

NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM - MISSISSIPPI RIVER LOCK 25, ILLINOIS WATERWAY LAGRANGE LOCK

INLAND WATERWAYS USERS BOARD MEETING NO. 99

COL Jesse Curry
USACE Rock Island
District Commander

13 April 2023

***World-Class Delivery...
Real-World Impact!***



US Army Corps
of Engineers®





MISSISSIPPI RIVER LOCK 25 - OVERVIEW



Authorization: Title VIII of Water Resources Development Act (WRDA) 2007, P.L. 110-114 and WRDA 2022, P.L. 117-263. Authorized cost in legislation is at the Navigation Ecosystem Sustainability Program (NESP) level, not for the individual projects. In FY22, 1st Construction appropriations (\$732M) via the Bipartisan Infrastructure Law (BIL).

Purpose/Description: The construction of a new 1200-foot lock at Lock & Dam 25 will significantly reduce delays and increase safety. Proposed project features include construction of new 1200-foot pile founded lock located in the auxiliary miter gate bay, construction of an upstream ported guard wall totaling 1200-feet, and a 650-foot downstream approach wall.

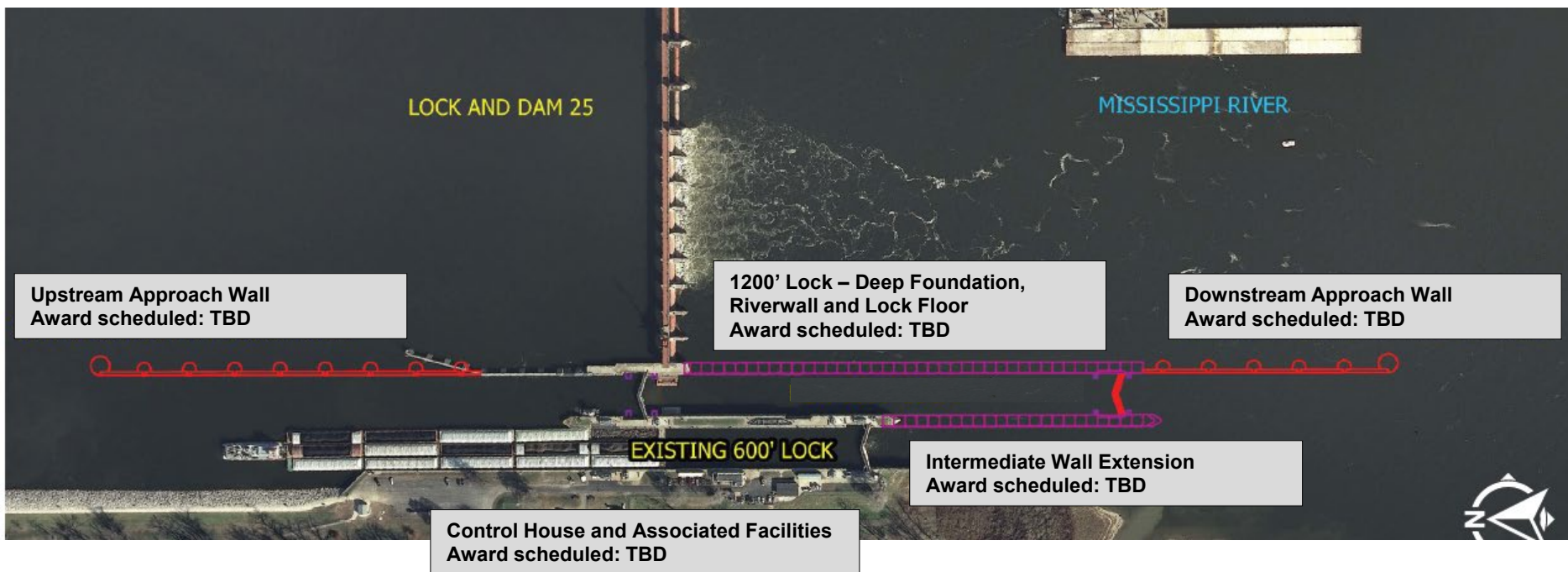
Schedule: Current lock operational date is October 2034. Current project fiscal completion date is September 2036.

Cost: Cost update ongoing, the update is considered procurement sensitive information due to the Early Contractor Involvement (ECI)-Integrated Design and Construction (IDaC) contract type. Current cost estimate is \$732M.



MISSISSIPPI RIVER LOCK 25 NEW 1200' LOCK - SCOPE

3



TBD is in relation to construction activities within pending contract award for ECI-IDaC

Contract Legend

Completed
Current
Future



MISSISSIPPI RIVER LOCK 25 – BLUF STATUS / DASHBOARD



PROJECT SAFETY



No lost time accidents
Phase 1 – Lockwall
Modification

PROJECT STATUS SUMMARY



Schedule:

Phase 1 – Contractor schedule being reviewed
Phase 2 – Design is on schedule

Next Major Contract Award(s):

- March 2024 – Phase 2 Early Contractor Involvement – Integrated Design and Construction

FINANCIAL STATUS SUMMARY



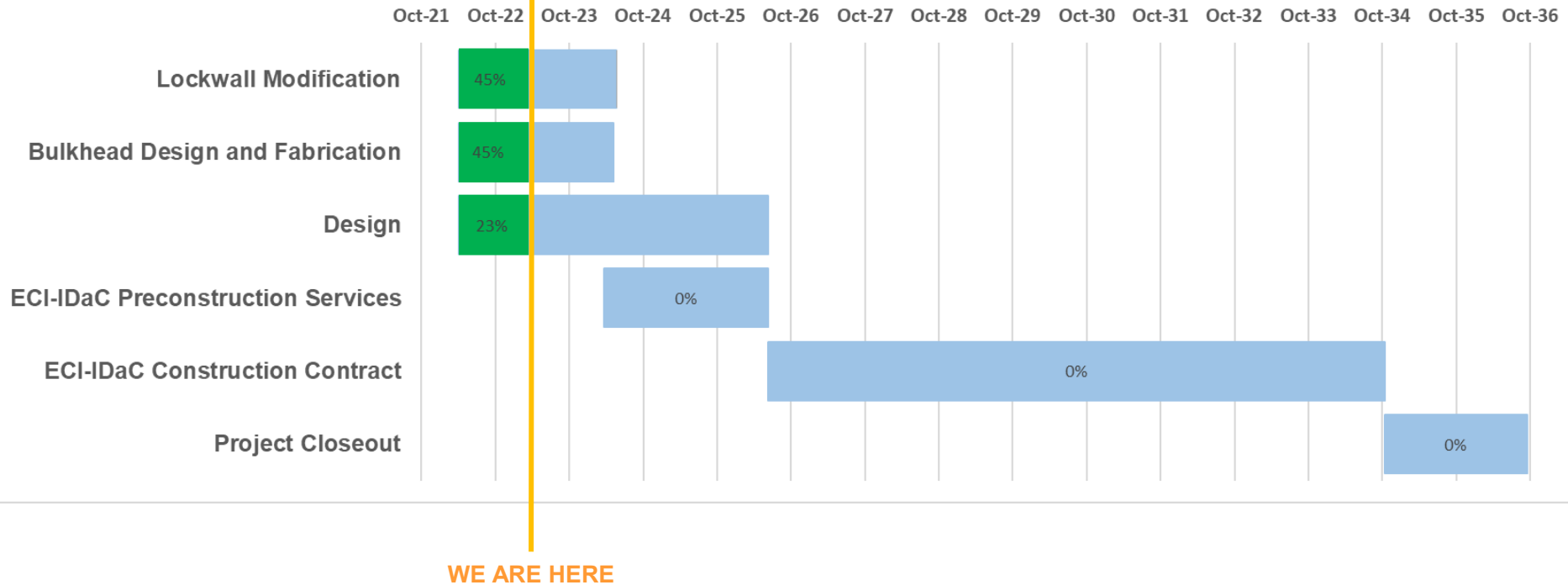
Financial Status Summary TBD

EXECUTIVE SUMMARY:

- Acquisition plan approval is imminent
 - Utilize Early Contractor Involvement (ECI) – Integrated Design and Construction (IDaC)
 - Solicit contract in June 2023
 - Award base contract in March 2024
 - Conducted a Pre-Solicitation Conference 20-23 March 2023
 - ECI-IDaC continues to be strongly supported
 - Market escalation risk is still being felt by industry and remains a cost risk for project
- Project delivery team working on 35% design phase, scheduled to start review in June 2023
- Advancing design of bulkhead supply contract
- Leveraging the USACE Engineer Research and Development Center and Navigation Industry partners with ship simulator
- Starting the real estate acquisition process for staging and laydown areas



MISSISSIPPI RIVER LOCK 25 – SCHEDULE & FUNDING



Schedule comments:

- Design is progressing on schedule
- Acquisition is progressing on schedule and in parallel with design. Upcoming scheduled items:
 - ECI-IDaC Preconstruction Services Award in March 2024
 - ECI-IDaC Construction Option Award in June 2026
 - ECI-IDaC Construction Complete in October 2034
- Preconstruction Services will include contractor involvement with the design team and will facilitate collaboration with end-user as well
- Construction schedule is informed by actual production rates and current understanding of constraints as well as input from construction industry



MISSISSIPPI RIVER LOCK 25 – FUNDING SUMMARY



Allocations:	ARRA (\$M)	CG(\$M)	IWTF(\$M)	BIL(\$M)	Total(\$M)
Prior to FY 20:					\$0
FY 20:					\$0
FY 20:					\$0
FY 21:					\$0
FY 22:				\$732	\$732
FY 23:					\$0
Total to Date:				\$732	\$732
Remaining TPC Balance:					TBD

Total Project Cost (TPC)	\$xxx.x M	Cert. date
Authorized Cost:	\$xxx.x M	WRDA 20XX
Escalated Cost:	\$xxx.x M	Date
902 Limit:	\$xxx.x M	Date
PED Cost:	\$xx.x M	Date
EDC Cost:	\$xx.x M	Date
S&A Cost:	\$xx.x M	Date

Fiscal Year Funding Capabilities: Cost certification ongoing; considered procurement sensitive due to ECI-IDaC

FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	TOTAL
TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Commentary:

- There is no authorized cost specific for Lock 25, the Navigation and Ecosystem Sustainability Program carries the authorized cost at the program level.



MISSISSIPPI RIVER L&D #25 – ISSUES/CHALLENGES



- **Progress:** Phase 1 Lockwall Construction Contract
 - Awarded 6 September 2022, NTP issued October 2022, construction completion December 2023.
 - ~\$10.1M Firm Fixed Price Contract
- **Challenge:** Minimize impacts to navigation industry during lock construction
- **Mitigation Strategies:**
 - Early Contractor Involvement (ECI) will allow proper coordination between USACE, Navigation, and Construction Industry
 - Continued Navigation and Construction industry collaboration to inform intermediate wall design and operational capabilities
- **Challenge:** Construction Market Inflation and Labor/Material Availability
- **Primary Mitigation Strategy:** Early Contractor Involvement will allow proper coordination between USACE, Navigation, and Construction Industry



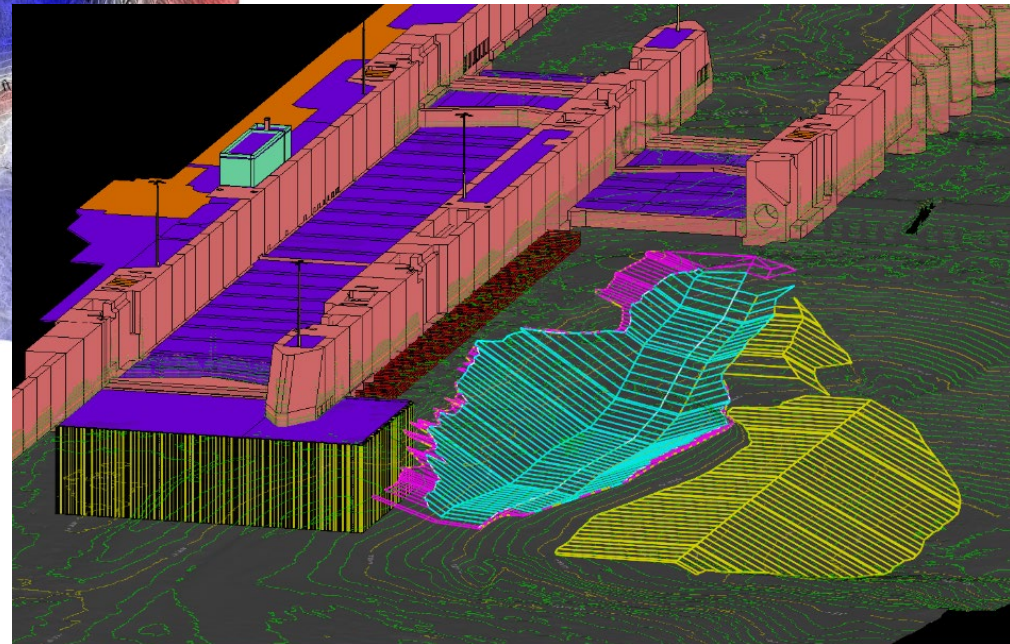
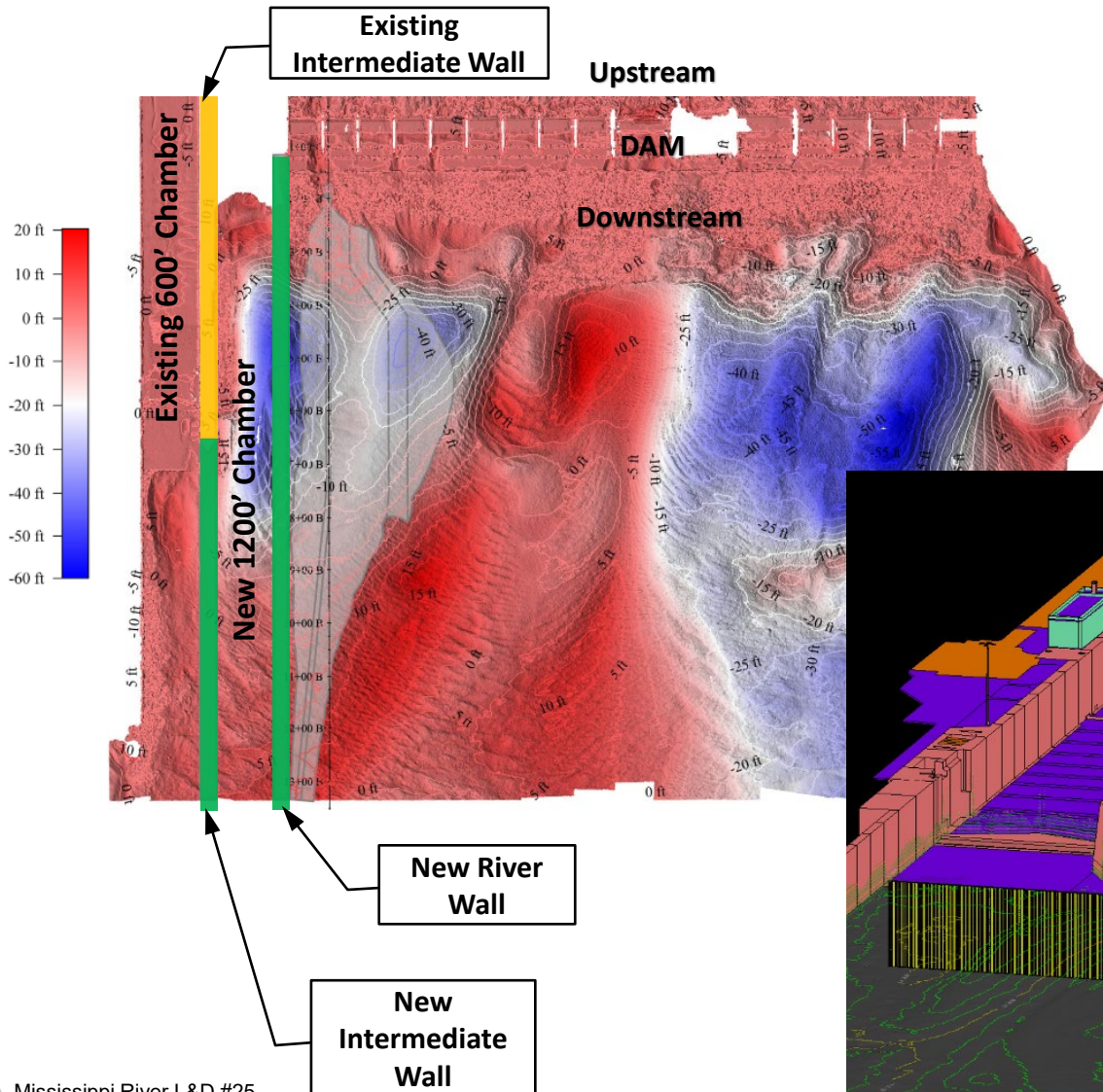
MISSISSIPPI RIVER L&D #25 – ISSUES/CHALLENGES



- **Challenge:** 2011 barge accident and resulting scour hole

Barge Accident Details

- Occurred 6 March 2011 – 4 barges loaded with rock struck the dam
- Damaged tainter gate 2, caused upstream and downstream scour along with Intermediate-wall foundation failure
- Created a 60' deep scour hole in the footprint of the new riverwall and lock floor
- Repair consisted of 1,000 and 5,000 pound riprap along with grouting



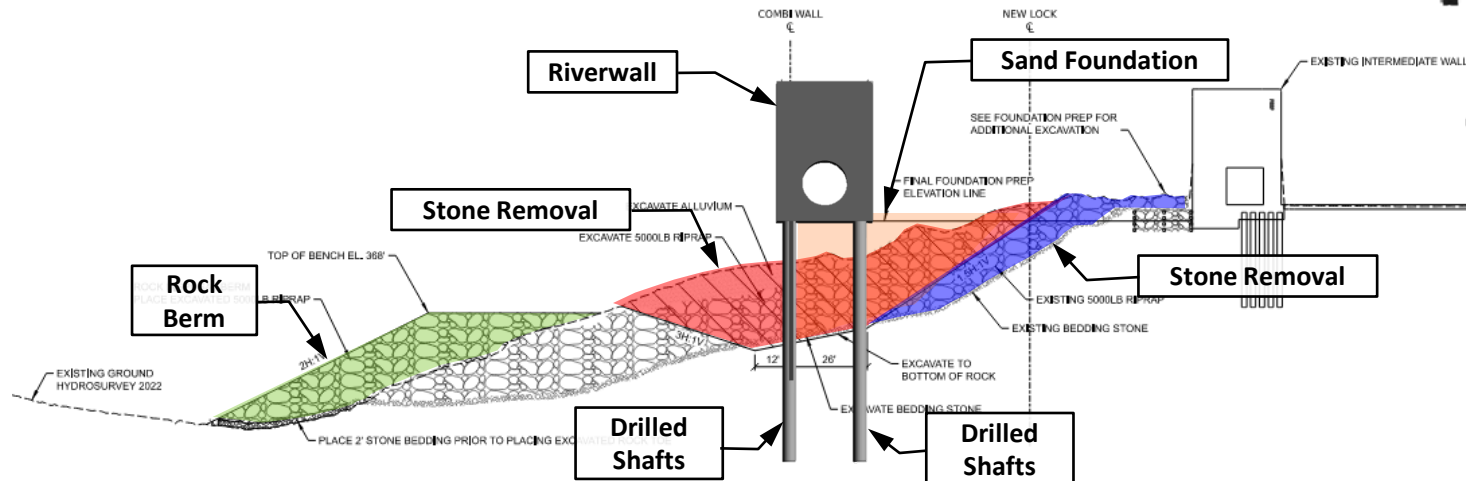
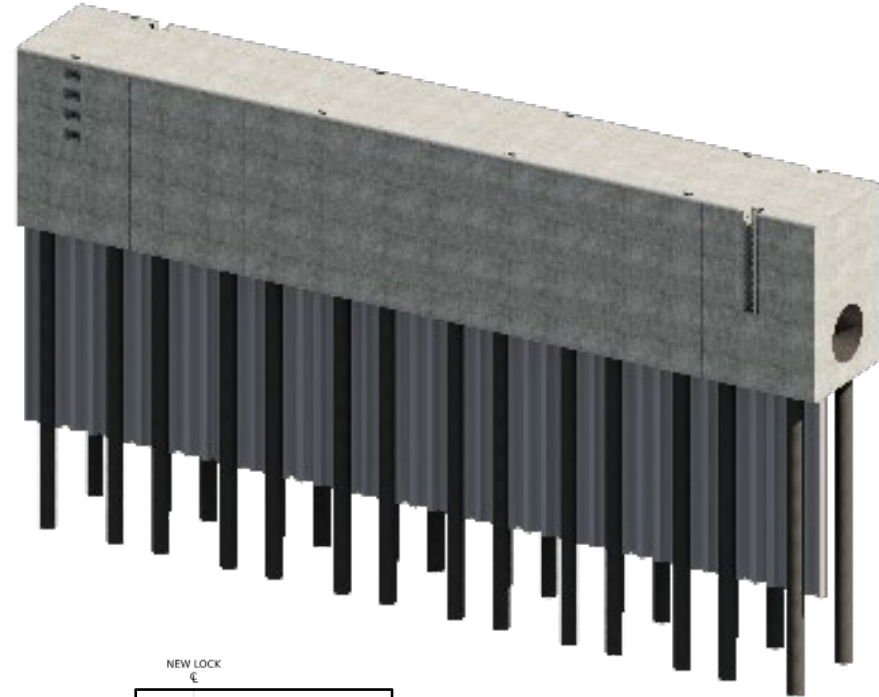


MISSISSIPPI RIVER L&D #25 – ISSUES/CHALLENGES



- **Mitigation strategies for 2011 barge accident:**

- Remove emergency repair Stone in riverwall footprint (80+ foot Depth)
- Install combi-wall (drilled shafts/sheet pile)
- Remove remainder of emergency repair stone between combi-wall & intermediate wall
- Place Sand Foundation Material
- Install Remaining Drilled Shafts
- Construct Riverwall Concrete Monoliths





ILLINOIS WATERWAY LAGRANGE LOCK - OVERVIEW



Authorization: Title VIII of Water Resources Development Act (WRDA) 2007, P.L. 110-114 and WRDA 2022, P.L. 117-263. A total of \$69.3M was received through Congressionally directed spending in FY22 and FY23, it is anticipated that this will fully fund design activities for the project.

Purpose/Description: The construction of a new 1200-foot lock at LaGrange will significantly reduce delays and increase safety. Project features include construction of new 1200-foot lock located landward of the existing 600' lock, upstream and downstream approach channels, and associated guidewalls.

Schedule: The initial construction contracts for site development and machinery fabrication will be ready for contract award in September 2024, pending construction funding.

Cost: The comprehensive cost estimate development is scheduled to begin in March 2024.



ILLINOIS WATERWAY LAGRANGE LOCK - SCOPE



Contract Legend

Completed
Current
Future



ILLINOIS WATERWAY LAGRANGE LOCK – BLUF STATUS / DASHBOARD



PROJECT SAFETY



USACE Safety stats TBD

PROJECT STATUS SUMMARY



Schedule:

Schedule in development

Next Major Contract Award(s):

- September 2023 – 35%-100% Design

FINANCIAL STATUS SUMMARY



Financial Status Summary TBD

EXECUTIVE SUMMARY:

- Physical modeling ongoing at Engineer Research Development Center to include industry coordination with the Illinois River Carriers Association, model testing of lock configurations, and ship simulation when the final configuration is ready.
- Fiscal Year 2022 task order (5%-35%) ongoing tasks include:
 - Geotechnical investigations, lock design, hydraulic modeling, site surveys, cultural surveys, real estate documentation, and physical model updates.
 - Development of construction contract documents – supply contract and utility relocation/site development.
- Design task order development for 35%-100% design, tasks include: all project design features for final plans and specifications.
- Acquisition strategy development. The initial construction contractor industry day is tentatively planned for July 2023.



THANK YOU



Lock 25



LaGrange