

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

**Contract/Project Title:** Design-Build Services to Furnish and Install a 48-inch Force Main along North Miami Avenue from N.W. 8 Street along to 36 Street and along N.E. 36 Street from North Miami Avenue to N.E. 2 Avenue

**Contract/Project No.** DB14-WASD-05

**Description:** Design-Build Services to Furnish and Install a 48-inch Force Main along North Miami Avenue from N.W. 8 Street along to 36 Street and along N.E. 36 Street from North Miami Avenue to N.E. 2 Avenue

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

**Contact:** Patty David

**Phone:** (786) 552-8040

**Estimated Project Cost:** \$21,192,854.00 Total Engineering Cost \$2,471,251 including 10% contingency allowance.

**Funding Source:** Waster Connection Charges, Future WASD Revenue Bonds, WASD Revenue Bonds Sold and WASD Future Funding

**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

Existing

2<sup>nd</sup> Year

1<sup>st</sup> Year

Contractor	_____	_____	_____
Ethnicity/Race	_____	_____	_____
Gender	_____	_____	_____
Contract Value	_____	_____	_____

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

<u>CBE GOAL</u>	<u>BJD PREFERENCE</u>	<u>NO MEASURE</u>
17.5 %	_____	_____
<u>SBE GOAL</u> %	_____	_____
.25 %	_____	_____

Analysis for Goal Recommendation

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

**Basis for Recommendation:** WASD proposes that the goal can be achieved with CBE firms assisting with 16.00- 7%; 17.00 - 5%; 10.05 - .5%; 11.00 - 5%

By: Bill Johnson, Director

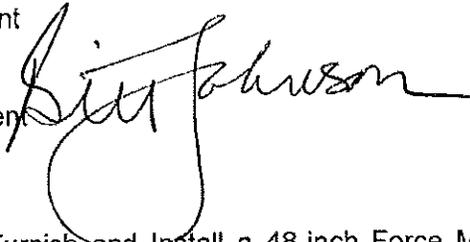
Date: \_\_\_\_\_

Date: Internal Services Department

**DEPARTMENTAL INPUT  
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION**

TO: Lester Sola, Director  
Internal Services Department

FROM: Bill Johnson, Director  
Water and Sewer Department



DATE: January 15, 2015

CONTRACT TITLE: Design-Build Services to Furnish and Install a 48-inch Force Main along North Miami Avenue from N.W. 8 Street along to 36 Street and along N.E. 36 Street from North Miami Avenue to N.E. 2 Avenue  
Project No. DB14-WASD-05

Construction Cost	\$16,128,632.00
Construction Contingency 5%	\$ 806,432.00
Dedicated Allowance	\$ 1,302,680.00
Permitting Fees 3%	\$ 483,859.00
<b>TOTAL:</b>	<b>\$18,721,603.00</b>

ITEM	SUBTRADE	ESTIMATED COST	% OF CONSTRUCTION COST	CSBE AVAILABILITY
1	Force Main Construction	\$11,373,105.00	70.52%	4.00%
2	Micro-tunnel at various locations	\$ 3,349,800.00	20.77%	0%
3	Pavement Restoration	\$ 703,034.00	4.36%	4.46%
4	Restoration of concrete sidewalk, curb and gutter, access ramps	\$ 91,656.00	0.57%	0.57%
5	Traffic Control	\$ 611,037.56	3.79%	3.79%
	<b>Total Construction Cost</b>	\$16,128,632.00	<b>100%</b>	<b>12.82%</b>
	<b>Contingency Allowance 5%</b>	\$ 806,432.00		
	<b>Dedicated Allowance: Off-Duty Police Officer</b>	\$ 1,302,680.00		
	<b>Permitting 3%</b>	\$ 483,859.00		
	<b>Total Estimated Construction Cost including Dedicated Allowance, Contingency and Permitting Fees</b>	<b>\$18,721,603.00</b>		

**Design-Build Services to Furnish and Install a 48-inch Force Main along North  
Miami Avenue from N.W. 8 Street along to 36 Street and along N.E. 36 Street from  
North Miami Avenue to N.E. 2 Avenue  
Project No. DB14-WASD-05**

**MINIMUM EXPERIENCE AND QUALIFICATIONS**

**Qualifications and Experience for Lead Constructors and Lead Designers:** Minimum Project Experience and Past Performance: Proposed Design-Builder shall demonstrate its project team experience by presenting the qualifications and capabilities of each Design-Builder Team member firm, for a minimum of 3 projects completed within the last 10 years from the date of this solicitation, including projects that may be at least 50% complete prior to the required submission date of this Request for Design-Build Services (RDBS) Step 1 solicitation, that demonstrate related minimum project experience as indicated below:

a) **Lead Constructors:**

- i. The construction firm performing the force main installation work must have a minimum 4 years total industry experience as of the date of this solicitation and must have constructed at least 3 force main projects of similar size and complexity in an urban environment. A minimum total of 10,000 total linear feet of installation and minimum 42-inch nominal diameter of such pressure pipeline installation is required in the last 10 years from the date of this solicitation.
- ii. The construction firm performing the micro-tunneling work must have constructed at least 3 micro-tunneling projects of similar size and complexity within the last 10 years from the date of this solicitation. A minimum sum total of 1,200 linear feet of installation and minimum 42-inch nominal diameter carrier main of such tunnel installation is required.
- iii. The Lead Constructor within the Design-Builder team shall qualify for Item i of the above requirements.
- iv. The construction firm or specialty subcontractor performing the shaft construction shall have successfully constructed at least 3 deep shafts that were at least 30-foot deep (below grade). At least 2 of these shafts must have been extended below groundwater and required means of controlling inflow and bottom heave of the shaft.
- v. The construction firm or specialty subcontractor performing the installation of the carrier pipe within the casing pipe shall have successfully completed at least 1 project involving the installation of a carrier pipe of minimum 42-inches inside diameter, similar pipe material, installation length that exceeds 1,000-feet and grout fill of the annular space between casing and carrier pipe.
- vi. The construction firm or specialty subcontractor performing the tapping of the operating 48-inch diameter ductile iron pipe sewer transmission main and a 36-inch ductile iron sewer main shall have successfully completed at least 1 project of similar size and type.

b) Lead Designers:

- i. The Lead Design Firm performing the design of the force main installation must have within the last 10 years from the date of this solicitation designed at least 3 pressure pipeline installation projects in an urban environment consisting of a minimum of 10,000 total linear feet of minimum 42-inch nominal diameter concrete cylinder pressure pipe (PCCP).
- ii. The firm performing the design of the micro-tunnel must have designed at least 3 micro-tunneling projects within the last 10 years from the date of this solicitation consisting of a minimum sum total of 1,000-feet in length and 42-inch nominal diameter of the carrier pipe.
- iii. The design firm and/or Subconsultants performing design for the deep shafts shall have designed at least 1 deep shaft project to support a tunnel boring operation within the last 10 years from the date of this solicitation. The shaft shall have been at least at least 30-foot deep (below grade).

c) Subconsultants:

- i. Subconsultants to the Design-Builder or Lead Designer providing services under A/E technical certification categories must provide at least 3 projects that were completed within the last 10 years from the date of this solicitation that involved the main project elements for which the subconsultant is being proposed, unless the experience and qualifications of the Lead Designer listed above require otherwise.
- ii. The Lead Designer firm or its Subconsultant performing design for the deep shafts shall have designed a deep shaft project to support a micro-tunneling operation. The shaft shall be at least 30-foot deep (below grade).

d) Additional Preferred Project Experience: Design-Builder teams shall receive higher qualifications scores from the Competitive Selection Committee (CSC) if their submitted project experience and past performance can demonstrate the following:

- i. Listed projects are of a similar or greater size and level of complexity.
- ii. Any listed projects of the proposed Design-Builder entity were designed and constructed through design-build project delivery.
- iii. The Lead Constructor and Lead Designer have worked together on previous projects, especially on design-build projects.
- iv. Key Personnel, most significantly the proposed Project Manager, Design Manager and Construction Manager, have served on the Projects listed and their client reference can validate that performance.
- v. Listed projects demonstrate capabilities and experience of utilizing soil stabilization and grouting techniques for water control during boring and shaft excavation. (This may be a specialty subcontractor).
- vi. Key personnel, most significantly the proposed Project Manager, Design Manager and Construction Manager, that have served on the Projects listed and their client reference can validate that performance.

**Design-Build Team Key Personnel Experience and Qualifications:**

- a) Minimum industry and position experience of Design-Build team Key Personnel are as follows:
- i. Minimum 10 years total industry experience of which 5 years in a similarly responsible position for each of the following Key Personnel:
    - Design-Build Project Manager
    - Lead Designer- Design Manager
    - Lead Constructor - Construction Manager
    - Lead Civil Engineer
    - Lead Pipeline Engineer
    - Pipe Installation Superintendent
    - Permitting/Compliance Manager
    - Design-Builder Quality Assurance/Quality Control (QA/QC) Manager
    - Design-Builder Safety Manager
    - Micro-tunneling Superintendent
    - Shafts Construction Superintendent
    - Lead Geotechnical Engineer
    - Pipe Tapping Superintendent
  - ii. Key Personnel must demonstrate experience with the type work to be performed.
  - iii. Proposers shall identify those State of Florida registered Professional Engineers who will sign and seal construction plans and specifications.
  - iv. Key Personnel resumes shall indicate the individual's current firm association, their professional qualifications, a client reference with contact information, and their role and duration on each project for which they are being credited the related experience.
- b) Additional Preferred Experience and Past Performance:
- i. Experience in significant role on a design-build project, especially in a similar role as proposed for this Project.
  - ii. Superior references with regard to meeting cost, schedule, and quality objectives on previous projects, and maintaining a positive client relationship.

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

Past performance as reflected by a 3 year average for the last 3 previous full years of the Experience Modification Rate (EMR) for the Design-Builder for the pipeline work and the micro-tunnel contractor is recommended to be below 1.10 for each firm.

Design-Builders shall provide EMR data for the previous 3 full calendar years (2011, 2012, and 2013) on a firm-wide basis shall be documented by a signed letter with contact information from the firm's insurance carrier, or the insurance carrier's agency representative. Higher qualifications score shall be provided by the 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 3 full calendar years indicating OSHA submitted accident data for evaluation by the CSC as to their frequency and severity.

# Memorandum



Date: January 15, 2015

To: Lester Sola, Director  
Internal Services Department

From: Bill Johnson, Director  
Miami-Dade Water and Sewer Department

Subject: Review Item: Design-Build Services to Furnish and Install a 48-inch Force Main along North Miami Avenue from N.W. 8 Street along to 36 Street and along N.E. 36 Street from North Miami Avenue to N.E. 2 Avenue; Project No. DB14-WASD-05

A handwritten signature in black ink, appearing to read "Bill Johnson", written over the printed name in the "From:" field.

The Miami-Dade Water and Sewer Department (WASD) is requesting that the subject Project be reviewed by the Small Business Development division of the Internal Services Department for Community Business Enterprise (CBE), Community Small Business Enterprise (CSBE) and Small Business Enterprise (SBE) measures in order to proceed with the advertisement and subsequent consultant selection for this Project.

The duration of the proposed design-build contract is 960 calendar days. The total maximum compensation for the Design-Build contract is \$21,192,854.00 which includes the following:

- \$ 16,128,632.00 estimated construction cost;
- \$ 2,246,592.00 estimated engineering cost;
- \$ 806,432.00 contingency fees for construction (5%);
- \$ 224,659.00 contingency fees for engineering (10%);
- \$ 1,302,680.00 dedicated allowance; and
- \$ 483,859.00 permitting fees.

**ENGINEERING SERVICES:** The scope of Engineering services will include, but is not limited to engineering, design, survey, technical specifications, permitting and inspection to support the construction, installation, testing and commissioning activities associated with the construction of a new 48 -inch sewer force main. The Design-Builder should also comply with all other required construction methods for this work, including those to minimize noise, dust, and other impacts to surrounding residential neighborhoods. The design and construction services rendered by the Design-Builder shall result in a complete, functional, and operable piping project with a minimum 80 year design life.

The Design-Builder shall include, but not be limited to the following:

1. Furnish and install approximately 12,700 linear feet of 48-inch Prestressed Concrete Cylinder Pipe (PCCP) and fittings
2. Construct three (3) micro-tunnels (approximately 1300 linear feet in total length) with 48-inch carrier mains inside 72-inch steel casings under the railroad crossing along North Miami Avenue at N.W. 19 Street, under the railroad crossing at N.E. 36 Street and North Federal

- Furnish and install the 1-inch thick 72-inch casings; furnishing and installing casing spacers; constructing jacking and receiving pits for the micro-tunnel;
3. Construct approximately ten (10) Access Manhole assemblies;
  4. Furnish and install ten (10) 48-inch Plug Valves; furnish and install one (1) 42-inch plug valve; furnish and install three (3) 36-inch Plug Valves;
  5. Provide a tapping connection to an existing 48-inch Ductile Iron Pipe force main at the intersection of N.W. 8 Street and North Miami Avenue, including furnishing and installing a 48-inch x 36-inch tapping sleeve, a 36-inch FLG. X M.J. tapping valve, complete with riser pipe, valve box and cover, and polyethylene encasement;
  6. Cut-in connection to an existing 36-inch water main to include all costs in dewatering the existing sewage force main and hauling wastewater; making a tapping connection including furnishing and installing tapping saddles and tapping valves;
  7. Install a pipe in a hydrocarbon contaminated area; providing a Certified Hygienist certified by the American Board of Industrial Hygiene or a State of Florida Registered Engineer licensed in Environmental Discipline;
  8. Construct air release valve assemblies at all high points of the force main;
  9. Relocate of existing utilities in conflict with the route of the force main;
  10. Remove and legally disposing of unsuitable fill; furnishing and installing suitable backfill for pipe bedding and backfill, if needed;
  11. Clean and testing the main;
  12. Provide temporary pavement; making permanent paving repairs to include milling and resurfacing; providing traffic control; sidewalk and curb and gutter restoration; restoration of any facilities damaged during construction to a condition equal or better than before the start of construction; and
  13. Provide all other appurtenant and miscellaneous items and work for a complete and fully functional installation.

Additionally, the Design-Builder shall design and construct all ancillary piping, tapping, temporary bypass, and tie-in connections to facilitate successful construction and commissioning the new 48-inch sewer force main without any interruption of service to the existing Miami-Dade Water and Sewer Department's customers.

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 \$2,500.00 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 \$1,000.00 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 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:

Technical Category No.	Description	Total Percentage	CBE Percentage
6.01 PRIME	Water and Sanitary Sewer Systems – Water Distribution and Sanitary Sewage Collection and Transmission Systems	45.00%	0%
16.00 PRIME	General Civil Engineering	20.00%	7.0%
17.00 PRIME	Engineering Construction Management	10.00%	5.0%
3.02A	Highway Systems – Tunnel Design	5.00%	0%
9.01	Soils, Foundations and Materials Testing- Drilling, Subsurface Investigations and Seismographic Services	1.00%	0%
9.02	Soils, Foundations and Materials Testing – Geotechnical and Materials Engineering Services	2.00%	0%
9.03	Soils, Foundations and Materials Testing – Concrete and Asphalt Testing Services	0.5%	0%
9.04	Soils, Foundations and Materials Testing – Non-Destructive Testing and Inspections	0.5%	0%
9.06	Soils, Foundations and Materials Testing – Materials Testing/Consulting/Training Industrial Hygiene	0.5%	0%
10.02	Geology Services	1.00%	0%
10.05	Environmental Engineering – Contamination Assessment and Monitoring	0.5%	0.5%
10.06	Environmental Engineering – Remedial Action Plan Design	0.5%	0%
10.07	Environmental Engineering – Remedial Action Plan Implementation/Operation/Maintenance	0.5%	0%
11.00	General Structural Engineering	10.00%	5.0%
15.01	Surveying and Mapping – Land Surveying	2.00%	0%
15.03	Surveying and Mapping – Underground Utility Location	1.00%	0%
	TOTAL	100%	17.5%

WASD is recommending a 17.5% CBE, SBE .25% (technical category 91842 "Consulting Services" Maintenance of Traffic) and 12.82% CSBE goal participation. Attached are WASD's Departmental Input Worksheets and the Minimum Experience and Qualifications for your review.

If you have any questions, please contact Patty David, Chief, Intergovernmental Affairs Section at [pattyd@miamidade.gov](mailto:pattyd@miamidade.gov) or (786) 552-8040.

Attachments