ADDENDUM NO. 1
TO THE
BIDDING REQUIREMENTS AND CONTRACT DOCUMENTS
FOR THE
8th and WOLFLIN STREETS WATER MAIN REPLACEMENT PROJECT

OWNER: **City of Mt. Vernon**
520 Main Street
Mt. Vernon, Indiana 47620

ISSUED BY/ENGINEER: Beam, Longest and Neff, L.L.C.
8320 Craig Street
Indianapolis, Indiana 46250

ISSUED TO: All Plan and Specifications Holders of Record

ISSUE DATE: February 14, 2020

BID DATE: February 27, 2020

This Addendum No. 1, consisting of 2 pages, shall clarify, correct, or change the Bidding Requirements or the proposed Contract Documents. This Addendum is a part of the Bidding Requirements and the proposed Contract Documents and shall govern in the performance of the Work.

PART 1 - PROJECT MANUAL

1.1 ITEM NO. 1 – SECTION 00310 – GEOTECHNICAL DATA

A. The attached geotechnical investigation prepared by CTL Engineering, Inc. dated February 6, 2020 is provided for the bidder's use.

1.2 ITEM N0. 2 – SECTION 00311 – PERMITS

A. The following permits are attached for the bidder's use. It will be the contractor's responsibility to follow all provisions provided in the permits unless otherwise noted.

1. Executed INDOT Right-of-Way Permit for the 4th Street Crossing

2. Draft CSX Facility Encroachment Agreement

   This agreement will be finalized when the contractor has been selected. The City will provide the Railroad Protection Liability Insurance. However, the contractor awarded the job must delete the exclusion on their General Liability policy for work on or near a railroad within 50 feet.

1.3 ITEM NO. 3 – SECTION 00800 – SUPPLEMENTARY CONDITIONS

A. Replace this section with the attached Supplementary Conditions.

1.4 ITEM NO. 4 – SECTION 02510 – WATER DISTRIBUTION

A. Mueller is an acceptable fire hydrant manufacturer.

B. All fire hydrants supplied and installed shall have the Storz connection.

PART 2 - DRAWINGS (NOT USED)

PART 3 - ADDITIONAL TECHNICAL INFORMATION (NOT USED)

Except as modified by this Addendum and other Addenda, the Bidding Requirements and the proposed Contract Documents shall remain unchanged. You will receive no other notification of this Addendum. **RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED IN SECTION 00410 - BID FORM, PAGE 00410-1.**

CERTIFIED BY:

Brian A. Bullock, P.E.
Registered P.E. No. 10302366
State of Indiana

Encls.: Geotechnical Investigation
Executed INDOT Right-of-Way Permit
Draft CSX Facility Encroachment Agreement
Revised Supplementary Conditions

00310

Geotechnical Data

CTL Engineering, Inc.
1310 S. Franklin Road
Indianapolis, Indiana 46239
Phone: (317) 295-8650 • Fax: (317) 295-8395
www.ctleng.com

Consulting Engineers – Testing – Inspection Services – Analytical Laboratories

February 6, 2020

Beam, Longest and Neff, LLC
8320 Craig Street
Indianapolis, Indiana 46250

Attention: Mr. Brian A. Bullock, PE
Senior Project Manager

Reference: Geotechnical Investigation
Water Main Replacement
8th and Wolflin Streets
Mount Vernon, Posey County, Indiana
CTL Project No.: 2050001IND

Dear Mr. Bullock:

CTL Engineering, Inc. has completed the geotechnical investigation on the above referenced site. Enclosed is an electronic copy of the report.

Thank you for the opportunity to be of service to you on this project. If you have any questions or need further information, please contact us at (317) 295-8650.

Sincerely,

CTL ENGINEERING, INC.

Ali Karaki

Ali Karaki, PE
Principal Engineer

GEOTECHNICAL INVESTIGATION

WATER MAIN REPLACEMENT
8TH AND WOLFLIN STREETS
MOUNT VERNON, POSEY COUNTY, INDIANA
CTL PROJECT NO.: 20050001IND

PREPARED FOR:

BEAM, LONGEST AND NEFF, LLC
8320 CRAIG STREET
INDIANAPOLIS, INDIANA 46250

PREPARED BY:

CTL ENGINEERING, INC.
1310 S. FRANKLIN ROAD
INDIANAPOLIS, INDIANA 46239

FEBRUARY 6, 2020

CTL Engineering, Inc.
1310 S. Franklin Road
Indianapolis, Indiana 46239
Phone: (317) 295-8650 • Fax: (317) 295-8395
www.ctleng.com

Consulting Engineers – Testing – Inspection Services – Analytical Laboratories

February 6, 2020

Beam, Longest and Neff, LLC
8320 Craig Street
Indianapolis, Indiana 46250

Attention: Mr. Brian A. Bullock, PE
Senior Project Manager

Reference: Geotechnical Investigation
Water Main Replacement
8th and Wolflin Streets
Mount Vernon, Posey County, Indiana
CTL Project No.: 2050001IND

Dear Mr. Bullock:

In accordance with your authorization to proceed, CTL Engineering, Inc. has completed the geotechnical investigation on the above referenced site. The report includes the results of the field and laboratory testing, and geotechnical recommendations for the proposed water main replacement and earth related phases of the project.

Thank you for the opportunity to be of service to you on this project. If you have any questions or need further information, please contact us at (317) 295-8650.

Sincerely,

CTL ENGINEERING, INC.

Ali Karaki

Ali Karaki, PE
Principal Engineer

EXECUTIVE SUMMARY

Water Main Replacement
8th Street and Wolflin Street
Mount Vernon, Posey County, Indiana

Project Description: The project involves replacement of approximately of a water main starting at Station 10+00 at 4th Street and ending at Station 53+90± Line "A" for approximately 4,390 feet in length. The water main is anticipated to be constructed at depths ranging from 4 to 8 below the existing grade, corresponding to Elevations ranging from 377.5± to 390.5±. The proposed water main is expected to be constructed using open cut methods except at SR 62, Railroad and Storm Sewer crossings where trenchless methods of construction may be used.

Subsurface Conditions: Four (4) test borings, RB-1 through RB-4, drilled on the existing roadway indicate that the existing pavement consists of Hot Mix Asphalt (HMA) pavement approximately 6 to 10 inches in thickness. Sand and gravel base of approximately 6 inches to 15 inches were encountered in borings RB-1, RB-3 and RB-4. Below the pavement section, the test borings encountered soft to medium stiff lean clay, silty clay and/or silt of CL and ML soil categories.

Water Main: Excavation into the underlying soils to the proposed invert elevations for the water main may be accomplished using high powered excavation equipment. Groundwater is expected during excavation and placement of water main at or near the depths shown on the attached Test Boring Records in Appendix B. Dewatering system shall be determined by the contractor based on his/her means and methods to install the water main. Design of the dewatering system is beyond our scope of work.

The temporary dewatering should be performed continuously and should begin prior to general excavation, so that the water level is lowered and the subgrade materials do not become disturbed during excavation. In addition, dewatering should be continued until the excavations are backfilled to a minimum of 3 feet above the groundwater levels that are encountered during construction, so that hydrostatic forces do not lift the structures and also to permit proper placement of backfill material.

Open-Cut Method: The subgrade of pipe support may vary along the water main alignment. The soils at this site, in their native conditions, are considered marginally suitable to support the proposed water main. However, cohesive soils exposed to standing water can often swell and soften and silty soils can be easily disturbed by construction activities, particularly in the presence of water. Therefore, it is recommended a minimum of 6 inches be placed below the invert elevation of the proposed water main pipe to provide a stable working base. Pipe installation, trench width, bedding and backfill compaction should be performed in accordance with applicable project codes.

Local experience indicates that excavation in similar soils encountered at this site may not allow for vertical side walls to remain stable during for placement of the pipes and backfill materials for excavations less than 5 feet in depth. Vertical side walls in such soils have the tendency to cave or bulge when left open without support.

Backfill material should be selected and compacted in accordance with applicable project codes inclusive of local codes and/or specifications. Backfill material in trenches within the influence zone of roadways, sidewalks, houses or any structures may consist of No. 11 and/or granular backfill such as No. 53 or as otherwise directed by the owner.

Trenchless Installation Method: Placement of the proposed pipes and/or casings may require horizontal directional drilling machines capable of extending the casings into the soft to medium stiff lean clay, clay and/or silt. Please refer to the attached test borings in Appendix B for soil description. Trenchless installation should have minimal effect on surface settlements of the existing roadways and surface features provided that all boreholes are continuously cased during installation. Soil swelling, collapse and/or subsidence could occur if boreholes are left uncased due to the soft nature of the underlying soils within and above the proposed casings.

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LIST OF APPENDICES

I. PROJECT LOCATION AND DESCRIPTION

The project is located along West 8th Street and Wolflin Street in the City of Mount Vernon, Posey County, Indiana. Based on the plans prepared by Beam, Longest and Neff, LLC dated 12/31/2019, the project involves replacement of approximately of the water main starting at Station 10+00 at 4th Street and ending at Station 53+90± Line "A" for approximately 4,390 feet in length. The water main is anticipated to be constructed at depths ranging from 4 to 8 below the existing grade, corresponding to Elevations ranging from 377.5± to 390.5±.

The proposed water main is expected to be constructed using open cut methods except at SR 62, Railroad and Storm Sewer crossings where trenchless methods of construction may be used.

II. SUBSURFACE INVESTIGATION

Four (4) roadway test borings, designated as RB-1 through RB-4, were drilled along the vicinity of the proposed water main to a depth of 15.0 feet each below the existing grade at the approximate locations shown on the attached Boring Location Plans in Appendix A and Test Boring Records in Appendix B.

The test borings were advanced with an ATV mounted drilling rig utilizing hollow stem augers (HSA) on January 21st and January 22nd, 2020. Standard Penetration tests were conducted using a 140-pound automatic hammer falling 30 inches to drive a 2-inch O.D. split barrel sampler for 18 inches.

Soil samples obtained from the drilling operation were preserved in glass jars, visually classified in the field by the drilling crew and in the laboratory by a geotechnical engineer. The recovered soil samples were tested for Natural Moisture Content. Representative soil samples were tested for Grain Size Distribution, Atterberg Limits, Loss on Ignition and pH.

Drilling, soil sampling and laboratory testing were performed following standard geotechnical engineering practices and current ASTM procedures. Results from field tests are shown on the enclosed Test Boring Records in Appendix B and laboratory test sheets in Appendix C.

Stations, offsets and surface elevations of the test borings were interpolated from the plans provided by Beam, Longest and Neff, LLC dated 12/31/2019. The boring locations and surface elevations shown on the Boring Location Plans in Appendix A and Test Boring Records in Appendix B should be considered approximate.

III. FINDINGS

A. Subsurface Conditions

Test borings RB-1 through RB-4, drilled on the existing roadway indicate that the existing pavement consists of Hot Mix Asphalt (HMA) pavement ranging from 6 to 10 inches in thickness. Sand and gravel base of approximately 15 inches, 7.5 inches and 6 inches were encountered in borings RB-1, RB-3 and RB-4, respectively. The pavement and base thickness encountered at the boring locations are summarized below in Table 1. Please note that the pavement thickness obtained from the drilling operation is an estimate; no actual pavement cores were obtained to determine definite pavement thickness.

Table 1 – Existing Pavement Thickness

Core Location	Pavement Type	Pavement Thickness (inch)	Sand & Gravel Base Thickness (inch)
RB-1	Asphalt	9.0	15.0
RB-2	Asphalt	10.0	---
RB-3	Asphalt	6.5	7.5
RB-4	Asphalt	6.0	6.0

Below the pavement section, the test borings typically encountered soft to medium stiff lean clay (CL) over very loose to loose silt (ML). Standard penetration blowcounts (N-values) of these soils ranged from 2 to 7 blows per foot (bpf) with moisture content values ranging from 22 to 30 percent. Liquid Limit values ranged from 49 to 26 percent and Plastic Limit values from 23 to 24. Loss on Ignition testing performed on the soils obtained from RB-2 from depth 8.5 to 10 feet indicated that the recovered soils contain 2.6 percent of organic matter and 6.2 percent of calcium carbonate. Detailed information of soil type, moisture content and standard penetration values are presented in the Test Boring Records in Appendix B.

B. Groundwater

Groundwater levels and soil cave-in depths were recorded during and following the drilling operation as shown on the enclosed Test Boring Record in Appendix B and as summarized below in Table 2. It should be noted that groundwater levels recorded during this subsurface investigation are generally not a reliable indication of long term groundwater levels. Fluctuations in the groundwater level can occur with seasonal and weather conditions and water level of Ohio River.

Table 2 – Groundwater Depths

Boring Number	Boring Depth (feet)	Boring Elevation (feet)	Groundwater Readings (feet)			Cave-in Depth (feet)
			During Drilling	At Completion	Delayed Reading	
RB-1	15.0	388.2	Dry	7.3	5.5 @ 4.0 hrs.	9.0
RB-2	15.0	389.3	Dry	8.7	8.3 @ 3.0 hrs.	13.0
RB-3	15.0	385.5	Dry	12.0	7.6 @ 1.5 hrs.	12.8
RB-4	15.0	394.0	Dry	7.8	7.8 @ 1.0 hr.	13.3

IV. DISCUSSION AND RECOMMENDATIONS

Foundation support recommendations, excavation considerations, groundwater management and backfill considerations are provided in the following paragraphs.

A. Excavation Considerations

1. Excavation into the underlying soils to the proposed invert elevations for the water main may be accomplished using high powered excavation equipment. Soft to Medium stiff lean clay and very loose to loose silt deposits should be expected.

2. Subsequent to removal of soil overburden, soft/loose soils may be encountered in the form of soil swelling and/or liquefaction "boiling condition" particularly where groundwater is present. In such an event, the soft/loose soils should be removed and replaced with approved fill material, or as otherwise directed by the Engineer.

3. Excavations should be sloped and/or shored according to OSHA requirements. Temporary excavations extending to a depth of less than 15 feet may be laid back at a rate no steeper than 2:1 (H:V). The excavated side slopes should be observed and approved during construction by an experienced Registered Engineer. Local experience indicates that excavation in similar soils encountered at this site may not allow for vertical side walls to remain stable during for placement of the pipes and backfill materials for excavations less than 5 feet in depth. Vertical side walls in such soils have the tendency to cave or bulge when left open without support.

   If excavations cannot be sloped as recommended, the excavated sidewalls should be shored or shielded using a trench box system, sheet piling, soldier pile and lagging system, or equivalent shoring system for maintaining the

excavations and surrounding area in a safe condition. The temporary shoring systems may be designed using the estimated soil parameters provided below in Table 3. Design of the temporary shoring system should also take into account the influence of loads which will be applied adjacent to the excavation such as dead and live loads from structures, vehicular/construction traffic loading, and loading due to stockpiled material. Care should be taken while excavating adjacent to existing structures or roadways so as not to undermine the existing soil support.

4. Groundwater, surface runoff and other accumulations of surface water shall be diverted or removed from excavations. The Contractor shall make every effort necessary to secure a dry condition of bottom of excavation prior to placement water mains in conformance with local codes. The Contractor shall provide, install, and operate sufficient trenches, sump pumps, hoses, piping, wellpoints or other means necessary to depress and maintain the groundwater level below the base of the excavation as needed. Details of groundwater management are provided in section IV.B.

Table 3 – Estimated Soil Parameters for Shoring Design

Soil Parameters	Materials Type		
	Lean Clay	Silty Clay	Silt
Total Unit Weight, pcf	120	120	120
Angle of Internal Friction, Degrees	15	15	20
At Rest Pressure, K_o	0.74	0.74	0.66
Active Pressure, K_a	0.59	0.59	0.49
Passive Pressure, K_p	1.70	1.7	2.04

B. Groundwater Management

Excavations for the proposed water main to the anticipated depths at this site may encounter groundwater at or near the depths shown on the attached Test Boring Records in Appendix B and summarized above in Table 2. Additionally, groundwater may be influenced by the water level in Ohio River. Therefore, temporary dewatering during excavation and construction may be required.

The type of dewatering system required could include numerous shallow wells, sump pumps, hoses, piping, well point system or other means necessary depending upon the depths of the excavations. A general contractor will determine which system to use based on his/her means and methods to install the water main. Design of the dewatering system is beyond our scope of work.

The temporary dewatering should be performed continuously and should begin prior to general excavation, so that the water level is lowered and the subgrade materials do not become disturbed during excavation. In addition, dewatering should be continued until the excavations are backfilled to a minimum of 3 feet above the groundwater levels that are encountered during construction, so that hydrostatic forces do not lift the structures and also to permit proper placement of backfill material.

In addition to the general dewatering, water contained in discontinuous granular seams or layers and/or roadway base material may have to be drained by pumping or bailing from isolated sumps. Alternatively, water from these isolated zones may be piped or otherwise directed to the general dewatering system. The need for and the extent of these additional dewatering measures would have to be determined during construction.

The dewatering system should be carefully designed so that adjacent wells, structures, buildings, roadways, sidewalks, driveways and excavated slopes are not adversely affected by the operation. The pumping rate should be calculated and screen sizes determined. Pumped water should be disposed in a legal manner.

C. Pipe Support

1. Open-Cut Method

a. The subgrade of pipe support may vary along the water main alignment. The soils at this site, in their native conditions, are considered marginally suitable to support the proposed water main. However, cohesive soils exposed to standing water can often swell and soften and silty soils can be easily disturbed by construction activities, particularly in the presence of water. Therefore, it is recommended a minimum of 6 inches be placed below the invert elevation of the proposed water main pipe to provide a stable working base. The granular base will provide uniform support for the pipe, can be utilized in the dewatering process, and can act as a mudmat to help protect the soils from further disturbance by water and construction activities.

b. Backfill material should not be placed in a frozen condition or over a frozen subgrade.

c. Groundwater is expected in excavations extending below the groundwater depths recorded above in Table 2. Dewatering can be accomplished as recommended above in section IV.B

d. Pipe installation, trench width, bedding and backfill compaction should be performed in accordance with applicable project codes.

2. Trenchless Installation Method

a. Depending upon the invert elevations of the proposed water main, soft to medium stiff lean clay or silty (CL) and/or silt (ML) should be expected during trenchless method of pipe installation. Groundwater could be during the trenchless operation. Refer to the groundwater levels provided in the Test Boring Records in Appendix B and summarized above in Table 2.

b. Placement of the proposed pipes and/or casings may require horizontal directional drilling machines capable of extending the casings into the soft to medium stiff lean clay, clay and/or silt. Please refer to the attached test borings in Appendix B and Soil Profile in Appendix D for soil description.

c. Trenchless installation should have minimal effect on surface settlements of the existing roadways and surface features provided that all boreholes are continuously cased during installation. Soil swelling, collapse and/or subsidence could occur if boreholes are left uncased due to the soft nature of the underlying soils within and above the proposed casings. Also, pumps should be appropriately sized to limit fine soil migration during boring. Excessive pumping and loss of fines may result in settlement of surface supported features.

d. The recommendations contained in this report are based on the results of the soil borings taken at specific locations and at the time designated on the boring logs. It must be noted that soil conditions can vary between boring locations significantly and the nature and extent of these variations may not become evident until the construction is underway. Variation in soil condition between borings should be expected.

D. Backfill Considerations

1. Backfill material should be selected and compacted in accordance with applicable project codes inclusive of local codes and/or specifications. Backfill material in trenches within the influence zone of roadways, sidewalks, houses or any structures may consist of No. 11 and/or granular backfill such as No. 53 or as otherwise directed by the owner.

2. Backfill materials should be placed in layers not exceeding 8 inches in loose thickness with each layer compacted to a minimum of 98 percent of the maximum dry density (MDD) as determined by ASTM D 698 or as otherwise specified by the Engineer.

3. Backfill material should not be placed in a frozen condition or over a frozen subgrade.

V. CHANGED CONDITIONS

The evaluations, conclusions, and recommendations in this report are based on our interpretation of the field and laboratory data obtained during the exploration, our understanding of the project and our experience with similar sites and subsurface conditions using generally accepted geotechnical engineering practices. Although individual test borings are representative of the subsurface conditions at the boring locations on the dates drilled, they are not necessarily representative of the subsurface conditions between boring locations or subsurface conditions during other seasons of the year. If the scope of the project changes the recommendations may change and may require additional investigation.

VI. TESTING AND OBSERVATION

During the design process, it is recommended that CTL work with the project designers to confirm that the mentioned geotechnical recommendations are properly incorporated into the final plans and specifications, and to assist with establishing criteria for the construction observation and testing. CTL is not responsible for independent conclusions, opinions and recommendations made by others based on the data and the recommendations provided in this report.

VII. CLOSING

The report was prepared by CTL Engineering, Inc. (Consultant) solely for the use of the Client in accordance with an executed contract. The Client's use of or reliance on this report is limited by the terms and conditions of the contract and by the qualifications and limitations stated in the report. It is also acknowledged that the Client's use of and reliance of this report is limited for reasons which include actual site conditions that may change with time; hidden conditions, not discoverable within the scope of the assessment, may exist at the site; and the scope of the investigation may have been limited by time, budget and other constraints imposed by the Client.

Neither the report, nor its contents, conclusions or recommendations, are intended for the use of any party other than the Client. Consultant and the Client assume no liability for any reliance placed on this report by such party. The rights of the Client under contract may not be assigned to any person or entity, without the consent of the Consultant which consent shall not be unreasonably withheld.

This geotechnical report does not address the environmental conditions of the site. The Consultant is not responsible for consequences or conditions arising from facts that were concealed, withheld, or not fully disclosed at the time the assessment was conducted.

To the fullest extent permitted by law, the Consultant and Client agree to indemnify and hold each other, and their officers and employees harmless from and against claims, damages, losses and expenses arising out of unknown or concealed conditions. Furthermore, neither the Consultant nor its employees shall be liable to the Owner in an amount in excess of the available professional liability insurance coverage of the Consultant. In addition, Client and Consultant agree neither shall be liable for any special, indirect or consequential damages of any kind or nature.

The Consultant's services have been provided consistent with its professional standard of care. No other warranties are made, either expressed or implied.

Sincerely,

CTL ENGINEERING, INC.

Ali Karaki, PE
Principal Engineer

Ashok Gaire, EIT
Staff Geotechnical Engineer

APPENDIX A

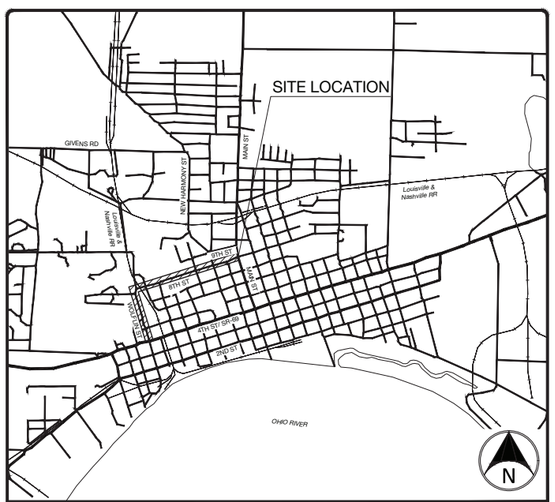
GENERAL LOCATION PLAN
BORING LOCATION PLANS

CONSTRUCTION PLANS FOR:

8TH & WOLFLIN STREETS
WATER MAIN REPLACEMENT

MOUNT VERNON, POSEY COUNTY, INDIANA

SITE LOCATION MAP



SITE VICINITY MAP

Are we including these sheets? I think Kevin put this here as a placeholder but we've never done boring plans before.

PLANS PREPARED FOR:

Client Name: City of Mount Vernon
Address: 520 Main Street
City, State ZIP Mount Vernon, IN 47620

Telephone: (812) 838-5576
Contact Person: Charles Gray, Water Superintendent

OPERATING AUTHORITIES

AT&T Distribution/Communications
208 S. Akard Street
Dallas, TX 75202
(210) 821-4105

CountryMark Refining and Logistics, LLC - Pipeline
1200 Refinery Road
Mount Vernon, IN 47620
(800)832-5490

Mt. Vernon Water Department
123 College Avenue
Mount Vernon, IN 47620
(812) 838-2136

Mount Vernon Wastewater Department
410 Old Highway 69 S
Mount Vernon, IN 47620
(812) 838-3396

Vectren Energy (Mount Vernon) - Electric & Gas
125 W Water Street
Mount Vernon, IN 47620
(812) 838-4421

Wide Open West (WOW) - Cable TV
6600 Hank Avenue
Evansville, IN 47715
(866) 496-9669

SHEET INDEX

SHEET NO.	SHEET NAME
C001	COVER
C002	GENERAL & SURVEY INFORMATION
C003	WATER MAIN KEY MAP
C004	MAINTENANCE OF TRAFFIC
C101-C109	WATER MAIN PLAN & PROFILE - LINE 'A'
C110	RECONNECTION PLAN & PROFILES
C200-202	RAILROAD & HIGHWAY BORING PLANS
C300-C302	STANDARD WATER MAIN CONSTRUCTION DETAILS
C400	EROSION CONTROL KEY MAP
C401-C405	EROSION CONTROL

BRIAN A. BECKMAN REGISTERED PROFESSIONAL ENGINEER
APPROVAL PENDING NOT FOR CONSTRUCTION

BLN: BEAM·LONGEST·NEFF

PLAN DATE: 12/31/2019
PROJECT NO. 190084
SHEET NO. C001

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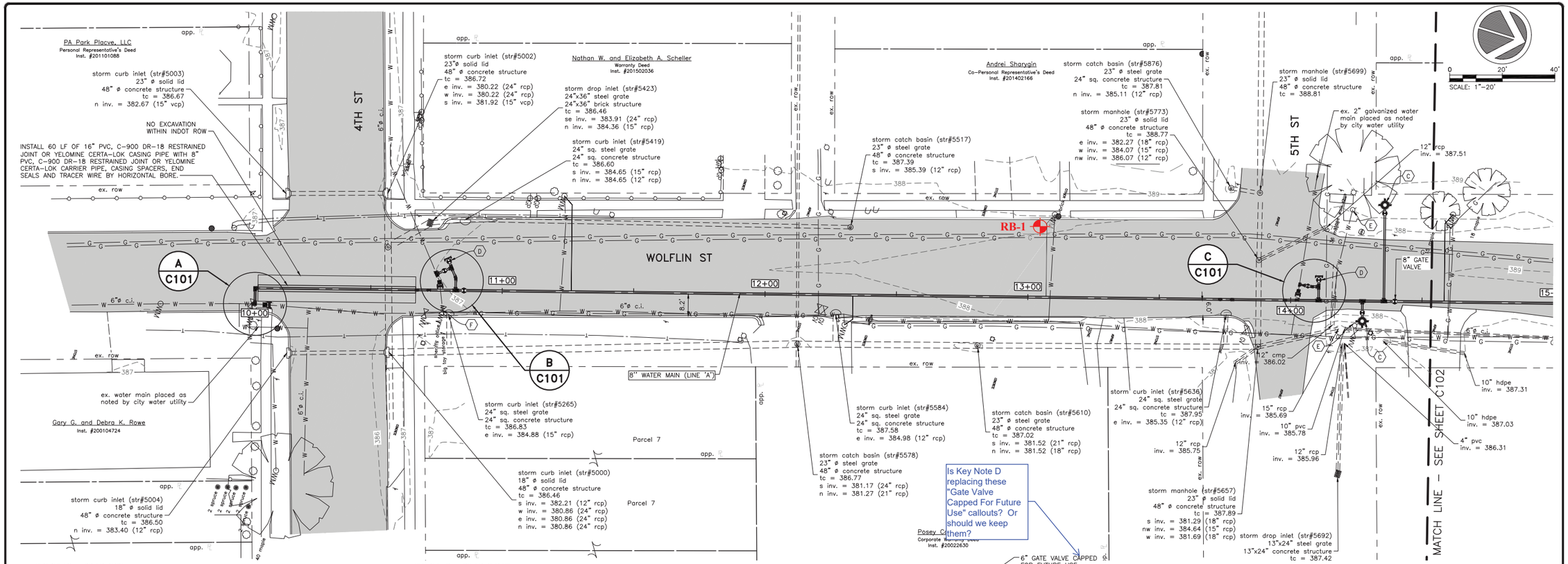


KEY NOTES – WATER MAIN

(A) INSTALL TAPPING SLEEVE WITH VALVE CONNECTION OR DRY TAP SLEEVE WITH GATE VALVE. EXPOSE AND CONFIRM TO THE ENGINEER AND UTILITY THE PIPE SIZE, LOCATION, MATERIAL AND O.D. PRIOR TO ORDERING MATERIALS. CONTRACTOR TO PROVIDE AND INSTALL FITTINGS AS NECESSARY TO MAKE THE CONNECTION FROM THE EXISTING MAIN TO THE NEW MAIN. DO NOT USE 90 DEGREE FITTINGS UNLESS APPROVED BY THE ENGINEER.

(B) INSTALL LINE STOP AND CUT/CAP EXISTING MAIN ON BOTH LIVE AND ABANDONED SECTIONS AFTER NEW MAIN AND SERVICES ARE TESTED AND COMMISSIONED.

(C) INSTALL NEW 3-WAY FIRE HYDRANT AND VALVE ASSEMBLY.

(D) INSTALL GATE VALVE AND VALVE BOX.

(E) ABANDON EXISTING FIRE HYDRANT, CLOSE LEAD LINE VALVE AND REMOVE VALVE BOX. CUT LEAD AT BOOT AND REMOVE HYDRANT AND RETURN TO THE CITY (IF REQUESTED) OR DISPOSE.

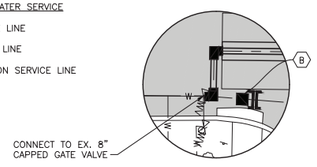
(F) PERMANENTLY CLOSE VALVE AND REMOVE VALVE BOX AFTER COMMISSIONING THE WATER MAIN.

KEY NOTES – WATER SERVICE

(1) ¾" P.E. SERVICE LINE

(2) 1" P.E. SERVICE LINE

(3) 2" P.E. IRRIGATION SERVICE LINE



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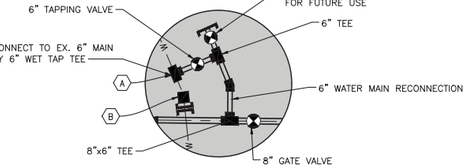
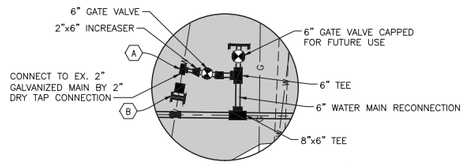
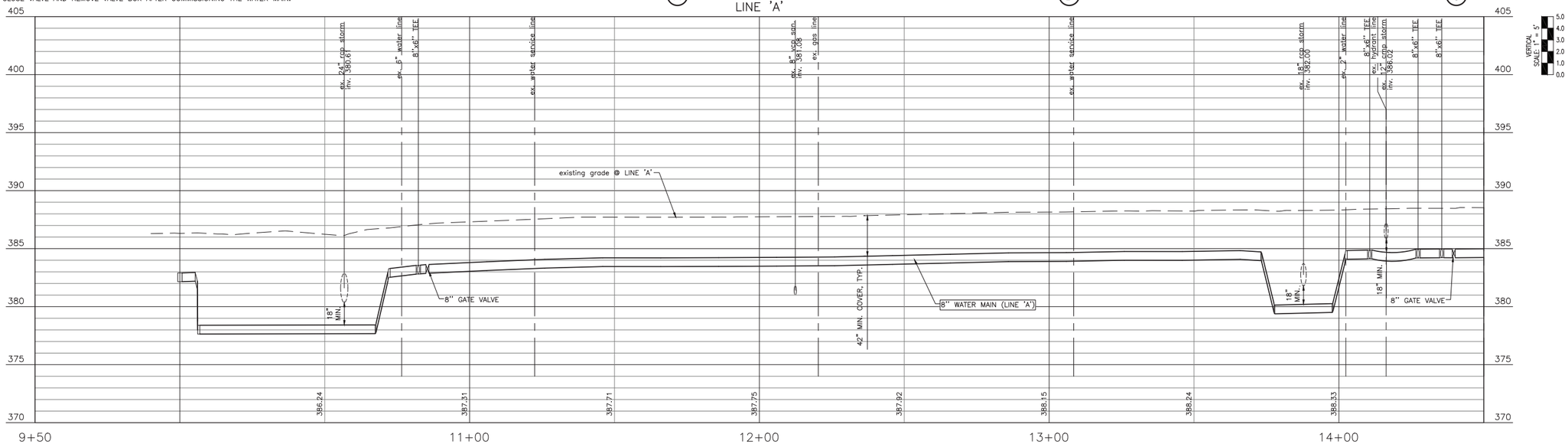


RECONNECTION DETAIL B (B)



RECONNECTION DETAIL C (C)



BEAM·LONGEST·NEFF

REVISIONS AND ISSUES	DATE	BY

APPROVAL PENDING NOT FOR CONSTRUCTION

CONSTRUCTION PLANS FOR:
8TH & WOLFLIN STREETS WATER MAIN REPLACEMENT PROJECT
CITY OF MOUNT VERNON
520 MAIN STREET, MOUNT VERNON, IN 47620

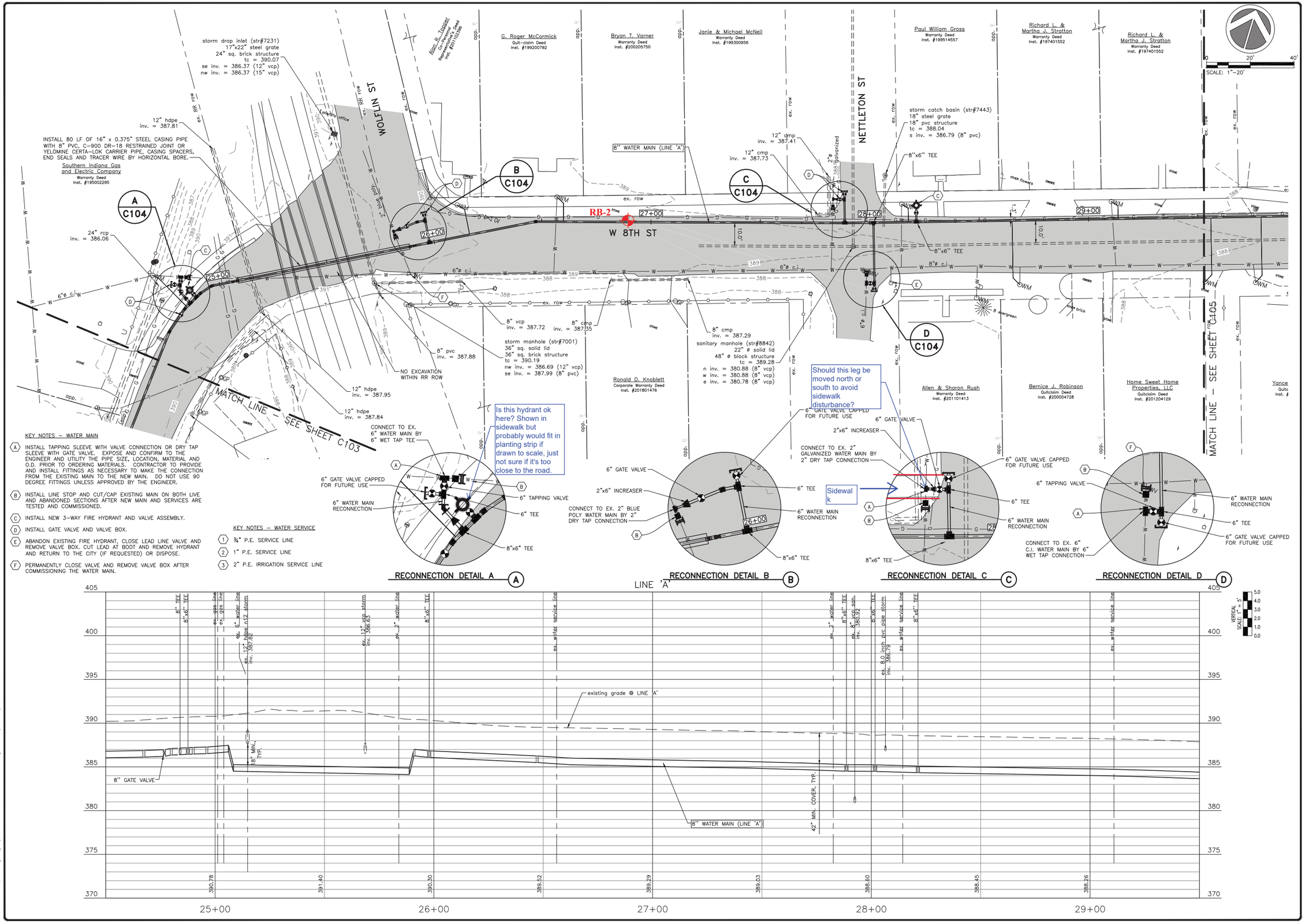
WATER MAIN PLAN & PROFILE - LINE '1'

PLAN DATE: ---

DESIGN:	CHECK:	DRAWN:
XXX	XXX	XXX

PROJECT NO. **190084**

SHEET NO. **C101**



BEAM·LONGEST·NEFF

BY
DATE
REVISIONS AND ISSUES

APPROVAL PENDING
NOT FOR
CONSTRUCTION

CONSTRUCTION PLANS FOR:
8TH & WOLFLIN STREETS WATER MAIN REPLACEMENT PROJECT
CITY OF MOUNT VERNON
520 MAIN STREET, MOUNT VERNON, IN 47620

WATER MAIN PLAN & PROFILE - LINE '1'

PLAN DATE: ---
DESIGN: XXX | CHECK: XXX | DRAWN: XXX
PROJECT NO. 190084
SHEET NO. **C104**

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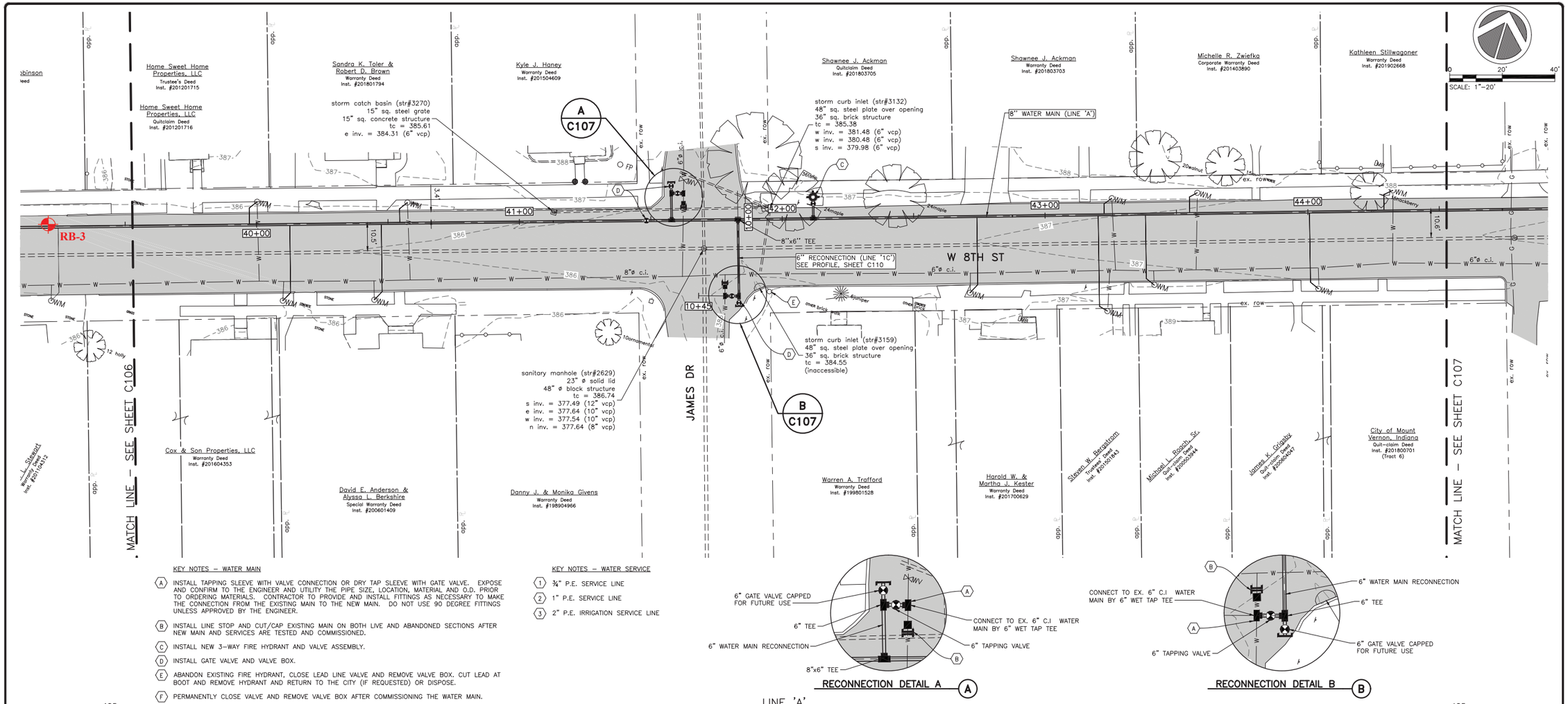


KEY NOTES – WATER MAIN

(A) INSTALL TAPPING SLEEVE WITH VALVE CONNECTION OR DRY TAP SLEEVE WITH GATE VALVE. EXPOSE AND CONFIRM TO THE ENGINEER AND UTILITY THE PIPE SIZE, LOCATION, MATERIAL AND O.D. PRIOR TO ORDERING MATERIALS. CONTRACTOR TO PROVIDE AND INSTALL FITTINGS AS NECESSARY TO MAKE THE CONNECTION FROM THE EXISTING MAIN TO THE NEW MAIN. DO NOT USE 90 DEGREE FITTINGS UNLESS APPROVED BY THE ENGINEER.

(B) INSTALL LINE STOP AND CUT/CAP EXISTING MAIN ON BOTH LIVE AND ABANDONED SECTIONS AFTER NEW MAIN AND SERVICES ARE TESTED AND COMMISSIONED.

(C) INSTALL NEW 3–WAY FIRE HYDRANT AND VALVE ASSEMBLY.

(D) INSTALL GATE VALVE AND VALVE BOX.

(E) ABANDON EXISTING FIRE HYDRANT, CLOSE LEAD LINE VALVE AND REMOVE VALVE BOX. CUT LEAD AT BOOT AND REMOVE HYDRANT AND RETURN TO THE CITY (IF REQUESTED) OR DISPOSE.

(F) PERMANENTLY CLOSE VALVE AND REMOVE VALVE BOX AFTER COMMISSIONING THE WATER MAIN.

KEY NOTES – WATER SERVICE

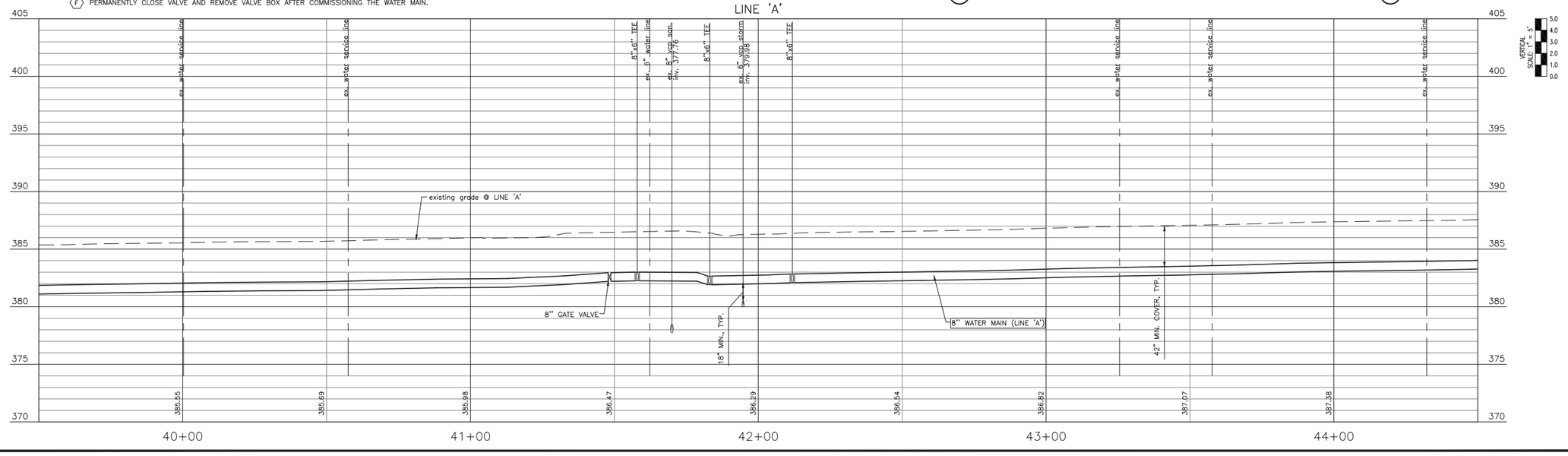
(1) ¾" P.E. SERVICE LINE

(2) 1" P.E. SERVICE LINE

(3) 2" P.E. IRRIGATION SERVICE LINE

RECONNECTION DETAIL A (A)

RECONNECTION DETAIL B (B)



BLN BEAM·LONGEST·NEFF

REVISIONS AND ISSUES	DATE	BY

APPROVAL PENDING
NOT FOR CONSTRUCTION

CONSTRUCTION PLANS FOR:
8TH & WOLFLIN STREETS WATER MAIN REPLACEMENT PROJECT
CITY OF MOUNT VERNON
520 MAIN STREET, MOUNT VERNON, IN 47620

WATER MAIN PLAN & PROFILE - LINE '1'

PLAN DATE: ---

DESIGN:	CHECK:	DRAWN:
XXX	XXX	XXX

PROJECT NO. 190084

SHEET NO. **C107**

Tony S. & Colette E. Maricca
Warranty Deed
Inst. #200403547

Agnes L. York & Allison M. Poole
Quit-claim Deed
Inst. #201901307

Eric Daniel Dunlap
Warranty Deed
Inst. #201205130

Nicholas S. Hoehn
Warranty Deed
Inst. #200402266

Jacquelyn S. Thomas
Warranty Deed
Inst. #201502337

Rockford W. Allen
Warranty Deed
Inst. #200103156

Sandra K. Roos
Warranty Deed
Inst. #201504199

Andrei Sharygin
Warranty Deed
Inst. #201203926

Rothrock House, LLC
Warranty Deed
Inst. #201602883

Kyle J. Haney
Warranty Deed
Inst. #201702560

Green's Enlargement of the City of Mt. Vernon
D.B. K, Pg. 441

W 8TH ST

COLLEGE AVE

MAIN ST

MATCH LINE – SEE SHEET C108

8"x6" TEE

8" WATER MAIN (LINE 'A')

CONNECT TO EX. 12" PVC WATER MAIN BY 12"x8" WET TAP

8" TAPPING VALVE

RB-4

49+00 50+00 51+00 52+00 53+00

A C109

sanitary manhole (str#1955)
23" ø solid lid
24" ø concrete structure
tc = 392.72
n inv. = 385.32 (10" vcp)
s inv. = 385.32 (10" vcp)

4" vcp inv. = 394.86

4" vcp inv. = 395.10

0 20' 40'
SCALE: 1"=20'

4" TAPPING VALVE

6" WATER MAIN RECONNECTION

CONNECT TO EX. 4" C.I WATER MAIN BY 4" WET TAP TEE

6" TEE

6" GATE VALVE CAPPED FOR FUTURE USE

4"x6" INCREASER

RECONNECTION DETAIL A (A)

LINE 'A'

existing grade @ LINE 'A'

8" WATER MAIN (LINE 'A')

18" MIN.

42" MIN. COVER, TYP.

8" GATE VALVE

391.53 391.95 392.43 392.93 393.47 393.81 394.24 394.71

405 400 395 390 385 380 375 370

50+00 51+00 52+00 53+00 54+00 54+50

KEY NOTES – WATER MAIN

(A) INSTALL TAPPING SLEEVE WITH VALVE CONNECTION OR DRY TAP SLEEVE WITH GATE VALVE. EXPOSE AND CONFIRM TO THE ENGINEER AND UTILITY THE PIPE SIZE, LOCATION, MATERIAL AND O.D. PRIOR TO ORDERING MATERIALS. CONTRACTOR TO PROVIDE AND INSTALL FITTINGS AS NECESSARY TO MAKE THE CONNECTION FROM THE EXISTING MAIN TO THE NEW MAIN. DO NOT USE 90 DEGREE FITTINGS UNLESS APPROVED BY THE ENGINEER.

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(1) ¾" P.E. SERVICE LINE

(2) 1" P.E. SERVICE LINE

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BLN BEAM·LONGEST·NEFF

REVISIONS AND ISSUES	DATE	BY

APPROVAL PENDING NOT FOR CONSTRUCTION

CONSTRUCTION PLANS FOR:
8TH & WOLFLIN STREETS WATER MAIN REPLACEMENT PROJECT
CITY OF MOUNT VERNON
520 MAIN STREET, MOUNT VERNON, IN 47620
WATER MAIN PLAN & PROFILE - LINE '1'

PLAN DATE: ---

DESIGN:	CHECK:	DRAWN:
XXX	XXX	XXX

PROJECT NO. 190084

SHEET NO. C109

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APPENDIX B

TEST BORING RECORDS

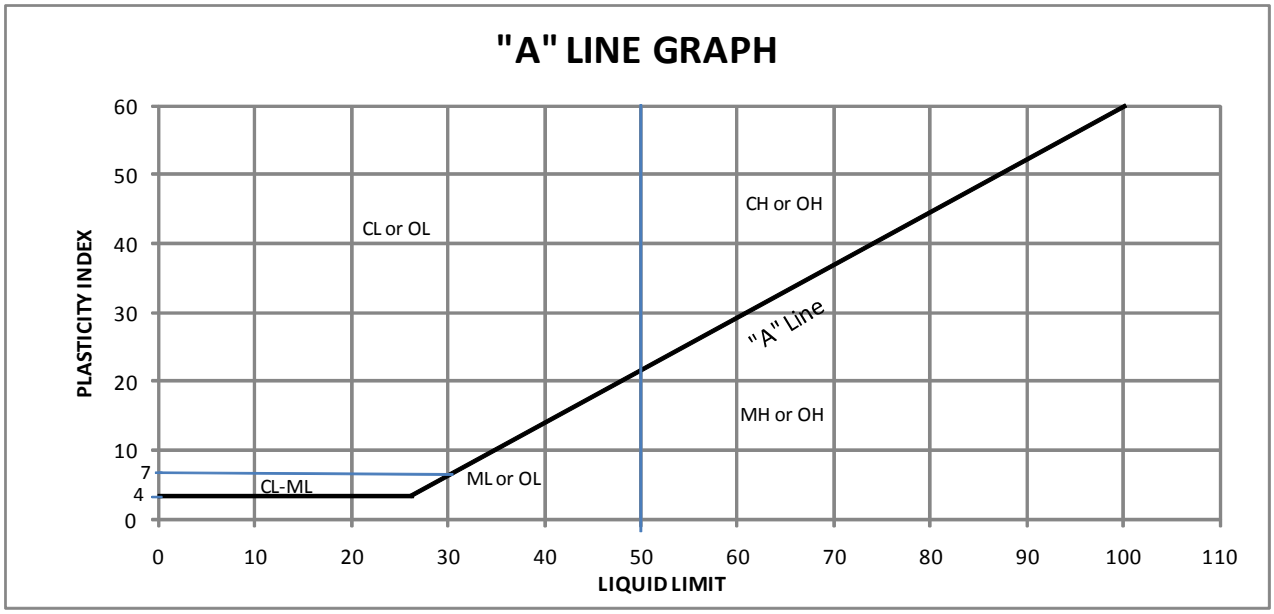
SOIL DESCRIPTIONS BASED ON THE UNIFIED SOIL CLASSIFICATION SYSTEM

ASTM D 2487 and D 2488

Major Division			Group Symbol	Letter Symbol	Group Name*
Coarse Grained Soils Less Than 50 Percent Passing the # 200 Sieve	Gravel - Percent GRAVEL > percent SAND	Gravel with < 5% Fines		GW	Well Graded GRAVEL
				GP	Poorly Graded GRAVEL
		Gravel with Between 5 and 15% Fines		GW-GM	Well Graded GRAVEL with silt
				GW-GC	Well Graded Gravel with clay
				GP-GM	Poorly Graded GRAVEL with silt
				GP-GC	Poorly Graded GRAVEL with clay
		Gravel with ≥ 15% Fines		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	Sand - Percent SAND ≥ percent GRAVEL	Sand with < 5% Fines		SW	Well Graded SAND
				SP	Poorly Graded SAND
		Sand with Between 5 and 15% Fines		SW-SM	Well Graded SAND with silt
				SW-SC	Well Graded SAND with clay
				SP-SM	Poorly Graded SAND with silt
				SP-SC	Poorly Graded SAND with clay
		Sand with ≥ 15% Fines		SM	Silty SAND
				SC	Clayey SAND
Fine Grained Soils 50 percent or more Passing the # 200 Sieve	SILT and CLAY	Liquid Limit Less Than 50		ML	SILT
				CL	Lean CLAY
				CL-ML	SILTY CLAY
				OL	Organic SILT, CLAY, or SILTY CLAY
		Liquid Limit 50 or Greater		MH	Elastic SILT
				CH	Fat CLAY
				OH	Organic SILT or CLAY
Highly Organic Soils				PT	Peat

* Additional Modifiers			
	Coarse Grained Soils	with silt or clay	5 to 12 % Silt or Clay by weight
		Silty or Clayey	more than 12 % Silt or Clay by weight
	Fine Grained Soils	with sand or gravel	15 to 29 % Sand or Gravel by weight
		Sandy or Gravelly	30 % or more Sand or Gravel by weight

"A" LINE GRAPH



SOIL DESCRIPTION

NON-COHESIVE SOIL DESCRIPTION	STANDARD PENETRATION BLOWCOUNTS PER FOOT (BPF)
Very Loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	Over 50

COHESIVE SOIL DESCRIPTION	STANDARD PENETRATION BLOWCOUNTS PER FOOT (BPF)
Very Soft	0 - 1
Soft	2 - 4
Medium Stiff	5 - 8
Stiff	9 - 15
Very Stiff	16 - 30
Hard	Over 30

GRADATION COMPONENT	SIZE
Boulders	Larger than 8"
Cobbles	8" - 3"
Gravel	Passing 3" Retained on #4
Sand	Passing #4 Retained on #200
Silt	0.075 mm to 0.005 mm
Clay	Smaller than 0.005 mm

COMPONENT MODIFIERS	SIZE
Traces	0 - 10%
Little	11 - 20%
Some	21 - 35%
And	36 - 50%

MOISTURE TERMS	DESCRIPTION
Dry	Powdery
Damp	Below Plastic
Moist	Above Plastic Limit & Below Liquid Limit
Wet	Above Liquid Limit

CTL ENGINEERING INC

TEST BORING RECORD

CLIENT : Beam, Longest & Neff
PROJECT : Water Main Replacement
LOCATION : 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana
PROJECT NO. : 20050001IND

BORING NO.: **RB-1**
SHEET 1 OF 1
DATE STARTED : 01-24-20
DATE COMPLETED : 01-24-20

Boring Elevation: 388.2 Feet
Northing : 977,960
Easting : 2,715,525
Datum : NAD83, Indiana West

Boring Depth : 15.0 Feet
Station: 13+06
Offset : 27' Lt
Line : 'A'

Boring Method : HSA
Rig Type : CME-550 ATV
Casing Diameter : 3.25" I.D.
Core Size : ---

Hammer : Automatic
Hammer Efficiency: 90.7%
Driller : J. S.
Temperature : 20° F
Weather : Overcast

GROUNDWATER: Encountered at Dry At completion 7.3' Delayed Reading 5.5' Caved in at 9.0'

Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12" (N)	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unconfined Compression (ksf)	Atterberg Limits LL	PL	PI
387.4		**ASPHALT CONCRETE** (9") (VISUAL)	0.8										
		SAND AND GRAVEL BASE (15") (VISUAL)			4								
386.2			2.0	SS-1	4	7	44	27					
					3								
		Brown, Moist, Medium Stiff to Soft, **LEAN CLAY (CL)**			2								
				SS-2	2	4	89	27			49	23	26
	5	(Lab 1)			2								
					1								
381.2			7.0	SS-3	1	3	100	26					
					2								
		Brown, Moist, Soft to Medium Stiff, **SILTY CLAY** (VISUAL)											
379.2			9.0		2								
				SS-4	2	5	100	25					
	10				3								
					3								
		Brown, Moist, Loose, **SILT (ML)**											
				SS-5	4	7	78	24			26	24	2
		Thin layer of Lean Clay at 11.0 feet			3								
		(Lab 2)											
					2								
				SS-6	2	5	100	24					
373.2	15		15.0		3								
		Bottom of Boring at 15.0 feet											
		Boring backfilled according to Aquifer Protection Guidelines											
	20												

CTL ENGINEERING

CTL Engineering, Inc.
Phone: 317-295-8650

BORING METHOD		SAMPLING METHOD		ABBREVIATIONS	
HSA	Hollow Stem Auger	SS	Split Spoon Sample	*	Hand Penetrometer
SFA	Solid Flight Auger	ST	Shelby Tube Sample	LL	Liquid Limit
RC	Rock Coring	CR	Rock Core Sample	PL	Plastic Limit
MD	Mud Drilling	BS	Bag Sample	PI	Plasticity Index
WD	Wash Drilling	AC	Auger Cuttings	SPT	Standard Penetration Test
HA	Hand Auger				

TEST BORING RECORD

CLIENT : Beam, Longest & Neff
PROJECT : Water Main Replacement
LOCATION : 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana
PROJECT NO. : 20050001IND

BORING NO.: **RB-2**
SHEET 1 OF 1
DATE STARTED : 01-24-20
DATE COMPLETED : 01-24-20

Boring Elevation: 389.3 Feet
Northing : 979,193
Easting : 2,715,465
Datum : NAD83, Indiana West

Boring Depth : 15.0 Feet
Station: 26+90
Offset : 1' Lt
Line : 'A'

Boring Method : HSA
Rig Type : CME-550 ATV
Casing Diameter : 3.25" I.D.
Core Size : ---

Hammer : Automatic
Hammer Efficiency: 90.7%
Driller : J. S.
Temperature : 20° F
Weather : Overcast

GROUNDWATER: Encountered at Dry At completion 8.7' Delayed Reading 8.3' Caved in at 13.0'

Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12" (N)	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unconfined Compression (ksf)	Atterberg Limits LL	PL	PI
388.5		**ASPHALT CONCRETE** (10") (VISUAL)	0.8										
387.3		Gray, Moist, Medium Stiff, **SILTY CLAY** (VISUAL)	2.0	SS-1	4 3 3	6	89	25					
	5	Light Gray to Brown, Moist, medium Stiff to Soft, **LEAN CLAY (CL)** Loss on Ignition (LOI) = 2.6% in SS-4B (As Lab 1)		SS-2 SS-3 SS-4	3 2 3 2 1 2 0 1 2	5 3 3	33 100 100	23 30 41					
378.8	10		10.5										
		Brown, Moist, Very Loose to Loose, **SILT (ML)** (As Lab 2)		SS-5 SS-6	0 0 2 2 2 3	2 5	100 100	27 26					
374.3	15	**Bottom of Boring at 15.0 feet** Boring backfilled according to Aquifer Protection Guidelines	15.0										
	20												

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BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling	AC - Auger Cuttings	SPT - Standard Penetration Test
HA - Hand Auger		

TEST BORING RECORD

CLIENT : Beam, Longest & Neff
PROJECT : Water Main Replacement
LOCATION : 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana
PROJECT NO. : 20050001IND

BORING NO.: **RB-3**
SHEET 1 OF 1
DATE STARTED : 01-24-20
DATE COMPLETED : 01-24-20

Boring Elevation: 385.5 Feet
Northing : 979,550
Easting : 2,716,637
Datum : NAD83, Indiana West

Boring Depth : 15.0 Feet
Station: 39+78
Offset : 1' Lt
Line : 'A'

Boring Method : HSA
Rig Type : CME-550 ATV
Casing Diameter : 3.25" I.D.
Core Size : ---

Hammer : Automatic
Hammer Efficiency: 90.7%
Driller : J. S.
Temperature : 20° F
Weather : Cloudy

GROUNDWATER: Encountered at Dry At completion 12.0' Delayed Reading 7.6' Caved in at 12.8'

Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12" (N)	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unconfined Compression (ksf)	Atterberg Limits LL	PL	PI
385.0		**ASPHALT CONCRETE** (6.5") (VISUAL)	0.5										
384.3		**SAND AND GRAVEL BASE** (7.5") (VISUAL)	1.2										
				SS-1	3 3 4	7	78	24					
	5	Brown, Moist, Medium Stiff to Soft, **LEAN CLAY (CL)** (As Lab 1)		SS-2	2 2 2	4	100	29					
377.5			8.0	SS-3	2 2 3	5	50	22					
	10			SS-4	2 2 2	4	100	23					
		Brown, Moist, Very Loose to Loose, **SILT (ML)** (As Lab 2)		SS-5	2 3 3	6	100	22					
				SS-6	3 3 4	7	100	23					
370.5	15	**Bottom of Boring at 15.0 feet** Boring backfilled according to Aquifer Protection Guidelines	15.0										
	20												

CTL Engineering, Inc.
Phone: 317-295-8650

BORING METHOD		SAMPLING METHOD		ABBREVIATIONS	
HSA	Hollow Stem Auger	SS	Split Spoon Sample	*	Hand Penetrometer
SFA	Solid Flight Auger	ST	Shelby Tube Sample	LL	Liquid Limit
RC	Rock Coring	CR	Rock Core Sample	PL	Plastic Limit
MD	Mud Drilling	BS	Bag Sample	PI	Plasticity Index
WD	Wash Drilling	AC	Auger Cuttings	SPT	Standard Penetration Test
HA	Hand Auger				

TEST BORING RECORD

CLIENT : Beam, Longest & Neff
PROJECT : Water Main Replacement
LOCATION : 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana
PROJECT NO. : 20050001IND

BORING NO.: **RB-4**
SHEET 1 OF 1
DATE STARTED : 01-24-20
DATE COMPLETED : 01-24-20

Boring Elevation: 394.0 Feet
Northing : 979,943
Easting : 2,717,945
Datum : NAD83, Indiana West

Boring Depth : 15.0 Feet
Station: 52+86
Offset : 2' Lt
Line : 'A'

Boring Method : HSA
Rig Type : CME-550 ATV
Casing Diameter : 3.25" I.D.
Core Size : ---

Hammer : Automatic
Hammer Efficiency: 90.7%
Driller : J. S.
Temperature : 20° F
Weather : Overcast

GROUNDWATER: Encountered at Dry At completion 7.8' Delayed Reading 7.8' Caved in at 13.3'

Stratum Elevation	Sample Depth	SOIL/MATERIAL DESCRIPTION	Stratum Depth	Sample Number	SPT per 6"	SPT per 12" (N)	Recovery (%)	Moisture Content (%)	Total Unit Weight (pcf)	Unconfined Compression (ksf)	Atterberg Limits LL	PL	PI
393.5		**ASPHALT CONCRETE** (6") (VISUAL)	0.5										
393.1		**SAND AND GRAVEL BASE** (5") (VISUAL)	0.9										
				SS-1	3 3 3	6	100	23					
				SS-2	2 2 2	4	89	27					
	5	Slightly Gray to Brown, Moist, Medium Stiff to Soft, **LEAN CLAY (CL)** (As Lab 1)		SS-3	2 2 3	5	100	28					
				SS-4	2 1 2	3	100	29					
	10												
383.5			10.5										
		Brown, Moist, Very Loose, **SILT (ML)** (As Lab 2)		SS-5	0 2 2	4	100	28					
				SS-6	0 2 2	4	100	26					
379.0	15	**Bottom of Boring at 15.0 feet**	15.0										
		Boring backfilled according to Aquifer Protection Guidelines											
	20												

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BORING METHOD	SAMPLING METHOD	ABBREVIATIONS
HSA - Hollow Stem Auger	SS - Split Spoon Sample	* - Hand Penetrometer
SFA - Solid Flight Auger	ST - Shelby Tube Sample	LL - Liquid Limit
RC - Rock Coring	CR - Rock Core Sample	PL - Plastic Limit
MD - Mud Drilling	BS - Bag Sample	PI - Plasticity Index
WD - Wash Drilling	AC - Auger Cuttings	SPT - Standard Penetration Test
HA - Hand Auger		

APPENDIX C

LABORATORY TESTING

Summary of Classification Test Results
Grain Size Distribution Curves
Summary of Special Laboratory Test Results

Lab No.	Boring No.	Station	Offset	Sample No.	Depth	Soil Classification	ASTM Group	Grain Size Distribution (%)				WC	LL	PL	PI	Max. Dry Density (pcf)	Optimum Moisture Content (%)	CBR (%)		
								Gravel	Sand	Silt	Clay							90%	93%	95%
Lab-1	RB-1	13+06	27' Lt	SS-2	3.5-5.0	LEAN CLAY	CL	0.0	3.6	58.2	38.3	27	49	23	26					
Lab-2	RB-1	13+06	27' Lt	SS-5	11.0-12.5	SILT	ML	0.0	0.9	87.7	11.4	24	26	24	2					

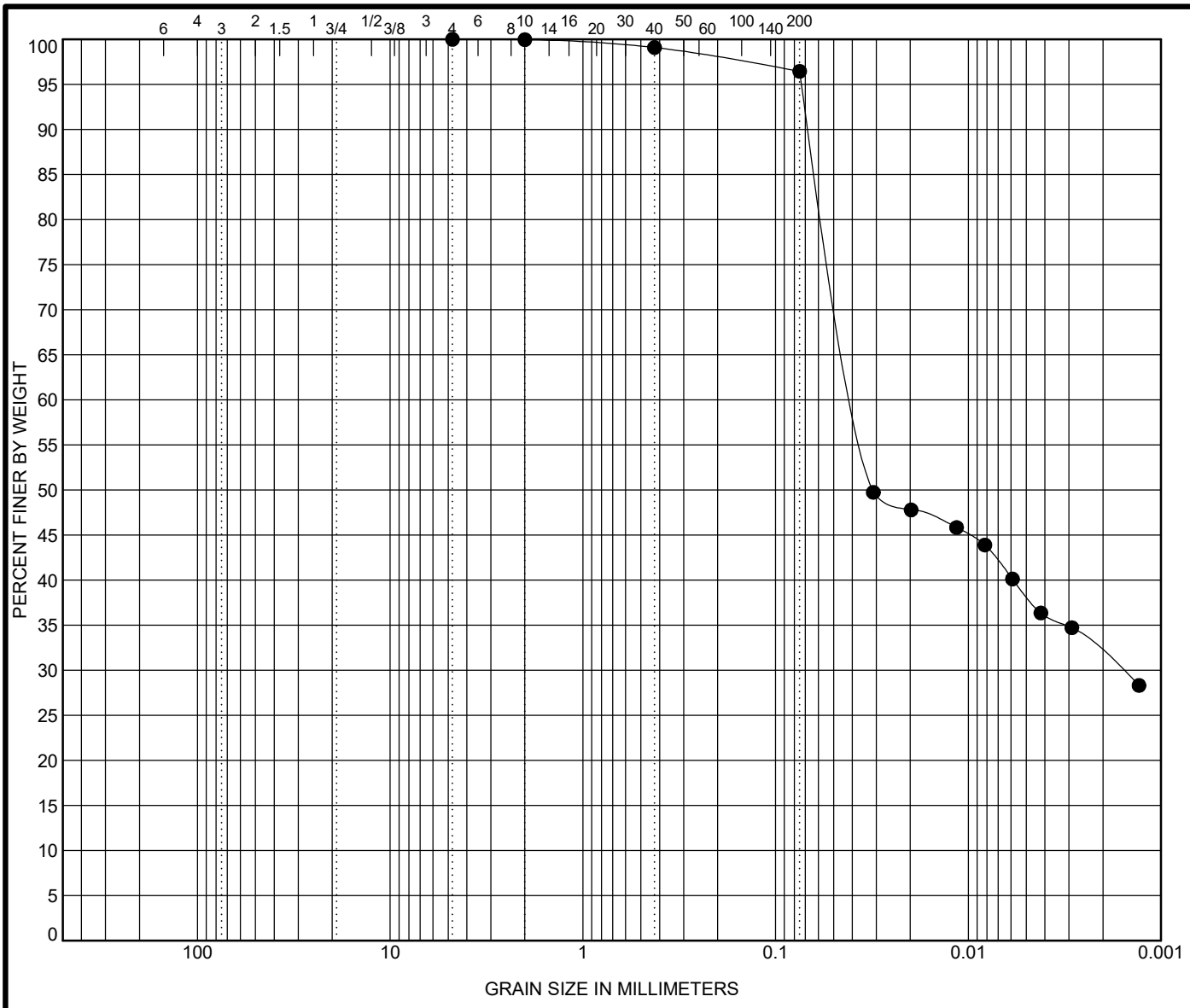
CTL Engineering, Inc.
Phone: 317-295-8650

SUMMARY OF CLASSIFICATION TEST RESULTS

Project: Water Main Replacement

Location: 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana

Project No.: 20050001IND



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

Boring No.	RB-1	Classification	MC	LL	PL	PI	Cc	Cu
Sample	SS-2	LEAN CLAY	26.7	49	23	26		
Depth	3.5-5.0	CL						
Station	13+06	Lab-1						
Offset	27' Lt							
Line	'A'							

Fine material soaking time	Minutes	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
		4.75	0.038	0.031	0.002		0.0	3.6	58.2	38.3

Remarks

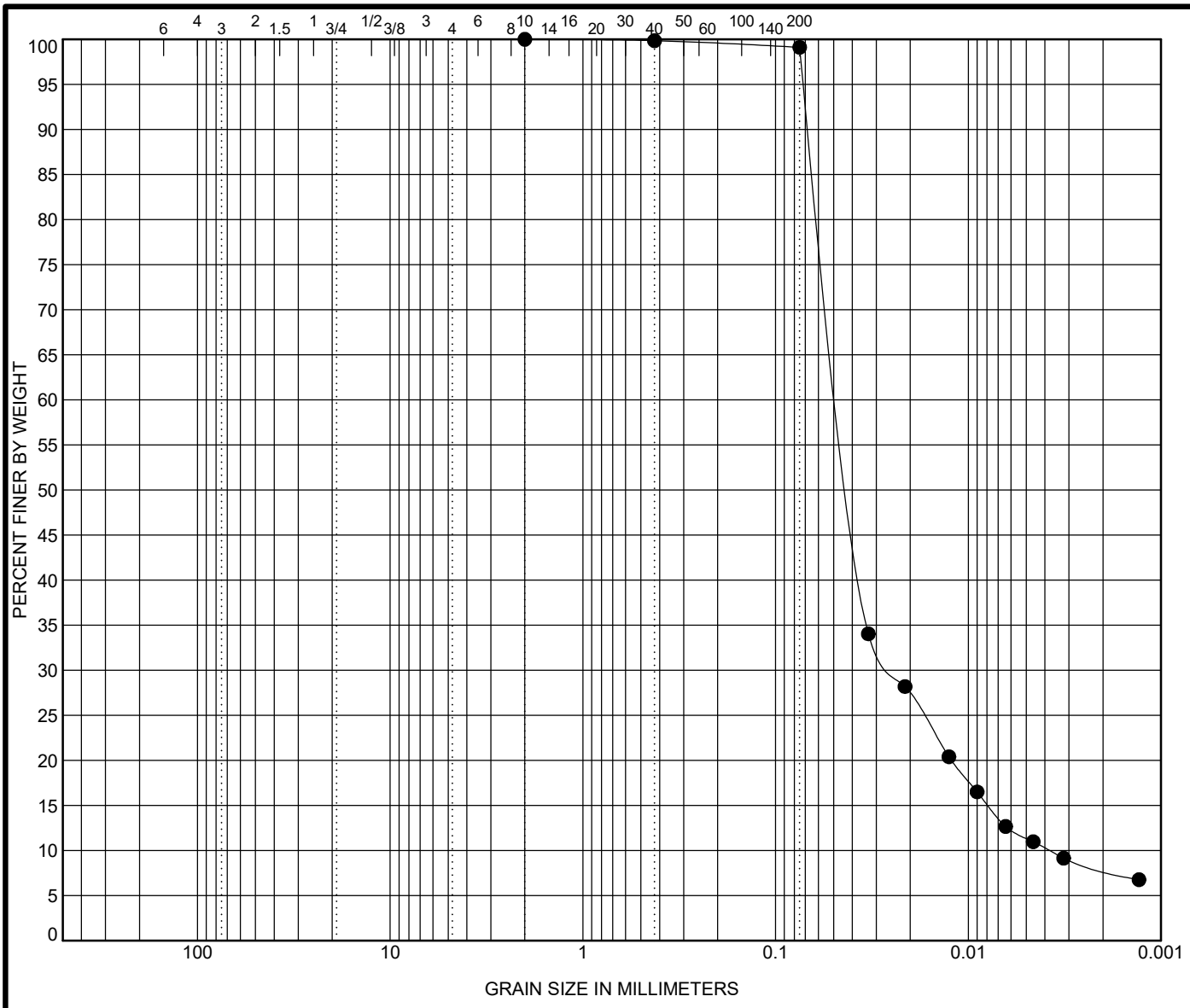
CTL ENGINEERING
CTL Engineering, Inc.
Phone: 317-295-8650

GRAIN SIZE DISTRIBUTION

Project: Water Main Replacement

Location: 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana

CTL Project No.: 20050001IND



COBBLES	GRAVEL		SAND			SILT OR CLAY
	Coarse	Fine	Coarse	Medium	Fine	

Boring No.	RB-1	Classification	MC	LL	PL	PI	Cc	Cu
Sample	SS-5	SILT	24.3	26	24	2	3.43	12.08
Depth	11.0-12.5	ML						
Station	13+06	Lab-2						
Offset	27' Lt							
Line	'A'							

Fine material soaking time	Minutes	D100	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
		2	0.046	0.04	0.024	0.004	0.0	0.9	87.7	11.4

Remarks

CTL ENGINEERING
CTL Engineering, Inc.
Phone: 317-295-8650

GRAIN SIZE DISTRIBUTION

Project: Water Main Replacement

Location: 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana

CTL Project No.: 20050001IND

Boring No.	Station	Offset	Sample No.	Depth	Moisture Content (%)	Wet Density (pcf)	Dry Density (pcf)	Unconfined Compression (psf)	Failure Strain (%)	Loss on Ignition (%)	Calcium Carbonate (%)	pH
RB-1	13+06	27' Lt	SS-1	1.0-2.5	26.6							
RB-1	13+06	27' Lt	SS-2	3.5-5.0	26.7							
RB-1	13+06	27' Lt	SS-3	6.0-7.5	25.7							
RB-1	13+06	27' Lt	SS-4	8.5-10.0	25.1							
RB-1	13+06	27' Lt	SS-5	11.0-12.5	24.3							7.9
RB-1	13+06	27' Lt	SS-6	13.5-15.0	24.0							
RB-2	26+90	1' Lt	SS-1	1.0-2.5	24.7							
RB-2	26+90	1' Lt	SS-2	3.5-5.0	22.9							
RB-2	26+90	1' Lt	SS-3	6.0-7.5	30.0							
RB-2	26+90	1' Lt	SS-4	8.5-10.0	40.8					2.6	6.2	
RB-2	26+90	1' Lt	SS-5	11.0-12.5	27.1							
RB-2	26+90	1' Lt	SS-6	13.5-15.0	26.1							
RB-3	39+78	1' Lt	SS-1	1.0-2.5	23.6							
RB-3	39+78	1' Lt	SS-2	3.5-5.0	29.0							
RB-3	39+78	1' Lt	SS-3	6.0-7.5	22.2							
RB-3	39+78	1' Lt	SS-4	8.5-10.0	23.1							
RB-3	39+78	1' Lt	SS-5	11.0-12.5	22.0							
RB-3	39+78	1' Lt	SS-6	13.5-15.0	22.8							
RB-4	52+86	2' Lt	SS-1	1.0-2.5	23.3							
RB-4	52+86	2' Lt	SS-2	3.5-5.0	27.4							
RB-4	52+86	2' Lt	SS-3	6.0-7.5	28.4							
RB-4	52+86	2' Lt	SS-4	8.5-10.0	28.6							
RB-4	52+86	2' Lt	SS-5	11.0-12.5	28.3							
RB-4	52+86	2' Lt	SS-6	13.5-15.0	25.5							

CTL Engineering, Inc.
Phone: 317-295-8650

SUMMARY OF SPECIAL LABORATORY TEST RESULTS

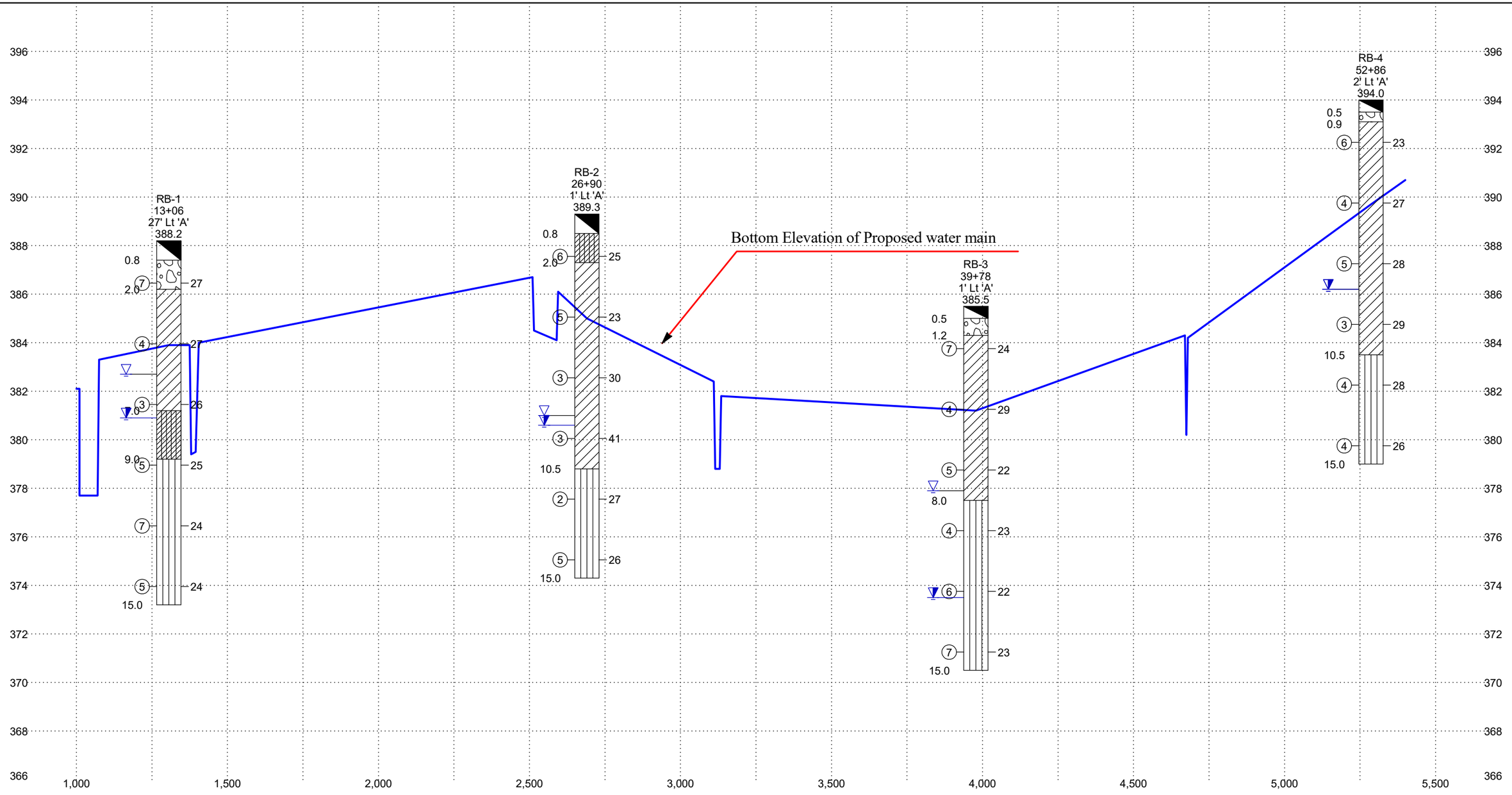
Project: Water Main Replacement

Location: 8th & Wolflin Streets, Mount Vernon, Posey County, Indiana

CTL Project No.: 20050001IND

APPENDIX D

SOIL PROFILE



CTL Engineering, Inc.
1310 S. Franklin Rd.
Indianapolis, Indiana 46239
Phone: 317-295-8650
Website: www.ctleng.com

LEGEND

- ASPHALT CONCRETE
- GRAVEL_POORLY GRADED
- LEAN CLAY
- SILTY CLAY
- SILT
- GROUND WATER DURING DRILLING
- GROUND WATER AT COMPLETION OF DRILLING
- GROUND WATER AT "N" HOURS AFTER COMPLETION
- W MOISTURE CONTENT IN PERCENT (w)
- (N) STANDARD PENETRATION IN BLOWS PER FOOT (N)

SOIL PROFILE

Scale: As Shown	Beam, Longest & Neff Water Main Replacement
Date: 1/30/20	8th & Wolflin Streets, Mount Vernon, Posey County, Indiana
Drawn By: CG	
Reviewed By	Project No. 20050001IND / Page 1 of 1

00311

Permits

RIGHT OF WAY PERMIT

State Form 41769 (R8 / 5-17)

Approved by State Board of Accounts, 2017

Approved by Auditor of State, 2017

STATE OF INDIANA
INDIANA DEPARTMENT OF TRANSPORTATION

Type of Permit:

☐ Occupancy (Above Ground) ☒ Occupancy (Below Ground) ☐ Railroad ☐ Miscellaneous ☐ Shared Use

District	Subdistrict	Telephone number
Vincennes		

Project locations:
Intersection of SR 62 (4th Street) and Wolflin Street in Mt. Vernon

Reference pt. number
6.56

Project description:

This project is replacement of an aging water main. The project will require boring under the intersection to install casing and carrier pipe. Reconnection to existing mains will take place outside of INDOT R/W.

Project purpose:

Replace aging water main with new, larger water main. No additional customers are being added by this project.

Bond required:	If Yes, Penal Sum	Bond number
☒ Yes ☐ No	$ 10000	999036246

PERMIT FEE: (Make check or bank draft payable to "Indiana Department of Transportation") $ 0
Fee amounts per IC 8-23-2-6(13); fee schedule address: http://www.in.gov/indot/2727.htm

SPECIAL PROVISIONS: See attached additional special provisions.

THE APPLICANT AGREES TO INDEMNIFY, DEFEND, EXCULPATE, AND HOLD HARMLESS THE STATE OF INDIANA, ITS OFFICIALS AND EMPLOYEES FROM ANY LIABILITY DUE TO LOSS, DAMAGE, INJURIES, OR OTHER CASUALTIES OF WHATSOEVER KIND, OR BY WHOMSOEVER CAUSED, TO THE PERSON OR PROPERTY OF ANYONE ON OR OFF THE RIGHT-OF-WAY ARISING OUT OF, OR RESULTING FROM THE ISSUANCE OF THIS PERMIT OR THE WORK CONNECTED THEREWITH, OR FROM THE INSTALLATION, EXISTENCE, USE, MAINTENANCE, CONDITIONS, REPAIRS, ALTERATION, OR REMOVAL OF ANY EQUIPMENT OR MATERIAL, WHETHER DUE IN WHOLE OR IN PART TO THE NEGLIGENT ACTS OR OMISSIONS (1) OF THE STATE, ITS OFFICIALS, AGENTS, OR EMPLOYEES; OR (2) OF THE APPLICANT, HIS AGENTS, OR EMPLOYEES, OR OTHER PERSONS ENGAGED IN THE PERFORMANCE OF THE WORK, OR (3) THE JOINT NEGLIGENCE OF ANY OF THEM; INCLUDING ANY CLAIMS ARISING OUT OF THE WORKMEN'S COMPENSATION ACT OR ANY OTHER LAW, ORDINANCE, ORDER, OR DECREE. THE APPLICANT ALSO AGREES TO PAY ALL REASONABLE EXPENSES AND ATTORNEY'S FEES INCURRED BY OR IMPOSED ON THE STATE IN CONNECTION HEREWITH IN THE EVENT THAT THE APPLICANT SHALL DEFAULT UNDER THE PROVISIONS OF THIS PARAGRAPH.

Signature of permit applicant	Printed name of permit applicant
	Bryce Anderson

Name of company organization	Telephone number
Beam, Longest & Neff, LLC	(812) 327-4371 Ext. 7515

Address (number and street, city, state, ZIP code)
505 South Woodscrest Drive Bloomington, IN 47401

Inspector
Dwayne Detzer

District Regulatory Supervisor
Randy Carie

District Director
Rusty Fowler

District addresses can be found at: https://entapps.indot.in.gov/dotmaps/districtmaps/

Application number

Road number

County number

Expiration date

Issue date

Permit number

RIGHT OF WAY PERMIT

STATE OF INDIANA
INDIANA DEPARTMENT OF TRANSPORTATION

ADDITIONAL SPECIAL PROVISIONS

Type II Safety Vest MUST be worn on
INDOT Right-of Way.
The Federal rule 23 CFR part 634 Requires all non Indiana workers along a roadway-including emergency workers, contract highway workers, and media representatives -to wear high-visibility safety gear. High-visibility gear is made of fluorescent yellow-green fabric and features retro-reflective stripes. The bright fabric and reflective material allows motorists to see workers in the highway right-of-way at a greater distance and helps drivers avoid hitting the worker - greatly improving safety for the worker in the right-of-way. All safety gear should be approved by the American National Standards Institute (ANSI).
When on Right OF Way for nighttime work, class III PPE is recommended for flaggers and all other workers.

A copy of this permit must be on site with crew or supervisor while working on INDOT Right of Way.

Please notify the investigator assigned to this permit before preceding with work, and when work is complete.

Dwayne Detzer Cell # 812.881.7631

Application number

Road number

County number

Expiration date

Issue date

Permit number

INDOT - PERMITS DIVISION

UTILITY PERMITS (OTHER THAN BROADBAND)

BORING AND JACKING SPECIFICATIONS WORKSHEET

PLEASE FILL-IN ALL NECESSARY INFORMATION AND DIMENSIONS ON DRAWINGS

Tracking # T0000135473

Application/Permit Number

SR 62 — Roadway

Posey — County

Pit dimensions

Pit #1 type (check one)	Pit: #2 type (check one)
☑ Bore	☐ Bore
☐ Receive	☑ Receive
L **30'**	L **10'**
W **10'**	W **10'**
H **8'**	H **8'**

Type of permit: (Check all that apply)

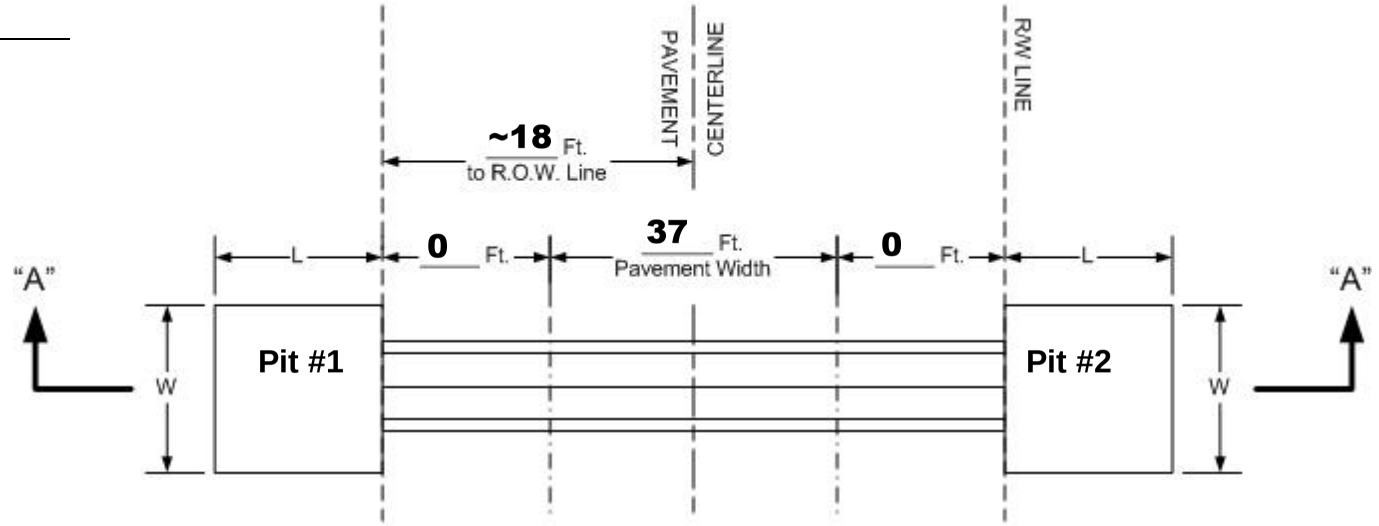
☐ Gas	☐ Telephone
☑ Water	☐ Electric
☐ Oil	☐ Cable
☐ Sewer	☐ Drainage
☐ Other (explain):	

Dimensions of casing and carrier (in feet)

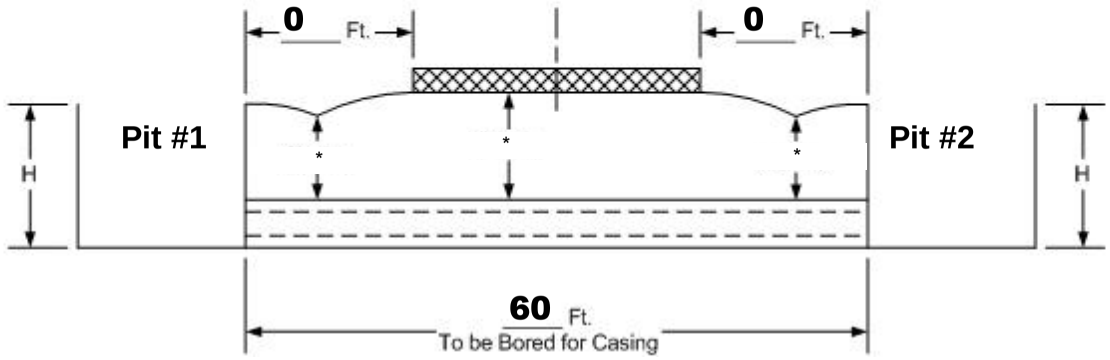
RJ PVC — Casing type	**PVC** — Carrier type
60' — Length	**60'** — Length
16" — Diameter, **DR-18** — Thickness	**8"** — Diameter

Location: (RRP if available)

PLAN VIEW



SECTION "A-A"



*Minimum depth depends on type of utility permit.

All installations must conform with current INDOT Utility Accommodation Policy.

Updated: Dec. 2019

5.0 Pipelines

5.0-(01) General

1. General. All pipelines will provide sufficient strength to withstand internal design pressures. All pipelines will provide sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, etc. All pipelines will be of satisfactory durability to withstand the conditions to which they may be subjected. All pipelines must meet any other applicable codes or industry standards.

2. Encasement. Pipelines with encasements will consist of a pipe or other separate structure around and outside of the carrier line. Encasements may be metallic or nonmetallic. The encasement will be of sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, etc. Casing strength will meet or exceed the structural requirements for drainage culverts. Casing materials must be of satisfactory durability to withstand the conditions to which they may be subjected. When used, encasement will extend under the median, from top of back slope to top of back slope for cut sections, 5 ft beyond the toe of slope under fill sections, 5 ft beyond the back of the curb, and 5 ft beyond any structure which the lines passes under or through. Encasement may be omitted under medians that are

substantially wider than normal standards for such roadway, such as when the roadways are on independent alignments.

3. Manholes, Vaults, Pits and Hand Holes. Generally, manholes, vaults and pits are discouraged from being placed in the pavement, shoulders or curbs of any roadway. However, if they are permitted in the roadway, they should be installed outside the normal wheel path and away from intersections. In general these types of access points are limited to those necessary to install and service the lines. They will be placed directly in line with the facilities and of the minimum width to accomplish their intended function. They will be installed so the top of the facility is flush with the roadway or ground surface. They will provide sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, etc.

4. Clearances. Vertical and horizontal clearances between a pipeline and a highway structure, other highway appurtenances or utility facilities should be sufficient to allow maintenance of the pipeline and the other items.

5. Depths. The table attached at Appendix A summarizes the minimum depths of cover for underground lines as described herein.

5.0-(02) Liquid Petroleum Lines

1. Depth of Cover for New Lines. All lines that are not under or within 5.0 feet of the roadway will have a minimum depth of cover of 3.0 feet for encased lines and non-encased lines. All lines which are under or within 5.0 feet of the roadway will have a minimum depth of cover under pavement of 4.0 feet for encased and non-encased lines. Further, all lines will be a minimum of 2.0 feet or one half the diameter of the pipe or casing below the pavement structure and subgrade whichever is lower. All lines must have a minimum depth of cover of 4.0 feet under ditches.

2. Depth of Cover for Existing Lines. Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above. Also, existing lines may remain in place with a lesser depth of cover if the pipeline is protected by a reinforced concrete slab which complies with the requirements listed below.

a. Width. The width shall be three times the pipe diameter or encasement diameter whichever is greater but not less than 4.0 feet.

b. Thickness. The thickness shall be a minimum of 6 inches.

c. Reinforcing. The minimum reinforcement shall be No. 4 epoxy coated bars on 12 inch center, or the equivalent.

d. Cover. The cover shall be at least six inches between the slab and top of pipe.

3. Crossings. These may be encased or non-encased. However, only welded steel lines with adequate corrosion protection may be used for non-encased highway crossings.
4. Vents. One or more vents will be provided for each casing or series of casings. For casings longer than 150.0 feet, a vent will be provided at both ends of the casing. On casings of 150.0 feet or less, a vent will be provided at both ends of the casing or a vent will be located at the high end with a marker placed at the low end. Vents will be placed at the right-of-way line immediately above the pipeline and situated so they do not interfere with highway maintenance and are not concealed by vegetation. The name of the utility will be shown on the vents.
5. Markers. The utility will place a readily identifiable and suitable marker immediately above any liquid petroleum line where it crosses the right-of-way line, except where there is a vent.

5.0-(03) Gas Lines, High Pressure

1. Depth of Cover for New Lines. All lines that are not under or within 5.0 feet of the roadway will have a minimum depth of cover of 3.0 feet for encased lines and non-encased lines. All lines which are under or within 5.0 feet of the roadway will have a minimum depth of cover under the pavement of 4.0 feet for encased and non-encased lines. Further, all lines will be a minimum of 2.0 feet or one half the diameter of the pipe or casing below the pavement structure and subgrade whichever is lower. All lines must have a minimum depth of cover of 4.0 feet under ditches.
2. Depth of Cover for Existing Lines. Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above. Also, existing lines may remain in place with a lesser depth of cover if the pipeline is protected by a reinforced concrete slab which complies with the requirements listed below.
a. Width. The width shall be three times the pipe diameter or encasement diameter whichever is greater but not less than 4.0 feet.

b. Thickness. The thickness shall be a minimum of 6 inches.
c. Reinforcing. The minimum reinforcement shall be No. 4 epoxy coated bars on 12 inch center, or the equivalent.
d. Cover. The cover shall be at least six inches between the slab and top of pipe.
3. Crossings. These may be encased or non-encased. However, only welded steel lines with adequate corrosion protection or fusion joined plastic lines may be used for non-encased highway crossings.
4. Vents. One or more vents will be provided for each casing or series of casings. For casings longer than 150.0 ft, a vent will be provided at both ends of the casing. On casings of 150.0 ft or less, a vent will be provided at both ends of the casing or a vent will be located at the high end with a marker placed at the low end. Vents will be placed at the right-of-way line immediately above the pipeline and situated so they do not interfere with highway maintenance and are not concealed by vegetation. The name of the utility will be shown on the vents.
5. Markers. The utility will place a readily identifiable and suitable marker immediately above any high pressure gas line where it crosses the right-of-way line, except where there is a vent.

5.0-(04) Gas Lines, Low Pressure & Medium Pressure

1. Depth of Cover for New Lines. All lines that are not under or within 5.0 feet of the roadway will have a minimum depth of cover of 3.0 feet for encased lines and non-encased lines. All lines which are under or within 5.0 feet of the roadway must have a minimum depth of cover under the pavement of 4.0 feet for encased and non-cased lines. Further, all lines will be a minimum of 2.0 feet or one half the diameter of the pipe or casing below the pavement structure and subgrade whichever is lower. All lines must have a minimum depth of cover of 4.0 feet under ditches.
2. Depth of Cover for Existing Lines. Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above.
3. Crossings. These may be encased or non-encased. Non-encased crossings must be welded steel construction with adequate corrosion protection, fusion joined plastic lines or plastic lines with

no joints under or within 5.0 feet of the roadway.

4. Vents. One or more vents will be provided for each casing or series of casings. For casings longer than 150.0 feet, a vent will be provided at both ends of the casing. On casings of 150.0 feet or less, a vent will be provided at both ends of the casing or a vent will be located at the high end with a marker placed at the low end. Vents will be placed at the right-of-way line immediately above the pipeline and situated so they do not interfere with highway maintenance and are not concealed by vegetation. The name of the utility will be shown on the vents.
5. Markers. The utility will place a readily identifiable and suitable marker immediately above any medium pressure gas line and low-pressure gas line where it crosses the right-of-way line, except where there is a vent.
6. Location. In urban areas existing longitudinal lines may remain in place provided they comply with the following:
a. the lines can be maintained without violating access control;
b. the lines will not interfere with the proposed highway improvement project;
c. the lines are of sufficient strength and durability to withstand the changed conditions and have adequate remaining service life to prevent maintenance, repair or replacement;
d. service access points are adjusted to be flush with the surface to accommodate any changes in grade;
e. service access points are positioned to be out of the normal wheel path to accommodate any changes in traffic patterns and away from intersections; and
f. the lines comply with all other requirements of this policy.

5.0-(05) Water Lines

1. Depth of Cover for New Lines. All lines that are not under or within 5.0 ft of the roadway will have a minimum depth of cover of 3.0 feet. All lines which are under or within 5.0 ft of the roadway will have a minimum depth of cover under the pavement surface of 4.0 feet. Further, all lines will be a minimum of 2.0 feet or one half the diameter of the pipe or casing below the pavement structure and sub-grade whichever is lower. All lines must have a minimum depth of cover of 4.0 feet under ditches.

2. Depth of Cover for Existing Lines. Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above.
3. Crossings. All crossings under the roadway and within 5.0 ft of the roadway must be encased, except service lines of 2 inches diameter or less.
4. Appurtenances. Customer meter pits, sprinkler pits, and similar type features should not be placed within the State highway right of way. Appurtenances will not be located within the pavement. Existing appurtenances may remain if they do not interfere with proposed highway construction, maintenance, operation or safety.
5. Casings. All casings will be sealed at both ends.
6. Markers. The utility will place a readily identifiable and suitable marker immediately above any water line where it crosses the right-of-way line.
7. Location. In urban areas existing longitudinal lines may remain in place provided they comply with the following:
a. the lines can be maintained without violating access control;
b. the lines will not interfere with the proposed highway improvement project;
c. the lines are of sufficient strength and durability to withstand the changed conditions and have adequate remaining service life to prevent maintenance, repair or replacement;
d. service access points are adjusted to be flush with the surface to accommodate any changes in grade;
e. service access points are positioned to be out of the normal wheel path to accommodate any changes in traffic patterns and away from intersections; and
f. the lines comply with all other requirements of this policy.

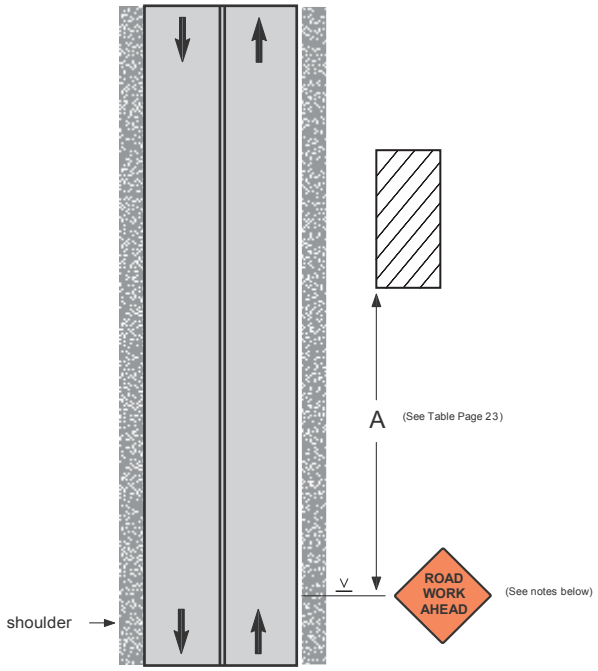
Appendix A Minimum Depth of Cover for Utility Lines

Minimum Depth of Cover for Utility Lines (Feet)	Under or within 5 ft of pavement or structure(1)	Not under or within 5 ft of pavement or structure	Under ditches
Liquid Petroleum Lines Encased	4.0	3.0	4.0
Liquid Petroleum Lines Not Encased	4.0	3.0	4.0
High Pressure Gas Lines Encased	4.0	3.0	4.0
High Pressure Gas Lines Not Encased	4.0	3.0	4.0
Medium & Low Pressure Gas Lines Encased	4.0	3.0	4.0
Medium & Low Pressure Gas Lines Not Encased	4.0	3.0	4.0
Water Lines(2)	4.0	3.0	4.0
Sanitary Lines	4.0	3.0	4.0
Underground Power Lines Encased	4.0	3.0	4.0
Underground Power Lines Not Encased	4.0	3.0	4.0
Underground Communication Lines Encased	4.0	3.0	4.0
Underground Communication Lines Not Encased	4.0	3.0	4.0
Notes			
(1) Minimum 2.0 ft below structure or improvement			
(2) Dependant on Ten State Standards and IDEM			

1. Depth of Cover for New Lines. All lines that are not under or within 5.0 feet of the roadway must have a minimum depth of cover of 3.0 feet. All lines which are under or within 5.0 feet of the roadway will have a minimum depth of cover under the pavement surface of 4.0 feet. Further, all lines will be a minimum of 2.0 feet or one half the diameter of the pipe or casing below the pavement structure and sub-grade whichever is lower. All lines will have a minimum depth of cover of 4.0 feet under ditches.
2. Depth of Cover for Existing Lines. Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above.
3. Crossings. All crossings under the roadway and within 5.0 ft of the roadway must be encased, except non-pressurized lines.
4. Markers. The utility will place a readily identifiable and suitable marker immediately above any sanitary line where it crosses the right-of-way line.
5. Location. In urban areas existing longitudinal lines may remain in place provided they comply with the following:
a. the lines can be maintained without violating access control;
b. the lines will not interfere with the proposed highway improvement project;
c. the lines are of sufficient strength and durability to withstand the changed conditions and have adequate remaining service life to prevent maintenance, repair or replacement;
d. service access points are adjusted to be flush with the surface to accommodate any changes in grade;
e. service access points are positioned to be out of the normal wheel path to accommodate any changes in traffic patterns and away from intersections; and
f. the lines comply with all other requirements of this policy.

Short Term Stationary
(1 to 12 hours)

Work off the Traveled Lanes
Includes Paved Shoulder < 8ft.
(Short Term Stationary - 1 to 12 hours)

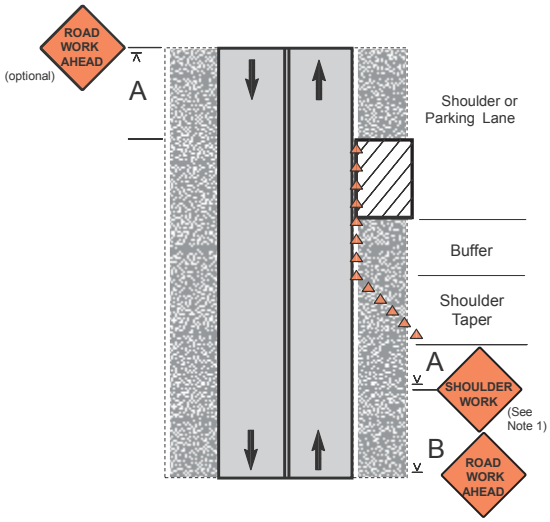


Notes:

1. Other acceptable advance warning signs are those indicating SHOULDER WORK, UTILITY WORK AHEAD, or the WORKERS sign.
2. An advance warning sign should be used; if the work will be performed immediately adjacent to the shoulder, if equipment will cross or move along the roadway, or if the activity may distract motorists.
3. Warning signs may be eliminated if the work space is behind a barrier, more than 2 ft. behind a curb, or 15 ft. or more from the edge of any traveled lane.
4. For work beyond the shoulder, all warning signs and channelizing devices are optional if a vehicle with activated warning lights is used.

Work on Paved Shoulders ≥8ft. or Parking Lanes

(Short Term Stationary – 1 to 12 hours)

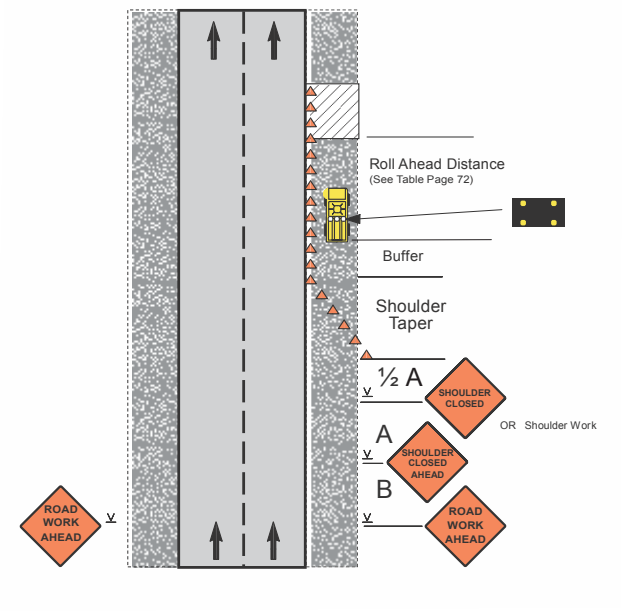


Notes:

1. WORKERS or UTILITY WORK AHEAD signs may be used instead of the SHOULDER WORK or ROAD WORK AHEAD signs.

Speed Limit (mph)	**Sign Spacing A** (ft)	**Sign Spacing B** (ft)	**Buffer** (ft)
25	100	100	160
30	100	100	200
35	350	350	280
40	350	350	320
45	500	500	360
50	500	500	440
55	500	500	520
60	1000	1000	600

Paved Shoulder ≥8ft.
Closed on Divided Roadway
(Short Term Stationary – 1 to 12 hours)



Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Buffer (ft)
35	350	350	280
40	350	350	320
45	500	500	360
50	1000	1600	440
55	1000	1600	520
60	1000	1600	600
65	1000	1600	680
70	1000	1600	760

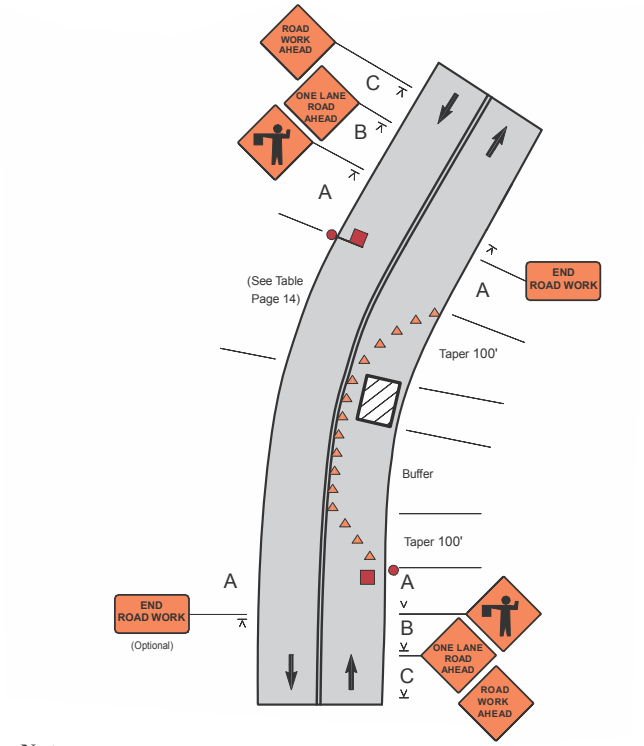
Notes:

1. SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the traveled way.
2. UTILITY WORK AHEAD or WORKERS signs may be used instead of the ROAD WORK AHEAD sign.
3. Use of an arrow display is optional. If used, it shall be operated in the caution mode.
4. On non-freeway multilane roads in urban areas, the sign spacing may be reduced as shown in the chart on page 2.
5. ≤40mph speed limit, shadow vehicle optional.

Lane Closure on a Two-Lane Road

(Two Flagger Operation)

(Short Term Stationary – 1 to 12 hours)



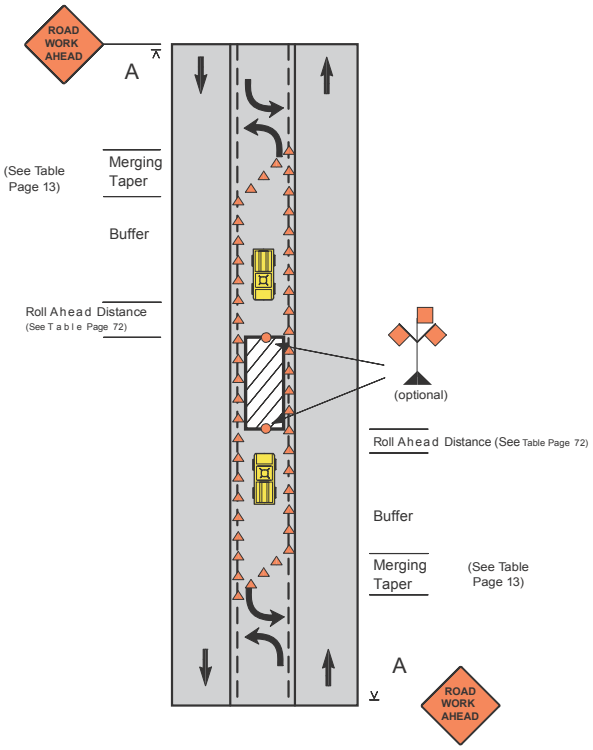
Notes:

1. The flagger or flaggers shall use approved flagging procedures according to the IMUTCD and as shown on page 76.
2. If there is a side road intersection within the work area, additional traffic control, such as flaggers and appropriate signage, may be needed on the side road approaches.

Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Sign Spacing C (ft)	Buffer (ft)
25	100	100	100	160
30	100	100	100	200
35	350	350	350	280
40	350	350	350	320
45	500	500	500	360
50	500	500	500	440
55	500	500	500	520
60	1000	1600	2640	600

Center Turn Lane Closed

(Short Term Stationary – 1 to 12 hours)



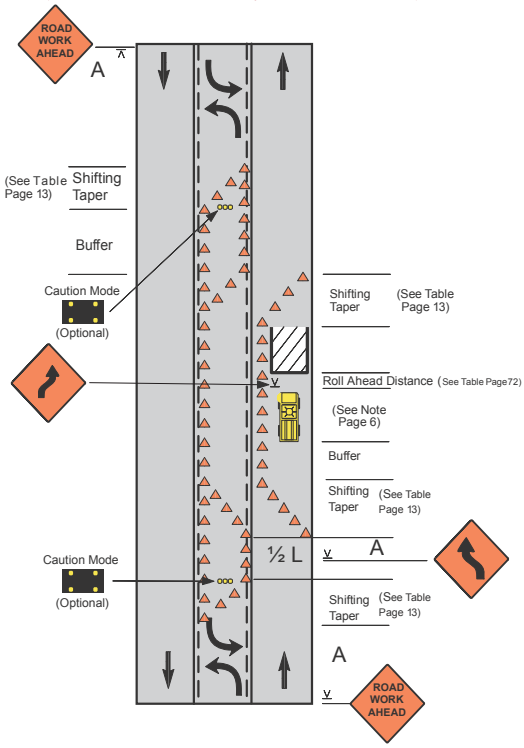
Notes:

1. LARGE ARROW sign may be used at the shift for added visibility.

Speed Limit (mph)	Sign Spacing A (ft)	Buffer (ft)
25	100	160
30	100	200
35	350	280
40	350	320
45	500	360
50	500	440
55	500	520
60	1000	600

Lane Shift on a Three-Lane, Two-Way Road

(Short Term Stationary – 1 to 12 hours)



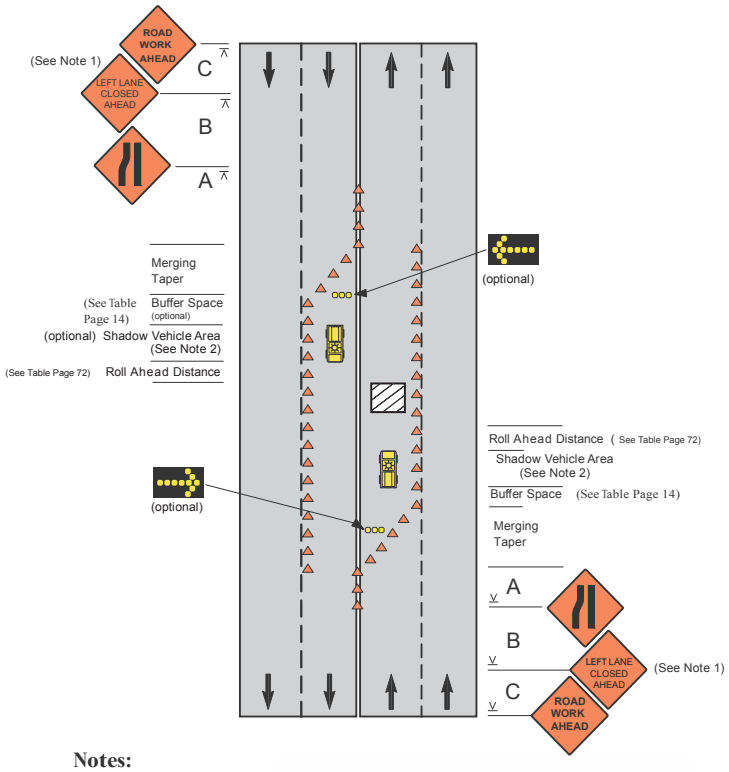
Notes:

1. LARGE ARROW signs may be used at the shifts for added visibility.
2. If the speeds are 30 mph or less, REVERSE TURN signs shall be used instead of REVERSE CURVE.
3. ≤40mph speed limit, shadow vehicle optional.
4. If an arrow board is used on the shadow vehicle, then it shall be in the caution mode.

Speed Limit (mph)	Sign Spacing A (ft)	Buffer (ft)
25	100	160
30	100	200
35	350	280
40	350	320
45	500	360
50	500	440
55	500	520
60	1000	600

Interior Lane Closure on a Four-Lane Undivided Road

(Short Term Stationary – 1 to 12 hours)



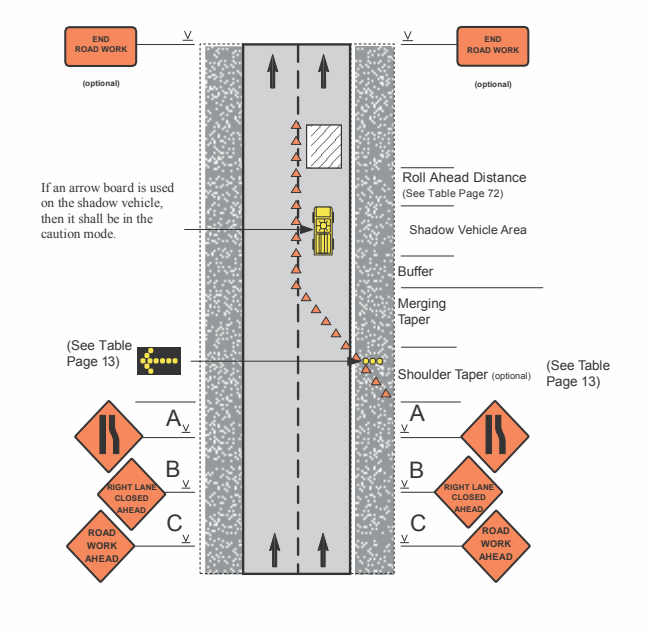
Notes:

1. ≤40mph speed limit, shadow vehicle optional, and LEFT LANE CLOSED AHEAD sign is optional.
2. If arrow boards are used on the shadow vehicles, then they shall be in the caution mode.

Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Sign Spacing C (ft)	Buffer (ft)
25	100	100	100	160
30	100	100	100	200
35	350	350	350	280
40	350	350	350	320
45	500	500	500	360
50	500	500	500	440
55	500	500	500	520
60	1000	1600	2640	600
65	1000	1600	2640	680

Lane Closure on Divided Roadway or One Way Street

(Short Term Stationary – 1 to 12 hours)



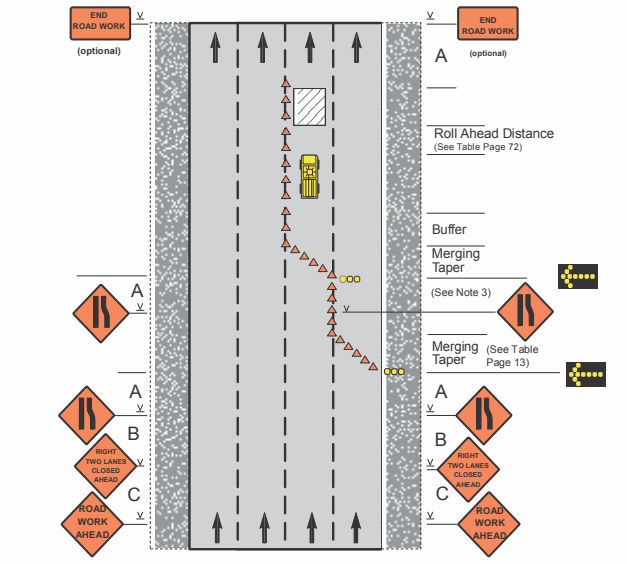
Notes:

1. When a side road intersects the roadway within the work zone, additional devices shall be erected to channelize traffic to/from the side road, and a ROAD WORK AHEAD sign shall be placed on each side road approach.
2. On non-freeway multi-lane roads in urban areas, the sign spacing may be reduced as shown in the chart on page 2.
3. ≤40mph speed limit, shadow vehicle optional.

Speed Limit (mph)	Sign Spacing (ft) A	B	C	Buffer (ft)
30	100	100	100	200
35	350	350	350	280
40	350	350	350	320
45	500	500	500	360
50	1000	1600	2640	440
55	1000	1600	2640	520
60	1000	1600	2640	600
65	1000	1600	2640	680
70	1000	1600	2640	760

Double Lane Closure on Divided Roadway

(Short Term Stationary – 1 to 12 hours)



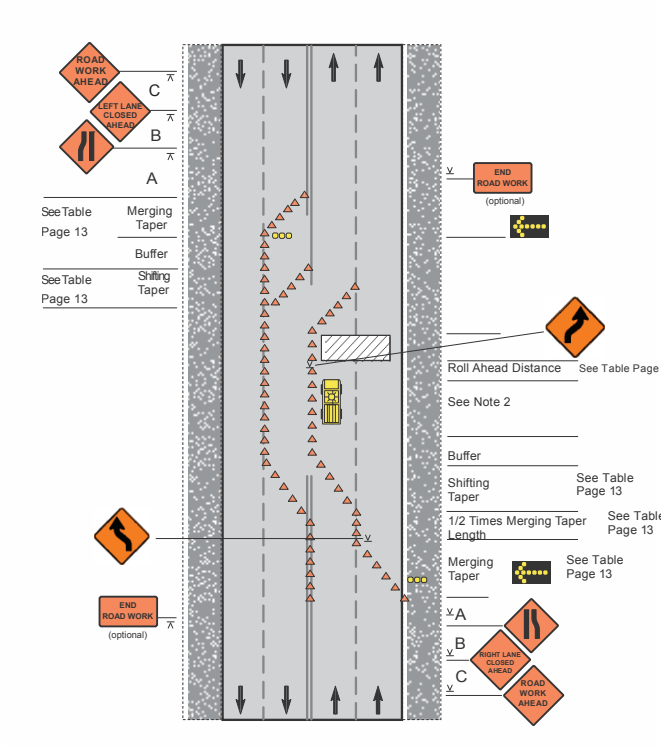
Notes:

1. When a side road intersects the roadway within the work zone, additional devices shall be erected to channelize traffic to/from the side road, and a ROAD WORK AHEAD sign shall be placed on each side road approach.
2. On non-freeway multilane roads in urban areas, the sign spacing may be reduced as shown in the chart on page 2.
3. 1560 feet for ≤65mph.
   1680 feet for 70 mph.
4. If an arrow board is used on the shadow vehicle, then it shall be in the caution mode.

Speed Limit (mph)	Sign Spacing (ft) A	B	C	Buffer (ft)
35	350	350	350	280
40	350	350	350	320
45	500	500	500	360
50	1000	1600	2640	440
55	1000	1600	2640	520
60	1000	1600	2640	600
65	1000	1600	2640	680
70	1000	1600	2640	760

Half Road Closure on Multilane Roadway

(Short Term Stationary – 1 to 12 hours)



Notes:

1. ≤40mph speed limit, shadow vehicle optional.
2. If an arrow board is used on the shadow vehicle, then it shall be in the caution mode.

Speed Limit (mph)	Sign Spacing A (ft)	Sign Spacing B (ft)	Sign Spacing C (ft)	Buffer
25	100	100	100	160
30	100	100	100	200
35	350	350	350	280
40	350	350	350	320
45	500	500	500	360
50	500	500	500	440
55	500	500	500	520
60	1000	1600	2640	600

Half Road Closure on Multilane Roadway (cont.)

(Short Term Stationary – 1 to 12 hours)

Notes:

1. Channelizing devices shall be more closely spaced when the pavement markings conflict with the temporary travel path.
2. When a side road intersects the roadway within the work zone, additional devices shall be erected to channelize traffic to/from the side road and a ROAD WORK AHEAD sign shall be placed on each side road approach.

Type II Safety Vest ***MUST*** be worn on INDOT Right-of Way.

The Federal rule 23 CFR part 634 Requires all non Indiana workers along a roadway-including emergency workers, contract highway workers, and media representatives -to wear high-visibility safety gear. High-visibility gear is made of fluorescent yellow-green fabric and features retro-reflective stripes. The bright fabric and reflective material allows motorists to see workers in the highway right-of-way at a greater distance and helps drivers avoid hitting the worker - greatly improving safety for the worker in the right-of-way. All safety gear should be approved by the American National Standards Institute (ANSI).

When on Right OF Way for nighttime work, class III PPE is recommended for flaggers and all other workers.

FACILITY ENCROACHMENT AGREEMENT

THIS AGREEMENT, Made as of January 22, 2020, effective January 22, 2020, by and between CSX TRANSPORTATION, INC., a Virginia corporation, whose mailing address is 500 Water Street, Jacksonville, Florida 32202, hereinafter called "Licensor," and CITY OF MOUNT VERNON, a municipal corporation, political subdivision or state agency, under the laws of the State of Indiana, whose mailing address is 520 Main Street, Mount Vernon, Indiana 47620, hereinafter called "Licensee," WITNESSETH:

WHEREAS, Licensee desires to construct (unless previously constructed and designated as existing herein), use and maintain the below described facility(ies), hereinafter called "Facilities," over, under or across property owned or controlled by Licensor, at the below described location(s):

1. One (1) eight inch (8") diameter sub-grade pipeline crossing, solely for the conveyance of potable water, located at or near Mount Vernon, Posey County, Indiana, Nashville Zone Division, Mount Vernon Branch Subdivision, Valuation Station 15037+25, Milepost 0ZJ-301.72, Latitude N37:56:00.89, Longitude W87:54:23.51;

2. One (1) existing eight inch (8") diameter sub-grade pipeline crossing to be abandoned per Licensor’s specifications, located at or near Mount Vernon, Posey County, Indiana, Nashville Zone Division, Mount Vernon Branch Subdivision, Valuation Station 15037+25, Milepost 0ZJ-301.72, Latitude N37:56:00.89, Longitude W87:54:23.51;

hereinafter, called the "Encroachment," as shown on print(s) labeled Exhibit "A," attached hereto and made a part hereof;

NOW, THEREFORE, in consideration of the mutual covenants, conditions, terms and agreements herein contained, the parties hereto agree and covenant as follows:

1. LICENSE:

1.1 Subject to Article 17, Licensor, insofar as it has the legal right, power and authority to do so, and its present title permits, and subject to:

(A) Licensor's present and future right to occupy, possess and use its property within the area of the Encroachment for any and all purposes;

(B) All encumbrances, conditions, covenants, easements, and limitations applicable to Licensor's title to or rights in the subject property; and

(C) Compliance by Licensee and its agent or contractor (“Licensee’s Contractor”) with the terms and conditions herein contained;

does hereby license and permit Licensee to construct, maintain, repair, renew, operate, use, alter or change the Facilities at the Encroachment above for the term herein stated, and to remove same upon termination.

1.2 The term Facilities, as used herein, shall include only those structures and ancillary facilities devoted exclusively to the transmission usage above within the Encroachment, and as shown on attached Exhibit A.

1.3 No additional structures or other facilities shall be placed, allowed, or maintained by Licensee in, upon or on the Encroachment except upon prior separate written consent of Licensor.

2. ENCROACHMENT FEE; TERM:

2.1 Licensee shall pay Licensor a one-time nonrefundable Encroachment Fee of ONE THOUSAND AND 00/100 U.S. DOLLARS ($1,000.00) upon execution of this Agreement. Licensee agrees that the Encroachment Fee applies only to the original Licensee under this Agreement. In the event of a successor (by merger, consolidation, reorganization and/or assignment) or if the original Licensee changes its name, then Licensee shall be subject to payment of Licensor's current administrative and document preparation fees for the cost incurred by Licensor in preparing and maintaining this Agreement on a current basis.

2.2 However, Licensee assumes sole responsibility for, and shall pay directly (or reimburse Licensor), any additional annual taxes and/or periodic assessments levied against Licensor or Licensor's property solely on account of said Facilities or Encroachment.

2.3 This Agreement shall terminate as herein provided, but shall also terminate upon: (a) Licensee's cessation of use of the Facilities or Encroachment for the purpose(s) above; (b) removal of the Facilities; (c) subsequent mutual consent; and/or (d) failure of Licensee to complete installation within five (5) years from the effective date of this Agreement.

2.4 In further consideration for the license or right hereby granted, Licensee hereby agrees that Licensor shall not be charged or assessed, directly or indirectly, with any part of the cost of the installation of said Facilities and appurtenances, and/or maintenance thereof, or for any public works project of which said Facilities is a part.

3. CONSTRUCTION, MAINTENANCE AND REPAIRS:

3.1 Licensee shall construct, maintain, relocate, repair, renew, alter, and/or remove the Facilities, in a prudent, workmanlike manner, using quality materials and complying with any applicable standard(s) or regulation(s) of Licensor (CSXT Specifications), or Licensee's particular industry, National Electrical Safety Code, or any governmental or regulatory body having jurisdiction over the Encroachment.

3.2 Location and construction of Facilities shall be made strictly in accordance with design(s) and specifications furnished to and approved by Licensor and of material(s) and size(s) appropriate for the purpose(s) above recited.

3.3 All of Licensee's work, and exercise of rights hereunder, shall be undertaken at time(s) satisfactory to Licensor, and so as to eliminate or minimize any impact on or interference with the safe use and operation of Licensor's property and appurtenances thereto.

3.4 In the installation, maintenance, repair and/or removal of said Facilities, Licensee shall not use explosives of any type or perform or cause any blasting without the separate express written consent of Licensor. As a condition to such consent, a representative will be assigned by Licensor to monitor blasting, and Licensee shall reimburse Licensor for the entire cost and/or expense of furnishing said monitor.

3.5 Any repairs or maintenance to the Facilities, whether resulting from acts of Licensee, or natural or weather events, which are necessary to protect or facilitate Licensor's use of its property, shall be made by Licensee promptly, but in no event later than thirty (30) days after Licensee has notice as to the need for such repairs or maintenance.

3.6 Licensor, in order to protect or safeguard its property, rail operations, equipment and/or employees from damage or injury, may request immediate repair or renewal of the Facilities, and if the same is not performed, may make or contract to make such repairs or renewals, at the sole risk, cost and expense of Licensee.

3.7 Neither the failure of Licensor to object to any work done, material used, or method of construction or maintenance of said Encroachment, nor any approval given or supervision exercised by Licensor, shall be construed as an admission of liability or responsibility by Licensor, or as a waiver by Licensor of any of the obligations, liability and/or responsibility of Licensee under this Agreement.

3.8 All work on the Encroachment shall be conducted in accordance with Licensor's safety rules and regulations.

3.9 Licensee hereby agrees to reimburse Licensor any loss, cost or expense (including losses resulting from train delays and/or inability to meet train schedules) arising from any failure of Licensee to make repairs or conduct maintenance as required by Section 3.5 above or from improper or incomplete repairs or maintenance to the Facilities or Encroachment.

3.10 In the event it becomes necessary for the Licensee to deviate from the approved Exhibit, Licensee shall seek prior approval from Licensor, or when applicable, an official field representative of Licensor permitted to approve changes, authorizing the necessary field changes and Licensee shall provide Licensor with complete As-Built Drawings of the completed work. As-Built Drawings shall be submitted to Licensor in either electronic or hard copy form upon the substantial completion of the project and upon Licensor’s request.

3.11 In the event of large scale maintenance/construction work to railroad bridges Licensee is required to protect power lines with insulated covers or comparable safety devices at their costs during construction/maintenance for safety of railroad employees.

4. PERMITS, LICENSES:

4.1 Before any work hereunder is performed, or before use of the Encroachment for the contracted purpose, Licensee, at its sole cost and expense, shall obtain all necessary permit(s) (including but not limited to zoning, building, construction, health, safety or environmental matters), letter(s) or certificate(s) of approval. Licensee expressly agrees and warrants that it shall conform and limit its activities to the terms of such permit(s), approval(s) and authorization(s), and shall comply with all applicable ordinances, rules, regulations, requirements and laws of any governmental authority (State, Federal or Local) having jurisdiction over Licensee's activities, including the location, contact, excavation and protection regulations of the Occupational Safety and Health Act (OSHA) (29 CFR 1926.651(b)), et al., and State "One Call" - "Call Before You Dig" requirements.

4.2 Licensee assumes sole responsibility for failure to obtain such permit(s) or approval(s), for any violations thereof, or for costs or expenses of compliance or remedy.

5. MARKING AND SUPPORT:

5.1 With respect to any subsurface installation or maintenance upon Licensor's property, Licensee, at its sole cost and expense, shall:

(A) support track(s) and roadbed in a manner satisfactory to Licensor;

(B) backfill with satisfactory material and thoroughly tamp all trenches to prevent settling of surface of land and roadbed of Licensor; and

(C) either remove any surplus earth or material from Licensor's property or cause said surplus earth or material to be placed and distributed at location(s) and in such manner Licensor may approve.

5.2 After construction or maintenance of the Facilities, Licensee shall:

(A) Restore any track(s), roadbed and other disturbed property; and

(B) Erect, maintain and periodically verify the accuracy of aboveground markers, in a form approved by Licensor, indicating the location, depth and ownership of any underground Facilities or related facilities.

5.3 Licensee shall be solely responsible for any subsidence or failure of lateral or subjacent support in the Encroachment area for a period of three (3) years after completion of installation.

6. TRACK CHANGES:

6.1 In the event that rail operations and/or track maintenance result in changes in grade or alignment of, additions to, or relocation of track(s) or other facilities, or in the event future use of Licensor's rail corridor or property necessitate any change of location, height or depth in the Facilities or Encroachment, Licensee, at its sole cost and expense and within thirty (30) days after notice in writing from Licensor, shall make changes in the Facilities or Encroachment to accommodate such track(s) or operations.

6.2 If Licensee fails to do so, Licensor may make or contract to make such changes at Licensee's cost.

7. FACILITY CHANGES:

7.1 Licensee shall periodically monitor and verify the depth or height of the Facilities or Encroachment in relation to the existing tracks and facilities, and shall relocate the Facilities or change the Encroachment, at Licensee's expense, should such relocation or change be necessary to comply with the minimum clearance requirements of Licensor.

7.2 If Licensee undertakes to revise, renew, relocate or change in any manner whatsoever all or any part of the Facilities (including any change in voltage or gauge of wire or any change in circumference, diameter or radius of pipe or change in materials transmitted in and through said pipe), or is required by any public agency or court order to do so, plans therefor shall be submitted to Licensor for approval before such change. After approval, the terms and conditions of this Agreement shall apply thereto.

8. INTERFERENCE WITH RAIL FACILITIES:

8.1 Although the Facilities/Encroachment herein permitted may not presently interfere with Licensor's railroad or facilities, in the event that the operation, existence or maintenance of said Facilities, in the sole judgment of Licensor, causes: (a) interference (including, but not limited to, physical or interference from an electromagnetic induction, or interference from stray or other currents) with Licensor's power lines, communication, signal or other wires, train control system, or electrical or electronic apparatus; or (b) interference in any manner, with the operation, maintenance or use of the rail corridor, track(s), structures, pole line(s), devices, other property, or any appurtenances thereto; then and in either event, Licensee, upon receipt of written notice from Licensor of any such interference, and at Licensee's sole risk, cost and expense, shall promptly make such changes in its Facilities or installation, as may be required in the reasonable judgment of the Licensor to eliminate all such interference. Upon Licensee's failure to remedy or change, Licensor may do so or contract to do so at Licensee's sole cost.

8.2 Without assuming any duty hereunder to inspect the Facilities, Licensor hereby reserves the right to inspect same and to require Licensee to undertake repairs, maintenance or adjustments to the Facilities, which Licensee hereby agrees to make promptly, at Licensee's sole cost and expense.

9. RISK, LIABILITY, INDEMNITY:

With respect to the relative risk and liabilities of the parties, it is hereby agreed that:

9.1 To the fullest extent permitted by State law (constitutional or statutory, as amended), Licensee hereby agrees to, defend, indemnify, and hold Licensor harmless from and against any and all liability, loss, claim, suit, damage, charge or expense which Licensor may suffer, sustain, incur or in any way be subjected to, on account of death of or injury to any person whomsoever (including officers, agents, employees or invitees of Licensor), and for damage to or loss of or destruction of any property whatsoever, arising out of, resulting from, or in any way connected with the construction, repair, maintenance, replacement, presence, existence, operations, use or removal of the Facilities or any structure in connection therewith, or restoration of premises of Licensor to good order or condition after removal, EXCEPT when proven to have been caused solely by the willful misconduct or gross negligence of Licensor. HOWEVER, to the fullest extent permitted by State law, during any period of actual construction, repair, maintenance, replacement or removal of the Facilities, wherein agents, equipment or personnel of Licensee are on the railroad rail corridor, Licensee's liability hereunder shall be absolute, irrespective of any joint, sole or contributory fault or negligence of Licensor.

9.2 Licensee’s Contractor shall hereby agree to, defend, indemnify, and hold Licensor harmless from and against any and all liability, loss, claim, suit, damage, charge or expense which Licensor may suffer, sustain, incur or in any way be subjected to, on account of death of or injury to any person whomsoever (including officers, agents, employees or invitees of Licensor), and for damage to or loss of or destruction of any property whosoever, arising out of resulting from, or in any way connected with the construction, repair, maintenance, replacement, presence, existence, operations, use or removal of the Facilities or any structure in connection therewith, or restoration of premises of Licensor to good order or condition after removal, EXCEPT when proven to have been caused solely by the willful misconduct or gross negligence of Licensor. HOWEVER, to the fullest extent permitted by State law, during any period of actual construction, repair, maintenance, replacement or removal of the Facilities, wherein agents, equipment or personnel of Licensee are on the railroad rail corridor, Licensee’s liability hereunder shall be absolute, irrespective of any joint, sole or contributory fault or negligence of Licensor.

9.3 Use of Licensor's rail corridor involves certain risks of loss or damage as a result of the rail operations. Notwithstanding Section 9.1, Licensee expressly assumes all risk of loss and damage to Licensee's Property or the Facilities in, on, over or under the Encroachment, including loss of or any interference with use or service thereof, regardless of cause, including electrical field creation, fire or derailment resulting from rail operations. For this Section, the term "Licensee's Property" shall include property of third parties situated or placed upon Licensor's rail corridor by Licensee or by such third parties at request of or for benefit of Licensee.

9.4 To the fullest extent permitted by State law, as above, Licensee assumes all responsibility for, and agrees to defend, indemnify and hold Licensor harmless from: (a) all

claims, costs and expenses, including reasonable attorneys' fees, as a consequence of any sudden or nonsudden pollution of air, water, land and/or ground water on or off the Encroachment area, arising from or in connection with the use of this Encroachment or resulting from leaking, bursting, spilling, or any escape of the material transmitted in or through the Facilities; (b) any claim or liability arising under federal or state law dealing with either such sudden or nonsudden pollution of air, water, land and/or ground water arising therefrom or the remedy thereof; and (c) any subsidence or failure of lateral or subjacent support of the tracks arising from such Facilities leakage.

9.5 Notwithstanding Section 9.1, Licensee also expressly assumes all risk of loss which in any way may result from Licensee's failure to maintain either required clearances for any overhead Facilities or the required depth and encasement for any underground Facilities, whether or not such loss(es) result(s) in whole or part from Licensor's contributory negligence or joint fault.

9.6 Obligations of Licensee hereunder to release, indemnify and hold Licensor harmless shall also extend to companies and other legal entities that control, are controlled by, subsidiaries of, or are affiliated with Licensor, as well as any railroad that operates over the rail corridor on which the Encroachment is located, and the officers, employees and agents of each.

9.7 If a claim is made or action is brought against Licensor, and/or its operating lessee, for which Licensee may be responsible hereunder, in whole or in part, Licensee shall be notified to assume the handling or defense of such claim or action; but Licensor may participate in such handling or defense.

9.8 Notwithstanding anything contained in this Agreement, the limitation of liability contained in the state statutes, as amended from time to time, shall not limit Licensor's ability to collect under the insurance policies required to be maintained under this Agreement.

10. INSURANCE:

10.1 Prior to commencement of surveys, installation or occupation of premises pursuant to this Agreement, Licensee shall procure and shall maintain during the continuance of this Agreement, at its sole cost and expense, a policy of

(i) Statutory Worker's Compensation and Employers Liability Insurance with available limits of not less than ONE MILLION AND 00/100 U.S. DOLLARS ($1,000,000.00).

(ii) Commercial General Liability coverage (inclusive of contractual liability) with available limits of not less than FIVE MILLION AND 00/100 U.S. DOLLARS ($5,000,000.00)in combined single limits for bodily injury and property damage and covering the contractual liabilities assumed under this Agreement and naming Licensor, and/or its designee, as additional insured. The evidence of insurance coverage shall be endorsed to provide for thirty (30) days' notice to Licensor, or its designee, prior to cancellation or modification of any policy. Mail CGL

certificate, along with agreement, to CSX Transportation, Inc., Speed Code J180, 500 Water Street, Jacksonville, FL 32202. On each successive year, send certificate to RenewalCOI@csx.com.

(iii) Business automobile liability insurance with available limits of not less than ONE MILLION AND 00/100 U.S. DOLLARS ($1,000,000.00) combined single limit for bodily injury and/or property damage per occurrence naming Licensor, and/or its designee, as additional insured.

(iv) The insurance policies must contain a waiver of subrogation against CSXT and its Affiliates, except where prohibited by law. All insurance companies must be A. M. Best rated A- and Class VII or better.

(v) Such other insurance as Licensor may reasonably require.

(vi) Licensee shall require its contractors to meet minimum insurance requirements above when performing work in relation to this agreement. Licensee will procure and review contractor's insurance certificates to confirm requirements are met. Licensor may request a copy of the insurance certificate.

10.2 If Licensee's Contractor's existing CGL policy(ies) do(es) not automatically cover Licensee's contractual liability during periods of survey, installation, maintenance and continued occupation, a specific endorsement adding such coverage shall be purchased by Licensee's Contractor. If said CGL policy is written on a "claims made" basis instead of a "per occurrence" basis, Licensee shall arrange for adequate time for reporting losses. Failure to do so shall be at Licensee's sole risk.

10.3 Licensor, or its designee, may at any time request evidence of insurance purchased by Licensee to comply with this Agreement. Failure of Licensee to comply with Licensor's request shall be considered a default by Licensee.

10.4 To the extent permitted by law and without waiver of the sovereign immunity of Licensee, securing such insurance shall not limit Licensee's liability under this Agreement, but shall be security therefor.

10.5 (A) In the event Licensee finds it necessary to perform construction or demolition operations within fifty feet (50') of any operated railroad track(s) or affecting any railroad bridge, trestle, tunnel, track(s), roadbed, overpass or underpass, Licensee shall: (a) notify Licensor; and (b) require Licensee's Contractor(s) performing such operations to procure and maintain during the period of construction or demolition operations, at no cost to Licensor,

i) Railroad Protective Liability (RPL) Insurance, naming Licensor, and/or its designee, as Named Insured, written on the current ISO/RIMA Form (ISO Form No. CG 00 35 04 13) with limits of FIVE MILLION AND 00/100 U.S. DOLLARS ($5,000,000.00) per occurrence for bodily injury and property damage, with at least TEN MILLION AND 00/100 U.S. DOLLARS ($10,000,000.00) aggregate limit per annual policy period. The

original of such RPL policy shall be sent to and approved by Licensor prior to commencement of such construction or demolition. Licensor reserves the right to demand higher limits.

OR

ii) The CGL policy shall include endorsement ISO CG 24 17 and the Auto Liability Policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsements are not included, RPL insurance must be provided.

(B) At Licensor's option, in lieu of purchasing RPL insurance or the 50 foot endorsements from an insurance company (but not CGL insurance), Licensee may pay Licensor, at Licensor's current rate at time of request, the cost of adding this Encroachment, or additional construction and/or demolition activities, to Licensor's Railroad Protective Liability (RPL) Policy for the period of actual construction. This coverage is offered at Licensor's discretion and may not be available under all circumstances.

10.6 Notwithstanding the provisions of Sections 10.1 and 10.2, Licensee, pursuant to State Statute(s), may self-insure or self-assume, in any amount(s), any contracted liability arising under this Agreement, under a funded program of self-insurance, which fund will respond to liability of Licensee imposed by and in accordance with the procedures established by law.

11. GRADE CROSSINGS; PROTECTION SERVICES:

11.1 Nothing herein contained shall be construed to permit Licensee or Licensee's contractor to move any vehicles or equipment over the track(s), except at public road crossing(s), without separate prior written approval of Licensor.

11.2 If Licensor deems it advisable, during any construction, maintenance, repair, renewal, alteration, change or removal of said Facilities, to place watchmen, flagmen, or field construction managers for protection of operations of Licensor or others on Licensor's rail corridor at the Encroachment, and to keep persons, equipment or materials away from the track(s), Licensor shall have the right to do so at the expense of Licensee, but Licensor shall not be liable for failure to do so.

12. LICENSOR'S COSTS:

12.1 Any additional or alternative costs or expenses incurred by Licensor to accommodate Licensee's continued use of Licensor's property as a result of track changes or wire changes shall also be paid by Licensee.

12.2 Licensor's expense for wages ("force account" charges) and materials for any work performed at the expense of Licensee pursuant hereto shall be paid by Licensee within thirty (30) days after receipt of Licensor's bill therefor. Licensor may, at its discretion, request an advance deposit for estimated Licensor costs and expenses.

12.3 Such expense shall include, but not be limited to, cost of railroad labor and supervision under "force account" rules, plus current applicable overhead percentages, the actual cost of materials, and insurance, freight and handling charges on all material used. Equipment rentals shall be in accordance with Licensor's applicable fixed rate. Licensor may, at its discretion, require advance deposits for estimated costs of such expenses and costs.

13. DEFAULT, BREACH, WAIVER:

13.1 The proper and complete performance of each covenant of this Agreement shall be deemed of the essence thereof, and in the event Licensee fails or refuses to fully and completely perform any of said covenants or remedy any breach within thirty (30) days after receiving written notice from Licensor to do so (or within forty-eight (48) hours in the event of notice of a railroad emergency), Licensor shall have the option of immediately revoking this Agreement and the privileges and powers hereby conferred, regardless of encroachment fee(s) having been paid in advance for any annual or other period. Upon such revocation, Licensee shall make removal in accordance with Article 14.

13.2 No waiver by Licensor of its rights as to any breach of covenant or condition herein contained shall be construed as a permanent waiver of such covenant or condition, or any subsequent breach thereof, unless such covenant or condition is permanently waived in writing by Licensor.

13.3 Neither the failure of Licensor to object to any work done, material used, or method of construction or maintenance of said Encroachment, nor any approval given or supervision exercised by Licensor, shall be construed as an admission of liability or responsibility by Licensor, or as a waiver by Licensor of any of the obligations, liability and/or responsibility of Licensee under this Agreement.

14. TERMINATION, REMOVAL:

14.1 All rights which Licensee may have hereunder shall cease upon the date of (a) termination, (b) revocation, or (c) subsequent agreement, or (d) Licensee's removal of the Facility from the Encroachment. However, neither termination nor revocation of this Agreement shall affect any claims and liabilities which have arisen or accrued hereunder, and which at the time of termination or revocation have not been satisfied; neither party, however, waiving any third party defenses or actions.

14.2 Within thirty (30) days after revocation or termination, Licensee, at its sole risk and expense, shall (a) remove the Facilities from the rail corridor of Licensor, unless the parties hereto agree otherwise, (b) restore the rail corridor of Licensor in a manner satisfactory to Licensor, and (c) reimburse Licensor any loss, cost or expense of Licensor resulting from such removal.

15. NOTICE:

15.1 Licensee shall give Licensor at least thirty (30) days written notice before doing any work on Licensor's rail corridor, except that in cases of emergency shorter notice may be given. Licensee shall provide proper notification as follows:

a. For non-emergencies, Licensee shall submit online via the CSX Property Portal from Licensor's web site, via web link: https://propertyportal.csx.com/pub_ps_res/ps_res/jsf/public/index.faces

b. For emergencies, Licensee shall complete all of the steps outlined in Section 15.1 a. above, and shall also include detailed information of the emergency. Licensee shall also call and report details of the emergency to Licensor's Rail Operations Emergency Telephone Number: 1-800-232-0144. In the event Licensor needs to contact Licensee concerning an emergency involving Licensee's Facility(ies), the emergency phone number for Licensee is: 812-838-2136.

15.2 All other notices and communications concerning this Agreement shall be addressed to Licensee at the address above, and to Licensor at the address shown on Page 1, c/o CSXT Contract Management, J180; or at such other address as either party may designate in writing to the other.

15.3 Unless otherwise expressly stated herein, all such notices shall be in writing and sent via Certified or Registered Mail, Return Receipt Requested, or by courier, and shall be considered delivered upon: (a) actual receipt, or (b) date of refusal of such delivery.

16. ASSIGNMENT:

16.1 The rights herein conferred are the privileges of Licensee only, and Licensee shall obtain Licensor's prior written consent to any assignment of Licensee's interest herein; said consent shall not be unreasonably withheld.

16.2 Subject to Sections 2 and 16.1, this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors or assigns.

16.3 Licensee shall give Licensor written notice of any legal succession (by merger, consolidation, reorganization, etc.) or other change of legal existence or status of Licensee, with a copy of all documents attesting to such change or legal succession, within thirty (30) days thereof.

16.4 Licensor expressly reserves the right to assign this Agreement, in whole or in part, to any grantee, lessee, or vendee of Licensor's underlying property interests in the Encroachment, upon written notice thereof to Licensee.

16.5 In the event of any unauthorized sale, transfer, assignment, sublicense or encumbrance of this Agreement, or any of the rights and privileges hereunder, Licensor, at its

option, may revoke this Agreement by giving Licensee or any such assignee written notice of such revocation; and Licensee shall reimburse Licensor for any loss, cost or expense Licensor may incur as a result of Licensee's failure to obtain said consent.

17. TITLE:

17.1 Licensee understands that Licensor occupies, uses and possesses lands, rights-of-way and rail corridors under all forms and qualities of ownership rights or facts, from full fee simple absolute to bare occupation. Accordingly, nothing in this Agreement shall act as or be deemed to act as any warranty, guaranty or representation of the quality of Licensor's title for any particular Encroachment or segment of Rail Corridor occupied, used or enjoyed in any manner by Licensee under any rights created in this Agreement. It is expressly understood that Licensor does not warrant title to any Rail Corridor and Licensee will accept the grants and privileges contained herein, subject to all lawful outstanding existing liens, mortgages and superior rights in and to the Rail Corridor, and all leases, licenses and easements or other interests previously granted to others therein.

17.2 The term "license," as used herein, shall mean with regard to any portion of the Rail Corridor which is owned by Licensor in fee simple absolute, or where the applicable law of the State where the Encroachment is located otherwise permits Licensor to make such grants to Licensee, a "permission to use" the Rail Corridor, with dominion and control over such portion of the Rail Corridor remaining with Licensor, and no interest in or exclusive right to possess being otherwise granted to Licensee. With regard to any other portion of Rail Corridor occupied, used or controlled by Licensor under any other facts or rights, Licensor merely waives its exclusive right to occupy the Rail Corridor and grants no other rights whatsoever under this Agreement, such waiver continuing only so long as Licensor continues its own occupation, use or control. Licensor does not warrant or guarantee that the license granted hereunder provides Licensee with all of the rights necessary to occupy any portion of the Rail Corridor. Licensee further acknowledges that it does not have the right to occupy any portion of the Rail Corridor held by Licensor in less than fee simple absolute without also receiving the consent of the owner(s) of the fee simple absolute estate. Further, Licensee shall not obtain, exercise or claim any interest in the Rail Corridor that would impair Licensor's existing rights therein.

17.3 Licensee agrees it shall not have nor shall it make, and hereby completely and absolutely waives its right to, any claim against Licensor for damages on account of any deficiencies in title to the Rail Corridor in the event of failure or insufficiency of Licensor's title to any portion thereof arising from Licensee's use or occupancy thereof.

17.4 Licensee agrees to fully and completely indemnify and defend all claims or litigation for slander of title, overburden of easement, or similar claims arising out of or based upon the Facilities placement, or the presence of the Facilities in, on or along any Encroachment(s), including claims for punitive or special damages.

17.5 Licensee shall not at any time own or claim any right, title or interest in or to Licensor's property occupied by the Encroachments, nor shall the exercise of this Agreement for

any length of time give rise to any right, title or interest in Licensee to said property other than the license herein created.

17.6 Nothing in this Agreement shall be deemed to give, and Licensor hereby expressly waives, any claim of ownership in and to any part of the Facilities.

17.7 Licensee shall not create or permit any mortgage, pledge, security, interest, lien or encumbrances, including without limitation, tax liens and liens or encumbrances with respect to work performed or equipment furnished in connection with the construction, installation, repair, maintenance or operation of the Facilities in or on any portion of the Encroachment (collectively, "Liens or Encumbrances"), to be established or remain against the Encroachment or any portion thereof or any other Licensor property.

17.8 In the event that any property of Licensor becomes subject to such Liens or Encumbrances, Licensee agrees to pay, discharge or remove the same promptly upon Licensee's receipt of notice that such Liens or Encumbrances have been filed or docketed against the Encroachment or any other property of Licensor; however, Licensee reserves the right to challenge, at its sole expense, the validity and/or enforceability of any such Liens or Encumbrances.

18. GENERAL PROVISIONS:

18.1 This Agreement, and the attached specifications, contains the entire understanding between the parties hereto.

18.2 Neither this Agreement, any provision hereof, nor any agreement or provision included herein by reference, shall operate or be construed as being for the benefit of any third person.

18.3 Except as otherwise provided herein, or in any Rider attached hereto, neither the form of this Agreement, nor any language herein, shall be interpreted or construed in favor of or against either party hereto as the sole drafter thereof.

18.4 This Agreement is executed under current interpretation of applicable Federal, State, County, Municipal or other local statute, ordinance or law(s). However, each separate division (paragraph, clause, item, term, condition, covenant or agreement) herein shall have independent and severable status for the determination of legality, so that if any separate division is determined to be void or unenforceable for any reason, such determination shall have no effect upon the validity or enforceability of each other separate division, or any combination thereof.

18.5 This Agreement shall be construed and governed by the laws of the state in which the Facilities and Encroachment are located.

18.6 If any amount due pursuant to the terms of this Agreement is not paid by the due date, it will be subject to Licensor's standard late charge and will also accrue interest at

eighteen percent (18%) per annum, unless limited by local law, and then at the highest rate so permitted.

18.7 Licensee agrees to reimburse Licensor for all reasonable costs (including attorney's fees) incurred by Licensor for collecting any amount due under the Agreement.

18.8 The provisions of this License are considered confidential and may not be disclosed to a third party without the consent of the other party(s), except: (a) as required by statute, regulation or court order, (b) to a parent, affiliate or subsidiary company, (c) to an auditing firm or legal counsel that are agreeable to the confidentiality provisions, or (d) to Lessees of Licensor's land and/or track who are affected by the terms and conditions of this Agreement and will maintain the confidentiality of this Agreement.

18.9 Within thirty (30) days of an overpayment in a cumulative total amount of One Hundred Dollars ($100.00) or more by Licensee to Licensor, Licensee shall notify Licensor in writing with documentation evidencing such overpayment. Licensor shall refund the actual amount of Licensee’s overpayment within 120 days of Licensor’s verification of such overpayment.

18.10 This Agreement may be executed in any number of counterparts, and such counterparts may be exchanged by electronic transmission. Upon execution by the parties hereto, each counterpart shall be deemed an original and together shall constitute one and the same instrument. A fully executed copy of this Agreement by electronic transmission shall be deemed to have the same legal effect as delivery of an original executed copy of this Agreement for all purposes.

19. CONTRACTOR’S ACCEPTANCE:

19.1 Licensee shall observe and abide by, and shall require Licensee’s Contractors to observe and abide by the terms, conditions and provisions set forth in this Agreement. Prior to any commencement of work under this Agreement by Licensee’s Contractor, Licensee shall require Licensee’s Contractor to execute and deliver to Licensor the Contractor Acceptance form attached hereto as Schedule A to acknowledge Licensee’s Contractor’s agreement to observe and abide by terms and conditions of the Agreement.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate (each of which shall constitute an original) as of the effective date of this Agreement.

Witness for Licensor:

_____

CSX TRANSPORTATION, INC.

By:_____

Print/Type Name:_____

Print/Type Title:_____

Witness for Licensee:

_____

CITY OF MOUNT VERNON

By:_____

Who, by the execution hereof, affirms that he/she has the authority to do so and to bind the Licensee to the terms and conditions of this Agreement.

Print/Type Name:_____

Print/Type Title:_____

Tax ID No.:_____

Authority under Ordinance or

Resolution No._____,

Dated _____.

Schedule "A"

CONTRACTOR'S ACCEPTANCE

This Amendment is and shall be a part of Agreement No. CSX902331, and is incorporated therein.

To and for the benefit of CSX TRANSPORTATION, Inc. (Licensor") and to induce Licensor to permit Contractor on or about Licensor's property for the purposed of performing work in accordance with the Agreement dated January 22, 2020, between Licensee and Licensor, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to Sections 3, 9, 10 of the Agreement.

Witness for Licensor:

_____

CSX TRANSPORTATION INC.

By:_____

Print/Type Name:_____

Print/Type Title:_____

Witness for Licensee's Contractor

_____

_____
LICENSEE'S CONTRACTOR

By: _____
Who, by the execution hereof, affirms that he/she has the authority to do so and to bind the Licensee has the authority to do so and to bind the Licensee to the terms and conditions of this Agreement

NAME: _____

TITLE: _____

DATE: _____

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Supplementary Conditions

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

No Supplementary Conditions in this Article.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

B. *Evidence of Contractor’s Insurance:* When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **four (4)** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement).

2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol (“EDP” or “Protocol”) for exchange of electronic transmittals.

1. *Basic Requirements*

a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.

b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.

c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. *System Infrastructure for Electronic Document Exchange*

a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.

1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 15 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.

2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.

b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.

e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.

f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.

g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

C. *Software Requirements for Electronic Document Exchange; Limitations*

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.

a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.

2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a

software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. *Requests by Contractor for Electronic Documents in Other Formats*

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.

2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:

a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.

b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.

c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.

d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.

3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at $155 per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

SC-3.01 Delete Paragraph 3.01.C in its entirety.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely: **[If there are no such reports, so indicate in the table.]**

Report Title	Date of Report	Technical Data
Geotechnical Investigation Water Main Replacement 8th and Wolflin Streets	February 6, 2020	**Soil borings and recommendations**

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically

identifies the Technical Data upon which Contractor may rely: **[If there are no such drawings, so indicate in the table.]**

Drawings Title	Date of Drawings	Technical Data
None Available		

G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at **[location]** during regular business hours, or may request copies from Engineer.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely: **[If there are no such reports, so indicate in the table]**

Report Title	Date of Report	Technical Data
None Available		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely: **[If there are no such drawings, so indicate in the table]**

Drawings Title	Date of Drawings	Technical Data
None Available		

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).

2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess,

pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: **None**

E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	$
Bodily injury by disease—aggregate	$
Employer's Liability	
Each accident	$1,000,000
Each employee	$1,000,000
Policy limit	$2,000,000

F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.

3. Severability of interests and no insured-versus-insured or cross-liability exclusions.

4. Underground, explosion, and collapse coverage.

5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).

2. Any exclusion for water intrusion or water damage.

3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).

6. Any limitation or exclusion based on the nature of Contractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	**Policy limits of not less than:**
General Aggregate	$2,000,000
Products—Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$1,000,000
Bodily Injury and Property Damage—Each Occurrence	$1,000,000
Fire Damage Limit	$50,000
Medical Expense Limit	$5,000

J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out

of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$2,000,000

K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$5,000,000
General Aggregate	$5,000,000

L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of $**5,000,000** after accounting for partial attribution of its limits to underlying policies, as allowed above.

SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. *Installation Floater*

1. Contractor shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work ("Covered Property"). Coverage under the Contractor's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:

    a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;

    b. while in transit to the Site, including while at temporary storage sites;

    c. while at the Site awaiting and during installation, erection, and testing;

    d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.

2. The installation floater coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable.

3. The installation floater coverage will be in an amount sufficient to protect Contractor's interest in the Covered Property. The Contractor will be solely responsible for any deductible carried under this coverage.

4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be between 7:00 am and 6:00 pm.

2. Owner's legal holidays are New Years Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving, Lincoln's Birthday, Washington's Birthday, and Christmas Day.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

A. Owner is exempt from payment of sales and compensating use taxes of the State of Indiana and of cities and counties thereof on all materials to be incorporated into the Work.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work

2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

ARTICLE 8—OTHER WORK AT THE SITE

No Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

3. *Liaison*

    a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

    b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

    c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

4. *Review of Work; Defective Work*

    a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

    b. Observe whether any Work in place appears to be defective.

    c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

    a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

    b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests:* Review Applications for Payment with Contractor.

7. *Completion*

    a. Participate in Engineer's visits regarding Substantial Completion.

    b. Assist in the preparation of a punch list of items to be completed or corrected.

    c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

    d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.

5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

11.08 *Change of Contract Times*

SC-11.08 Add the following new paragraph immediately after Paragraph 11.08.B:

C. No adjustment of Contract Time will be provided for delays in the work caused by flooding in a federally-designated floodway.

ARTICLE 12—CLAIMS

12.01 *Claims*

SC-12.01 Add the following new paragraph immediately after Paragraph 12.01.G:

G. The party making the Claim shall be responsible for the costs incurred for Engineer's review and preparation of actions related to any Claim. Should Contractor make the Claim, Owner at its sole discretion shall be entitled to charge Contractor directly for such costs or offset such costs from any payment due Contractor.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

SC-13.01.B.5.c Add the following new paragraph immediately after Paragraph 13.01.B.5.c:

4) Use of Contractor's and Subcontractor's Equipment. The value of such equipment ownership and use for the purposes of determining the value of any Work covered under 13.01.B.5.c shall not exceed the FHWA hourly rate listed in the current Rental Rate Blue Book published by EquipmentWatch for each hour of use in the Work. Equipment standby time will not be included in this value.

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 20 percent from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK

No Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be 1 years after Substantial Completion.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Arbitration*

A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of $100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.

C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.

D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.

E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.

F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.

G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;

2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;

3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and

4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.

H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.

I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

17.03 *Attorneys' Fees*

A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

No Supplementary Conditions in this Article.

EXHIBIT A—SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.	Email w/ Attachment	PDF	(2)
a.3	Contactors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment.	Email w/ Attachment	PDF	
a.4	Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.	Email w/ Attachment or LFE	PDF	
a.5	Layouts and drawings to be submitted to Owner for future use and modification.	Email w/ Attachment or LFE	DWG	
a.6	Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification.	Email w/ Attachment or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	EXC	

Notes	
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.
(2)	Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.

Key	
Email	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)
PDF	Portable Document Format readable by Adobe® Acrobat Reader Version
DWG	Autodesk® AutoCAD .dwg format Version
DOC	Microsoft® Word .docx format Version
EXC	Microsoft® Excel .xls or .xml format Version

EXHIBIT B—GEOTECHNICAL BASELINE REPORT SUPPLEMENT TO THE SUPPLEMENTARY CONDITIONS

1.01 *Definitions*

SC-1.01 Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

1. *Geotechnical Baseline Report (GBR)*—The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR is a Contract Document.

2. *Geotechnical Data Report (GDR)*—The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner in support of the Geotechnical Baseline Report. The GDR's content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Paragraph 5.03 in its entirety and replace with the following:

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions hereby identify:

1. those reports of explorations and tests of subsurface conditions at or adjacent to the Site (other than any Geotechnical Data Report or Geotechnical Baseline Report) that contain Technical Data. Such reports are as follows:

a. *Report Title:* **Geotechnical Investigation Water Main Replacement 8th and Wolflin Streets**

b. *Date of Report:* **February 6, 202**

c. *Technical Data in report upon which Contractor may rely*: **Soil borings and recommendations**

2. those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data. Such drawings are as follows:

a. *Drawings Title:* **None provided**

b. *Date of Drawings:*

c. *Technical Data in drawings upon which Contractor may rely:* 3. Contractor may examine copies of reports and drawings identified immediately above that were not included with the Bidding Documents at **[location]** during regular business hours, or may request copies from Engineer, at the cost of reproduction.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph SC-5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

E. *Geotechnical Baseline Report*

1. This Contract contains a Geotechnical Baseline Report ("GBR"), identified as follows:

2. The GBR and are incorporated as Contract Documents. The GBR and are to be used in conjunction with other Contract Documents, including the Drawings and Specifications.

3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.

4. The Baseline Conditions will be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions will be used to determine whether there is a differing site condition; and no

other indication of that condition in the Contract Documents or Technical Data, or of a condition that describes, quantifies, or measures a similar characteristic of the subsurface, will be used for the differing site condition determination.

5. The Baseline Conditions will not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions will be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR will be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.

6. The descriptions of subsurface conditions provided in the GBR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other consultant warrants or guarantees that actual subsurface conditions will be as described in the GBR, nor is the GBR intended to warrant or guarantee the use of specific means or methods of construction.

7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.

8. The GBR will not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

5.04 *Differing Subsurface or Physical Conditions*

SC-5.04 Delete Paragraph 5.04 in its entirety and replace with the following:

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:

1. differs materially from conditions shown or indicated in the GBR; or

2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or

3. differs materially from conditions shown or indicated in Contract Documents other than the GBR, to the extent the GBR and GDR are inapplicable; or

4. to the extent the GBR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or

5. to the extent the GBR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or

6. to the extent the GBR are inapplicable, is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC-5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption or continuation of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must fall within any one or more of the categories described in Paragraph SC-5.04.A;

b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or

b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice as required by Paragraph SC-5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment must be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 of the General Conditions governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 of the General Conditions governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs SC-5.03 and SC-5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.