



Civil Engineering  
Surveying  
Environmental Consulting

**Tysinger, Hampton & Partners, Inc.**

**ADDENDUM #1**

CITY OF JOHNSON CITY WATER & SEWER SERVICES  
JOHNSON CITY, TN

**WASHINGTON COUNTY WATER LINE EXTENSIONS**

ITB #6640 (TH&P PROJECT 2110601C)

**SEPTEMBER 16, 2022**

**CITY APPROVAL:**

*Debra O'Leary 9/16/22*



The original Contract Documents dated **August 18, 2022** for the above referenced project are hereby amended by the City of Johnson City and the project consultant as noted in this **Addendum Number One**. Receipt of this Addendum shall be acknowledged by inserting the Addendum number and date on the Bid Form; however, failure to do so does not relieve the Bidder from the requirements contained herein and may be cause for rejection of your submittal. This Addendum is issued to make certain additions, deletions, revisions, clarifications and/or alterations to the Contract Documents and other requirements for the subject project. Each Bidder shall acknowledge receipt of this Addendum on the Bid Form. This addendum consists of **51 pages**.

**I. CLARIFICATIONS**

- A. There are existing trees within the right-of-way (ROW) along the project route. The Contractor is responsible for removing trees that are in conflict with the proposed water line. Realignment of the proposed water line to avoid existing trees will be considered on a case-by-case basis by the Engineer and the Owner. All tree removal in the County ROW shall be coordinated with the Washington County Highway Department. Any and all expenses associated with tree removal shall be paid by the Contractor. There is no separate pay item for tree removal.
- B. The Contractor shall coordinate traffic control with the City of Johnson City, Washington County Highway Department (WCHD), Tennessee Department of Transportation (TDOT), emergency responders, and schools, as applicable.
- C. The City does not have a direct contact with CSXT. Contractors may contact CSXT with their inquiries by referencing Facility Encroachment Agreement No. CSX954283.
- D. Railroad insurance is required by CSXT while working in their ROW. Any and all expenses associated with obtaining and maintaining the insurance required by CSXT shall be paid by the Contractor. There is no separate pay item for this insurance, and it is not included in pay item A-54 "RAILROAD FLAGGING/INSPECTION SERVICES".



- E. There are several trees along Grassy Valley Road near station 50+00, and the water line may be in the drip line of the trees. The City does not want tree roots cut that may result in the tree to die at a later date. The Contractor will be required to remove trees that are determined to be in conflict with the new water line, or a realignment may be considered with prior approval of both the Engineer and the Owner. It may also be possible to obtain assistance from the Washington County Highway Department for tree removal, depending on the circumstances (proximity to road, power lines, etc.). All tree removal in the County ROW shall be coordinated with the Washington County Highway Department. Any and all expenses associated with tree removal shall be paid by the Contractor. There is no separate pay item for tree removal.
- F. The landscaping buffer at 3130 Grassy Valley Road will be paid under item A-56 "LANDSCAPING ALLOWANCE" (see Project Manual Section 01150 part 1.30 for details on this pay item). Payment for this item includes all labor, equipment, and materials but does not include additional payment for markup. This item is only for the landscape buffer at 3130 Grassy Valley Road, and all other landscape restoration required in this project will be paid under items A-45 and B-31 "LANDSCAPING RESTORATION".
- G. Plan Sheet C4.4 LN:W4 Pleasant Valley Road depicts one creek crossing. At present, no additional access beyond the Washington County ROW along Pleasant Valley Road has been acquired for installation of the creek crossing. Further discussions for additional access at this location of the project may be completed between the awarded contractor, Engineer, and Owner prior to construction activities, if needed.
- H. If a water service lateral cannot be installed by trenchless methods and must be open-cut, there shall be no additional payment for restoration of surfaces (asphalt, concrete, gravel, etc.).
- I. Pressure reducing valves are not required on the water service assemblies included in this project.
- J. Blasting will be permitted on this project as specified in Section 02221 Trenching, Backfilling, and Compaction and the Blasting Notes on Plan Sheet C2.1.

## II. PROJECT MANUAL

- A. **Section 00010 Table of Contents.** Page 2 of the Table of Contents has been revised. This page shall be removed from the Project Manual and replaced with the attached page included in Attachment "A" of this document.
- B. **Section 00410 Bid Form.** The Bid Schedule, pages 4 through 7, have been revised. These pages shall be removed from the Project Manual and replaced with the attached revised pages included in Attachment "B" of this document.
- C. **Section 00800 Supplementary General Conditions.** Part XXVI on Page 4 of 4, has been revised to include payment for stored materials. This page shall be removed from the Project Manual and replaced with the attached revised page included in Attachment "C" of this document.

- D. Section 00500 Agreement Between Owner and Contractor.** Article 5.3 on Page 3 of 5 has been revised to include payment for stored materials. This page shall be removed from the Project Manual and replaced with the attached revised page included in Attachment “D” of this document.
- E. Section 01150 Measurement and Payment Water Distribution Improvements.** This Section has been revised. This Section shall be removed from the Project Manual and replaced with the attached revised included in Attachment “E” of this document.
- F. Section 02221 Trenching, Backfilling, and Compaction.** This Section has been revised. This Section shall be removed from the Project Manual and replaced with the attached revised included in Attachment “F” of this document.

### **III. CONSTRUCTION PLANS**

- A. Sheet C1.1.** The Cover Plan Sheet C1.1 has been revised. This sheet shall be removed from the Construction Plans and replaced with the attached revised page included in Attachment “G” of this document.
- B. Sheet C2.1.** The Blasting Notes included on Plan Sheet C2.1 have been revised. This sheet shall be removed from the Construction Plans and replaced with the attached revised page included in Attachment “H” of this document.
- C. Sheet C4.7.** The LN:W5 Plan (Sta. 55+00 to Sta. 67+51) Grassy Valley Road has been revised. The method of connection to the existing 6-inch water line at Sta. 67+51.41 has been revised to reflect a 6” x 6” tapping sleeve, 6” tapping valve, and an 8” x 6” reducer. This sheet shall be removed from the Construction Plans and replaced with the attached revised page included in Attachment “I” of this document.

### **IV. PRE-BID MEETING**

- A.** The optional pre-bid meeting minutes are included in Attachment “J”.

September 16, 2022

TYSINGER, HAMPTON, & PARTNERS, INC.  
Jill D. Workman, P.E.

**END OF ADDENDUM ONE**

## ATTACHMENT "A"

## PROJECT SPECIFICATIONS

<b>SECTION</b>	<b>DESCRIPTION</b>	<b>PAGES</b>
01010	Summary of Work	2
01045	Cutting and Patching	3
01050	Field Engineering	3
01090	Reference Standards	3
01150	Measurement and Payment	11
01152	Applications for Payment	3
01153	Change Order Procedures	6
01310	Construction Schedules	4
01340	Shop Drawings, Product Data, and Samples	5
01380	Construction Videos and Photographs	1
01510	Temporary Utilities	4
01520	Construction Aids	2
01530	Barriers	3
01540	Security	2
01560	Temporary Controls	3
01570	Traffic Regulation	3
01580	Project Identification and Signs	3
01600	Material and Equipment	5
01700	Contract Closeout	4
01710	Cleaning	2
01720	Project Record Documents	3
01720A	Operational Definitions for Water line As-Built Notes	2
02110	Clearing and Grubbing	4
02221	Trenching , Backfilling, and Compaction	9
02300	Highway, Street, and Railway Crossings	4
02444	Chain Link Fences and Gates	3
02479	Base Treatment for Asphalt Pavement Repair	5
02480	Pavement Replacement	2
02485	Lawn and Grass Landscaping	8
02528	Concrete Curbs, Gutters and Sidewalks	6
02605	Separation of Pipe Utilities	2
02713	Water Distribution Systems	22
03001	Concrete Work	9
04001	Special Health and Safety Considerations	4

## ATTACHMENT "B"

**DIVISION A - BID SCHEDULE****(HARTMANTOWN RD. LN:W1, PLEASANT VALLEY RD. LN:W4, GRASSY VALLEY RD. LN:W5, & BILL BENNETT RD. LN:W6)**

ITEM NO.	DESCRIPTION	MEASUREMENT & PAYMENT SECTION	QTY	UNITS	UNIT COST	EXT. COST
A-1	8" DIP S.J. CLASS 350	1.02	8,300	LF	\$	\$
A-2	8" DIP R.J. CLASS 350	1.02	230	LF	\$	\$
A-3	6" DIP S.J. CLASS 350	1.02	4,900	LF	\$	\$
A-4	6" DIP R.J. CLASS 350	1.02	40	LF	\$	\$
A-5	8" X 6" TAPPING SLEEVE DI	1.03	1	EA	\$	\$
A-6	6" X 6" TAPPING SLEEVE DI	1.03	1	EA	\$	\$
A-7	6" TAPPING VALVE AND BOX	1.03	2	EA	\$	\$
A-8	8" M.J. GATE VALVE & VALVE BOX	1.04	6	EA	\$	\$
A-9	6" M.J. GATE VALVE & VALVE BOX	1.04	9	EA	\$	\$
A-10	8" 90° M.J. BEND & THRUST RESTRAINT	1.05	4	EA	\$	\$
A-11	8" 45° M.J. BEND & THRUST RESTRAINT	1.05	4	EA	\$	\$
A-12	8" 11.25° M.J. BEND & THRUST RESTRAINT	1.05	9	EA	\$	\$
A-13	6" 90° M.J. BEND & THRUST RESTRAINT	1.05	6	EA	\$	\$
A-14	6" 22.5° M.J. BEND & THRUST RESTRAINT	1.05	4	EA	\$	\$
A-15	6" 11.25° M.J. BEND & THRUST RESTRAINT	1.05	19	EA	\$	\$
A-16	8" X 6" M.J. REDUCER & THRUST RESTRAINT	1.05	1	EA	\$	\$
A-17	6" X 4" M.J. REDUCER & THRUST RESTRAINT	1.05	2	EA	\$	\$
A-18	8" x 6" M.J. TEE & THRUST RESTRAINT	1.05	6	EA	\$	\$
A-19	8" PLUG & THRUST RESTRAINT	1.05	1	EA	\$	\$
A-20	6" PLUG & THRUST RESTRAINT	1.05	3	EA	\$	\$
A-21	CONNECT TO EXISTING 8" WATER LINE	1.06	2	EA	\$	\$
A-22	CONNECT TO EXISTING 6" WATER LINE	1.06	1	EA	\$	\$
A-23	CONNECT TO EXISTING 4" WATER LINE	1.06	2	EA	\$	\$
A-24	FIRE HYDRANT ASSEMBLY	1.07	5	EA	\$	\$
A-25	OFF ROAD REPAIR & SEEDING	1.08	13,000	LF	\$	\$
A-26	FLOWABLE FILL FOR PAVED AREAS	1.09	20	CY	\$	\$
A-27	PAVEMENT REPLACEMENT - ROAD	1.10	1,500	LF	\$	\$
A-28	MILL & REPAVE EXISTING ASPHALT	1.11	3,000	SF	\$	\$
A-29	DRIVEWAY REPLACEMENT - ASPHALT	1.12	400	LF	\$	\$
A-30	DRIVEWAY REPLACEMENT - CONCRETE	1.12	100	LF	\$	\$

BIDDER NAME: \_\_\_\_\_

**DIVISION A - BID SCHEDULE**

**(HARTMANTOWN RD. LN:W1, PLEASANT VALLEY RD. LN:W4, GRASSY VALLEY RD. LN:W5, & BILL BENNETT RD. LN:W6)**

ITEM NO.	DESCRIPTION	MEASUREMENT & PAYMENT SECTION	QTY	UNITS	UNIT COST	EXT. COST
A-31	DRIVEWAY REPLACEMENT - GRAVEL	1.12	100	LF	\$	\$
A-32	MISC. CONCRETE	1.13	50	LF	\$	\$
A-33	MISC. STONE	1.14	50	TONS	\$	\$
A-34	1" COPPER SERVICE LATERAL- LINE SIDE	1.15	60	LF	\$	\$
A-35	3/4" COPPER SERVICE LATERAL - LINE SIDE	1.15	200	LF	\$	\$
A-36	1" COPPER SERVICE LATERAL- FAR SIDE	1.16	100	LF	\$	\$
A-37	3/4" COPPER SERVICE LATERAL - FAR SIDE	1.16	625	LF	\$	\$
A-38	1" METER SETTING	1.17	2	EA	\$	\$
A-39	5/8" METER SETTING	1.17	57	EA	\$	\$
A-40	1" COMBINATION AIR VALVE	1.18	3	EA	\$	\$
A-41	BLOW-OFF ASSEMBLY	1.19	1	EA	\$	\$
A-42	EROSION CONTROL	1.20	1	LS	\$	\$
A-43	PROJECT SIGN	1.21	4	EA	\$	\$
A-44	WATER LINE ABANDONMENT	1.22	1	EA	\$	\$
A-45	LANDSCAPING RESTORATION	1.23	20	LF	\$	\$
A-46	OPEN CUT 16" STEEL ENCASEMENT PIPE	1.24	40	LF	\$	\$
A-47	OPEN CUT 18" STEEL ENCASEMENT PIPE	1.24	230	LF	\$	\$
A-48	JACK AND BORE 18" STEEL ENCASEMENT PIPE	1.25	95	LF	\$	\$
A-49	WEATHERPROOF MARKER	1.26	2	EA	\$	\$
A-50	CREEK CROSSING - HARTMANTOWN ROAD	1.27	1	EA	\$	\$
A-51	CREEK CROSSING - PLEASANT VALLEY ROAD	1.27	1	EA	\$	\$
<b>DIVISION A SUBTOTAL =</b>						
A-52	MOBILIZATION/DEMOBILIZATION (LIMITED TO A MAXIMUM OF 3% OF DIVISION A SUBTOTAL)	1.28	1	LS	\$	\$
<b>DIVISION A TOTAL (DIVISION A SUBTOTAL PLUS ITEM A-52) =</b>						\$
A-53	DIVISION A CONSTRUCTION CONTINGENCY (3% OF DIVISION A TOTAL) =					\$
A-54	RAILROAD FLAGGING/INSPECTION SERVICES (MEASUREMENT & PAYMENT SECTION 1.29) =					\$ 100,000.00
A-55	DIVISION A FORCE MAJEURE CONTINGENCY ALLOWANCE FOR DIP SHIPMENT SURCHARGES & PRICE INCREASES (MEASUREMENT & PAYMENT SECTION 1.30) =					\$ 70,000.00
A-56	LANDSCAPING ALLOWANCE (MEASUREMENT & PAYMENT SECTION 1.31) =					\$ 10,000.00
<b>DIVISION A TOTAL (DIVISION A TOTAL + ITEM A-53 + ITEM A-54 + ITEM A-55 + ITEM A-56) =</b>						\$

BIDDER NAME: \_\_\_\_\_



**DIVISION B - BID SCHEDULE**  
(MULBERRY LN. LN:W2 & WILCOX CIR. LN:W3)

ITEM NO.	DESCRIPTION	& PAYMENT SECTION	QTY	UNITS	UNIT COST	EXT. COST
B-1	8" DIP S.J. CLASS 350	1.02	1,000	LF	\$	\$
B-2	6" DIP S.J. CLASS 350	1.02	2,200	LF	\$	\$
B-3	8" M.J. GATE VALVE & VALVE BOX	1.04	2	EA	\$	\$
B-4	6" M.J. GATE VALVE & VALVE BOX	1.04	8	EA	\$	\$
B-5	8" 90° M.J. BEND & THRUST RESTRAINT	1.05	2	EA	\$	\$
B-6	6" 45° M.J. BEND & THRUST RESTRAINT	1.05	1	EA	\$	\$
B-7	6" 22.5° M.J. BEND & THRUST RESTRAINT	1.05	1	EA	\$	\$
B-8	8" X 6" M.J. REDUCER & THRUST RESTRAINT	1.05	1	EA	\$	\$
B-9	8" M.J. TEE & THRUST RESTRAINT	1.05	1	EA	\$	\$
B-10	6" M.J. TEE & THRUST RESTRAINT	1.05	2	EA	\$	\$
B-11	8" PLUG & THRUST RESTRAINT	1.05	2	EA	\$	\$
B-12	6" PLUG & THRUST RESTRAINT	1.05	1	EA	\$	\$
B-13	CONNECT TO EXISTING 8" WATER LINE	1.06	2	EA	\$	\$
B-14	FIRE HYDRANT ASSEMBLY	1.07	1	EA	\$	\$
B-15	OFF ROAD REPAIR & SEEDING	1.08	3,000	LF	\$	\$
B-16	PAVEMENT REPLACEMENT - ROAD	1.10	50	LF	\$	\$
B-17	DRIVEWAY REPLACEMENT - ASPHALT	1.11	60	LF	\$	\$
B-18	DRIVEWAY REPLACEMENT - CONCRETE	1.11	30	LF	\$	\$
B-19	DRIVEWAY REPLACEMENT - GRAVEL	1.11	80	LF	\$	\$
B-20	MISC. CONCRETE	1.12	50	LF	\$	\$
B-21	MISC. STONE	1.13	50	TONS	\$	\$
B-22	3/4" COPPER SERVICE LATERAL - LINE SIDE	1.14	41	LF	\$	\$
B-23	1" COPPER SERVICE LATERAL- FAR SIDE	1.15	61	LF	\$	\$
B-24	3/4" COPPER SERVICE LATERAL - FAR SIDE	1.15	175	LF	\$	\$
B-25	1" METER SETTING	1.16	1	EA	\$	\$
B-26	5/8" METER SETTING	1.16	14	EA	\$	\$
B-27	1" COMBINATION AIR VALVE	1.17	2	EA	\$	\$
B-28	BLOW-OFF ASSEMBLY	1.18	1	EA	\$	\$
B-29	EROSION CONTROL	1.19	1	LS	\$	\$
B-30	PROJECT SIGN	1.20	2	EA	\$	\$

BIDDER NAME: \_\_\_\_\_

**DIVISION B - BID SCHEDULE**  
**(MULBERRY LN. LN:W2 & WILCOX CIR. LN:W3)**

ITEM NO.	DESCRIPTION	& PAYMENT SECTION	QTY	UNITS	UNIT COST	EXT. COST
B-31	LANDSCAPING RESTORATION	1.22	60	LF	\$	\$
B-32	CREEK CROSSING - MULBERRY LANE	1.26	2	EA	\$	\$
<b>DIVISION B SUBTOTAL =</b>						
B-33	MOBILIZATION/DEMobilIZATION <i>(LIMITED TO A MAXIMUM OF 3% OF DIVISION B SUBTOTAL)</i>	1.27	1	LS	\$	\$
<b>DIVISION B TOTAL (DIVISION B SUBTOTAL PLUS ITEM B-33) =</b>						<b>\$</b>
B-34	DIVISION B CONSTRUCTION CONTINGENCY (3% OF DIVISION B TOTAL) =					\$
B-35	DIVISION B FORCE MAJEURE CONTINGENCY ALLOWANCE FOR DIP SHIPMENT SURCHARGES & PRICE INCREASES (MEASUREMENT & PAYMENT SECTION 1.29) =					\$ 15,000.00
<b>DIVISION B TOTAL (DIVISION B TOTAL + ITEM B-34 + ITEM B-35) =</b>						<b>\$</b>

<b>TOTAL BID</b>	
DIVISION A TOTAL (WITH CONTINGENCIES & ALLOWANCES) =	\$
DIVISION B TOTAL (WITH CONTINGENCIES & ALLOWANCES) =	\$
<b>TOTAL BID =</b>	<b>\$</b>

**BID FORM MUST BE SIGNED TO BE CONSIDERED VALID (SEE ARTICLE 9 - BID SUBMITTAL)**

BIDDER NAME: \_\_\_\_\_

## ATTACHMENT "C"

- XXIII. All existing permanent structures shown on the plans shall remain in place following construction activities unless prior approval by the property owner and the City of Johnson City. Damage caused to any and all permanent structures within the construction area must be repaired by the contractor at no cost to the property owner or City of Johnson City.
- XXIV. No construction traffic will be allowed on private residence or business driveways without prior approval by the property owner.
- XXV. For construction delays associated with an abnormal amount of rain, Contractor shall submit written requests for the documented rain days, and a contract time extension may be awarded if approved by the Owner.
- XXVI. **Payment to the contractor for stored materials shall be included on progress payments throughout the duration of this project.**
- XXVII. All pipe must be new and shall be manufactured in the United States of America (USA); all ductile iron pipe shall be cast, cleaned, lined, coated, tested, and certified at a single manufacturing facility located in the USA. Approved USA manufacturers are AMERICAN Cast Iron Pipe Company, U.S. Pipe, and McWane Ductile.
- XXVIII. The issuance of a Notice to Proceed for this project will be contingent upon the availability of materials and delivery schedules.
- XXIX. Work shall not begin on water LN:W5 along Grassy Valley Road without prior approval by the Engineer and Owner.
- XXX. The Grassy Valley Road LN:W5 water line includes one bore and jack crossing of the CSXT right-of-way. The bore pit required for this railroad crossing shall be located on the northeastern side of the railroad tracks, and the receiving pit shall be located on the southwest side of the railroad tracks. The Contractor shall minimize impacts to existing vegetation on the properties adjacent to the CSXT right-of-way.
- XXXI. Work shall not begin on the CSXT right-of-way until a start work date is agreed upon between the Engineer, Owner, and CSXT.
- XXXII. All work within the CSXT right-of-way shall comply with CSXT Specifications, the CSXT General Notes listed on Sheet C2.3 of the Plans, and all items stipulated in the Facility Encroachment Agreement No. CSX954283.
- XXXIII. The Contractor shall be required to obtain insurance, flagging, and inspection services in accordance with the CSXT Facility Encroachment Agreement No. CSX954283.
- XXXIV. All Work for this project shall be confined to existing rights-of-way and easements.
- XXXV. The Contractor shall conform to all regulations and requirements stipulated by the American Rescue Plan Act (ARPA).

**END OF SECTION**

## ATTACHMENT “D”

Contractor's Application for Payment (Section 00620).

5.2 Progress payments for Items based on Unit Prices will be determined for each monthly payment period by establishing the quantity completed for each Item, and multiplying by the corresponding Unit Price for each Item to calculate the extended prices. Lump Sum Items will be based on an estimate of the percentage of the Work completed for the payment period and applying the percent of Work completed to the total Lump Sum price. ENGINEER will verify the quantity completed and the percent of Work completed during each payment period prior to payment.

5.3 Five percent (5%) retainage will be held on completed work and stored materials not incorporated in the Work until final acceptance of project. The entire retainage amount will be released with the final payment.

#### **Article 6. Contract Documents**

6.1 The Contract Documents which comprise the contract between the OWNER and the CONTRACTOR are attached hereto and made a part hereof and consist of the following:

6.1.1 This Agreement (pages 1 to 5, inclusive);

6.1.2 Performance Bond (pages 1 to 3, inclusive);

6.1.3 Payment Bond (pages 1 to 3, inclusive);

6.1.4 General Conditions (pages 1 to 68, inclusive);

6.1.5 Acknowledgement of Requirements for Bids, Requests for Proposals, and Contracts Between The City of Johnson City and Other Parties (1 page);

6.1.6 Supplementary General Conditions (pages 1 to 4, inclusive);

6.1.7 Requirements for Bids, Requests for Proposals, and Contracts Between the City of Johnson City and Other Parties (pages 1 to 3, inclusive);

6.1.8 General Contract Form (pages 1 to 5, inclusive);

6.1.9 Insurance Checklist (1 page)

6.1.10 Sealed Solicitation General Terms and Conditions (pages 1 to 2, inclusive)

6.1.11 Escrow Agreement (pages 1 to 2, inclusive)

## ATTACHMENT "E"

**SECTION 01150**  
MEASUREMENT AND PAYMENT  
WATER DISTRIBUTION IMPROVEMENTS

**PART 1 GENERAL**

**1.01 GENERAL**

- A. For the information and guidance of bidders, the following explanation of the bid form items is made. The omission of reference to any item in this description shall not, however, alter the intent of the bid form or relieve the Contractor of the necessity of furnishing such as part of the contract if the item is shown on the drawings. The quantities set forth in the bid form are approximate and are given to establish a uniform basis for the comparison of bids. The Owner reserves the right to increase or decrease the quantity of any class or portion of the work during the progress of construction in accordance with the terms of the contract. Unit prices are used as a means of computing the final figures for bid and contract purposes, for periodic payments for work performed, for determining value of additions or deletions and wherever else as is reasonable.
- B. Payment will be made on the basis of work actually performed completing each item in the contract proposal, such work including, but not limited to, the furnishing of all necessary material, labor, equipment, transportation, clean up, and all other appurtenances to complete the construction and installation of the work to the configuration and extent as shown on the drawings and as described in the specifications.

**1.02 WATER MAIN**

- A. Payment for water main will be made at the Contract Unit Price per lineal foot for the pipe in place and shall include all necessary labor, equipment and materials for laying of the pipe; polyethylene encasement; metallic marking tape; dewatering if required; clearing and grubbing; temporary fencing and repairing or replacing existing fence; special restrained joints as required; clamps; harnessing; furnishing and installing all fittings and incidentals necessary to complete the work that are not itemized in the bid schedule and specifically called out on the plans; excavation of all material encountered including rock which will not be a separate pay item; bedding material including stone bedding, and/or borrow dirt for suitable material if required (where solid rock encountered at trench bottom); **backfill material including crushed stone backfill (where trench is within 3' of the edge of pavement)**; replacement of trench surface to original ground elevation; sterilization, and pressure testing. This work also includes required flagmen, construction signs, barricades, etc., necessary to comply and meet the safety standards required by the owner of each road and highway along the entire construction area.



- B. Measurement of water main will be to the nearest tenth of a foot along the pipe centerline excluding the lengths of valves, tees, reducers, and plugs, which will be separate pay items. Payment shall be at the same unit price for pipe laid without regard to location.
- C. Water lines 2 inches nominal diameter and smaller when crossing roads, highways or driveways will be installed by jacking, boring, directional boring, or pneumatic piercing tool unless otherwise shown on the plans. Open cut crossings will only be allowed for water lines 4 inches and larger (subject to city and/or county approval). There will be no additional payment for this work.
- D. Payment for water line installation as part of a creek crossing is not included in this item.
- E. Payment shall include V-BIO polyethylene encasement on DIP water mains (where indicated on the Plans) installed under the Contract. Payment shall also be compensation for all materials, labor, and equipment required to provide and install the polywrap including, but not limited to, LLD polyethylene film, tapes, adhesives, special cleaning agents, repair materials, and all other items required for a complete and functional installation.
- F. Measurement and payment of restrained joint pipe will only be made where specifically called out on the plans, the Bid Schedule, or as directed by the Engineer and the Owner.

**1.03 TAPPING SLEEVE/SADDLE and TAPPING VALVE with BOX**

- A. Payment for tapping sleeve/saddle and tapping valve with box shall include all materials, labor, equipment, and excavation for required installation in the location shown on the drawings at the appropriate contract unit price per each tapping sleeve/saddle and tapping valve with box for the type and size of pipe as shown.

**1.04 VALVE and BOX**

- A. Payment for installing butterfly or gate valves and box shall be made at the contract unit price for each valve in place in the location shown on the drawings at the appropriate contract unit price per each valve for the type and size of pipe as shown. Payment shall include compensation for all necessary labor, materials, and equipment for installation.
- B. Gate valve and box for fire hydrant assemblies are included for payment under "FIRE HYDRANT ASSEMBLY".

**1.05 TEES, REDUCERS, BENDS, and PLUGS with THRUST RESTRAINT**

- A. This item will be measured for payment by the number of tees, reducers, bends, and plugs with thrust restraint installed as shown on the plans.
  
- B. Payment for installing tees, reducers, bends, and plugs with thrust restraint on water mains shall be made at the contract unit price for each fitting in place only in locations shown and labeled on the plans. Payment shall include compensation for all necessary labor, materials, excavation, and equipment for installation. Payment will only be made for fittings that are shown and labeled on the plans and included with a quantity on the bid form; all other bends shall be included in the cost of installing water main.
  
- C. This item does not include payment for water main pipe inside the joint lengths required for thrust restraint at fittings and appurtenances.

**1.06 CONNECT TO EXISTING WATER LINE**

- A. Payment for installing tapping saddle and valve, solid sleeve, thrust restraint, couplings, all thread rods, and/or any other required materials for a complete and serviceable connection where indicated on the drawings or as directed by the Owner's representative. Payment shall include compensation for all necessary labor, materials, and equipment for installation.

**1.07 FIRE HYDRANT ASSEMBLY**

- A. Payment for installing tee, pipe, valve or tapping sleeve and valve with box, hydrant and mechanical restraint as shown on the drawings shall be made at the Contract Unit Price for each fire hydrant assembly in place. Payment shall include compensation for all necessary labor, materials, and equipment for installation.

**1.08 OFF ROAD REPAIR AND SEEDING**

- A. Payment for off road repair and seeding shall be for the repair of all areas disturbed by water installation. No payment will be made for seeding of those areas disturbed by installation of pipe for service laterals.
  
- B. Payment shall be made for the quantity of pipe installed in linear feet as measured along the centerline of the pipe.
  
- C. Contractor shall furnish all sod, seed, straw, and fertilizer and other materials required for seeding disturbed areas.
  
- D. Contractor shall provide replacement sod in areas where water line installation disturbs previously established sod yards as shown on the plans.

**1.09 FLOWABLE FILL FOR PAVED AREAS**

- A. Payment shall be made at the contract unit price per cubic yard in place. Flowable fill shall conform to Section 02300.
- B. Material for pipe bedding, haunching, backfill, and miscellaneous stone are included for payment under "INSTALLING WATER MAIN".

**1.10 PAVEMENT REPLACEMENT - ROAD**

- A. Payment for this item shall be furnishing all labor, materials and equipment to properly neat cut pavement and replace the road as specifically detailed in the plans. Payment shall also include asphalt required for temporary roadway maintenance. Any extra replacement of pavement must be approved by Owner.
- B. Payment shall be at the contract unit price per linear foot and shall be measured along the centerline of water line installed.
- C. Material for pipe bedding, haunching, backfill, and miscellaneous stone are included for payment under "INSTALLING WATER MAIN".

**1.11 MILL & REPAVE EXISTING ASPHALT**

- A. A complete mill and surface re-pavement of both travel lanes will be required as shown on Plan Sheet C4.5 LN:W5 Grassy Valley Road. A new layer of surface will be installed over both travel lanes over an area approximately  $\pm 3,000$  square foot in size after construction is complete. Payment for this item will be made at the contract unit price per square foot. The price for this item will include all necessary striping required for the travel lanes. All paving must meet all requirements set forth by the Washington County Highway Department. The complete re-pavement will begin near the road crossing of LN:W5, beginning approximately at water line STA 15+50, and extending to approximately water line STA 17+50. This Work shall be completed only if directed by the Washington County Highway Department, with concurrence from the Engineer and Owner. The Contractor will be required to provide new re-pavement matching all existing surface pavement thicknesses already in-place on Grassy Valley Road, or meet the minimum thickness shown on the plans for pavement replacement, whichever is greater. Payment for this item shall include furnishing all labor, materials and equipment to properly install new surface pavement specifically detailed in the plans. Compacted crushed stone used for pavement maintenance will not be a separate pay item. Payment for full road surface pavement replacement shall also include any crushed stone required for temporary roadway maintenance. Owner must approve any extra replacement of pavement. Base material placed as a portion of pavement replacing items will not be directly measured for payment. Contractor must also mill both ends across both travel lanes of new full road surface pavement replacement in order to install a smooth transition to existing surface pavement on both ends. No

additional payment will be made for necessary milling activities for either transition tie-in locations.

- B. Payment shall be at the contract unit price per square foot and shall be measured by the road width times the centerline of new pavement installed. Material for pipe bedding, haunching, backfill, and miscellaneous stone are included for payment under "WATER MAIN".
- C. This item does not include payment for the restoration of pavement for water or service line road cut installations across driveways or roads.

**1.12 DRIVEWAY REPLACEMENT – ASPHALT, CONCRETE, & GRAVEL**

- A. Payment for this item shall be furnishing all labor, materials and equipment to properly neat cut pavement and replace the driveway as specifically detailed in the plans. Payment shall also include crushed stone required for temporary driveway maintenance. Any extra replacement of driveway must be approved by Owner.
- B. Payment shall be at the contract unit price per linear foot as measured along the centerline of the installed pipe.
- C. Material for pipe bedding, haunching, backfill, and miscellaneous stone are included for payment under "INSTALLING WATER MAIN".

**1.13 MISCELLANEOUS CONCRETE**

- A. Payment for miscellaneous concrete shall include all concrete curbs, gutters, encasements, and miscellaneous concrete items disturbed by the construction process. Payment shall be for all excavation, placement of concrete, and other associated work in accordance with drawings and as directed by the Engineer in writing. This item does not include concrete for creek crossings, thrust blocks, sidewalks, or concrete driveways. Payment shall include equipment for the proper encasement or concrete placement. Quantity of concrete for payment must be agreed to upon a daily basis and entered in the inspector log. No concrete will be paid for that is not directed by the Engineer.
- A. Payment shall be at the contract unit price per linear foot as measured along the water line. Concrete specifically paid under other items shall be excluded from payment under this item.

**1.14 MISCELLANEOUS STONE**

- A. Payment for stone for stabilization shall be for furnishing and placement of stone in trenches as backfill material where the trench has been undercut due to unsuitable material encountered or at other places where specifically directed by the Owner's representative.

- B. Payment for stone restoration of gravel driveways is not included in this item.
- C. Material for pipe bedding, haunching and backfill as shown on the plans above the water line is excluded for payment under this item.
- D. No payment shall be made for stabilization work under this item unless ordered by the Engineer and approved by the Owner. The location and cause of the stabilization work shall be fully explained to the Owner. The quantity of work anticipated to be performed using this item shall be mutually agreed to by the Contractor and the Engineer before any trench excavation begins.
- E. Payment shall be at the contract unit price per ton. The Owner has the option of figuring payment amounts by either weigh tickets or by calculating the volume of stone compacted in place using a density of 120 pounds/cubic foot. In no case shall the trench width exceed 2 feet plus the nominal diameter of the pipe.
- F. There shall be no payment for temporary stone used to backfill paved areas prior to flowable fill and asphalt installation.

**1.15 SERVICE LATERALS – LINE SIDE**

- A. Payment for this item shall be made at the Contract Unit Price per lineal foot of service lateral installed from main water line to existing water meter location. A separate pay item shall be used for each size service lateral.
- B. Service laterals shall include necessary hardware for connection to the water main (i.e. corporation stop and fittings) and connection to existing water meter or setter. This item also includes all work necessary to complete the service lateral, including but not limited to: trenchless installations; abandonment of old laterals; temporary service lines; bedding and backfill stone; creek crossings; restoration of all surfaces; cleanup, grading, and seeding.
- C. This pay item shall also be applied to the ¾" copper after the wye on a split lateral installation.

**1.16 SERVICE LATERALS – FAR SIDE**

- A. Payment for this item shall be made at the Contract Unit Price per lineal foot of service lateral installed from main water line to existing water meter location. A separate pay item shall be used for each size service lateral.
- B. Service laterals shall include necessary hardware for connection to the water main (i.e. corporation stop and fittings) and connection to existing water meter or setter. This item also includes all work necessary to complete the service lateral, including but not limited to: trenchless installations; abandonment of old laterals; temporary

service lines; bedding and backfill stone; creek crossings; restoration of all surfaces; cleanup, grading, and seeding.

- C. This pay item shall also be applied to the ¾" copper after the wye on a split lateral installation.
- D. Installations crossing roads, highways, or driveways shall be installed by pneumatic piercing tool, boring, or directional boring. There will be no additional payment for this work.

**1.17 METER SETTING**

- A. Payment for this item shall be made at the Contract Unit Price for each new meter setting installed. Payment shall include tap, labor, new meter, meter box, meter setter and connection of lateral to meter.
- B. Service connections will be installed only where shown on the plans or as directed by the Project Engineer.

**1.18 COMBINATION AIR VALVE**

- A. Payment for installing combination air/vacuum release valve and box shall be made at the contract unit price for each valve in place. Payment shall include compensation for all necessary labor, materials, excavation, and equipment for installation.

**1.19 BLOW-OFF ASSEMBLY**

- A. Payment for installing pipe, valve, valve box, bends, brass cap, meter box and concrete thrust blocking as shown on the drawings shall be made at the Contract Unit Price for each blow-off assembly in place. Payment shall include compensation for all necessary labor, materials and equipment for installation.

**1.20 EROSION CONTROL**

- A. Payment for this item shall be made at the Contract Unit Price as a lump sum. This price shall be full compensation for furnishing, preparing, transporting, delivering, excavating, and placing the materials, and for all labor, tools, equipment and incidentals necessary to complete the installation work.
- B. This price shall also include removal after project is complete.
- C. This price shall include temporary silt fence, bailed straw checks, and temporary sediment basins. No separate payment shall be made for incidental or unlisted erosion control measures nor for cleaning and/or replacement of any measure that becomes loosened, torn, undermined, or washed out.

**1.21 PROJECT SIGN**

- A. This item will be measured for payment at the Contract Unit Price per each project sign installed.
  
- B. Payment for installing and maintaining Project Identification Signs including all labor, materials, and equipment to properly construct/install signs in accordance with Section 01580 of the contract documents. Payment shall also include removal of sign at completion of project, as directed by the Engineer or Owner.

**1.22 WATER LINE ABANDONMENT**

- A. Water line abandonment shall include all necessary materials and labor to remove the existing water line from service. Includes all earthwork, backfill, paving, and cleanup involved in the abandonment. Water line abandonment will include excavation in the location shown on the plans to locate the existing water line connection and then removing the line from service as shown in the details. This work may need to be performed under pressure if the existing water line cannot be valved off.

**1.23 LANDSCAPING RESTORATION**

- A. This item will be measured for payment by the linear foot along the centerline of the installed pipe. This item includes complete restoration of existing landscape areas identified on the Drawings, or as directed by the Owner. This item is limited to the restoration of landscape areas disturbed by installation of main water lines only. This item includes but is not limited to replacement of trees, bushes, borders, walls, and ornamental plantings. This item does not include payment for seeding or mulching.
  
- B. Payment for this item, as shown on the Drawings or as specified herein, shall be paid for at the Contract unit price per linear foot of water line in place.

**1.24 OPEN CUT STEEL ENCASUREMENT**

- A. This item will be measured for payment by the linear foot along the centerline of the installed open-cut steel encasement for main water lines. **This item does not include payment for carrier pipe.**
  
- B. Payment for this item, as shown on the Drawings or as specified herein, shall be paid for at the Contract unit price per linear foot installed for the various encasement sizes and classifications shown on the Bid Form. Payment includes, but is not limited to, monitoring, temporary fencing, casing pipe, casing spacers, end seals, coatings, and dewatering.
  
- C. Railroad fees applicable to the Contractor for flagging/inspection services for work within the railroad right-of-way are included for payment under "RAILROAD FLAGGING/INSURANCE SERVICES".

**1.25 JACK AND BORE STEEL ENCASEMENT**

- A. This item will be measured for payment by the linear foot along the centerline of the installed jack and bore steel encasement for main water lines. **This item does not include payment for carrier pipe.**
  
- B. Payment for this item, as shown on the Drawings or as specified herein, shall be paid for at the Contract unit price per linear foot installed for the various encasement sizes and classifications shown on the Bid Form. Payment includes, but is not limited to, monitoring, temporary fencing, casing pipe, casing spacers, end seals, coatings, and dewatering and all incidentals necessary to complete the work that are not itemized in the Bid Form.
  
- C. Railroad fees applicable to the Contractor for flagging/inspection services for work within the railroad right-of-way are included for payment under "RAILROAD FLAGGING/INSURANCE SERVICES".

**1.26 WEATHERPROOF MARKER**

- A. Weatherproof marker signs shall be measured for payment by the number installed and accepted.
  
- B. Payment shall be made at the Contract unit price for each weatherproof marker sign installed. Payment shall be full compensation for: all labor, materials, equipment, installation, excavation, backfill, clearing, concrete, restoration, and all incidentals necessary to complete the work that are not itemized in the Bid Form.

**1.27 CREEK CROSSING**

- A. Payment for this item will be made at the contract unit price per each creek crossing itemized on the Bid Schedule. Payment for creek crossings include concrete encasement, rip-rap, geotextile, sample taps (if required), any encasement pipe, spacers between carrier pipe and casing pipe, and all necessary end sealing. Price shall also include all necessary labor, equipment, and appurtenances required to complete the installation as shown on the plans or described in the specifications. Such price shall be full compensation for all excavation, bore set-up, de-watering, sheeting and shoring, cofferdams, bypass pumping, backfill with suitable material, compaction, disposal of surplus or unsuitable material, pavement restoration, and restoration of property, and for all labor, tools, equipment and incidentals necessary to complete the preparation and finishing the work for each creek crossing.
  
- B. Gate valves at creek crossings (if required) are included for payment under "VALVE and BOX".



**1.28 MOBILIZATION AND DEMOBILIZATION**

- A. Payment for this item shall be made at the Contract Unit Price for each occurrence. Each occurrence consists of a single mobilization and a single demobilization. There should be only one occurrence for this item. Multiple payments for this item will only be paid to the Contractor when the Contractor must leave the job site for a reason directly attributable to the Owner. The Owner's resident inspector and project engineer shall be notified prior to mobilization and demobilization.
  
- B. Contractor shall submit for payment of this item on the first pay estimate after mobilization/demobilization occurs. Mobilization/ Demobilization is a lump sum payment limited to a maximum of 3 percent of the bid subtotal. One half of the mobilization/ demobilization cost shall be included in the Contractor's first Pay Request. The remainder of this pay item shall be included in the Contractor's final Pay Request.
  
- C. Mobilization and Demobilization shall also include any bonds and/or insurance required for completion of the project.

**1.29 RAILROAD FLAGGING/INSPECTION SERVICES**

- A. Measurement of railroad flagging/inspection services and fees will not be made. This item includes all CSXT costs to provide inspection and flagging during the course of construction within the CSXT right-of-way. Proof of payment shall be included with each pay request for reimbursement. The Contractor shall make payments due to the railroad within the specified time-period. All late charges and interest incurred due to late payment shall be borne by the Contractor and will not be reimbursed.
  
- B. Payment for railroad flagging/inspection services will be made according to proof of payment receipts submitted by the Contractor for these costs. Payments to the Contractor will be made in accordance with the allowance provided in the Bid Schedule, excluding fees incurred by CSXT for late payment. Payments shall not exceed the allowance stipulated on the Bid Schedule without prior approval by both the Engineer and the Owner. This allowance will not include any additional payment to the Contractor for Overhead and Profit (O&P) regarding CSXT fees or services.

**1.30 FORCE MAJEURE CONTINGENCY ALLOWANCE**

- A. This item is a contingency allowance for reimbursement of any and all additional invoices by the Contractor for items including, but not limited to, Ductile Iron pipe shipment surcharges and Ductile Iron pipe price increases if encountered after the project bid award.

- B. The Force Majeure Contingency Allowance item shall only be paid to the Contractor with prior approval by both the Engineer and Owner. Payment for this item will be directly taken from bid quote documentation versus the invoices submitted by the Contractor for items that could be categorized as “Force Majeure” based on unforeseen changes in material prices and/or shipment surcharges of bid items as part of the project scope. This allowance will not include any additional payment to the Contractor for Overhead and Profit (O&P) regarding changes in material prices and/or shipment surcharges.

**1.31 LANDSCAPING ALLOWANCE**

- A. Measurement of this item will not be made. This item is an allowance for the provision of new landscaping areas as indicated on the plans and as specified by the Engineer and the Owner. The required landscaping items to be provided by the Contractor will be specified by the Owner prior to construction.
- B. Payment for this item shall be for complete-in-place landscaping as specified by the Owner, including all labor, equipment, and materials. Payment will be made according to invoices submitted by the Contractor for the costs associated with provision of the landscaping items. Payments to the Contractor will be made in accordance with the allowance provided in the Bid Schedule and shall not exceed the allowance stipulated on the Bid Schedule without prior approval by both the Engineer and the Owner. This allowance will not include any additional payment to the Contractor for markup.
- C. Restoration of existing landscaping is included for payment under “LANDSCAPING RESTORATION”.

END OF SECTION

## ATTACHMENT "F"

## **SECTION 02221**

### **TRENCHING, BACKFILLING, AND COMPACTION**

#### **PART 1 GENERAL**

##### **1.01 WORK INCLUDED**

- A. Excavation for piped utility material.
- B. Provide necessary sheeting, shoring and bracing.
- C. Prepare trench bottom with appropriate materials.
- D. De-water excavation as required in accordance with TDEC regulations.
- E. Place and compact granular beds, as required, and backfill.

##### **1.02 RELATED WORK**

- A. Section 02110: Clearing and Grubbing
- B. Section 02480: Pavement Replacement
- C. Section 03001: Concrete Work

##### **1.03 PRECAUTIONS**

- A. Notify Tennessee One-Call when necessary to locate, and protect existing utilities or when necessary to disturb existing utility facilities and abide by their requirements for repairing and replacing. Call three working days prior to excavation at 1-800-351-1111.
- B. Protect all vegetation and other features to remain. Minimize damage to all existing trees, shrubs, and flowers.

- C. Protect all benchmarks and survey points. Property corners determined by the engineer to be carelessly destroyed shall be replaced at no cost to City. Replacement shall be performed by a Registered Land Surveyor (TN) and approved by engineer.

## **PART 2 PRODUCTS**

### **2.01 BEDDING AND BACKFILL MATERIALS – WATER AND SEWER LINES**

- A. Class I Material: Angular, 1/4 to 1 inch graded stone including a number of fill materials that have regional significance such as crushed stone, cinders, slag and crushed shells meeting the following gradation requirements:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

- B. Class II Material: Coarse sands and gravels with a maximum particle dimension of 1-1/2 inch including variously graded sands and gravels containing small percentages of fines, generally granular and non-cohesive, either wet or dry.
- C. Class III Material: Fine sand and clayey gravels, including fine sands, sand-clay mixtures, and gravel-clay mixtures.
- D. Class IV Material: Silt, silty clays, and clays, including inorganic clays and silts of medium to high plasticity and liquid limits.
- E. Class V Material: Organic soils, as well as, soil containing frozen earth, debris, rocks larger than 1-1/2 inches and other foreign material.

## PART 3 EXECUTION

### 3.01 PREPARATION

- A. Install barriers and other devices to protect areas adjacent to construction.
- B. Protect and maintain all benchmarks and other survey points.

### 3.02 EXCAVATION TRENCHES

- A. Perform in such a manner as to form a suitable trench in which to place the pipe and so as to cause the least inconvenience to the public.
- B. Maximum width at the crown of the pipe-2 feet plus the nominal diameter of the pipe.
- C. Cut pavement along neat, straight lines with either a pavement breaker or pavement saw.
- D. Align trench as shown on the Plans unless a change is necessary to miss an unforeseen obstruction.
- E. When unstable soil is encountered at the trench bottom, remove it to a depth required to assure support of the pipeline, as approved by the engineer, and backfill to the proper grade with coarse aggregate AASHTO M-43, Size No. 2 or 3. The contractor shall keep a record of the tonnage of stone placed for stabilization and submit stone tickets to the owner.
- F. Remove rock encountered in trench excavation to a depth of 6 inches below the bottom of the pipe barrel, backfill with and crushed stone, and compact to uniformly support the pipe. In no case shall solid rock exist within six (6) inches of the finished pipeline. When solid rock is encountered or stone bedding is necessary, copies of the delivery tickets for bedding material are to be given to the owner.
- G. When rock borings or soundings are provided, they are for information only and do not guarantee existing conditions. Make such investigations as deemed necessary to determine existing conditions.

**3.03 SHEETING, SHORING AND BRACING**

- A. When necessary or when directed by the Engineer, furnish, put in place, and maintain such sheeting, bracing, etc., as may be required to support the sides of the excavation and to prevent movement. Sheeting, shoring, etc., shall meet OSHA safety requirements.
- B. Take care to prevent voids outside the sheeting.
- C. If voids are formed, immediately fill and ram to the satisfaction of the Engineer.
- D. Devise plans for performing this work subject to the approval of the Engineer.
- E. Unless adjacent facilities will be injured, remove all sheeting, shoring, and bracing after backfill has been placed to a depth of 18 inches over the pipeline.
- F. Cut shoring off at the top of the pipe and leave the lower section in the trench.

**3.04 USE OF EXPLOSIVES**

- A. Conduct all blasting operations in accordance with prevailing municipal, state or other agency regulations, codes, ordinances, or laws.
- B. Exercise due caution when blasting adjacent to existing structures and pipelines.
- C. If structures or pipelines are damaged, promptly replace or repair them at no expense to Owner.
- D. Contractor liable for damages to private property due to sewer back-ups or flooding after blasting damage to mainlines or service laterals.
- E. Do not conduct blasting operations within 25 feet of water, sewer, gas or other utility lines, unless otherwise directed by Engineer and approved by utility owner.
- F. Cover all shots with blasting mats to prevent flying material.
- G. No blasting will be permitted in the excavation of trenches that parallel or lie within 50 feet of a stream or wetland, including all stream crossings.

- H. Blasting is not permitted under, on, or adjacent to CSXT property.
- I. Blasting is not permitted in State rights of way unless prior approval is obtained from the Tennessee Department of Transportation (TDOT).
- J. Blasting is not permitted in County rights of way unless prior approval is obtained from the Washington County Highway Department (WCHD).

**3.05 DISPOSAL OF EXCAVATED MATERIAL**

- A. Satisfactorily dispose of all excess excavated material that cannot be used or is not suitable for embankments. The owner is not responsible for disposed material in any regard including any possible regulatory action by local, state, or federal agencies.

**3.06 UNAUTHORIZED EXCAVATION**

- A. All excavation outside or below the proposed lines and grades shown on the Plans is prohibited unless directed by the Engineer.
- B. Backfill areas of unauthorized excavation with the type material necessary (earth, rock or concrete) to insure the stability of the structure of construction involved.

**3.07 REMOVAL OF WATER**

- A. Keep excavated areas free of water while work is in progress in accordance with TDEC regulations.
- B. Well-pointing shall be performed if required.
- C. Take particular precautions to prevent the displacement of structures or pipelines as a result of accumulated water.

**3.08 OBSTRUCTIONS**

- A. Obstructions shown on the Plans are for information only and do not guarantee their exact locations nor that other obstructions are not present.



- B. When unforeseen utilities or obstructions are encountered during installation of pipeline, the contractor may submit a request to relocate the proposed pipeline or obstruction. The request shall detail the length of the relocation and any additional bends, bedding materials, and other items needed.
- C. Exercise due care in excavating adjacent to existing obstructions and do not disturb same unless absolutely necessary. The contractor shall notify the utility owner when working within close proximity of their line.
- D. In the event utilities or structures are disturbed, repair or replace as quickly as possible to the condition existing prior to their disturbance.
- E. If desired by the utility company, pay for the repair or replacement work performed by the forces of the utility company or other appropriate party at no expense of City of Johnson City.
- F. If replacement or repair of disturbed obstructions is not performed after a reasonable period of time, the Owner may have the necessary work done and the contractor may be required to provide monetary compensation to the City of Johnson City.

**3.09 GRAVITY SANITARY SEWER BEDDING**

- A. Always maintain proper grade and alignment during the bedding and tamping process.
  - 1. Any pipe dislodged during this process shall be replaced.
  - 2. Dig bell holes to assure uniform support of the pipe.
- B. Bedding for PVC Sewers:
  - 1. Completely encapsulate each sewer pipe section with granular material from a distance of 6" below the bottom of the pipe to a distance of 6" above the top of the pipe for the entire width of the ditch, compacted to 60% relative density, ASTM D-2049. Use Class I angular material.
- C. Bedding for Ductile Iron Pipe Sewers:
  - 1. Lay each sewer pipe section on a 6" bed of granular material and backfill to the springline of the pipe with granular material, compacted to 60% relative density, ASTM D-2049.

2. In unimproved areas, use Class I or II granular material.

### **3.10 INITIAL BACKFILLING**

- A. Do not begin backfilling before the Engineer has inspected the grade and alignment of the pipe, the bedding of the pipe, and the joints between the pipe. If backfill material is placed over the pipe before an inspection is made, reopen the trench in order for an inspection to be made.
- B. Perform backfilling by hand, together with tamping, until fill has progressed to 18" above the top of the pipe.
  1. Deposit Class I granular material (where required) or loose soil free from lumps, clods, frozen material or stones in layers approximately 6" thick.
  2. Compact by hand, or with manually operated machine tampers actuated by compressed air or other suitable means.
  3. Use tamps and machines of a suitable type which do not crush or otherwise damage the pipe.

### **3.11 FINAL BACKFILLING**

- A. After the backfill has reached a point 18" or more above the top of the pipe, perform final backfilling depending upon the location of the work and danger from subsequent settlement.
- B. Backfilling in Unimproved Areas:
  1. Dispose of and replace all soft or yielding material which is unsuitable for trench backfill with suitable material.
  2. Deposit backfill to the surface of the ground by dragline, bulldozer, or other suitable equipment in such a manner so as not to disturb the pipe.
  3. Neatly round sufficient surplus excavated material over the trench to compensate for after settlement.
  4. Dispose of all surplus excavated material.
  5. Prior to final acceptance, remove all mounds to the elevation of the surrounding terrain.

C. Backfilling Beneath Driveways and Streets where Non-Rigid and Rigid Type Surfacing is to be Replaced:

1. Use select backfill material, crushed limestone, or crushed gravel of high weight and density, as directed by the Engineer.
2. Carefully deposit in uniform layers, not to exceed 12" thick, compacted to at least 95 percent standard proctor but not less than a minimum of 90 lb/ft<sup>3</sup> dry density.
3. Compact each layer thoroughly by rolling, ramming and tamping with tools suitable for that purpose in such a manner so as to not disturb the pipe.

D. Backfilling Beneath Existing Streets

1. Backfilling methods and materials beneath the street shall be flowable fill in accordance with the requirements of the City of Johnson City in accordance with Section 02300.
2. The pipe shall be covered with Class 1 material 6" – 12" above the top of the pipe.
3. The flowable fill shall be placed up to 3" from the pavement surface (or to the base of the existing pavement).

E. Backfilling Beneath New Streets Prior to Initial Paving

1. Backfilling methods and materials beneath a new street recently constructed by a contractor prior to initial paving can meet the requirements set forth above for backfilling beneath existing streets or contractor can backfill with other methods and materials that are specified in Section 02221 that have prior approval by the City of Johnson City Water and Sewer Services Department.

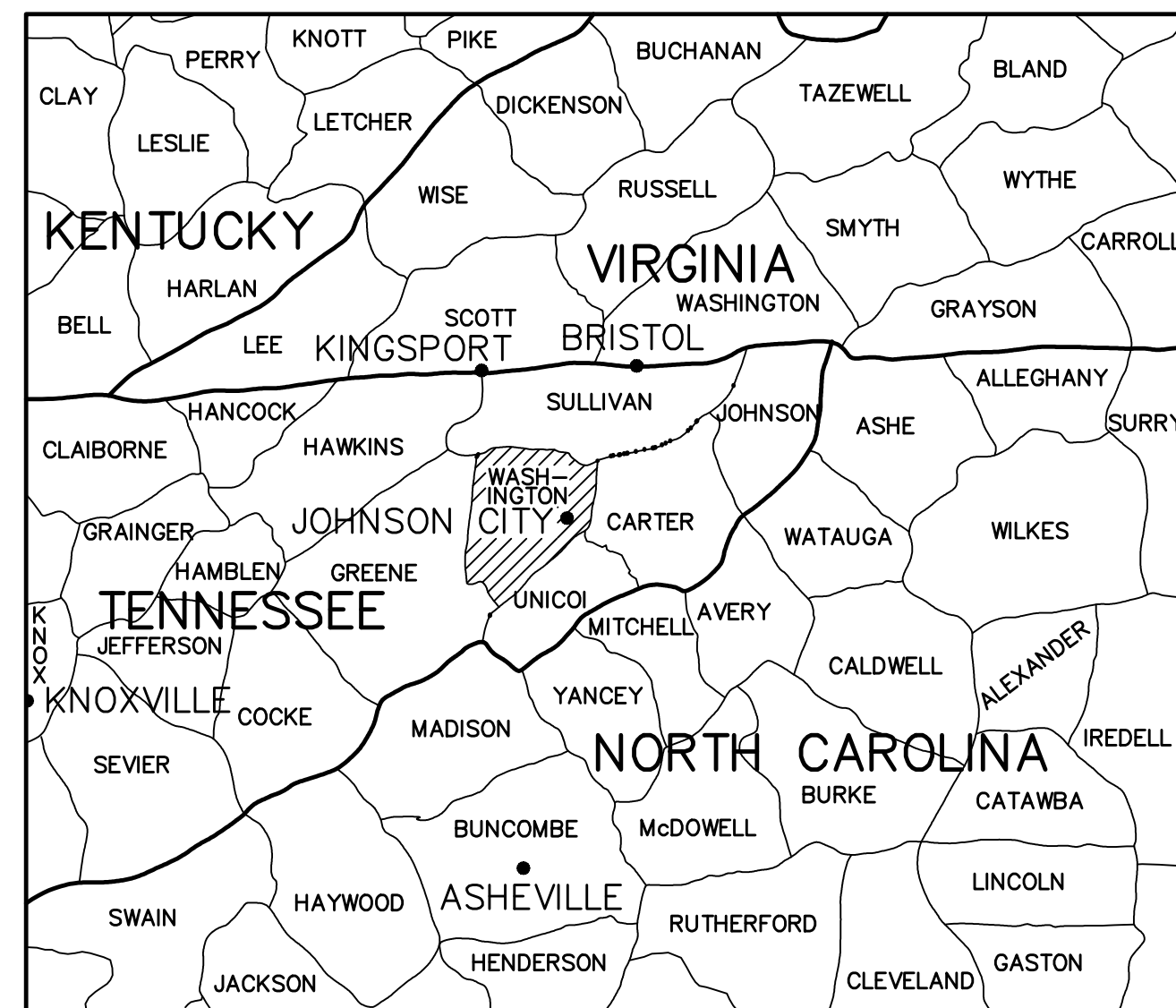
F. Backfilling of Shoulders Along Streets and Highways:

1. Backfilling methods and materials for shoulders along streets and highways shall be in accordance with the requirements of governing local, county, or state departments maintaining the particular roadway or highway.
2. Replace with similar materials, all shoulders which may be damaged or destroyed as a result of pipe trenching.
3. Where shoulders along state highways have seal coat surfaces replace with double bituminous seal in accordance with Section 02480.

- G. Crushed Stone or Pavement Maintenance and Shoulder Replacement:
1. Where possible, salvage and reuse all base material that is removed during construction.
  2. Wet and thoroughly compact crushed stone and blade to tie into the existing surface prior to final acceptance.

END OF SECTION

## ATTACHMENT "G"



VICINITY MAP  
NTS

# WASHINGTON COUNTY WATER LINE EXTENSIONS WASHINGTON COUNTY, TN

## UTILITY LIST

UTILITY	WATER
NAME :	CITY OF JOHNSON CITY
ADDRESS :	POST OFFICE BOX 2150 JOHNSON CITY, TN 37605
CONTACT :	TOM WITHERSPOON
PHONE :	(423) 434-6000

UTILITY	ELECTRICITY
NAME :	BRIGHTBRIDGE
ADDRESS :	2600 BOONES CREEK ROAD JOHNSON CITY, TN 37615
CONTACT :	MARK EADES
PHONE :	(423) 434-4000

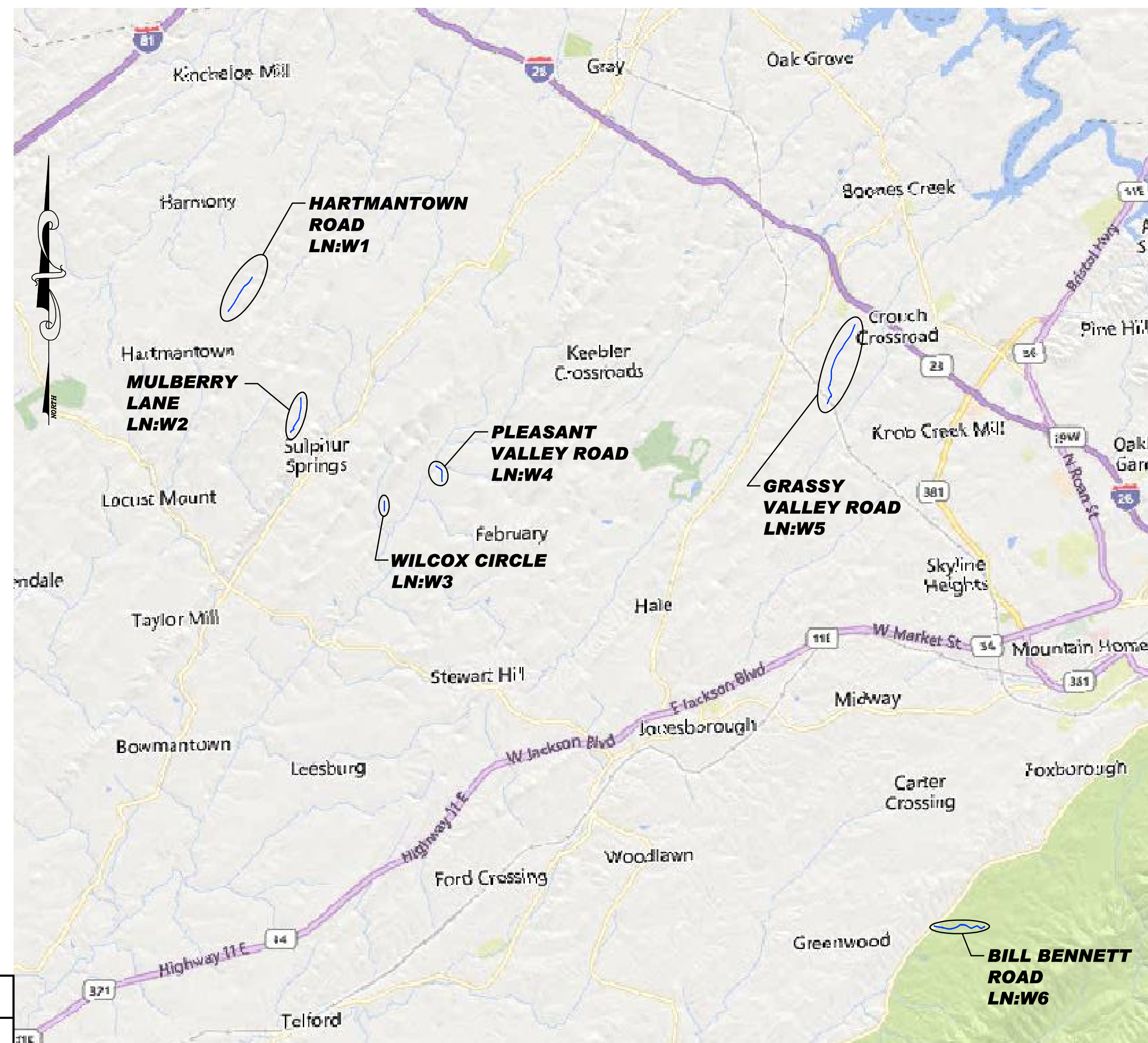
UTILITY	SANITARY SEWER
NAME :	CITY OF JOHNSON CITY
ADDRESS :	POST OFFICE BOX 2150 JOHNSON CITY, TN 37605
CONTACT :	TOM WITHERSPOON
PHONE :	(423) 434-6000

UTILITY	TELEPHONE
NAME :	LUMEN
ADDRESS :	101 N. ROAN STREET JOHNSON CITY, TN 37601
CONTACT :	JEFF HENLEY
PHONE :	(423) 722-1342

UTILITY	NATURAL GAS
NAME :	ATMOS ENERGY
ADDRESS :	2833 W MARKET STREET JOHNSON CITY, TN 37604
CONTACT :	
PHONE :	(888) 286-6700

UTILITY	CABLE
NAME :	CHARTER COMMUNICATIONS
ADDRESS :	2302 S. ROAN STREET JOHNSON CITY, TN 37601
CONTACT :	DONALD RILEY
PHONE :	(423) 212-2344

UTILITY	CABLE
NAME :	COMCAST
ADDRESS :	1794 OLD GRAY STATION ROAD GRAY, TN 37615
CONTACT :	KEVIN WALDROP
PHONE :	(423) 791-4128



The boundary, building, and topographic data depicted hereon is from the City of Johnson City GIS, from the Tennessee STS-GIS LIDAR, and supplemented by a limited field run survey by TH&P (Job NO. 2110601S).

The contours and other topographic data has been photographically enlarged, traced and otherwise transferred from a copy of the above referenced maps, and may vary slightly from what is actually present in the field.

The contractor(s), or anyone using these documents is advised to layout his work and verify the actual field conditions relative to the designs shown on the drawings. Any discrepancies encountered that would affect the proper installation or construction of the proposed improvements shall be reported to the Owner and/or Engineer in order to allow for necessary adjustments in the plans.

The contractor(s) shall layout in the field all the elements of the improvements, prior to and well ahead of construction, to insure that no conflicts exist between any underground service utilities or drain lines, including their minimum depths below finished surfaces, the surface elevations of all manholes and catch basins relative to finished grades, and the planned improvements. Any discrepancies encountered shall be reported to the Owner and/or Engineer in order to allow for necessary adjustments in the plans.

The contractor(s) shall maintain accurate and legible records of all installations, and deliver the same to the Owner in a form adequate to readily transfer the data directly to record ("as-built") drawings as required by the reviewing agencies. The form and adequacy of these records are subject to the approval of recipient.



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COUNTY  
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START DATE START TIME  
TYPE OF WORK  
BLASTING ?  
WORK BEING DONE BY  
WORK BEING DONE FOR

THE CITY OF JOHNSON CITY  
WATER & SEWER SERVICES  
DEPARTMENT APPROVAL

NAME: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
DATE: \_\_\_\_\_

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**PREPARED FOR: THE CITY OF JOHNSON CITY  
601 EAST MAIN STREET  
JOHNSON CITY, TENNESSEE 37601**

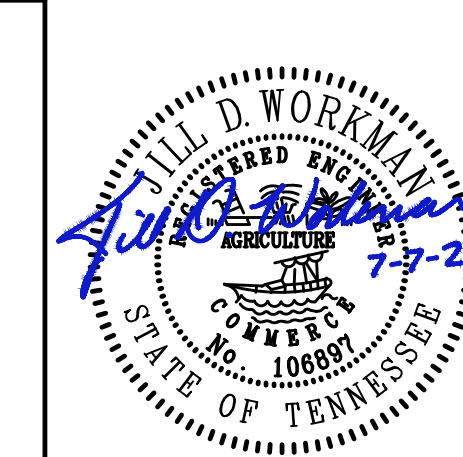


**Tysinger, Hampton & Partners, Inc.**  
Civil Engineering · Surveying · Environmental Consulting

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ENGINEER'S APPROVAL:



REVISIONS				APPROVALS	SET NO.
REV.	DESCRIPTION	DATE	BY		
1	COJC COMMENTS	8/11/22	JDW	PRELIMINARY:	
2	COJC COMMENTS	8/18/22	JDW	FINAL:	
3	ADDENDUM 1	9/16/22	JDW	AS BUILTS:	7/7/22
				ISSUE DATE	PROJECT NO. 2110601C
					C1.1

## ATTACHMENT “H”

## NOTIFICATION NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING THE OWNER IN WRITING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO REQUESTING FINAL INSPECTION AND PAYMENT.
- THE CONTRACTOR MUST GIVE ADEQUATE NOTICE TO ALL UTILITY OWNERS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THE CONTRACTOR SHALL NOTIFY TENNESSEE ONE CALL SERVICE AT LEAST 3 WORKING DAYS PRIOR TO EXCAVATING. THE TENNESSEE ONE CALL SERVICE CAN BE CONTACTED BY CALLING 811 OR 1-800-351-1111.
- THE CONTRACTOR SHALL MAINTAIN A LIST OF EMERGENCY CONTACTS WITH EACH AFFECTED UTILITY FOR CASES OF ACCIDENTAL UTILITY DAMAGE.
- THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING A BID TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING THE UTILITY INSPECTION DIVISION IN WRITING THREE WEEKS PRIOR TO THE START OF UTILITY CONSTRUCTION, MAKING SERVICE CONNECTIONS, AND REQUESTING FINAL INSPECTION FOR APPROVAL BY THE UTILITY.
- IF AN EXISTING UTILITY IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY INSPECTOR AND RECORD THE LOCATION OF THE INCIDENT ON THE AS-BUILT RECORD.
- EXISTING UTILITY SERVICES SHALL BE MAINTAINED. WHERE SERVICE INTERRUPTION IS UNAVOIDABLE, COORDINATE WITH THE UTILITY OWNER AT LEAST 5 DAYS (120 HOURS) IN ADVANCE REGARDING THE DURATION OF THE INTERRUPTION AND THE PROPER RESTORATION OF SERVICE. CONNECTION TO EXISTING PUBLIC FACILITIES SHALL BE MADE ONLY UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE UTILITY. LIMIT INTERRUPTIONS TO OCCUR AND BE COMPLETED ON MONDAY THRU THURSDAY 9:00 AM TO 4:00 PM. NO INTERRUPTIONS SHALL OCCUR ON FRIDAYS, WEEKENDS, OR HOLIDAYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION TO AFFECTED CUSTOMERS (CONTACT THE UTILITY FOR NOTIFICATION REQUIREMENTS). FOR SHUTDOWNS LONGER THAN 4 HOURS, CONTRACTOR SHALL SUBMIT A TEMPORARY PLAN TO KEEP ALL CUSTOMERS IN SERVICE. ALL COSTS ASSOCIATED WITH MAINTAINING SERVICE TO AFFECTED CUSTOMERS SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL HAVE ALL PERTINENT PARTS AND MATERIALS ON SITE PRIOR TO SHUTDOWN OF THE UTILITY SYSTEM. CONSTRUCTION EXCAVATION MUST BE PREPARED AND THE UTILITY EXPOSED PRIOR TO SHUTDOWN OF THE SYSTEM.

## DEMOLITION NOTES

- THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS AND NOTIFY ALL AFFECTED UTILITY COMPANIES PRIOR TO THE DEMOLITION OF ANY EXISTING STRUCTURES. ALL EXISTING UTILITIES INDICATED TO BE ABANDONED SHALL BE CAPPED OFF OR REMOVED.
- EXISTING CONDITIONS AS DEPICTED ON THE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE, AND DO NOT INCLUDE MECHANICAL OR MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING CONSTRUCTION ARE SIGNIFICANTLY DIFFERENT THAN THOSE ANTICIPATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- ANY OFF-SITE DEMOLITION SHALL BE PERFORMED BY LETTER OF PERMISSION ONLY.
- ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
- ALL OFF-SITE DISPOSAL AREAS SHALL BE PERMITTED IN ACCORDANCE WITH LOCAL AND TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REQUIREMENTS.
- WATER, SANITARY SEWER, STORM SEWER, GAS, POWER, AND TELECOMMUNICATION FACILITY ADJUSTMENT, RELOCATION, OR REMOVAL SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY.
- THE CONTRACTOR SHALL PROVIDE ALL SALVAGEABLE MATERIALS TO THE OWNER, AS APPLICABLE. THE CONTRACTOR SHALL COORDINATE THE MATERIAL TO BE SALVAGED WITH THE OWNER PRIOR TO REMOVAL.
- THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICES DURING DEMOLITION AND CONSTRUCTION PHASES.
- THE CONTRACTOR SHALL PROTECT TREES FROM DAMAGE DURING CONSTRUCTION, UNLESS INDICATED TO BE REMOVED. FOR TREES TO BE PRESERVED, AN AREA SHALL BE ESTABLISHED AT ONE-HALF THE DISTANCE BETWEEN THE DRIP LINE AND THE TRUNK OF THE TREE, WHICH SHALL NOT BE DISTURBED BY CONSTRUCTION ACTIVITY, EXCLUDING SODDING OR THE PLACEMENT OF OTHER LANDSCAPE MATERIALS. THIS AREA SHALL BE BARRICADED AND MARKED WITH SIGNAGE DURING CONSTRUCTION.

- THE CONTRACTOR SHALL COORDINATE RELOCATION OF ALL SIGNS WITHIN THE RIGHT-OF-WAY SHALL WITH THE GOVERNING AUTHORITY.
- THE CONTRACTOR SHALL COORDINATE RELOCATION OF MAILBOXES WITH PROPERTY OWNERS, THE GOVERNING AUTHORITY, AND THE U.S. POSTAL SERVICE, AS NEEDED.

## CLEARING & GRUBBING NOTES

- THE CONTRACTOR SHALL STRIP TOPSOIL, VEGETATION, AND PAVEMENT AS NEEDED TO COMPLETE THE WORK AS SHOWN ON THE CONSTRUCTION PLANS. CLEAR AND GRUB REMAINING AREAS IN CONSTRUCTION LIMITS.
- ALL WASTE AND CONSTRUCTION DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
- ANY OFF-SITE CLEARING OR GRUBBING SHALL BE PERFORMED ONLY AFTER OBTAINING A LETTER OF PERMISSION FROM THE RESPECTIVE PROPERTY OWNER.
- ALL OFF-SITE BORROW OR DISPOSAL AREAS SHALL BE PERMITTED IN ACCORDANCE WITH LOCAL AND TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REQUIREMENTS.
- THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF THE RIGHT-OF-WAY IN A REGULATORY FLOODWAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA AND/OR THE GOVERNING AUTHORITY.
- ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE, OR LOCAL AGENCY.

## BLASTING NOTES

- CONDUCT ALL BLASTING OPERATIONS IN ACCORDANCE WITH PREVAILING MUNICIPAL, STATE OR OTHER AGENCY REGULATIONS, CODES, ORDINANCES, OR LAWS.
- EXERCISE DUE CAUTION WHEN BLASTING ADJACENT TO EXISTING STRUCTURES AND PIPELINES.
- IF STRUCTURES OR PIPELINES ARE DAMAGED, PROMPTLY REPLACE OR REPAIR THEM AT NO EXPENSE TO OWNER.
- CONTRACTOR LIABLE FOR DAMAGES TO PRIVATE PROPERTY DUE TO SEWER BACK-UPS OR FLOODING AFTER BLASTING DAMAGE TO MAINLINES OR SERVICE LATERALS.
- DO NOT CONDUCT BLASTING OPERATIONS WITHIN 25 FEET OF WATER, SEWER, GAS OR OTHER UTILITY LINES, UNLESS OTHERWISE DIRECTED BY ENGINEER AND APPROVED BY UTILITY OWNER.
- COVER ALL SHOTS WITH BLASTING MATS TO PREVENT FLYING MATERIAL.
- NO BLASTING WILL BE PERMITTED IN THE EXCAVATION OF TRENCHES THAT PARALLEL OR LIE WITHIN 50 FEET OF A STREAM OR WETLAND, INCLUDING ALL STREAM CROSSINGS.
- BLASTING IS NOT PERMITTED UNDER, ON, OR ADJACENT TO CSXT PROPERTY.
- BLASTING IS NOT PERMITTED IN STATE RIGHTS OF WAY UNLESS PRIOR APPROVAL IS OBTAINED FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT).
- BLASTING IS NOT PERMITTED IN COUNTY RIGHTS OF WAY UNLESS PRIOR APPROVAL IS OBTAINED FROM THE WASHINGTON COUNTY HIGHWAY DEPARTMENT (WCHD).

## GENERAL LAYOUT NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED AND NOTIFY THE ENGINEER OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL IDENTIFY REQUIRED LINES, LEVELS, AND DATUM PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT BENCHMARKS, PROPERTY CORNERS, AND ALL OTHER SURVEY MARKERS FROM DAMAGE AND/OR DESTRUCTION.

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LAYOUT ALL THE FACILITIES BEING CONSTRUCTED, RELOCATED, AND/OR ADJUSTED WITHIN THE CONTRACT.
- TSYNSINGER, HAMPTON AND PARTNERS, INC. WILL PROVIDE A DIGITAL FILE FOR USE IN SITE LAYOUT, IF REQUIRED.

## GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE GOVERNING AGENCY, UTILITY, AND THE OWNER, AS APPLICABLE.
- THE GOVERNING AUTHORITY MUST CLEAR ANY WORK BEING DONE ON PUBLIC RIGHT-OF-WAY AND A PERMIT MUST BE ISSUED.
- THE CONTRACTOR SHALL COORDINATE THE RELOCATION AND/OR ADJUSTMENT OF EXISTING UTILITIES (E.G., WATER, SANITARY SEWER, STORM SEWER, POWER, TELECOMMUNICATION, GAS, ETC.) WITH THE RESPECTIVE UTILITY OWNER.
- NOTHING IN THE GENERAL NOTES SHALL RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF MAINTAINING THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE BUSINESSES ALONG THE PROPOSED CONSTRUCTION AREA.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN SAFETY FENCE AROUND ALL WORK AREAS AS NEEDED TO PROTECT PREMISES FROM ENTRY BY UNAUTHORIZED PERSONS.
- ALL TRENCHING, PIPE-LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
- ALL SLOPES NOT OTHERWISE INDICATED SHALL BE 2:1 OR FLATTER. SLOPES GREATER THAN 3:1 SHALL (AFTER TOPSOIL, SEEDING AND MULCHING) BE COVERED WITH CULXES BASKETS BY AMERICAN EXCELSIOR OR APPROVED EQUAL.
- ALL DISTURBED AREAS NOT PAVED SHALL BE SEEDED, FERTILIZED, MULCHED, WATERED, AND MAINTAINED UNTIL AN ADEQUATE STAND OF VEGETATION IS OBTAINED. A MINIMUM OF 4" OF TOPSOIL SHALL BE PLACED IN ALL SUCH AREAS.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- ANY OFFSITE GRADING SHALL BE PERFORMED BY LETTER OF PERMISSION ONLY.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H-20) LOADING AND BE INSTALLED ACCORDINGLY.
- ALL CORRUGATED METAL PIPES (CMP) SHALL BE FULLY ASPHALT COATED OR ALUMINIZED STEEL TYPE-2. PIPE SIZES 18" AND SMALLER TO BE 16 GAUGE. PIPE SIZES 24" 30" SHALL BE 14 GAUGE. PIPE SIZES 30" 48" SHALL BE 12 GAUGE. PIPE SIZES LARGER THAN 48" SHALL BE 10 GAUGE.
- ALL CONCRETE PIPES SHALL BE IN ACCORDANCE WITH ASTM C-76 CLASS III.

SICP - SMOOTH INTERIOR CORRUGATED PLASTIC PIPES AND FITTINGS SHALL BE:  
A.D.S.-N12 MFRD. BY ADVANCED DRAINAGE SYSTEMS, INC.  
3300 RIVERSIDE DRIVE, COLUMBUS OHIO 43221  
(614) 457-3051

"HI-Q SURE-LOK" MFRD. BY HANCOR, INC.  
901 OLIVE STREET FINDLAY, OHIO 95840  
1-800-FOR-PIPE  
LANE ENTERPRISES, INC.  
34 STROHM ROAD SHIPPENSBURG, PA 17257  
(717) 532-9959

SICP SHALL BE INSTALLED PER MANUFACTURER'S GUIDELINE FOR HEAVY DUTY DRAINAGE APPLICATIONS. ALL FITTINGS SHALL BE PRE-MANUFACTURED FITTINGS AS PROVIDED BY THE ABOVE LISTED SUPPLIERS.

ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND "THE AMERICANS WITH DISABILITIES ACT", AS APPLICABLE.

ALL STRIPING SHALL BE 4" WIDE WHITE TRAFFIC PAINT. PAINT SHALL BE NON-BLEEDING, QUICK DRYING, ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND SHALL MEET FS TTP-85E AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION.

UNLESS OTHERWISE INDICATED, ALL EXCAVATION SHALL BE UNCLASSIFIED.

## RESTORATION NOTES

- TEMPORARY RESTORATION SHALL BE PART OF THE IN-PLACE COST OF CONSTRUCTING THE ASSOCIATED PERMANENT ITEM.
- EXISTING FEATURES, INCLUDING BUT NOT LIMITED TO, CURBING, FENCING, SIDEWALKS, APRONS, PAVEMENT MARKINGS, MAIL BOXES, DRIVEWAYS, AND OTHER INCIDENTAL ITEMS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED IN-KIND TO AT LEAST THE ORIGINAL CONDITIONS OR REPAIRED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. PAYMENT FOR RESTORATION OF MISCELLANEOUS EXISTING FEATURES SHALL NOT BE MADE UNLESS SPECIFICALLY CALLED FOR ON THE BID FORM.
- ALL DITCHES AND BANKS DISTURBED MUST BE TOPSOILED, SEEDED, MULCHED, AND RETURNED TO ORIGINAL CONDITION.
- UNLESS OTHERWISE INDICATED, ALL FENCING AND ASSOCIATED APPURTENANCES SHALL BE CAREFULLY REMOVED AND STOCKPILED ON SITE TO BE REINSTALLED UPON COMPLETION OF THE WORK THROUGH THE AREA.
- THE CONTRACTOR SHALL COORDINATE FENCING REMOVAL AND REPLACEMENT WITH THE APPLICABLE PROPERTY OWNER. IF TEMPORARY FENCING IS REQUIRED, IT SHALL BE SUPPLIED BY THE CONTRACTOR.

## SPECIAL NOTES

- STORM, SURFACE, NUISANCE, OR OTHER WORKS MAY BE ENCOUNTERED AT VARIOUS TIMES DURING CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL ASSUME ANY AND ALL RISKS AND LIABILITIES ARISING THEREFROM.
- COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE LINE ITEM.
- THE BIDDER IS ENCOURAGED TO CHECK QUANTITIES PRIOR TO SUBMITTING BID. ANY DISCREPANCIES FOUND BY THE CONTRACTOR SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS SOON AS POSSIBLE AND IN ALL CASES PRIOR TO THE OPENING OF BIDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS SPECIFIED IN THE PERMITS FOR THIS PROJECT. ANY FINES ISSUED FOR NON-COMPLIANCE WITH THE PERMIT CONDITIONS SHALL BE PAID BY THE CONTRACTOR.

## UTILITY LAYOUT NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LAYOUT ALL THE UTILITIES BEING CONSTRUCTED AND/OR RELOCATED WITHIN THE CONTRACT.
- LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHOWN ARE APPROXIMATE AND THOSE SHOWN ARE NOT NECESSARILY ALL OF THE EXISTING UTILITIES AND STRUCTURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND EXISTENCE OF ALL UTILITIES AND UNDERGROUND STRUCTURES AND TO COORDINATE EXCAVATION REQUIRED AROUND THESE UTILITIES WITH THE RESPECTIVE OWNERS.
- THE CONTRACTOR SHALL CONFIRM FIELD LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES, BOTH ABOVE AND BELOW GROUND, PRIOR TO THE BEGINNING OF WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ANY ADJUSTMENTS TO THE HORIZONTAL OR VERTICAL ALIGNMENTS REQUIRED TO AVOID EXISTING UTILITIES SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION.
- THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF A WATER LINE AND SEWER LINE IS 10'. THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF A WATER AND SEWER LINE IS 18" WHEN THE MINIMUM HORIZONTAL SEPARATION OF 10' CANNOT BE ATTAINED. REFER TO THE PIPE SEPARATION DETAIL FOR ADDITIONAL CLEARANCE REQUIREMENTS.
- UTILITY PLAN DIMENSIONS SHOWN ARE TO THE CENTERLINE OF A PIPE, FITTING, OR STRUCTURE.
- THE HORIZONTAL AND VERTICAL BEND FITTINGS AND DEFLECTIONS SHOWN ON THE DRAWINGS ARE NOT NECESSARILY ALL OF THE BEND FITTINGS OR DEFLECTIONS REQUIRED FOR THE INSTALLATION OF THE UTILITIES.

- ALL UTILITY WORK SHALL BE COMPLETED WITHIN THE RIGHT-OF-WAY OR EASEMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S SURVEYOR TO LAYOUT ALL THE RIGHT-OF-WAY AND EASEMENT AREAS. EASEMENT DOCUMENTS AND STATE APPROVED CONSTRUCTION PLANS SHALL BE KEPT BY THE CONTRACTOR ON THE PROJECT SITE AT ALL TIMES.

- THE CONTRACTOR SHALL FIELD LOCATE FIRE HYDRANTS AS DIRECTED BY THE UTILITY'S REPRESENTATIVE AND BY COORDINATING WITH AFFECTED PROPERTY OWNERS, AS NEEDED. MAXIMUM SPACING IS 500' INSIDE CITY LIMITS AND 1,500' OUTSIDE CITY LIMITS.

## UTILITY CONSTRUCTION NOTES

- NO WORK WILL BE PERMITTED ON OFFICIAL CITY OF JOHNSON CITY HOLIDAYS AND ASSOCIATED WEEKENDS THAT REQUIRE INSPECTION SERVICES.
- ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY SPECIFICATIONS OR DRAWINGS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION MUST BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED UTILITY WORK ITEM.
- THE CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROPOSED UTILITY SYSTEM PRIOR TO INSTALLATION.
- CONNECTION TO EXISTING UTILITIES SHALL BE MADE ONLY UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE UTILITY.
- THE CONTRACTOR SHALL PROVIDE SUPPORT AND PROTECTION OF EXISTING UTILITIES EXPOSED DURING EXCAVATION AS NEEDED TO MAINTAIN SERVICE AND THE INTEGRITY OF THE UTILITY.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND EXISTING UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REPAIRS AND RELATED EXPENSES IF EXISTING UTILITIES ARE DAMAGED.
- ALL UTILITY INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT, INCLUDING COORDINATION, TRENCHING, BACKFILL, COMPACTION, AND OVERALL CONSTRUCTION OPERATIONS.
- ALL UTILITY EXCAVATION SHALL BE UNCLASSIFIED, UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN SAFETY FENCE AROUND ALL OPEN TRENCHES AND WORK AREAS AS NEEDED TO PROTECT PREMISES FROM ENTRY BY UNAUTHORIZED PERSONS. LOCATION OF SAFETY FENCE SHALL BE COORDINATED WITH TRAFFIC CONTROL PLANS AS CONSTRUCTION PROCEEDS.
- ALL ROAD CUTS AND HIGH TRAFFIC AREAS (INCLUDING APARTMENTS AND BUSINESSES) THAT ARE NOT REPAVED THE SAME DAY SHALL BE TEMPORARILY PAVED (COLD PATCH); STONE FOR TEMPORARY STABILIZATION OF ROAD CUTS WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER. THE CONTRACTOR SHALL INSPECT TEMPORARY PAVEMENT DAILY AFTER RAINFALL EVENTS (INCLUDING WEEKENDS) UNTIL ROAD CUTS ARE PERMANENTLY PAVED. THE COST OF TEMPORARY PAVEMENT SHALL BE INCLUDED IN THE PAYMENT FOR PAVEMENT REPLACEMENT.
- ROADWAY TRENCHES SHALL NOT BE LEFT OPEN WHILE THE CONTRACTOR IS NOT PRESENT, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE OWNER. IF A UTILITY TRENCH MUST BE LEFT OPEN IN A ROADWAY, IT SHALL BE COVERED WITH A HEAVY-DUTY STEEL PLATE (SUPPLIED BY CONTRACTOR), TEMPORARILY SECURED, AND PROPERLY SIGNED. TEMPORARY PAVEMENT SHALL BE SUPPLIED BY THE CONTRACTOR ON EACH SIDE OF PLATE, WHERE NECESSARY. THERE SHALL BE NO ADDITIONAL PAYMENT FOR TEMPORARY MEASURES. UNPAVED GRAVEL TRENCHES IN ROADWAYS ARE NOT PERMITTED.
- BACKFILL FOR UTILITY LINES SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. UNLESS OTHERWISE INDICATED, BACKFILL UNDER PAVED AND GRAVEL AREAS SHALL BE COMPACTED CRUSHED STONE. BACKFILL UNDER OPEN-CUT ROADWAYS IN THE CITY SHALL BE FLOWABLE FILL AND COMPACTED CRUSHED STONE IN THE COUNTY.
- UTILITY INSTALLATIONS CLOSER THAN 36" TO THE EDGE OF PAVEMENT WITHOUT CURBING (MEASURED FROM TRENCH WALL TO EDGE OF PAVEMENT) SHALL BE BACKFILLED WITH COMPACTED CRUSHED STONE.
- WHEN UNSUITABLE SOIL IS ENCOUNTERED AT THE TRENCH BOTTOM, REMOVE IT TO A DEPTH REQUIRED TO ASSURE SUPPORT OF THE PIPELINE AND BACKFILL TO THE PROPER GRADE WITH COARSE AGGREGATE AASHTO M-43, SIZE NO. 2 OR 3.

## PUBLIC UTILITIES

- ALL PUBLIC WATER AND SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), AND THE SPECIFICATIONS OF THE UTILITY. IN THE EVENT OF CONFLICTING SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE UTILITY OWNER FOR APPROVAL PRIOR TO CONSTRUCTION FOR ALL PUBLIC UTILITY CONSTRUCTION.
- ALL PUBLIC WATER AND SEWER PLANS MUST BE SUBMITTED TO AND APPROVED BY TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) PRIOR TO CONSTRUCTION. A COPY OF THE APPROVAL LETTER MUST BE SUBMITTED TO THE UTILITY PRIOR TO CONSTRUCTION.
- UNLESS OTHERWISE INDICATED, ALL PUBLIC UTILITY LINES SHALL HAVE A MINIMUM COVER OF 3' ABOVE THE TOP OF PIPE IN OPEN AREAS, AND A MINIMUM COVER OF 4' ABOVE THE TOP OF PIPE IN PAVED AREAS.
- LOCATE WIRE SHALL BE PROVIDED ON ALL NON-METALLIC PUBLIC WATER AND PRESSURE SANITARY SEWER LINE INSTALLATIONS. LOCATE WIRE IN OPEN TRENCH INSTALLATIONS SHALL BE 12 AWG COPPER-CLAD CARBON STEEL WITH 30 MILS (MINIMUM) OF INSULATION AND A MINIMUM BREAK STRENGTH OF 450 POUNDS. LOCATE WIRE IN DIRECTIONAL DRILLING/BORING INSTALLATIONS SHALL BE 12 AWG COPPER-CLAD CARBON STEEL WITH 45 MILS (MINIMUM) OF INSULATION AND A MINIMUM BREAK STRENGTH OF 1,150 POUNDS. THE EXTERNAL COLOR SHALL BE BLUE FOR WATER AND GREEN FOR SEWER. THE LOCATE WIRE SHALL BE BROUGHT TO GRADE WITHIN A VALVE BOX OR LOCATION STATION BOX AT ALL "ENTRY POINT LOCATIONS" AND ALL "EXIT POINT LOCATIONS" WITH 18" OF SLACK COILED UP INSIDE THE BOX. THERE IS NO MAXIMUM LENGTH OR INTERVAL BETWEEN THE LOCATE WIRE STATIONS. IF THE LOCATE LINE BREAKS OR IF IT IS NOT CONTINUOUS, THE CONTRACTOR SHALL (AT NO EXPENSE TO THE OWNER) PROVIDE SOFT-DIGS EVERY 50 LF ALONG THE MAIN TO PROVIDE DETAILED AS-BUILT DATA. THE SOFT DIG DATA SHALL BE RECORDED ON THE AS-BUILT DRAWINGS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE AN AS-BUILT RECORD TO THE UTILITY UPON COMPLETION. THE CONTRACTOR SHALL MAINTAIN AN ACCURATE AND LEGIBLE RECORD OF ALL INSTALLATIONS ON THE CONSTRUCTION DRAWINGS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS. THE AS-BUILT RECORD SHALL BE PREPARED BY THE CONTRACTOR AS THE JOB PROGRESSES TO ENSURE ITS ACCURACY. AS-BUILT RECORDS MUST BE PROVIDED TO THE UTILITY PRIOR TO FINAL ACCEPTANCE.
- ALL PUBLIC WATER AND SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) AND THE UTILITY'S STANDARDS.
- ALL WORK ON A SECTION, OR WITHIN 1,000 LF OF FORWARD PROGRESS (WHICHEVER IS LESS) SHALL BE COMPLETED BEFORE WORK IN ANOTHER SECTION BEGINS.

## WATER LINE NOTES

- ALL WATER LINE PIPE AND FITTINGS SHALL BE LEAD FREE AS DEFINED IN THE SAFE DRINKING WATER ACT (SDWA) SECTION 1417.
- THE CONTRACTOR SHALL PROVIDE A POSITIVE/NEGATIVE GRADIENT BETWEEN AIR VALVES TO PREVENT EXCESSIVE HIGH POINTS IN THE WATER LINE PROFILE. THE WATER LINE PROFILE MAY BE ADJUSTED BY THE CONTRACTOR IN THE FIELD BY USING BENDS BUT SHALL NOT RESULT IN ADDITIONAL HIGH POINTS IN THE PIPELINE OR REQUIRE ADDITIONAL AIR RELEASE VALVES, UNLESS APPROVED BY THE UTILITY OWNER PRIOR TO CONSTRUCTION.
- THERE WILL BE NO CLASSIFICATION OF CUTS FOR WATER LINES.
- UNLESS OTHERWISE SPECIFIED, PIPE AND FITTINGS FOR MAINS 6" IN DIAMETER AND LARGER SHALL MEET THE FOLLOWING STANDARDS (LATEST REVISION):

- DUCTILE IRON
- PRESSURE CLASS 350
  - ANSI/AWWA C104/A21.4 - CEMENT-MORTAR LINING
  - ANSI/AWWA C105/A21.5 - POLYETHYLENE ENCASEMENT (V-BIO ENHANCED POLYWRAP WHERE SPECIFIED)
  - ANSI/AWWA C110/A21.10 - FITTINGS
  - ANSI/AWWA C111/A21.11 - RUBBER-GASKET JOINTS
  - ANSI/AWWA C115/A21.15 - FLANGED DUCTILE-IRON PIPE
  - ANSI/AWWA C116/A21.16 - EPOXY COATINGS (WHERE SPECIFIED)
  - ANSI/AWWA C150/A21.50 - THICKNESS
  - ANSI/AWWA C151/A21.51 - DUCTILE-IRON PIPE
  - ANSI/AWWA C153/A21.53 - COMPACT FITTINGS
  - ANSI/AWWA C600 - INSTALLATION
- FURNISH IN STANDARD LAYING LENGTHS OF 20'.  
• PROVIDE A MINIMUM OF 1 MIL THICK BITUMINOUS COATING ON THE OUTSIDE SURFACE.  
• THE CLASS OR NOMINAL THICKNESS, NET WEIGHT WITHOUT LINING, AND CASTING PERIOD SHALL BE CLEARLY MARKED ON EACH LENGTH OF PIPE. ADDITIONALLY, THE MANUFACTURER'S MARK, COUNTRY WHERE CAST, YEAR IN WHICH THE PIPE WAS PRODUCED, AND THE LETTERS "DI" OR "DUCTILE" SHALL BE CAST OR STAMPED ON THE PIPE. PIPE SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY ACCESSORIES.

- UNLESS OTHERWISE SPECIFIED, PIPE AND FITTINGS FOR MAINS 4" AND LESS IN DIAMETER SHALL MEET THE FOLLOWING STANDARDS (LATEST REVISION):

- ASTM D2241 PR PVC PRESSURE PIPE AND FITTINGS
- SDR 21 (200 PSI) OR SDR 13.5 (315 PSI) (AS SHOWN ON THE BID SCHEDULE)
  - ASTM D2241 - POLYVINYL CHLORIDE (PVC) PRESSURE RATED PIPE (SDR SERIES)
  - ASTM D1784 - RIGID POLYVINYL CHLORIDE (PVC) COMPOUNDS
  - ASTM D3139 - JOINTS FOR PLASTIC PRESSURE PIPES USING FLEXIBLE ELASTOMERIC SEALS
  - ASTM F477 - ELASTOMERIC SEALS (GASKETS) FOR JOINING PIPE
  - NSF/ANSI 61 - DRINKING WATER SYSTEM COMPONENTS
  - NSF/ANSI 14 - PLASTIC PIPING SYSTEM COMPONENTS AND RELATED MATERIALS
- FURNISH IN STANDARD LAYING LENGTHS OF 20'.  
• THE MINIMUM WALL THICKNESS OF THE BELL, AT ANY POINT, SHALL CONFORM TO THE DR REQUIREMENTS OF THE PIPE.  
• ALL PVC PIPE AND FITTINGS SHALL BE CLEARLY MARKED WITH MANUFACTURER'S NAME, NOMINAL DIAMETER, SDR, ASTM D2241, PRESSURE RATING, AND NSF APPROVAL SEAL.

- AWWA C900 PVC PRESSURE PIPE AND FITTINGS
- AWWA C900 - POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FABRICATED FITTINGS, 4 IN. THROUGH 12 IN., FOR WATER TRANSMISSION AND DISTRIBUTION
  - DR 14 (305 PSI)
  - PVC 1120 - PIPE MATERIAL
  - ASTM D1784 - RIGID POLYVINYL CHLORIDE (PVC) COMPOUNDS
  - ASTM D3139 - JOINTS FOR PLASTIC PRESSURE PIPES USING FLEXIBLE ELASTOMERIC SEALS
  - ASTM F477 - ELASTOMERIC SEALS (GASKETS) FOR JOINING PIPE
  - NSF/ANSI 14 - PLASTIC PIPING SYSTEM COMPONENTS AND RELATED MATERIALS
  - NSF/ANSI 61 - DRINKING WATER SYSTEM COMPONENTS
  - FURNISH IN STANDARD LAYING LENGTHS OF 20'.  
• THE OUTSIDE DIAMETER SHALL BE EQUIVALENT TO THE SAME OUTSIDE DIAMETER OF DUCTILE IRON PIPE.  
• THE MINIMUM WALL THICKNESS OF THE BELL, AT ANY POINT, SHALL CONFORM TO THE DR REQUIREMENTS OF THE PIPE.  
• CLEARLY MARK WITH THE MANUFACTURER'S NAME, NOMINAL DIAMETER, DR, PVC 1120, PRESSURE CLASS, AWWA C900, AND NSF APPROVAL SEAL.

- ALL WATER LINE PIPE, FITTINGS, AND ACCESSORIES SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH AWWA C600, DISINFECTED IN ACCORDANCE WITH AWWA C651, AND PASS BACTERIOLOGICAL TESTING BEFORE BEING PLACED IN SERVICE AND PRIOR TO ACCEPTANCE. TESTING SHALL BE CONDUCTED ON PIPE LENGTHS OF LESS THAN 1,000'. WHERE THIS IS NOT POSSIBLE, TESTING SHALL BE CONDUCTED FROM ONE VALVE TO THE NEXT CLOSEST VALVE.

- ALL WATER LINE FITTINGS (BENDS, TEES, VALVES, HYDRANTS, PLUGS, CAPS, ETC.) SHALL BE PROPERLY RESTRAINED TO RESIST THRUST FORCES IN ACCORDANCE WITH THE THRUST RESTRAINT DETAIL. IF CONCRETE THRUST BLOCKS ARE NOT USED, JOINT RESTRAINT SHALL BE PROVIDED AT ALL PIPE JOINTS FALLING WITHIN THE RESTRAINED LENGTHS. RESTRAINTING GASKETS SHALL BE INSTALLED AS PIPE IS LAID.

- ALL PIPE AND FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC, MINIMUM 6-MIL THICKNESS.

- WATER SERVICE LINES: ALL WATER SERVICE LINES SMALLER THAN 2" IN DIAMETER SHALL BE SEAMLESS TYPE K COPPER PIPE MEETING ASTM B-88 MANUFACTURED IN THE USA, UNLESS OTHERWISE INDICATED. ALL WATER SERVICE LINES 2" THROUGH 3" IN DIAMETER SHALL BE PVC SDR 13.5 OR HDPE DR 7. ALL WATER SERVICE LINES CROSSING EXISTING ROADWAYS SHALL BE BORED.

- ALL CONNECTIONS TO THE WATER MAIN 2" AND LARGER SHALL BE MADE WITH A TEE OR TAPPING SLEEVE/SADDLE AND GATE VALVE. ALL CONNECTIONS SMALLER THAN 2" SHALL BE MADE WITH A CORPORATION STOP.

- THE CONTRACTOR SHALL RECONNECT ALL EXISTING WATER LINES AS INDICATED ON THE PLANS OR AS DIRECTED. RELOCATED WATER METERS SHALL BE INSTALLED AT THE PROPERTY LINE, PERMANENT EASEMENT LINE, OR AS DIRECTED BY THE UTILITY. THE CONTRACTOR SHALL FIELD VERIFY EXISTING WATER METER SIZES TO BE RELOCATED/ADJUSTED, AND REPLACE IN-KIND WHERE SPECIFIED.

## UTILITY ABANDONMENT NOTES

- EXISTING PRESSURE UTILITIES 12" OR LESS INDICATED TO BE ABANDONED OR RETIRED IN PLACE SHALL BE CUT AT A CLOSED VALVE, PLUGGED OR CAPPED, AND REMOVED FROM SERVICE ONLY AFTER NEW UTILITY IS MADE OPERATIONAL AND CONCRETE BLOCKS HAVE CURED. THE CONTRACTOR SHALL FIELD VERIFY THE PRESENCE OF EXISTING VALVES FOR USE IN ABANDONMENT. A SACRIFICIAL VALVE OF THE SAME SIZE AS THE LINE SHALL BE INSTALLED WHERE ONE IS NOT PROVIDED, UNLESS OTHERWISE INDICATED. PLUGS AND CAPS SHALL BE COMMERCIALY AVAILABLE AND SPECIFICALLY DESIGNED TO BE USED WITH THE PIPE BEING ABANDONED. CAPS MAY ALSO BE CEMENT-BASED DRY-PACK GROUT CONFORMING TO ASTM C1107, GRADE B OR C.
- THE CONTRACTOR SHALL COMPLETE UTILITY ABANDONMENTS BY CLOSING ALL VALVES AND REMOVING SALVAGEABLE ITEMS (VAULTS, VALVE BOXES, HYDRANTS, METERS, METER BOXES, ETC.) ON LINES TO BE ABANDONED OR RETIRED IN PLACE. BACKFILL ALL VOIDS AND RESTORE THE FINISHED GRADE TO MATCH EXISTING ADJACENT CONDITIONS. VOIDS IN PAVED OR GRAVEL AREAS AND WITHIN 24" OF THE EDGE OF PAVEMENT SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE/GRANULAR MATERIAL OR FLOWABLE FILL. VOIDS IN GRASSED AREAS SHALL BE BACKFILLED WITH SOIL, SEEDED, AND MULCHED. REMOVED MATERIALS SHALL NOT BE REUSED IN THE COMPLETED WORK, EXCEPT AS SPECIFICALLY APPROVED BY THE OWNER. THE CONTRACTOR SHALL RETURN ALL SALVAGEABLE ITEMS REMOVED DURING CONSTRUCTION TO THE OWNER, OR DISPOSED OF, AS DIRECTED.
- NO GALVANIZED PIPE CONNECTIONS SHALL BE LEFT BEHIND. COORDINATE WITH JCWSS MAINTENANCE DIVISION AT LEAST ONE WEEK IN ADVANCE OF ALL ABANDONMENT WORK.

## TEMPORARY UTILITY FACILITIES NOTES

- THE CONTRACTOR MUST MAINTAIN ALL SERVICES DURING THE CONSTRUCTION. ANY COSTS ASSOCIATED WITH INSTALLATION OF REQUIRED TEMPORARY SERVICE LINES DUE TO THE CONSTRUCTION SEQUENCE OF WORK SHALL BE INCLUDED IN THE COST OF THE PERMANENT UTILITY ITEMS.
- TEMPORARY TIE-OVERS MAY BE REQUIRED TO MAINTAIN SERVICE DURING CONSTRUCTION. ALL MATERIALS AND MEANS NECESSARY FOR A COMPLETE WORKING CONNECTION SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

DATE	BY	DESCRIPTION	REV.	COJC COMMENTS	ADDDENDUM 1															
8/11/22	JDW		1																	
9/16/22	JDW		3																	

## GENERAL NOTES

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## UTILITY ABANDONMENT NOTES

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- THE CONTRACTOR SHALL COMPLETE UTILITY ABANDONMENTS BY CLOSING ALL VALVES AND REMOVING SALVAGEABLE ITEMS (VAULTS, VALVE BOXES, HYDRANTS, METERS, METER BOXES, ETC.) ON LINES TO BE ABANDONED OR RETIRED IN PLACE. BACKFILL ALL VOIDS



## ATTACHMENT "I"

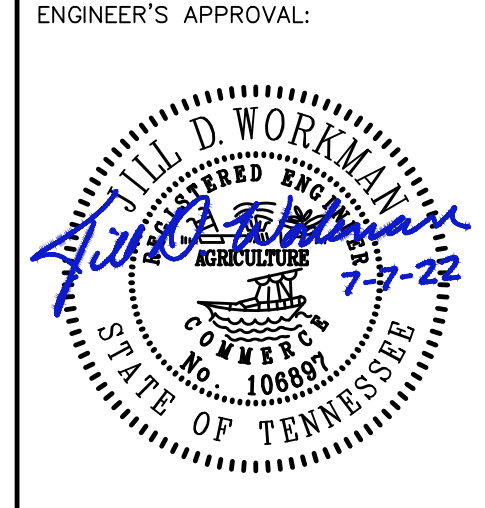
REV.	DESCRIPTION	DATE	BY
1	COJC COMMENTS	8/11/22	JDW
3	ADDENDUM 1	9/16/22	JDW

GENERAL NOTES



7 NORTH CIRCLE  
JOHNSON CITY, TENNESSEE 37601  
Phone: (423) 282-2687 Fax: (423) 854-4563  
Email: thp@tysinger-engineering.com  
WWW.TYSINGER-ENGINEERING.COM

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PROJECT:  
**WASHINGTON COUNTY WATER LINE EXTENSIONS**

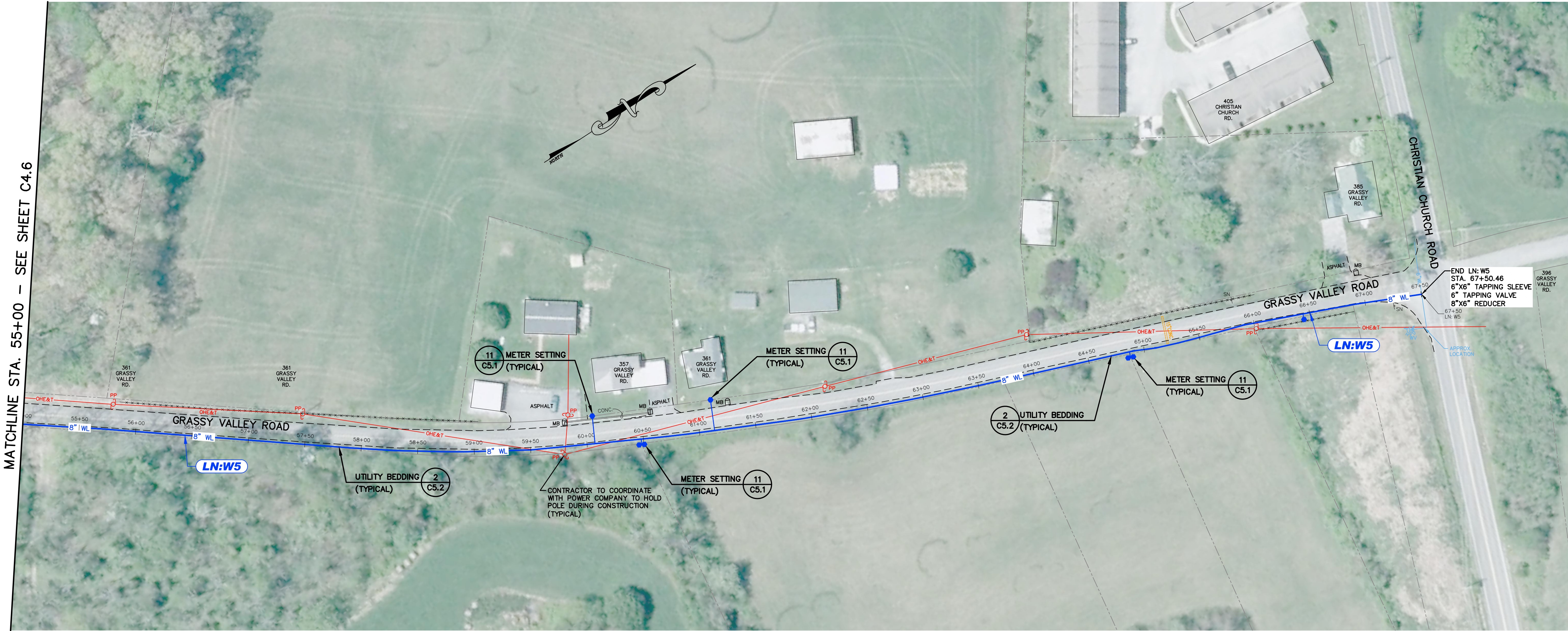
PREPARED FOR:  
**THE CITY OF JOHNSON CITY**

LOCATION:  
**WASHINGTON COUNTY, TENNESSEE**

DWG. TITLE:  
**LN: W5 PLAN (STA. 55+00 TO STA. 67+51) GRASSY VALLEY ROAD**

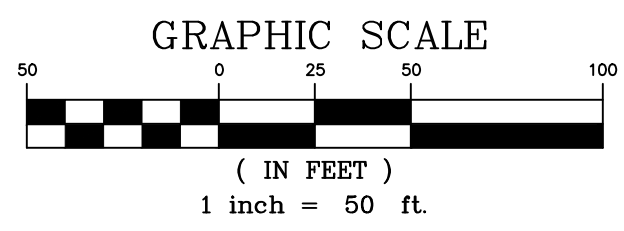
ISSUE DATE :  
CADD FILE: 2110601C DESIGN

SCALE: 1"=50'	PROJECT NO.
DRAWN: SDC	2110601C
CHECK: JDW	
DATE: 7/7/22	C4.7



**NOTES:**

- REFER TO SHEETS C5.1 THROUGH C5.3 FOR MISCELLANEOUS WATER LINE DETAILS.
- REFER TO SHEET C5.1 MISCELLANEOUS DETAILS 1 THROUGH 5 FOR ROAD, DRIVEWAY, CURB/GUTTER, AND SIDEWALK REPLACEMENT DETAILS.
- REFER TO SHEET C5.4 FOR EROSION & SEDIMENT CONTROL DETAILS.
- CONTRACTOR SHALL MAINTAIN POSITIVE/NEGATIVE GRADIENT BETWEEN AIR RELEASE VALVES TO AVOID EXCESSIVE HIGH POINTS IN THE WATER LINE PROFILE.
- NEW WATERLINE TRENCH TO BEGIN 3' OFF PAVED SURFACES OR BACKFILLED WITH COMPACTED STONE. PAYMENT FOR BACKFILL STONE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR WATER LINE. STONE BACKFILL SHALL NOT BE REQUIRED WHERE THERE IS CURBING.
- TIE-OVERS AND CLEAN-UP TO BE COMPLETED BEFORE CONSTRUCTION ON ANOTHER SECTION BEGINS.
- COORDINATE WITH JCWS FOR GALVANIZED ABANDONMENT. THIS WORK MAY NEED TO BE COMPLETED WHILE MAINS ARE ACTIVE.
- BACKFILL CITY STREETS WITH FLOWABLE FILL AND COUNTY ROADS WITH COMPACTED CRUSHED STONE. BACKFILL DRIVEWAYS WITH STONE. REFER TO THE SPECIFICATIONS FOR ADDITIONAL DETAILS.
- WATER LINES PARALLEL TO ROADWAYS TO BE INSTALLED MINIMUM 36" DEEP TO TOP OF PIPE. ROAD CROSSINGS SHALL BE INSTALLED A MINIMUM OF 48" DEEP TO TOP OF PIPE.
- NOT ALL WATER METERS AND VALVES MAY BE SHOWN ON THE PLANS.
- ALL ROAD AND DRIVEWAY CROSSINGS ON 2" OR SMALLER WATER LINES, INCLUDING SERVICE LATERALS, TO BE INSTALLED USING TRENCHLESS METHODS. THERE WILL BE NO PAYMENT FOR PAVEMENT OR FLOWABLE FILL.
- METERS TO BE RELOCATED IF NEW LINE IS INSTALLED BEHIND METERS. UTILITY INSPECTOR TO COORDINATE WITH PROPERTY OWNER FOR METER LOCATION. PAYMENT WILL BE FOR "METER SETTING".
- ALL WORK SHALL BE COMPLETED WITHIN EXISTING RIGHTS-OF-WAY OR EASEMENTS.
- THE PROPERTY LINES DEPICTED HEREON ARE BASED ON TAX PARCEL LINES FROM THE CITY OF JOHNSON CITY GIS AND MAY NOT REFLECT THE ACTUAL RIGHT OF WAY OR EXISTING EASEMENTS.



**NOTICE**  
LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHOWN ARE APPROXIMATE AND THOSE SHOWN ARE NOT NECESSARILY ALL OF THE EXISTING UTILITIES AND STRUCTURES. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND THE EXISTENCE OF ALL UTILITIES AND UNDERGROUND STRUCTURES.

## ATTACHMENT "J"



Civil Engineering  
Surveying  
Environmental Consulting

## Tysinger, Hampton & Partners, Inc.

### **OPTIONAL PRE-BID MEETING - MINUTES**

Washington County Water Line Extensions  
ITB #6640 / TH&P Project No. 2110601C  
September 7, 2022 @ 2:00 PM ET

#### 1. General Information

##### A. Project Owner & Engineer:

Role	With	Name	Phone	Email
Owner	City of Johnson City Water & Sewer Department	Garrett Dorn, PE	(423) 975-2625	gdorn@johnsoncitytn.org
Engineer	TH&P	Jill Workman, PE	(423) 722-1815	jworkman@tysinger-engineering.com

##### B. Contract Documents:

- \$200 per hard copy set
- Free digital set available upon request (email Jill Workman)
- Hard copy set does not need to be purchased to submit a bid; however, **you must request to be placed on the Bidder of Record list to submit a bid.**
- Available for viewing at AGC & Knoxville Builder's Exchange plan rooms

##### C. Bid Opening:

- When: 2:00 PM ET, Wednesday, September 21, 2022
- Where: Web Conference Hosted by City of Johnson City Office of the Purchasing Agent
- Link:  
<https://us02web.zoom.us/j/88293536255?pwd=bHUxOHl4UFZSYUljOVRREplOHc4QT09>
  - Meeting ID: 882 9353 6255
  - Passcode: 806498
  - If you do not have access to a webcam, or you have no audio with your system, you may call this number to join: (646) 518-9805

- D. The last day to ask questions is by the end of business on Thursday, September 15, 2022. Please submit all questions in writing to Jill D. Workman at [jworkman@tysinger-engineering.com](mailto:jworkman@tysinger-engineering.com)

- E. If required, a final addendum will be sent to the plan holders by noon on Friday, September 16, 2022. Pre-Bid minutes will be posted to the Box Link below:

<https://app.box.com/s/2j0712n5jlc0fhdp4flgopyiej2faf99>

F. Bid Submittal:

- Bids may be mailed or dropped-off at the Purchasing Department prior to the bid opening at the following address:

City of Johnson City  
Purchasing Department  
P.O. Box 2150 (37605)  
209 Water Street (37601)  
Johnson City, TN

- Bids that are received after the specified time will not be considered.
- Bids will be accepted from Bidders of Record only (must obtain Bidding Documents from TH&P).
- Bids will be opened publicly via a web conference.
- Submit the following items to Bid (do not need to submit entire Contract Documents):
  1. All bids must be enclosed in a sealed envelope with the State Contractors Licensing Information Bid Envelope Form firmly attached to the outside (Bid Form Section 00410, right after Bid Form).
  2. Completed & signed Bid Form (Bid Form Section 00410)
  3. Required Bid Security of 5% of the **TOTAL CONTRACT PRICE** in the form of a Bid Bond (Bid Bond Section 00430) or Certified Check
  4. Non-Collusion Affidavit (Section 00450)
  5. Drug Free Workplace Affidavit (Section 00460)
  6. Acknowledgement of Requirements for Bids, Requests for Proposals, and Contracts Between The City of Johnson City and Other Parties (Section 00900)
  7. General Contract Form (Section 00901, right after Acknowledgement of Requirements for Bids, Requests for Proposals, and Contracts Between The City of Johnson City and Other Parties)
  8. Insurance Checklist (Section 00902, right after General Contract Form)
  9. Sealed Solicitation General Terms and Conditions (Section 00903, right after Insurance Checklist)
  10. List of references for similar type projects (3 minimum – attach sheet)
  11. Copy of State of Tennessee Contractor’s License

- Please be sure to review all of the Bidding and Contract requirements for this project. Review, complete, sign, and check all necessary documents before submitting your bid. ***Bid Form must be signed to be considered valid.***
  - The Owner reserves the right to waive any irregularities or reject any or all bids. The Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. The Owner may make such investigations as deemed necessary to determine the ability of the selected Contractor to perform the work.
- G. Contract Time:
- Substantial Completion: 210 calendar days (\$500/day LD)
  - Final Completion: 240 calendar days (\$500/day LD)
  - For construction delays associated with an abnormal amount of rain, Contractor shall submit written requests for the documented rain days, and a contract time extension may be awarded if approved by the Owner.
  - The Notice to Proceed for this project will be contingent upon the availability of materials and delivery schedules.
- H. Wage Rates: There are no wage rates applicable to this project.
- I. DBE Goals: There are no Disadvantaged Business Enterprise requirements for this project.
- J. The project is bid as a unit price contract. The Work may be reduced or increased at the Owner's option. Items not specifically called for on the Bid Form shall be included in the payment for the item with which they are associated. Refer to Project Manual Section 01150 Measurement and Payment Water Distribution Improvements for a description of the items included with each unit price.
- K. There are two divisions in this project as listed below.
- Division A includes:
- LN:W1 Hartmantown Road
  - LN:W4 Pleasant Valley Road
  - LN:W5 Grassy Valley Road
  - LN:W6 Bill Bennett Road

Division B includes:

- LN:W2 Mulberry Lane
- LN:W3 Wilcox Circle

- L. No geotechnical exploration was performed for this project. All excavation is unclassified.

## **2. Layout**

- A. TH&P will provide a digital file for use in layout, upon request.
- B. The Contractor is responsible for laying out the Work, establishing the limits of construction, maintaining established control, and providing an accurate record of as-built installations.
- C. The vertical alignment shall not result in excessive high points or ARVs unless approved by the City.

## **3. Construction**

- A. Inspection: The City of Johnson City Water and Sewer Department to provide construction inspection of the project.
- B. Laydown/Staging Area: Any area needed for laydown/staging shall be secured by the Contractor.
- C. Ductile Iron Pipe: All pipe must be new and shall be manufactured in the United States of America (USA); all ductile iron pipe shall be cast, cleaned, lined, coated, tested, and certified at a single manufacturing facility located in the USA. Approved USA manufacturers are AMERICAN Cast Iron Pipe Company, U.S. Pipe, and McWane Ductile.
- D. Excavation:
- All excavation (including rock, which is not a separate pay item, shall be included in the unit price bid for the item with which it is associated.
  - The Contractor shall provide, install, and maintain safety fence around all open trenches and work areas to protect premises from entry by unauthorized persons.
  - Water line trenches shall begin 3-feet from the edge of pavement. Trenches within 3-feet of the edge of pavement without curbing shall be backfilled with

crushed stone. Payment for backfill stone shall be included in the unit price bid for water line.

- All Work shall be completed inside the public right-of-way. The Contractor shall minimize clearing of the site and limit disturbance to this area.
- The Contractor is responsible for removing trees that are in conflict with the water line. Realignment of the water line to avoid existing trees will be considered on a case-by-case basis. **All tree removal in the County ROW shall be coordinated with the Washington County Highway Department. Any and all expenses associated with tree removal shall be paid by the Contractor. There is no separate pay item for tree removal.**
- All waste and construction debris shall be removed by the Contractor and disposed of in accordance with local and state requirements.
- All off-site disposal areas shall be permitted in accordance with TDEC requirements.
- Blasting is not permitted.

E. Road Crossings & Sidewalk Cuts:

- Road crossings for water lines larger than 2" shall be backfilled with flowable fill & driveway crossings shall be backfilled with stone.
- Road and driveway crossings for water lines 2" or smaller shall be installed using trenchless methods, unless otherwise approved. There shall be no additional payment for trenchless installation of water lines 2" or smaller.
- All water service lines crossing the roadway shall be installed using trenchless methods, unless otherwise approved. Service lines installed by open-cut shall be backfilled with stone and the surface restored. Payment includes all work necessary to complete the service lateral.
- All road cuts and high traffic areas (including apartments and businesses) that are not paved the same day shall be temporarily paved. The cost for temporary pavement shall be included in payment for pavement replacement.
- Replacement section for sidewalks shall be the full width of the sidewalk.

F. Access & Traffic Control:

- Access to all property owners shall be maintained during the project.
- The Contractor shall coordinate traffic control with the City of Johnson City, **Washington County Highway Department**, emergency responders, and schools, as applicable. The traffic control plans provided are to serve as a guide only, and other signs, barricades, barrels, or other traffic control devices may be required during various phases of construction. The Contractor shall be responsible for all traffic control and shall submit detailed alternate traffic control plans for approval prior to beginning construction.



- There shall be no road closures on holiday weekends, starting on noon the day before the holiday and ending the morning after. The holidays are listed below:
    - New Year's Day
    - Good Friday
    - Memorial Day
    - Independence Day
    - Labor Day
    - Thanksgiving weekend
    - Christmas Eve
    - Christmas Day
  - All temporary traffic control measures shall be removed by the contractor at the end of the workday or work week.
- G. Services:
- Utility services shall be maintained during construction. Temporary measures to maintain service shall be included in the unit price bid for other items. Scheduled outages shall be coordinated with the City 5 days (min.) in advance.
  - Existing meters shall be re-used wherever possible. The Contractor shall provide new meters, as indicated or as directed. Meters located behind the new water line shall be relocated and a new assembly shall be installed.
- H. Site clean-up:
- Roadways shall be cleaned daily.
  - Tie-overs and clean-up shall be completed before beginning Work on another section.
- I. Special Construction Requirements at Grassy Valley Road LN:W5:
- Work shall not begin in the CSXT ROW until a start work date is agreed upon by the Engineer, Owner, and CSXT
  - Bore pit shall be located on the NE side of the RR & receiving pit shall be located on the SW side of the RR
  - Contractor shall comply with the requirements of CSXT while working in the railroad ROW
  - Flagging and inspection services will be required from CSXT while working in the railroad ROW. These invoices shall be paid by the Contractor, and the cost will be reimbursed with the allowance pay item A-51 Railroad Flagging/Inspection Services. Refer to the Project Manual Section 01150 Measurement and Payment Water Distribution Improvements, part 1.28 for additional information.

- DIP inside the casing shall be restrained and encased with V-Bio Enhanced Polywrap
- Minimize impacts to existing vegetation at 3130 Knob Creek Road
- Do not disturb existing Leyland Cypress trees at 3130 Knob Creek Road
- Provide a landscape buffer at 3130 Knob Creek Road after prior approval by Engineer, Owner, and Property Owner. Items to be installed will be specified by the City prior to construction
- No work shall occur outside of ROW or easement area, except to install the landscape buffer

#### **4. Permits**

- A. The Contractor shall be required to adhere to the general conditions, special conditions requirements, and laws associated with the permits. The Engineer will furnish a copy of each permit to the Contractor.
- B. The following permits have been obtained for this project and are part of the Contract Documents:
  - Tennessee Department of Conservation Division of Water Resources Permit
  - Tennessee Department of Conservation Aquatic Resource Alteration Permit (ARAP) (for creek crossings at LN:W1 Hartmantown Road & LN:W2 Mulberry Lane)
  - Tennessee Department of Conservation Construction General Permit (SWPPP)
  - CSXT Facility Encroachment Agreement (for railroad crossing at LN:W5 Grassy Valley Road)
  - Washington County Highway Department Right-of-Way Excavation Permit
  - TDOT Utility Use and Occupancy Permit (for road crossing at LN:W6 Bill Bennett Road)
- C. Any fines issued for non-compliance with the permit conditions shall be paid by the Contractor.

#### **5. Payment**

- A. There will be no payment for stored materials.
- B. A 3% construction contingency is included in the Bid Schedule.
- C. Force Majeure Contingency:
  - Due to ductile iron pipe availability and pricing fluctuations, a fixed amount of “force majeure” contingency allowance is included on the Bid Schedule.

- This item is for reimbursement of unforeseen costs associated with ductile iron pipe price increases and pipe shipment surcharges that occur after the project bid award.
- Payment for this item requires prior approval and documentation.
- This item does not include any overhead or profit charges.
- Refer to the Project Manual Section 01150 Measurement and Payment Water Distribution Improvements, part 1.29 for additional information.

**6. Questions & Comments – The following questions will be clarified in an Addendum**

Q: Do we have a contact for the railroad?

A: If we have a contact for the railroad (CSXT), it will be provided in an Addendum.

Q: Is the CSXT insurance included in the pay item A-51?

A: No.

Q: Why are stored materials not included in this project?

A: This project was originally considered to not allow stored materials. This question will be considered for this project and clarified in an Addendum.

Q: There are several trees along Grassy Valley Road near station 50+00, and the water line may be in the drip line of the trees. What should Contractors do about those trees?

A: The City does not want tree roots cut that may result in the tree to die at a later date. The Contractor will be required to remove trees that are determined to be in conflict with the new water line, or a realignment may be considered with prior approval of both the Engineer and the Owner. It may also be possible to get some assistance from the Washington County Highway Department for tree removal, depending on the circumstances (proximity to road, power lines, etc.). All tree removal in the County ROW shall be coordinated with the Washington County Highway Department. Any and all expenses associated with tree removal shall be paid by the Contractor.

Q: How is the landscaping buffer on the Grassy Valley Road water line to be paid for, and what is included?

A: The landscaping buffer at 3130 Grassy Valley Road will be paid under item A-53 "LANDSCAPING ALLOWANCE" (see Project Manual Section 01150 part 1.30 for details on this pay item). Payment for this item includes all labor, equipment, and materials but does not include additional payment for markup. This item is only for the landscape buffer at 3130 Grassy Valley Road, and all other landscape restoration required in this project will be paid under items A-42 and B-31 "LANDSCAPING RESTORATION".