



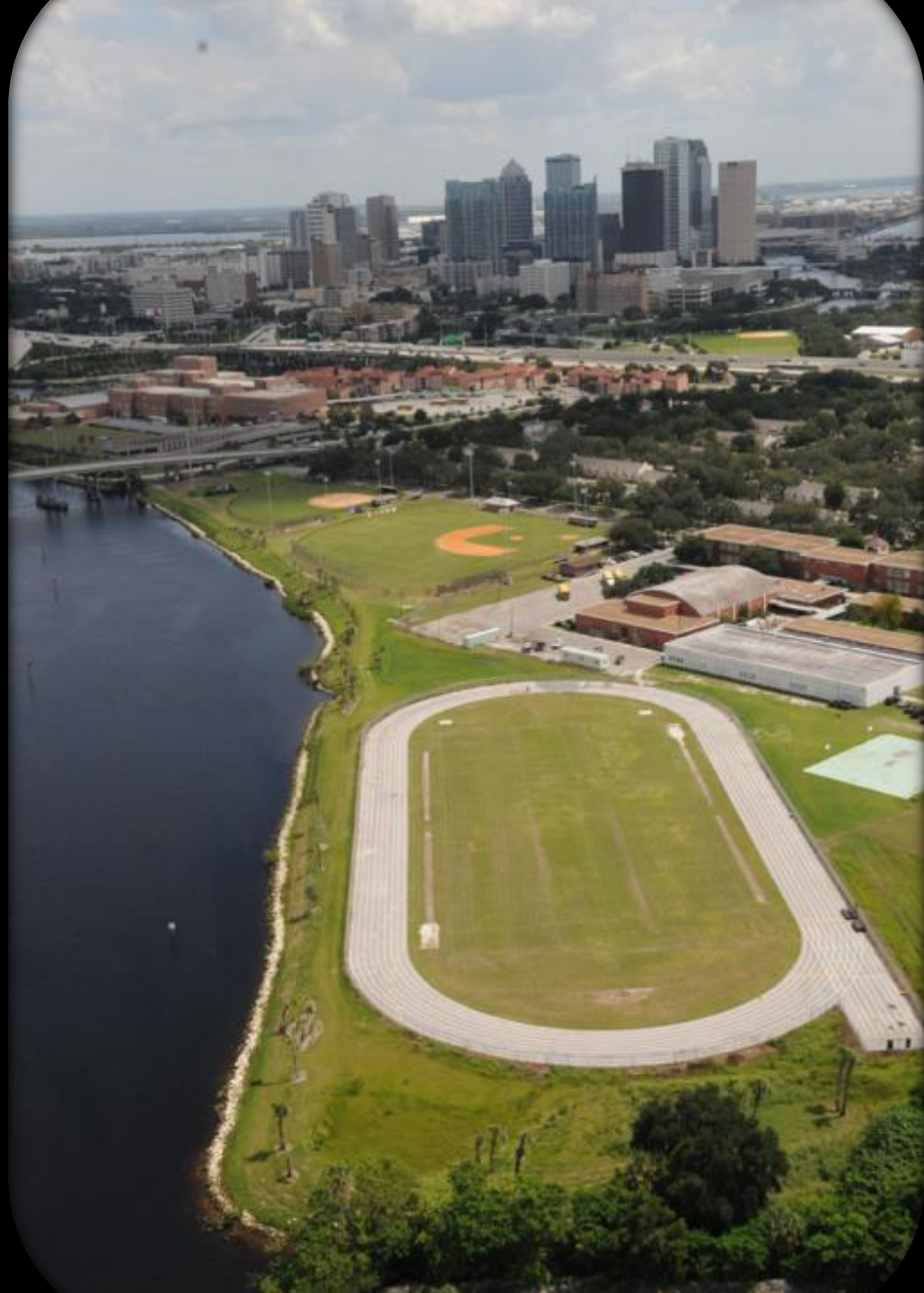
# **Ulele Springs Restoration**

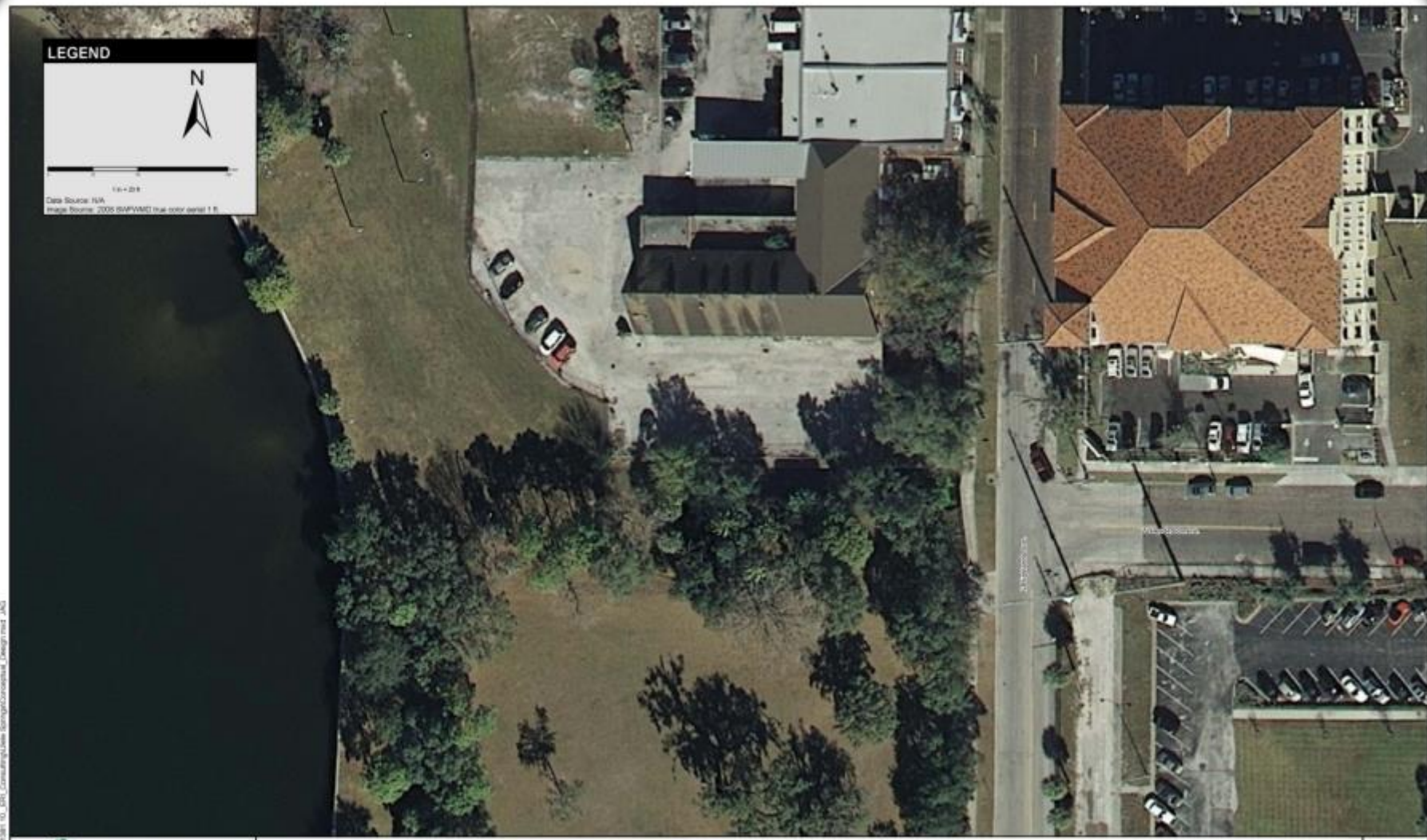
**Presented by:**

**Thomas F. Ries**

**President**

**Ecosphere Restoration Institute**





**LEGEND**



1 in = 20 ft  
Data Source: FSA  
Image Source: 2005 BMPVMD true color aerial 1 ft

U:\PROJECT\PROJECTS\10\_001\_Consulting\Ulele\_Springs\Conceptual\_Design.mxd\_JAG



**ULELE SPRINGS**  
Hillsborough County, Florida

**CONCEPTUAL DESIGN**

Figure X

THIS IS NOT A CERTIFIED COPY



OCT.

88

Being

THE SOUTH

HALF of LDT 1

SEC 13 of TOWNSHIP

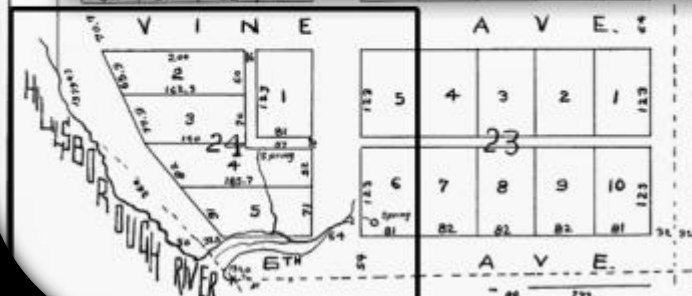
29s of RANGE 18e.

By

BROWN & SWINGLY.

# HIGHLAND PARK

1st ADDITION,



SE 1/4 of Sec. 13, T. 29S., R. 18E., S. 1 of R. 18E.

54 acs. of Florida, County of Hillsborough, [22  
 Filed Nov. 11, 1889  
 Rec. — — —  
 Warren & Givens Ck.  
 By D.B. Givens

7805

Map reduced in scale  
 of Lot No. 177 p. 13  
 of R. 18 E.



*W. H. H. H.*  
V. 125

















# Ulele Springs - Fact Sheet

1/2011	City of Tampa	\$ 50,000	Construction
1/2011	City of Tampa	\$ 5,000	In-kind Services
1/2011	SWFWMD	\$ 5,400	In-kind Services (H <sub>2</sub> O)
1/2011	SARP (NOAA)	\$ 50,000	Design
8/2011	USFWS	\$ 50,000	Construction
10/2011	SWFWMD	\$ 50,000	Construction
10/2012	TBEP	\$ 10,000	Plants
9/2013	FDEP	\$ 5,000	Plants
12/2013	EPC	\$ 800	In-Kind Services (H <sub>2</sub> O)
10/2012	SWFWMD	<u>\$450,000</u>	Living Shoreline
<b>Total</b>		<b>\$676,200</b>	<b>Awarded</b>

Open Water	0.14 acres
Low Marsh	0.05 acres
High Marsh	0.10 acres
Wetland Enhancement	0.13 acres
Upland Enhancement	<u>0.76 acres</u>

**Total** **1.20 Acres plus 500 linear feet - Living Shoreline**

<b>Contractors</b>	<b>Estimate</b>	<b>Paid</b>	<b>Funding</b>
Survey (SurvTech)	\$ 4,384	Yes	SARP
Geotechnical (Aethna)	\$ 4,749.25	Yes	SARP
Archaeological. (B. Burger)	\$ 1,200	Yes	SARP
Engineering (5MCivil)	\$14,666	Yes	SARP
Coastal engineering (H&M)	\$20,000	Yes	SARP
Admin	<u>\$ 5,000</u>	Yes	SARP
<b>Total SARP</b>	<b>\$49,999.25</b>	<b>\$50,000</b>	

<b>Reports</b>	<b>Expiration</b>
SARP	Semi-Annually March 15 <sup>th</sup> & Sept 15 <sup>th</sup> 01/2013
USFWS	Annually w/in 30 days of September 07/2013
SWFWMD	Upon invoicing

**LEGEND**

- High Marsh
- Low Marsh
- Seawall
- Breakline



0 20 40 60 80 100 Feet  
1 in = 50 ft

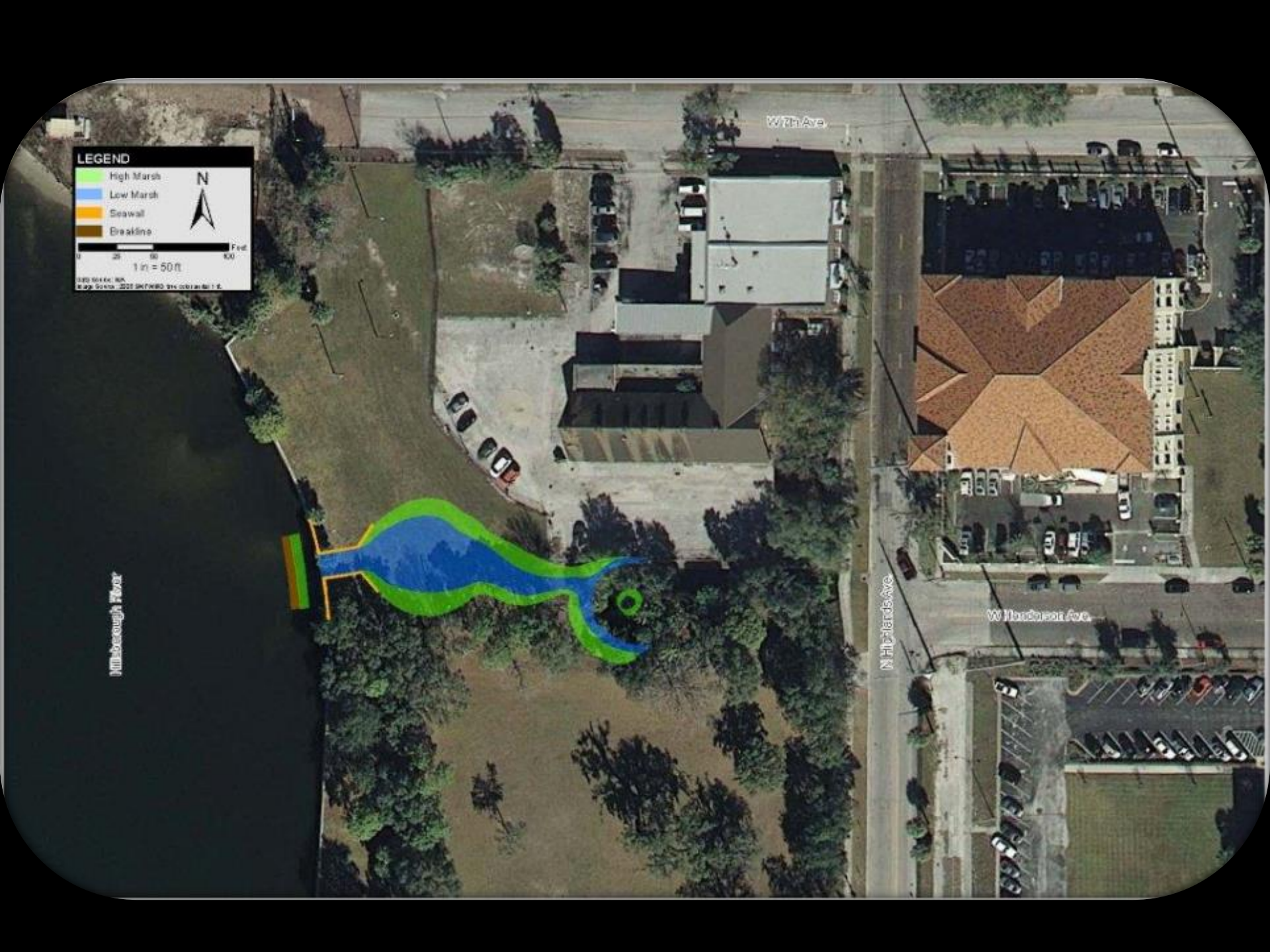
410 5044 NK  
8.29.2016 2022 SHFWB 314 0318161.E

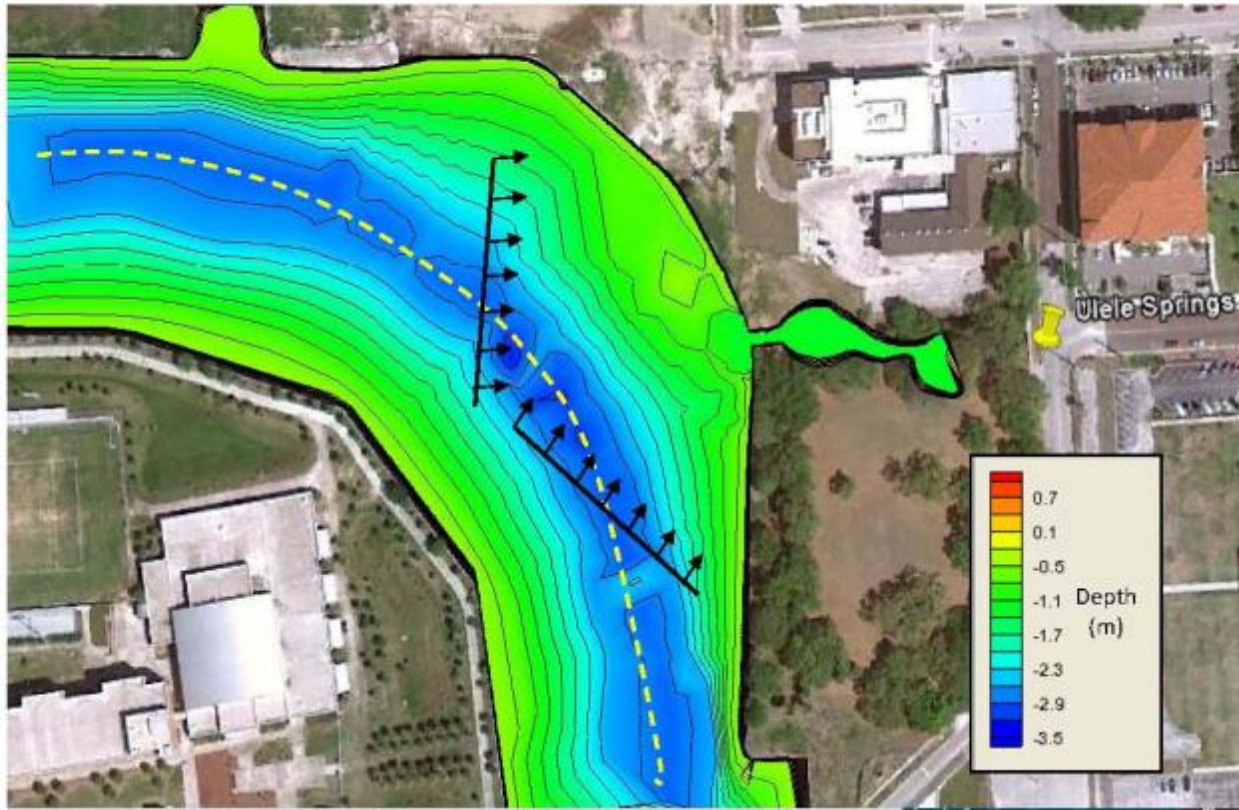
Millstone Creek

W 7th Ave

N Highland Ave

W Henderson Ave



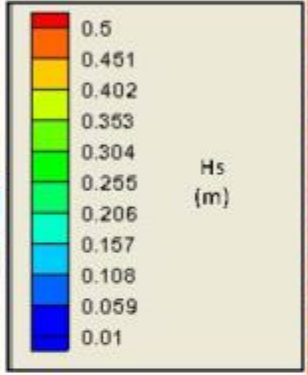
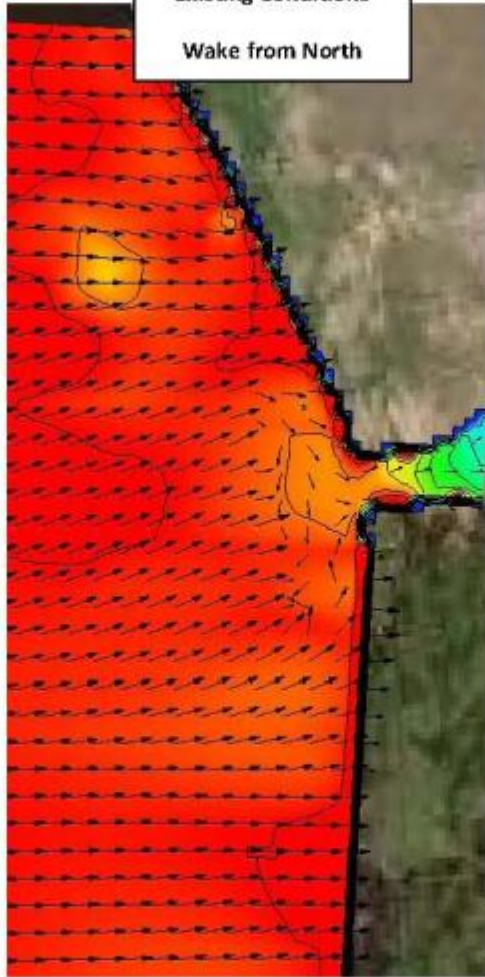


**WAVE INPUT:  $H_s=0.5M$   $T_p=2S$  // WAVE OUTPUT Values at Spring Entrance**

Alternative	$H_s$ from North	$H_s$ from South	% $H_s$ Reduction w BW
Existing	0.43	0.4	
BW 35'	0.23	0.2	50%
BW 45'	0.19	0.17	58%
BW 55'	0.15	0.13	68%
BW 65'	0.11	0.11	73%
BW 75'	0.09	0.09	78%

Existing Conditions

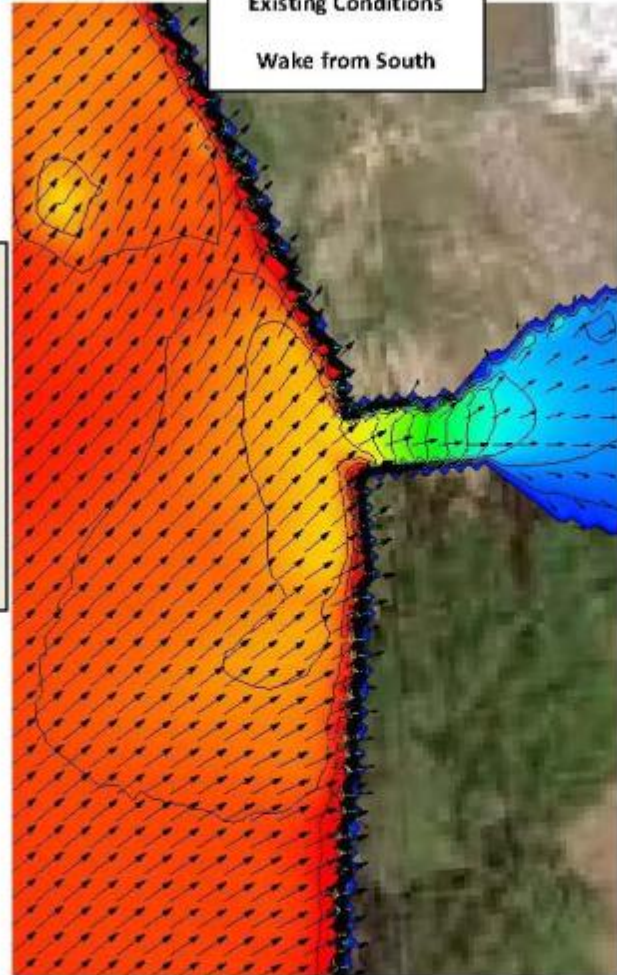
Wake from North



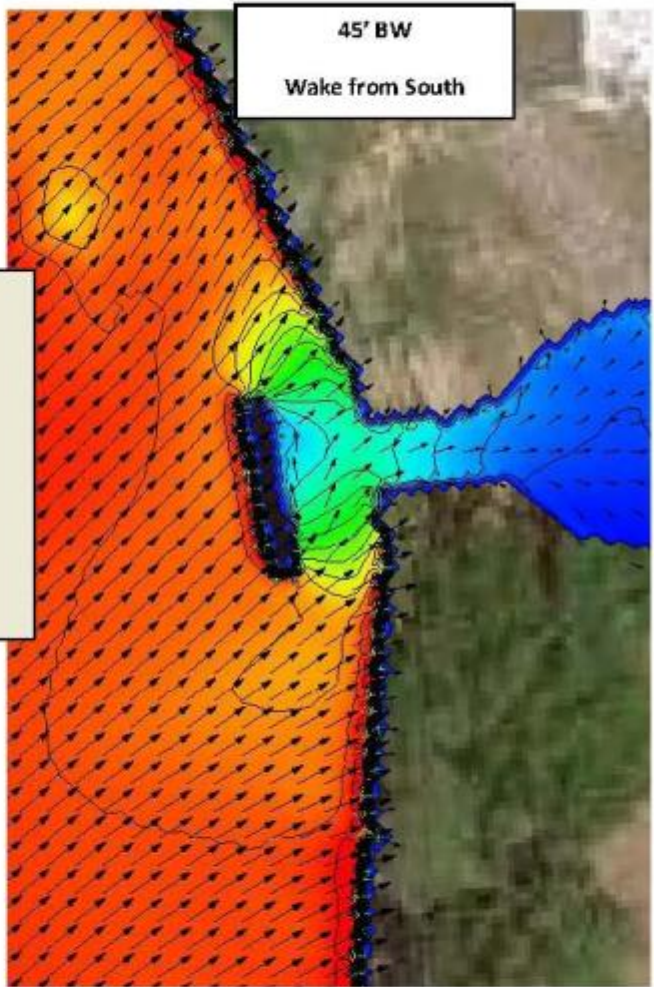
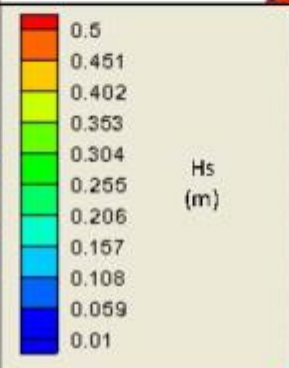
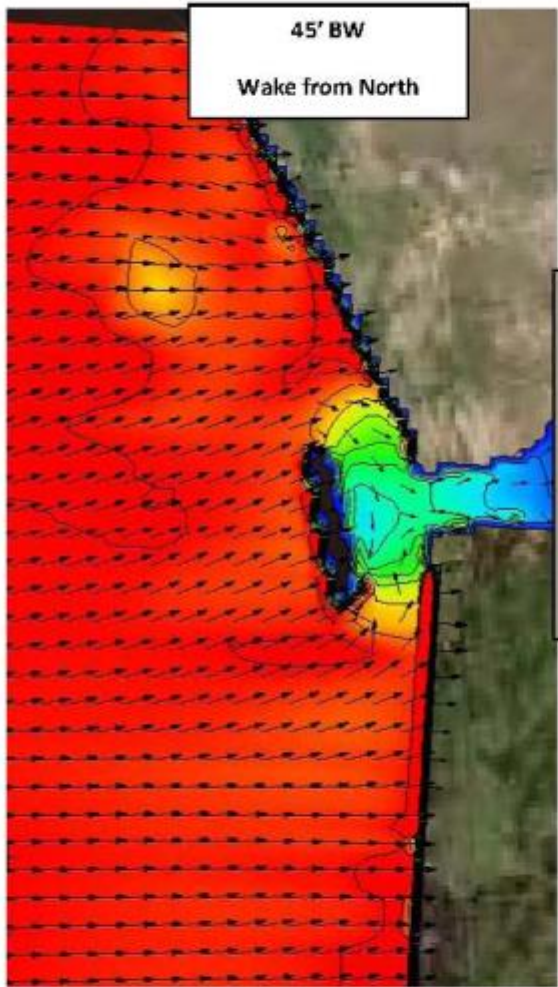
$H_s$   
(m)

Existing Conditions

Wake from South

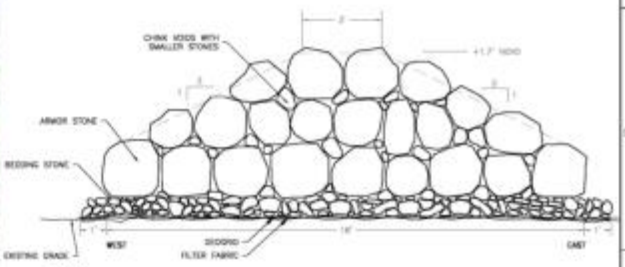






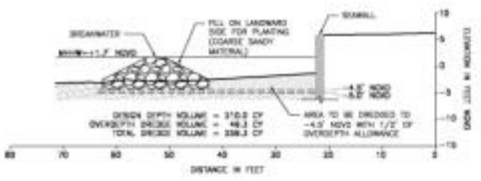


TYPICAL BREAKWATER SECTION A-A  
SCALE: 1"=2'



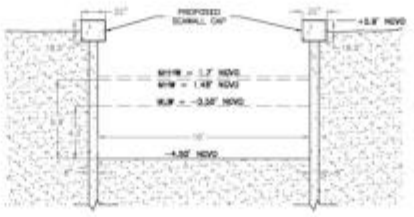
- NOTES:
- ROCK (SIZES)
    - ARMOR STONE  
DEPTH: 140 LBS./CU. FT. OR GREATER  
MINIMUM SIZE: 0.33 TONS  
MAXIMUM SIZE: 0.75 TONS
    - BEDDING STONE  
DEPTH: 140 LBS./CU. FT. OR GREATER  
SIZE: 3" TO 6"
  - ARMOR STONE SLOPE TO BE 1:1 ON SEAWARD SIDE AND 2:1 ON LANDWARD SIDE.
  - FILTER CLOTH AND GEOTEXTILE TO BE PLACED WITH A MINIMUM OVERLAP OF THREE FEET ON SEAWARD SIDE.
  - FILTER CLOTH AND GEOTEXTILE TO EXTEND TO EDGES OF BEDDING STONE.
  - TYPICAL BARRIAL GEOTEXTILE 80-100 (80-1) OR EQUIVALENT TO BE PLACED ABOVE FILTER CLOTH AND BENEATH BEDDING STONE.
  - A GEOTEXTILE COMPOSITE CONSISTING OF WEAVER FILTER FABRIC AND BARRIAL GEOTEXTILES SUCH AS TYPICAL SUBSTRATA, OR EQUIVALENT MAY BE USED UPON APPROVAL BY THE PROJECT ENGINEER.

TYPICAL PROFILE  
SCALE: 1"=10'

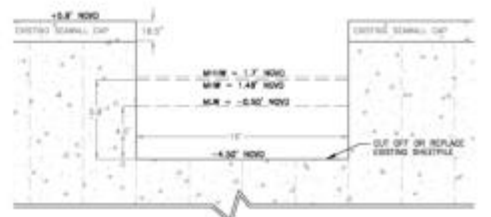


- NOTES:
- ALL DIMENSIONS ARE IN FEET.
  - ALL VOLUMES REFERENCED ABOVE ARE BASED ON A TYPICAL VERTICAL DRAIN OF 1800'
  - LENGTH OF PROPOSED RETURN WALL IS TO BE DETERMINED.

SECTION B-B  
LADDOON OPENING  
SCALE: 1"=4'



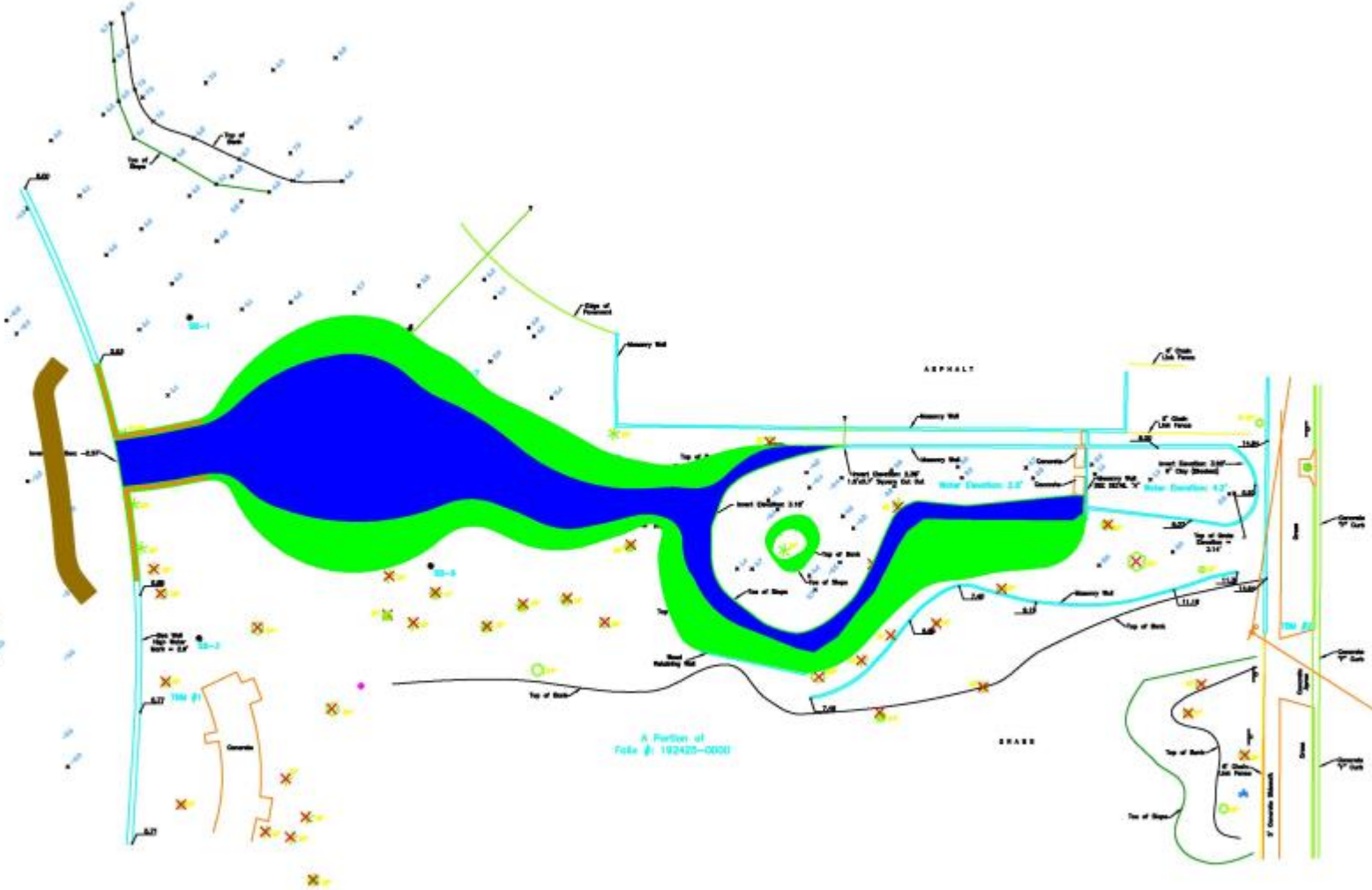
SECTION C-C  
LADDOON OPENING  
SCALE: 1"=4'



PERMIT PLANS  
NOT FOR CONSTRUCTION

	ULELE SPRINGS RESTORATION PROJECT		
	FOR: ECOSPHERE RESTORATION INSTITUTE, INC.		
DATE: 10/24/2011	FILE: PERMIT PLANS	SCALE: AS SHOWN	
PROJECT NO.: 21-025	DATELINE: NOV08	SHEET: 1	

Hillsborough River



A Portion of  
Plate # 192425-0000

Highland Avenue  
Pavement Right-of-Way Width Vernee  
(Asphalt Paved)





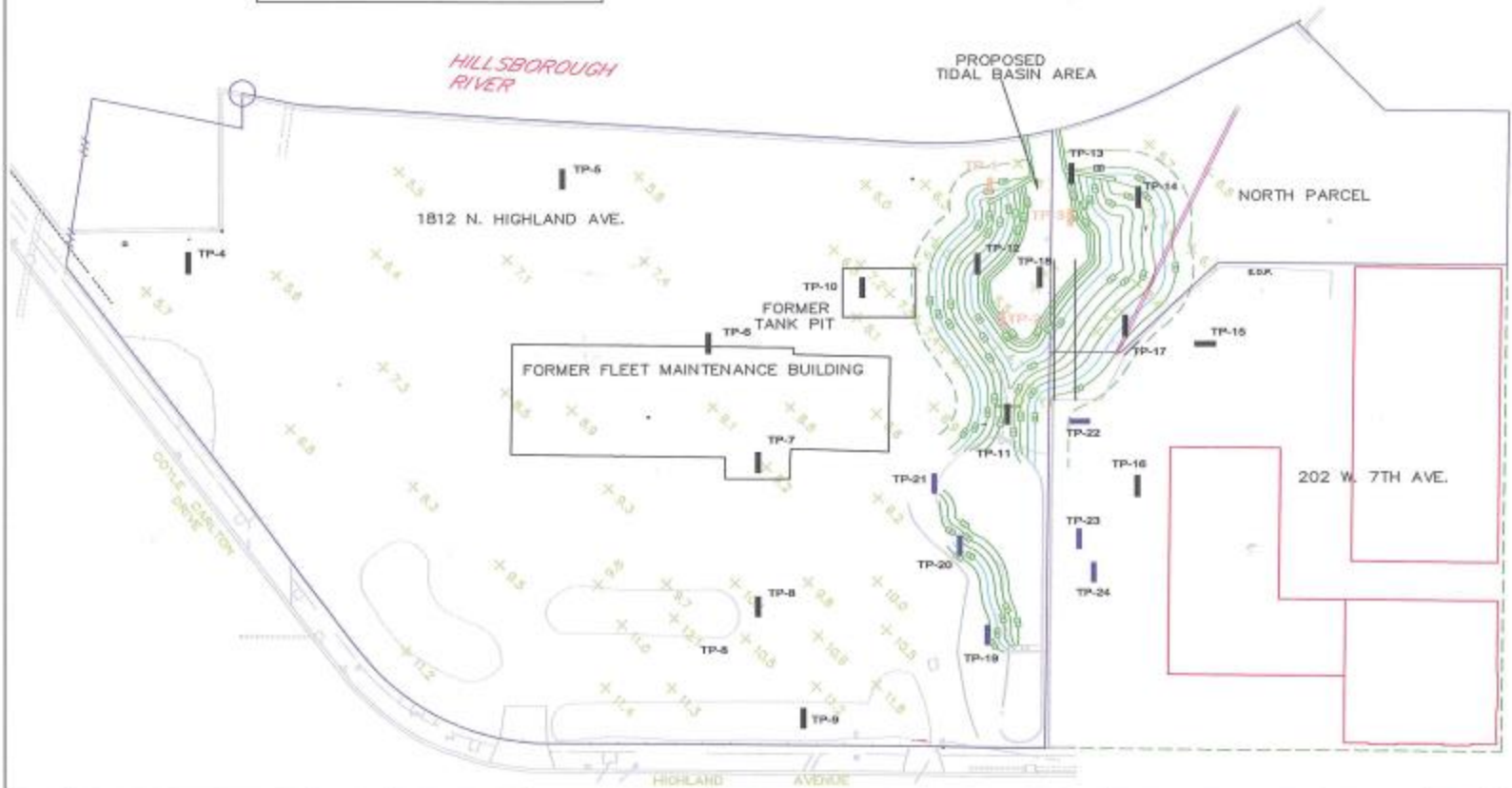
W 7th Ave

Doyle Carlton Dr

N Highland Ave

W 1st

TEST PIT LOCATIONS MAY 2011 (0)  
 TEST PIT, MARCH 2013 (15)  
 TEST PIT, APRIL 2013 (6)



DATE	REVISION	BY/APP

ENGINEER'S CERTIFICATION

\_\_\_\_\_  
 SIGNATURE

\_\_\_\_\_  
 DATE

**ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.**

CONSULTING ENGINEERS AND ENVIRONMENTAL SCIENTISTS

5128 WOODS FLORENCE AVENUE  
 P.O. BOX 7600  
 TAMPA, FLORIDA 33622

REVISION #	DATE	BY

**FIGURE 8**

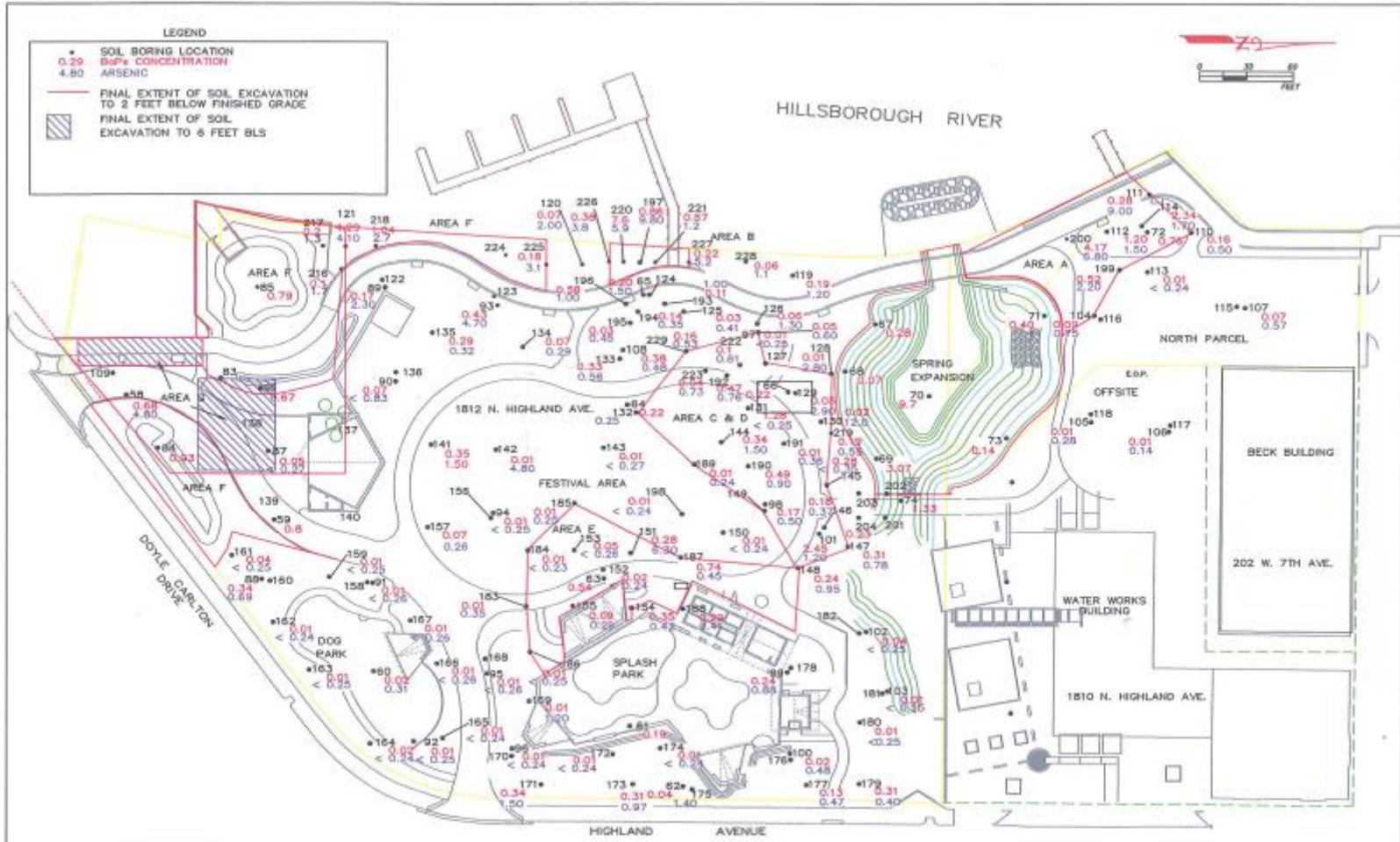
TEST PIT, INTERMEDIATE AND DEEP SOIL SAMPLE LOCATIONS

1812 N. HIGHLAND AVE.  
 TAMPA, FLORIDA

DATE	SCALE
2/6/13	1"=40'
JOB NUMBER	DRAWING
201304	

**LEGEND**

- SOIL BORING LOCATION
- 0.29 BaP<sub>e</sub> CONCENTRATION
- 4.80 ARSENIC
- FINAL EXTENT OF SOIL EXCAVATION TO 2 FEET BELOW FINISHED GRADE
- ▨ FINAL EXTENT OF SOIL EXCAVATION TO 6 FEET BLS



DATE	REVISION	BY/APP

**ENGINEER'S CERTIFICATION**

\_\_\_\_\_  
 ENGINEER

\_\_\_\_\_  
 DATE

**ENVIRONMENTAL CONSULTING ENGINEERS AND ENVIRONMENTAL SCIENTISTS**  
**ENVIRONMENTAL CONSULTANTS, INC.**

518 NORTH FLORIDA AVENUE  
 P.O. BOX 705  
 TAMPA, FLORIDA 33673

DESIGNED BY \_\_\_\_\_ DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

**FIGURE 7**

**BENZO (a) PYRENE EQUIVALENT & ARSENIC RESULTS (mg/kg), 2 FT.**

1812 N. HIGHLAND AVE.  
 TAMPA, FLORIDA

DATE	SCALE
6/26/93	1"=50'
JOB NUMBER	SHEET
200139	1 OF 1

# Brownfield Designation

- BF #291305001
- Lead (Pb), Arsenic, & BAPs
  - Pb: 270 - 3,100 mg/kg (standard = 5 mg/kg)
- 7 PAHs plus TRPHs
- 4.5 acres
- 17,720 tons material excavated & removed
- Cedar Trails Landfill
- \$1,000,000 cleanup cost











































# Seine Results

<u>Common</u>	<u>Genus Species</u>
• Mayan Cichlid	<i>Cichlasoma urophthalmus</i>
• Tilapia (Blackchin)	<i>Sarotherodon melanotheron</i>
• Common Snook	<i>Centropomus unidecimalis</i>
• Largemouth Bass	<i>Micropterus salmoides</i>
• Tidewater Mojarra	<i>Euchinostomus harengulus</i>
• Hogchoker	<i>Tinectes maculatus</i>
• Pinfish	<i>Lagodon rhomboides</i>
• Sheepshead	<i>Archosargus probatocephalus</i>
• Flathead Mullet	<i>Mugil cephalus</i>
• Atlantic Needlefish	<i>Strongylura marina</i>
• Blue Crab	<i>Callinectes sapidus</i>

# Manatees

- 98 surveys 31 manatee sightings ~10/month
- 12 in the river and 19 in the spring run
- May highest number - 12
- Temperatures ranged 44<sup>0</sup>F to 94<sup>0</sup>F
- Manatees sighted – 66<sup>0</sup>F to 90<sup>0</sup>F
- Most sightings (7) at 90<sup>0</sup>F
- 2<sup>nd</sup> most sightings (5) at 66<sup>0</sup>F















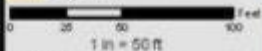
aerial  
innovations  
OF FLORIDA

# ecoSPHERE

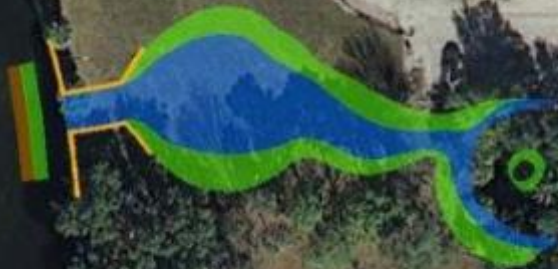
Restoration Institute, Inc.  
a nonprofit organization

## LEGEND

- High Marsh
- Low Marsh
- Seawall
- Breakline



DATE: 04/01/10  
FILE: S:\101 - 2007 SPRINGS - The Old Town Mall



Mississippi River

N Henderson Ave

W Henderson Ave

## ULELE SPRINGS CONCEPTUAL PLAN

