

BRAZOS RIVER FLOODGATES AND COLORADO RIVER LOCKS, TX

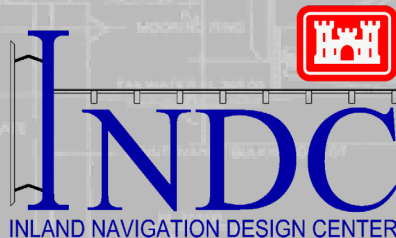
INLAND WATERWAYS USERS BOARD MEETING #97

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Senior Project Manager
Galveston District
16 August 2022

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Real-World Impact!***



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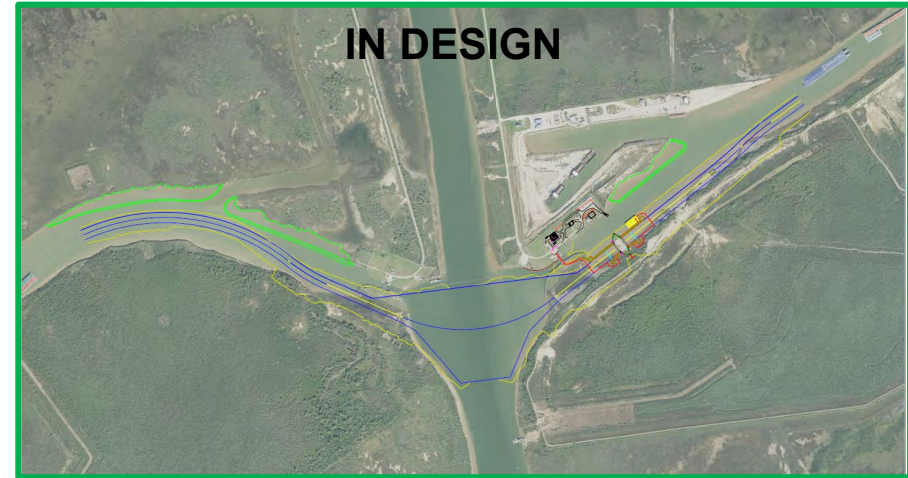
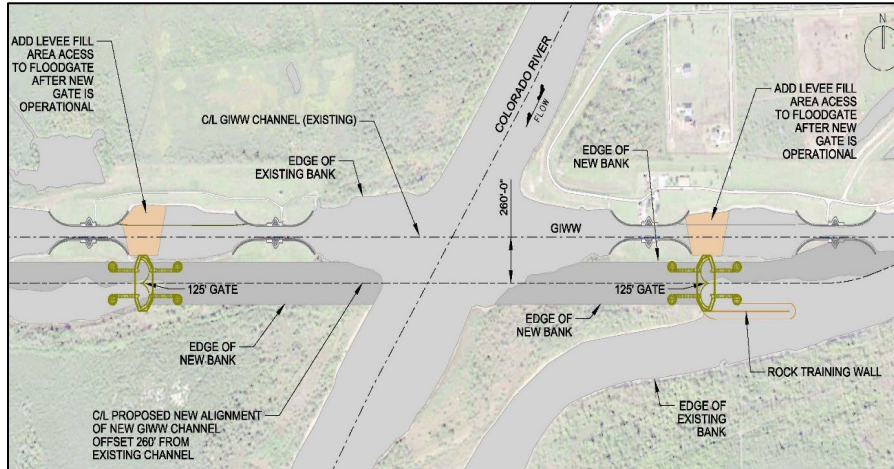


Brazos River Crossing



Colorado River Crossing

PROJECT OVERVIEW OF SCOPE



Colorado River Crossing Plan

- Removal of all existing buildings and 75-ft locks on both sides of the river
- Construction of 125-foot channel from east to west, realigned
- Construction of two new 125-foot gates (east and west)
- Construction of new control houses, administration building, warehouse, boathouse
- Creation of ~ 1 acre of tidal wetlands

Brazos River Crossing Plan

- Removal of all existing buildings and 75-ft gates on both sides of the river
- Construction of 125-foot channel from east to west, realigned
- Construction of a new 125-foot gate at the east side
- Construction of a new control house, administration building, warehouse, boathouse
- Creation of ~ 14 acres of tidal wetlands



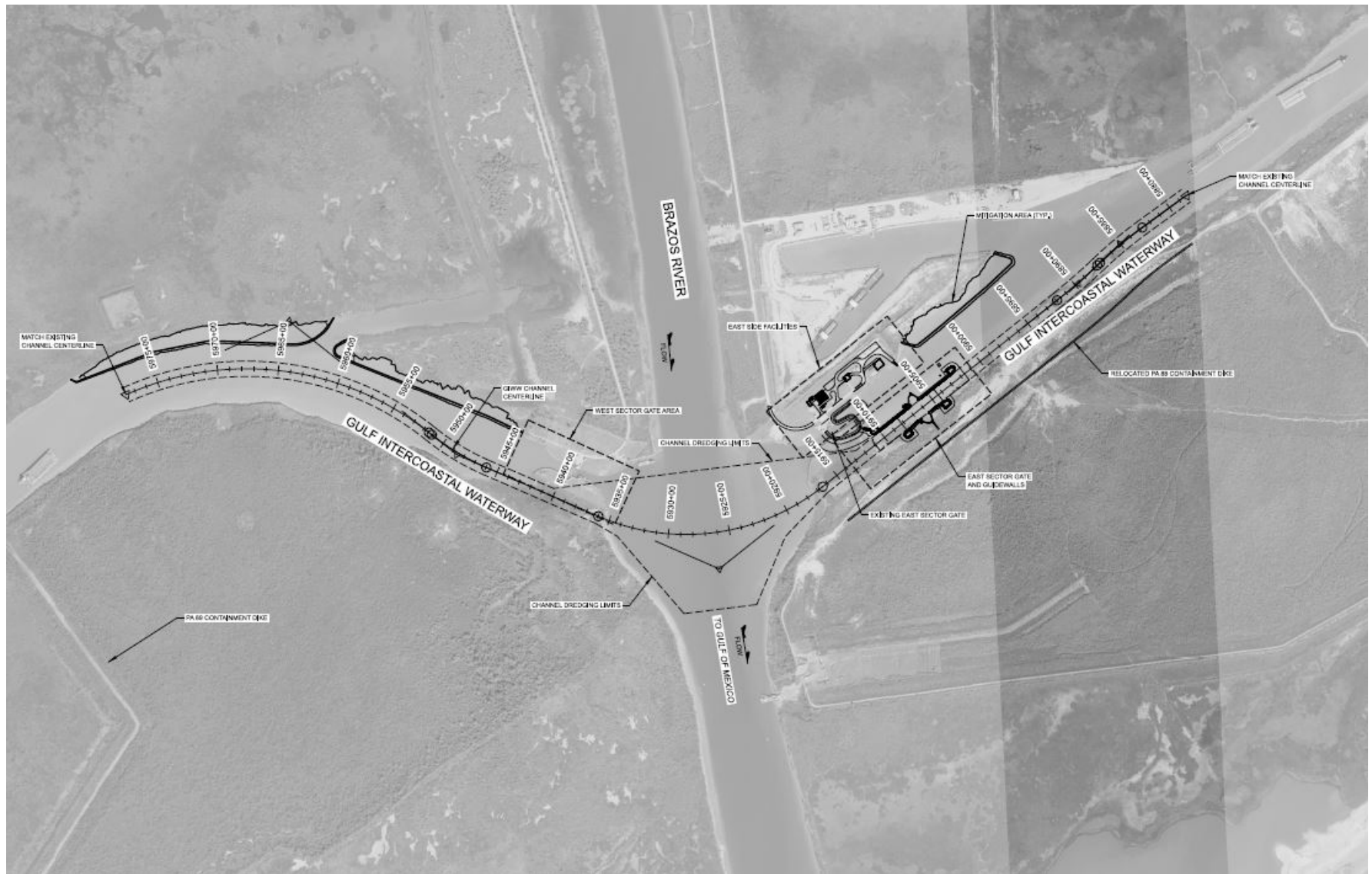
LOCAL, STATE, NATIONAL INTERESTS



- **GIWW is a high use waterway; Energy (Petro/Chemical)**
- **Upgrade infrastructure (constructed in the 1940s)**
- **High Benefit-to-Cost Ratio (5.03)**
- **Increase navigation industry efficiency:** Wider gate openings, realigned channels will allow wider tow/barge configurations, cross faster, eliminating/decreasing impact to navigation industry of \$10M+ per year, 2019 estimate
- **Increase safety:** Wider gate openings, realigned channels will eliminate/reduce collisions to gates significantly
- **Located in low-income area (Brazoria County)**
- **Partnership efforts (GICA Captains involved; Briefings to local, state, federal governments; External stakeholder briefings)**
- **Cat # 2 project (authorized and awaiting construction funds)**



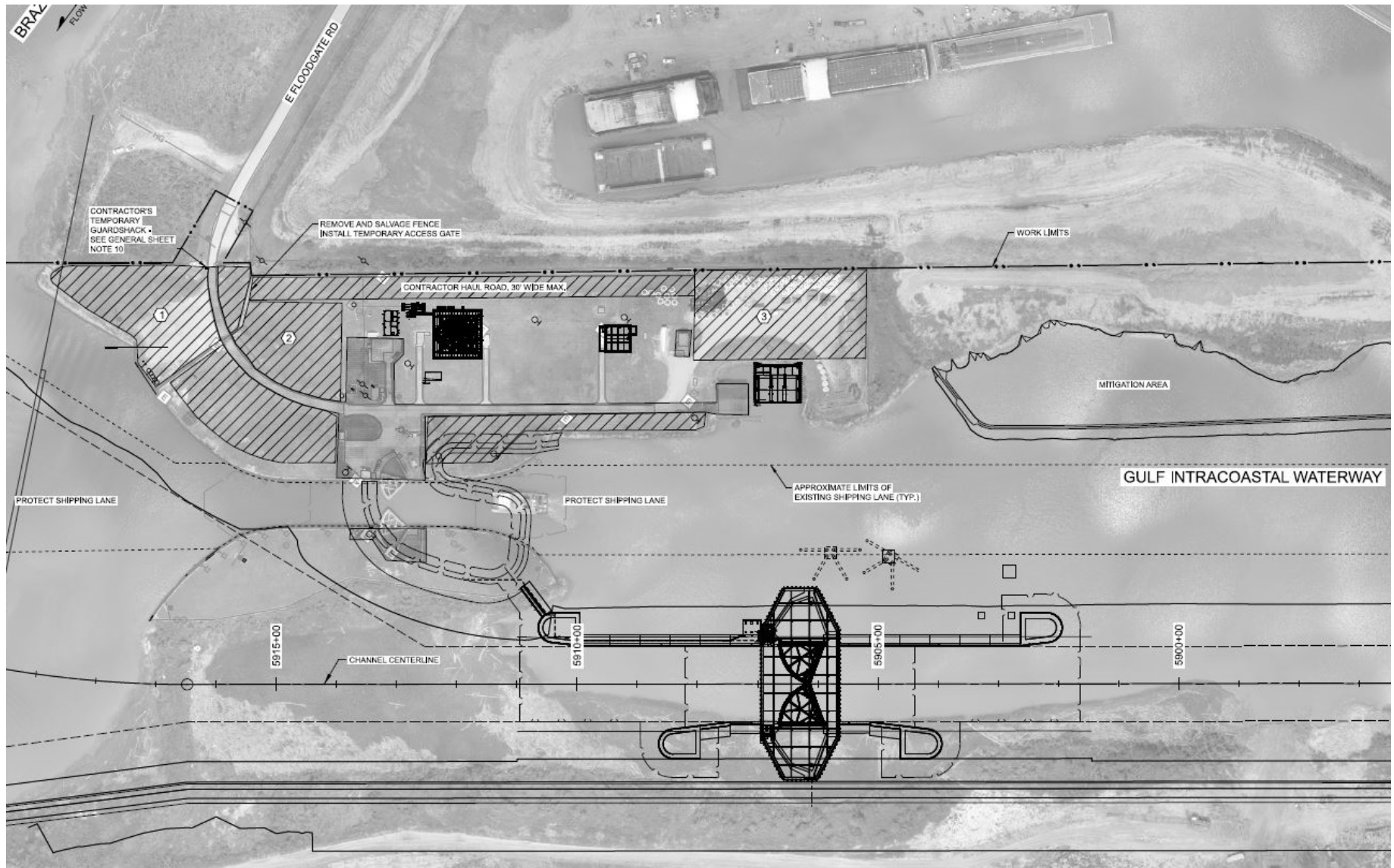
BRAZOS RIVER CROSSING, 65% DESIGN





BRAZOS RIVER CROSSING, 65% DESIGN

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COMPREHENSIVE TECHNICAL ANALYSIS



Tools

- 2 Digital Models (2D and 3D)
- 1 Physical Model
- Over 300 Ship Simulations with Navigation Working Group
 - Golding – Captains JR Miller (24y), Todd Hundley (15y)
 - Enterprise – Captains Donnie LeBeouf (35y), James Leonard (15y)
 - Kirby – Captains Adam Grasser (22y), Karl T Comeaux (13y)

Calibrations / Modeled Scenarios

- Sunny days – Jan and Sep 2020, <5,000 cfs
- Moderate flows – May-Jul 2020, 55,000 cfs; Sep-Nov 2021, 60,000 cfs
- High flows – Aug-Sep 2017 Hurricane Harvey, >120,000 cfs



SCHEDULE – FY22 WORK



Completed: 35% design work, including District Quality Control reviews and Value Engineering Study. Coordination with resource agencies, including mitigation areas.

Ongoing: 65% design work submittal 30 Jun 22 (A), Complete after reviews by 24 Aug 22

Scheduled: 95% design work submittal 18 Oct 22, Complete after reviews by 6 Dec 22

Brazos River Crossing



Colorado River Crossing





COST/FUNDING OVERVIEW – TOTAL & REMAINING



FINANCIAL SUMMARY (\$):

	<u>PED</u>	<u>CONSTRUCTION</u>
Federal Cost Estimate	\$23,122,000 <u>1/</u>	\$338,570,000
IWTF Cost Estimate	\$0	\$182,307,000
<u>Total Project Cost</u>	\$23,122,000	<u>\$520,877,000</u>
Allocation thru FY 2019	\$0	\$0
Allocation for FY 2020	\$0	\$0
Allocation for FY 2021	\$16,618,000 <u>2/</u>	\$16,618,000 <u>2/</u>
Allocation for FY2022	\$6,932,000 <u>3/</u>	\$6,932,000 <u>3/</u>
President Budget FY 2023	\$0	\$0
Federal Balance to Complete	\$0	\$315,020,000
IWTF Balance to Complete	\$0	\$182,307,000
Amount That Could Be Used in FY 2023	\$0	<u>\$223,377,000</u>

^{1/} Excluding Colorado River Locks, except the economic updates.

^{2/} Includes 21 Work Plan Funding in the amount of \$16,440,000 and Reallocated Feasibility funds to the PED phase in the amount of \$178,000.

^{3/} President Budget Fiscal Year 2022 funded PED phase to completion.



PROJECT ISSUES AND CHALLENGES



- **Maintaining project at a reasonable cost**
 - **Current working estimates (FY22 costs): \$203.4M BRFG, \$317.5M CRL**
- **Brazos River Crossing Facility not included in FY23 President's Budget**
- **Construction may not start in FY23, impacts to continue**
 - **\$10M+ per year (FY2019 prices) impact to navigation industry will continue (local, state, national economic impacts)**
 - **High safety risks (frequent allisions) to navigation industry will continue**



THANK YOU

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