



Invitation for Bid No. 2023-009

Jesse Helms Park Water Main Extension

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ADDENDUM No. 1

ISSUE DATE: October 12, 2022

Responding Bidders on this project are hereby notified that this Addendum shall be made a part of the above named IFB document.

The following items add to, modify, and/or clarify the IFB documents and shall have the full force and effect of the original Documents. This Addendum shall be acknowledged by the Offeror in the IFB document.

Union County, NC
Jesse Helms Park Water Main Extension
Project Number: WT121

ADDENDUM # 1

ISSUED DATE: October 12, 2022

TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

Specifications

Item 1: Section 15062 of the Project Manual – Remove and replace Section 15062 with the attached Section 15062. Changes include:

1. Section 2.1.A. DIP Manufacturers requirements.
2. Section 2.1.B.2 Restrained joints.

Questions & Answers

1. **Question:** With the recent back logs in Ductile Iron Pipe Production, would it be possible for me to quote the job using a different product. The back log is now 15 to 17 months to get an order delivered.

Answer: Union County currently will allow only pipes and other construction materials meeting Union County standard specifications and project specifications. Union County can allow a “reasonable” amount of time between Notice of Award and Notice to Proceed for acquisition of construction materials as long as the contract bid prices are maintained. 15 to 17 months will not be considered a “reasonable” amount of time.

2. **Question:** Will pre-bid meeting information be published at a later date? Additionally, is there any geotechnical information on the site or are there any plans on completing a geotechnical survey?

Answer: A pre-bid meeting is not planned for the project. There is no geotechnical information provided as part of the bid package for the project.

3. **Question:** Is there a requirement for a Bid Bond at the time of submission of the Bid?

Answer: Yes, a Bid Bond is required. Bid Bond and requirements are covered in the Advertisement Notice for Bids, Instructions to Bidders, and Bid Form in the project manual. Additionally, a blank Bid Bond form for execution is included in the project manual and a separate blank Bid Bond form is provided by the Issuing Office as described in the Advertisement Notice for Bids for the project.

END OF ADDENDUM No.1

SECTION 15062

PIPE: DUCTILE

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1 SECTION 15062

2 PIPE: DUCTILE

3 PART 1 – GENERAL

4 1.1 SUMMARY

5 A. Section Includes:

- 6 1. Ductile iron piping, fittings, and appurtenances.

7 B. Related Sections include but are not necessarily limited to:

- 8 1. Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
9 2. Division 1 - General Requirements.
10 3. Section 15060 - Pipe and Pipe Fittings: Basic Requirements.

11 1.2 QUALITY ASSURANCE

12 A. Referenced Standards:

- 13 1. American National Standards Institute (ANSI):
14 a. B1.1, Unified Inch Screw Threads (UN and UNR Thread Form).
15 b. B16.1, Cast-Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 300.
16 c. B16.21, Nonmetallic Flat Gaskets for Pipe Flanges.
17 2. American Society for Testing and Materials (ASTM):
18 a. A183, Carbon Steel Track Bolts.
19 b. A193, Alloy-Steel and Stainless Steel Bolting Materials for High Temperature Service.
20 c. A194, Carbon and Alloy Steel Nuts and Bolts for High Pressure and High Temperature
21 Service.
22 d. A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile
23 Strength.
24 e. B695, Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and
25 Steel.
26 f. D1330, Rubber Sheet Gaskets.
27 3. American Water Works Association (AWWA):
28 a. ANSI/AWWA C104/A21.4, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for
29 Water.
30 b. C105, Polyethylene Encasement for Gray and Ductile Cast-Iron Piping for Water and
31 Other Liquids.
32 c. ANSI/AWWA C110/A21.10, Ductile Iron and Gray Iron Fittings, 3 IN through 48 IN for
33 Water and Other Liquids.
34 d. ANSI/AWWA C111/A21.11, Gasket Joints for Cast Iron and Ductile Iron Pressure Pipe and
35 Fittings.
36 e. ANSI/AWWA C115/A21.15, Flanged Ductile Iron Pipe with Threaded Flanges.
37 f. ANSI/AWWA C150/A21.50, Thickness Design of Ductile Iron Pipe.
38 g. ANSI/AWWA C151/A21.51, Ductile Iron Pipe, Centrifugally Cast-In-Metal Molds or Sand-
39 Lined Molds, for Water or Other Liquids.
40 h. ANSI/AWWA C153/A21.53, Ductile-Iron Compact Fittings, 3 IN through 16 IN {24 IN and 54
41 IN through 64 IN} for Water and Other Liquids.

42 1.3 SUBMITTALS

43 A. Shop Drawings:

- 44 1. See Sections 01340 and 15060.
45 2. Certification of factory hydrostatic testing.
46 3. If mechanical coupling system is used, submit piping, fittings, and appurtenant items which
47 will be utilized to meet system requirements.

48 PART 2 – PRODUCTS

49 2.1 ACCEPTABLE MANUFACTURERS

50 A. DIP Manufacturers requirements:

- 1 2. The manufacturer shall have a minimum of 5 YRS experience successfully manufacturing and
2 furnishing all sizes of pipe fittings and joint types involved on this project.
- 3 2. All pipe specified in this section shall be manufactured in the United States of America.
4 Certain fittings, restraining devices, and accessories may be manufactured outside the USA as
5 approved equals.

- 6 B. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
7 1. Ductile Iron Pipe:
8 a. American.
9 b. US Pipe.
10 c. Griffin.
- 11 2. Restrained joints:
12 a. American (Flex-Ring or Lok-Ring).
13 b. US Pipe (TR-Flex).
14 c. US Pipe (Field Lok)
15 d. Griffin (Snap-Lok).
16 e. Or approved equal.
- 17 3. Compression sleeve coupling:
18 a. Rockwell (Style 431 (cast)).
19 b. Dresser (Style 153 (cast)).
- 20 4. Reducing couplings:
21 a. Rockwell (Style 415).
22 b. Dresser (Style 62).
- 23 5. Transition coupling:
24 a. Rockwell (Style 413).
25 b. Dresser (Style 62).
26 c. Or approved equal.
- 27 6. Polyethylene encasement tape:
28 a. Chase (Chasekote 750).
29 b. Kendall (Polyken 900).
30 c. 3 M (Scotchrap 50).
31 d. Or approved equal.

- 32 C. Submit requests for substitution in accordance with Section 01640 - Product Substitution.

33 2.2 MATERIALS

- 34 A. Ductile Iron Pipe:
35 1. ANSI/AWWA C115A21.15.
36 2. ANSI/AWWA C150A21.50.
37 3. ANSI/AWWA C151A21.51.

- 38 B. Fittings and Flanges:
39 1. ANSI/AWWA C110A21.10.
40 2. ANSI/AWWA C115A21.15.
41 3. ANSI/AWWA C153A21.21.53.
42 4. Flanges drilled and faced per ANSI B16.1 for both 125 and 250 psi applications.

- 43 C. Nuts and Bolts:
44 1. Hot-dipped zinc galvanized, ASTM A307, Grade B.
45 2. Heads, dimensions and threading per ANSI B1.1.

- 46 D. Gaskets:
47 1. Gaskets shall be synthetic rubber:
48 a. Styrene Butadiene Copolymer (SBR).
49 2. Natural rubber or other materials, which will support microbiological growth, will not be
50 acceptable.
51 3. Gaskets shall be certified as suitable for chlorinated and chloraminated potable water.
52 4. A certificate of gasket suitability shall be submitted.

- 53 E. If mechanical coupling system is used, utilize pipe thickness and grade in accordance with AWWA
54 C606.

- 55 F. Polyethylene Encasement: See AWWA C105.

1 G. See Piping Specification Schedules in Section 15060 - Pipe and Pipe Fittings: Basic Requirements.

2 **2.3 LININGS AND COATINGS**

- 3 A. Interior surfaces of all ductile iron pipe, fittings, and specials shall be cleaned and lined in the
4 shop with a standard thickness cement-mortar lining applied in conformity with AWWA C104:
5 1. Portland cement mortar.
- 6 B. The exterior of all ductile iron pipe, fittings, and specials shall be coated with a 1 mil asphaltic
7 coating in accordance with AWWA C151. When specified or shown on the Drawings, loose
8 polyethylene encasement shall be provided in accordance with AWWA C105.

9 **2.4 SOURCE QUALITY CONTROL**

- 10 A. Factory Test:
11 1. Subject pipe to hydrostatic test of not less than 500 psi with the pipe under the full test
12 pressure for at least 10 seconds.

13 **PART 3 – EXECUTION**

14 **3.1 INSTALLATION**

- 15 A. Joining Method - Push-On Mechanical (Gland-Type) Joints:
16 1. Install in accordance with ANSI/AWWA C111/A21.11.
17 2. Assemble mechanical joints carefully according to manufacturer's recommendations.
18 3. If effective sealing is not obtained, disassemble, thoroughly clean, and reassemble the joint.
19 4. Do not overstress bolts.
20 5. Where piping utilizes mechanical joints with tie rods, align joint holes to permit installation
21 of harness bolts.
- 22 B. Joining Method - Push-On Joints:
23 1. Install in accordance with ANSI/AWWA C115/A21.15.
24 2. Assemble push-on joints in accordance with manufacturer's directions.
25 3. Bevel and lubricate spigot end of pipe to facilitate assembly without damage to gasket. Use
26 lubricant that is non-toxic, does not support the growth of bacteria, has no deteriorating
27 effects on the gasket material, and imparts no taste or odor to water in pipe.
28 4. Assure the gasket groove is thoroughly clean.
29 5. For cold weather installation, warm gasket prior to placement in bell.
30 6. Taper of bevel shall be approximately 30 degree with centerline of pipe and approximately
31 1/4 IN back.
- 32 C. Joining Method - Mechanical Coupling Joint:
33 1. Arrange piping so that pipe ends are in full contact.
34 2. Groove and shoulder ends of piping in accordance with manufacturer's recommendations.
35 3. Provide coupling and grooving technique assuring a connection which passes pressure testing
36 requirements.
- 37 D. Cutting:
38 1. Do not damage interior lining material during cutting.
39 2. Use abrasive wheel cutters or saws.
40 3. Make square cuts.
41 4. Bevel and free cut ends of sharp edges after cutting.
- 42 E. Install buried piping in accordance with Section 15060 - Pipe and Pipe Fittings: Basic
43 Requirements.
- 44 F. Install restrained joint systems where specified in Section 15060 - Pipe and Pipe Fittings: Basic
45 Requirements under specific piping system or as shown on the Drawings.

46 **3.2 FIELD QUALITY CONTROL**

- 47 A. Test piping systems in accordance with Section 15060 - Pipe and Pipe Fittings: Basic
48 Requirements.

49 **END OF SECTION**

