Claiborne and Millers Ferry Locks and Dams Fish Passage Study

Appendix C: Cost

May 2023

US Army Corps of Engineers

The Nature Conservancy

APPENDIX-C: Cost

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C.1. Introduction

C.1.1. Study Area

Claiborne and Millers Ferry Locks and Dams are part of the Alabama-Coosa-Tallapoosa (ACT) River system. The ACT is an interconnected river system and drainage basin that that extends from southeast Tennessee and the northwest corner of Georgia through Alabama and discharges at Mobile Bay in southwest Alabama. The system contains 5 U.S. Army Corps of Engineers (USACE) dams and 11 privately owned dams as shown on Figure C1.

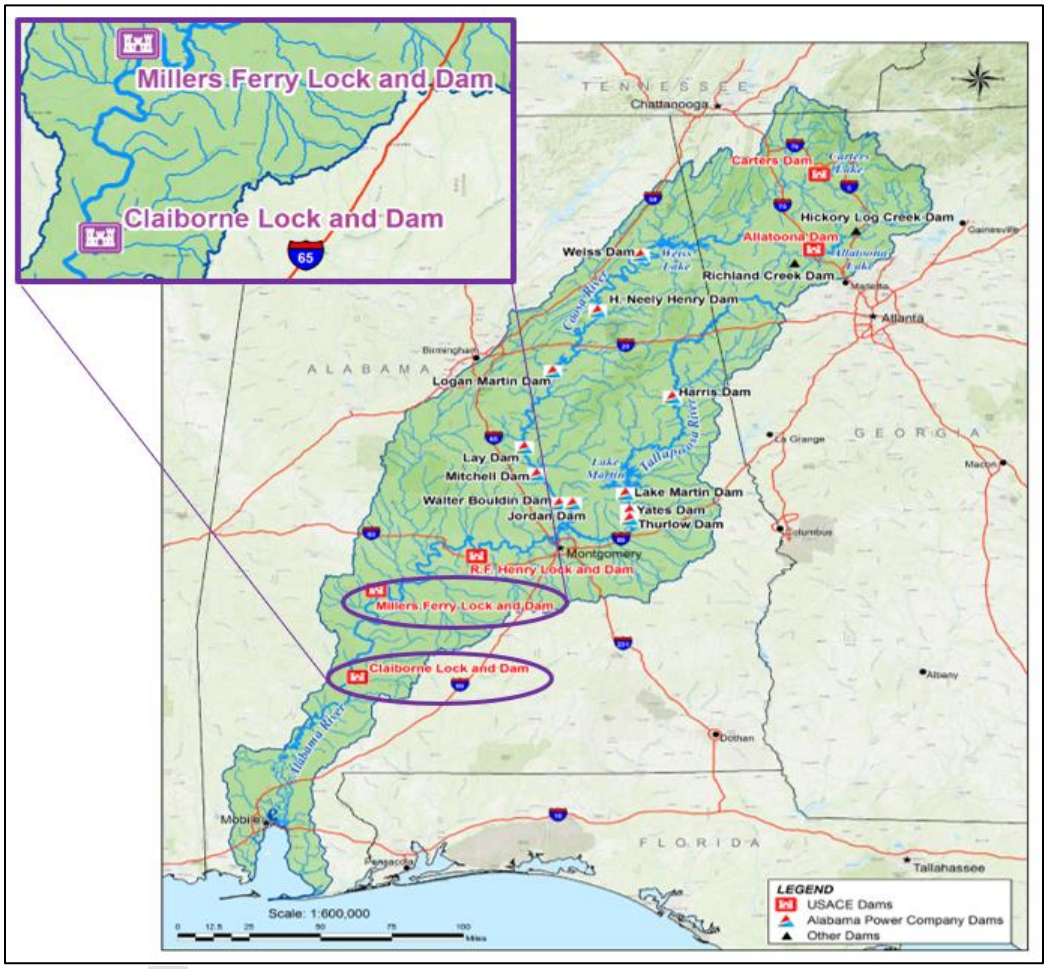

Figure C1: The Alabama-Coosa-Tallapoosa (ACT) River system

C.1.2. Purpose

The purpose of the study is to evaluate Federal interest in establishing fish passage through restoring connectivity in the Alabama and Cahaba Rivers. The system is highly impaired by two dams which restrict access to historical spawning grounds on the Cahaba River from species present in the lower Alabama River. This disruption of natural fish migration patterns has resulted in a decline in native aquatic species populations. Passage would reconnect over 230 miles of the Alabama and Cahaba Rivers to the Mobile River Delta into the Gulf of Mexico, providing connectivity for multiple species of fish, crawfish, mussels, turtles, etc. These species are extremely important to this

freshwater ecosystem and are critical to sustain biodiversity and encourage a healthy ecosystem. This system provides one of the last habitats to many affected species and increased access to historical spawning grounds should result in an increase in the size and distribution of native fish populations.

C.2. Development and Description of Alternatives

C.2.1. Development of Alternatives

Many alternatives and measures were developed and screened out prior to development of any reliable cost estimates. The initial array of alternatives presented at the Alternatives Milestone Meeting (AMM) included 20 measures as presented in Table C-1 along with the screening status. These alternatives were screened on factors other than cost, so a complete description of the measures and explanation of the screening is available in other parts of this report.

Table C-1: Initial Array of Alternatives

Alternatives	Screened out / Carried Forward
Alt. 1: No Action Alternative	Carried Forward
Alt. 2: Dam Removal- Both CL and MF	Carried Forward
Alt. 3: Fixed Weir Rock Arch- Both CL and MF	Carried Forward
Alt. 4: Fish Lift- Both CL and MF	Screened Out
Alt. 5: Natural Bypass Channel- Both CL and MF	Carried Forward
Alt. 6: Partial Dam Removal- Both CL and MF	Carried Forward
Alt. 7: Dam Removal- CL; Fixed Weir Rock Arch- MF	Carried Forward
Alt. 8: Dam Removal- CL; Fish Lift- MF	Screened Out
Alt. 9: Dam Removal- CL Bypass Channel- MF	Carried Forward
Alt. 10: Dam Removal- CL; Partial Dam Removal- MF	Carried Forward
Alt. 11: Fixed Weir Rock Arch- CL; Fish Lift- MF	Screened Out
Alt. 12: Bypass- CL; Fixed Weir Arch- MF	Carried Forward
Alt. 13: Bypass- CL; Fish Lift- MF	Screened Out
Alt. 14: Fish Lift- CL; Fixed Wei Rock Arch- MF	Screened Out
Alt. 15: Partial Dam Removal- CL; Fixed Weir Rock Arch- MF	Screened Out
Alt. 16: Partial Dam Removal- CL; Fish Lift- MF	Screened Out

Alt 17: Partial Dam Removal- CL; Natural Bypass- MF	Carried Forward
Alt. 18: No Structural Change- CL; Fixed Weir Rock Arch- MF	Screened Out
Alt. 19: No Structural Change- CL; Fish Lift- MF	Screened Out
Alt. 20: No Structural Change- CL; Natural Bypass- MF	Screened Out

The focused array of alternatives, including site specific options, was developed before the AMM. The focused array of alternatives includes ten structural and/or combination alternatives. The complete list is included in Table C-2.

Table C-2: Focused Array of Alternatives

Focused Array of Alternatives	Screened Out / Carried Forward
Alt. 1: No Action Alternative	Carried Forward
Alt. 2: Dam Removal- Both CL and MF	Carried Forward
Alt. 3: Fixed Weir Rock Arch- Both CL and	Carried Forward
Alt. 5: Natural Bypass Channel- Both CL	Carried Forward
Alt. 6: Partial Dam Removal- Both CL and	Carried Forward
Alt. 7: Dam Removal- CL; Fixed Weir Rock	Carried Forward
Alt. 9: Dam Removal- CL Bypass Channel-	Carried Forward
Alt. 10: Dam Removal- CL; Partial Dam	Carried Forward
Alt. 12: Bypass- CL; Fixed Weir Arch- MF	Carried Forward
Alt. 17: Partial Dam Removal- CL; Natural	Carried Forward

C.2.2. Screening of Focused Array

This array of alternatives was analyzed based on environmental benefits achieved, and incremental cost analyses of those benefits. Dam removal was screened out due to violations of study-specific constraints and high overall systemwide impacts. Dam removal would end hydropower generation, a current project authorized purpose at Millers Ferry resulting in a substantial loss in annual benefits. Dam removal would result in negative systemwide environmental impacts including invasive species migration, dredging requirements, contaminated sediment, and unmet flow requirements. All alternatives with that option were removed resulting in the Final Array of Alternatives.

C.3. Development of Alternative Estimates for Final Array

C.3.1. Price Level

The total estimated cost for each of the final alternatives consists of the estimated construction cost, the real estate cost, the Planning, Engineering and Design (PED) cost, the Construction Management (CM) cost, and a contingency developed using an

Abbreviated Risk Analysis (ARA). Each estimate is a class 4 level estimate per ER 1110-2-1302.

C.3.2. Cost Estimate Structure

The cost estimate was developed using a collaboration of several components. Each measure was estimated as a separate project and combined to make alternatives shown in Table C-2. Specifically, the Claiborne Bypass Channel and Rock Weir Arch were each estimated separately from the Millers Ferry Bypass Channel and Rock Weir Arch in MCACES 2nd generation software (MII). In the ARA and Total Project Cost Summaries (TPCS) the measures were combined using simple addition. This approach is justified due to the geographical separation of the project sites. There are no anticipated economies of scale applicable to the alternatives that would need to be included in these estimates.

The construction cost estimates were prepared using MII. Prices used in developing the construction estimates have been found in the 2022 MII Cost Book and material pricing has been validated by requesting quotes from local suppliers. The MII equipment library was set to the 2022 Region III Equipment Library which captures equipment rates in the southeast United States. These rates were backchecked and modified as required to reflect accurate equipment pricing from recent historical projects in Alabama. Labor rates were modified per Davis-Bacon wage rates in Monroe and Wilcox counties Alabama. Project markups were included in the MII estimate as appropriate. PED and CM costs were developed using typical rates from previous Civil Works studies completed by Mobile District. Rates were validated by the project development team and changes were made as necessary to reflect accurate PED and CM costs. An ARA was conducted for each of the study alternatives to provide a basis for carrying contingency forward. These contingency rates were included in the TPCS. Real estate costs and their respective contingency and administrative costs were provided by real estate division and included for each alternative.

C.3.3. Risk Analysis and Contingency

For the analysis an ARA was prepared for each alternative. The ARAs were prepared with input from the PDT to quantify the risks and assigning likelihood and impact of each risk. Existing geotechnical data was not sufficient to develop conceptual design and cost estimates which result in a medium risk. ARA results are included in the Cost Exhibit C-1.

C.3.4. Cost Estimate Presentation

A TPCS was prepared for each alternative. The TPCS combines the RE costs, construction costs, Contingency, PED, and CM, and applies escalation factors to calculate a total project cost for each alternative. Table C-3 shows the Total Project Costs, estimated operations and maintenance (O&M) costs, and estimated construction durations for each of the final array of alternatives. O&M costs are at FY2025 Price level to facilitate economic analysis.

Table C-3: Total Project Costs and Durations of Final Array

Alternative	Total Project Cost	Annual O&M (FY25)	Construction Duration
Alt. 1: No Action Alternative	$0	$0	0 Months
Alt. 3: Fixed Weir Rock Arch- Both CL and MF	$227,000,000	$200,000	24 Months
Alt. 5d: Natural Bypass Channel- Both Dams (CL right bank, MF right bank)	$188,000,000	$200,000	30 Months
Alt. 12b: Fixed Weir Rock Arch- CL; Natural Bypass Channel- MF	$201,000,000	$200,000	30 Months
Alt. 13b: Natural Bypass Channel (CL right bank); Fixed Weir Rock Arch- MF	$214,000,000	$200,000	24 Months

C.3.5. Development of Operations and Maintenance Costs

Operations and maintenance costs of the final array of alternatives, although not a part of the TPCS, are used in the economics analysis. The O&M costs for the alternatives include routine maintenance costs for the planned gates at Millers Ferry, additional Water Management monitoring, and removal of debris and shoaling at fish passage sites. The O&M cost estimates may be seen in table C-3. O&M costs were estimated using FY25 Price Level.

C.4. Development of the Estimated Schedule

The estimated construction durations have been developed based on the anticipated project requirements from “notice to proceed” through construction completion. The projected project construction durations may be seen in table C-3.

C.5. Selection of the Recommended Plan

Based on the analysis considering project objectives, environmental outcomes, P&G criteria, Cost Effectiveness Analysis (CE), and the Multi-Criteria Decision Analysis (MCDA), the tentatively selected plan (TSP) is Alternative 5d – Natural Bypass Channel at both Claiborne and Millers Ferry Locks and Dams. Alternative 5d has the lowest cost and highest ecological lift of all final array alternatives, is the only best buy action alternative and has the highest comprehensive score from the MCDA. This alternative provides connectivity to the Cahaba River while providing the most acceptable method of fish passage. Sixteen Federally listed threatened and endangered species benefit equally or more with alternative 5d than any other alternative evaluated. Additionally, alternative 5d is preferred by the non-Federal sponsor. The TSP becomes the Recommended Plan once endorsed at the Agency Decision Milestone.

C.6. Development of the Recommended Plan

This section will be developed after the Agency Decision Milestone (ADM).

C.7. Exhibits

1) Exhibit C-1: Abbreviated Risk Analysis for the Final Array of Alternatives
2) Exhibit C-2: TPCS Sheets for the Final Array of Alternatives

Exhibit C-1: Abbreviated Risk Analysis for Final Array of Alternatives

Abbreviated Risk Analysis

Project (less than $40M): **Claiborne and Millers Ferry Locks and Dams Fish Passage S** **Alternative:** **Alt 3**
Project Development Stage/Alternative: **Feasibility (Alternatives)**
Risk Category: **Moderate Risk: Typical Project Construction Type** **Meeting Date:** **12/9/2022**

Total Estimated Construction Contract Cost = $ 109,981,527

	CWWBS	Feature of Work	Estimated Cost		% Contingency	$ Contingency	Total
	01 LANDS AND DAMAGES	Real Estate	$ 170,000		32%	$ 55,000	$ 225,000
1	06 01 FISH FACILITIES AT DAMS	CL Excavation	$ 2,857,420		46.4%	$ 1,327,160	$ 4,184,580
2	06 01 FISH FACILITIES AT DAMS	CL Conc Installation	$ 13,507,769		42.7%	$ 5,772,470	$ 19,280,239
3	06 01 FISH FACILITIES AT DAMS	CL Cofferdam	$ 4,239,012		58.7%	$ 2,489,144	$ 6,728,156
4	06 01 FISH FACILITIES AT DAMS	CL Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509
5	06 01 FISH FACILITIES AT DAMS	MF Excavation	$ 59,236,347		46.4%	$ 27,512,966	$ 86,749,313
6	06 01 FISH FACILITIES AT DAMS	MF Conc Installation	$ 14,608,963		42.7%	$ 6,243,059	$ 20,852,022
7	06 01 FISH FACILITIES AT DAMS	MF Cofferdam	$ 3,651,787		58.7%	$ 2,144,326	$ 5,796,113.21
8	06 01 FISH FACILITIES AT DAMS	MF Gate Structure (Rock Arch)	$ 512,953		40.4%	$ 207,386	$ 720,339.45
9	06 01 FISH FACILITIES AT DAMS	MF Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509.09
10			$ -		0%	$ -	$ -
11			$ -		0%	$ -	$ -
12	All Other	Remaining Construction Items	$ -	*0.0%*	0%	$ -	$ -
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	$ 10,335,100		24.7%	$ 2,548,915	$ 12,884,015
14	31 CONSTRUCTION MANAGEMENT	Construction Management	$ 5,820,000		24.8%	$ 1,443,104	$ 7,263,104
XX	FIXED DOLLAR RISK ADD (EQUALLY DISPERSED TO ALL, MUST INCLUDE JUSTIFICATION SEE BELOW)					$ -	

Totals					
Real Estate	$ 170,000	32%	$ 55,000	$ 225,000.10	
Total Construction Estimate	$ 109,981,527	46%	$ 50,554,254	$ 160,535,781	
Total Planning, Engineering & Design	$ 10,335,100	25%	$ 2,548,915	$ 12,884,015	
Total Construction Management	$ 5,820,000	25%	$ 1,443,104	$ 7,263,104	
Total Excluding Real Estate	**$ 126,136,627**	**43%**	**$ 54,546,273**	**$ 180,682,900**	
		Base	**50%**	**80%**	
Confidence Level Range Estimate ($000's)		$126,137k	$158,865k	$180,683k	

* 50% based on base is at 5% CL.

Fixed Dollar Risk Add: (Allows for additional risk to be added to the risk analsyis. Must include justification. Does not allocate to Real Estate.	

Exhibit C-1: Abbreviated Risk Analysis for Final Array of Alternatives

Abbreviated Risk Analysis

Project (less than $40M): **Claiborne and Millers Ferry Locks and Dams Fish Passage** **Alternative:** **Alt 5**
Project Development Stage/Alternative: **Feasibility (Alternatives)**
Risk Category: **Moderate Risk: Typical Project Construction Type** **Meeting Date:** **12/9/2022**

Total Estimated Construction Contract Cost = $ 84,090,635

	CWWBS	Feature of Work	Estimated Cost		% Contingency	$ Contingency	Total
	01 LANDS AND DAMAGES	Real Estate	$ 660		25.0%	$ 165	$ 825
1	06 01 FISH FACILITIES AT DAMS	CL Excavation	$ 6,699,901		46.4%	$ 3,111,842	$ 9,811,743
2	06 01 FISH FACILITIES AT DAMS	CL Cofferdam	$ 735,825		58.7%	$ 432,076	$ 1,167,901
3	06 01 FISH FACILITIES AT DAMS	CL Rock Lining and Weirs	$ 5,772,540		47.5%	$ 2,739,707	$ 8,512,247
4	06 01 FISH FACILITIES AT DAMS	CL Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509
5	06 01 FISH FACILITIES AT DAMS	MF Excavation	$ 27,284,862		46.4%	$ 12,672,751	$ 39,957,613
6	06 01 FISH FACILITIES AT DAMS	MF Cofferdam	$ 1,055,794		58.7%	$ 619,961	$ 1,675,755
7	06 01 FISH FACILITIES AT DAMS	MF Rock Lining and Weirs	$ 23,882,959		47.5%	$ 11,335,097	$ 35,218,055.57
8	06 01 FISH FACILITIES AT DAMS	MF Gate Structure (Bypass)	$ 1,607,839		52.0%	$ 836,484	$ 2,444,323.19
9	06 01 FISH FACILITIES AT DAMS	MF Prefab Bridge	$ 11,367,276		42.7%	$ 4,857,742	$ 16,225,018.18
10			$ -		0.0%	$ -	$ -
11			$ -		0.0%	$ -	$ -
12	All Other	Remaining Construction Items	$ 1	*0.0%*	7.0%	$ 0	$ 1
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	$ 16,312,750		24.7%	$ 4,023,165	$ 20,335,915
14	31 CONSTRUCTION MANAGEMENT	Construction Management	$ 8,830,000		27.8%	$ 2,454,911	$ 11,284,911
XX	FIXED DOLLAR RISK ADD (EQUALLY DISPERSED TO ALL, MUST INCLUDE JUSTIFICATION SEE BELOW)					$ -	

Totals					
Real Estate	$ 660	25%	$ 165	$ 825.00
Total Construction Estimate	$ 84,090,635	46%	$ 39,034,531	$ 123,125,166
Total Planning, Engineering & Design	$ 16,312,750	25%	$ 4,023,165	$ 20,335,915
Total Construction Management	$ 8,830,000	28%	$ 2,454,911	$ 11,284,911
Total Excluding Real Estate	**$ 109,233,385**	**42%**	**$ 45,512,607**	**$ 154,745,992**

	Base	50%	80%
Confidence Level Range Estimate ($000's)	$109,233k	$136,541k	$154,746k

* 50% based on base is at 5% CL.

Fixed Dollar Risk Add: (Allows for additional risk to be added to the risk analsyis. Must include justification. Does not allocate to Real Estate.	

Exhibit C-1: Abbreviated Risk Analysis for Final Array of Alternatives

Abbreviated Risk Analysis

Project (less than $40M): **Claiborne and Millers Ferry Locks and Dams Fish Passage** **Alternative: Alt 12b**
Project Development Stage/Alternative: **Feasibility (Alternatives)**
Risk Category: **Moderate Risk: Typical Project Construction Type** **Meeting Date: 12/9/2022**

Total Estimated Construction Contract Cost = $ 91,486,569

	CWWBS	Feature of Work	Estimated Cost		% Contingency	$ Contingency	Total
	01 LANDS AND DAMAGES	Real Estate	$ 620,000		25.0%	$ 155,000	$ 775,000
1	06 01 FISH FACILITIES AT DAMS	CL Excavation	$ 2,857,420		46.4%	$ 1,327,160	$ 4,184,580
2	06 01 FISH FACILITIES AT DAMS	CL Conc Installation	$ 13,507,769		42.7%	$ 5,772,470	$ 19,280,239
3	06 01 FISH FACILITIES AT DAMS	CL Cofferdam	$ 4,239,012		58.7%	$ 2,489,144	$ 6,728,156
4	06 01 FISH FACILITIES AT DAMS	CL Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509
5	06 01 FISH FACILITIES AT DAMS	MF Excavation	$ 27,284,862		46.4%	$ 12,672,751	$ 39,957,613
6	06 01 FISH FACILITIES AT DAMS	MF Cofferdam	$ 1,055,794		58.7%	$ 619,961	$ 1,675,755
7	06 01 FISH FACILITIES AT DAMS	MF Rock Lining and Weirs	$ 23,882,959		47.5%	$ 11,335,097	$ 35,218,055.57
8	06 01 FISH FACILITIES AT DAMS	MF Gate Structure (Bypass)	$ 1,607,839		52.0%	$ 836,484	$ 2,444,323.19
9	06 01 FISH FACILITIES AT DAMS	MF Prefab Bridge	$ 11,367,276		42.7%	$ 4,857,742	$ 16,225,018.18
10			$ -		0%	$ -	$ -
11			$ -		0%	$ -	$ -
12	All Other	Remaining Construction Items	$ -	*0.0%*	0%	$ -	$ -
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	$ 15,885,400		24.7%	$ 3,917,769	$ 19,803,169
14	31 CONSTRUCTION MANAGEMENT	Construction Management	$ 9,606,000		24.8%	$ 2,381,866	$ 11,987,866
XX	FIXED DOLLAR RISK ADD (EQUALLY DISPERSED TO ALL, MUST INCLUDE JUSTIFICATION SEE BELOW)					$ -	

Totals					
Real Estate	$ 620,000	25%	$ 155,000	$ 775,000.00
Total Construction Estimate	$ 91,486,569	46%	$ 42,339,681	$ 133,826,250
Total Planning, Engineering & Design	$ 15,885,400	25%	$ 3,917,769	$ 19,803,169
Total Construction Management	$ 9,606,000	25%	$ 2,381,866	$ 11,987,866
Total Excluding Real Estate	**$ 116,977,969**	**42%**	**$ 48,639,316**	**$ 165,617,285**
		Base	**50%**	**80%**
Confidence Level Range Estimate ($000's)		$116,978k	$146,161k	$165,617k

*50% based on base is at 5% CL.

Fixed Dollar Risk Add: (Allows for additional risk to be added to the risk analsyis. Must include justification. Does not allocate to Real Estate.	

Exhibit C-1: Abbreviated Risk Analysis for Final Array of Alternatives

Abbreviated Risk Analysis

Project (less than $40M): **Claiborne and Millers Ferry Locks and Dams Fish Passage** **Alternative:** **Alt 13b**
Project Development Stage/Alternative: **Feasibility (Alternatives)**
Risk Category: **Moderate Risk: Typical Project Construction Type** **Meeting Date:** **12/9/2022**

Total Estimated Construction Contract Cost = $ 102,585,593

	CWWBS	Feature of Work	Estimated Cost		% Contingency	$ Contingency	Total
	01 LANDS AND DAMAGES	Real Estate	$ 230,000		26.1%	$ 60,000	$ 290,000
1	06 01 FISH FACILITIES AT DAMS	CL Excavation	$ 6,699,901		46.4%	$ 3,111,842	$ 9,811,743
2	06 01 FISH FACILITIES AT DAMS	CL Cofferdam	$ 735,825		58.7%	$ 432,076	$ 1,167,901
3	06 01 FISH FACILITIES AT DAMS	CL Rock Lining and Weirs	$ 5,772,540		47.5%	$ 2,739,707	$ 8,512,247
4	06 01 FISH FACILITIES AT DAMS	CL Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509
5	06 01 FISH FACILITIES AT DAMS	MF Excavation	$ 59,236,347		46.4%	$ 27,512,966	$ 86,749,313
6	06 01 FISH FACILITIES AT DAMS	MF Conc Installation	$ 14,608,963		42.7%	$ 6,243,059	$ 20,852,022
7	06 01 FISH FACILITIES AT DAMS	MF Cofferdam	$ 3,651,787		58.7%	$ 2,144,326	$ 5,796,113.21
8	06 01 FISH FACILITIES AT DAMS	MF Gate Structure (Rock Arch)	$ 512,953		40.4%	$ 207,386	$ 720,339.45
9	06 01 FISH FACILITIES AT DAMS	MF Prefab Bridge	$ 5,683,638		42.7%	$ 2,428,871	$ 8,112,509.09
10			$ -		0.0%	$ -	$ -
11			$ -		0.0%	$ -	$ -
12	All Other	Remaining Construction Items	$ 1	0.0%	7.0%	$ 0	$ 1
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	$ 10,762,450		24.7%	$ 2,654,311	$ 13,416,761
14	31 CONSTRUCTION MANAGEMENT	Construction Management	$ 5,043,000		24.8%	$ 1,250,442	$ 6,293,442
XX	FIXED DOLLAR RISK ADD (EQUALLY DISPERSED TO ALL, MUST INCLUDE JUSTIFICATION SEE BELOW)					$ -	

Totals					
Real Estate	$ 230,000	26%	$ 60,000	$ 290,000.10	
Total Construction Estimate	$ 102,585,593	46%	$ 47,249,104	$ 149,834,697	
Total Planning, Engineering & Design	$ 10,762,450	25%	$ 2,654,311	$ 13,416,761	
Total Construction Management	$ 5,043,000	25%	$ 1,250,442	$ 6,293,442	
Total Excluding Real Estate	**$ 118,391,043**	**43%**	**$ 51,153,858**	**$ 169,544,901**	
		Base	**50%**	**80%**	
Confidence Level Range Estimate ($000's)		$118,391k	$149,083k	$169,545k	

* 50% based on base is at 5% CL.

Fixed Dollar Risk Add: (Allows for additional risk to be added to the risk analsyis. Must include justification. Does not allocate to Real Estate.

Example C-2: TPCS Sheets for Final Array of Alternatives

**** TOTAL PROJECT COST SUMMARY ****

Printed:1/31/2023
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PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
PROJECT NO: Alt 3 Rock Arch Both Dams
LOCATION: Monroe and Wilcox Counties, Al

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2031

This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC):			2025						
						Effective Price Level Date:			1 OCT 24						
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-22 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O
06	Excavation	$62,093	$28,811	46.4%	$90,904	5.5%	$65,528	$30,405	$95,933	$0	$95,933	15.2%	$75,480	$35,023	$110,503
06	Concrete Installation	$28,117	$12,006	42.7%	$40,123	5.5%	$29,673	$12,670	$42,343	$0	$42,343	15.2%	$34,179	$14,594	$48,773
06	Cofferdam	$7,891	$4,632	58.7%	$12,523	5.5%	$8,328	$4,888	$13,216	$0	$13,216	15.2%	$9,592	$5,631	$15,223
06	Prefab Bridge	$11,368	$4,854	42.7%	$16,222	5.5%	$11,997	$5,123	$17,120	$0	$17,120	15.2%	$13,819	$5,901	$19,720
06	Gate Structure	$513	$207	40.4%	$720	5.5%	$541	$219	$760	$0	$760	15.2%	$624	$252	$876
06	Rock Armoring & Weirs	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$109,982	$50,511		$160,493	5.5%	$116,067	$53,305	$169,372	$0	$169,372	15.2%	$133,693	$61,400	$195,094
01	LANDS AND DAMAGES	$170	$55	32.4%	$225	5.5%	$179	$58	$237	$0	$237	8.0%	$194	$63	$256
30	PLANNING, ENGINEERING & DESIGN	$10,335	$2,553	24.7%	$12,888	5.1%	$10,861	$2,683	$13,544	$0	$13,544	9.3%	$11,869	$2,932	$14,800
31	CONSTRUCTION MANAGEMENT	$11,548	$2,864	24.8%	$14,412	5.1%	$12,136	$3,010	$15,146	$0	$15,146	12.7%	$13,679	$3,392	$17,071
	PROJECT COST TOTALS:	$132,035	$55,982	42.4%	$188,017		$139,243	$59,055	**$198,298**	$0	**$198,298**	14.6%	$159,435	$67,787	$227,222

ESTIMATED TOTAL PROJECT COST: **$227,222**

_____ CHIEF, COST ENGINEERING, George Brown

_____ PROJECT MANAGER, Jonas White

_____ CHIEF, REAL ESTATE, Karen Kennedy

_____ CHIEF, PLANNING, Jenny Jacobson

_____ CHIEF, ENGINEERING, Jason Krick

_____ CHIEF, OPERATIONS, Nelson Sanchez

_____ CHIEF, CONSTRUCTION, George Condoyiannis

_____ CHIEF, CONTRACTING,Jeff Burgess

_____ CHIEF, PM-PB, xxxx

_____ CHIEF, DPM, Pete Taylor

Filename: TPCS Alt 3_updated.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:1/31/2023
Page 2 of 3

****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2031

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 31-Jan-23 Effective Price Level: 1-Oct-22				Program Year (Budget EC): 2025 Effective Price Level Date: 1 OCT 24								
WBS NUMBER A	Civil Works Feature & Sub-Feature Description B	COST ($K) C	CNTG ($K) D	RISK BASED CNTG (%) E	TOTAL ($K) F	ESC (%) G	COST ($K) H	CNTG ($K) I	TOTAL ($K) J	Mid-Point Date P	INFLATED (%) L	COST ($K) M	CNTG ($K) N	FULL ($K) O
	Claiborne													
06	Excavation	$2,857	$1,326	46.4%	$4,183	5.5%	$3,015	$1,399	$4,414	2030Q3	15.2%	$3,473	$1,611	$5,084
06	Concrete Installation	$13,508	$5,768	42.7%	$19,276	5.5%	$14,255	$6,087	$20,342	2030Q3	15.2%	$16,420	$7,011	$23,432
06	Cofferdam	$4,239	$2,488	58.7%	$6,727	5.5%	$4,474	$2,626	$7,099	2030Q3	15.2%	$5,153	$3,025	$8,178
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q3	15.2%	$6,909	$2,950	$9,860
06	Gate Structure	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Rock Armoring & Weirs	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$26,288	$12,009	45.7%	**$38,297**		$27,742	$12,673	$40,416			$31,956	$14,598	$46,554
01	LANDS AND DAMAGES	$90	$35	38.9%	$125	5.5%	$95	$37	$132	2028Q1	8.0%	$103	$40	$142
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Planning & Environmental Compliance	$1,275	$315	24.7%	$1,590	5.1%	$1,340	$331	$1,671	2028Q1	6.7%	$1,430	$353	$1,784
0.0%	Engineering & Design	$6,100	$1,507	24.7%	$7,607	5.1%	$6,410	$1,583	$7,994	2028Q1	6.7%	$6,843	$1,690	$8,533
0.0%	Reviews, ATRs, IEPRs, VE	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Life Cycle Updates (cost, schedule, risks)	$120	$30	24.7%	$150	5.1%	$126	$31	$157	2028Q1	6.7%	$135	$33	$168
0.0%	Contracting & Reprographics	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2028Q1	6.7%	$112	$28	$140
0.0%	Engineering During Construction	$200	$49	24.7%	$249	5.1%	$210	$52	$262	2030Q3	12.7%	$237	$59	$295
0.0%	Planning During Construction	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2030Q3	12.7%	$118	$29	$148
0.0%	Adaptive Management & Monitoring	$1,800	$445	24.7%	$2,245	5.1%	$1,892	$467	$2,359	2033Q3	20.3%	$2,275	$562	$2,837
0.0%	Project Operations	$40	$10	24.7%	$50	5.1%	$42	$10	$52	2028Q1	6.7%	$45	$11	$56
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$2,366	$587	24.8%	$2,953	5.1%	$2,486	$617	$3,103	2030Q3	12.7%	$2,802	$695	$3,497
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$394	$98	24.8%	$492	5.1%	$414	$103	$517	2030Q3	12.7%	$467	$116	$583
	CONTRACT COST TOTALS:	$39,473	$15,281		$54,754		$41,599	$16,112	**$57,711**			$47,196	$18,380	**$65,577**

Filename: TPCS Alt 3_updated.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

**** TOTAL PROJECT COST SUMMARY ****

Printed:1/31/2023
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**** CONTRACT COST SUMMARY ****

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2031

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: / Effective Price Level:			31-Jan-23 / 1-Oct-22	Program Year (Budget EC): / Effective Price Level Date:			2025 / 1 OCT 24					
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	Millers Ferry													
06	Excavation	$59,236	$27,486	46.4%	$86,722	5.5%	$62,513	$29,006	$91,519	2030Q3	15.2%	$72,007	$33,411	$105,418
06	Concrete Installation	$14,609	$6,238	42.7%	$20,847	5.5%	$15,417	$6,583	$22,000	2030Q3	15.2%	$17,759	$7,583	$25,342
06	Cofferdam	$3,652	$2,144	58.7%	$5,796	5.5%	$3,854	$2,262	$6,116	2030Q3	15.2%	$4,439	$2,606	$7,045
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q3	15.2%	$6,909	$2,950	$9,860
06	Gate Structure	$513	$207	40.4%	$720	5.5%	$541	$219	$760	2030Q3	15.2%	$624	$252	$876
06	Rock Armoring & Weirs	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$83,694	$38,502	46.0%	**$122,196**		$88,324	$40,632	$128,956			$101,738	$46,802	$148,540
01	LANDS AND DAMAGES	$80	$20	25.0%	$100	5.5%	$84	$21	$106	2028Q1	8.0%	$91	$23	$114
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning & Environmental Compliance	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering & Design	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Reviews, ATRs, IEPRs, VE	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Life Cycle Updates (cost, schedule, risks)	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Contracting & Reprographics	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$7,532	$1,868	24.8%	$9,401	5.1%	$7,916	$1,963	$9,879	2030Q3	12.7%	$8,922	$2,213	$11,135
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$1,255	$311	24.8%	$1,567	5.1%	$1,319	$327	$1,646	2030Q3	12.7%	$1,487	$369	$1,856
	CONTRACT COST TOTALS:	$92,562	$40,701		$133,263		$97,644	$42,943	**$140,587**			$112,238	$49,407	**$161,645**

Filename: TPCS Alt 3_updated.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:12/16/2022
Page 1 of 3

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
PROJECT NO: Alt 5 Bypass Both Dams
LOCATION: Monroe and Wilcox Counties, Al

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 12/13/2022

This Estimate reflects the scope and schedule in report: Study Draft Feasibility Report

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)				
						Program Year (Budget EC): 2025 Effective Price Level Date: 1 OCT 24										
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-22 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)	
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O	
06	Excavation	$33,985	$15,769	46.4%	$49,754	5.5%	$35,865	$16,641	$52,507	$0	$52,507	15.9%	$41,580	$19,293	$60,873	
06	Concrete Installation	$0	$0	-	$0	-	$0	$0	$0	$0	$0		$0	$0	$0	
06	Cofferdam	$1,792	$1,052	58.7%	$2,844	5.5%	$1,891	$1,110	$3,001	$0	$3,001	15.9%	$2,192	$1,287	$3,479	
06	Prefab Bridge	$17,051	$7,281	42.7%	$24,332	5.5%	$17,994	$7,684	$25,678	$0	$25,678	15.9%	$20,861	$8,908	$29,769	
06	Gate Structure	$1,608	$836	52.0%	$2,444	5.5%	$1,697	$882	$2,579	$0	$2,579	15.9%	$1,967	$1,023	$2,990	
06	Rock Armoring & Weirs	$29,656	$14,087	47.5%	$43,743	5.5%	$31,297	$14,866	$46,163	$0	$46,163	15.9%	$36,283	$17,235	$53,518	
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0		$0	$0	$0	
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0		$0	$0	$0	
	CONSTRUCTION ESTIMATE TOTALS:	$84,092	$39,024		$123,116	5.5%	$88,744	$41,184	$129,928	$0	$129,928	15.9%	$102,884	$47,745	$150,630	
01	LANDS AND DAMAGES	$660	$165	25.0%	$825	5.5%	$697	$174	$871	$0	$871	8.0%	$752	$188	$940	
30	PLANNING, ENGINEERING & DESIGN	$16,313	$4,029	24.7%	$20,342	5.1%	$17,143	$4,234	$21,378	$0	$21,378	8.4%	$18,577	$4,588	$23,165	
31	CONSTRUCTION MANAGEMENT	$8,830	$2,455	27.8%	$11,284	5.1%	$9,279	$2,580	$11,859	$0	$11,859	13.3%	$10,516	$2,923	$13,440	
	PROJECT COST TOTALS:	$109,895	$45,673	41.6%	$155,568		$115,863	$48,172	$164,036	$0	$164,036	14.7%	$132,729	$55,445	$188,175	

ESTIMATED TOTAL PROJECT COST: **$188,175**

_____ **CHIEF, COST ENGINEERING, George Brown**

_____ **PROJECT MANAGER, Jonas White**

_____ **CHIEF, REAL ESTATE, Karen Kennedy**

_____ **CHIEF, PLANNING, Jenny Jacobson**

_____ **CHIEF, ENGINEERING, Jason Krick**

_____ **CHIEF, OPERATIONS, Nelson Sanchez**

_____ **CHIEF, CONSTRUCTION, George Condoyiannis**

_____ **CHIEF, CONTRACTING,Jeff Burgess**

_____ **CHIEF, PM-PB, xxxx**

_____ **CHIEF, DPM, Pete Taylor**

Filename: TPCS Alt 5.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:12/16/2022
Page 2 of 3

****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown
PREPARED: 12/13/2022

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 8-Dec-22 Effective Price Level: 1-Oct-22				Program Year (Budget EC): 2025 Effective Price Level Date: 1 OCT 24								
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	RISK BASED CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	Claiborne													
06	Excavation	$6,700	$3,109	46.4%	$9,809	5.5%	$7,071	$3,281	$10,351	2030Q4	15.9%	$8,197	$3,804	$12,001
06	Concrete Installation	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Cofferdam	$736	$432	58.7%	$1,168	5.5%	$777	$456	$1,233	2030Q4	15.9%	$900	$529	$1,429
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q4	15.9%	$6,954	$2,969	$9,924
06	Gate Structure	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Rock Armoring & Weirs	$5,773	$2,742	47.5%	$8,515	5.5%	$6,092	$2,894	$8,986	2030Q4	15.9%	$7,063	$3,355	$10,418
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$18,893	$8,710	46.1%	**$27,803**		$19,938	$9,192	$29,130			$23,115	$10,657	$33,772
01	LANDS AND DAMAGES	$660	$165	25.0%	$825	5.5%	$697	$174	$871	2028Q1	8.0%	$752	$188	$940
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Planning & Environmental Compliance	$7,253	$1,791	24.7%	$9,044	5.1%	$7,622	$1,883	$9,505	2028Q1	6.7%	$8,136	$2,010	$10,146
0.0%	Engineering & Design	$6,100	$1,507	24.7%	$7,607	5.1%	$6,410	$1,583	$7,994	2028Q1	6.7%	$6,843	$1,690	$8,533
0.0%	Reviews, ATRs, IEPRs, VE	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Life Cycle Updates (cost, schedule, risks)	$120	$30	24.7%	$150	5.1%	$126	$31	$157	2028Q1	6.7%	$135	$33	$168
0.0%	Contracting & Reprographics	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2028Q1	6.7%	$112	$28	$140
0.0%	Engineering During Construction	$200	$49	24.7%	$249	5.1%	$210	$52	$262	2030Q4	13.3%	$238	$59	$297
0.0%	Planning During Construction	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2030Q4	13.3%	$119	$29	$149
0.0%	Adaptive Management & Monitoring	$1,800	$445	24.7%	$2,245	5.1%	$1,892	$467	$2,359	2033Q3	20.3%	$2,275	$562	$2,837
0.0%	Project Operations	$40	$10	24.7%	$50	5.1%	$42	$10	$52	2028Q1	6.7%	$45	$11	$56
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$1,700	$473	27.8%	$2,173	5.1%	$1,787	$497	$2,284	2030Q4	13.3%	$2,025	$563	$2,588
0.0%	Project Operation:	$0	$0	27.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.6%	Project Management	$283	$79	27.8%	$362	5.1%	$298	$83	$381	2030Q4	13.3%	$338	$94	$431
	CONTRACT COST TOTALS:	$37,850	$13,456		$51,306		$39,863	$14,180	**$54,043**			$44,807	$16,090	**$60,897**

Filename: TPCS Alt 5.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:12/16/2022
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****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 12/13/2022

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			8-Dec-22	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-22	Effective Price Level Date:			1 OCT 24					
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	Millers Ferry													
06	Excavation	$27,285	$12,660	46.4%	$39,945	5.5%	$28,795	$13,361	$42,155	2030Q4	15.9%	$33,382	$15,489	$48,872
06	Concrete Installation	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Cofferdam	$1,056	$620	58.7%	$1,676	5.5%	$1,114	$654	$1,769	2030Q4	15.9%	$1,292	$758	$2,050
06	Prefab Bridge	$11,367	$4,854	42.7%	$16,221	5.5%	$11,996	$5,122	$17,118	2030Q4	15.9%	$13,907	$5,938	$19,846
06	Gate Structure	$1,608	$836	52.0%	$2,444	5.5%	$1,697	$882	$2,579	2030Q4	15.9%	$1,967	$1,023	$2,990
06	Rock Armoring & Weirs	$23,883	$11,344	47.5%	$35,227	5.5%	$25,204	$11,972	$37,176	2030Q4	15.9%	$29,220	$13,880	$43,100
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$65,199	$30,314	46.5%	**$96,613**		$68,806	$31,992	$100,798			$79,769	$37,089	$116,858
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning & Environmental Compliance	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering & Design	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Reviews, ATRs, IEPRs, VE	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Life Cycle Updates (cost, schedule, risks)	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Contracting & Reprographics	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$5,868	$1,631	27.8%	$7,499	5.1%	$6,167	$1,714	$7,881	2030Q4	13.3%	$6,989	$1,943	$8,931
0.0%	Project Operation:	$0	$0	27.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.6%	Project Management	$978	$272	27.8%	$1,250	5.1%	$1,028	$286	$1,313	2030Q4	13.3%	$1,165	$324	$1,489
	CONTRACT COST TOTALS:	$72,045	$32,218		$104,262		$76,000	$33,992	**$109,992**			$87,923	$39,355	**$127,278**

Filename: TPCS Alt 5.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:1/4/2023
Page 1 of 3

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
PROJECT NO: Alt 12b CL Rock Arch, MF Bypass
LOCATION: Monroe and Wilcox Counties, Al

DISTRICT: Mobile District **PREPARED:** 12/13/2022
POC: CHIEF, COST ENGINEERING, George Brown

This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC): 2025									
						Effective Price Level Date: 1 OCT 24									
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-22 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O
06	Excavation	$30,142	$13,986	46.4%	$44,128	5.5%	$31,810	$14,760	$46,569	$0	$46,569	15.9%	$36,878	$17,111	$53,989
06	Concrete Installation	$13,508	$5,768	42.7%	$19,276	5.5%	$14,255	$6,087	$20,342	$0	$20,342	15.9%	$16,527	$7,057	$23,584
06	Cofferdam	$5,295	$3,108	58.7%	$8,403	5.5%	$5,588	$3,280	$8,868	$0	$8,868	15.9%	$6,478	$3,803	$10,281
06	Prefab Bridge	$17,051	$7,281	42.7%	$24,332	5.5%	$17,994	$7,684	$25,678	$0	$25,678	15.9%	$20,861	$8,908	$29,769
06	Gate Structure	$1,608	$836	52.0%	$2,444	5.5%	$1,697	$882	$2,579	$0	$2,579	15.9%	$1,967	$1,023	$2,990
06	Rock Armoring & Weirs	$23,883	$11,344	47.5%	$35,227	5.5%	$25,204	$11,972	$37,176	$0	$37,176	15.9%	$29,220	$13,880	$43,100
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	#N/A	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$91,487	$42,323		$133,810	5.5%	$96,549	$44,665	$141,213	$0	$141,213	15.9%	$111,932	$51,781	$163,713
01	LANDS AND DAMAGES	$620	$155	25.0%	$775	5.5%	$654	$164	$818	$0	$818	8.0%	$707	$177	$883
30	PLANNING, ENGINEERING & DESIGN	$15,885	$3,924	24.7%	$19,809	5.1%	$16,693	$4,123	$20,817	$0	$20,817	8.4%	$18,097	$4,470	$22,566
31	CONSTRUCTION MANAGEMENT	$9,606	$2,382	24.8%	$11,988	5.1%	$10,095	$2,504	$12,599	$0	$12,599	13.3%	$11,441	$2,837	$14,278
	PROJECT COST TOTALS:	$117,598	$48,784	41.5%	$166,382		$123,991	$51,455	**$175,447**	$0	**$175,447**	14.8%	$142,176	$59,265	$201,441

ESTIMATED TOTAL PROJECT COST: **$201,441**

_____ **CHIEF, COST ENGINEERING, George Brown**

_____ **PROJECT MANAGER, Jonas White**

_____ **CHIEF, REAL ESTATE, Karen Kennedy**

_____ **CHIEF, PLANNING, Jenny Jacobson**

_____ **CHIEF, ENGINEERING, Jason Krick**

_____ **CHIEF, OPERATIONS, Nelson Sanchez**

_____ **CHIEF, CONSTRUCTION, George Condoyiannis**

_____ **CHIEF, CONTRACTING,Jeff Burgess**

_____ **CHIEF, PM-PB, xxxx**

_____ **CHIEF, DPM, Pete Taylor**

Filename: TPCS Alt 12b CL Rock Arch MF Bypass.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:1/4/2023
Page 2 of 3

****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 12/13/2022

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 8-Dec-22 Effective Price Level: 1-Oct-22				Program Year (Budget EC): 2025 Effective Price Level Date: 1 OCT 24								
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	RISK BASED CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	Claiborne													
06	Excavation	$2,857	$1,326	46.4%	$4,183	5.5%	$3,015	$1,399	$4,414	2030Q4	15.9%	$3,495	$1,622	$5,117
06	Concrete Installation	$13,508	$5,768	42.7%	$19,276	5.5%	$14,255	$6,087	$20,342	2030Q4	15.9%	$16,527	$7,057	$23,584
06	Cofferdam	$4,239	$2,488	58.7%	$6,727	5.5%	$4,474	$2,626	$7,099	2030Q4	15.9%	$5,186	$3,044	$8,231
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q4	15.9%	$6,954	$2,969	$9,924
06	Gate Structure	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Rock Armoring & Weirs	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$26,288	$12,009	45.7%	**$38,297**		$27,742	$12,673	$40,416			$32,163	$14,693	$46,855
01	LANDS AND DAMAGES	$90	$23	25.0%	$113	5.5%	$95	$24	$119	2028Q1	8.0%	$103	$26	$128
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Planning & Environmental Compliance	$6,825	$1,686	24.7%	$8,511	5.1%	$7,172	$1,772	$8,944	2028Q1	6.7%	$7,656	$1,891	$9,547
0.0%	Engineering & Design	$6,100	$1,507	24.7%	$7,607	5.1%	$6,410	$1,583	$7,994	2028Q1	6.7%	$6,843	$1,690	$8,533
0.0%	Reviews, ATRs, IEPRs, VE	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Life Cycle Updates (cost, schedule, risks)	$120	$30	24.7%	$150	5.1%	$126	$31	$157	2028Q1	6.7%	$135	$33	$168
0.0%	Contracting & Reprographics	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2028Q1	6.7%	$112	$28	$140
0.0%	Engineering During Construction	$200	$49	24.7%	$249	5.1%	$210	$52	$262	2030Q4	13.3%	$238	$59	$297
0.0%	Planning During Construction	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2030Q4	13.3%	$119	$29	$149
0.0%	Adaptive Management & Monitoring	$1,800	$445	24.7%	$2,245	5.1%	$1,892	$467	$2,359	2033Q3	20.3%	$2,275	$562	$2,837
0.0%	Project Operations	$40	$10	24.7%	$50	5.1%	$42	$10	$52	2028Q1	6.7%	$45	$11	$56
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$2,366	$587	24.8%	$2,953	5.1%	$2,486	$617	$3,103	2030Q4	13.3%	$2,818	$699	$3,517
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$394	$98	24.8%	$492	5.1%	$414	$103	$517	2030Q4	13.3%	$470	$116	$586
	CONTRACT COST TOTALS:	$45,023	$16,640		$61,663		$47,432	$17,540	**$64,971**			$53,649	$20,003	**$73,653**

Filename: TPCS Alt 12b CL Rock Arch MF Bypass.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:1/4/2023
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****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 12/13/2022

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: / Effective Price Level:			8-Dec-22 / 1-Oct-22	Program Year (Budget EC): / Effective Price Level Date:			2025 / 1 OCT 24					
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	Millers Ferry													
06	Excavation	$27,285	$12,660	46.4%	$39,945	5.5%	$28,795	$13,361	$42,155	2030Q4	15.9%	$33,382	$15,489	$48,872
06	Concrete Installation	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Cofferdam	$1,056	$620	58.7%	$1,676	5.5%	$1,114	$654	$1,769	2030Q4	15.9%	$1,292	$758	$2,050
06	Prefab Bridge	$11,367	$4,854	42.7%	$16,221	5.5%	$11,996	$5,122	$17,118	2030Q4	15.9%	$13,907	$5,938	$19,846
06	Gate Structure	$1,608	$836	52.0%	$2,444	5.5%	$1,697	$882	$2,579	2030Q4	15.9%	$1,967	$1,023	$2,990
06	Rock Armoring & Weirs	$23,883	$11,344	47.5%	$35,227	5.5%	$25,204	$11,972	$37,176	2030Q4	15.9%	$29,220	$13,880	$43,100
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$65,199	$30,314	46.5%	**$95,513**		$68,806	$31,992	$100,798			$79,769	$37,089	$116,858
01	LANDS AND DAMAGES	$530	$133	25.0%	$663	5.5%	$559	$140	$699	2028Q1	8.0%	$604	$151	$755
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning & Environmental Compliance	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering & Design	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Reviews, ATRs, IEPRs, VE	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Life Cycle Updates (cost, schedule, risks)	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Contracting & Reprographics	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$5,868	$1,455	24.8%	$7,323	5.1%	$6,167	$1,529	$7,696	2030Q4	13.3%	$6,989	$1,733	$8,722
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$978	$243	24.8%	$1,221	5.1%	$1,028	$255	$1,283	2030Q4	13.3%	$1,165	$289	$1,454
	CONTRACT COST TOTALS:	$72,575	$32,145		$104,720		$76,560	$33,916	**$110,475**			$88,527	$39,262	**$127,789**

Filename: TPCS Alt 12b CL Rock Arch MF Bypass.xlsx
TPCS

Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

Printed:1/31/2023
Page 1 of 3

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
PROJECT NO: Alt 13b CL Bypass, MF Rock Arch
LOCATION: Monroe and Wilcox Counties, Al

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2023

This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC):				2025					
						Effective Price Level Date:				1 OCT 24					
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-22 ($K)	TOTAL FIRST COST ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J		K	L	M	N	O
06	Excavation	$65,936	$30,594	46.4%	$96,530	5.5%	$69,584	$32,287	$101,871	$0	$101,871	15.2%	$80,151	$37,190	$117,342
06	Concrete Installation	$14,609	$6,238	42.7%	$20,847	5.5%	$15,417	$6,583	$22,000	$0	$22,000	15.2%	$17,759	$7,583	$25,342
06	Cofferdam	$4,388	$2,576	58.7%	$6,964	5.5%	$4,631	$2,718	$7,349	$0	$7,349	15.2%	$5,334	$3,131	$8,465
06	Prefab Bridge	$11,368	$4,854	42.7%	$16,222	5.5%	$11,997	$5,123	$17,120	$0	$17,120	15.2%	$13,819	$5,901	$19,720
06	Gate Structure	$513	$207	40.4%	$720	5.5%	$541	$219	$760	$0	$760	15.2%	$624	$252	$876
06	Rock Armoring & Weirs	$5,773	$2,742	47.5%	$8,515	5.5%	$6,092	$2,894	$8,986	$0	$8,986	15.2%	$7,018	$3,333	$10,351
	#N/A	$0	$0 -		$0	-	$0	$0	$0	$0	$0		$0	$0	$0
	#N/A	$0	$0 -		$0	-	$0	$0	$0	$0	$0		$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$102,587	$47,212		$149,799	5.5%	$108,263	$49,824	$158,086	$0	$158,086	15.2%	$124,704	$57,390	$182,094
01	LANDS AND DAMAGES	$230	$60	26.1%	$290	5.5%	$243	$63	$306	$0	$306	8.0%	$262	$68	$331
30	PLANNING, ENGINEERING & DESIGN	$10,762	$2,658	24.7%	$13,420	5.1%	$11,310	$2,794	$14,103	$0	$14,103	9.2%	$12,348	$3,050	$15,398
31	CONSTRUCTION MANAGEMENT	$10,772	$2,671	24.8%	$13,443	5.1%	$11,320	$2,807	$14,127	$0	$14,127	12.7%	$12,759	$3,164	$15,923
	PROJECT COST TOTALS:	$124,351	$52,601	42.3%	$176,952		$131,135	$55,488	**$186,623**	$0	**$186,623**	14.5%	$150,073	$63,673	$213,746

ESTIMATED TOTAL PROJECT COST: **$213,746**

_____ **CHIEF, COST ENGINEERING, George Brown**

_____ **PROJECT MANAGER, Jonas White**

_____ **CHIEF, REAL ESTATE, Karen Kennedy**

_____ **CHIEF, PLANNING, Jenny Jacobson**

_____ **CHIEF, ENGINEERING, Jason Krick**

_____ **CHIEF, OPERATIONS, Nelson Sanchez**

_____ **CHIEF, CONSTRUCTION, George Condoyiannis**

_____ **CHIEF, CONTRACTING,Jeff Burgess**

_____ **CHIEF, PM-PB, xxxx**

_____ **CHIEF, DPM, Pete Taylor**

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Example C-2: TPCS Sheets for Final Array of Alternatives

****** TOTAL PROJECT COST SUMMARY ******

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****** CONTRACT COST SUMMARY ******

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
This Estimate reflects the scope and schedule in report; Study Draft Feasibility Report

DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2023

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 31-Jan-23 Effective Price Level: 1-Oct-22				Program Year (Budget EC): 2025 Effective Price Level Date: 1 OCT 24								
WBS NUMBER A	Civil Works Feature & Sub-Feature Description B	COST ($K) C	CNTG ($K) D	RISK BASED CNTG (%) E	TOTAL ($K) F	ESC (%) G	COST ($K) H	CNTG ($K) I	TOTAL ($K) J	Mid-Point Date P	INFLATED (%) L	COST ($K) M	CNTG ($K) N	FULL ($K) O
	Claiborne													
06	Excavation	$6,700	$3,109	46.4%	$9,809	5.5%	$7,071	$3,281	$10,351	2030Q3	15.2%	$8,144	$3,779	$11,924
06	Concrete Installation	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Cofferdam	$736	$432	58.7%	$1,168	5.5%	$777	$456	$1,233	2030Q3	15.2%	$895	$525	$1,420
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q3	15.2%	$6,909	$2,950	$9,860
06	Gate Structure	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	Rock Armoring & Weirs	$5,773	$2,742	47.5%	$8,515	5.5%	$6,092	$2,894	$8,986	2030Q3	15.2%	$7,018	$3,333	$10,351
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$18,893	$8,710	46.1%	**$27,603**		$19,938	$9,192	$29,130			$22,966	$10,588	$33,554
01	LANDS AND DAMAGES	$150	$40	26.7%	$190	5.5%	$158	$42	$201	2028Q1	8.0%	$171	$46	$217
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Planning & Environmental Compliance	$1,702	$420	24.7%	$2,122	5.1%	$1,789	$442	$2,230	2028Q1	6.7%	$1,909	$472	$2,381
0.0%	Engineering & Design	$6,100	$1,507	24.7%	$7,607	5.1%	$6,410	$1,583	$7,994	2028Q1	6.7%	$6,843	$1,690	$8,533
0.0%	Reviews, ATRs, IEPRs, VE	$300	$74	24.7%	$374	5.1%	$315	$78	$393	2028Q1	6.7%	$337	$83	$420
0.0%	Life Cycle Updates (cost, schedule, risks)	$120	$30	24.7%	$150	5.1%	$126	$31	$157	2028Q1	6.7%	$135	$33	$168
0.0%	Contracting & Reprographics	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2028Q1	6.7%	$112	$28	$140
0.0%	Engineering During Construction	$200	$49	24.7%	$249	5.1%	$210	$52	$262	2030Q3	12.7%	$237	$59	$295
0.0%	Planning During Construction	$100	$25	24.7%	$125	5.1%	$105	$26	$131	2030Q3	12.7%	$118	$29	$148
0.0%	Adaptive Management & Monitoring	$1,800	$445	24.7%	$2,245	5.1%	$1,892	$467	$2,359	2033Q3	20.3%	$2,275	$562	$2,837
0.0%	Project Operations	$40	$10	24.7%	$50	5.1%	$42	$10	$52	2028Q1	6.7%	$45	$11	$56
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$1,700	$422	24.8%	$2,122	5.1%	$1,787	$443	$2,230	2030Q3	12.7%	$2,014	$499	$2,514
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$283	$70	24.8%	$354	5.1%	$298	$74	$372	2030Q3	12.7%	$336	$83	$419
	CONTRACT COST TOTALS:	$31,789	$11,900		$43,689		$33,491	$12,545	**$46,036**			$37,835	$14,266	**$52,101**

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Example C-2: TPCS Sheets for Final Array of Alternatives

**** TOTAL PROJECT COST SUMMARY ****

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**** CONTRACT COST SUMMARY ****

PROJECT: Claiborne and Millers Ferry Locks and Dams Fish Passage Study
LOCATION: Monroe and Wilcox Counties, Al
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DISTRICT: Mobile District
POC: CHIEF, COST ENGINEERING, George Brown

PREPARED: 1/31/2023

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: / Effective Price Level:			31-Jan-23 / 1-Oct-22	Program Year (Budget EC): / Effective Price Level Date:			2025 / 1 OCT 24					
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	P	L	M	N	O
	Millers Ferry													
06	Excavation	$59,236	$27,486	46.4%	$86,722	5.5%	$62,513	$29,006	$91,519	2030Q3	15.2%	$72,007	$33,411	$105,418
06	Concrete Installation	$14,609	$6,238	42.7%	$20,847	5.5%	$15,417	$6,583	$22,000	2030Q3	15.2%	$17,759	$7,583	$25,342
06	Cofferdam	$3,652	$2,144	58.7%	$5,796	5.5%	$3,854	$2,262	$6,116	2030Q3	15.2%	$4,439	$2,606	$7,045
06	Prefab Bridge	$5,684	$2,427	42.7%	$8,111	5.5%	$5,998	$2,561	$8,560	2030Q3	15.2%	$6,909	$2,950	$9,860
06	Gate Structure	$513	$207	40.4%	$720	5.5%	$541	$219	$760	2030Q3	15.2%	$624	$252	$876
06	Rock Armoring & Weirs	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	#N/A	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$83,694	$38,502	46.0%	**$122,196**		$88,324	$40,632	$128,956			$101,738	$46,802	$148,540
01	LANDS AND DAMAGES	$80	$20	25.0%	$100	5.5%	$84	$21	$106	2028Q1	8.0%	$91	$23	$114
30	PLANNING, ENGINEERING & DESIGN													
0.0%	Project Management	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning & Environmental Compliance	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering & Design	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Reviews, ATRs, IEPRs, VE	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Life Cycle Updates (cost, schedule, risks)	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Contracting & Reprographics	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Engineering During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Planning During Construction	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	24.7%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
9.0%	Construction Management	$7,532	$1,868	24.8%	$9,401	5.1%	$7,916	$1,963	$9,879	2030Q3	12.7%	$8,922	$2,213	$11,135
0.0%	Project Operation:	$0	$0	24.8%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.5%	Project Management	$1,255	$311	24.8%	$1,567	5.1%	$1,319	$327	$1,646	2030Q3	12.7%	$1,487	$369	$1,856
	CONTRACT COST TOTALS:	$92,562	$40,701		$133,263		$97,644	$42,943	**$140,587**			$112,238	$49,407	**$161,645**

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