

SBD - CM Review Form

To: Project Review & Analysis - Construction
From: SBD Engineer - Eric Perez
Department: Miami Dade Water & Sewer Department
Date: 7/18/2019

Contact: Isaac Smith
Resubmittal:

PROJECT NUMBER: S-943
PROJECT TITLE: CD 2.01(7) ELECTRICAL IMPROVEMENTS - SUBSTATIONS 7A, 8A, 9A, 10A
PROJECT LOCATION: 3839 Rickenbacker Causeway in Virginia Key, Florida

SCOPE OF WORK/DESCRIPTION: The scope of work includes, but is not limited to, furnishing all materials, labor, and equipment necessary for new electrical substation building for Substations 7A, SA, 9A and 10A. The substations provide power for the processes at the Oxygen Generation Plant 2 building. The electrical improvements consist of removing the existing substation transformers within the existing building and installing new transformers and electrical gear within a new Substation Building. General site civil work will include all grading, paving, drainage, utilities and pavement restoration. associated instrumentation and controls; and modifications to the existing substation buildings, including: replacement of existing built-up roofing, new interior and exterior lighting, power and lighting panels, new doors, louvers, equipment pads, exhaust fans, and air conditioning and filtration equipment; and new sidewalks, fencing, and site grading. Major portions of the work includes:

1. Installation of new 15 KV feeder cables from Main Switchgear Building to the new substation transformers T-7A, T-BA, T-9A and T-10A that will be located in the new Substation Building
2. Installation of two (2) new, less-flammable, liquid filled, indoor transformers for substation 7A and BA each rated at 13.2KV-2400/4160V, 2000KVA to replace the existing transformers. The transformers will be anchored to the concrete pads.
3. Installation of new 15 KV primary fused switch units for each new substation transformer 7A and BA
4. Installation of two (2) new 4160V solid state reduced voltage starters with required interlocks between each such that only one starter can be operational at given time.
5. Installation of a new 1750HP, 4160V compressor motor on Compressor No. 3. motor (to be Owner-furnished)..
6. Installation of two (2) new, less-flammable, liquid filled, indoor transformers for substation 9A and 10A each rated at 13.2KV-277/480V, 1500KVA to replace the existing substation transformers. The transformers will be anchored to concrete pads.
7. Installation of a new 15 KV primary fused switch units for each new substation transformer 9A and 10A.
8. Installation of a new arc-resistant, double-ended, 480V draw-out switchgear lineups with Main-Tie- Tie-Main configurations for Substations 9A & 10A.
9. Installation of a new 480V feeder cables from the new switchgear to MCC-4 and MCC-6 using the combination of existing ductbank/conduits and required duct bank extensions.
10. Installation of a new arc-resistant, double-ended, low voltage (480V), motor control center with Main-Tie-Tie-Main configuration to feed the 480V HVAC motor loads.
11. Installation of a new power panels, lighting transformers and lighting panels in the Switchgear Room to support building auxiliary loads.
12. Installation of a new LED lighting fixtures inside and outside of the new Substation Building.
13. Installation of lightning protection system for the new substation building.
14. Installation of a new fire alarm system with Fire Alarm Control Panel.
15. In each transformer room and the switchgear room provide two water-cooled heat pump AC units.
17. Construction of new building with CMU walls, cast-in-place walls, pre-cast concrete joist roof with SBS modified bituminous membrane
18. Painting interior and exterior of each substation building.

Initial: EP

Date: 7/23/19

SPECIAL REQUIREMENTS: Bidders shall submit proof that his/her firm has at least the minimum successful contract experience as requested below:

- a. Bidders shall be experienced in chemical storage and metering facilities, specifically for sodium hypochlorite applications..
- b. Bidders or Bidder's Electrical Subcontractor shall have successfully completed a minimum of three (3) projects demonstrating experience with installation of electrical equipment rated for 13.2KV and 480V power supply within the last 10 years

Due to the specialized nature of the project is not recommended for Joint Venture

TRADES/SUBTRADES	AMOUNT		COMMENTS
General Engineering/General Building Contractor			
Mobilization & demobilization	\$698,000.00		
Geotechnical and Erosion Control	\$55,000.00		*Opportunities for Small Businesses due to requirements
For all Site Civil demolition, removal and disposal	\$72,050.00		*Opportunities for Small Businesses due to requirements
For all Site Civil Work, including grading, compaction, pavement restoation and sidewalk construction,	\$77,060.00		*Opportunities for Small Businesses due to requirements
For all structural and architectural work for Substation Buildings	\$2,265,140.00		*Opportunities for Small Businesses due to requirements
For furnishing and installing all protective coating and coatings	\$195,760.00		*Opportunities for Small Businesses due to requirements
Final Clean-Up	\$10,800.00		
Mechanical			
For furnishing and installing all building mechanical Work for Substations.	\$507,980.00		*Opportunities for Small Businesses due to requirements
Electrical			
For demolition, removal and disposal of electrical components - Oxygen Generation Plant 2 Bldg.	\$58,420.00		*Opportunities for Small Businesses due to requirements
For furnishing and installing electrical sitework and components	\$878,700.00		
For furnishing and installing electrical components, transformers and switchgear in Substation	\$4,208,700.00		
For all Instrumentation and Control W ork at Substations, including furnishing a Systems Integrator	\$5,200.00		
For conducting startup and commissioning services for the new electrical distribution system	\$161,344.00		

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TRADES/SUBTRADES	AMOUNT		COMMENTS
	BASE TOTAL	\$9,194,154.00	90.91%
Contingency Allowance (10% of Base Estimate)		\$919,415.40	9.09%
	TOTAL AMOUNT	\$10,113,569.40	100.00%

Small Business Development Signature:  Date: 7/23/19

***Trades/Sub-Trades identified for possible subcontracting opportunities by SBD CM**

WASD is recommending **11.51%**

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