

CHICKAMAUGA LOCK REPLACEMENT PROJECT

INLAND WATERWAYS USERS BOARD MEETING NO. 101

ELIZABETH M. BURKS, P.E., PMP, LSS-BB
CHIEF OF INTEGRATED PROJECT OFFICE
U.S. ARMY CORPS OF ENGINEERS
NASHVILLE DISTRICT
19 OCTOBER 2023



U.S. ARMY



US Army Corps
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CHICKAMAUGA LOCK - OVERVIEW

Authorization:

- Energy and Water Appropriations Act of 2003
- Reauthorized in America's Infrastructure Act of 2018

Purpose/Description:

Construction of a new 110' x 600' lock replacement for Chickamauga Lock on TN River Mile 471 in Chattanooga, Tennessee. Construction of a new lock is required due to Alkali Aggregate Reaction (AAR), which threatens the stability and operability of the existing lock. Chickamauga passes approximately 1M tons annually and the new lock would reduce commercial transit times by 80%. In addition, the lock is the most active lock on the TN River for recreation vessels (~3,500 vessel lockages annually).

Schedule:

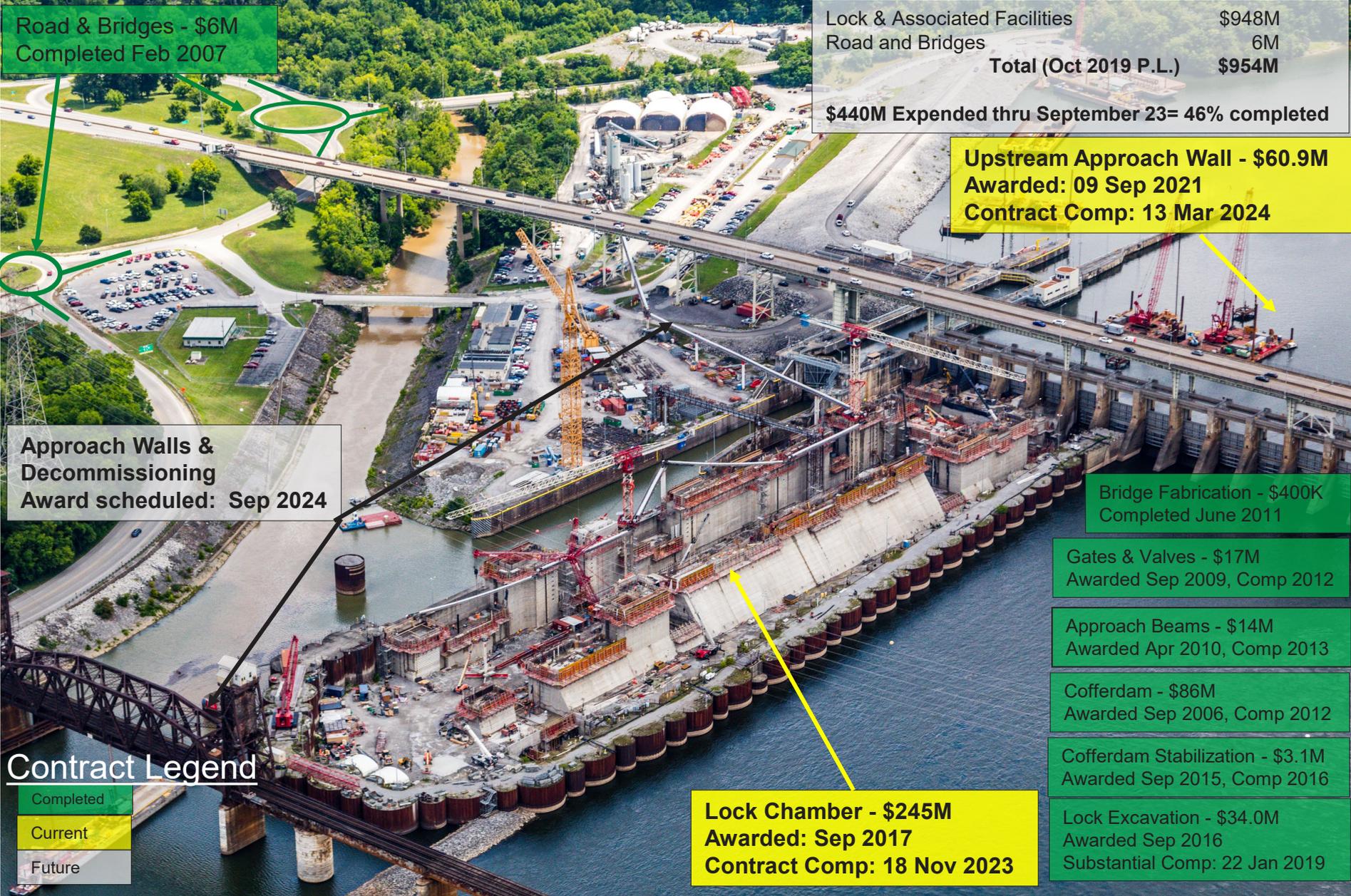
DESCRIPTION	ORIGINAL	CURRENT
Lock Operational (Online)	2024	2026-2027
Project Completion Date (Base Schedule)	2025	2028-2029

Cost:

- Total Project Cost Estimate: \$ 954,396,000 (Oct 2022 P.L.); Certified 16 Mar 2023
- Section 902 Limit = \$1,116,000,000 (FY22)



CHICKAMAUGA LOCK - SCOPE





CHICKAMAUGA LOCK – BLUF STATUS / DASHBOARD

PROJECT SAFETY



Hours/Rate	Lock Chamber
Exp Hours	2,791,305
PDART	1.2
Hours/Rate	USAW
Exp Hours	45,369
PDART	0.00

PROJECT STATUS SUMMARY



Schedule:	<u>Original</u>	<u>Last</u>	<u>Current</u>
Operational	Apr-24	Apr-24	Nov-26
Completion	Nov-25	Nov-25	Sep-28
Note: Orig. and Last Completion Dates from 2022 TPCS; Current Completion Date from 2023 TPCS			
Next Major Contract Award(s):			
• Approach Walls, Decommissioning & Site Restoration			

FINANCIAL STATUS SUMMARY



Planned	(BCWS)	\$491.1 M
Earned	(BCWP)	\$402.6 M
Actual	(ACWP)	\$425.7 M

BCWP: Reports the value (based on % Complete) of work performed to date (1SEP23)

Target: Actual as compared to Planned: (<1% = green)
(>1% and <3% = Yellow and (>3% = Red)

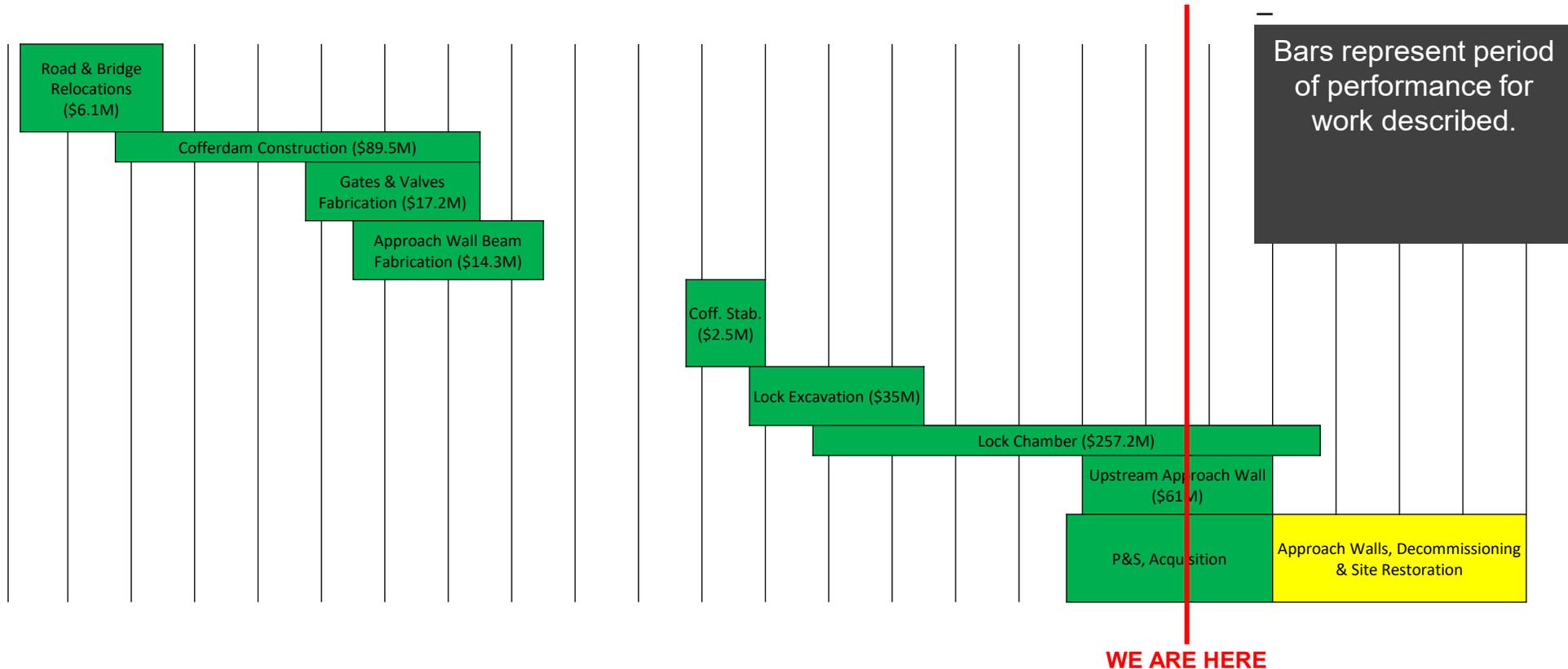
EXECUTIVE SUMMARY:

- **Lock Chamber Contract:**
 - **Schedule:** Required contract completion is 18 Nov 2023; Contractor's Operational Schedule indicates approx. 646 days behind.
 - **Certified Claim:** ADR is scheduled for January 2023. DCAA is currently writing their final report and will be complete in November 2023
 - **Concrete Placements:** Contractor continues to improve on monthly concrete placement rates, currently averaging just under 6,000 CY per month, 200K of 250K CY complete
 - **Gate installation:** Start in Fall 2024, critical path activities will then transition to electrical work for the operations building
- **Upstream Approach Wall Contract:**
 - **Schedule:** Required contract completion date in January 2024, currently approx. -234 days behind.
 - **Construction Status:** Three of fourteen shaft have been drilled and concrete placement for the first shaft has begun
 - **Redesign:** VECP has all comments resolved. Negotiating final impacts to the project for cost and time impact to contract completion. No impact expected to the Approach Wall and Decommissioning Award.
- **Approach Wall, Decommissioning & Site Restoration Contract:**
 - Contract Package undergoing Agency Technical Review (ATR). Solicitation scheduled for February 2024 pending funding and award in September 2024.



CHICKAMAUGA LOCK – SCHEDULE & FUNDING

FY2005 FY2006 FY2007 FY2008 FY2009 FY2010 FY2011 FY2012 FY2013 FY2014 FY2015 FY2016 FY2017 FY2018 FY2019 FY2020 FY2021 FY2022 FY2023 FY2024 FY2025 FY2026 FY2027 FY2028 FY2029



- Funded Work
- Unfunded Work, includes contract, contingency, and labor

Schedule comments:

- The Lock Chamber contract is significantly behind schedule, which is impacting follow on contract work; Alternative Dispute Resolution (ADR) on hold until DCAA audit is complete, currently in risk assessment phase.
- The March 2023 certified Total Project Cost and Schedule update estimated baseline project completion in September 2028 (80% confident completion by August 2030).
- The new lock will become operational during the Approach Wall, Decommissioning, and Site Restoration contract.



CHICKAMAUGA LOCK – FUNDING SUMMARY

ALLOCATIONS	INVESTIGATION (M)	CG (M)	IWTF (M)	ARRA (M)	TOTAL (M)
Prior to FY 20	\$3.3	\$215.9	\$156.4	\$49.3	\$424.9
FY20	\$0	\$66.1	\$35.6	\$0	\$101.7
FY21	\$0	\$124.2	\$66.9	\$0	\$191
FY22	\$0	\$0	\$0	\$0	\$0
FY23	\$0	\$0	\$0	\$0	\$0
Total to Date:	\$3.3	\$406.2	\$258.8	\$49.3	\$717.6
Remaining TPC Balance:					\$ 236.8

Total Project Cost (TPC)	\$954.4 M	FY23 Price
Authorized Cost:	\$717.6 M	WRDA 2020
Escalated Cost:	\$854.2 M	FY23 Price
902 Limit:	\$1,116 M	FY22
PED Cost:	\$68.3M	1 Sep 2023
S&A Cost:	\$27.2 M	1 Sep 2023

Fiscal Year Funding Capabilities:

FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	TOTAL
\$236.8M										\$236.8M

Commentary:

- The project was not funded in the FY22 or FY23 President Budget.
- The FY2023 Total Project Cost and Schedule update has been certified as of 16 March 2023.
 - TPC increased \$197.5M (26%)
 - Approx. 2.5 years added to lock operation date (online); 3 years added to project completion date (baseline)
 - Funds to request to be Fully Funded is \$236.8M



CHICKAMAUGA LOCK – ISSUES/CHALLENGES

- The Lock Chamber contractor is significantly behind and efforts to regain schedule to achieve the current required contract completion date of 18 November 2023 have not been successful to date. The previously reported new lock operational date of April 2024 will not be achieved. Demobilization is expected in late 2025 allowing the Approach Wall and Decommissioning Contractor to fully mobilize then. New on-line date is projected to be November 2026 but will slip if there are issues with the Lock Chamber Contractor demobilizing.
- The Lock Chamber Certified Claim alleges cost and schedule impacts due to a variety of items, most notably COVID-19. ADR scheduled for January 2024. DCAA audit will be complete in early November.
- Current Market Conditions, extended Project Duration, and increased Inflationary rates will have impacts on required cost to complete the project.
- Delays in Lock Chamber will impact full mobilization of Approach Wall and Decommissioning contractor due to site limitations. Phased access to the construction site is needed.
 - A focus on submittal approval in FY25 and a decrease in workload on the engineering team from the Lock Chamber and Upstream Approach Wall contracts will help reduce future impacts to schedule.



THANK YOU

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