

P:\0000_0100\0028240010_Chapin_Sewer_Drawings\Civil\Misc\240010_A2 Cover and Legend.dwg -- _a2 standard bw.stb -- Plot Date: 9/17/2025 6:54:11 PM



CITY OF ANN ARBOR ENGINEERING HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS

NOTES:

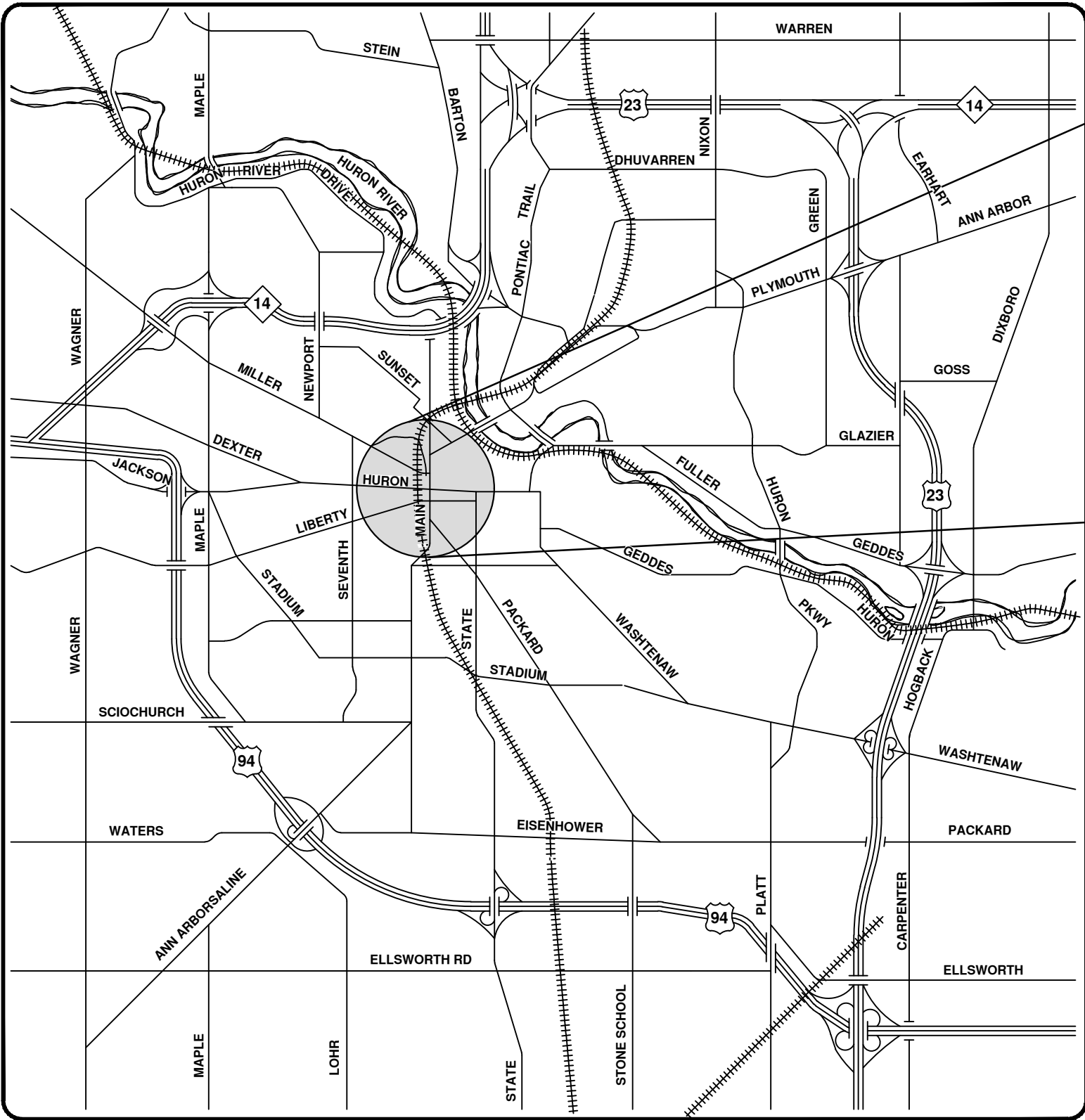
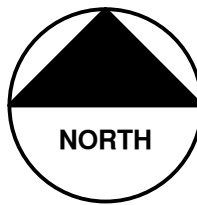
FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

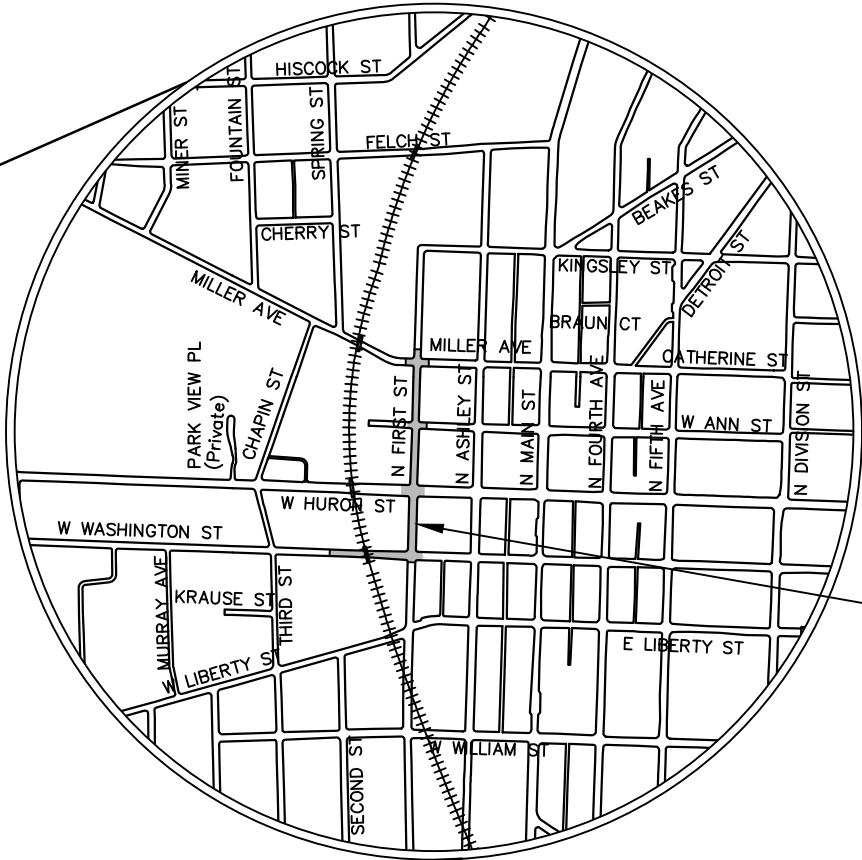
THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

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RFP No. 25-39, FILE No. 2024-001



VICINITY MAP



PROJECT LOCATION

PREPARED UNDER THE SUPERVISION OF		CITY APPROVAL	
 CHRISTOPHER JAY ELENBAAS, P.E. PROJECT MANAGER	09 / 18 / 2025 DATE	 TRACY CRANE ANDERSON, P.E. PROJECT MANAGER	09 / 18 / 2025 DATE

 Know what's below. Call before you dig.		CE	CE	CE	CE	CE	CHECKED
BID SET	09/18/2025	SM	SM	SM	AT	DRAWN	
03	90% DESIGN SUBMITTAL						
01	30% DESIGN SUBMITTAL						
00	WATCO RAILROAD PERMIT SUBMITTAL						
REV.							
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-6647 www.a2gov.org				THIS PROJECT INCLUDES APPROX 1500 FT OF NEW SANITARY SEWER EFFECTED WATER MAIN AND STORM WATER AND ROAD RESURFACING			
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING		SCALE		DRAWING No.		2024-001-1	
		SHEET No.		1 OF 42			

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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. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLYETHYLENE WRAPPED PER ANSI/AWWA C105/A21.5.
7. COR-BLU BOLTS TO BE USED AT ALL MECHANICAL WATER MAIN JOINTS AT HYDRANTS AND MEGALUG FITTINGS
8. 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.
9. 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.
10. "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.
11. POSTAL DELIVERY AND REFUSE PICKUP SERVICE SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
12. 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.
13. WHERE STREET CURBS ARE UNDERMINED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
14. 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".
15. ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS DONE.
16. SAWED SEWER PIPE CONNECTIONS SHALL BE COUPLED WITH A FERNCO FLEXIBLE COUPLING AND A STAINLESS STEEL SHEAR RING.
17. THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER.
18. 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.
19. 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.
20. PAYMENT FOR DRAINAGE STRUCTURE SUMPS, WHERE SPECIFIED, SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURE SIZES AND OR TYPES.
21. 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.
22. 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.
23. 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"
24. 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.
25. ALL AGGREGATE ON THE PROJECT SHALL BE LIMESTONE BASED. CRUSHED CONCRETE AGGREGATE IS NOT PERMITTED.

- GENERAL
NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.
1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.
- SEQUENCE OF EROSION CONTROL MEASURES:
1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.
- SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:
- 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.
- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.9. CLEAN OUT STORM SEWER SYSTEMS.
- 1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION
- NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

AREA OF PROPOSED DISTURBANCE = 0.3 ACRES

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
FORESTRY		
SIGNS		MARK MORENO
SIGNALS		(734) 794-6361
STREET LIGHTS		
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 BELLVILLE, 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

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
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
EGLE PART 41 PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
MDOT (ROW PERMIT)	MICHIGAN DEPARTMENT OF TRANSPORTATION
DRAIN USE PERMIT	WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
DEWATERING PERMIT	CITY OF ANN ARBOR SYSTEMS PLANNING
RAILROAD PIPELINE CROSSING PERMIT	ANN ARBOR RAILROAD (WATCO)



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS



SHEET No.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48106-8647
734-794-6410
www.a2gov.org

STANDARD NOTES

SCALE : NTS
DRAWING No.
2024-001-2



Know what's below.
Call before you dig.

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	e duct bank	ELECTRICAL DUCT BANK
SANITARY MANHOLE	TELEPHONE OVER HEAD	
CLEAN-OUT	TELEPHONE UNDER GROUND	
POST	t duct bank	TELEPHONE DUCT BANK
PEDESTRIAN SIGNAL	CABLE TV OVER HEAD	
SIGN	CABLE TV UNDER GROUND	
HAND HOLE	fo	FIBER OPTIC
ORNAMENTAL LIGHT	fo duct bank	FIBER OPTIC DUCT BANK
FLOOD LIGHT		
UNKNOWN MANHOLE		
TELEPHONE MANHOLE	BUILDING	BOUNDARY
TELEPHONE RISER	CENTERLINE OF DITCH	
GAS VALVE	CENTERLINE/CROWN OF ROAD	
GAS VENT	800	CONTOUR MAJOR
GAS BOX	799	CONTOUR MINOR
ELECTRICAL RISER	EDGE OF WATER	
TRANSFORMER	FLOODPLAIN	
UTILITY POLE	FENCE	
LAMP POLE	GRAVEL	
GUY ANCHOR	GUARDRAIL	
GUY POLE	STONE WALL	
MONITORING WELL	R.O.W.	
MAILBOX	TREELINE	
SOIL BORING	WETLAND	
TRAVERSE POINT	EDGE OF BRUSH	
BENCH MARK	HEDGE	
IRON PIPE		
MON BOX		



TREE (DECIDUOUS)



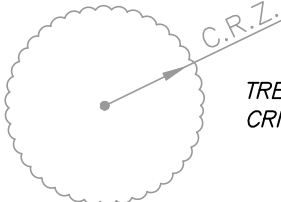
TREE (CONIFEROUS)



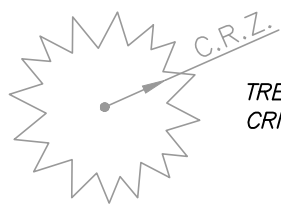
SHRUB (DECIDUOUS)



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 EASEMENT
HAND HOLE		STORM EASEMENT
		SANITARY EASEMENT
		R.O.W.
		LIMITS OF CONSTRUCTION
		LIMIT OF GRADING
		STONE WALL
		DETECTABLE WARNING
		ASPHALT
		CONCRETE
		SIDEWALK
		LEVEL LANDING
		TREE (DECIDUOUS)
		TREE (CONIFEROUS)
		TREE TO BE REMOVED (DECIDUOUS)
		TREE TO BE REMOVED (CONIFEROUS)
		STUMP TO BE REMOVED



	CE	CE	CE	CE	CHECKED
	SM	SM	SM	AT	DRAWN

	09/18/2025	08/14/2025	01/09/2025	11/12/2024	DATE
					REV.

	BID SET				
03	90% DESIGN SUBMITTAL				
02	30% DESIGN SUBMITTAL				
01	WATCO RAILROAD PERMIT SUBMITTAL				
00					

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106
P.O. BOX 8647
734-794-4410
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
LEGEND

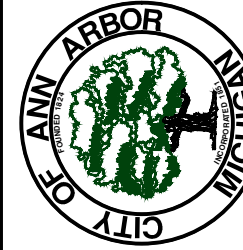
SCALE : NTS	
DRAWING No.	2024-001-3

SHEET No.



TRAVERSE POINTS			
TP #	ELEV	NORTHING	EASTING
100	802.04	285118.8870	13289256.9300
101	803.04	285132.4090	13289029.7600
102	799.74	285255.4920	13289183.1300
103	809.24	284898.7880	13289225.4900
104	799.72	285067.0220	13289411.6900
105	799.14	285105.0100	13289575.1500
106	803.19	285051.4190	13289788.8500
107	815.49	285106.5280	13289976.1000
108	822.84	285040.0040	13290108.2900
109	809.93	284914.7850	13289967.3900
110	816.34	285228.2500	13289975.9600
111	816.60	285375.2930	13290011.7200
112	823.67	285432.3900	13290173.6800
113	805.63	285446.0230	13289829.8700
114	813.16	285564.5780	13289954.3200
115	811.25	285726.8600	13290004.1100
116	817.55	285763.7360	13290150.5500
117	801.09	285930.7152	13289965.1700
118	797.31	286051.4950	13290015.2600
119	808.97	286093.3760	13290191.9900
120	786.58	286254.4110	13289978.2100
121	791.23	286098.1680	13289789.3400

BENCHMARKS				
BM #	ELEV	NORTHING	EASTING	DESCRIPTION
200	803.55	285073.2420	13289258.7600	SET COTTON SPINDLE IN NORTH FACE LIGHT POLE IN SOUTHEAST QUAD OF WASHINGTON & 3RD.
201	804.13	285086.1240	13288994.8800	SET COTTON SPINDLE IN NORTH FACE LIGHT POLE SOUTH SIDE OF WASHINGTON, INFRONT OF HOUSE #517.
202	799.98	285294.0930	13289204.9100	SET COTTON SPINDLE WEST FACE POWER POLE EAST SIDE 3RD.ACROSS FROM HOUSE #108.
203	811.85	284852.5320	13289259.6200	SET COTTON SPINDLE IN WEST FACE POWER POLE EAST SIDE OF 3RD, SOUTH OF HOUSE #217
204	799.38	285068.5790	13289455.7700	SET COTTON SPINDLE IN NORTH FACE POWER POLE SOUTH SIDE WASHINGTON +/- 50' EAST OF CP#104.
205	799.24	285064.3640	13289552.8800	SET COTTON SPINDLE IN NORTH FACE POWER POLE SOUTH SIDE WASHINGTON, ACROSS FROM BLD # 400 PARKING ENTRANCE.
206	0.00	285100.5416	13289781.5858	SET ARROW ON HYD NORTH SIDE WSHINGTON, +/- 50' EAST OF TRACKS.
207	813.50	285046.4300	13289937.8400	SET COTTON SPINDLE IN NORTHEAST QUAD POWER POLE IN SOUTHWEST QUAD WASHINGTON & 1ST.
208	827.12	285040.0320	13290136.5500	SET CHISELED X ON NORTHWEST BOLT LIGHT POLE SOUTH SIDE WASHINGTON EAST OF ALLY.
209	812.63	284907.5630	13289980.3200	SET ARROW ON HYDRANT EAST SIDE OF 1ST +/- 15' EAST OF CP #109.
210	817.96	285209.7220	13289939.6300	SET ARROW ON HYDRANT WEST SIDE OF 1ST INFRONT OF BLD#106.
211	816.30	285366.3180	13289994.8000	SET CHISELED BOX ON NORTH STRAIN POLE BASE IN SOUTHEAST QUAD 1ST & HURON.
212	824.44	285431.3770	13290179.8500	SET CHISELED BOX ON WEST BASE LIGHT POLE NORTH SIDE HURON IN FRONT OF BLD#200.
213	807.11	285444.7190	13289818.6500	SET ARROW ON HYDRANT NORTH SIDE HURON EAST OF BLD #312.
214	813.70	285661.0180	13290003.6200	SET COTTON SPINDLE IN WEST FACE POWER POLE EAST SIDE 1ST, IN FRONT HOUSE #221.
215	811.98	285769.3610	13290018.6100	SET COTTON SPINDLE IN SOUTH FACE POWER POLE IN NORTHEAST QUAD 1ST & ANN.
216	821.23	285720.0190	13290205.3300	SET NORTHEAST BOLT LIGHT POLE BASE SOUTHSIDE OF ANN ACROSS FROM HOUSE #208.
217	807.58	285889.4410	13290007.5300	SET ARROW ON HYDRANT EAST SIDE OF 1ST IN FRONT OF HOUSE #210.
218	798.62	286095.5680	13290045.8200	SET COTTON SPINDLE IN SOUTH FACE POWER POLE IN NORTHEAST QUAD 1ST & MILLER.
219	810.90	286048.4080	13290176.7500	SET ARROW ON HYDRANT SOUTH SIDE MILLER IN FRONT OF HOUSE #209.
220	788.36	286271.1720	13290019.7200	SET ARROW ON HYDRANT EAST SIDE 1ST ACROSS FROM BLD #310.
221	792.75	286141.8120	13289793.4200	SET ARROW ON HYDRANT NORTH SIDE OF MILLER ACROSS FROM BLD #401.
502	792.75	286144.8163	13289784.8900	RAILROAD SPIKE SET IN SW FACE OF UTILITY POLE NORTH WEST OF MILLER ROAD +/- 8' FROM BM 221.



REV.	DATE	DESCRIPTION
03	09/18/2025	BID SET
02	08/14/2025	90% DESIGN SUBMITTAL
01	01/09/2025	30% DESIGN SUBMITTAL
00	11/12/2024	WATCO RAILROAD PERMIT SUBMITTAL



1. XXX



XXX
N.T.S.



XXX
N.T.S.

HMA APPLICATION ESTIMATE				
IDENT NO.	ITEM	RATE (LBS/SYD)	PERFORMANCE GRADE	REMARKS
5EL	HMA, 5EL	220	64-28	AWI-260 MIN, WEARING
4EL	HMA, 4EL	275	64-28	LEVELING (2-2" LIFTS ON FIRST ST)
	* BOND COAT	0.05-0.15 GAL		

NOTE: MDOT 17% RAP LIMITS APPLIES TO WEARING COURSE



REV.								
01	BID SET	DESCRIPTION	DATE	DRAWN	CHECKED			
00	ADENDUM #2		12-19-2024	SM	CE			
02	CONSTRUCTION SET		3-21-2025	SM	CE			

**CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org**



ES - ENGINEERING

INKLINE CAPACITY IMPROVEMENTS

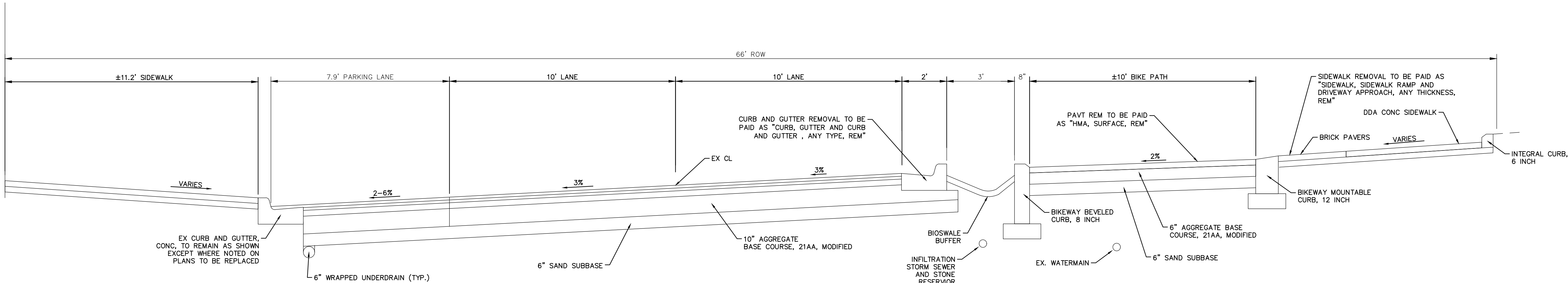
TYPICAL CROSS SECTIONS
WASHINGTON STREET

CITY OF ANN ARBOR SHEET No. SCALE : NTS DRAWING No. 2024-001-6	

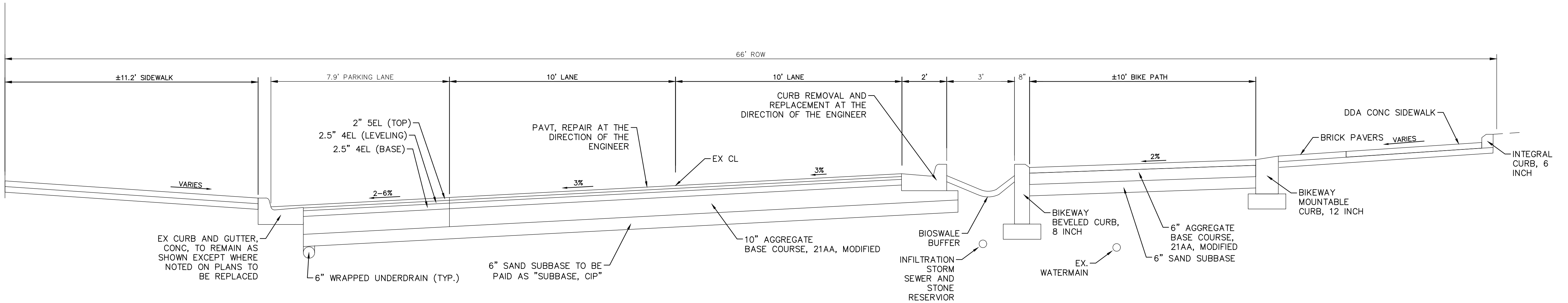
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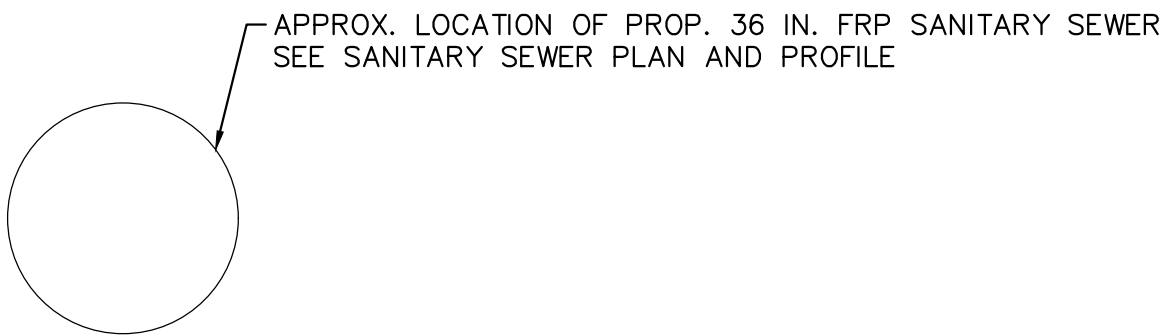
1. XXX



FIRST STREET
EXISTING TYPICAL SECTION
WASHINGTON STREET TO HURON STREET
N.T.S.



FIRST STREET
PROPOSED TYPICAL SECTION
WASHINGTON STREET TO HURON STREET
N.T.S.



REV.	DATE	DESCRIPTION	CHECKED	DRAWN	DATE	SM	CE
02	3-21-2025	CONSTRUCTION SET	SM	CE			
01	1-22-2025	ADDENDUM #2	SM	CE			
00	12-19-2024	BID SET	SM	CE			

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106
P.O. BOX 8647
ANN ARBOR, MI 48108
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
TYPICAL CROSS SECTIONS
FIRST STREET - WASHINGTON TO HURON

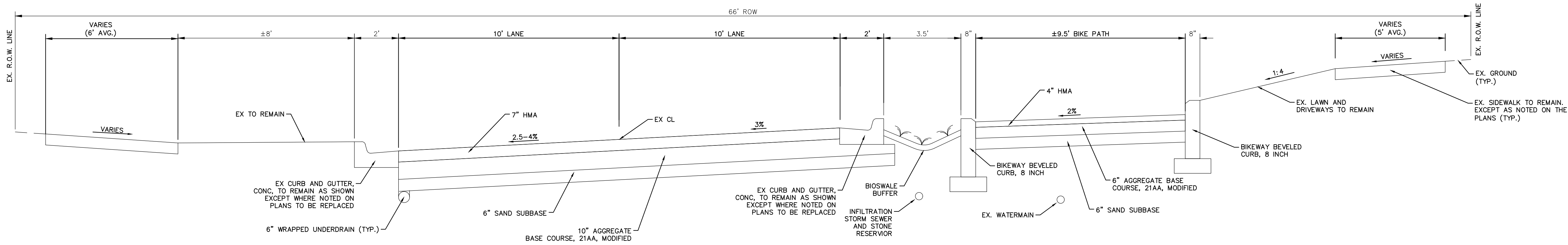
SCALE : NTS	DRAWING No.
	2024-001-7

SHEET No.

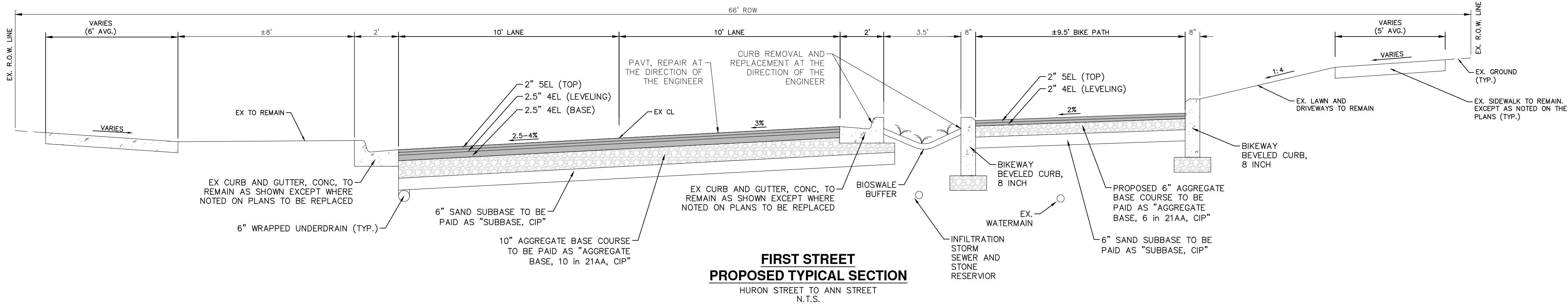
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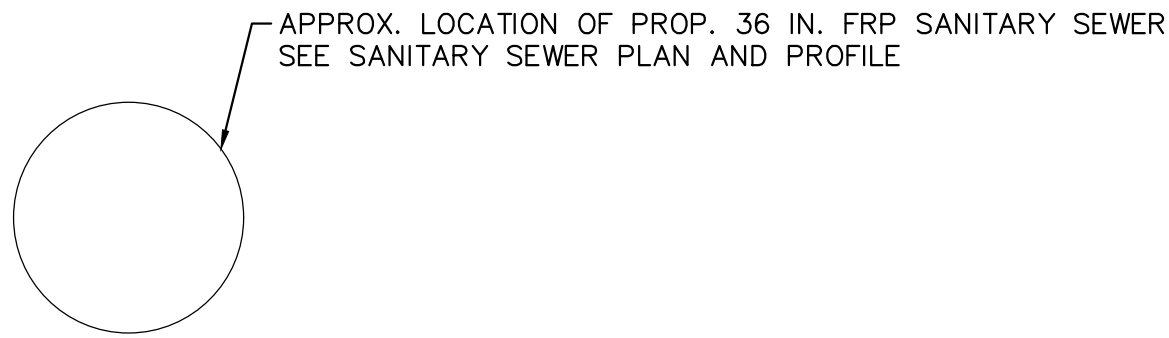
1. XXX

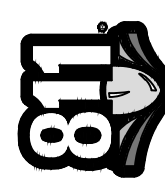


FIRST STREET
EXISTING TYPICAL SECTION
HURON STREET TO ANN STREET
N.T.S.



FIRST STREET
PROPOSED TYPICAL SECTION
HURON STREET TO ANN STREET
N.T.S.





Know what's below.
Call before you dig.

		CE	SM	3-21-2025	CONSTRUCTION SET	
		CE	SM	1-22-2025	ADDENDUM #2	
		CE	SM	12-19-2024	BID SET	
				DATE	DESCRIPTION	REV.



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS

TYPICAL CROSS SECTIONS
FIRST STREET - HURON TO ANN

SCALE : NTS



DRAWING No.
2024-001-8

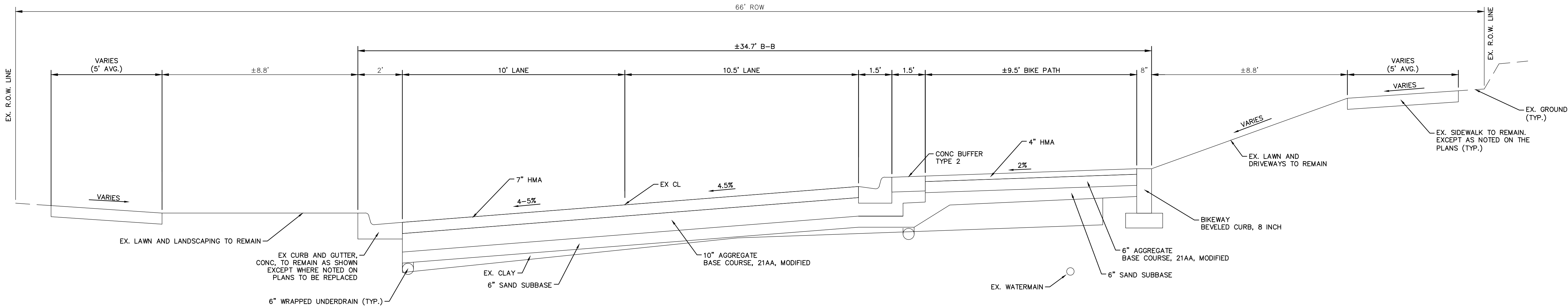
SHEET No.

8 OF 42

P:\0000_0100\0028240010_Chaplin_Sewer_Drawings\Civil\Typicals\240010TYPs.dwg - _a2_standard bw.stb - Plot Date: 9/17/2025 6:58:44 PM

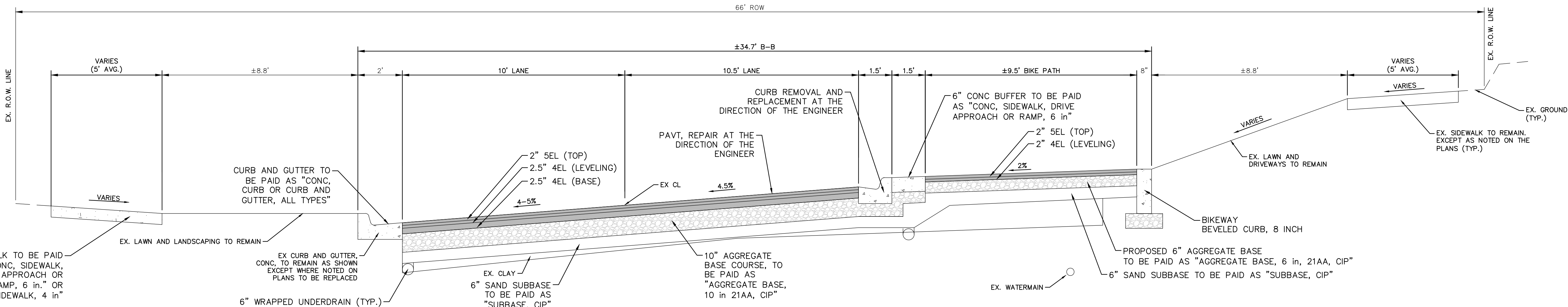
NOTES:

1. XXX



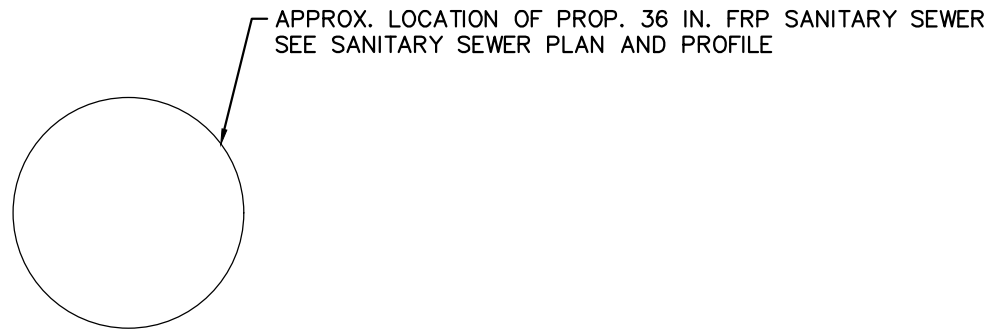
FIRST STREET
EXISTING TYPICAL SECTION

STA 157+50 TO P.O.E.
ANN STREET TO MILLER STREET
N.T.S.



FIRST STREET
PROPOSED TYPICAL SECTION

STA 157+50 TO P.O.E.
ANN STREET TO MILLER STREET
N.T.S.



APPROX. LOCATION OF PROP. 36 IN. FRP SANITARY SEWER
SEE SANITARY SEWER PLAN AND PROFILE

HMA APPLICATION ESTIMATE				
IDENT NO.	ITEM	RATE (LBS/SYD)	PERFORMANCE GRADE	REMARKS
5EL	HMA, 5EL	165	58-28	AWI-260 MIN, WEARING
4EL	HMA, 4EL	275	58-28	LEVELING
	* BOND COAT	0.05-0.15 GAL		

NOTE: MDOT TIER 1 RAP LIMITS APPLIES TO WEARING COURSE



	CE	SM	CE	SM	CE	SM	CHECKED
	3-21-2025	1-22-2025	12-19-2024	DATE			
02	CONSTRUCTION SET	01	ADDENDUM #2	BID SET			REV.

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PUBLIC SERVICES
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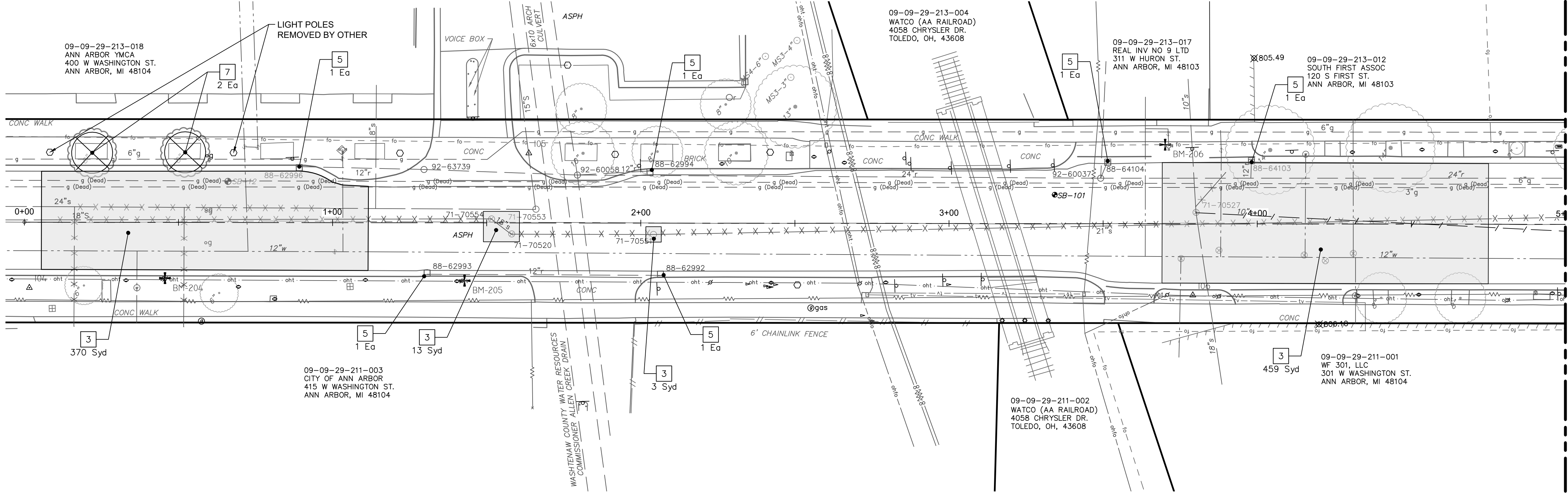
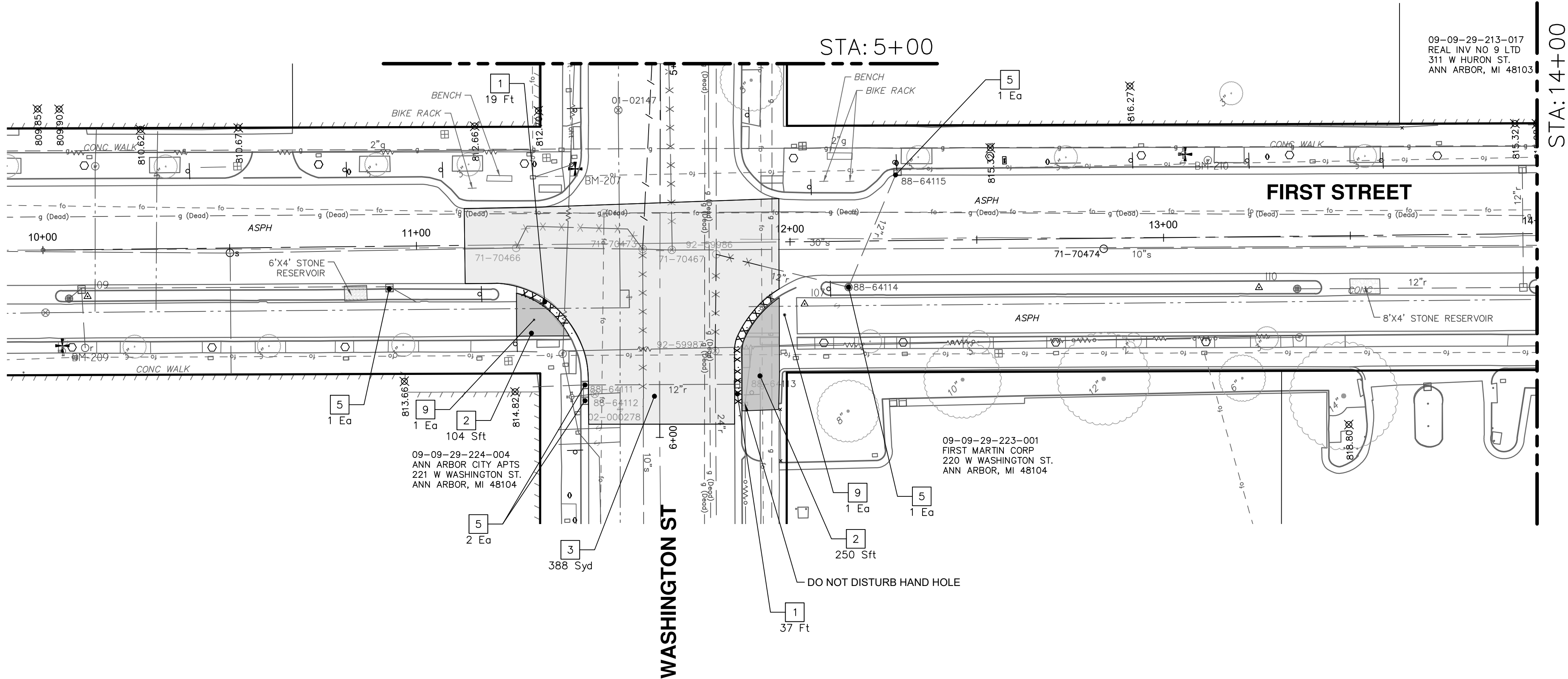


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
TYPICAL CROSS SECTIONS
FIRST STREET - ANN TO MILLER

SCALE : NTS	DRAWING No.
	2024-001-9

SHEET No.

P:\0000_0100\0028240010_Chapin_Sewer_Drawings\Civil\Removal\240010REM.dwg Dwg Created: 14-Aug-25 -- _a2 standard bw.stb -- Plot Date: 17-Sep-25



NOTES:

- PROPOSED TREE AND STREETLIGHT REMOVALS SHALL BE REVIEWED DURING A CONSTRUCTION SITE WALK-THROUGH PRIOR TO START OF WORK ALONG WASHINGTON STREET. ALL TREE REMOVALS MUST OCCUR PRIOR TO MARCH 21, 2026.
- IF STREET LIGHTS ARE REMOVED TO FACILITATE OVERHEAD CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THE EXISTING SIDEWALK CORRIDOR.

REMOVAL KEY	
KEY	DESCRIPTION
1	REMOVE CONCRETE CURB OR CURB AND GUTTER - ANY TYPE
2	REMOVE CONCRETE SIDEWALK AND DRIVE - ANY THICKNESS *
3	HMA PAVEMENT REMOVAL, ANY DEPTH*
4	CONCRETE PAVEMENT REMOVAL, ANY DEPTH*
5	INLET FILTER
6	SILT FENCE
7	REMOVE EXISTING TREE - SIZE VARIES
8	REMOVE AND SALVAGE SIGN
9	SALVAGE AND REPLACE BOLLARD

* SAWCUT FULL DEPTH AT REMOVAL LIMITS

NOTES:

- PAVEMENT SHALL BE SAW CUT FULL DEPTH AND REMOVED HALF WIDTH FOR WATER MAIN INSTALLATION. FINAL LIMITS OF PAVEMENT REMOVAL WILL BE AS DIRECTED BY THE ENGINEER.
- UTILITY REMOVALS SHOWN ON UTILITY SHEET(S).
- LIGHT POLES TO BE REMOVED BY CITY OF ANN ARBOR AS NEEDED AND COORDINATED BY THE CONTRACTOR.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
WASHINGTON STREET

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING No.
2024-001-10

SHEET No.

10 OF 42

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
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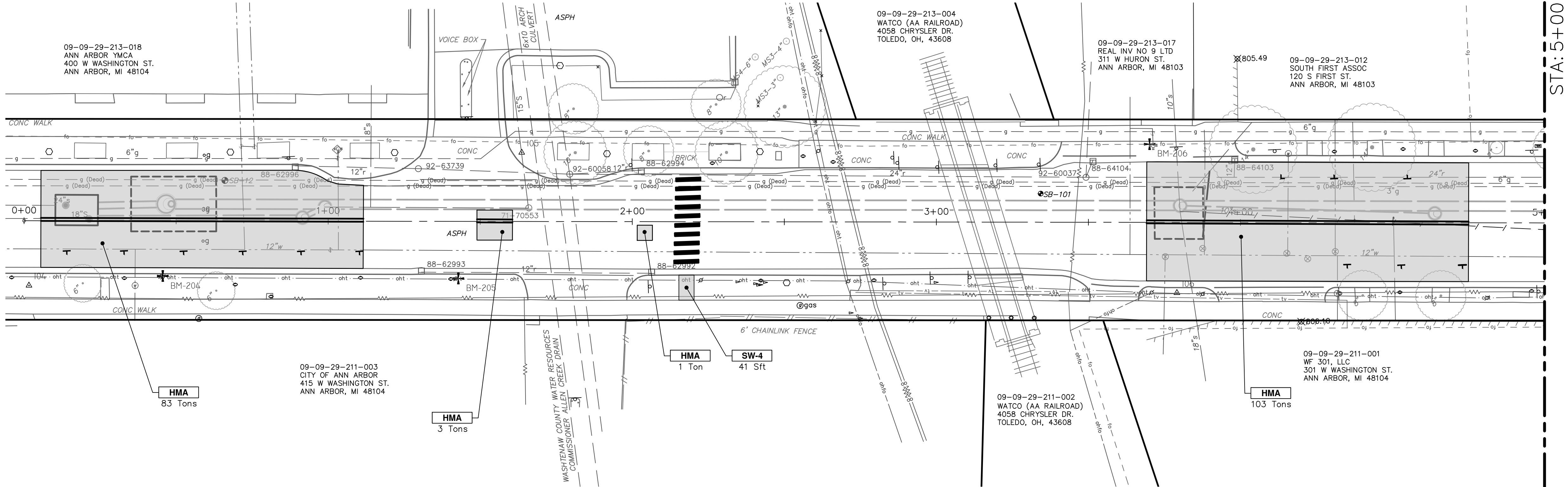
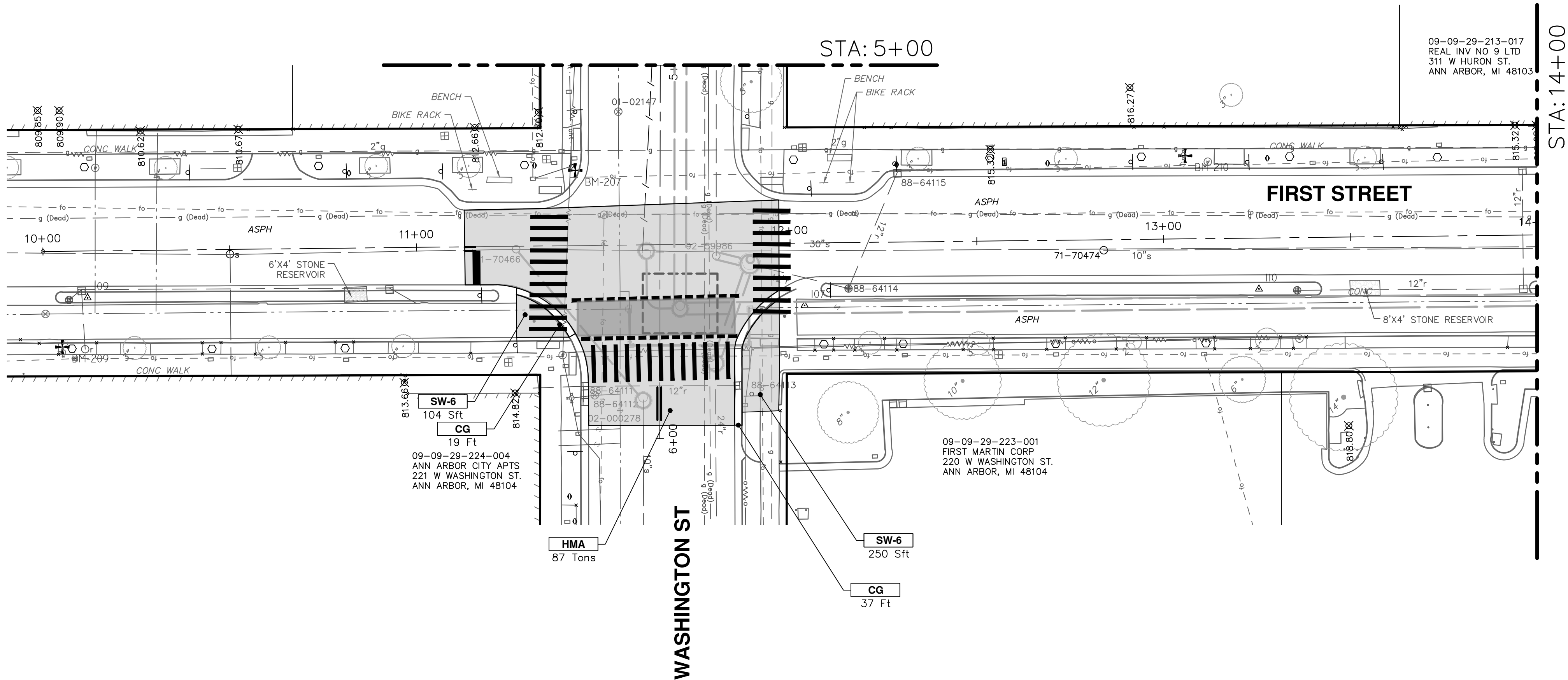


WASHINGTON ST AND FIRST ST REMOVAL PLAN (POB TO STA 14+00)



Know what's below.
Call before you dig.

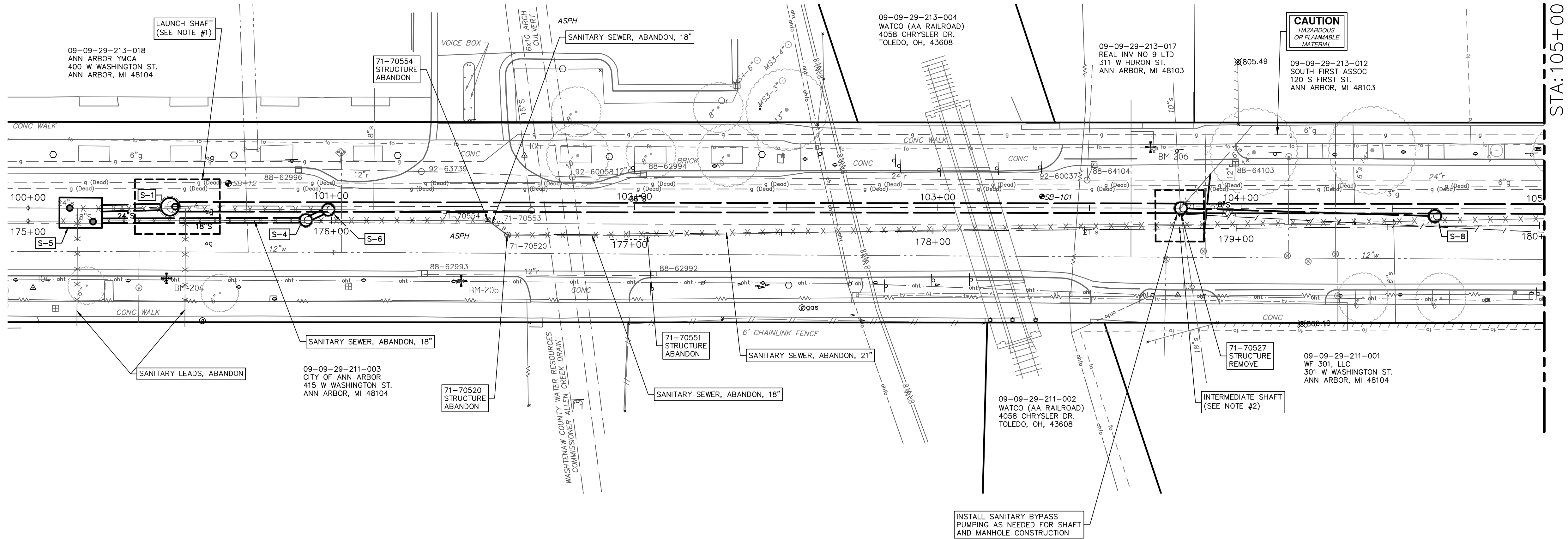
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02	08/14/2025	90% DESIGN SUBMITTAL	SM	CE
01	07/09/2025	30% DESIGN SUBMITTAL	SM	CE
00	11/12/2024	WATCO RAILROAD PERMIT SUBMITTAL	AT	CE



CONSTRUCTION KEY	
KEY	DESCRIPTION
ABM	ADJUST MONUMENT BOX OR GATE VALVE BOX
ASC	ADJUST STRUCTURE COVER
CD	6 INCH CURB DRAIN, HDPE DR17
CG	CURB AND GUTTER, CONCRETE, F4, SPECIAL
C-8	8 INCH CONCRETE PAVEMENT
DSC	STRUCTURE COVER
DWS	DETECTABLE WARNING, CAST IN PLACE
DO-M	DRIVEWAY OPENING, CONCRETE, DETAIL M
DC-6	6 INCH CONCRETE DRIVE, HIGH
HMA	HMA, PAVEMENT LEVELING COURSE/TOP COURSE PER TYPICAL SECTION
RG	RAINGARDEN
SW-4	4 INCH CONCRETE SIDEWALK
SWR-6	6 INCH CONCRETE SIDEWALK OR SIDEWALK RAMP
SW-8	8 INCH CONCRETE SIDEWALK
UD	6 INCH UNDERDRAIN

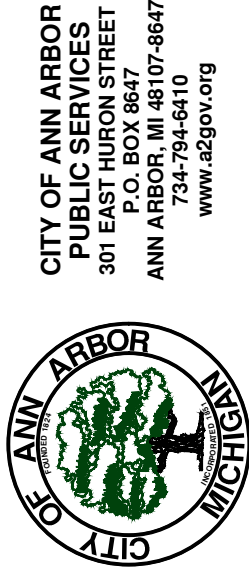
P:\0000_0100\0028240010_Chapin_Sanitary_Sewer_Drawings\Civil\Plans_Const\240010SAN_Plan and Profile.dwg Dwg Created: 17-Jul-25 - _a2 standard bwstb - Plot Date: 17-Sep-25

WASHINGTON STREET

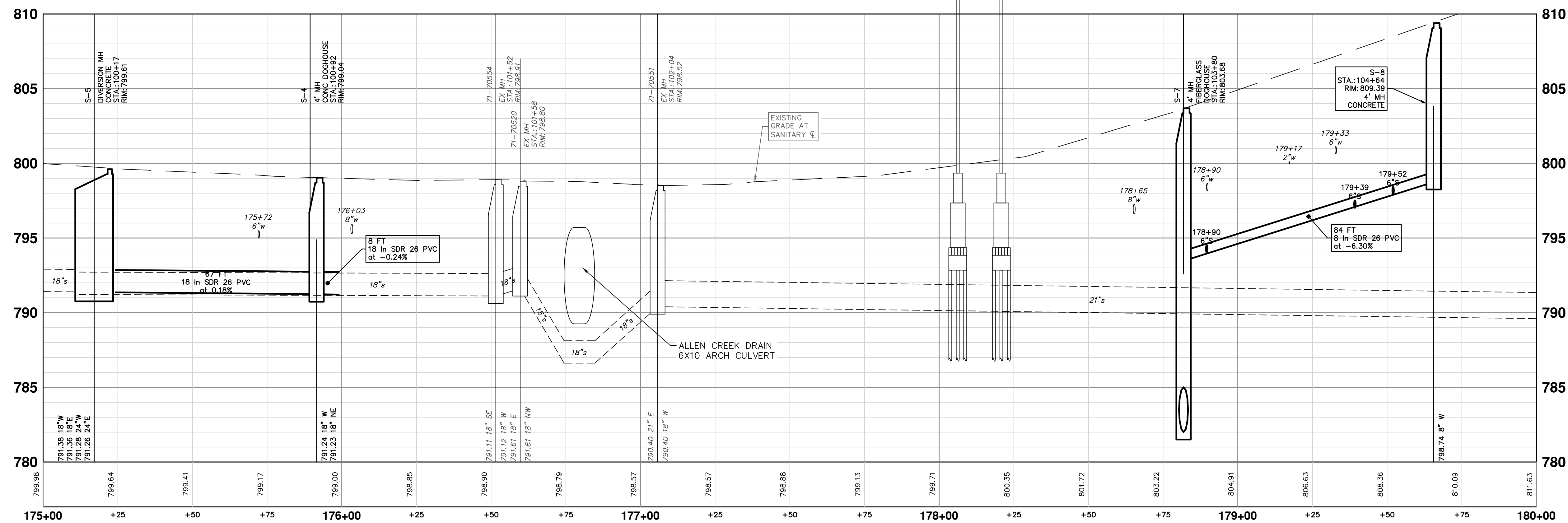
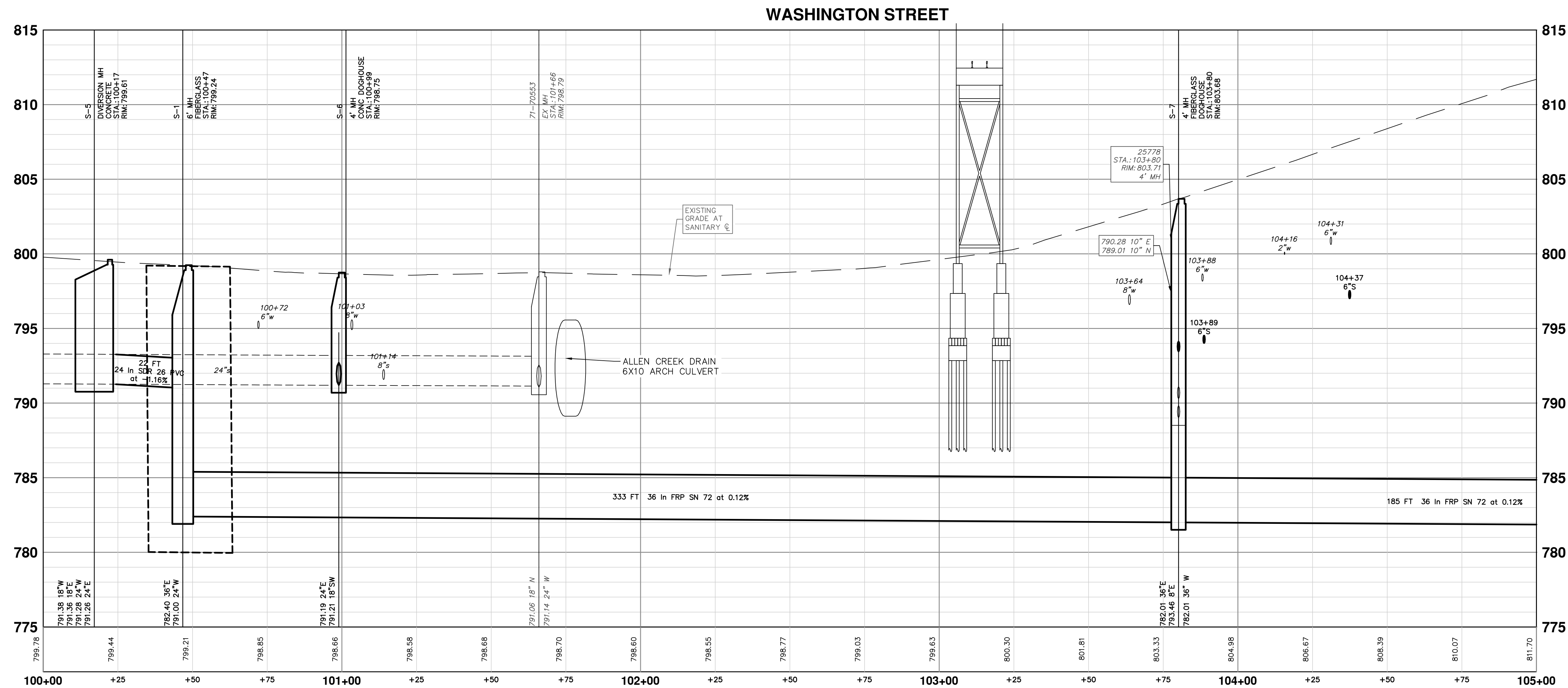


SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STA.	TYPE	RIM	DEPTH	INVERTS
S-5	100+17	DIVERSION MH CONCRETE	799.61	8.35	18" W 791.38
					18" E 791.36
					24" W 791.28
					24" E 791.26
S-1	100+47	6' MH FIBERGLASS	799.24	16.84	36" E 782.40 24" W 791.00
S-4	100+92	4' MH CONC DOGHOUSE	799.04	7.81	18" W 791.24 18" NE 791.23
S-6	100+99	4' MH CONC DOGHOUSE	798.75	7.56	24" E 791.19 18" SW 791.21
71-70553	101+66	EX MH	798.79	7.73	24" W 791.14 18" N 791.06
S-8	104+64	4' MH CONCRETE	809.39	10.65	8" W 798.74

- NOTES:
- SHAFT SIZES SHOWN ARE INDICATIVE. CONTRACTOR TO SIZE AND DESIGN SHAFT AND MAY CHANGE LAUNCH AND RECEIVING DIRECTION AT THEIR OPTION.
 - SHAFT SIZE SHOWN IS INDICATIVE. CONTRACTOR MAY TUNNEL UNDERNEATH MANHOLE 71-70527 OR RECEIVE AND RELAUNCH MTBM AT THEIR OPTION.
 - SANITARY SEWER INSTALLED VIA MICROTUNNELING.

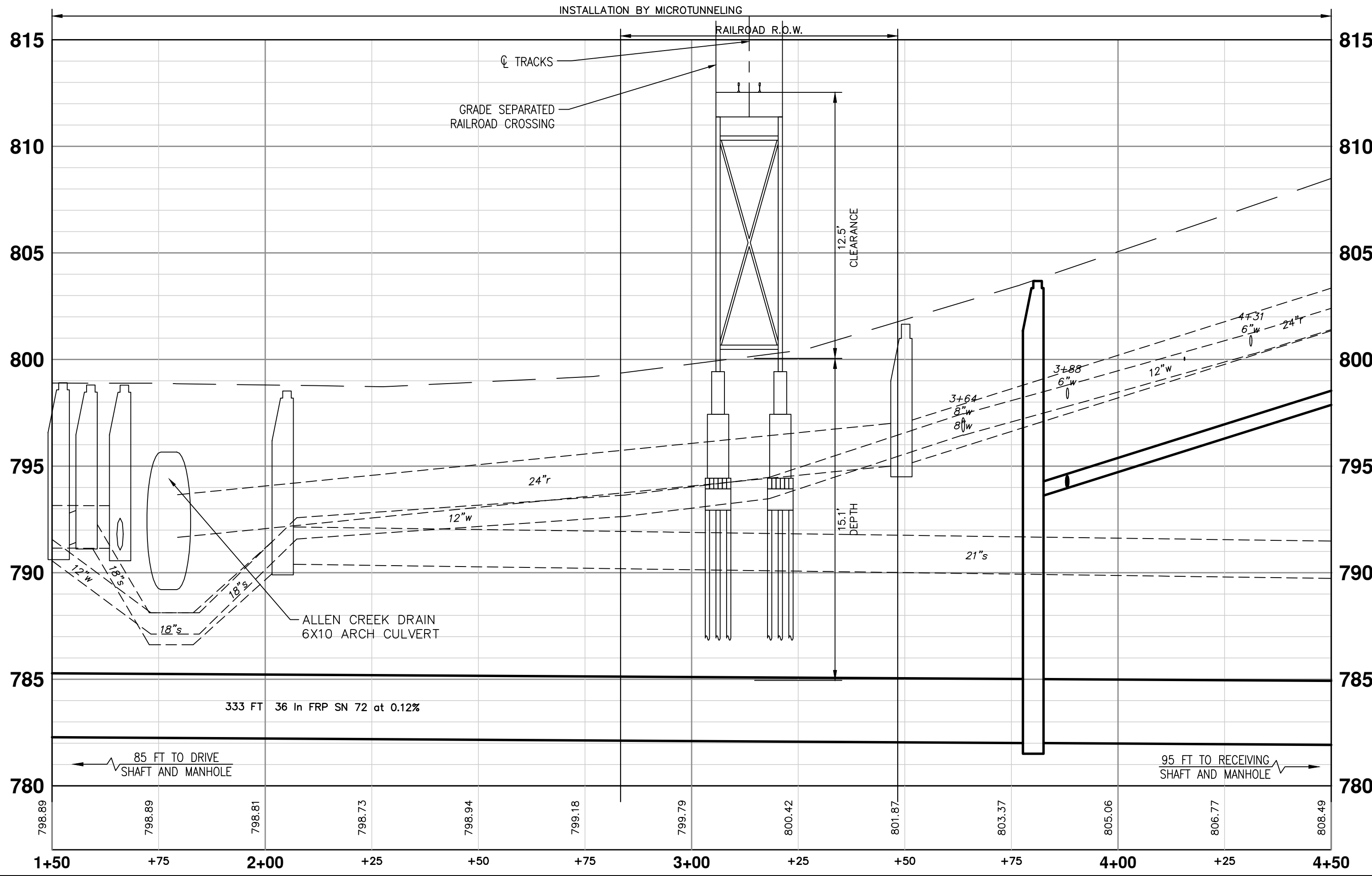
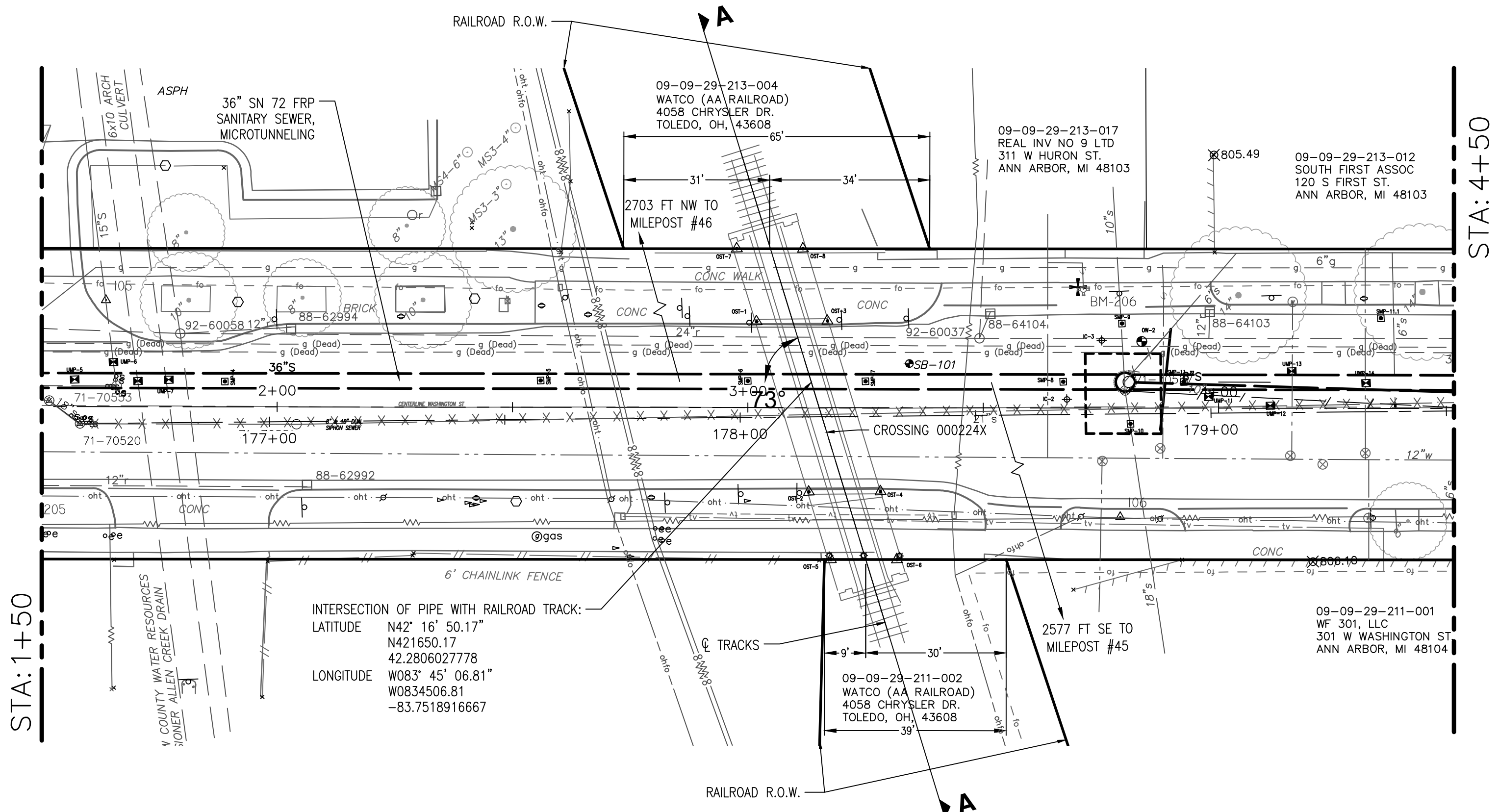


REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE



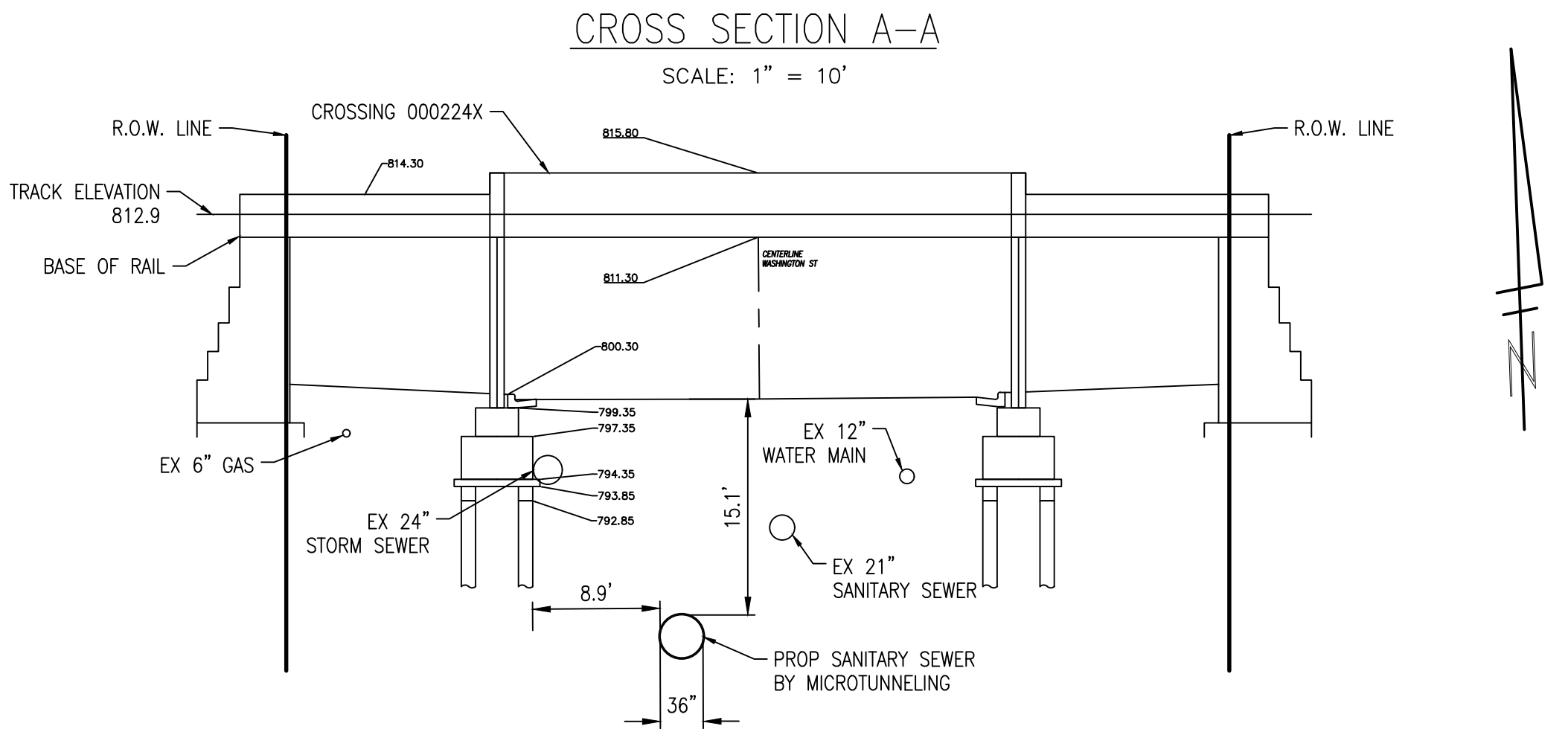
JOB BENCHMARK #205 SET COTTON SPINDLE IN W/FACE UTIL POLE W/SIDE OF RAILROAD ±41'S 22'W OF TP#105	
	ELEV 799.24
JOB BENCHMARK #206 ARROW ON HYDRANT E/SIDE OF RAILROAD ±48'N 6'W OF TP#106	
	ELEV 805.53
TRAVERSE POINT # 105 N 285105.01 E 13289575.15	
	ELEV 799.14
TRAVERSE POINT # 106 N 285051.42 E 13289788.85	
	ELEV 803.19

- NOTES:
1. INSTALL PIPE MARKERS PER DIRECTIONS OF RAILROAD REPRESENTATIVE
 2. RAILROAD BRIDGE PILE DEPTH UNKNOWN AS PER 1902 WASHINGTON ST BRIDGE DRAWING PROVIDED BY WATCO
 3. SEE SPECIFICATIONS FOR CONTACT GROUTING REQUIREMENTS.



WASHINGTON STREET

STA: 4+50



SOURCE: 1902 WASHINGTON ST BRIDGE DRAWING, 1930 WASHINGTON ST. GRADE SEPARATION ANN ARBOR RAILROAD PROJECT PLANS, & 1937 WASHINGTON ST. GRADE SEPARATION ANN ARBOR RAILROAD PROJECT PLANS PROVIDED BY WATCO

LEGEND:

- INCLINOMETER (IC)
- SETTLEMENT MONITORING POINT (SMP)
- UTILITY MONITORING POINT (UMP)
- OPTICAL SURVEY TARGET (OST)
- MONITORING POINT ARRAY (MPA)
- OBSERVATION WELL (OW)

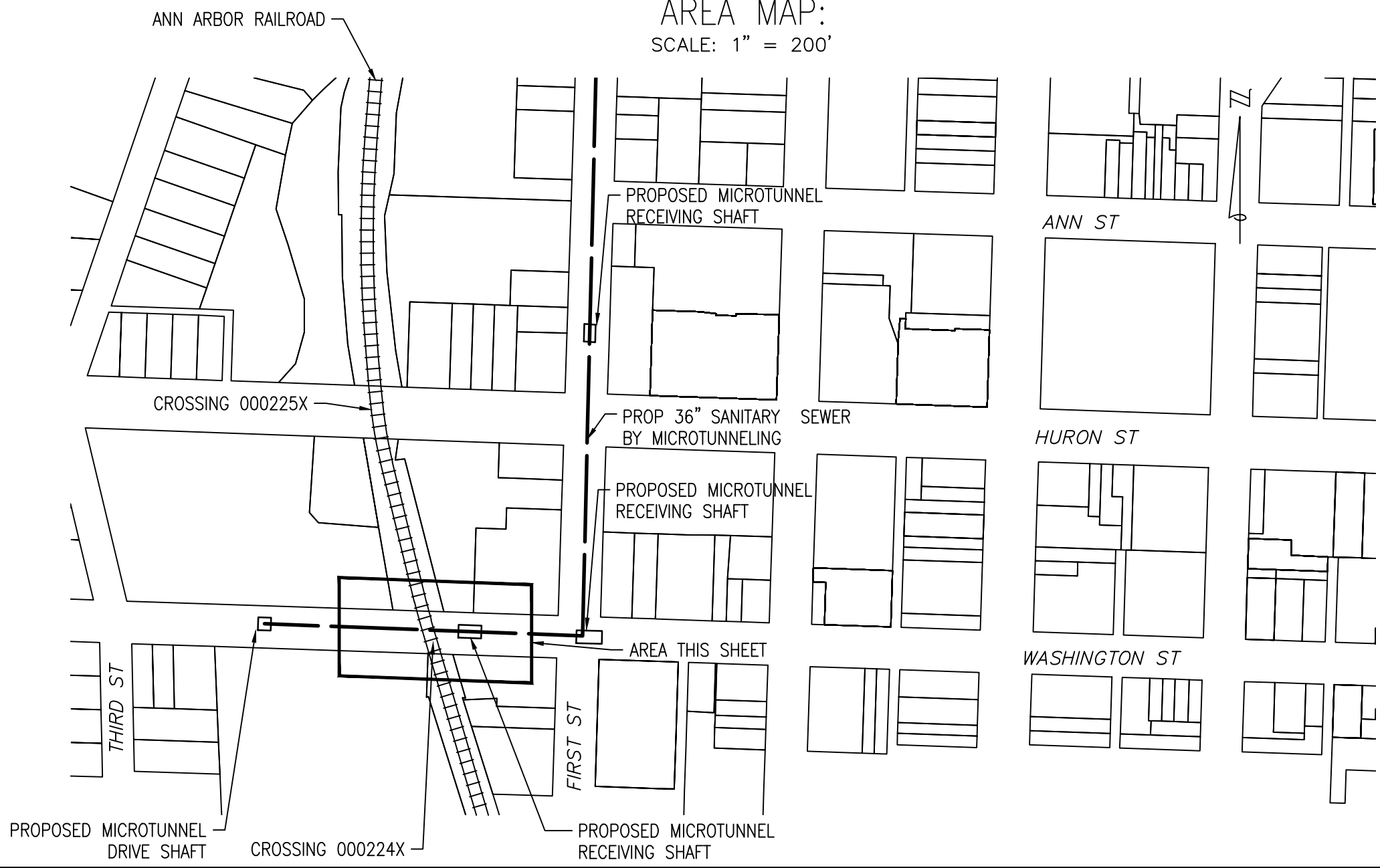
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Latitude:	N 42.280583
Longitude:	W-83.751903
Drawing No.:	0028-24-0010 Sheet: 1 of 1
Drawing Date:	11/12/2024 Revised:
Drawing Scale:	V 1 Inches = 4 Feet
Drawing Scale:	H 1 Inches = 20 Feet

PIPE CROSSING DATA SHEET

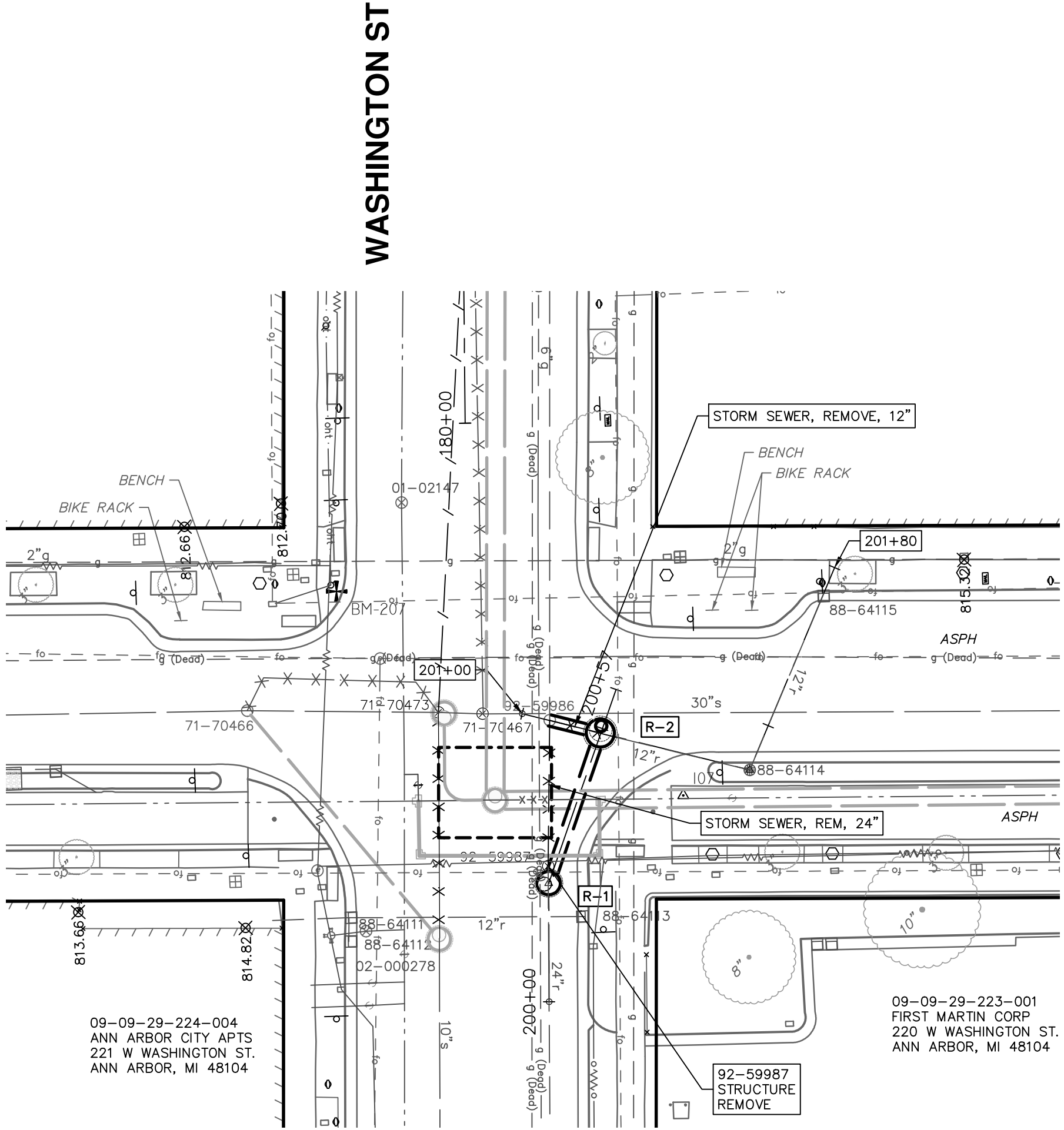
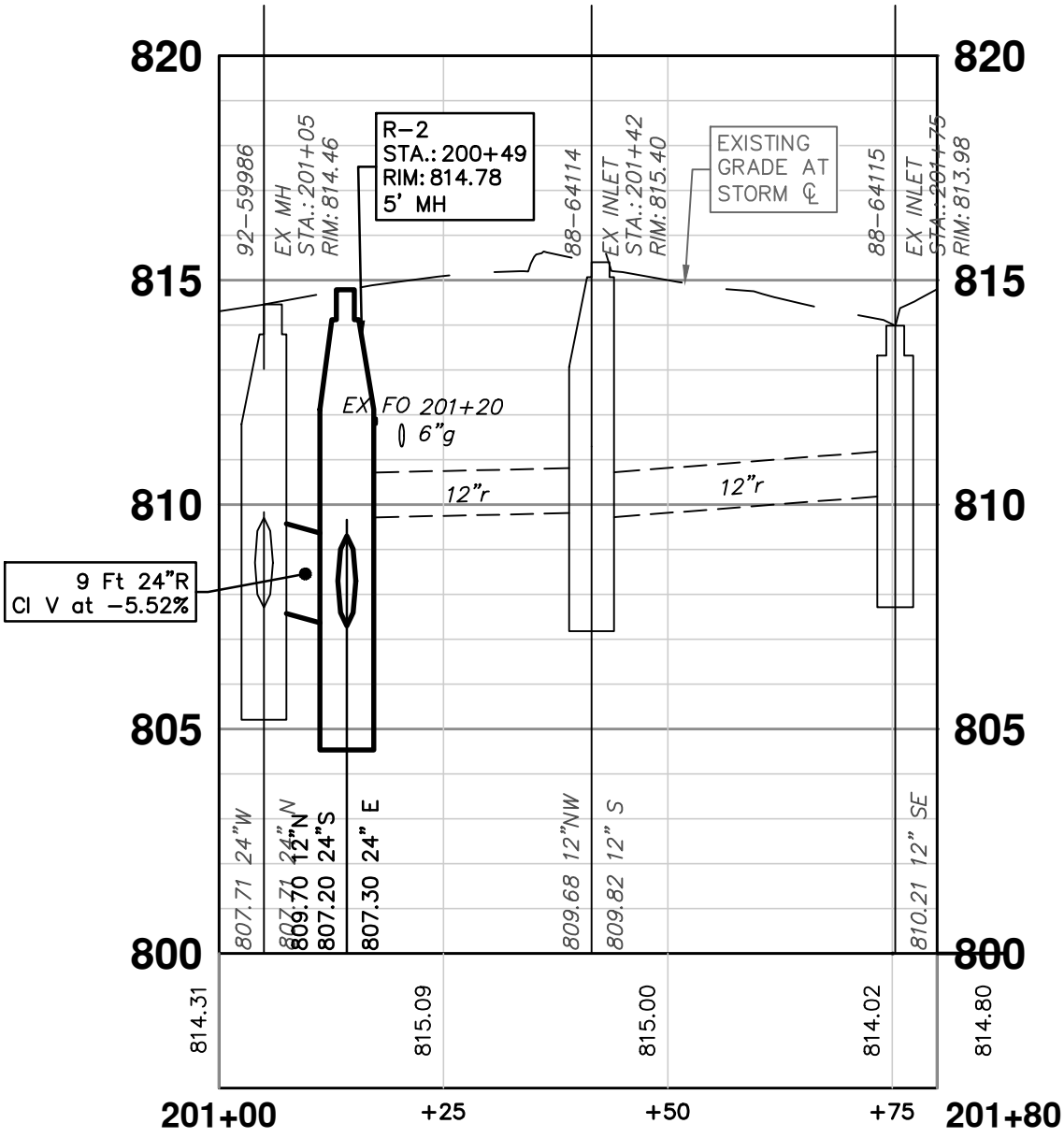
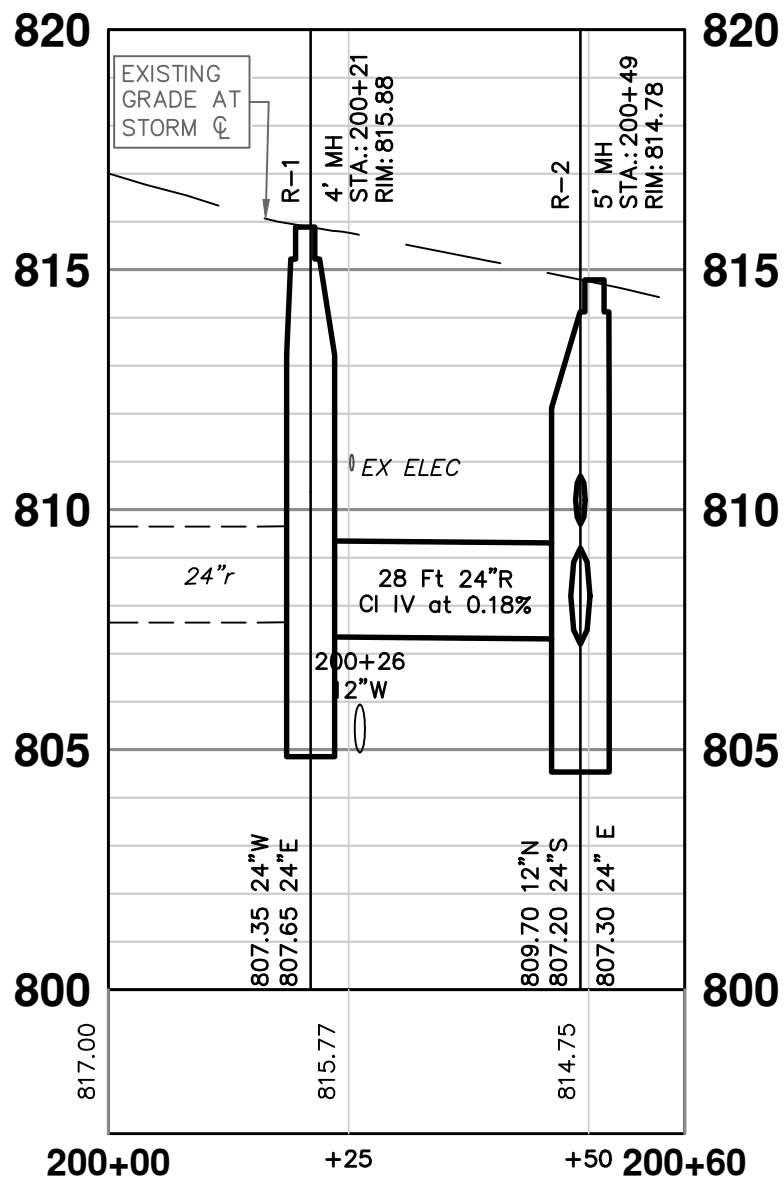
DESCRIPTION	CARRIER PIPE	CASING PIPE
CONTENTS TO BE HELD	Sanitary Sewer	N/A
NORMAL OPERATING PRESSURE	2 psi	N/A
NOMINAL SIZE OF PIPE	36 in	N/A
OUTSIDE DIAMETER	38.3 in	N/A
INSIDE DIAMETER	34.3 in	N/A
WALL THICKNESS	1.85 in	N/A
WEIGHT PER FOOT	208 lb/ft	N/A
MATERIAL	FRP SN-72	N/A
PROCESS OF MANUFACTURE		N/A
SPECIFICATION	ASTM D3262	N/A
GRADE OR CLASS	GRADE 1	N/A
TEST PRESSURE	6 psi	N/A
TYPE OF JOINT	Flush Bell-spigot	N/A
TYPE OF COATING	N/A	N/A
DETAILS OF CATHODIC PROTECTION	N/A	N/A
DETAILS OF SEAL OR PROTECTION AT ENDS OF CASING	N/A	N/A
METHOD OF INSTALLATION	Microtunneling	N/A
APPROXIMATE ELEVATION OF GROUND WATER LEVEL	793 ft	
SOURCE OF SUBSOIL CONDITIONS	Soil Borings	

AREA MAP:

SCALE: 1" = 200'



STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-2	200+49	5' MH	814.78	24" E 807.30 12" N 809.70 24" S 807.20	9.58	2.00'
R-1	200+21	4' MH	815.88	24" W 807.35 24" E 807.65	10.53	2.00'
88-64115	201+75	EX INLET	813.98	12" SE 810.21	5.77	2.00'
88-64114	201+42	EX INLET	815.40	12" S 809.82 12" NW 809.68	7.72	2.00'
88-64111	200+15	EX INLET	815.16	12" N 811.82 12" E 812.73	5.34	2.00'
92-59986	201+05	EX MH	814.46	24" N 807.71 24" W 807.71	8.75	2.00'

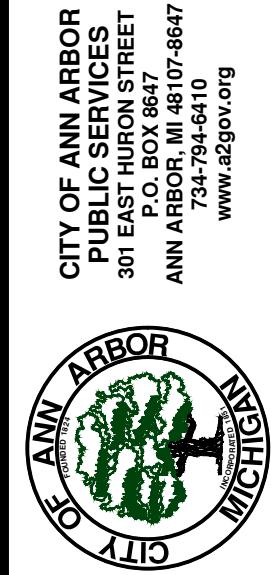
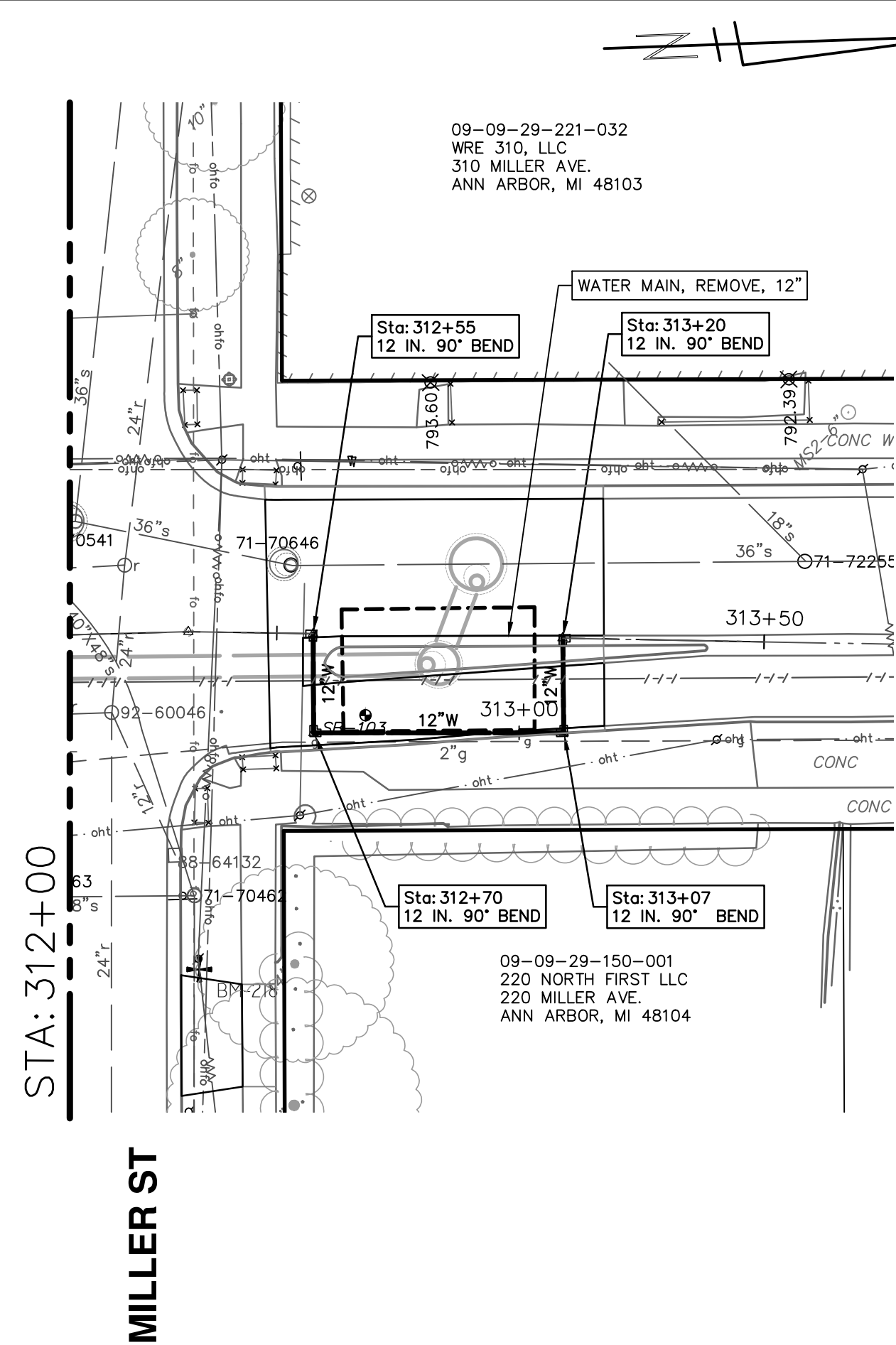
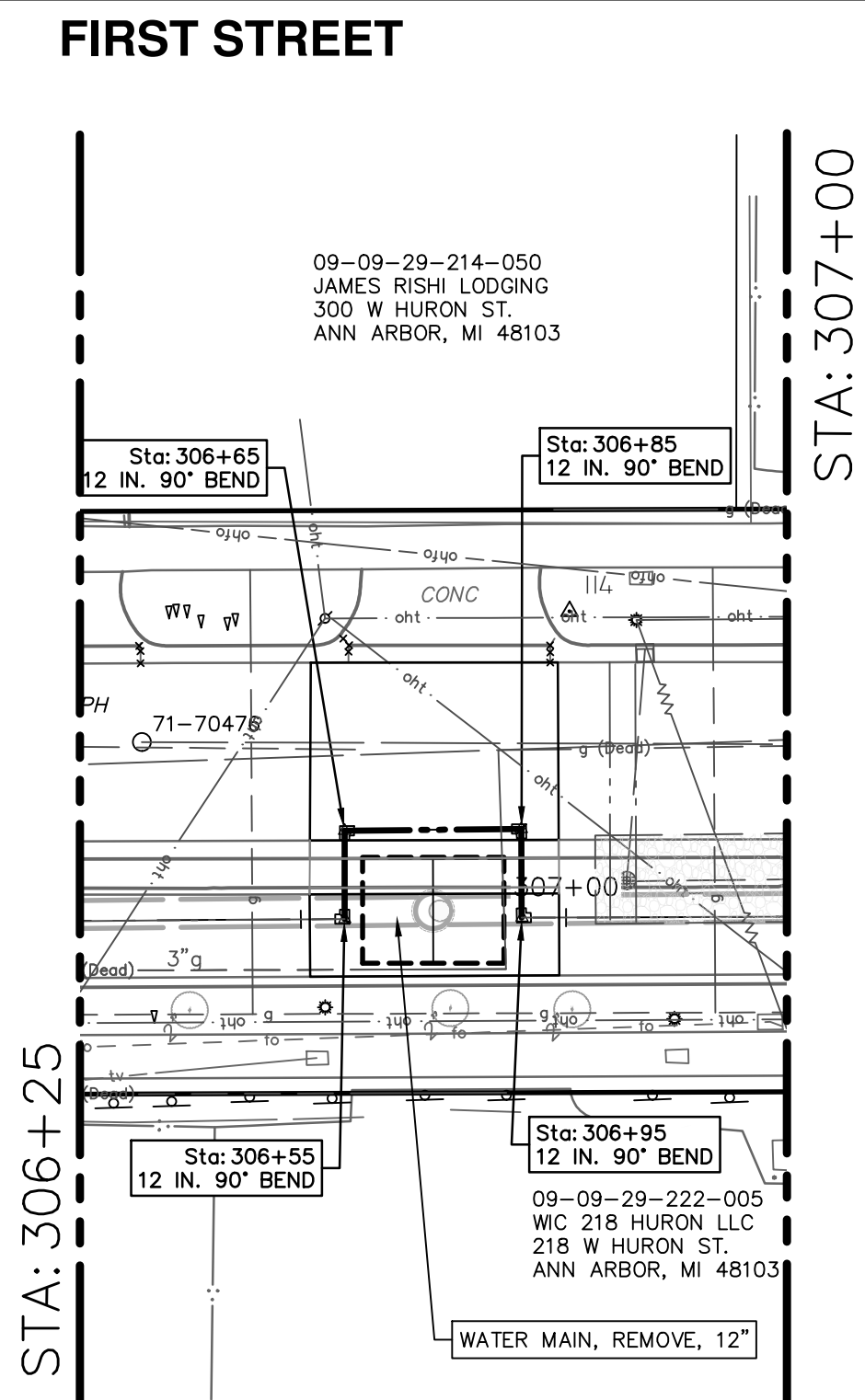
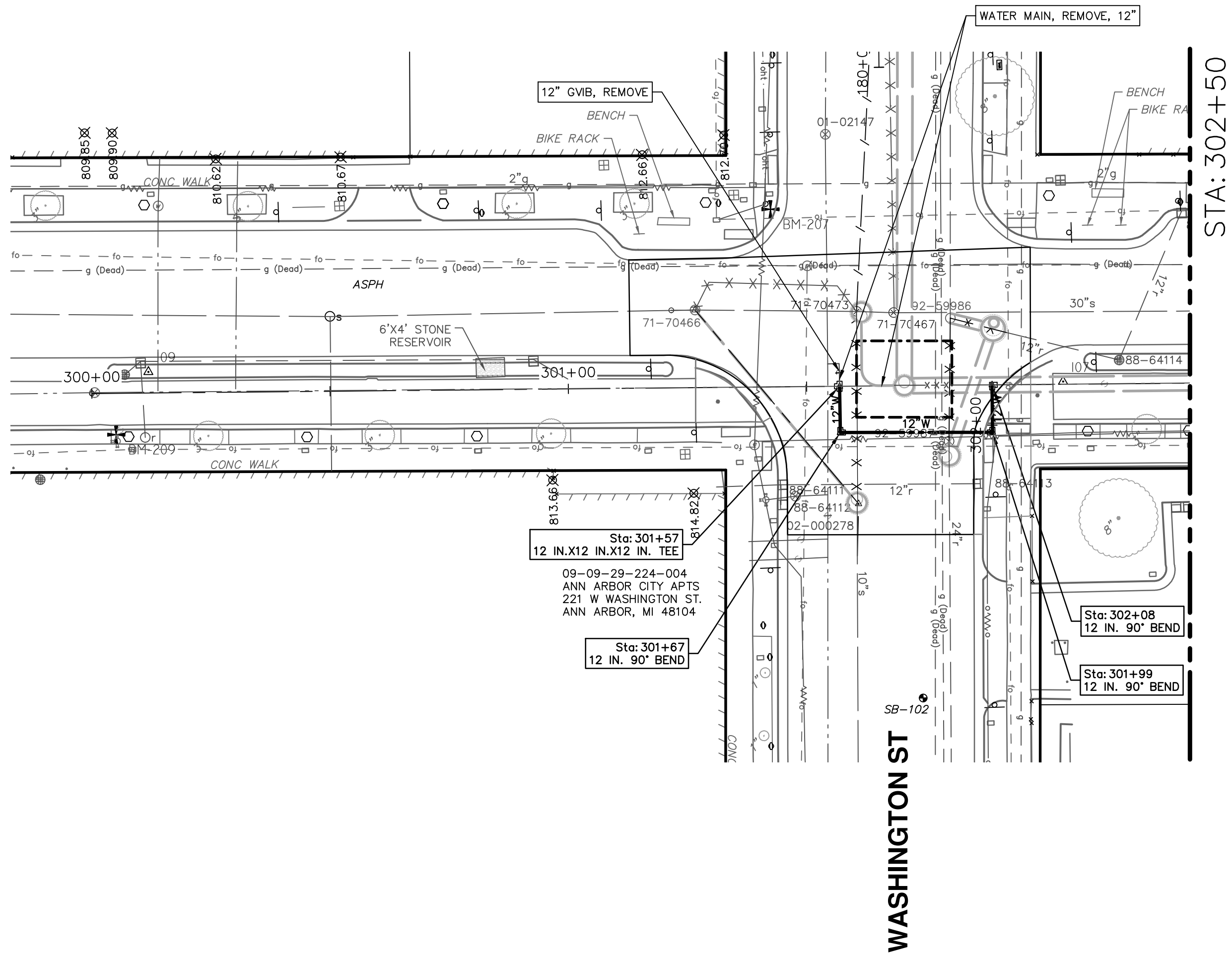
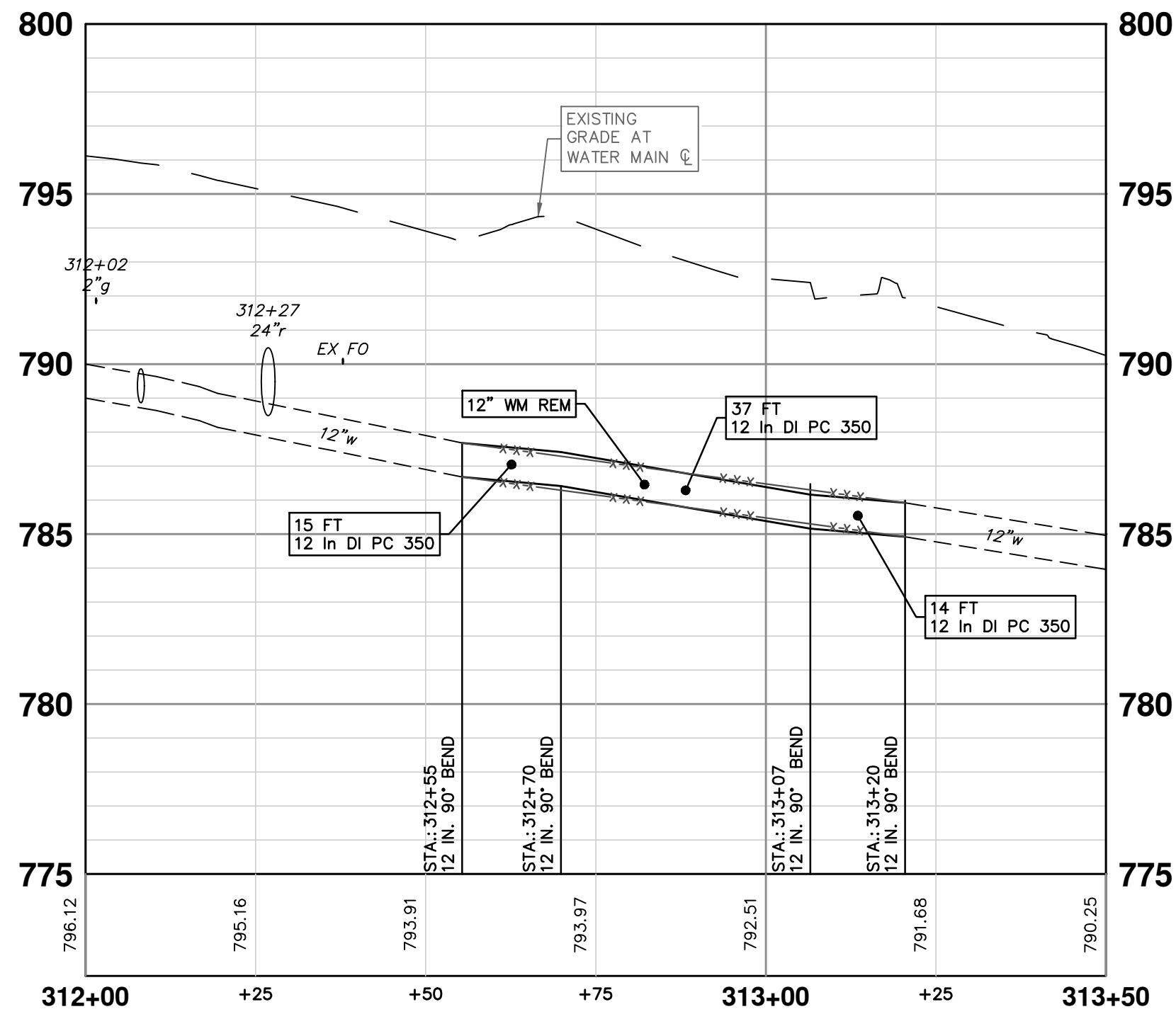
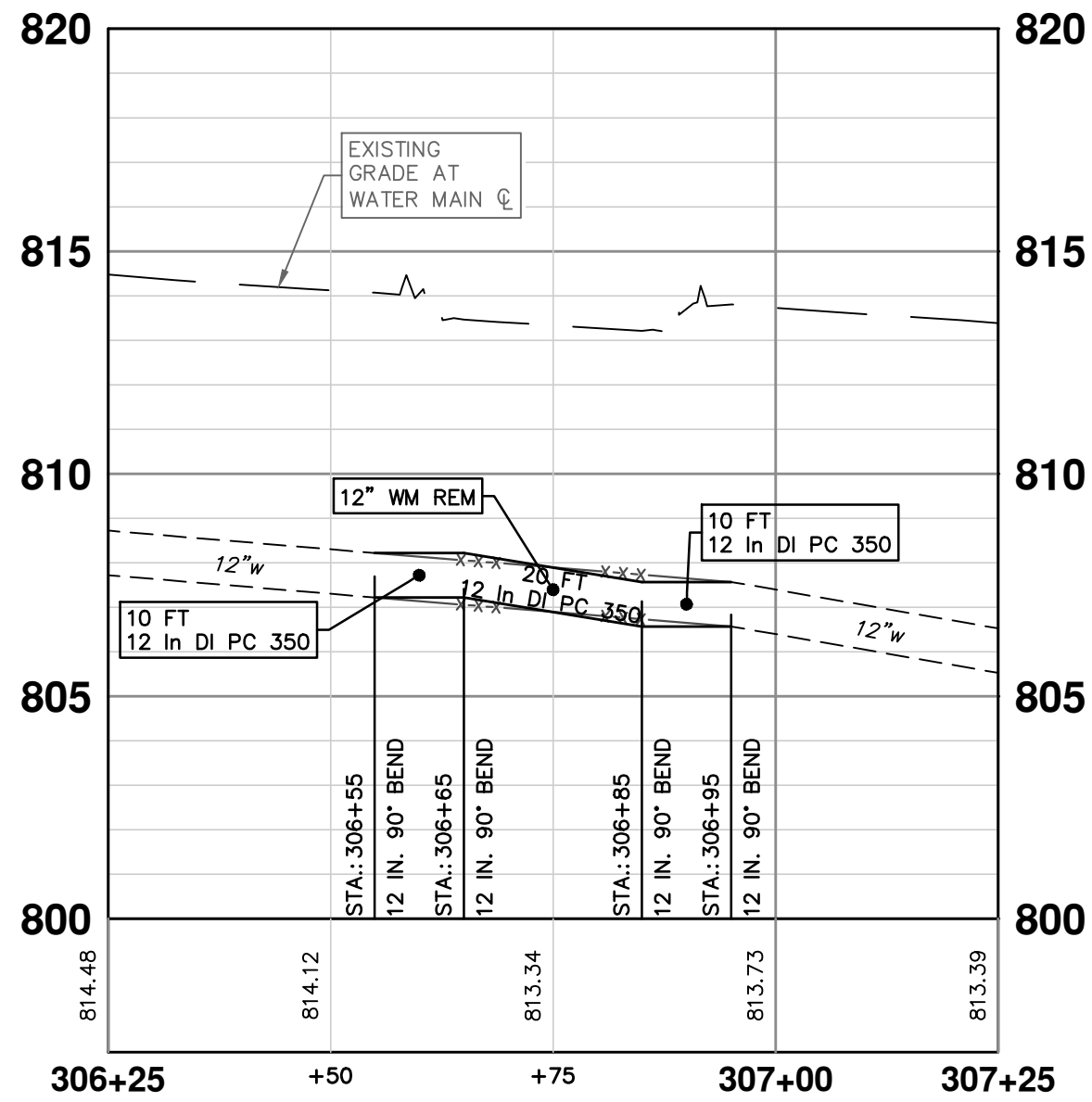
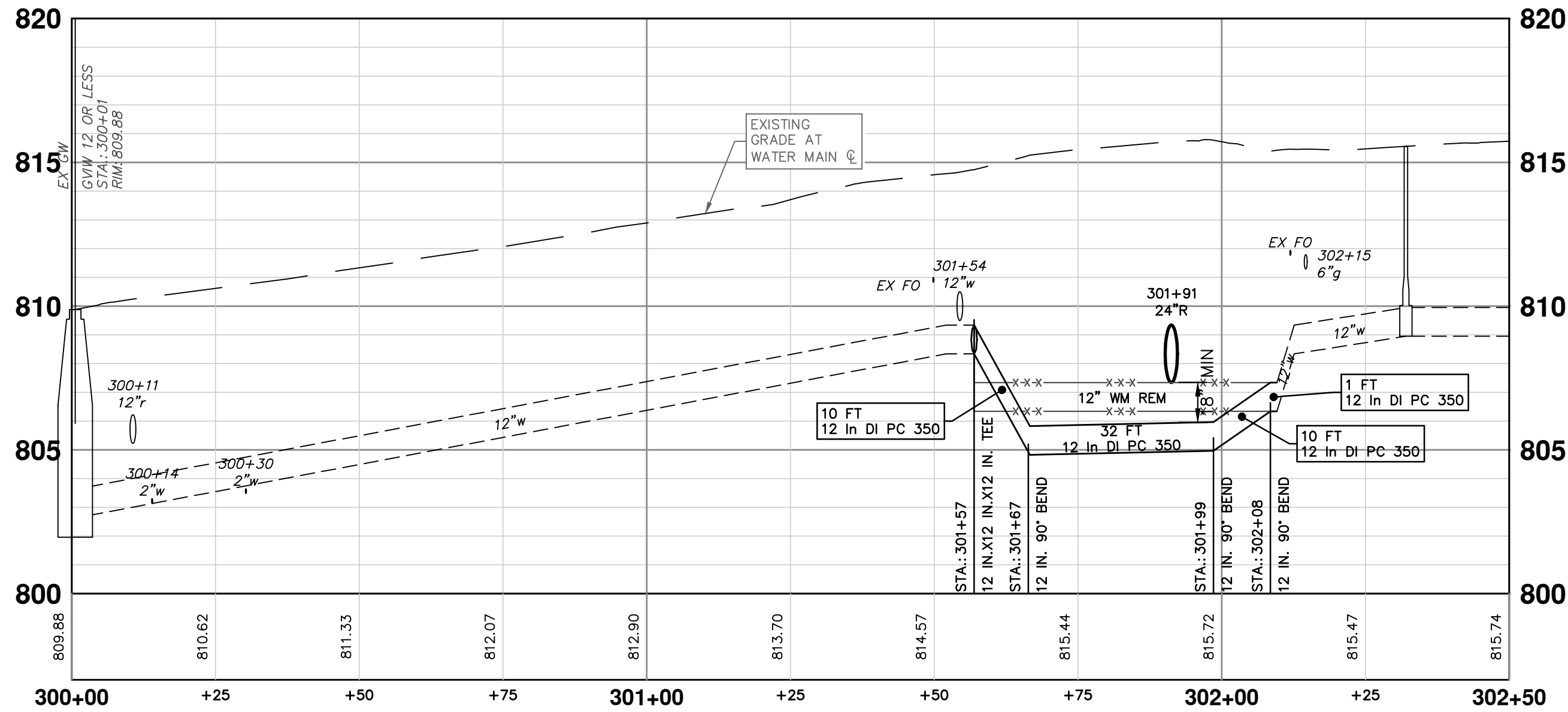


FIRST STREET

WASHINGTON ST



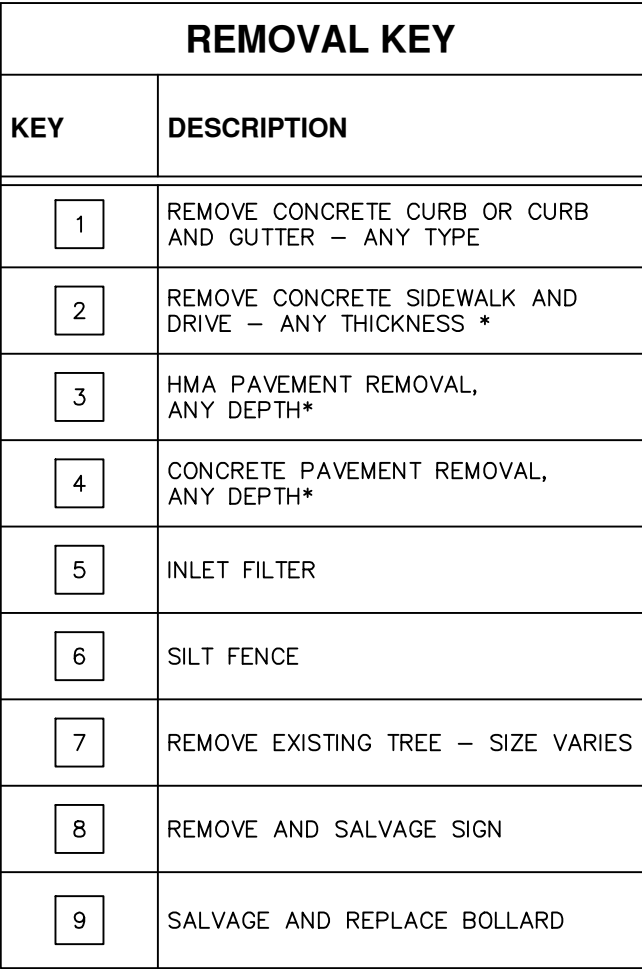
P:\0000_0100\0028240010_Chapin_Sanitary_Sewer_Const\240010WM_Plan and Profile.dwg Dwg Created: 14-Jul-25 - _a2 standard bw.stb - Plot Date: 17-Sep-25



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE

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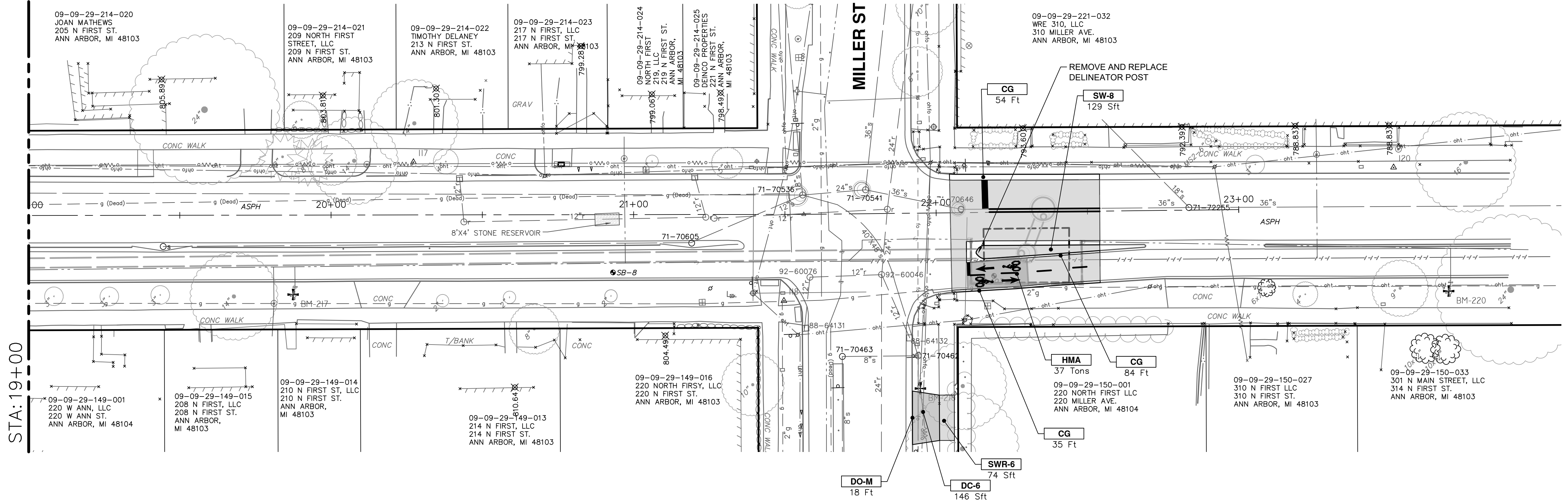
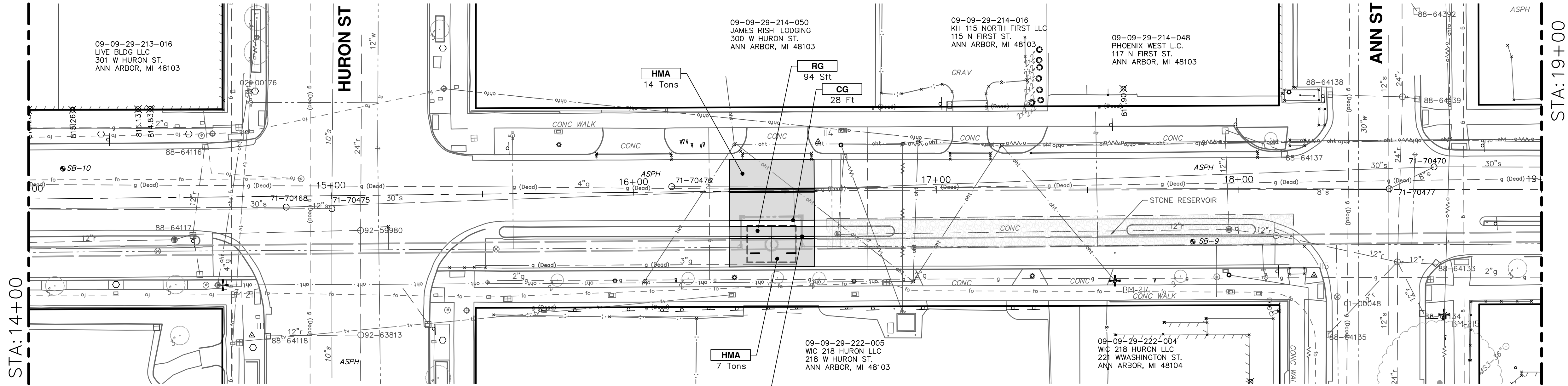
811
Know what's below.
Call before you dig.



- * SAWCUT FULL DEPTH AT
REMOVAL LIMITS

NOTES:

1. PAVEMENT SHALL BE SAW CUT FULL DEPTH AND
REMOVED HALF WIDTH FOR WATER MAIN
INSTALLATION. FINAL LIMITS OF PAVEMENT
REMOVAL WILL BE AS DIRECTED BY THE
ENGINEER.
2. UTILITY REMOVALS SHOWN ON UTILITY SHEET(S).
3. LIGHT POLES TO BE REMOVED BY CITY OF AN
ARBOR AS FEASIBLE AND COORDINATED BY THE
CONTRACTOR.

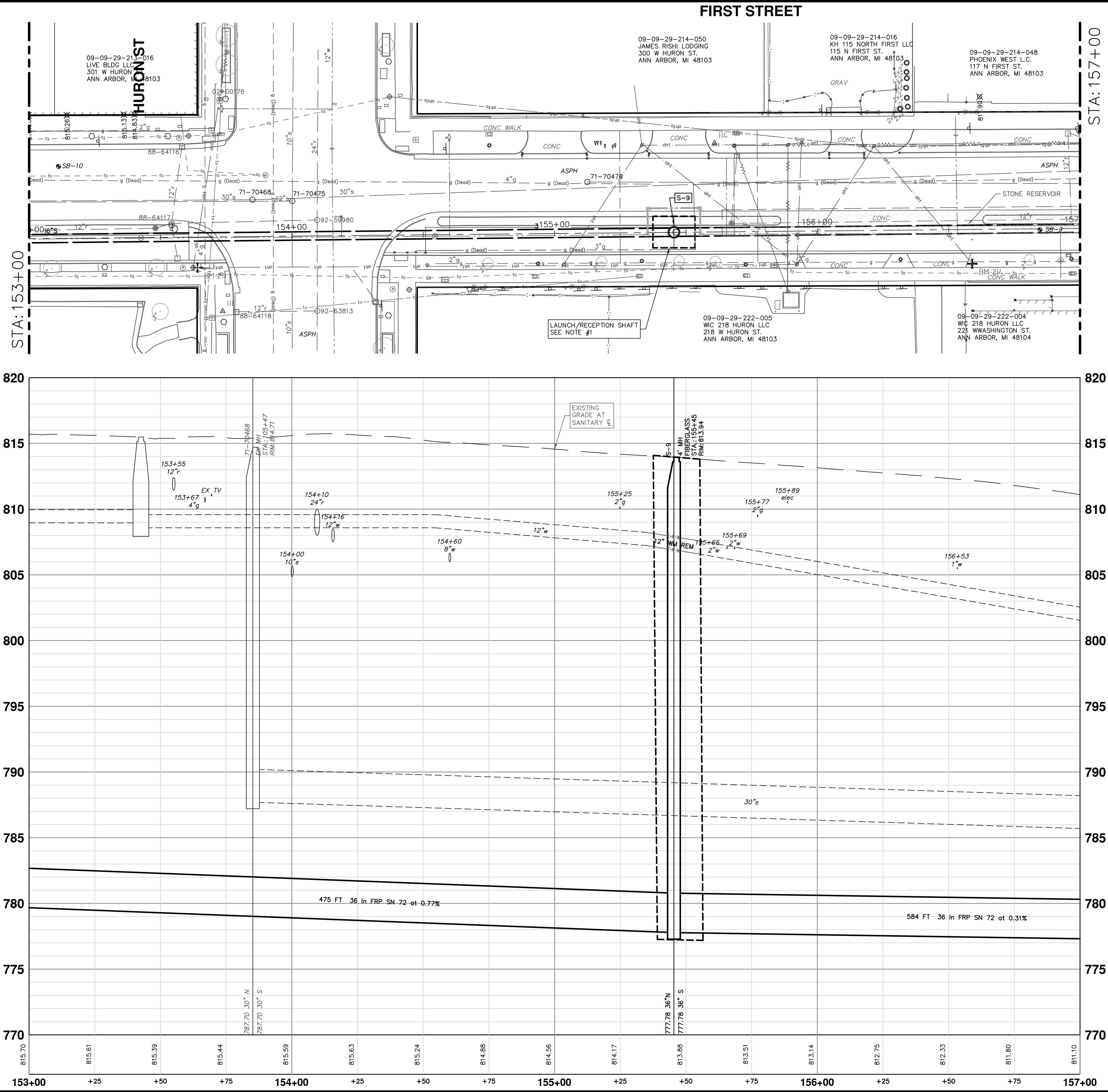


CONSTRUCTION KEY	
KEY	DESCRIPTION
ABM	ADJUST MONUMENT BOX OR GATE VALVE BOX
ASC	ADJUST STRUCTURE COVER
CD	6 INCH CURB DRAIN, HDPE DR17
CG	CURB AND GUTTER, CONCRETE, F4, SPECIAL
C-8	8 INCH CONCRETE PAVEMENT
DSC	STRUCTURE COVER
DWS	DETECTABLE WARNING, CAST IN PLACE
DO-M	DRIVEWAY OPENING, CONCRETE, DETAIL M
DC-6	6 INCH CONCRETE DRIVE, HIGH EARLY
HMA	HMA, PAVEMENT LEVELING COURSE/TOP COURSE PER TYPICAL SECTION
RG	RAINGARDEN
SW-4	4 INCH CONCRETE SIDEWALK
SWR-6	6 INCH CONCRETE SIDEWALK OR SIDEWALK RAMP
SW-8	8 INCH CONCRETE SIDEWALK
UD	6 INCH UNDERDRAIN



REV.	DATE	DESCRIPTION	BY	CHKD
03	09/18/2025	BID SET	SM	CE
02	08/14/2025	90% DESIGN SUBMITTAL	SM	CE
01	01/09/2025	30% DESIGN SUBMITTAL	SM	CE
00	11/12/2024	WATCO RAILROAD PERMIT SUBMITTAL	AT	CE

P:\0000_0100\0028240010_Chapin_Sewer_Sanitary_Const\240010SAN_Plan and Profile.dwg Dwg Created: 17-Jul-25 - _a2 standard bwstb - Plot Date: 17-Sep-25



SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STA.	TYPE	RIM	DEPTH	INVERTS
S-9	155+45	4' MH FIBERGLASS	813.94	36.16	36" S 777.78 36" N 777.78

- NOTES:
- SHAFT SIZES SHOWN ARE INDICATIVE. CONTRACTOR TO SIZE AND DESIGN SHAFT AND MAY CHANGE LAUNCH AND RECEIVING DIRECTION AT THEIR OPTION.
 - SHAFT SIZE SHOWN IS INDICATIVE. CONTRACTOR MAY TUNNEL UNDERNEATH MANHOLE 71-70527 OR RECEIVE AND RELAUNCH MTBM AT THEIR OPTION.
 - SANITARY SEWER INSTALLED VIA MICROTUNNELING.

811

Know what's below. Call before you dig.

03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE
REV.	DATE		DRAWN	CHECKED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS

FIRST STREET

SANITARY SEWER PLAN (STA 153+00 TO STA 157+00)

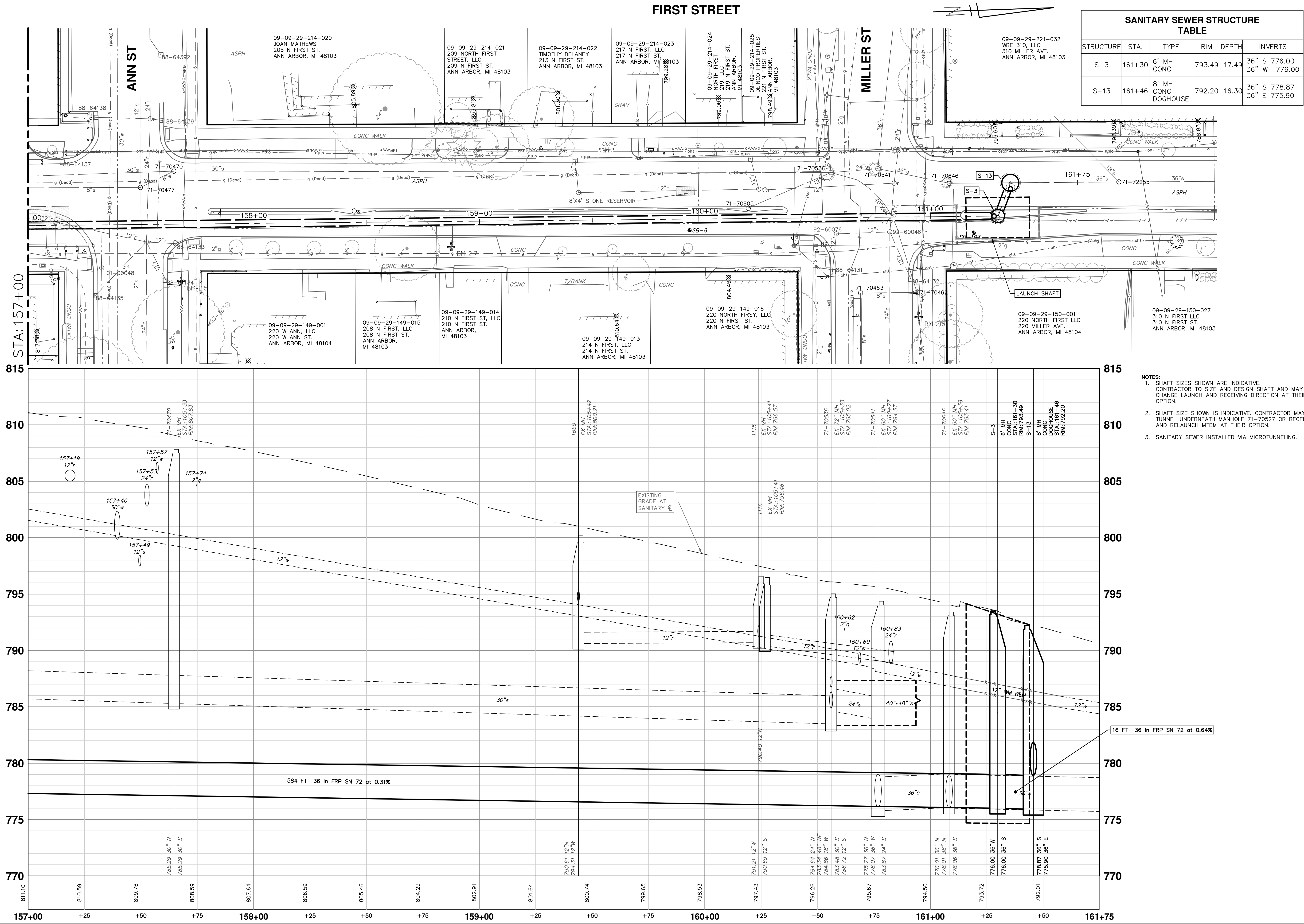
SCALE PLAN: 1" = 20'

PROFILE: 1" = 4'

DRAWING No. 2024-001-20

20 OF 42

P:\0000_0100\0028240010_Chapin_Sanitary_Sewer_Const\240010SAN_Plan and Profile.dwg Dwg Created: 17-Jul-25 - _a2 standard bwstb - Plot Date: 17-Sep-25





MILLER
1. MILLER BYPASS
BYPASS FLOW AT MH 71-70646 TO MH 71-72255

FIRST STREET AT MILLER
36-INCH SANITARY (LOW LEVEL SEWER)
DRY WEATHER FLOW - 4.7 CFS
WET WEATHER FLOW - 33.0 CFS

FIRST/WASHINGTON-
1. SANITARY MANHOLE
(S-10) INSTALLATION
BYPASS FLOW AT MH
71-70446 TO MH 71-70473
2. SANITARY MANHOLE
(S-11) INSTALLATION
BYPASS FLOW MH 71-70466
TO MH S-2

WASHINGTON STREET AT ASHLEY
10-INCH SANITARY
DRY WEATHER FLOW - 1.2 CFS
WET WEATHER FLOW - 1.4 CFS

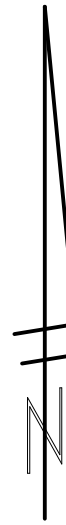
WASHINGTON—
1. DIVERSION STRUCTURE
(S-5) BYPASS
BYPASS FLOW AT MH
71-70588 TO MH 71-70553
BYPASS FLOW AT MH
71-70522 TO MH 71-50554
2. SHAFT BYPASS
BYPASS DIVERSION STRUCTURE
(S-5) TO MH 71-70553
BYPASS DIVERSION STRUCTURE
(S-5) TO MH 71-70554

WASHINGTON STREET AT THIRD

18-INCH SANITARY
DRY WEATHER FLOW - 1.7 CFS
WET WEATHER FLOW - 7.4 CFS

24-INCH SANITARY
DRY WEATHER FLOW - 0.8 CFS
WET WEATHER FLOW - 5.2 CFS

NOTES:
CONTRACTOR SHALL PERFORM A BYPASS PUMPING
WALK-THROUGH PRIOR TO SUBMITTING FINAL
BYPASS PLANS TO THE ENGINEER AND OWNER FOR
APPROVAL.



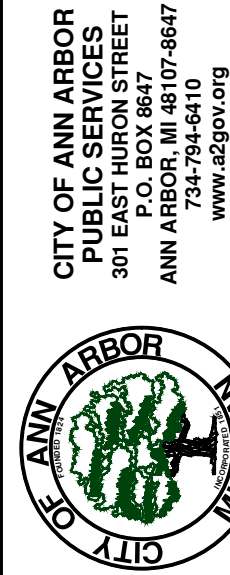
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02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE
REV.	DESCRIPTION	DATE	DRAWN	CHECKED



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS

SCALE 1" = 30'
DRAWING No.
2024-001-23

STAGING PLAN



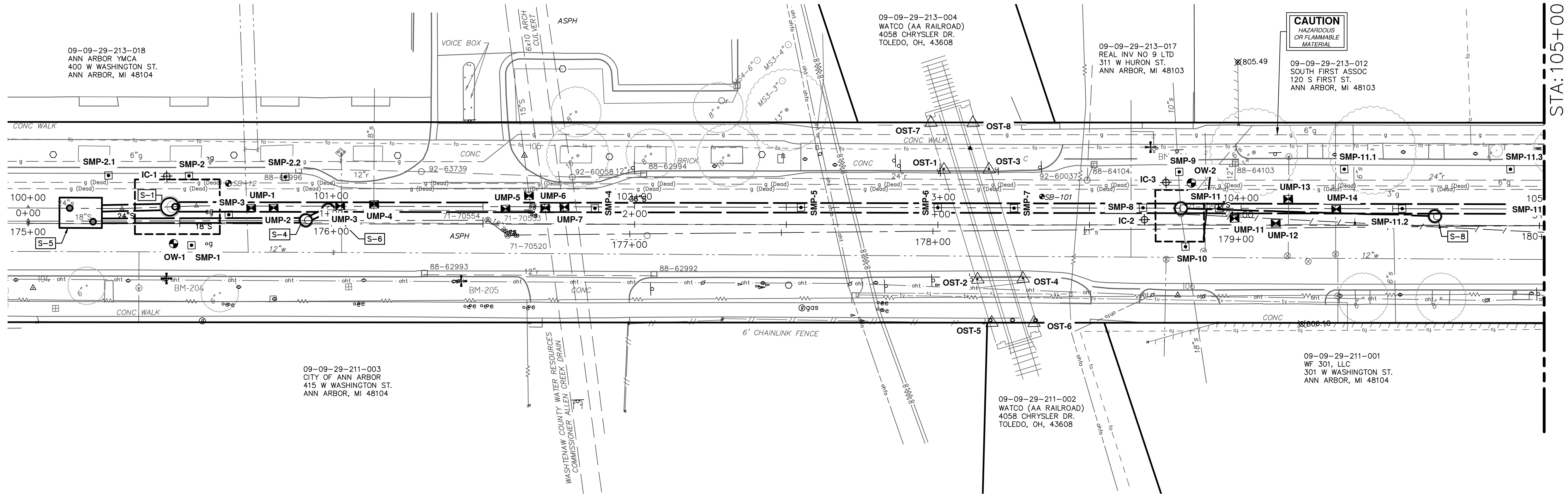
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PUBLIC SERVICES
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ANN ARBOR, MI 48106-6647
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE



P:\0000_0100\0028240010_Chapin_Sanitary_Sewer\Drawings\Civil\Non_OHM\STANTEC 8-15-25\240010INST_Plan and Profile.dwg Dwg Created: 15-Aug-25 -- _a2 standard bw.stb -- Plot Date: 17-Sep-25

WASHINGTON STREET



LEGEND:

- INCLINOMETER (IC)
- SETTLEMENT MONITORING POINT (SMP)
- UTILITY MONITORING POINT (UMP)
- OPTICAL SURVEY TARGET (OST)
- MONITORING POINT ARRAY (MPA)
- OBSERVATION WELL (OW)

NOTE:
IF CONTRACTORS CONSTRUCTION SEQUENCE RESULTS IN INSTRUMENTS BEING LOCATED IN DISTURBED AREAS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ALTERNATIVE INSTRUMENTS AND/OR LOCATIONS AT THE CONTRACTOR'S EXPENSE.

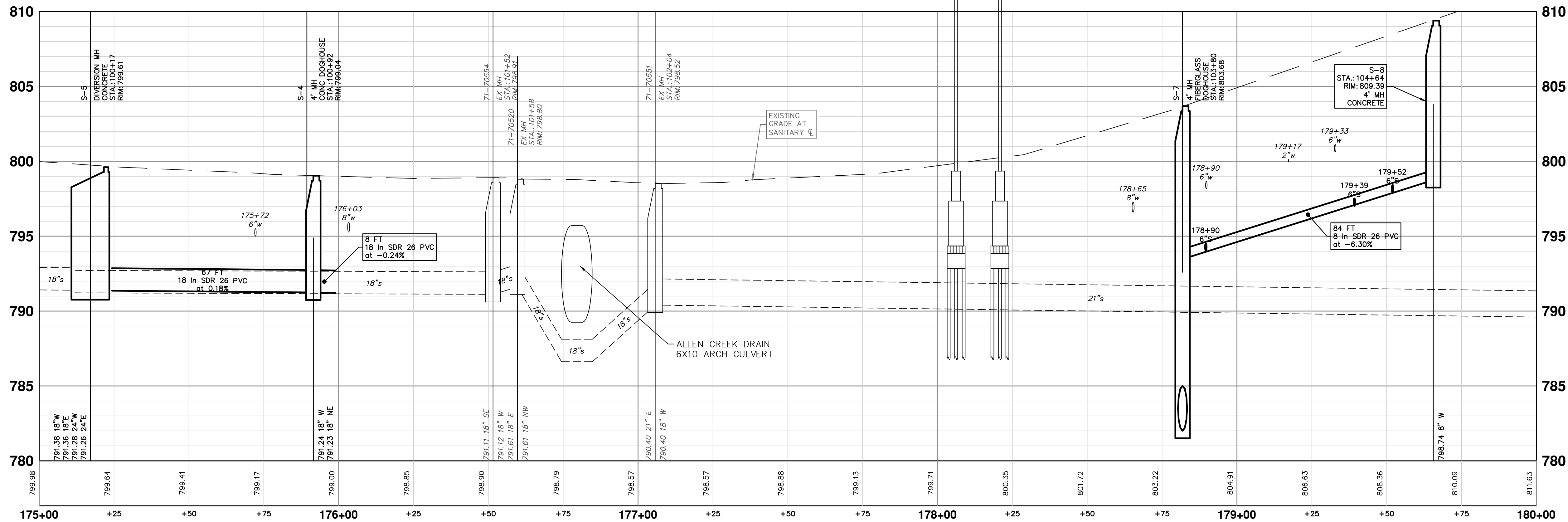
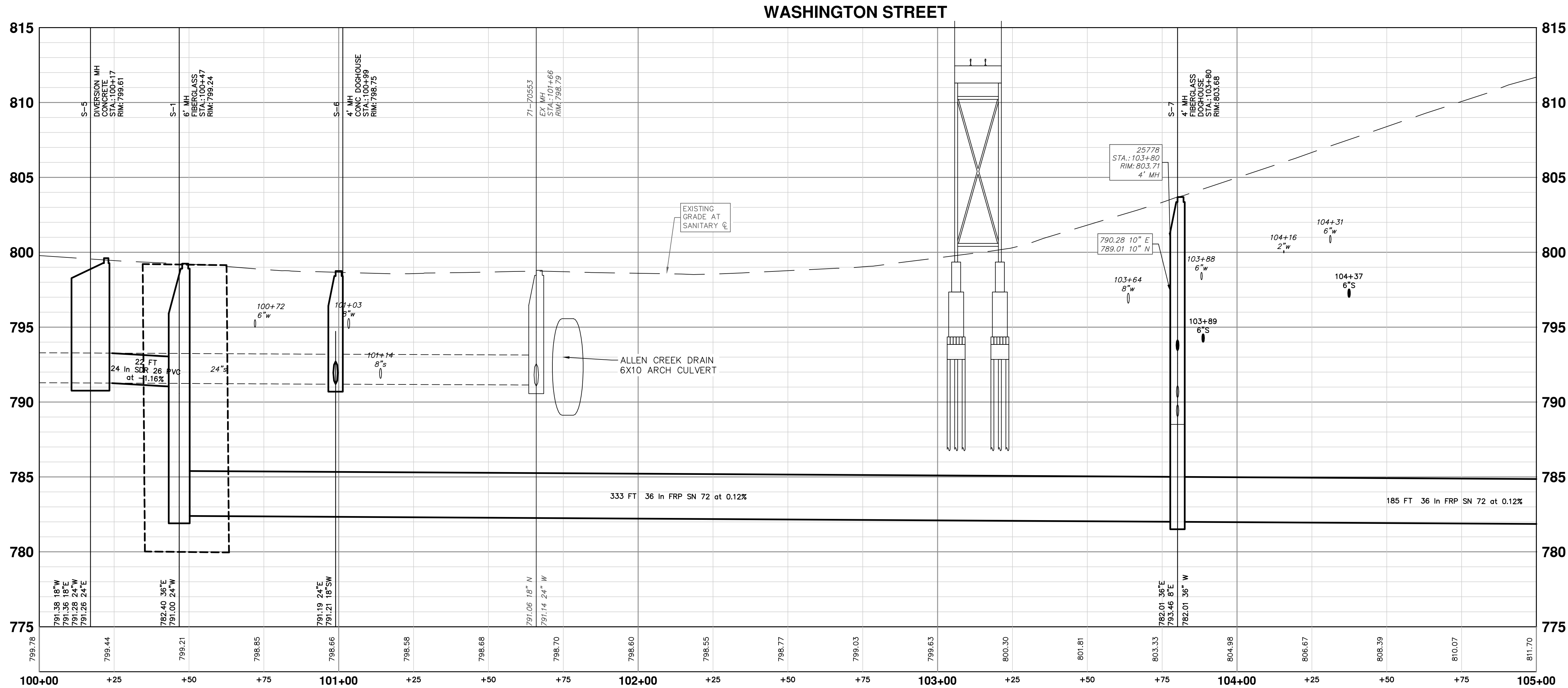
INSTRUMENTATION SCHEDULE				
TYPE	ID	STATION	DEPTH/ LENGTH (FT)	NOTES
INCLINOMETER (IC)	IC-1	100+46		
	IC-2	103+70		
	IC-3	103+75	N/A	
OBSERVATION WELL (OW)	OW-1	100+25		
	OW-2	103+84	N/A	
SETTLEMENT MONITORING POINT (SMP)	SMP-1	100+53		
	SMP-2	100+53		
	SMP-2.1	100+27		
	SMP-2.2	100+85		
	SMP-3	100+67		
	SMP-4	101+89		
	SMP-5	102+98		
	SMP-6	103+00		
	SMP-7	103+25	N/A	
	SMP-8	103+67		
	SMP-9	103+80		
	SMP-10	103+80		
	SMP-11	103+91		
	SMP-11.1	104+35		
UTILITY MONITORING POINT (UMP)	UMP-1	100+74		
	UMP-2	100+81		
	UMP-3	101+03		
	UMP-4	101+14		
	UMP-5	101+57	N/A	
	UMP-6	101+70		
	UMP-7	101+77		
OPTICAL SURVEY TARGET (OST)	UMP-11	103+98		
	UMP-12	104+11		
	UMP-13	104+16		
	UMP-14	104+32		
	OST-1	103+02		
	OST-2	103+12	N/A	
	OST-3	103+17		
	OST-4	103+27		
	OST-5	103+17		
	OST-6	103+90		
	OST-7	102+98		
	OST-8	103+12		



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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE



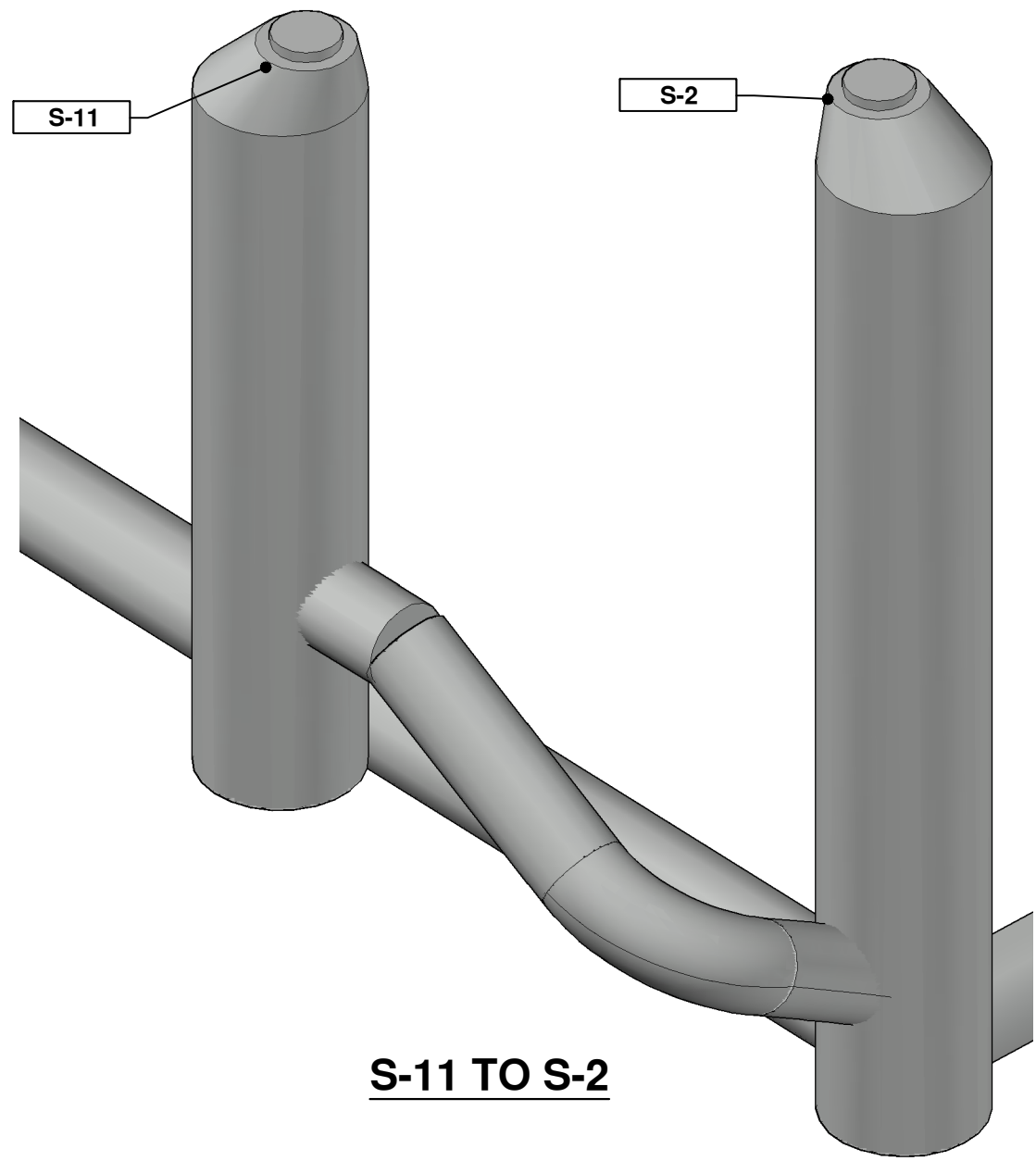


LEGEND:

- INCLINOMETER (IC)
- SETTLEMENT MONITORING POINT (SMP)
- UTILITY MONITORING POINT (UMP)
- OPTICAL SURVEY TARGET (OST)
- MONITORING POINT ARRAY (MPA)
- OBSERVATION WELL (OW)

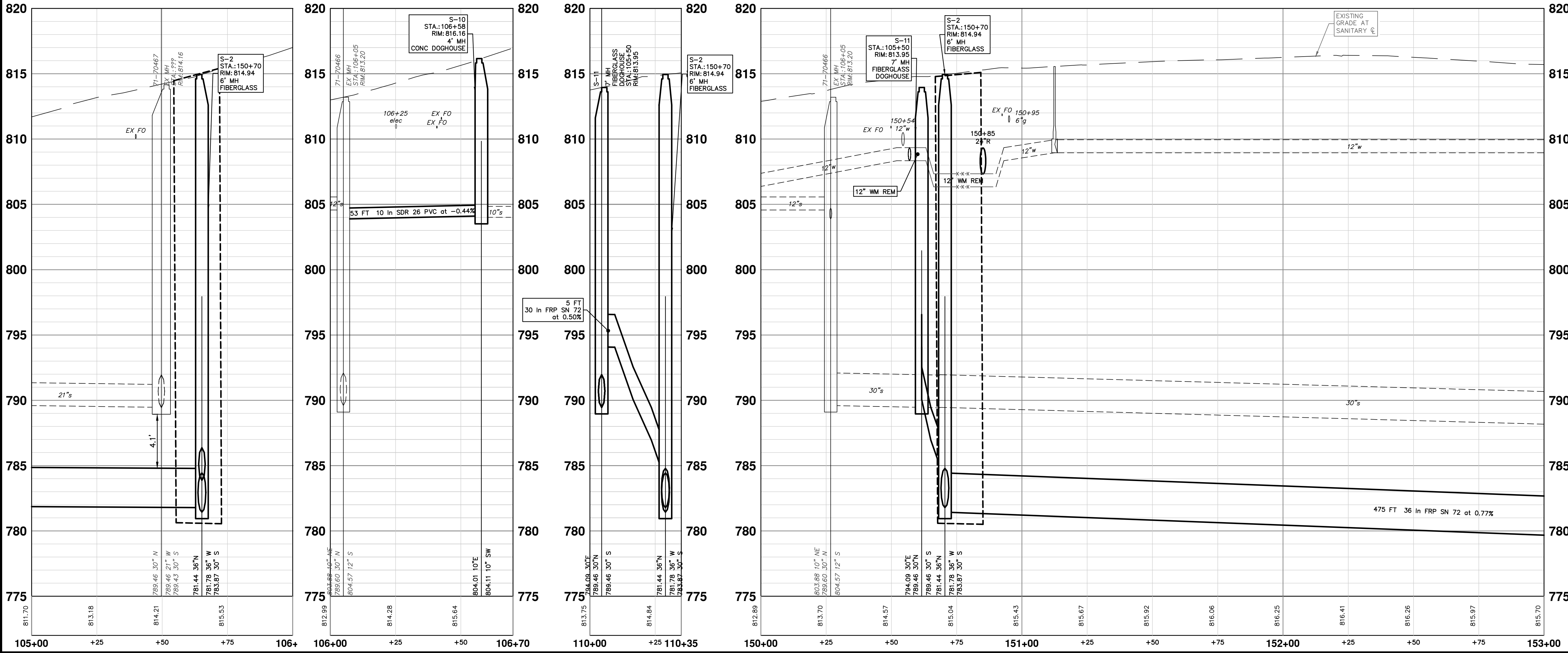
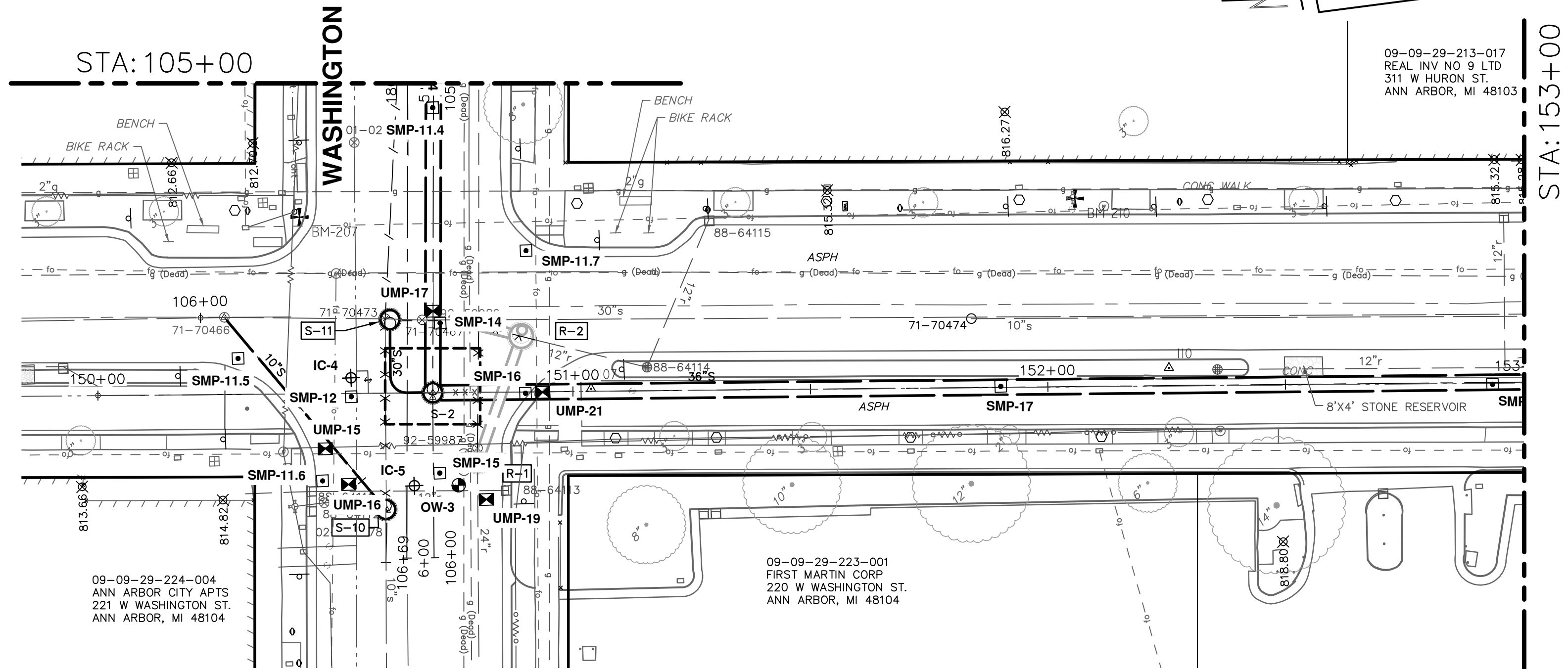
INSTRUMENTATION SCHEDULE				
TYPE	ID	STATION	DEPTH/ LENGTH (FT)	NOTES
INCLINOMETER (IC)	IC-4	150+53	N/A	
	IC-5	150+66	N/A	
OBSERVATION WELL (OW)	OW-3	150+74	N/A	
SETTLEMENT MONITORING POINT (SMP)	SMP-11.5	150+30		
	SMP-11.6	150+47		
	SMP-11.7	150+81		
	SMP-12	150+53		
	SMP-13	150+68		
	SMP-14	150+72		
	SMP-15	150+72		
	SMP-16	150+90		
	SMP-17	151+91		
	SMP-18	152+97		
UTILITY MONITORING POINT (UMP)	UMP-15	150+46		
	UMP-16	150+50		
	UMP-17	150+70		
	UMP-18	150+76		
	UMP-19	150+81		
	UMP-20	150+82		
	UMP-21	150+95		

NOTE:
IF CONTRACTORS CONSTRUCTION SEQUENCE RESULTS IN INSTRUMENTS BEING LOCATED IN DISTURBED AREAS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ALTERNATIVE INSTRUMENTS AND/OR LOCATIONS AT THE CONTRACTOR'S EXPENSE.



S-11 TO S-2

FIRST STREET



Know what's below.
Call before you dig.

03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
INSTRUMENTATION PLANS
FIRST STREET (STA 150+00 TO STA 153+00)

SCALE PLAN: 1" = 20'

PROFILE: 1" = 4'

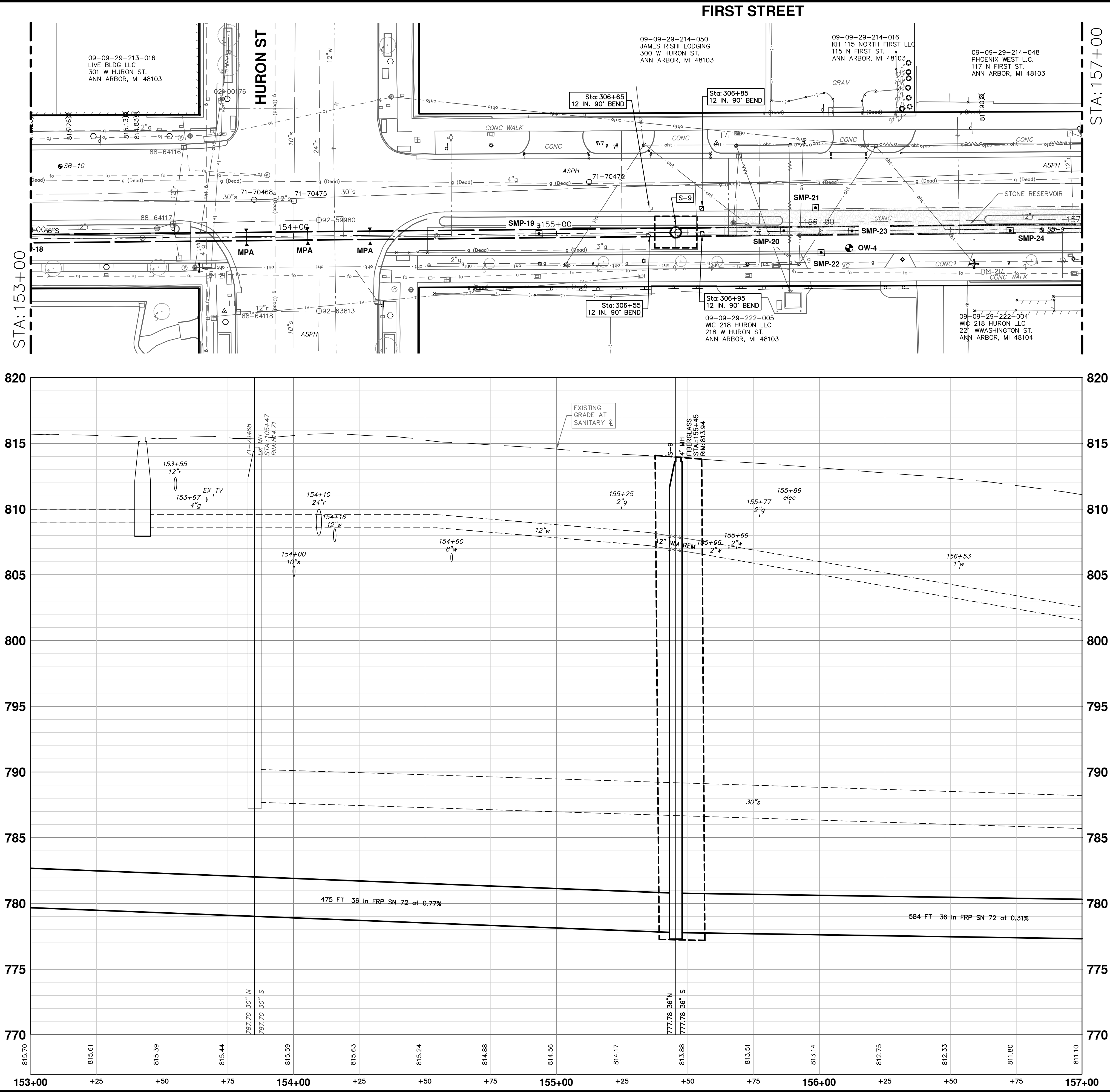
DRAWING No.

2024-001-26

SHEET No.

26 OF 42

P:\0000_0100\0028240010_Chapin_Sewer_Drawings\Civil\Non_OHM\STANTEC 8-15-25\240010INST_Plan and Profile.dwg Dwg Created: 15-Aug-25 --_a2_standard bw.stb -- Plot Date: 17-Sep-25



- LEGEND:**
- INCLINOMETER (IC)
 - SETTLEMENT MONITORING POINT (SMP)
 - UTILITY MONITORING POINT (UMP)
 - OPTICAL SURVEY TARGET (OST)
 - MONITORING POINT ARRAY (MPA)
 - OBSERVATION WELL (OW)

INSTRUMENTATION SCHEDULE				
TYPE	ID	STATION	DEPTH/LENGTH (FT)	NOTES
OBSERVATION WELL (OW)	OW-4	156+12	N/A	
	SMP-19	154+94		
	SMP-20	155+87		
	SMP-21	156+00		
	SMP-22	156+00		
SETTLEMENT MONITORING POINT (SMP)	SMP-23	156+14		
	SMP-24	156+71		
	SMP-25	157+87		
	UMP-22	157+20		
	UMP-23	157+39		
UTILITY MONITORING POINT (UMP)	UMP-24	157+52		
	UMP-25	157+58		

NOTE:
IF CONTRACTORS CONSTRUCTION SEQUENCE RESULTS IN INSTRUMENTS BEING LOCATED IN DISTURBED AREAS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ALTERNATIVE INSTRUMENTS AND/OR LOCATIONS AT THE CONTRACTOR'S EXPENSE.



Know what's below.
Call before you dig.

CE	CE	SM	SM	CE	CE	CE	CE	CE	CE
09/18/2025	08/14/2025	01/09/2025	11/12/2024	DATE	DRAWN	CHECKED			

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HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
INSTRUMENTATION PLANS
FIRST STREET (STA 153+00 TO STA 157+00)

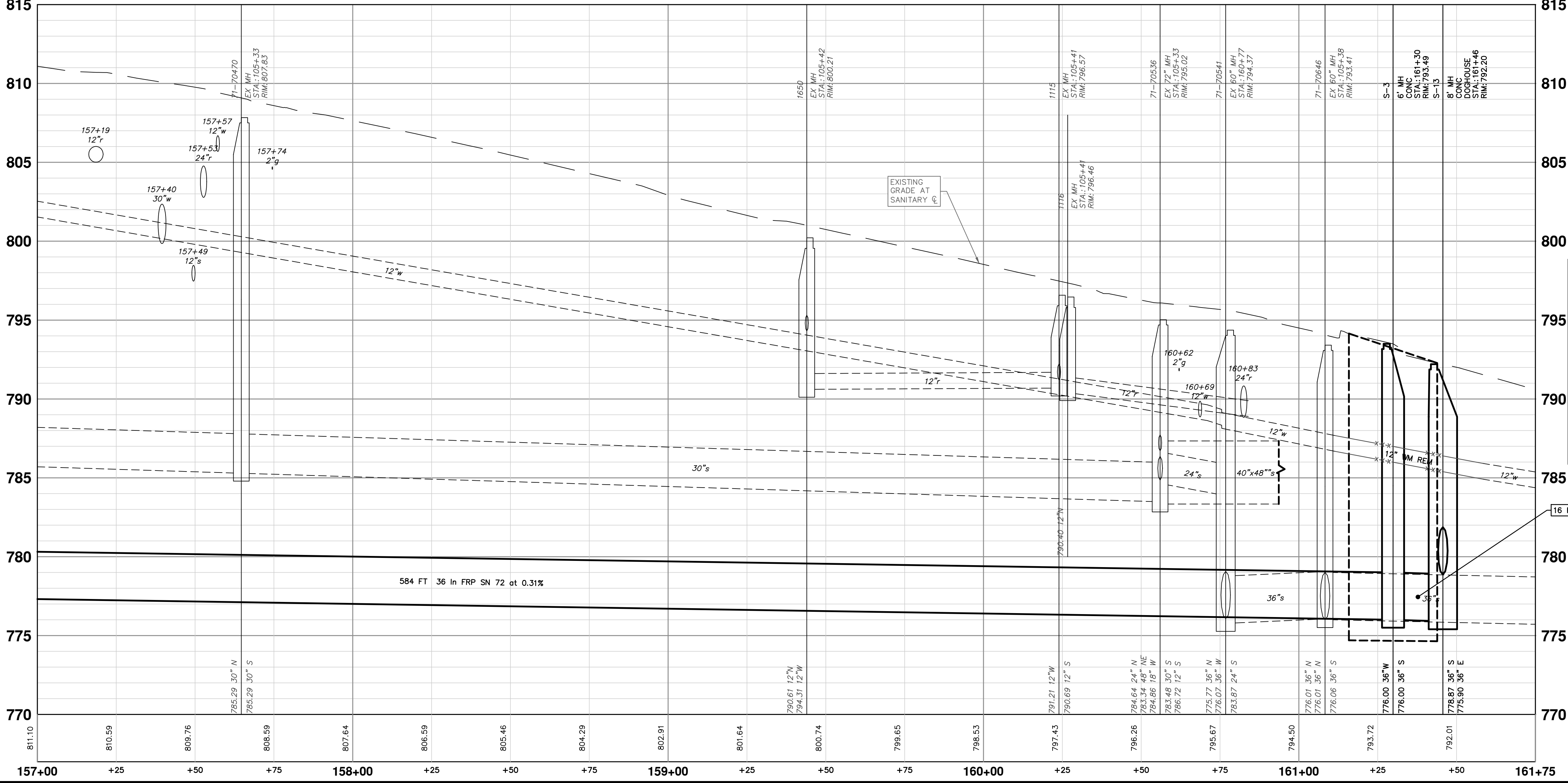
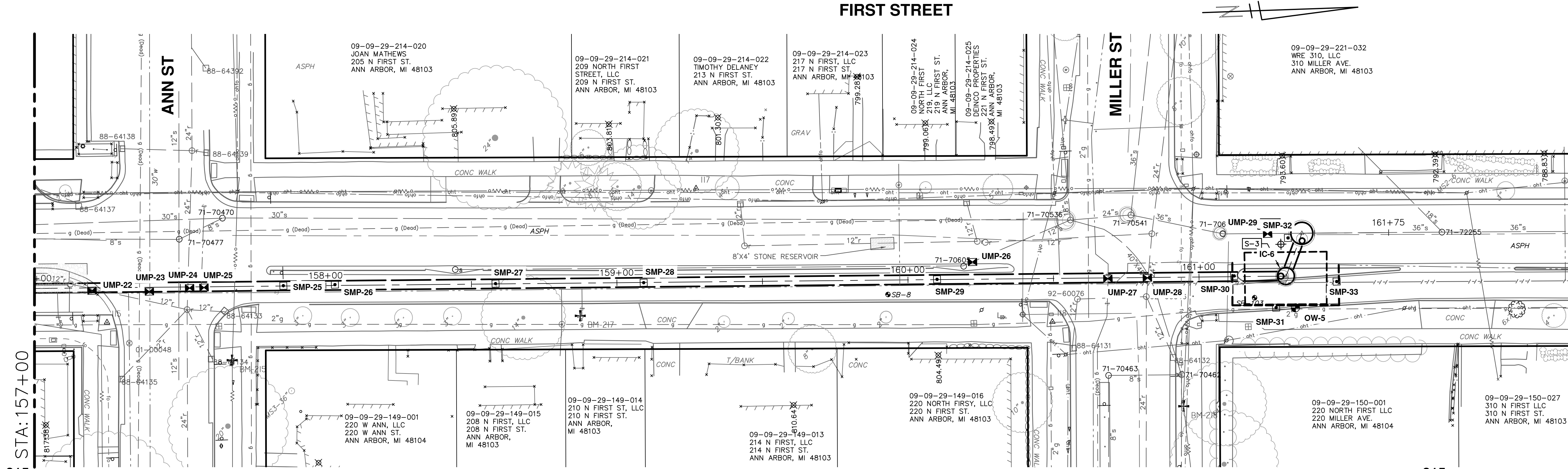
SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'



DRAWING No. 2024-001-27

SHEET No. 27 OF 42

FIRST STREET



LEGEND:

- INCLINOMETER (IC)
- SETTLEMENT MONITORING POINT (SMP)
- UTILITY MONITORING POINT (UMP)
- OPTICAL SURVEY TARGET (OST)
- MONITORING POINT ARRAY (MPA)
- OBSERVATION WELL (OW)

INSTRUMENTATION SCHEDULE

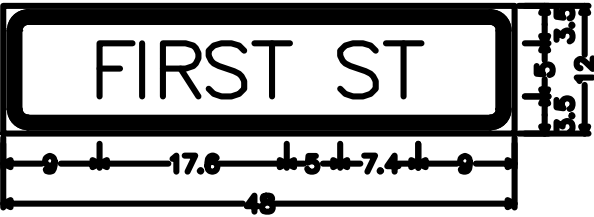
TYPE	ID	STATION	DEPTH/LENGTH (FT)	NOTES
INCLINOMETER (IC)	IC-6	161+27	N/A	
OBSERVATION WELL (OW)	OW-5	161+32	N/A	
SETTLEMENT MONITORING POINT (SMP)	SMP-26	158+02		
	SMP-27	158+58		
	SMP-28	159+08		
	SMP-29	160+08	N/A	
	SMP-30	161+09		
	SMP-31	161+25		
UTILITY MONITORING POINT (UMP)	SMP-32	161+31		
	SMP-33	161+45		
	UMP-26	160+21	N/A	
	UMP-27	160+67		

NOTE:
IF CONTRACTORS CONSTRUCTION SEQUENCE RESULTS IN INSTRUMENTS BEING LOCATED IN DISTURBED AREAS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ALTERNATIVE INSTRUMENTS AND/OR LOCATIONS AT THE CONTRACTOR'S EXPENSE.



REV.	DATE	DESCRIPTION
03	09/18/2025	BID SET
02	08/14/2025	90% DESIGN SUBMITTAL
01	01/09/2025	30% DESIGN SUBMITTAL
00	11/12/2024	WATCO RAILROAD PERMIT SUBMITTAL

SIGNING LEGEND					
SIGN	SIGN CODE	SIZE	NUMBER REQUIRED	AREA (SFT)	TOTAL (SFT)
	M4-8a	24"x18"	4	3	12
	M4-9L	30"x24"	10	5	50
	M4-9KL	30"x30"	2	6.25	12.5
	M4-9R	30"x24"	4	5	20
	M4-9KR	30"x24"	2	6.25	12.5
	M4-9j	30"x24"	2	5	10
	R11-2(1)	48"x30"	1	10	10
	R11-4	60"x30"	4	12.5	50
	W20-1	48"x48"	5	16	80
	W20-2	48"x48"	5	16	80
	W20-3	48"x48"	5	16	80
	W20-12P	30"x12"	19	2.5	47.5
	W20-12P	36"x12"	13	3	39
	W20-13P	48"x12"	18	4	72



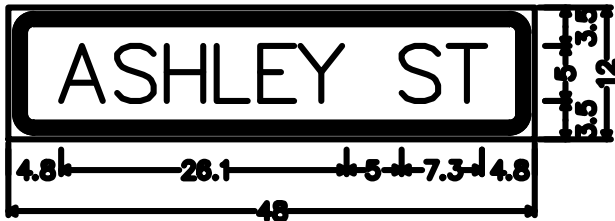
SS-A;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts

F	R	S	T	S	T
9.0	13.0	15.0	19.3	23.6	31.6



SS-B;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts

F	R	S	T	S	T
6.0	9.2	10.6	14.2	17.7	24.1



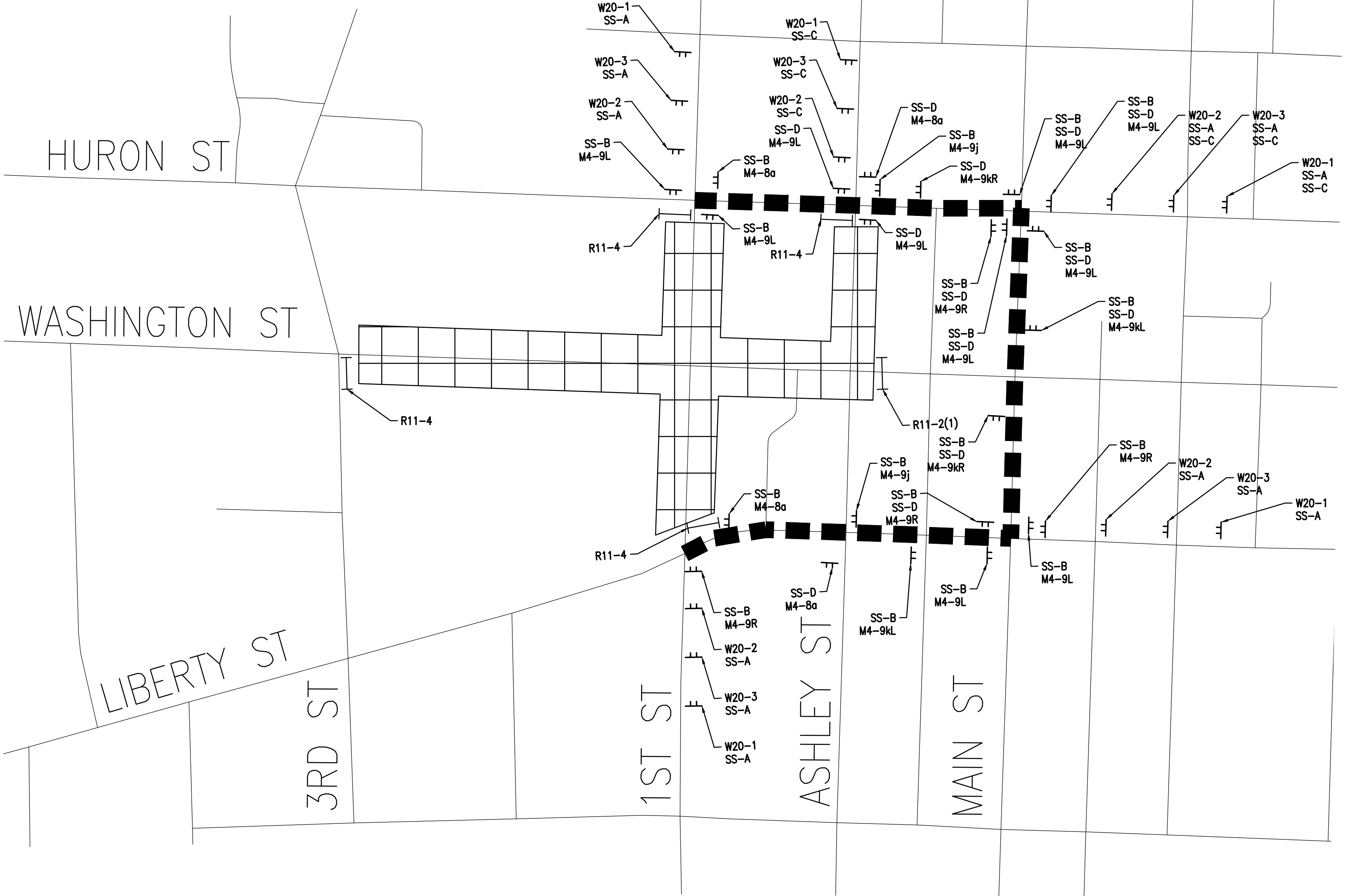
SS-C;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"ASHLEY ST", D;
Table of letter and object lefts

A	S	H	L	E	Y	S	T
4.8	9.9	14.4	19.0	23.0	26.6	35.9	40.2



SS-D;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"ASHLEY ST", D;
Table of letter and object lefts

A	S	H	L	E	Y
2.6	6.7	10.4	14.0	17.2	20.1
S	T				
27.8	30.9				



STAGE 1 OVERVIEW

- INSTALL NEW SANITARY MANHOLE AT 1ST ST AND WASHINGTON ST.
- TEMPORARY BYPASS SEWER FROM ASHLEY ST AND WASHINGTON ST TO 1ST AVE AND WASHINGTON ST.

STAGE 1 DETOUR / CLOSURES

- WASHINGTON ST WILL BE CLOSED TO THRU TRAFFIC FROM 3RD ST TO 1ST ST. THERE WILL BE A FULL CLOSURE OF WASHINGTON ST FROM 1ST ST TO ASHLEY ST.
- 1ST ST WILL BE CLOSED TO THRU TRAFFIC.
- ASHLEY ST WILL BE CLOSED TO THRU TRAFFIC FOR SB BUT WILL REMAIN OPEN NB.

TRAFFIC NOTES

- "D" DISTANCE BETWEEN ADVANCED SIGNING SHALL BE PER MDOT MAINTAINING TRAFFIC TYPICAL 101-GEN-SPACING-CHARTS.
- SIGN LOCATIONS APPROXIMATELY SHOWN, EXACT LOCATION OF PROPOSED DETOUR ROUTE SIGNING SHALL BE APPROVED BY ENGINEER.
- PLACE ALL RELATED ROAD CLOSURE SIGNING AND CONSTRUCTION SIGNING PRIOR TO STARTING WORK.
- ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE SHALL CONFORM TO MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION PART 6, THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND AS SPECIFIED HEREIN.

STAGE 1 PEDESTRIAN OVERVIEW

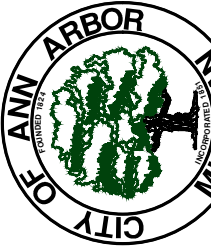
- CONTRACTOR IS REQUIRED TO PROVIDE PEDESTRIAN FACILITIES DURING CONSTRUCTION
- MAINTAIN PEDESTRIAN WALK CONNECTIVITY VIA DETOURS BY NEVER CLOSING MORE THAN ONE LEG OF THE INTERSECTION AT ANY TIME.

LEGEND	
	WORK ZONE
	DETOUR ROUTE
	TEMPORARY SIGN
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	LIGHTED ARROW PANEL (CAUTION MODE)
	PORTABLE CHANGEABLE MESSAGE SIGN



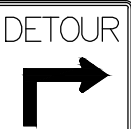
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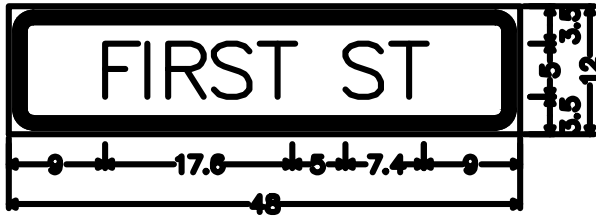
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HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
MAINTENANCE OF TRAFFIC
DETOUR PHASE 1

SHEET No.	DRAWING No.
29 OF 42	

SIGNING LEGEND					
SIGN	SIGN CODE	SIZE	NUMBER REQUIRED	AREA (SFT)	TOTAL (SFT)
	M4-8a	24"x18"	3	3	9
	M4-9L	30"x24"	6	5	30
	M4-9KL	30"x30"	0	6.25	0
	M4-9R	30"x24"	5	5	25
	M4-9R	30"x24"	0	6.25	0
	M4-9j	30"x24"	3	5	15
	R11-2(1)	48"x30"	0	10	0
	R11-4	60"x30"	5	12.5	62.5
	W20-1	48"x48"	6	16	96
	W20-2	48"x48"	6	16	96
	W20-3	48"x48"	6	16	96
	W20-12P	30"x12"	19	2.5	47.5
	W20-13P	48"x12"	18	4	72



SS-A;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts
F 0.1 3.0 18.0 19.3 23.6 51.6 36.6



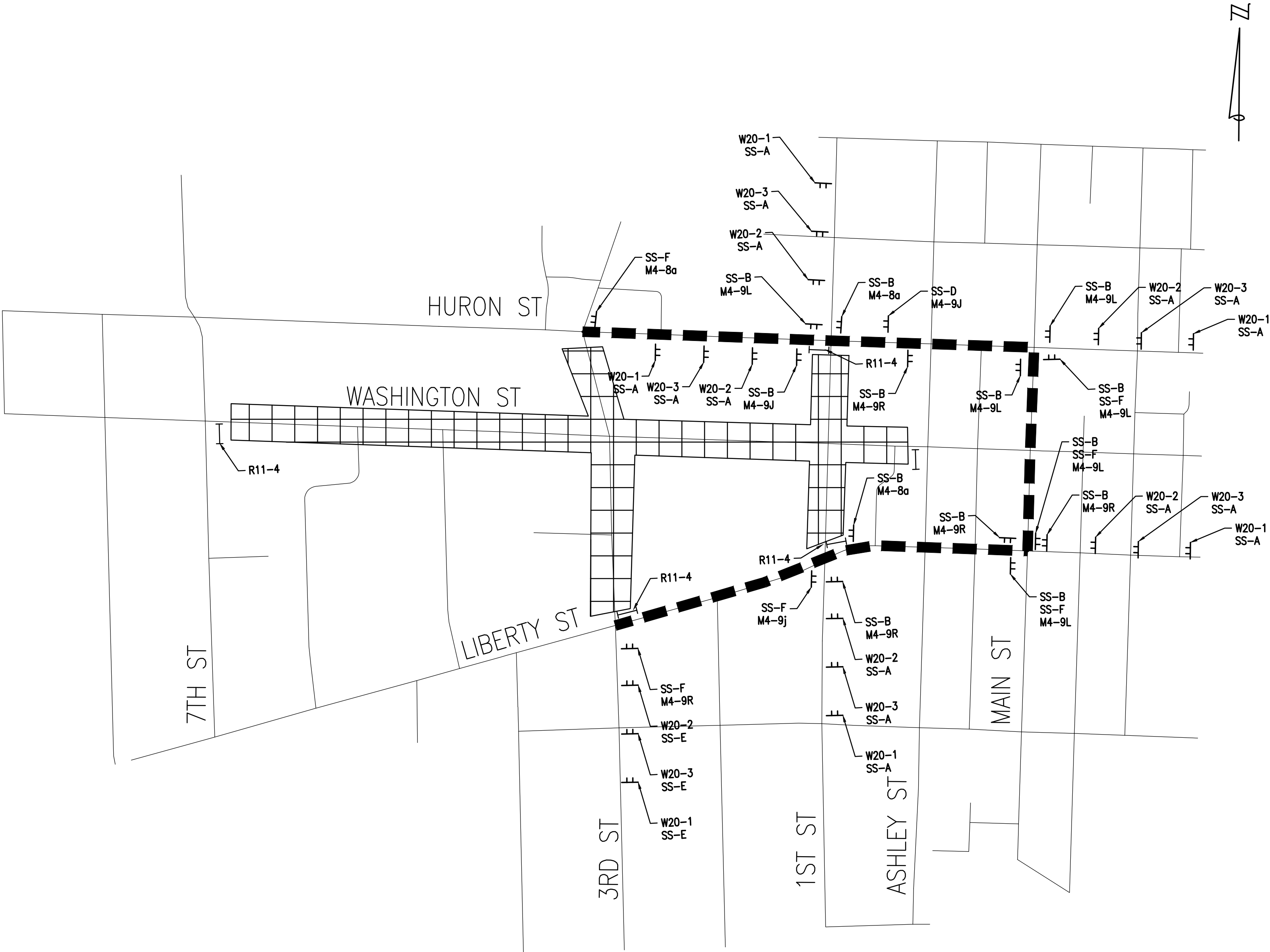
SS-B;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts
F 0.0 9.2 10.8 14.2 17.7 24.1 27.5



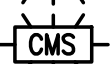
SS-E;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"THIRD ST", D;
Table of letter and object lefts
T 0.0 12.6 17.2 19.1 23.6 32.0 36.3



SS-F;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"THIRD ST", D;
Table of letter and object lefts
T 0.7 8.9 12.5 14.1 17.7 24.4 27.8



LEGEND

-  WORK ZONE
-  DETOUR ROUTE
-  TEMPORARY SIGN
-  BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  PORTABLE CHANGEABLE MESSAGE SIGN

STAGE 3 OVERVIEW

- INSTALL SANITARY DIVERSION STRUCTURE ON WASHINGTON ST.
- TEMPORARY BYPASS SEWER FROM CHAPIN AT THE YMCA DRIVEWAY.

STAGE 3 DETOUR / CLOSURES

- WASHINGTON ST WILL BE CLOSED TO THRU TRAFFIC FROM 7TH ST TO ASHLEY ST. WORK DOES NOT BEGIN ON WASHINGTON ST UNTIL 3RD ST.
- 1ST ST WILL BE CLOSED TO THRU TRAFFIC FROM HURON ST TO LIBERTY ST.
- NB 3RD ST WILL BE CLOSED TO THRU TRAFFIC BETWEEN HURON ST AND LIBERTY ST. SB 3RD ST WILL REMAIN OPEN.

TRAFFIC NOTES

- "D" DISTANCE BETWEEN ADVANCED SIGNING SHALL BE PER MDOT MAINTAINING TRAFFIC TYPICAL 101-GEN-SPACING-CHARTS.
- SIGN LOCATIONS APPROXIMATELY SHOWN, EXACT LOCATION OF PROPOSED DETOUR ROUTE SIGNING SHALL BE APPROVED BY ENGINEER.
- PLACE ALL RELATED ROAD CLOSURE SIGNING AND CONSTRUCTION SIGNING PRIOR TO STARTING WORK.
- ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE SHALL CONFORM TO MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION PART 6, THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND AS SPECIFIED HEREIN.

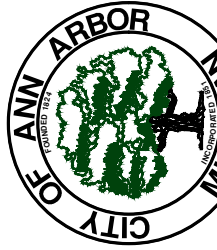
STAGE 3 PEDESTRIAN OVERVIEW

- CONTRACTOR IS REQUIRED TO PROVIDE PEDESTRIAN FACILITIES DURING CONSTRUCTION
- MAINTAIN PEDESTRIAN WALK CONNECTIVITY VIA DETOURS BY NEVER CLOSING MORE THAN ONE LEG OF THE INTERSECTION AT ANY TIME.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

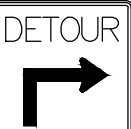
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MAINTENANCE OF TRAFFIC
DETOUR PHASE 3

SHEET No.

31 OF 42

SIGNING LEGEND					
SIGN	SIGN CODE	SIZE	NUMBER REQUIRED	AREA (SFT)	TOTAL (SFT)
	M4-8a	24"x18"	2	3	6
	M4-9L	30"x24"	8	5	40
	M4-9KL	30"x30"	2	6.25	12.5
	M4-9R	30"x24"	4	5	20
	M4-9kR	30"x24"	0	6.25	0
	M4-9j	30"x24"	6	5	30
	R11-2(1)	48"x30"	0	10	0
	R11-4	60"x30"	4	12.5	50
	W20-1	48"x48"	6	16	96
	W20-2	48"x48"	6	16	96
	W20-3	48"x48"	6	16	96
	W20-12P	30"x12"	22	2.5	55
	W20-13P	48"x12"	18	4	72



SS-A:
2.5" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts
F 0.1 13.0 15.0 19.3 23.6 31.6 35.9
R 1.5 1.5 1.5 1.5 1.5 1.5 1.5
S 1.5 1.5 1.5 1.5 1.5 1.5 1.5
T 1.5 1.5 1.5 1.5 1.5 1.5 1.5



SS-B:
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts
F 0.0 9.2 10.8 14.2 17.7 24.1 27.9
R 1.5 1.5 1.5 1.5 1.5 1.5 1.5
S 1.5 1.5 1.5 1.5 1.5 1.5 1.5
T 1.5 1.5 1.5 1.5 1.5 1.5 1.5



STAGE 4 OVERVIEW

INSTALL FINAL SHAFTS AND 36 IN PIPE. TEMPORARY BYPASS SEWER FROM NEW DIVERSION STRUCTURES TO YMCA DRIVEWAY.

STAGE 4 DETOUR / CLOSURES

- WASHINGTON ST WILL BE CLOSED TO WESTBOUND THRU TRAFFIC FROM 3RD ST TO 1ST ST. ONE LANE WILL REMAIN OPEN EASTBOUND.
- 1ST ST WILL BE CLOSED TO THRU TRAFFIC.

TRAFFIC NOTES

- "D" DISTANCE BETWEEN ADVANCED SIGNING SHALL BE PER MDOT MAINTAINING TRAFFIC TYPICAL 101-GEN-SPACING-CHARTS.
- SIGN LOCATIONS APPROXIMATELY SHOWN, EXACT LOCATION OF PROPOSED DETOUR ROUTE SIGNING SHALL BE APPROVED BY ENGINEER.
- PLACE ALL RELATED ROAD CLOSURE SIGNING AND CONSTRUCTION SIGNING PRIOR TO STARTING WORK.
- ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE SHALL CONFORM TO MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION PART 6, THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND AS SPECIFIED HEREIN.

STAGE 4 PEDESTRIAN OVERVIEW

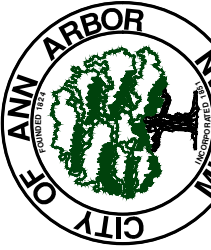
- CONTRACTOR IS REQUIRED TO PROVIDE PEDESTRIAN FACILITIES DURING CONSTRUCTION
- MAINTAIN PEDESTRIAN WALK CONNECTIVITY VIA DETOURS BY NEVER CLOSING MORE THAN ONE LEG OF THE INTERSECTION AT ANY TIME.

LEGEND	
	WORK ZONE
	DETOUR ROUTE
	TEMPORARY SIGN
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	LIGHTED ARROW PANEL (CAUTION MODE)
	PORTABLE CHANGEABLE MESSAGE SIGN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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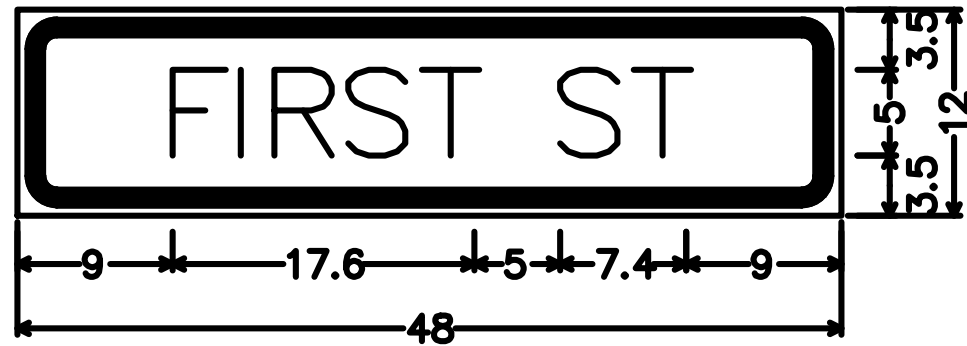


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HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
MAINTENANCE OF TRAFFIC
DETOUR PHASE 4

SHEET No.	DRAWING No.

SIGN DETAILS

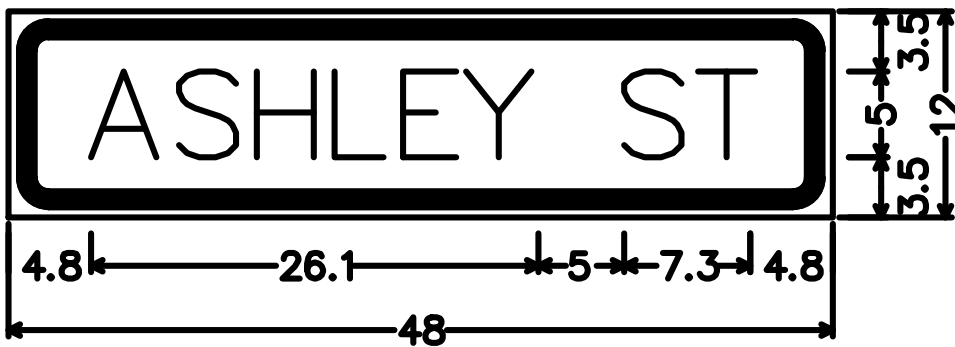
SS-A



SS-A;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts

F	I	R	S	T	S	T
9.0	13.0	15.0	19.3	23.6	31.6	35.9

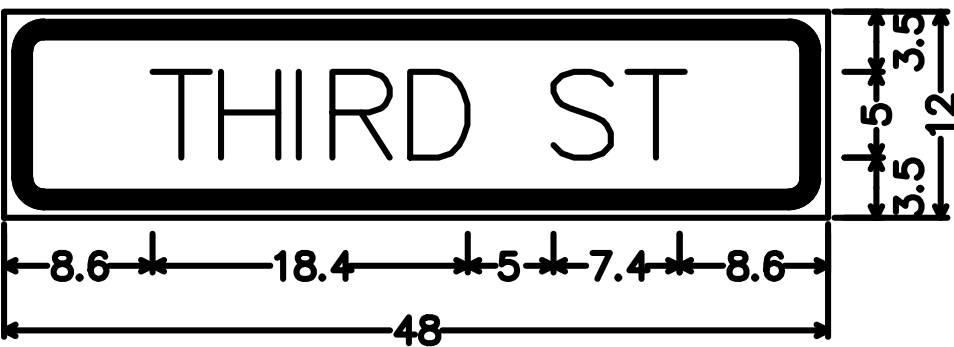
SS-C



SS-C;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"ASHLEY ST", D;
Table of letter and object lefts

A	S	H	L	E	Y	S	T
4.8	9.9	14.4	19.0	23.0	26.6	35.9	40.2

SS-E



SS-E;
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"THIRD ST", D;
Table of letter and object lefts

T	H	I	R	D	S	T
8.6	12.6	17.2	19.1	23.6	32.0	36.3

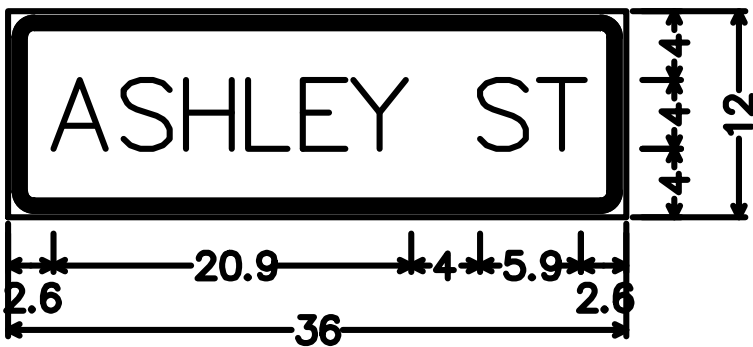
SS-B



SS-B;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"FIRST ST", D;
Table of letter and object lefts

F	I	R	S	T	S	T
6.0	9.2	10.8	14.2	17.7	24.1	27.5

SS-D



SS-D;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"ASHLEY ST", D;
Table of letter and object lefts

A	S	H	L	E	Y
2.6	6.7	10.4	14.0	17.2	20.1
S		T			
27.5		30.9			

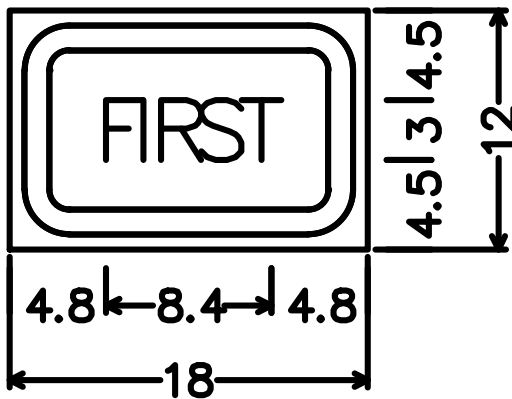
SS-F



SS-F;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"THIRD ST", D;
Table of letter and object lefts

T	H	I	R	D	S	T
5.7	8.9	12.5	14.1	17.7	24.4	27.8

SS-G



SS-G;
3.0" Radius, 1.3" Border, 0.8" Indent, Black on Orange;
"FIRST", C 75% spacing;
Table of letter and object lefts

F	I	R	S	T
4.8	6.7	7.6	9.6	11.7



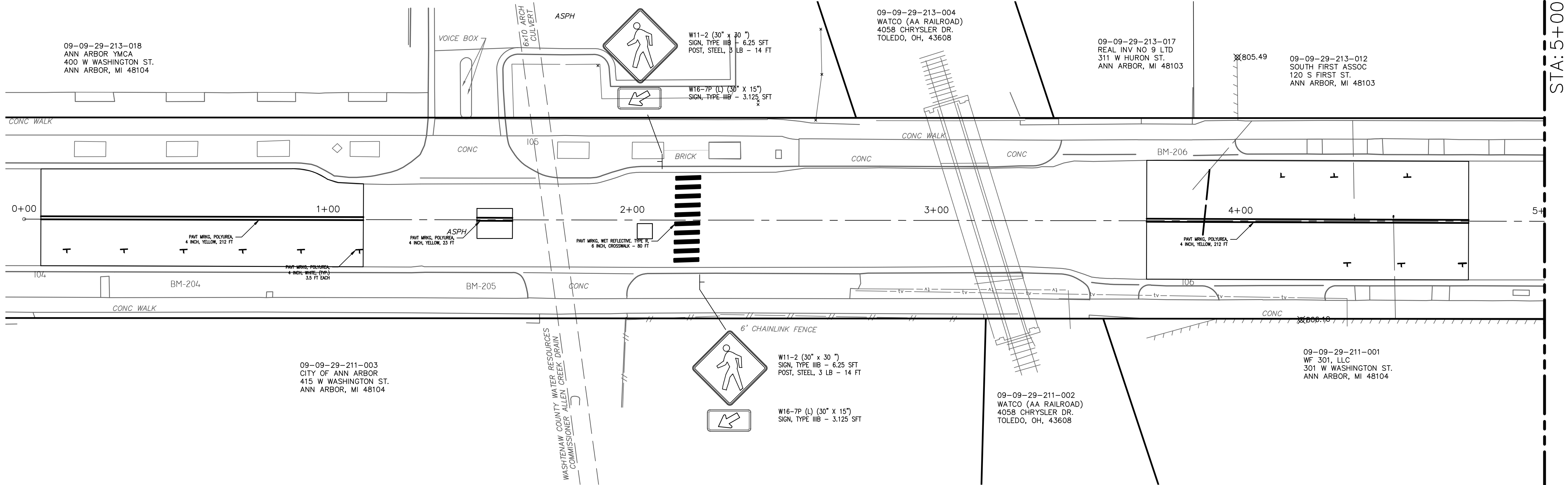
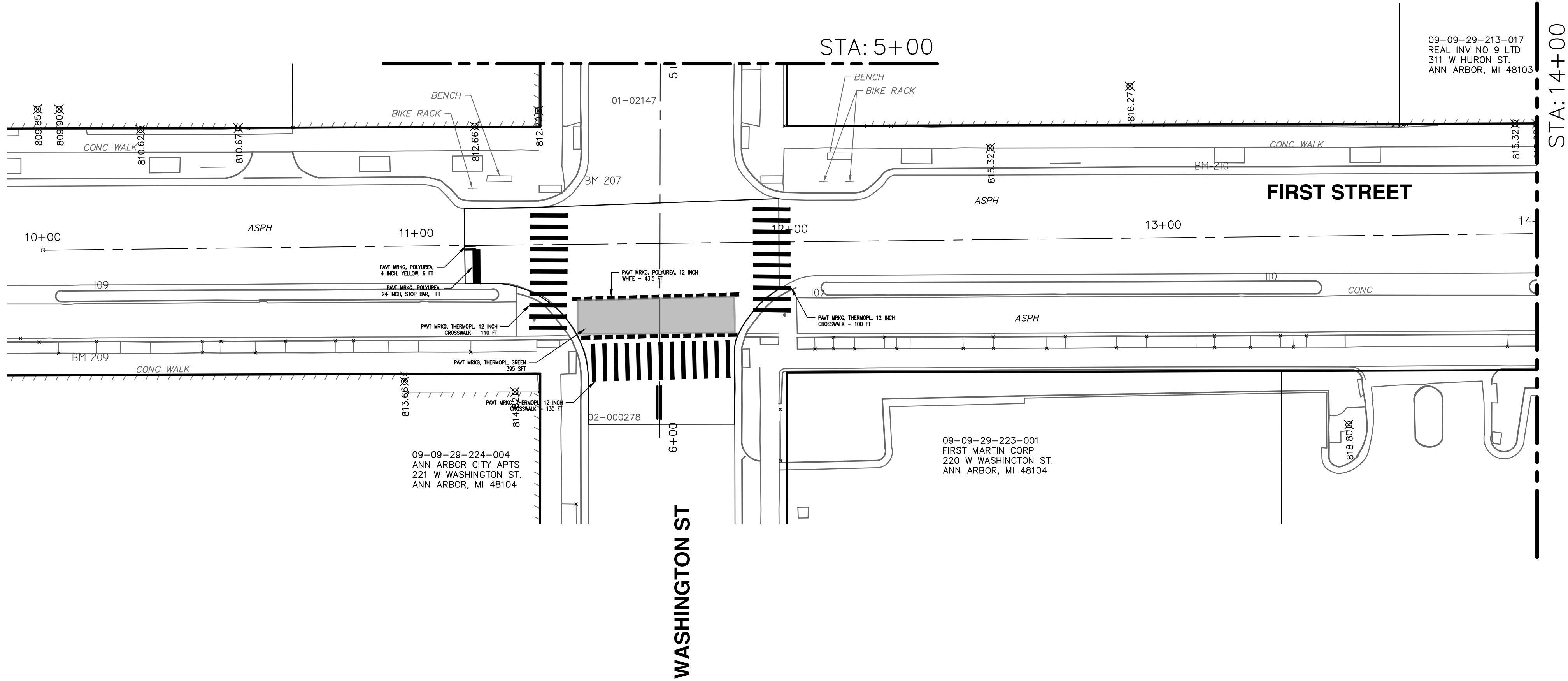
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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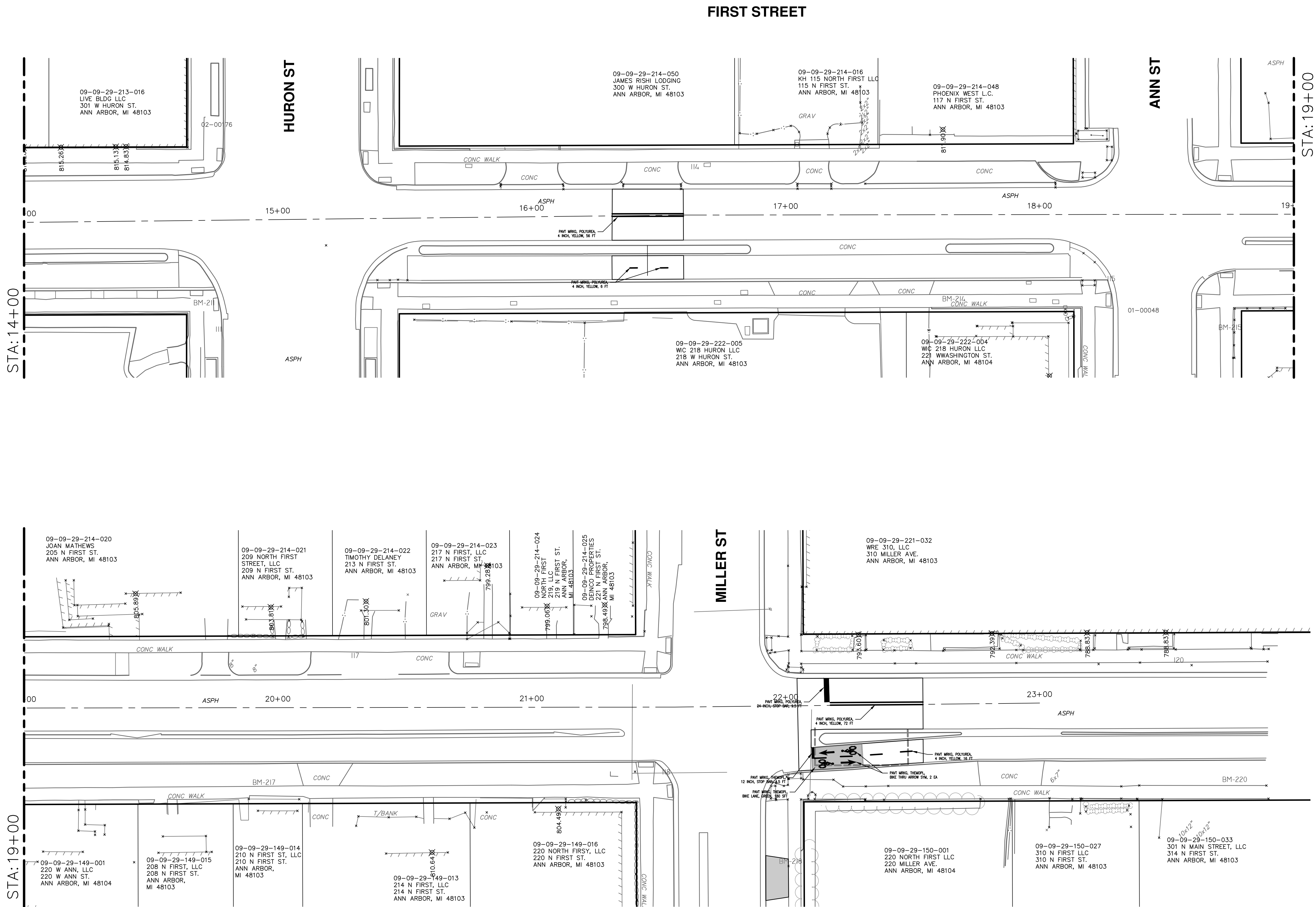


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING	HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS	
	MAINTENANCE OF TRAFFIC	DETOUR SIGNS
SCALE	DRAWING No.	

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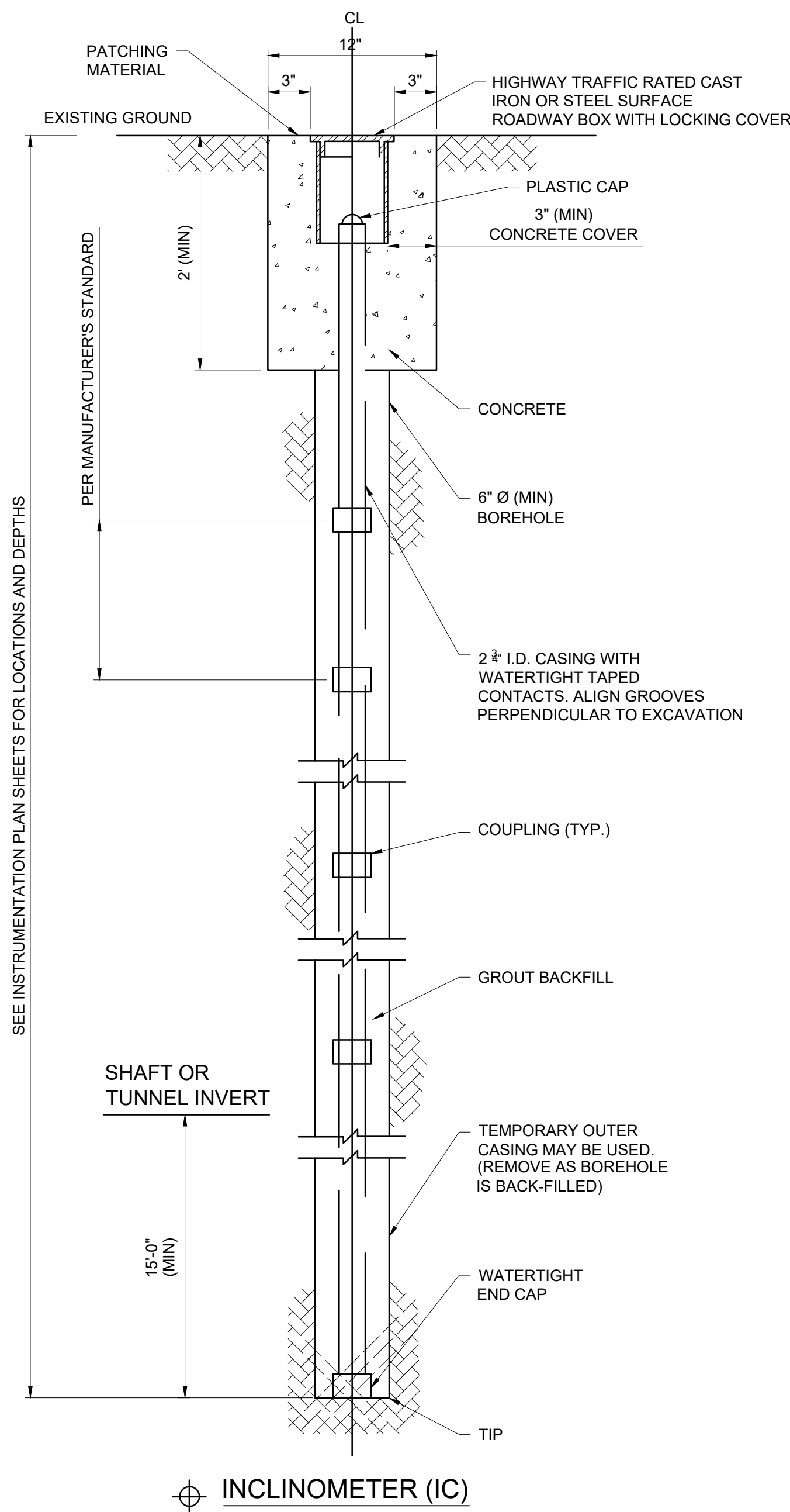
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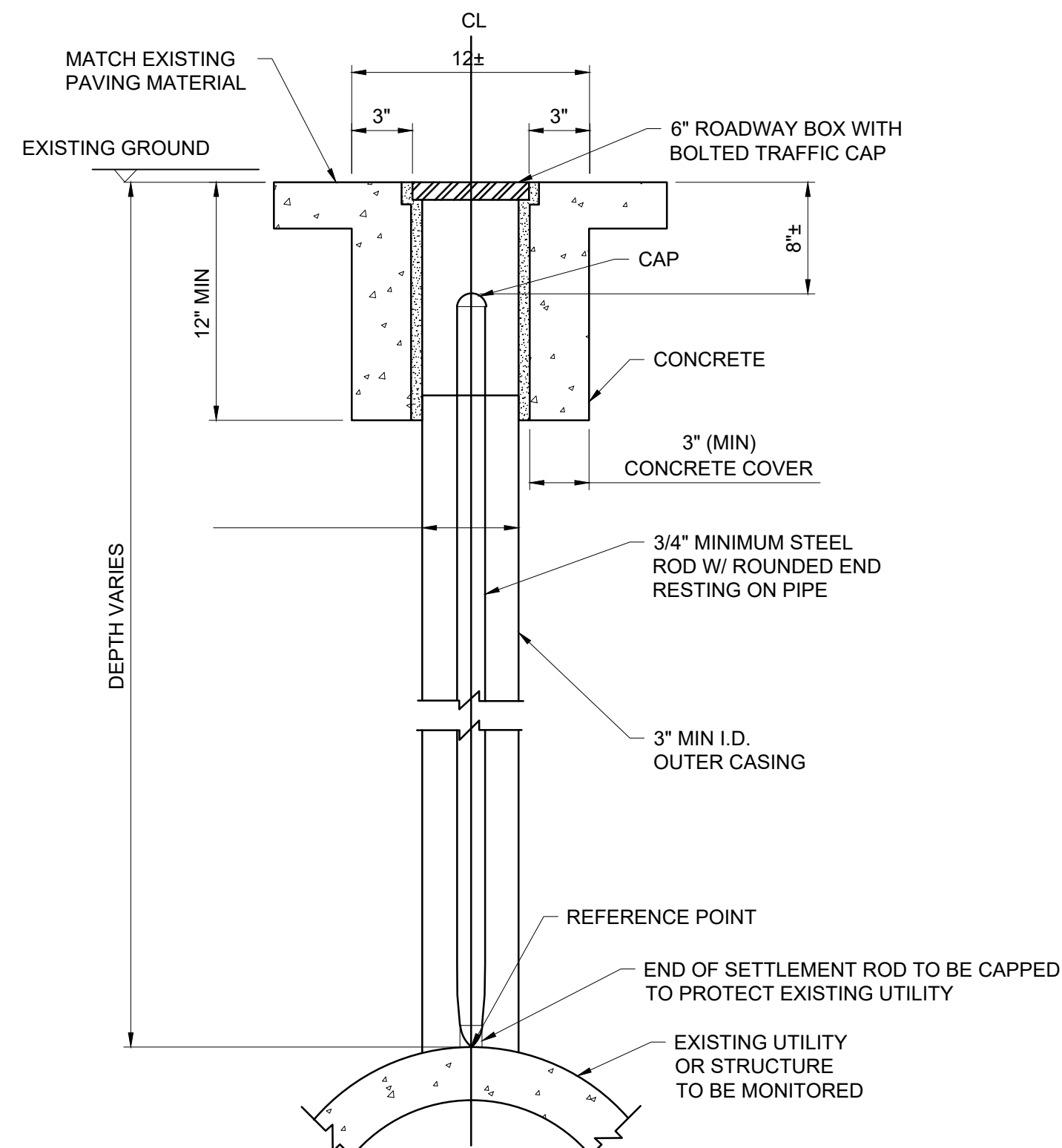
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	BID SET	09/18/2025	SM	CE
02	90% DESIGN SUBMITTAL	08/14/2025	SM	CE
01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE



P:\0000_0100\0028240010_Chapin_Sewer_Drawings\Civil\Misc\240010LEG_NOT.dwg - _o2 standard bw.stb - Plot Date: 9/17/2025 7:02:04 PM



DETAIL 1
N.T.S.

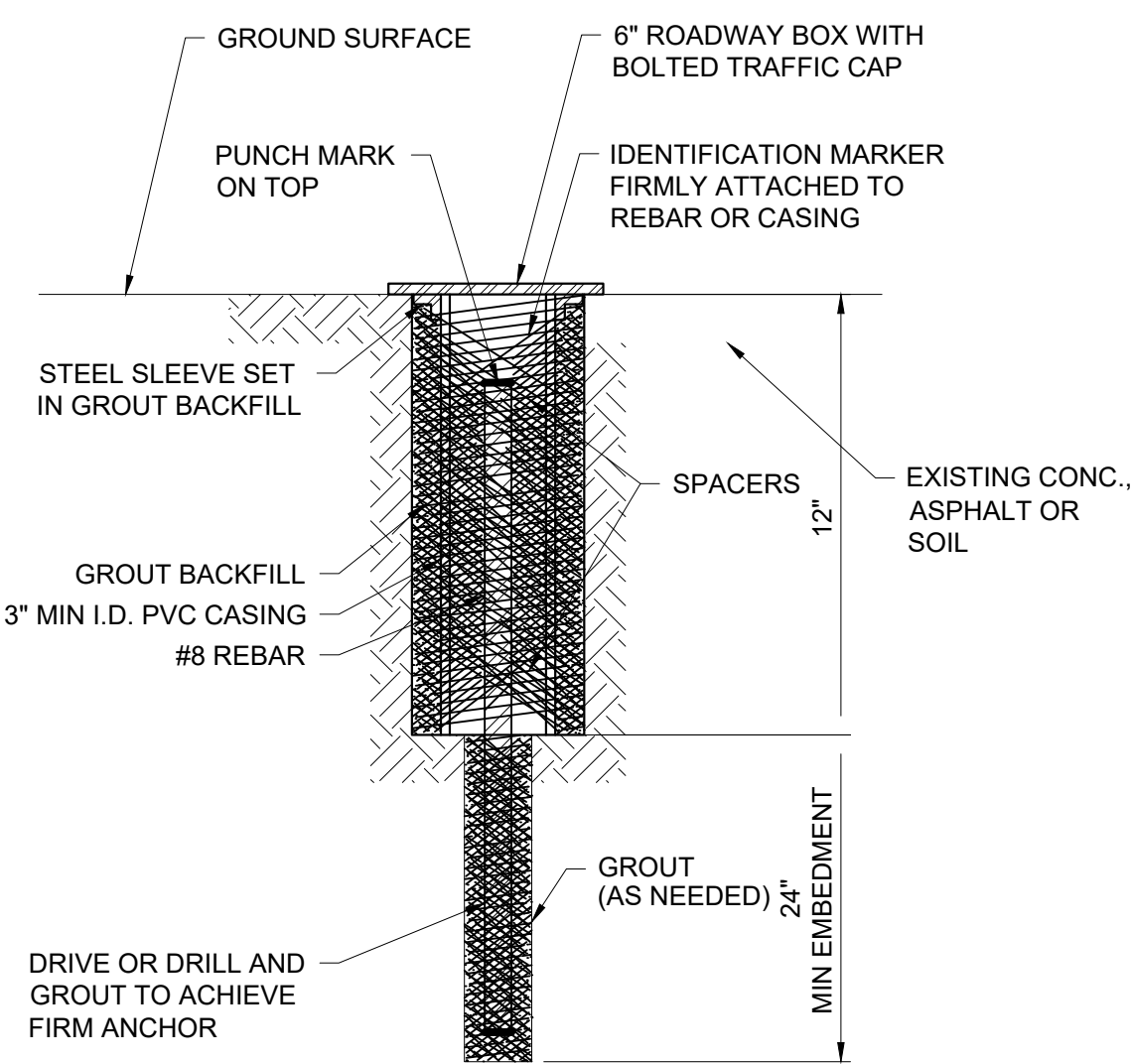


UTILITY MONITORING POINT (UMP)

UMP NOTES:

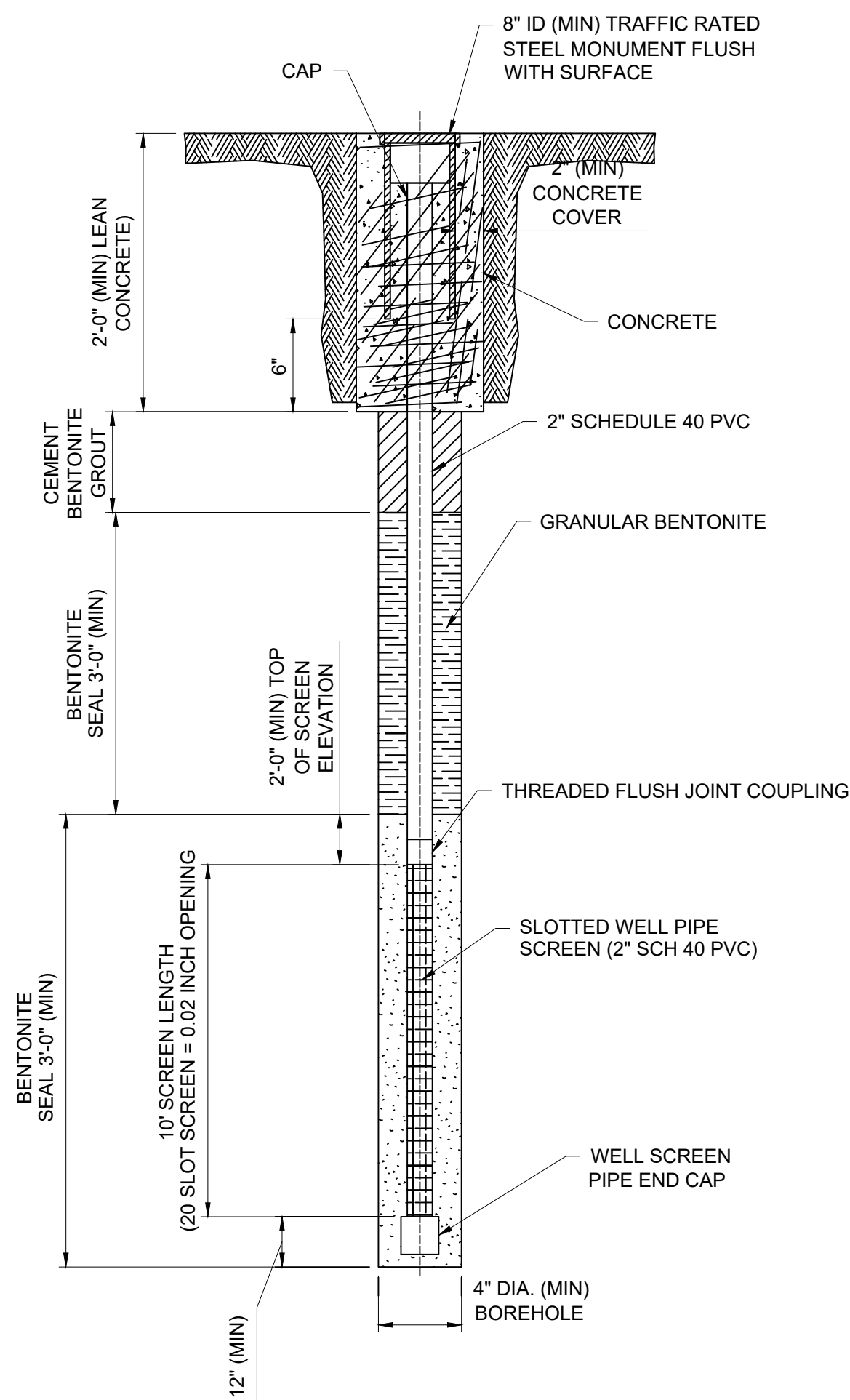
1. AT A MINIMUM, PLACE AT LEAST ONE UMP ON ALL UTILITIES THAT THE TUNNEL ALIGNMENT CROSSES. UMP SHALL BE PLACED AS CLOSE TO THE TUNNEL CENTERLINE AS POSSIBLE.
2. EXPOSE UTILITY TO ALLOW DIRECT ACCESS FOR SURVEY ROD USING VACUUM EXTRACTION OF SOILS OR OTHER NON-DESTRUCTIVE METHOD.
3. PROTECT ACCESS HOLE FROM SOIL WITH CASING.
4. CONTRACTOR TO OBTAIN WRITTEN AUTHORIZATION PRIOR TO UTILITY MONITORING POINT INSTALLATION.

DETAIL 2
N.T.S.



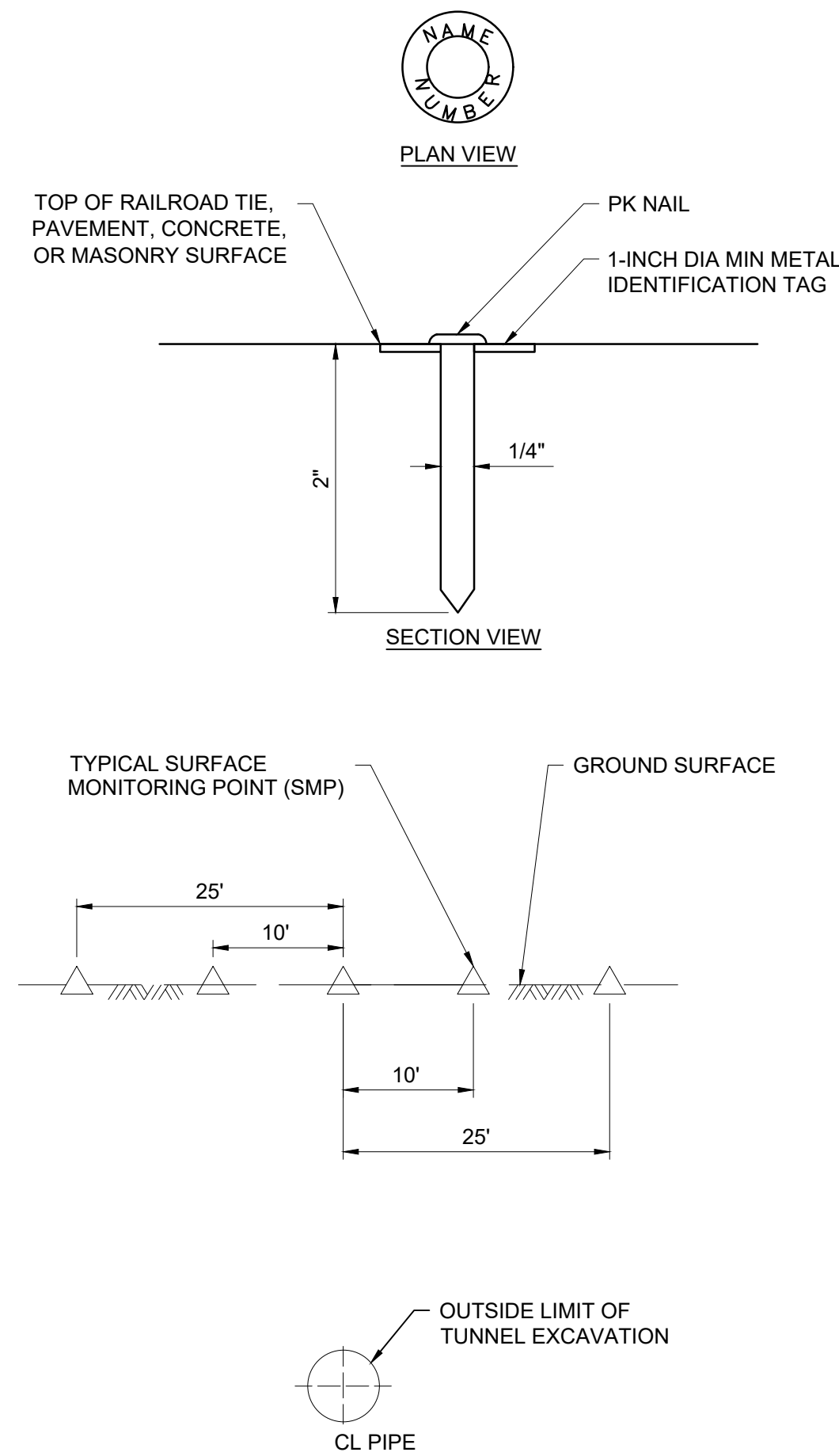
SETTLEMENT MONITORING POINT (SMP)

DETAIL 3
N.T.S.



OPEN STANDPIPE PIEZOMETER

DETAIL 4
N.T.S.

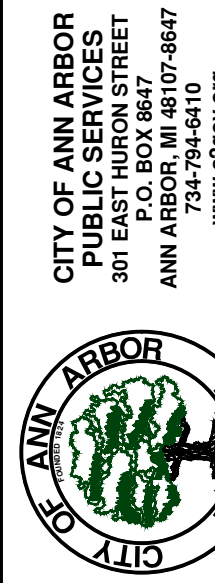


MONITORING POINT ARRAY NOTES:

1. ADJUST LOCATIONS AS NECESSARY FOR BUILDING AND OBSTRUCTIONS.
2. REFLECTORLESS MONITORING POINTS MAY BE USED INSTEAD OF PK NAILS.
3. REFLECTORLESS MONITORING POINTS ARE POSITIONED AT PREDETERMINED LOCATIONS WHERE ACCESS IS LIMITED OR NOT ACCESSIBLE WITHIN THE RIGHT OF WAY. AN AUTOMATED TOTAL STATION (ATS) MONITORS ON A CONTINUOUS FREQUENCY DURING CONSTRUCTION USED TO COLLECT AND RECORD MEASUREMENTS.

MONITORING POINT ARRAY (MPA)

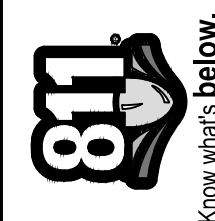
DETAIL 5
N.T.S.



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
HIGH-LEVEL TRUNKLINE CAPACITY IMPROVEMENTS
MISCELLANEOUS DETAILS
2024-001-37

SHEET No.

37 OF 42



Know what's below. Call before you dig.

REV.	DATE	DRAWN	CHECKED
03	09/18/2025	SM	CE
02	08/14/2025	SM	CE
01	01/09/2025	SM	CE
00	11/12/2024	AT	CE

BID SET

90% DESIGN SUBMITTAL

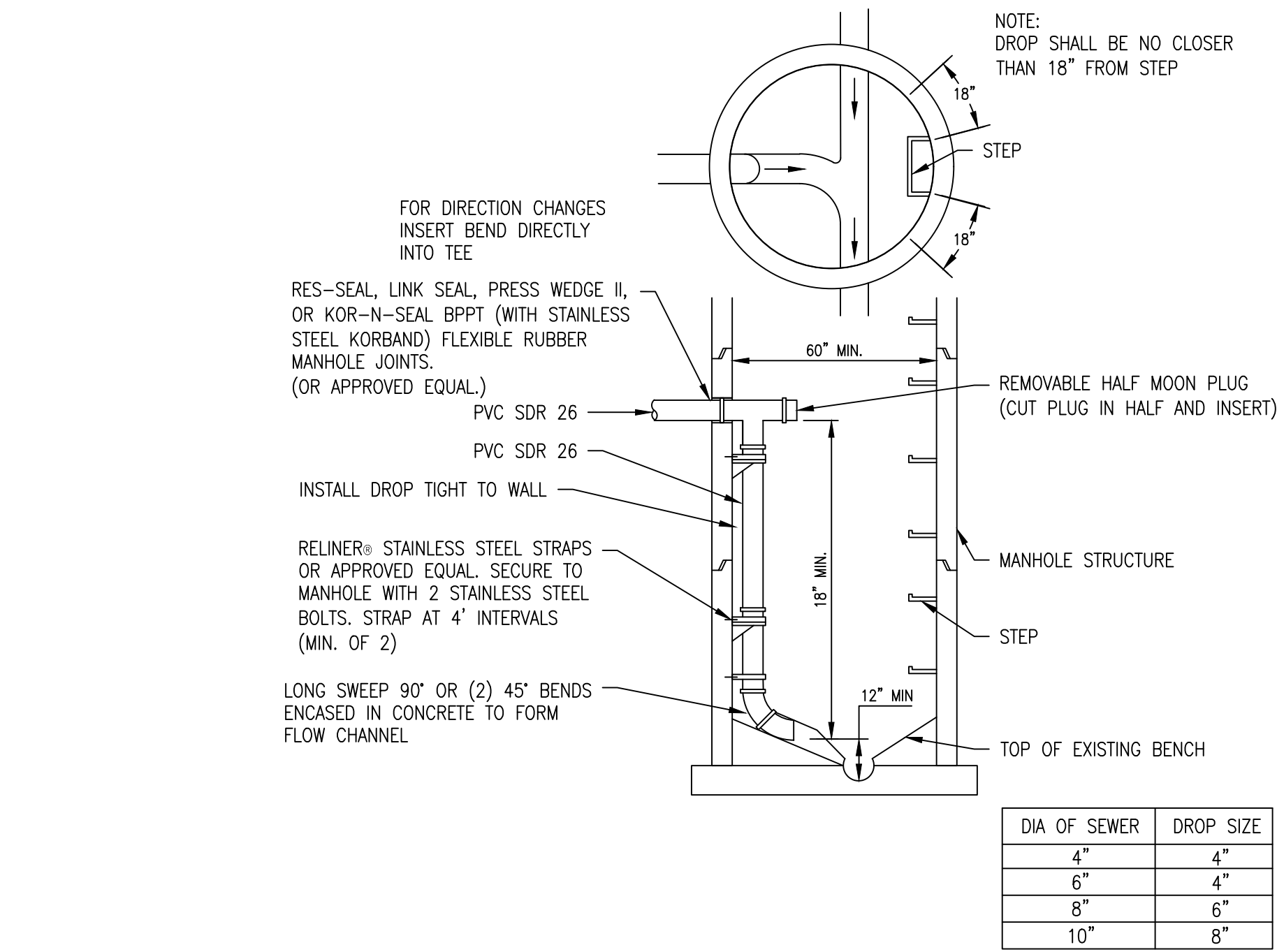
30% DESIGN SUBMITTAL

WATCO RAILROAD PERMIT SUBMITTAL

DESCRIPTION

REV.

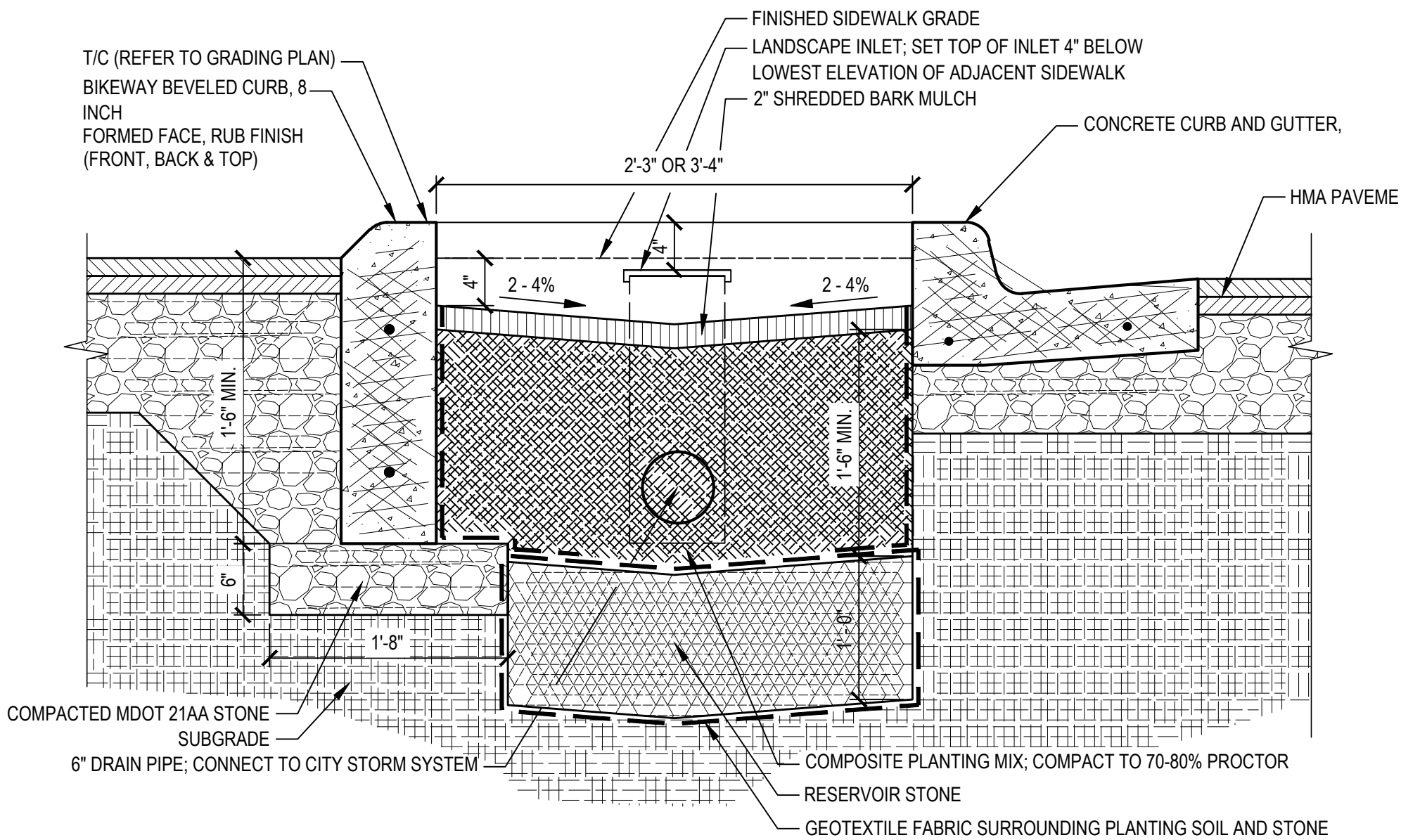
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INTERIOR DROP CONNECTION

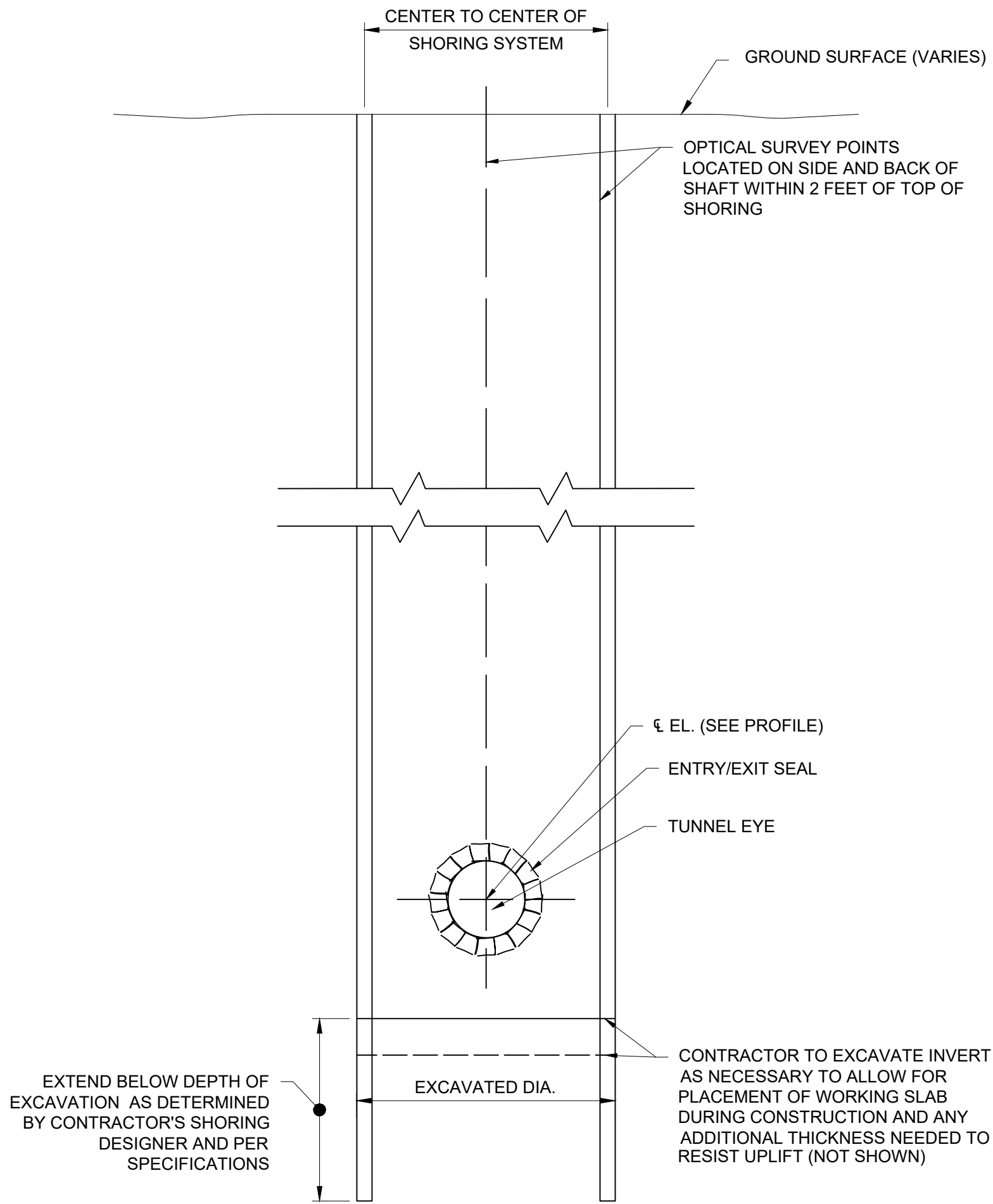
NOT TO SCALE
NOTE:
CITY ENGINEER APPROVAL REQUIRED FOR
THE USE OF A DROP CONNECTION.

DIA OF SEWER	DROP SIZE
4"	4"
6"	4"
8"	6"
10"	8"



TYPICAL BIOSWALE BUFFER DETAIL

SCALE: NTS



SHAFT - SECTION SCHEMATIC

SCALE: NTS

NOTES:

1. THE ABOVE DETAIL IS SCHEMATIC. CONTRACTOR SHALL SELECT, DESIGN, INSTALL AND MAINTAIN AN EXCAVATION SUPPORT SYSTEM UNTIL THE PIPELINE IS PLACED AND THE SHAFT IS BACKFILLED AS SPECIFIED AND SHOWN ON THE PLANS. THE EXCAVATION SUPPORT SYSTEM SHALL BE COMPATIBLE WITH SURFACE AND SUBSURFACE CONDITIONS.
2. SUMP PUMP SHALL BE INCLUDED TO HANDLE ALL WATER INFILTRATION DURING SHAFT OPERATIONS.
3. USE MECHANICAL TUNNEL EYE SEAL. CONTRACTOR TO DESIGN TUNNEL EYE SEAL BASED ON SELECTED EQUIPMENT SIZE, GROUNDWATER LEVEL, LUBRICATION AND GROUT PRESSURES. CONTRACTOR SHALL PROVIDE A REPLACEMENT SEAL SYSTEM ONSITE AT ALL TIMES DURING TUNNELING OPERATIONS.
4. CONTRACTOR SHALL GROUT OR BACKFILL BEHIND EXCAVATION SUPPORT SYSTEM AS NECESSARY TO MINIMIZE GROUND MOVEMENT AND MAINTAIN CONTACT BETWEEN GROUND AND EXCAVATION SUPPORT SYSTEM.



CE	SM
CE	SM
CE	SM
CE	AT
CE	DATE

09/18/2025	08/14/2025	01/09/2025	11/12/2024
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BID SET	90% DESIGN SUBMITTAL	30% DESIGN SUBMITTAL	WATCO RAILROAD PERMIT SUBMITTAL
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03	02	01	00
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REV.	DESCRIPTION
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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03	02	01	00
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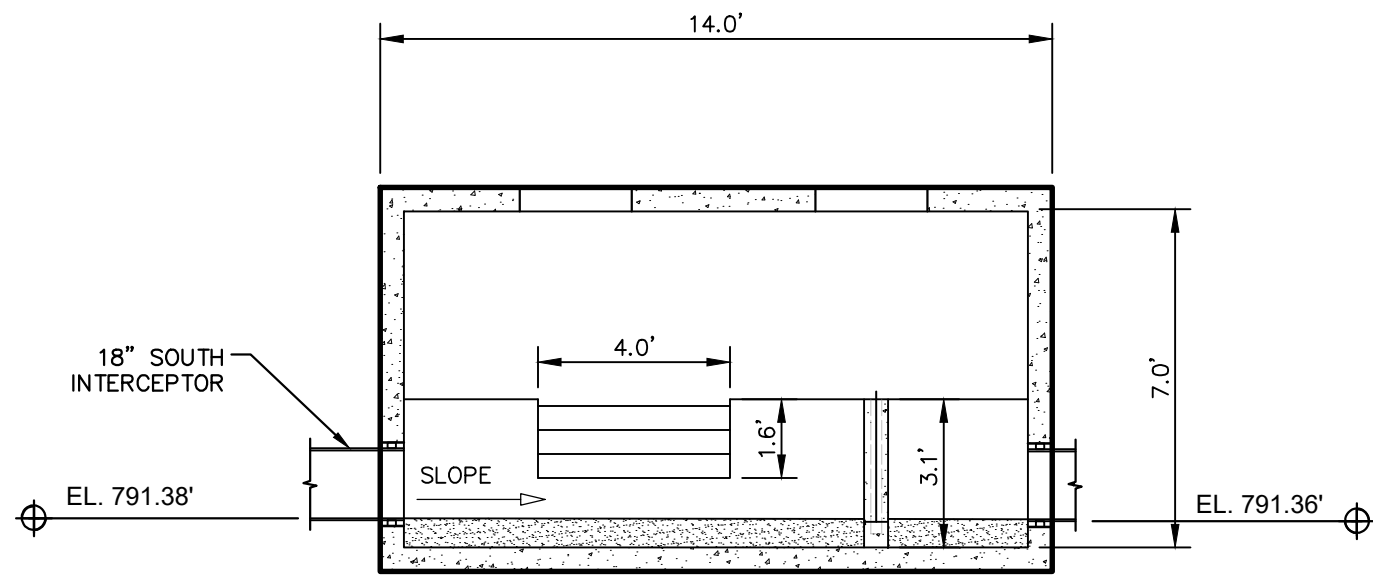
03	02	01	00
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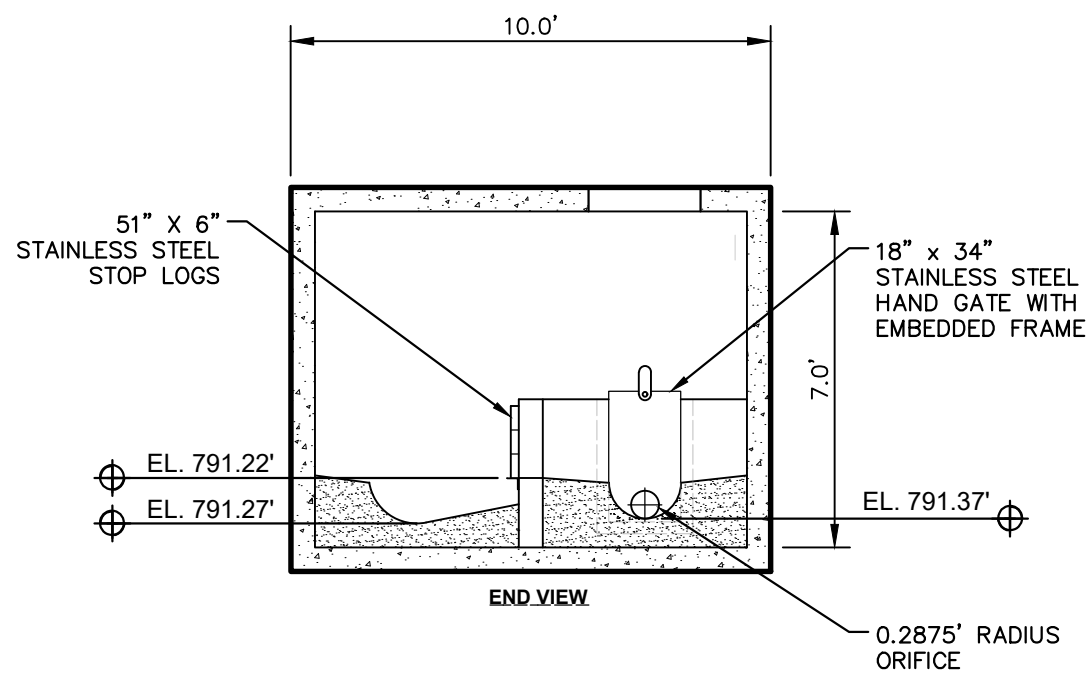
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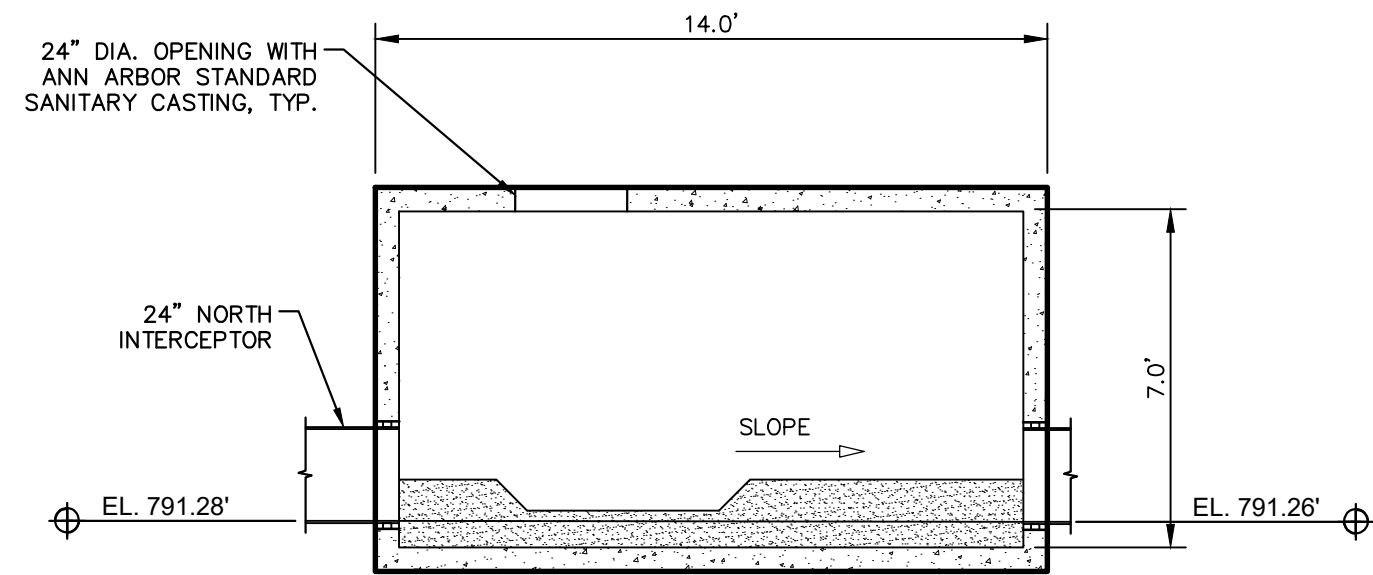
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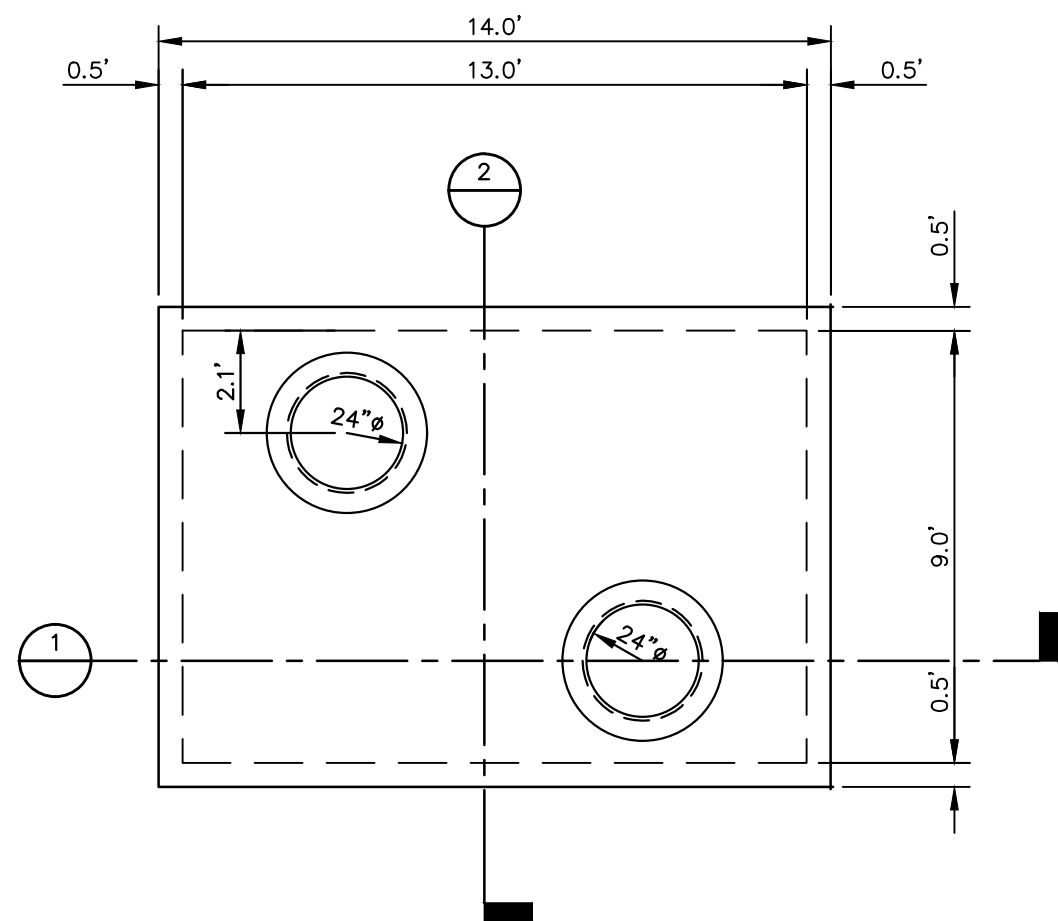
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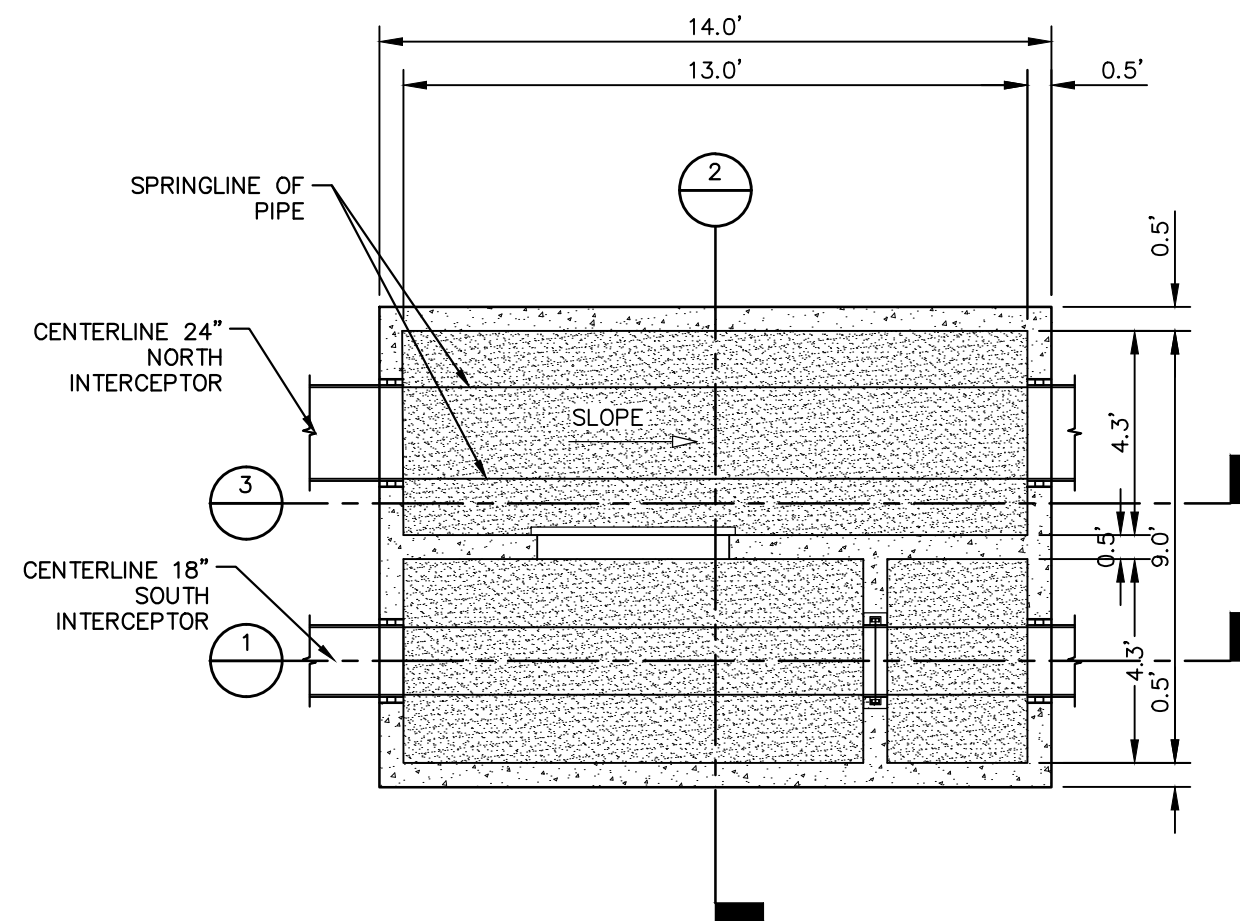
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SCALE: 1/4" = 1'-0"



3 SECTION
SCALE: 1/4" = 1'-0"



TOP SLAB PLAN
SCALE: 1/4" = 1'-0"



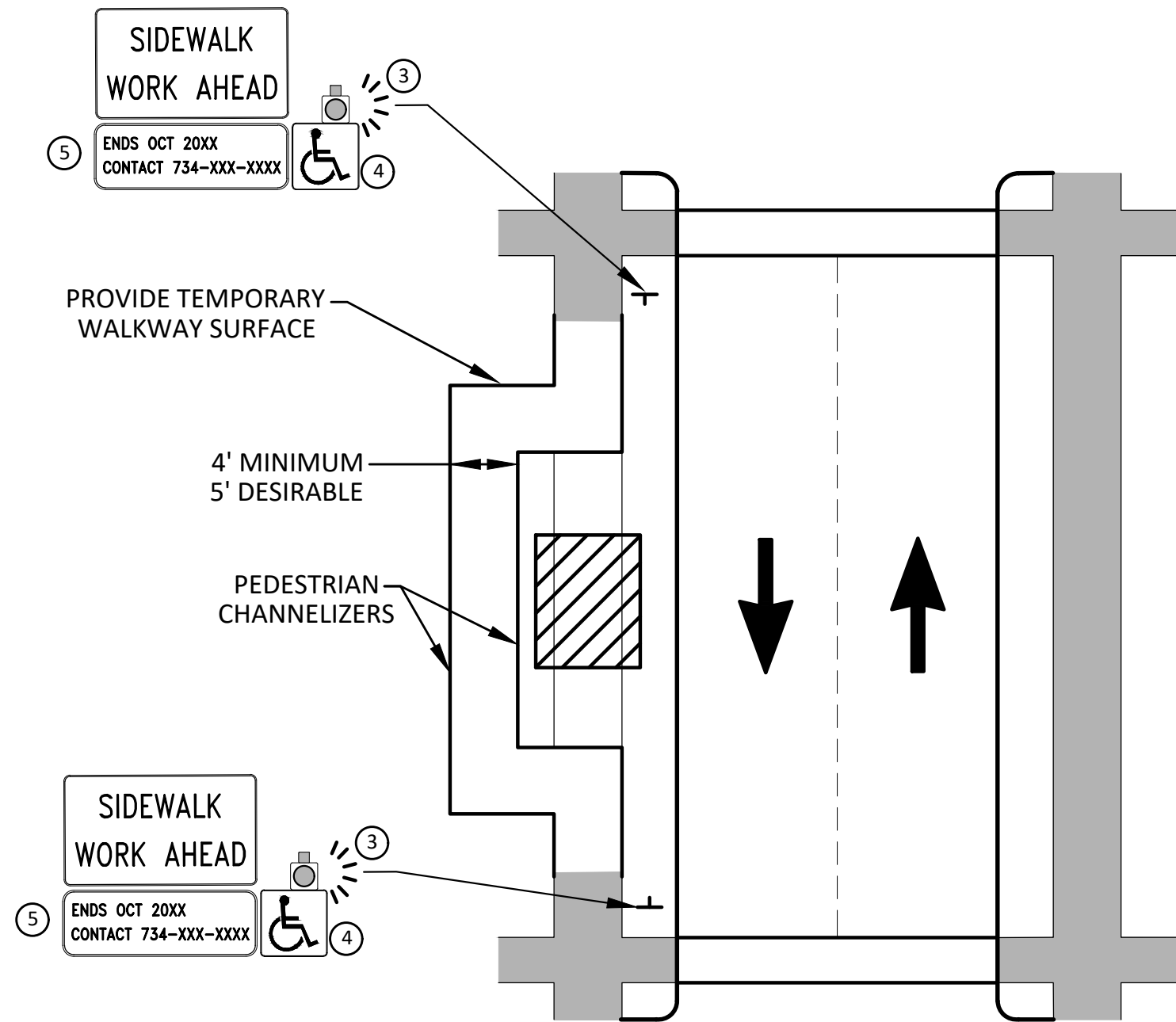
BASE SLAB PLAN
SCALE: 1/4" = 1'-0"

- NOTES:
- PERFORM EXPLORATORY EXCAVATION OF EXISTING SEWER PRIOR TO ORDERING PRECAST CONCRETE DIVERSION STRUCTURE.
 - DIVERSION MANHOLE SHALL SERVE AS PRIMARY BYPASS SUCTION STRUCTURE FOLLOWING INSTALLATION. MAINTAIN SEPARATION BETWEEN THE 24-INCH AND 18-INCH SEWERS DURING BYPASS.



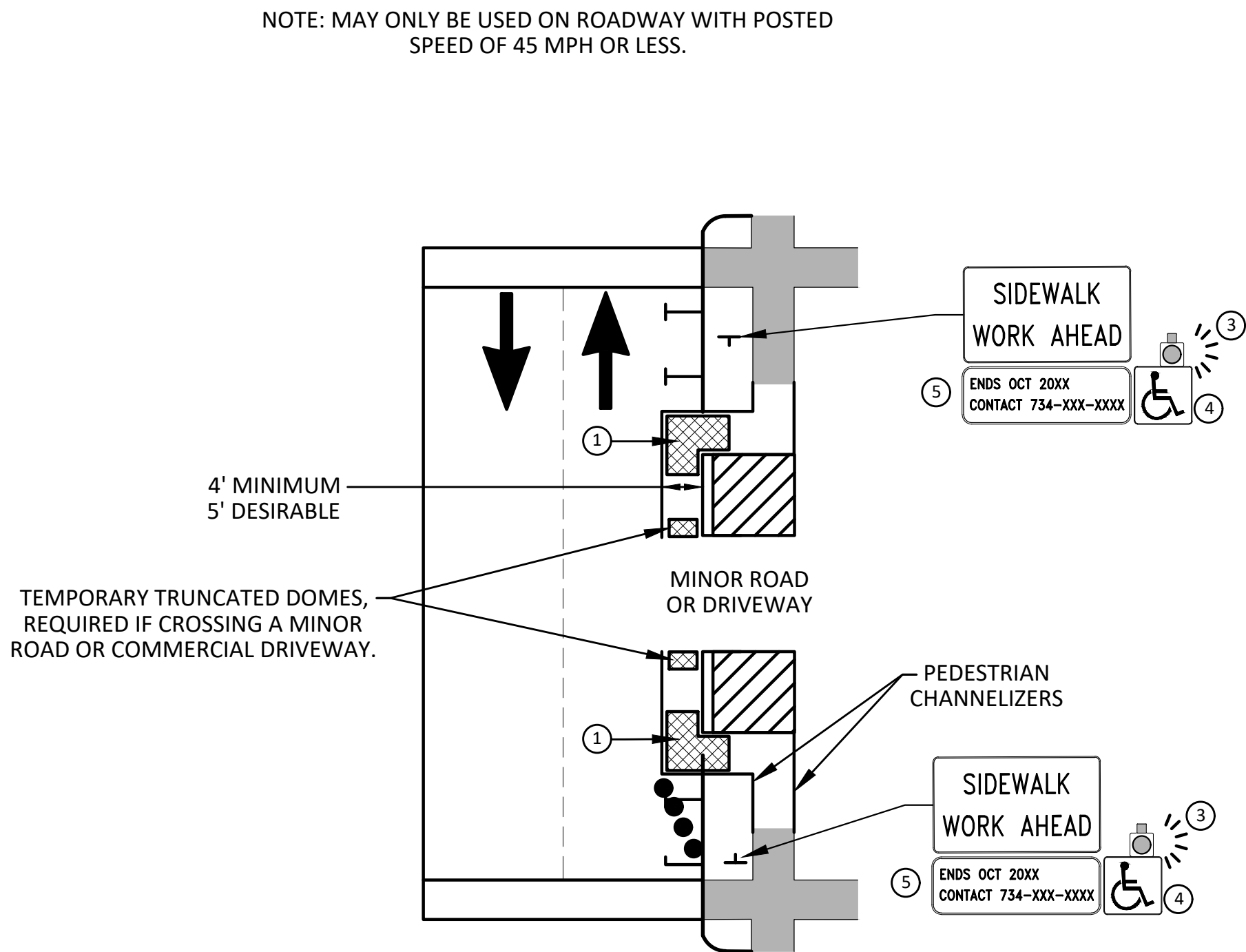
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01	30% DESIGN SUBMITTAL	01/09/2025	SM	CE
00	WATCO RAILROAD PERMIT SUBMITTAL	11/12/2024	AT	CE

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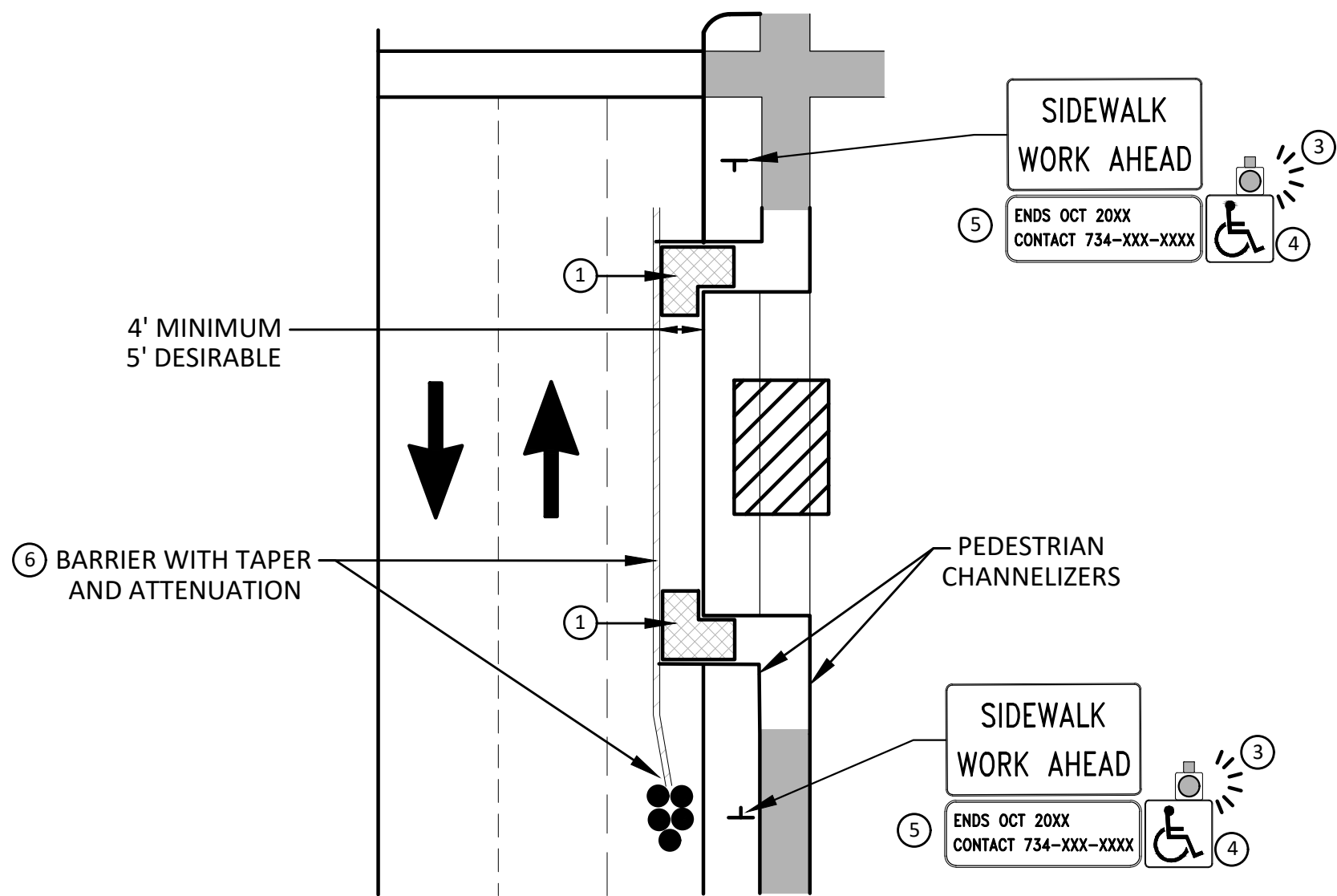
BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY

BYPASS TYPE A



SIDEWALK BYPASS USING PARKING OR
SHOULDER ON LOW SPEED ROADWAY

BYPASS TYPE B



SIDEWALK BYPASS USING
SHOULDER OR PARKING LANE ON
HIGH SPEED ROADWAY

BYPASS TYPE C

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, THE CONTRACTOR SHALL PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED BY THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE ENGINEER A MINIMUM OF 72 HOURS (NOT INCLUDING WEEKENDS & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK THAT REQUIRES A SIDEWALK CLOSURE.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF A TRAFFIC CONTROL DEVICE IS REDUCED ENOUGH TO CREATE A HAZARD, THE TRAFFIC CONTROL DEVICES SHALL BE DELINEATED WITH FLAGS OR OTHER ENGINEER-APPROVED DEVICES AT NO ADDITIONAL COST TO THE PROJECT.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS AS SHOWN ON THE PROJECT PLANS.

SPECIFIC NOTES

- ① TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.
- ② 5 DEVICE TAPER 25 FEET LONG, RECOMMENDED WHEN THE CLOSED AREA WAS USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ③ AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHOULD BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.
- ④ THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHALL BE POSTED AND AN ALTERNATE ROUTE SHALL BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.
- ⑤ TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHALL INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.
- ⑥ SEE MMUTCD FOR GUIDANCE ON PLACEMENT AND USAGE OF BARRIER.

LEGEND

- SIGN
- EXISTING PEDESTRIAN SURFACE
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE



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	1-22-2025
	12-19-2024
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	CONSTRUCTION SET
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	DESCRIPTION

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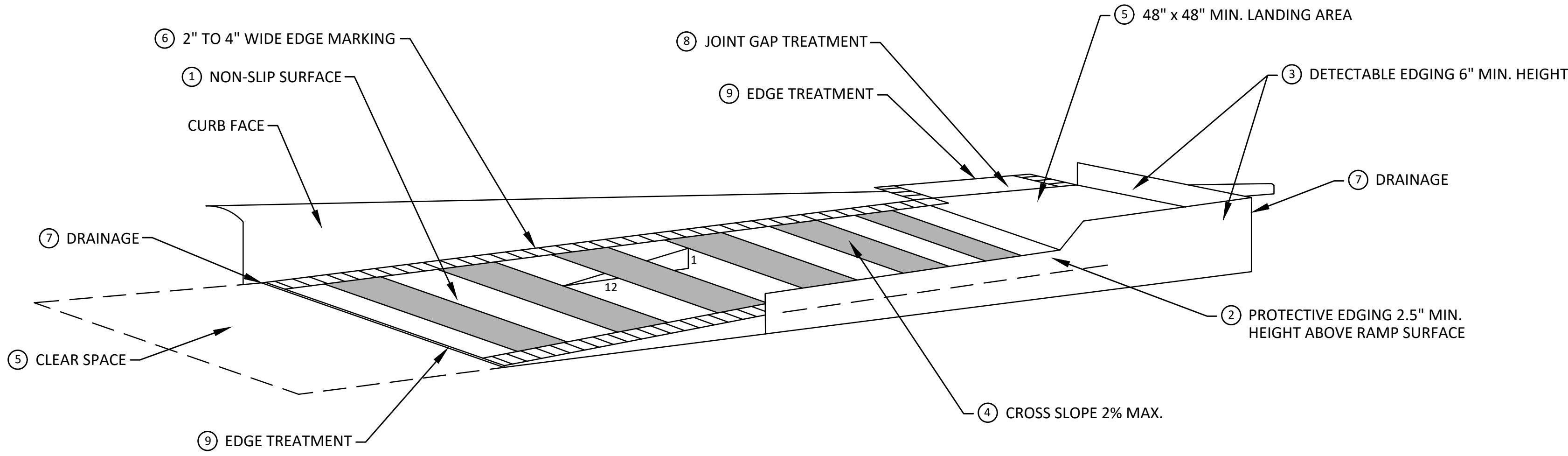
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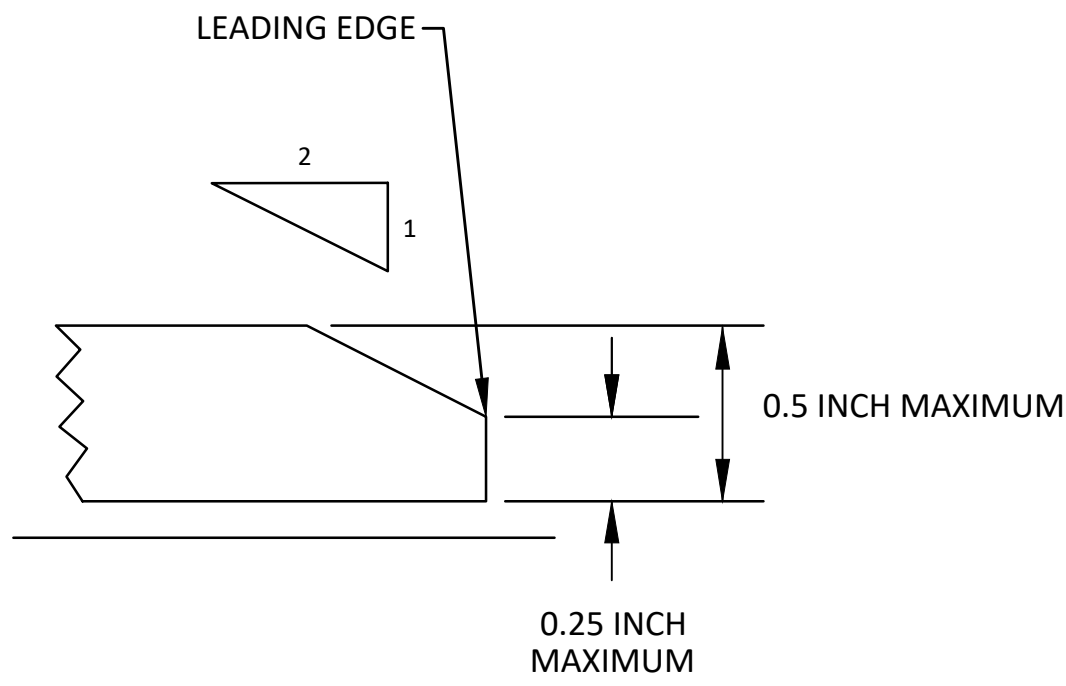
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TEMPORARY CURB RAMP
PARALLEL TO CURB



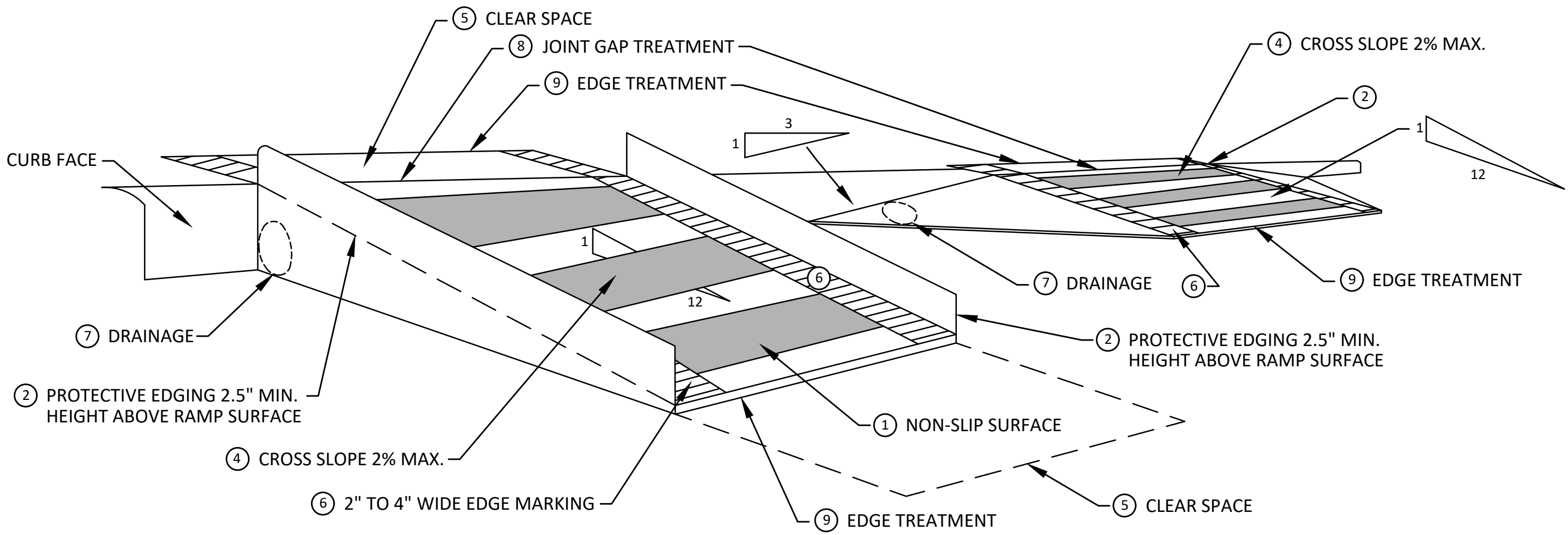
9 EDGE TREATMENT

SPECIFIC NOTES

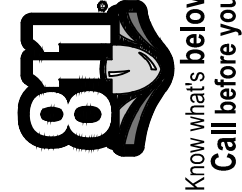
- 1 CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. PROTECTIVE EDGING WITH A 2.5" MIN. HEIGHT ABOVE THE RAMP SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- 2 DETECTABLE EDGING ANYTIME A HANDRAIL IS REQUIRED, AND ANYTIME THE PATH CHANGES DIRECTION. THIS INCLUDES A TURN ONTO THE RAMP FROM THE PATH. DETECTABLE EDGING MUST BEGIN A MAXIMUM OF 2.5" ABOVE THE RAMP SURFACE, AND EXTEND AT LEAST 6" ABOVE THE RAMP SURFACE. CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- 3 CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
- 4 CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- 5 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
- 6 WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
- 7 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- 8 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHOULD BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2" HEIGHT.

SHOWN WITH PROTECTIVE EDGE

SHOWN WITH SIDE APRON



TEMPORARY CURB RAMP
PERPENDICULAR TO CURB



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	3-21-2025			
	1-22-2025			
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	CONSTRUCTION SET			
	ADDENDUM #2			
	BID SET			
	REV.			

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106
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HIGH-LEVEL TRUNKLINE CAPACITY
IMPROVEMENTS
TAPR DETAILS - TPAP RAMPS

SCALE : N.T.S.	
DRAWING No.	2024-001-41

SHEET No.

