## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

13. ROLE IN THIS CONTRACT 12. NAME 14. YEARS EXPERIENCE a. TOTAL b. WITH CURRENT FIRM Jeff Shelden, PE **Coastal Engineer** 39 37

15. FIRM NAME AND LOCATION (City And State)

## Moffatt & Nichol – Raleigh, North Carolina

16. EDUCATION (DEGREE AND SPECIALIZATION) 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer, Alabama: (#26262), Louisiana: BS, Civil Engineering (#29462), Mississippi: (#16219), and Texas: (#145426)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, Etc.)

Mr. Shelden has 39 years of coastal engineering experience, including extensive experience in the analysis and evaluation of coastal processes for coastal storm risk management, floodwalls, levees and shoreline protection projects. His work includes leading major navigation structure design and analyses, including Cape Fear (Section 203), Coos Bay (Section 204/208), and Corpus Christi, through which he led the deep draft channel design. His work in Texas includes subject matter expert input to shoreline protection projects, coastal storm surge analysis modeling, and levee failure risk assessments. He has detailed experience in the application of various numerical models used for those analyses, including the MIKE Suite GENESIS models in 1, 2, or 3D applications to determine sediment transport, scour and deposition: tidal hydraulics, salinity intrusion, winds, waves, and currents; shoreline evolution; and hydraulic and storm surge effects on coastal

structures.					
19. RELEVANT PROJECTS					
		(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
		Bogue Banks Beach Nourishment Master Plan, Carteret County, NC	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	
			2021	2021	
		(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE			
	а	Scope: (Full Project Writeup is included in SF330 Section F9) Moffatt & Nichol was tasked by Carteret County to provide all final design, bidding, and engineering during construction services for three projects. The projects consisted of developing a multidecadal programmatic EIS, master plan, engineering report, and GENESIS/SBEACH modeling. Cost: \$79.6M Role: Coastal Engineer			
		(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
		Port Freeport, Velasco Terminal Berths 8 and 9, Freeport,	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	
		Texas	2019	2023	
		(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE			
1	Scope: Mr. Shelden provided subject matter expert input into the detailed design, and prepara construction documents for the coastal engineering and dredging components for this new 1,6			new 1,600- foot	
		wharf navigation structure and floodwall. Jeff reviewed coastal engineering aspects, which included the			
		design of the navigation channel template, sea level rise allowances, and submerged scour protection			
		beneath the wharf. Cost: \$4M Role: Coastal Engineer			

(1) TITLE AND LOCATION (City and State) (2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (if applicable) Lightning Point Restoration, Bayou La Batre, Alabama 2019 2020 (3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

□ Check if project performed with current firm

Scope: Mr. Shelden provided the quality control review for determining environmental design criteria for the shoreline protection component using hydrodynamic, spectral wave, and Boussinesg wave modeling. This included the review of wave height thresholds for restored marsh edge erosion and modeled wave generation, propagation, and transmission at shoreline protection features using advanced numerical modeling. The project also included a statistical evaluation to determine the necessary elevation of the living shoreline to increase the resiliency of the restored marsh platform and breakwater armor stone for resiliency when exposed to extreme storms. Cost: \$14M Role: Coastal Engineer