

**DEPARTMENT INPUT**  
**CONSTRUCTION CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION**

Check applicable Ordinance(s):  90-143 Responsible Wage and Benefits       03-237 (formerly 03-1) Community Workforce Program

**PROJECT INFORMATION**      See attachment

**Contract/Project/\*Work Order No.:** S-882

\*Reference corresponding project number when submitting a work order

**Contract/Project Title:** CD 1.02 Oxygen Production Upgrades

**Description/Scope of Work:** See Attached

**Estimated Cost:** 7612081 **Funding Source:** Other (specify)

**Location of Project** (street address or beginning and ending points) i.e. 12345 NE 23<sup>rd</sup> Ct or Starts at 135 St. ends at 145 St.  
South District Waste Water Treatment Plant at 8590 SW 232 Street

**PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CWP)**      See attachment

Engineer/Department or Agency's estimated required workforce for Project  Work Order :

Trade/Skills Required	Est. # of workforce required per trade	Est. # of total days to complete job
N/A		
N/A		
N/A		

Comments: Highly specialized work involving Oxygen compressors. Work will be performed in an oxygen enriched environment which may produce special hazards.

**PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE)**      See attachment

Sub-Trade	Est. Cost	% of Item to Base Bid	Availability
<b>Underground Utility/excavation</b>	\$385,612	5.6%	
<b>Building</b>	\$760,9763	11%	
<b>Electrical</b>	\$185,306	1.9%	

**RECOMMENDATION**

**Set-Aside:** Level 1  Level 2  Level 3  Trade Set-Aside  Sub-Contractor Goal  Workforce Goal  No Measure

**Basis for Recommendation:** This project is to install an additional Oxygen Gas Compressor in the existing plant without taking the current Oxygen Compressors off-line. Liquid Oxygen (LOX) and Gaseous Oxygen (GOX) present a hazardous work environment due to increased risk of fire and explosion along with extreme low temperatures. As part of this project, a new electrical room will be constructed. CSBE goals are established to prepare site, build new electrical building, provide house electric (120/240), and lighting. Not included are the new control panels, process and circuitry required for plant operation.

**Date submitted to DBD:** \_\_\_\_\_

**Contact Person:** Isaac Smith

**Telephone No.:** 786-552-8255

**DEPARTMENTAL INPUT  
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION**

To: Gary T. Hartfield, Division Director  
Internal Services Department  
Small Business Development Division

From: Isaac Smith, Manager  
Construction Contracts Section

Department: Miami-Dade Water and Sewer Department

Contract Title: CD 1.02 OXYGEN PRODUCTION UPGRADES

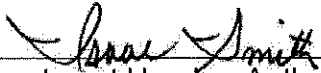
Contract No.: S-882

Estimate Amount: \$ 7,612,081 [ \$6,920,074 Construction + \$ 692,007 Contingency ]

Funding Source: EW 660, WASD Revenue Bonds Sold

**Small Business Enterprise – Construction – 21.13%**

**Analysis for Recommendation (Attached)**



Department Head or Authorized Agent

**DESCRIPTION OF PROJECT:**

This project is one in a series of projects that are being processed under County Code Section 2-8.2.12, entitled Miami-Dade Water and Sewer Department Consent Decree and Capital Improvement Programs Acceleration Ordinance. In general, the project consists of furnishing all materials, labor, and equipment necessary for the Oxygen Production Upgrades at the South District Wastewater Treatment Plant (SDWWTP), located at 8590 S.W. 232nd Street, Section 21, Township 56, Range 40, Miami-Dade, Florida 33190.

The scope of work includes, but is not limited to, upgrading the existing oxygen production facilities which shall include construction of a new electrical building, installation of an owner furnished centrifugal compressor, and overhaul of the existing centrifugal compressor. The purpose of the upgrade will be to increase the oxygen production capacity at the plant and to provide for redundancy of equipment.

**LICENSES:** The types of licenses required are: State General Contractor, General Engineering Contractor and/or other categories as applicable by Chapter 489 of the Florida Statutes or Chapter 10 of Miami-Dade County Code.

**COMMUNITY WORKFORCE PROGRAM**

**CWP PARTICIPATION: Not Applicable, as Project is not in a DTA**

## **SPECIAL PROJECT CONSIDERATIONS:**

Bidders shall demonstrate relevant minimum experience by submitting proof with their bid contract experience as required below:

- a. The project involves specialized work with large expensive specialized equipment. Portions of the work will be performed in an enriched oxygen environment, requiring special safety and health procedures are implemented and used prior construction, during construction and startup.
- b. Bidders are advised that the project will be constructed while while maintaining operations of an existing wastewater treatment plant.
- c. Due to the specialized nature of the work, a detailed breakdown is provided to facilitate your review.

The scope of work consist of furnishing all material, except as furnished by the Department, labor and equipment necessary for the following items:

1. Upgrade/overhaul of Compressor No. 3 from 100-tons to 125-tons, furnished by the Department.
2. Installation of new 125 Ton Compressor No. 4, furnished by the Department.
3. Installation of Local Control Panel for Compressor Nos. 3 & 4, furnished by the Department.
4. Installation of all new compressor ancillary components including but not limited to the inlet filter for each compressor.
5. Piping modifications and additions to connect Compressor No. 4 to the existing Cryogenic Oxygen Plants.
6. Construction of a new Electrical Building to power Compressor Nos. 3 and 4, complete, including:
  - a. Two (2) 5000 kVA Transformers
  - b. Two (2) 5 kV and Two (2) 15 kV Switchgears
  - c. 25 Ton HVAC system.
7. Installation of a new Motor Control Center.
8. Electrical wiring modifications to feed power to the new and upgraded compressors to include installation of the following:
  - a. Two (4) New 15 kV feeders from existing Switchgear Building 1 to the new Electrical Building with two (2) feeder jumpers at the new 15 kV switchgear.
  - b. New electrical duct bank to accommodate the new 15 kV feeders.
  - c. New 15 kV feeder from existing Switchgear Building No.1 to existing Substation No.17.
9. Decommissioning in place of the following components and equipment:
  - a. Compressor Nos. 1 & 2
  - b. Starters for Compressor No. 1 and No. 2
  - c. Substation Nos. 3, 4 and 20
10. Demolition of the following components:
  - a. Air and Cooling Water Piping for Compressor Nos. 1 & 2.
  - b. Compressor No. 3 inlet air piping, valves and filter components.
  - c. Compressor No. 3 discharge silencer and blow-off valve.
  - d. 15 kV feeders to Compressor No. 1 and Compressor No. 2.
  - e. 15 kV feeder jumper between Substation 1 and Substation 17.
11. Site Civil and Stormwater work.
12. Relocation of existing utilities.

**South District Wastewater Treatment Plant  
CD 1.02 Oxygen Production Upgrades (\$-882)**

**Analysis for Recommendations**

Bid Form No.	Description	Direct Amount	Percent of Project Sub Total w/Contingency	Work Element	CSBE Construction	CSBE Const as % of Base	CSBE Goods and Services
1	Mob/Demob and Preparatory Work <sup>2</sup>	\$ 2,593,365	30.8%				
2	Compressor Piping and Electrical Feeder Demolition	\$ 14,722	0.2%				
3	General Site Civil	\$ 385,612	4.6%		\$ 385,612.00	5.57%	
4	Decommissioning of Compressors and Substations	\$ 8,709	0.1%				
5	Process Mechanical	\$ 75,445	0.9%				
6	Architectural and Structural	\$ 1,014,631	12.1%	Construction of Electrical Building including slab, foundation, walls, roof system.	\$ 760,973.25	11.00%	\$ 253,657.75
7	Installation of Compressor No. 4	\$ 42,496	0.5%				
8	Installation of Compressor No. 3	\$ 92,682	1.1%				
9	Building Mechanical	\$ 216,876	2.6%	HVAC Systems	\$ 130,125.60	1.88%	\$ 86,750.40
10	Electrical	\$ 2,105,752	25.0%	Household Electric (120/240) service to include building lighting, HVAC power	\$ 185,306.18	2.68%	\$ 25,269.02
11	Site Electrical	\$ 296,273	3.5%				
12	Installation of Local Control Panels	\$ 1,103	0.0%				
13	Instrumentation and Controls	\$ 61,408	0.7%				
14	Misc. and Punchlist Items	\$ 11,000	0.1%				
15	<b>SUBTOTAL</b>	<b>\$ 6,920,074</b>	<b>90.9%</b>		<b>\$ 1,462,017.03</b>		<b>\$ 365,677.17</b>
20	WASD Contingency Allowance (10%)	\$ 692,007	9.1%				
	<b>SUBTOTAL and Contingency</b>	<b>\$ 7,612,081</b>	<b>100.0%</b>		<b>21.13%</b>		<b>5.28%</b>
16	WASD Dedicated Allowance (3% - Permits, fees, etc.)	\$ 207,602					
17	WASD Dedicated Allowance (Permitting Comments)	\$ 200,000					
18	WASD Dedicated Allowance (Utility Conflicts)	\$ 150,000					
19	WASD Dedicated Allowance (Lead/Asbestos Abatement)	\$ 100,000					
	<b>PROJECT TOTAL</b>	<b>\$ 7,819,684</b>					

Notes:

<sup>1</sup> Equipment total includes a 10% markup on equipment and a 9.4% markup for storage by Owner.

<sup>2</sup> Total includes Contractor Overhead&Profit, General Conditions, Taxes, Mob/Demob, Bonds, and Insurance.

**CONSTRUCTION**

**GOOD & SERVICES**

**SBE**

**SBE**

**CONSTRUCTION**

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**SBE**

**DEPARTMENTAL INPUT  
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION**

To: Gary T. Hartfield, Division Director  
Internal Services Department  
Small Business Development Division

From: Isaac Smith, Manager  
Construction Contracts Section

Department: Miami-Dade Water and Sewer Department

Contract Title: CD 1.02 OXYGEN PRODUCTION UPGRADES

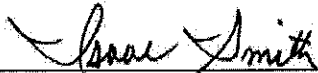
Contract No.: S-882

Estimate Amount: \$ 7,612,081 [\$6,920,074 Construction + \$ 692,007 Contingency ]

Funding Source: EW 660, WASD Revenue Bonds Sold

**Small Business Enterprise – Goods & Services – 5.28%**

**Analysis for Recommendation (Attached)**



Department Head or Authorized Agent

**DESCRIPTION OF PROJECT:**

This project is one in a series of projects that are being processed under County Code Section 2-8.2.12, entitled Miami-Dade Water and Sewer Department Consent Decree and Capital Improvement Programs Acceleration Ordinance. In general, the project consists of furnishing all materials, labor, and equipment necessary for the Oxygen Production Upgrades at the South District Wastewater Treatment Plant (SDWWTP), located at 8590 S.W. 232nd Street, Section 21, Township 56, Range 40, Miami-Dade, Florida 33190.

The scope of work includes, but is not limited to, upgrading the existing oxygen production facilities which shall include construction of a new electrical building, installation of an owner furnished centrifugal compressor, and overhaul of the existing centrifugal compressor.

**CONSIDERATIONS**

1. The project involves specialized work using specialized material and equipment at an existing cryogenic oxygen generation plant used to produce high purity oxygen for the oxygenation bioreactors.
2. Portions of the work will be performed in an enriched oxygen environment, requiring special safety and health procedures are implemented prior to and used during construction.
3. The Department has evaluated the project for possible opportunities for participation in the area of SBE-Goods and Services. The possible areas of subcontracting are in the area of Cryogenic Processing, Structural, Electrical, Instrumentation, Mechanical, Sitework/Civil and Architectural. Our recommendation is in the area of Goods: for Architectural; and Services: for Electrical, Painting, Waterproofing and HVAC for the project.

<b>Analysis for Small Business Enterprise – Goods and Services Recommendation</b>				
<b>Item</b>	<b>Goods &amp; Services</b>	<b>Prime Contractor</b>	<b>Sub-Contractor</b>	<b>SBE Availability</b>
1.	<b>GOODS:</b> Building Structural Cryogenic Oxygen Compressors Mechanical Process Equipment Building Electrical Instrumentation & Controls HVAC Piping & Fittings	X X X X X   	   X X X X  	   X  X X  
2.	<b>SERVICES</b> Sitework/Civil Structural Architectural Roofing Painting Waterproofing HVAC & Plumbing Electrical	X X X     X  	 X X X X X X X X 	X X X X X X X X X 