

ADDENDUM NO. 1

TO: All Bid Document Holders

FROM: Heather A. Campbell, P.E.

DATE: July 15, 2026

RE: Albemarle County Service Authority
Townwood Water Main Replacement Project
ACSA Project No.: 2022-05
DEI Project#: 50154109



The following additions, corrections, clarifications and/or changes to the Contract Documents are to be made:

1. *Modification:* All references to the installation of new zinc-coated ductile iron pipe in the contract documents shall be replaced with the installation of C900 DR14 PVC pipe.
2. *Modification:* Specification Section 02270 "EARTHWORK FOR UTILITIES", **REPLACE** 3.3 BEDDING, section B. with the following:
 - B. Bedding in Good Soil: The bottom of trench shall be scraped and compacted. All stones shall be removed to insure the pipe doesn't rest on rock. Four (4) inch bedding of No. 68 or 21A or 21B Virginia Department of Transportation stone shall be provided and thoroughly compacted. The bedding material shall extend evenly to the trench wall.
3. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.1 PIPE, section A. with the following:
 - A. PVC Pipe:
 1. PVC pipe shall meet the requirements of AWWA C900 pressure class 305 psi, DR-14, for sizes up to 8 inches in diameter. Joints and gaskets shall be in accordance with manufacturer's instructions and ASTM D3139 and F477. Material shall meet requirements for ASTM D1784, cell classification 12454.
4. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **DELETE** 2.1 PIPE, section C. relative to Schedule 80 PVC pipe.
5. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.2 PIPE FITTINGS, section A. with the following:
 - A. PVC Pipe:
 1. Fittings for PVC pipe shall be ductile iron and compatible with the pipe specified. Ductile iron fittings shall be in accordance with AWWA C110, current revision or AWWA C153, current revision. Fittings shall be manufactured by Tyler (with D.I. T-bolts or Corten steel bolts), Standard International (with Corten steel bolts), Union Foundry Co., Star Pipe Products, Sigma Corporation, or equal.

2. Gaskets shall be of vulcanized natural or vulcanized synthetic rubber, free of porous areas, foreign material or visible defects. Rubber gaskets shall conform to all applicable provisions of AWWA C111, current revision. Gaskets shall be protected from exposure to excessive heat and cold, direct sunlight, ozone (from electric motors and equipment), oil, grease or other contaminants. Lubricant used to facilitate assembly of joints shall be a non-toxic, tasteless, odorless grease that will not support bacteria.
 3. Fittings shall have a fusion-bonded epoxy lining and coating per AWWA C116, current revision. Bolts utilized shall also be poly-coated to ensure corrosion protection.
6. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **DELETE** 2.2 PIPE FITTINGS, section C. relative to Schedule 80 PVC pipe fittings.
7. *Addition:* Specification Section 02665 "POTABLE WATER SYSTEMS", **ADD** part 6. to 2.4 VALVES & ACCESSORIES, section A. Gate Valves:
6. All valves shall have a fusion-bonded epoxy lining and coating per AWWA C550.
8. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.4 VALVES & ACCESSORIES, section G. and section H. with the following:
- G. Service Laterals
1. Crosslinked polyethylene (PEXa) municipal water service pipe (Such as Municipex, manufactured by REHAU, or approved equal) shall be manufactured using the highpressure peroxide method of crosslinking. Pipe shall be certified to AWWA C 904 Crosslinked Polyethylene (PEX) Pressure Pipe, 3/4" through 2", for Water Service by approved testing agencies. In addition, pipe shall be certified to standards ASTM F876, CSA B137.5, NSF 14 and NSF 61, by approved testing agencies with a standard materials designation code of 3306.
 2. Pipe shall demonstrate ability to satisfy the performance requirements of section F.7 of PPI TR-3 for PE materials in order to apply a 0.63 design factor resulting in a temperature/pressure rating of 200 psi @ 73.4°F.
 3. Pipe shall be rated for 160 psi @ 73.4°F and 100 psi @ 180°F.
 4. Pipe shall have a co-extruded UV Shield made from UV-resistant high-density polyethylene, color blue. Pipe shall have minimum recommended UV exposure time of one (1) year when tested in accordance with ASTM F2657, or as per manufacturer's recommendation.
 5. Pipe shall be compatible with cold-expansion compression-sleeve fittings certified to ASTM F2080 for installations as cold as -40°F.
 6. Pipe shall be approved for use with AWWA C800 fittings when using manufacturer's recommended insert.
 7. Pipe shall be approved by manufacturer for use with manual plastic squeeze-off tools for temporary stoppage of flow. Pipe shall be approved by manufacturer to be repaired using hot air, if kinked in the field.

8. Pipe shall have the minimum markings: PEXa 3306, CSA B137.5, ASTM F876, F2023 and F2080, NSF-pwg.

H. Service Saddles

1. All saddle castings must be bronze and meet the requirements of AWWA C800 and ASTM B-62. Saddles shall be Ford Style 202BS or 202BSD, Mueller Model BR2S, PowerSeal Model, ROMAC Style 202BS, Smilth-Blair (Rockwell) SB 325, or approved equal.
2. All saddles must have a minimum of two (2) 1-1/2" wide (including bolts) stainless steel straps type 304 (18-8) where welds are passivated for resistance to corrosion. Exception: Ford 202BS which has two (2) bolts and a single strap with a minimum width of 3-1/4".
3. Gaskets must be made of Virgin NBR compound.
4. Service saddles are required on all taps made onto PVC pipe.

9. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.4 VALVES & ACCESSORIES, section J. with the following:

J. Joint Restraint

1. All waterline joints and fittings shall be restrained.
2. All restraint devices must be UL listed and FM approved.
3. PVC Pipe
 - a. Where PVC pipe is connected to fittings, mechanical joint restraint shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Flexibility and minimal deflection of the joint shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A536. Restraining devices shall be of ductile iron heat treated to a minimum hardness of 370 BHN. There shall be no dissimilar metals allowed. Dimensions of the gland shall be such that it can be used with all AWWA approved standardized mechanical joint bell and tee-head bolts conforming to ANSI A21.11 and AWWA C153 of latest revision. The mechanical joint restraint device shall have a working pressure of at least the working pressure of the pipe with a minimum of 150 psi. Twist-off nuts shall be used to insure proper actuating of the restraining devices.
 - b. As part of a joint restraint system, all bell and spigot end joints within this length shall be restrained with a clamping ring and an additional ring designed to fit behind the bell end of the PVC pipe. The rings shall relate to T-Head Bolts or Rods.
 - c. All clamping rings shall incorporate serrations on the inside surface to provide positive restraint on the outside surface of the pipe and shall provide full support around the circumference of the pipe to maintain roundness.
 - d. Restraining devices shall have a pressure rating equal to or greater than the PVC pipe and shall be capable of withstanding a minimum test pressure of 2

times the pressure rating of the device.

- e. Restraining devices and T-bolts shall be manufactured from high strength ductile iron, ASTM A536, Grade manufactured from completely corrosion resistant COR-TEN STEEL or equal.
4. PVC Pipe (Sizes up to 12") restraining devices shall be as follows or approved equal:
 - a. EBAA Iron Megalug Series 2000 PV (PVC Pipe – MJ Fittings)
 - b. EBAA Iron Megalug Series 1500 (PVC Bell and Spigot Joints)
 - c. Mueller – AquaGrip Integral Restraint System for use on the Centurion Fire Hydrants and Mueller RS Valves
 - d. Romac Style 611 (PVC Bell and Spigot Joints)
 - e. SIGMA – One-Lok Model SLC
 - f. Star Pipe Products STARGRIP Series 4000 (PVC Pipe – MJ Fittings)
10. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.6 WATER SERVICE LATERALS, section A. with the following:
 - A. Water service laterals shall extend from the main to the property line of the lot or parcel. Water service laterals are to be crosslinked polyethylene (PEXa) municipal water service pipe (Such as Municipex, manufactured by REHAU, or approved equal), installed at minimum depth of 36-inches from the main line to a meter setting below finished grade.
11. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 3.3 INSTALLATION OF PERMANENT PIPE, PIPE FITTINGS, AND ACCESSORIES, WATER SERVICE LATERALS, section G. with the following:
 - G. Deflection of PVC Pipe
 1. No joint deflection is allowed in PVC push on joints.
 2. Wherever it is necessary to deflect the pipe from a straight line, either in vertical or horizontal plane, which cannot be accomplished with bend fitting(s), deflection shall be by allowable longitudinal bending of the pipe in accordance with manufacturer's specifications and instructions. The following table identifies minimum allowable radius (feet) and offset (inches). Offset is based on 20 feet length of pipe forming a true arc.

Pipe Diameter (inches)	Minimum Radius (feet)	Offset (inches)
4	100	24.08
6	150	16.02
8	200	12.01
12	300	8.00

12. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", **REPLACE** 2.10:
- 2.10 POLYETHYLENE ENCASEMENT
- A. Metallic fittings, valves, and saddles shall be protected with polyethylene encasement. Each fitting, valve, and saddle shall be double-wrapped.
 - B. Polyethylene encasement shall conform to AWWA C105, current revision, with regard to materials used and method of installation (Modified Method A).
 - C. In addition, polyethylene encasement shall consist of three layers of co-extruded linear low density polyethylene (LLDPE), fused into a single thickness of not less than eight (8) mils.
 - D. The inside surface of the polyethylene wrap shall be infused with a blend of anti-microbial biocide to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.
 - E. Polyethylene encasement shall be V-Bio Enhanced Polyethylene Encasement or approved equal.
13. *Modification:* Specification Section 02665 "POTABLE WATER SYSTEMS", 3.3, **REPLACE** I:
- I. Installation of Polyethylene Encasement
 - 1. Contractor shall install a double layer of 8-mil thick V-Bio polyethylene encasement film over metallic fittings, valves, and service saddles.
 - 2. Overlapping Sections: Provide 2-foot overlap between sections of polyethylene. Complete tape overlapping sections to hold securely in place during backfilling, using compatible polyethylene tape.
 - 3. Repair of Openings in Encasement: Repair holes, slits, or openings of any size, to restore integrity of polyethylene in accordance with manufacturer's recommendation.
 - 4. Installation at Hydrants and Interconnections: Provide opening or other means at base of hydrant riser to avoid water accumulation under encasement because of water relief.
 - 5. Backfill around polyethylene encasement shall be VDOT 21A stone, in accordance with the trench detail on the Drawings.

All other parts of the Contract Documents remain unaltered by this Addendum. Bidders must acknowledge receipt of this Addendum with a completed Receipt of Addenda form, Section 00490 of the Contract Documents, included in their bid package.

END OF ADDENDUM NO. 1