

Kentucky Lock Project Update Inland Waterways Users Board Meeting No. 95

Mr. Don Getty
Project Manager
Nashville District
Great Lakes and Ohio River Division
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Kentucky Lock Addition Bottom Line Up Front

- **Downstream Cofferdam Construction**
 - ▶ Contractor has experienced schedule delays but not sensitive to high water impacts
 - ▶ Continues to be high risk construction due to constricted area and geology
 - ▶ Guard cell construction has allowed existing lock to resume pre-construction lockage efficiencies
- **Downstream Lock Monoliths award on track for September 2021**

Kentucky Lock Project Overview

Bridges Superstructures - \$104M
Completed Jul 2014

Bridges Substructures - \$44M
Completed Mar 2006

D/S Lock Excavation - \$54.8M
Award – Sept. 2018

D/S Cofferdam - \$67.1M
Award - Sept. 2016

U/S Miter Gate Fab. - \$5.6M
Completed Dec 2016

D/S Lock Monoliths
Award – Sept. 2021

Upstream Cofferdam - \$17M
Completed Nov 2006

Site, Demolition, &
Utilities - \$4.6M
Completed Mar 2019

Approach Walls
Award – Sept. 2022

Upstream Lock - \$110M
Completed Feb 2017

Contract Legend

Completed
Current
Future

Lock & Associated Facilities	\$1,001M
TVA Transmission Towers	13M
P & L Railroad	97M
Hwy 62 and other roadways	100M
Total	\$1,211M

\$542M Obl thru Sep 2020 = 45% complete

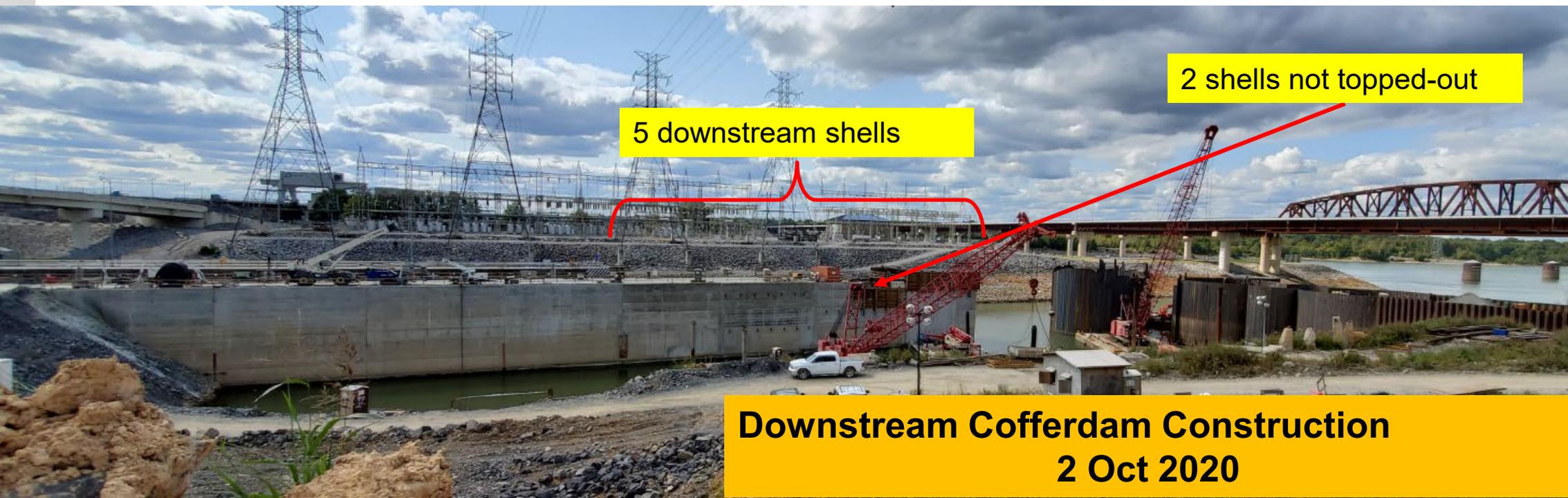


September 2020

**Downstream
Cofferdam**

Lock Excavation





1150 cubic yards
concrete placed to form
bottom plug in Cell 3 on
5 Oct 2020.

All sheet piles placed for
Cell 2

Guard Cell 2 placed in
operation on 11 Sep
2020.

Downstream Cofferdam Construction 6 Oct 2020





Secondary Helper Boat

Guard Cell under construction

Primary Helper Boat

Upbound Tow on 17 June 2020



Downstream Lock Excavation Looking Downstream

21 Sep 2020



Excavating soil around rock outcrops

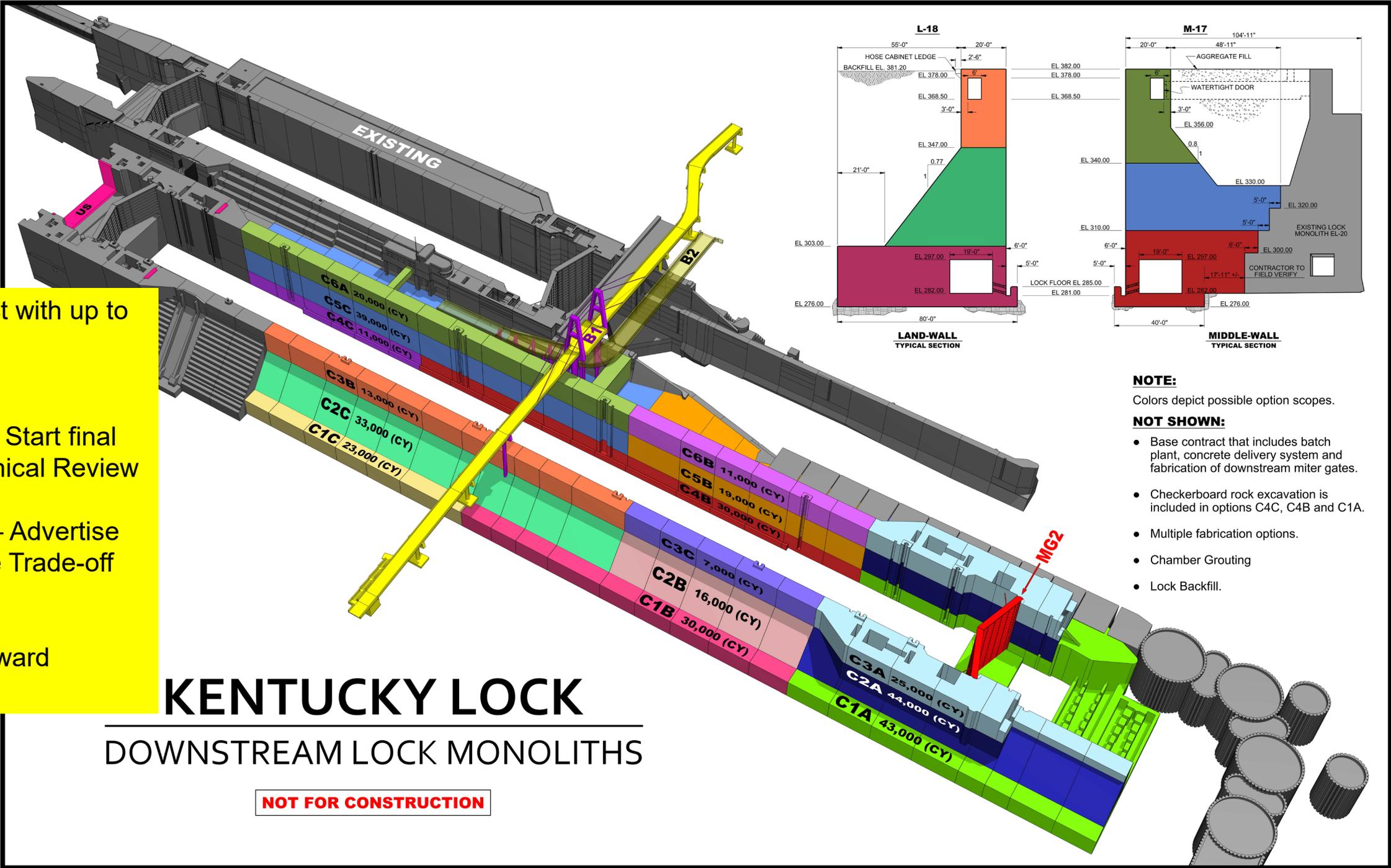
Breaking up rock after blast

Base Contract with up to 33 Options

Milestones:
 2 Nov 2020 – Start final Agency Technical Review

12 Feb 2021– Advertise as Best Value Trade-off Solicitation

Sep 2021 - Award



KENTUCKY LOCK

DOWNSTREAM LOCK MONOLITHS

NOT FOR CONSTRUCTION

Kentucky Locks & Dam, Tennessee River, KY

	ARRA	CG	IWTF	Total
Total Project Cost (TPC):				\$1,210,565,000 ¹
Allocations through FY 2015:	\$88,833,626	\$183,305,288	\$148,810,987	\$420,949,901
FY16 Allocation:	NA	\$22,850,000	\$22,850,000	\$45,700,000
FY17 Allocation:	NA	\$18,000,000	\$18,000,000	\$36,000,000
FY18 Allocation:	NA	\$20,600,000	\$20,600,000	\$41,200,000*
FY19 Allocation:	NA	\$21,800,000	\$21,800,000	\$43,600,000
FY20 Allocation:	NA	\$30,530,000	\$30,530,000	\$61,060,000
Total Allocations to Date:	\$88,833,626	\$297,085,288	\$262,590,987	\$648,509,901
Remaining TPC Balance:				\$562,055,099
Remaining Balance Change From Last Meeting				0

Notes: ¹Project cost data is reflective of 27 Mar 2020 certified cost (OCT 19 \$'s), Fully Funded.

Changes

None

Funding Overview

- Authorized Cost: \$726,046,000 (Oct19 \$)
- 902 Limit: \$812,844,000 (Oct19 \$)
- ARRA (FY09-13): \$ 88,833,626
- Engineering & Design Cost: \$115,425,000 (Thru FY19)
- Supervision & Admin Cost: \$ 23,599,000 (Thru FY19)
- Mitigation Cost: TBD

Current Status of the Project

- Downstream Cofferdam construction is **83%** complete;
- Downstream Lock Excavation contract **45%** completed.
- **Downstream Lock Monoliths has 95% District Quality Control review ongoing.**

Next Steps

- **Complete Downstream Cofferdam by March 2021.**
- **Advertise Downstream Monoliths by 12 February 2021.**

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Kentucky Locks & Dam, Tennessee River, KY

Schedule of Remaining Work	Design Initiated	Contract Award	Construction Complete*	Project Benefits	Capitalized Cost Closeout
Task 1 – HWY / RR Superstructures	01-Oct-99	19-Sep-05	24-May-12		
Task 2 – Upstream Lock Monoliths (all Options)	01-Oct-00	29-Jan-10	30-Dec-16		
Task 3 – Upstream Miter Gate Fabrication	01-Oct-02	30-Sep-13	1-Mar-16		
Task 4 – Downstream Cofferdam	01-Oct-00	30-Sep-16	19-Nov-20		
Task 5 – Site, Demolition, & Utilities	01-Oct-00	31-Jan-18	30-Mar-19		
Task 6 – Downstream Lock Excavation	01-Oct-00	26-Sep-18	3-Jan-22		
Task 7 – Downstream Lock Monoliths	01-Oct-00	30-Sep-21	12-Sep-25	12-Sep-25**	
Task 8 – Approach Walls	01-Oct-02	30-Sep-22	21-Nov-24		

*Dates are achievable based on the most efficient funding profile.

**Based on 27 Mar 2020 Certified cost estimate Cost and Schedule Risk Assessment, the project has an 80% confidence level of being completed by 2028.

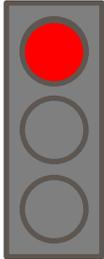
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Kentucky Lock Project Time and Cost Scorecard



Expenditures

1 Jul

Planned (BCWS)	\$634.4M
Earned (BCWP)	\$537.3M
Actual (ACWP)	\$522.9M

BCWP: Reports the value (based on % complete) of the work performed to date.

Target:

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

Schedule

1 Jul

(Baseline)/(Current)

Project Complete	May 2028 / Sep 2025
Lock Operational	May 2028 / Sep 2025

Measures: Planned project completion and Lock operational dates

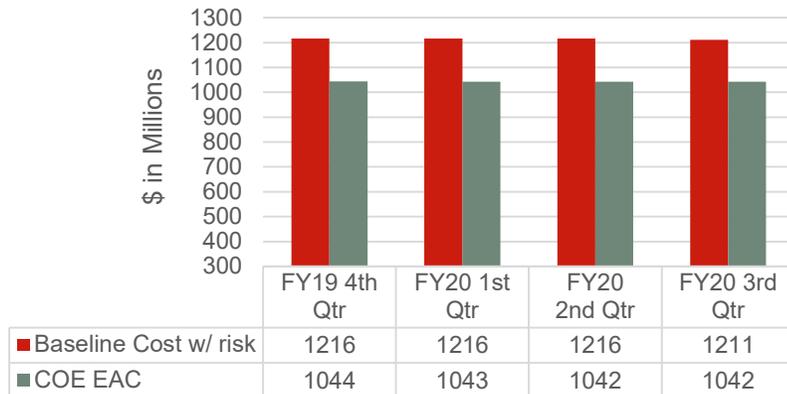
Target:

Downstream Lock Monoliths award September 2021.



Budget

KY Lock Project EAC Trend



Major Activity Schedule

Activity	Baseline	Current
Complete Downstream Cofferdam	Nov 2019	Mar 2021
Advertise Downstream Lock Monoliths Contract	May 2020	12 Feb 2021
Project Re-Authorization	FY2020	FY2020



Kentucky Lock Summary and Challenges

- Project schedule impacts are being experienced due to complications of downstream cofferdam construction.
- The Team is focused to minimize all schedule impacts but Downstream Cofferdam construction is a high risk contract due to constricted marine area and geology.
- Award of >\$250M Downstream Lock Monoliths in September 2021
- Efficient Funding Profile:

Date	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY2025	Total
July 2020	\$61.1M	\$110.1M ¹	\$162.7M	\$138.5M	\$131.5M	\$19.2M	\$623.1M ²

¹ Includes contingencies at 50% confidence level and one year of labor while considering FY21 carry-in amounts.

² Reflects new 2020 Total Project Cost with 80% confidence level contingencies (difference between 80% and 50% confidence level budgeting is included in FY's 24 and 25)