

City of Ann Arbor

WTP Lime Residual Removal Contract No. 1 - Site Modifications

Ann Arbor, Michigan

Issued for Bids & Construction
Project Number 241760
RFP 25-15



fishbeck.com 2001 Commonwealth Blvd.
800.456.3824 Ann Arbor, Michigan

GENERAL

- G001 COVER SHEET
- G101 LEGEND, OVERALL SITE PLAN & NOTES
- G102 OVERALL SITE LAYOUT

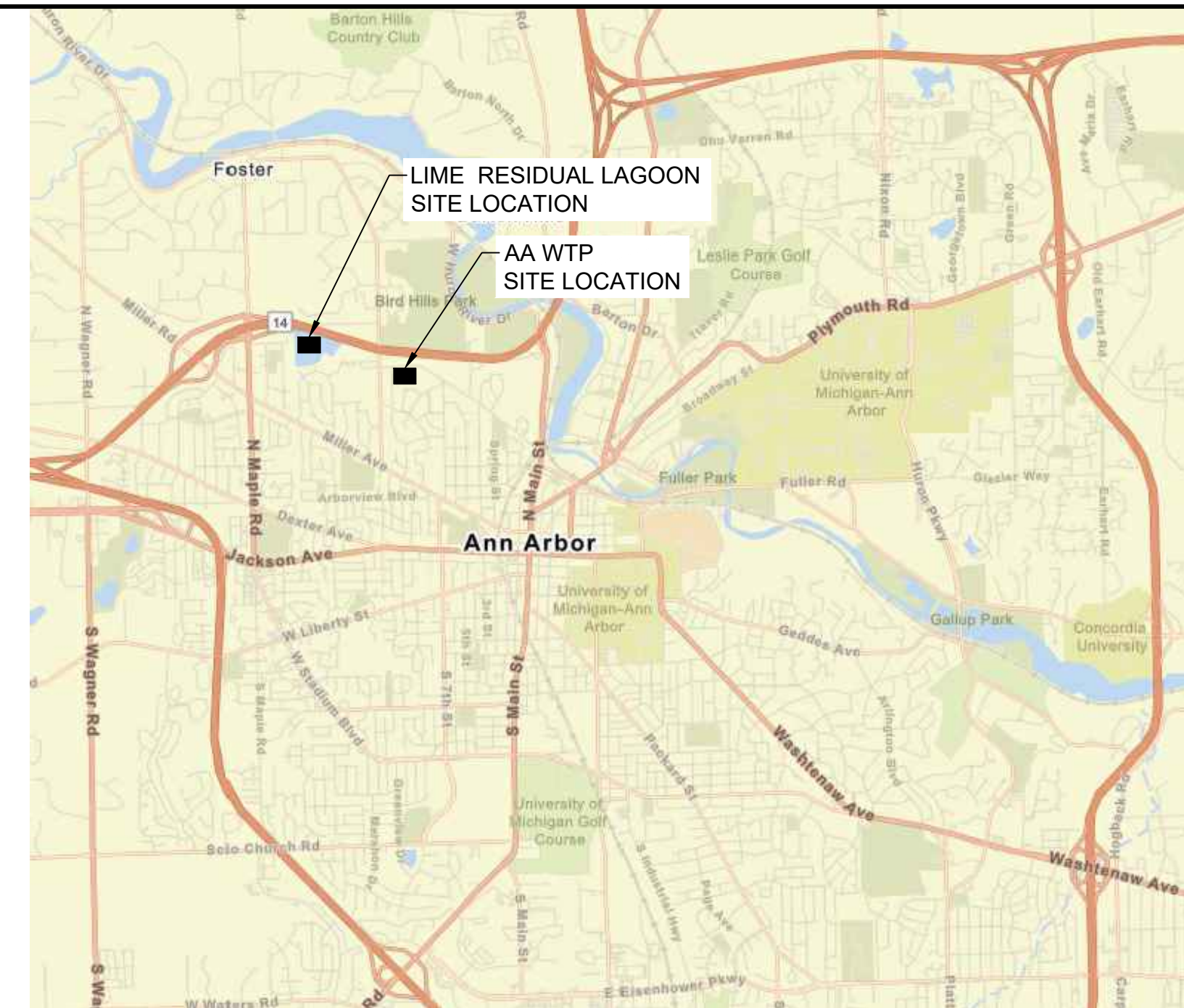
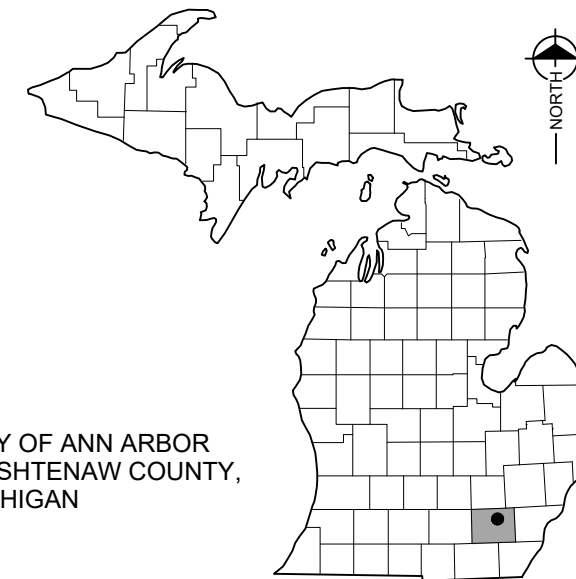
CIVIL

- C101 LIME RESIDUAL LAGOON SITE PLAN
- C102 WATER TREATMENT PLANT SITE PLAN
- C401 WATER TREATMENT PLANT TEMPORARY DRIVEWAY & FORCE MAIN PLAN & PROFILE
- C402 LAGOON FORCE MAIN PLAN & PROFILE
- C501 SESC & STANDARD DETAILS
- C502 STANDARD DETAILS
- C503 MISC. DETAILS

REFERENCE

- R1 8 IN 2009 AS BUILT DRAWING SHEET 31
- R2 8 IN 2009 AS BUILT DRAWING SHEET 32

VICINITY MAP
MICHIGAN



LOCATION MAP
NO SCALE

GRAPHIC SYMBOLS

<p>ELEVATION, SECTION, AND DETAIL DESIGNATION</p> <p>1 SECTION SCALE: 1/4" = 1'-0"</p> <p>PLAN DESIGNATION</p> <p>PLAN SCALE: 1/8" = 1'-0"</p>	<p>EXTERIOR ELEVATION TAG</p> <p>A/400</p> <p>INTERIOR ELEVATION TAG/PHOTO TAG</p> <p>A/301 D</p>	<p>NORTH ARROW DESIGNATION</p> <p>NORTH ROOM NAME AND NUMBER</p> <p>ROOM NAME</p> <p>101</p>	<p>ENLARGED DETAIL FRAME</p> <p>1 A201</p> <p>SECTION CUT LINE</p> <p>1 A501</p>	<p>ELEVATION TARGET</p> <p>SPOT ELEVATION</p> <p>EXISTING CONSTRUCTION GRID</p> <p>NEW CONSTRUCTION GRID</p> <p>LEVEL CALLOUT</p> <p>EL 100'-0"</p> <p>000</p> <p>000</p> <p>FIRST FLOOR 100'-0"</p>	<p>DEMOLITION KEY NOTE</p> <p>NEW CONSTRUCTION KEY NOTE</p> <p>REVISION CLOUD</p> <p>ADDENDUM IDENTIFICATION</p> <p>BULLETIN IDENTIFICATION</p> <p>2</p> <p>◇</p> <p>☁</p> <p>△A</p> <p>△B1</p>
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BUILDING CODE INFORMATION



City of Ann Arbor
Ann Arbor, Michigan
WTP Lime Residual Removal
Contract 1 - Site Modifications

REVISIONS

3/4/2025 BIDS & CONSTRUCTION

Drawn By jreyes
Designer jsiwek
Reviewer krostowski
Manager jsiwek

Hard copy is intended to be 22"x34" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
241760

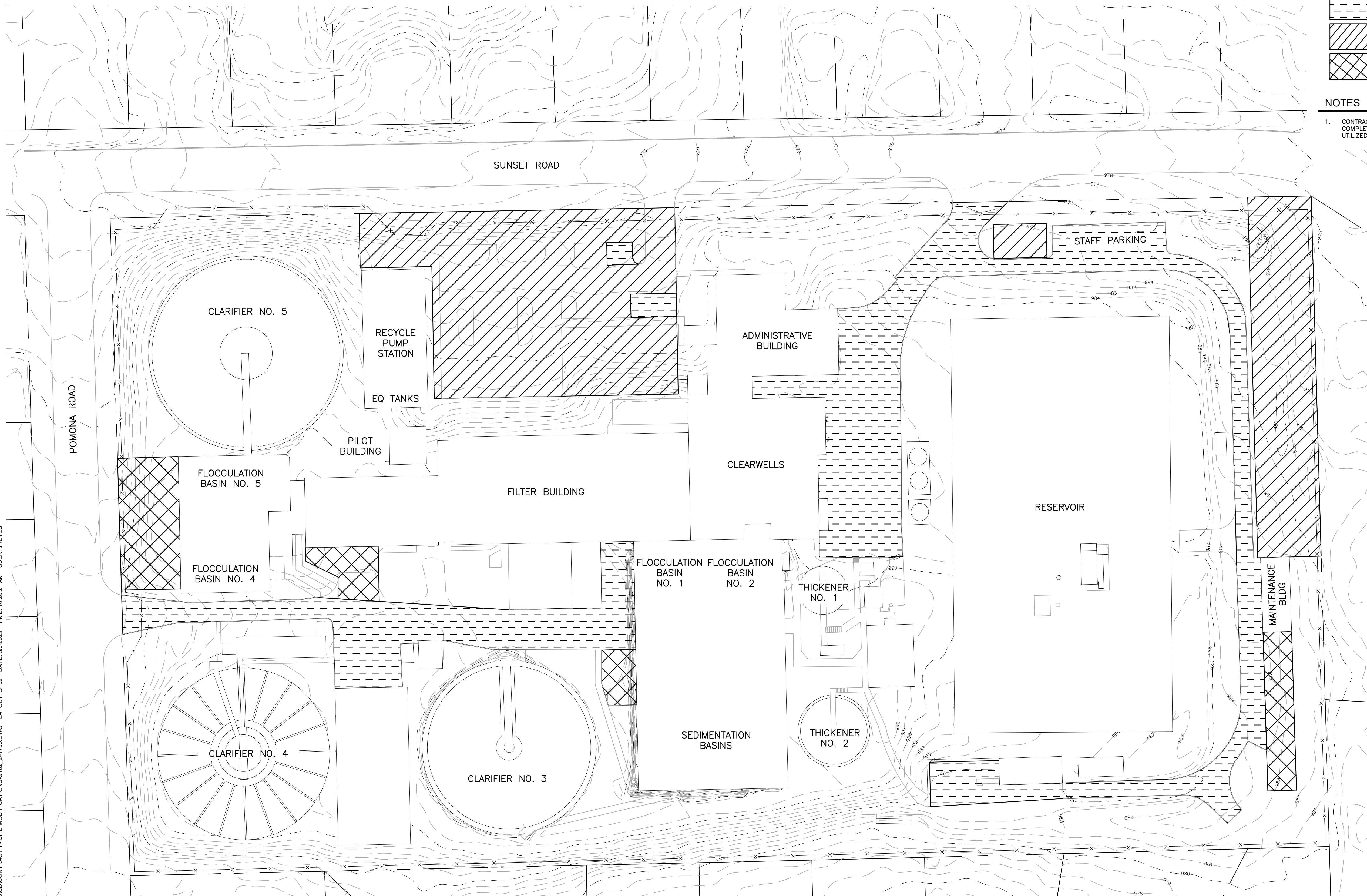
SHEET NO.

G001

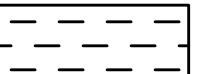


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PLOT INFO: 2/20/2024 11:50:00 CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/G001_241760.DWG LAYOUT: G101 DATE: 3/5/2025 TIME: 4:20:45 PM USER: JREYES

PLOT INFO: 2/2024/241760/CADD/CD/CONTRACT 1 - SITE MODIFICATIONS/G102_241760.DWG LAYOUT: G102 DATE: 3/5/2025 TIME: 10:20:21 AM USER: JREYES

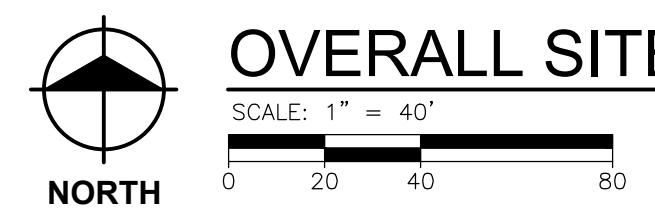


SYMBOL LEGEND

-  AREAS NOT TO BE BLOCKED
-  AREAS ALLOWED FOR EQUIPMENT STAGING
-  AREAS OCCUPIED BY OTHER CONTRACTORS

NOTES

1. CONTRACTOR TO CONFIRM THE SPACES THEY WILL NEED TO COMPLETE THE PROJECT SO THAT UNUSED SPACE MAY BE UTILIZED BY WTP STAFF.

OVERALL SITE LAYOUT
 SCALE: 1" = 40'


City of Ann Arbor
 Ann Arbor, Michigan
WTP Lime Residual Removal
 Contract 1 - Site Modifications

REVISIONS

3/4/2025 BIDS & CONSTRUCTION

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 Designer jsiwiek
 Reviewer krostowski
 Manager jsiwiek

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PROJECT NO.
241760

SHEET NO.

G102

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PLOT INFO: 2/20/24 17:60/CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/C101_241760.DWG LAYOUT: C101 DATE: 3/4/2025 TIME: 8:31:53 AM USER: JREYES



NOTES

- ALL LOCATIONS AND DIMENSIONS OF EXISTING FEATURES SHOWN ON THE DRAWINGS ARE APPROXIMATE. FIELD VERIFY SITE CONDITIONS AND EXISTING FEATURES PRIOR TO COMMENCING WORK.
- PROTECT TREES AND UTILITY POLES NOT NOTED OR APPROVED FOR REMOVAL IN ACCORDANCE WITH ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, DIVISION 1 - GENERAL SPECIFICATIONS "PROTECTION OF TREES" AND STANDARD. SEE SHEET C501. CONTRACTOR TO COORDINATE WITH OWNER AND ENGINEER IF ANY TREES NEED TO BE REMOVED.
- CONTRACTOR TO PRESSURE TEST THE EXISTING FORCE MAIN AFTER COMPLETION OF PIPE MODIFICATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONTRACTOR TO FLUSH AND PIG THE EXISTING FORCE MAIN AFTER COMPLETION OF PIPE PRESSURE TESTING. CONTRACTOR SHALL UTILIZE THE EXISTING STORMWATER BASIN FOR COLLECTING WATER FROM FLUSHING. THE PIG AND ALL DEBRIS FLUSHED FROM THE LINE SHALL BE CLEANED FROM THE BASIN UPON COMPLETION. CONTRACTOR SHALL INSERT A TEMPORARY PLUG IN THE DOWNSTREAM STORM SEWER UPSTREAM OF THE METERING MANHOLE TO ENSURE THAT NO WATER FROM CONSTRUCTION OPERATIONS LEAVE THE SITE. THE PLUG MUST BE REMOVED AFTER FLUSHING IS COMPLETE.
- CONTRACTOR RESPONSIBLE FOR ALL SITE SECURITY AT THE LAGOON SITE DURING CONSTRUCTION. THE ACCESS GATE SHOULD REMAIN LOCKED AT ALL TIMES WHEN NOT BEING ACTIVELY UTILIZED. CONTRACTOR TO COORDINATE WITH CITY AND "DAISY CHAIN" THEIR LOCK WITH CITY'S LOCK FOR ACCESS DURING CONSTRUCTION.
- CONTRACTOR SHALL PERFORM STREET SWEEPING IN HATCHER CRESCENT AND SAUNDERS CRESCENT AS NEEDED DURING THE PROJECT.
- CONTRACTOR SHALL RESTORE THE SITE ONCE ALL PIPE MODIFICATIONS AND TESTING / FLUSHING IS COMPLETE.
- PROVIDE 8 CU YD. MDOT PLAIN RIP RAP TO BE FIELD LOCATED TO PROTECT BASIN SLOPE FROM EROSION DURING PIGGING AND FLUSHING OPERATIONS.

SYMBOL LEGEND

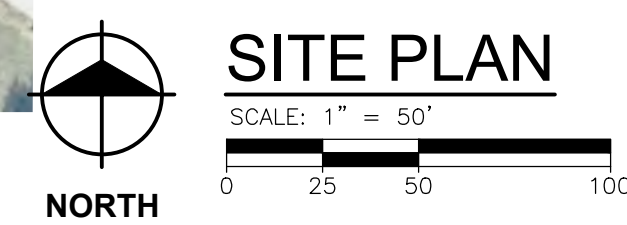
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- SILT FENCE
- TURBIDITY CURTAIN
- GRAVEL PAVEMENT
- TEMPORARY EASEMENT

EGL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
1		Within a stream or drain parallel to flow when a slack water area is necessary to isolate earth change activities from a lake or channel.
7		Used where vegetation is not easily established. Effective for high velocities or high concentrations. Permits runoff to infiltrate soil. Dissipates energy flow at system outlets.
14		Used at every point where construction traffic enters or leaves a construction site.
26		Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.
29		Collects high velocity concentrated runoff. May use filter cloth over inlet.

TEMPORARY MEASURE PERMANENT MEASURE

CONTRACTOR TO LEAVE SESC BMP'S IN PLACE FOR USE IN CONTRACT NO. 2.



REVISIONS

3/4/2025 BIDS & CONSTRUCTION

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Designer jsiwiek
Reviewer krostowski
Manager jsiwiek

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PROJECT NO.
241760

SHEET NO.

C101



- NOTES**
- CONTRACTOR TO FURNISH PARTS, LABOR & EQUIPMENT TO FLUSH PIPE AND PRESSURE TEST THE EXISTING FORCE MAIN PER THE SPECIFICATIONS.
 - CONTRACTOR RESPONSIBLE FOR COORDINATING WITH WTP STAFF TO SECURE THE SITE DURING CONSTRUCTION AND MUST CONFORM TO ALL SITE SECURITY PROTOCOLS DURING CONSTRUCTION INCLUDING TEMPORARY FENCING AS MAY BE REQUIRED.
 - CONTRACTOR TO IDENTIFY ANY PARKING SPACES ALONG SUNSET RD THAT WILL NEED TO BE TAKEN OUT OF SERVICE IN ORDER FOR THEM TO COMPLETE THE WORK AND COORDINATE WITH THE CITY OF ANN ARBOR TO TEMPORARILY ADJUST PARKING LIMITS, INCLUDING INSTALLATION OF NO PARKING SIGNS.
 - CONTRACTOR TO SET UP PEDESTRIAN DETOUR DURING CLOSURE OF THE SIDEWALK FOR CONSTRUCTION OF THE ACCESS DRIVEWAY. POMONA, RED OAK AND VESPER ROADS SHALL BE UTILIZED. CONTRACTOR SHALL FOLLOW CITY STANDARDS FOR SIGNAGE AND PLACEMENT. ADDITIONAL SIGNAGE MAY BE NECESSARY AT SUNSET RD AND BROOKS ST. CONTRACTOR SHALL SUBMIT BOTH TRAFFIC CONTROL AND PEDESTRIAN DETOUR PLANS TO THE CITY FOR APPROVAL.
 - PLANT WATER SUPPLY AVAILABLE FROM YARD HYDRANT. COORDINATE ALL CONNECTIONS AND USAGE WITH WTP STAFF.
 - REMOVE EXISTING LIGHT POLE. COORDINATE WITH WTP STAFF FOR LOCATION OF NEW LIGHT POLE. SEE LIGHT POLE DETAIL ON C502. REMOVE FOUNDATION AND REROUTE EXISTING CONDUIT AND CONDUCTORS TO NEW POLE LOCATION AS REQUIRED.
 - PROTECT EXISTING GATE CONTROLS. COORDINATE THE OPERATION OF THE GATE WITH WTP.
 - CONTRACTOR SHALL PERFORM STREET SWEEPING IN SUNSET ROAD, MILLER ROAD, AND NEWPORT ROAD AS NEEDED DURING THE PROJECT.

SYMBOL LEGEND

	SAWCUT
	CURB REMOVAL
	REMOVE BITUMINOUS PAVEMENT FULL DEPTH
	REMOVE CONCRETE SIDEWALK
	REMOVE SOD AND TOPSOIL
	TREE REMOVAL
725	EXISTING MAJOR CONTOUR
724	EXISTING MINOR CONTOUR
-X-X-X-X-	SILT FENCE



SITE PLAN
SCALE: 1" = 20'
0 10 20 40

EGLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
26		Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.
29		Collects high velocity concentrated runoff. May use filter cloth over inlet.

TEMPORARY MEASURE
 PERMANENT MEASURE
 CONTRACTOR TO LEAVE SESC BMP'S IN PLACE FOR USE IN CONTRACT NO. 2.

REVISIONS

3/4/2025 BIDS & CONSTRUCTION
 Drawn By jreyes
 Designer jsiwk
 Reviewer krostowski
 Manager jsiwk

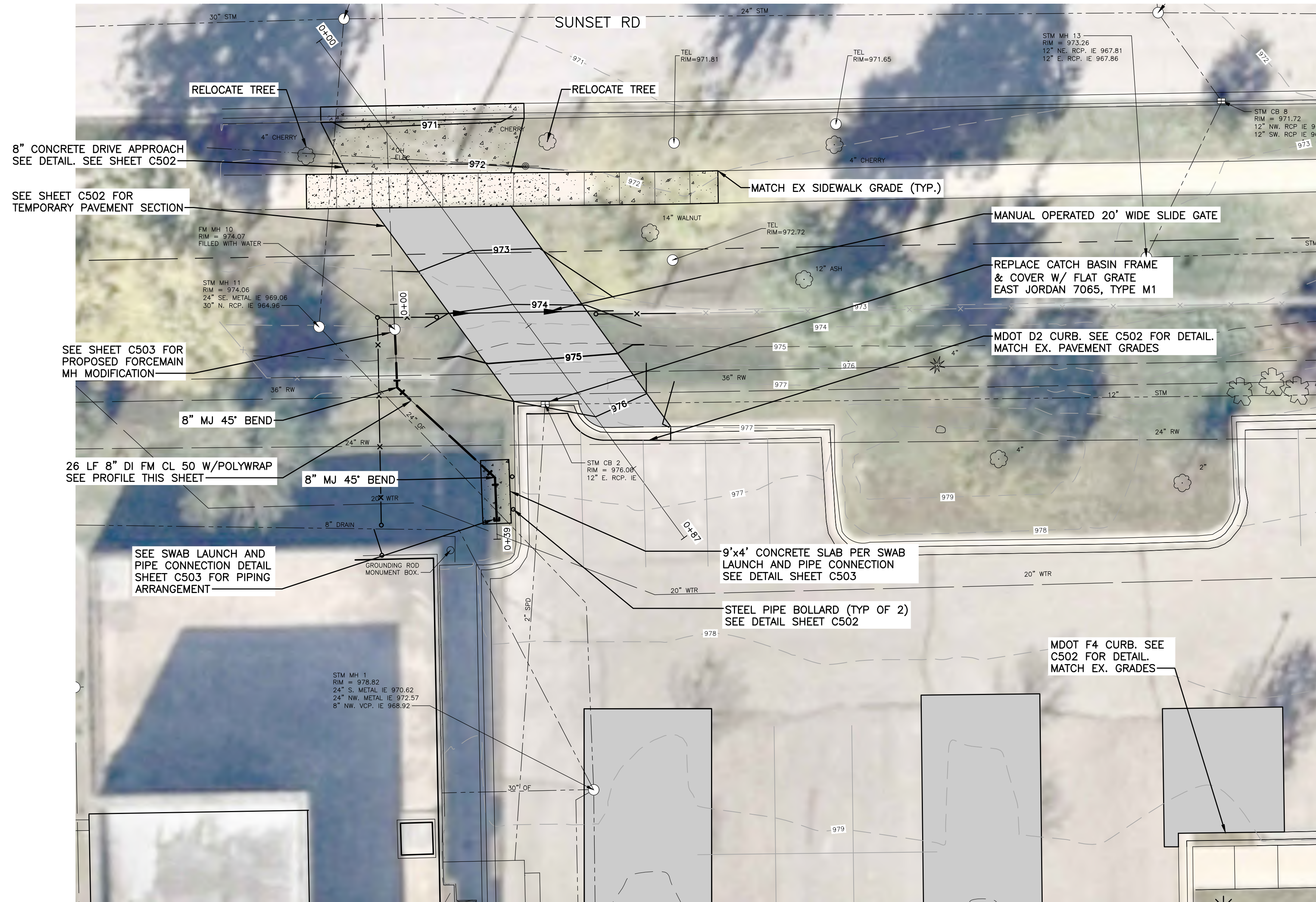
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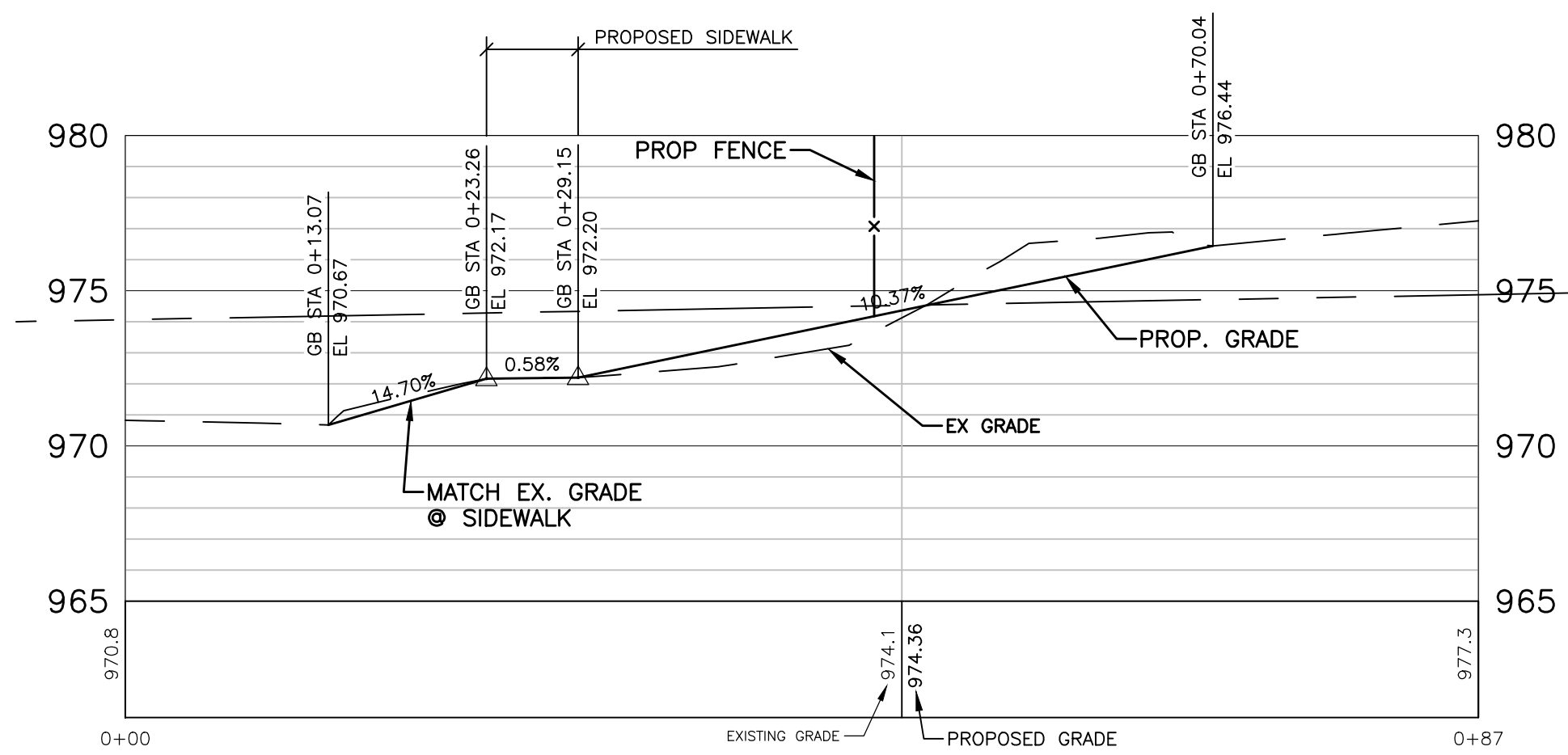
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C102

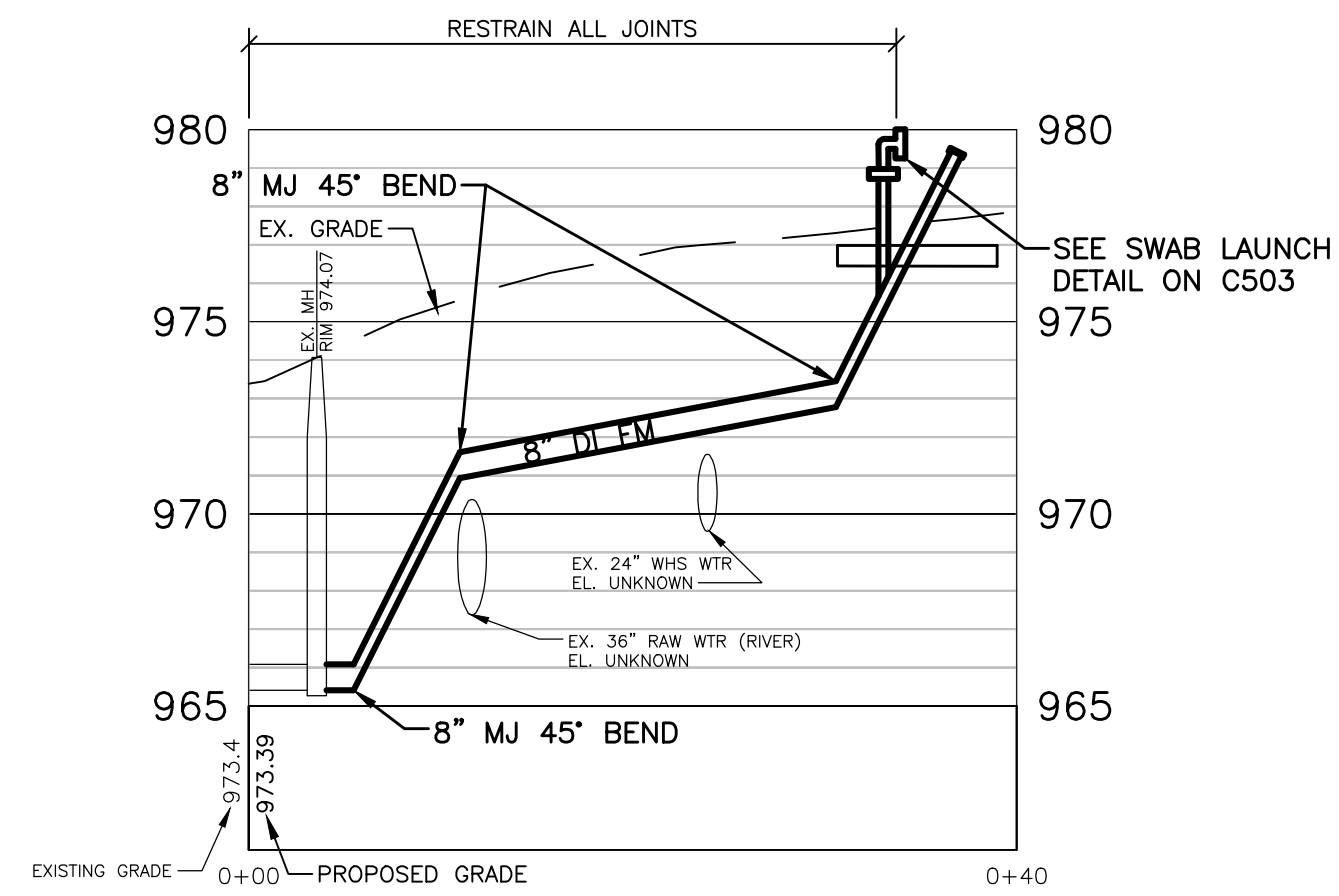
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PLAN - DRIVEWAY
SCALE: 1" = 10'
NORTH



PROFILE - DRIVEWAY
SCALE: 1" = 10'H, 1" = 5'V



PROFILE - FORCEMAIN
SCALE: 1" = 10'H, 1" = 5'V

NOTES

1. PROFILE IS ASSUMED BASED ON EXISTING UTILITY INFORMATION. CONTRACTOR TO EXPOSE ALL EXISTING PIPES TO BE CROSSED BY THE PROPOSED FORCE MAIN PRIOR TO PIPE INSTALLATION. ADDITIONAL FITTINGS MAY BE REQUIRED TO CONSTRUCT WITH PROPER CLEARANCES, AND ARE TO BE PAID FOR PER CONTRACT ALLOWANCE FOR UTILITY CONFLICTS. CONTRACTOR TO PROVIDE AS NEEDED.
2. ABOVE GROUND DUCTILE IRON PIPE SHALL BE POLYURETHANE COATED: APPLY 2 COATS OF A POLYAMIDE-CURED EPOXY RESIN FINISH AT 2.5 TO 3.5 DRY MILS, AND 1 FINAL COAT OF AN ALIPHATIC POLYURETHANE ENAMEL AT 2.0 TO 3.0 DRY MILS. BLACK IN COLOR.

SYMBOL LEGEND

	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	8" THICK CONCRETE SIDEWALK
	4" THICK CONCRETE SIDEWALK

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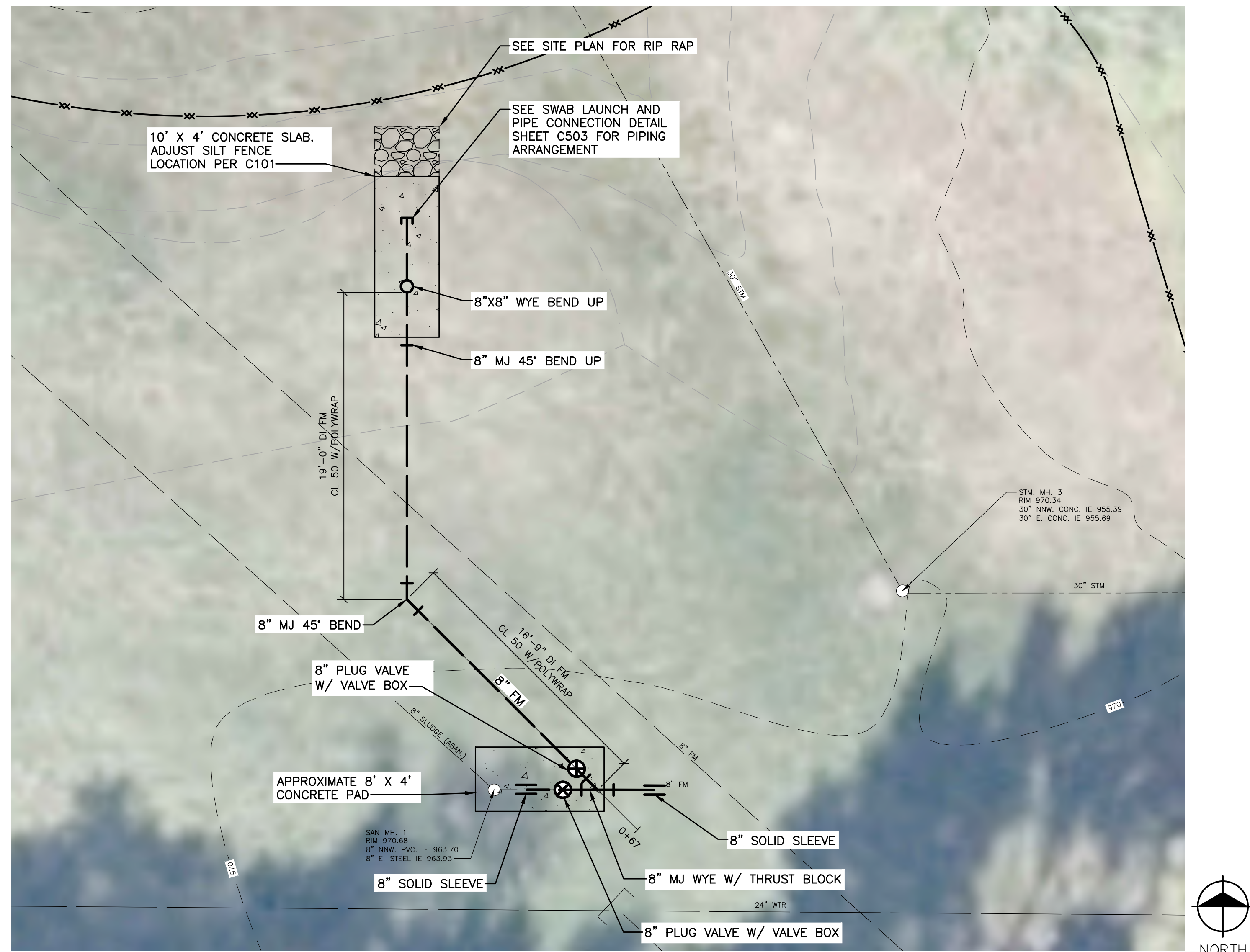
PROJECT NO.
241760

SHEET NO.

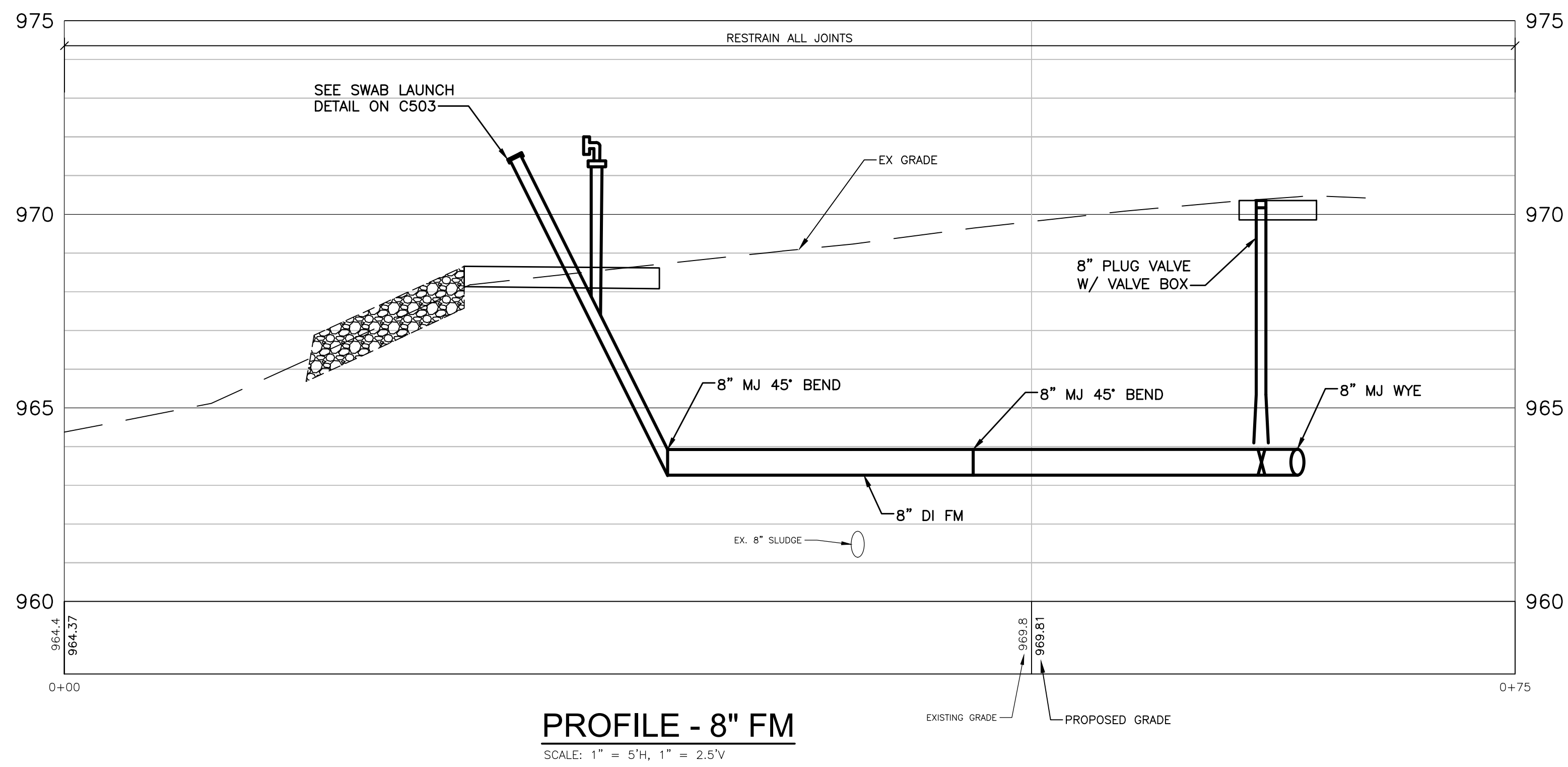
C401

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PLOT INFO: 2:2024041760\CAD\CDD\CONTRACT 1 - SITE MODIFICATIONS\C402_241760.DWG LAYOUT: C402 DATE: 3/4/2025 TIME: 8:37:16 AM USER: JREYES



1 ENLARGED PLAN
SCALE: 1" = 5'-0"



PROFILE - 8" FM
SCALE: 1" = 5'H, 1" = 2.5'V

NOTES

1. ABOVE GROUND DUCTILE IRON PIPE SHALL BE POLYURETHANE COATED. APPLY 2 COATS OF A POLYAMIDE-CURED EPOXY RESIN FINISH AT 2.5 TO 3.5 DRY MILS, AND 1 FINAL COAT OF AN ALIPHATIC POLYURETHANE ENAMEL AT 2.0 TO 3.0 DRY MILS. BLACK IN COLOR.
2. CONTRACTOR TO GRADE LOCATION FOR CONCRETE SLAB AND BACKFILL TRENCH TO NECESSARY GRADE PER THE SPECIFICATIONS.

SYMBOL LEGEND

	CONCRETE PAVEMENT
	RIP RAP
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SILT FENCE

REVISIONS

3/4/2025 BIDS & CONSTRUCTION

Drawn By jreyes
Designer jsiwiek
Reviewer krostowski
Manager jsiwiek

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PROJECT NO.
241760

SHEET NO.

C402

PLOT INFO: 2/20/24 04:17:00 CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/CONTRACT 1 - DATE: 3/4/2025 LAYOUT: C501 TIME: 8:34:20 AM USER: JREYES

SHORELINE CONSTRUCTION
Anchor to shoreline upstream. Re-directionals needed. Mark Area. Flow. Shore or Abutment. Place Stone Bags on inside bottom face of Curtain (as needed). Anchor to shoreline downstream.

IN-STREAM CONSTRUCTION
Curtain Anchor (Typ). Mark Area. Flar.

TURBIDITY CURTAIN (SHALLOW)
Stake. 2' Max. Bottom of the Turbidity Curtain shall be anchored as needed.

TURBIDITY CURTAIN (DEEP)
Float. Balloast Chain. Depths from 2' to 10'. Balloast Chain. Anchor. Depths greater than 10'.

Use:
A Turbidity Curtain is used when slack water area is necessary to isolate construction activities from the watercourse. The Turbidity Curtain system shall be designed to handle site specific drainage or flow patterns. When water is less than 2 feet deep and has low flow, Turbidity Curtain (Shallow) may be used. Curtains shall be securely fastened to stakes. Water greater than 2 feet deep or where high flow exists requires the use of Turbidity Curtain (Deep).

Installation and Maintenance:
The Turbidity Curtain shall be installed at the location shown on the plans and according to the special provision. The Turbidity Curtain shall be placed parallel to the direction of flow and anchored upstream, downstream, and to the stream bed to maximize protection to the watercourse. The Contractor shall maintain the Turbidity Curtain until the construction activity within the watercourse is complete or as approved by the Engineer. Retained sediment shall be removed to the maximum extent practicable prior to removing the curtain.

Optional Measures:
The Turbidity Curtain may include a re-directional barrier on the upstream end of the work area.

Related SESC Measures:
E & S-18 Doweling with Filter Bag
E & S-24 Sand and Stone Bags
E & S-34 Cofferdam

Measurement and Payments:
Turbidity Curtain requires inclusion of the appropriate special provision in the contract documents. Payment includes furnishing and installing sufficient anchors, floats, or other mechanisms to ensure proper position and performance of the Turbidity Curtain. Optional work shown, when installed and maintained as directed by the Engineer, will be paid using the associated contract item listed here.

Contract Item #/Pay Item	Pay Unit	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR
Turbidity Curtain (Shallow)	Foot	Turbidity Curtain
Turbidity Curtain (Deep)	Foot	

MDOT	09-30-2005	E&S-1-A	SHEET
	PLAN DATE		1 OF 1

25' Radius. 50'. 21AA 20# or 3#1. Depth of Aggregate 6". Geotextile Separator to Stabilize Foundation. 6" to 8". Diverston Ridge (Optional). 15'. Public Road. Geotextile Separator.

Use:
Providing a stable Gravel Access Approach, minimizes the tracking of loose materials from the construction site onto public roadways. Coarser aggregate is more effective in reducing tracking. Any materials tracked onto public roadways shall be removed as specified in the Standard Specifications for Construction, or as directed by the Engineer.

Installation and Maintenance:
Installation and maintenance of Gravel Access Approach is effective in reducing sediment loading to inlet protection devices. The Gravel Access Approach should be located in accordance with the plans or as directed by the Engineer. All vegetation and other objectionable material shall be removed from the foundation area. Geotextile Separator must be placed beneath the aggregate to stabilize the foundation. Replace or replenish aggregate if it is no longer preventing tracking.

Optional Measures:
A Gravel Access with Diverston Ridge is recommended where access grade exceeds 2%. This will also aid in dislodging soil or debris from tires.

Related SESC Measures:

Measurement and Payments:
Optional work shown, when installed and maintained as directed by the Engineer, will be included in the Item Gravel Access Approach.

Contract Item #/Pay Item	Pay Unit	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR
Erosion Control, Gravel Access Approach	Each	Gravel Access Approach

MDOT	04-07-2006	E&S-14-A	SHEET
	PLAN DATE		1 OF 1

See Splice Detail. Sheet Flow. 6" Trench With Compact Earth. Silt Fence Geotextile. Sheet Flow. Undisturbed Vegetation. Post. Spacing 6.5' Max. Posts Driven into Ground 12". Silt Fence Geotextile. Trench Detail. Section A-A. Silt Fence Geotextile fastened on uphill side towards Earth Disturbance. Ridge of Compacted Earth on uphill side of silt fence. 6" X 6" Anchor Trench. See Trench Detail. Undisturbed Vegetation. Sheet Flow. Trench Detail. Road. Filt Slope. Watercourse. Silt Fence (Optional). Culvert Extension Showing Sand/Stone Bags with optional Silt Fence. Filt Slope. Silt Fence (Optional). Watercourse.

Use:
Silt Fence is used to filter sediment from runoff water. It is most effective when installed on a slope. The Silt Fence shall be installed in accordance with the plans and according to the special provision. The Silt Fence shall be placed parallel to the direction of flow and anchored upstream, downstream, and to the stream bed to maximize protection to the watercourse. The Contractor shall maintain the Silt Fence until the construction activity within the watercourse is complete or as approved by the Engineer. Retained sediment shall be removed to the maximum extent practicable prior to removing the Silt Fence.

Installation and Maintenance:
The Silt Fence shall be installed at the location shown on the plans and according to the special provision. The Silt Fence shall be placed parallel to the direction of flow and anchored upstream, downstream, and to the stream bed to maximize protection to the watercourse. The Contractor shall maintain the Silt Fence until the construction activity within the watercourse is complete or as approved by the Engineer. Retained sediment shall be removed to the maximum extent practicable prior to removing the Silt Fence.

Optional Measures:
The Silt Fence may include a re-directional barrier on the upstream end of the work area.

Related SESC Measures:

Measurement and Payments:
Optional work shown, when installed and maintained as directed by the Engineer, will be included in the Item Silt Fence.

Contract Item #/Pay Item	Pay Unit	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR
Silt Fence	Foot	Silt Fence

MDOT	09-30-2005	E&S-26-A	SHEET
	PLAN DATE		1 OF 2

Drop Inlet with grate. Trench in Silt Fence and stake all four corners. Gather excess fabric at corners. Inlet Protection in Unpaved Area. Geotextile Blanket held in place by Stone/Sand Bags or other Non-erodible Device. Plan View Inlet in Curb - Paved Area Behind Curb. Secure Behind Curb. Inlet Grate. Drainage Structure. Geotextile Blanket. Trench in Behind Curb in Unpaved Area (Optional). Cross Section Inlet in Curb - Paved or Unpaved Area Behind Curb.

Use:
Inlet Protection Fabric Drop is used to filter sediment from runoff water. It is most effective when installed on a slope. The Inlet Protection Fabric Drop shall be installed in accordance with the plans and according to the special provision. The Inlet Protection Fabric Drop shall be placed parallel to the direction of flow and anchored upstream, downstream, and to the stream bed to maximize protection to the watercourse. The Contractor shall maintain the Inlet Protection Fabric Drop until the construction activity within the watercourse is complete or as approved by the Engineer. Retained sediment shall be removed to the maximum extent practicable prior to removing the Inlet Protection Fabric Drop.

Installation and Maintenance:
The Inlet Protection Fabric Drop shall be installed at the location shown on the plans and according to the special provision. The Inlet Protection Fabric Drop shall be placed parallel to the direction of flow and anchored upstream, downstream, and to the stream bed to maximize protection to the watercourse. The Contractor shall maintain the Inlet Protection Fabric Drop until the construction activity within the watercourse is complete or as approved by the Engineer. Retained sediment shall be removed to the maximum extent practicable prior to removing the Inlet Protection Fabric Drop.

Optional Measures:
The Inlet Protection Fabric Drop may include a re-directional barrier on the upstream end of the work area.

Related SESC Measures:

Measurement and Payments:
Optional work shown, when installed and maintained as directed by the Engineer, will be included in the Item Inlet Protection Fabric Drop.

Contract Item #/Pay Item	Pay Unit	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR
Inlet Protection Fabric Drop	Foot	Inlet Protection Fabric Drop

MDOT	04-07-2006	E&S-29-A	SHEET
	PLAN DATE		1 OF 2

PLAN. 6". STANDARD STEEL OR WOODEN FENCE POST. STANDARD 48" HIGH SNOW FENCE. ELEVATION. SNOW FENCE SHALL BE LOCATED AT THE OUTER PERIMETER OF THE SPREAD OF THE BRANCHES OR CLOSER ONLY AT THE DIRECTION OF THE ENGINEER.

DR. BY	DF/SMJ	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	11-8-92	SD-M-1
INCH	0	1		SHEET NO. OF

REVISIONS

3/4/2025 BIDS & CONSTRUCTION

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Designer jsiwiek
Reviewer krostowski
Manager jsiwiek

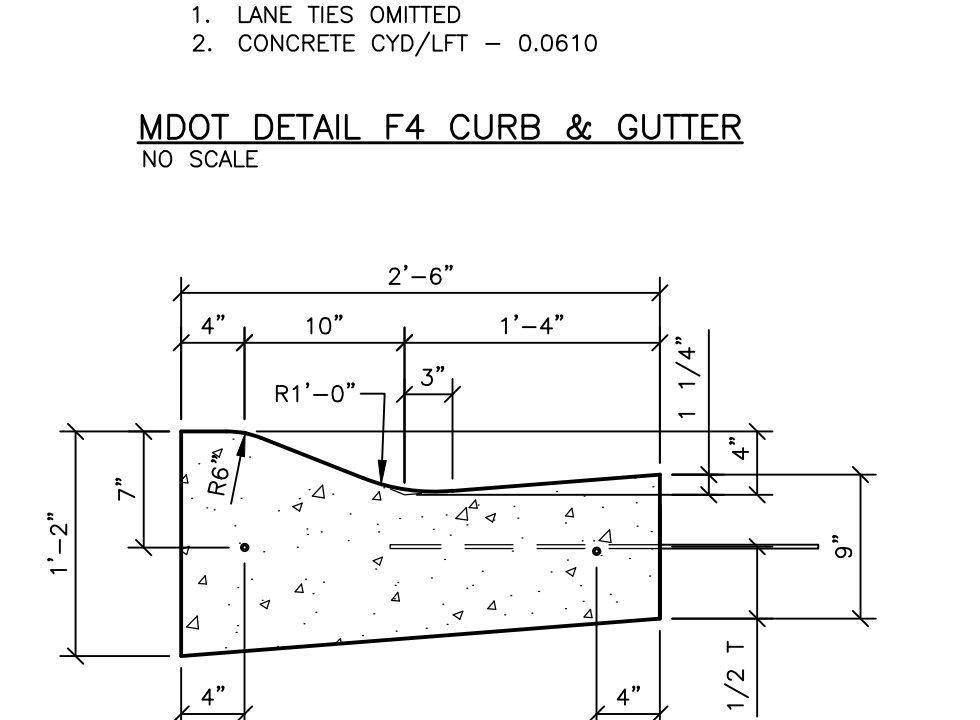
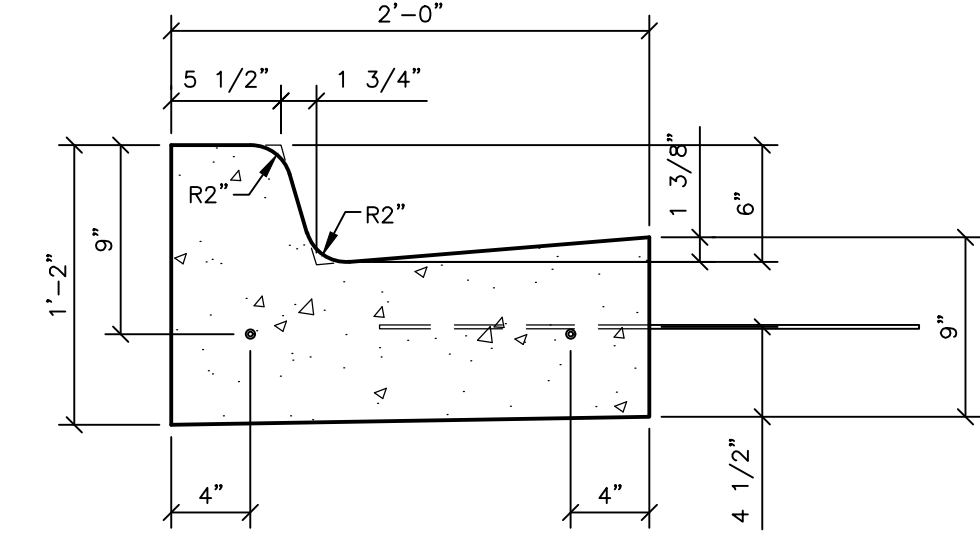
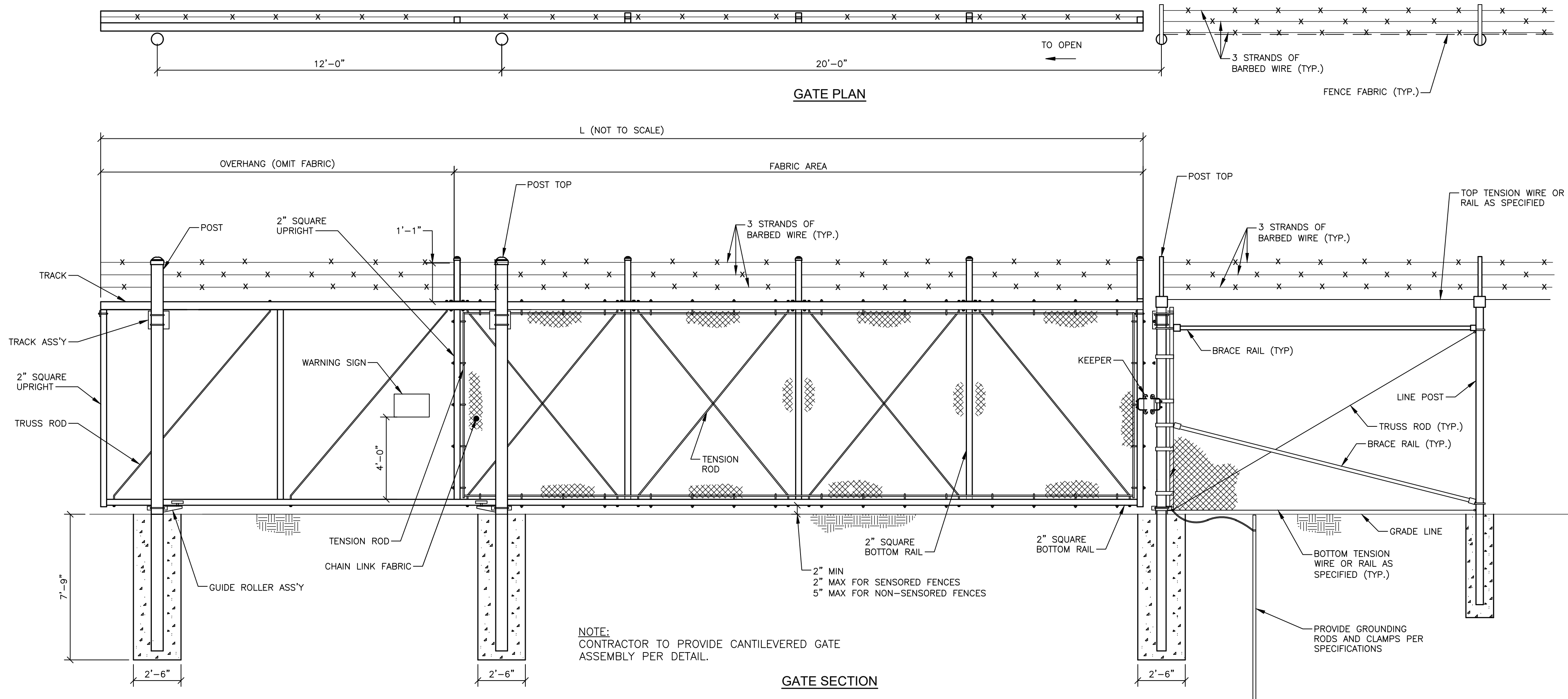
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PROJECT NO.
241760

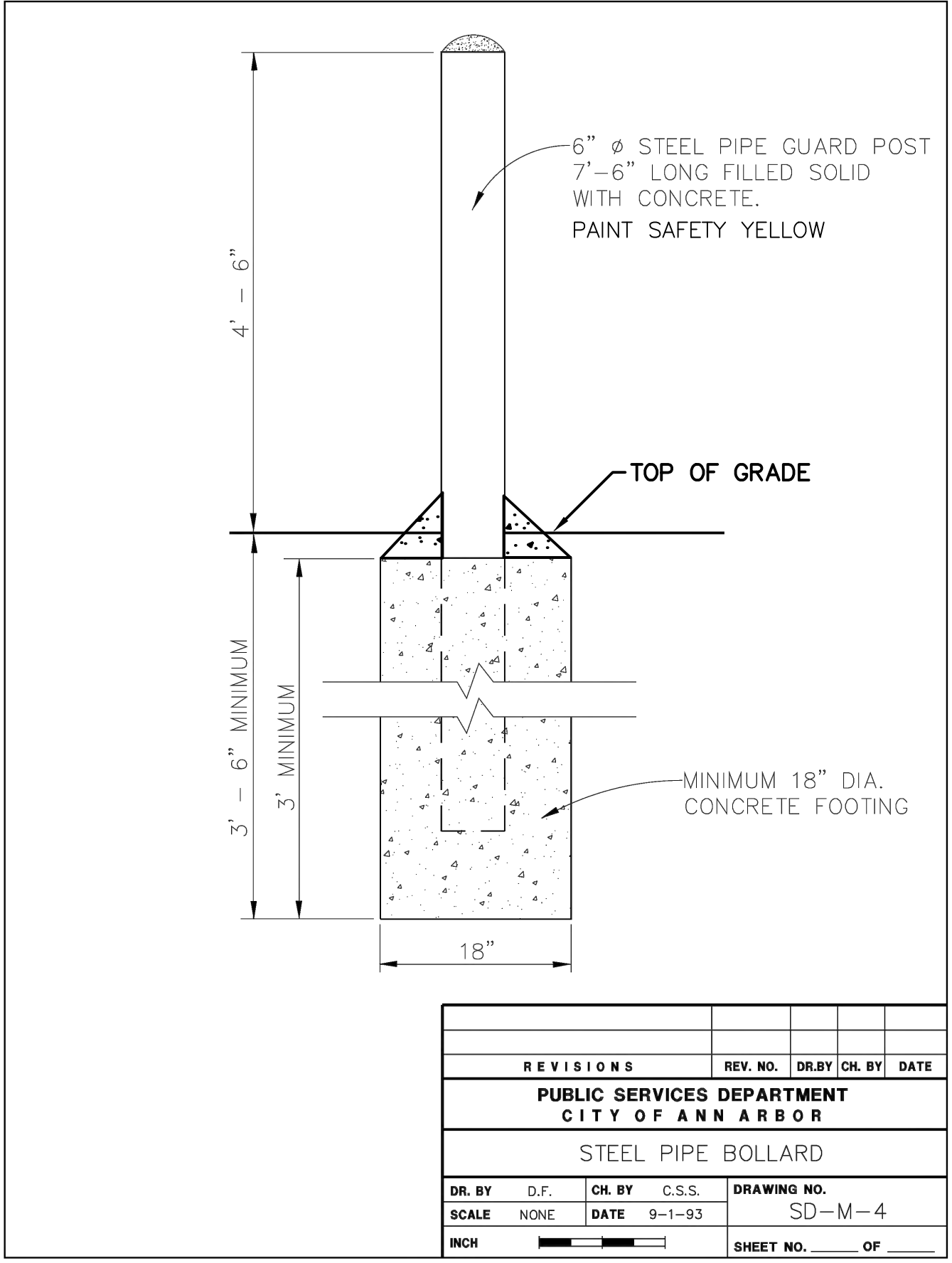
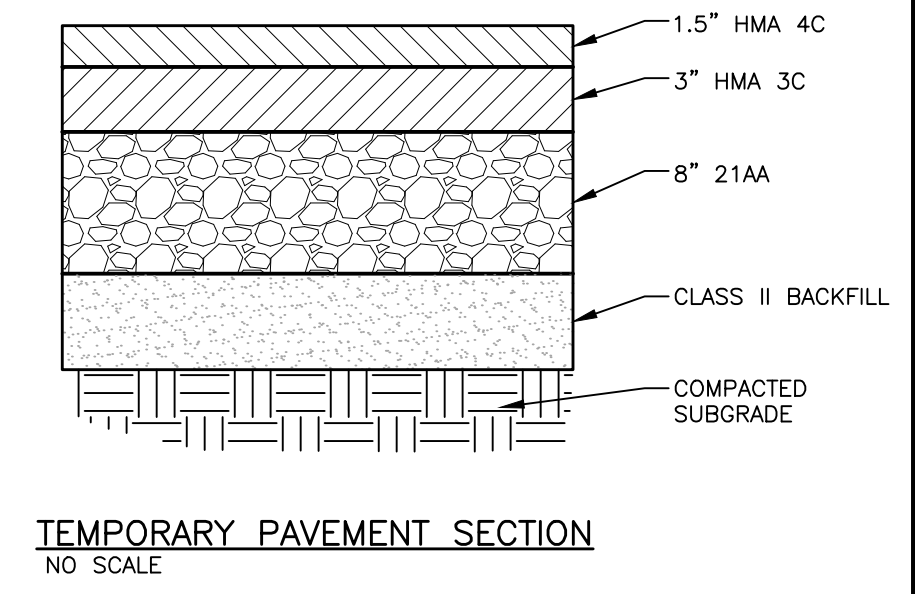
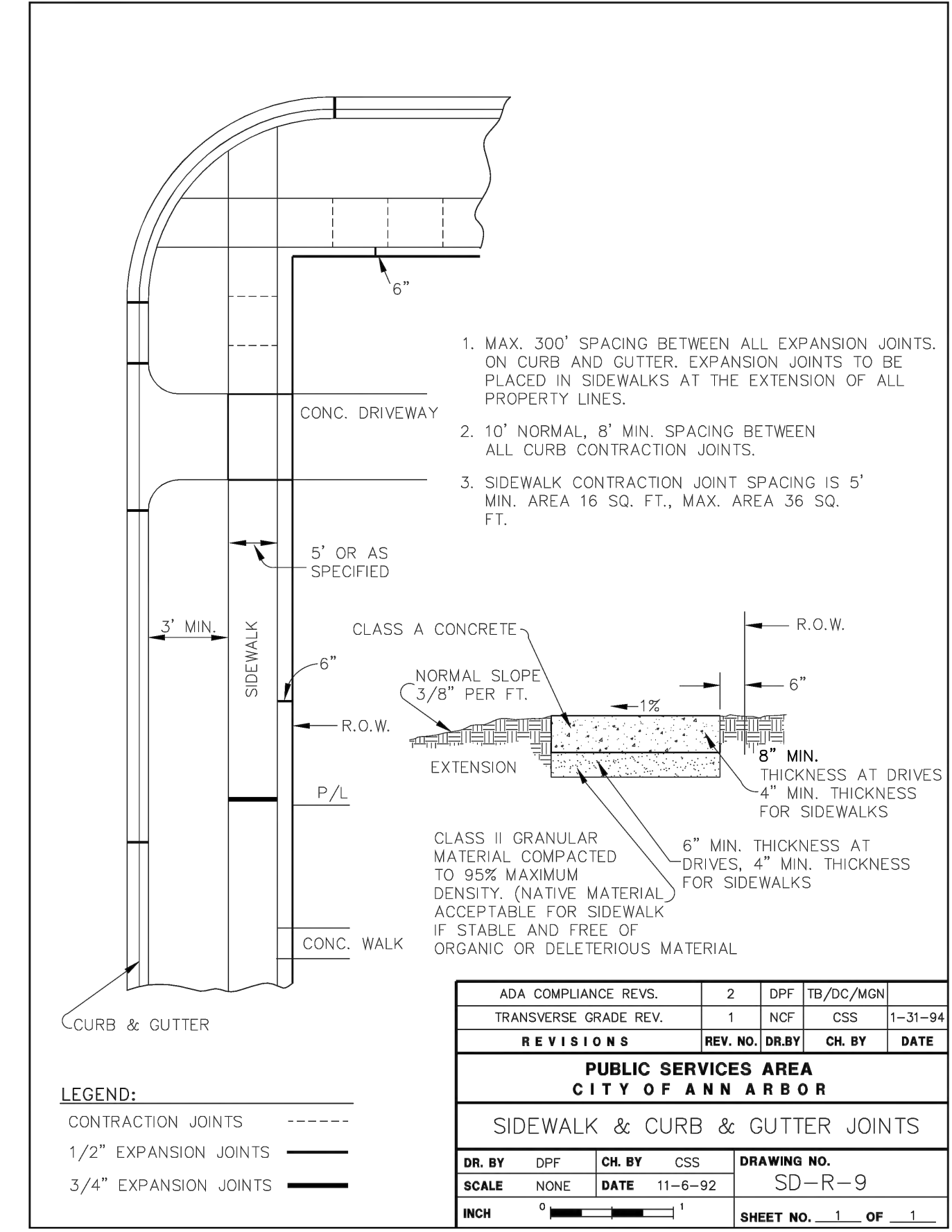
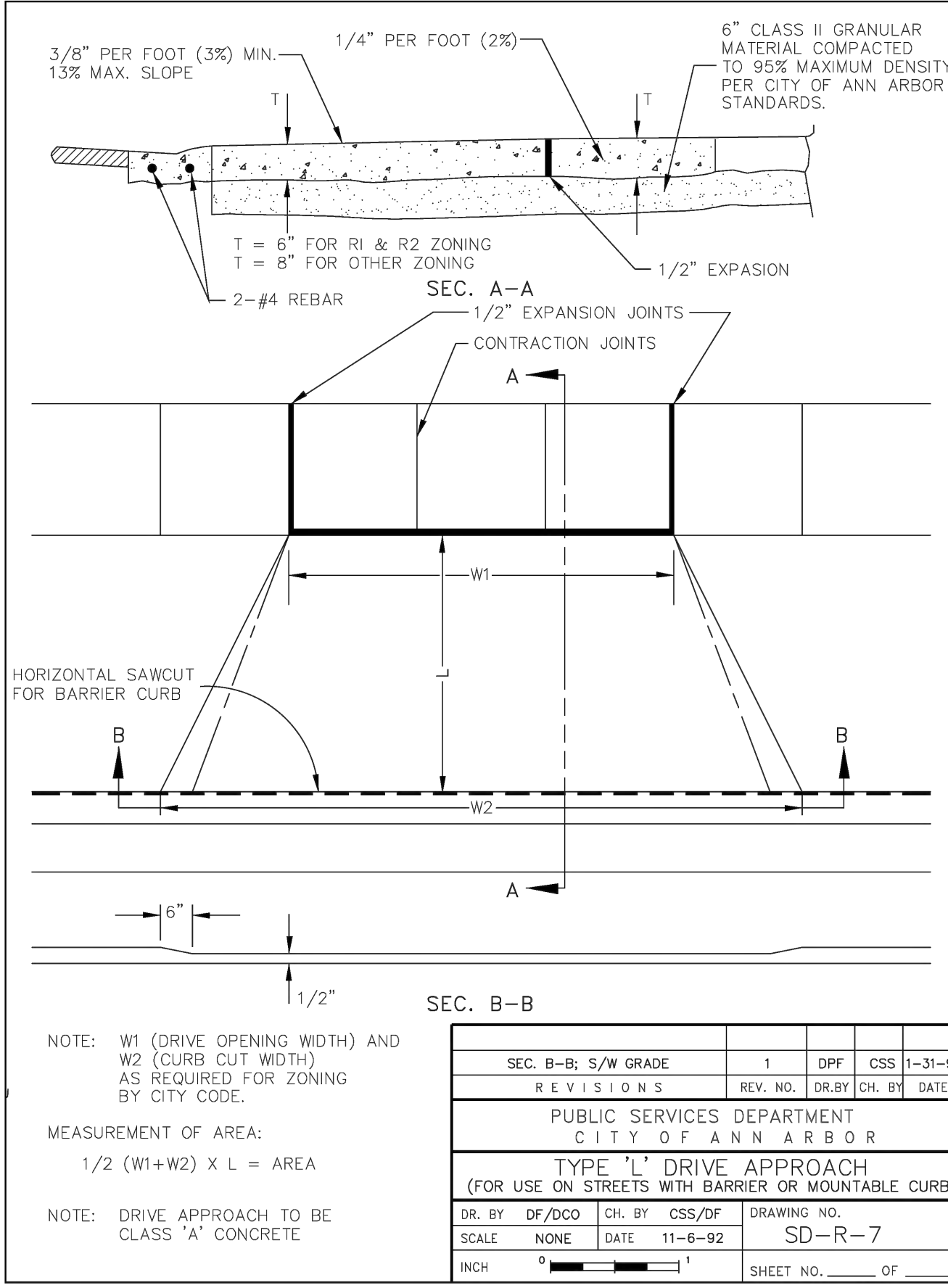
SHEET NO.

C501

PLOT INFO: 2/20/24 2:17:00 CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/C502_241760.DWG LAYOUT: C502 DATE: 3/4/2025 TIME: 8:34:39 AM USER: JREYES



SECURITY CHAIN LINK FENCE
 NO SCALE



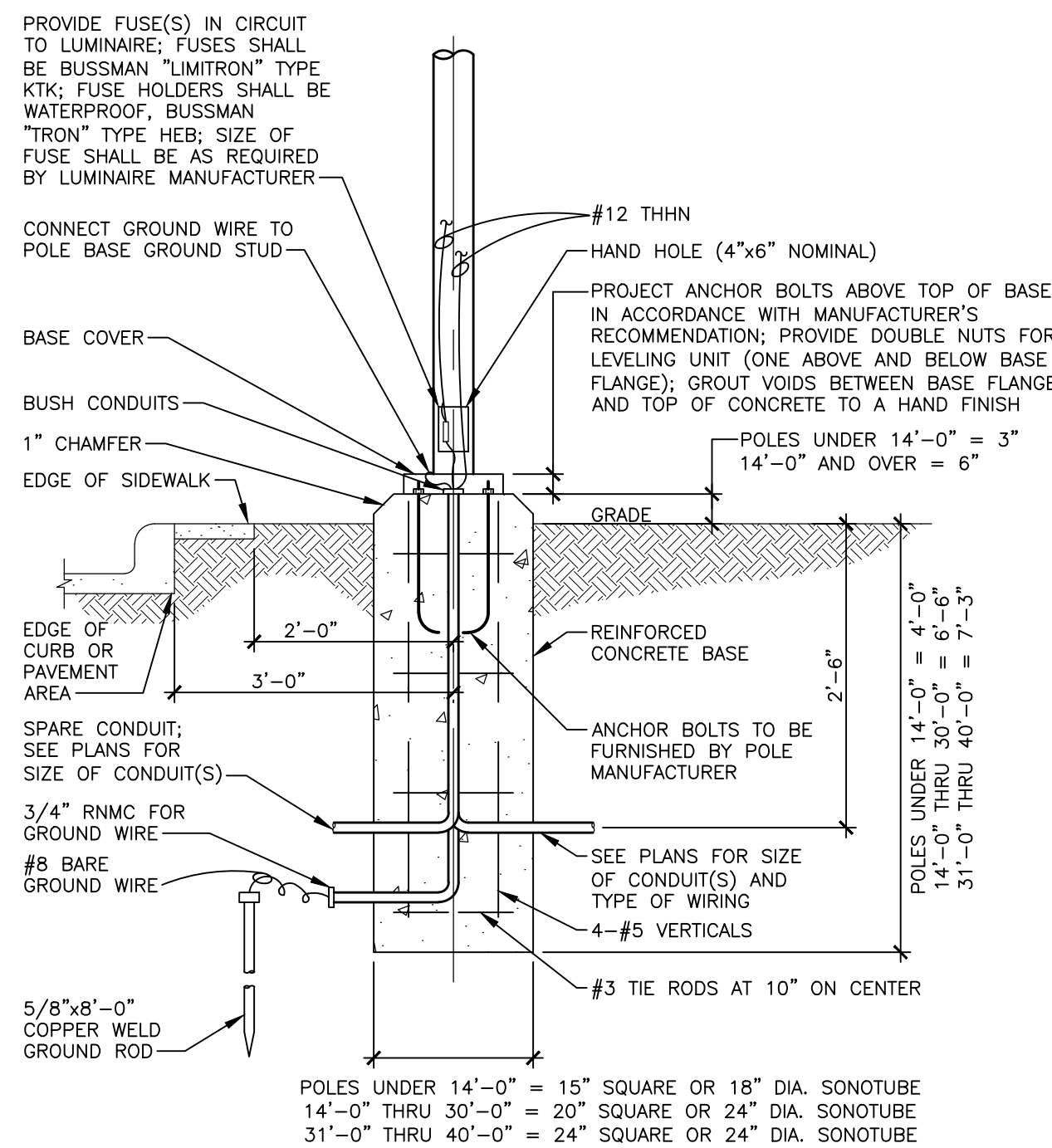
REVISIONS

3/4/2025 BIDS & CONSTRUCTION
 Drawn By jreyes
 Designer jsiwiek
 Reviewer krostowski
 Manager jsiwiek

PROJECT NO.
 241760
 SHEET NO.

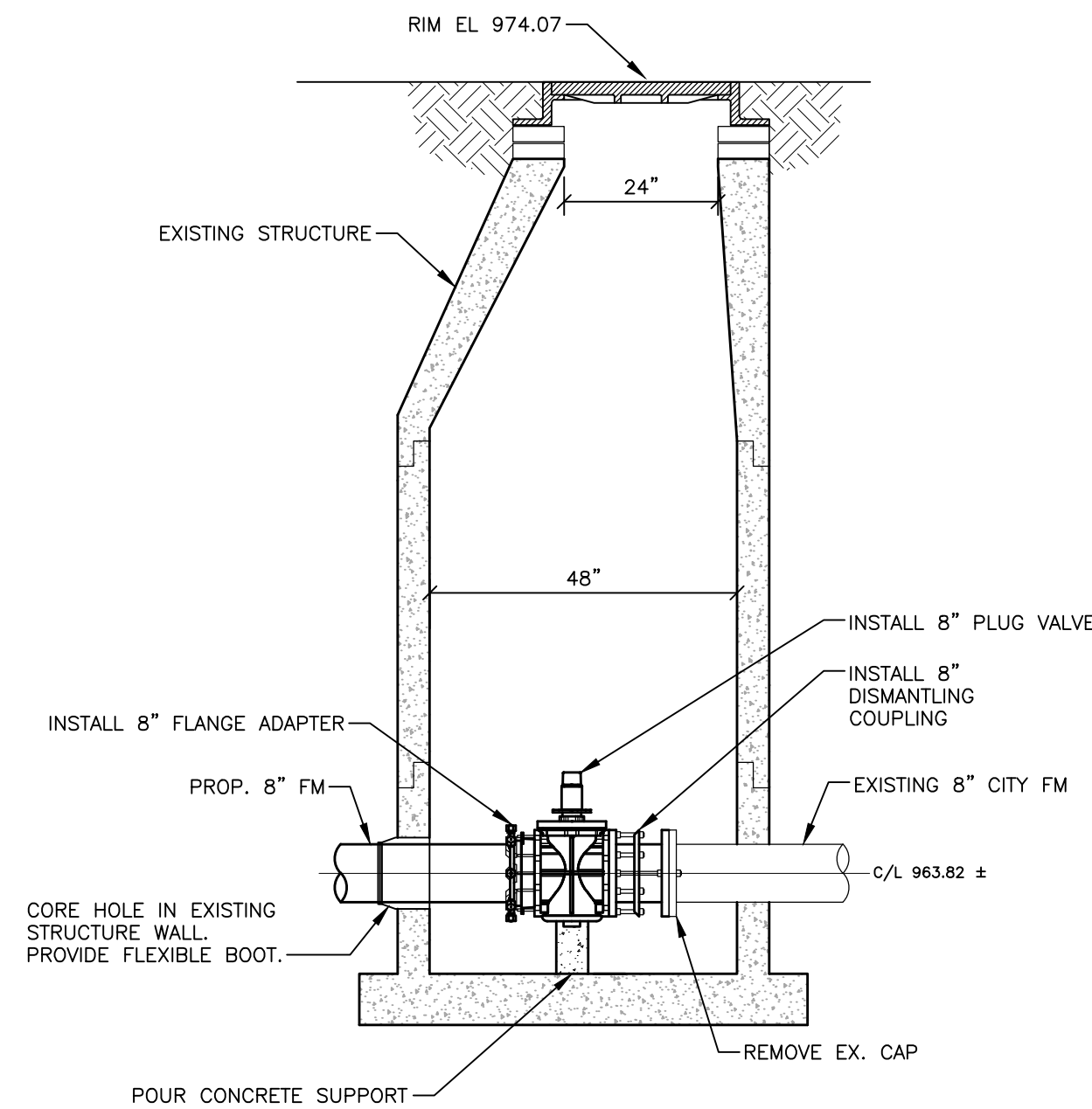
C502

PLOT INFO: 2:2024041760/CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/C503_241760.DWG LAYOUT: C503 DATE: 3/4/2025 TIME: 8:35:21 AM USER: JREYES

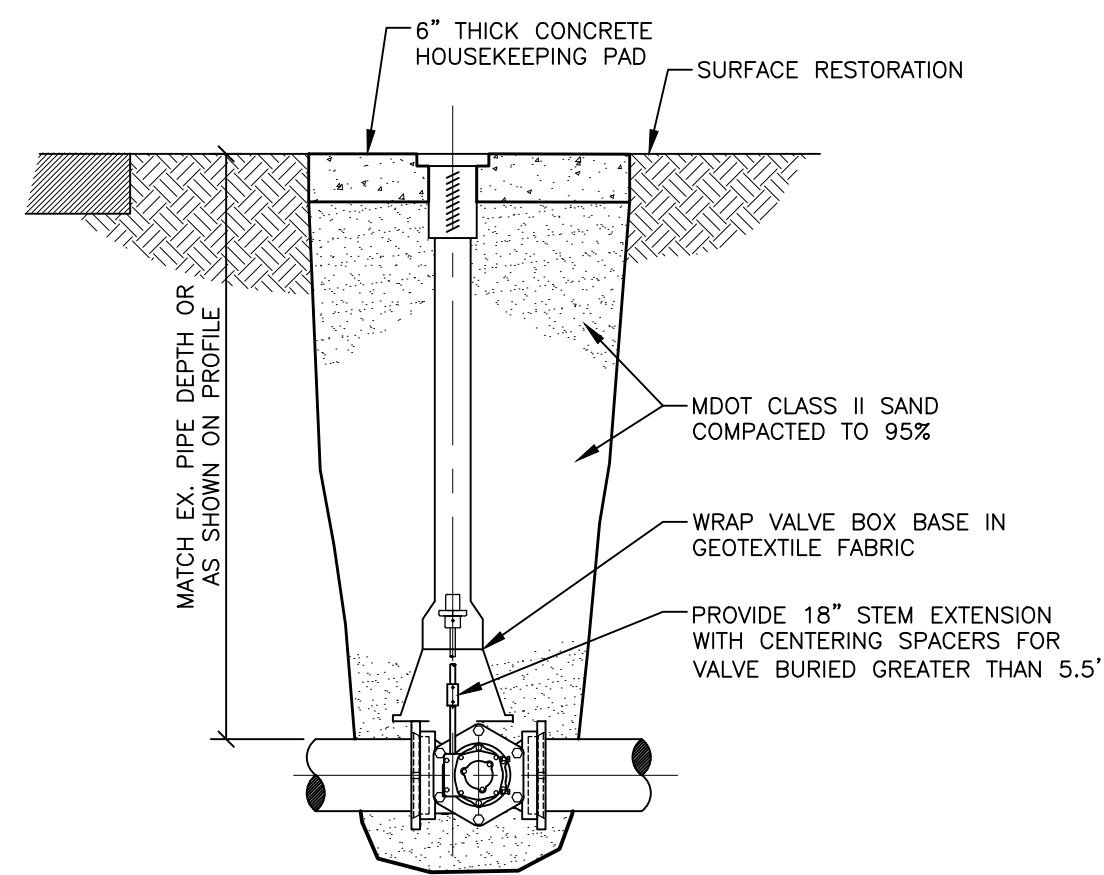


- NOTES:
- EXISTING POLE, LUMINAIRE, AND BASE TO BE DEMOLISHED AS INDICATED ON C102. DISCONNECT AND MAINTAIN EXISTING CONDUIT AND CONDUCTORS FOR RECONNECTION TO NEW LUMINAIRE IN NEW LOCATION. EXTEND CONDUIT AND CONDUCTORS AS REQUIRED TO NEW LOCATION.
 - PROVIDE NEW POLE OF HEIGHT, DIAMETER, AND COLOR TO MATCH EXISTING POLES TO REMAIN. PROVIDE LITHONIA RSS POLE, WITH ALL ACCESSORIES REQUIRED FOR POLE BASE INSTALLATION AND FIXTURE MOUNTING.
 - PROVIDE NEW LITHONIA POLE MOUNTED AREA LIGHTING FIXTURE. LITHONIA D SERIES SIZE 0. FIXTURE COLOR TO MATCH POLE. FIELD VERIFY VOLTAGE REQUIRED BEFORE ORDERING. FIELD VERIFY COLOR TEMPERATURE OF EXISTING FIXTURES TO REMAIN AND MATCH FOR NEW FIXTURE. MODEL DSX0-LED-P1-(COT TO MATCH EXISTING)-70CRI-14M-MVOLT-RPA. VERIFY WITH OWNER IF ANY PHOTOCONTROL OR OTHER ACCESSORIES ARE REQUIRED BEFORE ORDERING.

OUTDOOR LIGHTING STANDARD CONCRETE BASE DETAIL
NO SCALE

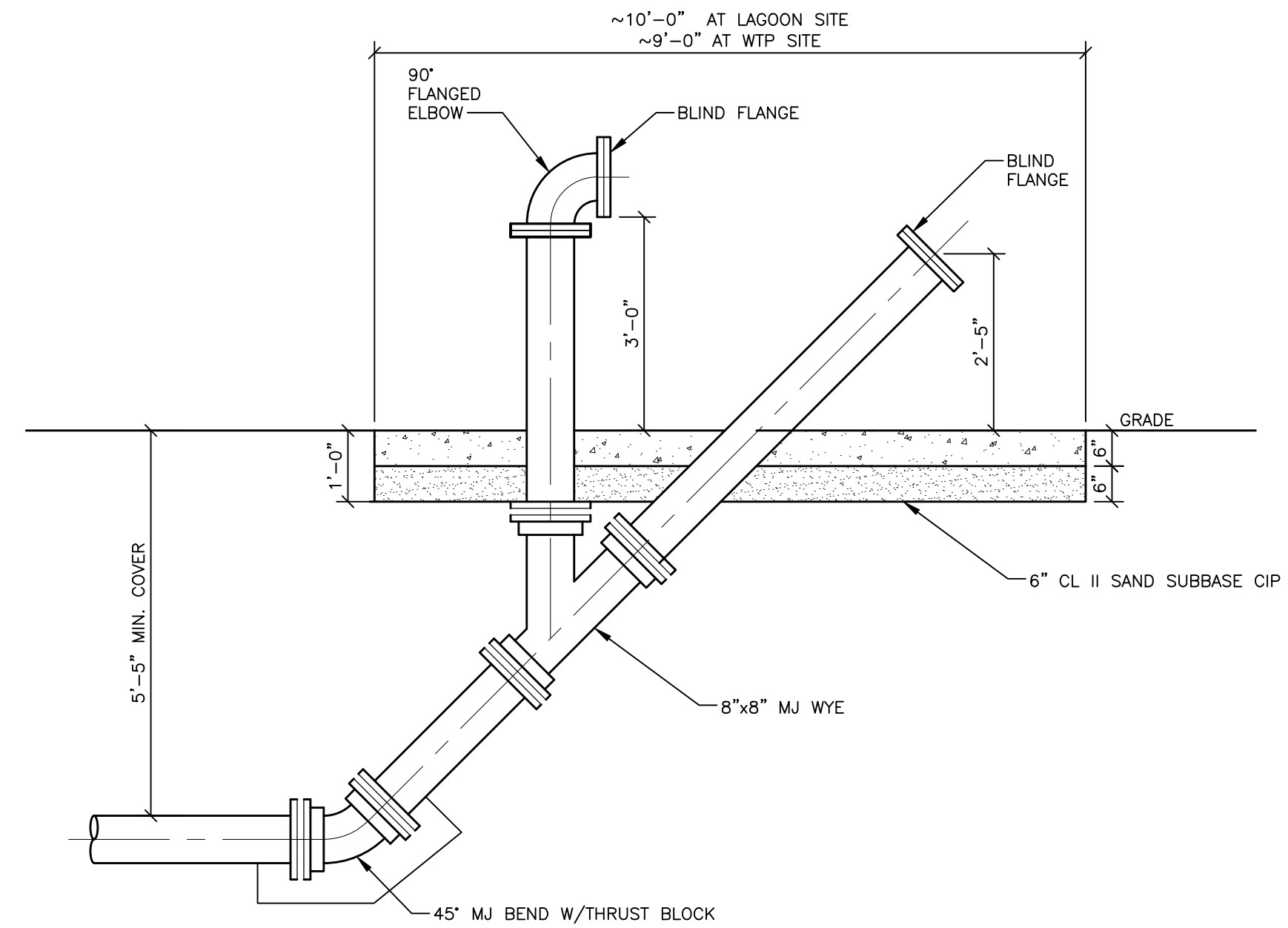


MANHOLE MODIFICATIONS - WTP SITE
NO SCALE



NOTE: VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE. PLACE CONCRETE BLOCKS AROUND VALVE TO SUPPORT BOX.

PLUG VALVE AND BOX
NO SCALE



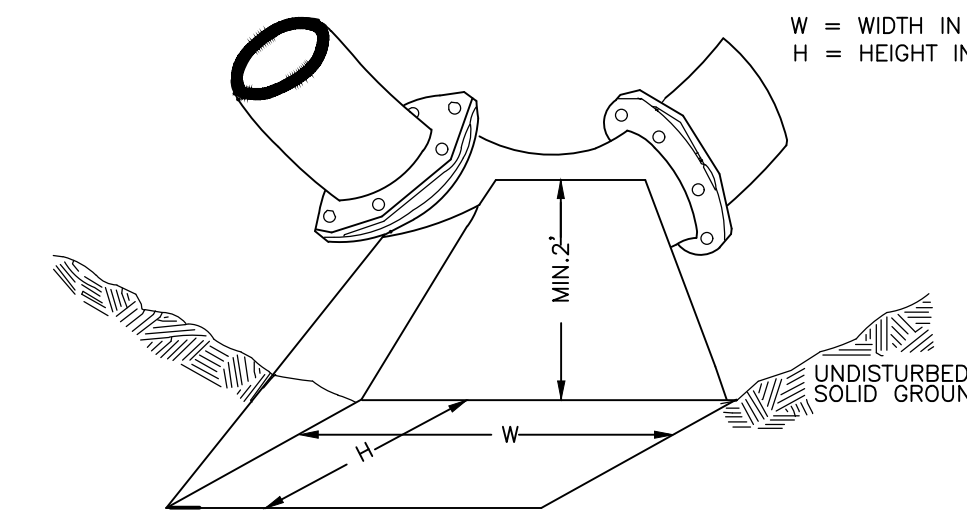
SWAB LAUNCH AND PIPE CONNECTION DETAIL
NO SCALE

MINIMUM STANDARDS

REACTION BACKING: The Class "A" concrete at the Fitting face shall extend to within (2) inches of the bell and shall extend from the fitting face a minimum of (2) feet to the UNDISTURBED SOLID GROUND. The dimensions of the reaction backing (thrust block) at the face of the undisturbed solid ground shall be as shown in the Table below. If there isn't sufficient space for the installation of the "thrust block" without interference with other services, another arrangement satisfactory to the engineer shall be used, i.e. encasement.

Fittings I.D. Inches	Plug Tee Cross	Bends						Hydrant	
		90°		45°		22 1/2°		11 1/4°	
	W	H	W	H	W	H	W	H	
2.5	1	1	1	1	1	1			
4	1	1	1	1	1	1			
6	2	1.5	2	2	2	1	1	1	
8	2.5	2	3.5	2	2	2	1	1	
12	3.5	3	5.5	3	3.5	2.5	2	2	
16	6	3.5	6	4	5	3	3.5	2.5	
20	8	4	12	4	6	4	4	3	
24	11	4	17	4	9	4	6	4	
30	11	4	17	4	9	4	6	4	

W = WIDTH IN FEET
H = HEIGHT IN FEET



NOTE: THESE ARE MINIMUM STANDARDS. WHERE SOIL CONDITIONS DICTATE, ADJUSTMENTS IN SIZE SHALL BE MADE BY THE PUBLIC SERVICES DIRECTOR.

THRUST BLOCK
NO SCALE

REVISIONS

3/4/2025 BIDS & CONSTRUCTION

Drawn By jreyes
Designer jsiwk
Reviewer krostowski
Manager jsiwk

Hard copy is intended to be 22"x34" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO.
241760

SHEET NO.

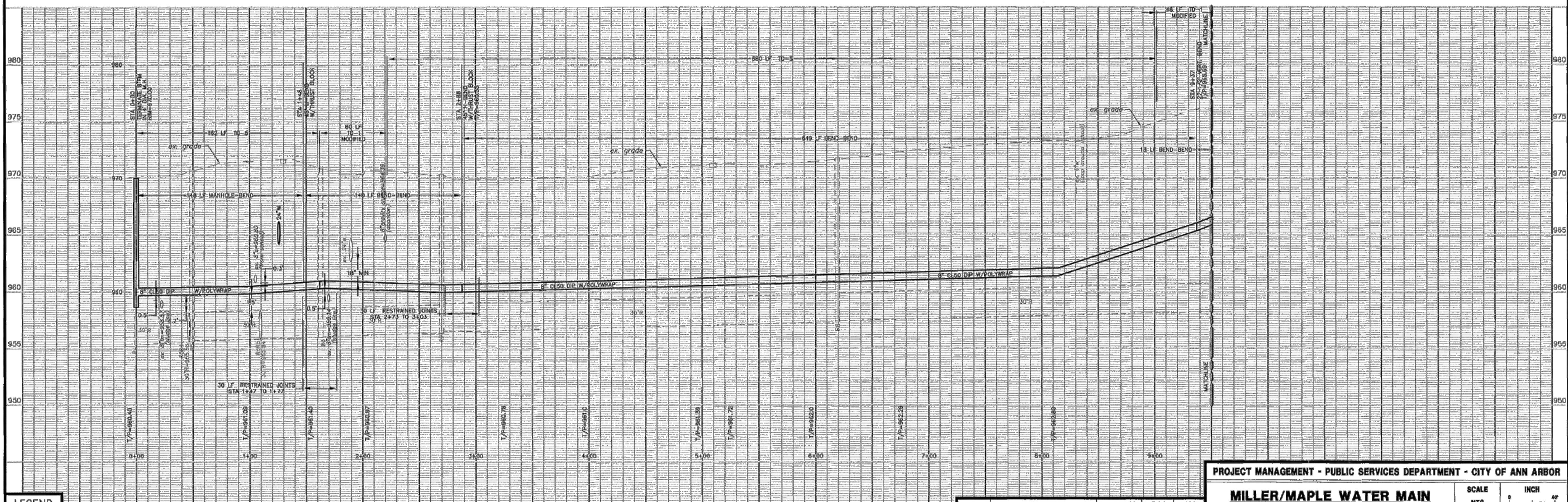
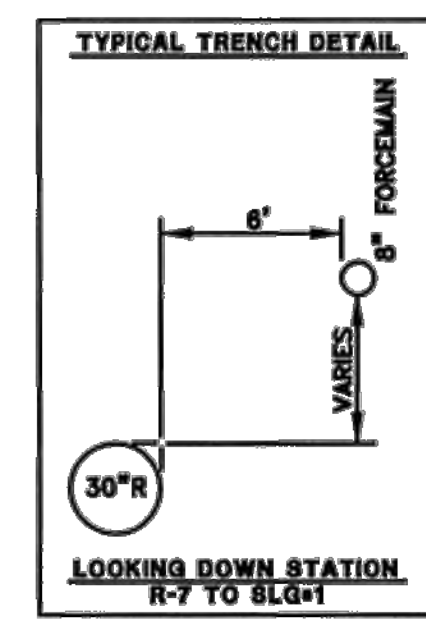
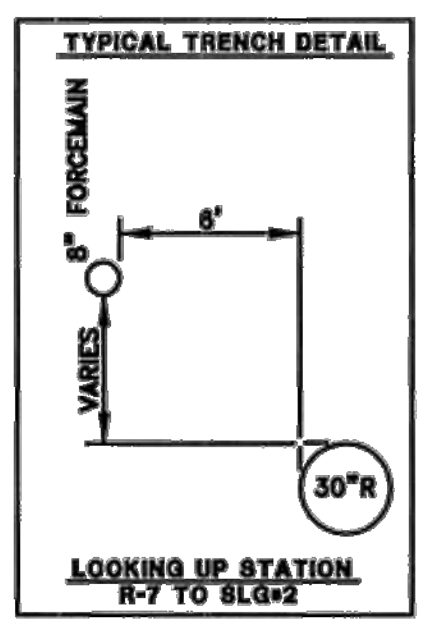
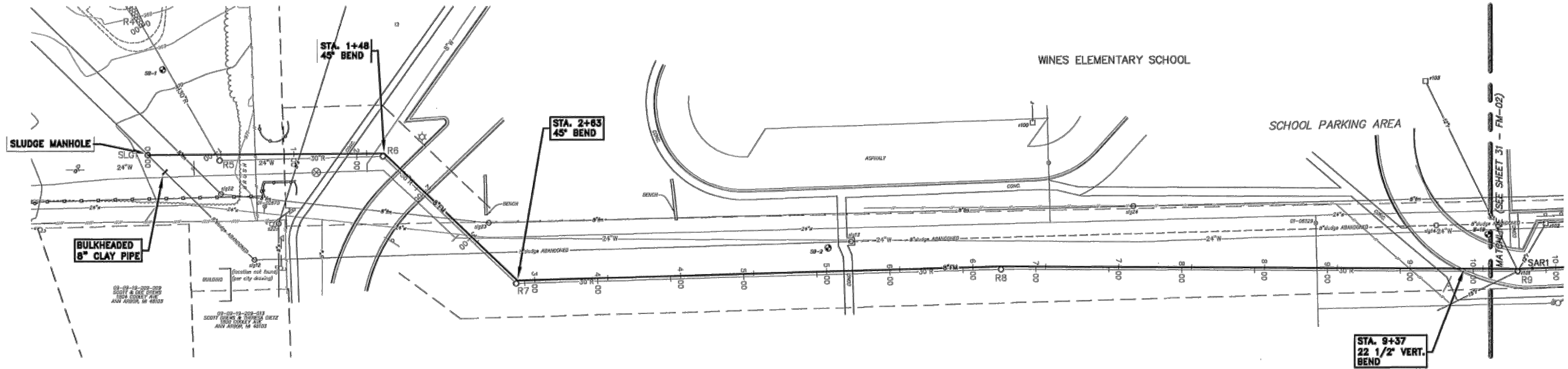
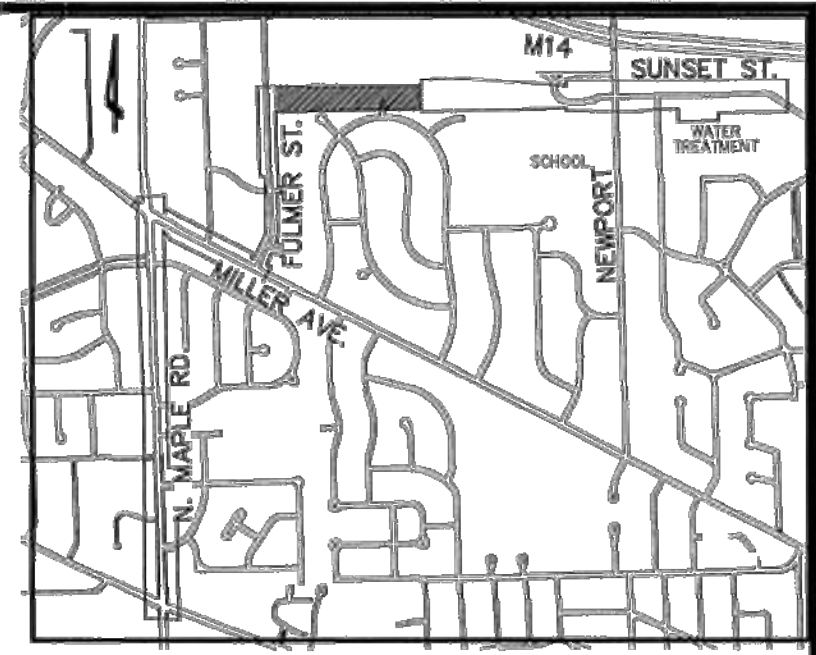
C503

PLOT INFO: 2/20/2024 1:16:00 CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/ST1_241760.DWG LAYOUT-R1 DATE: 3/4/2025 TIME: 8:30:32 AM USER: JREYES

AS-BUILT WATER DRAWING
 CONST. COMP. DATE 11-2008
 MDEQ PERMIT No. W073126
 IN SERVICE DATE (MO/YR) 12/08
 CONTRACTOR E.T. MACKENZIE

NOTE:
 Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

DIGITAL STATUS
 SCANNED ON 1/10
 BY ALC



LEGEND

EXISTING FENCE	--- --- ---	EXISTING SANITARY SEWER & MANHOLE	--- --- ---	EXISTING TELEPHONE	--- --- ---	EXISTING RD. & GRADE	--- --- ---	NEW SANITARY SEWER & MANHOLE	--- --- ---	NEW CURB & GUTTER	--- --- ---
CONTOUR	--- --- ---	UTILITY POLE & GUY	--- --- ---	GAS LINE	--- --- ---	LEFT EDGE/RD. GRADE	--- --- ---	STORM SEWER & CAT. BAS.	--- --- ---	LANDMARK TREE & LABEL	--- --- ---
STORM SEWER & CAT. BAS.	--- --- ---	FIRE HYDRANT ASSEMBLY	--- --- ---	CABLE T.V.	--- --- ---	RIGHT EDGE/RD. GRADE	--- --- ---	WATER MAIN W/F.H. ASSEM.	--- --- ---	(GOLDER LINE THEN OTHERS)	---
WATER MAIN & VALVE-IN-WELL	--- --- ---	LIGHT POLE	--- --- ---	ELECTRIC	--- --- ---	CURB & GUTTER	---	CONTOUR	---		
WATER MAIN & VALVE-IN-BOX	--- --- ---	END SECTION	---					ROAD & GRADE	---		

SEE ABOVE	BOOK	3	AS-BUILT	7-30-09	DPF	JTZ
BENCH MARK	SURVEY BOOK	1	CITY OF ANN ARBOR	06-24-08	JFR	SRG
REV. NO.	DESCRIPTION	1	CITY OF ANN ARBOR	12-16-07	JFR	SRG
			ORIGINAL ISSUE	11-30-07	RKY	SRG

PROJECT MANAGEMENT - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

MILLER/MAPLE WATER MAIN

FORCEMAIN PLAN & PROFILE

OFF-ROAD

STA 00+00 TO 9+00

SCALE: 1" = 40'

DRAWING NO. **2004041-W13**

FILE NO. 2004-041

SHEET NO. **31** OF **41**

CONSULTANT: WASHTENAW ENGINEERING COMPANY

City of Ann Arbor
 Ann Arbor, Michigan
 WTP Lime Residual Removal
 Contract 1 - Site Modifications

REVISIONS

3/4/2025	BIDS & CONSTRUCTION
Drawn By	jreyes
Designer	jsiwk
Reviewer	krostowski
Manager	jsiwk

Hard copy is intended to be 22"x34" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

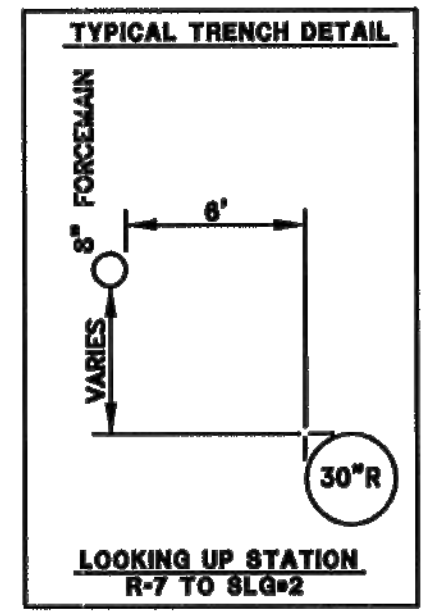
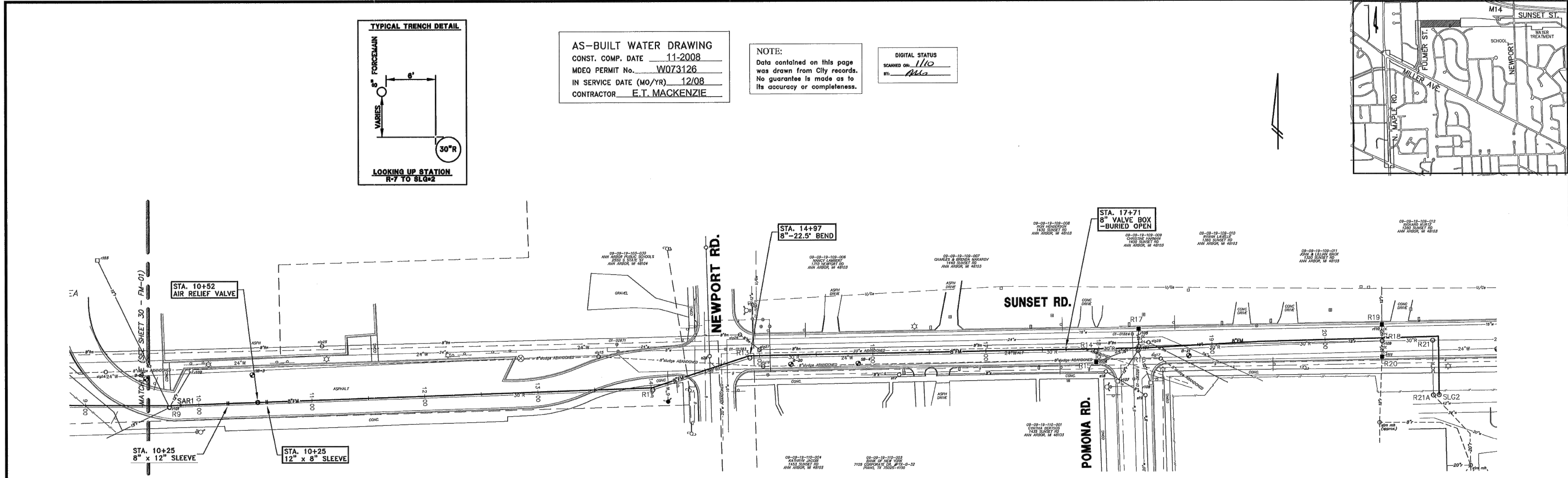
PROJECT NO. **241760**

SHEET NO.

R1



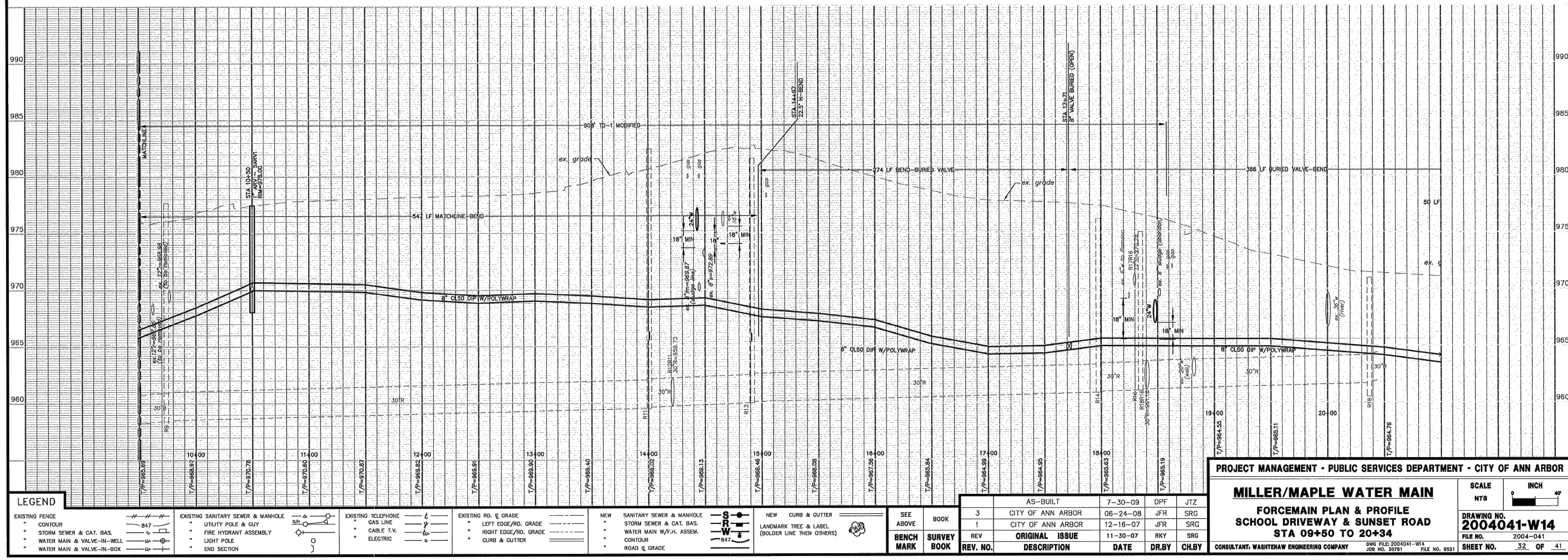
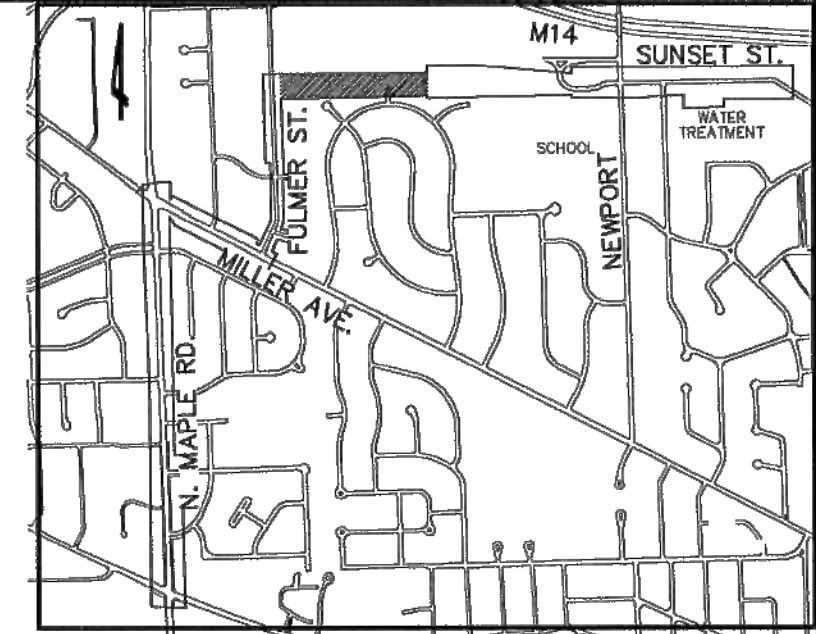
PLOT INFO: 2/20/2024 17:00 CAD/CDD/CONTRACT 1 - SITE MODIFICATIONS/R2_241760.DWG LAYOUT: R2 DATE: 3/4/2025 TIME: 8:31:36 AM USER: JREYES



AS-BUILT WATER DRAWING
 CONST. COMP. DATE 11-2008
 MDEQ PERMIT No. W073126
 IN SERVICE DATE (MO/YR) 12/08
 CONTRACTOR E.T. MACKENZIE

NOTE:
 Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

DIGITAL STATUS
 SCANNED ON: 1/10
 BY: [Signature]



LEGEND EXISTING FENCE CONTOUR STORM SEWER & CAT. BAS. WATER MAIN & VALVE-IN-WELL WATER MAIN & VALVE-IN-BOX		EXISTING SANITARY SEWER & MANHOLE UTILITY POLE & GUY FIRE HYDRANT ASSEMBLY LIGHT POLE END SECTION		EXISTING TELEPHONE GAS LINE CABLE T.V. ELECTRIC		EXISTING RD. & GRADE LEFT EDGE/RD. GRADE RIGHT EDGE/RD. GRADE CURB & GUTTER		NEW SANITARY SEWER & MANHOLE STORM SEWER & CAT. BAS. WATER MAIN W/F.H. ASSEM. CONTOUR ROAD & GRADE		NEW CURB & GUTTER LANDMARK TREE & LABEL (BOLDER LINE THEN OTHERS)		SEE ABOVE BOOK BENCH MARK SURVEY BOOK		<table border="1"> <tr> <th>REV. NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DR. BY</th> <th>CH. BY</th> </tr> <tr> <td>3</td> <td>AS-BUILT</td> <td>7-30-09</td> <td>DPF</td> <td>JTZ</td> </tr> <tr> <td>1</td> <td>CITY OF ANN ARBOR</td> <td>06-24-08</td> <td>JFR</td> <td>SRG</td> </tr> <tr> <td>1</td> <td>CITY OF ANN ARBOR</td> <td>12-16-07</td> <td>JFR</td> <td>SRG</td> </tr> <tr> <td>REV.</td> <td>ORIGINAL ISSUE</td> <td>11-30-07</td> <td>RKY</td> <td>SRG</td> </tr> </table>		REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	3	AS-BUILT	7-30-09	DPF	JTZ	1	CITY OF ANN ARBOR	06-24-08	JFR	SRG	1	CITY OF ANN ARBOR	12-16-07	JFR	SRG	REV.	ORIGINAL ISSUE	11-30-07	RKY	SRG	PROJECT MANAGEMENT - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR MILLER/MAPLE WATER MAIN FORCEMAIN PLAN & PROFILE SCHOOL DRIVEWAY & SUNSET ROAD STA 09+50 TO 20+34 CONSULTANT: WASHTENAW ENGINEERING COMPANY DWS FILE: 2004041-W4 JOB NO. 30791 FILE NO. 9521		SCALE NTS 0 INCH 1" = 40' DRAWING NO. 2004041-W14 FILE NO. 2004-041 SHEET NO. 32 OF 41	
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY																																								
3	AS-BUILT	7-30-09	DPF	JTZ																																								
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REV.	ORIGINAL ISSUE	11-30-07	RKY	SRG																																								

City of Ann Arbor
 Ann Arbor, Michigan
WTP Lime Residual Removal
 Contract 1 - Site Modifications

REVISIONS

3/4/2025	BIDS & CONSTRUCTION
----------	---------------------

Drawn By jreyes
 Designer jsiwek
 Reviewer krostowski
 Manager jsiwek

PROJECT NO.
241760
 SHEET NO.

R2
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