COST ENGINEERING APPENDIX C
FOLLY BEACH, SOUTH CAROLINA

SEPTEMBER 2021

Prepared by:

U.S. Army Corps of Engineers, Wilmington District

The Cost Engineering Appendix project costs were prepared to describe the Current Working Estimate (CWE)-October 2020 price level; First Costs-October 2021 price level; and Fully Funded pricing to midpoint construction for the recommended plan at Folly Beach, South Carolina – Integrated Feasibility Report.

The recommended plan for Folly Beach includes a beach template volume on average of 2 million cubic yards for each cycle nourishment over approximately 5.5 miles of beach from Folly River Inlet to Lighthouse Inlet. Initial construction nourishment midpoint is projected as February 2024. Total quantity and total cost is split between the Coastal Storm Risk Management (CSRM) areas and the Section 111 areas of the beach. The Section 111 authority of the River and Harbor Act of 1968 authorizes the USACE to prepare Detailed Project Reports (DPR's) to investigate potential impacts on adjacent shorelines and construct projects for the prevention or mitigation of shore damages attributable to Federal navigation works.

Template volume quantities and associated overfill factors and mechanical losses are indicated in Table 1. These overfill factors were determined by our geotechnical engineers using the Corps of Engineers method. This method compares 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. The mechanical losses were estimated based on historical averages.

Table 1. Template Volume Quantities

Borrow Area	Design Template Volumes (cy)	Overfill Factor	Volume Placed on Beach	Mechanical Losses (%)	Required Borrow Volumes (cy)
Lighthouse Inlet (Initial)	1,485,026 (csrm) 121,394 (Sec 111)	1.35	2,004,785 (csrm) 163,883 (Sec 111)	20	2,405,741 (csrm) 196,659 (Sec 111)
Stono Ebb Shoal (1st Periodic)	1,461,158 (csrm) 137,851 (Sec 111)	1.17	1,709,554 (csrm) 161,285 (Sec 111)	18	2,017,274 (csrm) 190,316 (Sec 111)
Stono Ebb Shoal (2nd Periodic)	1,604,861 (csrm) 138,581 (Sec 111)	1.17	1,877,688 (csrm) 162,140 (Sec 111)	18	2,215,671 (csrm) 191,326 (Sec 111)
Stono Ebb Shoal (3rd Periodic)	1,907,787 (csrm) 150,405 (Sec 111)	1.17	2,232,111 (csrm) 175,974 (Sec 111)	18	2,633,891 (csrm) 207,650 (Sec 111)

There will be a total of 3 periodic nourishments, following Initial nourishment, every 12 years (2036, 2048, & 2060) during the 50-year life (2024–2074) of the project. The beach reaches are labeled Reaches FB-1 thru FB-9 along with Stationing from 0+00 to 288+90

as shown in Figures 1 & 2.

Two essential features of the selected plan template are a varying dune height and design berm, as shown in the Figures 3 & 4, as a result of alternative comparisons evaluated during coastal and economic evaluations.

Five (5) borrow areas, shown in Figure 1, were initially evaluated using SBEACH and Beach-*fx* modeling. Coastal analysis and characterizing the physical characteristics of the shoreline were used for modeling with the Storm-induced Beach Change (SBEACH) model.

The SBEACH model output of shoreline responses was then used as an input into the Beach-*fx* model. Beach-*fx* uses a Monte Carlo simulation to track beach profile evolution over time and measure average economic damages over multiple project life cycles. Project costs plus a contingency from each borrow area were used in the model of alternatives.

There were three (3) borrow areas that resulted from the alternatives evaluated as the recommended plan shown in Figure 1.

-Two (2) offshore borrow areas "F" (Lighthouse) and "K/E" (Stono Ebb Shoal) approximately 2 and 5 miles offshore, and

Pipeline cutter suction dredges are the most economical method (vs Hopper dredges) to excavate material and pump material onto the beach. Pipeline cutter suction dredges have also been the historical method of placement for Folly Beach nourishments from other offshore borrow areas and from the Folly River borrow area.

Initial and Periodic nourishments – The borrow use plan involves placing material for Initial nourishment, FY 2024, from offshore area "F" (Lighthouse), based on engineering and economic pricing evaluations. There is enough material in the Lighthouse borrow area "F" to allow initial nourishment. (27% contingency for the Lighthouse Inlet borrow area)

All periodic nourishments (FY-2036, FY-2048, and FY-2060) use offshore "K/E" (Stono Ebb) borrow area.

The TOTAL CURRENT WORKING ESTIMATE (CWE) - CSRM

Initial Project - CWE $35,409,000 - October 2020 price level
($44,969,000 with 27% contingency)

Initial Project - FIRST COST $36,439,000 – October 2021 price level
($46,278,000 with 27% contingency).

Initial Project -Fully Funded midpoint $40,027,000 – February 2024 price level
($50,834,000 with 27% contingency).

The TOTAL CURRENT WORKING ESTIMATE (CWE) – SEC 111

Initial Project - CWE $3,265,000 - October 2020 price level
($4,146,000 with 27% contingency)

Initial Project - FIRST COST $3,359,000 – October 2021 price level
($4,266,000 with 27% contingency).

Initial Project -Fully Funded midpoint $3,689,000 – February 2024 price level
($4,685,000 with 27% contingency).

Pricing for Initial is shown in the Total Project Cost Summary (TPCS) Attachment "A".

Three (3) Periodic Nourishments are similar in pricing for approximately a 2 million cy template volume. The periodic nourishment years occur every 12 years after completion of Initial Construction. The periodic nourishments will take approximately 6 months of dredging using 1 pipeline cutter suction dredge. Pricing is shown in the Total Project Cost Summary (TPCS) Attachment "B" with the 3 periodic totals as follows. (29% contingency for the Stono Ebb Shoal borrow area as shown in TPCS).

The TOTAL CURRENT WORKING ESTIMATE (CWE) - CSRM

3 Periodic Projects - CWE $132,937,000 - October 2020 price level
($171,489,000 w/~ 29% contingency).

3 Periodic Projects - FIRST COST $136,789,000 – October 2021 price level
($176,458,000 w/~29% contingency).

3 Periodic Projects -Fully Funded $312,910,000 – Feb 2036 - 2060 price level
($403,654,000 w/ ~29% contingency).

The TOTAL CURRENT WORKING ESTIMATE (CWE) – SEC 111

3 Periodic Projects – CWE $11,100,000 - October 2020 price level
($14,319,000 w/~ 29% contingency).

3 Periodic Projects - FIRST COST $11,421,000 – October 2021 price level
($14,733,000 w/~29% contingency).

3 Periodic Projects -Fully Funded $25,666,000 – Feb 2036 - 2060 price level
($33,109,000 w/ ~29% contingency).

A $550,000 monthly expense is included in CEDEPS and is for material, equipment, and labor for the beach crew to support the dredge. This is an estimate based on historical work supporting a 30" Cutter-Suction Dredge.

The 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 2020 price level, are shown in the MCACES (Microcomputer Aided Cost Engineering System) summary sheets – Attachment "C".

The MCACES summary sheets are formatted into a Code of Accounts framework for reporting. The costs included under each Code of Accounts are described below.

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.

The Cost Estimates were prepared under guidance given in the Corps of 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.

CODE OF ACCOUNTS

CODE OF ACCOUNT 01 – LANDS AND DAMAGES: The detail estimated costs were prepared and furnished by the Real Estate Division; Savannah District as discussed in the Real Estate Appendix.

CODE OF ACCOUNT 17 – BEACH REPLENISHMENT: This account includes project costs for beach nourishment mobilization and demobilization, dredging, beach fill shaping, beach tilling, dune vegetation, sand fencing, and other construction contract pricing such as structural vibration monitoring, surveys, turtle monitoring, etc.

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 30" ocean certified cutter suction dredges, and this data was used in the CEDEPS analysis. Data indicates a production rate of between 1400 to 2100 cy/hr for old Borrow Areas A and B.

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.

For Initial Construction, it was determined one large (Ocean Certified) pipeline cutter suction dredge would be used to place sand on the beach from Borrow Area "F" (Lighthouse).

The initial construction time for placement of sand is estimated to be 6 months for 1.83 million cubic yards based on pipeline cutter suction dredge. There are no specific calendar

environmental window limits but likely placement on the beach was assumed to occur November through April.

Construction contract time for mob/demob 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. will be included.

For Periodic Nourishments, it was determined large pipeline cutter suction dredges would also be the most economical and suitable method to place sand on the beach from the offshore borrow areas.

The Periodic Nourishment construction time for placement of sand is estimated to be 6 months for approximately 2 million cubic yard template volume for each cycle. The 3rd and final periodic nourishment cycle is estimated to be 2.5 million cubic yards as this cycle includes 2 years (or 14 year cycle) to reach the end of the project life cycle of 50 years.

Beach template fill placement costs are included as part of the dredging unit price. Beach fill consists of shaping the dredged material with dozers to the required cross section while the dredge is pumping material onto the beach. Profile dimensions and quantities for the initial shoreline condition were derived from the late December 2018 and early January 2019 Office of Ocean and Coastal Resource Management (OCRM) survey.

The costs for other contract items such as beach tilling, dune vegetation, sand fencing, surveys, etc., were based on historical bid abstracts for similar coastal storm damage reduction projects. These project include 2012, 2015, and 2018 Carolina/Kure Beach; and 2013 and 2017 Wrightsville Beach.

For offshore borrow area nourishments, a contingency of 27% was included for the Lighthouse Inlet borrow area and 29% for the Stono Ebb Shoal borrow area. These contingencies represent unanticipated conditions and uncertainties at the time the estimate was developed for offshore borrow areas.

There is a better than average level of confidence in the dredge pricing, because of the detailed geotechnical investigations of borrows areas, similarities of other beach nourishment projects, and the historical costs for Folly Beach projects. The contingency percentages are similar to several other beach nourishment projects with similar conditions and risks. A detailed Cost Schedule and Risk Analysis (CSRA) for the contingencies was developed through coordination with the Cost Center of Expertise in Walla Walla, Washington.

CODE OF ACCOUNT 30 – PLANNING, ENGINEERING AND DESIGN: The costs included in this account were furnished by CESAC project management elements responsible for performing each activity. This account includes plans and specifications, field and borrow area investigations, surveys, cost estimates, engineering during construction, environmental monitoring, and project management.

CODE OF ACCOUNT 31 – CONSTRUCTION MANAGEMENT – This account includes supervision and administration of the contracts by construction management, hydrologic surveys during construction, environmental/coastal monitoring after construction, and contracting personnel during construction.

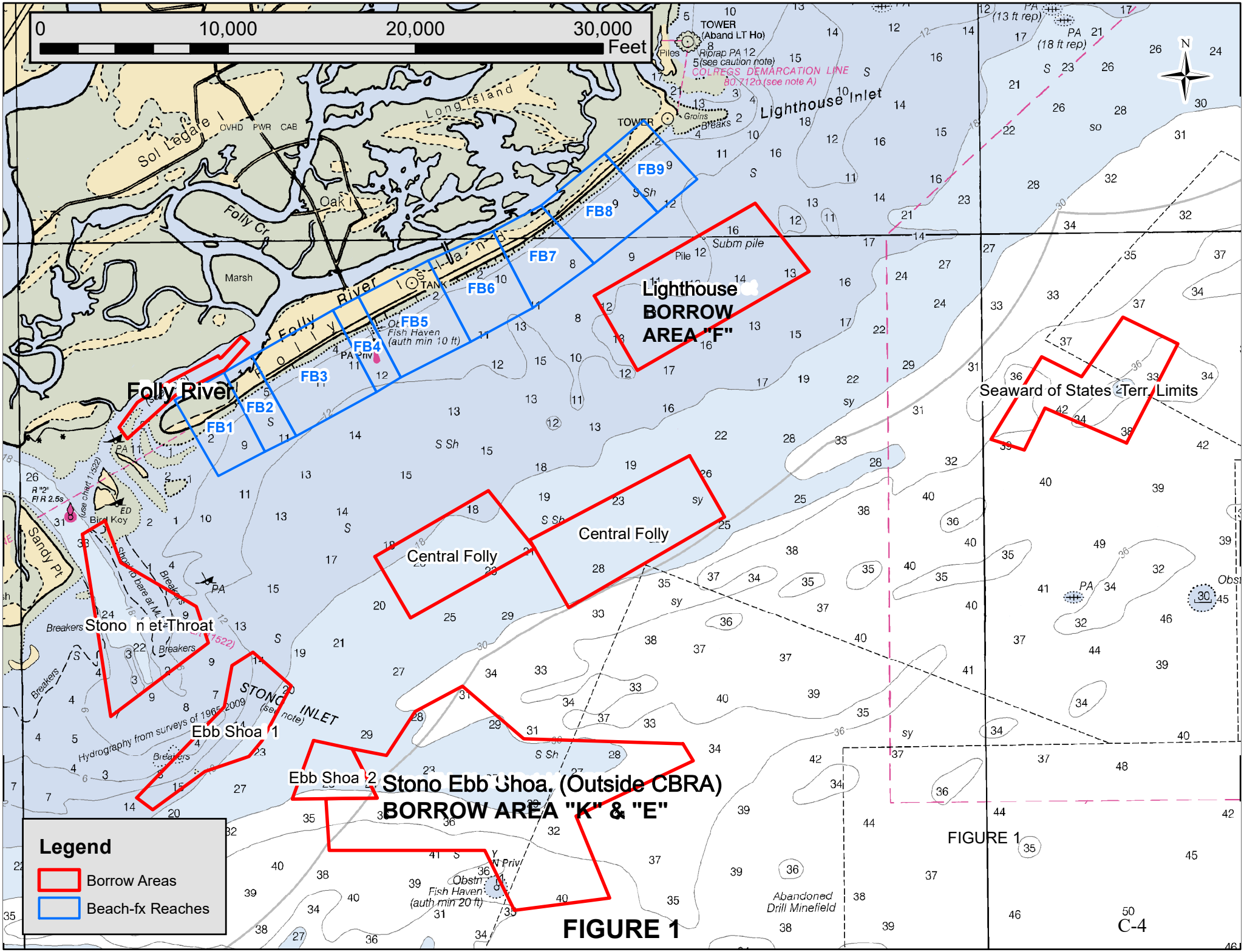
0
10,000
20,000
30,000
Feet
Folly River
Lighthouse BORROW AREA "F"
Seaward of States Terr. Limits
Central Folly
Central Folly
Stono Inlet Throat
Ebb Shoal 1
Ebb Shoal 2
Stono Ebb Shoal (Outside CBRA) BORROW AREA "K" & "E"
FB1
FB2
FB3
FB4
FB5
FB6
FB7
FB8
FB9
Lighthouse Inlet
Folly River
Sol Legare Is
Oak I
Folly Cr
Marsh
Long Island
Sandy Pt
Bird Key
TOWER
(Aband LT Ho)
COLREGS DEMARCATION LINE
80.712o (see note A)
Subm pile
Fish Haven
(auth min 10 ft)
Fish Haven
(auth min 20 ft)
Abandoned
Drill Minefield
Hydrography from surveys of 1965-2009
Legend
Borrow Areas
Beach-fx Reaches

FIGURE 1

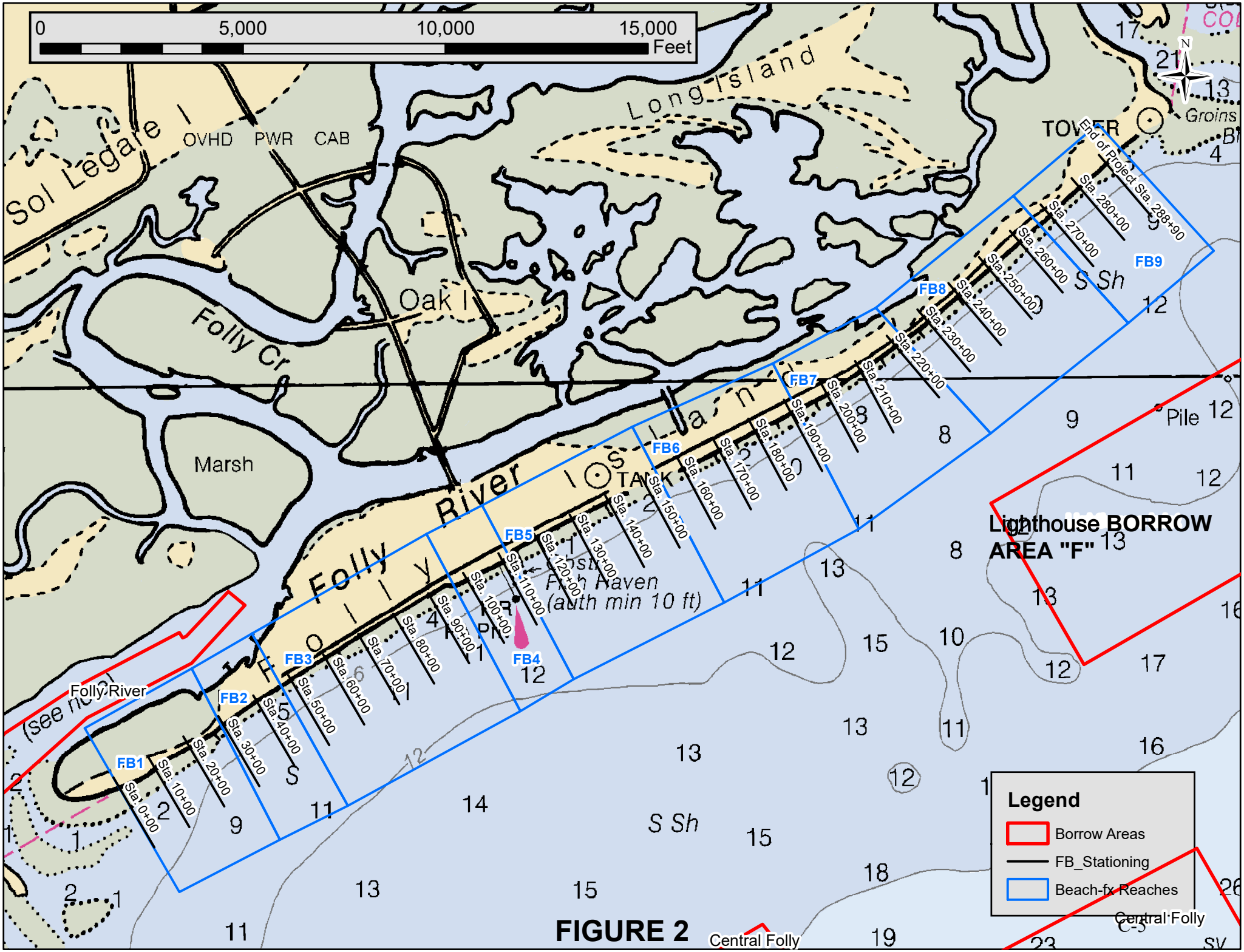
0
5,000
10,000
15,000
Feet
Sol Legare I
OVHD PWR CAB
Long Island
Oak I
Folly Cr
Marsh
Folly River
Folly River
(see note)
Lighthouse BORROW AREA "F"
Fish Haven (auth min 10 ft)
TANK
TOWER
Pile
Groins
End of Project Sta. 288+90
Sta. 280+00
Sta. 270+00
Sta. 260+00
Sta. 250+00
Sta. 240+00
Sta. 230+00
Sta. 220+00
Sta. 210+00
Sta. 200+00
Sta. 190+00
Sta. 180+00
Sta. 170+00
Sta. 160+00
Sta. 150+00
Sta. 140+00
Sta. 130+00
Sta. 120+00
Sta. 110+00
Sta. 100+00
Sta. 90+00
Sta. 80+00
Sta. 70+00
Sta. 60+00
Sta. 50+00
Sta. 40+00
Sta. 30+00
Sta. 20+00
Sta. 10+00
Sta. 0+00
FB1
FB2
FB3
FB4
FB5
FB6
FB7
FB8
FB9
S Sh
Central Folly
Legend
Borrow Areas
FB_Stationing
Beach-fx Reaches

FIGURE 2

Northeast Folly Beach – Reach FB8 - Existing Profile and Design

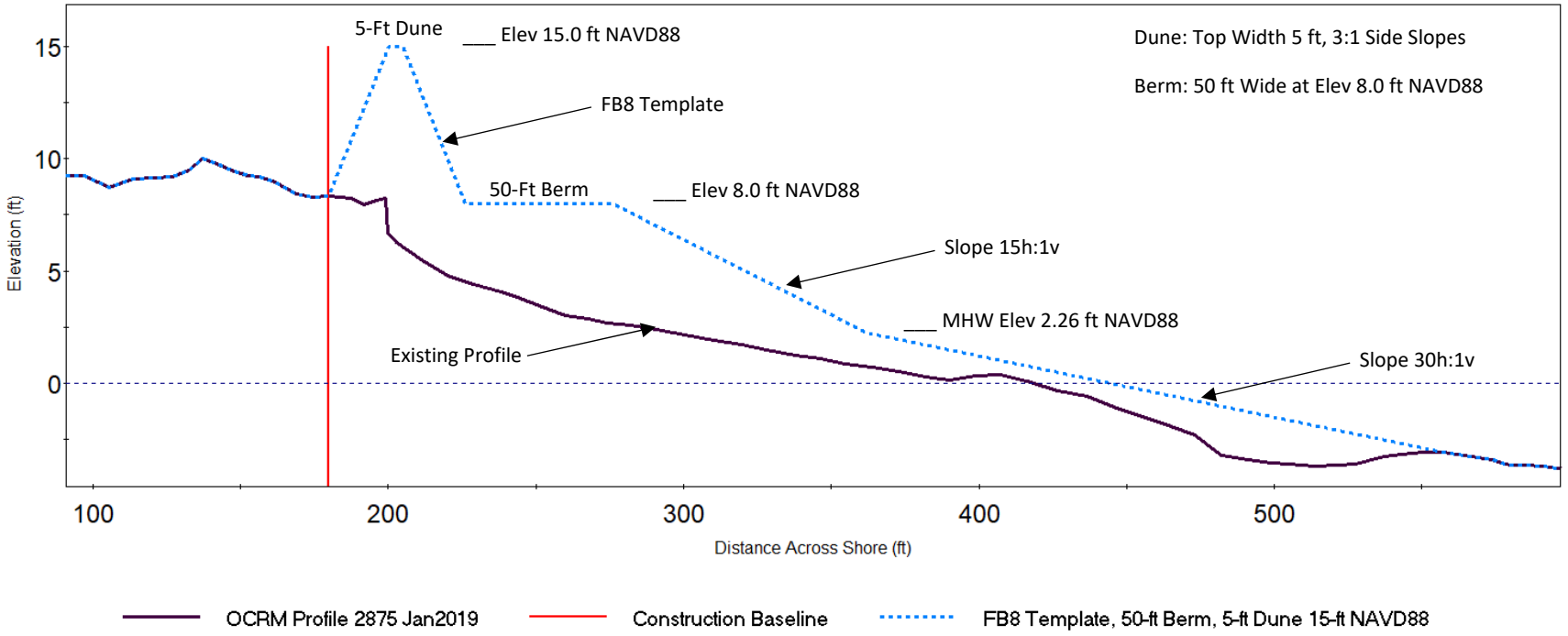

FIGURE 3

Southwest Folly Beach – Reach FB3 - Existing Profile and Design

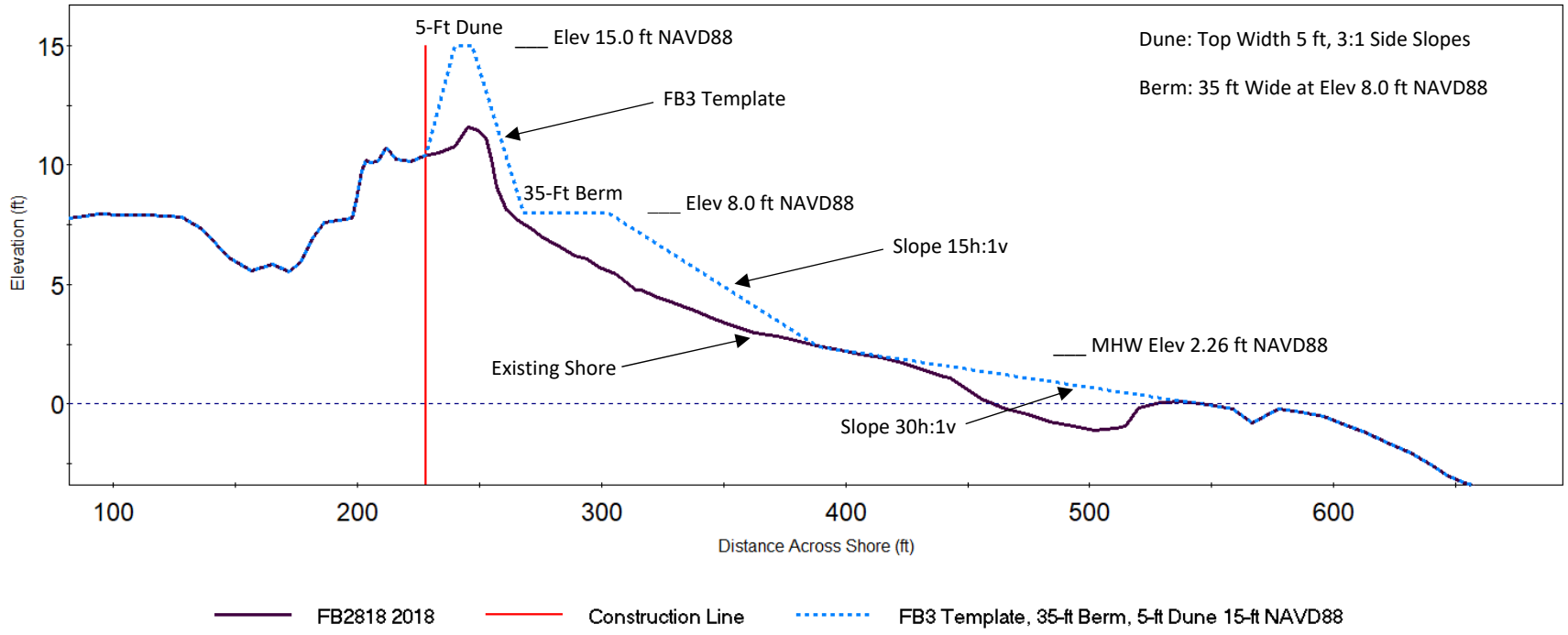

FIGURE 4

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

PROJECT: **FOLLY BEACH GRR STUDY**
PROJECT NO: P2 - 477186
LOCATION: FOLLY BEACH, South Carolina

DISTRICT: USACE - CHARLESTON **PREPARED:** **7/29/2021**
POC: CHIEF, COST ENGINEERING, Stephen Roman
USAED - WILMINGTON

This Estimate reflects the scope and schedule in report; FOLLY BEACH - INITIAL NOURISHMENT 2024

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
		Price Level 10/1/2020				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21									
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-Jun-20** ($K)	**TOTAL FIRST COST** ($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	$33,591	$9,070	27.0%	$42,661	2.9%	$34,549	$9,328	$43,877	$0	$43,877	9.8%	$37,918	$10,238	$48,156
	CONSTRUCTION ESTIMATE TOTALS:	$33,591	$9,070		$42,661	2.9%	$34,549	$9,328	$43,877	$0	$43,877	9.8%	$37,918	$10,238	$48,156
01	LANDS AND DAMAGES	$4	$1	27.0%	$5	2.9%	$4	$1	$5	$0	$5	7.4%	$4	$1	$6
30	PLANNING, ENGINEERING & DESIGN	$907	$245	27.0%	$1,152	4.0%	$943	$255	$1,198	$0	$1,198	10.5%	$1,043	$282	$1,324
31	CONSTRUCTION MANAGEMENT	$907	$245	27.0%	$1,152	4.0%	$943	$255	$1,198	$0	$1,198	12.5%	$1,062	$287	$1,348
	PROJECT COST TOTALS:	$35,409	$9,560	27.0%	$44,969		$36,439	$9,839	**$46,278**	$0	**$46,278**	9.8%	$40,027	$10,807	$50,834

ESTIMATED TOTAL PROJECT COST: **$50,834**

CHIEF, COST ENGINEERING, Stephen Roman

PROJECT MANAGER, Kent Tranter

CHIEF, REAL ESTATE, Ralph Werthmann

CHIEF, PLANNING, Elden Gatwood

CHIEF, ENGINEERING, Greg Williams

CHIEF, OPERATIONS, Daniel Brown

CHIEF, CONSTRUCTION, Dennis Lynch

CHIEF, CONTRACTING, John Mayo

CHIEF, PM-PB, Robert Keistler

CHIEF, DPM, Christine Brayman

ATTACHMENT A

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

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

PROJECT: FOLLY BEACH GRR STUDY
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH - INITIAL NOURISHMENT 2024

DISTRICT: USACE - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 7/29/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 28-Jul-21 Effective Price Level: 1-Oct-20				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21								
				RISK BASED										
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	***LIGHTHOUSE BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	INITIAL CONSTRUCTION DEC 2024													
17	BEACH REPLENISHMENT	$33,591	$9,070	27.0%	$42,661	2.9%	$34,549	$9,328	$43,877	2025Q2	9.8%	$37,918	$10,238	$48,156
	CONSTRUCTION ESTIMATE TOTALS:	$33,591	$9,070	27.0%	**$42,661**		$34,549	$9,328	$43,877			$37,918	$10,238	$48,156
01	LANDS AND DAMAGES	$4	$1	27.0%	$5	2.9%	$4	$1	$5	2024Q3	7.4%	$4	$1	$6
30	PLANNING, ENGINEERING & DESIGN 7%													
	Project Management	$907	$245	27.0%	$1,152	4.0%	$943	$255	$1,198	2024Q4	10.5%	$1,043	$282	$1,324
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$907	$245	27.0%	$1,152	4.0%	$943	$255	$1,198	2025Q2	12.5%	$1,062	$287	$1,348
	CONTRACT COST TOTALS:	$35,409	$9,560		$44,969		$36,439	$9,839	**$46,278**			$40,027	$10,807	**$50,834**

Filename: 20210729_Folly Beach_Initial Construction_TPCS - CSRM.xlsx
TPCS

ATTACHMENT A

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

PROJECT: **FOLLY BEACH GRR STUDY**
PROJECT NO: P2 - 477186
LOCATION: FOLLY BEACH, South Carolina

DISTRICT: USACE - CHARLESTON **PREPARED:** **7/29/2021**
POC: CHIEF, COST ENGINEERING, Stephen Roman
USAED - WILMINGTON

This Estimate reflects the scope and schedule in report; FOLLY BEACH - INITIAL NOURISHMENT 2024

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
		Price Level 10/1/2020				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21									
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-Jun-20** ($K)	**TOTAL FIRST COST** ($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	$3,125	$844	27.0%	$3,969	2.9%	$3,214	$868	$4,082	$0	$4,082	9.8%	$3,528	$952	$4,480
	CONSTRUCTION ESTIMATE TOTALS:	$3,125	$844		$3,969	2.9%	$3,214	$868	$4,082	$0	$4,082	9.8%	$3,528	$952	$4,480
01	LANDS AND DAMAGES	$4	$1	27.0%	$4	2.9%	$4	$1	$5	$0	$5	7.4%	$4	$1	$5
30	PLANNING, ENGINEERING & DESIGN	$68	$18	27.0%	$86	4.0%	$71	$19	$90	$0	$90	10.5%	$78	$21	$99
31	CONSTRUCTION MANAGEMENT	$68	$18	27.0%	$86	4.0%	$71	$19	$90	$0	$90	12.5%	$80	$21	$101
	PROJECT COST TOTALS:	$3,265	$881	27.0%	$4,146		$3,359	$907	**$4,266**	$0	**$4,266**	9.8%	$3,689	$996	$4,685

ESTIMATED TOTAL PROJECT COST: **$4,685**

CHIEF, COST ENGINEERING, Stephen Roman

PROJECT MANAGER, Kent Tranter

CHIEF, REAL ESTATE, Ralph Werthmann

CHIEF, PLANNING, Elden Gatwood

CHIEF, ENGINEERING, Greg Williams

CHIEF, OPERATIONS, Daniel Brown

CHIEF, CONSTRUCTION, Dennis Lynch

CHIEF, CONTRACTING, John Mayo

CHIEF, PM-PB, Robert Keistler

CHIEF, DPM, Christine Brayman

ATTACHMENT A

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

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

PROJECT: FOLLY BEACH GRR STUDY
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH - INITIAL NOURISHMENT 2024

DISTRICT: USACE - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 7/29/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 28-Jul-21 Effective Price Level: 1-Oct-20				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21								
				RISK BASED										
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	***LIGHTHOUSE BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	INITIAL CONSTRUCTION DEC 2024													
17	BEACH REPLENISHMENT	$3,125	$844	27.0%	$3,969	2.9%	$3,214	$868	$4,082	2025Q2	9.8%	$3,528	$952	$4,480
	CONSTRUCTION ESTIMATE TOTALS:	$3,125	$844	27.0%	**$3,969**		$3,214	$868	$4,082			$3,528	$952	$4,480
01	LANDS AND DAMAGES	$4	$1	27.0%	$4	2.9%	$4	$1	$5	2024Q3	7.4%	$4	$1	$5
30	PLANNING, ENGINEERING & DESIGN 7%													
	Project Management	$68	$18	27.0%	$86	4.0%	$71	$19	$90	2024Q4	10.5%	$78	$21	$99
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$68	$18	27.0%	$86	4.0%	$71	$19	$90	2025Q2	12.5%	$80	$21	$101
	CONTRACT COST TOTALS:	$3,265	$881		$4,146		$3,359	$907	**$4,266**			$3,689	$996	**$4,685**

ATTACHMENT A

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

PROJECT: **FOLLY BEACH GRR STUDY 2020**
PROJECT NO: P2 - 477186
LOCATION: FOLLY BEACH, South Carolina

DISTRICT: USACE - CHARLESTON **PREPARED:** **7/29/2021**
POC: CHIEF, COST ENGINEERING, Stephen Roman
USAED - WILMINGTON

This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21									
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-20** ($K)	**TOTAL FIRST COST** ($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	$127,495	$36,974	29.0%	$164,469	2.9%	$131,130	$38,028	$169,157	$0	$169,157	125.9%	$296,273	$85,919	$382,192
	CONSTRUCTION ESTIMATE TOTALS:	$127,495	$36,974		$164,469	2.9%	$131,130	$38,028	$169,157	$0	$169,157	125.9%	$296,273	$85,919	$382,192
01	LANDS AND DAMAGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN	$2,721	$789	29.0%	$3,510	4.0%	$2,830	$821	$3,650	$0	$3,650	191.1%	$8,236	$2,389	$10,625
31	CONSTRUCTION MANAGEMENT	$2,721	$789	29.0%	$3,510	4.0%	$2,830	$821	$3,650	$0	$3,650	196.9%	$8,401	$2,436	$10,837
	PROJECT COST TOTALS:	$132,937	$38,552	29.0%	$171,489		$136,789	$39,669	**$176,458**	$0	**$176,458**	128.8%	$312,910	$90,744	$403,654

ESTIMATED TOTAL PROJECT COST: **$403,654**

CHIEF, COST ENGINEERING, Stephen Roman

PROJECT MANAGER, Kent Tranter

CHIEF, REAL ESTATE, Ralph Werthmann

CHIEF, PLANNING, Elden Gatwood

CHIEF, ENGINEERING, Greg Williams

CHIEF, OPERATIONS, Daniel Brown

CHIEF, CONSTRUCTION, Dennis Lynch

CHIEF, CONTRACTING, John Mayo

CHIEF, PM-PB, Robert Keistler

CHIEF, DPM, Christine Brayman

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USACE - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 7/29/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
2036		Estimate Prepared: 28-Jul-21 Effective Price Level: 1-Oct-20				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21								
				RISK BASED										
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	***FOLLY RIVER BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 2 or CONTRACT 2 2036													
17	BEACH REPLENISHMENT	$38,274	$11,099	29.0%	$49,373	2.9%	$39,365	$11,416	$50,781	2036Q2	50.3%	$59,170	$17,159	$76,329
	CONSTRUCTION ESTIMATE TOTALS:	$38,274	$11,099	29.0%	**$49,373**		$39,365	$11,416	$50,781			$59,170	$17,159	$76,329
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN 7%													
	Project Management	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2035Q4	67.0%	$1,575	$457	$2,032
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2036Q2	70.3%	$1,606	$466	$2,072
	CONTRACT COST TOTALS:	$40,088	$11,626		$51,714		$41,252	$11,963	**$53,215**			$62,351	$18,082	**$80,433**

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USACE - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 7/29/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
	2048 Civil Works	Estimate Prepared:			28-Jul-21	Program Year (Budget EC):			2022					
		Effective Price Level:			1-Oct-20	Effective Price Level Date:			1 OCT 21					
WBS NUMBER	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	***STONO EBB SHOAL BORROW*** **PHASE 3 or CONTRACT 3 2048**	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
17	BEACH REPLENISHMENT	$41,299	$11,977	29.0%	$53,276	2.9%	$42,476	$12,318	$54,795	2048Q2	111.8%	$89,974	$26,093	$116,067
	CONSTRUCTION ESTIMATE TOTALS:	$41,299	$11,977	29.0%	**$53,276**		$42,476	$12,318	$54,795			$89,974	$26,093	$116,067
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
	PED	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2047Q4	169.6%	$2,543	$737	$3,280
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2048Q2	175.0%	$2,594	$752	$3,346
	CONTRACT COST TOTALS:	$43,113	$12,503		$55,616		$44,363	$12,865	**$57,228**			$95,111	$27,582	**$122,693**

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USACE - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 7/29/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 28-Jul-21 Effective Price Level: 1-Oct-20				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21								
	2060													
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	***FOLLY RIVER BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 4 or CONTRACT 4 2060													
17	BEACH REPLENISHMENT	$47,922	$13,897	29.0%	$61,819	2.9%	$49,288	$14,294	$63,582	2060Q2	198.5%	$147,129	$42,667	$189,797
	CONSTRUCTION ESTIMATE TOTALS:	$47,922	$13,897	29.0%	**$61,819**		$49,288	$14,294	$63,582			$147,129	$42,667	$189,797
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
	PED	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2059Q4	336.6%	$4,118	$1,194	$5,313
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$907	$263	29.0%	$1,170	4.0%	$943	$274	$1,217	2060Q2	345.4%	$4,201	$1,218	$5,419
	CONTRACT COST TOTALS:	$49,736	$14,423		**$64,159**		$51,175	$14,841	**$66,015**			$155,448	$45,080	**$200,528**

ATTACHMENT B

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

PROJECT: **FOLLY BEACH GRR STUDY 2020**
PROJECT NO: P2 - 477186
LOCATION: FOLLY BEACH, South Carolina

DISTRICT: USAED - CHARLESTON **PREPARED:** **5/20/2021**
POC: CHIEF, COST ENGINEERING, Stephen Roman
USAED - WILMINGTON

This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)						TOTAL PROJECT COST (FULLY FUNDED)			
						Program Year (Budget EC): 2022									
						Effective Price Level Date: 1 OCT 21									
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-20** ($K)	**TOTAL FIRST COST** ($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	$10,692	$3,101	29.0%	$13,793	2.9%	$10,997	$3,189	$14,186	$0	$14,186	122.1%	$24,419	$7,081	$31,500
	CONSTRUCTION ESTIMATE TOTALS:	$10,692	$3,101		$13,793	2.9%	$10,997	$3,189	$14,186	$0	$14,186	122.1%	$24,419	$7,081	$31,500
01	LANDS AND DAMAGES	$0	$0	-	$0	-	$0	$0	$0	$0	$0	-	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN	$204	$59	29.0%	$263	4.0%	$212	$62	$274	$0	$274	191.1%	$617	$179	$797
31	CONSTRUCTION MANAGEMENT	$204	$59	29.0%	$263	4.0%	$212	$62	$274	$0	$274	196.9%	$630	$183	$812
	PROJECT COST TOTALS:	$11,100	$3,219	29.0%	$14,319		$11,421	$3,312	**$14,733**	$0	**$14,733**	124.7%	$25,666	$7,443	$33,109

ESTIMATED TOTAL PROJECT COST: **$33,109**

CHIEF, COST ENGINEERING, Stephen Roman

PROJECT MANAGER, Kent Tranter

CHIEF, REAL ESTATE, Ralph Werthmann

CHIEF, PLANNING, Elden Gatwood

CHIEF, ENGINEERING, Greg Williams

CHIEF, OPERATIONS, Daniel Brown

CHIEF, CONSTRUCTION, Dennis Lynch

CHIEF, CONTRACTING, John Mayo

CHIEF, PM-PB, Robert Keistler

CHIEF, DPM, Christine Brayman

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USAED - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 5/20/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
	2036	Estimate Prepared: 20-May-21 Effective Price Level: 1-Oct-20				Program Year (Budget EC): 2022 Effective Price Level Date: 1 OCT 21								
				RISK BASED										
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	***FOLLY RIVER BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 2 or CONTRACT 2 2036													
17	BEACH REPLENISHMENT	$3,474	$1,007	29.0%	$4,481	2.9%	$3,573	$1,036	$4,609	2036Q2	50.3%	$5,371	$1,557	$6,928
	CONSTRUCTION ESTIMATE TOTALS:	$3,474	$1,007	29.0%	**$4,481**		$3,573	$1,036	$4,609			$5,371	$1,557	$6,928
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN 7%													
	Project Management	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2035Q4	67.0%	$118	$34	$152
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2036Q2	70.3%	$120	$35	$155
	CONTRACT COST TOTALS:	$3,610	$1,047		$4,657		$3,714	$1,077	**$4,792**			$5,609	$1,627	**$7,236**

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USAED - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 5/20/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
	2048 Civil Works	Estimate Prepared: / Effective Price Level:			20-May-21 / 1-Oct-20	Program Year (Budget EC): / Effective Price Level Date:			2022 / 1 OCT 21					
WBS NUMBER	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	***STONO EBB SHOAL BORROW*** **PHASE 3 or CONTRACT 3 2048**	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
17	BEACH REPLENISHMENT	$3,491	$1,012	29.0%	$4,503	2.9%	$3,591	$1,041	$4,632	2048Q2	111.8%	$7,606	$2,206	$9,811
	CONSTRUCTION ESTIMATE TOTALS:	$3,491	$1,012	29.0%	**$4,503**		$3,591	$1,041	$4,632			$7,606	$2,206	$9,811
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
	PED	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2047Q4	169.6%	$191	$55	$246
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2048Q2	175.0%	$194	$56	$251
	CONTRACT COST TOTALS:	$3,627	$1,052		$4,679		$3,732	$1,082	**$4,814**			$7,991	$2,317	**$10,308**

ATTACHMENT B

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

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

PROJECT: FOLLY BEACH GRR STUDY 2020
LOCATION: FOLLY BEACH, South Carolina
This Estimate reflects the scope and schedule in report; FOLLY BEACH GRR - PERIODICS FY 2036, 2048 & FY 2060

DISTRICT: USAED - CHARLESTON
POC: CHIEF, COST ENGINEERING, Stephen Roman
PREPARED: 5/20/2021

Civil Works Work Breakdown Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared:			20-May-21	Program Year (Budget EC):			2022					
	2060	Effective Price Level:			1-Oct-20	Effective Price Level Date:			1 OCT 21					
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	***FOLLY RIVER BORROW***	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 4 or CONTRACT 4 2060													
17	BEACH REPLENISHMENT	$3,727	$1,081	29.0%	$4,808	2.9%	$3,833	$1,112	$4,945	2060Q2	198.5%	$11,443	$3,318	$14,761
	CONSTRUCTION ESTIMATE TOTALS:	$3,727	$1,081	29.0%	**$4,808**		$3,833	$1,112	$4,945			$11,443	$3,318	$14,761
01	LANDS AND DAMAGES	$0	$0	29.0%	$0	0.0%	$0	$0	$0	0	0.0%	$0	$0	$0
30	PLANNING, ENGINEERING & DESIGN													
	PED	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2059Q4	336.6%	$309	$90	$398
31	CONSTRUCTION MANAGEMENT													
	Construction Management	$68	$20	29.0%	$88	4.0%	$71	$21	$91	2060Q2	345.4%	$315	$91	$406
	CONTRACT COST TOTALS:	$3,863	$1,120		**$4,983**		$3,975	$1,153	**$5,127**			$12,066	$3,499	**$15,565**

ATTACHMENT B

ALL COSTS ARE October 2021 PRICE LEVEL

ATTACHMENT "A" FOR COST ENGINEERING APPENDIX "C"

THE OVERFILL FACTORS AND MECHANICAL LOSSES FOR THE BORROW AREAS ARE AS FOLLOWS:

LIGHTHOUSE INLET BORROW AREA = 1.35 OF ; 20% MECHANICAL LOSSES

STONO EBB SHOAL BORROW AREA = 1.17 OF ; 18% MECHANICAL LOSSES

Estimated by	Chris Norton
Designed by	USACE - SAW - SAC
Prepared by	
Preparation Date	7/29/2021
Effective Date of Pricing	10/1/2021
Estimated Construction Time	180 Days

ATTACHMENT C

Currency in US dollars

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ATTACHMENT C

Description	UOM	Quantity	DirectLabor	DirectEQ	DirectMatl	DirectCost	CostToPrime	ContractCost	ProjectCost
Project Cost Summary Report			0	0	0	182,708,605	0	182,708,605	182,708,605
FOLLY BEACH INITIAL NOURISHMENT FY 2024 ----------Lighthouse Borrow Source	LS	1	0	0	0	38,672,570	0	38,672,570	38,672,570
CSRM	EA	1	0	0	0	35,408,100	0	35,408,100	35,408,100
Beach Replenishment	LS	1	0	0	0	33,591,100	0	33,591,100	33,591,100
REAL ESTATE	LS	1	0	0	0	3,500	0	3,500	3,500
PED	LS	1	0	0	0	906,750	0	906,750	906,750
Construction Mgt	LS	1	0	0	0	906,750	0	906,750	906,750
SEC 111	EA	1	0	0	0	3,264,470	0	3,264,470	3,264,470
Beach Replenishment	LS	1	0	0	0	3,124,470	0	3,124,470	3,124,470
REAL ESTATE	LS	1	0	0	0	3,500	0	3,500	3,500
PED	LS	1	0	0	0	68,250	0	68,250	68,250
Construction Mgt	LS	1	0	0	0	68,250	0	68,250	68,250
FOLLY BEACH - PERIODIC NOURISHMENTS ----------2036--2048--2060	LS	1	0	0	0	144,036,035	0	144,036,035	144,036,035
FOLLY BEACH PERIODIC NOURISHMENT FY 2036 ----------Stono Ebb Shoal Borrow Source	EA	1	0	0	0	43,697,371	0	43,697,371	43,697,371
CSRM	EA	1	0	0	0	40,087,050	0	40,087,050	40,087,050
SEC 111	EA	1	0	0	0	3,610,321	0	3,610,321	3,610,321
FOLLY BEACH PERIODIC NOURISHMENT FY 2048 ----------Stono Ebb Shoal Borrow Source	EA	1	0	0	0	46,739,434	0	46,739,434	46,739,434
CSRM	EA	1	0	0	0	43,112,310	0	43,112,310	43,112,310
SEC 111	EA	1	0	0	0	3,627,124	0	3,627,124	3,627,124
FOLLY BEACH PERIODIC NOURISHMENT FY 2060 ----------Stono Ebb Shoal Borrow Source	EA	1	0	0	0	53,599,230	0	53,599,230	53,599,230
CSRM	EA	1	0	0	0	49,735,580	0	49,735,580	49,735,580
SEC 111	EA	1	0	0	0	3,863,650	0	3,863,650	3,863,650

ATTACHMENT C

Currency in US dollars