



**HIGHFILL**

Highfill Infrastructure Engineering, P.C.  
380 Knollwood Street, Suite 734  
Winston-Salem, North Carolina 27103  
Tel 336-701-2910 | NC Firm License No. C-2586

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**To:** ALL PLANHOLDERS  
**Copies:** Darren Redfield, City Purchasing  
Jordan Toney, WSFC Utilities

**Date:** June 2, 2023  
**Proj. No.:** WIN2001

**Subject:** Addendum No. 2  
Peters Creek Outfall – Phase 2  
Bid No.: FB#23283  
Owner: Winston-Salem/Forsyth County Utilities

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### **ADDENDUM NO. 2**

**BID DATE: JUNE 7, 2023 @ 2:00 PM**

**BID OPENING LOCATION: CITY HALL, FRONT STEPS**

Please be advised of the following changes in the plans and specifications for this project:

**Item 2.01:** A bypass pumping system test shall be performed for a 24-hour period prior to taking the existing gravity sewer system offline.

**Item 2.02:** Refer to the Itemized Proposal Form:

Replace the Itemized Proposal Form with the attached updated Itemized Proposal Form. Please submit this new Itemized Proposal Form with your bid.

Note that Pay Item 19.c (Tunnel Liner Plate Repair) has been revised from a per linear foot unit price to an Allowance.

**Item 2.03:** Refer to Section 01 20 00 (Price and Payment Procedures), Paragraph 1.6.H.19.c in the Project Manual and revise as follows:

Delete Pay Item 19.c (Tunnel Liner Plate Repair) and replace with the following.

- c. Tunnel Liner Plate Repair - Allowance  
An allowance set forth on the Bid Form for repair of the tunnel liner plate, if needed. Repair to include removal of existing damaged tunnel liner plate sections, removal of encroaching soils inside tunnel, and installation of new tunnel liner plate sections. The Allowance shall include all materials, equipment, and labor required for proper completion of Work to allow for installation of sewer pipe through tunnel. Allowance shall be used only upon authorization from the Engineer or Owner.

Written questions received during the project bidding advertisement period and the Engineer's responses are below.

1. Can the city provide any sewer flow data for the lines and manholes that will require by-pass pumping. Additionally is there any flow data for Peter's Creek, average and peak flow data?

Response:

The City does not have recent flow data for this area; however, flow data from 2018 showed an average flow rate of 1,350 GPM. For peak flow considerations, full pipe flow in the Canal Drive area is 4,600 GPM and full pipe flow just downstream of University Parkway is 3,900 GPM.

2. Will any of the existing powerline utilities be relocated and/or de-energized during the construction ?

Response:

Utility coordination during construction will be the Contractor's responsibility.

3. Can bid items be provided that will cover the protection of the existing buildings/structures that are located on the edge of the trench limits of disturbance ? i.e. active shoring of the structures / inspections, etc.

Response:

Include shoring costs in the existing bid items.

4. Will the city provide any assistance during the open-cut section at Chatham Road, i.e. Support of the existing waterline and/or operation of any valves if an emergency occurs?

Response:

The Contractor is responsible for requirements to open-cut Chatham Road. The Contractor shall not operate waterline valves. If waterline valves are required to be operated, the Contractor shall coordinate with the inspector and City staff.

5. We noticed that NCDOT Encroachment Permits were included in the specifications. Are there any encroachment permits for crossing underneath the Norfolk Southern Railroad Bridge ?

Response:

The Agreement with Norfolk Southern Railway Company is attached. Contractor shall coordinate with RailPros during construction.

6. Will a change order be considered if Norfolk Southern doesn't agree with the per plan crossing design as noted between stations 16+10 to 16+50 ?

Response:

The railroad crossing as shown on the plans has been submitted and approved by Norfolk Southern Railway Company via RailPros (see attached agreement with the Railway).

7. Is there a contingency plan if the two (2) tunnel liner plate crossings are not functional to facilitate the removal and placement of the new line ?

Response:

It is understood that the tunnel liner plate condition is unknown. It is the Contractors responsibility to repair the tunnel liner plate, if needed. Pay Item 19.c (Tunnel Liner Plate Repair) has been revised from a per linear foot unit price to an Allowance. The Notes on plan sheet SS-1.1 call for investigating the tunnel prior to preparing to remove the existing pipe. We recommend performing this investigation early in the project to determine repair methods, if needed.

8. Who will be responsible for overall project testing and inspections ( QA / QC ) ?

Response:

The Engineer will provide inspections for this project. Testing (i.e., compaction) will be performed by a testing firm selected by the Engineer. Testing costs for the testing firm will be paid by the Engineer. The Contractor shall coordinate with the selected testing firm during the project to schedule tests.

9. There are plan drawings included in the specifications detailing the Brownfield site 401 West End Blvd. ( shts. 504 – 509 ). Are those items of work to be included in this project ?

Response:

The Environmental Management Plan (EMP) was originally prepared for redevelopment of that site and included plan sheets C1 to C6 (PDF page 504 to 509). The EMP applies to this project; however, the work shown on the EMP sheets C1 to C6 is not part of this project. That work was previously completed by others and those sheets are for reference only.

10. Are there any limits and/ or restrictions regarding bypass sewer pumping ?

Response:

Overnight bypass pumping is not allowed without approval. Contractor shall make temporary tie-ins at the end of the day. It is understood that some locations will require overnight and/ or extended period bypass pumping.

No further changes at this time.

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A list of all bid set holders is available through a link on our website ([www.hiepc.com](http://www.hiepc.com)) under the Project Links/Bid Documentation section.

Please acknowledge receipt of this Addendum in the space provided in the Itemized Proposal Form for each bid submitted. Failure to do so may constitute grounds for the rejection of your Bid.

HIGHFILL INFRASTRUCTURE ENGINEERING, P.C.



Eddie Sasser, PE  
Project Manager

Enclosures:

- Revised Itemized Proposal Form
- Agreement with Norfolk Southern Railway Company

**Itemized Proposal Form**  
Winston-Salem/Forsyth County Utility Commission  
**Peters Creek Outfall Replacement – Phase 2**  
FB #23283

**ARTICLE 1 – BID RECIPIENT**

1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; (3) Bidder’s safety precautions and programs; and (4) Bidder has correlated all such information available.
- E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

- H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 4 – BIDDER’S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### **ARTICLE 5 – BASIS OF BID**

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following prices:

No.	Item	Quantity	Units	Unit Price	Extended Total
1	Mobilization, Bonds, Insurance (3% of subtotal)	1	LS		
2	Temporary Traffic Management	1	LS		
3	Clearing & Grubbing	1	LS		
4	4' Standard Precast MH - Replace Existing MH				
	a. 15'-20' Depth	1	EA		
5	5' Standard Precast MH				
	a. 10'-15' Depth	3	EA		
	b. 15.01'-20' Depth	1	EA		
6	5' Standard Precast MH - Replace Existing MH				
	a. 0'-10' Depth	1	EA		
	b. 10.01'-15' Depth	3	EA		
7	5' Type B Precast MH				
	a. 24'-26' Depth	1	EA		
8	5' Type B Precast MH - Replace Existing MH				
	a. 10'-15' Depth	6	EA		
	b. 15.01'-20' Depth	2	EA		
	c. 20.01'-25' Depth	1	EA		
	d. >25' Depth	1	EA		
9	6' Type B Precast MH - Replace Existing MH				
	a. 15'-20' Depth	1	EA		
10	8' Type B Precast MH - Replace Existing 4' MH				
	a. 15'-20' Depth	1	EA		
11	Outside Drop for MH				
	a. 6" Diameter Pipe	2	EA		
	b. 8" Diameter Pipe	1	EA		
	c. 10" Diameter Pipe	2	EA		
12	Sewer MH Vent	3	EA		
13	Gravity Sewer 10" - Excavate and Replace				
	a. 0'-5' Depth	35	LF		
	b. 5.01'-10' Depth	41	LF		
	c. 10.01'-15' Depth	11	LF		
	d. 15.01'-20' Depth	28	LF		
14	Gravity Sewer 20" - Excavate and Replace				
	a. 15'-20' Depth	312	LF		
15	Gravity Sewer 24"				
	a. 0'-10' Depth	52	LF		
	b. 10.01'-15' Depth	43	LF		
	c. 15.01'-20' Depth	161	LF		
16	Gravity Sewer 24" - Excavate and Replace				
	a. 15'-20' Depth	15	LF		
17	Gravity Sewer 30"				
	a. 0'-10' Depth	44	LF		
	b. 10.01'-15' Depth	469	LF		
	c. 15.01'-20' Depth	313	LF		
	d. 20.01'-25' Depth	56	LF		

No.	Item	Quantity	Units	Unit Price	Extended Total
<b>18</b>	Gravity Sewer 30" - Excavate and Replace				
	a. 0'-10' Depth	367	LF		
	b. 10.01'-15' Depth	986	LF		
	c. 15.01'-20' Depth	353	LF		
	d. 20.01'-25' Depth	51	LF		
<b>19</b>	Reuse Ex. 54" Tunnel Plate Liners				
	a. Broad Street Crossing	1	LS		
	b. University Boulevard Crossing	1	LS		
	c. Tunnel Liner Plate Repair	1	LS	\$200,000	<b>\$200,000</b>
<b>20</b>	30" HDPE Sewer via Pipe Bursting	557	LF		
<b>21</b>	Install CIPP Liner				
	a. 24"	773	LF		
	b. 30"	81	LF		
<b>22</b>	4" Standard Sanitary Sewer Lateral Connection	2	EA		
<b>23</b>	Sanitary Sewer Service Pipe	90	LF		
<b>24</b>	Sanitary Sewer Service Cleanout	2	EA		
<b>25</b>	Rock Excavation	100	CY		
<b>26</b>	Contaminated Soils				
	a. Contaminated Soils Management	1	LS		
	b. Add'l Contaminated Soils Remediation	500	CY		
	c. Add'l Contaminated Groundwater Residuals	60,000	GAL		
<b>27</b>	Abandon Existing Sewer - Plug Ends	10	EA		
<b>28</b>	Remove Existing Aerial Crossing – Canal Drive	1	LS		
<b>29</b>	Asphalt Pavement Repair - Road	1,050	SY		
<b>30</b>	Asphalt Pavement Repair - Driveway	90	SY		
<b>31</b>	Gravel Pavement Repair	200	SY		
<b>32</b>	Concrete Sidewalk	40	SY		
<b>33</b>	Stabilization Stone	185	CY		
<b>34</b>	Select Backfill	250	CY		
<b>35</b>	Flowable Fill	200	CY		
<b>36</b>	12-Foot-Wide Double Leaf Fence Gate	1	EA		
<b>37</b>	Fence Replacement	100	LF		
<b>38</b>	Temporary Sewer Bypass Pumping	1	LS		
<b>39</b>	Temporary Erosion Control Measures	1	LS		
<b>40</b>	Temporary Seeding and Mulching	2	AC		
<b>41</b>	Permanent Seeding and Mulching	2	AC		
<b>42</b>	Digital Submission Requirements for Utility GIS Data	1	LS		
<b>43</b>	Rip Rap - Class 1	460	TN		
<b>44</b>	Allowance - Renovation	1	LS	\$100,000	<b>\$100,000</b>



The Total Base Bid Price shall be:

\_\_\_\_\_ (words)  
\$ \_\_\_\_\_ (numerals)

Where the numerical bid amount and the written word amount is required the numerical amount will prevail.

**ARTICLE 6 – TIME OF COMPLETION**

6.01 Bidder agrees that the Work will be Substantially Complete in accordance with Paragraph 15.04 of the General Conditions within 480 calendar days of Notice to Proceed as indicated in the Construction Contract.

6.02 Bidder agrees that the Work will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 510 calendar days of Notice to Proceed as indicated in the Construction Contract.

Note that calendar days to final payment includes 180 calendar days for material procurement.

6.03 Bidder accepts the liquidated damages sum of \$1,200 per calendar day and provisions thereof as stipulated in the Construction Contract.

**ARTICLE 7 – SUBCONTRACTORS REQUIREMENTS FOR CERTAIN BUILDING CONTRACTS**

Pursuant to North Carolina General Statute 143-128 paragraph (d) which states “Single-prime contracts-All bidders in a single-prime project shall identify on their bid the contractors they have selected for the subdivisions or branches of work for:

- (1) Heating, ventilating, and air conditioning
- (2) Plumbing
- (3) Electrical; and
- (4) General.”

IDENTIFICATION OF MAJOR SUBCONTRACTORS (per G.S.143-128-d). Bidder submits below a list of Subcontractors to be used in the performance of the work. No substitute(s) for the Subcontractors listed below shall be allowed except as prescribed in N.C.G.S. 143-128-d.

If Bidder elects to self-perform any work specifically described in the list below, the Bidder shall so indicate by entering “Self-Performing” in the appropriate row(s).

**If any of the work specifically described in the list below is not applicable to the project, the Bidder shall so indicate with “N/A” in the appropriate row(s).**

Description of Work	Subcontractor	NC Contractor License No.
HVAC		
Electrical		
Plumbing		
General		

**BID PROPOSAL AUTHORIZATION AND SIGNATURE**

**BIDDERS:**

The undersigned has received and reviewed a complete set of the Contract Documents for the above referenced project by the City of Winston-Salem and/or City/County Utility Commission, and in submitting this bid agree to accomplish the work in strict accordance with said Documents.

**The signature page must be completed and submitted with the proposal: Proposals are to be signed by an officer of the company authorized to bind the submitter to its provisions. Failure to manually sign the appropriate bid proposal form will be construed as non-responsive and the bid proposal will not be considered.**

(SEAL)

\_\_\_\_\_ Date

\_\_\_\_\_ Company

\_\_\_\_\_ Authorized Signature

\_\_\_\_\_ Typed or Print Name and Title

\_\_\_\_\_ Contractor's License No.

\_\_\_\_\_ Mailing Address, (P.O. Box or Street)

\_\_\_\_\_ City, State, Zip Code

\_\_\_\_\_ Email Address

\_\_\_\_\_ Telephone Number

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me \_\_\_\_\_ (name)

to me personally known, being duly sworn, did execute the foregoing proposal, and did so state

that he/she was properly authorized by \_\_\_\_\_ (name of company)

to execute the proposal and did so on his/her free act and deed.

**SEAL**

Notary Public \_\_\_\_\_ My Commission Expires \_\_\_\_\_

**The following information is requested for statistical purposes only. Provisions or omission of this information will not affect the City's award of this contract.**

We ( ) are a Historically Underutilized Business (HUB) certified by State of North Carolina.

We ( ) are a minority business enterprise.  
( ) are not a minority business enterprise.

If yes, please identify in the appropriate box below:  
( ) Black  
( ) Hispanic  
( ) Asian American including Indian Subcontinent and Pacific Islands  
( ) Native American Indian including Eskimos and Aleuts

We ( ) are a woman-owned business concern.  
( ) are not a woman-owned business concern



November 29, 2022

Courtney Driver  
**Winston-Salem/Forsyth County Utilities**  
100 1st Street  
Winston Salem, North Carolina 27101

**RE: Proposal to remove and replace an existing underground transverse pipeline crossing consisting of one (1) existing sewer pipeline with one 30-inch DIP sewer pipe under bridge over Peters Creek**

**Blue Ridge Division, at Mile Post 1.09-LE  
Winston Salem, Forsyth County, North Carolina  
Latitude / Longitude: 36.1046 / -80.2567  
NS Activity No. 1299691**

Dear Courtney Driver:

Attached for your records is a copy of the fully executed agreement countersigned by Norfolk Southern Railway Company ("Railway").

**For Scheduling of Flagging & Construction Monitoring submit a Protection Services Coordination request online at: <https://ns.railprosp permitting.com>**

If you have questions regarding the Protection Service request process, the work plan requirements, or need assistance submitting a request, please send an email to [NS.Coordinator@RailPros.com](mailto:NS.Coordinator@RailPros.com) or call (402) 965-0539. It is recommended that the contractor or construction field manager submit the request as information on specific construction means and methods are required. Projects are scheduled only after the construction work plan has been approved. **Entry onto Railway's property without the Division Engineer or their representative's prior approval is considered trespassing.**

Sincerely,

A handwritten signature in black ink, appearing to read "Mitch Murphy".

Mitch Murphy  
Real Estate Specialist

## PIPE DATA SHEET

	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HANDLED	Wastewater	N/A
MAX. ALLOWABLE OPERATING PRESSURE	250 psi	N/A
NOMINAL SIZE OF PIPE	30 in	N/A
OUTSIDE DIAMETER	32 in	N/A
INSIDE DIAMETER	30 in	N/A
WALL THICKNESS	.42 in	N/A
WEIGHT PER FOOT	127.5 lb/ft	N/A
MATERIAL	Ductile Iron	N/A
PROCESS OF MANUFACTURE	Centrifugally Cast	N/A
SPECIFICATION	ANSI/AWWA C151/A21.51	N/A
GRADE OR CLASS (Specified Minimum Yield Strength)	CL250	N/A
TEST PRESSURE	150 psi	N/A
TYPE OF JOINT	Push-on	N/A
TYPE OF COATING	Protecto 401	N/A
DETAILS OF CATHODIC PROTECTION	N/A	N/A
DETAILS OF SEALS OR PROTECTION AT END OF CASING	N/A	N/A
CHARACTER OF SUBSURFACE MATERIAL	SM/SC/SP	N/A
APPROXIMATE GROUND WATER LEVEL	6-ft	N/A
SOURCE OF INFORMATION ON SUBSURFACE CONDITIONS	Boring	N/A

Proposed method of installation (refer to NSCE-8 Specification):

- Bore & Jack  
 Jacking  
 Tunneling (with Tunnel Liner Plate)  
 Directional Bore/Horizontal Direction Drilling – Method A  
 Directional Bore/Horizontal Direction Drilling – Method B  
 Open Cut – *All installations directly under any track must be designed as a bored installation. Open cut installations will be considered on a case-by-case basis by Norfolk Southern's Division Superintendent at the time of installation.*  
 Other – Please Specify: \_\_\_\_\_

## LICENSE AGREEMENT

**THIS LICENSE AGREEMENT** (this “Agreement”), dated as of November 29, 2022 (the “Effective Date”) is made and entered into by and between

**NORFOLK SOUTHERN RAILWAY COMPANY**, a Virginia corporation, whose mailing address is 650 West Peachtree St. Box 22, Atlanta, Georgia 30308 (hereinafter called "Railway"), and **WINSTON-SALEM/FORSYTH COUNTY UTILITIES**, a North Carolina Government Entity, whose mailing address is 100 1st St, Winston Salem, North Carolina 27101 (hereinafter called "Licensee").

### WITNESSETH

**WHEREAS**, Licensee has submitted to Railway an Application (as defined herein) related to a proposal to remove and replace an existing underground transverse pipeline crossing consisting of one (1) 20-inch sewer pipeline with one (1) 30-inch ductile iron sewer pipeline under bridge over Peters Creek (hereinafter called the "Facilities") located in, over or under, and across the right-of-way or property and any tracks of Railway at or near:

- Milepost 1.09-LE, Blue Ridge Division
- Latitude 36.1046, Longitude -80.2567
- Winston Salem, Forsyth County, North Carolina

the same to be located in accordance with and limited to the installation shown on the diagram set forth in **Exhibit A**, dated May 9, 2022, attached hereto and made a part hereof (such right-of-way or property of Railway, collectively, the “Premises”); and

**WHEREAS**, Licensee and Railway entered into an Original Agreement dated May 15, 1969, Railway Custodian Number 45689, covering the installation of two (2) 20-inch sewer pipeline crossings, and this Agreement is intended to supersede the 20-inch sewer pipeline crossing indicated on Exhibit A of the Original Agreement, with the pipeline crossing indicated in Exhibit B of the Original Agreement remaining intact and unaltered; and

**WHEREAS**, Railway has approved the Application for the initial installation and construction of the Facilities; and

**WHEREAS**, Licensee desires a license to use such right-of-way or property of Railway for the installation and construction, as well as the subsequent maintenance, operation and removal, of the Facilities.

**NOW, THEREFORE**, Railway and Licensee agree as follows:

1. Grant; Consideration; Term. Subject to Section 2(b) below, Railway hereby grants to Licensee, insofar as Railway has the right to do so, without warranty and subject to all encumbrances, covenants and easements to which the Railway’s title may be subject, the right to use and occupy so much of the Premises as may be necessary for the installation, construction,

maintenance, operation and removal of the Facilities (collectively, “Operate” or “Operations”). Upon execution of this Agreement, Licensee shall pay to Railway (i) a non-refundable, non-assignable, one-time license fee in the amount of TWENTY THOUSAND THREE HUNDRED AND 00/100 DOLLARS (\$20,3000.00), and (ii) if applicable as determined by Railway pursuant to Section 12 below, the Risk Financing Fee (as defined in Section 12). The term of this Agreement shall commence on the Effective Date and shall continue for a period of twenty (20) years, subject to prior termination as hereinafter described (the “Term”).

2. Use and Condition of the Premises.

(a) The Premises shall be used by Licensee only for Operations and for no other purpose. Licensee accepts the Premises in their current "as is" condition, as suited for Operations, and without the benefit of any improvements to be constructed by Railway.

(b) With respect to each Operations project that requires access to the Premises after the initial installation and construction of the Facilities, Licensee shall submit to Railway an application conforming to Railway’s then-current standards and procedures (an “Application”) for review and approval.

3. Installation of the Facilities; Railway Support. Licensee shall, at its expense, Operate the Facilities (i) on a lien-free basis and in such a manner as will not interfere with the operations of Railway, or endanger persons or property of Railway and (ii) in accordance with (a) the plans and specifications (if any) shown on the prints attached hereto and any other specifications prescribed by Railway, (b) applicable laws, regulations, ordinances and other requirements of federal, state and local governmental authorities, and (c) applicable specifications adopted by the American Railway Engineering and Maintenance-of-Way Association, when not in conflict with the applicable plans, specifications, laws, regulations, ordinances or requirements mentioned in clauses (a) and (b) above. All underground pipes must have secondary pipe containment if the material flowing through the pipeline poses a safety or environmental hazard. Any change to the character, capacity or use of the Facilities shall require execution of a new agreement. In the event it becomes necessary for Licensee to deviate from the approved plans and specifications, Licensee shall seek prior approval from Railway’s Division Engineer or his or her authorized representative and, when applicable, an authorized representative of the Division Engineer in the field during Construction Monitoring. Licensee shall provide Railway with complete as-built drawings of the Facilities in an electronic format within thirty (30) days of (i) completion of the initial installation and construction of the Facilities and (ii) completion of any material change to the Facilities.

4. Railway Support. With respect to each Operations project that requires access to the Premises, Railway shall, at Railway's option, furnish, at the sole expense of Licensee, Support Services. The term “Support Services” means such materials and services as necessary, in Railway's sole judgment, to support Railway’s tracks and to protect Railway’s traffic, including without limitation flagging services and Construction Monitoring during Operations that require access to the Premises. Support Services shall be provided unless Railway’s Division Engineer or his or her authorized representative provides to Licensee a written waiver of Support Services, whether in whole or in any part, in a given instance. The term “Construction Monitoring” means

services comprised of one or more Railway representatives being assigned and present to monitor construction activities of Licensee, which may include a preconstruction site assessment and a post-construction site assessment.

5. Electronic Interference. If the Facilities cause degradation of Railway's signal, communications and other electronic systems (hereinafter collectively called the "Electronic Systems") or endanger Railway's personnel or other individuals entitled to be on or about the Premises, through inductive or electrostatic interference or otherwise, Licensee, at its expense, will modify the Facilities to the satisfaction of Railway so as to eliminate such degradation or danger. Such modifications may include, without limiting the generality of the foregoing, transposing circuits or providing additional shielding, reactance or other corrective measures deemed necessary by Railway. The provisions of this Section 5 shall apply to the Electronic Systems existing as of the date of this Agreement and to any Electronic Systems that Railway may install in the future.

6. Corrective Measures. If Licensee fails to take any corrective measures requested by Railway in a timely manner, or if an emergency situation is presented which, in Railway's judgment, requires immediate repairs to the Facilities, Railway, at Licensee's expense, may undertake such corrective measures or repairs as it deems necessary or desirable.

7. Railway Changes. If Railway shall make any changes, alterations or additions to the line, grade, tracks, structures, roadbed, installations, right-of-way or works of Railway, or to the character, height or alignment of the Electronic Systems, at or near the Facilities, Licensee shall, upon not less than thirty (30) days prior written notice from Railway and at Licensee's sole expense, make such changes in the location and character of the Facilities as, in the opinion of the chief engineering officer of Railway, shall be necessary or appropriate to accommodate any construction, improvements, alterations, changes or additions of Railway.

8. Assumption of Risk. Unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway, Licensee hereby assumes all risk of damage to the Facilities and Licensee's other property relating to its use and occupation of the Premises or business carried on the Premises and any defects to the Premises; and Licensee hereby indemnifies Railway, its officers, directors, agents and employees from and against any liability for such damage.

9. Entry Upon Premises. Licensee shall enter the Premises in any given instance only pursuant to an approved Application. Prior to commencement of any work to be performed on or about the Premises, Licensee shall notify the appropriate Division Engineer or their authorized representative for the scheduling of Support Services as determined pursuant to Section 4 above. Within seventy-two (72) hours after the Division Engineer's actual receipt of such notification, the Division Engineer shall review the necessity and availability of flagmen for the proposed work and advise Licensee of such matters and the estimated cost of Support Services. No work shall be permitted on or about the Premises without the presence of Railway's flagman or the Division Engineer's waiver of the requirement for flag protection. Entry on or about the Premises or any other Railway right-of-way without the Division Engineer's prior approval shall be deemed

trespassing. Licensee agrees to pay Railway, within thirty (30) days after delivery of an invoice therefor, for the cost of Support Services provided by or on behalf of Railway.

10. Liens; Taxes. Licensee will not permit any mechanic's liens or other liens to be placed upon the Premises, and nothing in this Agreement shall be construed as constituting the consent or request of Railway, express or implied, to any person for the performance of any labor or the furnishing of any materials to the Premises, nor as giving Licensee any right, power or authority to contract for or permit the rendering of any services or the furnishing of any materials that could give rise to any mechanic's liens or other liens against the Premises. In addition, Licensee shall be liable for all taxes levied or assessed against the Facilities and any other equipment or other property placed by Licensee within the Premises. In the event that any such lien shall attach to the Premises or Licensee shall fail to pay such taxes, then, in addition to any other right or remedy available to Railway, Railway may, but shall not be obligated to, discharge the same. Any amount paid by Railway for any of the aforesaid purposes, together with related court costs, attorneys' fees, fines and penalties, shall be paid by Licensee to Railway within ten (10) days after Railway's demand therefor.

11. Indemnification. Licensee hereby agrees to indemnify and save harmless Railway, its officers, directors, agents and employees, from and against any and all liabilities, claims, losses, damages, expenses (including attorneys' fees) or costs for personal injuries (including death) and property damage to whomsoever or whatsoever occurring (hereinafter collectively, "Losses") that arise in any manner from (a) the presence of the Facilities on or about the Premises, (b) any Operations or any failure to conduct Operations properly, or (c) any act, omission or neglect of Licensee, its agents, servants, employees or contractors in connection therewith, unless caused solely by the negligence of Railway or caused solely by the willful misconduct of Railway.

12. Insurance.

(a) Insurance Requirements. Without limiting in any manner the liability and obligations assumed by Licensee under any other provision of this Agreement, and as additional protection to Railway, Licensee shall comply with the following provisions:

(i) Subject to subsection (ii) below, upon execution of this Agreement, Licensee shall pay Railway a risk financing fee of \$1,900 (the "Risk Financing Fee") to provide Railroad Protective Liability Insurance or such supplemental insurance (which may be self-insurance) as Railway, in its sole discretion, deems to be necessary or appropriate with respect to the initial construction and installation of the Facilities.

(ii) Prior to commencement of each Operations project that requires access to the Premises, unless Railway elects to make available and Licensee pays the then-current Risk Financing Fee for a given Operations project, Licensee shall furnish Railway with an original Railroad Protective Liability ("RPL") Insurance Policy naming Railway as the named insured and having a limit of (1) not less than a combined single limit of \$2,000,000 each occurrence and \$6,000,000 aggregate, or (2) if the value of a given operations project exceeds \$350,000, not less than a combined single limit of \$5,000,000 per occurrence and \$10,000,000 in the aggregate. Each RPL policy shall conform to CG



00 35 04 13 or equivalent and include coverage for Terrorism and the Physical Damage to Property Endorsement and shall name Norfolk Southern Corporation and its affiliates and subsidiaries as the insured. Licensee shall ensure that the project location, Licensee identification and work description appear on the declaration pages of a given RPL policy. Licensee shall provide an electronic copy of each RPL policy (and not merely the binder) to Railway at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com) for review and approval prior to commencing any work on the associated Operations project. Licensee may submit inquiries about RPL issues at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com).

(iii) Licensee shall maintain a Commercial General Liability (“CGL”) policy containing products and completed operations and contractual liability coverage, with a combined single limit of not less than \$2,000,000 for each occurrence. Any portion of this requirement may be satisfied by a combination of General Liability and/or Excess/Umbrella Liability Coverage. The policy shall not deny any obligation of any insured under the Federal Employer’s Liability Act, as amended. The CGL policy shall provide additional insured coverage equivalent to ISO CG 20 10 11/85.

(iv) Licensee shall maintain Automobile Liability Insurance with a current ISO occurrence form policy (or equivalent) and apply on an “any auto” (Symbol 1) basis, including coverage for all vehicles used in connection with the Work or Services on the leased property, providing annual limits of at least \$1,000,000 per occurrence for bodily injury and property damage combined including uninsured and underinsured motorist coverage, medical payment protection, and loading and unloading.

(v) Licensee shall maintain Workers’ Compensation Insurance to meet fully the requirement of any compensation act, plan or legislative enactment applicable in connection with the death, disability or injury of Licensee’s officers, agents, servants or employees arising directly or indirectly out of the performance of this Agreement;

(vi) Licensee shall maintain Employers’ Liability Insurance with limits of not less than \$1,000,000 each accident \$1,000,000 policy limit for disease, and \$1,000,000 each employee for disease;

(b) General Insurance Requirements. Each insurance policy referred to in subsection (a) above shall also comply with the following requirements:

(i) Additional Insureds. Each insurance policy (excluding any RPL policy and Workers’ Compensation policy) shall name Railway and its parent, subsidiary and affiliated companies as additional insureds with an appropriate endorsement to each policy.

(ii) Licensee’s Coverage Primary and Without Right to Contribution. All policies secured by Licensee, whether primary, excess, umbrella or otherwise, and providing coverage to the Railway as an additional insured (1) are intended to take priority in responding and to pay before any insurance policies Railway may have secured for itself must respond or pay and (2) may not seek contribution from any policies the Railway may

have secured for itself.

(iii) Severability of Interests (Cross Liability). No cross-liability exclusions are permitted that would apply to the additional insureds, and there may not be any restrictions in any policy that limits coverage for a claim brought by an additional insured against a named insured.

(iv) Waiver of Subrogation. To the fullest extent permitted by law, all insurance furnished by Licensee pursuant to this Agreement shall include a waiver of subrogation in favor of Railway with an appropriate endorsement to each policy.

(v) Notice of Cancellation, Modification or Termination. Each insurance policy shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days' prior written notice to the additional insureds.

(vi) No Limitation. Each insurance policy shall not limit any of Licensee's indemnity obligations or other liabilities under this Agreement. The insurance available to Railway and its parent, subsidiary and affiliated companies as additional insureds shall not be limited by these requirements should Licensee maintain higher coverage limits.

(vii) Any deductibles or self-insured retentions of Licensee over \$50,000 must be declared and approved by Railway. Approval of such requests shall not be unreasonably withheld.

(viii) Licensee shall require all subcontractors who are not covered by the insurance carried by Licensee to maintain the insurance coverages set forth in subsection (a) above, except for the RPL insurance, including but not limited to additional insured status for Railway and its parent, subsidiary and affiliated companies.

(ix) Licensee shall furnish their memorandum of insurance and the RPL Insurance Policy to Railway's Managing Agent prior to execution of this Agreement at [ns.permitting@railpros.com](mailto:ns.permitting@railpros.com). The insurance coverage required herein shall in no way limit Licensee's liability under this Agreement.

13. Environmental Matters. Licensee assumes all responsibility for any environmental obligations imposed under applicable laws, regulations, ordinances or other requirements of federal, state and local governmental authorities relating to (a) any Operations, including notification and reporting of any releases, and (b) any contamination of any property, water, air or groundwater arising or resulting, in whole or in part, from Licensee's operation or use of the Premises pursuant to this Agreement. In addition, Licensee shall obtain any necessary permits to conduct Operations. Licensee agrees to indemnify and hold harmless Railway from and against any and all fines, penalties, demands or other Losses (including attorneys' fees) incurred by Railway or claimed by any person, company or governmental entity relating to (a) any contamination of any property, water, air or groundwater due to the use or presence of the Facilities on the Premises, (b) Licensee's violation of any laws, regulations or other requirements of federal, state or local governmental authorities in connection with the use or presence of the Facilities on the Premises or (c) any violation of Licensee's obligations imposed under this Section. Without

limitation, this indemnity provision shall extend to any cleanup and investigative costs relating to any contamination of the Premises arising or resulting from, in whole or in part, Licensee's use of the Facilities or any other activities by or on behalf of Licensee occurring on or about the Premises. Licensee further agrees not to dispose of any trash, debris or wastes, including hazardous waste, on the Premises and will not conduct any activities on the Premises which would require a hazardous waste treatment, storage or disposal permit.

14. Assignments and Other Transfers.

(a) Licensee shall not assign, transfer, sell, mortgage, encumber, sublease or otherwise convey (whether voluntarily, involuntarily or by operation of law) this Agreement or any interest therein, nor license, mortgage, encumber or otherwise grant to any other person or entity (whether voluntarily, involuntarily or by operation of law) any right or privilege in or to the Premises (or any interest therein), in whole or in part, without the prior written consent of Railway, which consent may be withheld by Railway in its sole discretion. Any such assignment or other transfer made without Railway's prior written consent shall be null and void and, at Railway's option, shall constitute an immediate default of this Agreement. Notwithstanding the foregoing, upon prior written notice to Railway, Licensee may assign this Agreement to a parent, a wholly-owned subsidiary of Licensee or a wholly-owned subsidiary of Licensee's parent without Railway's consent; provided, however, that no such assignment shall relieve Licensee of its obligations under this Agreement.

(b) Railway shall have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder and in or to the Premises. From and after the effective date of any such assignment or transfer, Railway shall be released from any further obligations hereunder; and Licensee shall look solely to such successor-in-interest of Railway for the performance of the obligations of "Railway" hereunder.

15. Meaning of "Railway". The word "Railway" as used herein shall include any other company whose property at the aforesaid location may be leased or operated by Railway. Said term also shall include Railway's officers, directors, agents and employees, and any parent company, subsidiary or affiliate of Railway and their respective officers, directors, agents and employees.

16. Default; Remedies.

(a) The following events shall be deemed to be events of default by Licensee under this Agreement:

(i) Licensee shall fail to pay the Fee or any other sum of money due hereunder and such failure shall continue for a period of ten (10) days after the due date thereof;

(ii) Licensee shall fail to comply with any provision of this Agreement not requiring the payment of money, all of which terms, provisions and covenants shall be deemed material, and such failure shall continue for a period of thirty (30) days after written notice of such default is delivered to Licensee;

(iii) Licensee shall become insolvent or unable to pay its debts as they become due, or Licensee notifies Railway that it anticipates either condition;

(iv) Licensee takes any action to, or notifies Railway that Licensee intends to file a petition under any section or chapter of the United States Bankruptcy Code, as amended from time to time, or under any similar law or statute of the United States or any State thereof; or a petition shall be filed against Licensee under any such statute; or

(v) A receiver or trustee shall be appointed for Licensee's license interest hereunder or for all or a substantial part of the assets of Licensee, and such receiver or trustee is not dismissed within sixty (60) days of the appointment.

(b) Upon the occurrence of any event or events of default by Licensee, whether enumerated in this Section or not, Railway shall have the option to pursue any remedies available to it at law or in equity without any additional notices to Licensee. Railway's remedies shall include, but not be limited to, the following: (i) termination of this Agreement, in which event Licensee shall immediately surrender the Premises to Railway; (ii) entry into or upon the Premises to do whatever Licensee is obligated to do under the terms of this License, in which event Licensee shall reimburse Railway on demand for any expenses which Railway may incur in effecting compliance with Licensee's obligations under this License, but without rendering Railway liable for any damages resulting to Licensee or the Facilities from such action; and (iii) pursuit of all other remedies available to Railway at law or in equity, including, without limitation, injunctive relief of all varieties.

17. Railway Termination Right. Notwithstanding anything to the contrary in this Agreement, Railway shall have the right to terminate this Agreement and the rights granted hereunder, after delivering to Licensee written notice of such termination no less than sixty (60) days prior to the effective date thereof, upon the occurrence of any one or more of the following events:

(a) If Licensee shall fail to install the Facilities within one (1) year from the date of the Agreement, or if Licensee shall discontinue the use or operations of the Facilities for one (1) year; or

(b) If Railway shall be required by any governmental authority having jurisdiction over the Premises to remove, relocate, reconstruct or discontinue operation of its railroad on or about the Premises; or

(c) If Railway, in the good faith judgment of its Superintendent, shall require a change in the location or elevation of its railroad on or about the location of the Facilities or the Premises that might effectively prohibit the use or operation of the Facilities; or

(d) If Railway, in the good faith judgment of its Superintendent, determines that one or more aspects of Operations unduly interfere with the operation and maintenance of the facilities

of Railway, or with the present or future use of such property by Railway, its lessees, affiliates, successors or assigns, for their respective purposes.

18. Condemnation. If the Premises or any portion thereof shall be taken or condemned in whole or in part for public purposes, or sold in lieu of condemnation, then this Agreement and the rights granted to Licensee hereunder shall, at the sole option of Railway, forthwith cease and terminate. All compensation awarded for any taking (or sale proceeds in lieu thereof) shall be the property of Railway, and Licensee shall have no claim thereto, the same being hereby expressly waived by Licensee.

19. Removal of Facilities; Survival. The Facilities are and shall remain the personal property of Licensee. Upon the expiration or termination of this Agreement, Licensee shall remove the Facilities from the Premises within thirty (30) days after the effective date thereof. In performing such removal, unless otherwise directed by Railway, Licensee shall restore the Premises to the same condition as existed prior to the installation or placement of Facilities, reasonable wear and tear excepted. In the event Licensee shall fail to so remove the Facilities or restore the Premises, the Facilities shall be deemed to have been abandoned by Licensee, and the same shall become the property of Railway for Railway to use, remove, destroy or otherwise dispose of at its discretion and without responsibility for accounting to Licensee therefor; provided, however, in the event Railway elects to remove the Facilities, Railway, in addition to any other legal remedy it may have, shall have the right to recover from Licensee all costs incurred in connection with such removal and the restoration of the Premises. Notwithstanding anything to the contrary contained in this Agreement, the expiration or termination of this Agreement, whether by lapse of time or otherwise, shall not relieve Licensee from Licensee's obligations accruing prior to the expiration or termination date, and such obligations shall survive any such expiration or other termination of this Agreement.

20. Entire Agreement. This Agreement contains the entire agreement of Railway and Licensee and supersedes any prior understanding or agreement between Railway and Licensee respecting the subject matter hereof, and no representations, warranties, inducements, promises or agreements, oral or otherwise, between the parties not embodied in this Agreement shall be of any force or effect. In case of the Facilities previously described under Exhibit A of the Original Agreement dated May 15, 1969, Custodian Number 45689, those Facilities are hereby cancelled and superseded by the Facilities installed by this Agreement.

21. Attorneys' Fees. If Railway should bring any action under this Agreement or consult or place the Agreement or any amount payable by Licensee hereunder, with an attorney concerning or for the enforcement of any of Railway's rights hereunder, then Licensee agrees in each and any such case to pay to Railway all costs, including but not limited to court costs and attorneys' fees, incurred in connection therewith.

22. Severability. If any clause or provision of this Agreement is illegal, invalid or unenforceable under present or future laws effective during the Term, then and in that event, it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby; and it is also the intention of the parties to this Agreement that in lieu of each clause or provision of this Agreement that is illegal, invalid or unenforceable, there be added as a part of

this Agreement a clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible and be legal, valid and enforceable.

23. Modifications; Waiver; Successors and Assigns. This Agreement may not be altered, changed or amended, except by instrument in writing signed by both parties hereto. No provision of this Agreement shall be deemed to have been waived by Railway unless such waiver shall be in a writing signed by Railway and addressed to Licensee, nor shall any custom or practice that may evolve between the parties in the administration of the terms hereof be construed to waive or lessen the right of Railway to insist upon the performance by Licensee in strict accordance with the terms hereof. The terms and conditions contained in this Agreement shall apply to, inure to the benefit of, and be binding upon the parties hereto, and upon their respective successors in interest and legal representatives, except as otherwise herein expressly provided. If there shall be more than one Licensee, the obligations hereunder imposed upon Licensee shall be joint and several.

24. Notice. Any and all other notices, demands or requests by or from Railway to Licensee, or Licensee to Railway, shall be in writing and shall be sent by (a) postage paid, certified mail, return receipt requested, or (b) a reputable national overnight courier service with receipt therefor, or (c) personal delivery, and addressed in each case as follows:

If to Railway:  
c/o Norfolk Southern Corporation  
650 West Peachtree Street, Box 22  
Atlanta, Georgia 30308  
Attention: Director Real Estate

If to Licensee:  
Winston-Salem/Forsyth County Utilities  
100 1st St  
Winston Salem, North Carolina 27101  
Attention: Courtney Driver

Either party may, by notice in writing, direct that future notices or demands be sent to a different address. All notices hereunder shall be deemed given upon receipt (or, if rejected, upon rejection).

25. Miscellaneous. Time is of the essence with regard to each provision of this Agreement. This Agreement shall be construed and interpreted in accordance with and governed by the laws of the State in which the Premises are located. Each covenant of Railway and Licensee under this Agreement is independent of each other covenant under this Agreement. No default in performance of any covenant by a party shall excuse the other party from the performance of any other covenant. The provisions of this Agreement that, by their nature, are intended to survive the expiration or earlier termination of this Agreement, including Sections 8, 10, 11, 13 and 19, shall so survive.

26. Limitations of Grant. Licensee acknowledges that the license granted hereunder is a quitclaim grant, made without covenants, representations or warranties with respect to Railway's (a) right to make the grant, (b) title in the Premises, or (c) right to use or make available to others the Premises for the purposes contemplated herein. Railway is the owner and/or holder of the Premises subject to the terms and limitations under which it is owned or held, including without limitation conditions, covenants, restrictions, easements (including any pre-existing fiber optic easements or licenses), encroachments, leases, licenses, permits, mortgages, indentures, reversionary interests, fee interests, zoning restrictions and other burdens and limitations, of record and not of record, and to rights of tenants and licensees in possession, and Licensee agrees that the rights licensed hereunder are subject and subordinate to each and all of the foregoing. Licensee accepts this grant knowing that others may claim that Railway has no right to make it, and Licensee agrees to release, hold harmless and indemnify (and, at Railway's election, defend, at Licensee's sole expense, with counsel approved by Railway) Railway, its affiliated companies, and its and their respective officers, directors, agents and employees, from and against any detriments to, or liabilities of, any type or nature arising from such claims, including punitive damages and any forfeitures declared or occurring as a result of this grant.

27. Limitations Upon Damages. Notwithstanding any other provision of this Agreement, Railway shall not be liable for breach of this Agreement or under this Agreement for any consequential, incidental, exemplary, punitive, special, business damages or lost profits, as well as any claims for death, personal injury, and property loss and damage which occurs by reason of, or arises out of, or is incidental to the interruption in or usage of the Facilities placed upon or about the Premises by Licensee, including without limitation any damages under such claims that might be considered consequential, incidental, exemplary, punitive, special, business damages or loss profits. It is understood and agreed by Licensee that Railway cannot and will not make any warranties, representations or guarantees that Licensee's communication system (if any), as located on Railway's property, will not be interrupted.

[Remainder of page intentionally left blank]

**IN WITNESS WHEREOF**, the parties hereto have executed this Agreement in duplicate, each part being an original, as of the date first above written.

Witness:

DocuSigned by:  
*Kayna Holloway*  
953F9C948034405...  
As to Railway

**NORFOLK SOUTHERN RAILWAY  
COMPANY**

DocuSigned by:  
*Adam Johnson*  
ECFF11FBD73C464...  
By: \_\_\_\_\_  
Real Estate Manager

Witness:

\_\_\_\_\_  
As to Licensee

**WINSTON-SALEM/FORSYTH  
COUNTY UTILITIES**

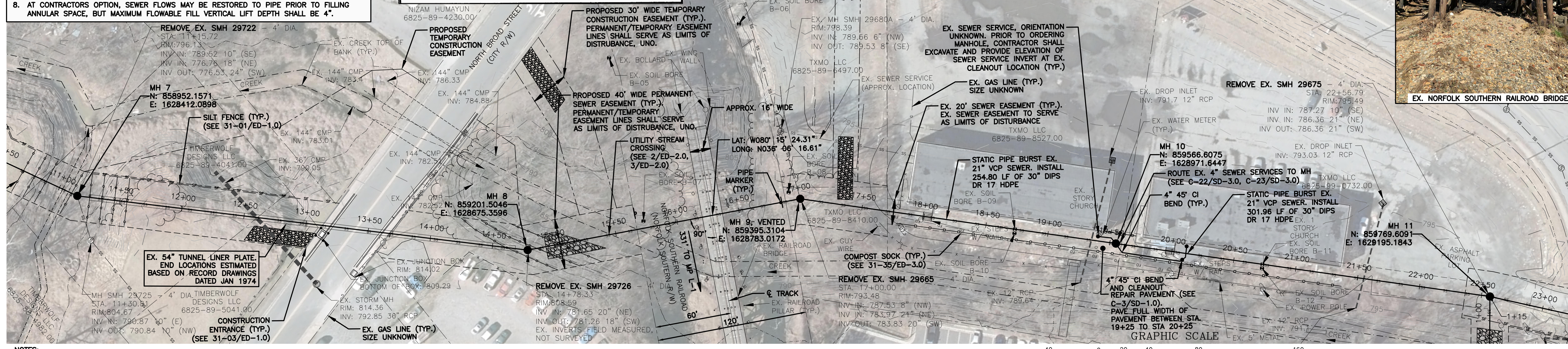
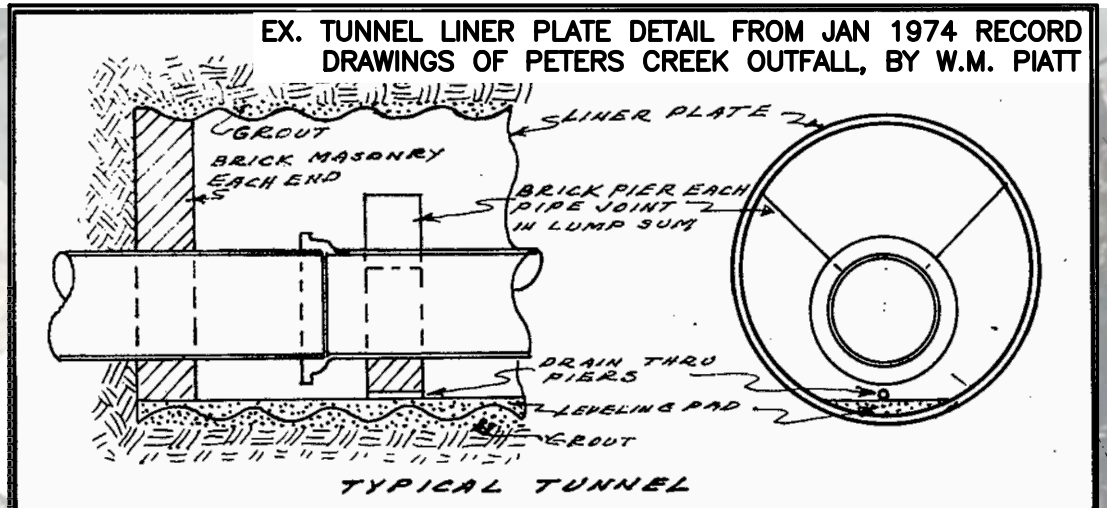
DocuSigned by:  
*Courtney Driver*  
4B3079DBF51A410...  
By: \_\_\_\_\_  
Title: winston-salem/Forsyth County Utilities Director

Activity Number: 1299691  
MPM: 08/05/2022



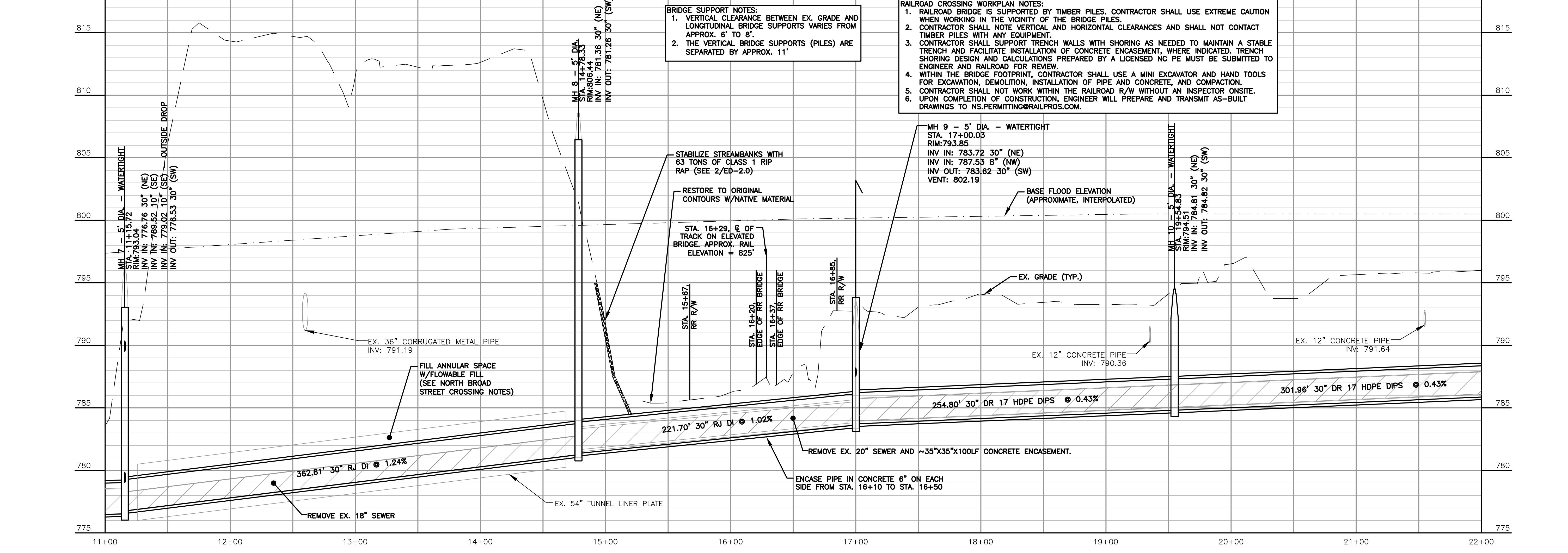
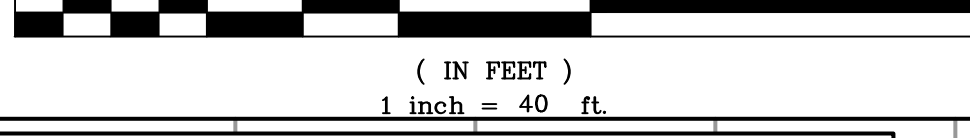
**NORTH BROAD STREET CROSSING NOTES (MH7 TO MH8):**

- CONTRACTOR SHALL EXCAVATE AND INVESTIGATE THE EX. TUNNEL LINER PLATE CROSSING. REMOVE EXISTING MASONRY END CAPS (BOTH ENDS) AND INSPECT INTERIOR OF LINER PLATE. USE POLE CAMERA OR OTHER AVAILABLE MEANS TO INSPECT LINER PLATE AND PROVIDE PHOTOGRAPHS, VIDEO, INVERTS AND INTERNAL MEASUREMENTS, AND CONTRACTOR'S WRITTEN EVALUATION OF REUSE OF EXISTING TUNNEL LINER FOR INSTALLATION OF NEW 30" CARRIER PIPE AT GRADE SHOWN. SUBMIT TO ENGINEER AND OWNER FOR REVIEW.
- CONTRACTOR SHALL SCHEDULE INSPECTION WORK AND SUBMIT RESULTS TO ALLOW ENGINEER AND OWNER 4 WEEKS TO REVIEW.
- AFTER BYPASS SETUP, REMOVE EX. PIPE AND PIPE SUPPORTS FROM TUNNEL.
- VERIFY EX. TUNNEL LINER PLATE IS ABLE TO ACCEPT NEW SEWER. PROVIDE VIDEO OF FULL LENGTH OF TUNNEL TO ENGINEER AND OWNER.
- AFTER NEW PIPE IS INSTALLED, AT THE DIRECTION OF THE ENGINEER, FILL ANNULAR SPACE W/EXCAVATABLE FLOWABLE FILL. PRIOR TO INSTALLATION OF FLOWABLE FILL, FILL PIPE WITH WATER TO DETER PIPE FLOTATION.
- INSTALL FLOWABLE FILL IN MAXIMUM VERTICAL LIFTS OF 12".
- AT CONTRACTOR'S OPTION, SEWER FLOWS MAY BE RESTORED TO PIPE PRIOR TO FILLING ANNULAR SPACE, BUT MAXIMUM FLOWABLE FILL VERTICAL LIFT SHALL BE 4".



- NOTES:**
- TO ABANDON EX. SEWERS, PLUG ENDS WITH 2' OF CONCRETE.
  - CONTRACTOR SHALL VERIFY ALL EX. CONNECTING PIPE DIAMETERS PRIOR TO ORDERING MANHOLES.

**1 PLAN - STA. 11+00 TO 22+00**  
SCALE: 1" = 40'

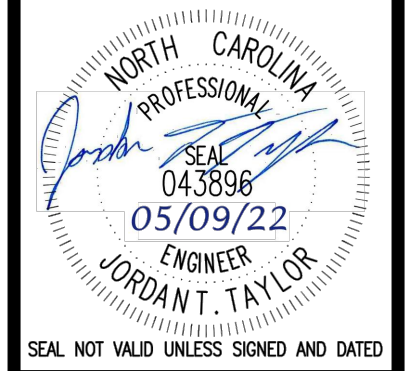


**2 PROFILE - STA. 11+00 TO 22+00**  
SCALE: 1" = 40'  
VERTICAL SCALE: 1" = 4'



REVISED FOR PERMITTING	DATE	BY
REVISED FOR PERMITTING	5/9/22	
REVISED FOR PERMITTING	4/25/22	
ISSUED FOR BID	3/29/22	
REVISED FOR PERMITTING	3/18/22	
REVISED FOR PERMITTING	3/7/22	
REVISION	DATE	

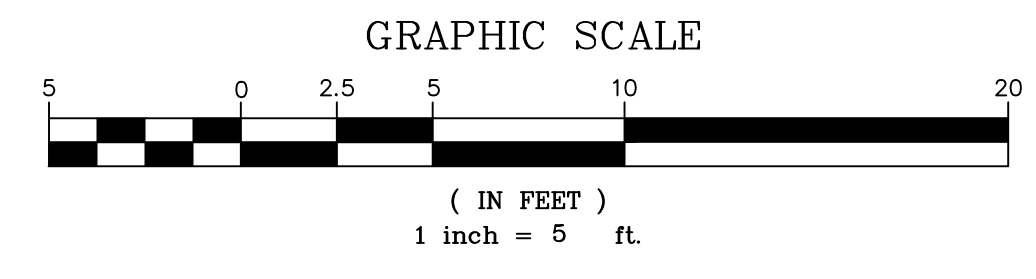
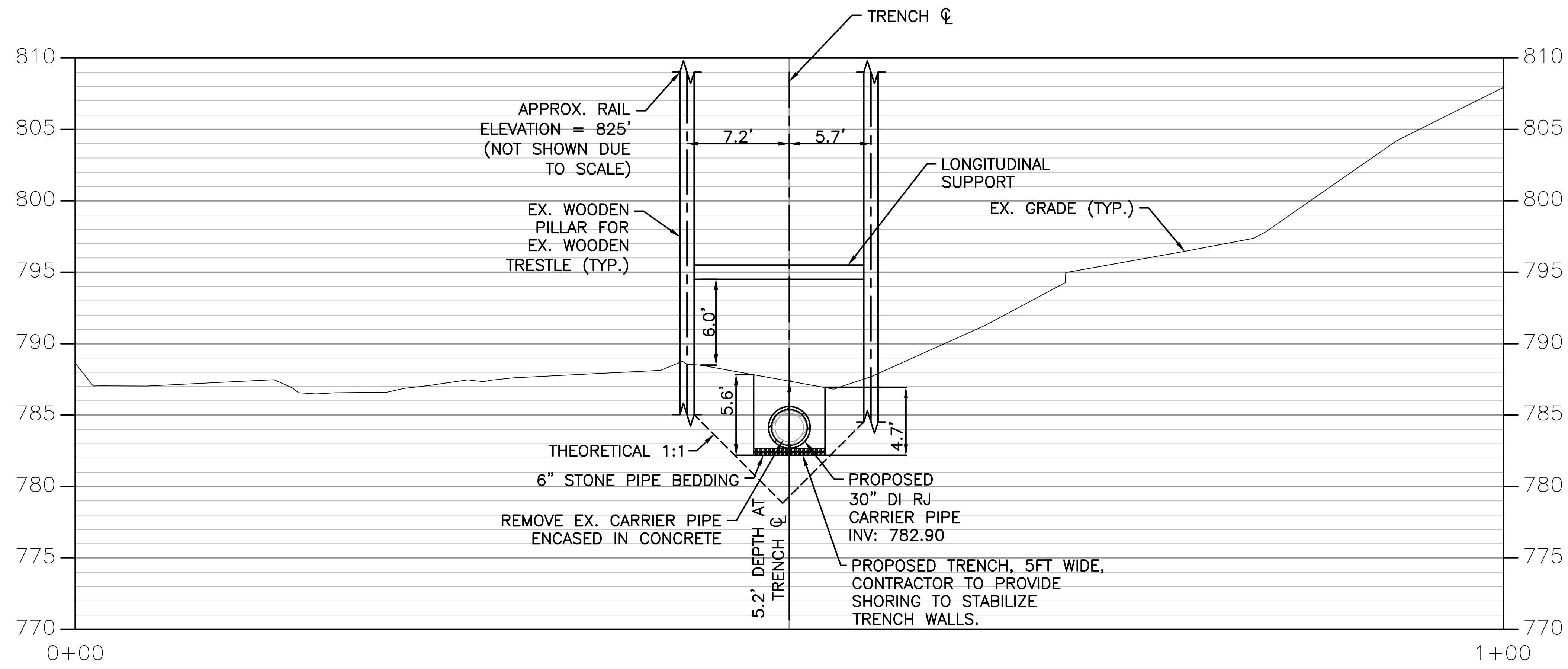
**EXHIBIT A**  
North Carolina Professional Engineer  
Accompanying Agreement File  
Winston-Salem/Forsyth County Utilities  
Sanitary Sewer Replacement  
Project No. 129901  
Date: 05/09/22  
Scale: As Shown  
North Carolina  
Professional Engineer  
Jordan Taylor  
043898  
SEAL  
05/09/22  
ENGINEER  
JORDAN TAYLOR



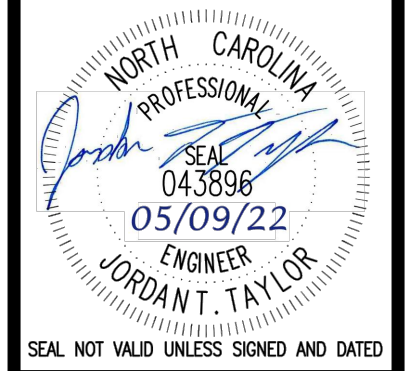
**HIGHFILL**  
INFRASTRUCTURE  
ENGINEERING, P.C.  
380 Knollwood St., Ste 734  
Winston-Salem, NC 27103  
Tel: 336-701-2910  
www.hiepc.com  
Firm License No. C-2586  
Engineering is our profession.  
Service is our passion.

PETERS CREEK OUTFALL REPLACEMENT  
WINSTON SALEM/FORSYTH COUNTY UTILITIES  
WINSTON-SALEM  
SANITARY SEWER PLAN AND PROFILE  
STA. 11+00 TO 22+00





DATE	REVISION	BY
5/9/22	REVISED FOR PERMITTING	DRM
4/25/22	REVISED FOR PERMITTING	DRM
3/29/22	ISSUED FOR BID	DRM
3/18/22	REVISED FOR PERMITTING	DRM
3/7/22	REVISED FOR PERMITTING	DRM



380 Knollwood St., Ste 734  
Winston-Salem, NC 27103  
Tel: 336-701-2910  
www.hiepc.com  
Firm License No. C-2586

Engineering is our profession.  
Service is our passion.

PETERS CREEK OUTFALL REPLACEMENT  
WINSTON SALEM/FORSYTH COUNTY UTILITIES  
WINSTON-SALEM

RAILROAD CROSSING SECTION VIEW

PROJECT NO.  
WIN2001

RR-1.0