
CITY OF PORT LAVACA

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PORT COMMISSION MEETING: MARCH 19, 2024

DATE: 3.14.2024

TO: PORT COMMISSION BOARD MEMBERS CC: JIM RUDELLAT, HARBOR MASTER

FROM: JODY WEAVER, INTERIM CITY MANAGER

SUBJECT: GLO CDBG-MIT COASTAL RESILIENCY LIVING SHORELINE

Attached is a Monthly Progress Report from Mott McDonald covering the period 1/1 through 3/8 2024.

On March 7th, our engineering consultants attended a pre-application meeting with the USACE for this project. Also Attached is a copy of the Pre-Application Meeting Summary and Presentation including

- Current and pending Action Items
- USACE and other Regulatory Next Steps
- Completed Project Tasks

Andi Binion with Triton Environmental Solutions is a subconsultant of Mott McDonald's charged with coordinating the regulatory coordination. She has been designated the City's agent through the permitting process. She plans to be in attendance at the Port Commission meeting on Tuesday to help answer any questions regarding the permitting process.

Monthly Progress Report

Reporting Period: 1/1 through 3/8 2024

Project Information

Project Name	Port Lavaca Living Shoreline Breakwater
City Resolution	R-050922-5
CDBG-MIT Contract	20-087-001-D226
City PM	Jody Weaver
Mott MacDonald/Coast and Harbor Engineering PM	Thomas Everett
Mott MacDonald Project Number	507107066
Date	3/13/2024

Project Milestones

Milestone Description	Date (Actual=A)	Notes
Task 1: Project Kickoff		
Project Kickoff Meeting	6/8/2022 (A)	
Memorandum of Project Understanding	6/21/2022 (A)	
Task 2: Data Collection and Analysis		
Collect available coastal processes data	7/29/2022 (A)	
Collect USACE historical survey data		Not yet started
Collect new bathymetric and topographic data	8/3/2022 (A)	New data collection complete
Collect new geotechnical data	8/4/2023	Field data 6/26 to 29, 2023; data collection lab work memo from subcontractor received 11/9/2023, Finalizing MM geotechnical design 2/29/2024
Collect new cultural resources data	8/31/2023	Work initiated; progressing; Data collection completed Mar 2024
Collect new habitat data	7/21/2023 (A)	Field work complete 6/12-16 2023; report 7/21/2023
Technical memorandum on data collection	10/13/2023 (A)	Complete; as part of 30% report
Task 3: Coastal Analysis, Alts Development, Alt Eval		
Coastal Engineering Analysis	11/4/2022 (A)	Via presentation 11/4/2022
Alternatives Development	11/4/2022 (A)	Via presentation 11/4/2022
Meeting on Alternatives Development	11/4/2022 (A)	Completed in person on 11/4/2022
Alternatives Evaluation	2/20/2023 (A)	complete
Meeting on Alternatives Evaluation	2/22/2023 (A)	complete
Tech Memo on CEA and Alts Analysis	10/13/2023 (A)	Complete; as part of 30% report
Task 4: Preliminary Design		
Prelim design: 30% plans, cost, report	10/13/2023 (A)	Complete; submitted 10/13/2023
Task 5: Regulatory Compliance		
Prepare application and permit plans	02/29/2024	In development
USACE Regulatory Permitting		
USACE pre-application meeting	03/07/2024	Complete
USACE Joint Evaluation Meeting	4/10/2024	Scheduled
Submit USACE Permit Application	04/17/2024	
Issuance of USACE Permit	12/17/2024	Assuming 9 months to issue permit
TXGLO Coastal Lease		

Milestone Description	Date (Actual=A)	Notes
Submit coastal lease application to GLO	4/24/2024	Will time this to wait until we know USACE is preparing approved permit
Task 6: Engineering Design		
Submit 70% Design	5/1/2024	
Submit 95% Design	7/29/2024	
Develop for proposal package	01/10/2025	Set to 1 month after receipt of permit
Task 7: Construction Proposal Solicitation Assistance		
Out to bid	03/2025	
Issue Construction NTP	04/2025	

Project Budget

Budget Summary	% Complete by Budget	notes
Task 1: Develop Project Understanding	100%	
Task 2: Data Collection and Analysis	100% Mott / 90% by sub	Survey, Geotech, Habitat surveys complete; Geotech lab work complete, Cultural Resources data collection complete
Task 3: Coastal Analysis, Alts Development, Alts Eval	100%	
Task 4: Preliminary Design	100%	
Task 5: Regulatory Compliance	60%	Coordination on CR surveys, Finalizing permit drawings, Permit application development in progress
Task 6: Final Design	5%	Geotech design in progress
Task 7: Bidding Phase Services	0%	
Task 8: Engineering Services during Construction	0%	
Task 9: Project Management	40%	
Overall	39%	

Activities Performed This Period

Activity Summary

Task 1: Project Kickoff

- Task Completed

Task 2: Existing and New Data Collection

- Bathy and magnetometer survey completed 8/3/2022; deliverable received 8/9/2022. Survey deliverable submitted.
- Geotech data collection complete. Work in field began 6/26/23. Deliverable received 8/4/23. Geotech report finalized by subcontractor 11/9/23. Internal Geotech analysis for breakwater design in progress.
- Habitat Survey was conducted 6/12-6/22/2023. Deliverable received 7/21/23
- Cultural resources surveys have been given NTP; Marine and terrestrial Antiquities Permit applications have been approved by the THC; field survey completed March 2024.

Activity Summary

Task 3: Coastal Analysis, Alts Development, Alts Evaluation

- Coastal data processing and analysis is complete
- Coastal modeling of site is complete
 - Storm surge model is set up for existing conditions; runs complete.
 - Local wave model is set up for existing conditions; runs for existing conditions complete.
 - Modeling of flushing of harbor for existing and w/ project conditions complete.
- Alternatives development
 - Completed development of alternatives for evaluation.
 - Modeling of proposed alternatives are complete
 - Wave transmission through artificial reefs
 - Typical wave conditions
 - Storm wave conditions
 - Flushing of alternatives
 - Developed and evaluated breakwater modifications based on initial evaluation for improvements to water quality (flushing) and wave protection; work complete.
- Reporting
 - Conducted meeting on CEA and alternatives development with the City and KSBR on 11/4/2022 to discuss avoidance and minimization of impact to habitat
 - Completed drafting of CEA and Alternatives Development and Evaluation memo submitted 10/13/2023.
 - Conducted meeting on Alternatives Analysis with the City and KSBR on 2/22/2023
 - Conducted meeting on Alternatives Analysis results with the City and KSBR 10/24/23
- Revisions to preferred alt required due to results of habitat survey. New alignment was developed and evaluated in the numerical model.

Task 4: Preliminary Design

- 30% design plans complete, submitted 10/13/2023.
- Completed developing preliminary geometric design of structures

Task 5: Regulatory Compliance

- Permit application development in progress. Coordination with subcontractor (Triton) on permit application progress.
 - Permit drawings finalized
 - Permit application package near completion
 - Pre-application meeting with USACE scheduled 3/7/24
- Ongoing coordination with subcontractor (Gray and Pape) on Texas antiquities permit and cultural resources survey.
 - Field surveys conducted week of 2/26/24 and 3/4/24
- USACE Joint Evaluation Meeting scheduled April 10 2024

Task 6: Final Design

- Development of design specifications document in progress
- Finalizing Geotech design: stability, settlement, and bearing capacity for all project features
- Updates and modifications to 30pct design layout

Task 7: Bidding Phase Services

- Not yet started

Task 8: Construction Proposal Solicitation Assistance

- Not yet started

Task 9: Project Management

- Ongoing internal project management e.g. scheduling, invoicing, resourcing, etc.
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Anticipated Effort Next Period

- Preliminary design documentation after receipt of field data (cultural resources)
- USACE JEM meeting preparation for early April 2024
- Finalize permit application based on USACE feedback and submit April 2024
- Continue monthly invoicing against second milestone draw (Final Design).

Outstanding Items

None

Please do not hesitate to contact me if you have any questions or comments.

Sincerely,



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Email: Thomas.Everett@mottmac.com



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Project Principal; Office: 504-383-9785
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Port Lavaca Living Shoreline Project

U.S. Army Corps of Engineers (USACE) Pre-Application Meeting Notes and Project Summary

Meeting Date: Thursday, March 7, 2024 (3 PM)

Meeting Venue: Microsoft Teams

Participants: Cecilia Askins (USACE), Jim Rudellat (City of Port Lavaca), Josh Carter (Mott MacDonald), Thomas Everett (Mott MacDonald), Andi Binion (Triton), Sam Pence (Triton)

Meeting Objective:

Seek feedback from USACE regarding permitting strategy, project design, and implementation.

Andi Binion delivers PowerPoint presentation to meeting attendees to provide project background information, project need, purpose, preliminary design, and minimization and mitigation measures.

USACE Feedback:

- Standard individual permit (IP) recommended.
- USACE Sect. 408 coordination may be necessary due to proximity and adjacency to the existing channel. States if 408 review is required, timelines can be extensive and cause project delays.
 - Triton to reach out to USACE 408 prior to Joint Evaluation Meeting (JEM) to initiate coordination.
- States National Marine Fisheries Service (NMFS) will likely have feedback regarding potential impacts to Essential Fish Habitat (EFH), threatened and endangered species, and project design recommendations.
 - States she anticipates Endangered Species Act formal consultation request from NMFS.
 - Currently, a lengthy process. She has several projects which have been in NMFS consultation for an extended period.
 - Will likely suggest scour protection and/or gaps at specified intervals for fish passage.
 - Josh (Mott) expressed concern in a design with gaps and requested feedback on how to balance the fish gap request and primary project purpose. Primary project purpose is shoreline and infrastructure protection. If gaps are constructed, will not provide maximum protection and may not serve intended function in inclement weather and surge type events.
 - Cecilia recommended it be discussed during the JEM.
- Suggest adding notes and description regarding construction methods and processes would be useful.
 - Examples: barge vessel depths (if known), BMPs to be implemented, etc.
- Presently, IP is typically issued 1-year after Public Notice, states will be important to confirm funding timelines to ensure project hits those timelines.
- Requested additional information be provided on the plans regarding marsh creation islands and borrow areas.
 - Detailed methods of how materials will be transported including routes, BMPs, etc.

- States the pre-application submittal documents were thoughtful and well prepared. While will likely solicit regulatory feedback, the project is well designed and overall a great project.

Current and Pending Action Items:

- Triton coordinate JEM w/USACE PM (completed).
- Mott to revise project plans and review IP application cover letter (completed).
- Triton to incorporate latest revisions to IP application including Mott revisions to project plans and cover letter (completed).
- Triton to reach out to USACE real estate to discuss potential need for 408 review (in progress).
- Mott to confirm internally if USACE will be the leading agency (GLO funded project) (in progress).
- Mott to confirm project funding timelines (in progress).
- Mott to explore the potential of additional modeling to support current design or show fish gaps may not be necessary from a circulation, water quality perspective.
- Mott to update Design Memo with geotechnical analysis (in progress). Slope stability calculations (in progress).
- Consolidate JEM presentation and circulate internally w/project team.
 - JEM presentation due to USACE by April 3, 2024.
- Conduct JEM w/resource agencies.
 - Scheduled for 10:30AM-11:20AM on April 10, 2024
- Discuss internally and address agency comments/feedback provided from the JEM to revise IP package accordingly (if necessary).

USACE and Other Regulatory Next Steps:

- JEM Meeting.
- Submit IP application to USACE.
- Support USACE issuance of 30-day Public Notice.
- Upon receipt of any comments, prepare response to comments package.
 - Response to comments is typically due within 30 days.
- Develop necessary documentation to support Endangered Species Act Consultation, if necessary.
- Develop documentation to support Texas Commission on Environmental Quality (TCEQ) Water Quality Certification (WQC).
- Develop and submit Texas General Land Office (GLO) submerged land lease.
- Support USACE in permit issuance.

Completed Tasks:

- Draft permit drawing package.
- Coastal modeling analysis.
- Alternatives Analysis (AA).
- Preliminary agency coordination w/TPWD re: Aquatic Resource Relocation Plan (ARRP) for oyster.
- IP ENG application form.
- Cover letter for IP application submittal.
- Preliminary endangered species evaluation.
- Preliminary cultural resources evaluation.
- Cultural resources survey (data analysis in progress).
- Pre-application meeting w/USACE.

- Geotechnical design: Settlement and global stability were analyzed for reef and rock breakwater (complete).
- Geotechnical: Consolidation of underlying soils beneath marsh creation was calculated (complete).



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Port Lavaca Living Shoreline Project (SWG-2024-00114) USACE Pre-Application Meeting

Applicant: City of Port Lavaca

Project Location: Lavaca Bay, Port Lavaca, Calhoun County, Texas

March 7, 2024

Port Lavaca Living Shoreline Project

1. Participant Introductions
2. Pre-Application Meeting Discussion Topics
 - Project Location and General Overview
 - Project Need and Purpose
 - WOUS and Aquatic Resources Survey Results
 - Impacts
 - Avoidance and Minimization Measures
 - Open Discussion, Q&A



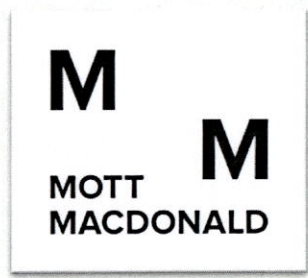
Project Team

-City of Port Lavaca
(Applicant)



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-Mott MacDonald
(Engineering)



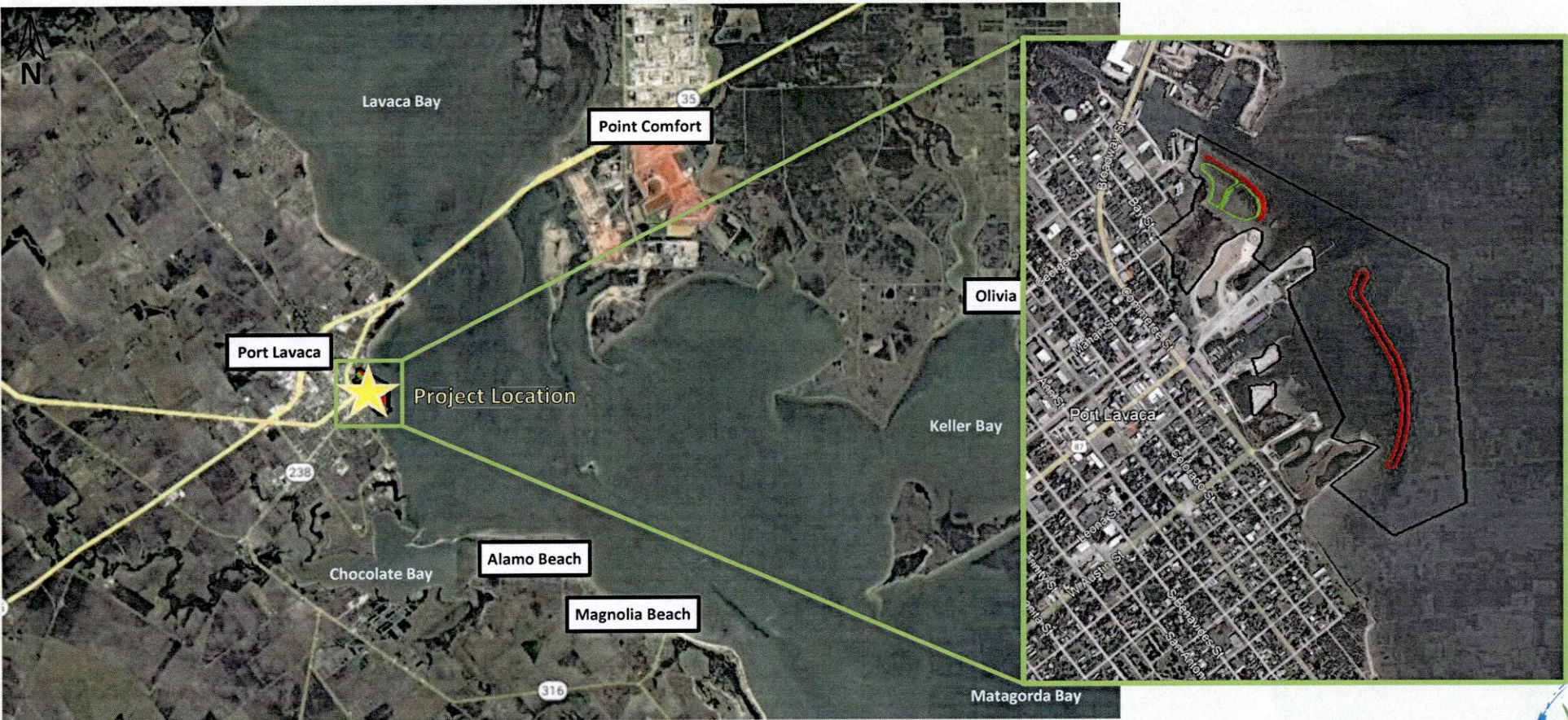
-Triton Environmental Solutions, LLC
(Environmental Surveying & Permitting)



-Funding Source: Department of Interior, Community Development Block Grant – Mitigation Program (CDBG-MIT) administered by the Texas General Land Office.



Project Location & General Overview



Project Need

- In its current state, the project area shoreline is comprised of a mix of exposed shoreline unprotected from wind and wave energy and armored shoreline (i.e., bulkhead).
- Historically, the exposed shoreline has retreated from natural erosive forces (i.e., wind, tidal currents), marine traffic and remains susceptible to further damage from these forces.
- These forces are reducing available marsh and aquatic habitat used by wildlife and marine species, increasing land loss for the City of Port Lavaca, and reducing ecological and recreational values of the area.
- The proposed project has been designed to protect and refortify the existing shoreline.



Project Purpose & Description

- I. Provide offshore protection to project area shoreline;
- II. Reduce onshore wave energy;
- III. Increase sediment stabilization;
- IV. Establish and improve aquatic habitat conditions for oyster propagation; and
- V. Create and improve conditions for the establishment of coastal marsh vegetation.

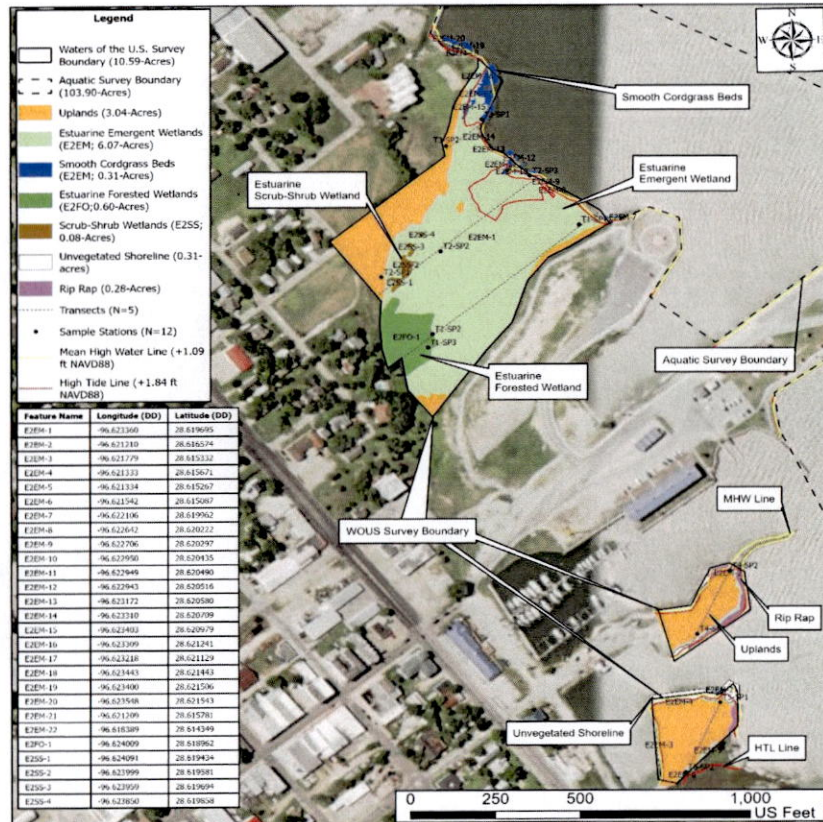
The following improvements are proposed: one rock breakwater, one artificial (mitigation) reef breakwater, and two marsh creation islands along approx. 0.70 miles of shoreline waterward of Port Lavaca, Texas.

The project will utilize stone, artificial oyster reef units, beneficial use dredged material, and native vegetation plantings in the construction of two breakwaters and two marsh habitat islands seaward of Bayfront Peninsula Park.



Natural Resource Survey Results

Waters of the U.S. Survey Results



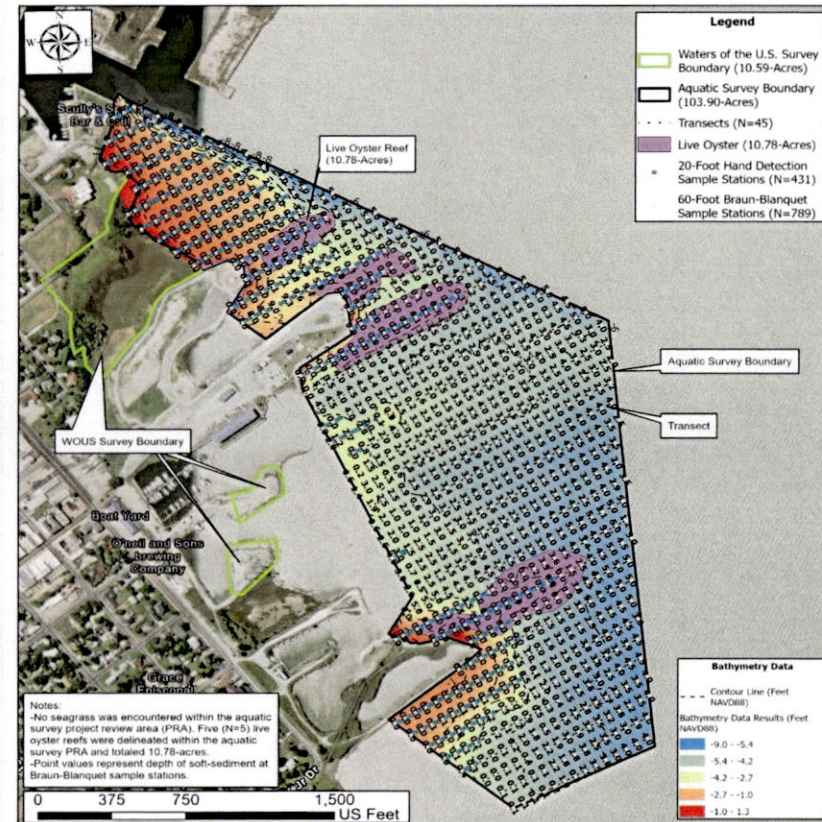
Waters of the U.S. Survey Results
 Port Lavaca Living Shoreline Breakwater Project
 Port Lavaca, Calhoun County, Texas

Prepared For: **Mott MacDonald**
 802 N Carancahua Street, Suite 300
 Corpus Christi, Texas 78401

Prepared By: **Triton Environmental Solutions, LLC**
 P.O. Box 1755
 Rockport, Texas 78381

Map Notes:
 For planning and permitting only, not for construction.
 Base Map Source: ESRI NAIP Hybrid Base Map Imagery
 Map Preparation Date: 7/4/23 (SP).

Sensitive Aquatic Resources Results



Sensitive Aquatic Resources Survey Results
 Port Lavaca Living Shoreline Breakwater Project
 Port Lavaca, Calhoun County, Texas

Prepared For: **Mott MacDonald**
 802 N Carancahua Street, Suite 300
 Corpus Christi, Texas 78401

Prepared By: **Triton Environmental Solutions, LLC**
 P.O. Box 1755
 Rockport, Texas 78381

Map Notes:
 For planning and permitting only, not for construction.
 Base Map Source: ESRI NAIP Hybrid Base Map Imagery
 Map Preparation Date: 7/4/23 (SP).



Anticipated Impacts to Jurisdictional Areas

-There will be a total of 7.70-acres of permanent fill-related impacts waterward of the High Tide Line (HTL) within jurisdictional waters of the U.S.

-Suitable fill material to construct the marsh creation islands will be sourced from nearby borrow areas containing historically placed dredged material (BUDM), sourced from nearby borrow areas.

Project Feature	Fill Material and Volume (CY)	Acres
Rock Breakwater	Stone (33,500 CY)	3.51
Reef Breakwater	Artificial Oyster Reef Units (4,000 CY)	0.63
Marsh Creation Islands (N=2)	BUDM (10,000 CY)	3.56

-Additionally, 3.01-acres of temporary impacts associated with creation of a temporary access corridor for construction of project features. Total temporary fill volumes are approximately 6,300 cy of BUDM.



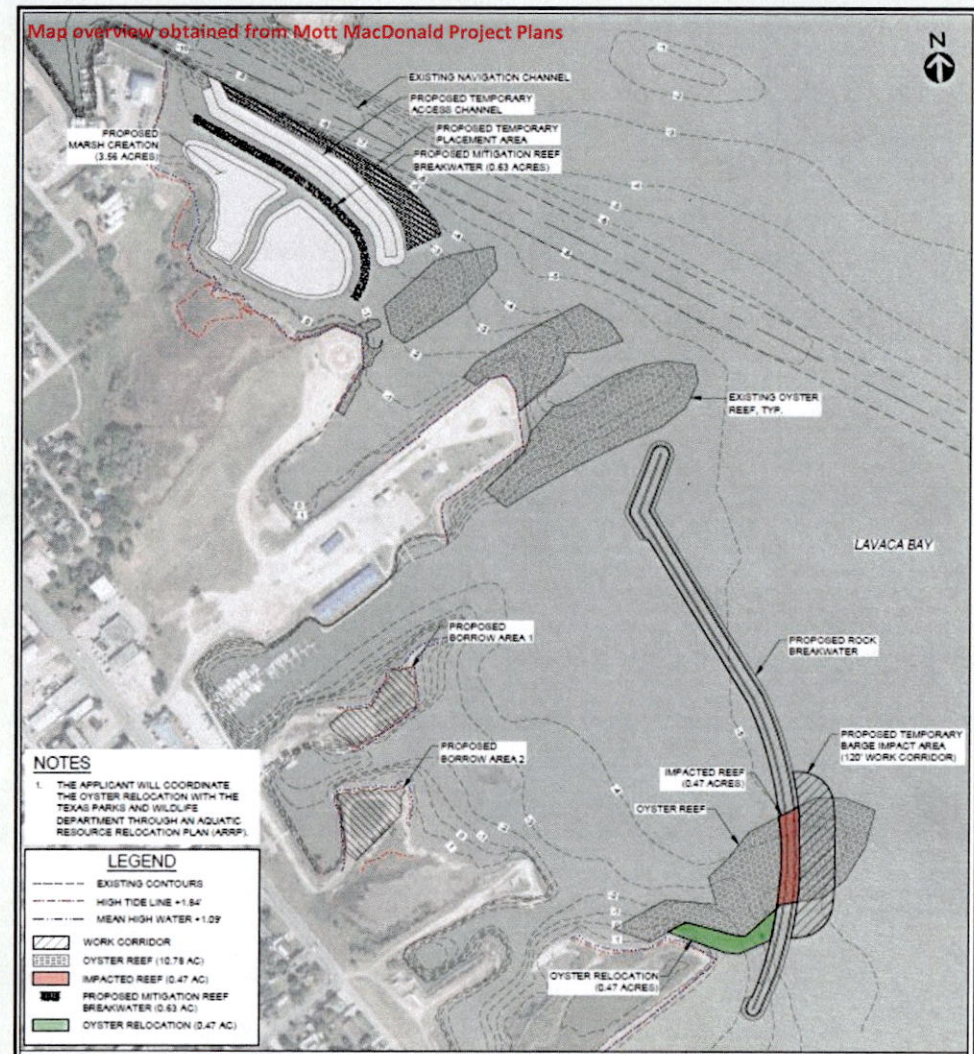
Avoidance and Minimization Measures

-The proposed project has been designed to avoid impacts to jurisdictional areas and special aquatic sites (SAS) to the maximum extent practicable while still attaining the primary project purpose.

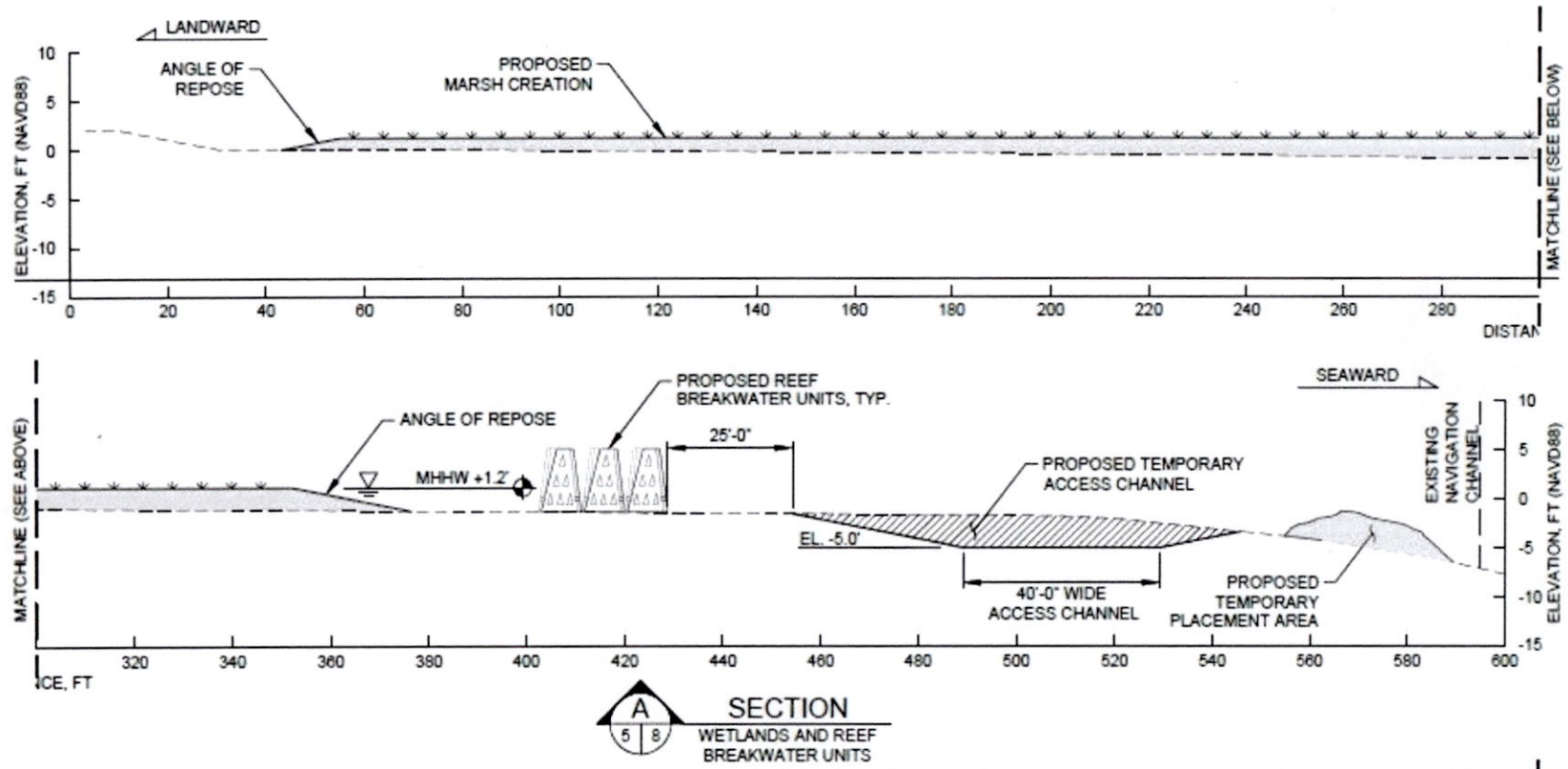
-In the southern portion of the project area, 0.47-acres of oyster reef will be relocated to the southern edge of the impacted reef. This effort will be coordinated w/TPWD through an ARRP.

-In the northern portion of the project area, 0.62-acres of oyster reef habitat will be created through the construction of the artificial reef breakwater.

-Finally, in the northern portion of the project area, two marsh creation islands will be constructed, totaling 3.56-acres. Each island will be contoured and planted with native vegetation for the creation of marsh habitat.



Avoidance and Minimization Measures



Cross-section obtained from Mott MacDonald Project Plans



Avoidance and Minimization Measures

-Conservation measures and best management practices (BMPs) will be implemented to minimize impacts water quality and adjacent special aquatic sites.

-Conservation measures include reasonable and practical measures that have largely been incorporated by USACE regulatory throughout the project area and greater region. Further, NOAA's Southeast Regional Office (SERO) Protected Species Construction Conditions and Vessel Strike Avoidance Measures (NOAA 2021b) will be strictly adhered.

-Other BMPs such as silt curtains, matting, and silt fencing will be utilized during construction activities (as applicable).

-On-site contractors will transit from borrow areas to the marsh creation islands using existing street access or pre-approved temporary vehicle access routes.



Port Lavaca Living Shoreline Project

Open Discussion and Q&A



Port Lavaca Living Shoreline Project

Thank you!

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