

ADDENDUM No. 1

RFP No. 25-10

WESTGATE WATER MAIN PROJECT

Due: March 3, 2025 at 2:00 P.M. (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes fifty-five (55) pages.**

The Proposer is to acknowledge receipt of this Addendum No. 1 by signing and submitting Attachment B, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- Attachment D - Prevailing Wage Declaration of Compliance
- Attachment E - Living Wage Declaration of Compliance
- Attachment G - Vendor Conflict of Interest Disclosure Form
- Attachment H - Non-Discrimination Declaration of Compliance

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

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

Section/Page(s)	Change
Addendum 1 pages 11-13	Pre-proposal meeting Minutes and attendance
Addendum 1 BF1 toBF3	As provided in RFP No. 25-10 Document: Form, Section E – Schedule of Prices as Page 15-17 As updated herein: Form, Section E – Schedule of Prices as Pages BF-1 to BF-3. Modifications to pay items and quantities shown in bold

Comment: The intent with this change is to simply replace the inaccurate Page 15-17 provided in the RFP Document with the accurate Page 14-16 provided herein.

All mentions	As provided in RFP No. 24-10 Document: Proposal Due Date: February 25, 2025 at 2:00 p.m.
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As updated herein:

Proposal Due Date: March 3, 2025 at 2:00 p.m.

Comment: The Due Date and Time for responses to this RFP has been extended to March 3, 2025 at 2:00 p.m. (local time). Note that all other dates are unchanged.

Replace

DS

Replace DS_2 In., Copper Service Lead, Directional Drill with
DS_2 In., HDPE Water Service, Directional Drill

Replace Plan Set
in its entirety

Replace Plan Set
Minor labeling revisions as mentioned in the answers below
Widened trench sections as mentioned in the answers below
New alignment for Jack and Bore across Jackson Road
New Tie In alignment for Maple Tie In

II. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the RFP. Respondents are directed to take note in its review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: Can you please provide the Engineers Estimate for bonding purposes?

Answer 1: Engineers' Estimate is \$2M.

Question 2: Do you know which material testing company will be utilized for this project?

Answer 2: Intertek PSI will be the material testing company.

Question 3: Can MDOT CLII limestone sand be used on the project?

Answer 3: Yes, MDOT Class II Limestone sand is acceptable.

Question 4: Does 6A stone used for the project (utility construction) need to meet the specifications of MDOT Table 902-1 AND 902-2?

Answer 4: The 6A coarse aggregate for utility trench bedding needs to meet MDOT Table 902-1. Table 902-2 would be required if the coarse aggregate is used for concrete purposes.

Question 5: Please confirm "Water Structure Covers" and "Water Structure Cover, Adjust" will be for both proposed and existing structures. If the two items are not to be paid for the proposed structures, please clarify what work is incidental and to what item it is incidental.

Answer 5: Correct, "Water Structure Covers" and "Water Structure Cover, Adjust" will be for both proposed and existing structures.

Question 6: Water main restraints lengths are not shown in the plan profiles for the "West Side North- South Water Main" profiles (Pg. 24 - Pg.26.) Please confirm restraint joints are not required in this section or please provide the required restraint joint lengths if required.

Answer 6: There are no vertical bends on the water main shown on sheets 24-26, only vertical deflections. Restrained joints are only required where vertical bends are present.

Question 7: Please define the payment limits of "Machine Grading". Plans do not indicate how this item will be measured for payment.

Answer 7: Machine Grading will be measured by the limits of the pavement removal for trenching.

Question 8: How is the excavation for the sidewalk to be paid?

Answer 8: Excavation for sidewalks will be incidental to pay item "Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem".

Question 9: How is the excavation of the curb items to be paid?

Answer 9: Excavation of the curb item will be incidental to "Curb, Gutter, and Curb and Gutter, Any Type, Rem".

Question 10: Is the sand subbase for the proposed sidewalk incidental to the sidewalk item or paid for under an item?

Answer 10: For the ramps and level landing subbase will be paid under "Aggregate Base Course, 21AA, CIP", and for the sidewalk subbase will be paid for under "Subbase, Class II Sand, CIP".

Question 11: Is limestone aggregate base required under any of the sidewalk or sidewalk ramp items. If required, how is it paid?

Answer 11: Please refer to City of Ann Arbor Detail for Sidewalk, SD-DS-5. For the ramps and level landing, subbase will be required and paid under "Aggregate Base Course, 21AA, CIP", and for the sidewalk subbase will be required and will be paid for under "Subbase, Class II Sand, CIP".

Question 12: Where is Item 8000.00, Subbase CIP to be utilized on this project?

Answer 12: It is meant to be used for subbase under sidewalk, pay item name has been updated to "Subbase, Class II Sand, CIP" for increase clarity.

Question 13: Please provide necessary curb details for the proposed curbs for this project, including the required stone cross section.

Answer 13: For curbs on City of Ann Arbor ROW or private property, please refer to City of Ann Arbor 2025 Standard Specifications, Article 12. For curb on MDOT Row, MDOT Curb Detail is located on Plan Sheet 27. Stone under curb will be 8 inches thick and it will be paid as "Aggregate Base Course, 21AA, CIP."

Question 14: If stone is required under the curb how is to be paid?

Answer 14: See Answer 13.

Question 15: The existing pavement sections for Maple Rd. are not provided in the plan set or provided Geo reports. Please provide the existing pavement cross section within S. Maple Rd or confirm what the bidding contractors are to assume for existing pavement.

Answer 15: According to as-builts, Maple Road pavement cross section is 6 inches of asphalt over 8 inches of aggregate base.

Question 16: What is the pavement/aggregate cross section for Maple Road?

Answer 16: See Answer 15.

Question 17: Will all detour signs be required to be installed per note 9 on the detour plans even if the detour is in place for less than 30 days?

Answer 17: Yes all detour signs need to meet Note 9 unless the ground conditions or a utility conflict does not allow them to be driven.

Question 18: Per a site visit the existing Westgate parking lot has varied pavement conditions. Some appear to have “recent overlay/paving work” and in fair condition while other areas show signs of block and alligator cracking. The “preferred “north side parking lot staging area as discussed in the pre-bid meeting will result in excess construction traffic which could result in damage to the existing lot. If damage to the existing lot happens utilizing normal construction practices and legal loaded trucks will payment and replacement of the damaged lot be paid for?

Answer 18: This hypothetical question cannot be answered at this time as it depends on the actual factors and the extent for ‘damage’ to existing parking lot. Specific factors will need to be discussed when a situation arises but we will use contract documents and video survey as our framework for such a discussion.

Question 19: There is conflicting information between the plans/bid items and the detailed specification for Minor traffic Control, Modified. The plans call out quantities of traffic control items and there are pay items for these items in the schedule of items. The special provision notes “The furnishing and operating of signs, pedestrian channelizers, temporary pedestrian ramp and temporary mats (and/or plywood or cold patch material) as required to maintain or detour pedestrian traffic around the construction areas and provide access to business for the duration of the project.” Please clarify what traffic control related items are incidental and what traffic control items will be paid.

Answer 19: Please review Detailed Specification Minor Traffic Control Modified for more information. Pay items that are incidental to this pay item include Pedestrian Channelizer Device, Furn & Oper, Temporary Pedestrian Ramp, Furn & Oper, Temporary Pedestrian Mat, Furn & Oper. Per Section 1 of proposed construction contract: In case of a conflict among the contract documents listed below in any requirement(s), the requirement(s) of the document listed first shall prevail over any conflicting requirement(s) of a document listed later.(1) Addenda in reverse chronological order; (2) Detailed Specifications; (3) Standard Specifications; (4) Plans; (5) General Conditions; (6) Contract; (7) Bid Forms; (8) Bond Forms; (9) Bid.

Question 20: Will stone brought up to grade be considered a drivable surface?

Answer 20: Yes, stone brought up to grade will be considered a drivable surface.

Question 21: Please specify what areas will require cold patch for the maintenance of vehicular and/or pedestrian traffic.

Answer 21: Contractor should provide maintenance of traffic configuration for review and approval. Means and methods are up to the contractor. Areas may need either a cold patch, and/or other drivable surface such as stone or steel plates to maintain vehicle and pedestrian access during construction.

Question 22: The staging and phasing of work within the three noted CIA is critical to the successful completion of this project for the owner, businesses, public, contractor and city. The current plans and specifications leave this open ended for the contractor to make assumptions with only general requirements. A reasonable assumption made by a bidding contractor might not be acceptable to the owner and business and greatly increase the cost. Please provide the staging and phasing within the CIA's as it will directly relate to price and receiving comparable bids.

Answer 22: The exact phasing of the work is left open for the contractor but guidance is provided in contract documents and will be provided throughout the project. Especially setting the initial phasing and section plans, and if analysis is required, assistance from Public Works Department and Systems Planning and Engineering Department will be provided.

Question 23: Is the existing water main material for all proposed tie-in locations available? Please provide if this information is available.

Answer 23: All water mains at tie-in locations are cast iron pipes.

Question 24: Sheet 26 calls out three incidental exploratory excavations to be performed two weeks prior to the start of construction to verify the location and depth of the existing utilities. The noted storm that will require an exploratory excavation is in the middle of Jackson Road. Please provide the existing pavement cross section and the required pavement repair that will need to be performed the noted exploratory excavation.

Answer 24: Pavement repair is incidental to exploratory excavation pay item. Existing cross section for Jackson Road is approximately 5 inches of asphalt over 10 inches nonreinforced concrete base over 6 inches of aggregate base.

Question 25: The bid form has three paid exploratory excavations. What exploratory excavations will be paid? What exploratory excavations are incidental?

Answer 25: Only the jack and bore has the 3 exploratory who are incidental. All other exploratory excavations will be paid for using pay item "Exploratory Excavation, SD-TD-1, (0-10' Deep)".

Question 26: What is the detail for the approach/curb restoration in the MDOT right of way on sheet 34 of the plan set?

Answer 26: Please refer to MDOT Special Detail on Sheet, 27.

Question 27: Will the city provide all necessary material testing to be compliant with a typical MDOT permit?

Answer 27: Yes.

Question 28: Please provide the anticipated MDOT permit fee.

Answer 28: Unknown at this time.

Question 29: If the MDOT permit fee cannot be provided can an allowance be provided?

Answer 29: No, but if the fee is more than \$1,000 it will be reimbursed by the City of Ann Arbor.

Question 30: Are there any specific excavation concerns/limitation for the work within the road ROW. Below is a picture of an MDOT monument located about 8' from the existing TSVIW on the North side of Jackson Road @ the proposed Bore.

Answer 30: MDOT has briefly reviewed the plans and has not mentioned any other special restrictions to the proposed project other than Jackson Road I-94 entrance must not have any lane closures. MDOT may state additional restrictions or requirements when they issue the permit.

Question 31: Please provide profiles for the DI water service leads shown In the West North-South Water Main section of work.

Answer 31: Most profiles can be provided to the contractor once the project has been awarded and before construction. We do not anticipate any bends in the service leads but have added some as pay items in case the situation arises.

Question 32: Please provide the existing storm invert information for existing storm line for the West North-South project area. Will the proposed 2" water services be above or below the existing storm?

Answer 32: Invert information has been added to sheets 24-25. The exact depth of the proposed water services to be reconnected will be unknown until they are excavated.

Question 33: Based on the proposed design vertical 6" bends will be required to achieve the correct alignment for some of the DI service leads. Can 6" bend please be added to the proposal.

Answer 33: We do not anticipate 6-inch bends but we will add a pay item in case they are needed.

Question 34: There are concerns with the current alignment of the proposed water main at the proposed water main bore at Jackson Road.

- a. The proposed water bore pit is shown to be only 20' long. The standard bore pit length to auger and jack the pipe requires a 40' long pit. Water main pipe is 20' in length.
- b. There is an existing 3" steel gas service in the current proposed alignment for the bore pit. This gas service will have to be relocated and/or the alignment revised to perform the bore as you cannot push against the gas main or have suspended in the pit. Please advise how the 3" steel gas service will be addressed.
- c. The CL/CL of the existing 8" water main bend to the proposed 12" water main in casing is 2' apart. There is only inches of separation when the OD's of the existing pipe are figured in and that is not considering that there is also a thrust block at the bend. It is too close to the existing water main bend/thrust block to safely perform this work. Please advise how this should be handled.

Answer 34: The Plan set has been revised with requested bore pit dimensions and also a new alignment that takes into considerations concerns noted in the question. If utility conflicts are still a concern, additional exploratory excavation can be done to verify location of existing utilities before jack and bore.

Question 35: The proposed elevation of the water main at the bore is 7' deep. Assuming the existing water main is at 5.5' of vertical bends will need to be installed. Per the MOT plans a 12' lane needs to be maintained at all times (Sheet 14). This only leaves a maximum of 6' of working horizontal working space to install bends as required. Will portable concrete barrier wall be required for the proposed east side of Jackson Road tie in to create a safe excavation? Will PCB wall be paid for if needed?

Answer 35: Means and methods are up to the contractor. If a portable concrete barrier or trench box or other means is necessary for a safe excavation it will be incidental to the pay item "DS_12 In., PC 350 DIP w/polywrap, Bore and Jack". Please note that alignment has been shifted to allow for a larger bore pit.

Question 36: Please confirm the abandoned water main will not need to be grouted in the MDOT ROW.

Answer 36: Per City of Ann Arbor 2025 Standard Specifications, Article 10, Section 10-74, abandoned water main in MDOT ROW shall be filled with flowable fill, the Contractor is responsible to provide all needed materials and appurtenances to properly introduce the flowable fill into the full length and cross section of the pipe being abandoned.

Question 37: Is any of the existing water main required to be grouted?

Answer 37: Only abandoned water main in MDOT ROW is required to be grouted, no other existing water main shall be grouted.

Question 38: Will the bore and jack require grout between the carrier and casing pipe.

Answer 38: Please refer to Sheet 27, Typical Type Casing Standard Detail or City of Ann Arbor Standard Specifications, Article 12, SD-W-6 which includes information on the required spacers inside of the casing pipe. No grouting is required.

Question 39: Is both the 12" carrier pipe and steel casing pipe paid for under DS_12 In., PC350 DIP w/polywrap, Bore and Jack?

Answer 39: Yes both the 12" pipe and 20" steel casing pipe will be paid under "DS_12 In., PC350 DIP w/polywrap, Bore and Jack".

Question 40: Will the carrier pipe need to be fully restrained inside of the casing pipe?

Answer 40: Please refer to Sheet 27, Typical Type Casing Standard Detail or City of Ann Arbor Standard Specifications, Article 12, SD-W-6 which includes information on the required spacers inside of the casing pipe. Due to the design configuration especially at the tie in location, restrained joints are necessary from the bore pit to the receiving pit. This change has been reflected on Sheet 26.

Question 41: The Detailed Special provision for the direction drilled copper service specifies the material to be copper. For this application and length, it is not advised or recommended by suppliers to use this material. Two-inch copper comes in 60' rolls and will require multiple silver solder joints. Can alternative material be specified for this work? A typical industry standard water service material used for directional drill applications is HDPE SDR-9 CTS. It also comes in lengths that are longer than the bore length resulting in a jointless run of pipe.

Answer 41: The Detailed Special Provision for directional drilled service has been revised and included in this Addendum as DS_2 In., HDPE Water Service, Directional Drill. Instead of copper, we recommend HDPE. Service lead material is noted on Sheet 32.

Question 42: If an alternate 2" material for the HDD drilled is not acceptable, please state what unions/joints are to be used to splice pipe together.

Answer 42: Please see Answer 41.

Question 43: Please state the scope of work and material field services will perform for all the proposed 2" water services.

Answer 43: For a complete description please refer to City of Ann Arbor 2025 Standard Specification Article 3.

Domestic water connections 2-inch diameter or smaller will be installed by the City's field services from the main to the curb stop or service valve upon completion of new water main construction, testing, and acceptance. Except for the Zingerman 2" service lead on Sheet 29 will be done by the contractor, however the corp connection to the water main will be by the City.

Domestic water service connections larger than 2-inch diameter shall be constructed to within 5 feet of the serviced building (or please refer to plan set for the limits of each service) by the Contractor and shall be tested in conjunction with the water main that is under construction. All water service connections will be made by the City's field services.

The City's field services will provide the boxes, corp, and curb stops for all services 2" and below. In addition, they will provide the HDPE adapter, curb and corp stops, and make the connection for the HDD service for the library. All other boxes, curb stops/valves for services greater than 2" will be provided by the Contractor.

Question 44: Please state the scope of the work and material the contractors will be required to perform for all the proposed 2" water services.

Answer 44: Please see answer 43.

Question 45: Item 7050.01 is for a 2", Gate Valve in Box. Where is this required?

Answer 45: 2" Gate in Valve in Box pay item has been removed. Instead Curb Stop label has been added but no pay item is needed given this is provided by city field services. Notes have been added to Sheets 25 and 29 regarding the curb stop boxes.

Question 46: Will field services provide the curb stop and box if needed for any of the services for the project?

Answer 46: Please see Answer 43.

Question 47: Please provide a detail for the 2", Gate Valve and Box.

Answer 47: Not needed, please see Answer 45.

Question 48: Will any building or plumbing permits be required for the copper water services or DI water services? If additional permits are required, please specify the fees and requirements the contractor will be responsible for.

Answer 48: No building or plumbing permits shall be required as these are not new services but existing and the scope of work terminates at the curb stop. If additional permits or plumbing subcontractor are needed this will be considered additional work subject to contract terms for additional work.

Question 49: It was noted in the meeting that the intent was to pay plan quantities for the removal and restoration items. This goes against the intent of a unit price contract and makes the entire removal and restoration lump sum with all the risk being put on the contractor for changes. Please confirm how the removal and restoration limits will be paid and quantified.

Answer 49: The intent is to pay for plan quantities however as per contract terms, unit prices are paid for actual work performed. If contractor finds an incorrect quantity or substantially deviates from plan set or scope of work per the contract, justification should be brought to the attention of the project manager and inspector before continuing the work.

Question 50: The current removal limits are not wide enough to perform the work as shown. Below are a few examples of areas where it is not feasible to install the proposed work with the depicted removal limits. A minimum average width of 12'-15' would be more appropriate for the proposed work and existing constraints of this project. Please revise the removal limits to reflect the required removals to allow for the construction of the proposed work.

Answer 50: Revisions to the plan set have been made. Trench widths have been increased.

Question 51: What is the testing procedure for the South Maple Road / Lewis Jewelers Hydrant reconnection. This work is referenced as a "tie-in" in the plans. Does this mean pipe is to be swabbed and directly tied in or will the entire portion of this work need to follow the standard pressure testing and chlorination procedure. Please confirm a 4-week detour of this area will be acceptable if standard testing procedures are required.

Answer 51: This tie-in section is to be tested at the same time for the segment that is ready to be tested on plans. Anything more than 20 ft length of water main pipe needs to be tested. Deviations to this plan that still met the standard testing procedures can be approved by Project Manager.

Question 52: There is proposed water line work shown at the S Maple Road / Lewis Jewelers Tie-in. The plan view does not have any callouts for work and a profile is not provided. Please clarify what this is.

Answer 52: Revisions to plan set have been added. This is a service lead reconnection. Detailed information on this lead is not available but a service box was located by City of Ann Arbor Survey. The size of the lead has been added to the plans.

Question 53: Please confirm the location of the existing valves that will be turned of and the distance from the proposed 20" water main work. Also please confirm if the existing 20" water main is restrained at the S. Maple Road Tie in. The required work on the existing 20" water main

will require a long shut down to safely cut into existing water main.

Answer 53: At this location we proposed 20-inch line stops. We cannot guarantee the valves will operate properly. Approximate distances have been added to the Plan Set. We don't know if the existing 20" water main is restrained.

Question 54: The plans do not note the location of the 20" valve. Please confirm the location of the 20" valve.

Answer 54: The approximate location has been added to Plan Set. A label with station and offset has been added.

Question 55: Please state how far the contractor will be required to stub the water main into S. Maple Rd at the Abbott Tie in. (What is the water main station required to install the testing blow of.)

Answer 55: Please review revised tie in on plan set. New valves have been added to allow for smoother testing. For all the testing on this loop, we can use the H1 hydrant lead as a blow off. Contractor should follow the water testing requirements found in the City of Ann Arbor 2025 Standard Specifications.

Question 56: Please create additional pay items for Temporary Water Main Line Stop Additional Rental Day for 12" and 20" Line Stops. The additional daily rental cost varies by line stop size.

Answer 56: These have been added to the bid sheet.

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

E. Schedule of Pricing/ Cost

Company: _____

Project: Westgate Water Main Project

File #: 2023-013

(Changes have been bolded)

ITEM NUMBER	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
General					
01000.00	General Conditions, Max. \$100,000	LS	1		
01001.00	Project Supervision, Max. \$50,000	LS	1		
01002.00	Project Clean-Up and Restoration	LS	1		
01003.00	Digital Audio Visual Coverage	LS	1		
				\$	
01004.00	Allowance for Unforeseen Conditions	Dlr	30,000	1.00	30,000
01021.00	Erosion Control, Inlet Protection, Fabric Drop	Ea	9		
01030.00	Tree Protection Fence	Ft	45		
01040.00	DS_Minor Traffic Control, Modified, Max. \$80,000	LS	1		
01041.00	Traffic Regulator Control	LS	1		
01050.00	Sign, Type B, Temp, Prismatic, Furn & Oper	Sft	841		
01051.00	Sign, Type B, Temp, Prismatic, Special, Furn & Oper	Sft	144		
01070.00	Sign, Portable, Changeable Message, Furn & Oper	Ea	8		
01080.00	Plastic Drum, High Intensity, Lighted, Furn & Oper	Ea	7		
01081.00	Channelizer Cone, High Intensity, 42 In., Furn & Oper	Ea	65		
01092.00	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn & Oper	Ea	87		
01100.00	Pedestrian Type II Barricade, Temp, Furn & Oper	Ea	10		
01101.00	Pedestrian Channelizer Device, Furn & Oper (Contingency)	Ea	20		
01102.00	Temporary Pedestrian Ramp, Furn & Oper (Contingency)	Ea	2		
01103.00	Temporary Pedestrian Mat, Furn & Oper (Contingency)	Ft	20		
01127.00	Pavt Mrkg, Wet Reflective, Type R, Tape, 6 In., White, Temp	Ft	177		
01128.00	DS_Additional Signs	Ea	20		
Removals					
02020.00	HMA, Any Thickness, Rem	Syd	2303		
02023.00	Cold-Milling HMA Surface	Syd	657		
02025.00	Concrete Pavt, Any Thickness, Rem	Syd	7		
02030.00	Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	365		
02040.00	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Sft	902		
02050.00	Sign, Rem, Salv	Ea	5		
02060.00	DS_Concrete Bollard, Rem	Ea	10		
Earthwork					
03001.00	Machine Grading	Syd	4000		
03030.01	Exploratory Excavation, SD-TD-1, (0-10' Deep)	Ea	3		
03030.02	Exploratory Excavation, SD-TD-1, Additional Depth	Ft	5		
Storm and Drainage					

06160.01	Storm Structure Cover	Ea	2
06160.02	Storm Structure Cover, Adjust	Ea	2
Water Mains			
07000.02	6 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	64
07000.03	8 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	18
07000.05	12 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	2175
07001.02	20 In., PC 250 DIP w/polywrap, SD-TD-1	Ft	12
	DS_2 In., HDPE Water Service, Directional Drill	Ft	143
	DS_12 In., PC 350 DIP w/polywrap, Bore and Jack	Ft	98
7010.01	6 In. 11.25° DIP Bend	Ea	3
7010.01	6 In. 22.5° DIP Bend	Ea	3
07011.02	8 In. 45° DIP Bend	Ea	1
07013.01	12 In. 90° DIP Bend	Ea	3
07013.02	12 In. 45° DIP Bend	Ea	9
07013.03	12 In. 22.5° DIP Bend	Ea	10
07013.04	12 In. 11.25° DIP Bend	Ea	7
07020.08	12 In. X 6 In. DIP Reducer	Ea	6
07020.09	12 In. X 8 In. DIP Reducer	Ea	1
07020.10	20 In. X 12 In. DIP Reducer	Ea	1
07030.03	6 In. X 6 In. X 6 In. DIP Tee	Ea	1
07030.12	12 In. X 12 In. X 6 In. DIP Tee	Ea	3
07030.13	12 In. X 12 In. X 8 In. DIP Tee	Ea	1
07030.15	12 In. X 12 In. X 12 In. DIP Tee	Ea	7
07030.33	20 In. X 20 In. X 20 In. DIP Tee	Ea	1
07050.02	Gate Valve in Box, 6 In.	Ea	3
07050.03	Gate Valve in Box, 8 In.	Ea	1
07050.04	Gate Valve in Box, 12 In.	Ea	3
07050.05	Gate Valve in Box, 20 In.	Ea	1
07060.04	Gate Valve in Well, 12 In.	Ea	4
07080.00	Excavate & Backfill For Water Service Tap and Lead	Ft	700
07090.00	Water Structure Cover	Ea	4
07100.00	Fire Hydrant Assembly, Complete	Ea	4
07102.00	Fire Hydrant Assembly, Rem	Ea	6
07110.02	Sacrificial Anode, 32-pound	Ea	10
07121.00	Curb Box, Adjust	Ea	1
07141.00	DS_Water Main Pipe, Abandon, Modified	LS	1
07141.00	DS_6 in TSV in Well, Rem	Ea	1
07141.00	DS_20 in Tee, Rem	Ea	1
07170.01	DS_Gate Valve in Box, 2 In. Dia., Rem	Ea	2
07170.02	Gate Valve in Box, 6 In. Dia., Rem	Ea	4
07170.03	Gate Valve in Box, 8 In. Dia., Rem	Ea	3
07190.02	Gate Valve in Well, 6 In. Dia., Rem	Ea	2
07190.03	Gate Valve in Well, 8 In. Dia., Rem	Ea	5
07190.05	Gate Valve in Well, 12 In. Dia., Rem	Ea	2

07130.01	Temporary Water Main Line Stop, 8 In. or less	Ea	3
07130.03	Temporary Water Main Line Stop, 12 In.	Ea	3
7130.04	Temporary Water Main Line Stop, 20 In.	Ea	1
07131.00	Temporary Water Main Line Stop, 12 In., Additional Rental Day	Ea	2
07131.00	Temporary Water Main Line Stop, 20 In., Additional Rental Day	Ea	2

Streets, Driveways, & Sidewalks

	Subbase, Class II Sand, CIP	Cyd	5
08010.00	Aggregate Base Course, 21AA, CIP	Cyd	713
08020.00	DS_Steel Bollard	Ea	2
08060.00	Hand Patching (Contingency)	Ton	10
08070.14	HMA, 4EL	Ton	193
08071.00	HMA Approach	Ton	510
08110.00	Conc, Curb or Curb & Gutter, All Types	Ft	285
08120.01	Conc, Driveway Opening, Type M	Ft	95
08130.01	Conc, Sidewalk, 4 In.	Sft	641
08131.01	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.	Sft	380
08150.00	Detectable Warning Surface	Ft	27
08200.09	Pavt Mrkg, Polyurea, 24 In., Stop Bar	Ft	48
08200.10	Pavt Mrkg, Polyurea, 12 In., Crosswalk	Ft	199
08200.13	Pavt Mrkg, Polyurea, 6 In., White	Ft	120
08200.14	Pavt Mrkg, Polyurea, 6 In., Yellow	Ft	513
08200.15	Pavt Mrkg, Polyurea, Lt Turn Arrow Sym	Ea	1
08200.17	Pavt Mrkg, Polyurea, Rt Turn Arrow Sym	Ea	1
08240.02	Pavt Mrkg, Waterborne, 4 In., Yellow	Ft	354
08251.00	Recessing Pavt Mrkg, Longit	Ft	633
08252.00	Recessing Pavt Mrkg, Transv	Sft	335

Lighting and Electrical

09102.00	DS_Light Pole and Foundation, Rem and Salvage	Ea	2
09103.00	DS_Light Pole and Foundation, Reinstall	Ea	2

Landscaping

10000.01	Tree, Medium, B&B	Ea	2
10030.00	Fence, Salvage and Re-Erect	Ft	20
10060.00	Turf Restoration	Syd	1059

Estimated Total

\$

Pre-Proposal Meeting
Westgate Water Main Project
February 3, 2025, 11:30 AM via Microsoft Teams

- I. City Introductions
 - a. Project Manager – Francisca Chan
 - b. Design Engineering Team – Karen Bityk
 - c. Inspection - Ammar Hamamy
 - d. Construction Staking – City of Ann Arbor

- II. Project Overview
 - a. Work components – Overview on Sheet 23
 - i. West Side - North to South Water Main Replacement
 - 1. Includes Jack and Bore across Jackson Rd
 - ii. South East Side - Water Main Replacement
 - 1. Need to decide which side will be done first. Contractor to submit project schedule for review and approval.
 - iii. Maple Connections
 - 1. Maple and Abbot and Zingerman Service Connection
 - 2. Maple and Stadium

Both Maple connections cannot be done at the same time because of the detours in place.
 - b. Traffic Control
 - i. Contractor must submit a MOT Plan for approval
 - ii. See relevant notes on MOT Sheets and Detail Specification for Minor Traffic Control
 - iii. Access from one side of the parking to the other. This is a busy shopping Center.

- III. General Items
 - a. Standard Specifications – 2025
 - b. Detailed Specifications
 - i. Project Schedule and Payment
 - ii. Maintaining Traffic and Construction Sequencing
 - iii. Minor Traffic Control
 - iv. Jack and Bore across Jackson

 - c. Accessibility
 - i. Must maintain local pedestrian and vehicle traffic
 - 1. Must maintain a drivable surface
 - 2. Use pedestrian channelizers around work area
 - ii. The contractor will be responsible for making sure access is maintained especially at the back doors on west side of Westgate Shopping Center.
 - 1. Garbage day is _____. (Will know soon).
 - 2. Truck Deliveries will vary.

 - d. Davis Bacon Wage Decisions
 - i. 10 days before proposals are due

- e. Addendum
 - i. Answer all questions received
 - 1. HMA Approach, will be revised to a total 6 inches instead of 4 inches.
 - ii. Pre-proposal meeting minutes
 - iii. Updated bid form (if required)
 - 1. Updated excel file can be provided
- f. EGLE Permit Approved
- g. MDOT Permit – WIP
- h. Public Engagement Meeting – Early to mid April 2025. Meet in person at Westgate Library with business representatives to give overview of the project and Q&A.

IV. Project Schedule

- a. Written Question: Deadline February 6, 2025, 2:00 p.m. (Local Time)
- b. Addenda Published (if needed): Week of February 10, 2025
- c. **Proposal Due Date: February 25, 2025, 2:00 p.m. (Local Time)**
- d. Selection/Negotiations: March 2025
- e. Expected City Council Authorizations April 7, 2025
- f. Anticipated Construction Start Date: May 2025

V. Questions?

Q: Will water main trenching be paid as plan quantities? Some of the trenching dimensions seem very narrow.

Answer: Yes they will be paid as plan quantities. Our intent was to have the trenching narrow given the good soil conditions as well as need to bypass traffic in some areas.

Q: Will there be a construction staging area? Yes, preferably on the north side of the parking lot where there is less demand for parking space. However we understand that there might be a need for closer construction staging depending on the stage of construction and would like to work with the contractor and owner to decide which areas/ drive isle might need to be used as temporary construction areas.

Notes by:

Francisca Chan

1. Summary

Meeting title	Pre-Proposal RFP 25-10 Westgate Water Main Project
Attended participants	8
Start time	2/03/25, 11:15:13 AM
End time	2/03/25, 11:54:53 AM
Meeting duration	39m 39s
Average attendance time	24m 3s

2. Participants

Name	First Join	Last Leave	In-Meeting
Chan, Francisca	2/03/25, 11:29:00 AM	2/03/25, 11:54:53 AM	25m 53s
John Niemiec (External)	2/03/25, 11:15:17 AM	2/03/25, 11:51:44 AM	36m 26s
Ryan Doski (External)	2/03/25, 11:26:12 AM	2/03/25, 11:51:43 AM	25m 31s
Mike Haeussler (External)	2/03/25, 11:28:35 AM	2/03/25, 11:51:46 AM	23m 10s
Hamamy, Ammar	2/03/25, 11:30:26 AM	2/03/25, 11:51:45 AM	21m 18s
Nollar, Brian	2/03/25, 11:30:57 AM	2/03/25, 11:54:53 AM	23m 56s
Bityk, Karen	2/03/25, 11:31:34 AM	2/03/25, 11:51:54 AM	20m 20s
Carson, Chris	2/03/25, 11:35:49 AM	2/03/25, 11:51:37 AM	15m 48s

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
DS_2 In., HDPE WATER SERVICE, DIRECTIONAL DRILL

FC

1 of 2

1/21/25

Description

This work shall consist of furnishing all labor, tools, equipment, and materials to construct HDPE water service via horizontal directional drill in accordance with the Ann Arbor 2025 Public Services Standard Specifications; current, applicable City of Ann Arbor Standard Details; as shown on the plans; and as specified herein.

Where unspecified by City of Ann Arbor Standard Specifications and/or standard details, work and materials shall be in accordance with the MDOT 2020 Standard Specifications for Construction.

Materials

Material requirements of Section II.E of Article 3, and Appendix A of the Ann Arbor 2025 Public Services Standard Specifications, or approved equal as determined by the City of Ann Arbor.

Tracer wire shall meet the material requirements of Section II.F of Article 3 and Appendix A of the Ann Arbor 2024 Public Services Standard Specifications.

Construction

Water service material shall be 2-inch HDPE SDR 9, preferably Municipex Pipe.

Construction shall comply with Section 1.B. item 14 of Article 3 and Section II. N. (Water Main Directional Drilling), items 1-4, 7 of Article 10 of the Ann Arbor 2025 Public Services Standard Specifications.

The tapping of water mains for connections 4 inches and smaller, the installation of all corporations, curb stops, and the operation of valves and hydrants is reserved for City personnel. The Contractor is required to assist in valve and hydrant operation.

The Contractor shall be required to notify and coordinate work with City personnel at an interval specified by City personnel to complete connections, tapping of water mains, the installation of all corporation stops, and the operation of valves and hydrants.

Domestic water service connections 2-inch diameter or smaller must be installed from the main to the curb stop exclusively by the Public Works Unit.

Claims and extensions of time shall not be approved due to delays caused in whole or in part resulting from the coordination, mobilization, and completion of work by City personnel.

Service lead shall be constructed at the locations and to the vertical and horizontal limits and elevations indicated in the plans. The minimum depth of cover at any location shall be 3 feet. Depth of cover is measured from the finished grade to the top of the pipe.

Measurement and Payment

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
DS_2 In., HDPE WATER SERVICE, DIRECTIONAL DRILL

FC

2 of 2

1/21/25

The completed work, as described, will be measured and paid for at the approved price for the following pay item:

Pay Item	Pay Unit
DS_2 In., HDPE Water Service, Directional Drill.....	Ft

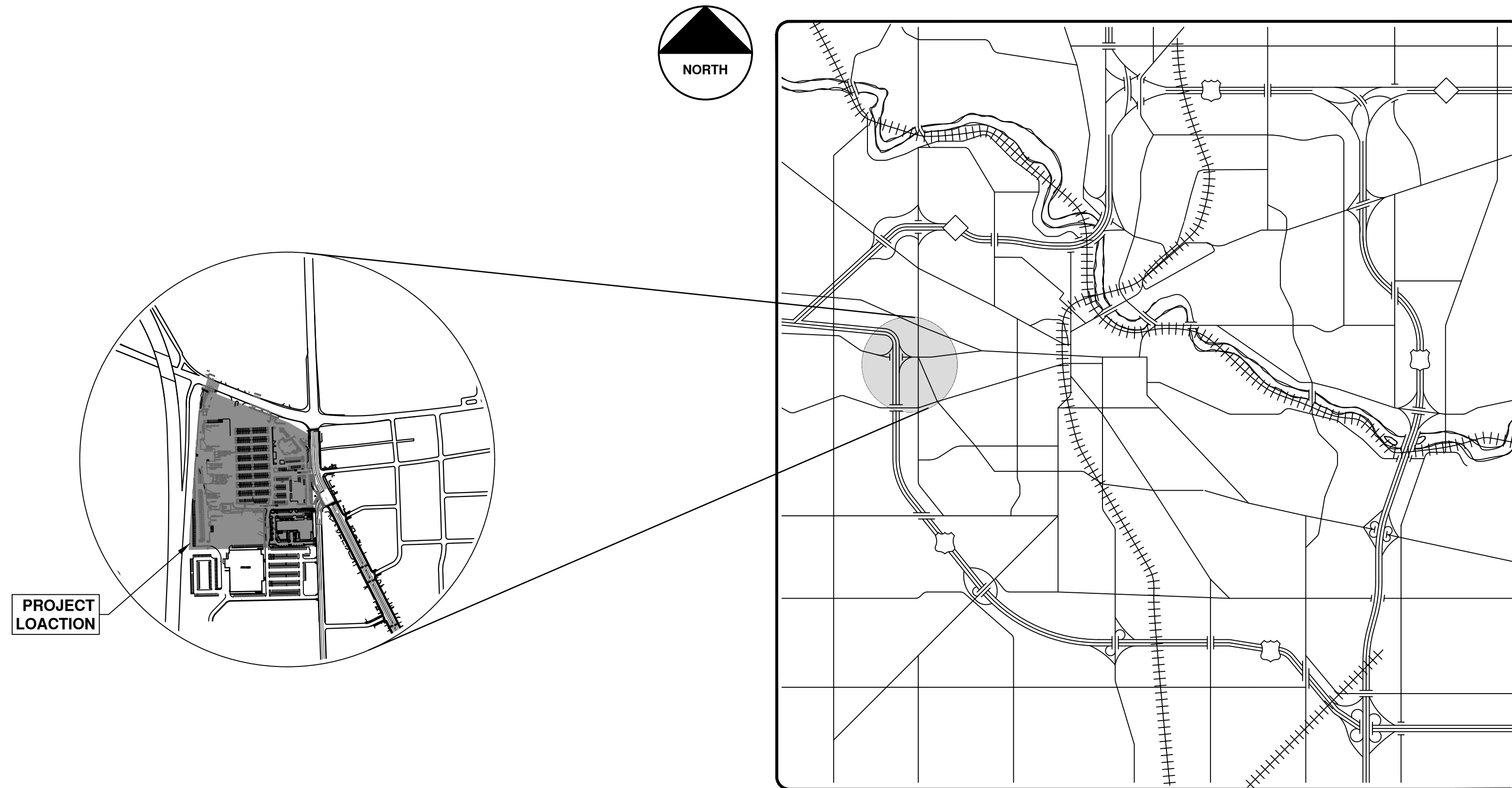
The unit price bid shall be payment in full for will be measured by length in feet and shall include all labor, material and equipment costs required to furnish and install pipe; and shall include, but not be limited to, excavations, bore pits, trench sheeting and shoring, directional drilling, assembly, dewatering, disinfectant and testing, spoils removal, backfill, compaction, fittings, elbows, sweeps, pull strings, end caps, sleeves, tracer wire, spacers, concrete and other work necessary for installation of as shown on the plans or specified.



CITY OF ANN ARBOR ENGINEERING

WESTGATE WATERMAIN

RFP No. 25-10, FILE No. 2023013



VICINITY MAP

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 CITY OF ANN ARBOR PUBLIC SERVICES AREA DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS ("STANDARDS"). THE OMISSION OF ANY STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR OF THEIR OBLIGATION TO CONSTRUCT ITEMS IN COMPLETE ACCORDANCE WITH THOSE STANDARDS.

Sheet List Table

Sheet Number	Sheet Title
1	Cover Sheet
2	Standard Notes
3	Legend
4	Parking Lot Typical Section
5	Alternate Pedestrian Route (APR) Detour
6	Alternate Pedestrian Route (APR) Bypass
7	TPAR Ramps
8	TPAR Walkway Devices
9	Detour Route - Lewis Jewelers Water Main Connection
10	Detour Route - S Maple and Abbott Ave Water Main Connection
Traffic Control	
11	Westgate Shopping Center
12	Lewis Jewelers and Abbott Ave Water Main Connection
13	Westgate Shopping Center Behind Buildings
Traffic Control - Jackson Ave Water Main Bore	
14	Sta. 33+00 - Sta. 51+00
15	Sta. 51+00 - Sta. 54+00
Removals	
16	SE Water Main Reroute Sta. 100+00 - Sta. 104+50
17	SE Water Main Reroute Sta. 104+50 - Sta. 108+76
18	West Side Sta. 0+00 - Sta. 8+00
19	West Side Sta. 8+00 - Sta. 10+00
20	S Maple Reconnections
6 in Water Main Abandon	
21	S Maple 6in Water Main Abandon STA 0+00 to 9+00
22	S Maple 6in Water Main Abandon STA 9+00 to 10+38
23	Overall Water Main Layout
West Side North-South Water Main	
24	Sta. 0+00 - Sta. 4+00
25	Sta. 4+00 - Sta. 8+50
26	Sta. 8+50 - Sta. 10+81
27	Jackson Ave MDOT Plan
28	Hydrants H3, H4
S Maple Water Tie-In	
29	S Maple Reconnections and Zingermans Water Lead
SE Water Main Reroute	
30	Sta. 100+00 - Sta. 104+50
31	Sta. 104+50 - Sta. 108+63 and Hydrant H1
32	Hydrant H2 & 2503 Jackson Ave Service Lead
Restoration	
33	West Side Restoration Sta. 0+00 - Sta. 8+00
34	West Side Restoration Sta. 8+00 - Sta. 10+00
35	SE Water Main Reroute Restoration Sta. 100+00 - Sta. 104+50
36	SE Water Main Reroute Restoration Sta. 104+50 - Sta. 108+76
37	S Maple Tie-in and Zingerman's Roadhouse Lead Restoration



REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HMA TABLE REVISIONS
00	01/23/2025	BID SET

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-6647
734.794.4410
www.a2gov.org



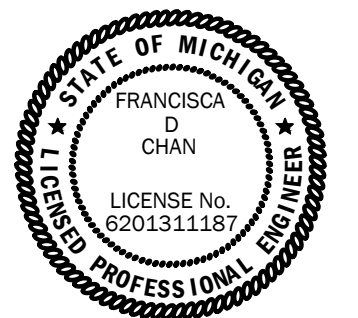
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

Description:
The Westgate Watermain Project includes water main replacement and reconfiguration, and upsizing from 8 inch to 12 inch water main. In total, approximately 2,200 feet of new 12 inch water main, replacement of 4 fire hydrants, adding additional system valves, and restoration of all disturbed areas.

SCALE: _____
DRAWING No. 2023013-1
SHEET No. 1 OF 37

PREPARED UNDER THE SUPERVISION OF
Francisca Chan
FRANCISCA D CHAN, P.E. - MI LICENSE No. 6201311187
PROJECT MANAGER

12/5/2024
DATE



CONSTRUCTION NOTES:

- 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.
- The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- 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.
- The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
- 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".
- Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
- 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.
- 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.
- 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.
- 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.
- "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.
- Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
- 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.
- Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- 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".
- All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- The location of material stock piles and on-site staging areas to be approved by the Engineer.
- 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.
- 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.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLIATIVE AS REQUIRED.
- 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.
- 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.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

- 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:

- 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.
- STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 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.
- PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- COMPLETE ALL FINE GRADING.
- TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- CLEAN OUT STORM SEWER SYSTEMS.
- REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 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.

TEMPORARY SEEDING:

- SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
- ANY DISTURBED AREA NOT PAVED, SEEDDED, 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 = \$30,000

WESTGATE WATERMAIN		
BM #	ELEV	DESCRIPTION
1	955.649	WESTERLY FLANGE BOLT ON FIRE HYDRANT IN REAR PARKING LOT, NORTH OF ENTRANCE TO PUBLIC LIBRARY
2	949.060	SET RR SPIKE EAST SIDE OF UTILITY POLE, WEST SIDE OF PARKING LOT, ACROSS FROM DOOR #2539
3	942.730	SET RR SPIKE EAST SIDE OF UTILITY POLE, SW OF SMOOTHIE KING BLDG. CORNER (150'+/-)
4	941.535	SET RR SPIKE SOUTH SIDE OF UTILITY POLE, NORTH SIDE OF JACKSON RD. 100'+/- EAST OF DRIVE FOR D&D BICYCLES
5	945.184	TOP OF NORTH SIDE OF CONC. BASE FOR LIGHT POLE, 50'+/- SOUTH OF SOUTHERLY BUILDING COR FOR ZINGERMANS ROADHOUSE
6	945.434	TOP OF WEST SIDE OF CONC. BASE FOR LIGHT POLE, 100'+/- EAST OF ENTRANCE TO ZINGERMANS ROADHOUSE
7	943.599	TOP OF SW ANCHOR BOLT FOR LIGHT POLE AT THE NE CORNER OF STADIUM & ABBOTT
8	941.786	TOP OF SW CORNER OF CONC. BASE FOR PEDESTRIAN SIGNAL AT SW CORNER OF STADIUM & MAPLE
9	954.733	TOP OF SOUTH SIDE OF CONC. BASE FOR LIGHT POLE AT SW CORNER OF PARKING LOT IN FRONT OF SCHULER BOOKS
10	951.715	TOP OF WEST SIDE OF CONC. BASE FOR LIGHT POLE AT NW CORNER OF LEWIS JEWELERS COMPLEX PARKING LOT
11	953.458	TOP OF EAST SIDE OF CONC. BASE FOR LIGHT POLE AT SW CORNER OF LEWIS JEWELERS COMPLEX PARKING LOT

AREA OF PROPOSED DISTURBANCE = 0.66 ACRES

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
MDOT RIGHT-OF-WAY PERMIT	MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)
* NO COST TO CONTRACTOR	


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

PERMIT	ISSUING AUTHORITY
WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE)

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		MARK MORENO (734) 794-6361
SIGNS SIGNALS STREET LIGHTS		
FIBER OPTIC	CITY OF ANN ARBOR INFORMATION TECHNOLOGY LARCUM CITY HALL 301 E. HURON STREET ANN ARBOR, MI 48107	(734) 794-6550
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE. YPSILANTI TOWNSHIP, MI 48198	ADAM EGELER 734 929-8042 ADAM.EGELER@DTEENERGY.COM
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	STEPHEN BECK (248) 972-7511
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	CHRIS SHOUP (734) 263-7385 CS6558@ATT.COM
FIBER OPTIC	MCI/VERIZON 4401 STECKER STREET DEARBORN, MICHIGAN 48126	MARLON REDD (313) 588-0849 MARLON.REDD@VERIZON.COM
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	DAVID BEGGS (810) 397-8956 DAVID.BEGGS@WINDSTREAM.COM
FIBER OPTIC	ADVANCED COMMUNICATIONS & DATA 1800 NORTH GRAND RIVER AVE LANSING, MI 48906	OSP@ACD.NET
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

R:\2023013 Westgate Watermain\Plan Production\2023013Cov.dwg - _a2_standard bw.stb - Plot Date: 2/20/2025 4:59:02 AM




Know what's below. Call before you dig.


	FDC	FDC	FDC	FDC	CHECKED
	KMB	KMB	KMB	KMB	DRAWN
	02/20/2025	01/29/2025	01/23/2025		DATE

PRE-BID QUESTION REVISIONS
SHEET # HVA TABLE REVISIONS
BID SET
REV.

DESCRIPTION



CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 864
ANN ARBOR, MI 48107-0864
734-794-6410
www.a3gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WESTGATE WATERMAIN

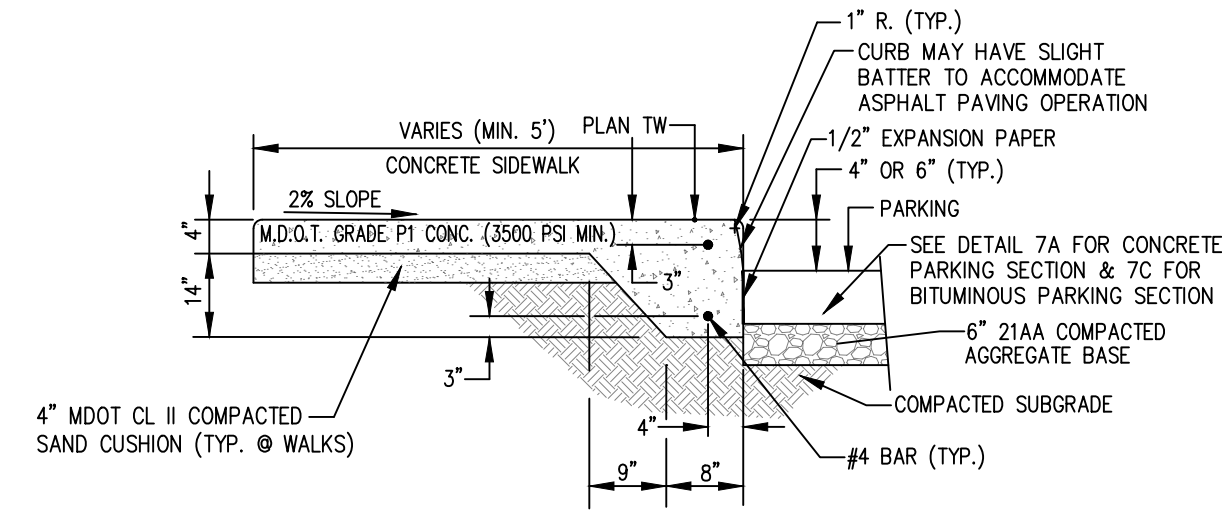
STANDARD NOTES

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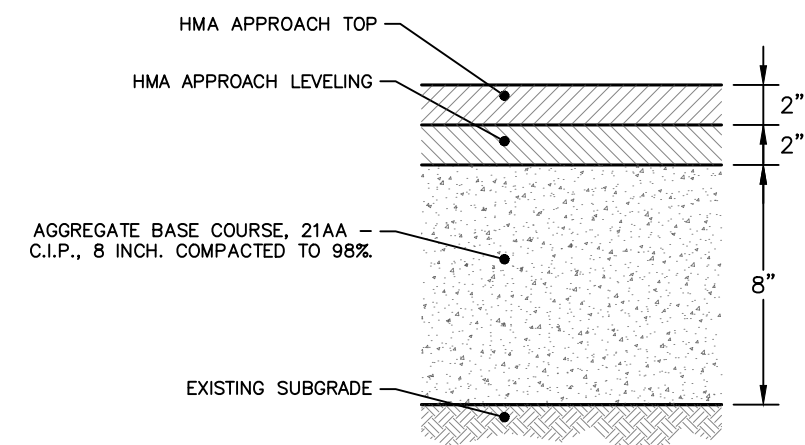
DRAWING No. 2023013-2

SHEET No.

2 OF 37



**TYPICAL CONCRETE PAVEMENT
INTEGRAL WALK/CURB**



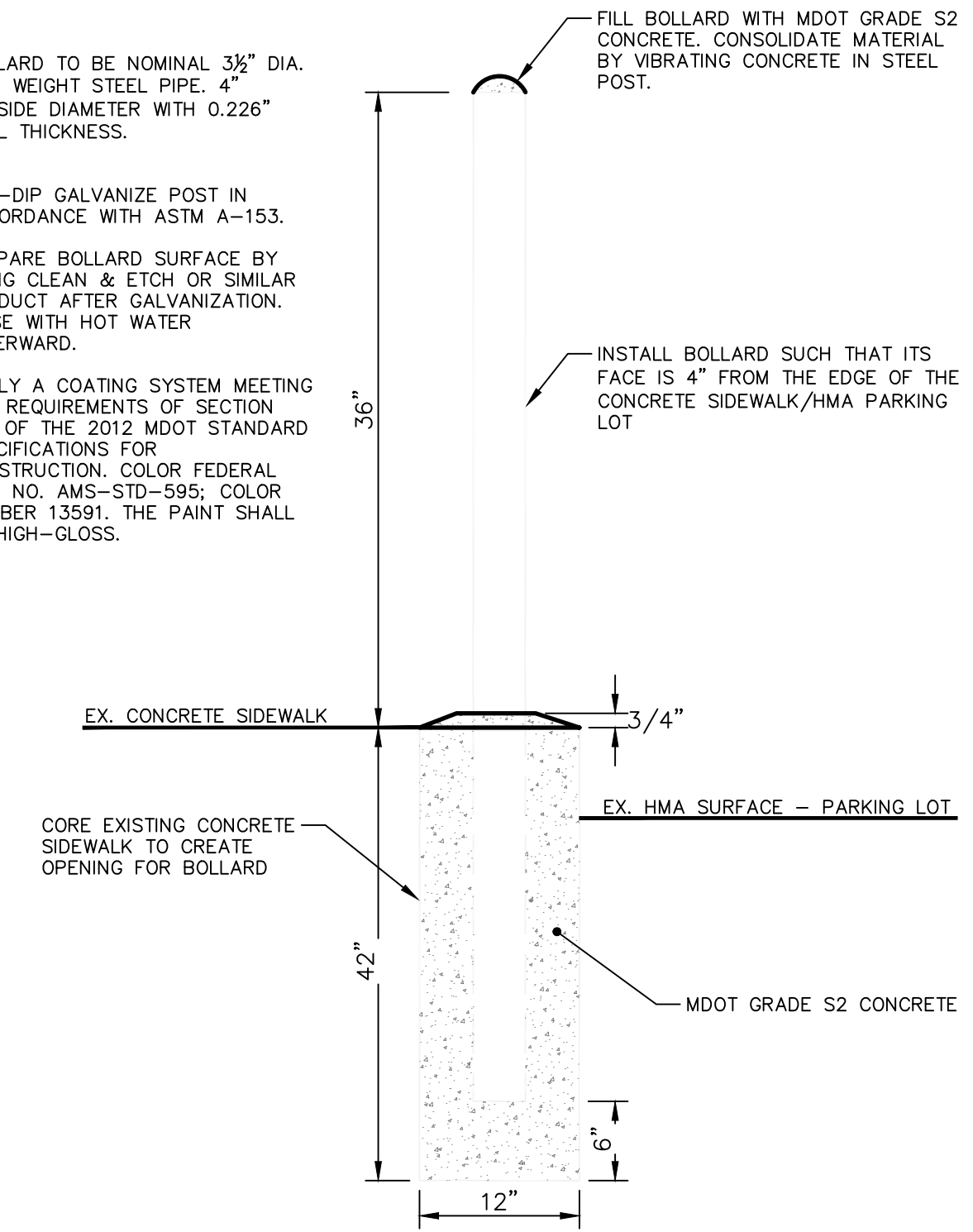
WESTGATE PARKING AREA SECTION
NOT TO SCALE

HMA APPLICATION ESTIMATE						
HMA PAVEMENT	HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
HMA APPROACH TOP	4EL	220 LB/SYD	3	220 (TOP)	PG 58-28	TOP COURSE
HMA APPROACH LEVELING	4EL	220 LB/SYD	3	-	PG 58-28	LEVELING COURSE
HAND PATCHING	4EL	0 - 440 LB/SYD			PG 58-28	HAND PATCHING
ASPHALT EMULSION	SS-1h	0.05 - 0.15 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

NOTE:
WESTGATE PARKING AREA TO BE RESTORED AND PAID FOR AS HMA APPROACH.
S MAPLE ROAD AND STADIUM BLVD ASPHALT MIXTURE TO BE HIGH STRESS HOT MIX

NOTES:

- BOLLARD TO BE NOMINAL 3 1/2" DIA. STD. WEIGHT STEEL PIPE. 4" OUTSIDE DIAMETER WITH 0.226" WALL THICKNESS.
- HOT-DIP GALVANIZE POST IN ACCORDANCE WITH ASTM A-153.
- PREPARE BOLLARD SURFACE BY USING CLEAN & ETCH OR SIMILAR PRODUCT AFTER GALVANIZATION. RINSE WITH HOT WATER AFTERWARD.
- APPLY A COATING SYSTEM MEETING THE REQUIREMENTS OF SECTION 715 OF THE 2012 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. COLOR FEDERAL STD. NO. AMS-STD-595; COLOR NUMBER 13581. THE PAINT SHALL BE HIGH-GLOSS.



BOLLARD DETAIL

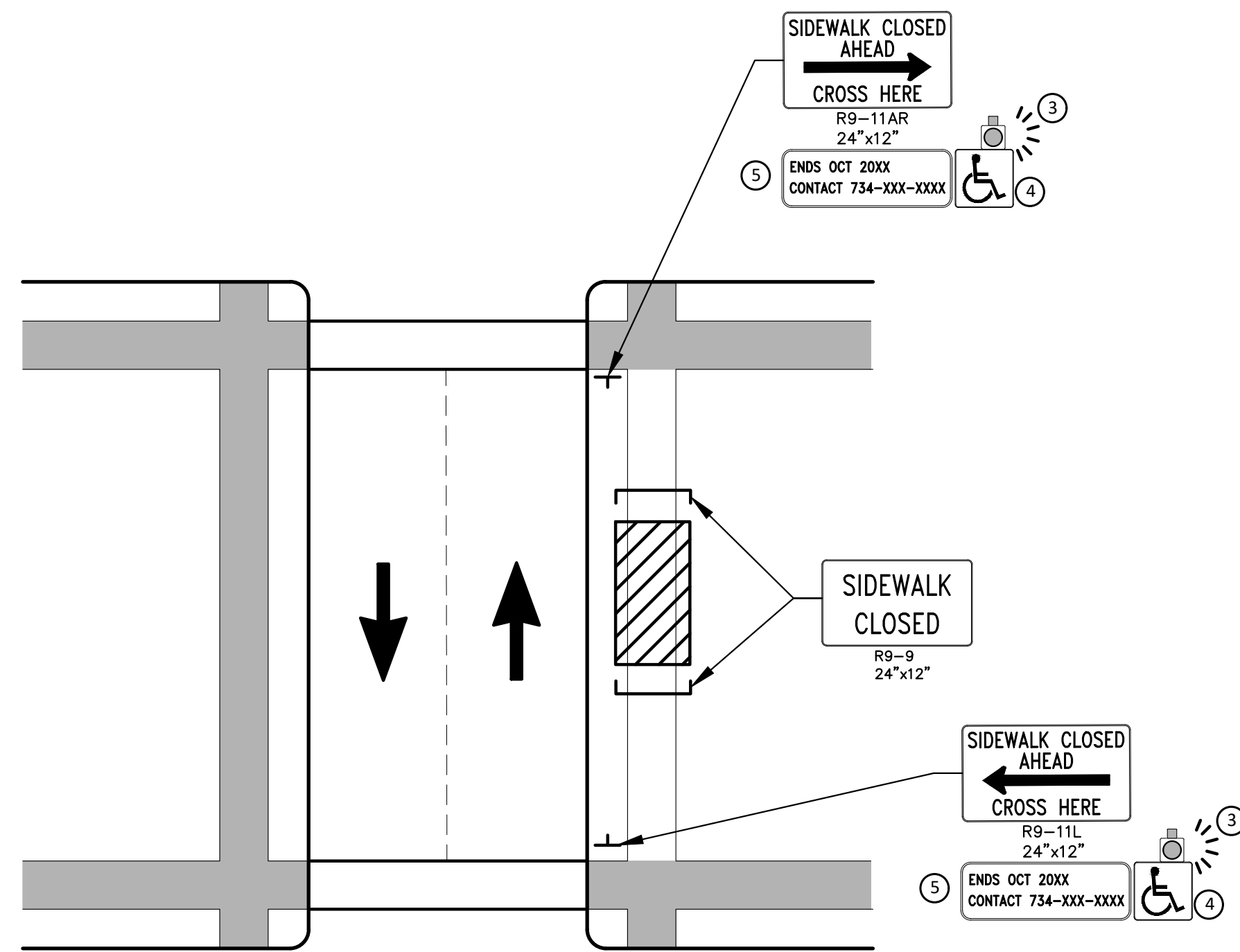


02	PRE-BID QUESTION REVISIONS	02/20/2025	KMB	KMB	KMB	KMB	CHECKED
01	SHEET 4: HMA TABLE REVISIONS	01/29/2025	KMB	KMB	KMB	KMB	CHECKED
00	BID SET	01/23/2025	KMB	KMB	KMB	KMB	CHECKED
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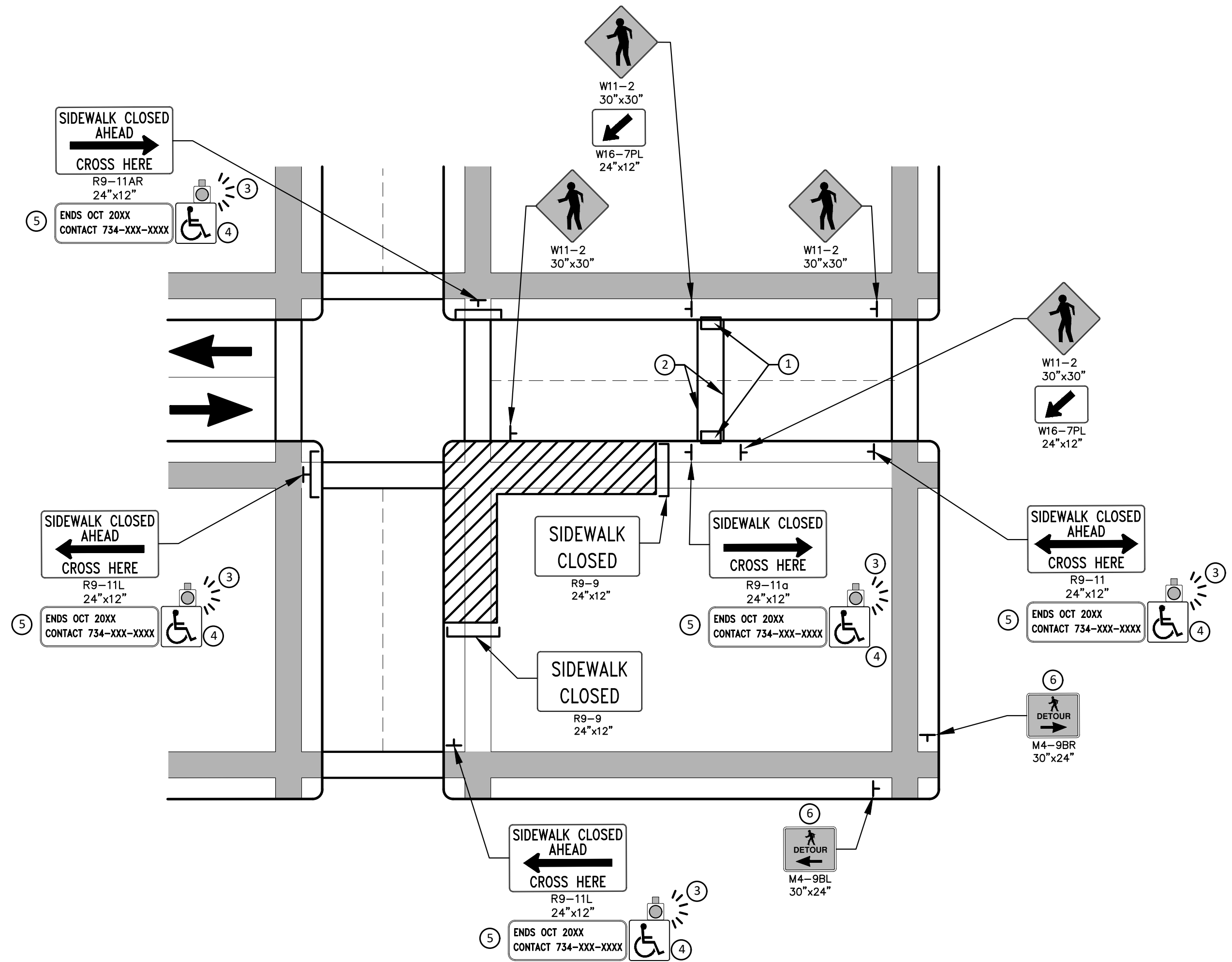
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
PARKING LOT TYPICAL SECTION

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PEDESTRIAN DETOUR USING OPPOSITE SIDE OF STREET



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS
(FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK)

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 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. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
3. AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHALL BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.
4. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD 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. PEDESTRIAN DETOUR TRAILBLAZING SIGNS SHALL BE USED IF THE PEDESTRIAN DETOUR IS IN A LOCATION OTHER THAN ACROSS THE STREET FROM THE SIDEWALK CLOSURE.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MMUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHALL BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF NCHRP 350 AND THE MMUTCD SHALL BE USED.
5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
7. WHEN DIRECTED BY THE ENGINEER, OR STATED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. NO WORK SHALL BE ALLOWED TO BEGIN UNTIL THIS PLAN IS APPROVED BY THE ENGINEER IN WRITING.
8. PROVISION OF THE TPAR AND ALL OF ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO, CREATION OF THE TEMPORARY PEDESTRIAN CONTROL PLAN, SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "MINOR TRAF DEVICES."

LEGEND

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



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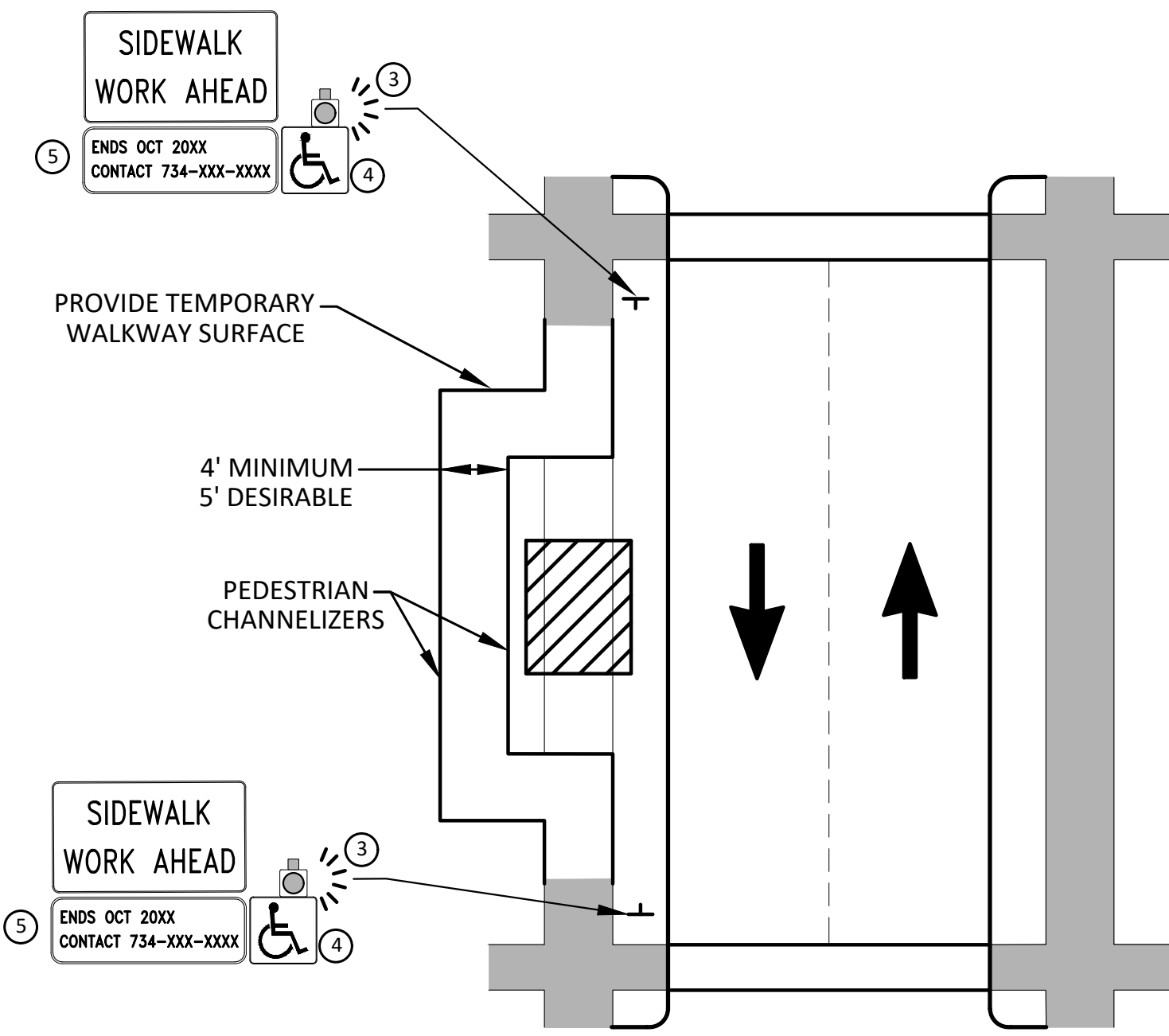
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
ALTERNATE PEDESTRIAN ROUTE (APR) DETOUR

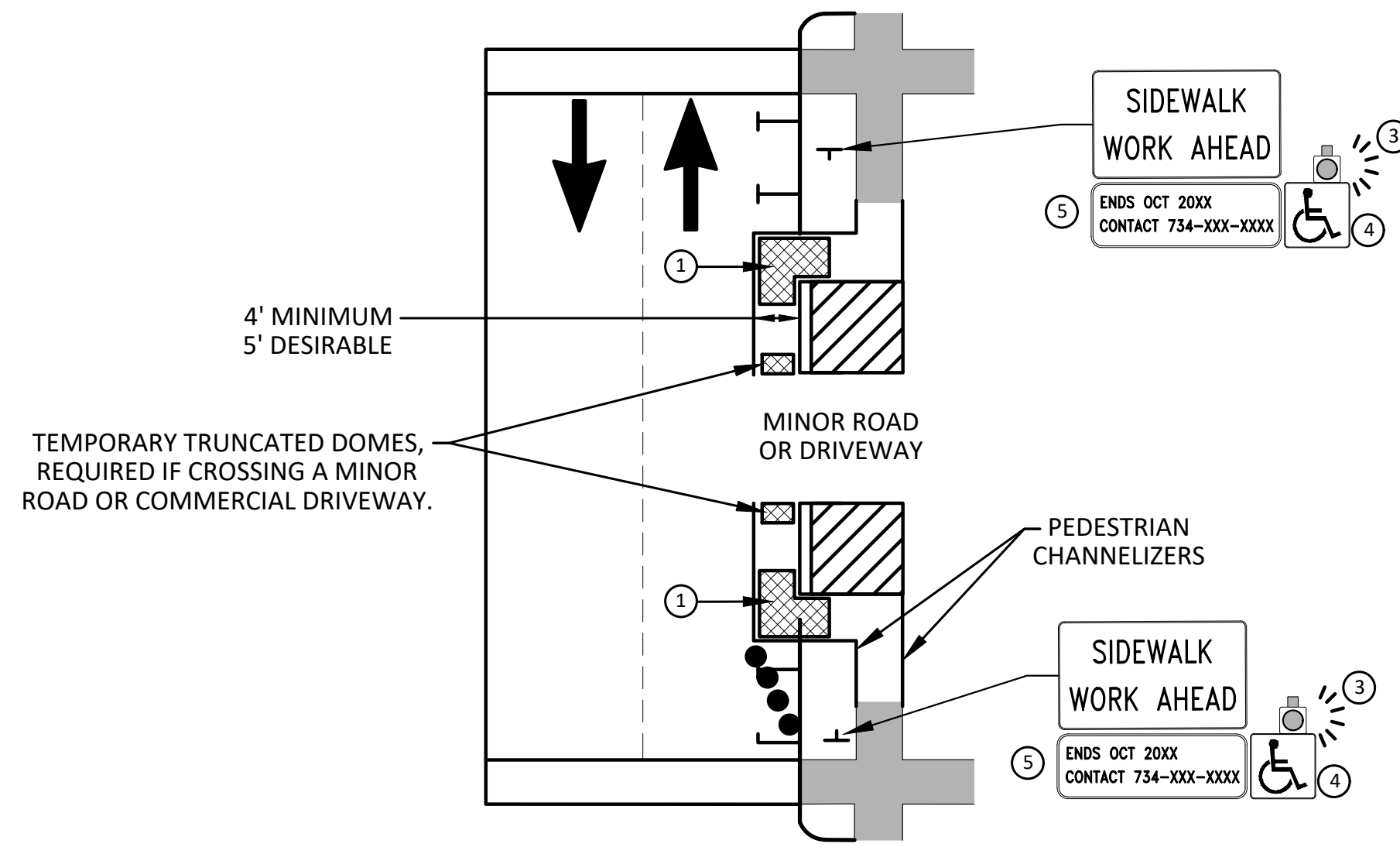
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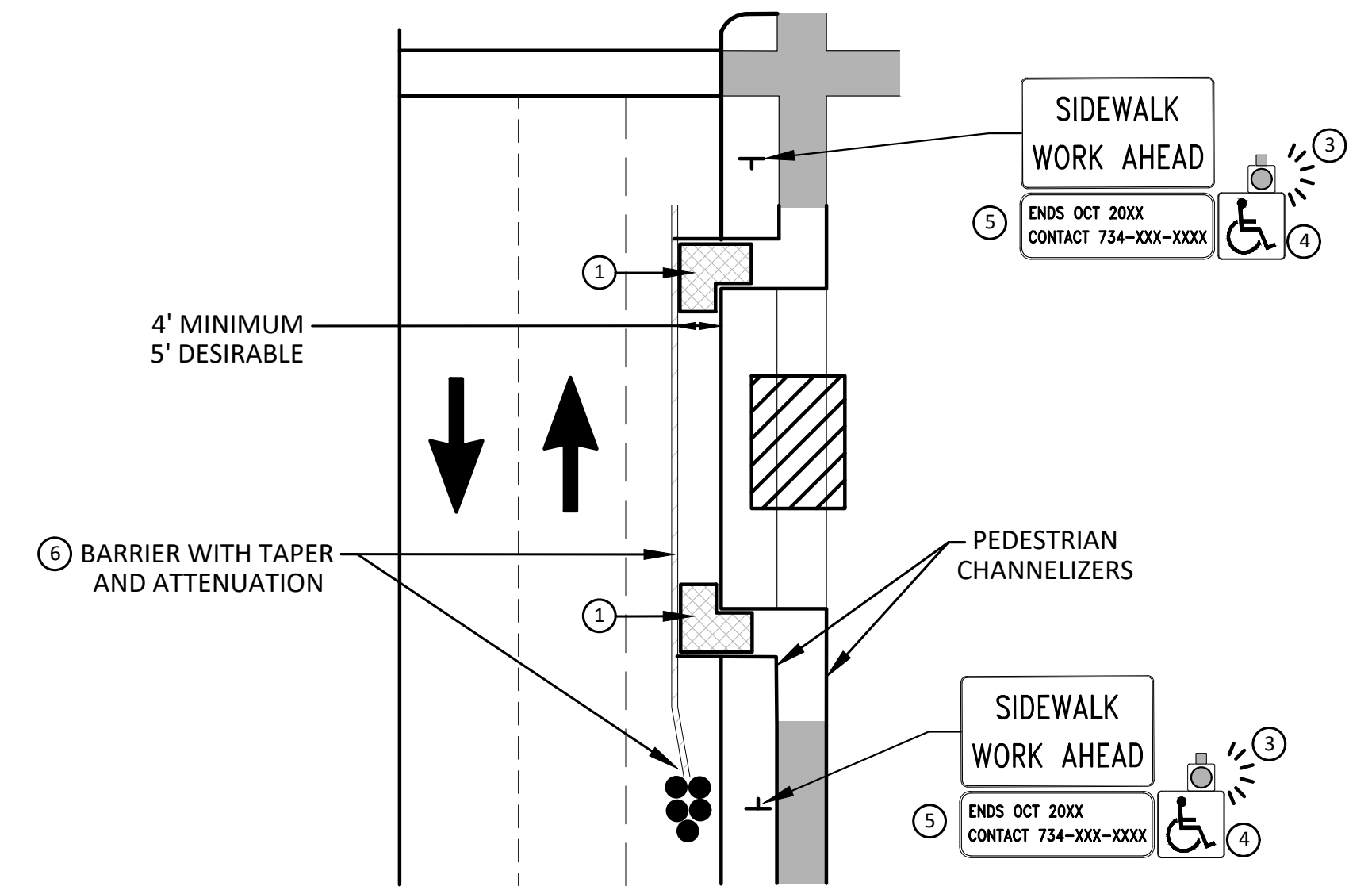


**BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY
BYPASS TYPE A**

NOTE: MAY ONLY BE USED ON ROADWAY WITH POSTED
SPEED OF 45 MPH OR LESS.



**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

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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 RAMP 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



REV.	DATE	DESCRIPTION
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01	01/29/2025	SHEET 4: HMA TABLE REVISIONS
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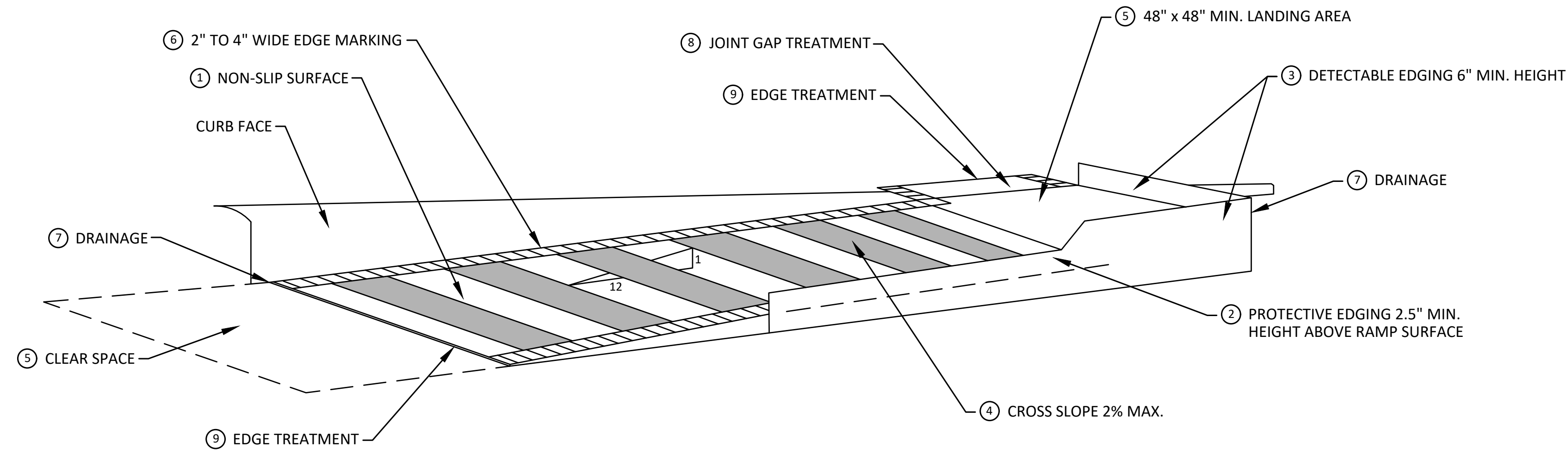
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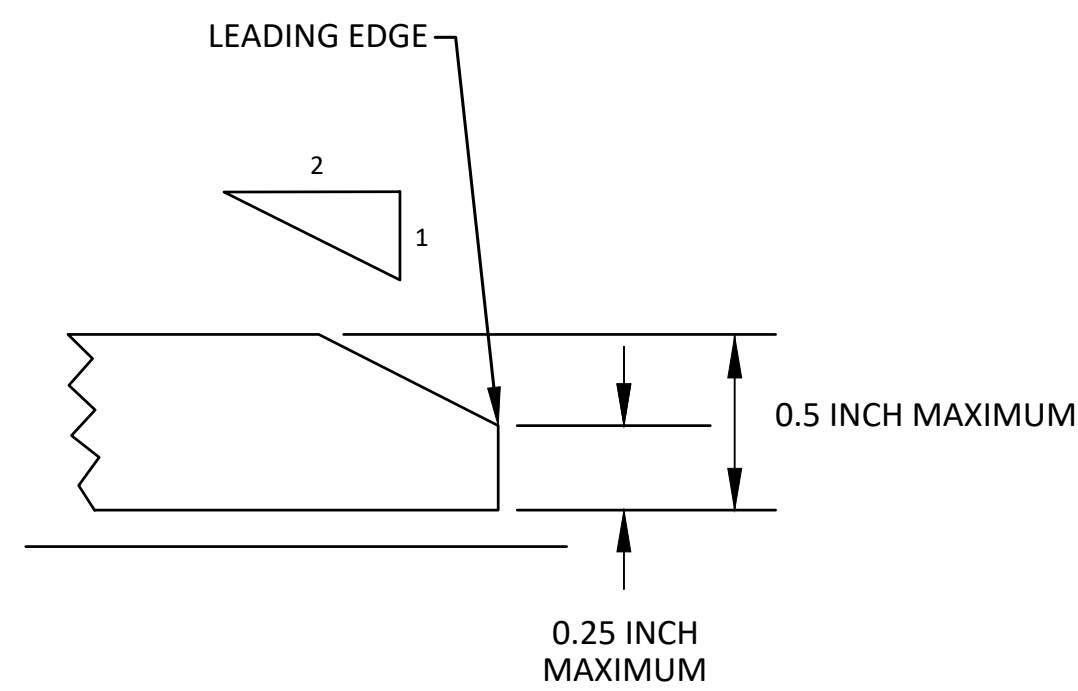
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
ALTERNATE PEDESTRIAN ROUTE (APR) BYPASS

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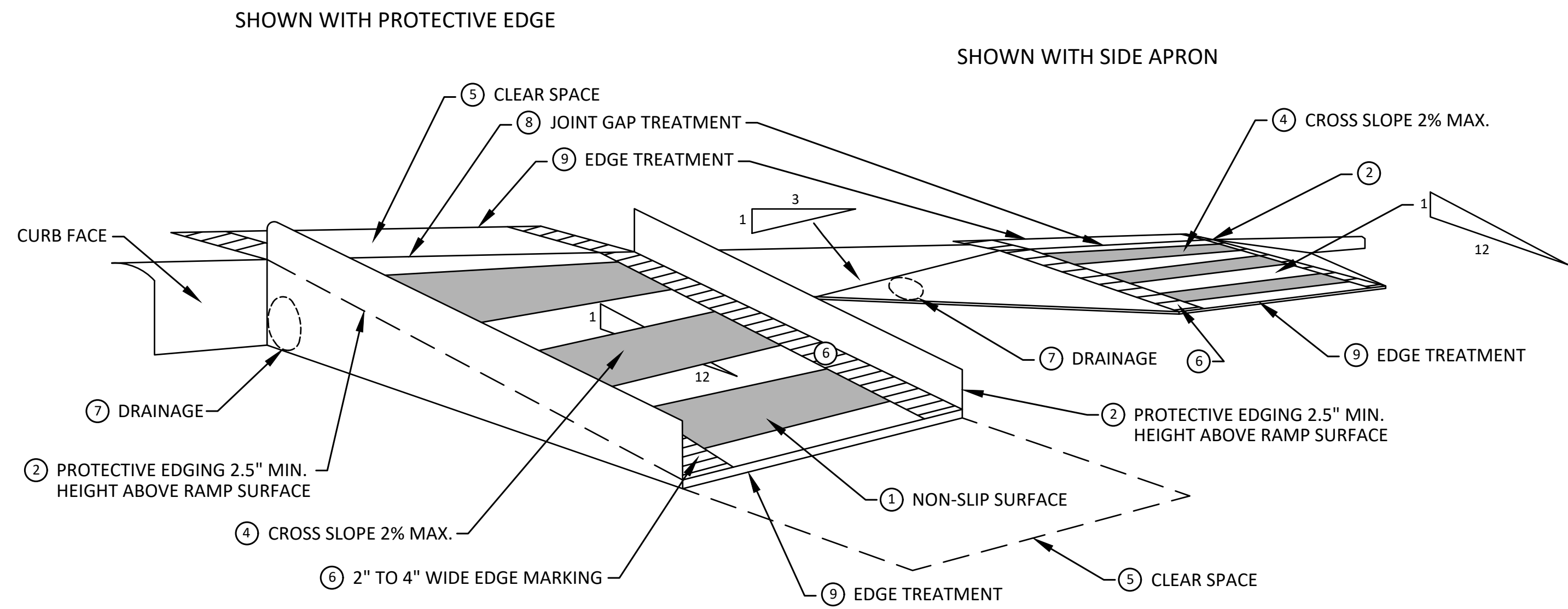
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**TEMPORARY CURB RAMP
PARALLEL TO CURB**



EDGE TREATMENT



**TEMPORARY CURB RAMP
PERPENDICULAR TO CURB**

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.



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01	SHEET 4: HVA TABLE REVISIONS	01/29/2025	KMB	FDC
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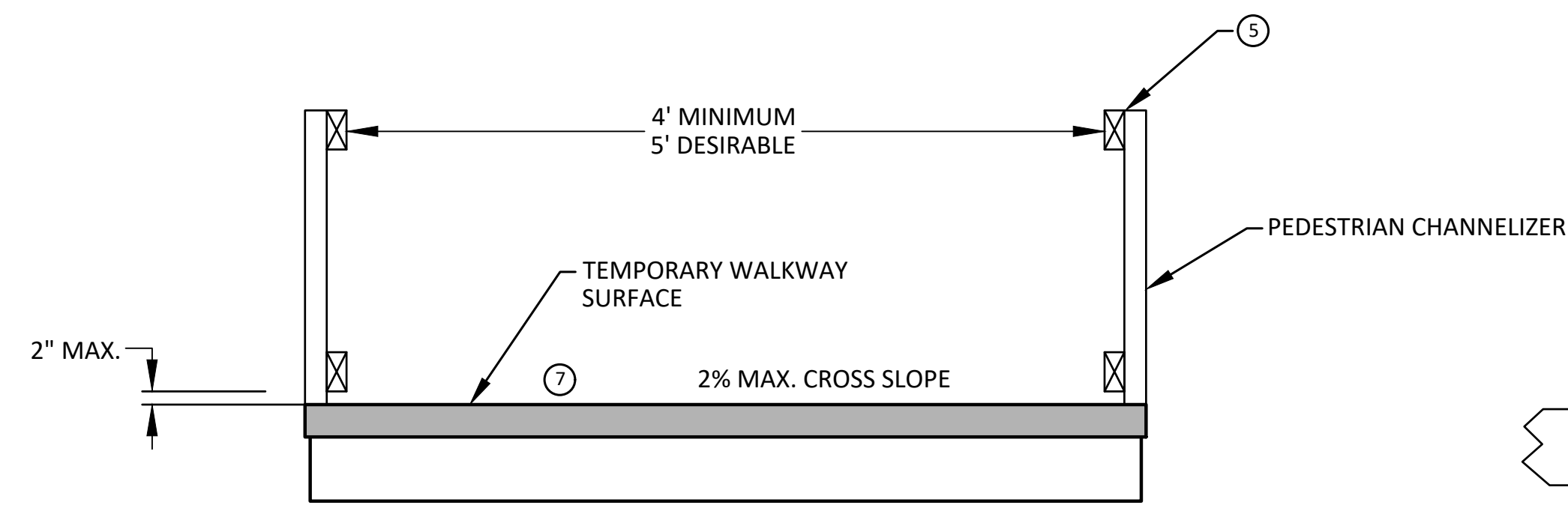
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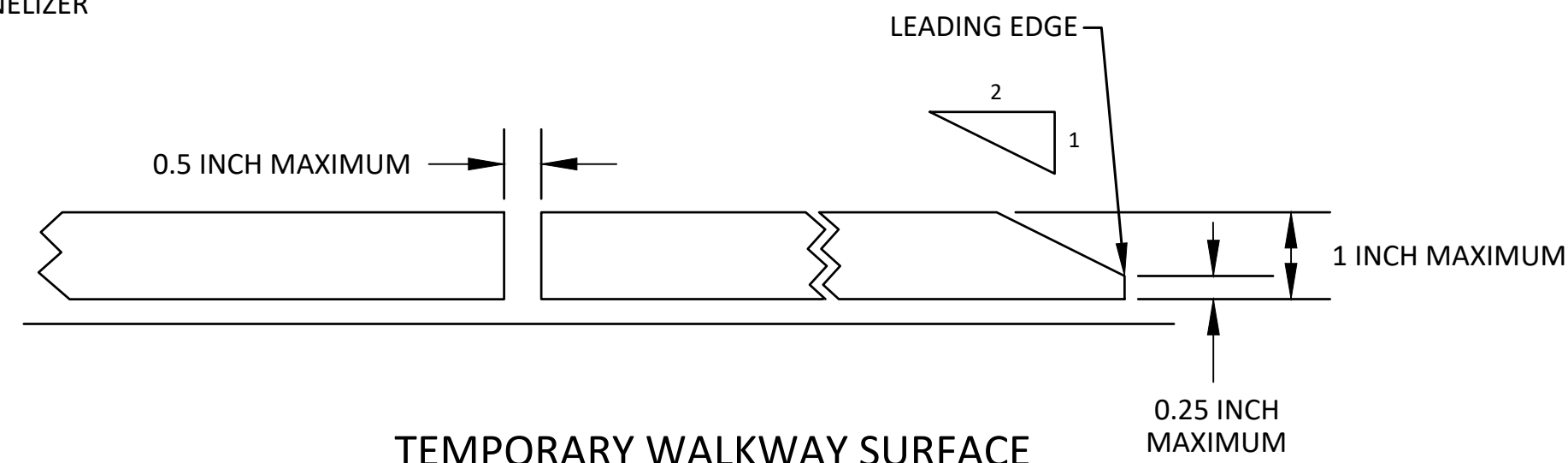
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
TPAR RAMPS

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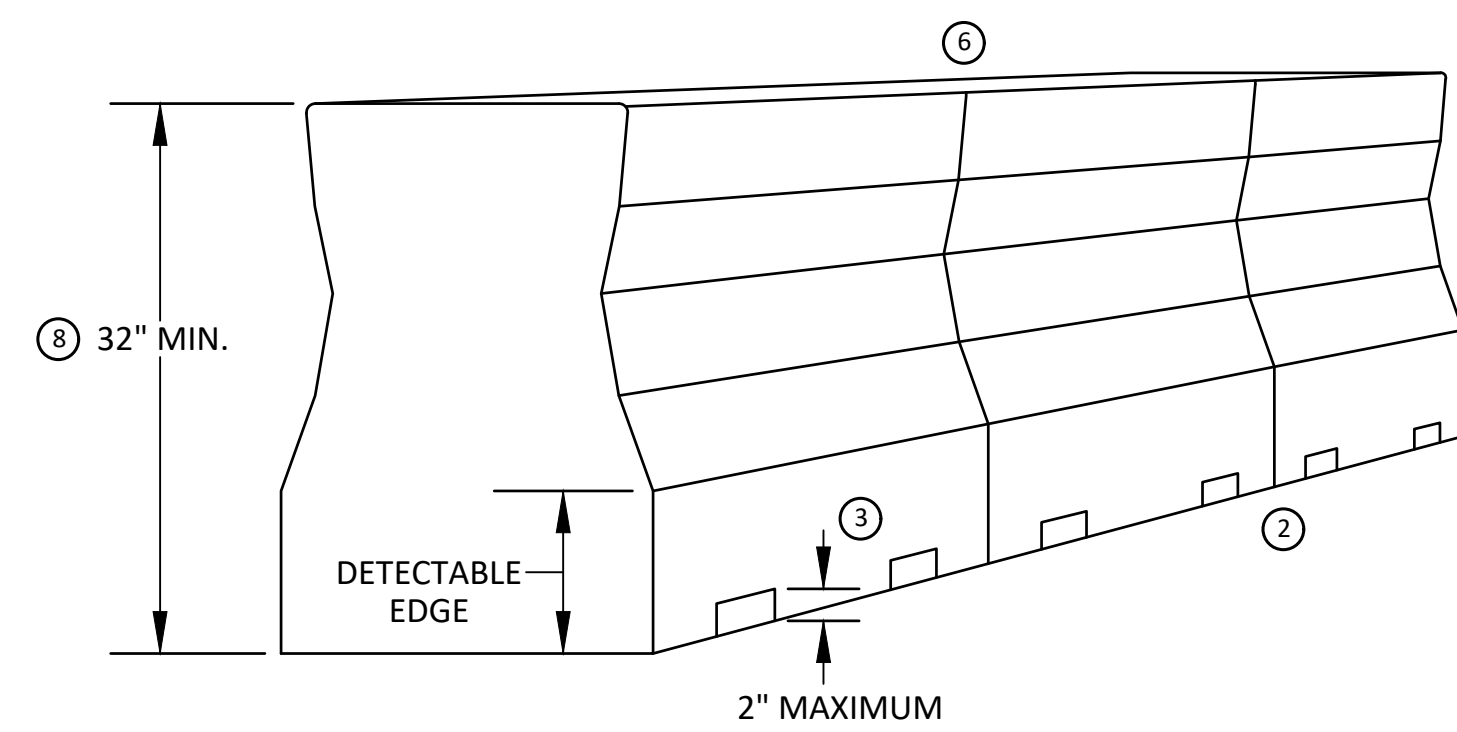
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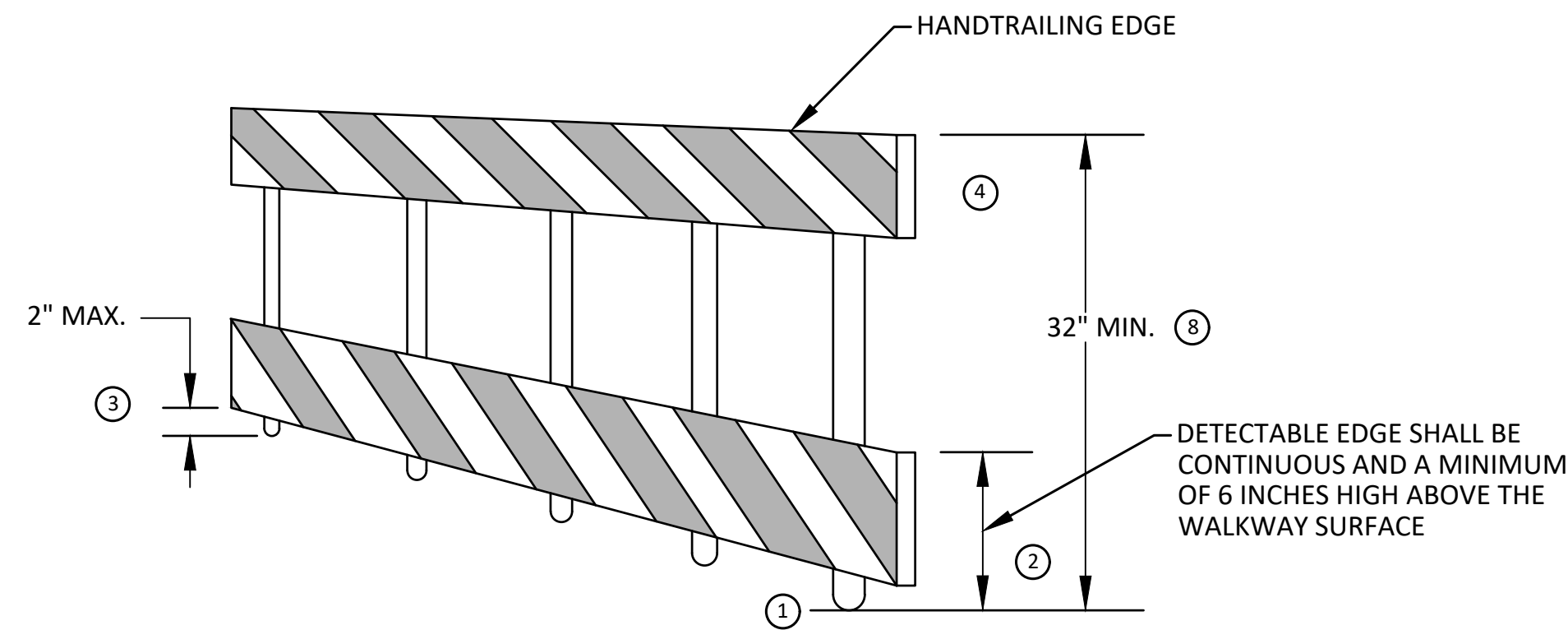
TEMPORARY PEDESTRIAN ACCESS



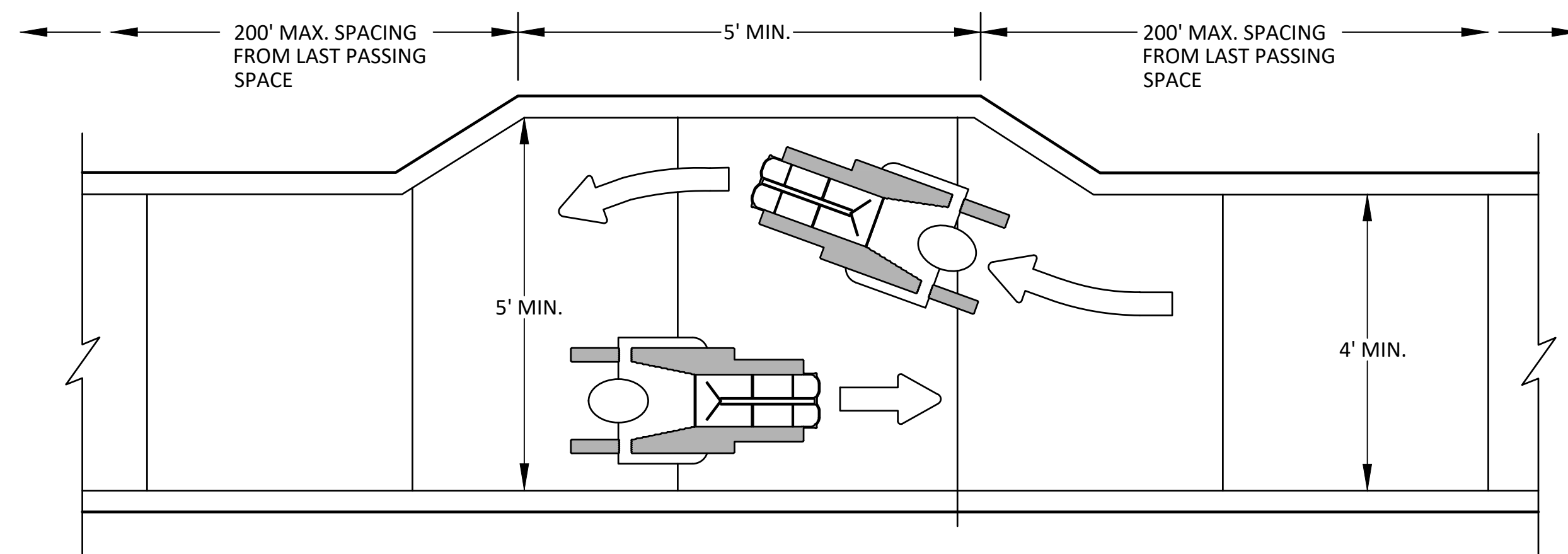
TEMPORARY WALKWAY SURFACE



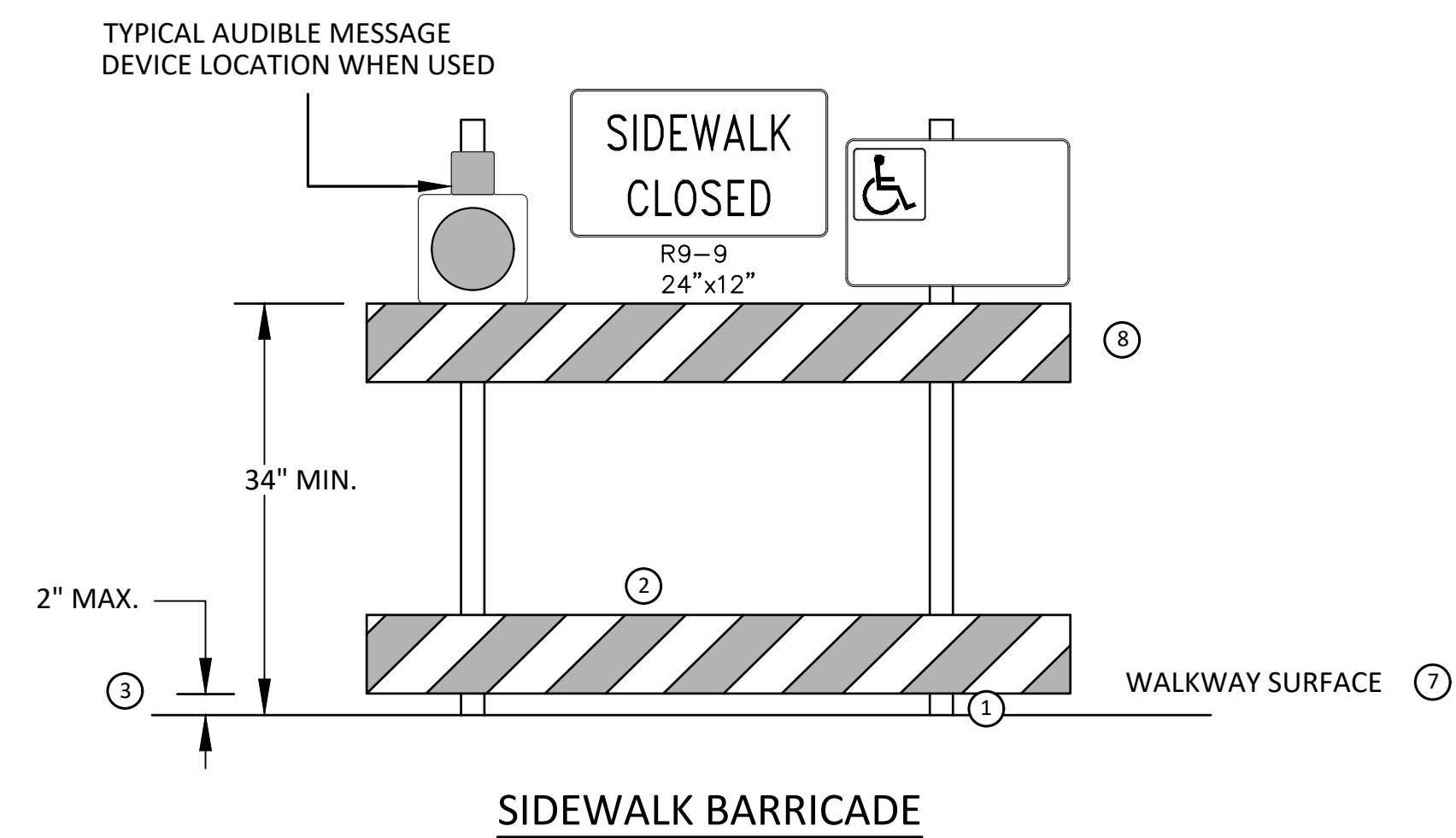
PEDESTRIAN CHANNELIZER USING A BARRIER (MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER (MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL



SIDEWALK BARRICADE

GENERAL NOTES

RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.

ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIER'S APPLICATION.

BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE BEING CLOSED.

SPECIFIC NOTES

1 ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.

2 DETECTABLE EDGES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES IN HEIGHT ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.

3 DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.

4 PROVIDE A HANDRAIL ON BOTH SIDES OF THE RAMP IF THE RAMP IS NOT EXPOSED TO VEHICLE TRAFFIC AND HAS A TOTAL RISE GREATER THAN 6 INCHES, AND A LENGTH GREATER THAN 72 INCHES.

- ENSURE THE HANDRAIL IS 1.25 AND 1.5 INCHES WIDE AND CONFIGURED TO BE A "GRASPABLE" CROSS-SECTION.

SEE CONSTRUCTION SUBSECTION 2.A FOR ADDITIONAL DETAILS.

WHEN THE RAMP IS EXPOSED TO TRAFFIC, IN LIEU OF HANDRAILS, USE A PROTECTIVE EDGE 2.5 INCHES MINIMUM HEIGHT ABOVE THE RAMP SURFACE OR 1:10 FLARE ON BOTH SIDES OF THE RAMP.

5 ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.

6 ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE INTENDED CHANNELIZED PATH.

7 A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED.

8 LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES IN HEIGHT OR GREATER.



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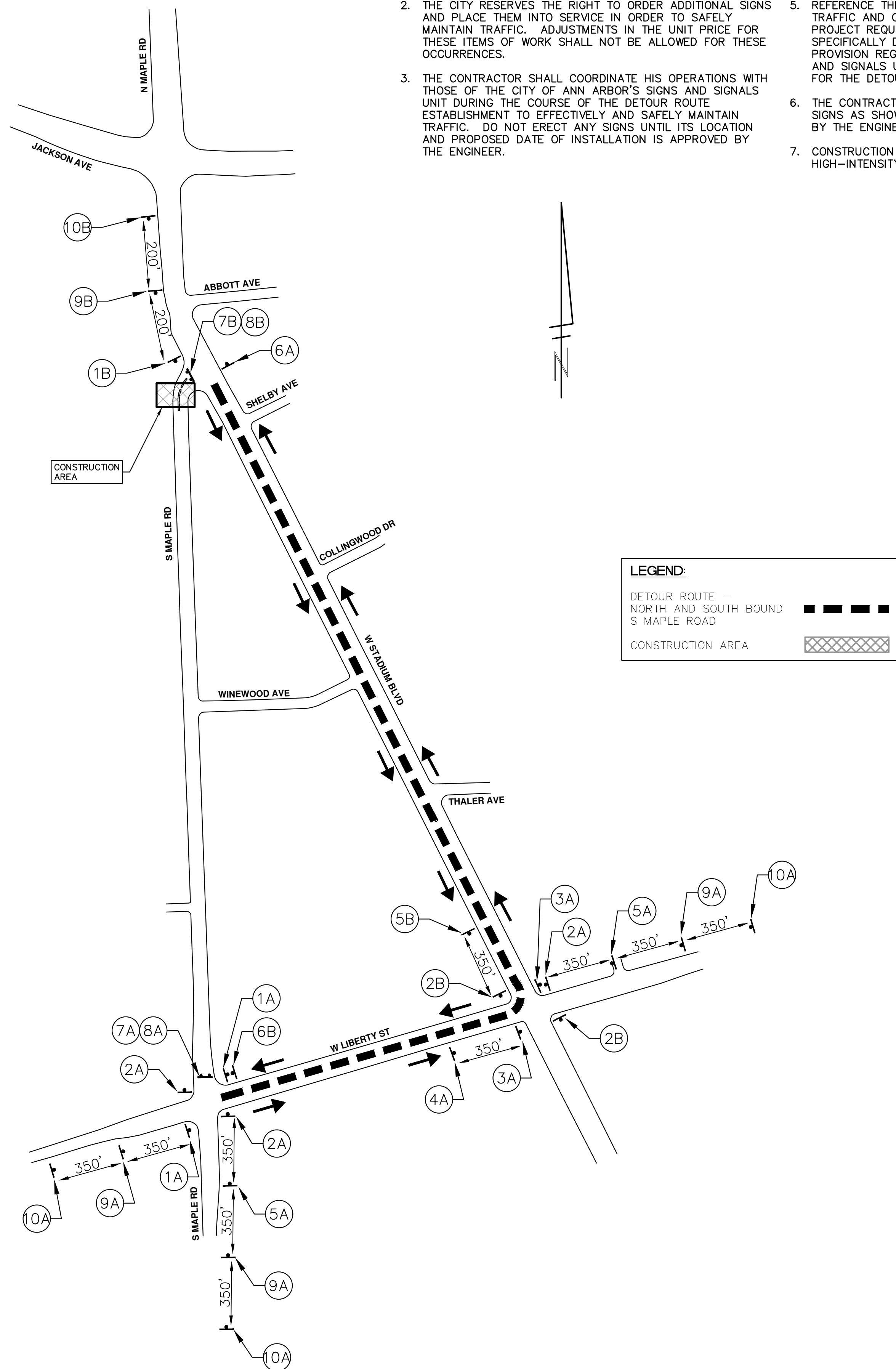


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
TPAR WALKWAY DEVICES

SCALE: N.T.S.
DRAWING No. 2023013-8

DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THE DETOUR IS TO BE IN PLACE DURING S MAPLE RD WATERMAIN TIE IN. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR NORTH AND SOUTH BOUND S MAPLE RD TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN & OPER"
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING NORTH AND SOUTH BOUND S MAPLE RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.



NORTH BOUND S MAPLE RD			SOUTH BOUND S MAPLE RD		
SIGN	NUMBER	QUANTITY	SIGN	NUMBER	QUANTITY
(1A) NB S MAPLE RD DETOUR ↑	D3-1 M4-9S 30"x24"	2	(1B) SB S MAPLE RD DETOUR ↑	D3-1 M4-9S 30"x24"	1
(2A) NB S MAPLE RD DETOUR →	D3-1 M4-9R 30"x24"	3	(2B) SB S MAPLE RD DETOUR →	D3-1 M4-9R 30"x24"	2
(3A) NB S MAPLE RD DETOUR ←	D3-1 M4-9L 30"x24"	2	(3B) SB S MAPLE RD DETOUR ←	D3-1 M4-9L 30"x24"	0
(4A) NB S MAPLE RD DETOUR ↙	D3-1 M4-9L (MOD) 30"x24"	1	(4B) SB S MAPLE RD DETOUR ↙	D3-1 M4-9L (MOD) 30"x24"	0
(5A) NB S MAPLE RD DETOUR ↘	D3-1 M4-9R (MOD) 30"x24"	2	(5B) SB S MAPLE RD DETOUR ↘	D3-1 M4-9R (MOD) 30"x24"	1
(6A) NB S MAPLE RD END DETOUR	D3-1 M4-8A 24"x18"	1	(6B) SB S MAPLE RD END DETOUR	D3-1 M4-8A 24"x18"	1
(7A) ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1	(7B) ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
(8A) DETOUR →	M4-10R 48"x18"	1	(8B) DETOUR ←	M4-10L 48"x18"	1
(9A) DETOUR AHEAD	D3-1 W20-2 36"x36"	3	(9B) DETOUR AHEAD	D3-1 W20-2 36"x36"	1
(10A) ROAD WORK AHEAD	D3-1 W20-1 36"x36"	3	(10B) ROAD WORK AHEAD	D3-1 W20-1 36"x36"	1
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, FURN & OPER - 2 EACH			BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, FURN & OPER - 2 EACH		
SIGN, PORTABLE, CHANGEABLE MESSAGE, FURN & OPER NTCIP-COMPLIANT - 2 EACH			SIGN, PORTABLE, CHANGEABLE MESSAGE, FURN & OPER NTCIP-COMPLIANT - 2 EACH		
VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING			VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

PRCMS MESSAGE PHASING		
PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	DURING CONSTRUCTION
S MAPLE RD CONSTRUCTION	NB S MAPLE RD CLSD TO THRU TRAFFIC	SB S MAPLE RD CLSD TO THRU TRAFFIC
MONTH DATE *	FOLLOW POSTED DETOUR	FOLLOW POSTED DETOUR

NOTE: PRCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER. TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.

* THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.

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

REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HWA TABLE REVISIONS
00	01/23/2025	BID SET

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-6647
 www.a2gov.org

CITY OF ANN ARBOR MICHIGAN

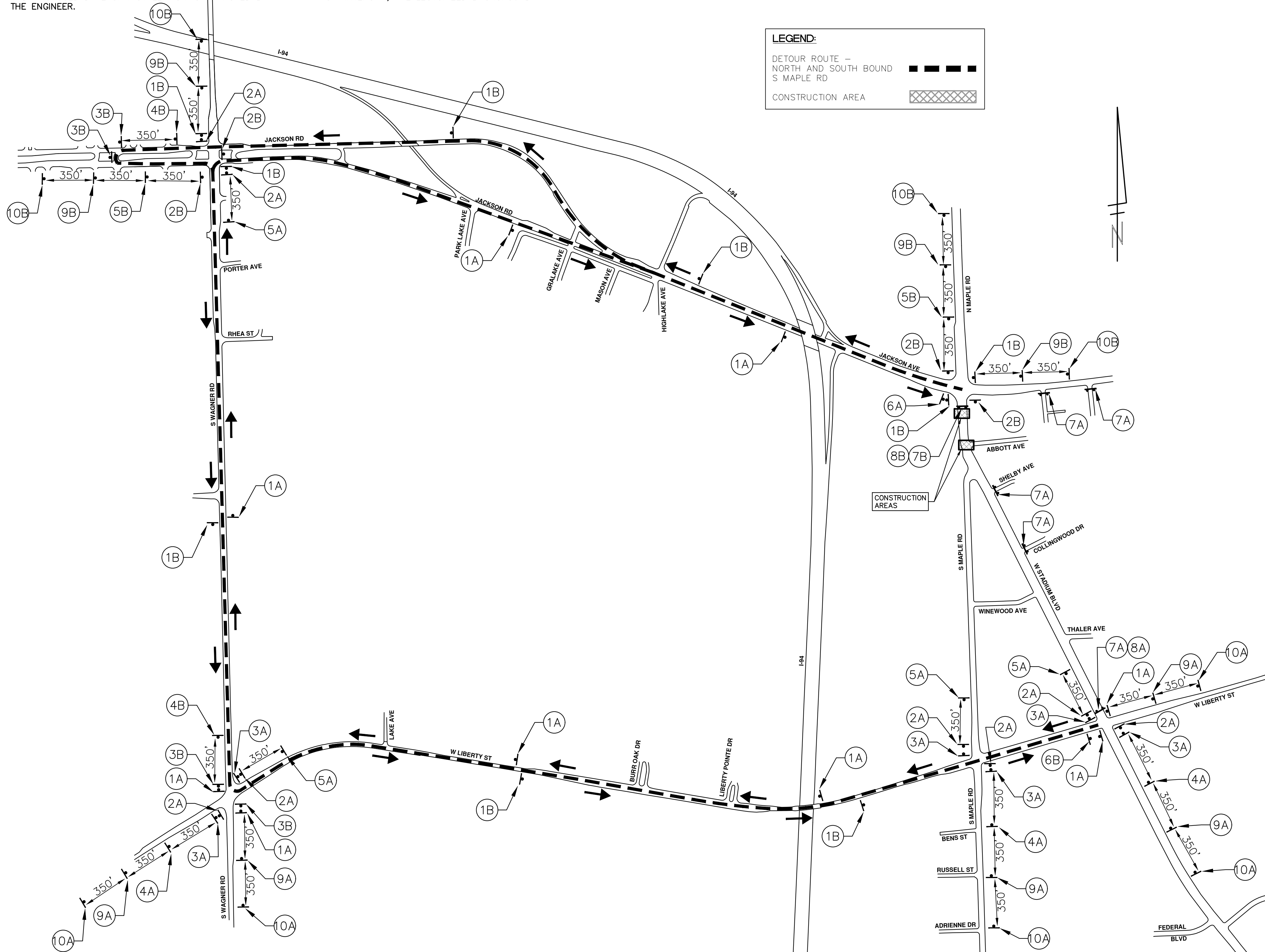
ENGINEERING
WESTGATE WATERMAIN
 DETOUR ROUTE - LEWIS JEWELLERS WATER MAIN CONNECTION

SCALE PLAN: 1" = 400'
 DRAWING No. 2023013-9
 SHEET No. 9 OF 37

DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT 7 DAYS IN ADVANCE OF THE DETOUR ROUTE ESTABLISHMENT, DURING THE COURSE OF THE DETOUR ROUTE, AND WILL NOTIFY 2 DAYS PRIOR TO THE DETOUR SETUP BEING LIFTED TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THE DETOUR IS TO BE IN PLACE DURING S MAPLE RD/ABBOTT AVE WATERMAIN TIE IN. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR NORTH AND SOUTH BOUND S MAPLE RD TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.

8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN & OPER"
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING NORTH AND SOUTH BOUND S MAPLE RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.



LEGEND:

DETOUR ROUTE - NORTH AND SOUTH BOUND S MAPLE RD

CONSTRUCTION AREA

NORTH BOUND S MAPLE RD		
SIGN	NUMBER	QUANTITY
1A	NB S MAPLE RD DETOUR ↑	D3-1: 9 M4-9S 30"x24": 9
	2A	NB S MAPLE RD DETOUR →
3A	NB S MAPLE RD DETOUR ←	D3-1: 6 M4-9L 30"x24": 6
	4A	NB S MAPLE RD DETOUR ↙
5A	NB S MAPLE RD DETOUR ↘	D3-1: 4 M4-9R (MOD) 30"x24": 4
	6A	NB S MAPLE RD END DETOUR
7A	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30": 5
	8A	DETOUR ←
9A	DETOUR AHEAD	D3-1: 5 W20-2 36"x36": 5
	10A	ROAD WORK AHEAD
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, FURN & OPER - 2 EACH		
SIGN, PORTABLE, CHANGEABLE MESSAGE, FURN & OPER NTCIP-COMPLIANT - 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		


SOUTH BOUND S MAPLE RD		
SIGN	NUMBER	QUANTITY
1B	SB S MAPLE RD DETOUR ↑	D3-1: 9 M4-9S 30"x24": 9
	2B	SB S MAPLE RD DETOUR →
3B	SB S MAPLE RD DETOUR ←	D3-1: 4 M4-9L 30"x24": 4
	4B	SB S MAPLE RD DETOUR ↙
5B	SB S MAPLE RD DETOUR ↘	D3-1: 2 M4-9R (MOD) 30"x24": 2
	6B	SB S MAPLE RD END DETOUR
7B	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30": 1
	8B	DETOUR →
9B	DETOUR AHEAD	D3-1: 4 W20-2 36"x36": 4
	10B	ROAD WORK AHEAD
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, FURN & OPER - 2 EACH		
SIGN, PORTABLE, CHANGEABLE MESSAGE, FURN & OPER NTCIP-COMPLIANT - 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

PRCMS MESSAGE PHASING

PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	DURING CONSTRUCTION
S MAPLE RD CONSTRUCTION	NB S MAPLE RD CLSD TO THRU TRAFFIC AT ABBOTT AVE	SB S MAPLE RD CLSD TO THRU TRAFFIC AT ABBOTT AVE
MONTH DATE *	FOLLOW POSTED DETOUR	FOLLOW POSTED DETOUR


NOTE: PRCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER. TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.

*THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.



Know what's below. Call before you dig.

	FDC	FDC	FDC	FDC	FDC	FDC	FDC	FDC	FDC
	KMB	KMB	KMB	KMB	KMB	KMB	KMB	KMB	KMB
	02/20/2025	01/29/2025	01/23/2025	01/23/2025	01/23/2025	01/23/2025	01/23/2025	01/23/2025	01/23/2025
	PRE-BID QUESTION REVISIONS	SHEET # 4: HVA TABLE REVISIONS	BID SET	DATE	DESCRIPTION	REV.			

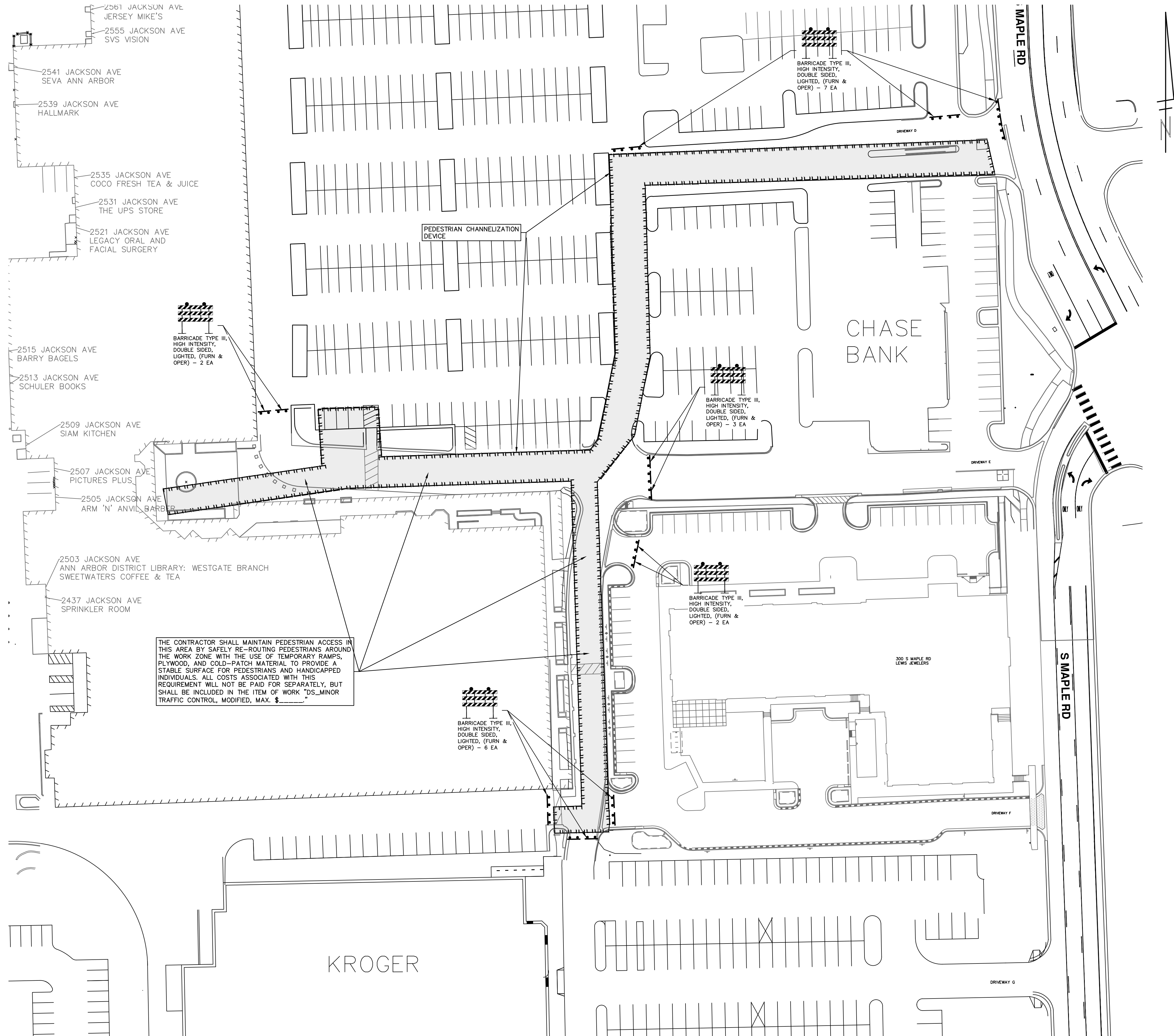


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
 DETOUR ROUTE - S MAPLE AND ABBOTT AVE WATER MAIN CONNECTION

SCALE PLAN: 1" = 400'
 DRAWING No. 2023013-10
 SHEET No. 10 OF 37

CONSTRUCTION COORDINATION AND MAINTENANCE OF TRAFFIC REQUIREMENTS:

1. THE CONTRACTOR SHALL STAGE AND EXECUTE THE PROJECT'S CONSTRUCTION SUCH THAT NO MORE THAN TWO ROADWAY CONNECTIONS "DRIVEWAYS" BETWEEN JACKSON AVENUE AND MAPLE ROAD ARE CLOSED AT ANY ONE TIME. ADDITIONALLY, IF DRIVEWAY "A" IS CLOSED, THEN DRIVEWAY "B" MUST REMAIN OPEN. SIMILARLY, DRIVEWAY "D" AND "E" CANNOT BOTH BE CLOSED SIMULTANEOUSLY.
2. THE CONTRACTOR MUST MAINTAIN VEHICLE AND PEDESTRIAN ACCESS TO ALL BUSINESSES DURING REGULAR BUSINESS HOURS.
3. WHILE PERFORMING THE WORK ON MAPLE ROAD, THE CONTRACTOR SHALL WORK CONSECUTIVE DAYS TO COMPLETE THE WORK AND OPEN THE ROAD TO TRAFFIC AS SOON AS POSSIBLE.
4. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE, DETOUR LIMITATIONS, AND OTHER DETAILS.
5. THE CONTRACTOR MUST PROVIDE ALTERNATIVE MAINTENANCE OF TRAFFIC CONFIGURATIONS FOR REVIEW AND APPROVAL. CONFIGURATION MUST MEET CITY OF ANN ARBOR SPECIFICATION REQUIREMENTS.
6. PROPER SIGNAGE:
 - 6.1. ADVANCED WARNING SIGNS
PLACE WARNING SIGNS AT ALL ENTRANCES TO THE SHOPPING PLAZA STATING "CONSTRUCTION AHEAD - EXPECT DELAYS" AND "LANE/SHOPS OPEN - USE CAUTION."
USE STANDARD MUTCD-COMPLIANT SIGNS LIKE "ROAD WORK AHEAD" (W20-1) AND "FLAGGER AHEAD" (W20-7A) IF APPLICABLE.
 - 6.2. DIRECTIONAL SIGNS
INSTALL SIGNS SHOWING DETOUR ROUTES, ALTERNATIVE PARKING, OR TEMPORARY PEDESTRIAN PATHWAYS (IF APPLICABLE).
USE "OPEN DURING CONSTRUCTION" OR "BUSINESS ACCESS OPEN" SIGNS TO REASSURE CUSTOMERS, PAID FOR AS DS_ADDITIONAL SIGNS.
 - 6.3. SPEED REDUCTION SIGNS
IF REQUIRED, PLACE SPEED LIMIT SIGNS TO SLOW DOWN VEHICLES NEAR THE ACTIVE WORK ZONE.
 - 6.4. BARRICADES AND REFLECTIVE TAPE
USE TYPE II OR III BARRICADES WITH REFLECTIVE TAPE AROUND THE WORK ZONE. FOR NIGHTTIME OPERATIONS, INCLUDE FLASHING WARNING LIGHTS.
 - 6.5. PEDESTRIANS AND ADA COMPLIANCE
PLACE "SIDEWALK CLOSED - USE OTHER SIDE" SIGNS WHERE SIDEWALKS ARE IMPACTED.
ENSURE TEMPORARY PEDESTRIAN WALKWAYS HAVE ADA-COMPLIANT ACCESS RAMPS.
7. WORK METHODS:
 - 7.1. SECTIONAL WORK ZONES
DIVIDE THE TRENCHING WORK INTO SMALLER, MANAGEABLE SECTIONS (E.G. 300-500 FEET AT A TIME). THIS KEEPS PARTS OF THE PLAZA OPEN AND ALLOWS FOR CONTINUOUS PROGRESS.
USE STEEL TRENCH PLATES TO COVER OPEN TRENCHES TEMPORARILY FOR VEHICLE AND PEDESTRIAN ACCESS.
 - 7.2. PHASED OPERATIONS
WORK IN PHASES:
PHASE 1: EXCAVATE AND INSTALL WATER MAIN FOR SECTION 1.
PHASE 2: BACKFILL AND RESTORE SECTION 1 WHILE SECTION 2 EXCAVATION BEGINS.
 - 7.3. TRAFFIC MANAGEMENT
USE FLAGGERS OR TEMPORARY TRAFFIC SIGNALS TO MANAGE VEHICLE FLOW.
ESTABLISH A ONE-WAY TRAFFIC SYSTEM IF LANE REDUCTION IS REQUIRED.
 - 7.4. PEDESTRIAN SAFETY
ERECT TEMPORARY BARRIERS SEPARATING PEDESTRIAN WALKWAYS FROM THE CONSTRUCTION ZONE.
USE CLEAR SIGNAGE TO DIRECT PEDESTRIANS TO SAFE CROSSING POINTS.
 - 7.5. STAGING AND STORAGE
KEEP CONSTRUCTION EQUIPMENT, MATERIALS, AND DEBRIS CONFINED TO DESIGNATED AREAS TO AVOID ENCRoACHING ON PARKING OR DRIVING LANES.
 - 7.6. DUST AND NOISE CONTROL
USE WATER SPRAYING TO SUPPRESS DUST.
ADHERE TO LOCAL NOISE ORDINANCES TO AVOID DISRUPTING BUSINESSES.



R:\2023013 Westgate Watermain\Plan Production\2023013Mtrf1.dwg Dwg Created: 16-Jan-25 - a2 standard bw.stb - Plot Date: 20-Feb-25

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

REV.	DATE	DESCRIPTION	DRAWN	CHECKED
02	02/20/2025	PRE-BID QUESTION REVISIONS	KMB	FDC
01	01/29/2025	SHEET 4: HMA TABLE REVISIONS	KMB	FDC
00	01/23/2025	BID SET	KMB	FDC

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
 TRAFFIC CONTROL
 WESTGATE SHOPPING CENTER

SCALE PLAN: 1" = 40'

DRAWING No. 2023013-11

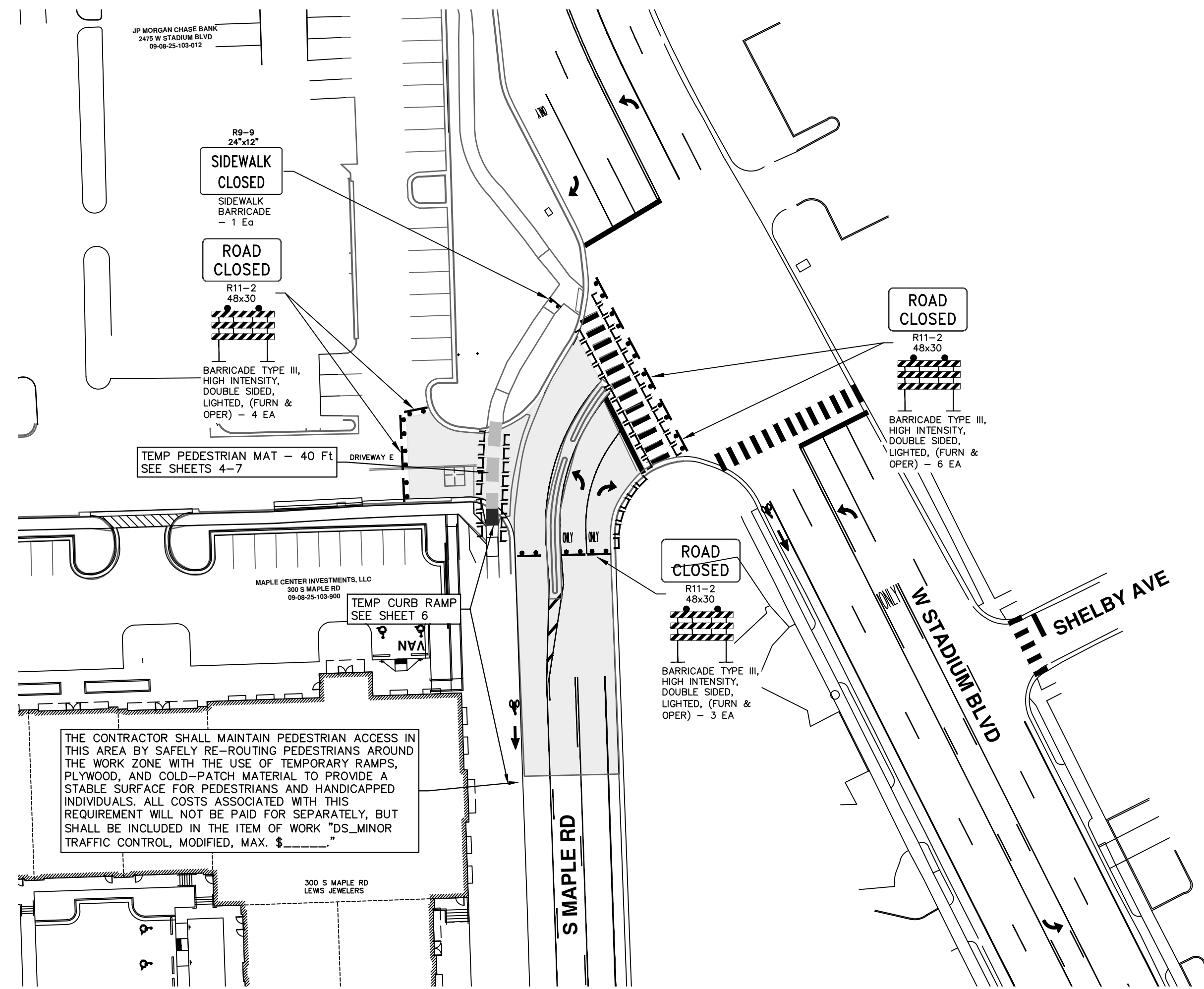
SHEET No. 11 OF 37

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-0647
 WWW.A2GOV.GOV

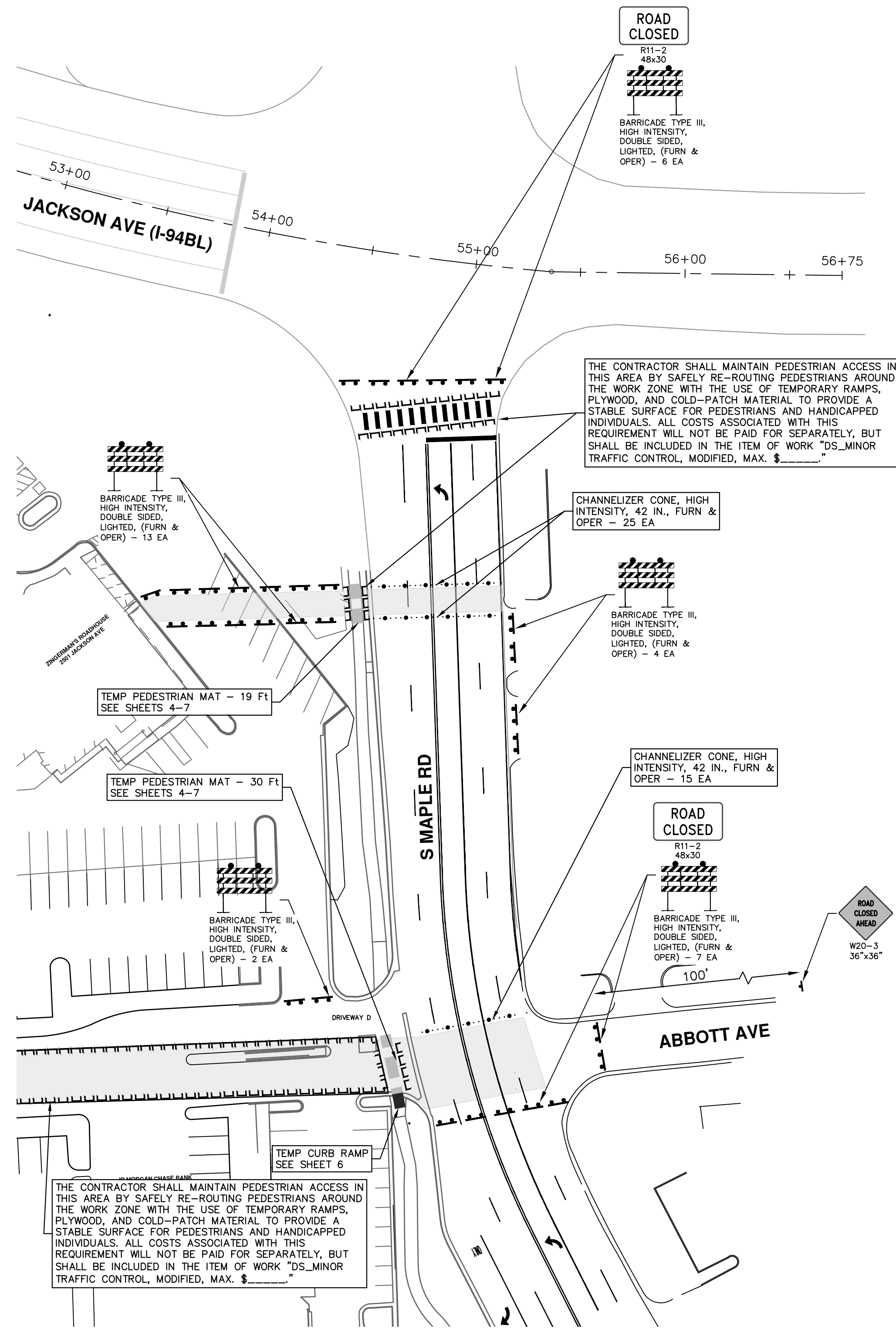
CONSTRUCTION COORDINATION AND MAINTENANCE OF TRAFFIC REQUIREMENTS:

- THE CONTRACTOR SHALL STAGE AND EXECUTE THE PROJECT'S CONSTRUCTION SUCH THAT NO MORE THAN TWO ROADWAY CONNECTIONS "DRIVEWAYS" BETWEEN JACKSON AVENUE AND MAPLE ROAD ARE CLOSED AT ANY ONE TIME. ADDITIONALLY, IF DRIVEWAY "A" IS CLOSED, THEN DRIVEWAY "B" MUST REMAIN OPEN. SIMILARLY, DRIVEWAY "D" AND "E" CANNOT BOTH BE CLOSED SIMULTANEOUSLY.
- THE CONTRACTOR MUST MAINTAIN VEHICLE AND PEDESTRIAN ACCESS TO ALL BUSINESSES DURING REGULAR BUSINESS HOURS.
- WHILE PERFORMING THE WORK ON MAPLE ROAD, THE CONTRACTOR SHALL WORK CONSECUTIVE DAYS TO COMPLETE THE WORK AND OPEN THE ROAD TO TRAFFIC AS SOON AS POSSIBLE.
- SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE, DETOUR LIMITATIONS, AND OTHER DETAILS.
- PROPER SIGNAGE:
 - ADVANCED WARNING SIGNS
PLACE WARNING SIGNS AT ALL ENTRANCES TO THE SHOPPING PLAZA STATING "CONSTRUCTION AHEAD - EXPECT DELAYS" AND "LANE/SHOPS OPEN - USE CAUTION."
USE STANDARD MUTCD-COMPLIANT SIGNS LIKE "ROAD WORK AHEAD" (W20-1) AND "FLAGGER AHEAD" (W20-7A) IF APPLICABLE.
 - DIRECTIONAL SIGNS
INSTALL SIGNS SHOWING DETOUR ROUTES, ALTERNATIVE PARKING, OR TEMPORARY PEDESTRIAN PATHWAYS (IF APPLICABLE).
USE "OPEN DURING CONSTRUCTION" OR "BUSINESS ACCESS OPEN" SIGNS TO REASSURE CUSTOMERS, PAID FOR AS DS_ADDITIONAL SIGNS.
 - SPEED REDUCTION SIGNS
IF REQUIRED, PLACE SPEED LIMIT SIGNS TO SLOW DOWN VEHICLES NEAR THE ACTIVE WORK ZONE.
 - BARRICADES AND REFLECTIVE TAPE
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- PEDESTRIANS AND ADA COMPLIANCE
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USE STEEL TRENCH PLATES TO COVER OPEN TRENCHES TEMPORARILY FOR VEHICLE AND PEDESTRIAN ACCESS.
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ESTABLISH A ONE-WAY TRAFFIC SYSTEM IF LANE REDUCTION IS REQUIRED.
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USE CLEAR SIGNAGE TO DIRECT PEDESTRIANS TO SAFE CROSSING POINTS.
 - STAGING AND STORAGE
KEEP CONSTRUCTION EQUIPMENT, MATERIALS, AND DEBRIS CONFINED TO DESIGNATED AREAS TO AVOID ENCROACHING ON PARKING OR DRIVING LANES.
 - DUST AND NOISE CONTROL
USE WATER SPRAYING TO SUPPRESS DUST.
ADHERE TO LOCAL NOISE ORDINANCES TO AVOID DISRUPTING BUSINESSES.



LEWIS JEWELERS WATER MAIN CONNECTION



S MAPLE AND ABBOTT AVE WATER MAIN CONNECTION

R:\2023013 Westgate Watermain\Plan Production\2023013Mtrf3.dwg Dwg Created: 22-Jan-25 - _a2 standard b.w.stb - Plot Date: 20-Feb-25



REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HWA TABLE REVISIONS
00	01/23/2025	BID SET

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1067
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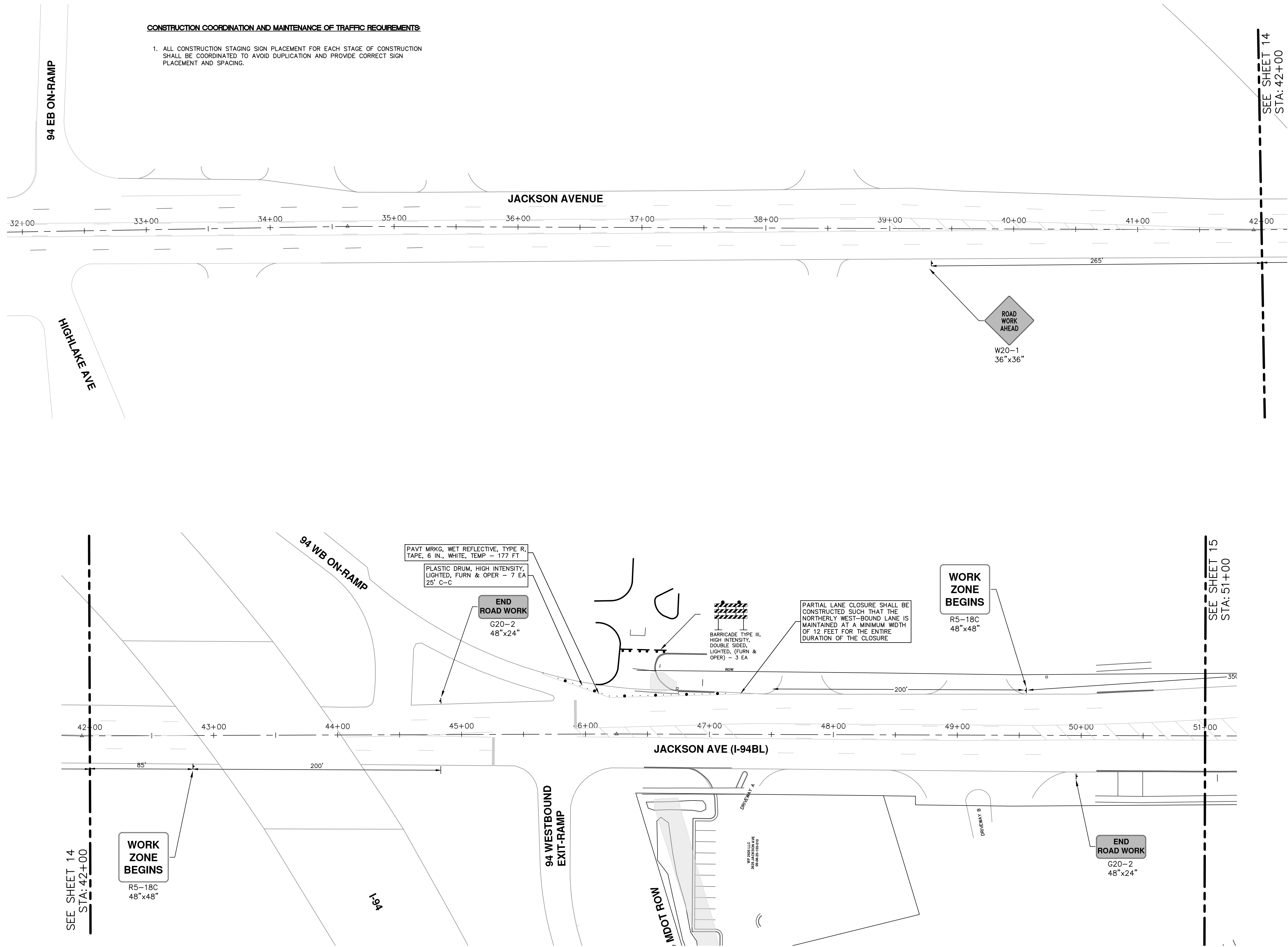
CITY OF ANN ARBOR - ENGINEERING
WESTGATE WATERMAIN
TRAFFIC CONTROL
LEWIS JEWELERS AND ABBOTT AVE WATER MAIN CONNECTION

SCALE PLAN: 1" = 40'
DRAWING No. 2023013-12

R:\2023013 Westgate Watermain\Plan Production\2023013Mtrf.dwg Dwg Created: 15-Jan-25 - _a2_standard bw.stb - Plot Date: 20-Feb-25

CONSTRUCTION COORDINATION AND MAINTENANCE OF TRAFFIC REQUIREMENTS:

1. ALL CONSTRUCTION STAGING SIGN PLACEMENT FOR EACH STAGE OF CONSTRUCTION SHALL BE COORDINATED TO AVOID DUPLICATION AND PROVIDE CORRECT SIGN PLACEMENT AND SPACING.



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WESTGATE WATERMAIN

TRAFFIC CONTROL - JACKSON AVE WATER MAIN BORE

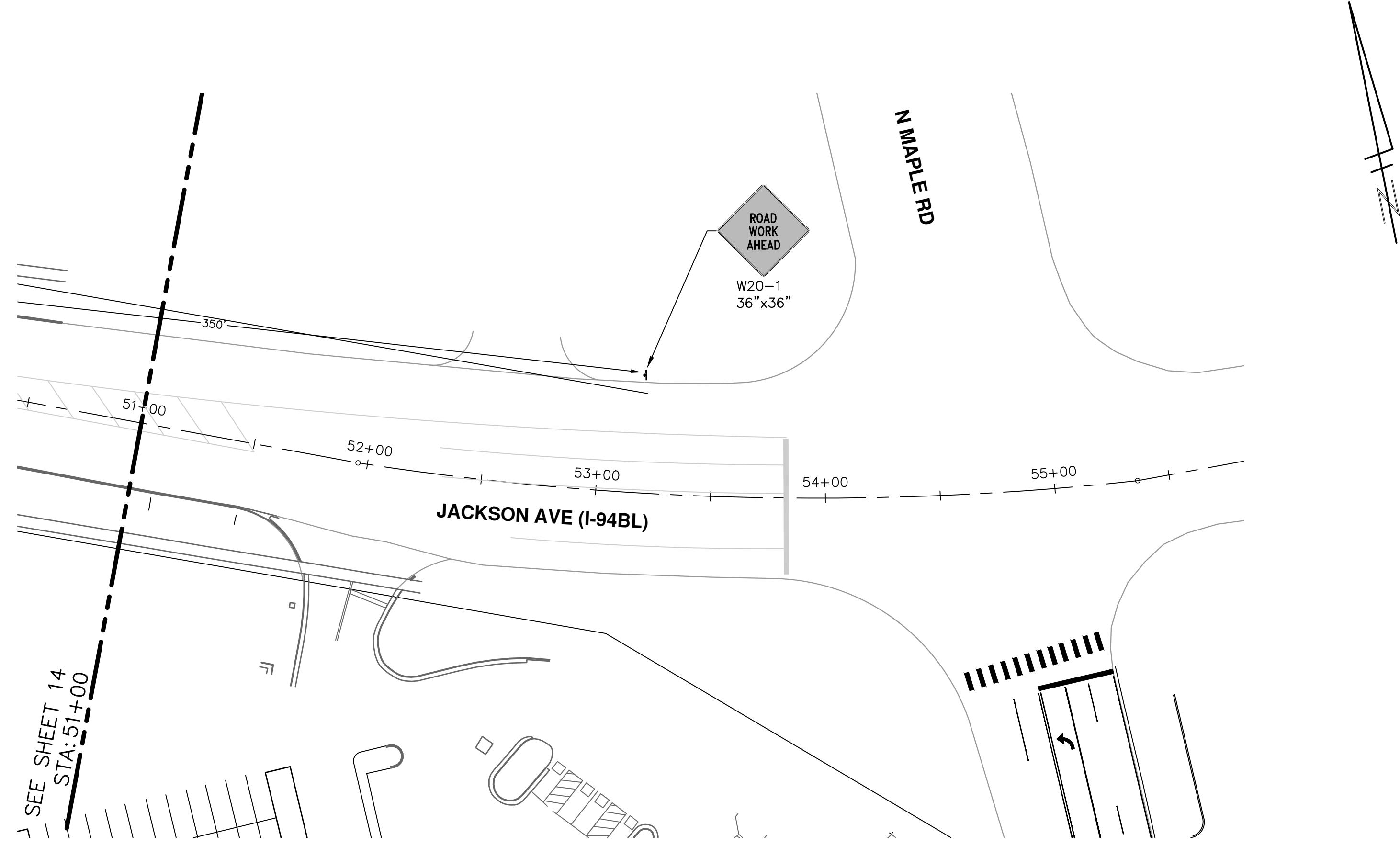
STA. 33+00 - STA. 51+00

14 OF 37

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	PRE-BID QUESTION REVISIONS	02/20/2025	KMB	FDC
01	SHEET 4: HVA TABLE REVISIONS	01/29/2025	KMB	FDC
00	BID SET	01/23/2025	KMB	FDC

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-6647
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SHEET No.

SCALE : 1" = 40'
DRAWING No.
2023013-15

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
TRAFFIC CONTROL - JACKSON AVE WATER MAIN BORE
STA. 51+00 - STA. 54+00



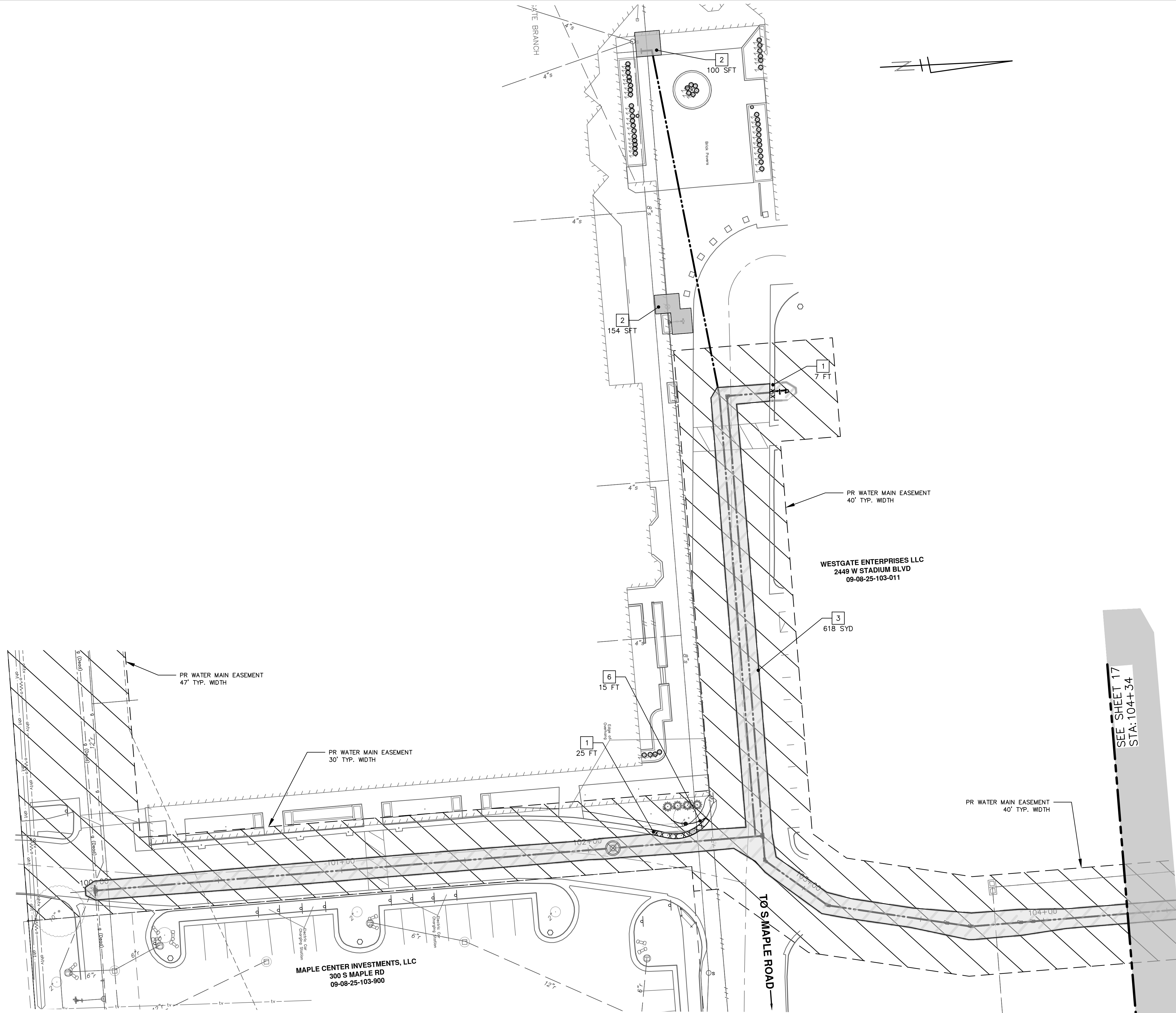
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
734.794.4410
www.a2gov.org

REV. DESCRIPTION

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	PRE-BID QUESTION REVISIONS	02/20/2025	KMB	FDC
01	SHEET 4: HMA TABLE REVISIONS	01/29/2025	KMB	FDC
00	BID SET	01/23/2025	KMB	FDC



Know what's below.
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REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Bollard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
Approx. Limits of Water Trench	

- * SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- * WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS

SEE SHEET 17
STA: 104+34

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 20'

DRAWING No. 2023013-16

SHEET No. 16 OF 37

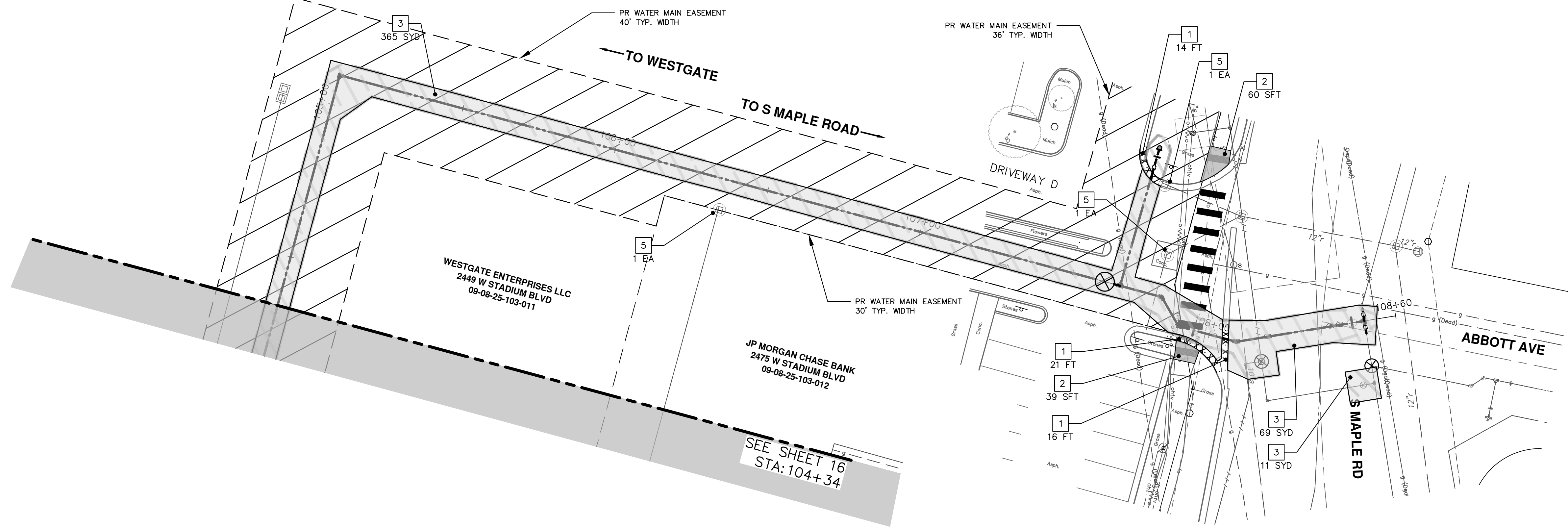
WESTGATE WATERMAIN REMOVALS

SE WATER MAIN REROUTE STA. 100+00 - STA. 104+50

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ANN ARBOR: 734.794.4410
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REV.	DESCRIPTION	DATE	BY	CHECKED
00	REVISE THIS WHEN GOING OUT FOR BID			

811
Know what's below.
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NOTES:

1. SEE SHEET 20 FOR ADDITIONAL REMOVALS ON S MAPLE RD.

REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Bollard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

- * SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- * WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS

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SCALE PLAN: 1" = 20'

DRAWING No. 2023013-17

WESTGATE WATERMAIN REMOVALS

SE WATER MAIN REROUTE STA. 104+50 - STA. 108+76

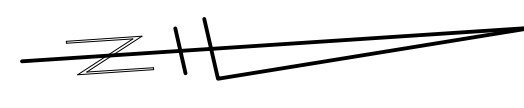
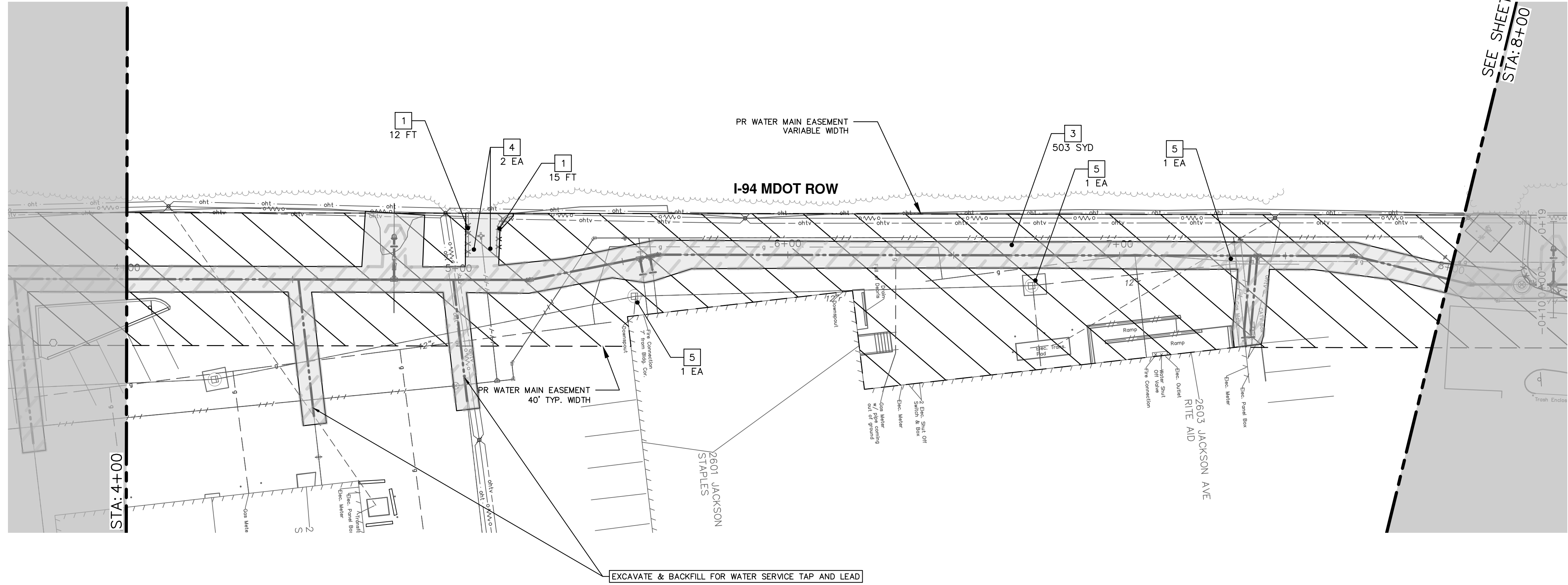
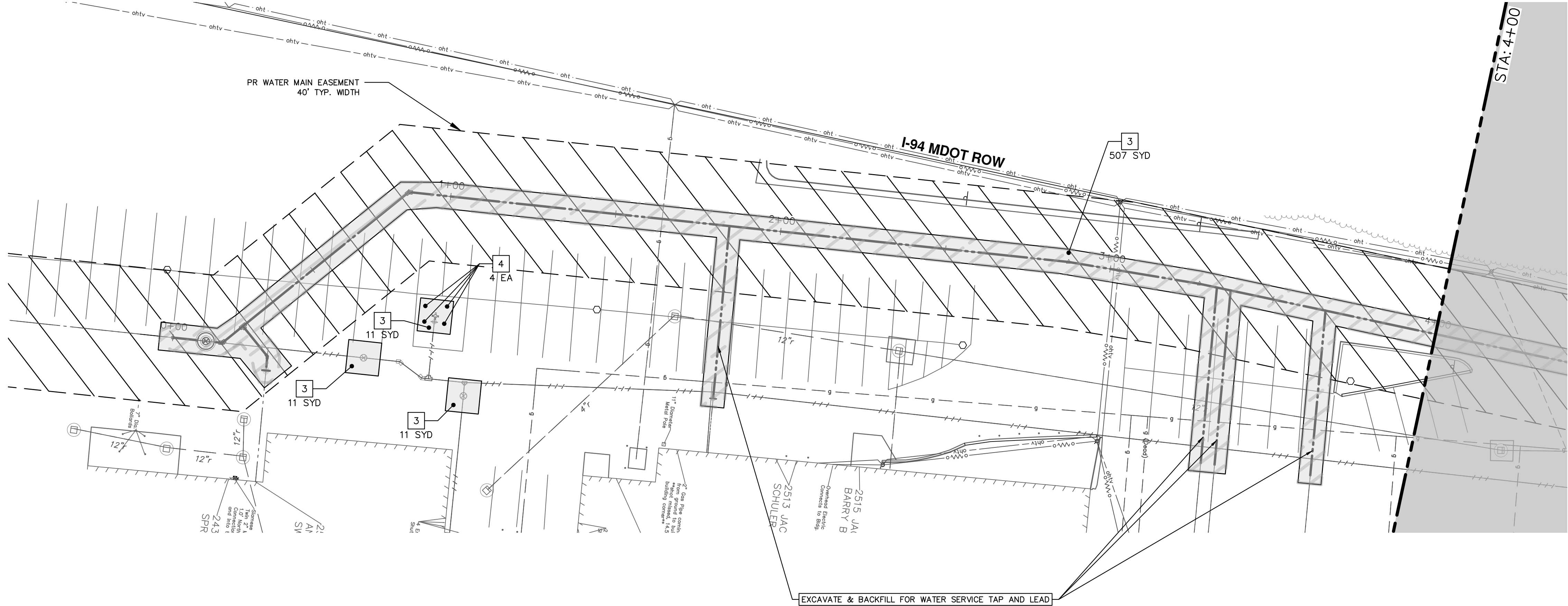
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ANN ARBOR MICHIGAN

REV.	DESCRIPTION	DATE	BY	CHECKED
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17 OF 37





REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Bollard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

- SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS



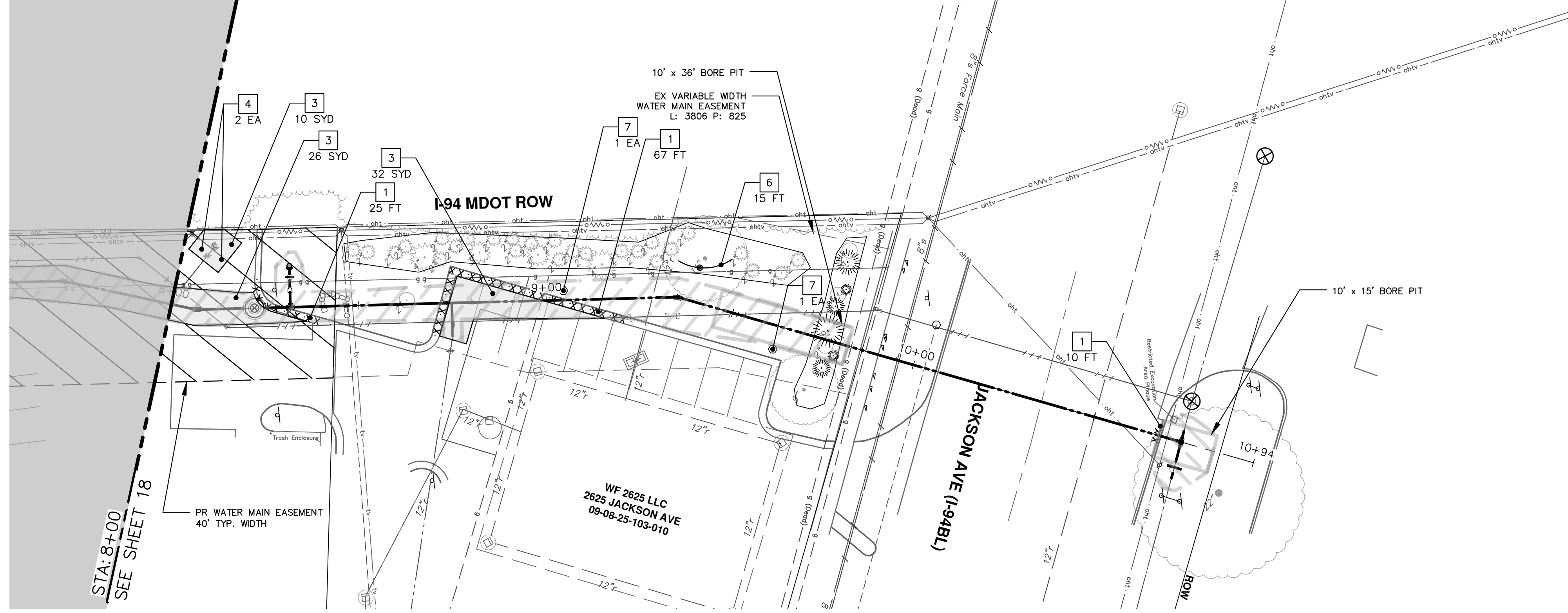
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
REMOVALS
WEST SIDE STA. 0+00 - STA. 8+00

SCALE: 1" = 20'
DRAWING No. 2023013-18



REMOVAL KEY	
KEY	DESCRIPTION
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2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Bollard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

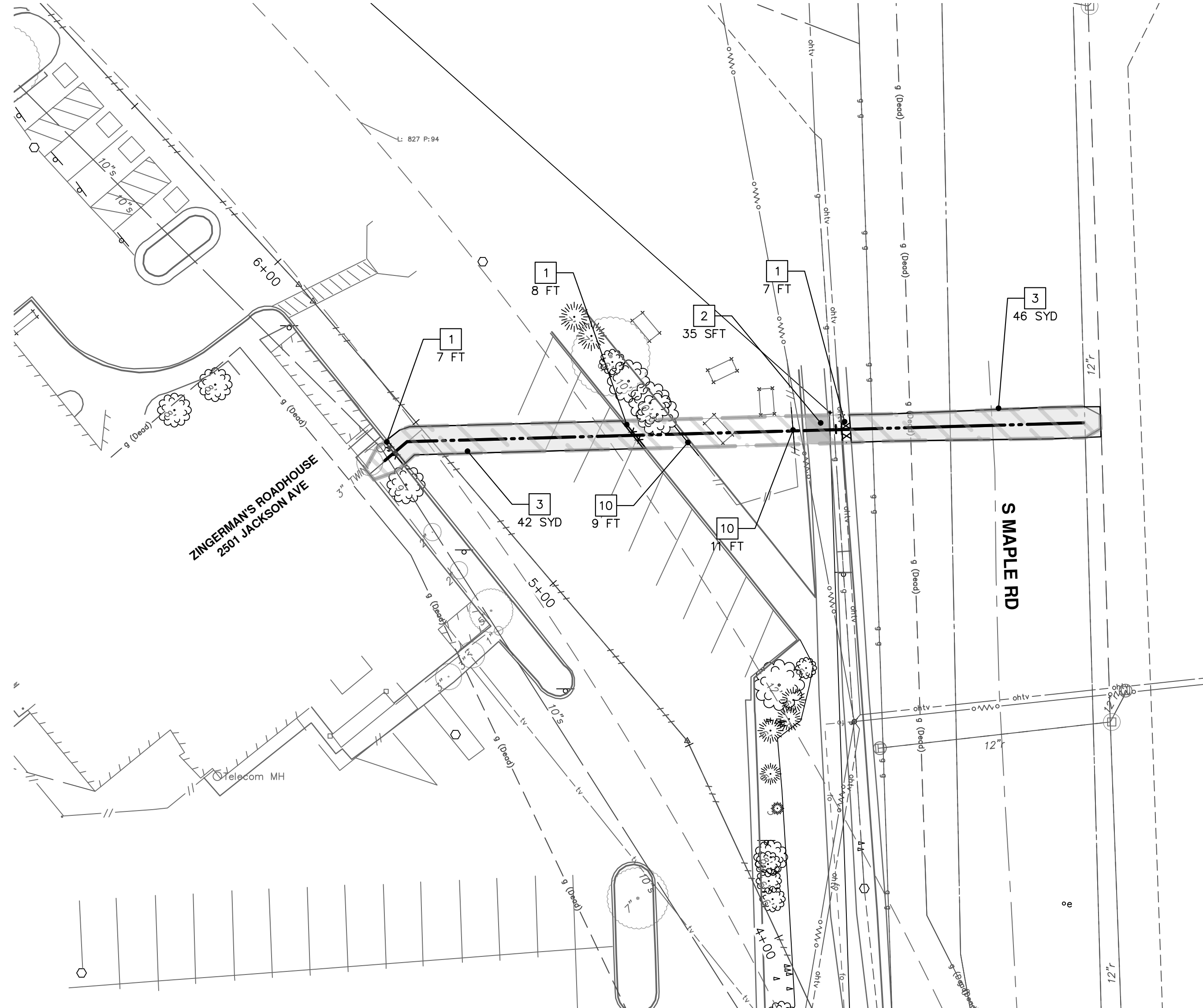
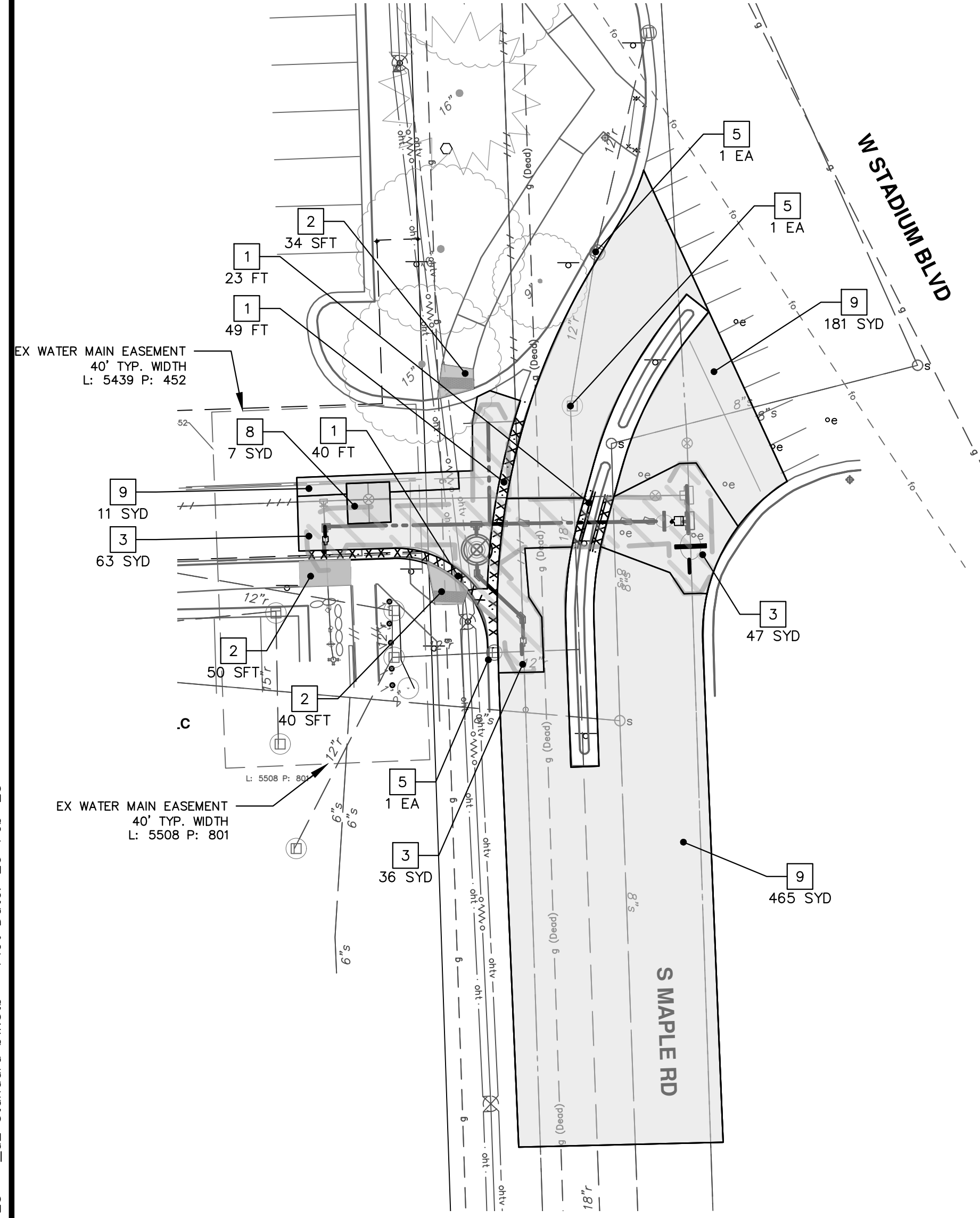
- * SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- * WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS



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REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Ballard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

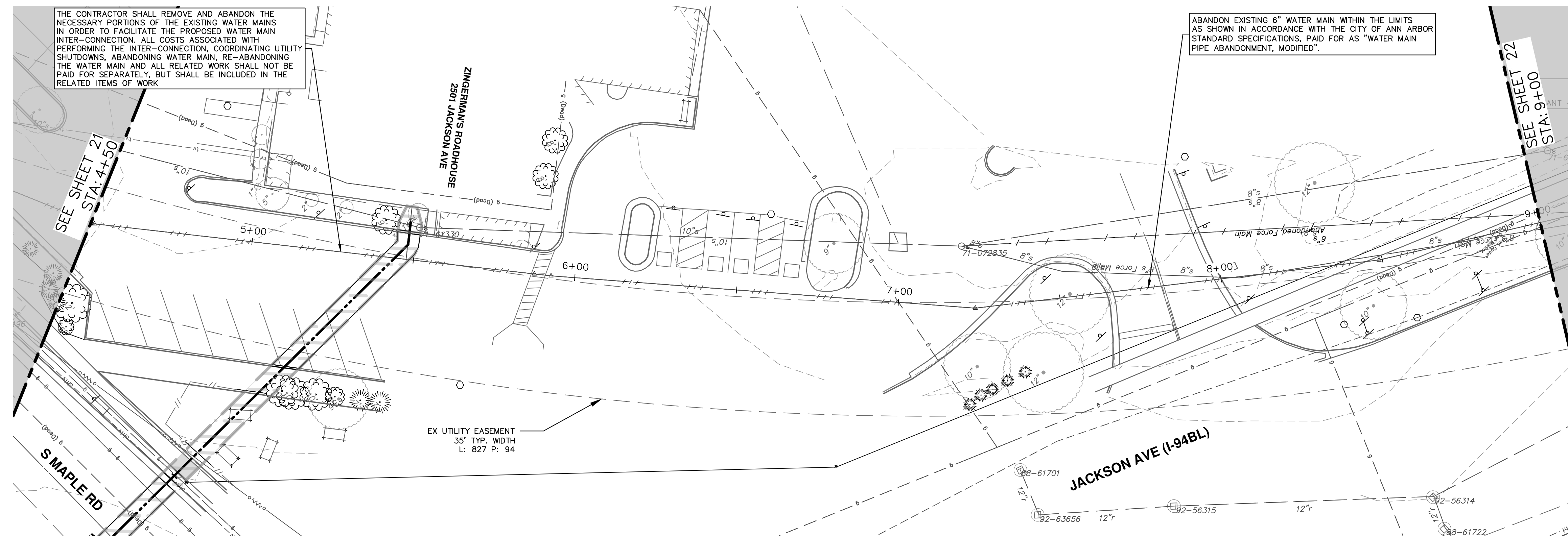
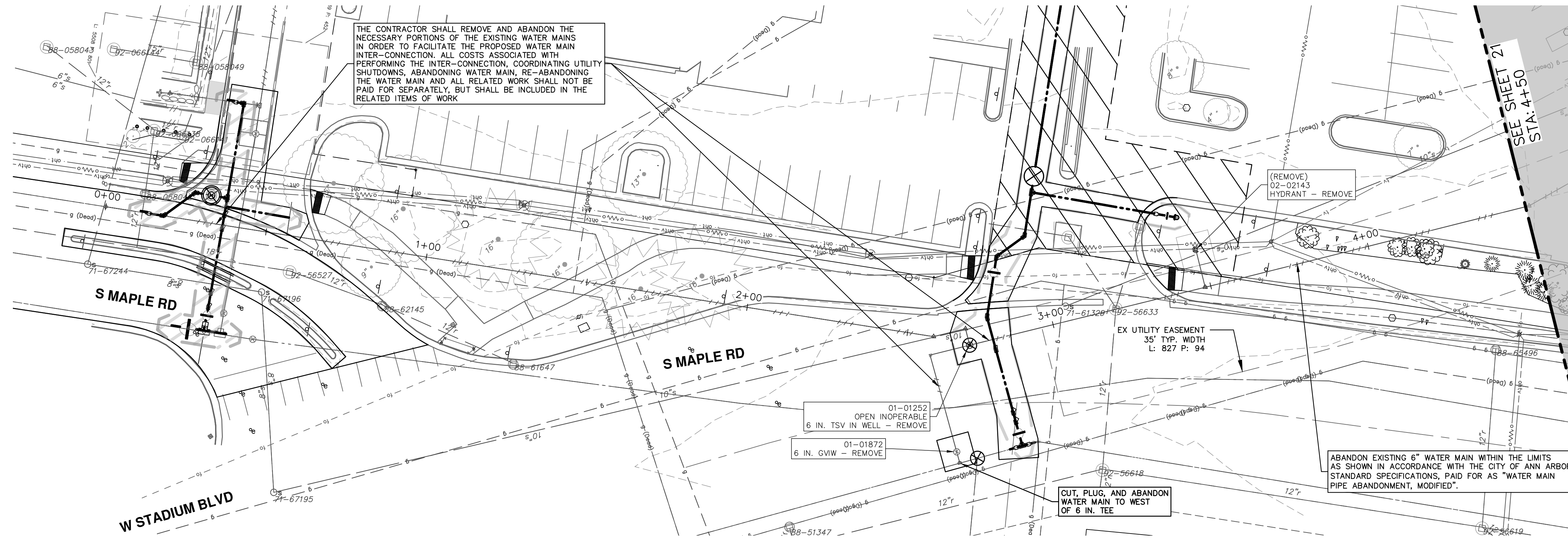
- * SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- * WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS



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00	REVISE THIS WHEN GOING OUT FOR BID			





REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Ballard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

- SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS

WATER MAIN STRUCTURE REMOVALS	
STRUCTURE	TYPE
01-01872	6 in. GVIW - Remove
01-01252 OPEN INOPERABLE	6 in. TSV in Well - Remove
02-02143	HYDRANT - Remove



Know what's below.
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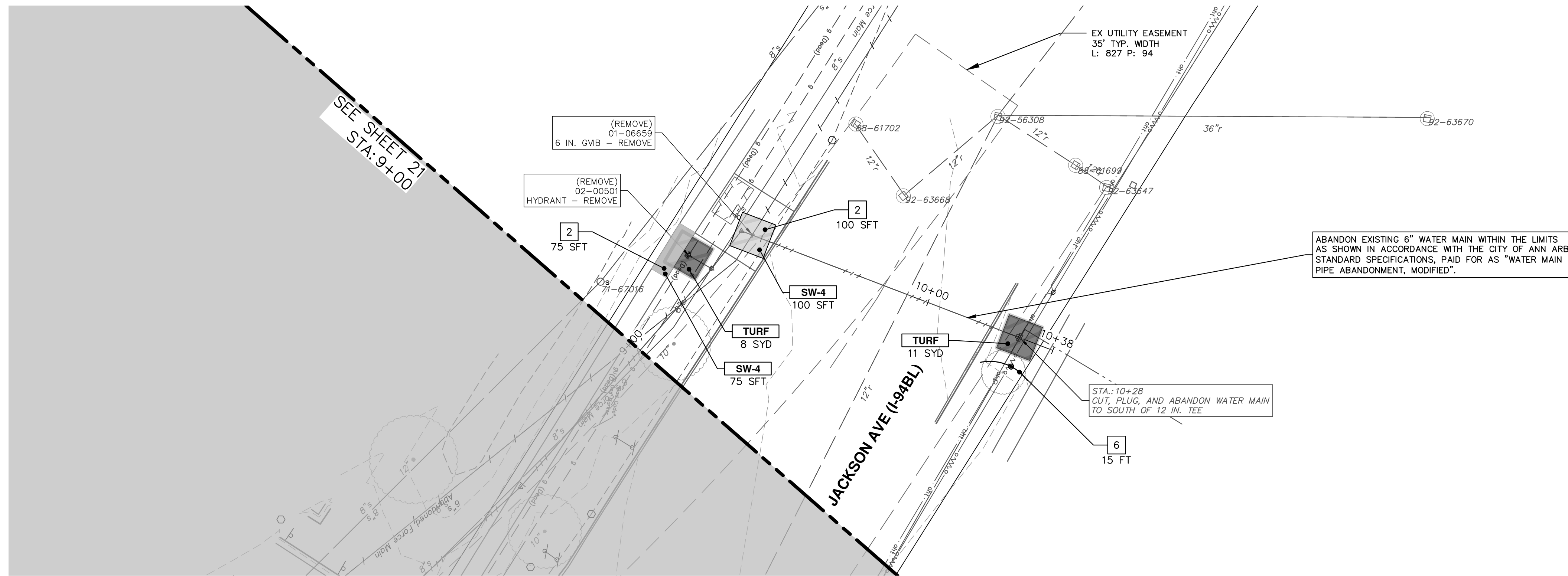
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
6 IN WATER MAIN ABANDON

SCALE: 1" = 20'
DRAWING No.
2023013-21



WATER MAIN STRUCTURE REMOVALS	
STRUCTURE	TYPE
01-06659	6 in. GVB - Remove
02-00501	HYDRANT - Remove

REMOVAL KEY	
KEY	DESCRIPTION
1	Curb, Gutter, and Curb and Gutter, Any Type, Rem *
2	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem
3	HMA, Any Thickness, Rem *
4	Concrete Ballard, Rem
5	Erosion Control, Inlet Protection, Fabric Drop
6	Protective Fencing
7	Light Pole, Rem and Salvage
8	Concrete Pavt, Any Thickness, Rem
9	Cold-Milling HMA Surface
10	Fence, Salvage and Re-Erect
	Approx. Limits of Water Trench

- * SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER
- * WATER MAIN REMOVALS SHOWN ON WATER MAIN SHEETS

CONSTRUCTION KEY	
KEY	DESCRIPTION
	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
	Conc, Curb or Curb & Gutter, All Types
	Conc, Driveway Opening, Type M
	Conc, Sidewalk, 4 In.
	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
	Adjust Structure Cover
	Structure Cover
	Steel Bollard
	Turf Restoration
	Detectable Warning Surface

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WESTGATE WATERMAIN

6 IN WATER MAIN ABANDON

S MAPLE 6IN WATER MAIN ABANDON STA 9+00 TO 10+38

SCALE: 1" = 20'

DRAWING No. 2023013-22

SHEET No. 22 OF 37

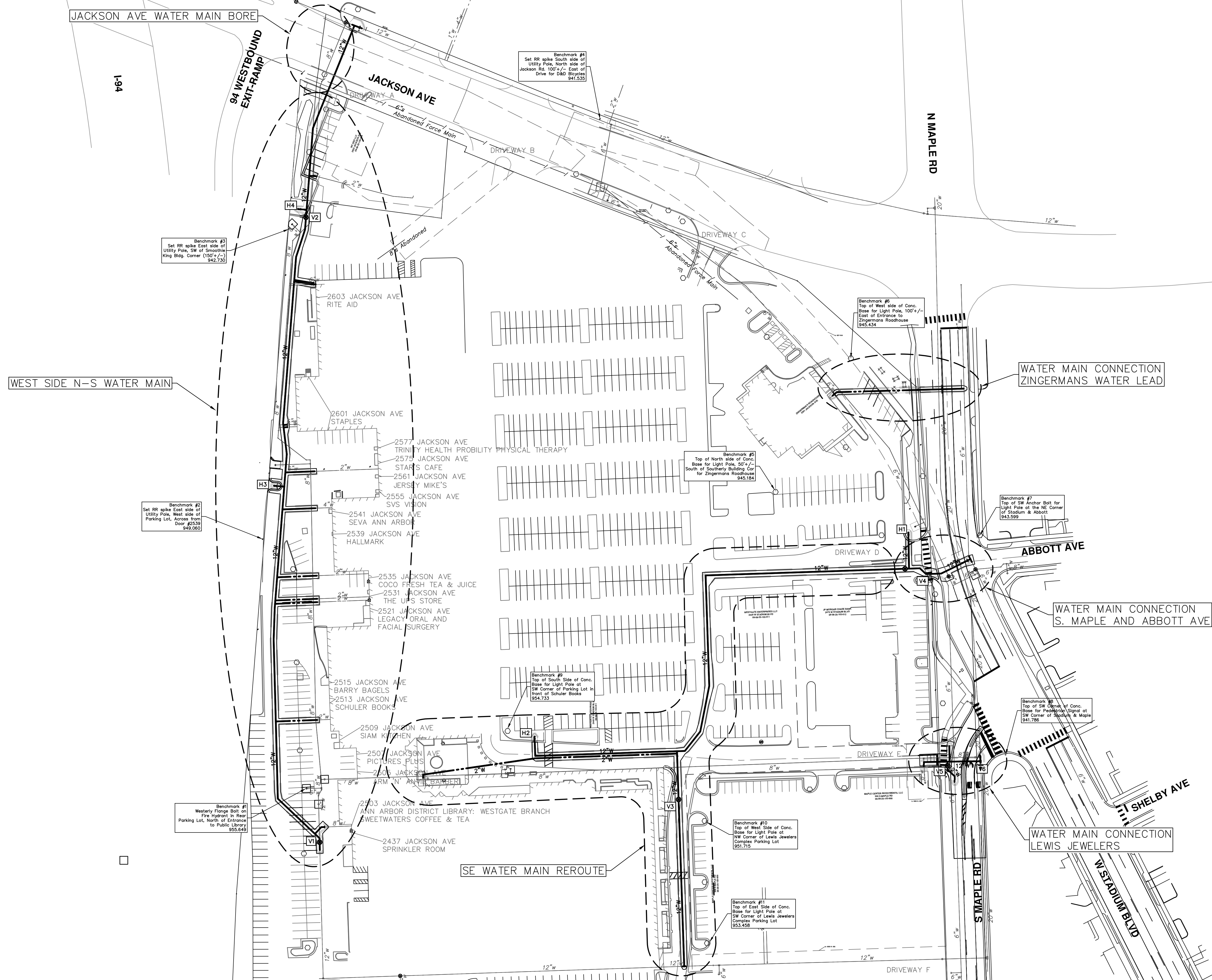
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NO	DATE	BY	CHECKED

R:\2023013 Westgate Watermain\Plan Production\20230130vruutil.dwg Dwg Created: 18-Sep-24 - _a2 standard bw.stb - Plot Date: 20-Feb-25



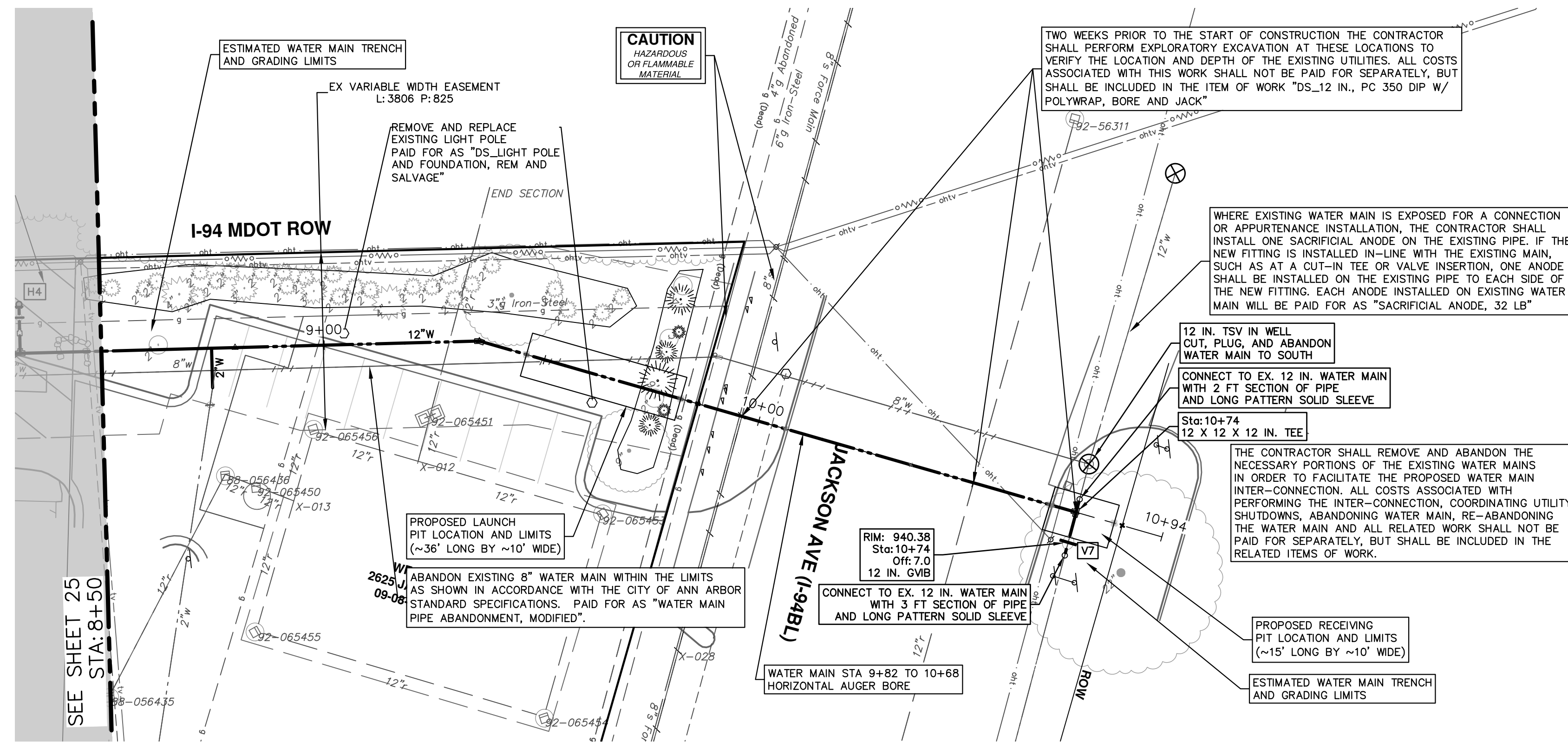
REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HMA TABLE REVISIONS
00	01/23/2025	BID SET
		DRAWN
		CHECKED

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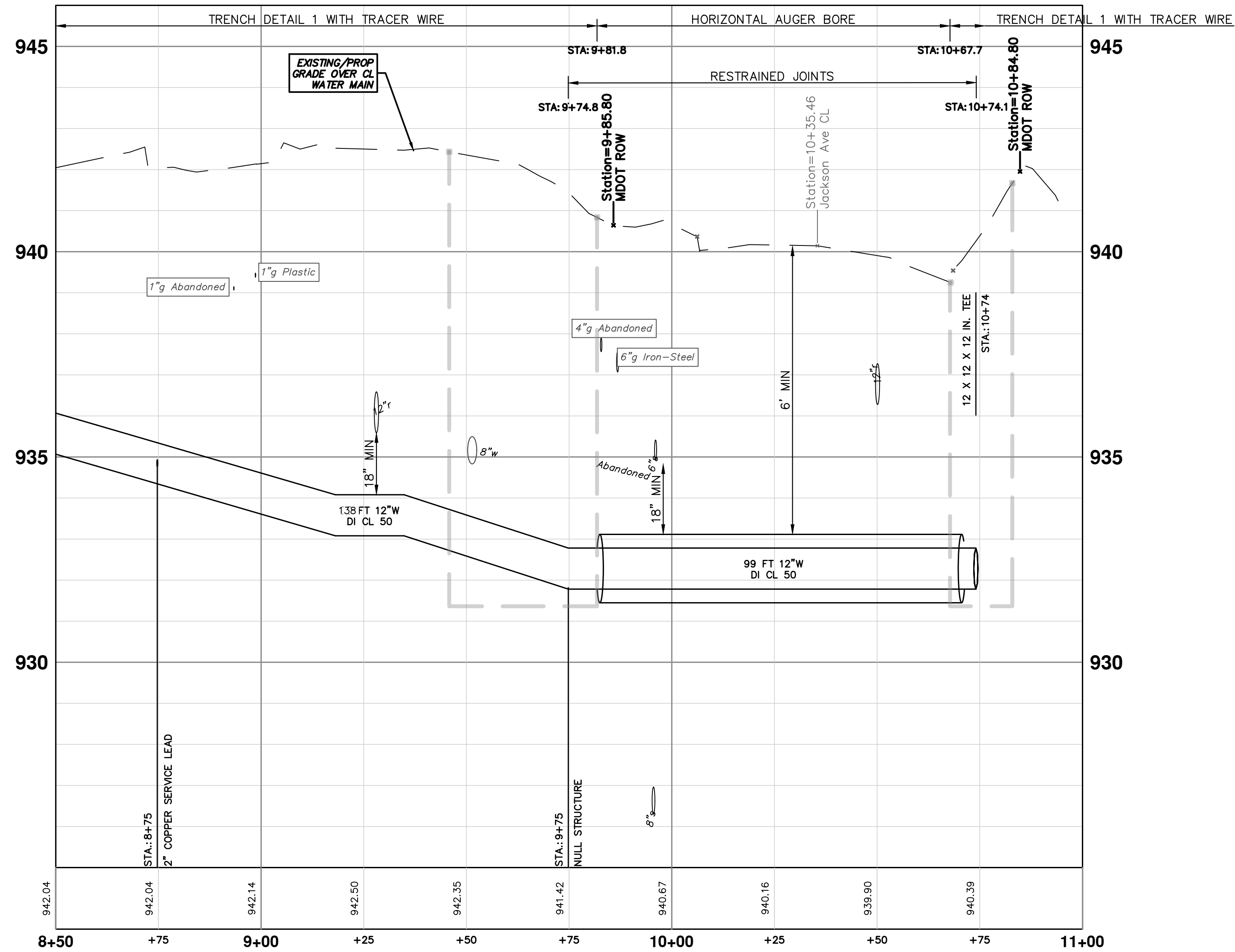


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
OVERALL WATER MAIN LAYOUT

SCALE PLAN: 1" = 60'
DRAWING No. 2023013-23



WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V7	12 in. GWB	10+74	940.38



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
WEST SIDE NORTH-SOUTH WATER MAIN
STA. 8+50 - STA. 10+81

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No. 2023013-26

SHEET No. 26 OF 37

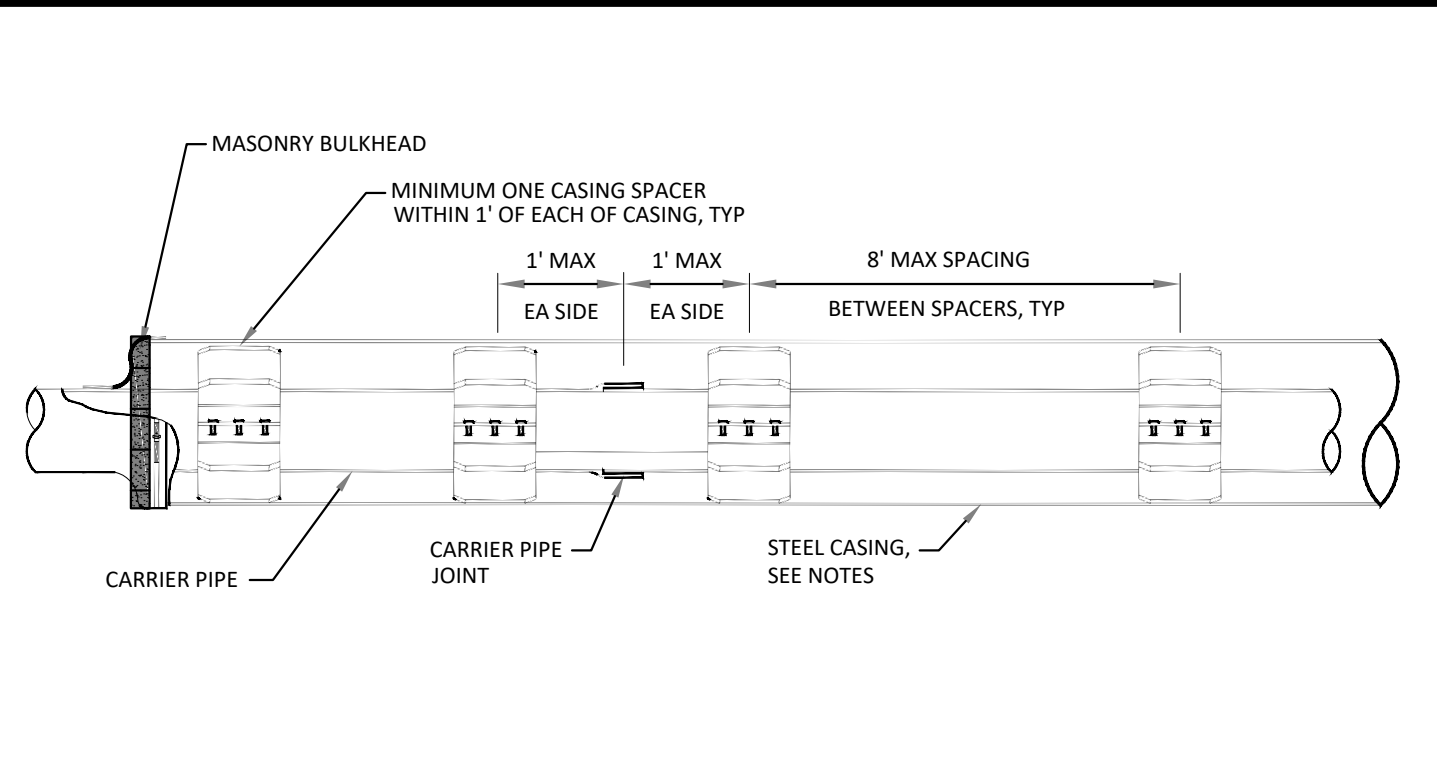
NO.	DATE	BY	CHECKED	DESCRIPTION
00				REV.
				DATE
				DATE
				DATE
				DATE

COPY A2REVDATE.DWG TO PROJECT FOLDER AND REVISE THIS WHEN GOING OUT FOR BID

R:\2023013 Westgate Watermain\Plan Production\2023013Watr1.dwg Dwg Created: 20-Feb-25 --_a2 standard bw.stb -- Plot Date: 20-Feb-25

NOTES:

- EXISTING PAVEMENT AND CURB/GUTTER TO BE SAWCUT TO FULL DEPTH AT PROPOSED LIMITS OF REMOVAL.
- ALL EXCAVATION WORK WITHIN THE LIMITS OF THE ROADWAY, AND WITHIN A 1:1 ANGLE OF INFLUENCE BEHIND THE BACK OF CURB, SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH SECTION 206 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, UP TO THE BOTTOM OF THE REPLACEMENT XX-INCH-THICK (CIP) AGGREGATE BASE.
- CLASS II GRANULAR MATERIAL SHALL MEET THE MATERIAL REQUIREMENTS OF GRANULAR MATERIAL CLASS II AS SET FORTH IN SECTION 902 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. PLACEMENT AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 301 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 21AA LIMESTONE SHALL MEET THE MATERIAL REQUIREMENTS OF DENSE-GRADED AGGREGATE 21AA AS SET FORTH IN SECTION 902 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. PLACEMENT AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 302 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.



- NOTES:**
- THE AREA BETWEEN THE CASING PIPE AND WATER MAIN SHALL BE LEFT OPEN EXCEPT FOR SOLID BRICK MASONRY BULKHEAD AT EACH END, AND MANUFACTURED SPACERS WHEN REQUIRED.
 - EACH JOINT OF CASING PIPE SHALL BE WELDED TOGETHER ALONG ENTIRE CIRCUMFERENCE OF PIPE.
 - MANUFACTURED SPACERS SHALL BE USED.
 - WOOD BLOCK SPACERS ARE NOT ALLOWED.
 - BORING SHALL BE AT 90 DEGREES TO ALL CROSSINGS UNLESS OTHERWISE APPROVED. THE BORING OF THE HOLE AND INSTALLATION OF THE CASING PIPE SHALL BE SIMULTANEOUS. BORE HOLE DIAMETER SHALL ESSENTIALLY BE THE SAME AS THE OUTSIDE DIAMETER OF THE CASING PIPE TO BE INSTALLED.
 - STEEL PIPE CASING SHALL BE SMOOTH STEEL PIPE FABRICATED IN SECTIONS IN ACCORDANCE WITH ASTM A53, TYPE E OR S, GRADE B OR ASTM A139, GRADE B. LENGTHS OF CASING PIPE SHALL BE AS LONG AS PRACTICAL FOR SITE CONDITIONS.
 - JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM. JOINTS BETWEEN SECTIONS SHALL BE COMPLETELY WELDED TO THE PRECEDING SECTIONS. PRIOR TO WELDING JOINTS, THE CONTRACTOR SHALL ENSURE THAT BOTH ENDS OF THE CASING SECTIONS BEING WELDED ARE SQUARE.
 - STEEL PIPE CASING SIZE AND WALL THICKNESS SHALL BE AS SPECIFIED IN ARTICLE I OF THESE STANDARDS. VERIFY CASING SIZES PRIOR TO ORDERING AND SIZING CASING INSULATORS.
 - CASING SPACERS SHALL BE RESTRAINED-TYPE BOLTED SPACERS AND SHALL HAVE A MAXIMUM SPACING AS SHOWN, OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS CLOSER.
 - REFER TO ARTICLE 1, XXVI CASING PIPE, FOR PIPE SIZES.

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REV. NO.	DATE	DRAWN BY	CHECKED BY

TYPICAL PIPE CASING DETAIL

DR. ENG.	CH. ENG.	DRAWING NO.
		SD-W-6
SCALE: N.T.S.	DATE: 12/8/2023	

DETAIL A

DETAIL	CONCRETE	LANE TIES	CONCRETE
A1	8" AS SHOWN	0.0500	1/4" (0.0891)
A2	8" UNREINFORCED	0.0500	1/4" (0.0891)
A3	10" AS SHOWN	0.0941	1/4" (0.0891)

DETAIL B

DETAIL	CONCRETE	LANE TIES	CONCRETE
B1	8" AS SHOWN	0.0500	1/4" (0.0891)
B2	8" UNREINFORCED	0.0500	1/4" (0.0891)
B3	10" AS SHOWN	0.0941	1/4" (0.0891)

DETAIL C

DETAIL	CONCRETE	LANE TIES	CONCRETE
C1	1'-4" AS SHOWN	0.0500	0.0484
C2	1'-4" UNREINFORCED	0.0500	0.0484
C3	1'-4" AS SHOWN	0.0632	0.0632
C4	2'-0" AS SHOWN	0.0632	0.0632
C5	2'-4" AS SHOWN	0.0737	0.0737
C6	2'-4" UNREINFORCED	0.0737	0.0737

DETAIL D

DETAIL	CONCRETE	LANE TIES	CONCRETE
D1	8" AS SHOWN	0.0500	1/4" (0.0891)
D2	8" UNREINFORCED	0.0500	1/4" (0.0891)
D3	10" AS SHOWN	0.0941	1/4" (0.0891)

DETAIL E

DETAIL	CONCRETE	LANE TIES	CONCRETE
E1	1'-4" AS SHOWN	0.0510	0.0510
E2	1'-4" UNREINFORCED	0.0510	0.0510
E3	2'-0" UNREINFORCED	0.0477	0.0477

DETAIL F

DETAIL	CONCRETE	LANE TIES	CONCRETE
F1	1'-4" AS SHOWN	0.0484	0.0484
F2	1'-4" UNREINFORCED	0.0484	0.0484
F3	2'-0" AS SHOWN	0.0632	0.0632
F4	2'-0" UNREINFORCED	0.0632	0.0632
F5	2'-4" AS SHOWN	0.0737	0.0737
F6	2'-4" UNREINFORCED	0.0737	0.0737

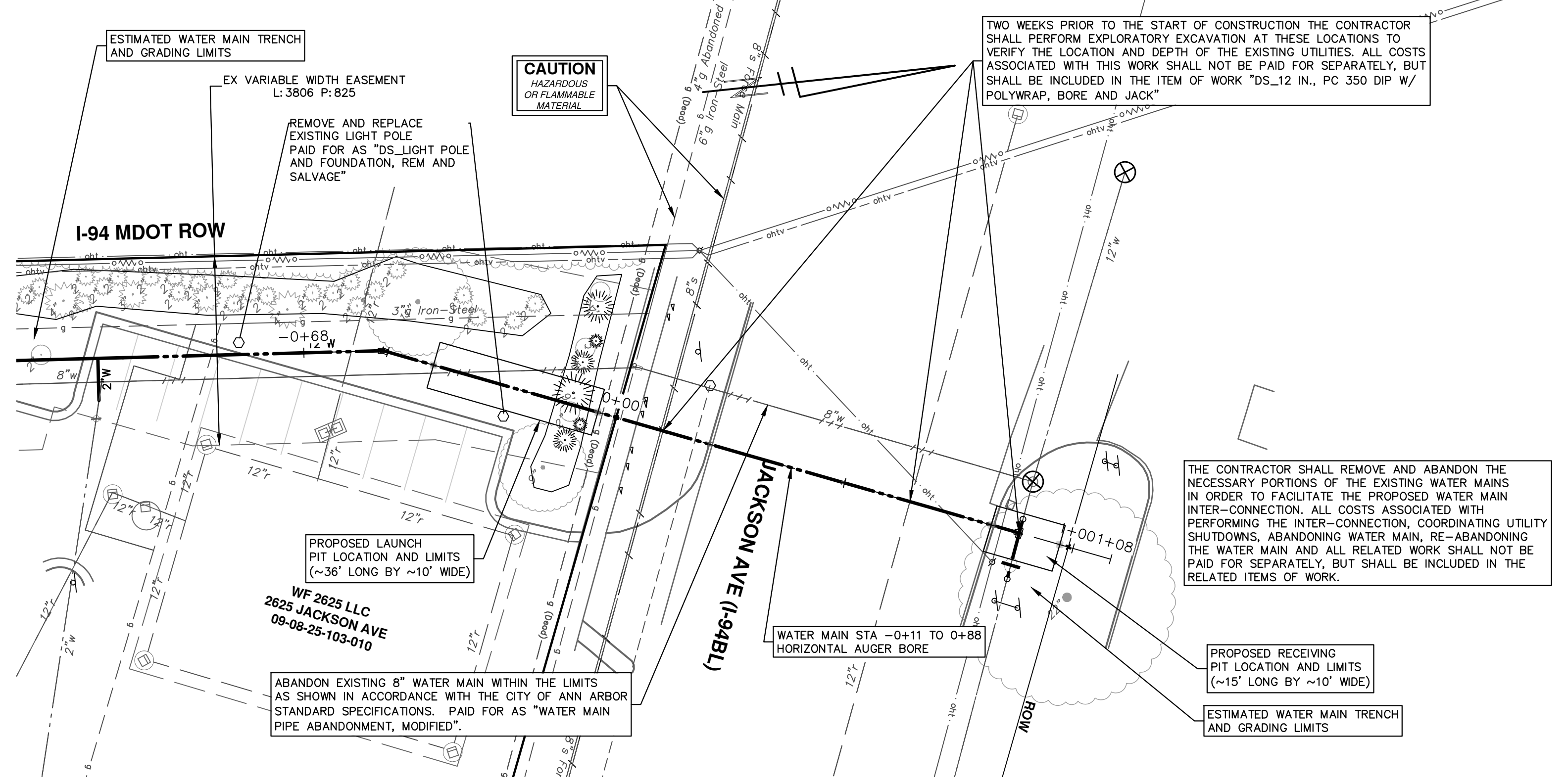
DEPARTMENT SECTION: MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARDS PLAN FOR

CONCRETE CURB AND GUTTER

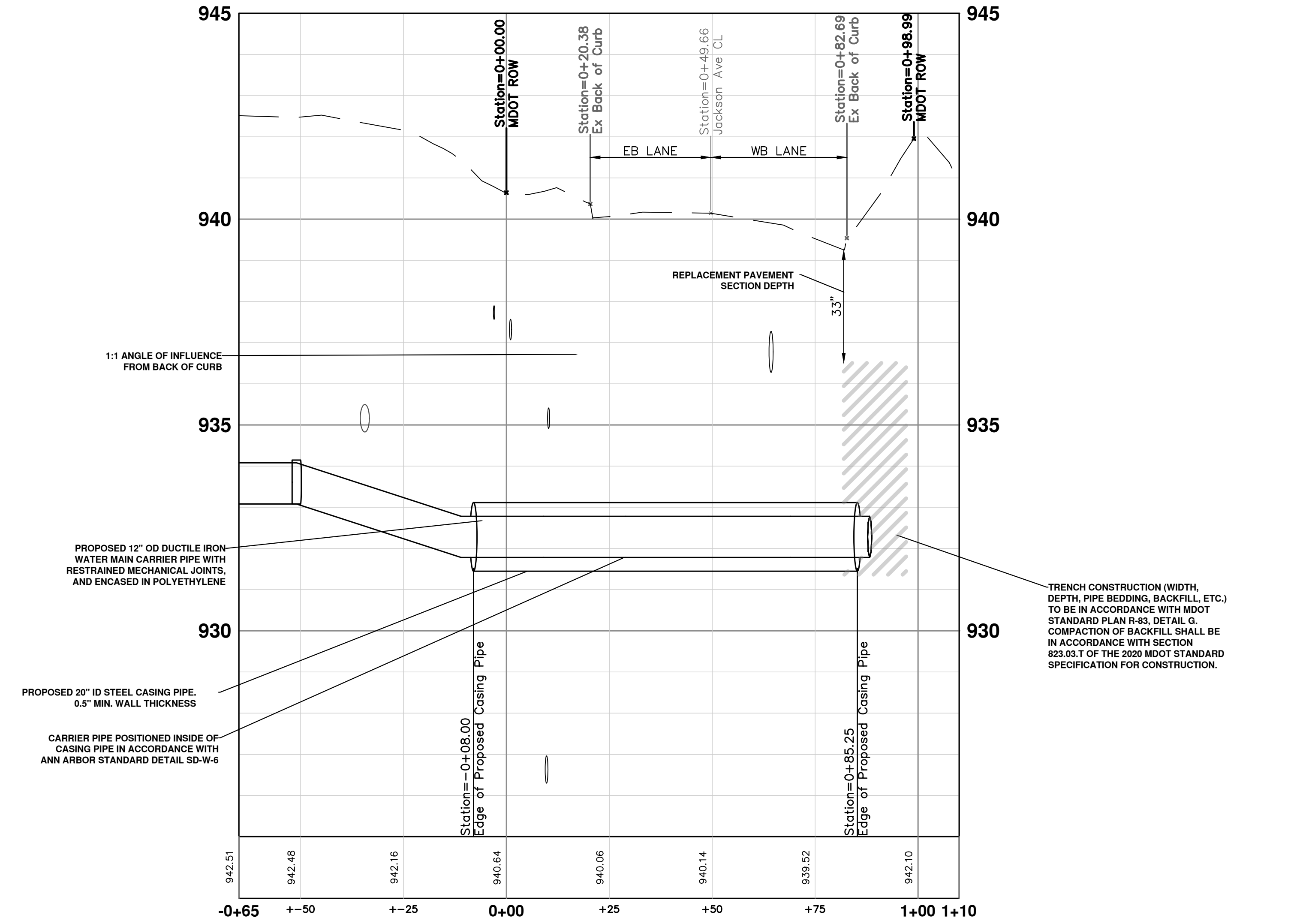
PREPARED BY: [Signature]
APPROVED BY: [Signature]

DESIGNED BY: [Signature]
CHECKED BY: [Signature]

DATE: 5-10-2014
PLAN DATE: 2-6-2024
R-30-G
SHEET 1 OF 2



AA - JACKSON AVENUE JACK AND BORE UTILITY INSTALLATION



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
WEST SIDE NORTH-SOUTH WATER MAIN
JACKSON AVE MDOT PLAN

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING NO. 2023013-27

SHEET NO. 27 OF 37

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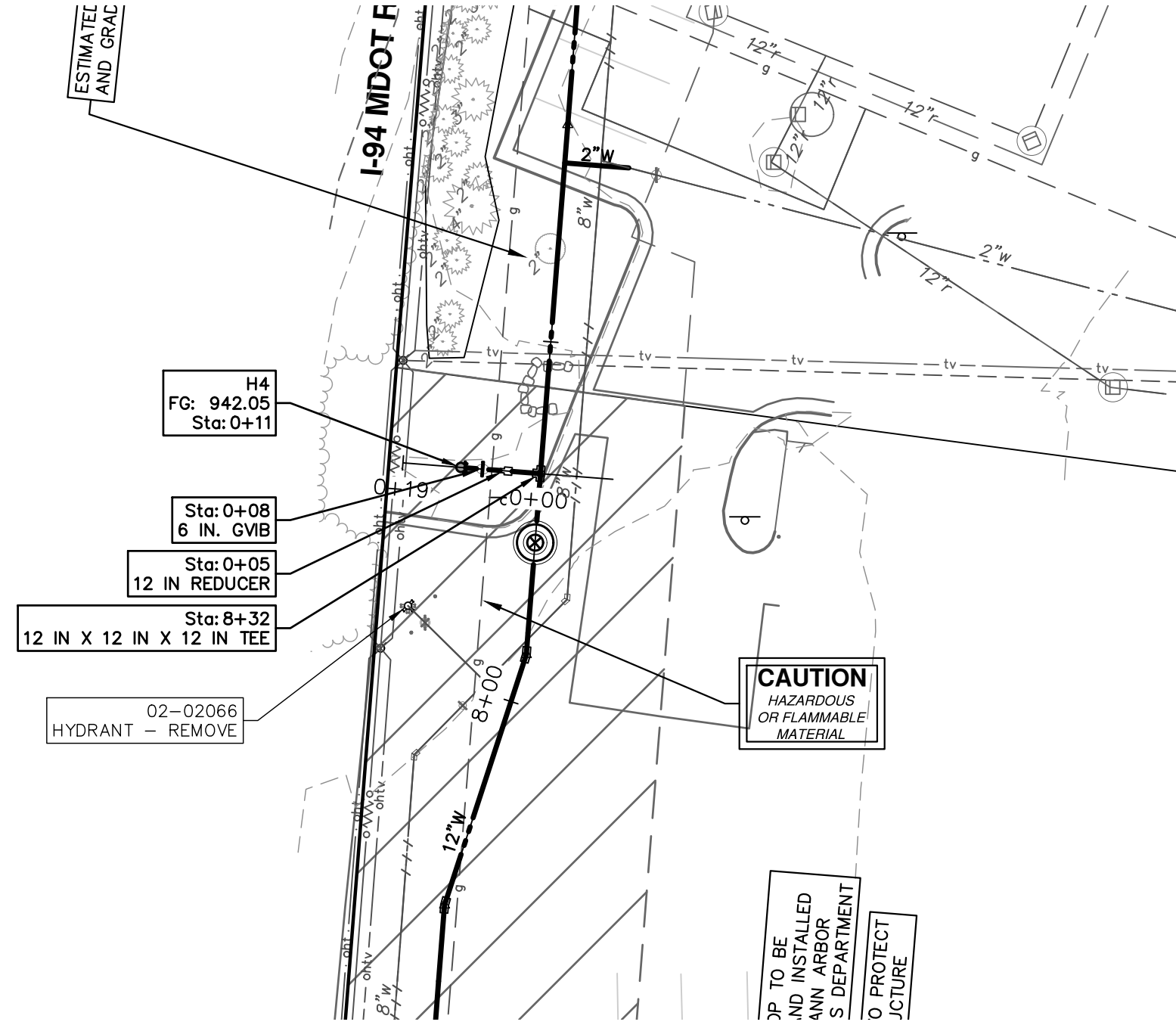
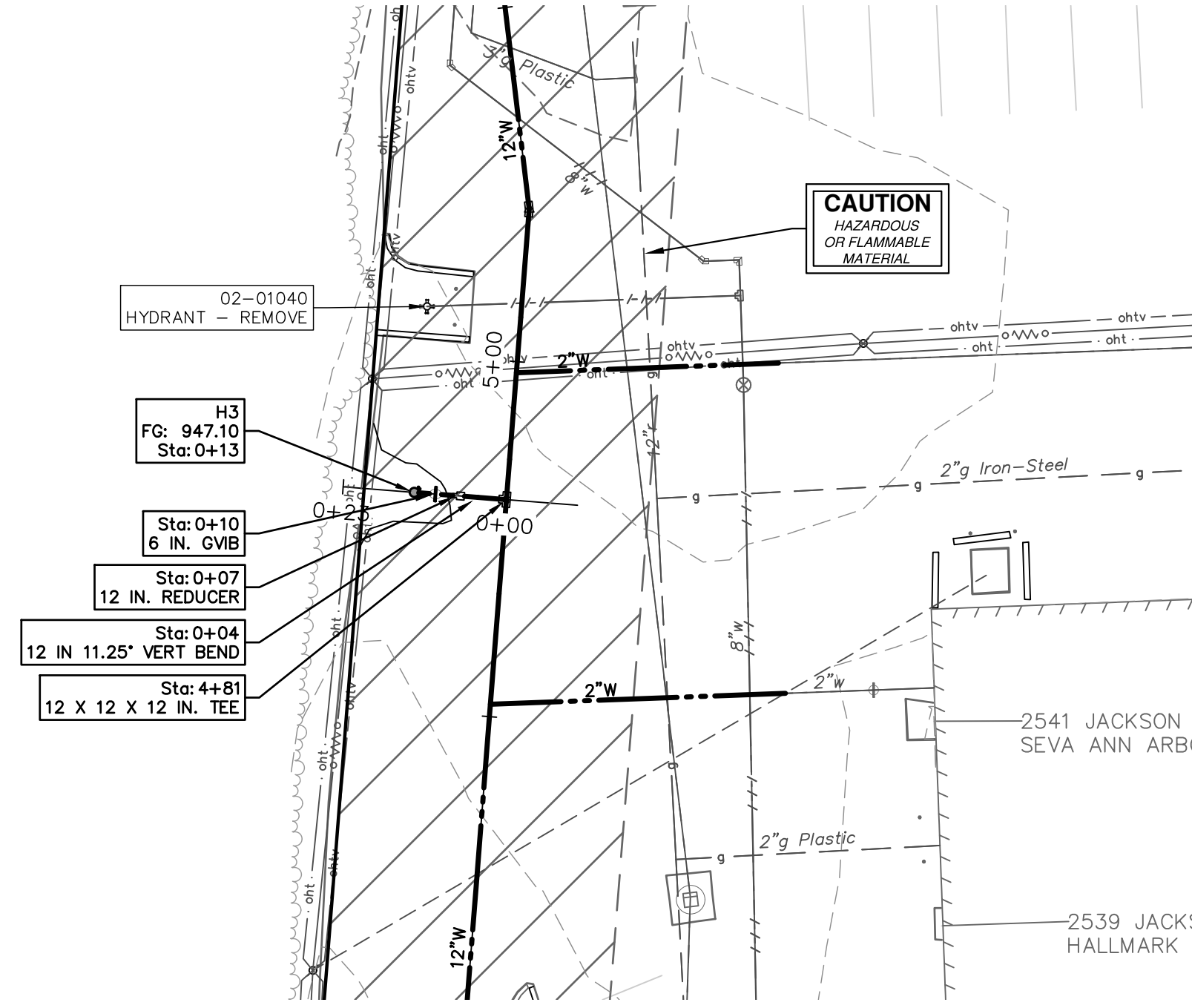
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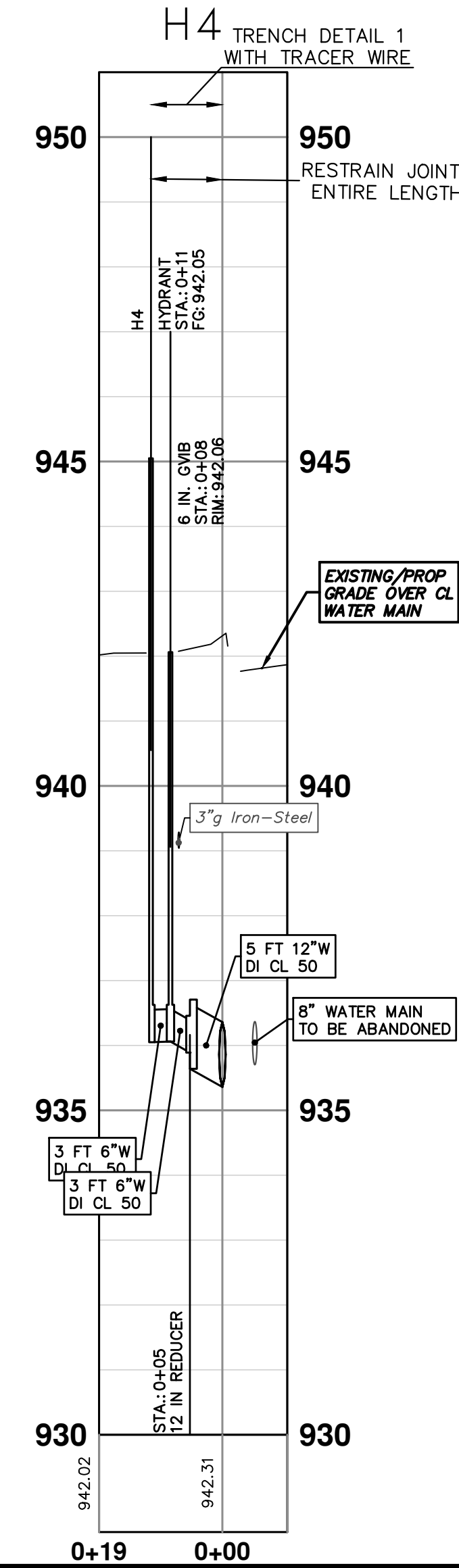
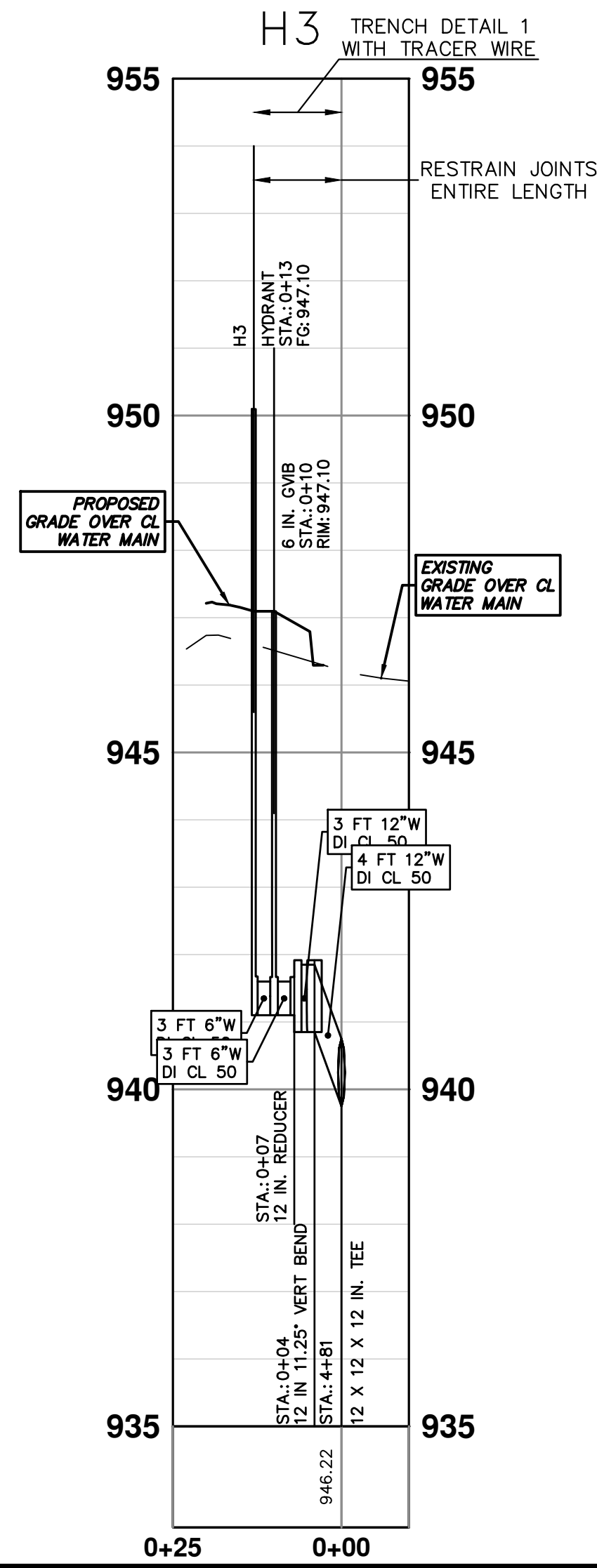
00 REV.

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THE CONTRACTOR SHALL REMOVE AND ABANDON THE NECESSARY PORTIONS OF THE EXISTING WATER MAINS IN ORDER TO FACILITATE THE PROPOSED WATER MAIN INTER-CONNECTION. ALL COSTS ASSOCIATED WITH PERFORMING THE INTER-CONNECTION, COORDINATING UTILITY SHUTDOWNS, ABANDONING WATER MAIN, RE-ABANDONING THE WATER MAIN AND ALL RELATED WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H3	HYDRANT	0+13	947.10
H4	HYDRANT	0+11	942.05



REV.	DESCRIPTION	DATE	BY	CHECKED
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	COPY A2REVDATE:DWG TO PROJECT FOLDER AND			

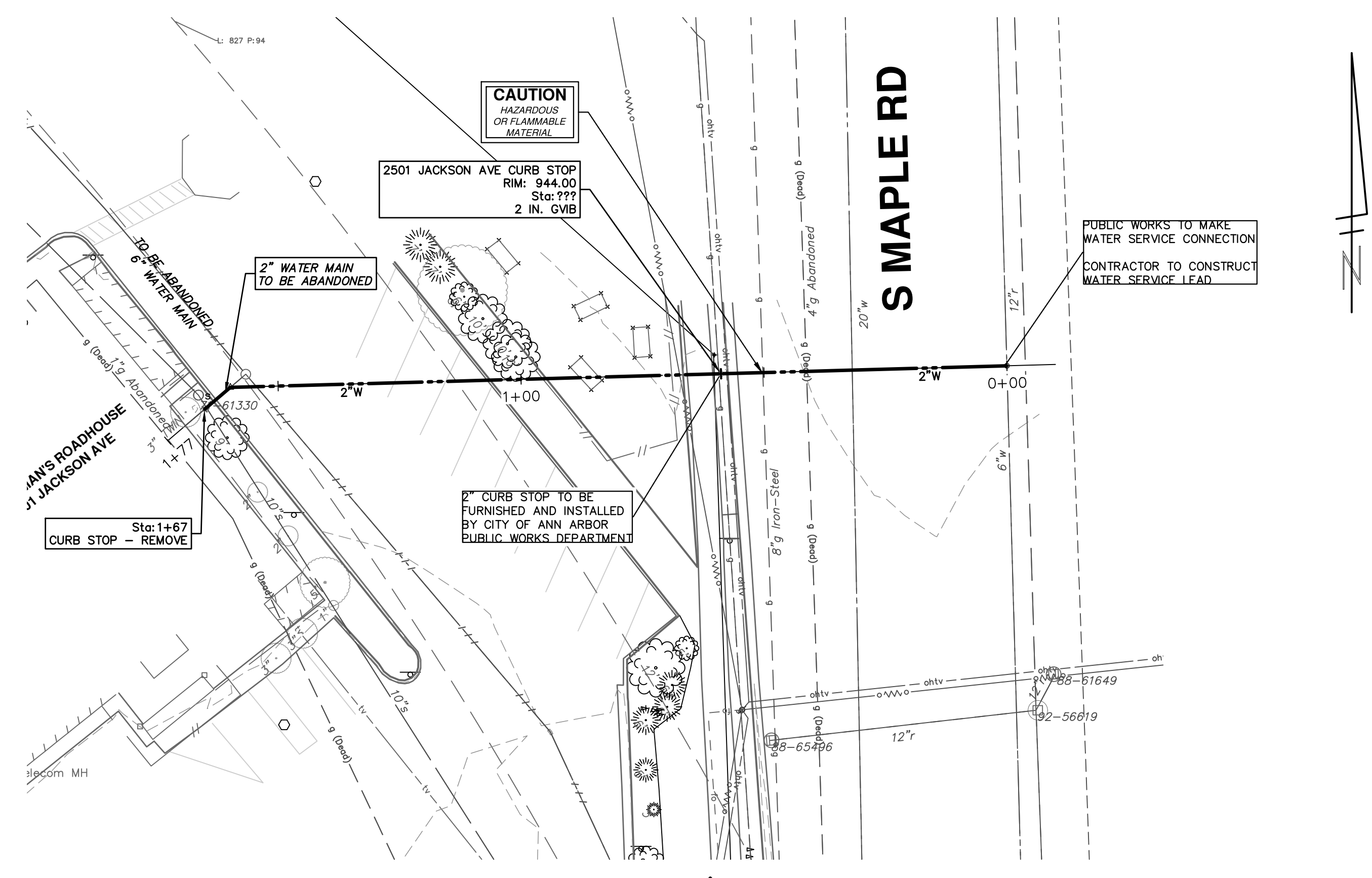
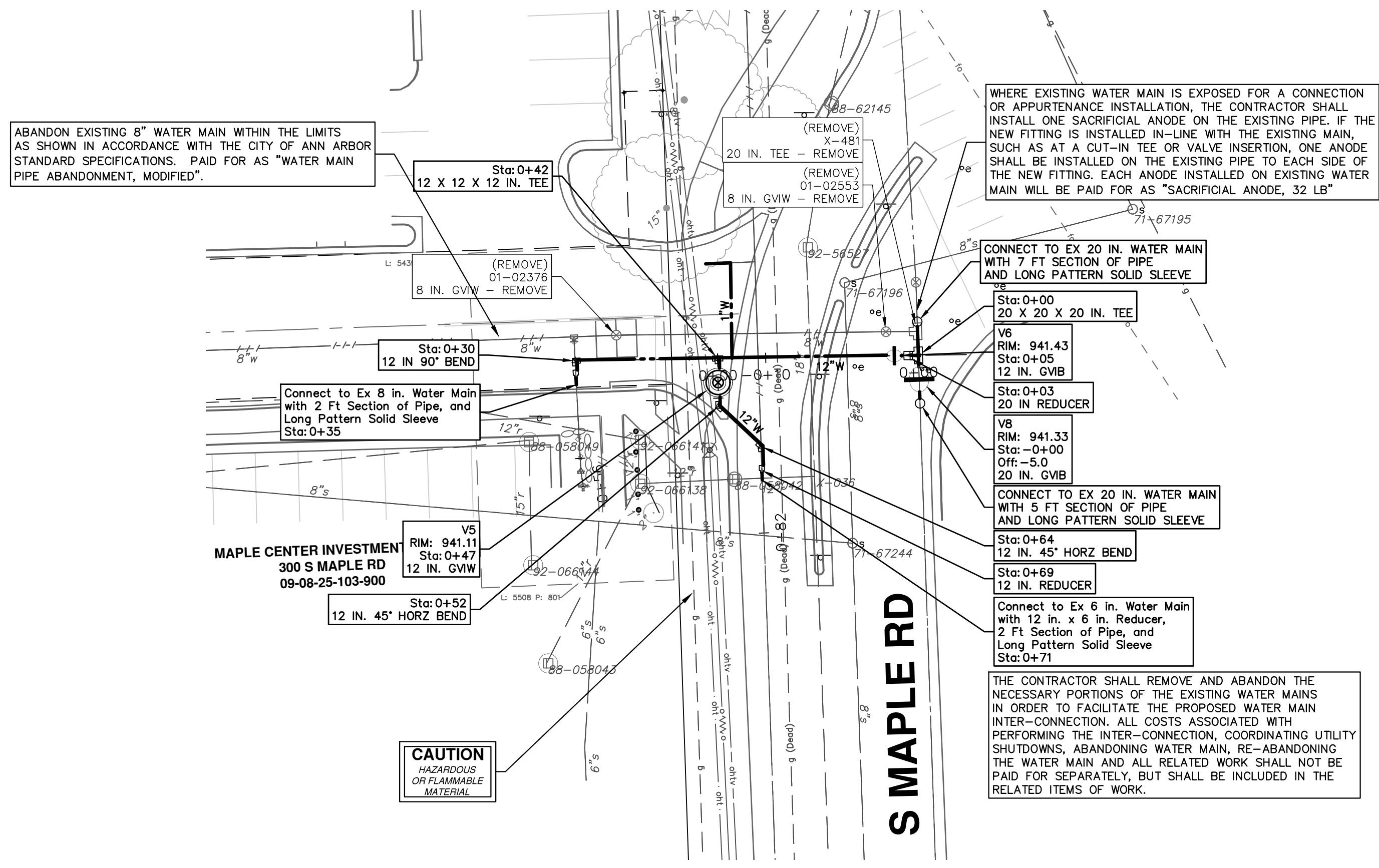
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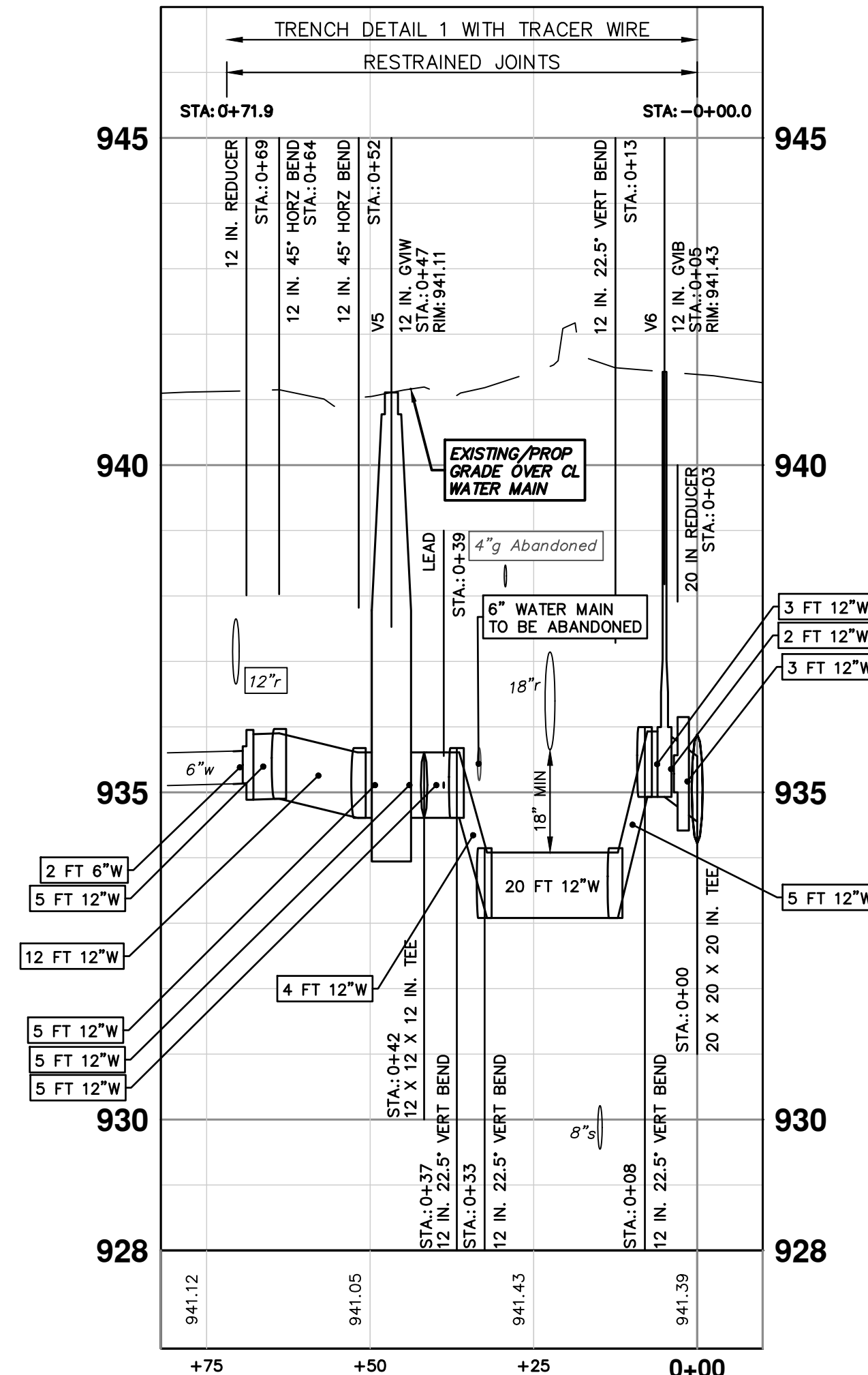
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
WEST SIDE NORTH-SOUTH WATER MAIN
HYDRANTS H3, H4

SHEET No. 28 OF 37
SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. 2023013-28

R:\2023013 Westgate Watermain\Plan Production\2023013Watr3.dwg Dwg Created: 20-Feb-25 --_a2_standard.bw.sbt -- Plot Date: 20-Feb-25



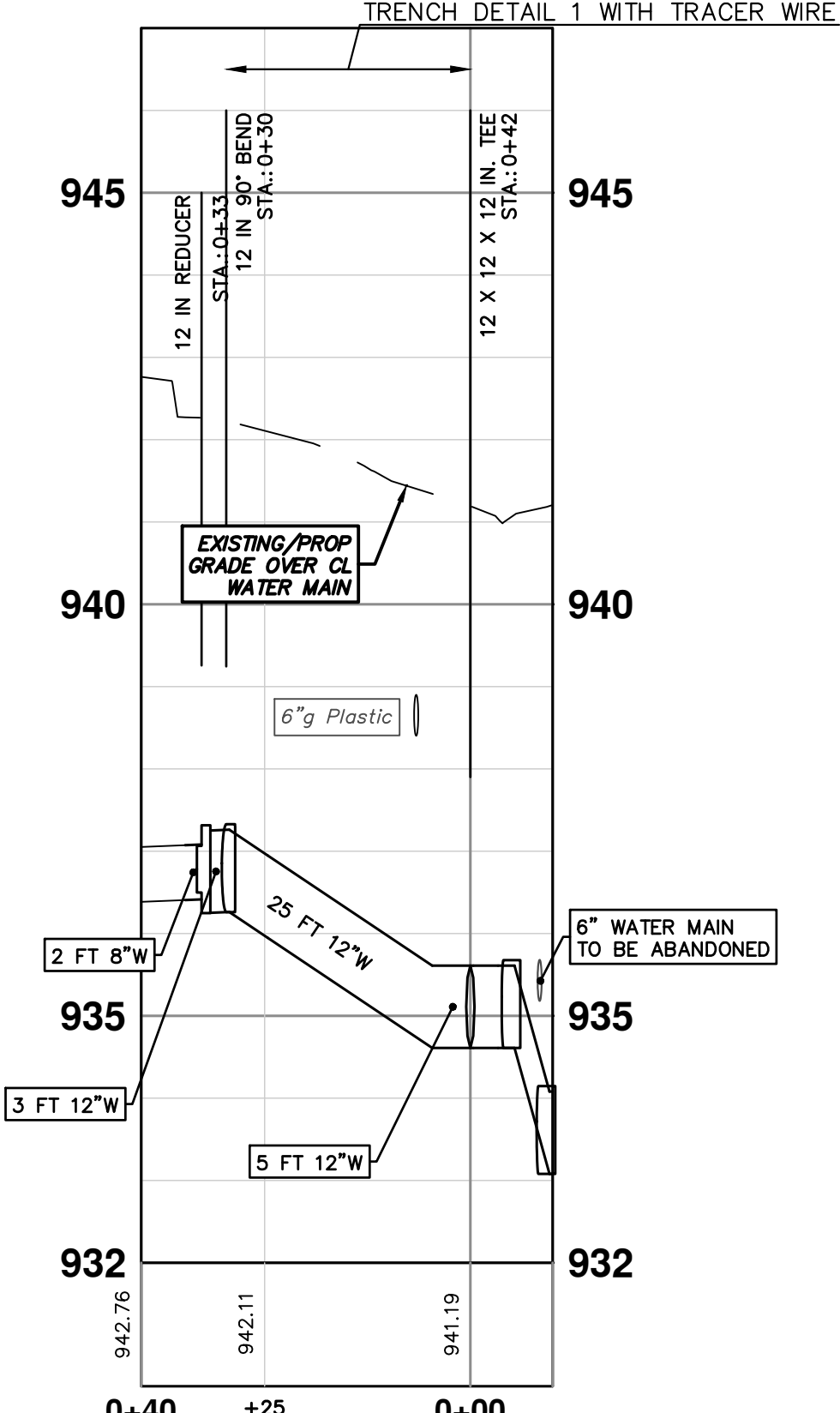
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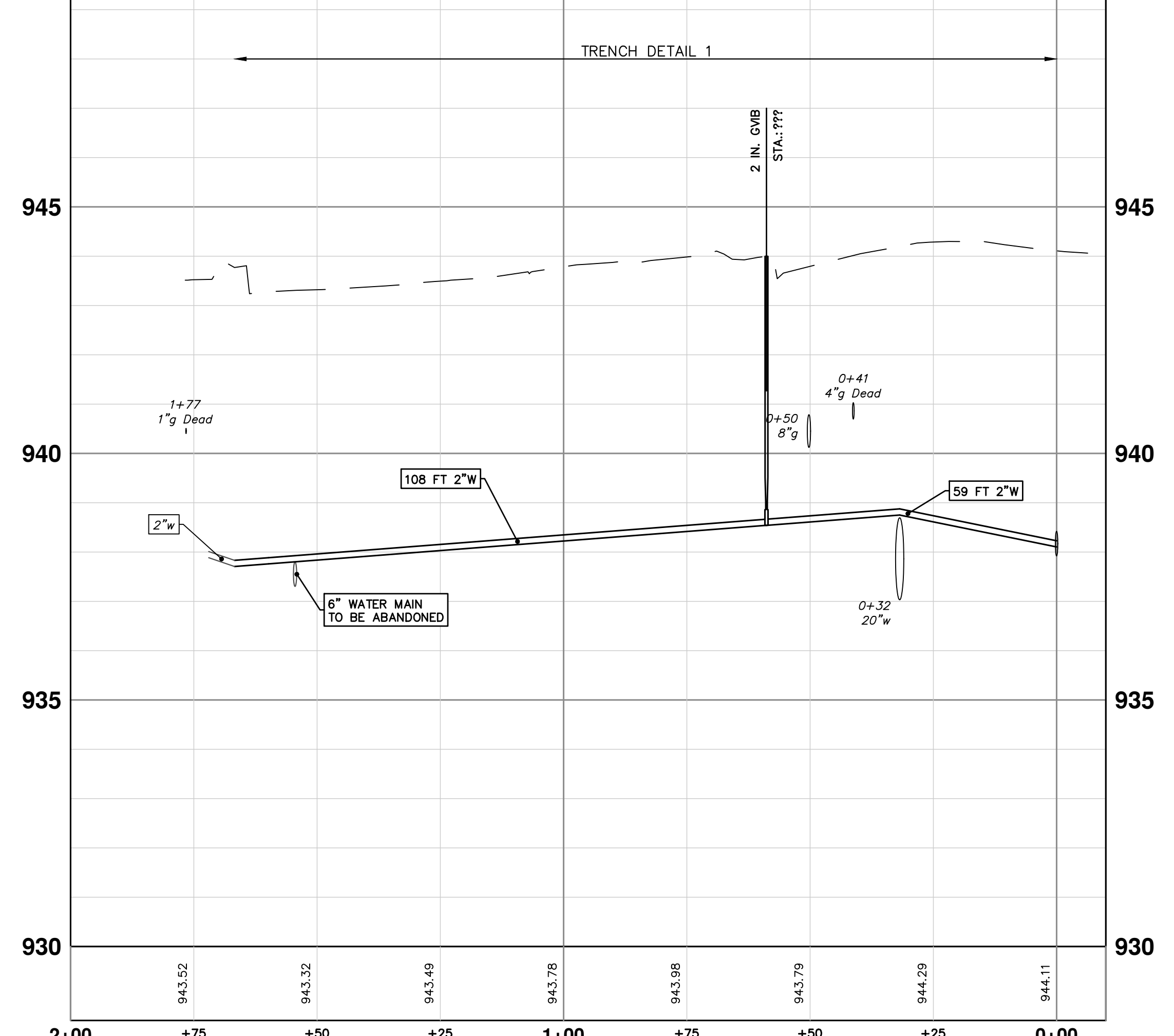
WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V6	12 in. G.V.B	0+05	941.43
V5	12 in. G.V.W	0+47	941.11


WATER MAIN STRUCTURE REMOVALS	
STRUCTURE	TYPE
01-02553	8 in. G.V.W - Remove
01-02376	8 in. G.V.W - Remove

LEWIS JEWELERS HYDRANT RECONNECTION




ZINGERMAN'S SERVICE LEAD





Know what's below.
Call before you dig.

NO.	DESCRIPTION	DATE	BY	CHECKED



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WESTGATE WATERMAIN

S MAPLE WATER TIE-IN

S MAPLE RECONNECTIONS AND ZINGERMANS WATER LEAD

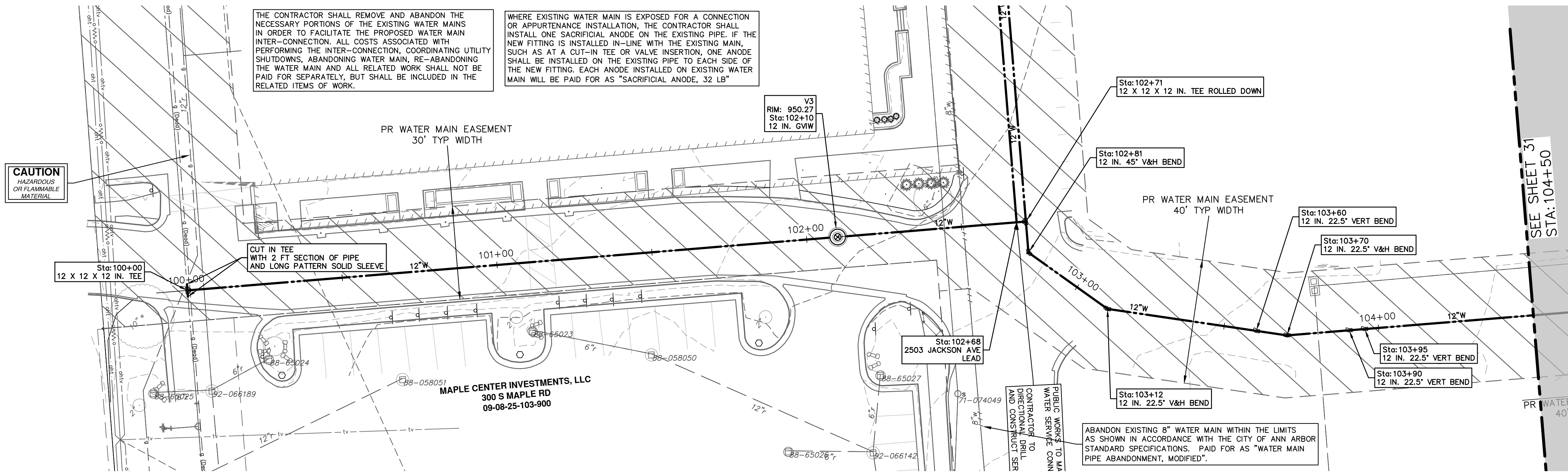
SCALE PLAN: #####

PROFILE: 1" = 2'

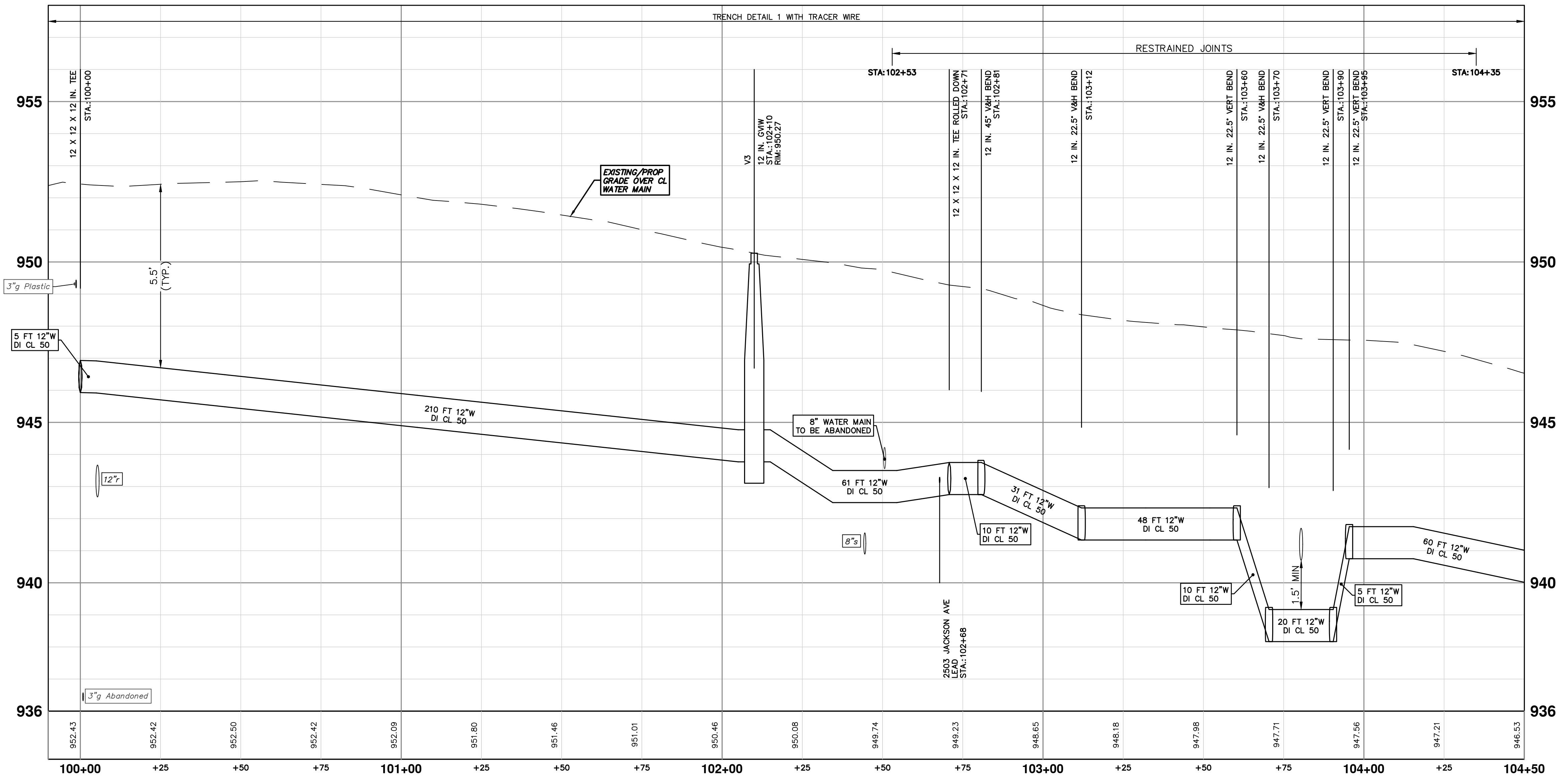
DRAWING NO. 2023013-29

SHEET NO. 29 OF 37

R:\2023013 Westgate Watermain\Plan Production\2023013Watr2.dwg Dwg Created: 20-Feb-25 --_a2_standard.bw.stb -- Plot Date: 20-Feb-25



STRUCTURE	TYPE	STATION	RIM
V3	12 in. GVW	102+10	950.27



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

02	PRE-BID QUESTION REVISIONS	02/20/2025	KMB	FDC
01	SHEET 4: HMA TABLE REVISIONS	01/29/2025	KMB	FDC
00	BID SET	01/23/2025	KMB	FDC
	REV.	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR MI 48107-8647
www.a3gov.org

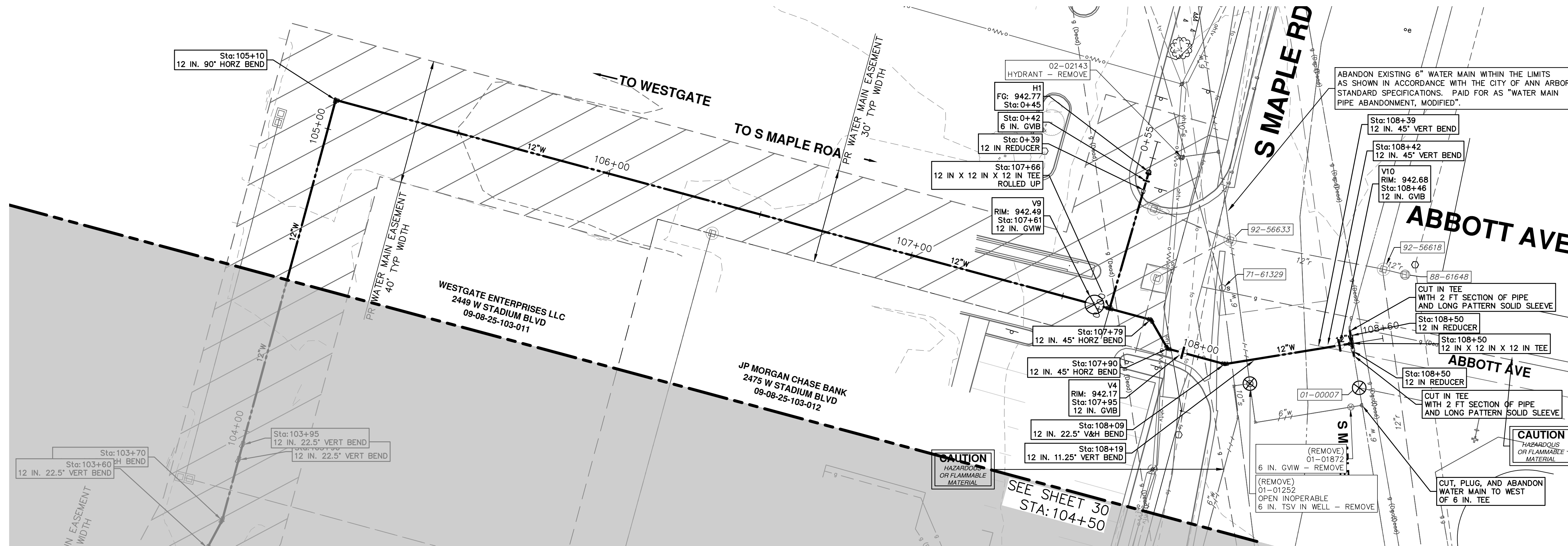
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
SE WATER MAIN REROUTE
STA. 100+00 - STA. 104+50

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No. 2023013-30

SHEET No. 30 OF 37

R:\2023013 Westgate Watermain\Plan Production\2023013Watr2.dwg Dwg Created: 20-Feb-25 --_a2_standard.bw.sb -- Plot Date: 20-Feb-25

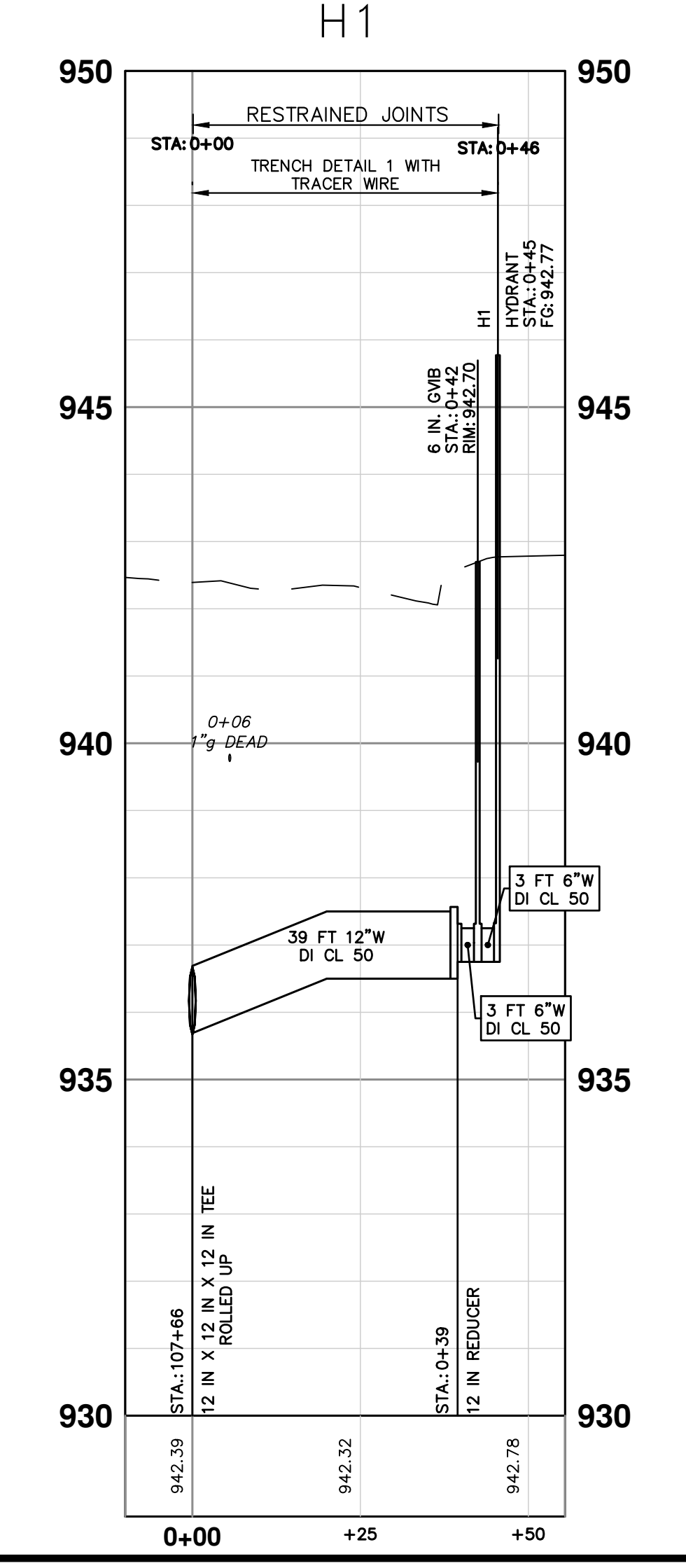
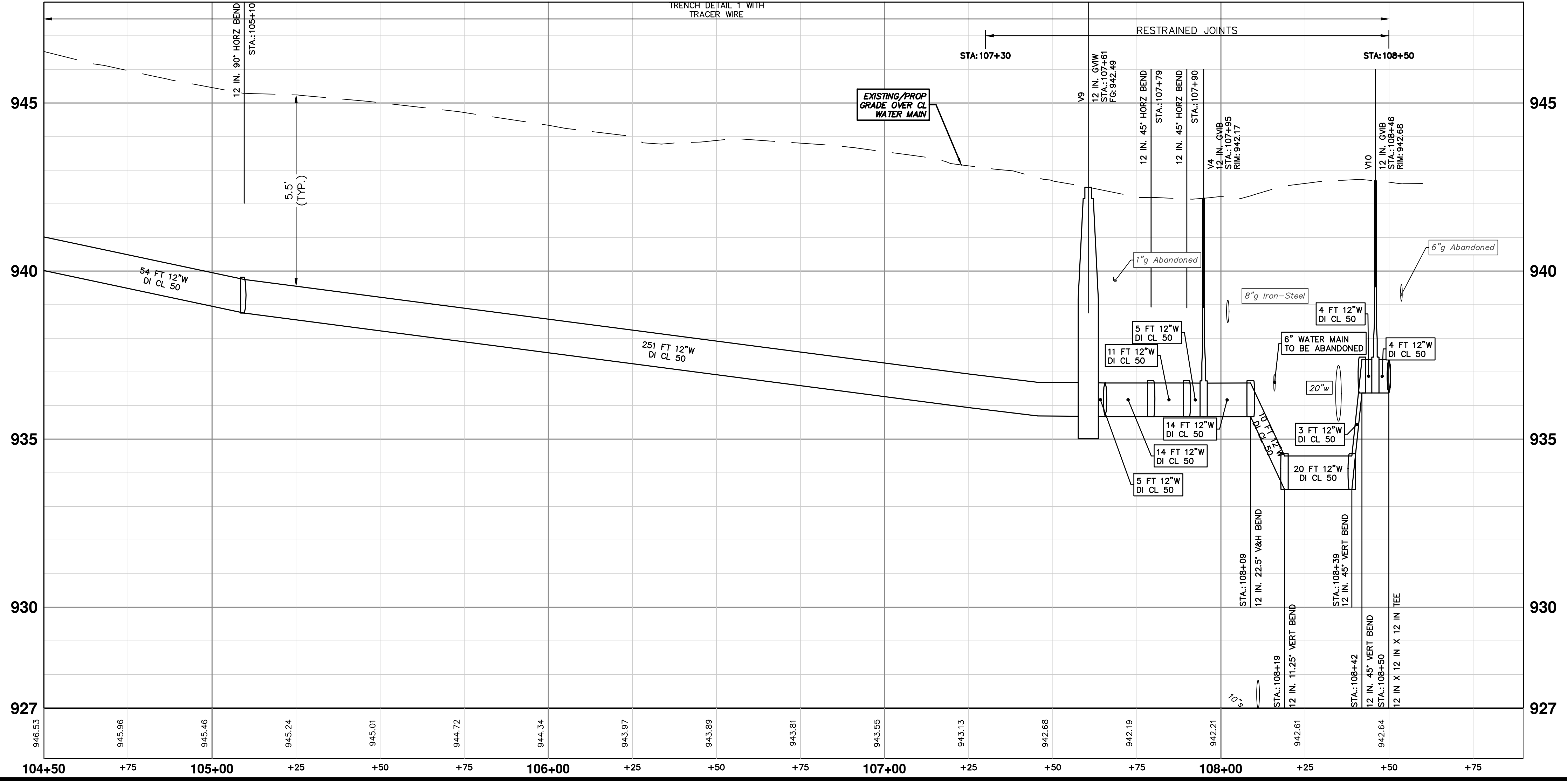


THE CONTRACTOR SHALL REMOVE AND ABANDON THE NECESSARY PORTIONS OF THE EXISTING WATER MAINS IN ORDER TO FACILITATE THE PROPOSED WATER MAIN INTER-CONNECTION. ALL COSTS ASSOCIATED WITH PERFORMING THE INTER-CONNECTION, COORDINATING UTILITY SHUTDOWNS, ABANDONING WATER MAIN, RE-ABANDONING THE WATER MAIN AND ALL RELATED WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.

WHERE EXISTING WATER MAIN IS EXPOSED FOR A CONNECTION OR APPURTENANCE INSTALLATION, THE CONTRACTOR SHALL INSTALL ONE SACRIFICIAL ANODE ON THE EXISTING PIPE. IF THE NEW FITTING IS INSTALLED IN-LINE WITH THE EXISTING MAIN, SUCH AS AT A CUT-IN TEE OR VALVE INSERTION, ONE ANODE SHALL BE INSTALLED ON THE EXISTING PIPE TO EACH SIDE OF THE NEW FITTING. EACH ANODE INSTALLED ON EXISTING WATER MAIN WILL BE PAID FOR AS "SACRIFICIAL ANODE, 32 LB"

STRUCTURE	TYPE	STATION	RIM
V9	12 in. GVW	107+61	942.49
V4	12 in. GVIB	107+95	942.17
V10	12 in. GVIB	108+46	942.68

STRUCTURE	TYPE	STATION	FG
H1	HYDRANT	0+45	942.77



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

REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HMA TABLE REVISIONS
00	01/23/2025	BID SET

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
 SE WATER MAIN ROUTE
 STA. 104+50 - STA. 108+63 AND HYDRANT H1

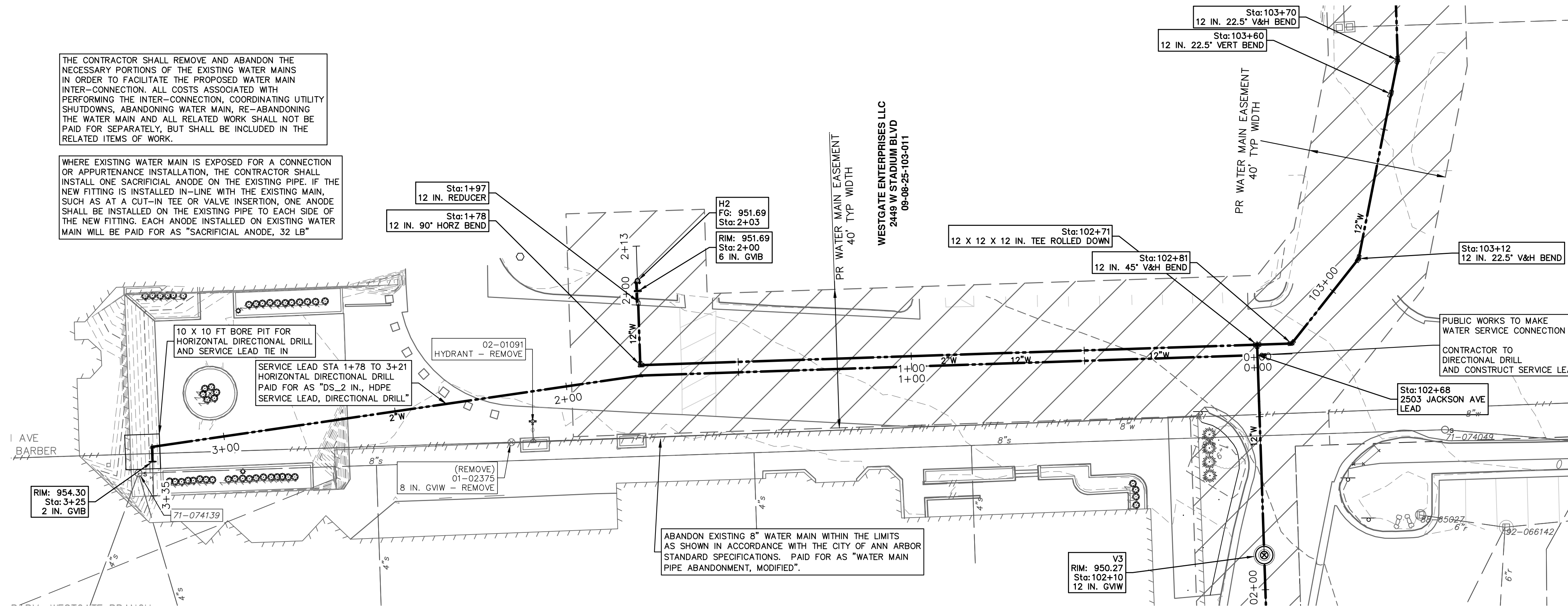
SHEET NO. 31 OF 37

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 2'
 DRAWING NO. 2023013-31

R:\2023013 Westgate Watermain\Plan Production\2023013Watr2.dwg Dwg Created: 20-Feb-25 --_a2_standard.bw.stb -- Plot Date: 20-Feb-25

THE CONTRACTOR SHALL REMOVE AND ABANDON THE NECESSARY PORTIONS OF THE EXISTING WATER MAINS IN ORDER TO FACILITATE THE PROPOSED WATER MAIN INTER-CONNECTION. ALL COSTS ASSOCIATED WITH PERFORMING THE INTER-CONNECTION, COORDINATING UTILITY SHUTDOWNS, ABANDONING WATER MAIN, RE-ABANDONING THE WATER MAIN AND ALL RELATED WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.

WHERE EXISTING WATER MAIN IS EXPOSED FOR A CONNECTION OR APPURTENANCE INSTALLATION, THE CONTRACTOR SHALL INSTALL ONE SACRIFICIAL ANODE ON THE EXISTING PIPE. IF THE NEW FITTING IS INSTALLED IN-LINE WITH THE EXISTING MAIN, SUCH AS AT A CUT-IN TEE OR VALVE INSERTION, ONE ANODE SHALL BE INSTALLED ON THE EXISTING PIPE TO EACH SIDE OF THE NEW FITTING. EACH ANODE INSTALLED ON EXISTING WATER MAIN WILL BE PAID FOR AS "SACRIFICIAL ANODE, 32 LB"

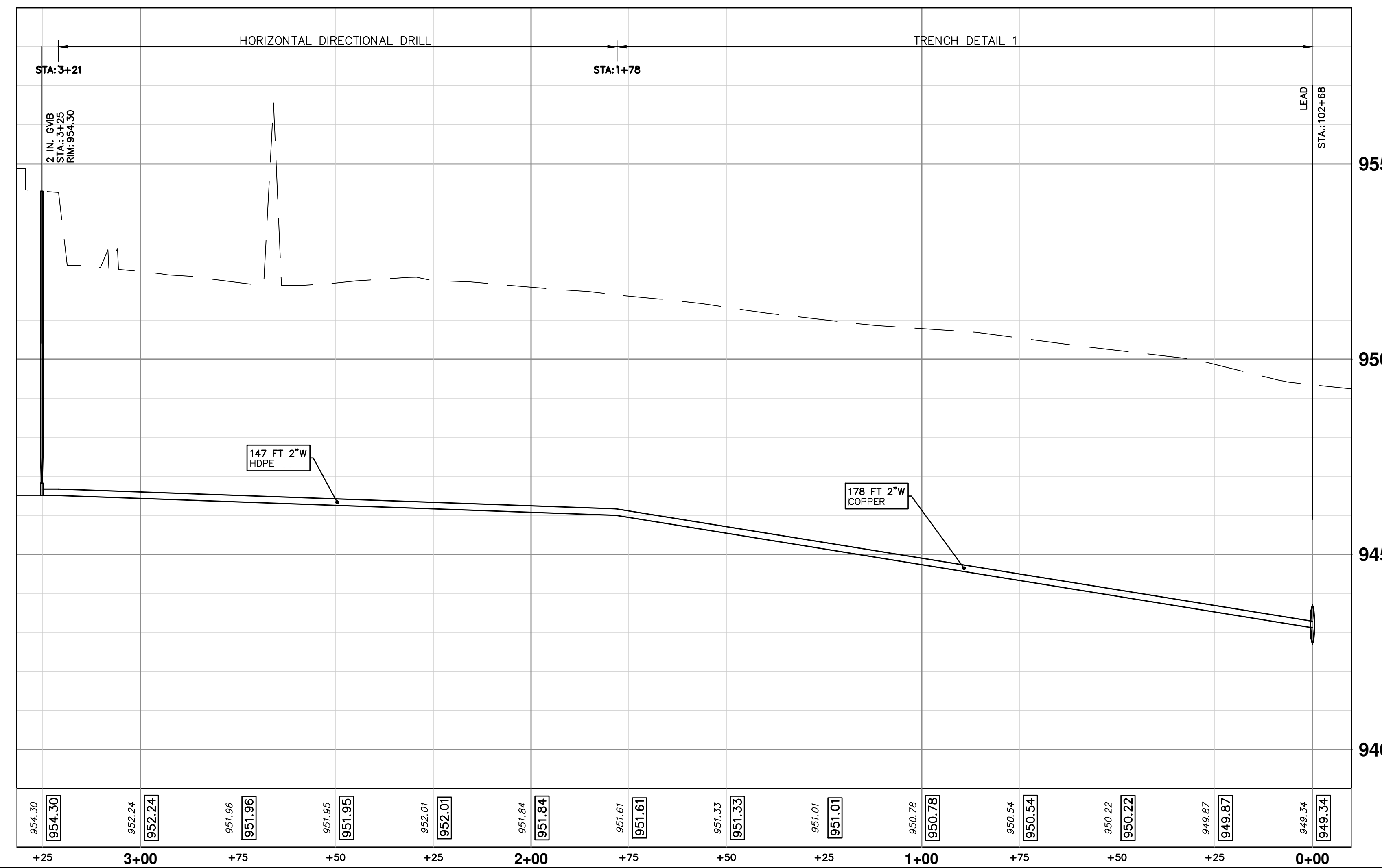
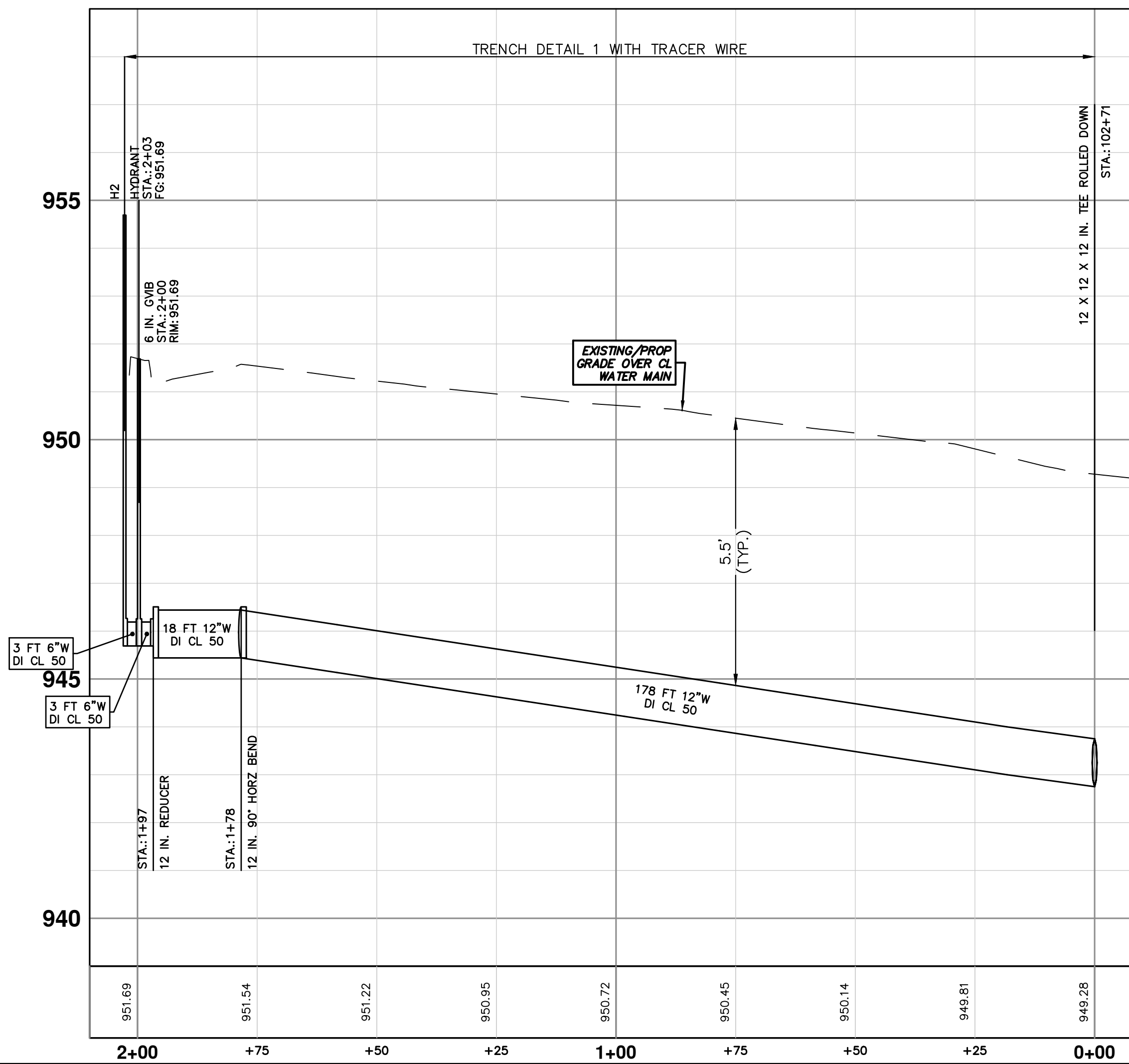


WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H2	HYDRANT	2+03	951.69

WATER MAIN STRUCTURE REMOVALS	
STRUCTURE	TYPE
01-02375	8 in. GVIW - Remove
02-01091	HYDRANT - Remove

H2

2503 JACKSON WATER SERVICE



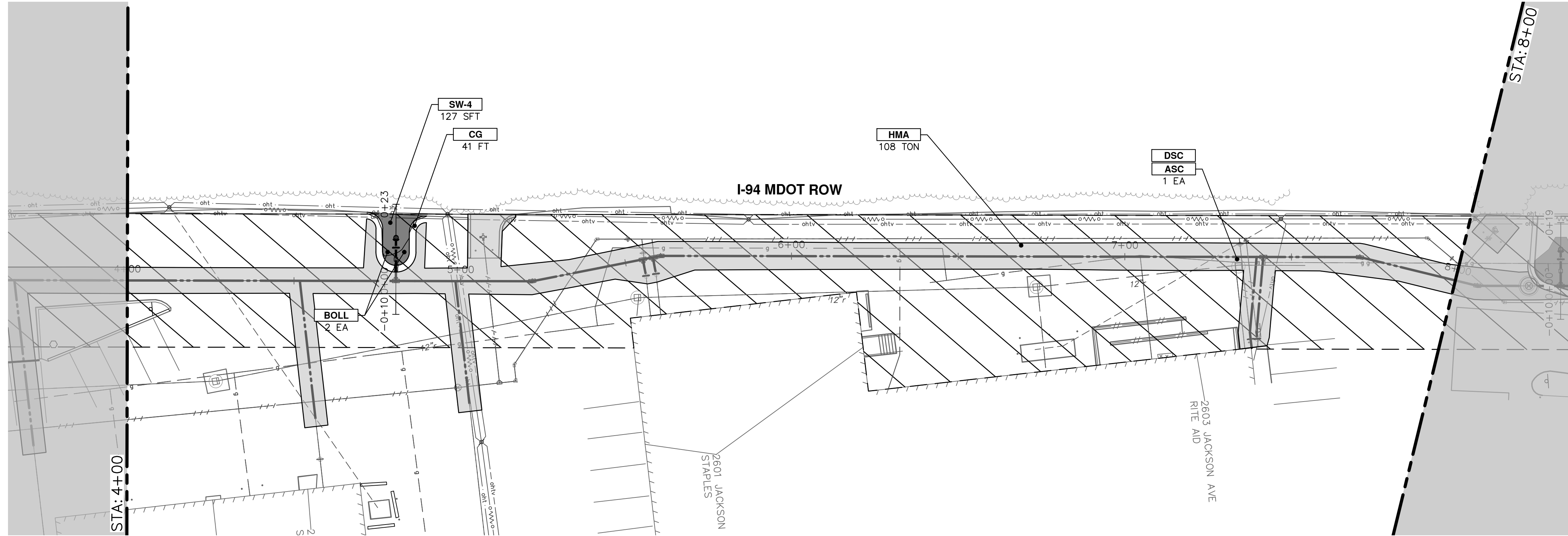
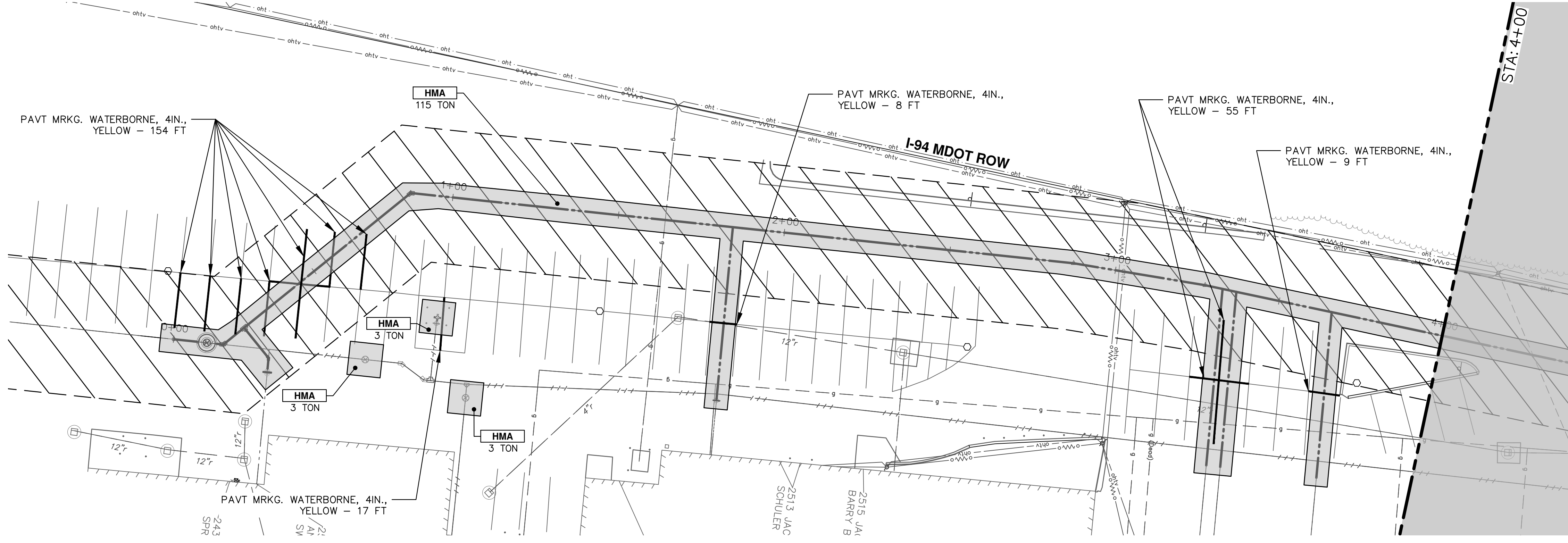
REV.	DATE	DESCRIPTION
02	02/20/2025	PRE-BID QUESTION REVISIONS
01	01/29/2025	SHEET 4: HWA TABLE REVISIONS
00	01/23/2025	BID SET

CITY OF ANN ARBOR
PUBLIC SERVICES
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ANN ARBOR, MI 48107-8647
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
SE WATER MAIN ROUTE
HYDRANT H2 & 2503 JACKSON AVE SERVICE LEAD

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No. 2023013-32



CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
CG	Conc. Curb or Curb & Gutter, All Types
DOM	Conc. Driveway Opening, Type M
SW-4	Conc. Sidewalk, 4 In.
SWR-6	Conc. Sidewalk, Drive Approach, or Ramp, 6 In.
ASC	Adjust Structure Cover
DSC	Structure Cover
BOLL	Steel Bollard
TURF	Turf Restoration
DWS	Detectable Warning Surface



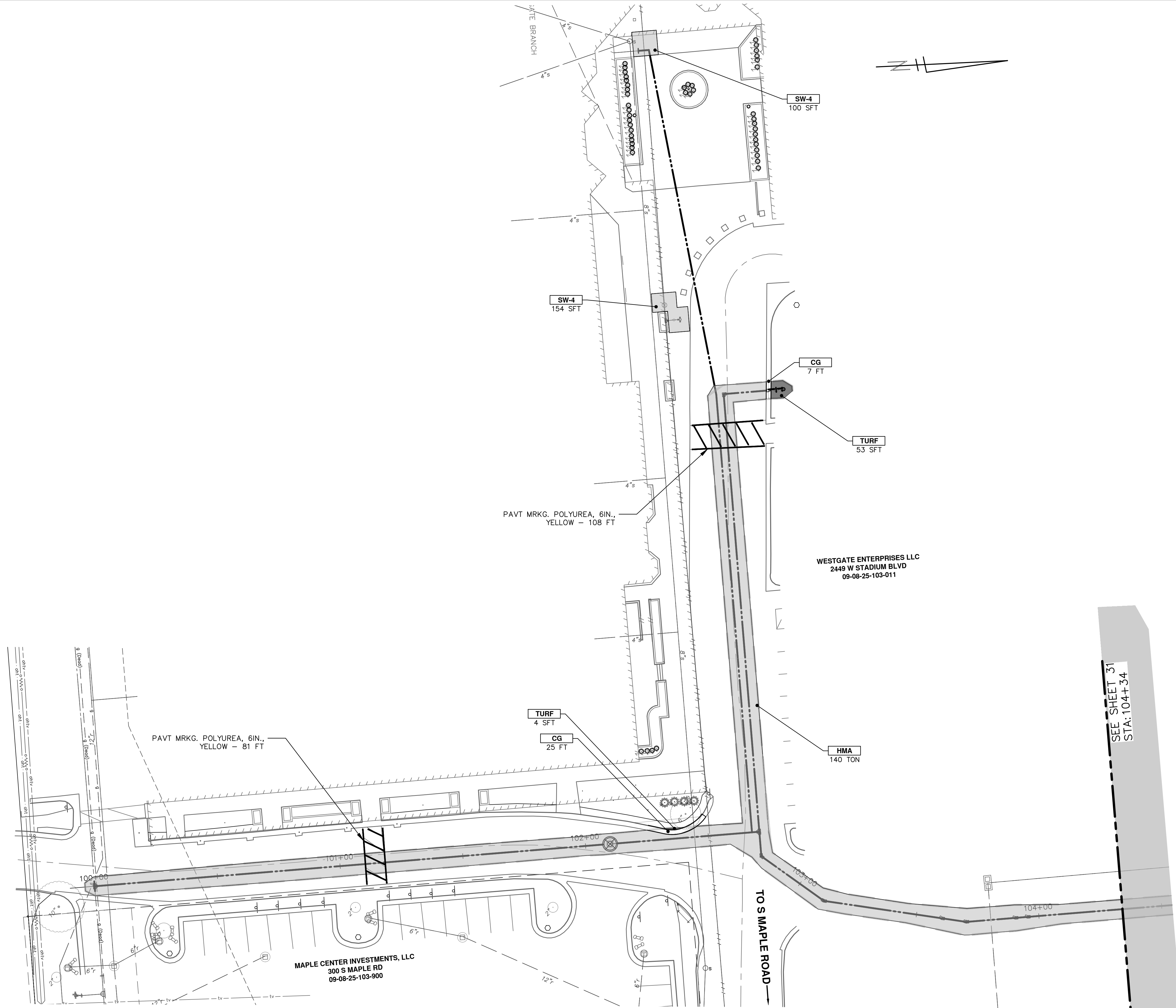
NO	REVISION	DATE	BY	CHECKED

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-8647
 ANN ARBOR 734.794.4410
 www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN
 RESTORATION
 WEST SIDE RESTORATION STA. 0+00 - STA. 8+00

SCALE: 1" = 20'
 DRAWING No. 2023013-33

SHEET No. 33 OF 37



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
CG	Conc. Curb or Curb & Gutter, All Types
DOM	Conc. Driveway Opening, Type M
SW-4	Conc. Sidewalk, 4 In.
SWR-6	Conc. Sidewalk, Drive Approach, or Ramp, 6 In.
ASC	Adjust Structure Cover
DSC	Structure Cover
BOLL	Steel Bollard
TURF	Turf Restoration
DWS	Detectable Warning Surface

SEE SHEET 31
STA: 104+34


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WESTGATE WATERMAIN RESTORATION

SE WATER MAIN REROUTE RESTORATION STA. 100+00 - STA. 104+50

DRAWING No. 2023013-35

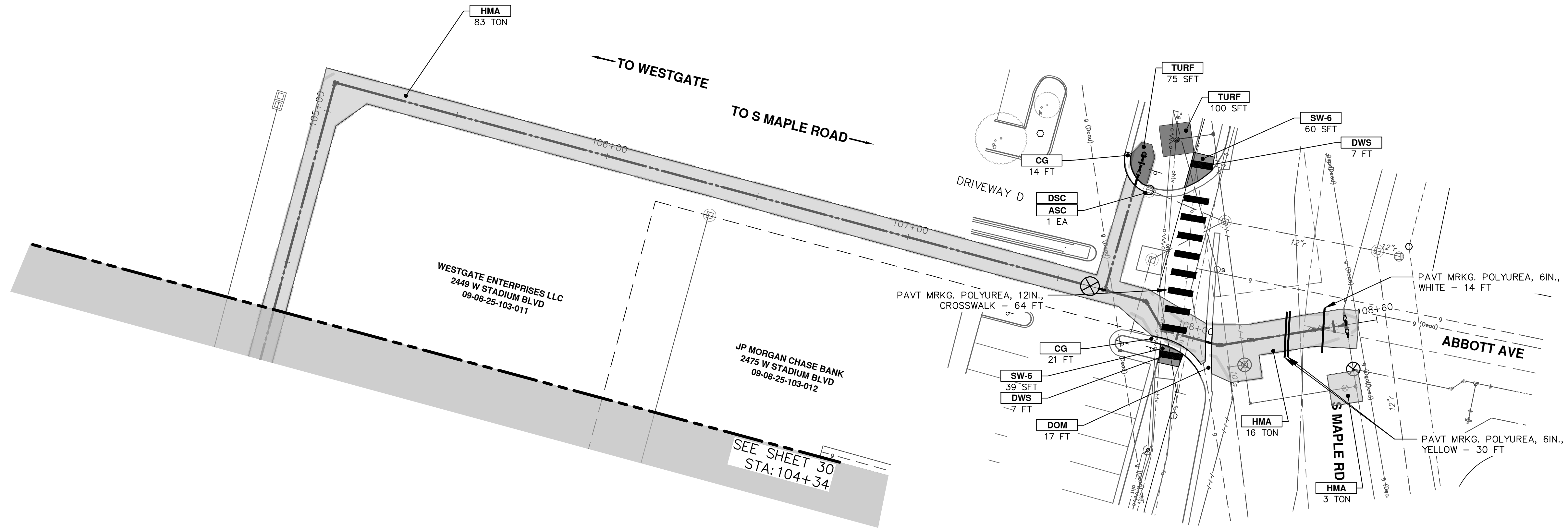
SHEET No. 35 OF 37



CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
ANN ARBOR 734.794.4410
www.a2gov.org

REV.	DESCRIPTION	DATE	BY	CHECKED
00	REVISION THIS WHEN GOING OUT FOR BID			

COPY 2:REVDATE:DWG TO PROJECT FOLDER AND
Know what's below.
Call Before you dig.



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
CG	Conc. Curb or Curb & Gutter, All Types
DOM	Conc. Driveway Opening, Type M
SW-4	Conc. Sidewalk, 4 In.
SWR-6	Conc. Sidewalk, Drive Approach, or Ramp, 6 In.
ASC	Adjust Structure Cover
DSC	Structure Cover
BOLL	Steel Bollard
TURF	Turf Restoration
DWS	Detectable Warning Surface

SEE SHEET 30
STA: 104+34

WESTGATE ENTERPRISES LLC
2449 W STADIUM BLVD
09-08-25-103-011

JP MORGAN CHASE BANK
2475 W STADIUM BLVD
09-08-25-103-012

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48106-1667
www.aagov.org



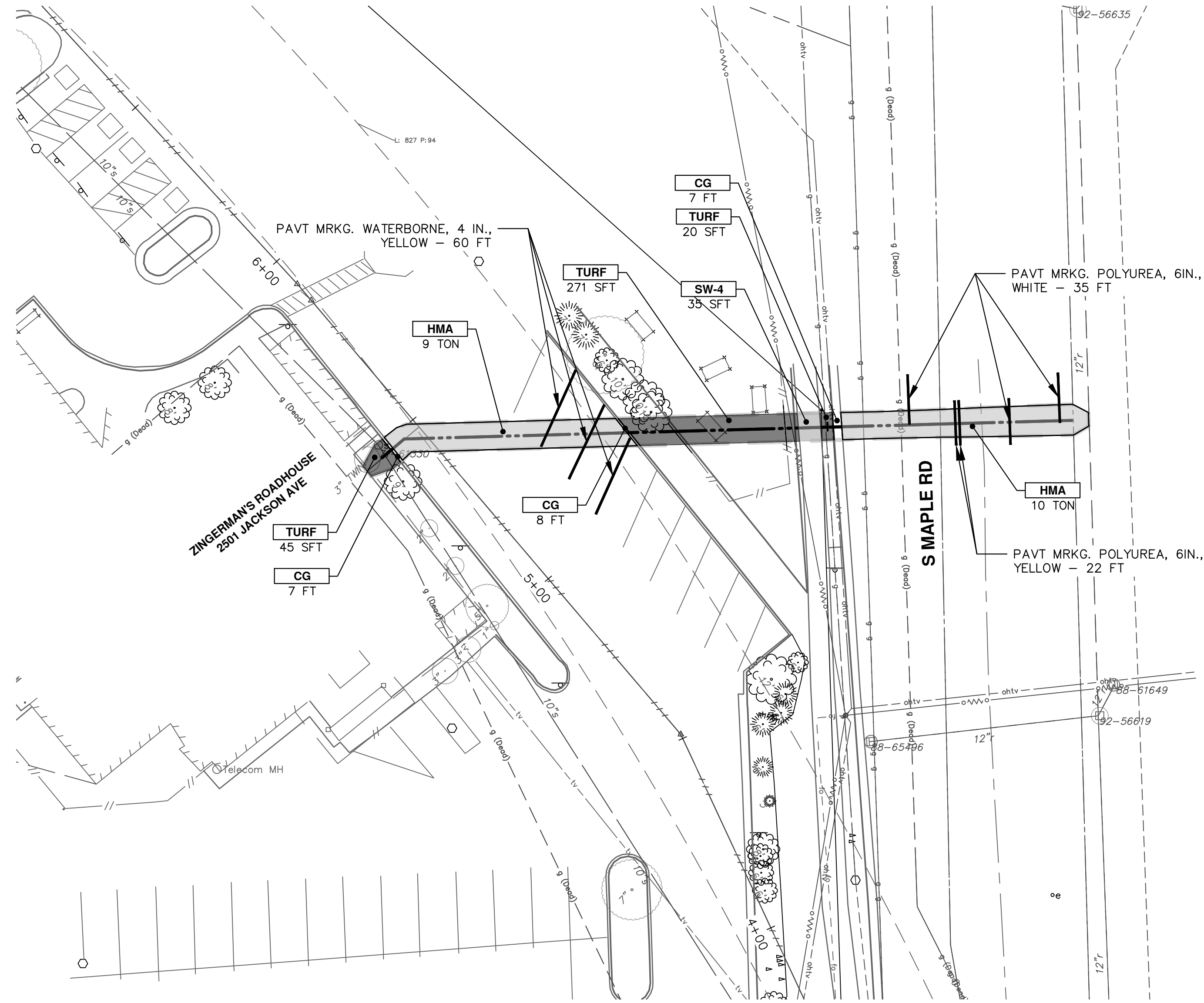
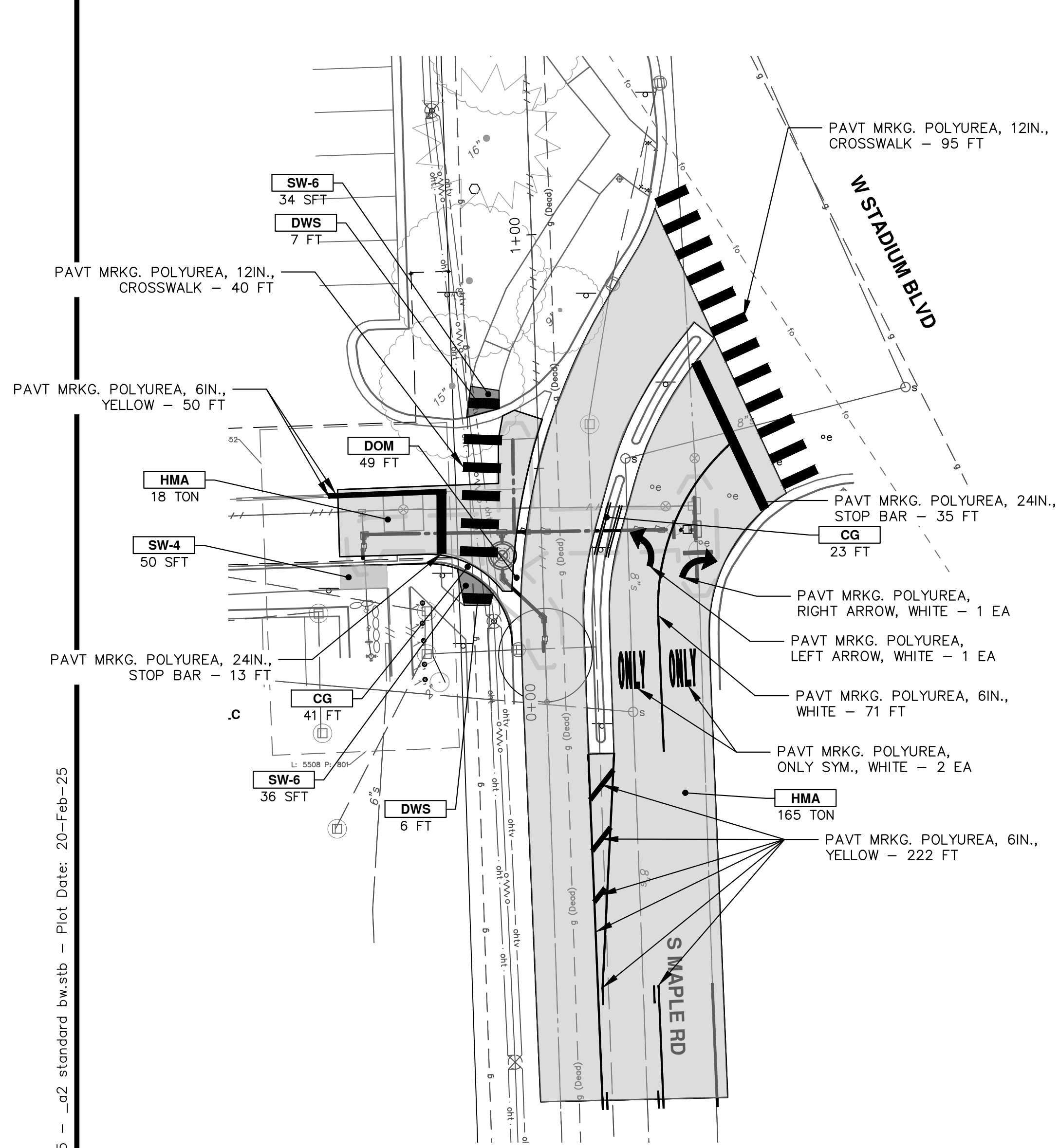
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WESTGATE WATERMAIN RESTORATION

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'
DRAWING No. 2023013-36

SE WATER MAIN REROUTE RESTORATION STA. 104+50 - STA. 108+76



REV.	DESCRIPTION	DATE	BY	CHECKED
00	REVISE THIS WHEN GOING OUT FOR BID			
	COPY A2REVDATE.DWG TO PROJECT FOLDER AND			



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
CG	Conc. Curb or Curb & Gutter, All Types
DOM	Conc. Driveway Opening, Type M
SW-4	Conc. Sidewalk, 4 In.
SWR-6	Conc. Sidewalk, Drive Approach, or Ramp, 6 In.
ASC	Adjust Structure Cover
DSC	Structure Cover
BOLL	Steel Bollard
TURF	Turf Restoration
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