



CITY OF ANN ARBOR ENGINEERING

S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

NOTES

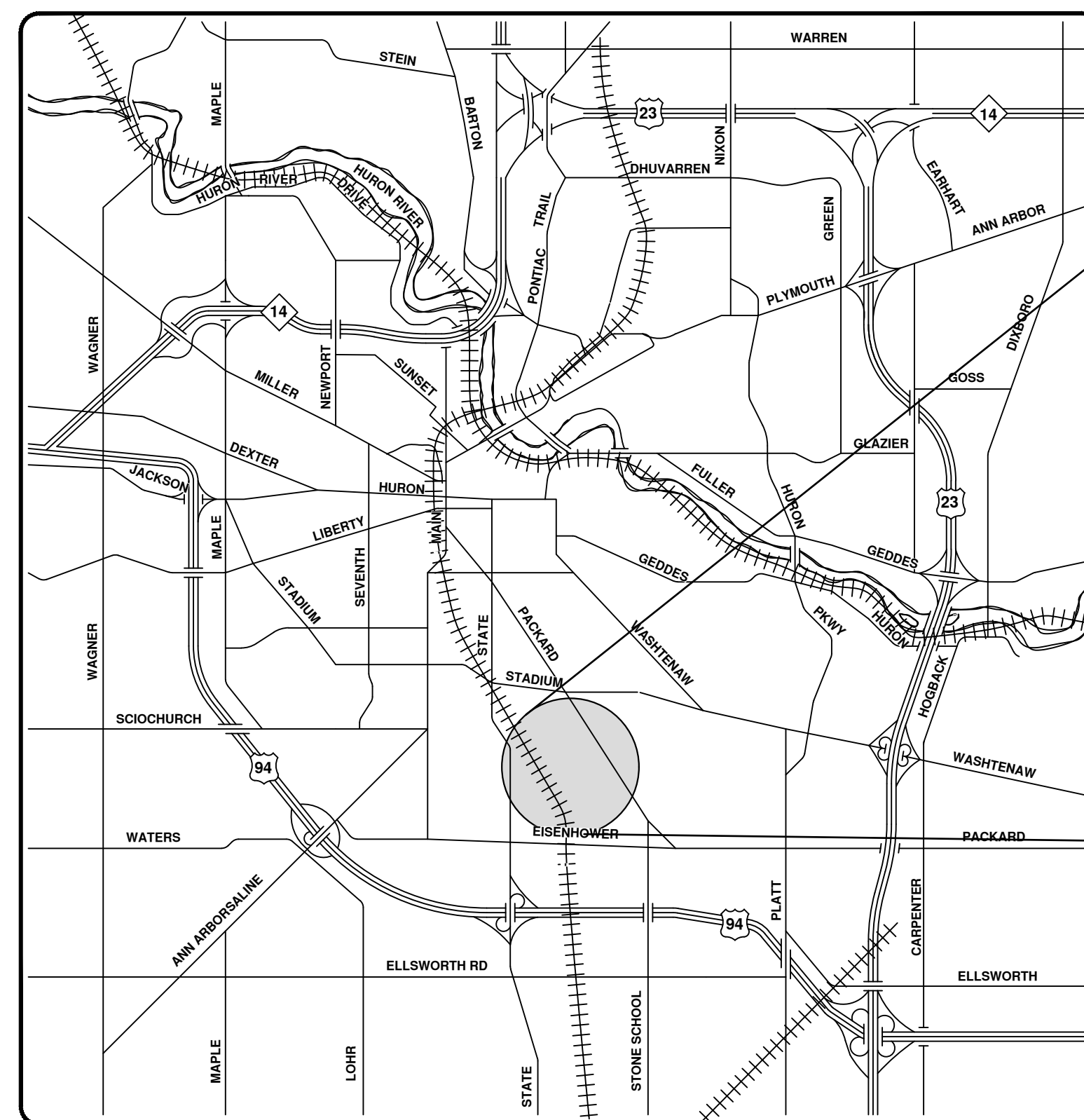
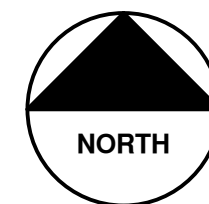
FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY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

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

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

BID No. 4655, FILE No. 2020024

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VICINITY MAP

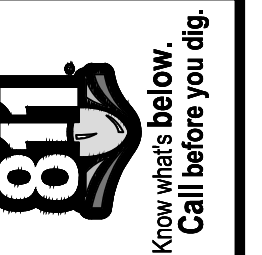


PREPARED UNDER THE SUPERVISION OF

T.C.B.
THERESA BRIDGES, P.E. - MI LICENSE No. 6201052180
PROJECT MANAGER



1 / 2021
DATE



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
PROJECT DESCRIPTION AND LIMITS

SCALE
DRAWING No.
2020024-1

SHEET No.
1 OF 34

GENERAL NOTES

UTILITIES

MISS DIG/UNDERGROUND UTILITY NOTIFICATION

For the protection of underground utilities and in conformance with Public Act 174 of 2013, the Contractor shall contact MISS DIG System, Inc. by phone at 811 or 800-482-7171 or via the web at either elocate.missdig.org, for single address, or rte.missdig.org a minimum of 3 business days prior to excavating, excluding weekends and holidays.

ROW / REAL ESTATE

PROPERTY ACCESS

Do not block driveways and entrances to buildings, real property, and the like except for short durations and only when approved by the Engineer. Maintain pedestrian access at all times. It is the Contractor's responsibility to coordinate all necessary driveway closures with property owner(s) and resident(s) in the construction area.

STOCK PILES AND STAGING AREAS

The engineer must approve of all location(s) for material stock piles and on-site staging areas.

LAWN SPRINKLER SYSTEMS AND LANDSCAPING

Owners of existing lawn sprinkler systems and/or landscaping shall be notified (in writing with a copy sent to the Engineer) by the Contractor two weeks in advance of any work to be done that will affect those systems and/or landscaping. If the property owner fails to relocate the lawn sprinkler system prior to the Contractor beginning work, and if the Contractor cuts the system during the construction, the Contractor shall cap the system pipe and witness the location of the cap with a wooden stake for the property owners use. The Contractor shall place the salvaged sprinkler heads on the property owners property. If the property owner fails to relocate the landscaping prior to the Contractor beginning work, the Contractor shall carefully salvage the landscaping items and stockpile them on the property owner's property for the property owner. Any other modification to the lawn sprinkler systems and/or landscaping is the responsibility of the owner and is not part of this contract. This work is included in other items of the project.

SURVEY

ADJUSTING MONUMENT BOXES

Preserve all government corners on this project, whether shown or not. It may be necessary to place or adjust monument boxes, as required.

STATIONING

Stationing on this project was taken from old plans and pavement stenciled stationing and is not necessarily accurate.

DETAILED GRADES

SIDEWALK AND SIDEWALK RAMP GRADES

Stake all sidewalk and sidewalk ramp grades according to Standard Plan R-28 series and as shown on the plans. Prior to constructing the sidewalk and sidewalk ramps, the Engineer will verify the grades and authorize the construction of the sidewalk and sidewalk ramps.

EARTHWORK

SOIL EROSION MEASURES

Place all appropriate soil erosion and sedimentation control measures prior to undertaking any earth-disturbing activities. Place turf establishment items as soon as possible on potential erodable slopes as directed by the Engineer. Protect critical ditch grades with either sod or seed/mulch or mulch blanket as directed by the Engineer.

BASES

AGGREGATE BASE

Use Dense-Graded Aggregate Class 21 AA or Open-Graded Aggregate Class 4 G for base materials unless otherwise specified Place base materials as directed by the Engineer.

SUBBASE

Place 4 inch (minimum) thickness of MDOT Granular Material, CI II compacted to 95% of its maximum dry density under concrete sidewalk and ramps as shown on the plans. include this work in the contract pay item " Subbase, CIP."

DRAINAGE

STORM SEWER

Some storm sewer may unavoidably become damaged during construction, or the Engineer may determine that existing storm sewer needs replacing. In either case the engineer may direct the sewer be removed and replaced. The Engineer will pay the cost of this work using applicable contract pay items or as new/extra work if the contract includes no such items.

Where pipes of different sizes or materials are joined, use Fernco flexible couplings with stainless steel shear rings. the contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.

Where storm sewer is to be removed and replaced or added, all pipe shall be installed using the utility trench details shown elsewhere in the plan sheets and/or detailed in the specifications. Trench Details I and V require the use of MDOT Class II Granular Material.

DRAINAGE (continued)

UNDERDRAIN

Cap existing underdrain(s) encountered during construction to prevent material from entering the pipe. The Engineer will pay the cost of this work using applicable contract pay items or as new/extra work if the contract includes no such items.

In areas where under drain cannot be installed in accordance with the details, the under drain shall be installed at the depth as indicated on the plans, or as directed by the Engineer. In no case shall the under drain be installed at a grade less than 0.50% or at a depth less than 3.25' below the top of pavement.

ILLICIT CONNECTIONS TO STORM WATER SYSTEM

Connections to existing storm conveyance systems not shown on the plans must be reconnected with minimal interruption in service. Size, type and location by station and offset and any suspect illicit discharge observed shall be reported to the Engineer prior to reconnecting. Contractor shall proceed as directed by the Engineer.

PAVEMENT, SIDEWALKS AND RAMPS, AND DRIVEWAYS

REMOVAL AND QUANTITIES

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

Quantities are computed based upon limited survey information. These quantities are for bidding purposes only and will be adjusted by the Engineer based upon actual field measurements. Removals as shown on the plans will be at the discretion of the Engineer. If in his/her judgment, areas of pavement, sidewalk, sidewalk ramps, driveways, etc. may be left in place, or additional areas added to address conditions. Changes will be made in the quantities.

APPLICATION OF CURING COMPOUND

Apply uniform coat(s) of curing compound accordance with the standard specifications and special provisions regardless of the difficulty involved. The contractor shall take care to prevent overspray when applying curing compound. This may require the development of different methods to protect various situations, and each method used shall be completely effective. The engineer must approve all methods prior to use; however approval of a method does not guarantee success or acceptability. The cost for this work will not be paid for separately, but shall be included in applicable concrete pay items.

SOIL BORINGS AND/OR PAVEMENT CORES

The soil boring logs and/or pavement cores represent point information. No inference should be made that subsurface or pavement conditions are the same at other locations.

SIGNS

GENERAL

All signs shall be installed, removed and/or salvaged according to the current edition of "Michigan Manual on Uniform Traffic Control Devices" and the current edition of Michigan Department of Transportation (MDOT) "Standard Specifications for Construction."

All signs on the plans or in the log that do not have a recommendation are to be retained.

EXISTING SIGN RELOCATION

The Contractor shall salvage and reset any permanent signs requiring relocation due to its operations at locations designated by the Engineer. Remove and store signs and posts requiring relocation in a manner which will prevent damage. Replace any/all signs and posts damaged during the removal and storage operations with new signs and posts. The cost of this work shall be borne by the Contractor.

SIGN INSTALLATION

When attaching signs to supports, tighten the nut, not the bolt head.

Place nylon washers between the steel washer and the sign face sheeting. The nylon washers are part of the attaching devices and hardware. Nylon washers shall have a 3/8 inch inner diameter, a 7/8 inch outer diameter and a 1/16 inch thickness.

The Contractor shall attach a date sticker to the back of all signs installed on the contract as directed by the Engineer. The City of Ann Arbor Sign Shop will provide the stickers.

UTILITIES

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

During non-working hours no more than ten (10) feet of trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the items of work being undertaken and will not be paid for separately.

The existing castings shall be returned to the city by stockpiling the castings onsite and loading castings on city vehicles. All Structures receiving new castings, either Type B, Type Q, or Type R as specified on the Standard Casting Schedule. The existing castings shall be neatly stacked on-site in a single location so that City of Ann Arbor forces can retrieve them at a later date. The Contractor shall assist City forces by loading them into City trucks. All costs associated with storing, stockpiling, and loading castings into City vehicles shall be included in the item of work " Mobilization, Max. ___ " and will not be paid for separately.

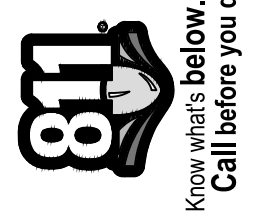
PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT	CITY OF ANN ARBOR ENGINEERING
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	

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER		DAN WOODEN (734) 794-6350 DCWOODEN@A2GOV.ORG
SANITARY		TRAVIS CONLEY (734) 794-6350 TCONLEY@A2GOV.ORG
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	PAT MAINO (734) 794-6350 PMAINO@A2GOV.ORG
FORESTRY		MATT WALDSMITH (734) 794-6350 MWALDSMITH@A2GOV.ORG
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTIK (734) 794-6361 CFOJTIK@A2GOV.ORG
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	SHAWN BURNSIDE (734) 996-5322 (313) 683-7349(MOBILE)
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

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DATE	DRAWN	CHECKED

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



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
PROJECT INFORMATION, NOTES AND MISCELLANEOUS QUANTITIES
SCALE : NTS
DRAWING No. 2020024-2
SHEET No. 2 OF 34

GENERAL

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

- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

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

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

- INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).

- CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- COMPLETE ALL FINE GRADING.
- TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- CLEAN OUT STORM SEWER SYSTEMS.
- REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

TEMPORARY SEEDING:

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

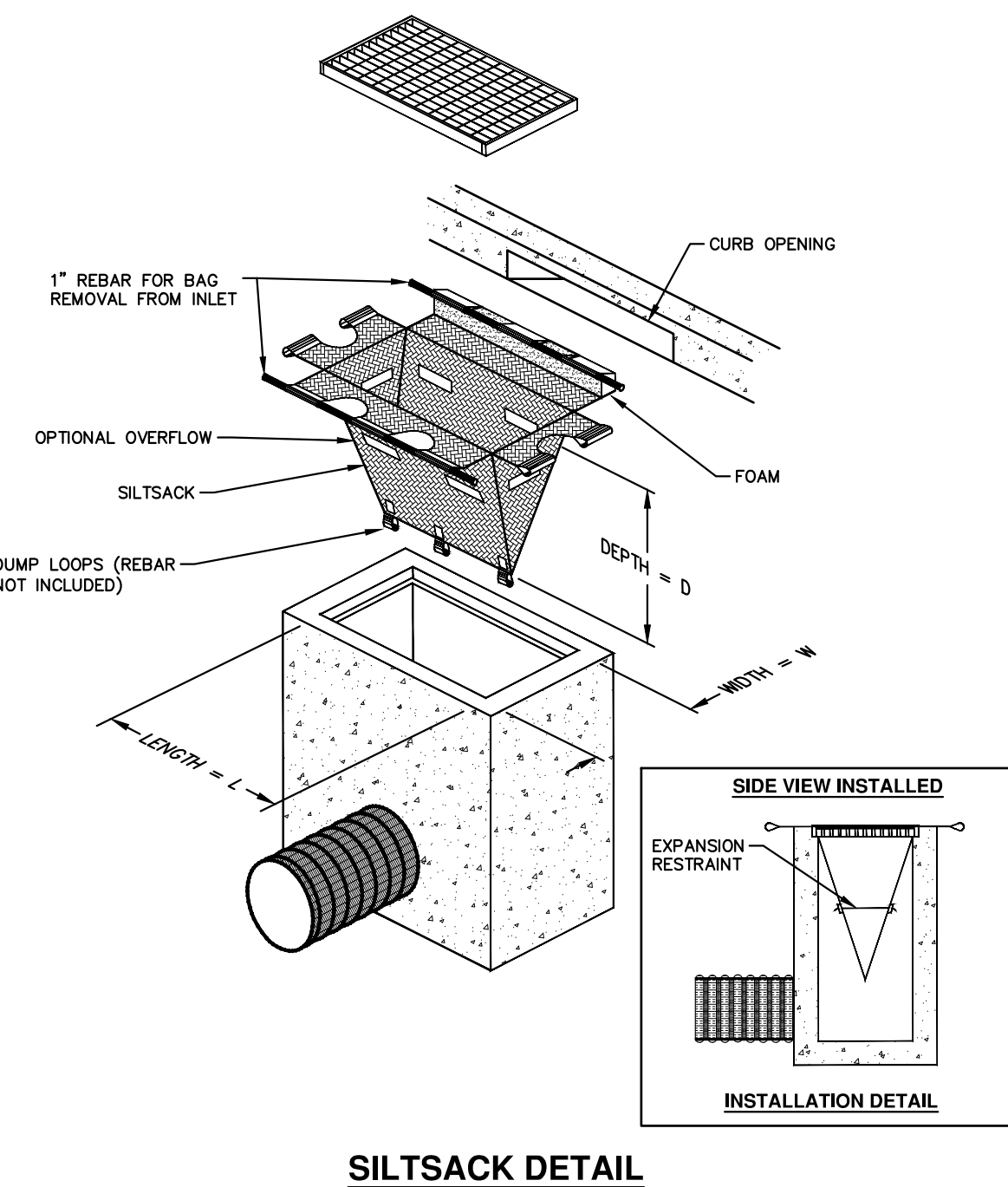
THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$xxx,xxx

ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:

- Sb - SEBEWA LOAM - IN DEPRESSION AREAS, BROAD LOW-LYING AREA, AND DRAINAGEWAYS OF OUTWASH PLAINS, VALLEY TRAINS, AND TERRACES. SLOPE IS 0% TO 2%.
- MdA - MATHERTON SANDY LOAM - IN DEPRESSION AREAS, BROAD LOW-LYING AREAS, AND ALONG DRAINAGEWAYS, OUTWASH PLAINS, VALLEY TRAINS, AND TERRACES. NEARLY LEVEL TO GENTLY SLOPING.

IMPERVIOUS PROJECT AREA
ROAD = 110,943 SFT (2.61 AC)
SIDEWALK/RAMPS = 6,381 SFT (0.15 AC)

TOTAL AREA OF PROPOSED DISTURBANCE = 3.06 AC



NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSF
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK

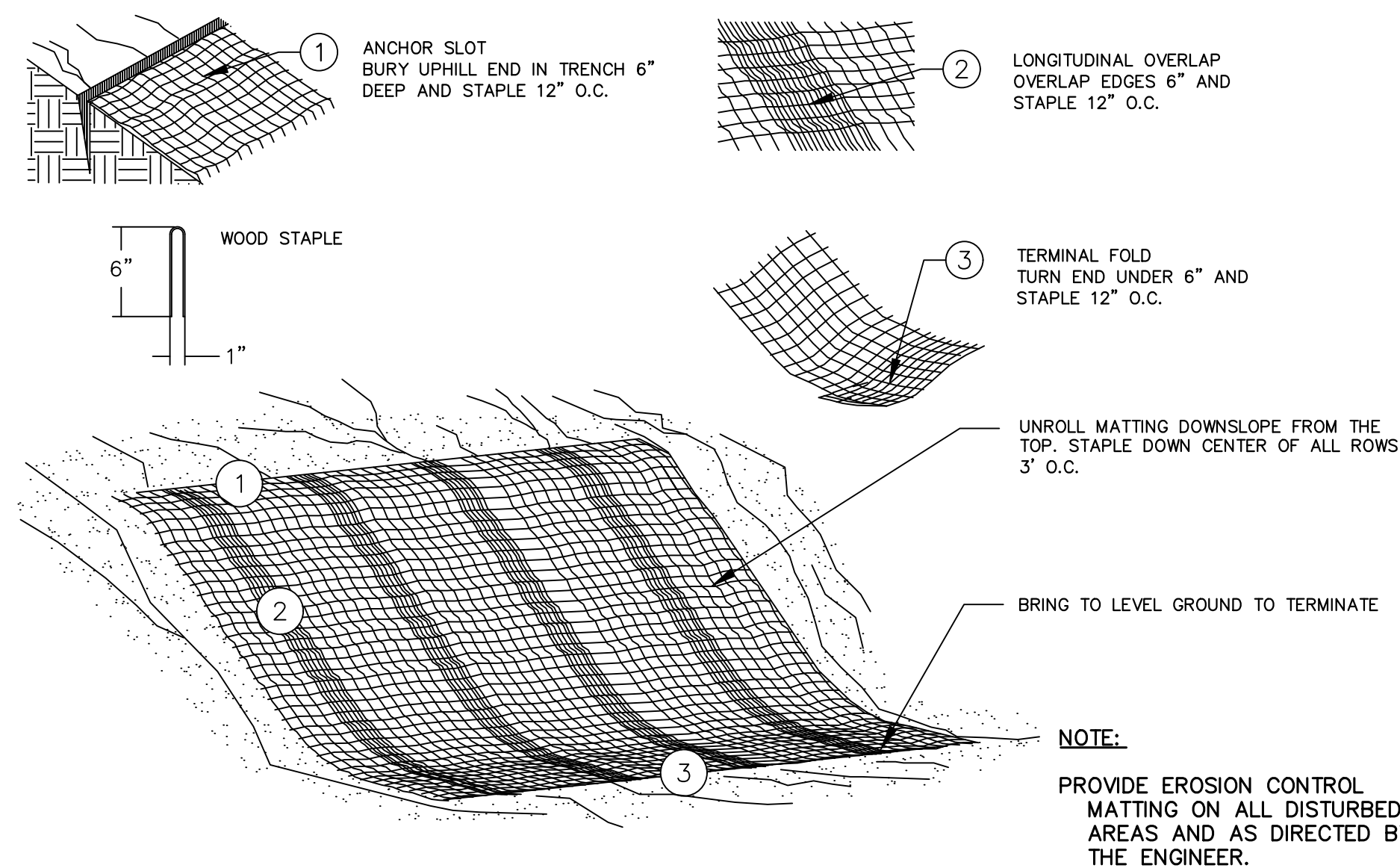
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSF
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

OIL-ABSORBANT SILTSACK

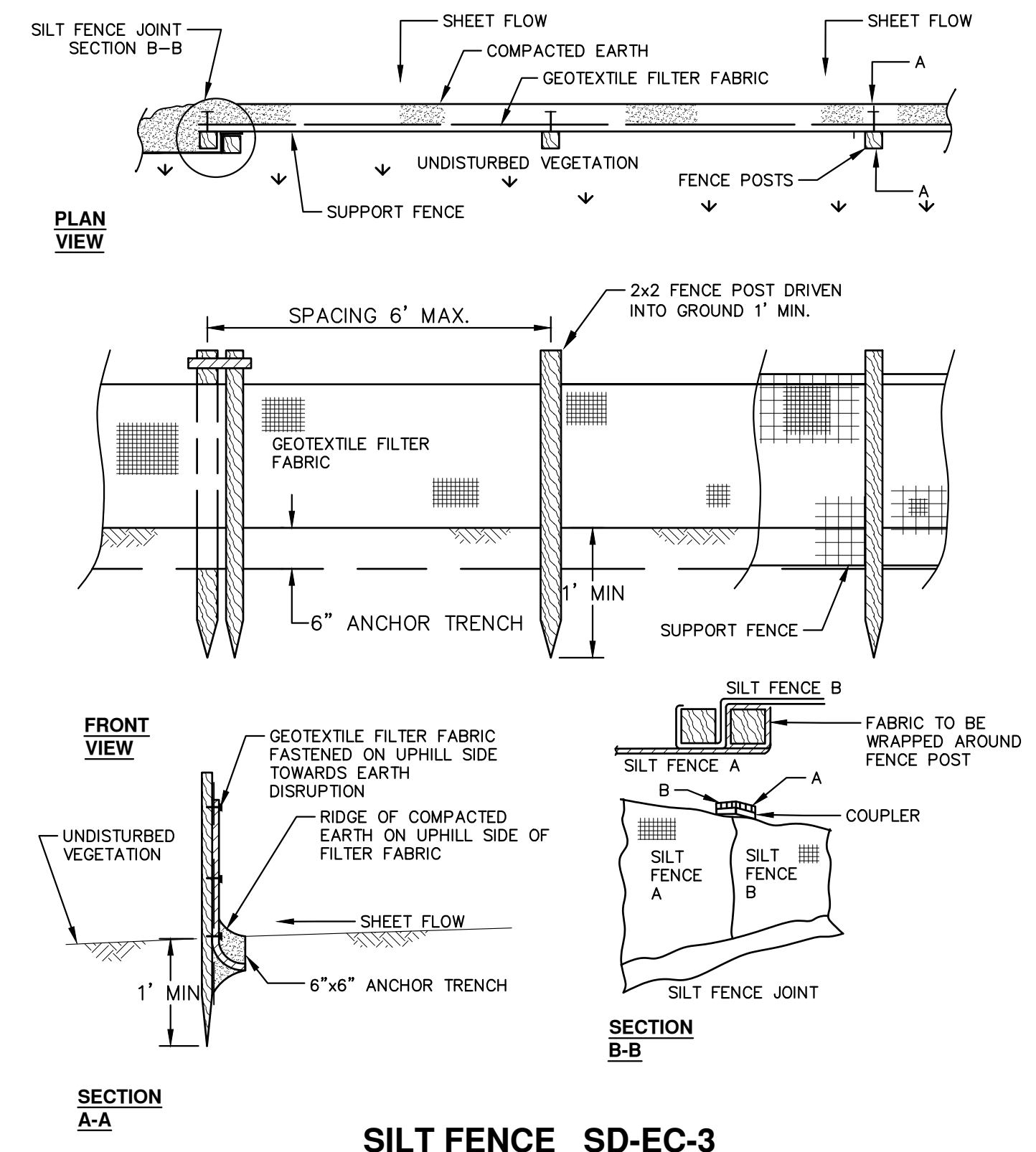
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.



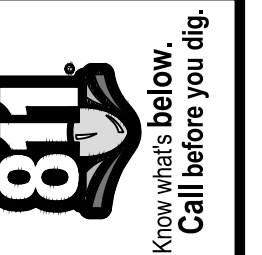
MULCH BLANKET DETAIL

APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.



SILT FENCE SD-EC-3

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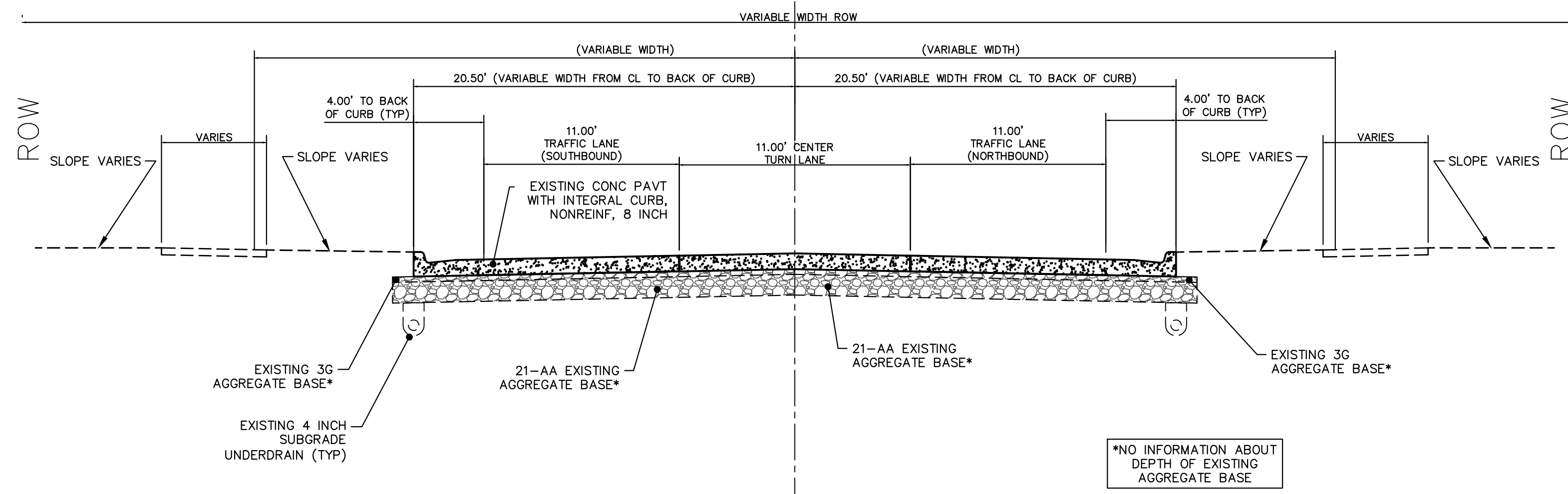
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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1647
734-794-6410
www.a2gov.org



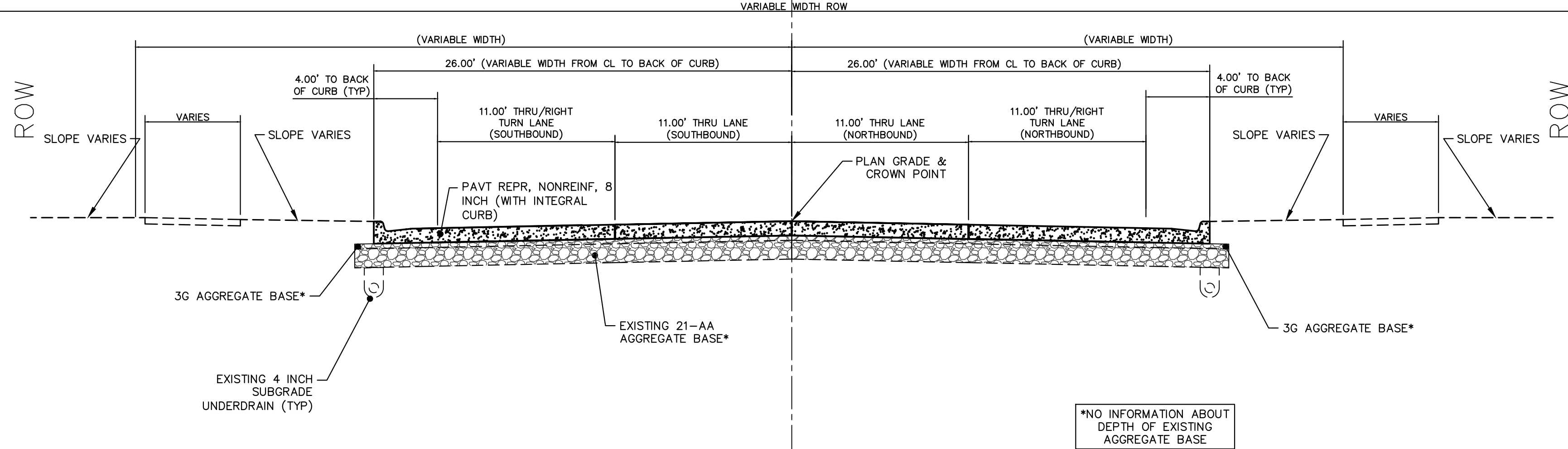
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SOIL EROSION AND SEDIMENTATION CONTROL (SESC) NOTES AND DETAILS
DRAWING No. 2020024-3
SCALE: NTS

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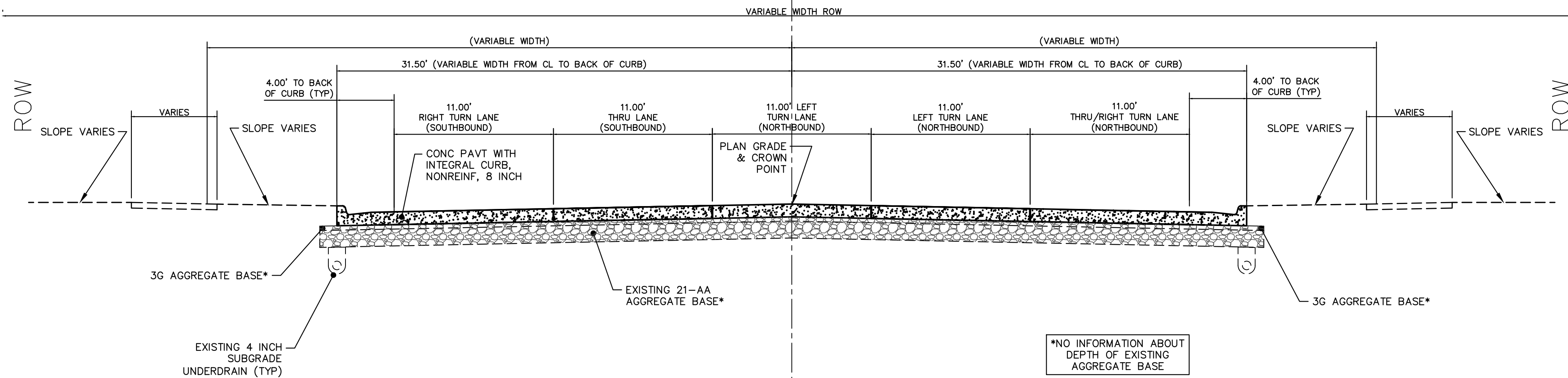
EXISTING TYPICAL CROSS SECTION STA 4+22 TO 51+79



EXISTING TYPICAL CROSS SECTION STA 51+79 TO 63+82



EXISTING TYPICAL CROSS SECTION STA 63+82 TO 65+62



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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-6647
ANN ARBOR: 734.794.4410
WWW.A2GOV.ORG

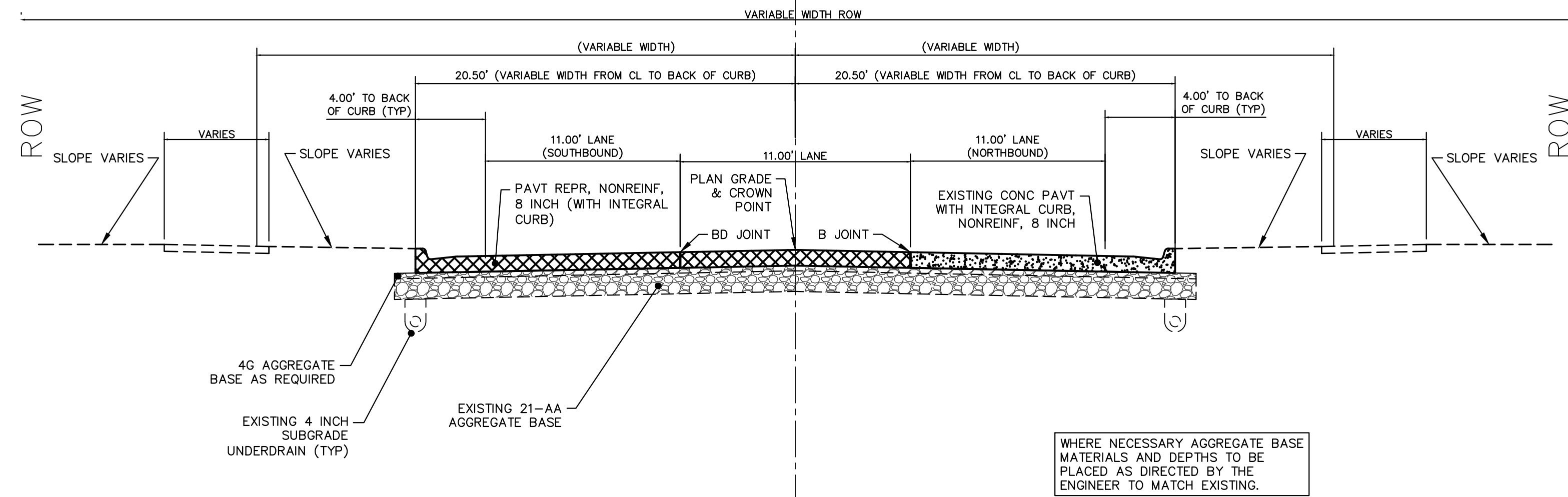


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
TYPICAL CROSS SECTIONS
EXISTING TYPICAL CROSS SECTIONS

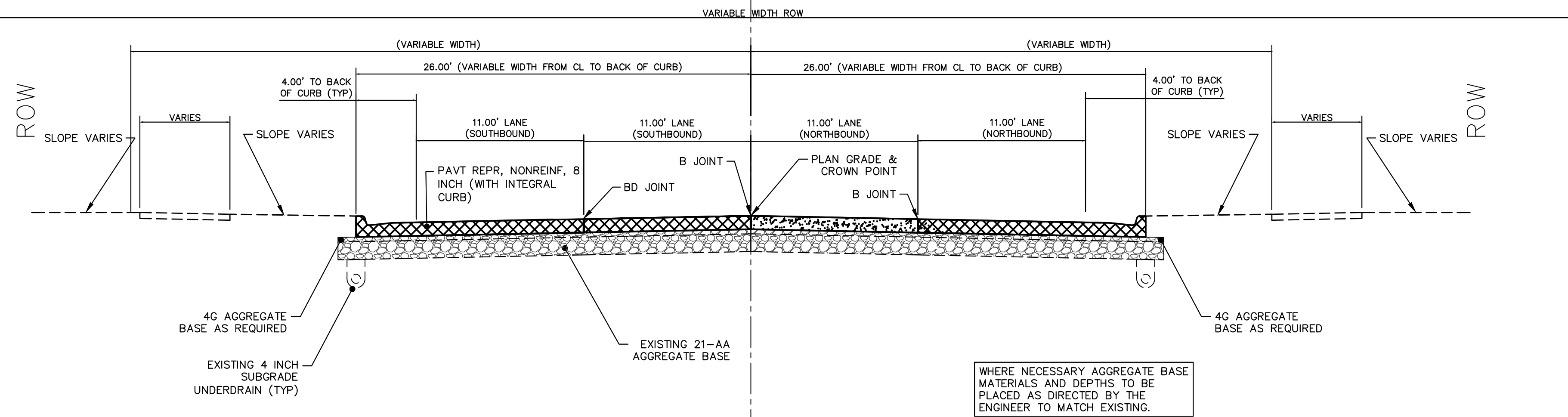
SCALE: N/A
DRAWING No. 2020024-4

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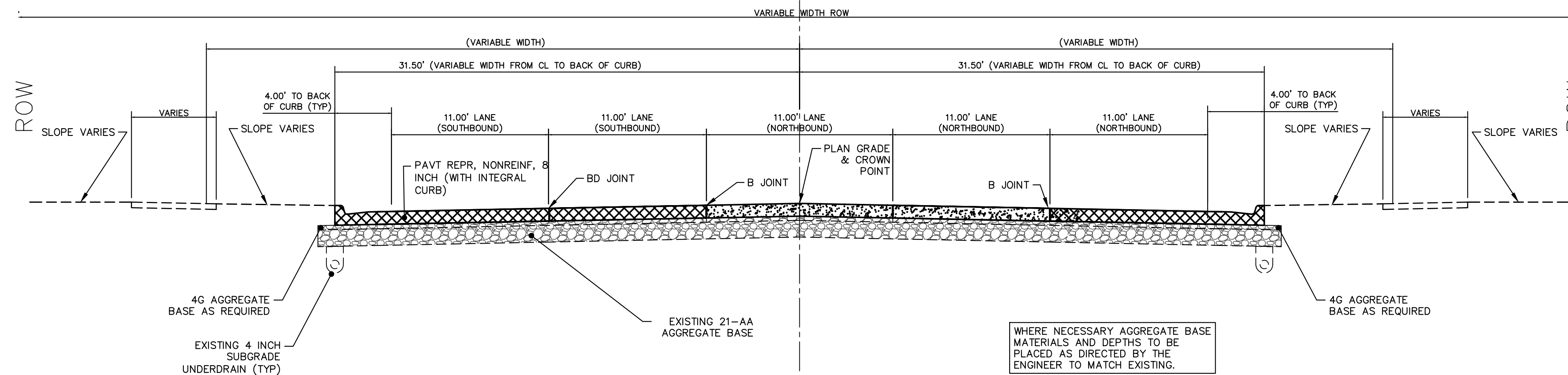
PROPOSED TYPICAL CROSS SECTION STA 4+71 TO 51+79



PROPOSED TYPICAL CROSS SECTION STA 51+79 TO 63+82



PROPOSED TYPICAL CROSS SECTION STA 63+82 TO 65+62



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

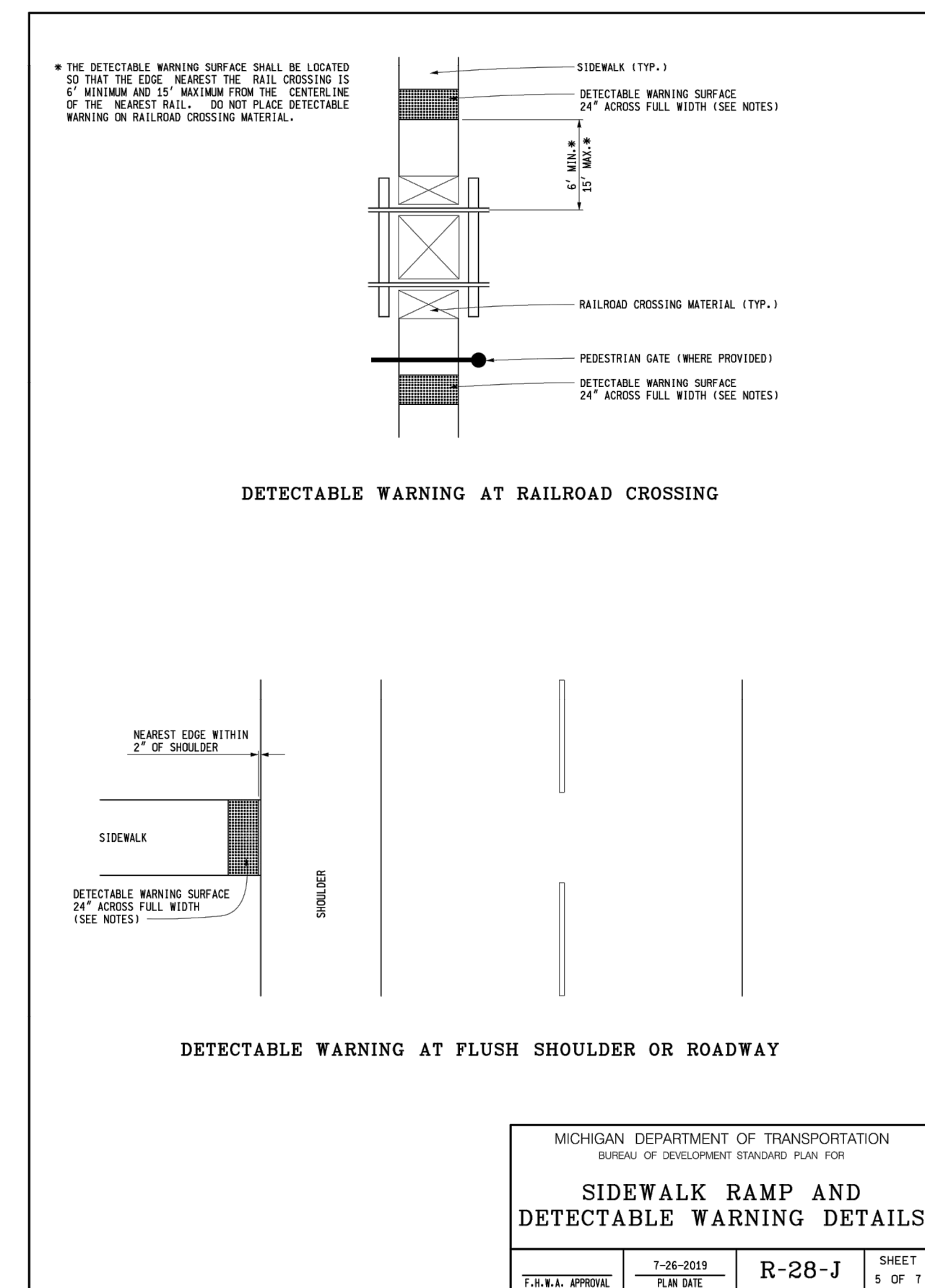
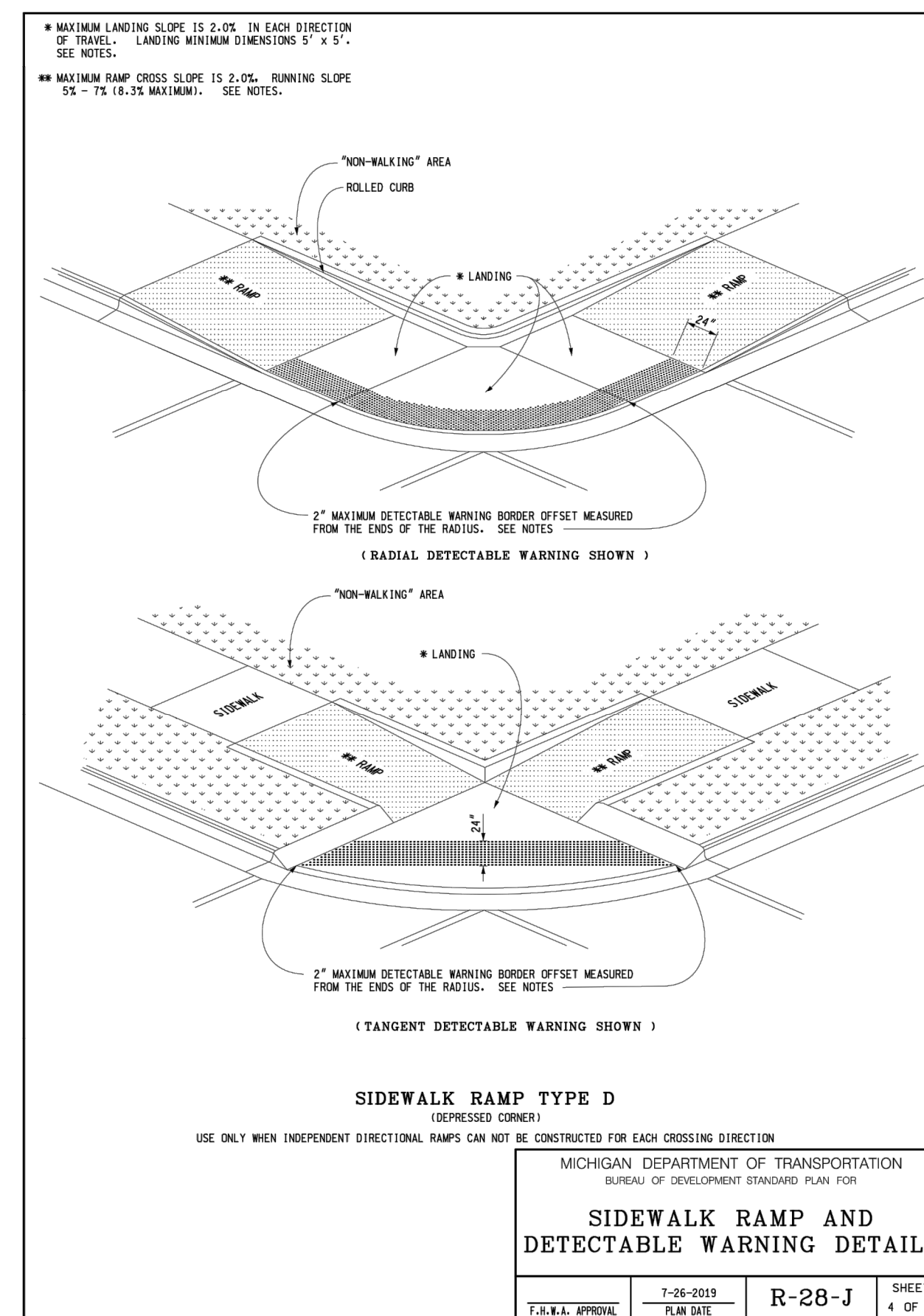
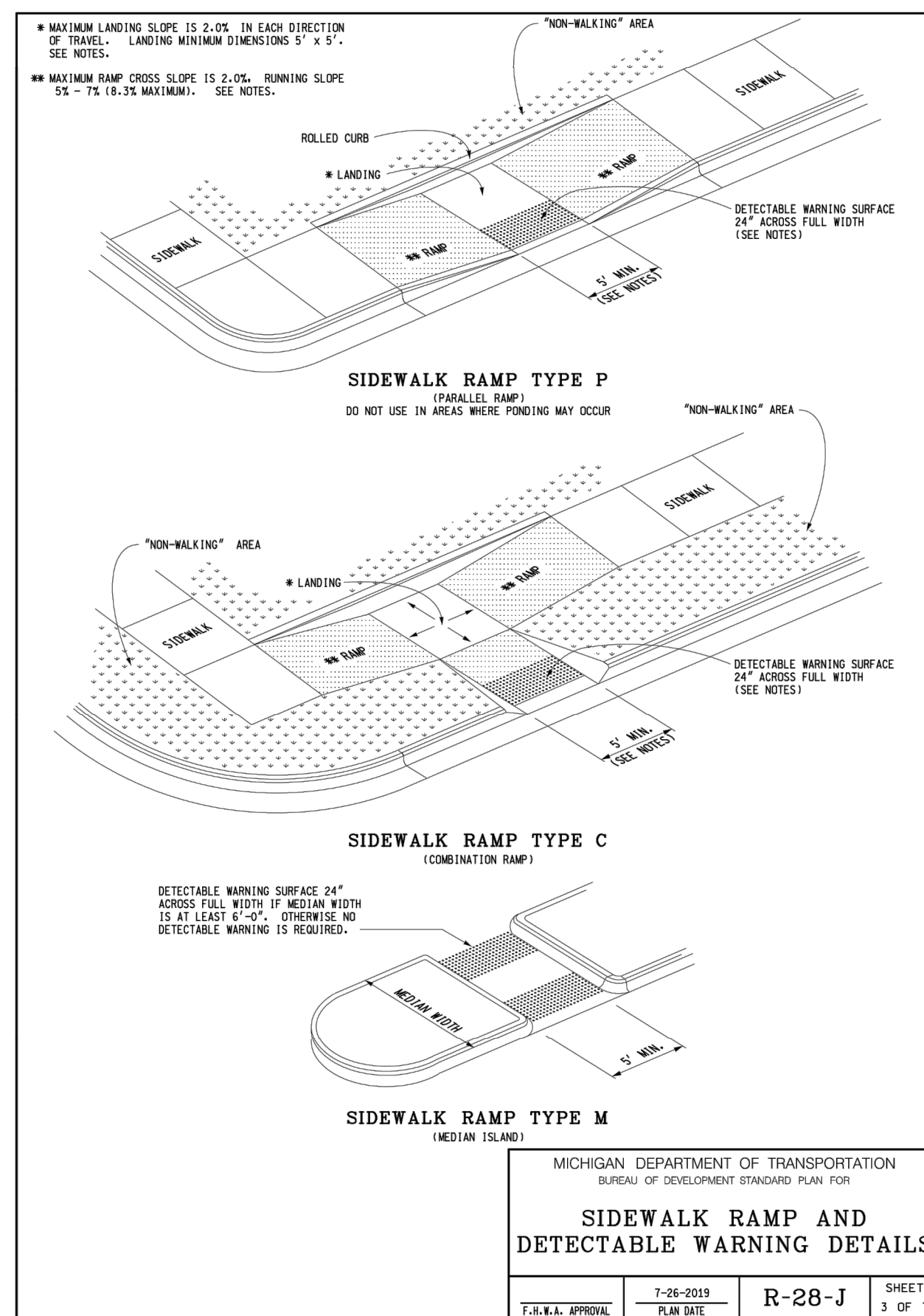
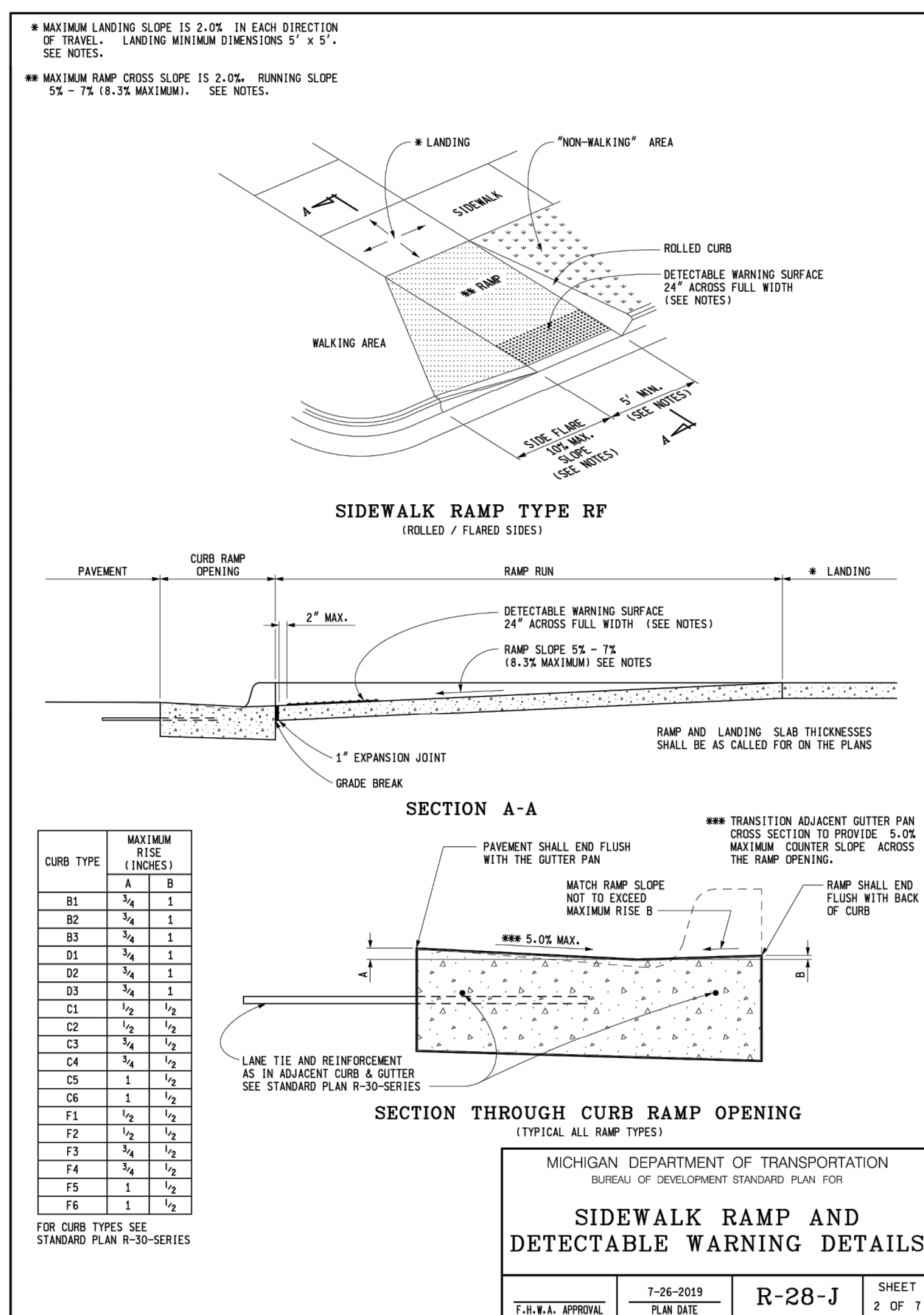
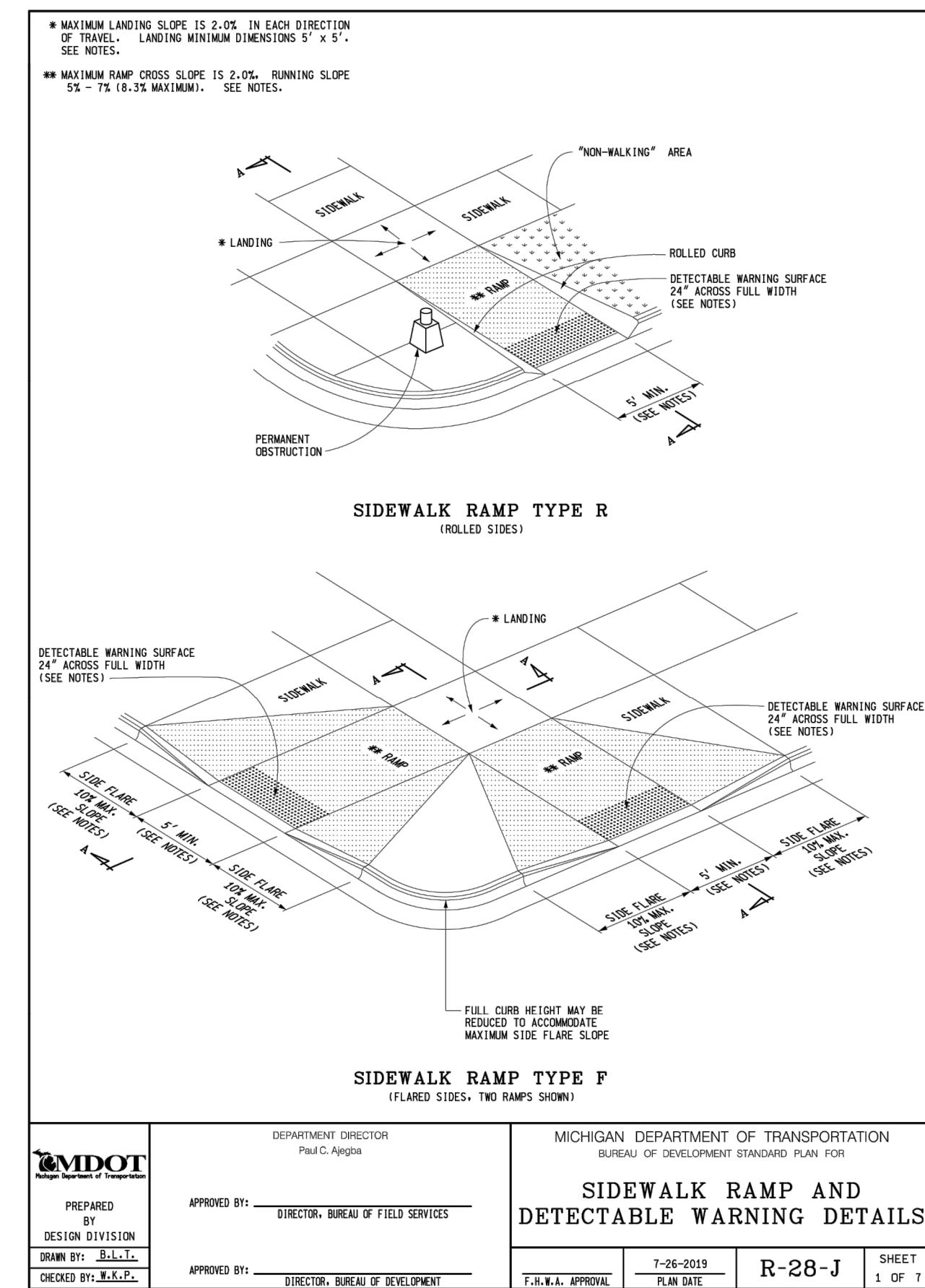
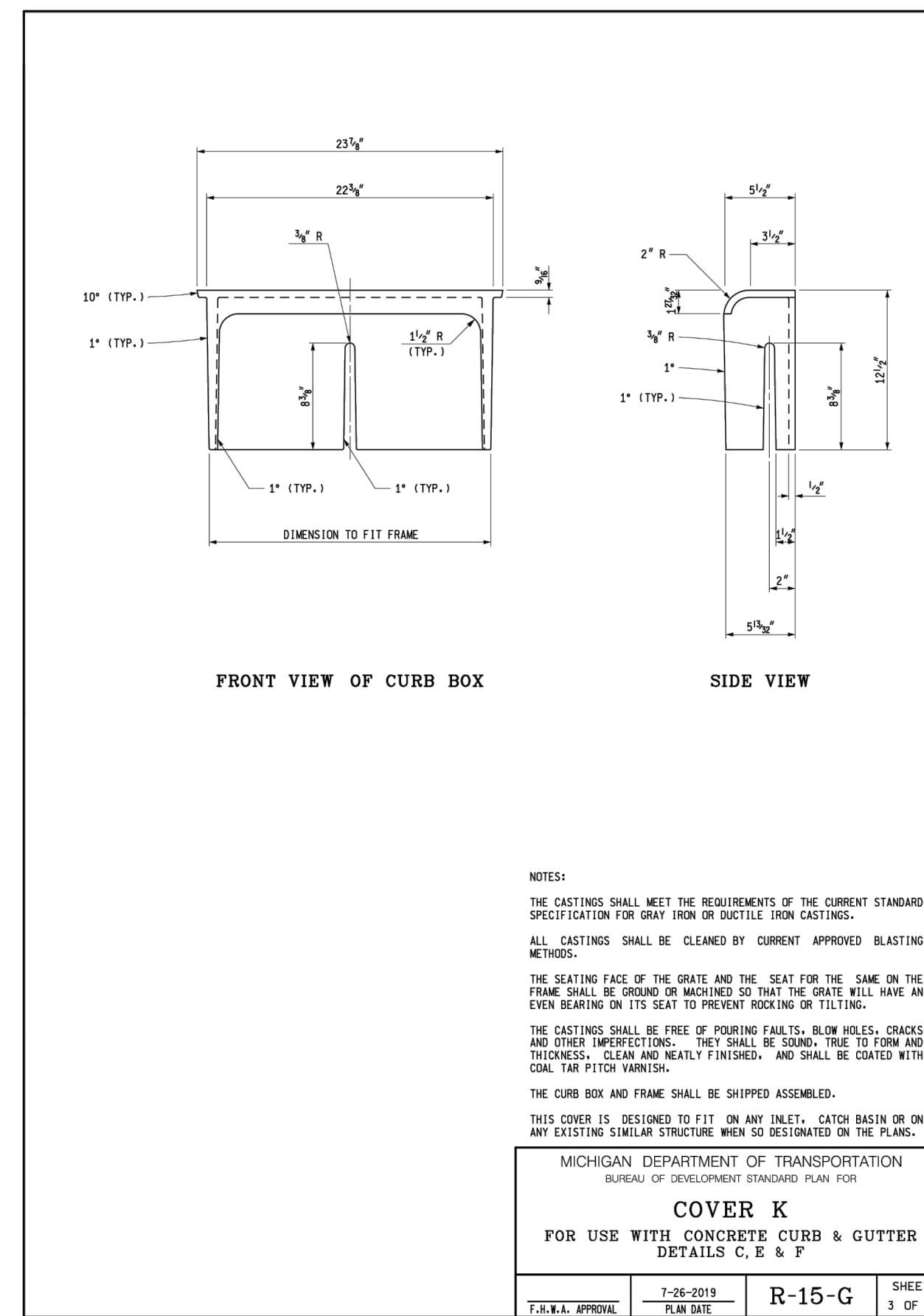
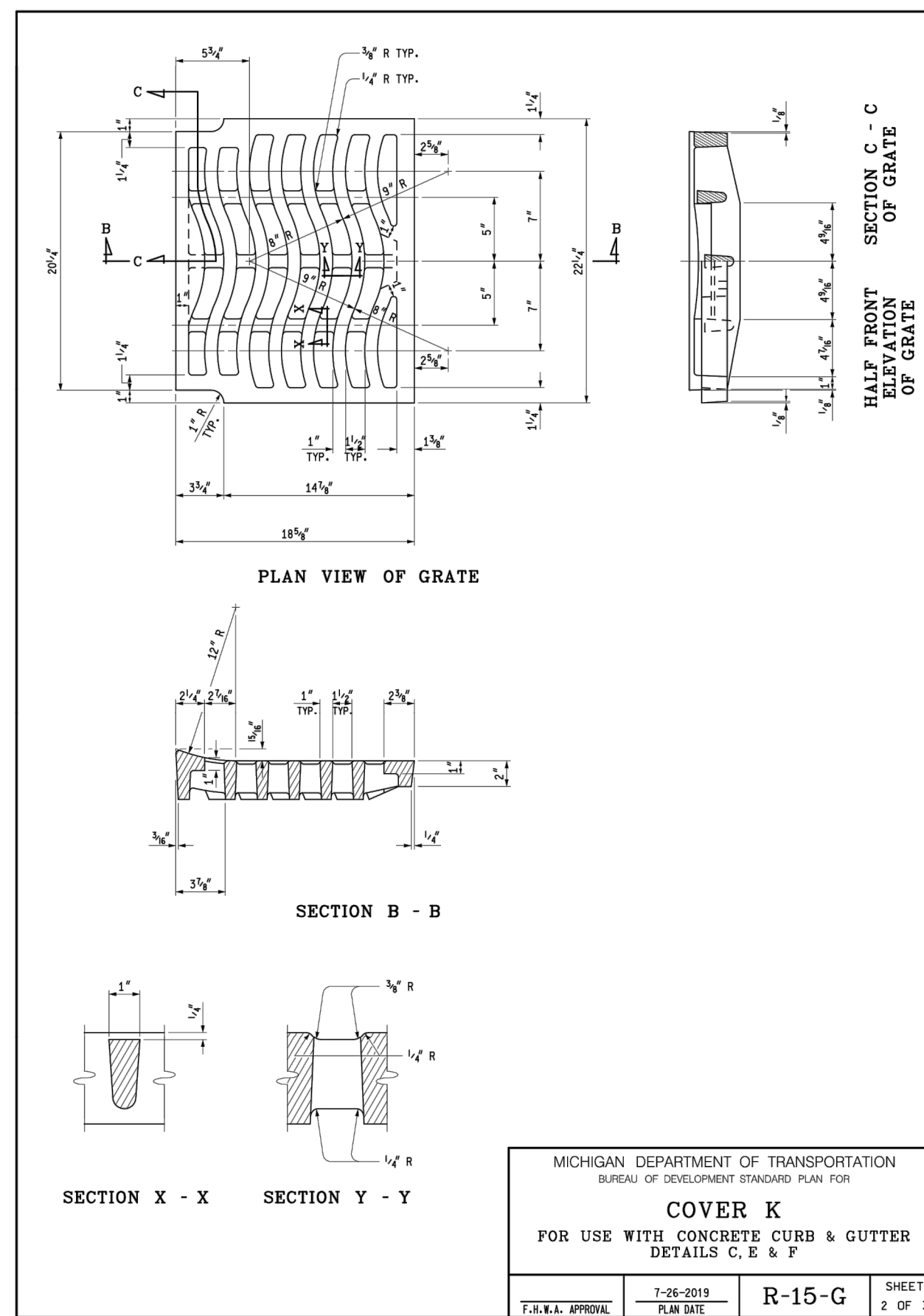
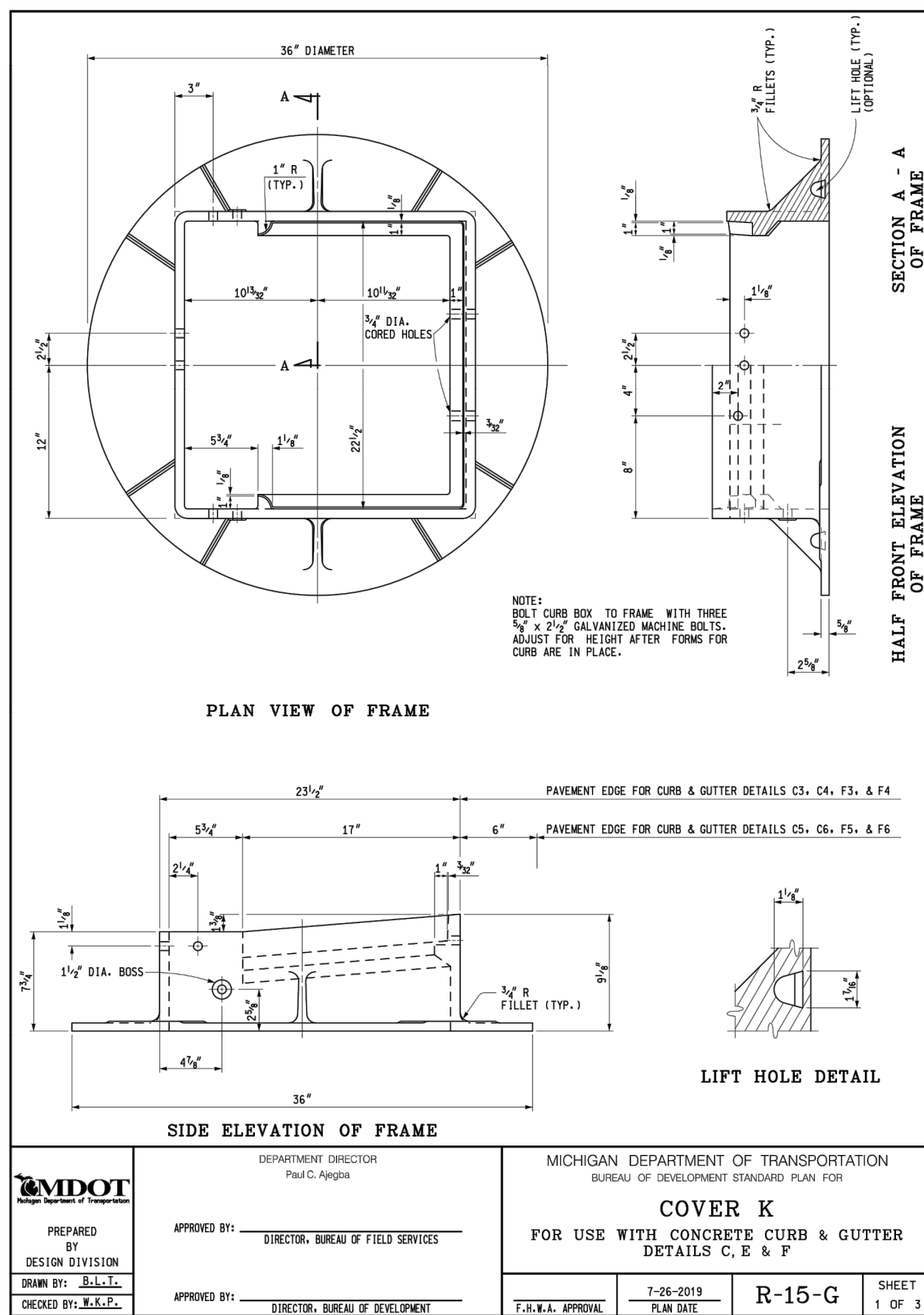
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48107-8647
www.a2gov.org



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
TYPICAL CROSS SECTIONS
PROPOSED TYPICAL CROSS SECTIONS

SCALE: N/A
DRAWING No. 2020024-5
SHEET No. 5 OF 34

R:\2020024 S Industrial Conc Repair\Plan Production\2020024DET2.dwg Dwg Created: 30-Sep-20 -- a2 standard bw.stb -- Plot Date: 21-Jan-21



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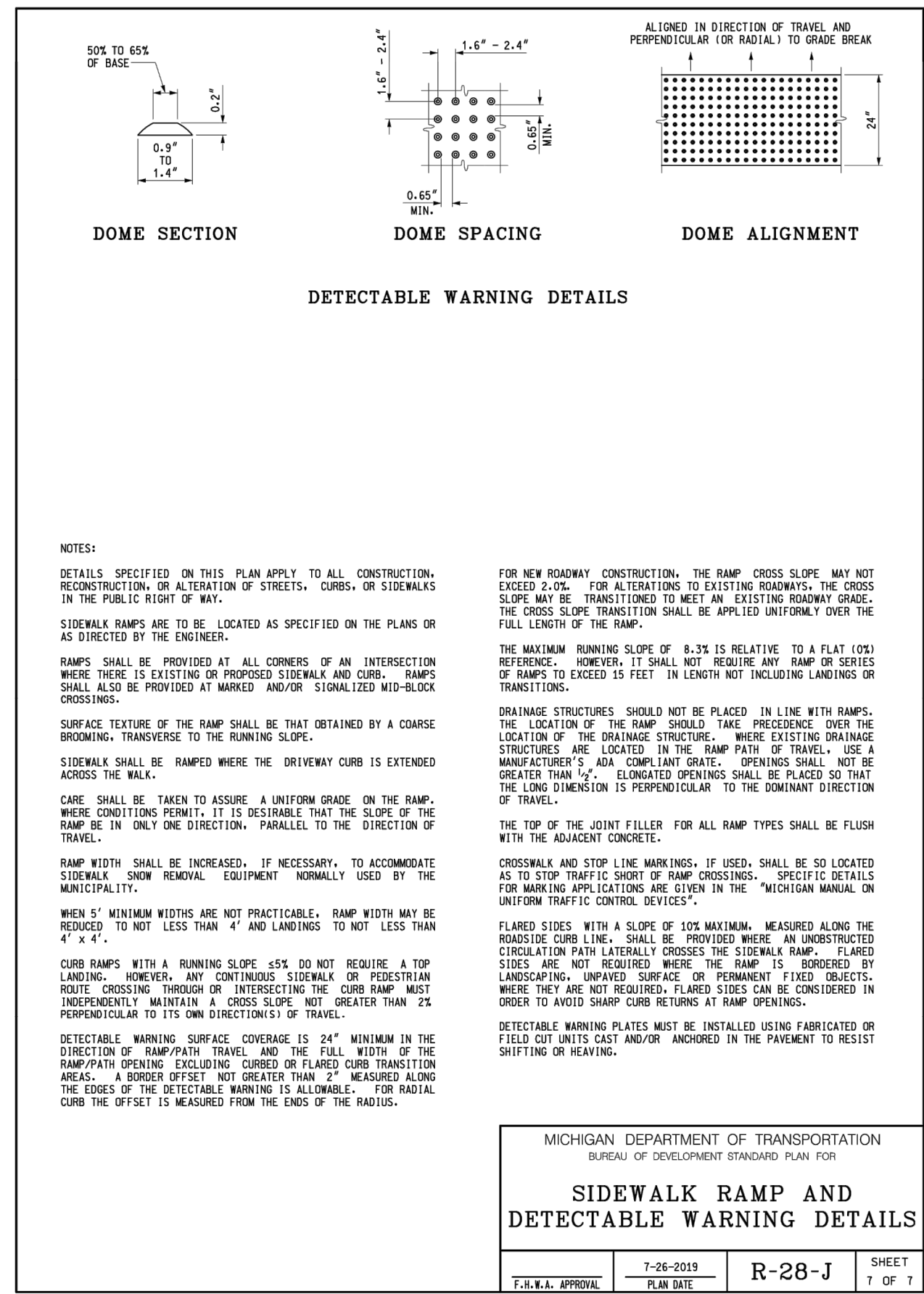
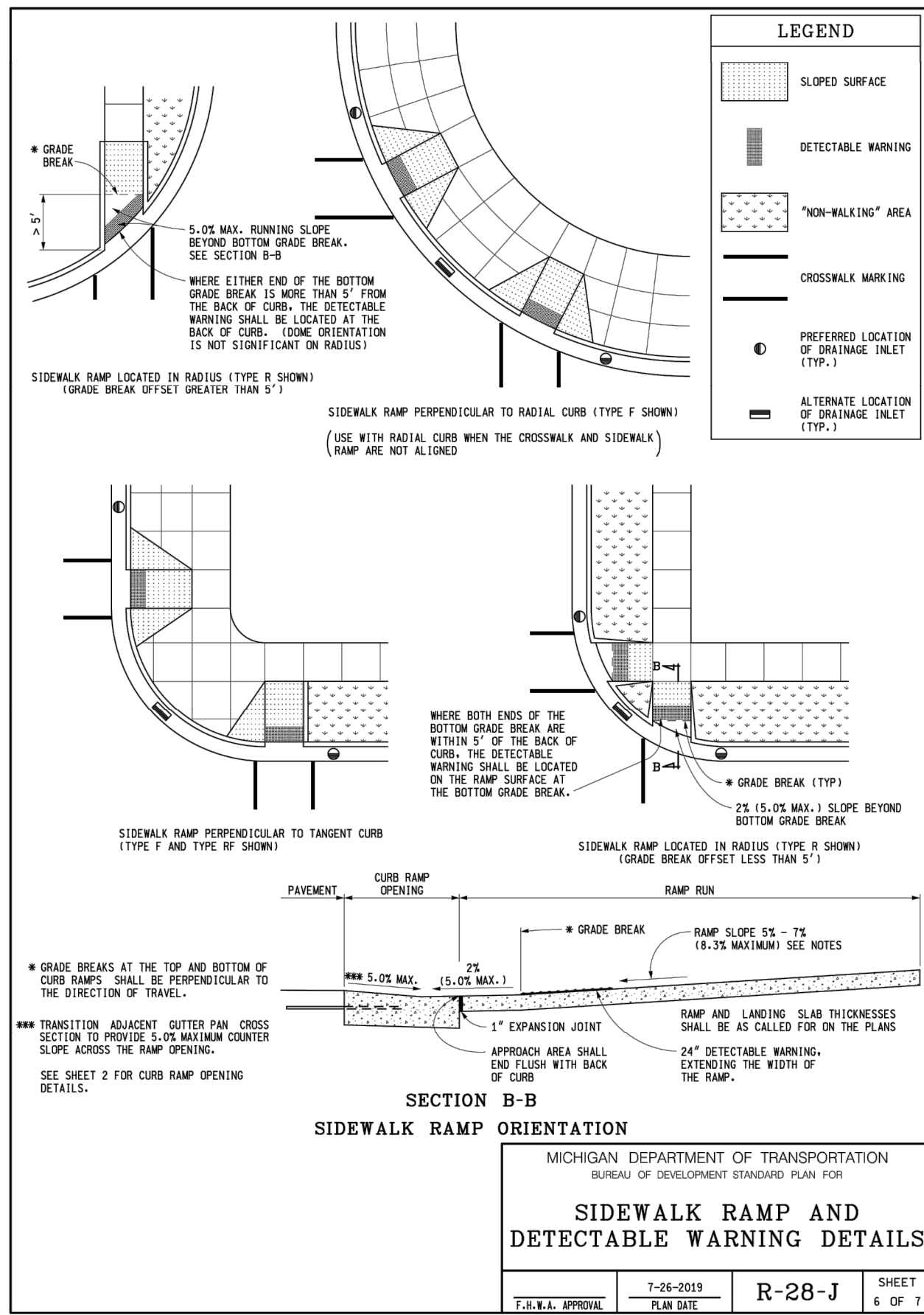
CITY OF ANN ARBOR MICHIGAN

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
SPECIAL DETAILS

SCALE: N.T.S.
DRAWING NO: 2020024-6
SHEET NO. 6 OF 34

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

R:\2020024 S Industrial Conc Repair\Plan Production\2020024DET2.dwg Dwg Created: 30-Sep-20 --a2 standard bw.stb -- Plot Date: 21-Jan-21



SIGN MATERIAL SELECTION TABLE

SIGN SIZE	SIGN MATERIAL TYPE		
	TYPE I	TYPE II	TYPE III
$\le 36" \times 36"$		X	X
$>36" \times 36" \le 96" \text{ TO WIDE}$		X	
$> 96" \text{ WIDE TO } 144" \text{ WIDE}$	X	X	
$> 144" \text{ WIDE}$	X		

TYPE I ALUMINUM EXTRUSION
TYPE II PLYWOOD
TYPE III ALUMINUM SHEET

ROUNDING OF CORNERS IS NOT REQUIRED FOR TYPE I OR II SIGNS.
VERTICAL JOINTS ARE NOT PERMITTED.
HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE NOT PERMITTED.

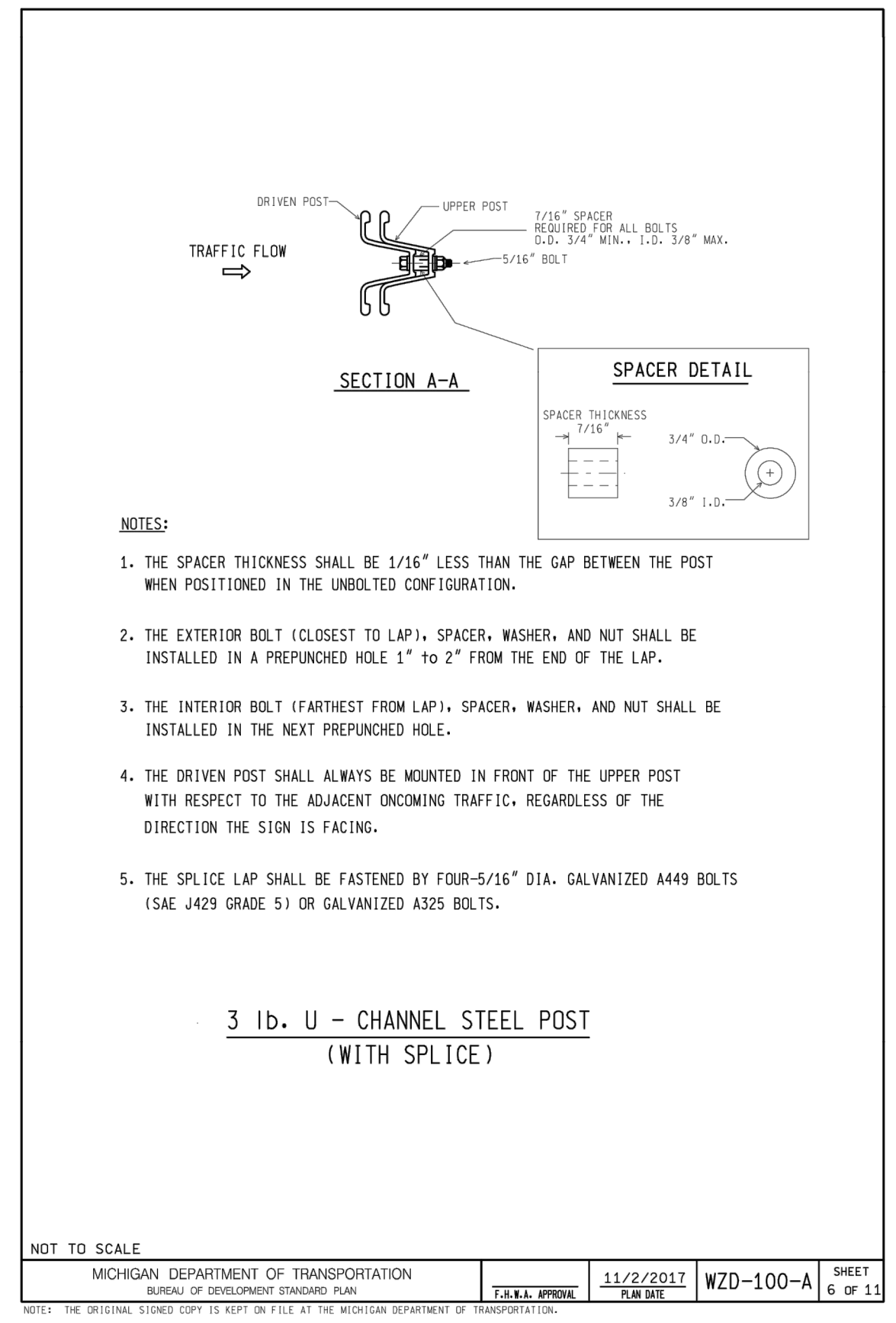
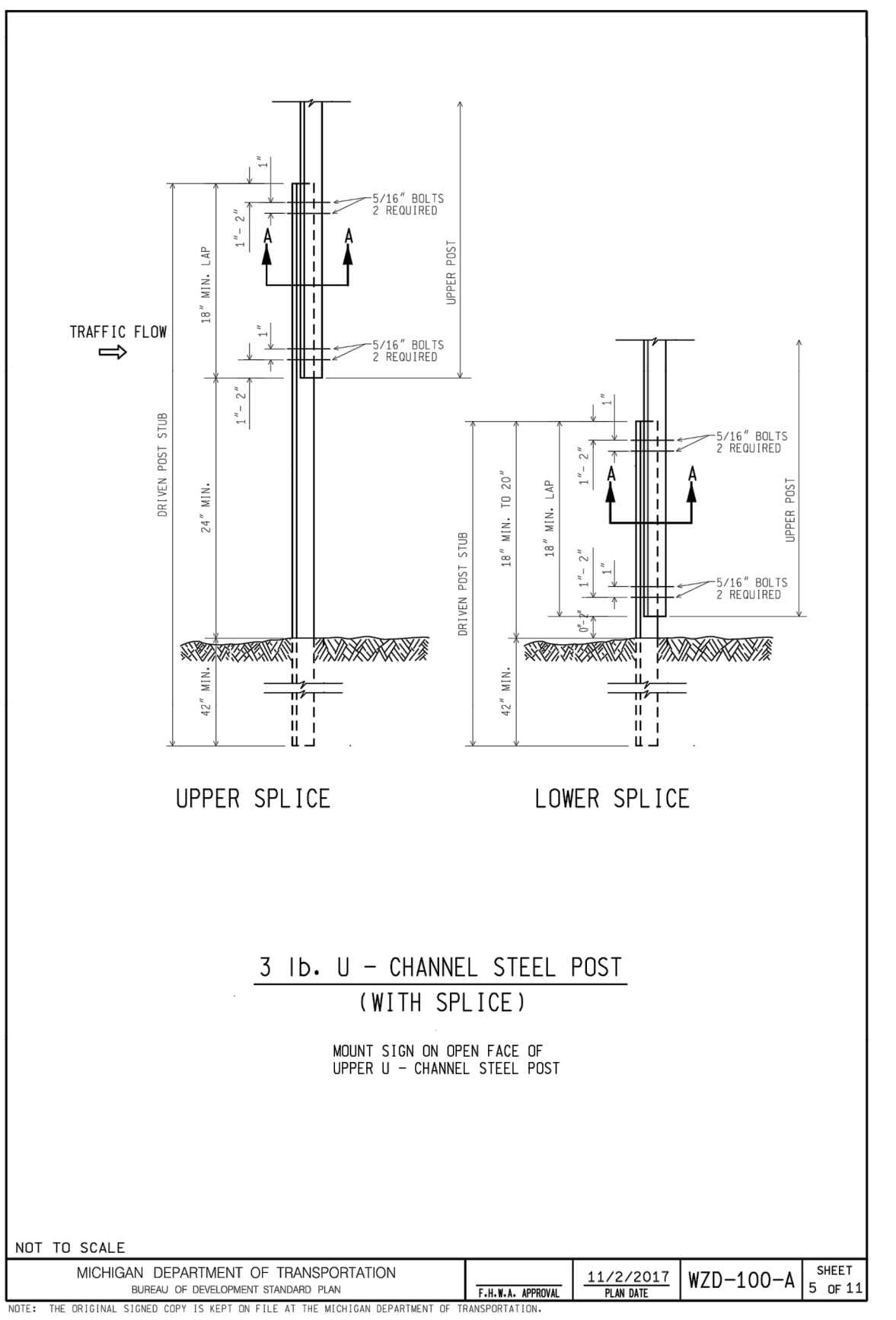
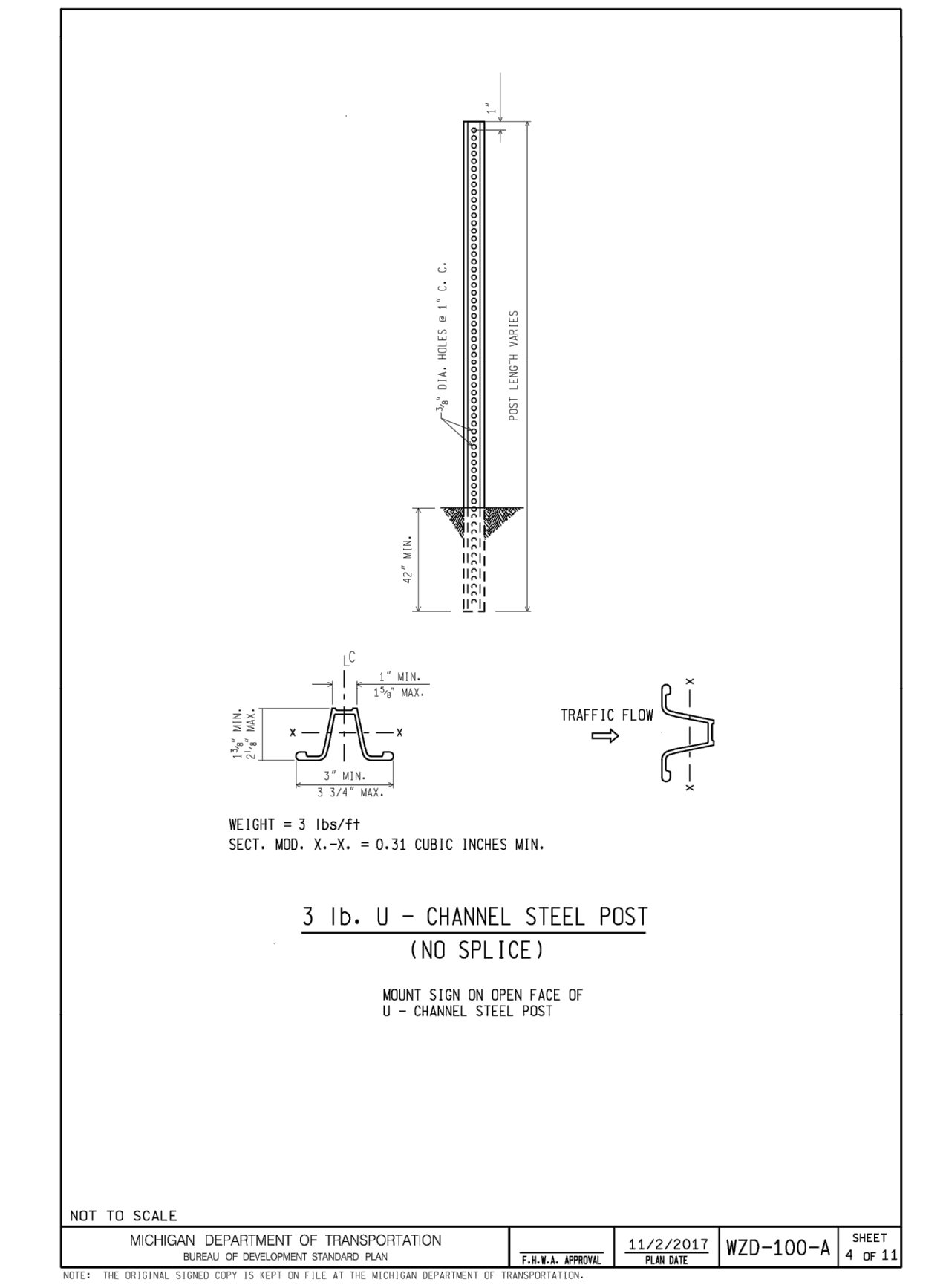
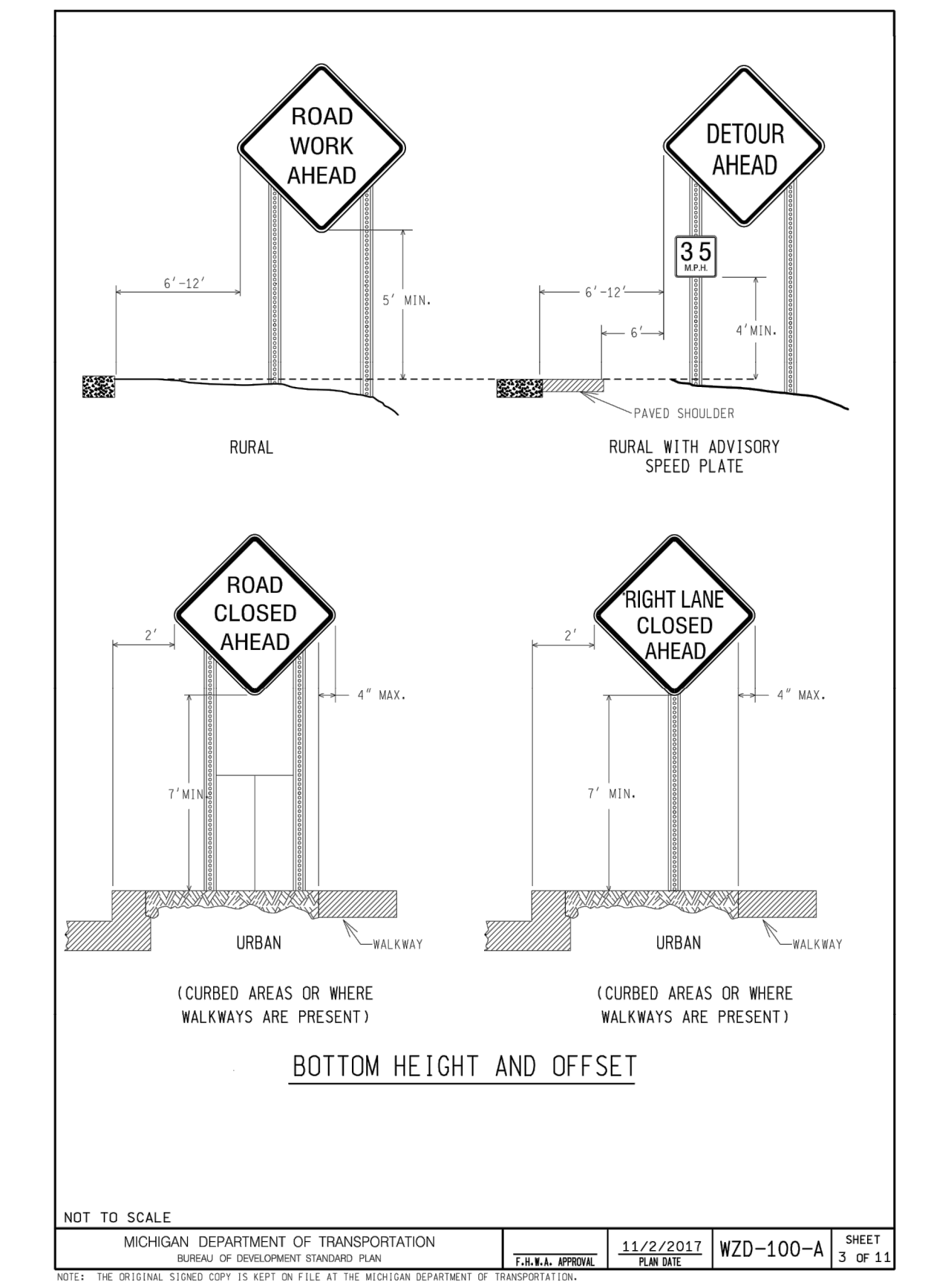
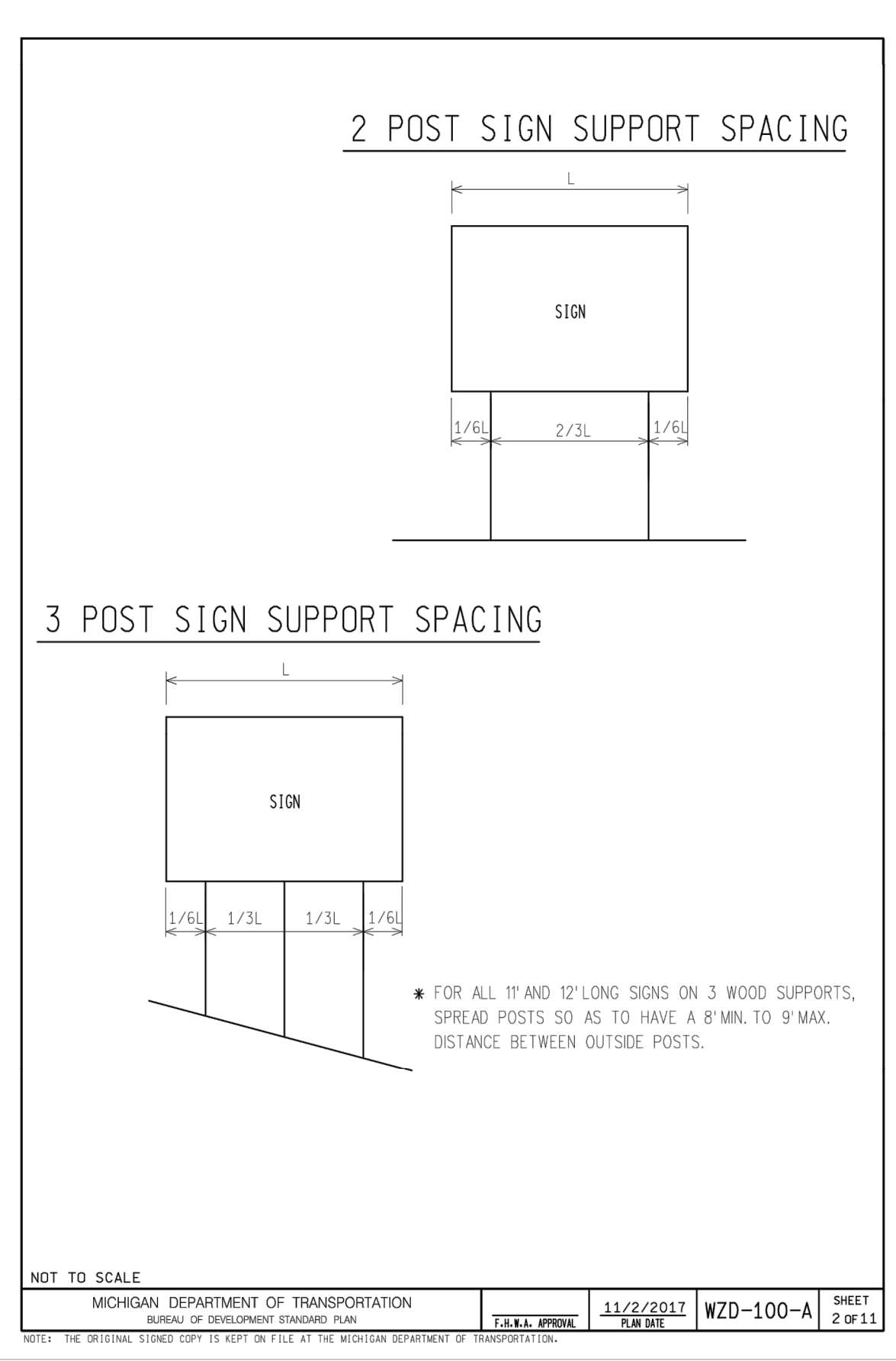
POST SIZE REQUIREMENTS TABLE

SIGN AREA (sq ft)	POST TYPE		
	U-CHANNEL STEEL	SQUARE TUBULAR STEEL	WOOD
≤ 9	1 - 3 lb/ft*	1 - 2" 12 or 14 GA*	N/A
$9 \le 20$	2 - 3 lb/ft	2 - 2" 12 or 14 GA	1 - 4" X 6"*
$> 20 \le 30$	N/A	N/A	2 - 4" X 6"
$> 30 \le 60$	N/A	N/A	2 - 6" X 8"
$> 60 \le 84$	N/A	N/A	3 - 6" X 8"

*SIGNS 4 FEET AND GREATER IN WIDTH REQUIRE 2 POSTS.
SIGNS GREATER THAN 8 FEET IN WIDTH REQUIRE 2 OR 3 WOOD POSTS DEPENDING ON AREA OF SIGN.
A MAXIMUM OF 2 POSTS WITHIN A 7' PATH IS PERMITTED.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**GROUND DRIVEN SIGN
SUPPORTS FOR TEMP SIGNS**

F.S.L.L. APPROVAL: [] PLAN DATE: 11/2/2017 WZD-100-A SHEET 1 OF 11



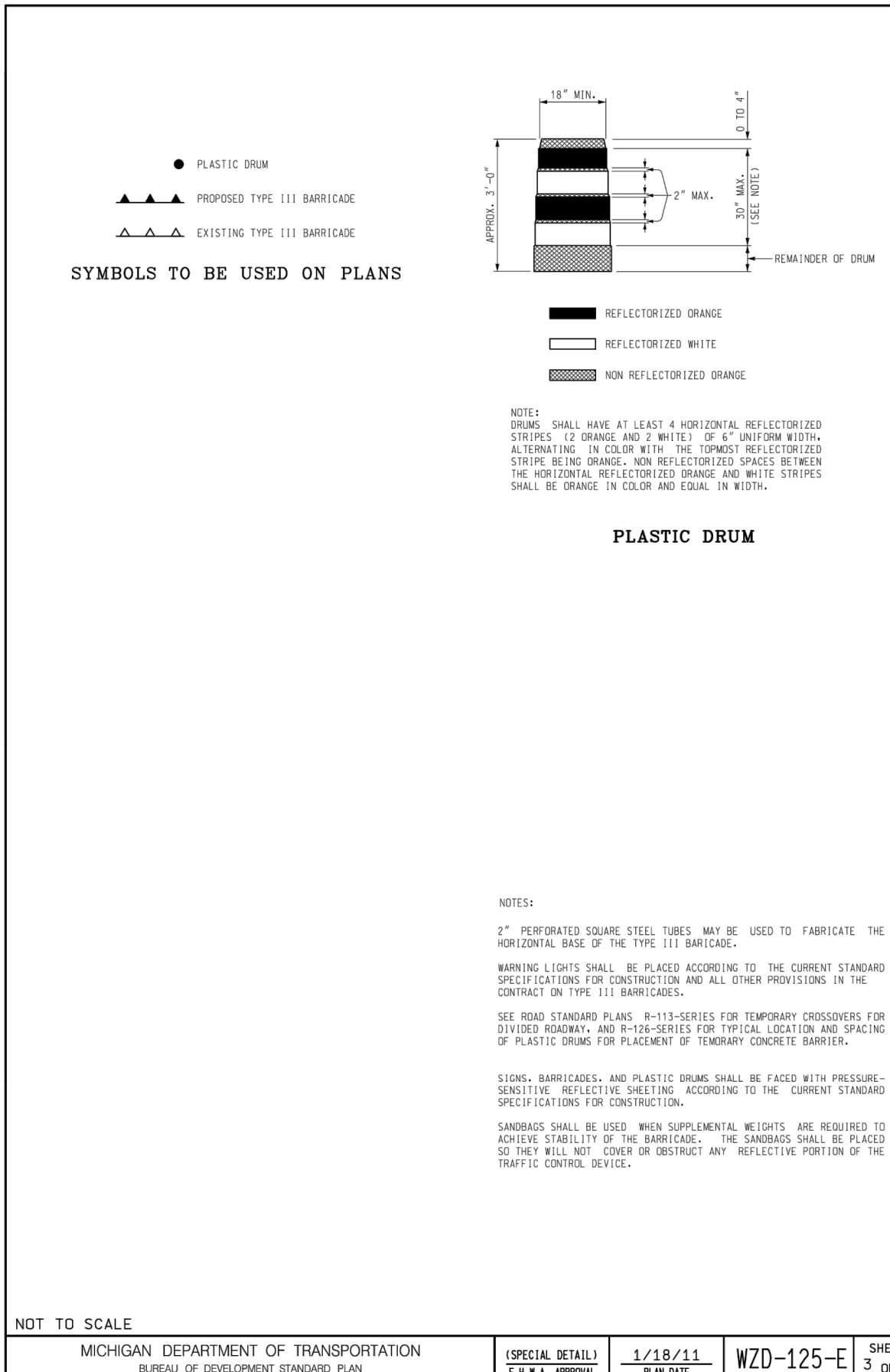
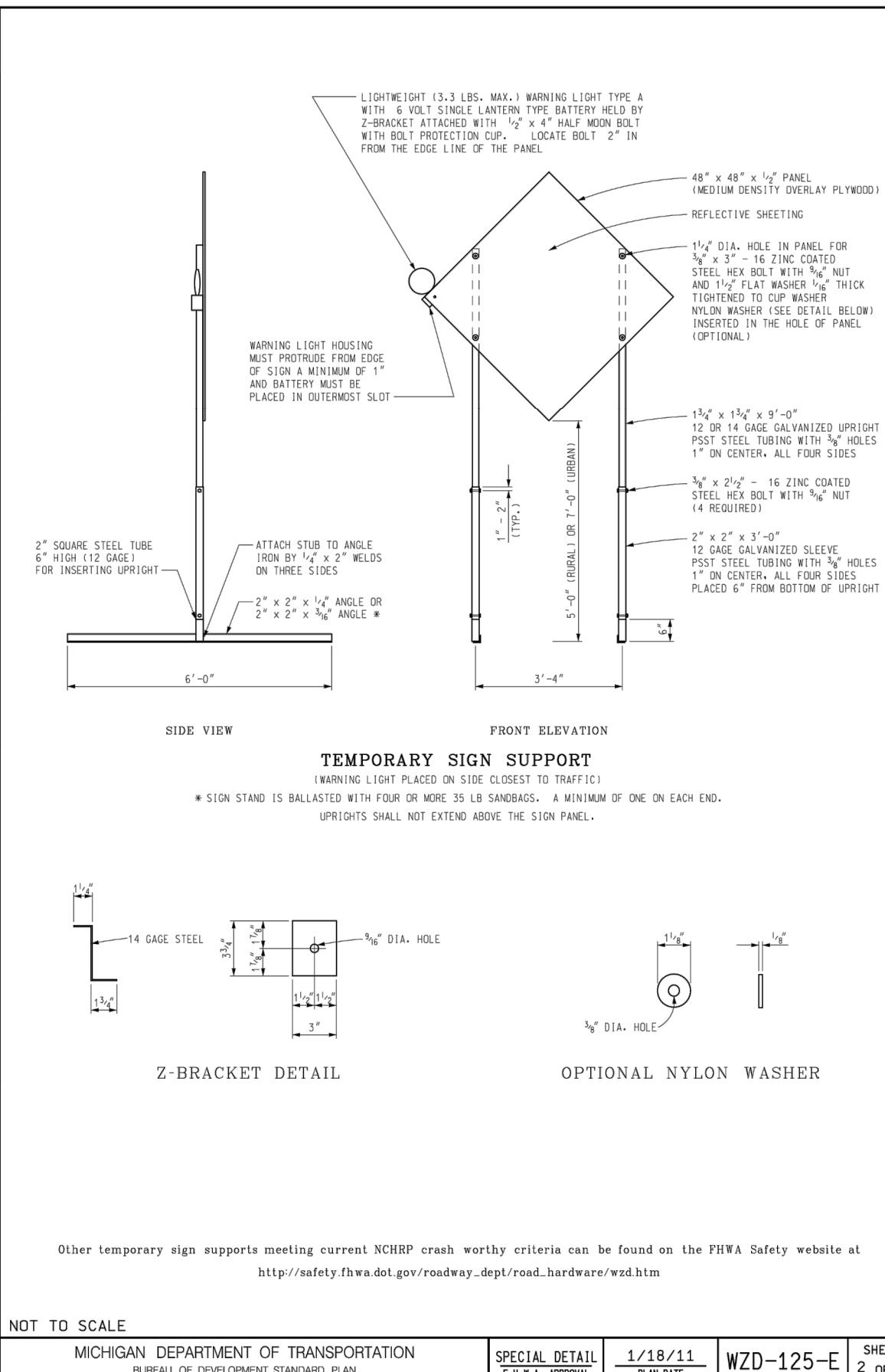
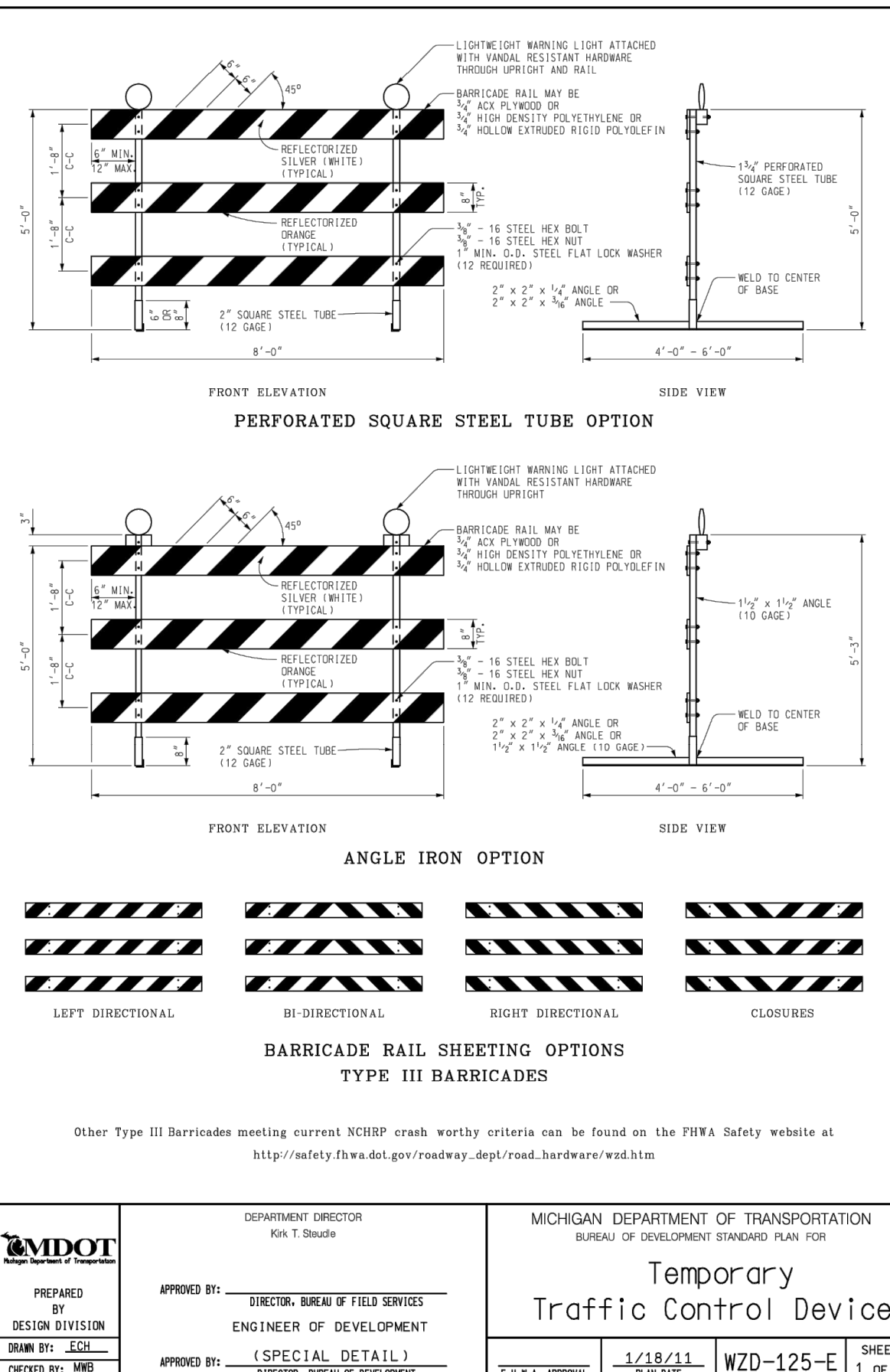
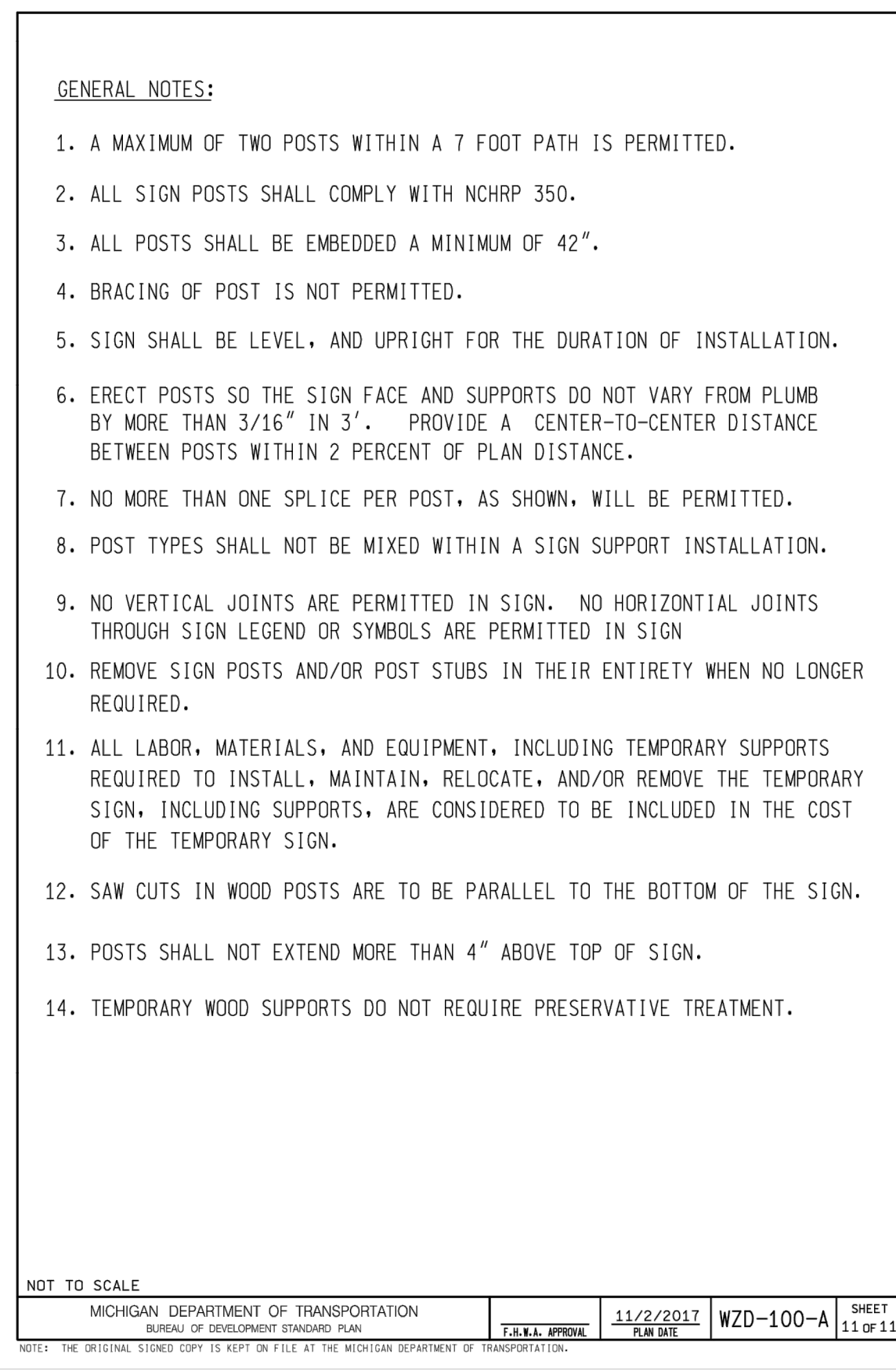
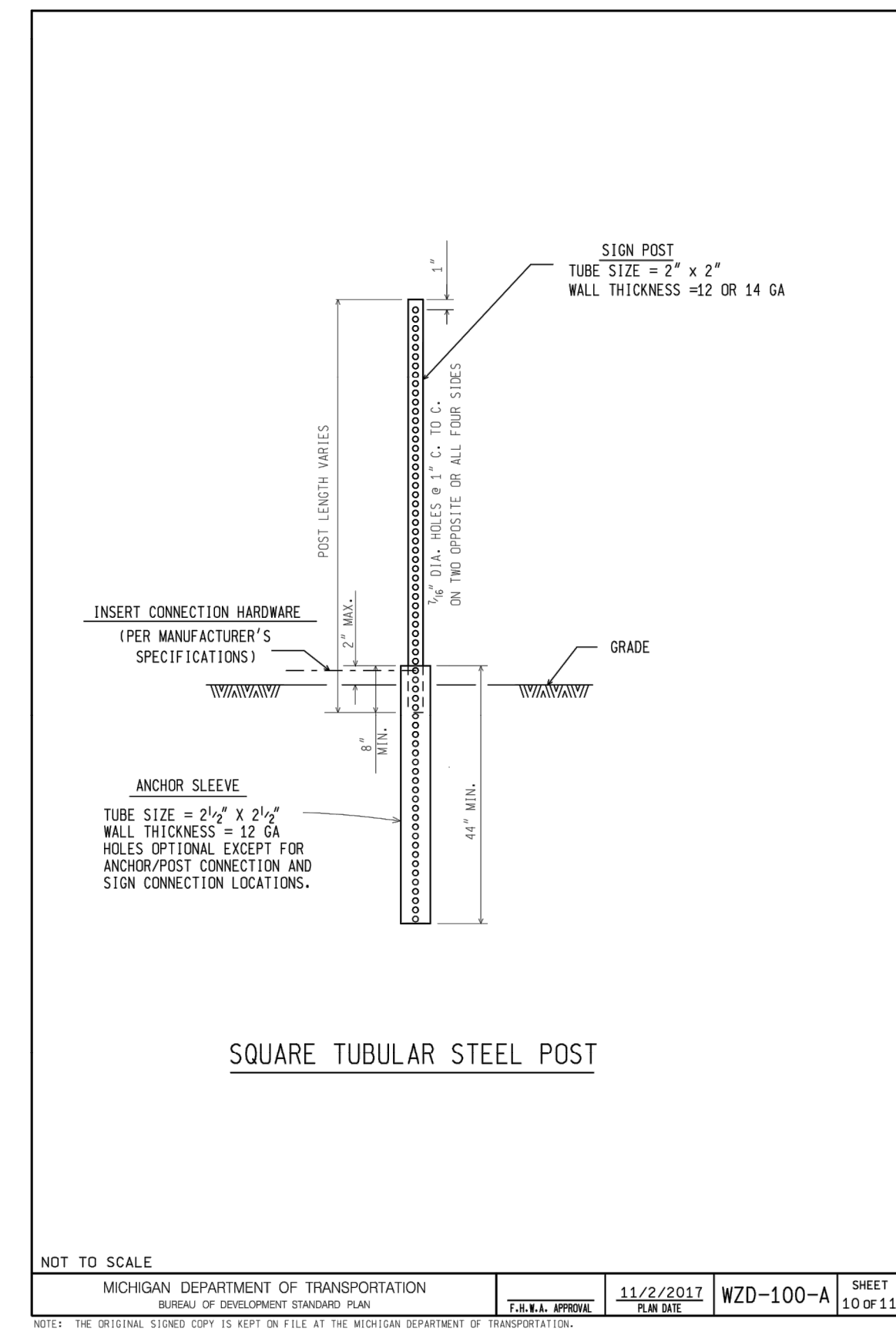
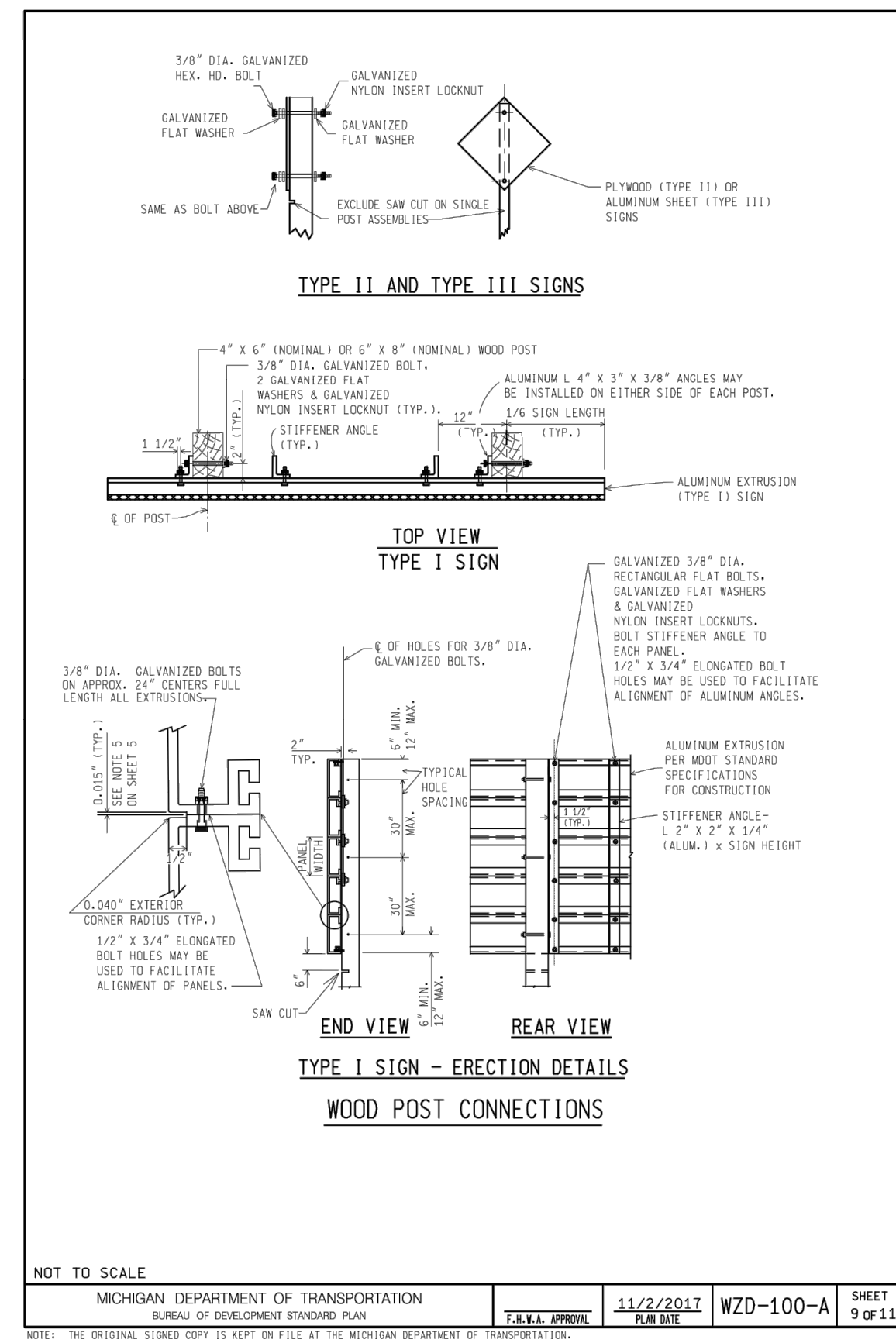
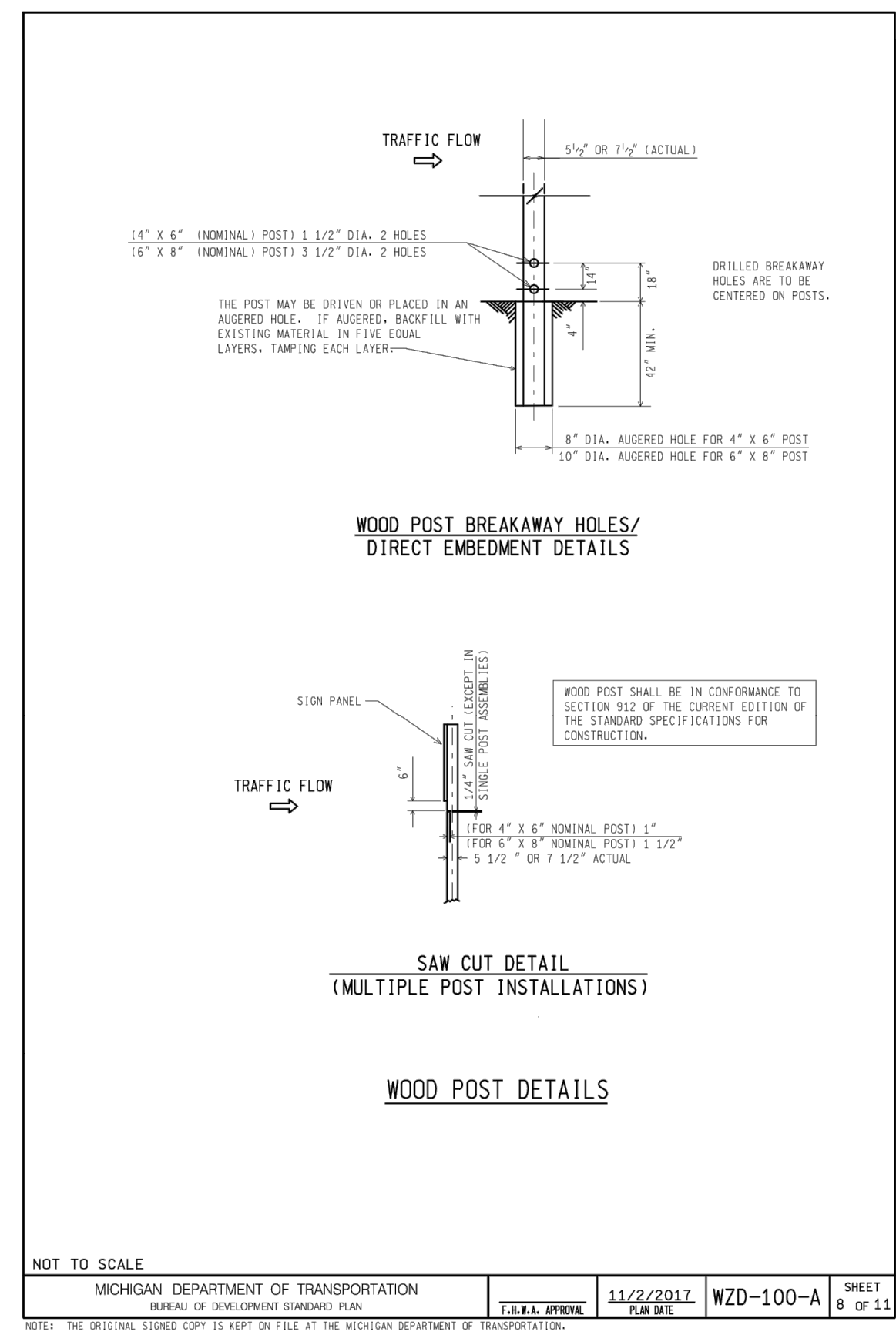
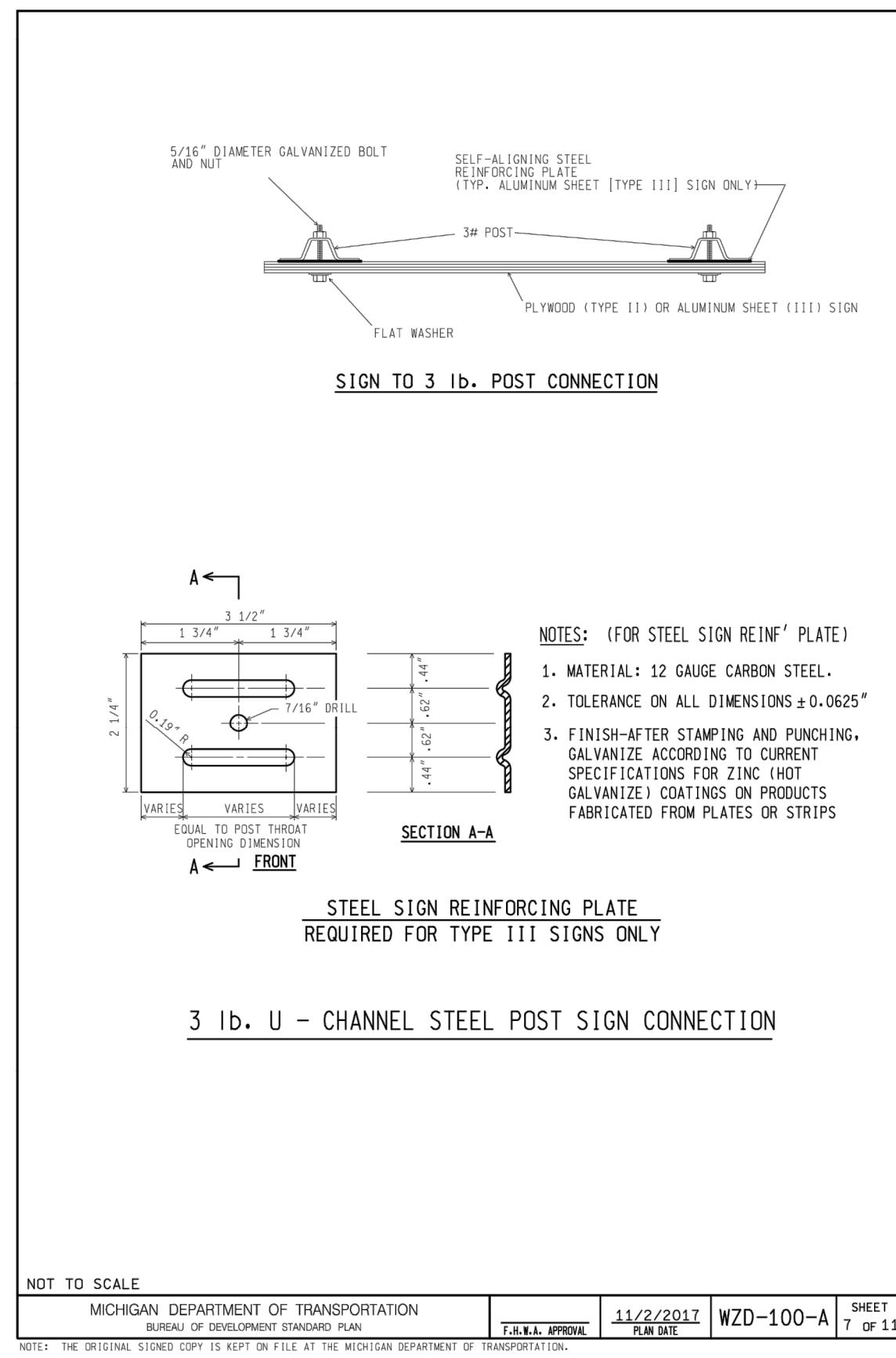
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
SPECIAL DETAILS

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

SCALE: N.T.S.
DRAWING NO. 2020024-7

SHEET NO. 7 OF 34



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PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8667
ANN ARBOR MI 48107-8667
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CITY OF ANN ARBOR MICHIGAN

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

SPECIAL DETAILS

SCALE: N.T.S.

DRAWING NO. 2020024-8

SHEET NO. 8 OF 34

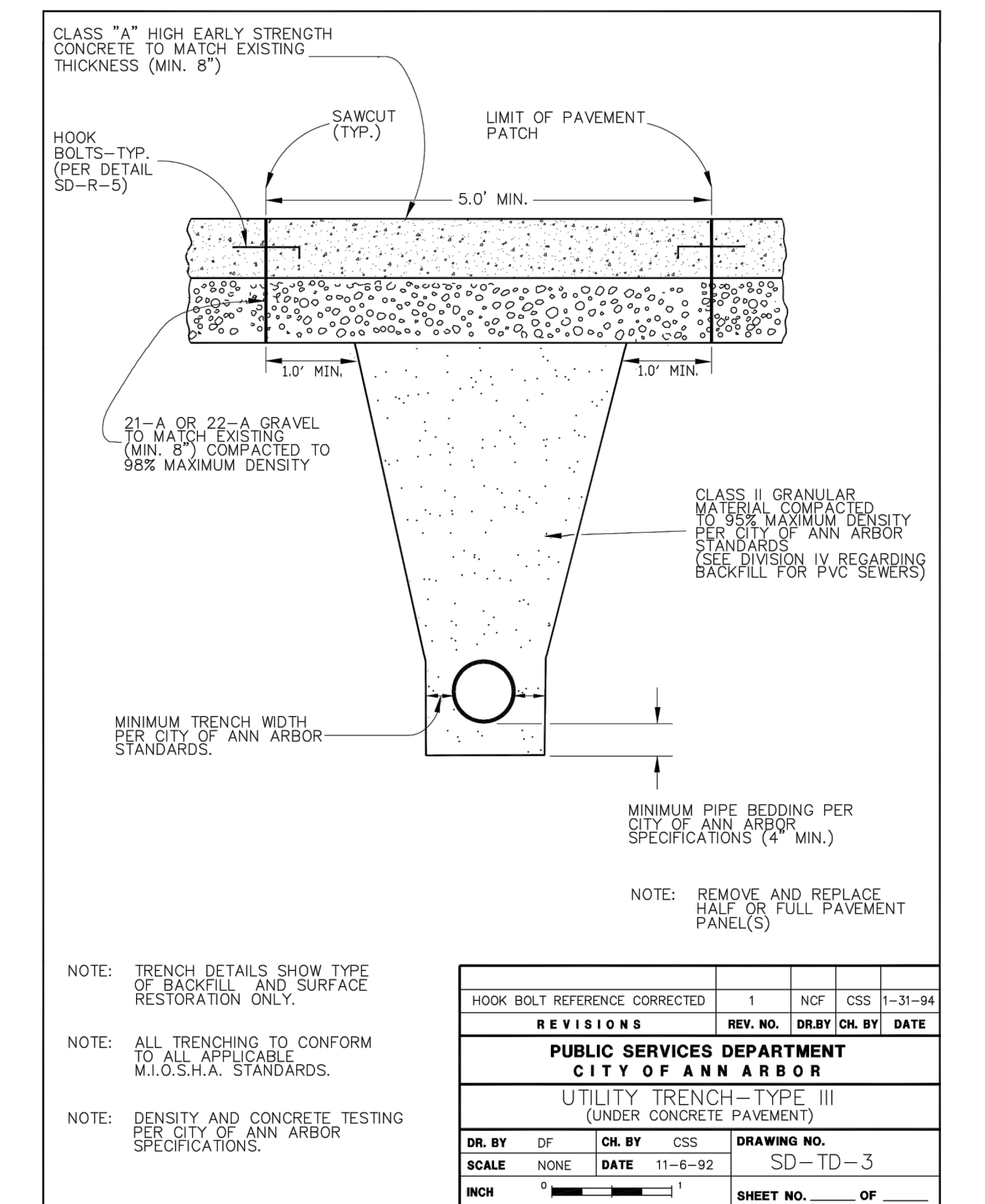
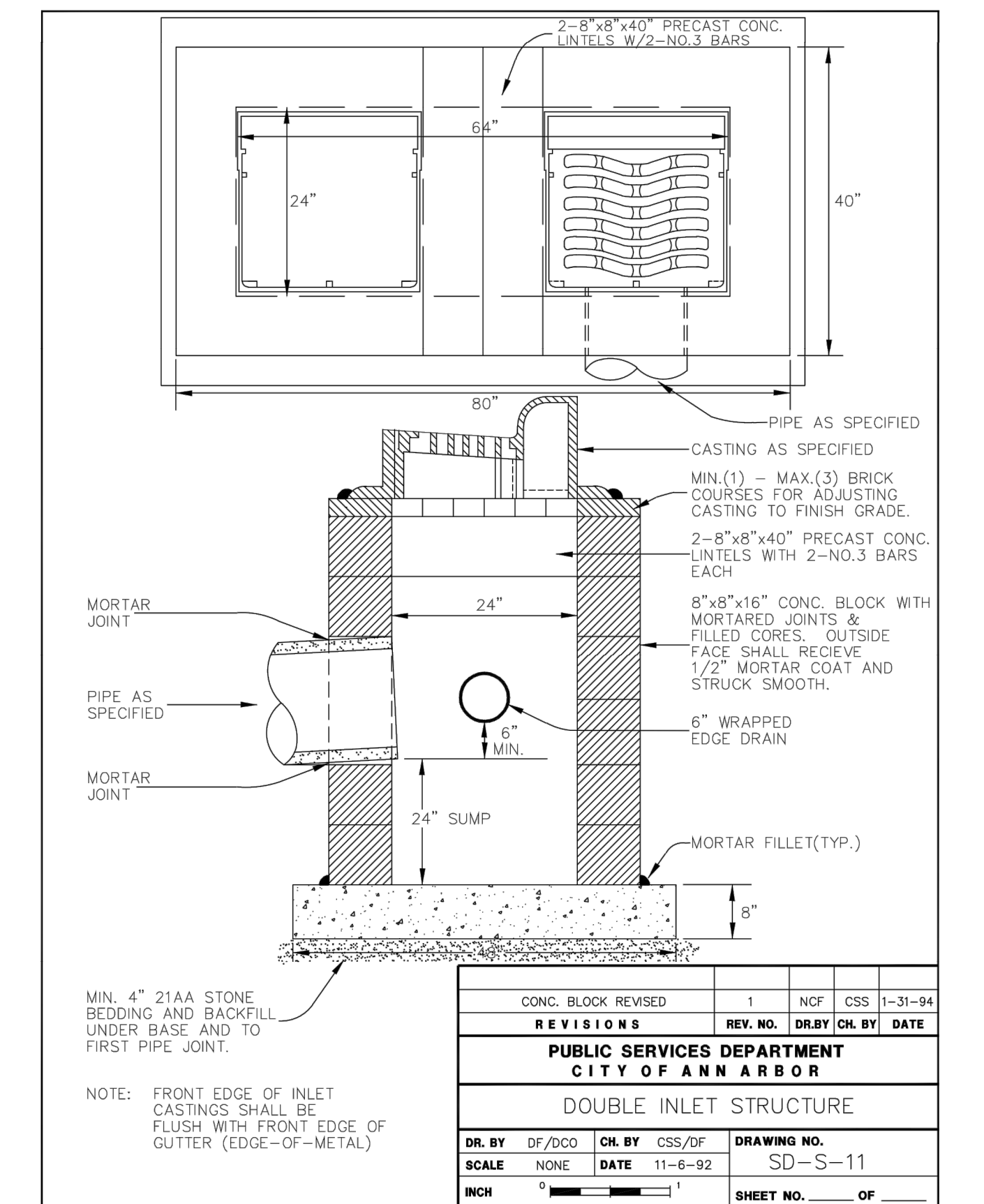
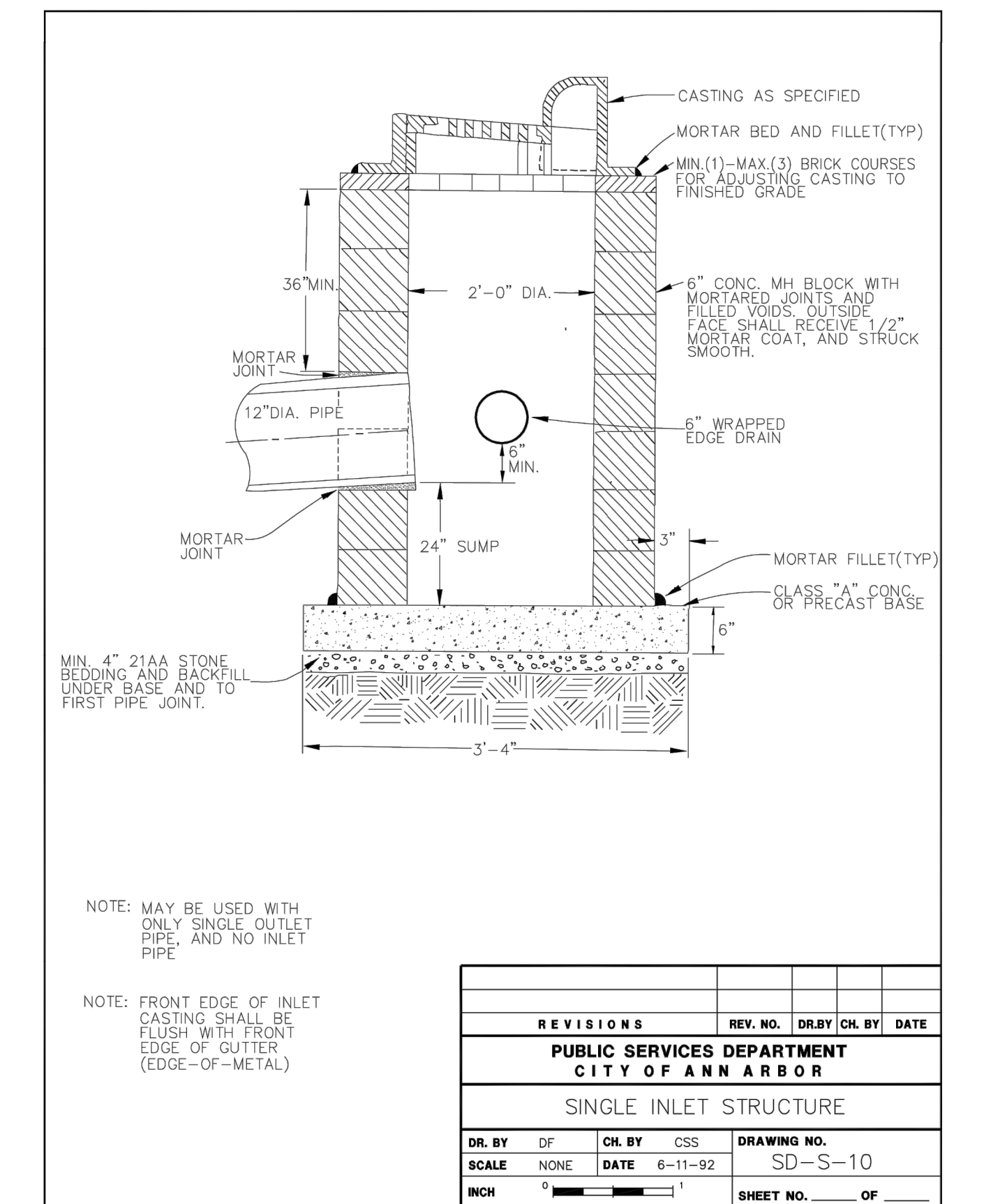
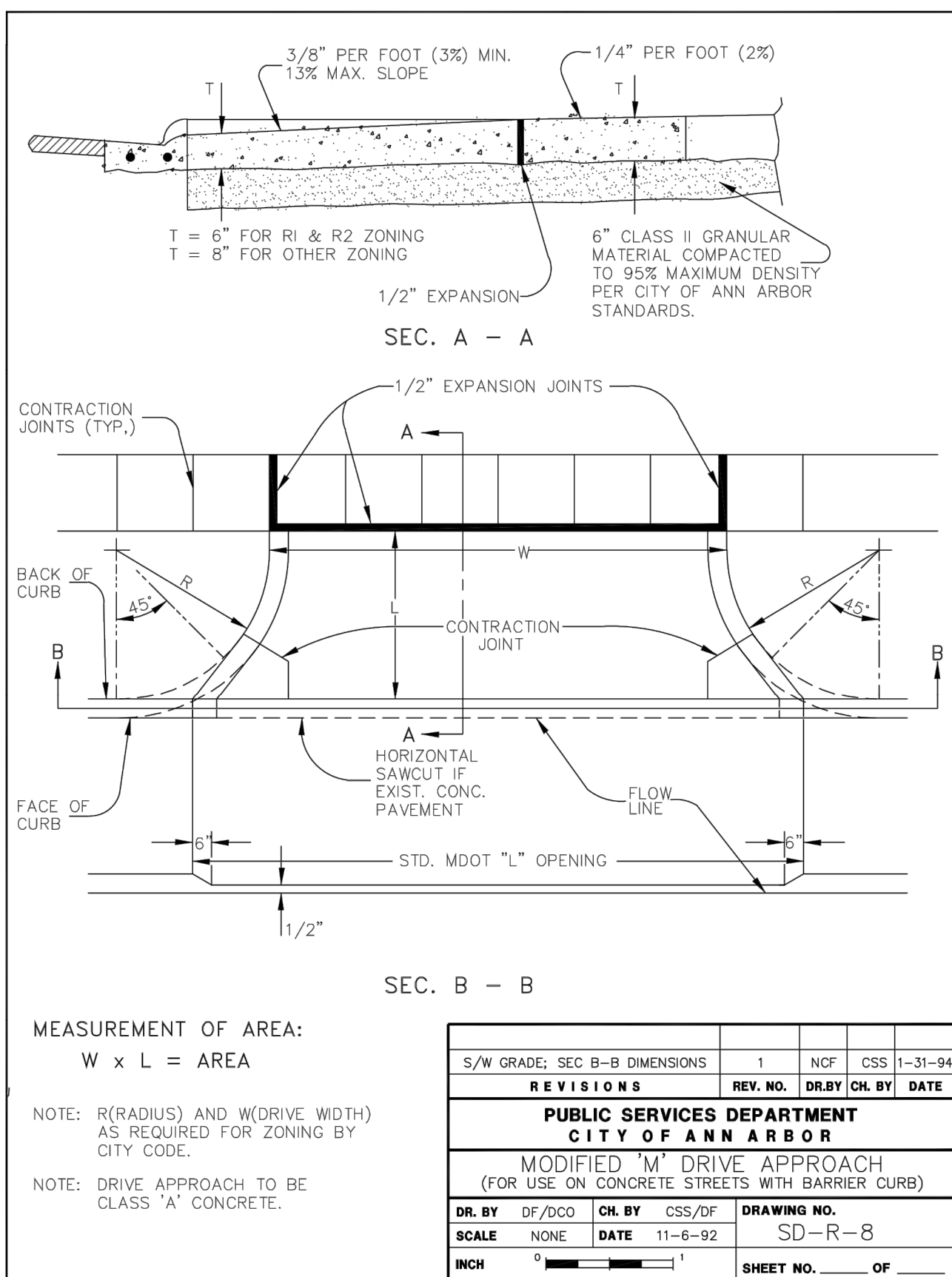
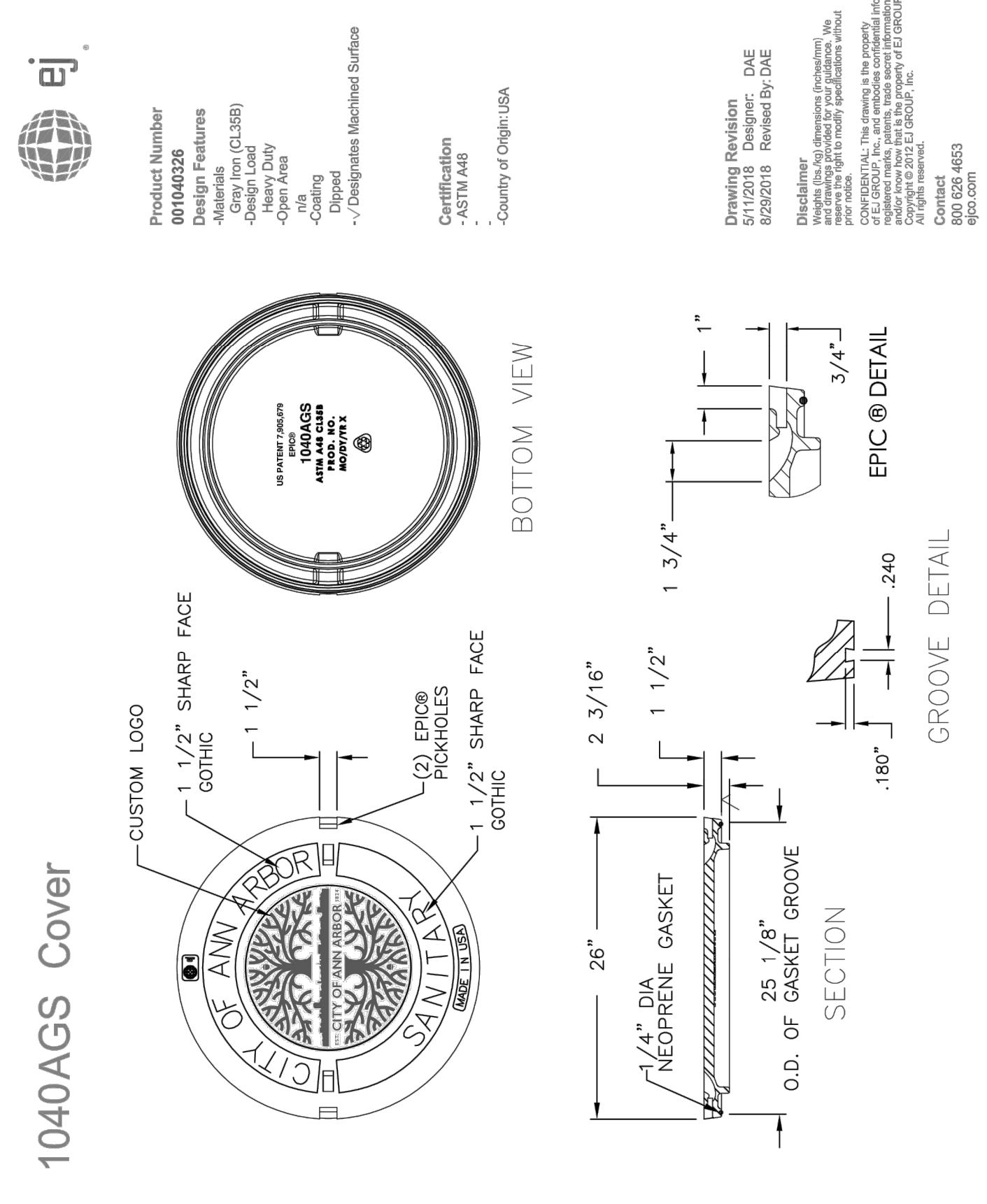
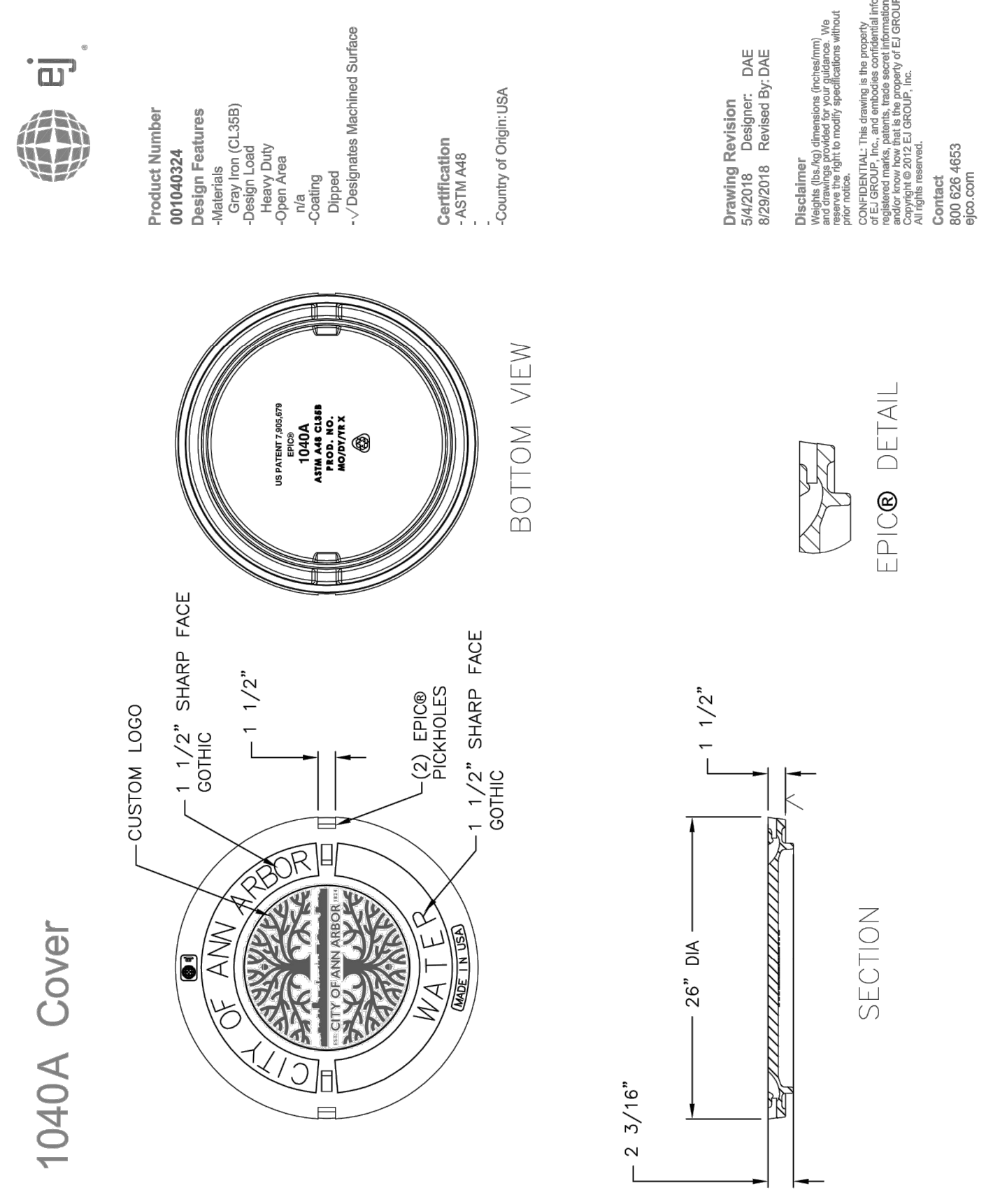
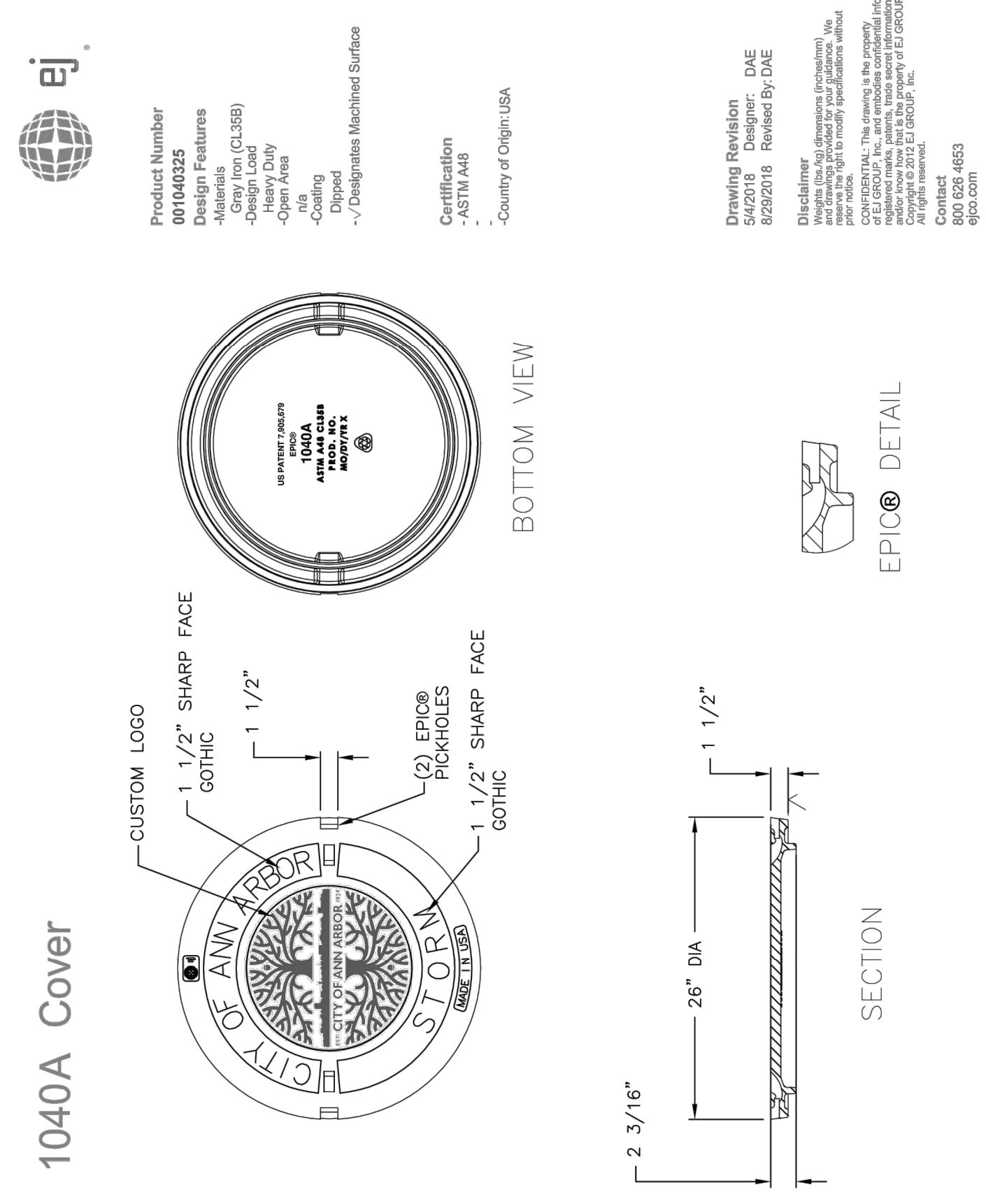
TYPE OF CASTING	NEEHAH FOUNDRY	EAST JORDAN IRON WORKS
Barrier Curb Inlet	R-3013B, Type S grate (500 Pounds)	7045, Type M1 grate (450 Pounds)
Barrier Curb Double Inlet	R-3249F, Type S grate (410 Pounds)	N/A
Mountable Curb Inlet	R-3034B, Type S grate (500 Pounds)	7065, Type M1 grate (470 Pounds)
Gutter Inlet	R-3448C, Type S grate (285 Pounds)	5080, Type M2 grate (315 Pounds)
Gutter Double Inlet	R-3448B, Type S grate (265 Pounds)	5000, Type M2 grate (285 Pounds)
Yard Drain	R-2560-E1 (285 Pounds)	1040, Type 02 grate (355 Pounds)
Yard Drain in City Park	N/A	1040, Type M1 grate (400 Pounds)
*Manhole (Water and Storm) Frame & Cover	N/A	1040, Type A Cover (400 Pounds)
**Watertight Manhole (Sanitary) Frame and Cover	N/A	1040, Type AGS Cover (400 Pounds)
Monument Box	N/A	8360 (100 Pounds)

Frames and covers must have machined bearing surfaces.

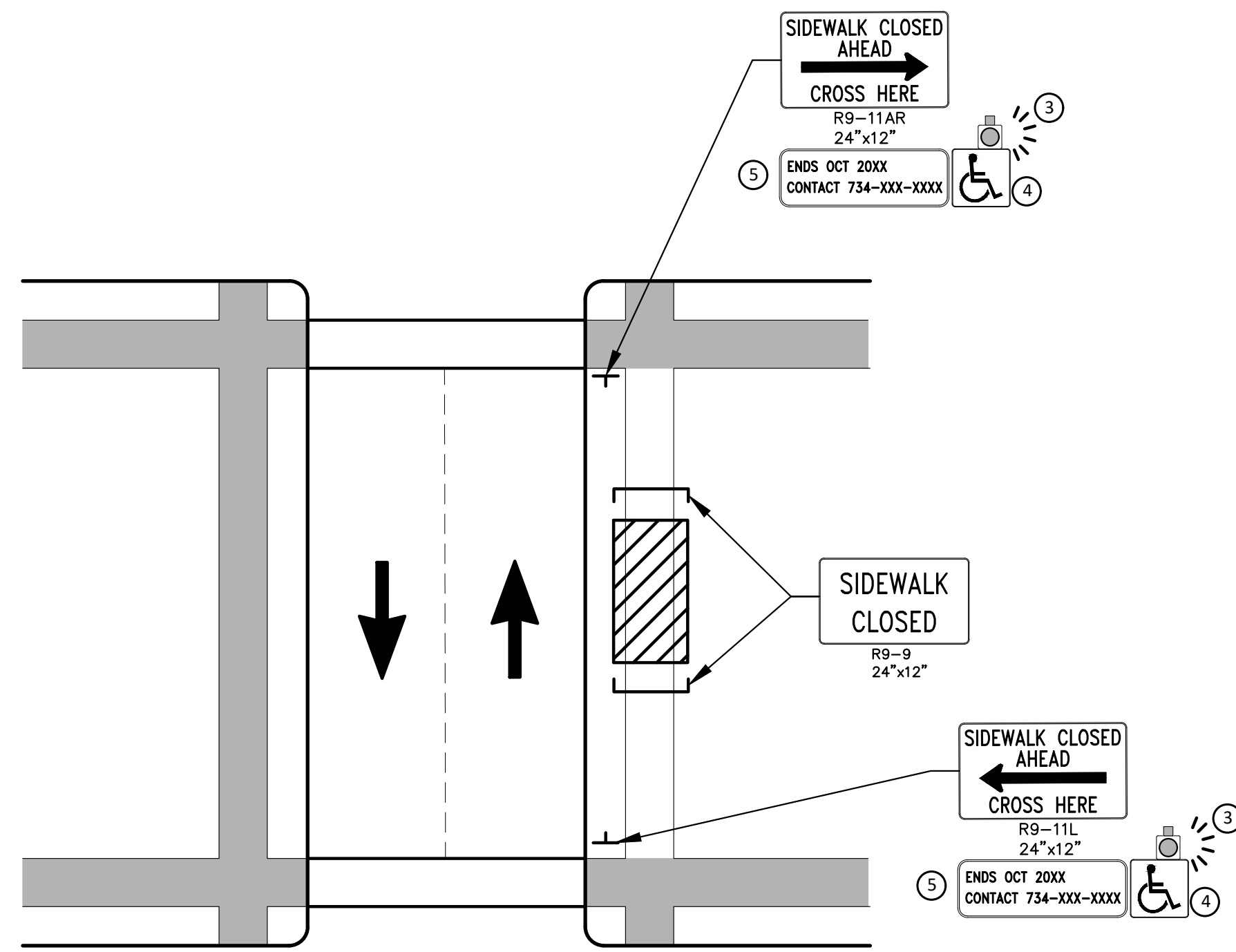
*Manhole covers shall be labeled with "CITY OF ANN ARBOR" and "WATER", "STORM" or "SANITARY", whichever is applicable. All covers shall include the City's custom logo in use at the time of the project.

**Sanitary manhole covers shall be 1040AGS with a 1/4" neoprene gasket to seal against the frame.

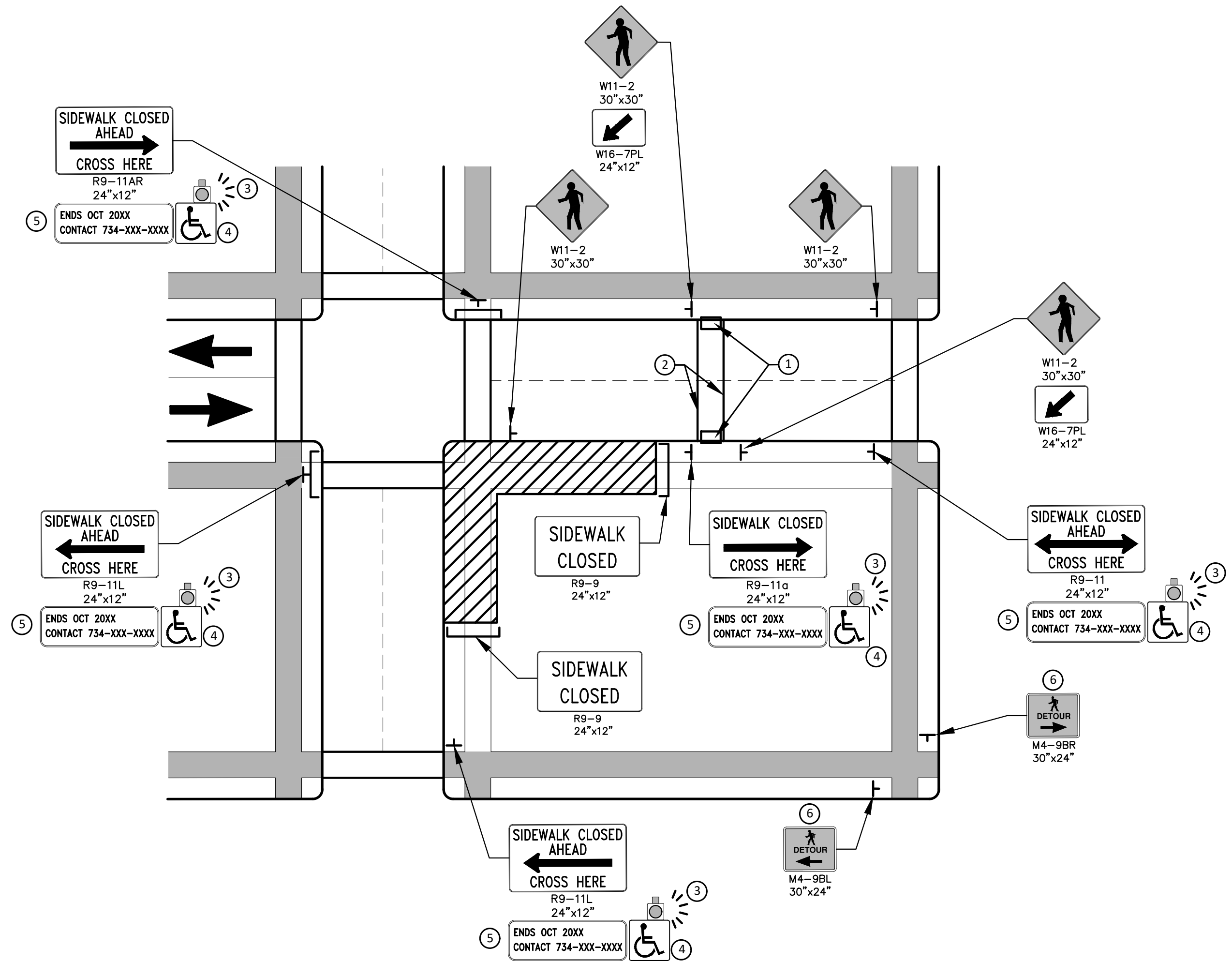
REVISIONS	REV. NO.	DR. BY	CH. BY	DATE
PUBLIC SERVICES DEPARTMENT CITY OF ANN ARBOR				
STANDARD CASTING SCHEDULE				
DR. BY	JPB	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	6-12-92	SD-GU-5
INCH	1" = 1'-0"			SHEET NO. OF



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PEDESTRIAN DETOUR USING OPPOSITE SIDE OF STREET



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

GENERAL NOTES

THESE NOTES ARE IN ADDITION OR CONJUNCTION OF THE SPECIAL PROVISION FOR MAINTENANCE OF TRAFFIC AND THE PROCESS CLAUSE. REQUIREMENTS FROM ALL SHALL BE EXPECTED.

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 5 DAYS (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 BE PAID IN ACCORDANCE WITH AND UTILIZING THE PAY ITEMS IDENTIFIED IN THE CONTRACT SPECIAL PROVISION FOR MAINTENANCE OF TRAFFIC.

LEGEND

- SIGN
- ▨ EXISTING PEDESTRIAN SURFACE
- ▨ WORK AREA
- ▬ PEDESTRIAN CHANNELIZING DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE



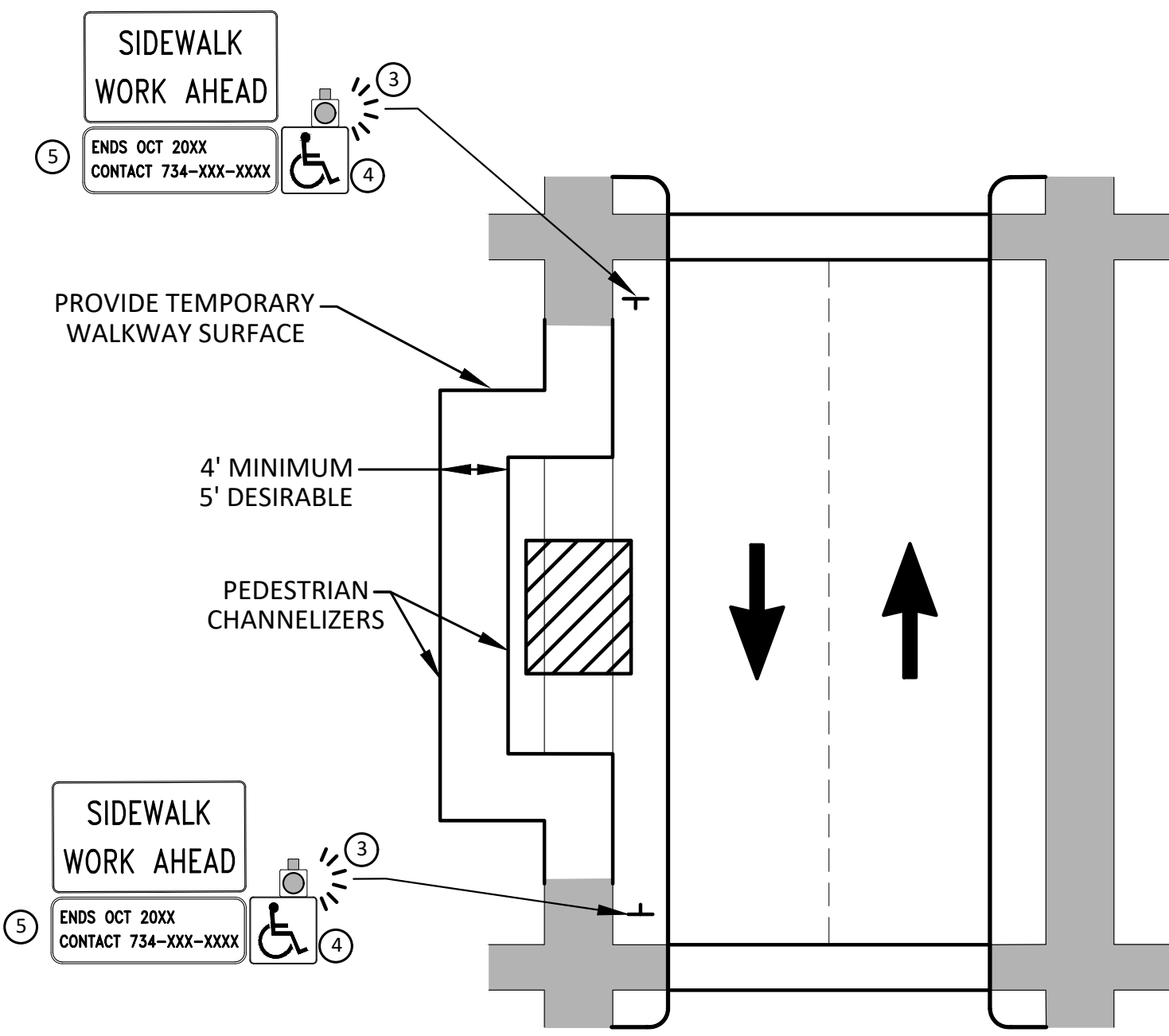
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
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ANN ARBOR, MI 48106-8647
www.a2gov.org



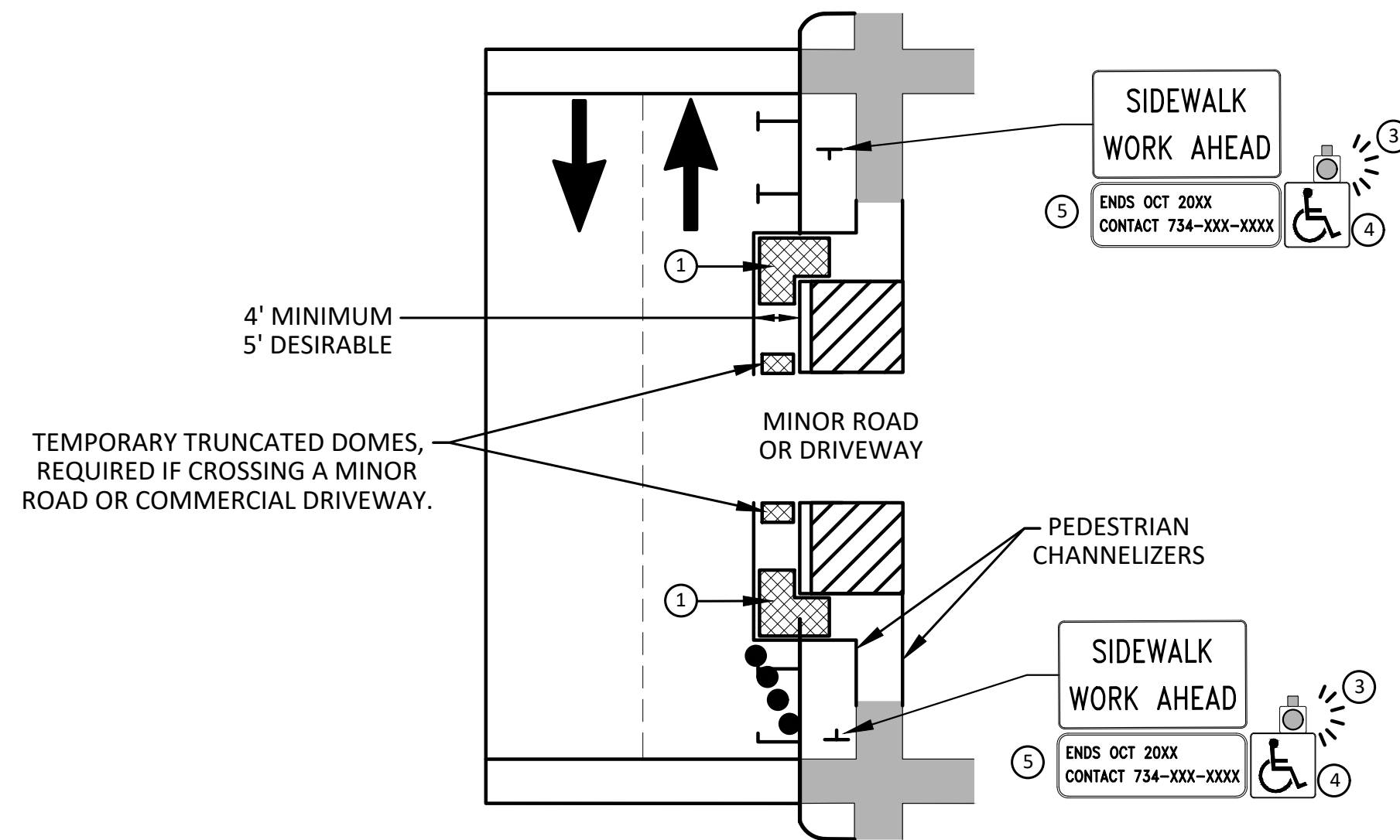
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DETAILS
SCALE: N.T.S.
DRAWING No. 2020024-10

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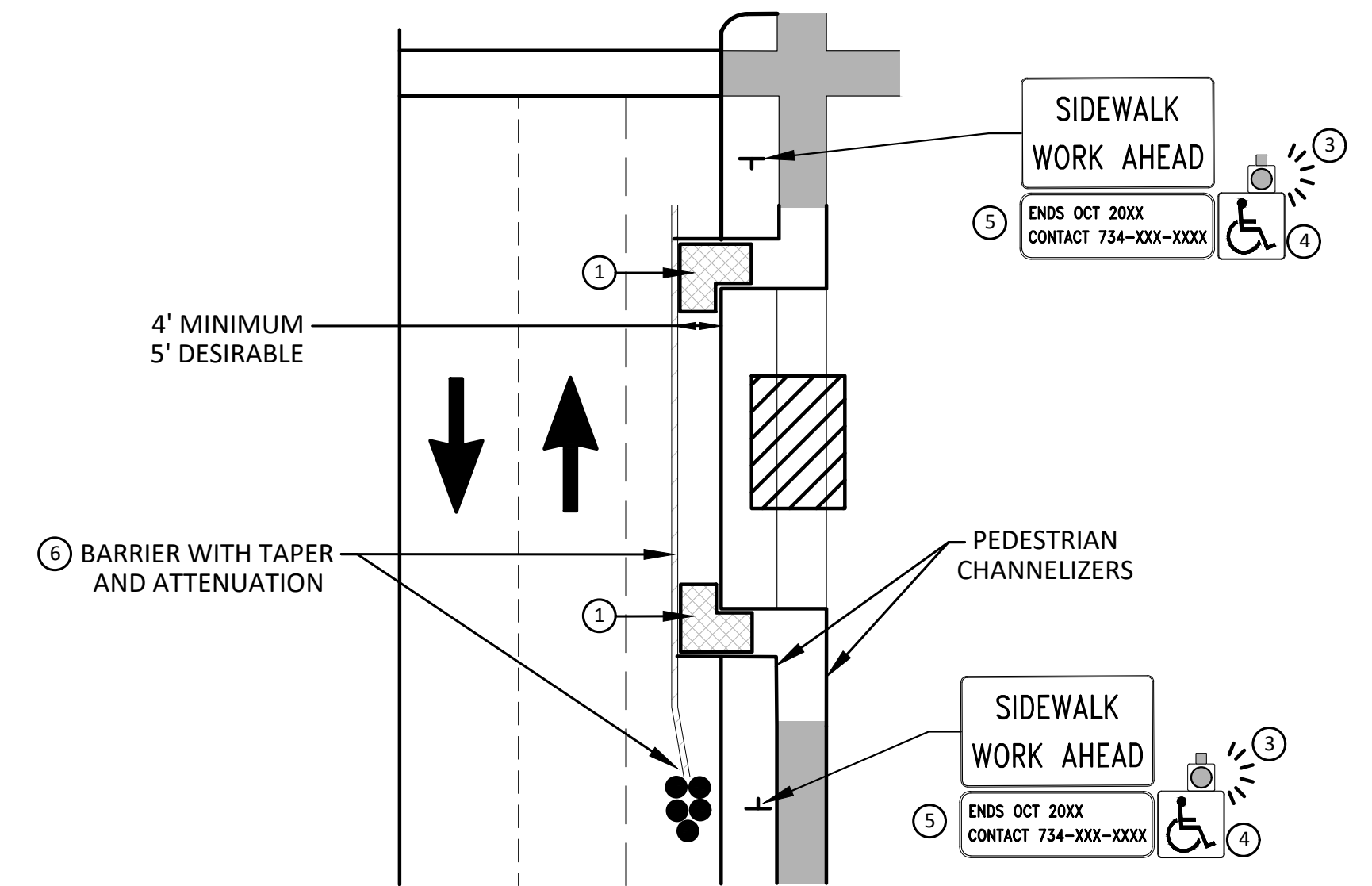


**BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY**
BYPASS TYPE A

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



**SIDEWALK BYPASS USING PARKING OR
SHOULDER ON LOW SPEED ROADWAY**
BYPASS TYPE B



**SIDEWALK BYPASS USING
SHOULDER OR PARKING LANE ON
HIGH SPEED ROADWAY**
BYPASS TYPE C

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SPECIFIC NOTES

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

LEGEND

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



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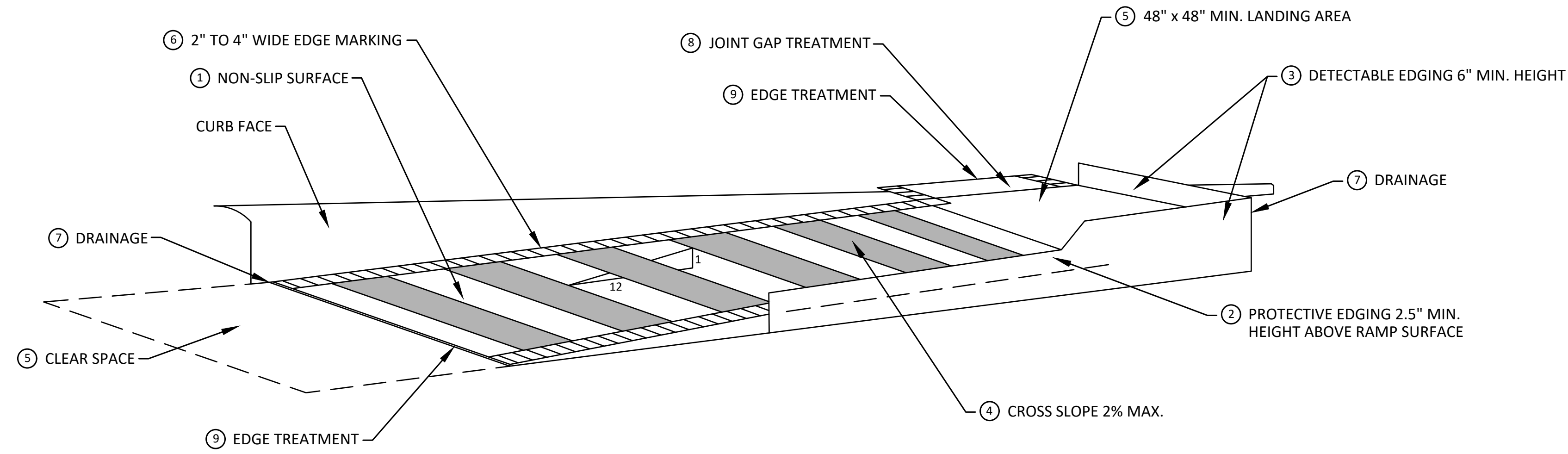
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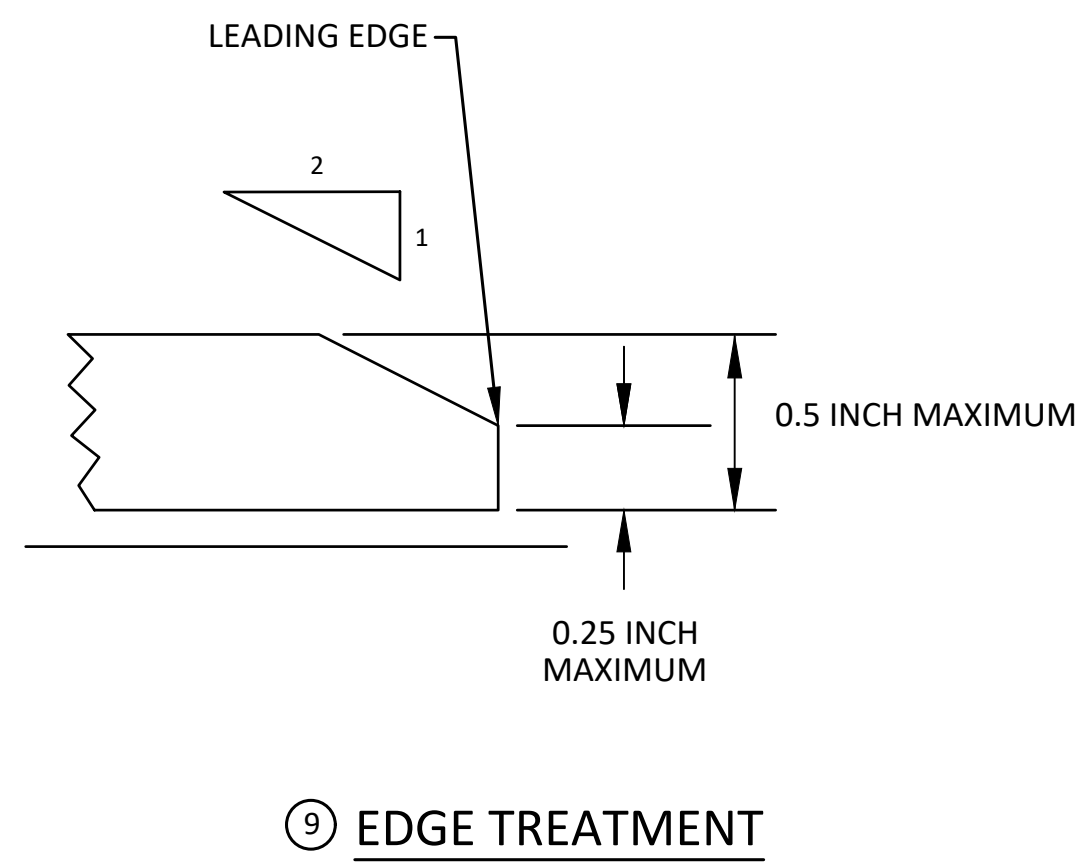
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DETAILS

SCALE : N.T.S.
DRAWING No. 2020024-11

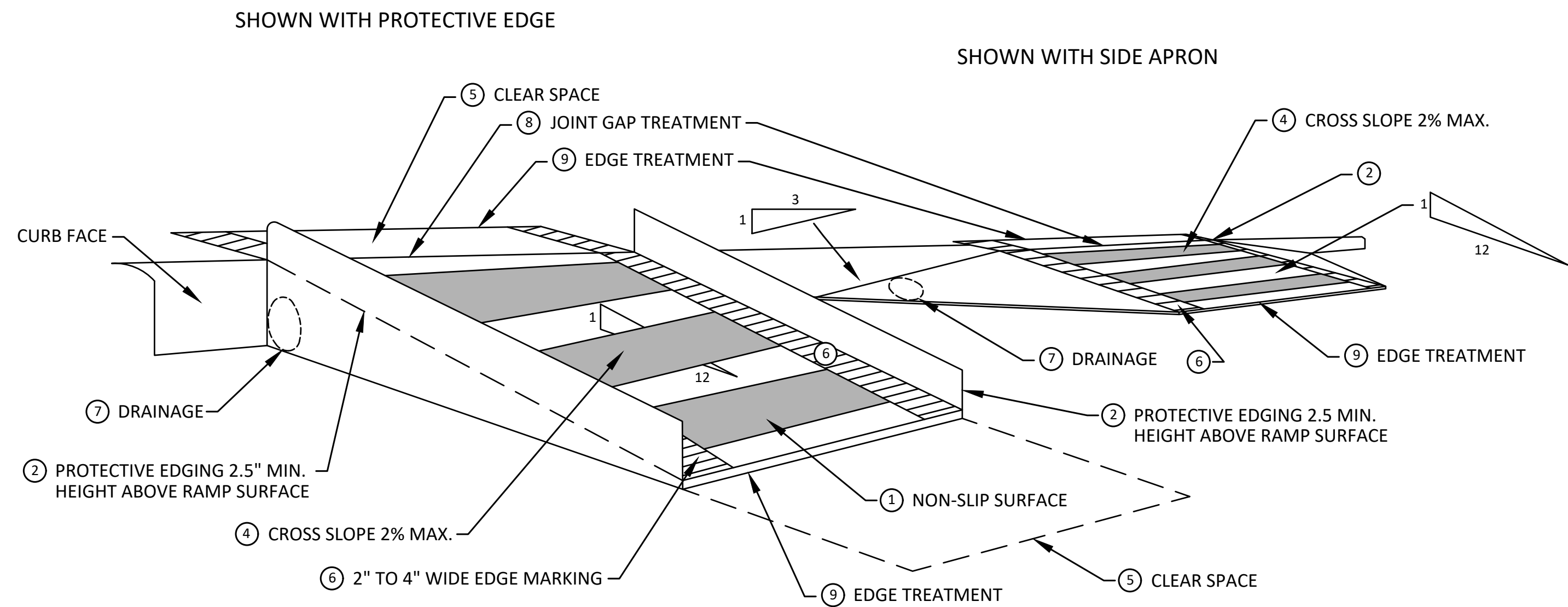
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TEMPORARY CURB RAMP
PARALLEL TO CURB



EDGE TREATMENT



TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

SPECIFIC NOTES

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



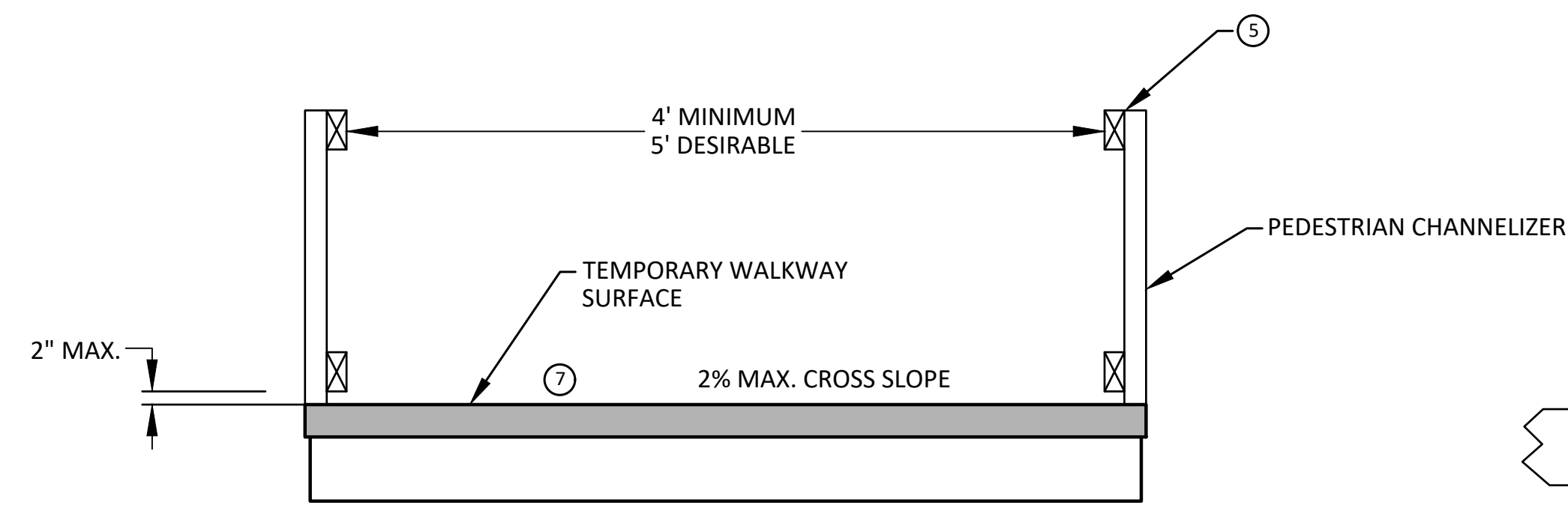
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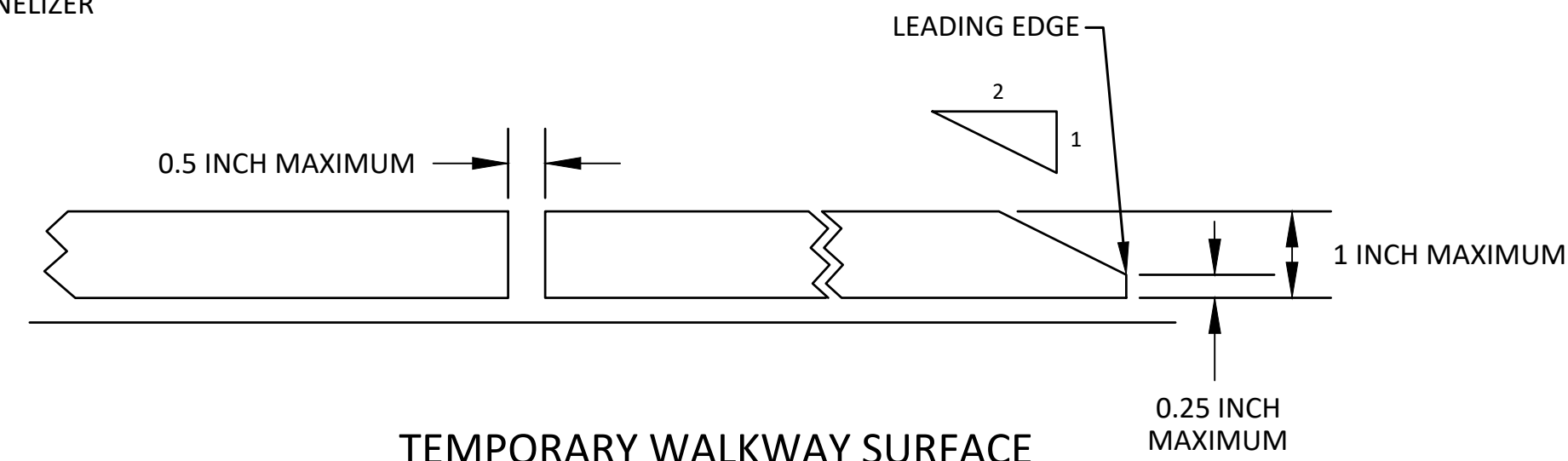


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TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DETAILS
SCALE: N.T.S.
DRAWING No. 2020024-12

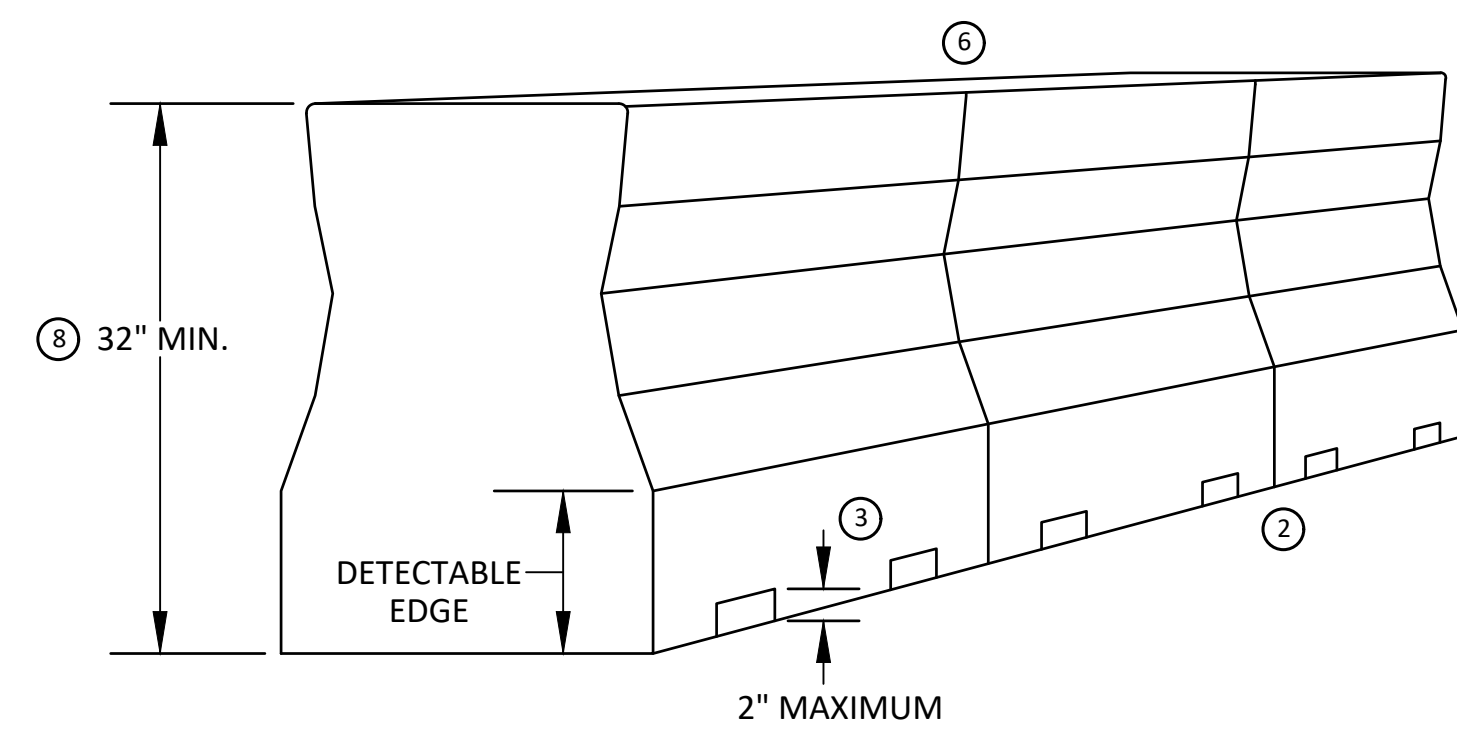
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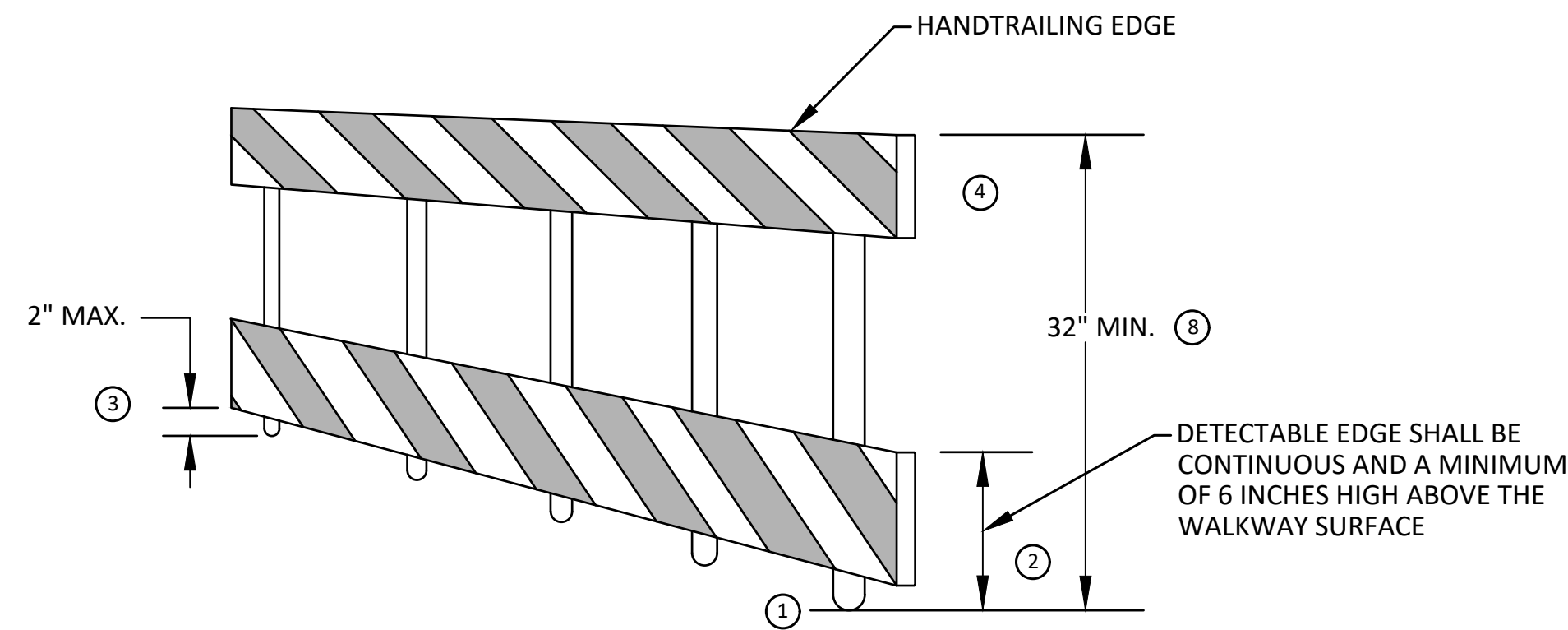
TEMPORARY PEDESTRIAN ACCESS



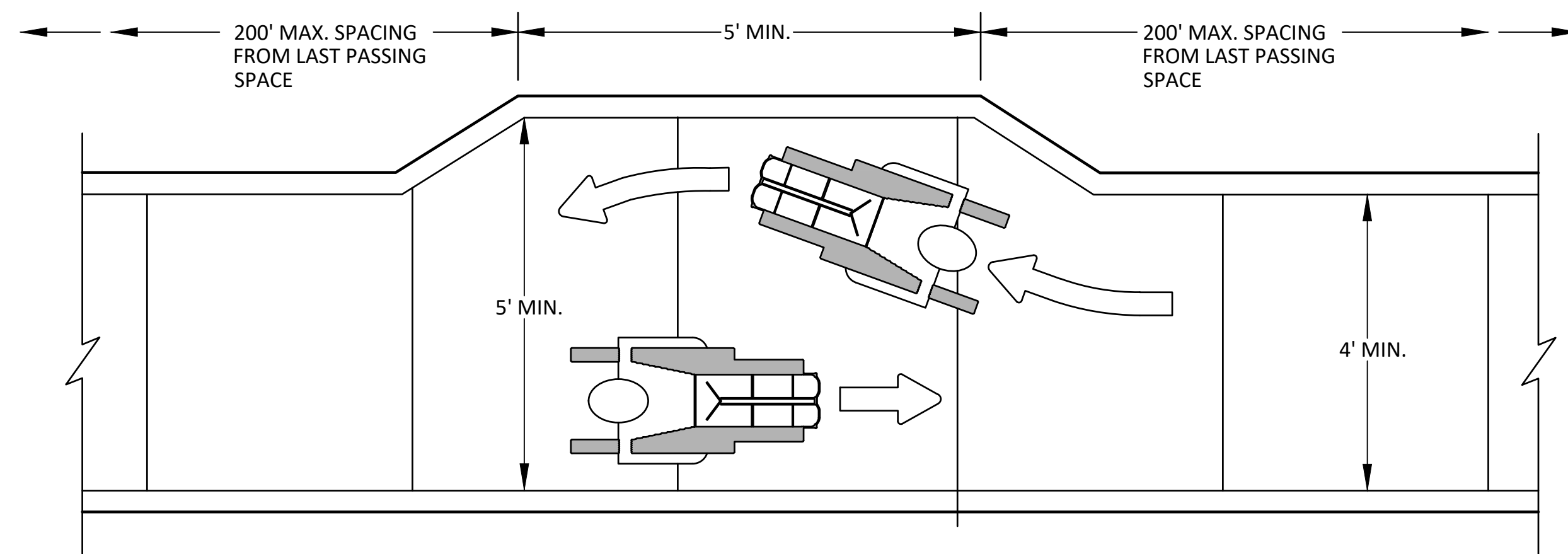
TEMPORARY WALKWAY SURFACE



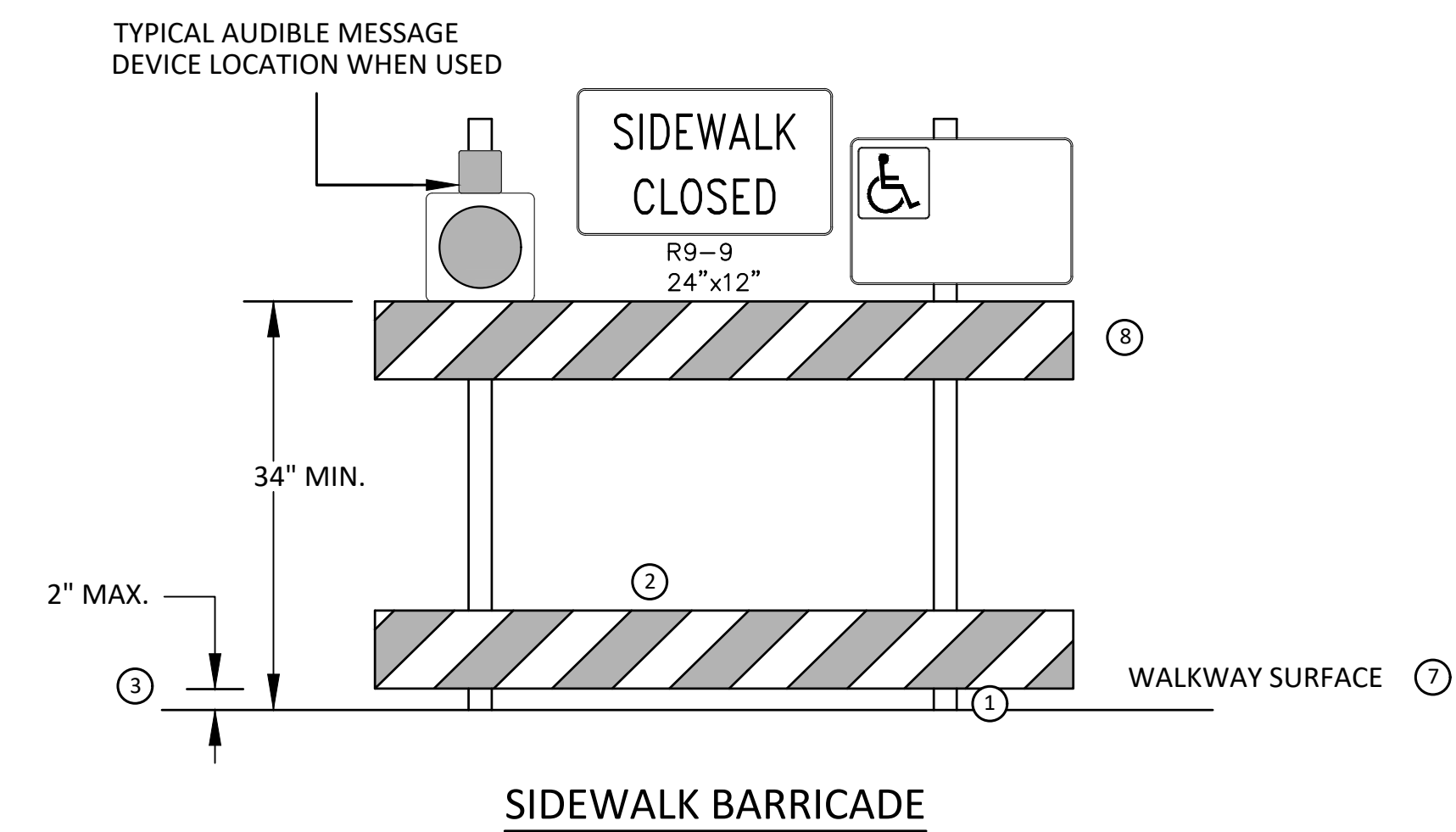
PEDESTRIAN CHANNELIZER USING A BARRIER
(MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER
(MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL



SIDEWALK BARRICADE

GENERAL NOTES

RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.
 ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIER'S APPLICATION.
 BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE BEING CLOSED.

SPECIFIC NOTES

- 1 ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.
- 2 DETECTABLE EDGES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES IN HEIGHT ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.
- 3 DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.
- 4 PROVIDE A HANDRAIL ON BOTH SIDES OF THE RAMP IF THE RAMP IS NOT EXPOSED TO VEHICLE TRAFFIC AND HAS A TOTAL RISE GREATER THAN 6 INCHES, AND A LENGTH GREATER THAN 72 INCHES.
 - ENSURE THE HANDRAIL IS 1.25 AND 1.5 INCHES WIDE AND CONFIGURED TO BE A "GRASPABLE" CROSS-SECTION.
 SEE CONSTRUCTION SUBSECTION 2.A FOR ADDITIONAL DETAILS.
 WHEN THE RAMP IS EXPOSED TO TRAFFIC, IN LIEU OF HANDRAILS, USE A PROTECTIVE EDGE 2.5 INCHES MINIMUM HEIGHT ABOVE THE RAMP SURFACE OR 1:10 FLARE ON BOTH SIDES OF THE RAMP.
- 5 ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.
- 6 ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE INTENDED CHANNELIZED PATH.
- 7 A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED.
- 8 LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES IN HEIGHT OR GREATER.



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 TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DETAILS

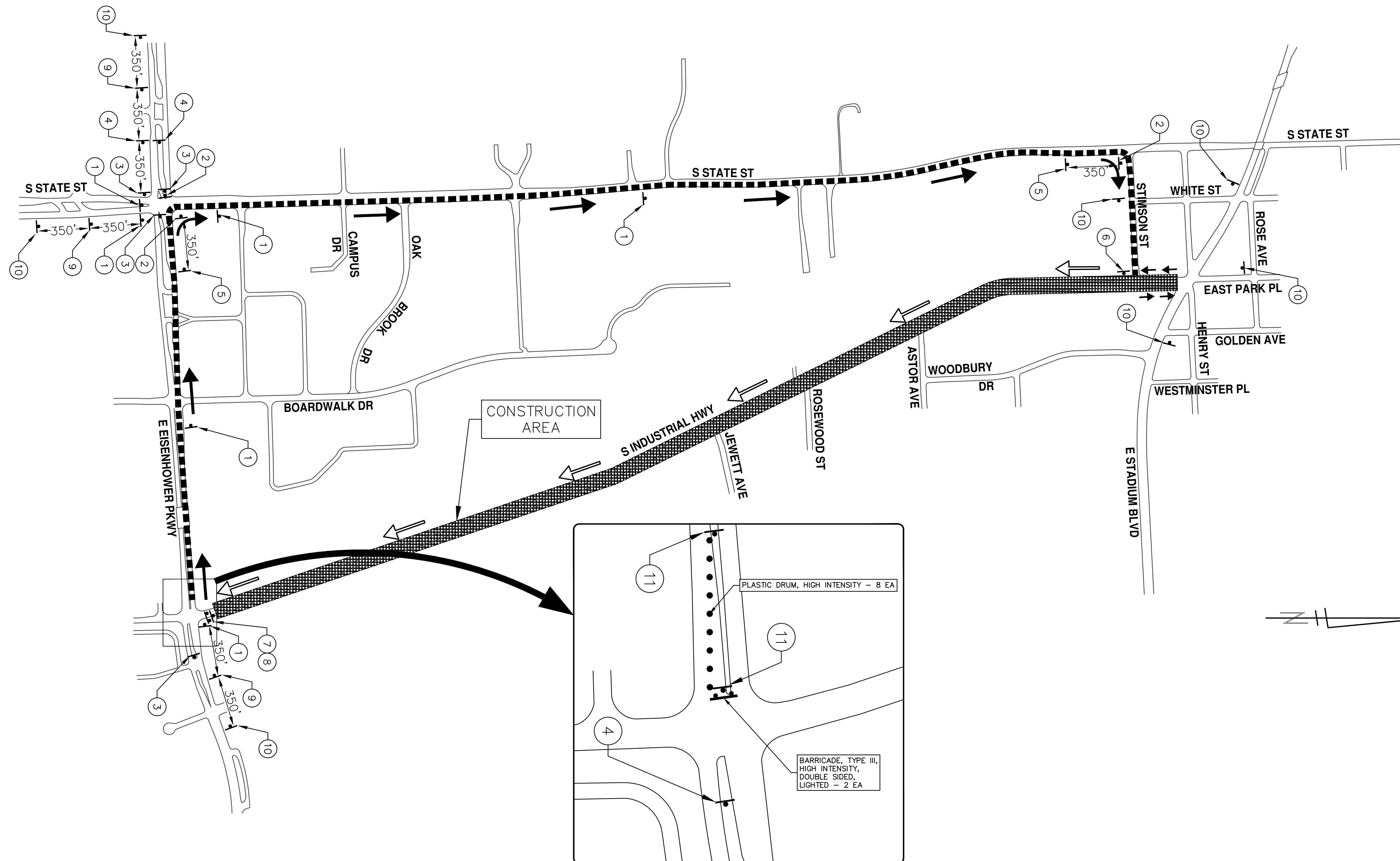
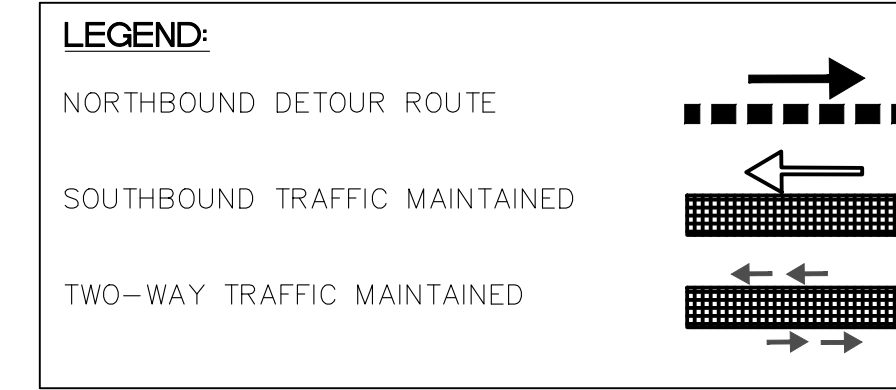
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 DRAWING No. 2020024-13
 SHEET No.

DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THE DETOUR IS TO BE IN PLACE DURING S. INDUSTRIAL HWY IMPROVEMENTS. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR NORTH BOUND S. INDUSTRIAL HWY 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" OR "SIGN, TYPE B, TEMP, PRISMATIC, FURN, SPECIAL".
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING NORTH BOUND S. INDUSTRIAL HWY DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

PCMS PHASE MESSAGES	
PRIOR TO CONSTRUCTION	DURING CONSTRUCTION
NBOUND INDUSTRIAL TO CLOSE	NBOUND INDUSTRIAL CLOSED
MM/DD/YY (DATE) FOLLOW DETOUR	FOLLOW POSTED DETOUR

NOTE: PCMS 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.



NORTH BOUND S. INDUSTRIAL HWY		
SIGN	NUMBER	QUANTITY
1. NB S INDUSTRIAL HWY DETOUR (up arrow)	D3-1	7
	M4-9S 30"x24"	7
2. NB S INDUSTRIAL HWY DETOUR (right arrow)	D3-1	4
	M4-9R 30"x24"	4
3. NB S INDUSTRIAL HWY DETOUR (left arrow)	D3-1	3
	M4-9L 30"x24"	3
4. NB S INDUSTRIAL HWY DETOUR (left arrow)	D3-1	2
	M4-9L (MOD) 30"x24"	2
5. NB S INDUSTRIAL HWY DETOUR (right arrow)	D3-1	2
	M4-9R (MOD) 30"x24"	2
6. NB S INDUSTRIAL HWY END DETOUR	D3-1	1
	M4-8A 24"x18"	1
7. ROAD CLOSED	R11-2 48"x30"	1
8. DETOUR (left arrow)	M4-10L 48"x18"	1
9. DETOUR AHEAD	W20-2 36"x36"	4
10. ROAD WORK AHEAD	W20-1 36"x36"	7
11. S INDUSTRIAL HWY	D3-1	7
	R3-2 24"x24"	1

BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 2 EACH
 SIGN, PORTABLE, CHANGEABLE MESSAGE - 3 EACH
 VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING

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

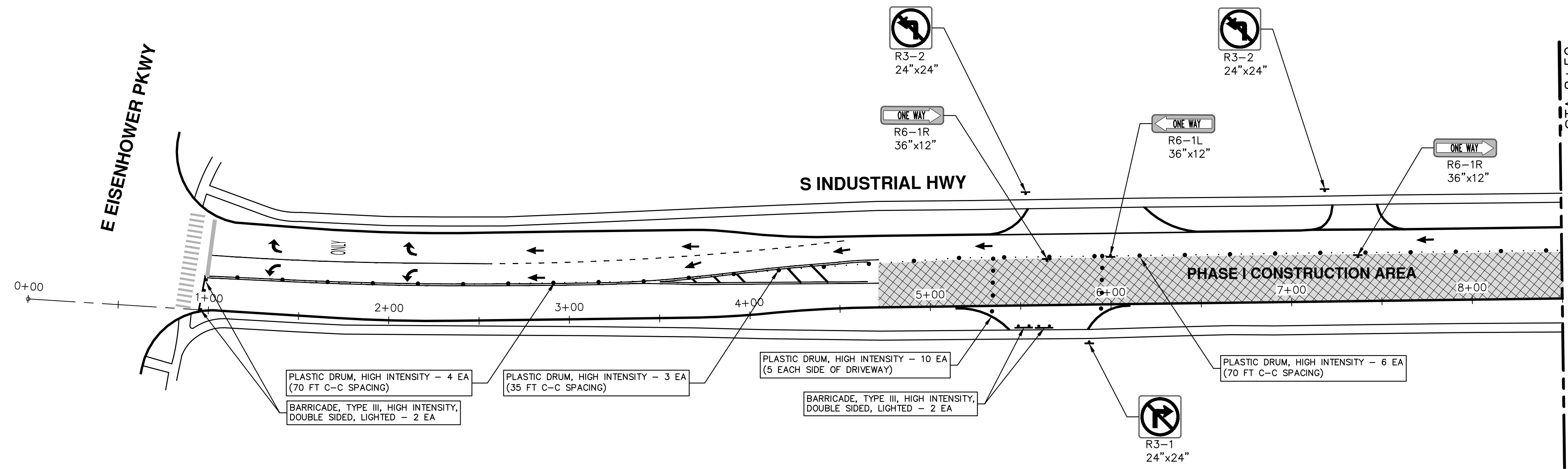
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 S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
 MAINTENANCE OF TRAFFIC - DETOUR PLAN

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 ANN ARBOR 734.794.4410
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SCALE PLAN: Custom
 DRAWING No. 2020024-14
 SHEET No. 14 OF 34

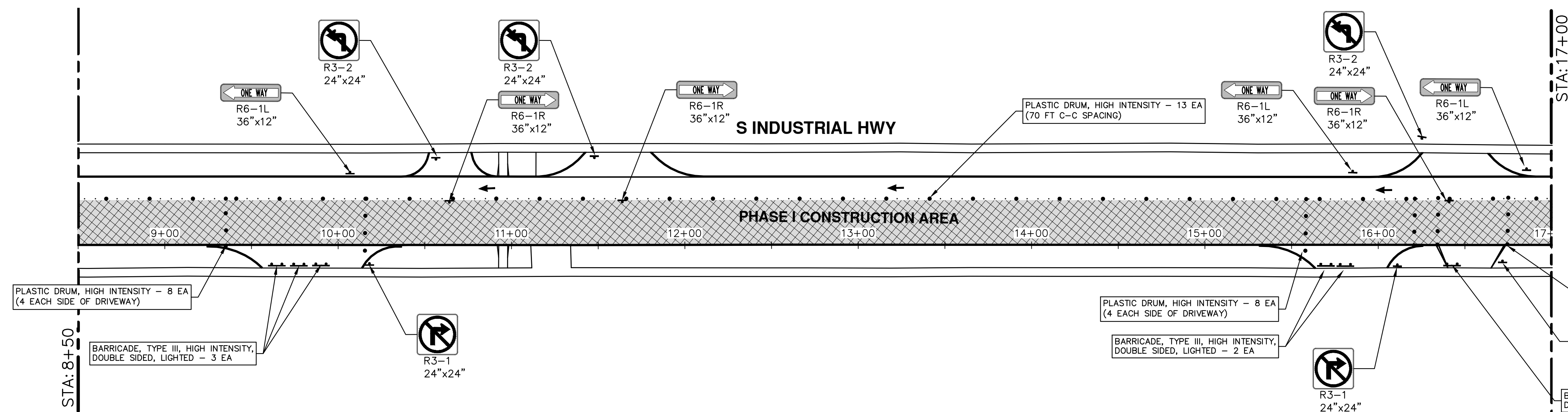
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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)

SIGN	NUMBER	QUANTITY
	R3-1 24"x24"	4
	R3-2 24"x24"	5
	R6-1R 36"x12"	5
	R6-1L 36"x12"	4
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 10 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 90 EA		



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

MAINTENANCE OF TRAFFIC - PHASE I

SCALE: 1" = 40'

DRAWING No. 2020024-15

SHEET No. 15 OF 34

STA. 0+00 - STA. 17+00

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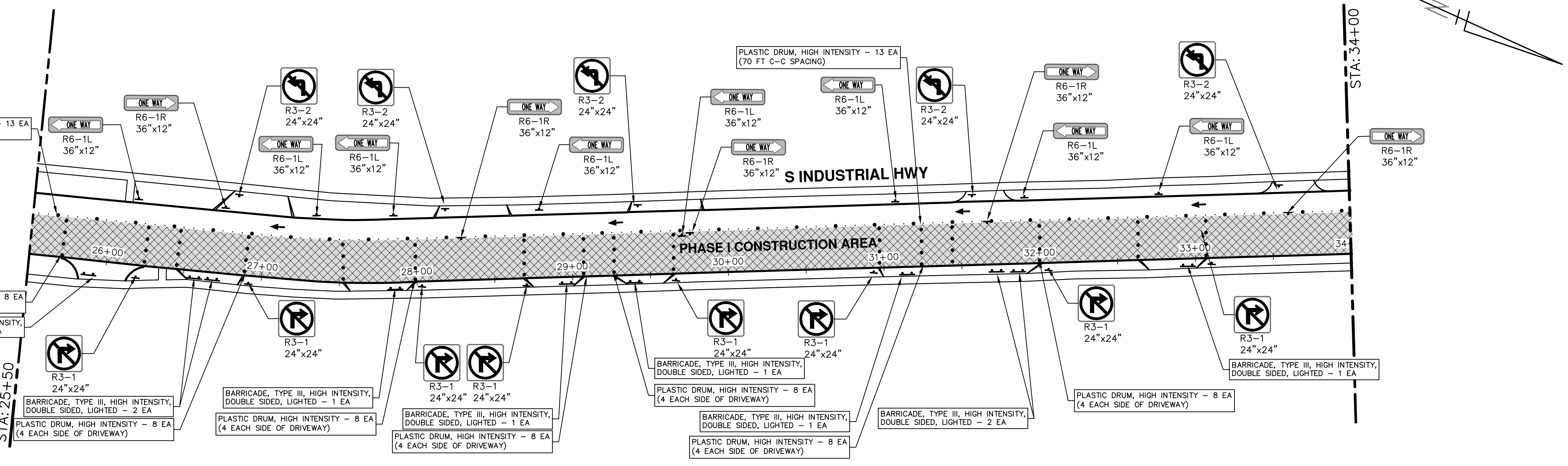
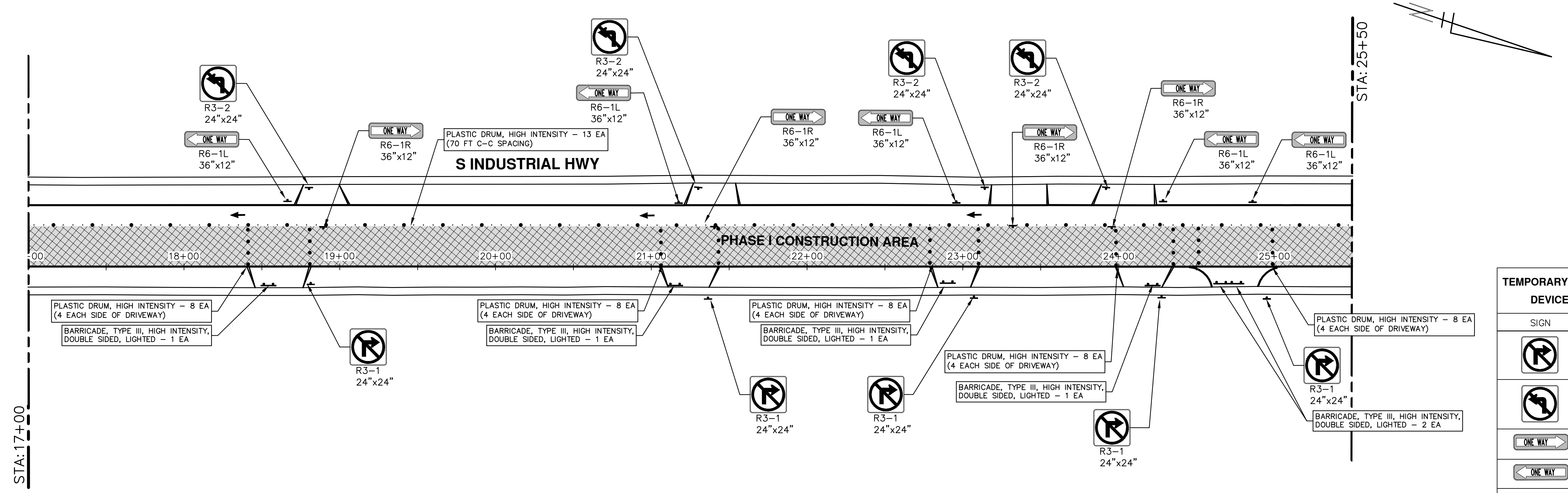
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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)

SIGN	NUMBER	QUANTITY
	R3-1 24"x24"	13
	R3-2 24"x24"	9
	R6-1R 36"x12"	9
	R6-1L 36"x12"	13
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 15 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 130 EA		

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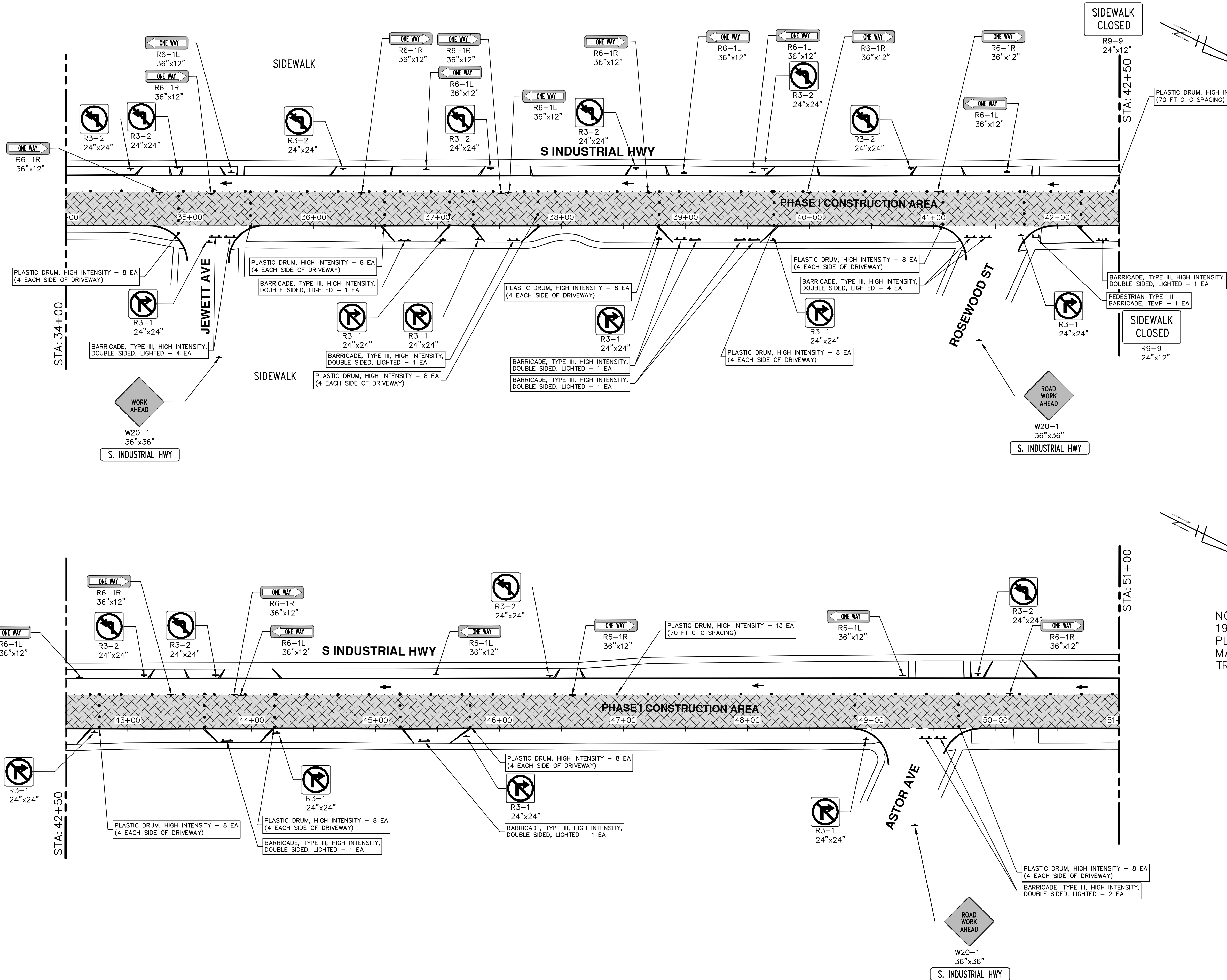
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MAINTENANCE OF TRAFFIC - PHASE I

STA. 17+00 - STA. 34+00

SHEET No. 16 OF 34

DRAWING No. 2020024-16

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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)

SIGN	NUMBER	QUANTITY
	W20-1 36"x36"	3
	D3-1	3
	R3-1 24"x24"	10
	R3-2 24"x24"	11
	R6-1R 36"x12"	11
	R6-1L 36"x12"	10
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED - 15 EACH		
PEDESTRIAN TYPE II CHANNELIZER, TEMP - 20 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 98 EA		

NOTE: SEE PLAN SHEETS 10 TO 13, 19, 25 AND 26 FOR DETAILS AND PLANS RELATED TO TEMPORARY MAINTENANCE OF PEDESTRIAN TRAFFIC.

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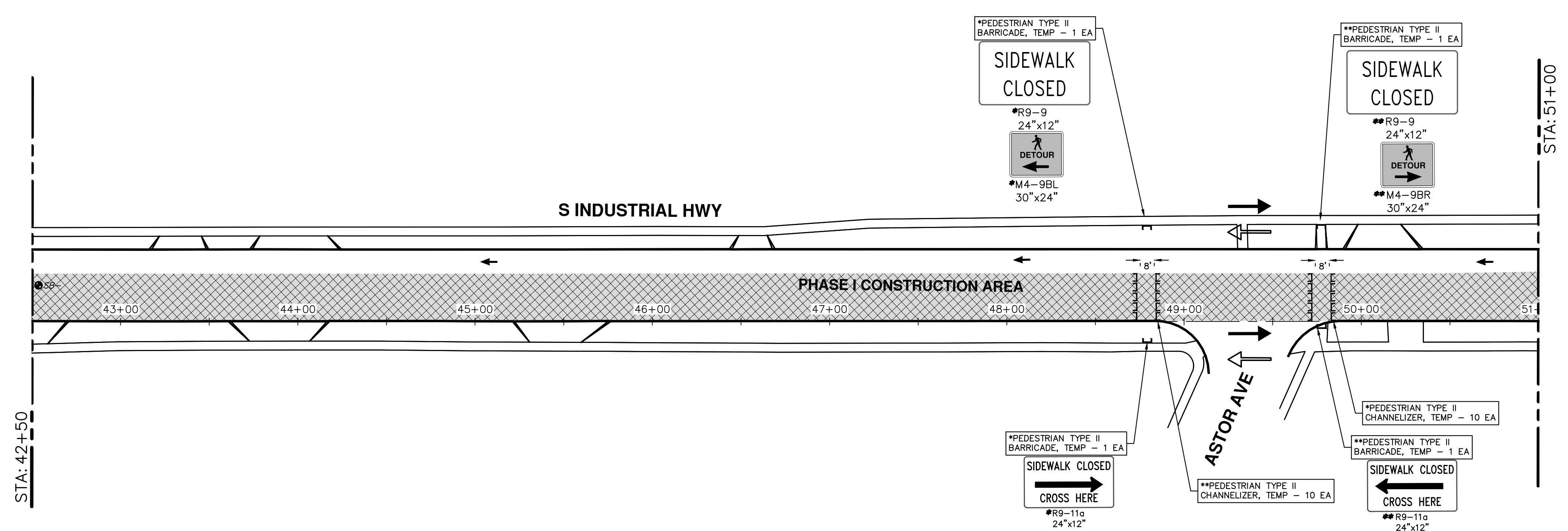
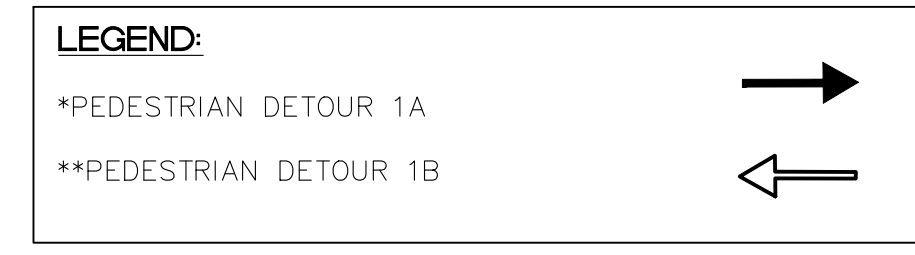
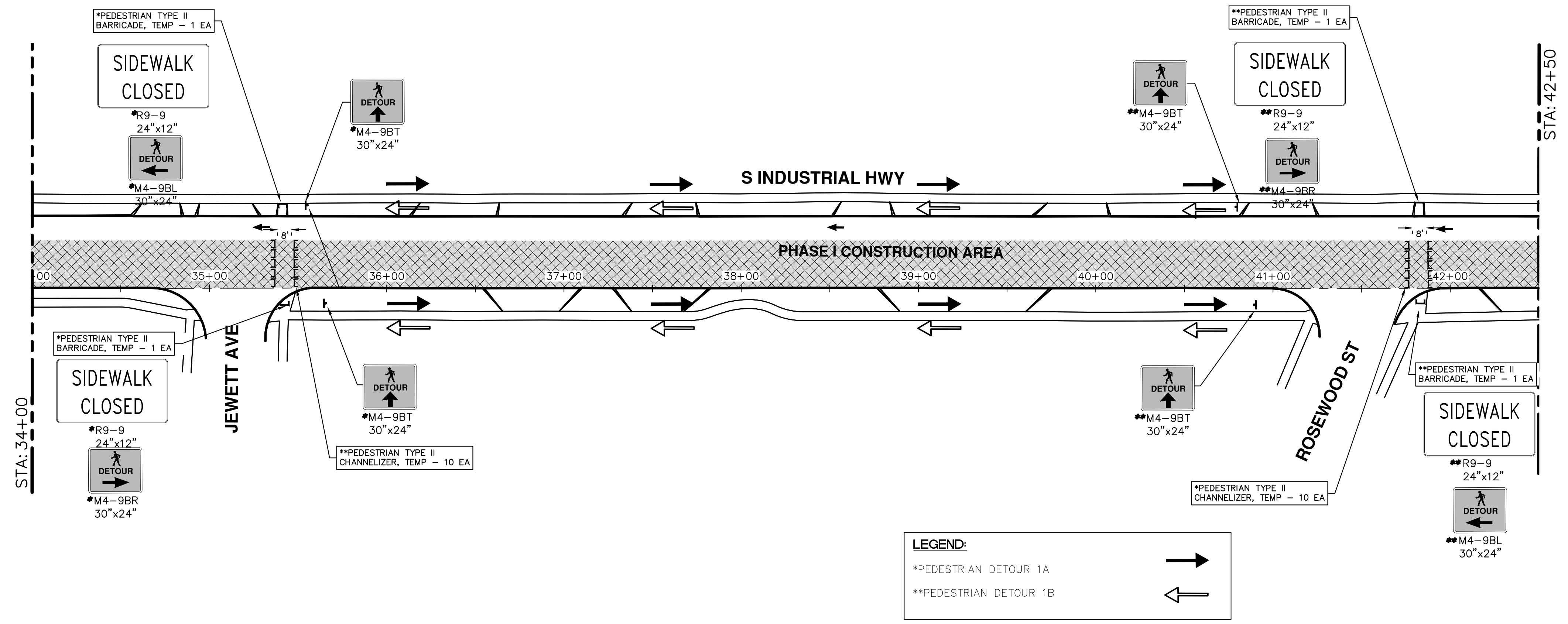
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MAINTENANCE OF TRAFFIC - PHASE I

SCALE: 1" = 40'
DRAWING No. 2020024-17
SHEET No. 17 OF 34

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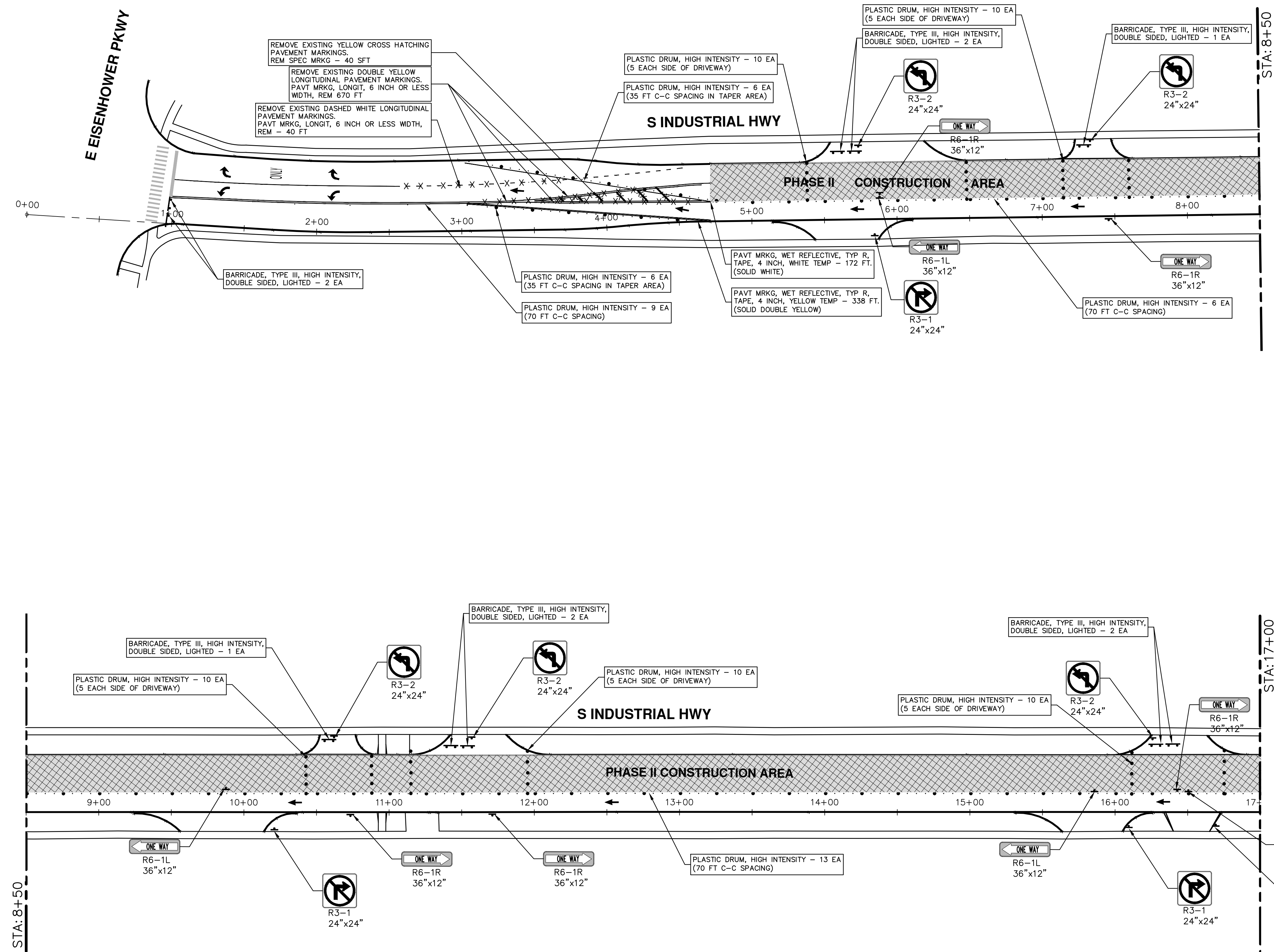
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S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
PEDESTRIAN DETOURS - PHASE I

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SCALE: 1" = 40'

DRAWING No. 2020024-19
SHEET No. 19 OF 34

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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)

SIGN	NUMBER	QUANTITY
	R3-1 24"x24"	4
	R3-2 24"x24"	5
	R6-1R 36"x12"	5
	R6-1L 36"x12"	4
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 10 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 90 EA		

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

MAINTENANCE OF TRAFFIC - PHASE II

SCALE: 1" = 40'

DRAWING No. 2020024-20

SHEET No. 20 OF 34

STA. 0+00 - STA. 17+00

PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 90 EA

BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 10 EACH

R6-1L 36"x12" 4

R6-1R 36"x12" 5

R3-2 24"x24" 5

R3-1 24"x24" 4

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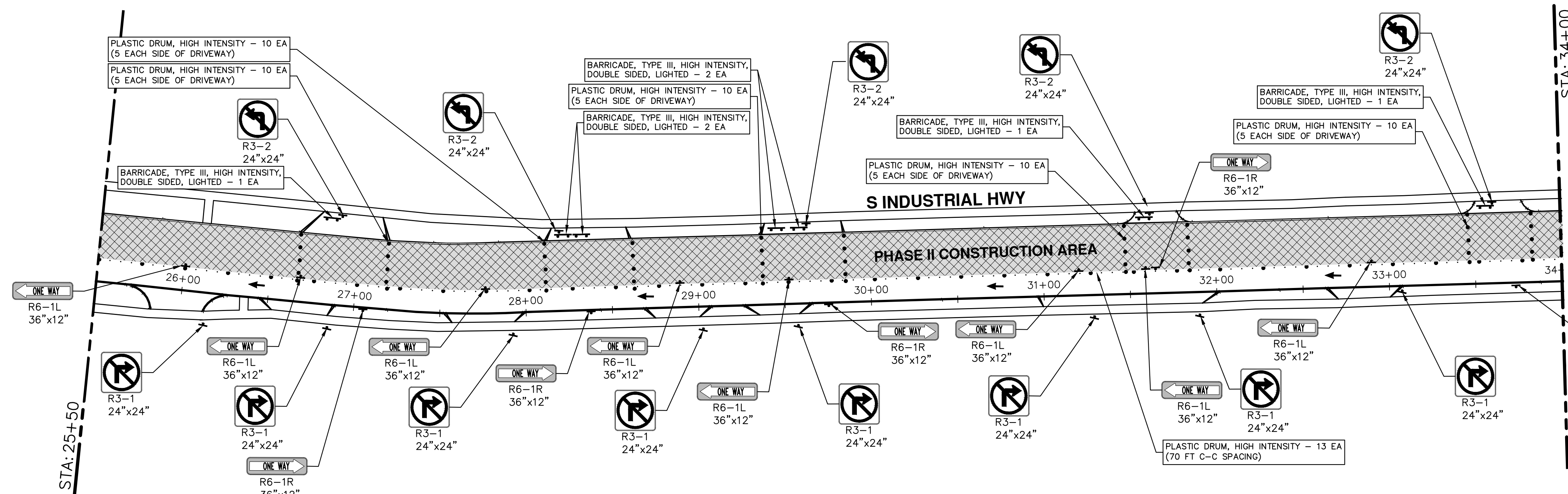
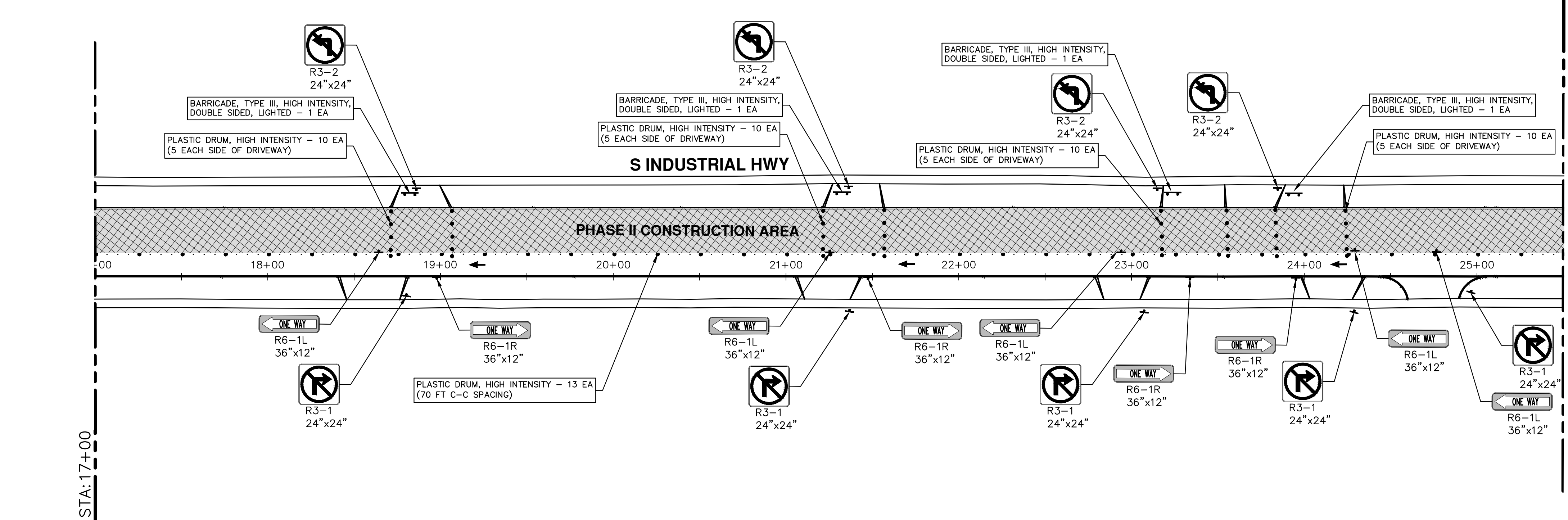
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	R3-1 24"x24"	13
	R3-2 24"x24"	9
	R6-1R 36"x12"	9
	R6-1L 36"x12"	13
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 11 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 116 EA		



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 MAINTENANCE OF TRAFFIC - PHASE II

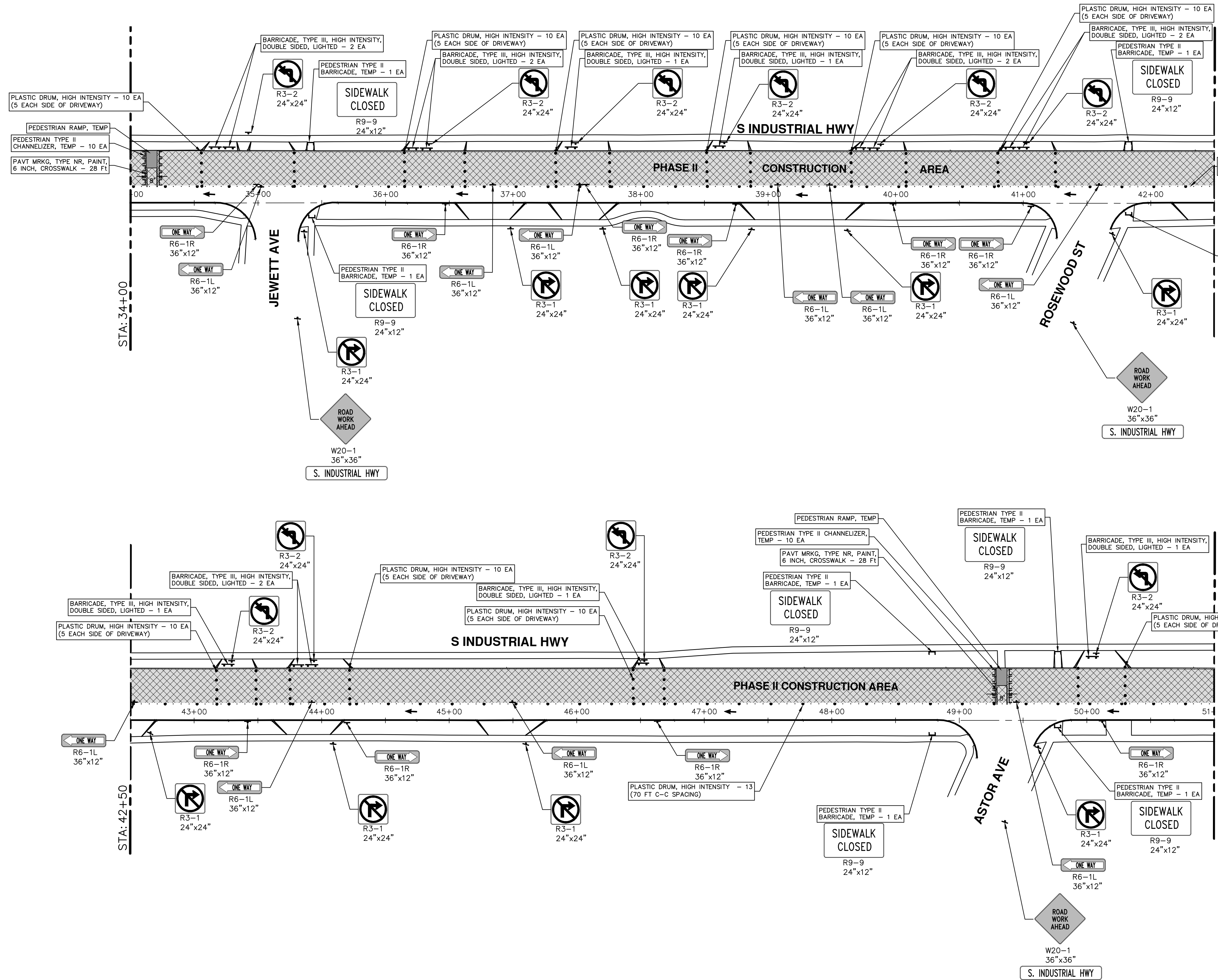
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SHEET No. 21 OF 34

STA. 17+00 - STA. 34+00

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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)

SIGN	NUMBER	QUANTITY
	W20-1 36"x36"	3
	D3-1	3
	R3-1 24"x24"	10
	R3-2 24"x24"	10
	R6-1R 36"x12"	10
	R6-1L 36"x12"	10
	R9-9 24"x12"	8

BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED - 15 EACH

PEDESTRIAN TYPE II BARRICADE, TEMP - 8 EACH

PEDESTRIAN TYPE II CHANNELIZER, TEMP - 20 EACH

PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 126 EA

NOTE: SEE PLAN SHEETS 10 TO 13, 19, 25 AND 26 FOR DETAILS AND PLANS RELATED TO TEMPORARY MAINTENANCE OF PEDESTRIAN TRAFFIC.

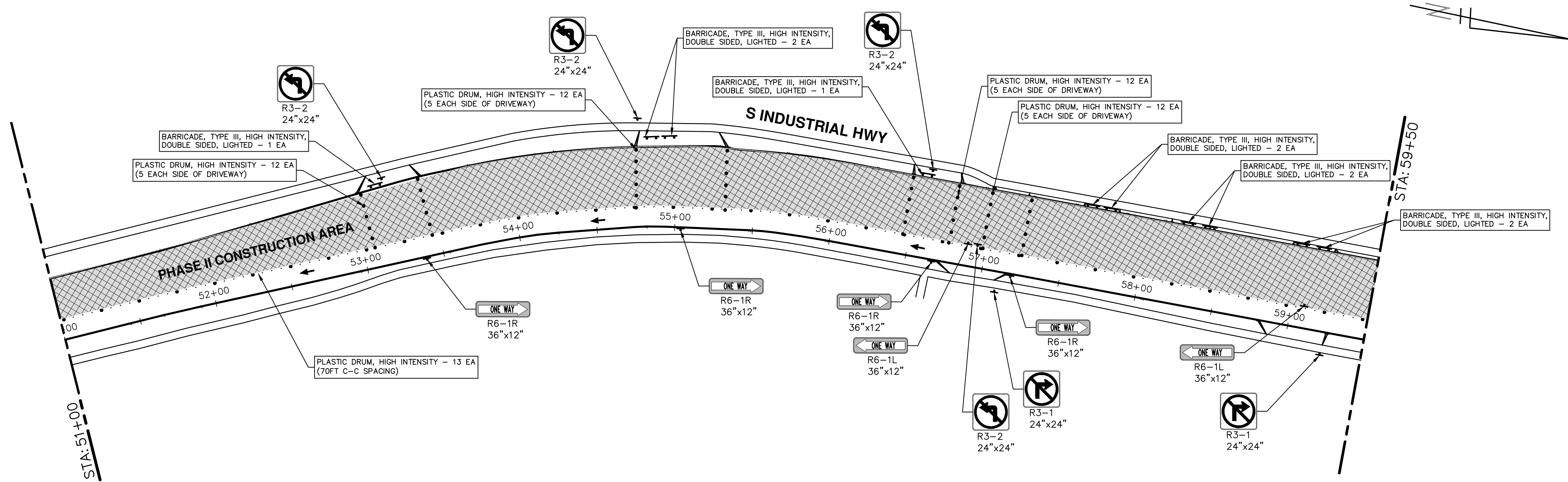
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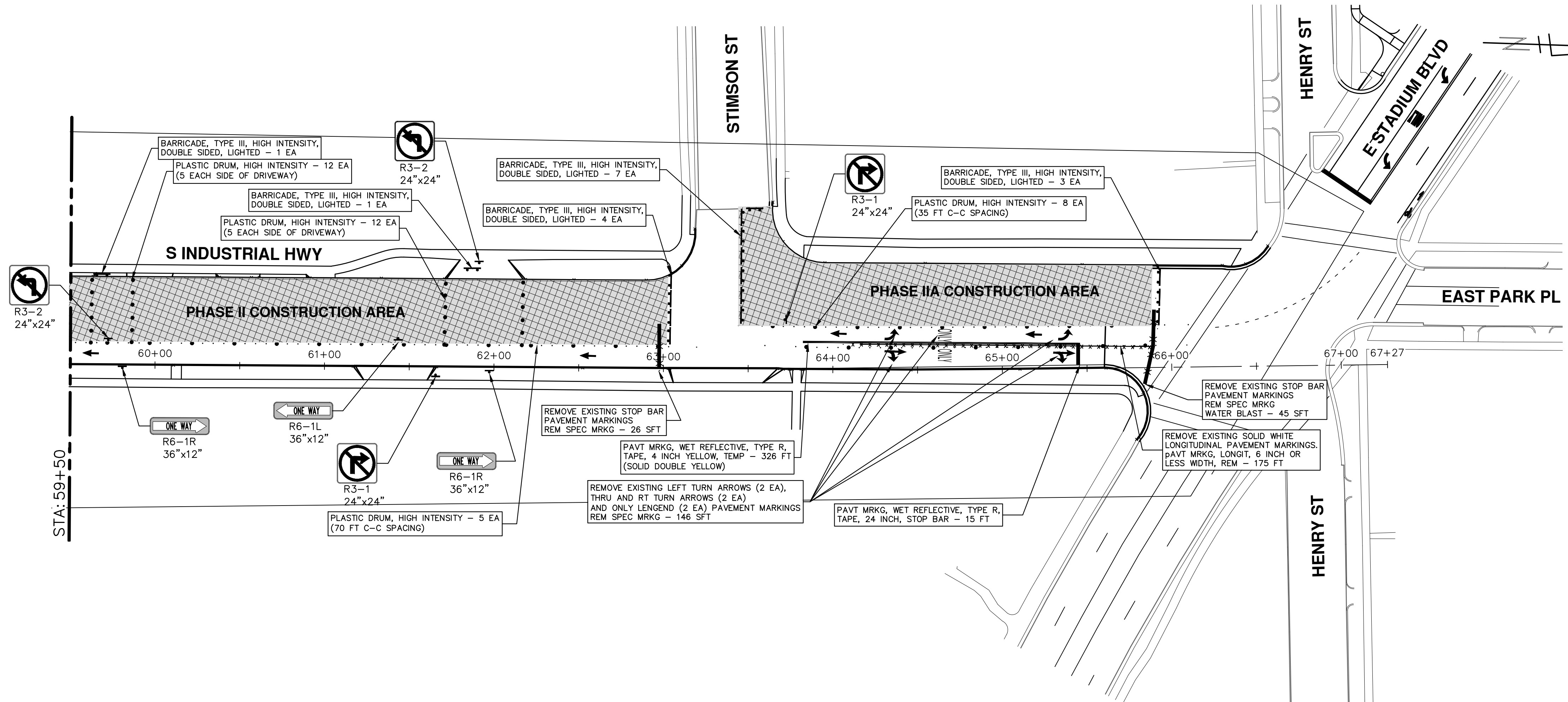
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S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
 MAINTENANCE OF TRAFFIC - PHASE II

STA. 34+00 - STA. 51+00
 DRAWING No. 2020024-22
 SHEET No. 22 OF 34

R:\2020024 S Industrial Conc Repair\Plan Production\2020024M012.dwg Dwg Created: 4-Jan-21 - _a2 standard bw.stb - Plot Date: 21-Jan-21



TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)		
SIGN	NUMBER	QUANTITY
	W20-1 36"x36"	1
	D3-1	1
	R3-1 24"x24"	4
	R3-2 24"x24"	6
	R6-1R 36"x12"	6
	R6-1L 36"x12"	3
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED - 26 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 98 EA		



NOTE: COORDINATE MODIFICATIONS TO, AND TIMING ADJUSTMENTS OF, THE TRAFFIC SIGNALS AT THE INTERSECTIONS OF STIMSON STREET AND EAST STADIUM BOULEVARD WITH THE CITY OF ANN ARBOR SIGNS AND SIGNALS SHOP. TRAFFIC SIGNAL MODIFICATIONS (BY OTHERS) INCLUDES REMOVAL AND/OR DEACTIVATION OF ALL TRAFFIC DETECTION DEVICES AND THE TEMPORARY PLACEMENT AND ACTIVATION OF TRAFFIC SIGNALS FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION PHASES AND THE DEACTIVATION AND REMOVAL OF SUCH TRAFFIC SIGNALS.

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S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

MAINTENANCE OF TRAFFIC - PHASE II

STA. 51+00 - STA. 67+27 PHASE II-A

SCALE: 1" = 40'

DRAWING No. 2020024-23

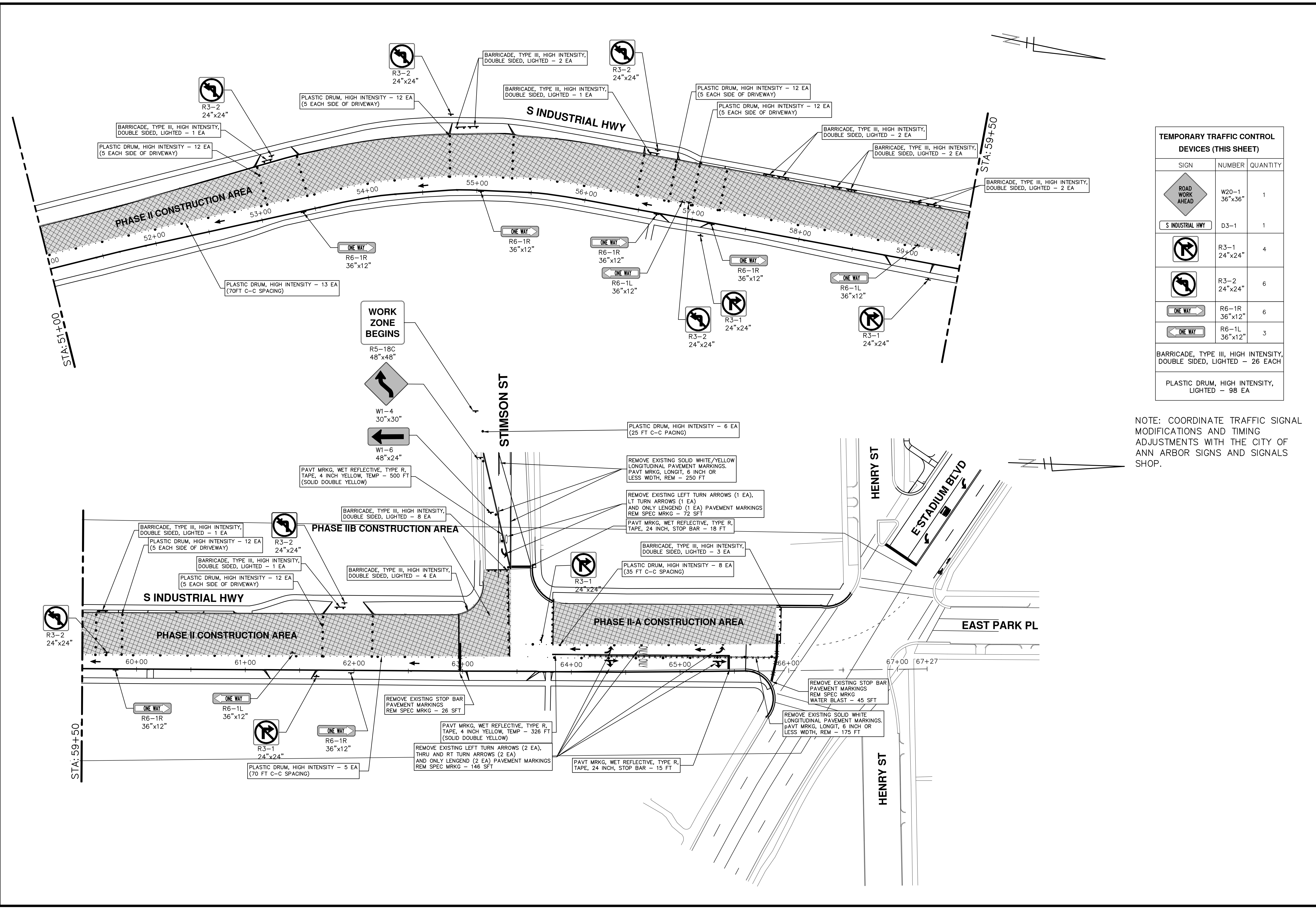
SHEET No. 23 OF 34

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TEMPORARY TRAFFIC CONTROL DEVICES (THIS SHEET)		
SIGN	NUMBER	QUANTITY
	W20-1 36"x36"	1
	D3-1	1
	R3-1 24"x24"	4
	R3-2 24"x24"	6
	R6-1R 36"x12"	6
	R6-1L 36"x12"	3
BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED - 26 EACH		
PLASTIC DRUM, HIGH INTENSITY, LIGHTED - 98 EA		

NOTE: COORDINATE TRAFFIC SIGNAL MODIFICATIONS AND TIMING ADJUSTMENTS WITH THE CITY OF ANN ARBOR SIGNS AND SIGNALS SHOP.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

MAINTENANCE OF TRAFFIC - PHASE II

STA. 51+00 - STA. 67+27 PHASE II-B

SCALE: 1" = 40'

DRAWING No. 2020024-24

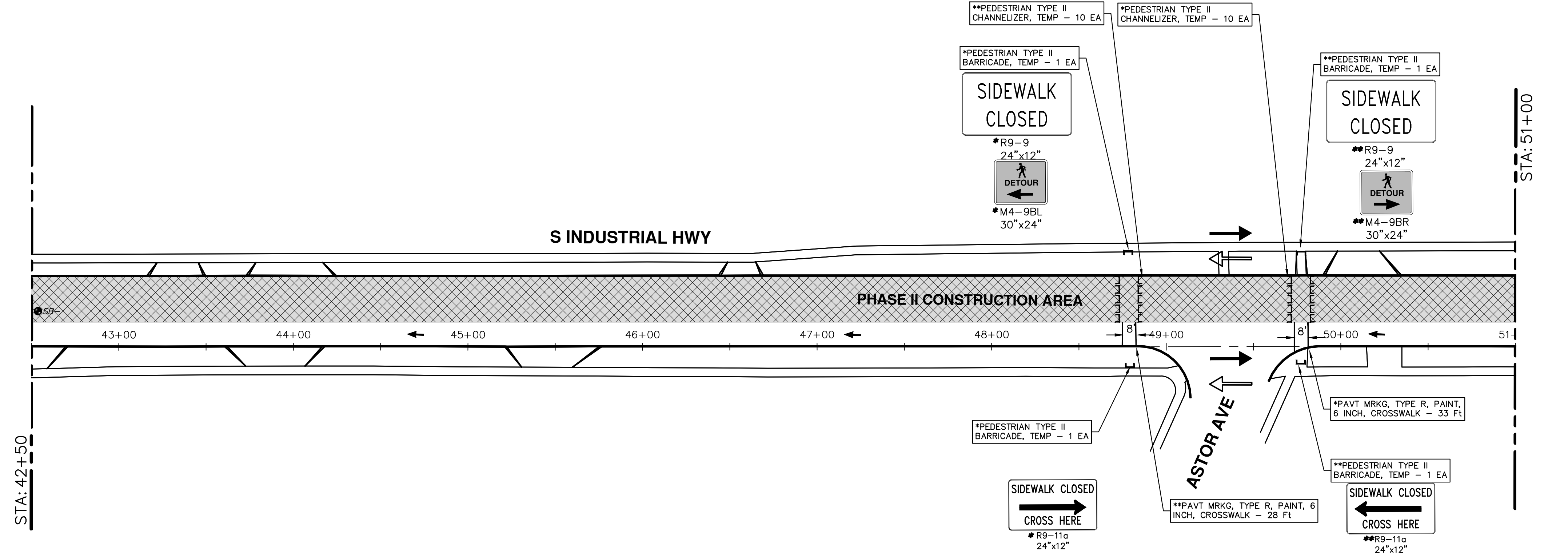
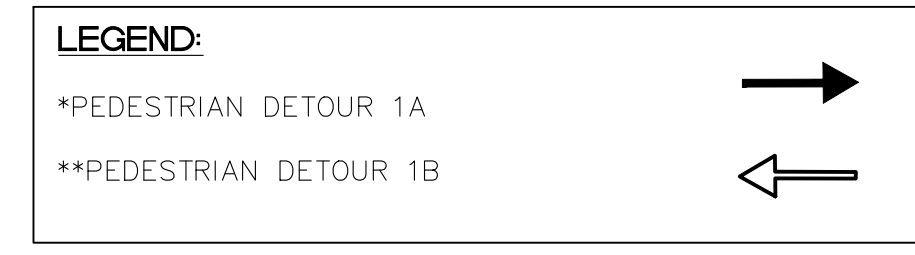
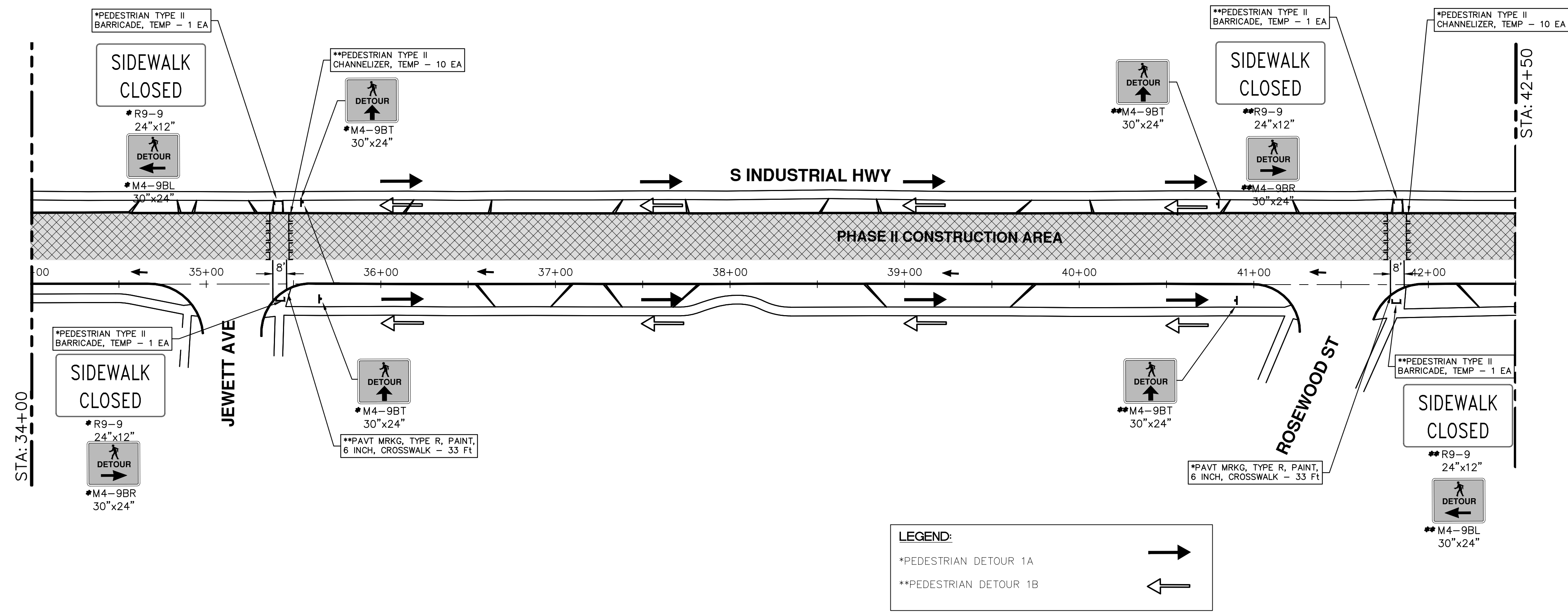
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

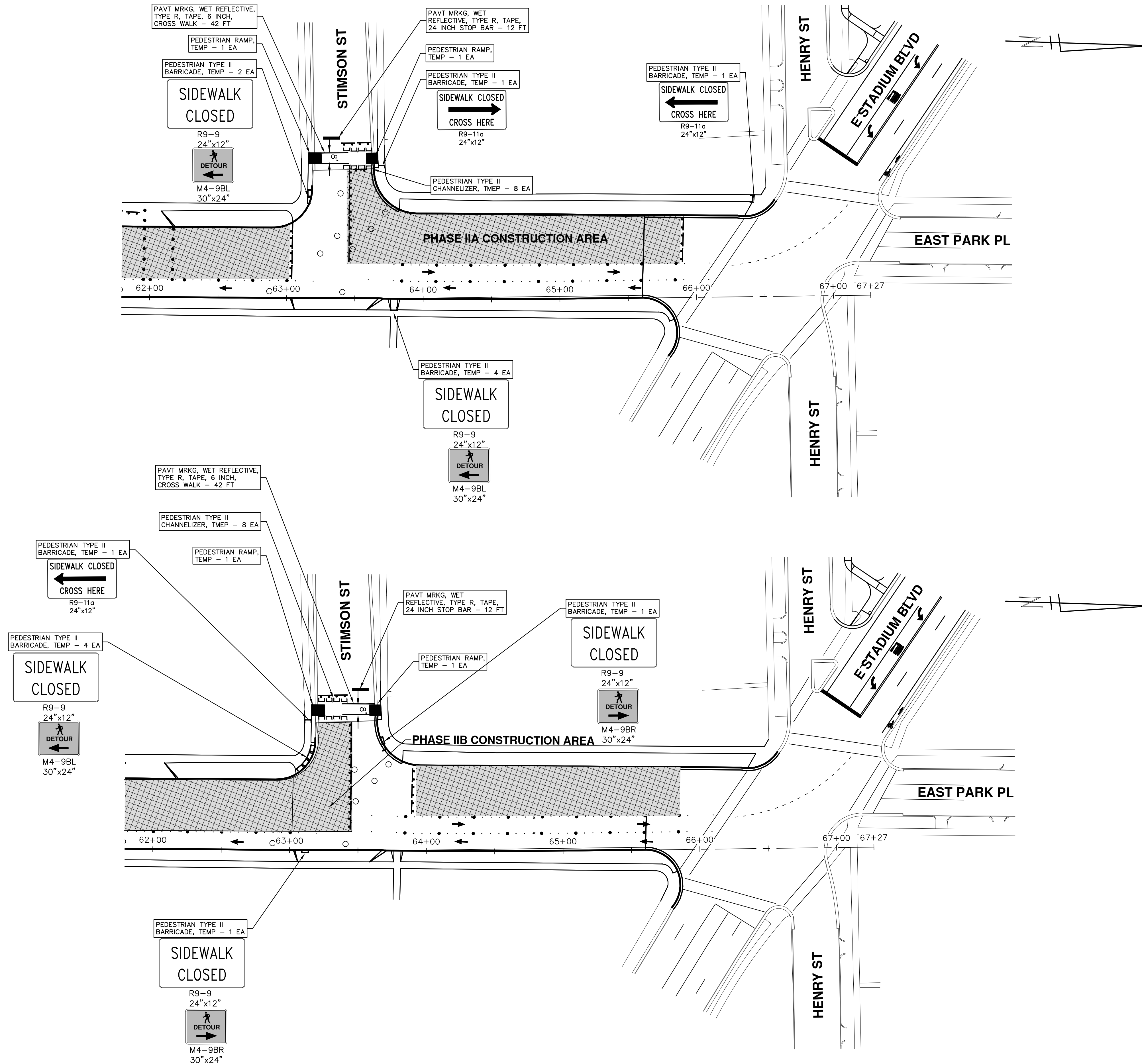
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PEDESTRIAN DETOURS - PHASE II

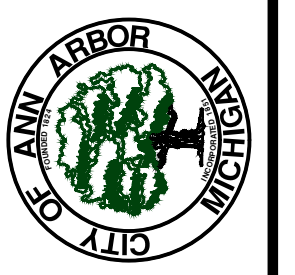
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DRAWING No. 2020024-25

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

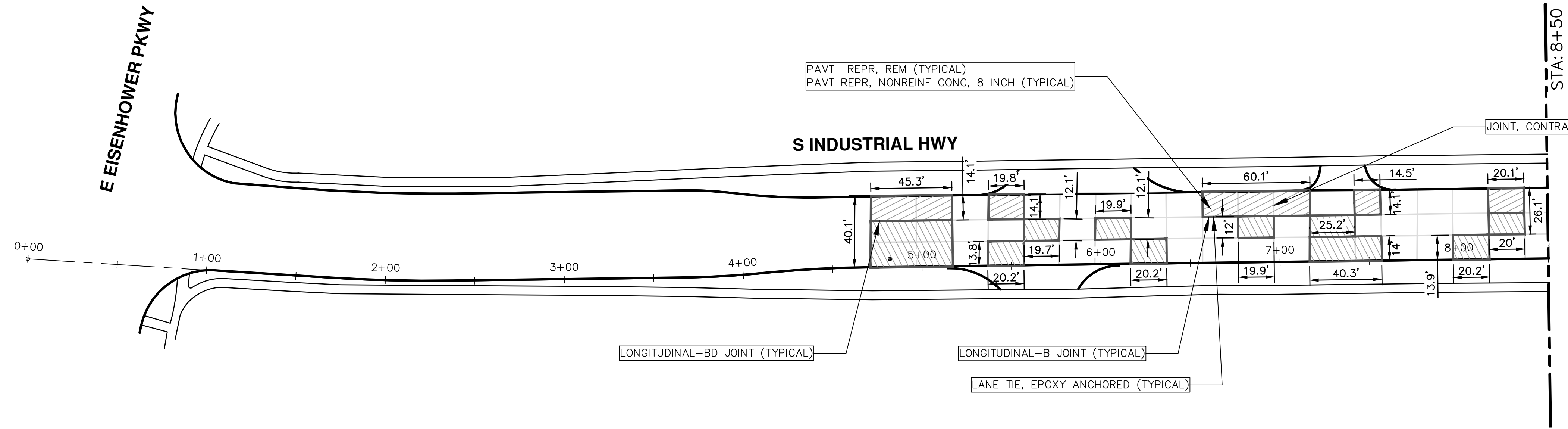
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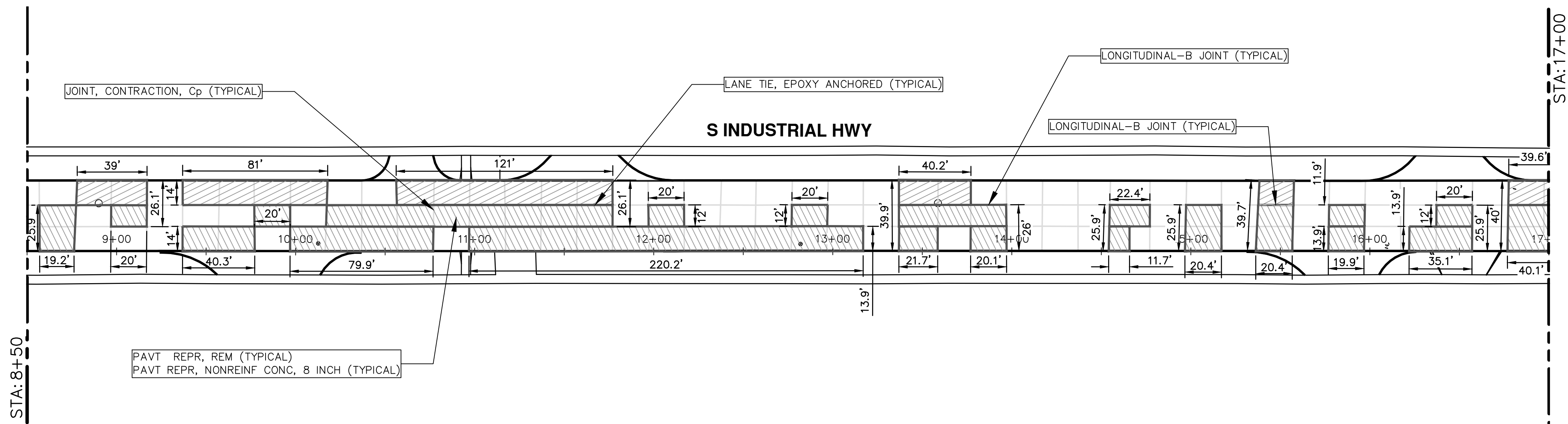
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PEDESTRIAN DETOURS - PHASE II

SCALE: #####
DRAWING No. 2020024-26

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LEGEND	
	PHASE I
	PHASE II
	EX. WATER STRUCTURE
	EX. SANITARY/STORM STRUCTURE
	B JOINT
	Cp JOINT
	BD JOINT



QUANTITIES THIS SHEET			
Item No.	Description	Unit	Quantity
4030005	Dr Structure Cover, Adj, Case 1	Ea	17.000
4037050	_Dr Structure Cover, Type B, Modified	Ea	5.000
4037050	_Dr Structure Cover, Type R, Modified	Ea	5.000
4037050	_Dr Structure Cover, Type K, Modified	Ea	7.000
6020200	Joint, Contraction, Cp	Ft	508.300
6030020	Joint, Contraction, Crg	Ft	1,199.000
6030030	Lane Tie, Epoxy Anchored	Ea	524.000
6030044	Pavt Repr, Nonreinf Conc, 8 inch	Syd	2,593.000
6030080	Pavt Repr, Rem	Syd	2,593.000
8167011	_Slope Restoration	Syd	326.070
8230431	Gate Box, Adj, Case 1	Ea	1.000



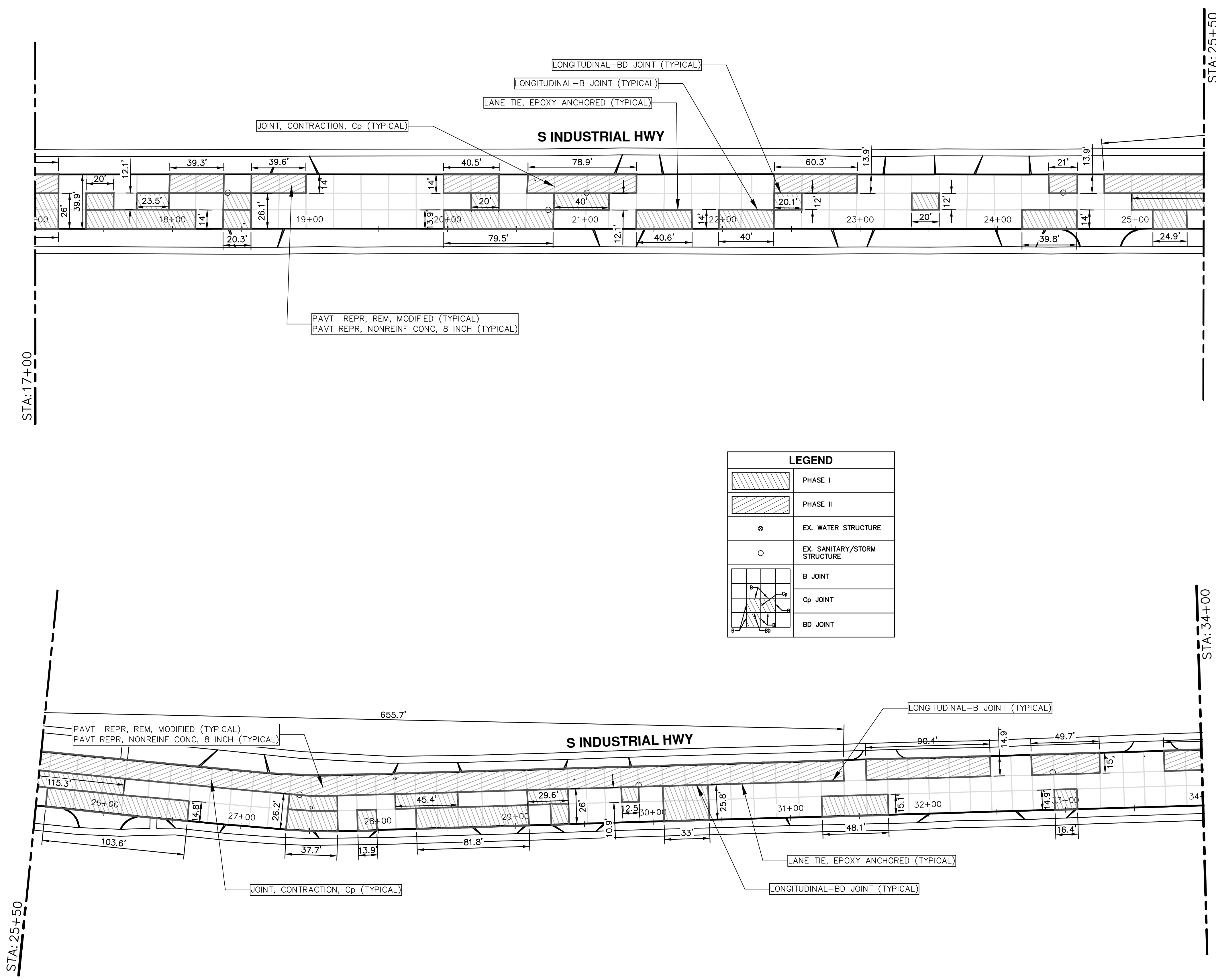
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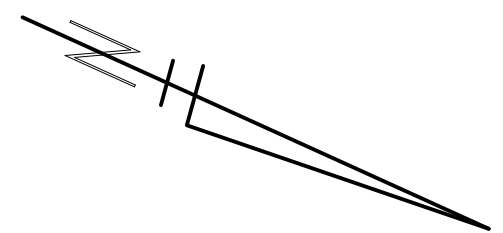
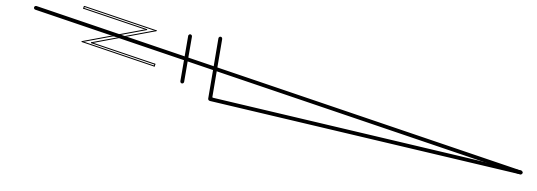
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REMOVAL AND CONSTRUCTION
STA. 4+71 - STA.17+00

SCALE: 1" = 40'
DRAWING No. 2020024-27

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LEGEND	
	PHASE I
	PHASE II
	EX. WATER STRUCTURE
	EX. SANITARY/STORM STRUCTURE
	B JOINT
	Cp JOINT
	BD JOINT



QUANTITIES THIS SHEET

Item No.	Description	Unit	Quantity
4030005	Dr Structure Cover, Adj, Case 1	Ea	19.000
4037050	_Dr Structure Cover, Type B, Modified	Ea	10.000
4037050	_Dr Structure Cover, Type R, Modified	Ea	3.000
4037050	_Dr Structure Cover, Type K, Modified	Ea	5.000
6020200	Joint, Contraction, Cp	Ft	1,176.000
6030020	Joint, Contraction, Crg	Ft	1,028.100
6030030	Lane Tie, Epoxy Anchored	Ea	807.740
6030044	Pavt Repr, Nonreinf Conc, 8 inch	Syd	3,489.222
6030080	Pavt Repr, Rem	Syd	3,489.222
8167011	_Slope Restoration	Syd	383.000
8230431	Gate Box, Adj, Case 1	Ea	4.000

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S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS
 REMOVAL AND CONSTRUCTION

SCALE: 1" = 40'
 DRAWING No. 2020024-28

STA. 17+00 - STA. 34+00

28 OF 34

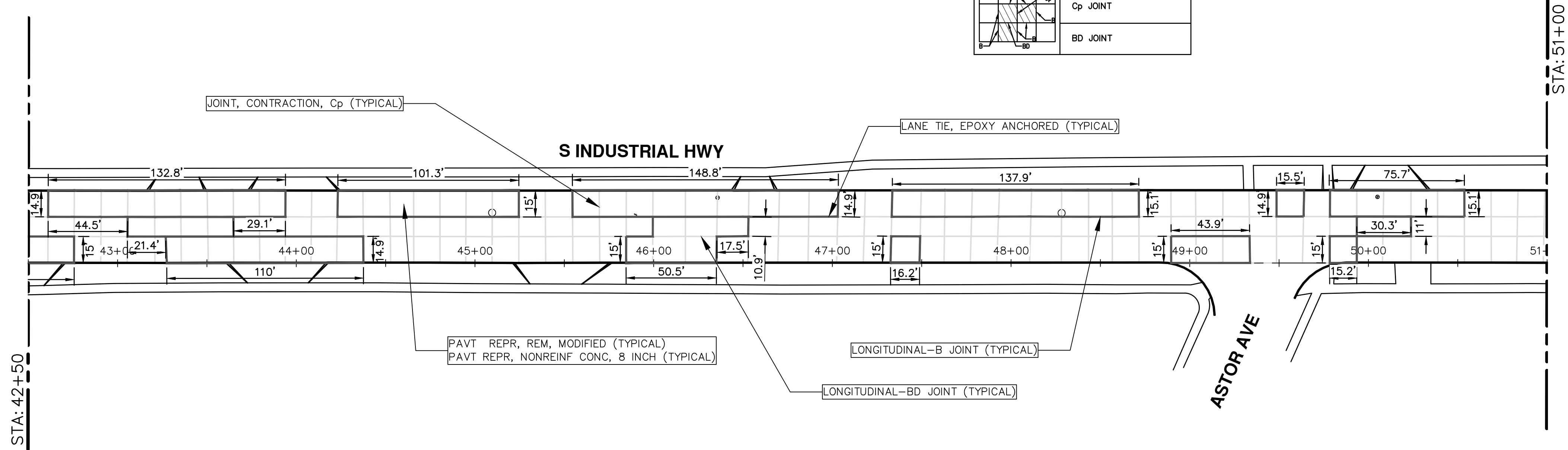
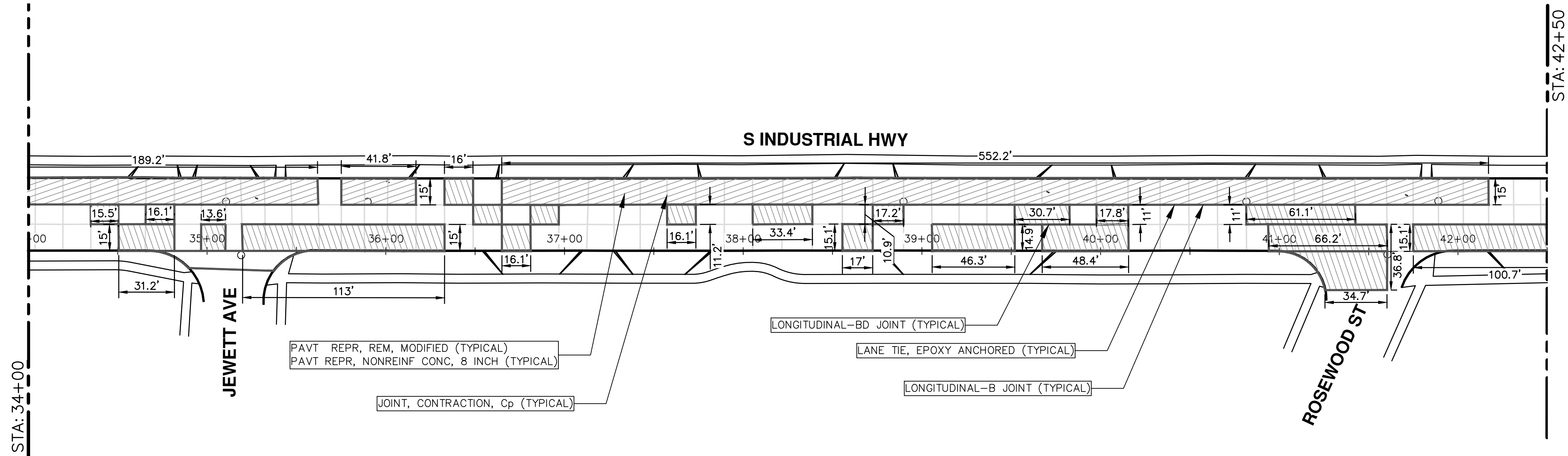
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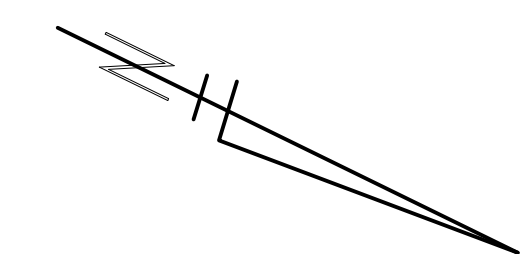
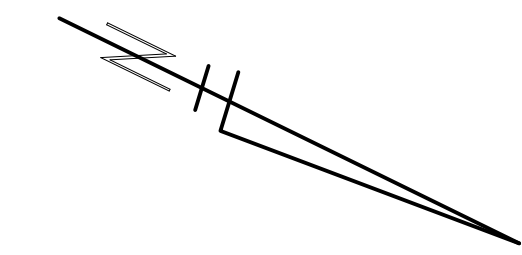
ANN ARBOR MICHIGAN

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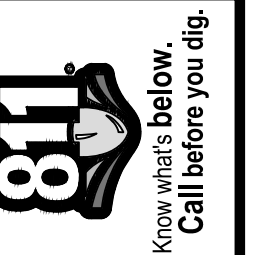
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LEGEND	
	PHASE I
	PHASE II
	EX. WATER STRUCTURE
	EX. SANITARY/STORM STRUCTURE
	B JOINT
	Cp JOINT
	BD JOINT



QUANTITIES THIS SHEET			
Item No.	Description	Unit	Quantity
4030005	Dr Structure Cover, Adj, Case 1	Ea	27.000
4037050	_Dr Structure Cover, Type B, Modified	Ea	11.000
4037050	_Dr Structure Cover, Type R, Modified	Ea	2.000
4037050	_Dr Structure Cover, Type K, Modified	Ea	14.000
6020200	Joint, Contraction, Cp	Ft	1,060.000
6030020	Joint, Contraction, Crg	Ft	1,060.000
6030030	Lane Tie, Epoxy Anchored	Ea	546.000
6030044	Pavt Repr, Nonreinf Conc, 8 inch	Syd	4,101.222
6030080	Pavt Repr, Rem	Syd	4,101.222
8167011	_Slope Restoration	Syd	488.260
8230431	Gate Box, Adj, Case 1	Ea	3.000



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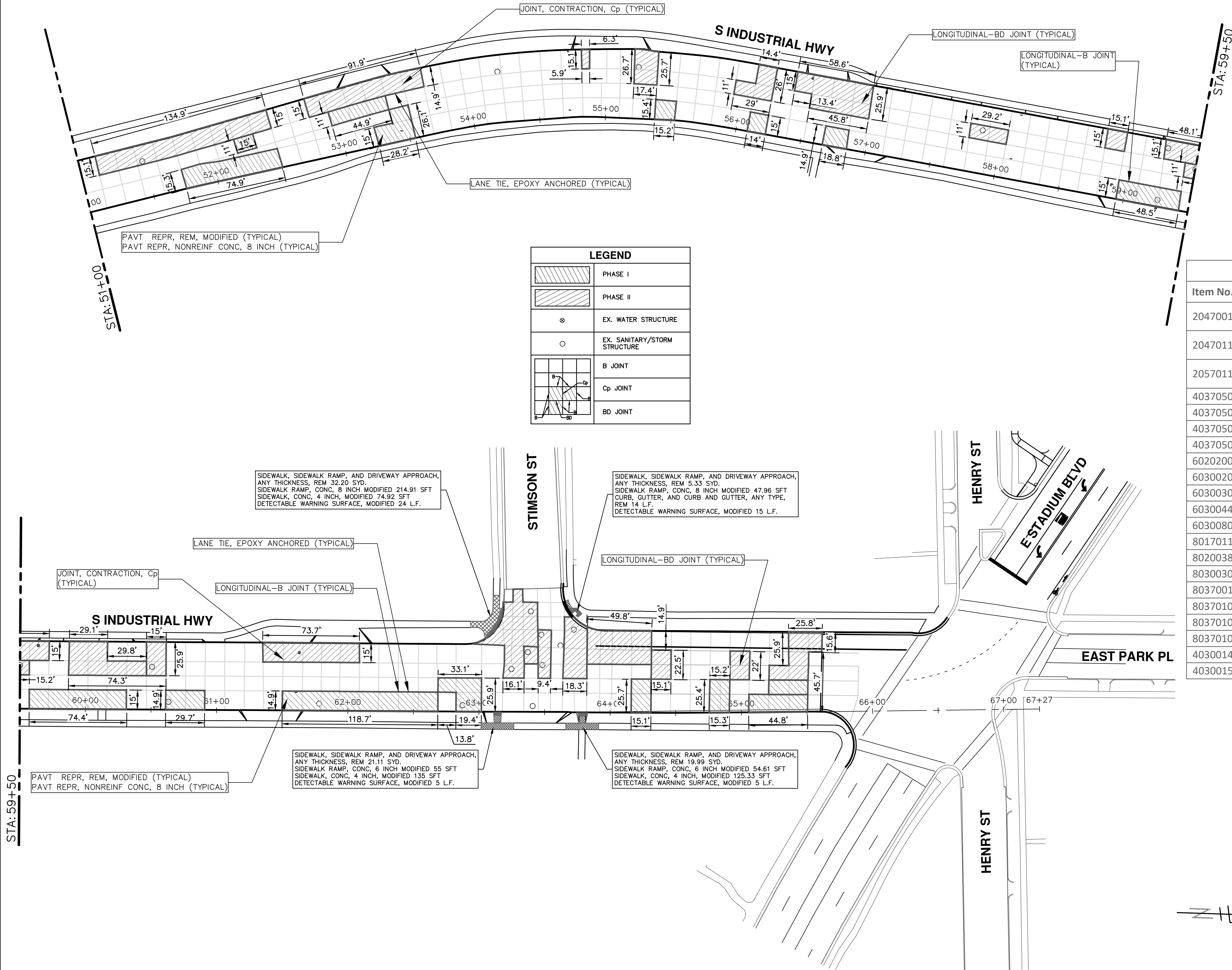
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STA. 34+00 - STA. 51+00

SCALE: 1" = 40'
DRAWING No. 2020024-29

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STA: 59+50



LEGEND	
	PHASE I
	PHASE II
	EX. WATER STRUCTURE
	EX. SANITARY/STORM STRUCTURE
	B JOINT
	Cp JOINT
	BD JOINT

QUANTITIES THIS SHEET			
Item No.	Description	Unit	Quantity
2047001	_Curb, Gutter, snf Curb and Gutter, Any Type, Rem	Ft	14.000
2047011	_Sidewalk, Sidewalk Ramp, and Driveway Approach, Any Thickness, Rem	Syd	78.630
2057011	_Grading, Sidewalk and Sidewalk Ramp, and Driveway Approach	Syd	78.630
4037050	Dr Structure Cover, Adj, Case 1	Ea	27.000
4037050	_Dr Structure Cover, Type B, Modified	Ea	17.000
4037050	_Dr Structure Cover, Type R, Modified	Ea	5.000
4037050	_Dr Structure Cover, Type K, Modified	Ea	5.000
6020200	Joint, Contraction, Cp	Ft	999.600
6030020	Joint, Contraction, Crg	Ft	1,400.500
6030030	Lane Tie, Epoxy Anchored	Ea	763.000
6030044	Pavt Repr, Nonreinf Conc, 8 inch	Syd	2,786.111
6030080	Pavt Repr, Rem	Syd	2,786.111
8017011	_Driveway, Non-reinf Conc, 8 inch	Syd	303.320
8020038	Curb and Gutter, Conc, Det F3	Ft	14.000
8030030	Curb Ramp Opening, Conc	Ft	5.000
8037001	_Detectable Warning Surface, Modified	Ft	49.000
8037010	_Sidewalk Ramp, Conc, 6 inch, Modified	Sft	109.610
8037010	_Sidewalk Ramp, Conc, 8 inch, Modified	Sft	262.870
8037010	_Sidewalk, Conc, 4 inch, Modified	Sft	335.250
4030014	_Slope Restoration	Syd	261.170
4030015	Gate Box, Adj, Case 1	Ea	2.000

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REMOVAL AND CONSTRUCTION

SCALE: 1" = 40'

DRAWING No. 2020024-30

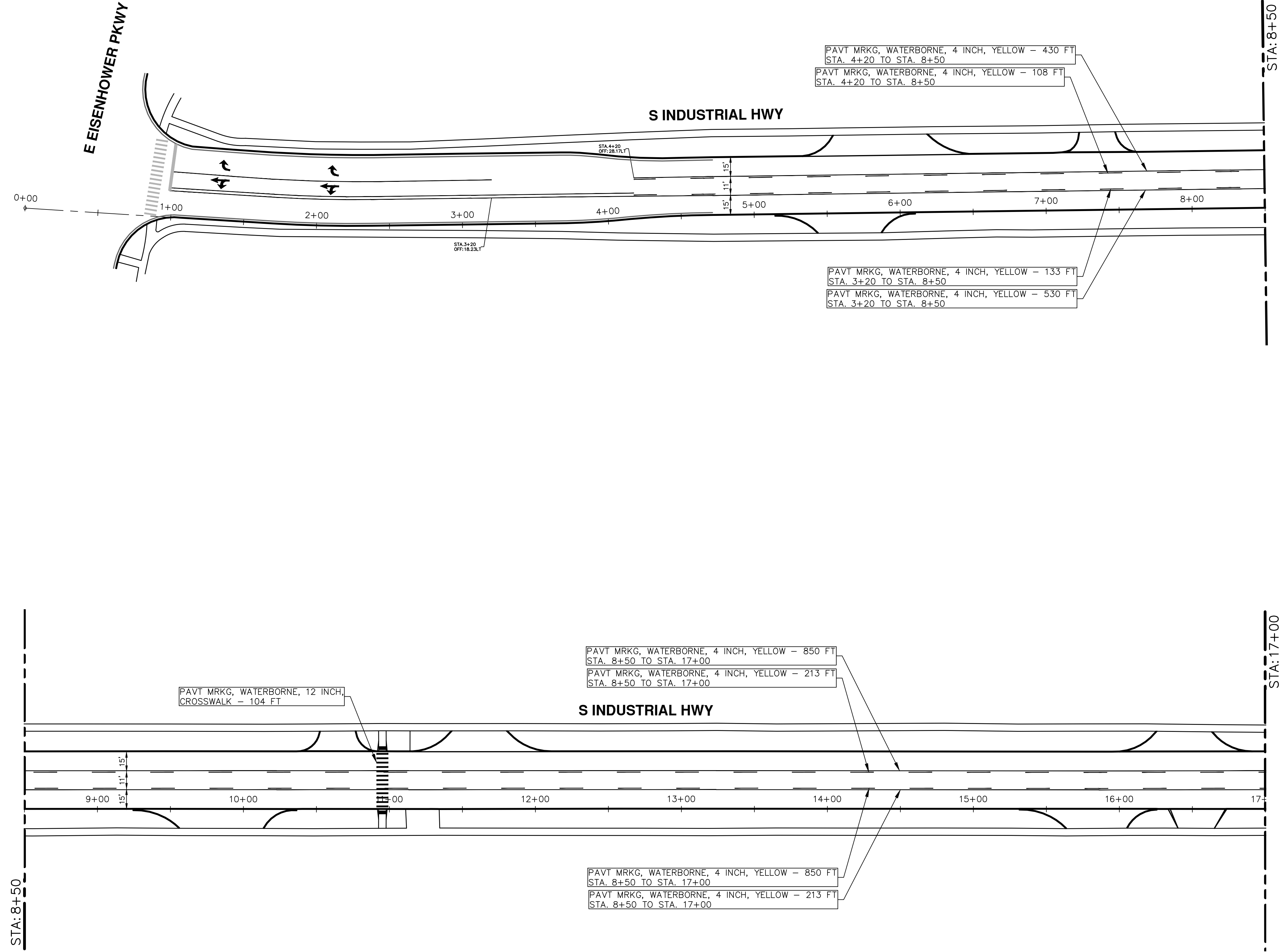
SHEET No. 30 OF 34

STA. 51+00 - STA. 65+90

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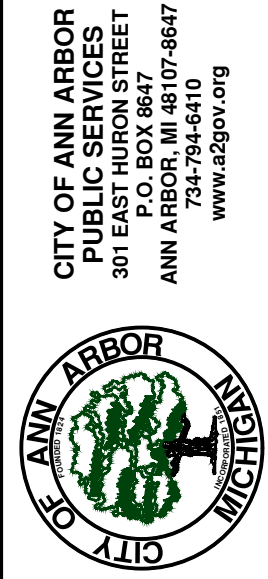
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 SCALE: 1" = 40'
 DRAWING No.
 2020024-31

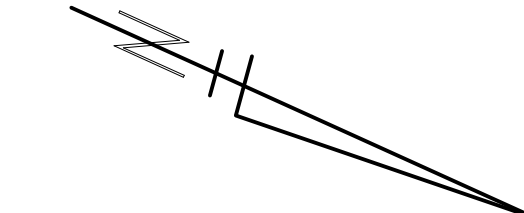
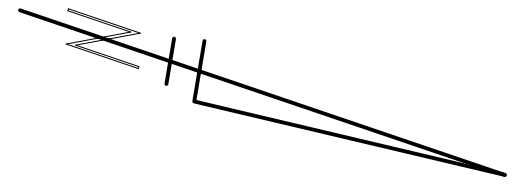
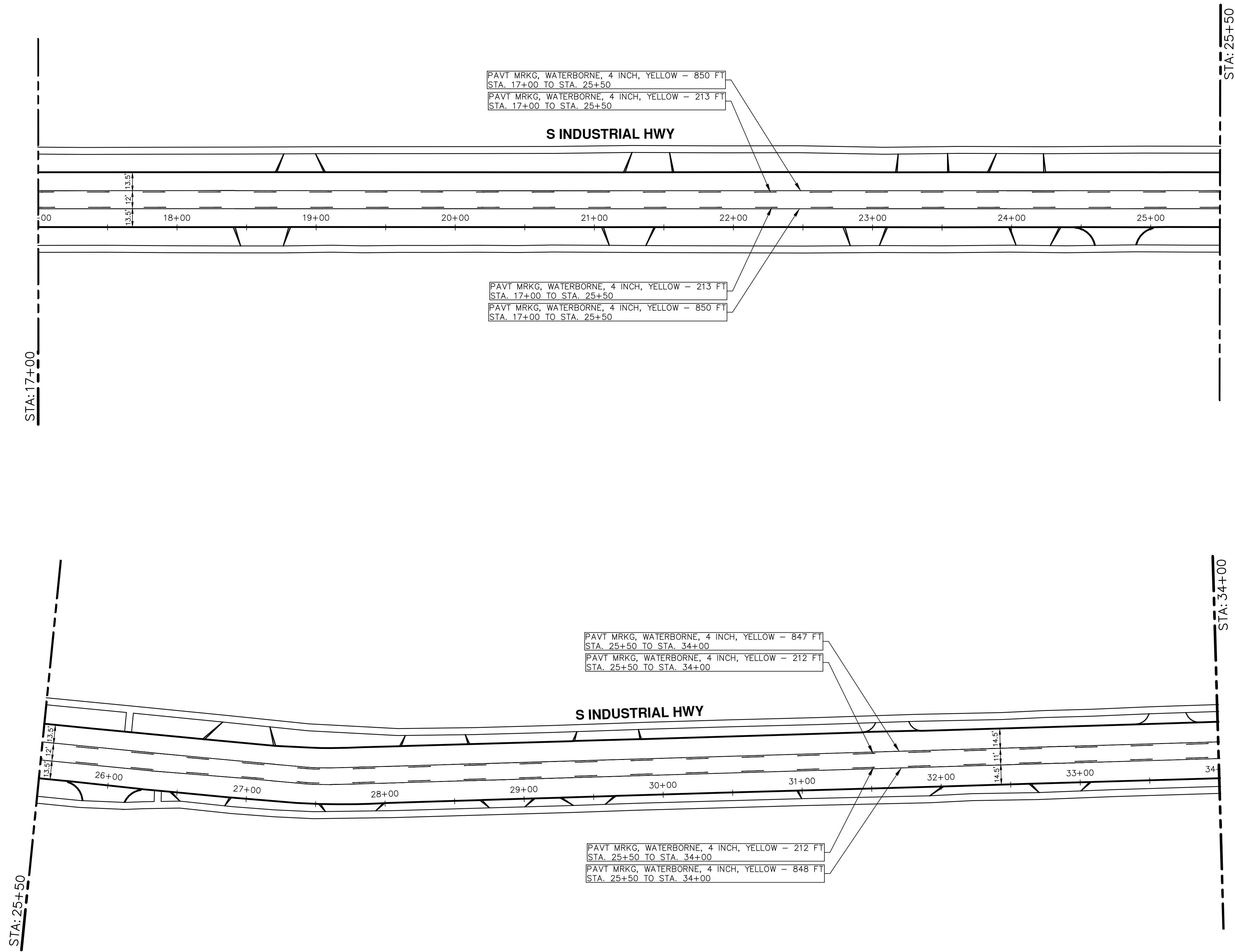
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 PERMANENT PAVEMENT MARKINGS
 STA. 4+71 - STA. 17+00



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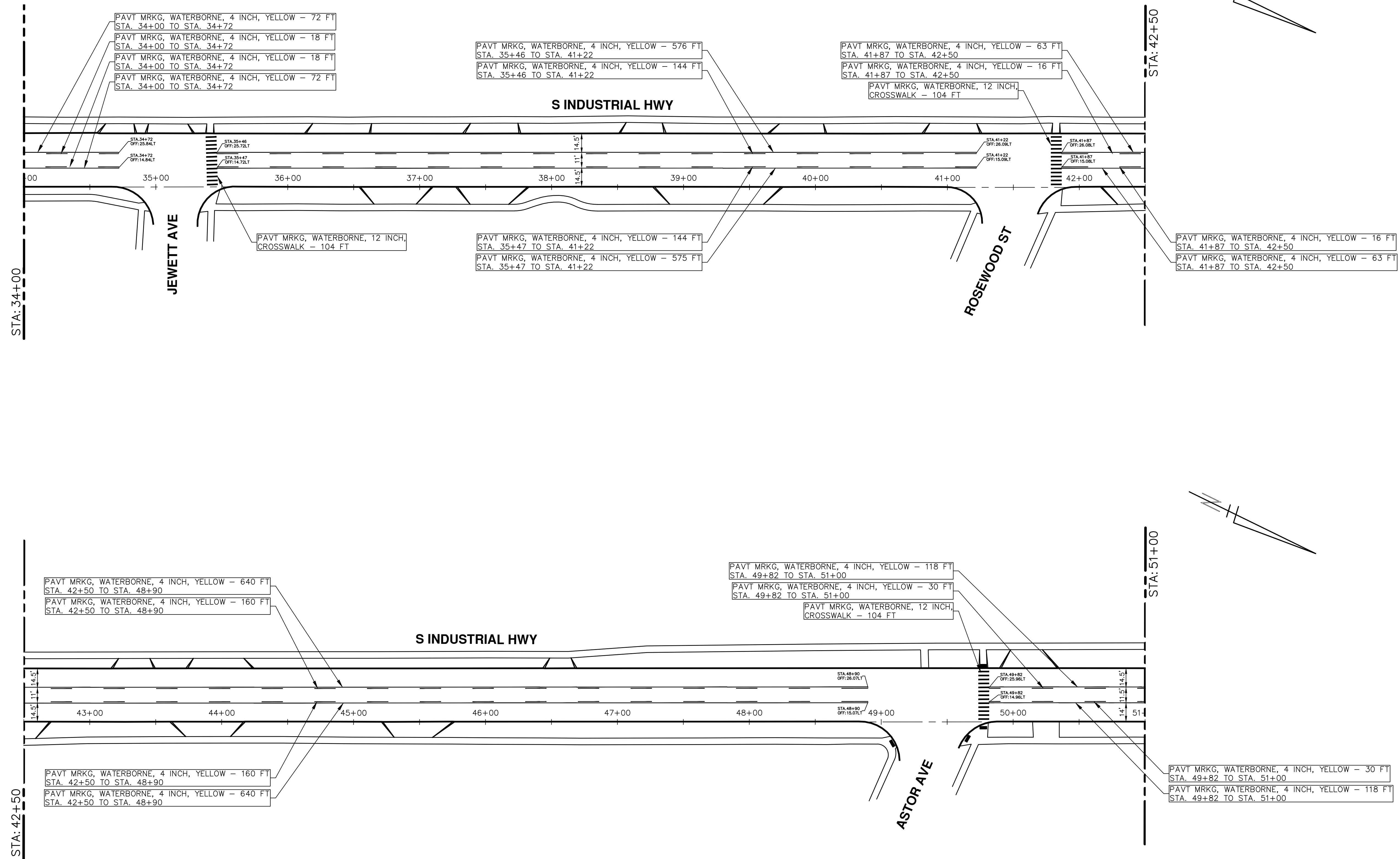




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PERMANENT PAVEMENT MARKINGS

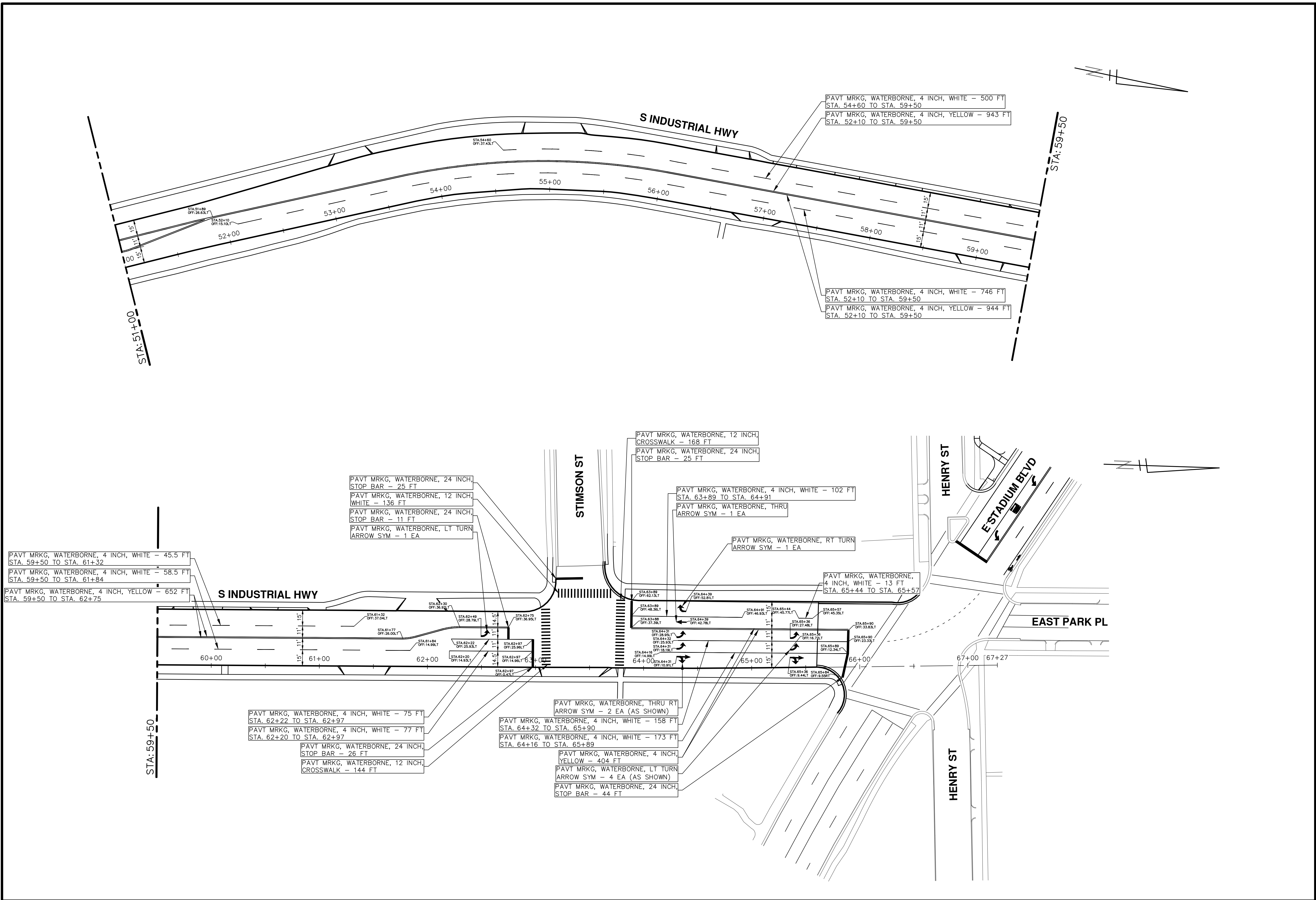
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S INDUSTRIAL HWY CONCRETE PAVEMENT REPAIRS

PERMANENT PAVEMENT MARKINGS


SCALE: 1" = 40'

DRAWING No. 2020024-34


SHEET No. 34 OF 34

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