

INFORMAL STAFF REPORT

MEMORANDUM

To: President and Honorable Board Members,
Corpus Christi Business and Job Development Corporation

Thru: Ronald L. Olson, City Manager

From: Jerry Shoemaker, P.E., Acting Director of Capital Programs
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Date: March 4, 2015

Subject: Type A Board Action Request

Issue:

This memo is provided to provide the Type A Board information for the various projects. Currently there are five (5) projects identified, the first four are in the approved Capital Improvement Plan (CIP) and one added separately by the Board. These projects support ongoing operations, provide needed maintenance and compliance with the Texas Commission on Environmental Quality (TCEQ) permit requirements within the Type A Board area of review.

The following are the five (5) current projects with respective budgets and status. The attached pages provide more detailed information for each project:

Project	Budget	Status
1. Seawall Capital Repairs	\$500,000	Annual Maint. Contract work completed
2. Barge Dock Improvements	\$2,000,000	Initial Investigative Report Complete, pending Final Report
3. Salt Flats Levee System	\$4,000,000	Design and Construction pending FEMA LAMP Process
4. McGee Beach Re-Nourishment	\$1,200,000	Design ongoing with GLO activities pending.
5. Miradores Improvements	\$400,000	Design ongoing with pending construction activities

Background & Findings:

Projects one through four were approved by the Board for funding within the \$7.7 Million Capital Improvement Plan (CIP). Project five was subsequently added with a cost of \$400,000 for a total of \$8.1 Million in capital improvements.

1. Seawall Capital Repairs

Budget: \$ 500,000

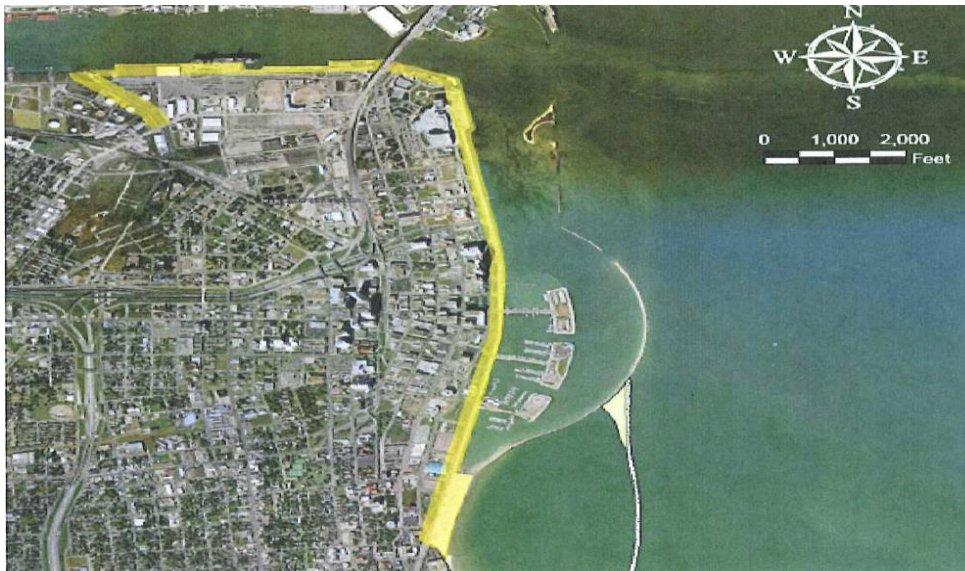
Project Scope:

The nearly four-mile-long Seawall and flood protection system paralleling the Corpus Christi Bayfront, originally constructed from 1939 to 1942, provides protection of the downtown business district from hurricanes and storm surges. Generally, the flood protection system starts at McGee Beach and continues to the salt flats levee system.

The Seawall and Flood Protection Maintenance involves evaluating, inspecting, repairing and maintaining many components within and along the seawall and flood protection system.

A final Seawall Assessment Report was completed in 2009 which documented a number of maintenance issues that needed to be addressed along the seawall. After review of this report by the Corpus Christi Business and Job Development Board and the Capital Programs Department, development of construction documents for seawall maintenance repairs proceeded. Repairs along the seawall include the pertinent repairs needed to protect the structural integrity of the seawall system.

Project Justification: The Seawall provides critical flood protection for the downtown area and the maintenance is necessary to regularly and routinely allow performance of maintenance and repairs of structural enhancements within the flood protection system.



2. Barge Dock Improvements

Budget: \$2,000,000

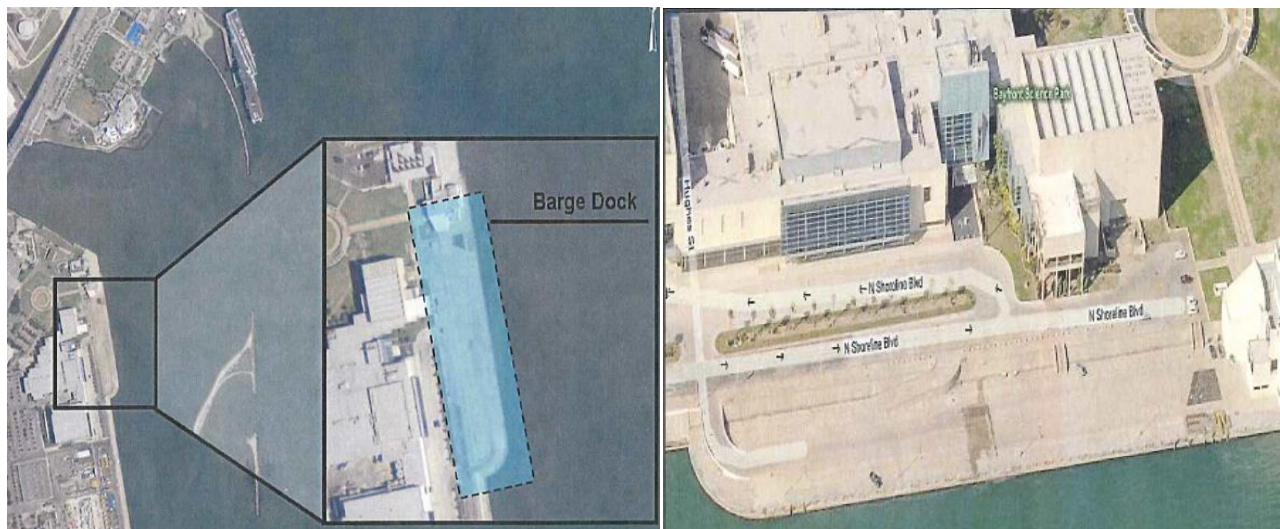
Project Scope: The Barge Dock was constructed in 1938 and is located on North Shoreline Boulevard at the north end of the Corpus Christi Seawall the adjacent to the Art Museum of South Texas. This project is a four phase approach as presented below:

- Phase 1 – Conduct subsurface and geotechnical investigations with topographic survey and bathometric surveys to determine the overall structural condition of the Barge Dock to perform as originally designed;
- Phase 2 – Model the wave loading to evaluate the existing structure capacity within FEMA guidelines;
- Phase 3 – Conduct key stakeholder meeting to define the current and future uses of the Barge Dock;
- Phase 4 – Develop construction/rehab requirements based on the load evaluations and determination of the future uses.

RVE Engineering was selected for this project. Phase 1 for the initial investigations is complete with findings that the Barge Dock is in fair condition. Phase 2 being coordinated with the overall Seawall evaluation and modeling with plans to start within 60 days.

Future improvements could include raising the elevation of the Barge Dock by two (2) feet, constructing a relief platform to prevent the new fill from surcharging the existing bulkhead, create a stepped terrace area to reduce wave run-up onto the adjacent roadways during storms, create additional parking and other amenities.

Project Justification: The Barge Dock has been in service for over 75 years and is an integral part of the Seawall and flood protection for the downtown area. With recent changes to the FEMA program it is essential to complete the study and ultimate improvements for this facility. Additionally, the proximity of the Barge Dock to the entrance of the Port of Corpus Christi, the American Bank Center, Selena Auditorium, the Museum of Science and History and the Art Museum make the Barge Dock an important starting point for local tourist attractions.



3. Salt Flats Levee System

Budget: \$4,000,000

Project Scope: The Salt Flats Levee is one part of a 3.75 mile long flood protection system. The port wharf and seawall make up the other segments. This system protects a 486 acre basin that includes portions of downtown below the bluff, the entertainment district and the port.

FEMA and the Corp of Engineers have recognized this and have implemented a certification process for all levee type protection systems nationwide. After experiences learned in the aftermath of hurricane Katrina the certification process was developed by the Corp of Engineers to provide FEMA with a way to document the adequacy of flood protection systems. As such, the City is conducting necessary evaluations and subsequent report to obtain certification and required improvements to the Salt Flats Levee. This report looks at what is required in the levee certification process and potential consequences and cost associated with certification.

Additional project phases may include consideration for additional improvements to the downtown flood protection system.

Project Justification: This is a critical component of the downtown flood protection system and must be certified as part of the flood protection for the downtown area. The city entered a Provisional Accredited Levee agreement with FEMA as part of the development of the City's ongoing strategy to further assess potential impacts of FEMA's effort to update Flood Insurance Rate Map.

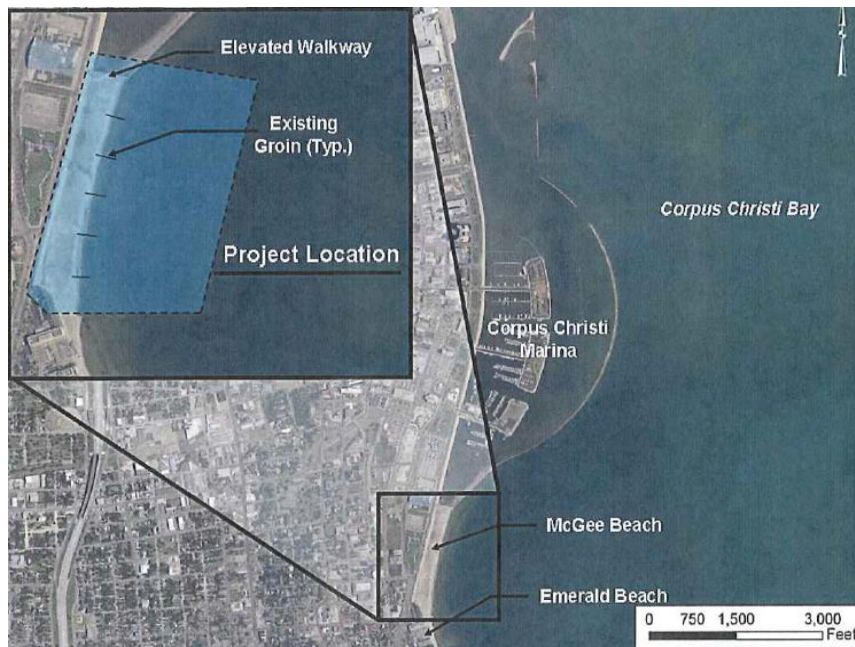


4. McGee Beach Re-Nourishment

Budget: \$1,200,000

Project Scope: McGee beach functions as a popular pocket beach along Corpus Christi Bay. The isolation of the beach provides little opportunity for sand introduction from the bay system due to the many coastal structures along the adjacent shoreline as well as the surrounding deeper bay waters. The structures function as artificial headlands, sheltering the beach but also blocking sediment transport into the beach compartment. Beach re-nourishment took place in years 2004 and 2007. Currently, the City is working with the General Land Office to perform a nourishment project with anticipation of placement in Fiscal Year 2015/2016.

Project Justification: A survey of the McGee Beach indicated a location with some erosion at the south end, placing it in the Tier 2 category which is recommended for nourishment within 1 to 3 years (See Attachment – Table 3, from the CEPRA Beach Monitoring Phase 4 Surveys and Analysis: 2012/2013 Survey Year). With the GLO findings, the nourishment for McGee Beach was accelerated to the Capital Improvement Program Funding Year 2014/15 in lieu of the Funding Year 2015/16 to minimize overall cost and potential degradation to the beach and seawall.



5. Miradores Improvements

Budget: \$400,000

Project Scope: The Miradores are Park facilities attached to the Seawall that experience weathering due to the corrosive marine environment and require restoration to the finishes, electrical/lighting systems, plumbing, clay tile roof repairs and other miscellaneous improvements. The Board approved \$400,000 to complete the various repairs and the City is developing the necessary construction documents for the repairs.

Additionally, the City is developing an appropriate sustainable maintenance plan with cost for future consideration by the Type A Board. A contract will allow for periodic maintenance and upkeep.

Project Justification: The Miradores are a vital element of the Seawall and Bayfront. The proper maintenance plan will ensure the integrity and aesthetics of the structures will prohibit excessive deterioration that may result in excessive restoration cost.

