ADDENDUM No. 3

RFP No. 24-19

Miller Avenue Rehabilitation

Updated Due Date and Time: May 14, 2024 at 11:00 A.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 one hundred fifty (150) pages.**

The Proposer is to acknowledge receipt of this Addendum No. 3 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 B – General Declaration**
- **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
All mentions	As provided in RFP No. 24-19 Document: Proposal Due Date: May 6, 2024 at 11:00 a.m. (local time) As updated herein: Proposal Due Date: May 14, 2024 at 11:00 a.m. (local time)

Comment: The Due Date and Time for responses to this RFP has been extended as provided above. Note that all other dates are unchanged.

New Content

Addendum-3-1	New Bid Opening Date
Addendum-3-1 to Addendum-3-2	Replace Schedule of Prices, Detailed Specifications, and Construction Plan Drawings
Addendum-3-3	Questions and Answers

Replace Schedule of Prices

BID FORM-1 to BID-FORM-4	**Replace with Sheets BID FORM-1 through BID FORM-4** Pay items for Sanitary Sewer Repairs added

Replace Detailed Specifications

DS-2 to DS-4 PROJECT SCHEDULE AND PAYMENT	**Replace with DS-2 to DS-4** Revised Award and Construction Start Schedule
DS-8 to DS-15 CHAMBERMAXX SYSTEM	**Replace with DS-8 to DS-16** Revised Description. Added ChamberMaxx Pre-Treatment Options Detail.

Replace Plan Set in its entirety

Plan Sheets 1-131	**Replace with Plan Sheets 1-131** Sheet 20: Revised Typical Sections Sheet 12-15 Replotted for Ink Saturation Sheet 16: Contech's Structure Details Added Sheets 17-64: Renumber Sheets Sheets 64: Not Used; Removed to maintain page number totals Sheets 91-96: Numbered Sheets 97-131: Denominator added to Sheets (of 131)

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 provide an engineer's estimate for the project?
Answer 1: $ 6,850,012.75

Question 2: Do you have a model number / detail for the RS pre-treatment structure R104?
Answer 2: The model is a Cascade Separator CS-4 and the details are included as Sheet 16 in Addendum No. 3. A Pre-Treatment Structure Options Detail is attached to the ChamberMaxx System Detailed Specifications.

Question 3: Will the long side water service transfers be installed under the existing large diameter storm sewer in Miller, or will they go over the storm w/ insulation? As an example, please look at Sheet 54, Phase II (STA 07+33 to STA 10+50).
Answer 3: The large storm inverts seem to follow the new watermain inverts pretty close except from 10+00 to 11+00 where the storm inverts are less predictable. In this case, the City would want the long side services to go under the storm unless the watermain invert is over the top of storm, in which case wrapping it would be required.

Question 4: In general, if existing storm sewer needs to be removed to facilitate new water main installation (if the existing pipe can't be safely tunneled), will the required RS removal / replacement be paid for separately, or is it incidental to the water main?
Answer 4: Any storm or sanitary found to conflict with the new watermain, and the watermain cannot deflect, will need to be relocated or repaired. If removals, replacements, or repairs are needed that are discovered in the field, they will be paid for separately.

Question 5: There are several instances where we cross under the existing sanitary main (8" vertical bends in intersections). Typically, there are pay items to remove and replace sanitary pipe (leads and main, as necessary) but I don't see any in Addendum #2. Will these crossings (and removal and replacement, as necessary) be paid for separately, or are they incidental to the water main installation?
Answer 5: Sanitary leads found to conflict with the new watermain, and the watermain cannot deflect, will need to be relocated or repaired. A pay item for the replacement pipe has been add to the Bid Form. Cutting and removing the conflicting sewer while installing the watermain is incidental to the watermain pay items.

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

E. Schedule of Pricing/Cost – 20 Points

Company:

Project: Miller Avenue Rehabilitation

File #: 2022-034 **RFP#: 24-19**

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
1000	General				
1000.00	General Conditions, Max. $300,000.00	LS	1	$	$
1001.00	Project Supervision, Max. $150,000.00	LS	1	$	$
1002.00	Project Clean-Up and Restoration	LS	1	$	$
1003.00	Digital Audio Visual Coverage	LS	1	$	$
1021.00	Erosion Control, Inlet Protection, Fabric Drop	Ea	94	$	$
1030.00	Tree Protection Fence	Ft	1837	$	$
1040.00	Minor Traffic Control, Max. $75,000.00	LS	1	$	$
1041.00	Traffic Regulator Control	LS	1	$	$
1050.00	Sign, Type B, Temp, Prismatic, Furn & Oper	Sft	1477.25	$	$
1051.00	Sign, Type B, Temp, Prismatic, Special, Furn & Oper	Sft	473	$	$
1052.00	Temporary "No Parking" Sign	Ea	208	$	$
1060.00	Lighted Arrow, Type A, Furn & Oper	Ea	1	$	$
1070.00	Sign, Portable, Changeable Message, Furn & Oper	Ea	8	$	$
1080.00	Plastic Drum, High Intensity, Lighted, Furn & Oper	Ea	459	$	$
1081.00	Channelizer Cone, High Intensity, 42 In., Furn & Oper	Ea	25	$	$
1092.00	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn & Oper	Ea	75	$	$
1100.00	Pedestrian Type II Barricade, Temp, Furn & Oper	Ea	231	$	$
1102.00	Temporary Pedestrian Ramp, Furn & Oper	Ea	11	$	$
1103.00	Temporary Pedestrian Mat, Furn & Oper	Ft	55	$	$
1112.00	Pavt Mrkg Cover, Type R, Black	Ft	1017	$	$
1127.00	Pavt Mrkg, Wet Reflective, Type R, Tape, 6 In., White, Temp	Ft	13723	$	$
1128.00	Pavt Mrkg, Wet Reflective, Type R, Tape, 6 In., Yellow, Temp	Ft	5183	$	$
1146.00	Pavt Mrkg, Wet Reflective, Type R, Tape, Thru and Lt Turn Arrow Sym	Ea	1	$	$
1160.71	DS_Band, Sign	Ea	5	$	$
1160.72	DS_Sign, Type IIIA	Sft	342.75	$	$
1160.73	DS_Sign, Type IIIB	Sft	12	$	$
1160.74	DS_Perforated Steel Square Breakaway System	Ea	74	$	$
1160.75	DS_Mast Arm Cable Mount	Ea	2	$	$
1160.76	DS_In-Street Pedestrian Crossing Sign	Ea	25	$	$
2000	Removals				
2000.01	Tree, Rem, 6 In. - 12 In.	Ea	2	$	$
2000.02	Tree, Rem, 13 In. - 19 In.	Ea	3	$	$
2020.00	HMA, Any Thickness, Rem	Syd	6760	$	$
2021.00	HMA Surface, Rem	Syd	1511	$	$
2023.00	Cold-Milling HMA Surface	Syd	15993	$	$
2025.00	Concrete Pavt, Any Thickness, Rem	Syd	180	$	$
2030.00	Curb, Gutter, and Curb and Gutter, Any Type, Rem	Ft	2175	$	$
2040.00	Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Sft	8810	$	$
2050.00	Sign, Rem, Salv	Ea	177	$	
3000	Earthwork				
3021.00	Subgrade Undercutting, Type II	Cyd	200	$	$
3030.01	Exploratory Excavation, SD-TD-1, (0-10' Deep)	Ea	2	$	$
3030.03	Exploratory Excavation, SD-TD-2, (0-10' Deep)	Ea	2	$	$
3040.00	Earth Excavation	Cyd	81	$	$
3050.00	Embankment	Cyd	48	$	$
4000	Sanitary Sewer				
4014.01	6 In., SDR 26 PVC Sanitary Service Lead, SD-TD-2	Ft	100	$	$
4060.00	Sanitary Structure Cover	Ea	23	$	$
4061.00	Sanitary Structure Cover, Adjust	Ea	23	$	$
6000	Storm and Drainage				
6000.01	12 In., CL IV RCP Storm Sewer, SD-TD-1	Ft	828	$	$
6000.03	18 In., CL IV RCP Storm Sewer, SD-TD-1	Ft	42	$	$
6000.05	24 In., CL IV RCP Storm Sewer, SD-TD-1	Ft	315	$	$
6000.09	48 In., CL IV RCP Storm Sewer, SD-TD-1	Ft	380	$	$

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
6003.04	12 In., PE Storm Sewer, SD-TD-2	Ft	78	$	$
6003.06	18 In., PE Storm Sewer, SD-TD-2	Ft	77	$	$
6003.71	DS_ChamberMaxx System	LS	1	$	$
6030.04	Storm Sewer Tap, 12 In. Dia.	Each	15	$	$
6050.01	Storm Manhole, 48 In. Dia. (0-8' deep)	Ea	2	$	$
6050.02	Storm Manhole, 48 In. Dia. , Additional Depth	Ft	0.77	$	$
6050.05	Storm Manhole, 72 In. Dia. (0-8' deep)	Ea	2	$	$
6050.06	Storm Manhole, 72 In. Dia. , Additional Depth	Ft	8.07	$	$
6060.01	Storm Inlet-Junction, 36 In. Dia., (0-8' deep)	Ea	1	$	$
6060.03	Storm Inlet-Junction, 48 In. Dia., (0-8' deep)	Ea	2	$	$
6060.04	Storm Inlet-Junction, 48 In. Dia., Additional Depth	Ft	1.31	$	$
6070.01	Storm Single Inlet, 24 In. Dia., (0-8' deep)	Ea	22	$	$
6070.02	Storm Single Inlet, 24 In. Dia., Additional Depth	Ft	0.55	$	$
6080.01	Storm High Capacity Inlet, 48 In. Dia., (0-8' deep)	Ea	1	$	$
6090.01	Storm Manhole with Weir, 72 In. Dia. (0-8' deep)	Ea	2	$	$
6090.02	Storm Manhole with Weir, 72 In. Dia., Additional Depth	Ft	2.34	$	$
6100.01	Storm Manhole Over Existing ("Doghouse"), 48 In. Dia.	Ea	1	$	$
6100.02	Storm Manhole Over Existing ("Doghouse"), 60 In. Dia.	Ea	1	$	$
6110.03	Storm Sewer Pipe, 12 In. Dia., Abandon	Ft	642	$	$
6120.03	Storm Sewer Pipe, 12 In. Dia., Rem	Ft	526	$	$
6130.00	Storm Sewer Structure, Abandon	Ea	1	$	$
6140.00	Storm Sewer Structure, Rem	Ea	6	$	$
6150.00	Storm Sewer Drop Structure, Rem	Ea	15	$	$
6160.01	Storm Structure Cover	Ea	48	$	$
6160.02	Storm Structure Cover, Adjust	Ea	48	$	$
6160.03	Storm Structure Adjust, Additional Depth	Ft	5	$	$
6180.02	Underdrain, Subgrade, 6 In.	Ft	1155	$	$
7000	**Water Mains**				
7000.02	6 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	103	$	$
7000.03	8 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	692	$	$
7000.05	12 In., PC 350 DIP w/polywrap, SD-TD-1	Ft	2886	$	$
7001.01	16 In., PC 250 DIP w/polywrap, SD-TD-1	Ft	19	$	$
7011.01	8 In. 90° DIP Bend	Ea	3	$	$
7011.02	8 In. 45° DIP Bend	Ea	45	$	$
7011.03	8 In. 22.5° DIP Bend	Ea	5	$	$
7011.04	8 In. 11.25° DIP Bend	Ea	1	$	$
7013.02	12 In. 45° DIP Bend	Ea	15	$	$
7013.03	12 In. 22.5° DIP Bend	Ea	2	$	$
7013.04	12 In. 11.25° DIP Bend	Ea	4	$	$
7014.02	16 In. 45° DIP Bend	Ea	2	$	$
7020.03	8 In. X 6 In. DIP Reducer	Ea	9	$	$
7020.14	16 In. X 12 In. DIP Reducer	Ea	1	$	$
7030.12	12 In. X 12 In. X 6 In. DIP Tee	Ea	1	$	$
7030.13	12 In. X 12 In. X 8 In. DIP Tee	Ea	19	$	$
7030.18	16 In. X 16 In. X 12 In. DIP Tee	Ea	1	$	$
7050.01	DS_Gate Valve in Box, 6 In.	Ea	9	$	$
7050.02	DS_Gate Valve in Box, 8 In.	Ea	4	$	$
7050.04	DS_Gate Valve in Box, 12 In.	Ea	6	$	$
7050.05	DS_Gate Valve in Box, 16 In.	Ea	2	$	$
7060.02	DS_Gate Valve in Well, 8 In.	Ea	5	$	$
7060.04	DS_Gate Valve in Well, 12 In.	Ea	3	$	$
7060.05	DS_Gate Valve in Well, 16 In.	Ea	1	$	$
7071.04	Tapping Sleeve & Valve in Well, 12 In.	Ea	1	$	$
7080.00	Excavate & Backfill For Water Service Tap and Lead	Ft	822	$	$
7090.00	Water Structure Cover	Ea	3	$	$
7091.00	Water Structure Cover, Adjust	Ea	3	$	$
7100.00	Fire Hydrant Assembly, Complete	Ea	9	$	$
7102.00	Fire Hydrant Assembly, Rem	Ea	6	$	$
7110.01	Sacrificial Anode, 17-pound	Ea	19	$	$
7110.02	Sacrificial Anode, 32-pound	Ea	4	$	$
7120.00	Gate Box, Adjust	Ea	3	$	$
7121.00	Curb Box, Adjust	Ea	3	$	$
7130.01	Temporary Water Main Line Stop, 8 In. or less	Ea	11	$	$
7130.03	Temporary Water Main Line Stop, 12 In.	Ea	1	$	$
7130.04	Temporary Water Main Line Stop, 16 In.	Ea	4	$	$

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
7131.00	Temporary Water Main Line Stop, Additional Rental Day	Ea	5	$	$
7140.02	Water Main Pipe, 6 In. Dia., Abandon	Ft	2636	$	$
7140.03	Water Main Pipe, 8 In. Dia., Abandon	Ft	415	$	$
7140.05	Water Main Pipe, 12 In. Dia., Abandon	Ft	14	$	$
7140.07	Water Main Pipe, 16 In. Dia., Abandon	Ft	7	$	$
7160.02	Gate Valve in Box, 6 In. Dia., Abandon	Ea	8	$	$
7160.03	Gate Valve in Box, 8 In. Dia., Abandon	Ea	1	$	$
7160.05	Gate Valve in Box, 12 In. Dia., Abandon	Ea	1	$	$
7180.02	Gate Valve in Well, 6 In. Dia., Abandon	Ea	5	$	$
7180.03	Gate Valve in Well, 8 In. Dia., Abandon	Ea	2	$	$
7180.06	Gate Valve in Well, 16 In. Dia., Abandon	Ea	1	$	$
8000	**Streets, Driveways, & Sidewalks**				
8000.00	Subbase, CIP	Cyd	279	$	$
8010.00	Aggregate Base Course, 21AA, CIP	Cyd	43	$	$
8010.01	Aggregate Base, 4 In., 21AA, CIP	Syd	3394	$	$
8010.02	Aggregate Base, 6 In., 21AA, CIP	Syd	1219	$	$
8010.03	Aggregate Base, 8 In., 21AA, CIP	Syd	6762	$	$
8010.71	DS_Aggregate Base, Conditioning	Syd	1600	$	$
8060.00	Hand Patching	Ton	110	$	$
8070.15	HMA, 4EML	Ton	2273	$	$
8070.19	HMA, 5EML	Ton	1844	$	$
8080.02	Conc Pavt, Non-Reinf, 7 In.	Syd	9	$	$
8080.03	Conc Pavt, Non-Reinf, 8 In.	Syd	156	$	$
8080.04	Conc Pavt, Non-Reinf, 9 In.	Syd	371	$	$
8110.00	Conc, Curb or Curb & Gutter, All Types	Ft	4843	$	$
8110.71	DS_Conc, Curb or Curb & Gutter, Monolithic	Ft	211	$	$
8120.01	Conc, Driveway Opening, Type M	Ft	174	$	$
8130.01	Conc, Sidewalk, 4 In.	Sft	4675	$	$
8131.01	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.	Sft	2307	$	$
8150.00	Detectable Warning Surface	Ft	331	$	$
8150.71	DS_Detectable Directional Tile	Ea	16	$	$
8190.01	Pavt Mrkg, Polymer Cement Surface, Bike, Large Sym	Ea	1	$	$
8190.02	Pavt Mrkg, Polymer Cement Surface, Bike, Small Sym	Ea	36	$	$
8190.03	Pavt Mrkg, Polymer Cement Surface, Bike Thru Arrow Sym	Ea	29	$	$
8190.04	Pavt Mrkg, Polymer Cement Surface, Bike Lt Turn Arrow Sym	Ea	1	$	$
8190.05	Pavt Mrkg, Polymer Cement Surface, Bike Rt Turn Arrow Sym	Ea	2	$	$
8190.06	Pavt Mrkg, Polymer Cement Surface, Bike Lane Green	Sft	10734	$	$
8190.07	Pavt Mrkg, Polymer Cement Surface, Tan	Sft	820	$	$
8200.05	Pavt Mrkg, Polyurea, 12 In., Cross Hatching, White	Ft	162	$	$
8200.07	Pavt Mrkg, Polyurea, 12 In., Crosswalk	Ft	3493	$	$
8200.09	Pavt Mrkg, Polyurea, 24 In., Stop Bar	Ft	496	$	$
8200.12	Pavt Mrkg, Polyurea, 4 In., Yellow	Ft	4770	$	$
8200.13	Pavt Mrkg, Polyurea, 6 In., White	Ft	11156	$	$
8200.14	Pavt Mrkg, Polyurea, 6 In., Yellow	Ft	14900	$	$
8200.15	Pavt Mrkg, Polyurea, Lt Turn Arrow Sym	Ea	3	$	$
8200.17	Pavt Mrkg, Polyurea, Rt Turn Arrow Sym	Ea	2	$	$
8200.18	Pavt Mrkg, Polyurea, Thru Arrow Sym	Ea	1	$	$
8200.30	Pavt Mrkg, Polyurea, Yield Triangle Sym	Ea	36	$	$
8200.31	Pavt Mrkg, Polyurea, Speed Hump Chevron, White	Ea	36	$	$
8200.73	DS_Continuous Base Mid Span L60	Ea	1103	$	$
8200.74	DS_Continuous Base Front Span L61	Ea	75	$	$
8200.75	DS_Continuous Base Rear Span L62	Ea	75	$	$
8200.76	DS_Big Bollard MASH L125SHM	Ea	913	$	$
8200.77	DS_Bikeway Delineator Post Black	Ea	89	$	$
8200.78	DS_Bikeway Delineator Post Yellow	Ea	20	$	$
8251.00	Recessing Pavt Mrkg, Longit	Ft	24598	$	$
8252.00	Recessing Pavt Mrkg, Transv	Sft	4531	$	$
8300.00	Monument Box, Adjust	Ea	12	$	$
9000	**Lighting and Electrical**				
9013.02	Conduit, Schedule 80 HDPE, 3 In., Directional Drill	Ft	40	$	$
9020.00	Handhole, Rem	Ea	2	$	$
9030.01	Handhole Assembly, 17 In X 30 In X 18 In.	Ea	6	$	$
9122.00	Light Fixture, Rem and Salvage	Ea	1	$	$
9123.00	Light Fixture, Reinstall	Ea	1	$	$
9200.71	DS_Post, Steel, 3 lb	Ft	17	$	$

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
9200.72	DS_Ground Mtd Sign Support, Rem	Ea	2	$	$
9210.71	DS_Conduit, Directional Bore, 2, 3 inch	Ft	150	$	$
9210.72	DS_Conduit, DB, 1, 1 1/2 inch	Ft	140	$	$
9210.73	DS_Conduit, DB, 1, 3 inch	Ft	10	$	$
9210.74	DS_Conduit, DB, 2, 3 inch	Ft	75	$	$
9210.75	DS_Conduit, DB, 4, 3 inch	Ft	10	$	$
9211.71	DS_Cable Pole, TS and Sec, Disman	Ea	1	$	$
9211.72	DS_Cable, Sec, 600V, 1, 3/C#6	Ft	100	$	$
9211.73	DS_Wood Pole, Rem	Ea	1	$	$
9211.74	DS_Serv Disconnect	Ea	1	$	$
9211.75	DS_Serv Disconnect, Rem	Ea	1	$	$
9211.76	DS_Wood Pole, Fit Up, TS and Sec Cable Pole	Ea	1	$	$
9220.71	DS_Light Std Arm, Install Salv	Ea	1	$	$
9220.72	DS_Light Std Arm, Rem and Salv	Ea	1	$	$
9230.71	DS_Controller and Cabinet, Rem	Ea	2	$	$
9230.72	DS_Controller Fdn, Base Mount	Ea	1	$	$
9230.73	DS_Controller Fdn, Rem	Ea	1	$	$
9231.71	DS_Pedestal, Alum	Ea	6	$	$
9231.72	DS_Pedestal, Fdn	Ea	8	$	$
9231.73	DS_Pedestal Fdn, Rem	Ea	3	$	$
9231.74	DS_Pedestal, Rem	Ea	4	$	$
9231.75	DS_Pushbutton, Pedestal, Alum	Ea	1	$	$
9231.76	DS_Pushbutton, Rem	Ea	1	$	$
9231.77	DS_Pushbutton and Sign, Salv	Ea	1	$	$
9231.78	DS_Push Button Station and Sign	Ea	6	$	$
9232.71	DS_Span Wire, Rem	Ea	1	$	$
9232.72	DS_TS, Pedestrian, Bracket Arm Mtd, Rem	Ea	1	$	$
9232.73	DS_TS, Pedestrian, Pedestal Mtd, Rem	Ea	4	$	$
9232.74	DS_TS, Span Wire Mtd, Rem	Ea	2	$	$
9232.75	DS_TS, Pedestrian, One Way Pedestal Mtd, Salv	Ea	1	$	$
9232.76	DS_Pedestrian Signal System, Accessible	Ea	1	$	$
9232.77	DS_TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	Ea	4	$	$
9232.78	DS_TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown	Ea	1	$	$
9233.71	DS_Bracket, Truss, With 12 Foot Arm	Ea	2	$	$
9233.72	DS_Wireless Vehicle Sensor Node, Rem	Ea	15	$	$
9233.73	DS_Hemispherical Video Detection Camera	Ea	1	$	$
9233.74	DS_Hemispherical Video Detection System	Ea	1	$	$
9234.71	DS_Casing	Ft	15	$	$
9234.72	DS_Backplate, TS	Ea	7	$	$
9235.71	DS_Mast Arm Pole, Cat III	Ea	1	$	$
9235.72	DS_Mast Arm, 25 foot, Cat III	Ea	1	$	$
9235.73	DS_Mast Arm, 40 foot, Cat III	Ea	1	$	$
9235.74	DS_Mast Arm Pole Fdn, Modified	Ft	18	$	$
9235.75	DS_TS, One Way Bracket Arm Mtd (LED), Long Life	Ea	1	$	$
9235.76	DS_TS, One Way Mast Arm Mtd (LED), Long Life	Ea	6	$	$
9235.77	DS_TS, One Way Mast Arm Mtd, FYA (LED), Long Life	Ea	1	$	$
9235.78	DS_TS, One Way Pedestal Mtd (LED), Long Life	Ea	3	$	$
9236.71	DS_Controller, NEMA, ATC Type, Modified	Ea	1	$	$
9236.72	DS_Cabinet, NEMA Type, Modified	Ea	1	$	$
9240.71	DS_St Name Sign, Two Way, LED, 6 foot	Ea	1	$	$
9240.72	DS_St Name Sign, Two Way, LED, 8 foot	Ea	1	$	$
9240.73	DS_Roadside Unit, Rem and Salv	Ea	1	$	$
9240.74	DS_Roadside Unit, Install Salv	Ea	1	$	$
10000	Landscaping				
10060.00	Turf Restoration	Syd	1243	$	$
	TOTAL BID AMOUNT			**$**	

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SCHEDULE AND PAYMENT

AA:JKA 5/2/24

Description

Examination of Plans, Specifications, and Work Site

Bidders shall carefully examine the Bid Form, plans, specifications, and the work site until the Bidder is satisfied as to all local conditions affecting the contract and the detailed requirements of construction. The submission of the bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and all requirements of the Contract.

The entire work under this Contract shall be completed in accordance with, and subject to, the scheduling requirements as outlined below, and all other requirements of the Contract Documents.

1. The Contractor shall begin the work of this project on or before **June 19, 2024**, and only upon receipt of the fully executed Contract and Notice to Proceed. Appropriate time extensions shall be granted if the Notice to Proceed is delayed beyond this date.

2. This Contract requires water main, storm sewer, sidewalk replacement, road resurfacing, cycle track installation, and turf establishment, in three (3) phases: Phase 1 will include all work required on Miller Avenue from Newport Road to S. Seventh Street, with the exception of the cycle track and associated pavement markings and shall be substantially complete by **November 15, 2024.** (No longer than one hundred fifty-one (151) consecutive calendar days.) Phase 2 shall begin **June 16, 2025** and includes all work required on Miller Avenue from S. Seventh Street to Chapin Street, with the exception of the cycle track and associated pavement markings, and shall be substantially complete by **October 15 2025.** (No longer than one hundred twenty-one (121) consecutive calendar days.) Phase 3 includes the cycle track installation and final pavement markings and shall begin after Phase 2 work is substantially complete and shall be complete by **November 15, 2025.** (No longer than thirty-one (31) consecutive calendar days.) The total calendar days for this contract is three hundred three (303) days.

3. Contractor shall sequence the water and storm sewer installation in a way that does not interrupt service of other utilities.

4. Contractor shall provide all necessary sewer flow control to maintain flow at all existing sewer crossings, connections and lead transfers.

5. No work shall be performed during Holiday weekends as follows, unless approved by the City of Ann Arbor:

    - Fourth of July, from 3:00 p.m. Wednesday July 3, 2024, through 7:00 a.m. Friday July 5, 2024
    - Labor Day, from 3:00 p.m. Friday August 30, 2024 through 7:00 a.m. Tuesday September 3, 2024
    - Memorial Day, from 3:00 p.m. Friday May 23, 2025, through 7:00 a.m. Tuesday

May 27, 2025

- Fourth of July, from 3:00 p.m. Thursday July 3, 2024, through 7:00 a.m. Saturday July 5, 2024
- Labor Day, from 3:00 p.m. Friday August 29, 2025 through 7:00 a.m. Tuesday September 2, 2025

6. No work shall be performed during University of Michigan home football games.

City Council approval is expected on or before **June 18, 2024**. The Contractor shall not begin the work without approval from the Project Engineer, and in no case before the receipt of the Notice to Proceed.

Contractor will be furnished with two (2) copies of the Contract, for his/her execution, before the aforementioned City Council meeting. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance Certificate, to the City within **ten (10) days.**

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project by the final completion date. Should the Contractor demonstrate that they must work on some Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the City. There will be no additional compensation due to the Contractor for work performed on Sundays.

Prior to the start of any construction, the Contractor shall submit a detailed schedule of work for the Engineer's review and approval. Work shall not be started until a schedule is approved in writing by the Engineer. The proposed schedule must fully comply with the scheduling requirements contained in this Detailed Specification. The Contractor shall update the approved work schedule upon request by the Engineer and present it to the Engineer within seven days of said request.

Liquidated Damages

Failure to complete all work as specified herein within the times specified herein, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct from the payments due the Contractor, **$2,000.00** in Liquidated Damages, and not as a penalty, for delays in the completion of the work for each and every calendar day beyond the times for each sub-phase, as required by this Detailed Specification.

Liquidated Damages will be assessed until the required work is completed in the current construction season. If, with the Engineer’s approval, work is extended beyond seasonal limitations, the assessment of Liquidated Damages will be discontinued until the work is resumed in the following construction season.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SCHEDULE AND PAYMENT

AA:JKA 5/2/24

Measurement and Payment

If the construction Contract is not completed within the specified calendar day period including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor, this Contract may be terminated with no additional compensation due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least three (3) years. If the Engineer elects to terminate the Contract, Contract items paid for on a Lump Sum basis shall be paid up to a maximum percentage equal to the percentage of the Contract work that has been completed.

Costs for the Contractor to organize, coordinate, and schedule all of the work of the project, will not be paid for separately, but shall be included in the bid price of the Contract Item “General Conditions, Max $300,000.00”.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CHAMBERMAXX SYSTEM

a. Description. This work consists of installing stormwater management as shown on the plans or as directed by the Engineer. Stormwater Retention Systems with ground infiltration are best management practices (BMPs) which are designed to capture stormwater and store it until some, or all, of the stormwater filters into the surrounding soil. This system is effective for removing fine grained pollutants. The removal of suspended solids from the runoff will improve the quality of the captured runoff. The system retains stormwater in open-bottomed chambers underground, which increases the amount of water that infiltrates into the ground and reduces the volume of water reentering the stormwater system. The system will improve water quality of captured runoff and decrease potential for the storm system surcharging, while having minimal impact on above-ground land use.

General

1. This item shall govern the furnishing and installation of ChamberMaxx underground detention and infiltration chamber systems.

2. Contractor shall furnish all labor, materials, equipment and incidentals necessary to install the ChamberMaxx system, appurtenances and incidentals in accordance with the Drawings and as specified herein.

3. The containment row of the ChamberMaxx system is recommended as the appropriate means of pretreating for the purpose of extending the maintenance interval on the ChamberMaxx system and reducing the life cycle cost. The containment row shall consist of a row of chambers which lays upon 2 layers of AASHTO M288 Class I woven geotextile between the chamber and stone bedding.

4. Applicable provisions of any Division shall govern work in this section.

5. Related Standards:

    a. ASTM 2418 “Standard Specification for Polypropylene Corrugated Wall Stormwater Collection Chambers”

    b. ASTM F-2787 “Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers”

6. Site layout drawings, product specifications, materials, hydraulic storage data and supported calculations of proposed alternatives shall be submitted to the Engineer of Record (EOR) for review at a minimum of 10 working days prior to bid closing.

7. Shop drawings shall be annotated to indicate all materials to be furnished and installed under this section, and all applicable standards for materials, required tests of materials and design assumptions for structural analysis:

8. Before installation of the ChamberMaxx system, Contractor shall obtain the written approval of the EOR for the stormwater system and the installation drawings.

9. All proposed alternatives to the ChamberMaxx system shall conform to applicable above referenced ASTM specifications.

b. Materials. The Contractor shall provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to furnish and install the retention system with infiltration as specified on the Drawings and manufactured by Contech as ChamberMaxx, or Engineer approved equivalent, as detailed in the Specifications.

1. The chamber shall be constructed of injection molded polypropylene copolymer formulated for high impact and stress cracking resistance and sustained structural performance during high temperatures. The chamber shall be designed and manufactured in accordance with ASTM F-2418 and F-2787.

2. The chamber shall be designed to AASHTO LRFD Bridge Design Specifications (Section 12), as applied to material and performance requirements for buried thermoplastic pipes. Design live load shall be the AASHTO HS-20 and HS-25 truck, including multiple lane presence factors, over a minimum cover of 18 inches and chamber row spacing of 5 inches or greater.

3. The chamber system shall be comprised of three chamber configurations: The MIDDLE chambers shall be open-ended to allow unobstructed hydraulic flow, inspection, and maintenance. The START and END chambers shall each have an integral end wall designed to resist loading at the start and end of the chamber rows. The chambers within a row shall be installed with overlapping end corrugations.

4. The nominal dimensions of the START chamber shall be 51.4 inches wide, 30.3 inches tall, and 98.4 inches long. The nominal dimensions of the MIDDLE chamber shall be 51.4 inches wide, 30.3 inches tall, and 91.0 inches long. The nominal dimensions of the END chamber shall be 51.4 inches wide, 30.3 inches tall, and 92.0 inches long. The nominal storage volume inside the chamber shall be 75 cubic feet when utilizing 6” of stone above and below chamber with 40% stone porosity per ChamberMaxx standard detail.

5. The chamber shall have a continuously-curved, arch-shaped section profile.

6. The START and END chamber integral end wall shall be structurally suitable for cutting and inserting inlet pipes and shall provide a range of pipe diameter indicants up to 24” diameter as cutting templates.

7. The chamber shall be a corrugated, open-bottom design and top vent orifices for hydraulic pressure equalization. Corrugation valleys and crests shall be sub-corrugated to increase stiffness.

8. The chamber shall have a circular cut line for an optional reinforced inspection port configured to accept a 4” Schedule 40 pipe.

9. The END chambers shall be capable of being cut to shorter lengths to accommodate site specific requirements.

10. The chamber shall be supported by integral structural footings comprised of load dispersing toe ribs and longitudinally aligned stiffening ribs.

11. The manufacturer of the ChamberMaxx system shall be one that has regularly been engaged in the engineering design and production of these systems for at least eight (8) years and which has a history of successful production, acceptable to the Engineer of Record (EOR). In accordance with the Drawings, the ChamberMaxx system shall be supplied by:

Contech Engineered Solutions
9025 Centre Pointe Drive
West Chester, OH, 45069
Tel: 1 800 338 1122

c. Performance.

1. The ChamberMaxx system proposal shall be sized in accordance with the design provided and approved by the Engineer of Record (EOR). Any Contractor deviating from the design shown on the plans, to include: material, footprint, etc., shall provide to the EOR a summary report on stage-storage curves, design calculations, HydroCAD modeling and engineering drawings.

2. ChamberMaxx row spacing, and stone base thickness cannot be altered with consultation from Contech Engineered Solutions, LLC.

3. The ChamberMaxx system shall be designed so as the hydraulic grade line will increase evenly throughout whereas transverse movement from one storage compartment to another shall not be permitted. All storage compartments shall be connected via manifold (or connecting pipe) versus by entirely transporting stormwater through stone.

4. The ChamberMaxx system shall include a containment row(s) for the collected of sediment in stormwater prior to flowing into the chamber array. The containment row shall be connected to a diversion structure with a 24-inch pipe. The initial flow of stormwater shall be diverted by a weir into the containment row. The containment row shall consist of a row of chambers which lays upon 2 layers of AASHTO M288 Class I woven geotextile between the chamber and stone bedding.

d. Execution

1. The ChamberMaxx system shall be installed per the Contech “ChamberMaxx Stormwater Retention System Standard Installation Detail”, available from local Contech representative or from www.conteches.com.

2. For temporary construction vehicle loads, an extra amount of compacted cover may be required over the top of the chambers. The Height-of-Cover shall meet the minimum requirements shown in the Contech “ChamberMaxx Stormwater Retention System Standard Installation Detail”. The use of heavy construction equipment necessitates greater protection for the chambers than finished grade cover minimums for normal highway traffic.

3. The contractor shall follow Occupational Safety and Health Association (OSHA) guidelines for safe practices in executing the installation process in accordance with the manufacturer/supplier installation recommendations.

4. Contractor is required to participate in an on-site preconstruction meeting with the supplier prior to the scheduled delivery date of the ChamberMaxx system.

The Contractor must notify the Engineer in advance when specific items are ready for observation. The construction shall not proceed without the approval of the Engineer at the specific points indicated below, unless the express consent of the Engineer is given to proceed. The Engineer may stop construction and/or have materials removed at the Contractor's expense if no notification or approval to proceed is given. Contractor responsibilities include:

- **Start of construction** – Locate utilities and layout sand filters, relocate utilities as required while providing the required separation of at least 2’, locate and install appropriate temporary erosion control measures.

- **Completion of excavation** – Excavate material and verify contours and that the base of the entire sand filter is level.

- **Placement of underdrain structures and gravel** – Place geofabric, underdrains, stormwater control structures, and stormwater storage chambers and make internal connections between stormwater control structures, place storage aggregate in compacted lifts with a middle geofabric layer, and place at least an additional 6” of storage aggregate above the middle geofabric. A top geofabric layers shall be installed on top of the final aggregate grade, or as specified in the manufacturer’s installation guide.

- **Install open cell pavers** – Place open cell pavers onto aggregate material for both curbs cut spillways and sand filter terraces. Install pavers according to manufacturer instructions.

- **Placement of filter soil** – Verify that material is approved prior to placement, install the filter soil and perform final grading to the needed contours.

- **Completion of construction** – Seeding of other restoration areas and installation of permanent erosion control measures, removal of excess or excavated materials, and general cleanliness and completeness of work areas.

e. Products

- Geofabric: Geofabric shall be constructed of a non-woven geotextile that meets AASHTO M288 Class 2. The geofabric shall be placed on the bottom, sides, and ends of the excavated sand filter with a minimum overlap of 2' at all joints. Geofabric will also be placed above the stormwater storage chambers as shown on the drawings.

- Perforated Pipe: Underdrain piping will consist of perforated single wall HDPE highway pipe with geofabric sock unless otherwise noted on Drawings. The perforations shall be slits in the corrugations spaced every 4 inches or an equivalent approved by the Engineer. A perforated pipe shall be installed on the geofabric within the base of the storage aggregate and shall originate 1 foot short of the sand filter wall and terminate in the specified catch basin structure.

- Stormwater Storage Chambers: The chambers shall meet the ASTM F 2922-12 standard specification for polyethylene (PE) corrugated wall stormwater storage chambers. The installed chamber system shall provide the load factors specified in the ASSHTO LRFD bridge design specifications section 12.12 for earth and live loads with consideration for impact and possible vehicle presence. Chambers shall be ChamberMaxx or equal.

- Storage Aggregate: Storage aggregate shall consist of ¾" – 2" crushed angular stone. The material shall be washed and contain no more than 1% fines, including silt, clay or organic material. No PreCenozoic limestone, dolomite, or stone containing phosphate shall be used.

- Filter Soil: Filter soil shall be composed of 75% by weight of sand and 25% compost. Sand shall be clean construction sand, free of deleterious materials including but not limited to clay, silt, organics, woody debris, construction debris or other materials that may negatively affect infiltration. Clean construction sand or clean river-run sand is acceptable. A sample of the sand shall be made available to the Engineer prior to mixing the amended soils. Any deleterious materials in the sand will be screened at the expense of the Contractor.

- Compost shall be aged yard-leaf compost and shall be free of deleterious materials including but not limited to clay, silt, manure solids, woody debris, plastics, construction debris or other materials that may negatively affect infiltration. The pH shall be between 5.5 and 8.5. Particles shall be able to pass through a 1-inch screen or smaller. Compost that smells putrid, has an ammonia odor, or shows visible signs of mold is unacceptable. A sample of the compost shall be made available to the Engineer prior to mixing the amended soils.

- Catch Basin Structure and Grate: The catch basin (structure) shall consist of a 3' x 3' precast structure with a depth and grate size as indicated on the drawings, cast as a single unit consisting of the base and side walls and fit with a top slab frame and grate. Structure, frames and covers shall support an H20 loading. Structure shall have a 6" inlet cast into the catch basin chamber that extends 6" from the exterior of the structure and shall include

a breakout panel for installation of the catch basin lead to the stormwater drainage system. Pipe connection to storm sewer shall be sealed with a rubber boot to limit infiltration or approved equal.

For locations with turf, the appropriate turf seed blend shall be installed in all areas containing filter soil.

All curb cuts, overland flow or other hydrologic inputs shall not be brought online and allowed to enter sand filters for at least 14 days following seeding, or until turf establishment is verified and approved by Engineer.

f. Maintenance and Guarantee

The Contractor shall assume responsibility for maintaining work to the end of the guarantee period. During this period, the Contractor shall make a minimum of one maintenance trip every 4 weeks during the growing season and as many more as necessary to keep the plantings and turf in a thriving condition.

Maintenance activities generally include but are not limited to: prescribed burns, herbicide applications of invasive species, spot-spraying or hand-pulling undesirable weeds, irrigation, debris removal, and supplemental plantings as determined to be appropriate by the Engineer.

- Watering shall be the responsibility of the Contractor. Seed shall be kept moist for optimum growth (1 inch of water each week, including rainfall) for the first growing season. Any erosion resulting from watering shall be repaired by the Contractor.
- Weeding will be the responsibility of the Contractor. The sand filters will be kept free of species other than the prescribed seed.
- Trash removal and maintenance of the drainage structures will be the responsibility of the Contractor. The drainage structures and inlets will be kept free of debris that may block storm flows and cause an overflow of the sand filters. Protection from foot traffic, mowing, or herbicide application is the responsibility of the Contractor. Appropriate signage and/or fencing may be used following approval by the Engineer to protect the plantings until they are fully established.

The Contractor shall replace, at no cost to the Owner, all dead vegetation during the maintenance period, and will maintain the sand filters to ensure uniform healthy plant growth, in order for the site to be released by the Engineer so that the Contractor may be paid the final retainage.

Maintenance Plan

During the period of the contract, the contractor shall perform the elements of the Maintenance Plan, as described below. This plan requires the following bi-annual inspection (Fall and Spring) to be performed:

- Inspect and maintain the sand filter catch basins – Vegetation, grass, bark, mulch, and accumulated leaves from the fall season, and grit from the winter season will accumulate in the sand filters. Perform inspections in the fall and spring and clear and remove these materials from the catch basin and catch basin sumps using a Vactor or alternative

methods.

- Inspect and maintain the curb cut energy dissipation pads – Solids and grit may accumulate on the energy dissipation pads downstream from the curb cuts that enter each sand filter. Areas with accumulation should be swept or vactored to remove deposited solids.
- Inspect and maintain the sand filter surfaces – The sand filter surface should be inspected, and if necessary, any leaves, trash, or other material removed. A motorized vacuum methods used for leaf collection shall be employed.
- Inspect the terraces for erosion – Some sand filters may have terraces to make sure that surface water is evenly distributed. These terraces shall be inspected to verify that they have not eroded and that the spillway pavers have adequate soil to support vegetation. Any eroded areas shall be repaired to make sure that the terraces are continuous and vegetated.
- Standing water and sediment inspection – Should standing water be observed, or if the base of the sand filter is less than 4" below the catch basin grate elevation, the surface of the sand filter may need to be removed and replaced with appropriate filter soils and replanted. The use of 75% sand and 25% compost shall be used, and a low maintenance turf blend used to minimize the amount of mowing or watering needed in the sand filter areas. If the discharge orifice is plugged, this should be unblocked, and material removed so that it will discharge flow at the required rate.

Guarantee

By May 31st of the year following seeding, the sand filter and surrounding disturbed areas shall show a uniform density of healthy specimens of turf or native cover. The sand filters shall also be free of weeds and trash, and covered in a uniform layer of mulch, as determined by the Engineer.

Uniform density is deemed as 85% coverage of all sand filter areas, with no bare patches greater than 4 square feet within the sand filters, or bare patches greater than I square foot within the areas of turf grass.

Any area in the sand filters that fails to show a uniform density of plants shall be replanted with appropriate native seed mix, temporary stabilization seed mix, or turf. Any bare patches around the borders will be reseeded with fescue until a uniform density of turf grass is established.

g. Measurement And Payment

The completed work as measured will be paid for at the Contract Unit Price for the following contract items (pay items):

PAY ITEM	PAY UNIT
DS_CHAMBERMAXX SYSTEM	LS

The unit price includes all labor, equipment, materials, and documents necessary to install the sand filter, catch basin, stop gate and control orifice as detailed in the plans.

ChamberMaxx Project Details

Description

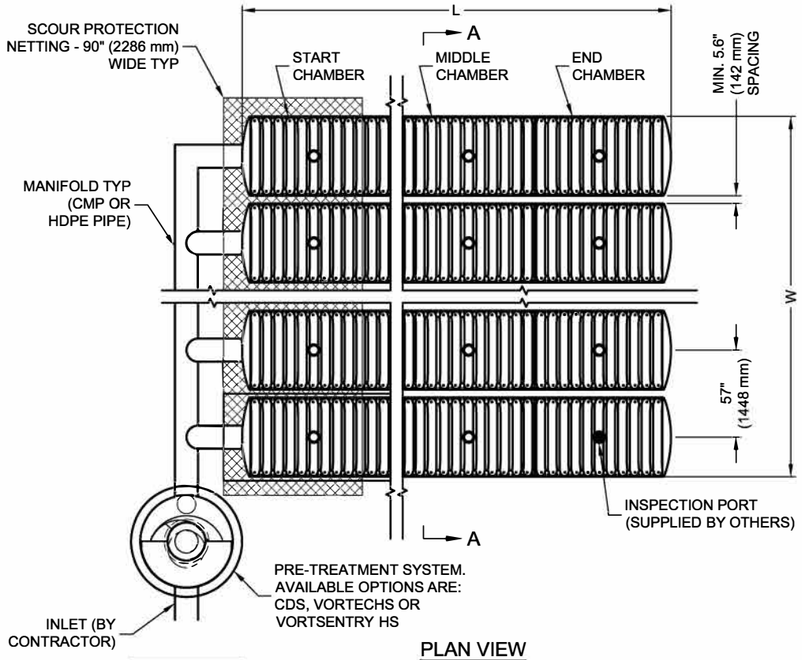
The ChamberMaxx corrugated, open-bottom plastic infiltration chamber system allows you to meet stormwater runoff reduction requirements and maximize available land space by providing economic infiltration below grade. ChamberMaxx maximizes storage volume in a small footprint, and its low-profile shape is ideal for sites with shallow footprints.

Project Information

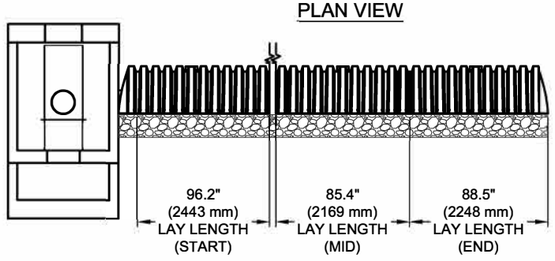
Project Name 47180 - West Park
Location Ann Arbor, MI
Date March 05 2024

Design Parameters	
Pretreatment Method	Hydrodynamic Separator
Storage Volume	6712ft³
Limiting Length	80ft
Limiting Width	40ft
Invert Depth	6ft
Number of Headers	1
Header Diameter	18in
Spacing Between Chambers	5.6in
Porous Stone Width at Sides	12in
Porous Stone Width at Ends	12in
Porous Stone Width at Above	6in
Porous Stone Width at Below	6in
Porosity	40%
Include Porous Storage Between Chambers	Yes

Chamber Information	
Start Units	8
Middle Units	64
End Units	8
Required Chambers	80
Manifold Tees	7
Manifold Elbows	1
Number of Rows	8
Chambers per Row	10
Storage Calculations	
Chamber Storage	3792ft³
Header Storage	221.63ft³
Porous Stone Storage	2809.28ft³
Total Storage Provided	6712.68ft³
Percentage of Storage Provided	100.01%
System Dimensions and Other Mat'l	
Rectangular Footprint	78.41x39.53ft
Total Excavation	746.23y³
Stone Backfill	260.12y³
Remaining Backfill to Pavement	341.55y³
Woven Geotextile Qty	0y²
Non-Woven Geotextile Qty	344.42y²
Scour Protection Fitting	39.53x7.5ft
Approximate Truckloads	1



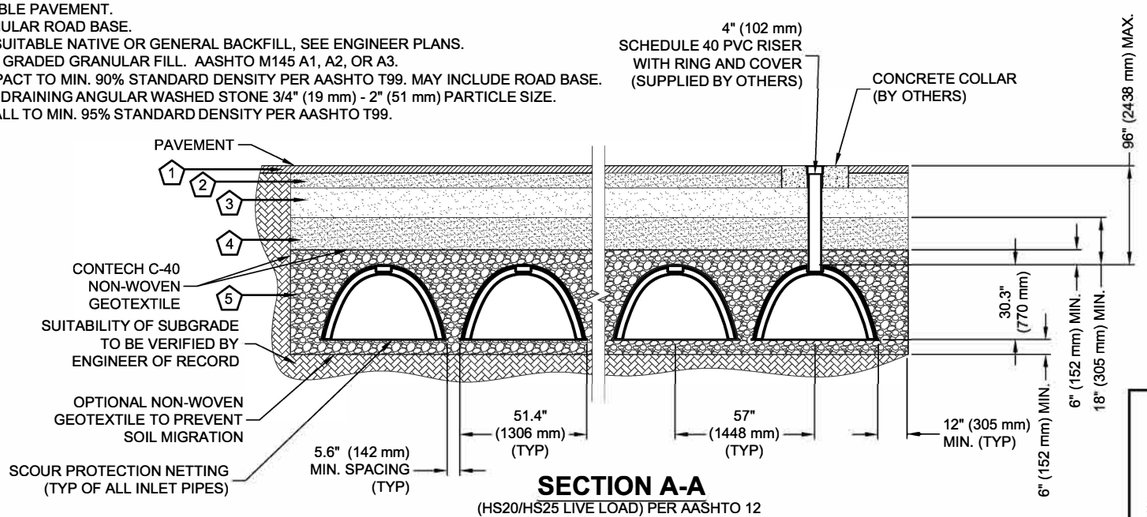
PLAN VIEW



ELEVATION VIEW

TYPICAL LAYOUT

KEY
1. FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
4. WELL GRADED GRANULAR FILL. AASHTO M145 A1, A2, OR A3. COMPACT TO MIN. 90% STANDARD DENSITY PER AASHTO T99. MAY INCLUDE ROAD BASE.
5. FREE DRAINING ANGULAR WASHED STONE 3/4" (19 mm) - 2" (51 mm) PARTICLE SIZE. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.



SECTION A-A
(HS20/HS25 LIVE LOAD) PER AASHTO 12

CHAMBERMAXX DESIGN DETAILS

FEATURE	START CHAMBER	MIDDLE CHAMBER	END CHAMBER
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	98.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	88.5 (2248)
CHAMBER STORAGE VOLUME - CF (m³)	50.2 (1.421)	47.2 (1.336)	46.2 (1.307)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m³/m)	6.3 (0.582)	6.6 (0.616)	6.3 (0.582)
*INSTALLED CHAMBER VOLUME - CF (m³)	78.1 (2.211)	75.1 (2.127)	74.1 (2.098)
*INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m³/m)	9.7 (0.905)	10.6 (0.981)	10.0 (0.934)
CHAMBER WEIGHT - LB (kg)	83 (37.65)	73 (33.11)	76 (34.47)
*6" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5.6" (142 mm) CHAMBER SPACING AND 40% POROSITY			

* SITE SPECIFIC DATA REQUIREMENTS	
FOR DETAILED DESIGN ASSISTANCE REFERENCE CHAMBERMAXX DYODS (DESIGN YOUR OWN DETENTION SYSTEM) SOFTWARE AND CHAMBERMAXX STAGE STORAGE CALCULATOR @ WWW.CONTECHSTORMWATER.COM	
TOTAL REQUIRED STORAGE VOLUME (CF OR m³)	
DEPTH TO INVERT BELOW ASPHALT (FT OR m)	
LIMITING WIDTH (FT OR m)	
LIMITING LENGTH (FT OR m)	
POROUS STONE ABOVE CHAMBER (IN OR mm)	
POROUS STONE BELOW CHAMBER (IN OR mm)	
STONE POROSITY (0 TO 40%)	
MANIFOLD SYSTEM DIAMETER (IN OR mm)	
* PER ENGINEER OF RECORD	

GENERAL NOTES

1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
2. PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
3. CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
4. CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
6. MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
7. ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
8. FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
9. CHAMBERMAXX BY CONTECH ENGINEERED SOLUTIONS, LLC.

INSTALLATION NOTES

1. CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
2. PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A GEOGRID SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
3. THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
4. COVER ANY OPEN VOID SPACES GREATER THAN ¾" (19 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
5. STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
6. REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
7. IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
8. GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.

CHAMBERMaxx®
PATENT PENDING

CONTECH®
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CHAMBERMAXX STORMWATER RETENTION STANDARD DETAIL PRE-TREATMENT STRUCTURE OPTION

CITY OF ANN ARBOR

ENGINEERING

MILLER AVENUE REHABILITATION

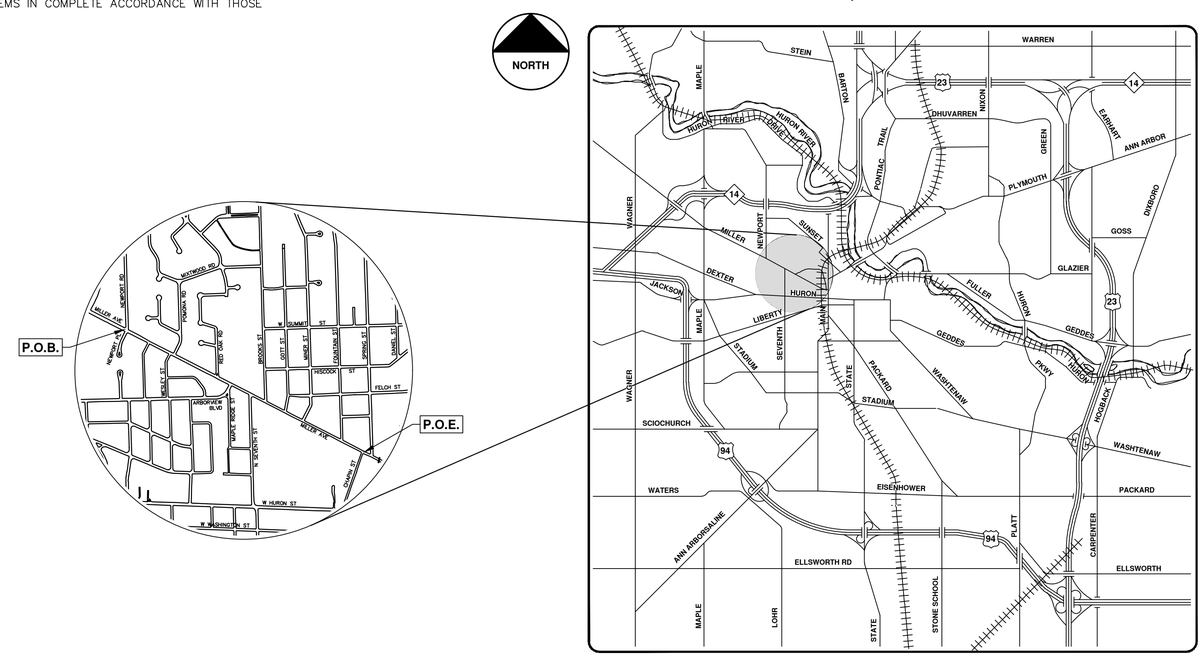
RFP No 24-19, FILE No. 2022034

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.



VICINITY MAP

Sheet List Table	
Sheet Number	Sheet Title
1	Cover Sheet
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4	Alternate Pedestrian Route (APR) Detour
5	Alternate Pedestrian Route (APR) Bypass
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7	TPAR Walkway Devices
8	Rectangular Rapid Flashing Beacon Assembly
9	Detectable Tactile Directional Tile
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19	Miller Sections 2
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Detour Route	
22	Phase I Stage I & II (Water Main)
23	Phase II Stage I & II (Water Main)
24	Phase II Stage III (Cycle Track)
Traffic Control - Phase I Stage I (Newport Water Main Conn)	
25	P.O.B. - Sta. 61+00
Traffic Control - Phase I Stage II (Water Main)	
26	P.O.B. - Sta. 61+00
27	Sta. 61+00 - P.O.E.
Traffic Control - Phase I Stage III (Water Main)	
28	P.O.B. - Sta. 61+00
29	Sta. 61+00 - P.O.E.
Traffic Control - Phase II Stage I (Water Main)	
30	P.O.B. - Sta. 80+00
31	Sta. 80+00 - P.O.E.
Traffic Control - Phase II Stage II (Water Main)	
32	P.O.B. - Sta. 80+00
33	Sta. 80+00 - P.O.E.
Traffic Control - Phase II Stage III (Cycle Track)	
34	P.O.B. - Sta. 14+00
35	Sta. 14+00 - Sta. 30+00
36	Sta. 30+00 - Sta. 45+00
37	Sta. 45+00 - Sta. 61+00
38	Sta. 61+00 - Sta. 77+00
39	Sta. 77+00 - P.O.E.
Removals	
40	Sta. 49+13 - Sta. 55+00
41	Sta. 55+.00 - Sta. 62+00
42	Sta. 62+00 - Sta. 69+00
43	Sta. 69+00 - Sta. 76+50
44	Sta. 76+50 - Sta. 83+00
45	Sta. 83+00 - Sta. 88+79
Proposed Water Main - Newport to N Seventh - Phase I	
46	Newport and Newport Pl Connections
47	Sta. 0+51 - Sta. 3+75
48	Sta. 3+75 - Sta. 8+00
49	Pomona and Wesley Connections and H1 Profile
50	Sta. 8+00 - Sta. 12+50
51	Red Oak Connection and H2 and H3 Profiles
52	Sta. 12+50 - Sta. 16+00
53	Sta. 16+00 - Sta. 18+69

Proposed Water Main - N Seventh to Chapin - Phase II	
54	Sta. 7+33 - Sta. 10+50
55	Sta. 10+50 - Sta 15+00
56	Fountain Connection and H7 and H8 Profiles
57	Sta. 15+00 - Sta. 17+48
Proposed Storm Sewer	
58	R300,R301,R302,R303,R410,R411
59	R400,R401,R404,R407
60	R402,R403,R405,R406,R408,R409
61	R207,R208,R209,R210,211
62	R201 R202 R204 R205
63	R100,R101,R102,R103,R104,R105,R108,R109
64	R106,R107
Road Plan & Profile	
65	Sta. 49+13 - Sta. 52+00
66	Sta. 52+00 - Sta. 55+50
67	Sta. 55+50 - Sta. 59+00
68	Sta. 59+00 - Sta. 62+50
69	Sta. 62+50 - Sta. 66+00
70	Sta. 66+00 - Sta. 69+50
71	Sta. 69+50 - Sta. 73+00
72	Sta. 73+00 - Sta. 76+50
73	Sta. 76+50 - Sta. 80+00
74	Sta. 80+00 - Sta. 84+00
75	Sta. 84+00 - Sa. 88+79
Intersection Grades	
76	Bus Stop Near Newport Pl.
77	Red Oak Rd., Bus Stop Near Arborview Blvd.
78	N Seventh St, Bus Stop Near Gott St
Pavement Markings	
79	P.O.B. - Sta. 55+00
80	Sta. 55+.00 - Sta. 62+00
81	Sta. 62+00 - Sta. 69+00
82	Sta. 69+00 - Sta. 76+50
83	Sta. 76+50 - Sta. 83+00
84	Sta. 83+00 - P.O.E.
Permanent Signing	
85	P.O.B. - Sta 14+00
86	Sta. 14+00 - Sta. 30+00
87	Sta. 30+00 - Sta. 45+00
88	Sta 45+00 - Sta. 61+00
89	Sta. 61+00 - Sta. 77+00
90	Sta. 77+00 - P.O.E.

Sheet List Table	
Sheet Number	Sheet Title
91	RRFB Crossing - Detail Grades Miller Ave @ Fulmer St
92	RRFB Crossing - Detail Grades Miller Ave @ Hatcher Crescent
93	RRFB Crossing - Detail Grades Miller Ave @ Bruce St
94	RRFB Crossing - Detail Grades Miller Ave @ Saunders Crescent
95	RRFB Crossing - Detail Grades Miller Ave @ Pine Tree Dr
96	RRFB Crossing - Detail Grades Miller Ave @ Newport Rd

Sheet List Table	
Sheet Number	Sheet Title
97 - 131	Miller Ave Cycle Track Maple Road to Newport Road and Chapin Street to First Street

PREPARED UNDER THE SUPERVISION OF

JANE KATHERINE ALLEN, P.E. - MI LICENSE No. 57254
PROJECT MANAGER

04 / 09 / 2024
DATE

STATE OF MICHIGAN
JANE KATHERINE ALLEN
ENGINEER No. 57254
LICENSED PROFESSIONAL ENGINEER

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

Description:
The Miller Avenue Improvement Project consists of installing approximately 2900 feet of new water main and 1700 feet of new storm sewer between Newport Road and Chapin Street, the installation of a new Cycle Track from Maple Road to First Street, the realignment of the intersections at Miller / S Red Oak and Miller / S Seventh with the installation of new Rectangular Rapid Flashing Beacons (RRFBs) at Red Oak, along with associated concrete work, pavement markings, and restoration.

SCALE

DRAWING No.
2022034-1

SHEET No.
1 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\20220340ov.dwg — _a2 standard bw.stb — Plot Date: 5/2/2024 3:32:22 PM

CONSTRUCTION NOTES:

1. Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.

2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.

3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.

4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.

5. During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".

6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.

7. City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public Works.

8. For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.

9. The Contractor shall backfill trenches in accordance with Trench Detail specified on plans. This work shall be included in the item of work "Excavate and Backfill for Water Service Tap and Lead". All concrete removals and replacements required for this work will be paid for separately.

10. 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.

11. "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.

12. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.

13. 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.

14. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.

15. 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".

16. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.

17. The location of material stock piles and on-site staging areas to be approved by the Engineer.

18. 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.

19. 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.

MILLER AVENUE REHAB BENCHMARKS

BM #	ELEV	DESCRIPTION
1	797.186	S.W. ANCHOR BOLT ON SUPPORT POLE FOR SIGNALS @ N.E. CORNER OF MILLER AND FIRST
2	792.872	SET RR SPIKE IN S. SIDE OF L.P. ON N. SIDE OF MILLER @ ENTRANCE TO FIRST MILLER BUSINESS CENTER
3	794.390	N.E. CORNER OF MAIL BOX PAD @ N.W. CORNER OF MILLER AND SPRING
4	798.274	SET RR SPIKE IN S. SIDE OF L.P. ON N. SIDE OF MILLER AT CHAPIN
5	818.597	SET RR SPIKE IN S.W. SIDE OF L.P. @ N.E. CORNER OF MILLER AND FOUNTAIN
6	833.388	SET RR SPIKE IN N. SIDE OF U.P. ON S. SIDE OF MILLER ACROSS FROM HSE NO. 620
7	839.564	SET RR SPIKE IN S. SIDE OF U.P. @ N.W. CORNER OF MILLER AND MINER
8	845.877	SET RR SPIKE IN N. SIDE OF L.P. ON S. SIDE OF MILLER IN FRONT OF MILLER APARTMENTS @ 801 MILLER
9	852.358	RR SPIKE IN N. SIDE OF U.P. ON S. SIDE OF MILLER @ BROOKS. (BROOKS STREET PROJECT, BK 1124 P55)
10	855.314	SET RR SPIKE IN N. SIDE OF U.P. @ S.E. CORNER OF MILLER AND SEVENTH
11	845.506	SET RR SPIKE IN S. SIDE OF U.P. ON N. SIDE OF MILLER AT ARBORVIEW
12	852.220	SET RR SPIKE IN N. SIDE OF U.P. ON S. SIDE OF MILLER AT RED OAK
13	864.548	SET RR SPIKE IN N. SIDE OF U.P. ON S. SIDE OF MILLER IN FRONT OF HSE NO. 1107
14	872.353	SET RR SPIKE IN S. SIDE OF U.P. AT NW CORNER OF MILLER AND POMONA
15	881.960	FND 60D NAIL IN N. SIDE OF U.P. ON S. SIDE OF MILLER BETWEEN HSE NO'S 1305 AND 1309
16	889.525	FND BOAT SPIKE IN U.P. @ SE CORNER OF MILLER & LINDA VISTA
17	900.375	SET RR SPIKE IN S. SIDE OF L.P. AT NE CORNER OF MILLER AND NEWPORT

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE

* NO COST TO CONTRACTOR

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

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

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER SANITARY STORM FORESTRY	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
SIGNS SIGNALS STREET LIGHTS		MARK MORENO (734) 794-6361
FIBER OPTIC	CITY OF ANN ARBOR INFORMATION TECHNOLOGY LARCOM 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	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	STEPHEN BECK (248) 972-7511
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	STEVEN ALLSHOUSE (734) 996-5381
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

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

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02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

NOTES

SCALE: NTS

DRAWING No. 2022034-2

SHEET No. 2 OF 131

EXISTING LEGEND

EX = EXISTING

- FIRE HYDRANT
- GATE VALVE IN BOX
- GATE VALVE IN WELL
- STOP BOX
- WATER VAULT
- WELL
- CATCH BASIN (SQ)
- CATCH BASIN (RD)
- STORM MANHOLE
- NON-CURB CATCH BASIN (SQ)
- END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- POST
- PEDESTRIAN SIGNAL
- SIGN
- HAND HOLE
- ORNAMENTAL LIGHT
- FLOOD LIGHT
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- GAS VALVE
- GAS VENT
- GAS BOX
- ELECTRICAL RISER
- TRANSFORMER
- UTILITY POLE
- LAMP POLE
- GUY ANCHOR
- GUY POLE
- MONITORING WELL
- MAILBOX
- SOIL BORING
- TRAVERSE POINT
- BENCH MARK
- IRON PIPE
- MON BOX

- WATER MAIN
- WATER MAIN ABANDONED
- STORM SEWER
- STORM SEWER ABANDONED
- SANITARY SEWER
- SANITARY SEWER ABANDONED
- GAS MAIN
- GAS MAIN (DEAD)
- ELECTRICAL OVER HEAD
- ELECTRICAL UNDER GROUND
- ELECTRICAL DUCT BANK
- TELEPHONE OVER HEAD
- TELEPHONE UNDER GROUND
- TELEPHONE DUCT BANK
- CABLE TV OVER HEAD
- CABLE TV UNDER GROUND
- FIBER OPTIC
- FIBER OPTIC DUCT BANK
- BOUNDARY
- BUILDING
- CENTERLINE OF DITCH
- CENTERLINE/CROWN OF ROAD
- CONTOUR MAJOR
- CONTOUR MINOR
- EDGE OF WATER
- FLOODPLAIN
- FENCE
- GRAVEL
- GUARDRAIL
- STONE WALL
- R.O.W.
- TREELINE
- WETLAND
- EDGE OF BRUSH
- HEDGE
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- SHRUB (DECIDUOUS)
- STUMP
- TREE TO REMAIN & PROTECT (DECIDUOUS)
  CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10
- TREE TO REMAIN & PROTECT (CONIFEROUS)
  CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10

PROPOSED LEGEND

PROP = PROPOSED

- HYDRANT (PLAN)
- WATER GATE WELL
- REDUCER
- WATER GATE VALVE
- WATER STOP BOX
- WATER VAULT
- INLET
- DOUBLE INLET
- INLET JUNCTION CHAMBER
- ROUND CATCH BASIN
- STORM MANHOLE
- DRAIN ARROW
- FLARED END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- BARREL
- SIGN
- PUSH BUTTON
- HAND HOLE

- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- FIBER OPTIC
- ELECTRICAL
- CENTERLINE OF DITCH
- CENTERLINE OF ROAD
- FENCE
- GRAVEL
- SILT FENCE
- PROTECTIVE FENCE
- GUARDRAIL
- LOT/UNIT
- CURB
- TEMPORARY GRADING PERMIT
- CONTOUR MAJOR
- CONTOUR MINOR
- WATER EASMENT
- STORM EASEMENT
- SANITARY EASEMENT
- R.O.W.
- LIMITS OF CONSTRUCTION
- LIMIT OF GRADING
- STONE WALL
- DETECTABLE WARNING
- ASPHALT
- CONCRETE
- SIDEWALK
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- TREE TO BE REMOVED (DECIDUOUS)
- TREE TO BE REMOVED (CONIFEROUS)
- STUMP TO BE REMOVED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

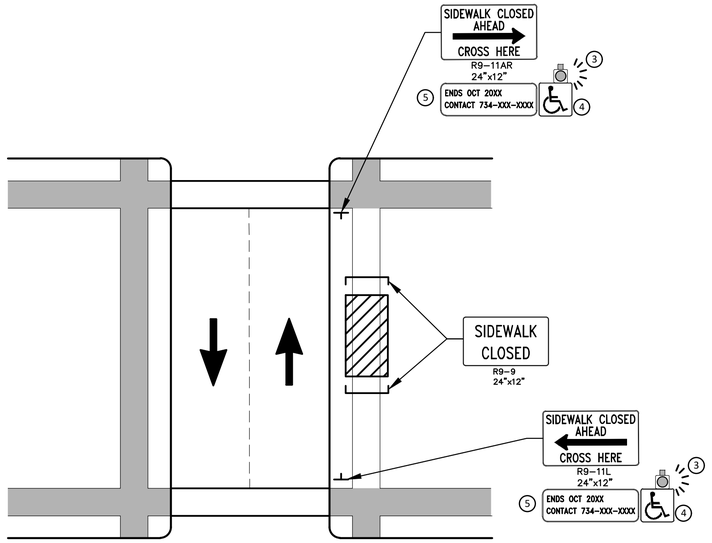
MILLER AVENUE REHABILITATION

LEGEND

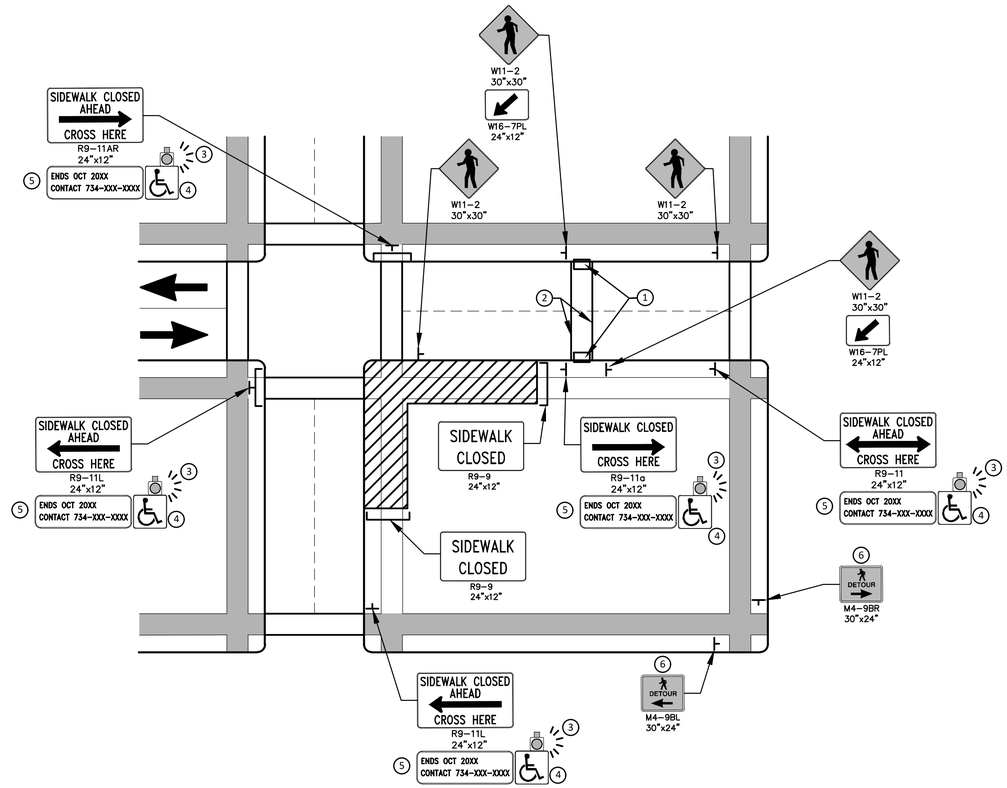
SCALE: NTS

DRAWING No. 2022034-3

SHEET No. 3 OF 131



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

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5–2–24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4–29–24	A2D	JKA
01	ADDENDUM PLANS	4–25–24	A2D	JKA
00	BID SET	4–9–24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

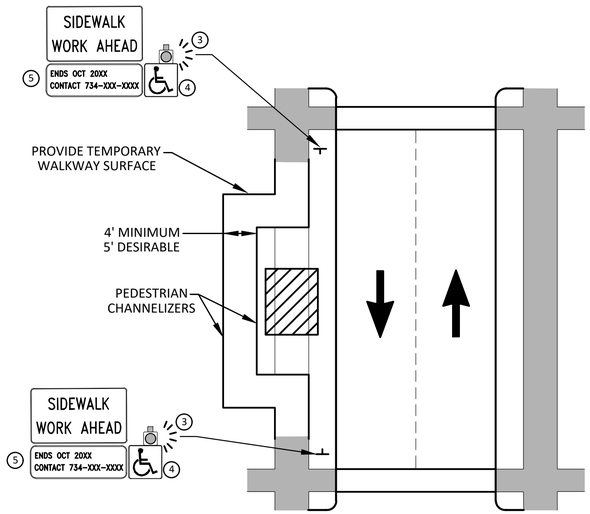
MILLER AVENUE REHABILITATION

ALTERNATE PEDESTRIAN ROUTE (APR) DETOUR

SCALE : N.T.S.

DRAWING No. 2022034-4

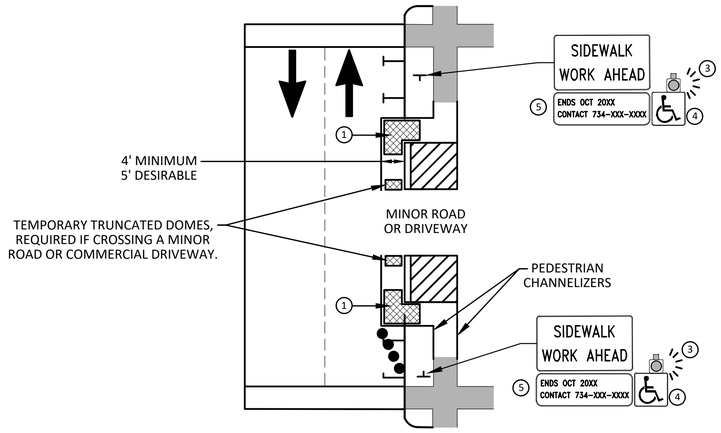
SHEET No. 4 OF 131



BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY

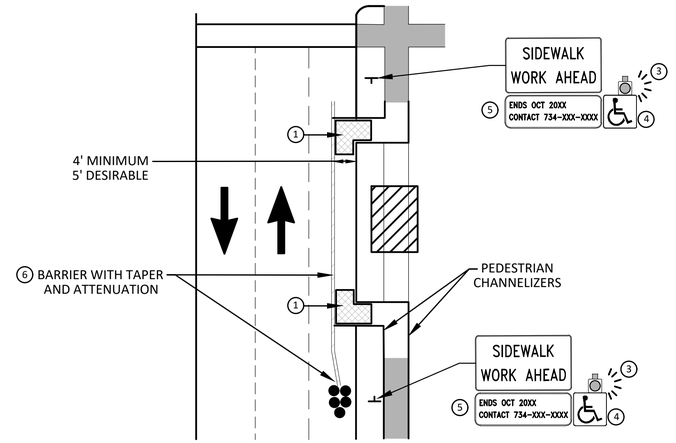
BYPASS TYPE A

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

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

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

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

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

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

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

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

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

SPECIFIC NOTES

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

LEGEND

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

Know what's below. Call before you dig.

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

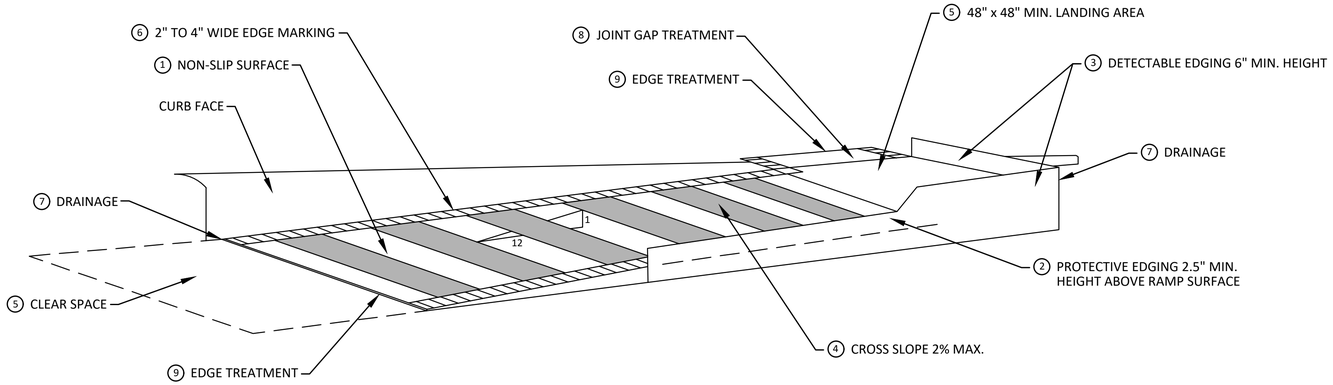
MILLER AVENUE REHABILITATION

ALTERNATE PEDESTRIAN ROUTE (APR) BYPASS

SCALE : N.T.S.

DRAWING No. 2022034-5

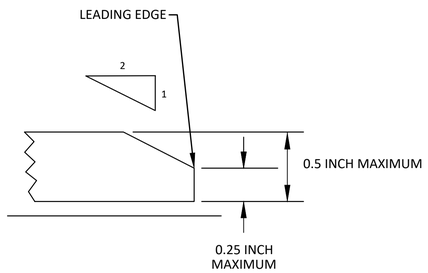
SHEET No.
5 OF 131



TEMPORARY CURB RAMP
PARALLEL TO CURB

SPECIFIC NOTES

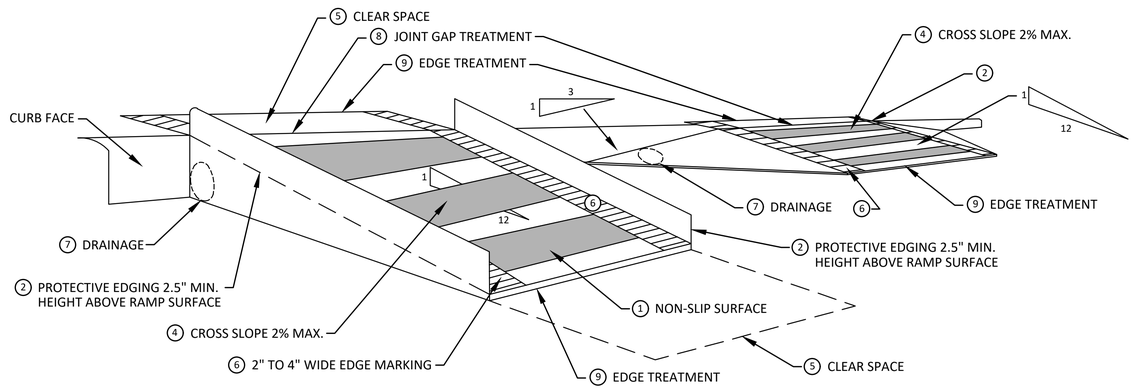
1. CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
2. PROTECTIVE EDGING WITH A 2.5" MIN. HEIGHT ABOVE THE RAMP SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. 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).
4. CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
5. CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. 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.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
9. 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.



9 EDGE TREATMENT

SHOWN WITH PROTECTIVE EDGE

SHOWN WITH SIDE APRON



TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

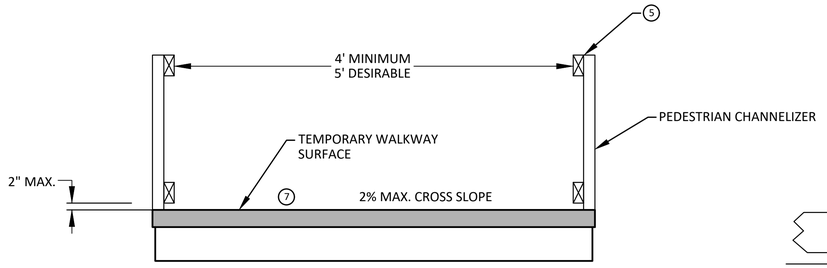
MILLER AVENUE REHABILITATION

TPAR RAMPS

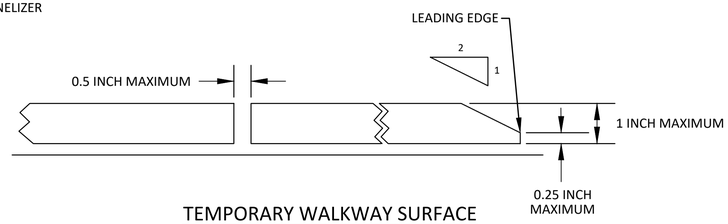
SCALE : N.T.S.

DRAWING No. 2022034-6

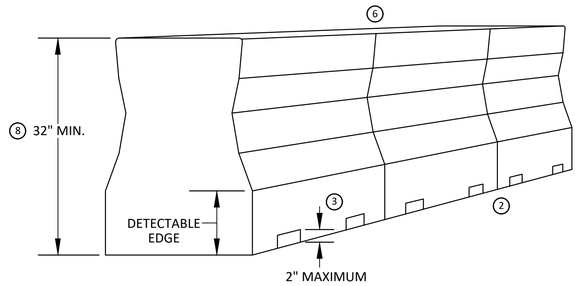
SHEET No. 6 OF 131



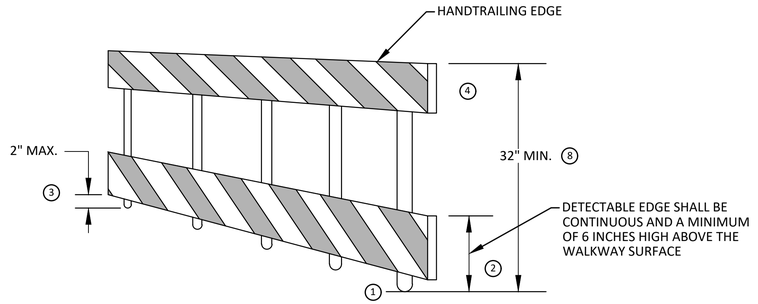
TEMPORARY PEDESTRIAN ACCESS



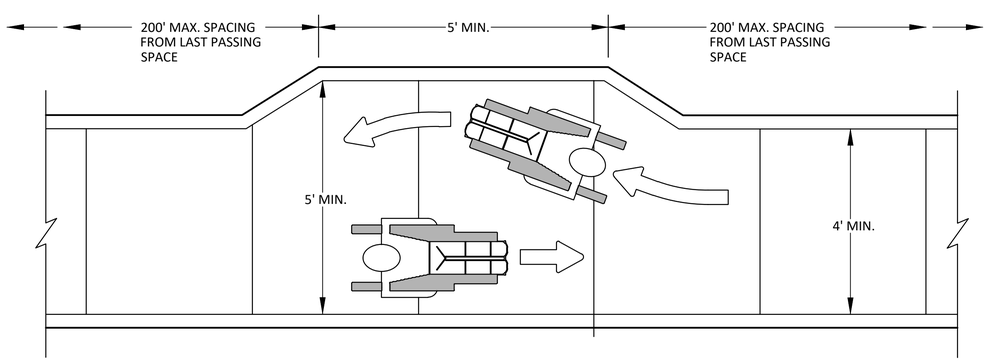
TEMPORARY WALKWAY SURFACE



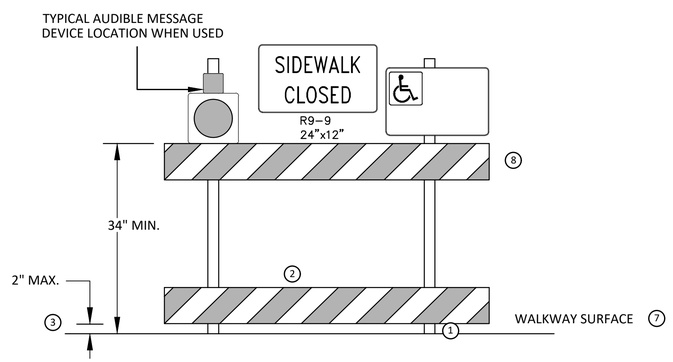
PEDESTRIAN CHANNELIZER USING A BARRIER
(MINIMUM REQUIREMENTS)



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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03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

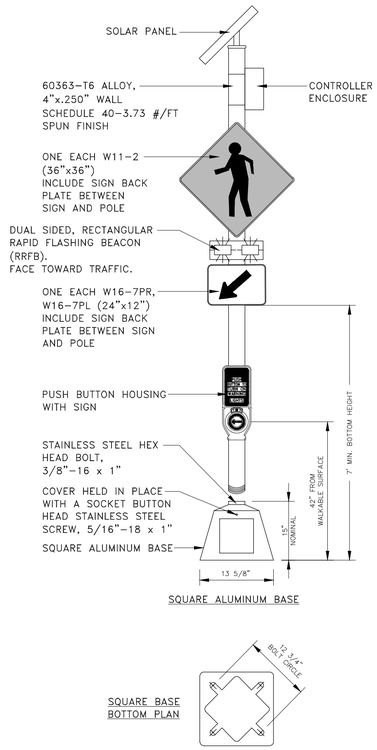
MILLER AVENUE REHABILITATION

TPAR WALKWAY DEVICES

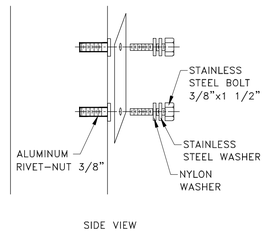
SCALE: N.T.S.

DRAWING No. 20220034-7

SHEET No. 7 OF 131



ALL PEDESTRIAN & PUSHBUTTON SIGNS (SIDE MOUNT DETAIL)



SIDE VIEW

RECTANGULAR RAPID FLASHING BEACON ASSEMBLY

R:\2022034 Miller Ave Rehab\Plan Production\2022034pet.dwg Dwg Created: 29-Mar-24 — _a2 standard bw.stb — Plot Date: 2-May-24

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

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

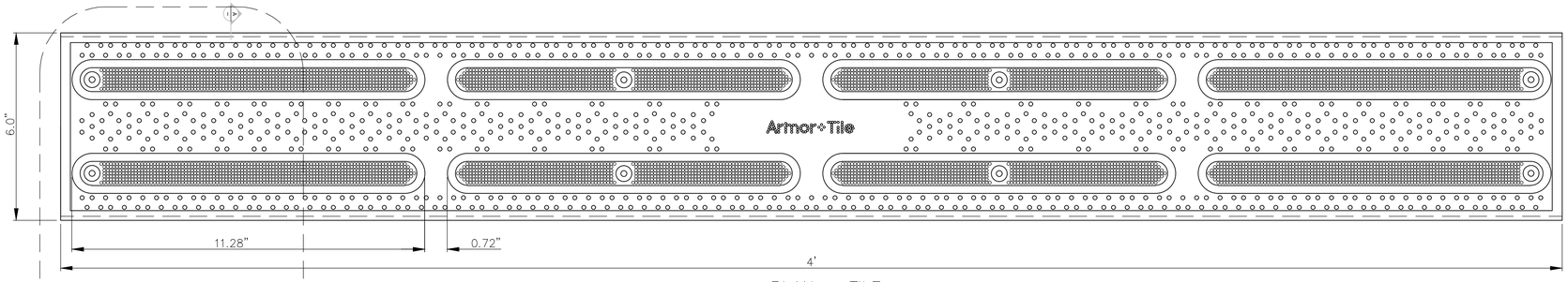
MILLER AVENUE REHABILITATION

RECTANGULAR RAPID FLASHING BEACON ASSEMBLY

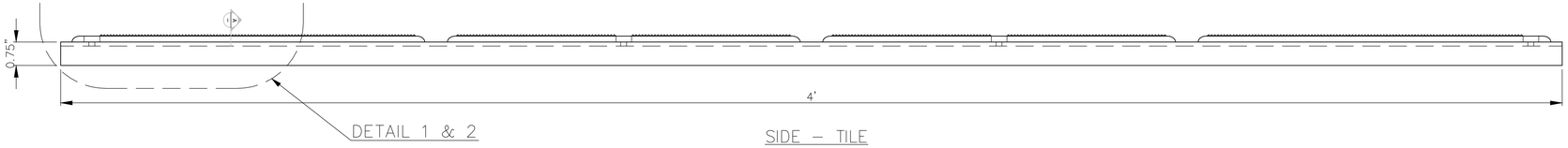
SCALE : NTS

DRAWING No. 2022034-8

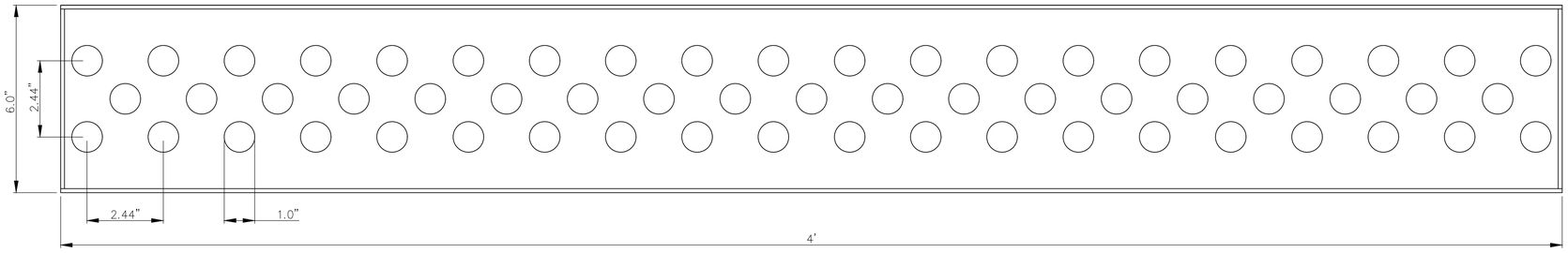
SHEET No. 8 OF 131



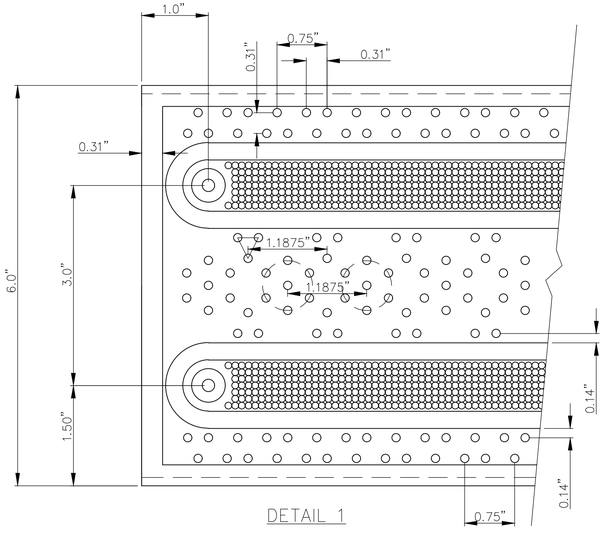
PLAN – TILE



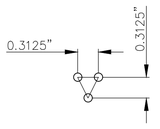
SIDE – TILE



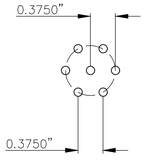
REFLECTED PLAN



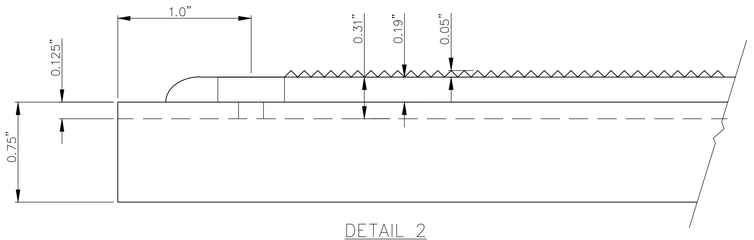
DETAIL 1



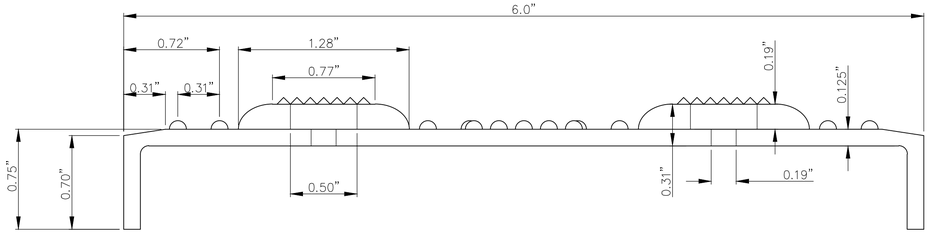
PATTERN DETAIL A



PATTERN DETAIL B



DETAIL 2



SECTION A–A

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ENGINEERED PLASTICS

MATERIAL LIST

#	DESCRIPTION	PART No:	QT'Y
1	ARMOR–TILE	ADD–504	1
2	EXPANSION ANCHOR	ADA–FAST	8
3	ARMOR–BOND	ADA–ADHE–EA	1
4	ARMOR–SEAL	ADA–SEAL–EA	1

No:	DATE	REVISION	APPR.

SCALE			
DESIGNED	BY K.S.	DATE 08/90	
DRAWN	D.G.	2/22/2006	
CHECKED			
PROJECT MANAGER			
TRADE DETECTABLE WARNING SURFACE		PART No: ADA–D–448	
MATERIAL VITRIFIED POLYMER COMPOSITE			

SUBJECT

Armor-Tile™ ADA

SOUND AMPLIFYING DETECTABLE/TACTILE WARNING SURFACE TILE

PROJECT

Armor-Tile™

DETECTABLE/TACTILE DIRECTIONAL TILE
6" x 48" SURFACE APPLIED BAR TILE
PLANS AND DETAILS

DRAWING No:	REV. No:
ADD–504	0

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5–2–24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4–29–24	A2D	JKA
01	ADDENDUM PLANS	4–25–24	A2D	JKA
00	BID SET	4–9–24	A2D	JKA

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301 EAST HURON STREET
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734.794-6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

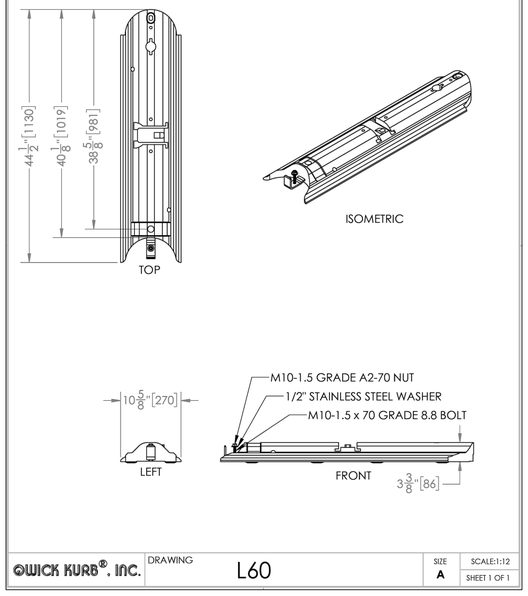
MILLER AVENUE REHABILITATION

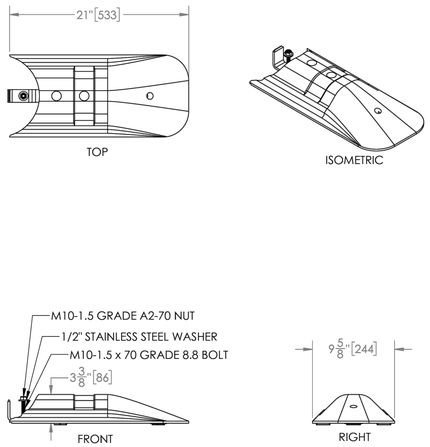
DETECTABLE TACTILE DIRECTIONAL TILE

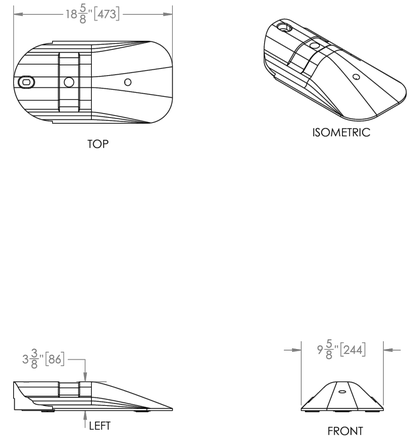
SCALE PLAN: NTS

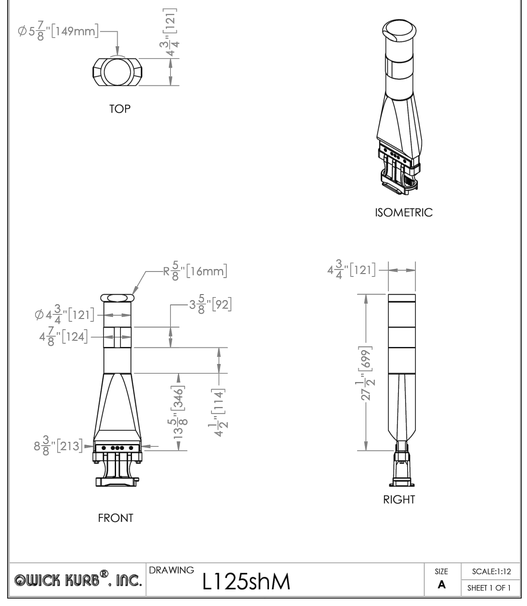
DRAWING No. 2022034-9

SHEET No.









QWICK KURB®, INC.	DRAWING	SIZE	SCALE
	L60	A	1:12
			SHEET 1 OF 1

QWICK KURB®, INC.	DRAWING	SIZE	SCALE
	L61	A	1:8
			SHEET 1 OF 1

QWICK KURB®, INC.	DRAWING	SIZE	SCALE
	L62	A	1:8
			SHEET 1 OF 1

QWICK KURB®, INC.	DRAWING	SIZE	SCALE
	L125shM	A	1:12
			SHEET 1 OF 1

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

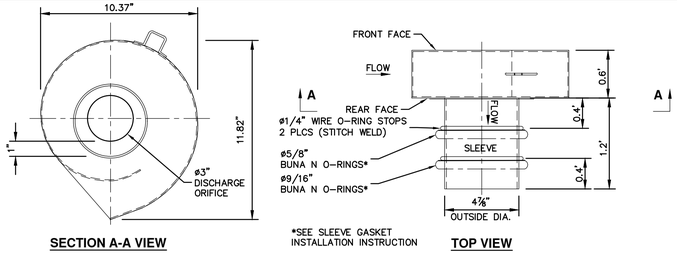
MILLER AVENUE REHABILITATION

QWICKKURB

SCALE PLAN: NTS

DRAWING No. 2022034-10

SHEET No. 10 OF 131



SECTION A-A VIEW

*SEE SLEEVE GASKET INSTALLATION INSTRUCTION

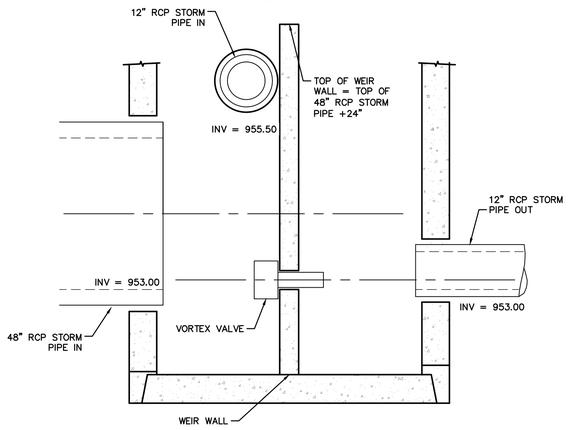
TOP VIEW

NOTES:

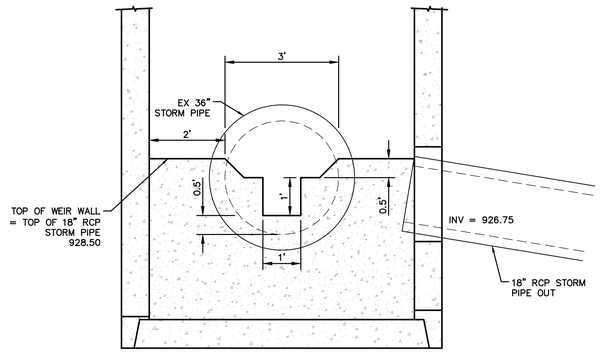
1. ALL WELDS CONTINUOUS UNLESS NOTED OTHERWISE.
2. MATERIALS:
   - 12 GA. 304L STAINLESS STEEL
   - (1) ø5/8" AND (1) ø9/16" BUNA N, 50 DUROMETER O-RINGS.
3. MANUFACTURE HOUSING AND BYPASS DOOR AND ASSEMBLE PER DRAWING "2 mm FLUIDIC-AMP FABRICATION DETAILS FA1012-FA2023 HOUSING AND INLET"
4. DISCHARGE ORIFICE LOCATED REAR FACE. ø4" BYPASS OPENING LOCATED FRONT FACE.
5. INCLUDES 20' BYPASS DOOR PULL CABLE.

FLUIDIC-AMP VORTEX VALVE MODEL FA1012 WITH SLEEVE ATTACHMENT FOR Ø6" OPENING

FABRICATION DRAWING



SECTION



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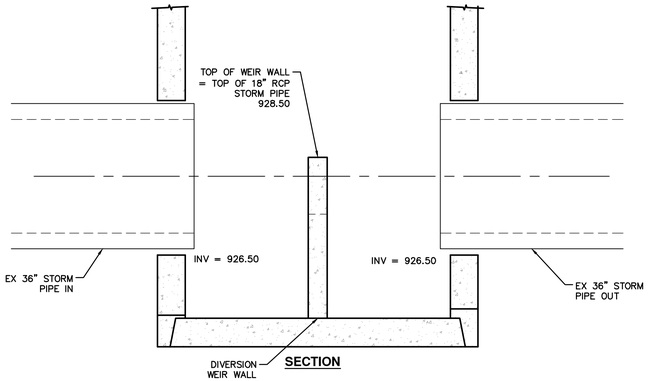

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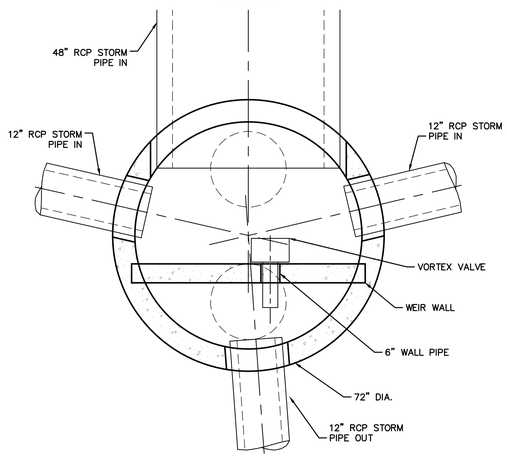
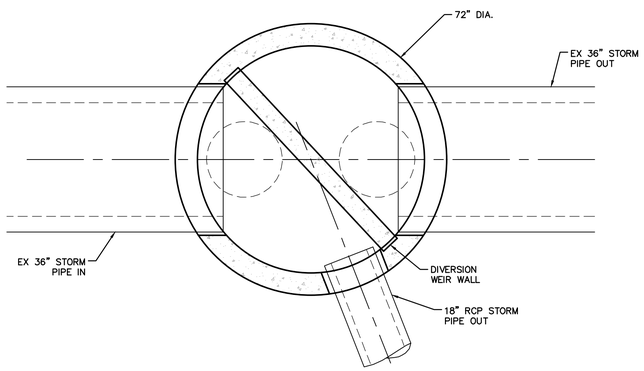


PLAN

R401 UNDERGROUND STORMWATER STORAGE CONTROL STRUCTURE

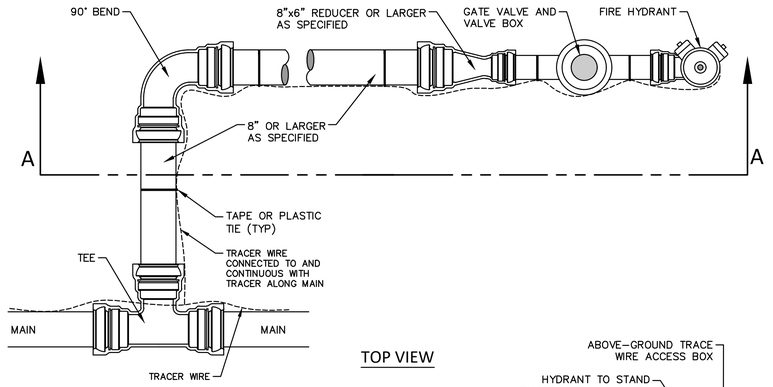
NOT TO SCALE



PLAN

R301 & R317 UNDERGROUND STORMWATER STORAGE CONTROL STRUCTURE

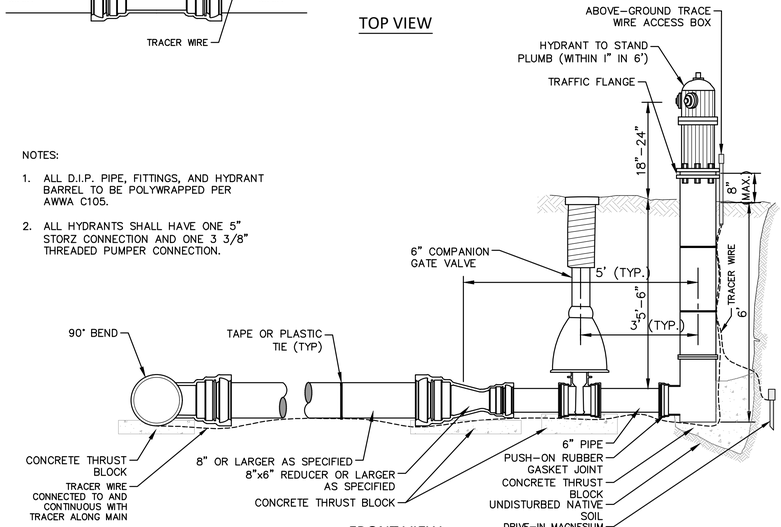
NOT TO SCALE



TOP VIEW

NOTES:

1. ALL D.I.P. PIPE, FITTINGS, AND HYDRANT BARREL TO BE POLYWRAPPED PER AWWA C105.
2. ALL HYDRANTS SHALL HAVE ONE 5" STORZ CONNECTION AND ONE 3 3/8" THREADED PUMPER CONNECTION.



FRONT VIEW

SECTION A-A

MISC. DETAILS - SPECIAL DETAIL

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

MISC. DETAILS

SCALE: NTS

DRAWING No. 2022034-11

SHEET No. 11 OF 131

PROJECT SUMMARY

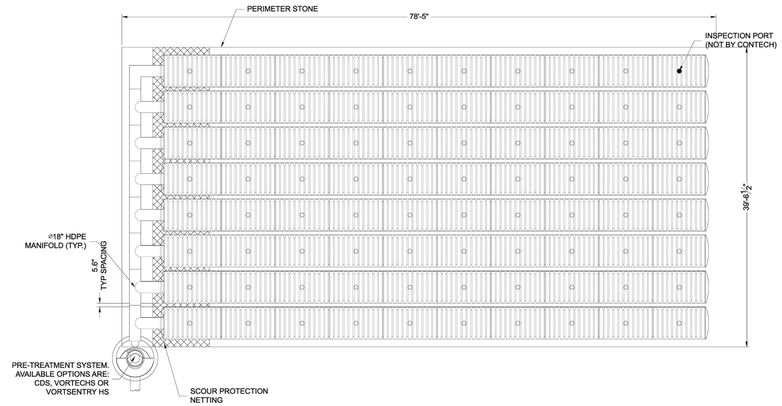
DESIGN PARAMETERS
- PRETREATMENT METHOD = Hydrodynamic Separator
- STORAGE VOLUME REQUIRED = 6712ft³
- INVERT DEPTH = 6ft
- MANIFOLD DIAMETER = 18in.
- SPACING BETWEEN CHAMBERS = 5.6in.
- SIDE PERIMETER STONE WIDTH = 12in.
- END PERIMETER STONE WIDTH = 12in.
- TOP PERIMETER STONE WIDTH = 6in.
- BOTTOM PERIMETER STONE WIDTH = 6in.
- STONE POROSITY = 40%

SYSTEM DETAILS
- TOTAL ELBOW MANIFOLDS = 1
- TOTAL TEE MANIFOLDS = 7
- TOTAL START CHAMBERS = 8
- TOTAL MID CHAMBERS = 64
- TOTAL END CHAMBERS = 8
- TOTAL NUMBER OF CHAMBERS = 80
- NUMBER OF ROWS = 8
- CHAMBERS PER ROW = 10
- CHAMBER STORAGE VOLUME = 3792ft³
- MANIFOLD STORAGE VOLUME = 111.4ft³
- BACKFILL STORAGE VOLUME = 2809.28ft³
- TOTAL STORAGE PROVIDED = 6712.68ft³

SYSTEM DIMENSIONS AND OTHER MATERIALS
- RECTANGULAR FOOTPRINT = 78.41x39.53ft
- TOTAL EXCAVATION = 746.23yᵌ
- STONE BACKFILL = 260.12yᵌ
- REMAINING BACKFILL TO PAVEMENT = 341.55yᵌ
- WOVEN GEOTEXTILE QTY = 0yᵌ
- NON-WOVEN GEOTEXTILE QTY = 344.42yᵌ
- SCOUR PROTECTION FITTING = 39.53x7.5ft
- APPROXIMATE TRUCKLOADS = 1

GENERAL NOTES

1. ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
2. PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
3. CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
4. CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
5. ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
6. MINIMUM COVER IS 18-INCHES TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES CONTACT YOUR LOCAL REPRESENTATIVE.
7. ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
8. FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
9. CHAMBERMAXX BY CONTECH ENGINEERED SOLUTIONS (800) 925-5240



ASSEMBLY
SCALE: 1"=10'

MARK	DATE	REVISION DESCRIPTION	BY

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CHAMBERMaxx® PATENT PENDING
CONTECH
DYODS
DRAWING

DYO47180 Miller Ave
West Park
Ann Arbor, MI
CHAMBERMAXX

PROJECT No.:	SEQ. No.:	DATE:
32607	47180	03/05/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1 OF D4		

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

CONTECH CHAMBEMAXX

SCALE PLAN: 1" = 5'

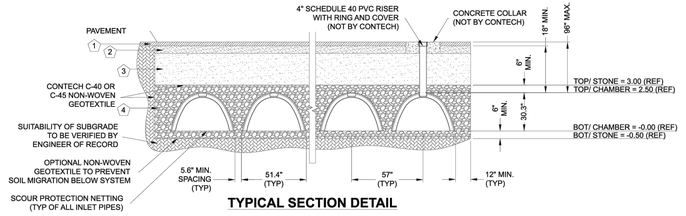
DRAWING No. 2022034-12

SHEET No. 12 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\20220340et5.dwg Dwg Created: 2-May-24 — _a2 standard bw.stb — Plot Date: 2-May-24

INSTALLATION NOTES

1.CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
2.PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
3.THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
4.COVER ANY OPEN VOID SPACES GREATER THAN 3/4" ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
5.STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 95% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH TO 8-INCH LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% SPD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
6.REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
7.IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
8.GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.



TYPICAL SECTION DETAIL

NOT TO SCALE

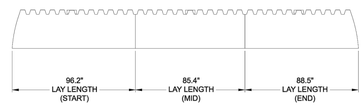
KEY
1. FLEXIBLE PAVEMENT.
2. GRANULAR ROAD BASE.
3. ANY SUITABLE NATIVE OR GENERAL BACKFILL, SEE ENGINEER PLANS.
4. THE BACKFILL MATERIAL SHALL BE FREE-DRAINING ANGULAR WASHED STONE 3/4" - 2" PARTICLE SIZE. MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. MATERIAL SHALL BE WORKED INTO THE CHAMBER SPACING BY MEANS OF SHOVEL-SLICING, RODDING, AIR-TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS. COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE PROJECT ENGINEER OR THEIR REPRESENTATIVE IS SATISFIED WITH THE LEVEL OF COMPACTION. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY CHAMBER IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE CHAMBERS. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT, AND MAINTAIN BALANCED LOADING ON ALL CHAMBERS IN THE SYSTEM, DURING ALL SUCH OPERATIONS.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. CONTACT YOUR LOCAL CONTECH REPRESENTATIVE FOR DETAILS.

CHAMBERMAXX DESIGN DETAILS

FEATURE	START CHAMBER	MIDDLE CHAMBER	END CHAMBER
OVERALL CHAMBER HEIGHT - IN	30.3	30.3	30.3
OVERALL CHAMBER WIDTH - IN	51.4	51.4	51.4
ACTUAL LENGTH - IN	98.4	91.0	92.0
INSTALLED LAY LENGTHS - IN	96.2	85.4	88.5
CHAMBER STORAGE VOLUME - CF	50.2	47.2	46.2
CHAMBER STORAGE PER LINEAR FOOT - CF/LF	6.3	6.6	6.3
*MIN. INSTALLED CHAMBER VOLUME - CF	78.1	75.1	74.1
*MIN. INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF	9.7	10.6	10.0
CHAMBER WEIGHT - LB	83	73	76
*6" OF STONE ABOVE AND BELOW CHAMBER, 5.6" CHAMBER SPACING AND 40% POROSITY			



TYPICAL ELEVATION VIEW

NOT TO SCALE

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West Park
Ann Arbor, MI
CHAMBERMAXX

PROJECT No.:	BEQ. No.:	DATE:
32607	47180	03/05/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D2 OF D4		

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
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00	BID SET	4-9-24	A2D	JKA

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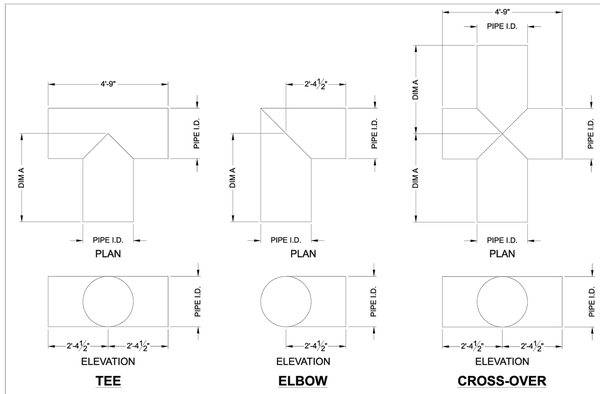
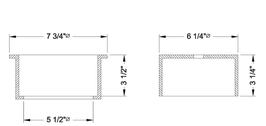
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
MILLER AVENUE REHABILITATION
CONTECH CHAMBEMAXX

SCALE PLAN: N.T.S.
DRAWING No. 2022034-13

SHEET No.
13 OF 131

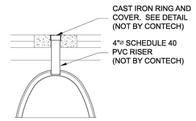
R:\2022034 Miller Ave Rehab\Plan Production\20220340et5.dwg Dwg Created: 2-May-24 — _a2 standard bw.stb — Plot Date: 2-May-24





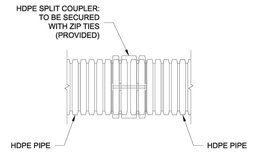
RING AND COVER DETAIL

NOT TO SCALE



INSPECTION PORT DETAIL

NOT TO SCALE



HDPE SPLIT COUPLER DETAIL

STANDARD MANIFOLD COMPONENTS - NOT TO SCALE				
	AVAILABLE DIAMETERS - INCHES			
TEE	12	15	18	24
ELBOW	12	15	18	24
DIM A	42	42	48	48

HDPE SPLIT COUPLERS	
COUPLER SIZE	PART NUMBER
12"ID SPLIT COUPLER	PEF12SPCP
15"ID SPLIT COUPLER	PEF15SPCP
18"ID SPLIT COUPLER	PEF18SPCP
24"ID SPLIT COUPLER	PEF24SPCP

GENERAL NOTES:
1. FITTING MATERIAL TO BE MANUFACTURED FROM CORRUGATED HIGH DENSITY POLYETHYLENE, AASHTO M294 PIPE.
2. FITTINGS TO BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENT OF AASHTO M294.
3. FITTINGS DESIGNED TO PROTRUDE 6" INTO THE END OF THE INLET CHAMBERS.
4. MANIFOLD TEE AND ELBOW JOINT TO BE CONNECTED UTILIZING HDPE SPLIT COUPLERS.

TYPICAL MANIFOLD DETAILS

MARK	DATE	REVISION DESCRIPTION	BY

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CHAMBERMAXX

PROJECT No.:	SEQ. No.:	DATE:
32607	47180	03/05/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D3 OF D4		

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

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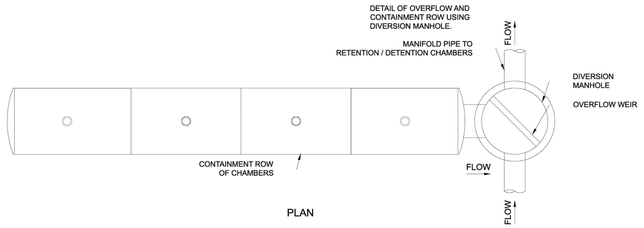
MILLER AVENUE REHABILITATION

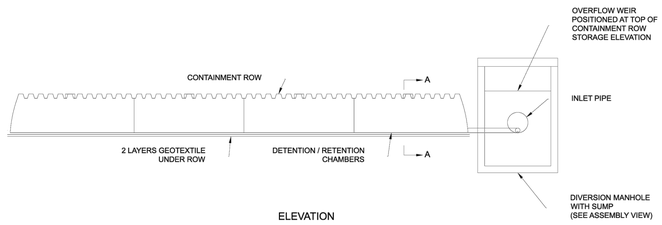
CONTECH CHAMBEMAXX

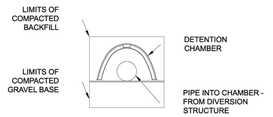
SCALE PLAN: N.T.S.

DRAWING No. 2022034-14

SHEET No. 14 OF 131







CONTAINMENT ROW DETAILS

NOT TO SCALE

MARK	DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
8301 State Highway 29 North, Alexandria, MN 56308
800-328-2047 320-852-7500 320-852-7067 FAX

CHAMBERMaxx® PATENT PENDING
CONTECH **DYODS** DRAWING

DYO47180 Miller Ave
West Park
Ann Arbor, MI
CHAMBERMAXX

PROJECT No.:	SEQ. No.:	DATE:
32607	47180	03/05/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4 OF D4		

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

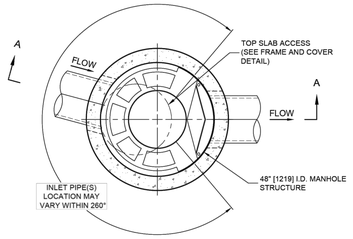
MILLER AVENUE REHABILITATION

CONTECH CHAMBEMAXX

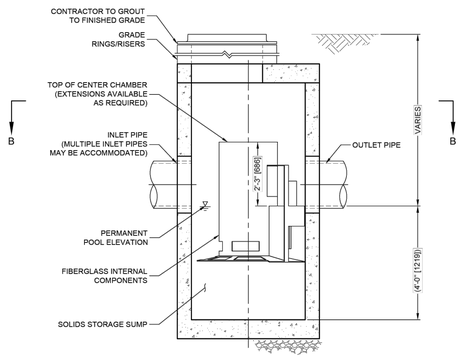
SCALE PLAN: N.T.S.

DRAWING No. 2022034-15

SHEET No. 15 OF 131



PLAN VIEW B-B
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE
separator™

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [l/s])			
PEAK FLOW RATE (cfs [l/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE www.ContechES.com.
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-4
CASCADE SEPARATOR
STANDARD DETAIL

I:\COMMON\CAD\TREATMENT\21 CASCADE\40 STANDARD DRAWINGS\DWG\CS-4.DTL.DWG, 1/22/2019 9:34 AM

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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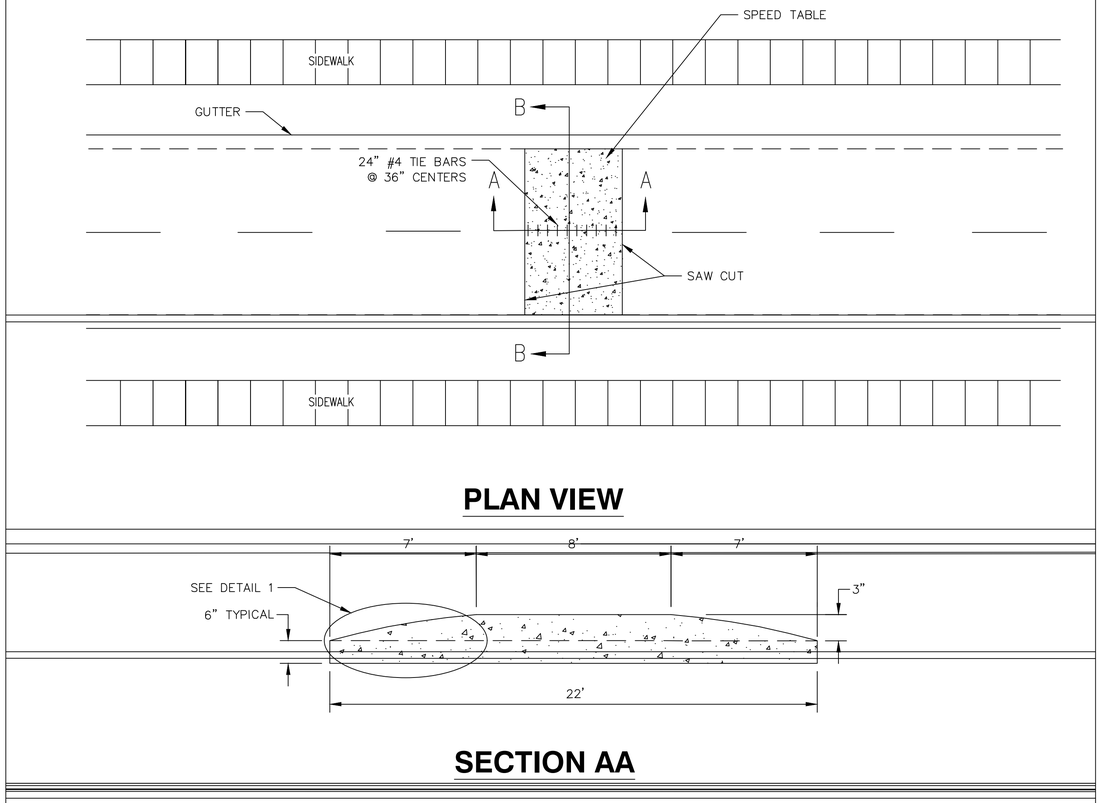
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
MILLER AVENUE REHABILITATION
CONTECH CASCADE SEPARATOR

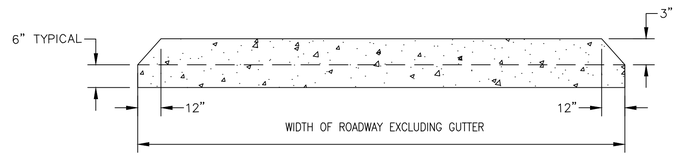
SCALE PLAN: N.T.S.
DRAWING No. 2022034-16
SHEET No. 16 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034pt5.dwg Dwg Created: 2-May-24 — _a2 standard bw.stb — Plot Date: 2-May-24

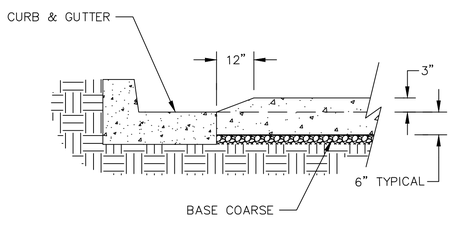


PLAN VIEW

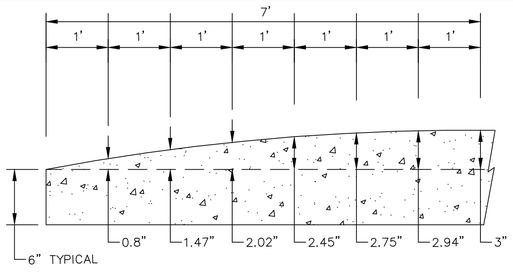
SECTION AA



SECTION BB



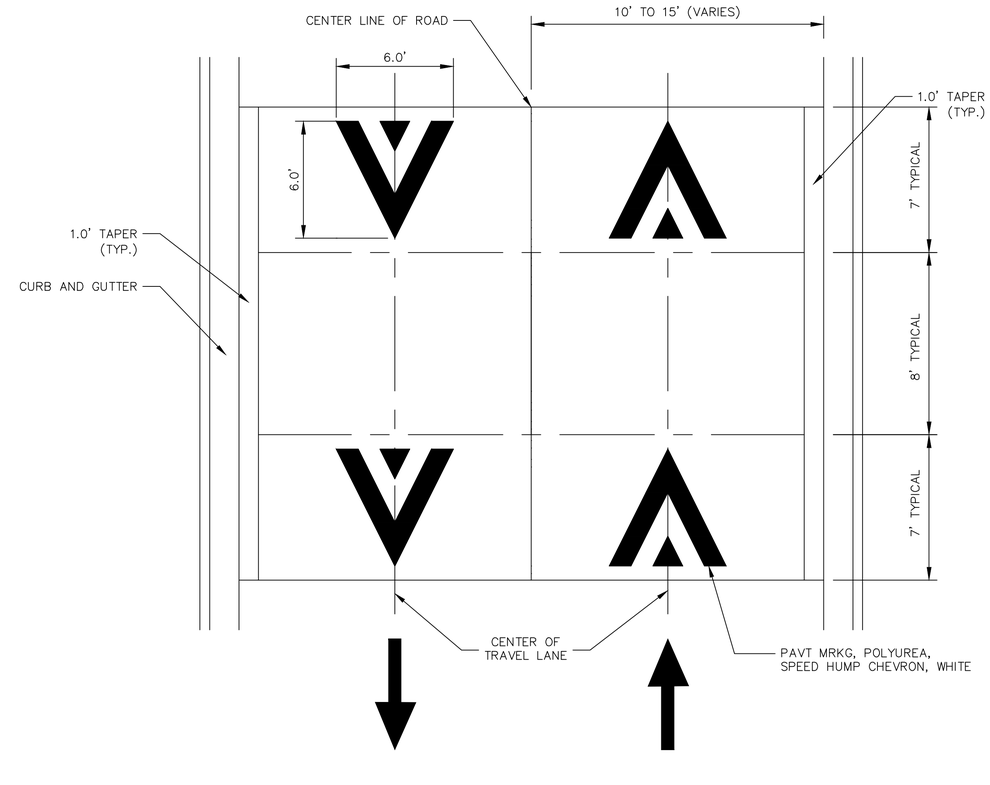
CURB DETAIL



DETAIL 1

CONCRETE SPEED TABLE DETAIL

SCALE: NOT TO SCALE



PAVEMENT MARKING DETAIL

SCALE: NOT TO SCALE

GENERAL NOTES

1. RAISED INTERSECTIONS SHALL FOLLOW THE SAME TAPER REQUIREMENT AS THE SPEED HUMPS DETAILED HEREIN.

2. PAYMENT FOR PAVEMENT MARKINGS FOR SPEED HUMPS AND RAISED INTERSECTIONS SHALL BE INCLUDED IN THE RESPECTIVE BID ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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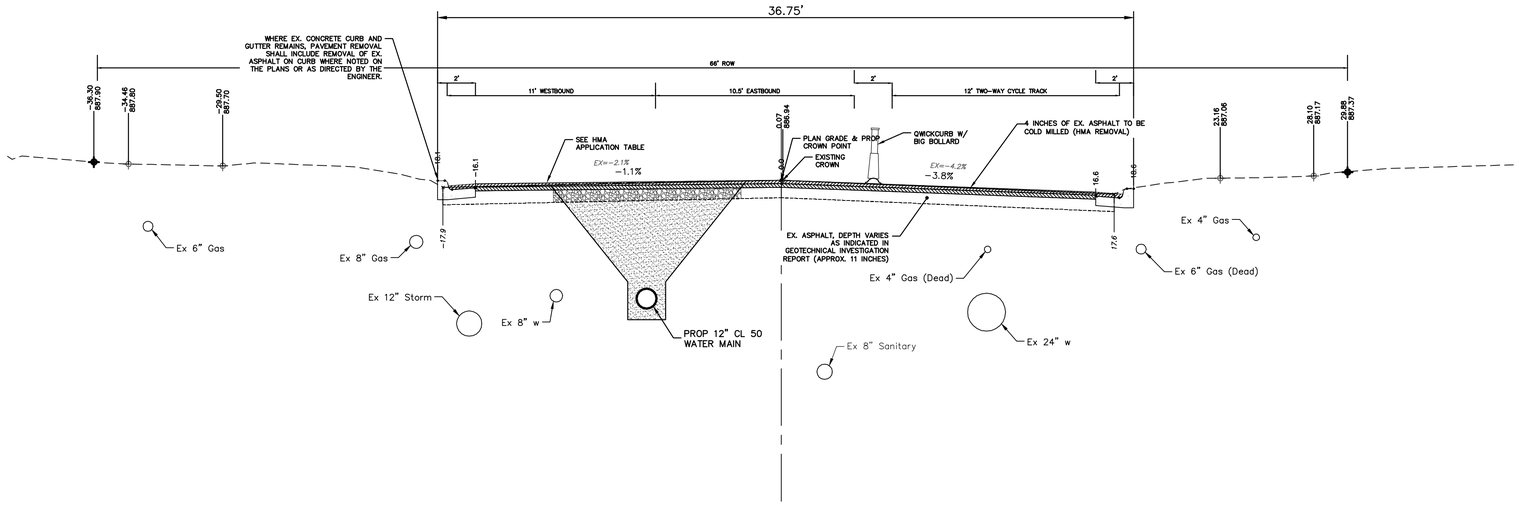
MILLER AVENUE REHABILITATION

CONCRETE SPEED TABLE DETAIL

SCALE : NTS

DRAWING No. 2022034-17

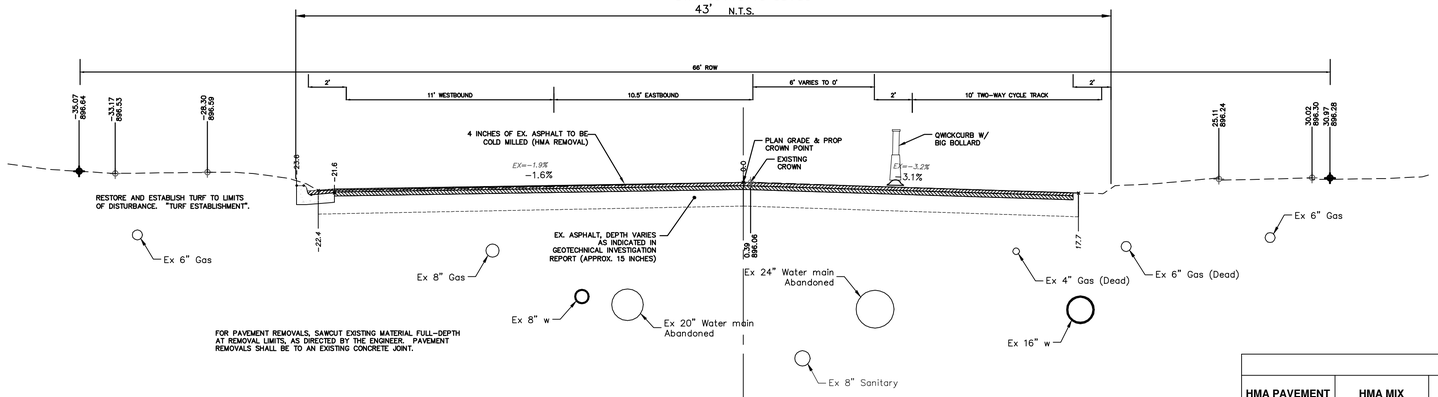
SHEET No. 17 OF 131



MILLER AVENUE
TYPICAL SECTION

STA. 50+75 TO 58+50

43' N.T.S.



FOR PAVEMENT REMOVALS, SAWCUT EXISTING MATERIAL FULL-DEPTH AT REMOVAL LIMITS, AS DIRECTED BY THE ENGINEER. PAVEMENT REMOVALS SHALL BE TO AN EXISTING CONCRETE JOINT.

MILLER AVENUE
TYPICAL SECTION

P.O.B. TO STA. 50+75

N.T.S.

HMA APPLICATION ESTIMATE

HMA PAVEMENT	HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
HMA PAVEMENT TOP	5EML	220 LB/SYD	2.0	220 (TOP)	PG 64-28	TOP COURSE
HMA PAVEMENT LEVELING	4EML	275 LB/SYD	2.5	-	PG 64-28	LEVELING COURSE
HMA APPROACH TOP	4EML	220 LB/SYD	2	220 (TOP)	PG 64-28	TOP COURSE
HMA APPROACH LEVELING	4EML	220 LB/SYD	2	-	PG 64-28	LEVELING COURSE
HAND PATCHING	4EML	0 - 440 LB/SYD			PG 64-28	HAND PATCHING
ASPHALT EMULSION	SS-1h	0.05 - 0.15 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

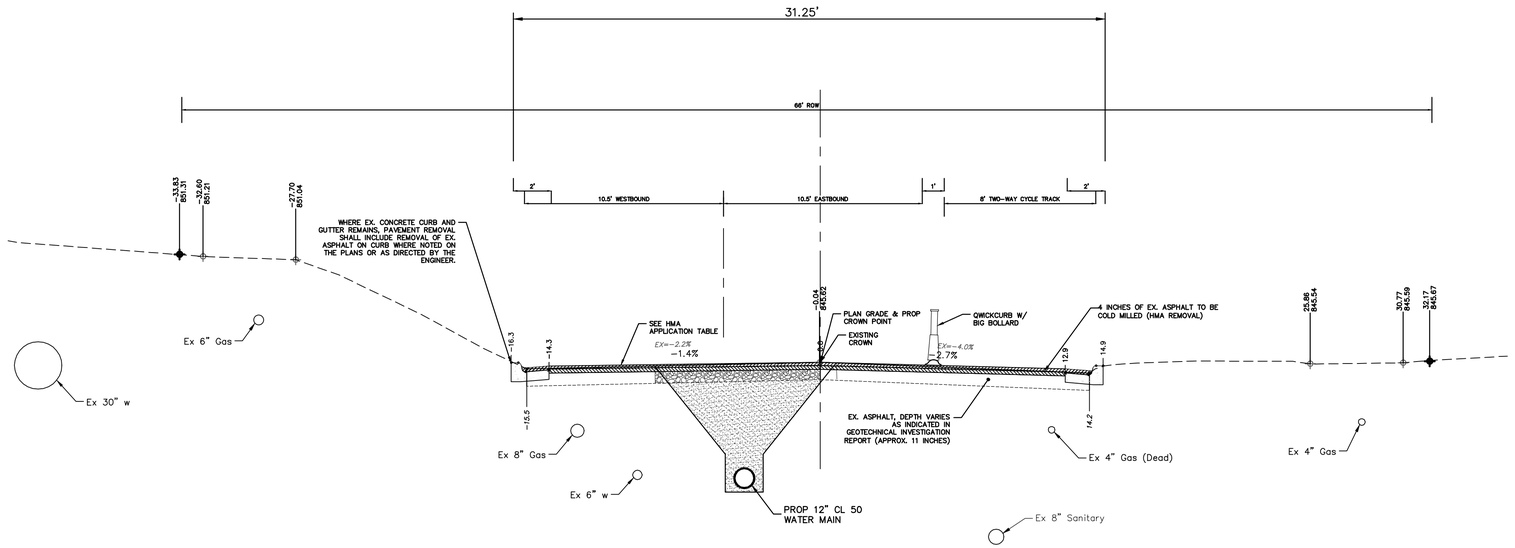
MILLER SECTIONS 1

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

DRAWING No. 2022034-18

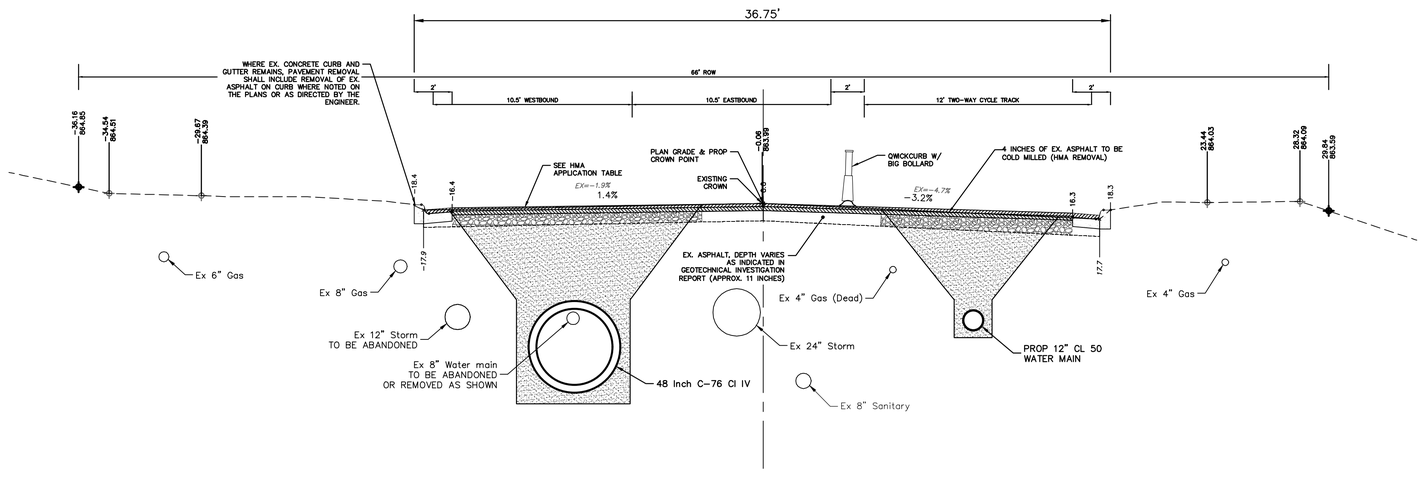
SHEET No. 18 OF 131

R:\2022034 Miller Ave Rehab\Source Drawings\Align-Corridor\2022034 Xsctn.dwg Dwg Created: 2-May-24 - _a2 standard bw.stb - Plot Date: 2-May-24



MILLER AVENUE
TYPICAL SECTION

PHASE 1– STA. 63+85 TO 71+00
PHASE 2 –STA. 63+85 TO 68+75
N.T.S.



MILLER AVENUE
TYPICAL SECTION

~~phase 2 – STA 58+50 TO STA.63+85~~
N.T.S.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

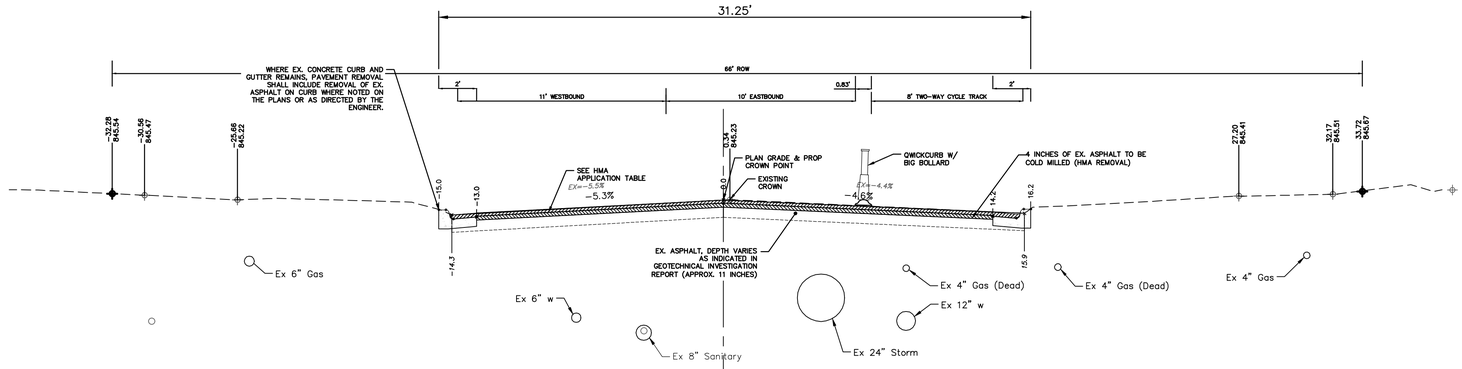
MILLER AVENUE REHABILITATION

MILLER SECTIONS 2

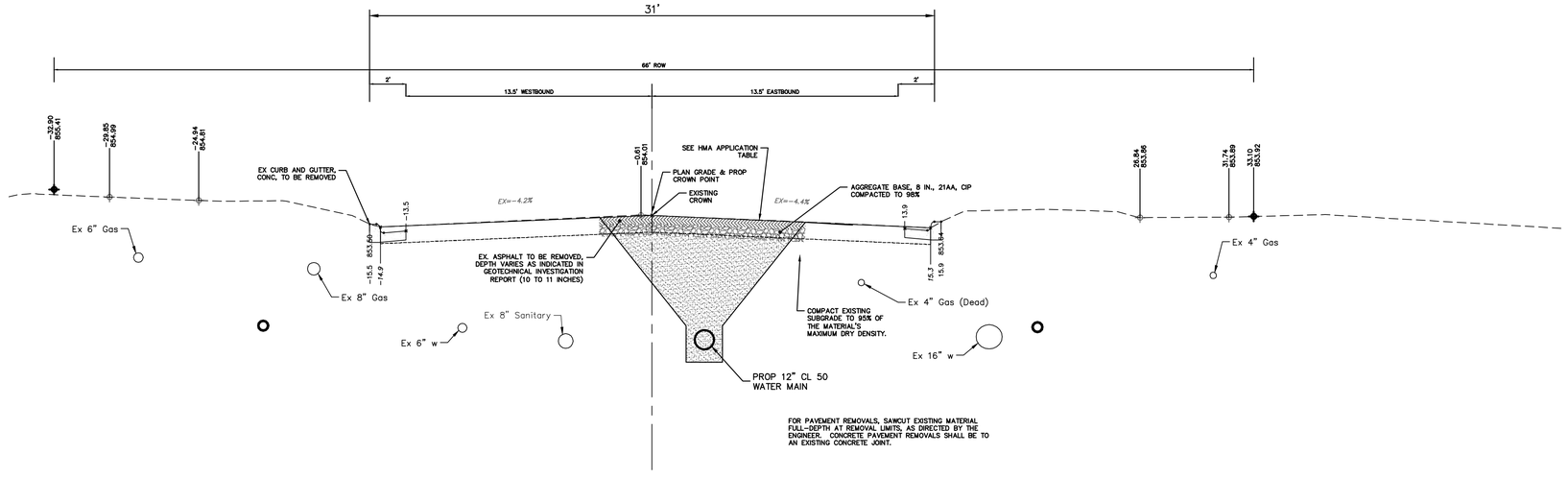
SCALE: PLAN: 1" = 4' PROFILE: 1" = 4'

DRAWING No. 2022034-19

SHEET No. 19 OF 131



MILLER AVENUE
TYPICAL SECTION
STA. 72+85 TO 79+00
N.T.S.



FOR PAVEMENT REMOVALS, SAWCUT EXISTING MATERIAL FULL-DEPTH AT REMOVAL LIMITS, AS DIRECTED BY THE ENGINEER. CONCRETE PAVEMENT REMOVALS SHALL BE TO AN EXISTING CONCRETE JOINT.

MILLER AVENUE
TYPICAL SECTION
STA 68+75. TO STA.72+85
N.T.S.

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

MILLER SECTIONS 3

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

DRAWING No.
2022034-20

SHEET No.
20 OF 131

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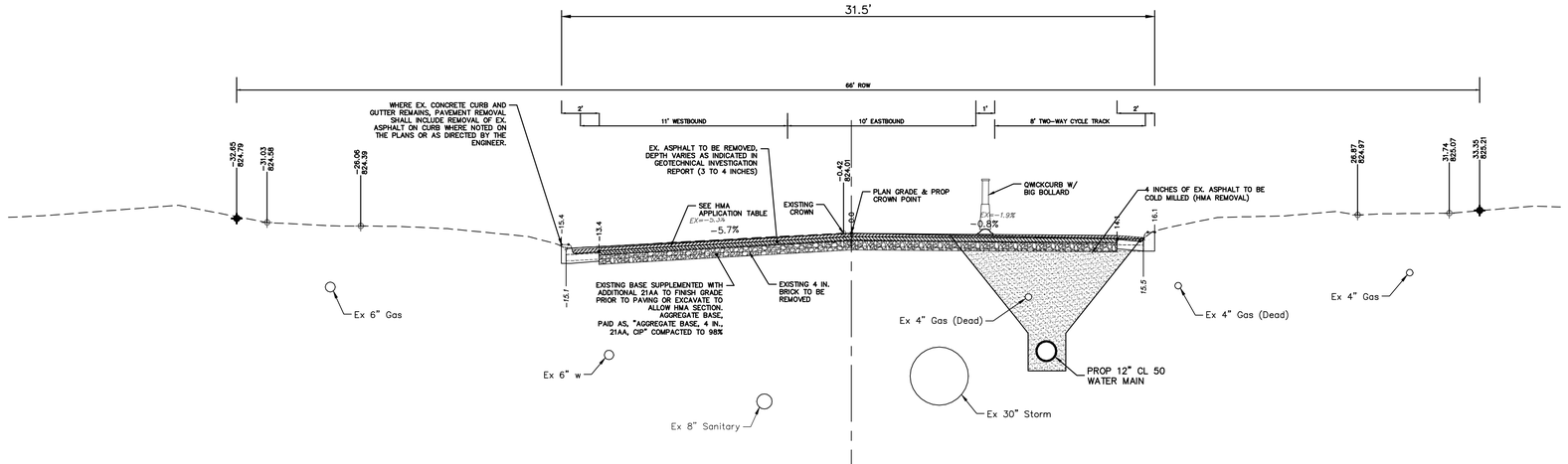
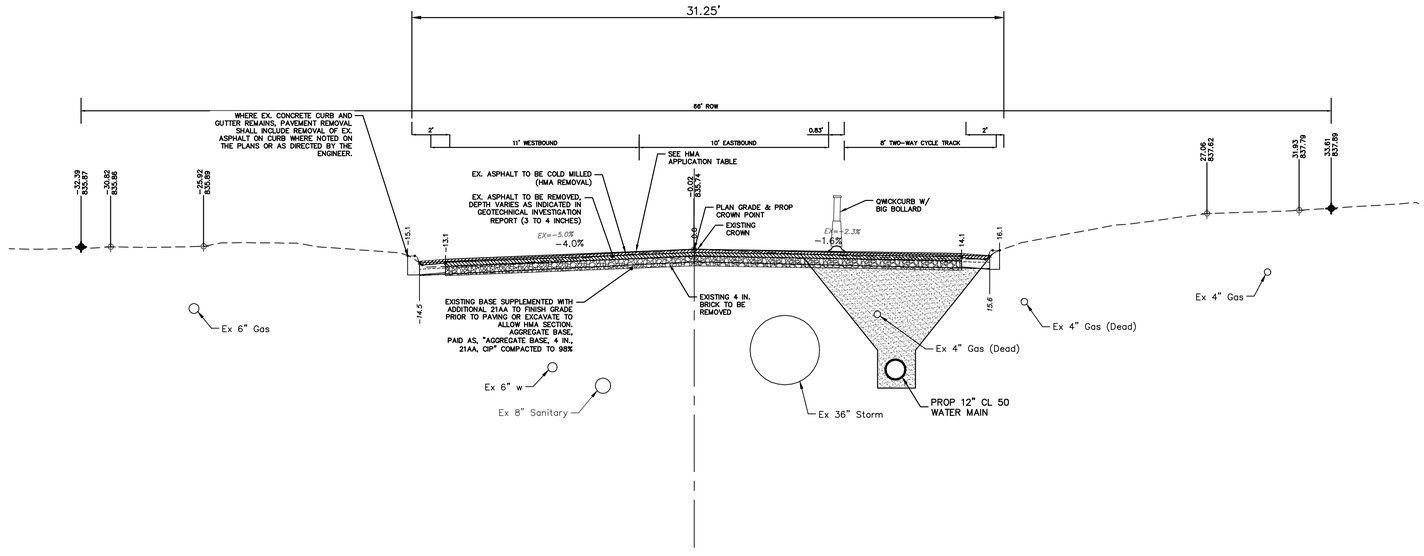


MILLER AVENUE
TYPICAL SECTION
STA. 82+50 TO P.O.E.
N.T.S.



MILLER AVENUE
TYPICAL SECTION
STA 79+00. TO STA.82+50
N.T.S.

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

MILLER SECTIONS 4

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

DRAWING No.
2022034-21

SHEET No.
21 OF 131

R:\2022034 Miller Ave Rehab\Source Drawings\Align-Corridor\2022034 Xsctn.dwg Dwg Created: 2-May-24 -- a2 standard bw.stb -- Plot Date: 2-May-24

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 MILLER RD IMPROVEMENTS. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR EAST AND WEST BOUND MILLER 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 AND 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 EAST AND WEST BOUND MILLER RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

LEGEND:

DETOUR ROUTE – EAST AND WEST BOUND MILLER RD

CONSTRUCTION AREA EAST BOUND LOCAL TRAFFIC MAINTAIINED

PRCMS MESSAGE PHASING

PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	DURING CONSTRUCTION
MILLER RD CONSTRUCTION	EB MILLER RD CLSD TO THRU TRAFFIC AT NEWPORT RD	WB MILLER RD CLSD TO THRU TRAFFIC AT N SEVENTH ST
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.

EAST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1B	EB MILLER RD / DETOUR ↑	D3-1 36"x6"	6
		M4-9S 30"x24"	6
2B	EB MILLER RD / DETOUR →	D3-1 36"x6"	3
		M4-9R 30"x24"	3
3B	EB MILLER RD / DETOUR ←	D3-1 36"x6"	4
		M4-9L 30"x24"	4
4B	EB MILLER RD / DETOUR ↰	D3-1 36"x6"	2
		M4-9L (MOD) 30"x24"	2
5B	EB MILLER RD / DETOUR ↱	D3-1 36"x6"	1
		M4-9R (MOD) 30"x24"	1
6B	EB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7B	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
8B	DETOUR →	M4-10R 48"x18"	1
9B	MILLER AVE CLOSED AT N SEVENTH ST FOLLOW DETOUR	SPECIAL 48x66	1
10B	EB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	2
		W20-2 36"x36"	2
11B	EB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	2
		W20-1 36"x36"	2
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

WEST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1A	WB MILLER RD / DETOUR ↑	D3-1 36"x6"	8
		M4-9S 30"x24"	8
2A	WB MILLER RD / DETOUR →	D3-1 36"x6"	4
		M4-9R 30"x24"	4
3A	WB MILLER RD / DETOUR ←	D3-1 36"x6"	6
		M4-9L 30"x24"	6
4A	WB MILLER RD / DETOUR ↰	D3-1 36"x6"	3
		M4-9L (MOD) 30"x24"	3
5A	WB MILLER RD / DETOUR ↱	D3-1 36"x6"	2
		M4-9R (MOD) 30"x24"	2
6A	WB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7A	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
8A	← DETOUR	M4-10L 48"x18"	1
9A	WEST BOUND MILLER AVE CLOSED AT N SEVENTH ST FOLLOW DETOUR	SPECIAL 48x66	6
10A	WB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	5
		W20-2 36"x36"	5
11A	WB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	3
		W20-1 36"x36"	3
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

DETOUR ROUTE

PHASE I STAGE I & II (WATER MAIN)

SCALE PLAN: 1" = 300'

DRAWING No. 2022034-22

SHEET No. 22 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Dtr.dwg Dwg Created: 29-Mar-24 — _a2 standard bw.stb — Plot Date: 2-May-24

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 MILLER RD IMPROVEMENTS. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR EAST AND WEST BOUND MILLER 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 AND 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 EAST AND WEST BOUND MILLER RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

LEGEND:

DETOUR ROUTE – EAST AND WEST BOUND MILLER RD

CONSTRUCTION AREA EAST BOUND LOCAL TRAFFIC MAINTAIINED

PRCMS MESSAGE PHASING

PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	DURING CONSTRUCTION
MILLER RD CONSTRUCTION	EB MILLER RD CLSD TO THRU TRAFFIC AT N SEVENTH ST	WB MILLER RD CLSD TO THRU TRAFFIC AT CHAPIN ST
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.

EAST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1B	EB MILLER RD / DETOUR	D3-1 36"x6"	6
		M4-9S 30"x24"	6
2B	EB MILLER RD / DETOUR	D3-1 36"x6"	3
		M4-9R 30"x24"	3
3B	EB MILLER RD / DETOUR	D3-1 36"x6"	4
		M4-9L 30"x24"	4
4B	EB MILLER RD / DETOUR	D3-1 36"x6"	2
		M4-9L (MOD) 30"x24"	2
5B	EB MILLER RD / DETOUR	D3-1 36"x6"	1
		M4-9R (MOD) 30"x24"	1
6B	EB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7B	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
8B	DETOUR	M4-10R 48"x18"	1
9B	MILLER AVE CLOSED AT N SEVENTH ST FOLLOW DETOUR	SPECIAL 48x66	1
10B	EB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	2
		W20-2 36"x36"	2
11B	EB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	2
		W20-1 36"x36"	2
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

WEST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1A	WB MILLER RD / DETOUR	D3-1 36"x6"	8
		M4-9S 30"x24"	8
2A	WB MILLER RD / DETOUR	D3-1 36"x6"	4
		M4-9R 30"x24"	4
3A	WB MILLER RD / DETOUR	D3-1 36"x6"	6
		M4-9L 30"x24"	6
4A	WB MILLER RD / DETOUR	D3-1 36"x6"	3
		M4-9L (MOD) 30"x24"	3
5A	WB MILLER RD / DETOUR	D3-1 36"x6"	2
		M4-9R (MOD) 30"x24"	2
6A	WB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7A	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
8A	DETOUR	M4-10L 48"x18"	1
9A	WEST BOUND MILLER AVE CLOSED AT CHAPIN ST FOLLOW DETOUR	SPECIAL 48x66	6
10A	WB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	5
		W20-2 36"x36"	5
11A	WB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	3
		W20-1 36"x36"	3
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

DETOUR ROUTE

PHASE II STAGE I & II (WATER MAIN)

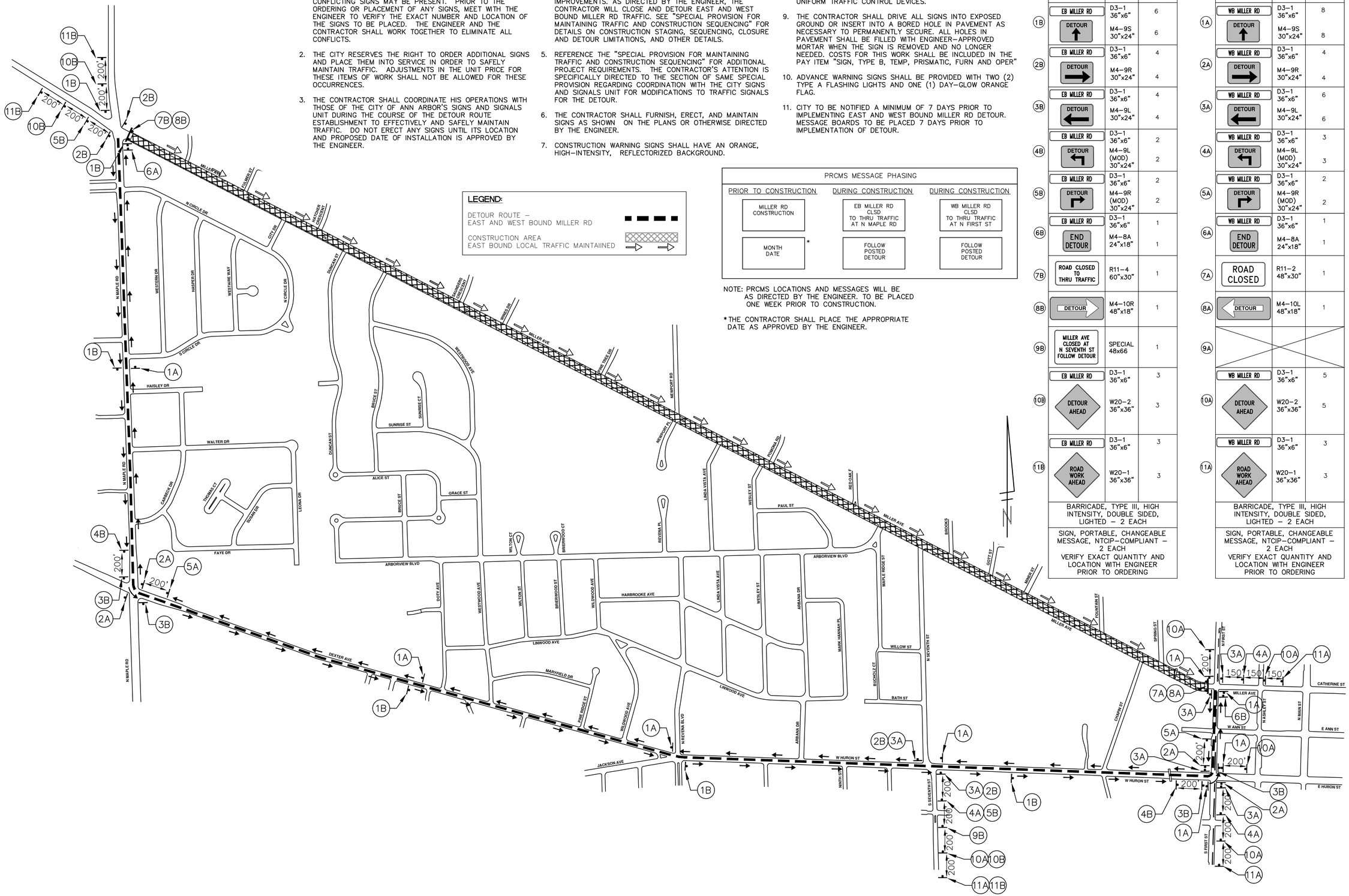
SCALE FILM: 1" = 300'

DRAWING No. 2022034-23

SHEET No. 23 OF 131

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 MILLER RD IMPROVEMENTS. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR EAST AND WEST BOUND MILLER 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 AND 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 EAST AND WEST BOUND MILLER RD DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.



PRCMS MESSAGE PHASING

PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	DURING CONSTRUCTION
MILLER RD CONSTRUCTION	EB MILLER RD CLSD TO THRU TRAFFIC AT N MAPLE RD	WB MILLER RD CLSD TO THRU TRAFFIC AT N FIRST ST
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.

EAST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1B	EB MILLER RD / DETOUR ↑	D3-1 36"x6"	6
		M4-9S 30"x24"	6
2B	EB MILLER RD / DETOUR →	D3-1 36"x6"	4
		M4-9R 30"x24"	4
3B	EB MILLER RD / DETOUR ←	D3-1 36"x6"	4
		M4-9L 30"x24"	4
4B	EB MILLER RD / DETOUR	D3-1 36"x6"	2
		M4-9L (MOD) 30"x24"	2
5B	EB MILLER RD / DETOUR →	D3-1 36"x6"	2
		M4-9R (MOD) 30"x24"	2
6B	EB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7B	ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
8B	DETOUR →	M4-10R 48"x18"	1
9B	MILLER AVE CLOSED AT N SEVENTH ST FOLLOW DETOUR	SPECIAL 48x66	1
10B	EB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	3
		W20-2 36"x36"	3
11B	EB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	3
		W20-1 36"x36"	3
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

WEST BOUND MILLER RD

	SIGN	NUMBER	QUANTITY
1A	WB MILLER RD / DETOUR ↑	D3-1 36"x6"	8
		M4-9S 30"x24"	8
2A	WB MILLER RD / DETOUR →	D3-1 36"x6"	4
		M4-9R 30"x24"	4
3A	WB MILLER RD / DETOUR ←	D3-1 36"x6"	6
		M4-9L 30"x24"	6
4A	WB MILLER RD / DETOUR	D3-1 36"x6"	3
		M4-9L (MOD) 30"x24"	3
5A	WB MILLER RD / DETOUR →	D3-1 36"x6"	2
		M4-9R (MOD) 30"x24"	2
6A	WB MILLER RD / END DETOUR	D3-1 36"x6"	1
		M4-8A 24"x18"	1
7A	ROAD CLOSED	R11-2 48"x30"	1
8A	DETOUR ←	M4-10L 48"x18"	1
9A			
10A	WB MILLER RD / DETOUR AHEAD	D3-1 36"x6"	5
		W20-2 36"x36"	5
11A	WB MILLER RD / ROAD WORK AHEAD	D3-1 36"x6"	3
		W20-1 36"x36"	3
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED – 2 EACH		
	SIGN, PORTABLE, CHANGEABLE MESSAGE, NTCIP-COMPLIANT – 2 EACH VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

DETOUR ROUTE

PHASE II STAGE III (CYCLE TRACK)

SCALE FLAN: 1" = 300'

DRAWING No. 2022034-24

SHEET No. 24 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Dtr2.dwg Dwg Created: 29-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24

Know what's below. Call before you dig.

NO.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE I STAGE I (NEWPORT WATER MAIN CONN)

P.O.B. - STA. 61+00

SCALE: 1" = 40'

DRAWING No. 2022034-25

SHEET No. 25 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034MtrRBB.dwg Dwg Created: 29-Mar-24 - _a2 standard bw.stb - Plot Date: 2-May-24

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE I STAGE II (WATER MAIN)

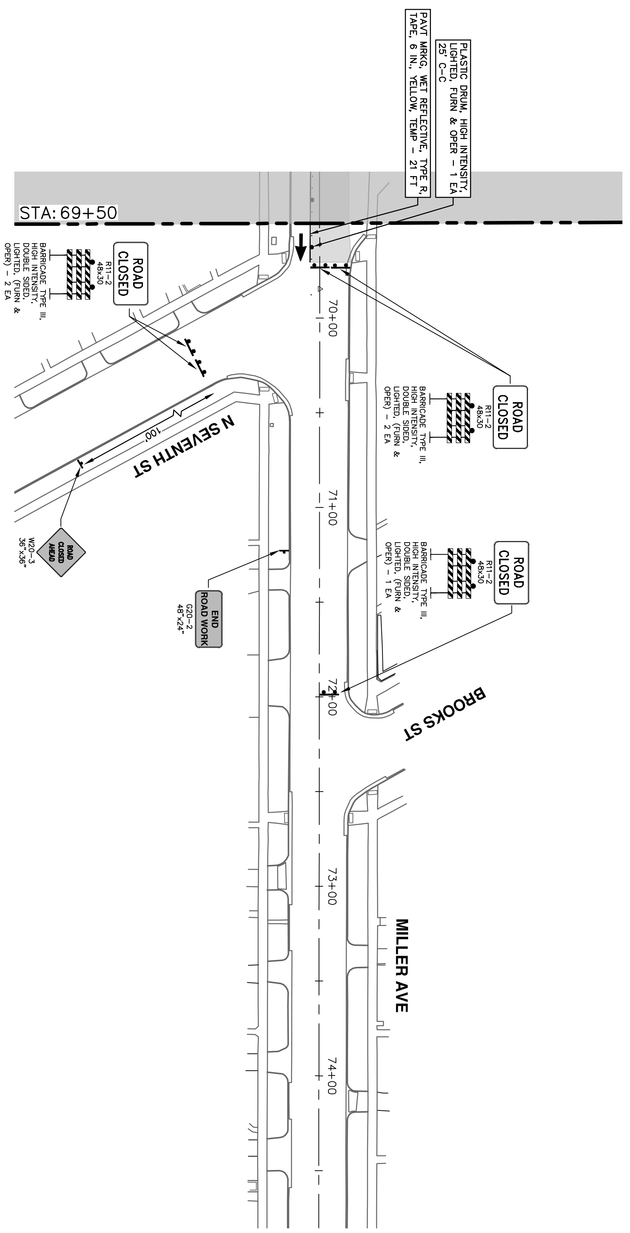
P.O.B. - STA. 61+00

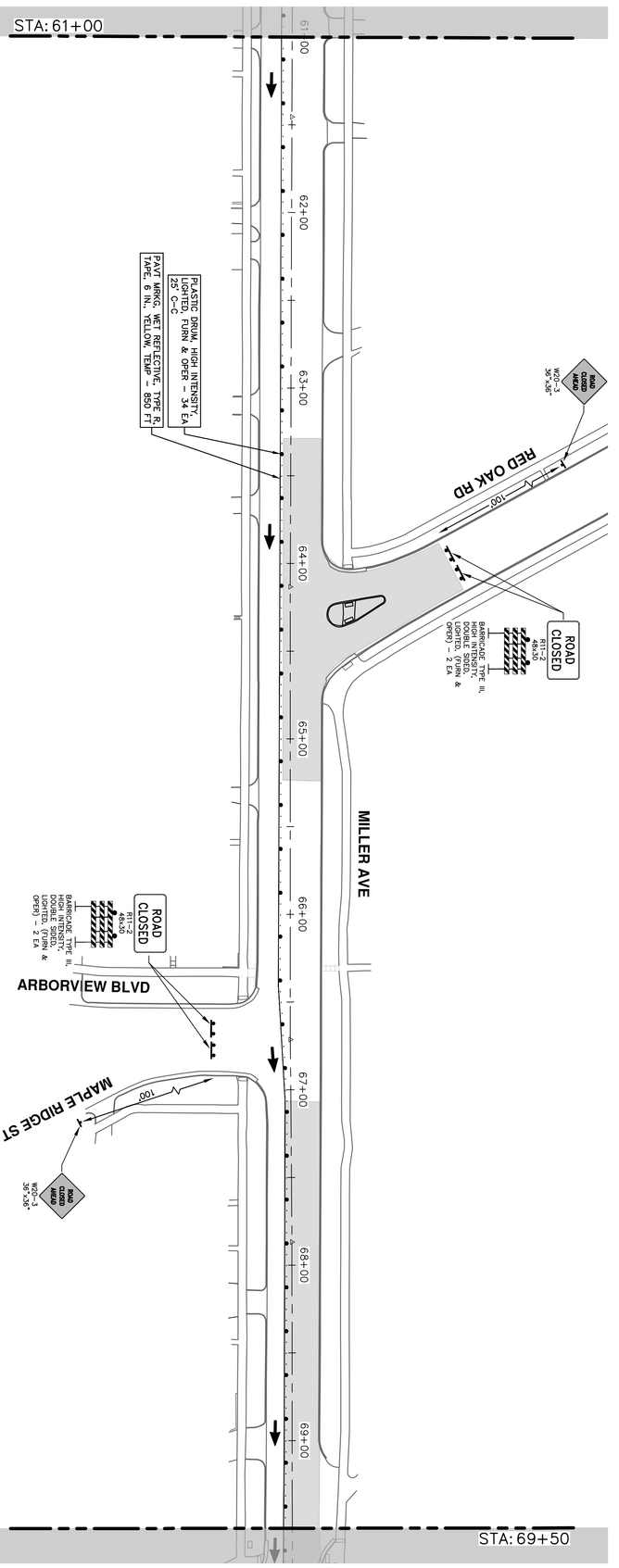
SCALE : 1" = 40'

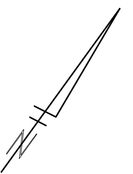
DRAWING No. 2022034-26

SHEET No. 26 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034MtrfA.dwg Dwg Created: 26-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24







SHEET No. 27 OF 131

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No. 2022034-27

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE I STAGE II (WATER MAIN)

STA. 61+00 - P.O.E.

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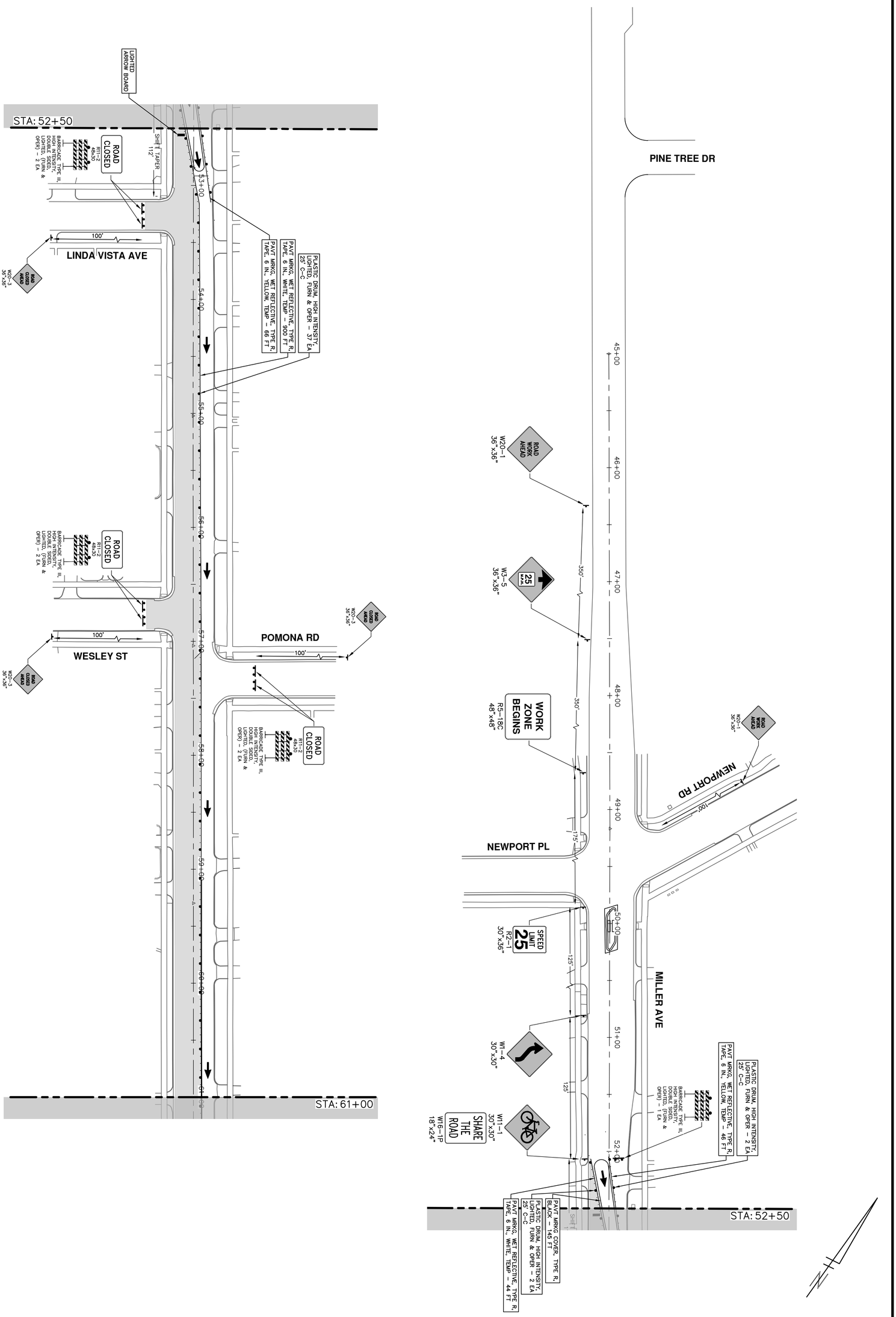
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No. 2022034-28

SHEET No. 28 OF 131

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE I STAGE III (WATER MAIN)

P.O.B. - STA. 61+00

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734-794-6410
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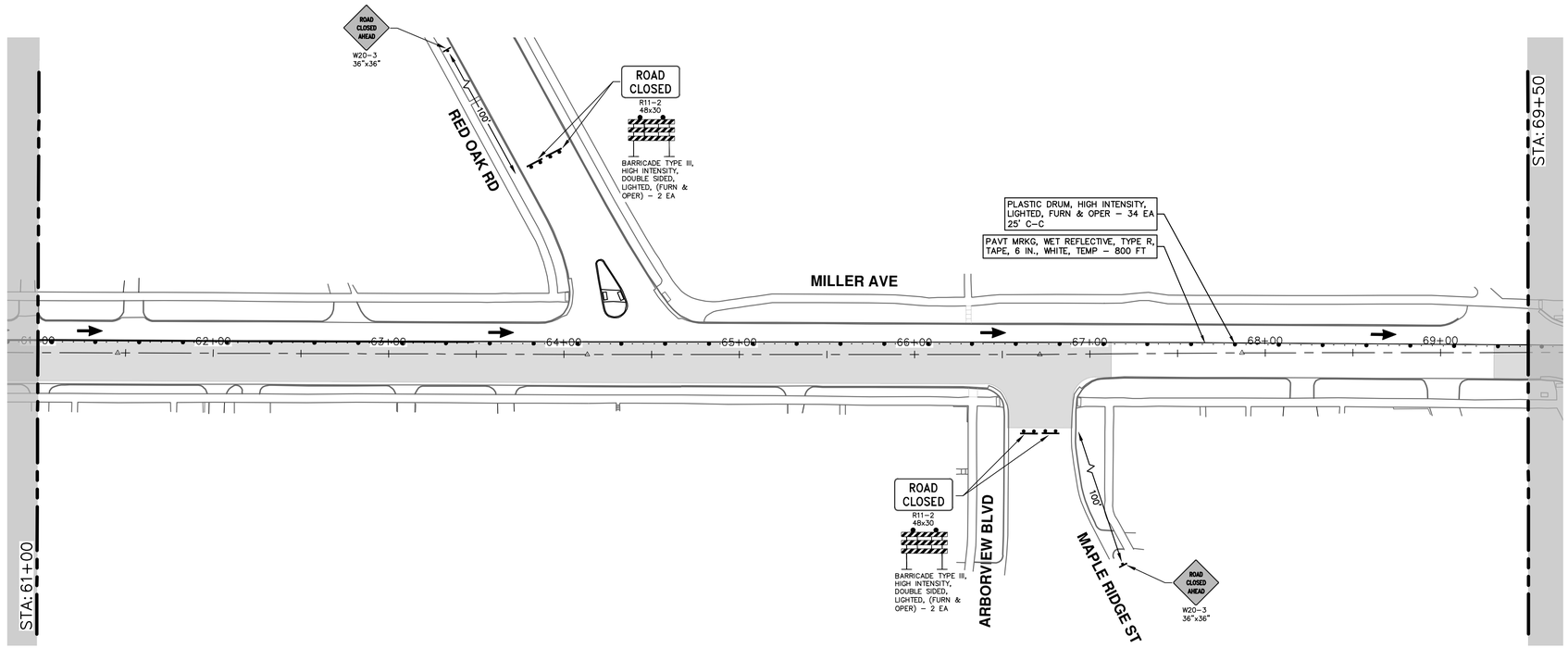
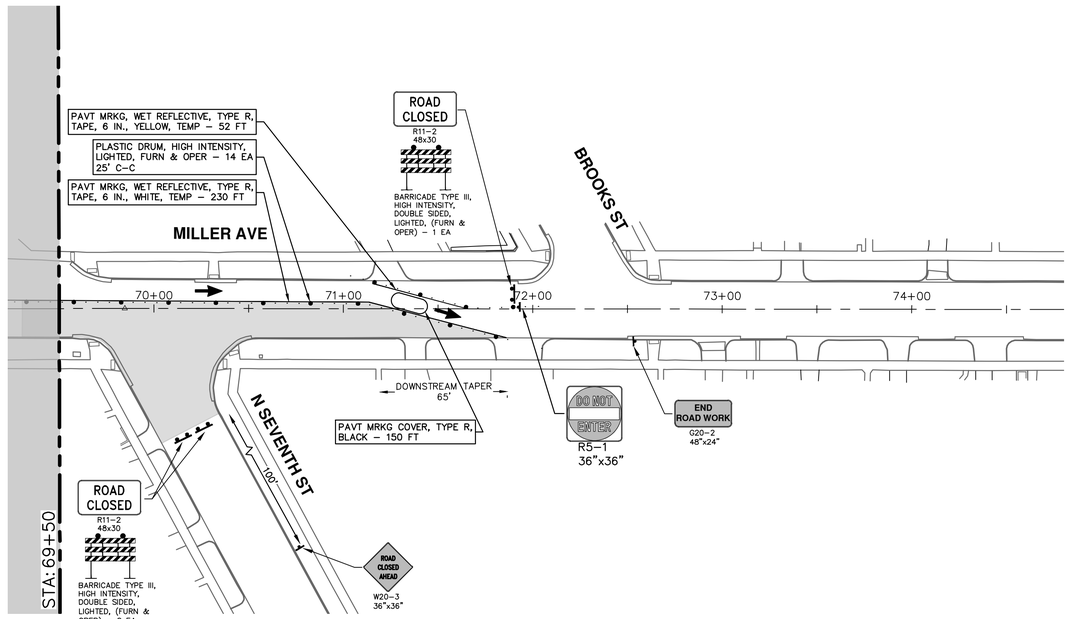
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

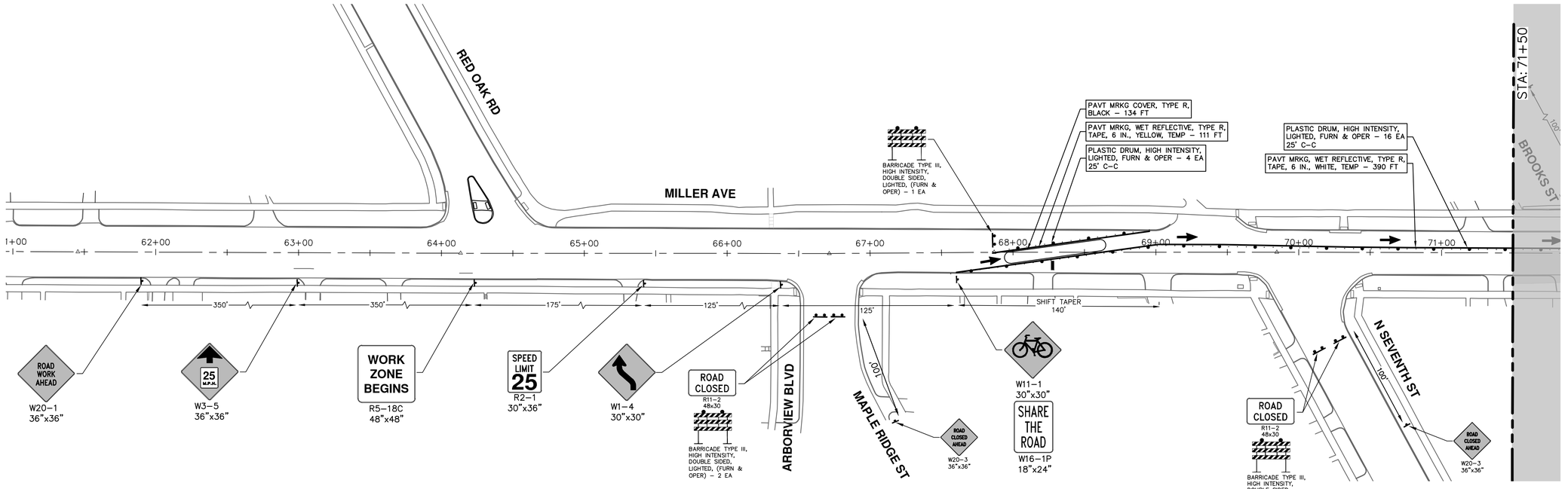
TRAFFIC CONTROL - PHASE I STAGE III (WATER MAIN)

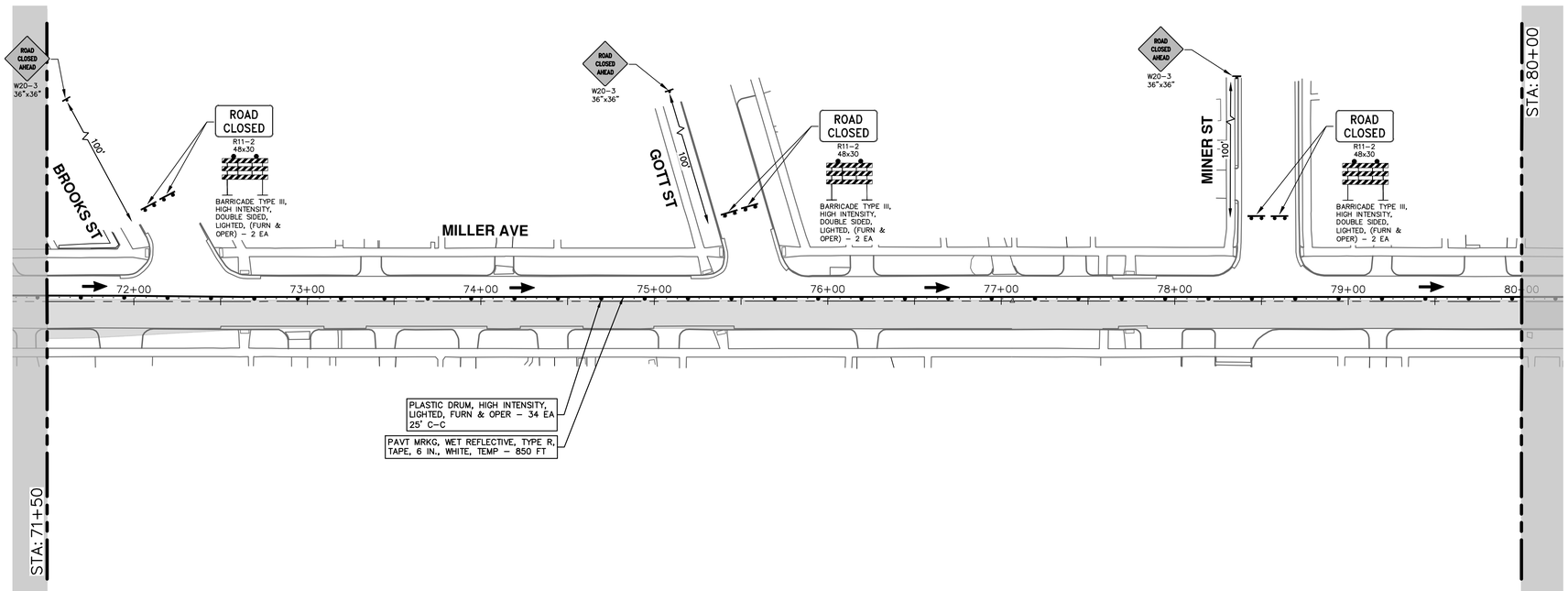
STA. 61+00 - P.O.E.

SCALE : 1" = 40'

DRAWING No.
2022034-29

SHEET No.
29 OF 131





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5–2–24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4–29–24	A2D	JKA
01	ADDENDUM PLANS	4–25–24	A2D	JKA
00	BID SET	4–9–24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

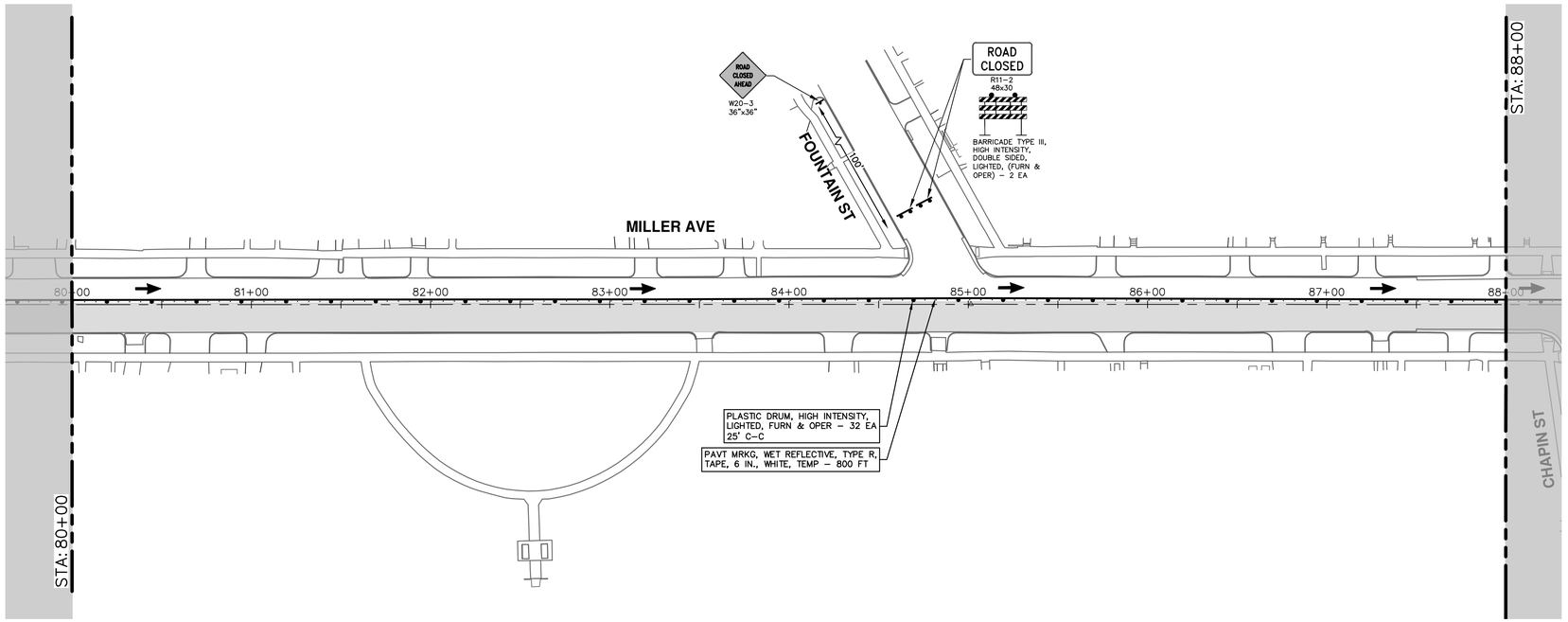
TRAFFIC CONTROL - PHASE II STAGE I (WATER MAIN)

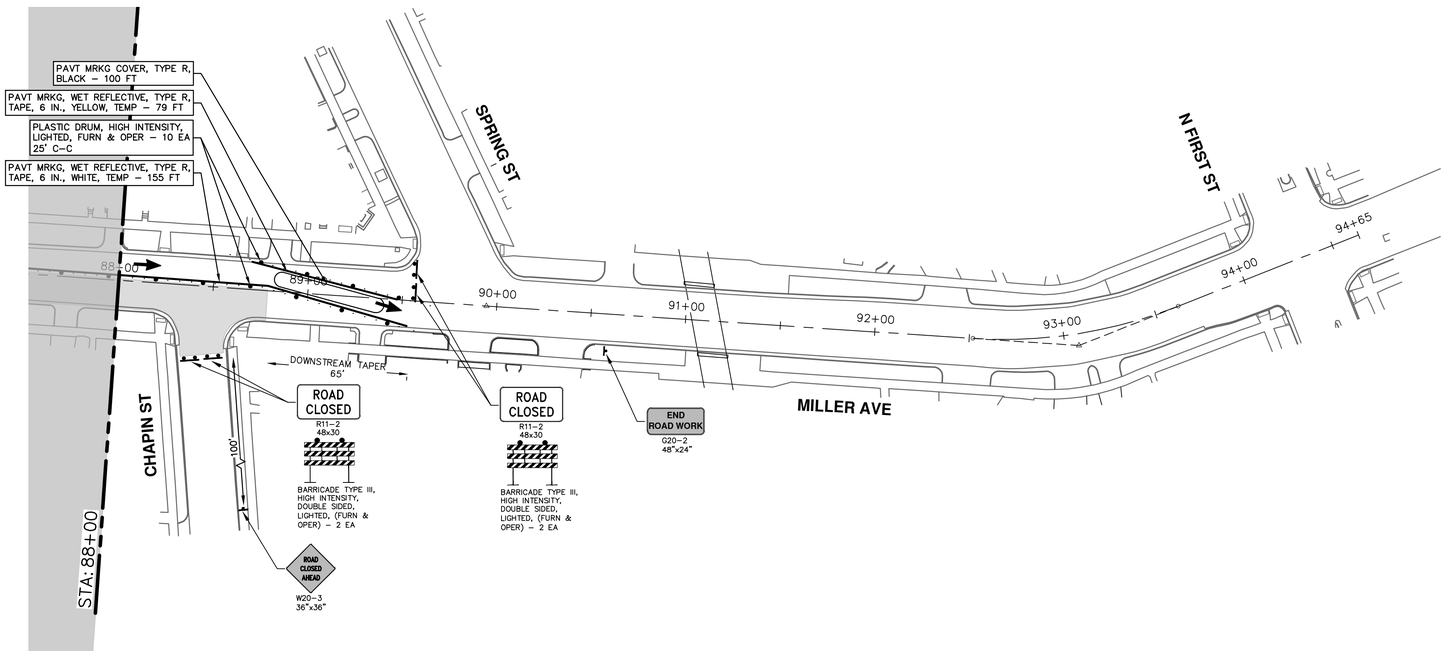
P.O.B. - STA. 80+00

SCALE : 1" = 40'

DRAWING No. **2022034-30**

SHEET No. **30 OF 131**





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE I (WATER MAIN)

STA. 80+00 - P.O.E.

SCALE : 1" = 40'

DRAWING No.
2022034-31

SHEET No.
31 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034MtrfIC.dwg Dwg Created: 29-Mar-24 - _a2 standard bw.stb - Plot Date: 2-May-24

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5–2–24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4–29–24	A2D	JKA
01	ADDENDUM PLANS	4–25–24	A2D	JKA
00	BID SET	4–9–24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE II (WATER MAIN)

P.O.B. - STA. 80+00

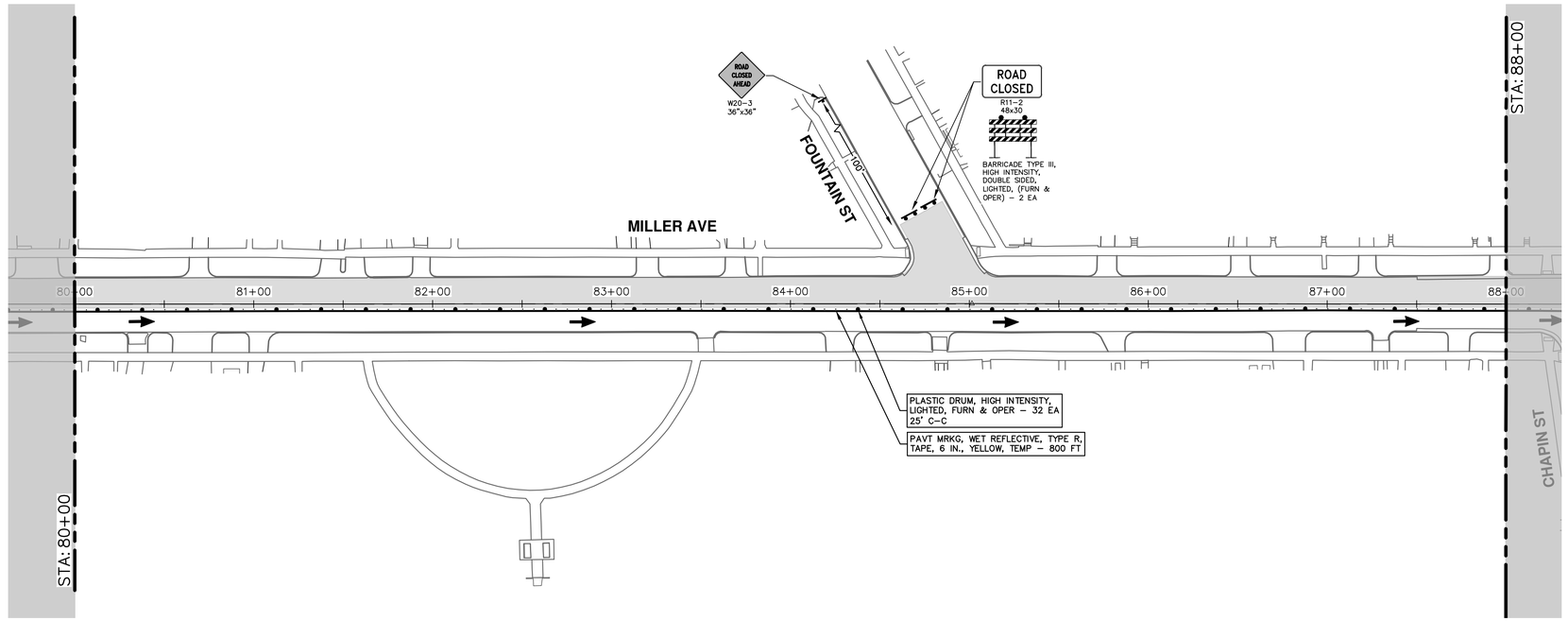
SCALE : 1" = 40'

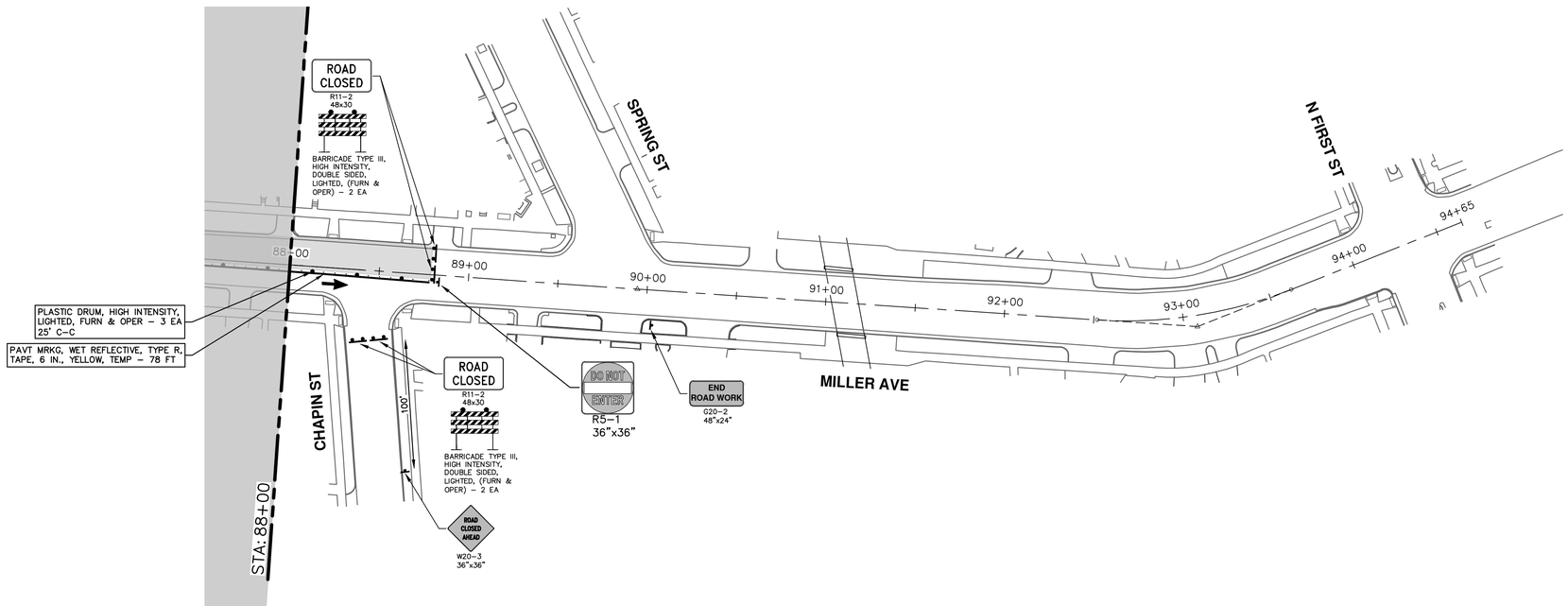
DRAWING No. **2022034-32**

SHEET No.

32 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Mtrf1D.dwg Dwg Created: 29-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	4-9-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA

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MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE II (WATER MAIN)

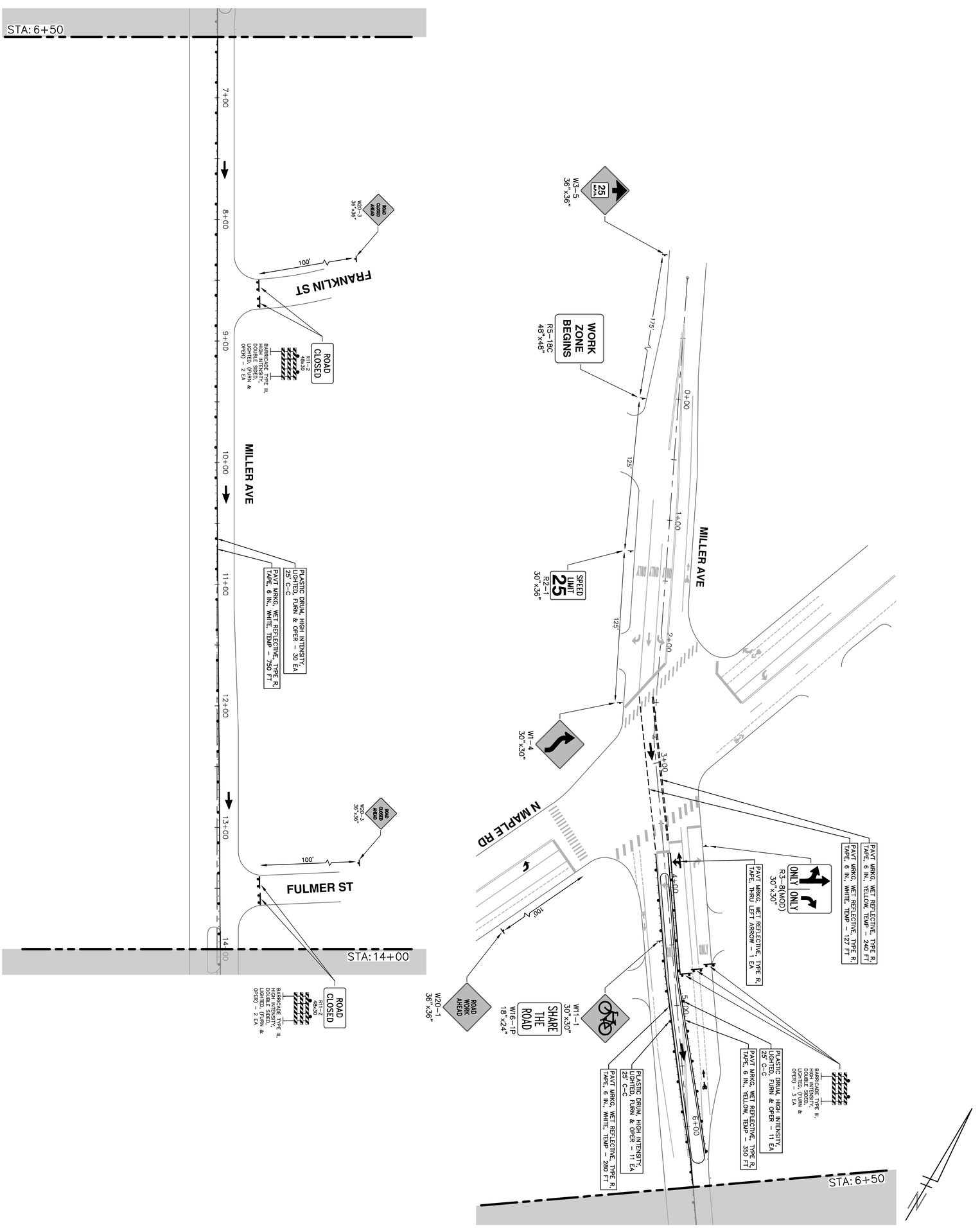
STA. 80+00 - P.O.E.

SCALE : 1" = 40'

DRAWING No.
2022034-33

SHEET No.
33 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034MtrP1D.dwg Dwg Created: 29-Mar-24 - _a2 standard bw.stb - Plot Date: 2-May-24



SHEET No. 34 OF 131

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No. 2022034-34

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

P.O.B. - STA. 14+00

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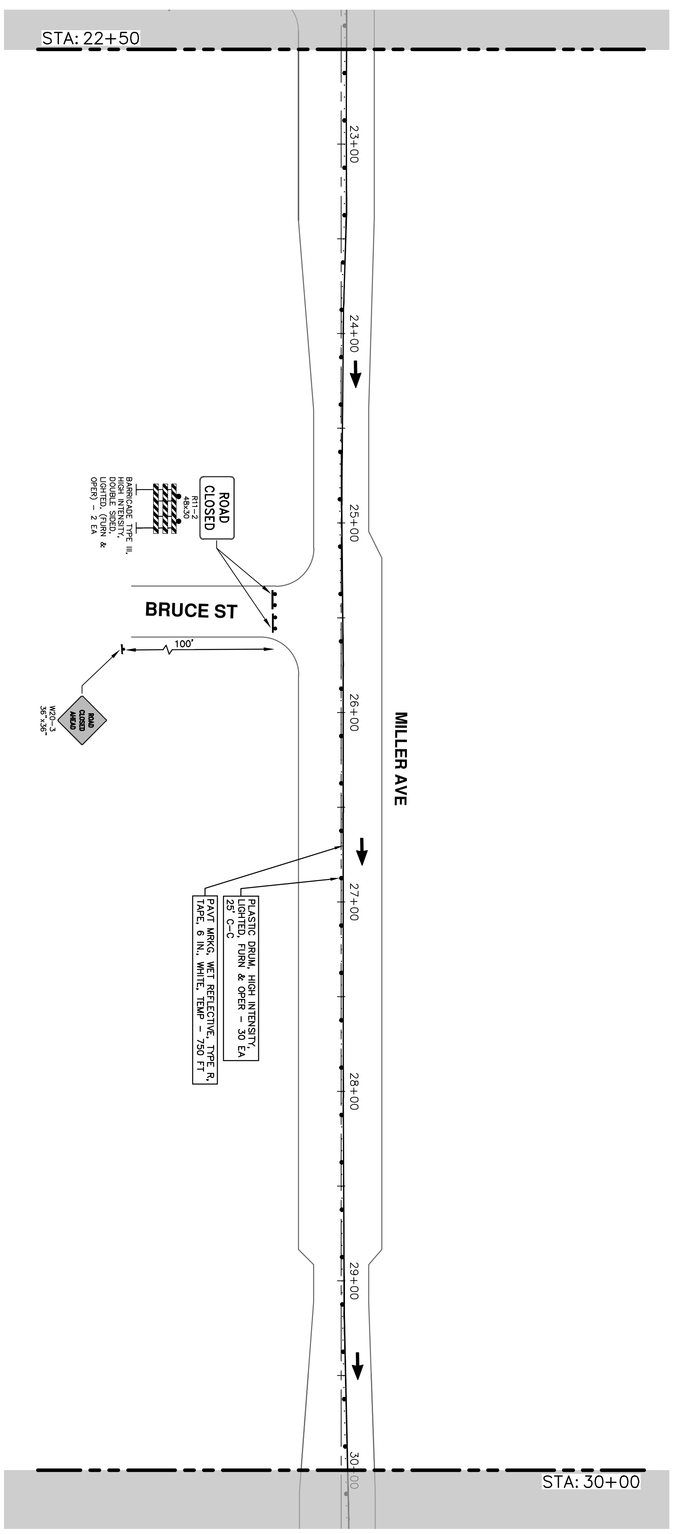
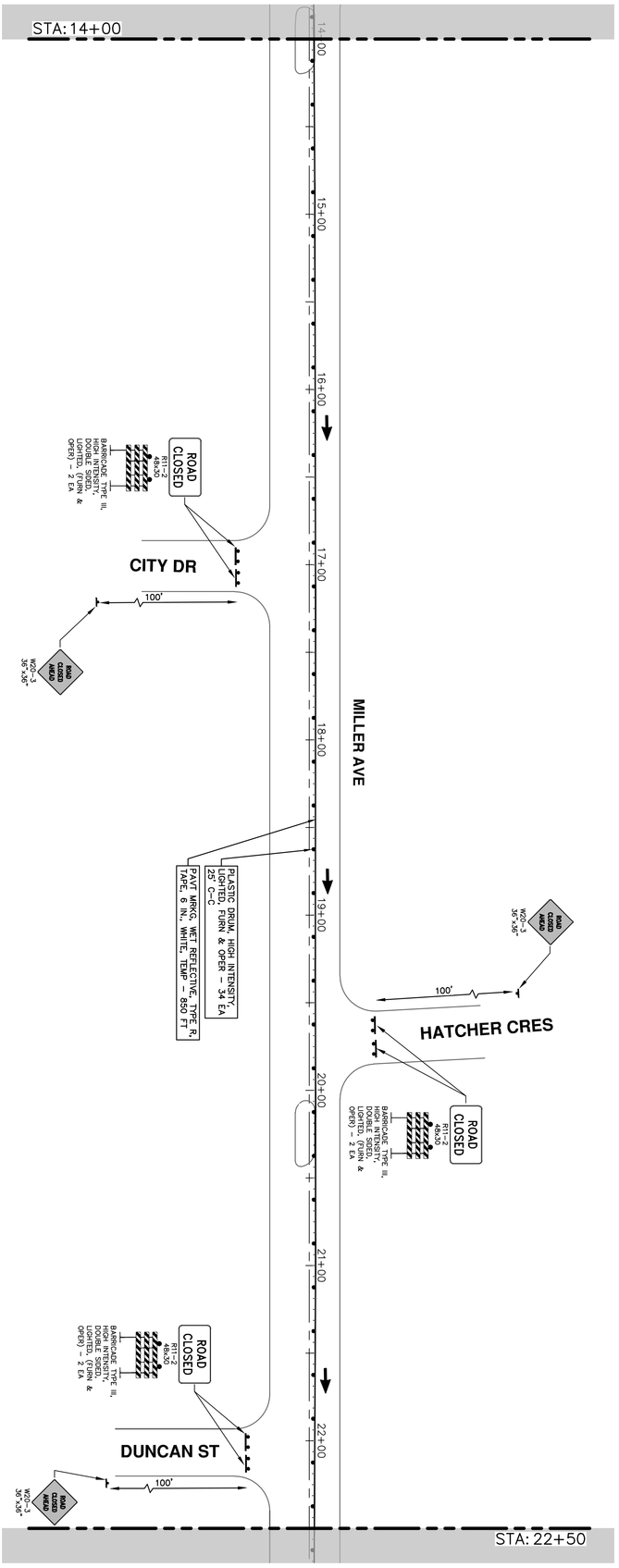
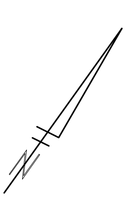
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA







SHEET No.
35 OF 131

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No.
2022034-35

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

STA. 14+00 - STA. 30+00

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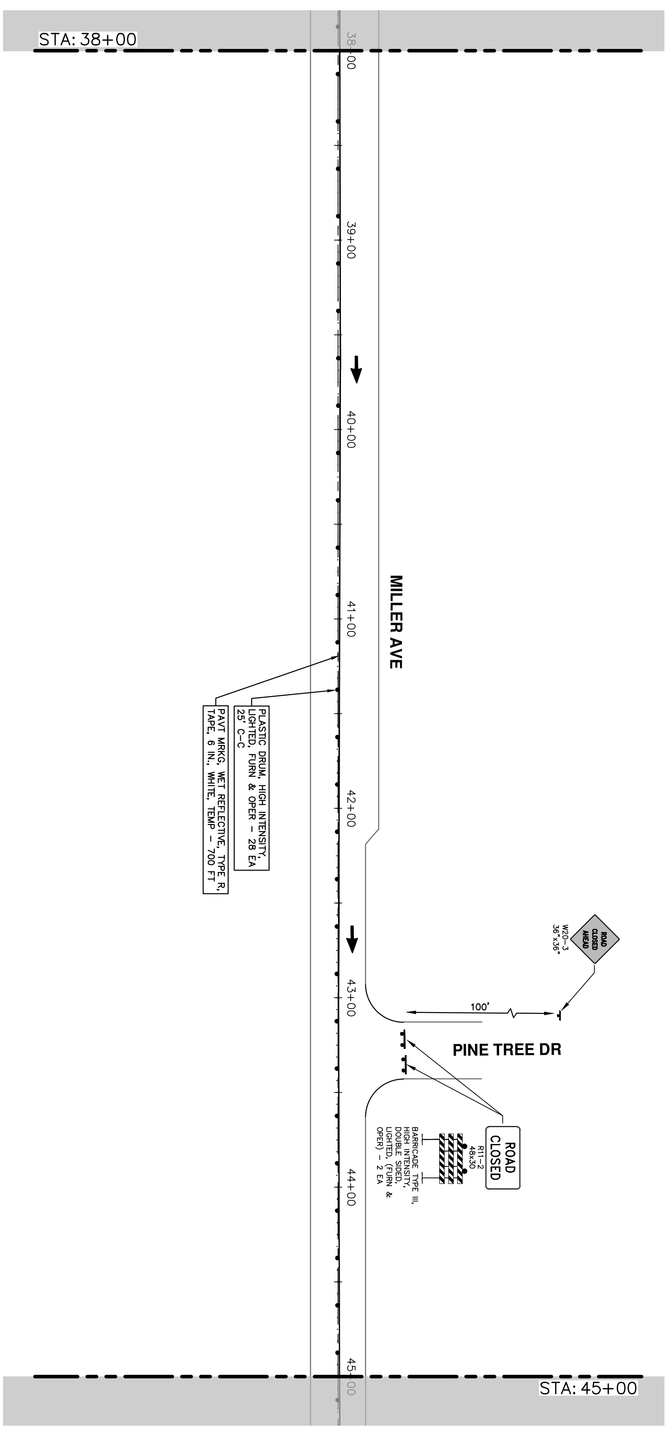
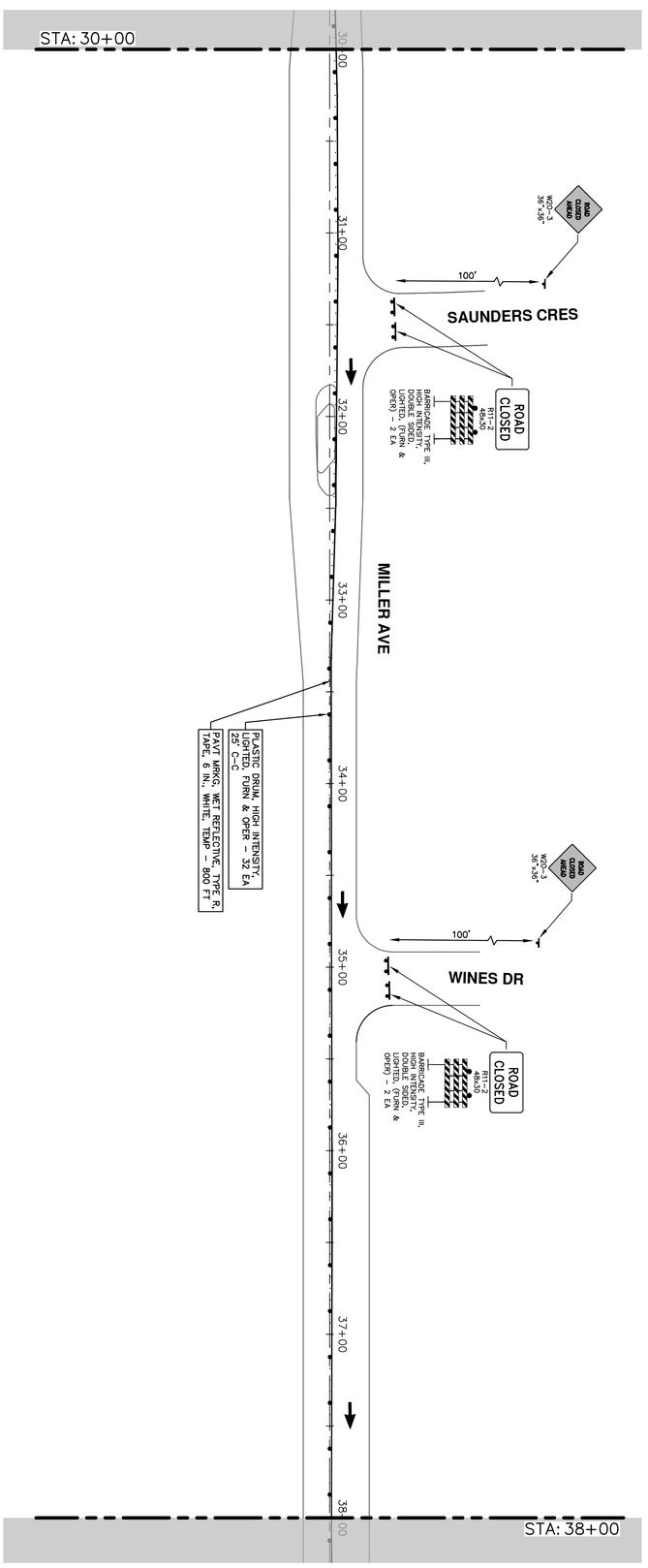
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA





CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No.
2022034-36

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

STA. 30+00 - STA. 45+00

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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

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MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

STA. 45+00 - STA. 61+00

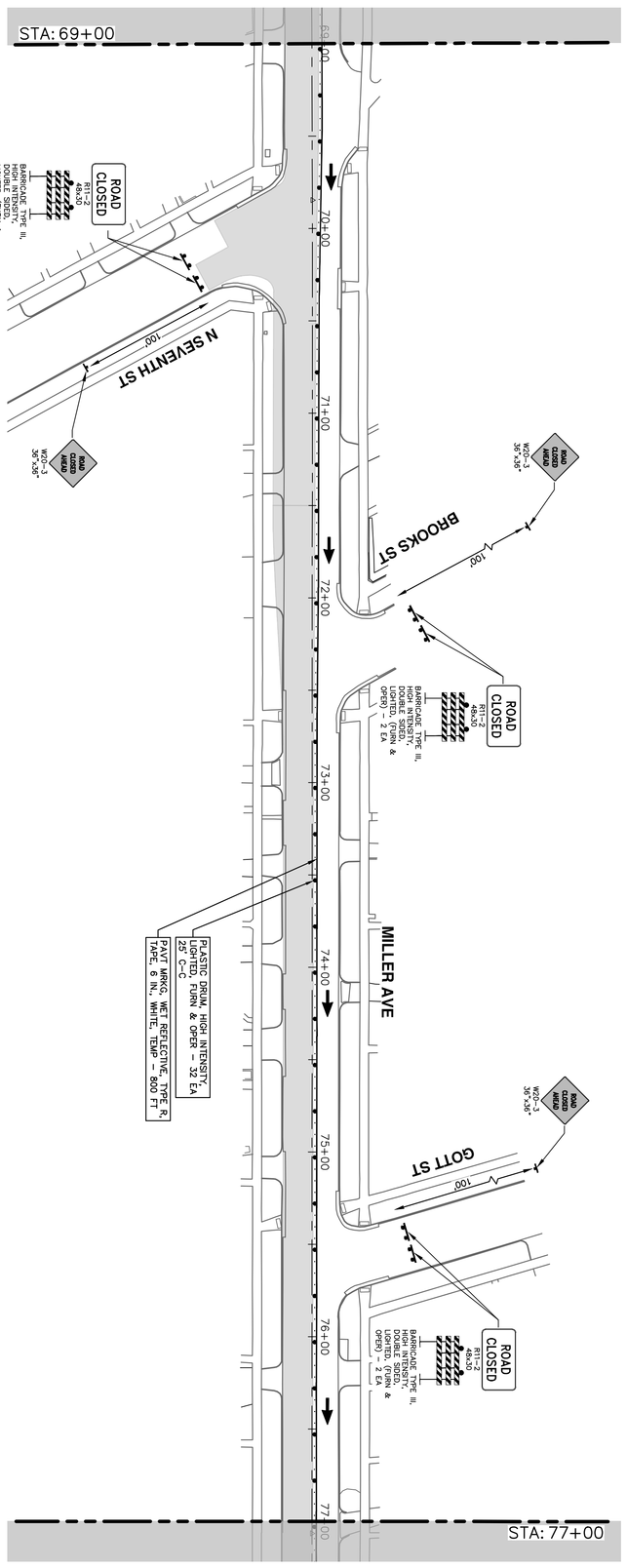
SCALE: 1" = 40'

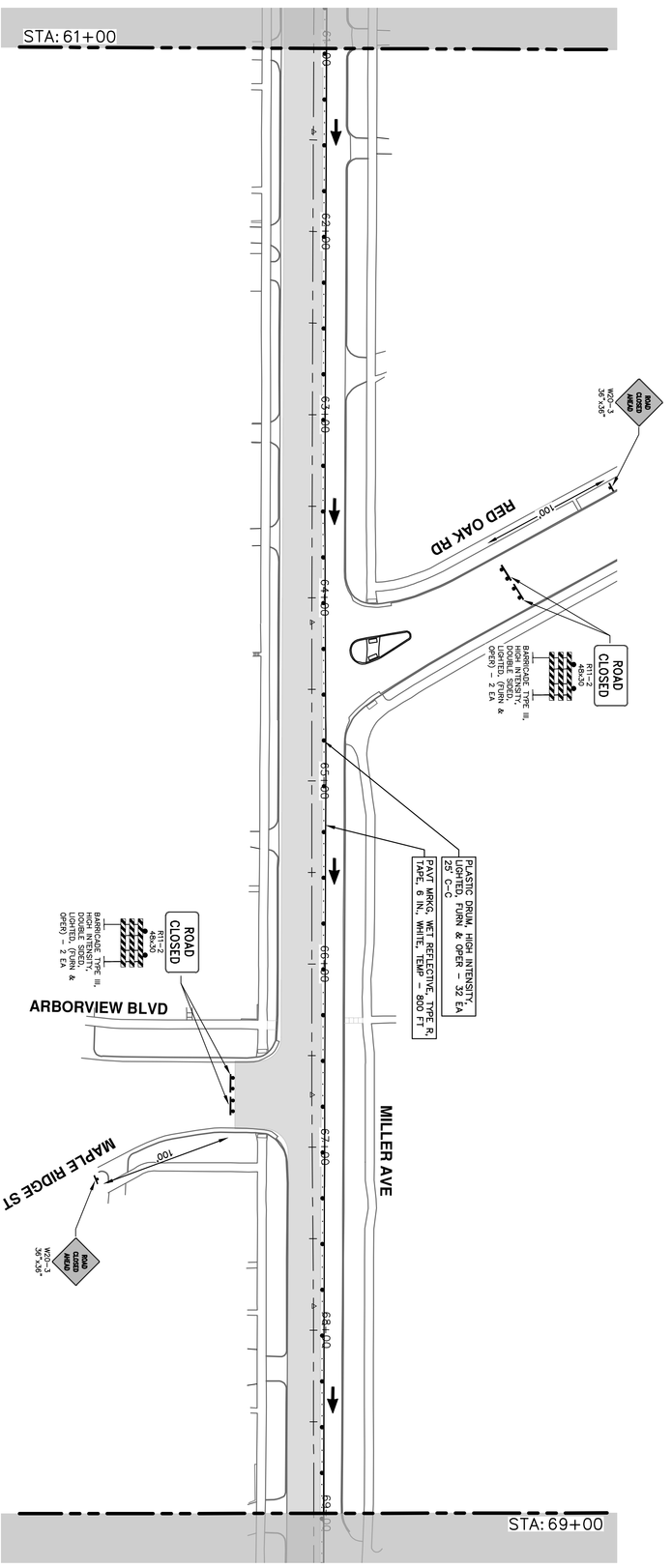
DRAWING No. **2022034-37**

SHEET No.

37 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034MtrHE.dwg Dwg Created: 29-Mar-24 - _a2 standard bw.stb - Plot Date: 2-May-24





SHEET No.
38 OF 131

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 40'

DRAWING No.
2022034-38

MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

STA. 61+00 - STA. 77+00

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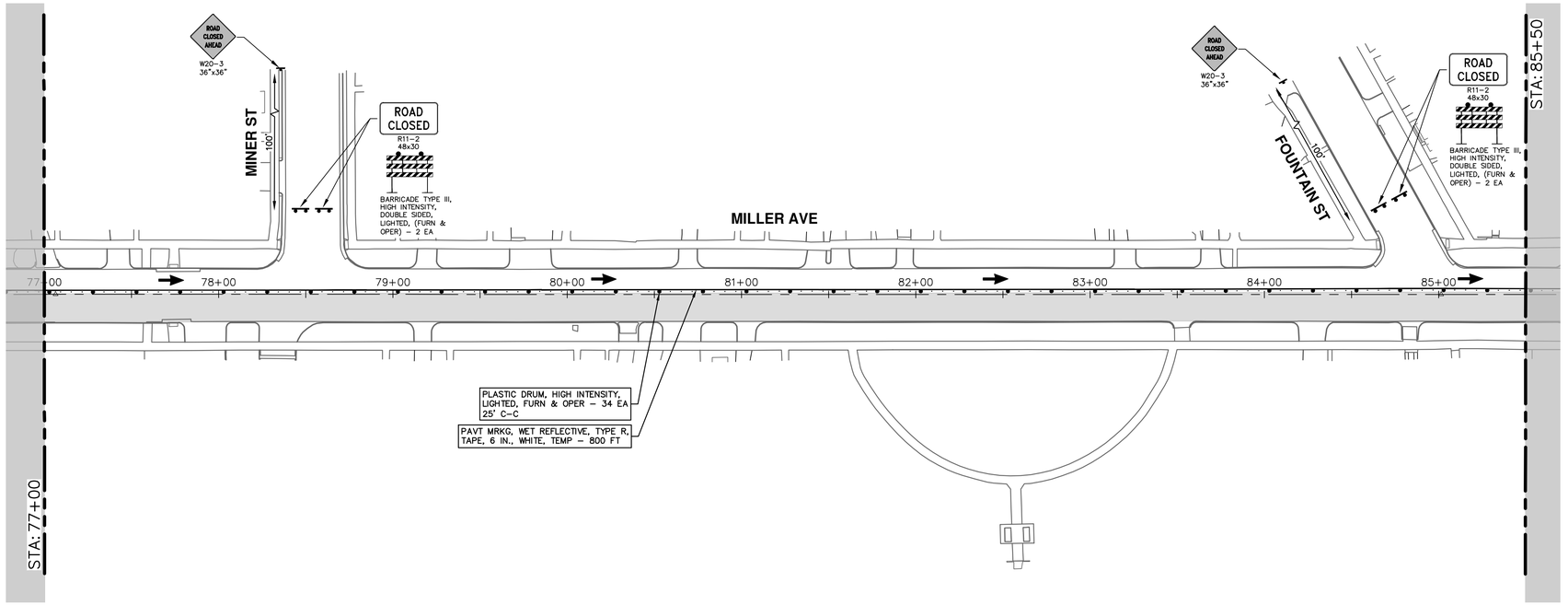
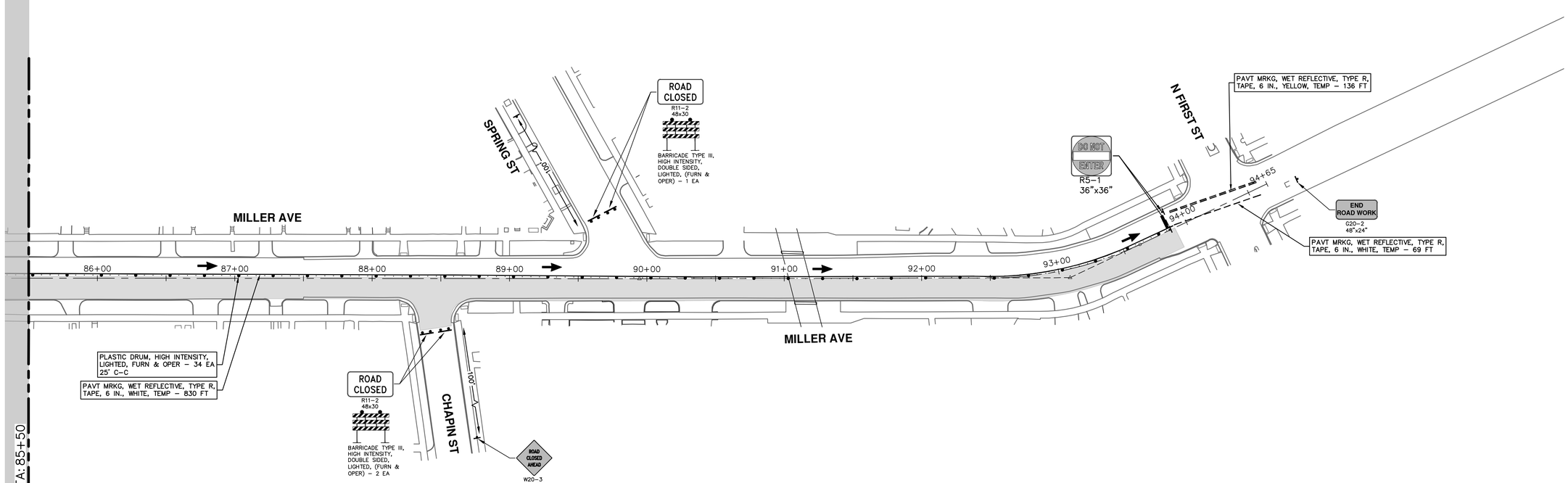
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA





R: \2022034 Miller Ave Rehab\Plan Production\2022034MtrHE.dwg Dwg Created: 29-Mar-24 - _a2 standard bw.stb - Plot Date: 2-May-24

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

TRAFFIC CONTROL - PHASE II STAGE III (CYCLE TRACK)

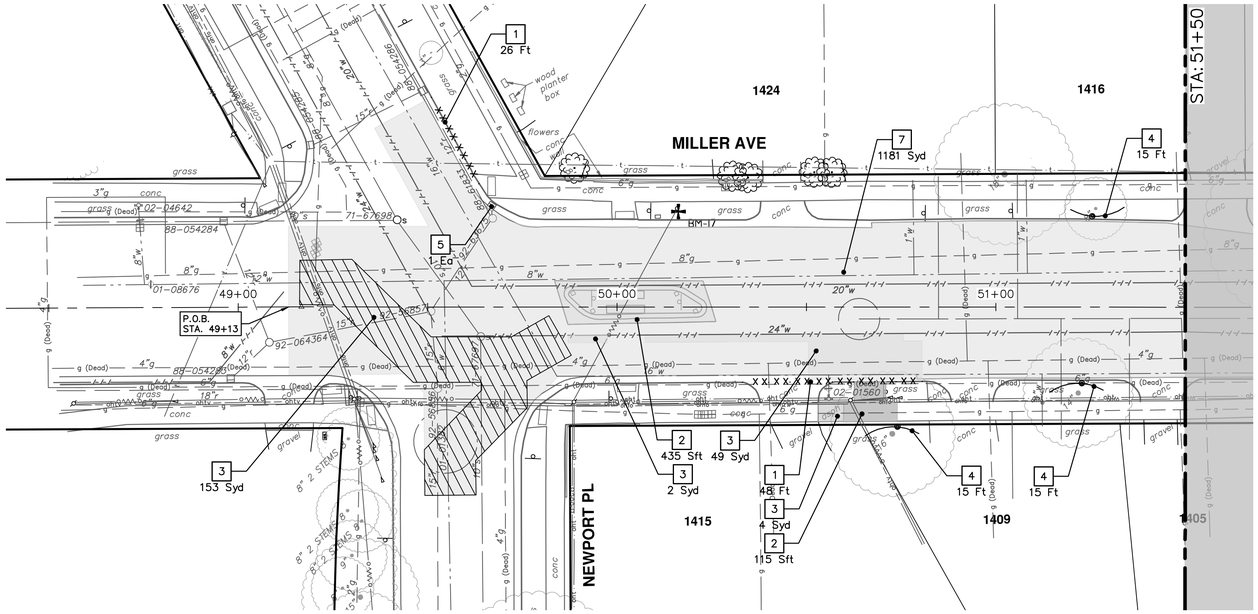
STA. 77+00 - P.O.E.

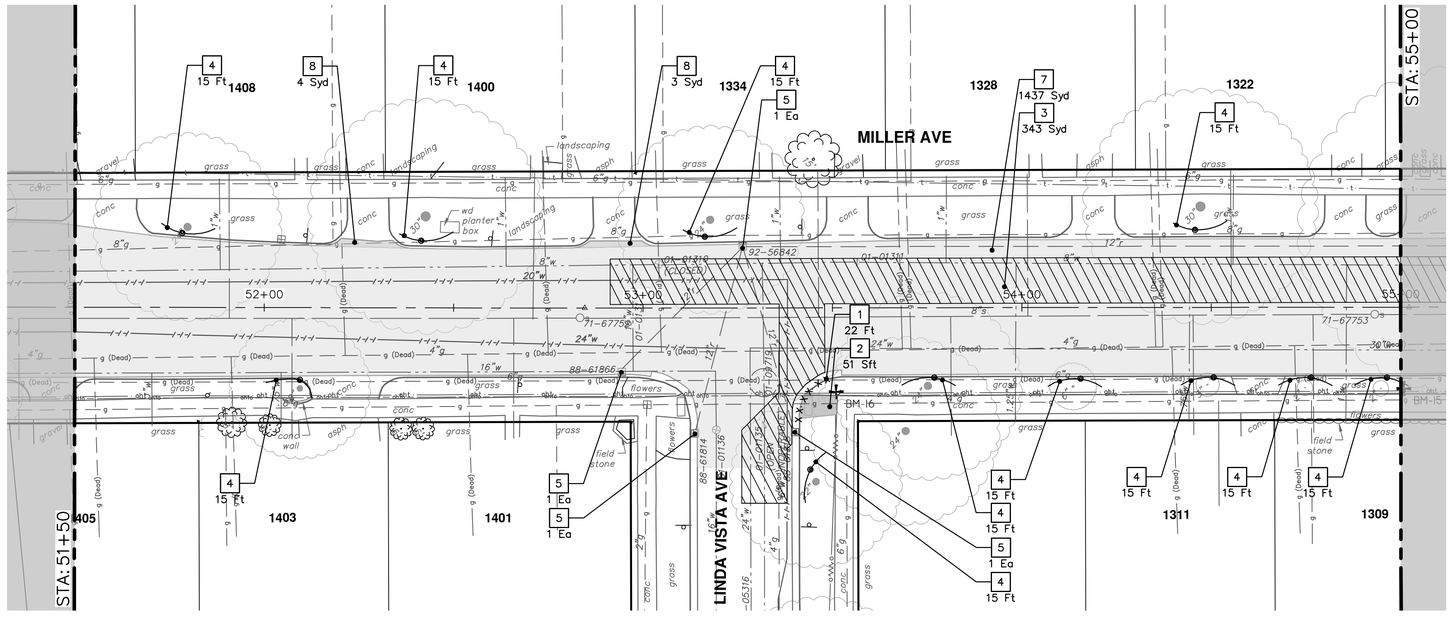
SCALE: 1" = 40'

DRAWING No. **2022034-39**

SHEET No.

39 OF 131





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold-Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

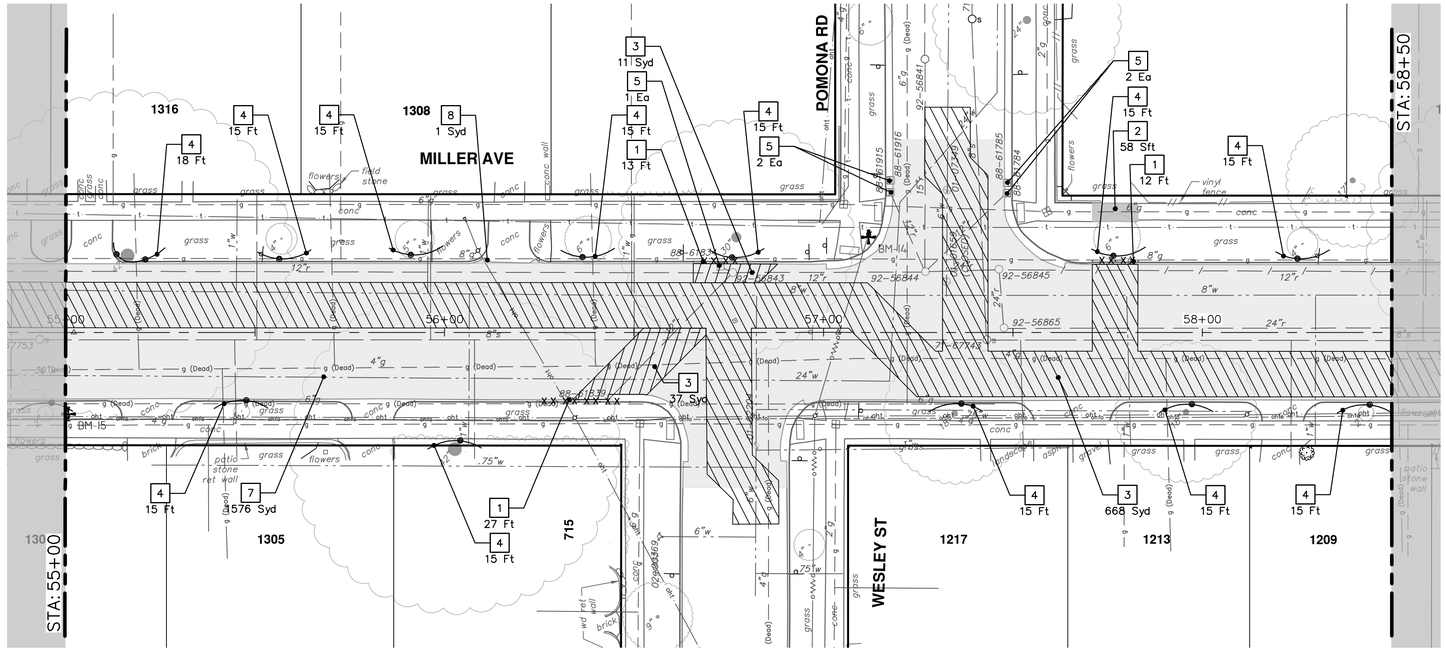
REMOVALS

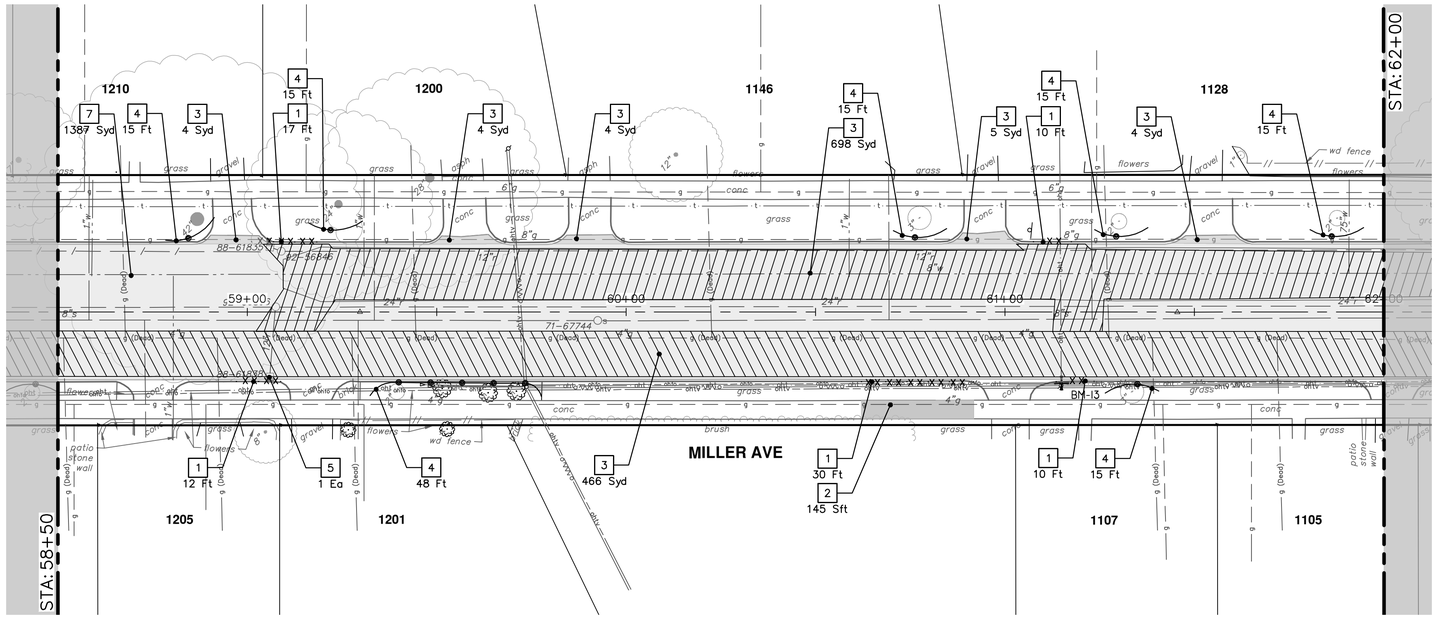
STA. 49+13 - STA. 55+00

SCALE : 1" = 20'

DRAWING No. 2022034-40

SHEET No. 40 OF 131





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold-Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

REMOVALS

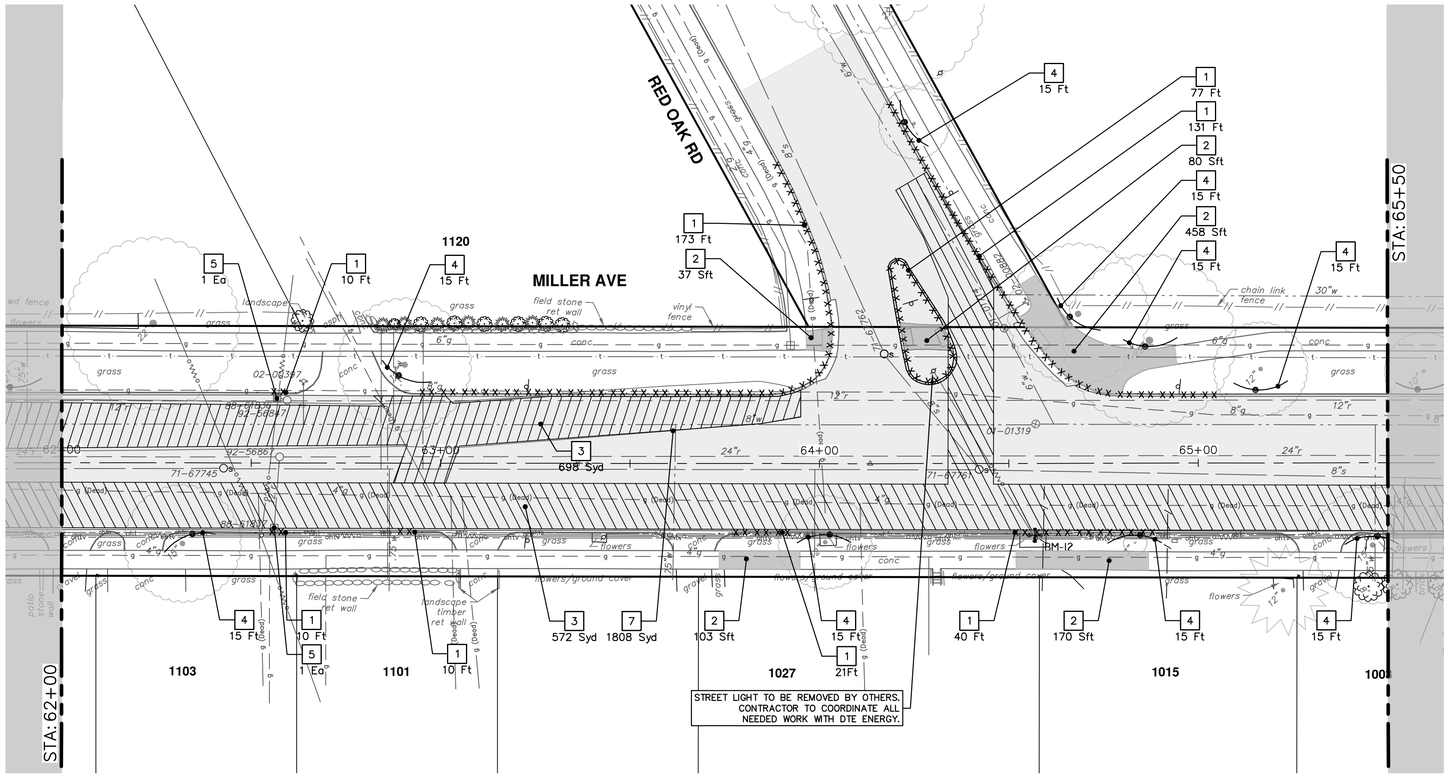
STA. 55+.00 - STA. 62+00

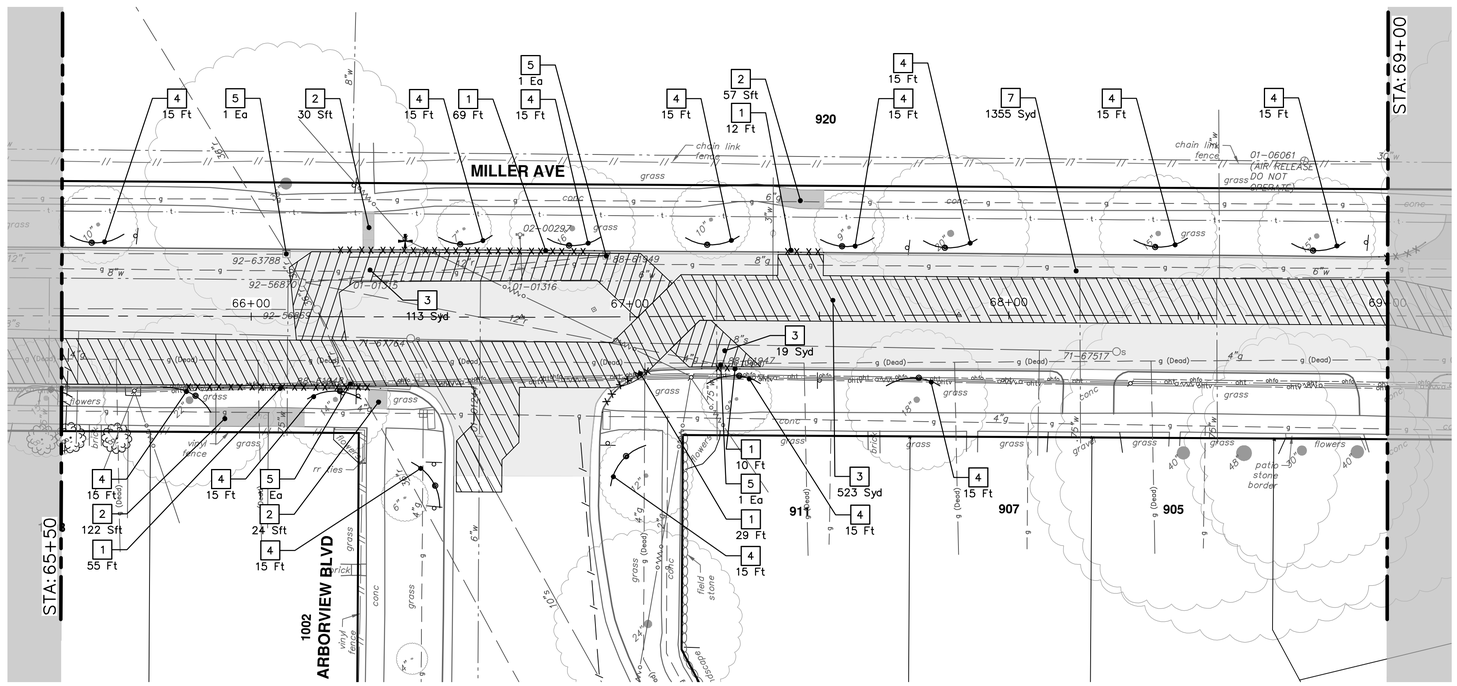
SCALE : 1" = 20'

DRAWING No.
2022034-41

SHEET No.
41 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Rem1.dwg Dwg Created: 2-May-24 — _a2 standard bw.stb — Plot Date: 2-May-24 Plot Date: 2-May-24





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold-Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

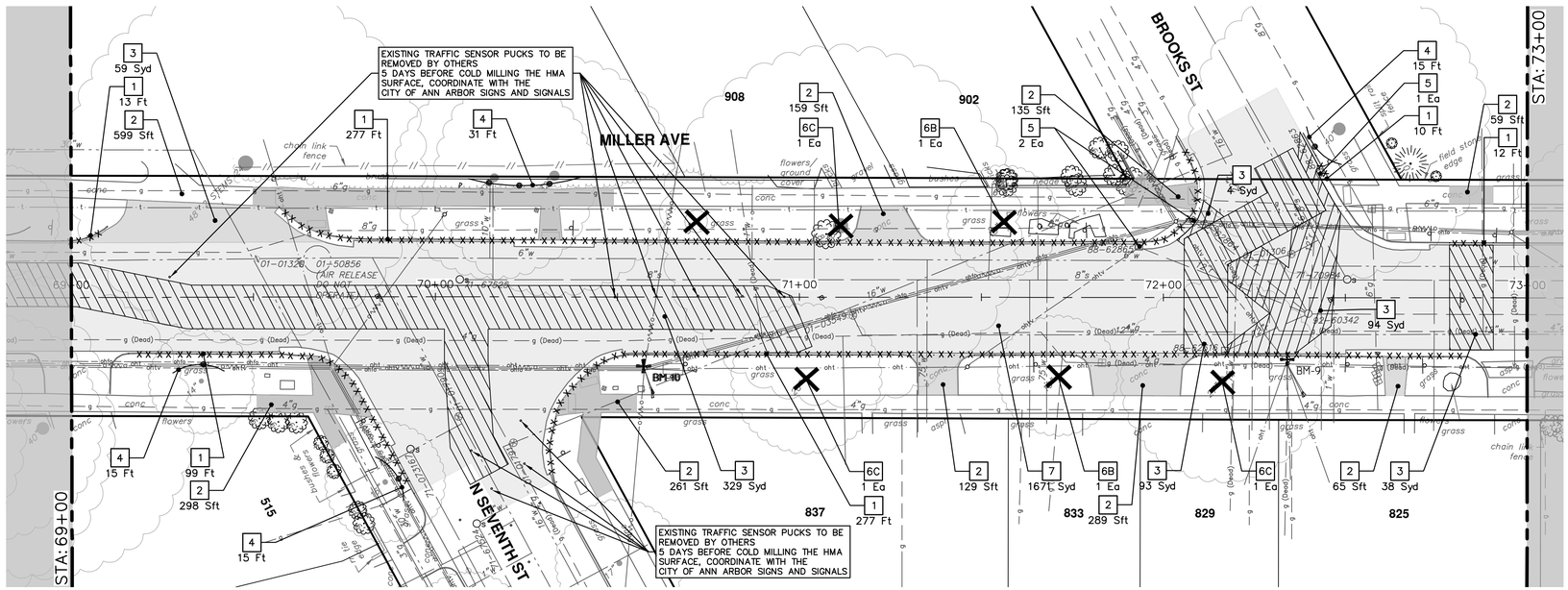
REMOVALS

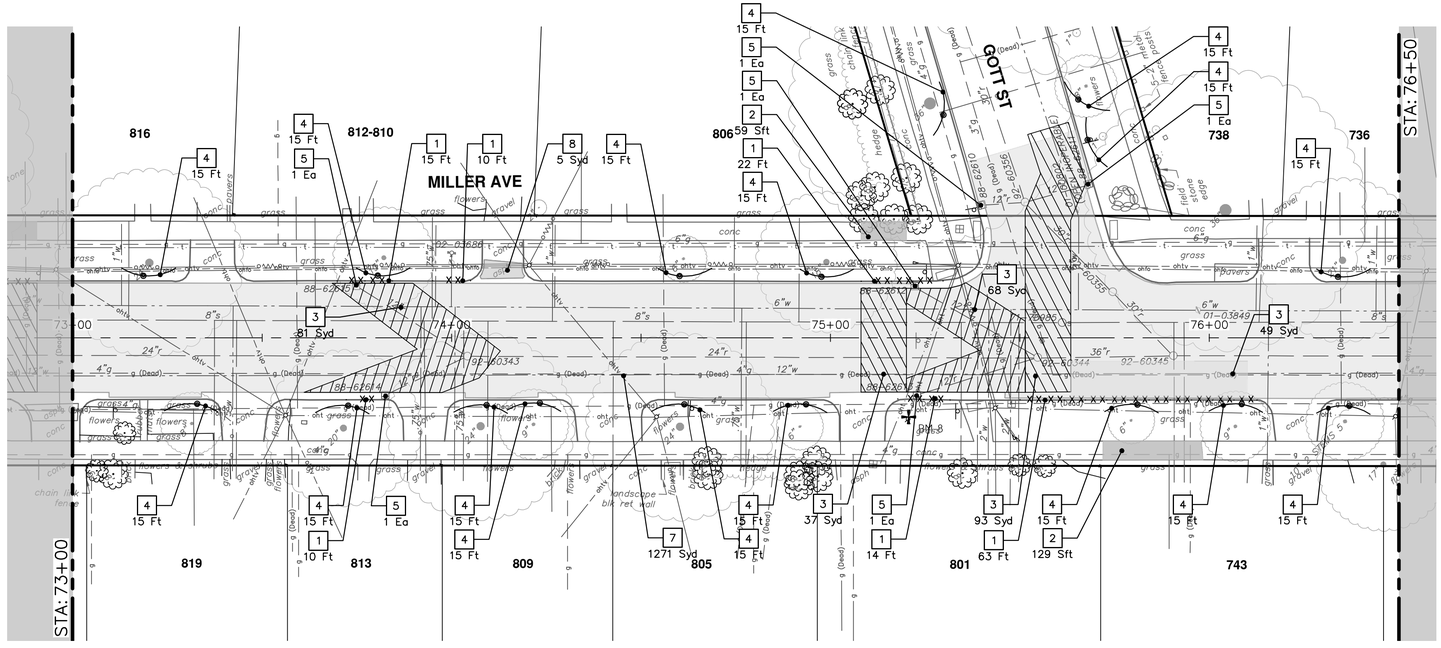
STA. 62+00 - STA. 69+00

SCALE : 1" = 20'

DRAWING No. 2022034-42

SHEET No. 42 OF 131





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold–Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5–2–24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4–29–24	A2D	JKA
01	ADDENDUM PLANS	4–25–24	A2D	JKA
00	BID SET	4–9–24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

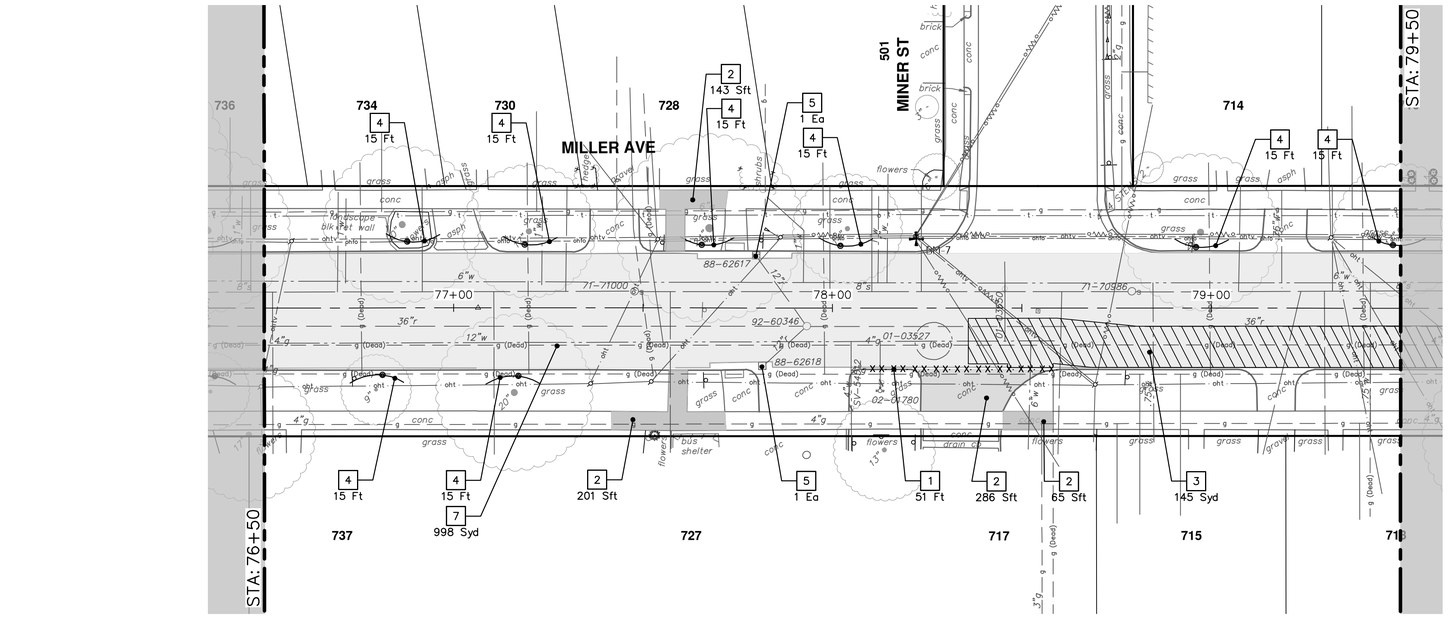
MILLER AVENUE REHABILITATION

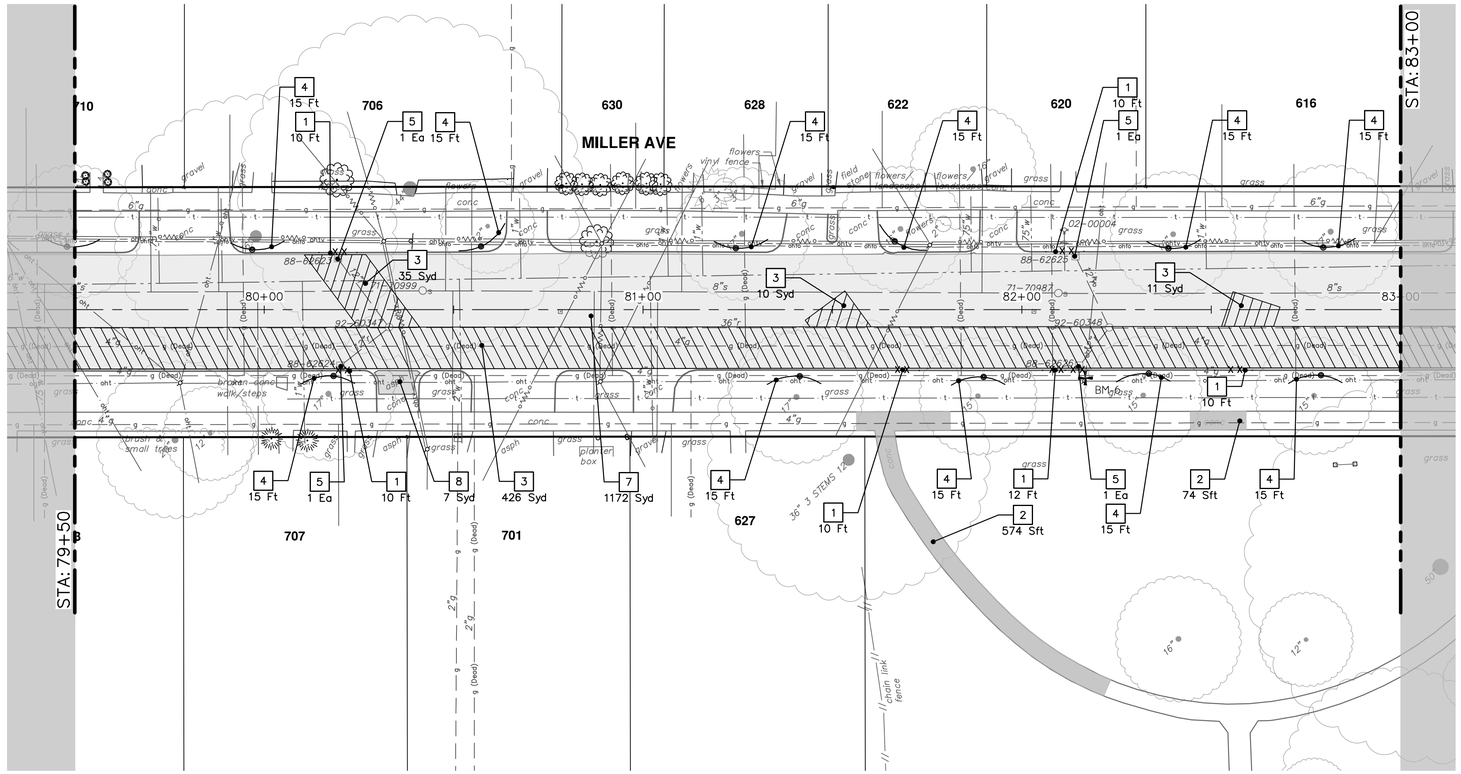
REMOVALS

STA. 69+00 - STA. 76+50

SCALE : 1" = 20'

DRAWING No. 2022034-43





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold-Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

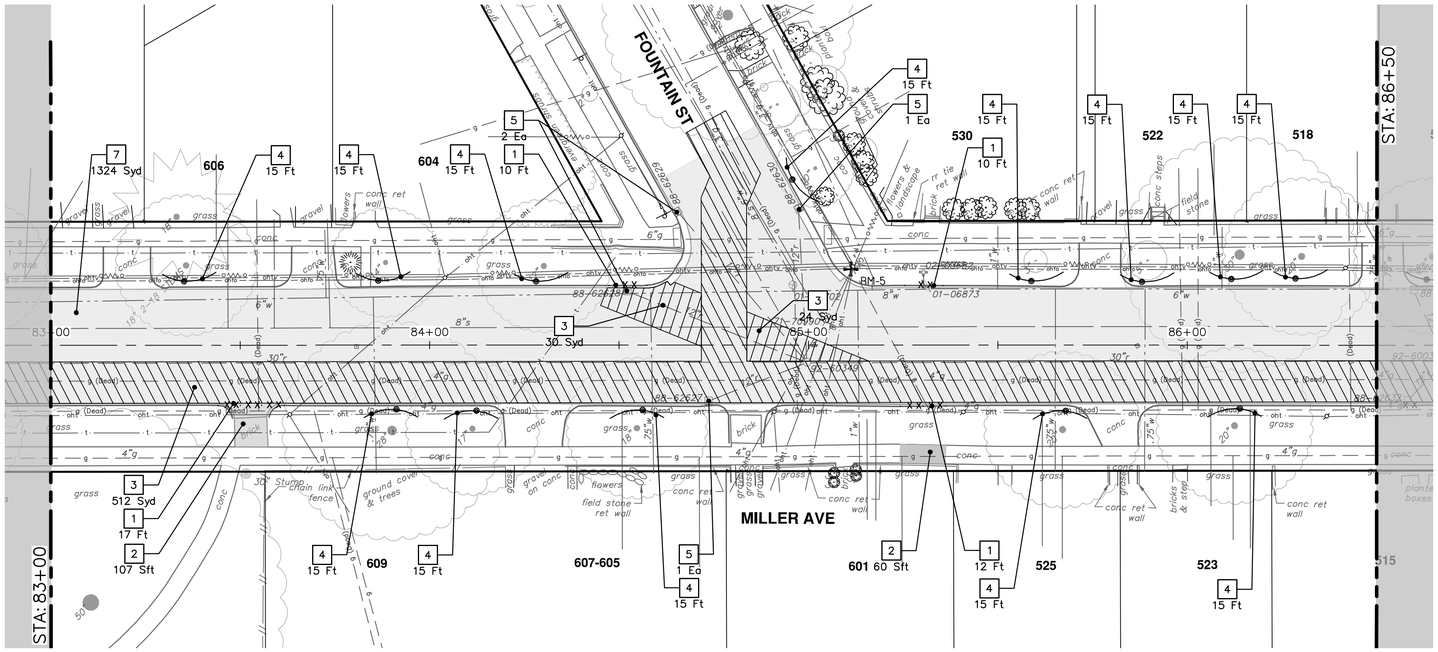
REMOVALS

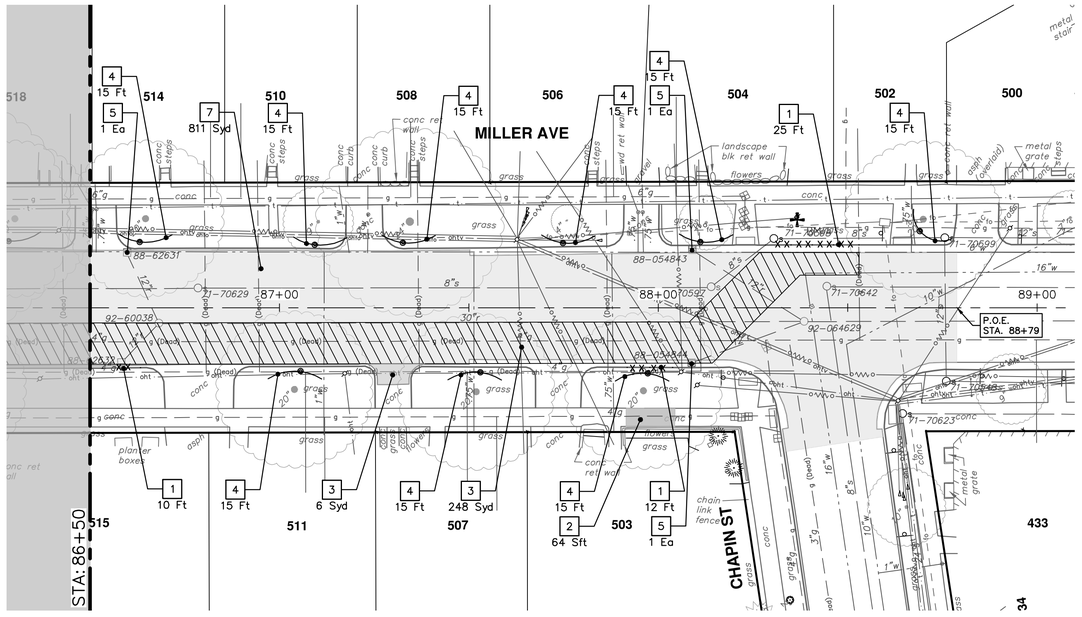
STA. 76+50 - STA. 83+00

SCALE : 1" = 20'

DRAWING No. 2022034-44

SHEET No. 44 OF 131





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	Tree Protective Fence
5	Erosion Control, Inlet Protection, Fabric Drop
6A	Tree, Rem, 6 In. – 12 In.
6B	Tree, Rem, 13 In. – 19 In.
6C	Tree, Rem, 20 In. – 29 In.
6D	Tree, Rem, 40 In. and Larger
7	Cold-Milling HMA Surface
8	HMA Surface, Rem

* SAWCUT FULL DEPTH AT REMOVAL LIMITS AS DIRECTED BY ENGINEER

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION
REMOVALS
STA. 83+00 - STA. 88+79

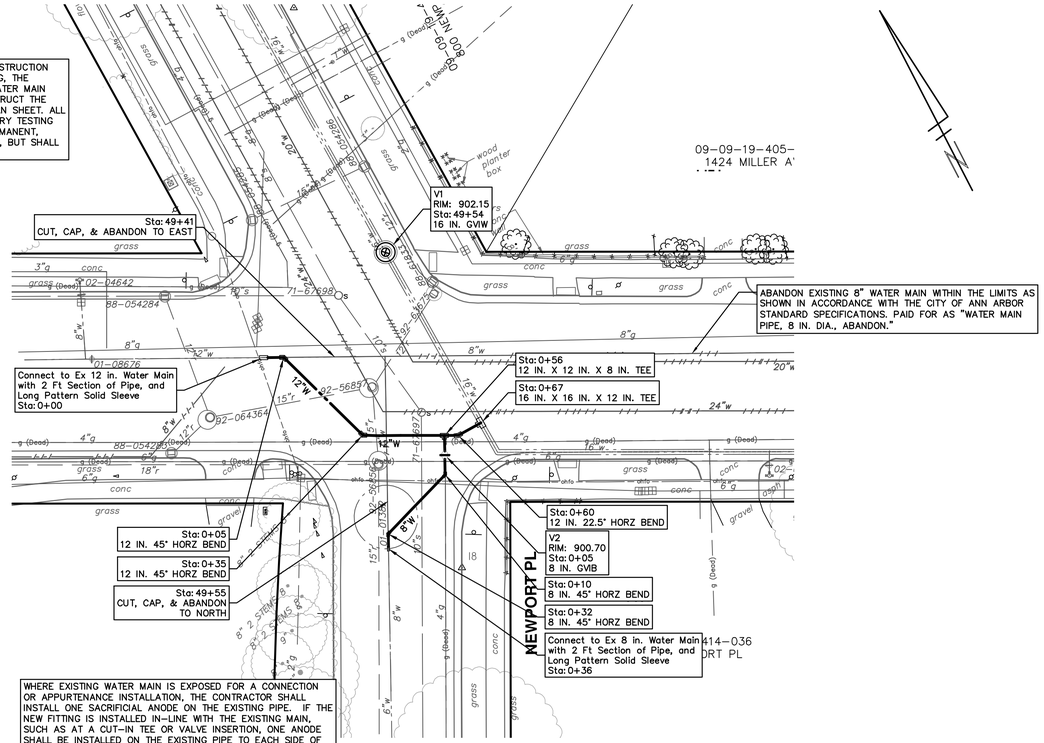
SCALE : 1" = 20'

DRAWING No.
2022034-45

SHEET No.
45 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Rem1.dwg Dwg Created: 2-May-24 — _a2 standard bw.stb — Plot Date: 2-May-24

UPON COMPLETION OF THE 12" WATER MAIN CONSTRUCTION AND HYDROSTATIC AND BACTERIOLOGICAL TESTING, THE CONTRACTOR SHALL REMOVE THE TEMPORARY WATER MAIN TESTING AND CONNECTION ASSEMBLY AND CONSTRUCT THE PERMANENT WATER MAIN AS SHOWN ON THE PLAN SHEET. ALL WORK ASSOCIATED WITH REMOVING THE TEMPORARY TESTING CONNECTION AND CONSTRUCTING THE FINAL, PERMANENT, CONNECTION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.



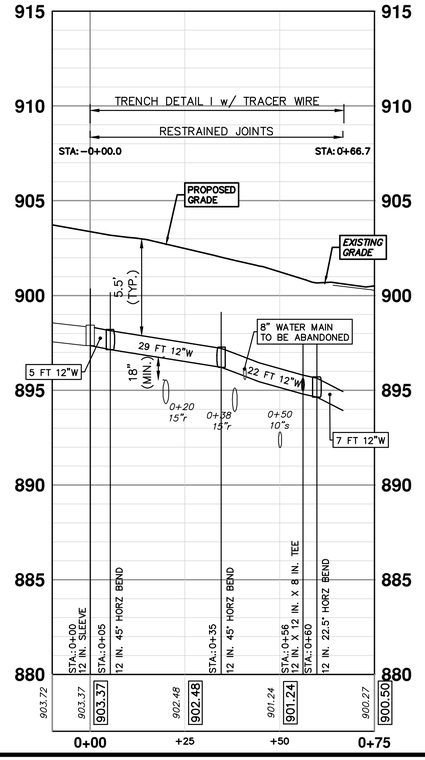
WHERE EXISTING WATER MAIN IS EXPOSED FOR A CONNECTION OR APPURTENANCE INSTALLATION, THE CONTRACTOR SHALL INSTALL ONE SACRIFICIAL ANODE ON THE EXISTING PIPE. IF THE NEW FITTING IS INSTALLED IN-LINE WITH THE EXISTING MAIN, SUCH AS AT A CUT-IN TEE OR VALVE INSERTION, ONE ANODE SHALL BE INSTALLED ON THE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

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.

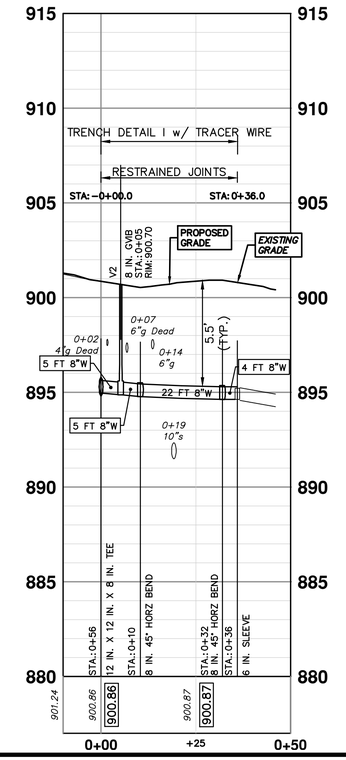
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	RIM
V2	8 in. GVIB	0+05	900.70
V1	16 in. GVIW	49+54	902.15

NEWPORT CONNECTION



NEWPORT PLACE CONN



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

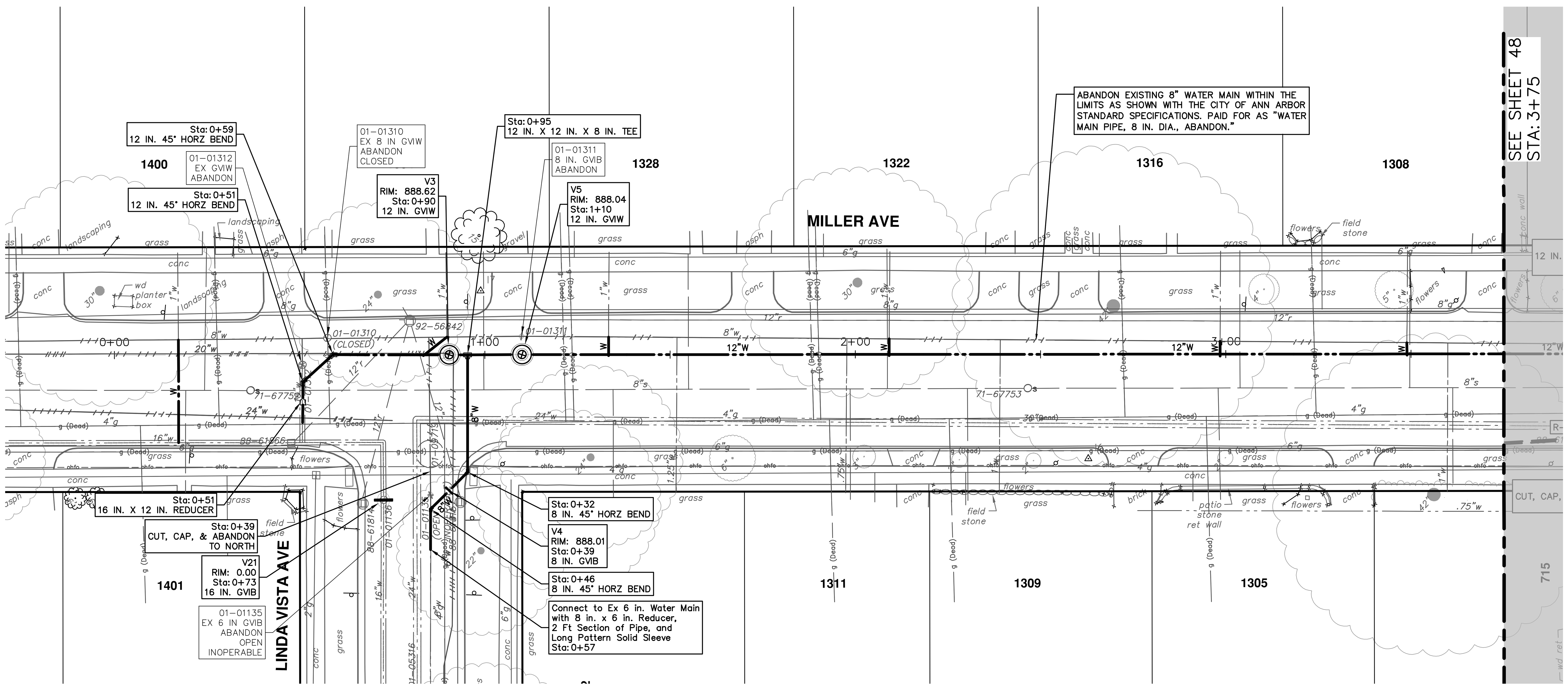
NEWPORT AND NEWPORT PL CONNECTIONS

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

DRAWING No. 2022034-46

SHEET No. 46 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr1.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24

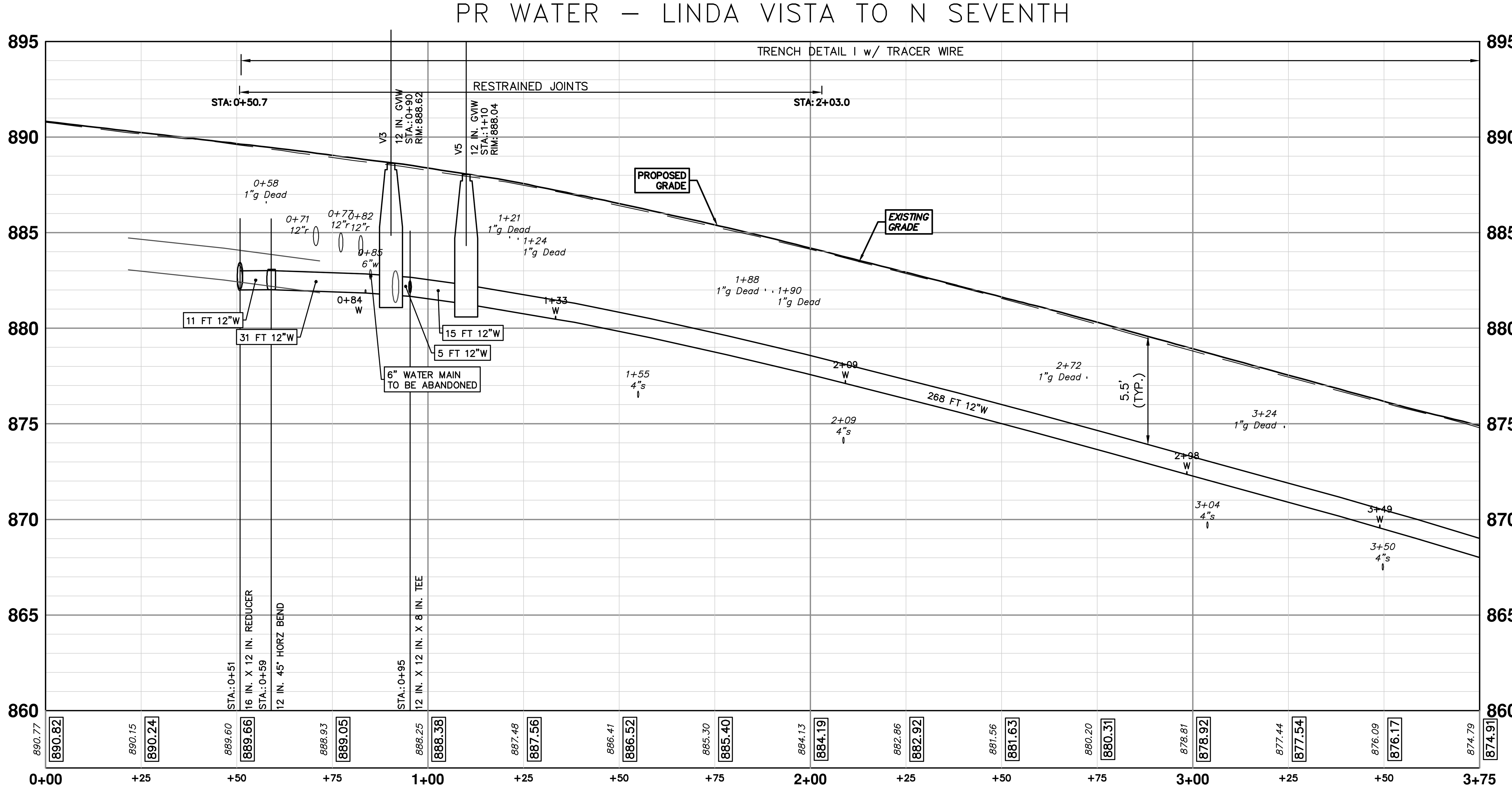


WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V4	8 in. GVIB	0+39	888.01
V21	16 in. GVIB	0+73	0.00
V3	12 in. GVIW	0+90	888.62
V5	12 in. GVIW	1+10	888.04

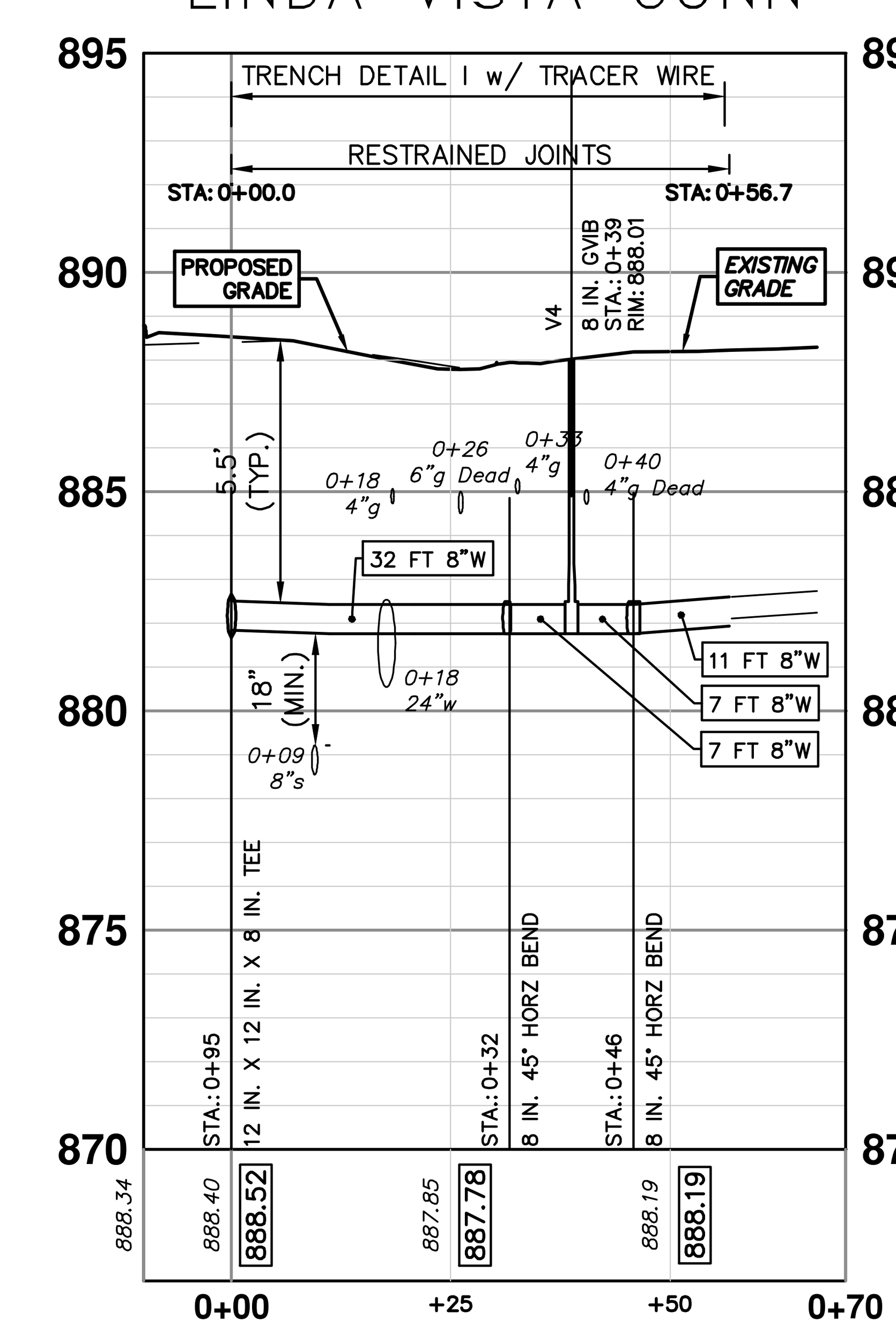
WHERE EXISTING WATER MAIN IS EXPOSED FOR A CONNECTION OR APPURTENANCE INSTALLATION, THE CONTRACTOR SHALL INSTALL ONE SACRIFICIAL ANODE ON THE EXISTING PIPE. IF THE NEW FITTING IS INSTALLED IN-LINE WITH THE EXISTING MAIN, SUCH AS AT A CUT-IN TEE OR VALVE INSERTION, ONE ANODE SHALL BE INSTALLED ON THE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

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.

PR WATER — LINDA VISTA TO N SEVENTH



LINDA VISTA CONN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

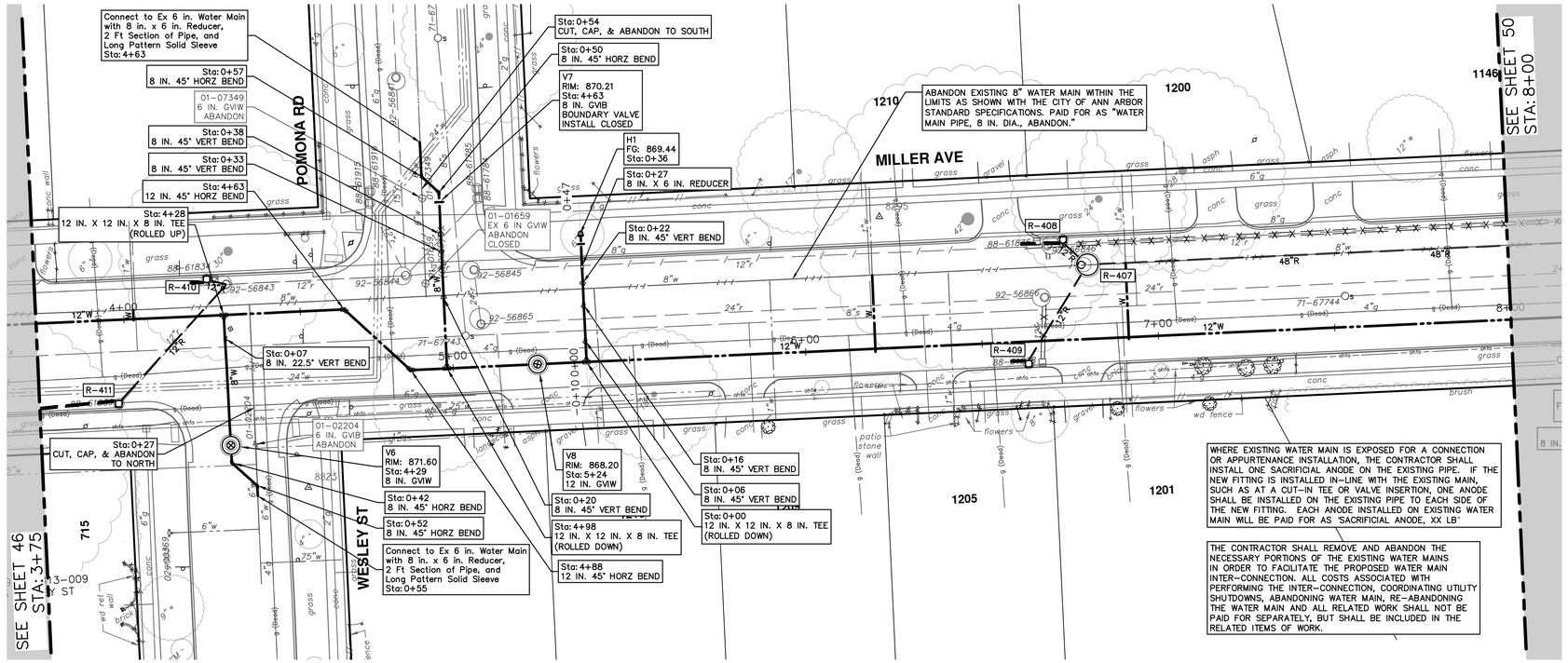
STA. 0+51 - STA. 3+75

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

DRAWING No. 2022034-47

SHEET No. 47 OF 131

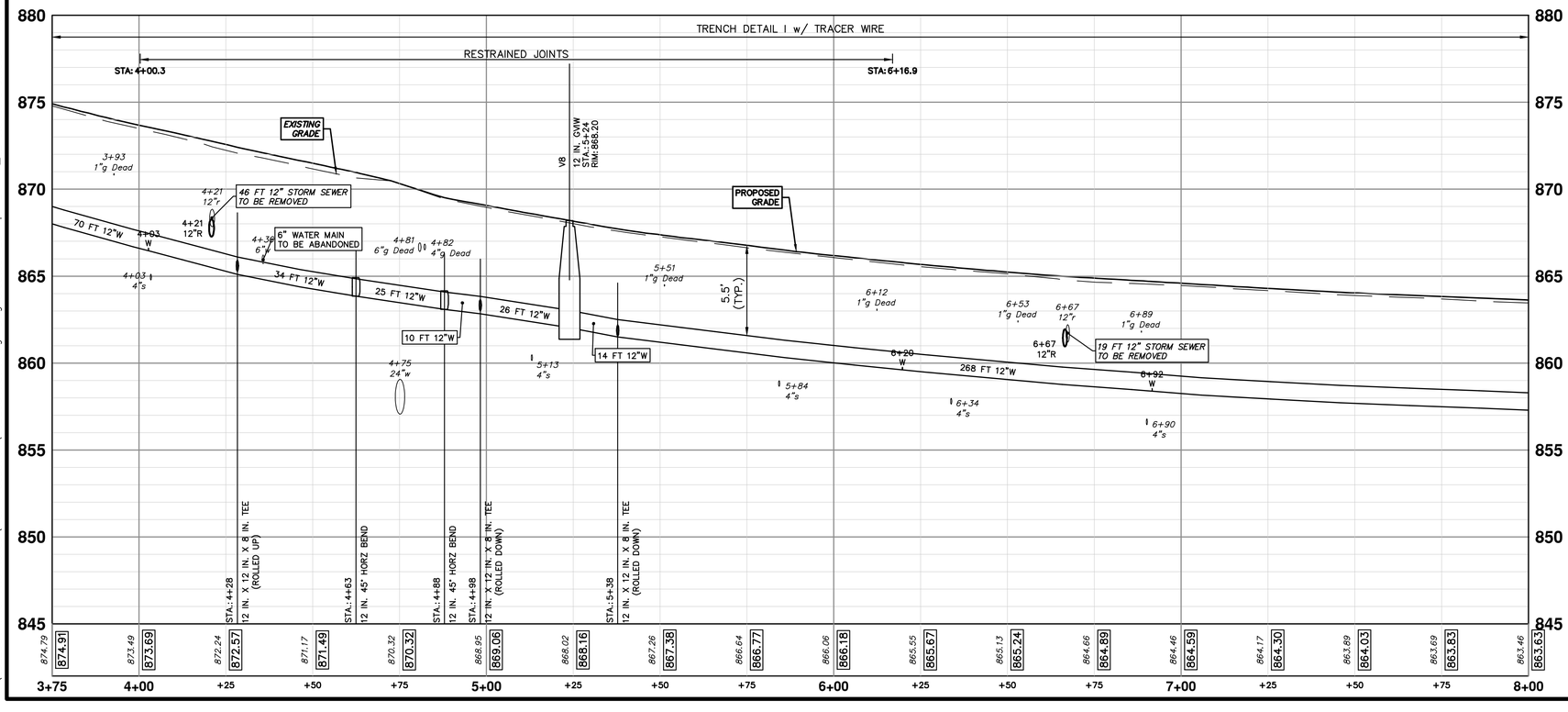
R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr1.dwg Dwg Created: 29-Apr-24 - _a2 standard bw.stb - Plot Date: 2-May-24



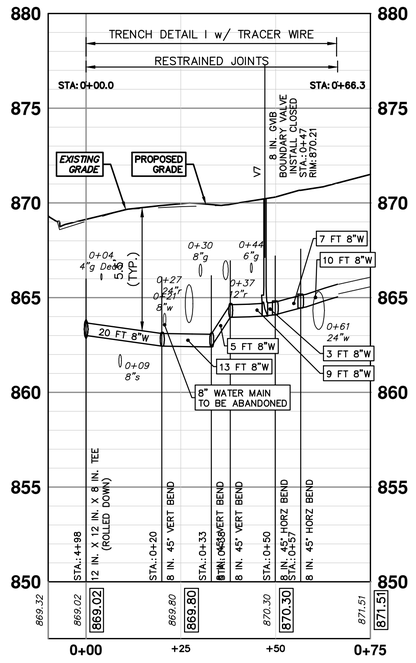
WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V6	8 in. GVIW	0+37	871.60
V7	8 in. GVIB BOUNDARY VALVE INSTALL CLOSED	0+47	870.21
V8	12 in. GVIW	5+24	868.20

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H1	HYDRANT	0+36	869.44

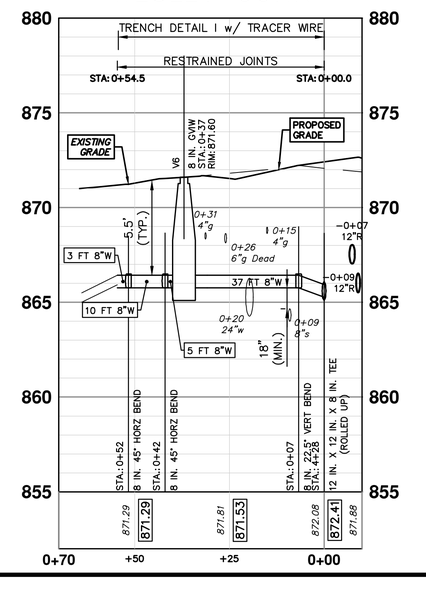
PR WATER – LINDA VISTA TO N SEVENTH



POMONA CONN



WESLEY CONN



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

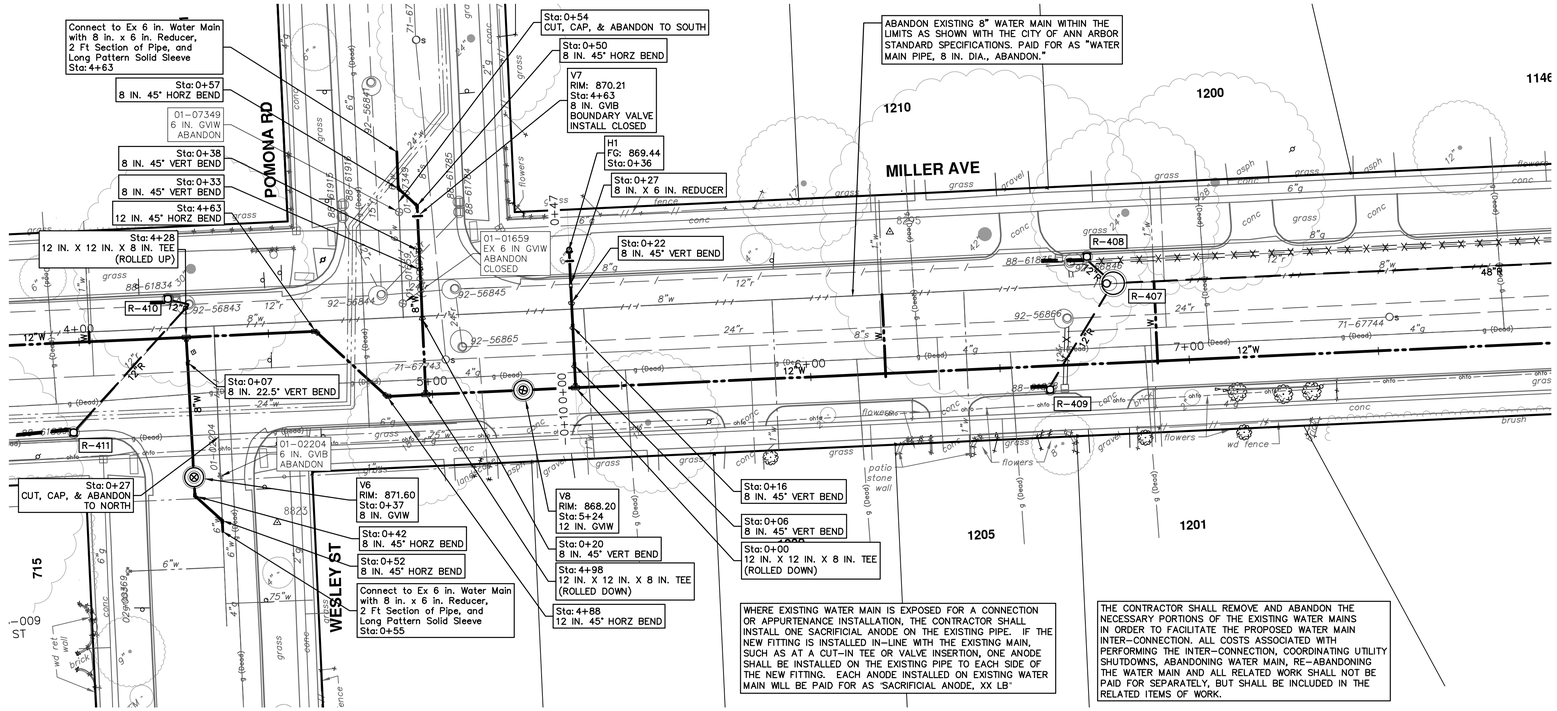
STA. 3+75 - STA. 8+00

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

DRAWING No. 2022034-48

SHEET No. 48 OF 131

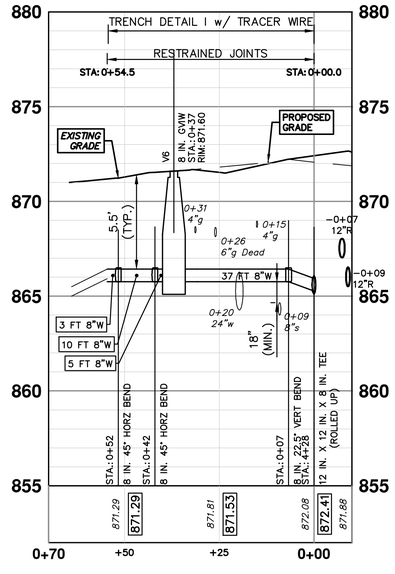
R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr1.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24



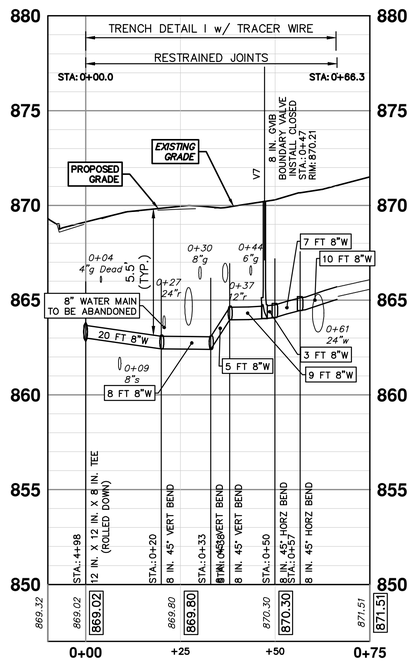
WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H1	HYDRANT	0+36	869.44

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V7	8 in. GVIB BOUNDARY VALVE INSTALL CLOSED	0+47	870.21

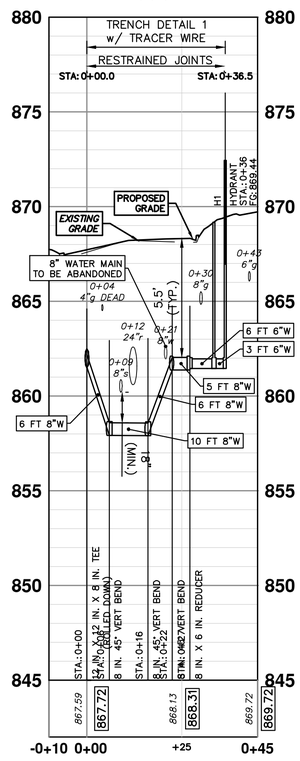
WESLEY CONN



POMONA CONN



H1



Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

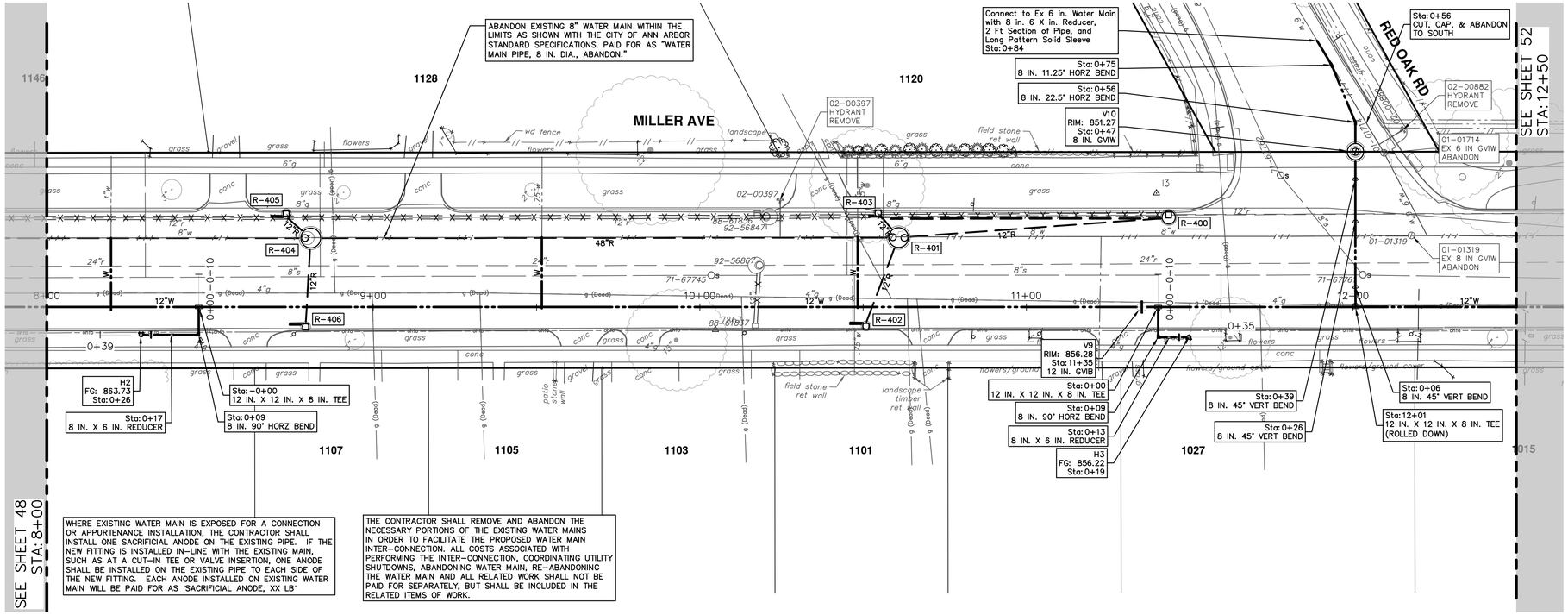
PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

POMONA AND WESLEY CONNECTIONS AND H1 PROFILE

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

DRAWING No. 2022034-49

SHEET No. 49 OF 131



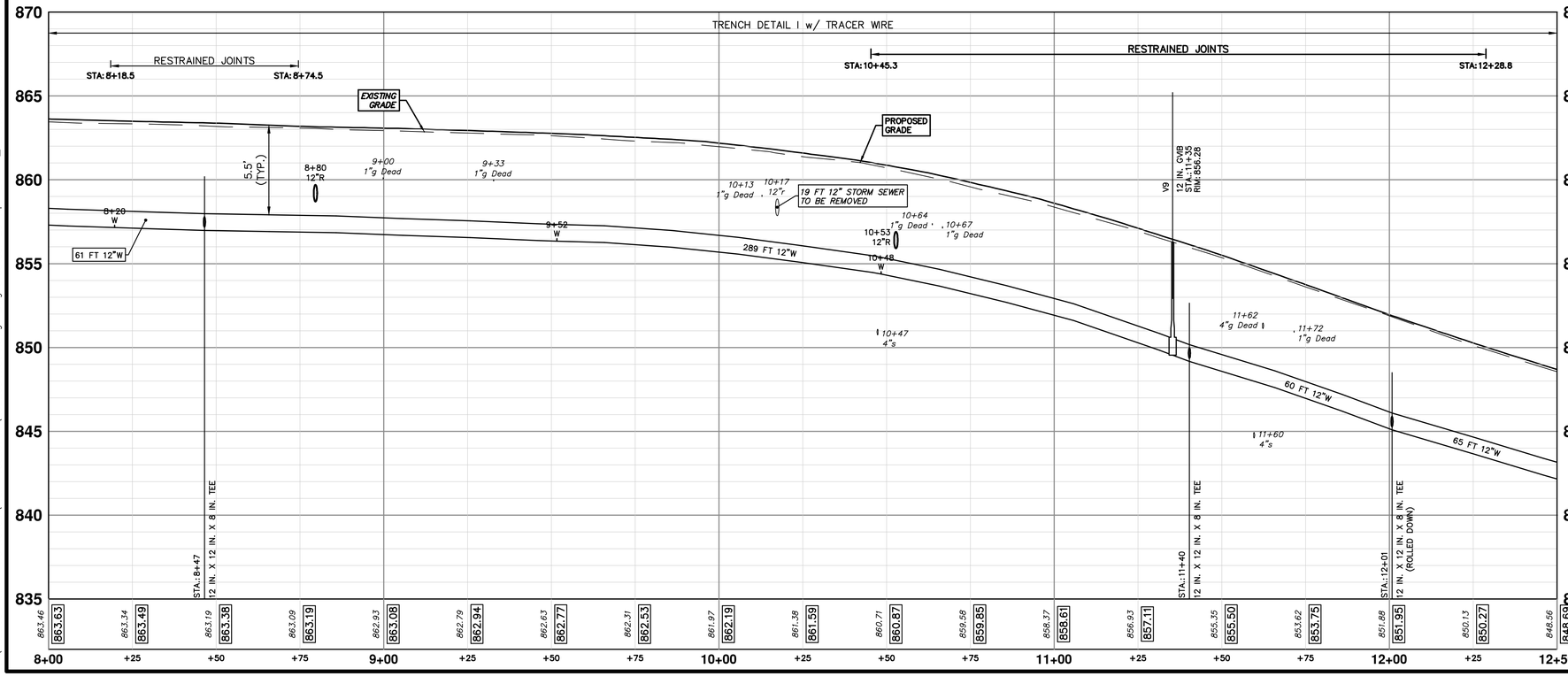
WATER MAIN STRUCTURES

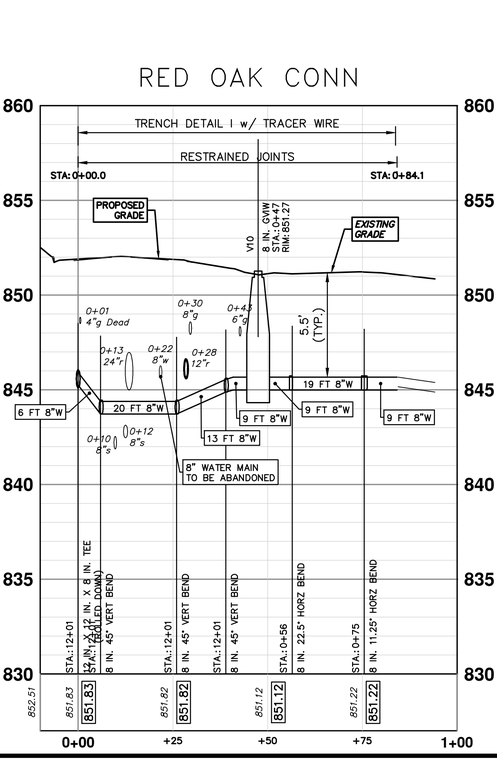
STRUCTURE	TYPE	STATION	RIM
V10	8 in. GVIW	0+47	851.27
V9	12 in. GVIB	11+35	856.28

WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	FG
H2	HYDRANT	0+26	863.73
H3	HYDRANT	0+19	856.22

PR WATER – LINDA VISTA TO N SEVENTH





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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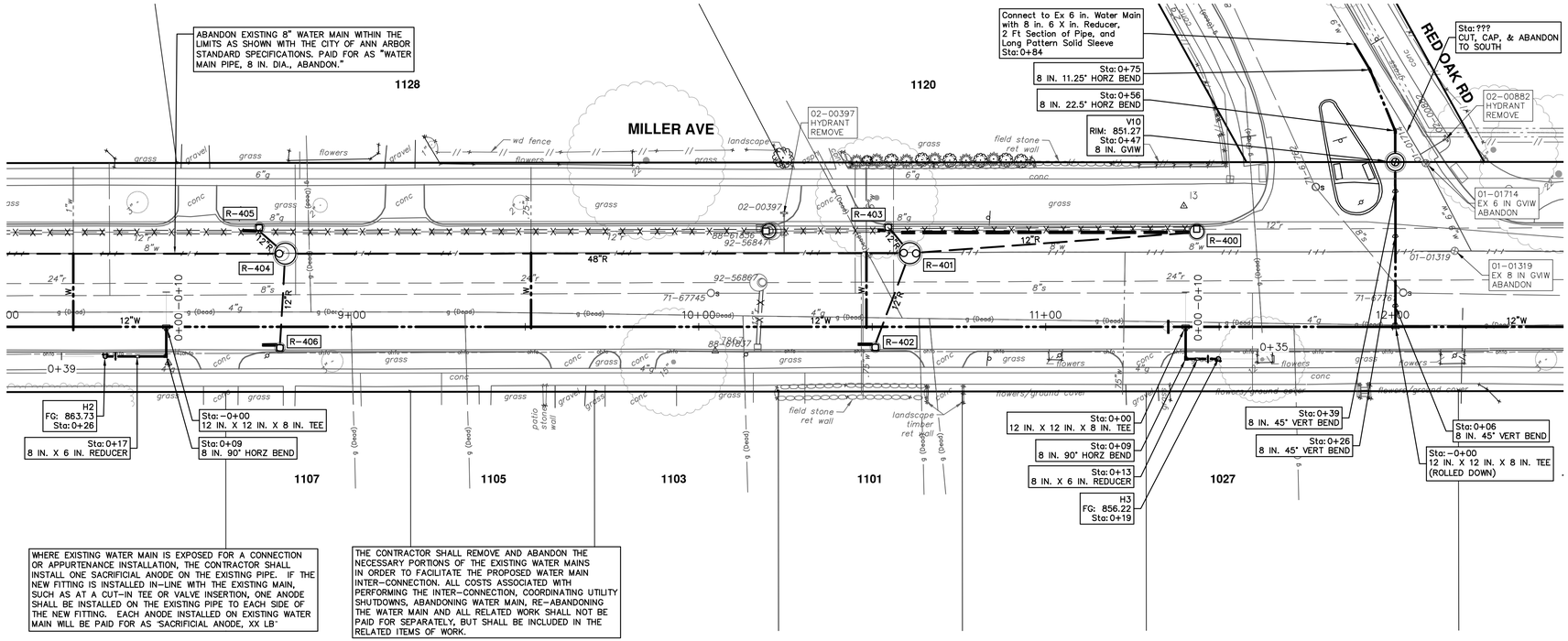
MILLER AVENUE REHABILITATION
PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

STA. 8+00 - STA. 12+50

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

DRAWING No. 2022034-50

SHEET No. 50 OF 131



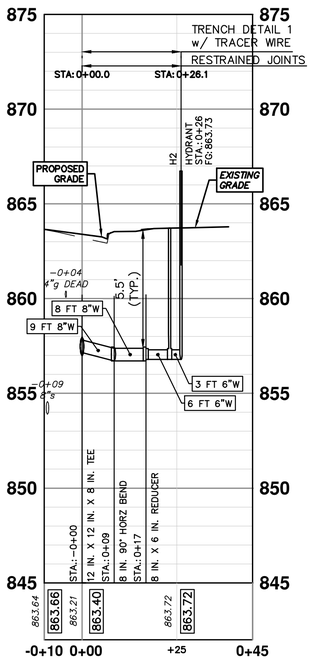
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	FG
H2	HYDRANT	0+26	863.73
H3	HYDRANT	0+19	856.22

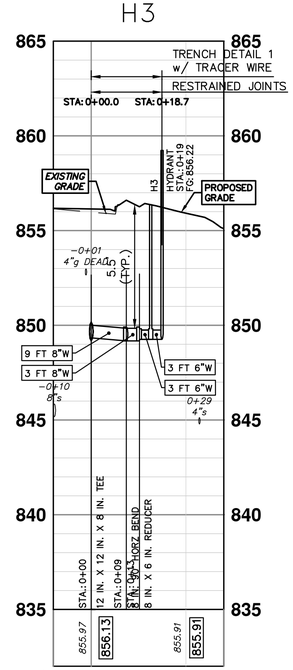
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	RIM
V10	8 in. GVIW	0+47	851.27

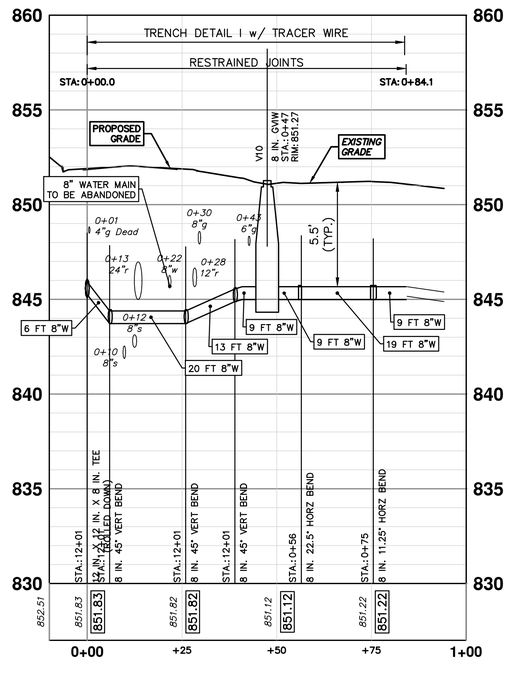
H2



H3



RED OAK CONN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

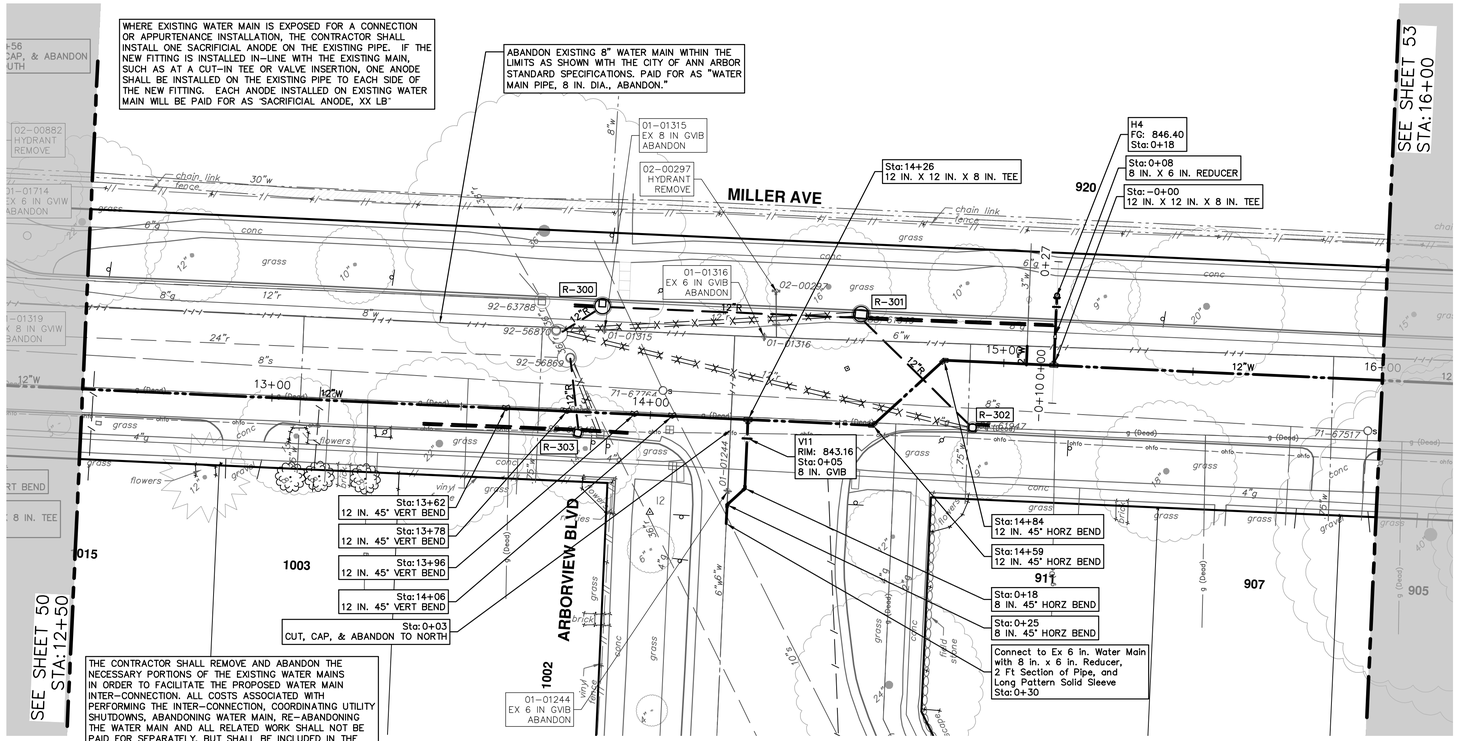
RED OAK CONNECTION AND H2 AND H3 PROFILES

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

DRAWING No. 2022034-51

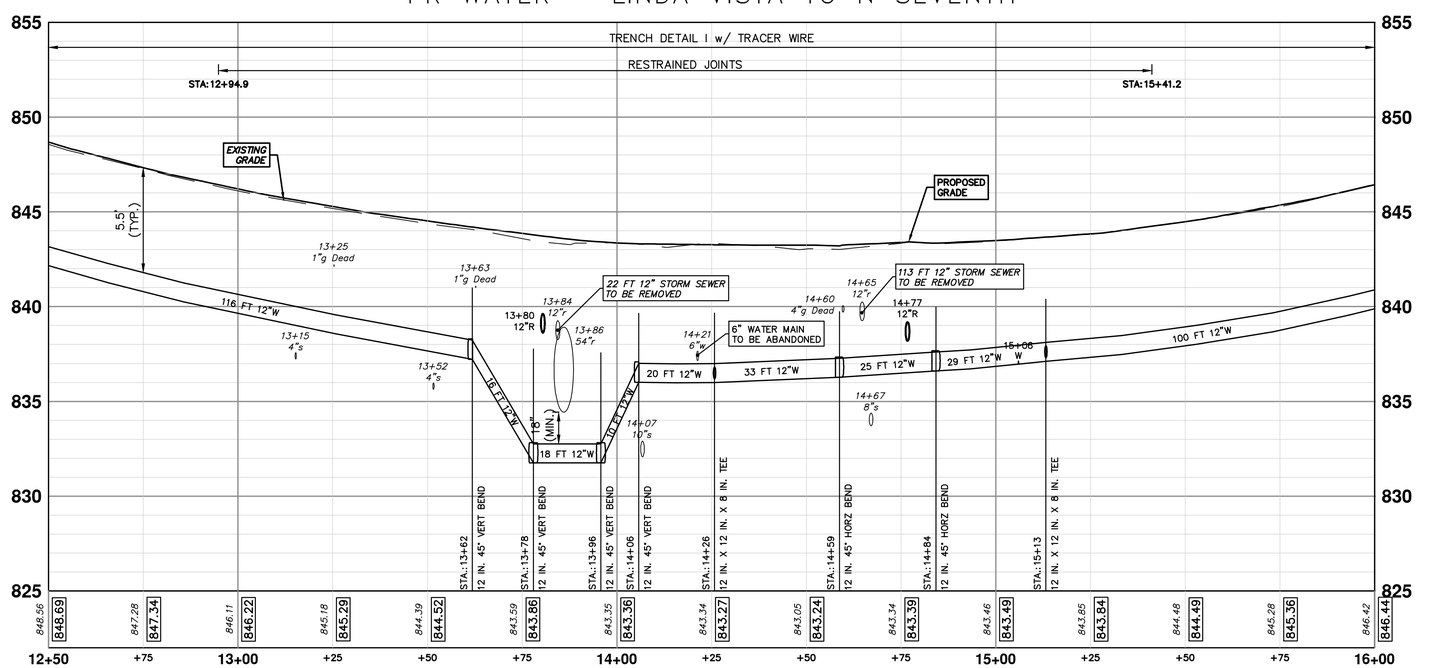
SHEET No. 51 OF 131

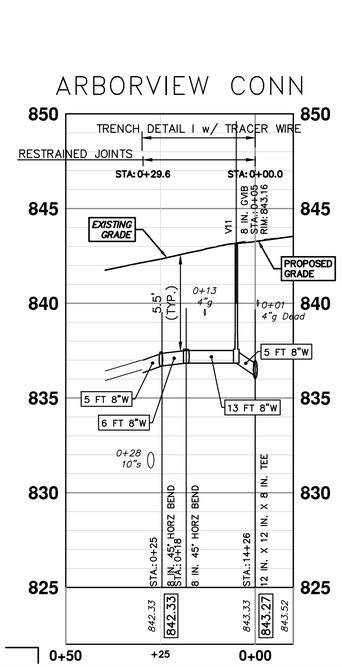
R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr2.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24

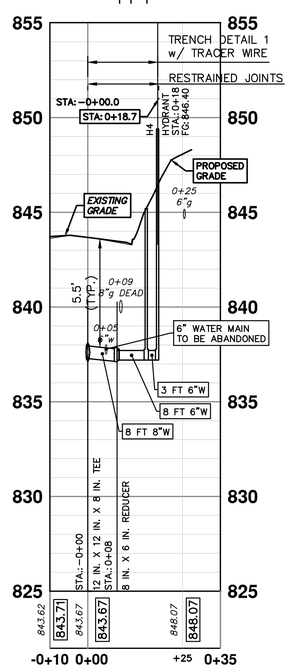


WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V11	8 in. GVIB	0+05	843.16

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H4	HYDRANT	0+18	846.40







R:\2022034 Miller Ave Rehab\Plan Production\2022034Wtr1.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

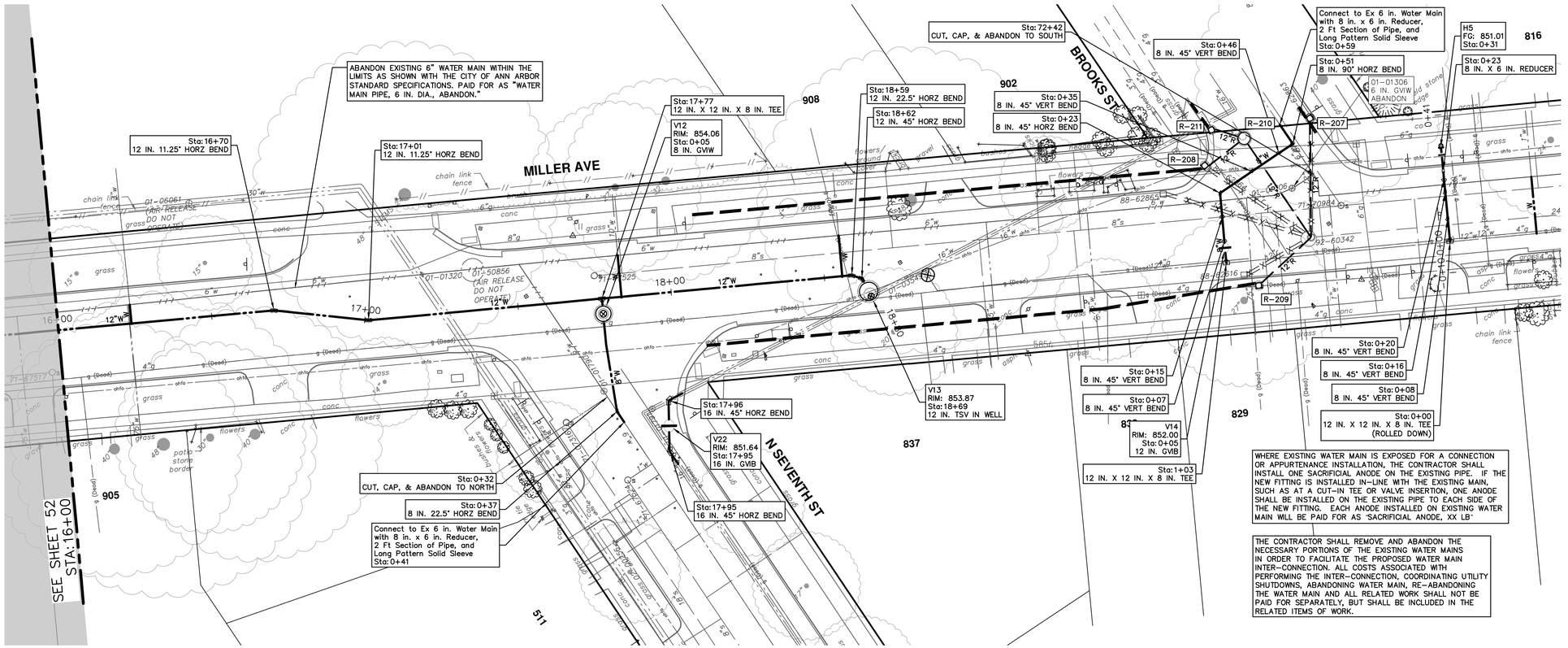
PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

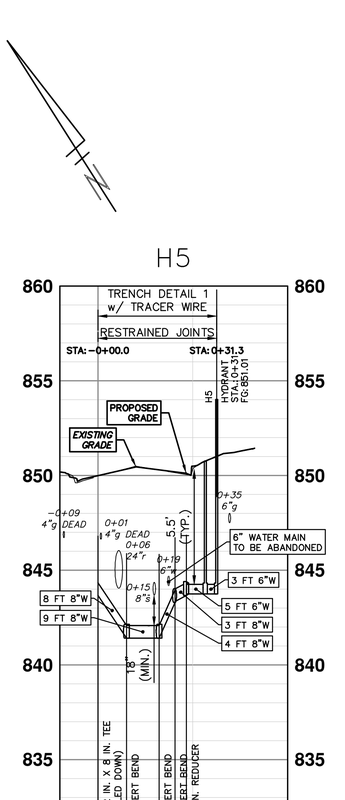
STA. 12+50 - STA. 16+00

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

DRAWING No. 2022034-52

SHEET No. 52 OF 131





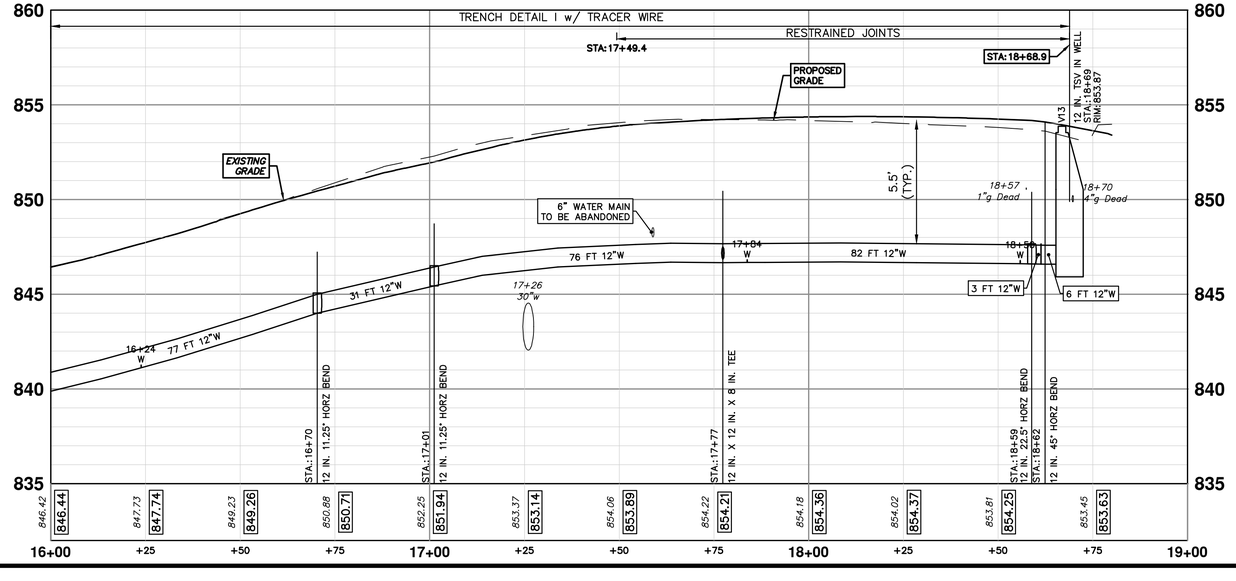
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	RIM
V12	8 in. GVIW	0+05	854.06
V14	12 in. GVIB	0+05	852.00
V22	16 in. GVIB	17+95	851.64
V13	12 IN. TSV in Well	18+69	853.87

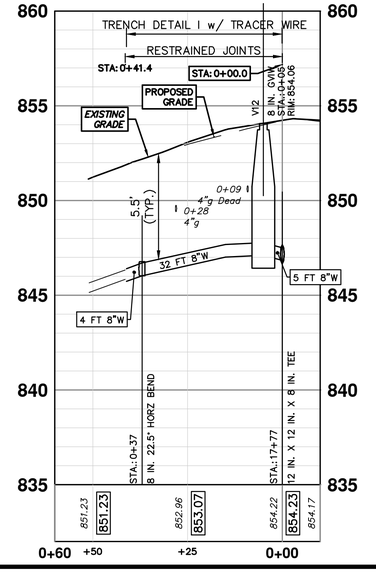
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	FG
H5	HYDRANT	0+31	851.01

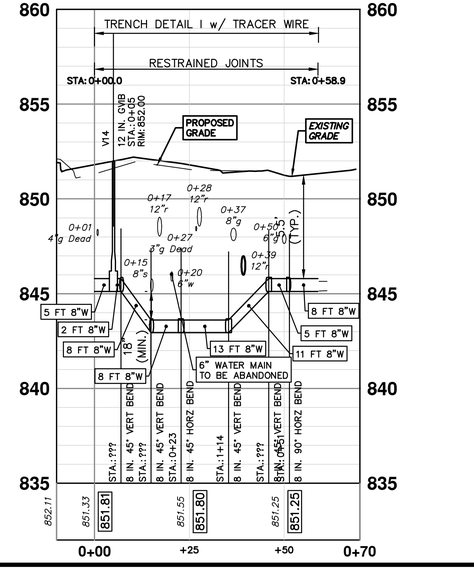
PR WATER – LINDA VISTA TO N SEVENTH



N SEVENTH CONN



BROOKS CONN



NO.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - NEWPORT TO N SEVENTH - PHASE I

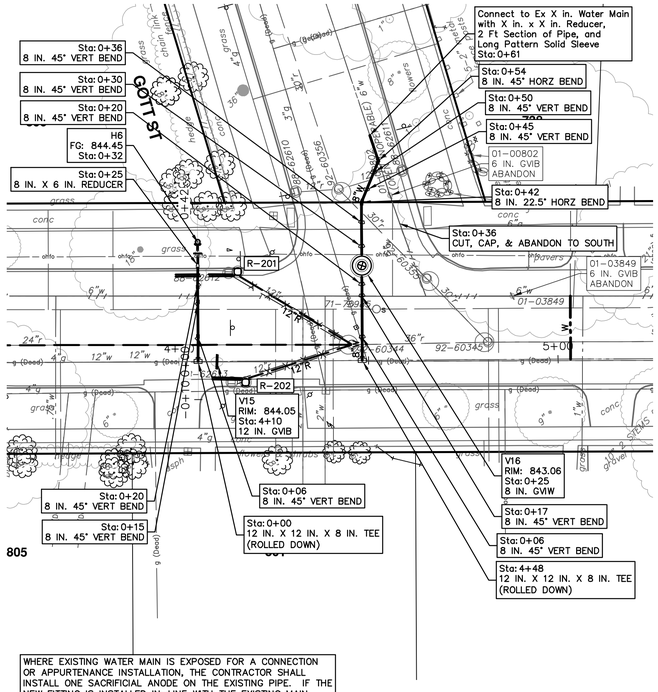
STA. 16+00 - STA. 18+69

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

DRAWING No. 2022034-53

SHEET No. 53 OF 131

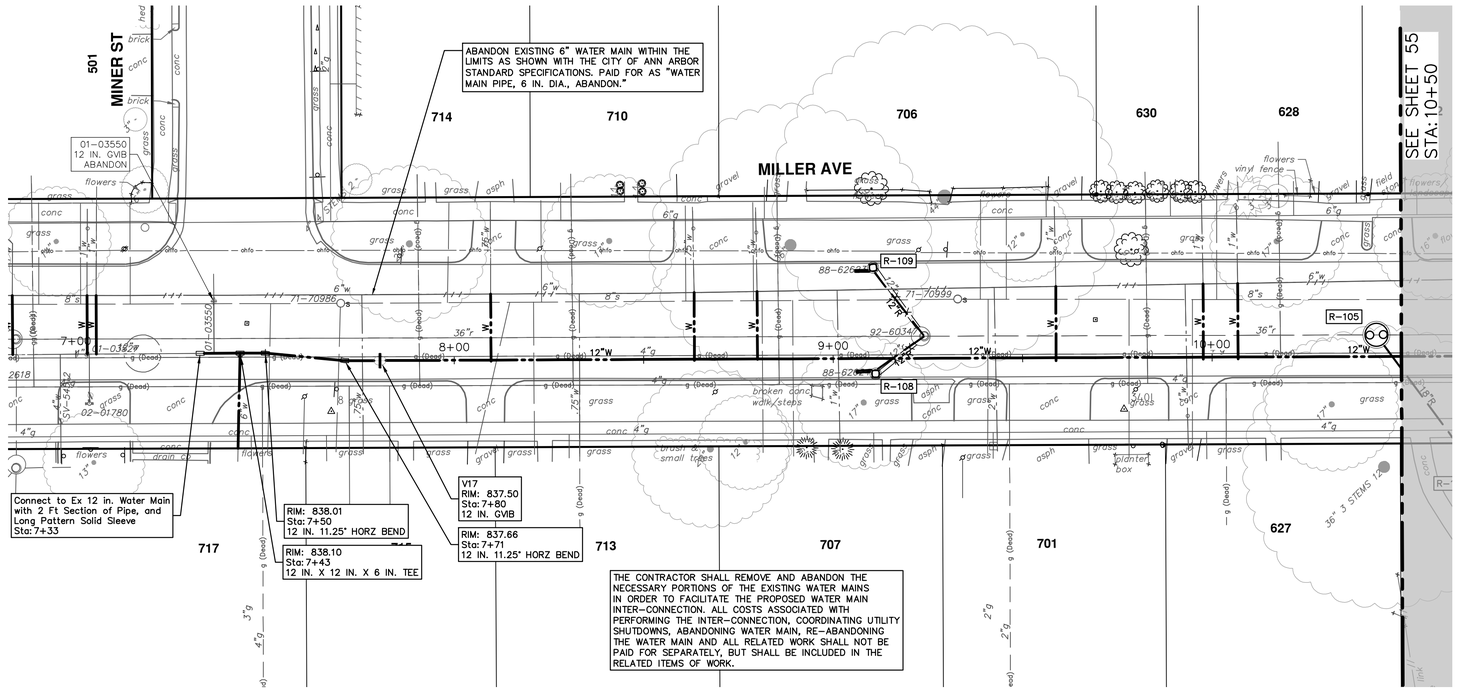
R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr1.dwg Dwg Created: 29-Apr-24 – _a2 standard bw.stb – Plot Date: 2-May-24



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, XX LB"

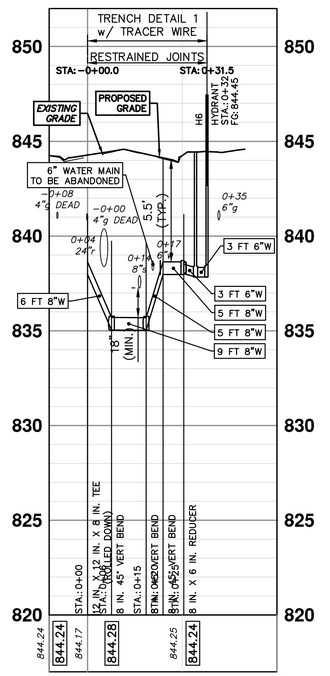
WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V16	8 in. GVIW	0+25	843.06
V15	12 in. GVIB	4+10	844.05
V17	12 in. GVIB	7+80	837.50

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H6	HYDRANT	0+32	844.45

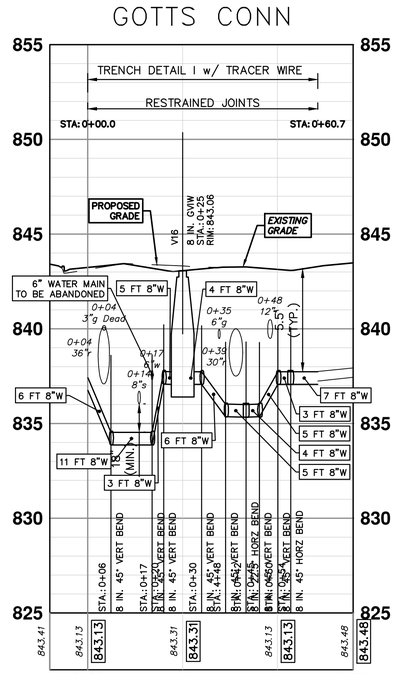


THE CONTRACTOR SHALL REMOVE AND ABANDON THE NECESSARY PORTIONS OF THE EXISTING WATER MAINS IN ORDER TO FACILITATE THE PROPOSED WATER MAIN INTER-CONNECTION. ALL COSTS ASSOCIATED WITH PERFORMING THE INTER-CONNECTION, COORDINATING UTILITY SHUTDOWNS, ABANDONING WATER MAIN, RE-ABANDONING THE WATER MAIN AND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

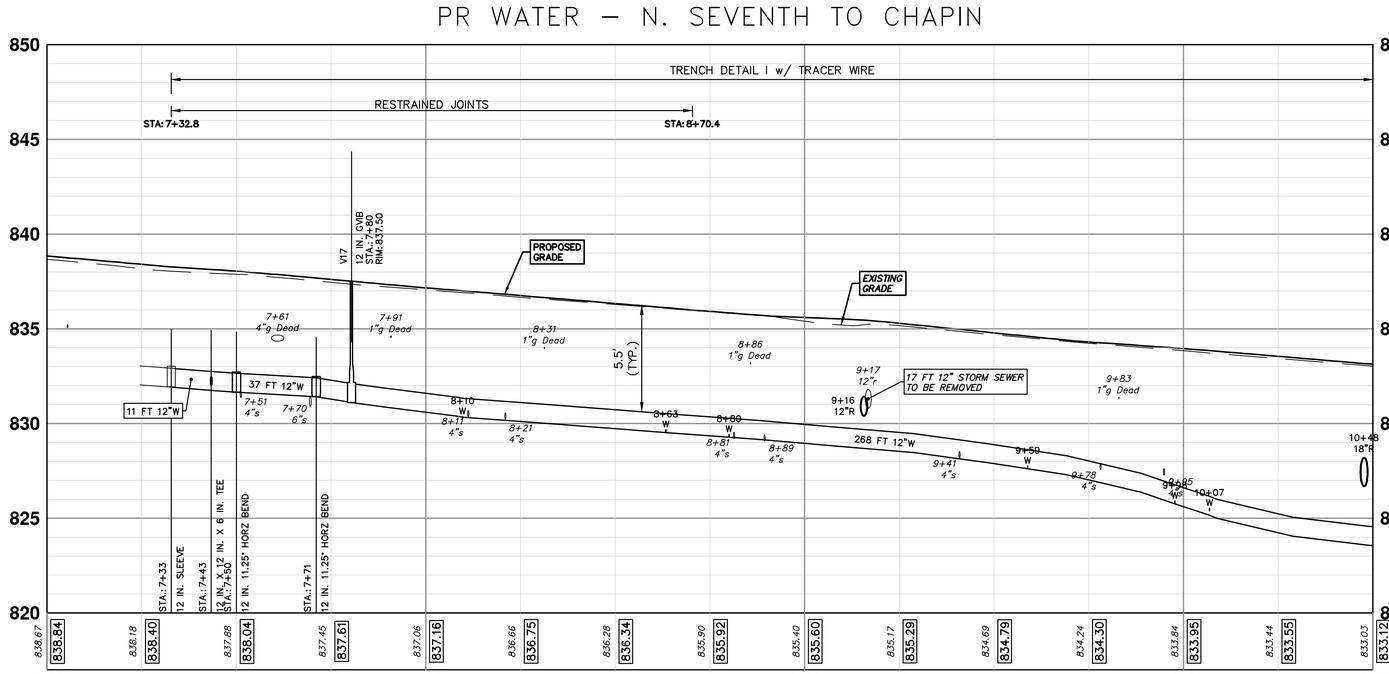
H6



GOTTS CONN



PR WATER – N. SEVENTH TO CHAPIN



03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

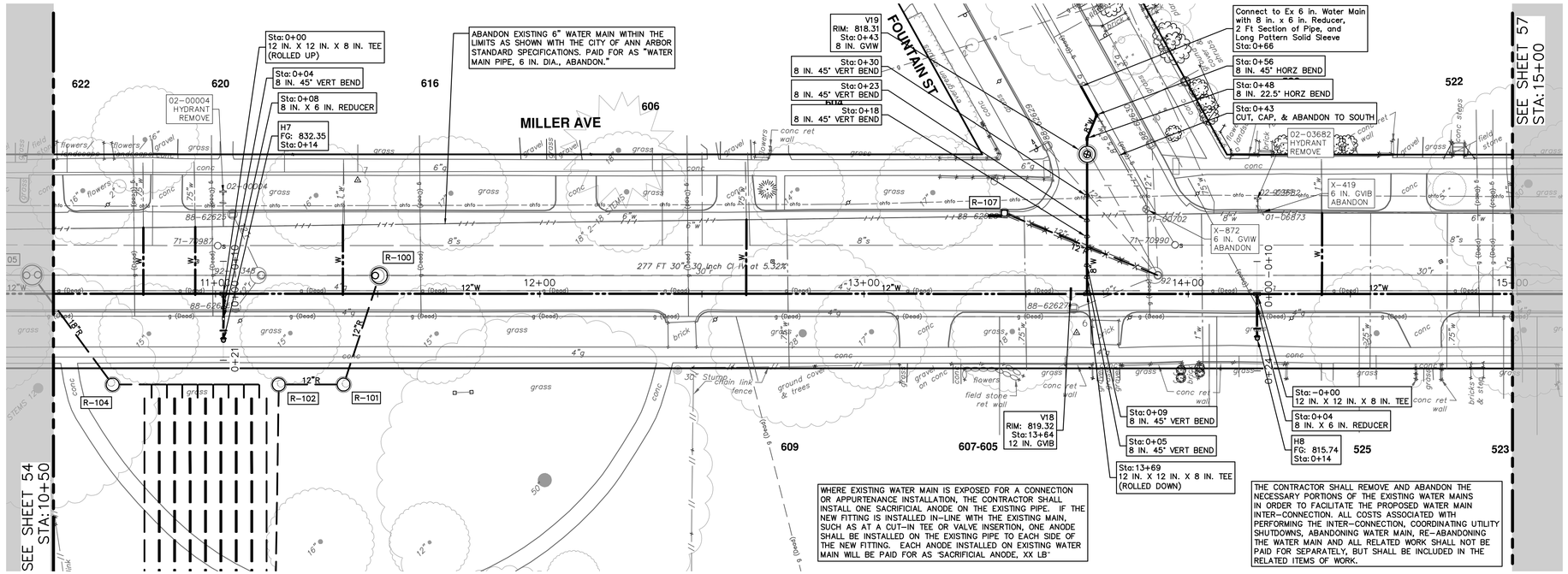
PROPOSED WATER MAIN - N SEVENTH TO CHAPIN - PHASE II

STA. 7+33 - STA. 10+50

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

DRAWING No. 2022034-54

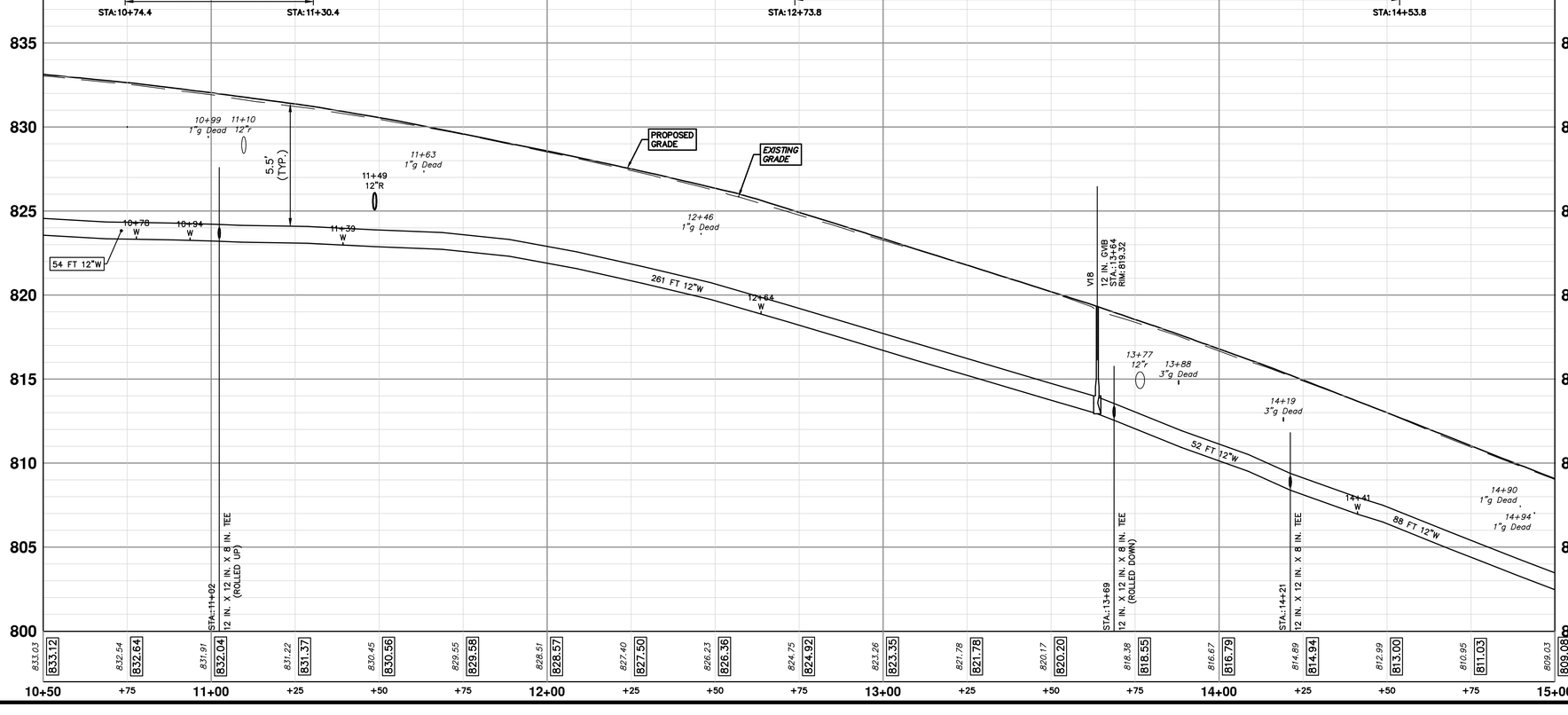
SHEET No. 54 OF 131



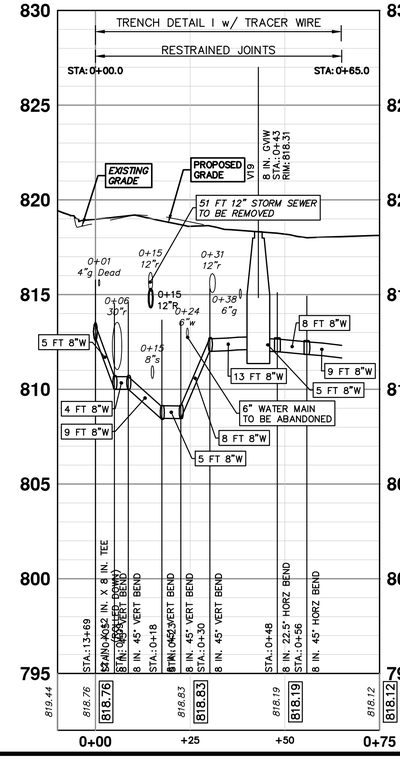
WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V19	8 in. GVIW	0+43	818.31
V18	12 in. GVIB	13+64	819.32

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H7	HYDRANT	0+14	832.35
H8	HYDRANT	0+14	815.74

PR WATER – N. SEVENTH TO CHAPIN



FOUNTAIN CONN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

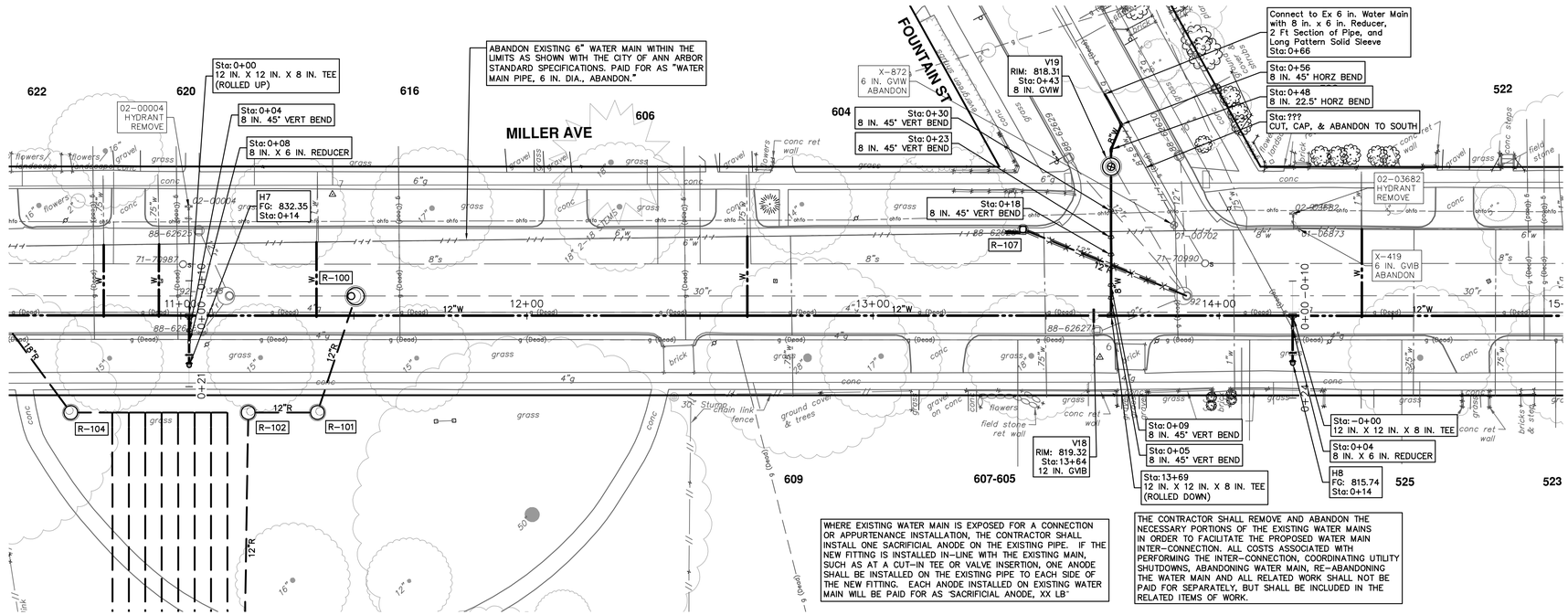
PROPOSED WATER MAIN - N SEVENTH TO CHAPIN - PHASE II

STA. 10+50 - STA 15+00

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

DRAWING No. 2022034-55

SHEET No. 55 OF 131



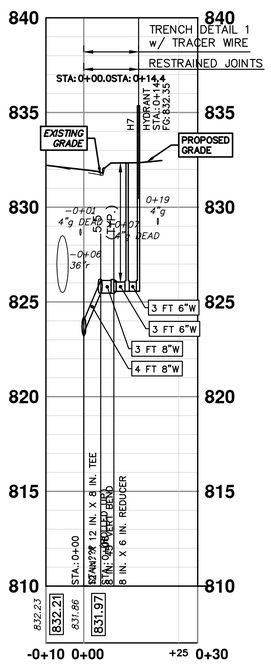
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	FG
H7	HYDRANT	0+14	832.35
H8	HYDRANT	0+14	815.74

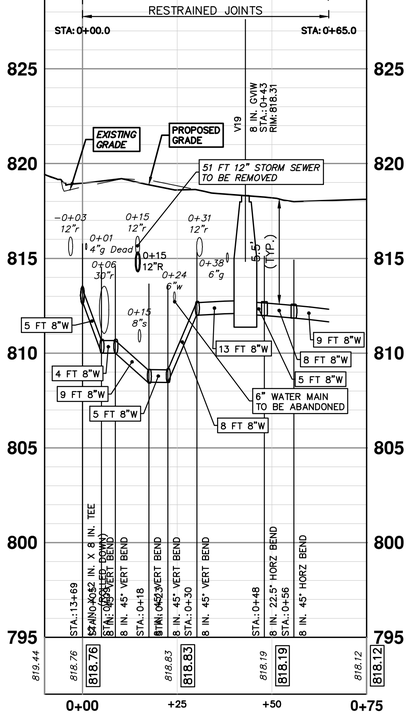
WATER MAIN STRUCTURES

STRUCTURE	TYPE	STATION	RIM
V19	8 in. GVIW	0+43	818.31

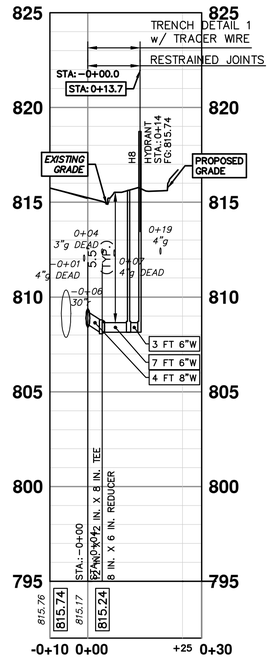
H7



FOUNTAIN CONN



H8



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

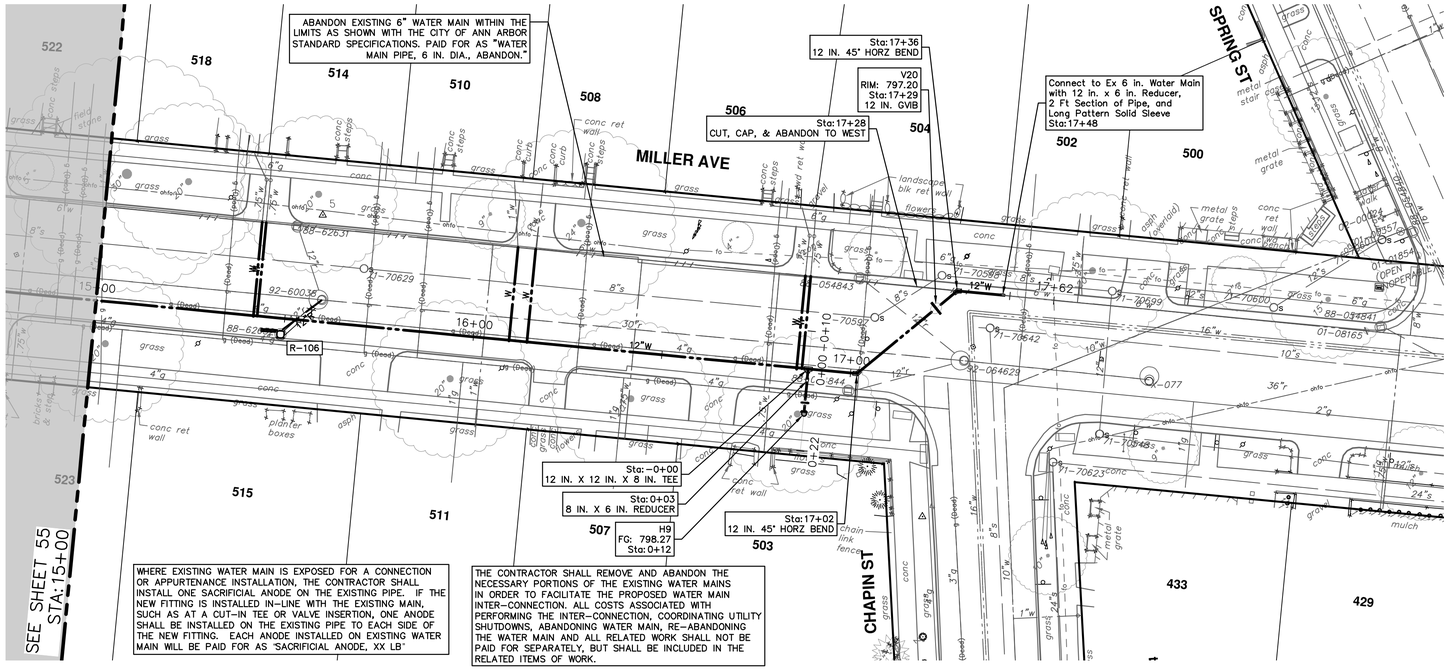
PROPOSED WATER MAIN - N SEVENTH TO CHAPIN - PHASE II

FOUNTAIN CONNECTION AND H7 AND H8 PROFILES

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

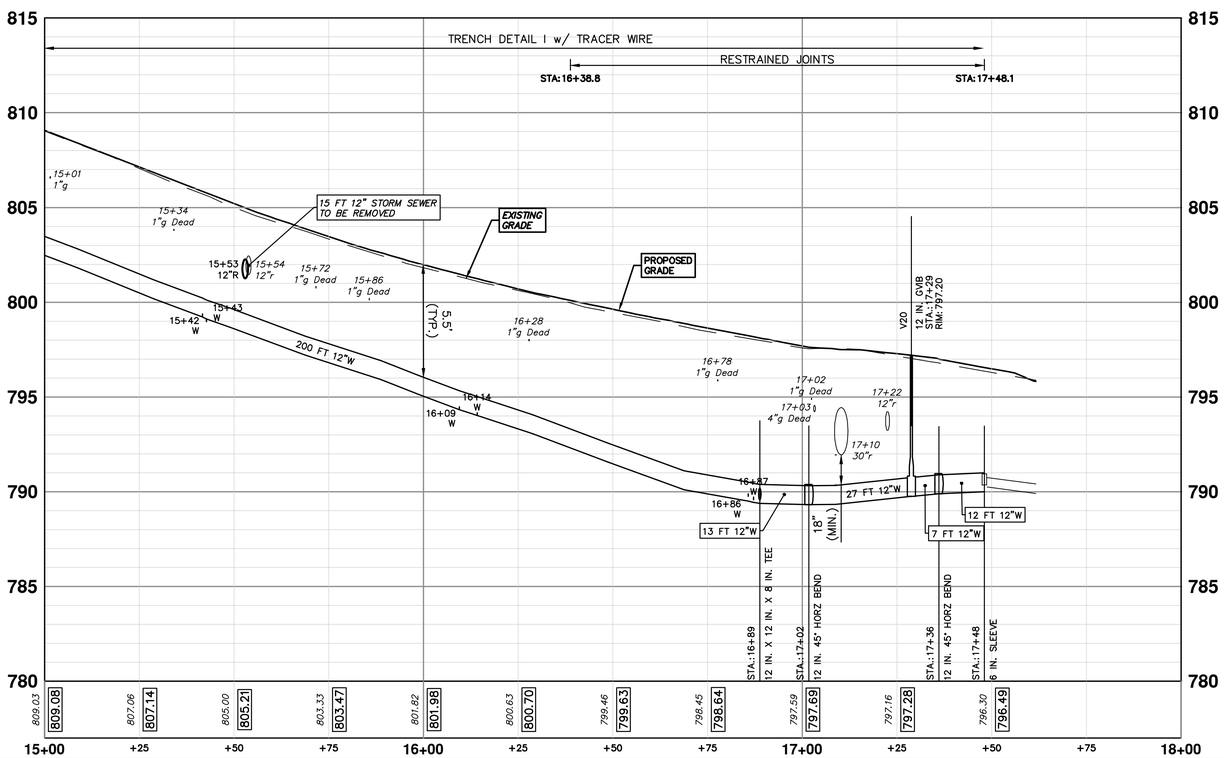
DRAWING No. 2022034-56

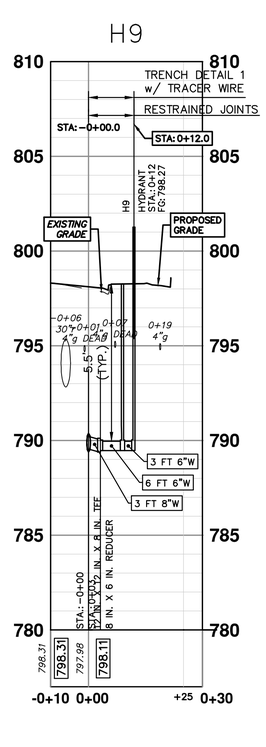
SHEET No. 56 OF 131



WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	RIM
V20	12 in. GVIB	17+29	797.20

WATER MAIN STRUCTURES			
STRUCTURE	TYPE	STATION	FG
H9	HYDRANT	0+12	798.27





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

PROPOSED WATER MAIN - N SEVENTH TO CHAPIN - PHASE II

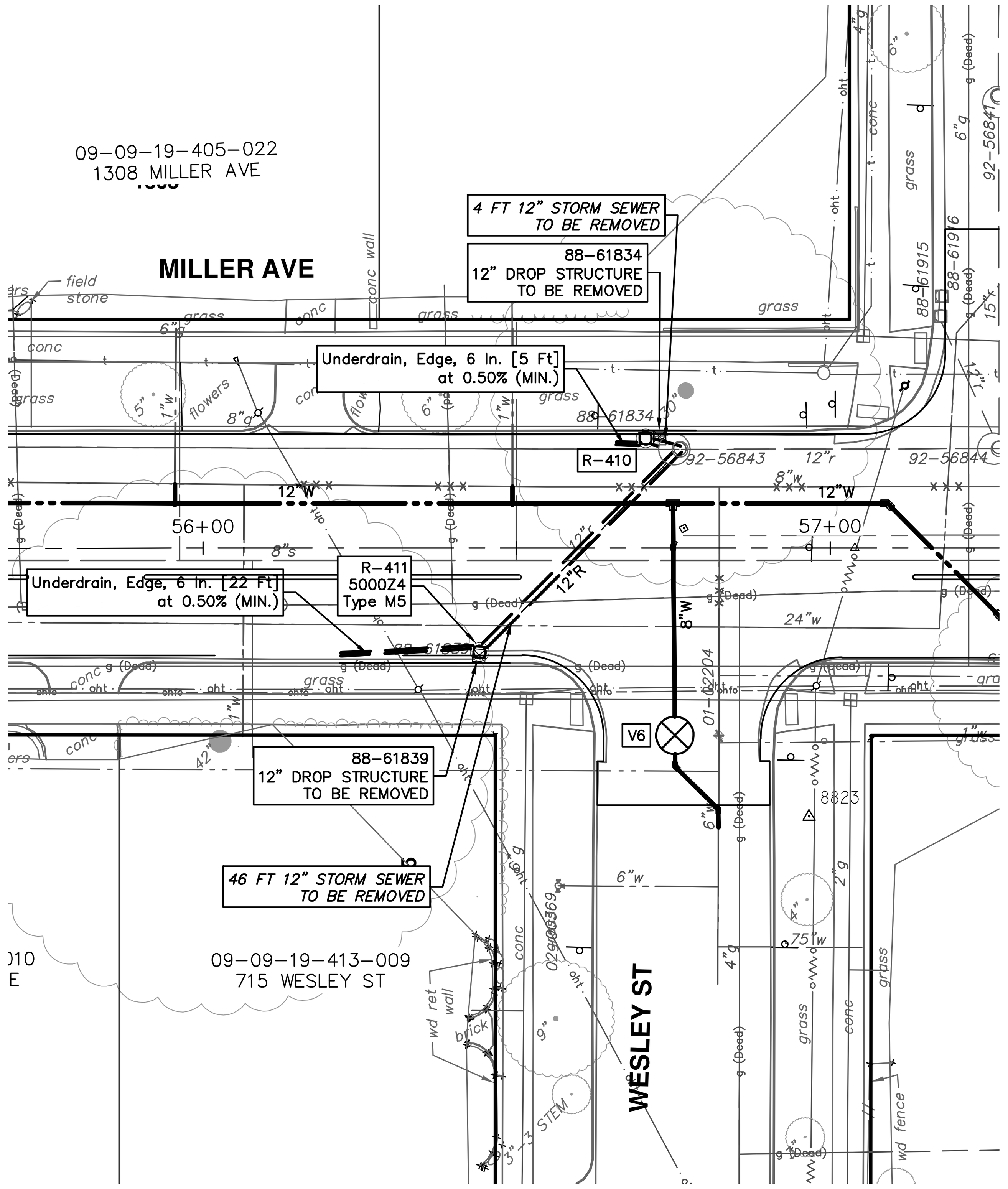
STA. 15+00 - STA. 17+48

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

DRAWING No. 2022034-57

SHEET No. 57 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Watr1.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24

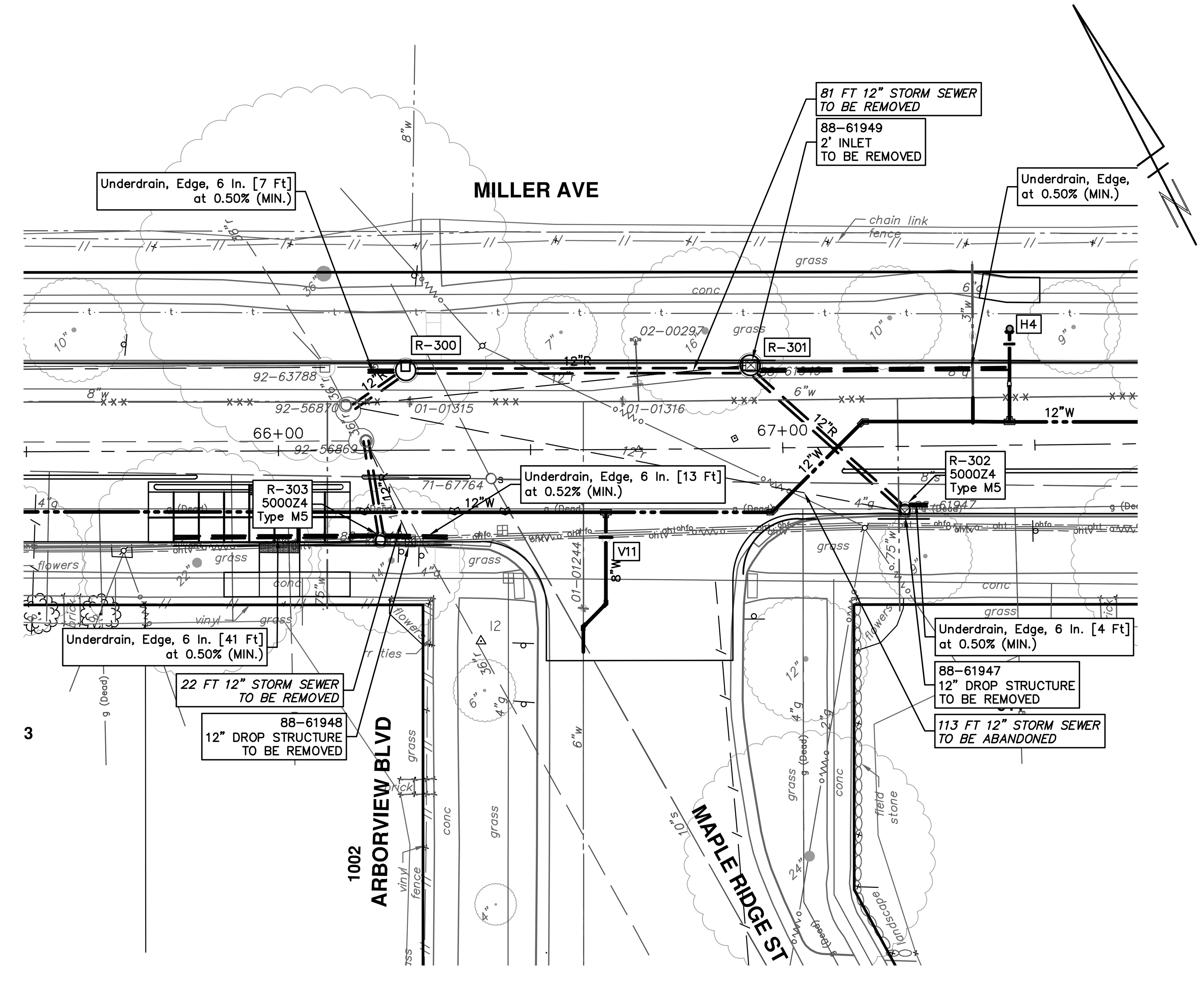


EXISTING STORM SEWER STRUCTURE REMOVAL TABLE

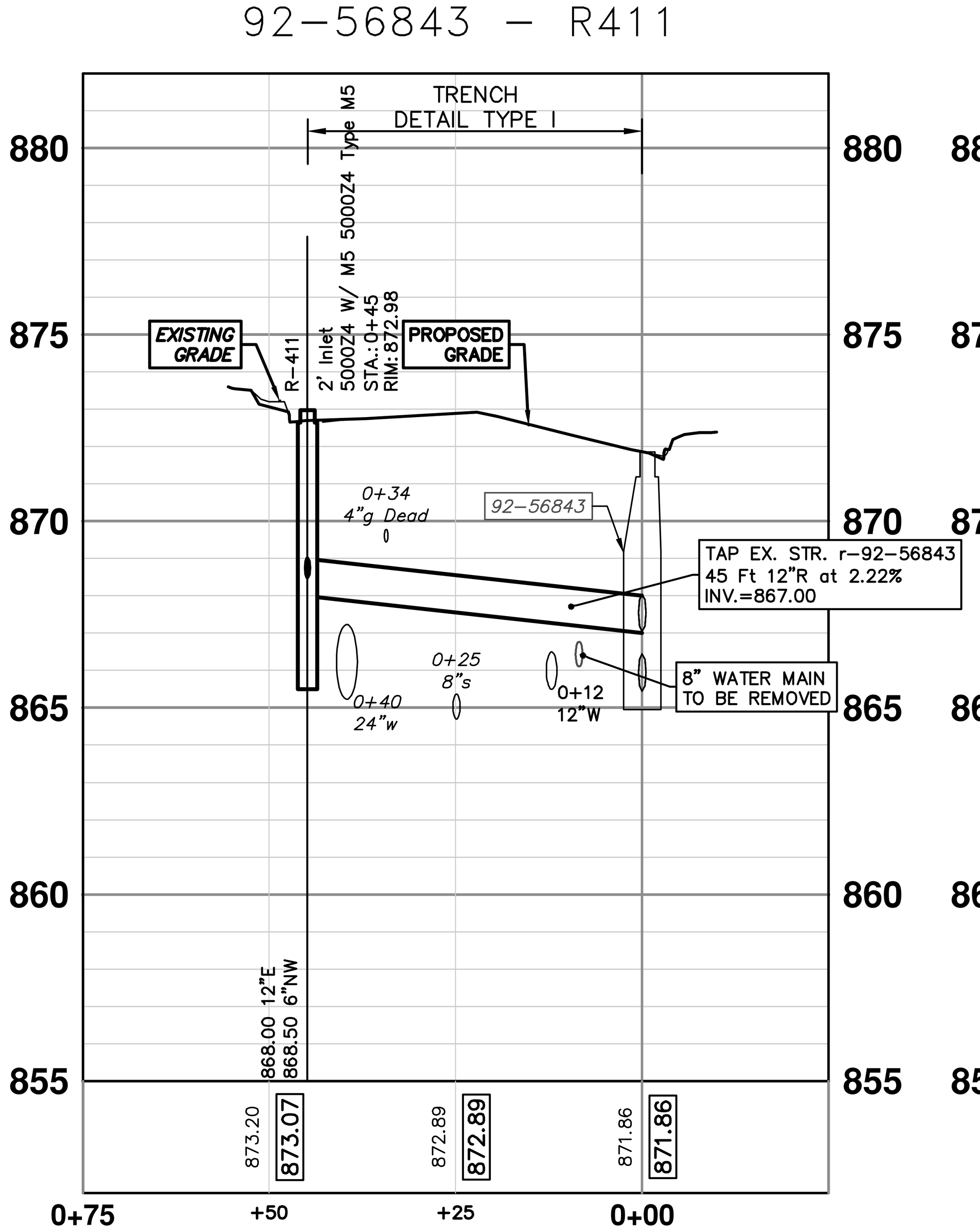
STRUCTURE	DEPTH (Feet)	REMOVE
88-61834	2.90	12" Drop Structure TO BE REMOVED
88-61839	2.56	12" Drop Structure TO BE REMOVED
88-61949	2.00	2' Inlet TO BE REMOVED
88-61947	3.22	12" Drop Structure TO BE REMOVED
88-61948	4.71	12" Drop Structure TO BE REMOVED

STORM SEWER STRUCTURE TABLE

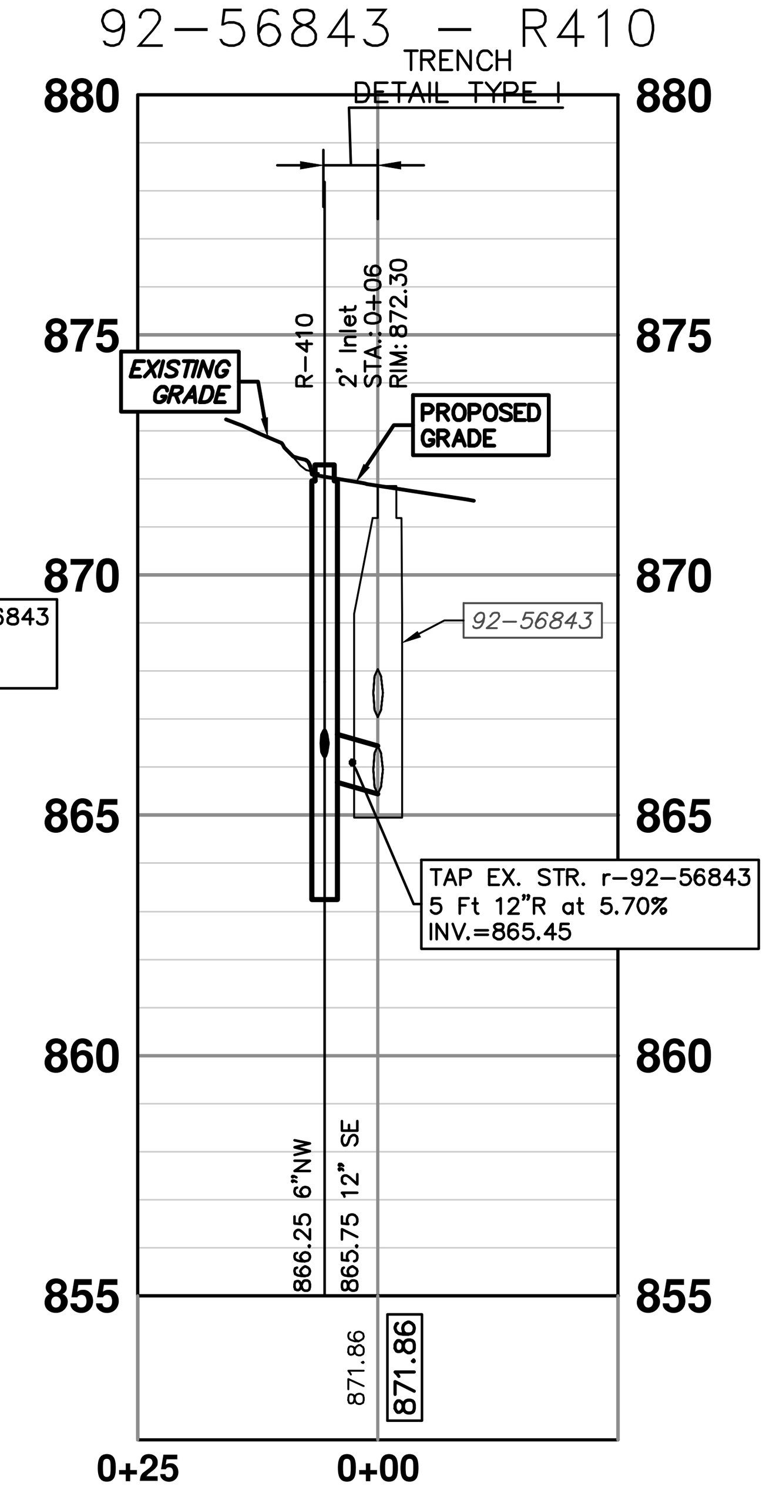
STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-300	0+14	4' Inlet Junction	843.77	12" SE 837.75 12" W 837.75 6" NW 838.25	8.02	2'
R-301	0+83	4' Low Point Inlet	843.00	12" S 838.00 12" NW 838.00 6" SE 838.50	7.00	2'
R-302	1+23	2' Inlet 5000Z4 W/ M5	843.19	12" N 838.33 6" SE 838.83	6.86	2'
R-303	0+19	2' Inlet 5000Z4 W/ M5	843.52	12" N 838.75 6" SE 839.25 6" NW 839.25	6.77	2'
R-410	0+06	2' Inlet	872.30	12" SE 865.75 6" NW 866.25	8.55	2'
R-411	0+45	2' Inlet 5000Z4 W/ M5	872.98	12" E 868.00 6" NW 868.50	6.98	2'



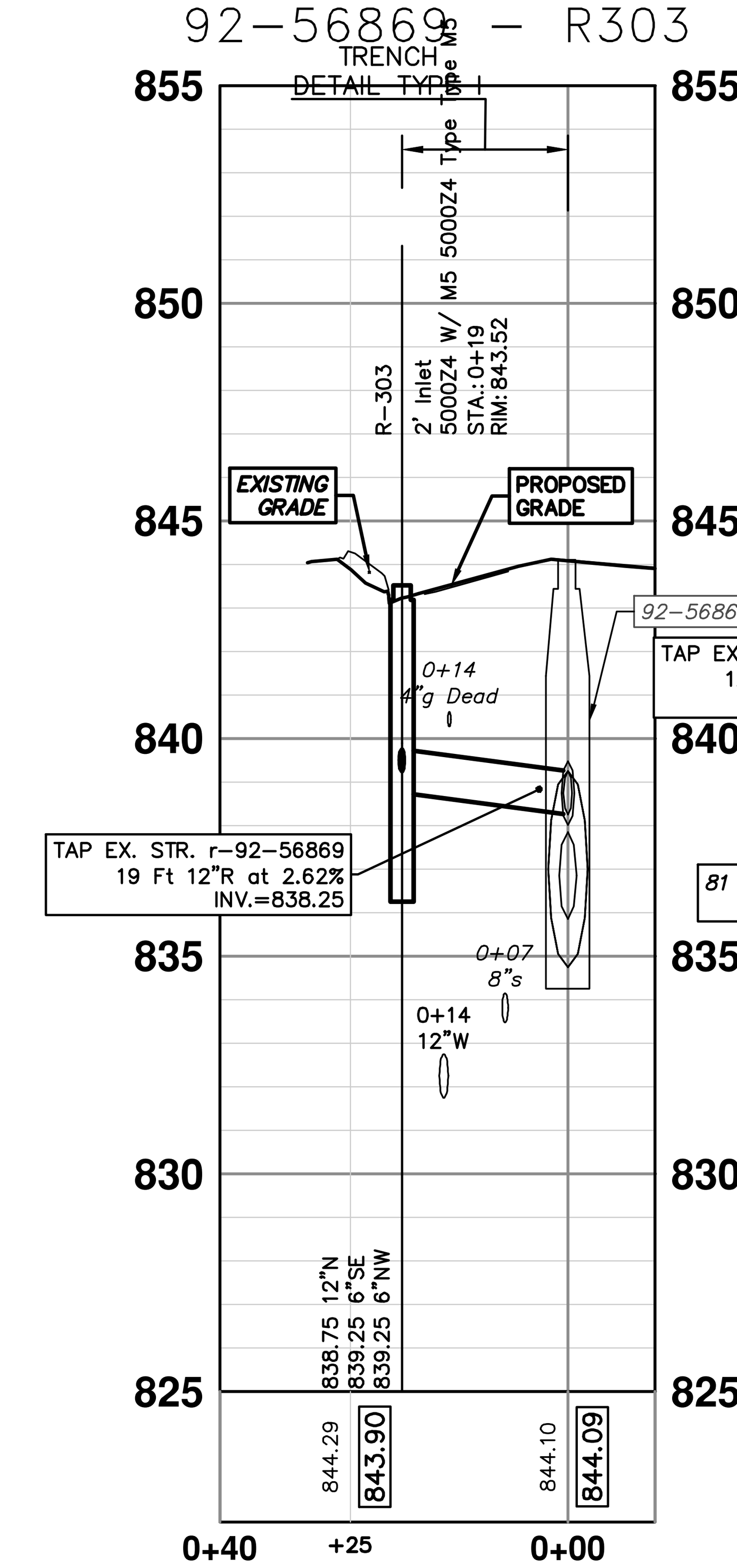
92-56843 – R411



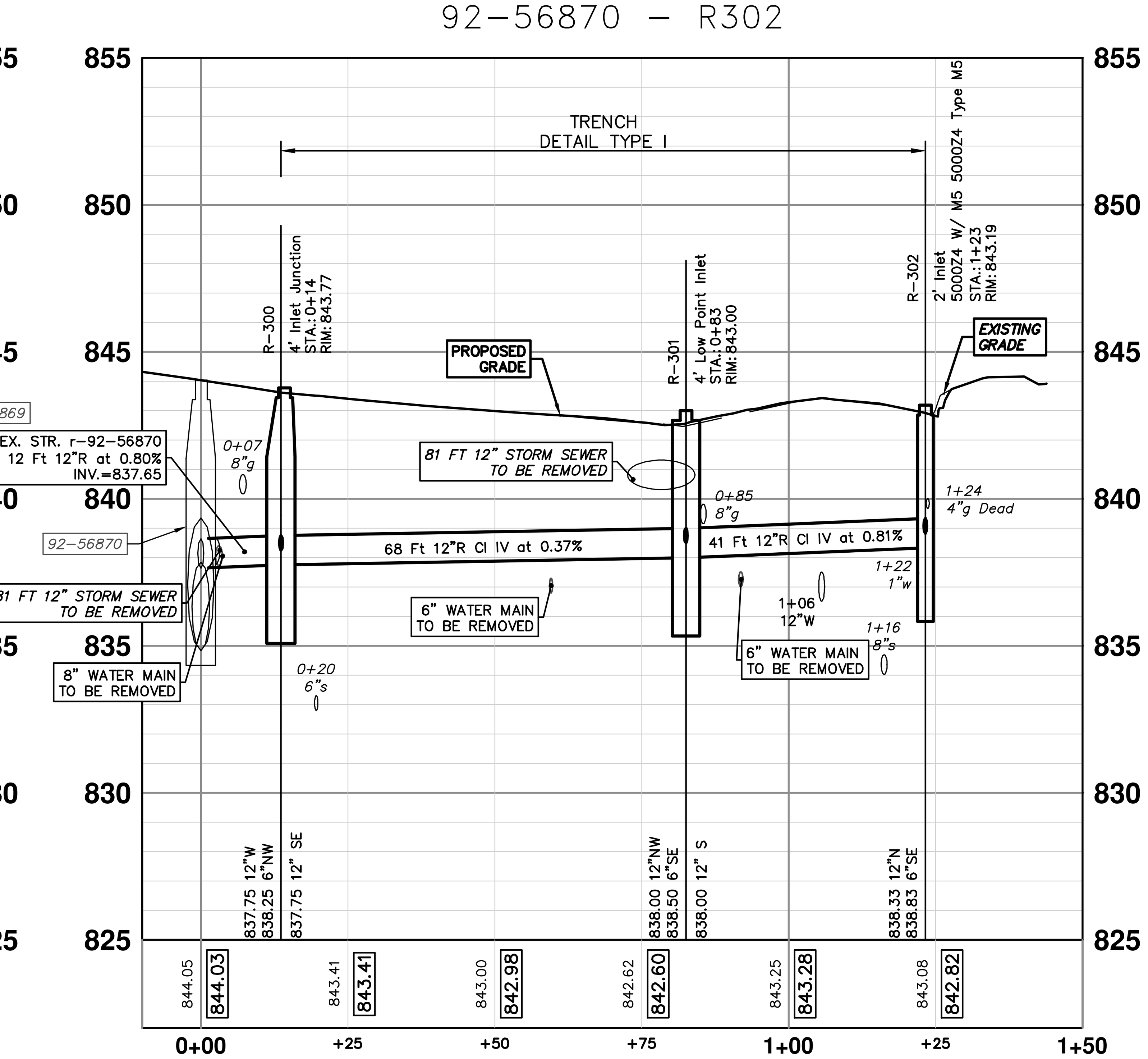
92-56843 – R410



92-56869 – R303



92-56870 – R302



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

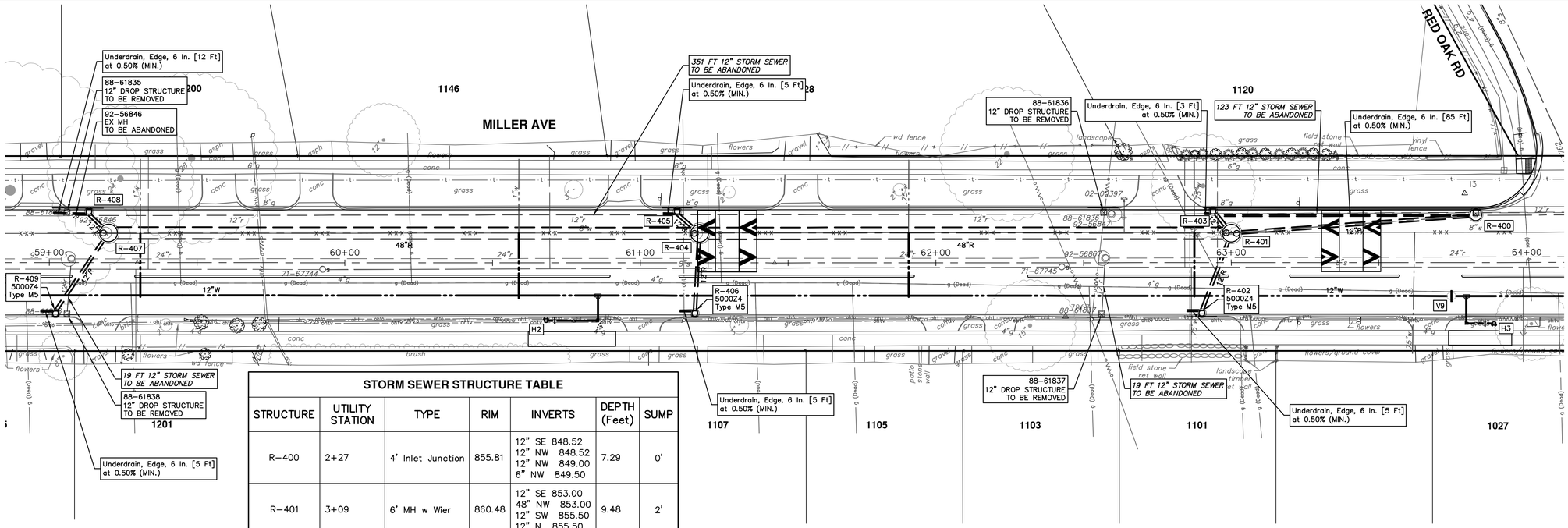
PROPOSED STORM SEWER

R300,R301,R302,R303,R410,R411

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

DRAWING No. 2022034-58

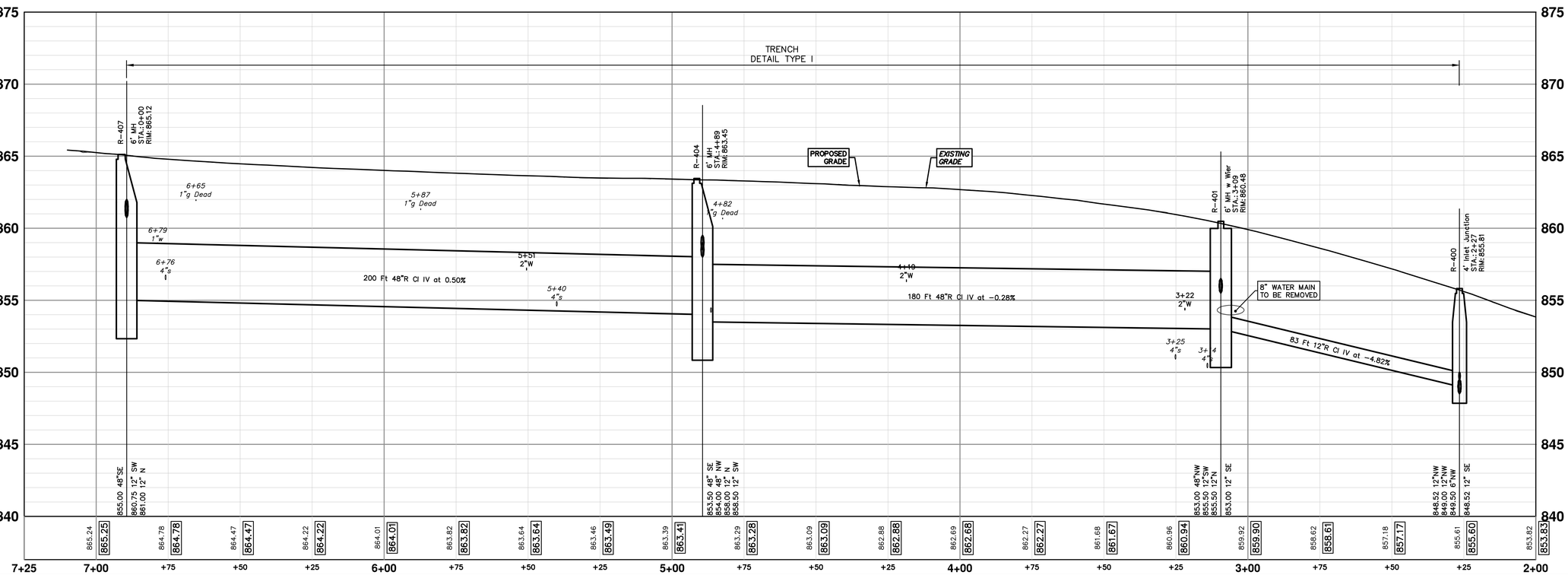
SHEET No. 58 OF 131



STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-400	2+27	4' Inlet Junction	855.81	12" SE 848.52 12" NW 848.52 12" NW 849.00 6" NW 849.50	7.29	0'
R-401	3+09	6' MH w Wier	860.48	12" SE 853.00 48" NW 853.00 12" SW 855.50 12" N 855.50	9.48	2'
R-404	4+89	6' MH	863.45	48" SE 853.50 48" NW 854.00 12" N 858.00 12" SW 858.50	11.95	2'
R-407	0+00	6' MH	865.12	12" SW 860.75 12" N 861.00 48" SE 855.00	12.12	2'

92-63788 - R407



R:\2022034 Miller Ave Rehab\Plan Production\2022034Strm.dwg Dwg Created: 29-Apr-24 - _a2 standard bw.stb - Plot Date: 2-May-24

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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MILLER AVENUE REHABILITATION

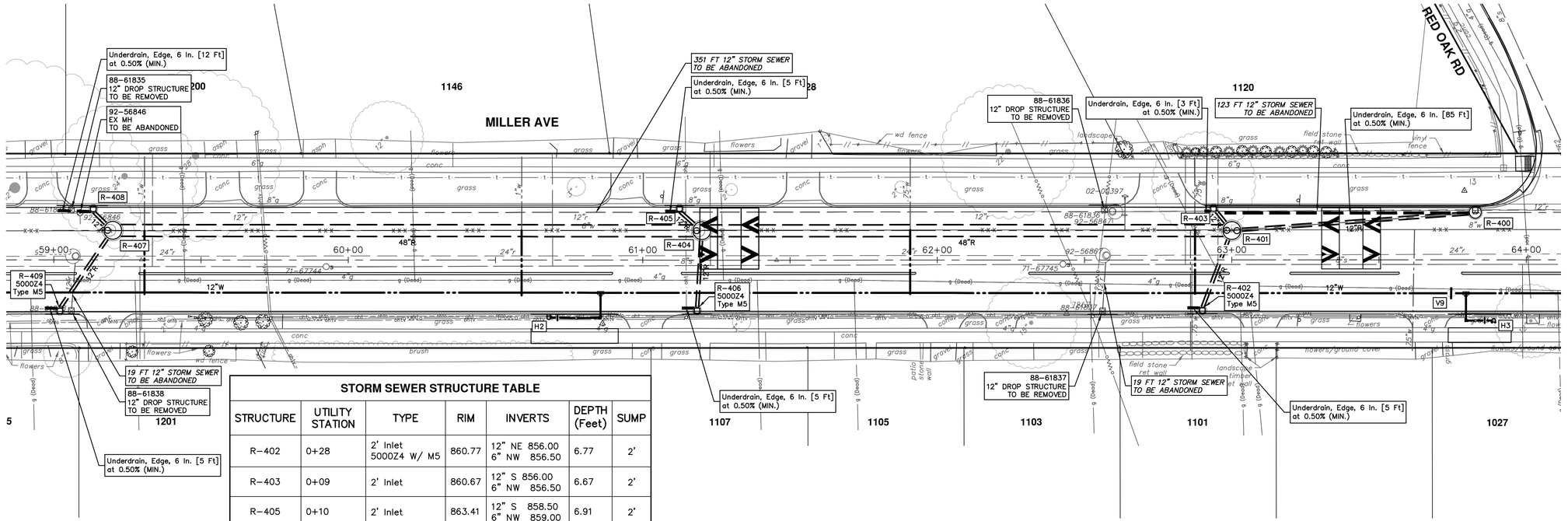
PROPOSED STORM SEWER

R400,R401,R404,R407

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

DRAWING No. 2022034-59

SHEET No. 59 OF 131



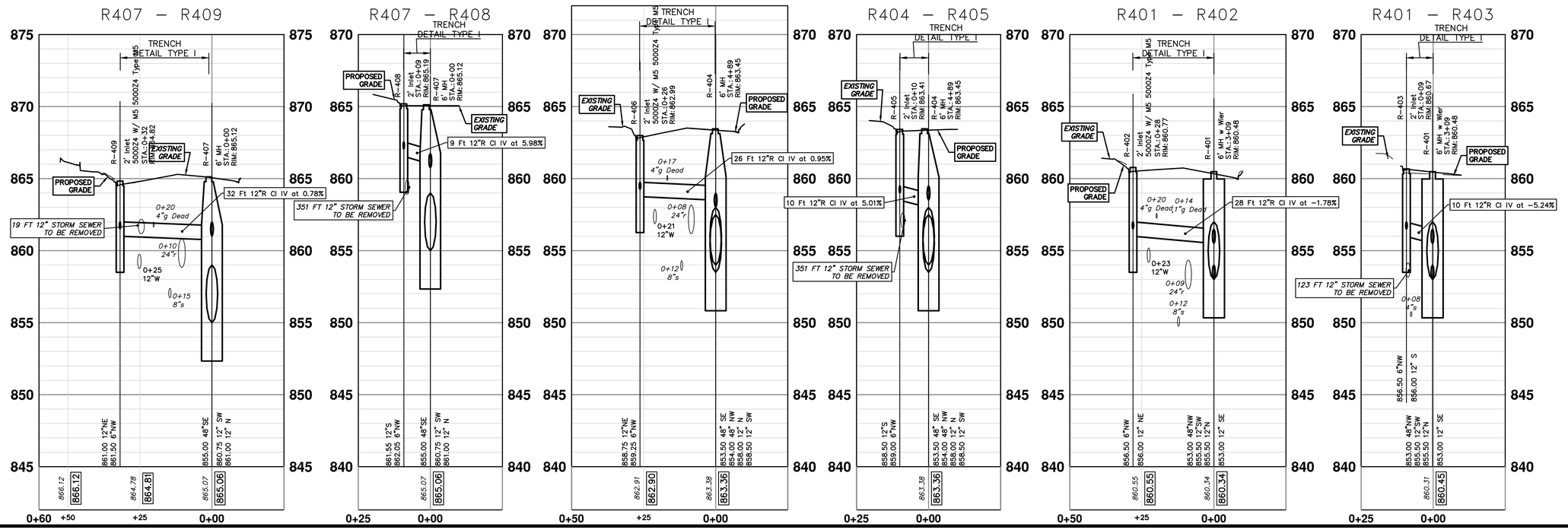
STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-402	0+28	2' Inlet 5000Z4 W/ M5	860.77	12" NE 856.00 6" NW 856.50	6.77	2'
R-403	0+09	2' Inlet	860.67	12" S 856.00 6" NW 856.50	6.67	2'
R-405	0+10	2' Inlet	863.41	12" S 858.50 6" NW 859.00	6.91	2'
R-406	0+26	2' Inlet 5000Z4 W/ M5	862.99	12" NE 858.75 6" NW 859.25	6.24	2'
R-408	0+09	2' Inlet	865.19	12" S 861.55 6" NW 862.05	5.64	2'
R-409	0+32	2' Inlet 5000Z4 W/ M5	864.82	12" NE 861.00 6" NW 861.50	5.82	2'

EXISTING STORM SEWER STRUCTURE REMOVAL TABLE

STRUCTURE	DEPTH (Feet)	REMOVE
88-61837	3.31	12" Drop Structure TO BE REMOVED
88-61836	3.71	12" Drop Structure TO BE REMOVED
88-61838	2.91	12" Drop Structure TO BE REMOVED
88-61835	4.12	12" Drop Structure TO BE REMOVED
92-56846	6.21	EX MH TO BE ABANDONED

R404 – R406



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

NO.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

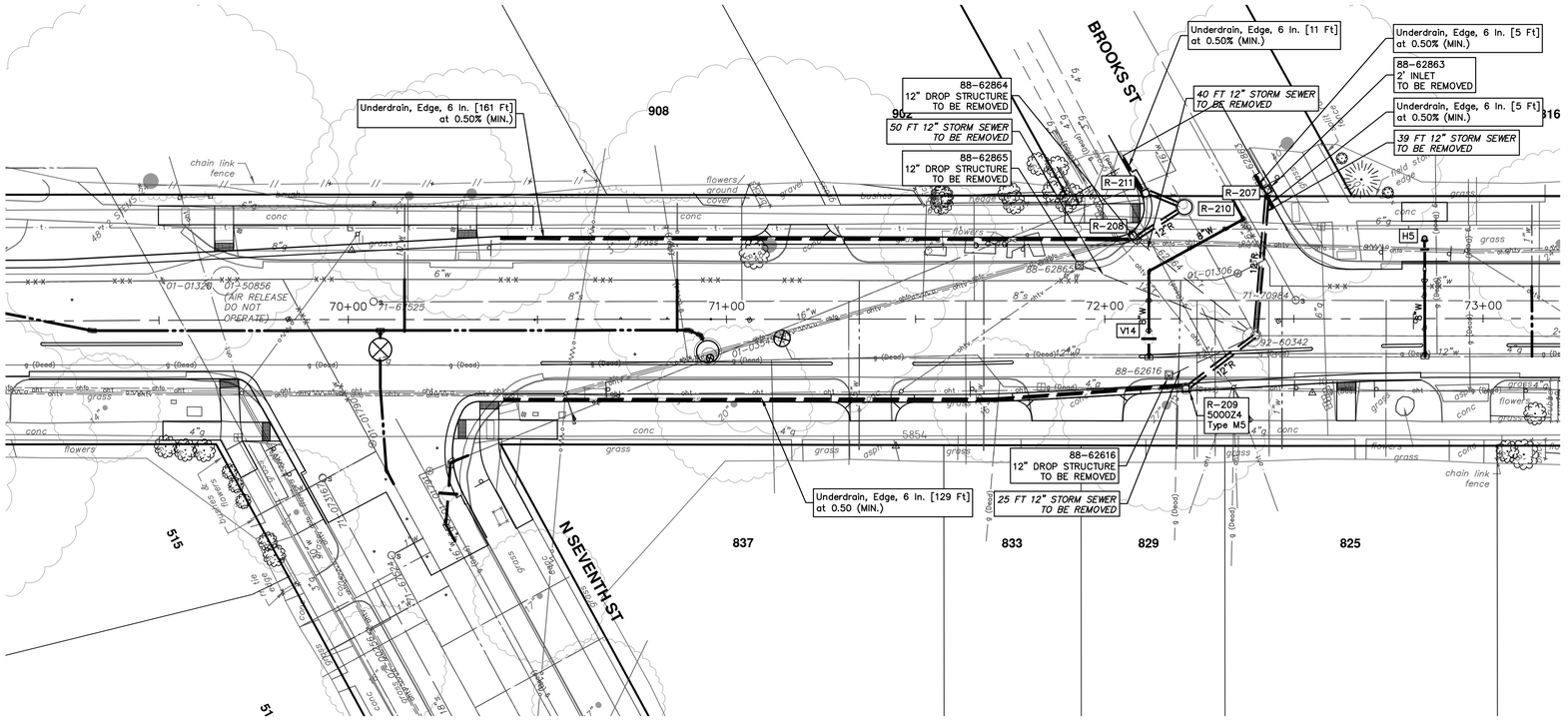
PROPOSED STORM SEWER

R402,R403,R405,R406,R408,R409

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

DRAWING No. 2022034-60

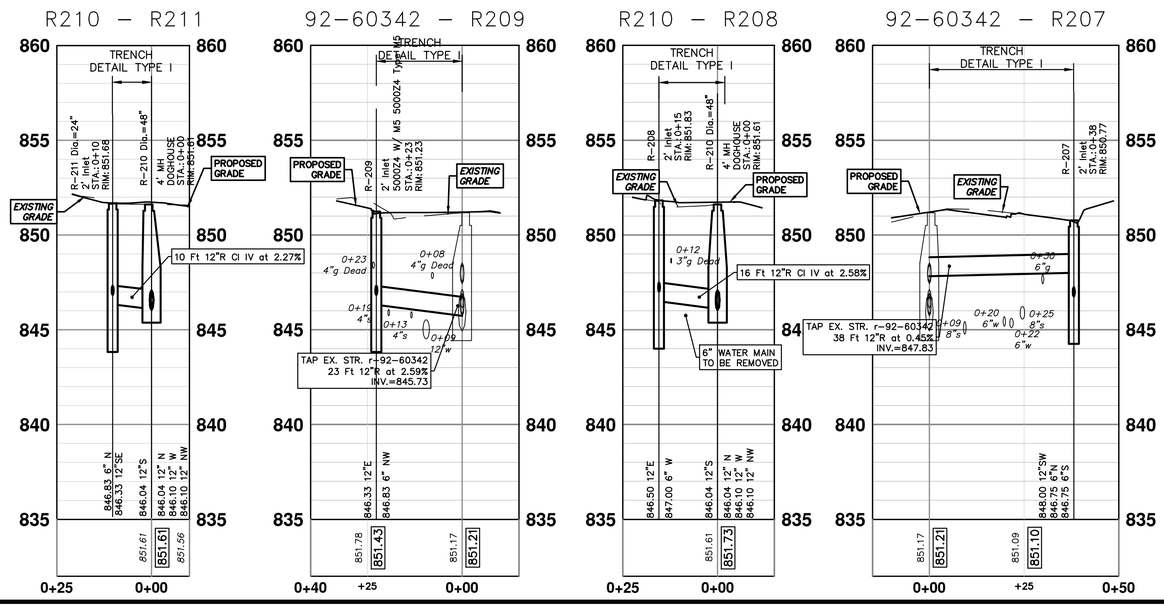
SHEET No. 60 OF 131



EXISTING STORM SEWER STRUCTURE REMOVAL TABLE		
STRUCTURE	DEPTH (Feet)	REMOVE
88-62863	2.00	2' Inlet TO BE REMOVED
88-62616	3.32	12" Drop Structure TO BE REMOVED
88-62864	2.51	12" Drop Structure TO BE REMOVED
88-62865	2.20	12" Drop Structure TO BE REMOVED

STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-207	0+38	2' Inlet	850.77	12" SW 848.00 6" N 846.75 6" S 846.75	6.02	2'
R-208	0+15	2' Inlet	851.83	6" W 847.00 12" E 846.50	7.33	2'
R-209	0+23	2' Inlet 5000Z4 W/ M5	851.23	6" NW 846.83 12" E 846.33	6.90	2'
R-210	0+00	4' MH DOGHOUSE	851.61	12" N 846.04 12" W 846.10 12" NW 846.10 12" S 846.04	5.57	0'
R-211	0+10	2' Inlet	851.68	6" N 846.83 12" SE 846.33	7.35	2'



NO.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

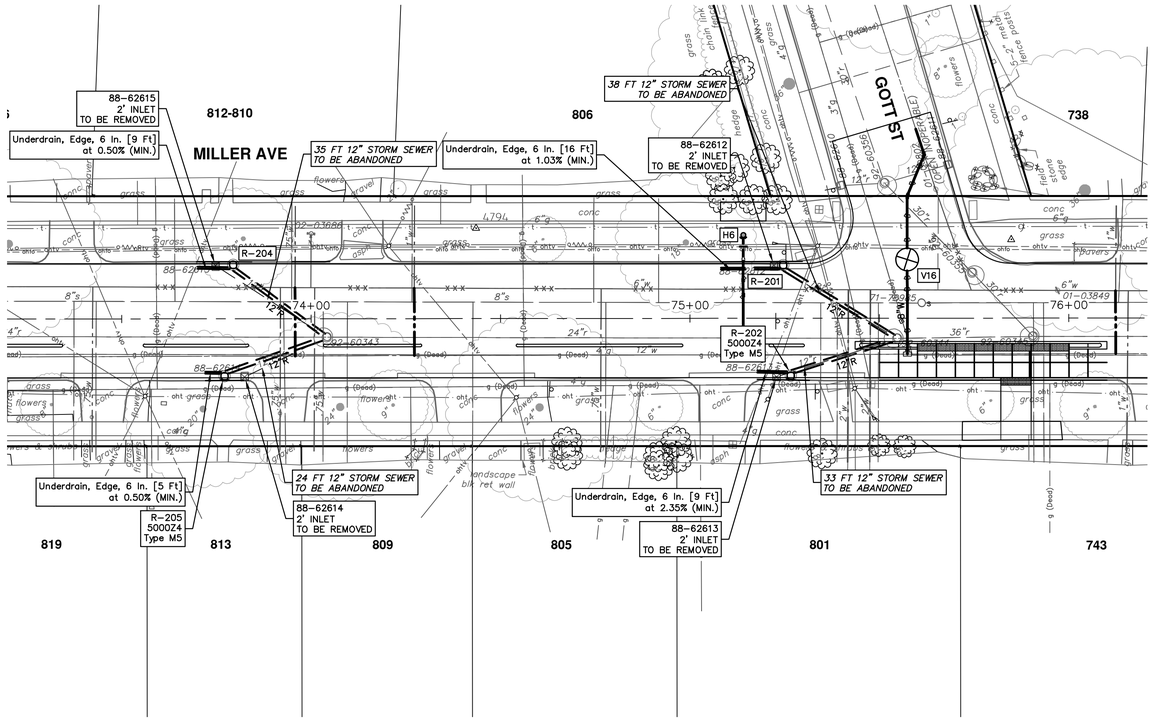
PROPOSED STORM SEWER

R207,R208,R209,R210,211

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

DRAWING No. 2022034-61

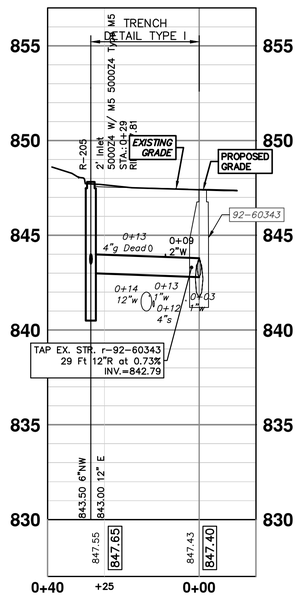
SHEET No. 61 OF 131



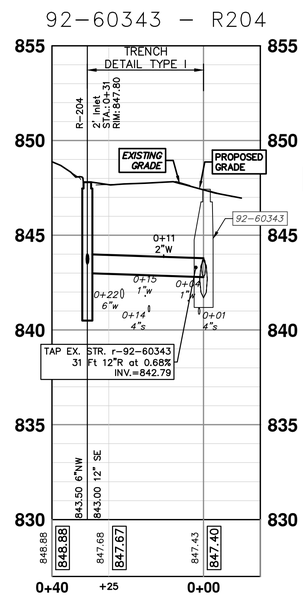
EXISTING STORM SEWER STRUCTURE REMOVAL TABLE		
STRUCTURE	DEPTH (Feet)	REMOVE
88-62612	3.60	2' Inlet TO BE REMOVED
88-62613	2.90	2' Inlet TO BE REMOVED
88-62614	3.61	2' Inlet TO BE REMOVED
88-62615	4.10	2' Inlet TO BE REMOVED

STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-201	0+35	2' Inlet	843.76	12" SE 839.25 6" NW 839.75	6.51	2'
R-202	0+30	2' Inlet 5000Z4 W/ M5	843.75	12" E 839.25 6" NW 839.75	6.50	2'
R-204	0+31	2' Inlet	847.80	12" SE 843.00 6" NW 843.50	6.80	2'
R-205	0+29	2' Inlet 5000Z4 W/ M5	847.81	12" E 843.00 6" NW 843.50	6.81	2'

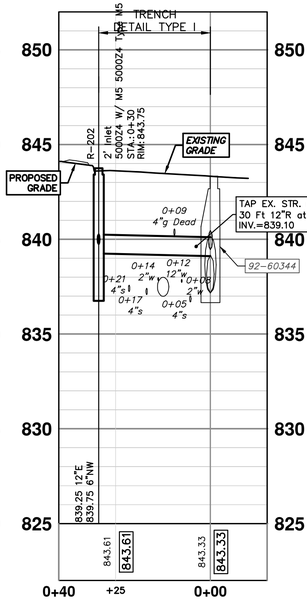
92-60343 – R205



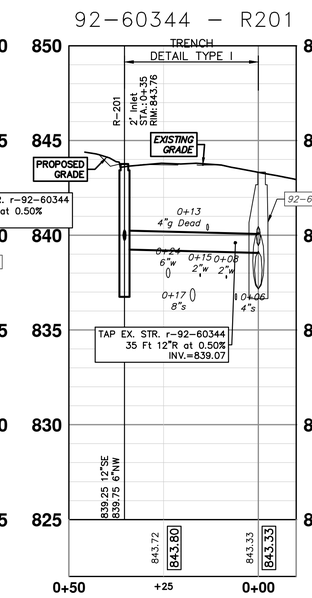
92-60343 – R204



92-60344 – R202



92-60344 – R201



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

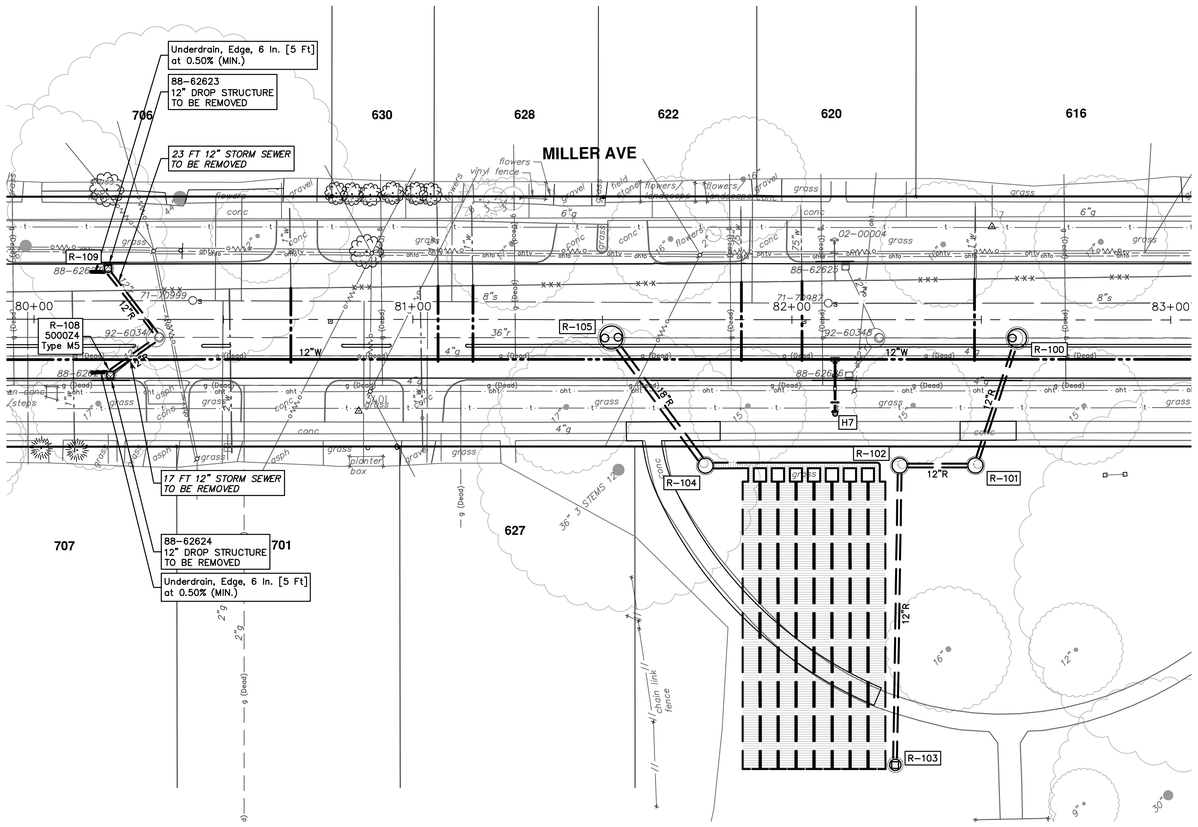
PROPOSED STORM SEWER

R201 R202 R204 R205

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

DRAWING No. 2022034-62

SHEET No. 62 OF 131

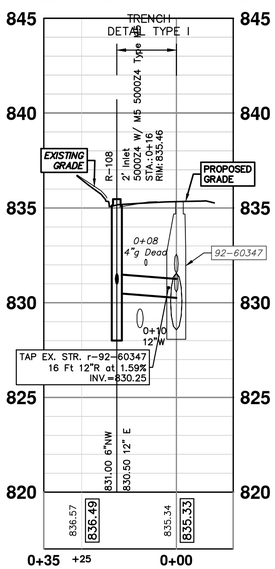


EXISTING STORM SEWER STRUCTURE REMOVAL TABLE		
STRUCTURE	DEPTH (Feet)	REMOVE
88-62623	2.21	12" Drop Structure TO BE REMOVED
88-62624	4.00	12" Drop Structure TO BE REMOVED

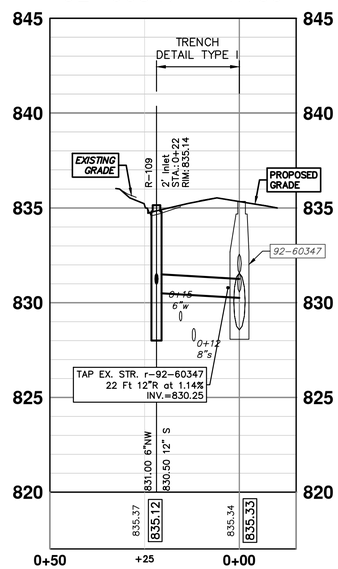
STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-100	0+00	5' MH DOGHOUSE	830.63	30" NW 822.67 12" SW 825.00 30" SE 822.67	7.96	0'
R-101	0+35	4' MH	831.68	12" NW 825.50 12" NE 825.50	8.18	2'
R-102	0+55	4' MH	832.26	12" SW 825.67 12" SE 825.67	8.59	2'
R-103	1+34	3' Inlet Junction	830.49	12" NE 826.00	6.49	2'
R-104	0+51	PRE-TREATMENT STRUCTURE	833.68	18" N 826.42 18" SE 826.42	9.26	2'
R-105	0+93	6' MH w Diversion	833.36	36" NW 826.50 18" S 826.75 36" SE 826.50	8.86	2'
R-108	0+16	2' Inlet 5000Z4 W/ M5	835.46	12" E 830.50 6" NW 831.00	6.96	2'
R-109	0+22	2' Inlet	835.14	12" S 830.50 6" NW 831.00	6.64	2'

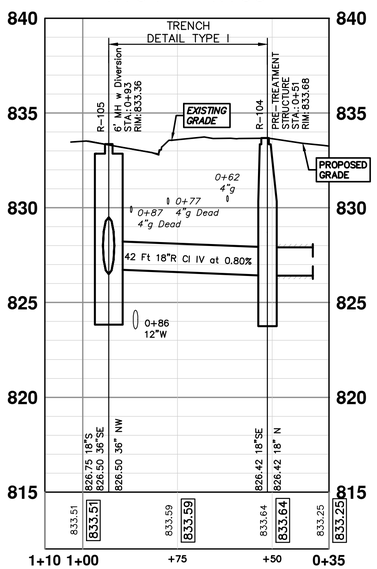
92-60347 — R108



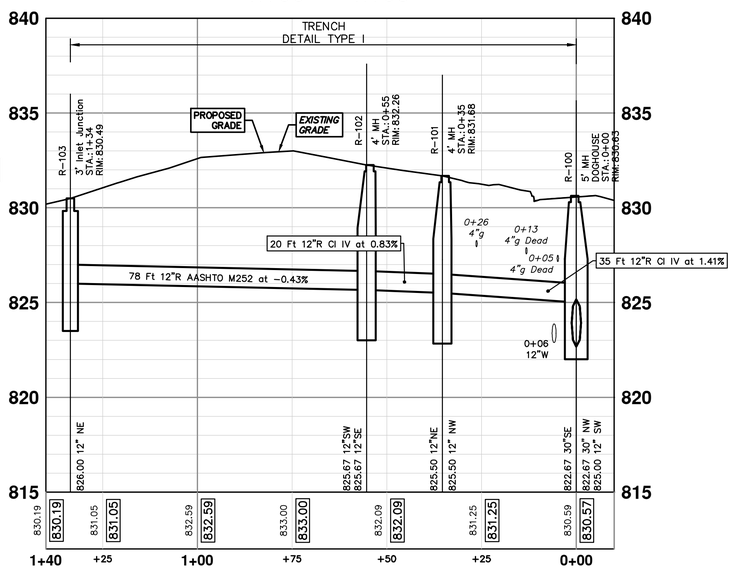
92-60347 — R109



R104 — R105



R100 — R103



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

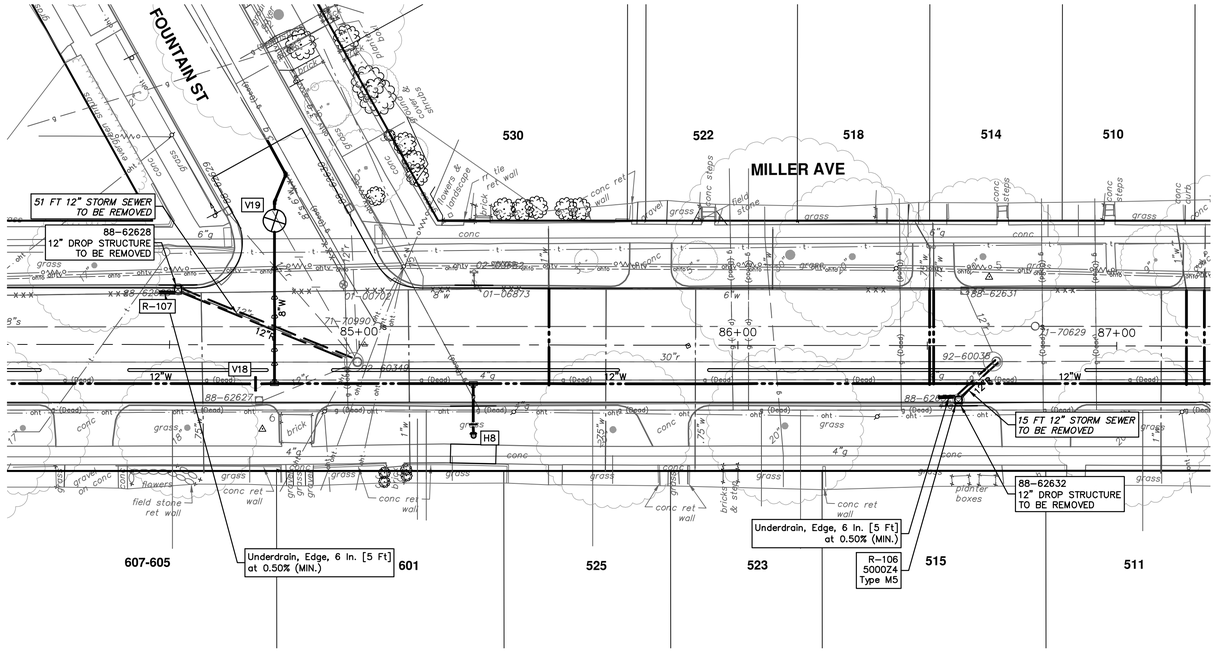
PROPOSED STORM SEWER

R100,R101,R102,R103,R104,R105,R108,R109

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

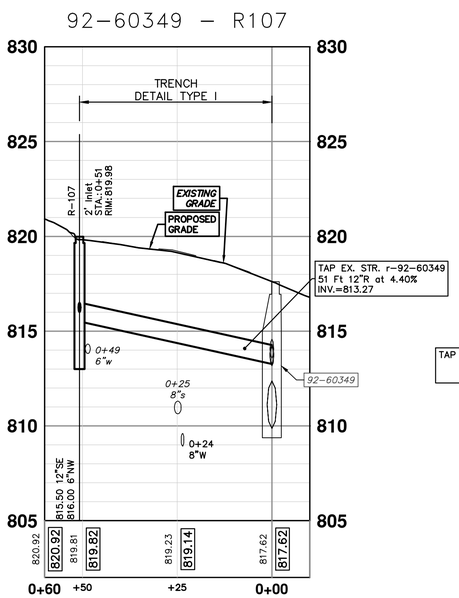
DRAWING No. 2022034-63

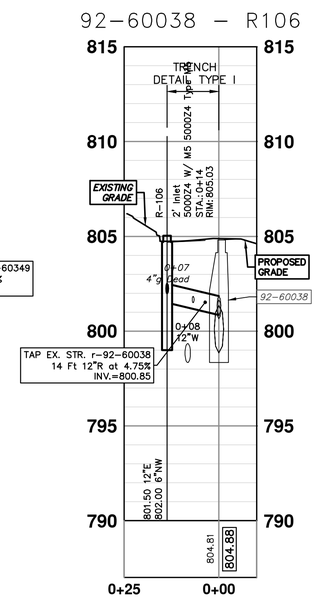
SHEET No. 63 OF 131



EXISTING STORM SEWER STRUCTURE REMOVAL TABLE		
STRUCTURE	DEPTH (Feet)	REMOVE
88-62628	2.41	12" Drop Structure TO BE REMOVED
88-62632	2.71	12" Drop Structure TO BE REMOVED

STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	TYPE	RIM	INVERTS	DEPTH (Feet)	SUMP
R-106	0+14	2' Inlet 5000Z4 W/ M5	805.03	12" E 801.50 6" NW 802.00	5.53	2'
R-107	0+51	2' Inlet	819.98	12" SE 815.50 6" NW 816.00	6.48	2'





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PROPOSED STORM SEWER

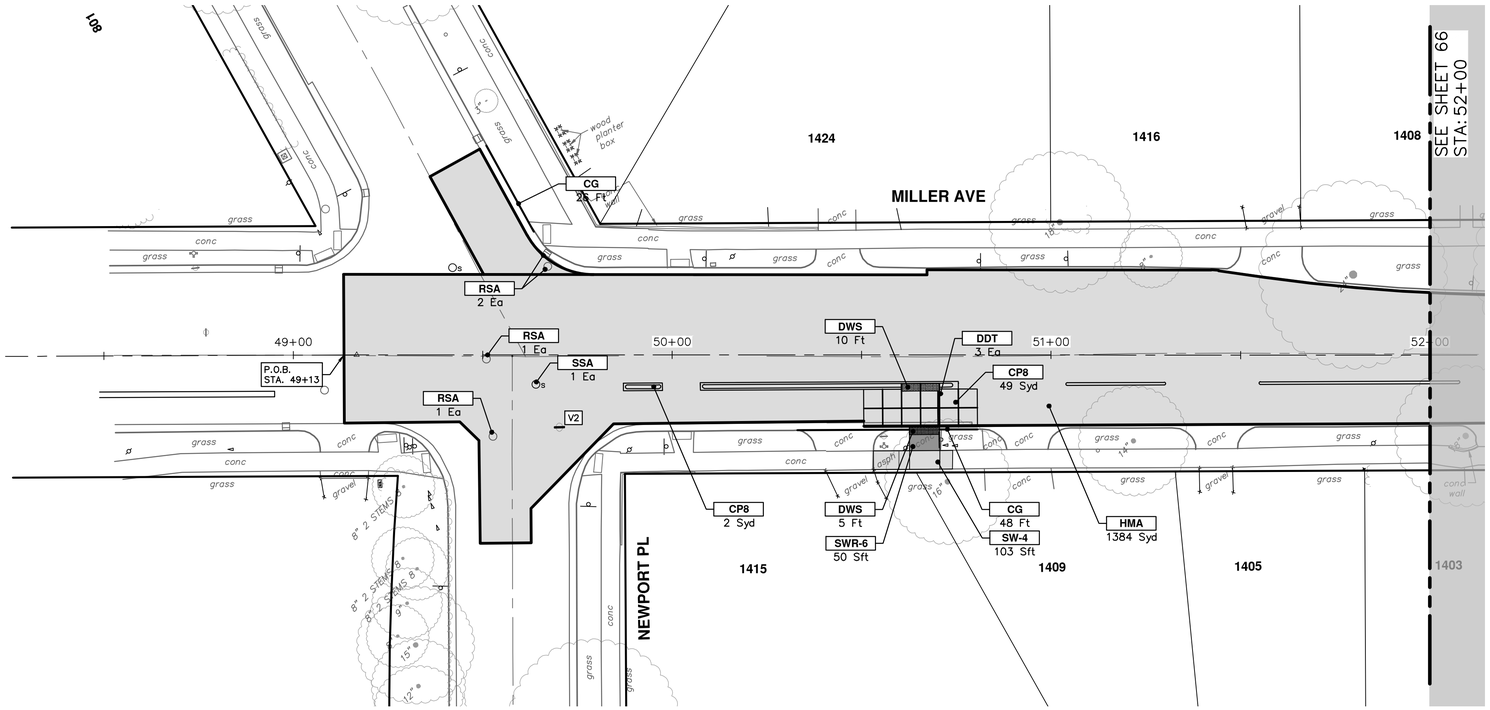
R106,R107

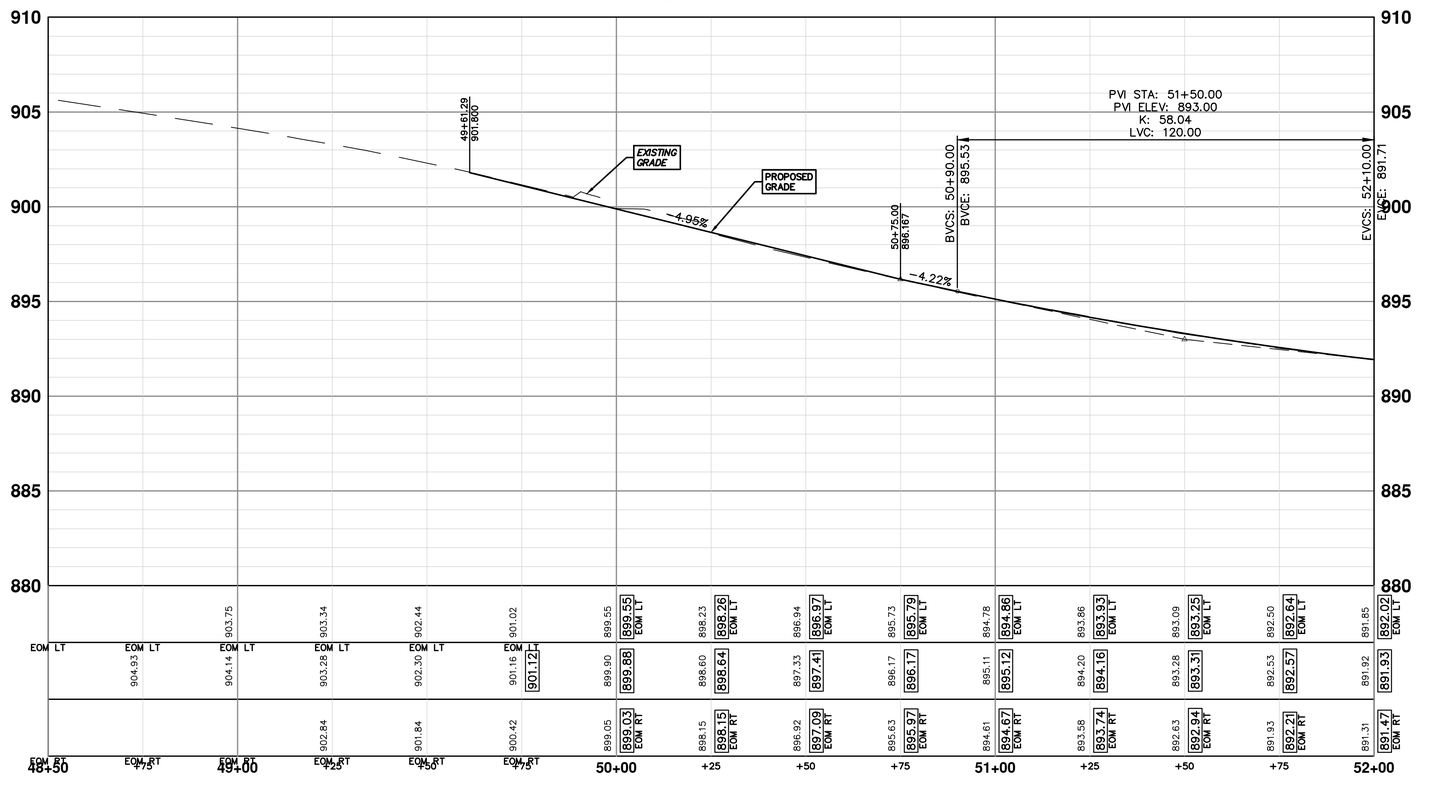
SCALE PLAN: ######## PROFILE: 1" = 4'

DRAWING No. 2022034-64

SHEET No.

64 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
DG-6	DRIVEWAY GRAVEL 6 INCH 21AA LIMESTONE, C.I.P.
MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

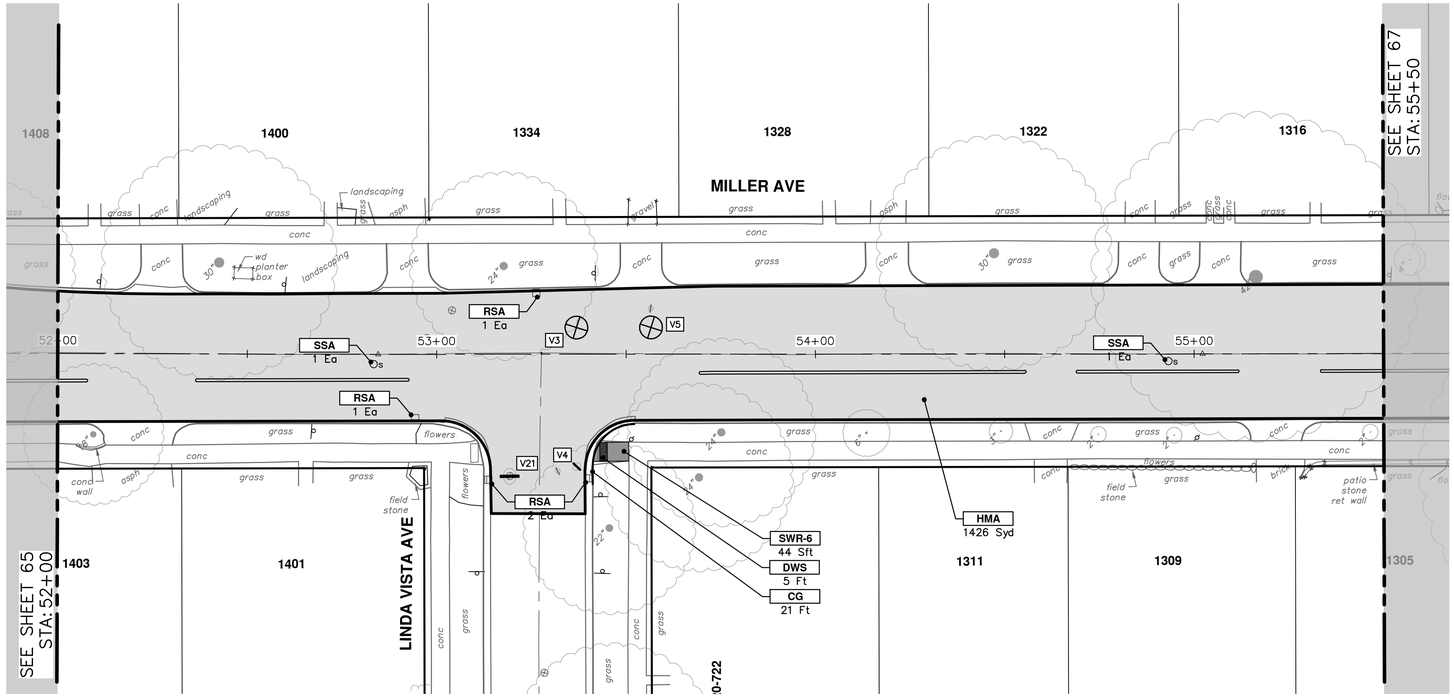
ROAD PLAN & PROFILE

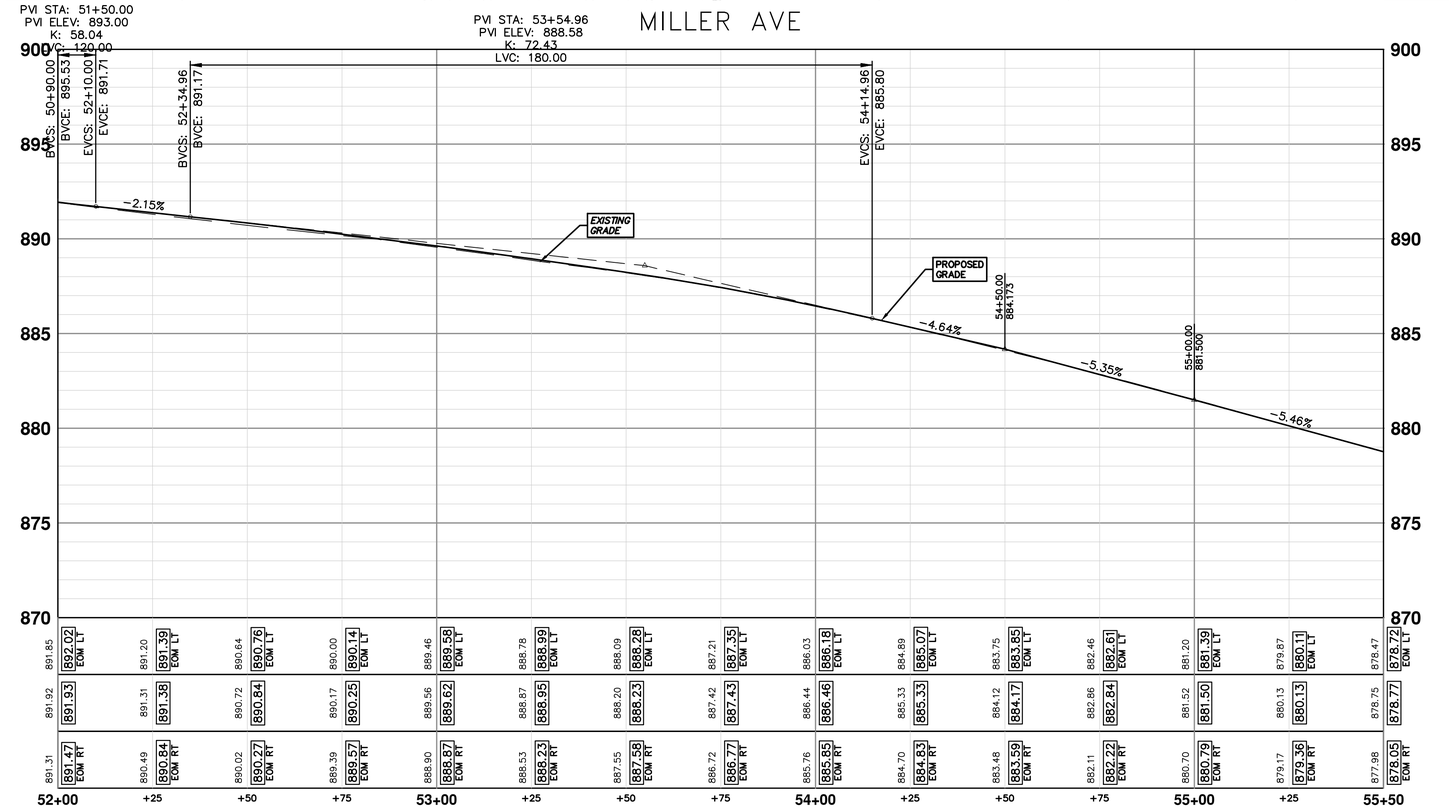
STA. 49+13 - STA. 52+00

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

DRAWING No. 2022034-65

SHEET No. 65 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
DG-6	DRIVEWAY GRAVEL 6 INCH 21AA LIMESTONE, C.I.P.
MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 in.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 in.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 in., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 in.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

ROAD PLAN & PROFILE

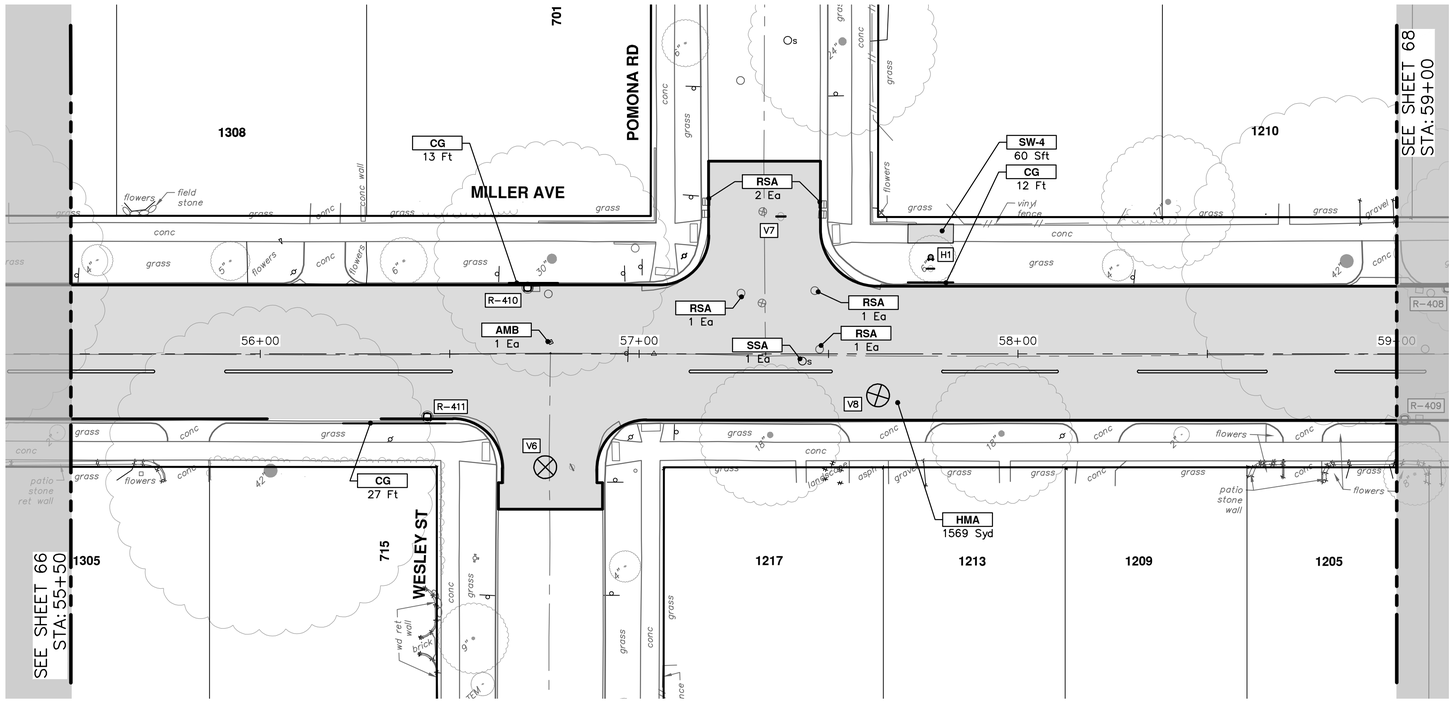
STA. 52+00 - STA. 55+50

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

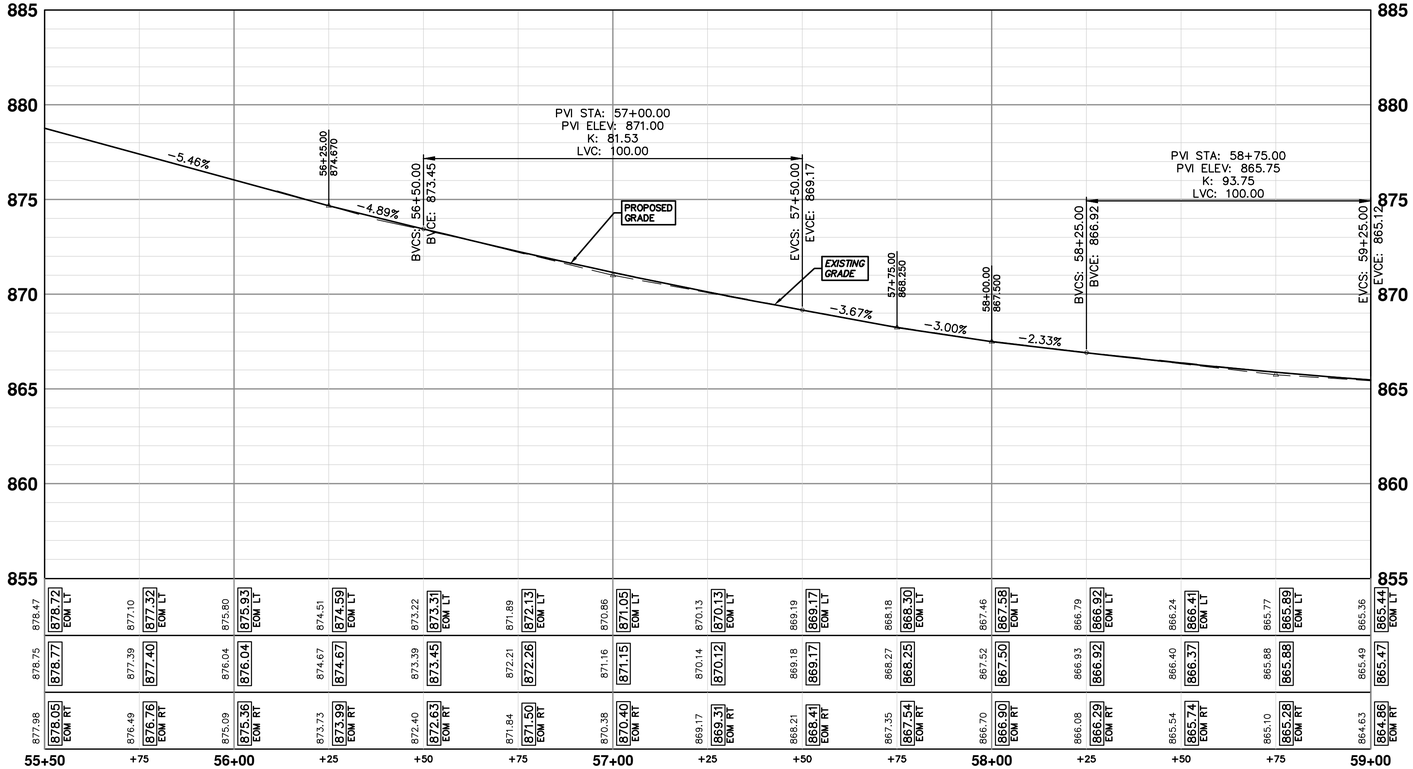
DRAWING No. 2022034-66

SHEET No. 66 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034PRrd.dwg Dwg Created: 23-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24



MILLER AVE



CONSTRUCTION KEY	
KEY	**DESCRIPTION**
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DOM-HE	Conc, Driveway Opening, Type M, High Early
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MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 in.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 in.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 in., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 in.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

	55+50	+75	56+00	+25	+50	+75	57+00	+25	+50	+75	58+00	+25	+50	+75	59+00
	878.47	877.10	875.80	874.51	873.22	871.89	870.86	870.13	869.19	868.18	867.46	866.79	866.24	865.77	865.36
EOM LT	878.72	877.32	875.93	874.59	873.31	872.13	871.05	870.13	869.17	868.30	867.58	866.92	866.41	865.89	865.44
	878.75	877.39	876.04	874.67	873.39	872.21	871.16	870.14	869.18	868.27	867.52	866.93	866.40	865.88	865.49
EOM LT	878.77	877.40	876.04	874.67	873.45	872.26	871.15	870.12	869.17	868.25	867.50	866.92	866.37	865.88	865.47
	877.98	876.49	875.09	873.73	872.40	871.84	870.38	869.17	868.21	867.35	866.70	866.08	865.54	865.10	864.63
EOM RT	878.05	876.76	875.36	873.99	872.63	871.50	870.40	869.31	868.41	867.54	866.90	866.29	865.74	865.28	864.86

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301 E. HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
(734) 794-6410
www.a2gov.org

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

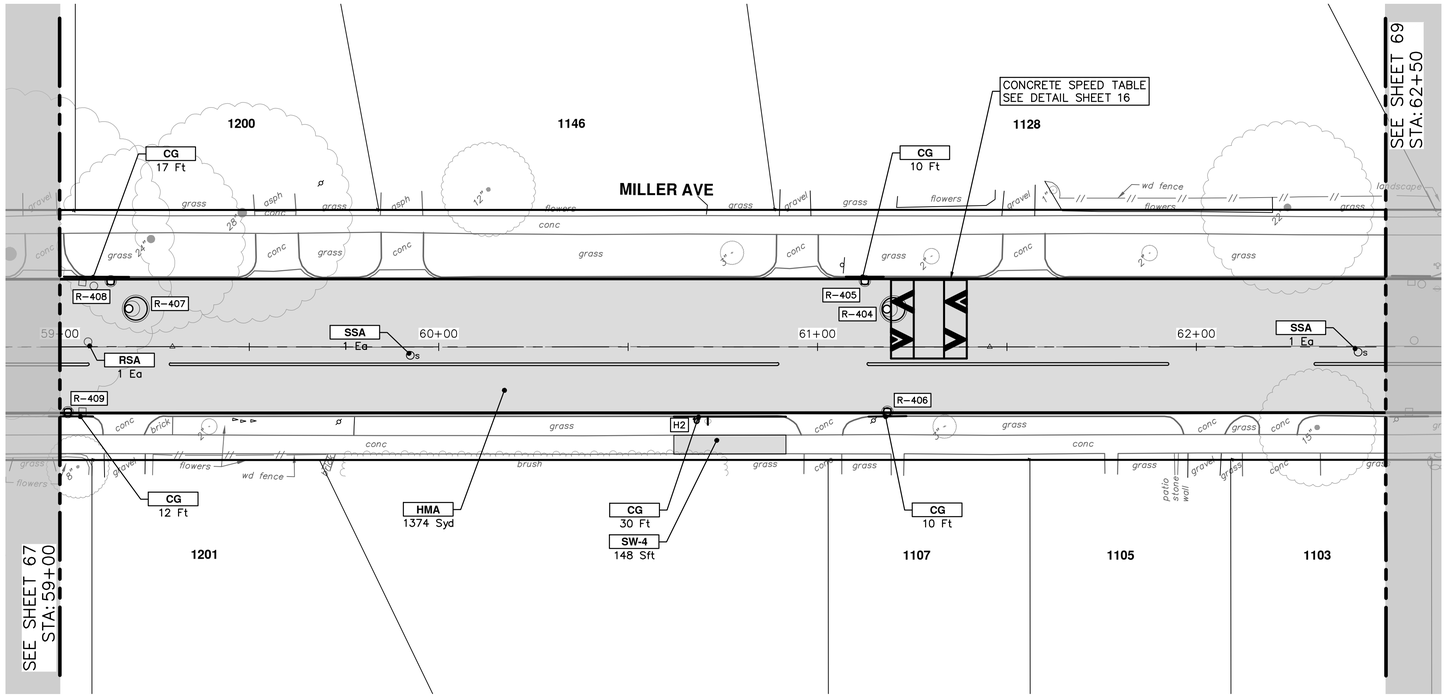
ROAD PLAN & PROFILE

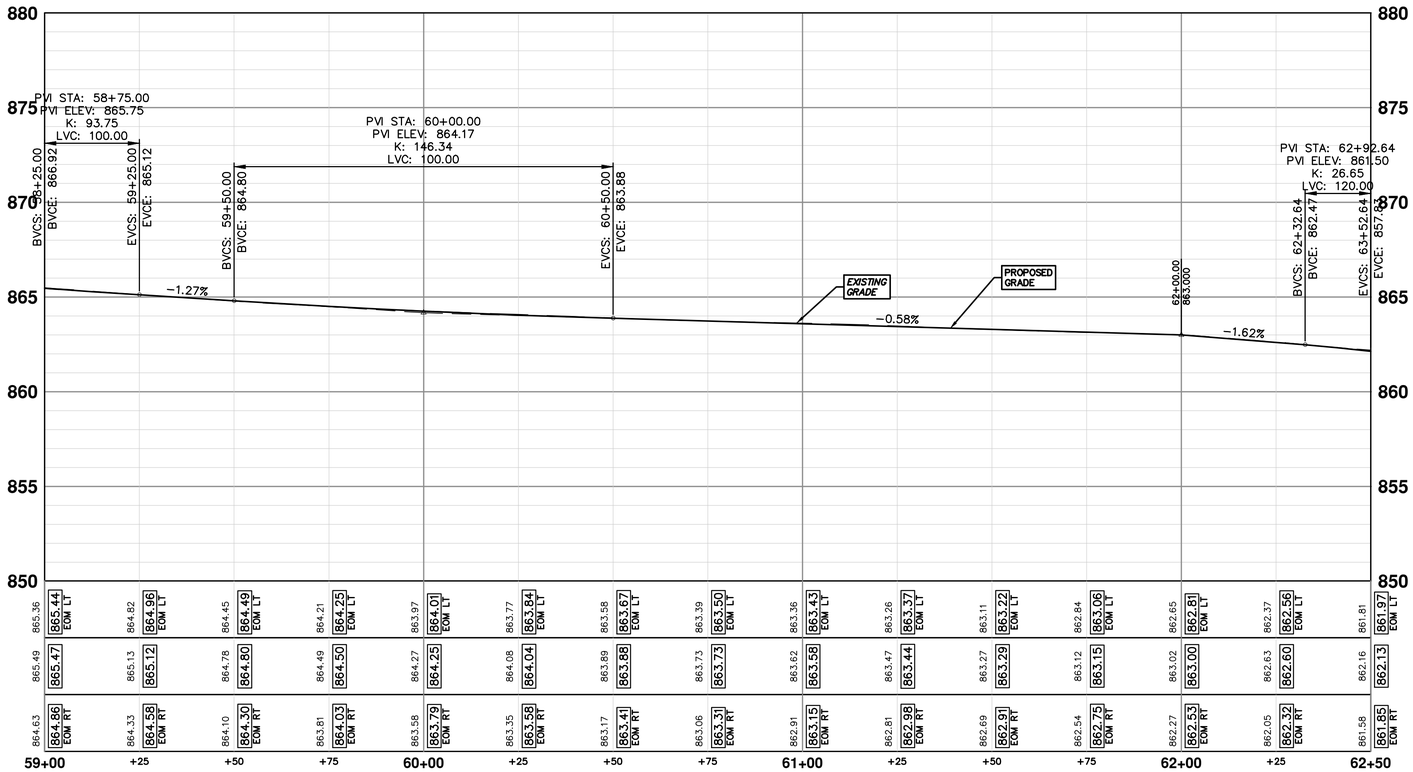
STA. 55+50 - STA. 59+00

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

DRAWING No. 2022034-67

SHEET No. 67 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
DG-6	DRIVEWAY GRAVEL 6 INCH 21AA LIMESTONE, C.I.P.
MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

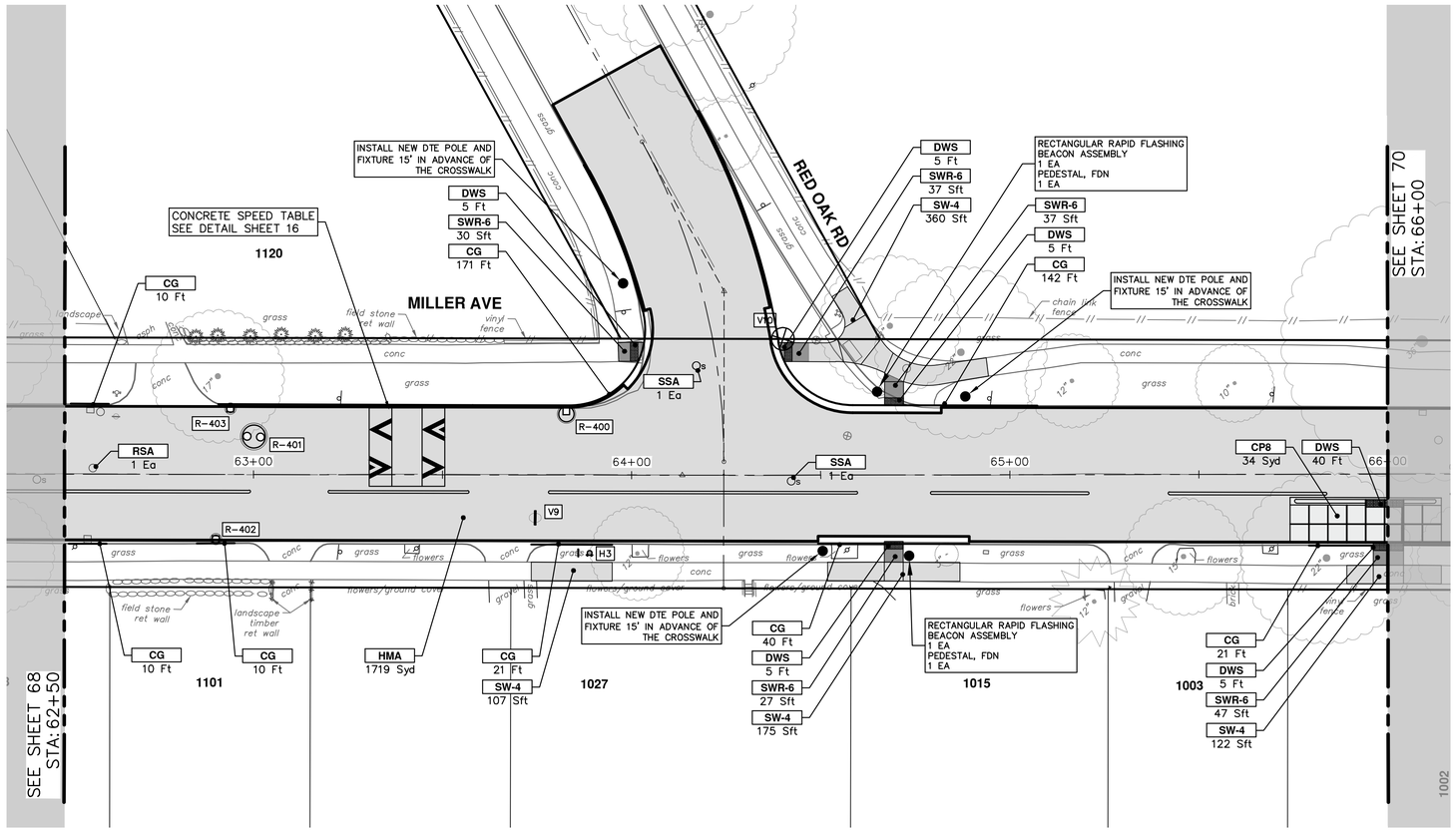
ROAD PLAN & PROFILE

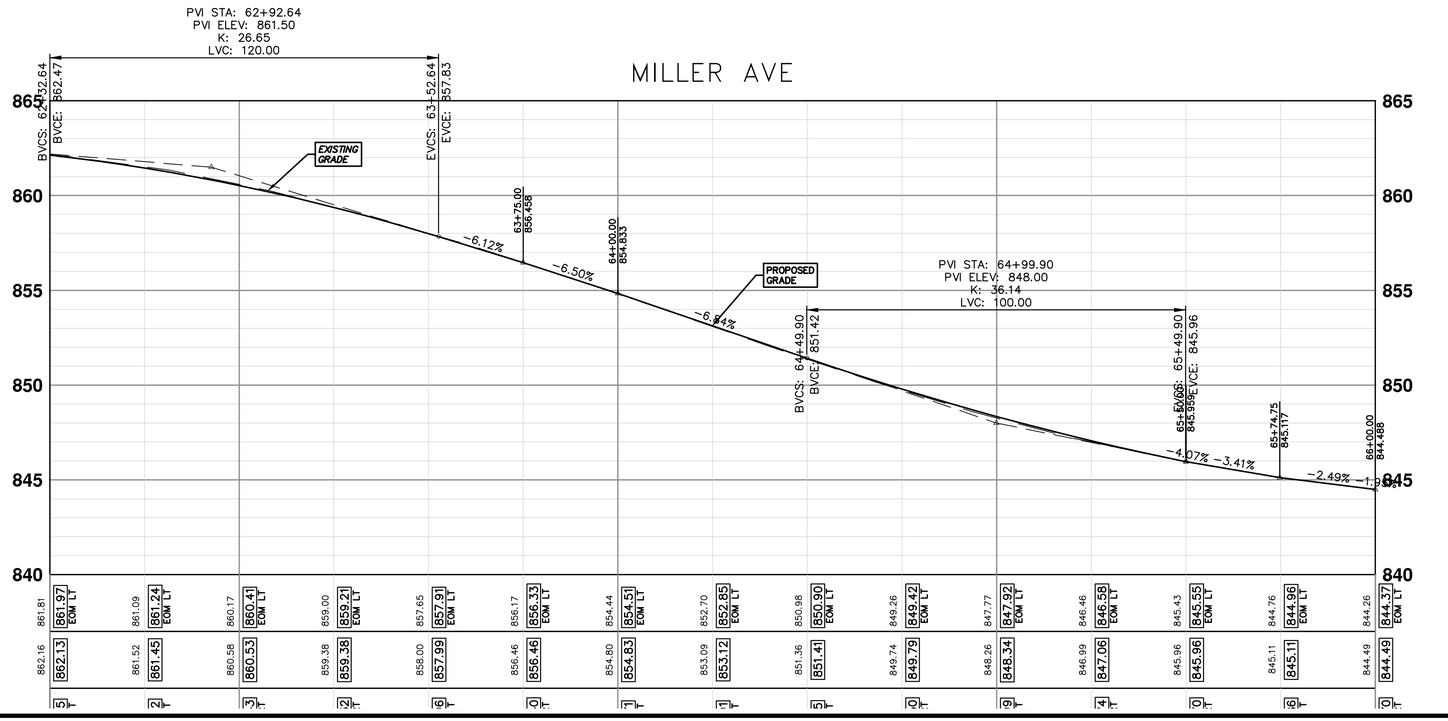
STA. 59+00 - STA. 62+50

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

DRAWING No. 2022034-68

SHEET No. 68 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
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MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 in.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 in.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 in., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 in.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

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03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
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00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

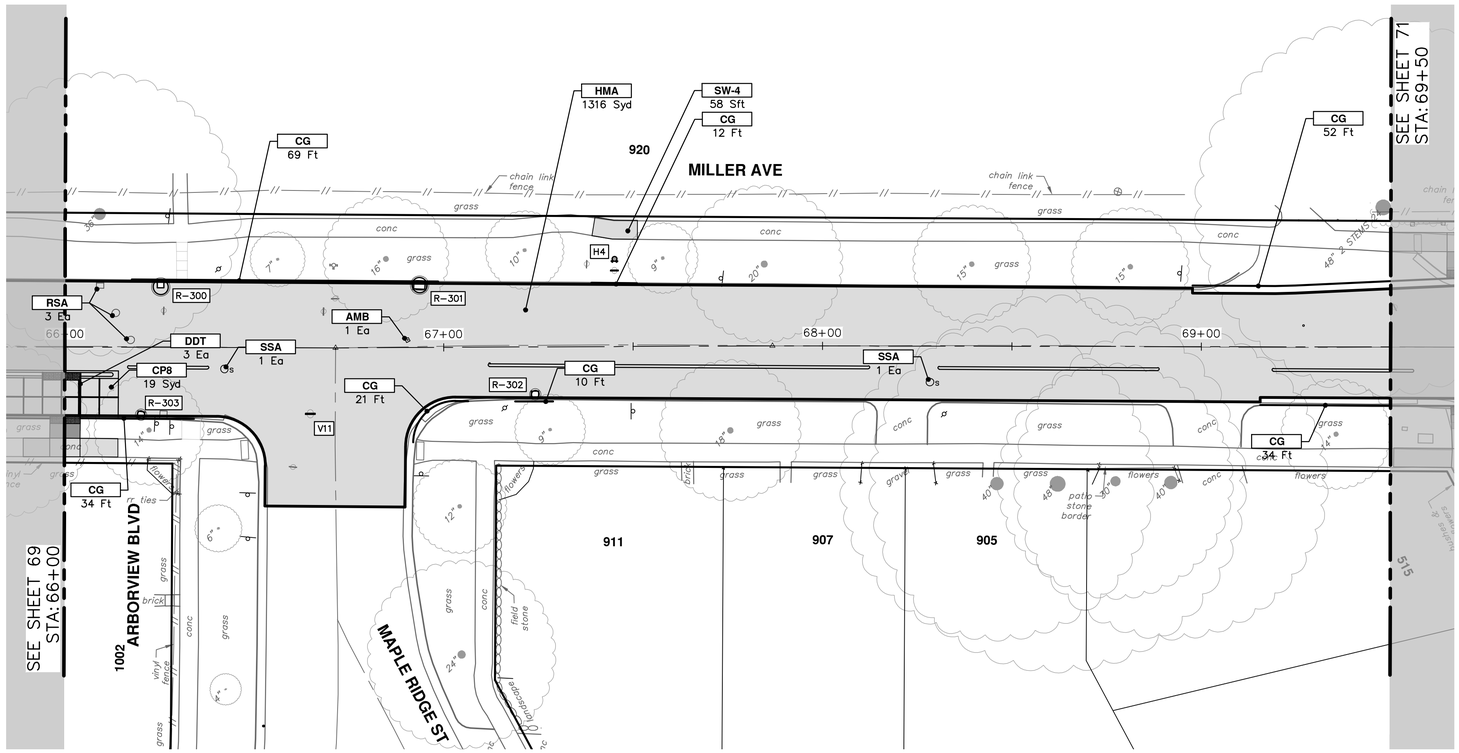
ROAD PLAN & PROFILE

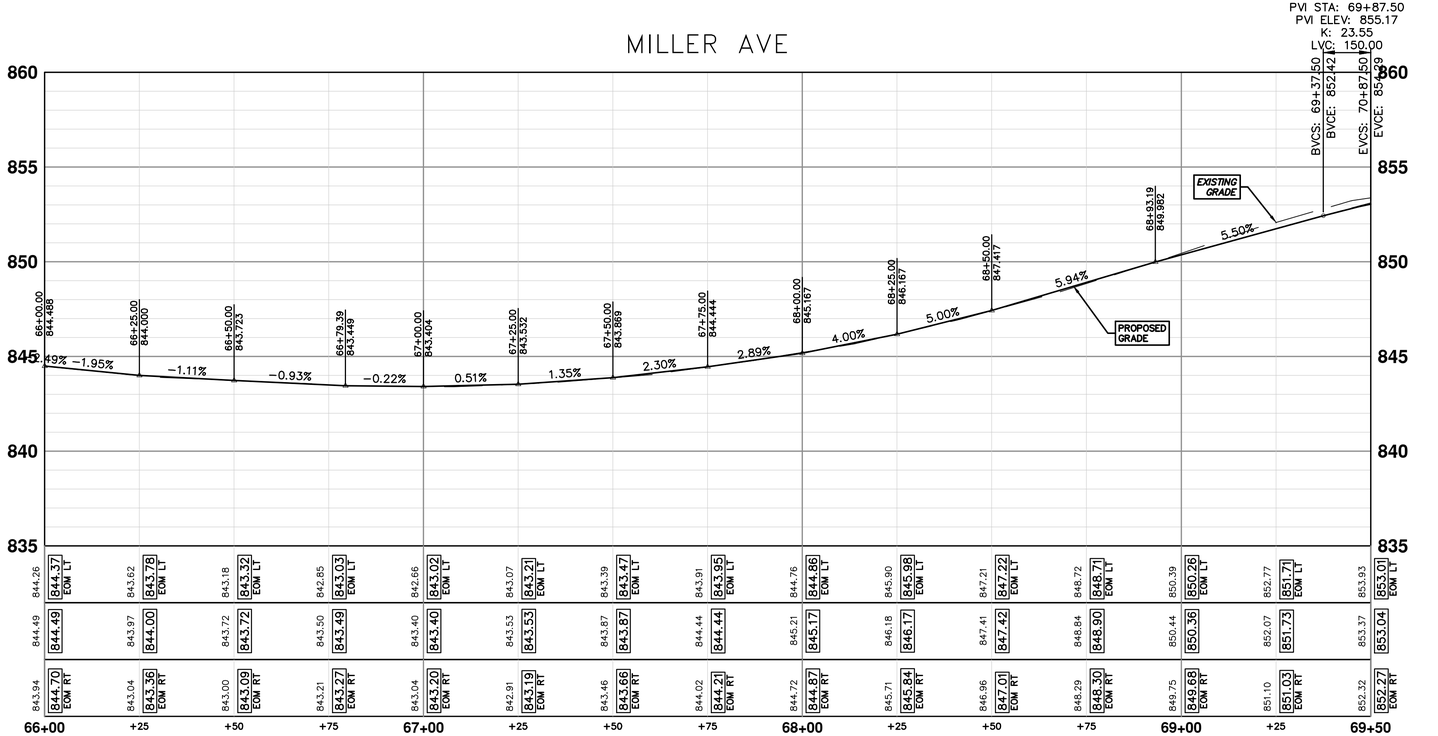
STA. 62+50 - STA. 66+00

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

DRAWING No. 2022034-69

SHEET No. 69 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
DG-6	DRIVEWAY GRAVEL 6 INCH 21AA LIMESTONE, C.I.P.
MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
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WSA	Water Structure Cover, Adjust

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00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

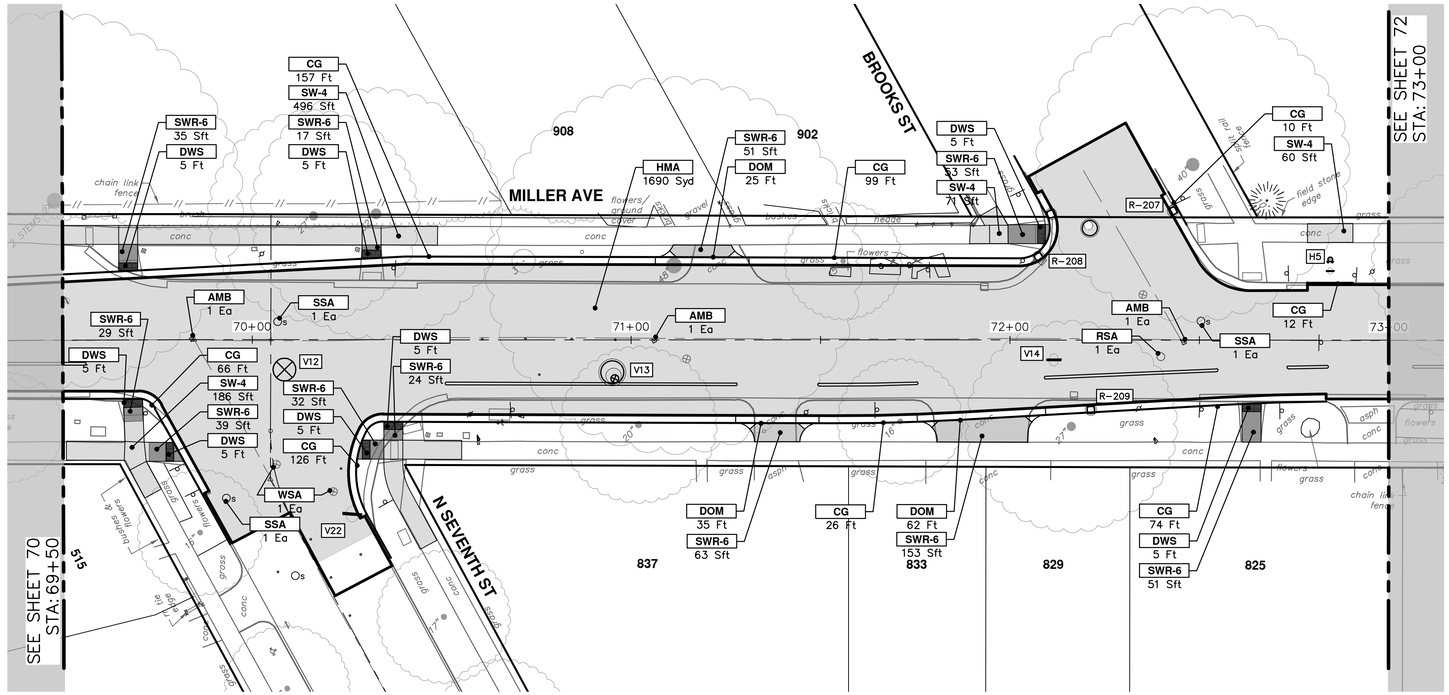
ROAD PLAN & PROFILE

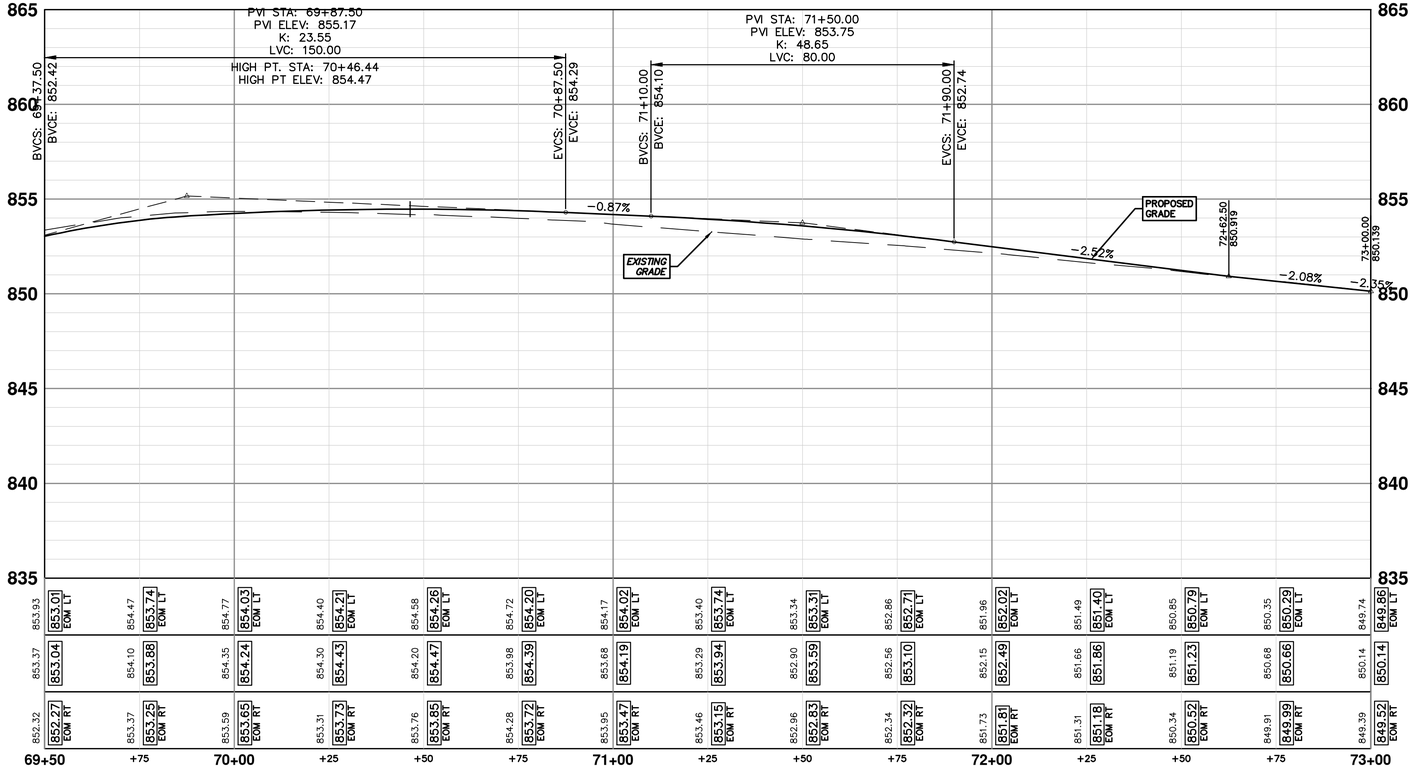
STA. 66+00 - STA. 69+50

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

DRAWING No. 2022034-70

SHEET No. 70 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
DG-6	DRIVEWAY GRAVEL 6 INCH 21AA LIMESTONE, C.I.P.
MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non-Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

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01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

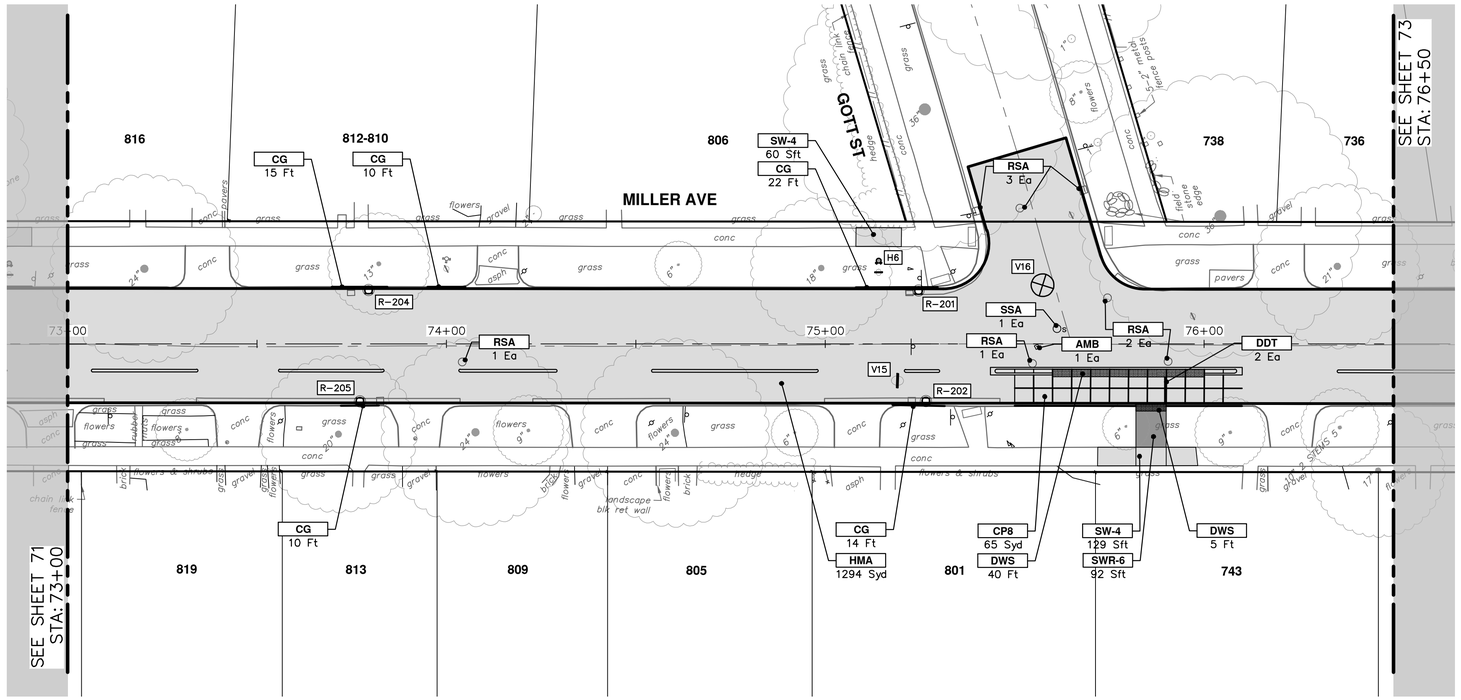
ROAD PLAN & PROFILE

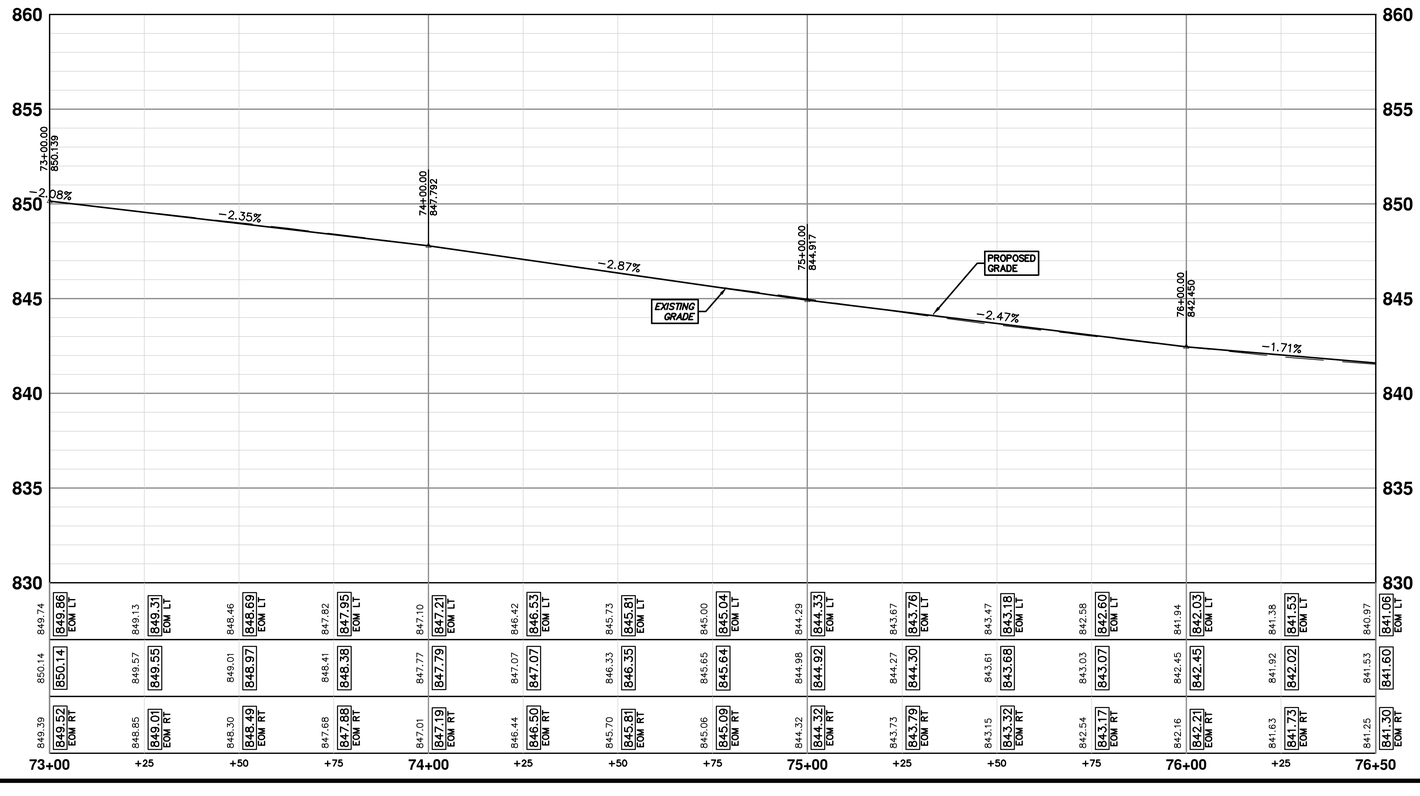
STA. 69+50 - STA. 73+00

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

DRAWING No. 2022034-71

SHEET No. 71 OF 131





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
DOM	Conc, Driveway Opening, Type M
DOM-HE	Conc, Driveway Opening, Type M, High Early
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MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non−Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
AGB	Gate Box, Adjust
RSA	Storm Structure Cover, Adjust
SSA	Sanitary Structure Cover, Adjust
WSA	Water Structure Cover, Adjust

Know what's below. Call before you dig.

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01	ADDENDUM PLANS	4−25−24	A2D	JKA
00	BID SET	4−9−24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

ROAD PLAN & PROFILE

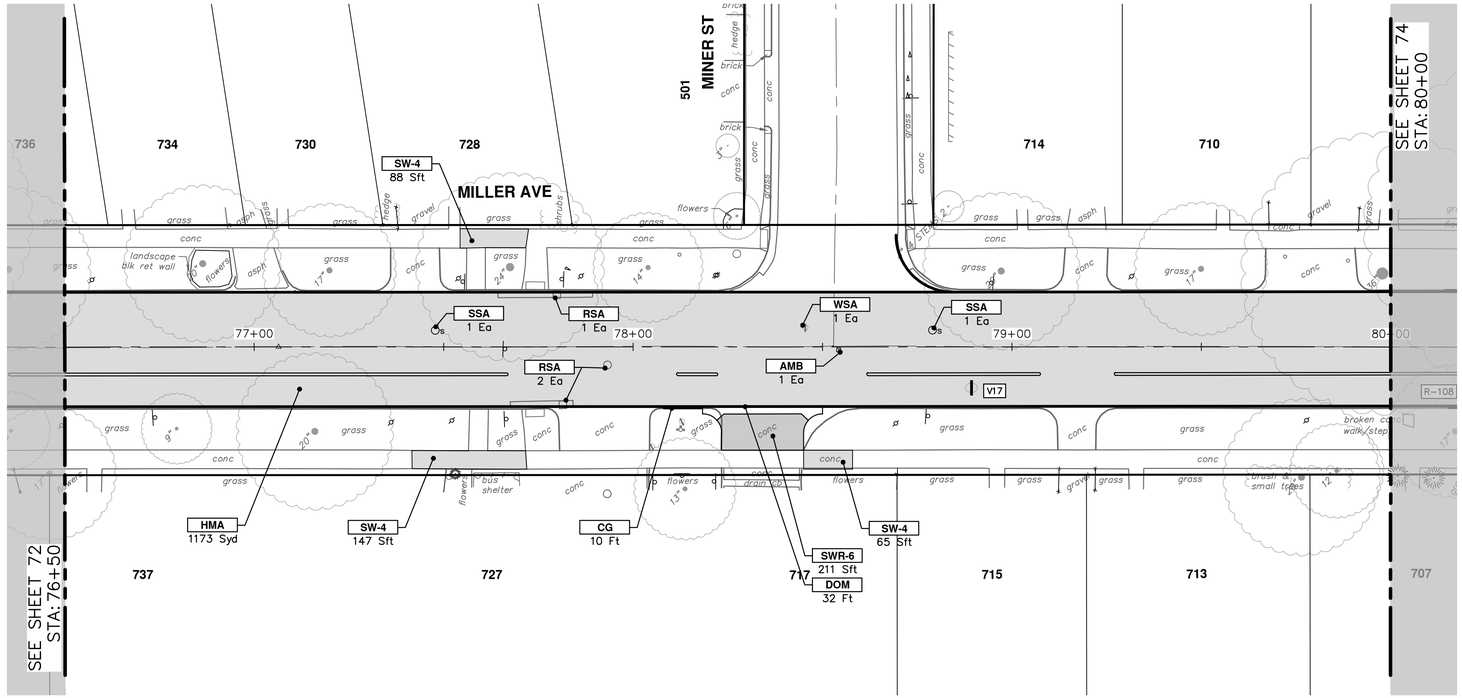
STA. 73+00 - STA. 76+50

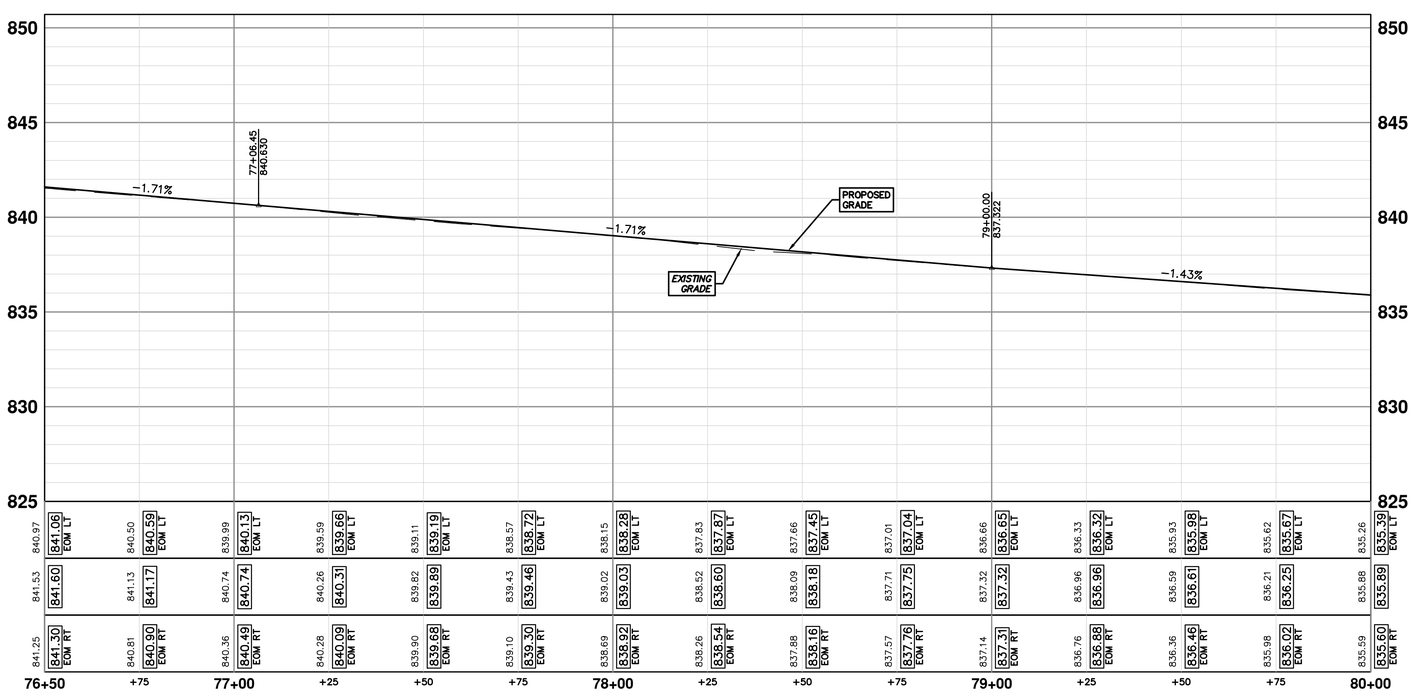
SCALE PLAN: 1" = 20' PROFILE: 1" = 4'

DRAWING No. 2022034-72

SHEET No. 72 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034Prd.dwg Dwg Created: 23−Apr−24 — _a2 standard bw.stb — Plot Date: 2−May−24





CONSTRUCTION KEY

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HMA	PLACE HMA, PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	HMA Approach
HP	Hand Patching
CG	Conc, Curb or Curb & Gutter, All Types
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DOM-HE	Conc, Driveway Opening, Type M, High Early
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MGD	MACHINE GRADING, DRIVEWAY
SW-4	Conc, Sidewalk, 4 In.
SWR-6	Conc, Sidewalk, Drive Approach, or Ramp, 6 In.
SW6-HE	Conc, Sidewalk, Drive Approach, or Ramp, 6 In., High Early
SW8	Conc, Sidewalk, Drive Approach, or Ramp, 8 In.
CP8	Conc Pavt, Non−Reinf, 8 in.
DWS	Detectable Warning Surface
DDT	Detectable Directional Tiles
ABO	ADJUST BY OTHERS
AMB	Monument Box, Adjust
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RSA	Storm Structure Cover, Adjust
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WSA	Water Structure Cover, Adjust

Know what's below. Call before you dig.

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00	BID SET	4−9−24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

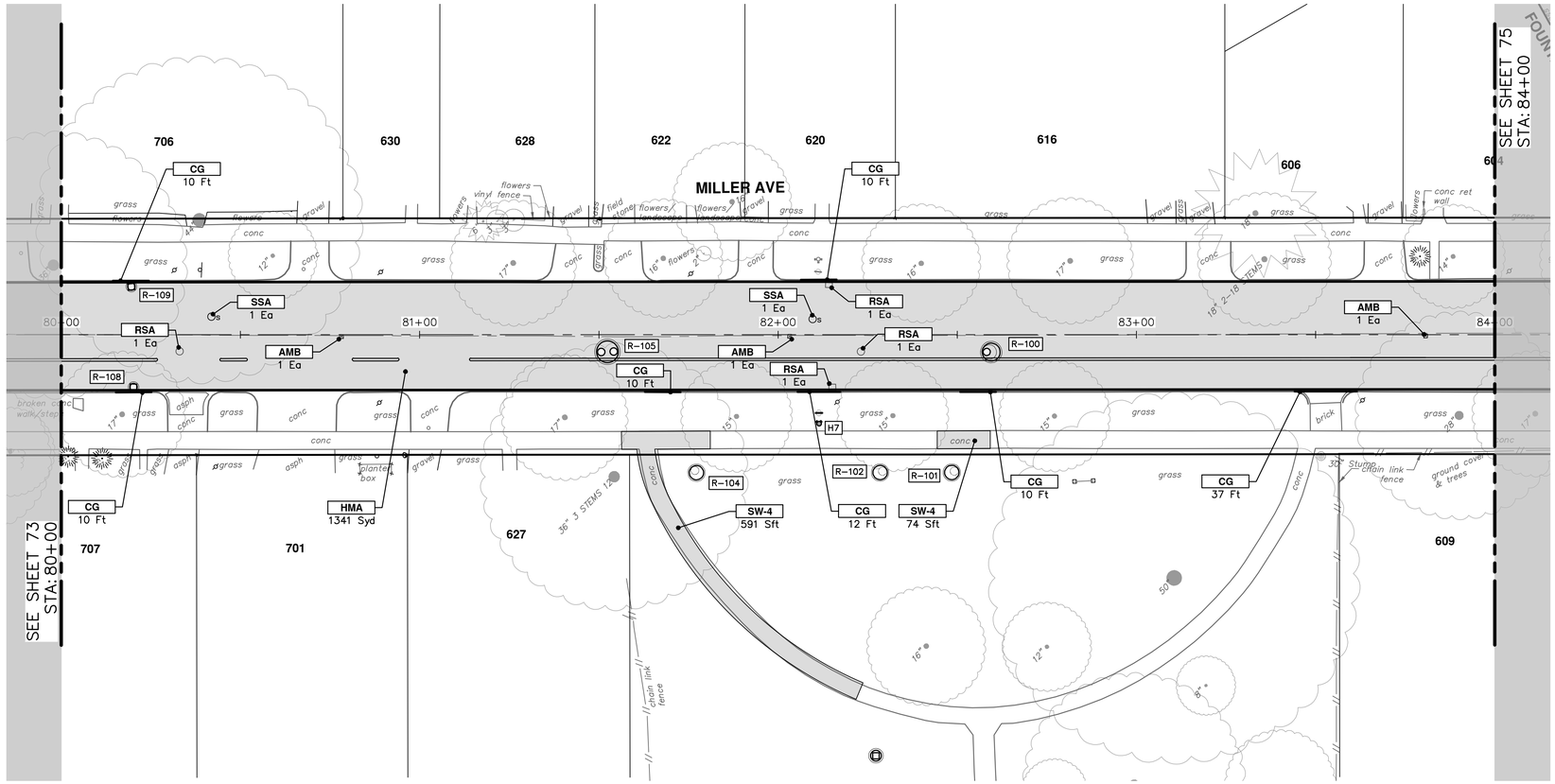
ROAD PLAN & PROFILE

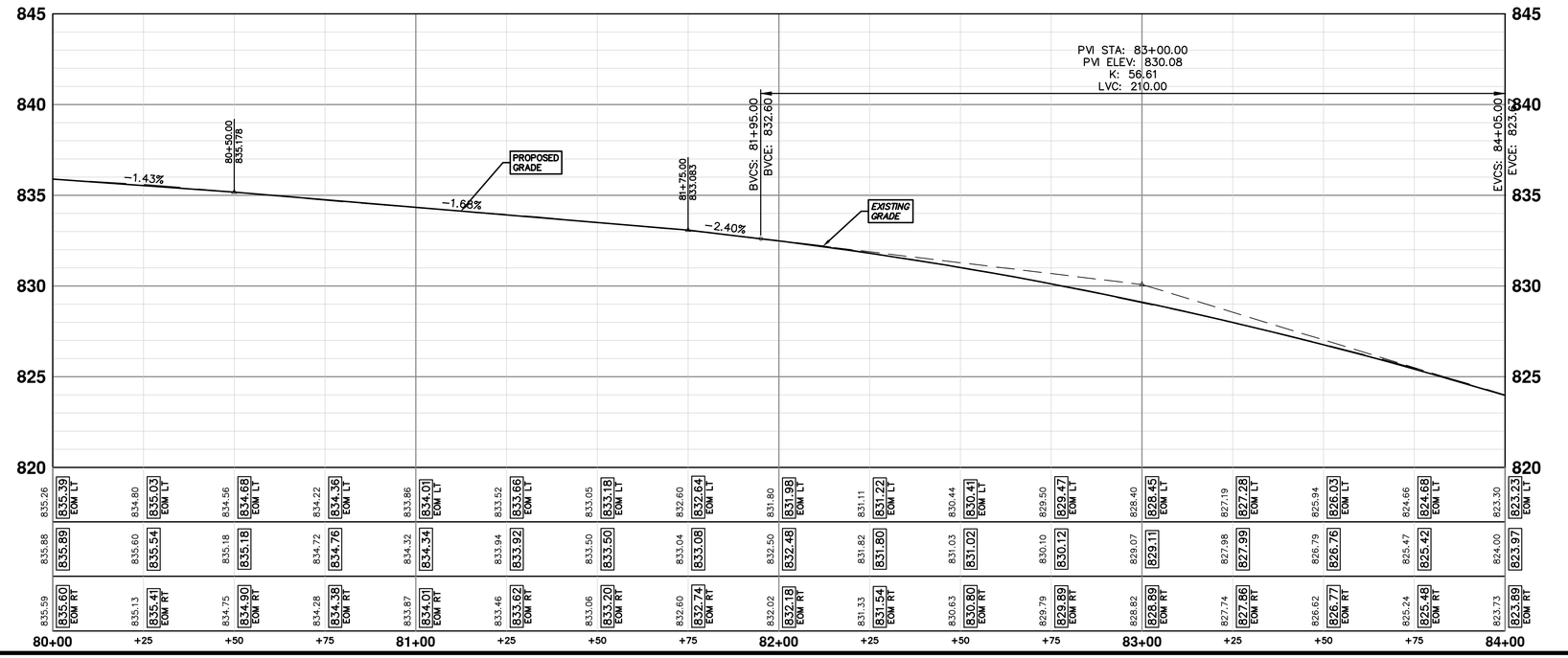
STA. 76+50 - STA. 80+00

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

DRAWING No. 2022034-73

SHEET No. 73 OF 131





CONSTRUCTION KEY	
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00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

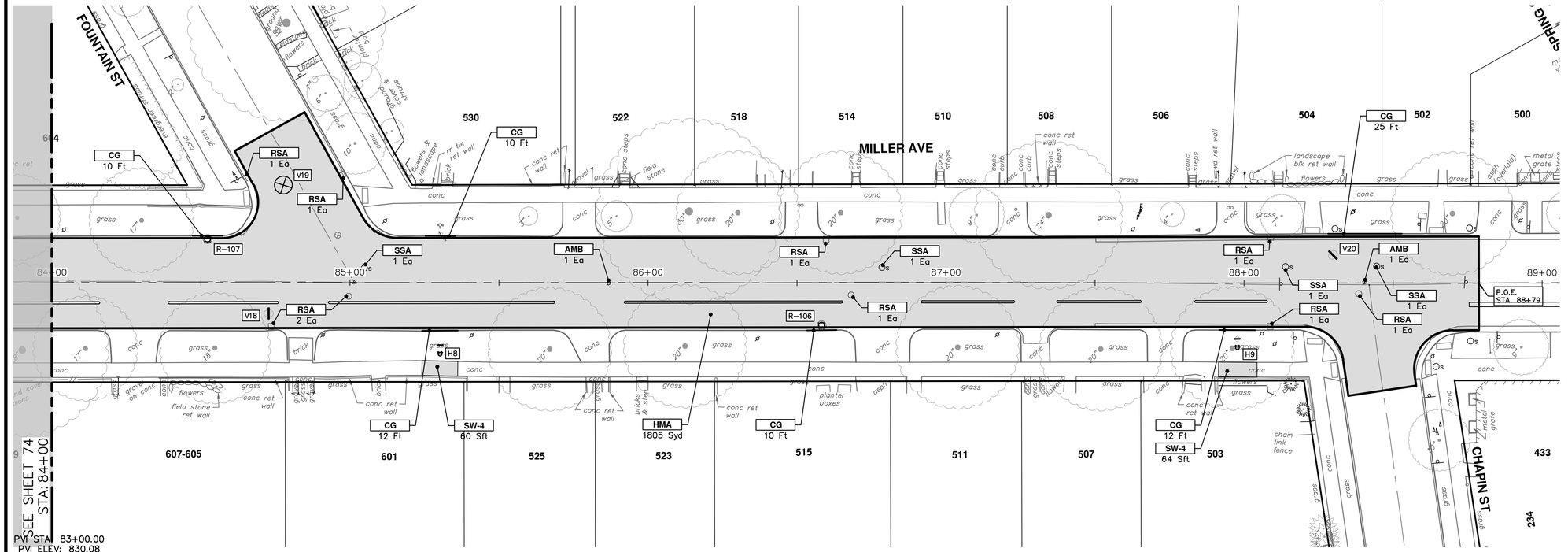
ROAD PLAN & PROFILE

STA. 80+00 - STA. 84+00

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

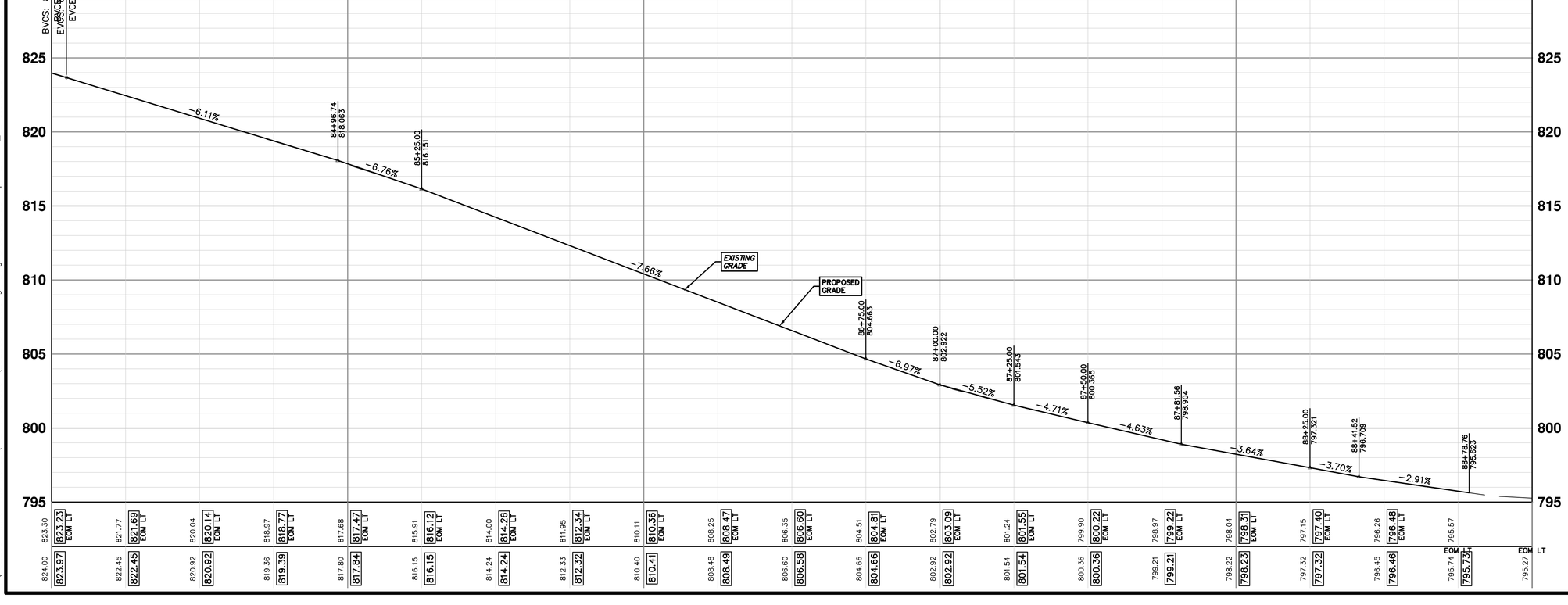
DRAWING No. 2022034-74

SHEET No. 74 OF 131



PVI STA: 83+00.00
PVI ELEV: 830.08
K: 56.61
LVC: 210.00
BVCS: 81[illegible]
EVCS: 83+66.61
EVCE: 823.67

MILLER AVE



CONSTRUCTION KEY

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

ROAD PLAN & PROFILE

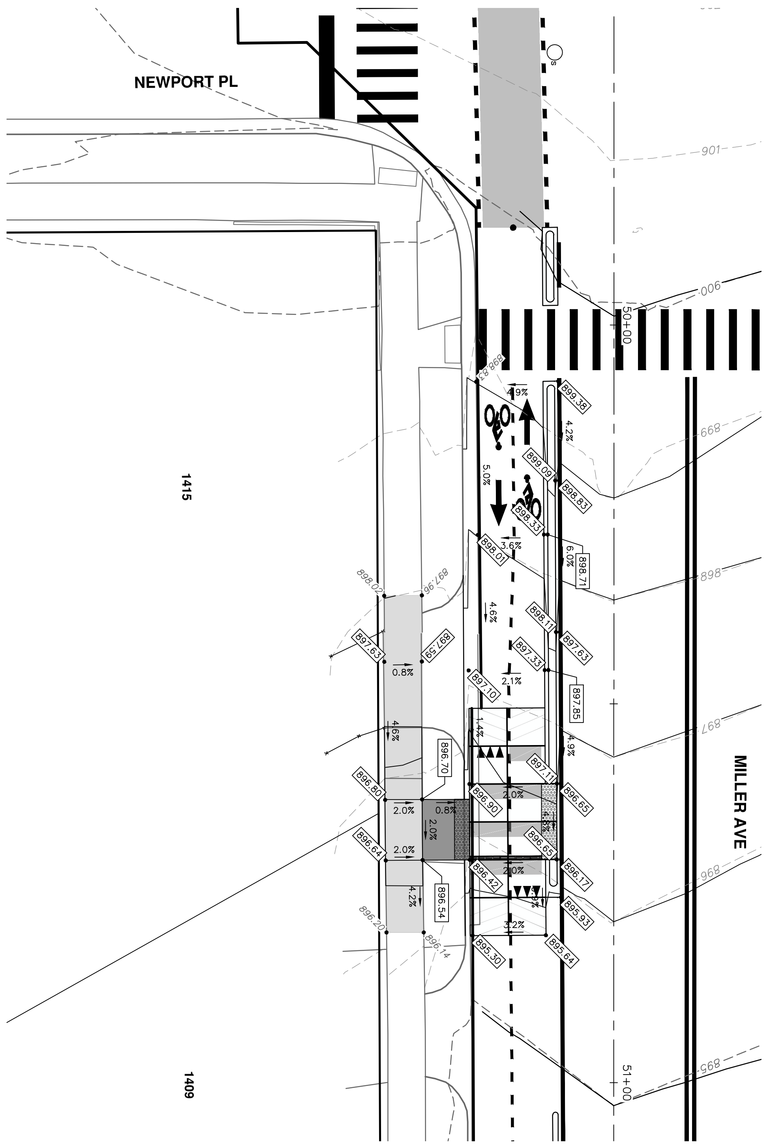
STA. 84+00 - SA. 88+79

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

DRAWING No. 2022034-75

SHEET No. 75 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034PPrd.dwg Dwg Created: 23-Apr-24 -- _a2 standard bw.stb -- Plot Date: 2-May-24



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 10'

DRAWING No. 2022034-76

MILLER AVENUE REHABILITATION

INTERSECTION GRADES

BUS STOP NEAR NEWPORT PL.

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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00	BID SET	4-9-24	A2D	JKA

RED OAK RD

MILLER AVE

ARBORVIEW BLVD

1027

1015

1003

64+00

65+00

66+00

R:\2022034 Miller Ave Rehab\Plan Production\2022034IG.dwg Dwg Created: 22-Apr-24 — _02 standard bw.stb — Plot Date: 2-May-24

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

INTERSECTION GRADES

RED OAK RD., BUS STOP NEAR ARBORVIEW BLVD.

SCALE **PLAN:** 1" = 10'

DRAWING No.
2022034-77

SHEET No.
77 OF 131

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	BID SET	4-9-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA

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

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

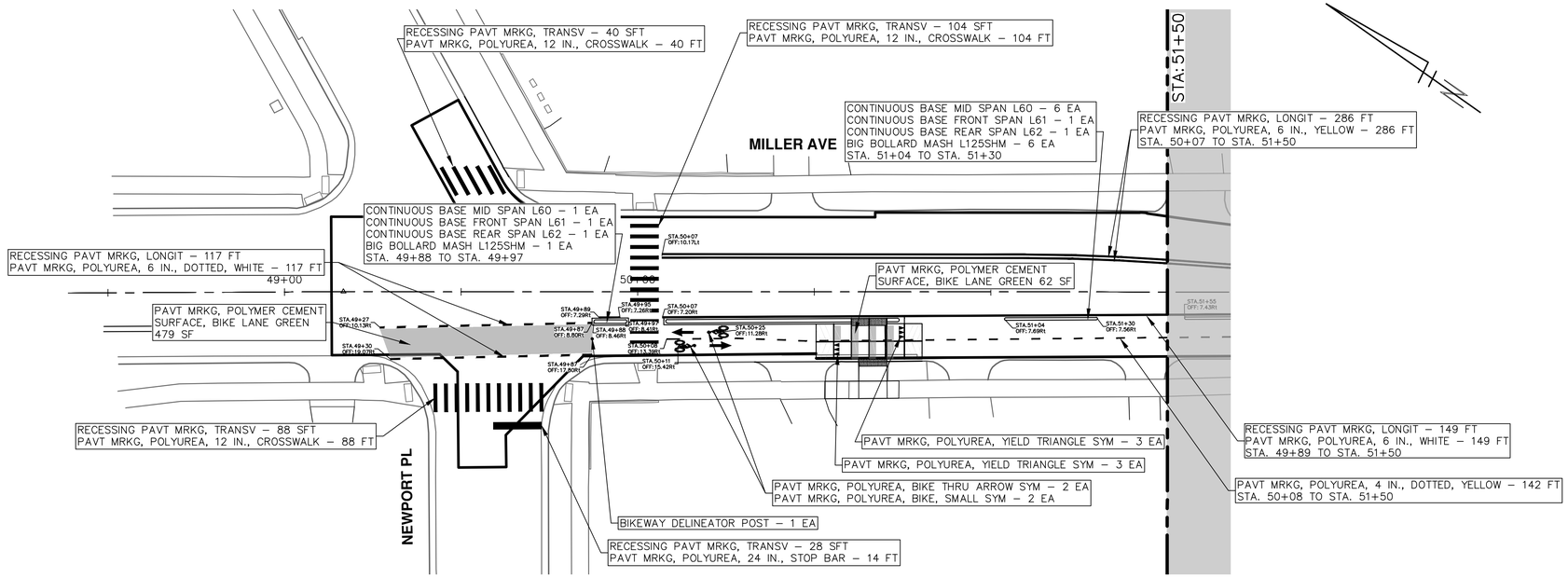
INTERSECTION GRADES

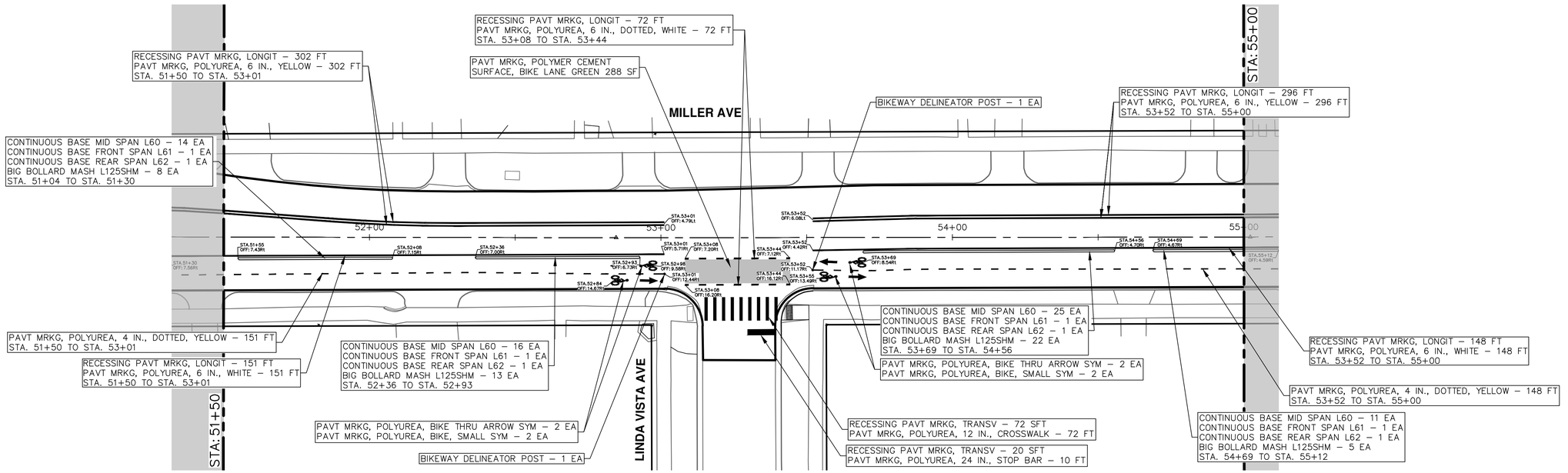
N SEVENTH ST, BUS STOP NEAR GOTT ST

SCALE **PLAN:** 1" = 10'

DRAWING No. **2022034-78**

SHEET No. **78 OF 131**





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

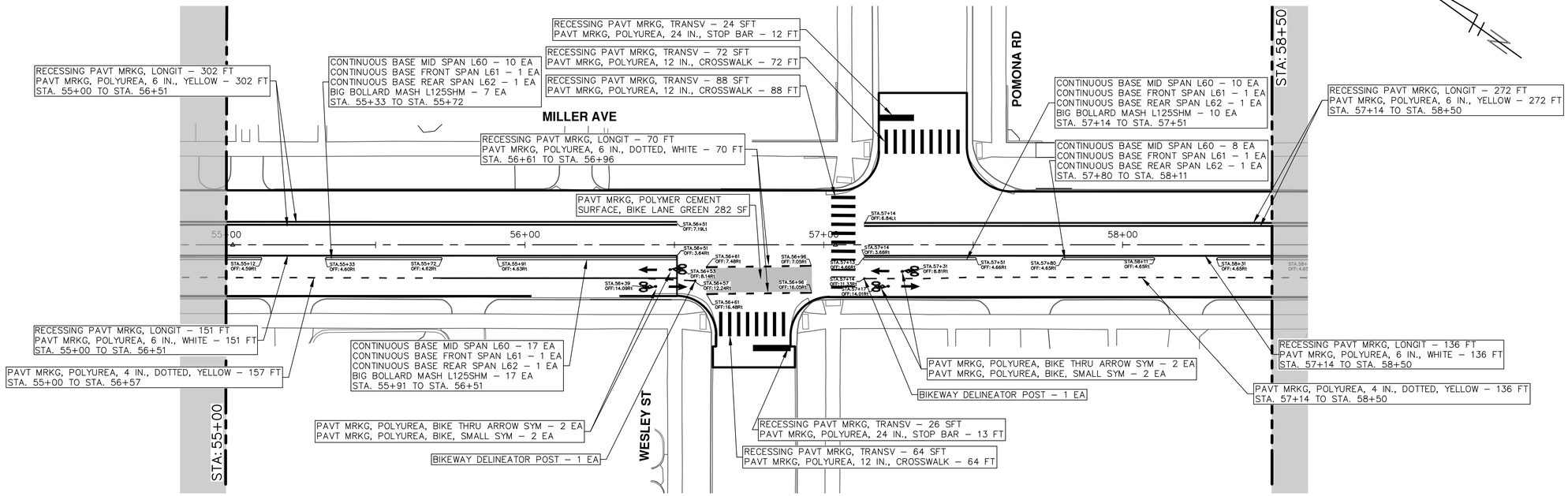
PAVEMENT MARKINGS

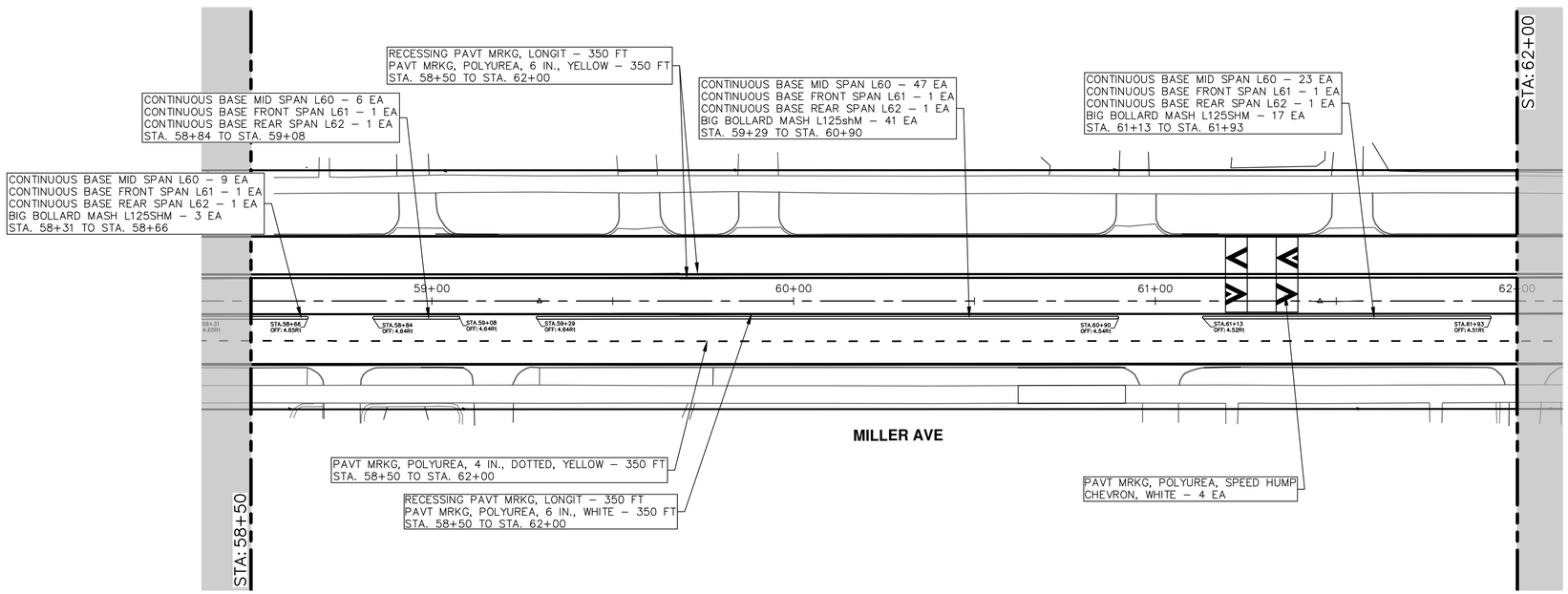
P.O.B. - STA. 55+00

SCALE : 1" = 20'

DRAWING No. 2022034-79

SHEET No. 79 OF 131





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

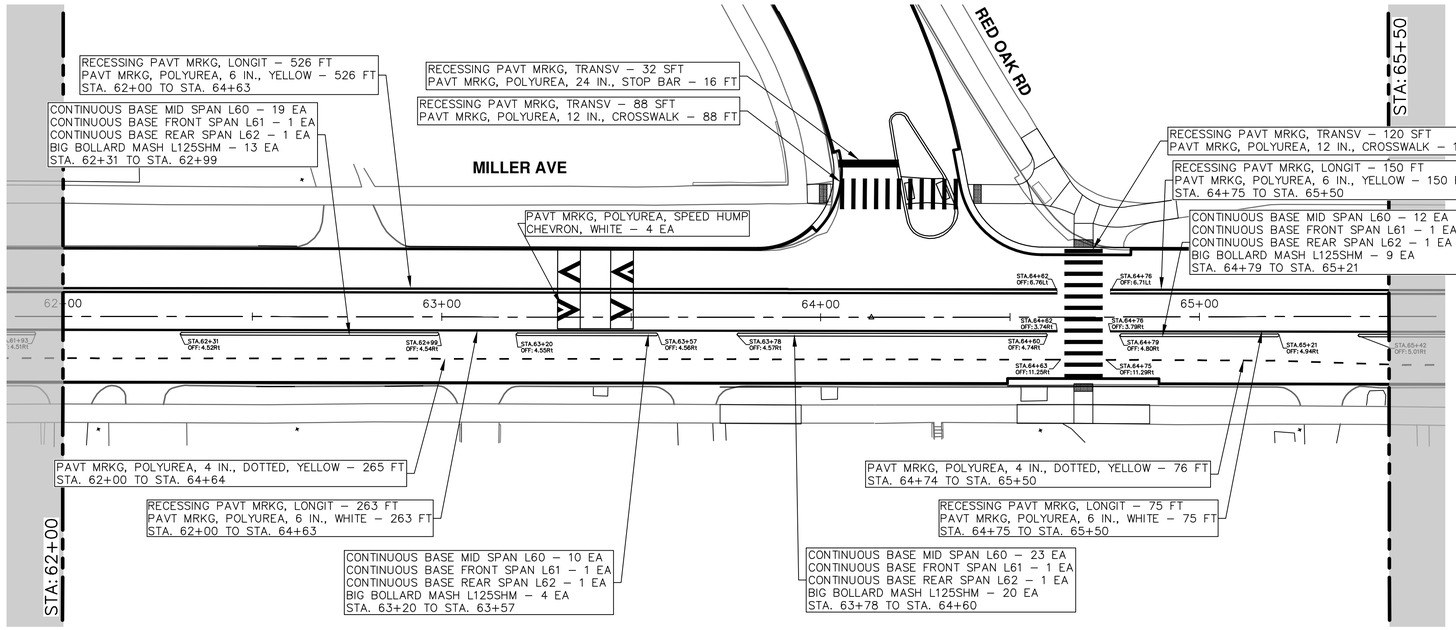
PAVEMENT MARKINGS

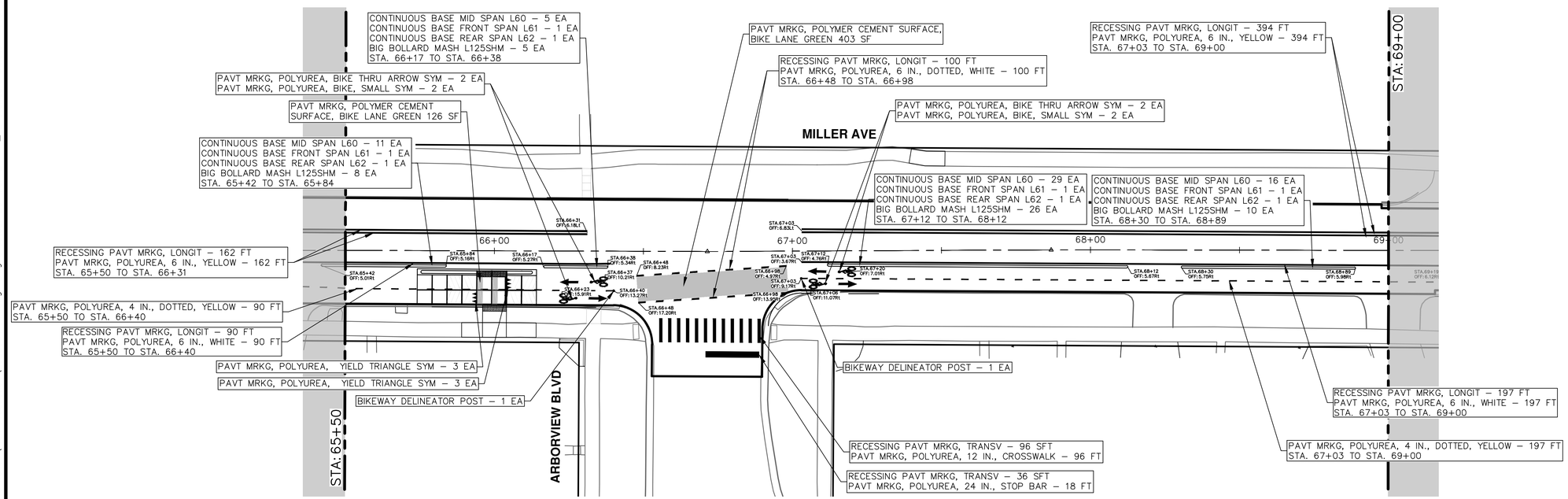
STA. 55+.00 - STA. 62+00

SCALE : 1" = 20'

DRAWING No.
2022034-80

SHEET No.
80 OF 131





Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PAVEMENT MARKINGS

STA. 62+00 - STA. 69+00

SCALE : 1" = 20'

DRAWING No. 2022034-81

SHEET No. 81 OF 131

RECESSING PAVT MRKG, LONGIT – 113 FT
PAVT MRKG, POLYUREA, 6 IN., DOTTED, WHITE – 113 FT

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 562 SF

RECESSING PAVT MRKG, TRANSV – 80 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 80 FT

RECESSING PAVT MRKG, TRANSV – 20 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 10 FT

PAVT MRKG, POLYUREA, BIKE THRU ARROW SYM – 2 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 2 EA

RECESSING PAVT MRKG, LONGIT – 104 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 104 FT
STA. 69+00 TO STA. 69+52

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 160 SF

CONTINUOUS BASE MID SPAN L60 – 10 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 7 EA
STA. 69+19 TO STA. 69+56

RECESSING PAVT MRKG, LONGIT – 52 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 52 FT
STA. 69+00 TO STA. 69+52

PAVT MRKG, POLYUREA, 4 IN., DOTTED, YELLOW – 39 FT
STA. 69+00 TO STA. 69+39

PAVT MRKG, POLYUREA, 4 IN., YELLOW – 20 FT
STA. 69+39 TO STA. 69+59

PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 4 FT

BIKEWAY DELINEATOR POST – 1 EA

PAVT MRKG, POLYUREA, BIKE THRU ARROW SYM – 1 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 1 EA

RECESSING PAVT MRKG, TRANSV – 38 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 19 FT

PAVT MRKG, POLYUREA,
BIKE, LARGE SYM – 1 EA

RECESSING PAVT MRKG, TRANSV – 24 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 12 FT

RECESSING PAVT MRKG, LONGIT – 256 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 256 FT

RECESSING PAVT MRKG, LONGIT – 434 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 434 FT

RECESSING PAVT MRKG, LONGIT – 151 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 151 FT

RECESSING PAVT MRKG, LONGIT – 100 FT
PAVT MRKG, POLYUREA, 6 IN., DOTTED, WHITE – 100 FT

MILLER AVE

N SEVENTH ST

BROOKS ST

RECESSING PAVT MRKG, TRANSV – 104 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 104 FT

RECESSING PAVT MRKG, TRANSV – 20 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 10 FT

PAVT MRKG, POLYUREA, 6 IN., WHITE – 104 FT
STA. 70+46 TO STA. 71+50

BIKEWAY DELINEATOR POST – 1 EA

RECESSING PAVT MRKG, TRANSV – 20 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 10 FT

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 237 SF

CONTINUOUS BASE MID SPAN L60 – 22 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 22 EA
STA. 70+51 TO STA. 71+28

PAVT MRKG, POLYUREA, 4 IN., YELLOW – 20 FT
STA. 70+46 TO STA. 70+66

PAVT MRKG, POLYUREA, BIKE THRU ARROW SYM – 2 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 2 EA

PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 5 FT

RECESSING PAVT MRKG, TRANSV – 120 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 120 FT

PAVT MRKG, POLYUREA,
BIKE, SMALL SYM – 1 EA

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 282 SF

MATCHLINE SEE LEFT

RECESSING PAVT MRKG, LONGIT – 242 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 242 FT
STA. 70+81 TO STA. 72+02

RECESSING PAVT MRKG, TRANSV – 30 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 15 FT

RECESSING PAVT MRKG, TRANSV – 88 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 88 FT

RECESSING PAVT MRKG, LONGIT – 54 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 54 FT
STA. 72+73 TO STA. 73+00

CONTINUOUS BASE MID SPAN L60 – 12 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 6 EA
STA. 72+09 TO STA. 72+55

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 126 SF

CONTINUOUS BASE MID SPAN L60 – 7 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
STA. 71+49 TO STA. 71+76

PAVT MRKG, POLYUREA, 4 IN., DOTTED, YELLOW – 224 FT
STA. 70+66 TO STA. 73+00

RECESSING PAVT MRKG, LONGIT – 235 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 208 FT
STA. 70+46 TO STA. 73+00

CONTINUOUS BASE MID SPAN L60 – 2 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 2 EA
STA. 72+73 TO STA. 72+84

RECESSING PAVT MRKG, TRANSV – 80 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 80 FT

MATCHLINE SEE RIGHT

RECESSING PAVT MRKG, TRANSV – 72 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 72 FT

RECESSING PAVT MRKG, TRANSV – 28 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 14 FT

RECESSING PAVT MRKG, TRANSV – 80 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 80 FT

CONTINUOUS BASE MID SPAN L60 – 1 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125shM – 1 EA
STA. 75+21 TO STA. 75+30

RECESSING PAVT MRKG, LONGIT – 231 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 231 FT
STA. 73+00 TO STA. 75+31

RECESSING PAVT MRKG, LONGIT – 442 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 442 FT
STA. 73+00 TO STA. 75+21

MILLER AVE

GOTT ST

PAVT MRKG, POLYUREA, YIELD TRIANGLE SYM – 3 EA

CONTINUOUS BASE MID SPAN L60 – 7 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 1 EA
STA. 73+55 TO STA. 73+84

CONTINUOUS BASE MID SPAN L60 – 6 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
STA. 74+03 TO STA. 74+29

CONTINUOUS BASE MID SPAN L60 – 7 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
STA. 73+06 TO STA. 73+34

PAVT MRKG, POLYUREA, 4 IN., DOTTED, YELLOW – 338 FT
STA. 73+00 TO STA. 76+50

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 80 SF

CONTINUOUS BASE MID SPAN L60 – 12 EA
CONTINUOUS BASE FRONT SPAN L61 – 1 EA
CONTINUOUS BASE REAR SPAN L62 – 1 EA
BIG BOLLARD MASH L125SHM – 3 EA
STA. 74+54 TO STA. 74+98

PAVT MRKG, POLYUREA, YIELD TRIANGLE SYM – 3 EA

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 98 SF

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN 96 SF

RECESSING PAVT MRKG, LONGIT – 37 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 37 FT
STA. 76+13 TO STA. 76+50

RECESSING PAVT MRKG, LONGIT – 124 FT
PAVT MRKG, POLYUREA, 6 IN., YELLOW – 124 FT
STA. 75+88 TO STA. 76+50

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

NO.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

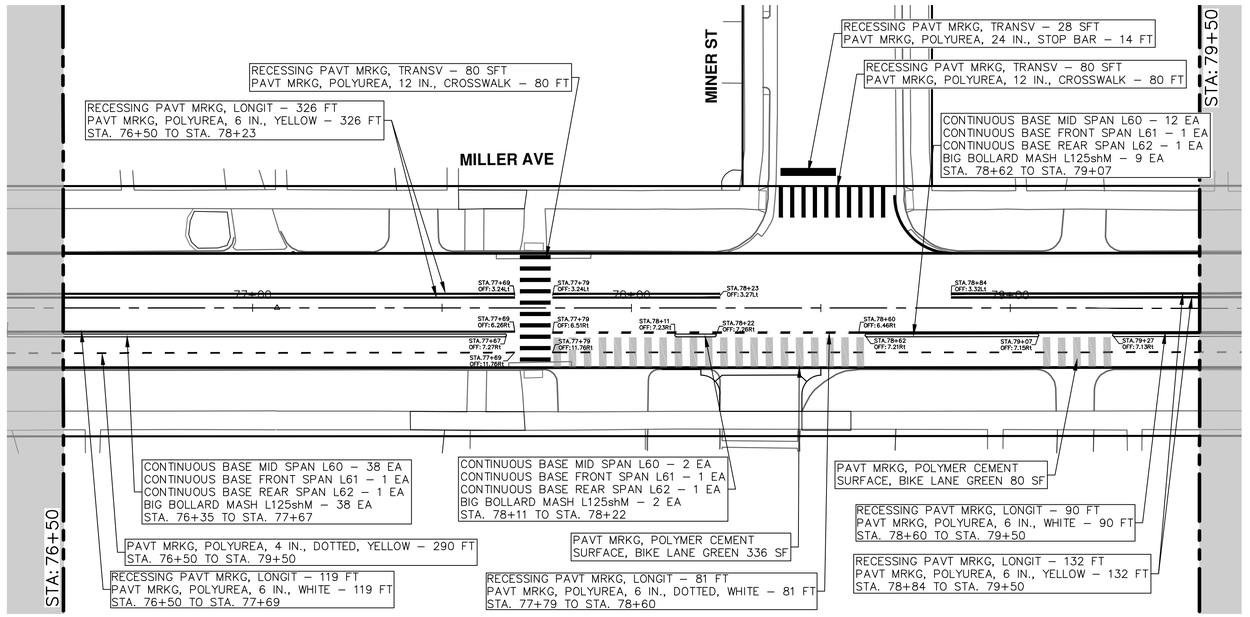
PAVEMENT MARKINGS

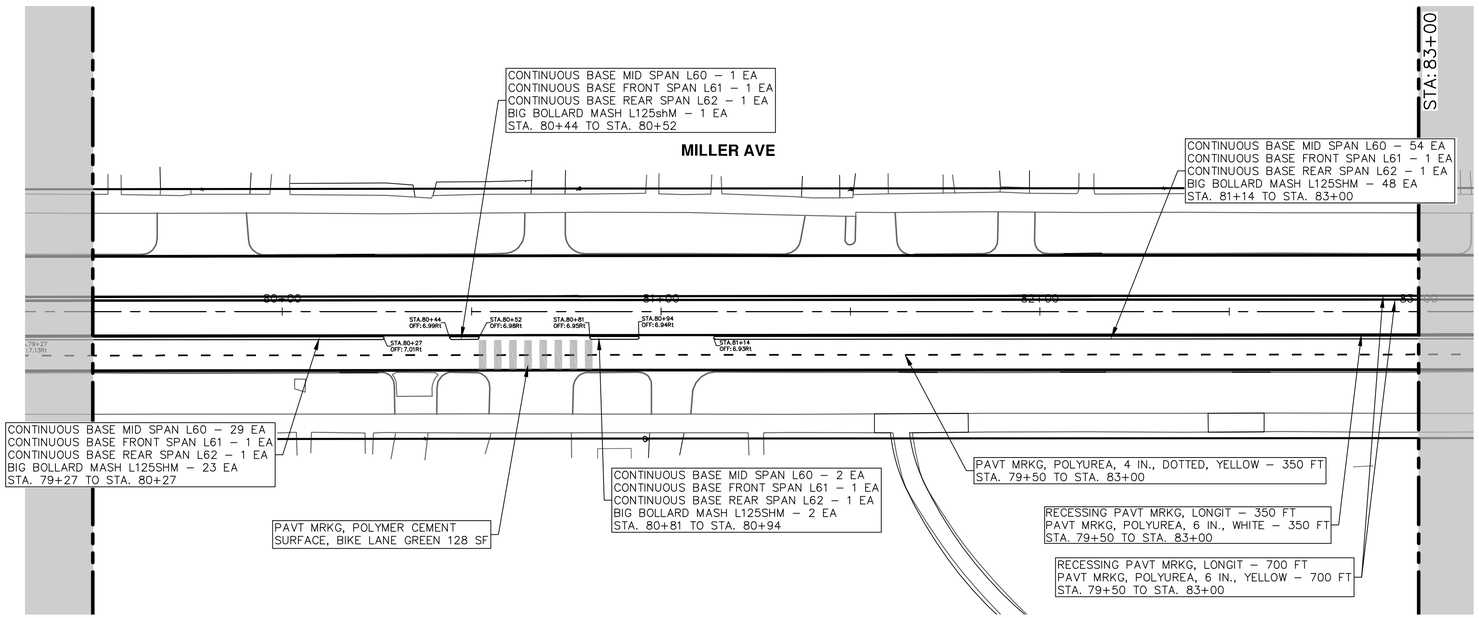
STA. 69+00 - STA. 76+50

SCALE: 1" = 20'

DRAWING No. 2022034-82

SHEET No. 82 OF 131





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

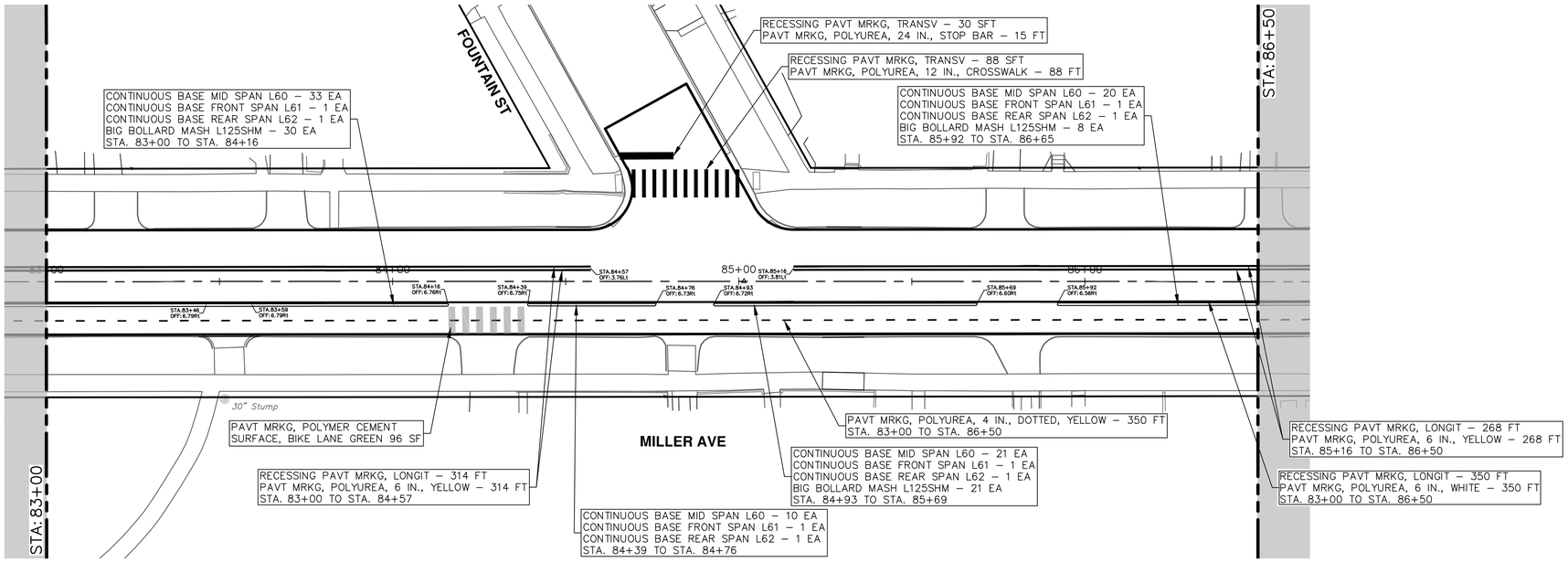
PAVEMENT MARKINGS

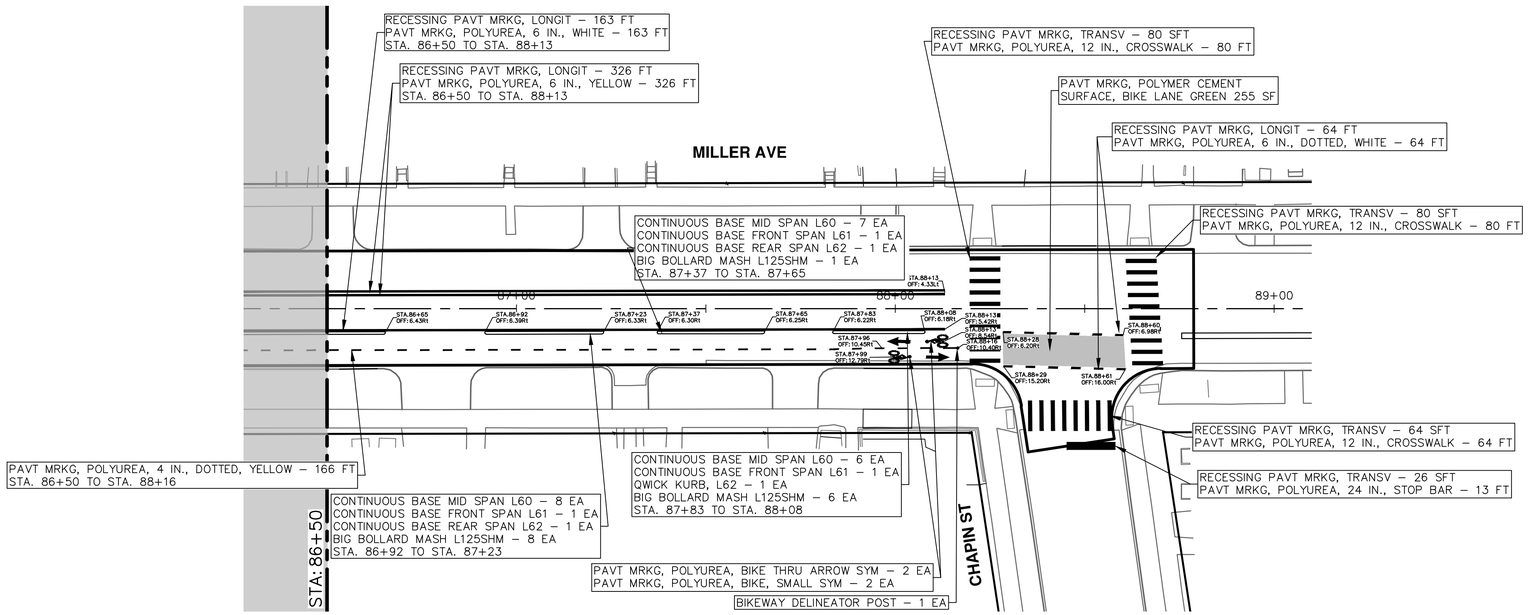
STA. 76+50 - STA. 83+00

SCALE : 1" = 20'

DRAWING No. 2022034-83

SHEET No. 83 OF 131





R:\2022034 Miller Ave Rehab\Plan Production\2022034Pmk.dwg Dwg Created: 29-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PAVEMENT MARKINGS

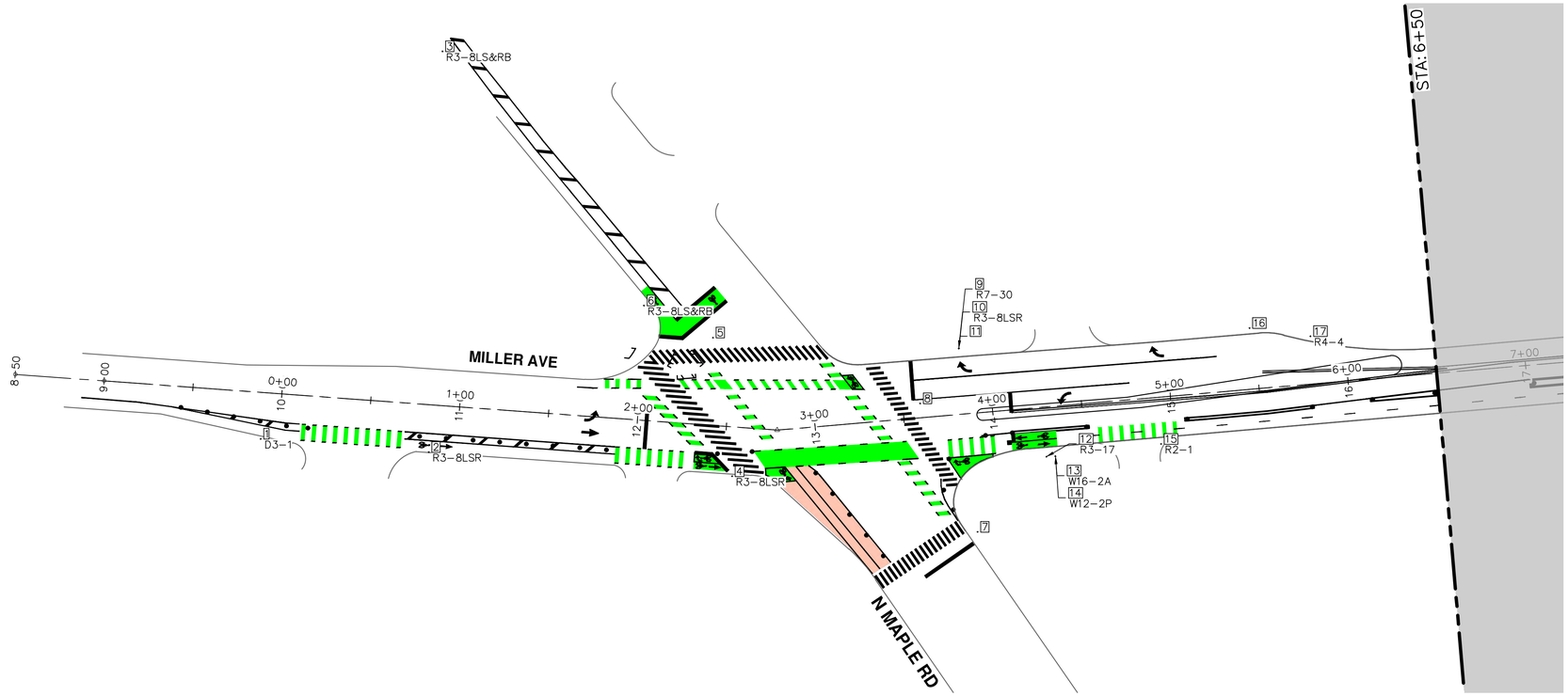
STA. 83+00 - P.O.E.

SCALE : 1" = 20'

DRAWING No. 2022034-84

SHEET No.

84 OF 131



Point #	REMOVE EXISTING	INSTALL NEW
1	Y	
2	Y	LEFT, THRU RIGHT, BIKE (R3-8)
3	Y	LEFT, THRU RIGHT, BIKE (R3-8)
4	Y	R10-1B, POST MOUNTED, 24"X24"
5	N	R10-1B, MAST-ARM MOUNTED, (FACING SB), 24"X24"
6	Y	LEFT, THRU RIGHT, BIKE (R3-8)
7	N	R10-1B, POST MOUNTED, 24"X24"
8	N	R10-1B, MAST-ARM MOUNTED, (FACING WB), 24"X24"
9	Y	
10	Y	
11	N	LEFT, THRU RIGHT (R3-8)
12	Y	
13	Y	W16-2A
14	Y	W12-2P
15	Y	R2-1
16	N	LEFT, THRU RIGHT (R3-8)
17	Y	
18	Y	R2-1

SIGN	EA (THIS SHEET)
R2-1	2
LEFT, THRU RIGHT (R3-8)	2
LEFT, THRU RIGHT, BIKE (R3-8)	3
R10-1B	4
W12-2P	1
W16-2A	1

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

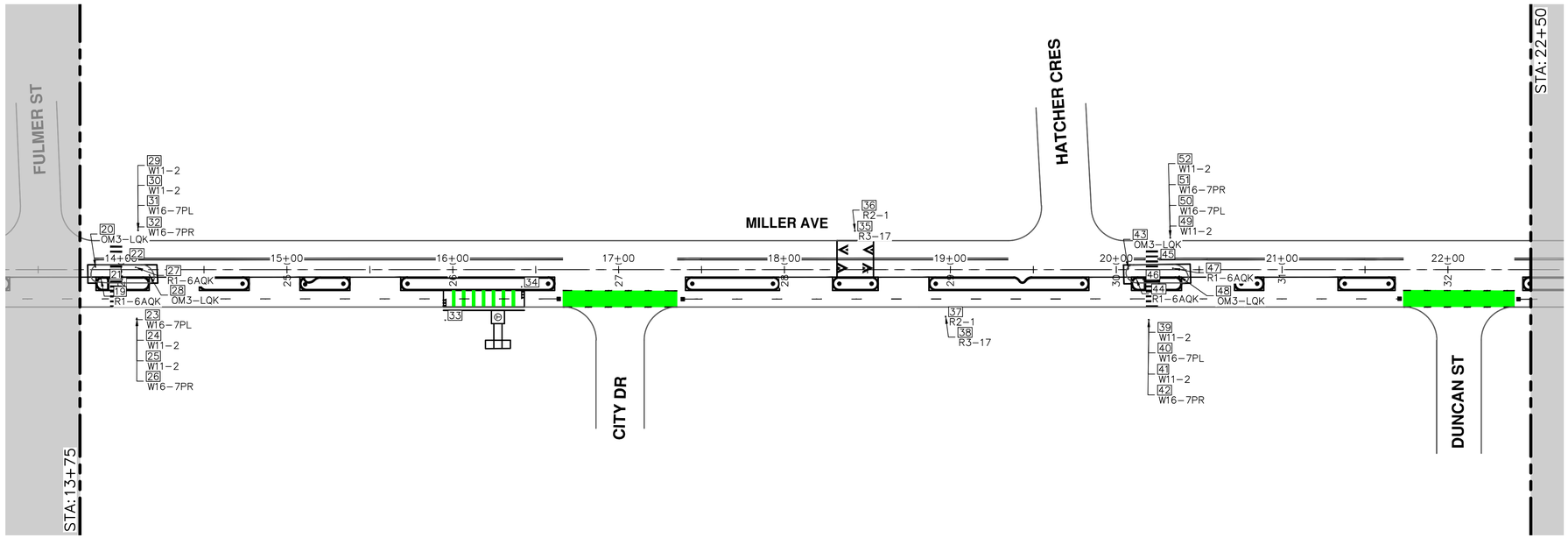
PERMANENT SIGNING

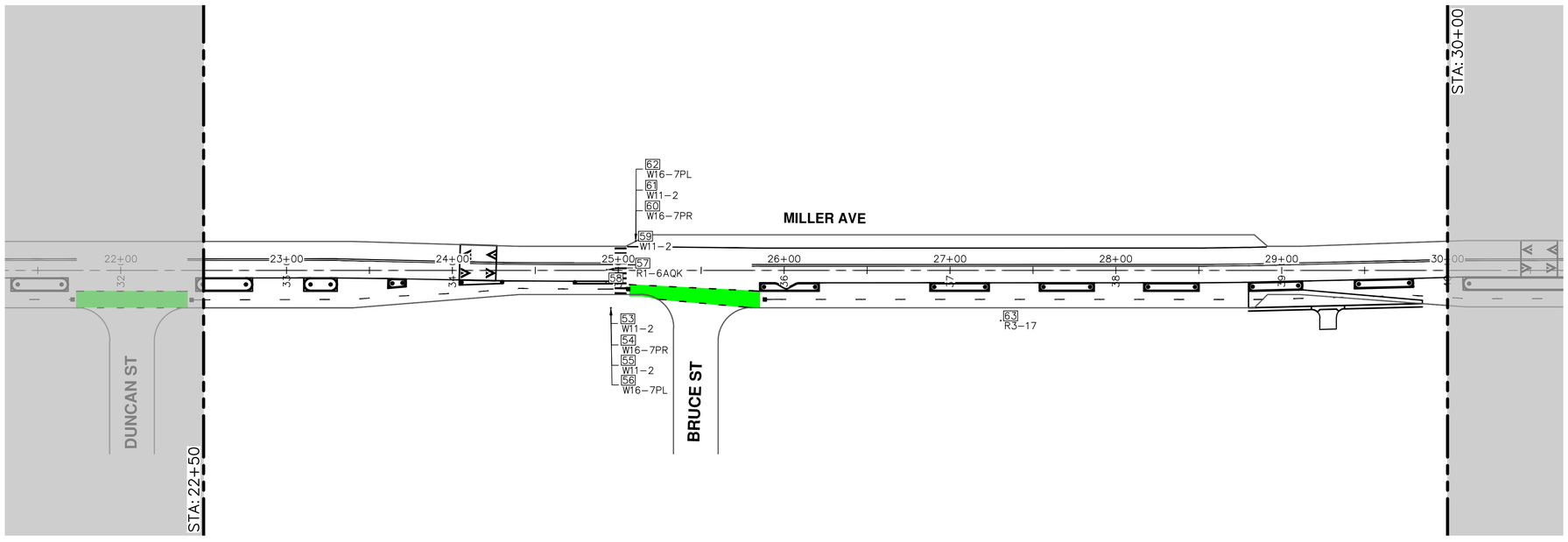
P.O.B. - STA 14+00

SCALE: 1" = 40'

DRAWING No. 2022034-85

SHEET No. 85 OF 131





Point #	REMOVE EXISTING	INSTALL NEW
19	Y	
20	Y	
21	N	QWICK KURB SIGN, R1-6A, BUFFER
22	N	QWICK KURB SIGN, R1-6A, CENTERLINE
23	N	
24	N	
25	N	
26	N	
27	Y	
28	Y	
29	N	
30	N	
31	N	
32	N	
33	N	R9-6
34	N	QWICK KURB SIGN, R9-6, BUFFER
35	Y	
36	Y	R2-1
37	Y	R2-1
38	Y	
39	N	
40	N	
41	N	
42	N	
43	Y	
44	Y	
45	N	QWICK KURB SIGN, R1-6A, CENTERLINE
46	N	QWICK KURB SIGN, R1-6A, BUFFER
47	Y	
48	Y	
49	N	
50	N	
51	N	
52	N	
53	N	
54	N	
55	N	
56	N	
57	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
58	N	QWICK KURB SIGN, R1-6A, BUFFER
59	N	
60	N	
61	N	
62	N	
63	Y	

SIGN	EA (THIS SHEET)
QWICK KURB SIGN, R1-6A	6
R2-1	2
R9-6	1
QWICK KURB SIGN, R9-6	1

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

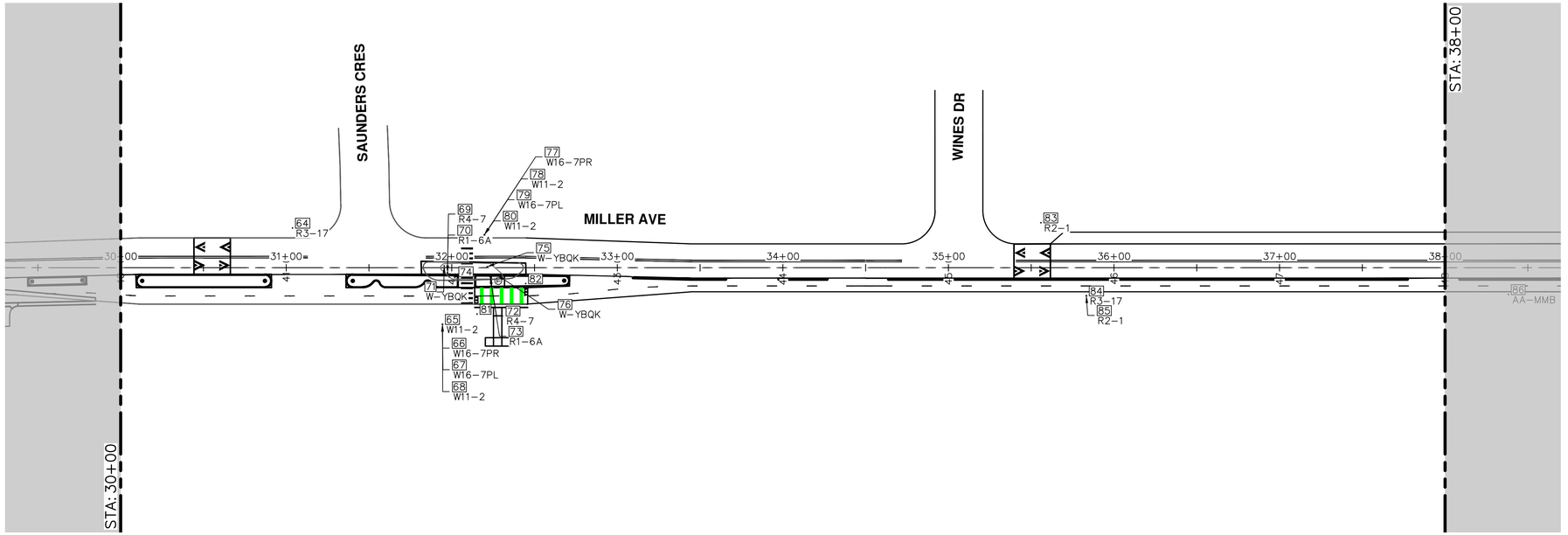
PERMANENT SIGNING

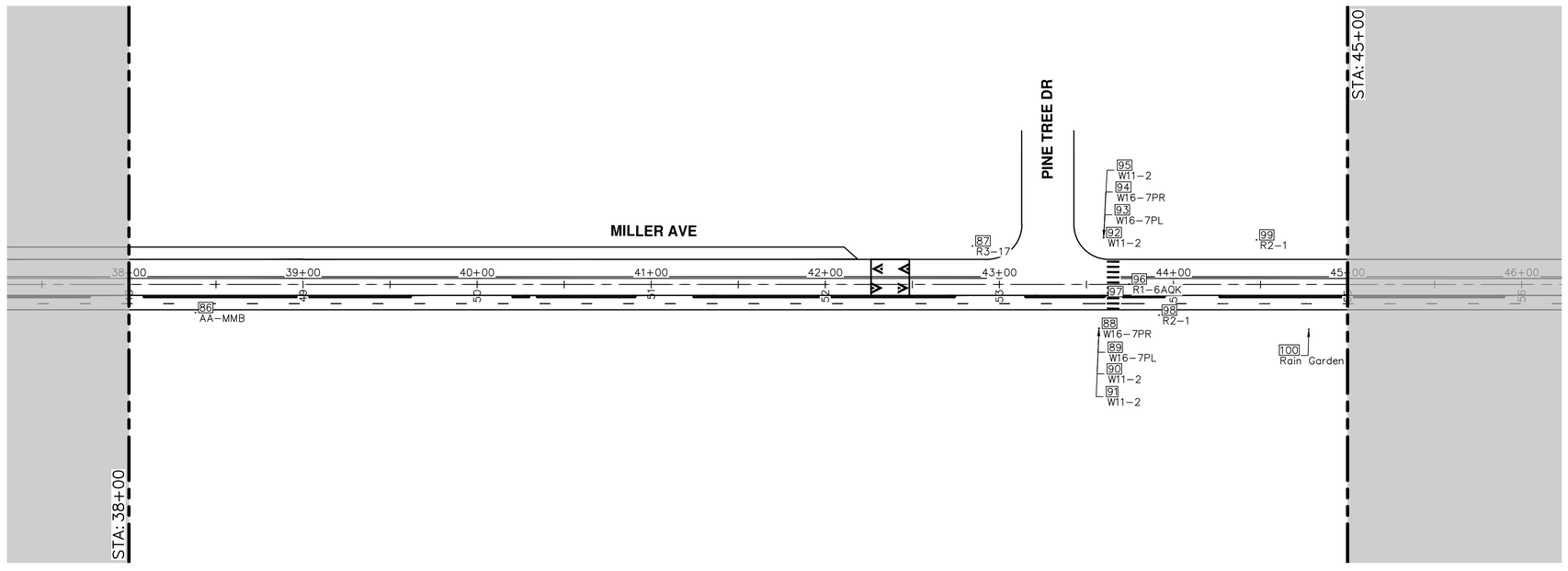
STA. 14+00 - STA. 30+00

SCALE : 1" = 40'

DRAWING No. 2022034-86

SHEET No. 86 OF 131





SIGN	EA (THIS SHEET)
QWICK KURB SIGN, R1-6A	4
R2-1	4
R9-6	1
QWICK KURB SIGN, R9-6	1

Point #	REMOVE EXISTING	INSTALL NEW
64	Y	
65	N	
66	N	
67	N	
68	N	
69	Y	
70	Y	
71	Y	
72	Y	
73	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
74	N	QWICK KURB SIGN, R1-6A, BUFFER
75	Y	
76	Y	
77	N	
78	N	
79	N	
80	N	
81	N	R9-6
82	N	QWICK KURB SIGN, R9-6
83	Y	R2-1
84	Y	
85	Y	R2-1
86	Y	
87	Y	
88	N	
89	N	
90	N	
91	N	
92	N	
93	N	
94	N	
95	N	
96	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
97	N	QWICK KURB SIGN, R1-6A, BUFFER
98	Y	R2-1
99	Y	R2-1
100	Y	

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PERMANENT SIGNING

STA. 30+00 - STA. 45+00

SCALE : 1" = 40'

DRAWING No. 2022034-87

SHEET No. 87 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\20220334PSgn.dwg Dwg Created: 29-Apr-24 - _a2 standard bw.stb - Plot Date: 2-May-24

SIGN	EA (THIS SHEET)
QWICK KURB SIGN, R16A	4
R2-1	3
R9-6	1
QWICK KURB SIGN, R9-6	1

Point #	REMOVE EXISTING	INSTALL NEW
101	Y	
102	Y	
103	Y	
104	N	
105	N	
106	N	
107	N	
108	N	
109	N	
110	N	
111	N	
112	N	QWICK KURB SIGN, R16A, CENTERLINE
113	N	QWICK KURB SIGN, R16A, BUFFER
114	N	
115	N	
116	N	
117	N	
118	Y	
119	Y	
120	Y	
121	Y	
122	Y	
123	Y	
124	Y	
125	Y	
126	N	QWICK KURB SIGN, R16A, IN NEW HARDENED CENTERLINE
127	N	
128	N	
129	N	
130	N	
131	N	R9-6
132	N	QWICK KURB SIGN, R9-6, BUFFER
133	Y	
134	Y	
135	Y	
136	Y	
137	Y	
138	Y	
139	Y	R2-1
140	Y	
141	Y	
142	Y	
143	Y	
144	Y	
145	Y	
146	Y	
147	Y	
148	Y	QWICK KURB SIGN, R16A, CENTERLINE
149	N	
150	N	
151	N	
152	N	
153	Y	
154	Y	
155	Y	
156	Y	R2-1
157	Y	
158	Y	R2-1
159	Y	

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PERMANENT SIGNING

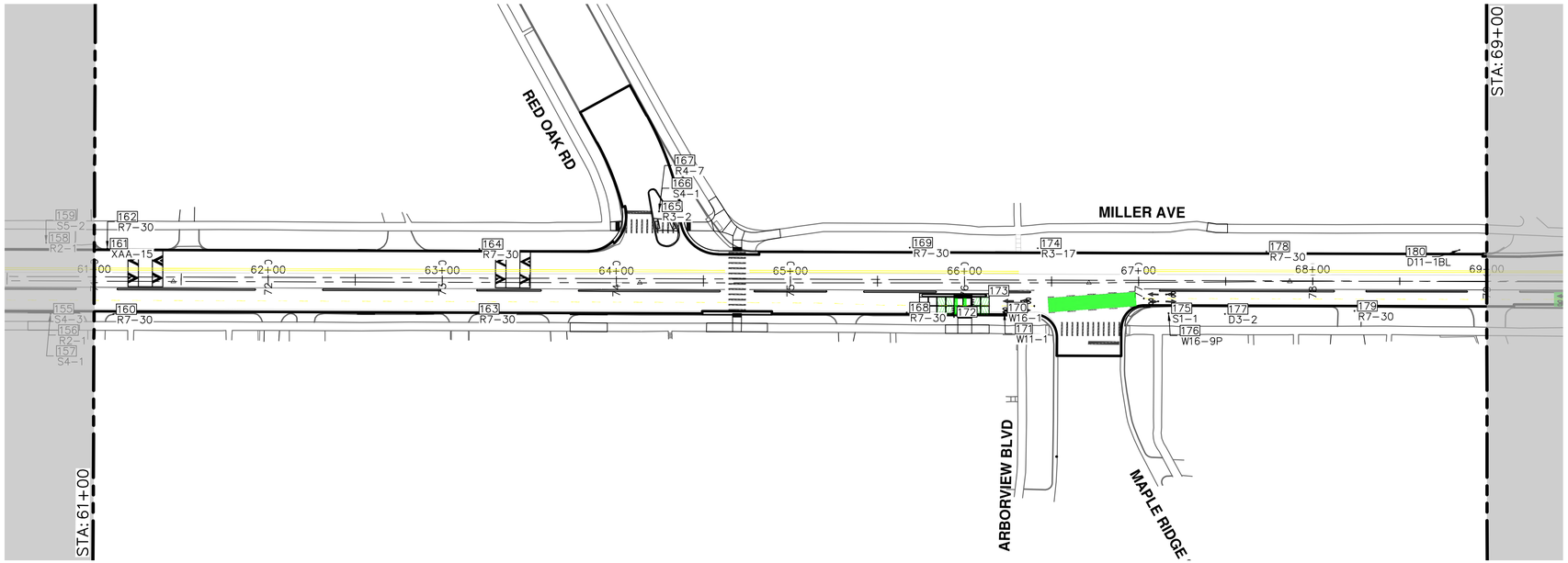
STA 45+00 - STA. 61+00

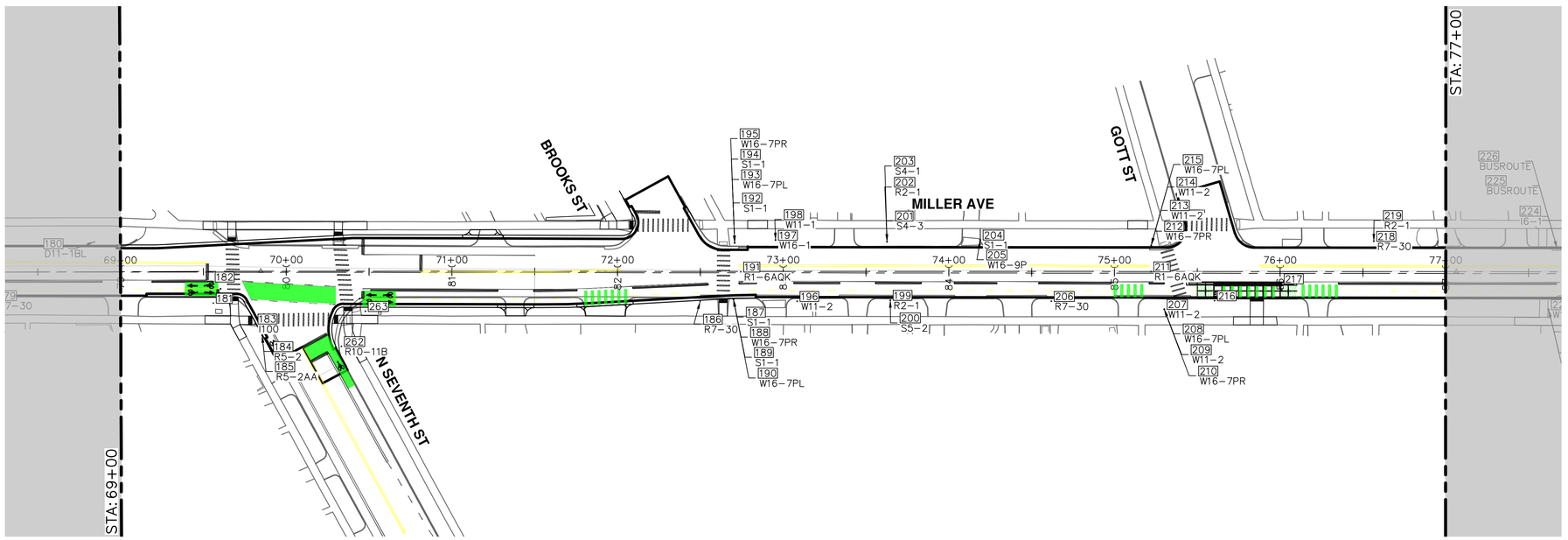
SCALE: 1" = 40'

DRAWING No. 2022034-88

SHEET No. 88 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034PSgn.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24





SIGN	EA (THIS SHEET)
QWICK KURB SIGN, R1-6A	2
R2-1	3
R9-6	2
QWICK KURB SIGN, R9-6	2
R10-1B	3
QWICK KURB SIGN, NO TURN ON RED	1
S1-1	4
W11-2	4
W16-7PL	4
W16-7PR	4

Point #	REMOVE EXISTING	INSTALL NEW
160	Y	
161	Y	
162	Y	
163	Y	
164	Y	
165	Y	
166	Y	
167	Y	
168	Y	
169	Y	
170	Y	
171	Y	
172	N	R9-6
173	N	QWICK KURB SIGN, R9-6, BUFFER
174	Y	
175	Y	
176	Y	
177	Y	
178	Y	
179	Y	
180	Y	
181	N	R10-1B
182	N	QWICK KURB SIGN, NO TURN ON RED
262	N	R10-1B
263	N	R10-1B
183	Y	
184	Y	R5-2 (RELOCATE)
185	Y	R5-2AA (RELOCATE)
186	Y	
187	Y	S1-1
188	Y	W16-7PR
189	Y	S1-1
190	Y	W16-7PL
191	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
192	Y	S1-1
193	Y	W16-7PL
194	Y	S1-1
195	Y	W16-7PR
196	Y	
197	Y	
198	Y	
199	Y	R2-1
200	Y	
201	Y	
202	Y	R2-1
203	Y	
204	Y	
205	Y	
206	Y	
207	Y	W11-2
208	Y	W16-7PL
209	Y	W11-2
210	Y	W16-7PR
211	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
212	Y	W16-7PR
213	Y	W11-2
214	Y	W11-2
215	Y	W16-7PL
216	N	R9-6
217	N	QWICK KURB SIGN, R9-6, BUFFER
218	Y	
219	Y	R2-1

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
01	ADDENDUM PLANS	4-25-24	A2D	JKA
00	BID SET	4-9-24	A2D	JKA

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PERMANENT SIGNING

STA. 61+00 - STA. 77+00

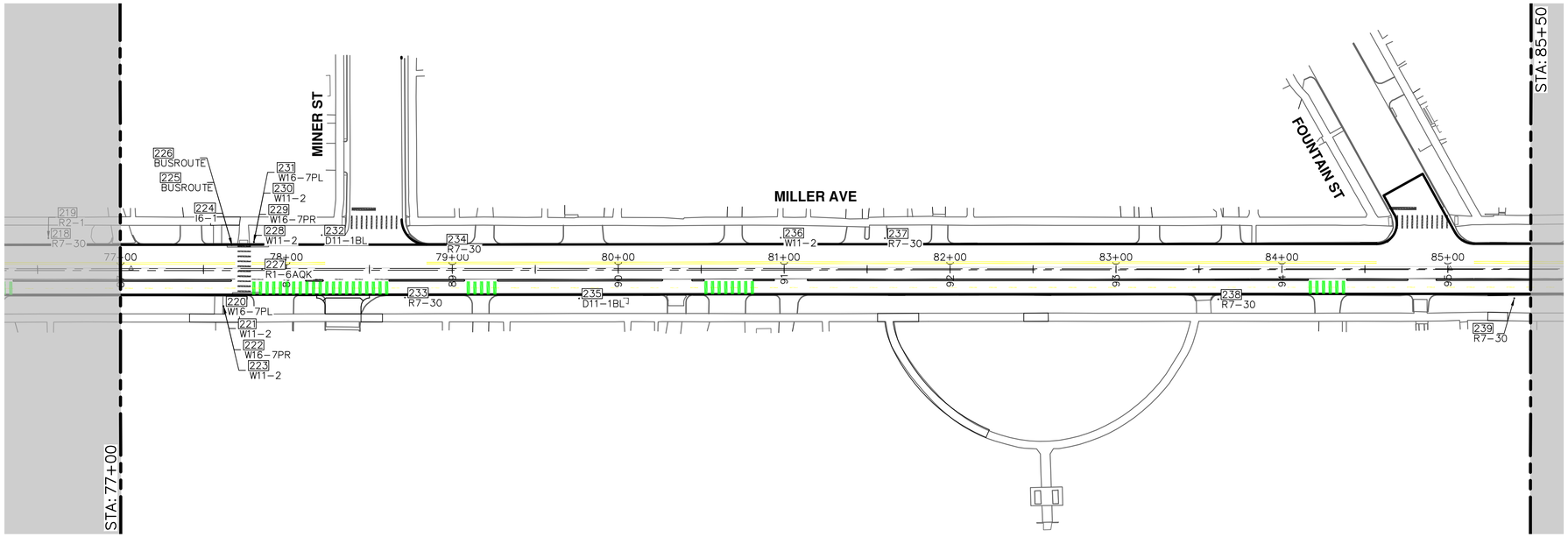
SCALE: 1" = 40'

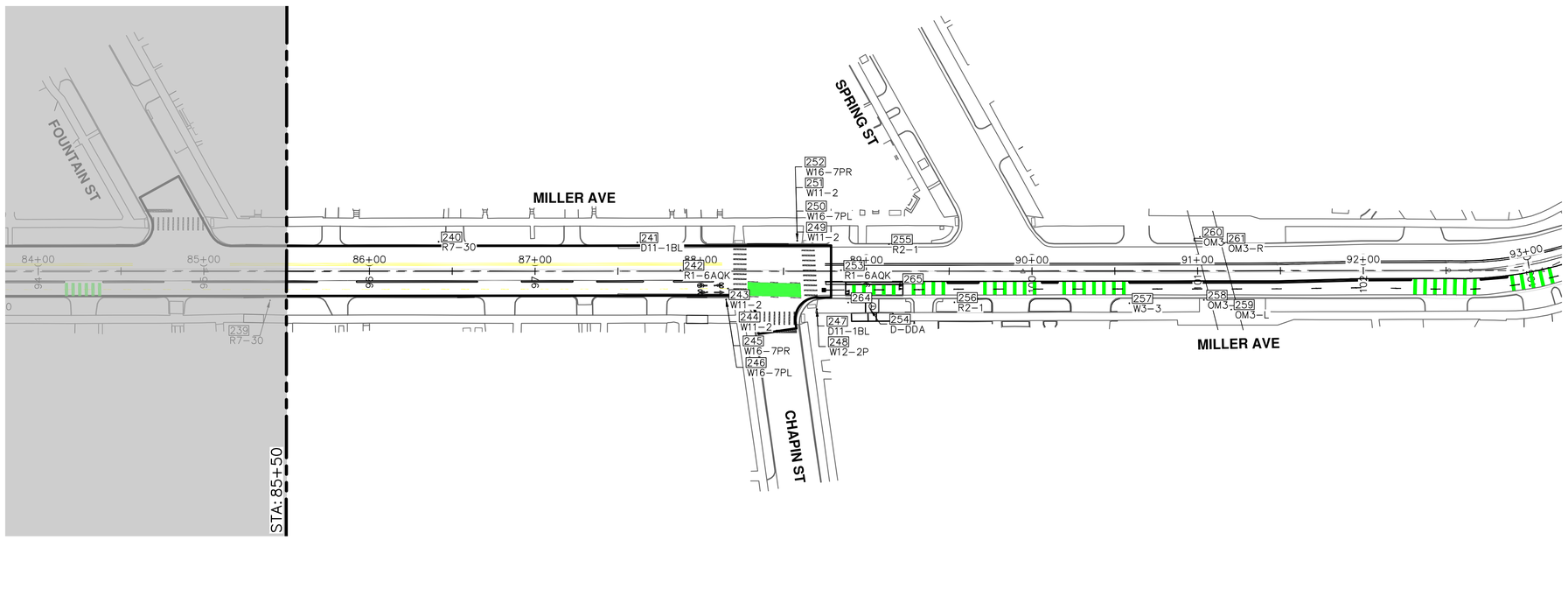
DRAWING No. 2022034-89

SHEET No.

89 OF 131

R:\2022034 Miller Ave Rehab\Plan Production\2022034PSgn.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24





Point #	REMOVE EXISTING	INSTALL NEW
220	Y	W16-7PL
221	Y	W11-2
222	Y	W16-7PR
223	Y	W11-2
224	Y	
225	Y	
226	Y	
227	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
228	Y	W11-2
229	Y	W16-7PR
230	Y	W11-2
231	Y	W16-7PL
232	Y	
233	Y	
234	Y	
235	Y	
236	Y	
237	Y	
238	Y	
239	Y	
240	Y	
241	Y	
242	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
243	Y	W11-2
244	Y	W11-2
245	Y	W16-7PR
246	Y	W16-7PL
247	Y	
248	Y	W12-2P
249	Y	W11-2
250	Y	W16-7PL
251	Y	W11-2
252	Y	W16-7PR
253	Y	QWICK KURB SIGN, R1-6A, CENTERLINE
254	N	
255	Y	R2-1
256	Y	R2-1
264	N	R9-6
265	N	QWICK KURB SIGN, R9-6, BUFFER
257	Y	W3-3
258	Y	OM3-R
259	Y	OM3-L
260	Y	OM3-L
261	Y	OM3-R

SIGN	EA (THIS SHEET)
OM3-L	2
OM3-R	2
QWICK KURB SIGN, R1-6A	3
R2-1	2
R9-6	1
QWICK KURB SIGN, R9-6	1
W3-3	1
W11-2	8
W12-2P	1
W16-7PL	4
W16-7PR	4

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
03	ADDENDUM No. 3 PLANS	5-2-24	A2D	JKA
02	ADDENDUM No. 2 PLANS	4-29-24	A2D	JKA
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER AVENUE REHABILITATION

PERMANENT SIGNING

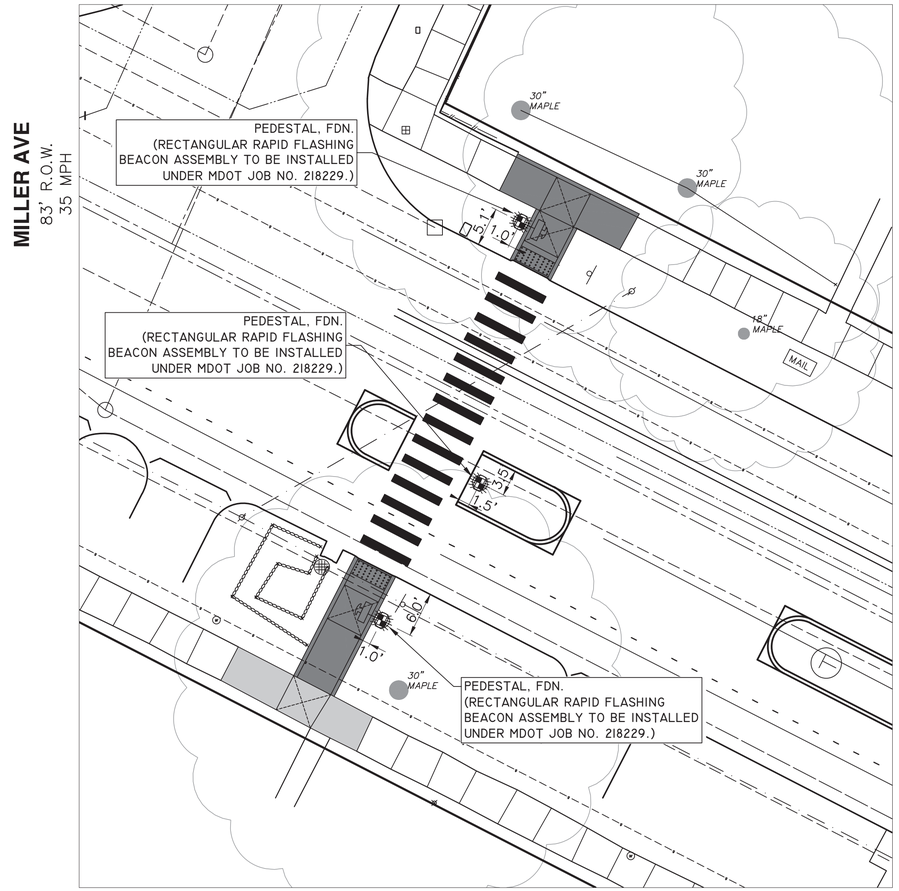
STA. 77+00 - P.O.E. STA. 85+50

SCALE: 1" = 40'

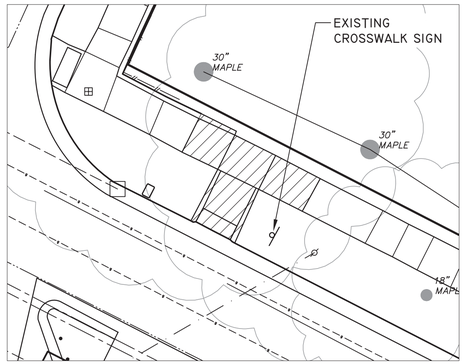
DRAWING No. 2022034-90

SHEET No. 90 OF 131

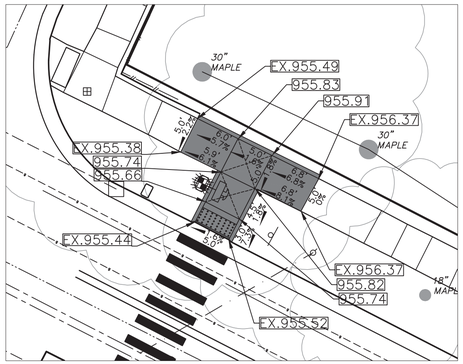
R:\2022034 Miller Ave Rehab\Plan Production\2022034PSgn.dwg Dwg Created: 29-Apr-24 — _a2 standard bw.stb — Plot Date: 2-May-24



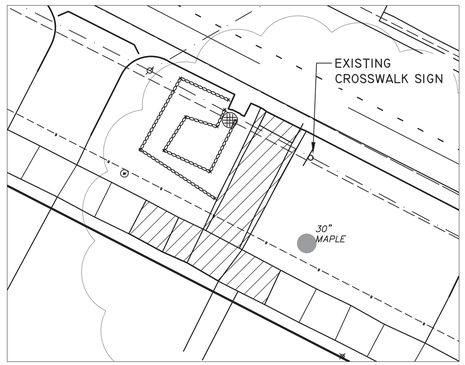
MILLER AVE @ FULMER ST



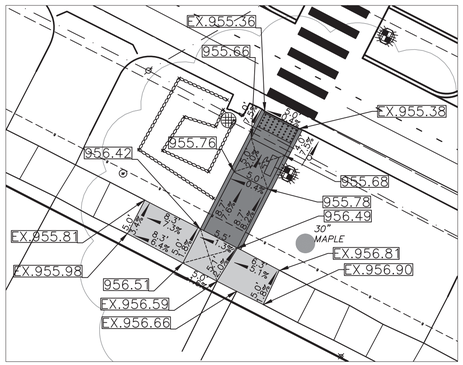
NORTH SIDE OF MILLER AVE



NORTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

MILLER AVE @ FULMER ST - REMOVALS

SIDEWALK, SIDEWALK RAMP, & DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ FULMER ST - GRADING DETAILS

CONC, SIDEWALK, 4 IN.

CONC, SIDEWALK, DRIVE APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 208
ELEVATION = 955.43
TOP OF ARROW ON HYDRANT AT NORTHWEST INTERSECTION CORNER OF MILLER AVENUE AND FULMER STREET.

BENCHMARK 211
ELEVATION = 954.99
SOUTHEAST CORNER OF CATCH BASIN RIM LOCATED AT NORTHEAST QUADRANT OF FULMER STREET & MILLER AVENUE, 17' +/- NORTH FROM CENTERLINE MILLER AVENUE, 32' +/- EAST FROM CENTERLINE FULMER STREET.

CONTROL POINT 117
NORTHING = 289660.641/EASTING = 13282821.500
ELEVATION = 957.05
SET BAR WITH CAP 5 FEET NORTH OF 30 INCH MAPLE TREE, 8 FEET SOUTH OF SOUTH BACK OF CURB FOR MILLER AVENUE, 37 FEET EAST OF CENTERLINE DRIVEWAY #2235.

CONTROL POINT 118
NORTHING = 289719.857/EASTING = 13282829.070
ELEVATION = 988.41
SET BAR WITH CAP 4 FEET NORTH OF NORTH BACK OF CURB FOR MILLER AVENUE, 36 FEET EAST OF CENTERLINE FULMER STREET, 15 FEET SOUTH OF 30 INCH MAPLE TREE.

CONTROL POINT 119
NORTHING = 289748.556/EASTING = 13282775.380
ELEVATION = 953.26
SET BAR WITH CAP AT NORTHWEST INTERSECTION CORNER OF MILLER AVENUE AND FULMER STREET, 4 FEET NORTH OF NORTH BACK OF CURB FOR MILLER, 6 FEET EAST OF HYDRANT.

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
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(734) 794-6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

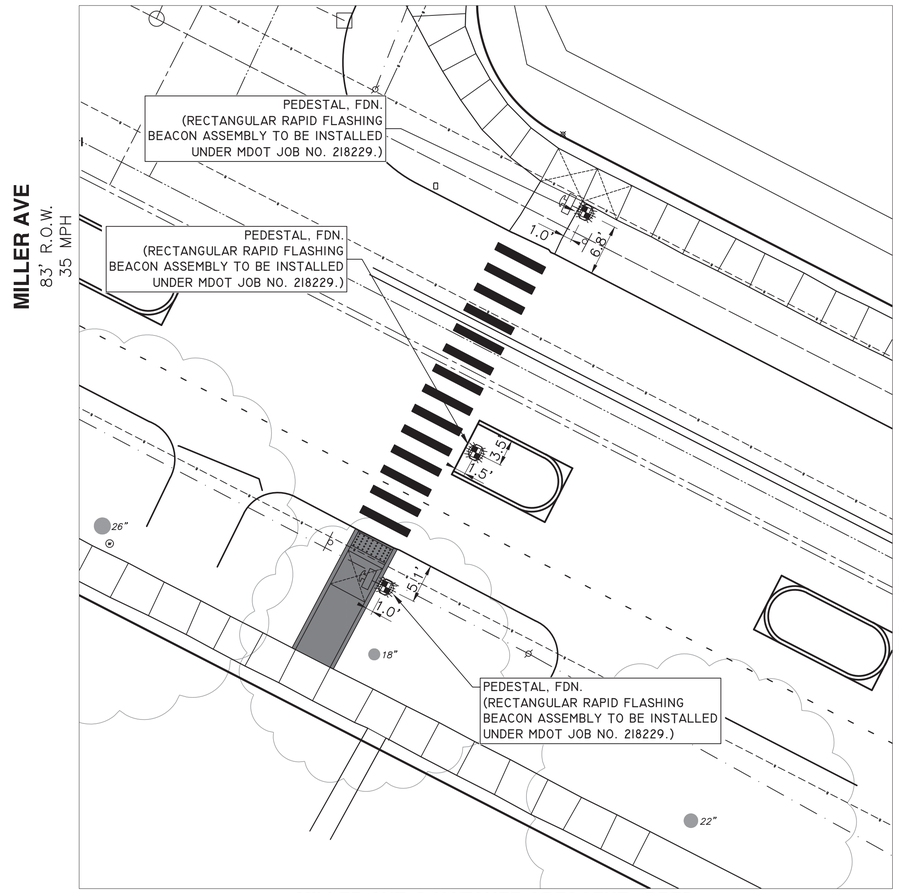
MILLER ROAD CYCLE TRACK

RRFB CROSSING - DETAIL GRADES
MILLER AVE @ FULMER ST

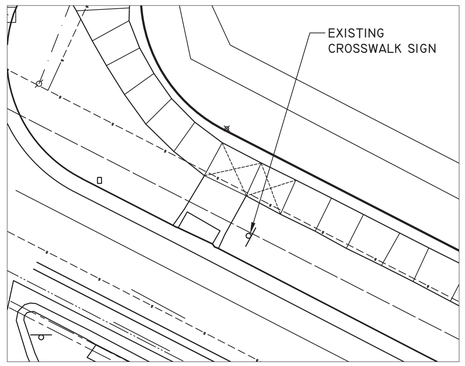
SCALE: 1"=20'

DRAWING No.

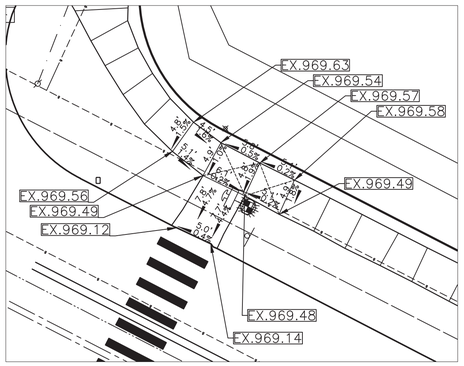
SHEET No.
91 of 131



MILLER AVE @ HATCHER CRESCENT - RRFB

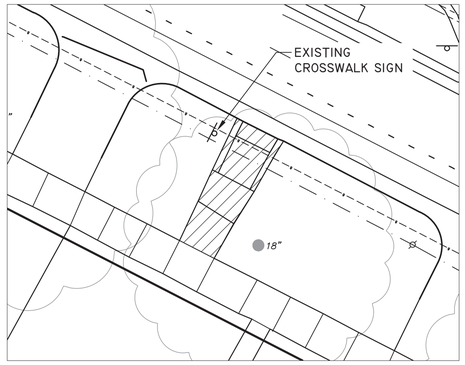


NORTH SIDE OF MILLER AVE

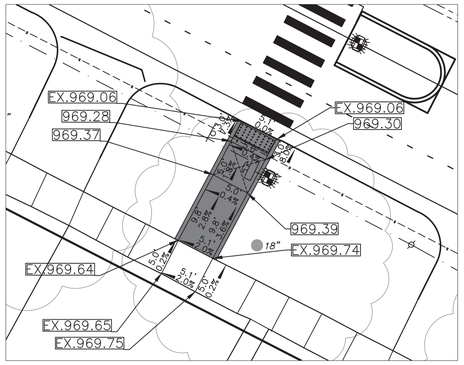


NORTH SIDE OF MILLER AVE

DETAILED GRADES SHOWN FOR INFORMATION ONLY.
NO SIDEWALK WORK BEING DONE HERE.



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

MILLER AVE @ HATCHER CRESCENT - REMOVALS

SIDEWALK, SIDEWALK RAMP, &
DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ HATCHER CRESCENT - GRADING DETAILS

CONC, SIDEWALK, DRIVE
APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 200
ELEVATION = 970.44
TOP OF RAILROAD SPIKE IN SOUTHWEST FACE OF LIGHT POLE ON THE NORTHEAST INTERSECTION CORNER OF MILLER AVENUE AND HATCHER CRESCENT.

BENCHMARK 210
ELEVATION = 971.61
ARROW ON TOP OF HYDRANT LOCATED AT THE NORTHWEST QUADRANT OF MILLER AVENUE AND HATCHER CRESCENT.

CONTROL POINT 100
NORTHING = 289438.758/EASTING = 13283381.310
ELEVATION = 969.61
SET BAR WITH CAP 6 FEET NORTH OF BACK OF CURB MILLER AVENUE, 12 FEET EAST OF UTILITY POLE AT NORTHEAST INTERSECTION CORNER OF MILLER AVENUE AND HATCHER CRESCENT, 50 FEET SOUTH SOUTHEAST OF 18 INCH MAPLE TREE THAT IS 75 FEET NORTH OF MILLER AVENUE ON THE EAST SIDE OF HATCHER CRESCENT.

CONTROL POINT 101
NORTHING = 289467.753/EASTING = 13283324.540
ELEVATION = 969.62
SET BAR WITH CAP AT NORTHWEST INTERSECTION CORNER OF MILLER AVENUE AND HATCHER CRESCENT, 12 FEET EAST OF FIRE HYDRANT, 55 FEET SOUTH OF 3 INCH DECORATIVE TREE ON WEST SIDE OF HATCHER CRESCENT NORTH OF MILLER AVENUE, 30 FEET NORTHWEST OF CENTER OF INTERSECTION.

CONTROL POINT 102
NORTHING = 289400.881/EASTING = 13283336.770
ELEVATION = 969.56
SET BAR WITH CAP 4 FEET SOUTH SOUTH BACK OF CURB ON MILLER AVENUE, 12 FEET NORTHWEST OF 26 INCH MAPLE TREE, 17 FEET WEST OF CENTERLINE DRIVEWAY #2045.

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
301 EAST HURON STREET
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

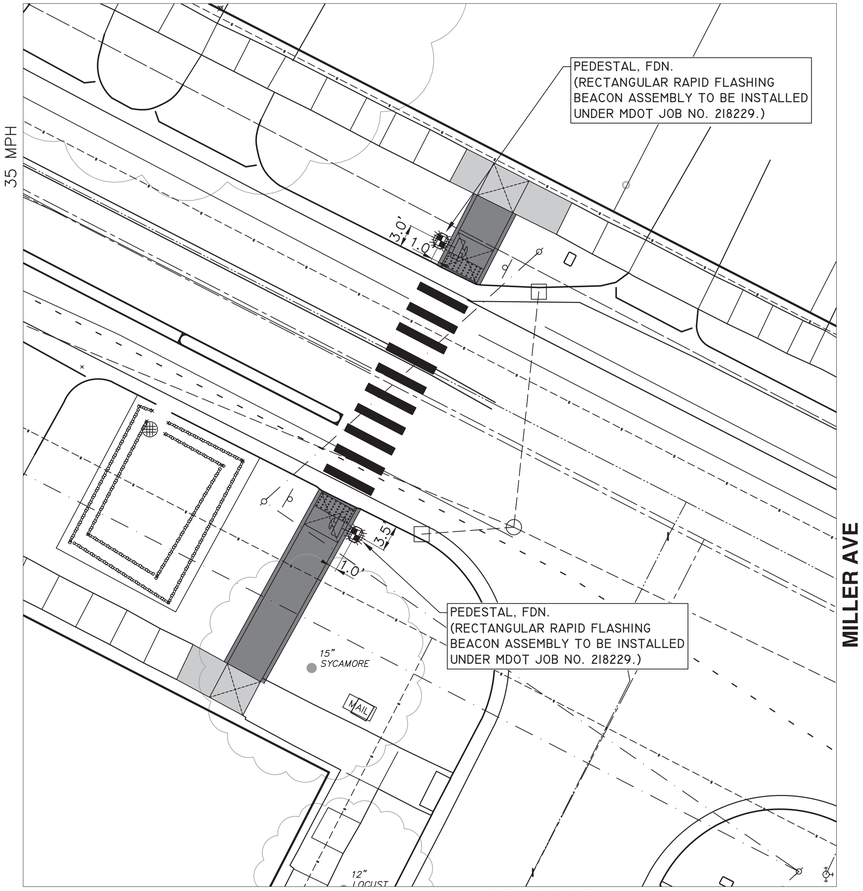
MILLER ROAD CYCLE TRACK

RRFB CROSSING - DETAIL GRADES
MILLER AVE @ HATCHER CRESCENT

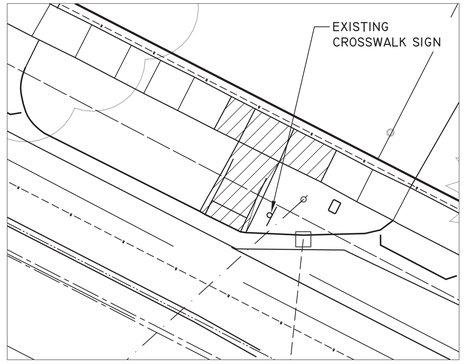
SCALE: 1"=20'

DRAWING No.

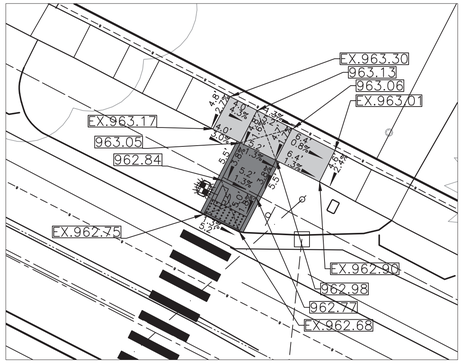
SHEET No.
92 of 131



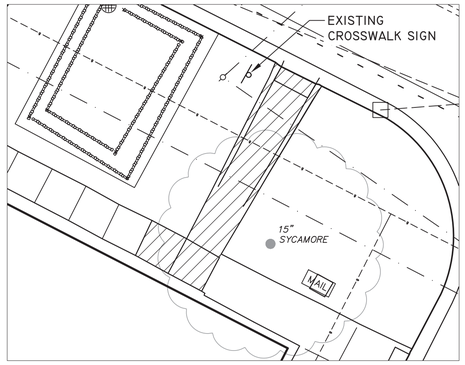
MILLER AVE @ BRUCE ST - RRFB



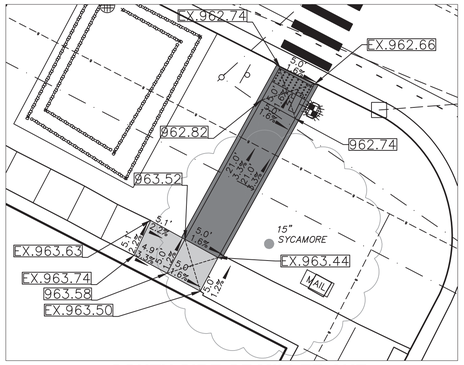
NORTH SIDE OF MILLER AVE



NORTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

MILLER AVE @ BRUCE ST - REMOVALS

SIDEWALK, SIDEWALK RAMP, & DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ BRUCE ST - GRADING DETAILS

CONC, SIDEWALK, 4 IN.

CONC, SIDEWALK, DRIVE APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 201
ELEVATION = 963.61
TOP OF ARROW ON HYDRANT AT SOUTHEAST INTERSECTION CORNER OF MILLER AVENUE AND BRUCE STREET.

BENCHMARK 209
ELEVATION = 962.53
SOUTHEAST CORNER OF CATCH BASIN RIM LOCATED AT THE SOUTHWEST QUADRANT OF MILLER AVENUE AND BRUCE STREET, SOUTH SIDE MILLER AVENUE, 15 FEET ± SOUTHWEST FROM CENTERLINE MILLER AVENUE, 37 FEET ± NORTHWEST FROM CENTERLINE BRUCE STREET.

CONTROL POINT 103
NORTHING = 288160.657/EASTING = 13283816.54
ELEVATION = 963.05
SET BAR WITH CAP ON SOUTHWEST INTERSECTION CORNER OF MILLER AVENUE AND BRUCE STREET, 8 FEET SOUTHEAST OF ROAD CATCH BASIN ON SOUTH SIDE OF MILLER AVENUE JUST WEST OF BRUCE STREET, 20 FEET NORTHEAST OF 18 INCH SYCAMORE, TREE 20 FEET NORTH OF US POST OFFICE MAILBOX.

CONTROL POINT 104
NORTHING = 289121.629/EASTING = 13283859.300
ELEVATION = 961.86
SET BAR WITH CAP ON SOUTHEAST INTERSECTION OF MILLER AVENUE AND BRUCE STREET, 5 FEET NORTH OF BACK OF WALK FOR SOUTH SIDE OF MILLER AVENUE SOUTHWEST OF HYDRANT AT THE SOUTHEAST CORNER OF MILLER AVENUE AND BRUCE STREET, 10 FEET NORTHWEST OF TELEPHONE MANHOLE.

CONTROL POINT 105
NORTHING = 289204.007/EASTING = 13283836.520
ELEVATION = 962.62
SET BAR WITH CAP IN GRASS BETWEEN BACK OF CURB AND SIDEWALK ON THE NORTH SIDE OF MILLER AVENUE, 10 FEET WEST OF CENTER OF DRIVE OF #1950, 2 FEET EAST OF FIBER OPTIC BOX AND 37 FEET NORTHWEST OF CENTER OF INTERSECTION FOR MILLER AVENUE AND BRUCE STREET.

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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

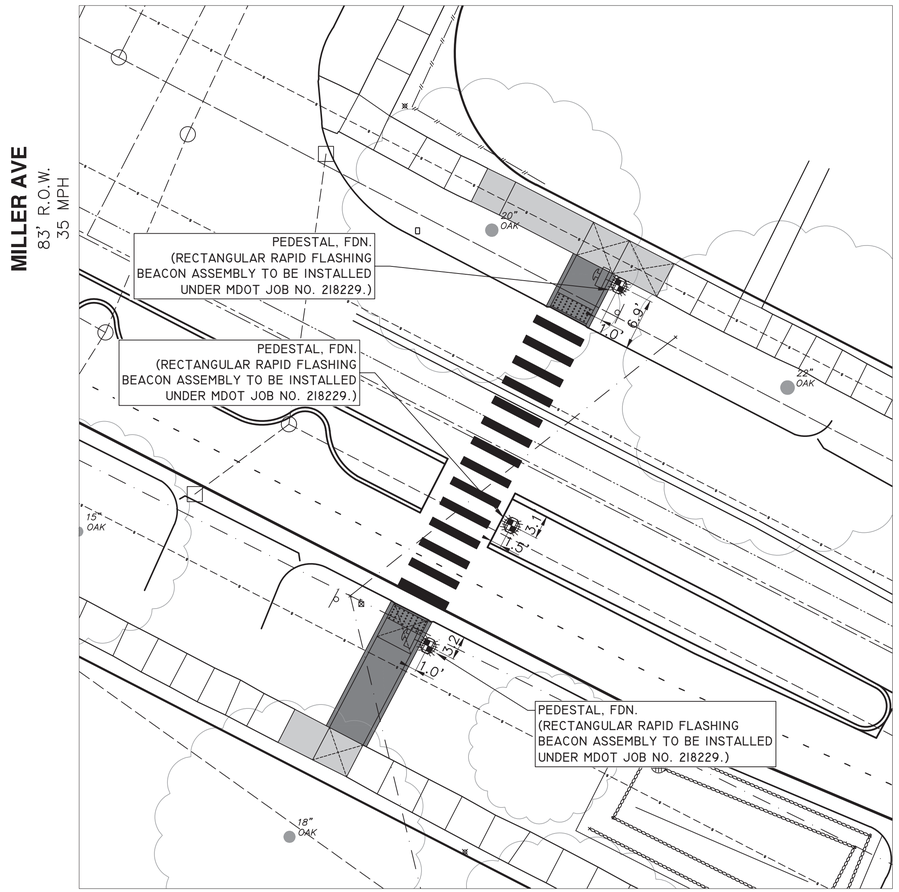
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK
RRFB CROSSING - DETAIL GRADES
MILLER AVE @ BRUCE ST

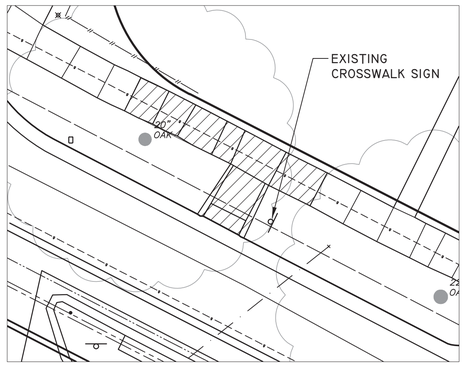
SCALE: 1"=20'

DRAWING No.

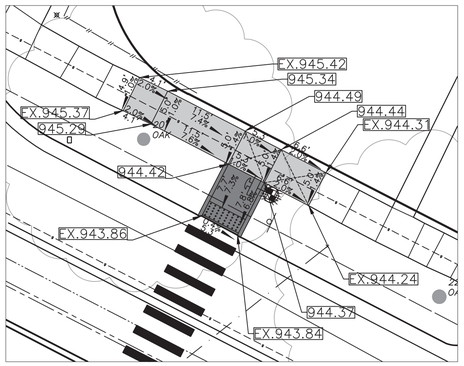
SHEET No.
93 of 131



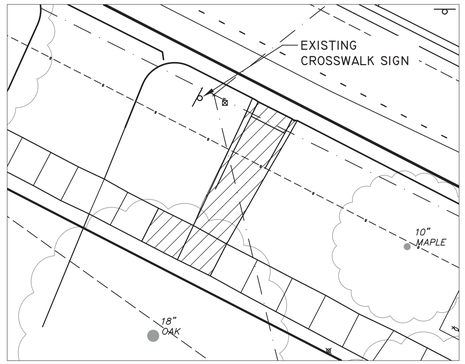
MILLER AVE @ SAUNDERS CRESCENT - RRFB



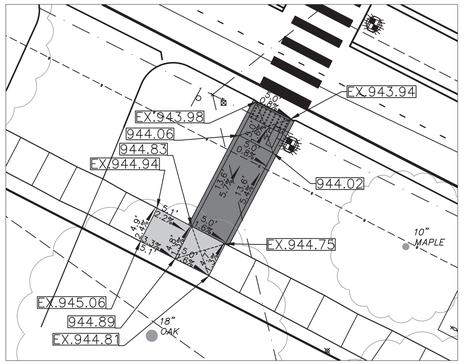
NORTH SIDE OF MILLER AVE



NORTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 202
ELEVATION = 949.70
TOP OF ARROW ON HYDRANT AT NORTHWEST CORNER OF MILLER AVENUE AND SAUNDERS CRESCENT.

BENCHMARK 203
ELEVATION = 948.13
TOP OF RAILROAD SPIKE IN NORTH FACE OF UTILITY POLE ON SOUTH SIDE OF MILLER AVENUE OPPOSITE 10 FEET WEST OF CENTERLINE SAUNDERS CRESCENT.

CONTROL POINT 106
NORTHING = 288929.449/EASTING = 13284370.950
ELEVATION = 947.24
SET BAR WITH CAP 4 FEET NORTH OF BACK OF CURB FOR NORTH SIDE OF MILLER AVENUE, 10 FEET EAST OF HYDRANT AT NORTHWEST CORNER OF MILLER AVENUE AND SAUNDERS CRESCENT, 45 FEET SOUTH SOUTHWEST UTILITY POLE AT NORTHWEST INTERSECTION CORNER MILLER AVENUE AND SAUNDERS CRESCENT.

CONTROL POINT 107
NORTHING = 288855.704/EASTING = 13284394.000
ELEVATION = 945.89
SET BAR WITH CAP 6 FEET SOUTH BACK OF CURB ON SOUTH SIDE OF MILLER AVENUE, 12 FEET WEST OF CENTERLINE DRIVEWAY #1797, 7 FEET NORTHEAST OF 15" OAK TREE.

CONTROL POINT 108
NORTHING =288901.187/EASTING =13284451.720
ELEVATION = 945.49
SET BAR WITH CAP 4 FEET NORTH OF BACK OF SIDEWALK FOR NORTH SIDE OF MILLER AVENUE, 27 FEET EAST OF BACK OF SIDEWALK, EAST SIDE OF SAUNDERS.

MILLER AVE @ SAUNDERS CRESCENT - REMOVALS

SIDEWALK, SIDEWALK RAMP, &
DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ SAUNDERS CRESCENT - GRADING DETAILS

CONC, SIDEWALK, 4 IN.

CONC, SIDEWALK, DRIVE
APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

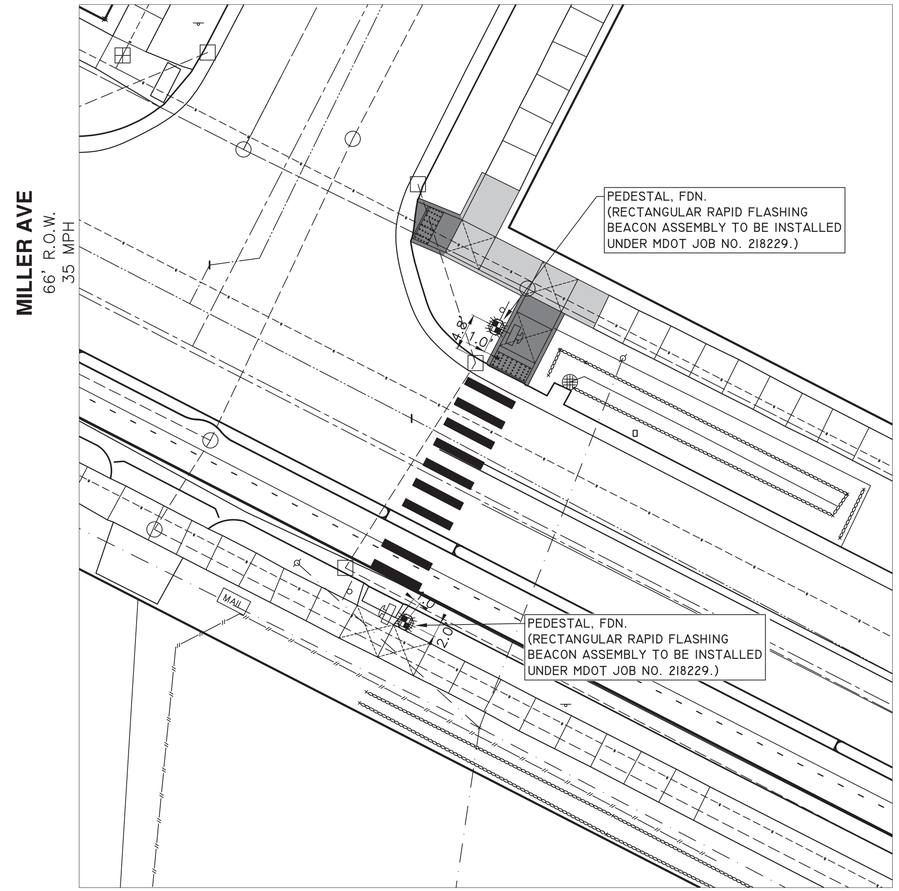
MILLER ROAD CYCLE TRACK

RRFB CROSSING - DETAIL GRADES
MILLER AVE @ SAUNDERS CRESCENT

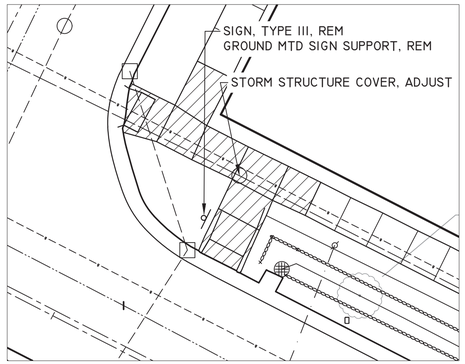
SCALE: 1"=20'

DRAWING No.

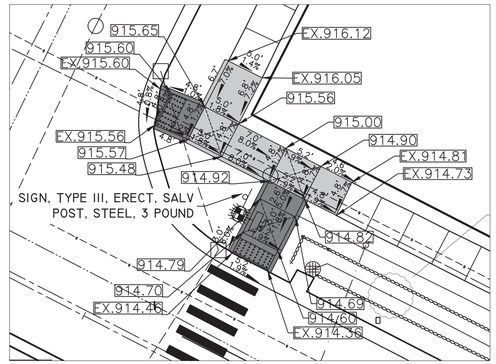
SHEET No.
94 of 131



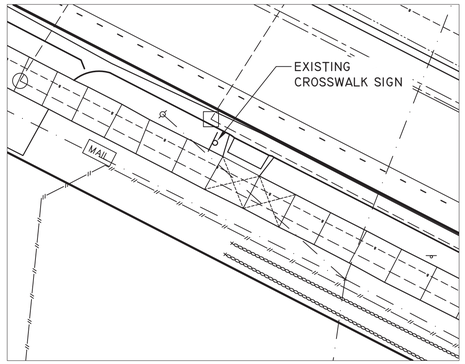
MILLER AVE @ PINE TREE DR - RRFB



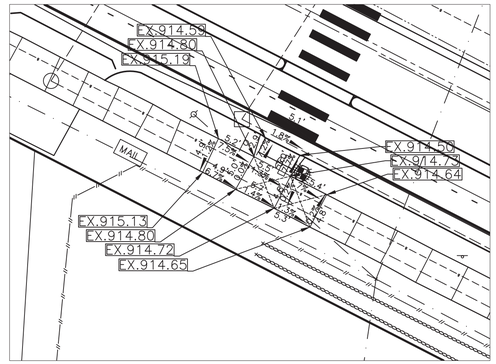
NORTH SIDE OF MILLER AVE



NORTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

DETAILED GRADES SHOWN FOR INFORMATION ONLY.
NO SIDEWALK WORK BEING DONE HERE.

MILLER AVE @ PINE TREE DR - REMOVALS

SIDEWALK, SIDEWALK RAMP, &
DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ PINE TREE DR - GRADING DETAILS

CONC, SIDEWALK, 4 IN.

CONC, SIDEWALK, DRIVE
APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 204
ELEVATION = 920.03
TOP OF ARROW ON HYDRANT AT NORTHWEST INTERSECTION CORNER OF PINE TREE DRIVE AND MILLER AVENUE.

BENCHMARK 205
ELEVATION = 914.87
NORTHWEST CORNER OF CATCH BASIN RIM LOCATED ON THE SOUTH SIDE OF MILLER AVENUE, 15'+/- SOUTH FROM CENTERLINE MILLER AVENUE, 33' +/- EAST FROM CENTERLINE PINE TREE STREET.

CONTROL POINT 110
NORTHING = 288362.318/EASTING = 13285473.570
ELEVATION = 915.36
SET BAR WITH CAP 33 FEET EAST OF CENTERLINE FOR PINE TREE DRIVE, 9 FEET NORTH NORTHWEST OF ROAD CATCH BASIN AT NORTHEAST CORNER OF PINE TREE DRIVE AND MILLER AVENUE, 7 FEET SOUTHWEST OF SANITARY SEWER MANHOLE AT NORTHEAST CORNER OF PINE TREE DRIVE AND MILLER AVENUE.

CONTROL POINT 111
NORTHING = 288389.683/EASTING = 13285419.400
ELEVATION = 917.59
SET BAR WITH CAP 8 FEET NORTH OF ROAD CATCH BASIN ON NORTH SIDE OF MILLER AVENUE, 33 FEET WEST OF CENTERLINE PINE TREE DRIVE, 7 FEET EAST OF HYDRANT ON NORTHWEST INTERSECTION CORNER OF PINE TREE DRIVE AND MILLER AVENUE.

CONTROL POINT 112
NORTHING = 288316.847/EASTING = 13285469.650
ELEVATION = 914.66
SET BAR AND CAP IN GRASS HALFWAY BETWEEN BACK OF CURB FOR SOUTH SIDE OF MILLER AND SIDEWALK, 100 FEET WEST OF CENTERLINE DRIVEWAY #1575, 12 FEET NORTHWEST OF UTILITY POLE, 17 FEET EAST SOUTHEAST OF ROAD CATCH BASIN ON SOUTH SIDE OF MILLER AVENUE.

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

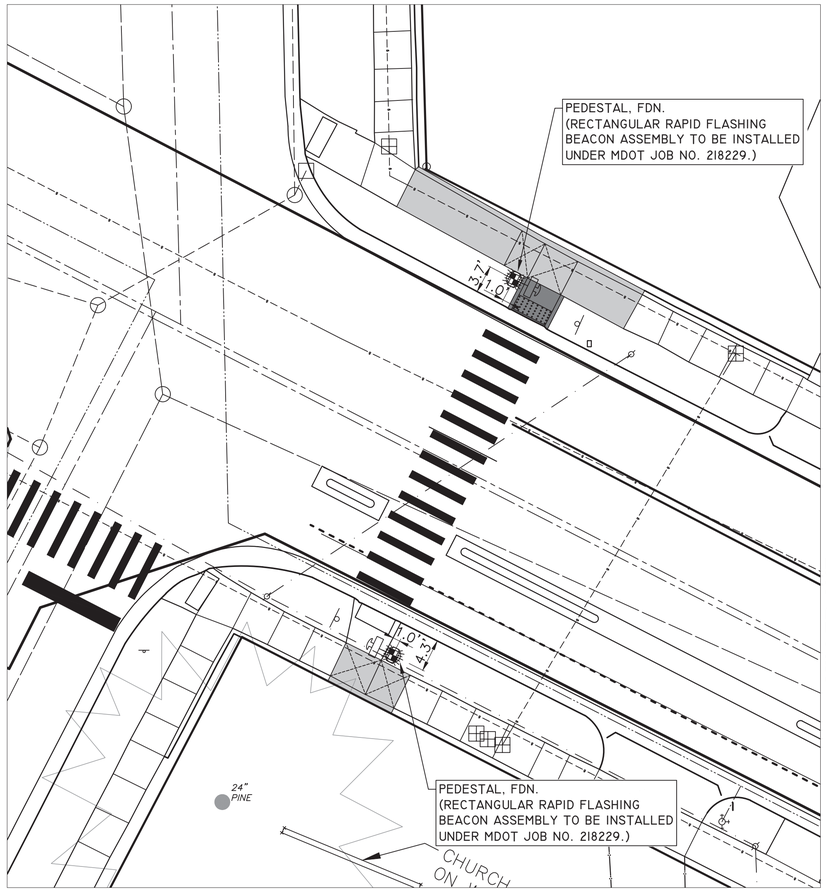
MILLER ROAD CYCLE TRACK

RRFB CROSSING - DETAIL GRADES
MILLER AVE @ PINE TREE DR

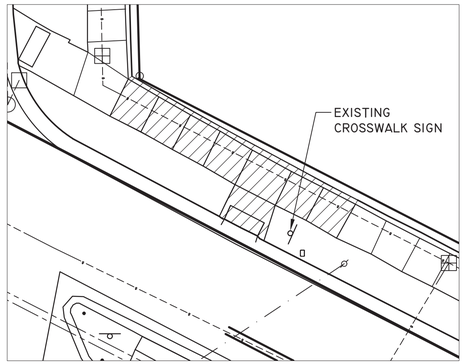
SCALE: 1"=20'

DRAWING No.

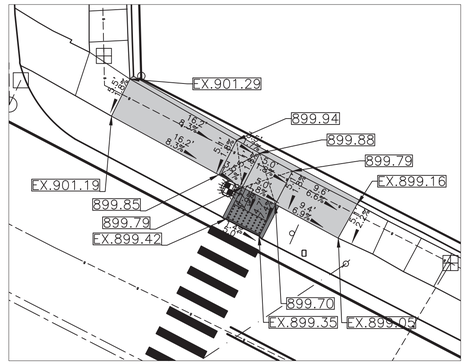
SHEET No.
95 of 131



MILLER AVE @ NEWPORT RD - RRFB

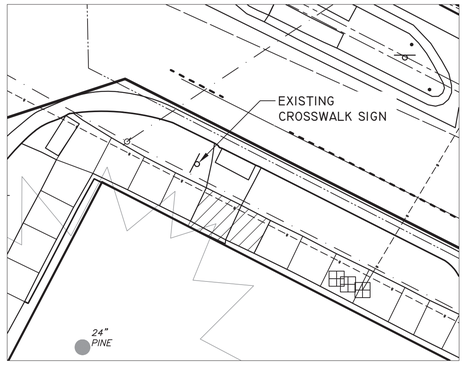


NORTH SIDE OF MILLER AVE

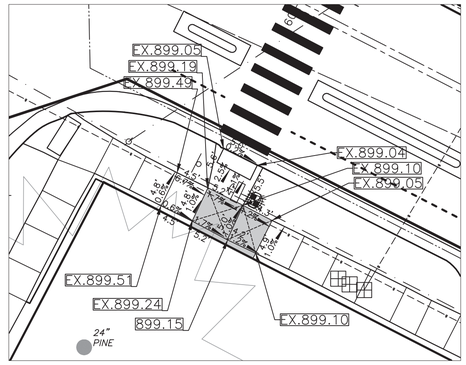


NORTH SIDE OF MILLER AVE

MILLER AVE
66' R.O.W.
30 MPH



SOUTH SIDE OF MILLER AVE



SOUTH SIDE OF MILLER AVE

MILLER AVE @ NEWPORT RD - REMOVALS

SIDEWALK, SIDEWALK RAMP, & DRIVEWAY APPROACH, ANY THICK, REM

MILLER AVE @ NEWPORT RD - GRADING DETAILS

CONC, SIDEWALK, 4 IN.

CONC, SIDEWALK, DRIVE APPROACH, OR RAMP, 6 IN.

DETECTABLE WARNING SURFACE

BENCHMARK AND CONTROL POINT INFORMATION:

BENCHMARK 206
ELEVATION = 907.49
TOP OF ARROW ON HYDRANT 2 FEET NORTH OF NORTH BACK FOR MILLER AVENUE, 30 FEET WEST OF NORTHWEST INTERSECTION CORNER NEWPORT ROAD AND MILLER AVENUE.

BENCHMARK 207
ELEVATION = 900.25
TOP OF RAILROAD FIGHT IN SOUTH FACE OF UTILITY POLE ON NORTH SIDE OF MILLER AVENUE, 50 FEET EAST OF NORTHEAST INTERSECTION CENTER OF MILLER AVENUE AND NEWPORT ROAD.

CONTROL POINT 113
NORTHING = 288023.226/EASTING = 13286030.480 ELEVATION = 899.33
SET BAR AND CAP IN GRASS HALF WAY BETWEEN SIDEWALK AND BACK OF CURB ON SOUTH SIDE MILLER AVENUE, 9 FEET WEST OF HYDRANT IN FRONT OF HURON RIVER METHODIST CHURCH.

CONTROL POINT 114
NORTHING = 288077.933/EASTING = 13286032.290 ELEVATION = 900.82
SET BAR AND CAP IN GRASS BETWEEN BACK OF CURB AND SIDEWALK ON NORTH SIDE OF MILLER AVENUE, 21 FEET EAST OF BASIN AT NORTHEAST CORNER OF NEWPORT ROAD AND MILLER AVENUE.

CONTROL POINT 115
NORTHING = 288121.797/EASTING = 13285976.420 ELEVATION = 904.17
SET BAR AND CAP 4 FEET WEST OF CATCH BASIN ON WEST SIDE OF NEWPORT ROAD AT THE NORTHWEST INTERSECTION CORNER OF NEWPORT ROAD AND MILLER AVENUE, 9 FEET NORTH OF CENTERLINE SIDEWALK FOR NORTH SIDE OF MILLER AVENUE.

CONTROL POINT 116
NORTHING = 288071.614/EASTING = 13285937.120 ELEVATION = 903.95
SET BAR WITH CAP 6 FEET SOUTHEAST OF CATCH BASIN THAT IS 25 FEET WEST OF THE SOUTHWEST CORNER OF NEWPORT ROAD AND MILLER AVENUE, 6 FEET NORTH OF CENTERLINE OF SIDEWALK ON SOUTH SIDE OF MILLER AVENUE, 25 FEET NORTH OF 54 INCH OAK TREE.

NORTH

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 E. HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

RRFB CROSSING - DETAIL GRADES
MILLER AVE @ NEWPORT RD

SCALE: 1"=20'

DRAWING No.

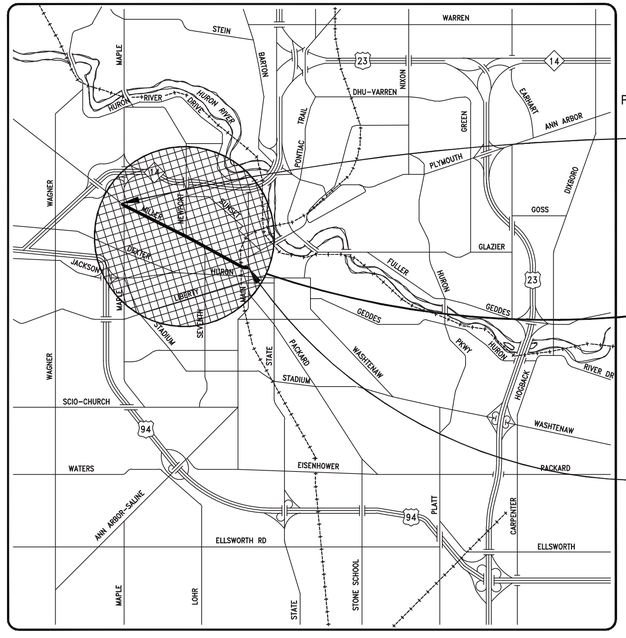
SHEET No.
96 of 131

CITY OF ANN ARBOR
PROJECT MANAGEMENT
MILLER AVENUE CYCLE TRACK
MAPLE ROAD TO NEWPORT ROAD
AND CHAPIN STREET TO FIRST STREET

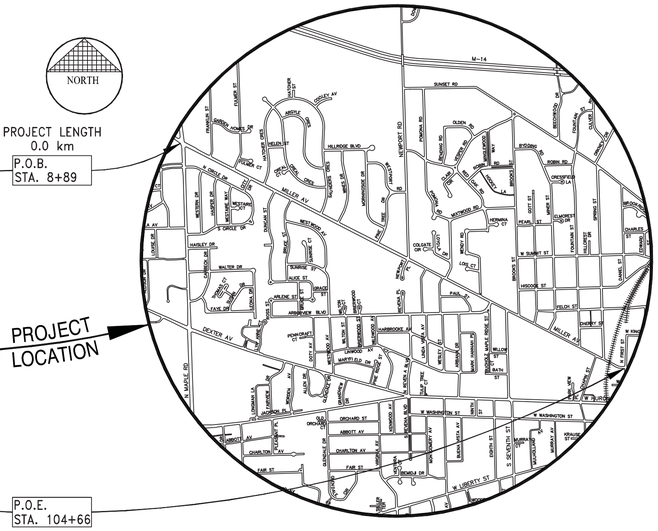
ADDENDUM No. 3 PLANS - 05/2/24

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
97	COVER SHEET
98	NOTES & LEGEND
99 – 100	TYPICAL SECTIONS
101 – 103	DETAILS
104 – 110	REMOVAL SHEETS
111 – 117	CONSTRUCTION SHEETS
118	DETAIL GRADES
119 – 126	PAVEMENT MARKING SHEETS
127–131	SIGNAL SHEETS

"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."



VICINITY MAP



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
(TOLL FREE)

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL DIAL 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.

PREPARED BY:

HRC
HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

555 HULET DRIVE **P.O. BOX 824**
BLOOMFIELD HILLS, MI. **48303 - 0824**

PREPARED UNDER THE SUPERVISION OF:

STATE OF MICHIGAN
Nicholas Brandon Nicita
ENGINEER
No. 6201063626
LICENSED PROFESSIONAL ENGINEER

NICHOLAS NICITA, P.E., PTOE
PROJECT MANAGER

PROJECT MANAGEMENT SERVICE UNIT

TREVOR BRYDON, AICP
TRANSPORTATION PROGRAM MANAGER

May 2, 2024
DATE

DRAWING NO.
20230643-CV01
SHEET 97 of 131

PROJECT NAME: MILLER AVE. CYCLE TRACK

ABBREVIATIONS

A	
ABD	ABANDONED
AC	ACRES
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
B	
B.M.	BENCHMARK
BIT	BITUMINOUS
BLDG	BUILDING
B/F	BOTTOM OF FOOTING
B/S	BOTTOM OF SWALE
B/W	BOTTOM OF WALL (FINISH GRADE)
C	
CB	CATCH BASIN
C	CURB INLET
CIP	CAST IRON PIPE
CL	CLASS
CMP	CORRUGATED METAL PIPE
CON	CONDENSATE
CO	CLEANOUT
CONC	CONCRETE
CONTR	CONTRACTOR
CU FT	CUBIC FOOT
CURV	CURVATURE
CU YD	CUBIC YARD
D	
DEMO	DEMOLISH
DEPT	DEPARTMENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
E	
E	EAST, EASTING COORDINATE
EA	EACH
EG	EXISTING GRADE
ELEV	ELEVATION
E/M	EDGE OF METAL (EDGE OF GUTTER)
EQ	EQUAL
EX	EXISTING
F	
FF:	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FLASH	FLASHING
FM	FORCE MAIN
FT	FOOT, FEET
FURN	FURNISHING
G	
GALV	GALVANIZED
GAS	NATURAL GAS
G/C:	GUTTER OF CURB (FLOWLINE)
GVL	GRAVEL
H	
H	HIGH
HB	HOSE BIBB
HCAP	ADA HANDICAP
HDPE	HIGH-DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HORZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
I	
I.D.	INNER DIAMETER
IN	INCH, INCHES
INCL	INCLUDE, INCLUDING
INL	INLET PIPE
INV:	INVERT ELEVATION
IRR	IRRIGATION
J	
JT	JOINT
L	
L	LENGTH
LF	LINEAR FEET
LPT	LOW POINT
LN	LANE
LT	LIGHT
LTG	LIGHTING
M	
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
M.E.	MATCH EXISTING
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODIFIED
N	
N	NORTH, NORTHING COORDINATE
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O	
O.C.	ON CENTER
O.D.	OUTER DIAMETER
OFF	OFFSET
OPT	OPTIONAL
P	
PC	POINT OF CURVATURE (POC)
PED	PEDESTRIAN
PERF	PERFORATED
PERP	PERPENDICULAR
PLMB	PLUMBING
PREFAB	PREFABRICATED
PREP	PREPARATION
PROJ	PROJECTED
PROP	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY (POT)
Pv?	POINT OF VERTICAL CURVATURE, POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL
PVMT	INTERSECTION PAVEMENT
PWR	POWER
Q	
QTY	QUANTITY
R	
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
RD	ROAD
REF	REFERENCE
REINF	REINFORCED, REINFORCEMENT
REM	REMOVE
REQD	REQUIRED
RIM:	RIM ELEVATION
ROW	RIGHT OF WAY
S	
S	SOUTH
SAN	SANITARY SEWER
SCH	SCHEDULE
SECT	SECTION
SESC	SOIL EROSION AND SEDIMENTATION CONTROL
SIM	SIMILAR
SP	SPACE, SPACED, SPACING
SQ FT	SQUARE FEET
SQ YD	SQUARE YARD
ST LT	STREET STREET LIGHT
STA	STATION
STAG	STAGGER, STAGGERED
STD STL	STANDARD STEEL
SSL	STAINLESS STEEL
STM	STORM SEWER
STRUCT	STRUCTURAL
SUBCONTR	SUBCONTRACTOR
T	
T	TELECOM
T/C	TOP OF CURB
TEMP	TEMPORARY
T/F	TOP OF FOOTING
T/S	TOP OF SWALE
T/W	TOP OF WALL
TYP.	TYPICAL
U	
UD	UNDERDRAIN
UTIL	UTILITY
V	
V/B:	VALVE BOX
VERT	VERTICAL
W	
W	WEST
WM	WATER MAIN
W/O	WITHOUT
WWF	WELDED WIRE FABRIC
Y	
YARD DRAIN	

CONSTRUCTION NOTES

1. THIS PROJECT IS BEING COMPLETED BY THE ANN ARBOR TRANSPORTATION DEPARTMENT AND IS LOCATED IN THE CITY OF ANN ARBOR (CITY).
2. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 2024 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND ITS DETAILS WHICH ARE INCLUDED BY REFERENCE.
3. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT PUBLIC SERVICES STANDARD SPECIFICATIONS AND DETAILS.
4. 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.
5. THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. 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.
7. THE CONTRACTOR IS TO TAKE SPECIAL CARE TO PROTECT THE EXISTING WATER MAIN AND BE RESPONSIBLE FOR MAINTAINING CONSISTENT WATER SERVICE.
8. DURING NON-WORKING HOURS, NO TRENCH SHALL REMAIN OPEN; ANY OPEN TRENCH SHALL BE PROPERLY SECURED WITH PROTECTIVE FENCING.
9. 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 FIELD SERVICES.
10. THE CONTRACTOR SHALL BACKFILL TRENCHES IN ACCORDANCE WITH TRENCH DETAIL SPECIFIED ON PLANS. ALL CONCRETE REMOVALS AND REPLACEMENTS REQUIRED FOR THIS WORK WILL BE PAID FOR SEPARATELY.
11. POSTAL DELIVERY AND REFUSE PICKUP SERVICE SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
12. ALL LIGHT POLES, LUMINAIRES, SIGNS, 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 FIELD OPERATIONS AND MAINTENANCE FACILITY AT THE W.R. WHEELER SERVICE CENTER LOCATED AT 4251 STONE SCHOOL ROAD.
13. WHERE STREET CURBS ARE UNDERMINED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUOUS MAINTENANCE OF THE TEMPORARY ROAD SURFACE AND SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT.
15. ALL NEW AND EXISTING STORM INLETS WITHIN THE PROJECT SHALL HAVE INLET FILTER PROTECTION FOR THE DURATION CONSTRUCTION.
16. ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS DONE.
24. THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER.
25. FOR MAINLINE PAVING, THE WIDTH OF THE MAT FOR EACH PASS OF THE PAVER SHALL BE NOT LESS THAN 10.5' OR GREATER THAN 15', AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DIRECT THE LAYOUT OF THE LONGITUDINAL JOINTS DURING CONSTRUCTION.
26. 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 FIELD OPERATIONS AND MAINTENANCE FACILITY AT THE W.R. WHEELER SERVICE CENTER LOCATED AT 4251 STONE SCHOOL ROAD. STRUCTURES SHALL BE ADJUSTED AS DIRECTED BY ENGINEER.
27. PAYMENT FOR DRAINAGE STRUCTURE SUMPS, WHERE SPECIFIED, SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURE SIZES AND OR TYPES.
28. 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.
29. PAVEMENT MARKINGS DISTURBED AS A RESULT OF PAVEMENT CUTS OR CONSTRUCTION ACTIVITIES SHALL BE REPLACED AS DIRECTED BY PROJECT MANAGEMENT. REPLACEMENT DURING CONSTRUCTION OF THE PROJECT MAY BE CONSIDERED TEMPORARY, WITH FINAL PAVEMENT MARKING RESTORATION TO OCCUR AT THE END OF THE PROJECT.
30. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING PUBLIC ROAD PAVEMENT. DAMAGE TO THE PUBLIC ROAD PAVEMENT DURING THE COURSE OF CONSTRUCTION MAY NECESSITATE MILLING AND RESURFACING OF THE DAMAGED AREAS PRIOR TO ACCEPTANCE.
31. ACCESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
32. ALL TRAFFIC CONTROL DEVICES AND THEIR USAGE MUST CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), 2011 EDITION.
33. DURING THE LANE CLOSURES, ACCESS FOR EMERGENCY VEHICLES (FIRE, AMBULANCE, POLICE) MUST BE MAINTAINED TO ADJACENT HOMES, BUSINESSES, AND SUBDIVISIONS AT ALL TIMES.
34. ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED WITH WATERBORNE MARKINGS.THIS INCLUDES THE SPECIAL MARKINGS – OVERLAY COLD PLASTIC – (SPECIAL EMPHASIS CROSSWALK ARROWS, 24 INCH STOP BAR).
35. ANY MDOT SIGNS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED IN KIND ON NEW SUPPORTS.
36. ALL SIGN MATERIALS AND SUPPORTS MUST MEET NCHRP-350 CRASH WORTHY REQUIREMENTS.
37. CONTRACTOR SHALL NOT STORE OR PLACE EQUIPMENT AND/OR MATERIALS INSIDE DRIP LINE OF ANY CITY TREE. MECHANICAL DAMAGE TO CITY OWNED TREES (I.E. BARK DAMAGE, BRANCH BREAKAGE) IS NOT PERMITTED. CONTRACTOR IS RESPONSIBLE FOR PROPERLY PRUNING TREES TO PREVENT DAMAGE. IF BRANCHES GREATER THAN 2" IN DIAMETER REQUIRE PRUNING, CONTRACTOR TO CONTACT FORESTRY FOR CONSULTATION AND EVALUATION AT (734) 794-6320. NO ROOTS OF THE CITY-OWNED TREES GRATER THAN 2 INCHES IN DIAMETER ARE TO BE CUT. IF CONTRACTOR ENCOUNTERS CITY-OWNED TREES WITH ROOTS GREATER THAN 2 INCHES IN DIAMETER THAT THEY DETERMINE NEED TO BE CUT. CONTACT FORESTRY IMMEDIATELY FOR EVALUATION. ALL TRENCHING AND BORE PITS OF ANY KIND SHALL BE CLEAR OF TREE DRIP LINES. IF ANY CITY-OWNED STREET TREES ARE DAMAGED BY THIS WORK, THE CONTRACTOR MUST CONTACT FORESTRY AS SOON AS POSSIBLE SO THAT THE DAMAGE CAN BE ASSESSED. CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DAMAGE REMEDIATION.
38. PAVEMENT REMOVAL LIMITS TO BE DISCUSSED AND APPROVED BY ENGINEER PRIOR TO WORK BEING DONE. DURING UTILITY CONSTRUCTION ONLY REMOVE PAVEMENT NEEDED FOR INSTALLATION.

S.E.S.C. NOTES

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.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CITY ORDINANCE CHAPTER 63, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
1.3. PERFORM ALL CURB AND GUTTER AND PAVEMENT REMOVALS IN ACCORDANCE WITH CONSTRUCTION SEQUENCE CONTAINED WITHIN THE SPECIAL PROVISION FOR MAINTAINING TRAFFIC.
1.4. INSTALL STORM SEWERS AND OTHER ENCLOSED DRAINAGE FEATURES IN ACCORDANCE WITH CONSTRUCTION SEQUENCE CONTAINED WITHIN THE SPECIAL PROVISION FOR MAINTAINING TRAFFIC. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS AND CATCH BASINS.
1.5. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.) IN ACCORDANCE WITH CONSTRUCTION SEQUENCE CONTAINED WITHIN THE SPECIAL PROVISION FOR MAINTAINING TRAFFIC.
1.6. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
1.7. COMPLETE ALL DITCH GRADING AND FINE GRADING.
1.8. RESTORE ALL DISTURBED AREAS IN ACCORDANCE WITH SLOPE RESTORATION SPECIAL PROVISION.
1.9. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
1.10. 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.

TRAFFIC SIGNAL

- ANTENNA
- CASE SIGN, 1-WAY - EXISTING
- CASE SIGN, 1-WAY
- CASE SIGN, 2-WAY - EXISTING
- CASE SIGN, 2-WAY
- CASE SIGN, 3-WAY - EXISTING
- CASE SIGN, 3-WAY
- CASE SIGN, 4-WAY - EXISTING
- CASE SIGN, 4-WAY
- DEDICATED SHORT RANGE COMMUNICATIONS
- CONTROLLER CABINET - PAD MOUNTED
- CONTROLLER CABINET - POLE MOUNTED
- CONTROL EMERGENCY PREEMPTION OPTICOM
- DILEMMA ZONE DETECTION
- GLOBAL POSITIONING SYSTEM MODULE
- HANDHOLE - 2 FOOT ROUND
- HANDHOLE - 2 FOOT SQUARE
- HANDHOLE - 3 FOOT ROUND
- HANDHOLE - 4 FOOT SQUARE
- HANDHOLE - POLYMER CONCRETE
- PEDESTAL
- PEDESTRIAN PUSHBUTTON
- POLE MAST ARM (LENGTH VARIES) - EXISTING
- POLE MAST ARM (LENGTH VARIES)
- POLE STRAIN
- POLE WOOD
- ROAD SIGN W/ FLASHING SIGN OPTICAL (1-WAY)
- SIGNAL HEAD PEDESTRIAN - EXISTING
- SIGNAL HEAD PEDESTRIAN 1-WAY
- SIGNAL HEAD PEDESTRIAN 2-WAY
- SIGNAL HEAD VEHICLE 1-WAY - EXISTING
- SIGNAL HEAD VEHICLE 1-WAY
- SIGNAL HEAD VEHICLE 2-WAY - EXISTING
- SIGNAL HEAD VEHICLE 2-WAY
- SIGNAL HEAD VEHICLE 3-WAY - EXISTING
- SIGNAL HEAD VEHICLE 3-WAY
- SIGNAL HEAD VEHICLE 4-WAY - EXISTING
- SIGNAL HEAD VEHICLE 4-WAY
- SIGNAL HEAD VEHICLE BAGGED
- SIGNAL HEAD VEHICLE PROGRAMMABLE
- VEHICLE DETECTION CAMERA
- VEHICLE DETECTION CAMERA - HEMISPHERICAL
- VEHICLE DETECTION LOOP
- VEHICLE DETECTION - RADAR
- WIRELESS VEHICLE DETECTION RADIO RECEIVER
- WIRELESS VEHICLE DETECTION RADIO REPEATER
- WIRELESS VEHICLE DETECTION SENSOR - EXISTING
- WIRELESS VEHICLE DETECTION SENSOR

CABLING / WIRING DIAGRAM

- CIRCUIT BREAKER
- COILED WIRE
- FUSE
- FUSE SWITCH
- GROUND
- ILLUMINATED CASE SIGN
- METER
- SERVICE DISCONNECT
- SIGNAL HEAD

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
PUBLIC WORKS MANAGER	CITY OF ANN ARBOR 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	PAUL MATTHEWS (734) 794-6350
ENGINEERING	CITY OF ANN ARBOR 301 E. HURON STREET ANN ARBOR, MI 48104	(734) 794-6410
TRAFFIC SIGNS, MARKINGS AND SIGNALS	CITY OF ANN ARBOR 301 E. HURON STREET ANN ARBOR, MI 48104	CYNTHIA REDINGER (734) 794-6410 x43632

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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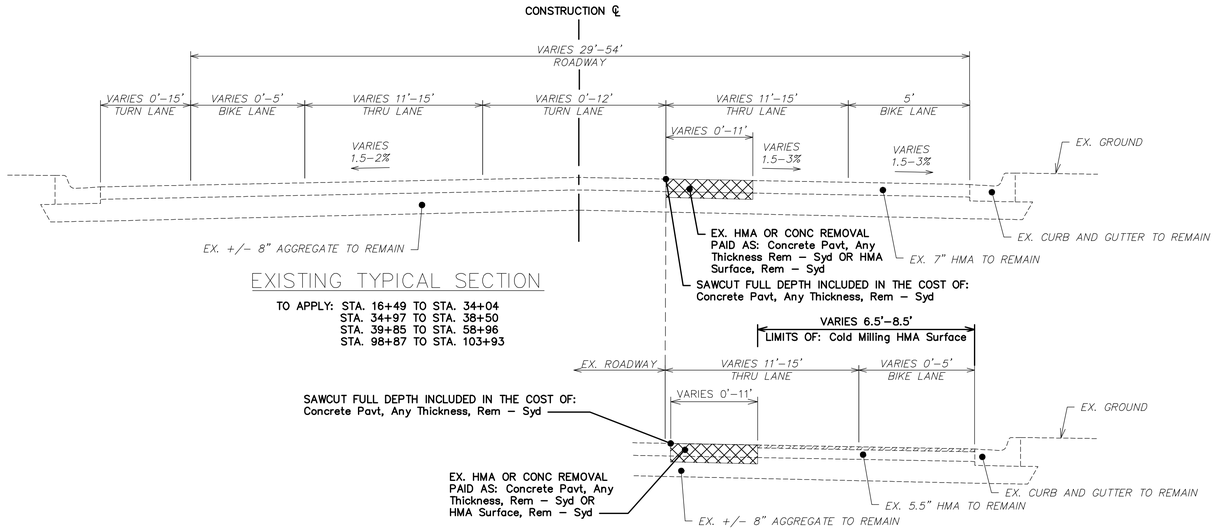
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK
PROJECT NOTES

SCALE: NOT TO SCALE
DRAWING No. 20230643-NT01
SHEET No.

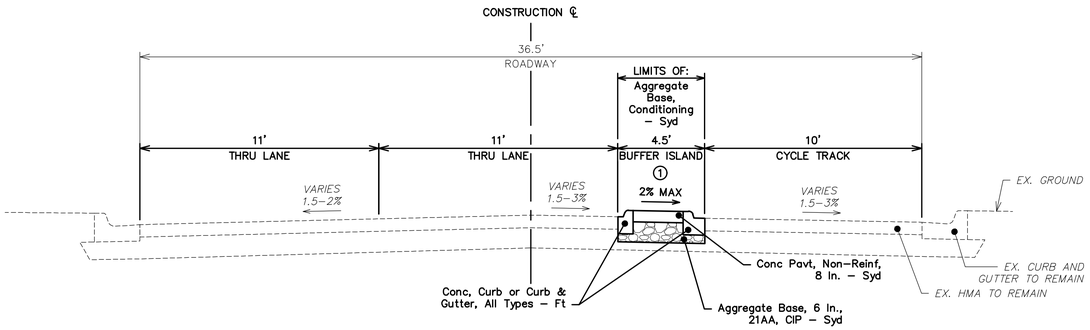


EXISTING TYPICAL SECTION

TO APPLY: STA. 16+49 TO STA. 34+04
STA. 34+97 TO STA. 38+50
STA. 39+85 TO STA. 58+96
STA. 98+87 TO STA. 103+93

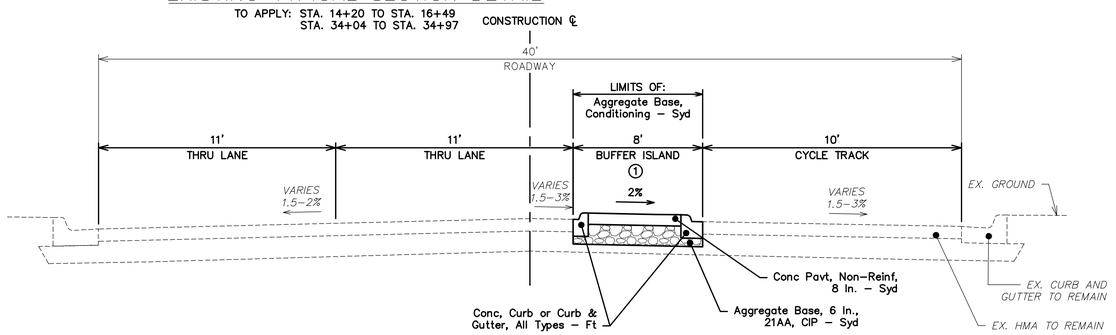
EXISTING TYPICAL SECTION DETAIL

TO APPLY: STA. 14+20 TO STA. 16+49
STA. 34+04 TO STA. 34+97



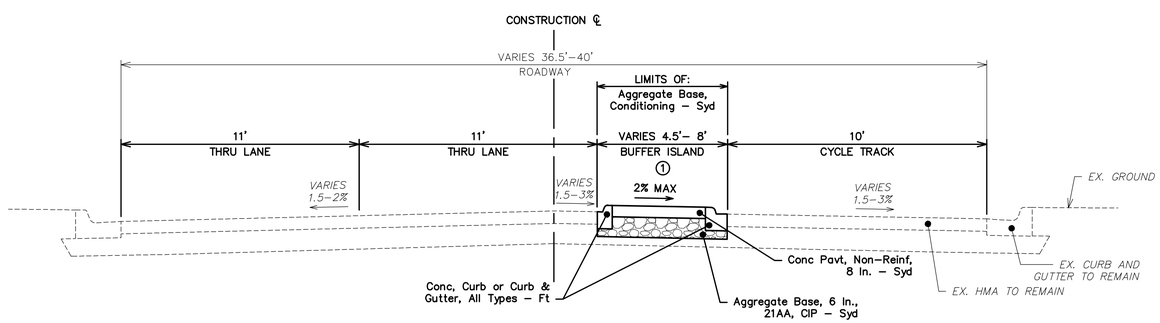
PROPOSED TYPICAL SECTION

TO APPLY: STA. 17+02 TO STA. 21+05



PROPOSED TYPICAL SECTION

TO APPLY: STA. 21+98 TO STA. 33+30
STA. 40+09 TO STA. 42+71



PROPOSED TYPICAL SECTION

TO APPLY: STA. 21+35 TO STA. 21+67
STA. 33+61 TO STA. 33+72

NOTES:

1. SEE PLANS FOR EXACT LIMITS OF BUFFER.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

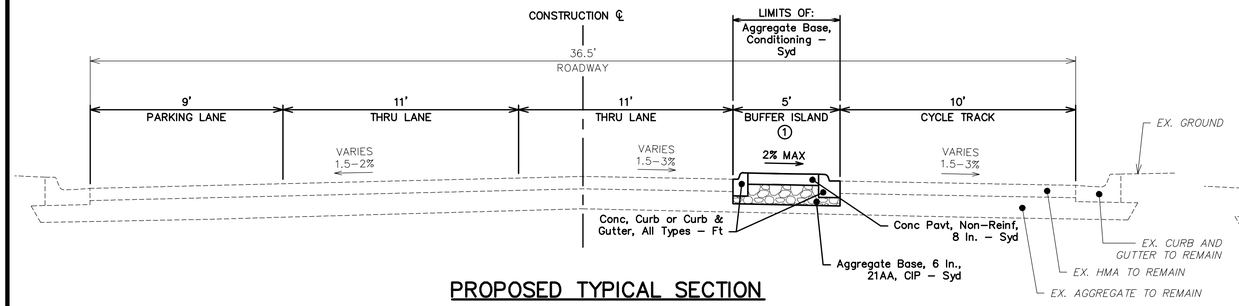
MILLER ROAD CYCLE TRACK

TYPICAL SECTIONS

SCALE: NOT TO SCALE

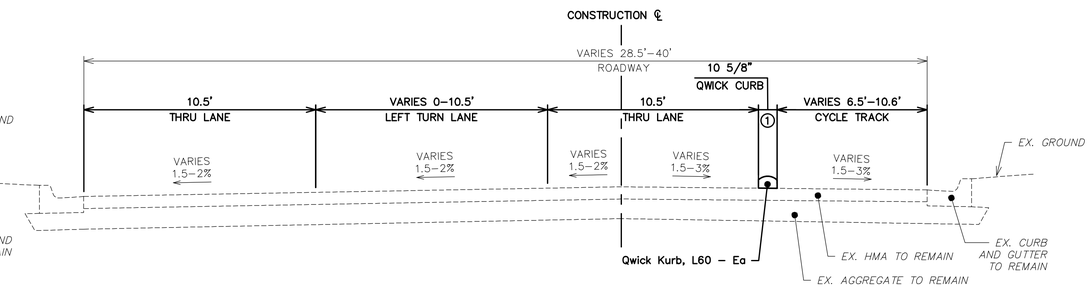
DRAWING No. 20230643-TYP01

SHEET No.



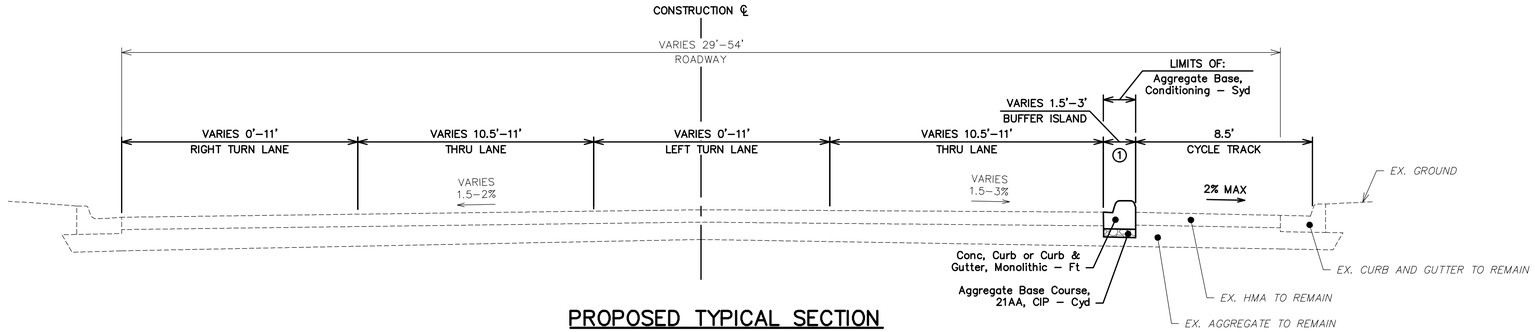
PROPOSED TYPICAL SECTION

TO APPLY: STA. 35+85 TO STA. 38+50



PROPOSED TYPICAL SECTION

TO APPLY: STA. 43+09 TO STA. 58+96
STA. 98+87 TO STA. 103+93



PROPOSED TYPICAL SECTION

TO APPLY: STA. 34+04 TO STA. 34+97
STA. 14+20 TO STA. 16+49

NOTES:

① SEE PLANS FOR EXACT LIMITS OF BUFFER.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

TYPICAL SECTIONS

SCALE : NOT TO SCALE

DRAWING No. 20230643-TYP02

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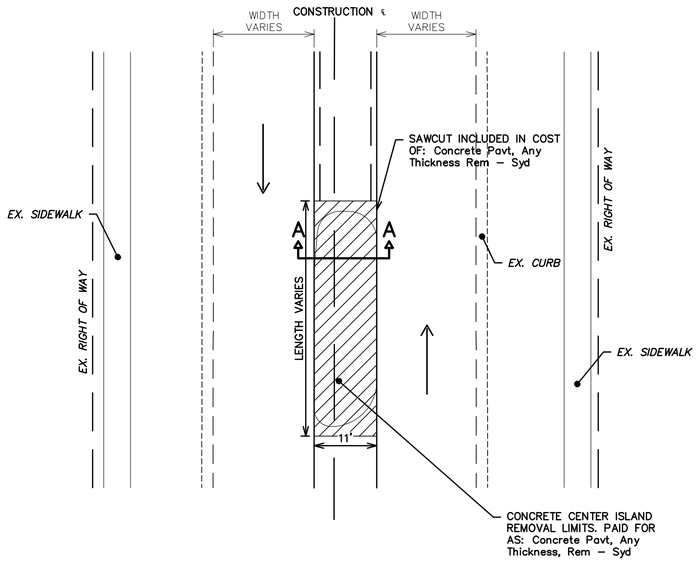
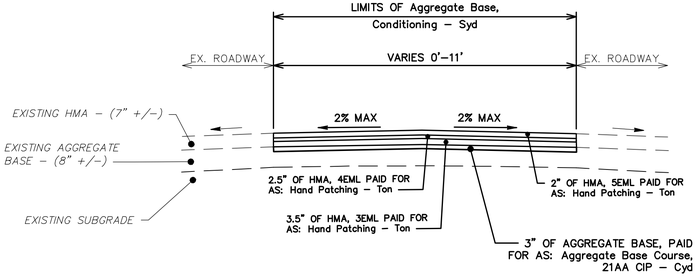


EXISTING DETAIL LEGEND

REMOVE CONCRETE PAVEMENT

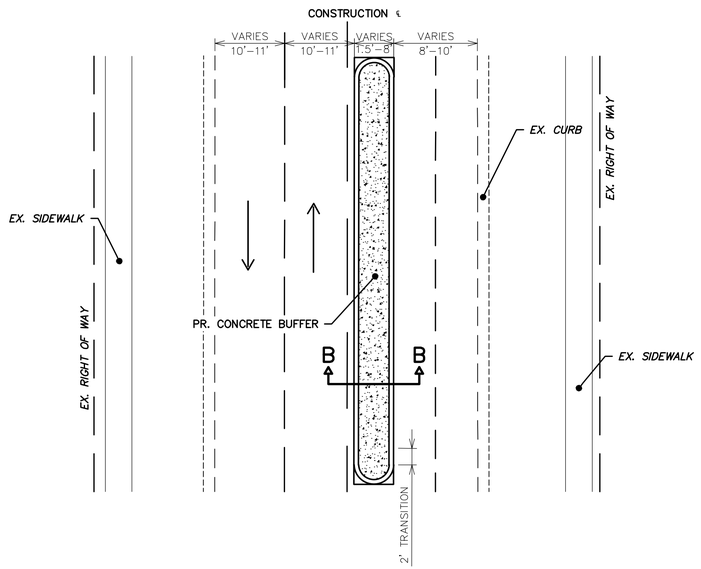


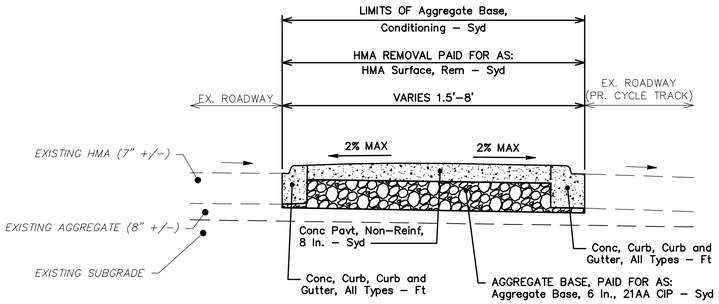
SECTION A–A
NOT TO SCALE

EXISTING PEDESTRIAN ISLAND REMOVAL DETAIL

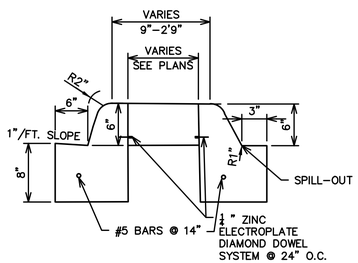
NOT TO SCALE

HMA APPLICATION ESTIMATE						
PAY ITEM	HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
HAND PATCHING	5EML	220 Lb/Syd	2	220 (TOP)	PG 64–28	TOP COURSE, HAND PATCHING
HAND PATCHING	4EML	275 Lb/Syd	2.5	–	PG 64–28	LEVELING COURSE, HAND PATCHING
HAND PATCHING	3EML	385 Lb/Syd	3.5	–	PG 64–28	BASE COURSE, HAND PATCHING
ASPHALT EMULSION	88–1H	0.05–0.15 GAL/SYD	–	–	–	INCLUDED IN COST OF HMA ITEM





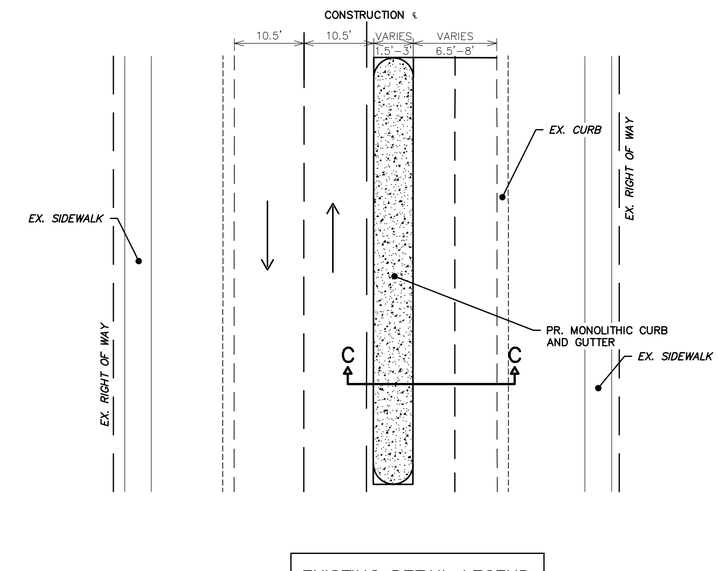
SECTION B–B
NOT TO SCALE



SECTION B–B CURB DIMENSIONS
NOT TO SCALE

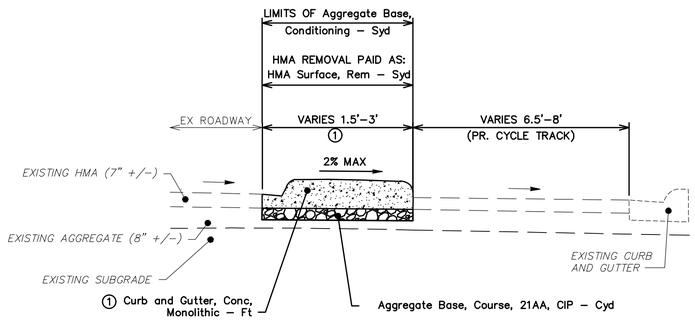
PROPOSED BUFFER ISLAND DETAIL

NOT TO SCALE



EXISTING DETAIL LEGEND

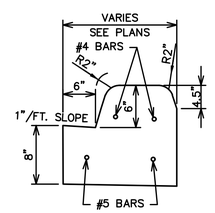
LIMITS OF MILL AND OVERLAY



SECTION C–C
NOT TO SCALE

NOTES:

① CONCRETE CURB TO PITCH AWAY FROM ROADWAY CROWN AT A 2% (MAX) CROSS SLOPE.



SECTION C–C CURB DIMENSIONS
NOT TO SCALE

PROPOSED MONOLITHIC CURB AND GUTTER DETIAL

NOT TO SCALE

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
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3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

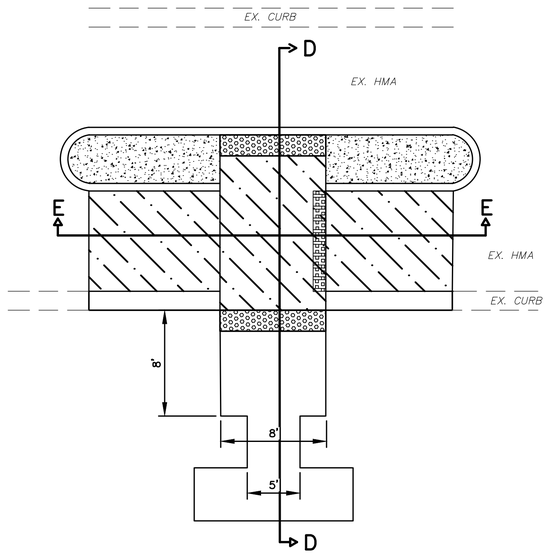
MILLER ROAD CYCLE TRACK

PROJECT DETAILS

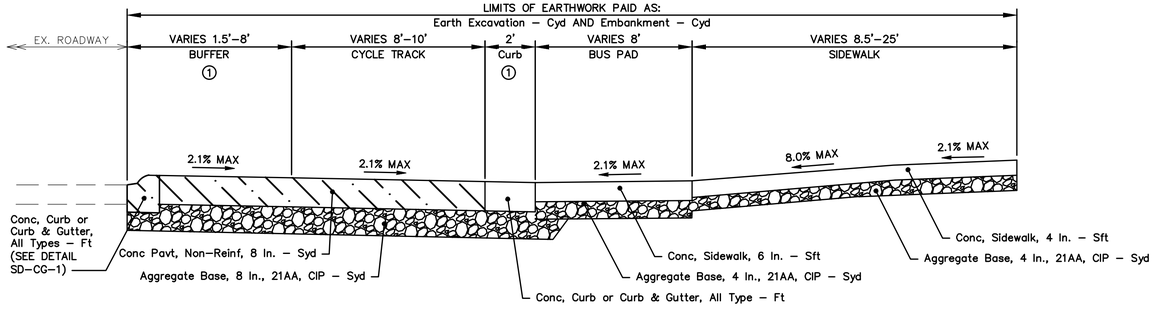
SCALE : NOT TO SCALE

DRAWING No. 20230643-DT01

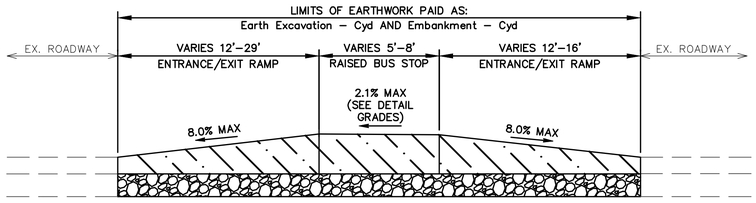
SHEET No. 101 of 131



PLAN VIEW
NOT TO SCALE



SECTION D–D
NOT TO SCALE



SECTION E–E
NOT TO SCALE

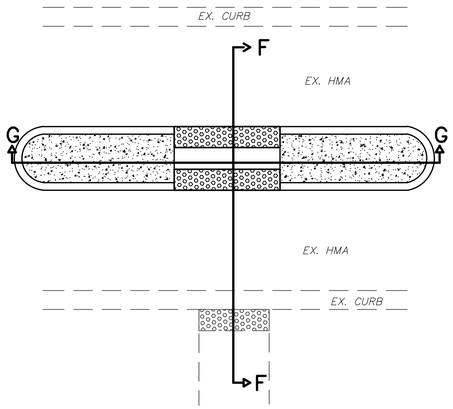
RAISED CONCRETE BUS STOP DETAIL

NOT TO SCALE

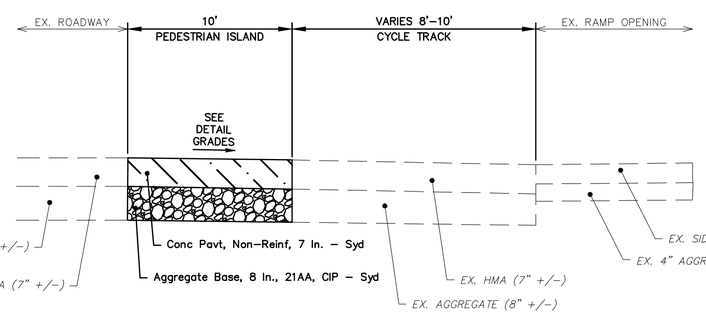
TO APPLY: STA. 25+69 TO STA. 26+61
STA. 42+14 TO STA. 42+71
STA. 98+87 TO STA. 99+23

NOTES:

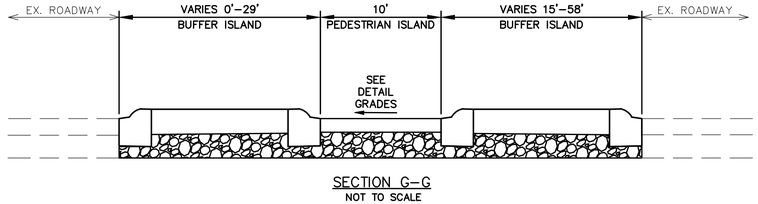
① CONCRETE CURB AND GUTTER TO SLOPE UP WITH CONCRETE SECTION. SEE DETAIL GRADES.



PLAN VIEW
NOT TO SCALE



SECTION F–F
NOT TO SCALE



SECTION G–G
NOT TO SCALE

PEDESTRIAN ISLAND DETAIL

NOT TO SCALE

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

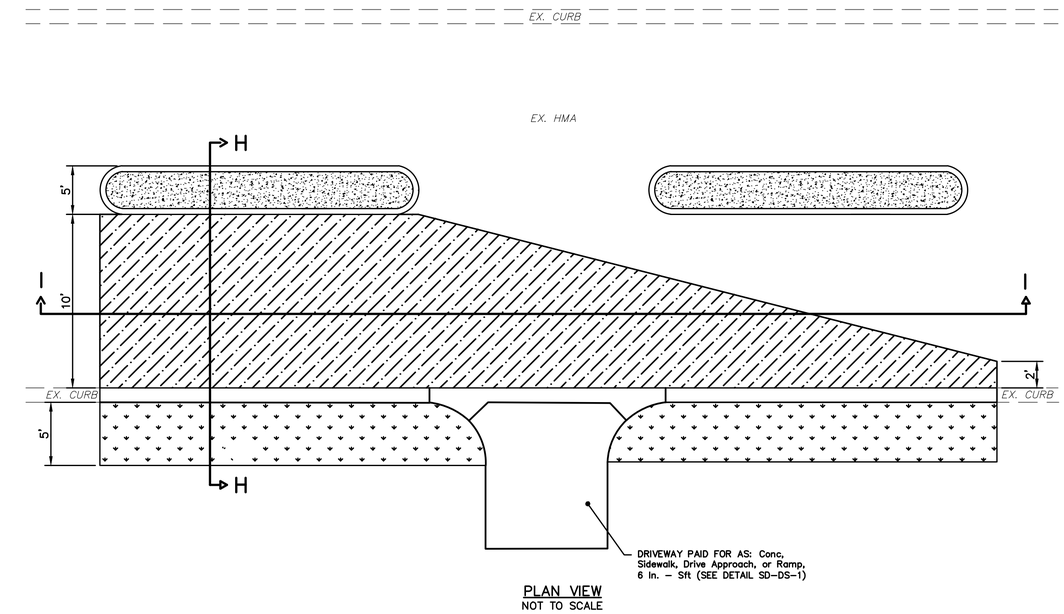
MILLER ROAD CYCLE TRACK

PROJECT DETAILS

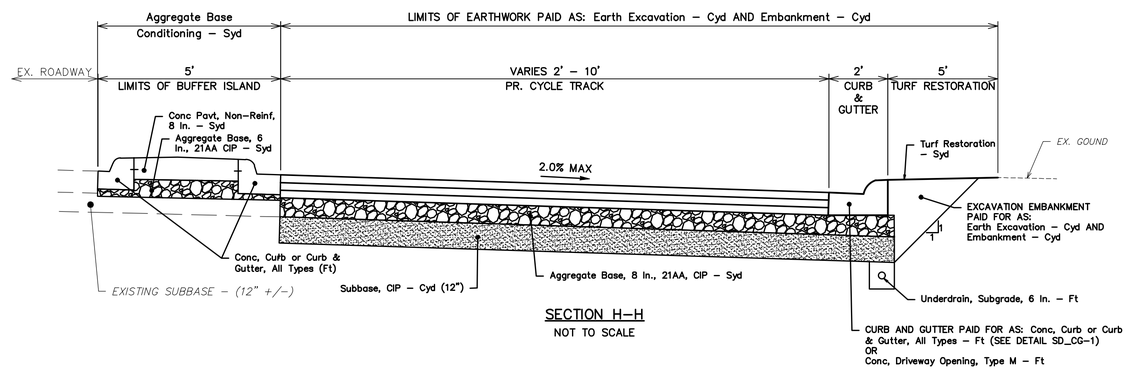
SCALE : NOT TO SCALE

DRAWING No. 20230643-DT02

SHEET No.



PLAN VIEW
NOT TO SCALE



SECTION H–H
NOT TO SCALE

SECTION I–I
NOT TO SCALE

CURB ALIGNMENT RECONSTRUCT

NOT TO SCALE

TO APPLY: STA. 38+80 TO STA. 39+85

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

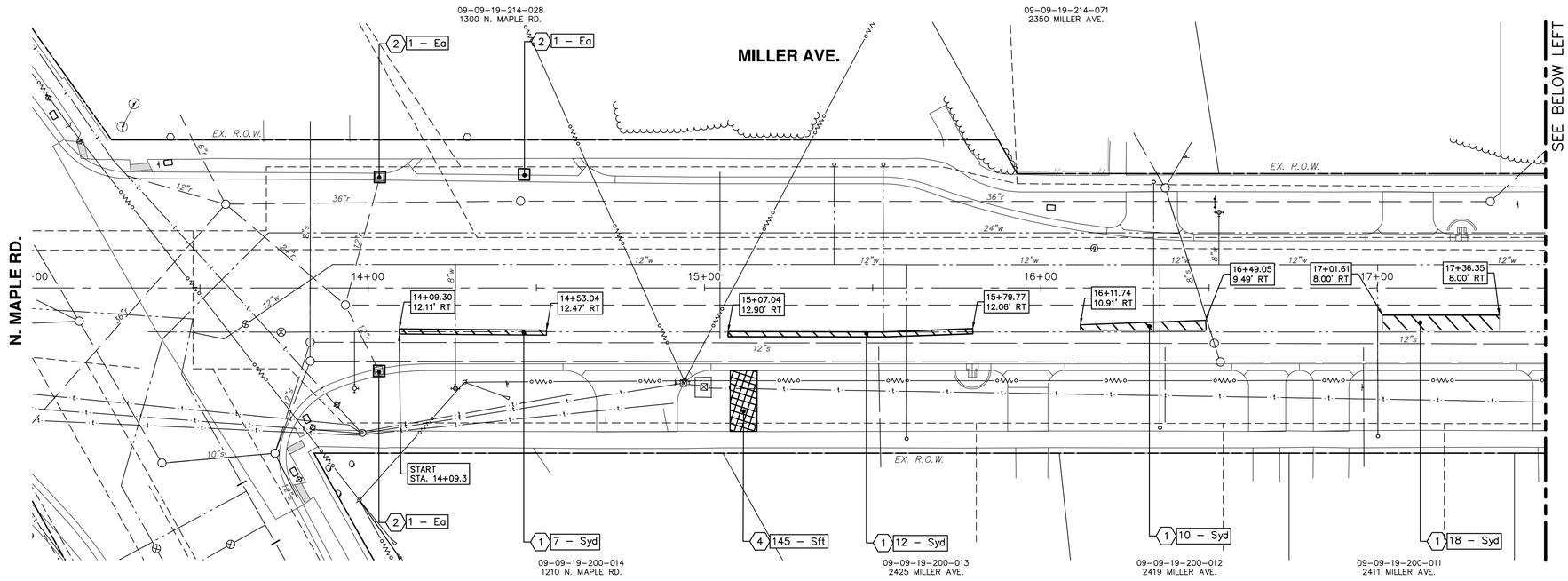
MILLER ROAD CYCLE TRACK

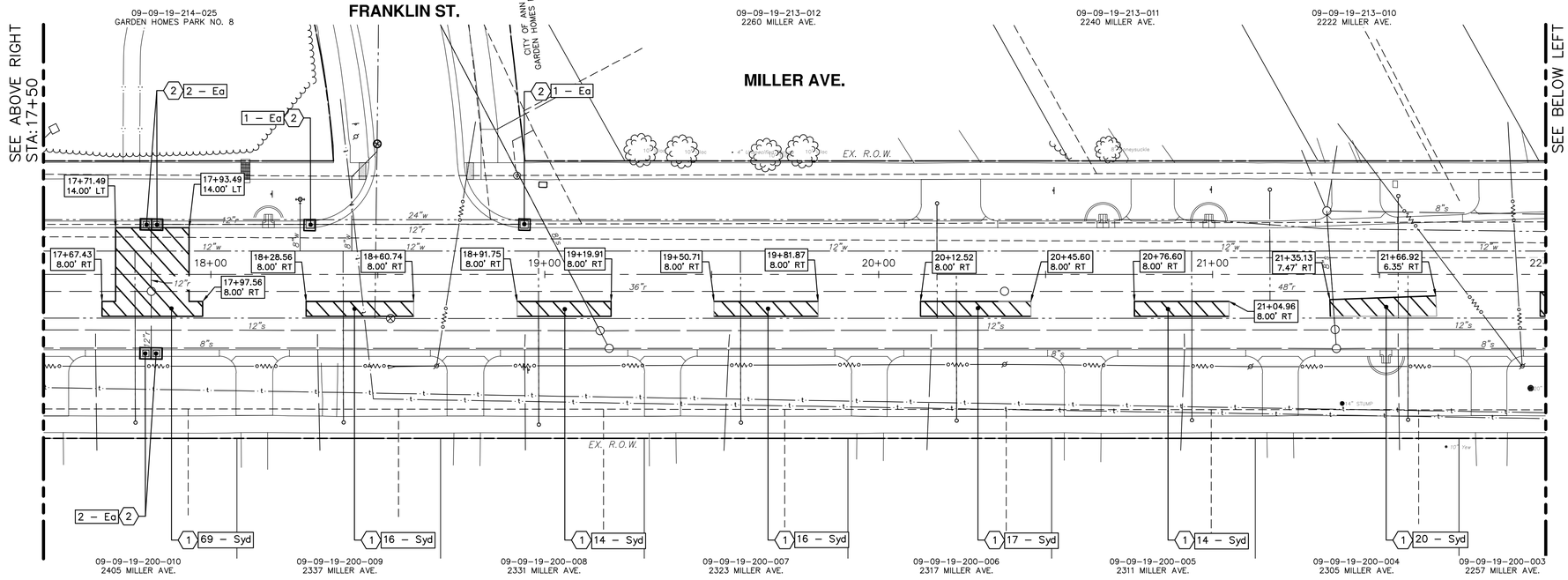
PROJECT DETAILS

SCALE : NOT TO SCALE

DRAWING No. 20230643-DT03

SHEET No.





CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5	· X X· X X· X X· X X· X X·	Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

REMOVAL PLAN SHEET

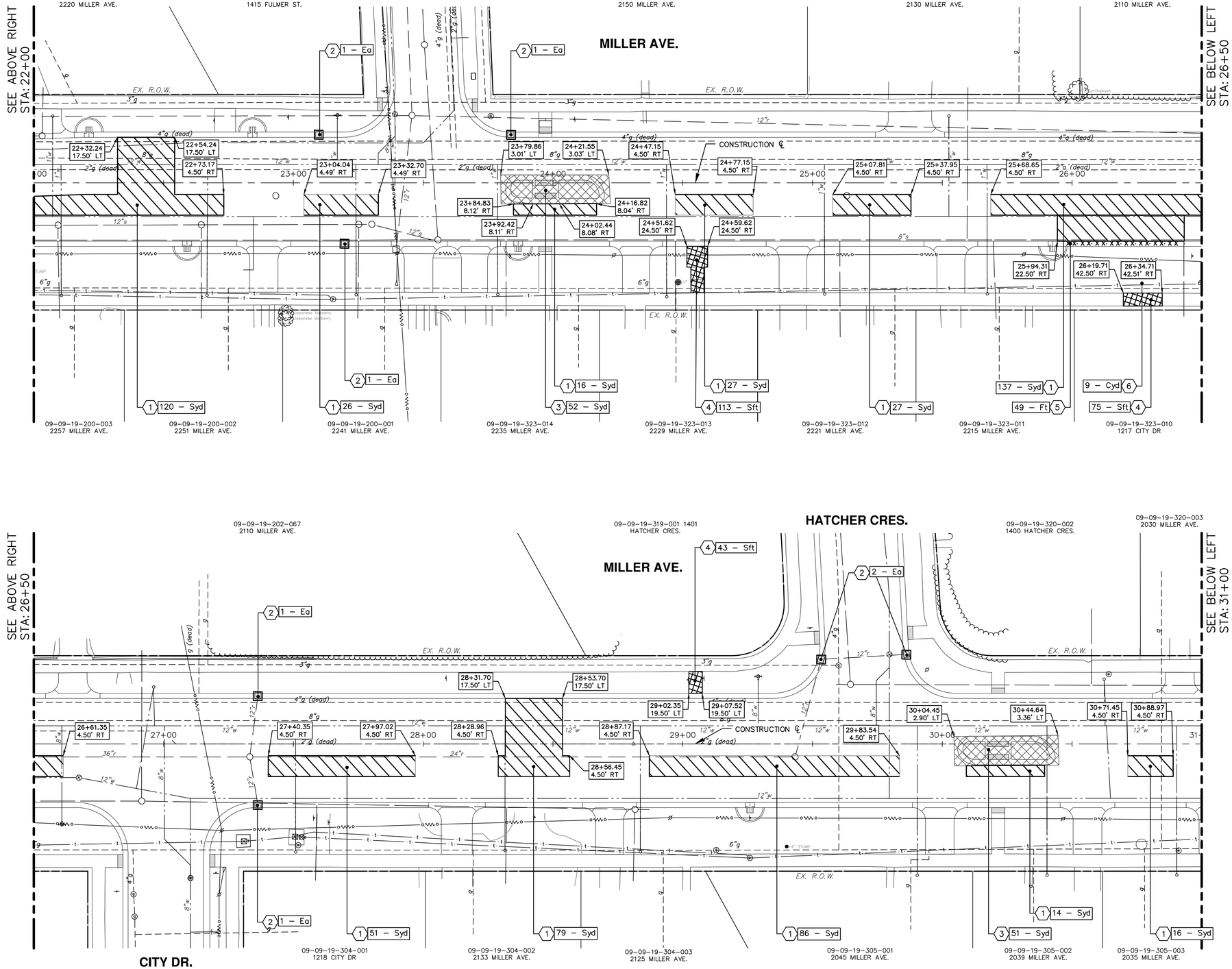
START (STA. 14+09) TO STA. 22+00

SCALE : 1" = 20'

DRAWING No. 20230643-RM01

SHEET No. 104 of 131

V: \2023O6\20230643\V\Sheets\rm01.dwg Dwg Created: 11-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5		Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

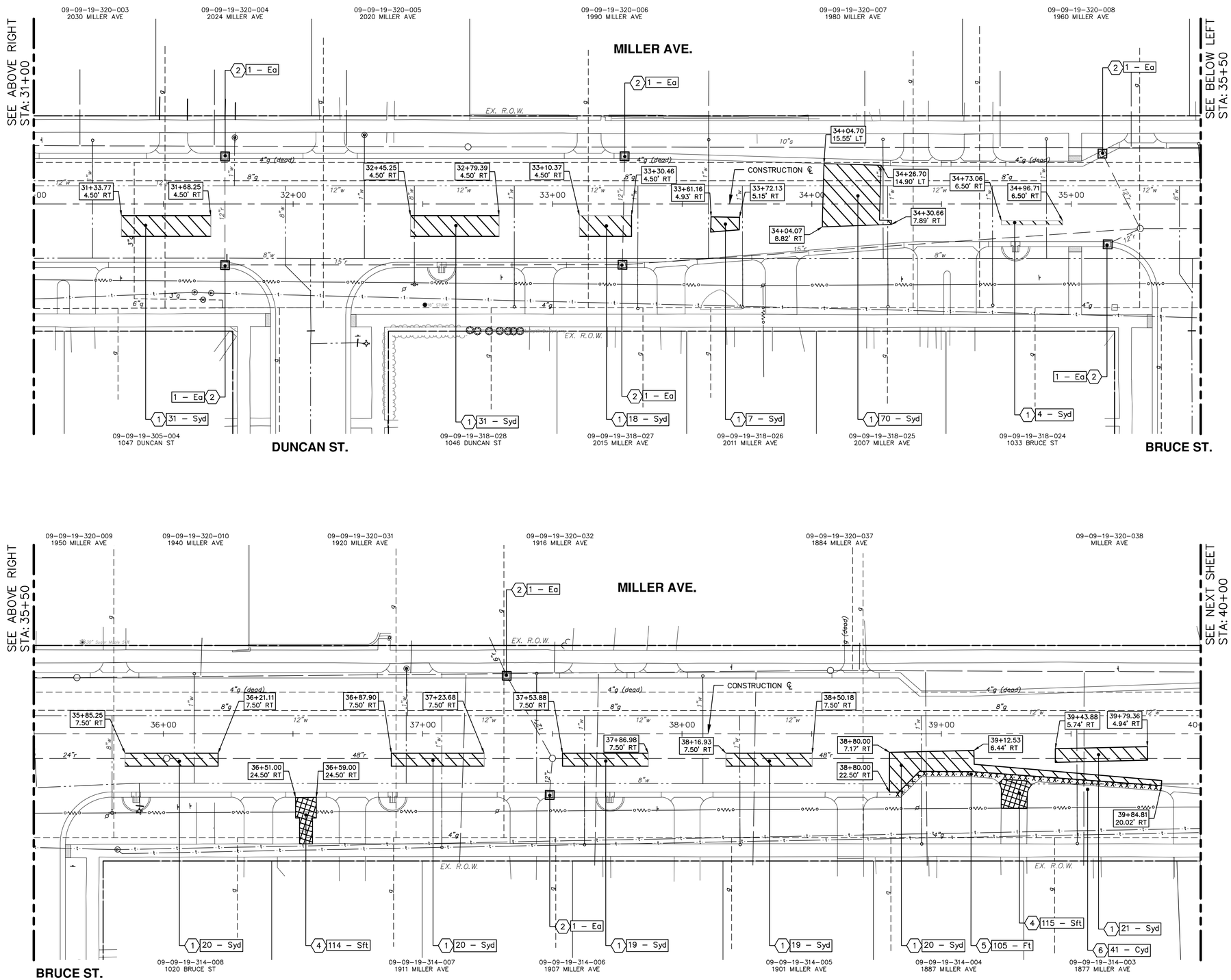
REMOVAL PLAN SHEET

STA. 22+00 TO STA. 31+00

SCALE : 1" = 20'

DRAWING No. 20230643-RM02

SHEET No.



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5		Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

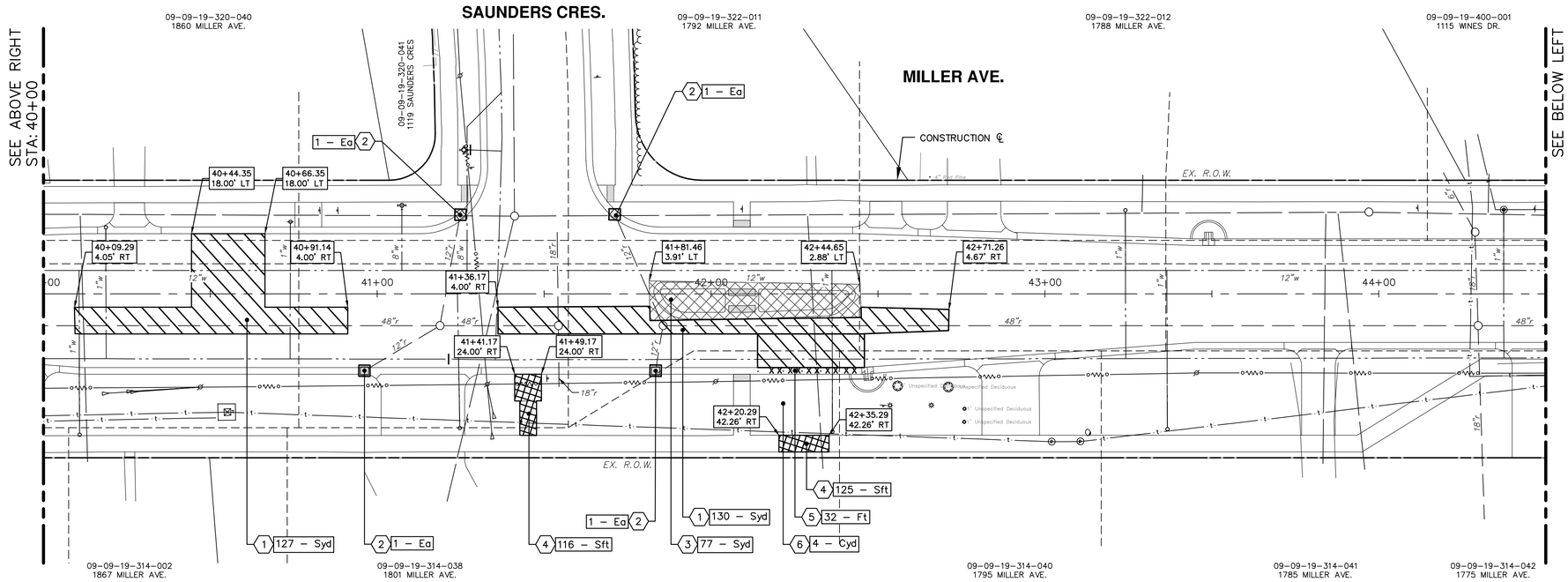
REMOVAL PLAN SHEET

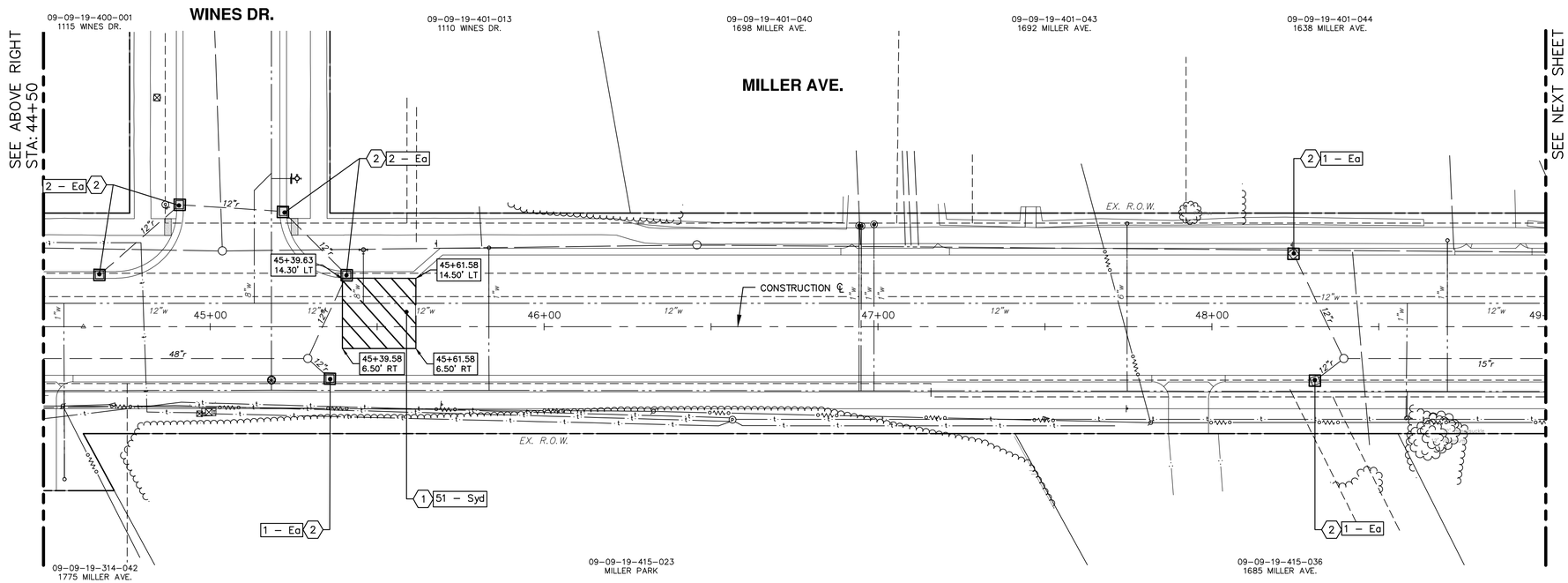
STA. 31+00 TO STA. 40+00

SCALE : 1" = 20'

DRAWING No. **20230643-RM03**

SHEET No.





CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5		Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

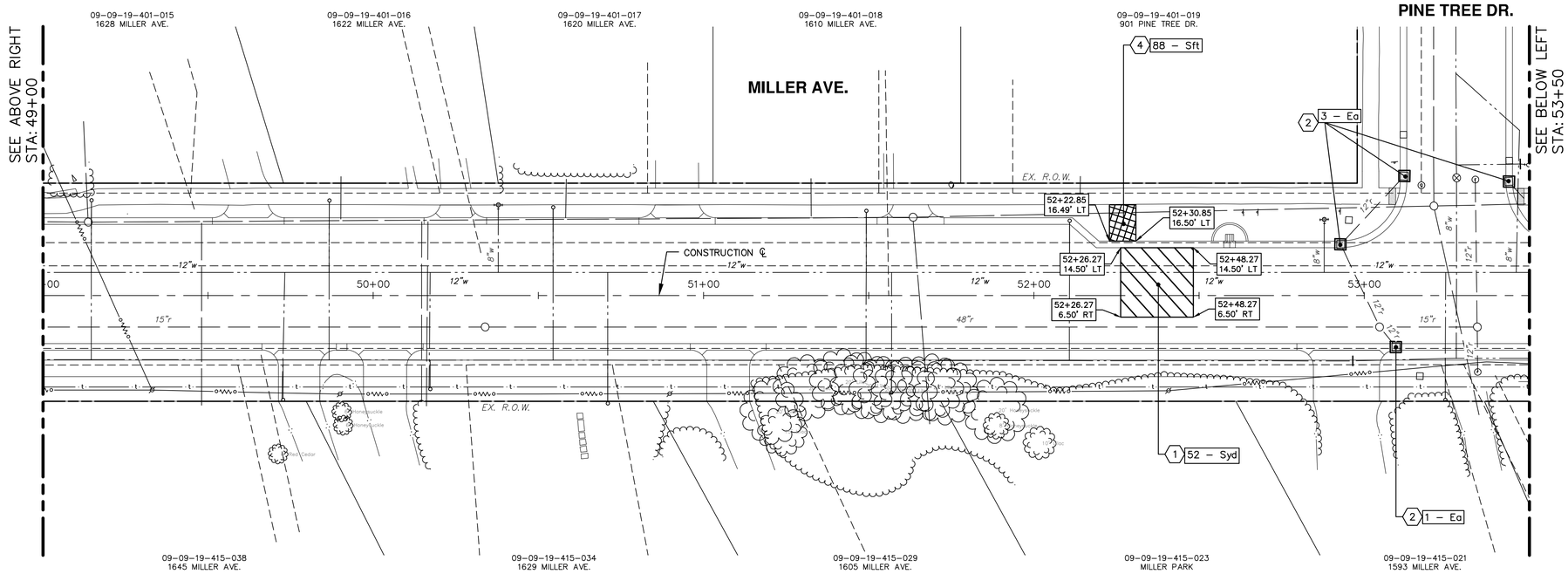
REMOVAL PLAN SHEET

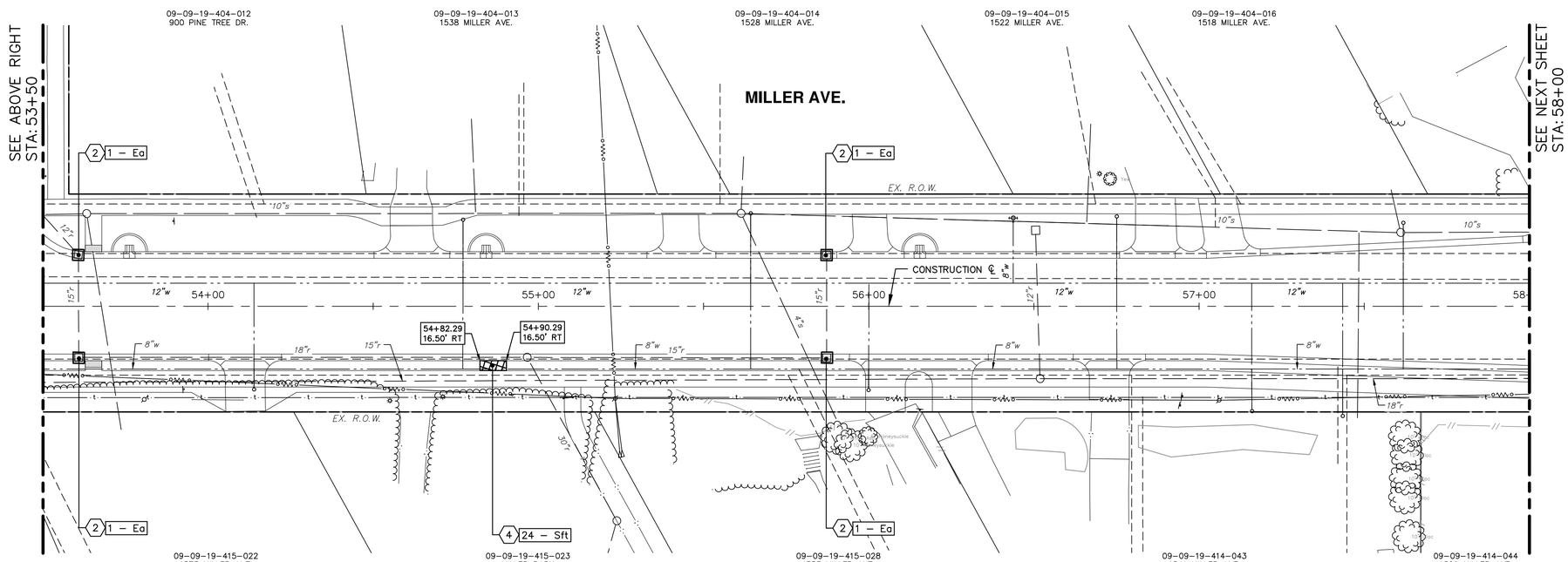
STA. 40+00 TO STA. 49+00

SCALE : 1" = 20'

DRAWING No. **20230643-RM04**

SHEET No.





CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5	- X X - X X - X X - X X -	Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

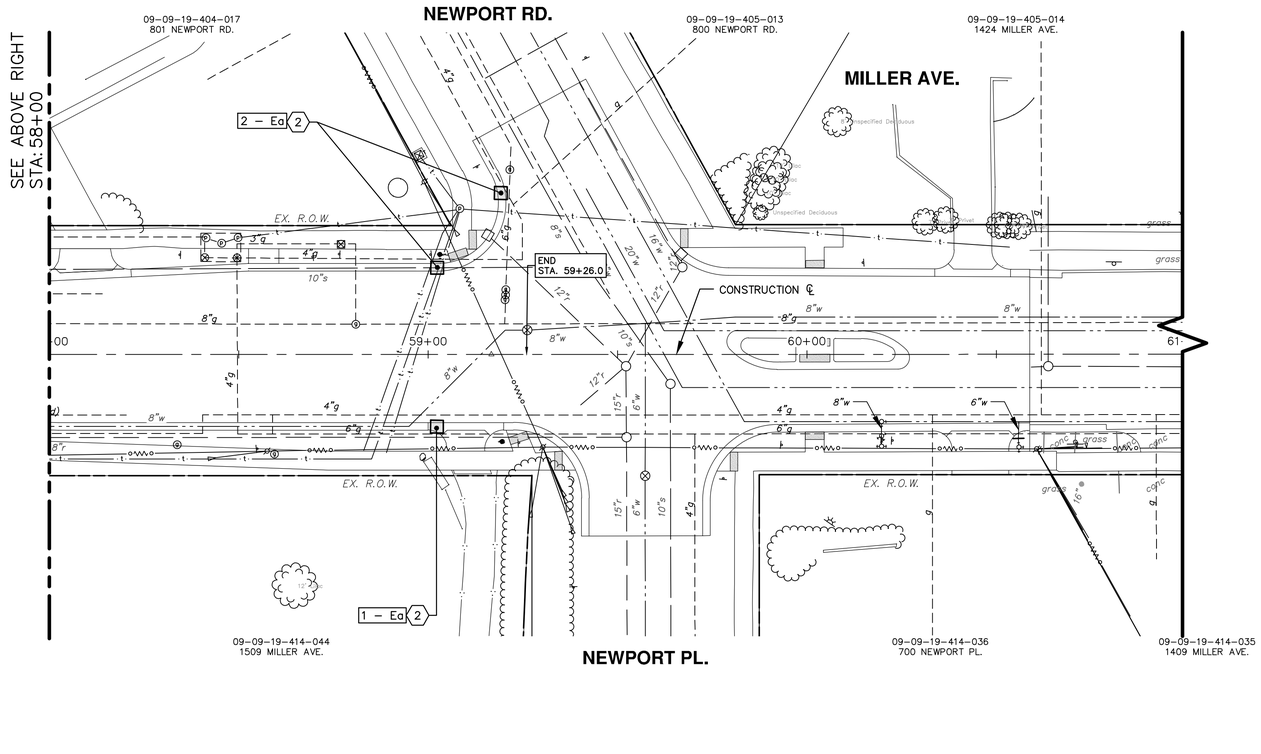
REMOVAL PLAN SHEET

STA. 49+00 TO STA. 58+00

SCALE : 1" = 20'

DRAWING No. **20230643-RM05**

SHEET No.



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5	· X X· X X· X X· X X· X X·	Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

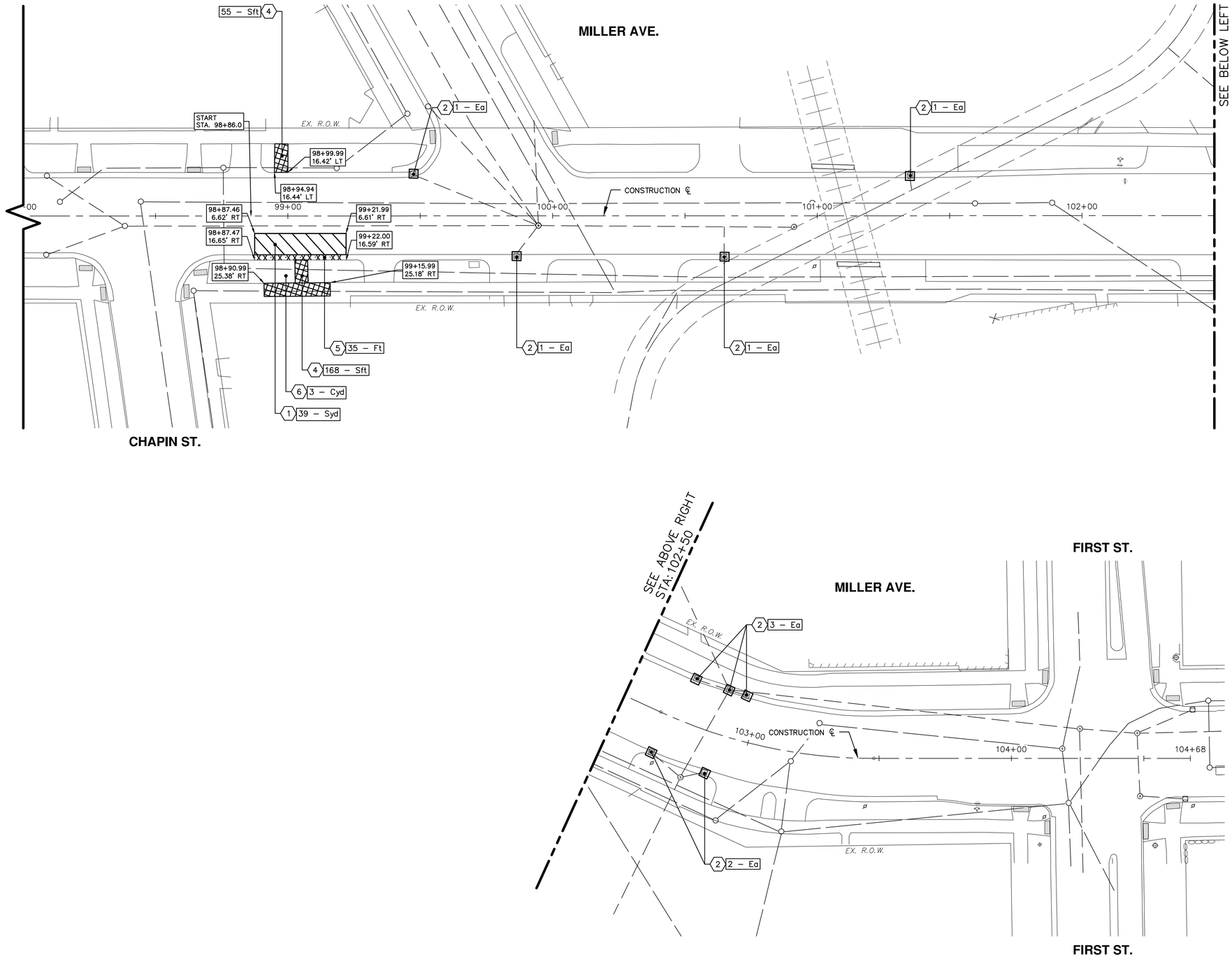
REMOVAL PLAN SHEET

STA. 58+00 TO END (STA. 59+26)

SCALE : 1" = 20'

DRAWING No. 20230643-RM06

SHEET No.



CONSTRUCTION KEY		
KEY No.	PROPOSED WORK	DESCRIPTION
1		HMA Surface, Rem – Syd
2		Erosion Control, Inlet Protection, Fabric Drop – Ea
3		Concrete Pavt, Any Thickness, Rem – Syd
4		Sidewalk, Sidewalk Ramp, & Driveway Approach, Any Thick, Rem – Sft
5	· X X· X X· X X· X X· X X·	Curb, Gutter, Curb and Gutter, Any Type, Rem – Ft
6		Earth Excavation – Cyd

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

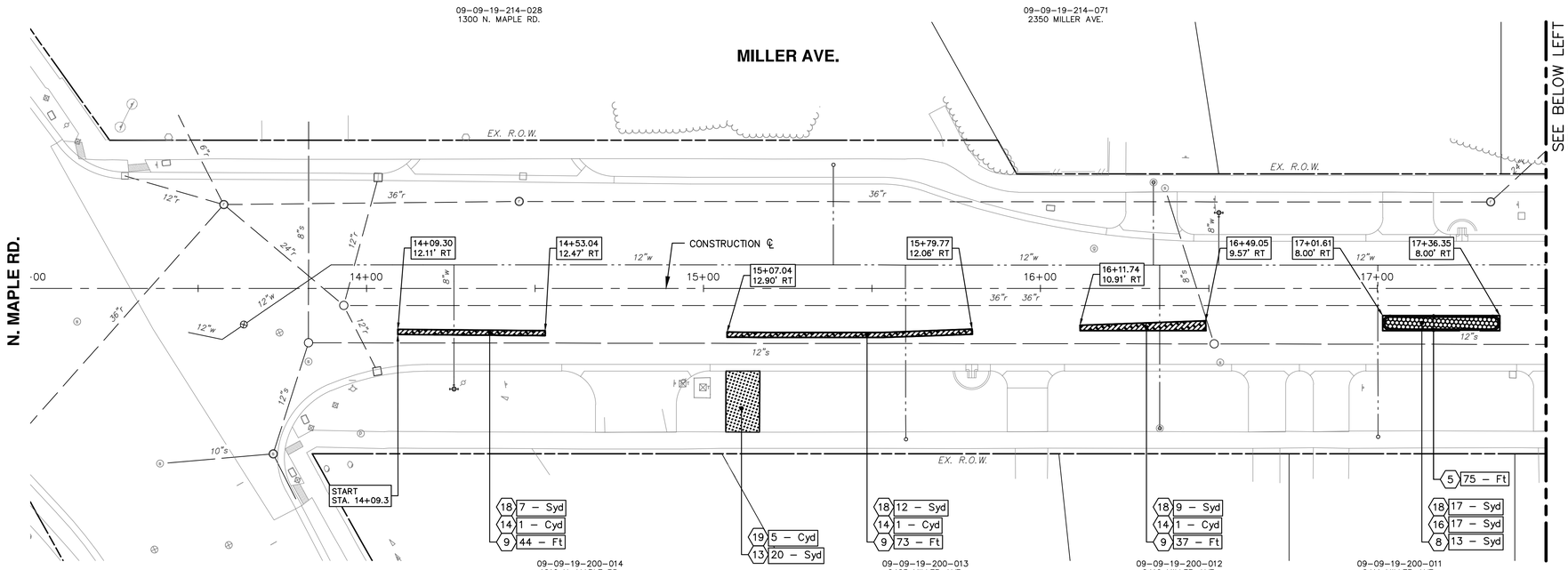
REMOVAL PLAN SHEET

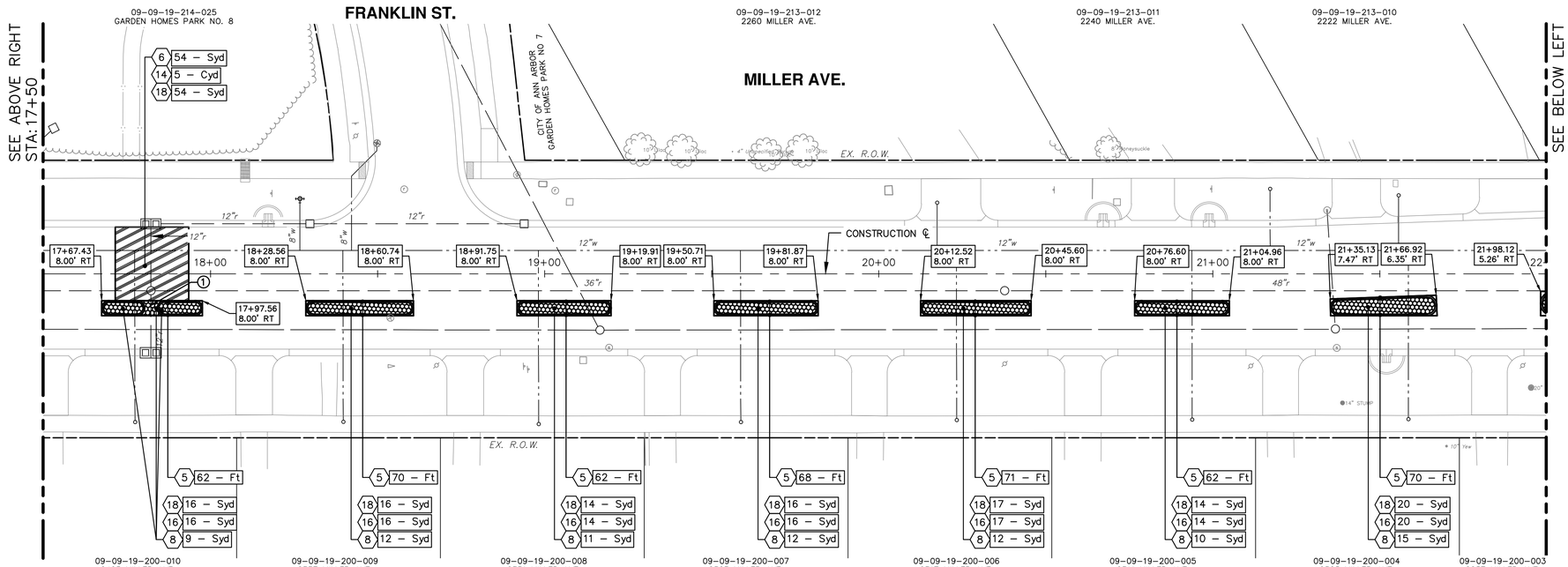
START (STA. 98+86) TO P.O.E. (STA. 104+07)

SCALE: 1" = 20'

DRAWING No. 20230643-RM07

SHEET No.





NOTES:

1. CONCRETE PAVEMENT TO BE FLUSH WITH HMA ROADWAY.

CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L125SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
4	Ⓣ	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. – Sft
5		Conc, Curb or Curb & Gutter, All Types – Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non-Reinf, 9 In.
7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non-Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non-Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
15		Aggregate Base, 4 In., 21AA, CIP – Syd
16		Aggregate Base, 6 In., 21AA, CIP – Syd
17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

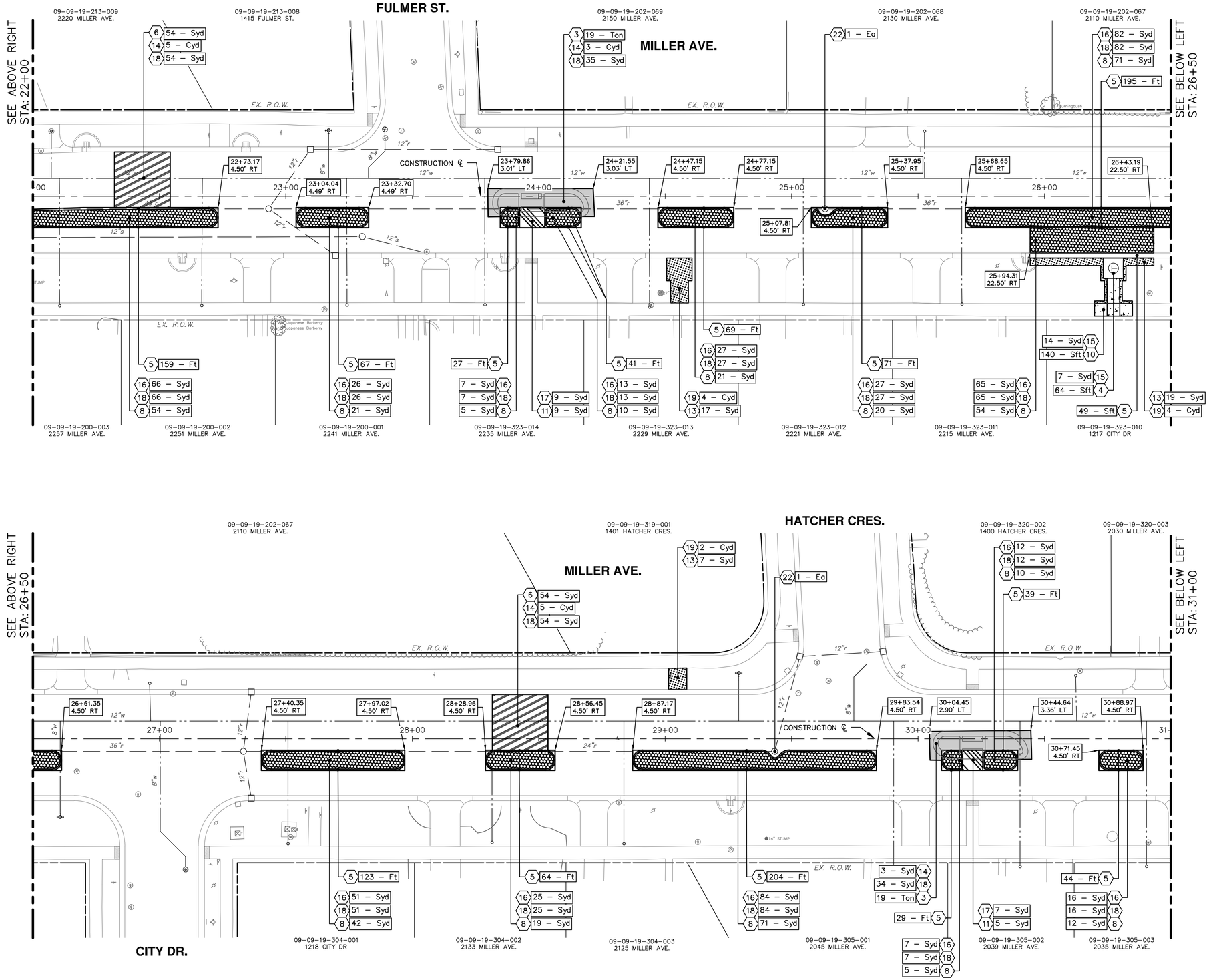
CONSTRUCTION PLAN SHEET

START (STA. 14+09) TO STA. 22+00

SCALE : 1" = 20'

DRAWING No. 20230643-PL01

SHEET No. 111 of 131



NOTES:

1. STRUCTURES MAY BE LOCATED IN CURB LINE AND REQUIRE HAND FORMING OF THE CURB AROUND THE STRUCTURE. THESE EYEBROWS SHOWN AROUND STRUCTURES ARE NOT TO SCALE AND EXACT LOCATIONS SHALL BE FIELD VERIFIED. IF STRUCTURES ARE NOT FOUND TO BE WITHIN THE PROPOSED CURB LINE, EYEBROWS SHALL BE ELIMINATED AND CURB SHALL CARRY STRAIGHT THROUGH.

CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 — Ea AND DS_Big Bollard — MASH L1259HM — Ea
2		DS_Continuous Base Front Span L61 — Ea AND DS_Continuous Base Rear Span L62 — Ea
3		8" OF HMA PAID AS: Hand Patching — Ton (SEE HMA APPLICATION TABLE)
4	T	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. — Sft
5		Conc, Curb or Curb & Gutter, All Types — Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non-Reinf, 9 In.
7		Conc, Driveway Opening, Type M — Ft
8		Conc Pavt, Non-Reinf, 8 In. — Syd
9		DS_Conc, Curb and Gutter, Monolithic — Ft
10		Conc, Sidewalk, 4 In. — Sft
11		Conc Pavt, Non-Reinf, 7 In. — Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified — Sft
13		Turf Restoration — Syd
14		Aggregate Base Course, 21AA, CIP — Cyd
15		Aggregate Base, 4 In., 21AA, CIP — Syd
16		Aggregate Base, 6 In., 21AA, CIP — Syd
17		Aggregate Base, 8 In., 21AA, CIP — Syd
18		Aggregate Base, Conditioning — Syd
19		Embankment — Cyd
20		12" SUBBASE PAID AS: Subbase, CIP — Cyd
21		Underdrain, Subgrade, 6 In. — Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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

MILLER ROAD CYCLE TRACK

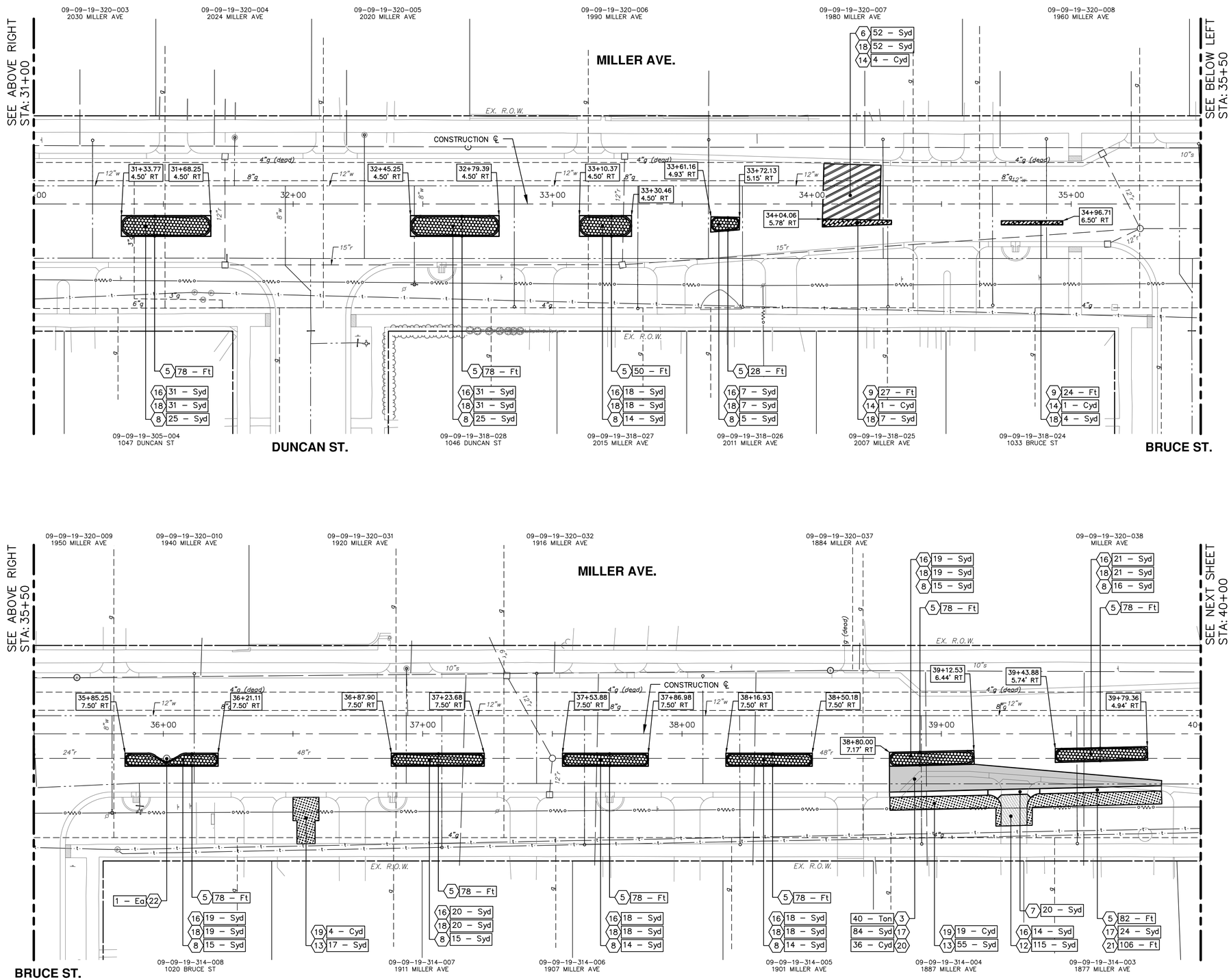
CONSTRUCTION PLAN SHEET

STA. 22+00 TO STA. 31+00

SCALE : 1" = 20'

DRAWING No. 20230643-PL02

SHEET No. 112 of 131



NOTES:

1. SEE DETAIL SD–DS–1 FOR DRIVEWAY CONSTRUCTION DETAIL.
2. STRUCTURES MAY BE LOCATED IN CURB LINE AND REQUIRE HAND FORMING OF THE CURB AROUND THE STRUCTURE. THESE EYEBROWS SHOWN AROUND STRUCTURES ARE NOT TO SCALE AND EXACT LOCATIONS SHALL BE FIELD VERIFIED. IF STRUCTURES ARE NOT FOUND TO BE WITHIN THE PROPOSED CURB LINE, EYEBROWS SHALL BE ELIMINATED AND CURB SHALL CARRY STRAIGHT THROUGH.

CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L12SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
4	Ⓣ	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. – Sft
5		Conc, Curb or Curb & Gutter, All Types – Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non–Reinf, 9 In.
7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non–Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non–Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
15		Aggregate Base, 4 In., 21AA, CIP – Syd
16		Aggregate Base, 6 In., 21AA, CIP – Syd
17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

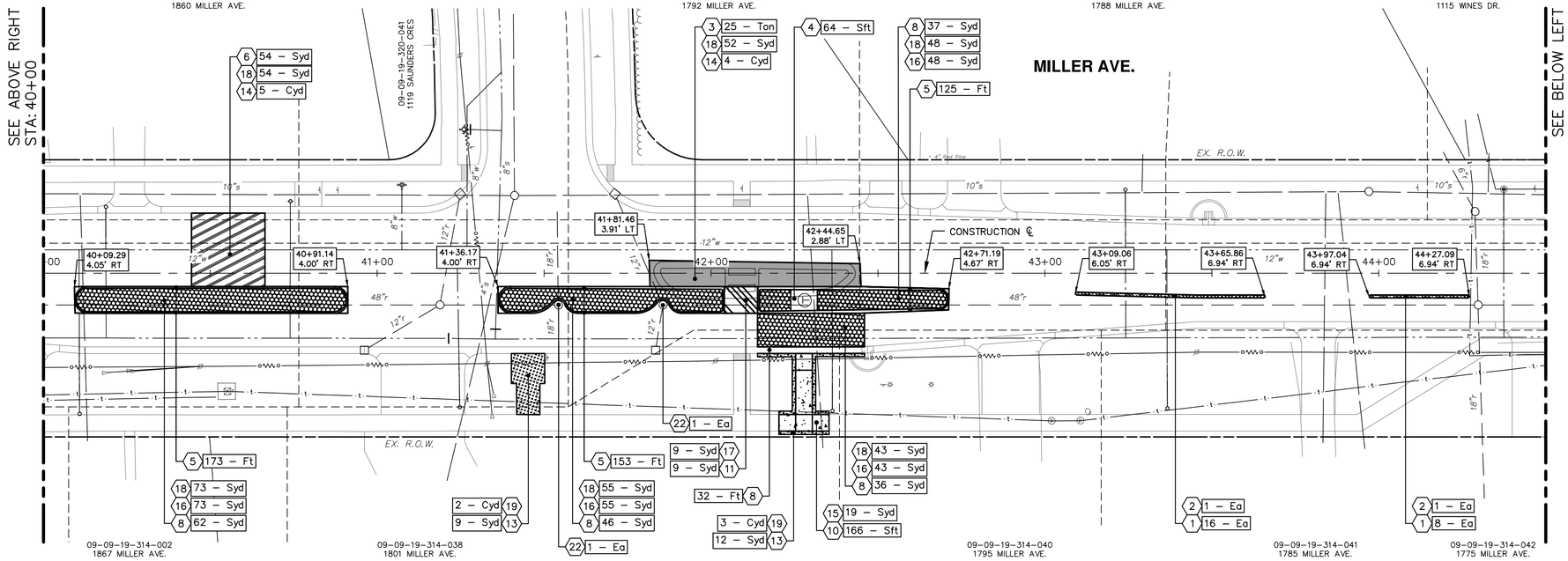
CONSTRUCTION PLAN SHEET

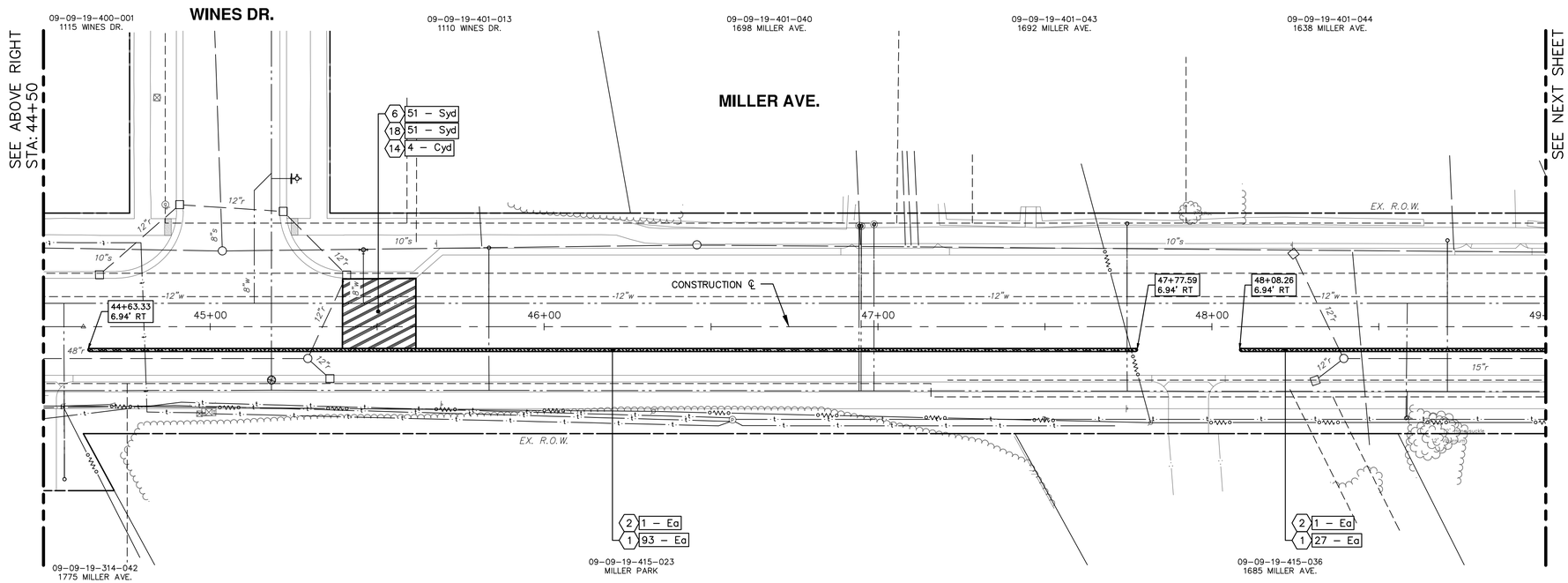
STA. 31+00 TO STA. 40+00

SCALE : 1" = 20'

DRAWING No. 20230643-PL03

SHEET No. 113 of 131





NOTES:

1. STRUCTURES MAY BE LOCATED IN CURB LINE AND REQUIRE HAND FORMING OF THE CURB AROUND THE STRUCTURE. THESE EYEBROWS SHOWN AROUND STRUCTURES ARE NOT TO SCALE AND EXACT LOCATIONS SHALL BE FIELD VERIFIED. IF STRUCTURES ARE NOT FOUND TO BE WITHIN THE PROPOSED CURB LINE, EYEBROWS SHALL BE ELIMINATED AND CURB SHALL CARRY STRAIGHT THROUGH.

CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L125SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
4	Ⓣ	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. – Sft
5		Conc, Curb or Curb & Gutter, All Types – Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non-Reinf, 9 In.
7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non-Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non-Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
15		Aggregate Base, 4 In., 21AA, CIP – Syd
16		Aggregate Base, 6 In., 21AA, CIP – Syd
17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

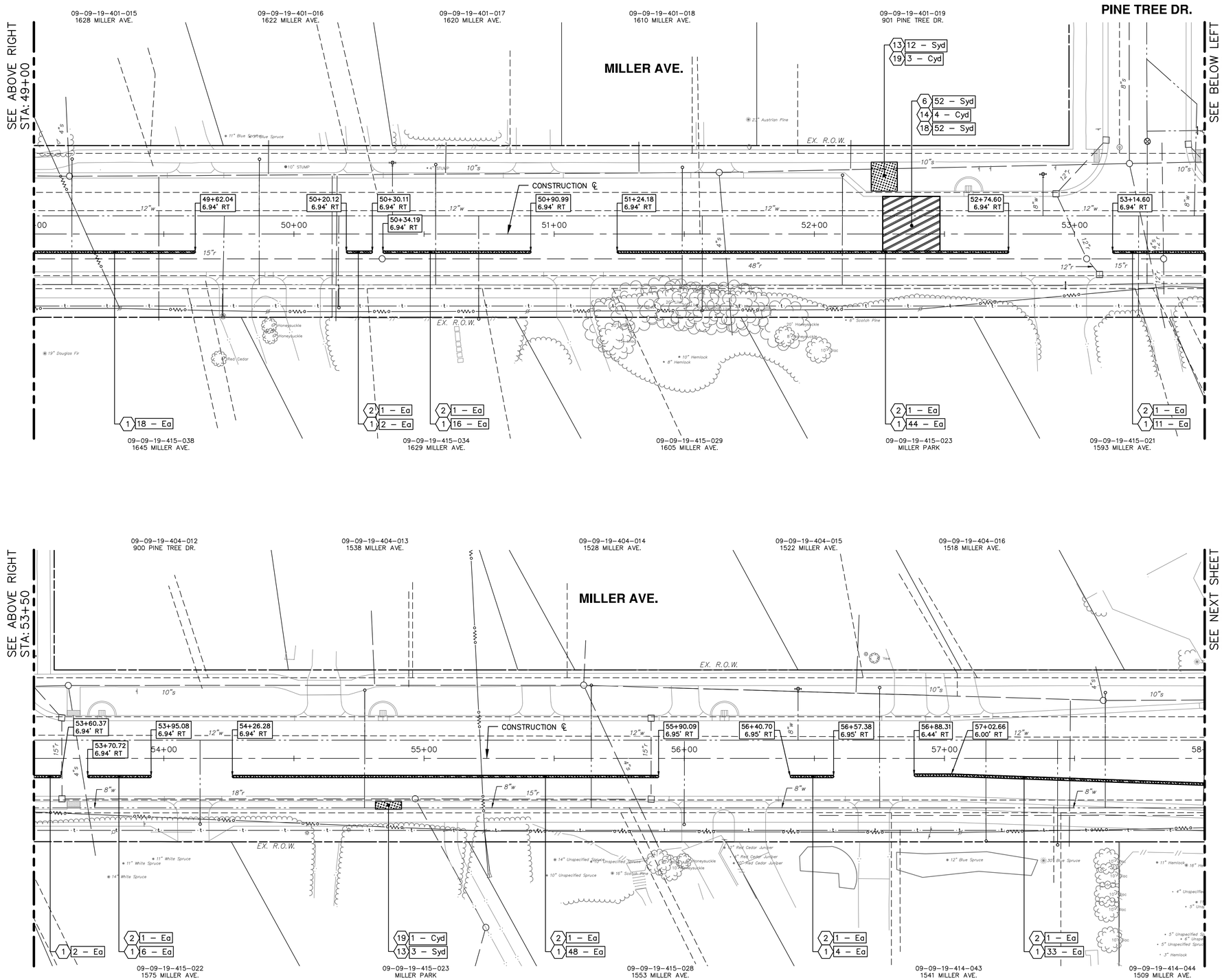
CONSTRUCTION PLAN SHEET

STA. 40+00 TO STA. 49+00

SCALE : 1" = 20'

DRAWING No. 20230643-PL04

SHEET No. 114 of 131



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L12SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
4	T	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. – Sft
5		Conc, Curb or Curb & Gutter, All Types – Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non-Reinf, 9 In.
7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non-Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non-Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
15		Aggregate Base, 4 In., 21AA, CIP – Syd
16		Aggregate Base, 6 In., 21AA, CIP – Syd
17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

CONSTRUCTION PLAN SHEET

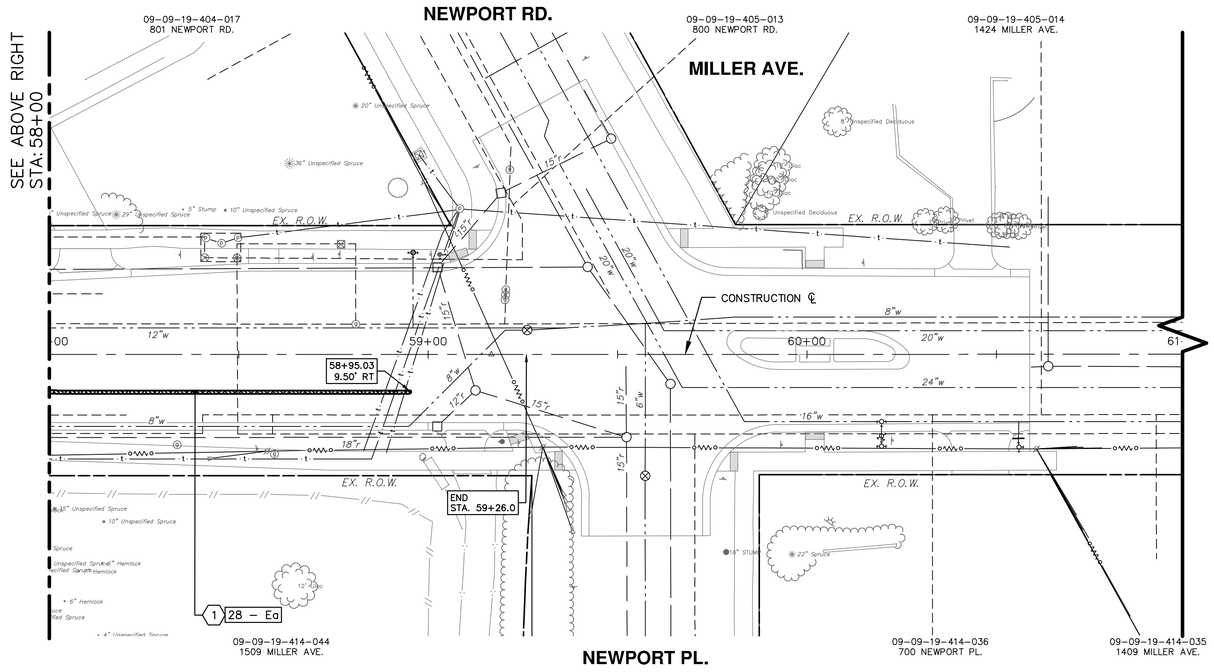
STA. 49+00 TO STA. 58+00

SCALE : 1" = 20'

DRAWING No. **20230643-PL05**

SHEET No. 115 of 131

V:\202306\20230643\V\Sheets\pl05.dwg Dwg Created: 13-Mar-24 – _a2 standard bw.stb – Plot Date: 2-May-24



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L125SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
4	T	BUS STOP LOCATION PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In. – Sft
5		Conc, Curb or Curb & Gutter, All Types – Ft
6		SPEED TABLE PAID AS: Conc Pavt, Non-Reinf, 9 In.
7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non-Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non-Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
15		Aggregate Base, 4 In., 21AA, CIP – Syd
16		Aggregate Base, 6 In., 21AA, CIP – Syd
17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

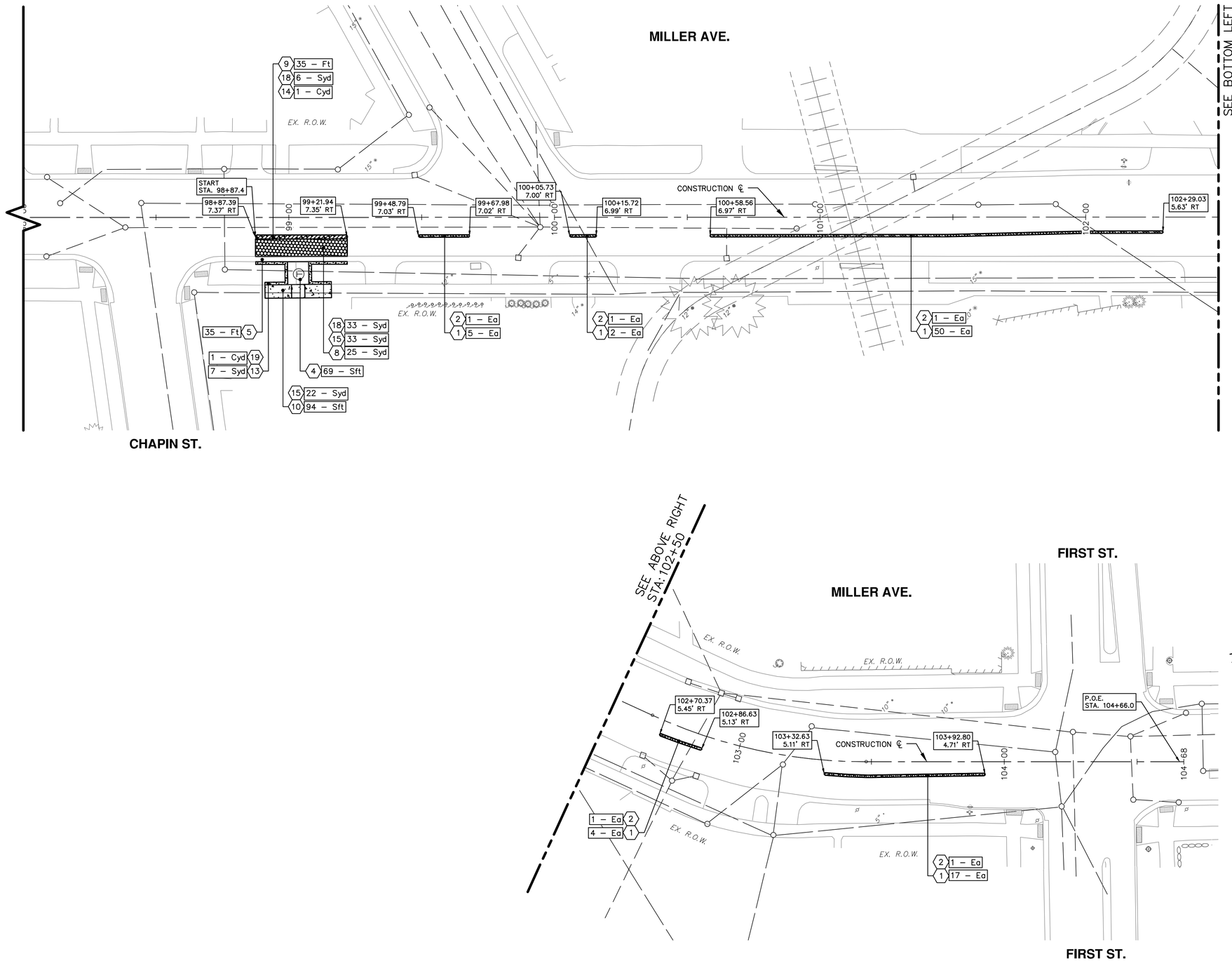
CONSTRUCTION PLAN SHEET

STA. 58+00 TO END (STA. 59+26)

SCALE : 1" = 20'

DRAWING No.
20230643-PL06

SHEET No.
116 of 131



CONSTRUCTION KEY

KEY No.	PROPOSED WORK	DESCRIPTION
1		DS_Continuous Base Mid Span L60 – Ea AND DS_Big Bollard – MASH L125SHM – Ea
2		DS_Continuous Base Front Span L61 – Ea AND DS_Continuous Base Rear Span L62 – Ea
3		8" OF HMA PAID AS: Hand Patching – Ton (SEE HMA APPLICATION TABLE)
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7		Conc, Driveway Opening, Type M – Ft
8		Conc Pavt, Non-Reinf, 8 In. – Syd
9		DS_Conc, Curb and Gutter, Monolithic – Ft
10		Conc, Sidewalk, 4 In. – Sft
11		Conc Pavt, Non-Reinf, 7 In. – Syd
12		DRIVEWAY APPROACH PAID AS: Conc, Sidewalk, Drive Approach, or Ramp, 6 In., Modified – Sft
13		Turf Restoration – Syd
14		Aggregate Base Course, 21AA, CIP – Cyd
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17		Aggregate Base, 8 In., 21AA, CIP – Syd
18		Aggregate Base, Conditioning – Syd
19		Embankment – Cyd
20		12" SUBBASE PAID AS: Subbase, CIP – Cyd
21		Underdrain, Subgrade, 6 In. – Ft
22		AS DIRECTED: Storm Structure Cover, Adjust

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

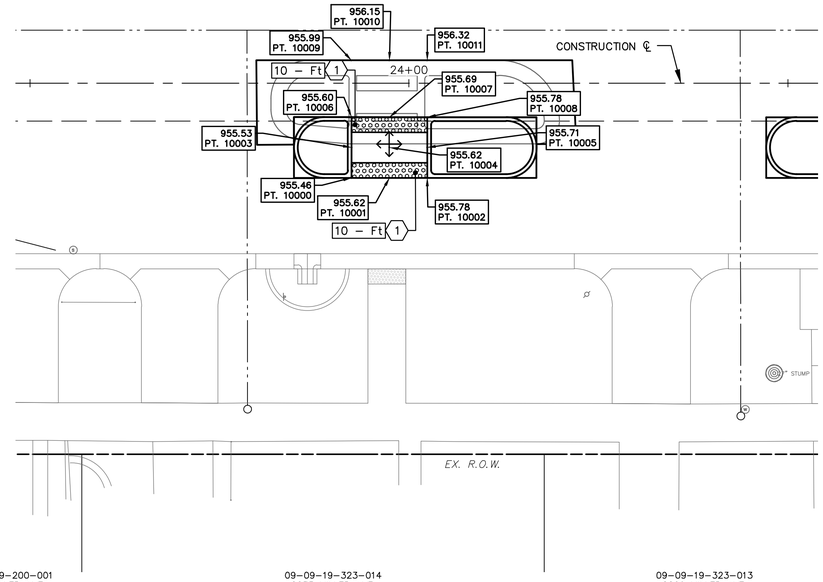
MILLER ROAD CYCLE TRACK
CONSTRUCTION PLAN SHEET
START TO P.O.E.

SCALE : 1" = 20'

DRAWING No.
20230643-PL07

SHEET No.
117 of 131

MILLER AVE.

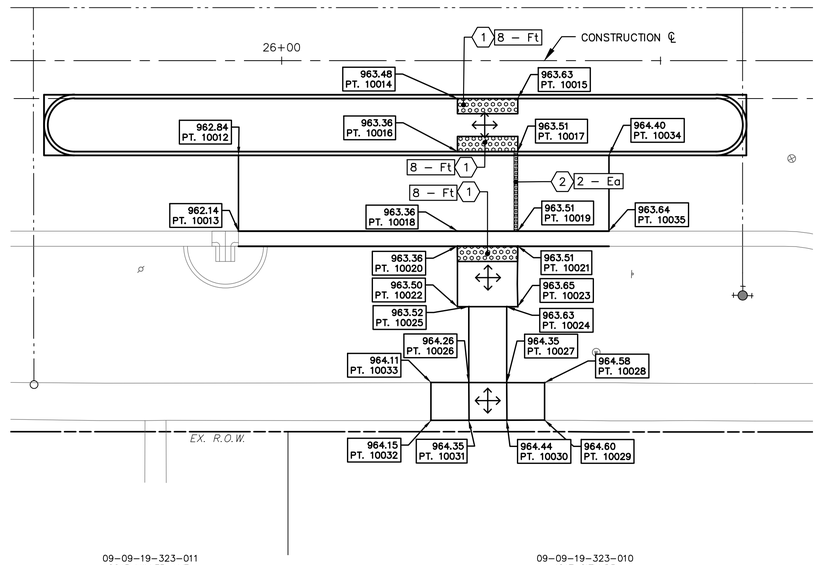


09-09-19-200-001
2241 MILLER AVE.

09-09-19-323-014
2235 MILLER AVE.

09-09-19-323-013
2229 MILLER AVE.

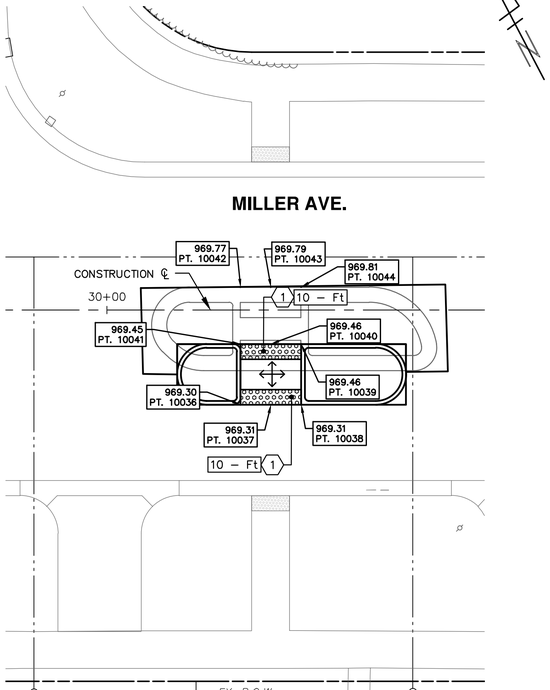
MILLER AVE.



09-09-19-323-011
2215 MILLER AVE.

09-09-19-323-010
1217 CITY DR

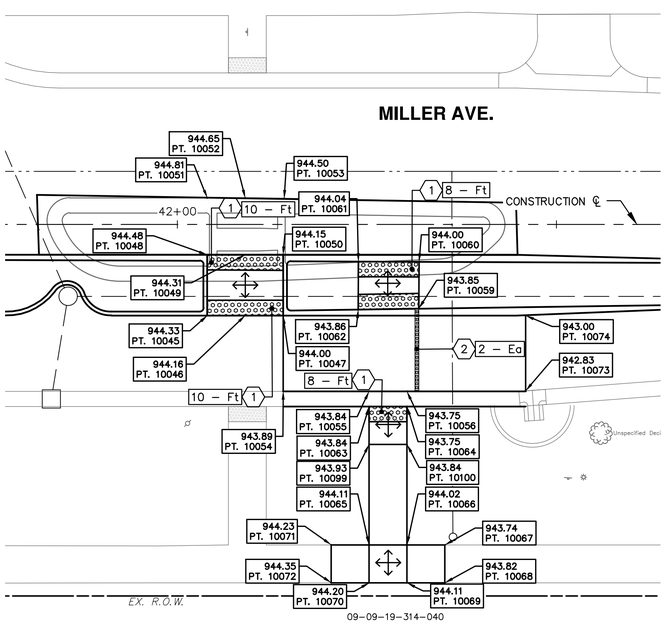
MILLER AVE.



09-09-19-305-002
2039 MILLER AVE.

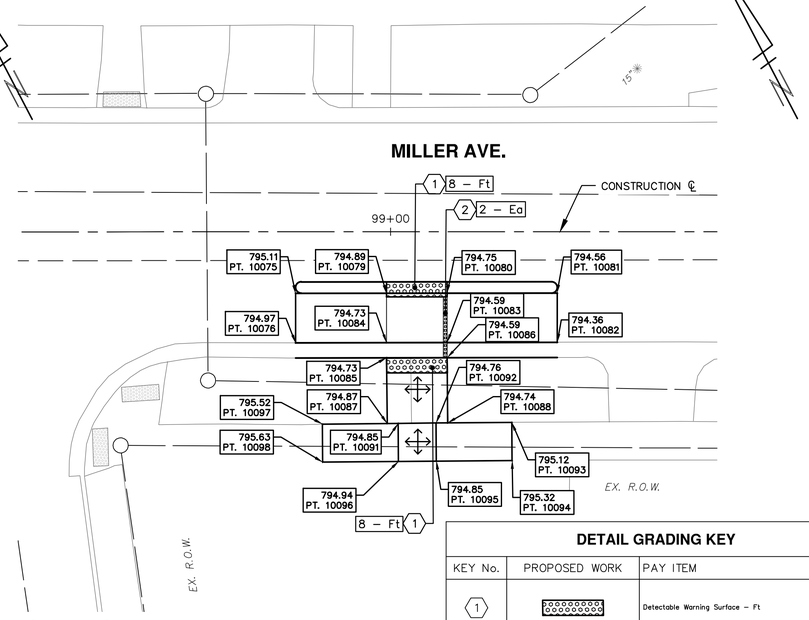
09-09-19-305-003
2035 MILLER AVE.

MILLER AVE.



09-09-19-314-040
1795 MILLER AVE.

MILLER AVE.



CHAPIN ST.

NOTES:

1. DETECTABLE DIRECTIONAL TILE MAY NEED TO BE MEASURED AND CUT IN THE FIELD TO FIT AS SHOWN.
2. COORDINATE DETAIL GRADES WITH RECTANGULAR RAPID FLASHING BEACON (RRFB) INSTALLATION. SEE RRFB CROSSING DETAIL GRADE SHEETS FOR RRFB FOUNDATION AND SIDEWALK (RAMPS AND LANDINGS) LOCATIONS AND DETAIL GRADES.

DETAIL GRADING KEY

KEY No.	PROPOSED WORK	PAY ITEM
1		Detectable Warning Surface – Ft
2		DS_Detectable Directional Tile – Ea
		LEVEL LANDING

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	ENR	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	ENR	NBN
3	ADDENDUM PLANS	4/25/24	ENR	NBN
2	FINAL BID PLANS	4/9/24	ENR	NBN
1	FINAL PLANS	3/13/24	ENR	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

DETAIL GRADES

SCALE : 1" = 10'

DRAWING No. 20230643-DTG01

SHEET No. 118 of 131

81-08-24-125-017
MILLER RD

MAPLE RD.

RECESSING PAVT MRKG, LONGIT – 400 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 400 FT

RECESSING PAVT MRKG, TRANSV, 92 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSS
HATCHING, WHITE – 92 FT

PAVT MRKG, POLYUREA, BIKE, SMALL SYM –3 EA

PAVT MRKG, POLYMER CEMENT SURFACE,
BIKE LANE GREEN – 536 SF

RECESSING PAVT MRKG, TRANSV – 148 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 74 FT

RECESSING PAVT MRKG, TRANSV – 270 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 270 FT

RECESSING PAVT MRKG, TRANSV – 44 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 22 FT

PAVT MRKG, POLYUREA, LT TURN
ARROW SYM – 1 EA

PAVT MRKG, POLYUREA, THRU
ARROW SYM – 1 EA

RECESSING PAVT MRKG, TRANSV, 70 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSS
HATCHING, WHITE – 62 FT
WEST LEG (TYP.)

P.O.B.
STA. 8+88.0

RECESSING PAVT MRKG, LONGIT – 450 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 450 FT
WEST LEG (TYP.)

RECESSING PAVT MRKG, LONGIT – 64 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 64 FT
WEST LEG (TYP.)

PAVT MRKG, POLYMER CEMENT SURFACE,
BIKE LANE GREEN – 101 SF

PAVT MRKG, POLYUREA, BIKE, THRU ARROW SYM – 1 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 1 EA

RECESSING PAVT MRKG, LONGIT – 42 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 42 FT
BEG TO END = 45 FT

PAVT MRKG, POLYMER CEMENT SURFACE,
BIKE LANE GREEN – 175 SF

PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 23 FT

PAVT MRKG, POLYUREA, BIKE, THRU ARROW SYM – 1 EA
PAVT MRKG, POLYUREA, BIKE RT TURN ARROW SYM – 1 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 2 EA
PAVT MRKG, POLYUREA, 6 IN., WHITE – 15 FT
PAVT MRKG, POLYMER CEMENT SURFACE, BIKE LANE GREEN – 129 SF

09-08-24-104-043
1251 N MAPLE RD

RECESSING PAVT MRKG, TRANSV – 247 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 247 FT

RECESSING PAVT MRKG, LONGIT – 44 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 44 FT

RECESSING PAVT MRKG, LONGIT – 72 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 72 FT
BEG TO END = 108 FT

PAVT MRKG, POLYMER CEMENT SURFACE,
BIKE LANE GREEN – 184 SF
BEG TO END = 108 FT

09-09-19-214-028
1300 N. MAPLE RD.

RECESSING PAVT MRKG, TRANSV – 178 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 178 FT

RECESSING PAVT MRKG, TRANSV – 44 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 22 FT

RECESSING PAVT MRKG, LONGIT – 188 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 188 FT
STA. 13+56 TO 14+50

PAVT MRKG, POLYUREA, RT TURN
ARROW SYM – 1 EA

RECESSING PAVT MRKG, TRANSV – 22 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR
– 11 FT

RECESSING PAVT MRKG,
LONGIT – 80 FT
PAVT MRKG, POLYUREA,
6 IN., YELLOW – 80 FT

PAVT MRKG, POLYUREA, LT TURN
ARROW SYM – 1 EA

STA:14+50

MILLER AVE.

PAVT MRKG,
POLYMER CEMENT
SURFACE, BIKE
LANE GREEN –
318 SF

RECESSING PAVT MRKG, LONGIT – 53 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 53 FT
STA. 12+67 TO STA. 13+50

PAVT MRKG, POLYMER CEMENT SURFACE,
BIKE LANE GREEN – 861 SF

RECESSING PAVT MRKG, LONGIT – 223 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 223 FT

PAVT MRKG, POLYMER CEMENT SURFACE, TAN – 758 SF

PAVT MRKG, POLYMER CEMENT
SURFACE, BIKE LANE GREEN – 140 SF

PAVT MRKG, POLYUREA, 6 IN., WHITE – 63 FT

PAVT MRKG, POLYUREA, BIKE, RT TURN ARROW SYM – 1 EA
PAVT MRKG, POLYUREA, BIKE, SMALL SYM – 1 EA

RECESSING PAVT MRKG, TRANSV – 152 SFT
PAVT MRKG, POLYUREA, 12 IN., CROSSWALK – 152 FT

PAVT MRKG, POLYMER CEMENT SURFACE, TAN – 62 SF

RECESSING PAVT MRKG, TRANSV – 66 SFT
PAVT MRKG, POLYUREA, 24 IN., STOP BAR – 33 FT

PAVT MRKG, POLYUREA,
6 IN., WHITE – 47 FT

RECESSING PAVT MRKG, LONGIT – 12 FT
PAVT MRKG, POLYUREA, 6 IN., WHITE – 12 FT
STA. 13+74 TO STA. 14+00

PAVT MRKG, POLYUREA, 24 IN.,
STOP BAR – 4 FT

PAVT MRKG, POLYUREA, 4 IN., YELLOW – 25 FT

PAVT MRKG, POLYUREA, BIKE THRU ARROW SYM – 2 EA
PAVT MRKG, POLYUREA, BIKE SMALL SYM – 2 EA

09-09-19-200-014
1210 N. MAPLE RD.

9+00
10+00
11+00
12+00
13+00
14+00

10+13
16.1' RT

10+69
16.1' RT

11+89
16.0' RT

12+43
16.0' RT

12+67
12.8' RT

13+50
12.6' RT

13+56
10.3' LT

13+74
13.6' RT

14+00
13.7' RT

20'
(TYP)

NOTES:
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9. YELLOW BIKEWAY DELINEATOR POST ARE TO BE INSTALLED ON CYCLE TRACK ADJACENT TO CROSS STREETS UNLESS OTHERWISE NOTED.

● BIKEWAY DELINEATOR POST BLACK – 23 EA (THIS SHEET)

■ BIKEWAY DELINEATOR POST YELLOW – 1 EA (THIS SHEET)

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

PAVEMENT MARKING PLAN

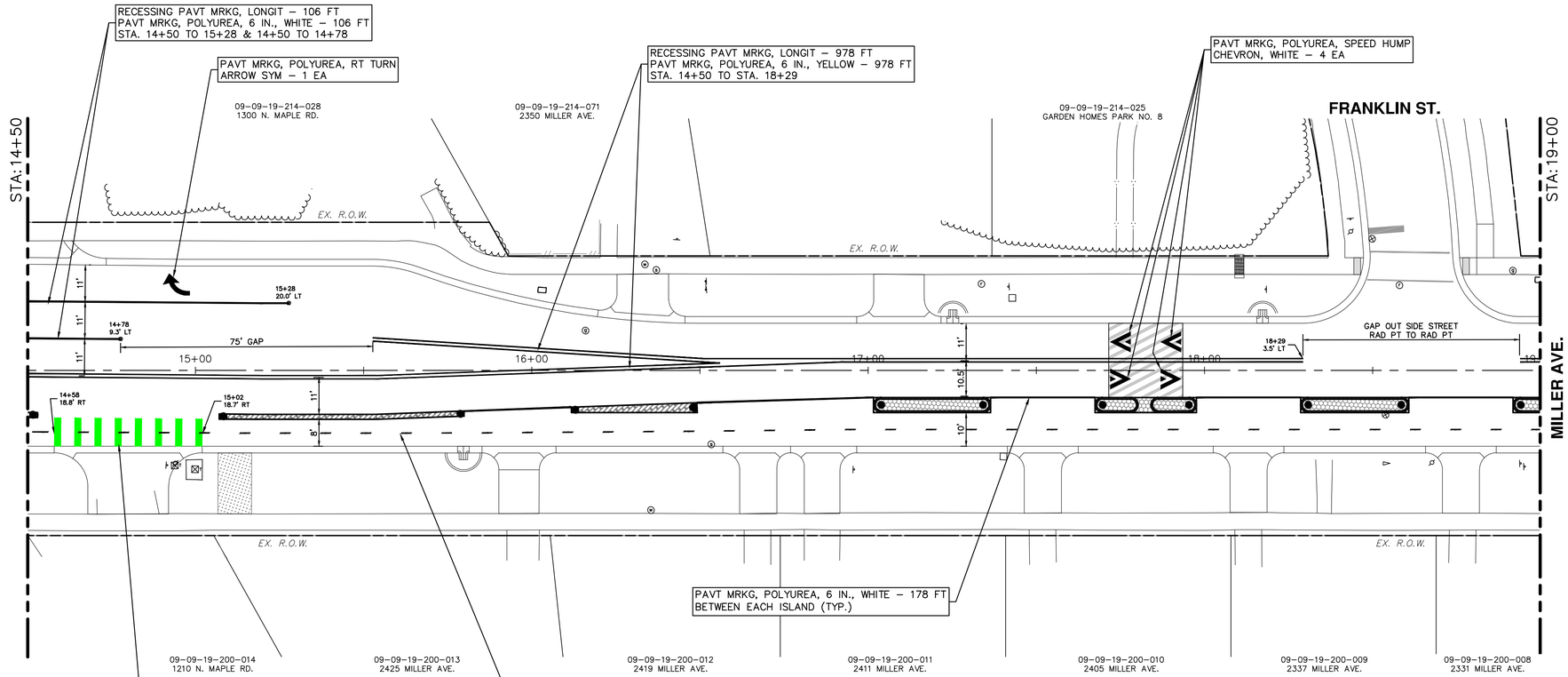
P.O.B. TO STA. 14+50

SCALE: 1" = 20'

DRAWING No.
20230643-PM01_MILLERMAPLE

SHEET No.
119 of 131

V:\20306\20230643\V\Sheets\pm01_MillerMaple.dwg Dwg Created: 19-Apr-24 ---- Plot Date: 2-May-24



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● BIKEWAY DELINEATOR POST BLACK – 11 EA (THIS SHEET)

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

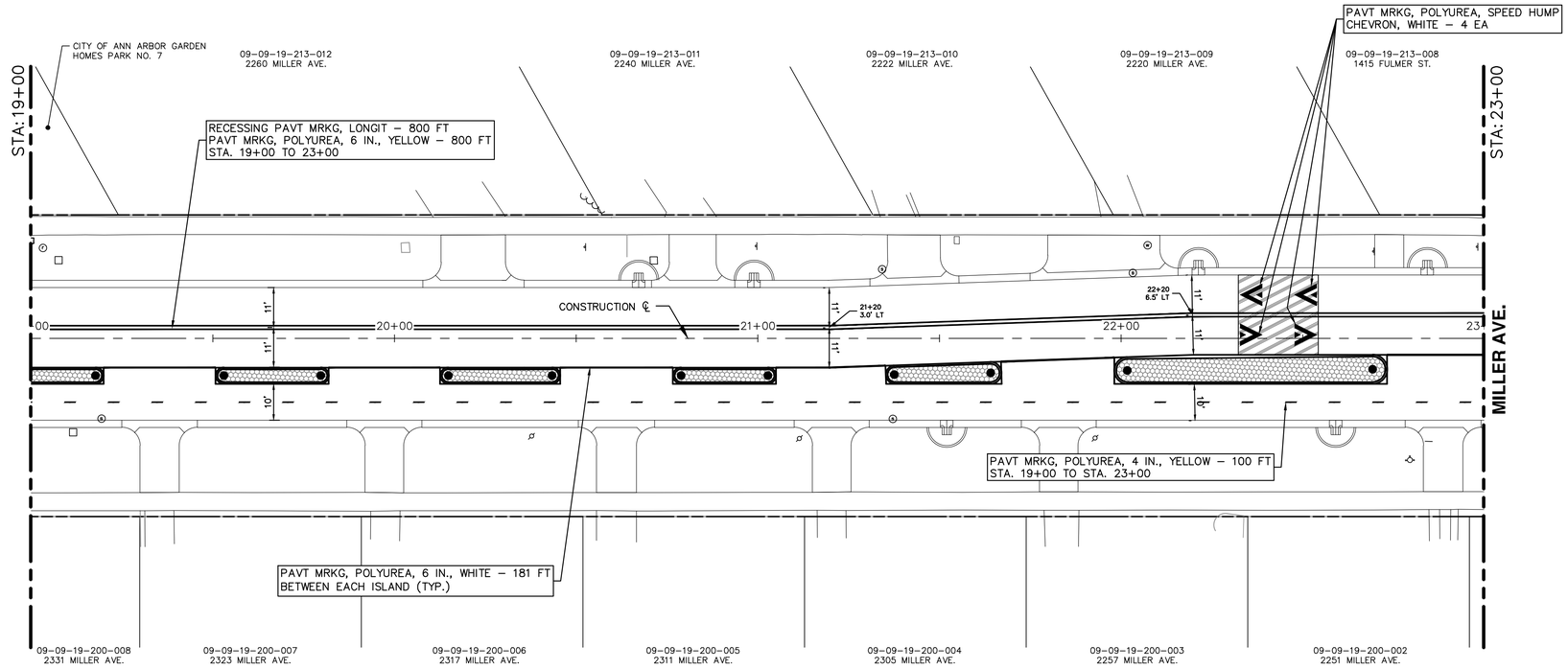
PAVEMENT MARKING PLAN

STA. 14+50. TO STA. 19+00

SCALE : 1" = 20'

DRAWING No. 20230643-PM01

SHEET No.



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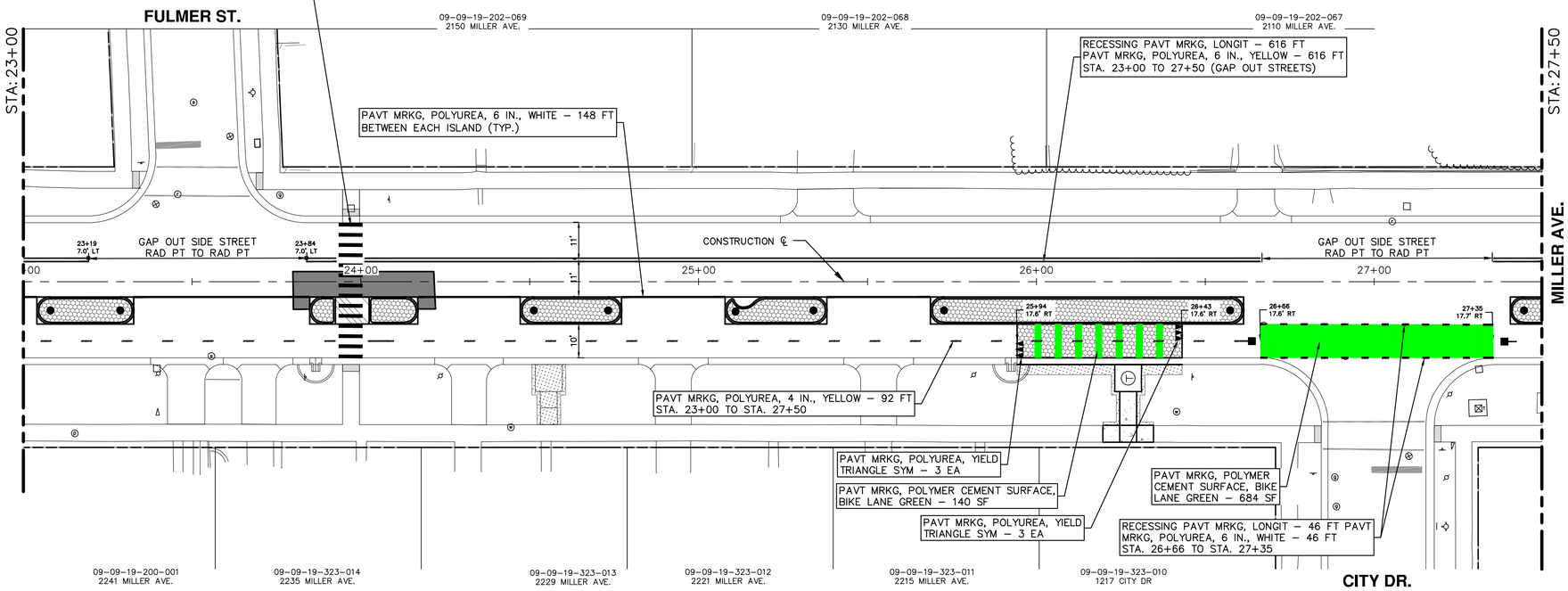
● BIKEWAY DELINEATOR POST BLACK – 20 EA (THIS SHEET)

■ BIKEWAY DELINEATOR POST YELLOW – 2 EA (THIS SHEET)



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

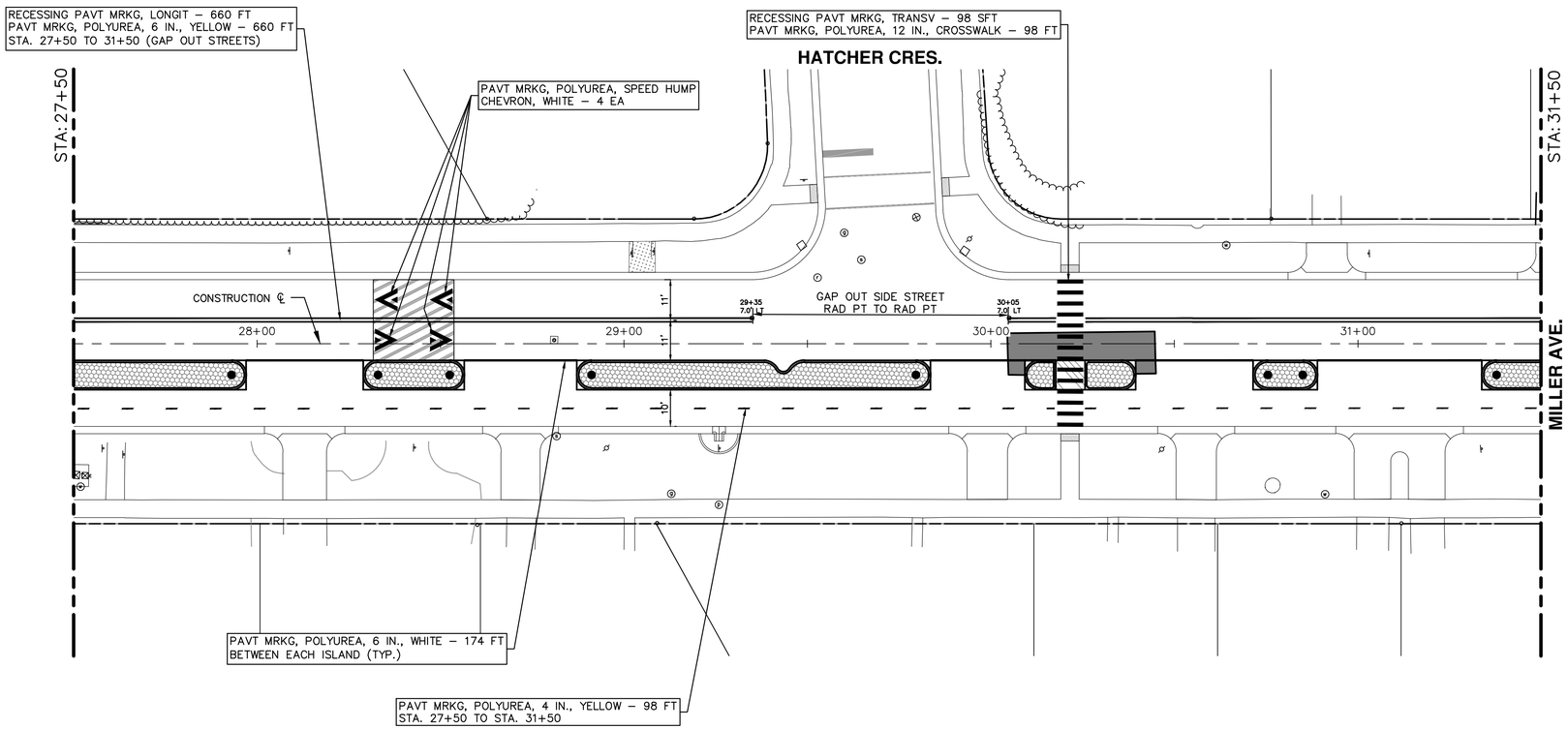
PAVEMENT MARKING PLAN

STA. 19+00 TO STA. 27+50

SCALE : 1" = 20'

DRAWING No. 20230643-PM02

SHEET No. 121 of 131



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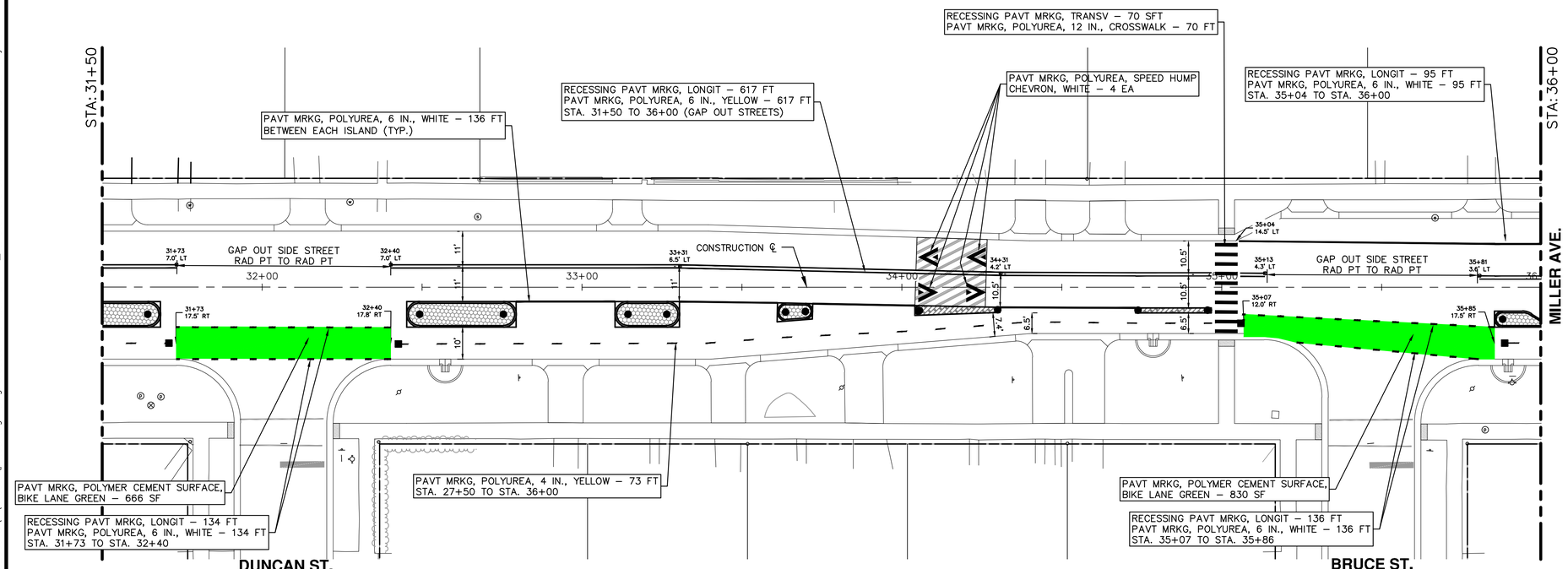
●	BIKEWAY DELINEATOR POST BLACK – 20 EA (THIS SHEET)
■	BIKEWAY DELINEATOR POST YELLOW – 4 EA (THIS SHEET)



REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

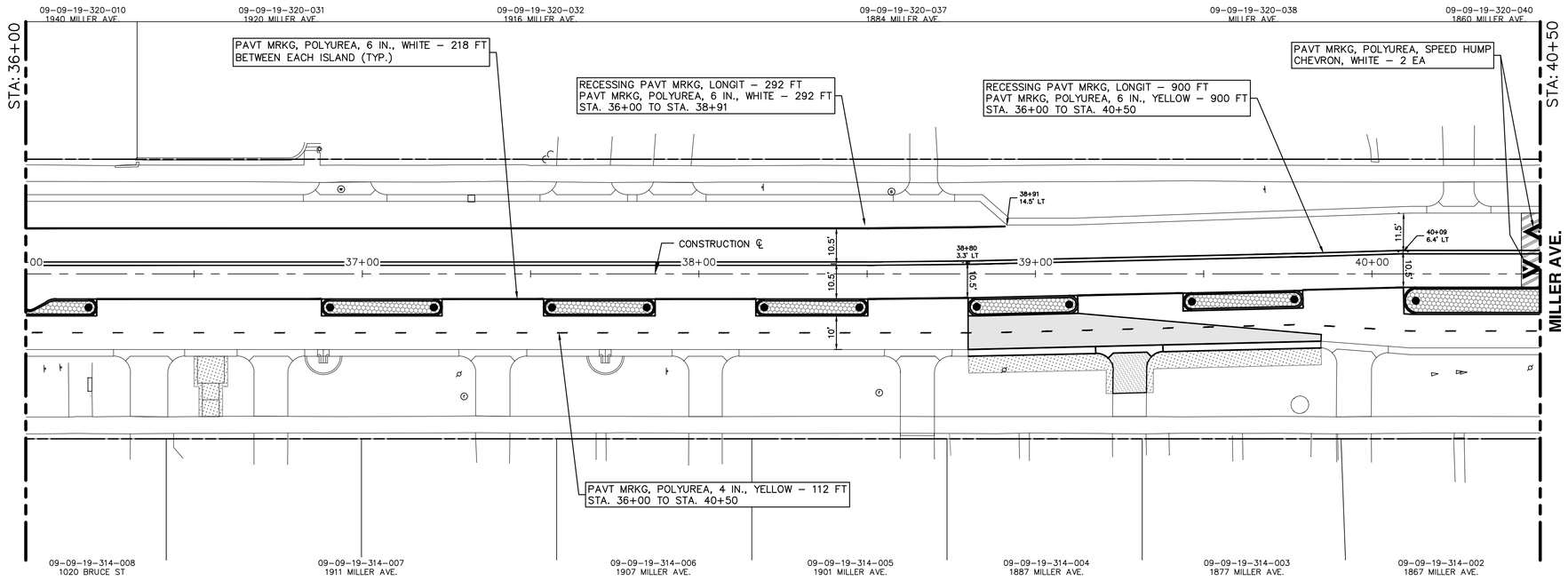
PAVEMENT MARKING PLAN

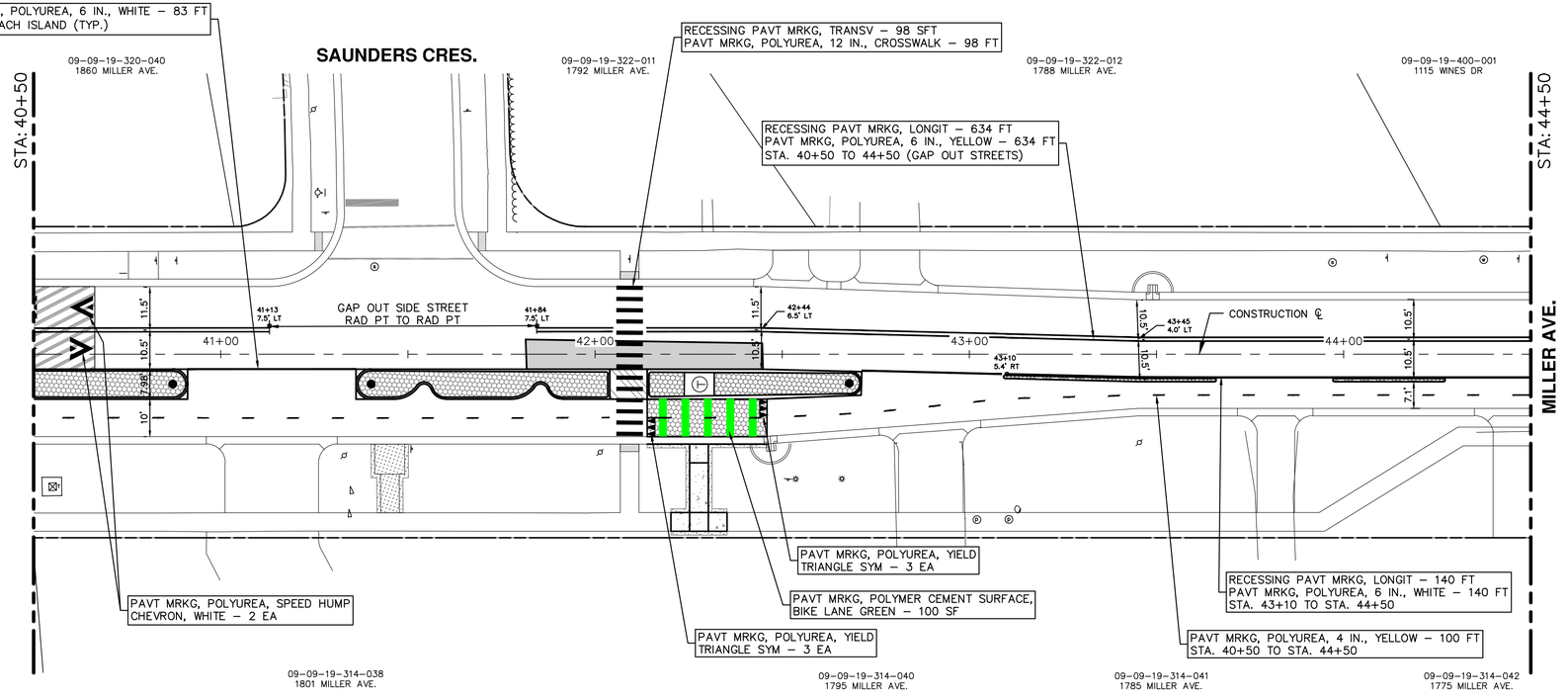
STA. 27+50 TO STA. 36+00

SCALE : 1" = 20'

DRAWING No.
20230643-PM03

SHEET No.





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● BIKEWAY DELINEATOR POST BLACK – 15 EA (THIS SHEET)

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

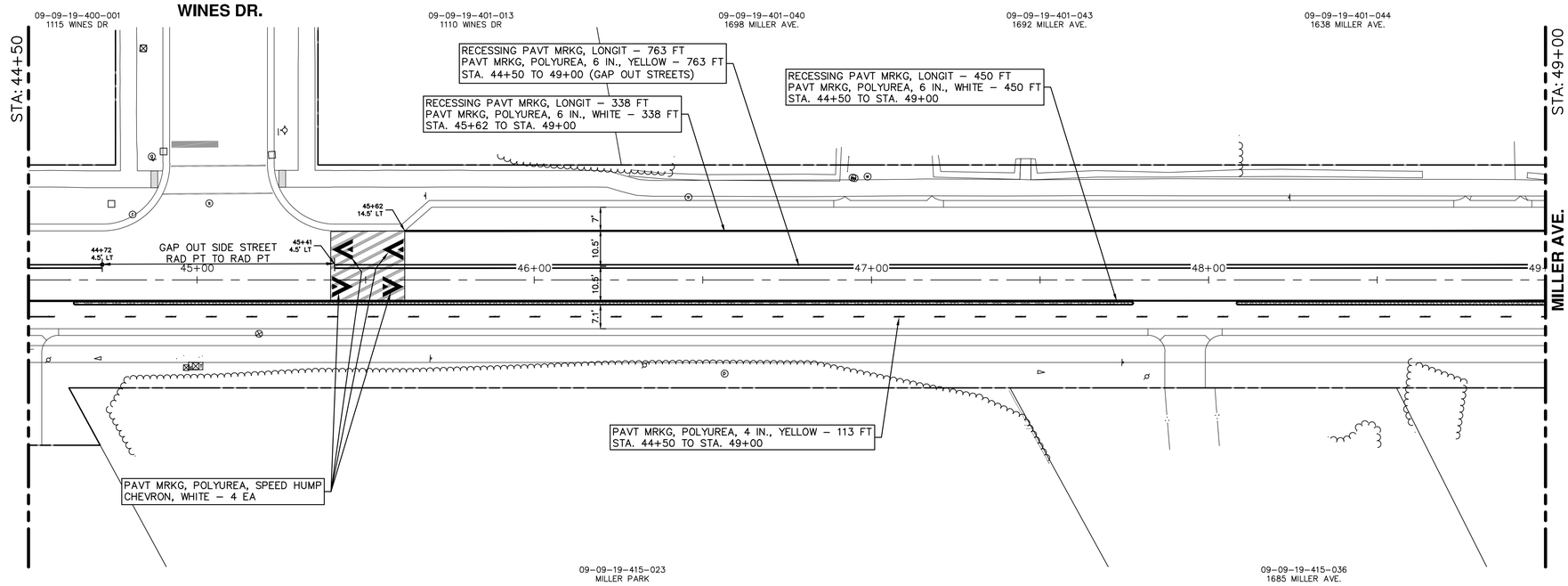
PAVEMENT MARKING PLAN

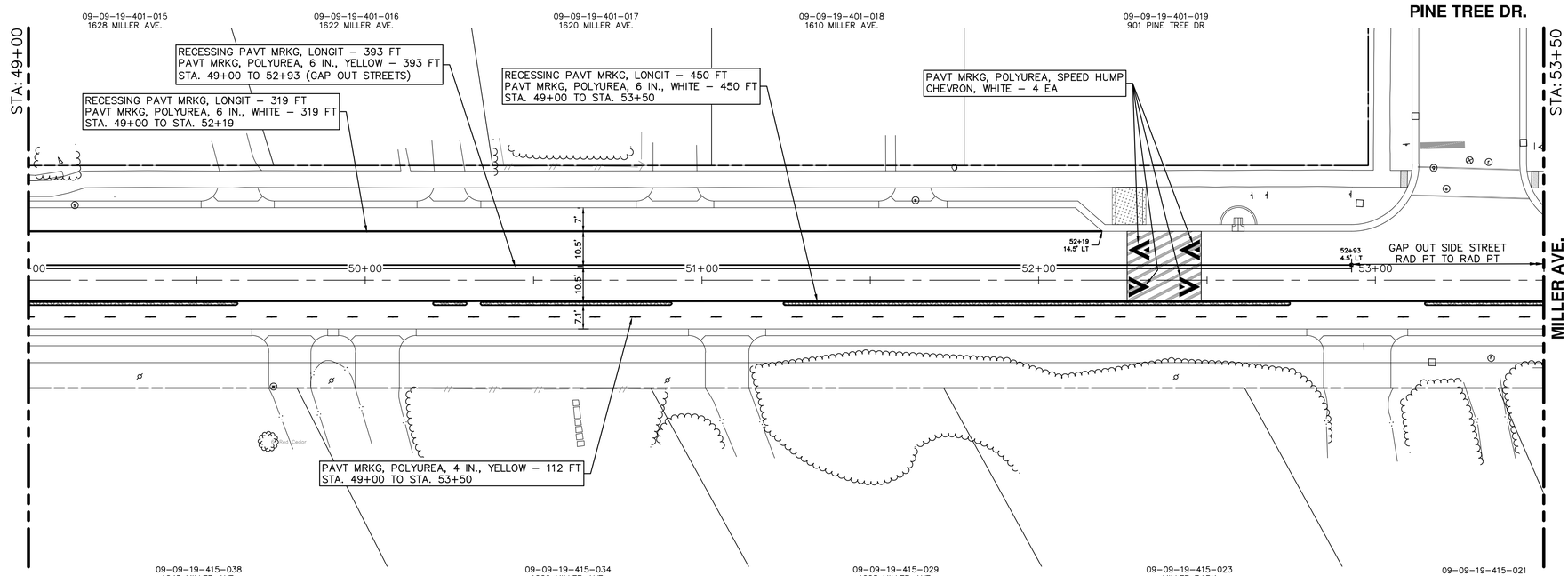
STA. 36+00 TO STA. 44+50

SCALE 1" = 20'

DRAWING No. 20230643-PM04

SHEET No.





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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/21/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

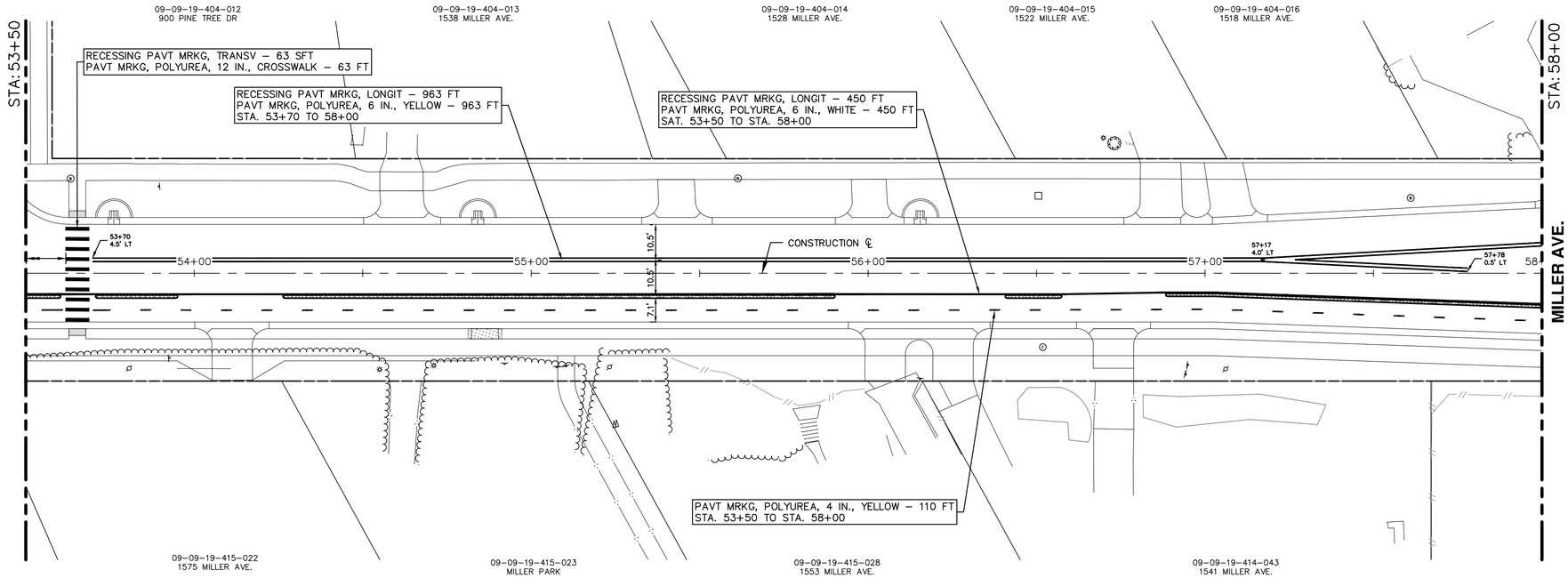
PAVEMENT MARKING PLAN

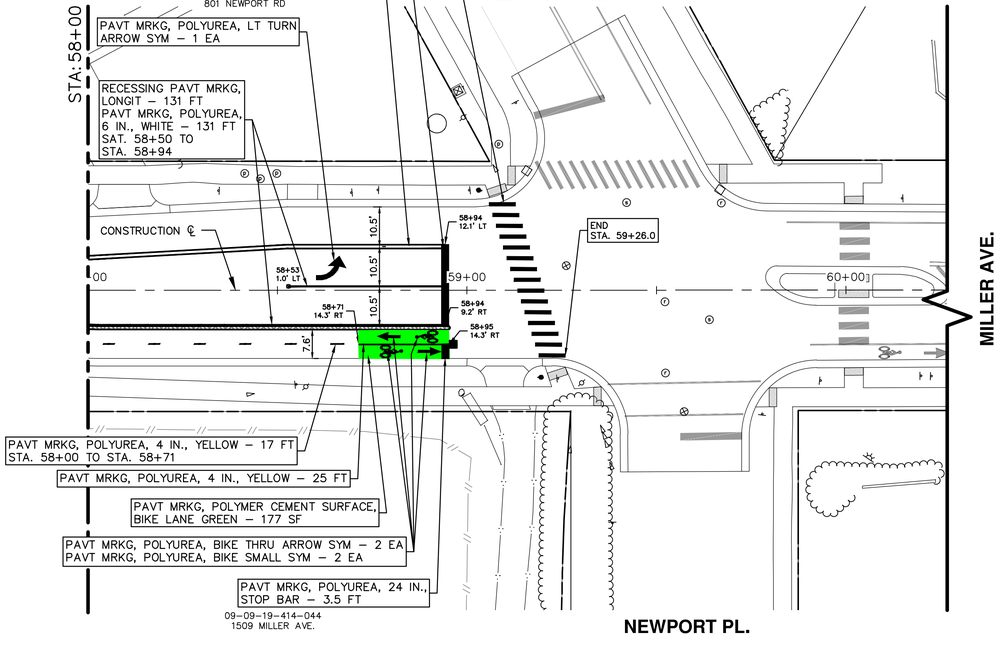
STA. 44+50 TO STA. 53+50

SCALE 1" = 20'

DRAWING No. **20230643-PM05**

SHEET No.





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BIKEWAY DELINEATOR POST YELLOW – 1 EA (THIS SHEET)

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
5	ADDENDUM No. 3 PLANS	5/2/24	HFA	NBN
4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
3	ADDENDUM PLANS	4/25/24	HFA	NBN
2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

PAVEMENT MARKING PLAN

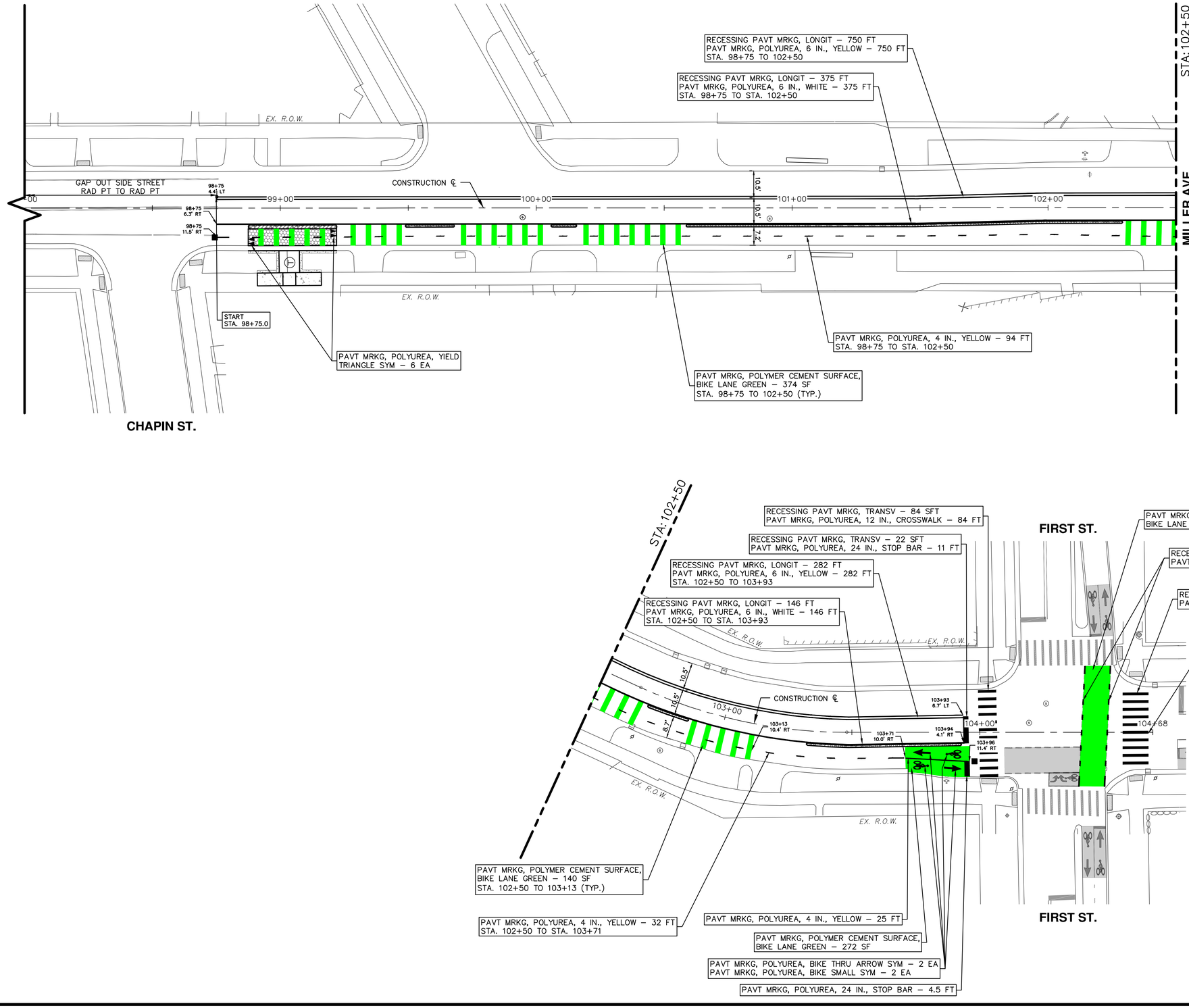
STA. 53+50 TO END

SCALE : 1" = 20'

DRAWING No. 20230643-PM06

SHEET No.

V:\202306\20230643\V\Sheets\pm06.dwg Dwg Created: 13-Mar-24 — _a2 standard bw.stb — Plot Date: 2-May-24



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■ BIKEWAY DELINEATOR POST YELLOW – 2 EA (THIS SHEET)

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

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4	ADDENDUM No. 2 PLANS	4/29/24	HFA	NBN
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2	FINAL BID PLANS	4/9/24	HFA	NBN
1	FINAL PLANS	3/13/24	HFA	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

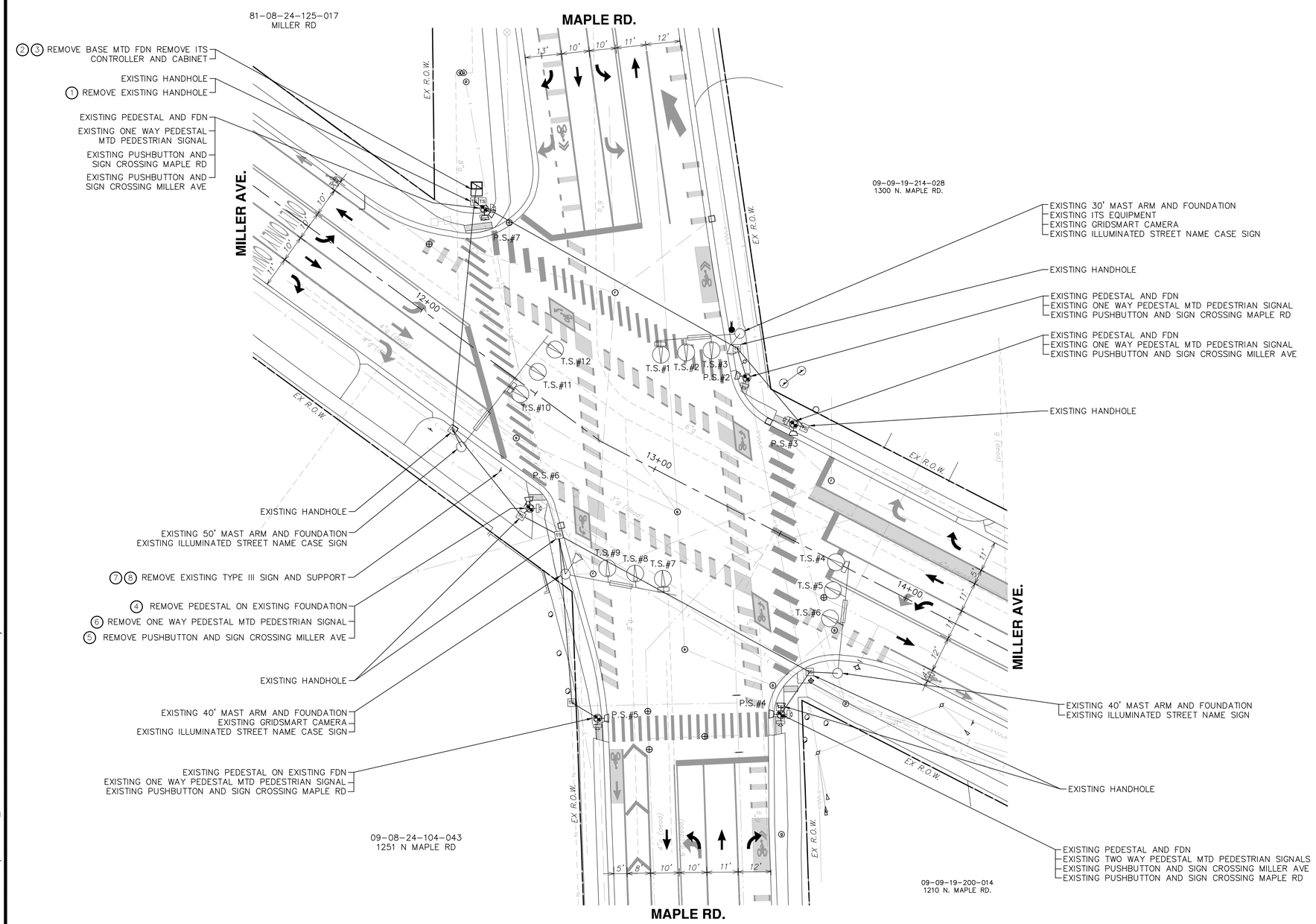
PAVEMENT MARKING PLAN

START TO P.O.E.

SCALE: 1" = 20'

DRAWING No. 20230643-PM07

SHEET No.



SIGNAL REMOVAL

SCALE: 1" = 20' (34"x22")
SCALE: 1" = 40' (17"x11")

APPROACH SPEED:	
NB	35 MPH
SB	35 MPH
EB	35 MPH
WB	35 MPH

QUANTITIES			
NO.	PAY ITEM	QTY	UNIT
1	Handhole, Rem	1	Ea
2	DS_Controller and Cabinet, Rem	1	Ea
3	DS_Controller Fdn, Rem	1	Ea
4	DS_Pedestal, Rem	1	Ea
5	DS_Pushbutton, Rem	1	Ea
6	DS_TS, Pedestrian, Pedestal Mtd, Rem	1	Ea
7	DS_Sign, Type III, Rem	1	Ea
8	DS_Ground Mtd Sign Support, Rem	1	Ea

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
3	ADDENDUM No. 3 PLANS	5/2/24	COB	NBN
2	ADDENDUM No. 2 PLANS	4/29/24	COB	NBN
1	ADDENDUM PLANS	4/25/24	COB	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

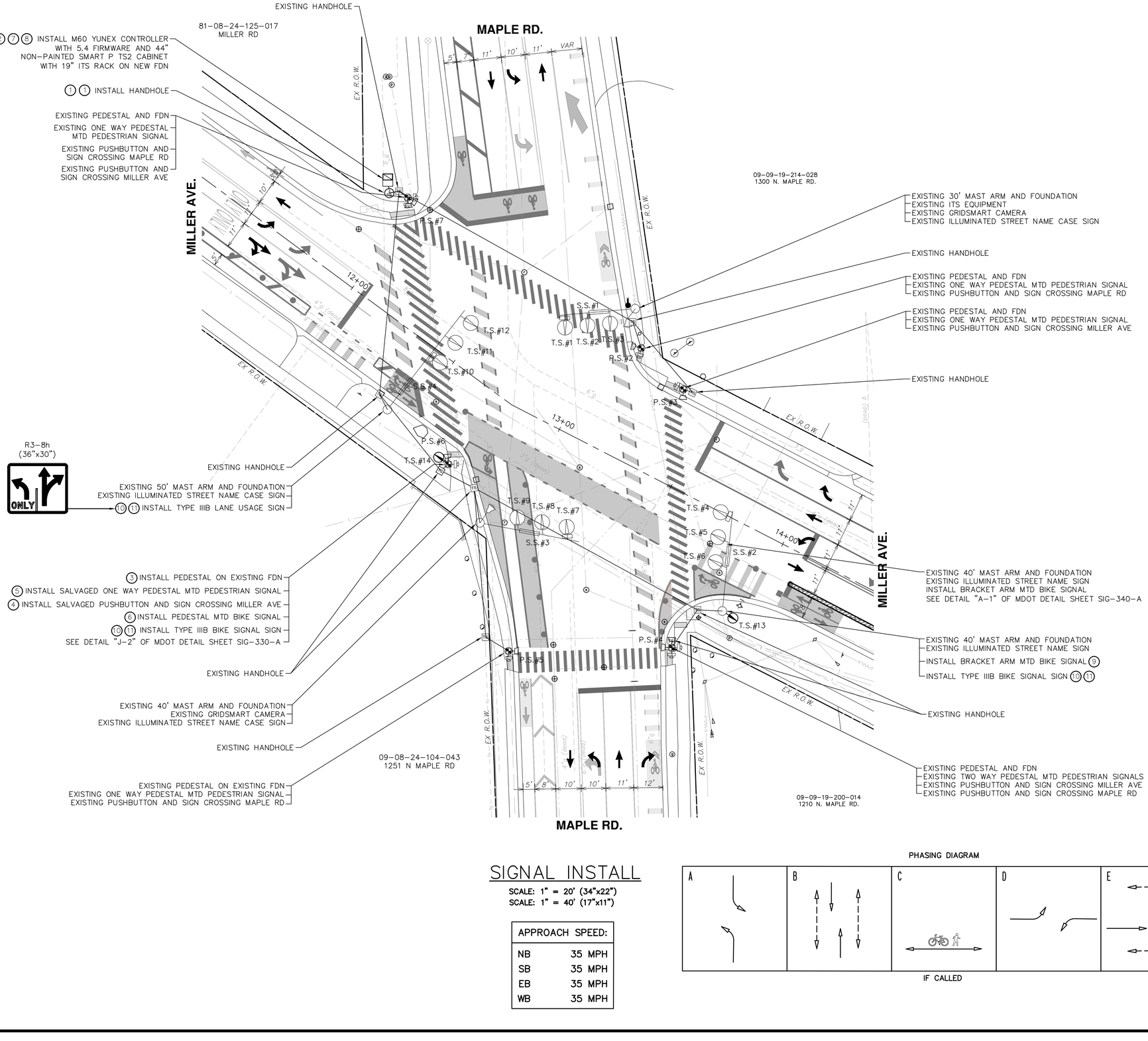
MILLER ROAD CYCLE TRACK
TRAFFIC SIGNAL REMOVAL

SR01-INTERSECTION OF MAPLE RD. AND MILLER AVE.

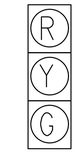
SCALE : 1" = 20'

DRAWING No.
20230643-SR01

SHEET No.
127 of 131

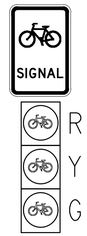


EXISTING ONE WAY 3 SEC T.S.



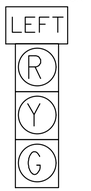
T.S. #2, #3, #5, #6, #8, #9, #11, #12

INSTALL ONE WAY 3 SEC 8" BIKE T.S.



T.S. #13, #14

EXISTING ONE WAY 3 SEC T.S. WITH LEFT CASE SIGN

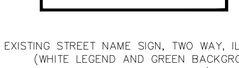


T.S. #1, #4, #7, #10

QUANTITIES			
NO.	PAY ITEM	QTY	UNIT
1	Handhole Assembly, 17 In. X 30 In. x 18 In.	2	Ea
2	DS_Controller Fdn, Base Mount	1	Ea
3	DS_Pedestal, Alum	1	Ea
4	DS_Pushbutton and Sign, Salv	1	Ea
5	DS_TS, Pedestrian, One Way Pedestal Mtd, Salv	1	Ea
6	DS_TS, One Way Pedestal Mtd (LED), Long Life	1	Ea
7	DS_Controller, NEMA, ATC Type, Modified	1	Ea
8	DS_Cabinet, NEMA Type, Modified	1	Ea
9	DS_TS, One Way Bracket Arm Mtd (LED), Long Life	1	Ea
10	DS_Band, Sign	3	Ea
11	DS_Sign, Type IIIB	9	Sft
	DS_Conduit, DB, 1, 1 1/2 inch	10	Ea
	DS_Conduit, DB, 1, 3 inch	10	Ft
	DS_Conduit, DB, 4, 3 inch	10	Ft

CONDUIT REQUIREMENTS (UNLESS OTHERWISE INDICATED)	
CONTROLLER FDN. TO H.H.	4-3", 1-3" & 1-1 1/2"

EXISTING STREET NAME SIGN, TWO WAY, ILLUMINATED
(WHITE LEGEND AND GREEN BACKGROUND)
SS #1, #3 FACING SOUTH/NORTH



EXISTING STREET NAME SIGN, TWO WAY, ILLUMINATED
(WHITE LEGEND AND GREEN BACKGROUND)
SS #2, #4 FACING EAST/WEST

SIGNAL INSTALL

SCALE: 1" = 20' (34"x22")
SCALE: 1" = 40' (17"x11")

APPROACH SPEED:	
NB	35 MPH
SB	35 MPH
EB	35 MPH
WB	35 MPH

PHASING DIAGRAM

IF CALLED

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
3	ADDENDUM No. 3 PLANS	5/2/24	COB	NBN
2	ADDENDUM No. 2 PLANS	4/29/24	COB	NBN
1	ADDENDUM PLANS	4/25/24	COB	NBN

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

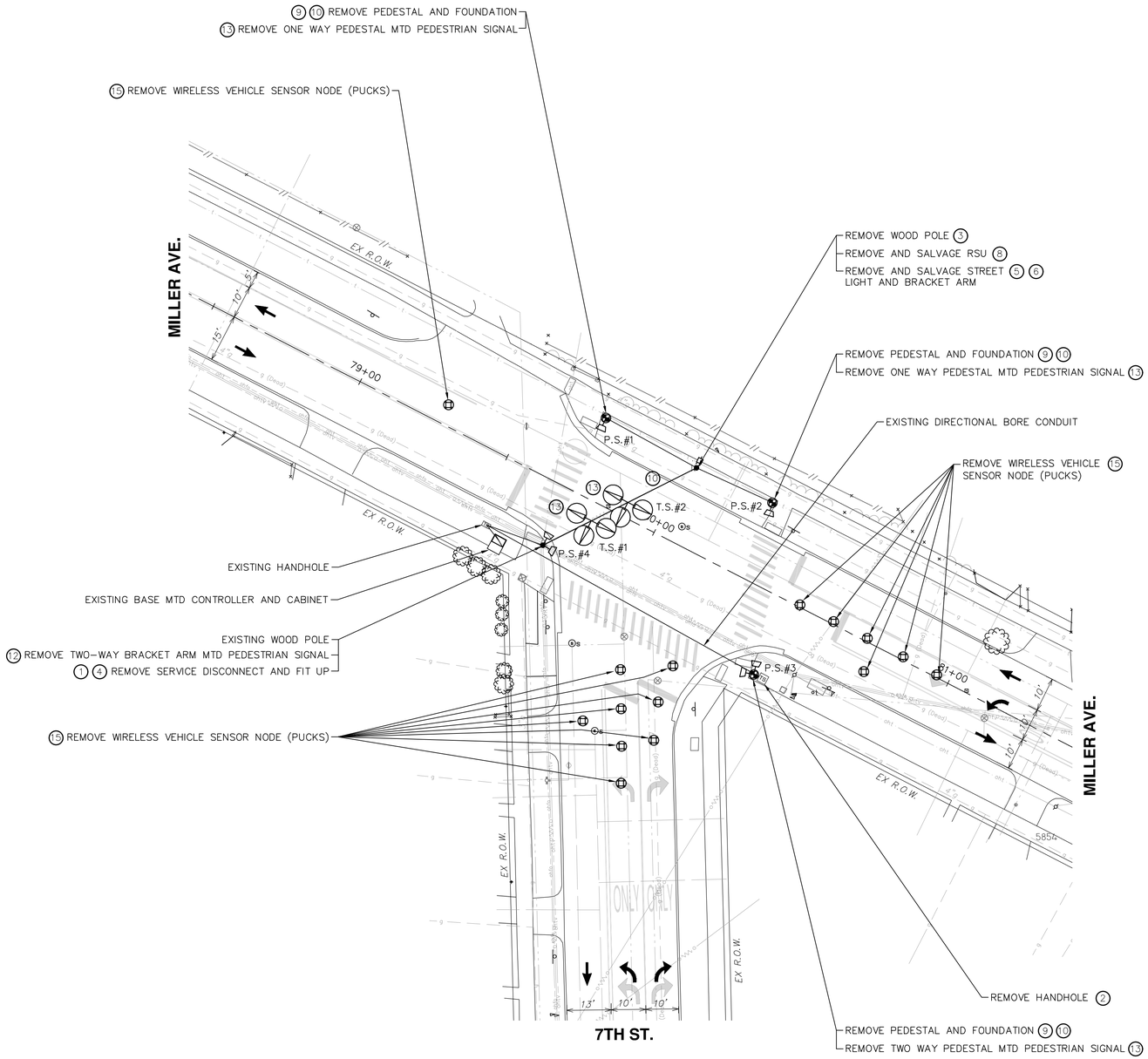
MILLER ROAD CYCLE TRACK
TRAFFIC SIGNAL REMOVAL

SI01 - INTERSECTION OF MAPLE RD. AND MILLER AVE.

SCALE : 1" = 20'

DRAWING No. 2023643-SI01

SHEET No.



SIGNAL REMOVAL

SCALE: 1" = 20' (34"x22")
SCALE: 1" = 40' (17"x11")

APPROACH SPEED:	
NB	30 MPH
EB	30 MPH
WB	30 MPH

QUANTITIES			
NO.	PAY ITEM	QTY	UNIT
(1)	DS_Cable Pole, TS and Sec, Disman	1	Ea
(2)	Handhole, Rem	1	Ea
(3)	DS_Wood Pole, Rem	1	Ea
(4)	DS_Serv Disconnect, Rem	1	Ea
(5)	DS_Light Std Arm, Rem and Salv	1	Ea
(6)	Light Fixture, Rem and Salvage	1	Ea
(7)	DS_Controller and Cabinet, Rem	1	Ea
(8)	DS_Roadside Unit, Rem and Salv	1	Ea
(9)	DS_Pedestal Fdn, Rem	3	Ea
(10)	DS_Pedestal, Rem	3	Ea
(11)	DS_Span Wire, Rem	1	Ea
(12)	DS_TS, Pedestrian, Bracket Arm Mtd, Rem	1	Ea
(13)	DS_TS, Pedestrian, Pedestal Mtd, Rem	3	Ea
(14)	DS_TS, Span Wire Mtd, Rem	2	Ea
(15)	DS_Wireless Vehicle Sensor Node, Rem	15	Ea

NOTE:

REUSE EXISTING HANDHOLES AND CONDUIT IF POSSIBLE

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
3	ADDENDUM No. 3 PLANS	5/2/24	COB	NBN
2	ADDENDUM No. 2 PLANS	4/29/24	COB	NBN
1	ADDENDUM PLANS	4/25/24	COB	NBN

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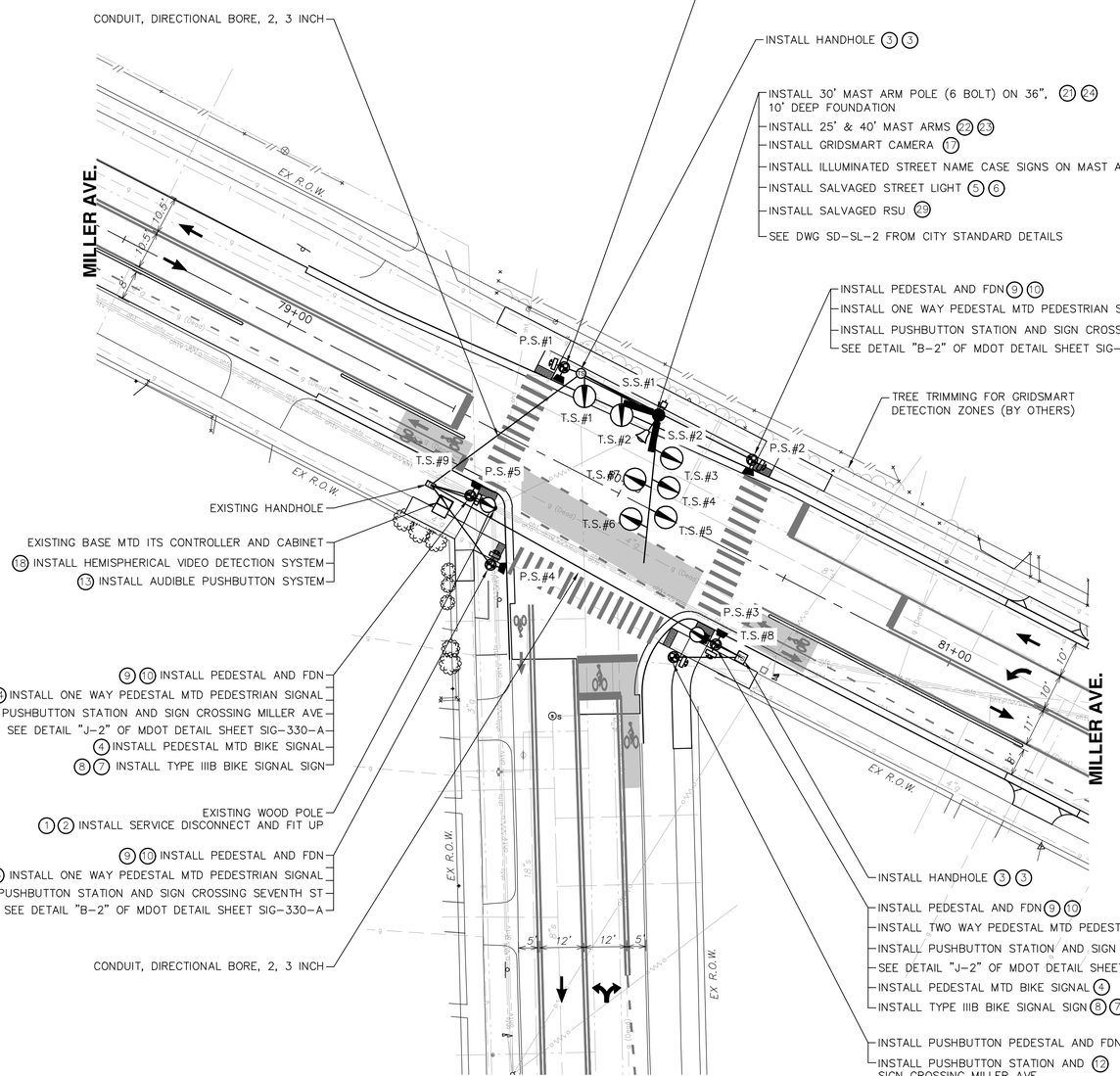
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK
TRAFFIC SIGNAL REMOVAL
SR02-INTERSECTION OF 7TH ST. AND MILLER AVE.

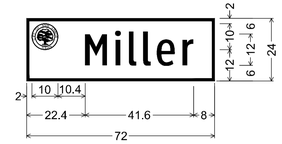
SCALE : 1" = 20'

DRAWING No.
20230643-SR02

SHEET No.
129 of 131



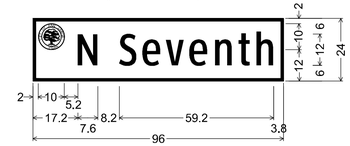
STREET NAME SIGN, TWO WAY, ILLUMINATED
(WHITE LEGEND AND GREEN BACKGROUND)
SS #1 FACING SOUTH/NORTH



Street Name Sign_Miller;
1.5" Radius, 1.0" Border, White on Green;
"Miller", ClearviewHwy-2-W;
Table of widths and spaces

22.4	M 8.5	3.0	i 2.4	2.9	l 3.0	2.5	l 3.0	2.2	e 7.0	2.9	r 4.2	8.0

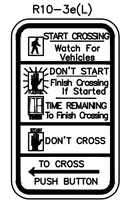
STREET NAME SIGN, TWO WAY, ILLUMINATED
(WHITE LEGEND AND GREEN BACKGROUND)
SS #2 FACING EAST/WEST



Street Name Sign_Miller;
1.5" Radius, 1.0" Border, White on Green;
"N Seventh", ClearviewHwy-2-W;
Table of widths and spaces

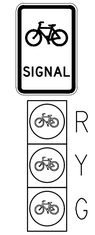
17.2	N 7.6												
S 8.2	6.7	e 2.2	7.0	2.0	v 7.0	2.0	e 7.0	2.9	n 6.6	2.4	t 4.3	2.5	h 6.6	3.8

R10-3e(L)



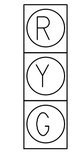
R10-3e(R)

INSTALL ONE WAY 3 SEC 8" BIKE T.S.



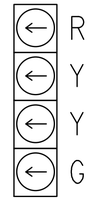
T.S. #8, #9

INSTALL ONE WAY 3 SEC T.S.



T.S. #1-#4, #6-#7

INSTALL TWO WAY 4 SEC FYA T.S.



T.S. #5

L.E.D.

COUNTDOWN HEAD
P.S.#1-#5

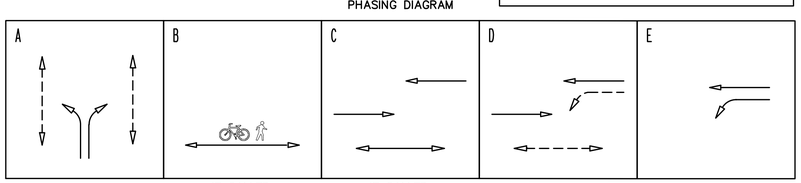
CONDUIT REQUIREMENTS (UNLESS OTHERWISE INDICATED)	
P.B. PEDESTAL TO H.H.	1-1 1/2"
H.H. TO H.H.	2-3"
MAST ARM FDN. TO H.H.	2-3"

SIGNAL INSTALL

SCALE: 1" = 20' (34"x22")
SCALE: 1" = 40' (17"x11")

APPROACH SPEED:	
NB	30 MPH
EB	30 MPH
WB	30 MPH

PHASING DIAGRAM



REFER TO CITY OF ANN ARBOR DETAIL SD-SL-2 FOR MAST ARM POLE FOUNDATION DETAIL

QUANTITIES			
NO.	PAY ITEM	QTY	UNIT
(1)	DS_Serv Disconnect	1	Ea
(2)	DS_Wood Pole, Fit Up, TS and Sec Cable Pole	1	Ea
(3)	Handhole Assembly, 17 In. X 30 In. x 18 In.	4	Ea
(4)	DS_TS, One Way Pedestal Mtd (LED), Long Life	2	Ea
(5)	DS_Light Std Arm, Install Salv	1	Ea
(6)	Light Fixture, Reinstall	1	Ea
(7)	DS_Band, Sign	2	Ea
(8)	DS_Sign, Type IIIB	3	Sft
(9)	DS_Pedestal, Alum	5	Ea
(10)	DS_Pedestal, Fdn	6	Ea
(11)	DS_Pushbutton, Pedestal, Alum	1	Ea
(12)	DS_Push Button Station and Sign	6	Ea
(13)	DS_Pedestrian Signal System, Accessible	1	Ea
(14)	DS_TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	4	Ea
(15)	DS_TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown	1	Ea
(16)	DS_Bracket, Truss, With 12 Foot Arm	2	Ea
(17)	DS_Hemispherical Video Detection Camera	1	Ea
(18)	DS_Hemispherical Video Detection System	1	Ea
(19)	DS_Casing	7	Ft
(20)	DS_Backplate, TS	7	Ea
(21)	DS_Mast Arm Pole, Cat III	1	Ea
(22)	DS_Mast Arm, 25 foot, Cat III	1	Ea
(23)	DS_Mast Arm, 40 foot, Cat III	1	Ea
(24)	DS_Mast Arm Pole Fdn, Modified	10	Ft
(25)	DS_TS, One Way Mast Arm Mtd (LED), Long Life	6	Ea
(26)	DS_TS, One Way Mast Arm Mtd, FYA (LED), Long Life	1	Ea
(27)	DS_St Name Sign, Two Way, LED, 6 foot	1	Ea
(28)	DS_St Name Sign, Two Way, LED, 8 foot	1	Ea
(29)	DS_Roadside Unit, Install Salv	1	Ea
	DS_Conduit, Directional Bore, 2, 3 inch	150	Ft
	DS_Conduit, DB, 1, 1 1/2 inch	130	Ft
	DS_Conduit, DB, 2, 3 inch	75	Ft
	DS_Cable, Sec, 600V, 1, 3/C#6	100	Ft

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
3	ADDENDUM No. 3 PLANS	5/2/24	COB	NBN
2	ADDENDUM No. 2 PLANS	4/29/24	COB	NBN
1	ADDENDUM PLANS	4/25/24	COB	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

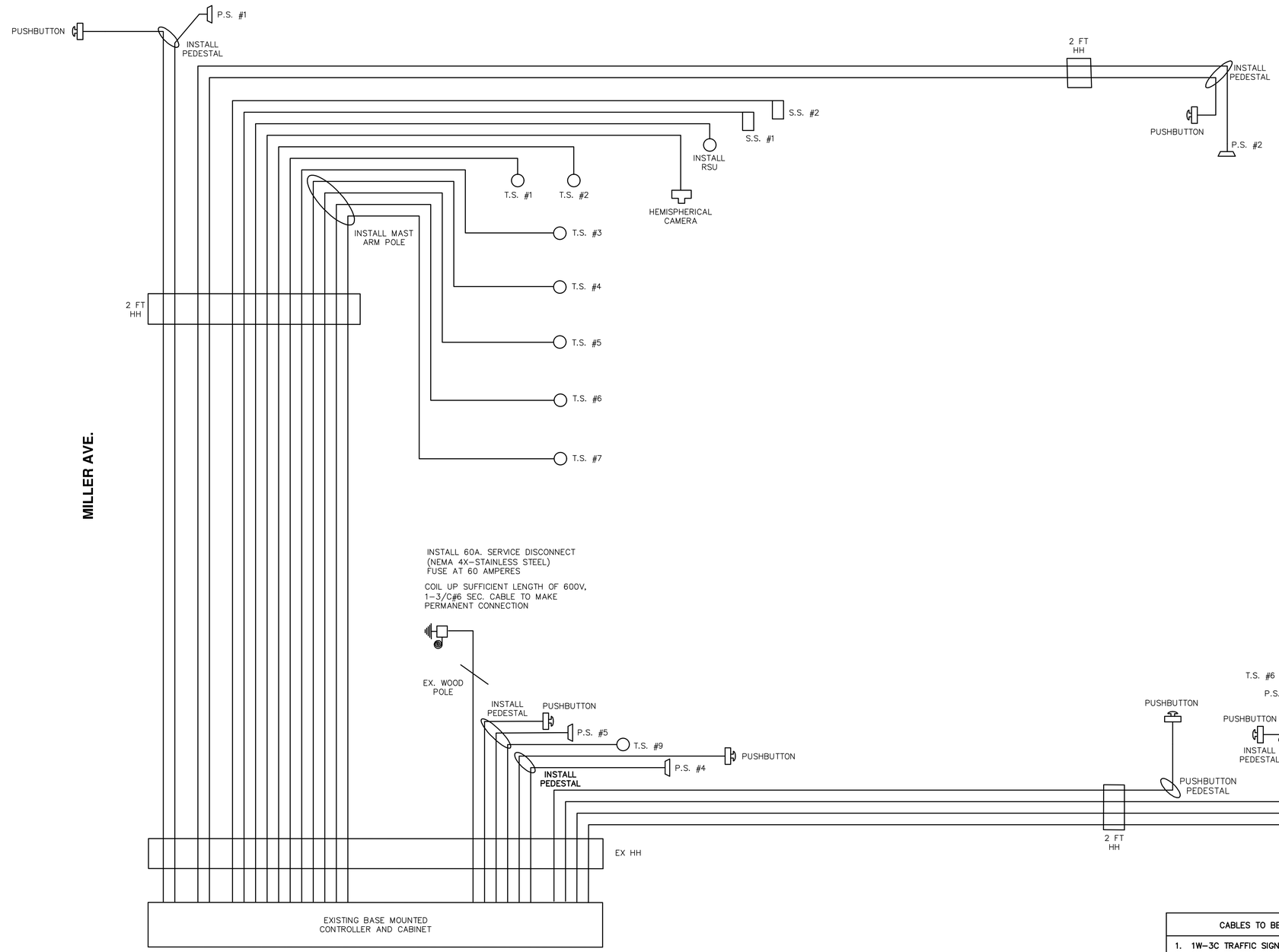
MILLER ROAD CYCLE TRACK
TRAFFIC SIGNAL REMOVAL

SI02 - INTERSECTION OF 7TH ST. AND MILLER AVE.

SCALE: 1" = 20'

DRAWING No. 20230643-SI02

SHEET No.



CABLES TO BE USED (UNLESS OTHERWISE INDICATED)
1. 1W-3C TRAFFIC SIGNAL CABLES SHALL BE 5/C#16P.J.
2. 1W-4C TRAFFIC SIGNAL CABLES SHALL BE 7/C#16P.J.
3. PEDESTRIAN SIGNAL CABLES SHALL BE 7/C#16P.J.
4. PUSHBUTTON CABLES SHALL BE 2/C#16 SHIELDED P.J.
5. CABLE TO VIDEO CAMERAS TO BE 600V CAT 5e OR APPROVED EQUAL
6. ILLUMINATED STREET NAME SIGN CABLES SHALL BE 4/C#16P.J.

CABLING INSTALL

NTS

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
3	ADDENDUM No. 3 PLANS	5/2/24	COB	NBN
2	ADDENDUM No. 2 PLANS	4/29/24	COB	NBN
1	ADDENDUM PLANS	4/25/24	COB	NBN

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

MILLER ROAD CYCLE TRACK

TRAFFIC SIGNAL REMOVAL

SC02 - INTERSECTION OF 7TH ST. AND MILLER AVE.

SCALE : 1" = 20'

DRAWING No. 20230643-SC02

SHEET No.