

ADDENDUM No. 1

ITB No. 4367

Lawrence Street Water Main Replacement and Summit Street Water Main Replacement Project

Due: Thursday, March 5, 11:00 A.M./P.M.

The following changes, additions, and/or deletions shall be made to the Invitation to Bid for **Lawrence Street Water Main Replacement and Summit Street Water Main Replacement Project**, ITB No. 4367, on which proposals will be received on/or before Thursday, March 5, 2015, by 11:00 A.M.

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes 14 page(s) and 2 drawing(s).**

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments (if any) in its Bid by so indicating on page ITB-1 of the Invitation to Bid Form. Bids submitted without acknowledgement of receipt of this addendum will be considered nonconforming.

I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the Bid documents which are outlined below are referenced to a page or Section in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

- | | |
|-----------|--|
| Item # 1 | Contract Documents, Instructions to Bidders
Replace page IB-4 with the attached revised page IB-4 (ADD-1-3) |
| Item # 2 | Contract Documents, Bid Forms
Replace page BF-1 with the attached revised page BF-1 (ADD-1-4) |
| Item # 3 | Contract Documents, Contract
Replace pages C-1 through C-11 with the attached revised pages C-1 through C-4 (ADD-1-5 through ADD 1-8) |
| Item # 4: | Contract Documents, Detailed Specification:
Add page DS - 61 (ADD-1-9) |
| Item # 5: | Contract Documents, Attachment B – Soil Borings:
Add pages SB-9 through SB-13 (ADD-1-10 through ADD-1-14) |

Item # 6: Contract Plan Set
Replace plan sheets 4 and 9 with attached plan sheets.
The revised plans show changes to the Trench Detail and water main connection notes.

Bidders are responsible for any conclusions that they may draw from the information contained in the Addendum.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing Bids, the City will give consideration to alternate Bids for items listed in the bid forms.

Official Documents

The City of Ann Arbor shall accept no alternates to the bid documents made by the Bidder unless those alternatives are set forth in the "Alternate" section of Bid form.

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on www.MITN.info and obtain an official Bid.

Bid Security

Each bid must be accompanied by a certified check, or Bid Bond by a surety licensed and authorized to do business within the State of Michigan, in the amount of 5% of the total of the bid price.

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of 90 days, as specified in the Advertisement.

Contract Time

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-1, Article III of the Contract. If these time requirements can not be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

Liquidated Damages

A liquidated damages clause, as given on page C-2, Article III of the Contract, provides that the Contractor shall pay the City as liquidated damages, and not as a penalty, a sum certain per day for each and every day that the Contractor may be in default of completion of the specified work, within the time(s) stated in the Contract, or written extensions.

Liquidated damages clauses, as given in the General Conditions, provide further that the City shall be entitled to impose and recover liquidated damages for breach of the obligations under Chapter 112 of the City Code.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

BID FORM

Section 1 - Schedule of Prices

Item	Description	Unit	Estimated Quantity	Unit Price	Total Cost
114	Type A Lighted Arrow Board, Furnished & Operated	EA	2	\$ _____	\$ _____
130	Protective Fencing	LF	2600	\$ _____	\$ _____
135	Tree Removal, 8" and larger	EA	1	\$ _____	\$ _____
140	Exploratory Excavations (0-10deep)	EA	4	\$ _____	\$ _____
201	Project Supervision, Max. \$ 20,000	LS	1	\$ _____	\$ _____
202	General Conditions, Max. \$ 40,000	LS	1	\$ _____	\$ _____
203	Minor Traffic Control, Modified, Max. \$ 20,000	LS	1	\$ _____	\$ _____
204	Audiovisual Tape Coverage	LS	1	\$ _____	\$ _____
207	Machine Grading Modified	SY	3500	\$ _____	\$ _____
212	Subgrade Undercutting - Type II	CY	200	\$ _____	\$ _____
213	Temporary 4 inch or 6 inch Water Main Line Stop	EA	5	\$ _____	\$ _____
221	HMA Pavement Leveling Course 13A	TON	100	\$ _____	\$ _____
222	HMA Pavement Wearing Course 13A	TON	50	\$ _____	\$ _____
223	HMA Pavement 13A - (Basketball Court and Track - 1.5")	TON	120	\$ _____	\$ _____
224	HMA Pavement 36A - (Basketball Court and Track - 1.5")	TON	120	\$ _____	\$ _____
225	Temporary HMA Pavement	TON	50	\$ _____	\$ _____
230	Remove Concrete Curb or Curb & Gutter - Any Type	LF	850	\$ _____	\$ _____
231	Remove Concrete Sidewalk & Driveways - Any Thickness	SF	1500	\$ _____	\$ _____
235	Concrete Curb or Curb & Gutter - Any Type	LF	100	\$ _____	\$ _____
237	4 or 6 -Inch Concrete Sidewalk, Ramp, or Drive	SF	250	\$ _____	\$ _____
240	Detectable Warning Plates	SF	20	\$ _____	\$ _____
241	Adjust Structure Cover	EA	4	\$ _____	\$ _____
242	Adjust Curb Inlet Structure Cover	EA	2	\$ _____	\$ _____
244	Structure Covers	LBS	1600	\$ _____	\$ _____
252	Sewer Bulkhead, 4-inch through 18-inch Diameter	EA	4	\$ _____	\$ _____
254	6-inch Wrapped Underdrain	LF	1400	\$ _____	\$ _____
255	4 or 6 inch sanitary sewer lead R/R in Trench	LF	150	\$ _____	\$ _____
261	21AA Limestone - C.I.P.	CY	200	\$ _____	\$ _____
262	Aggregate Base Course, 21AA - C.I.P.	CY	800	\$ _____	\$ _____
270	"No Parking" Signs	EA	30	\$ _____	\$ _____
271	Portable, Changeable Message Sign, Furn. & Oper.	EA	4	\$ _____	\$ _____
272	Plastic Drum - Lighted, Furnished and Operated	EA	100	\$ _____	\$ _____
273	Type III Lighted Barricade, Furnished & Operated	EA	16	\$ _____	\$ _____
274	Temporary Type B Signs	SF	750	\$ _____	\$ _____
280	Basketball Pole Assembly	EA	3	\$ _____	\$ _____
281	Concrete Foundation for Basketball Pole Assembly	EA	4	\$ _____	\$ _____
282	Basketball Court Color Coating	LS	1	\$ _____	\$ _____
283	Fence Removal/Welding Back	LS	1	\$ _____	\$ _____
284	Trex Retaining Wall	LS	1	\$ _____	\$ _____
285	Play Area Cross-section Repair	LS	1	\$ _____	\$ _____
286	Bench Removal/Installation	EA	1	\$ _____	\$ _____
287	Wood Retaining Wall	LS	1	\$ _____	\$ _____

TOTAL THIS PAGE \$ _____

(Also Enter on BF-2)

CONTRACT

THIS AGREEMENT is made on the _____ day of _____, 201_, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 E. Huron Street, Ann Arbor, Michigan 48104 (“City”) and _____ (“Contractor”)

..... (An individual/partnership/corporation, include state of incorporation)
(Address)

Based upon the mutual promises below, the Contractor and the City agree as follows:

ARTICLE I - Scope of Work

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled _____ in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, which are incorporated as part of this Contract:

- | | |
|--------------------------------|-------------------------|
| Human Rights Division Contract | General Conditions |
| Compliance Forms | Standard Specifications |
| Living Wage Declaration of | Detailed Specifications |
| Compliance Forms | Plans |
| (if applicable) | Addenda |
| Conflict of Interest | |
| Bid Forms | |
| Contract and Exhibits | |
| Bonds | |

ARTICLE II - Definitions

Administering Service Area/Unit means _____

Supervising Professional means City Engineer acting personally or through any assistants authorized by the Administrator/Manager of the Administering Service Area/Unit.

Project means _____

ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the City.
- (B) The entire work for this Contract shall be completed within scheduling requirements as specified in the Detailed Specifications.
- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount specified in Detailed Specification for Project Schedule and Payment shown on Page DS-1. If any liquidated damages are unpaid by the Contractor,

the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

As an independent requirement, where the Detailed Specifications identify certain portions of the work to be completed within a shorter period of time and the Contractor fails to complete each portion within the shorter period specified for each portion, including any extension granted in writing by the Project Supervisor, the City is entitled to deduct from the monies due the Contractor, as liquidated damages and not as a penalty, the amount identified in the Detailed Specifications for each portion of the work not timely completed for each calendar day of delay in completion of each portion of the work.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

Liquidated damages under this section are in addition to any liquidated damages due under Section 5 of the General Conditions.

ARTICLE IV - The Contract Sum

- (A) The City shall pay to the Contractor for the performance of the Contract, the unit prices as given in the Bid Forms for the estimated total of:

_____ Dollars (\$_____)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the contract documents.

ARTICLE V - Assignment

This Contract may not be assigned or subcontracted without the written consent of the City.

ARTICLE VI - Choice of Law

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this agreement, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract. The parties stipulate that the venue referenced in this Contract is for convenience and waive any claim of non-convenience.

Whenever possible, each provision of the contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision will not invalidate the remainder of the contract.

ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a contract of employment but is a contract to accomplish a specific result. Contractor is an independent contractor performing services for the City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

Contractor certifies that it has no personal or financial interest in the project other than the compensation it is to receive under the Contract. Contractor certifies that it is not, and shall not become, overdue or in default to the City for any contract, debt, or any other obligation to the City including real or personal property taxes. City shall have the right to set off any such debt against compensation awarded for services under this agreement.

ARTICLE VIII - Notice

All notices given under this contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the contract documents or other address the Contractor may specify in writing.

ARTICLE IX - Indemnification

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this contract, by the Contractor or anyone acting on the Contractor's behalf under this contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence.

ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations or agreements whether written or oral. Neither party has relied on any prior representations in entering into this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

FOR CONTRACTOR

By _____

Its: _____

FOR THE CITY OF ANN ARBOR

By _____
Christopher Taylor, Mayor

By _____
Jacqueline Beaudry, City Clerk

Approved as to substance

By _____
Steven D. Powers, City Administrator

By _____
Craig Hupy
Public Services Area Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

**DETAILED SPECIFICATION
FOR
ITEM #255 - 4" or 6" LEAD REMOVE AND REPLACE IN TRENCH**

DESCRIPTION

This work shall consist of removing and replacing existing lead in new utility trenches. Work includes cutting lead, carefully removing, replacing with SDR 35 PVC pipe and fittings along with "Fernco" connections. All materials need to accomplish this work is included in this pay item. All work shall be done in accordance with the City of Ann Arbor Public Services Department Standard Specifications, and as directed by the Engineer.

CONSTRUCTION METHODS

The Construction Methods shall meet all requirements of the City of Ann Arbor Standard Specifications.

Sewer leads are private and have been located and placed on plans per best information available to the City. Contractor to carefully excavate leads, not dig through lead but to saw cut out of way. Lead to be kept clean, have positive fall, and replaced as soon as possible. Contractor to coordinate with homeowner as needed to complete work. Trench must be carefully backfilled to prevent damage. Prior to placement of HMA contractor may be directed to have entire lead televised. If any defects in repair are found, contractor will be responsible to excavate the lead and make the necessary repairs.

MEASUREMENT AND PAYMENT

The unit price for the pay item "4" or 6" Lead Remove and Replace in Trench " includes all labor, material and equipment costs associated with the complete installation of the sewer lead, as specified herein, including but not limited to, excavation MDOT CL II backfill, compaction.

Payment shall include all labor, equipment, and materials necessary to remove and replace the existing sewer lead as directed by the Engineer.

The unit prices for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

PAY ITEM

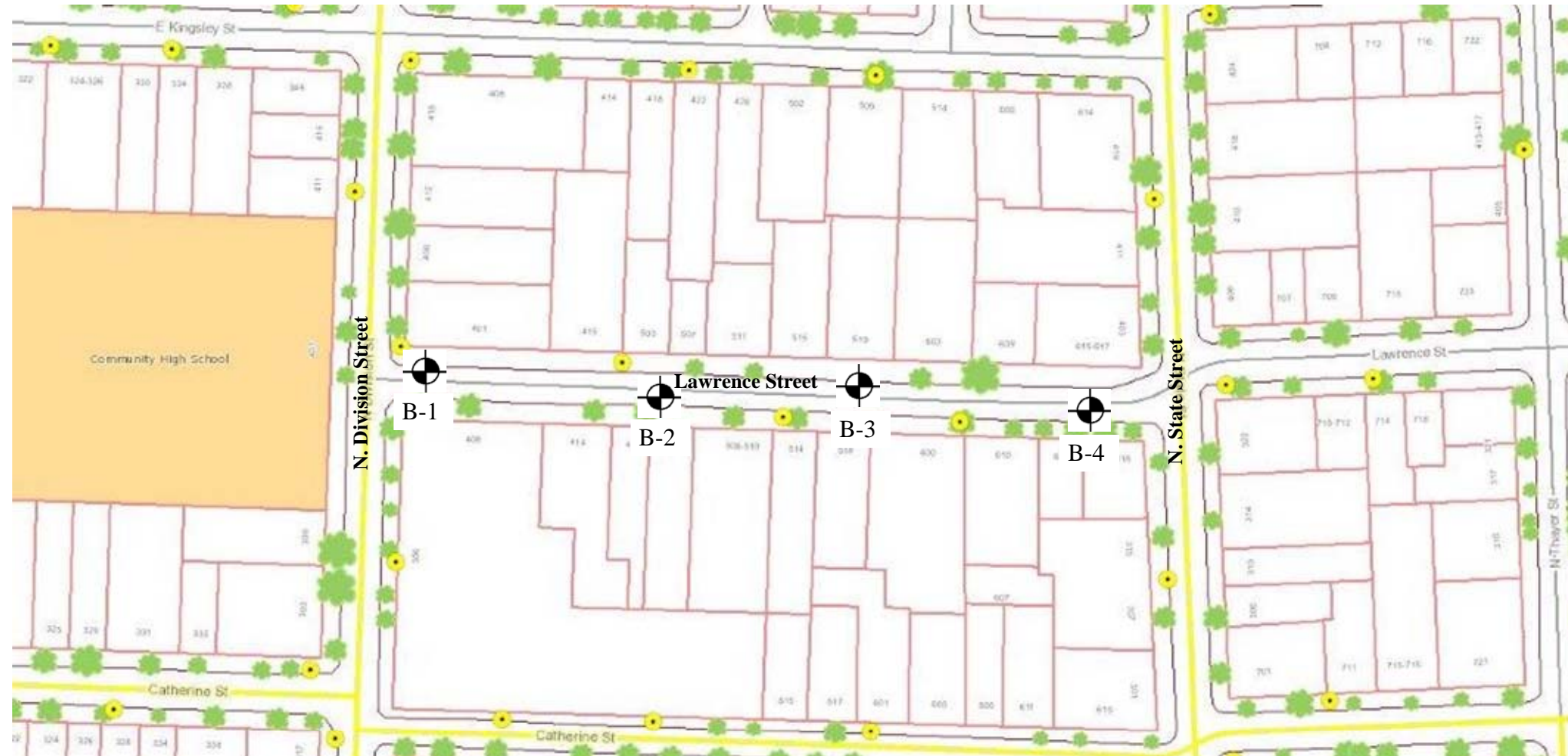
PAY UNIT

4" or 6" Lead Remove and Replace in Trench

Each

"
"
"
"
"
"
"
"
"
"
"

.....FU83
.....CFF/3/;"



Legend

⊕ Soil Borings Drilled by West Michigan Drilling, Inc. on June 4th, 2014.

Soil Boring Location Plan

Ann Arbor Soil Borings
Lawrence Street
Ann Arbor, Michigan



Project No. 130744

Drawn by: MGD

Date: 5/21/14

Scale: NTS

Plate No. 1

Boring No. B-1

Project Name:
Project Location:

G2 Project No. 130744



SUBSURFACE PROFILE

SOIL SAMPLE DATA

SUBSURFACE PROFILE		SOIL SAMPLE DATA					
DEPTH (ft)	DESCRIPTION	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
0.0 - 0.3	Bituminous Concrete (3 inches)						
0.3 - 0.7	Portland Cement Concrete (5 inches)						
0.7 - 2.5	Fill: Stiff Yellowish Brown Sandy Clay with trace gravel	S-1	2 2 2	4			2500*
2.5 - 7.5	Fill: Very Loose Yellowish Brown and Gray Sand with trace gravel	S-2	2 2 1	3			
7.5 - 10.0	Fill: Compact Yellowish Brown and Gray Silty Sand	S-3	3 2 2	4			
10.0	End of Boring @ 10 ft	S-4	14 18 14	32			

BORING LOG W/STA IN HEADER NO. LAT. LONG. 130744 - LAWRENCE.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 2/24/15

Total Depth: 10 ft
 Drilling Date: June 4, 2014
 Inspector:
 Contractor: West Michigan Drilling
 Driller: G. Strauch

Water Level Observation:
 No groundwater observed during or upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
 Borehole backfilled with auger cuttings; asphalt repaired with cold patch

Figure No. 1

Boring No. B-2

Project Name:
Project Location:

G2 Project No. 130744



SUBSURFACE PROFILE

SOIL SAMPLE DATA

SUBSURFACE PROFILE		SOIL SAMPLE DATA					
DEPTH (ft)	DESCRIPTION	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
0.0 - 0.4	Bituminous Concrete (5 inches)						
0.4 - 0.8	Portland Cement Concrete (4-1/2 inches)						
0.8 - 2.5	Fill: Soft Dark Yellowish Brown and Gray Sandy Clay with trace gravel	S-1	3 2 2	4			1000*
2.5 - 6.0	Fill: Medium Compact Yellowish Brown and Gray Silty Sand with trace gravel	S-2	6 7 5	12			
6.0 - 9.0	Fill: Medium Compact Yellowish Brown and Gray Silty Sand with trace gravel	S-3	7 10 13	23			
9.0 - 10.0	Fill: Medium Compact Yellowish Brown and Gray Silty Sand with trace gravel	S-4	6 7 6	13			
10.0	End of Boring @ 10 ft						

BORING LOG W/STA IN HEADER NO. LAT. LONG. 130744 - LAWRENCE.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 2/24/15

Total Depth: 10 ft
 Drilling Date: June 4, 2014
 Inspector: M. Dagher, EIT
 Contractor: West Michigan Drilling
 Driller: G. Strauch

Water Level Observation:
 No groundwater observed during or upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
 Borehole backfilled with auger cuttings; asphalt repaired with cold patch

Figure No. 2

Project Name:

Project Location:

G2 Project No. 130744



SUBSURFACE PROFILE

SOIL SAMPLE DATA

SUBSURFACE PROFILE		SOIL SAMPLE DATA					
		SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
	Bituminous Concrete (5 inches)						
0.4							
	Portland Cement Concrete (5 inches)						
0.8							
	Fill: Medium Dark Yellowish Brown and Gray Silty Clay with trace sand and gravel	S-1	4	7			
			4				
			3				
3.8							
	Fill: Medium Compact Yellowish Brown and Gray Sand with trace gravel	S-2	3	11			
			5				
			6				
7.5							
	Fill: Medium Compact Yellowish Brown and Gray Silty Sand with trace gravel	S-3	9	20			
			10				
			10				
10.0							
	End of Boring @ 10 ft	S-4	10	25			
			12				
			13				

BORING LOG W/STA IN HEADER NO. LAT. LONG. 130744 - LAWRENCE.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 2/24/15

Total Depth: 10 ft
 Drilling Date: June 4, 2014
 Inspector: M. Dagher, EIT
 Contractor: West Michigan Drilling
 Driller: G. Strauch

Water Level Observation:
 No groundwater observed during or upon completion of drilling operations

Excavation Backfilling Procedure:
 Borehole backfilled with auger cuttings; asphalt repaired with cold patch

Drilling Method:
 2-1/4 inch inside diameter hollow-stem auger

Figure No. 3

Boring No. B-4

Project Name:
Project Location:

G2 Project No. 130744



SUBSURFACE PROFILE

SOIL SAMPLE DATA

SUBSURFACE PROFILE		SOIL SAMPLE DATA					
DEPTH (ft)	DESCRIPTION	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
0.0 - 0.3	Bituminous Concrete (4 inches)						
0.3 - 0.7	Portland Cement Concrete (4 inches)						
0.7 - 3.0	Fill: Soft Dark Yellowish Brown and Gray Silty Clay with trace sand and gravel	S-1	2 2 2	4			1000*
3.0 - 8.0	Fill: Medium Compact Yellowish Brown and Gray Sand with trace clay and gravel	S-2	4 6 8	14			
8.0 - 10.0	Fill: Compact Yellowish Brown and Gray Silty Sand with trace gravel	S-3	10 13 15	28			
10.0	End of Boring @ 10 ft	S-4	21 23 21	44			

BORING LOG W/STA IN HEADER NO. LAT. LONG. 130744 - LAWRENCE.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 2/24/15

Total Depth: 10 ft
 Drilling Date: June 4, 2014
 Inspector:
 Contractor: West Michigan Drilling
 Driller: G. Strauch

Water Level Observation:
 No groundwater observed during or upon completion of drilling operations

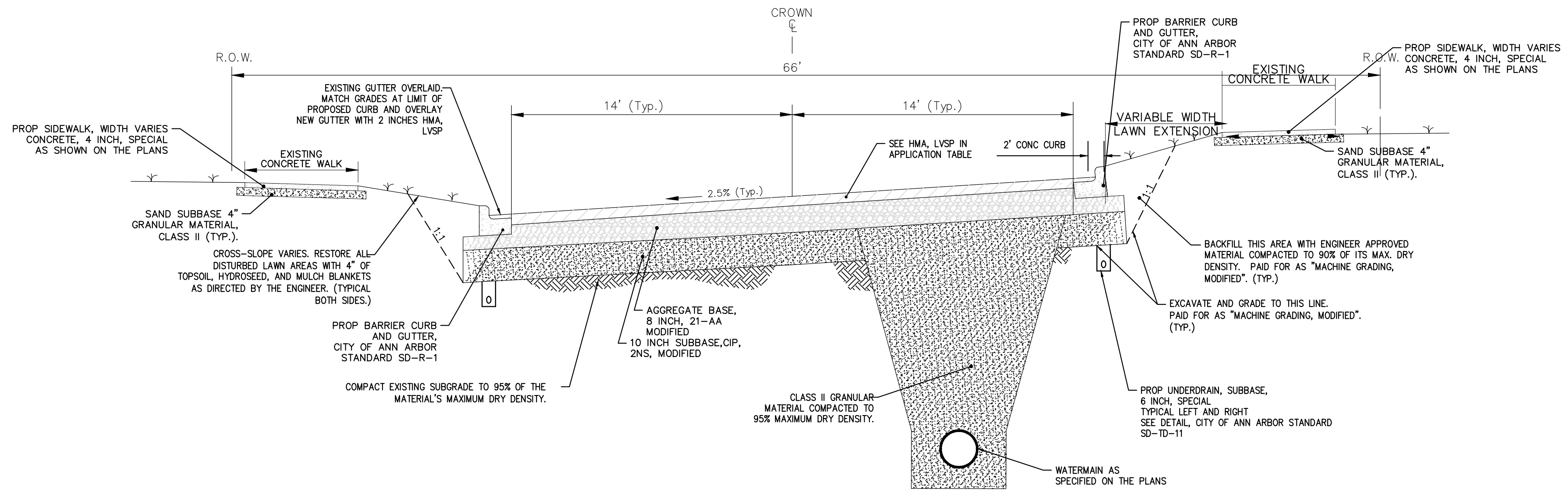
Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 2-1/4 inch inside diameter hollow-stem auger

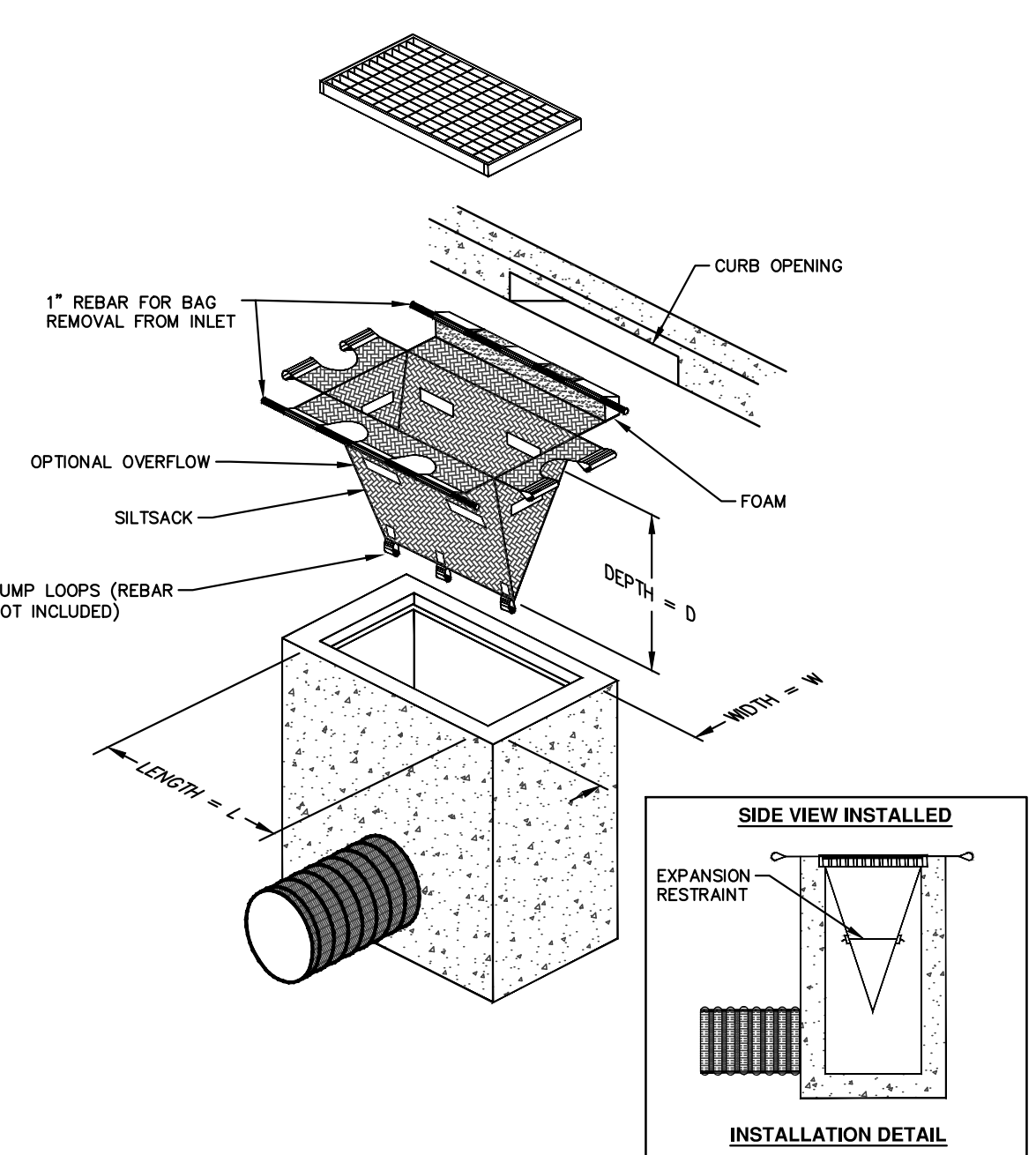
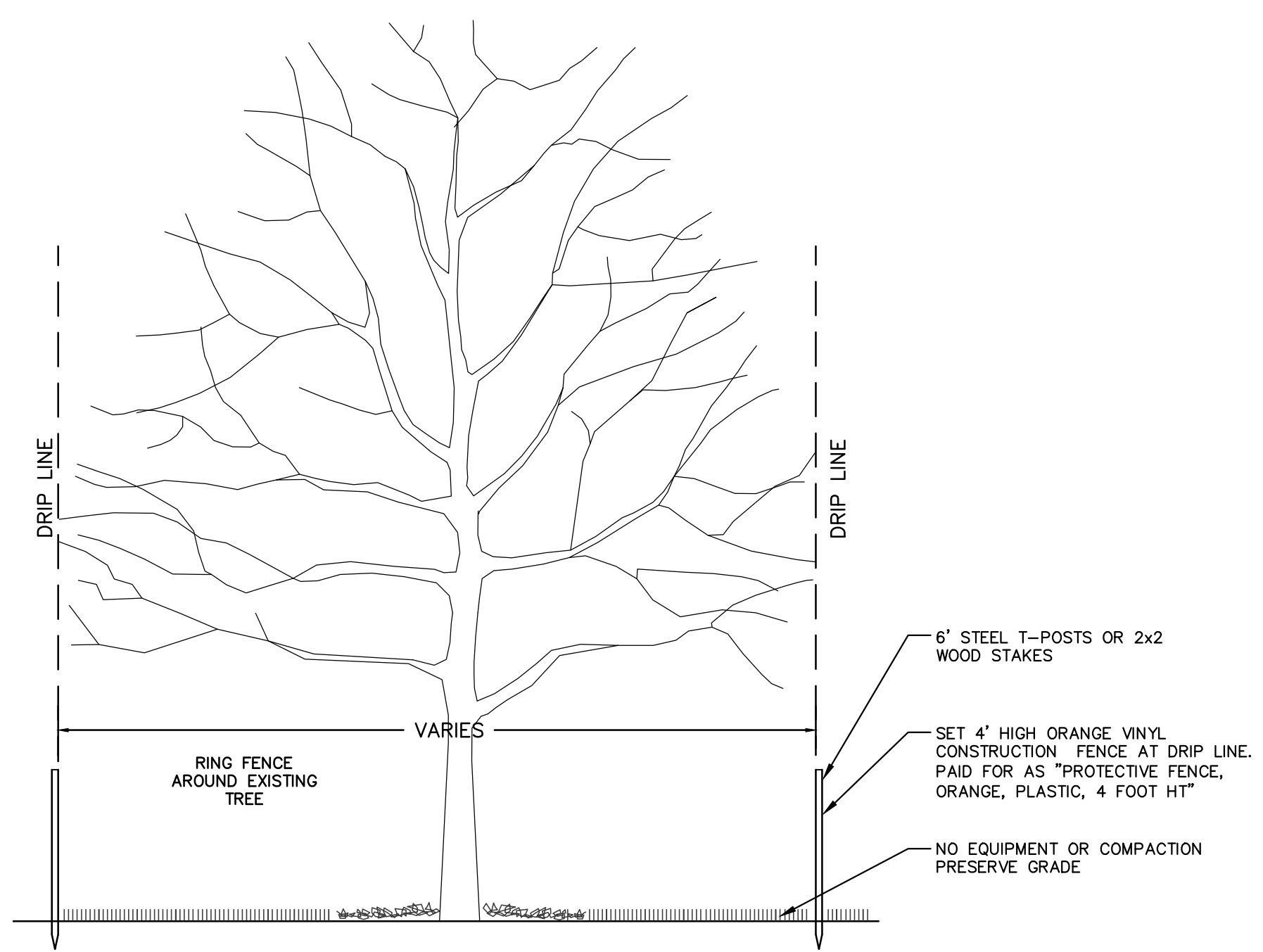
Excavation Backfilling Procedure:
 Borehole backfilled with auger cuttings; asphalt repaired with cold patch

Figure No. 4

S:\Project Management\Design\2014032 Lawrence\Plan Production\Primary\20140320DEI.dwg Dwg Created: 25-Sep-14 - _a2 standard bw.stb - Plot Date: 27-Feb-15



HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
LVSP	220 LB/SYD	2.0	260 (TOP)	PG 58-28	TOP COURSE
LVSP	220 LB/SYD	2.0	260 (TOP)	PG 58-28	LEVELING COURSE
Bond Coat SS-1h	0.05 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM



NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

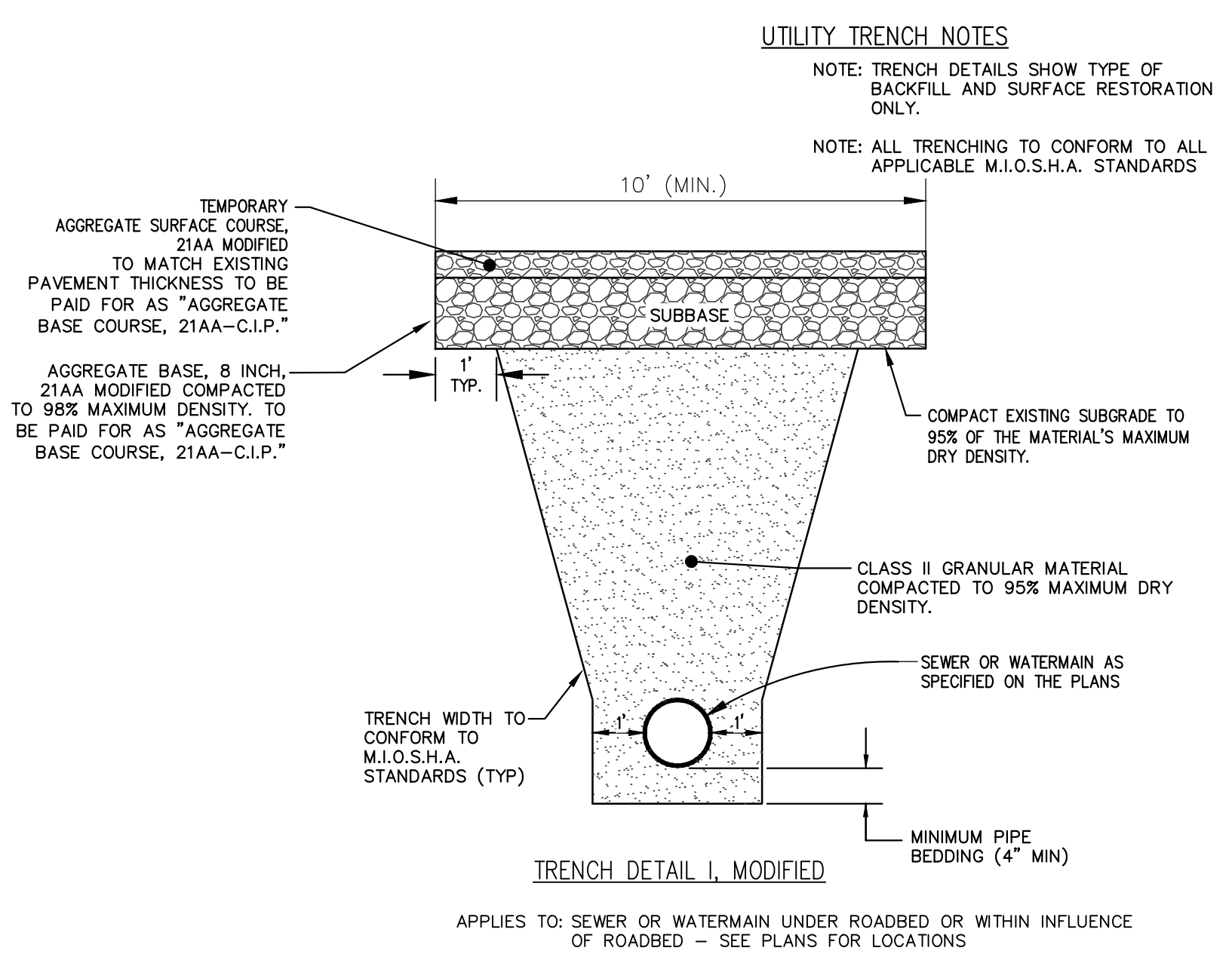
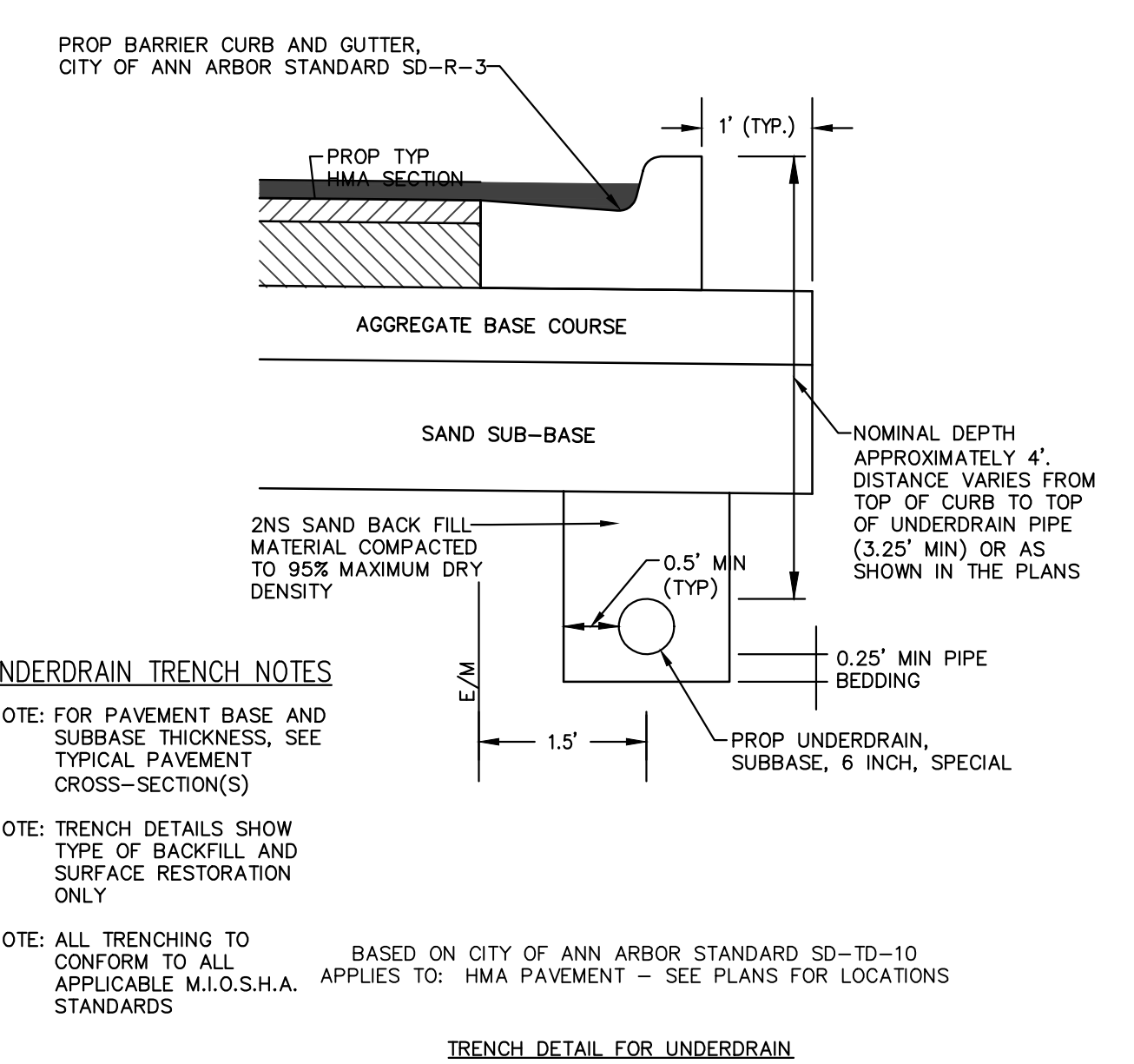
PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

OIL-ABSORBANT SILTSACK
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



811 Know what's below. Call before you dig.

REV.	DATE	DRAWN	CHECKED

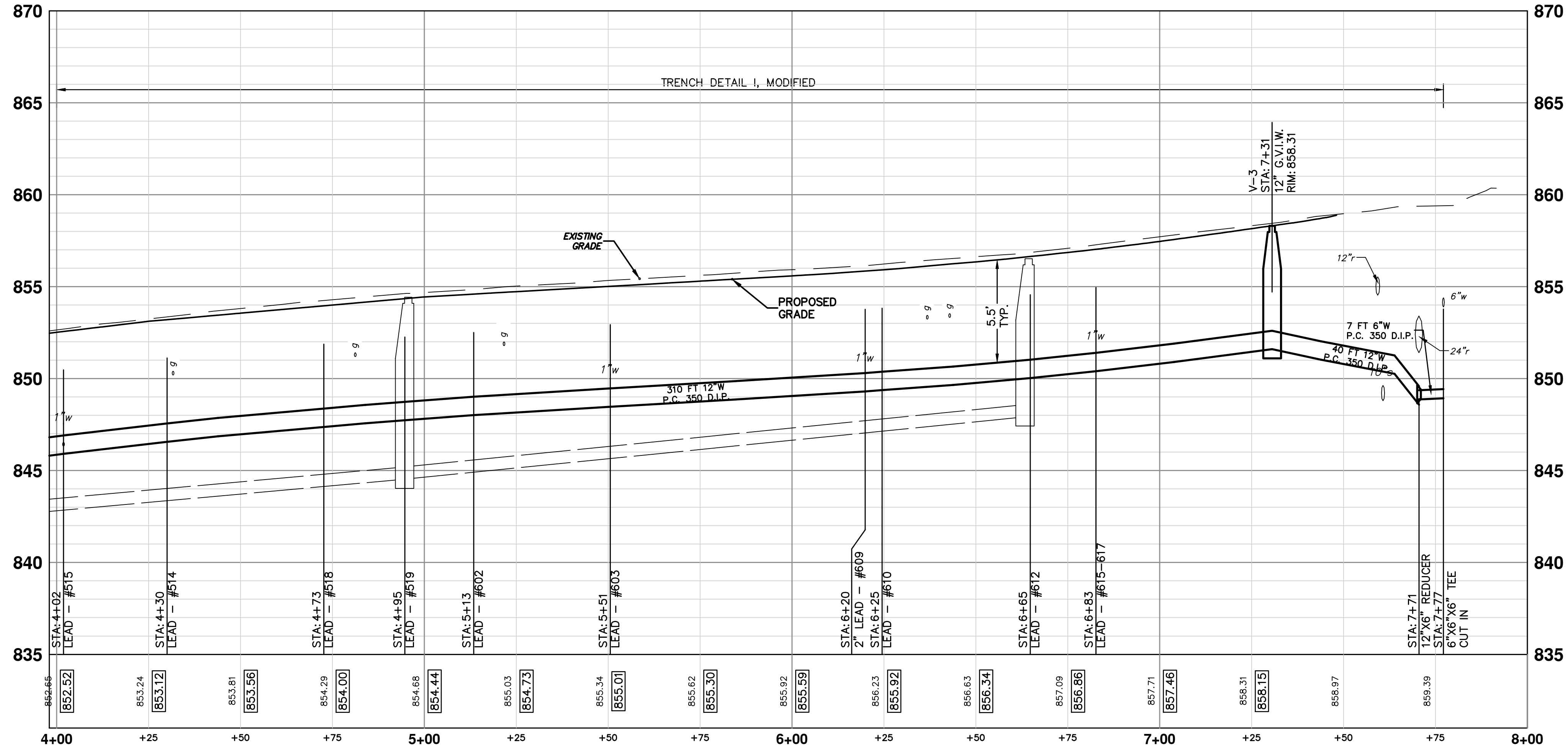
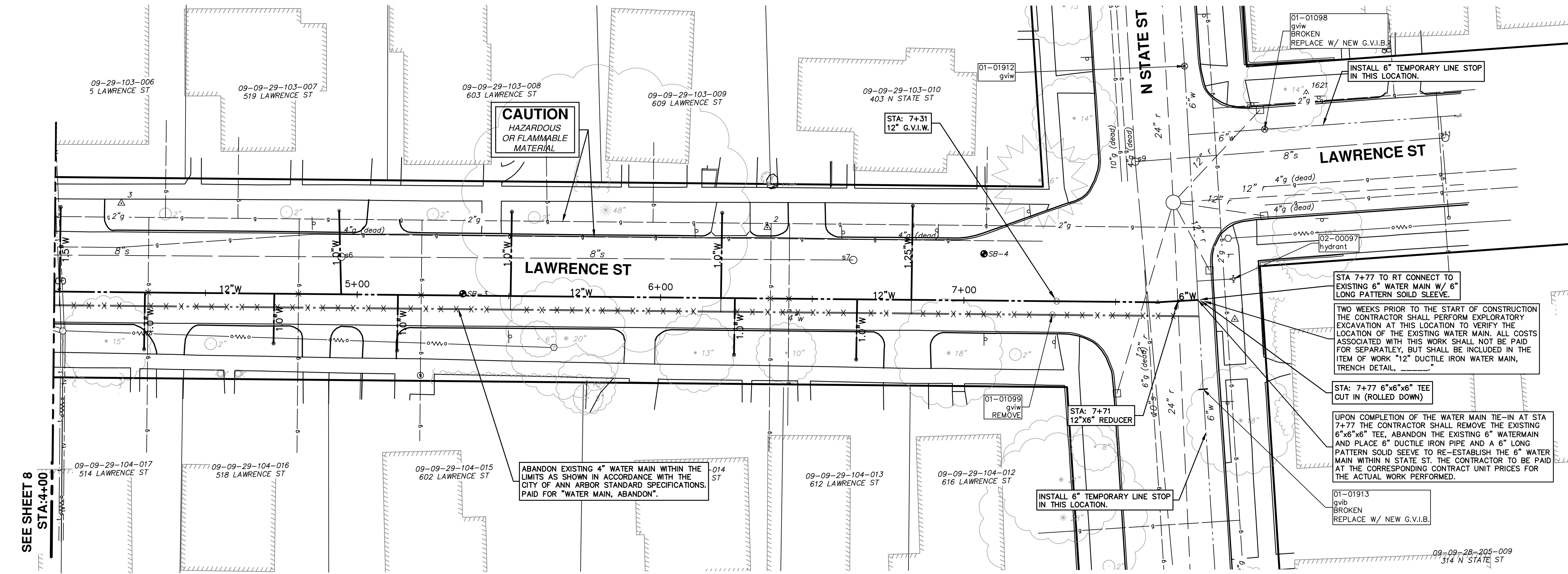
CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
LAWRENCE ST. WATER MAIN REPLACEMENT

ROAD SECTION, TRENCH DETAIL, INLET DETAIL

SCALE: 1" = 12"
DRAWING No. 2014032-4
SHEET No. 4 OF 11

S:\Project Management\Design\2014032 Lawrence WM\Plan Production\Primary\2014032WATR.dwg Dwg Created: 23-Sep-14 - a2 standard bw.stb - Plot Date: 27-Feb-15



SEE SHEET 8
STA: 4+00

870
865
860
855
850
845
840
835
4+00 +25 +50 +75 5+00 +25 +50 +75 6+00 +25 +50 +75 7+00 +25 +50 +75 8+00

811
Know what's below.
Call before you dig.

REV.	DESCRIPTION	DATE	BY	CHECKED
00	ADDENDUM #1	02-27-15	CEC	DRAWN
				CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0667
www.a2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
LAWRENCE ST. WATER MAIN REPLACEMENT
WATER MAIN PLAN & PROFILE
STA. 4+00 TO POE

SHEET No. **9 OF 11**

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'
DRAWING No. **2014032-9**