US Army Corps
of Engineers ®
Wilmington District

General Re-evaluation Report and Environmental Assessment
Surf City, Onslow and Pender Counties, North Carolina
Coastal Storm Risk Management Project

Appendix F: Cost Estimate

Final

April 2025

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1.0 INTRODUCTION

Costs for the recommended plan within the main report of the Surf City Coastal Storm Risk Management (CSRM) General Re-evaluation were developed at an October 1st 2024 price level; the Program Year is 2025 (Project 1st Cost). The fully funded project is priced to the mid-point of construction for Initial Construction and Periodic Nourishments events.

The recommended plan is approximately 5.5 miles in length, starting at Station 234+82 and ending at Station 520+45, near the town limits with North Topsail Beach. **Figure 1** presents the location of proposed sand borrow locations in proximity to the town of Surf City.

2.0 ANALYSIS

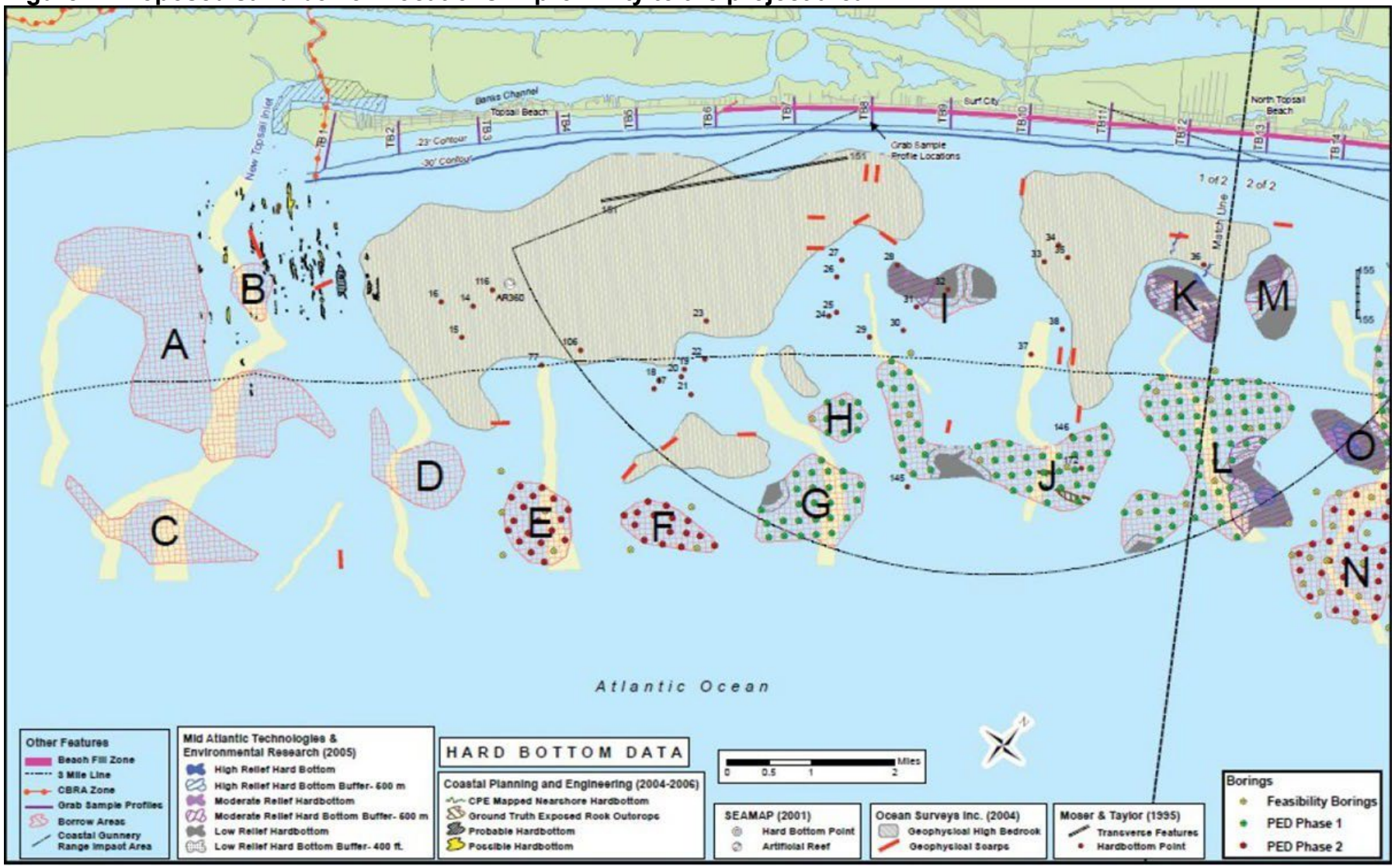
The Initial Construction midpoint is projected to be September 2024. Periodic Nourishments will be completed at 6-year intervals with approximately 2 million cubic yards (MCY) of sand, including mechanical and overfill losses.

Template volume quantities and associated overfill factors and mechanical losses are provided in **Table 1**. Overfill factors were determined by comparing the volume of borrow material required to produce a stable unit of usable fill material with the same grain size characteristics as the native beach sand. Mechanical losses were estimated based on historical averages.

Table 1. Template Volume Quantities.

Borrow Area	Design Template Volumes (cy)	Overfill Factor	Mechanical Losses (%)	Required Borrow Volumes (cy)
Initial Construction (Area A, O, & P)	6,419,281	1.15	8.7	7,940,650
1st Periodic (Area N & O)	1,594,648	1.15	8.7	1,972,579
2nd Periodic (Area J, L, & N)	1,594,648	1.15	8.7	1,972,579
3rd Periodic (Area A, G, H, & J)	1,594,648	1.15	8.7	1,972,579
4th Periodic (Area A)	1,594,648	1.15	8.7	1,972,579
5th Periodic (Area A)	1,594,648	1.15	8.7	1,972,579
6th Periodic (Area A)	1,594,648	1.15	8.7	1,972,579
7th Periodic (Area A)	2,126,196	1.15	8.7	2,630,105

Figure 1. Proposed sand borrow locations in proximity to the project area.



The Total Project Cost Summary (TPCS) includes base construction cost, which is escalated to the mid-point of construction for each respective nourishment. These escalation values were developed based on the Civil Works Construction Cost Index System (CWCCIS) for coastal storm risk management.

Baseline CWE's, October 2024 price level, are shown in the MCACES (Microcomputer Aided Cost Engineering System). The construction contract acquisition strategy for this cost estimate is an open competition Invitation for Bid (IFB). All pricing was done according to this strategy.

Emphasis was placed on accuracy of dredging costs during evaluation of alternative borrow area locations to evaluate the resulting recommended plan. The location and features of borrow areas in relation to the project, as well as historical production of dredges for similar projects, were used in conjunction with the Corps of Engineers Dredge Estimating Program (CEDEP). Data mining for historical production was conducted for projects using a large hopper dredge, and this data was used in the CEDEPS analysis.

Data indicates a production rate of between 600 to 1000 cy/hr for a large hopper, and 400 to 600 cy/hr for a medium hopper. It will take approximately 13.5 months to complete initial construction (7,940,650 cy), using one medium hopper and one large hopper working simultaneously within the designated borrow areas.

CEDEP considers details of borrow area characteristics, depth of borrow, effective production time, distances from borrow sites, costs of dredge plant ownership, operating and repair, fuel consumption/prices, and other economic adjustments for labor and equipment.

Construction contract time for mobilization/demobilization and pipe set-up on the beach will be included for each contract. Mobilization and demobilization of pipe and equipment off the beach, as well as beach tilling, dune vegetation, sand fencing, etc. are included in the estimate.

Some borrow areas for Surf City have been designated Munitions and Explosives of Concern (MEC) areas. Because of this, all borrow areas will require MEC screening at the beach end. Screening for MECs both decreases productivity and increases the risk associated with both cost and schedule should MECs be encountered. These costs were captured by updating the Cost Schedule Risk Analysis (CSRA) and utilizing bid abstract data from the Jacksonville District for standard box screening. The PDT made the decision to utilizing box screening at the effluent end of the operation only, and material from all borrow areas will be screened for MECs. Labor for MEC screening will consist of 5 UXO technicians, and one safety officer. These 6 employees will be working to maneuver the screening equipment into place, and to watch for MEC's at the effluent end of the pipe.

The costs for contract items such as MEC screening, beach tilling, dune vegetation, sand fencing, surveys, etc., were based on historical bid abstracts for similar coastal

storm damage reduction projects. These projects include 2012, 2015, and 2018 Carolina/Kure Beach; and 2013 and 2017 Wrightsville Beach.

Detailed Cost Schedule and Risk Analyses (CSRAs) were developed by Wilmington District to determined initial construction and periodic nourishment contingencies. These CSRA(s) were reviewed by the Cost Center of Expertise in Walla Walla, Washington, during ATR. A contingency of 33% was included for Initial Construction, and 27% for Periodic Nourishments. These contingencies represent unanticipated conditions and uncertainties at the time the estimate was developed. The contingency percentages are representative of several other beach nourishment projects with similar conditions and risks.

2.1 Initial Construction, Current Working Estimate

Initial Construction of the project will start during the 2nd quarter of FY25, with the mid- point of construction being around the 1st quarter of FY26 and will take approximately 16 months to complete using one large hopper dredge and one medium hopper dredge.

The Total Current Working Estimate (CWE):

- Initial Construction - CWE $145,889,000 - October 2023 price level
  ($193,592 with 33% contingency)

- Initial Construction - FIRST COST $149,672,000 - October 2024 price level
  ($198,613,000 with 33% contingency).

- Initial Construction - Fully Funded $156,661,000 - October 2026 price level
  ($207,904,000 with 33% contingency).

2.2 Periodic Nourishments, Current Working Estimate

Seven Periodic Nourishments will occur every 6 years after completion of Initial Construction (2030, 2036, 2042, 2048, 2054, 2060, & 2066). The periodic nourishments will take approximately 4 months of dredging using a large hopper dredge. Pricing is shown in the TPCS with the 7 periodic totals as follows (21% contingency):

The Total Current Working Estimate (CWE) - CSRM

- 7 Periodic Projects - CWE $278,137,000 - October 2023 price level
  ($353,235,000 w/~ 27% contingency).

- 7 Periodic Projects - FIRST COST $285,279,000 - October 2024 price level
  ($362,304,000 w/~27% contingency).

- 7 Periodic Projects – Fully-funded $603,438,000 - Feb 2032-2068 price level
  ($766,366,000 w/ ~27% contingency).

3.0 REFERENCES

This cost estimate was prepared under guidance provided by Engineers Regulation ER 1110-2-1302, CIVIL WORKS COST ENGINEERING; ER 1110-1-300, Cost Engineering Policy and General Requirements; and ETL 1110-2-573 Construction Cost Estimating Guide for Civil Works.

WALLA WALLA COST ENGINEERING
MANDATORY CENTER OF EXPERTISE

COST AGENCY TECHNICAL REVIEW

CERTIFICATION STATEMENT
For Project No. 117270

SAW – Surf City Coastal Storm Risk Management
Initial & Periodic Nourishments

The Surf City Coastal Storm Risk Management GRR, as presented by Wilmington District, has undergone a successful cost update and Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. This certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

As of February 11, 2025, the Cost MCX certifies the estimated total project cost:

INITIAL
FY25 Project First Cost INITIAL: $198,613,000
FULLY FUNDED: $207,904,000

PERIODIC – 7 Renourishments
FY25 Project First Cost (2032-68): $362,304,000
FULLY FUNDED: $766,366,000

Cost Certification assumes Efficient Implementation (Funding). It remains the responsibility of the District to correctly reflect these cost values within the Final Report and to implement effective project management controls and implementation procedures including risk management through the period of Federal Participation.

Michael P Jacobs, PE, CCE
Chief, Cost Engineering MCX
Walla Walla District

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

PROJECT: **SURF CITY CSRM - INITIAL CONSTRUCTION** **DISTRICT: WILMINGTON DISTRICT** **PREPARED: 2/6/2025**

PROJECT NO: P2 117270
LOCATION: PENDER COUNTY, NC

POC: CHRIS NORTON

This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

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-23** ($K)	**TOTAL FIRST COST** ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*		*K*	*L*	*M*	*N*	*O*
17	BEACH REPLENISHMENT	$128,494	$42,403	33.0%	$170,897	2.5%	$131,695	$43,459	$175,154	$0	$175,154	4.7%	$137,920	$45,514	$183,434
04	DAMS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
05	LOCKS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
07	POWER PLANT	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$128,494	$42,403		$170,897	2.5%	$131,695	$43,459	$175,154	$0	$175,154	4.7%	$137,920	$45,514	$183,434
01	LANDS AND DAMAGES	$1,023	$0	0.0%	$1,023	2.3%	$1,046	$0	$1,046	$0	$1,046	0.0%	$1,046	$0	$1,046
30	PLANNING, ENGINEERING & DESIGN	$8,020	$2,544	31.7%	$10,564	3.4%	$8,293	$2,631	$10,925	$0	$10,925	3.5%	$8,582	$2,723	$11,305
31	CONSTRUCTION MANAGEMENT	$8,352	$2,756	33.0%	$11,108	3.4%	$8,637	$2,850	$11,488	$0	$11,488	5.5%	$9,112	$3,007	$12,118
	PROJECT COST TOTALS:	$145,889	$47,703	32.7%	$193,592		$149,672	$48,941	**$198,613**	$0	**$198,613**	4.7%	$156,661	$51,244	$207,904

ESTIMATED TOTAL PROJECT COST: $207,904

_____ **CHIEF, COST ENGINEERING, Stephen Roman**

_____ **PROJECT MANAGER, Kent Tranter**

_____ **REALTY SPECIALIST, John Hinely**

_____ **CHIEF, PLANNING, Bret Walters**

_____ **CHIEF, ENGINEERING, Tamara Murphy**

_____ **CHIEF, OPERATIONS, Daniel Brown**

_____ **CHIEF, CONSTRUCTION, Jeremy Smith**

_____ **CHIEF, CONTRACTING, John Mayo**

_____ **CHIEF, PM-PB, Robert Keistler**

_____ **CHIEF, DPM, Christine Brayman**

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

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

PROJECT: SURF CITY CSRM - INITIAL CONSTRUCTION

DISTRICT: USACE - WILMINGTON DISTRICT

PREPARED: 2/6/2025

LOCATION: PENDER COUNTY, NC

POC: CHIEF, COST ENGINEERING, Stephen Roman

This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	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*
	PHASE 1 or CONTRACT 1													
17	BEACH REPLENISHMENT	$128,494	$42,403	33.0%	$170,897	2.5%	$131,695	$43,459	$175,154	2026Q4	4.7%	$137,920	$45,514	$183,434
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$128,494	$42,403	33.0%	**$170,897**		$131,695	$43,459	$175,154			$137,920	$45,514	$183,434
01	LANDS AND DAMAGES	$1,023	$0	0.0%	$1,023	2.3%	$1,046	$0	$1,046	2025Q1	0.0%	$1,046	$0	$1,046
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q1	3.1%	$1,370	$452	$1,822
1.0%	Planning & Environmental Compliance	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q1	3.1%	$1,370	$452	$1,822
1.0%	Engineering & Design	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q1	3.1%	$1,370	$452	$1,822
1.0%	Reviews, ATRs, IEPRs, VE	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q1	3.1%	$1,370	$452	$1,822
1.0%	Life Cycle Updates (cost, schedule, risks)	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q1	3.1%	$1,370	$452	$1,822
0.0%	Contracting & Reprographics	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$1,285	$424	33.0%	$1,709	3.4%	$1,329	$439	$1,767	2026Q4	5.5%	$1,402	$463	$1,864
0.0%	Planning During Construction	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$310	$0	0.0%	$310	3.4%	$321	$0	$321	2026Q1	3.1%	$331	$0	$331
31	CONSTRUCTION MANAGEMENT													
6.5%	Construction Management	$8,352	$2,756	33.0%	$11,108	3.4%	$8,637	$2,850	$11,488	2026Q4	5.5%	$9,112	$3,007	$12,118
0.0%	Project Operation:	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	33.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$145,889	$47,703		$193,592		$149,672	$48,941	**$198,613**			$156,661	$51,244	**$207,904**

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

PROJECT: **SURF CITY CSRM - PERIODIC NOURISHMENTS** **DISTRICT: WILMINGTON DISTRICT** **PREPARED: 2/6/2025**

PROJECT NO: P2 117270
LOCATION: PENDER COUNTY, NC

POC: CHRIS NORTON

This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

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-23** ($K)	**TOTAL FIRST COST** ($K)	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*		*K*	*L*	*M*	*N*	*O*
17	BEACH REPLENISHMENT	$255,172	$68,896	27.0%	$324,068	2.5%	$261,529	$70,613	$332,142	$0	$332,142	109.0%	$546,588	$147,579	$694,167
04	DAMS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
05	LOCKS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
07	POWER PLANT	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$255,172	$68,896		$324,068	2.5%	$261,529	$70,613	$332,142	$0	$332,142	109.0%	$546,588	$147,579	$694,167
01	LANDS AND DAMAGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN	$15,310	$4,134	27.0%	$19,444	3.4%	$15,833	$4,275	$20,108	$0	$20,108	137.6%	$37,615	$10,156	$47,771
31	CONSTRUCTION MANAGEMENT	$7,655	$2,067	27.0%	$9,722	3.4%	$7,917	$2,137	$10,054	$0	$10,054	143.0%	$19,235	$5,193	$24,428
	PROJECT COST TOTALS:	$278,137	$75,097	27.0%	$353,235		$285,279	$77,025	**$362,304**	$0	**$362,304**	111.5%	$603,438	$162,928	$766,366

ESTIMATED TOTAL PROJECT COST: $766,366

CHIEF, COST ENGINEERING, Stephen Roman

PROJECT MANAGER, Kent Tranter

REALTY SPECIALIST, John Hinely

CHIEF, PLANNING, Bret Walters

CHIEF, ENGINEERING, Tamara Murphy

CHIEF, OPERATIONS, Daniel Brown

CHIEF, CONSTRUCTION, Jeremy Smith

CHIEF, CONTRACTING, John Mayo

CHIEF, PM-PB, Robert Keistler

CHIEF, DPM, Christine Brayman

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 6-Feb-25 Effective Price Level: 1-Oct-23				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*
	PHASE 1 or CONTRACT 1 (2032)													
17	BEACH REPLENISHMENT	$32,186	$8,690	27.0%	$40,876	2.5%	$32,988	$8,907	$41,895	2032Q4	22.2%	$40,299	$10,881	$51,180
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$32,186	$8,690	27.0%	**$40,876**		$32,988	$8,907	$41,895			$40,299	$10,881	$51,180
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2032Q1	23.7%	$412	$111	$523
1.0%	Planning & Environmental Compliance	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2032Q1	23.7%	$412	$111	$523
1.0%	Engineering & Design	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2032Q1	23.7%	$412	$111	$523
1.0%	Reviews, ATRs, IEPRs, VE	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2032Q1	23.7%	$412	$111	$523
1.0%	Life Cycle Updates (cost, schedule, risks)	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2032Q1	23.7%	$412	$111	$523
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$322	$87	27.0%	$409	3.4%	$333	$90	$423	2026Q4	5.5%	$351	$95	$446
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$966	$261	27.0%	$1,226	3.4%	$999	$270	$1,268	2026Q4	5.5%	$1,053	$284	$1,338
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$35,083	$9,472		$44,555		$35,983	$9,716	**$45,699**			$43,763	$11,816	**$55,578**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	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*
	PHASE 2 or CONTRACT 2 (2038)													
17	BEACH REPLENISHMENT	$33,334	$9,000	27.0%	$42,334	2.5%	$34,164	$9,224	$43,389	2038Q4	42.5%	$48,686	$13,145	$61,831
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$33,334	$9,000	27.0%	**$42,334**		$34,164	$9,224	$43,389			$48,686	$13,145	$61,831
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q1	48.4%	$512	$138	$650
1.0%	Planning & Environmental Compliance	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q1	48.4%	$512	$138	$650
1.0%	Engineering & Design	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q1	48.4%	$512	$138	$650
1.0%	Reviews, ATRs, IEPRs, VE	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q1	48.4%	$512	$138	$650
1.0%	Life Cycle Updates (cost, schedule, risks)	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q1	48.4%	$512	$138	$650
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$333	$90	27.0%	$423	3.4%	$345	$93	$438	2038Q4	51.9%	$524	$141	$665
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,000	$270	27.0%	$1,270	3.4%	$1,034	$279	$1,313	2038Q4	51.9%	$1,571	$424	$1,995
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$36,334	$9,810		$46,144		$37,267	$10,062	**$47,329**			$53,338	$14,401	**$67,739**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	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*
	PHASE 3 or CONTRACT 3 (2044)													
17	BEACH REPLENISHMENT	$36,022	$9,726	27.0%	$45,748	2.5%	$36,919	$9,968	$46,888	2044Q4	66.2%	$61,371	$16,570	$77,942
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$36,022	$9,726	27.0%	**$45,748**		$36,919	$9,968	$46,888			$61,371	$16,570	$77,942
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q1	78.3%	$664	$179	$843
1.0%	Planning & Environmental Compliance	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q1	78.3%	$664	$179	$843
1.0%	Engineering & Design	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q1	78.3%	$664	$179	$843
1.0%	Reviews, ATRs, IEPRs, VE	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q1	78.3%	$664	$179	$843
1.0%	Life Cycle Updates (cost, schedule, risks)	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q1	78.3%	$664	$179	$843
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$360	$97	27.0%	$457	3.4%	$373	$101	$473	2044Q4	82.4%	$679	$183	$863
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,081	$292	27.0%	$1,372	3.4%	$1,118	$302	$1,419	2044Q4	82.4%	$2,038	$550	$2,589
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$39,264	$10,601		**$49,865**		$40,272	$10,873	**$51,146**			$67,410	$18,201	**$85,610**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	Effective Price Level Date:			1 OCT 24	FULLY FUNDED PROJECT ESTIMATE				
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*
	PHASE 4 or CONTRACT 4 (2050)													
17	BEACH REPLENISHMENT	$33,641	$9,083	27.0%	$42,724	2.5%	$34,479	$9,309	$43,788	2050Q4	93.9%	$66,858	$18,052	$84,909
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$33,641	$9,083	27.0%	**$42,724**		$34,479	$9,309	$43,788			$66,858	$18,052	$84,909
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2050Q1	114.1%	$745	$201	$946
1.0%	Planning & Environmental Compliance	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2050Q1	114.1%	$745	$201	$946
1.0%	Engineering & Design	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2050Q1	114.1%	$745	$201	$946
1.0%	Reviews, ATRs, IEPRs, VE	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2050Q1	114.1%	$745	$201	$946
1.0%	Life Cycle Updates (cost, schedule, risks)	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2050Q1	114.1%	$745	$201	$946
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$336	$91	27.0%	$427	3.4%	$348	$94	$442	2051Q4	125.9%	$786	$212	$998
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,009	$272	27.0%	$1,282	3.4%	$1,044	$282	$1,325	2051Q4	125.9%	$2,357	$636	$2,994
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$36,669	$9,901		**$46,569**		$37,610	$10,155	**$47,765**			$73,725	$19,906	**$93,631**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	Effective Price Level Date:			1 OCT 24	FULLY FUNDED PROJECT ESTIMATE				
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*
	PHASE 5 or CONTRACT 5 (2056)													
17	BEACH REPLENISHMENT	$39,696	$10,718	27.0%	$50,414	2.5%	$40,685	$10,985	$51,670	2056Q4	126.2%	$92,026	$24,847	$116,874
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$39,696	$10,718	27.0%	**$50,414**		$40,685	$10,985	$51,670			$92,026	$24,847	$116,874
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q1	157.1%	$1,056	$285	$1,341
1.0%	Planning & Environmental Compliance	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q1	157.1%	$1,056	$285	$1,341
1.0%	Engineering & Design	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q1	157.1%	$1,056	$285	$1,341
1.0%	Reviews, ATRs, IEPRs, VE	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q1	157.1%	$1,056	$285	$1,341
1.0%	Life Cycle Updates (cost, schedule, risks)	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q1	157.1%	$1,056	$285	$1,341
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$397	$107	27.0%	$504	3.4%	$411	$111	$521	2056Q4	163.1%	$1,080	$292	$1,372
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,191	$322	27.0%	$1,512	3.4%	$1,232	$333	$1,564	2056Q4	163.1%	$3,240	$875	$4,115
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$43,269	$11,683		**$54,951**		$44,380	$11,982	**$56,362**			$101,625	$27,439	**$129,064**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	Effective Price Level Date:			1 OCT 24	FULLY FUNDED PROJECT ESTIMATE				
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*
	PHASE 6 or CONTRACT 6 (2062)													
17	BEACH REPLENISHMENT	$35,400	$9,558	27.0%	$44,958	2.5%	$36,282	$9,796	$46,078	2062Q4	163.9%	$95,731	$25,847	$121,579
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$35,400	$9,558	27.0%	**$44,958**		$36,282	$9,796	$46,078			$95,731	$25,847	$121,579
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2062Q1	208.8%	$1,131	$305	$1,436
1.0%	Planning & Environmental Compliance	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2062Q1	208.8%	$1,131	$305	$1,436
1.0%	Engineering & Design	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2062Q1	208.8%	$1,131	$305	$1,436
1.0%	Reviews, ATRs, IEPRs, VE	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2062Q1	208.8%	$1,131	$305	$1,436
1.0%	Life Cycle Updates (cost, schedule, risks)	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2062Q1	208.8%	$1,131	$305	$1,436
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$354	$96	27.0%	$450	3.4%	$366	$99	$465	2064Q4	235.9%	$1,230	$332	$1,562
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,062	$287	27.0%	$1,349	3.4%	$1,098	$297	$1,395	2064Q4	235.9%	$3,689	$996	$4,685
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$38,586	$10,418		**$49,004**		$39,577	$10,686	**$50,262**			$106,303	$28,702	**$135,005**

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

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

PROJECT: SURF CITY CSRM - PERIODIC NOURISHMENTS
LOCATION: PENDER COUNTY, NC
This Estimate reflects the scope and schedule in report; SURF CITY COST UPDATE

DISTRICT: USACE - WILMINGTON DISTRICT
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 2/6/2025

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			6-Feb-25	Program Year (Budget EC):			2025					
		Effective Price Level:			1-Oct-23	Effective Price Level Date:			1 OCT 24	FULLY FUNDED PROJECT ESTIMATE				
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*
	PHASE 7 or CONTRACT 7 (2068)													
17	BEACH REPLENISHMENT	$44,893	$12,121	27.0%	$57,014	2.5%	$46,011	$12,423	$58,434	2068Q4	207.8%	$141,616	$38,236	$179,853
04	DAMS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
05	LOCKS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
06	FISH & WILDLIFE FACILITIES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
07	POWER PLANT	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
08	ROADS, RAILROADS & BRIDGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
09	CHANNELS & CANALS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
10	BREAKWATER & SEAWALLS	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONSTRUCTION ESTIMATE TOTALS:	$44,893	$12,121	27.0%	**$57,014**		$46,011	$12,423	$58,434			$141,616	$38,236	$179,853
01	LANDS AND DAMAGES	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
1.0%	Project Management	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q1	270.9%	$1,722	$465	$2,187
1.0%	Planning & Environmental Compliance	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q1	270.9%	$1,722	$465	$2,187
1.0%	Engineering & Design	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q1	270.9%	$1,722	$465	$2,187
1.0%	Reviews, ATRs, IEPRs, VE	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q1	270.9%	$1,722	$465	$2,187
1.0%	Life Cycle Updates (cost, schedule, risks)	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q1	270.9%	$1,722	$465	$2,187
0.0%	Contracting & Reprographics	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
1.0%	Engineering During Construction	$449	$121	27.0%	$570	3.4%	$464	$125	$590	2068Q4	279.5%	$1,762	$476	$2,238
0.0%	Planning During Construction	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Adaptive Management & Monitoring	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Operations	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	Real Estate (All Federal Labor)	$0	$0	0.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
31	CONSTRUCTION MANAGEMENT													
3.0%	Construction Management	$1,347	$364	27.0%	$1,710	3.4%	$1,393	$376	$1,769	2068Q4	279.5%	$5,286	$1,427	$6,713
0.0%	Project Operation:	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
0.0%	Project Management	$0	$0	27.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
	CONTRACT COST TOTALS:	$48,933	$13,212		**$62,145**		$50,190	$13,551	**$63,741**			$157,274	$42,464	**$199,739**

Design Maturity Determination for Cost Certification

Date: 2/10/25
P2 Designation/Project Name: Surf City CSRM (P2 515901)

The Chief of Engineering is responsible for the technical content and engineering sufficiency for all engineering products produced by the command. As such, I have performed the Management Control Evaluation per Engineer Regulation (ER) 1110-2-1150, Engineering and Design for Civil Works Projects, Appendix **H,** Internal Management Control Review Checklist.

The current design OOEise .NGI:8. require HQ approval (i.e., engineering waivers), requiring a deviation from mandatory requirements and mandatory standards, as defined in ERs, Engineering Manuals, Engineering Technical letters, and Engineering Circulars.

The current hydrology and hydraulics modeling is at % design maturity, per reference (h) below.

The current geotechnical data and subsurface investigations are at _65_% design maturity, per reference (h) below. Subsurface investigations shall also include investigations of potential borrow and spoil areas.

The current survey data is at _35_% design maturity, per reference (h) below.

Other major technical and/or scope assumptions and risks include the following, which will be refined as the design progresses.

Several borrow sites for Surf City have been designated Munitions and Explosives of Concern (MEC) areas. Because of this, these borrow areas will require MEC screening. MEC screening is planned for borrow areas G, H, J, L, and 0.

Initial Construction Contingency is 33% and 27% for Periodic Renourishments.

The aggregate for all features is _35_% design maturity. Therefore, per the CECW-EC memorandum dated 05-June-2023, I certify that the design deliverables used to generate the cost products for this project and the estimate meet the requirements for a **CLASS 3** estimate, as per reference (a) below. Design risks, impacts and remaining efforts are summarized on page 2.

Considering risks and assumptions noted above, along with all other concerns documented in the Risk Register, the Cost and Schedule Risk Analysis has developed a contingency of 33 % at the 80 % confidence level for the defined project scope.

Chief of Engineering

Tamara Murphy, P.E., PMP

Printed Name

MURPHY.TAMARA.C.1386322240

Digitally signed by MURPHY.TAMARA.C.1386322240
Date: 2025.02.11 08:23:01 -05'00'

Signature

Design Maturity Determination for Cost Certification, Remaining Work

If an engineering waiver is required, list the risks and remaining design work needed to mitigate this issue in the current design. Identify remaining effort to complete the design required for 100% design.

N/A

Identify remaining effort to complete geotechnical design effort required for 100% design. List the risks and cost and schedule impacts needed to mitigate this issue in the current design.

75% complete fully designed borrow areas for initial construction. Borrow area sand quality in question directly offshore (within ~6 miles) of project between feasibility and initial design borings. Initial construction BOEM leases and final dredge cuts dependent on additional borrow area delineation in 2024. If area directly offshore is not fully delineated then project is dependent on Borrow Area "A" approximately 13 miles from placement area, adding significant additional cost.

Identify remaining effort required to complete H&H required for 100% design. List the risks and cost and schedule impacts needed to mitigate this issue in the current design.

Coastal engineering modeling is complete for the study. Project location, dimensions and nourishment intervals have been identified.

Identify remaining effort needed to complete survey data required for 100% design. List the risks and cost and schedule impacts needed to mitigate this issue in the current design.

A pre-construction survey will be needed to verify final quantities prior to solicitation.

If the project is anticipated to be executed in parts, provide a design assessment (percent complete) of each part/phase below.

N/A

References:

a. ER 1110-2-1302 -Civil Works Cost Engineering
b. CECW-EC memorandum dated 05-June-2023MFR, Guidance on Cost Engineering Products update for Civil Works Projects in accordance with Engineer Regulation 1110-2-1302 - Civil Works Cost Engineering
c. ER 1165-2-217 - Civil Works Review Policy
d. ER 1110-2-1150 - Engineering and Design for Civil Works Projects
e. ER 1110-3-12 - Quality Management
f. ER 1110-345-700 - Design Analysis, Drawings and Specifications
g. EM 5-1-11 - Project Delivery Business Process (PDBP)
h. Engineering and Construction Bulletin (ECB) 2023-9 - Civil Works Design Milestone Checklists

Design Maturity Determination for Cost Certification - Instructions

Paragraph 1 - Design Date: Use the drop-down menu to populate the date of the design.

Paragraph 1 - Project Information: Enter the P2 Project number and Project name.

Paragraph 3 - Engineering Waivers: Use the drop-down menu to populate this field with either "Does," or "Does not." If an engineering waiver is needed, or anticipated to be needed, provide the specific waiver required for the Project. A waiver is any deviation from current mandatory standards, as indicated.

Paragraph 4 - Hydrology and Hydraulics: Populate this field with the % design maturity.

Paragraph 5 - Geotechnical Information: Populate this field with the % design maturity.

Paragraph 6 - Survey Data: Populate this field with the % design maturity.

Paragraph 7 - Other Technical Assumptions and/or Scope: Enter any other major technical assumptions or scope assumptions here. Only include assumptions that pertain to design. Template discussion fields are provided as a courtesy. Please include additional pages as necessary.

Paragraph 8 - Signature: Print the name and title and provide the signature for the District's Chief of Engineering. This authority cannot be delegated; however, the Deputy Chief of Engineering and Design may sign the form in the absence of the Chief of Engineering. All fillable fields must be populated (use N/A if not applicable) in order for the document to be signed.

Page 2 - Remaining Work: Identify the current baseline design assumptions and the remaining design effort and risks to complete 100% design for the authorized project. If the project is to be broken into parts or phases, provide details on the aggregate design level of each phase and anticipated timeline for completion.

This form is required for all Civil Works projects for initial Cost Certification and Recertification, based on Policy Clarification MFR dated 05 June 2023, *Guidance on Cost Engineering Products update for Civil Works Projects in accordance with Engineer Regulation 1110-2-1302 - Civil Works Cost Engineering*.

The Point of Contact for this action is Mr. Mukesh Kumar, Cost Engineering Community of Practice Leader, CECW-EC, Mukesh.Kumar@usace.army.mil.

Version 1: 01 October 2023.