

# Memorandum



Date: April 11, 2018

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

From: Kevin T. Lynskey, Director  
Miami-Dade Water and Sewer Department

Subject: Review Item: Design-Build Services for the Installation of a 54-inch Diameter Water Transmission Main near Red Road from John E. Preston Treatment Plant to West 53 Street - Project No. DB17-WASD-02

---

The Miami-Dade Water and Sewer Department (WASD) is requesting that the subject project be reviewed for Small Business Enterprises (SBE) measures for construction, architectural and engineering (A/E) and goods and services (G/S), in order to proceed with the advertisement and subsequent consultant selection for this project.

The duration of the proposed design-build contract is 730 calendar days. The total maximum compensation for the design-build contract is **\$32,398,000**, which includes the following:

- \$ 26,972,730 estimated construction cost;
- \$ 2,697,273 estimated engineering cost
- \$ 1,348,637 contingency fees for construction (5%)
- \$ 269,727 contingency fees for engineering (10%)
- \$ 300,000 dedicated Allowance
- \$ 809,182 permitting fees (3% of construction cost))

## Scope of Services

The Design-Builder shall provide, but is not limited to engineering, design, survey, technical specifications, and permitting. Investigate existing conditions, construction, testing and commissioning activities associated with the construction of a new 54-inch diameter water transmission main near Red Road from John E. Preston Treatment Plant to West 53 Street. The design and construction services rendered by the Design-Builder shall result in a complete, functional, and operable piping project with a standard design life.

The Project includes the following Project elements:

- Construct approximately 3.1 miles of 54-inch diameter transmission main, along the routes described below; including approximately 1,500 linear feet of tunneling for the 54-inch diameter carrier pipe at crossings with canals, railroads, highways, and major intersections.
  - Along West 13 Street from John E. Preston Treatment Plant to West 1 Avenue;
  - Along West 1 Avenue from West 13 Street to W 29 Street;
  - Along West 29 Street from West 1 Avenue to Service Road;
  - Along Service Road from West 29 Street to West 53 Street;
  - Connect to existing 54-inch diameter prestressed concrete cylinder pipe (PCCP) water transmission main on Red Road south of Little River Canal;
  - Install all required fittings and valves, manholes, ancillary piping, tapping, utility relocation, temporary bypass and tie-in connections to facilitate successful construction and commissioning of the new 54-inch diameter water transmission main;
  - Clean, disinfect and test the new water transmission main; and
  - Restore all areas disturbed by construction activities to conditions equal to or better than those before the commencement of work activities.

The scope of services shall also include all professional services, all labor, supervision, quality control, project controls, safety programs, materials, tools, equipment, services, methods and procedures necessary for the Design-Builder to fulfill all duties and obligations imposed by the contract documents, which can be reasonably assumed as necessary to fulfill the intent of the contract documents and to provide a complete, fully functional and satisfactory Project.

The Design-Builder must complete the Work by the following durations, which exclude the warranty administration period:

- Substantial Completion on or before 640 calendar days after the date of Notice to Proceed which requires placing into service all new water mains and connections within the public right-of-way and shall include all work associated with surveying, geotechnical investigations, engineering, design, technical specifications, permitting, construction, testing and commissioning services for the complete and fully operational installation of the new 54-inch diameter water transmission main and reopening all roads and sidewalks to traffic.
- Final Completion and Project Closeout on or before 730 calendar days after the date of Notice to Proceed which requires Final Completion and Project Closeout: including obtaining acceptance by all applicable regulatory agencies including WASD, of all Work and Services under the Contract, including all remaining site restorations, record documents, and all other remaining incomplete or unacceptable work items identified at or subsequent to Substantial Completion.

If the Design-Builder does not achieve Substantial Completion by the established Substantial Completion Contract Date, Liquidated Damages (LDs) will be assessed in the amount of two thousand five hundred dollars (\$2,500) per calendar day, which will be paid to the County by the Design-Builder. If the Design-Builder does not achieve Final Completion by the established Final Completion Contract Date, LDs will be assessed in the amount of one thousand dollars (\$1,000) per calendar day, which will be paid to the County by the Design-Builder. LDs will be cumulative if both the Substantial Completion Contract Date and the Final Completion Contract Date are exceeded. All assessments of LDs to the Design-Builder may be adjustments to payments due to the Design-Builder.

Firms providing engineering services must be certified in the following technical categories and the respective percentages of the disciplines as indicated below:

<b>Technical Category No.</b>	<b>Description</b>	<b>Total Percent (%)</b>	<b>SBE %</b>
<b>6.01 LEAD A/E</b>	<b>Water and Sanitary Sewer Systems - Water Distribution and Sanitary Sewage Collection and Transmission Systems</b>	30.00%	N/A
<b>16.00 LEAD A/E</b>	<b>General Civil Engineering</b>	30.00%	N/A
6.01A Other	Utility Tunneling for Water Distribution and Sanitary Sewage Collection and Transmission Systems	1.0%	N/A
3.02A	Highway Systems -Tunnel Design	1.0%	N/A
3.04 Other	Highway Systems - Traffic Engineering Studies	5.0%	3.0%
9.01 Other	Soils, Foundations and Material Testing - Drilling, Subsurface Investigations and Seismographic Services	2.0%	2.0%
9.02 Other	Soils, Foundations and Materials Testing - Geotechnical and Materials Engineering Services	2.0%	2.0%
9.03 Other	Soils, Foundations and Materials Testing – Concrete and Asphalt Testing Services	1.0%	1.0%
9.04 Other	Soils, Foundations and Materials Testing – Non-Destructive Testing and Inspections	2.0%	2.0%
10.02 Other	Environmental Engineering-Geology Services	1.0%	1.0%
10.05 Other	Environmental Engineering - Contamination Assessment and Monitoring	1.0%	1.0%
11.00 Other	General Structural Engineering	2.0%	N/A
12.00 Other	General Mechanical Engineering	1.0%	N/A
15.01 Other	Surveying and Mapping - Land Surveying	3.0%	3.0%
15.03 Other	Surveying and Mapping - Underground Utility Location	4.0%	4.0%
17.00 Other	Engineering Construction Management	15.0%	N/A
	<b>TOTAL</b>	<b>100.00%</b>	<b>19.00%</b>

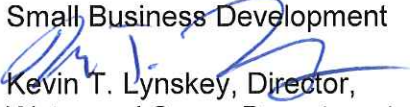
WASD is recommending a 19% SBE A/E, 8.4% Construction SBE and 0.5% SBE G/S participation goal. Attached are WASD's Departmental Input Worksheets and the Minimum Experience Qualifications for your review and approval. If you have any questions, please contact Patty Palomo, Chief, Intergovernmental Affairs Section at [patty.palomo@miamidade.gov](mailto:patty.palomo@miamidade.gov) or (786) 552-8040.

Attachments

**DEPARTMENTAL INPUT  
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION**

**DATE:** April 11, 2018

**TO:** Gary Hartfield, Division Director  
Internal Services Department  
Small Business Development

**FROM:**   
Kevin T. Lynskey, Director,  
Water and Sewer Department

**CONTRACT TITLE:**

Design-Build Services for the Installation of a 54-inch Diameter Water Transmission Main near Red Road from John E. Preston Treatment Plant to West 53 Street  
Project No. DB17-WASD-02

Construction Cost	\$26,972,730
Construction Contingency 5%	\$ 1,348,637
Dedicated Allowance	\$ 300,000
Permitting Fees 3%	\$ 809,182
<b>TOTAL:</b>	<b>\$29,430,549</b>

ITEM	DESIGN BUILD SUBTRADE	ESTIMATED COST CONSTRUCTION	% CONSTRUCTION COST	% SBE AVAILABILITY
1	Water Main Construction (includes mobilization, furnish and installation, connections, micro tunnel construction, utility relocation, dewatering, demolition, valves, and assemblies)	\$26,061,630	96.6%	5%
2	Pavement Restoration	\$ 506,100	1.9%	1.9%
3	Maintenance of Traffic	\$ 405,000	1.5%	1.5%
	Total Construction Cost	\$26,972,730	100%	8.4%
	Construction Contingency Allowance 5%	\$ 1,348,637		
	Permitting 3% total Construction Cost	\$ 809,182		
	Total Estimated Construction Cost including Contingency and Permitting Fees	\$ 29,430,549		

**DEPARTMENTAL INPUT**  
**CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION**

**Contract/Project Title:** Design-Build Services for the Installation of a 54-inch Diameter Water Transmission Main near Red Road from John E. Preston Treatment Plant to West 53 Street

**Contract/Project No.** DB17-WASD-02

**Description:** Design-Build Services for the Installation of a 54-inch Diameter Water Transmission Main near Red Road from John E. Preston Treatment Plant to West 53 Street

**Department:** Miami-Dade Water and Sewer Department

**Contact:** Patty Palomo

**Phone:** 786-552-8040

**Estimated Cost:** \$2,967,000 including contingency **Funding Source:** Future WASD Revenue Bonds, WASD Revenue Bonds and Water Connection Charges

**ANALYSIS**

Commodity/Service No. \_\_\_\_\_ SIC: \_\_\_\_\_

Trade/Commodity/Service Opportunities

Contract/Project History of Previous Purchases for Previous Three (3) Years  
 Check Here if this is a New Contract/Purchase with no Previous History

	<u>Existing</u>	<u>2<sup>nd</sup> Year</u>	<u>1<sup>st</sup> Year</u>
Contractor _____	_____	_____	_____
Ethnicity/Race _____	_____	_____	_____
Gender _____	_____	_____	_____
Contract Value _____	_____	_____	_____

COMMENTS: \_\_\_\_\_

SBE GOAL  
19.00 % A/E  
0.5 % G/S

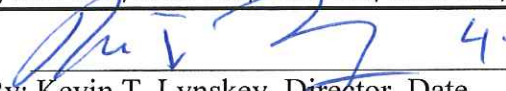
BID PREFERENCE

NO MEASURE

Analysis for Goal Recommendation

<u>Sub-Trade</u>	<u>Est. Cost</u>	<u>% of Item to Base Bid</u>	<u>Availability</u>
_____	\$ _____	_____	_____
_____	\$ _____	_____	_____
_____	\$ _____	_____	_____
Total:	\$ _____	_____	_____

**Basis for Recommendation:** WASD proposes that the goal can be achieved with SBE firms assisting with 3.04-3%; 9.01-2%; 9.02-2%; 9.03-1%; 9.04-2%; 10.02-1%; 10.05-1%; 15.01-3%; 15.03-4%

By:  4.11.18  
 Kevin T. Lynskey, Director Date \_\_\_\_\_  
 Water and Sewer Department Small Business Development Department Date \_\_\_\_\_

Design-Build Services for the Installation of a 54-inch Diameter  
Water Transmission Main near Red Road  
from John E. Preston Treatment Plant to West 53 Street  
Project No. DB17-WASD-02

**MINIMUM EXPERIENCE AND QUALIFICATIONS**

The proposed Design-Builder shall demonstrate its Project team experience by presenting the qualifications and capabilities of each Design-Build Team member firm, for projects completed within the ten (10) years, including projects that may be at least fifty percent (50%) complete prior to the required submittal date of this Request Design-Build Services (RDBS) Step 1 solicitation, that demonstrate related minimum project experience as indicated below:

Lead Constructors:

1. The construction firm performing the open cut installation work must have a minimum of five (5) years total industry experience as of the date of this solicitation. It also must have successfully constructed at least one (1) water main project of similar size and complexity in an urban environment consisting of minimum 48-inch nominal diameter of such pipeline installation.
2. The construction firm or specialty subcontractor performing the microtunneling work must have successfully constructed at least one (1) microtunneling project consisting of jacking similar type of casing pipe that is selected by the Design-Builder for the crossings in the last ten (10) years. To qualify, each of these microtunnel(s) must have been a minimum of 5-foot internal diameter in soft ground below the groundwater and at least one (1) of the microtunnel(s) excavated in ground similar to the conditions expected for this Project.
3. The construction firm or specialty subcontractor performing the shaft construction shall have successfully constructed at least one (1) deep shaft(s) that was at least 25-foot deep (below grade). At least one (1) shaft must have been extended below groundwater and required means of controlling inflow and bottom heave of the shaft.
4. The construction firm or specialty subcontractor performing the installation of the carrier pipe within the casing pipe shall have successfully completed at least one (1) project involving the installation of a carrier pipe of minimum 48-inches inside diameter, similar pipe material, installation and grout fill of the annular space between casing and carrier pipe.
5. The construction firm or specialty subcontractor performing the tapping of the operating 54-inch diameter prestressed concrete cylinder pipe water transmission main shall have successfully completed at least one (1) project of similar size and type.
6. The Lead Constructor on the Design-Builder team shall qualify for Item 1 of the above requirements.
7. Experience of Lead Constructors and Pipe Installation Crews must demonstrate history of past performance completing projects on schedule and to the satisfaction of the facility owner.

Lead Designers:

1. The Lead Designer firm performing the design of the water transmission main installation must have a minimum of five (5) years total industry experience as of the date of this solicitation. It also must have designed at least one (1) pressure pipeline installation project in an urban environment consisting of minimum 48-inch nominal diameter.
2. The Lead Designer firm or its Subconsultant performing the design of the microtunnel(s) must have designed at least one (1) microtunneling project consisting of jacking a similar casing pipe as proposed for this Project. The project shall be of 5-foot diameter casing pipe or larger. At least one microtunnel segment shall have been in similar ground conditions and similar crossings to those proposed.
3. The Lead Designer firm or its Subconsultant performing the design of the carrier pipe within the casing pipe shall have designed one (1) project with a carrier/product pipe of 48-inches minimum nominal diameter, and required a detailed geotechnical instrumentation program to monitor the ground behavior to the tunneling.
4. The Lead Designer firm or its Subconsultant performing design for the deep shaft(s) shall have designed a deep shaft project to support a microtunneling operation. The shaft shall be at least 25-foot deep (below grade).

The expertise must be met by a qualified individual(s) of the Design-Builder and its subconsultants. The experience must be demonstrated by direct or substantial involvement of the individual(s) in a supervisory capacity at the Project Manager level or above. The determination of the individual's qualifications and compliance with the experience and qualifications shall be at the sole discretion of the County. The Competitive Selection Committee may negatively evaluate proposals from firms they determine have failed to meet the above experience and qualification(s).

**Design-Builder Safety Record - Past Performance**

Minimum past performance as reflected by a three (3) year average for the last three (3) previous full years (from the date of the solicitation) of the Experience Modification Rate (EMR) for the Design-Builder shall not exceed 1.10 for each firm.

The Design-Builder shall provide EMR data for the previous three (3) full calendar years (2015, 2016, and 2017) on a firm-wide basis documented by a signed letter with contact information from the firm's insurance carrier, or the insurance carrier's agency representative. Higher qualifications scores shall be provided by the Competitive Selection Committee (CSC) for a Design-Builder demonstrating an average EMR lower than other competing Design-Builder firms. Design-Builder shall also provide their Occupational Safety and Health Administration (OSHA) forms 300 and 300A for the last three (3) full calendar years indicating OSHA submitted accident data for evaluation by the CSC as to their frequency and severity.