

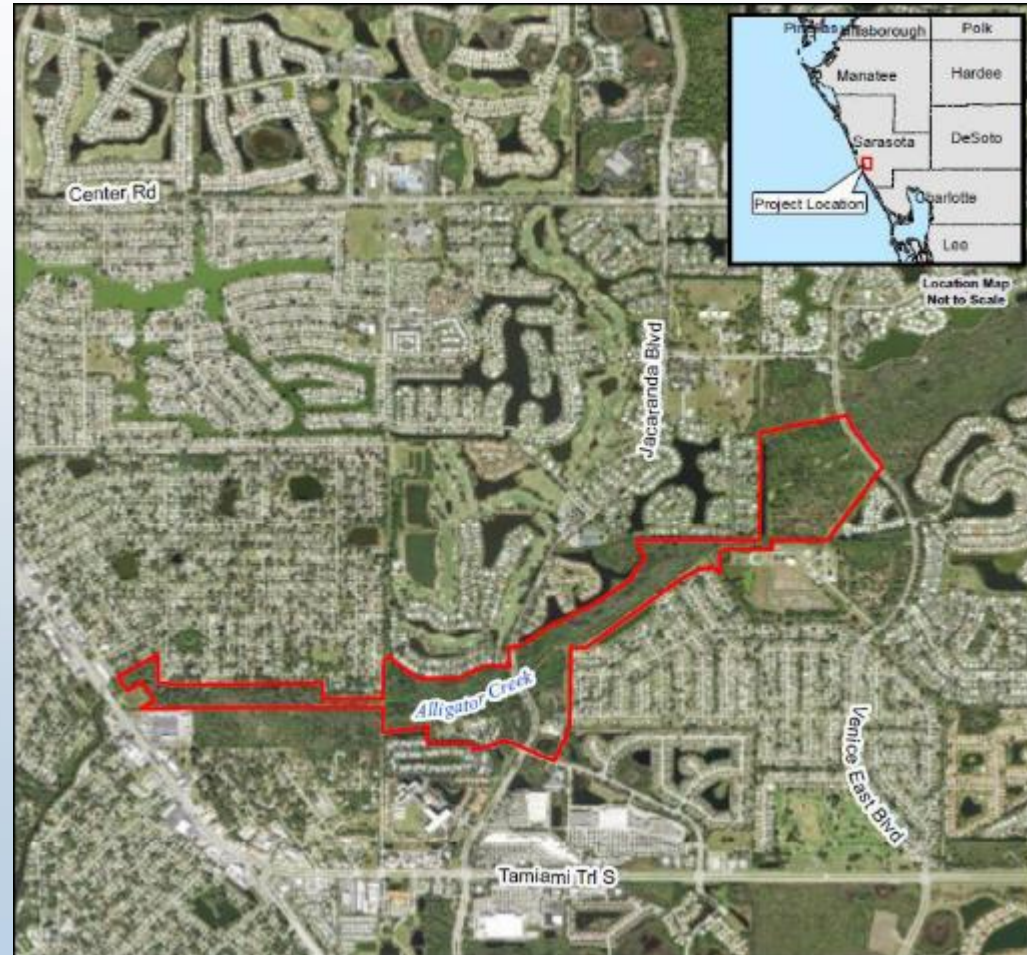


Alligator Creek Stream Restoration

Alligator Creek Stream Restoration

Background

- Tidally influenced creek beginning as a freshwater wetland system flowing to Lemon Bay
- Urbanized watershed
- Alterations to system began in 1940's
- Excavated to typical trapezoidal cross-section in project area



Project Overview

Why Alligator Creek?

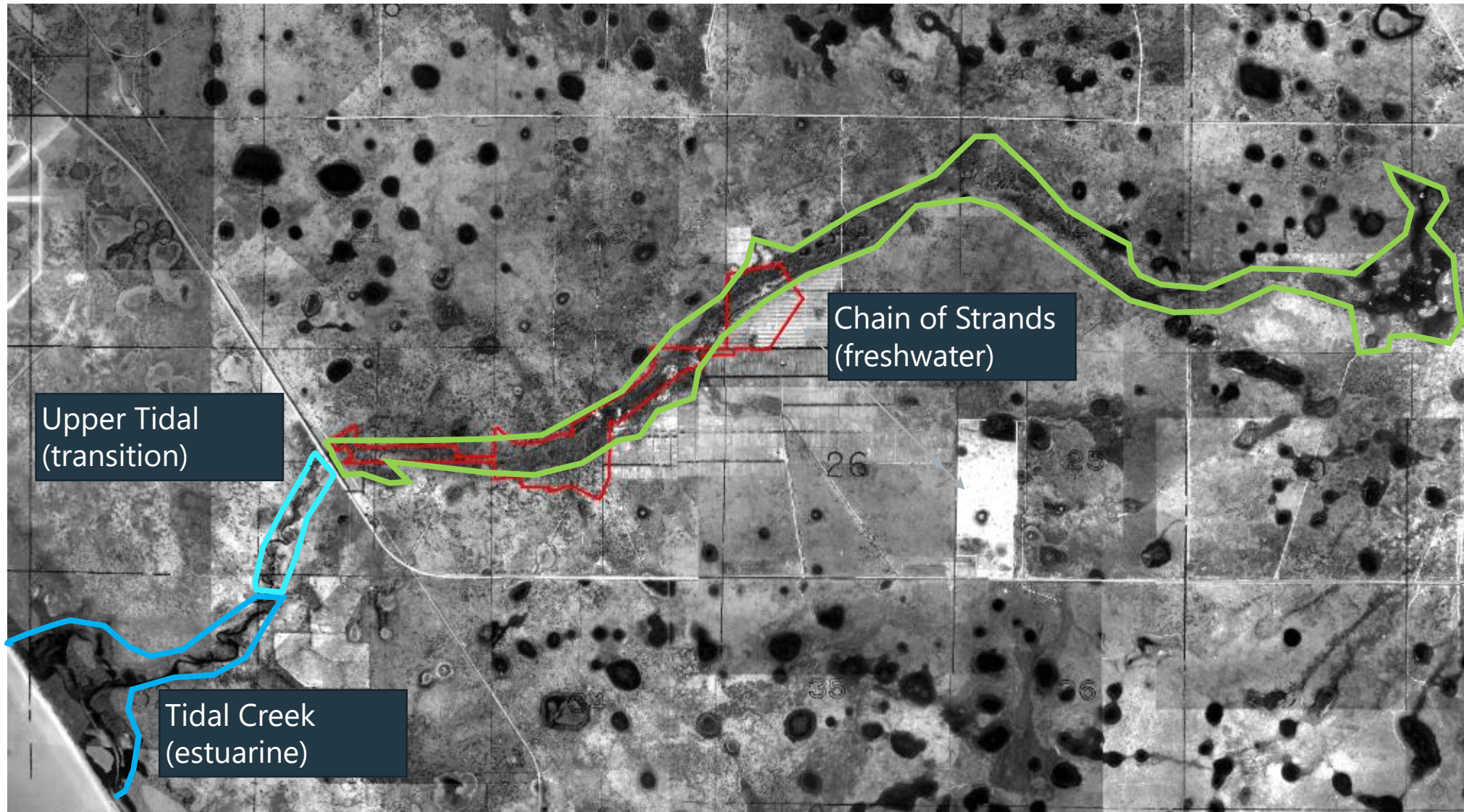
- Steep and unstable side banks resulting in excessive erosion and sedimentation
- High nutrient loading due to increased drainage flow
- Nuisance/Exotic vegetation overtaken native stream and shoreline habitats
- Ditching has resulted in significant waterbody degradation and homogenization, diminishing important fish rearing habitat and biodiversity

Project Benefits

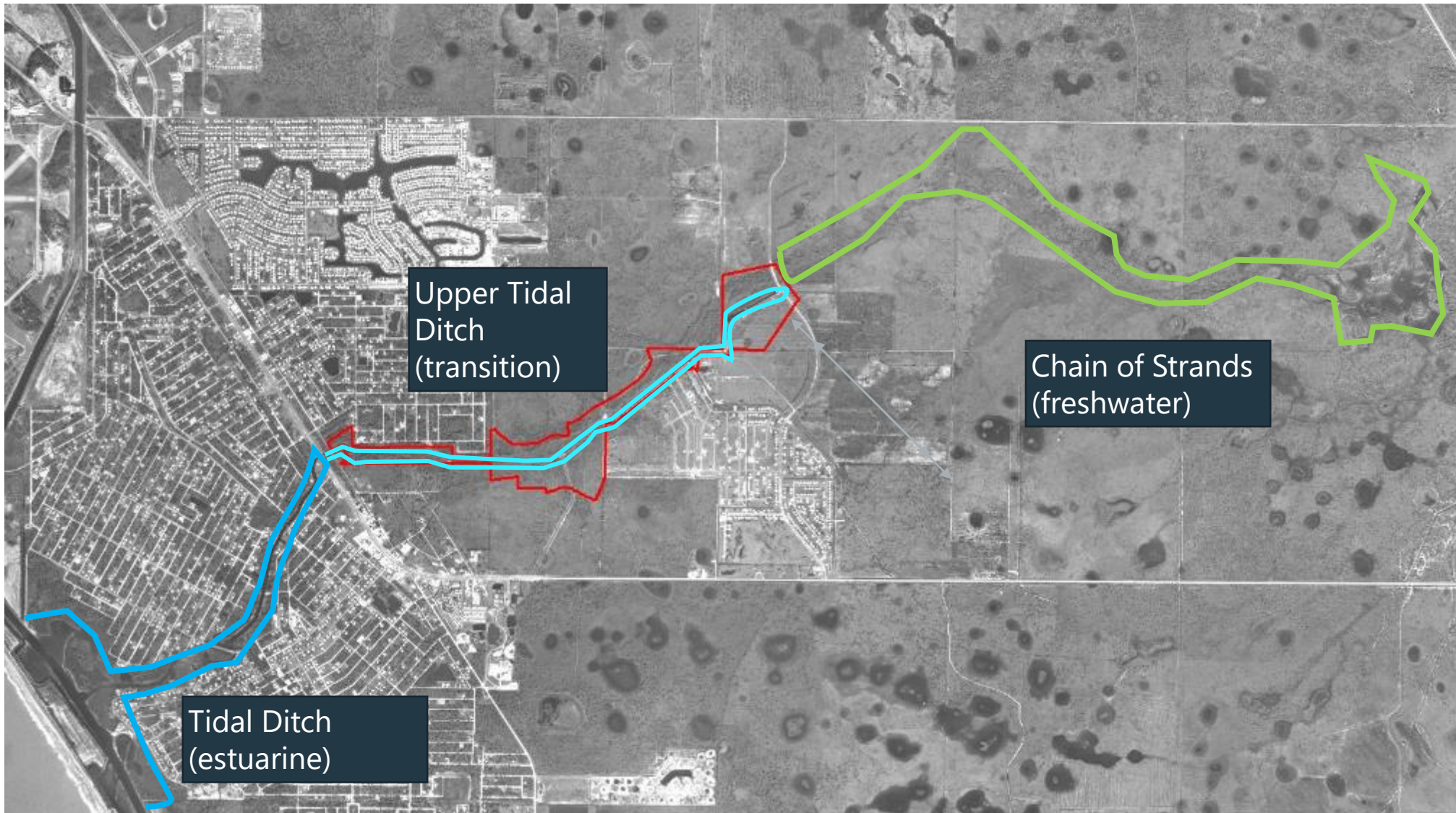


- Remove nutrients
- Stabilize banks
- Reduce maintenance
- Improve fisheries habitat
- Improve resiliency
- Enhance recreational area

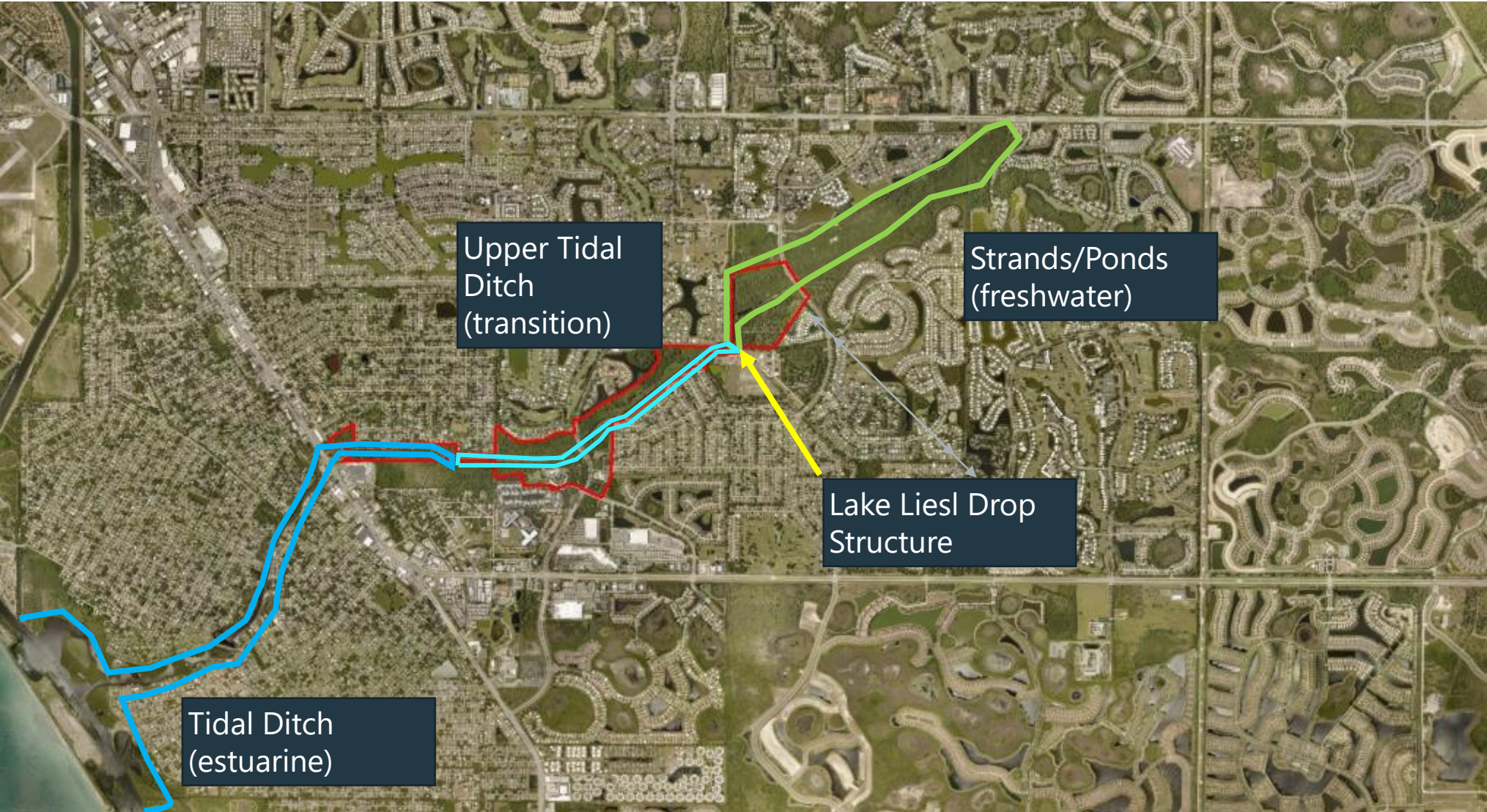
1948

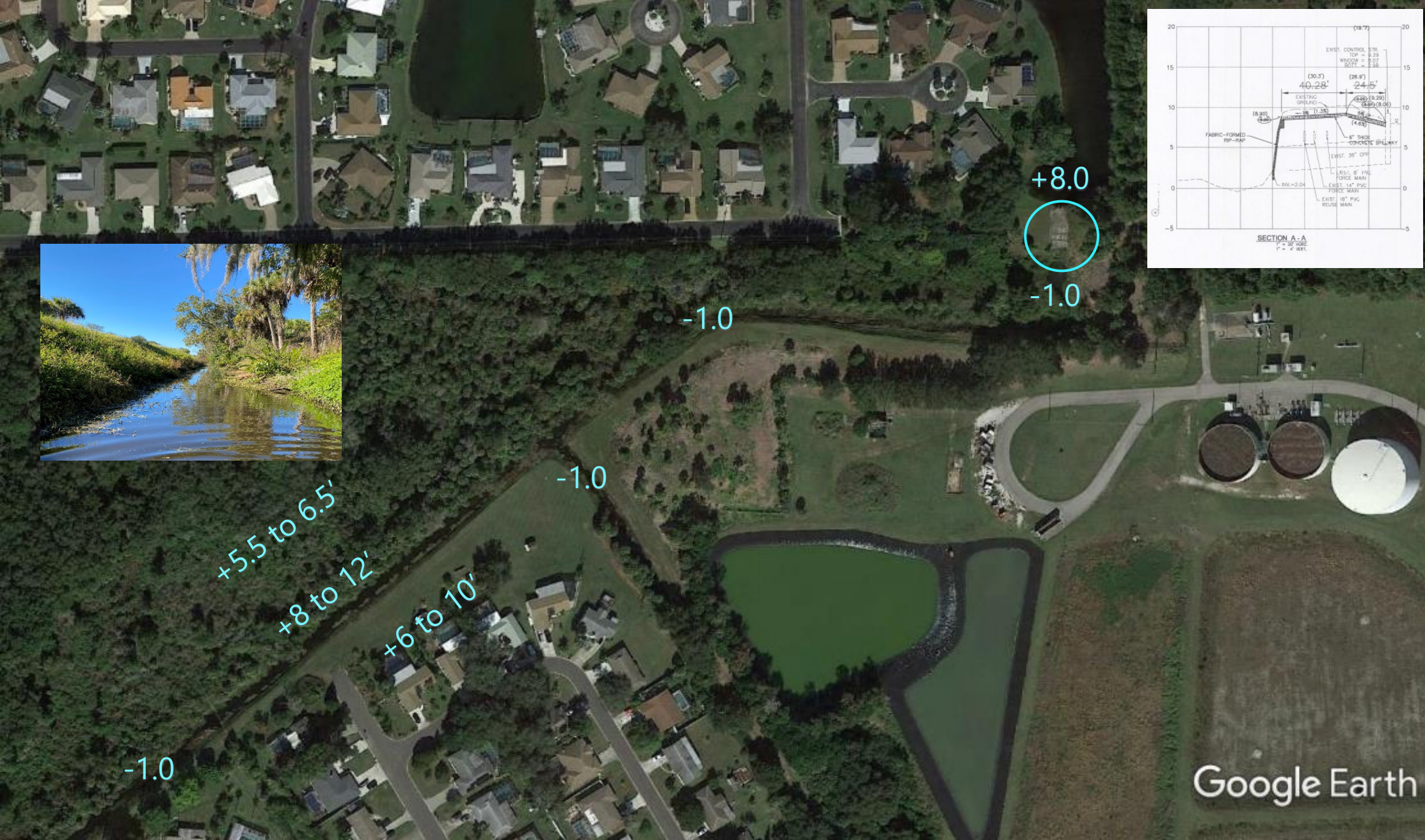


1974

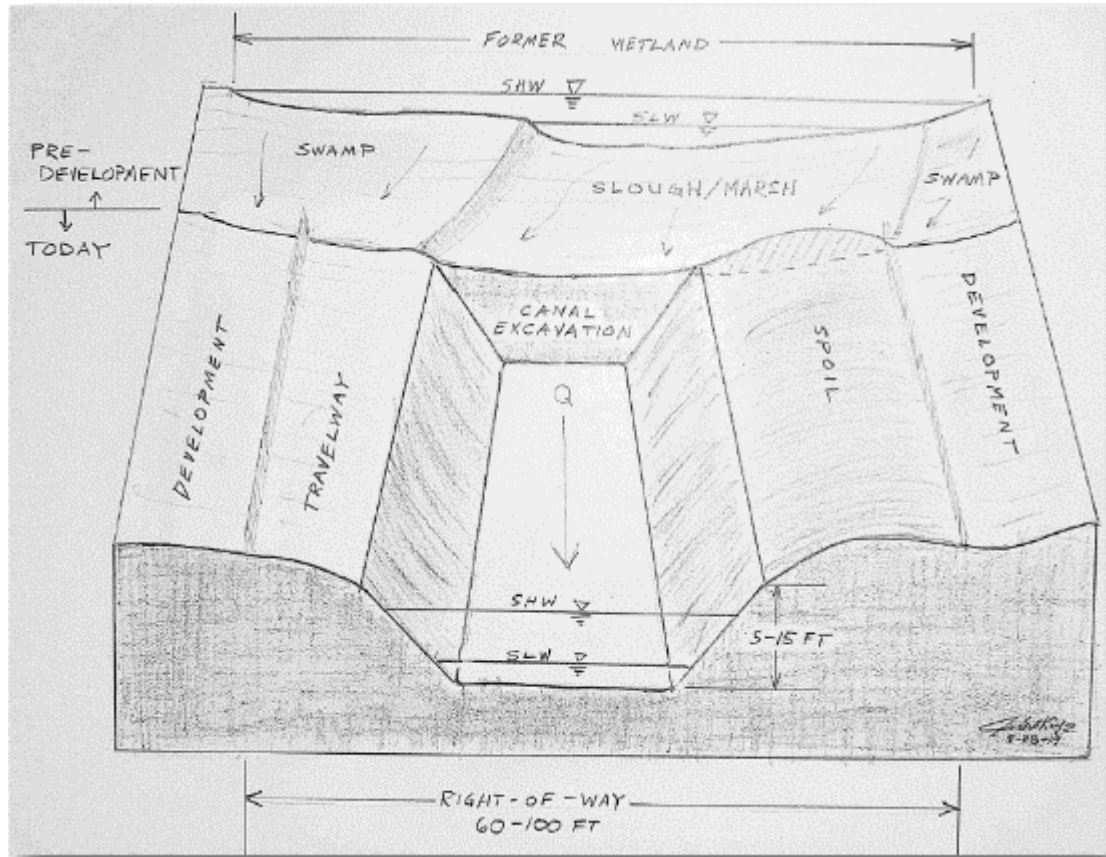


2019

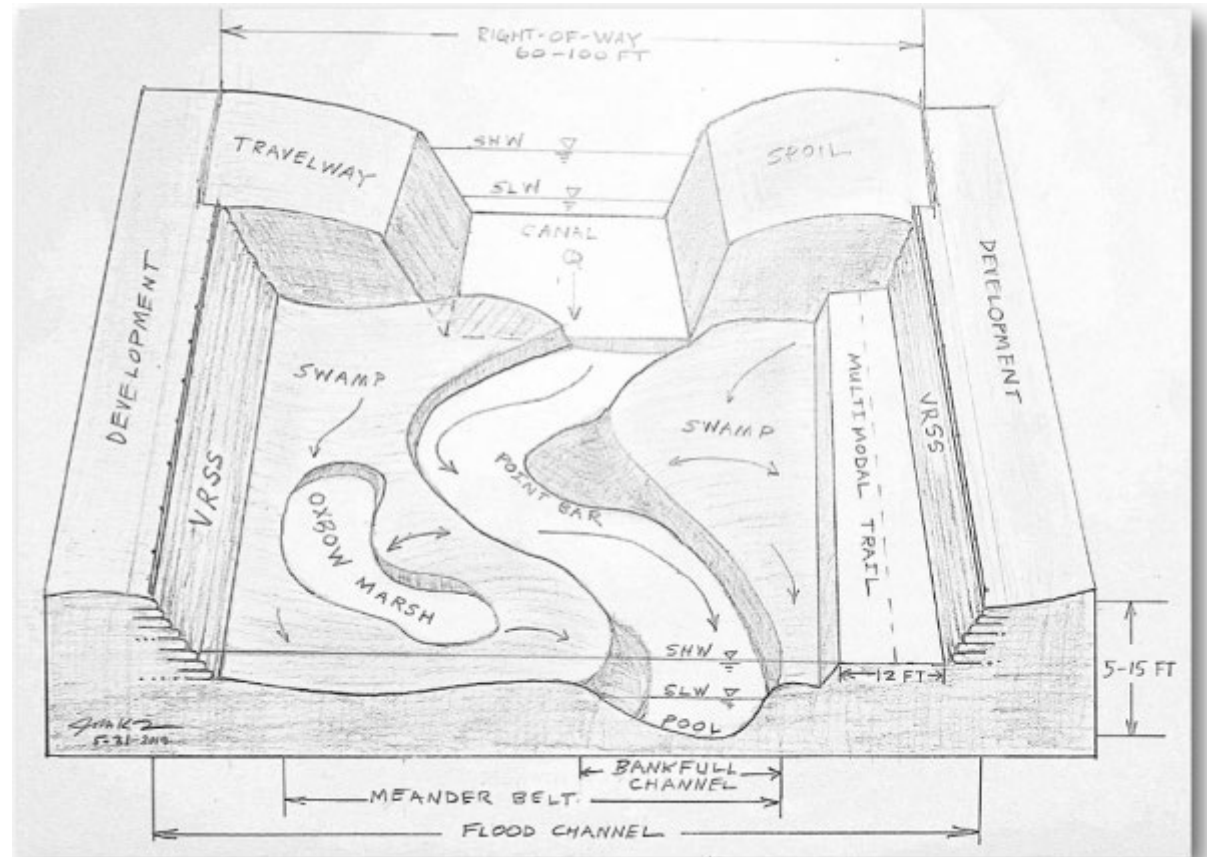




The Altered Drainage Network

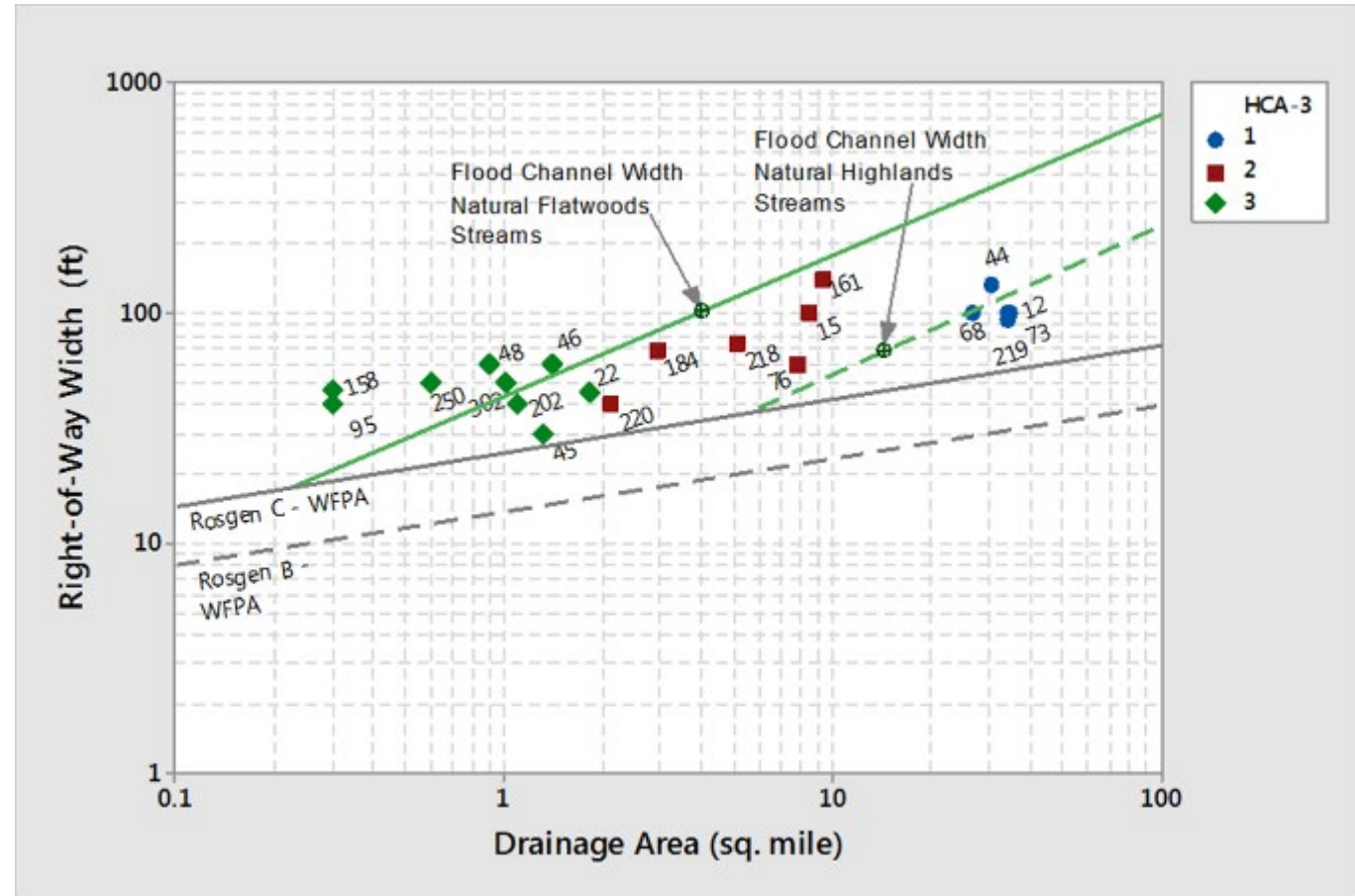
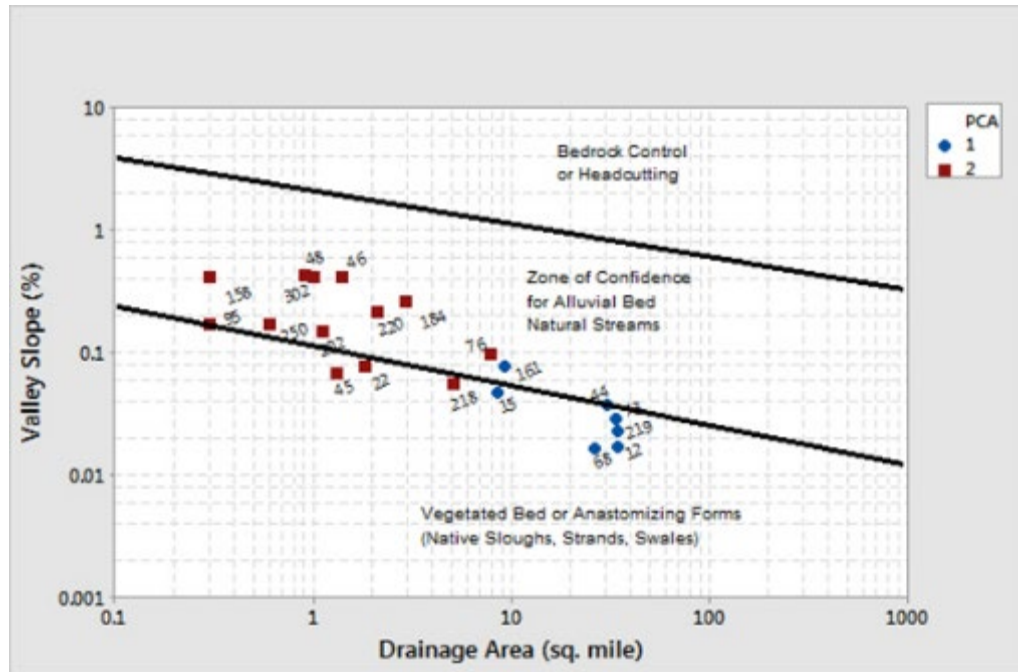


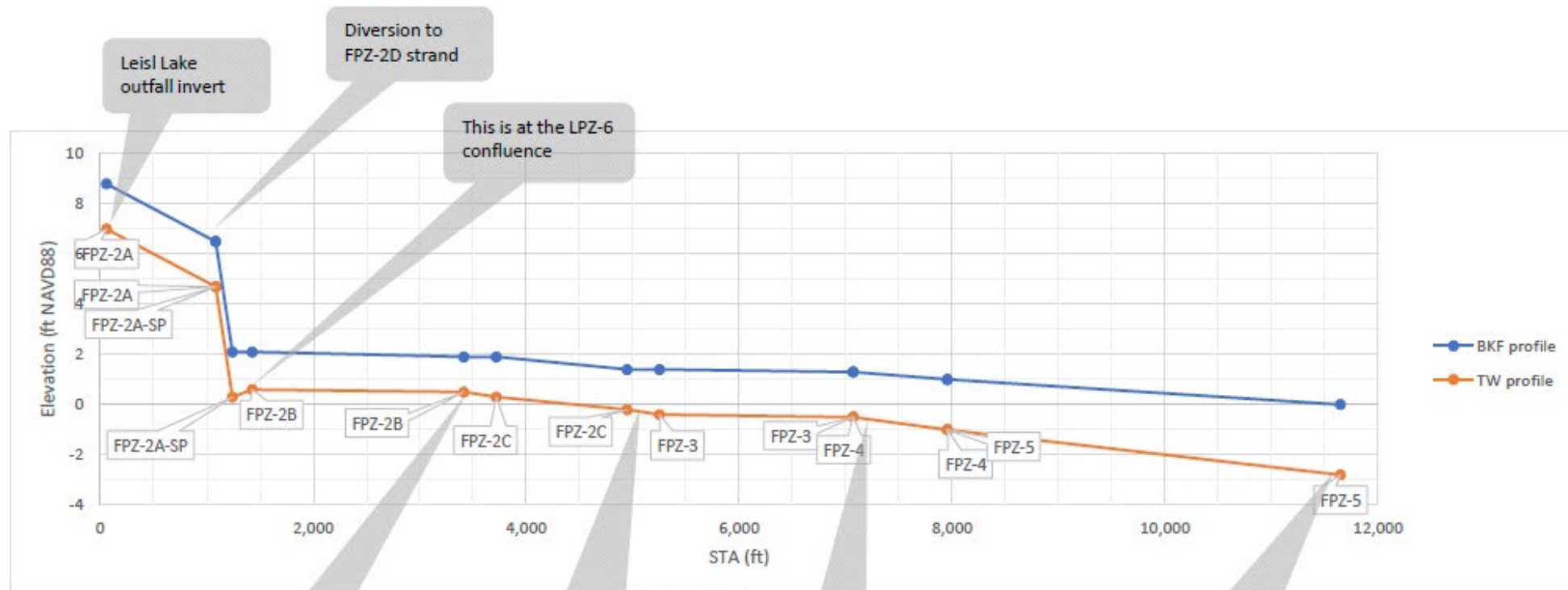
Priority 2 Restoration



Florida's Biophysical Fit

- Harness natural forces and use nature as our guide
 - More resilient
 - Less maintenance
 - More beautiful
 - Efficient design and construction



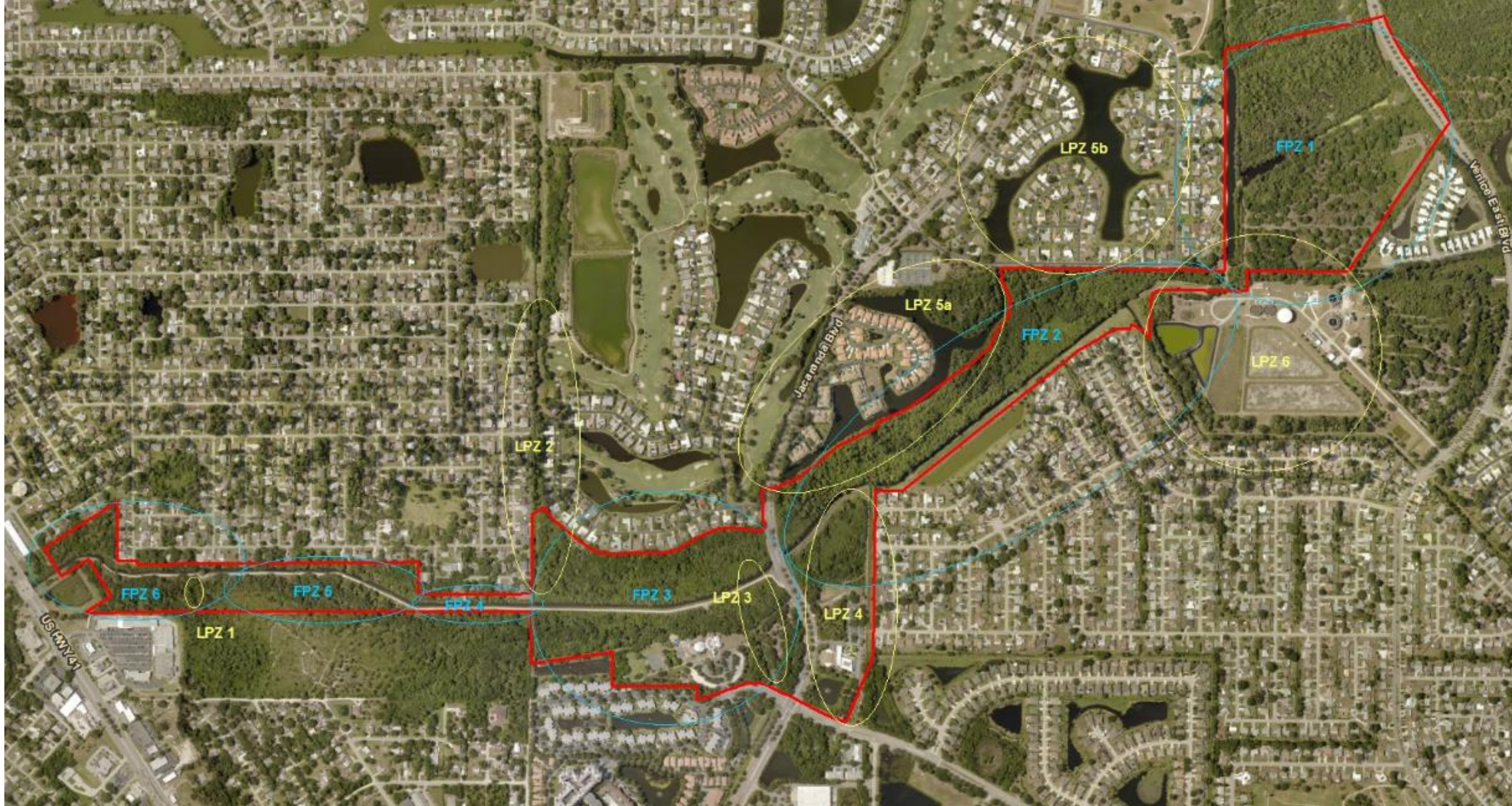


This is the confined area and shoal between the end of FPZ-2B and 2C.

This is where FPZ-2C goes under Jacaranda. Leaving existing channel then starting again at FPZ-3

This is at the LPZ-2 confluence

This is the existing grade approaching US 41













PROPOSED FRESH WATER STRAND CREATION AREA

PROPOSED SPOIL AREA

GOPHER TORTOISE ENHANCEMENT AREA

FLUCCS Description	
	420-Xeric Oak
	511-Freshwater Stream
	524-Open Water Lagoon
	617-Bottomland Forest
	615-Bottomland Meander Belt Forest
	615-Deepwater Forested Wetland
	617-Bottomland Forest Slopes
	641-Herbaceous Littoral Wetland



FPZ-2D

LPZ-8

FPZ-2A

JACARANDA BLVD

LN

IRC

LIESL DR E

OAKWOOD CT

MISTI CT

OLGA CT

FLAMETREE LN

SKLAR DR E

POND LILY WAY

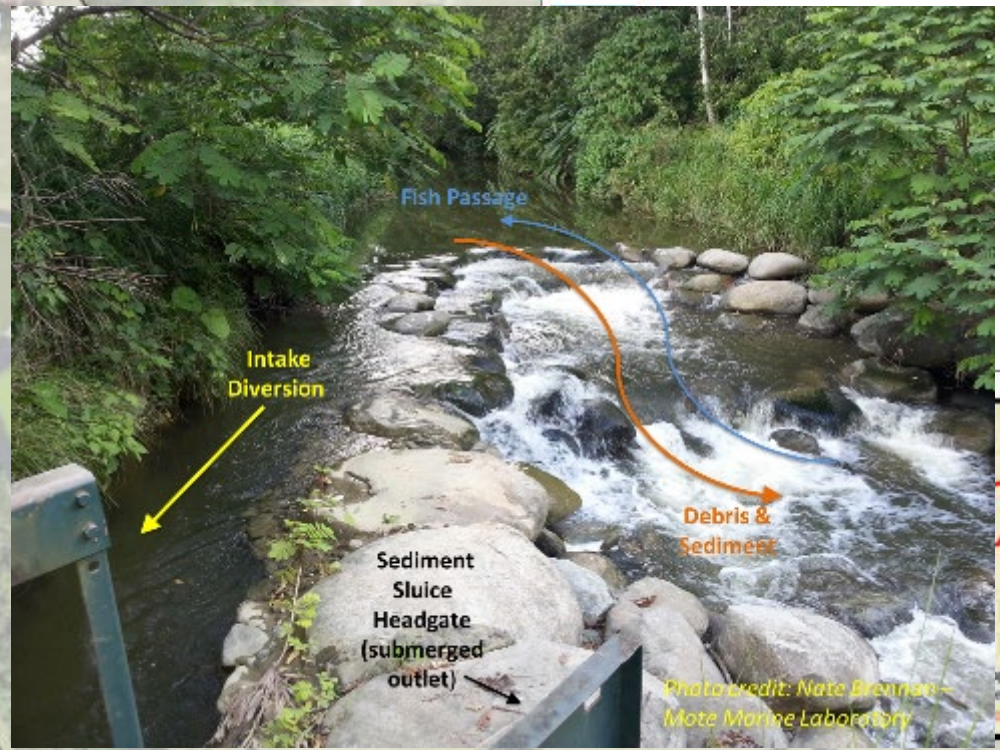
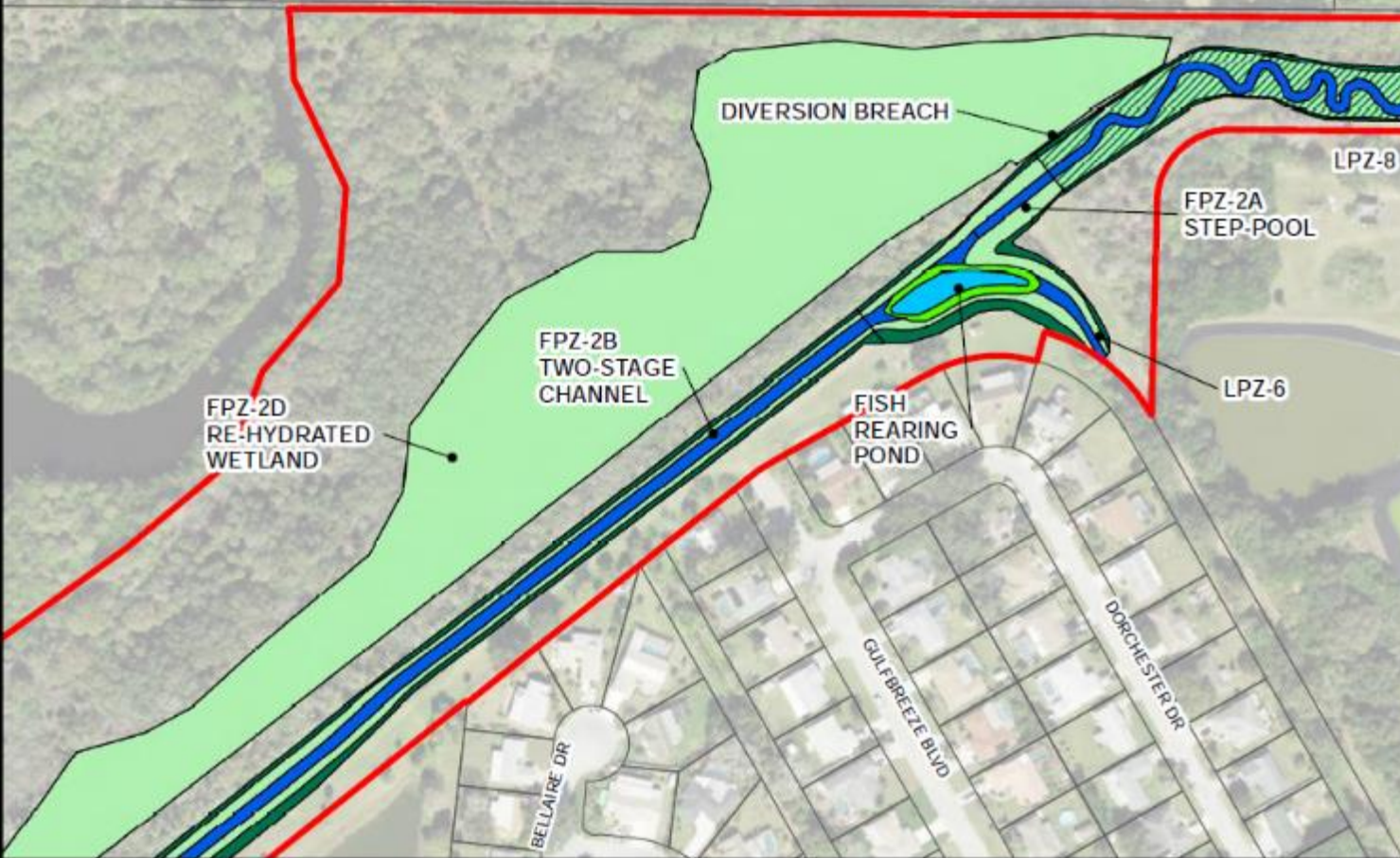
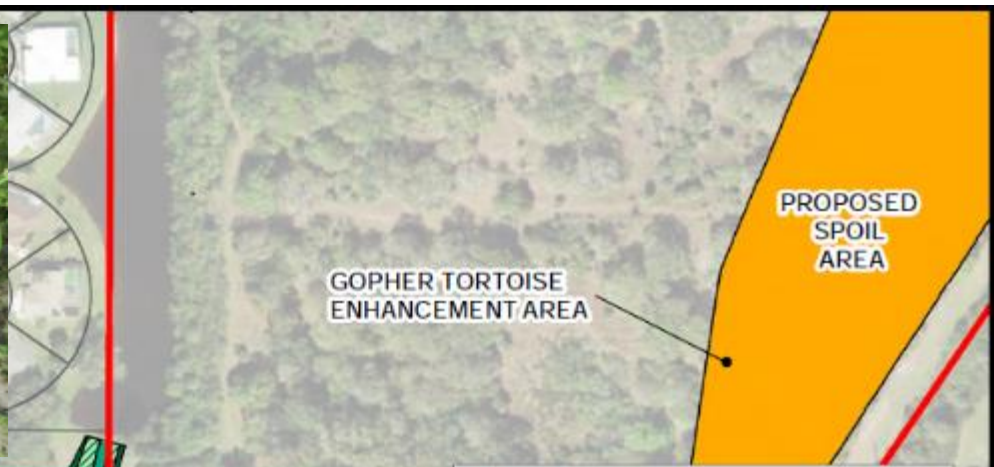
GRASSY OAKS DR

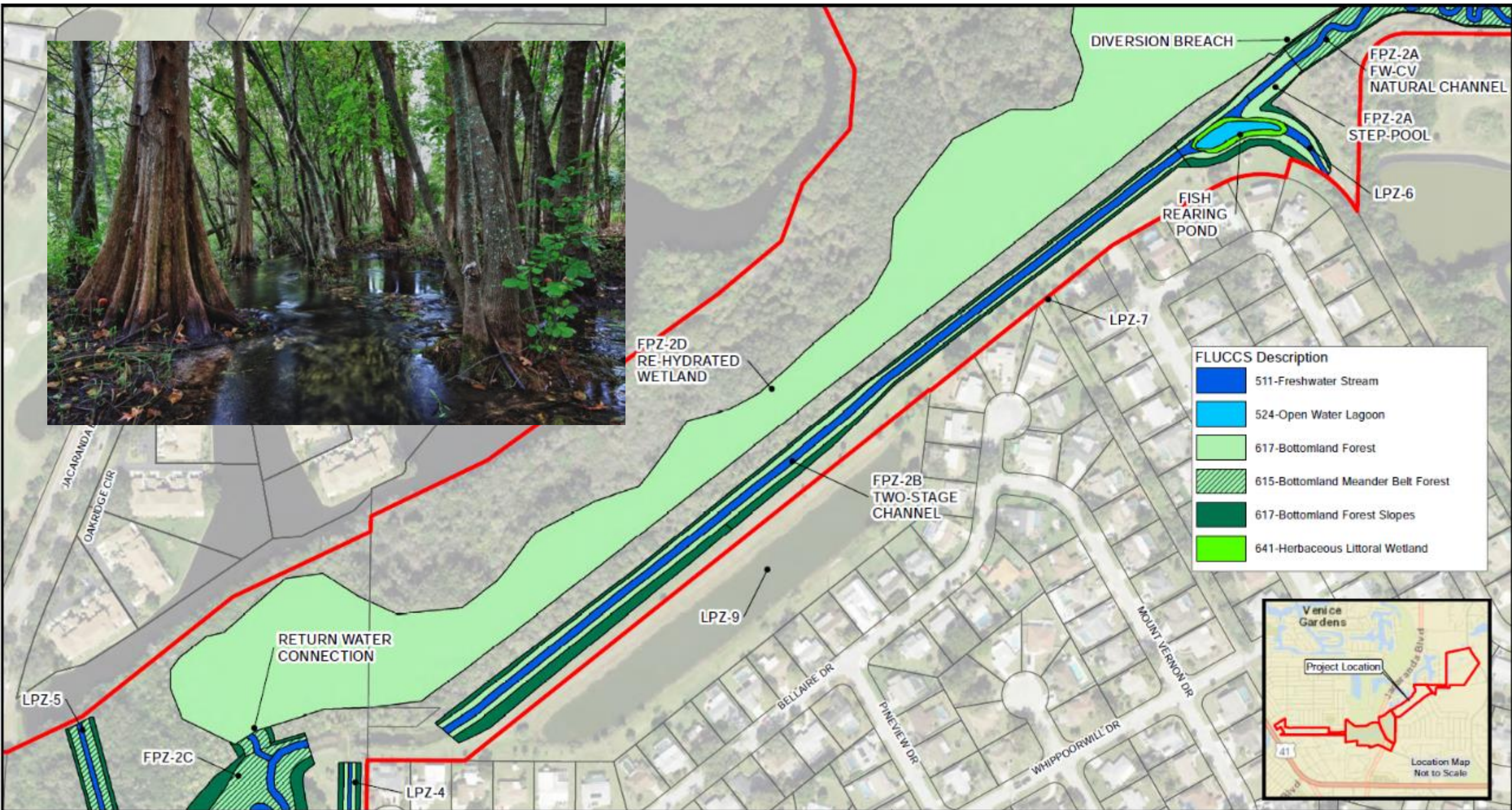
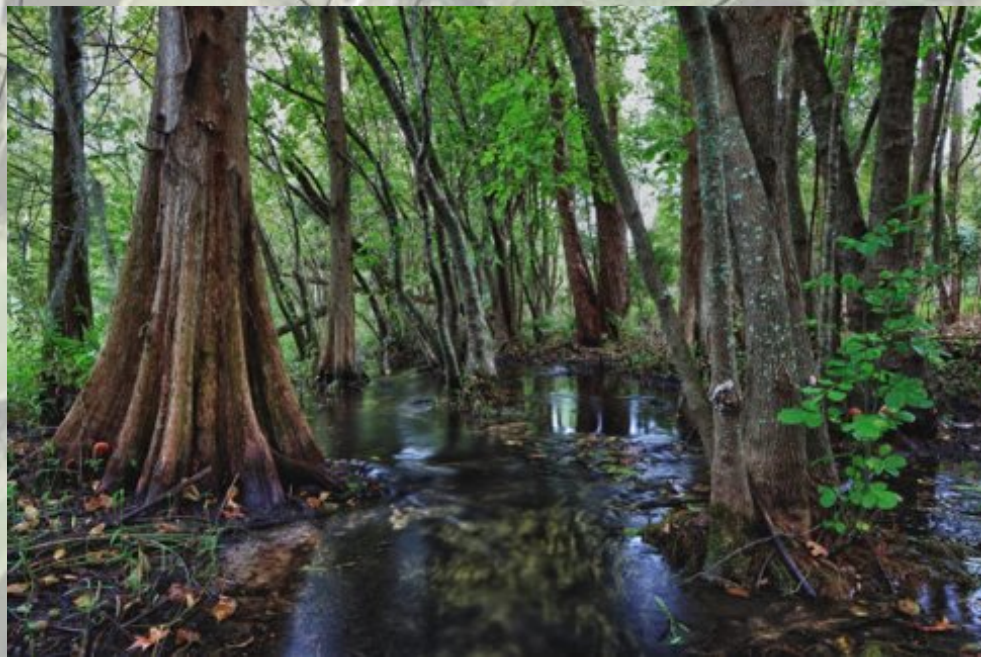
VENICE EAST BLVD

FRINGED ORCHID TRL

LAKE OF THE WOODS

SILK OAK DR





FLUCCS Description







	511-Freshwater Stream
	524-Open Water Lagoon
	617-Bottomland Forest
	615-Bottomland Meander Belt Forest
	617-Bottomland Forest Slopes
	641-Herbaceous Littoral Wetland







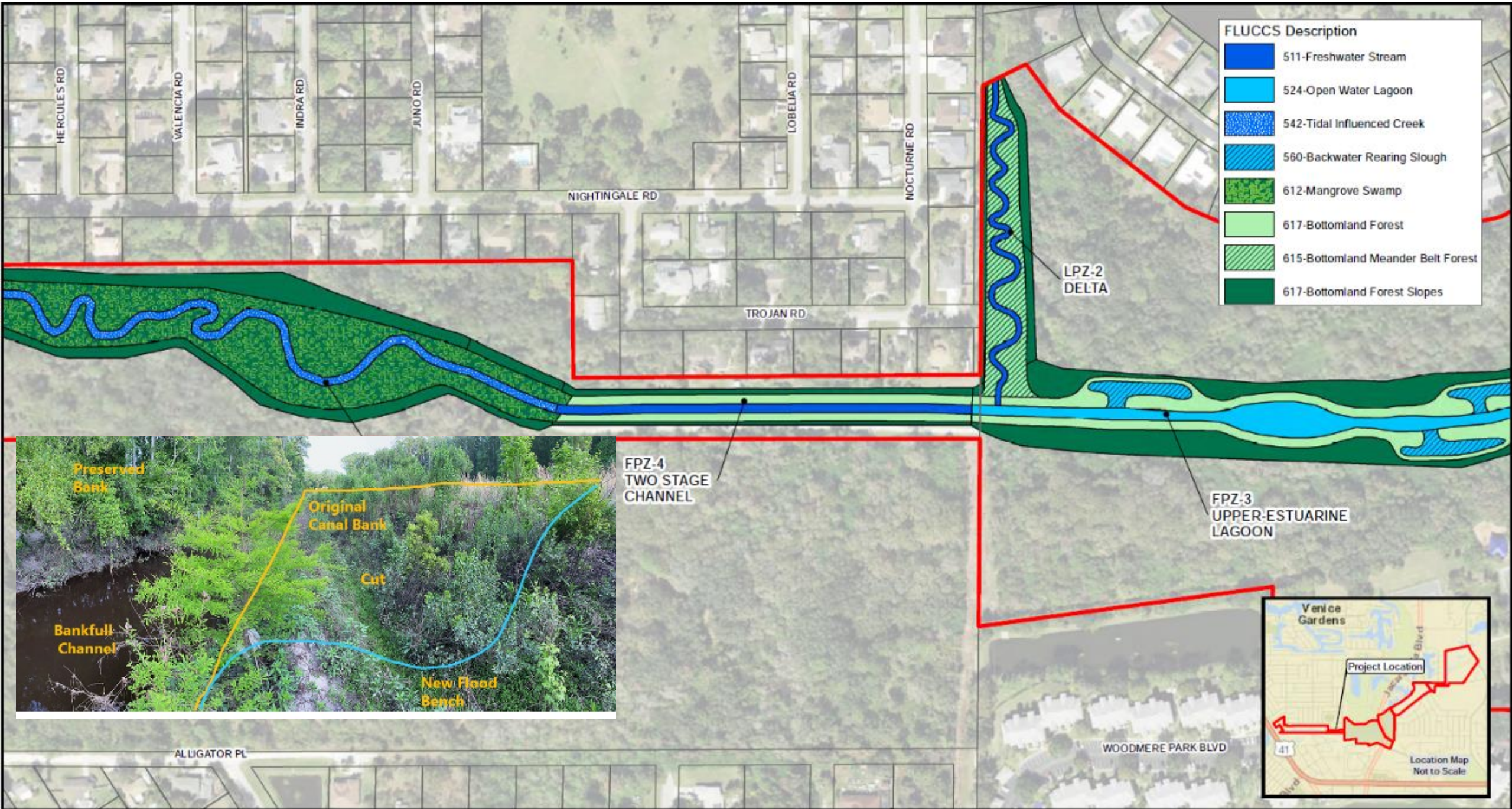
FLUCCS Description

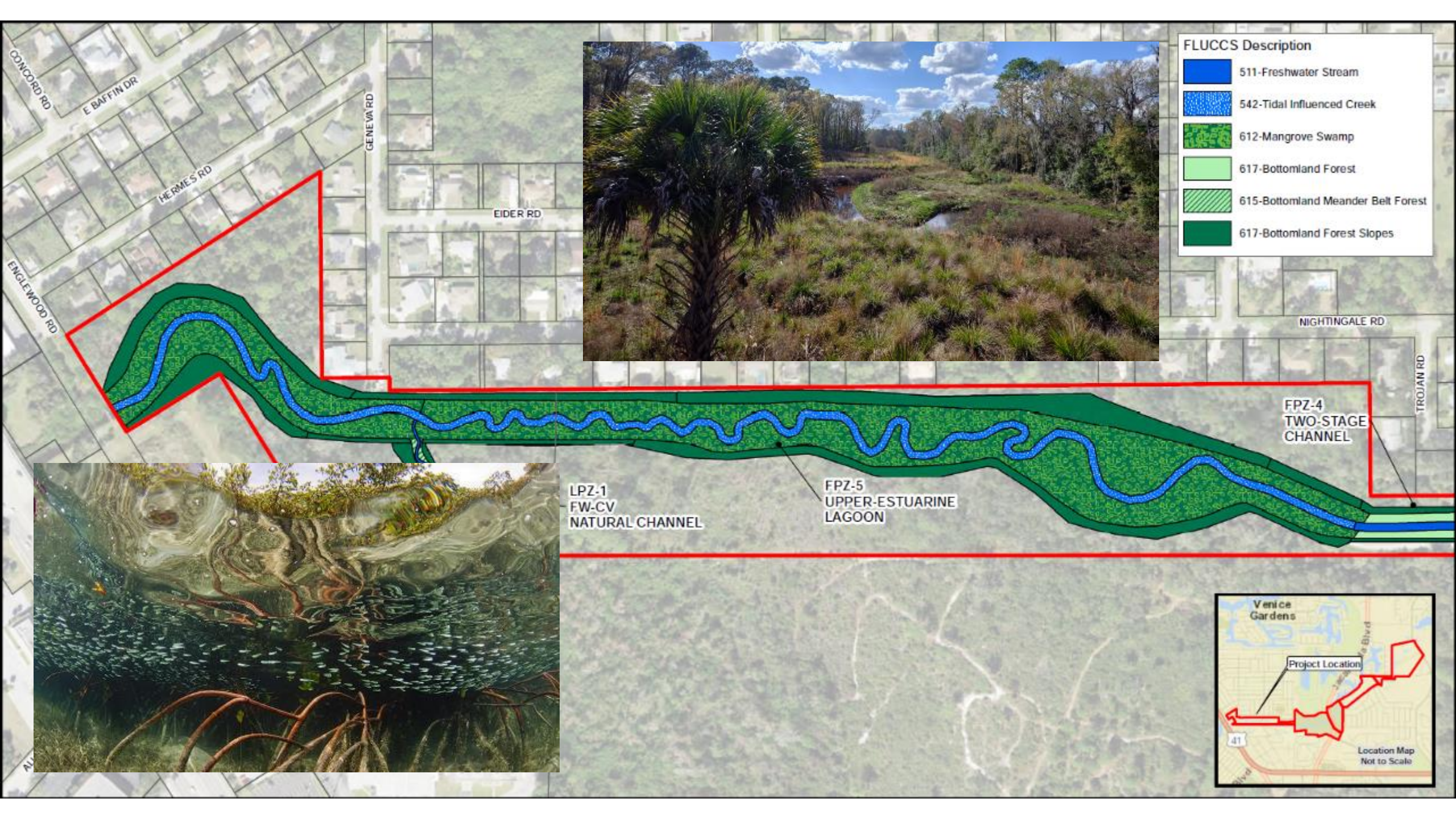
	511-Freshwater Stream
	524-Open Water Lagoon
	560-Backwater Rearing Slough
	617-Bottomland Forest
	615-Bottomland Meander Belt Forest
	617-Bottomland Forest Slopes



Rendering by SCAPE for Wood.







FLUCCS Description

- 511-Freshwater Stream
- 542-Tidal Influenced Creek
- 612-Mangrove Swamp
- 617-Bottomland Forest
- 615-Bottomland Meander Belt Forest
- 617-Bottomland Forest Slopes

LPZ-1
FW-CV
NATURAL CHANNEL

FPZ-5
UPPER-ESTUARINE
LAGOON

FPZ-4
TWO-STAGE
CHANNEL



World Famous Venice Rookery (at Venice Area Audubon Rookery)



Second grade students on a field trip to the Venice Area Audubon Rookery
By Lynne Pedlar



from Nate Brennan, Mote Marine Laboratory

Venice Snookery (coming soon to Alligator Creek)

A Biologically Diverse & Beautiful Bioreactor

- Significantly cleanse groundwater and surface water – **remove 1,500 lb TN per year**
- Expanded wetland and aquatic habitats – up to **54 acres functional wetland gain, ~3 miles of natural channels/lagoons**
 - Reduced palliative maintenance - **self-organizing equilibrium** with tide, valley, & watershed conditions
- Plan will unlock the potential of Alligator Creek as an estuarine fish nursery – **~76 acres of snook & tarpon rearing areas**
- Most of the **new creek will look like it belongs in old Florida**, from headwaters to the tide
- It will be a **marvelous community asset**, easily accessed by nature lovers
- A learning tool on the **vanguard of re-imagining the potential of our state's canals** and ditches





Alligator Creek Stream Restoration

Project Vision



Alligator Creek Stream Restoration



Questions or Comments?

wood.



Prepare for Rain

- Dry Season Construction
- Weather resilient construction sequencing
- Segmented Construction (stitch and move one geomorphic unit at a time)

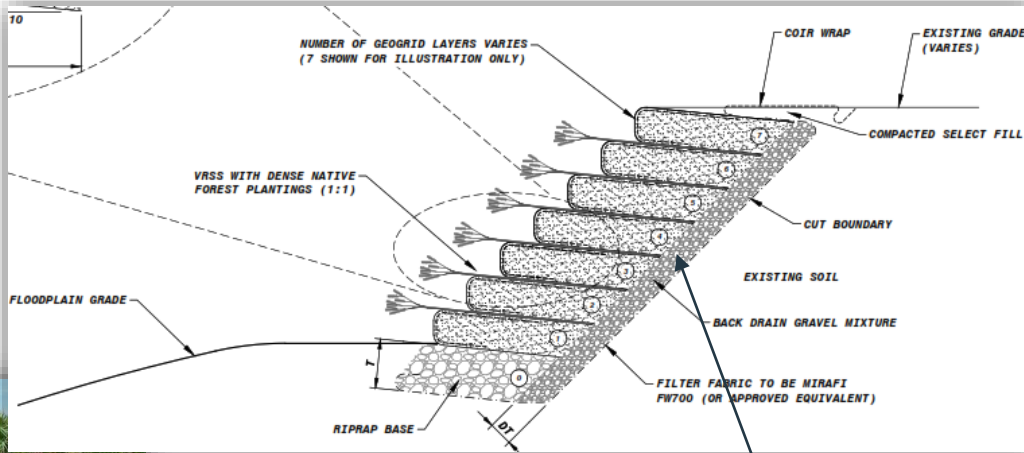
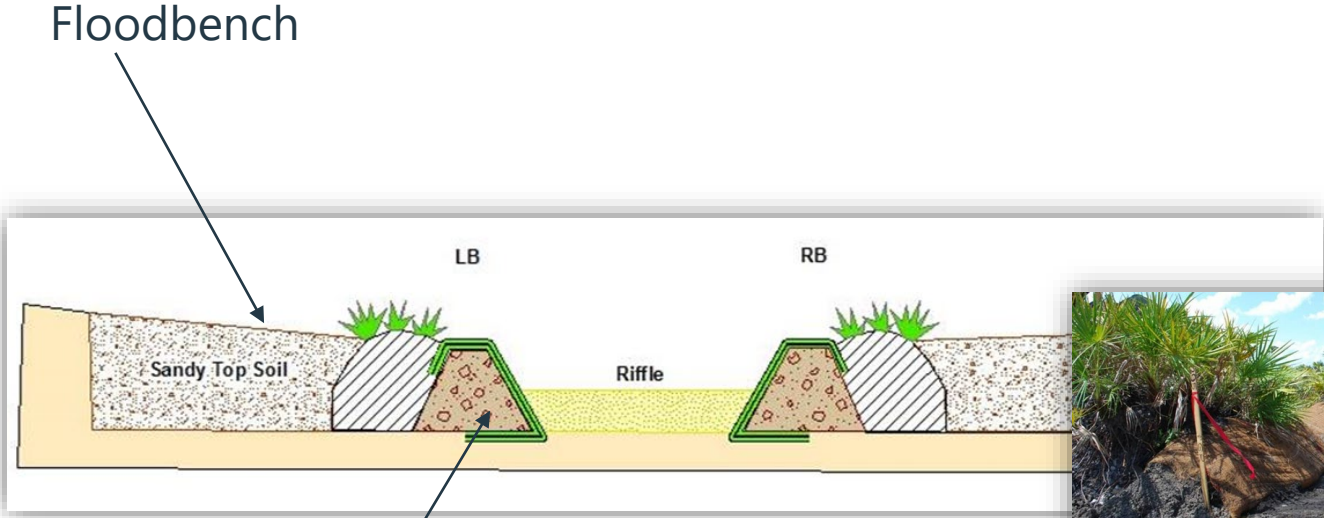


Edwards Bottomland Project – flood under construction



Edwards Bottomland Project – ongoing construction undamaged by flood

Enhanced Water Treatment Through Every Surface



Floodbank

Streambed

