

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

*Present as many projects as requested by the agency, or 10 projects if not specified.
(Complete one Section F for each project.)*

20. EXAMPLE
PROJECT KEY
NUMBER

F-3

21. TITLE AND LOCATION (<i>City and State</i>)		22. YEAR COMPLETED	
VE Study - Corpus Christi Ship Channel - PA 10 - Shoreline Protection/Stabilization - Containment Dike Raise, Texas		PROFESSIONAL SERVICES 2018	CONSTRUCTION (<i>If applicable</i>) 2022
a. PROJECT OWNER USACE, Galveston District	b. POINT OF CONTACT Mr. Jake Walsdorf, PLA VEO/A-E Contract Coordinator	c. TELEPHONE NUMBER 409-766-3817	
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (<i>Include scope, size, cost</i>)			

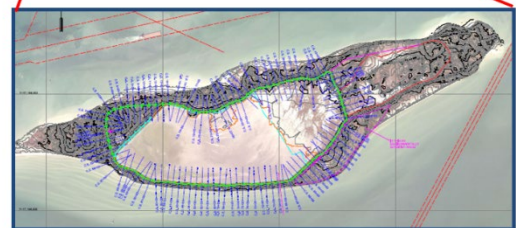
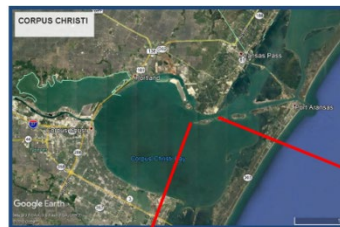
Prime Firm: MSMM Engineering – Contract W9126G-16-D-0017, Task Order # W9126G18F0159 – Subconsultant – Neelu, Inc.

Our team was tasked by the USACE Galveston District with completing a Value Engineering Study for the potential Containment Dike Raise along the Corpus Christi Ship Channel in Corpus Christi, Texas. We conducted a 4-day value engineering study evaluating the design to repair the stone jetties at the entrance to the Corpus Christi Ship Channel. The plans called for deepening the entrance channel by 7 ft. to an authorized depth of -52 ft. MLT. This results in the entrance channel bottom depth being lowered by 2 ft. to -54 MLT and extending it by 10,000 feet further into the Gulf of Mexico. Thus, the jetties need significant improvements/repairs. Utilizing the SAVE method, the VE team evaluated the \$50M construction estimate and project documentation, eventually developing 7 alternatives that were accepted for a net savings of approximately \$1.75, which resulted in the re-evaluation of the entire scope of the project by the Galveston District design team.

Project Description:

CCSC PA10 is located on the south side of Corpus Christi Ship Channel, to the northwest of Corpus Christi Bay, and south of Ingleside in San Patricio County Texas.

The average containment dike elevation of PA10 is about 32 feet from survey taken in 2013 (as presented in the survey plot from station 68+00 to station 71+00 in Section II. The proposed plan is to optimize erosion protection beginning at station 65+00 and ending at station 99+00 which makes the total design length of the erosion prevention construction 3,400 linear feet. Additionally, the Dike is proposed to be raised to a uniform elevation +40 feet, along with a PA expansion towards the northeast and relocation of the spill box northward.



Construction Cost:

Total Construction Budget at the Design Development (35%) phase totals approximately \$8 million (not including contingency).

VE Workshop: May 22-25, 2018.

Facilitated by Ramesh Kalvakaalva, PE, CVS of Neelu Inc, Team Members were provided by MSMM, Neelu Inc and USACE Galveston District.

SMEs included: Civil; Hydraulics; Geotechnical; Constructability; Operations; Cost Estimator

The VE Workshop adhered to the USACE Value Standard and the six step Value Engineering job plan as promulgated by SAVE International®. This six-step job plan included: I. Information Phase; II. Function Analysis Phase; III. Speculation/Creative Phase; IV. Evaluation Phase; V. Development Phase; VI. Presentation Phase. A FAST Diagram was developed to validate the Scope of the Operations and enable the VE Team to focus on the Functions identified as High Risk.

The VE Facilitator and PM also participated in the Implementation Meeting.



Objectives of the VE Study:

- Get the best return for construction dollars spent
- Assist in bringing the project within budget
- Assist in identifying the best approach for project delivery
- Reduce the risks associated with project delivery
- Minimize Life Cycle Costs for O & M
- Enhance the project outcome

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

FIRM NAME	(2) FIRM LOCATION (<i>City and State</i>)	(3) ROLE
MSMM Engineering, LLC	New Orleans, LA, Houston, TX	Project Management / VE Team Members (Co-Facilitator/Cost Estimator: Don "D" Daigle, CVS, CCP; Civil: Jim Wilson, PE, PM: Josh Carson)
Neelu, Inc.	Smyrna, GA	VE Facilitation / VE Team Members (Facilitator: Ramesh Kalvakaalva, PE, CVS; Geotech: Garfield Wray, PE, D.GE, Constructability: Charles McDuff, PE, CVS-Life)