

## SBD – CM REVIEW FORM

**To:** Project Review and Analysis Section – A/E  
**From:** SBD CM Vivian Forhat-Diaz  
**Department:** WASD  
**Date:** 02/20/15

**Contact:** Patty David  
**RESUBMITTAL:** No

**PROJECT NUMBER:** DB14-WASD-09  
**PROJECT TITLE:** Design-Build Services for Installation of a 36-inch diameter Sanitary Sewer Force Main in NW 107 Ave from NW 7 St. to NW 25 St.  
**PROJECT LOCATION:** NW 107 Ave from NW 7 St. to NW 25 St.

### SCOPE OF WORK/DESCRIPTION:

The Design-Builder services shall include, but is not limited to surveying, geotechnical investigations, engineering, design, technical specifications, permitting, construction, testing and commissioning services, and customer coordination for a new 36-inch diameter sanitary sewer force main. The project consists of replacing the existing 24-inch force main in N.W. 107 Avenue from south of N.W. 7 Street to N.W. 25 Street with a new 36-inch force main, connecting existing force mains into the new 36-inch force main along the project route, and tie-in of the new 36-inch force main into the existing force main system in order to reduce system operating pressures and increase system capacity within the area. Design-Builder shall include the following main elements:

- Furnish and install approximately 7,900 linear feet of 36-inch diameter ductile Iron Pipe (DIP) with ceramic epoxy lining for sanitary sewer force main service. Furnish and install all ancillary piping, tie-in connections, and temporary bypass pumping and piping, required to facilitate successful construction and commissioning the new 36-inch force main without any interruption of service to the existing Miami-Dade Water and Sewer customers
- Furnish and install a 48-inch diameter steel casing under an active railroad using trenchless construction installation; provide jacking and receiving pits for the trenchless casing and carrier pipe installation; furnish and install 36-inch carrier pipe, casing spacers, and ancillary materials for trenchless installation.
- Connect to existing 36-inch force main, in N.W. 107 Avenue, south of N.W. 7 Street and making connection using solid sleeve adapters; connect to existing 20-inch force main at N.W. 25 Street, with tapping valve, tapping sleeve and reducer.
- Provide all required valves and piping to facilitate connection of existing force mains to the new 36-inch force main
- Construct access manhole assemblies, as required by the Engineer.
- Provide air release valve assemblies at all high points on the new force main and tributary force mains as required.
- Relocate of existing utilities in conflict with the alignment of the force main; as required by the Engineer.
- Remove, transport, salvage and/or legal disposal of construction and demolition materials including asphalt pavement, concrete pavement, misc. concrete, unsuitable backfill material, pipe, valves, and sod.
- Sheefing and shoring ordered left in place by the engineer.
- Furnish and place suitable backfill for pipe bedding and backfill, as required by the Engineer.
- Construct and restore pedestrian curb ramps and detectable warning surfaces, temporary and permanent replacement or relocation of any utilities, pavement, sidewalk, curb & gutter, valley gutter, tree, landscaping, sod, pavement markings, and/or driveway damaged during construction to a condition equal to or better than at the start of construction.
- Furnish all materials, equipment, supplies, and labor necessary for cleaning, testing, commissioning, and placing the new force mains into service. Provide all other appurtenant and miscellaneous items and work for a complete and fully functional installation.
- Abandon in-place of existing 24-inch force main upon completion and acceptance of the new Work, including dewatering of the existing sewage force main, hauling and legal disposal of wastewater, cleaning the existing pipe, and filling it with grout.
- Design, permit, and maintain all required vehicle and pedestrian traffic control measures.

### SPECIAL REQUIREMENTS:

#### Lead Designer:

1. The Lead Designer firm performing the design of the force main must have a minimum of five (5) years total industry experience from the date of this solicitation and must have designed at least three (3) pressure pipeline projects in an urban environment consisting of a minimum of ten thousand (10,000) total linear feet of minimum thirty-six (36) inch nominal diameter.
2. The Lead Designer firm who will design the trenchless installation of the casing pipe must have designed at least five (5) trenchless projects consisting of jacking a similar type of casing pipe selected by the Design-Build team for this project. The total length of the reference projects shall be a minimum of one thousand (1,000) linear feet of four (4) foot diameter casing pipe or larger and at least two (2) of the reference projects shall have been designed for construction in ground conditions similar to those expected to be encountered on this project and one (1) of the five (5) reference projects shall have been for casing pipe installation under active railroad tracks.
3. The Lead Designer or their Sub-consultant firm performing design for the shaft(s) shall have designed one (1) shaft project to support a trenchless construction operation. Depth of the shaft for the reference project shall have been at least twenty-five (25) feet below ground surface.

#### Sub-consultants:

1. Sub-consultants to the Design-Builder or Lead Designer must demonstrate that they have designed at least three (3) projects that were successfully completed within the last ten (10) years from the date of the solicitation that involved the principal project element for which the Sub-consultant is being proposed, unless the experience and qualifications of the Design-Builder or Lead Designer listed above require otherwise.

WASD is recommending 13 % goal for SBE-A/E participation

**PROJECT NUMBER: DB14-WASD-09 (Continuation)**

CATEGORIES	PERCENTAGE	COMMENTS
		<b>PRIME</b>
6.01 Water And Sanitary Sewer Systems - Water Distribution And Sanitary Sewage Collection And Transmission Systems	30%	Must meet special Requirements. * Possible Small Business Participation
16.00 General Civil Engineering	30%	
		<b>SUB-CONSULTANTS</b>
3.02A Highway Systems – Tunnel Design	1%	Must meet special Requirements. * Possible Small Business Participation
3.04 Highway Systems – Traffic Engineering Studies	5%	
9.02 Soils, Foundations And Material Testing - Geotechnical And Materials Engineering Services	2%	
9.03 Soils, Foundations And Material Testing – Concrete and Asphalt Testing Services	1%	
9.04 Soils, Foundations And Material Testing - Non-Destructive Testing And Inspections	1%	
10.05 Environmental Engineering - Contamination Assessment And Monitoring	1%	
11.00 General Structural Engineering	1%	
12.00 General Mechanical Engineering	5%	
15.01 Surveying And Mapping - Land Surveying	3%	
15.03 Underground Utility Location	5%	
17.00 Engineering Construction Management	15%	
<b>TOAL COST including 10% Contingency</b>	<b>\$767,678.00</b>	
<b>TOTAL</b>	<b>100%</b>	

Small Business Development Signature: *Vivian Forhat* Date: 02/24/15

\*Trades/Subtrades identified for possible subcontracting opportunities by SBD CM  
**WASD is recommending 13 % goal for SBE-A/E participation.**



## SBD – CM REVIEW FORM

To: Project Review and Analysis Section – CONSTRUCTION

From: SBD CM Vivian Forhat-Diaz

Department: WASD

Date: 02/20/15

Contact: Patty David

RESUBMITTAL: No

PROJECT NUMBER: DB14-WASD-09

PROJECT TITLE: Design-Build Services for Installation of a 36-inch diameter Sanitary Sewer Force Main in NW 107 Ave from NW 7 St. to NW 25 St.

PROJECT LOCATION: NW 107 Ave from NW 7 St. to NW 25 St.

### SCOPE OF WORK/DESCRIPTION:

The Design-Builder services shall include, but is not limited to surveying, geotechnical investigations, engineering, design, technical specifications, permitting, construction, testing and commissioning services, and customer coordination for a new 36-inch diameter sanitary sewer force main. The project consists of replacing the existing 24-inch force main in N.W. 107 Avenue from south of N.W. 7 Street to N.W. 25 Street with a new 36-inch force main, connecting existing force mains into the new 36-inch force main along the project route, and tie-in of the new 36-inch force main into the existing force main system in order to reduce system operating pressures and increase system capacity within the area. Design-Builder shall include the following main elements:

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- Furnish and install a 48-inch diameter steel casing under an active railroad using trenchless construction installation; provide jacking and receiving pits for the trenchless casing and carrier pipe installation; furnish and install 36-inch carrier pipe, casing spacers, and ancillary materials for trenchless installation.
- Connect to existing 36-inch force main, in N.W. 107 Avenue, south of N.W. 7 Street and making connection using solid sleeve adapters; connect to existing 20-inch force main at N.W. 25 Street, with tapping valve, tapping sleeve and reducer.
- Provide all required valves and piping to facilitate connection of existing force mains to the new 36-inch force main.
- Construct access manhole assemblies, as required by the Engineer.
- Provide air release valve assemblies at all high points on the new force main and tributary force mains as required.
- Relocate of existing utilities in conflict with the alignment of the force main; as required by the Engineer.
- Remove, transport, salvage and/or legal disposal of construction and demolition materials including asphalt pavement, concrete pavement, misc. concrete, unsuitable backfill material, pipe, valves, and sod.
- Sheeting and shoring ordered left in place by the engineer.
- Furnish and place suitable backfill for pipe bedding and backfill, as required by the Engineer.
- Construct and restore pedestrian curb ramps and detectable warning surfaces, temporary and permanent replacement or relocation of any utilities, pavement, sidewalk, curb & gutter, valley gutter, tree, landscaping, sod, pavement markings, and/or driveway damaged during construction to a condition equal to or better than at the start of construction.
- Furnish all materials, equipment, supplies, and labor necessary for cleaning, testing, commissioning, and placing the new force mains into service. Provide all other appurtenant and miscellaneous items and work for a complete and fully functional installation.
- Abandon in-place of existing 24-inch force main upon completion and acceptance of the new Work, including dewatering of the existing sewage force main, hauling and legal disposal of wastewater, cleaning the existing pipe, and filling it with grout.
- Design, permit, and maintain all required vehicle and pedestrian traffic control measures.

### SPECIAL REQUIREMENTS:

#### Lead Constructor:

1. Construction firm performing open cut installation work must have a minimum of five (5) years total industry experience from the date of this solicitation. It also must have successfully constructed at least three (3) pressure pipeline projects of similar size and complexity in an urban environment consisting of a minimum of ten thousand (10,000) combined total linear feet of installation and minimum 36-inch nominal diameter pipe.
2. Construction firm performing trenchless installation of the casing pipe must have a minimum of five (5) years total industry experience from the date of this solicitation. It must also have successfully constructed at least three (3) trenchless projects utilizing a similar construction method and consisting of jacking similar type of casing pipe selected by the Design-Build team for this project, and/or completed a minimum of three (3) separate trenchless installations with a combined length of one thousand (1,000) linear feet. To qualify, each of these installations must have been a minimum of four (4) feet internal diameter in soft ground below the groundwater and at least two (2) of the installations completed in ground conditions similar to those expected to be encountered on this project.
3. Construction firm performing the shaft construction shall have successfully constructed at least three (3) shafts that were at least twenty-five (25) feet below ground surface. At least two (2) of these shafts must have been extended below groundwater and required means of controlling inflow and bottom heave of the shaft.

Small Business Development Signature: Vivian Forhat-Diaz Date: 02/24/15

\*Trades/Subtrades identified for possible subcontracting opportunities by SBD CM

WASD is recommending 8.30 % goal for SBE-Construction participation

**PROJECT NUMBER: DB14-WASD-09 (Continuation)**

CATEGORIES	Amount	COMMENTS
		<b>PRIME</b>
Mobilization	\$480,000.00	Must meet special requirements mentioned above. *Possible Subcontracting opportunities
MOT	\$560,000.00	
F&I 48" Casing	\$90,000.00	
Shaft Construction	\$50,000.00	
Furnish 36" DIP Pipe	\$2,025,000.00	
Install 36" DIP Pipe	\$2,106,000.00	
Polyethylene encasement for DI Pipe, Fittings & Valves	\$24,900.00	
F&I 36" Elbows; MJ; 11.25- to 90-degree (Rest.)	\$100,000.00	
F&I 36" Tee 6", 8", 12", 16" and 20"; MJ (Rest.)	\$210,000.00	
F&I 36" x 24" Reducer; MJ (Rest.)	\$11,500.00	
F&I 36" Plug Valve	\$180,000.00	
Furnish 6" DIP Pipe	\$2,000.00	*Possible Subcontracting opportunities
Install 6" DIP Pipe	\$1,750.00	
Furnish 8" DIP Pipe	\$2,500.00	
Install 8" DIP Pipe	\$1,750.00	
Furnish 12" DIP Pipe	\$3,500.00	
Install 12" DIP Pipe	\$2,000.00	
Furnish 16" DIP Pipe	\$4,000.00	
Install 16" DIP Pipe	\$2,750.00	
F&I 6" Solid Sleeve (Rest.)	\$6,750.00	
F&I 8" Solid Sleeve (Rest.)	\$12,500.00	
F&I 12" Solid Sleeve (Rest.)	\$15,000.00	
F&I 16" Solid Sleeve (Rest.)	\$3,750.00	
F&I 20" Solid Sleeve (Rest.)	\$4,500.00	
F&I 6" Elbow; MJ (Rest.)	\$2,400.00	
F&I 8" Elbow; MJ (Rest.)	\$6,000.00	
F&I 12" Elbow; MJ (Rest.)	\$7,000.00	
F&I 16" Elbow; MJ (Rest.)	\$1,600.00	
F&I 20" Elbow; MJ (Rest.)	\$2,000.00	
F&I 6" Plug Valve	\$6,750.00	
F&I 8" Plug Valve	\$16,250.00	
F&I 12" Plug Valve	\$25,000.00	
F&I 16" Plug Valve	\$7,500.00	
F&I 20" Plug Valve	\$12,500.00	
Bypass pumping system	\$75,000.00	
F&I Valve Boxes	\$5,600.00	
Furnish & Install Air Release Valve Assembly (2")	\$40,000.00	

WASD is recommending 8.30 % goal for SBE-Construction participation

**PROJECT NUMBER: DB14-WASD-09 (Continuation)**

		<b>General Engineering Contractor/Paving Contractor</b>
Pavement restoration	\$341,312.00	*Possible Subcontracting opportunities
Flowable fill for abandonment of existing 24-inch FM	\$142,500.00	
		<b>Concrete Contractor</b>
Miscellaneous restoration (sidewalks, curb/gutter)	\$75,000.00	*Possible Subcontracting opportunities
<b>Total Base Construction Cost</b>	<b>\$6,646,562.00</b>	
Contingency Allowance (5%)	\$332,328.00	
<b>Base Construction including Contingency</b>	<b>\$6,978,890.00</b>	
Permits Allowance	\$209,367.00	
<b>Total Construction Cost</b>	<b>\$7,188,257.00</b>	

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