

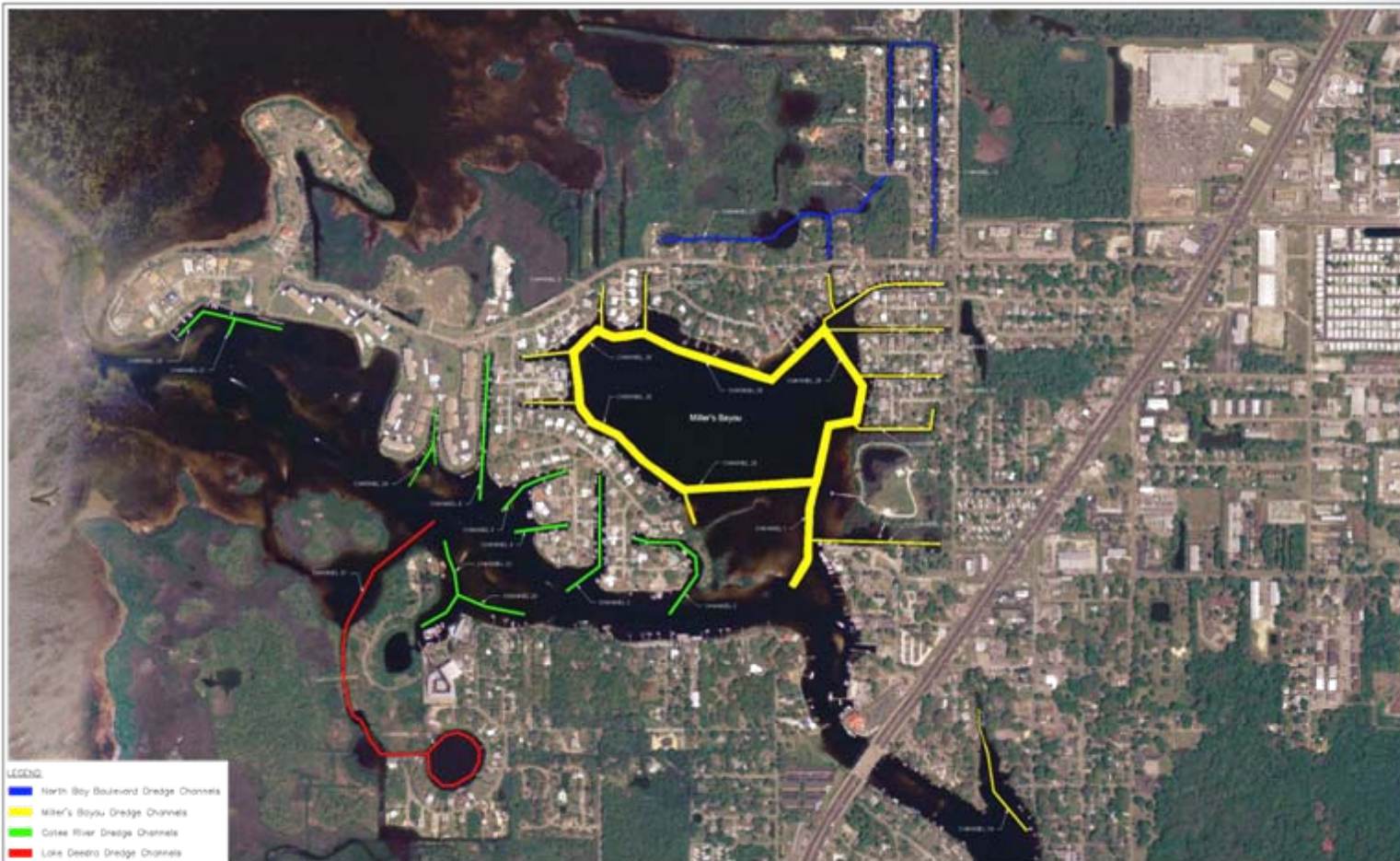


TAYLOR ENGINEERING, INC.

**Consulting Engineering Services  
for the City of Port Richey**



# Project Overview



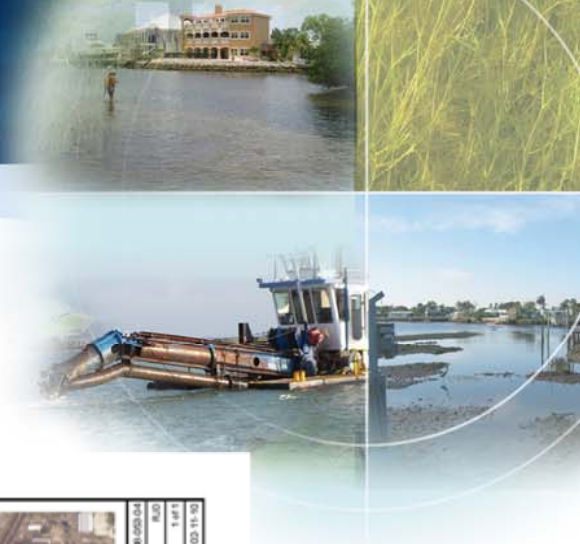
- LEGEND
- North Bay Boulevard Dredge Channels
  - Miller's Bayou Dredge Channels
  - Cortes River Dredge Channels
  - Lake Deedra Dredge Channels

**TAYLOR ENGINEERING INC.**  
 10151 DEERWOOD PARK BLVD.  
 BLDG. 300, SUITE 300  
 JACKSONVILLE, FL 32256  
(904) 721-1100

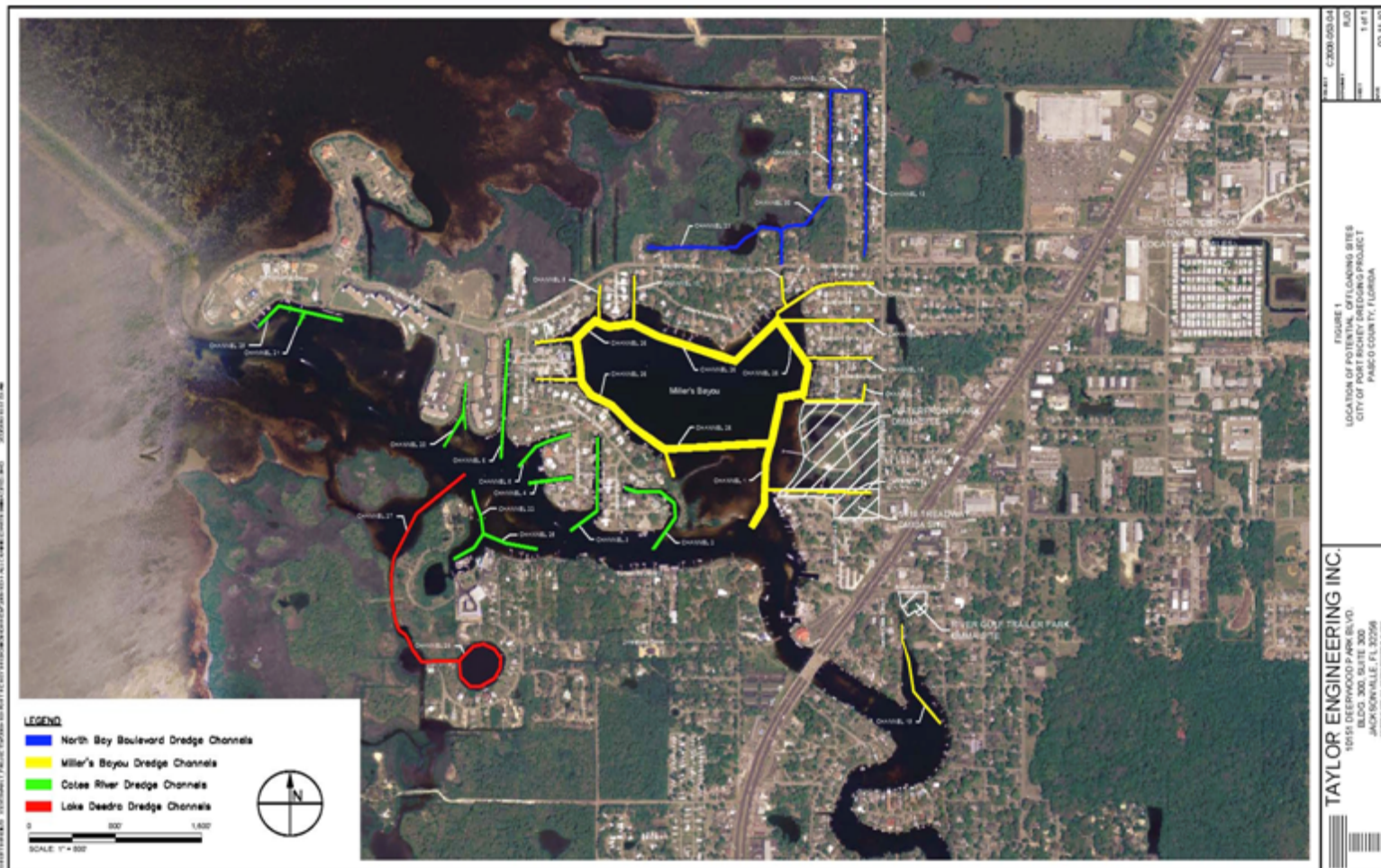
CITY OF PORT RICHEY DREDGING PROJECT - DREDGING PHASES

PROJECT	P2008-100
ISSUE	SLD
DATE	1 of 4
DATE	08-10-09

SCALE: 1" = 300'



# Potential DMMA Locations



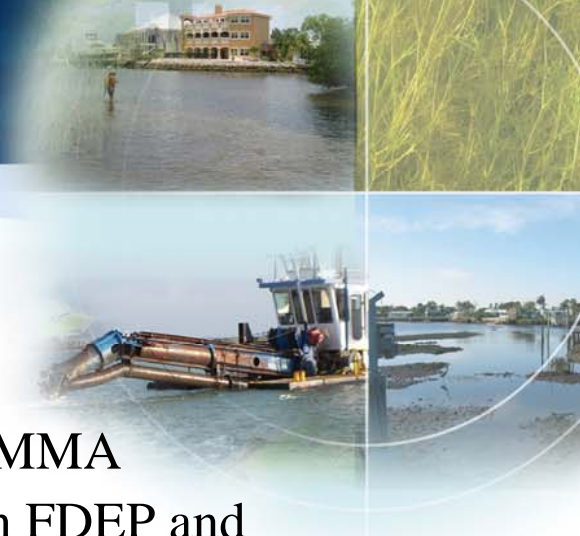


## Current Program Status

### U. S. Army Corps of Engineers (USACE) and Florida Department of Environmental Protection (FDEP) permits

- USACE and FDEP permits: channels 1, 3 – 11, 13 – 19, 24, and 26 (no seagrass impacts)
- FDEP permit: channels 2, 20, 22, 25, and 29 (seagrass impacts)
- FDEP permit expires July 28, 2013
- USACE permit expires February 27, 2013





## Current Program Status (cont.)

### FDEP permit — 100 specific conditions

- Related to seagrass mitigation and Waterfront Park DMMA
- Failure to successfully mitigate impacts could result in FDEP and USACE fines
  - a) Create a 63-acre Seagrass Protection Zone (SPZ)
    - Recruit 2.59 acres of seagrasses into propeller-scarred areas and a remnant channel
    - Eliminate future seagrass propeller scarring
    - Transplant seagrass from the seagrass impact areas into existing prop scars, remnant channel, and unvegetated areas within the SPZ
    - Install SPZ signs on boundaries
    - Install informational signs at Nick's Park Boat Ramp, Brasher Park, Waterfront Park, American Marina, and Sunset Landing Marina
  - b) Establish a seagrass monitoring program and maintain for five years



# Progress Schedule Sheets: Work Order #3

WO #	Task No.	Task	Start	Finish	Aug 2009	Sep 2009	Oct 2009	Nov 2009	Dec 2009	Jan 2010
3	1	Miller's Bayou - Opinion of Probable Cost	7/29/2009	2/23/2010						
	2	FDEP Teleconference and Correspondence	7/29/2009	7/30/2009						

Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010



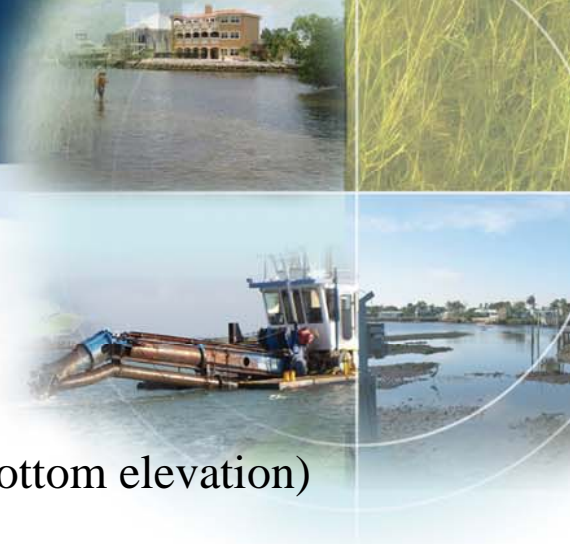
# Progress Schedule Sheets: Work Order #4

WO #	Task No.	Task	Start	Finish	Aug 2009	Sep 2009	Oct 2009	Nov 2009	Dec 2009	Jan 2010
4	1	Geotechnical Data Collection	8/25/2009	10/27/2009						
	2	Cotee River - Opinion of Probable Cost	10/13/2009	2/23/2010						
	3	North Bay Boulevard - Opinion of Probable Cost	10/13/2009	2/23/2010						

Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010

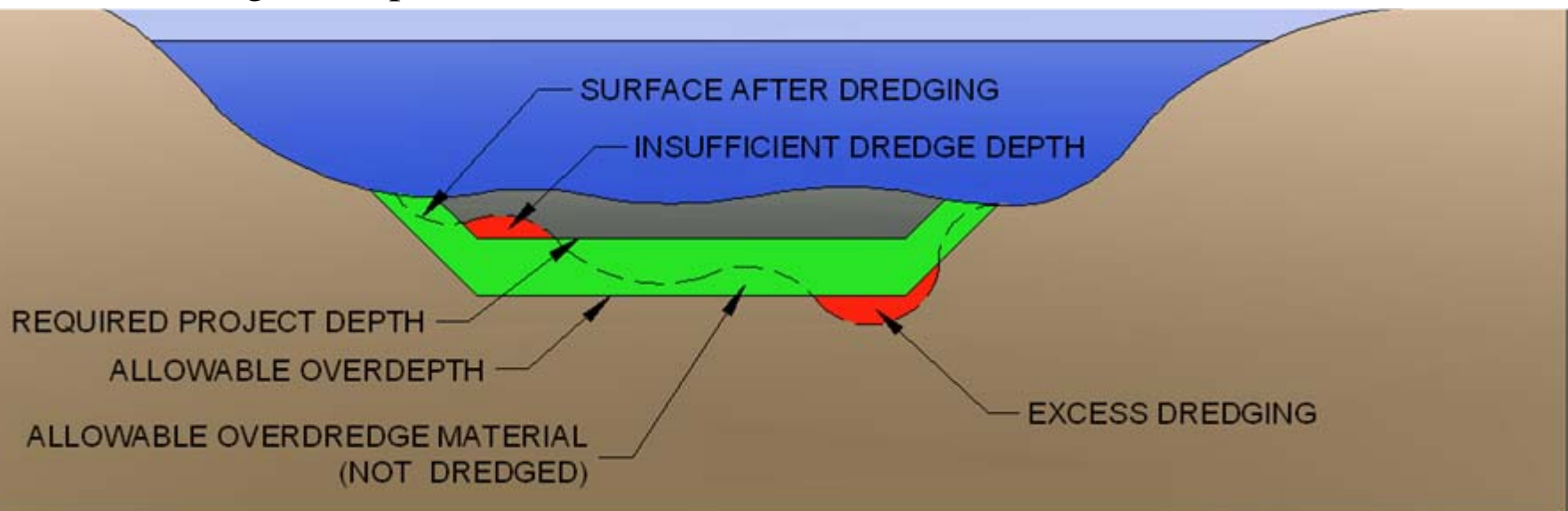






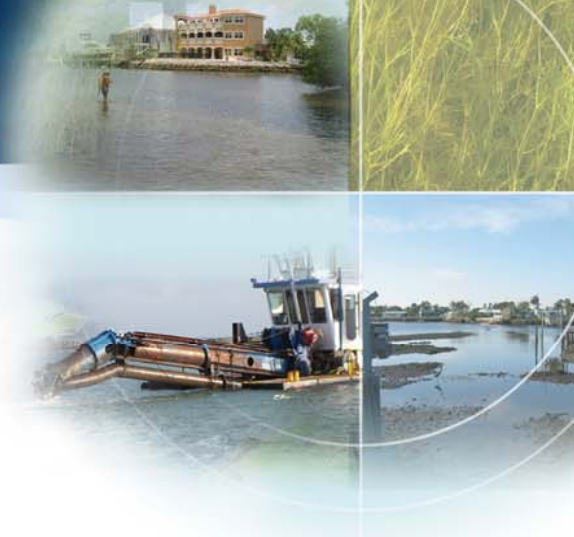
# Agency Coordination and Permit Modifications

- Requests 1 foot variance in dredging depth (-5 ft MLW template bottom elevation)
- Corrects overall dredging volume
- Requires mechanical dredging methodology
- Removes chemistry testing requirements
- Removes geosynthetic liner requirements
- Allows the city to select up to three locations for the temporary offloading facility
- Allows the contractor to select the final disposal facility
- Splits the project into two separate areas: Miller's Bayou (no seagrass impacts) and Cotee River (seagrass impacts)



## Estimated Project Dredging Volumes

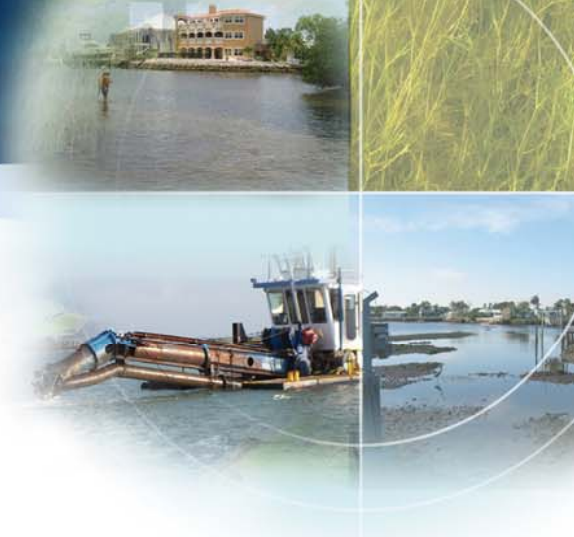
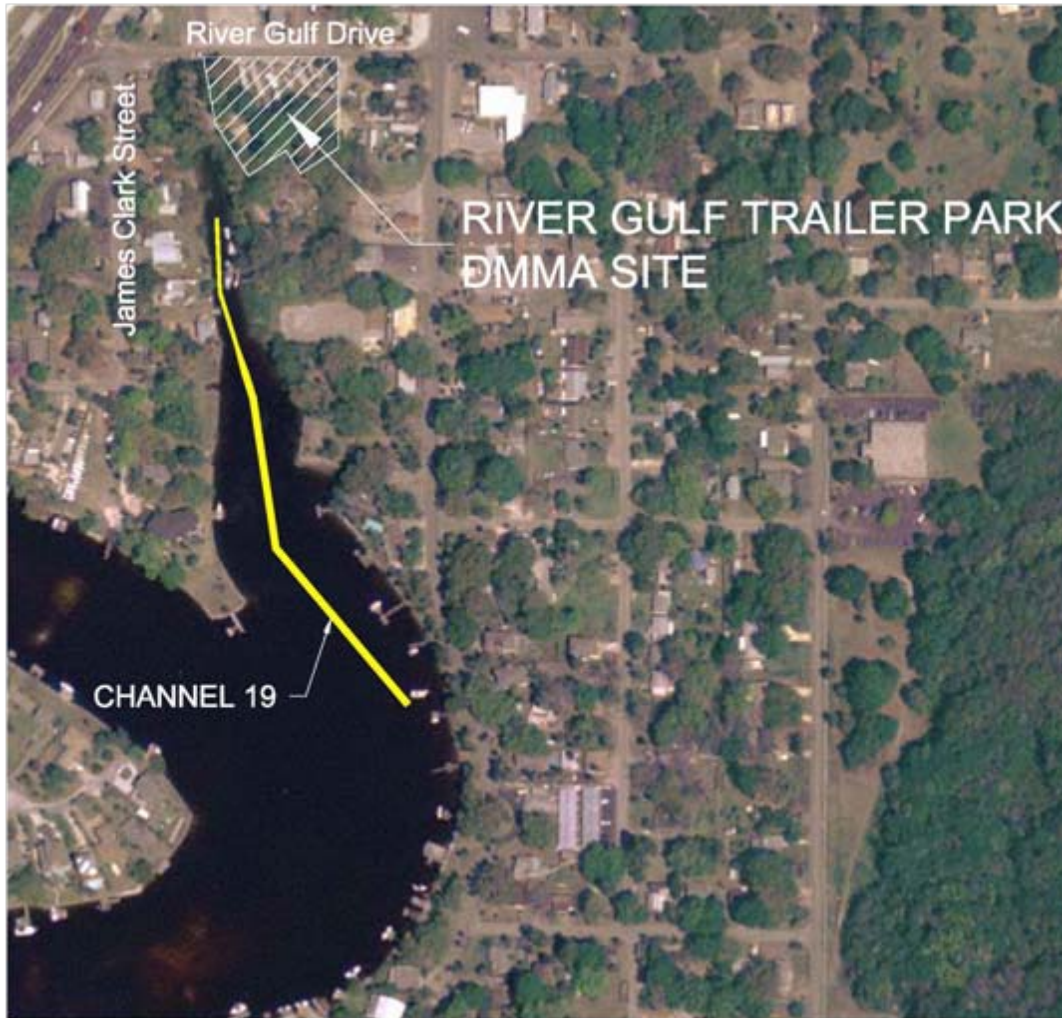
- Miller's Bayou Channels
  - 30-ft wide template ⇔ 29,400 cy
  - With 1-ft overdepth dredging ⇔ 45,200 cy
- Cotee River Channels
  - Existing template ⇔ 16,300 cy
  - With 1-ft overdepth dredging ⇔ 25,900 cy
- North Bay Boulevard Channels
  - Existing template ⇔ 1,300 cy
  - With 1-ft overdepth dredging ⇔ 9,400 cy
- Project Totals
  - Existing templates ⇔ 47,000 cy
  - With 1-ft overdepth dredging ⇔ 80,500 cy



# Miller's Bayou Channels



# Miller's Bayou Channels (cont.)





# Proposed Dredging Work Plan

- 1) Preliminary Opinion of Probable Cost
- 2) Agency Coordination and Permit Modifications
- 3) DMMA Permit-Level Design
- 4) Community Education of Special Assessment District
- 5) Calculation of Special Assessment District
- 6) Special Assessment District Ballot
- 7) Implementation of Special Assessment District
- 8) Final Construction Documents
- 9) Bidding Assistance and Contractor Selection
- 10) Dredging Construction Administration Services
- 11) Project Closeout and Certification



## DMMA Permit-Level Elements

### 1) Field Investigation

- Natural resources investigation and narrative
- Topographic, boundary, and hydrographic survey
- Geotechnical conditions site investigation
- Barge and dredge pipeline access location

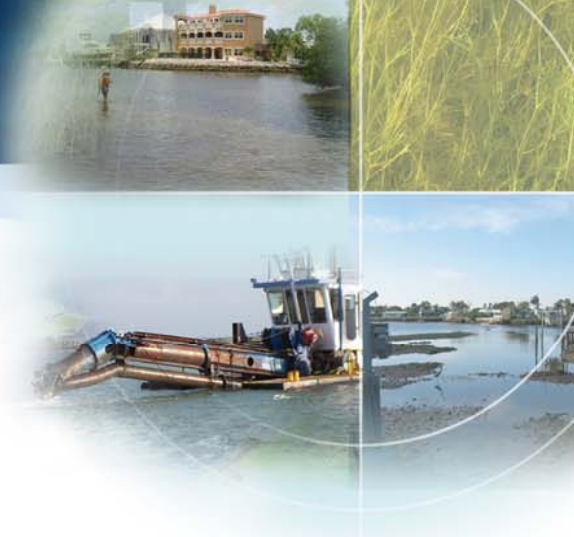
### 2) Preliminary Engineering Design

- Site bulkhead evaluation
- Design (permit-level)
- Permit drawings (signed and sealed)
- Dewatering and operations plan



## Special Assessment District

- 1) Identify serviced properties and affected businesses and homeowners
- 2) Develop final opinion of probable costs
- 3) Develop preliminary assessment rates
- 4) Administer special assessment district ballot for affected businesses and homeowners
- 5) Implement assessment rates





# Special Assessment District (cont.)





# Special Assessment District (cont.)



# Dredging Construction Services

- 1) Final construction documents
- 2) Bidding assistance and contractor selection
- 3) Construction administration
- 4) Construction project closeout and certification





## Differential Costs for Potential DMMA Sites

Preliminary opinion of probable cost compares the differential cost of using any one of three sites as a DMMA for *only* the proposed Miller's Bayou dredging project

- 1) 5419 Treadway — located across from Waterfront Park along Channel 18 inside Miller's Bayou
- 2) River Gulf Trailer Park — located at the corner of River Gulf Road and Grand Boulevard along Channel 19 outside of Miller's Bayou
- 3) Waterfront Park — located just west of Old Post Road along Channel 18 inside Miller's Bayou



## Differential Costs for Potential DMMA Sites (cont.)

- Preliminary opinion of probable cost compares the differential cost of using any one of three sites as a DMMA for each project
  - Miller's Bayou;
  - Cotee River; and
  - North Bay Boulevard
- Only accounts for the use of each potential DMMA site during:
  - a) offloading;
  - b) dewatering; and
  - c) final transportation of dredged material for a single dredging event, to a final disposal location
- Does not account for the actual cost of purchasing or leasing the DMMA property



# Differential Costs for Potential DMMA Sites (cont.)

**DMMA Cost Differential for Miller's Bayou**

DMMA	Total Cost Range	
5419 Treadway	\$2,800,000	\$3,500,000
River Gulf Trailer Park	\$3,000,000	\$3,740,000
Waterfront Park	\$3,185,000	\$4,025,000

**DMMA Cost Differential for Cotee River Dredging Project**

DMMA	Total Cost Range	
5419 Treadway	\$2,000,000	\$2,500,000
River Gulf Trailer Park	\$2,175,000	\$2,715,000
Waterfront Park	\$2,310,000	\$2,975,000

**DMMA Cost Differential for North Bay Boulevard Dredging Project**

DMMA	Total Cost Range	
5419 Treadway	\$2,400,000	\$3,000,000
River Gulf Trailer Park	\$2,550,000	\$3,190,000
Waterfront Park	\$2,710,000	\$3,475,000

† Assumes the least expensive alternative — construction of just one bridge along Bay Boulevard

## Preliminary Opinion of Probable Cost

- 1) The city has not yet established a final disposal location for all the proposed dredged material
- 2) The Oreto Drive site will only hold 10,000 – 15,000 cy of bulked dredged material
- 3) The selected contractor may suggest an alternate final disposal site to meet the project requirements
- 4) Cost estimates include a conservative cost of \$18 per cubic yard to haul the dredged material from the DMMA site to the final disposal location
- 5) Conservative hauling cost dictated by the unknown quantity of material that the final disposal site can store



## Preliminary Opinion of Probable Cost (cont.)

- 6) Taylor Engineering believes that the city, through the selected contractor, can sell a portion of the dredged material for use as structural fill
- 7) This preliminary opinion of cost does not account for the actual cost of purchasing or leasing the DMMA property





# Preliminary Opinion of Probable Cost — 5419 Treadway DMMA

**Preliminary Opinion of Probable Cost using the 5419 Treadway DMMA**

Dredging Area	Overall Cost*		Dredging Volume (cy)	Sellable Dredged Material (cy)	Projected Cost Savings	Final Adjusted Total	
Miller's Bayou	\$2,800,000	\$3,500,000	42,500	33,000	\$693,000	\$2,100,000	\$2,800,000
Cottee River	\$2,000,000	\$2,500,000	28,300	16,750	\$351,750	\$1,600,000	\$2,100,000
North Bay Blvd (and 1 Bridge) <sup>†</sup>	\$2,400,000	\$3,000,000	9,500	6,050	\$127,050	\$2,300,000	\$2,900,000
<b>Property Purchase Cost</b>						\$1,600,000	\$1,600,000
<b>Total</b>						\$7,600,000	\$9,400,000

\*Includes cost of using 5419 Treadway DMMA for the project

<sup>†</sup>Assumes the least expensive alternative — construction of just one bridge along Bay Boulevard



# Preliminary Opinion of Probable Cost — River Gulf Trailer Park DMMA

**Preliminary Opinion of Probable Cost using the River Gulf Trailer Park DMMA**

Dredging Area	Overall Cost*		Dredging Volume (cy)	Sellable Dredged Material (cy)	Projected Cost Savings	Final Adjusted Total	
Miller's Bayou	\$3,000,000	\$3,740,000	42,500	33,000	\$693,000	\$2,300,000	\$3,000,000
Cottee River	\$2,175,000	\$2,715,000	28,300	16,750	\$351,750	\$1,800,000	\$2,400,000
North Bay Blvd (and 1 Bridge)†	\$2,550,000	\$3,190,000	9,500	6,050	\$127,050	\$2,400,000	\$3,100,000
<b>Property Purchase Cost</b>						\$400,000	\$400,000
<b>Total</b>						\$6,900,000	\$8,900,000

\*Includes cost of using River Gulf Trailer Park DMMA for the project

† Assumes the least expensive alternative — construction of just one bridge along Bay Boulevard



# Preliminary Opinion of Probable Cost — Waterfront Park DMMA

**Preliminary Opinion of Probable Cost using the Waterfront Park DMMA**

Dredging Area	Overall Cost*		Dredging Volume (cy)	Sellable Dredged Material (cy)	Projected Cost Savings	Final Adjusted Total	
Miller's Bayou	\$3,185,000	\$4,025,000	42,500	33,000	\$693,000	\$2,500,000	\$3,300,000
Cottee River	\$2,310,000	\$2,975,000	28,300	16,750	\$351,750	\$2,000,000	\$2,600,000
North Bay Blvd (and 1 Bridge)†	\$2,710,000	\$3,475,000	9,500	6,050	\$127,050	\$2,600,000	\$3,300,000
<b>Property Purchase Cost</b>						\$0	\$0
<b>Total</b>						\$7,100,000	\$9,200,000

† Assumes the least expensive alternative — construction of just one bridge along Bay Boulevard



**THANK YOU**