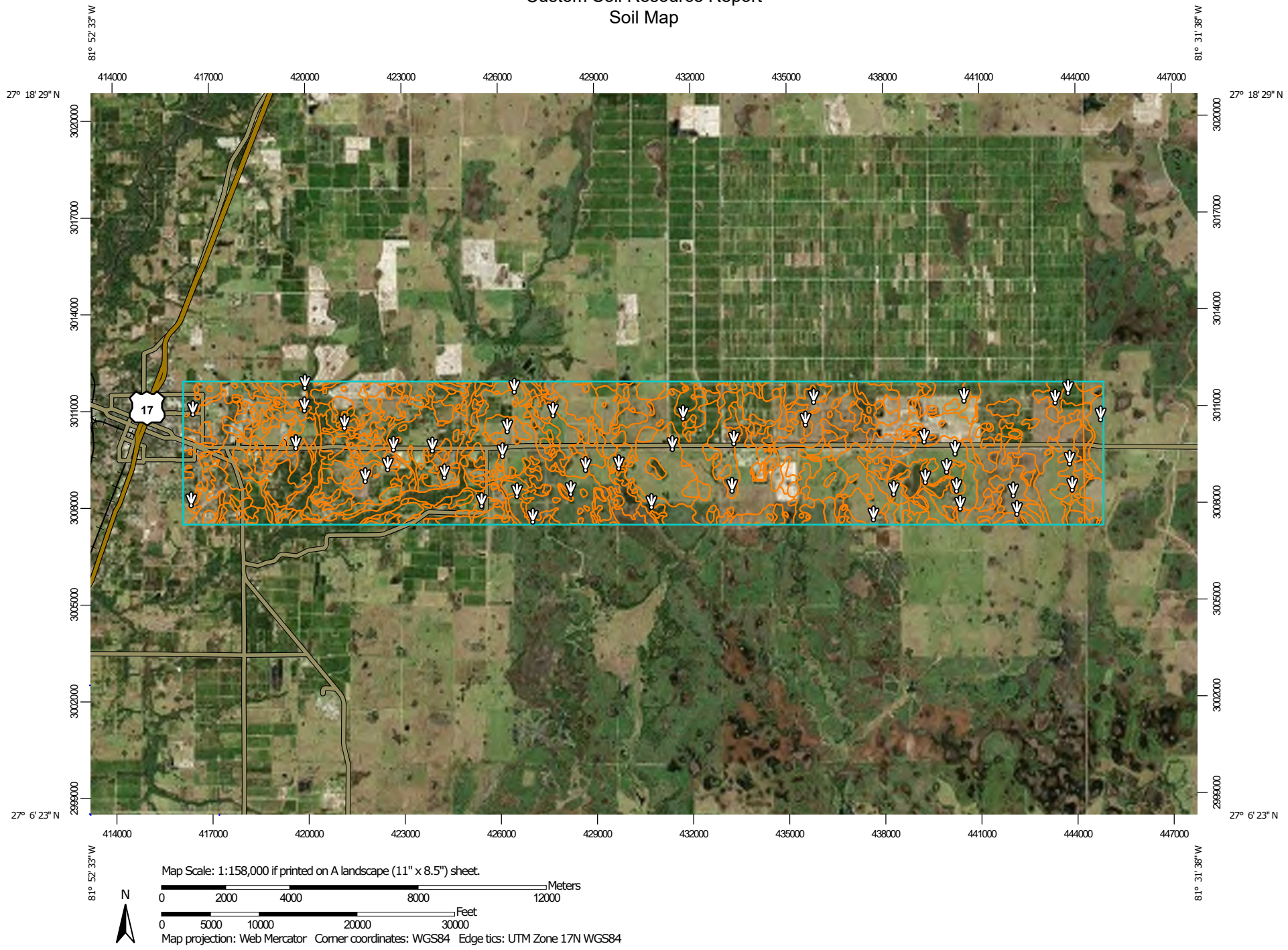
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: De Soto County, Florida
Survey Area Data: Version 21, Aug 21, 2024

Soil Survey Area: Highlands County, Florida
Survey Area Data: Version 24, Aug 21, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 30, 2022—Mar 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Anclote mucky fine sand, frequently ponded, 0 to 1 percent slopes	626.9	2.0%
3	Basinger fine sand, 0 to 2 percent slopes	2,289.1	7.2%
4	Basinger fine sand, frequently flooded	517.7	1.6%
5	Basinger fine sand, frequently ponded, 0 to 1 percent slopes	479.8	1.5%
6	Bradenton fine sand, 0 to 2 percent slopes	79.8	0.3%
10	Chobee muck, frequently ponded, 0 to 1 percent slopes	41.4	0.1%
11	Delray mucky fine sand, depressional	230.3	0.7%
13	EauGallie fine sand, 0 to 2 percent slopes	2,036.7	6.4%
14	Farmton fine sand, 0 to 2 percent slopes	3,325.9	10.5%
15	Felda fine sand, 0 to 2 percent slopes	201.2	0.6%
16	Felda fine sand, 0 to 2 percent slopes, frequently flooded	35.7	0.1%
17	Felda fine sand, frequently ponded, 0 to 1 percent slopes	55.9	0.2%
18	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes	91.3	0.3%
19	Gator muck, frequently ponded, 0 to 1 percent slopes	83.4	0.3%
20	Immokalee fine sand, 0 to 2 percent slopes	3,565.6	11.3%
21	Malabar fine sand, 0 to 2 percent slopes	3,025.2	9.6%
22	Malabar fine sand, high, 0 to 2 percent slopes	216.5	0.7%
23	Malabar fine sand, frequently ponded, 0 to 1 percent slopes	158.2	0.5%
24	Myakka fine sand, 0 to 2 percent slopes	3,377.7	10.7%
25	Ona fine sand, 0 to 2 percent slopes	1,349.1	4.3%
26	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	562.6	1.8%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
27	Pineda fine sand, frequently flooded	25.2	0.1%
28	Pineda fine sand, frequently ponded, 0 to 1 percent slopes	31.9	0.1%
29	Pineda-Pinellas fine sands	78.8	0.2%
30	Pomello fine sand, 0 to 2 percent slopes	8.7	0.0%
31	Pompano fine sand, 0 to 2 percent slopes	198.1	0.6%
32	Punta fine sand, 0 to 2 percent slopes	52.8	0.2%
34	Samsula muck, frequently ponded, 0 to 1 percent slopes	327.0	1.0%
36	Smyrna fine sand, 0 to 2 percent slopes	4,611.7	14.6%
37	Tavares fine sand, 0 to 5 percent slopes	175.9	0.6%
40	Valkaria fine sand, 0 to 2 percent slopes	2,097.0	6.6%
41	Wabasso fine sand, 0 to 2 percent slopes	162.9	0.5%
42	Zolfo fine sand, 0 to 2 percent slopes	666.1	2.1%
99	Water	94.2	0.3%
Subtotals for Soil Survey Area		**30,879.9**	**97.7%**
Totals for Area of Interest		**31,597.0**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Placid fine sand, frequently ponded, 0 to 1 percent slopes	35.1	0.1%
8	Immokalee sand, 0 to 2 percent slopes	49.5	0.2%
10	Myakka fine sand, 0 to 2 percent slopes	199.4	0.6%
12	Basinger fine sand, 0 to 2 percent slopes	100.3	0.3%
16	Valkaria fine sand, 0 to 2 percent slopes	50.9	0.2%
20	Samsula muck, frequently ponded, 0 to 1 percent slopes	31.9	0.1%
39	Smyrna sand, 0 to 2 percent slopes	210.7	0.7%
Subtotals for Soil Survey Area		**677.8**	**2.1%**
Totals for Area of Interest		**31,597.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

De Soto County, Florida

2—Anclote mucky fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2svzk
Elevation: 0 to 130 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Anclote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Anclote

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Parent material: Sandy marine deposits

Typical profile

A1 - 0 to 10 inches: mucky fine sand
A2 - 10 to 14 inches: fine sand
Ckg1 - 14 to 35 inches: fine sand
Ckg2 - 35 to 65 inches: fine sand
Ckg3 - 65 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Minor Components

Floridana

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Samsula

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 2 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

3—Basinger fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svym
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Basinger and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger

Setting

Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

Ag - 0 to 2 inches: fine sand
Eg - 2 to 18 inches: fine sand
Bh/E - 18 to 36 inches: fine sand
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Placid

Percent of map unit: 4 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 4 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf

Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

4—Basinger fine sand, frequently flooded

Map Unit Setting

National map unit symbol: 1hk5n
Elevation: 0 to 100 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 312 to 342 days
Farmland classification: Not prime farmland

Map Unit Composition

Basinger, frequently flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger, Frequently Flooded

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
Eg - 4 to 16 inches: fine sand
Bh/Eg - 16 to 36 inches: fine sand
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 39.96 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: R155XY030FL - Sandy Freshwater Floodplain Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Minor Components

Malabar

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

5—Basinger fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2v16v
Elevation: 0 to 70 feet
Mean annual precipitation: 43 to 55 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Basinger and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 14 inches: fine sand
Bh/E - 14 to 36 inches: fine sand
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Minor Components

Smyrna

Percent of map unit: 5 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Samsula

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

6—Bradenton fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svzf
Elevation: 0 to 130 feet
Mean annual precipitation: 45 to 63 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Bradenton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bradenton

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 10 inches: fine sand
Btg - 10 to 19 inches: fine sandy loam
Btkg - 19 to 26 inches: fine sandy loam
Ckg - 26 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D

Ecological site: F155XY140FL - Loamy and Clayey Flats and Hammocks
Forage suitability group: Loamy and clayey soils on flats of hydric or mesic lowlands (G155XB341FL)
Other vegetative classification: Wetland Hardwood Hammock (R155XY012FL), Loamy and clayey soils on flats of hydric or mesic lowlands (G155XB341FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: Yes

Minor Components

Felda
Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Malabar
Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Floridana
Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Wabasso
Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

10—Chobee muck, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzwf
Elevation: 0 to 80 feet
Mean annual precipitation: 46 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Chobee and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chobee

Setting

Landform: Depressions on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Loamy alluvium

Typical profile

Oa - 0 to 4 inches: muck
A - 4 to 16 inches: loamy sand
Btg1 - 16 to 28 inches: fine sandy loam
Btg2 - 28 to 42 inches: sandy clay loam
Btg3 - 42 to 53 inches: fine sandy loam
Cg - 53 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 7 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C/D
Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Floridana

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Delray

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Gator

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

11—Delray mucky fine sand, depressional

Map Unit Setting

National map unit symbol: 1hk5w
Elevation: 0 to 80 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 312 to 342 days
Farmland classification: Not prime farmland

Map Unit Composition

Delray and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Delray

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 23 inches: mucky fine sand
Eg - 23 to 65 inches: fine sand
Btg - 65 to 75 inches: fine sandy loam
Cg - 75 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Minor Components

Anclote
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Samsula
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Gator
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

13—EauGallie fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2svz1

Elevation: 10 to 130 feet
Mean annual precipitation: 42 to 68 inches
Mean annual air temperature: 66 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Eaugallie and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eaugallie

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 23 inches: fine sand
Bh - 23 to 47 inches: fine sand
Bw - 47 to 55 inches: fine sand
Btg - 55 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Myakka

Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces

Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Farmton

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Malabar

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

14—Farmton fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzvx
Elevation: 0 to 190 feet
Mean annual precipitation: 44 to 55 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Farmton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Farmton

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 34 inches: fine sand
Bh - 34 to 48 inches: fine sand
Btg - 48 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Malabar
Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Wauchula
Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: No

Eaugallie
Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

15—Felda fine sand, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2tzvy
Elevation: 0 to 180 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Felda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Felda

Setting

Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
Eg - 4 to 35 inches: fine sand
Btg - 35 to 43 inches: fine sandy loam
Cg - 43 to 80 inches: extremely paragravelly fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Minor Components

Wabasso

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Oldsmar

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Valkaria

Percent of map unit: 4 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

16—Felda fine sand, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2tzxc
Elevation: 10 to 130 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Felda, frequently flooded, and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Felda, Frequently Flooded

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
Eg - 4 to 35 inches: fine sand
Btg - 35 to 43 inches: fine sandy loam
Cg - 43 to 80 inches: extremely paragravelly fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: R155XY040FL - Sandy over Loamy Freshwater Floodplain Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Basinger

Percent of map unit: 7 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 6 percent
Landform: Depressions on drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Pineda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

17—Felda fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzxb
Elevation: 0 to 150 feet
Mean annual precipitation: 46 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Felda and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Felda

Setting

Landform: Depressions on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: fine sand
Eg - 7 to 24 inches: fine sand
Btg - 24 to 36 inches: fine sandy loam
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained

Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Floridana

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Winder

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear

Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Eaton

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F154XA012FL - Wet Rich Forests And Woodlands
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G154XB345FL), Freshwater Marshes and Ponds (R154XY010FL)
Hydric soil rating: Yes

Kaliga

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Myakka

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Sanibel

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

18—Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2sm4y
Elevation: 0 to 90 feet
Mean annual precipitation: 45 to 63 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Floridana and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Floridana

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A1 - 0 to 4 inches: mucky fine sand
A2 - 4 to 15 inches: fine sand
Eg - 15 to 32 inches: fine sand
Btg - 32 to 44 inches: sandy clay loam
BCg - 44 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: C/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Holopaw
Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Felda
Percent of map unit: 4 percent
Landform: Flats on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Gator
Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Placid
Percent of map unit: 2 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

19—Gator muck, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzwz
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Gator and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gator

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy and loamy marine deposits

Typical profile

Oa - 0 to 18 inches: muck
Cg1 - 18 to 36 inches: sandy clay loam
Cg2 - 36 to 55 inches: fine sandy loam
Cg3 - 55 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 13.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Terra ceia

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Chobee

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY090FL - Loamy and Clayey Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Loamy and clayey soils on stream terraces, flood plains, or in depressions (G155XB345FL)
Hydric soil rating: Yes

Tequesta

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R156BY010FL), Organic soils in depressions and on flood plains (G156AC645FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 3 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear

Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

20—Immokalee fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s3lk
Elevation: 0 to 130 feet
Mean annual precipitation: 42 to 68 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Immokalee and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Immokalee

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 35 inches: fine sand
Bh - 35 to 54 inches: fine sand
BC - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained

Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Basinger

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Pomello

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Wabasso

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Hydric soil rating: No

Placid

Percent of map unit: 1 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Jenada

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

21—Malabar fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svz3
Elevation: 10 to 140 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Malabar and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Malabar

Setting

Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand

E - 5 to 17 inches: fine sand
Bw - 17 to 42 inches: fine sand
Btg - 42 to 59 inches: fine sandy loam
Cg - 59 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Valkaria

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Oldsmar

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

22—Malabar fine sand, high, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svz4
Elevation: 0 to 80 feet
Mean annual precipitation: 42 to 64 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Malabar, high, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Malabar, High

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 17 inches: fine sand

Bw - 17 to 42 inches: fine sand
Bt - 42 to 59 inches: fine sandy loam
Cg - 59 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Oldsmar

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces

Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

23—Malabar fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2svz5
Elevation: 10 to 90 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Malabar and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Malabar

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 17 inches: fine sand
Bw - 17 to 42 inches: fine sand
Btg - 42 to 59 inches: fine sandy loam
Cg - 59 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Valkaria

Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Pineda

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 3 percent
Landform: Flats on marine terraces, depressions on marine terraces

Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Delray

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

24—Myakka fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s3lg
Elevation: 0 to 130 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Myakka and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myakka

Setting

Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 20 inches: fine sand
Bh - 20 to 36 inches: fine sand
C - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Basinger

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Cassia

Percent of map unit: 3 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear

Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Satellite

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces, rises on marine terraces
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

25—Ona fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w4gy
Elevation: 10 to 130 feet
Mean annual precipitation: 44 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Ona and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ona

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
Bh - 4 to 22 inches: fine sand
C - 22 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Basinger

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Immokalee

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Myakka

Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pomello

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Eaugallie

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

26—Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svyp
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Pineda and similar soils: 45 percent
Pineda, wet, and similar soils: 40 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda

Setting

Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 1 inches: fine sand
E - 1 to 5 inches: fine sand
Bw - 5 to 36 inches: fine sand
Btg/E - 36 to 54 inches: fine sandy loam
Cg - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: No

Description of Pineda, Wet

Setting

Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 1 inches: fine sand
E - 1 to 5 inches: fine sand
Bw - 5 to 36 inches: fine sand

Btg/E - 36 to 54 inches: fine sandy loam
Cg - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Minor Components

Felda

Percent of map unit: 6 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Valkaria

Percent of map unit: 2 percent

Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Cypress lake

Percent of map unit: 2 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Convex, linear
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Brynwood

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

27—Pineda fine sand, frequently flooded

Map Unit Setting

National map unit symbol: 1hk6d
Elevation: 10 to 100 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 312 to 342 days
Farmland classification: Not prime farmland

Map Unit Composition

Pineda, frequently flooded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda, Frequently Flooded

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E/Bw - 5 to 24 inches: fine sand
Btg - 24 to 37 inches: fine sandy loam
Cg - 37 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: R155XY040FL - Sandy over Loamy Freshwater Floodplain Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Felda, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R155XY040FL - Sandy over Loamy Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Basinger, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY030FL - Sandy Freshwater Floodplain Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

28—Pineda fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2svz7
Elevation: 0 to 90 feet
Mean annual precipitation: 46 to 60 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Pineda and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 12 inches: fine sand

Bw - 12 to 31 inches: fine sand
Btg/E - 31 to 39 inches: fine sandy loam
Btg - 39 to 55 inches: fine sandy loam
Cg - 55 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Minor Components

Malabar

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 2 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Cypress lake

Percent of map unit: 2 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Convex, linear
Across-slope shape: Linear, concave
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

29—Pineda-Pinellas fine sands

Map Unit Setting

National map unit symbol: 1hk6g
Elevation: 20 to 80 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 68 to 75 degrees F
Frost-free period: 312 to 342 days
Farmland classification: Not prime farmland

Map Unit Composition

Pineda and similar soils: 45 percent
Pinellas and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pineda

Setting

Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 1 inches: fine sand
E/Bw - 1 to 36 inches: fine sand
Btg - 36 to 54 inches: fine sandy loam
Cg - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Description of Pinellas

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 20 inches: fine sand
Bk - 20 to 30 inches: fine sand
Btg - 30 to 42 inches: fine sandy loam
Cg - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: No

Minor Components

Farmton

Percent of map unit: 7 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Eaugallie

Percent of map unit: 7 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Wabasso

Percent of map unit: 6 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

30—Pomello fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw1
Elevation: 0 to 110 feet
Mean annual precipitation: 42 to 60 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Pomello and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pomello

Setting

Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 42 inches: fine sand
Bh - 42 to 54 inches: fine sand
B/C - 54 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A

Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Minor Components

Duette
Percent of map unit: 5 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Immokalee
Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Jonathan
Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

Tavares
Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces, hills on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, side slope, tread, rise
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear

Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

31—Pompano fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw3
Elevation: 0 to 100 feet
Mean annual precipitation: 44 to 65 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Pompano and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pompano

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
C - 4 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Anclote

Percent of map unit: 4 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 4 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Malabar

Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Immokalee

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Myakka

Percent of map unit: 3 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Riviera

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

32—Punta fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2x9f7
Elevation: 0 to 70 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 360 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Punta and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Punta

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 57 inches: fine sand
Bh - 57 to 80 inches: fine sand

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Immokalee

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Satellite

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces, rises on marine terraces
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Myakka

Percent of map unit: 2 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

34—Samsula muck, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzw9
Elevation: 0 to 250 feet
Mean annual precipitation: 44 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Samsula and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Samsula

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa1 - 0 to 24 inches: muck
Oa2 - 24 to 32 inches: muck
Cg1 - 32 to 35 inches: sand
Cg2 - 35 to 44 inches: sand
Cg3 - 44 to 80 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches

Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 13.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Kaliga

Percent of map unit: 3 percent
Landform: Depressions on flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 2 percent

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL)
Hydric soil rating: Yes

Sanibel

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

36—Smyrna fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svzh
Elevation: 0 to 130 feet
Mean annual precipitation: 38 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Smyrna and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Smyrna

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 13 inches: fine sand
Bh - 13 to 18 inches: fine sand
C/Bw - 18 to 49 inches: fine sand
C - 49 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Eaugallie

Percent of map unit: 5 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Basinger

Percent of map unit: 4 percent

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Placid

Percent of map unit: 2 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Freshwater Marshes and Ponds (R155XY010FL), Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Pomello

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

37—Tavares fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2sw00
Elevation: 0 to 130 feet

Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 66 to 77 degrees F
Frost-free period: 340 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Tavares and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tavares

Setting

Landform: Flats on marine terraces, hills on marine terraces, ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, side slope, tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Eolian or sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
C - 6 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sand Pine Scrub (R155XY001FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

Minor Components

Cassia

Percent of map unit: 5 percent
Landform: Rises on marine terraces, knolls on marine terraces

Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Pomello

Percent of map unit: 4 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Astatula

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R155XY230FL - Sandy Scrub on Ridges, Knolls, and Dunes of Xeric Uplands
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Apopka

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Adamsville

Percent of map unit: 2 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands

Other vegetative classification: Upland Hardwood Hammock (R155XY008FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

40—Valkaria fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw5
Elevation: 0 to 110 feet
Mean annual precipitation: 44 to 61 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Valkaria and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valkaria

Setting

Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 16 inches: fine sand
Bw - 16 to 51 inches: fine sand
C - 51 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Minor Components

Myakka
Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Pineda
Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Malabar
Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Satellite
Percent of map unit: 2 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

41—Wabasso fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svzg
Elevation: 0 to 130 feet
Mean annual precipitation: 38 to 64 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Wabasso and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wabasso

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 16 inches: fine sand
Bh - 16 to 28 inches: fine sand
E' - 28 to 32 inches: fine sand
Btg - 32 to 48 inches: fine sandy loam
Ckg - 48 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Minor Components

Myakka
Percent of map unit: 4 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Riviera
Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Basinger
Percent of map unit: 3 percent
Landform: Drainageways on flats, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave, linear, convex
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Malabar
Percent of map unit: 2 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Felda
Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces

Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Pinellas

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Cabbage Palm Flatwoods (R155XY005FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: No

42—Zolfo fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw7
Elevation: 0 to 200 feet
Mean annual precipitation: 45 to 58 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Zolfo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Zolfo

Setting

Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 59 inches: fine sand
Bh - 59 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Minor Components

Tavares

Percent of map unit: 6 percent
Landform: Knolls on marine terraces, rises on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, side slope, tread, rise
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Ecological site: R155XY180FL - Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Longleaf Pine-Turkey Oak Hills (R155XY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

Myakka

Percent of map unit: 4 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Malabar

Percent of map unit: 3 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf

Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Millhopper

Percent of map unit: 2 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, rise, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F154XA004FL - Moist Sandy Pine-Hardwood Woodlands
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G155XB121FL)
Hydric soil rating: No

99—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G155XB999FL)
Other vegetative classification: Forage suitability group not assigned (G155XB999FL)
Hydric soil rating: Unranked

Highlands County, Florida

7—Placid fine sand, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzx9
Elevation: 0 to 160 feet
Mean annual precipitation: 44 to 61 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Placid and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Placid

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 24 inches: fine sand
Cg - 24 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)

Hydric soil rating: Yes

Minor Components

Basinger

Percent of map unit: 7 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Myakka

Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Gentry

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Samsula

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave

Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

8—Immokalee sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s3ll
Elevation: 0 to 150 feet
Mean annual precipitation: 42 to 57 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Immokalee and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Immokalee

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 9 inches: sand
E - 9 to 36 inches: sand
Bh - 36 to 55 inches: sand
C - 55 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Minor Components

Valkaria

Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Oldsmar

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Pomello

Percent of map unit: 3 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Satellite

Percent of map unit: 2 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)

Hydric soil rating: No

Felda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

10—Myakka fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s3lg
Elevation: 0 to 130 feet
Mean annual precipitation: 42 to 56 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Myakka and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Myakka

Setting

Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 20 inches: fine sand
Bh - 20 to 36 inches: fine sand
C - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 6 to 18 inches

Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Minor Components

Basinger

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Wabasso

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Cassia

Percent of map unit: 3 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 2 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf

Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Satellite

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces, rises on marine terraces
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

12—Basinger fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svym
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Basinger and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basinger

Setting

Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, convex
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

Ag - 0 to 2 inches: fine sand
Eg - 2 to 18 inches: fine sand
Bh/E - 18 to 36 inches: fine sand
Cg - 36 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 6 percent
Landform: Flatwoods on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Immokalee

Percent of map unit: 4 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Placid

Percent of map unit: 4 percent
Landform: Depressions on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Pompano

Percent of map unit: 4 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Felda

Percent of map unit: 1 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

16—Valkaria fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tzw5
Elevation: 0 to 110 feet
Mean annual precipitation: 44 to 61 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Valkaria and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valkaria

Setting

Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 16 inches: fine sand
Bw - 16 to 51 inches: fine sand
C - 51 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: About 3 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 5 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)

Hydric soil rating: No

Pineda

Percent of map unit: 4 percent
Landform: Drainageways on marine terraces, flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F155XY130FL - Sandy over Loamy Flatwoods and Hammocks
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Malabar

Percent of map unit: 4 percent
Landform: — error in exists on —
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Satellite

Percent of map unit: 2 percent
Landform: Rises on marine terraces, flatwoods on marine terraces
Landform position (three-dimensional): Tread, rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F155XY150FL - Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G155XB131FL), Sand Pine Scrub (R155XY001FL)
Hydric soil rating: No

20—Samsula muck, frequently ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tzw9
Elevation: 0 to 250 feet
Mean annual precipitation: 44 to 63 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Samsula and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Samsula

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa1 - 0 to 24 inches: muck
Oa2 - 24 to 32 inches: muck
Cg1 - 32 to 35 inches: sand
Cg2 - 35 to 44 inches: sand
Cg3 - 44 to 80 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 13.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Forage suitability group: Organic soils in depressions and on flood plains (G155XB645FL)
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Minor Components

Myakka

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Kaliga

Percent of map unit: 3 percent
Landform: Depressions on flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps
Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Anclote

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, convex
Across-slope shape: Concave, linear
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL)
Hydric soil rating: Yes

Floridana

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R155XY080FL - Sandy over Loamy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G155XB245FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Sanibel

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Ecological site: R155XY100FL - Organic Freshwater Isolated Marshes and Swamps

Other vegetative classification: Organic soils in depressions and on flood plains (G155XB645FL)
Hydric soil rating: Yes

39—Smyrna sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2svzy
Elevation: 30 to 130 feet
Mean annual precipitation: 46 to 55 inches
Mean annual air temperature: 68 to 77 degrees F
Frost-free period: 350 to 365 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Smyrna and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Smyrna

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: sand
Eg - 5 to 15 inches: sand
Bh1 - 15 to 18 inches: sand
Bh2 - 18 to 22 inches: sand
C1 - 22 to 35 inches: sand
C2 - 35 to 45 inches: sand
Cg1 - 45 to 56 inches: sand
Cg2 - 56 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), South Florida Flatwoods (R155XY003FL)
Hydric soil rating: No

Minor Components

Ona

Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Placid

Percent of map unit: 2 percent
Landform: Drainageways on marine terraces, depressions on marine terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R155XY070FL - Sandy Freshwater Isolated Marshes and Swamps
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G155XB145FL), Freshwater Marshes and Ponds (R155XY010FL)
Hydric soil rating: Yes

Basinger

Percent of map unit: 2 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Convex, concave
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

Valkaria

Percent of map unit: 2 percent
Landform: Drainageways on flats on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Ecological site: F155XY120FL - Sandy Flatwoods and Hammocks

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G155XB141FL), Slough (R155XY011FL)
Hydric soil rating: Yes

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Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 from West of SR 31 to CR 760 (Segment 9)
DeSoto County, Florida
FPID No. 451690-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH9-1	1045223	709713	62.8	5.0	1/21/2024	1.8	61.0	20	0.5-1.5	0.5	62.3
SH9-2	1045271	710190	63.2	5.0	1/21/2024	2.9	60.3	36	0.5-1.5	1.0	62.2
SH9-3	1045224	710687	63.9	5.0	1/21/2024	4.5	59.4	36	0.5-1.5	2.0	61.9
SH9-4	1045249	711181	62.4	4.5	1/21/2024	1.8	60.6	36	0.5-1.5	0.5	61.9
SH9-5	1045221	711692	63.7	5.0	1/21/2024	2.0	61.7	36	0.5-1.5	0.5	63.2
SH9-7	1045211	712679	63.1	3.5	1/21/2024	0.8	62.3	36	0.5-1.5	ABG[5]	>63.1
SH9-9	1045209	713496	63.6	3.5	1/21/2024	1.2	62.4	3	0.0-1.0	0.0	63.6
SH9-11	1045166	714544	64.0	5.0	1/31/2024	1.7	62.3	20	0.5-1.5	0.0	64.0
SH9-12	1045231	715011	64.8	5.0	1/31/2024	2.3	62.5	20	0.5-1.5	0.5	64.3
SH9-13	1045161	715506	63.8	4.0	1/31/2024	1.4	62.4	20	0.5-1.5	0.0	63.8
SH9-14	1045227	716022	64.6	5.0	1/31/2024	1.9	62.7	25	0.5-1.5	0.5	64.1
SH9-15	1045178	716537	64.0	4.0	1/31/2024	1.6	62.4	25	0.5-1.5	0.0	64.0
SH9-16	1045225	717031	65.6	5.0	1/31/2024	3.4	62.2	20	0.5-1.5	2.0	63.6
SH9-17	1045153	717550	63.5	5.0	2/1/2024	2.2	61.3	20	0.5-1.5	0.5	63.0
SH9-18	1045227	718007	64.8	6.0	2/1/2024	4.7	60.1	42/20	1.5-3.5/0.5-1.5	2.5	62.3
SH9-19	1045154	718500	61.5	4.5	2/1/2024	3.9	57.6	42	1.5-3.5	2.0	59.5
SH9-20	1045050	718964	59.1	5.0	2/1/2024	2.8	56.3	36/3	0.5-1.5/0.0-1.0	1.5	57.6
SH9-21	1045163	719500	55.7	5.0	2/1/2024	3.0	52.7	3/4	0.0-1.0/0.0	1.0	54.7
SH9-22	1045266	720005	52.6	3.5	2/1/2024	1.1	51.5	4/36	0.0/0.5-1.5	0.0	52.6
SH9-23	1045243	720496	56.4	4.0	2/1/2024	2.2	54.2	36	0.5-1.5	0.5	55.9
SH9-24	1045329	721003	60.1	6.0	2/1/2024	4.7	55.4	36	0.5-1.5	2.5	57.6
SH9-25	1045289	721478	58.5	5.0	2/1/2024	1.6	56.9	36	0.5-1.5	0.0	58.5
SH9-26	1045336	721988	62.2	5.0	2/1/2024	3.6	58.6	36	0.5-1.5	1.5	60.7
SH9-27	1045214	722487	61.5	5.0	2/1/2024	1.6	59.9	36	0.5-1.5	0.5	61.0
SH9-28	1045262	723014	61.2	4.0	2/1/2024	1.7	59.5	21/23	0.3-1.5/+2.0-0.0	0.5	60.7
SH9-29	1045160	723527	61.9	4.0	2/1/2024	1.8	60.1	21	0.3-1.5	0.5	61.4
SH9-30	1045048	723979	63.0	5.0	2/1/2024	2.7	60.3	21/13	0.3-1.5/0.5-1.5	1.0	62.0

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[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.

[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.

[5] ABG: Estimated seasonal high groundwater table is above existing grade. Tierra recommends SHGWT be evaluated by the project biologist based on biological indicators.

Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 from West of SR 31 to CR 760 (Segment 9)
DeSoto County, Florida
FPID No. 451690-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH9-31	1045147	724495	63.7	5.0	2/1/2024	2.7	61.0	13	0.5-1.5	1.0	62.7
SH9-32	1045212	724957	64.0	5.0	2/1/2024	2.3	61.7	13	0.5-1.5	0.5	63.5
SH9-33	1045131	725464	64.5	5.0	2/1/2024	2.2	62.3	14	0.5-1.5	0.5	64.0
SH9-34	1045213	725951	62.7	5.0	2/1/2024	2.5	60.2	14	0.5-1.5	1.0	61.7
SH9-35	1045140	726461	62.1	5.0	2/1/2024	2.9	59.2	14	0.5-1.5	1.5	60.6
SH9-36	1045209	726950	62.8	5.0	2/1/2024	4.0	58.8	21	0.3-1.5	2.5	60.3
SH9-37	1045142	727461	62.4	5.0	2/1/2024	2.8	59.6	36	0.5-1.5	1.0	61.4
SH9-38	1045211	727951	63.9	5.0	2/1/2024	3.2	60.7	36	0.5-1.5	1.5	62.4
SH9-39	1045135	728459	63.8	5.0	2/1/2024	2.7	61.1	36	0.5-1.5	1.5	62.3
SH9-40	1045047	728934	63.9	5.0	1/30/2024	2.9	61.0	36	0.5-1.5	1.5	62.4
SH9-41	1045138	729441	64.1	5.0	1/30/2024	2.8	61.3	41/36	0.5-1.5/0.5-1.5	1.5	62.6
SH9-42	1045214	729943	64.3	5.0	1/30/2024	2.3	62.0	36	0.5-1.5	1.0	63.3
SH9-43	1045147	730465	64.8	5.0	1/30/2024	2.3	62.5	36	0.5-1.5	1.0	63.8
SH9-44	1045217	730950	65.4	5.0	1/30/2024	2.8	62.6	36	0.5-1.5	1.5	63.9
SH9-45	1045139	731401	64.9	5.0	1/30/2024	2.2	62.7	36	0.5-1.5	1.0	63.9
SH9-46	1045214	731961	65.5	5.0	1/30/2024	4.0	61.5	36/3	0.5-1.5/0.0-1.0	2.0	63.5
SH9-47	1045153	732463	62.7	4.0	1/30/2024	3.0	59.7	13	0.5-1.5	0.5	62.2
SH9-48	1045224	732939	63.0	4.0	1/29/2024	2.3	60.7	13	0.5-1.5	1.0	62.0
SH9-49	1045156	733450	61.9	5.0	1/29/2024	2.4	59.5	36/13	0.5-1.5/0.5-1.5	1.0	60.9
SH9-50	1045062	733917	59.7	5.0	1/29/2024	2.4	57.3	36	0.5-1.5	1.0	58.7
SH9-51	1045161	734420	58.2	6.5	1/29/2024	5.4	52.8	2	+2.0-0.0	1.5	56.7
SH9-52	1045219	734924	61.1	6.5	1/21/2024	5.4	55.7	2	+2.0-0.0	2.5	58.6
SH9-53	1045156	735434	62.8	5.0	1/21/2024	3.0	59.8	41/36	0.5-1.5/0.5-1.5	1.0	61.8
SH9-54	1045236	735915	64.9	5.0	1/21/2024	3.3	61.6	42	1.5-3.5	1.5	63.4
SH9-55	1045041	736423	67.1	5.0	1/21/2024	3.8	63.3	42	1.5-3.5	2.5	64.6

[1] Boring locations and ground elevations were provided by the project surveyor.

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Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 From CR 760 to the Highlands County Line (Segment 10)
DeSoto County, Florida
FPID No. 451942-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH10-1	1045172	737105	65.8	5.0	2/2/2024	3.0	62.8	36	0.5-1.5	1.0	64.8
SH10-2	1045232	737571	65.3	5.0	2/2/2024	3.0	62.3	36	0.5-1.5	1.0	64.3
SH10-3	1045182	738108	65.3	5.0	2/2/2024	4.3	61.1	36	0.5-1.5	2.0	63.3
SH10-4	1045286	738576	63.4	5.0	2/2/2024	2.9	60.5	14	0.5-1.5	1.0	62.4
SH10-5	1045268	739120	64.0	5.0	2/2/2024	3.8	60.2	14	0.5-1.5	1.5	62.5
SH10-6	1045376	739587	64.5	5.0	2/2/2024	3.3	61.2	14	0.5-1.5	1.5	63.0
SH10-7	1045355	740103	65.5	5.0	2/2/2024	3.3	62.2	14	0.5-1.5	1.5	64.0
SH10-8	1045454	740578	65.3	5.0	2/2/2024	3.1	62.2	14	0.5-1.5	1.0	64.3
SH10-9	1045399	741062	66.2	5.0	2/2/2024	4.4	61.8	14	0.5-1.5	2.0	64.2
SH10-10	1045304	741547	66.6	6.5	2/2/2024	3.0	63.6	14	0.5-1.5	2.0	64.6
SH10-11	1045410	742094	66.8	6.5	2/2/2024	4.0	62.8	14	0.5-1.5	2.5	64.3
SH10-12	1045482	742555	65.6	5.0	2/2/2024	3.0	62.6	14/21	0.5-1.5/0.3-1.5	1.5	64.1
SH10-13	1045405	743070	68.5	6.5	2/2/2024	5.1	63.4	21/24	0.3-1.5/0.5-1.5	3.5	65.0
SH10-14	1045484	743525	67.0	5.0	2/2/2024	3.9	63.1	24	0.5-1.5	1.0	66.0
SH10-15	1045434	744038	68.4	5.0	2/2/2024	4.0	64.4	21/24	0.3-1.5/0.5-1.5	2.5	65.9
SH10-16	1045492	744505	68.7	5.0	2/2/2024	4.2	64.5	13/21	0.5-1.5/0.5-1.5	2.3	66.4
SH10-17	1045438	745031	69.3	5.0	2/3/2024	3.3	66.1	14	0.5-1.5	2.0	67.3
SH10-18	1045504	745499	69.2	5.0	2/3/2024	4.9	64.3	14	0.5-1.5	1.8	67.4
SH10-19	1045442	746009	69.3	5.0	2/3/2024	4.4	64.9	14/20	0.5-1.5/0.5-1.5	2.0	67.3
SH10-20	1045332	746515	70.5	6.0	2/3/2024	5.0	65.5	20	0.5-1.5	2.5	68.0
SH10-21	1045444	747032	69.4	6.0	2/3/2024	4.3	65.1	20/21	0.5-1.5/0.3-1.5	1.5	67.9
SH10-22	1045512	747507	69.0	6.0	2/4/2024	4.7	64.3	21	0.3-1.5	1.5	67.5
SH10-23	1045452	748037	69.0	5.0	2/4/2024	3.6	65.4	21/40	0.3-1.5/0.3-1.5	1.8	67.2
SH10-24	1045512	748510	68.5	5.0	2/4/2024	3.8	64.7	14/21	0.5-1.5/0.5-1.5	1.0	67.5
SH10-25	1045453	749036	69.9	6.5	2/4/2024	4.4	65.5	14/40	0.5-1.5/0.3-1.5	2.5	67.4
SH10-26	1045511	749499	69.9	6.5	2/4/2024	4.0	65.9	40	0.3-1.5	2.0	67.9
SH10-27	1045456	750002	70.7	6.5	2/4/2024	3.6	67.1	40	0.3-1.5	2.0	68.7
SH10-28	1045509	750498	70.6	5.0	2/4/2024	2.6	68.0	20	0.5-1.5	1.0	69.6
SH10-29	1045466	751060	71.7	5.0	2/4/2024	3.1	68.6	14/20	0.5-1.5/0.5-1.5	1.5	70.2

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Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 From CR 760 to the Highlands County Line (Segment 10)
DeSoto County, Florida
FPID No. 451942-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH10-30	1045346	751501	71.2	5.0	2/4/2024	2.0	69.2	14	0.5-1.5	0.5	70.7
SH10-31	1045464	752059	72.6	4.0	2/4/2024	3.1	69.5	21	0.3-1.5	1.5	71.1
SH10-32	1045527	752551	72.6	6.0	2/4/2024	3.3	69.3	13	0.5-1.5	1.5	71.1
SH10-33	1045477	753044	73.5	6.0	2/4/2024	4.2	69.3	13	0.5-1.5	1.8	71.7
SH10-34	1045530	753503	73.7	6.5	2/4/2024	4.0	69.7	13	0.5-1.5	1.5	72.2
SH10-35	1045472	754019	74.1	6.0	2/4/2024	3.9	70.2	13	0.5-1.5	1.5	72.6
SH10-36	1045534	754506	75.2	6.5	2/4/2024	5.0	70.2	13	0.5-1.5	2.0	73.2
SH10-37	1045482	754998	74.4	6.5	2/4/2024	3.7	70.7	13	0.5-1.5	1.0	73.4
SH10-38	1045535	755504	75.9	6.0	2/4/2024	5.3	70.6	13	0.5-1.5	2.5	73.4
SH10-39	1045483	756049	74.7	6.0	2/4/2024	3.1	71.6	13	0.5-1.5	1.5	73.2
SH10-40	1045368	756497	74.8	6.0	2/4/2024	3.7	71.1	13	0.5-1.5	2.0	72.8
SH10-41	1045501	757015	73.3	5.0	2/4/2024	2.4	70.9	21	0.3-1.5	1.0	72.3
SH10-42	1045562	757492	73.1	6.5	2/4/2024	2.9	70.2	21	0.3-1.5	1.5	71.6
SH10-43	1045491	757978	73.8	6.5	2/4/2024	3.9	69.9	21	0.3-1.5	2.5	71.3
SH10-44	1045559	758483	72.5	6.5	2/4/2024	3.3	69.2	21	0.3-1.5	1.0	71.5
SH10-45	1045493	759051	73.3	6.5	2/5/2024	3.6	69.7	21	0.3-1.5	2.0	71.3
SH10-46	1045564	759489	74.0	6.5	2/5/2024	4.7	69.3	13/21	0.5-1.5/0.3-1.5	2.5	71.5
SH10-47	1045503	759977	73.8	6.5	2/5/2024	4.1	69.7	14	0.5-1.5	2.0	71.8
SH10-48	1045570	760487	74.0	6.5	2/5/2024	4.3	69.8	14	0.5-1.5	2.0	72.0
SH10-49	1045500	760987	75.3	10.0	2/5/2024	8.4	66.9	14	0.5-1.5	3.0	72.3
SH10-50	1045402	761481	74.4	5.0	2/5/2024	4.2	70.2	14	0.5-1.5	2.0	72.4
SH10-51	1045504	761956	74.9	6.5	2/5/2024	4.6	70.3	14	0.5-1.5	2.5	72.4
SH10-52	1045609	762468	71.5	5.5	2/5/2024	2.9	68.6	14/21	0.5-1.5/0.3-1.5	0.0	71.5
SH10-53	1045505	762951	75.1	6.5	2/5/2024	5.3	69.9	21	0.3-1.5	3.0	72.1
SH10-54	1045597	763470	73.9	6.5	2/5/2024	4.3	69.6	21/26	0.3-1.5/0.0-1.5	2.0	71.9
SH10-55	1045514	763973	75.0	6.5	2/5/2024	5.2	69.8	26	0.0-1.5	3.0	72.0
SH10-56	1045607	764468	71.2	5.0	2/5/2024	1.6	69.6	22/26	0.5-1.5/0.0-1.5	0.0	71.2
SH10-57	1045517	764970	75.3	5.0	2/5/2024	4.5	70.8	22	0.5-1.5	2.5	72.8

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Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 From CR 760 to the Highlands County Line (Segment 10)
DeSoto County, Florida
FPID No. 451942-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH10-58	1045582	765461	72.5	5.0	2/5/2024	3.1	69.4	22	0.5-1.5	0.5	72.0
SH10-59	1045517	765958	75.8	6.0	2/5/2024	4.6	71.2	24/40	0.5-1.5/0.3-1.5	2.5	73.3
SH10-60	1045414	766486	73.7	5.0	2/5/2024	2.8	71.0	24/26	0.5-1.5/0.0-1.5	0.5	73.2
SH10-61	1045527	766970	76.0	6.0	2/5/2024	5.1	70.9	24	0.5-1.5	2.5	73.5
SH10-62	1045586	767470	75.7	6.5	2/5/2024	6.1	69.6	24	0.5-1.5	2.5	73.2
SH10-63	1045535	768014	76.4	6.5	2/5/2024	6.3	70.2	24	0.5-1.5	2.5	73.9
SH10-64	1045608	768471	76.1	6.5	2/6/2024	6.3	69.9	24	0.5-1.5	1.5	74.6
SH10-65	1045533	768974	77.1	5.0	2/6/2024	4.3	72.9	24	0.5-1.5	2.0	75.1
SH10-66	1045605	769470	76.1	5.5	2/6/2024	3.3	72.8	24	0.5-1.5	1.5	74.6
SH10-67	1045548	770005	76.9	6.5	2/6/2024	5.7	71.2	24	0.5-1.5	2.0	74.9
SH10-68	1045612	770468	77.4	6.5	2/6/2024	6.1	71.3	24	0.5-1.5	2.0	75.4
SH10-69	1045551	770967	76.2	5.0	2/6/2024	4.4	71.8	20/24	0.5-1.5/0.5-1.5	1.5	74.7
SH10-70	1045456	771483	78.0	6.0	2/6/2024	5.1	72.9	3/20	0.0-1.0/0.5-1.5	1.5	76.5
SH10-71	1045555	771971	77.3	5.0	2/6/2024	3.6	73.7	3/21	0.0-1.0/0.3-1.5	1.0	76.3
SH10-72	1045608	772450	76.9	6.5	2/6/2024	4.5	72.4	20	0.5-1.5	1.3	75.6
SH10-73	1045557	772960	78.0	6.5	2/6/2024	4.2	73.8	20	0.5-1.5	1.5	76.5
SH10-74	1045619	773453	79.2	6.5	2/6/2024	6.5	72.7	20	0.5-1.5	2.2	77.0
SH10-75	1045560	773958	79.1	6.5	2/6/2024	5.7	73.4	20/24	0.5-1.5/0.5-1.5	2.0	77.1
SH10-76	1045587	774456	77.9	6.5	2/6/2024	4.5	73.4	3/24	0.0-1.0/0.5-1.5	1.0	76.9
SH10-77	1045566	774960	79.4	6.5	2/6/2024	5.7	73.7	3	0.0-1.0	2.0	77.4
SH10-78	1045602	775465	80.9	6.5	2/6/2024	6.3	74.7	24	0.5-1.5	2.5	78.4
SH10-79	1045568	775996	79.7	6.5	2/6/2024	5.4	74.3	24/40	0.5-1.5/0.3-1.5	1.5	78.2
SH10-80	1045472	776447	81.1	6.5	2/6/2024	5.6	75.5	36/40	0.5-1.5/0.3-1.5	2.0	79.1
SH10-81	1045569	776952	81.0	6.5	2/6/2024	5.1	75.9	36	0.5-1.5	1.5	79.5
SH10-82	1045619	777489	81.2	5.0	2/6/2024	4.7	76.5	36	0.5-1.5	1.5	79.7
SH10-83	1045568	777988	81.9	5.0	2/6/2024	4.5	77.4	36	0.5-1.5	1.5	80.4
SH10-84	1045633	778455	81.2	5.0	2/6/2024	4.3	76.9	36	0.5-1.5	1.0	80.2
SH10-85	1045580	778968	83.2	6.5	2/6/2024	5.7	77.5	20	0.5-1.5	3.0	80.2

[1] Boring locations and ground elevations were provided by the project surveyor.

[2] Depth below existing grades at time of field exploration.

[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.

[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.

[5] ABG: Estimated seasonal high groundwater table is above existing grade. Tierra recommends SHGWT be evaluated by the project biologist based on biological indicators.

Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 From CR 760 to the Highlands County Line (Segment 10)
DeSoto County, Florida
FPID No. 451942-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH10-86	1045633	779456	83.5	6.5	2/6/2024	5.4	78.1	20	0.5-1.5	2.5	81.0
SH10-87	1045578	779979	84.6	6.0	2/6/2024	5.4	79.2	20	0.5-1.5	2.5	82.1
SH10-88	1045636	780444	84.3	5.0	2/6/2024	4.3	80.0	20	0.5-1.5	1.5	82.8
SH10-89	1045496	780964	83.5	6.0	2/6/2024	4.6	78.9	20/32	0.5-1.5/0.5-1.5	1.5	82.0
SH10-90	1045650	781446	81.5	5.0	2/6/2024	2.9	78.6	36	0.5-1.5	0.0	81.5
SH10-91	1045598	781960	82.7	5.0	2/6/2024	4.2	78.5	24/36	0.5-1.5/0.5-1.5	0.5	82.2
SH10-92	1045652	782441	83.7	6.0	2/6/2024	5.2	78.5	24/36	0.5-1.5/0.5-1.5	1.5	82.2
SH10-93	1045601	782968	83.1	5.0	2/6/2024	4.3	78.9	24/36	0.5-1.5/0.5-1.5	0.5	82.6
SH10-94	1045659	783479	83.9	6.0	2/6/2024	5.4	78.5	36	0.5-1.5	1.5	82.4
SH10-95	1045604	783971	84.1	5.0	2/6/2024	4.7	79.4	36	0.5-1.5	1.5	82.6
SH10-96	1045660	784442	84.2	6.0	2/6/2024	5.6	78.6	36	0.5-1.5	2.0	82.2
SH10-97	1045611	784941	84.0	5.0	2/5/2024	4.8	79.3	36	0.5-1.5	1.5	82.5
SH10-98	1045668	785434	84.9	6.5	2/5/2024	6.3	78.7	36	0.5-1.5	1.5	83.4
SH10-99	1045530	785982	84.7	6.0	2/5/2024	4.8	80.0	3/36	0.0-1.0/0.5-1.5	1.5	83.2
SH10-100	1045676	786447	84.0	6.0	2/5/2024	5.8	78.3	3	0.0-1.0	1.0	83.0
SH10-101	1045629	786984	83.3	5.0	2/5/2024	4.0	79.3	40	0.3-1.5	1.0	82.3
SH10-102	1045682	787448	83.3	5.0	2/5/2024	3.4	79.9	40	0.3-1.5	1.0	82.3
SH10-103	1045627	787955	83.4	5.0	2/5/2024	3.4	80.0	3	0.0-1.0	1.5	81.9
SH10-104	1045677	788428	83.1	5.0	2/5/2024	4.5	78.6	3	0.0-1.0	1.0	82.1
SH10-105	1045632	788976	83.2	5.0	2/5/2024	3.2	80.0	3	0.0-1.0	1.0	82.2
SH10-106	1045693	789411	82.7	5.0	2/5/2024	3.8	79.0	40	0.3-1.5	1.0	81.7
SH10-107	1045635	789918	83.4	6.0	2/5/2024	4.2	79.2	3	0.0-1.0	1.5	81.9
SH10-108	1045699	790413	83.5	6.0	2/5/2024	5.4	78.1	3/20	0.0-1.0/0.5-1.5	2.0	81.5
SH10-109	1045533	790872	83.7	5.0	2/5/2024	3.3	80.4	20	0.5-1.5	2.0	81.7
SH10-110	1045706	791409	83.1	5.0	2/5/2024	4.8	78.3	20	0.5-1.5	1.5	81.6
SH10-111	1045651	791905	82.7	5.0	2/3/2024	4.0	78.7	40	0.3-1.5	1.0	81.7
SH10-112	1045713	792404	81.9	5.0	2/3/2024	3.9	78.0	40	0.3-1.5	0.5	81.4
SH10-113	1045658	792947	82.3	5.0	2/3/2024	3.8	78.6	40	0.3-1.5	1.0	81.3

[1] Boring locations and ground elevations were provided by the project surveyor.

[2] Depth below existing grades at time of field exploration.

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[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.

[5] ABG: Estimated seasonal high groundwater table is above existing grade. Tierra recommends SHGWT be evaluated by the project biologist based on biological indicators.

Summary of Roadway Seasonal High Groundwater Table Estimates
SR 70 From CR 760 to the Highlands County Line (Segment 10)
DeSoto County, Florida
FPID No. 451942-1-32-01
Tierra Project No: 6511-24-001

Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
	Northing (feet)	Easting (feet)			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SH10-114	1045722	793405	81.1	5.5	2/3/2024	4.4	76.7	40	0.3-1.5	0.5	80.6
SH10-115	1045663	793889	81.8	6.0	2/3/2024	5.0	76.8	40	0.3-1.5	1.5	80.3
SH10-116	1045721	794399	81.8	6.0	2/3/2024	5.1	76.7	40	0.3-1.5	1.5	80.3
SH10-117	1045662	794906	83.5	6.0	2/3/2024	5.9	77.6	20	0.5-1.5	3.0	80.5
SH10-118	1045731	795405	83.3	7.0	2/3/2024	6.9	76.4	20	0.5-1.5	2.5	80.8
SH10-119	1045565	795877	81.9	5.0	2/3/2024	4.4	77.5	20/24	0.5-1.5/0.5-1.5	1.0	80.9
SH10-120	1045748	796391	82.8	6.0	2/3/2024	5.8	77.1	24	0.5-1.5	1.5	81.3
SH10-121	1045655	796861	84.8	7.0	2/3/2024	6.9	77.9	24	0.5-1.5	3.5	81.3
SH10-122	1045730	797349	79.7	5.0	2/3/2024	3.3	76.4	24/34	0.5-1.5/+2.0-0.0	0.0	79.7
SH10-123	1045675	797856	79.6	5.0	2/3/2024	3.3	76.3	34	+2.0-0.0	ABG[5]	>79.6
SH10-124	1045585	798215	81.5	6.5	2/3/2024	4.5	77.0	34	+2.0-0.0	1.5	80.0

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[2] Depth below existing grades at time of field exploration.

[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.

[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.

[5] ABG: Estimated seasonal high groundwater table is above existing grade. Tierra recommends SHGWT be evaluated by the project biologist based on biological indicators.

Summary of SMF/FPC Alternatives Seasonal High Groundwater Table Estimates
SR 70 from West of SR 31 to Highlands County Line
DeSoto County, Florida
FPID No. 451942-2-52-01
Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 0901C	PBA-1	1045770	710558	64.7	7.0	3/12/2025	6.9	57.8	36	0.5-1.5	4.5	60.2
FPC 0901B	PBA-2	1045741	710678	63.9	7.0	3/12/2025	6.6	57.3	36	0.5-1.5	3.5	60.4
FPC 0901A	PBA-3	1044662	710736	63.5	7.0	3/12/2025	6.6	56.9	36	0.5-1.5	3.0	60.5
	PBA-4	1044510	710754	63.1	7.0	3/12/2025	6.4	56.7	36	0.5-1.5	3.0	60.1
SMF 0901C	PBA-5	1045816	711396	63.8	5.0	3/12/2025	4.8	59.0	36	0.5-1.5	2.0	61.8
	PBA-6	1045401	711409	63.7	6.5	3/12/2025	5.4	58.3	36	0.5-1.5	2.0	61.7
	PBA-7	1045600	711419	63.9	7.0	3/12/2025	5.8	58.1	36	0.5-1.5	2.0	61.9
	PBA-8	1045414	711759	63.8	7.0	3/12/2025	5.5	58.3	36	0.5-1.5	2.0	61.8
SMF 0901A	PBA-10	1045673	712128	63.5	5.0	3/25/2025	4.8	58.7	36	0.5-1.5	1.0	62.5
	PBA-12	1045935	712476	63.0	5.0	3/25/2025	4.2	58.8	31	0.3-1.5	0.5	62.5
	PBA-13	1045423	712492	63.5	5.0	3/25/2025	4.5	59.0	36	0.5-1.5	1.0	62.5
SMF 0901B	PBA-15	1045907	713421	63.4	5.0	3/25/2025	4.0	59.4	3	0.0-1.0	0.5	62.9
	PBA-17	1045652	713786	63.3	5.0	3/25/2025	4.0	59.3	3	0.0-1.0	0.5	62.8
	PBA-19	1045875	714165	64.3	5.0	3/25/2025	4.6	59.7	20	0.5-1.5	1.5	62.8
	PBA-20	1045452	714186	63.7	5.0	3/25/2025	4.3	59.4	3	0.0-1.0	1.0	62.7
LP-4051R	PBA-21	1045003	714795	63.8	3.0	3/12/2025	GNE[5]	<60.8	25	0.5-1.5	1.0	62.8
	PBA-22	1044999	715815	63.7	5.0	3/12/2025	4.3	59.4	25	0.5-1.5	0.5	63.2
	PBA-23	1044981	716805	64.8	5.0	3/12/2025	4.8	60.0	20	0.5-1.5	1.5	63.3
	PBA-24	1045000	717773	65.2	6.0	3/12/2025	5.8	59.4	20	0.5-1.5	2.5	62.7
SMF 0902B	SH9-20	1045050	718964	59.1	5.0	2/1/2024	2.8	56.3	36/3	0.5-1.5/0.0-1.0	1.5	57.6
	PBA-25	1044785	718860	60.4	6.5	3/12/2025	4.9	55.5	36/42	0.5-1.5/1.5-3.5	2.5	57.9
	PBA-26	1044551	719033	59.6	5.0	3/12/2025	5.0	54.6	36	0.5-1.5	2.0	57.6
	PBA-27	1044793	719170	58.3	5.0	3/12/2025	4.7	53.6	3	0.0-1.0	1.5	56.8
LP-4096L	PBA-28	1045286	719239	58.5	6.5	3/13/2025	4.6	53.9	3	0.0-1.0	2.0	56.5
	SH9-22	1045266	720005	52.6	3.5	2/1/2024	1.1	51.5	4/36	0.0/0.5-1.5	0.0	52.6
	PBA-29	1045333	720276	55.4	5.5	3/13/2025	3.5	51.9	36	0.5-1.5	1.0	54.4
	SH9-24	1045329	721003	60.1	6.0	2/1/2024	4.7	55.4	36	0.5-1.5	3.0	57.1
	PBA-33	1045405	721323	60.3	5.0	3/13/2025	4.2	56.1	36	0.5-1.5	2.0	58.3
	SH9-26	1045336	721988	62.2	5.0	2/1/2024	3.6	58.6	36	0.5-1.5	2.0	60.2
	PBA-34	1045346	722357	62.1	5.0	3/13/2025	4.0	58.1	36	0.5-1.5	1.5	60.6
	SH9-28	1045262	723014	61.2	4.0	2/1/2024	1.7	59.5	21/23	0.3-1.5/+2.0-0.0	0.8	60.4
	PBA-35	1045270	723314	61.6	5.0	3/13/2025	3.4	58.2	21	0.3-1.5	1.0	60.6
SMF 0902A	PBA-30	1044956	720581	58.3	7.0	3/13/2025	5.9	52.4	36	0.5-1.5	1.0	57.3
	PBA-31	1044765	720958	59.4	6.0	3/13/2025	5.7	53.7	25	0.5-1.5	1.0	58.4
	PBA-32	1044983	721029	60.1	6.0	3/13/2025	5.7	54.4	36	0.5-1.5	1.5	58.6

[1] Boring locations and ground elevations were provided by the project surveyor.
[2] Depth below existing grades at time of field exploration.
[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.
[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.
[5] GNE: Groundwater Not Encountered
[6] Boring performed in active farmland at time of field exploration; encountered groundwater levels may be influenced by farmland irrigation.

Summary of SMF/FPC Alternatives Seasonal High Groundwater Table Estimates
SR 70 from West of SR 31 to Highlands County Line
DeSoto County, Florida
FPID No. 451942-2-52-01
Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
LP-4148R	SH9-30	1045048	723979	63.0	5.0	2/1/2024	2.7	60.3	21/13	0.3-1.5/0.5-1.5	1.3	61.7
	PBA-36	1044987	724723	63.8	5.0	3/13/2025	3.6	60.2	13	0.5-1.5	1.5	62.3
	PBA-37	1044991	725620	63.3	5.0	3/13/2025	3.5	59.8	14	0.5-1.5	1.5	61.8
	PBA-38	1044968	726379	63.7	6.5	3/13/2025	5.2	58.5	14/41	0.5-1.5/0.5-1.5	2.0	61.7
	PBA-39	1044902	727147	60.2	5.0	3/14/2025	3.5	56.7	21	0.3-1.5	1.0	59.2
	PBA-40	1044911	727604	61.0	5.0	3/14/2025	3.8	57.2	36	0.5-1.5	1.0	60.0
	SH9-40	1045047	728934	63.9	5.0	1/30/2024	2.9	61.0	36	0.5-1.5	1.5	62.4
	PBA-44	1044988	729894	64.1	5.0	3/13/2025	4.0	60.1	36	0.5-1.5	1.0	63.1
SMF 0903B	SH9-36	1045209	726950	62.8	5.0	2/1/2024	4.0	58.8	21	0.3-1.5	2.5	60.3
	PBA-41	1045514	727065	62.4	5.0	3/13/2025	3.8	58.6	36	0.5-1.5	1.5	60.9
	PBA-43	1045609	727537	62.3	4.0	3/13/2025	1.6	60.7	36	0.5-1.5	0.5	61.8
SMF 0904B	PBA-45	1044229	731760	62.3	5.0	3/13/2025	4.4	57.9	3/20	0.0-1.0/0.5-1.5	1.0	61.3
	PBA-46	1043991	732070	63.2	5.5	3/13/2025	4.6	58.6	20	0.5-1.5	1.5	61.7
LP-4227L	SH9-46	1045214	731961	65.5	5.0	1/30/2024	4.0	61.5	36/3	0.5-1.5/0.0-1.0	2.0	63.5
	PBA-47	1045270	732300	64.6	5.0	3/14/2025	3.8	60.8	13	0.5-1.5	1.5	63.1
SMF 0904A	SH9-48	1045224	732939	63.0	4.0	1/29/2024	2.3	60.7	13	0.5-1.5	1.0	62.0
	PBA-48	1045801	732884	64.3	5.0	3/14/2025	2.5	61.8	13	0.5-1.5	0.5	63.8
	PBA-49	1045543	733163	62.9	6.5	3/14/2025	3.7	59.2	13	0.5-1.5	0.5	62.4
	PBA-50	1045776	733402	63.1	6.0	3/14/2025	4.5	58.6	36	0.5-1.5	1.5	61.6
	PBA-51	1045307	733457	62.6	6.5	3/14/2025	5.0	57.6	36	0.5-1.5	1.0	61.6
LP-4236L	SH9-48	1045224	732939	63.0	4.0	1/29/2024	2.3	60.7	13	0.5-1.5	1.0	62.0
	PBA-51	1045307	733457	62.6	6.5	3/14/2025	5.0	57.6	36	0.5-1.5	1.0	61.6
	PBA-52	1045252	734123	57.2	6.0	3/14/2025	4.1	53.1	36	0.5-1.5	1.5	55.7
LP-4260R	PBA-53	1044941	735587	64.3	5.5	3/13/2025	4.6	59.7	41	0.5-1.5	2.0	62.3
	SH9-55	1045041	736423	67.1	5.0	1/21/2024	3.8	63.3	42	1.5-3.5	2.5	64.6
	PBA-54	1044945	736910	66.6	5.0	3/13/2025	4.8	61.8	36	0.5-1.5	1.5	65.1
LP-4279L	SH10-2	1045232	737571	65.3	5.0	2/2/2024	3.0	62.3	36	0.5-1.5	1.0	64.3
	SH10-4	1045286	738576	63.4	5.0	2/2/2024	2.9	60.5	14	0.5-1.5	1.0	62.4
	PBA-59	1045502	739408	63.4	5.0	3/17/2025	2.4	61.0	14	0.5-1.5	0.0	63.4
SMF 0904A	PBA-55	1046233	738725	64.9	5.0	3/17/2025	3.3	61.6	14	0.5-1.5	1.5	63.4
	PBA-56	1045570	738828	64.0	5.0	3/17/2025	3.8	60.2	14	0.5-1.5	0.5	63.5
	PBA-57	1045874	738896	64.6	5.0	3/17/2025	3.7	60.9	14	0.5-1.5	1.0	63.6
	PBA-58	1046229	739375	65.3	5.0	3/17/2025	3.9	61.4	14	0.5-1.5	1.5	63.8
	PBA-59	1045502	739408	63.4	5.0	3/17/2025	2.4	61.0	14	0.5-1.5	0.0	63.4
	PBA-60	1045895	739424	64.8	5.0	3/17/2025	3.3	61.5	14	0.5-1.5	0.5	64.3

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SR 70 from West of SR 31 to Highlands County Line
DeSoto County, Florida
FPID No. 451942-2-52-01
Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 1001A	PBA-56	1045570	738828	64.0	5.0	3/17/2025	3.8	60.2	14	0.5-1.5	0.5	63.5
	PBA-59	1045502	739408	63.4	5.0	3/17/2025	2.4	61.0	14	0.5-1.5	0.0	63.4
SMF 1001A	PBA-61	1044987	739187	62.9	5.0	3/13/2025	3.4	59.5	14	0.5-1.5	1.0	61.9
	PBA-62	1044615	739212	62.5	5.0	3/13/2025	3.9	58.6	14	0.5-1.5	1.0	61.5
	PBA-63	1044626	739665	63.3	5.0	3/13/2025	3.4	59.9	14	0.5-1.5	1.5	61.8
	PBA-64	1044986	739682	64.0	5.0	3/13/2025	4.3	59.7	14	0.5-1.5	2.0	62.0
SMF 1001A	PBA-63	1044626	739665	63.3	5.0	3/13/2025	3.4	59.9	14	0.5-1.5	1.5	61.8
	PBA-64	1044986	739682	64.0	5.0	3/13/2025	4.3	59.7	14	0.5-1.5	2.0	62.0
	PBA-65	1044978	740107	63.8	5.0	3/13/2025	3.1	60.7	14	0.5-1.5	1.5	62.3
	PBA-66	1044562	740113	63.2	5.0	3/13/2025	3.4	59.8	14	0.5-1.5	1.0	62.2
LP-4311R	SH10-7	1045355	740103	65.5	5.0	2/2/2024	3.3	62.2	14	0.5-1.5	1.5	64.0
	PBA-65	1044978	740107	63.8	5.0	3/13/2025	3.1	60.7	14	0.5-1.5	1.5	62.3
	SH10-10	1045304	741547	66.6	6.5	2/2/2024	3.0	63.6	14	0.5-1.5	2.0	64.6
	SH10-13	1045405	743070	68.5	6.5	2/2/2024	5.1	63.4	21/24	0.3-1.5/0.5-1.5	3.5	65.0
	PBA-69	1045012	743560	66.6	5.0	3/13/2025	3.3	63.3	3/20	0.0-1.0/0.5-1.5	0.5	66.1
	SH10-15	1045434	744038	68.4	5.0	2/2/2024	4.0	64.4	21/24	0.3-1.5/0.5-1.5	2.5	65.9
	PBA-74	1045032	744843	69.0	5.0	3/13/2025	5.2	63.8	14	0.5-1.5	1.5	67.5
	SH10-17	1045438	745031	69.3	5.0	2/3/2024	3.3	66.1	14	0.5-1.5	2.3	67.0
	PBA-75	1045297	745956	68.2	5.0	3/17/2025	3.6	64.6	20/23	0.5-1.5/+2.0-0.0	0.5	67.7
	SH10-20	1045332	746515	70.5	6.0	2/3/2024	5.0	65.5	20	0.5-1.5	2.5	68.0
	PBA-80	1045232	747928	68.2	5.0	3/17/2025	3.7	64.5	21	0.3-1.5	0.5	67.7
	SH10-25	1045453	749036	69.9	6.5	2/4/2024	4.4	65.5	14/40	0.5-1.5/0.3-1.5	2.5	67.4
	PBA-85	1045318	749836	69.4	4.5	3/17/2025	3.1	66.3	40	0.3-1.5	0.5	68.9
	SH10-30	1045346	751501	71.2	5.0	2/4/2024	2.0	69.2	14	0.5-1.5	0.5	70.7
	PBA-89	1045216	753497	72.9	5.0	3/17/2025	4.2	68.7	13	0.5-1.5	0.5	72.4
	SH10-40	1045368	756497	74.8	6.0	2/4/2024	3.7	71.1	13	0.5-1.5	2.0	72.8
	PBA-93	1045267	757854	71.5	5.0	3/25/2025	4.7	66.8	21	0.3-1.5	0.0	71.5
	PBA-96	1045252	758531	72.6	5.0	3/25/2025	4.5	68.1	21	0.3-1.5	1.0	71.6
	PBA-99	1045201	759575	73.2	5.0	3/19/2025	4.0	69.2	13	0.5-1.5	1.0	72.2
	PBA-105	1045250	760313	73.8	6.0	3/19/2025	4.8	69.0	14	0.5-1.5	2.0	71.8
FPC 1002C	PBA-67	1044948	743159	66.4	5.0	3/13/2025	3.6	62.8	20	0.5-1.5	1.5	64.9
	PBA-68	1044701	743480	67.0	5.0	3/13/2025	2.9	64.1	3/20	0.0-1.0/0.5-1.5	1.0	66.0
	PBA-69	1045012	743560	66.6	5.0	3/13/2025	3.3	63.3	3/20	0.0-1.0/0.5-1.5	0.5	66.1
FPC 1002A	PBA-70	1045907	743746	66.6	5.5	3/18/2025	3.4	63.2	21	0.3-1.5	0.5	66.1
	PBA-71	1045645	744017	67.6	5.0	3/18/2025	4.3	63.3	13	0.5-1.5	1.0	66.6
	PBA-72	1045902	744263	68.6	5.0	3/18/2025	4.8	63.8	13	0.5-1.5	1.5	67.1

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Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 1002B	PBA-73	1044845	744574	68.0	5.0	3/13/2025	3.6	64.4	20	0.5-1.5	1.5	66.5
	PBA-74	1045032	744843	69.0	5.0	3/13/2025	5.2	63.8	14	0.5-1.5	1.5	67.5
SMF 1002B	PBA-76	1044836	746555	69.6	5.0	3/17/2025	3.8	65.8	20	0.5-1.5	1.0	68.6
	PBA-77	1045033	747016	69.4	5.0	3/17/2025	4.5	64.9	20	0.5-1.5	1.0	68.4
	PBA-78	1044589	747034	69.4	5.0	3/17/2025	4.3	65.1	20	0.5-1.5	1.0	68.4
SMF 1002A	PBA-79	1044671	747679	67.4	4.5	3/17/2025	3.5	63.9	21	0.3-1.5	1.0	66.4
	PBA-80	1045232	747928	68.2	5.0	3/17/2025	3.7	64.5	21	0.3-1.5	0.5	67.7
	PBA-81	1044939	748086	68.0	5.0	3/17/2025	3.5	64.5	21	0.3-1.5	1.0	67.0
SMF 1002C	PBA-82	1046195	747951	68.2	4.0	3/17/2025	1.7[6]	66.5[6]	40	0.3-1.5	0.5	67.7
	PBA-83	1045781	747982	68.2	5.0	3/17/2025	1.9[6]	66.3[6]	40	0.3-1.5	0.5	67.7
	PBA-84	1046014	748320	68.3	5.0	3/17/2025	1.9[6]	66.4[6]	14	0.5-1.5	0.5	67.8
SMF 1003B	PBA-86	1045835	753237	73.7	5.5	3/17/2025	4.6	69.1	13/14	0.5-1.5/0.5-1.5	2.0	71.7
	PBA-87	1045833	753768	74.0	6.0	3/17/2025	4.3	69.7	13/14	0.5-1.5/0.5-1.5	1.5	72.5
SMF 1003A	PBA-88	1044943	753231	72.6	4.0	3/17/2025	3.5	69.1	13	0.5-1.5	0.5	72.1
	PBA-89	1045216	753497	72.9	5.0	3/17/2025	4.2	68.7	13	0.5-1.5	0.5	72.4
	PBA-90	1044981	753785	73.9	5.0	3/17/2025	4.6	69.3	13	0.5-1.5	1.0	72.9
FPC 1003B	PBA-92	1044860	757790	72.7	5.0	3/25/2025	3.6	69.1	21	0.3-1.5	1.0	71.7
	PBA-93	1045267	757854	71.5	5.0	3/25/2025	4.7	66.8	21	0.3-1.5	0.0	71.5
	PBA-94	1045051	757991	72.6	5.0	3/25/2025	4.8	67.8	21	0.3-1.5	1.0	71.6
	PBA-95	1044869	758286	72.1	6.0	3/25/2025	4.2	67.9	21	0.3-1.5	1.0	71.1
FPC 1003A	PBA-96	1045252	758531	72.6	5.0	3/25/2025	4.5	68.1	21	0.3-1.5	1.0	71.6
	PBA-97	1044985	758586	72.0	5.0	3/25/2025	4.6	67.4	21	0.3-1.5	1.0	71.0
	PBA-98	1044958	759003	72.5	5.0	3/25/2025	3.8	68.7	21	0.3-1.5	1.0	71.5
SMF 1004A	PBA-98	1044958	759003	72.5	5.0	3/25/2025	3.8	68.7	21	0.3-1.5	1.0	71.5
SMF 1004B	PBA-99	1045201	759575	73.2	5.0	3/19/2025	4.0	69.2	13	0.5-1.5	1.0	72.2
	PBA-101	1044901	759579	73.0	5.0	3/19/2025	4.6	68.4	13	0.5-1.5	1.0	72.0
FPC 1004A	PBA-99	1045201	759575	73.2	5.0	3/19/2025	4.0	69.2	13	0.5-1.5	1.0	72.2
	PBA-101	1044901	759579	73.0	5.0	3/19/2025	4.6	68.4	13	0.5-1.5	1.0	72.0
	PBA-103	1045032	759982	72.9	5.0	3/19/2025	4.8	68.1	13	0.5-1.5	1.0	71.9
	PBA-105	1045250	760313	73.8	6.0	3/19/2025	4.8	69.0	13	0.5-1.5	2.0	71.8
	PBA-106	1044813	760328	73.1	5.0	3/19/2025	4.1	69.0	13	0.5-1.5	1.5	71.6
	PBA-108	1045013	760655	73.6	8.0	3/19/2025	7.1	66.5	13	0.5-1.5	2.0	71.6

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SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 1004B	PBA-100	1044507	759560	72.4	5.0	3/19/2025	3.5	68.9	13	0.5-1.5	1.0	71.4
	PBA-102	1044298	759995	72.4	7.0	3/19/2025	5.4	67.0	13	0.5-1.5	1.0	71.4
	PBA-104	1044673	759984	72.9	5.0	3/19/2025	4.4	68.5	13	0.5-1.5	1.0	71.9
	PBA-107	1044468	760359	70.4	5.0	3/19/2025	4.3	66.1	13/19	0.5-1.5/+2.0-0.0	0.0	70.4
	PBA-109	1044244	760799	71.5	7.0	3/19/2025	7.6	63.9	13	0.5-1.5	1.0	70.5
LP-4516L	SH10-48	1045570	760487	74.0	6.5	2/5/2024	4.3	69.8	14	0.5-1.5	2.0	72.0
	PBA-113	1045818	761727	75.6	6.5	3/14/2025	5.9	69.7	14	0.5-1.5	2.5	73.1
	SH10-52	1045609	762468	71.5	5.5	2/5/2024	2.9	68.6	14/21	0.5-1.5/0.3-1.5	0.0	71.5
	SH10-54	1045597	763470	73.9	6.5	2/5/2024	4.3	69.6	21/26	0.3-1.5/0.0-1.5	2.0	71.9
	SH10-56	1045607	764468	71.2	5.0	2/5/2024	1.6	69.6	22/26	0.5-1.5/0.0-1.5	0.0	71.2
	SH10-58	1045582	765461	72.5	5.0	2/5/2024	3.1	69.4	22	0.5-1.5	0.5	72.0
	SH10-62	1045586	767470	75.7	6.5	2/5/2024	6.1	69.6	24	0.5-1.5	2.5	73.2
FPC 1004C	PBA-110	1046592	761491	76.0	7.0	3/14/2025	5.0	71.0	14	0.5-1.5	2.0	74.0
	PBA-111	1047011	761535	75.1	6.0	3/14/2025	3.5	71.6	14	0.5-1.5	1.0	74.1
	PBA-112	1046179	761572	74.7	5.0	3/14/2025	3.7	71.0	14	0.5-1.5	1.5	73.2
	PBA-113	1045818	761727	75.6	6.5	3/14/2025	5.9	69.7	14	0.5-1.5	2.5	73.1
	PBA-114	1046398	761820	75.3	5.0	3/14/2025	3.3	72.0	13	0.5-1.5	1.5	73.8
	PBA-115	1046905	761905	76.0	4.0	3/14/2025	2.7	73.3	13/14	0.5-1.5/0.5-1.5	1.0	75.0
SMF 1005B	PBA-113	1045818	761727	75.6	6.5	3/14/2025	5.9	69.7	14	0.5-1.5	2.5	73.1
	PBA-116	1045853	762259	75.2	6.5	3/18/2025	6.4	68.8	14	0.5-1.5	2.5	72.7
	PBA-117	1045842	762781	74.2	7.0	3/18/2025	5.7	68.5	21	0.3-1.5	1.5	72.7
FPC 1005A	PBA-118	1046824	762247	76.4	5.0	3/14/2025	2.6	73.8	13	0.5-1.5	1.5	74.9
	PBA-119	1046629	762568	76.1	4.0	3/14/2025	2.8	73.3	14	0.5-1.5	1.0	75.1
	PBA-120	1047040	762565	76.2	3.5	3/14/2025	2.3	73.9	13	0.5-1.5	1.0	75.2
	PBA-121	1046823	763123	75.4	3.5	3/14/2025	2.3	73.1	13	0.5-1.5	0.5	74.9
FPC 1005B	PBA-122	1046653	763863	75.3	6.5	3/14/2025	5.4	69.9	26	0.0-1.5	2.0	73.3
	PBA-124	1046398	764323	75.4	5.0	3/14/2025	4.2	71.2	22	0.5-1.5	1.5	73.9
	PBA-126	1046586	764874	74.4	5.0	3/18/2025	4.8	69.6	22	0.5-1.5	1.5	72.9
	PBA-127	1046046	764924	74.7	5.0	3/18/2025	4.0	70.7	22	0.5-1.5	1.5	73.2
	PBA-128	1046298	765204	74.9	5.0	3/18/2025	3.7	71.2	22	0.5-1.5	1.5	73.4
	PBA-129	1046529	765503	75.3	5.0	3/18/2025	3.7	71.6	22	0.5-1.5	1.5	73.8
SMF 1005A	PBA-123	1046137	764072	75.3	7.0	3/14/2025	5.3	70.0	26	0.0-1.5	2.0	73.3
	PBA-125	1045951	764334	74.9	7.0	3/14/2025	5.5	69.4	22	0.0-1.5	1.5	73.4

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Summary of SMF/FPC Alternatives Seasonal High Groundwater Table Estimates
SR 70 from West of SR 31 to Highlands County Line
DeSoto County, Florida
FPID No. 451942-2-52-01
Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 1005C	PBA-130	1047779	764494	76.5	5.0	3/18/2025	5.0	71.5	24	0.5-1.5	1.0	75.5
	PBA-131	1047585	764932	75.4	2.0	3/18/2025	GNE[5]	<73.4	18/24	+2.0-0.0/0.5-1.5	0.0	75.4
	PBA-132	1047783	765291	77.1	5.0	3/18/2025	4.8	72.3	24	0.5-1.5	1.5	75.6
	PBA-133	1047585	765710	76.8	5.5	3/18/2025	5.3	71.5	29	0.0-1.5	1.0	75.8
	PBA-134	1047802	766016	76.8	5.0	3/18/2025	4.7	72.1	29	0.0-1.5	1.0	75.8
LP-4585R	SH10-63	1045535	768014	76.4	6.5	2/5/2024	6.3	70.2	24	0.5-1.5	2.5	73.9
	PBA-137	1045273	769064	77.2	5.5	3/18/2025	3.8	73.4	20	0.5-1.5	1.0	76.2
	PBA-139	1045284	769653	76.7	6.5	3/17/2025	4.3	72.4	20	0.5-1.5	1.0	75.7
	PBA-142	1045300	770403	76.6	6.5	3/17/2025	3.1	73.5	24	0.5-1.5	1.0	75.6
	PBA-146	1045282	771253	77.4	6.5	3/17/2025	4.7	72.7	20	0.5-1.5	2.0	75.4
	PBA-148	1045325	771940	76.6	3.0	3/18/2025	GNE[5]	<73.6	3	0.0-1.0	1.5	75.1
FPC 1006A	PBA-135	1044675	769039	76.5	6.5	3/18/2025	4.5	72.0	20	0.5-1.5	1.5	75.0
	PBA-137	1045273	769064	77.2	5.5	3/18/2025	3.8	73.4	20	0.5-1.5	1.0	76.2
	PBA-138	1045006	769411	76.0	5.0	3/18/2025	3.5	72.5	20/40	0.5-1.5/0.3-1.5	1.0	75.0
	PBA-139	1045284	769653	76.7	6.5	3/17/2025	4.3	72.4	20	0.5-1.5	1.0	75.7
	PBA-141	1044937	770027	77.0	5.0	3/17/2025	4.1	72.9	20	0.5-1.5	1.5	75.5
	PBA-142	1045300	770403	76.6	6.5	3/17/2025	3.1	73.5	24	0.5-1.5	1.0	75.6
	PBA-143	1044775	770432	76.5	5.0	3/18/2025	4.1	72.4	20	0.5-1.5	1.0	75.5
FPC 1006B	PBA-135	1044675	769039	76.5	6.5	3/18/2025	4.5	72.0	20	0.5-1.5	1.5	75.0
	PBA-136	1044119	769084	76.2	6.5	3/18/2025	4.0	72.2	20	0.5-1.5	1.5	74.7
	PBA-140	1044113	769687	75.9	6.0	3/18/2025	3.6	72.3	20	0.5-1.5	1.0	74.9
SMF 1006A	PBA-142	1045300	770403	76.6	6.5	3/17/2025	3.1	73.5	24	0.5-1.5	1.0	75.6
	PBA-143	1044775	770432	76.5	5.0	3/18/2025	4.1	72.4	20	0.5-1.5	1.0	75.5
	PBA-144	1045009	770796	76.6	5.0	3/17/2025	3.8	72.8	20	0.5-1.5	1.0	75.6
	PBA-145	1044715	771227	76.8	6.0	3/18/2025	3.4	73.4	20	0.5-1.5	1.5	75.3
	PBA-146	1045282	771253	77.4	6.5	3/17/2025	4.7	72.7	20	0.5-1.5	2.0	75.4
FPC 1007C	PBA-146	1045282	771253	77.4	6.5	3/17/2025	4.7	72.7	20	0.5-1.5	2.0	75.4
	PBA-147	1044968	771633	76.4	6.0	3/18/2025	3.8	72.6	3	0.0-1.0	1.5	74.9
	PBA-148	1045325	771940	76.6	3.0	3/18/2025	GNE[5]	<73.6	3	0.0-1.0	1.5	75.1
FPC 1007A	PBA-150	1044910	772301	76.8	6.0	3/19/2025	3.4	73.4	3	0.0-1.0	2.0	74.8
	PBA-151	1045333	772533	77.8	6.5	3/18/2025	3.7	74.1	20	0.5-1.5	2.0	75.8
FPC 1007B	PBA-149	1044671	772225	76.4	6.0	3/19/2025	3.8	72.6	3	0.0-1.0	1.5	74.9
	PBA-152	1044667	772687	77.4	6.5	3/19/2025	3.8	73.6	20	0.5-1.5	1.5	75.9

[1] Boring locations and ground elevations were provided by the project surveyor.
[2] Depth below existing grades at time of field exploration.
[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.
[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.
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DeSoto County, Florida
FPID No. 451942-2-52-01
Tierra Project No: 6511-24-001

SMF/FPC Site Name	Boring Name	Boring Location[1] FL State Plane West		Surveyed Ground Elevation[1] (feet, NAVD 88)	Boring Depth[2] (feet)	Measured Groundwater Table			USDA Soil Survey		Estimated SHGWT[4]	
		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SMF 1006B	PBA-151	1045333	772533	77.8	6.5	3/18/2025	3.7	74.1	20	0.5-1.5	2.0	75.8
	PBA-152	1044667	772687	77.4	6.5	3/19/2025	3.8	73.6	20	0.5-1.5	1.5	75.9
	PBA-153	1044992	772882	78.2	6.5	3/19/2025	4.4	73.8	20	0.5-1.5	2.0	76.2
	PBA-154	1044780	773350	77.9	6.5	3/19/2025	4.0	73.9	20	0.5-1.5	1.5	76.4
	PBA-155	1045304	773365	78.4	6.5	3/19/2025	4.5	73.9	20	0.5-1.5	2.0	76.4
	PBA-156	1045050	773857	78.8	6.5	3/19/2025	4.1	74.7	20	0.5-1.5	2.0	76.8
LP-4648R	SH10-75	1045560	773958	79.1	6.5	2/6/2024	5.7	73.4	20/24	0.5-1.5/0.5-1.5	2.0	77.1
	PBA-157	1045328	775269	79.9	6.5	3/19/2025	4.8	75.1	3	0.0-1.0	1.5	78.4
	PBA-159	1045328	775806	79.8	6.5	3/19/2025	5.2	74.6	24/40	0.5-1.5/0.3-1.5	1.5	78.3
	PBA-163	1045264	776234	79.5	6.0	3/18/2025	4.2	75.3	40	0.3-1.5	1.0	78.5
	SH10-80	1045472	776447	81.1	6.5	2/6/2024	5.6	75.5	36/40	0.5-1.5/0.3-1.5	2.0	79.1
	PBA-165	1045268	776710	80.4	6.0	3/18/2025	4.2	76.2	36	0.5-1.5	2.0	78.4
	PBA-167	1045325	777380	80.9	6.0	3/18/2025	5.5	75.4	24	0.5-1.5	1.5	79.4
	PBA-168	1045258	777967	81.0	6.0	3/18/2025	3.8	77.2	36	0.5-1.5	1.5	79.5
	PBA-176	1045399	779225	83.9	6.5	3/14/2025	4.6	79.3	20	0.5-1.5	2.5	81.4
	PBA-177	1045329	780491	84.3	6.5	3/14/2025	5.5	78.8	20	0.5-1.5	3.0	81.3
	SH10-89	1045496	780964	83.5	6.0	2/6/2024	4.6	78.9	20/32	0.5-1.5/0.5-1.5	2.0	81.5
FPC 1008B	PBA-157	1045328	775269	79.9	6.5	3/19/2025	4.8	75.1	3	0.0-1.0	1.5	78.4
	PBA-158	1044992	775373	79.1	5.0	3/19/2025	3.8	75.3	3	0.0-1.0	1.0	78.1
	PBA-159	1045328	775806	79.8	6.5	3/19/2025	5.2	74.6	24/40	0.5-1.5/0.3-1.5	1.5	78.3
	PBA-160	1045015	775805	78.8	5.0	3/18/2025	4.4	74.4	3	0.0-1.0	1.5	77.3
FPC 1008A	PBA-161	1044603	775899	79.2	6.0	3/18/2025	4.3	74.9	3	0.0-1.0	1.5	77.7
	PBA-162	1044975	776164	80.0	6.0	3/18/2025	4.7	75.3	40	0.3-1.5	1.5	78.5
	PBA-163	1045264	776234	79.5	6.0	3/18/2025	4.2	75.3	40	0.3-1.5	1.0	78.5
	PBA-164	1044590	776405	79.9	6.0	3/18/2025	3.7	76.2	24	0.5-1.5	1.5	78.4
SMF 1007B	PBA-162	1044975	776164	80.0	6.0	3/18/2025	4.7	75.3	40	0.3-1.5	1.5	78.5
	PBA-163	1045264	776234	79.5	6.0	3/18/2025	4.2	75.3	40	0.3-1.5	1.0	78.5
	PBA-164	1044590	776405	79.9	6.0	3/18/2025	3.7	76.2	24	0.5-1.5	1.5	78.4
	PBA-165	1045268	776710	80.4	6.0	3/18/2025	4.2	76.2	36	0.5-1.5	2.0	78.4
	PBA-166	1044869	776705	80.3	6.0	3/18/2025	3.8	76.5	24	0.5-1.5	1.5	78.8
SMF 1007A	PBA-167	1045325	777380	80.9	6.0	3/18/2025	5.5	75.4	24	0.5-1.5	1.5	79.4
	PBA-168	1045258	777967	81.0	6.0	3/18/2025	3.8	77.2	36	0.5-1.5	1.5	79.5
	PBA-169	1044957	778073	80.8	6.0	3/18/2025	3.0	77.8	36	0.5-1.5	1.0	79.8
FPC 1008C	PBA-170	1045756	776859	80.8	6.0	3/19/2025	5.2	75.6	36	0.5-1.5	2.0	78.8
	PBA-172	1046070	777098	81.3	6.0	3/19/2025	3.7	77.6	36	0.5-1.5	2.0	79.3

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		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
SMF 1007C	PBA-171	1046387	777004	80.6	5.0	3/19/2025	2.3	78.3	36	0.5-1.5	1.5	79.1
	PBA-172	1046070	777098	81.3	6.0	3/19/2025	3.7	77.6	36	0.5-1.5	2.0	79.3
	PBA-173	1045892	777444	81.3	6.5	3/19/2025	4.1	77.2	36	0.5-1.5	2.0	79.3
	PBA-174	1046441	777535	81.2	5.0	3/19/2025	2.9	78.3	40	0.3-1.5	1.5	79.7
	PBA-175	1046098	777673	81.8	5.0	3/19/2025	3.5	78.3	36	0.5-1.5	2.0	79.8
FPC 1009C	PBA-178	1045216	781465	82.8	6.5	3/14/2025	4.5	78.3	36	0.5-1.5	1.5	81.3
FPC 1009B	PBA-179	1045235	781829	83.2	6.0	3/14/2025	5.0	78.2	36	0.5-1.5	1.5	81.7
FPC 1009A	PBA-180	1046048	781540	82.8	5.0	3/19/2025	4.3	78.5	24	0.5-1.5	1.0	81.8
	PBA-181	1045838	781839	83.5	6.5	3/19/2025	5.3	78.2	24	0.5-1.5	2.0	81.5
	PBA-182	1046076	781892	83.2	6.0	3/19/2025	4.5	78.7	24	0.5-1.5	1.5	81.7
LP-4742R	PBA-183	1045429	783778	85.2	6.0	3/14/2025	5.3	79.9	36	0.5-1.5	2.0	83.2
	SH10-97	1045611	784941	84.0	5.0	2/5/2024	4.8	79.3	36	0.5-1.5	1.5	82.5
	SH10-99	1045530	785982	84.7	6.0	2/5/2024	4.8	80.0	3/36	0.0-1.0/0.5-1.5	1.8	82.9
	SH10-101	1045629	786984	83.3	5.0	2/5/2024	4.0	79.3	40	0.3-1.5	1.0	82.3
	PBA-184	1045429	787583	84.5	6.0	3/19/2025	4.9	79.6	40	0.3-1.5	2.0	82.5
	SH10-105	1045632	788976	83.2	5.0	2/5/2024	3.2	80.0	3	0.0-1.0	1.3	81.9
	PBA-190	1045336	789911	83.0	6.0	3/14/2025	2.8	80.2	3	0.0-1.0	1.0	82.0
	SH10-109	1045533	790872	83.7	5.0	2/5/2024	3.3	80.4	20	0.5-1.5	2.0	81.7
	SH10-111	1045651	791905	82.7	5.0	2/3/2024	4.0	78.7	40	0.3-1.5	1.0	81.7
	PBA-194	1045354	792997	82.1	6.0	3/14/2025	3.2	78.9	40	0.3-1.5	1.0	81.1
SMF 1008C	PBA-185	1046663	788307	82.7	5.0	3/14/2025	1.5[6]	81.2[6]	40	0.3-1.5	0.5	82.2
	PBA-186	1045966	788350	82.6	4.0	3/14/2025	2.5[6]	80.1[6]	3	0.0-1.0	0.5	82.1
	PBA-187	1046359	788685	82.7	4.0	3/14/2025	3.5[6]	79.2[6]	3/40	0.0-1.0/0.3-1.5	0.5	82.2
	PBA-188	1046633	789012	82.5	4.0	3/14/2025	4.5[6]	78.0[6]	40	0.3-1.5	0.5	82.0
	PBA-189	1045916	789055	82.4	5.0	3/14/2025	5.5[6]	76.9[6]	3	0.0-1.0	0.5	81.9
SMF 1008A	PBA-190	1045336	789911	83.0	6.0	3/14/2025	2.8	80.2	3	0.0-1.0	1.0	82.0
	PBA-191	1045094	790274	83.4	6.0	3/14/2025	3.3	80.1	20	0.5-1.5	1.5	81.9
FPC 1010B	PBA-192	1045272	792304	82.3	6.0	3/14/2025	3.7	78.6	40	0.3-1.5	1.0	81.3
	PBA-193	1044688	792348	82.2	5.0	3/14/2025	3.1	79.1	3	0.0-1.0	1.0	81.2
	PBA-195	1044678	793155	82.1	6.0	3/14/2025	3.1	79.0	40	0.3-1.5	1.0	81.1
	PBA-196	1045075	793598	81.9	6.0	3/14/2025	4.3	77.6	40	0.3-1.5	1.5	80.4
	PBA-197	1044268	793721	80.6	5.5	3/14/2025	4.1	76.5	40	0.3-1.5	1.0	79.6
SMF 1008B	PBA-194	1045354	792997	82.1	6.0	3/14/2025	3.2	78.9	40	0.3-1.5	1.0	81.1
	PBA-196	1045075	793598	81.9	6.0	3/14/2025	4.3	77.6	40	0.3-1.5	1.5	80.4

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		Northing	Easting			Date Recorded	Depth[2] (feet)	Elevation (feet, NAVD 88)	Map Symbol	Estimated SHGWT[3] Depth (feet)	Depth[2] (feet)	Elevation (feet, NAVD 88)
FPC 1010C	PBA-198	1046282	793193	81.1	4.0	3/13/2025	1.2[6]	79.9[6]	40	0.3-1.5	0.5	80.6
	PBA-199	1045997	793771	81.0	3.0	3/13/2025	1.1[6]	79.9[6]	40	0.3-1.5	0.5	80.5
	PBA-200	1046288	794393	82.0	4.5	3/13/2025	1.6[6]	80.4[6]	40	0.3-1.5	1.0	81.0
SMF 1009A	PBA-201	1045987	794926	82.5	6.0	3/13/2025	2.3[6]	80.2[6]	20	0.5-1.5	1.0	81.5
	PBA-202	1046332	795308	82.7	5.0	3/13/2025	1.8[6]	80.9[6]	40	0.3-1.5	1.0	81.7
LP-4850R	SH10-117	1045662	794906	83.5	6.0	2/3/2024	5.9	77.6	20	0.5-1.5	3.0	80.5
	SH10-119	1045565	795877	81.9	5.0	2/3/2024	4.4	77.5	20/24	0.5-1.5/0.5-1.5	1.0	80.9
	SH10-121	1045655	796861	84.8	7.0	2/3/2024	6.9	77.9	24	0.5-1.5	3.5	81.3
	PBA-204	1045276	796920	82.4	6.0	3/13/2025	5.1	77.3	24	0.5-1.5	1.5	80.9
	SH10-124	1045585	798215	81.5	6.5	2/3/2024	4.5	77.0	34	+2.0-0.0	1.5	80.0
SMF 1009B	PBA-203	1044724	796619	82.4	5.0	3/13/2025	2.8	79.6	13	0.5-1.5	1.5	80.9
	PBA-204	1045276	796920	82.4	6.0	3/13/2025	5.1	77.3	24	0.5-1.5	1.5	80.9
FPC 1010A	PBA-205	1047883	797116	83.7	5.0	3/13/2025	1.8[6]	81.9[6]	24	0.5-1.5	1.0	82.7
	PBA-206	1047451	797447	83.1	3.0	3/13/2025	2.3[6]	80.8[6]	24	0.5-1.5	1.0	82.1
	PBA-207	1047920	797884	83.4	6.0	3/13/2025	3.5[6]	79.9[6]	24	0.5-1.5	1.0	82.4

[1] Boring locations and ground elevations were provided by the project surveyor.
[2] Depth below existing grades at time of field exploration.
[3] Seasonal high groundwater table depth estimated based on the DeSoto County, Florida USDA Soil Survey information.
[4] Seasonal high groundwater table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, the DeSoto County, Florida USDA Soil Survey information and past experience with similar soil conditions.
[5] GNE: Groundwater Not Encountered
[6] Boring performed in active farmland at time of field exploration; encountered groundwater levels may be influenced by farmland irrigation.

5701 Division Drive,Fort Myers Florida 33905 - 239.275-8875

RE: SEASONAL HIGH WATER MARK'S
SURVEY DATE: 02/15/2024

Description: SR 70 Segments 9-10
FP ID.: 451690-1, 451942-1
From: East of SR 31 to Desoto/Highlands Co. Line (Segments 9-10)

	STATE PLANE FLORIDA WEST (0902)		NAVD 1988		
FIELD LABELED	NORTHING	EASTING	ELEVATION	DESCRIPTION	SURVEY NOTE
SHW 1	1045123.11	719716.39	48.94	SEASONAL HIGH WATERMARK	NAME DUPLICATED
SHW1	1045153.16	738824.45	59.62	SEASONAL HIGH WATERMARK	NAME DUPLICATED
SHW2	1045054.84	726869.56	59.02	SEASONAL HIGH WATERMARK	NAME DUPLICATED
SHW 2	1045367.55	750983.40	70.55	SEASONAL HIGH WATERMARK	NAME DUPLICATED/ ADDED 0.55' TO NEW PAINT LINE
SHW 3	1045413.22	758077.33	68.84	SEASONAL HIGH WATERMARK	
SHW 4	1045425.94	760858.51	68.05	SEASONAL HIGH WATERMARK	
SHW 5	1045458.30	772038.29	73.43	SEASONAL HIGH WATERMARK	
SHW 6	1045500.56	781524.38	78.00	SEASONAL HIGH WATERMARK	
SHW 7	1045541.87	788455.48	79.52	SEASONAL HIGH WATERMARK	
SHW 8	1045585.67	793765.72	77.28	SEASONAL HIGH WATERMARK	
SHW 9	1045548.27	776069.62	75.98	SEASONAL HIGH WATERMARK	
SHW10	1045544.10	772046.78	72.84	SEASONAL HIGH WATERMARK	
SHW11	1045481.24	760873.98	68.79	SEASONAL HIGH WATERMARK	

5701 Division Drive,Fort Myers Florida 33905 - 239.275-8875

RE: SEASONAL HIGH BIOLOGICAL INDICATORS
Survey Date: 06/10/2024

Description: SR 70 Segment 9-10
FPID.:451690-1 & 451942-1
From: East of SR 31 to Desoto/Highlands Co Line

	STATE PLANE FLORIDA WEST (0902)		NAVD 1988	
FIELD LABELED	NORTHING	EASTING	ELEVATION	DESCRIPTION
SHW-278- R	1045028.16	726879.86	59.01	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-278- L	1045141.16	726891.23	59.69	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-302- L	1045145.79	729283.61	61.90	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-302- R	1045054.22	729278.39	62.16	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW 316 L	1045145.99	730738.24	64.53	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-317	1045142.99	730801.36	64.34	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-320-L	1045148.79	731077.15	64.37	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-323-L	1045144.02	731408.20	64.22	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-323-LB	1045145.43	731447.72	64.17	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-326- L	1045141.24	731764.25	63.67	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-327- L	1045143.02	731814.41	63.58	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-329- L-A	1045143.78	732023.50	63.43	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-329- L-B	1045144.00	732063.46	63.30	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-345- L-A	1045147.14	733566.20	60.67	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-345- L-B	1045144.63	733617.66	60.88	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-354-L	1045130.54	734521.40	53.70	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-397-L	1045245.78	738824.64	62.59	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-397-R	1045153.25	738834.12	61.23	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-404-L-A	1045307.83	739494.95	62.82	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-405-L	1045435.32	739579.51	61.50	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-404 L-B	1045433.99	739510.03	61.71	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-418-L	1045502.58	740929.87	62.04	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-423-L	1045486	742309	N/A	NO FLAG FOUND
SHW-459-L-A	1045529	744976	N/A	NO FLAG FOUND
SHW-459-L-B	1045560	745001	N/A	NO FLAG FOUND
SHW-476-L	1045534.95	746654.08	64.29	SEASONAL HIGH/BIOLOGICAL INDICATOR

SHW-484- LB	1045522.71	747563.67	67.81	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-484-LA	1045438.89	747565.75	68.75	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-484-R	1045323.99	747560.90	67.32	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-511-L	1045513	750210	N/A	NO FLAG FOUND
SHW-519-L	1045452.59	750986.13	70.08	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-519-R	1045339.73	750995.04	70.20	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-547-L	1045533	753767	N/A	NO FLAG FOUND
SHW-565-L B	1045584.77	755639.39	70.83	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-565-L A	1045586	755607	N/A	NO FLAG FOUND
SHW-573-L	1045607.10	756320.03	69.40	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-578-L	1045591.35	756872.50	68.14	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-587-L	1045585.1	757719.3	73.19	NO FLAG FOUND-SURVEYED GROUND LEVEL
SHW-589-L	1045468.99	758007.83	71.68	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-594-L	1045576.59	758537.83	73.48	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-604-L	1045596.99	759515.31	69.07	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-616	1045612.22	760673.65	69.93	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-617	1045481.54	760841.09	71.31	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-620	1045700.88	761112.63	70.04	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-629	1045671.87	762059.66	68.62	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-688 LB	1045632.73	765917.75	71.12	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-688 LA	1045631.44	765877.50	71.43	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-672- L	1045521.14	766362.43	72.95	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-681	1045627.10	767109.53	69.07	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-687- L	1045631.45	767849.78	70.58	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-699-L	1045634.12	769136.60	70.45	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-709-L	1045636.46	769983.98	72.62	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-718-L	1045639.22	770804.63	72.44	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-772-L	1045664.67	771366.36	73.36	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-772-L	1045647.51	772482.15	73.52	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-743-L	1045653.77	773286.16	72.98	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-755-L	1045657.99	774575.42	75.27	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-763-L	1045680.22	775431.46	77.34	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-777-L	1045669.21	776766.40	75.51	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-784-L	1045667.41	777566.10	77.25	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-793-L	1045674.77	778412.19	77.48	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-803- L	1045687.02	779454.36	77.43	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-808-L	1045689.96	779898.09	79.05	SEASONAL HIGH/BIOLOGICAL INDICATOR
SWH-809-L	1045691.01	779976.80	79.77	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-831-L	1045661.78	781141.09	79.13	NO FLAG FOUND-SURVEYED GROUND LEVEL
SHW- 824-L	1045586.64	781518.28	80.55	SEASONAL HIGH/BIOLOGICAL INDICATOR

SHW-830-L	1045686.29	782121.63	79.86	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-833-L	1045687.82	782411.91	79.87	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-844-L	1045690.69	783518.79	79.65	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-854- L	1045701.21	784497.67	79.51	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-863-L	1045709.30	785434.42	80.38	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-874-L	1045716.07	786576.20	80.53	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-206-L	1045145.18	719713.73	48.88	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-884-L	1045721.78	787494.72	78.57	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-894-L	1045626.79	788464.09	80.66	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-903-L	1045731.68	789469.09	80.73	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-923-L	1045746.86	791274.51	77.23	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-937-L	1045812.09	792848.78	78.75	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-946- L	1045651.60	793768.60	78.08	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-956- L	1045767.63	794755.19	77.04	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-972-L	1045771.73	796278.53	76.68	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-981-L	1045765.95	797209.50	77.44	SEASONAL HIGH/BIOLOGICAL INDICATOR
SHW-981-L	1045584.88	798385.30	79.03	SEASONAL HIGH/BIOLOGICAL INDICATOR

APPENDIX 7

EXHIBITS

FLOODPLAIN EXHIBITS

EXISTING CROSS DRAIN EXHIBIT

PROPOSED CROSS DRAIN EXHIBIT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 1

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awaller 10/9/2025 11:40:24 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 2

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awaller 10/9/2025 11:40:42 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 3

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awaller 10/9/2025 11:40:59 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 4

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awaller 10/9/2025 11:41:18 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 5

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awaller 10/9/2025 11:41:36 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 6

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 7

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awaller 10/9/2025 11:42:12 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 8

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awaller 10/9/2025 11:42:30 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD
HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 9

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awaller 10/9/2025 11:42:50 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 10

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awaller 10/9/2025 11:43:08 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 11

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awaller 10/9/2025 11:43:26 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 12

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awaller 10/9/2025 11:43:44 AM

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 13

c:\caddlib\pw\hntb_awaller\sediv\d0245995\DRMPRD0901_Preferred.dgn : CL_SR70 - FPC_ALIGNMENT-42 [SHEET]
awaller 10/9/2025 11:44:02 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 14

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awaller 10/9/2025 11:44:21 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 15

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awaller 10/9/2025 11:44:39 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 16

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awaller 10/9/2025 11:44:57 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 17

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awaller 10/9/2025 11:45:16 AM

MATCHLINE A-1

N

0 50 100 200
FEET

PROP. EASEMENT

ZONE A

ZONE A

ZONE A

ZONE A

1 MILE GRADE RD

DCT CANAL

FIA 1004-1
EL. 77.50

FIA 1004-2
EL. 78.00

4510 4515 4520 4525 4530 4535

SR 70

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 18

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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awaller 10/9/2025 11:45:35 AM

MATCHLINE A-2

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 19

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awaller 10/9/2025 11:45:54 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 20

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awaller 10/9/2025 11:46:13 AM

MATCHLINE B-2

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 21

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awaller 10/9/2025 11:46:31 AM

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 22

c:\caddlib\pw\hntb_awaller\sediv\d0245995\DRMPRD0901_Preferred.dgn : CL_SR70 - FPC_ALIGNMENT-51 [SHEET]
awaller 10/9/2025 11:46:50 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 23

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awaller 10/9/2025 11:47:09 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 24

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awaller 10/9/2025 11:47:29 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	TAMPA	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 25

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awaller 10/9/2025 11:47:49 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 26

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awaller 10/9/2025 11:48:08 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 27

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awaller 10/9/2025 11:48:28 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 28

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awaller 10/9/2025 11:48:50 AM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 29

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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awaller 10/9/2025 11:49:10 AM

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 30

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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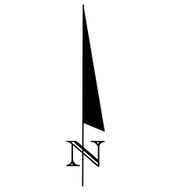
awaller 10/9/2025 11:49:30 AM



LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

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LICENSE NUMBER: 80386
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201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 31

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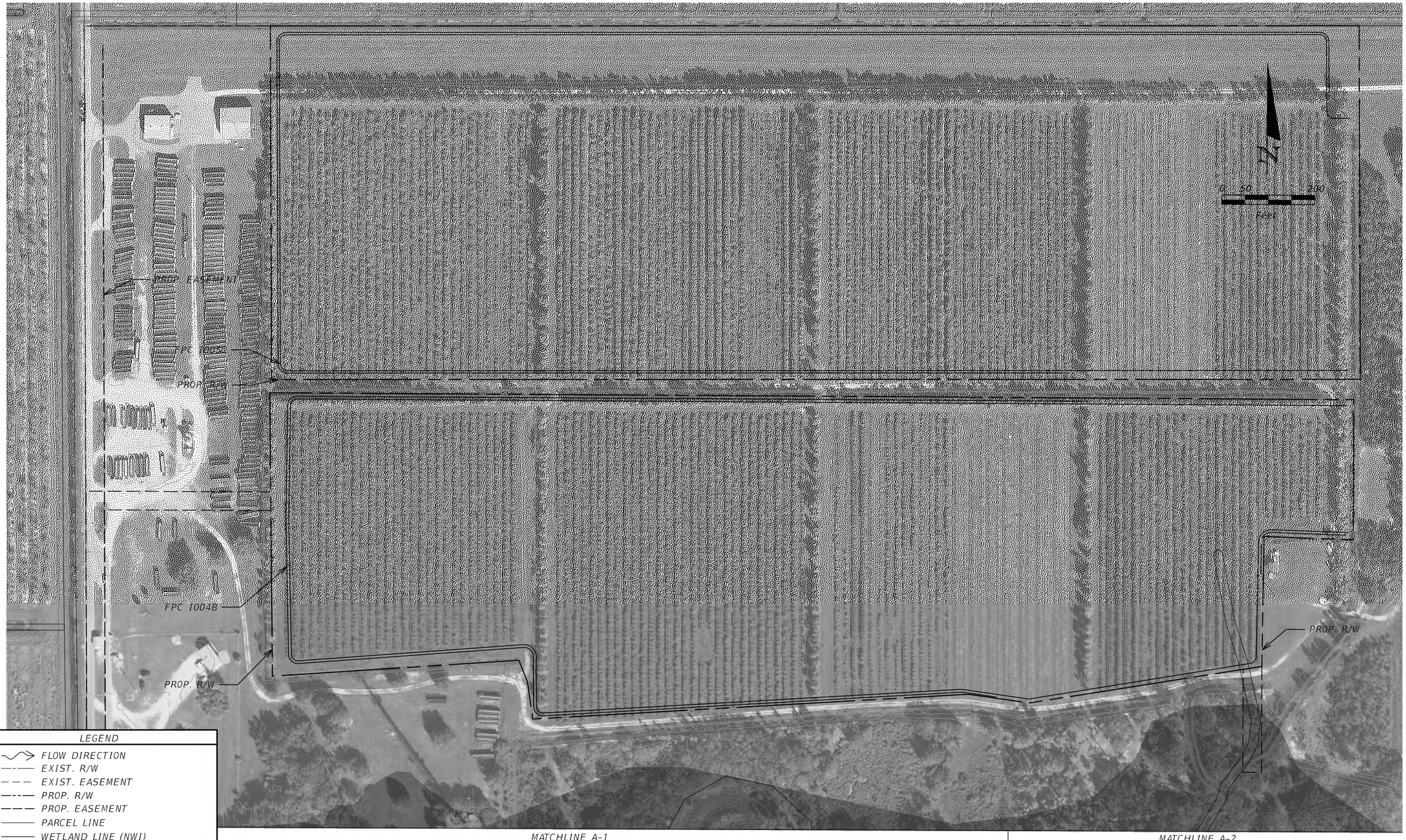
c:\caddlib\pw\hntb_awaller\sediv\d0245995\DRMPRD0901_Preferred.dgn : UNNAMED PLAN-9 - END_OF_ALIGNMENT [SHEET]
awaller 10/9/2025 11:49:39 AM



LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

MATCHLINE J-1

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 32

c:\caddlib\pw\hntb_awaller\sediv\d0245995\DRMPRD0901_Preferred.dgn : UNNAMED PLAN-2 - FPC_OFFSITE-1 [SHEET]
awaller 10/9/2025 11:49:56 AM

MATCHLINE B-1

MATCHLINE B-2

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 33

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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awaller 10/9/2025 11:50:15 AM

MATCHLINE C-1

MATCHLINE C-2

LEGEND

- FLOW DIRECTION
- EXIST. R/W
- EXIST. EASEMENT
- PROP. R/W
- PROP. EASEMENT
- PARCEL LINE
- WETLAND LINE (NWI)
- WETLAND LINE (FIELD VERIFIED)
- FLOODPLAIN
- FLOODWAY

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-2-52-01

FPC DRAINAGE MAP

SHEET NO. 34

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

c:\caddlib\pw\hntb_awaller\sediv\d0245995\DRMPRD0901_Preferred.dgn : UNNAMED PLAN-4 - FPC_OFFSITE-3 [SHEET]
awaller 10/9/2025 11:50:33 AM

LEGEND

DRAINAGE AREA BOUNDARY

N

4177+65.60
(2) 8'W x 6'H
Drainage Area: 1588.16 Acres

4201+67.22
(3) 42"
Drainage Area: 155.24 Acres

4297+11.54
(3) 48"
Drainage Area: 216.32 Acres

4384+54.40
(2) 6'W x 7'H
Drainage Area: 304.5 Acres

4517+54.96
(3) 8'W x 9'H Bridge Class
Drainage Area: 12495.53 Acres

SR 70

4572+61.46
8'W x 6'H

4595+39.13
4'W x 5'H

4598+11.14
8'W x 5'H

4629+38.27
9'W x 7'H

4724+09.97
8'W x 4'H

4793+50.90
(2) 9'W x 5'H

4846+36.30
(4) 12'W x 7'H Bridge Class
Drainage Area: 13495.80 Acres

0 6000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PROFESSIONAL TYPE

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-1-22-01

EXISTING CROSS DRAINS

SHEET NO.
01

FAC NOTE

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LEGEND

DRAINAGE AREA BOUNDARY

N

4177+65.60
(2) 8'W x 6'H
Drainage Area: 1588.16 Acres

4201+67.22
(3) 42"
Drainage Area: 155.24 Acres

4297+11.54
(3) 48"
Drainage Area: 216.32 Acres

4384+54.40
(2) 6'W x 7'H
Drainage Area: 304.5 Acres

4517+54.96
(3) 8'W x 9'H Bridge Class
Drainage Area: 12495.53 Acres
To be evaluated in separate BHR

SR 70

4572+61.46
8'W x 6'H

4595+39.13
4'W x 5'H

4598+11.14
8'W x 5'H

4629+38.27
9'W x 7'H

4724+09.97
8'W x 4'H

4793+50.90
(2) 9'W x 5'H

4846+36.30
(4) 12'W x 7'H Bridge Class
Drainage Area: 13495.80 Acres
To be evaluated in separate BHR

0 6000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

PROFESSIONAL TYPE

HONG TING CHIU, P.E.
LICENSE NUMBER: 80386
HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 70	DESOTO	451942-1-22-01

PROPOSED CROSS DRAINS

SHEET NO.
01

FAC NOTE

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APPENDIX 8

CORRESPONDENCE

APPENDIX 9

COMMENTS