



## AGENDA MEMORANDUM

May 16, 2016

Corpus Christi Business and Job Development Board Meeting

**DATE:** May 2, 2016

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

**THROUGH:** Ronald L. Olson, City Manager

**FROM:** Jeff Edmonds, P.E., Director of Engineering Services  
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### UPDATE

Engineering Services Monthly Project Updates

#### **STAFF PRESENTER(S):**

| <b><u>Name</u></b>    | <b><u>Title/Position</u></b> | <b><u>Department</u></b> |
|-----------------------|------------------------------|--------------------------|
| 1. Jeff Edmonds, P.E. | Director                     | Engineering Services     |

#### **OUTSIDE PRESENTER(S):**

None.

#### **BACKGROUND:**

The current active projects are listed below with the monthly activity shown.

##### **1. Salt Flats Levee Project/ FEMA Mapping:**

- In 2012 through 2014, the City submitted FEMA Certification Guidance Document report and began an assessment of the impact of FEMA's new FIRM maps.
- Beginning in 2015, Staff revised the HDR scope to better adapt a strategy to support identifying existing deficiencies, corrective actions and validation of the FEMA FIRM maps in lieu of "certifying" the systems. This is a result of the changes from the FEMA moving from the Provisional Accreditation Levy (PAL) to the Levy Accreditation Mapping Procedure (LAMP).
- June of 2015, Type A Board approved HDR MSA contract.
- July of 2015, HDR contract approved by City Council.
- August of 2015, meeting with FEMA was held on August 26<sup>th</sup> to discuss the LAMP and task orders are currently being negotiated.
- HDR Engineering has a task order for ongoing on-going support of the LAMP process, providing information to FEMA and peer review of FEMA's calculations and mapping.

- A task order is under negotiation to conduct an assessment of the overall flood protection system. The study will identify and prioritize corrective measures based on a risk assessment.
- Task Order No. 2 was conducted with the consultant HDR and is 90% complete.
- A workshop was conducted with City, AE, and HDR, on January 17<sup>th</sup>, 2016.
- HDR is preparing a proposal for Task Order's No. 3 and 4.
- The City is in negotiations on Task Order's No. 4 and 5 and Task Order No. 3 is still under development by HDR.
- The HDR Vulnerabilities Assessment was reviewed at the March Type A Board meeting.

## **2. Barge Dock Project:**

- The August 2012 contract with LJA (RVE) for **\$309,870.00**, defined their scope as a forensic assessment of the barge dock and the adjacent sloped seawall in order to pursue improvements identified in the 2012 CIP. The scope also included collaboration with the Barge Dock stakeholders to determine if the Barge Dock should continue to function as designed or if additional uses should be considered. The future CIP Funds identified at that time totaled **\$8,350,000**. The first phase of the assessment has been completed by LJA (RVE) and they are requesting to move forward with the Wave Load Analysis and Structural Stability Analysis.
- The improvements could include raising the elevation of the barge dock by 2', constructing a relief platform to prevent the new fill from surcharging the existing bulkhead, developing a stepped terrace area to reduce wave run-up onto the adjacent roadways during storms, and developing additional parking and other amenities.
- As of 2015, it is recommended that the deficiencies be corrected and the major alterations be deferred to allow for more critical flood protection upgrades.
- August of 2015, Engineering Services initiated discussions with the engineering consultant, LJA (RVE), to develop a scope of work for repairs to address deficiencies identified during the condition assessment. Any further betterments to the barge dock are being put on hold until requirements can be better defined.
- A proposal was requested from LJA for fees with the recommended improvements required to sustain the structure in its current use.
- A final condition assessment report is currently being prepared.
- The final report from LJA is pending.

## **3. McGee Beach Renourishment/ Boat Basin Dredging Project: (Not currently programmed)**

- This project includes data collection, final design, permitting, and construction of beach nourishment for 1,800 feet of beach. The GLO will manage the project and contract with a professional service provider (HDR) to prepare the construction plans. The City will enter into an agreement with the TGLO to provide matching funds for the design and construction of the project. Based on discussions with Cameron Perry with HDR, the beach does not currently require nourishment and the nourishment of North Beach is moving forward separately.

- In 2014, funding was approved and the Coastal Erosion Planning and Response Act Project Cooperation Agreement (PCA) would allow for the Texas General Land Office (GLO) to develop a design for the nourishment of McGee Beach.
- In 2015, the City staff met with GLO and the design consultant to discuss reducing beach re-nourishment demands in an effort to reduce cost and improve beach conditions. Based on the evaluations McGee Beach re-nourishment can be deferred and North Beach is scheduled for re-nourishment this year.
- August of 2015, Engineering Services staff has met with GLO's consultant about planning and permitting. The City may assume responsibility for this project from GLO and link it with other area project needs such as the boat basin dredging and breakwater repairs.
- September of 2015, Engineering Services will bring a proposal to expand the scope of this project or to create a new project for the breakwater repairs.
- A meeting was held during the month of September 2015 with Cameron Perry of HDR Engineering to formulate a new dredging and beach renourishment project.
- After consulting with HDR it was recommended that a feasibility study be conducted prior to initiating the design phase.
- HDR's proposal for the feasibility study is under review by Engineering Services.
- The HDR contract is being presented to Type A during the May meeting.

#### **4. McGee Beach – Breakwater Safety Improvements (Not currently programmed)**

- In 2009, HDR prepared a report recommending repairs and improvements to the Breakwater. The scope as we know it based on this study and includes removing the portion of the breakwater and replacing it with a 6' wide walkway over stone and repairing the damaged portions of rest of the walkway.
- The Breakwater structure provides wave dissipation reducing wear and tear on the sea wall and protects the Marina facilities. This structure includes a concrete cap that allows citizens to walk and fish from it. Since 2009, the deterioration has continued such that the structure is experiencing minor failures and presents potential safety risks to travel to and from the structure. Parks and Recreation continues to provide maintenance, however the deterioration is beyond economical maintenance capabilities.
- Engineering Services recommends approval for major repairs to the structure for approximately **\$1.8 Million**. Engineering Services has developed preliminary plans that phases the improvements to restore the safety and structural integrity. This may also include minor improvements to enhance the use of the structure by tourists and for fishing purposes. These improvements will help fortify the seawall against wave attacks by preventing failure of the breakwater and excessive erosion of McGee Beach. The proposed improvements consist of demolishing the existing elevated walkway and constructing a new breakwater and walkway in its place. The total costs associated with these repairs/improvements was estimated at **\$1,769,875** in 2009. For the Breakwater at McGee Beach the Seawall Maintenance Capital Improvement Plan Budget shows:
  - \$730,000 for 2019/2020
  - \$3,570,000 for 2020/2021
  - \$3,000,000 for 2021/2022
- The deteriorated concrete stairs to the breakwater structure were repaired by Parks and Recreation in June of 2015.

- Engineering services is currently awaiting a proposal from HDR to update the 2009 study of the breakwater. The goal is to obtain an updated work scope based on the current condition of the breakwater and current pricing for the repairs/upgrades.
- The repaired breakwater section scope of work is as follows:
  - 25% of the existing walkway will likely need to be partially removed
  - Construct/place rock ballast (smaller stones) to fill gaps between larger stone and provide a base for proposed concrete walkway
  - Build a new walkway 2ft wider and 1ft higher than the original. The new walkway will be 6ft wide.
  - Install additional amenities along the breakwater walkway. These include:
    - Electrical utilities and lighting along the length of the breakwater
    - Signage, trash receptacles, fish cleaning station(s) and other amenities
- HDR has submitted a proposal for the \$19,000 to prepare a study of possible improvements and costs.
- The proposed AE agreement was presented to City Council in February 2016 to approve \$19,000 to update the report with a more detailed scope and fee.
- The study was kicked-off on February 11, 2016 and a draft report has been submitted and is under review by Engineering. The report will be distributed to Type A for the May meeting.
- The City received the draft ELR on March 30<sup>th</sup>, 2016 and met with the consultant to review the draft on April 20<sup>th</sup>, 2016. The review comments have been provided to the consultant and will be incorporated into a final report will be presented to the Type A Board at the May meeting.

### **SUPPLEMENTAL:**

Breakwater Safety Improvements Report.