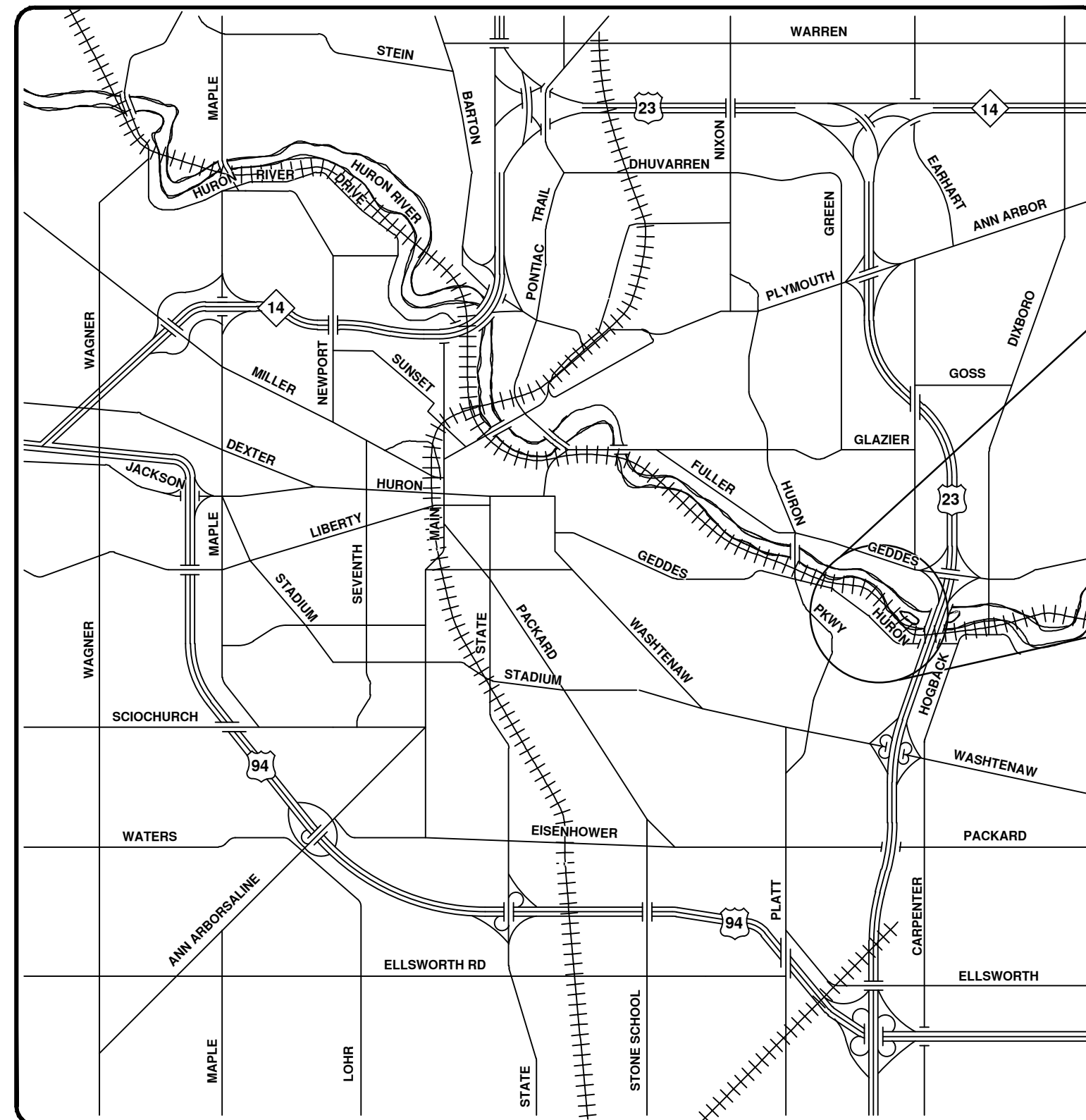




# E. HURON RIVER DRIVE RETAINING WALL REPLACEMENT AND ROAD RECONSTRUCTION

RFP No. 26-02, FILE No. 2025-26



12 / 12 / 2025  
DATE



CONSTRUCTION NOTES:

1. Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
5. During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".
6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
7. City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public Works.
8. For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.
9. The Contractor shall backfill trenches in accordance with Trench Detail specified on plans. This work shall be included in the item of work "Excavate and Backfill for Water Service Tap and Lead". All concrete removals and replacements required for this work will be paid for separately.
10. All ductile iron pipe and fittings shall be polyethylene wrapped per ANSI/AWWA C105/A21.5.
11. Cor-blu bolts to be used at all mechanical water main joints at hydrants and Megalug fittings
12. The Contractor shall construct, flush, and bacteriologically test the water main per Detailed Specification "Water Main Installation and Testing" and as approved by the Engineer. All chlorinated water shall be discharged directly into an approved sanitary sewer. The Contractor shall supply all necessary hoses, fittings and the like to accomplish this work.
13. Water main fittings, other than those specifically listed as separate pay items, which are required to complete the work, such as blow-off assemblies, concrete thrust blocks, solid sleeves and mechanical plugs, shall not be paid for separately, but shall be included in the pipe pay items.
14. "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.
15. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
16. All fittings, hydrants, valves and castings removed during construction are the property of the City of Ann Arbor. The Contractor within 48 hours shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
17. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
18. The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions".
19. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
20. Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
21. The location of material stock piles and on-site staging areas to be approved by the Engineer.
22. For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.
23. All structures shall receive new castings as directed by the Engineer, as specified on the standard casting schedule. The existing castings are the property of the City of Ann Arbor. The Contractor shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
24. Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
25. Where sewer pipes of different sizes or materials are joined, Fernco flexible couplings with stainless steel shear rings shall be used. The Contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.
26. Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail detailed in the specifications or shown on Plans. Backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.
27. Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"
28. In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2' below top of proposed pavement.

TEMPORARY SEEDING:

1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$8,026.00

AREA OF PROPOSED DISTURBANCE = 0.41 ACRES



CITY OF ANN ARBOR STANDARDS USED	
DRAWING NO.	SHEET TITLE
SD-GU-1	STANDARD CASTING SCHEDULE
SD-GU-7	MANHOLE AND VALVE MOMENT BOX LOWERING
SD-ST-4	PRECAST HIGH CAPACITY INLET
SD-CG-1	BARRIER CURB AND GUTTER
SD-DS-4	SIDEWALK AND CURB & GUTTER JOINTS
SD-SESC-3	SILT FENCE
SD-SESC-4	MULCH BLANKET
SD-SESC-6	STANDARD SESC NOTES
SD-SESC-7	SEQUENCE OF SESC MEASURES
SD-TD-1	UTILITY TRENCH - TYPE I
SD-TD-3.1	UTILITY TRENCH SURFACE RESTORATION EDGE DRAIN
MDOT STANDARDS USED	
DRAWING NO.	SHEET TITLE
R-35-E	CONCRETE SHOULDER GUTTER AND SPILLWAY
R-60-J	GUARDRAIL, TYPES A, B, BD, T, TD, MGS-8, & MGS-8D
R-86-F	PRECAST CONCRETE END SECTION FOR PIPE CULVERT
EGLE NPS BMP MANUAL USED	
RIRPRAP-STABILIZED OUTLET (V2012.12.5)	


PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.	
PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
INDIVIDUAL CONSTRUCTION PERMIT* (FOR DETOUR SIGNS ALONG US-23 AND M-17)	MICHIGAN DEPARTMENT OF TRANSPORTATION (CITY OF ANN ARBOR TO OBTAIN)
* NO COST TO CONTRACTOR	

CONTACT INFORMATION		
PUBLIC UTILITIES	OWNER	CONTACT
WATER	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
SANITARY		
STORM		
FORESTRY		
SIGNS SIGNALS STREET LIGHTS	CITY OF ANN ARBOR INFORMATION TECHNOLOGY LARCOM CITY HALL 301 E. HURON STREET ANN ARBOR, MI 48107	MARK MORENO (734) 794-6361
FIBER OPTIC		(734) 794-6550
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SOUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	MARC GOODELL (313) 405-0574
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

MISCELLANEOUS QUANTITIES NOT INCLUDED ON FOLLOWING SHEETS

ITEM	QTY	UNIT
General Conditions, Max. \$50,000.00	1	LS
Project Supervision, Max. \$10,000.00	1	LS
Project Clean-Up and Restoration	1	LS
Digital Audio Visual Coverage	1	LS
Minor Traffic Control, Max \$10,000.00	1	LS
Traffic Regulator Control	1	LS
Tree, Rem, 6 in. - 12 in.	2	Ea
Tree, Rem, 13 in. - 19 in.	2	Ea
DS_Clearing	0.2	Ac
Exploratory Excavation, SD-TD-1, (0-10' Deep)	3	Ea
DS_Granular Backfill	1000	Cyd


E. HURON DRIVE RETAINING WALL BENCHMARKS				
BM #	STA	OFFSET	ELEV	DESCRIPTION
100	6+15.6	R 27.0'	758.620	WCRC DRAIN DISK IN TOP OF BRIDGE ABUTMENT. LOCATED AT THE SOUTHEAST CORNER OF EAST HURON DRIVE AND CHALMERS DRIVE.
101	1+30.4	R 10.6'	772.125	SET CHISELED X IN THE NORTH RIM OF SANITARY MANHOLE (STRUCTURE #1). LOCATED AT THE SOUTHWEST CORNER OF EAST HURON DRIVE AND RIVERSIDE DRIVE.
102	-1+41.7	L 14.5'	773.265	SET CHISELED X IN THE MIDDLE OF STEEL GUARD RAIL POST. LOCATED ON THE EAST SIDE OF EAST HURON DRIVE AT THE NORTHERLY END OF THE GUARDRAIL.



Know what's below.  
Call before you dig.

				AL	CHECKED
				RD	DRAWN
			11/14/25	DATE	
			01	REV.	

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
P.O. BOX 9847  
ANN ARBOR, MI 48106-0847  
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION  
RIVERSIDE DR TO CHALMERS RD

GENERAL NOTES

SCALE PLAN NTS

DRAWING No.  
AA23004-2

SHEET No.  
2 OF 15



EXISTING LEGEND

EX = EXISTING		
FIRE HYDRANT	W	WATER MAIN
GATE VALVE IN BOX	WATER MAIN ABANDONED	
GATE VALVE IN WELL	S	STORM SEWER
STOP BOX	STORM SEWER ABANDONED	
WATER VAULT	SANITARY SEWER	
WELL	SANITARY SEWER ABANDONED	
CATCH BASIN (SQ)	GAS MAIN	GAS MAIN
CATCH BASIN (RD)	GAS MAIN (DEAD)	
STORM MANHOLE	ELECTRICAL OVER HEAD	
NON-CURB CATCH BASIN (SQ)	ELECTRICAL UNDER GROUND	
END SECTION	ELECTRICAL DUCT BANK	
SANITARY MANHOLE	TELEPHONE OVER HEAD	
CLEAN-OUT	TELEPHONE UNDER GROUND	
POST	TELEPHONE DUCT BANK	
PEDESTRIAN SIGNAL	CABLE TV OVER HEAD	
SIGN	CABLE TV UNDER GROUND	
HAND HOLE	FIBER OPTIC	
ORNAMENTAL LIGHT	FIBER OPTIC DUCT BANK	
FLOOD LIGHT	BOUNDARY	
UNKNOWN MANHOLE	BUILDING	
TELEPHONE MANHOLE	CENTERLINE OF DITCH	
TELEPHONE RISER	CENTERLINE/CROWN OF ROAD	
GAS VALVE	800	CONTOUR MAJOR
GAS VENT	799	CONTOUR MINOR
GAS BOX	EDGE OF WATER	
ELECTRICAL RISER	FLOODPLAIN	
TRANSFORMER	FENCE	
UTILITY POLE	GRAVEL	
LAMP POLE	GUARDRAIL	
GUY ANCHOR	STONE WALL	
GUY POLE	R.O.W.	
MONITORING WELL	TREELINE	
MAILBOX	WETLAND	
SOIL BORING	EDGE OF BRUSH	
TRAVERSE POINT	HEDGE	
BENCH MARK		
IRON PIPE		
MON BOX		



TREE (DECIDUOUS)



TREE (CONIFEROUS)



SHRUB (DECIDUOUS)



STUMP



TREE TO REMAIN & PROTECT (DECIDUOUS)  
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10



TREE TO REMAIN & PROTECT (CONIFEROUS)  
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10

PROPOSED LEGEND

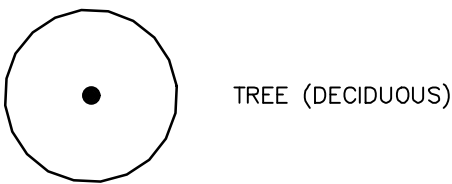
PROP = PROPOSED		
HYDRANT (PLAN)	W	WATER MAIN
WATER GATE WELL	R	STORM SEWER
REDUCER	S	SANITARY SEWER
WATER GATE VALVE	FO	FIBER OPTIC
WATER STOP BOX	E	ELECTRICAL
WATER VAULT	CENTERLINE OF DITCH	
INLET	CENTERLINE OF ROAD	
DOUBLE INLET	FENCE	
INLET JUNCTION CHAMBER	GRAVEL	
ROUND CATCH BASIN	SILT FENCE	
STORM MANHOLE	PROTECTIVE FENCE	
DRAIN ARROW	GUARDRAIL	
FLARED END SECTION	LOT/UNIT	
SANITARY MANHOLE	CURB	
CLEAN-OUT	TEMPORARY GRADING PERMIT	
BARREL	800	CONTOUR MAJOR
SIGN	799	CONTOUR MINOR
PUSH BUTTON	WATER EASMENT	
HAND HOLE	STORM EASEMENT	
	SANITARY EASEMENT	
	R.O.W.	
	LIMITS OF CONSTRUCTION	
	LIMIT OF GRADING	
	STONE WALL	

DETECTABLE WARNING

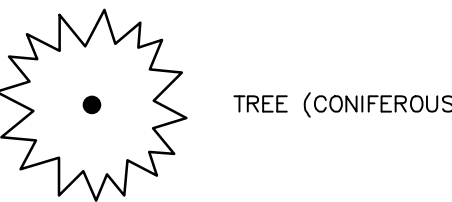
ASPHALT

CONCRETE

SIDEWALK



TREE (DECIDUOUS)



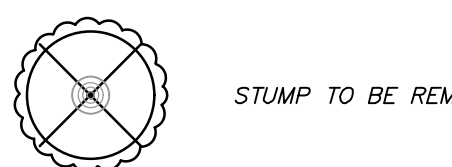
TREE (CONIFEROUS)



TREE TO BE REMOVED (DECIDUOUS)

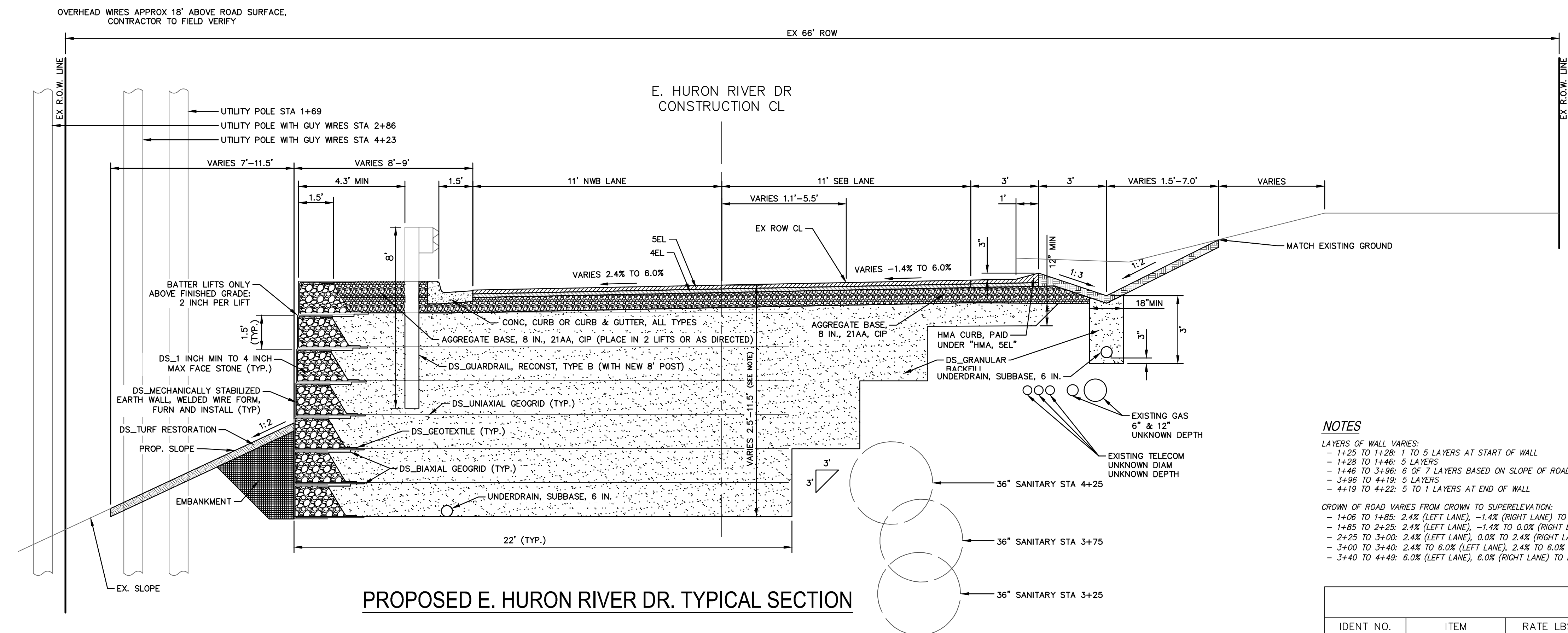
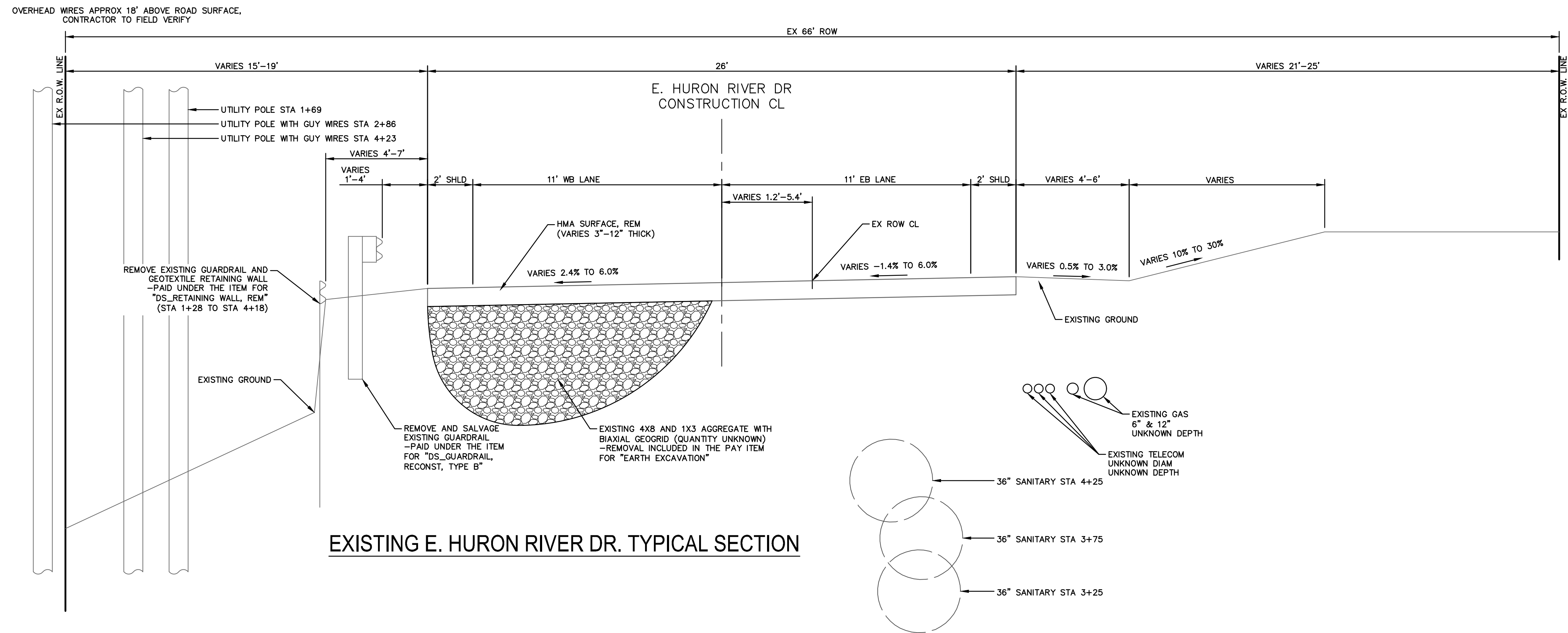


TREE TO BE REMOVED (CONIFEROUS)



STUMP TO BE REMOVED





*NOTES*

LAYERS OF WALL VARIES:

- 1+25 TO 1+28: 1 TO 5 LAYERS AT START OF WALL
- 1+28 TO 1+46: 5 LAYERS
- 1+46 TO 3+96: 6 OF 7 LAYERS BASED ON SLOPE OF ROADWAY
- 3+96 TO 4+19: 5 LAYERS
- 4+19 TO 4+22: 5 TO 1 LAYERS AT END OF WALL

CROWN OF ROAD VARIES FROM CROWN TO SUPERELEVATION:  
 - 1+06 TO 1+85: 2.4% (LEFT LANE), -1.4% (RIGHT LANE) TO MATCH EXISTING  
 - 1+85 TO 2+05: 2.4% (LEFT LANE), -1.4% TO 0.0% (RIGHT LANE) TRANSITION RIGHT LANE TO FLAT  
 - 2+25 TO 3+40: 2.4% (LEFT LANE), 0.0% TO 2.4% (RIGHT LANE) TRANSITION RIGHT LANE TO MATCH LEFT LANE  
 - 3+00 TO 3+40: 2.4% TO 6.0% (LEFT LANE), 2.4% TO 6.0% (RIGHT LANE) TRANSITION TO FULL SUPERELEVATION  
 - 3+40 TO 4+49: 6.0% (LEFT LANE), 6.0% (RIGHT LANE) TO MATCH EXISTING

HMA APPLICATION ESTIMATE				
IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
5EL	HMA, 5EL	165	64-28	MAINLINE TOP COURSE - AWI 260
4EL	HMA, 4EL	275	64-28	MAINLINE LEVELING COURSE
	* BOND COAT	0.05-0.15 GAL		



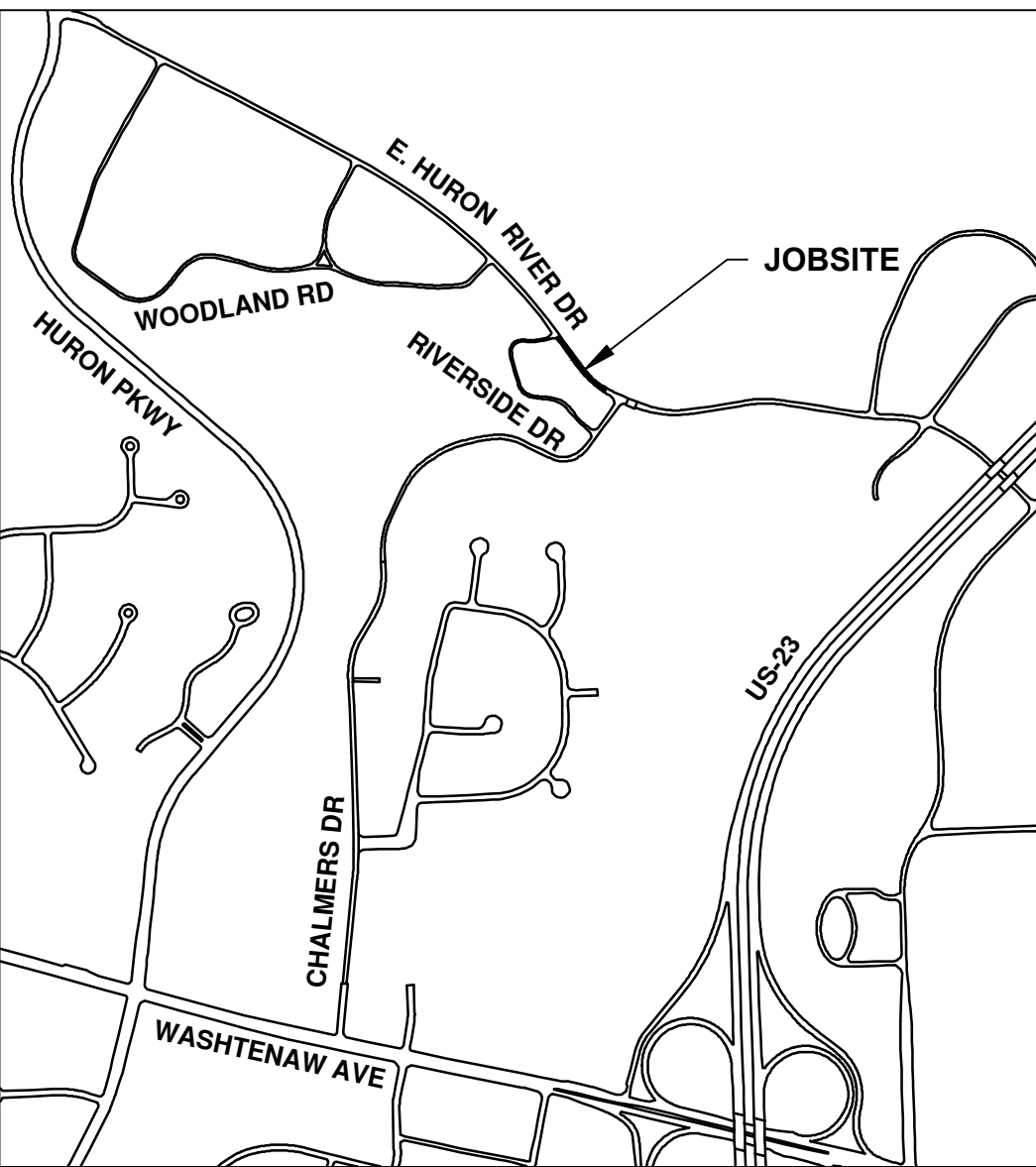
OVERHEAD LINES MAY NEED TO BE DE-ENERGIZED PRIOR TO START OF CONSTRUCTION. CONTRACTOR TO DETERMINE AND COORDINATE.



REMOVAL KEY	
KEY	DESCRIPTION
1	EROSION CONTROL, SILT FENCE
2	TREE, REM, 6 IN. – 12 IN.
3	DS_CLEARING
4	HMA SURFACE, REM
5	SIGN, REM, SALV
6	DS_GUARDRAIL, RECONST, TYPE B
7	DS_RETAINING WALL, REM
8	DS_PAVT FOR BUTT JOINTS, REM
9	EARTH EXCAVATION
10	MONUMENT BOX, ADJUST

\*SAWCUT FULL DEPTH AT REMOVAL LIMITS

REMOVAL QUANTITIES - THIS SHEET		
ITEM	QTY	UNIT
Erosion Control, Silt Fence	371	Ft
Tree, Rem, 6 In. - 12 In.	15	Ea
DS_Clearing	0.1	Ac
HMA Surface, Rem	928	Syd
Sign, Rem, Salv	3	Ea
DS_Guardrail, Reconst, Type B	355	Ft
DS_Retaining Wall, Rem	286	Ft
DS_Pavt for Butt Joints, Rem	58	Syd
Earth Excavation	3300	Cyd
Monument Box, Adjust	1	Ea

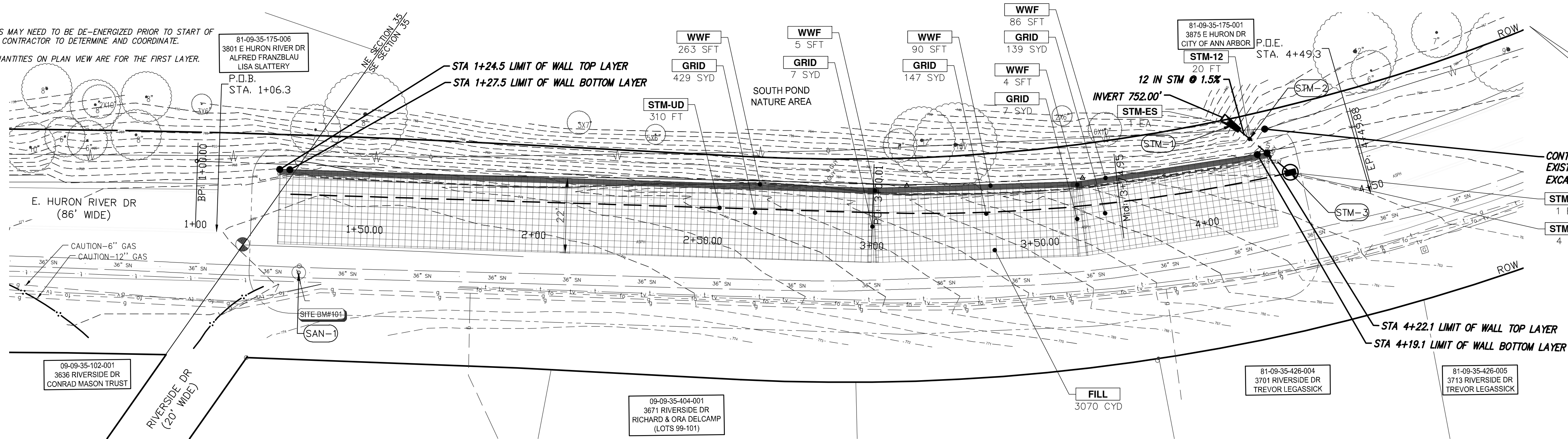




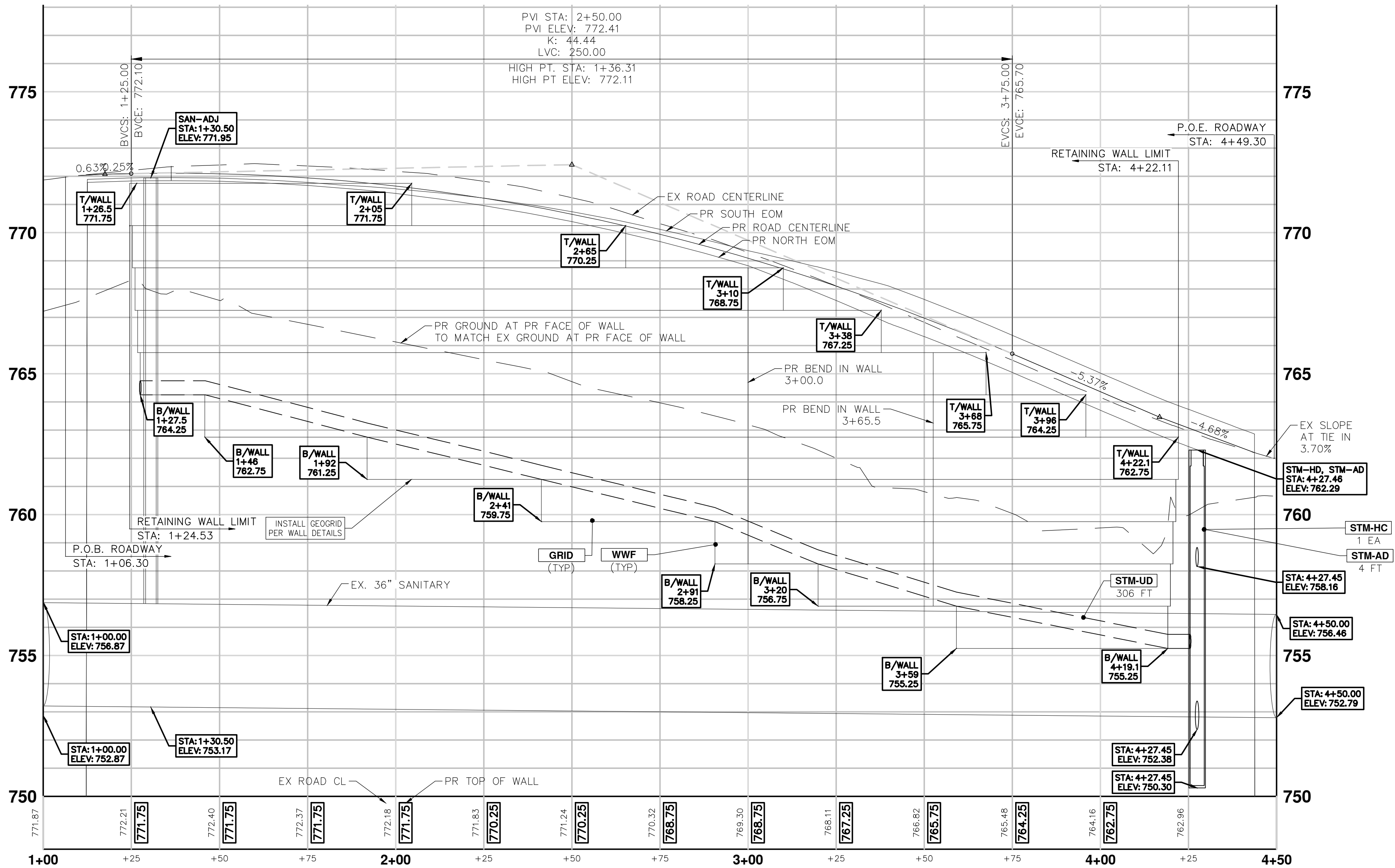
NOTES

OVERHEAD LINES MAY NEED TO BE DE-ENERGIZED PRIOR TO START OF CONSTRUCTION. CONTRACTOR TO DETERMINE AND COORDINATE.

WWF & GRID QUANTITIES ON PLAN VIEW ARE FOR THE FIRST LAYER.



RETAINING WALL PLAN STA 1+06 TO STA 4+49

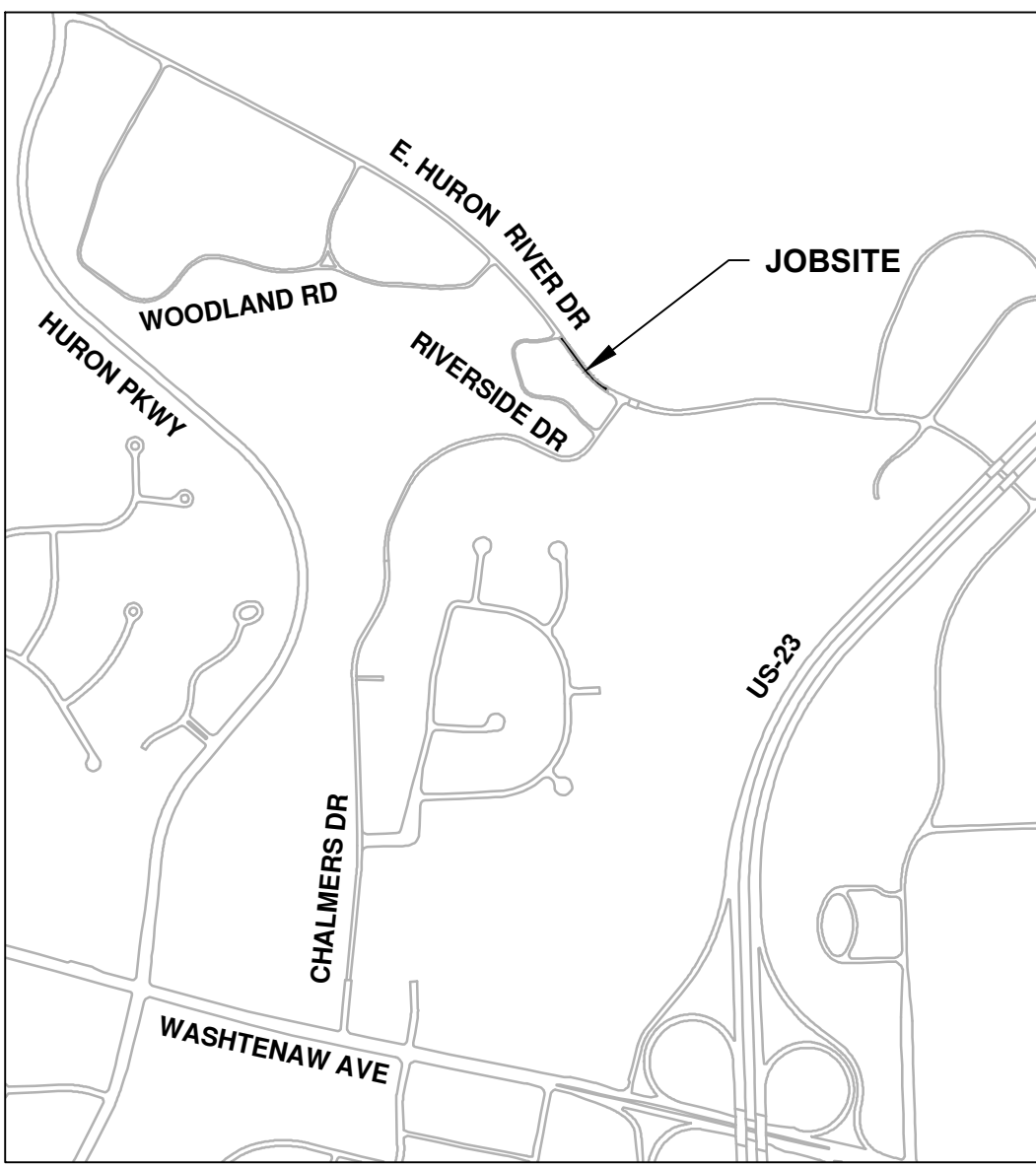


RETAINING WALL PROFILE STA 1+06 TO STA 4+49

RETAINING WALL CON. HATCH KEY	
	WELDED WIRE FORM FACING UNIT
	UNIAXIAL GEOGRID
	STORM PIPE
	BACKFILL

RETAINING WALL CONSTRUCTION KEY	
KEY	DESCRIPTION
FILL	DS_GRANULAR BACKFILL
WWF	DS_MECHANICALLY STABILIZED EARTH WALL, WELDED WIRE FORM, FURN INSTALL (5-7 LAYERS)
GRID	DS_UNIAXIAL GEOGRID (5-7 LAYERS)
STM-HC	STORM HIGH CAPACITY INLET, 48 IN. DIA., (0-8' DEEP)
STM-AD	STORM HIGH CAPACITY INLET, 48 IN. DIA., ADDITIONAL DEPTH
STM-12	12 IN., CL IV RCP STORM SEWER, SD-TD-1
STM-ES	12 IN., CL IV RCP END SECTION
STM-UD	UNDERDRAIN, SUBBASE, 6 IN.

WALL AND STORM CONSTRUCTION QUANTITIES - THIS SHEET		
ITEM	QTY	UNIT
Embankment	88	Cyd
DS_Granular Backfill	3070	Cyd
DS_1 inch Min to 4 inch Max Face Stone	175	Cyd
DS_Mechanically Stabilized Earth Wall, Welded Wire Form, Furn and Install	2849	Sft
DS_Biaxial Geogrid	1451	Syd
DS_Uniaxial Geogrid	4643	Syd
DS_Geotextile	526	Syd
12 In., CL IV RCP Storm Sewer, SD-TD-1	20	Ft
12 In., CL IV RCP End Section	1	Ea
Storm High Capacity Inlet, 48 In. Dia., (0-8' deep)	1	Ea
Storm High Capacity Inlet, 48 In. Dia., Additional Depth	4	Ft
Storm Structure Cover	1	Ea
Underdrain, Subbase, 6 In.	310	Ft



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301 EAST HURON STREET  
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ANN ARBOR, MI 48107-8847  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION  
RIVERSIDE DR TO CHALMERS RD  
RETAINING WALL CONSTRUCTION

SCALE PLAN: 1" = 20'  
DRAWING No.  
AA23004-6

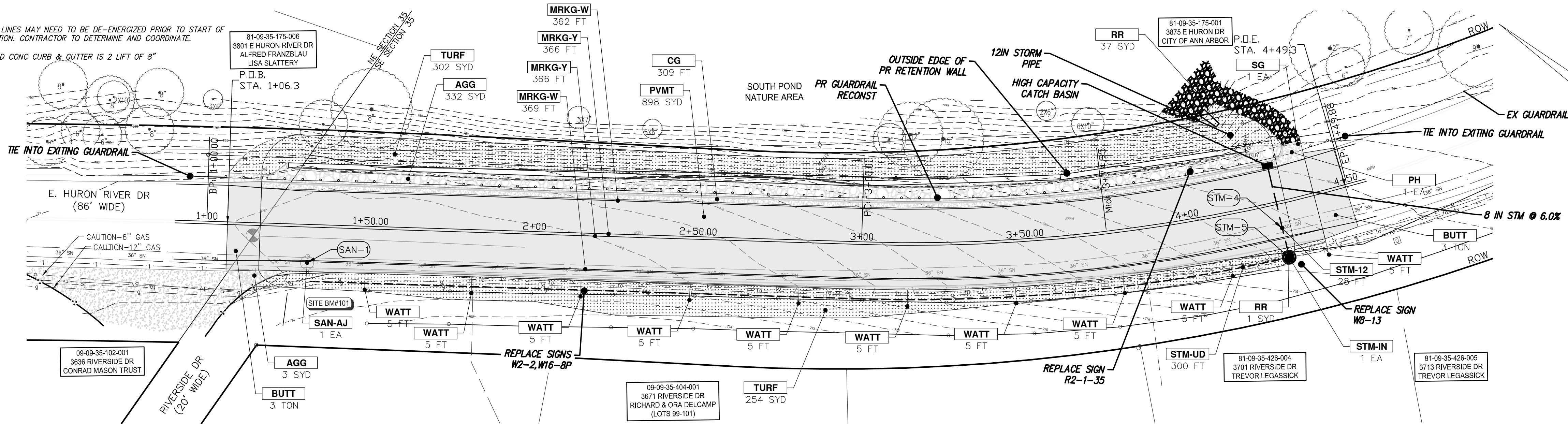
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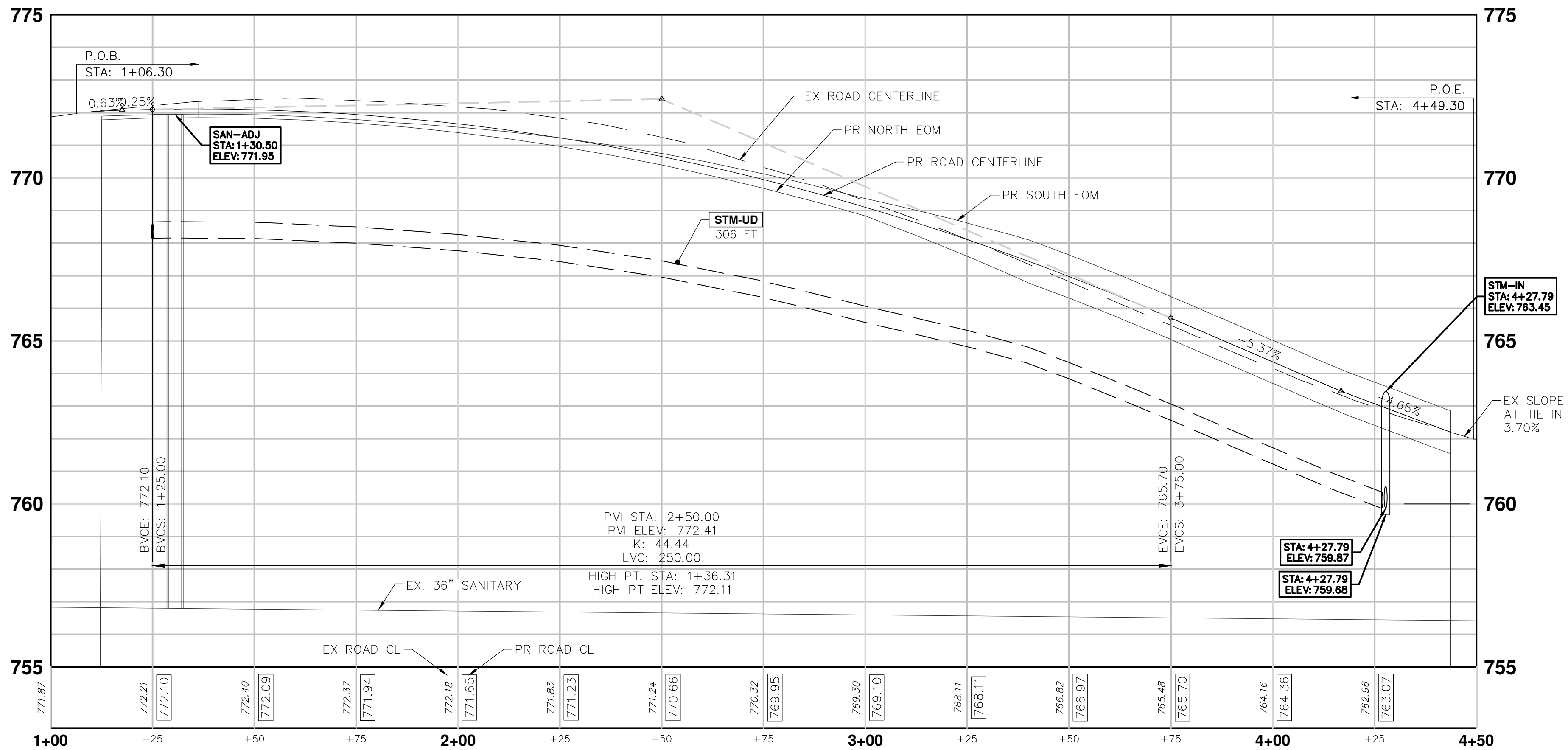
NOTES

OVERHEAD LINES MAY NEED TO BE DE-ENERGIZED PRIOR TO START OF CONSTRUCTION. CONTRACTOR TO DETERMINE AND COORDINATE.

AGG BEHIND CONC CURB & GUTTER IS 2" LIFT OF 8"



ROAD CONSTRUCTION PLAN STA 1+06 TO STA 4+49



ROAD CONSTRUCTION PROFILE STA 1+06 TO STA 4+49

SDANITARY & STORM, STRUCTURE & PIPE TABLE

STRUCTURE OR PIPE NAME	STRUCTURE OR PIPE TYPE	RIM ELEV.	SIZE, DIRECTION, & INVERT ELEV.	COVER TYPE
SAN-1	4' MH	771.95	36" NW 753.80 36" SE 753.80	Q (SD-GU-4)
STM-1	12" ES	752.00	-	-
STM-2	12" RCP Pipe	-	SW 752.38 NE 752.00	-
STM-3	4' MH	762.29	6" NW 755.25 8" SW 758.16 12" NE 752.38	HC (SD-ST-4)
STM-4	8" PVC Pipe	-	SW 759.87 NE 758.16	-
STM-5	2' Inlet	763.45	6" NW 759.87 8" NE 759.87	G

ROAD CONSTRUCTION QUANTITIES - THIS SHEET

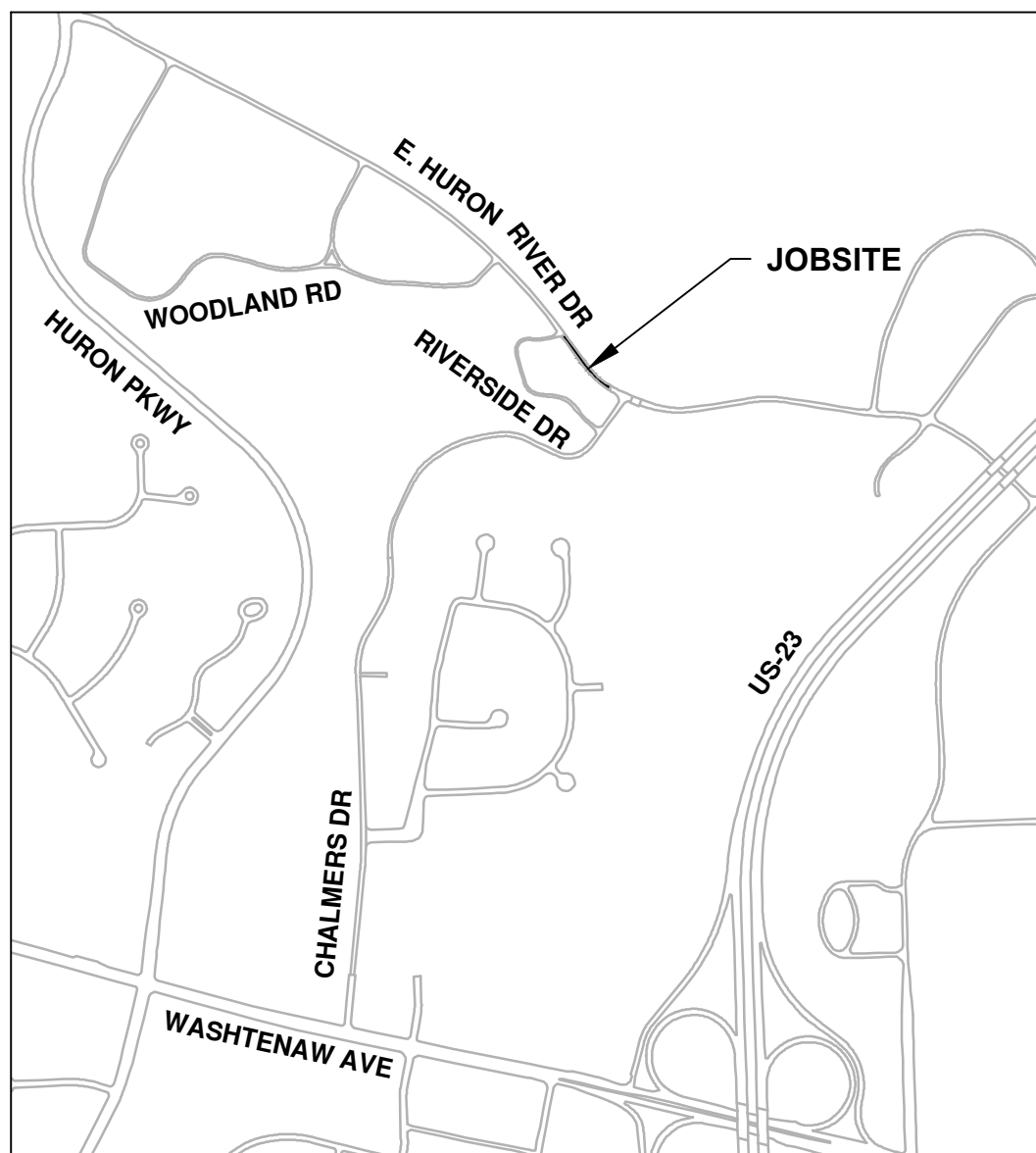
ITEM	QTY	UNIT
DS_Erosion Control, Straw Wattle, 12 In. Dia.	50	Ft
DS_Granular Backfill	53	Cyd
Sanitary Structure Cover, Adjust	1	Ea
DS_8 In., PVC Storm Sewer, SD-TD-2	28	Ft
Riprap, Heavy	38	Syd
DS_Storm Single Inlet, 24 In. Dia., (0-8' deep), Modified	1	Ea
Underdrain, Subbase, 6 In.	300	Ft
Aggregate Base, 8 In., 21AA, CIP	1406	Syd
HMA, 4EL	137	Ton
HMA, 5EL	92	Ton
DS_Shld Gutter, Conc, Det 2	1	Ea
Conc, Curb or Curb & Gutter, All Types	309	Ft
Pavt Mrkg, Polyurea, 4 In., White	731	Ft
Pavt Mrkg, Polyurea, 4 In., Yellow	732	Ft
DS_Post Hole Through Conc	1	Ea
DS_Turf Restoration	580	Syd

ROAD CONSTRUCTION HATCH KEY

HMA SURFACE	AGGREGATE BASE, 8 IN., 21AA
RIPRAP	TURF RESTORATION
CONCRETE CURB & GUTTER	GUARDRAIL RECONST
STORM PIPE	

ROAD CONSTRUCTION KEY

KEY	DESCRIPTION
RR	RIPRAP, HEAVY
PVMT	HMA, 4EL & HMA, 5EL & AGGREGATE BASE, 8 IN., 21AA, CIP
BUTT	HMA, 5EL
GRDL	DS_GUARDRAIL, RECONST, TYPE B
CG	CONC, CURB OR CURB & GUTTER, ALL TYPES
STM-8	DS_8 IN., PVC STORM SEWER, SD-TD-2
STM-IN	DS_STORM SINGLE INLET, 24 IN. DIA., (0-8' DEEP), MODIFIED
STM-UD	UNDERDRAIN, SUBBASE, 6 IN.
SAN-AJ	SANITARY STRUCTURE COVER, ADJUST
MRKG-W	PAVT MRKG, POLYUREA, 4 IN., WHITE
MRKG-Y	PAVT MRKG, POLYUREA, 4 IN., YELLOW
SG	DS_SHLD GUTTER, CONC, DET 2
PH	POST HOLE THROUGH CONC FOR STEEL POST
TURF	DS_TURF RESTORATION
AGG	AGGREGATE BASE, 8 IN., 21AA, CIP
WATT	DS_EROSION CONTROL, STRAW WATTLE, 12 IN. DIA.



AL

CHECKED

RD

DRAWN

DATE

11/14/25

REFRESH FOR NEW BID CYCLE

DESCRIPTION

01

REV.

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
P.O. BOX 8847  
ANN ARBOR, MI 48107-8847  
www.a2gov.org



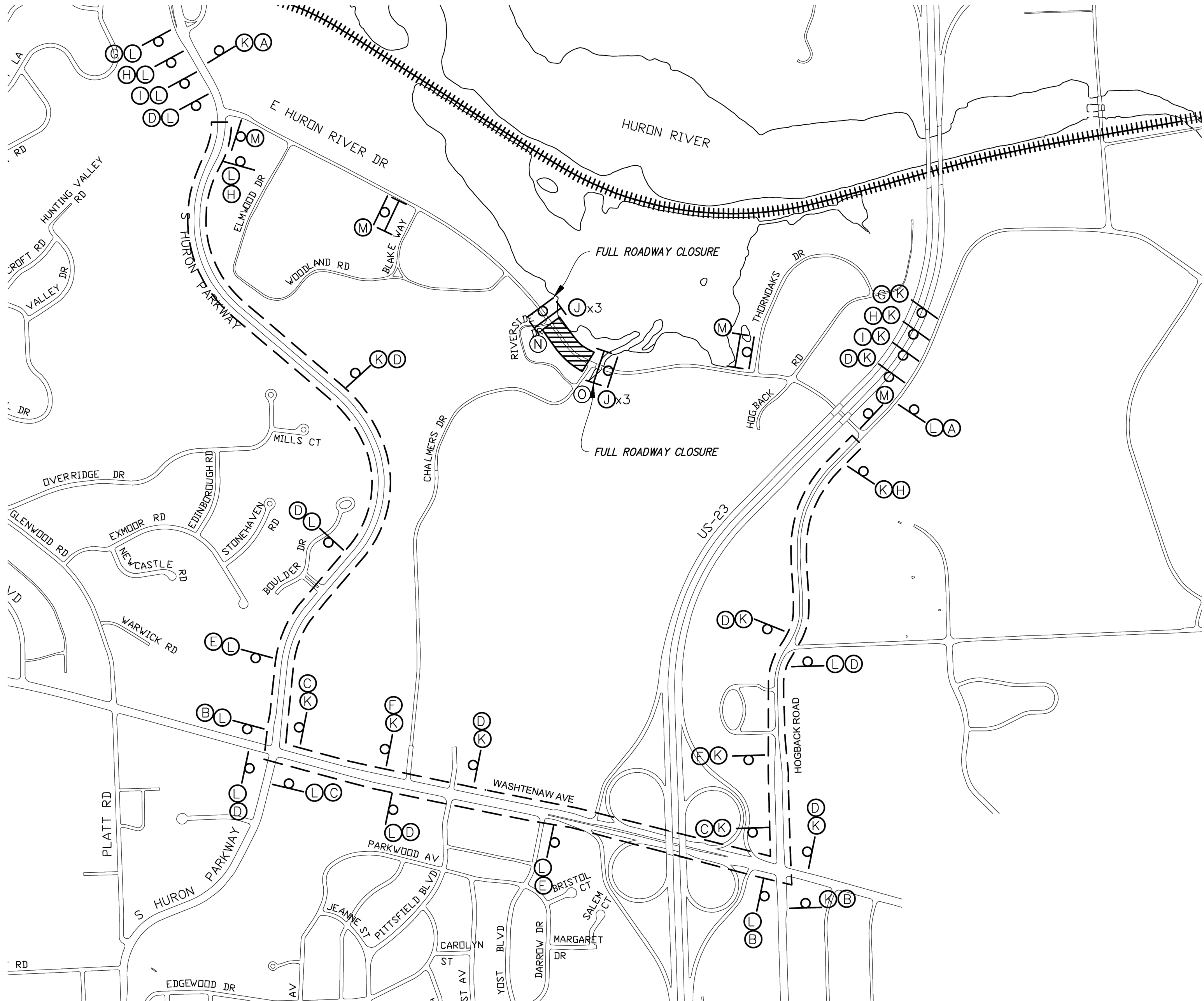
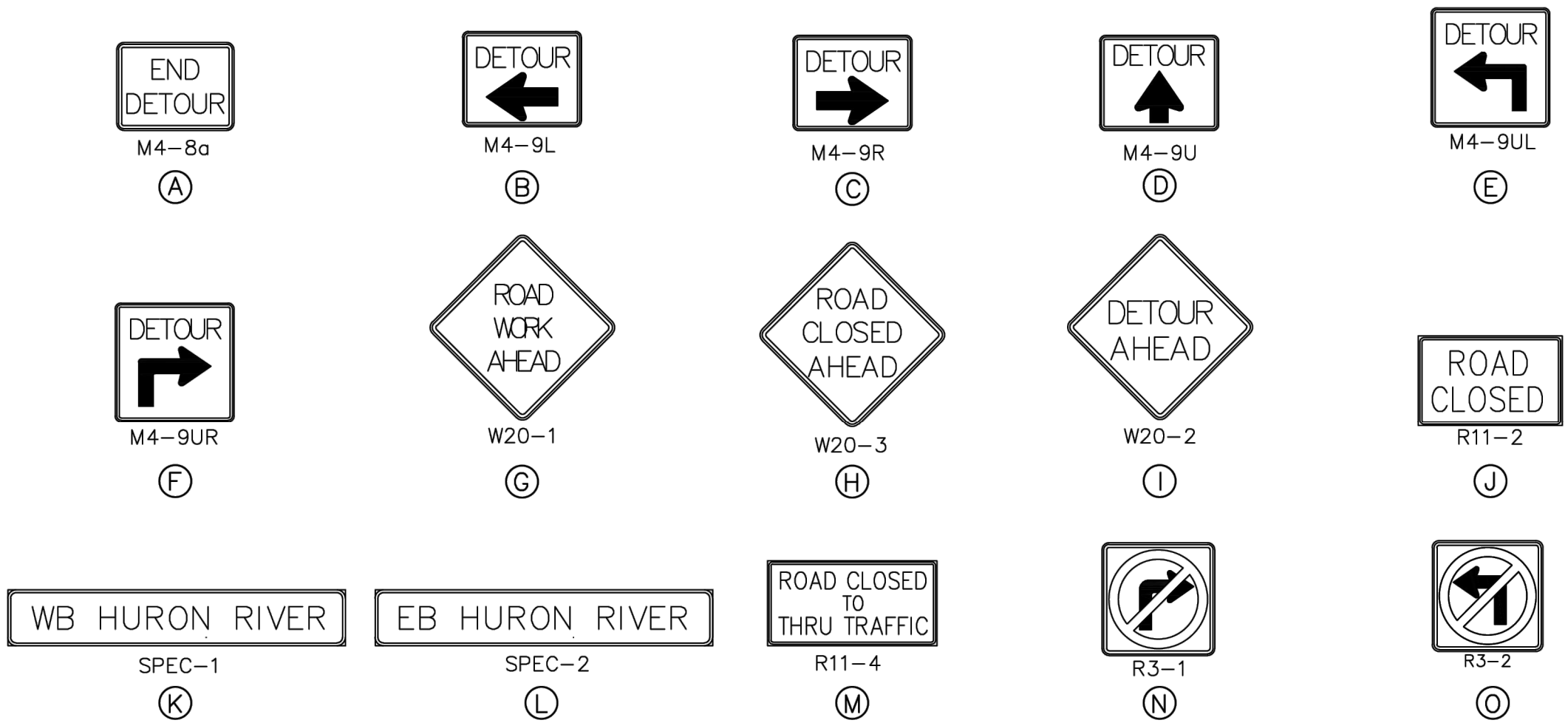
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION  
RIVERSIDE DR TO CHALMERS RD  
ROAD CONSTRUCTION

SCALE PLAN: 1" = 20'  
DRAWING No.  
AA23004-7

SHEET No.



J:\AA\Design\AA23004 - E. Huron River Drive Retaining Wall\DWG\AA23004\_MOT.dwg Dwg Created: 3-May-24 - \_a2 standard bw.stb - Plot Date: 11-Dec-25



TRAFFIC QUANTITIES - THIS SHEET		
ITEM	QTY	UNIT
Sign, Type B, Temp, Prismatic, Furn & Oper	330.0	Sft
Sign, Type B, Temp, Prismatic, Special, Furn & Oper	120.0	Sft
Barricade, Type III, High Intensity, Lighted, Furn & Oper	12	Ea

NOTES

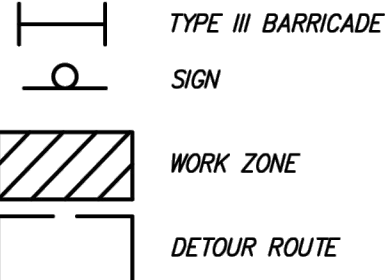
LEAD-IN PLACED AT 450' SPACING.

ADJUST ALL SIGNS AS NECESSARY TO FIT FIELD CONDITIONS.

SIGN, TYPE B, TEMP, PRISMATIC, FURN & OPER - THIS SHEET				
SYMBOL	MMUTCD DESIGNATION	DESCRIPTION	SIZE (IN)	QTY
A	M4-8a	END DETOUR	30x24	2
B	M4-4L	DETOUR (LEFT)	30x24	3
C	M4-9R	DETOUR (RIGHT)	30x24	3
D	M4-9U	DETOUR (STRAIGHT)	30x24	10
E	M4-9UL	DETOUR (STRAIGHT/LEFT)	30x30	2
F	M4-9UR	DETOUR (STRAIGHT/RIGHT)	30x30	2
G	W20-1	ROAD WORK AHEAD	36x36	2
H	W20-3	ROAD CLOSED AHEAD	36x36	4
I	W20-2	DETOUR AHEAD	36x36	2
J	R11-2	ROAD CLOSED	48x30	6
M	R11-4	ROAD CLOSED TO THRU TRAFFIC	60x30	6
N	R3-1	NO RIGHT TURN SYMBOL	24X24	1
O	R3-2	NO LEFT TURN SYMBOL	24X24	1

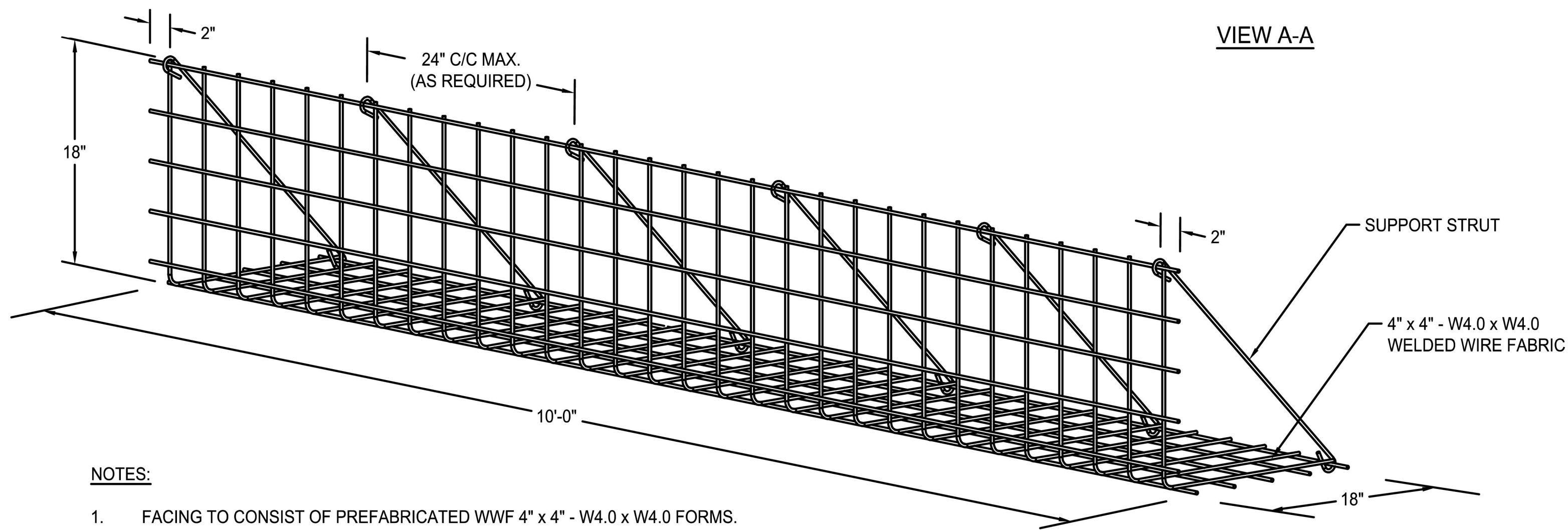
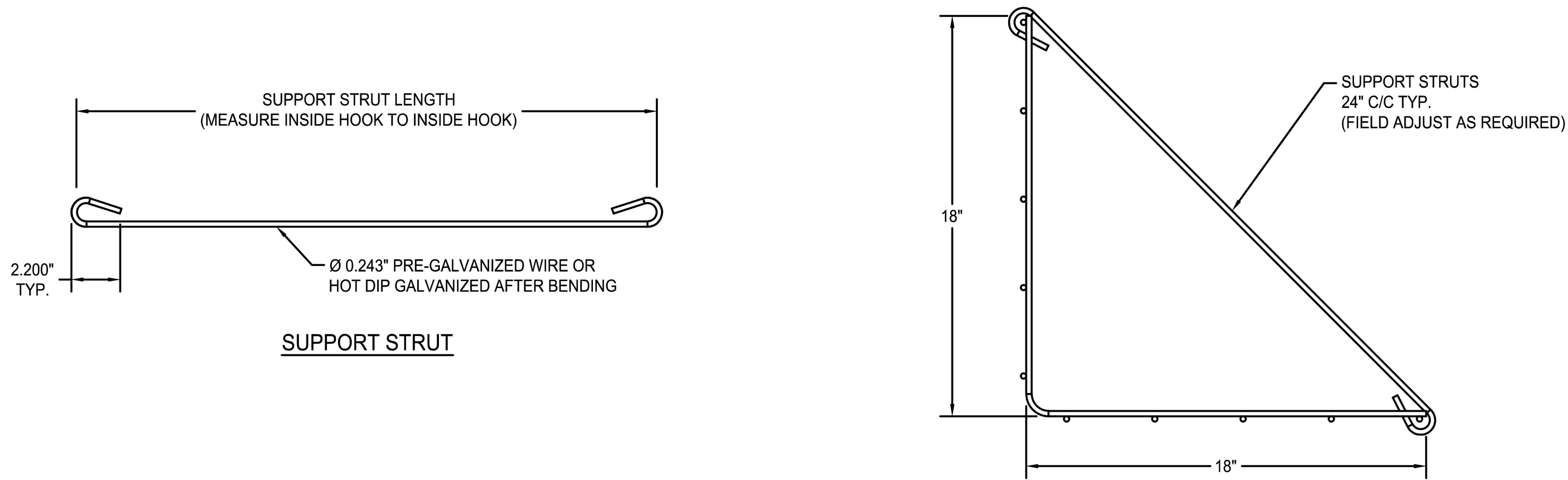
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, FURN & OPER - THIS SHEET				
SYMBOL	MMUTCD DESIGNATION	DESCRIPTION	SIZE (IN)	QTY
K	D3-2	WB HURON RIVER DR	12x48	15
L	D3-2	EB HURON RIVER DR	12x48	15

LEGEND



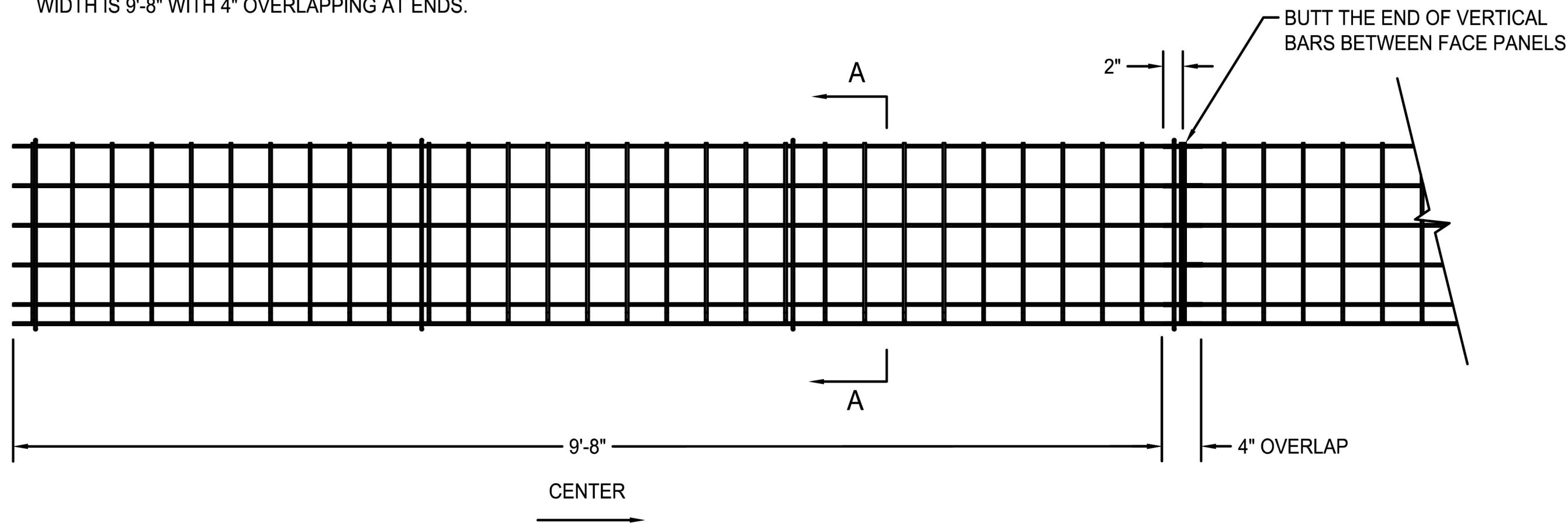


J:\AA\Design\AA23004 - E. Huron River Drive Retaining Wall\DWG\RETAINING WALL DETAILS.dwg Dwg Created: 12-Nov-25 -- \_a2 standard bw.stb -- Plot Date: 11-Dec-25



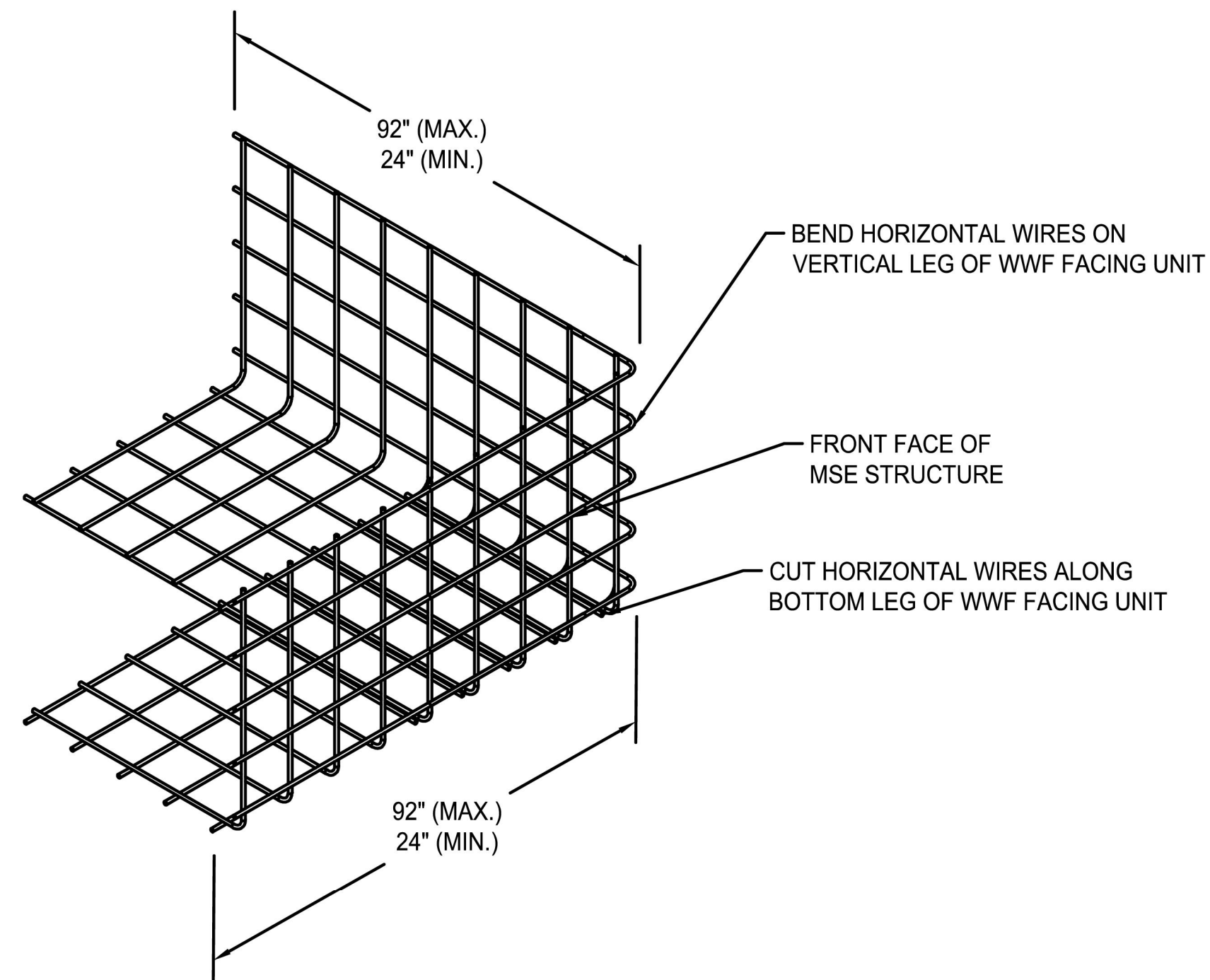
**NOTES:**

1. FACING TO CONSIST OF PREFABRICATED WWF 4" x 4" - W4.0 x W4.0 FORMS.
2. WWF'S ARE MANUFACTURED OF ASTM A82 (AASHTO M32) STEEL WIRE AND ARE WELDED IN ACCORDANCE WITH ASTM A185 (AASHTO M55).
3. ALL FORMS SHALL BE HOT DIP GALVANIZED AFTER BENDING IN ACCORDANCE WITH ASTM A123 (AASHTO M111).
4. STRUTS ARE MANUFACTURED OF MEDIUM TEMPER PRE-GALVANIZED WIRE, IN ACCORDANCE WITH ASTM A641 OR ARE HOT-DIP GALVANIZED AFTER BENDING IN ACCORDANCE WITH ASTM A153 (AASHTO M232).
5. OVERALL LENGTH OF WIRE FORMS IS 10'-0". EFFECTIVE CONSTRUCTED WIDTH IS 9'-8" WITH 4" OVERLAPPING AT ENDS.



**WELDED WIRE FORM FACING UNIT**

NOT TO SCALE

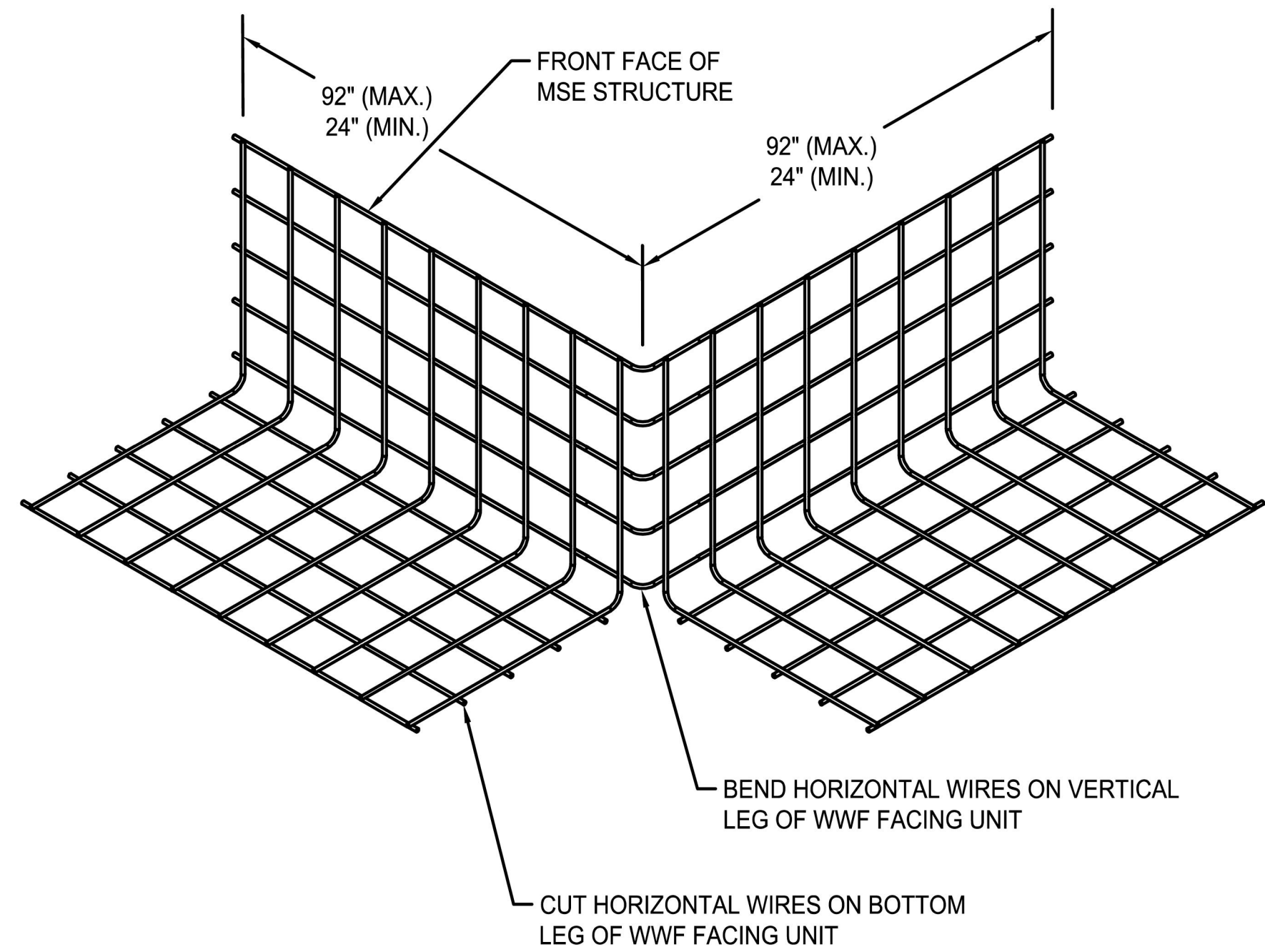


**NOTES:**

1. MAINTAIN 24" (MIN.) OF WIRE FORM ON EACH SIDE OF BEND.
2. SEE WELDED WIRE FORM (WWF) FACING UNIT DETAIL FOR FACING MATERIAL AND DIMENSIONS.

**WELDED WIRE FORM OUTSIDE CORNER UNIT**

NOT TO SCALE



**NOTES:**

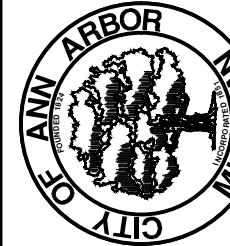
1. MAINTAIN 24" (MIN.) OF WIRE FORM ON EACH SIDE OF BEND.
2. SEE WELDED WIRE FORM (WWF) FACING UNIT DETAIL FOR FACING MATERIAL AND DIMENSIONS.

**WELDED WIRE FORM INSIDE CORNER UNIT**

NOT TO SCALE



CITY OF ANN ARBOR  
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301 EAST HURON STREET  
ANN ARBOR, MI 48106-6647  
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION  
RIVERSIDE DR TO CHALMERS RD  
RETAINING WALL DETAILS - 1

SCALE PLAN: NTS  
DRAWING No.  
AA23004-9

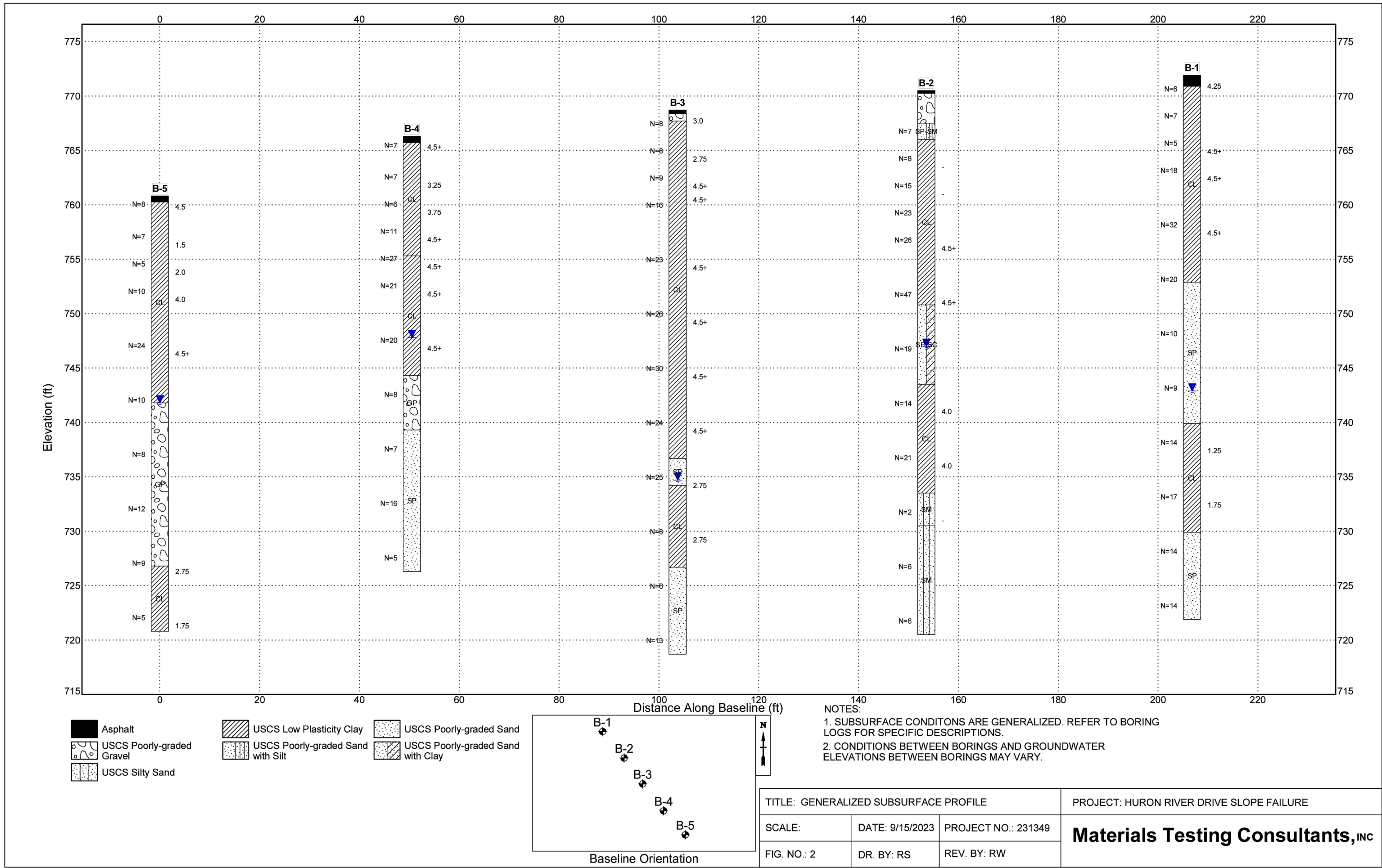
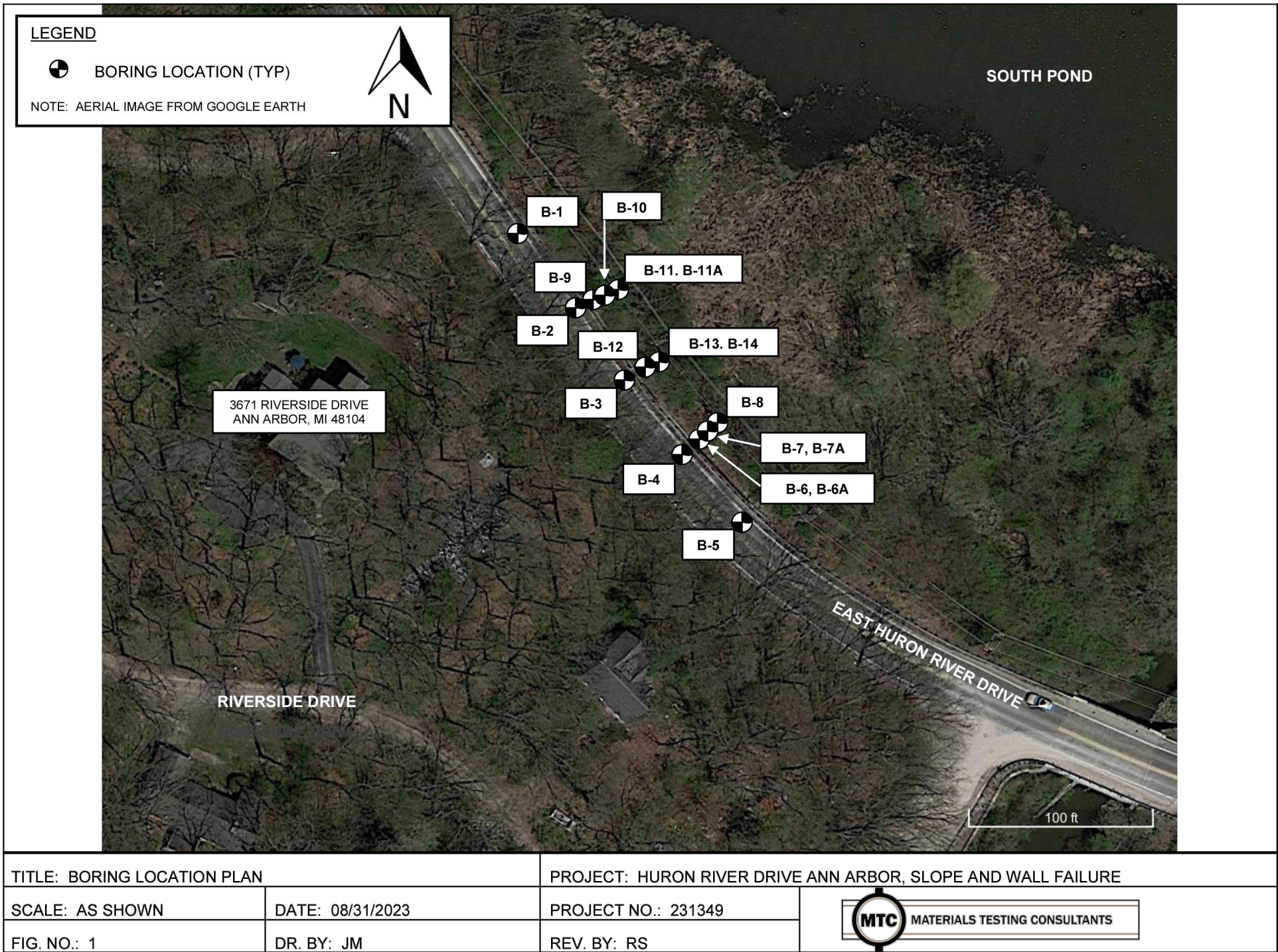
SHEET No.







Plotted: Dec 11, 2023, 3:18 PM by user: 1179 - Saved: 12/11/2025 by user: 1179  
J:\PA\Design\WAE2004 - E. Huron River Drive Retaining Wall\DWG\WAE2004\_SBL.dwg



CITY OF ANN ARBOR  
PUBLIC SERVICES  
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**CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING**

**E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION**

**RIVERSIDE DR TO CHALMERS RD  
SOIL BORING MAP AND PROFILE**

SCALE PLAN: NTS

DRAWING No.  
AA23004-11

SHEET No.



Plotted: Dec 11, 2023, 3:19 PM by user: 1179 - Saved: 12/11/2023 by user: 1179  
J:\AA\Design\W4E23004 - E: Huron River Drive Retaining Wall\DWG\W4E23004\_SBL.dwg

<div>MTC</div>			LOG OF BORING			Project No.: 231349 Boring No.: B-1 Sheet: 1 of 2				
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: 55 LC										
Crew Chief: KE			Field Eng.: BG			Rev. By: RS				
Coordinates: N=279878.9 E=13307260.6 (MI South ft)										
Elevation: 771.9 ft			Datum: NAVD 88 (GPS Observation)							
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 30.0 ft.										
Depth Drilled: 50.0 ft.										
Date Begin: 06/29/2023										
Date End: 06/29/2023										
Tooling		Type		Dia.		Groundwater, ft.				
Casing		HSA		4 1/4"		During		29.0		
Sampler		SPT		2"		End		29.0		
Core						Seepage				
Tube						Date		Depth, ft.		
SPT Hammer										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/seq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tonf	MST %	DO pdf	REMARKS
770.9	1					12" HMA	1.0	4.25		
769.9	2	S-1	1.2	3-3-3 N=6		Gray lean CLAY; mostly clayey fines, few coarse to fine sand, trace gravel, moist				
768.9	3									
767.9	4							2.9		
766.9	5	S-2	0.3	3-3-4 N=7						S-2, S-3: Poor recovery; possible coarse gravel / COBBLE
765.9	6									
764.9	7	S-3	1.0	2-2-3 N=5				4.5+	19.6	
763.9	8									
762.9	9	S-4	1.5	4-8-10 N=18	CL			4.5+	22.2	
761.9	10									
760.9	11									
759.9	12									
758.9	13									
757.9	14	S-5	1.5	9-13-19 N=32		Grades without sand		4.5+	14.0	
756.9	15									
755.9	16									
754.9	17									
753.9	18									
752.9	19	S-6	1.5	12-10-10 N=20			19.0			
751.9	20					Brown poorly graded SAND; mostly medium to fine sand, moist				
750.9	21									
749.9	22									
748.9	23									
747.9	24	S-7	1.5	5-4-6 N=10	SP					
746.9	25									
745.9	26									
744.9	27									
743.9	28									
742.9	29	S-8	1.5	3-4-5 N=9		Grades wet at 29'				
741.9	30									
740.9	31									
739.9	32						32.0			
738.9	33					Brown lean CLAY with sand; mostly clayey fines, little coarse to fine sand, wet				
737.9	34	S-9	1.5	6-6-8 N=14	CL			1.25	13.2	
736.9	35									
735.9	36									
734.9	37									
733.9	38									
732.9	39									
731.9	40	S-10	1.5	6-9-8 N=17		Grades gray	1.75	21.9		

<div>MTC</div>				LOG OF BORING		Project No.: 231349 Boring No.: B-1 Sheet: 2 of 2				
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%						QP = Calibrated Penetrometer (tons/sq. ft.)				
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pdf	REMARKS
730.9	41	S-11	1.5	7-7-7 N=14	CL	Gray lean CLAY with sand; mostly clayey fines, little coarse to fine sand, wet  Gray poorly graded SAND; mostly coarse to fine sand, moist	42.0			
729.9	42									
728.9	43									
727.9	44									
726.9	45									
725.9	46	S-12	1.5	9-7-7 N=14	SP	50.0				
724.9	47									
723.9	48									
722.9	49									
721.9	50									
End of Boring										


<div>MTC</div>		LOG OF BORING		Project No.: 231349 Boring No.: B-2 Sheet: 1 of 2						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: 55 LC										
Crew Chief: KE		Field Eng.: JV		Rev. By: RS						
Coordinates: N=279837.6 E=13307294.2 (MI South ft)										
Elevation: 770.5 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 23.0 ft.										
Depth Drilled: 50.0 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tonf	MST %	UCS psf	REMARKS
769.5	1					3" Asphalt patch	0.3			
768.5	2	S-1	1.5	1-WOH		Crushed Limestone Aggregate Base				WOH: Weight-of-Hammer
767.5	3						3.0			
766.5	4				SP-SM	Brown poorly graded SAND with silt and gravel; mostly coarse to fine sand, little coarse to fine gravel, few silty fines, moist				
765.5	5	S-2	1.5	5-3-4 N=7		Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist	4.5			
764.5	6									
763.5	7	S-3	0.6	4-4-4 N=8				-		S-3, S-4: Poor recovery; possible coarse gravel / COBBLE
762.5	8									
761.5	9	S-4	0.1	5-7-8 N=15				-		
760.5	10									
759.5	11					11-12-11 N=23				
758.5	12	S-5	1.5	11-12-11 N=23	CL			23.1		S-5: Atterberg Limits ASTM D4318: LL = 20, PL = 11, PI = 9
757.5	13									
756.5	14					11-12-14 N=26				
755.5	15	S-6	1.5	11-12-14 N=26				4.5+	19.3	
754.5	16									
753.5	17									
752.5	18									
751.5	19	S-7	1.5	11-15-32 N=47				4.5+	17.4	
750.5	20					Brown poorly graded SAND with clay and gravel; mostly coarse to fine sand, little coarse to fine gravel, few clayey fines, moist	19.7			Augers charged with water at 20.0' to 25.0'
749.5	21									
748.5	22									
747.5	23									
746.5	24									
745.5	25	S-8	0.8	12-10-9 N=19	SP-SC	Grades wet				
744.5	26									
743.5	27									
742.5	28					Gray lean CLAY; mostly clayey fines, trace fine gravel, moist	27.0			
741.5	29									
740.5	30	S-9	1.5	5-5-9 N=14				4.0	16.0	
739.5	31									
738.5	32				CL					
737.5	33									
736.5	34					Grades with wet sand seams		4.0	19.6	S-10: Atterberg Limits ASTM D4318: LL = 29, PL = 13, PI = 16
735.5	35	S-10	0.6	10-13-8 N=21						
734.5	36									
733.5	37									
732.5	38					Gray silty SAND; mostly medium to fine sand, some silty fines, wet	37.0			
731.5	39				SM			-	13.5	
730.5	40	S-11	0.2	1-1-1 N=2			40.0			


MTC			LOG OF BORING			Project No.: 231349 Boring No.: B-2 Sheet: 2 of 2				
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%						QP = Calibrated Penetrometer (tons/sq. ft.)				
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	UCS psf	REMARKS
729.5	41	U-12	2.0	Shelby	SM	Gray silty SAND; mostly medium to fine sand, some silty fines, wet				Augers charged with water at 45.0'
728.5	42									
727.5	43									
726.5	44									
725.5	45									
724.5	46	S-13	1.5	3-3-3 N=6						
723.5	47									
722.5	48									
721.5	49									
720.5	50									
		S-14	1.5	2-2-4 N=6			50.0			
						End of Boring				


MTC		LOG OF BORING		Project No.: 231349 Boring No.: B-3 Sheet: 1 of 2						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: 55 LC										
Crew Chief: KE		Field Eng.: BG		Rev. By: RS						
Coordinates: N=279797.1 E=13307323.3 (MI South ft)										
Elevation: 768.7 ft Datum: NAVD 88 (GPS Observation)										
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 26.0 ft.										
Depth Drilled: 50.0 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/eq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	OP t <sub>90</sub>	MST %	UCS psf	REMARKS
767.7	1					4" HMA	0.3			
766.7	2	S-1	1.5	5-4-4 N=8		7" Coarse Aggregate Base	1.0	3.0		
765.7	3					Brown lean CLAY; mostly clayey fines, few coarse to fine gravel, moist				
764.7	4							2.75	14.9	
763.7	5	S-2	1.5	4-4-4 N=8						
762.7	6									
761.7	7	S-3	1.5	2-4-5 N=9		Grades with trace coarse gravel at 6'		4.5+	24.8	
760.7	8							4.5+		
759.7	9	S-4	1.5	4-7-9 N=16					18.0	
758.7	10									
757.7	11									
756.7	12									
755.7	13									
754.7	14	S-5	1.5	11-11-12 N=23				4.5+	18.7	
753.7	15									
752.7	16									
751.7	17									
750.7	18									
749.7	19	S-6	1.5	8-11-15 N=26				4.5+	18.4	S-6: Poor recovery; possible coarse gravel / COBBLE
748.7	20									
747.7	21									
746.7	22									
745.7	23									
744.7	24									
743.7	25	S-7	1.5	8-13-17 N=30				4.5+	17.4	
742.7	26									
741.7	27									
740.7	28									
739.7	29	S-8	1.5	8-11-13 N=24				4.5+	16.0	
738.7	30									
737.7	31									
736.7	32							32.0		
735.7	33									
734.7	34	S-9	1.5	28-11-14 N=25	SP	Poorly graded SAND with gravel, mostly coarse to fine sand, little coarse to fine gravel, moist				
733.7	35					Grades wet at 34'		34.5	2.75	
732.7	36									
731.7	37									
730.7	38				CL	Brown lean CLAY; mostly clayey fines, trace coarse to fine gravel, moist				
729.7	39									
728.7	40	S-10	1.5	5-4-4 N=8		Grades gray with coarse to fine sand		2.75	23.1	



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		<b>LOG OF BORING</b>		<b>Project No.: 231349</b> <b>Boring No.: B-4</b> <b>Sheet: 1 of 1</b>						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: CME 55										
Crew Chief: KE		Field Eng.: BG		Rev. By: RS						
Coordinates: N=279755.0 E=13307355.9 (MI South ft)										
Elevation: 765.3 ft Datum: NAVD 88 (GPS Observation)										
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 21.0 ft.										
Depth Drilled: 40.0 ft.										
Date Begin: 06/30/2023				Date End: 06/30/2023						
Tooling		Type		Dia.						
Casing		HSA		4 1/4"						
Sampler		SPT		2"						
Core				Seepage						
Tube				Date						
SPT Hammer				Depth, ft.						
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recover. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	UCS psf	REMARKS
765.3	1					7" HMA				
764.3	2	S-1	1.0	3-3-4 N=7	CL	Brown lean CLAY; mostly clayey fines, few coarse to fine gravel, moist	4.5+			S-1, S-8: Poor recovery; possible coarse gravel / COBBLE
763.3	3									
762.3	4									
761.3	5	S-2	1.4	4-4-3 N=7				3.25	8.9	
760.3	6									
759.3	7									
758.3	8	S-3	1.3	2-3-3 N=6			3.75	14.7		
757.3	9									
756.3	10	S-4	1.5	3-5-6 N=11		Grades with trace organics, twigs at 8.5'	4.5+	13.9		
755.3	11									
754.3	12						11.0			
753.3	13	S-5	1.5	7-12-15 N=27		Brown lean CLAY with sand; mostly clayey fines, little fine sand, moist	4.5+			
752.3	14									
751.3	15	S-6	1.5	9-9-12 N=21	CL		4.5+	11.0		
750.3	16									
749.3	17									
748.3	18									
747.3	19									
746.3	20	S-7	1.5	24-8-12 N=20		Grades with few gravel at 18.5'	4.5+	18.2		
745.3	21									
744.3	22									
743.3	23						22.0			
742.3	24					Poorly graded GRAVEL with sand; mostly coarse to fine gravel, little coarse to fine sand, trace clayey fines, wet			14.4	
741.3	25	S-8	1.0	5-4-4 N=8	GP					
740.3	26									
739.3	27									
738.3	28									
737.3	29									
736.3	30									
735.3	31									
734.3	32									
733.3	33									
732.3	34									
731.3	35	S-9	1.5	4-3-4 N=7	SP	Brown poorly graded SAND with gravel; mostly coarse to fine sand, little fine gravel, trace clayey fines, wet				
730.3	36									
729.3	37									
728.3	38									
727.3	39									
726.3	40	S-10	1.5	9-8-8 N=16		Grades without gravel at 37.0'				End of Boring at 40.0'
725.3	41									
724.3	42	S-11	1.5	2-2-3 N=5			40.0			
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										


		LOG OF BORING		Project No.: 231349 Boring No.: B-5 Sheet: 1 of 1						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: CME 55										
Crew Chief: KE		Field Eng.: BG		Rev. By: RS						
Coordinates: N=279717.5 E=13307389.9 (MI South ft)										
Elevation: 760.8 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 20.0 ft.										
Depth Drilled: 40.0 ft.										
Date Begin: 06/30/2023      Date End: 06/30/2023										
Tooling		Type		Dia.						
Casing		HSA		4 1/4"						
Sampler		SPT		2"						
Core				Seepage						
Tube				Date						
SPT Hammer				Depth, ft.						
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recover. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
759.8	1					6 1/2" HMA				
758.8	2	S-1	1.0	6-4-4 N=8		Brown lean CLAY; mostly clayey fines, few coarse to fine gravel, moist	4.5			S-1, S-2: Poor recovery; possible coarse gravel / COBBLE
757.8	3									
756.8	4									
755.8	5	S-2	0.8	2-3-4 N=7			1.5	18.6		
754.8	6									
753.8	7	S-3	1.5	3-2-3 N=5		Grades with trace organics and occasional roots	2.0	21.0		
752.8	8									
751.8	9	S-4	1.5	4-4-6 N=10	CL		4.0	20.7		
750.8	10									
749.8	11									
748.8	12									
747.8	13									
746.8	14					Grades without organics, without gravel with few fine sand				
745.8	15	S-5	1.5	7-11-13 N=24			4.5+	18.1		
744.8	16									
743.8	17									
742.8	18									
741.8	19									
740.8	20	S-6	1.5	6-5-5 N=10		Poorly graded GRAVEL with sand; mostly coarse to fine gravel, little coarse to fine sand, trace clay, wet	19.0			
739.8	21									
738.8	22									
737.8	23									
736.8	24	S-7	1.5	4-4-4 N=8	GP					
735.8	25									
734.8	26									
733.8	27									
732.8	28									
731.8	29	S-8	1.5	7-7-5 N=12						
730.8	30									
729.8	31									
728.8	32									
727.8	33									
726.8	34									
725.8	35	S-9	1.5	4-5-4 N=9		Gray lean CLAY with sand; mostly clayey fines, little coarse to fine sand, moist	34.0	2.75		
724.8	36									
723.8	37									
722.8	38									
721.8	39									
720.8	40	S-10	1.5	2-3-2 N=5	CL		1.75	20.4		End of Boring at 40.0'
							40.0			
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										

		LOG OF BORING		Project No.: 231349 Boring No.: B-6 Sheet: 1 of 2	
Project: Huron River Drive Slope Failure					
Client: Spalding DeDecker					
Location: Ann Arbor, Michigan					
Drill Type: Hand Auger					
Crew Chief: BG/JV		Rev. By: RS			
Coordinates: N=279843.3 E=13307307.6 (MI South ft)					
Elevation: 765.6 ft Datum: NAVD 88 (GPS Observation)					
Notes: Elevations obtained from laser level					
Plugging Record: Backfilled borehole with compacted cuttings.					
Date Begin: 07/13/2023 Date End: 07/14/2023					
Tooling		Type	Dia.	Groundwater, ft.	
Casing	Sampler	Hand Auger	3 1/4"	During	None
Core	Tube			Seepage	NA
SPT Hammer				Date	Depth, ft.

Depth Drilled: 11.5 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recover. FT.	Dyn. Cone Eq. "N": ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
765.4	0.25					13" Sandy Topsoil				Fill: 0.0' to 11.5'
765.1	0.50									
764.9	0.75									
764.6	1.00									
764.4	1.25						1.1			
764.1	1.50					Brown poorly graded SAND with silt; mostly coarse to fine sand, few silty fines, few coarse to fine gravel, moist, Fill				
763.9	1.75	A-1			SP					
763.6	2.00									
763.4	2.25									
763.1	2.50									
762.9	2.75	A-2					2.8			
762.6	3.00					Brown sandy lean CLAY; mostly clayey fines, some coarse to fine sand, moist, Fill	2.0			
762.4	3.25									
762.1	3.50									
761.9	3.75	A-3			CL					
761.6	4.00									
761.4	4.25									
761.1	4.50						2.0			
760.9	4.75									
760.6	5.00									
760.4	5.25									
760.1	5.50						5.5			
759.9	5.75					Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist, Fill				
759.6	6.00	A-4			CL					
759.4	6.25									
759.1	6.50									
758.9	6.75									
758.6	7.00							3.5		
758.4	7.25							1.75		
758.1	7.50						7.5			
757.9	7.75	A-5				Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist, Fill with occasional metal debris				
757.6	8.00									
757.4	8.25									
757.1	8.50									
756.9	8.75									
756.6	9.00									
756.4	9.25									
756.1	9.50									
755.9	9.75									
755.6	10.00						10.0			

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.


<div><div></div><div>MTC</div></div>			LOG OF BORING			Project No.: 231349 Boring No.: B-6 Sheet: 2 of 2				
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%						QP = Calibrated Penetrometer (tons/sq. ft.)				
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N" ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
755.4	10.25	A-6			CL	Brown lean CLAY; mostly clayey fines, few coarse to fine sand, moist, Fill with occasional metal debris	2.0			
755.1	10.50									
754.9	10.75									
754.6	11.00									
754.4	11.25									
754.1	11.50					11.5				
						End of Boring				Auger refusal at 11.5' due to possible coarse gravel / COBBLE
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										


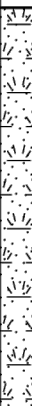

		LOG OF BORING		Project No.: 231349 Boring No.: B-6A Sheet: 1 of 1						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: Hand Auger										
Crew Chief:		Field Eng.: IA		Rev. By: RS						
Coordinates: N=279843.2 E=13307307.6 (MI South ft)										
Elevation: 765.6 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings.										
Depth Drilled: 7.0 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%				QP = Calibrated Penetrometer (tons/sq. ft.)						
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
765.4	0.25					12" Sandy Topsoil				Fill: 0.0' to 3.5'
765.1	0.50									
764.9	0.75									
764.6	1.00						1.0			
764.4	1.25					Brown poorly graded SAND with silt and gravel; mostly coarse to fine sand, little medium to fine gravel, few silty fines, moist, Fill with aluminum foil fragments, roots and wood debris				
764.1	1.50									
763.9	1.75									
763.6	2.00	A-1			SP-SM					
763.4	2.25									
763.1	2.50									
762.9	2.75									
762.6	3.00									
762.4	3.25						3.5			
762.1	3.50									
761.9	3.75									
761.6	4.00	A-2			SP-SC	Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, moist Grades wet at 4.0'				
761.4	4.25									
761.1	4.50	A-3					4.3			
760.9	4.75					Brown lean CLAY; mostly clayey fines, few medium to fine sand, trace of medium to fine gravel, moist				
760.6	5.00									
760.4	5.25	U-4	0.5				2.5			
760.1	5.50									
759.9	5.75				CL					
759.6	6.00									
759.4	6.25	U-5	0.4				2.5			
759.1	6.50									
758.9	6.75									
758.6	7.00					End of Boring	7.0			


\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.





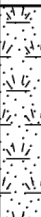
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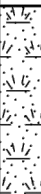

		LOG OF BORING		Project No.: 231349						
				Boring No.: B-7A						
				Sheet: 1 of 1						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: Hand Auger										
Crew Chief:		Field Eng.: JV		Rev. By: RS						
Coordinates: N=279845.3 E=13307312.8 (MI South ft)										
Elevation: 756.9 ft Datum: NAVD 88 (GPS Observation)										
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings.										
Date Begin: 07/14/2023				Date End: 07/14/2023						
Tooling		Type		Dia.						
Casing				Groundwater, ft.						
Sampler		Hand Auger		During						
Core				End						
Tube				Seepage						
SPT Hammer				Date						
				Depth, ft.						
Depth Drilled: 1.7 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
756.7	0.25				SP	12" Silty Topsoil				
756.4	0.50									
756.2	0.75									
755.9	1.00							1.0		
755.7	1.25				SP	Brown poorly graded SAND with clay and gravel, mostly coarse to fine sand, little coarse to fine gravel, few clayey fines, moist				
755.4	1.50	A-1						1.7		
						End of Boring				Hand auger refusal at 1.7' due to possible coarse gravel / COBBLE
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										

		LOG OF BORING		Project No.: 231349 Boring No.: B-8 Sheet: 1 of 1						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: Hand Auger										
Crew Chief:		Field Eng.: BG		Rev. By: RS						
Coordinates: N=279847.4 E=13307317.3 (MI South (ft))										
Elevation: 750.4 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings, patched pavement with cold patch.										
Date Begin: 07/13/2023				Date End: 07/13/2023						
Tooling		Type		Dia.						
Casing				Groundwater, ft.						
Sampler		Hand Auger		3 1/4"						
Core				During						
Tube				End						
SPT Hammer				Seepage						
				Date						
				Depth, ft.						
Depth Drilled: 4.0 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%										
QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
750.2	0.25	A-1		4		36" Clayey Topsoil				
749.9	0.50									
749.7	0.75									
749.4	1.00									
749.2	1.25									
748.9	1.50									
748.7	1.75									
748.4	2.00									
748.2	2.25									
747.9	2.50	A-2		5						
747.7	2.75									
747.4	3.00									
747.2	3.25	A-3				Dark brown lean CLAY, mostly clayey fines, moist. Fill with occasional tree roots and wood debris	3.0	2.25	49.9	Small plastic wire casing encountered at 3.0'
746.9	3.50									
746.7	3.75									
746.4	4.00									
End of Boring										Hand auger refusal at 4.0' due to possible coarse gravel / COBBLE
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										

		LOG OF BORING		Project No.: 231349 Boring No.: B-9 Sheet: 1 of 1	
Project: Huron River Drive Slope Failure Client: Spalding DeDecker Location: Ann Arbor, Michigan Drill Type: Hand Auger Crew Chief: Field Eng.: IA Rev. By: RS Coordinates: N=279764.8 E=13307368.4 (MI South ft) Elevation: 761.3 ft Datum: NAVD 88 (GPS Observation) Notes: Plugging Record: Backfilled borehole with compacted cuttings.					
		Date Begin: 07/18/2023		Date End: 07/18/2023	
		Tooling	Type	Dia.	Groundwater, ft.
		Casing			During 4.0
		Sampler	Hand Auger	3 1/4"	End 4.0
		Core			Seepage 4.0
		Tube			Date Depth, ft.
		SPT Hammer			
Depth Drilled: 7.0 ft.					
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)					
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol
"DESCRIPTION					
QP tsf					
MST %					
DO pcf					
REMARKS					
761.1	0.25				8" Clayey Topsoil
760.8	0.50				
760.6	0.75				
760.3	1.00				
760.1	1.25				
759.8	1.50	A-1			
759.6	1.75				
759.3	2.00				
759.1	2.25				
758.8	2.50				
758.6	2.75				
758.3	3.00				
758.1	3.25	A-2			
757.8	3.50				
757.6	3.75				
757.3	4.00				
757.1	4.25				
756.8	4.50				
756.6	4.75				
756.3	5.00				
756.1	5.25	A-3			
755.8	5.50				
755.6	5.75				
755.3	6.00				
755.1	6.25				
754.8	6.50				
754.6	6.75	A-4			
754.3	7.00				
End of Boring					
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.					

		LOG OF BORING			Project No.: 231349 Boring No.: B-10 Sheet: 1 of 1					
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: Hand Auger										
Crew Chief:		Field Eng.: BG		Rev. By: RS						
Coordinates: N=279767.8 E=13307372.1 (MI South ft)										
Elevation: 755.1 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings.										
Date Begin: 07/19/2023				Date End: 07/19/2023						
Tooling		Type		Dia.		Groundwater, ft.				
Casing						During 9.0				
Sampler		Hand Auger		3 1/4"		End 9.0				
Core						Seepage 9.0				
Tube						Date Depth, ft.				
SPT Hammer										
Depth Drilled: 9.2 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP ton/ft <sup>2</sup>	MST %	DD pcf	REMARKS
754.9	0.25					18" Clayey Topsoil	1.5	2.0		Fill: 0.0' to 7.5'
754.6	0.50									
754.4	0.75									
754.1	1.00									
753.9	1.25									
753.6	1.50	A-1				Brown lean CLAY: mostly clayey fines, trace fine gravel, moist. Fill with occasional asphalt debris and root fragments				
753.4	1.75									
753.1	2.00									
752.9	2.25									
752.6	2.50									
752.4	2.75	A-2								
752.1	3.00									
751.9	3.25									
751.6	3.50									
751.4	3.75									
751.1	4.00	A-3								
750.9	4.25									
750.6	4.50									
750.4	4.75									
750.1	5.00									
749.9	5.25	A-4								
749.6	5.50									
749.4	5.75									
749.1	6.00									
748.9	6.25									
748.6	6.50									
748.4	6.75									
748.1	7.00									
747.9	7.25									
747.6	7.50									
747.4	7.75									
747.1	8.00									
746.9	8.25									
746.6	8.50									
746.4	8.75									
746.1	9.00	End of Boring								Auger refusal at 9.2' due to possible coarse gravel / COBBLE
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										

		LOG OF BORING		Project No.: 231349 Boring No.: B-11 Sheet: 1 of 1						
Project: Huron River Drive Slope Failure Client: Spalding DeDecker Location: Ann Arbor, Michigan Drill Type: Hand Auger Crew Chief: Field Eng.: IA Rev. By: RS Coordinates: N=279770.9 E=13307376.6 (MI South ft) Elevation: 748.0 ft Datum: NAVD 88 (GPS Observation) Notes: Plugging Record: Backfilled borehole with compacted cuttings.										
		Date Begin: 07/18/2023		Date End: 07/18/2023						
		Tooling	Type	Dia.	Groundwater, ft.					
		Casing			During 1.5					
		Sampler	Hand Auger	3 1/4"	End NA					
		Core			Seepage					
		Tube			Date Depth, ft.					
		SPT Hammer								
Depth Drilled: 1.7 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
747.8	0.25	A-1				20" Dark Brown Clayey Topsoil with roots				
747.5	0.50									
747.3	0.75									
747.0	1.00									
746.8	1.25									
746.5	1.50									
						End of Boring	1.7			Auger refusal at 1.7' due to possible coarse gravel / COBBLE
* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.										

		<b>LOG OF BORING</b>		<b>Project No.:</b> 231349 <b>Boring No.:</b> B-11A <b>Sheet:</b> 1 of 1						
Project: Huron River Drive Slope Failure										
Client: Spalding DeDecker										
Location: Ann Arbor, Michigan										
Drill Type: Hand Auger										
Crew Chief:		Field Eng.: IA		Rev. By: RS						
Coordinates: N=279770.9 E=13307376.6 (MI South (ft))										
Elevation: 748.0 ft		Datum: NAVD 88 (GPS Observation)								
Notes:										
Plugging Record: Backfilled borehole with compacted cuttings.										
		Date Begin: 07/18/2023		Date End: 07/18/2023						
		Tooling	Type	Dia.	Groundwater, ft.					
		Casing			During 1.5					
		Sampler	Hand Auger	3 1/4"	End NA					
		Core			Seepage					
		Tube			Date Depth, ft.					
		SPT Hammer								
Depth Drilled: 2.0 ft.										
Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)										
Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	"USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
747.8	0.25	A-1				18" Clayey Topsoil				
747.5	0.50									
747.3	0.75									
747.0	1.00									
746.8	1.25									
746.5	1.50	SP-SC				Brown poorly graded SAND with clay; mostly coarse to fine sand, few clayey fines, wet	1.5			
746.3	1.75					2.0				
746.0	2.00					End of Boring				Auger refusal at 2.0' due to possible coarse gravel / COBBLE



AL CHECKED

RD DRAWN

11/14/25 DATE

01 REFRESH FOR NEW BID CYCLE

DESCRIPTION

REV.

01

CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
ANN ARBOR, MI 48107-4647  
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E. HURON RIVER DRIVE RETAINING WALL  
REPLACEMENT AND ROAD RECONSTRUCTION  
RIVERSIDE DR TO CHALMERS RD  
SOIL BORING LOGS 7A TO 11A

SCALE PLAN: NTS

DRAWING No.  
AA23004-14

SHEET No.

14 OF 15



MTC

LOG  
OF  
BORING

Project No: 231349

Boring No: B-12

Sheet: 1 of 1

Project: Huron River Drive Slope Failure

Client: Spalding DeDecker

Location: Ann Arbor, Michigan

Drill Type: Hand Auger

Crew Chief: Field Eng.: IA

Coordinates: N=279804.0 E=13307335.7 (MI South) (ft)

Elevation: 763.8 ft

Datum: NAVD 88 (GPS Observation)

Notes:

Plugging Record: Backfilled borehole with compacted cuttings, patched pavement with cold patch.

Rev. By: RS

Date Begin: 07/18/2023

Date End: 07/18/2023

Tooling	Type	Dia.	Groundwater, ft.
Casing			During
Sampler	Hand Auger	3 1/4"	End
Core			Seepage
Tube			Date
SPT Hammer			Depth, ft.

Depth Drilled: 6.0 ft.

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%

QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
763.6	0.25				<div><div></div><div>CL</div></div>	8" Clayey Topsoil				Fill: 0.0' to 6.0'
763.3	0.50									
763.1	0.75									
762.8	1.00						Brown lean CLAY with sand, mostly clayey fines, little coarse to fine sand, few coarse to fine gravel, moist, Fill	0.7		
762.6	1.25									
762.3	1.50									
762.1	1.75									
761.8	2.00							1.5		
761.6	2.25									
761.3	2.50									
761.1	2.75									
760.8	3.00							2.0		
760.6	3.25									
760.3	3.50									
760.1	3.75									
759.8	4.00									
759.6	4.25									
759.3	4.50									
759.1	4.75									
758.8	5.00									
758.6	5.25									
758.3	5.50									
758.1	5.75									
757.8	6.00					Grades with occasional root fragments at 5.8'	3.0			
						End of Boring	6.0			

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

MTC

LOG  
OF  
BORING

Project No.: 231349

Boring No.: B-13

Sheet: 1 of 1

Project: Huron River Drive Slope Failure

Client: Spalding DeDecker

Location: Ann Arbor, Michigan

Drill Type: Hand Auger

Crew Chief: Field Eng.: BG

Rev. By: RS

Coordinates: N=279807.1 E=13307341.0 (MI South itf)

Elevation: 757.0 ft

Datum: NAVD 88 (GPS Observation)

Notes:

Depth Drilled: 2.5 ft.

Plugging Record: Backfilled borehole with compacted cuttings.

Date Begin: 07/19/2023

Date End: 07/19/2023

Tooling	Type	Dia.	Groundwater, ft.	
Casing			During	None
Sampler	Hand Auger	3 1/4"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer				


Depth Drilled: 2.5 ft.

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100%



QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Dyn. Cone Eq. "N": ASTM STP 399	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
756.8	0.25				CL	18" Clayey Topsoil				Fill: 0.0' to 2.5'
756.5	0.50									
756.3	0.75									
756.0	1.00									
755.8	1.25									
755.5	1.50	A-1					1.5	2.0		
755.3	1.75									
755.0	2.00									
754.8	2.25									
754.5	2.50	A-2					2.5	2.0		
End of Boring										Auger refusal at 2.5' due to possible coarse gravel / COBBLE

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

		<b>LOG OF BORING</b>			<b>Project No.:</b> 231349 <b>Boring No.:</b> B-14 <b>Sheet:</b> 1 of 1							
<b>Project:</b> Huron River Drive Slope Failure <b>Client:</b> Spalding DeDecker <b>Location:</b> Ann Arbor, Michigan <b>Drill Type:</b> Hand Auger <b>Crew Chief:</b> Field Eng.: IA <b>Coordinates:</b> N=279807.1 E=13307341.0 (MI South ft) <b>Elevation:</b> 757.0 ft <b>Datum:</b> NAVD 88 (GPS Observation) <b>Notes:</b>												
					<b>Date Begin:</b> 07/27/2023		<b>Date End:</b> 07/27/2023					
<b>Tooling</b>		<b>Type</b>		<b>Dia.</b>		<b>Groundwater, ft.</b>						
<b>Casing</b>		<b>Hand Auger</b>		<b>3 1/4"</b>		<b>During</b> 5.0						
<b>Sampler</b>						<b>End</b> NA						
<b>Core</b>						<b>Seepage</b>						
<b>Tube</b>						<b>Date</b>						
<b>SPT Hammer</b>						<b>Depth, ft.</b>						
<b>Plugging Record:</b> Backfilled borehole with compacted cuttings.												
<b>Depth Drilled:</b> 9.2 ft.												
<b>Component Percentages:</b> Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% <b>OP = Calibrated Penetrometer (tons/sq. ft.)</b>												
<b>Elev. FT.</b>	<b>Depth FT.</b>	<b>Sample Number</b>	<b>Recov. FT.</b>	<b>Dyn. Cone Eq. "N": ASTM STP 399</b>	<b>*USCS Group Symbol</b>	<b>*DESCRIPTION</b>	<b>QP tsf</b>	<b>MSF %</b>	<b>DD pcf</b>	<b>REMARKS</b>		
756.8	0.25				CL	2" Sandy Topsoil	0.2			Fill: 0.0' to 6.0'		
756.5	0.50					Brown lean CLAY with sand and gravel; mostly clayey fines, some coarse to fine sand, little coarse to fine gravel, moist, Fill						
756.3	0.75											
756.0	1.00											
755.8	1.25											
755.5	1.50											
755.3	1.75											
755.0	2.00											
754.8	2.25											
754.5	2.50											
754.3	2.75											
754.0	3.00											
753.8	3.25											
753.5	3.50											
753.3	3.75											
753.0	4.00											
752.8	4.25											
752.5	4.50											
752.3	4.75											
752.0	5.00											
751.8	5.25											
751.5	5.50											
751.3	5.75											
751.0	6.00	A-1					6.0	4.0				
750.8	6.25				CL	Brown lean CLAY; mostly clayey fines, few medium to fine sand, trace fine gravel, moist				U-1: Atterberg Limits ASTM D4318: LL = 41, PL = 18, PI = 23		
750.5	6.50											
750.3	6.75											
750.0	7.00											
749.8	7.25	U-1							15.6			
749.5	7.50											
749.3	7.75											
749.0	8.00						Grades with few fine gravel					
748.8	8.25											
748.5	8.50											
748.3	8.75	U-2							4.0			
748.0	9.00											
<b>End of Boring</b>							9.2					

\* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING		 <div>CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48107-5847 734-794-6410 www.a2gov.org</div>		 <div>Know what's below. Call before you dig.</div>									
E. HURON RIVER DRIVE RETAINING WALL REPLACEMENT AND ROAD RECONSTRUCTION RIVERSIDE DR TO CHALLMERS RD SOIL BORING LOGS 12 TO 14		01		REFRESH FOR NEW BID CYCLE		11/14/25		RD		AL		CHECKED	
SHEET No.		REV.		DESCRIPTION		DATE		DRAWN					
15 OF 15													