

PROJECT ID:
WITH: N/A

4075-41-71

COUNTY:

OUTAGAMIE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 168



DESIGN DESIGNATION

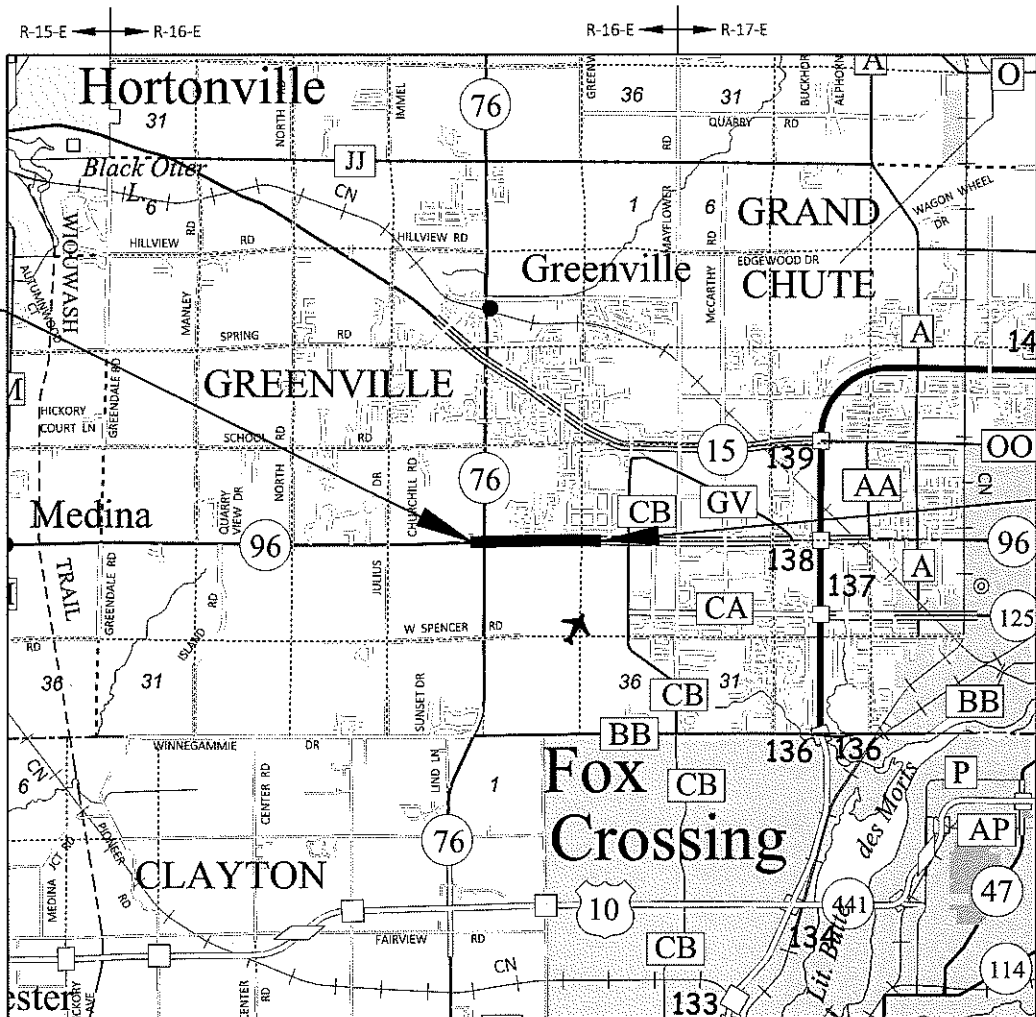
A.A.D.T.	2025	=	13,070
A.A.D.T.	2045	=	14,840
D.H.V.		=	5.3
D.D.		=	59/41
T.		=	6.2
DESIGN SPEED		=	45 MPH
ESALS		=	1,900,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT
STA 573+00.00
Y = 566,284.557
X = 792,537.972



LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 1.362 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OUTAGAMIE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WCL - APPLETON

CLEARY COURT - TOWER VIEW DRIVE

STH 96

OUTAGAMIE COUNTY

STATE PROJECT NUMBER

4075-41-71

STATE PROJECT

4075-41-71

FEDERAL PROJECT

PROJECT

CONTRACT

ORIGINAL PLANS PREPARED BY

raSmith

CREATIVITY BEYOND ENGINEERING

rasmith.com



01/22/2024
(Date)

Brad E. Severson
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT NE REGION
Designer	RASMITH
Project Manager	JESSE HANSEN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	TAMMY RABE

APPROVED FOR THE DEPARTMENT

DATE: 1/24/2024
(Signature)

E

AT&T WISCONSIN - COMMUNICATION LINE
KYLE WEBER
221 W WASHINGTON STREET
APPLETON, WI 54911
(920) 221-5969
KW715W@ATT.COM

GREENVILLE SANITARY DISTRICT NO. 1 - SEWER
CODY SIMONIS
W6860 PARKVIEW DR
GREENVILLE, WI 54942
(920) 750-8130
CSIMONIS@TOWNNOFGREENVILLE.COM

GREENVILLE SANITARY DISTRICT NO. 1 - WATER
CODY SIMONIS
W6860 PARKVIEW DR
GREENVILLE, WI 54942
(920) 757-7276
(920) 750-8130 (MOBILE)
CSIMONIS@TOWNNOFGREENVILLE.COM

LEVEL 3 COMMUNICATIONS LLC - COMMUNICATION LINE
MASOOD ZEERAK
1025 ELDORADO BLVD
BROOMFIELD, CO 80021
NATIONALRELO@CENTURYLINK.COM

NET LEC LLC - COMMUNICATION LINE
RICK VINCENT
450 SECURITY BLVD
P.O. BOX 19079
GREEN BAY, WI 54307-9079
(920) 617-7316
RICK.VINCENT@NSIGHT.COM

UTILITIES CONTACTS

SPECTRUM - COMMUNICATION LINE
VINCE ALBIN
3520 E DESTINATION DR
APPLETON, WI 54915
(920) 831-9249
VINCE.ALBIN@CHARTER.COM

TDS METROCOM LLC - COMMUNICATION LINE
JEFF SHAW
202 OGDEN ST
MEDFORD, WI 54451
(715) 748-6970
JEFF.SHAW@TDSTELECOM.COM

WIN TECHNOLOGY - COMMUNICATION LINE
ERIC BECKER
4955 BULLIS FARM RD
EAU CLAIRE, WI 54701
(715) 797-2724
ERIC.BECKER@WINTECHNOLOGY.COM

WE ENERGIES - ELECTRICITY
ZACH DUGA
800 S LYNNDALe DR
APPLETON, WI 54912
(920) 380-3458
(920) 450-9314 (MOBILE)
ZACHARY.DUGA@WE-ENERGIES.COM

WE ENERGIES - GAS/PETROLEUM
CODY BECKMAN
800 S LYNNDALe DR
APPLETON, WI 54912
(920) 380-3422
(920) 428-1038 (MOBILE)
CODY.BECKMAN@WE-ENERGIES.COM

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP- TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE- TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT				.70 - .95								
CONCRETE				.80 - .95								
BRICK				.70 - .80								
DRIVES, WALKS				.75 - .85								
ROOFS				.75 - .95								
GRAVEL ROADS, SHOULDERS				.40 - .60								

TOTAL PROJECT AREA = 20.96 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 9.60 ACRES

DNR LIASION

MATT SCHAEVE
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE
GREEN BAY, WI 54313
(920) 366-1544
matthew.schaeve@wisconsin.gov

OUTAGAMIE COUNTY HIGHWAY COMMISSIONER

DEAN STEINGRABER, P.E.
OUTAGAMIE COUNTY HIGHWAY DEPT
1313 HOLLAND ROAD
APPLETON, WI 54911-8947
(920) 832-5673
dean.steingraber@outagamie.org

VILLAGE OF GREENVILLE DIRECTOR OF PUBLIC WORKS

KEITH CURRAN, P.E.
VILLAGE OF GREENVILLE
W6895-A PARKVIEW DR
GREENVILLE, WI 54942
(920) 757-7276
kcurran@greenvillewi.gov

APPLETON INTERNATIONAL AIRPORT

SCOTT VOLBERDING
W6390 CHALLENGER DR STE 201
APPLETON, WI 54914
(920) 832-5267
SVOLBERDING@ATWAIKPORT.COM

NE REGION PROJECT MANAGER

JESSE HANSEN, PE
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-5630
Jesse.Hansen@dot.wi.gov

DESIGN CONSULTANT

raSmith
BRAD SEVERSON, PE
100 WEST LAWRENCE STREET, SUITE 412
APPLETON, WI 54911
(920) 843-5738
BRAD.SEVERSON@RASMITH.COM

GENERAL NOTES

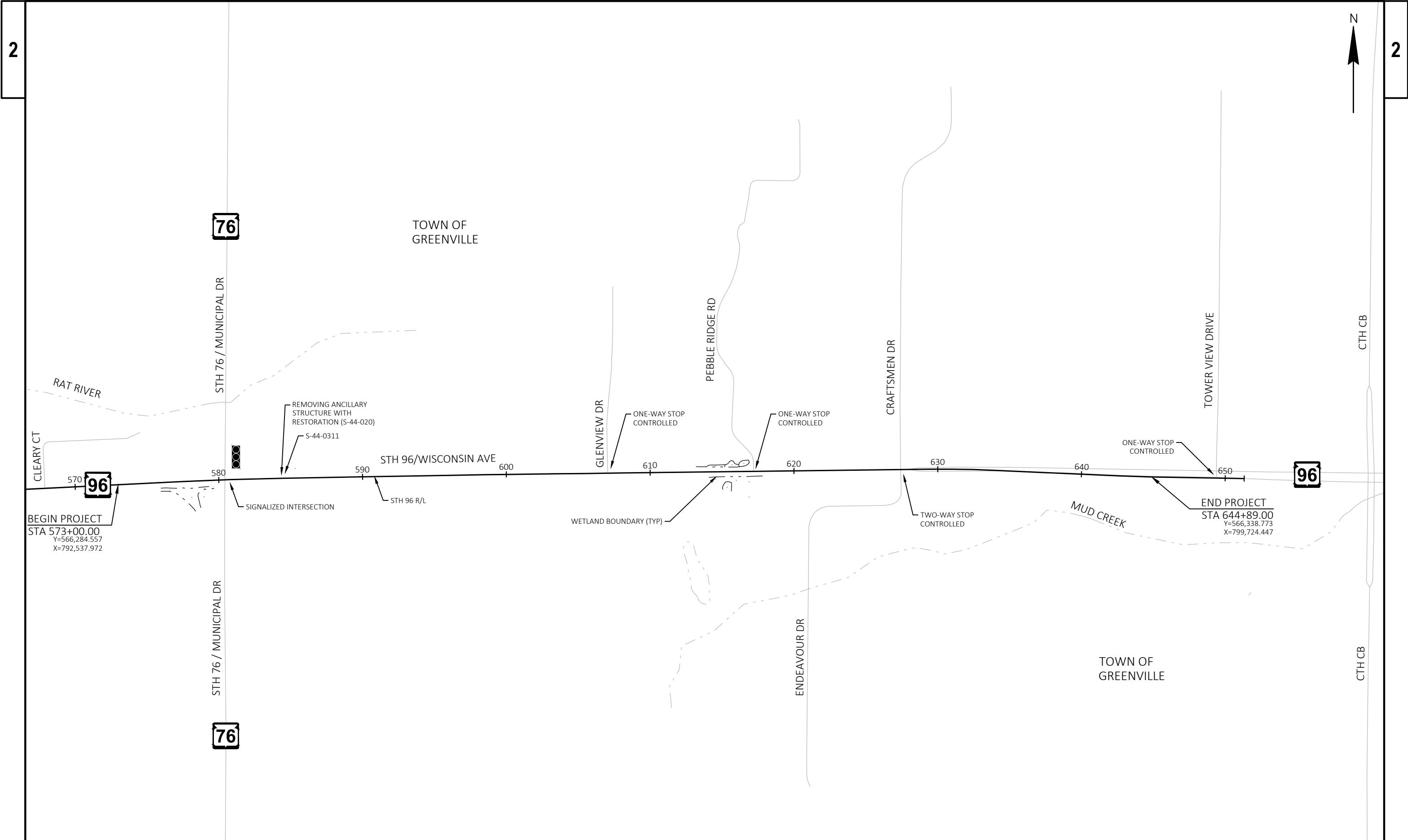
- THE LOCATIONS OF EXISTING UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN
- NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
- EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. NO WORK SHALL BEGIN UNTIL PROPER TRAFFIC CONTROL DEVICES ARE PLACED AND APPROVED BY THE ENGINEER.
- DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL PLAN
- STORM SEWER PLAN
- TRAFFIC SIGNAL PLAN
- PAVEMENT MARKING PLAN
- TRAFFIC CONTROL PLAN
- DETOUR PLAN



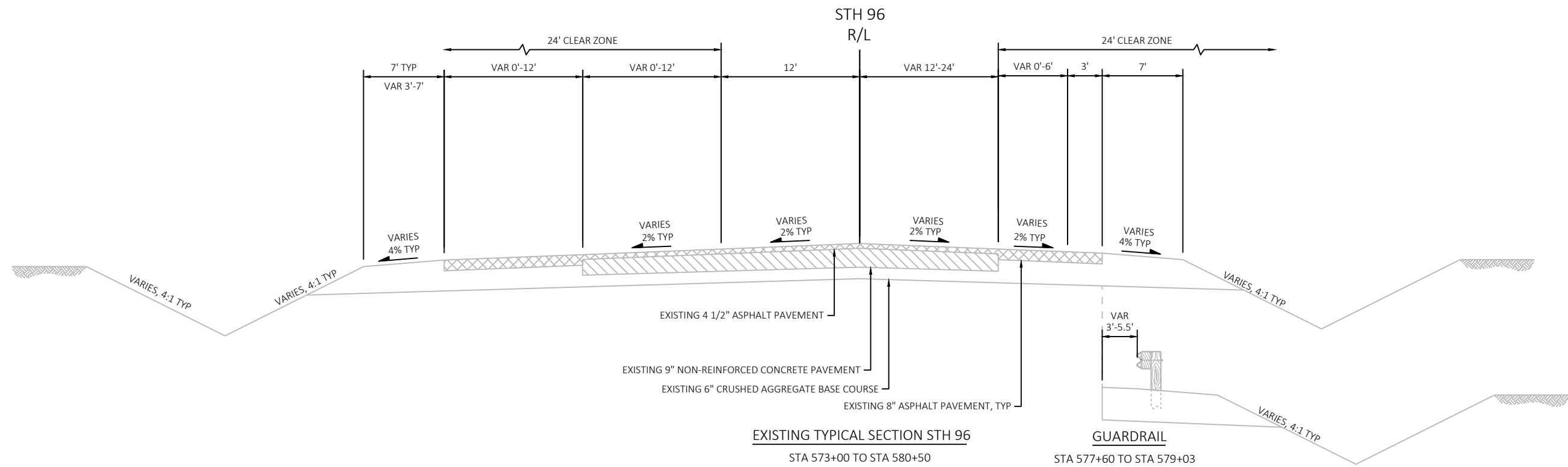
Dial 811 or (800)242-8511
www.DiggersHotline.com



PROJECT NO: 4075-41-71	HWY: STH 96	COUNTY: OUTAGAMIE	PROJECT OVERVIEW	SHEET	E
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2

2 |



PROJECT NO:	4075-41-71
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HWY: STH 96

COUNTY: OUTAGAMIE

TYPICAL SECTIONS

SHEET

■

FILE NAME : K:\1202715.07\CIVIL3D\40754100\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020301-ts

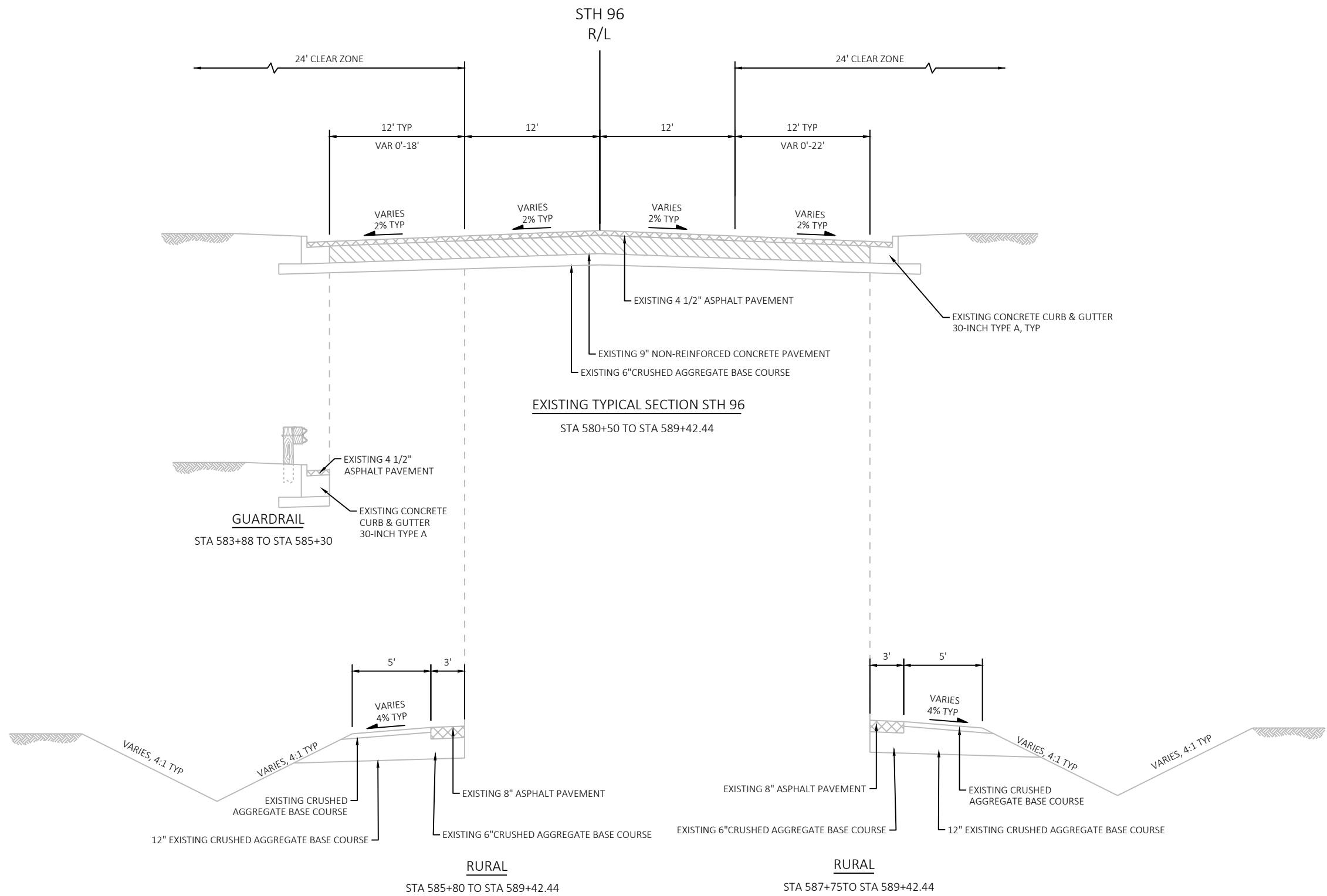
PLOT DATE : 2/26/2024 10:43 AM

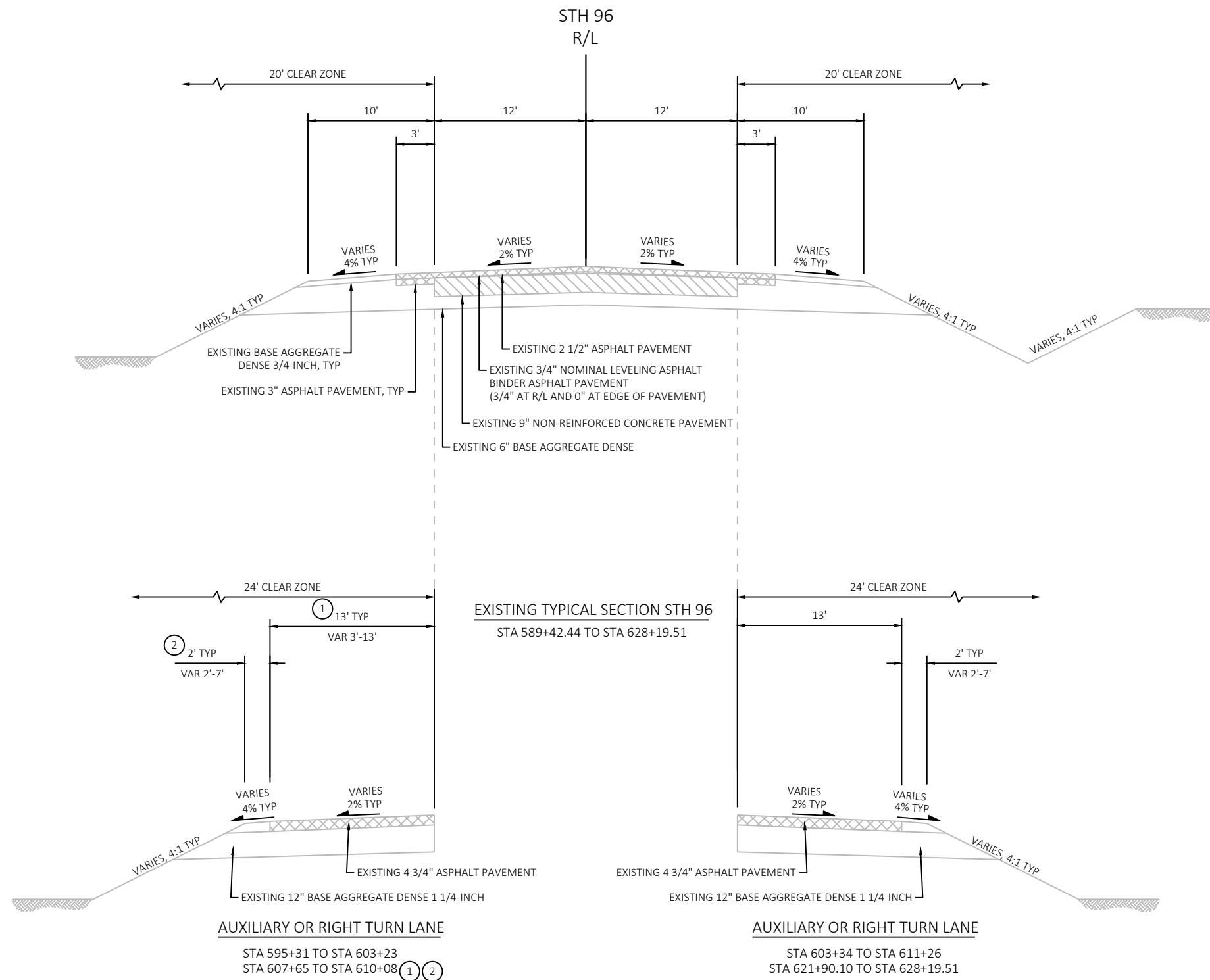
PLOT BY : NIKOLAI, ADAM

PLOT NAME :

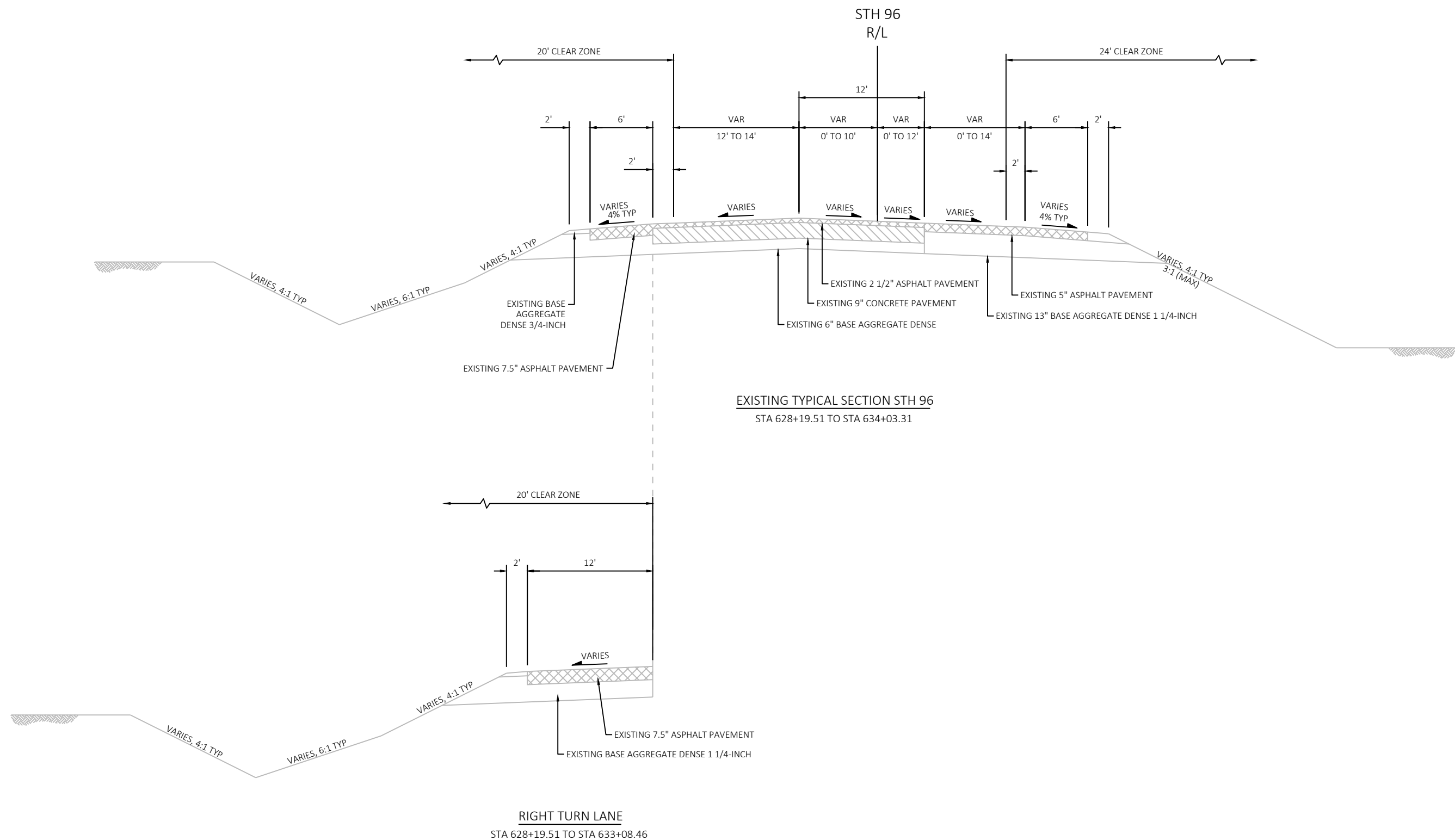
PLOT SCALE : 1IN:10 FT

WISDOT/CADDS SHEET 42



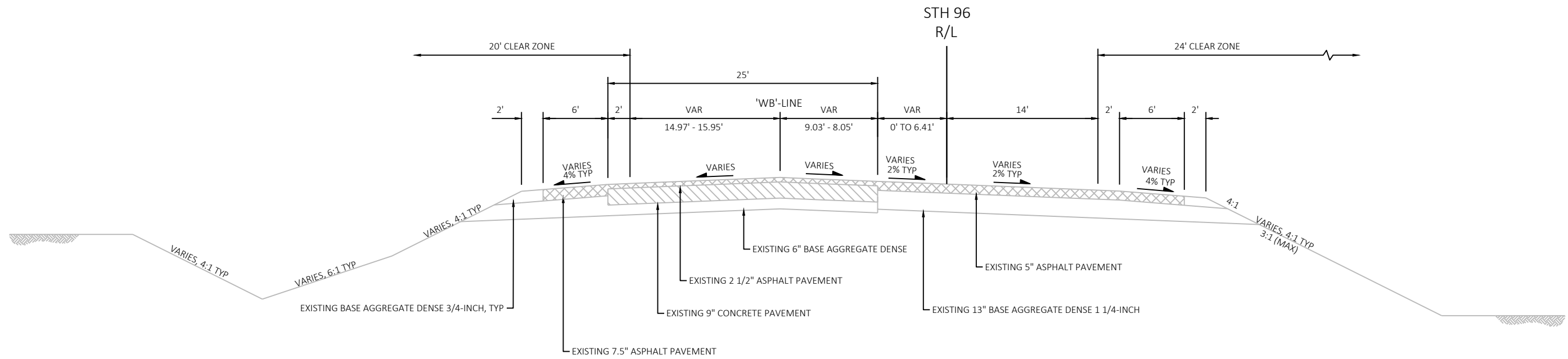


① 12' TYPICAL
② 3' TYPICAL

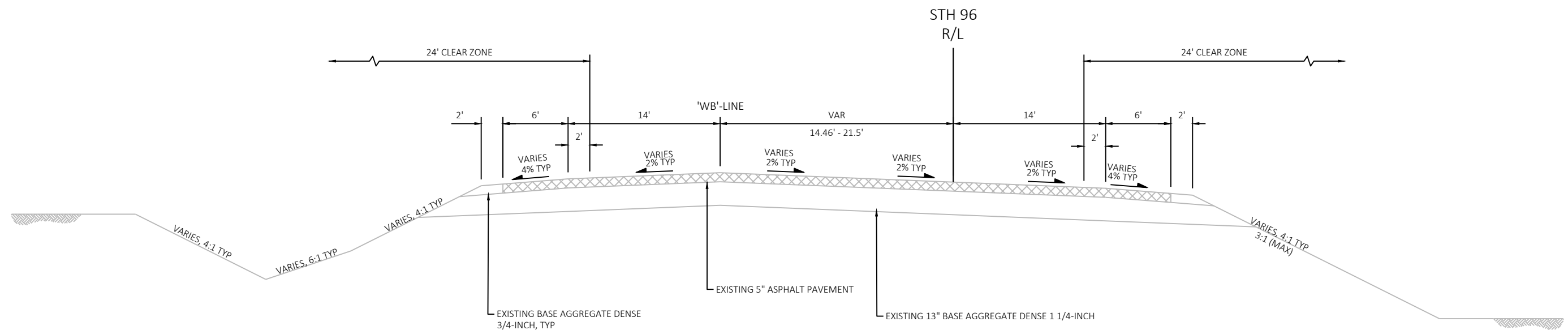


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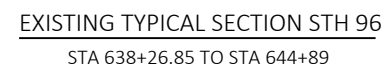
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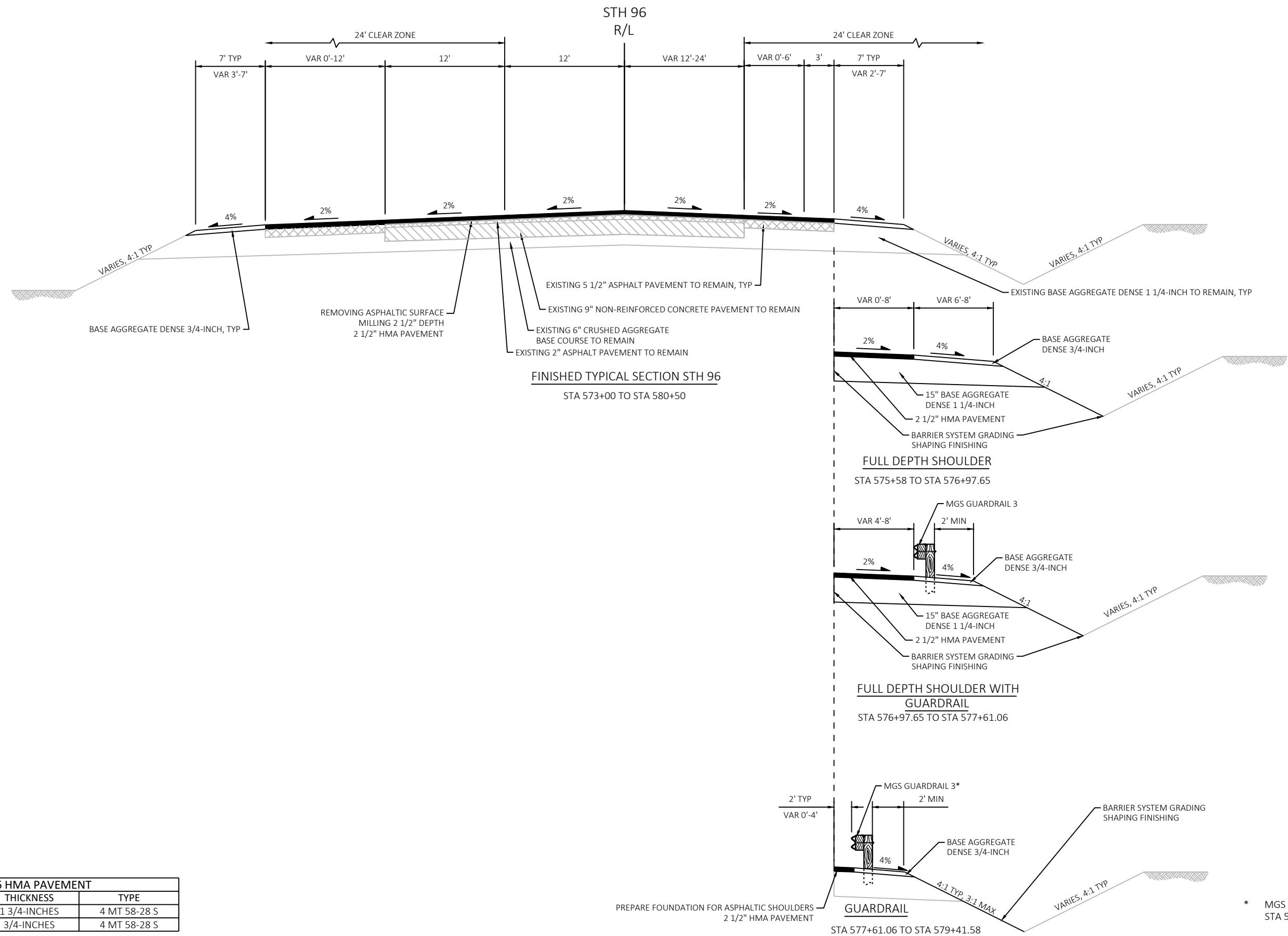


EXISTING TYPICAL SECTION STH 96
STA 634+03.31 TO STA 635+50.00

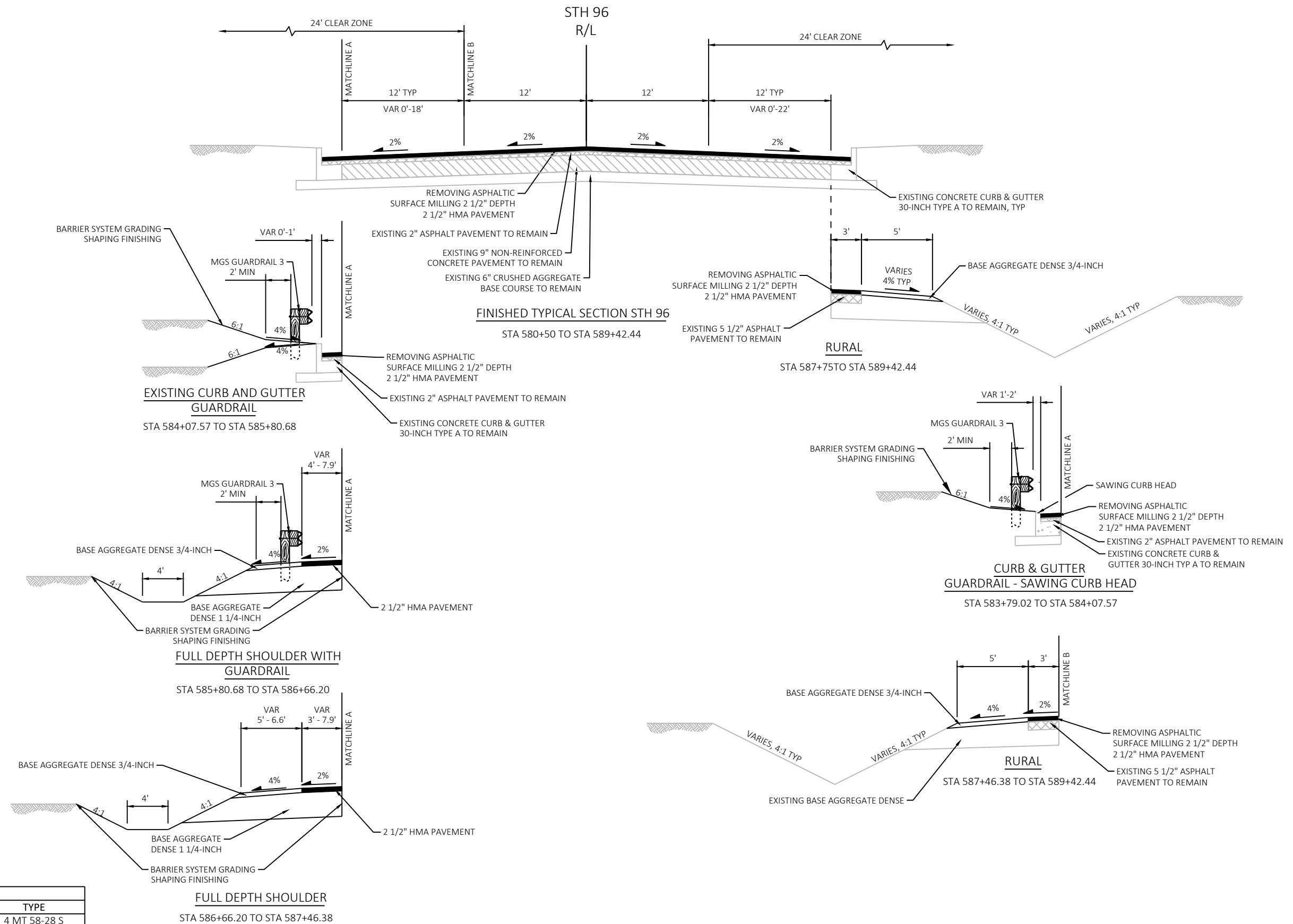


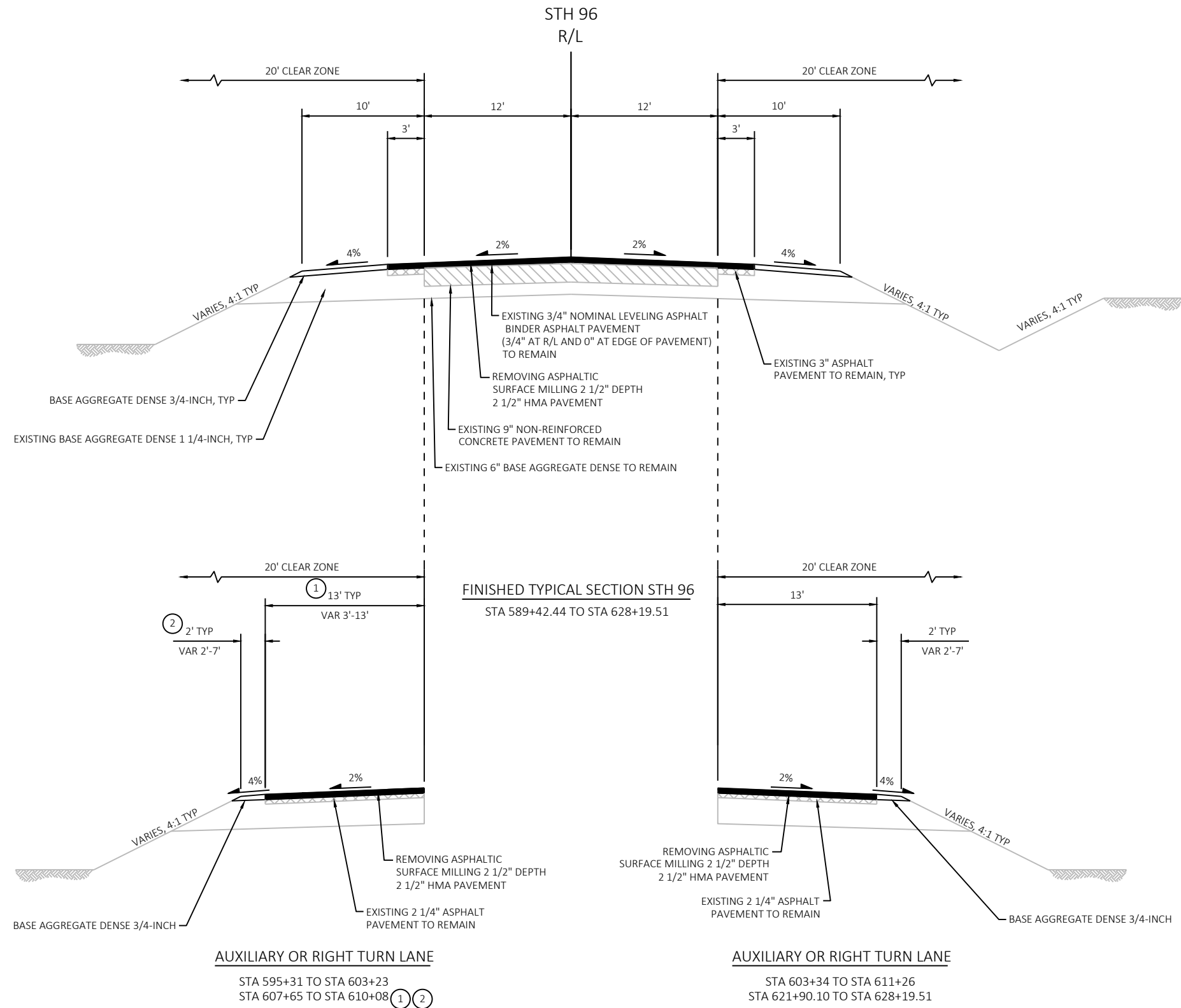
EXISTING TYPICAL SECTION STH 96
STA 635+50.00 TO 637+40.16





STH 96 HMA PAVEMENT		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 MT 58-28 S
LEVELING	3/4-INCHES	4 MT 58-28 S





STH 96 HMA PAVEMENT		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 MT 58-28 S
LEVELING	3/4-INCHES	4 MT 58-28 S

PROJECT NO: 4075-41-71

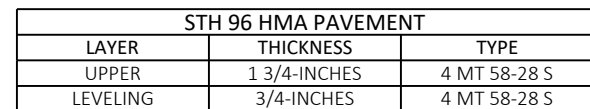
HWY: STH 96

COUNTY: OUTAGAMIE

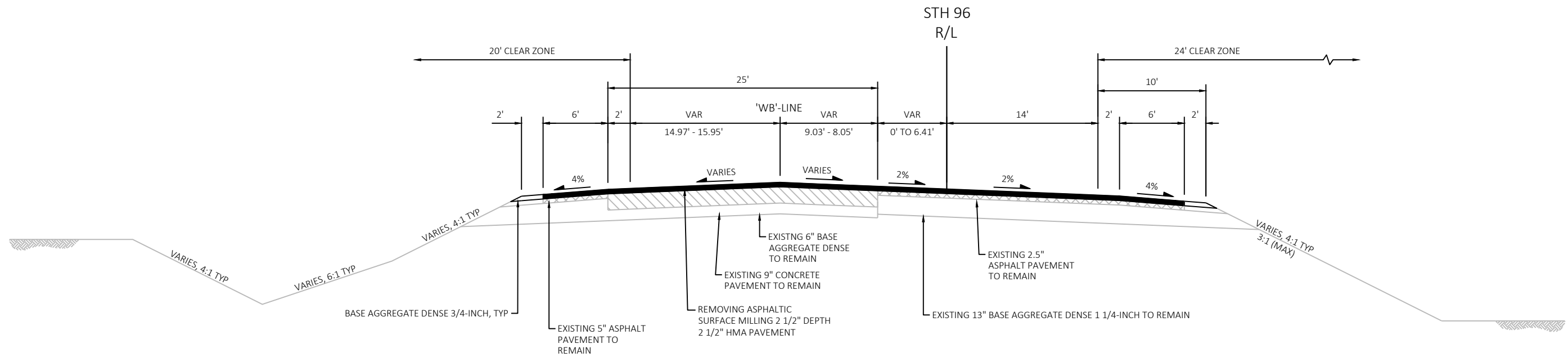
TYPICAL SECTIONS

SHEET

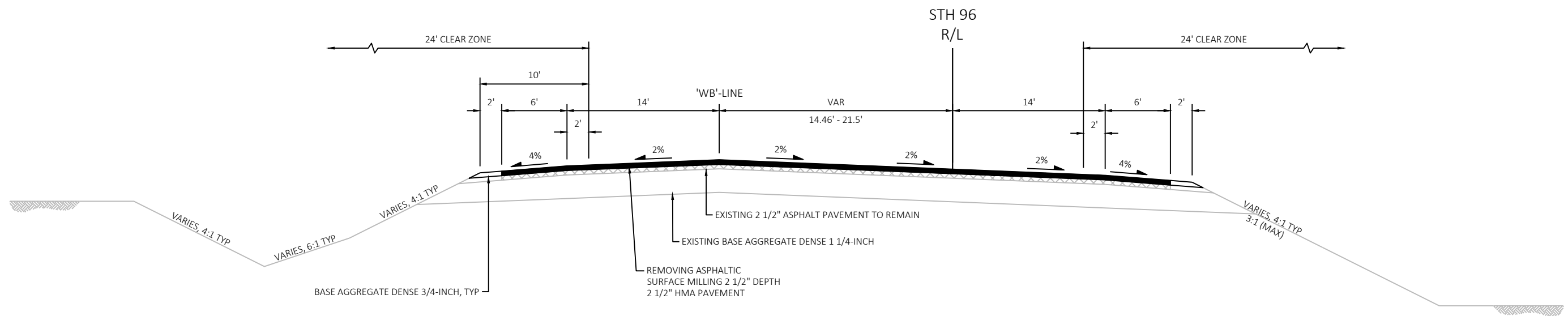
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FILE NAME :	K:\1202715.07\CIVIL3D\40754100\SHEETSP\PLAN\Q20301-TS.DWG	PLOT DATE :	2/26/2024 10:43 AM	PLOT BY :	NIKOLAI, ADAM	PLOT NAME :		PLOT SCALE :	1IN=10 FT	WISDOT/CADD SHEET 42
LAYOUT NAME :	Q20310-ts									



FINISHED TYPICAL SECTION STH 96
STA 634+03.31 TO STA 635+50.00



FINISHED TYPICAL SECTION STH 96
STA 635+50.00 TO STA 637+40.16

STH 96 HMA PAVEMENT		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 MT 58-28 S
LEVELING	3/4-INCHES	4 MT 58-28 S

PROJECT NO: 4075-41-71

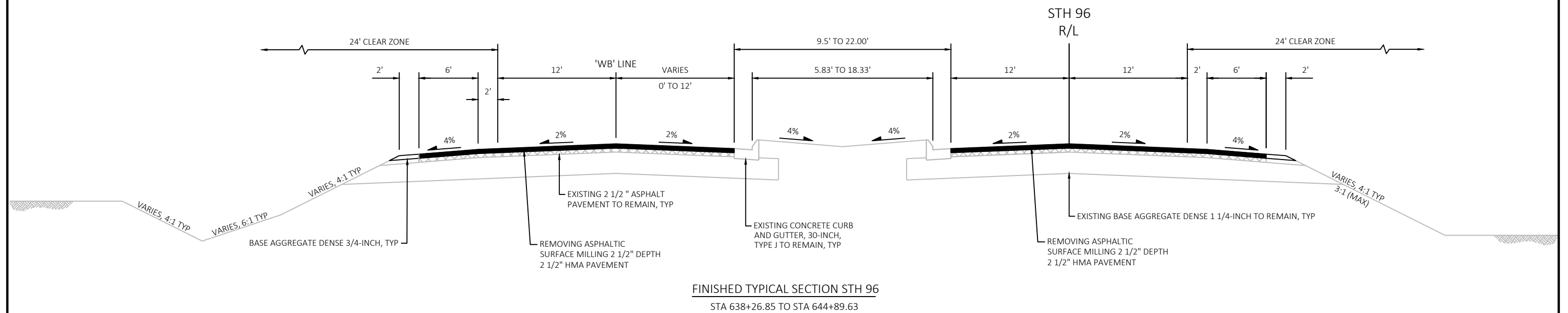
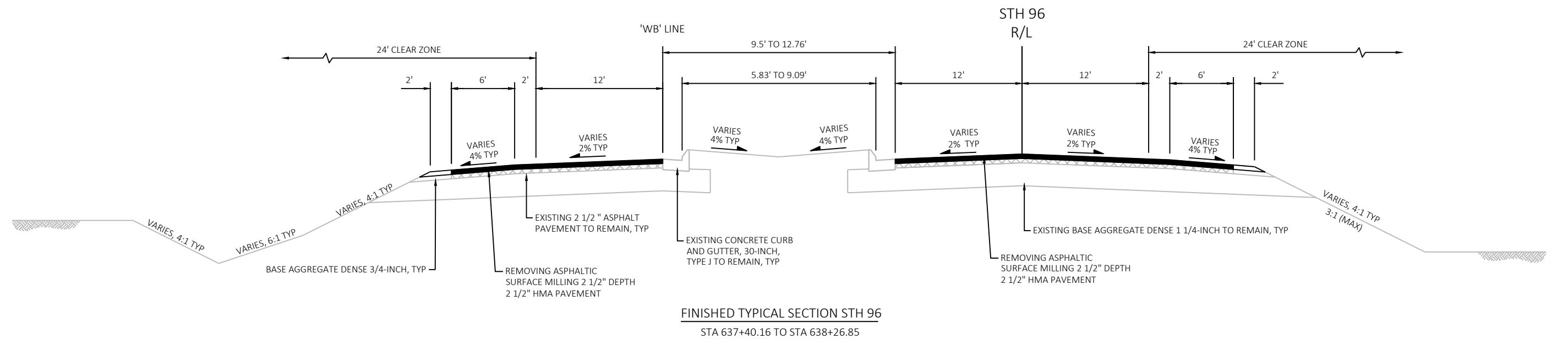
HWY: STH 96

COUNTY: OUTAGAMIE

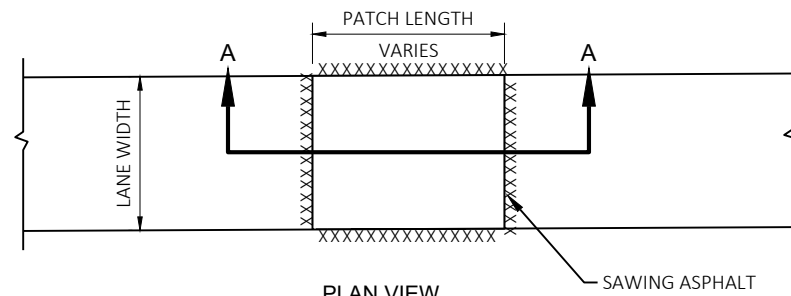
TYPICAL SECTIONS

SHEET

E

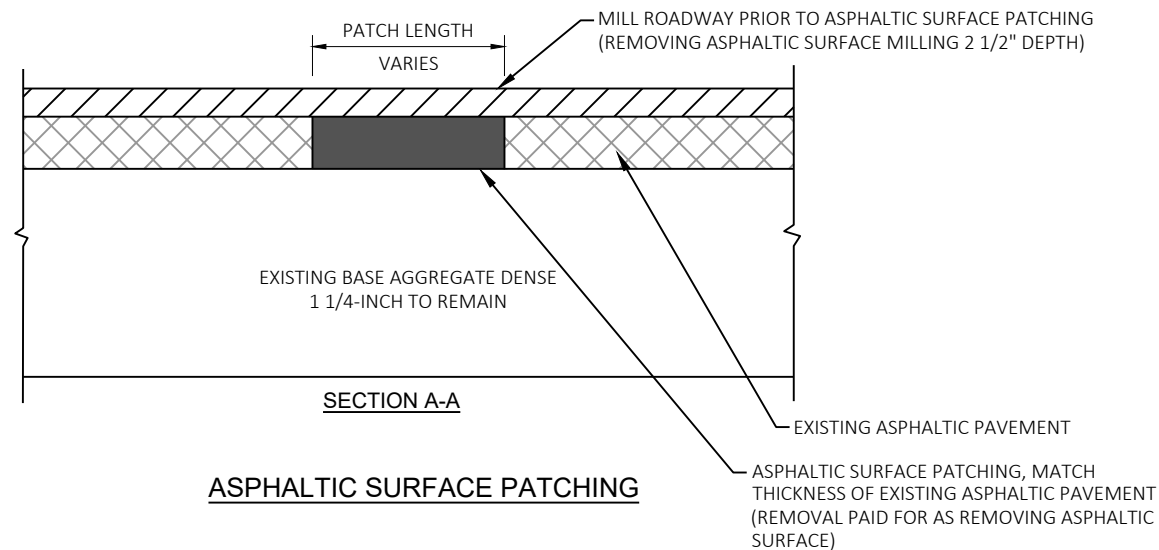
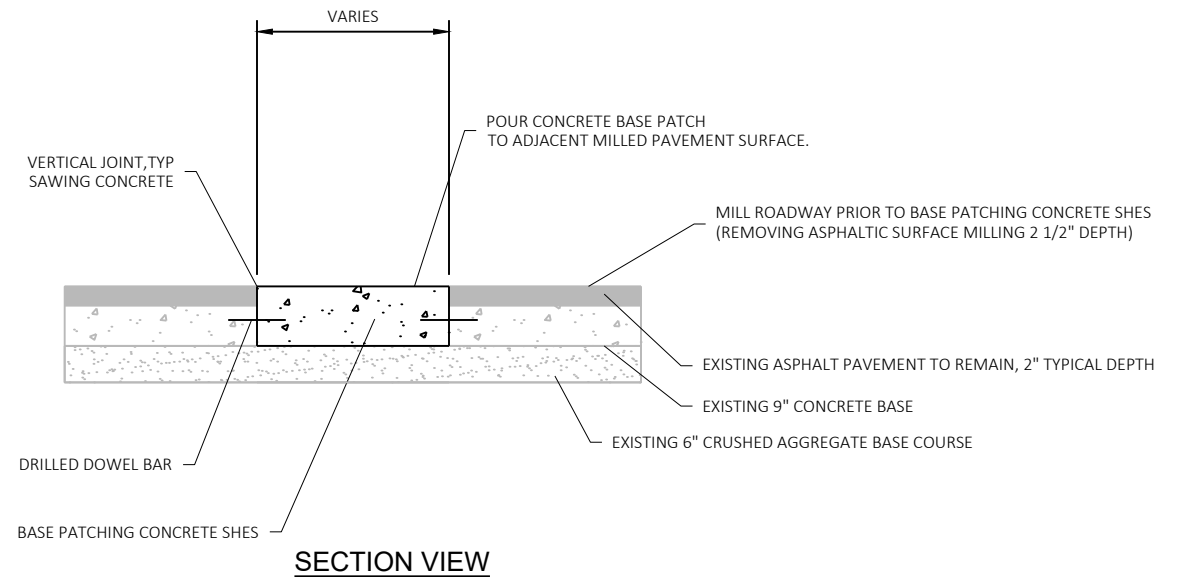


STH 96 HMA PAVEMENT		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	4 MT 58-28 S
LEVELING	3/4-INCHES	4 MT 58-28 S



NOTES:

1. EXACT LOCATION, DEPTH AND SIZE OF BASE PATCHING ASPHALTIC AREA TO BE DETERMINED BY ENGINEER IN THE FIELD.
2. BASE PATCHING ASPHALTIC TO BE COMPLETED ON THE SAME DAY AS REMOVAL IF DONE UNDER TRAFFIC.

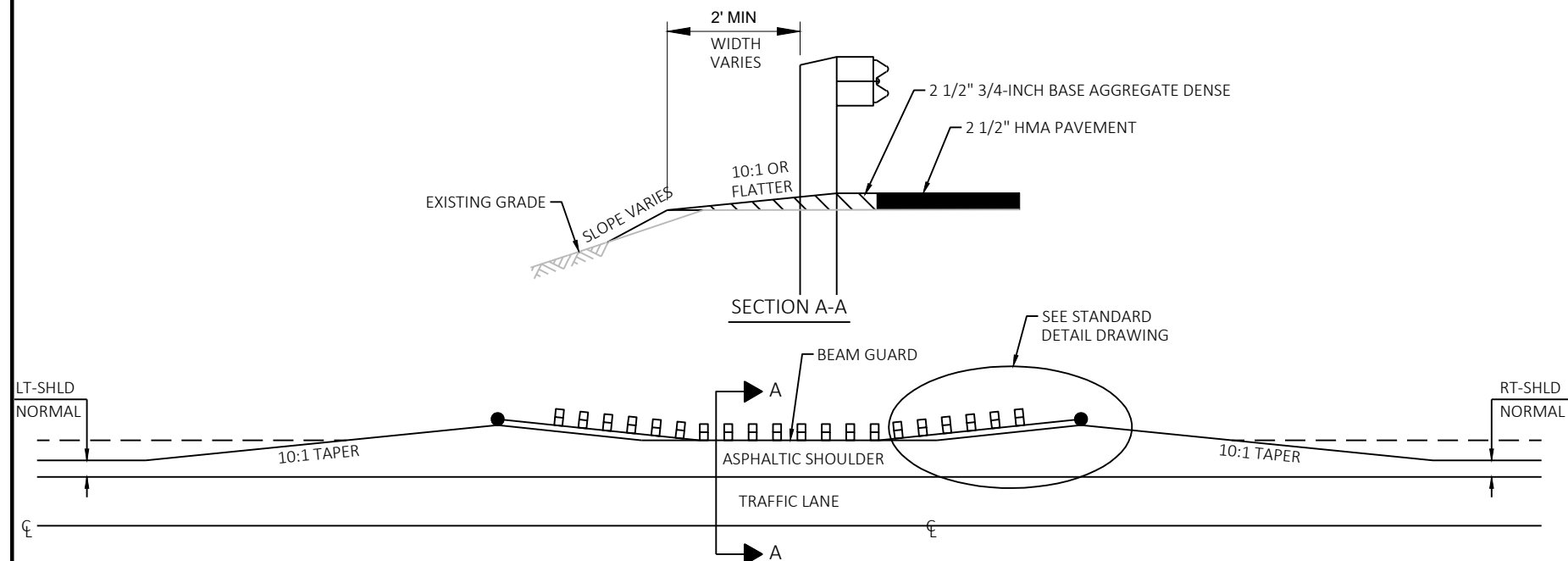
ASPHALTIC SURFACE PATCHINGSECTION VIEW

NOTE:

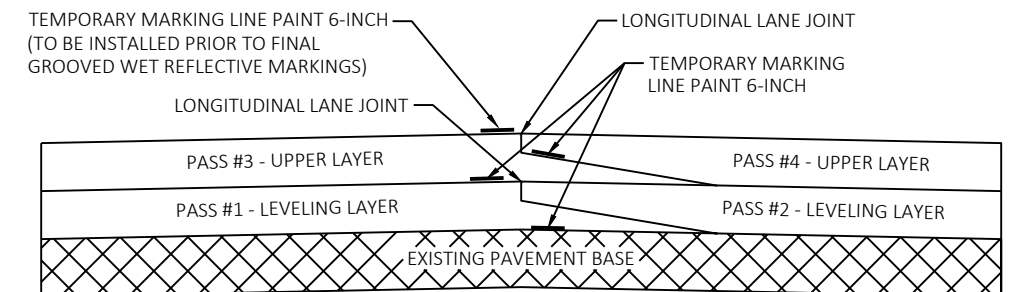
1. CONSTRUCT IN ACCORDANCE WITH SDD "BASE PATCHING CONCRETE"
2. PROVIDE DRILL TIE BARS INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

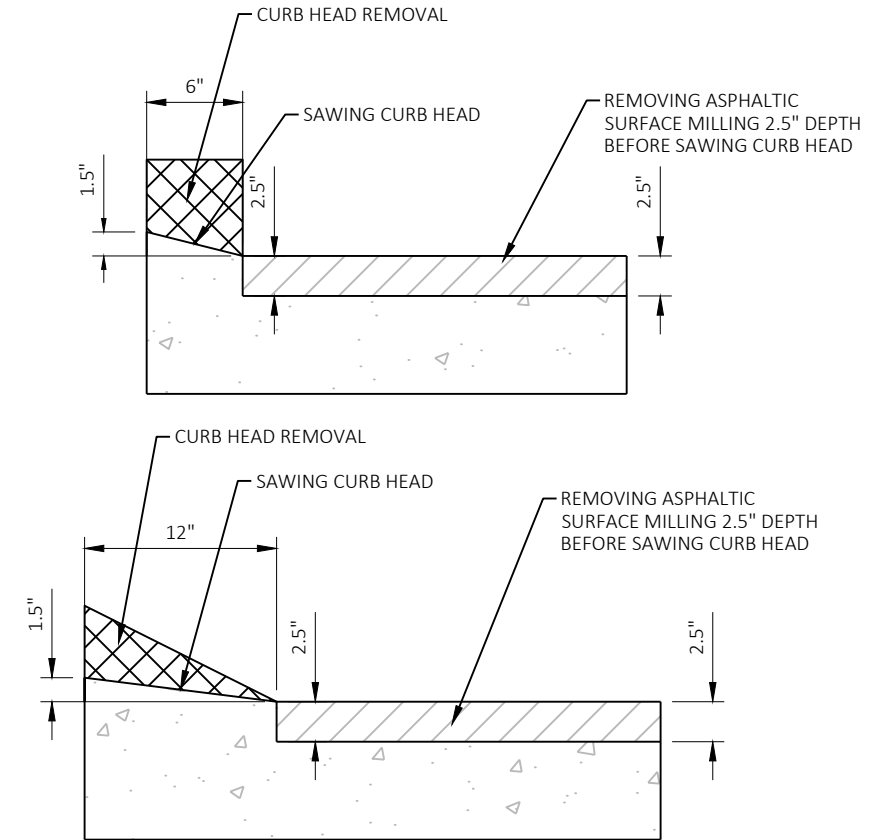
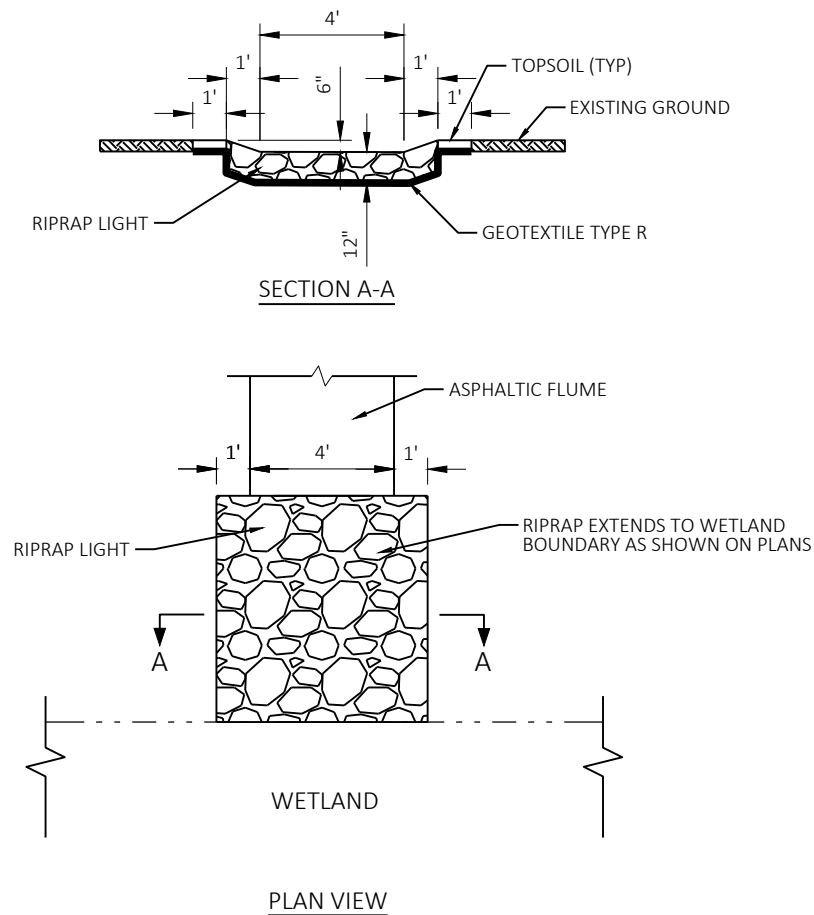
BASE PATCHING CONCRETE SHES

SEE PLAN DETAILS FOR LOCATIONS

DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

SEE PLAN DETAILS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION

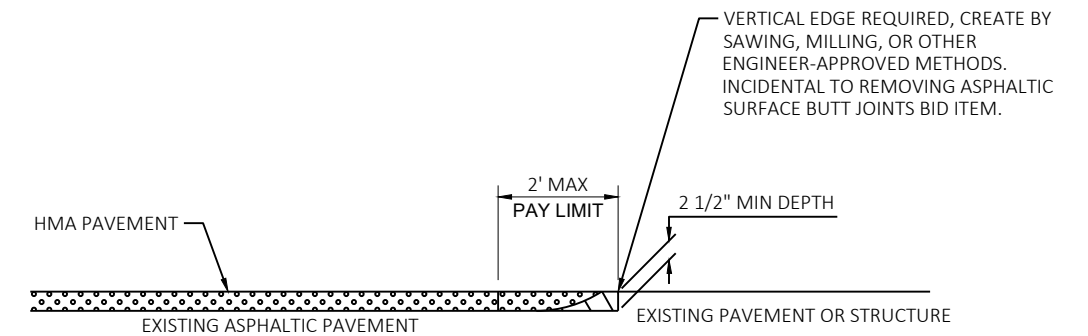
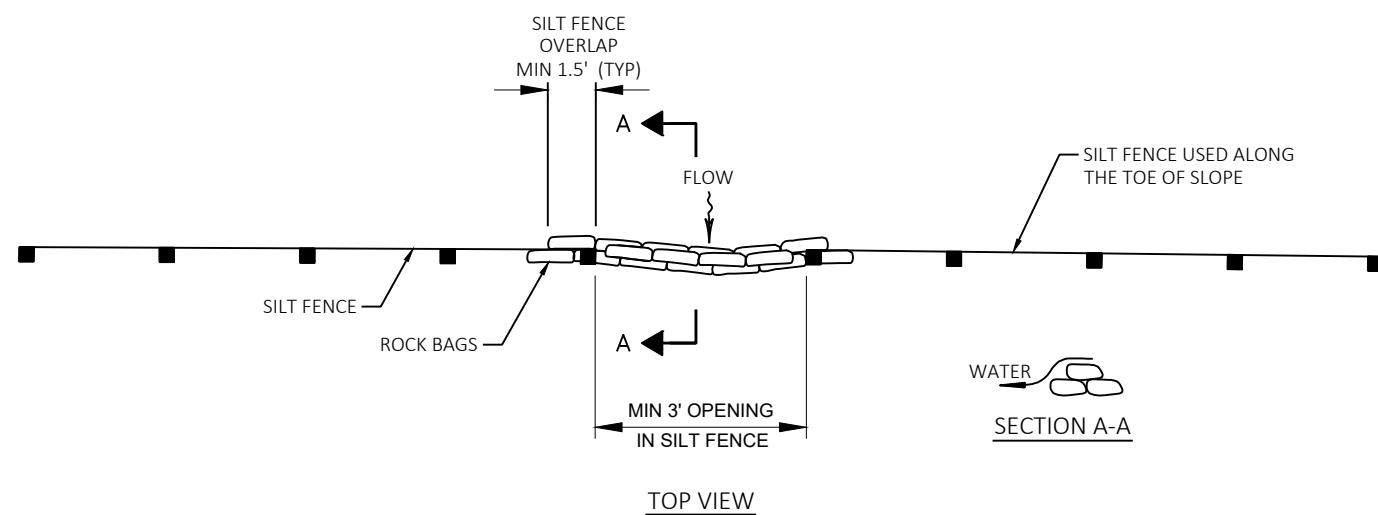
PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

**NOTE:**

1. SAW A 10' TRANSITION FROM FULL CURB HEAD HEIGHT TO HEIGHT SHOWN

SAWING CURB HEAD

STA 579+62 TO STA 579+76, RT
STA 583+79 TO STA 584+38, LT



SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

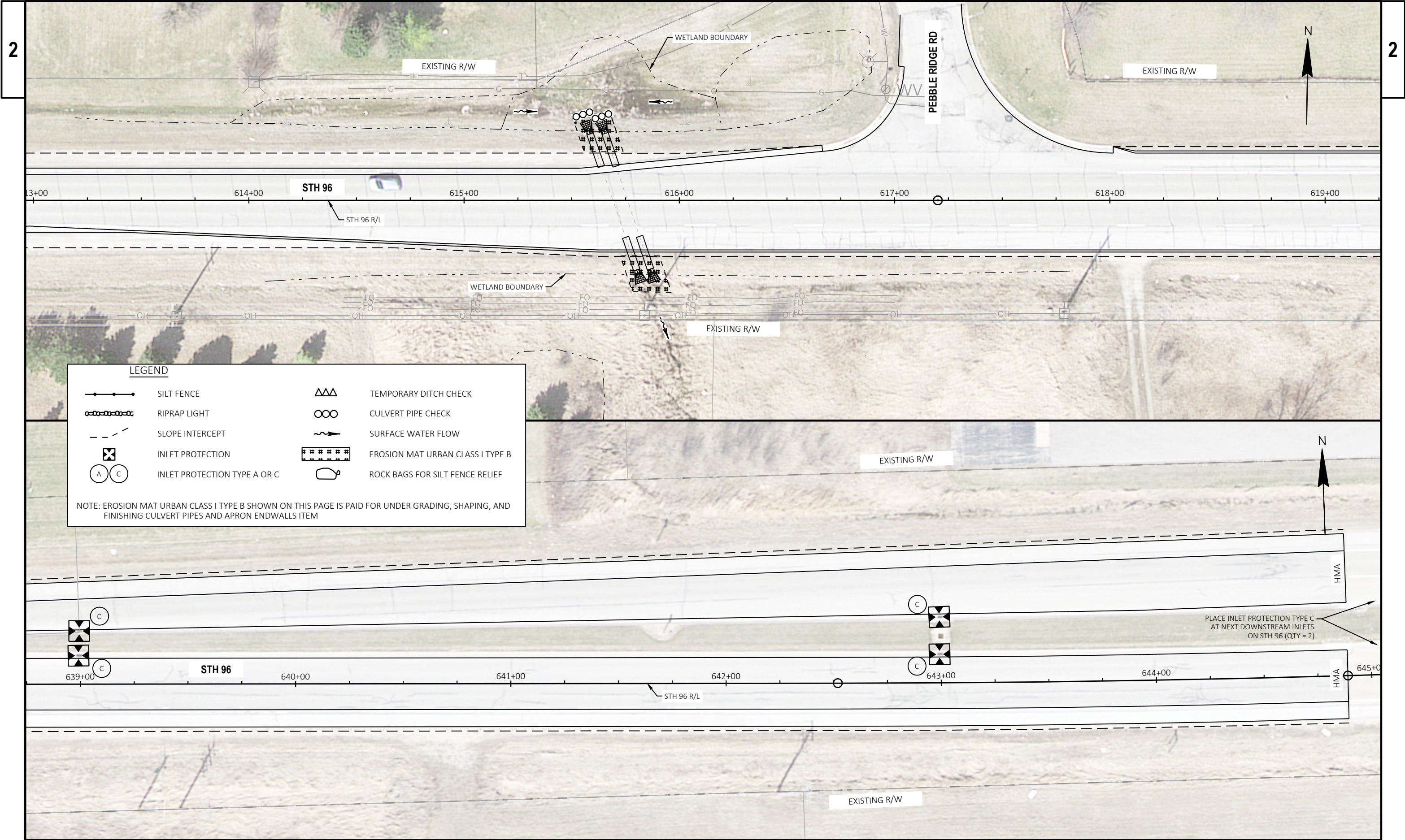


REMOVING ASPHALTIC SURFACE MILLING

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)





LEGEND

SILT FENCE

RIPRAP LIGHT

SLOPE INTERCEPT

INLET PROTECTION

INLET PROTECTION TYPE A OR C

TEMPORARY DITCH CHECK

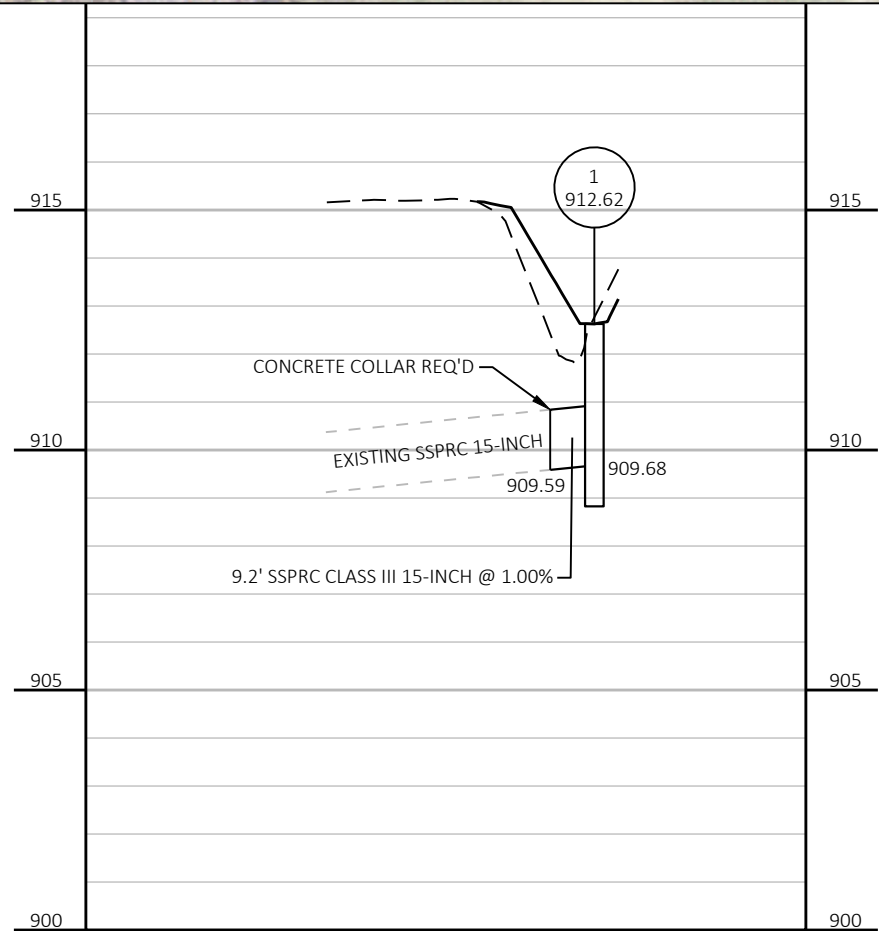
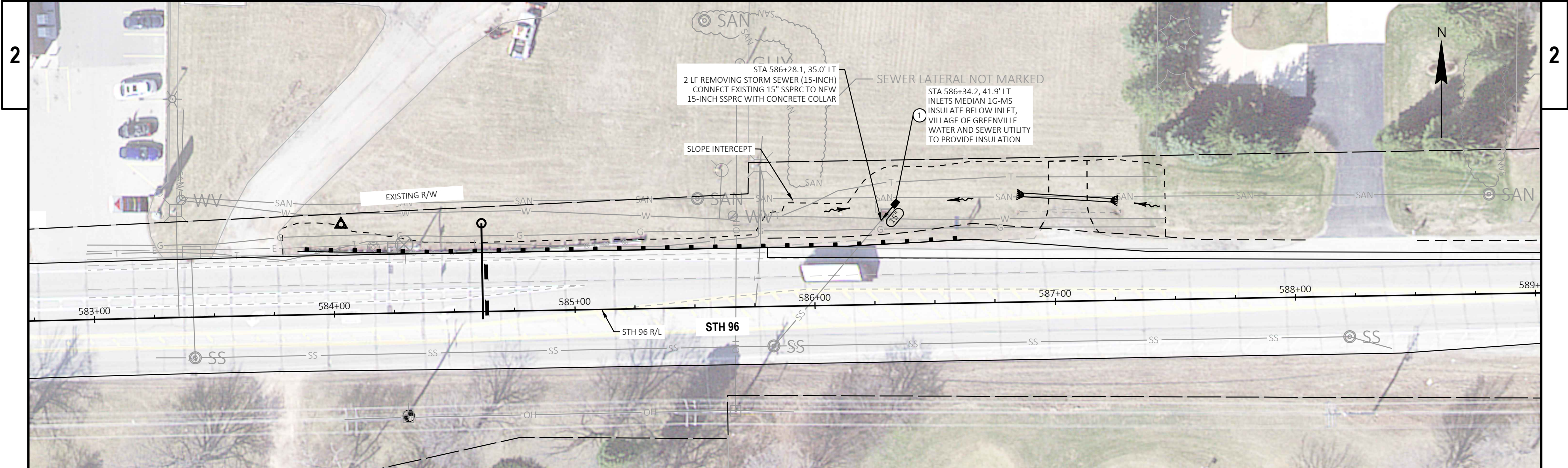
CULVERT PIPE CHECK

SURFACE WATER FLOW

EROSION MAT URBAN CLASS I TYPE B

ROCK BAGS FOR SILT FENCE RELIEF

NOTE: EROSION MAT URBAN CLASS I TYPE B SHOWN ON THIS PAGE IS PAID FOR UNDER GRADING, SHAPING, AND FINISHING CULVERT PIPES AND APRON ENDWALLS ITEM

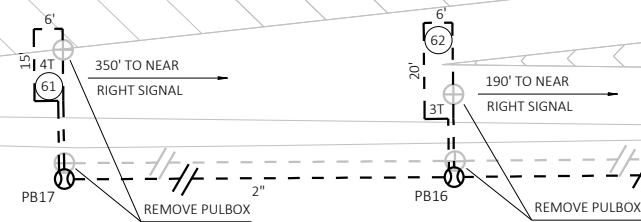


CONFIGURATION WITH HEAD NUMBERS			
3-V	(R)	3, 4, 5, 8, 9	4-VL FYA
	(Y)	10, 13, 14, 15	
	(G)	18, 19, 20	
	(R)	1, 2, 6	
	(Y)	7, 11, 12	
	(G)	16, 17	

MONOTUBE STRUCTURE NUMBERS	
SB2	S-44-0287
SB4	S-44-0288
SB6	S-44-0289
SB8	S-44-0290

NOTE: SIGNAL HEADS 1, 6, 11 & 16 REQUIRE TUNNEL VISORS

STH 76

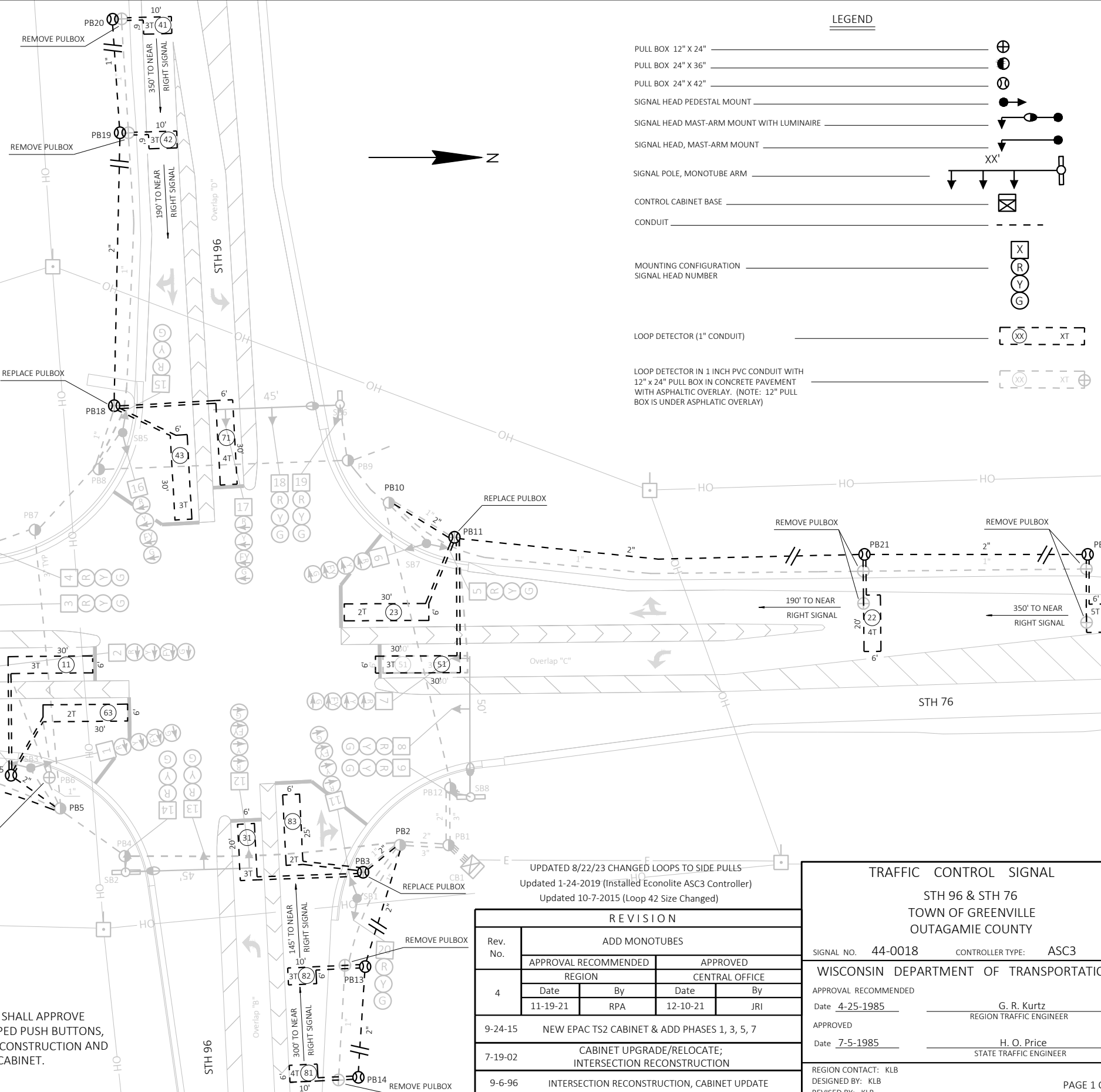


GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS, PED PUSH BUTTONS, AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION AND MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET.



LEGEND

PULL BOX 12" X 24"	
PULL BOX 24" X 36"	
PULL BOX 24" X 42"	
SIGNAL HEAD PEDESTAL MOUNT	
SIGNAL HEAD MAST-ARM MOUNT WITH LUMINAIRE	
SIGNAL HEAD, MAST-ARM MOUNT	
SIGNAL POLE, MONOTUBE ARM	
CONTROL CABINET BASE	
CONDUIT	
MOUNTING CONFIGURATION	
SIGNAL HEAD NUMBER	
LOOP DETECTOR (1" CONDUIT)	
LOOP DETECTOR IN 1 INCH PVC CONDUIT WITH 12" X 24" PULL BOX IN CONCRETE PAVEMENT WITH ASPHALTIC OVERLAY. (NOTE: 12" PULL BOX IS UNDER ASPHALTIC OVERLAY)	

UPDATED 8/22/23 CHANGED LOOPS TO SIDE PULLS
Updated 1-24-2019 (Installed Econolite ASC3 Controller)
Updated 10-7-2015 (Loop 42 Size Changed)

REVISION				
Rev. No.	ADD MONOTUBES			
	APPROVAL RECOMMENDED		APPROVED	
4	REGION		CENTRAL OFFICE	
	Date	By	Date	By
	11-19-21	RPA	12-10-21	JRI
9-24-15	NEW EPAC TS2 CABINET & ADD PHASES 1, 3, 5, 7			
7-19-02	CABINET UPGRADE/RELOCATE; INTERSECTION RECONSTRUCTION			
9-6-96	INTERSECTION RECONSTRUCTION, CABINET UPDATE			

TRAFFIC CONTROL SIGNAL

STH 96 & STH 76
TOWN OF GREENVILLE
OUTAGAMIE COUNTY

SIGNAL NO. 44-0018 CONTROLLER TYPE: ASC3

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

Date 4-25-1985

G. R. Kurtz

REGION TRAFFIC ENGINEER

APPROVED

Date 7-5-1985

H. O. Price

STATE TRAFFIC ENGINEER

REGION CONTACT: KLB

DESIGNED BY: KLB

REVISED BY: KLB

PAGE 1 OF 2

PROJECT NO: 4075-41-71

HWY: STH 96

COUNTY: OUTAGAMIE

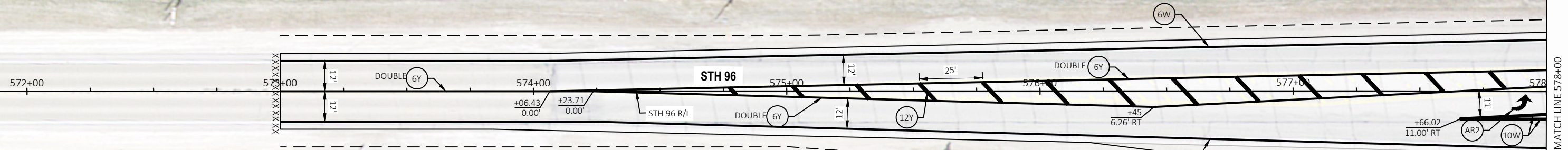
TRAFFIC CONTROL SIGNAL - S44-0018

SHEET

E

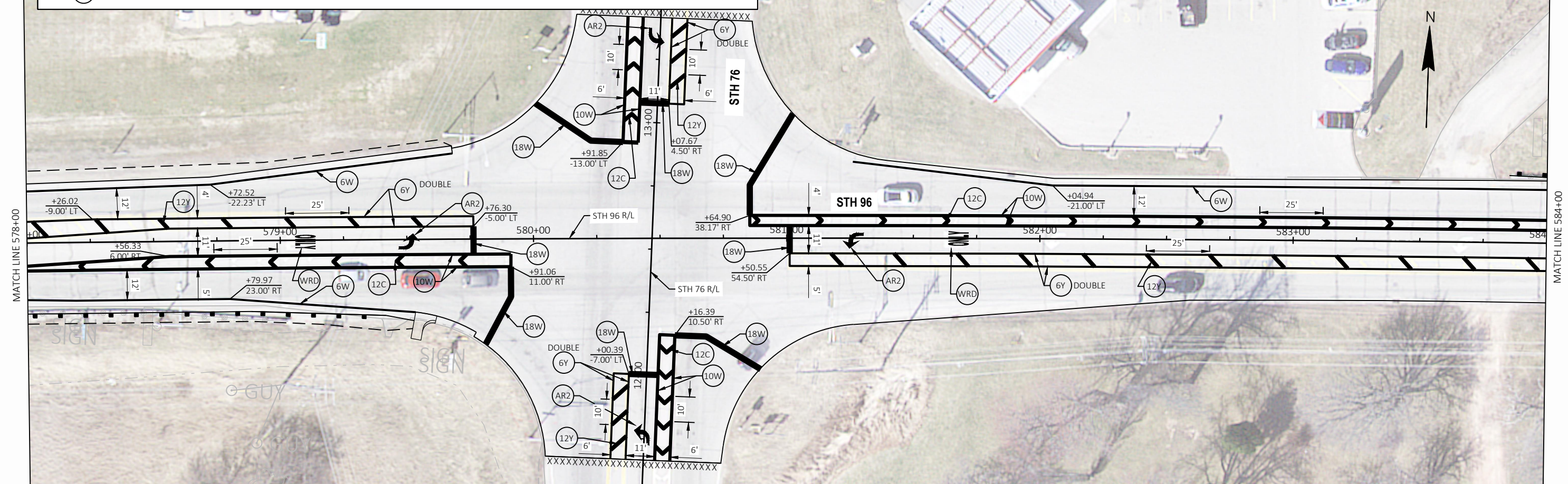
NOTE:

- DIMENSIONS AND STATIONS/OFFSETS SHOWN ON PAVEMENT MARKING PLAN SHEETS ARE APPROXIMATE. FINAL LOCATIONS OF MARKINGS TO BE DETERMINED BY THE ENGINEER.



PAVEMENT MARKING LEGEND

(6W) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(10W) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(6Y) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) (MATCH EXISTING NO PASSING ZONE LOCATIONS)	(18W) MARKING STOP LINE EPOXY 18-INCH (WHITE)
(6LN) MARKING LINE GROOVED WET REF EPOXY 6-INCH (12.5' LINE, 37.5' GAP, WHITE)	(WRD) MARKING ARROW EPOXY (TYPE 2, WHITE)
(12W) MARKING DIAGONAL EPOXY 12-INCH (WHITE)	(AR2) MARKING WORD EPOXY (WHITE)
(12Y) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	(12C) MARKING CHEVRON EPOXY 12-INCH (WHITE)



PROJECT NO: 4075-41-71

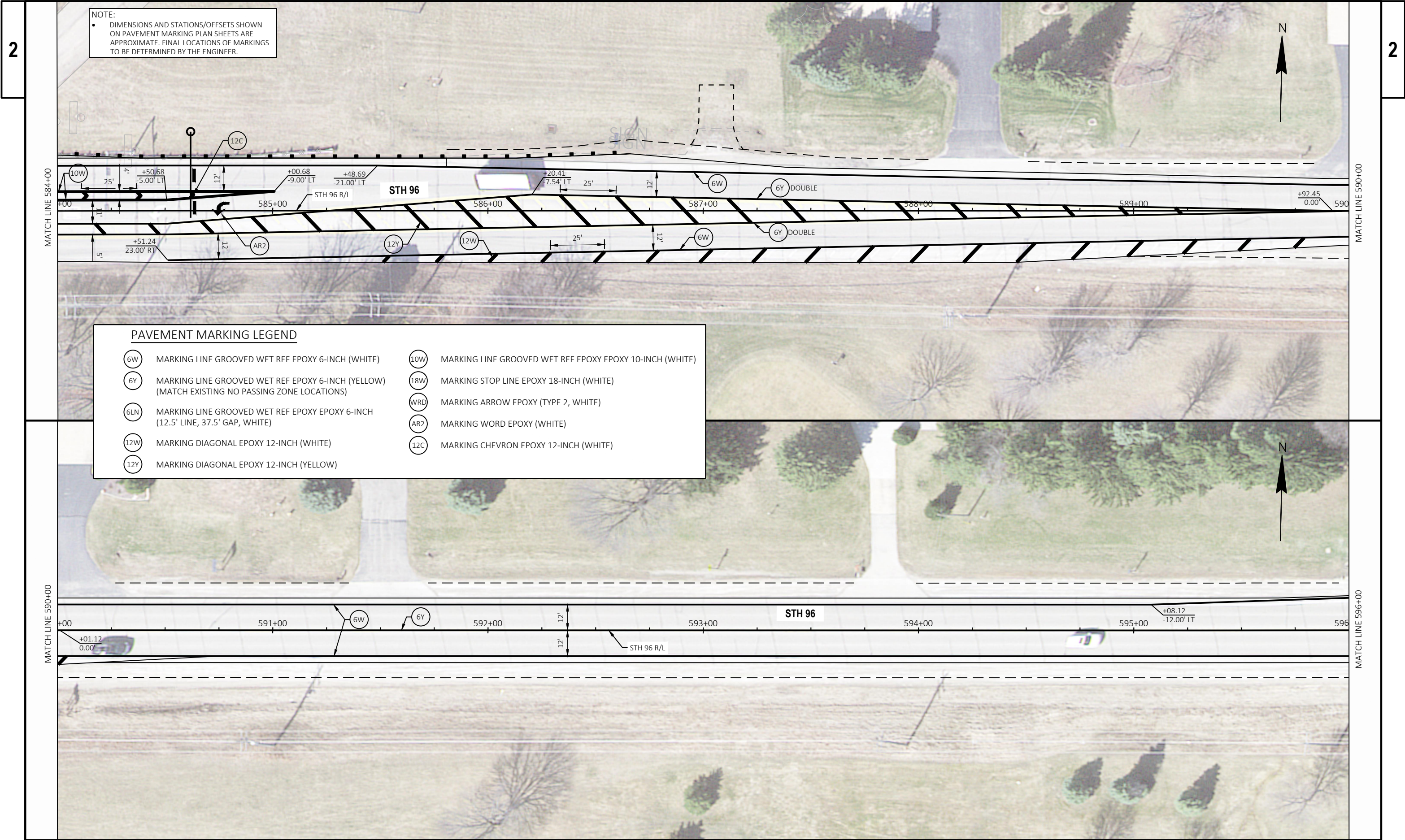
HWY: STH 96

COUNTY: OUTAGAMIE

PAVEMENT MARKING

SHEET

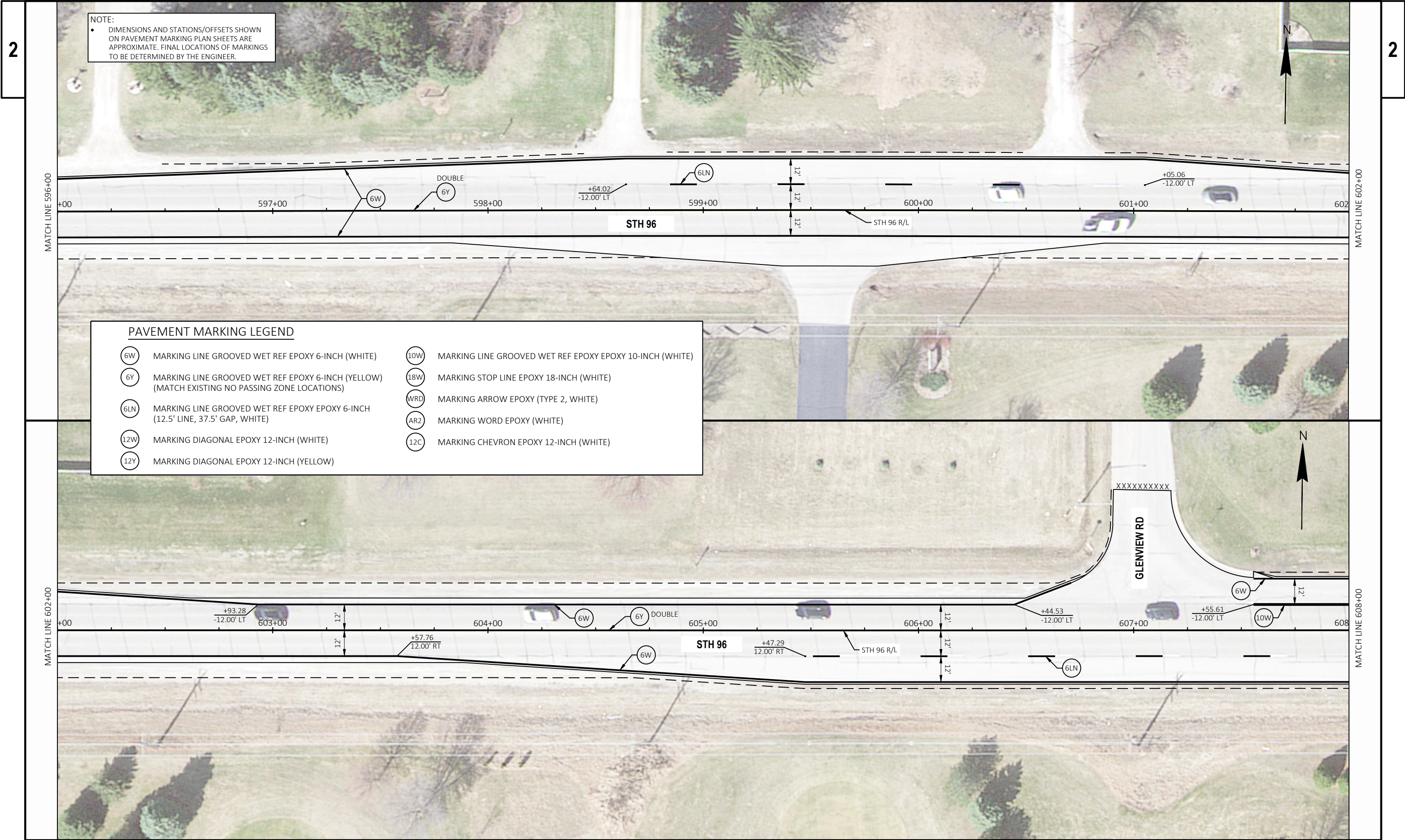
E



NOTE:

- DIMENSIONS AND STATIONS/OFFSETS SHOWN ON PAVEMENT MARKING PLAN SHEETS ARE APPROXIMATE. FINAL LOCATIONS OF MARKINGS TO BE DETERMINED BY THE ENGINEER.

PAVEMENT MARKING LEGEND			
(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(10W)	MARKING LINE GROOVED WET REF EPOXY EPOXY 10-INCH (WHITE)
(6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) (MATCH EXISTING NO PASSING ZONE LOCATIONS)	(18W)	MARKING STOP LINE EPOXY 18-INCH (WHITE)
(6LN)	MARKING LINE GROOVED WET REF EPOXY EPOXY 6-INCH (12.5' LINE, 37.5' GAP, WHITE)	(WRD)	MARKING ARROW EPOXY (TYPE 2, WHITE)
(12W)	MARKING DIAGONAL EPOXY 12-INCH (WHITE)	(AR2)	MARKING WORD EPOXY (WHITE)
(12Y)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	(12C)	MARKING CHEVRON EPOXY 12-INCH (WHITE)



NOTE:

- DIMENSIONS AND STATIONS/OFFSETS SHOWN ON PAVEMENT MARKING PLAN SHEETS ARE APPROXIMATE. FINAL LOCATIONS OF MARKINGS TO BE DETERMINED BY THE ENGINEER.

PAVEMENT MARKING LEGEND			
(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	(10W)	MARKING LINE GROOVED WET REF EPOXY EPOXY 10-INCH (WHITE)
(6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) (MATCH EXISTING NO PASSING ZONE LOCATIONS)	(18W)	MARKING STOP LINE EPOXY 18-INCH (WHITE)
(6LN)	MARKING LINE GROOVED WET REF EPOXY EPOXY 6-INCH (12.5' LINE, 37.5' GAP, WHITE)	(WRD)	MARKING ARROW EPOXY (TYPE 2, WHITE)
(12W)	MARKING DIAGONAL EPOXY 12-INCH (WHITE)	(AR2)	MARKING WORD EPOXY (WHITE)
(12Y)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	(12C)	MARKING CHEVRON EPOXY 12-INCH (WHITE)

NOTE:
• DIMENSIONS AND STATIONS/OFFSETS SHOWN ON PAVEMENT MARKING PLAN SHEETS ARE APPROXIMATE. FINAL LOCATIONS OF MARKINGS TO BE DETERMINED BY THE ENGINEER.

MATCH LINE 608+00

MATCH LINE 614+00

PAVEMENT MARKING LEGEND

- | | | | |
|-------|--|-------|--|
| (6W) | MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | (10W) | MARKING LINE GROOVED WET REF EPOXY EPOXY 10-INCH (WHITE) |
| (6Y) | MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
(MATCH EXISTING NO PASSING ZONE LOCATIONS) | (18W) | MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| (6LN) | MARKING LINE GROOVED WET REF EPOXY EPOXY 6-INCH
(12.5' LINE, 37.5' GAP, WHITE) | (WRD) | MARKING ARROW EPOXY (TYPE 2, WHITE) |
| (12W) | MARKING DIAGONAL EPOXY 12-INCH (WHITE) | (AR2) | MARKING WORD EPOXY (WHITE) |
| (12Y) | MARKING DIAGONAL EPOXY 12-INCH (YELLOW) | (12C) | MARKING CHEVRON EPOXY 12-INCH (WHITE) |

MATCH LINE 614+00

MATCH LINE 620+00

NOTE:
• DIMENSIONS AND STATIONS/OFFSETS SHOWN ON PAVEMENT MARKING PLAN SHEETS ARE APPROXIMATE. FINAL LOCATIONS OF MARKINGS TO BE DETERMINED BY THE ENGINEER.

MATCH LINE 620+00

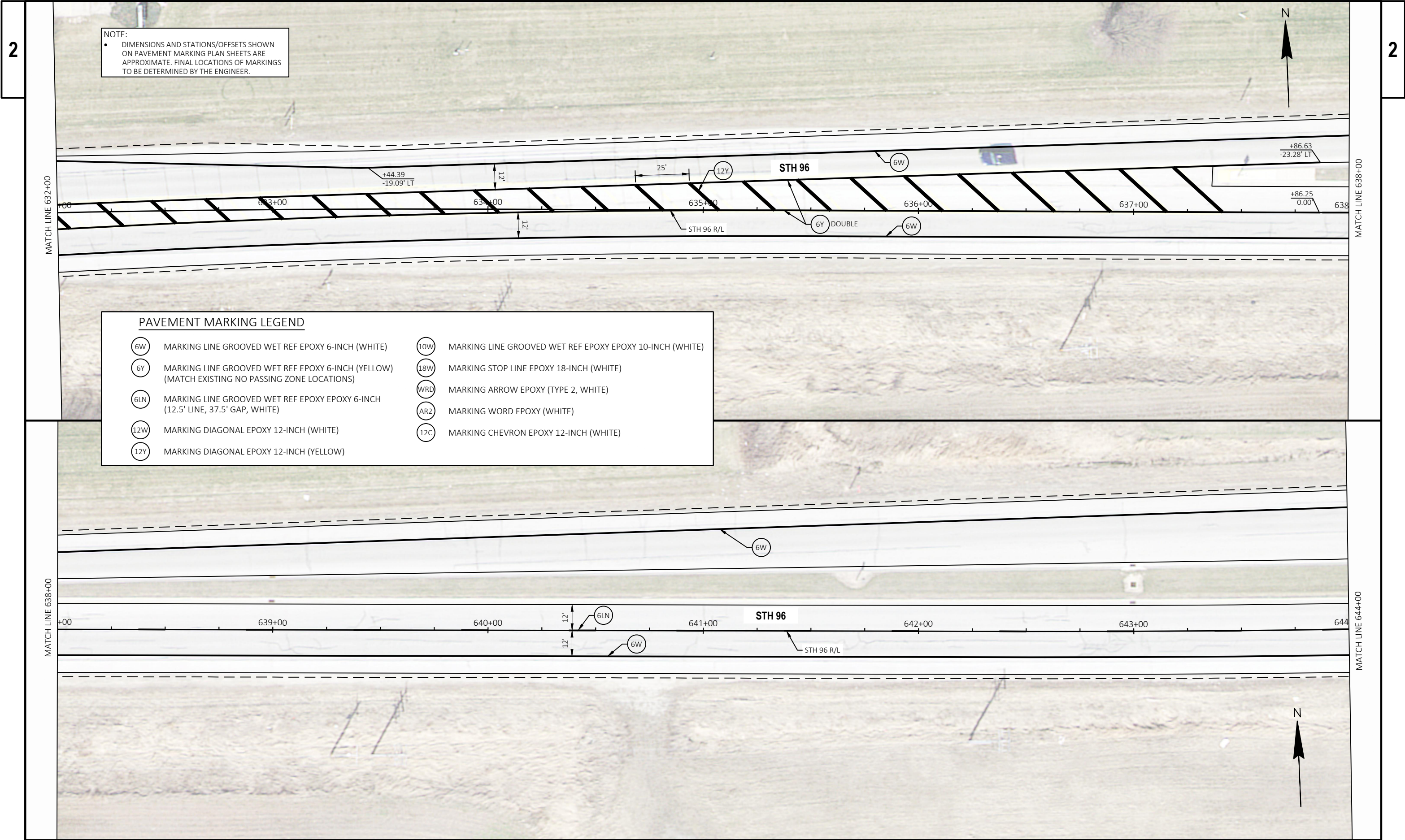
MATCH LINE 626+00

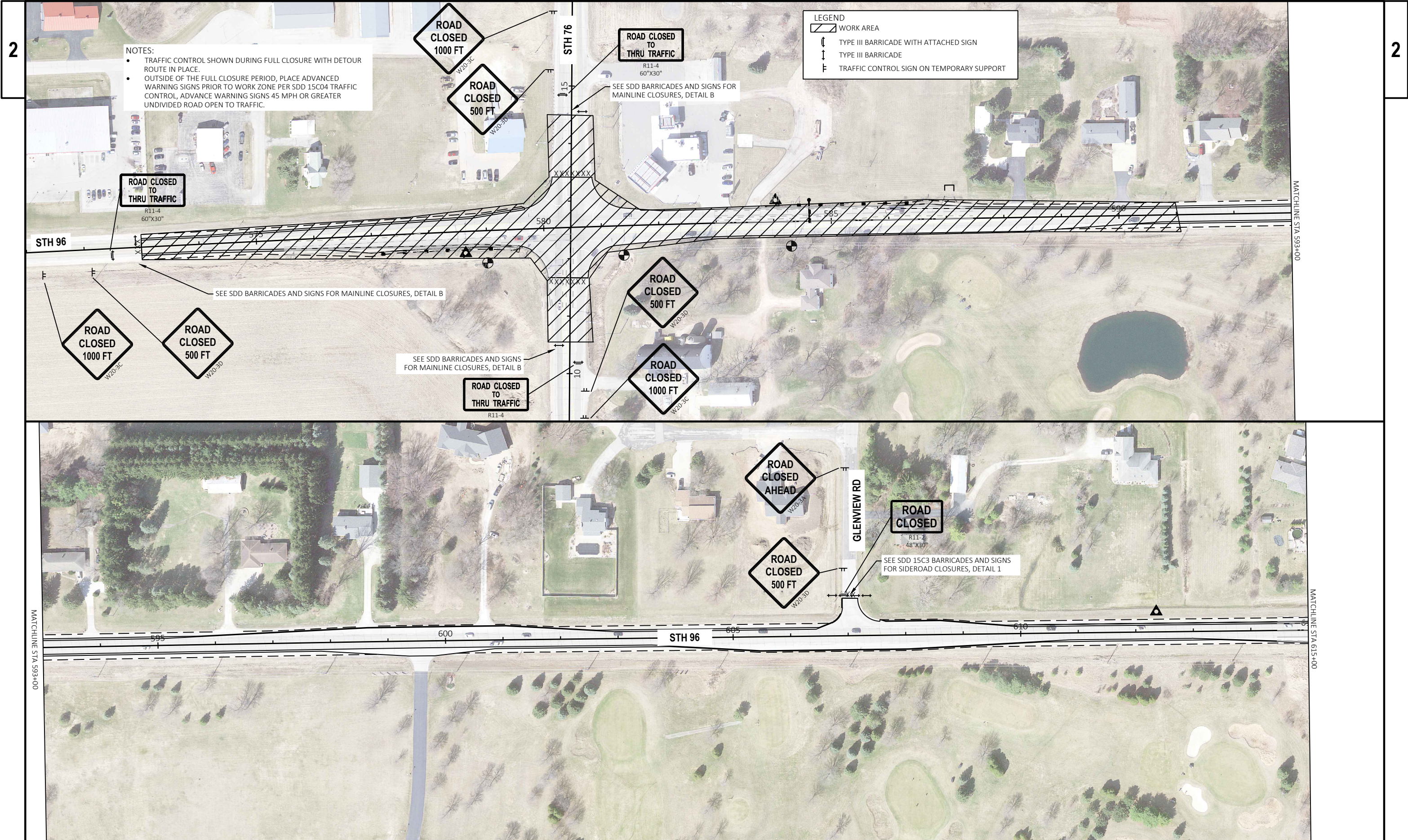
MATCH LINE 626+00

MATCH LINE 632+00

PAVEMENT MARKING LEGEND

- | | | | |
|-------|--|-------|--|
| (6W) | MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) | (10W) | MARKING LINE GROOVED WET REF EPOXY EPOXY 10-INCH (WHITE) |
| (6Y) | MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
(MATCH EXISTING NO PASSING ZONE LOCATIONS) | (18W) | MARKING STOP LINE EPOXY 18-INCH (WHITE) |
| (6LN) | MARKING LINE GROOVED WET REF EPOXY EPOXY 6-INCH
(12.5' LINE, 37.5' GAP, WHITE) | (WRD) | MARKING ARROW EPOXY (TYPE 2, WHITE) |
| (12W) | MARKING DIAGONAL EPOXY 12-INCH (WHITE) | (AR2) | MARKING WORD EPOXY (WHITE) |
| (12Y) | MARKING DIAGONAL EPOXY 12-INCH (YELLOW) | (12C) | MARKING CHEVRON EPOXY 12-INCH (WHITE) |



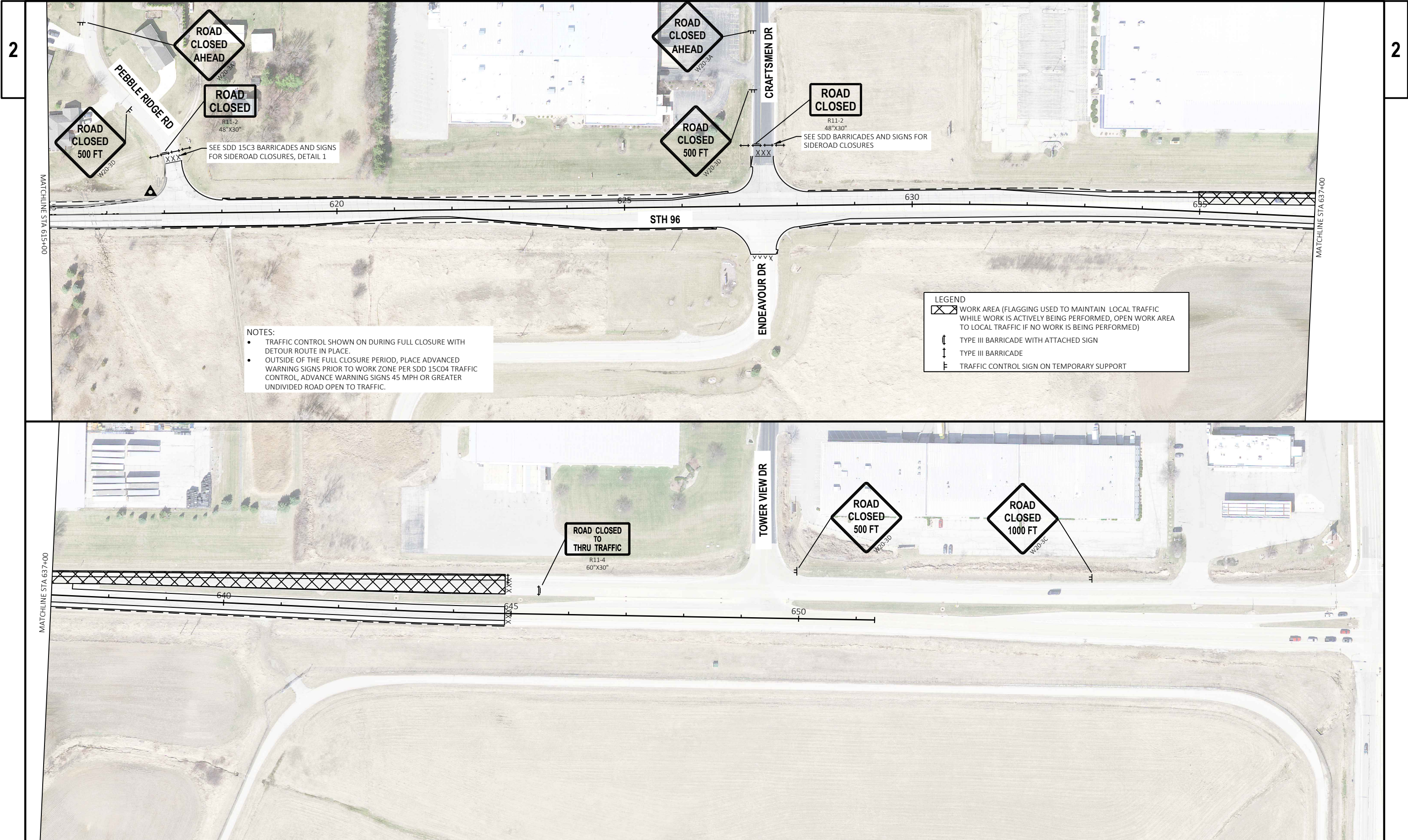


NOTES:

- TRAFFIC CONTROL SHOWN DURING FULL CLOSURE WITH DETOUR ROUTE IN PLACE.
- OUTSIDE OF THE FULL CLOSURE PERIOD, PLACE ADVANCED WARNING SIGNS PRIOR TO WORK ZONE PER SDD 15C04 TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER UNDIVIDED ROAD OPEN TO TRAFFIC.

LEGEND

- WORK AREA
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE III BARRICADE
- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT



2

2

PROJECT NO: 4075-41-71	HWY: STH 96	COUNTY: OUTAGAMIE	TRAFFIC CONTROL	SHEET	E
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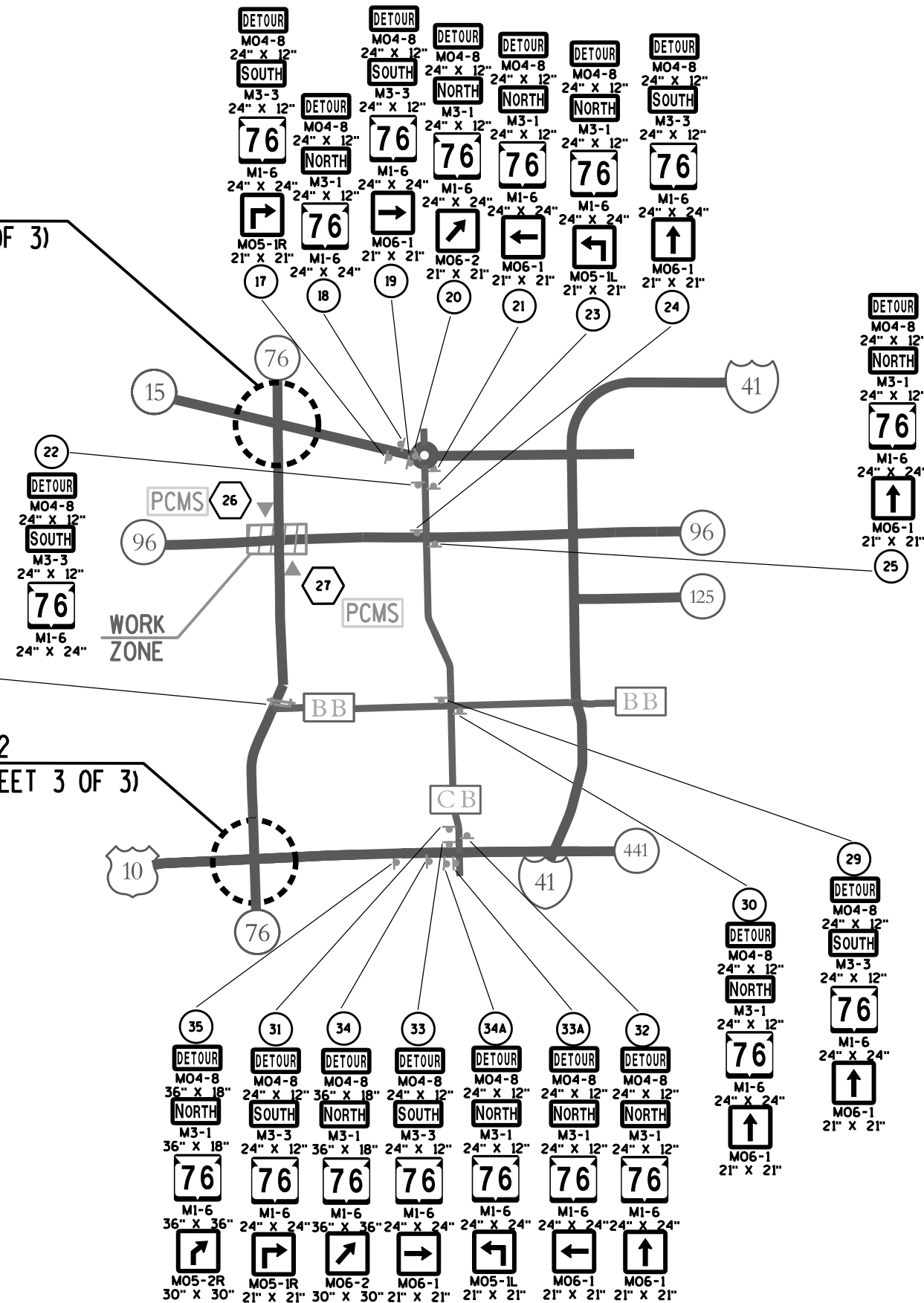
LEGEND

-  SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
 PORTABLE CHANGEABLE MESSAGE SIGN
 SIGN MOUNTED ON TYPE III BARRICADE
 POST MOUNTED SIGN

DETAIL 1
(SEE SHEET 2 OF 3)

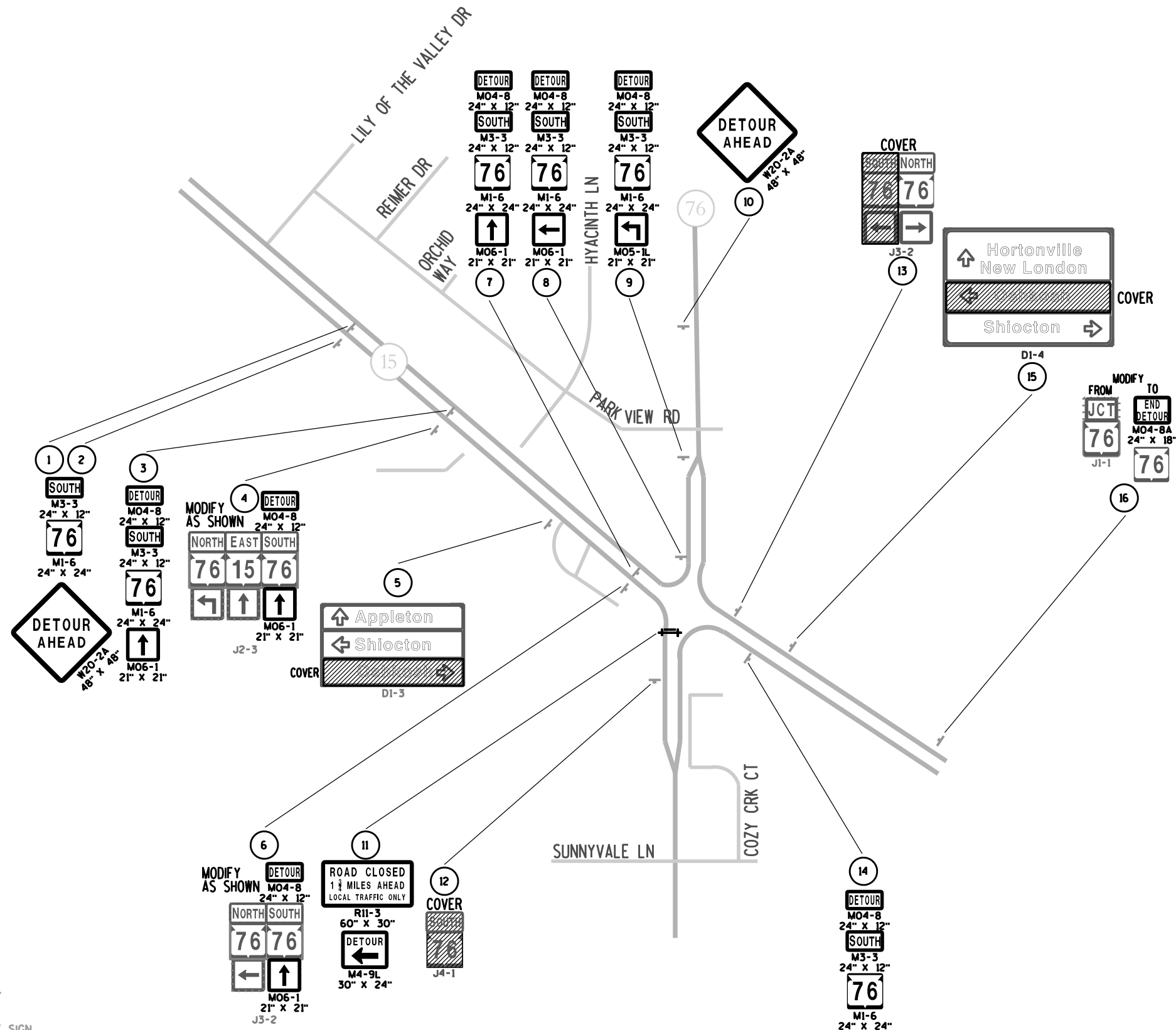
ROAD CLOSED
2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" X 30"

DETAIL 2
(SEE SHEET 3 OF 3)



SHEET 1 OF 3

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

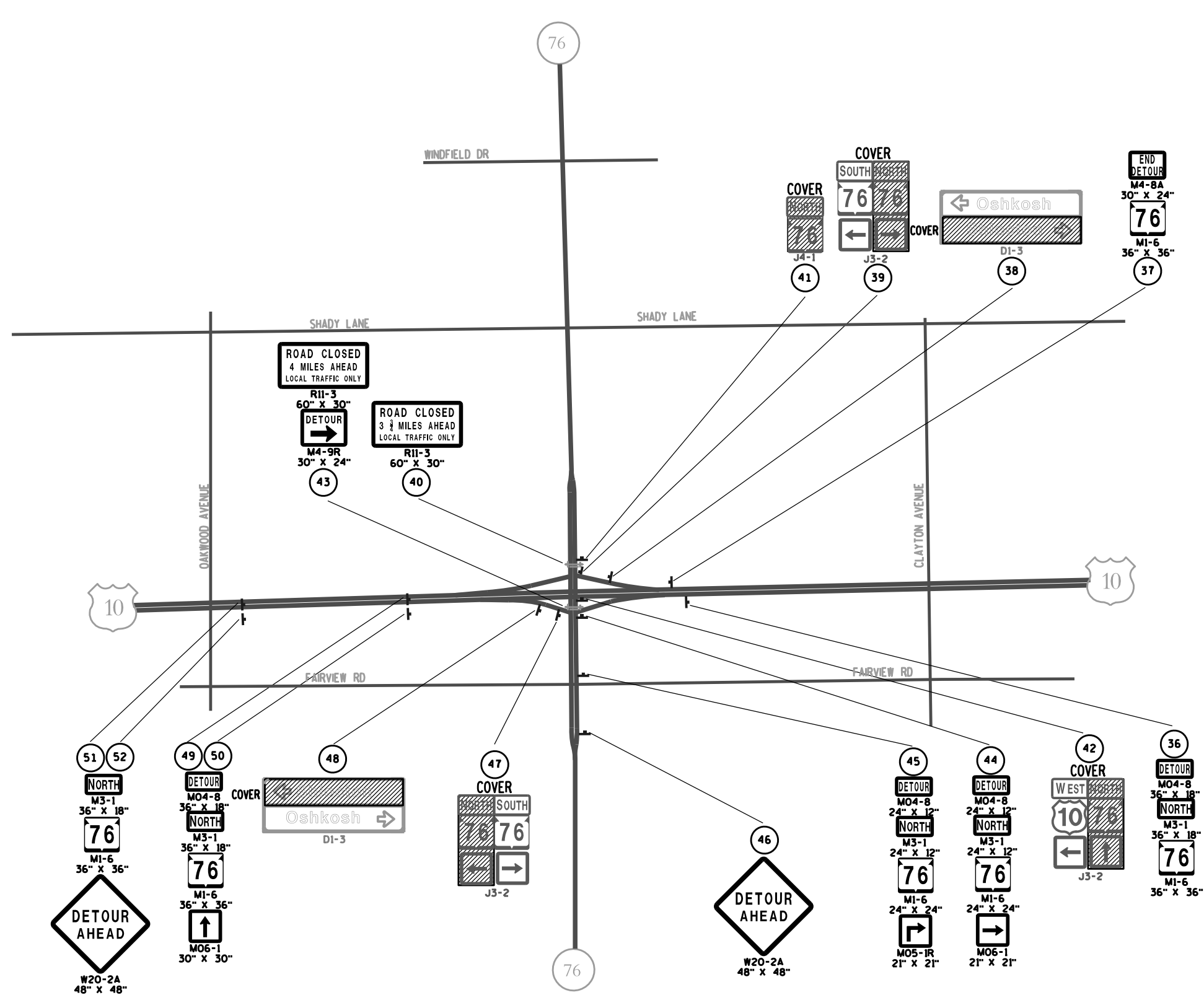


LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 1

SHEET 2 OF 3
PLAN SHEET PRODUCED
BY WISDOT-NE REGION

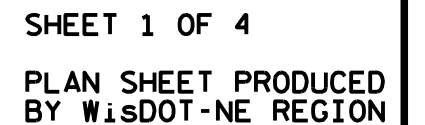


LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

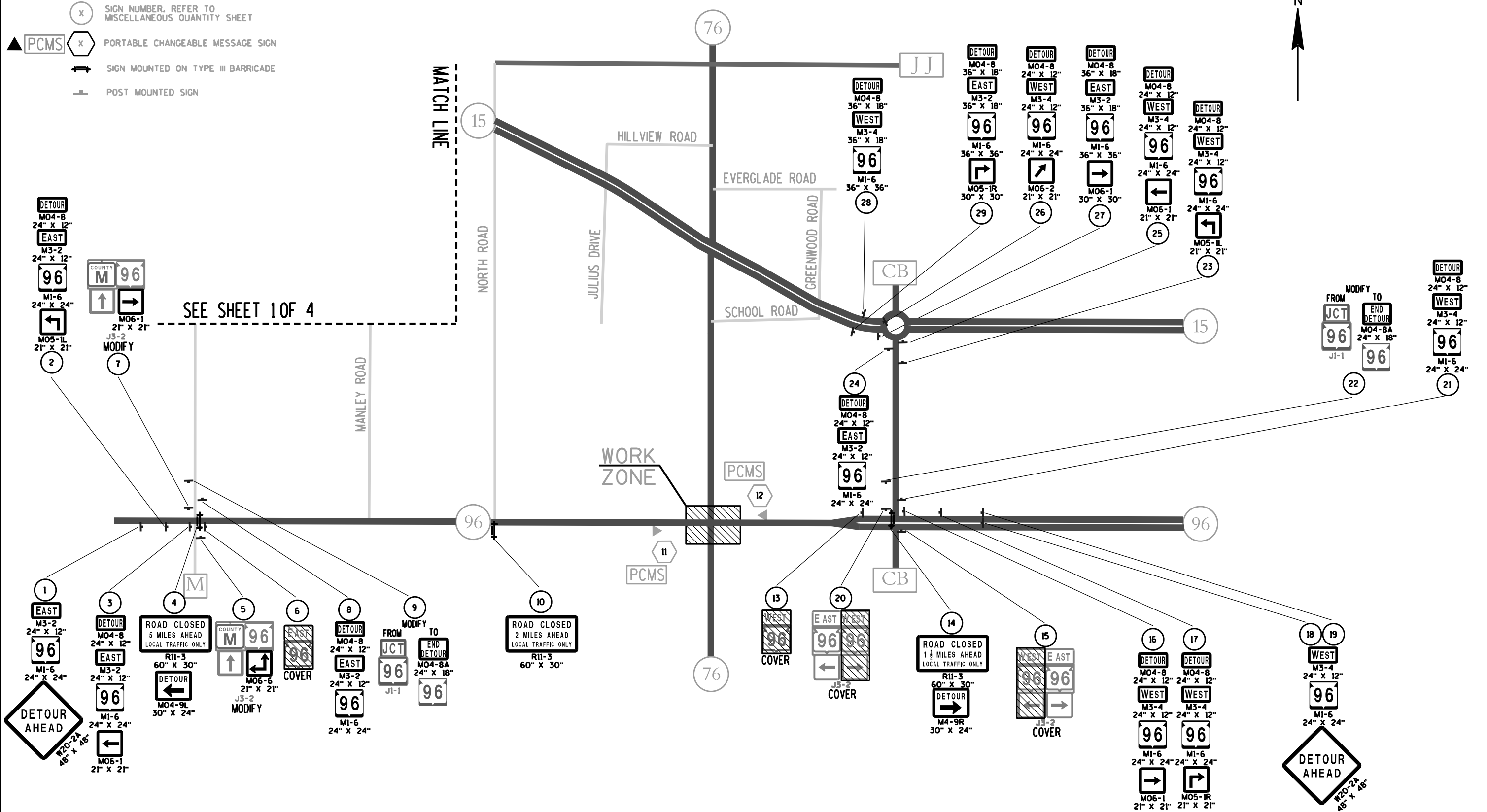
DETAIL 2

SHEET 3 OF 3
PLAN SHEET PRODUCED
BY WISDOT-NE REGION



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- ⇄ SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN



SHEET 2 OF 4

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO: 4075-41-71

HWY: STH 96

COUNTY: OUTAGAMIE

DETOUR SIGNING DETAIL - STH 96 DETOUR

SHEET

E

FILE NAME : \$\$....designfile....\$\$

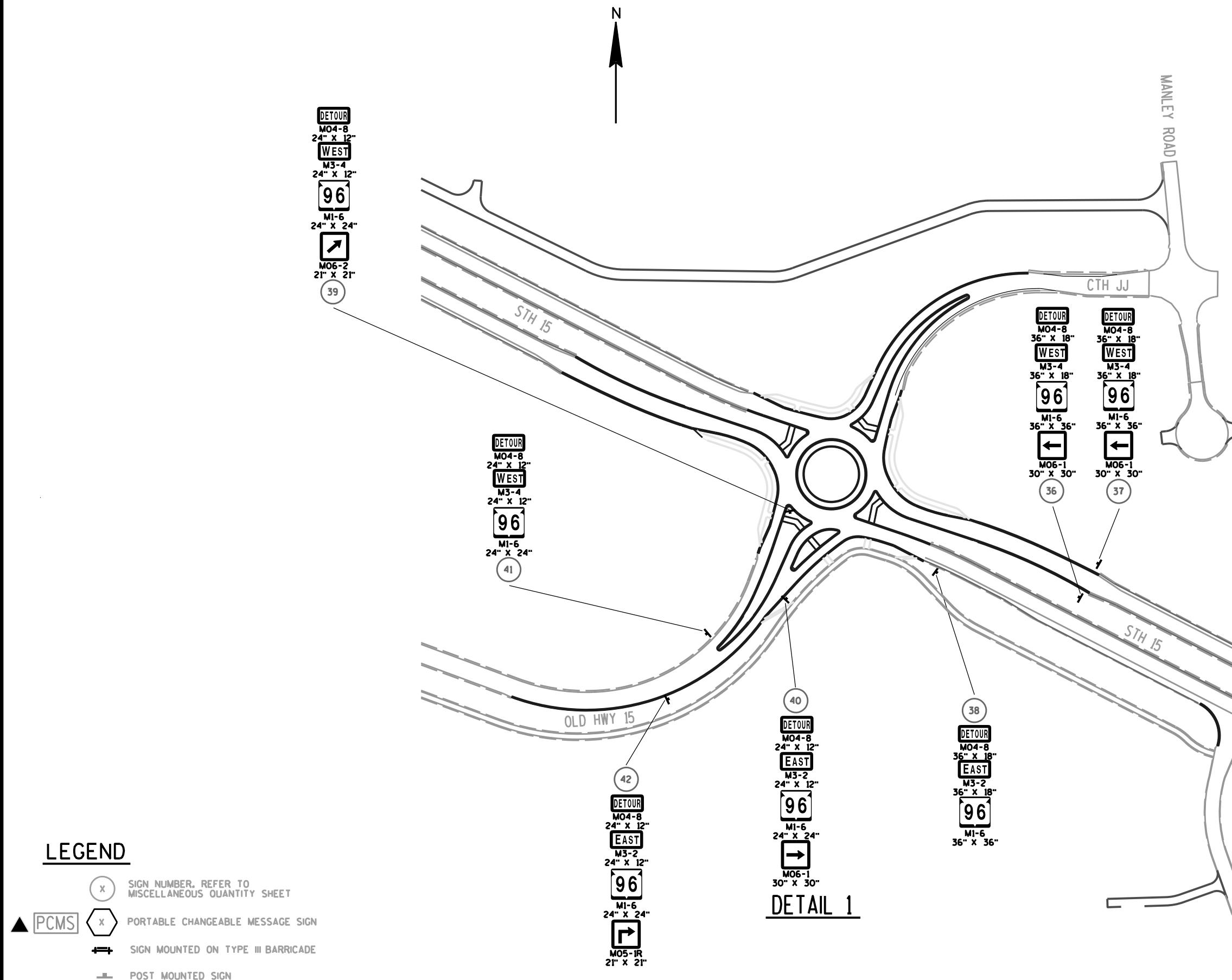
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PLOT BY : \$\$...plotuser...\$\$

PLOT NAME :

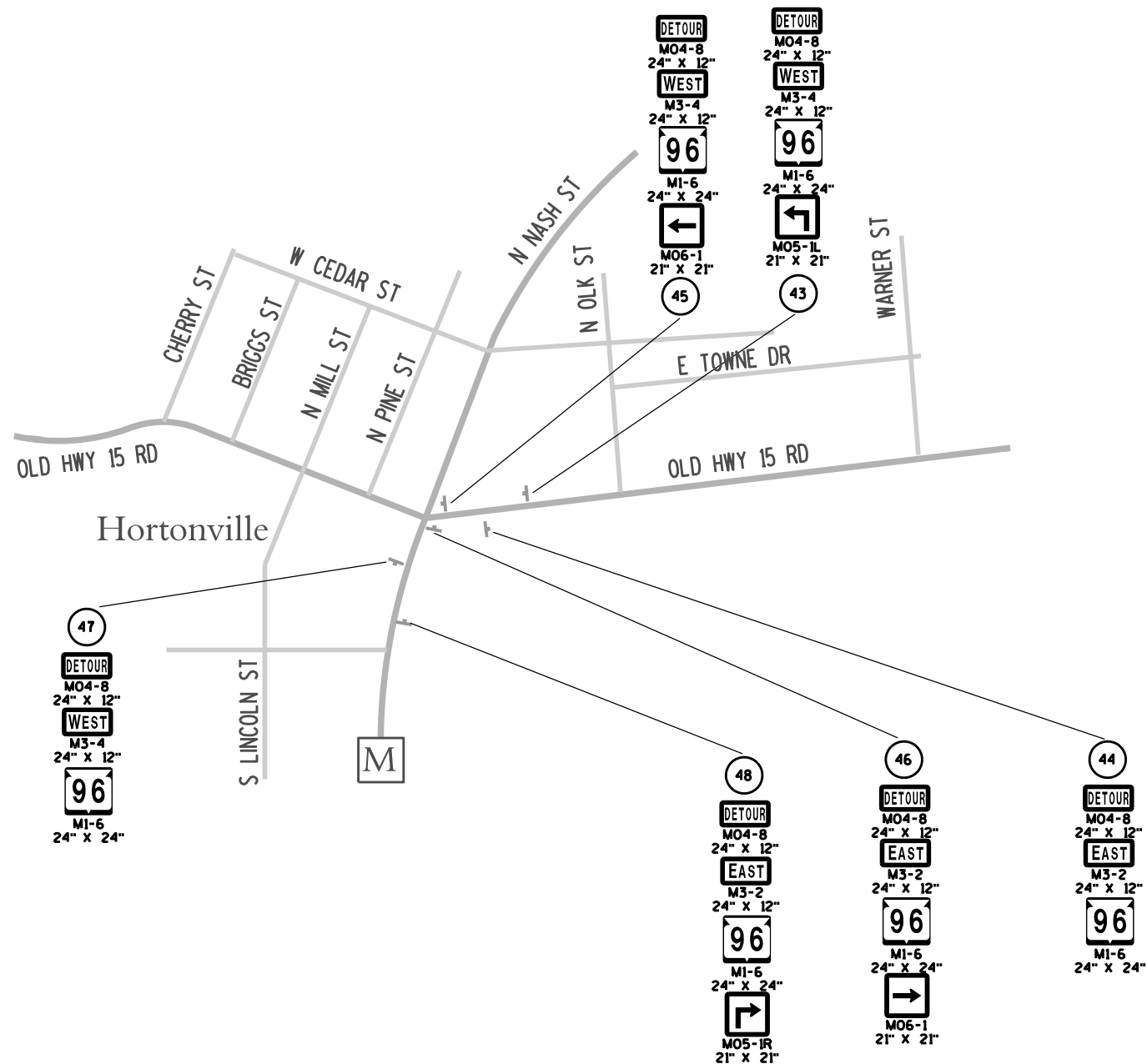
PLOT SCALE : \$\$.....plotscale.....\$\$

WISDOT/CADDs SHEET 42








SHEET 3 OF 4

PLAN SHEET PRODUCED
BY WISDOT-NE REGION



LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-   PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN

DETAIL 2

SHEET 4 OF 4
PLAN SHEET PRODUCED
BY WISDOT-NE REGION

Estimate Of Quantities

4075-41-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0004	204.0110	Removing Asphaltic Surface	SY	1,855.000	1,855.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	83.000	83.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	38,280.000	38,280.000
0010	204.0150	Removing Curb & Gutter	LF	10.000	10.000
0012	204.0165	Removing Guardrail	LF	285.000	285.000
0014	204.0220	Removing Inlets	EACH	1.000	1.000
0016	204.0245	Removing Storm Sewer (size) 01. 15-Inch	LF	2.000	2.000
0018	204.0247	Removing Ancillary Structure with Restoration (structure) 01. S-44-020	EACH	1.000	1.000
0020	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 4075-41-71	EACH	1.000	1.000
0022	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	3.000	3.000
0024	213.0100	Finishing Roadway (project) 01. 4075-41-71	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	900.000	900.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	510.000	510.000
0030	390.0100	Removing Pavement for Base Patching	CY	490.000	490.000
0032	390.0305	Base Patching Concrete HES	CY	490.000	490.000
0034	416.0610	Drilled Tie Bars	EACH	310.000	310.000
0036	416.0620	Drilled Dowel Bars	EACH	1,880.000	1,880.000
0038	455.0605	Tack Coat	GAL	2,710.000	2,710.000
0040	460.2000	Incentive Density HMA Pavement	DOL	3,700.000	3,700.000
0042	460.6224	HMA Pavement 4 MT 58-28 S	TON	5,690.000	5,690.000
0044	465.0110	Asphaltic Surface Patching	TON	345.000	345.000
0046	465.0315	Asphaltic Flumes	SY	7.000	7.000
0048	520.8000	Concrete Collars for Pipe	EACH	5.000	5.000
0050	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0052	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	37.000	37.000
0054	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	64.000	64.000
0056	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	4.000	4.000
0058	531.2042	Drilling Shaft 42-Inch	LF	18.000	18.000
0060	531.5130	Foundation Single-Shaft Type MC-III (structure) 01. S-44-0311	EACH	1.000	1.000
0062	532.5130	Monotube Cantilever Type III (structure) 01. S-44-0311	EACH	1.000	1.000
0064	606.0100	Riprap Light	CY	3.000	3.000
0066	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	10.000	10.000
0068	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0070	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0072	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0074	614.2300	MGS Guardrail 3	LF	262.500	262.500
0076	614.2310	MGS Guardrail 3 HS	LF	50.000	50.000
0078	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0080	618.0100	Maintenance and Repair of Haul Roads (project) 01. 4075-41-71	EACH	1.000	1.000
0082	619.1000	Mobilization	EACH	1.000	1.000
0084	624.0100	Water	MGAL	9.000	9.000
0086	628.1504	Silt Fence	LF	450.000	450.000
0088	628.1520	Silt Fence Maintenance	LF	345.000	345.000
0090	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0094	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0096	628.7015	Inlet Protection Type C	EACH	14.000	14.000
0098	628.7504	Temporary Ditch Checks	LF	21.000	21.000
0100	628.7555	Culvert Pipe Checks	EACH	15.000	15.000

Estimate Of Quantities

4075-41-71

Line	Item	Item Description	Unit	Total	Qty
0102	628.7570	Rock Bags	EACH	75.000	75.000
0104	633.5200	Markers Culvert End	EACH	4.000	4.000
0106	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0108	637.2210	Signs Type II Reflective H	SF	26.000	26.000
0110	638.2602	Removing Signs Type II	EACH	1.000	1.000
0112	638.3000	Removing Small Sign Supports	EACH	1.000	1.000
0114	642.5001	Field Office Type B	EACH	1.000	1.000
0116	643.0420	Traffic Control Barricades Type III	DAY	405.000	405.000
0118	643.0705	Traffic Control Warning Lights Type A	DAY	810.000	810.000
0120	643.0900	Traffic Control Signs	DAY	6,199.000	6,199.000
0122	643.0920	Traffic Control Covering Signs Type II	EACH	13.000	13.000
0124	643.1000	Traffic Control Signs Fixed Message	SF	14.000	14.000
0126	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0128	643.3165	Temporary Marking Line Paint 6-Inch	LF	71,020.000	71,020.000
0130	643.3265	Temporary Marking Line Paint 10-Inch	LF	10,400.000	10,400.000
0132	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	820.000	820.000
0134	643.5000	Traffic Control	EACH	1.000	1.000
0136	645.0130	Geotextile Type R	SY	10.000	10.000
0138	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	31,395.000	31,395.000
0140	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,600.000	2,600.000
0142	646.5020	Marking Arrow Epoxy	EACH	6.000	6.000
0144	646.5120	Marking Word Epoxy	EACH	2.000	2.000
0146	646.6120	Marking Stop Line Epoxy 18-Inch	LF	205.000	205.000
0148	646.7120	Marking Diagonal Epoxy 12-Inch	LF	1,360.000	1,360.000
0150	646.8120	Marking Curb Epoxy	LF	10.000	10.000
0152	646.8220	Marking Island Nose Epoxy	EACH	1.000	1.000
0154	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0156	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
0158	650.8000	Construction Staking Resurfacing Reference	LF	7,189.000	7,189.000
0160	650.9911	Construction Staking Supplemental Control (project) 01. 4075-41-71	EACH	1.000	1.000
0162	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	160.000	160.000
0164	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,370.000	1,370.000
0166	652.0605	Conduit Special 2-Inch	LF	175.000	175.000
0168	652.0800	Conduit Loop Detector	LF	1,662.000	1,662.000
0170	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	12.000	12.000
0172	653.0905	Removing Pull Boxes	EACH	16.000	16.000
0174	655.0700	Loop Detector Lead In Cable	LF	5,143.000	5,143.000
0176	655.0800	Loop Detector Wire	LF	5,280.000	5,280.000
0178	690.0150	Sawing Asphalt	LF	1,795.000	1,795.000
0180	690.0250	Sawing Concrete	LF	3,345.000	3,345.000
0182	740.0440	Incentive IRI Ride	DOL	11,500.000	11,500.000
0184	SPV.0060	Special 01. Utility Line Opening	EACH	1.000	1.000
0186	SPV.0060	Special 02. Grading, Shaping, and Finishing Culvert Pipes and Apron Endwalls	EACH	4.000	4.000
0188	SPV.0090	Special 01. Marking Chevron Epoxy 12-Inch	LF	215.000	215.000
0190	SPV.0090	Special 02. Sawing Curb Head	LF	50.000	50.000

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED				
REMOVING PIPE CULVERTS				
203.0100 REMOVING SMALL PIPE CULVERTS				
ROADWAY	STATION (MIDPOINT OF PIPE)	LOCATION (LT/RT)	EACH	DESCRIPTION*
STH 96				
	587+06	LT	1	18-INCH CMP, 39 LF
	615+61	LT	1	30-INCH RCP, 24 LF
	615+68	LT	1	30-INCH RCP, 24 LF
	615+79	RT	1	30-INCH RCP, 24 LF
	615+85	RT	1	30-INCH RCP, 24 LF
TOTAL 0010			5	
*FOR INFORMATION ONLY				

<u>REMOVING ASPHALTIC SURFACE</u>						
				204.0110	204.0115	204.0120
				REMOVING	REMOVING	REMOVING
				ASPHALTIC	ASPHALTIC	ASPHALTIC
				SURFACE	SURFACE BUTT	SURFACE
				SY	JOINTS	MILLING
ROADWAY	STATION	TO	STATION	SY	SY	SY
<hr/>						
STH 96						
<hr/>						
	573+00	-	582+00	135	38	5,900
	582+00	-	608+00	---	6	11,210
	608+00	-	627+00	655	7	9,010
	627+00	-	644+89	895	32	12,160
<hr/>						
UNDISTRIBUTED				170	---	---
<hr/>						
TOTAL 0010				1,855	83	38,280
<hr/>						

<u>REMOVING CURB & GUTTER</u>				
				204.0150
				REMOVING CURB
				& GUTTER
ROADWAY	STATION	TO	STATION	SIDE
				LF
<hr/>				
STH 96				
	579+51	-	579+61	RT
				10
TOTAL 0010				10

3

REMOVING GUARDRAIL					
					204.0165
					REMOVING
					GUARDRAIL
ROADWAY	STATION TO	STATION	SIDE	LF	
<hr/>					
STH 96					
<hr/>					
	577+61	-	579+03	RT	143
	583+89	-	585+30	LT	142
<hr/>					
TOTAL 0010					285

REMOVING INLET			
204.0220 REMOVING INLETS			
ROADWAY	STATION	OFFSET	EACH
STH 96			
	586+30	38' LT	1
TOTAL 0010			1

<u>REMOVING STORM SEWER</u>				
204.0245.01				
REMOVING STORM SEWER (SIZE) (01. 15-INCH)				
ROADWAY	STATION TO	STATION	SIDE	LF
<hr/>				
STH 96				
<hr/>				
	586+28	-	586+29	LT
				2
<hr/>				
TOTAL 0010				2

<u>REMOVING ANCILLARY STRUCTURE</u>			
204.0247.01 REMOVING ANCILLARY STRUCTURE WITH RESTORATION (STRUCTURE) (01. S-44-020)			
ROADWAY	STATION	OFFSET	EACH
<hr/>			
STH 96			
	584+36	28' LT	1
TOTAL 0010			1

<u>BASE AGGREGATE ITEMS</u>						
			305.011	305.012	624.0100	
			BASE	BASE		
			AGGREGATE	AGGREGATE		
			DENSE 3/4-	DENSE 1 1/4-		
ROADWAY	STATION	TO	INCH	INCH	WATER	
		STATION	TON	TON	MGAL	
<hr/>						
STH 96						
	573+00	-	582+00	130	300	5
	582+00	-	608+00	370	210	4
	608+00	-	627+00	275	---	---
	627+00	-	644+89	125	---	---
<hr/>						
TOTAL 0010			900	510	9	

<u>BASE PATCHING ITEMS</u>					
				390.0100	390.0305
				REMOVING	
				PAVEMENT FOR	BASE PATCHING
				BASE PATCHING	CONCRETE HES
ROADWAY	STATION	TO	STATION	CY	CY
<hr/>					
STH 96					
<hr/>					
	573+00	-	582+00	285	285
	582+00	-	608+00	150	150
	608+00	-	627+00	---	---
	627+00	-	644+89	10	10
<hr/>					
UNDISTRIBUTED					
				45	45
<hr/>					
TOTAL 0010				490	490
<hr/>					

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED					<div>HMA ITEMS</div> <div><div>211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS</div><div>455.0605 TACK COAT</div><div>460.6224 HMA PAVEMENT 4 MT 58-28 S</div><div>465.0110 ASPHALTIC SURFACE PATCHING</div></div> <table><thead><tr><th>ROADWAY</th><th>STATION</th><th>TO</th><th>STATION</th><th>STA</th><th>GAL</th><th>TON</th><th>TON</th></tr></thead><tbody><tr><td colspan="8">STH 96</td></tr><tr><td></td><td>573+00</td><td>-</td><td>582+00</td><td>3</td><td>425</td><td>890</td><td>45</td></tr><tr><td></td><td>582+00</td><td>-</td><td>608+00</td><td>---</td><td>805</td><td>1,690</td><td>---</td></tr><tr><td></td><td>608+00</td><td>-</td><td>627+00</td><td>---</td><td>635</td><td>1,330</td><td>120</td></tr><tr><td></td><td>627+00</td><td>-</td><td>644+89</td><td>---</td><td>845</td><td>1,780</td><td>145</td></tr><tr><td colspan="8">UNDISTRIBUTED</td></tr><tr><td colspan="8">TOTAL 0010</td></tr></tbody></table>										ROADWAY	STATION	TO	STATION	STA	GAL	TON	TON	STH 96									573+00	-	582+00	3	425	890	45		582+00	-	608+00	---	805	1,690	---		608+00	-	627+00	---	635	1,330	120		627+00	-	644+89	---	845	1,780	145	UNDISTRIBUTED								TOTAL 0010								<div>ASPHALTIC FLUMES</div> <div>465.0315 ASPHALTIC FLUMES</div> <table><thead><tr><th>ROADWAY</th><th>STATION</th><th>SIDE</th><th>SY</th></tr></thead><tbody><tr><td colspan="4">STH 96</td></tr><tr><td></td><td>579+57</td><td>RT</td><td>7</td></tr><tr><td colspan="3">TOTAL 0010</td><td>7</td></tr></tbody></table>					ROADWAY	STATION	SIDE	SY	STH 96					579+57	RT	7	TOTAL 0010			7																																																																																	
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<div>CULVERT PIPE ITEMS</div> <div>* 520.8000 521.1018 521.3118 522.0430 522.1030 633.5200 650.6000</div> <div><div>APRON ENDWALLS CONCRETE COLLARS FOR</div><div>FOR CULVERT PIPE STEEL 18-INCH</div><div>CORRUGATED STEEL 18-INCH LF</div><div>CULVERT PIPE REINFORCED CONCRETE CLASS IV 30- INCH LF</div><div>ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH</div><div>MARKERS CULVERT END EACH</div><div>CONSTRUCTION STAKING PIPE CULVERTS EACH</div><div>JOINT TIES** EACH</div><div>MINIMUM STEEL PIPE THICKNESS IN</div></div> <table><thead><tr><th>ROADWAY</th><th colspan="3">INLET</th><th colspan="3">DISCHARGE</th><th>SLOPE</th><th colspan="8"></th></tr><tr><th></th><th>STATION</th><th>OFFSET</th><th>ELEV</th><th>STATION</th><th>OFFSET</th><th>ELEV</th><th>FT/FT</th><th>EACH</th><th>EACH</th><th>LF</th><th>LF</th><th>EACH</th><th>EACH</th><th>EACH</th><th>EACH</th><th>EACH</th><th></th></tr></thead><tbody><tr><td colspan="18">STH 96</td><td>-</td></tr><tr><td></td><td>587+23.9</td><td>41.8' LT</td><td>913.52</td><td>586+87.5</td><td>44.6' LT</td><td>913.12</td><td>0.0111</td><td>---</td><td>2</td><td>37</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>---</td><td>0.064</td></tr><tr><td></td><td>615+58.5</td><td>30.9' LT</td><td>895.18</td><td>615+63.7</td><td>15.8' LT</td><td>895.11</td><td>0.0041</td><td>1</td><td>---</td><td>---</td><td>16</td><td>1</td><td>1</td><td>1</td><td>6</td><td>---</td><td></td></tr><tr><td></td><td>615+65.5</td><td>31.1' LT</td><td>895.32</td><td>615+70.6</td><td>15.9' LT</td><td>895.22</td><td>0.0067</td><td>1</td><td>---</td><td>---</td><td>16</td><td>1</td><td>1</td><td>1</td><td>6</td><td>---</td><td></td></tr><tr><td></td><td>615+75.0</td><td>17.2' RT</td><td>894.97</td><td>615+80.2</td><td>32.3' RT</td><td>894.90</td><td>0.0041</td><td>1</td><td>---</td><td>---</td><td>16</td><td>1</td><td>1</td><td>1</td><td>6</td><td>---</td><td></td></tr><tr><td></td><td>615+81.5</td><td>16.7' RT</td><td>894.99</td><td>615+86.6</td><td>31.9' RT</td><td>894.88</td><td>0.0067</td><td>1</td><td>---</td><td>---</td><td>16</td><td>1</td><td>1</td><td>1</td><td>6</td><td>---</td><td></td></tr><tr><td colspan="8">TOTAL 0010</td><td>4</td><td>2</td><td>37</td><td>64</td><td>4</td><td>4</td><td>4</td><td>24</td><td></td><td></td></tr></tbody></table> <div>* ADDITIONAL QUANTITIES SHOWN ELSEWHERE</div> <div>**NON-BID ITEM: FOR INFORMATION ONLY. LAST SET OF JOINT TIES TO BE DRILLED INTO EXISTING PIPE. DRILLING IS INCIDENTAL TO CULVERT PIPE REINFORCED CONCRETE ITEM</div>																				ROADWAY	INLET			DISCHARGE			SLOPE										STATION	OFFSET	ELEV	STATION	OFFSET	ELEV	FT/FT	EACH	EACH	LF	LF	EACH	EACH	EACH	EACH	EACH		STH 96																		-		587+23.9	41.8' LT	913.52	586+87.5	44.6' LT	913.12	0.0111	---	2	37	---	---	---	---	---	---	0.064		615+58.5	30.9' LT	895.18	615+63.7	15.8' LT	895.11	0.0041	1	---	---	16	1	1	1	6	---			615+65.5	31.1' LT	895.32	615+70.6	15.9' LT	895.22	0.0067	1	---	---	16	1	1	1	6	---			615+75.0	17.2' RT	894.97	615+80.2	32.3' RT	894.90	0.0041	1	---	---	16	1	1	1	6	---			615+81.5	16.7' RT	894.99	615+86.6	31.9' RT	894.88	0.0067	1	---	---	16	1	1	1	6	---		TOTAL 0010								4	2	37	64	4	4	4	24		
ROADWAY	INLET			DISCHARGE			SLOPE																																																																																																																																																																													
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<div>STORM SEWER PIPES</div> <div>608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH</div> <table><thead><tr><th>FROM</th><th>-</th><th>TO</th><th>LF</th><th>INLET ELEVATION</th><th>DISCHARGE ELEVATION</th><th>SLOPE FT/FT</th></tr></thead><tbody><tr><td>1</td><td>-</td><td>EXIST</td><td>9.2</td><td>909.68</td><td>909.59</td><td>0.0100</td></tr><tr><td colspan="3">TOTAL 0010</td><td>10</td><td colspan="3"></td></tr></tbody></table>										FROM	-	TO	LF	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT	1	-	EXIST	9.2	909.68	909.59	0.0100	TOTAL 0010			10				<div>STORM SEWER STRUCTURES</div> <div>* 520.8000 611.0642 611.3901 650.4000</div> <div><div>CONCRETE COLLARS FOR PIPE EACH</div><div>INLET COVERS TYPE MS EACH</div><div>INLETS MEDIAN 1 GRATE EACH</div><div>CONSTRUCTION STAKING STORM SEWER EACH</div></div> <table><thead><tr><th>STRUCTURE</th><th>STATION</th><th>OFFSET*</th><th>RIM ELEVATION</th><th>INVERT ELEVATION</th><th>DEPTH** FT</th><th colspan="4"></th></tr></thead><tbody><tr><td>1</td><td>586+34.2</td><td>41.9' LT</td><td>912.62</td><td>909.68</td><td>2.94</td><td>---</td><td>1</td><td>1</td><td>1</td></tr><tr><td>EXIST INLET</td><td>586+28.1</td><td>35.0' LT</td><td>---</td><td>---</td><td>---</td><td>1</td><td>---</td><td>---</td><td>---</td></tr><tr><td colspan="6">TOTAL 0010</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></tbody></table> <div>REMARKS</div> <div>* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE</div> <div>** DEPTH = RIM ELEV - INVERT ELEV</div> <div>*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE</div>										STRUCTURE	STATION	OFFSET*	RIM ELEVATION	INVERT ELEVATION	DEPTH** FT					1	586+34.2	41.9' LT	912.62	909.68	2.94	---	1	1	1	EXIST INLET	586+28.1	35.0' LT	---	---	---	1	---	---	---	TOTAL 0010						1	1	1	1																																																																																																				
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PROJECT NO: 4075-41-71			HWY: STH 96			COUNTY: OUTAGAMIE				MISCELLANEOUS QUANTITIES						SHEET:		E																																																																																																																																																																		

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

GUARDRAIL ITEMS															
ROADWAY	STATION	TO	STATION	SIDE	614.0010	614.2300	614.2310	614.2610	*	*	*	*	*	*	*
					BARRIER SYSTEM		MGS	MGS					SEEDING	EROSION MAT	
					GRADING SHAPING	MGS	GUARDRAIL 3	GUARDRAIL	EXCAVATION		SALVAGED	FERTILIZER	MIXTURE	URBAN CLASS I	SEED
					FINISHING	GUARDRAIL 3	HS	TERMINAL EAT	COMMON	BORROW	TOPSOIL	TYPE B	NO. 30	TYPE B	WATER
					EACH	LF	LF	EACH	CY	CY	SY	CWT	LB	SY	MGAL
STH 96															
	575+58	-	579+76	RT	1	87.5	50	2	85	10	415	0.3	8	415	10
	583+79	-	587+46	LT	1	175	---	2	170	---	540	0.4	10	540	13
TOTAL 0010					2	262.5	50	4	255	10	955	0.7	18	955	23
* FOR INFORMATION ONLY															

EROSION CONTROL ITEMS														
				606.0100	628.1504	628.1520	628.1905	628.1910	628.7005	628.7015	628.7504	628.7555	628.7570	645.0130
							MOBILIZATIONS	MOBILIZATIONS						
				RIPRAP LIGHT	SILT FENCE	SILT FENCE	EROSION	EMERGENCY	INLET	INLET	TEMPORARY	CULVERT PIPE	ROCK BAGS	GEOTEXTILE TYPE
ROADWAY	STATION	TO	STATION	CY	LF	LF	CONTROL	EROSION	PROTECTION	PROTECTION	DITCH CHECKS	CHECKS	EACH	R
							EACH	CONTROL	TYPE A	TYPE C	LF	EACH	EACH	SY
STH 96														
	575+50	-	580+00	2	310	235	---	---	---	---	16	---	45	8
	581+50	-	587+50	---	50	40	---	---	1	5	---	2	15	---
	615+50	-	616+00	---	---	---	---	---	---	---	---	10	---	---
	639+00	-	644+89	---	---	---	---	---	---	6	---	---	---	---
UNDISTRIBUTED														
				1	90	70	4	3	1	3	5	3	15	2
TOTAL 0010				3	450	345	4	3	2	14	21	15	75	10

PERMANENT SIGNS AND SIGN REMOVALS										
SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE			634.0616	637.2210	638.2602	638.3000	NOTES
			W	X	H	POSTS WOOD			REMOVING	
						4X6-INCH X 16-	SIGNS TYPE II	REMOVING	SMALL SIGN	
			IN		IN	FT	REFLECTIVE H	SIGNS TYPE II	SUPPORTS	
1	R3-5L	2S	42	X	48	---	14	---	---	TO BE MOUNTED ON S-44-0311
2	R3-6R	2S	42	X	48	---	14	---	---	TO BE MOUNTED ON S-44-0311
3	R3-8LF	3	48	X	36	1	12	1	1	TO BE INSTALLED ONLY IF 1 AND 2 NOT
TOTAL 0010						1	26	1	1	INSTALLED PRIOR TO OPENING TO TRAFFIC

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED		<div>TRAFFIC CONTROL ITEMS</div> <div><div>FIELD OFFICE</div><div>642.5001 FIELD OFFICE TYPE B EACH</div><div>LOCATION</div><div>4075-41-71</div><div>TOTAL 0010</div><div>1</div></div> <div><div>ESTIMATED CALENDAR DAYS</div><div>ROADWAY</div><div>STAGE</div><div>EACH</div><div>DAY</div><div>643.0420 TRAFFIC CONTROL BARRICADES TYPE III</div><div>20</div><div>240</div><div>643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A</div><div>40</div><div>480</div><div>643.0900 TRAFFIC CONTROL SIGNS</div><div>21</div><div>252</div></div> <div><div>49</div><div>DURING CONSTRUCTION</div><div>---</div><div>---</div><div>---</div><div>---</div><div>14</div><div>686</div></div> <div><div>UNDISTRIBUTED</div><div>---</div><div>25</div><div>50</div><div>95</div></div> <div><div>TOTAL 0010</div><div>265</div><div>530</div><div>1033</div></div> <div><div>* ADDITIONAL QUANTITIES SHOWN ELSEWHERE</div><div>** FOR INFORMATION ONLY</div></div>										<div>TEMPORARY PAVEMENT MARKING</div> <div><div>643.3165 TEMPORARY MARKING LINE PAINT 6-INCH YELLOW LF</div><div>643.3265 TEMPORARY MARKING LINE PAINT 10-INCH WHITE LF</div><div>643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH WHITE LF</div></div> <div><div>ROADWAY</div><div>STATION</div><div>TO</div><div>STATION</div><div>STH 96</div><div>573+00</div><div>-</div><div>582+00</div><div>12,820</div><div>3,600</div><div>820</div><div>582+00</div><div>-</div><div>608+00</div><div>24,820</div><div>2,600</div><div>---</div><div>608+00</div><div>-</div><div>627+00</div><div>18,240</div><div>2,460</div><div>---</div><div>627+00</div><div>-</div><div>644+89</div><div>15,140</div><div>1,740</div><div>---</div><div>TOTAL 0010</div><div>71,020</div><div>10,400</div><div>820</div></div>					
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<div>PAVEMENT MARKING ITEMS</div> <div><div>646.2040</div><div>646.4040</div><div>646.5020</div><div>646.5120</div><div>646.6120</div><div>646.7120</div><div>646.8120</div><div>646.8220</div><div>SPV.0090.01 SPECIAL (01. MARKING CHEVRON</div></div> <div><div>MARKING LINE GROOVED WET REF EPOXY 6-INCH</div><div>MARKING LINE GROOVED WET REF EPOXY 10-INCH</div><div>MARKING ARROW EPOXY TYPE 2</div><div>MARKING WORD EPOXY TYPE 2</div><div>MARKING STOP LINE EPOXY 18-INCH WHITE</div><div>MARKING DIAGONAL EPOXY 12-INCH WHITE YELLOW</div><div>MARKING CURB EPOXY YELLOW</div><div>MARKING ISLAND NOSE EPOXY YELLOW</div><div>MARKING EPOXY 12-INCH) WHITE</div></div> <div><div>ROADWAY</div><div>STATION</div><div>TO</div><div>STATION</div><div>WHITE LF</div><div>YELLOW LF</div><div>WHITE LF</div><div>EACH</div><div>EACH</div><div>WHITE LF</div><div>WHITE LF</div><div>YELLOW LF</div><div>EACH</div><div>WHITE LF</div></div> <div><div>STH 96</div><div>573+00</div><div>-</div><div>582+00</div><div>1,400</div><div>3,205</div><div>900</div><div>5</div><div>2</div><div>205</div><div>---</div><div>240</div><div>---</div><div>---</div><div>150</div><div>582+00</div><div>-</div><div>608+00</div><div>4,995</div><div>6,205</div><div>650</div><div>1</div><div>---</div><div>---</div><div>160</div><div>265</div><div>---</div><div>---</div><div>65</div><div>608+00</div><div>-</div><div>627+00</div><div>3,710</div><div>4,560</div><div>615</div><div>---</div><div>---</div><div>---</div><div>---</div><div>125</div><div>---</div><div>---</div><div>---</div><div>627+00</div><div>-</div><div>644+89</div><div>3,535</div><div>3,785</div><div>435</div><div>---</div><div>---</div><div>---</div><div>---</div><div>570</div><div>10</div><div>1</div><div>---</div><div>13,640</div><div>17,755</div><div>2,600</div><div>6</div><div>2</div><div>205</div><div>160</div><div>1,200</div><div>10</div><div>1</div><div>215</div><div>TOTAL 0010</div><div>31,395</div><div>2,600</div><div>6</div><div>2</div><div>205</div><div>1,360</div><div>10</div><div>1</div><div>215</div></div>													
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ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

STAKING ITEMS					
		650.8000	650.9911.01		
		CONSTRUCTION	CONSTRUCTION		
		STAKING	STAKING		
		RESURFACING	SUPPLEMENTAL		
		REFERENCE	CONTROL (PROJECT)		
			(01. 4075-41-71)		
ROADWAY	STATION TO	STATION	LF	EACH	
STH 96					
	573+00	- 582+00	900	---	
	582+00	- 608+00	2,600	---	
	608+00	- 627+00	1,900	---	
	627+00	- 644+89	1,789	---	
PROJECTWIDE					
			---	1	
TOTAL 0010			7,189	1	

SAWING ITEMS						
		690.0150	690.0250	SPV.0090.02		
		SAWING	SAWING	SPECIAL (02. SAWING		
		ASPHALT	CONCRETE	CURB HEAD)		
ROADWAY	STATION TO	STATION	LF	LF	LF	
STH 96						
	573+00 -	582+00	270	1,635	20	
	582+00 -	608+00	---	1,625	30	
	608+00 -	627+00	410	---	---	
	627+00 -	644+89	1,115	85	---	
TOTAL 0010			1,795	3,345	50	

UTILITY LINE OPENING	
	SPV.0060.01
	SPECIAL (01.
	UTILITY LINE
	OPENING)
PROJECT	EACH
4075-41-71	1
TOTAL 0010	1

GRADING, SHAPING, AND FINISHING CULVERT PIPES AND APRON ENDWALLS									
				SPV.0060.02		*	*	*	*
				SPECIAL (02.					
				GRADING,					
				SHAPING, AND				EROSION	
				FINISHING				MAT	
				CULVERT PIPES				SEEDING	
				AND APRON		SALVAGED		FERTILIZER	
				ENDWALLS)		TOPSOIL		TYPE B	
						SY		CWT	
ROADWAY	STATION TO STATION	SIDE	EACH	SY	CWT	LB	SY	MGAL	
STH 96									
	615+50 - 616+00	LT/RT	4	70	0.1	2	70	3	
TOTAL 0010			4	70	0.1	2	70	3	
* FOR INFORMATION ONLY									

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CONDUIT ITEMS

			652.0210	652.0225	652.0605
			CONDUIT RIGID NONMETALLIC	CONDUIT RIGID NONMETALLIC	CONDUIT
			SCHEDULE 40 1-INCH	SCHEDULE 40 2-INCH	SPECIAL 2-INCH
LOCATION	FROM	TO	LF	LF	LF
STH 96 & 76 (S44-0018)					
	PB2	PB3	---	20	---
	PB2	PB13	---	170	---
	PB13	WEST SIDE OF DRIVEWAY	---	155	---
	WEST SIDE OF DRIVEWAY	EAST SIDE OF DRIVEWAYS	---	---	115
	EAST SIDE OF DRIVEWAYS	PB14	---	100	---
	PB5	PB15	---	25	---
	PB5	PB16	---	210	---
	PB16	NORTH SIDE OF DRIVEWAY	---	20	---
	NORTH SIDE OF DRIVEWAY	SOUTH SIDE OF DRIVEWAY	---	---	60
	SOUTH SIDE OF DRIVEWAY	PB17	---	80	---
	PB18	PB19	---	200	---
	PB19	PB20	160	---	---
	PB10	PB11	---	30	---
	PB11	PB21	---	200	---
	PB21	PB22	---	160	---
TOTAL 0010			160	1,370	175

PULL BOXES

		653.0164	653.0905
		PULL BOXES NON-CONDUCTIVE	REMOVING PULL BOXES
LOCATION		24X42-INCH EACH	PULL BOXES EACH
STH 96 & 76 (S44-0018)			
		12	16
TOTAL 0010		12	16

LOOP DETECTORS

			652.0800	655.0700	655.0800
			CONDUIT LOOP DETECTOR	DETECTOR LEAD IN CABLE	LOOP DETECTOR WIRE
LOCATION	LOOP NO.	# OF TURNS	LF	LF	LF
STH 96 & 76 (S44-0018)					
	11	3	152	208	464
	21	5	72	548	368
	22	4	82	388	336
	23	2	122	188	252
	31	3	132	73	404
	41	3	62	658	194
	42	3	62	498	194
	43	3	122	298	374
	51	3	162	188	494
	61	4	82	558	336
	62	3	92	398	284
	63	2	122	188	252
	71	4	142	298	576
	81	4	72	378	296
	82	3	72	223	224
	83	2	112	53	232
TOTAL 0010			1,662	5,143	5,280

TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 76

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 26 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 15, W. OF STH 76, PLACE 1000' W. OF STH 76 IN MEDIAN	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	W 20-2A	48"x48"	1	26	26						
2	STH 15, W. OF STH 76, PLACE 1000' W. OF STH 76 ON RIGHT SHOULDER	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	W 20-2A	48"x48"	1	26	26						
3	STH 15, W. OF STH 76, PLACE ACROSS FROM SIGN #4 IN MEDIAN	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
4	STH 15, W. OF STH 76, MODIFY EXISTING J2-3 SIGN AS SHOWN	MO 4-8	24"x12"	1	26	26						
	"	MO 6-1	21"x21"	1	26	26						AHEAD
5	STH 15, W. OF STH 76, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "OSHKOSH RIGHT"
6	STH 15, W. OF STH 76, MODIFY EXISTING J3-2 SIGN AS SHOWN	MO 4-8	24"x12"	1	26	26						
	"	MO 6-1	21"x21"	1	26	26						AHEAD
7	STH 15, W. OF STH 76, PLACE ACROSS FROM SIGN #6 IN MEDIAN	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
8	STH 76, AT STH 15, PLACE RIGHT OF EXISTING SIGNAL AT STH 15 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						RIGHT
9	STH 76, N. OF STH 15, PLACE 500' N. OF STH 15 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1L	21"x21"	1	26	26						
10	STH 76, N. OF STH 15, PLACE 1000' N. OF STH 15 INTERSECTION	W 20-2A	48"x48"	1	26	26						
11	STH 76, AT STH 15, PLACE IN SW QUADRANT AT STH 15 INTERSECTION	R 11-3	60"x30"	1	26	26	26	52				1 3/4 MILES AHEAD
	"	M 4-9L	30"x24"	1	26	26						
12	STH 76, S. OF STH 15, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
13	STH 15, AT STH 76, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER "SOUTH 76 LEFT"
14	STH 15, E. OF STH 76, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
15	STH 15, E. OF STH 76, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "LEFT OSHKOSH"
16	STH 15, E. OF STH 76, MODIFY EXISTING J1-1 SIGN AS SHOWN	MO 4-8A	24"x18"	1	26	26						
17	STH 15, W. OF CTH CB, PLACE 500' W. OF CTH CB INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1R	21"x21"	1	26	26						
18	STH 15, W. OF CTH CB, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						
PAGE SUBTOTALS				40		1,040	26	52	0		4	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 76

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 26 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
19	STH 15, AT CTH CB, PLACE RIGHT OF EXISTING R1-2 AT CTH CB INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						RIGHT
20	STH 15, AT CTH CB, PLACE ABOVE EXISTING SPLITTER ISLAND SIGN AT WEST LEG EXIT	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-2	21"x21"	1	26	26						TILT RIGHT
21	CTH CB, AT STH 15, PLACE RIGHT OF EXISTING R1-2 AT STH 15 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						LEFT
22	CTH CB, S. OF STH 15, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
23	CTH CB, S. OF STH 15, PLACE 500' S. OF STH 15 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1L	21"x21"	1	26	26						
24	CTH CB, N. OF STH 96, PLACE 250' N. OF STH 96 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
25	CTH CB, S. OF STH 96, PLACE 250' S. OF STH 96 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
26	STH 76, N. OF STH 96, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
27	STH 76, S. OF STH 96, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
28	STH 76, AT CTH BB, PLACE IN NE QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"x30"	1	26	26	26	52				2 MILES AHEAD
29	CTH CB, N. OF CTH BB, PLACE 250' N. OF CTH BB INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
30	CTH CB, S. OF CTH BB, PLACE 250' S. OF CTH BB INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD
31	CTH CB, N. OF US 10, PLACE 500' N. OF US 10 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1R	21"x21"	1	26	26						
32	CTH CB, S. OF AMERICAN DR, PLACE 250' S. OF AMERICAN DR INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						AHEAD

PAGE SUBTOTALS

46

1,144

26

52

14

0

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TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 76

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 26 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
33	CTH CB, AT US 10, PLACE RIGHT OF EXISTING J3-2 SIGN AT US 10 INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-3	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						RIGHT
33A	US 10 OFF-RAMP TO CTH CB, PLACE RIGHT OF EXISTING R5-1 SIGN AT RAMP INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						LEFT
34A	US 10 OFF-RAMP TO CTH CB, PLACE 500' PRIOR TO RAMP INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1L	21"x21"	1	26	26						
34	US 10, AT CTH CB OFF-RAMP, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	MO 4-8	36"x18"	1	26	26						
	"	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	MO 6-2	30"x30"	1	26	26						TILT RIGHT
35	US 10, W. OF CTH CB OFF-RAMP, PLACE 750' W. OF CTH CB OFF-RAMP	MO 4-8	36"x18"	1	26	26						
	"	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	MO 5-2R	30"x30"	1	26	26						
36	US 10, E. OF STH 76, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	36"x18"	1	26	26						
	"	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
37	US 10, AT STH 76 OFF-RAMP, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	M 4-8A	30"x24"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
38	US 10 OFF-RAMP TO STH 76, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "SHIOCTON RIGHT"
39	US 10 OFF-RAMP TO STH 76, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER "NORTH 76 RIGHT"
40	STH 76, AT US 10 WB RAMP INTERSECTION, PLACE IN NE QUADRANT OF INTERSECTION	R 11-3	60"x30"	1	26	26	26	52				3 3/4 MILES AHEAD
PAGE SUBTOTALS				26		676	26	52	0		2	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 76

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 26 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
41	STH 76, N. OF US 10, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
42	STH 76, BETWEEN US 10 RAMP INTERSECTIONS, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER "NORTH 76 AHEAD"
43	STH 76, AT US 10 EB RAMP INTERSECTION, PLACE IN NE QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"x30"	1	26	26	26	52				4 MILES AHEAD
	"	M 4-9R	30"x24"	1	26	26						
44	STH 76, AT US 10 EB RAMP INTERSECTION, PLACE RIGHT OF EXISTING J3-1 SIGN	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 6-1	21"x21"	1	26	26						RIGHT
45	STH 76, S. OF US 10, PLACE 500' S. OF US 10 EB RAMP INTERSECTION	MO 4-8	24"x12"	1	26	26						
	"	M 3-1	24"x12"	1	26	26						
	"	M 1-6	24"x24"	1	26	26						76
	"	MO 5-1R	21"x21"	1	26	26						
46	STH 76, S. OF US 10, PLACE 1000' S. OF US 10 EB RAMP INTERSECTION	W 20-2A	48"x48"	1	26	26						
47	US 10 OFF-RAMP TO STH 76, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER "NORTH 76 LEFT"
48	US 10 OFF-RAMP TO STH 76, COVER EXISTING D1-2 SIGN AS SHOWN									1	1	COVER "LEFT SHIOCTON"
49	US 10, W. OF STH 76, PLACE 750' W. OF STH 76 IN MEDIAN	MO 4-8	36"x18"	1	26	26						
	"	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	MO 6-1	30"x30"	1	26	26						AHEAD
50	US 10, W. OF STH 76, PLACE 750' W. OF STH 76 ON RIGHT SHOULDER	MO 4-8	36"x18"	1	26	26						
	"	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	MO 6-1	30"x30"	1	26	26						AHEAD
51	US 10, W. OF STH 76, PLACE 1500' W. OF STH 76 IN MEDIAN	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	W 20-2A	48"x48"	1	26	26						
52	US 10, W. OF STH 76, PLACE 1500' W. OF STH 76 ON RIGHT SHOULDER	M 3-1	36"x18"	1	26	26						
	"	M 1-6	36"x36"	1	26	26						76
	"	W 20-2A	48"x48"	1	26	26						
PAGE SUBTOTALS				25		650	26	52	0		4	
STH 76 DETOUR TOTALS				137		3,510	104	208	14		10	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 96

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 96, W. OF CTH M, PLACE 1000' W. OF CTH M INTERSECTION	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	W 20-2A	48"x48"	1	12	12							
2	STH 96, W. OF CTH M, PLACE 500' W. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1L	21"x21"	1	12	12							
3	STH 96, AT CTH M, PLACE RIGHT OF EXISTING J13-1 AT CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							LEFT
4	STH 96, AT CTH M, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"x30"	1	12	12	12	24					5 MILES AHEAD
	"	MO 4-9L	30"x24"	1	12	12							
5	CTH M, AT STH 96, MODIFY EXISTING J13-2 SIGN AS SHOWN	MO 6-6	21"x21"	1	12	12							
6	STH 96, E. OF CTH M, COVER EXISTING J4-1 SIGN AS SHOWN												COVER ENTIRE SIGN
7	CTH M, AT STH 96, MODIFY EXISTING J13-2 SIGN AS SHOWN	MO 6-1	21"x21"	1	12	12							RIGHT
8	CTH M, N. OF STH 96, PLACE 250' N. OF STH 96 INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
9	CTH M, N. OF STH 96, MODIFY EXISTING J1-1 AS SHOWN	MO 4-8A	24"x18"	1	12	12							
10	STH 96, AT NORTH RD, PLACE IN SE QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"x30"	1	12	12	12	24					2 MILES AHEAD
11	STH 96, W. OF STH 76, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7				PLACE IN ADVANCE OF CLOSURE
12	STH 96, E. OF STH 76, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7				PLACE IN ADVANCE OF CLOSURE
13	STH 96, W. OF CTH CB, COVER EXISTING J4-1 SIGN AS SHOWN										1	1	COVER ENTIRE SIGN
14	STH 96, AT CTH CB, PLACE IN NW QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"x30"	1	12	12	12	24					1 1/2 MILES AHEAD
	"	M 4-9R	30"x24"	1	12	12							
15	CTH CB, AT STH 96, COVER EXISTING J3-2 SIGN AS SHOWN										1	1	COVER "WEST 96 LEFT"
16	STH 96, AT CTH CB, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							RIGHT
17	STH 96, E. OF CTH CB, PLACE 750' E. OF CTH CB INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1R	21"x21"	1	12	12							
18	STH 96, E. OF CTH CB, PLACE 1500' E. OF CTH CB INTERSECTION IN MEDIAN	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	W 20-2A	48"x48"	1	12	12							
19	STH 96, E. OF CTH CB, PLACE 1500' E. OF CTH CB INTERSECTION ON RIGHT SHOULDER	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	W 20-2A	48"x48"	1	12	12							
20	CTH CB, AT STH 96, COVER EXISTING J3-2 SIGN AS SHOWN										1	1	COVER "WEST 96 RIGHT"
21	CTH CB, N. OF STH 96, PLACE 250' N. OF STH 96 INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
PAGE SUBTOTALS				41		468	36	72	14	0		3	

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BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 96

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
22	CTH CB, N. OF STH 96, MODIFY EXISTING J1-1 SIGN AS SHOWN	MO 4-8A	24"x18"	1	12	12							
23	CTH CB, S. OF STH 15, PLACE 500' S. OF STH 15 INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1L	21"x21"	1	12	12							
24	CTH CB, S. OF STH 96, PLACE 250' S. OF STH 96 INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
25	CTH CB, AT STH 15, PLACE RIGHT OF EXISTING R1-2 SIGN AT STH 15 INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							LEFT
26	STH 15, AT CTH CB, PLACE NEXT TO EXISTING SPLITTER ISLAND SIGN ON WEST LEG EXIT	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-2	21"x21"	1	12	12							TILT RIGHT
27	STH 15, AT CTH CB, PLACE RIGHT OF EXISTING R1-2 SIGN AT CTH CB INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-2	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							RIGHT
28	STH 15, W. OF CTH CB, PLACE 250' W. OF CTH CB INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
29	STH 15, W. OF CTH CB, PLACE 750' W. OF CTH CB INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-2	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 5-1R	30"x30"	1	12	12							
30	STH 15, E. OF STH 76, PLACE 250' E. OF STH 76 INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							AHEAD
31	STH 15, W. OF STH 76, PLACE 250' W. OF STH 76 INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-2	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							AHEAD
32	STH 15, E. OF NORTH RD, PLACE 250' E. OF NORTH RD INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							AHEAD
33	STH 15, W. OF NORTH RD, PLACE 250' W. OF NORTH RD INTERSECTION	MO 4-8	36"x18"	1	12	12							
	"	M 3-2	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							AHEAD
PAGE SUBTOTALS				43		516	0	0	0	0		0	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 96

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
34	STH 15, E. OF OLD HWY 15 RD, PLACE 750' E. OF OLD HWY 15 RD IN MEDIAN	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 5-1L	30"x30"	1	12	12							
35	STH 15, E. OF OLD HWY 15 RD, PLACE 750' E. OF OLD HWY 15 RD ON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 5-1L	30"x30"	1	12	12							
36	STH 15, E. OF OLD HWY 15 RD, PLACE 250' E. OF OLD HWY 15 RD IN MEDIAN	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							LEFT
37	STH 15, E. OF OLD HWY 15 RD, PLACE 250' E. OF OLD HWY 15 RD ON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12							
	"	M 3-4	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
	"	MO 6-1	30"x30"	1	12	12							LEFT
38	STH 15, E. OF OLD HWY 15 RD, PLACE 150' E. OF OLD HWY 15 RD ON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12							
	"	M 3-2	36"x18"	1	12	12							
	"	M 1-6	36"x36"	1	12	12							96
39	STH 15, AT OLD HWY 15 RD, PLACE NEXT TO EXISTING SPLITTER ISLAND SIGN IN SOUTH LEG EXIT	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-2	21"x21"	1	12	12							TILT RIGHT
40	OLD HWY 15 RD, S. OF STH 15, PLACE 150' S. OF STH 15 RAB INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							RIGHT
41	OLD HWY 15 RD, S. OF STH 15, PLACE 250' S. OF STH 15 RAB INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
42	OLD HWY 15 RD, S. OF STH 15, PLACE 500' S. OF STH 15 RAB INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1R	21"x21"	1	12	12							
PAGE SUBTOTALS				34		408	0	0	0	0		0	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY - STH 96

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
43	OLD HWY 15 RD, E. OF CTH M, PLACE 500' E. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1L	21"x21"	1	12	12							
44	OLD HWY 15 RD, E. OF CTH M, PLACE 250' E. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
45	OLD HWY 15 RD, E. OF CTH M, PLACE 100' E. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							LEFT
46	CTH M, S. OF OLD HWY 15 RD, PLACE 100' S. OF OLD HWY 15 RD INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 6-1	21"x21"	1	12	12							RIGHT
47	CTH M, S. OF OLD HWY 15 RD, PLACE 250' S. OF OLD HWY 15 RD INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-4	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
48	CTH M, S. OF OLD HWY 15 RD, PLACE 500' S. OF OLD HWY 15 RD INTERSECTION	MO 4-8	24"x12"	1	12	12							
	"	M 3-2	24"x12"	1	12	12							
	"	M 1-6	24"x24"	1	12	12							96
	"	MO 5-1R	21"x21"	1	12	12							
PAGE SUBTOTALS				22		264	0	0	0	0		0	
STH 96 DETOUR TOTALS				140		1,656	36	72	14	0		3	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

LEGEND

ASPHALTIC SURFACE PATCHING

BASE PATCHING CONCRETE HES

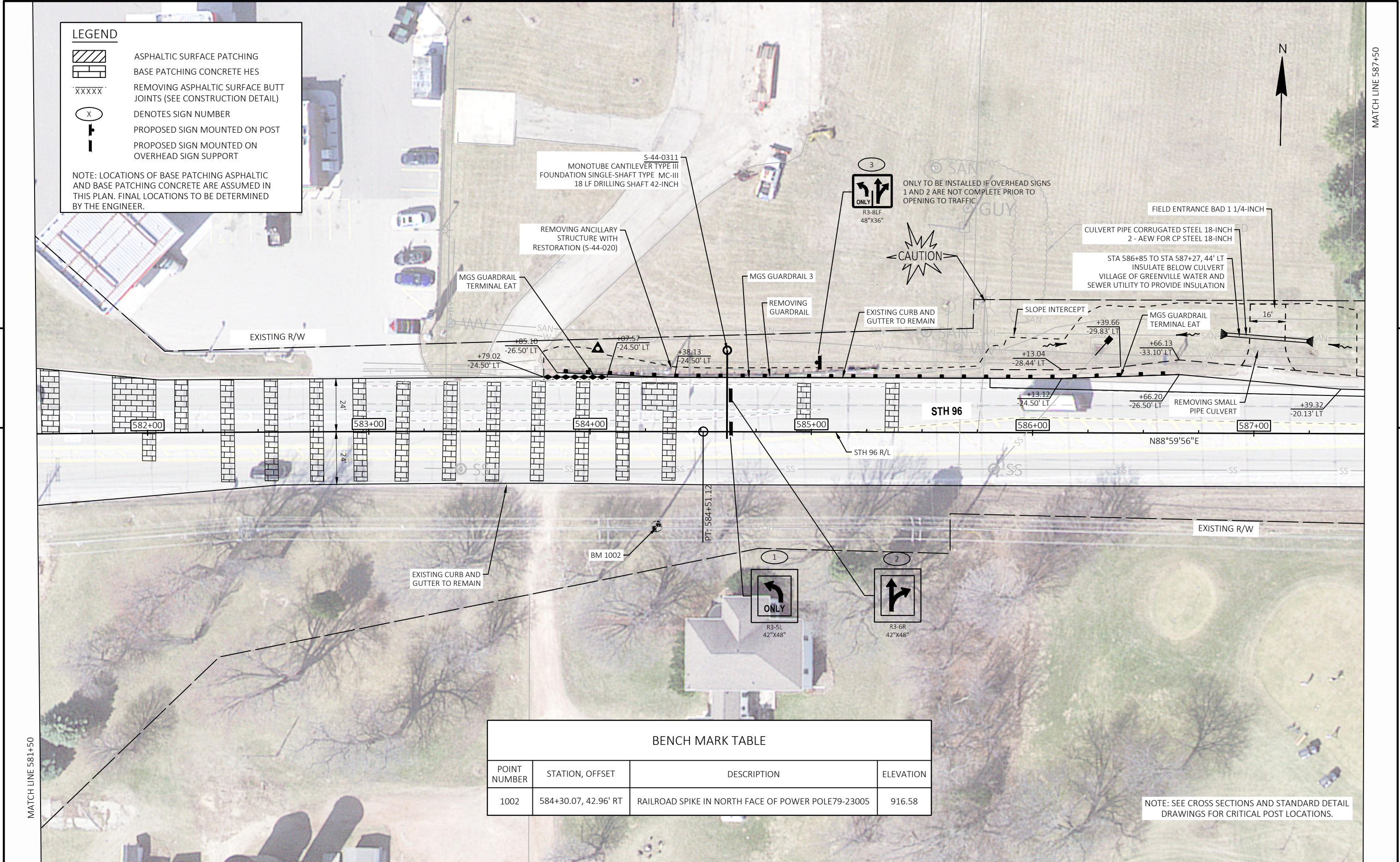
SAWING CURB HEAD

XXXXX

REMOVING ASPHALTIC SURFACE BUTT JOINTS (SEE CONSTRUCTION DETAIL)

NOTE: LOCATIONS OF BASE PATCHING ASPHALTIC AND BASE PATCHING CONCRETE ARE ASSUMED IN THIS PLAN. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.





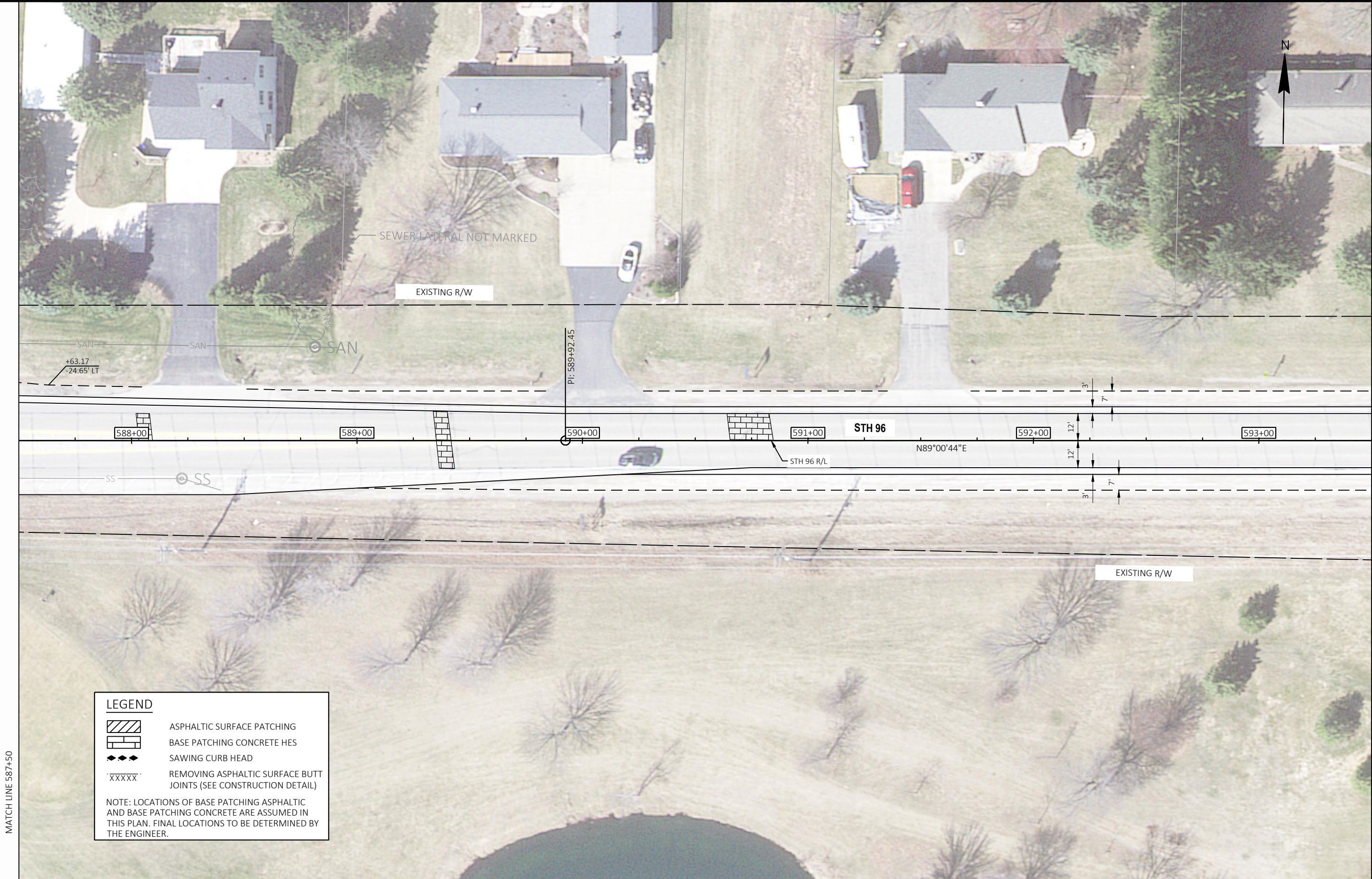
LEGEND

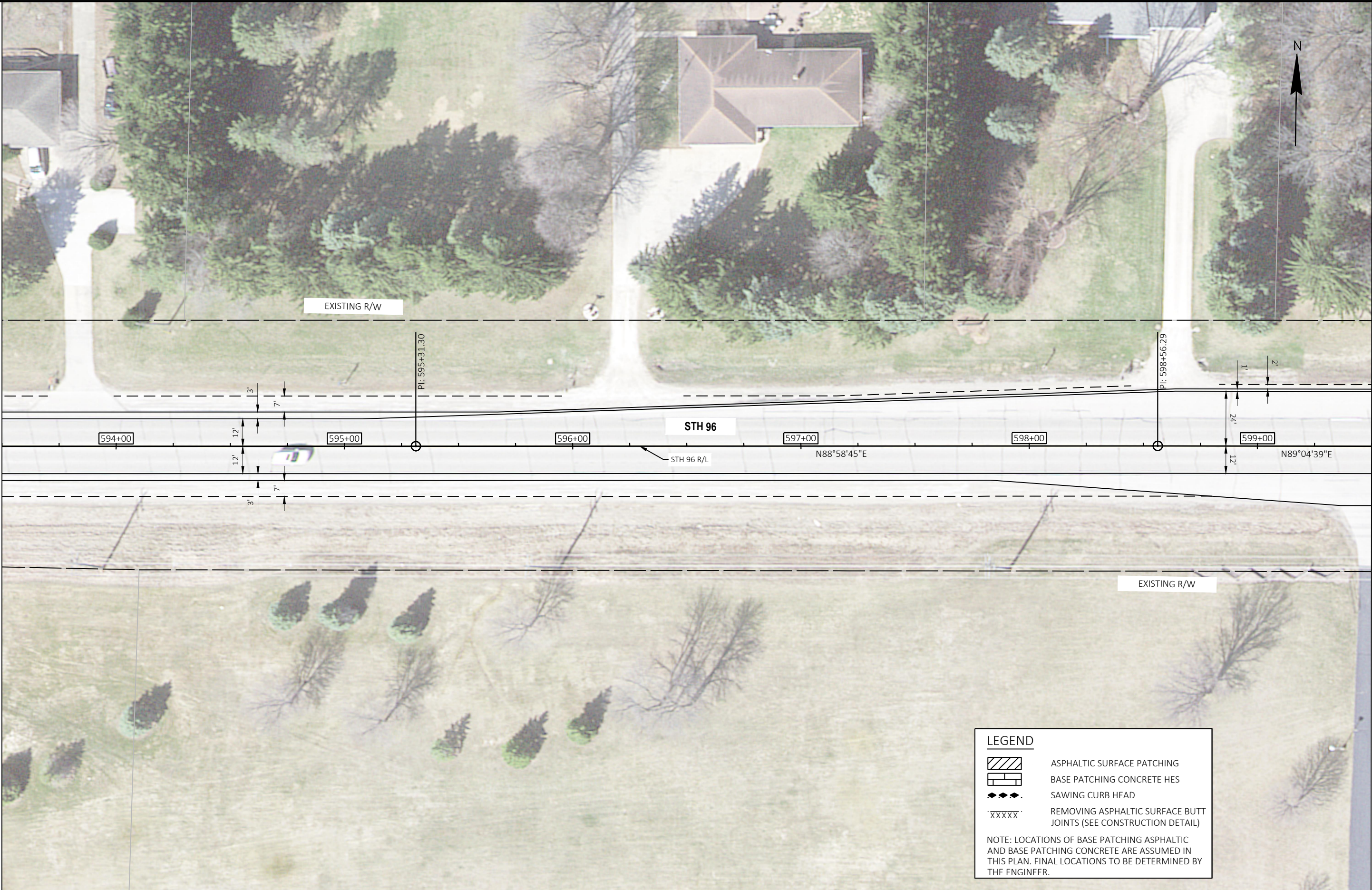
- ASPHALTIC SURFACE PATCHING
- BASE PATCHING CONCRETE HES
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (SEE CONSTRUCTION DETAIL)
- XXXXX
- X DENOTES SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- PROPOSED SIGN MOUNTED ON OVERHEAD SIGN SUPPORT

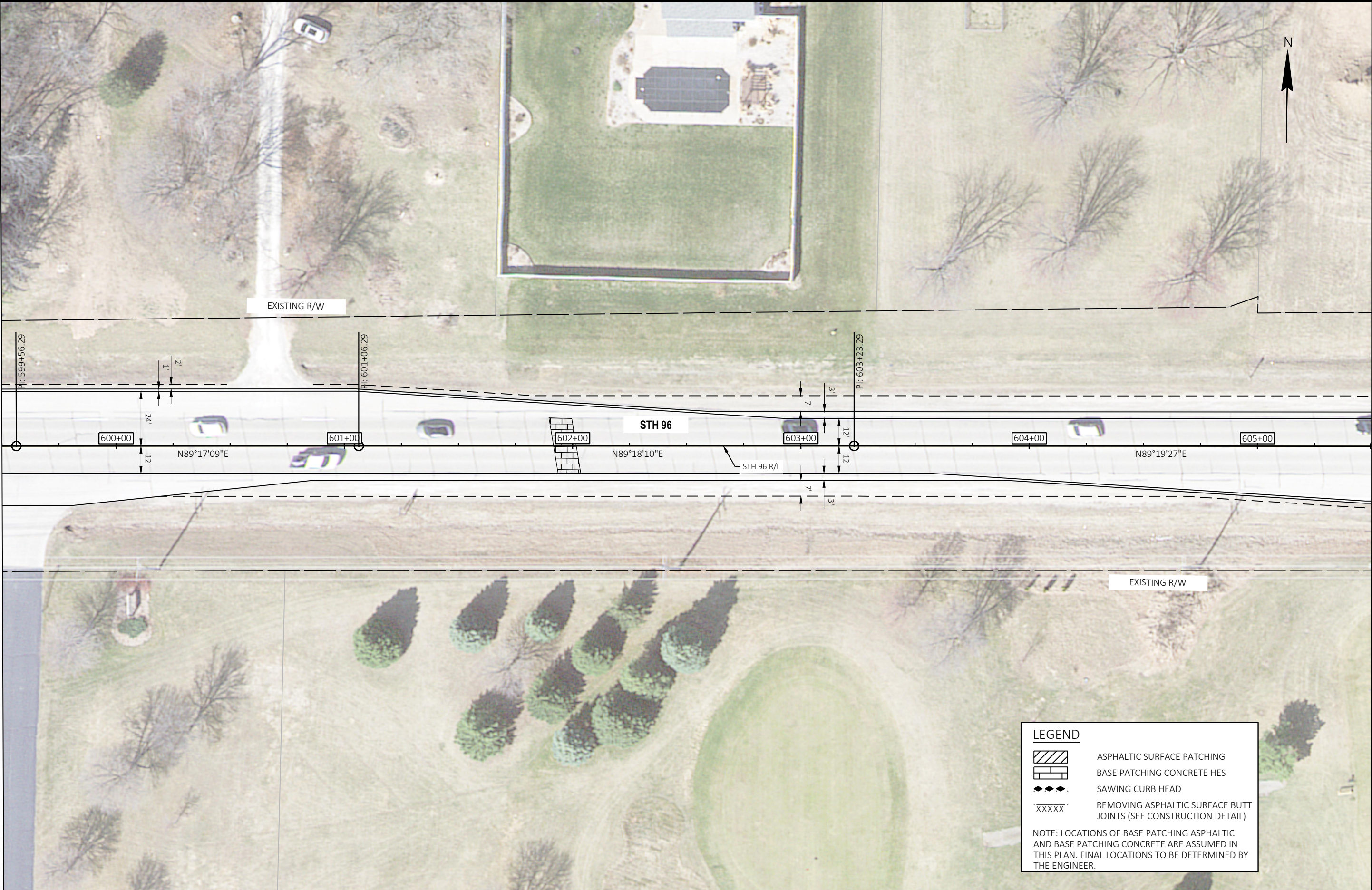
NOTE: LOCATIONS OF BASE PATCHING ASPHALTIC AND BASE PATCHING CONCRETE ARE ASSUMED IN THIS PLAN. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.

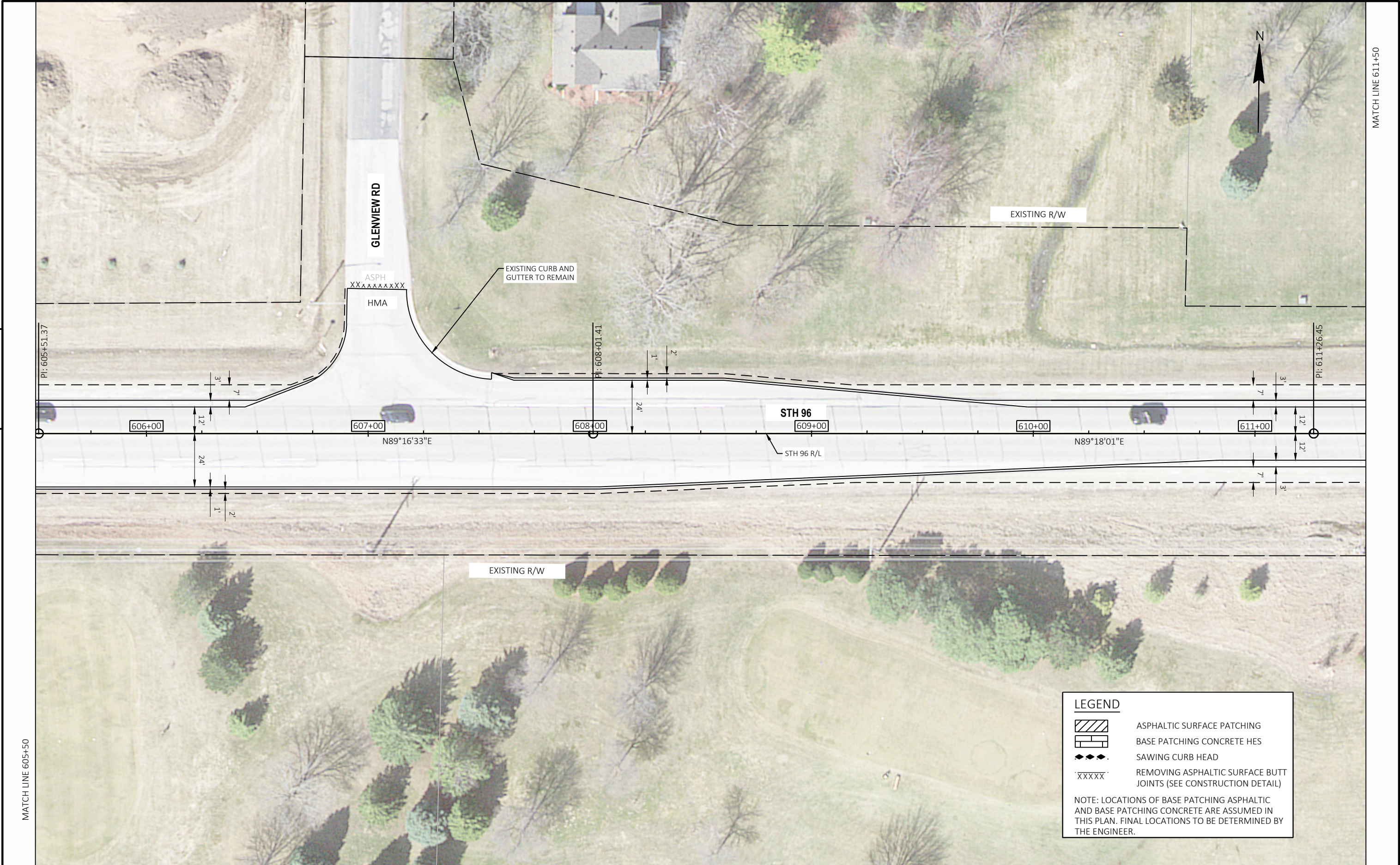
BENCH MARK TABLE			
POINT NUMBER	STATION, OFFSET	DESCRIPTION	ELEVATION
1002	584+30.07, 42.96' RT	RAILROAD SPIKE IN NORTH FACE OF POWER POLE 79-23005	916.58

NOTE: SEE CROSS SECTIONS AND STANDARD DETAIL DRAWINGS FOR CRITICAL POST LOCATIONS.



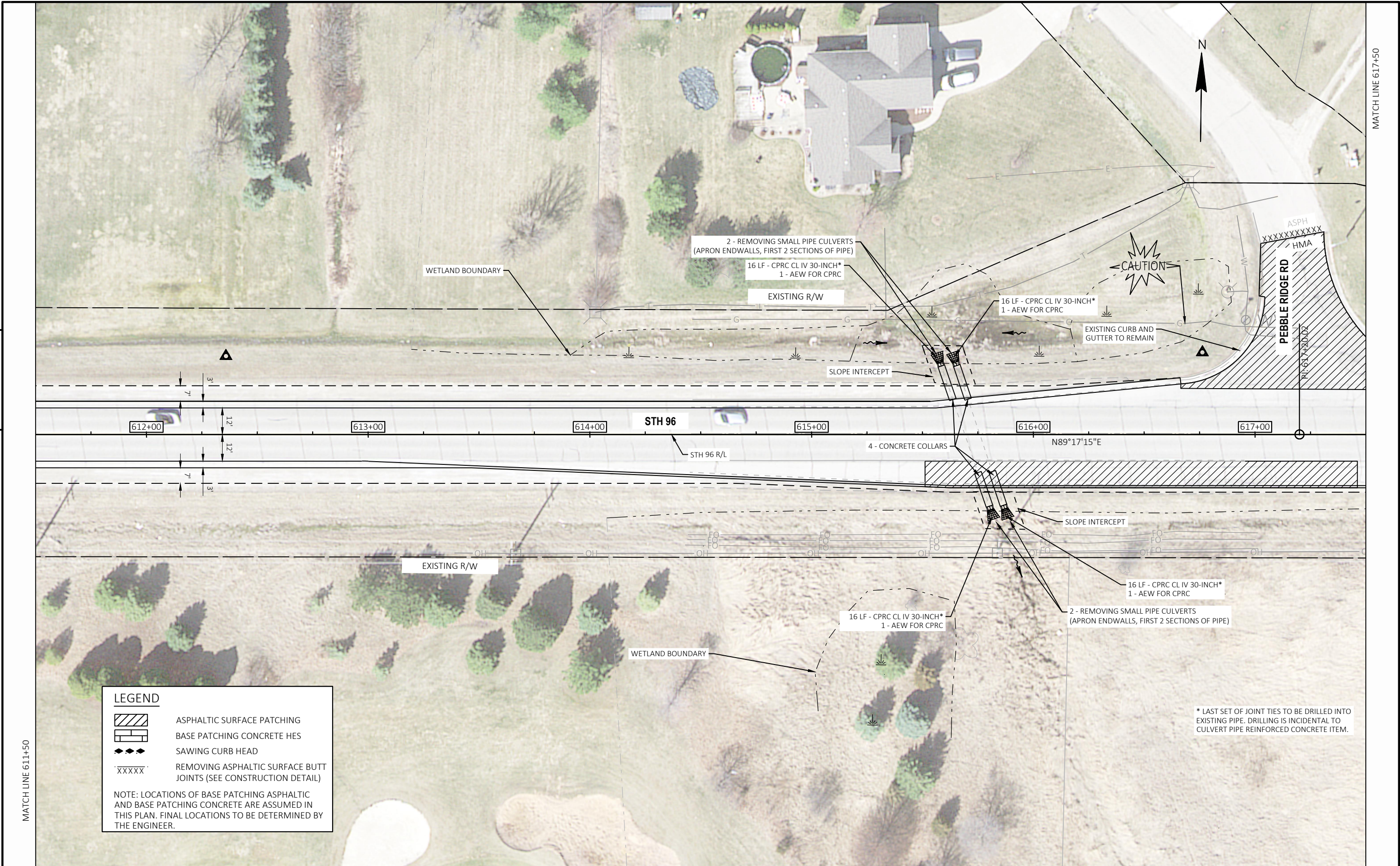


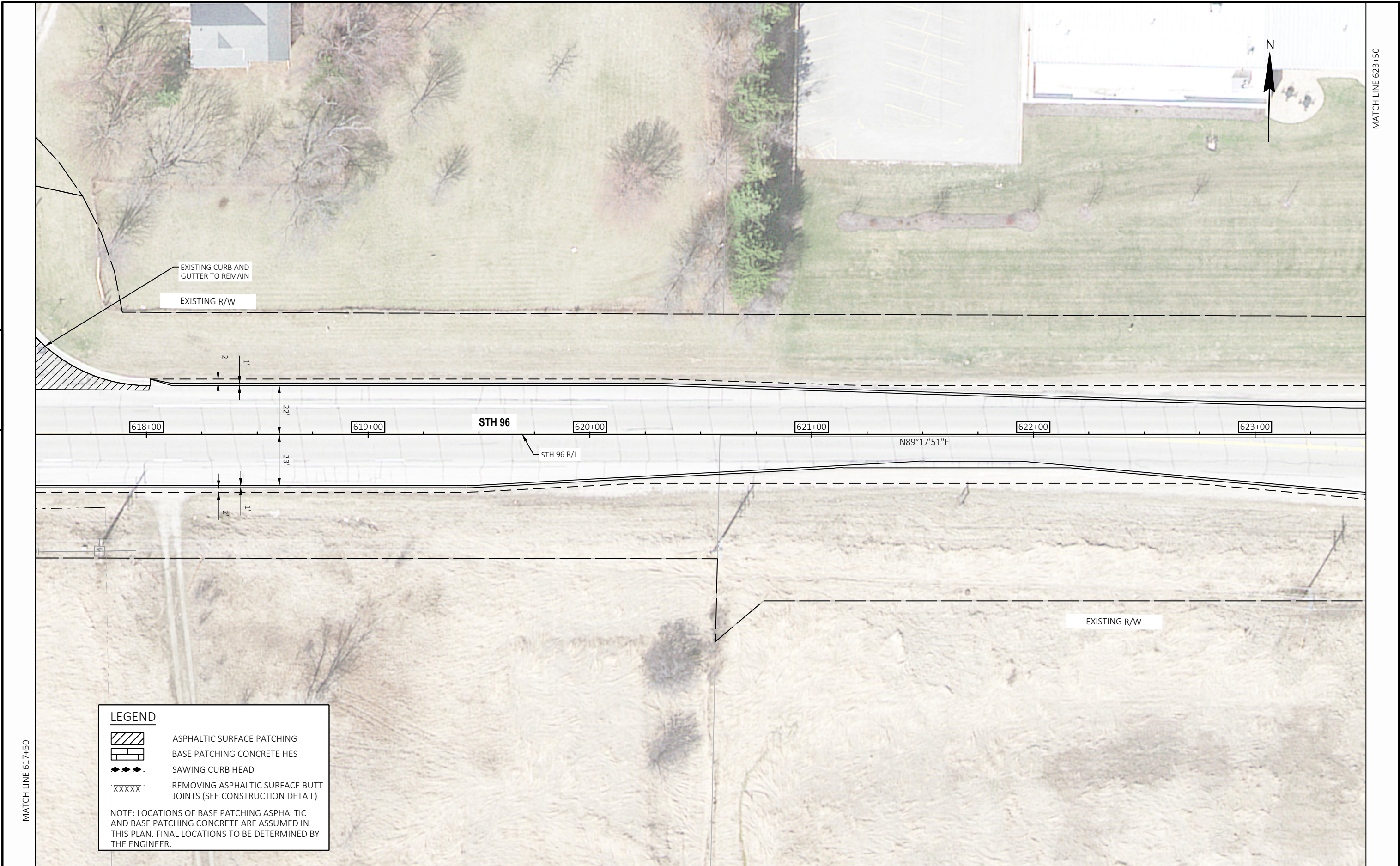




5

5





LEGEND

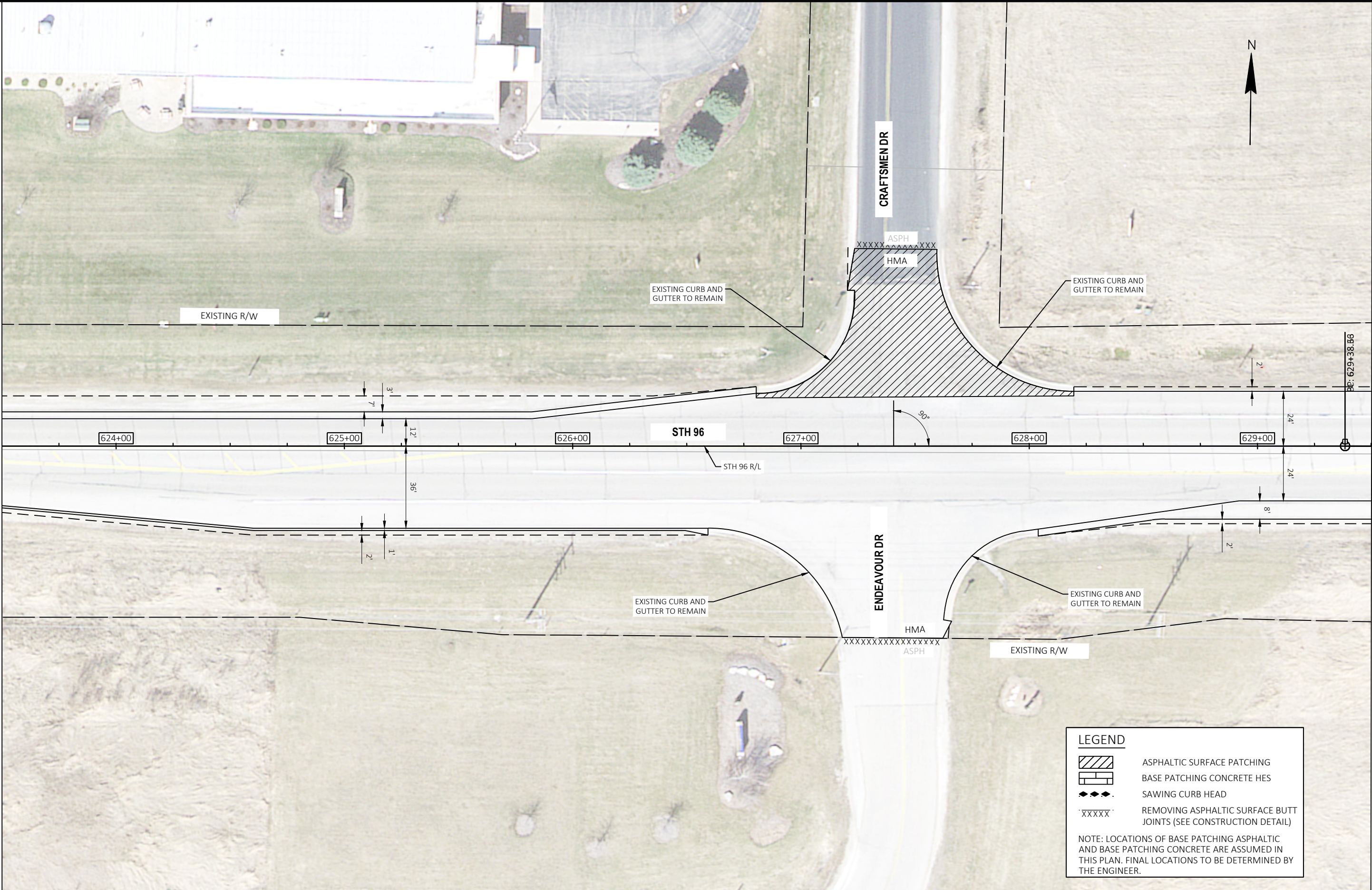
ASPHALTIC SURFACE PATCHING

BASE PATCHING CONCRETE HES

SAWING CURB HEAD

REMOVING ASPHALTIC SURFACE BUTT JOINTS (SEE CONSTRUCTION DETAIL)

NOTE: LOCATIONS OF BASE PATCHING ASPHALTIC AND BASE PATCHING CONCRETE ARE ASSUMED IN THIS PLAN. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.



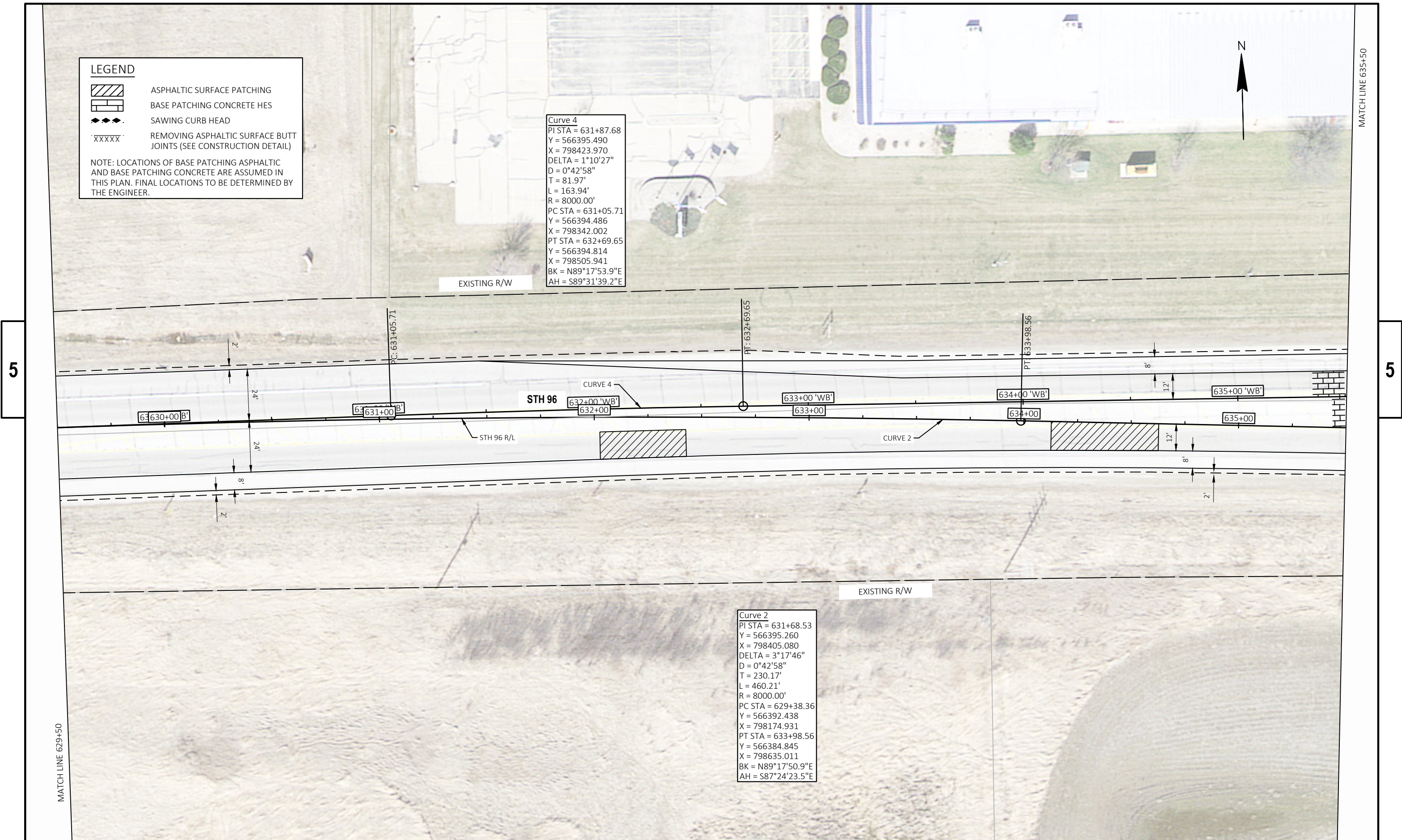
LEGEND

ASPHALTIC SURFACE PATCHING

BASE PATCHING CONCRETE HES

XXXXXX

NOTE: LOCATIONS OF BASE PATCHING ASPHALTIC AND BASE PATCHING CONCRETE ARE ASSUMED IN THIS PLAN. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.



LEGEND

ASPHALTIC SURFACE PATCHING

BASE PATCHING CONCRETE HES

SAWING CURB HEAD

REMOVING ASPHALTIC SURFACE BUTT JOINTS (SEE CONSTRUCTION DETAIL)

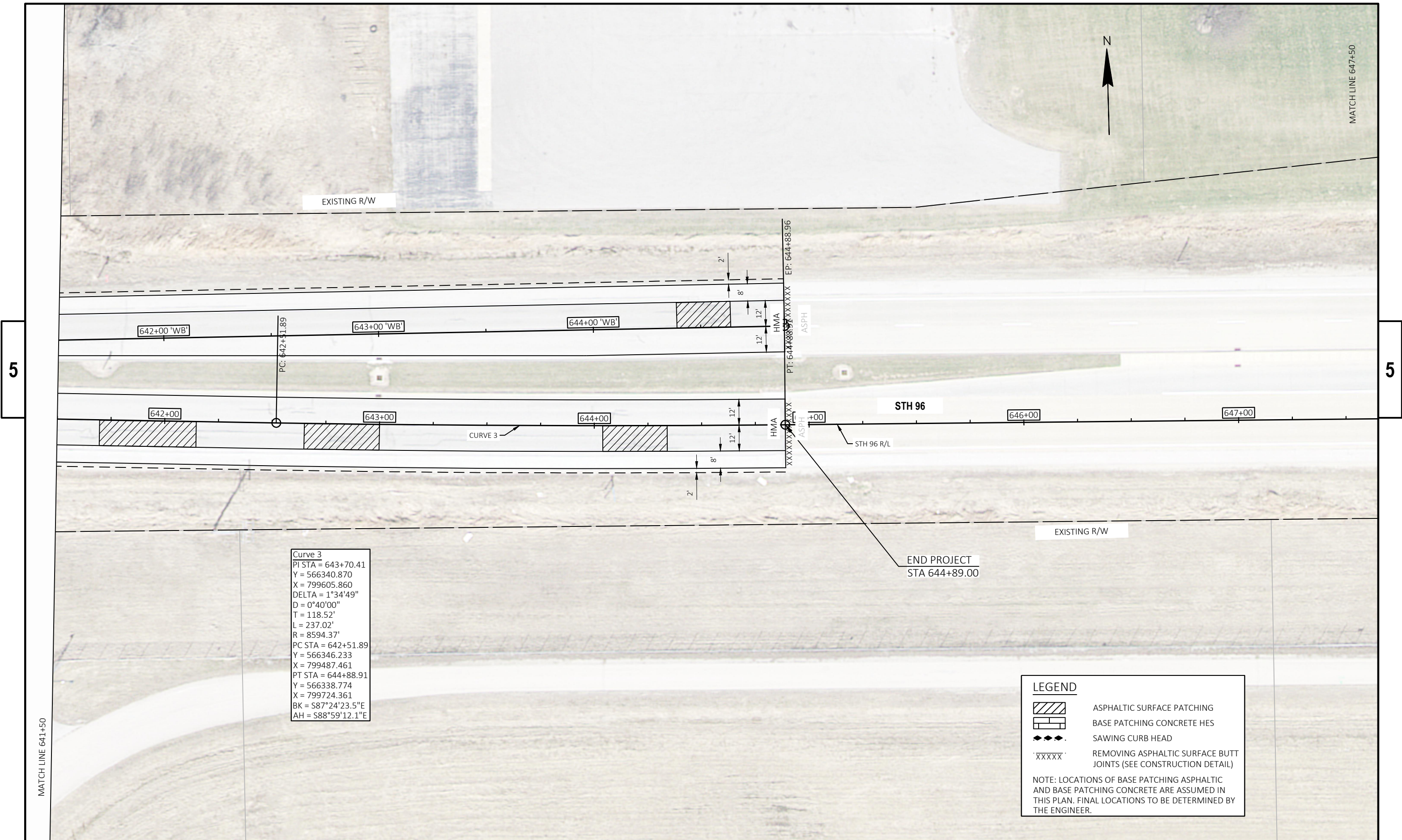
NOTE: LOCATIONS OF BASE PATCHING ASPHALTIC AND BASE PATCHING CONCRETE ARE ASSUMED IN THIS PLAN. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.

Curve 4
PI STA = 631+87.68
Y = 566395.490
X = 798423.970
DELTA = 1°10'27"
D = 0°42'58"
T = 81.97'
L = 163.94'
R = 8000.00'
PC STA = 631+05.71
Y = 566394.486
X = 798342.002
PT STA = 632+69.65
Y = 566394.814
X = 798505.941
BK = N89°17'53.9"E
AH = S89°31'39.2"E

Curve 2
PI STA = 631+68.53
Y = 566395.260
X = 798405.080
DELTA = 3°17'46"
D = 0°42'58"
T = 230.17'
L = 460.21'
R = 8000.00'
PC STA = 629+38.36
Y = 566392.438
X = 798174.931
PT STA = 633+98.56
Y = 566384.845
X = 798635.011
BK = N89°17'50.9"E
AH = S87°24'23.5"E

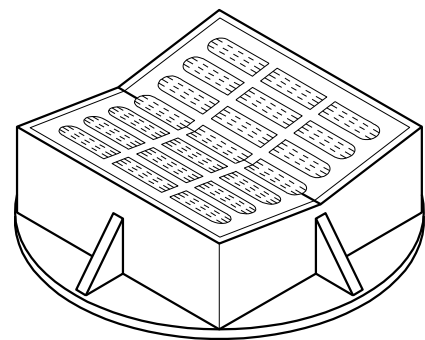
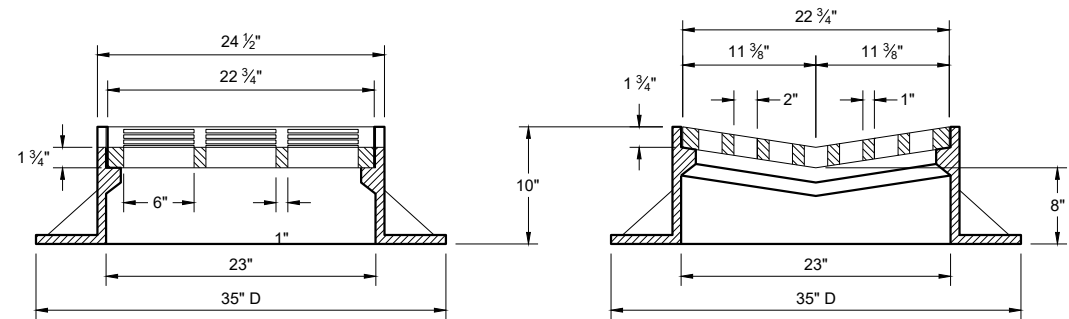


E



Standard Detail Drawing List

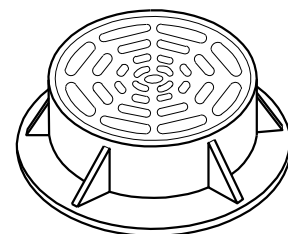
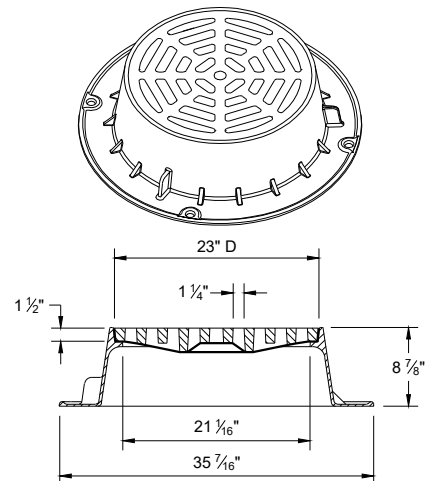
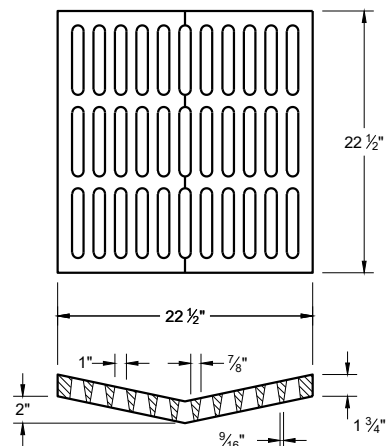
08A05-20B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C19-08A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-08B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-08C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-11	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



TYPE "B"

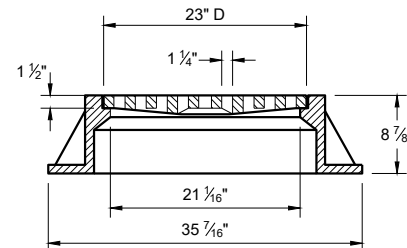
**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE
NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

NOTE: EITHER CASTING IS ACCEPTABLE

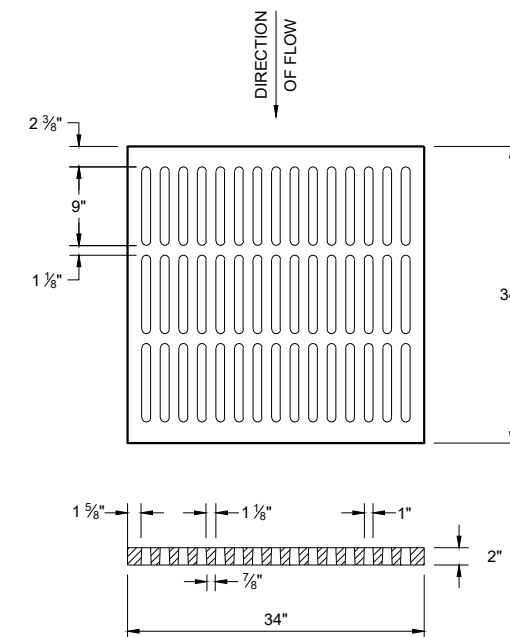


GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

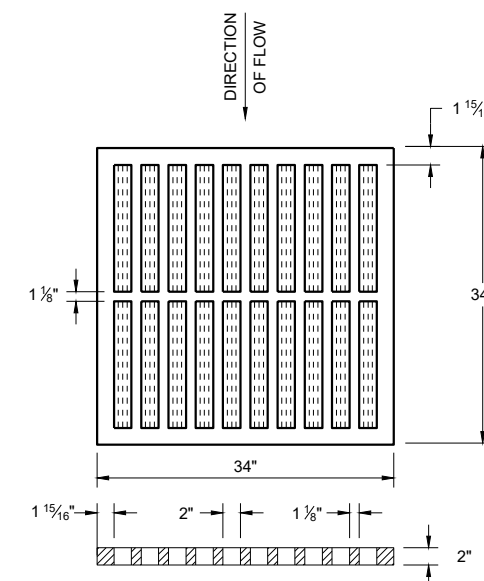
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



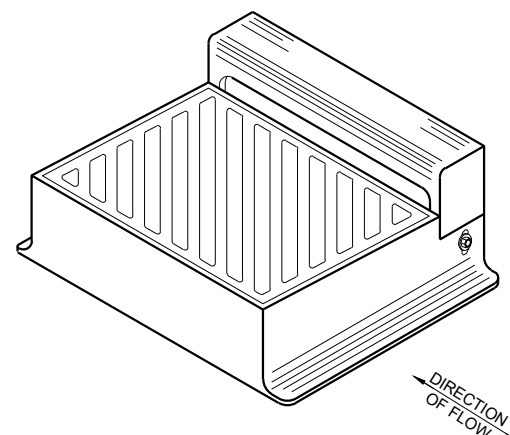
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

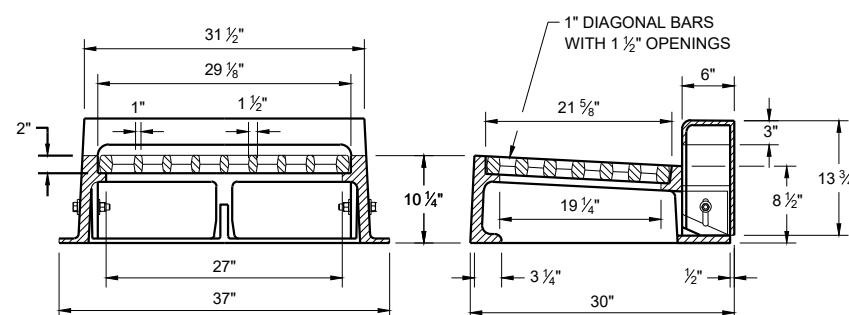


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON THE DRAINAGE TABLE



DIAGONAL SLOTS SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



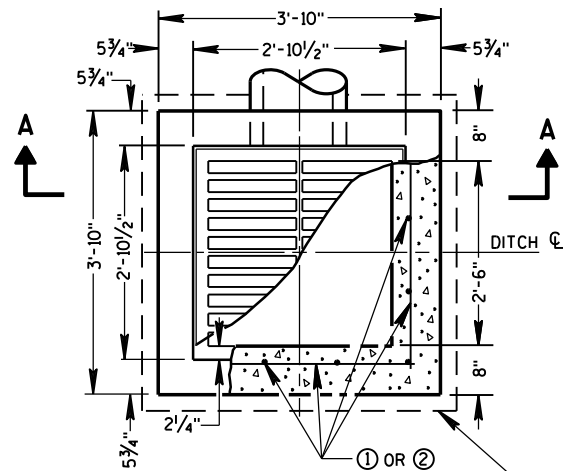
TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

**INLET COVERS
TYPES B, B-A, C,
MS, MS-A AND WM**

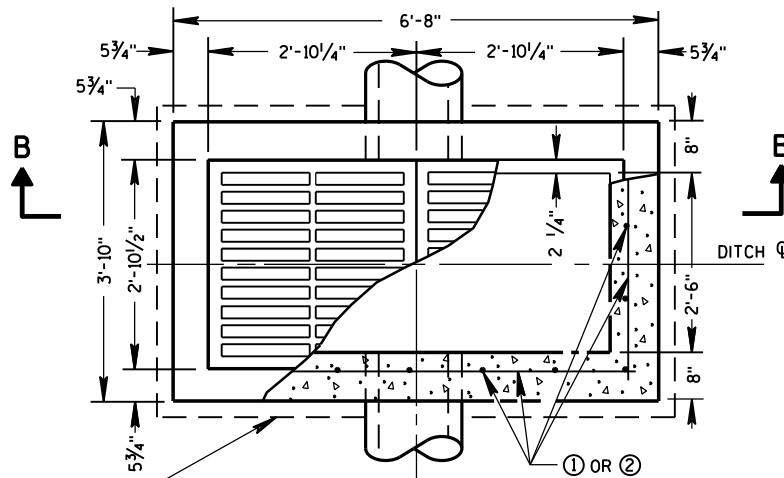
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

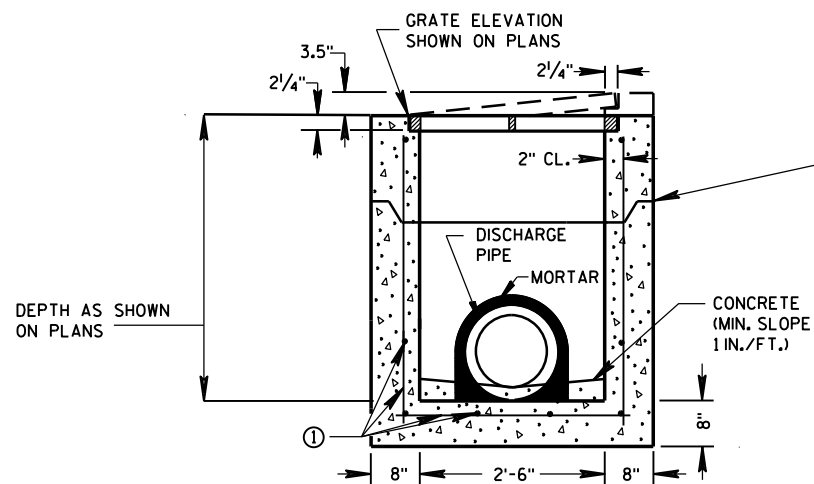


PLAN VIEW

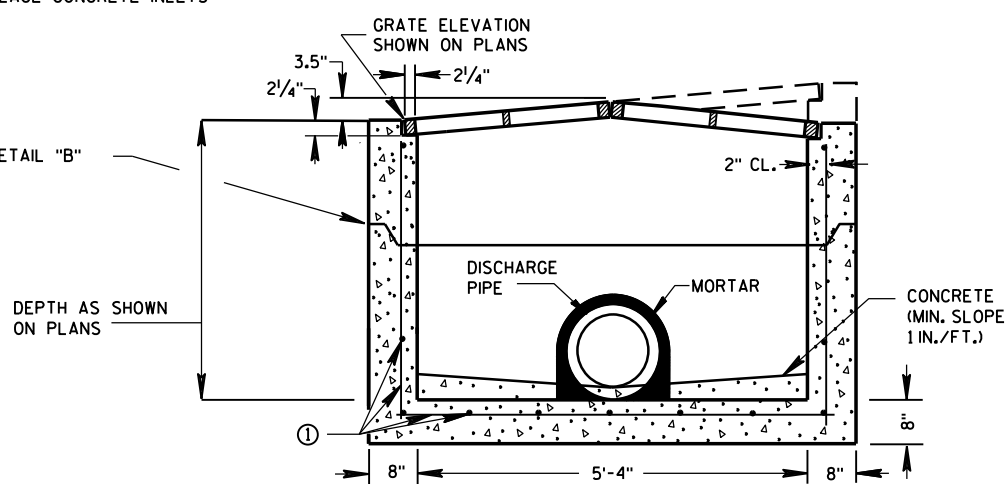
4" OVERHANGING BASE ON REINFORCED
CAST-IN-PLACE CONCRETE INLETS



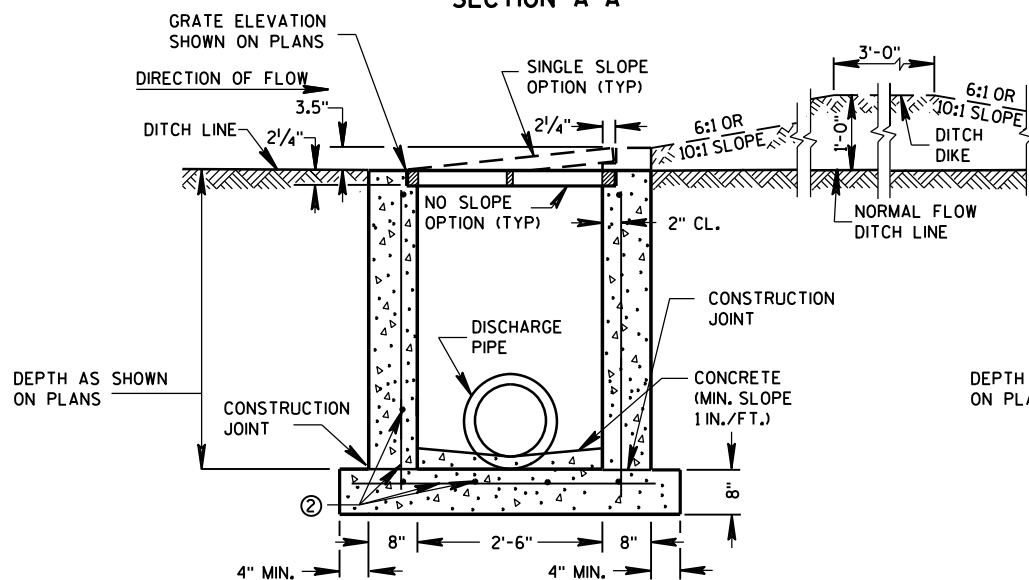
PLAN VIEW



PRECAST REINFORCED CONCRETE
SECTION A-A

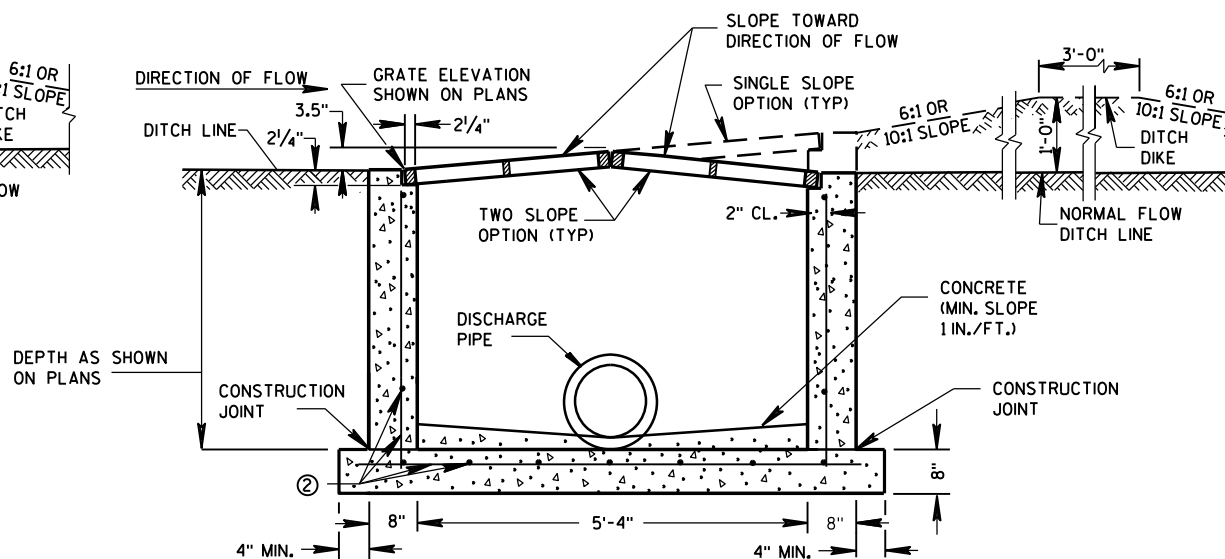


PRECAST REINFORCED CONCRETE
SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE
SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE
SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

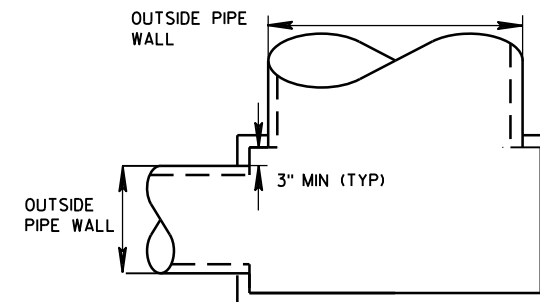
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

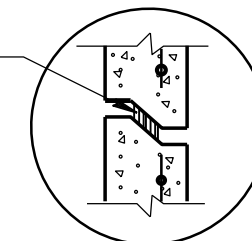
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

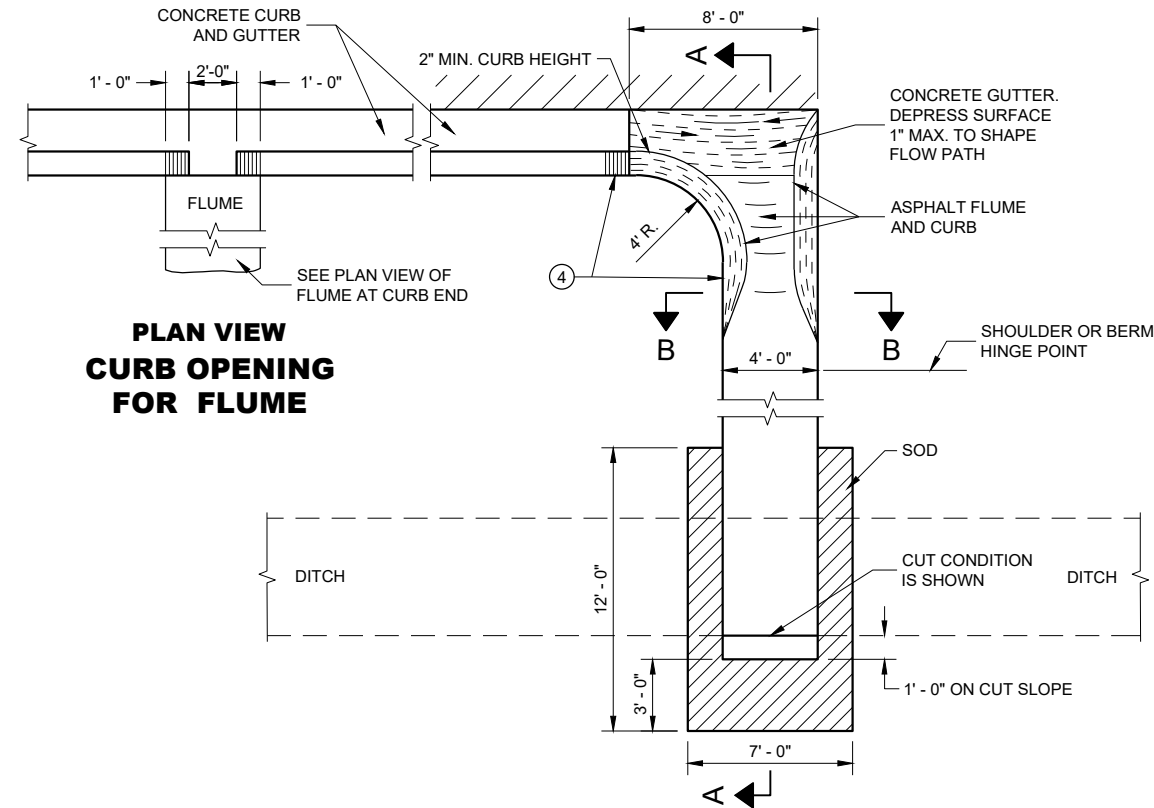
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

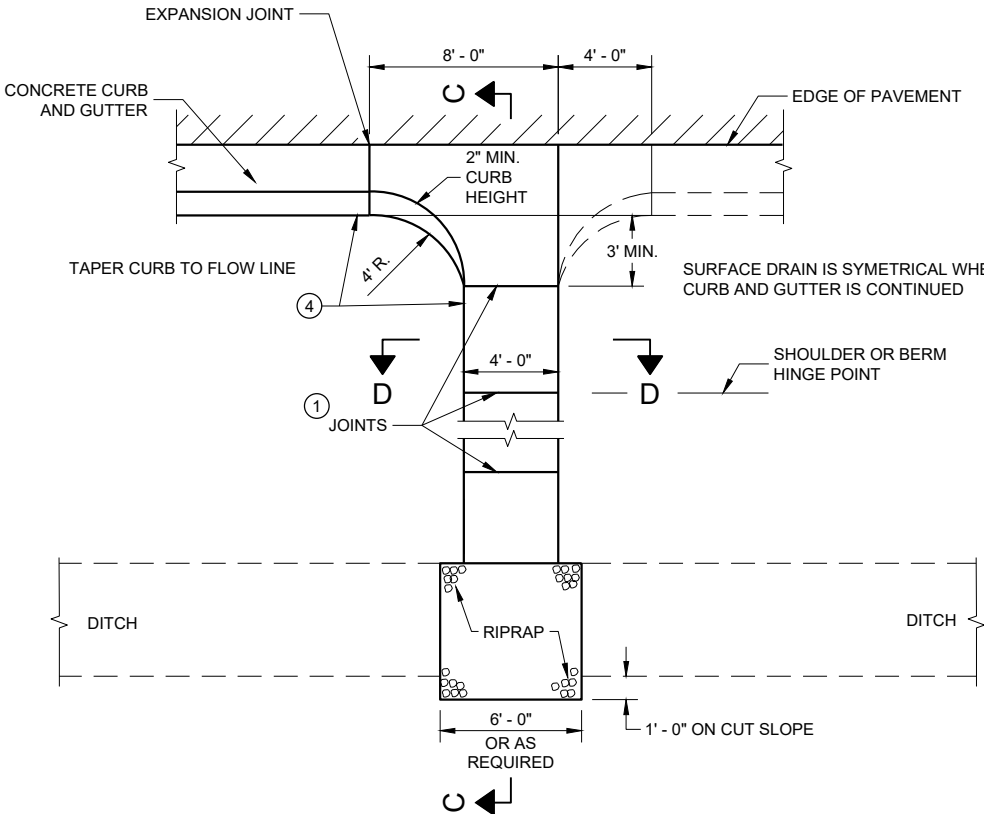
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



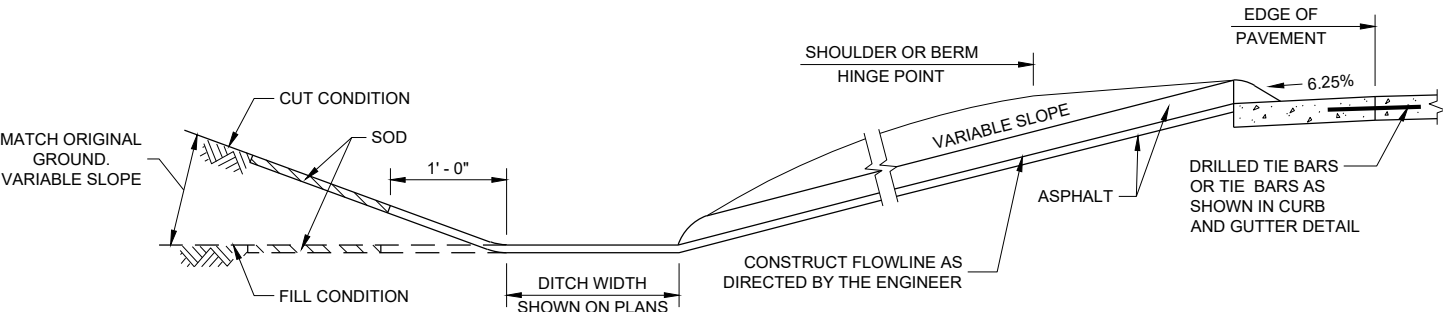
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

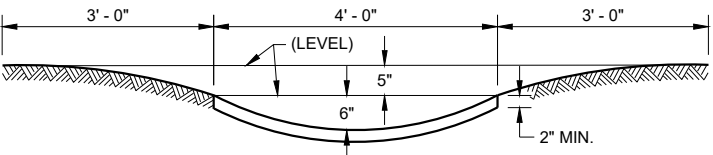
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

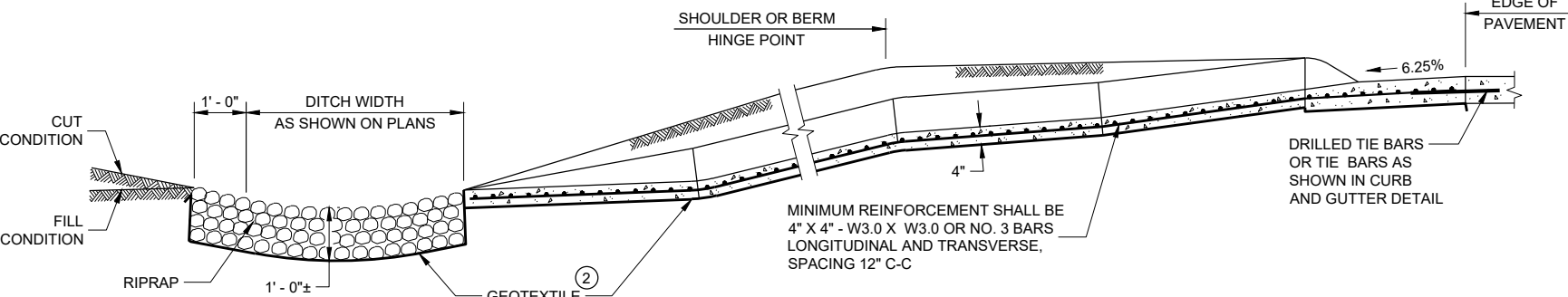
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



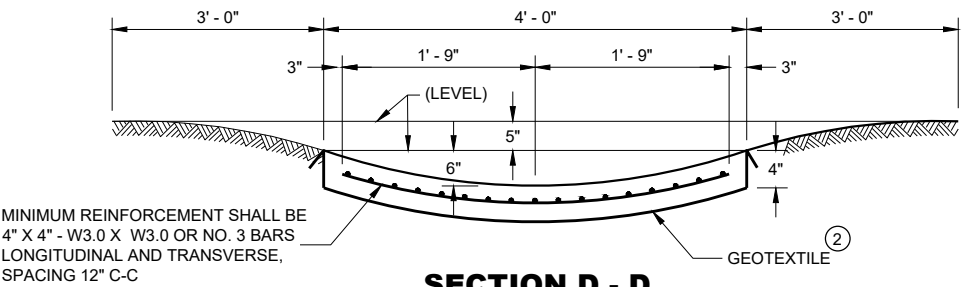
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023

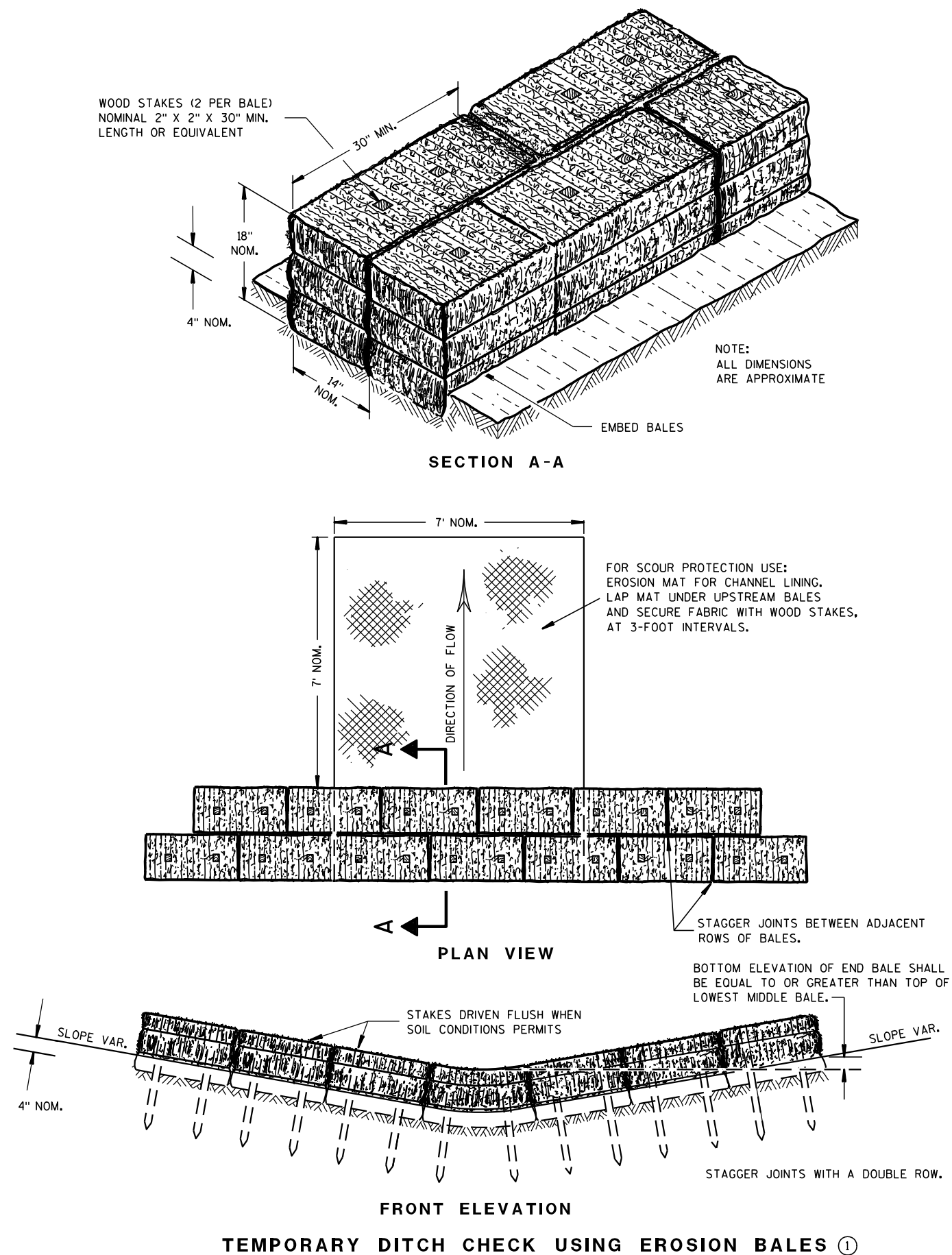
DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

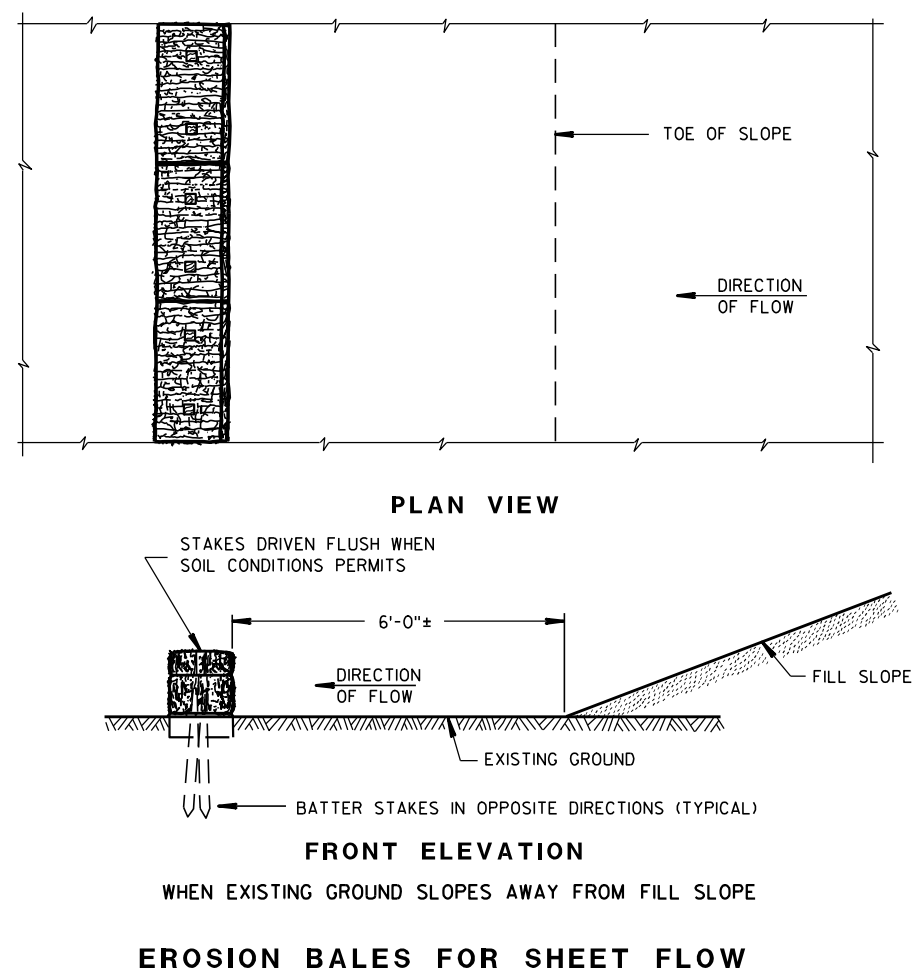
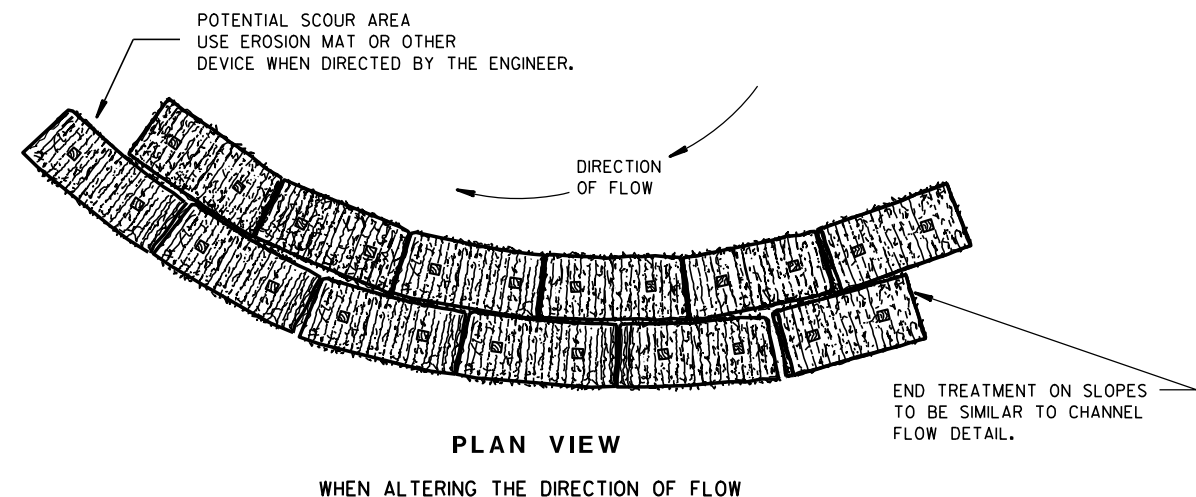
ENGINEER



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

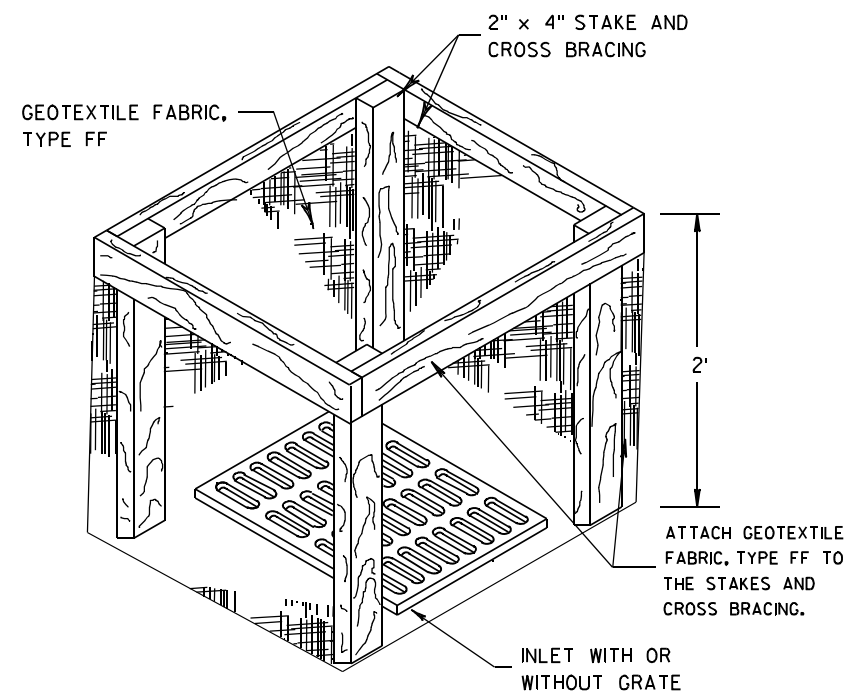
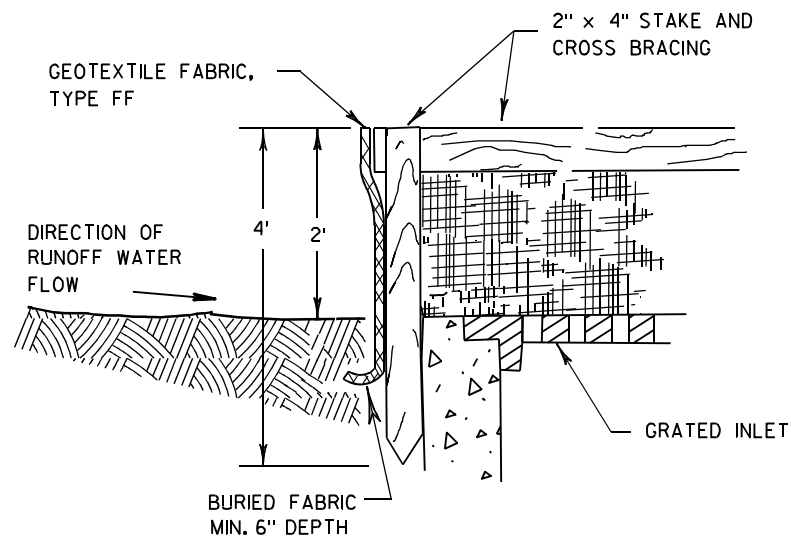
FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



<div>SILT FENCE</div>	
<div>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</div>	
<div>APPROVED</div> <div>4-29-05</div> <div>DATE</div>	<div>/S/ Beth Cannestra</div> <div>CHIEF ROADWAY DEVELOPMENT ENGINEER</div>



INLET PROTECTION, TYPE A

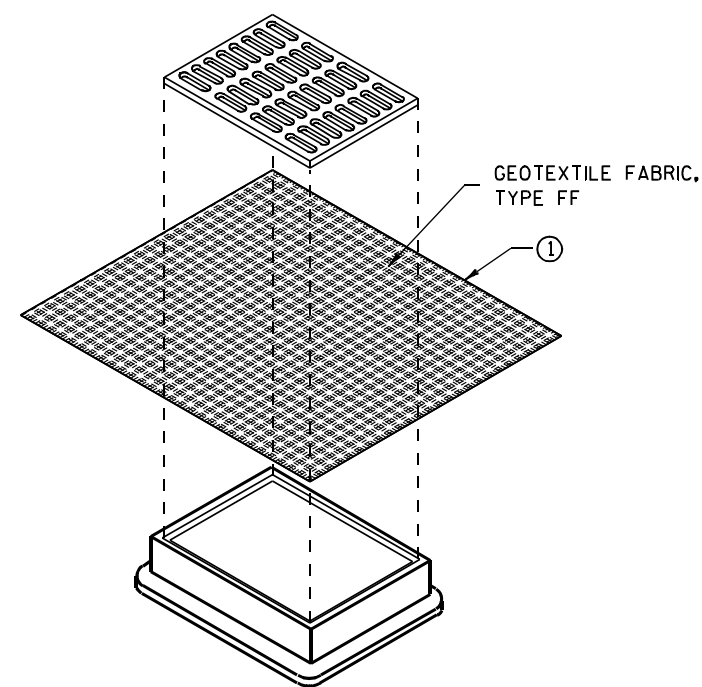
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

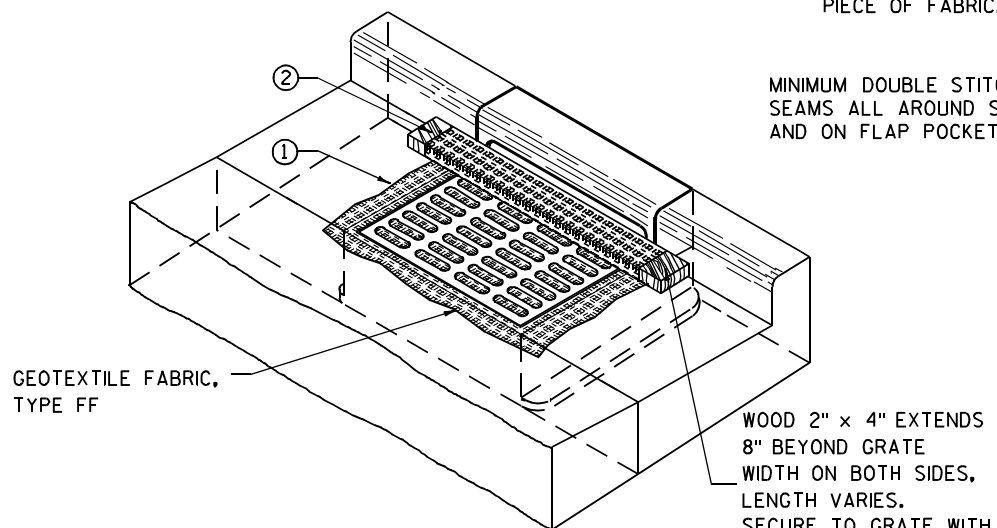
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

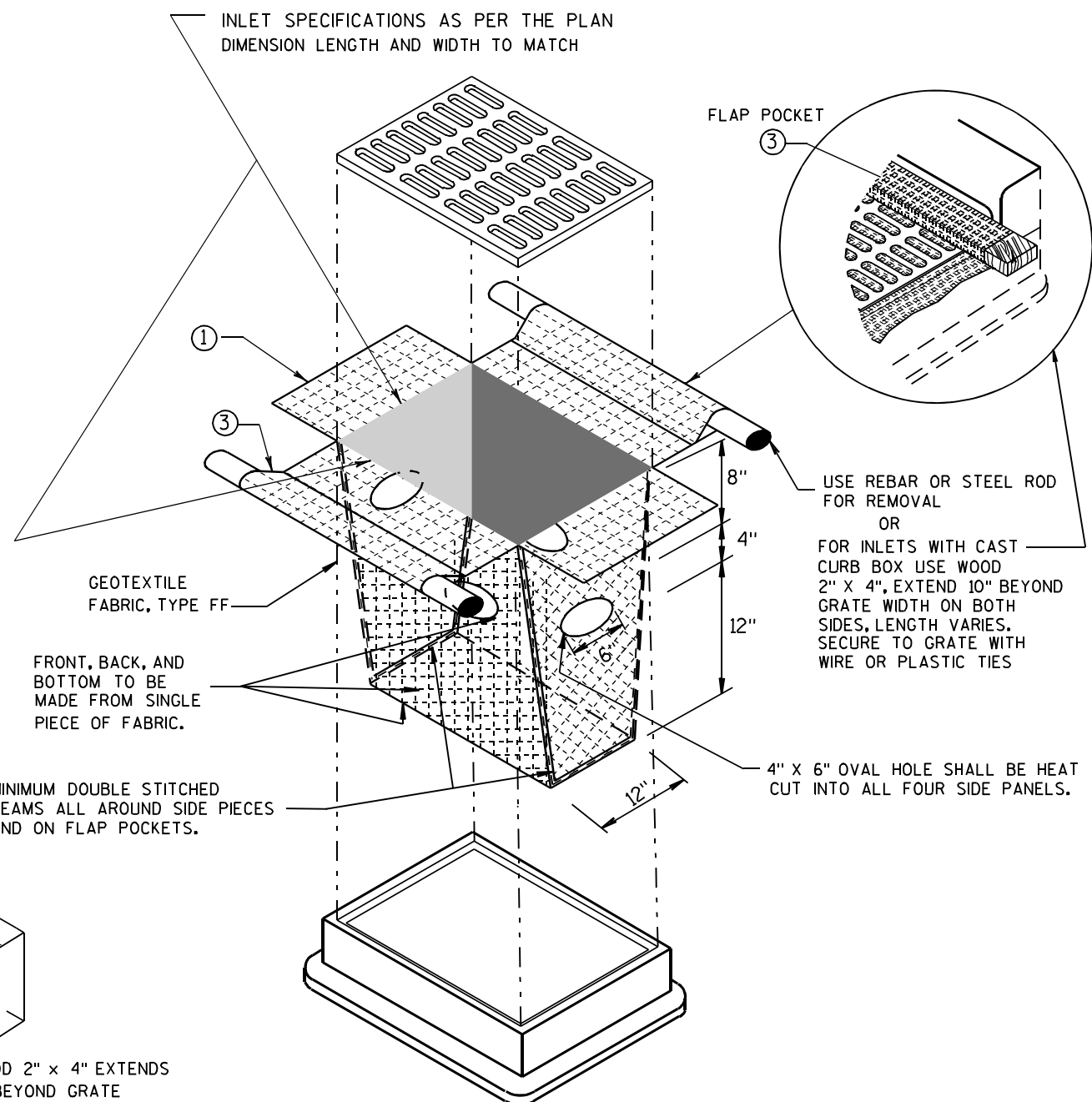
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



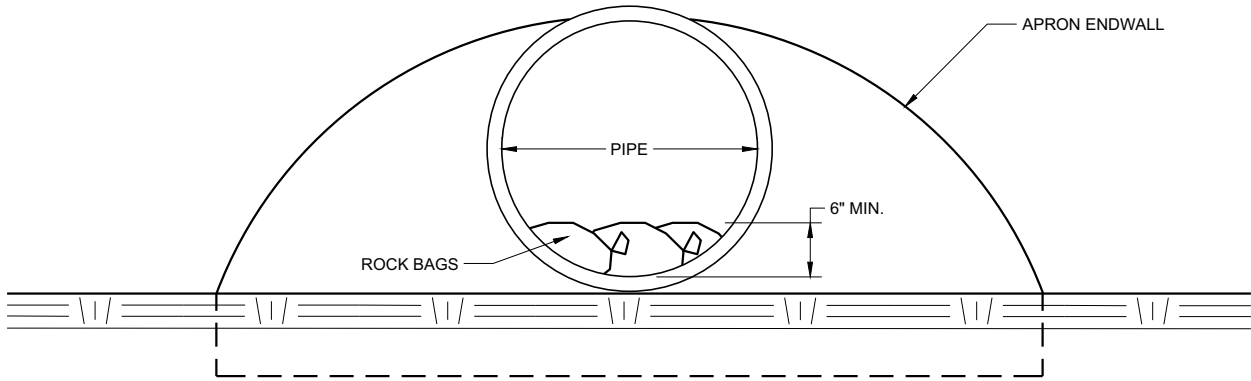
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

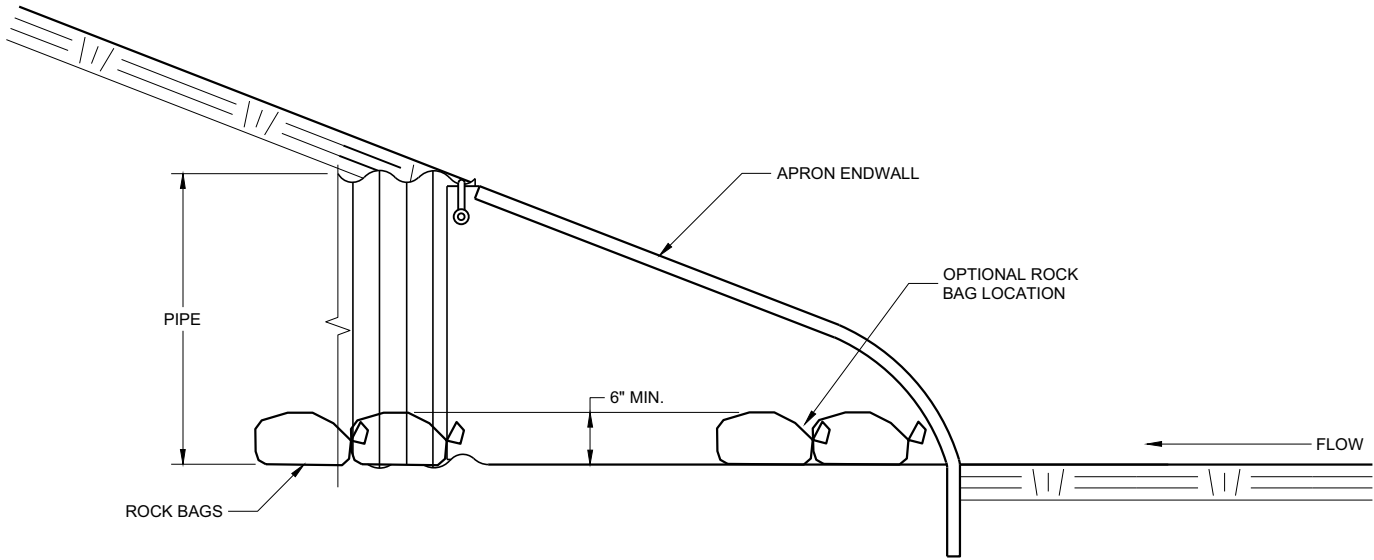
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW



SIDE VIEW

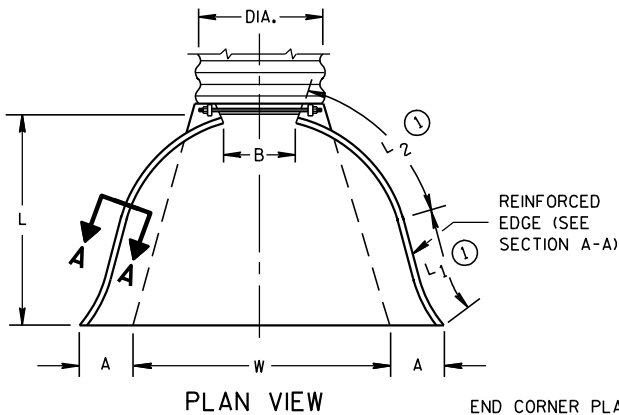
CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER

FHWA

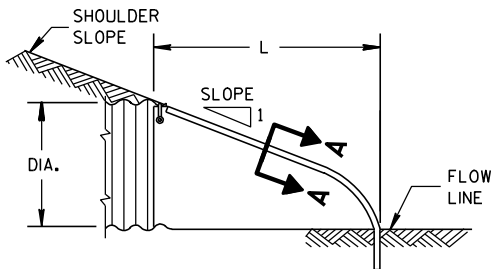
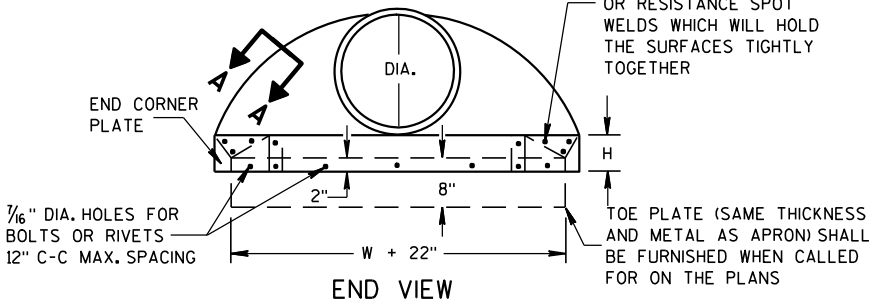
METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

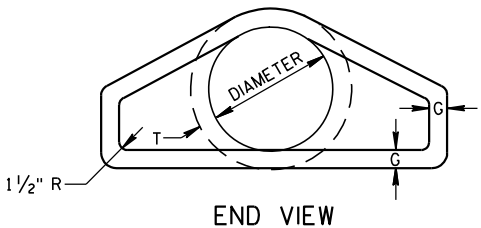
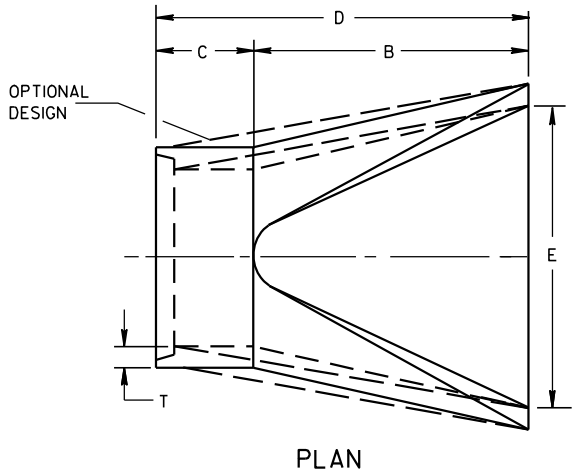
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



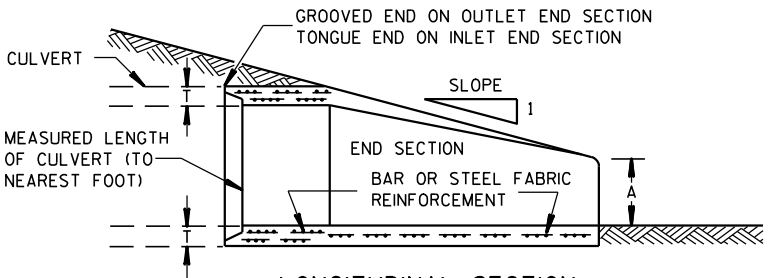
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1			
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1			
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1			
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1			
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1			
48	5	24	72	26	98	84	5	3 to 1			
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 2/5 to 1			
60	6	30-35	60	39	99	96	5	2 to 1			
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1			
72	7	24-36	78	21	99	108	6	2 to 1			
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1			
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1			
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1			

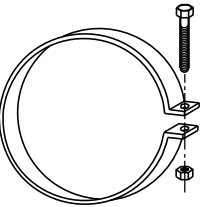
* MINIMUM
** MAXIMUM



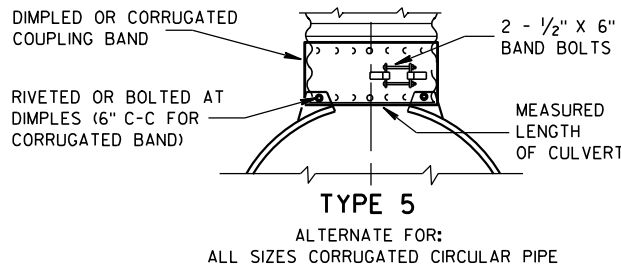
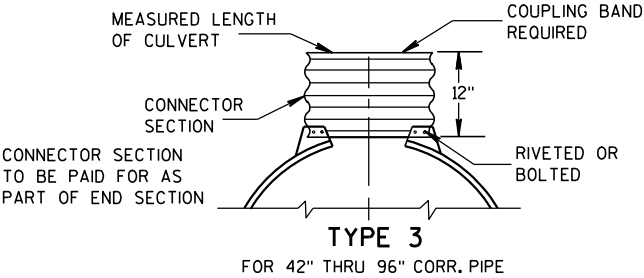
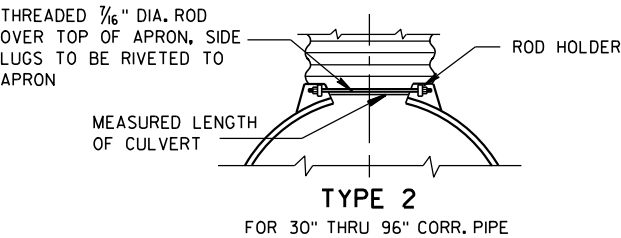
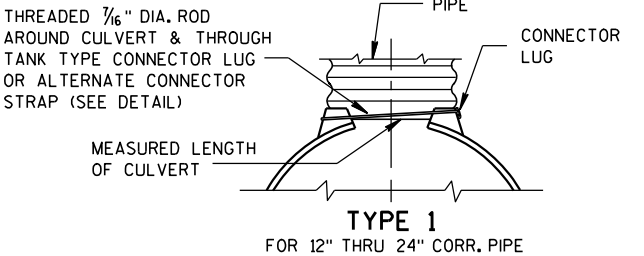
LONGITUDINAL SECTION
CONCRETE ENDWALLS



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



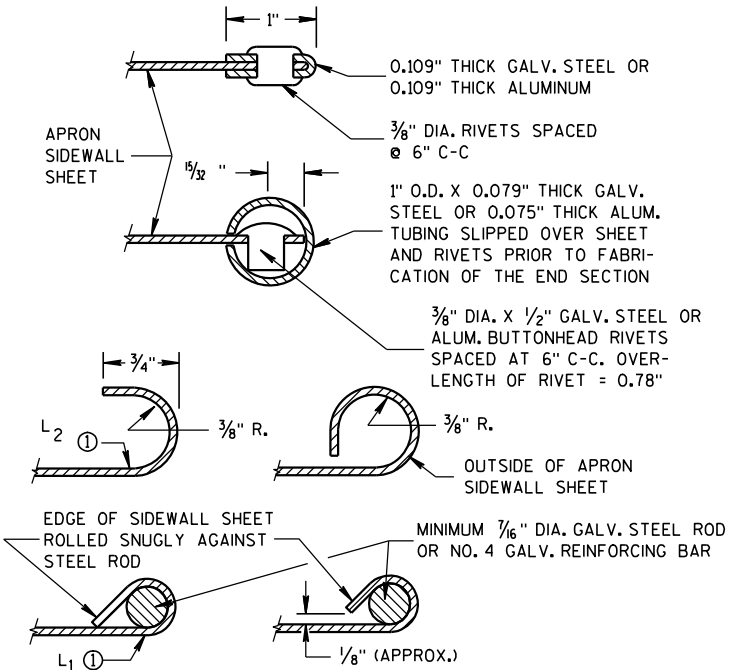
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

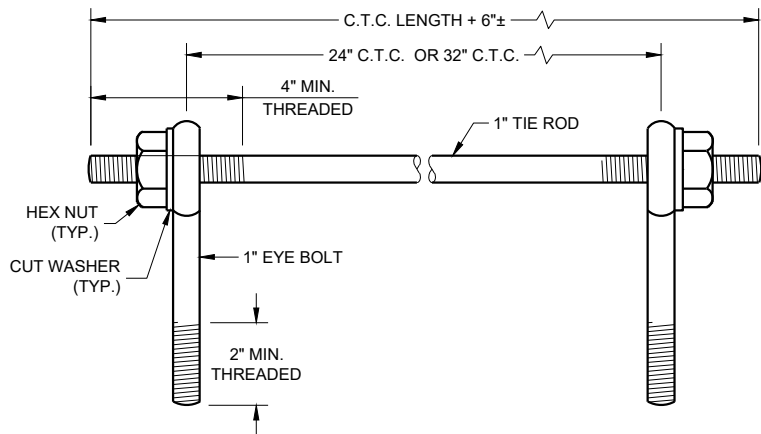
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

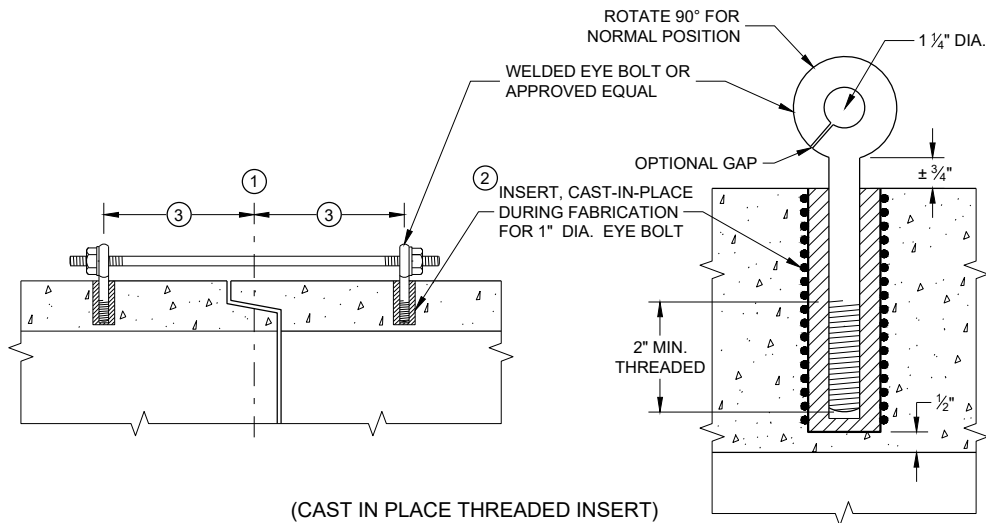
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



Eye Bolts and Tie Rod

Eye Bolt and Tie Rod Assembly (Alternate No. 1)



(Cast in Place Threaded Insert)

Longitudinal Sections

GENERAL NOTES

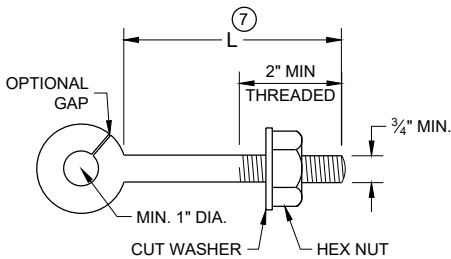
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

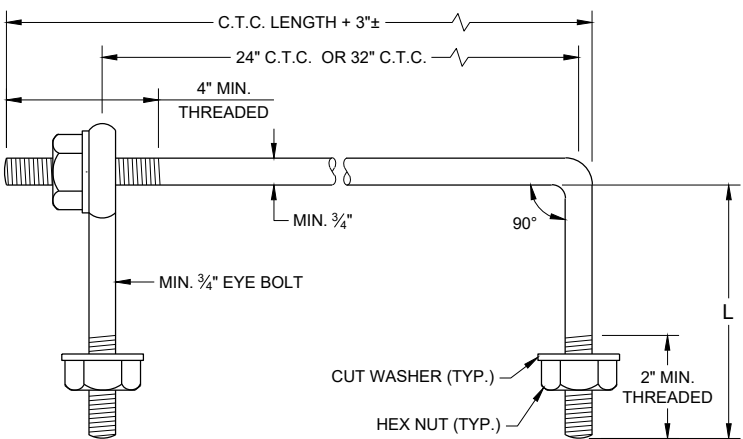
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

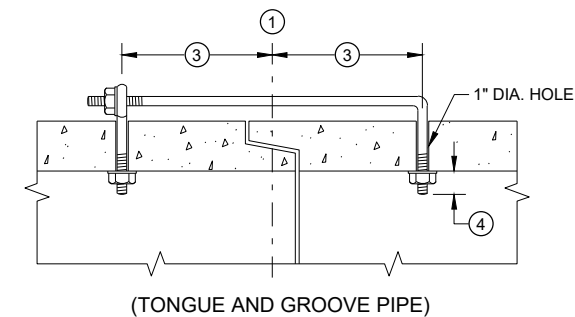


Eye Bolt

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



Eye Bolt and Tie Rod

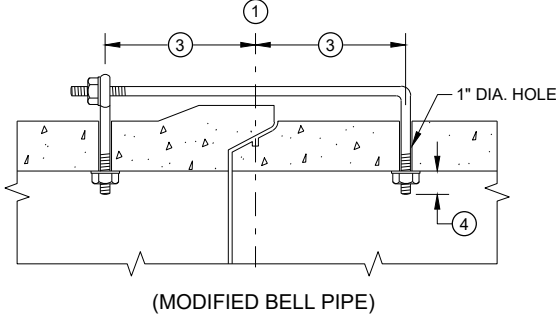


(Tongue and Groove Pipe)

Longitudinal Section

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

Eye Bolt and Tie Rod Assembly (Alternate No. 2)

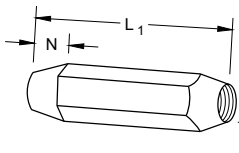


(Modified Bell Pipe)

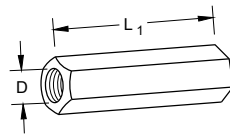
Adjustable Tie Rod Table

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

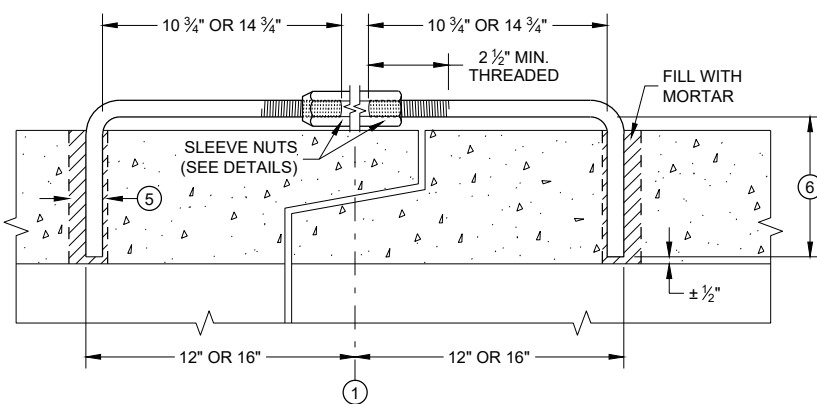


Tapered



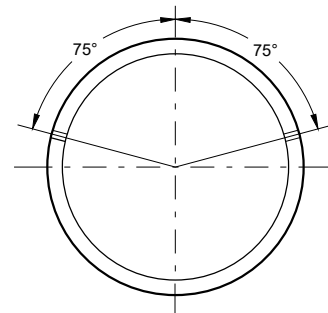
Plain

Right and Left Threads
Sleeve Nuts



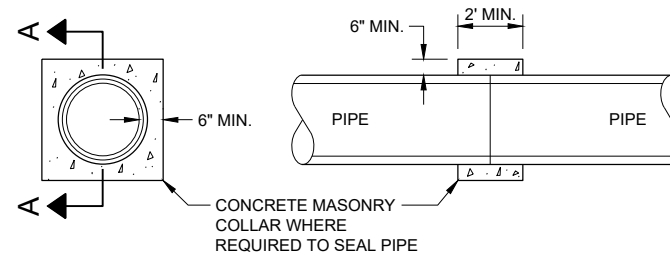
Longitudinal Section

Adjustable Tie Rod (Alternate No. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

Transverse Section



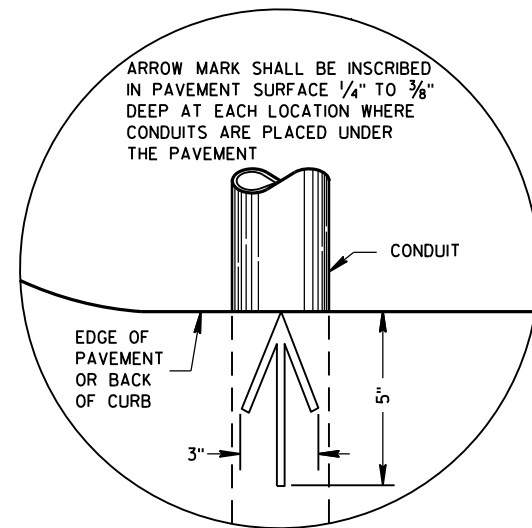
Section A - A

Concrete Collar Detail

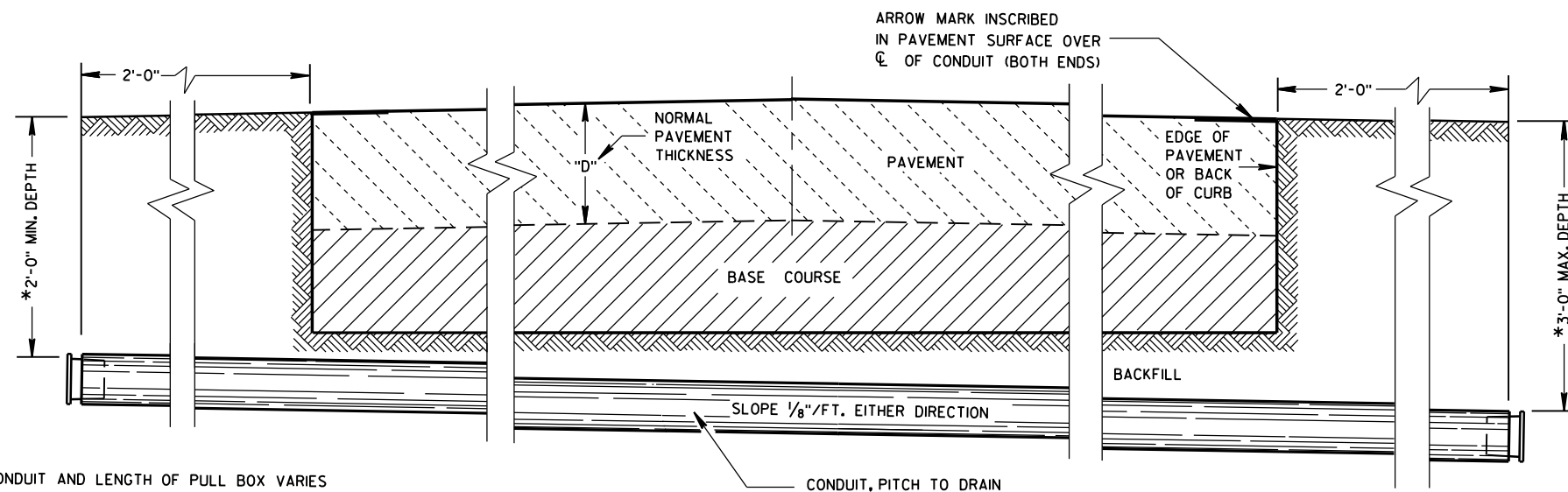
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

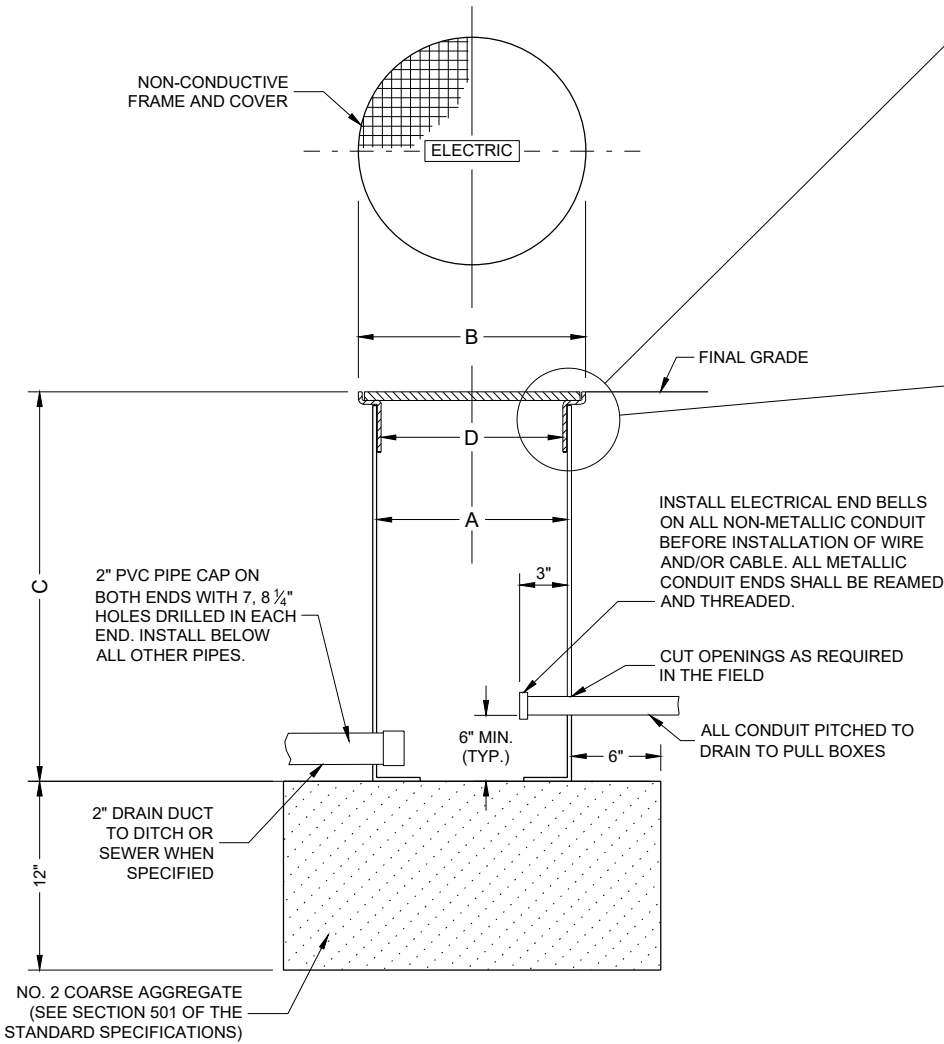
APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

TABLE OF NOMINAL DIMENSIONS
AND WEIGHTS

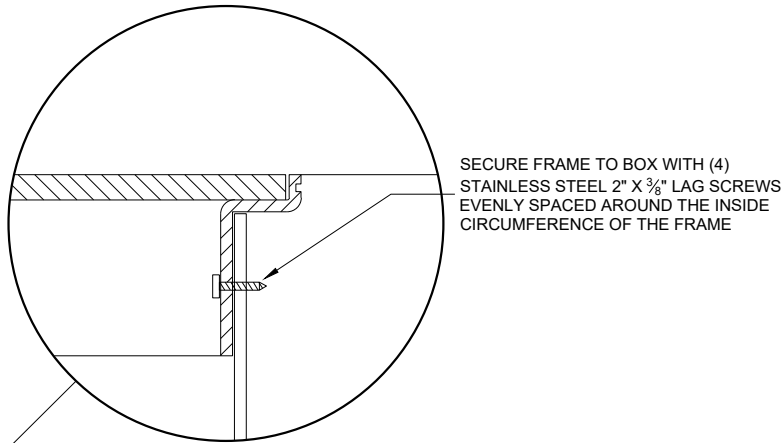
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS*			
COVER		50	50
BOX ONLY		75	85

*THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

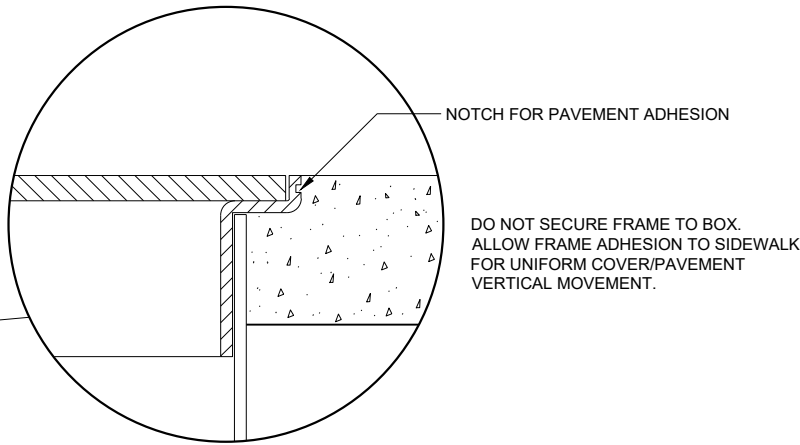
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



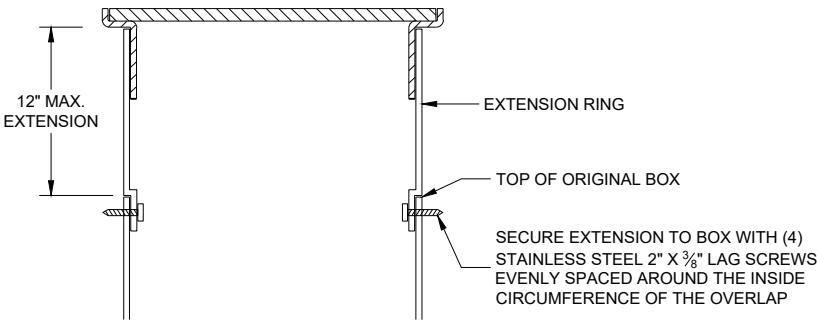
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD
OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

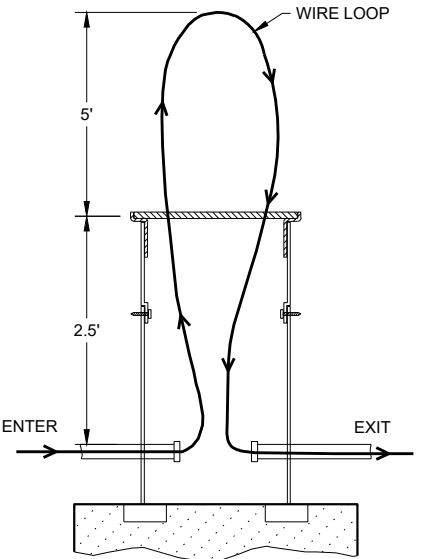
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



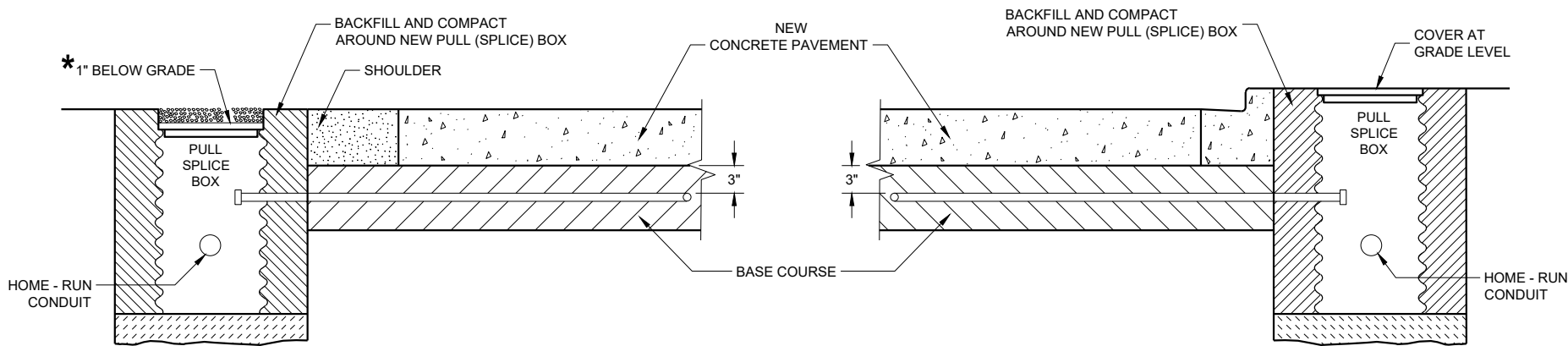
MEASUREMENT DETAIL FOR
WIRE/CABLE IN THE PULL BOX

PULL BOXES
NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA



**SECTION A - A
NO CURB AND GUTTER**

* RECESS PULL (SPICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

**SECTION B - B
CURB AND GUTTER**

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE IN THE ROADSIDE PULL (SPICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

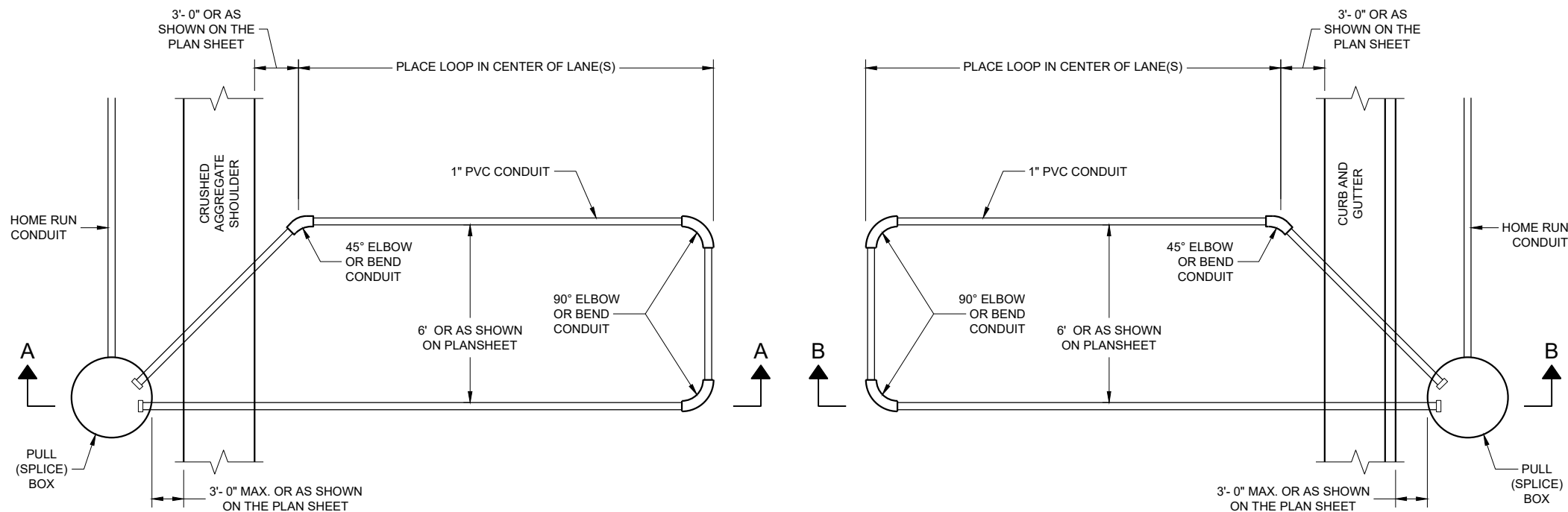
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

LOOP DETECTOR INSTALLATION DETAIL

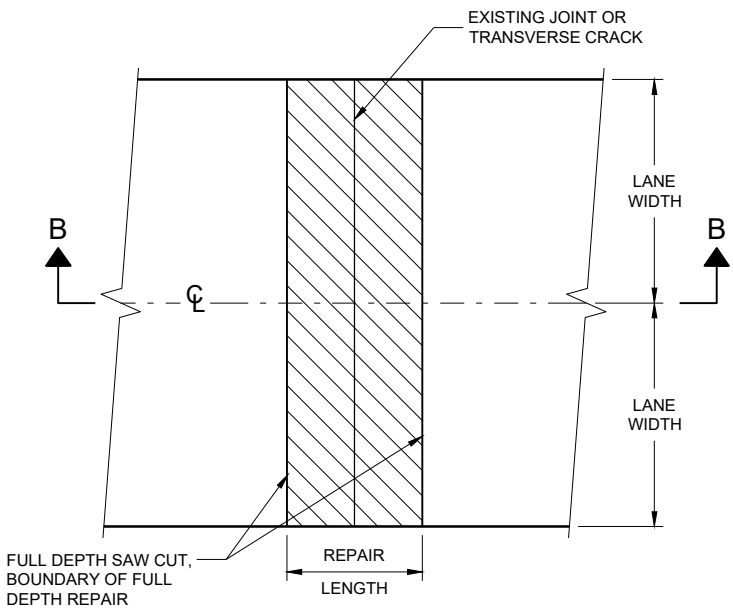


**TYPICAL PLAN LOOP DETECTOR
WITH 18" OR 24" PULL (SPICE) BOX**

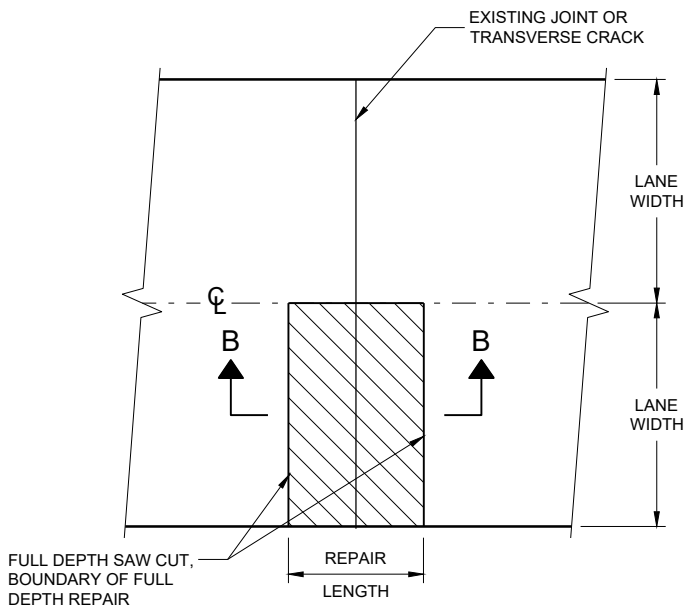
LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
FHWA

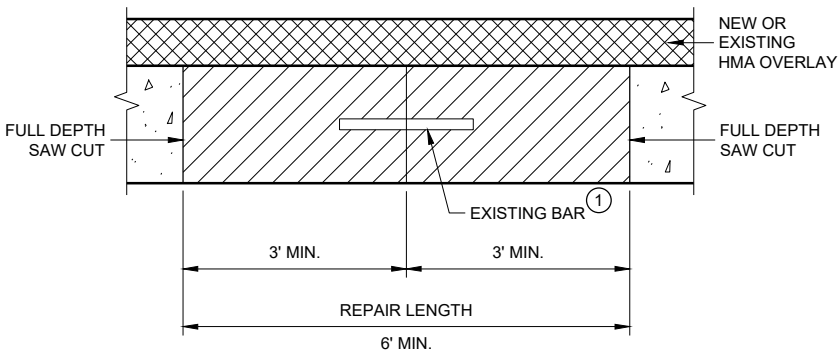


**PLAN VIEW
DOUBLE LANE REPAIR**



**PLAN VIEW
SINGLE LANE REPAIR**

FULL DEPTH CONCRETE PAVEMENT REMOVAL



**SECTION B - B
CONCRETE REMOVAL**

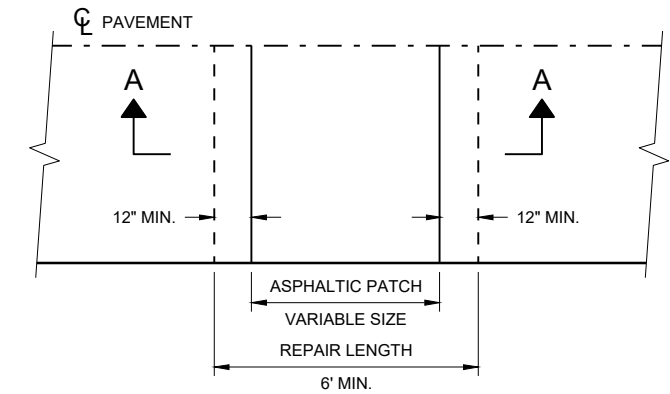
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

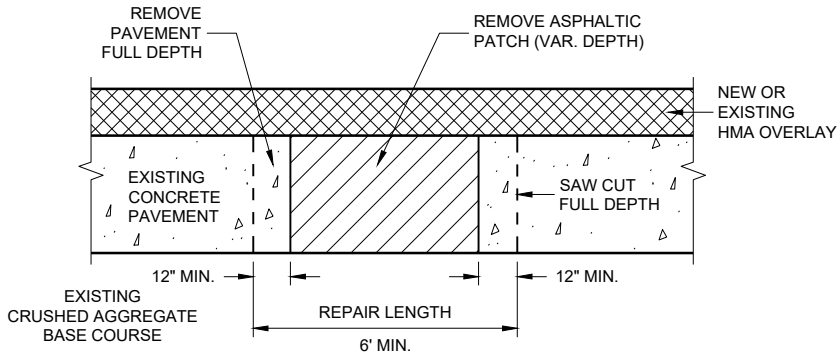
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW



SECTION A - A

HMA PATCH REMOVAL

BASE PATCHING CONCRETE

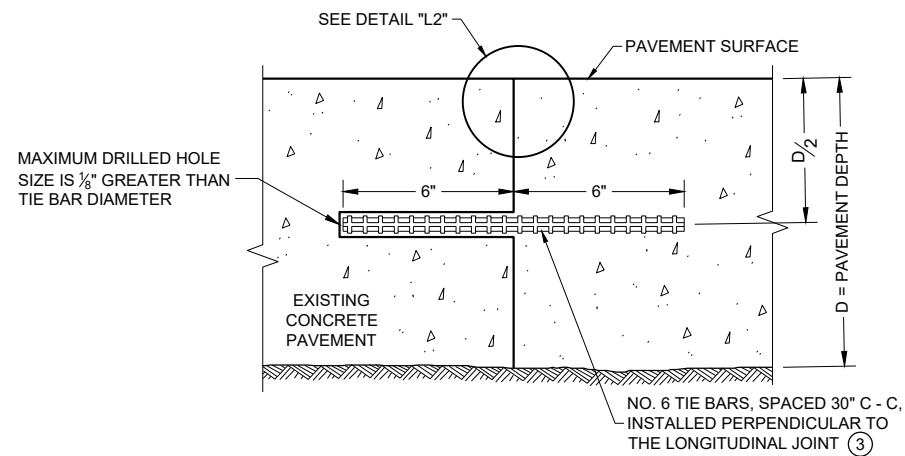
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



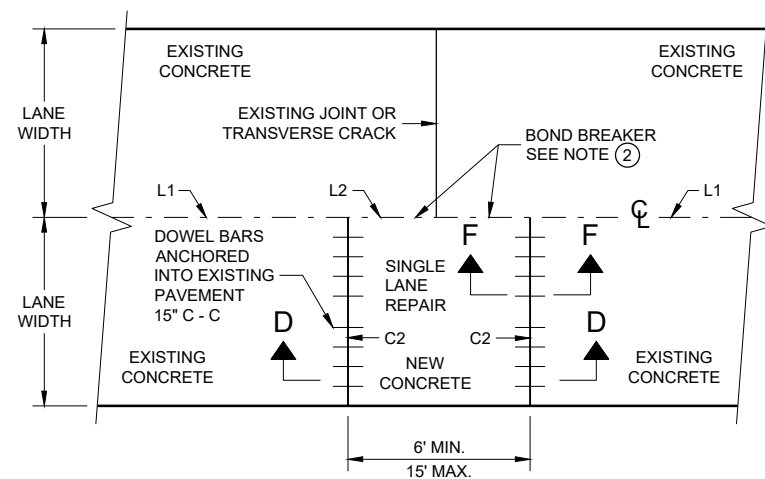
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



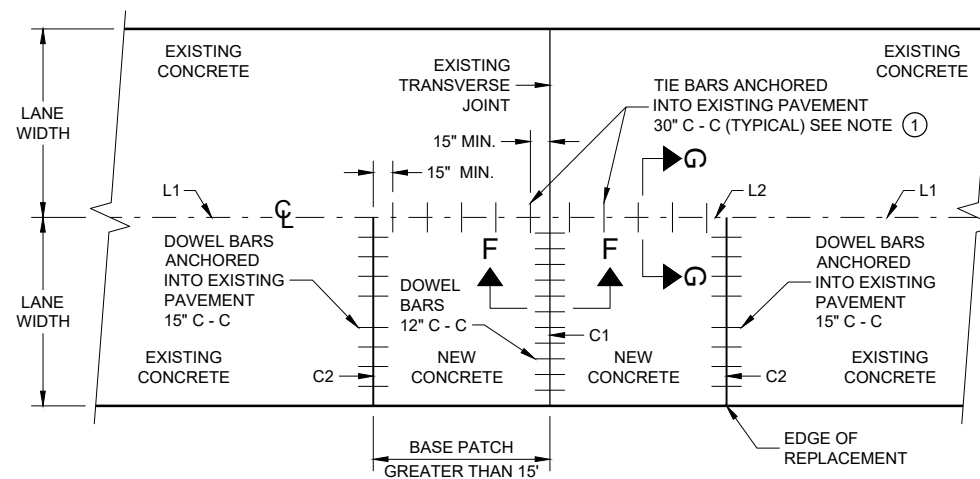
SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



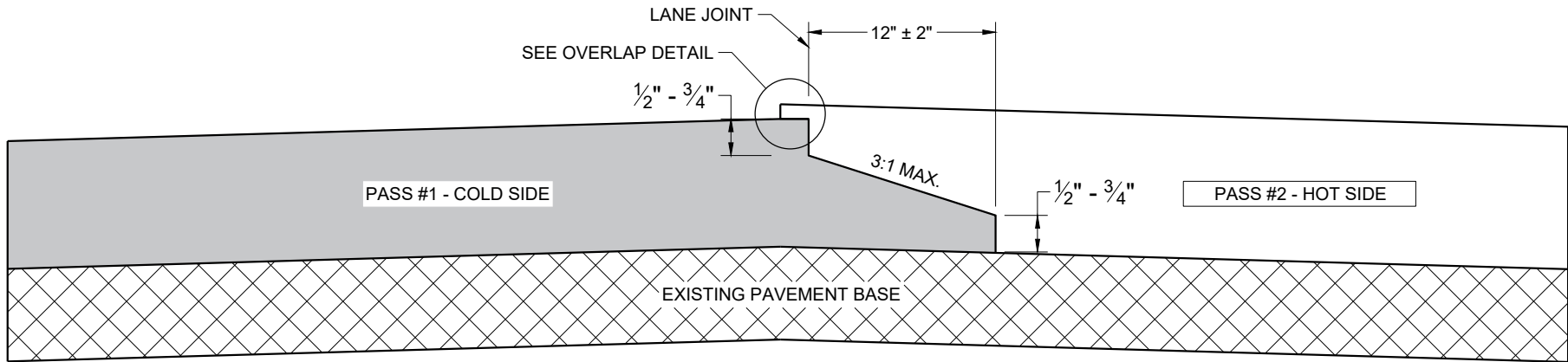
PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

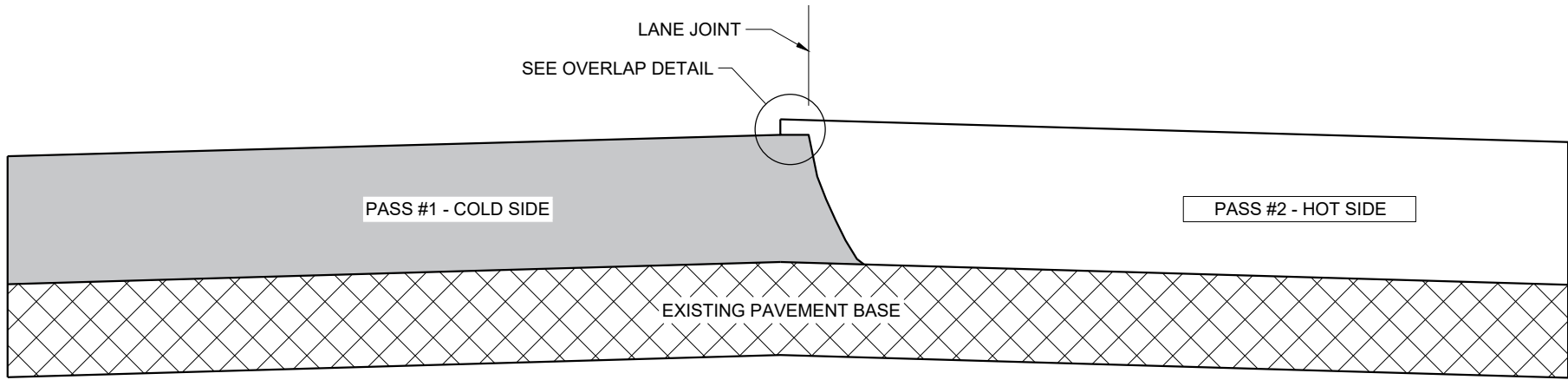
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

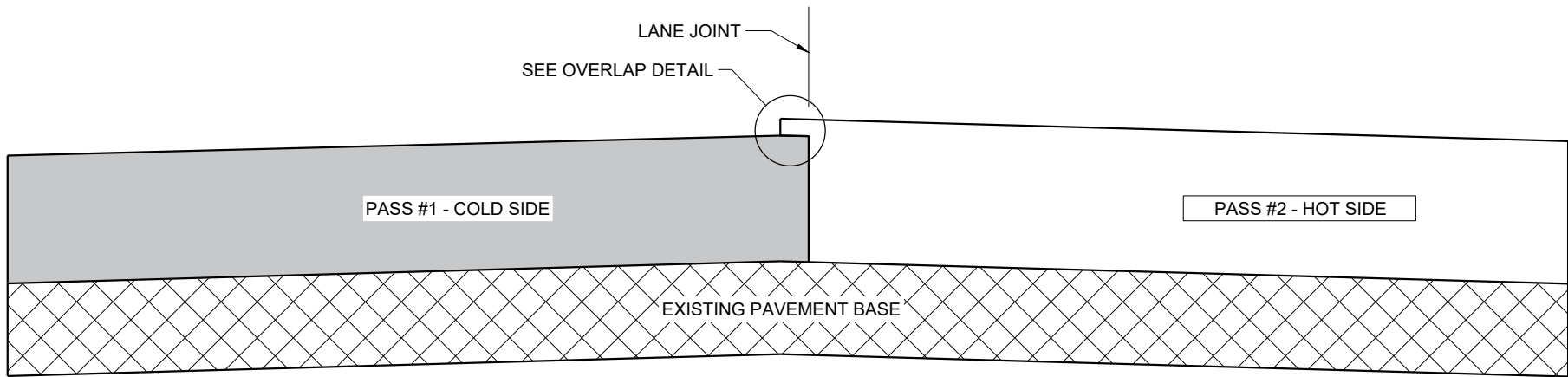
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

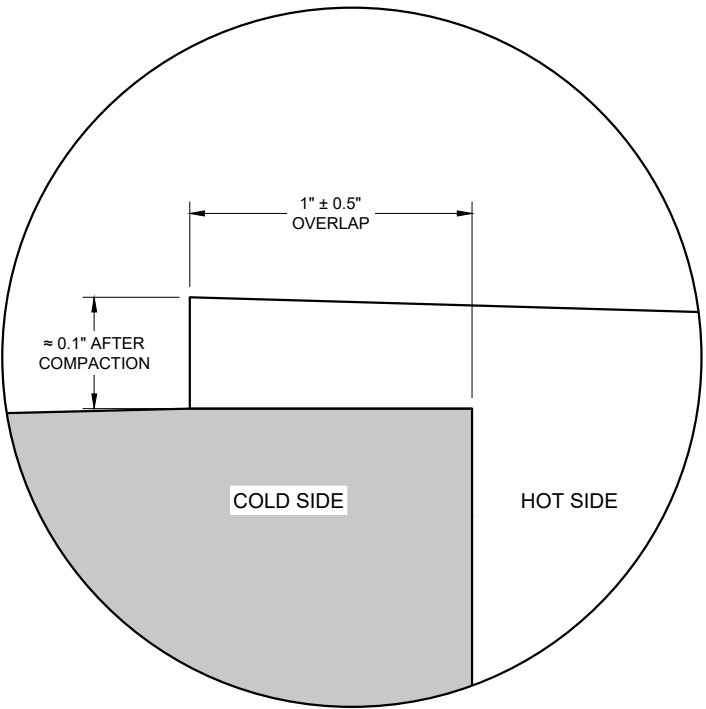
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

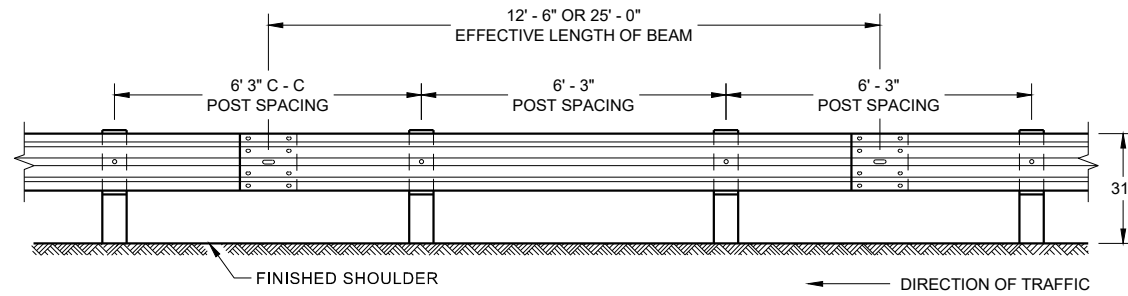
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA

- SDD 14B42 - 07a**

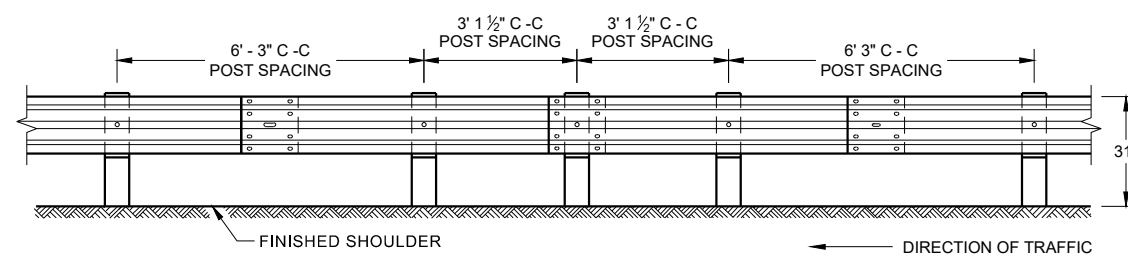


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DEPARTMENT OF TRANSPORTATION

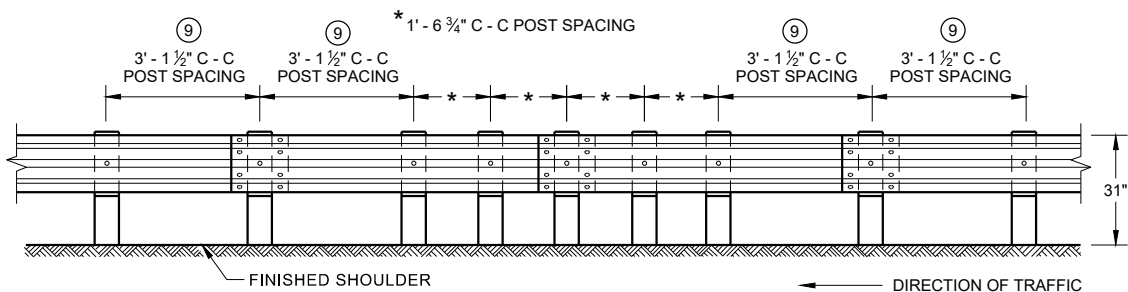
SDD 14B42 - 07a



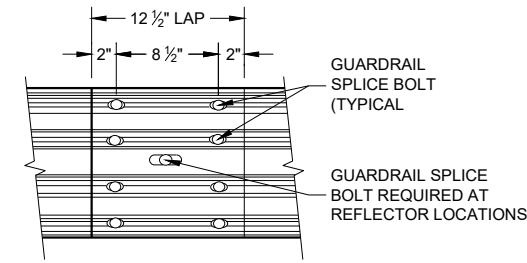
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



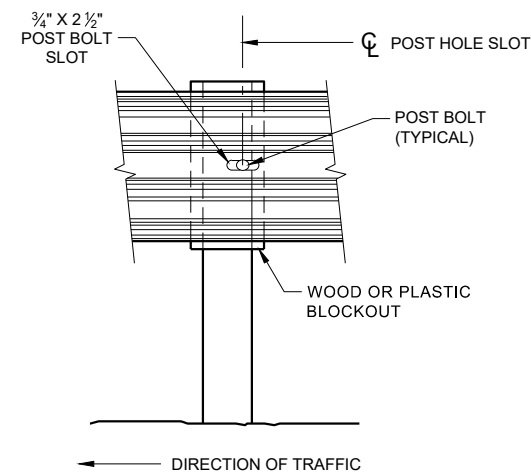
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



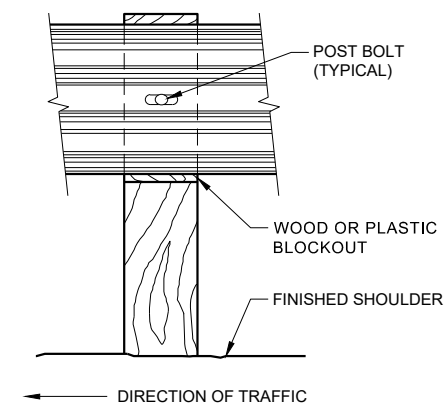
**FRONT VIEW
QUARTER POST SPACING (QS)**



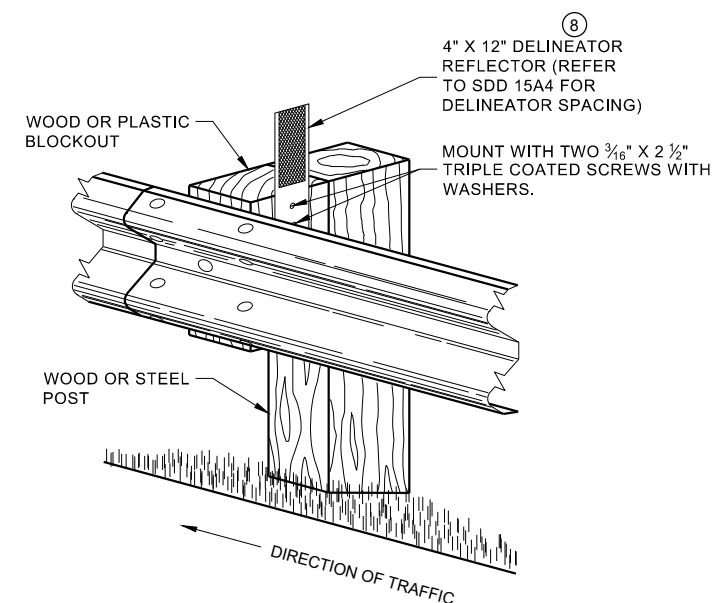
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



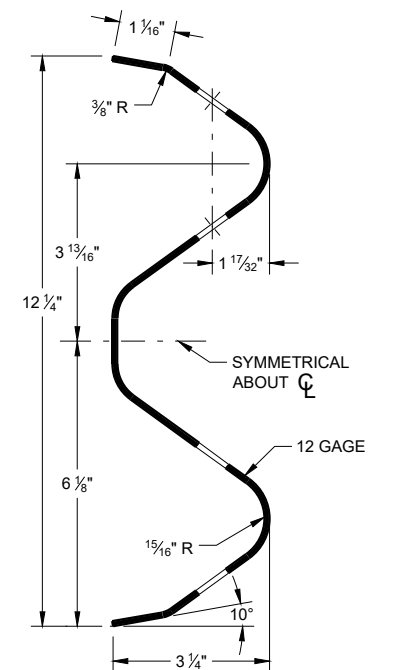
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

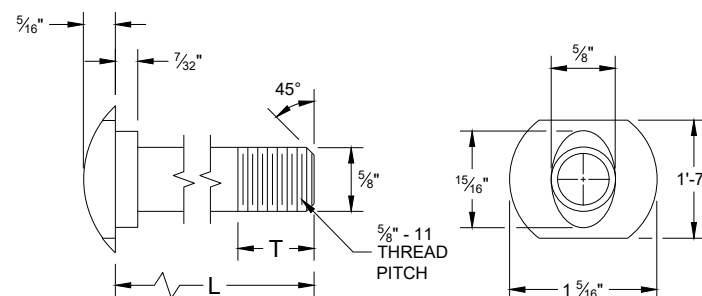


NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

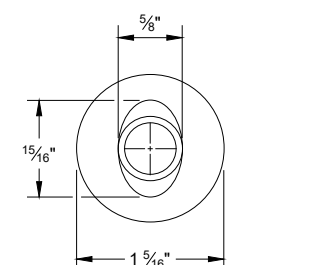
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

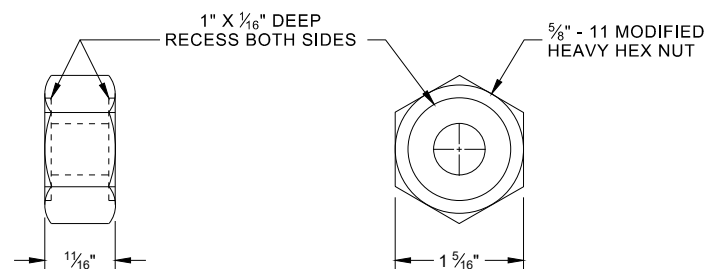


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

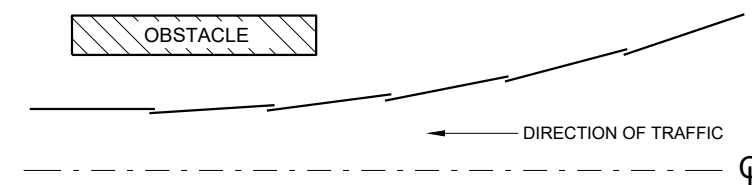


ALTERNATE BOLT HEAD

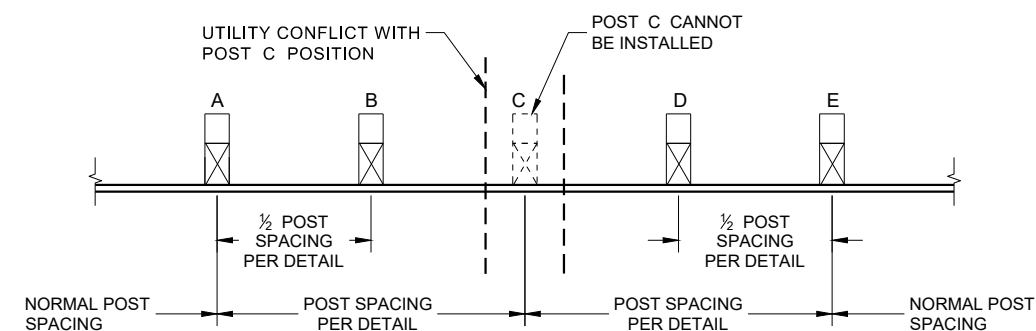


POST BOLT, SPLICE BOLT AND RECESS NUT

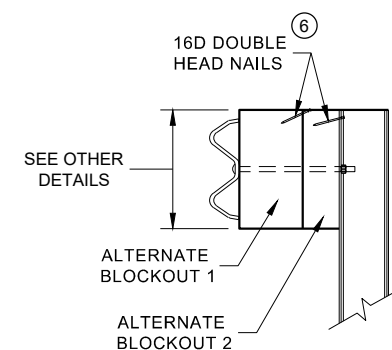
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



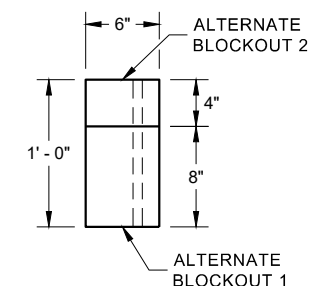
**PLAN VIEW
BEAM LAPPING DETAIL**



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

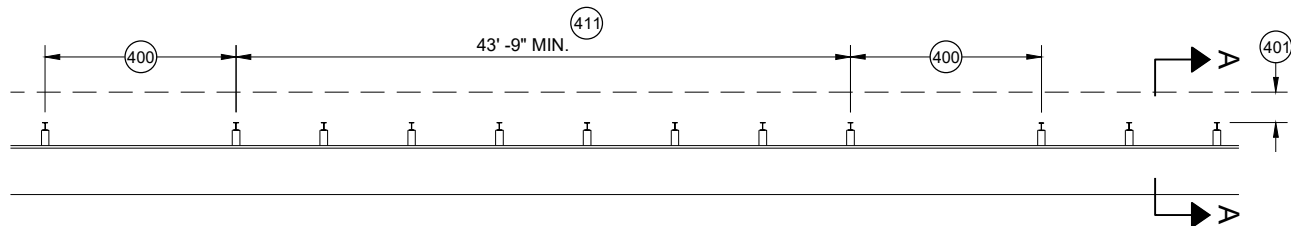


PLAN VIEW

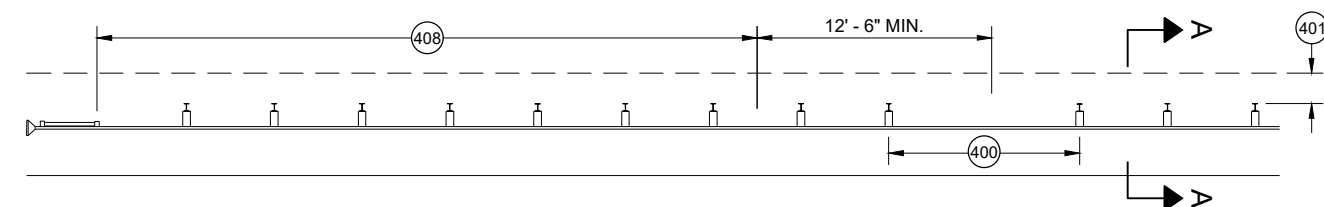
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

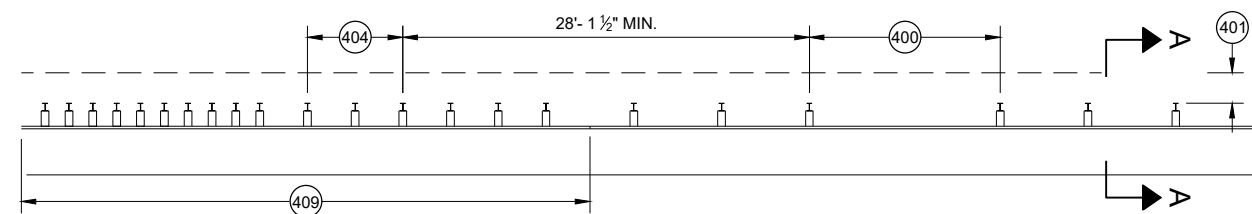
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



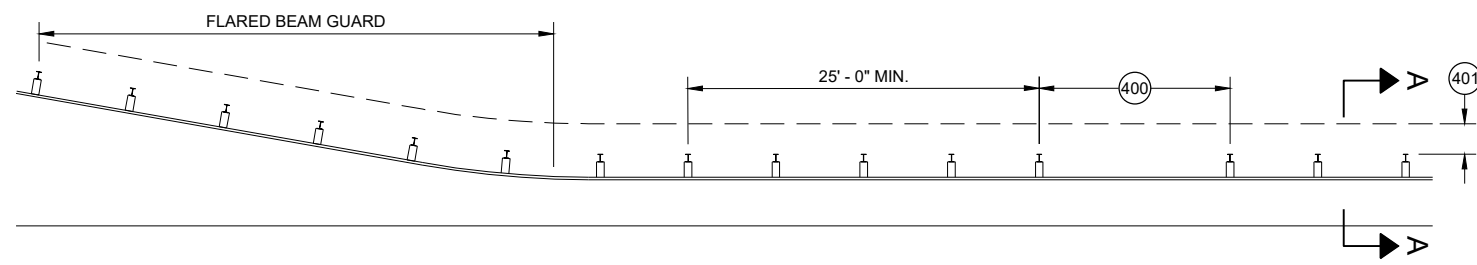
MISSING POST IN MGS GUARDRAIL



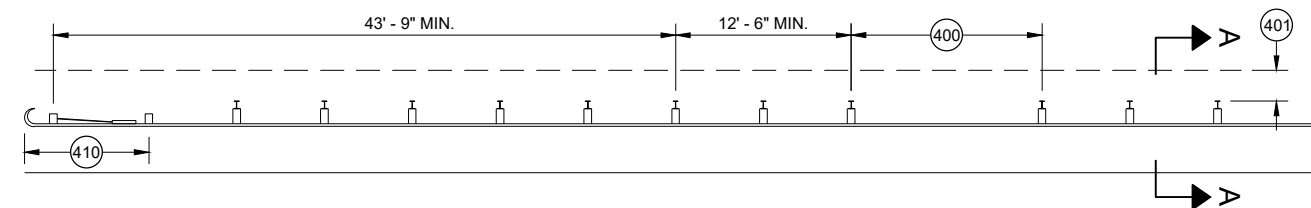
MISSING POST IN MGS GUARDRAIL NEAR EAT



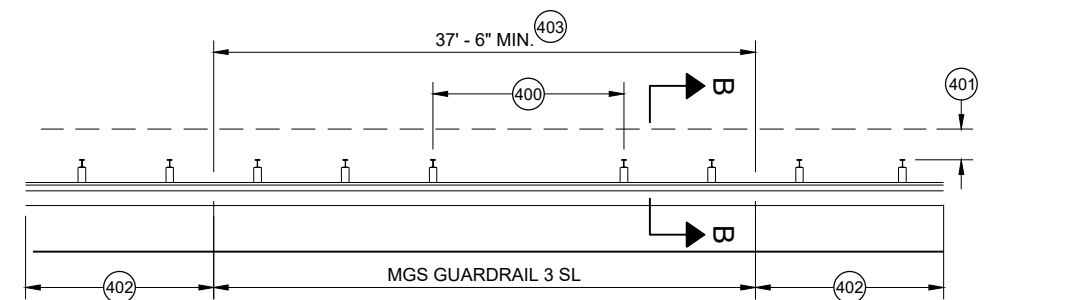
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

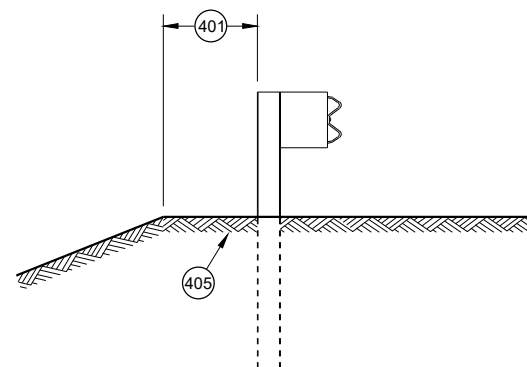


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

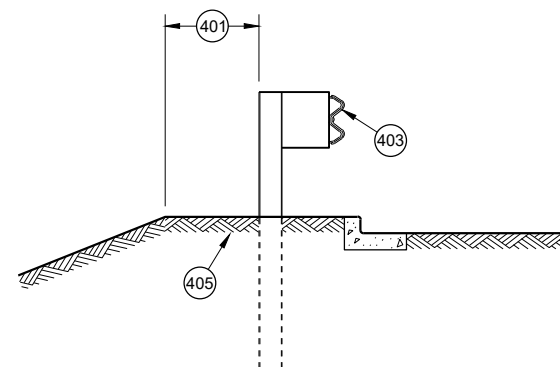


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

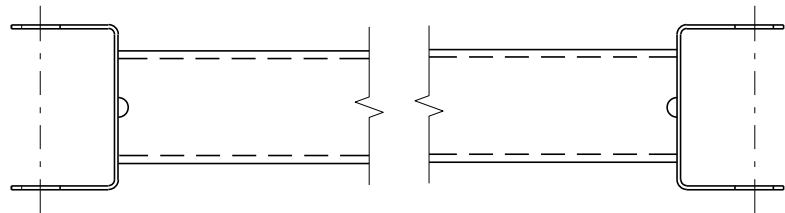
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

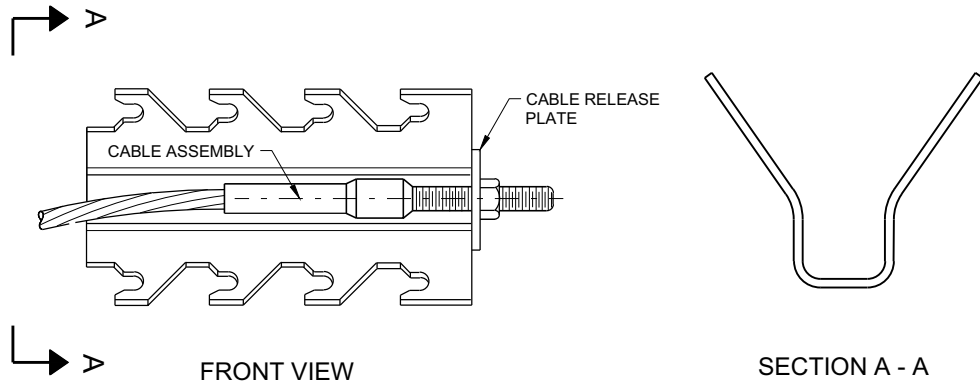


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

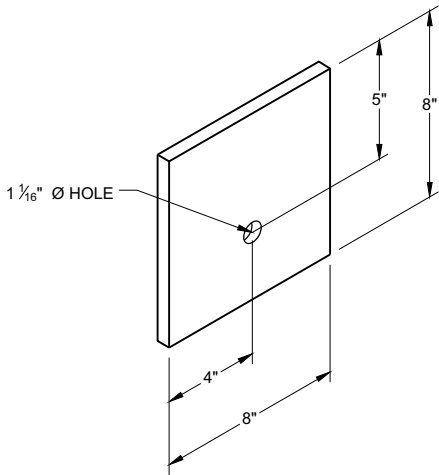


GENERIC GROUND STRUT⁹ ^E

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



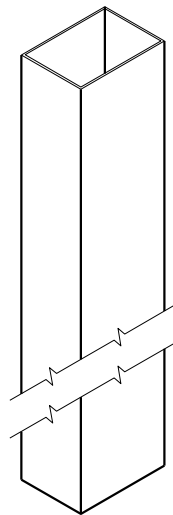
GENERIC ANCHOR CABLE BOX⁹ ^E



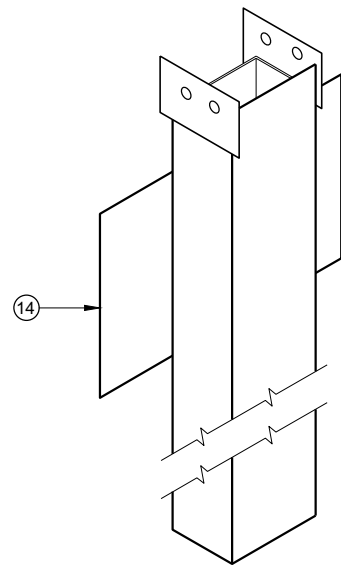
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

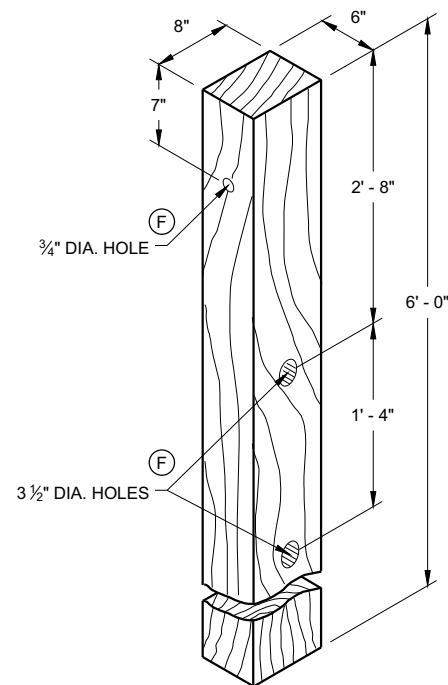
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



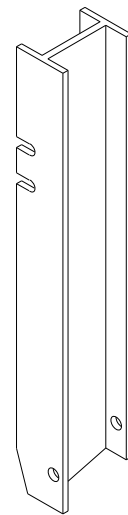
UPPER POST NO. 1 ⁽¹⁾ (E)



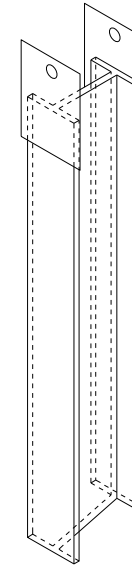
LOWER POST NO. 1 ⁽²⁾ (E)



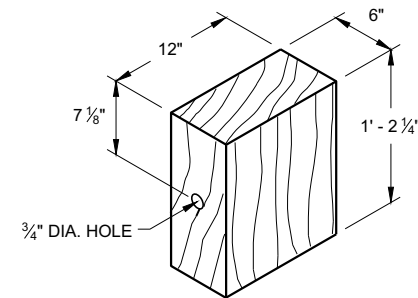
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



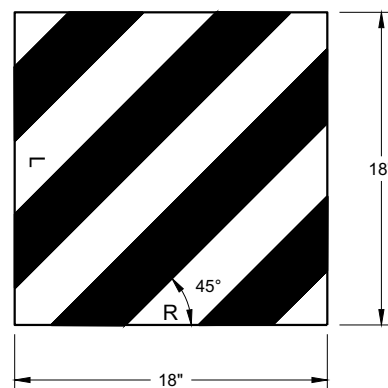
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



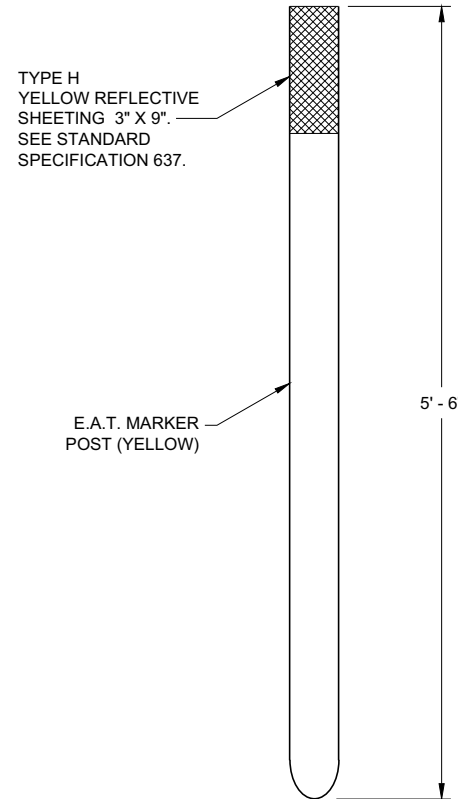
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



REFLECTIVE SHEETING DETAIL ^(E)

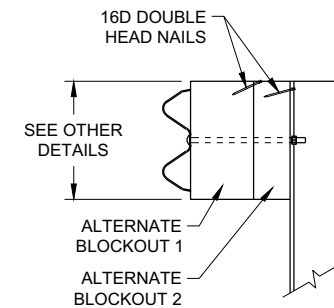


FRONT VIEW

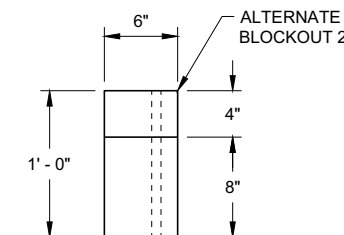


SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



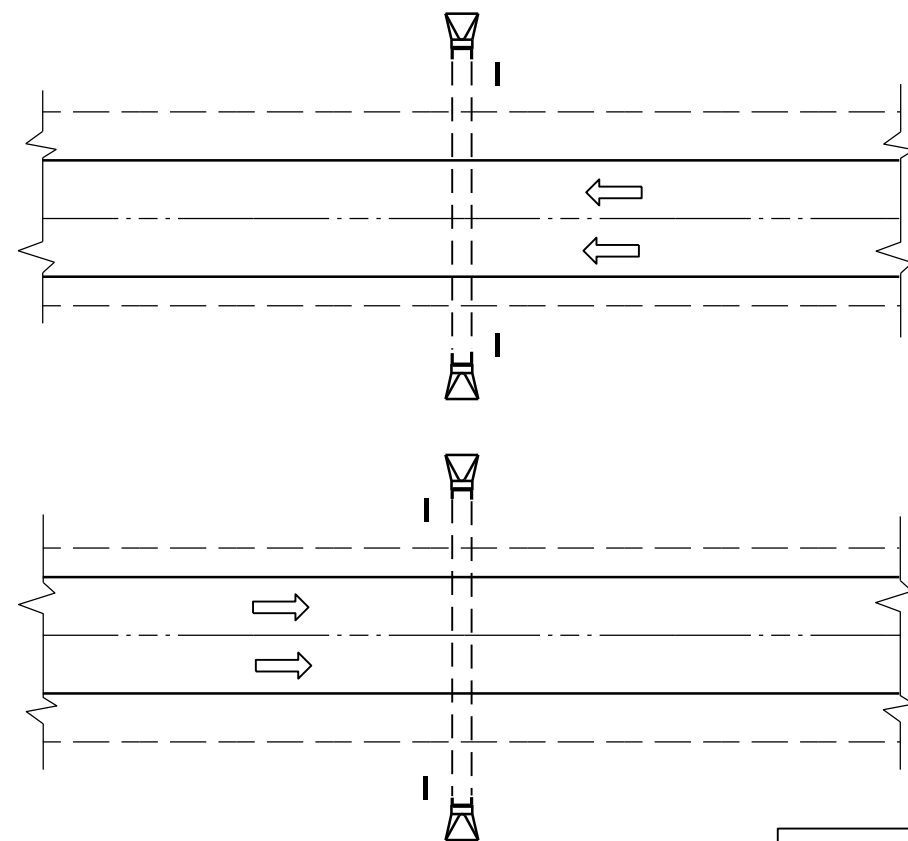
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

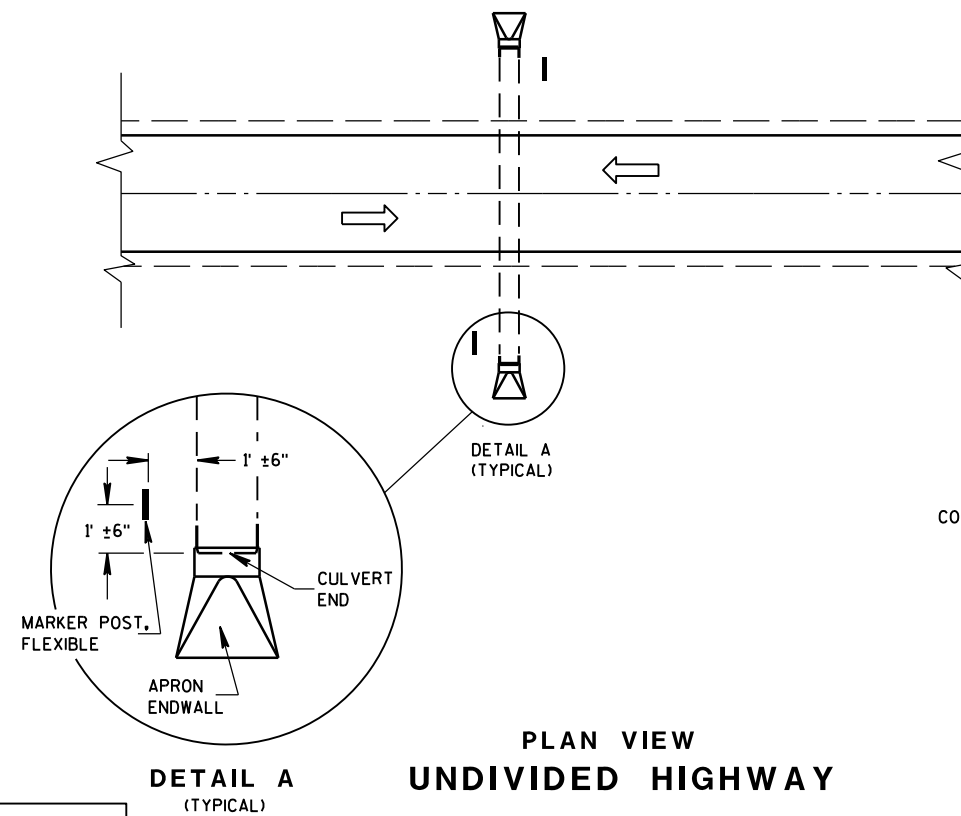
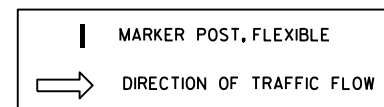
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



PLAN VIEW
DIVIDED HIGHWAY

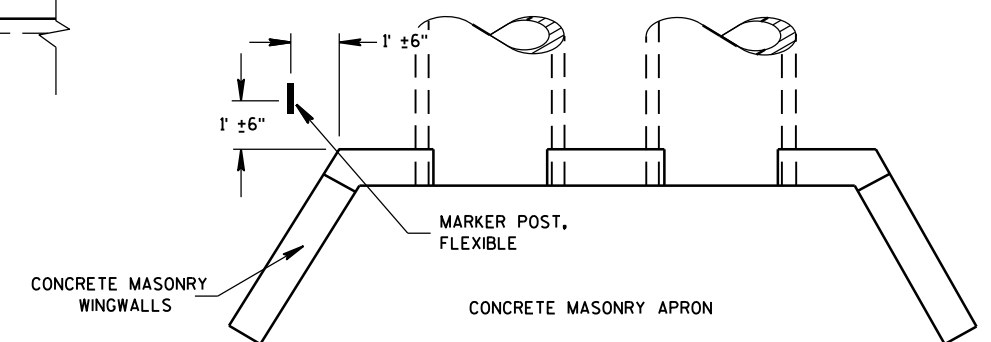


PLAN VIEW
UNDIVIDED HIGHWAY

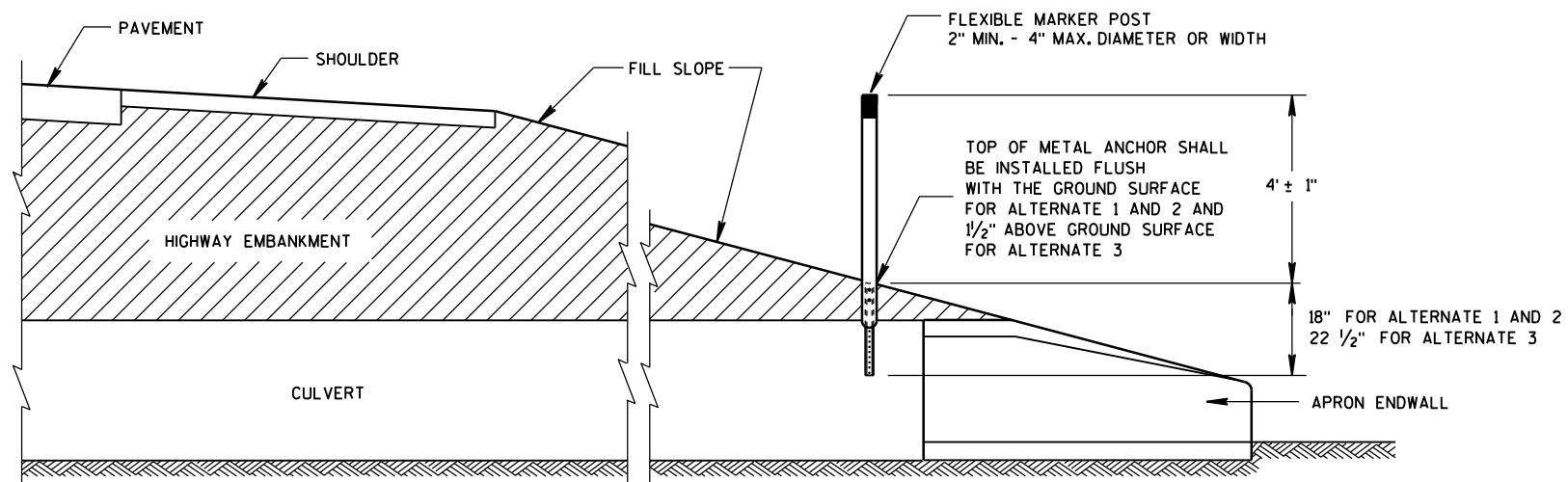
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



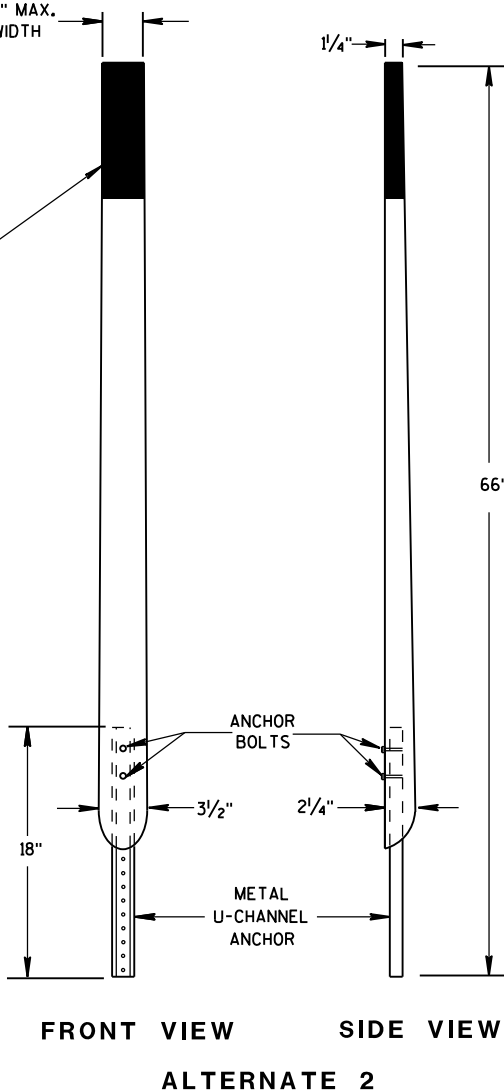
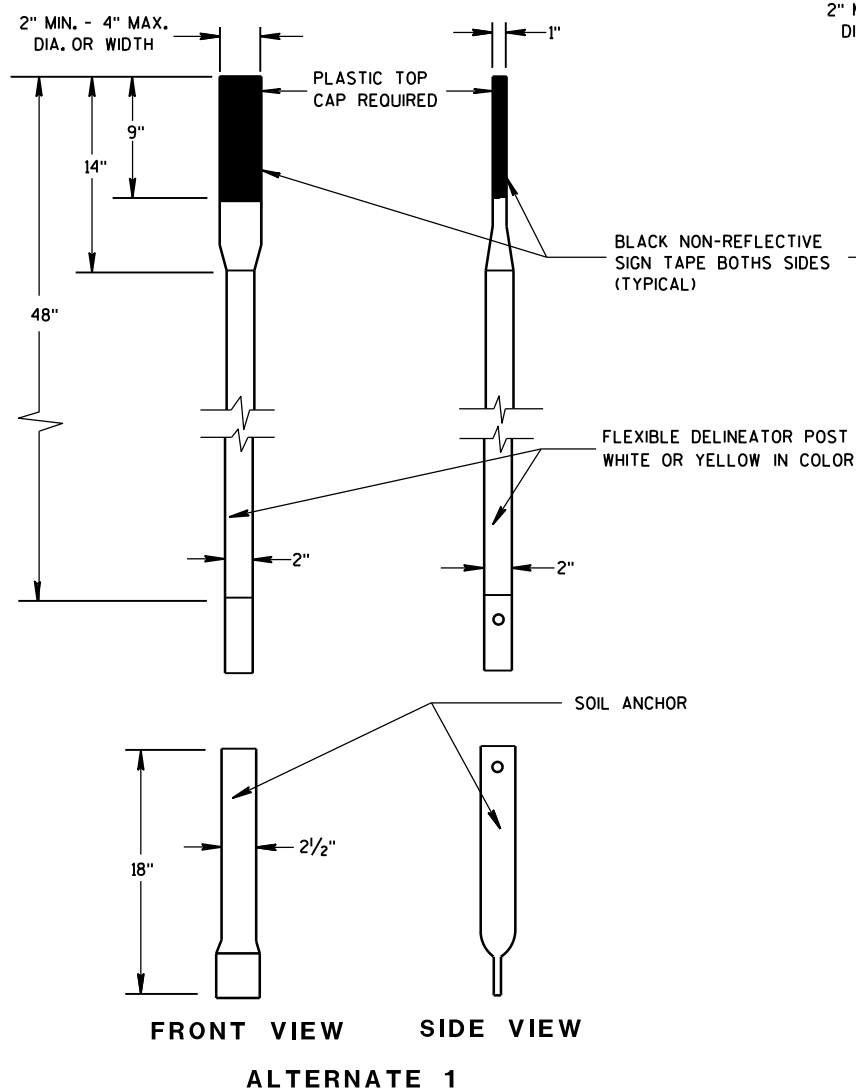
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



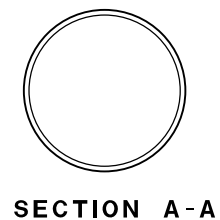
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

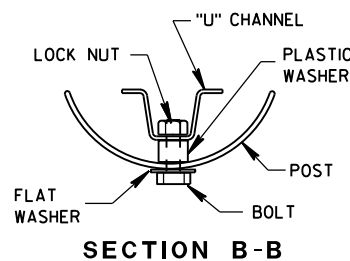
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



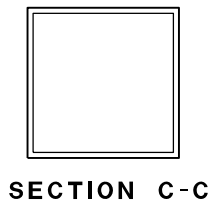
FLEXIBLE MARKER POSTS



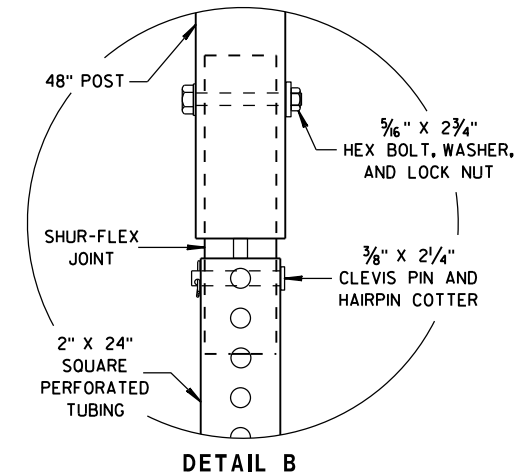
SECTION A-A



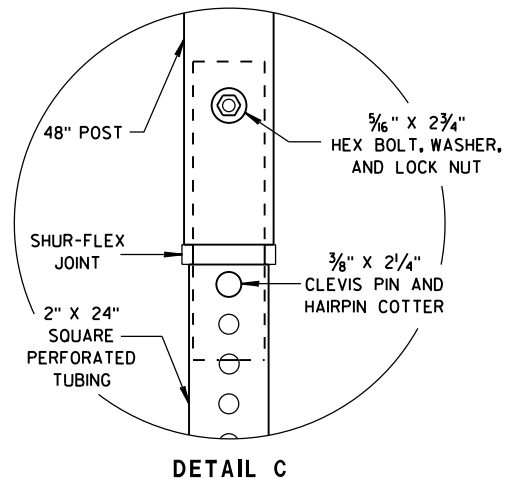
SECTION B-B



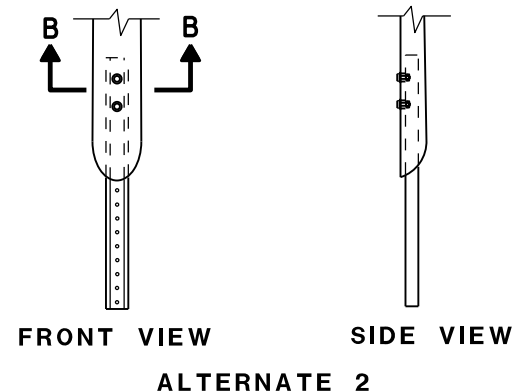
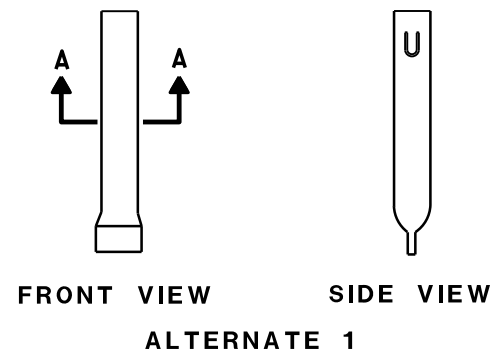
SECTION C-C



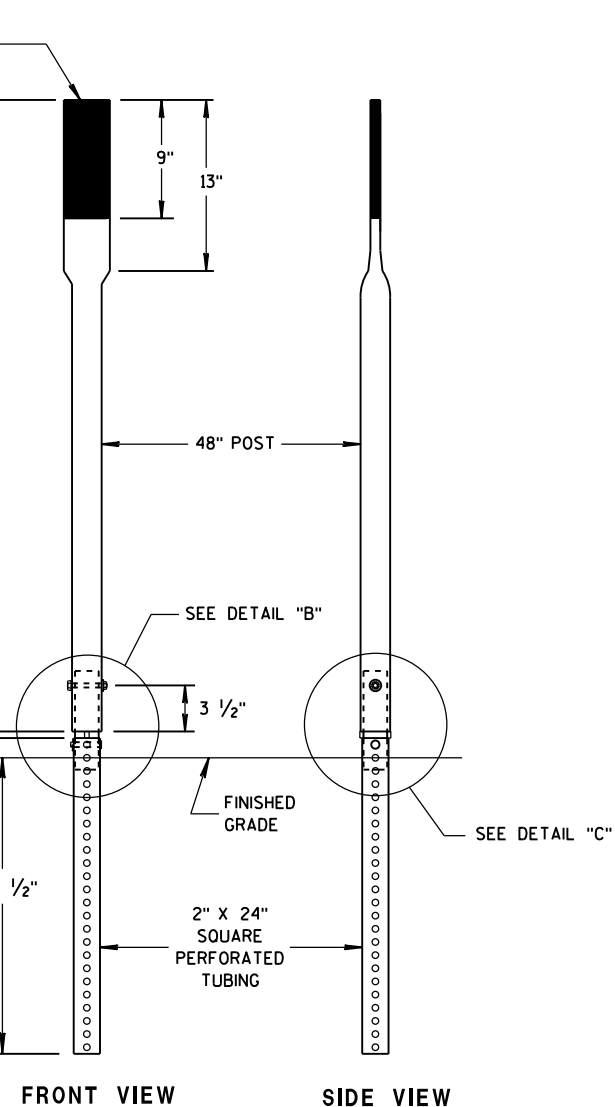
DETAIL B



DETAIL C

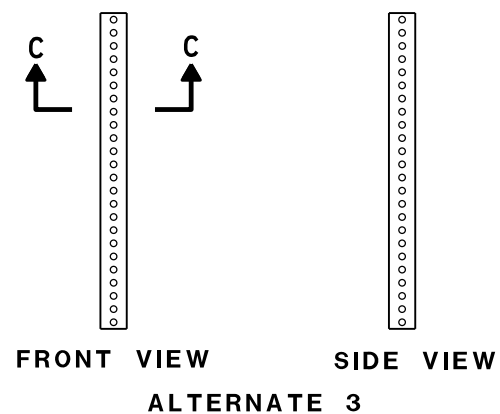


FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW

ALTERNATE 3



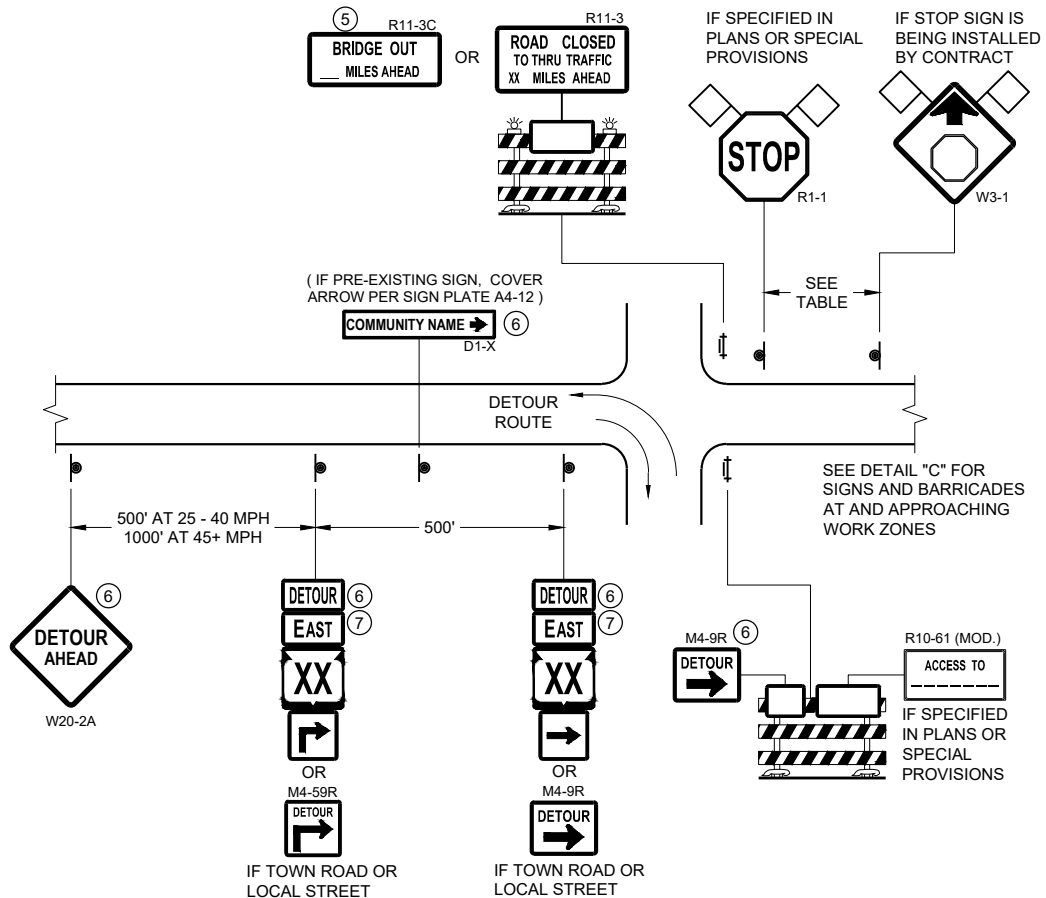
FRONT VIEW SIDE VIEW

ALTERNATE 3

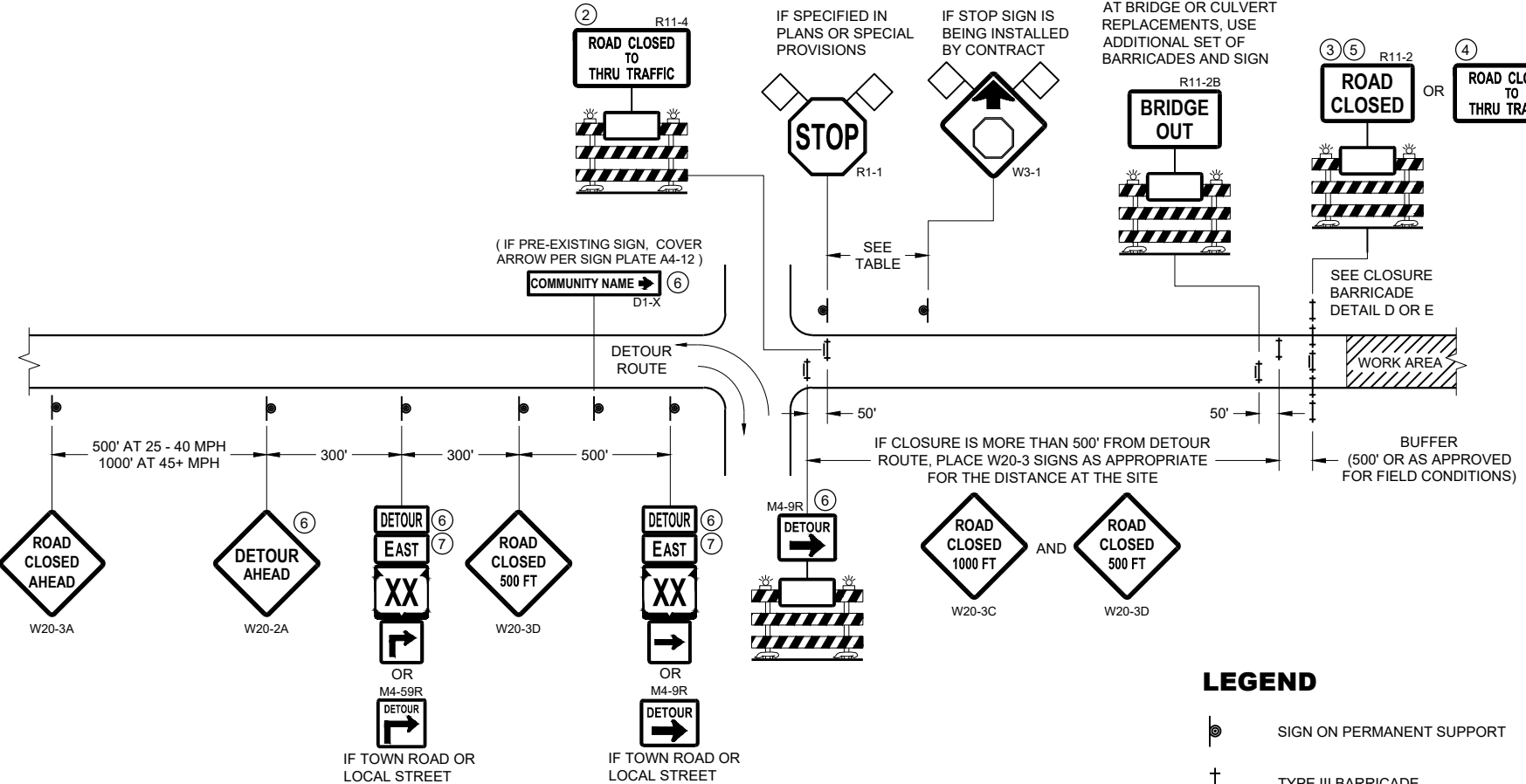
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



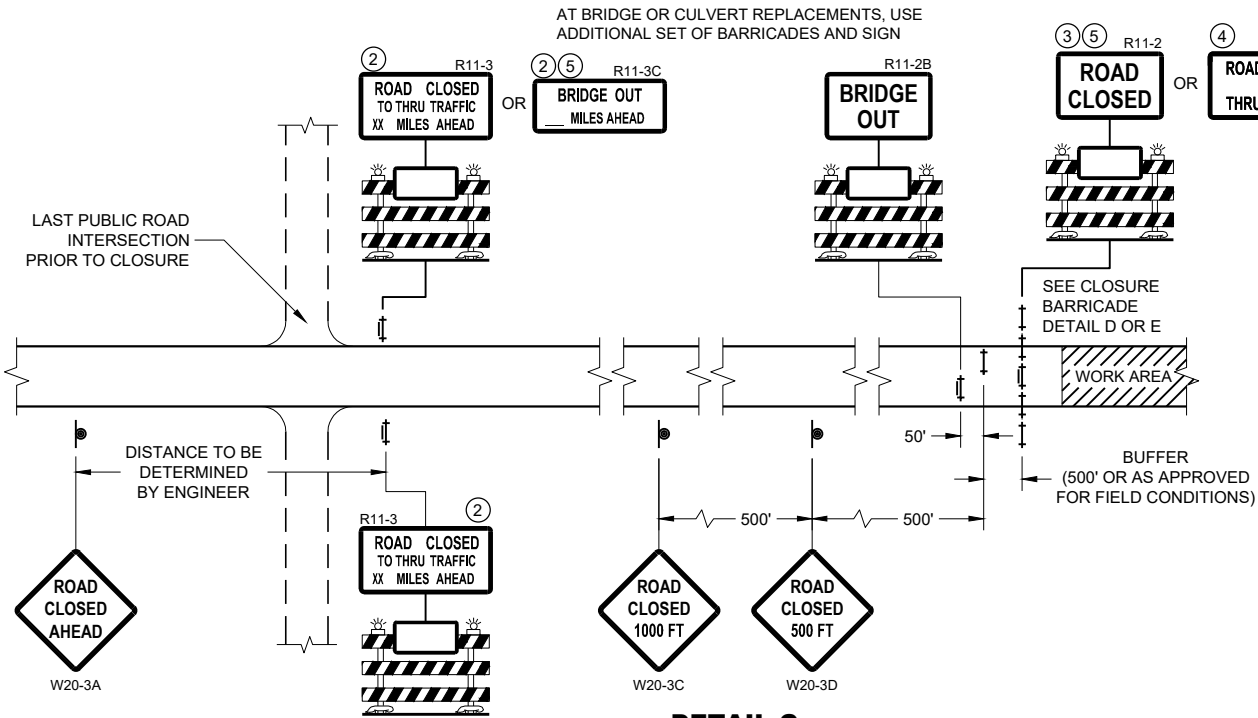
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE "A" WARNING LIGHT (FLASHING)
 - WORK AREA
 - FLAGS, 16" X 16" MIN. (ORANGE)

- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

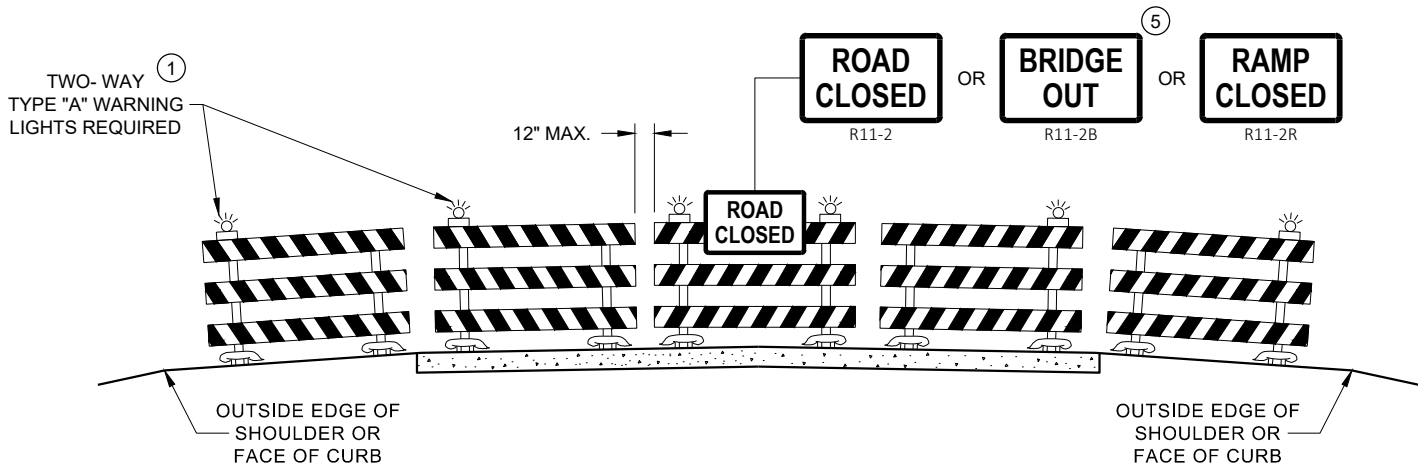


DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

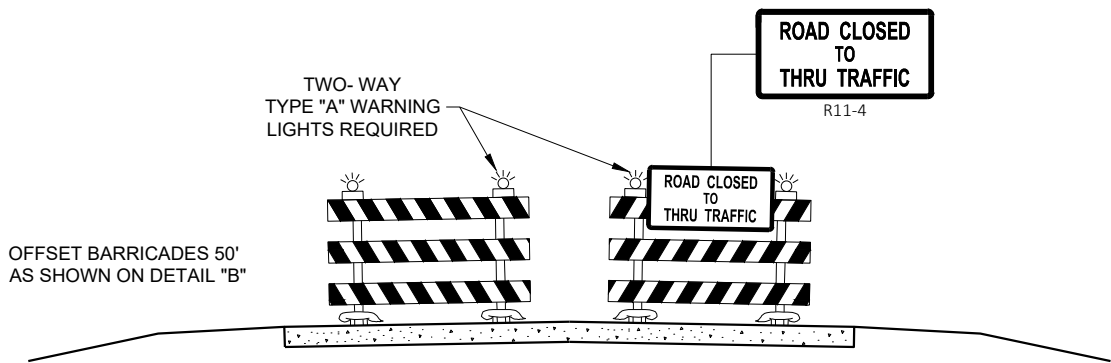
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

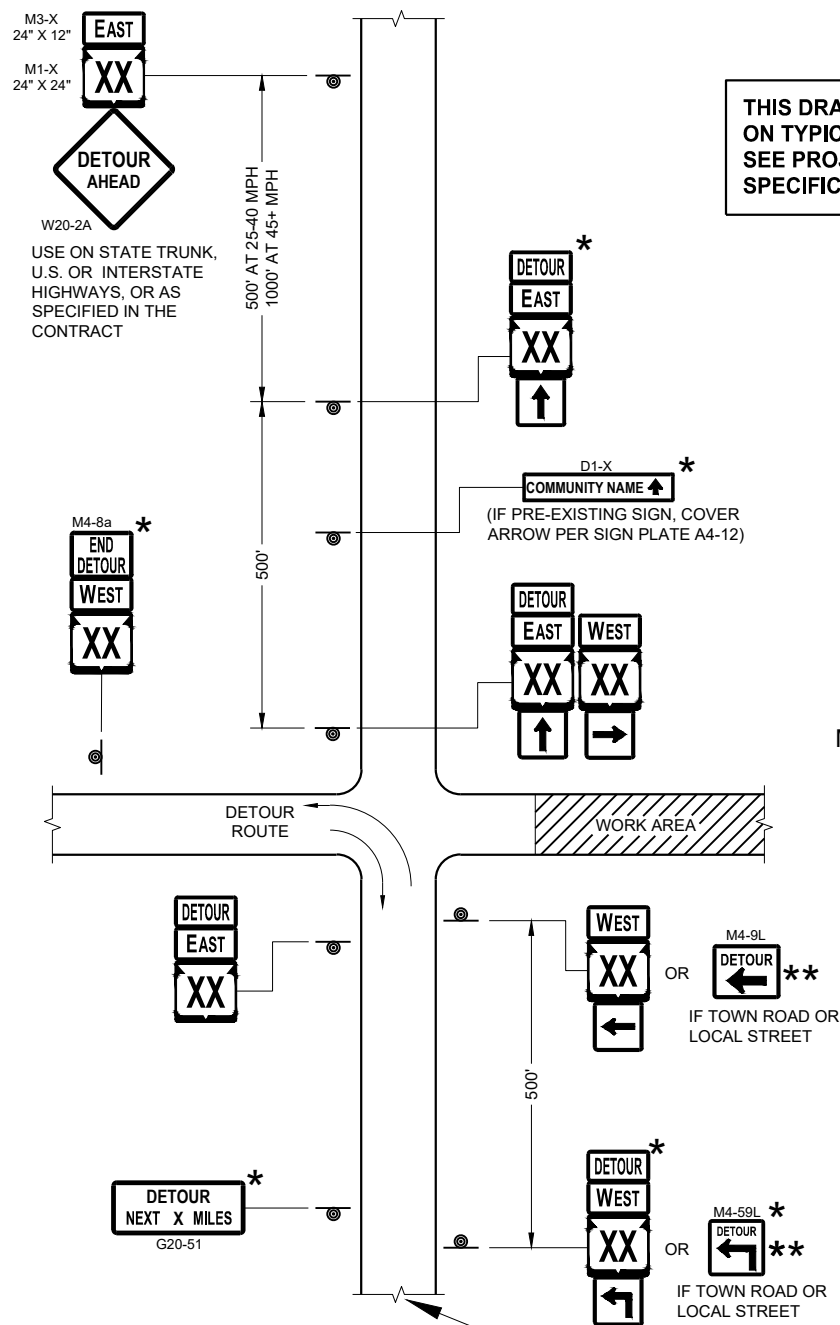
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

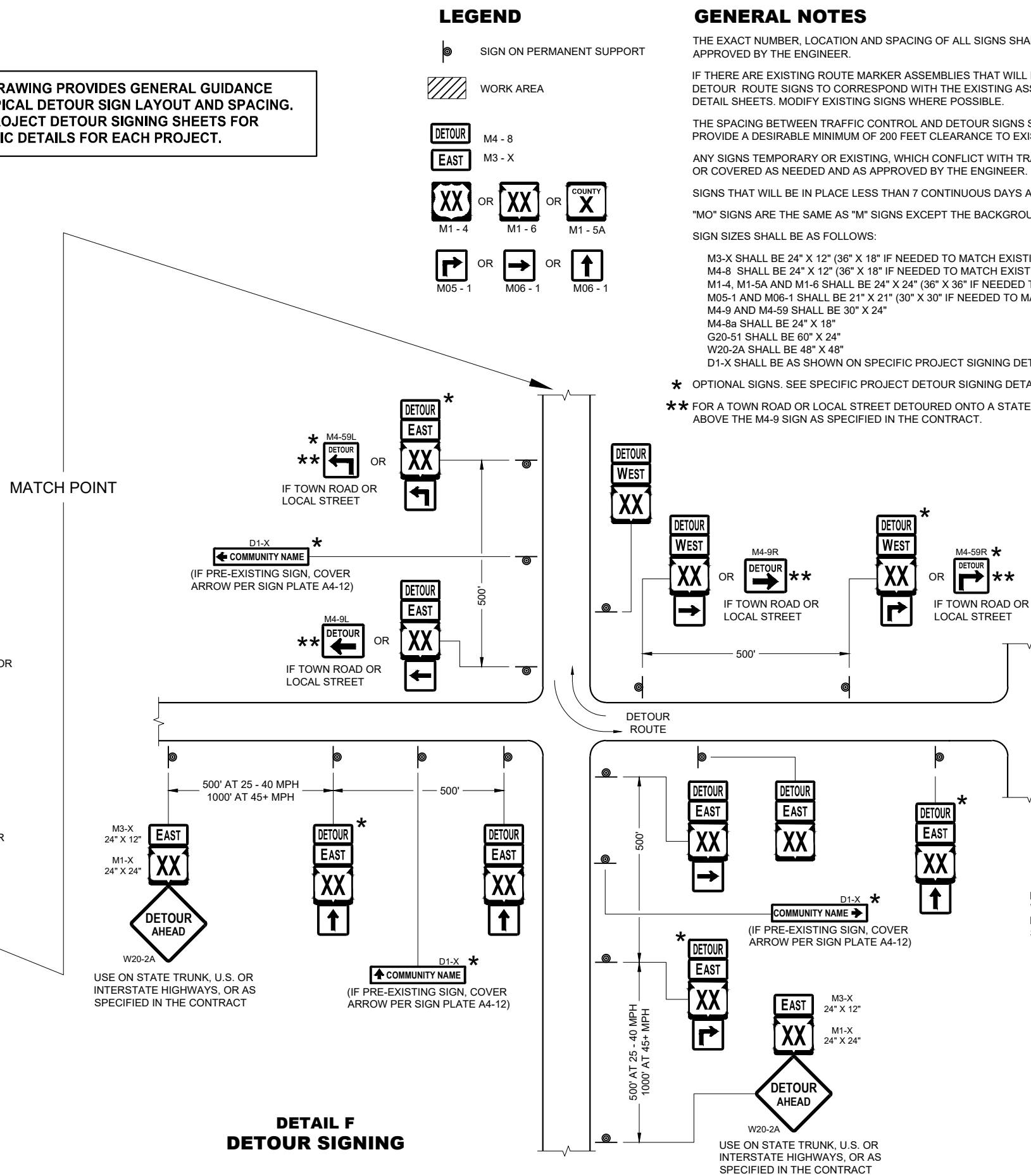
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**THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.**

SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

SDD 15C02 - 09c



DETAIL F DETOUR SIGNING

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

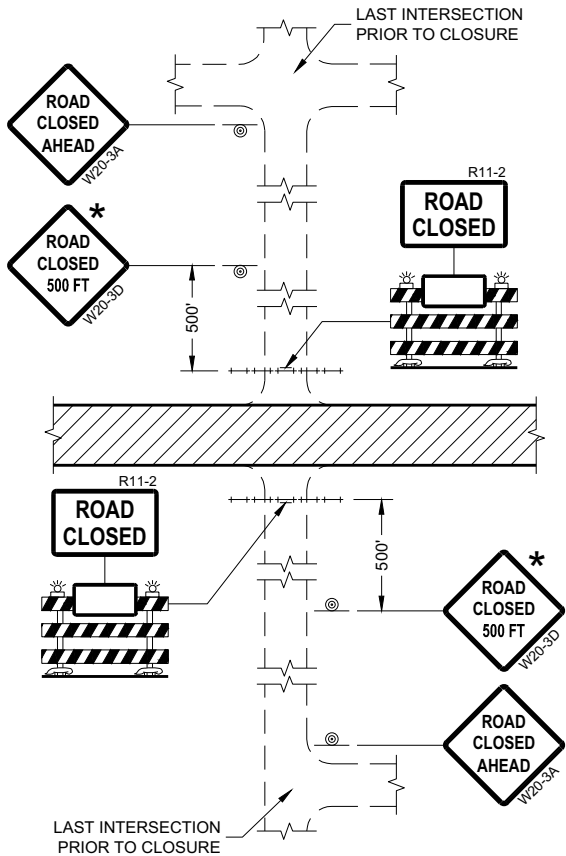
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

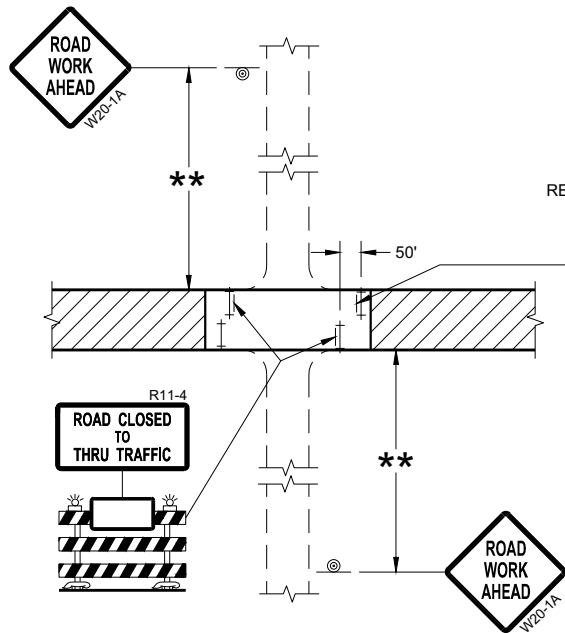
FHWA

WORK ZONE ENGINEER

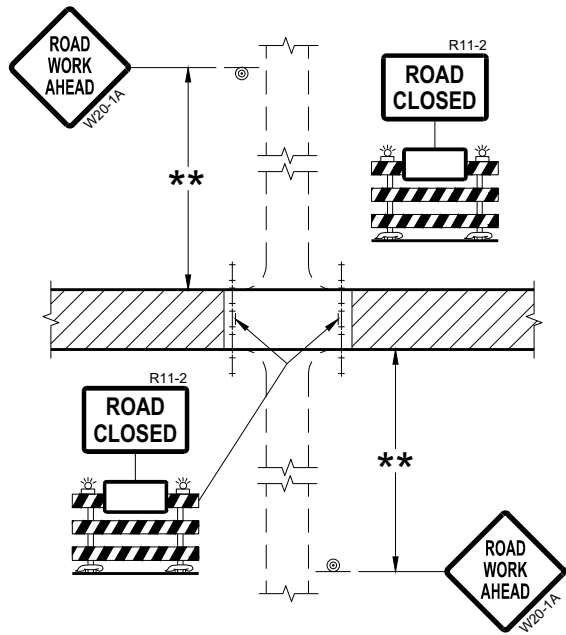
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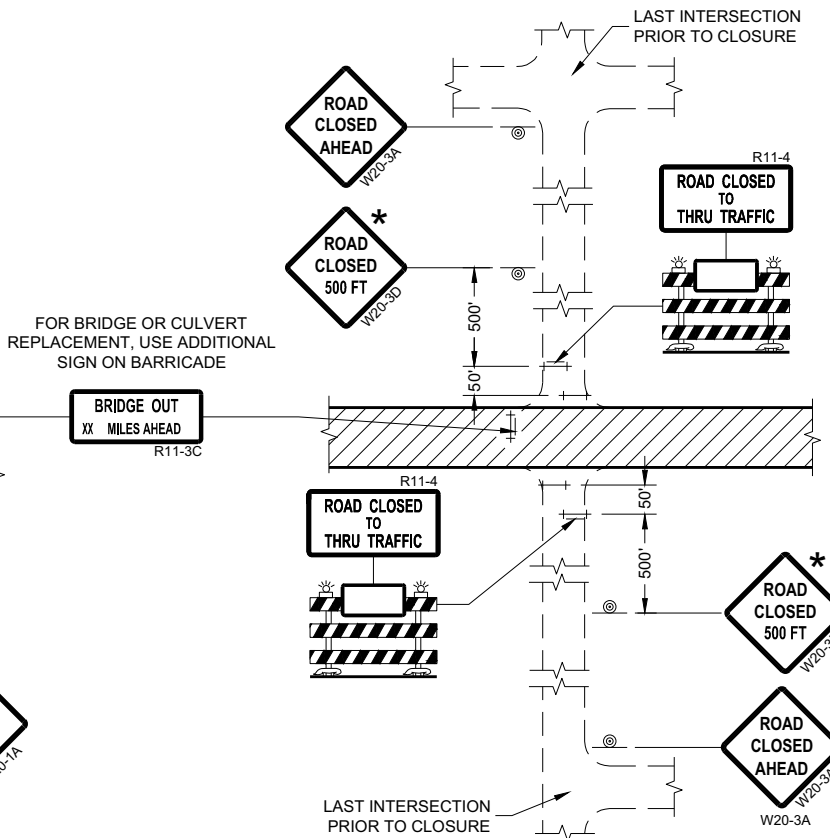
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

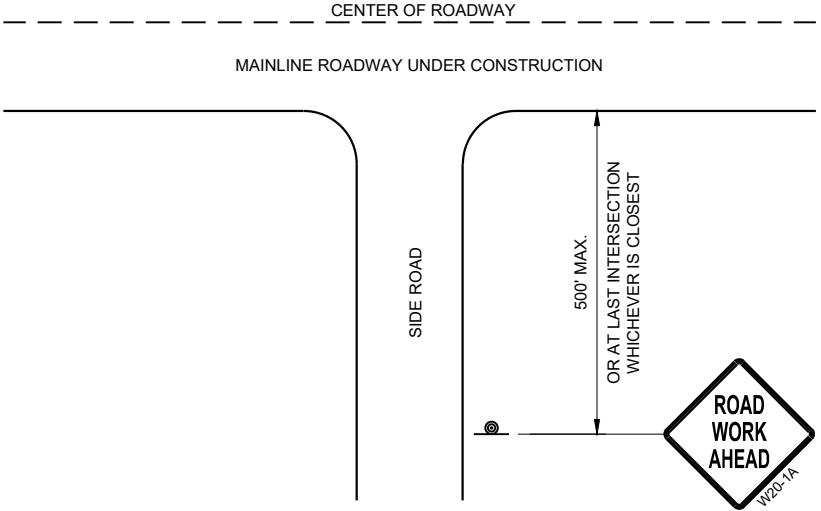
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

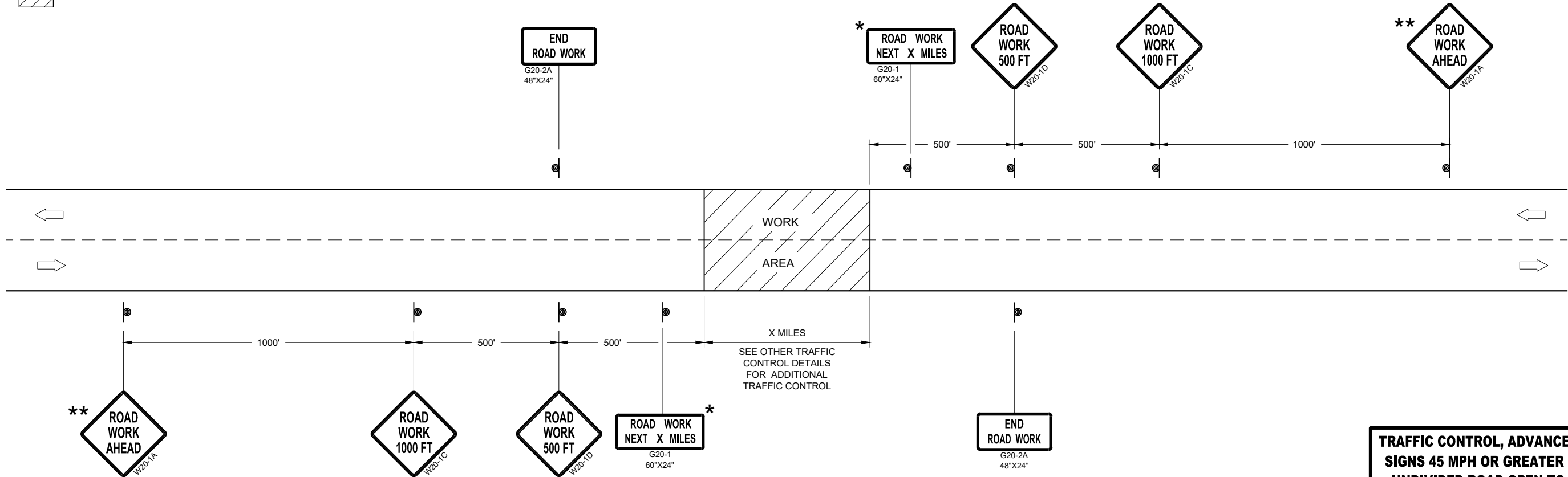
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

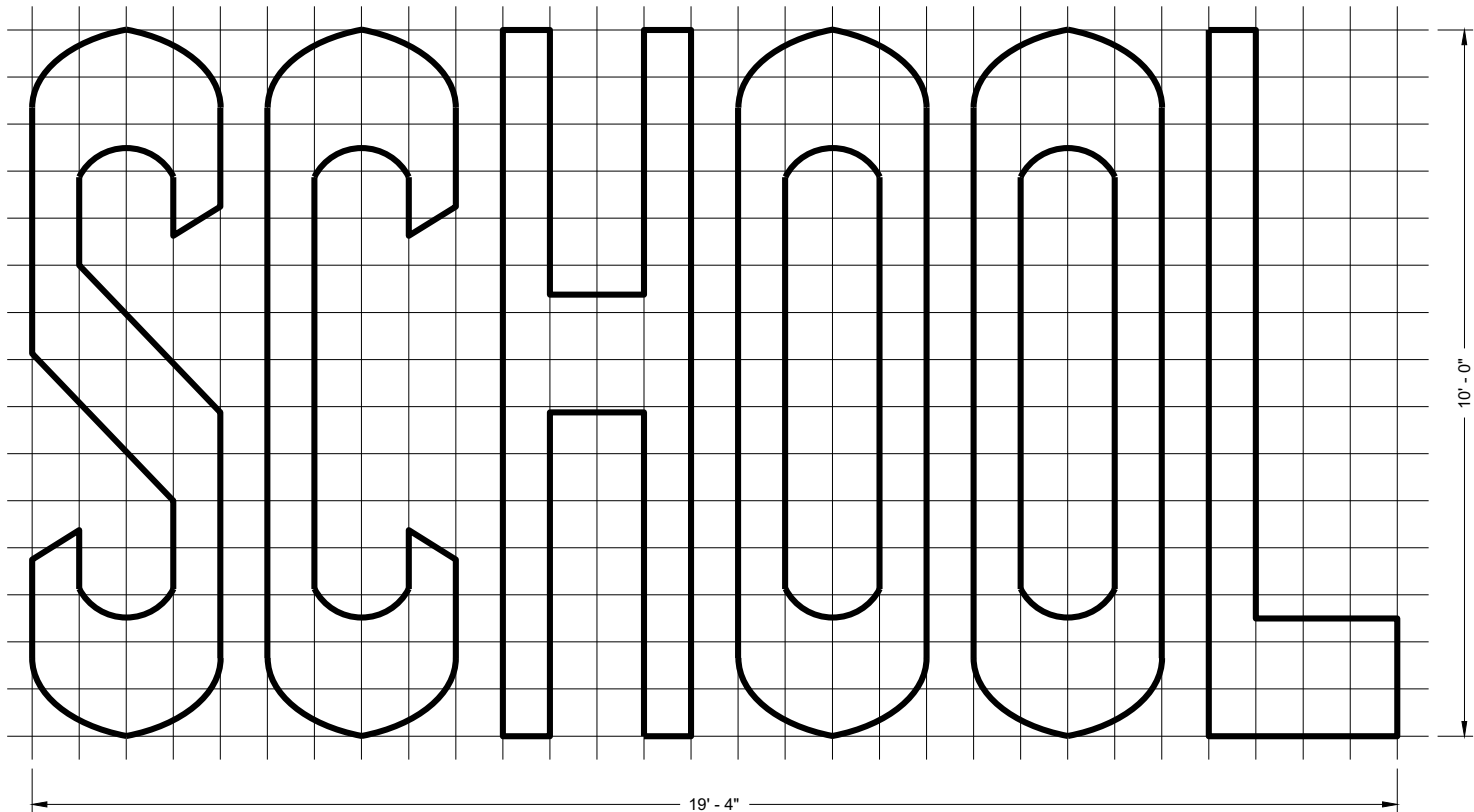
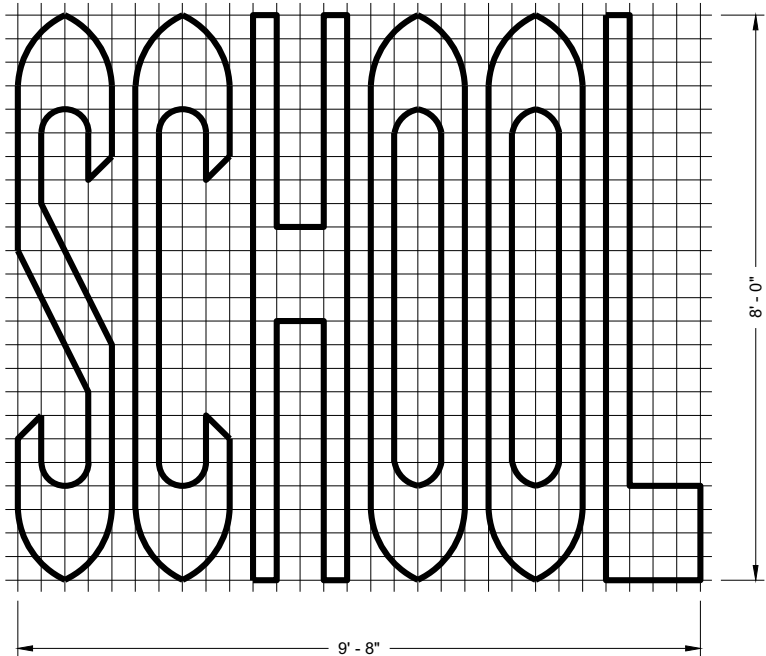
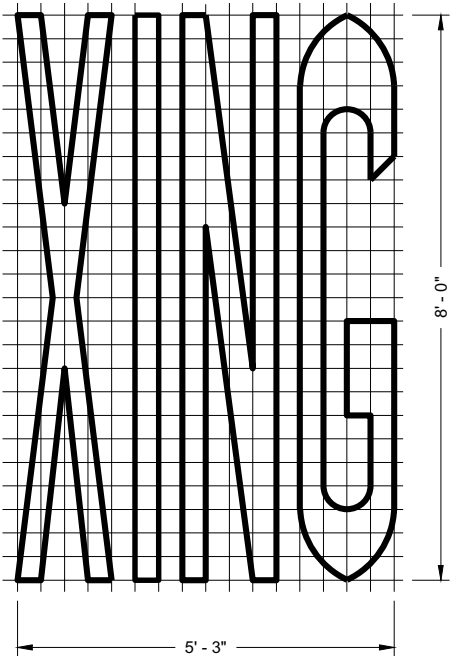
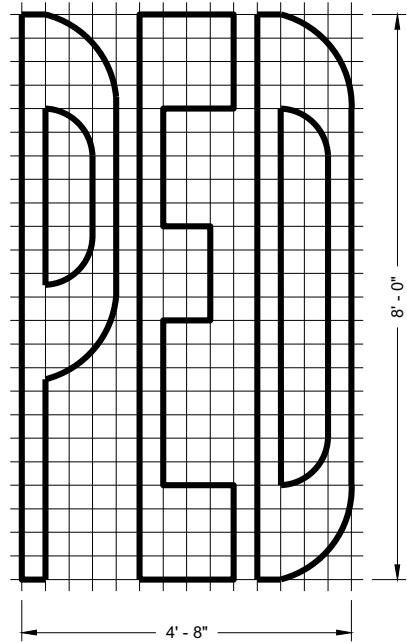
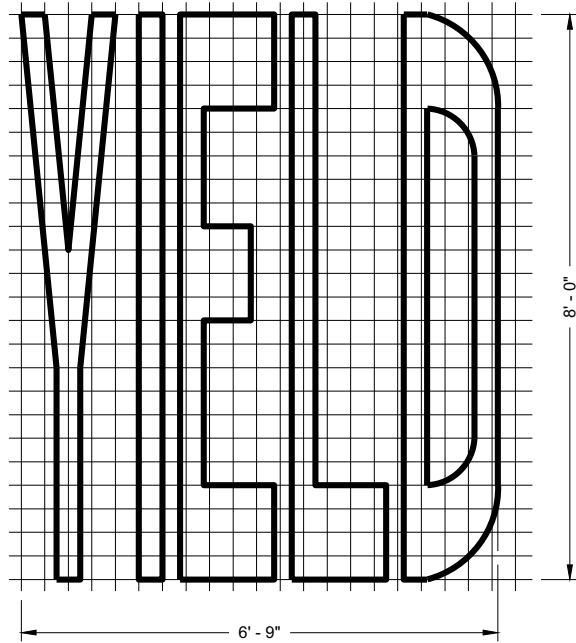
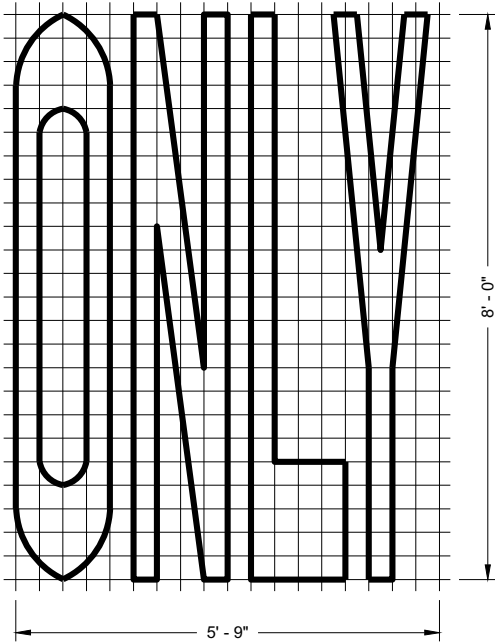
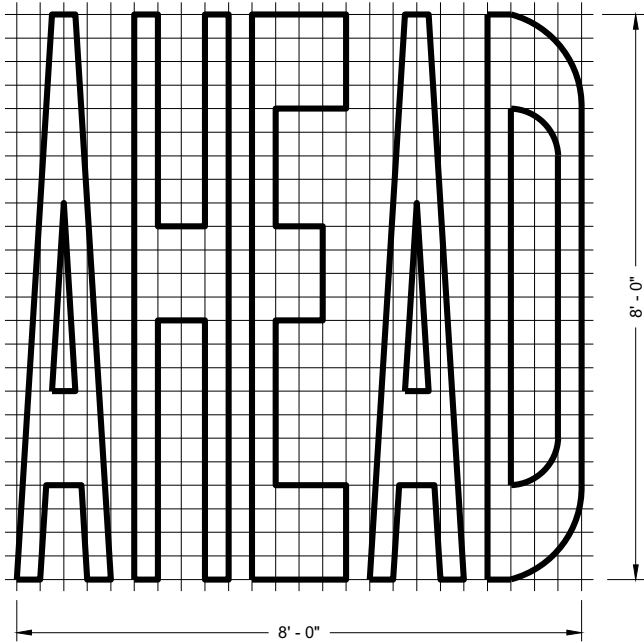
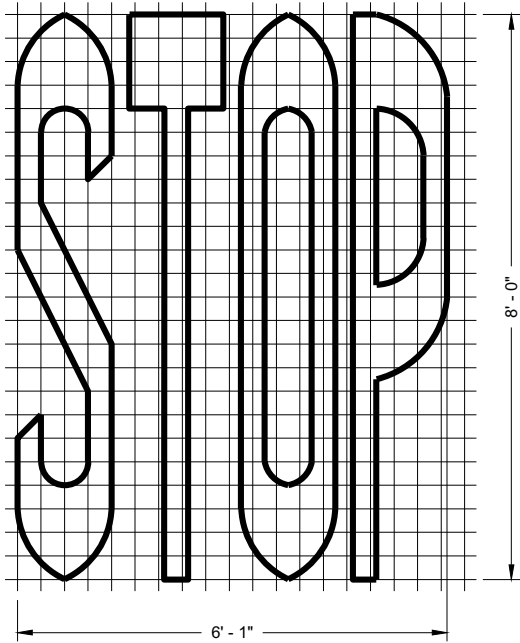


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
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SINGLE LANE

TWO - LANE

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

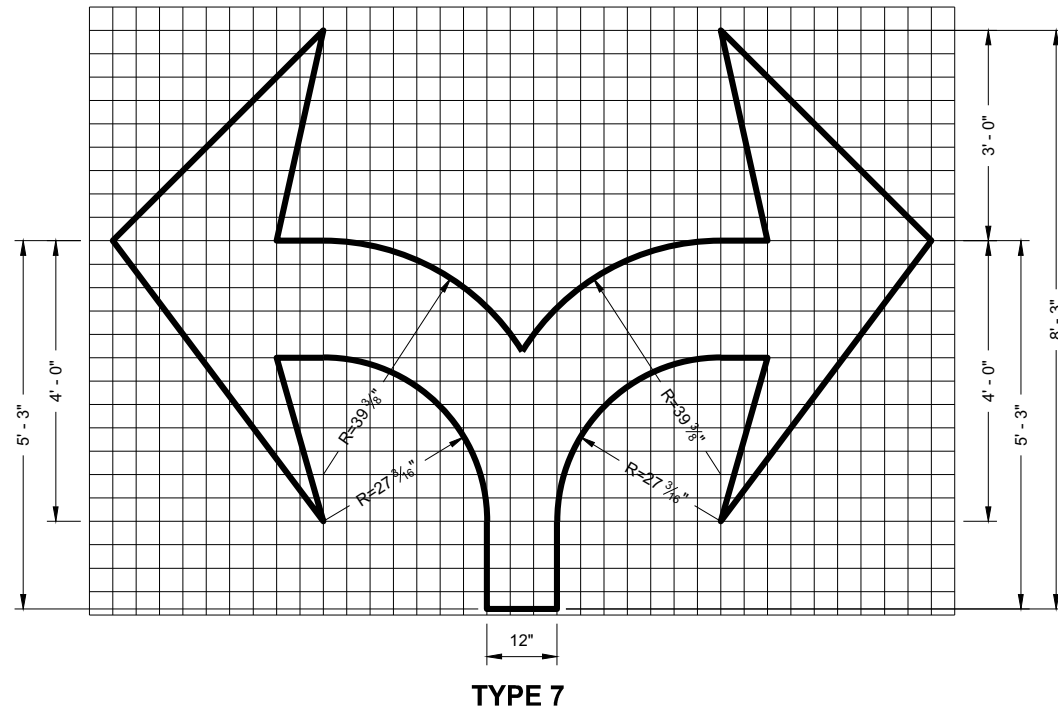
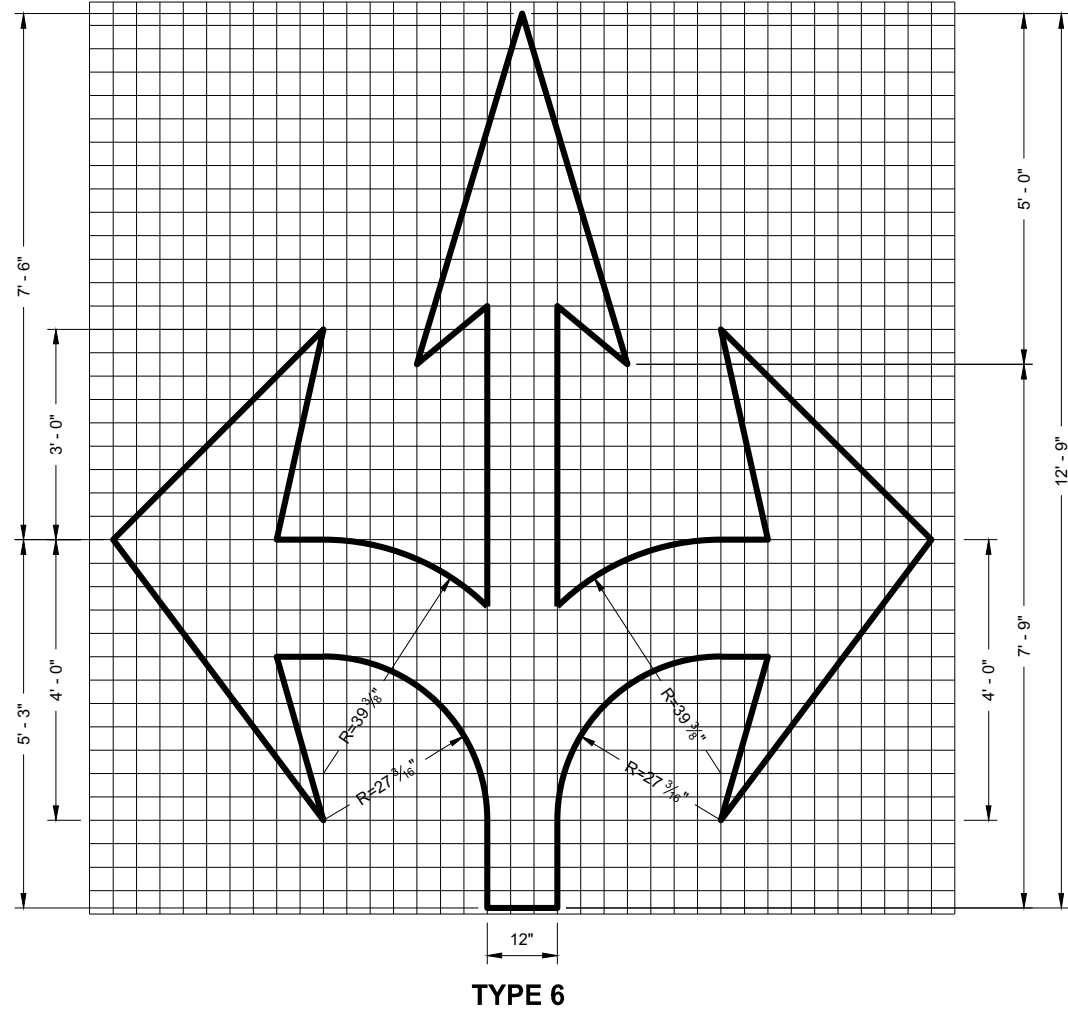
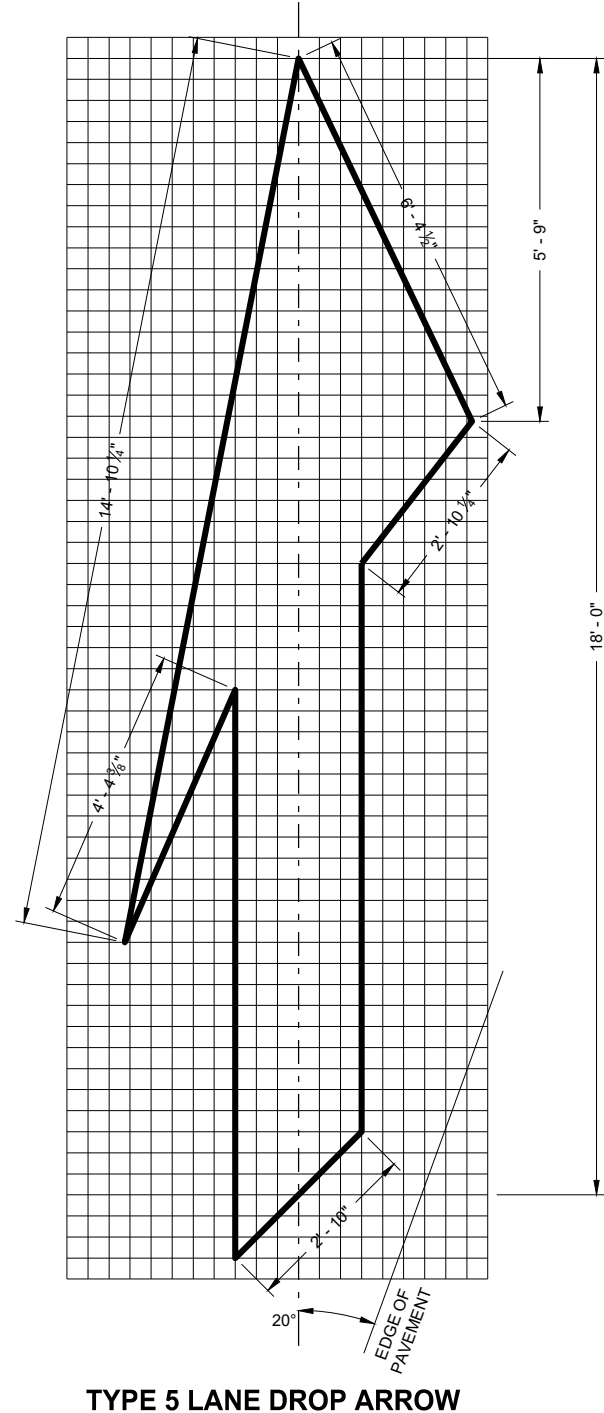
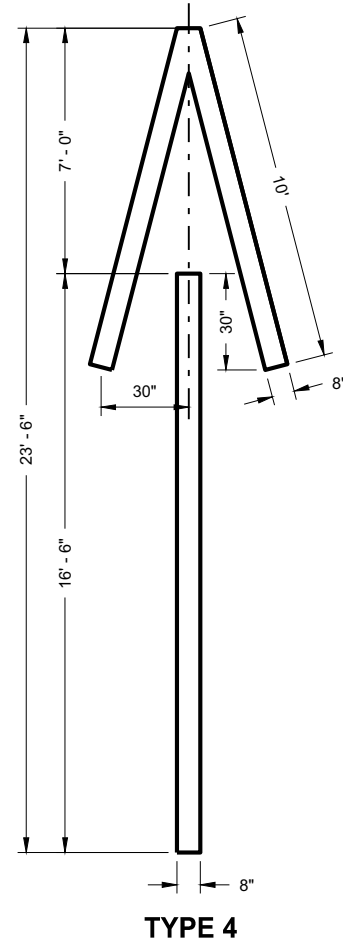
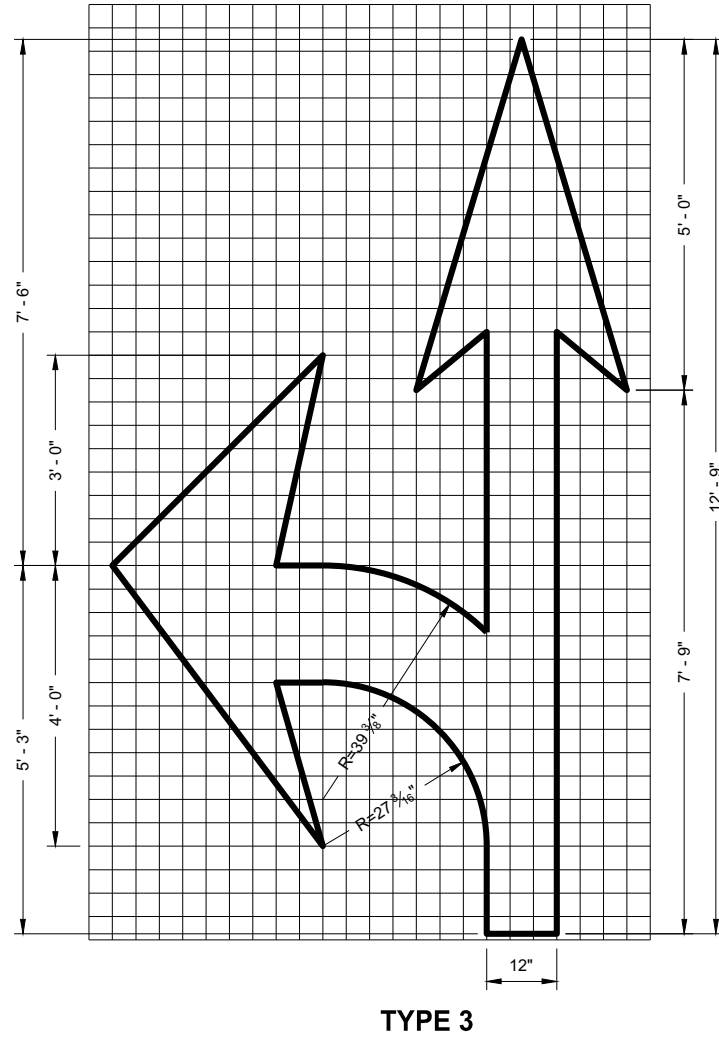
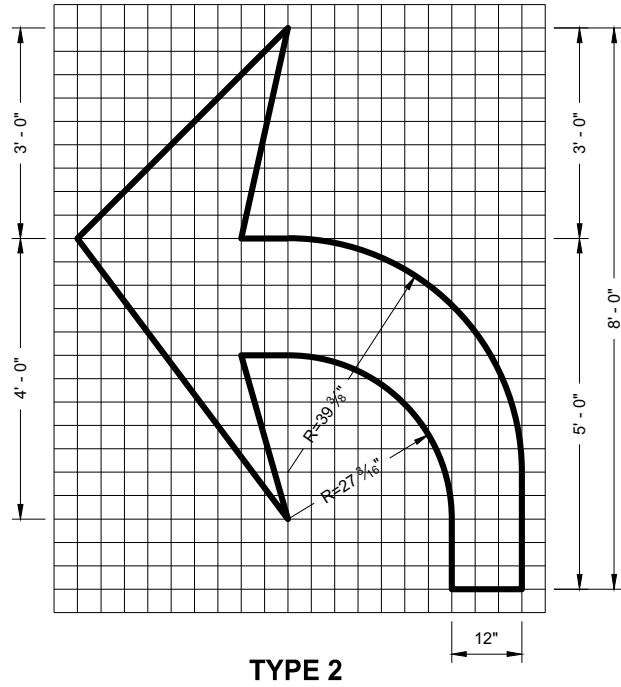
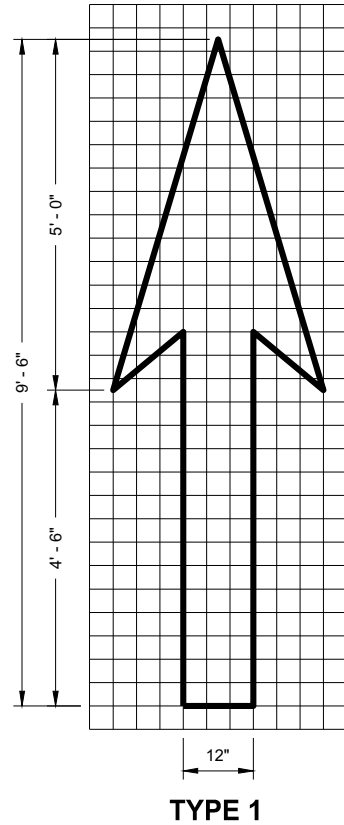
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



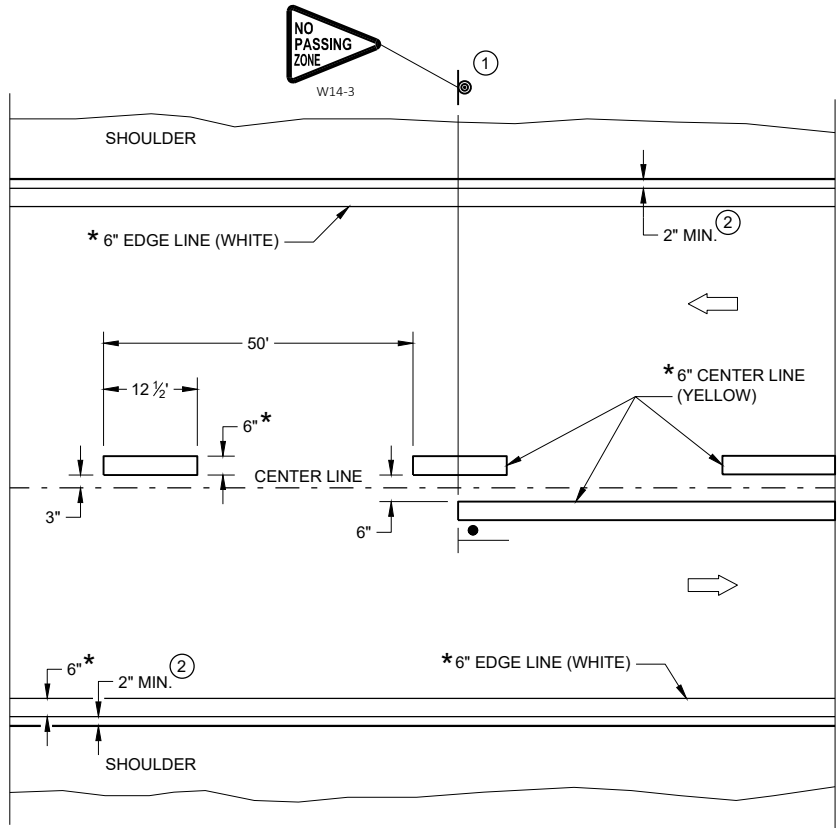
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

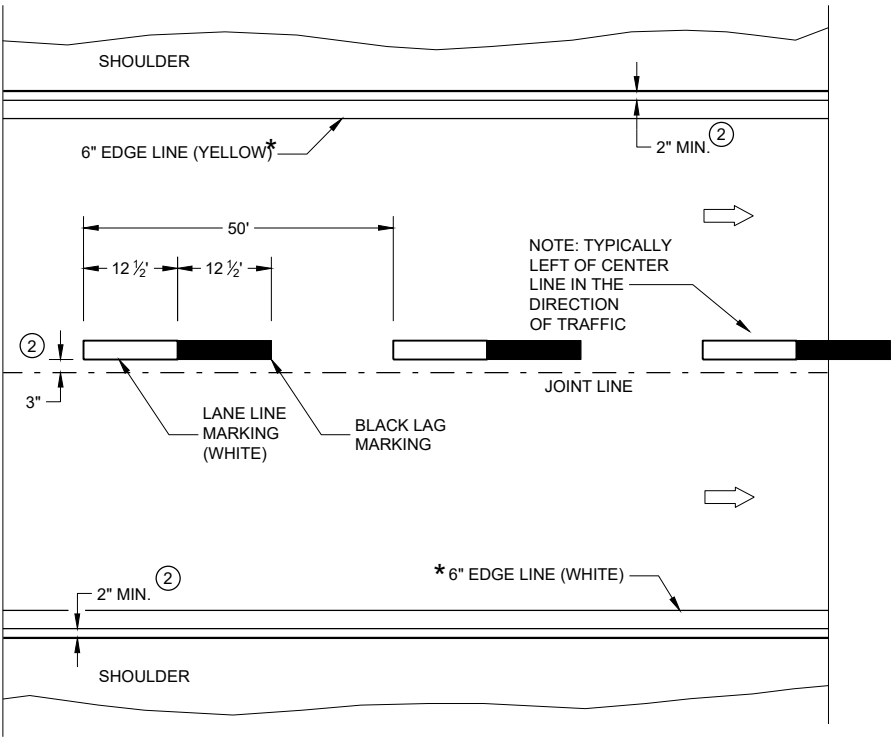
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE
/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

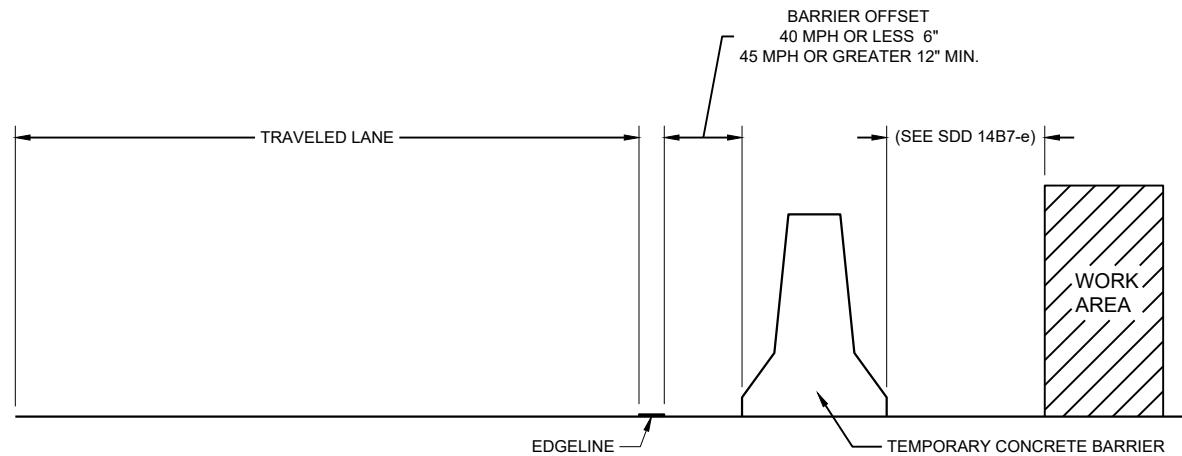
- "T" MARKING
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING
ENGINEER

FHWA



TEMPORARY BARRIER OFFSET FROM EDGE LINE

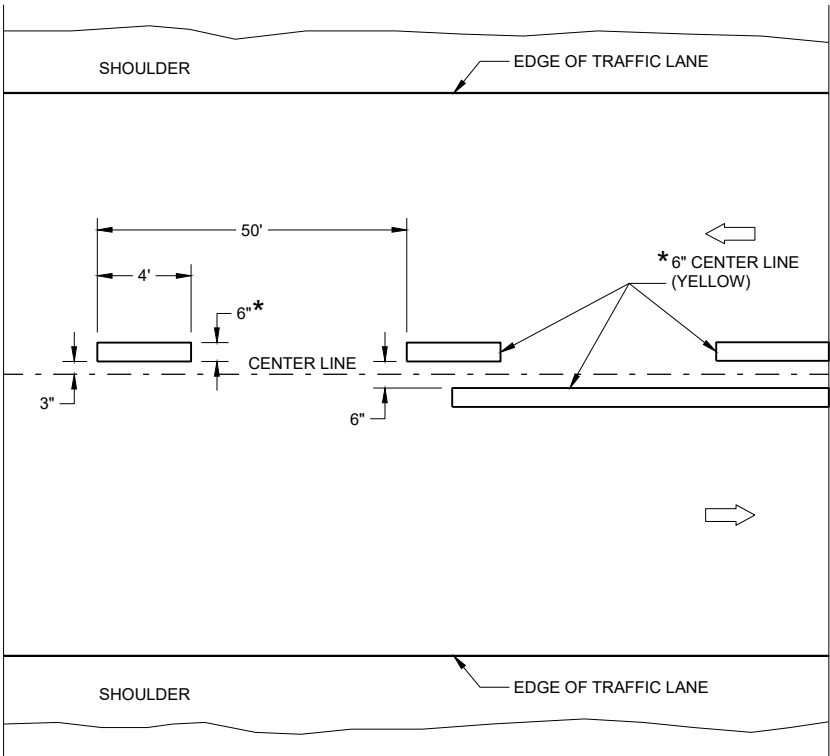
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

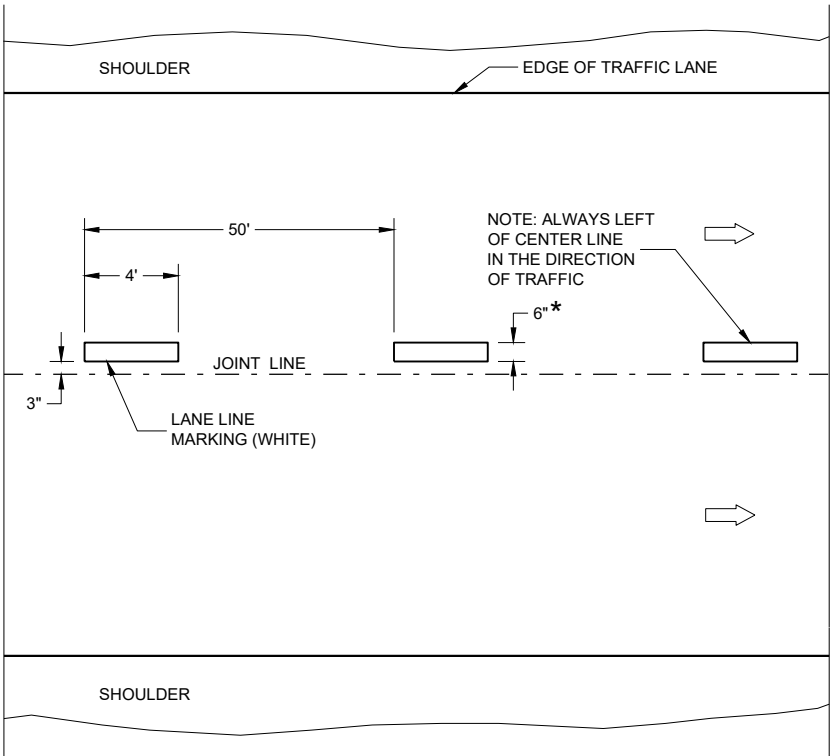
LEGEND

DIRECTION OF TRAFFIC

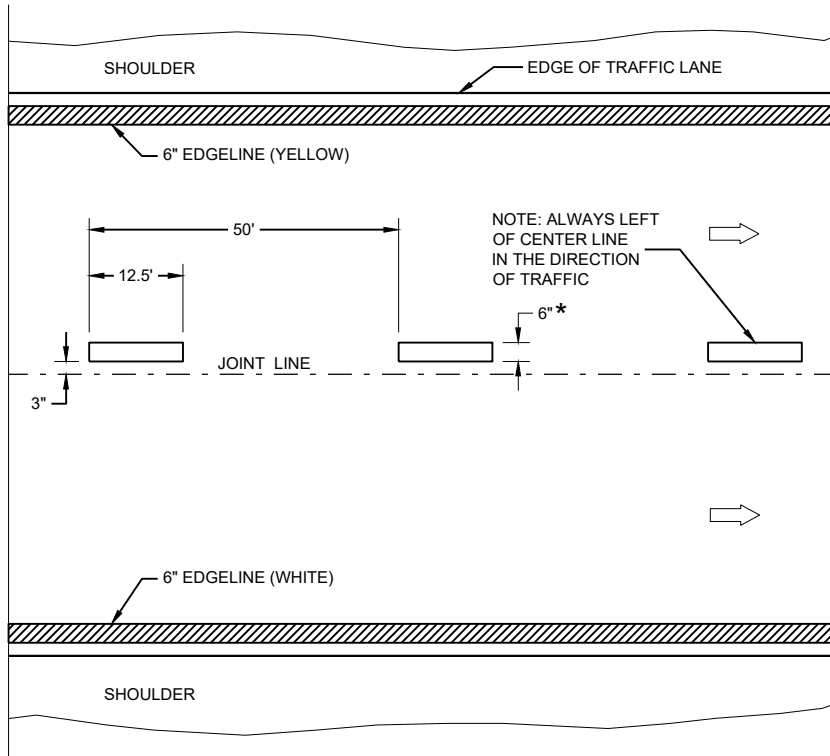
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



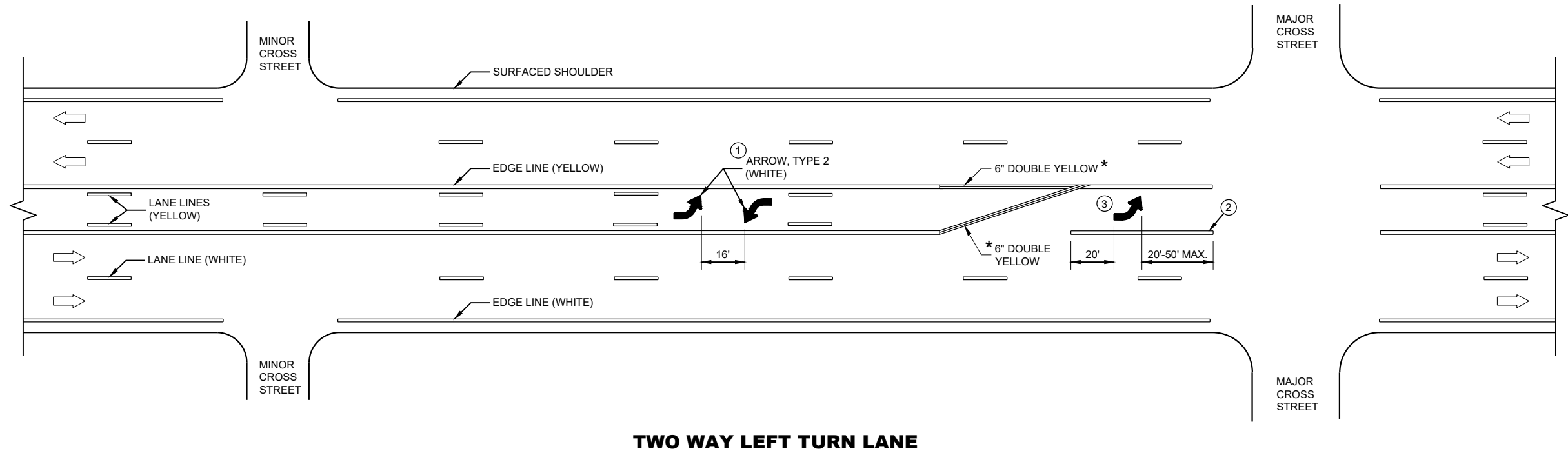
FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING
ENGINEER
FHWA



GENERAL NOTES

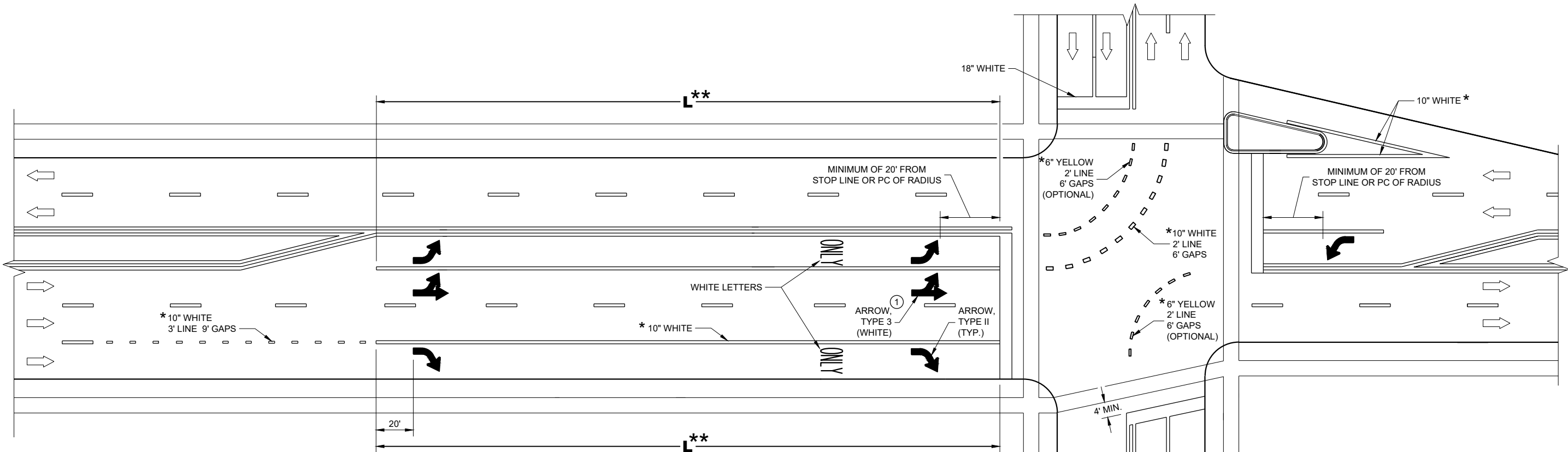
- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING
(TURN LANES)

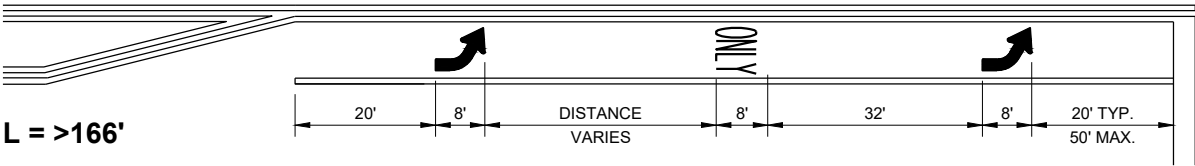
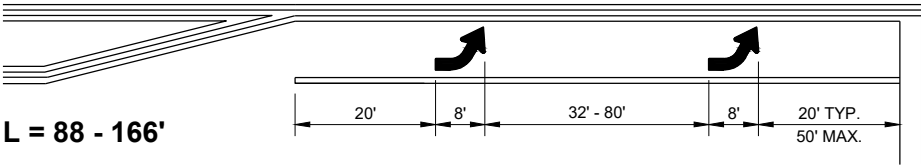
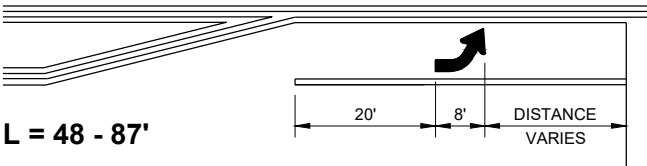
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

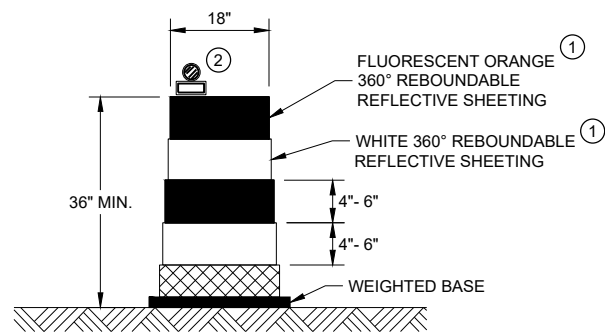
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

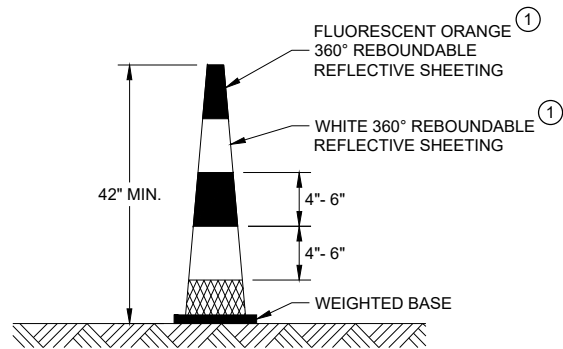
PAVEMENT MARKING (TURN LANES)

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DEPARTMENT OF TRANSPORTATION



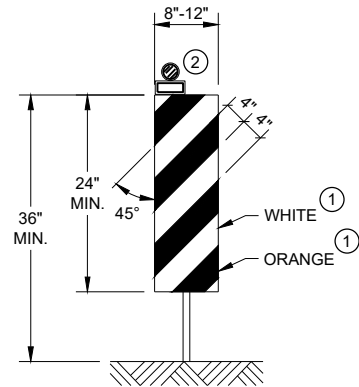
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



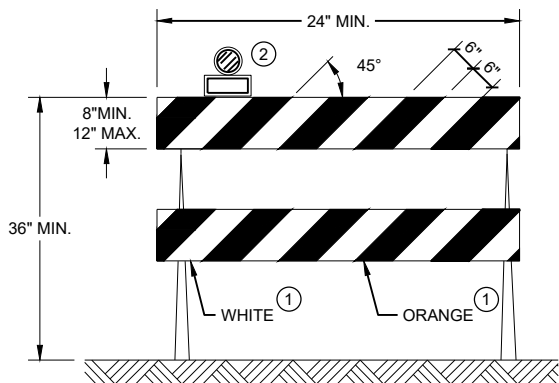
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



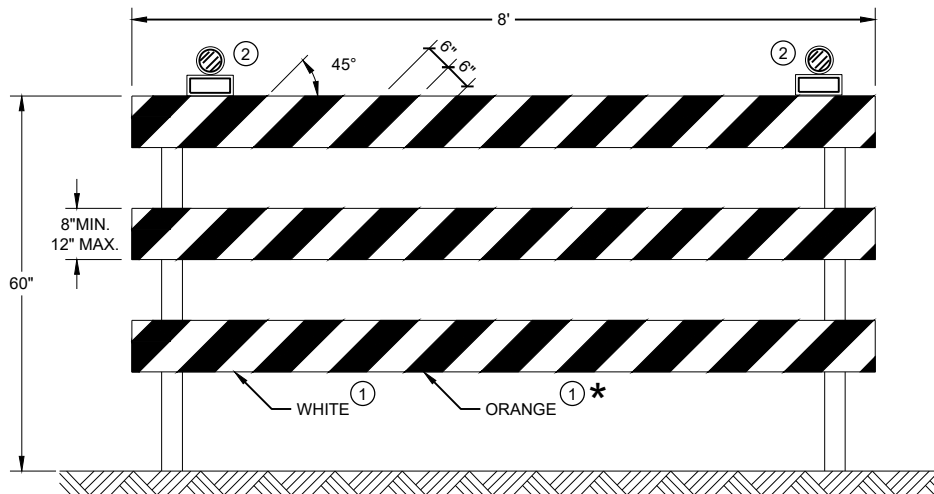
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.






**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

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LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

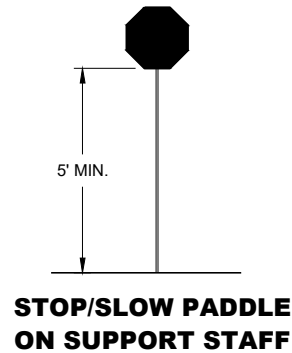
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

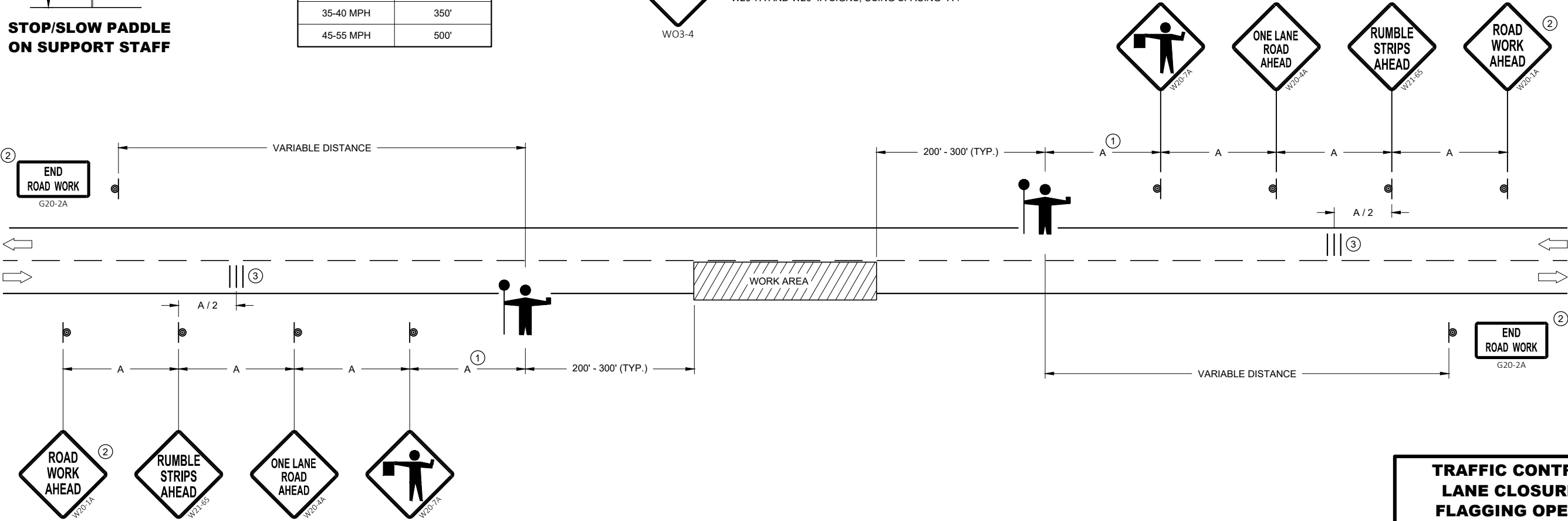


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

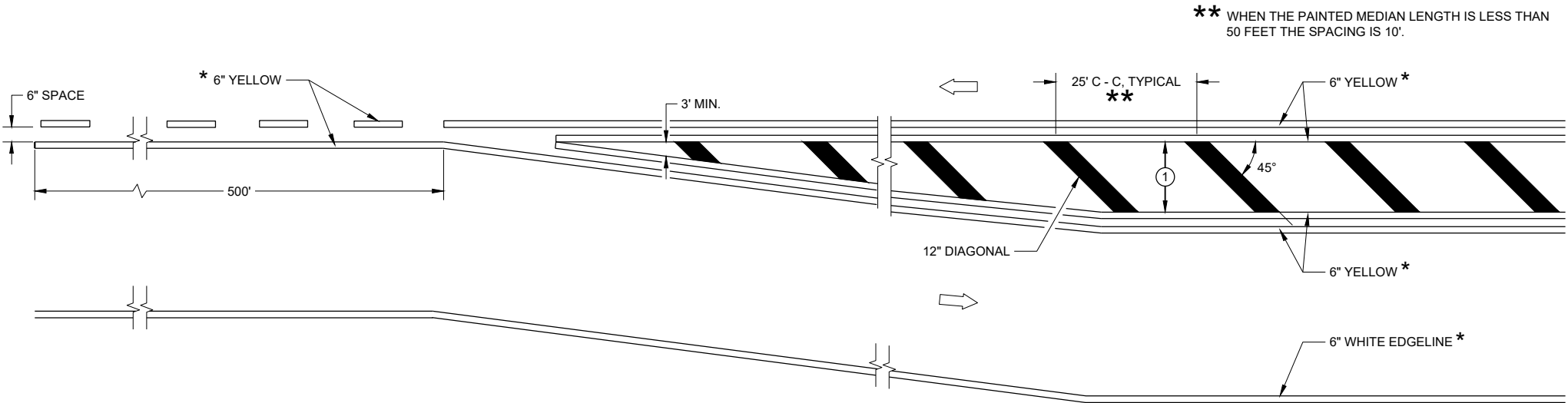
SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MEDIAN ISLAND DETAIL

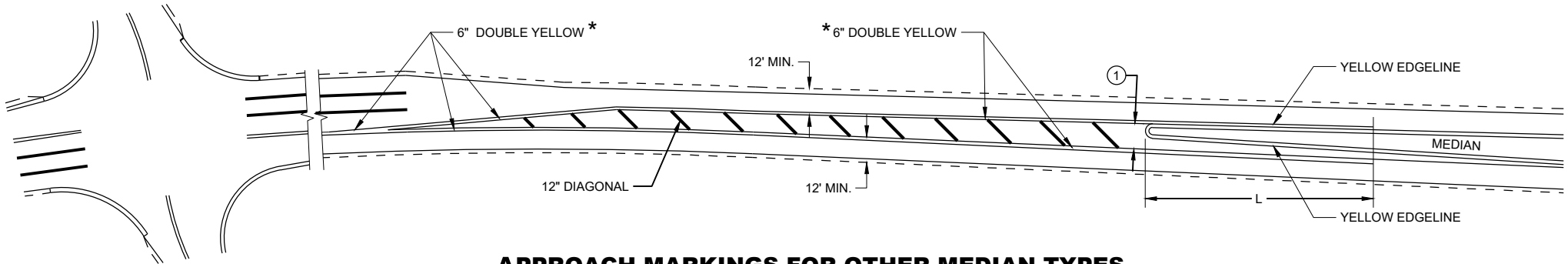
GENERAL NOTES

- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

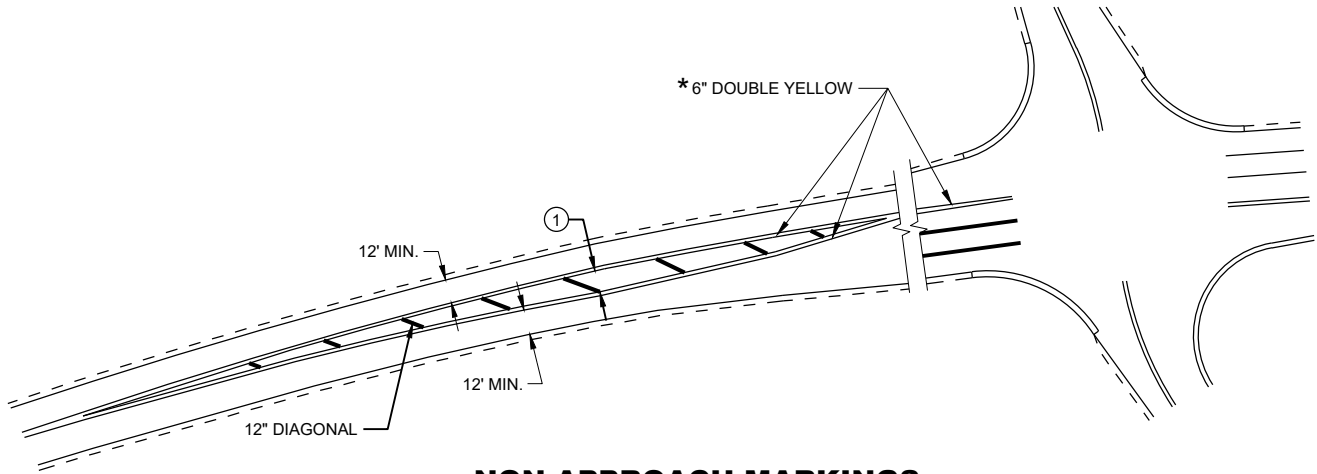
➡ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



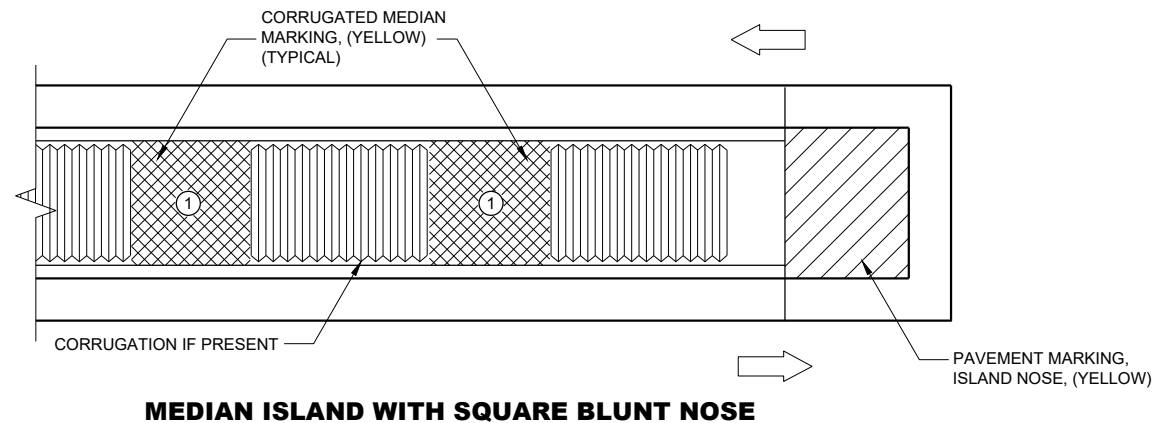
NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

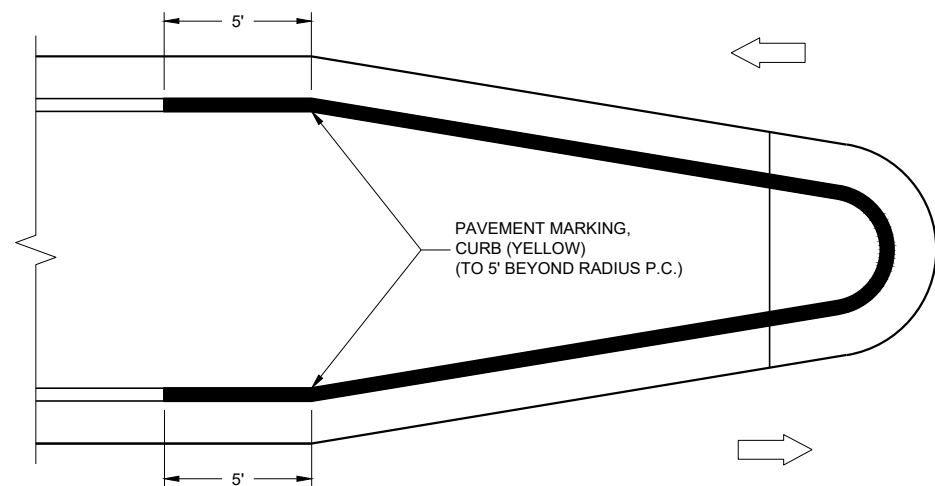
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING
ENGINEER

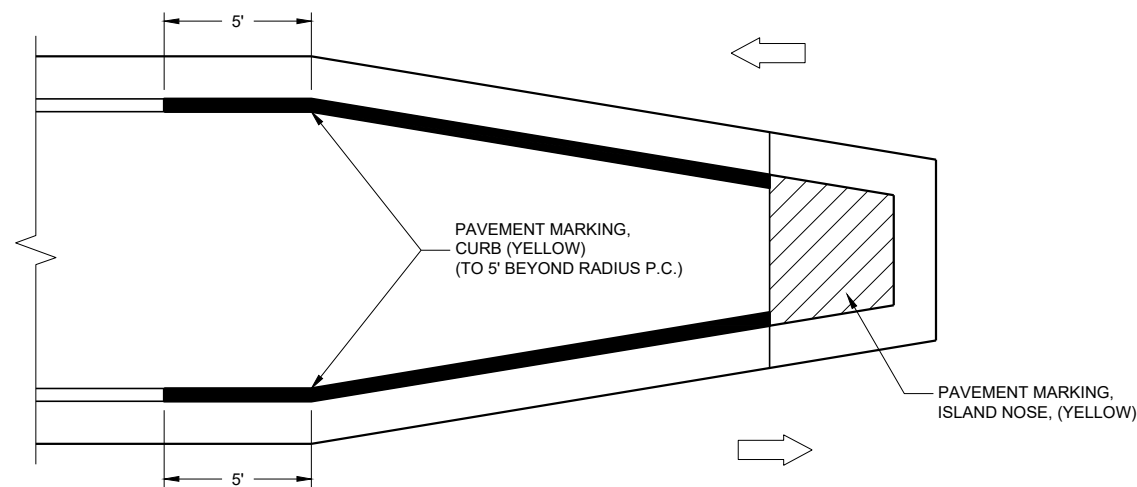
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	

V1	LEAD VEHICLE
V2	MARKING VEHICLE
V3	SHADOW VEHICLE

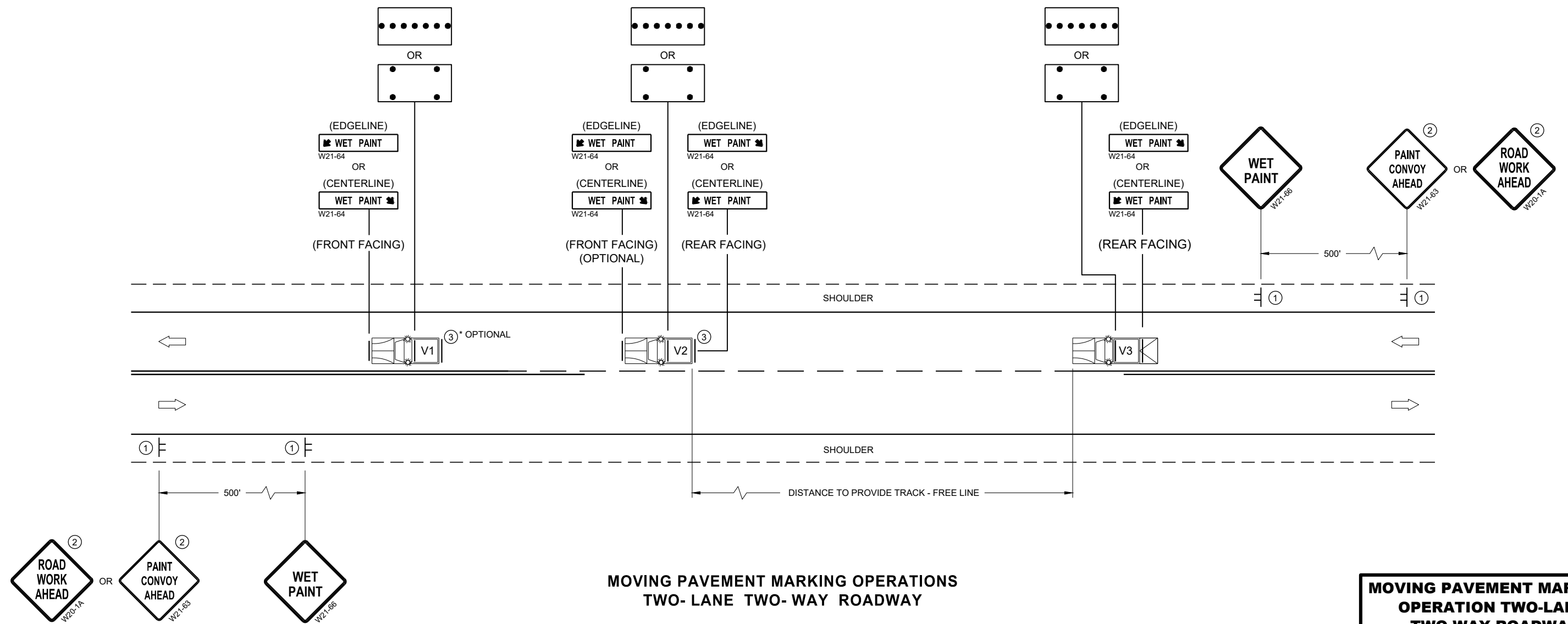


FLASHING ARROW PANEL (CAUTION)

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY






MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

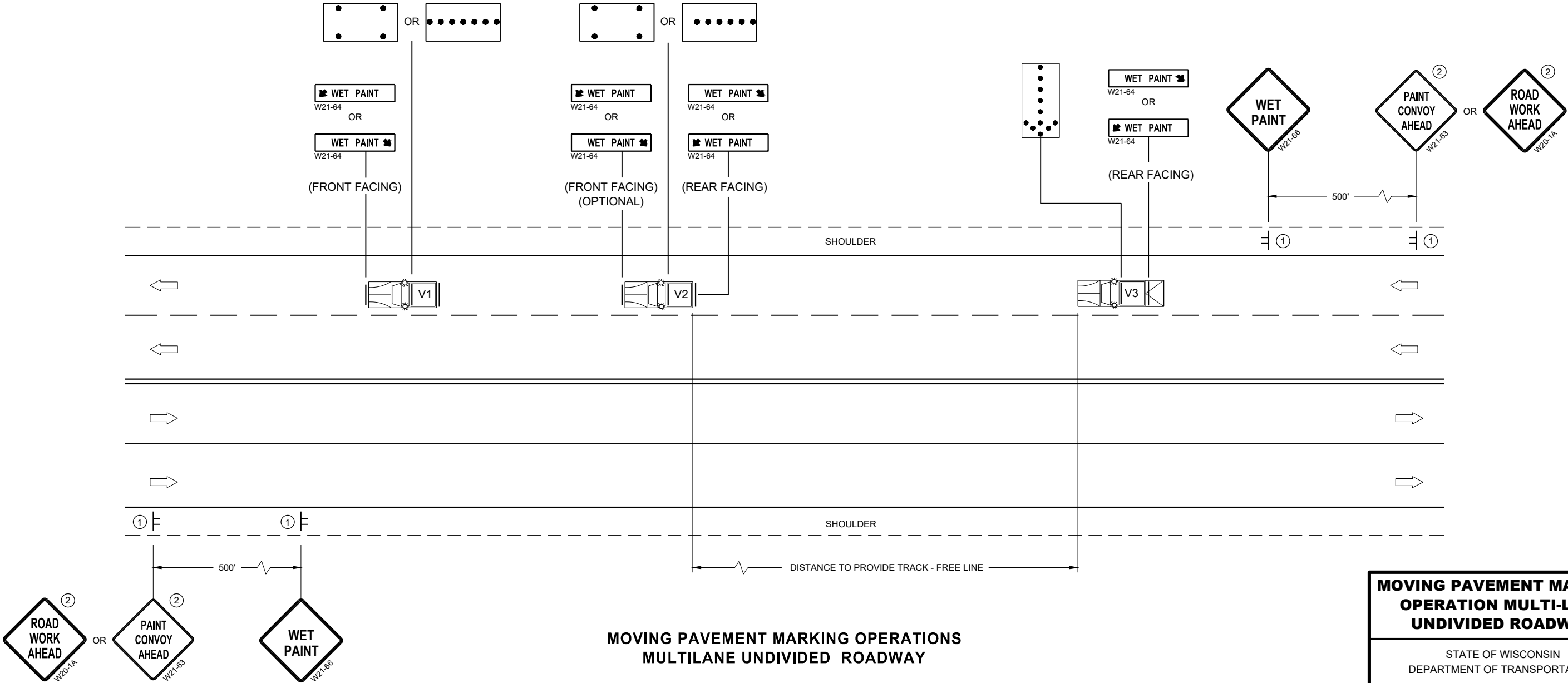
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



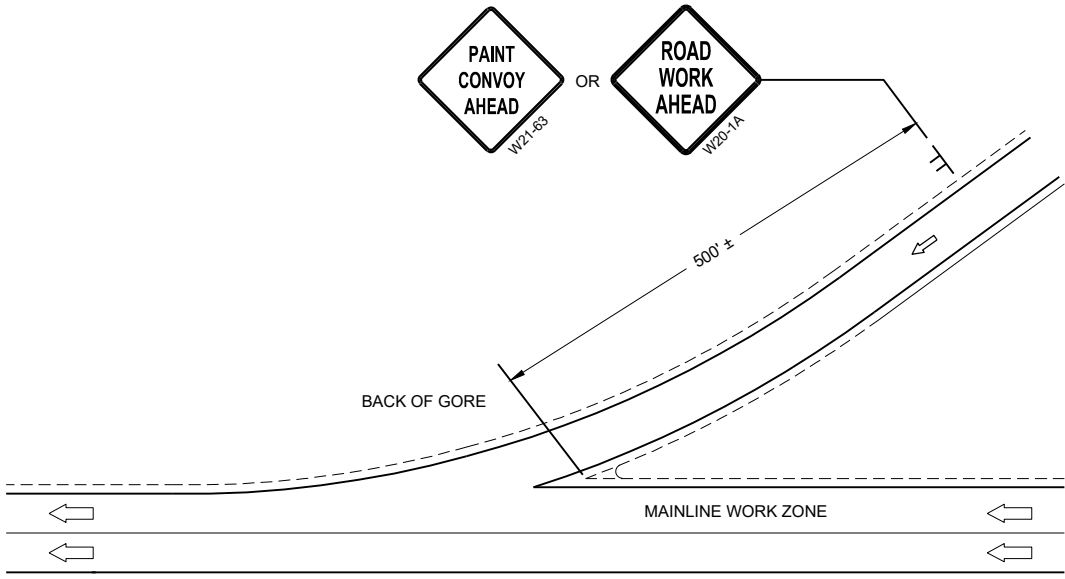
MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

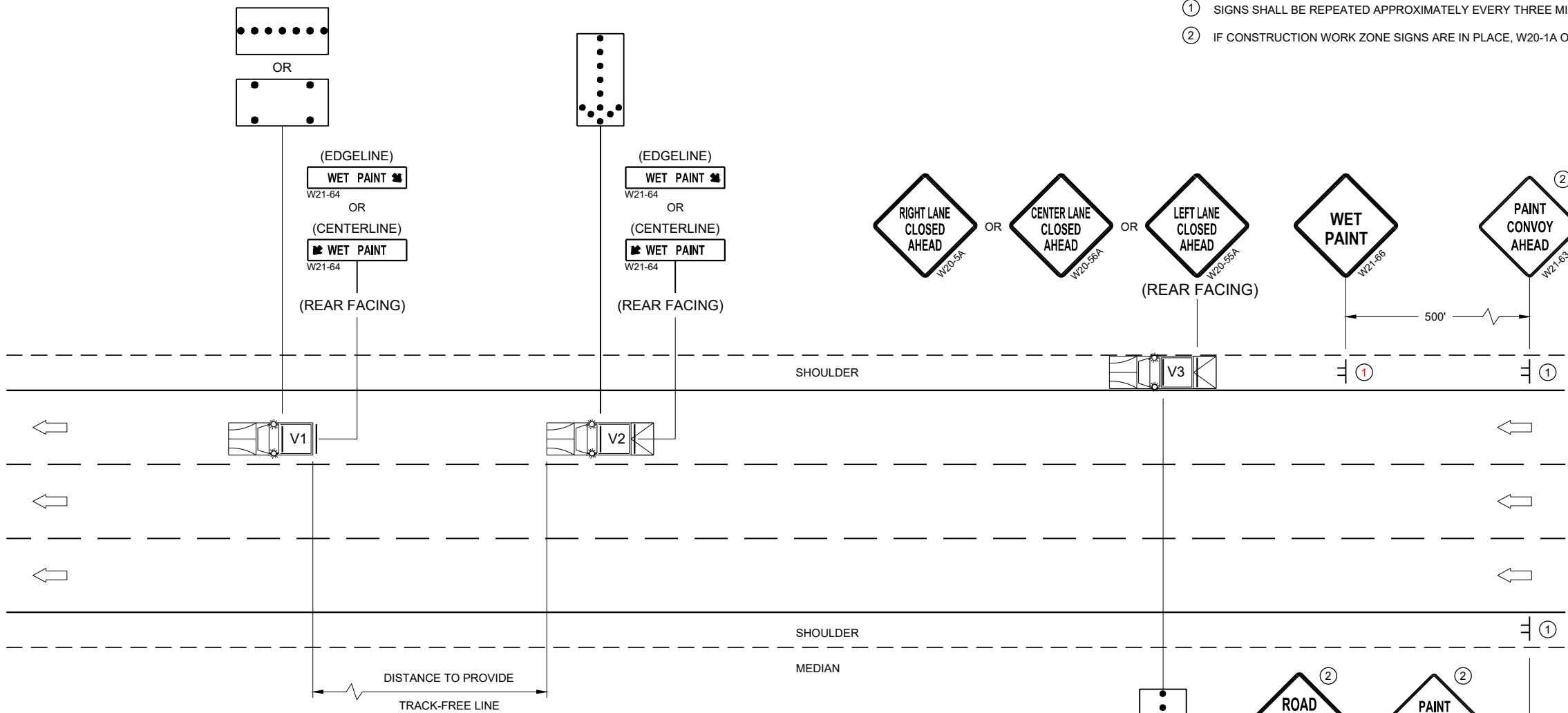
IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

① USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

*** IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

LEGEND

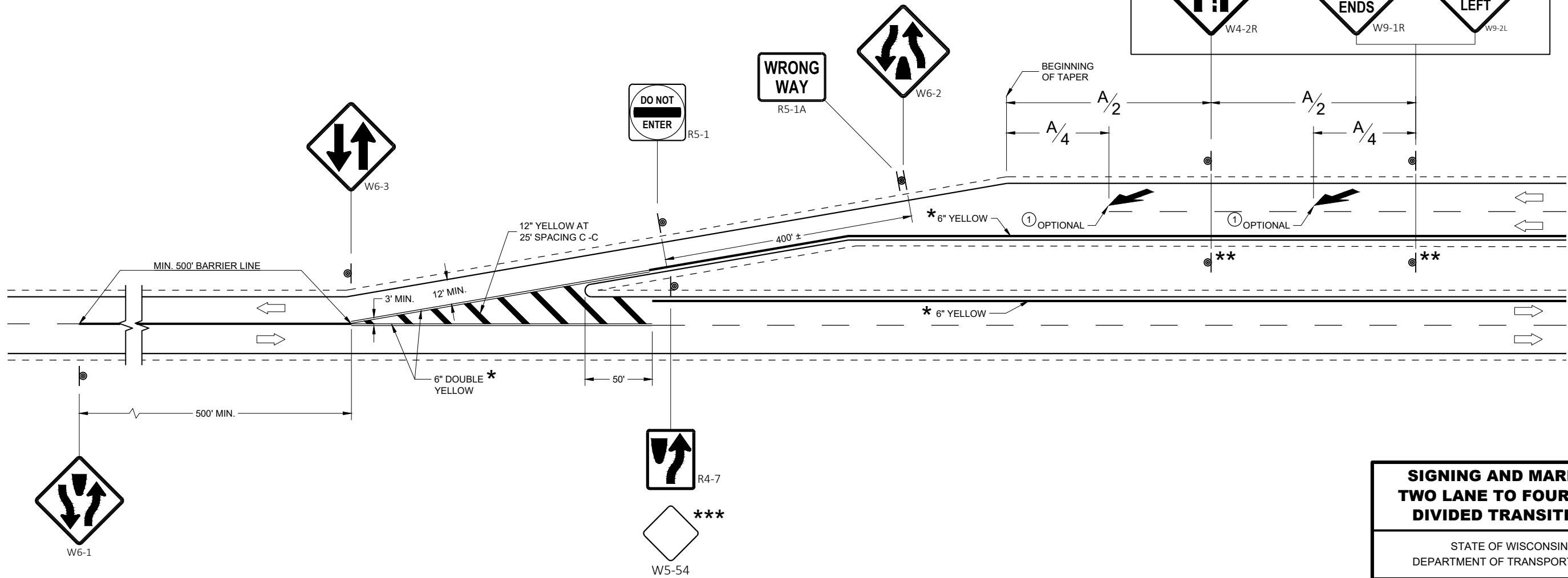
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

⦿ SIGN MOUNTED ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'



SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023

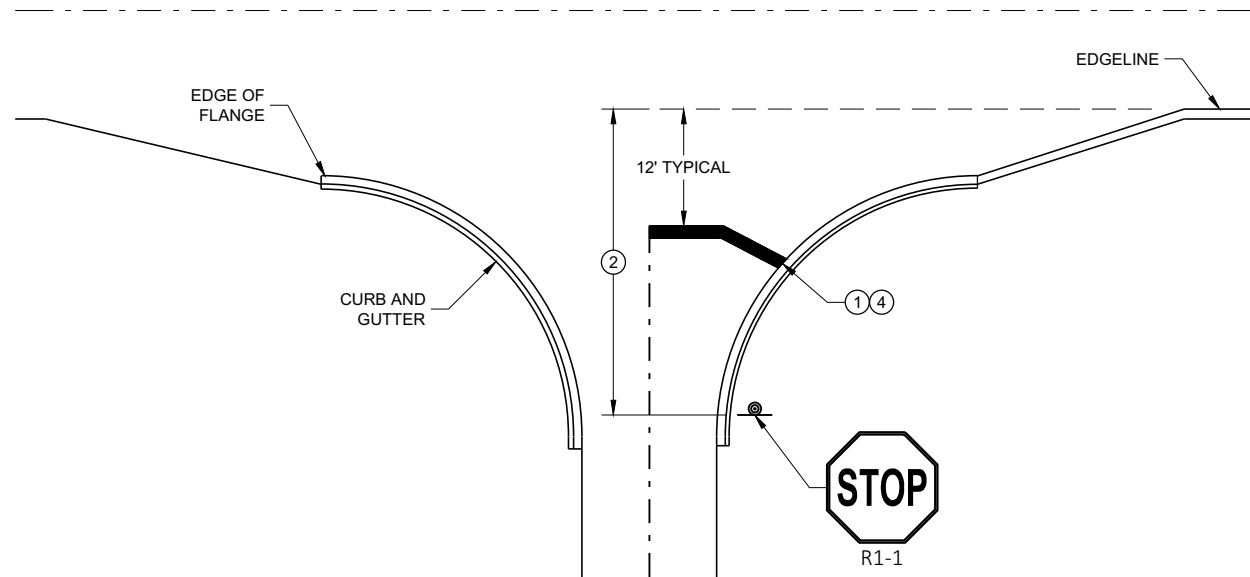
DATE

FHWA

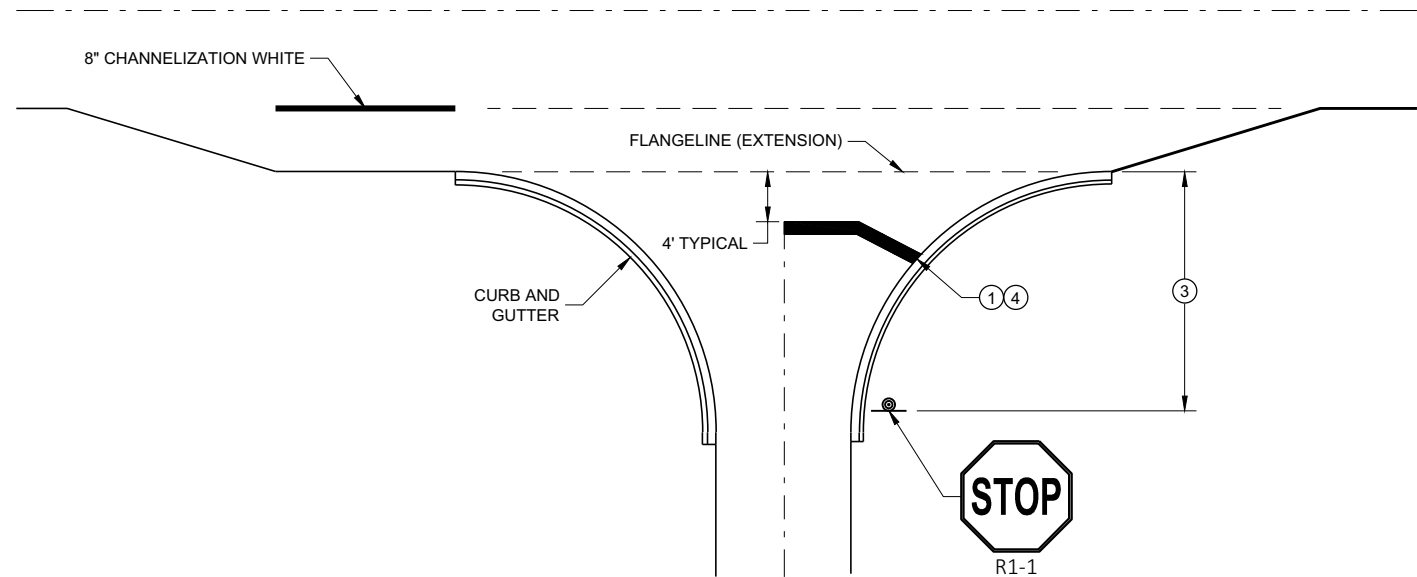
/S/ Matthew Rauch

STATE SIGNING AND MARKING

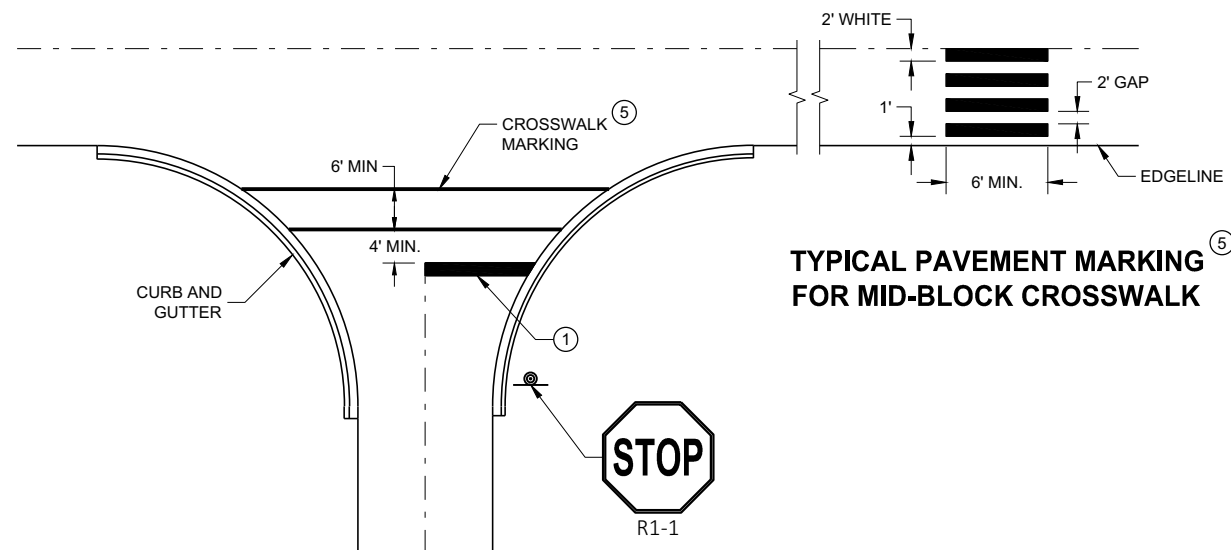
ENGINEER



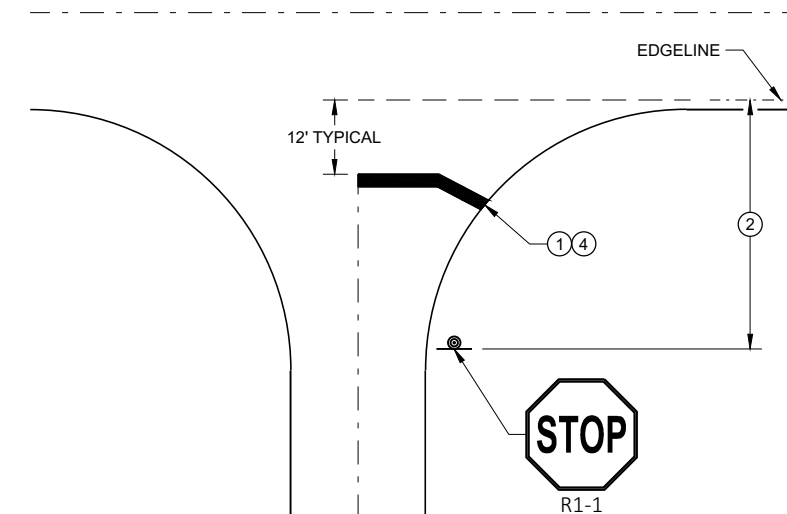
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.



THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

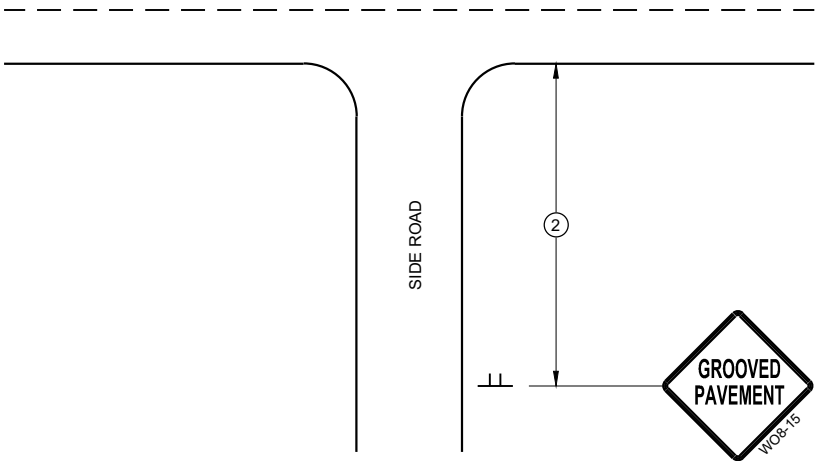
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

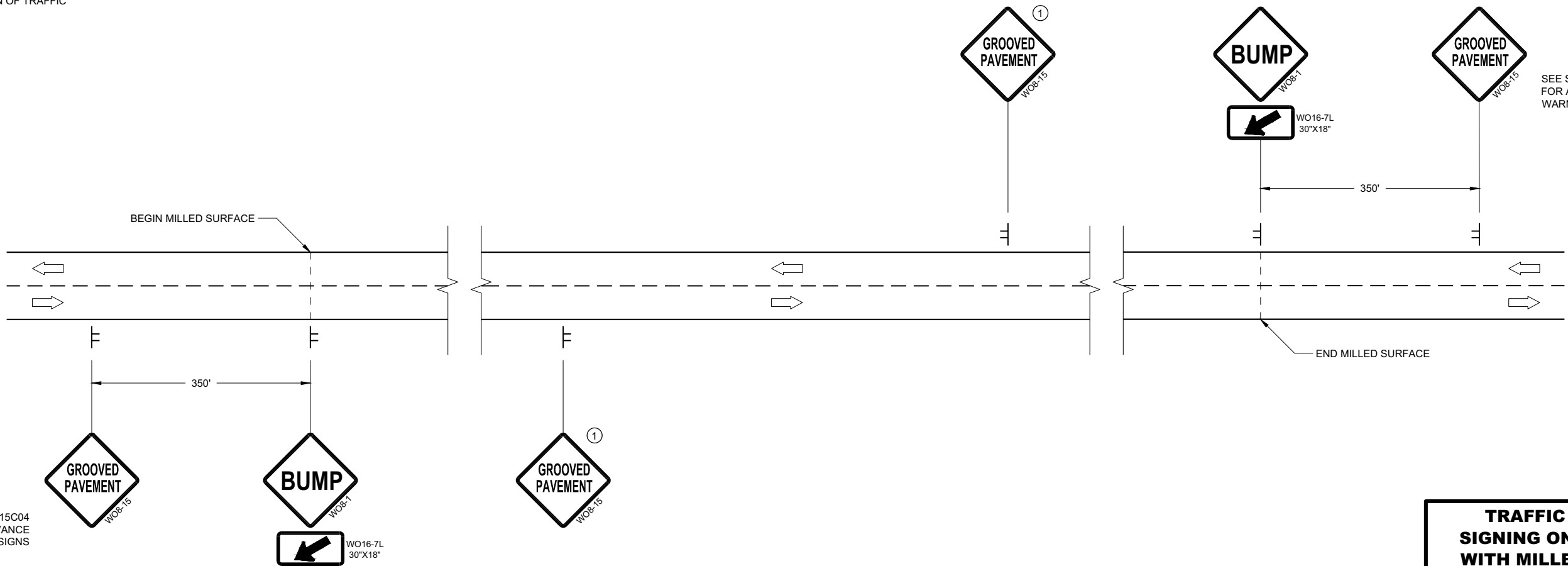
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER


FHWA


LEGEND


- V1

WORK VEHICLE
- V2

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

FLASHING ARROW PANEL (CAUTION)
- 

WORK AREA
- 

DIRECTION OF TRAFFIC

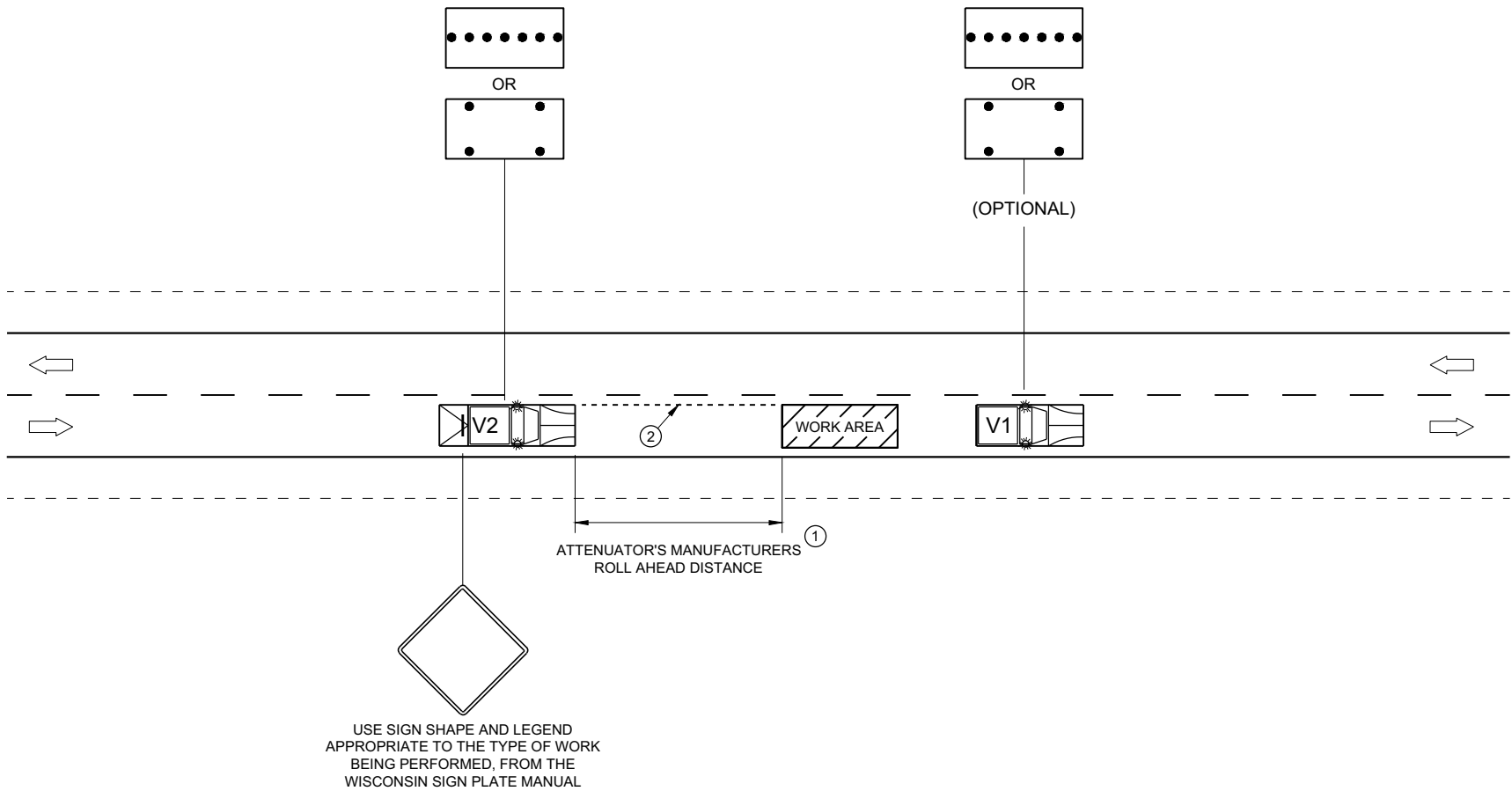
POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.
- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- ①

DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ②

ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY

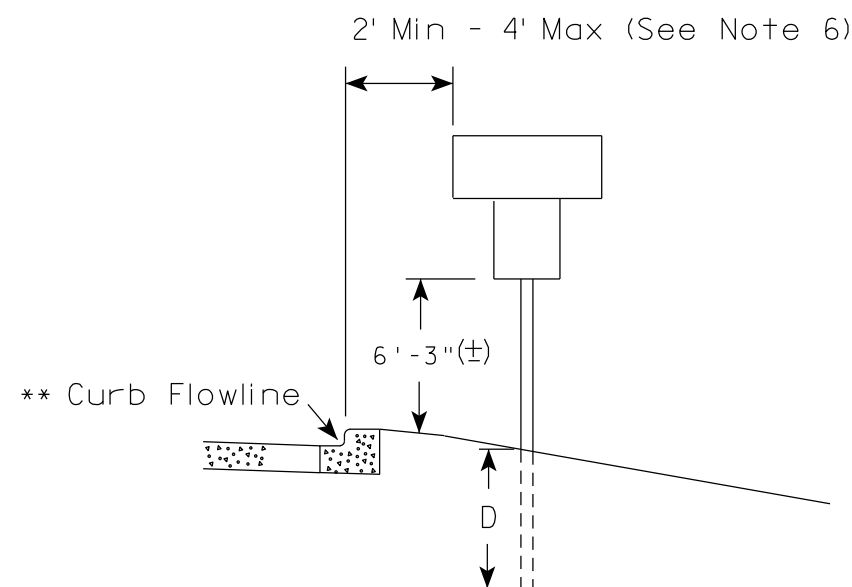
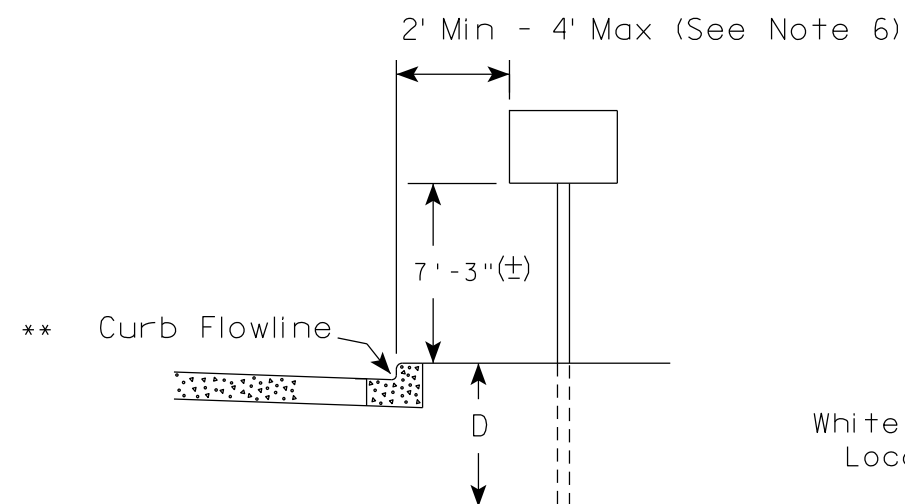
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

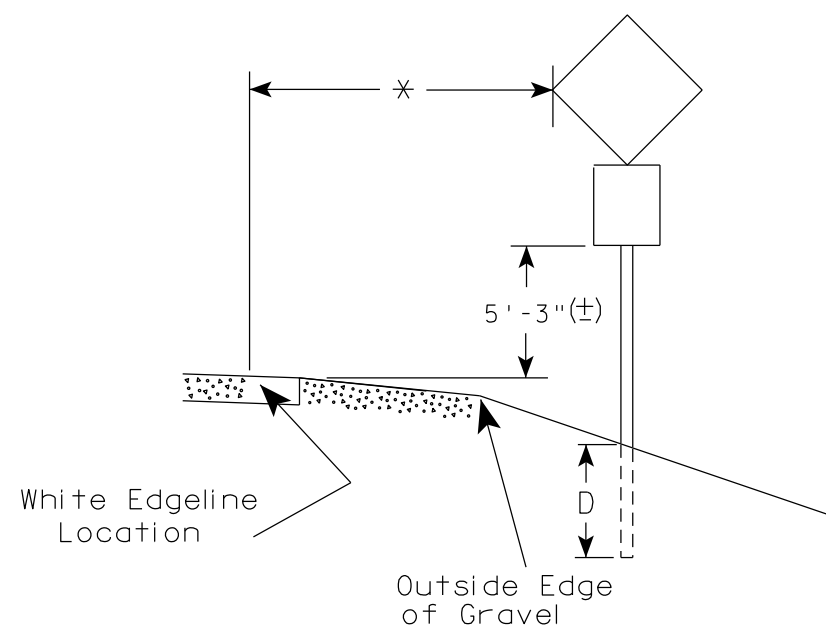
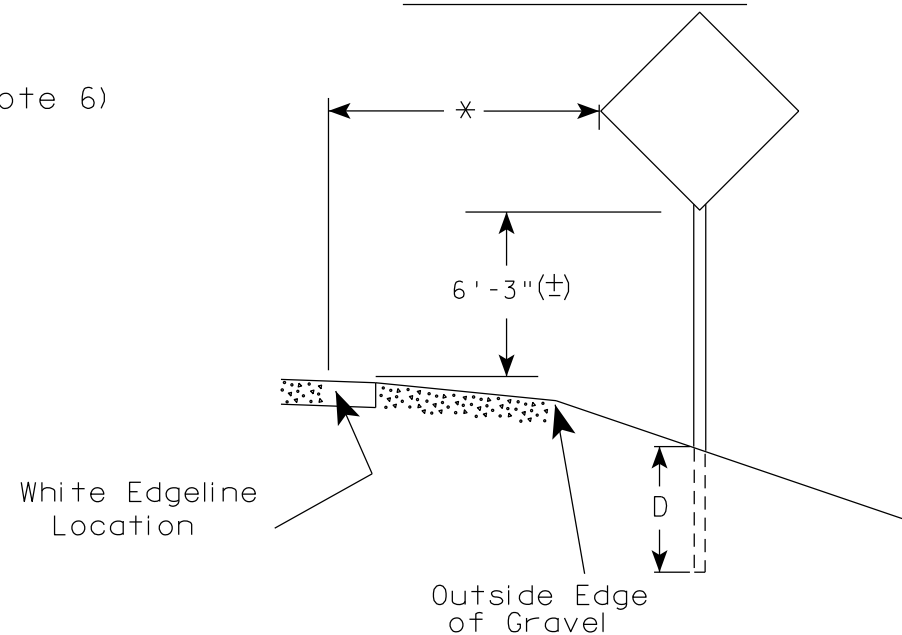
FHWA

URBAN AREA



✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

RURAL AREA (See Note 2)



✱ 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



ELEVATION VIEW

DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

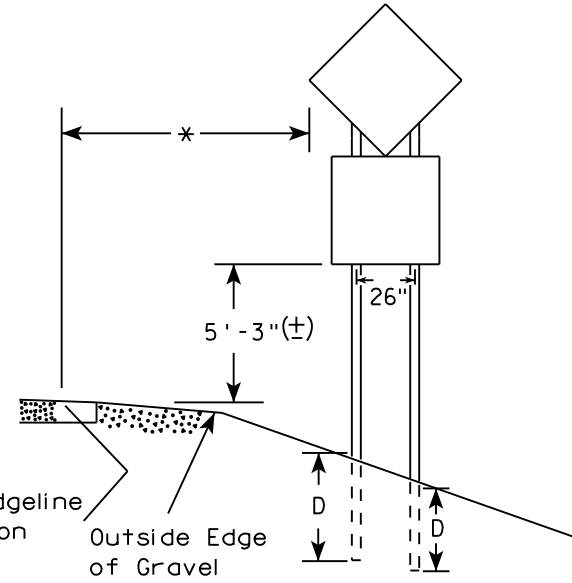
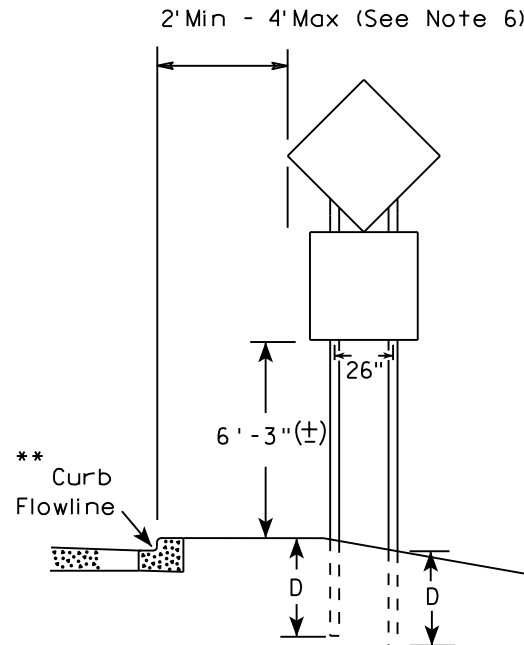
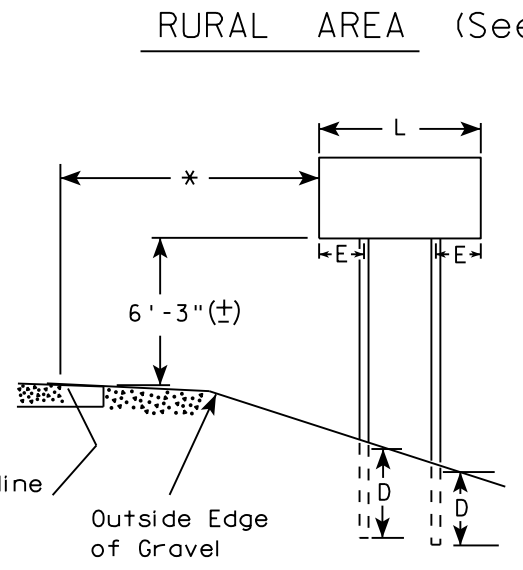
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

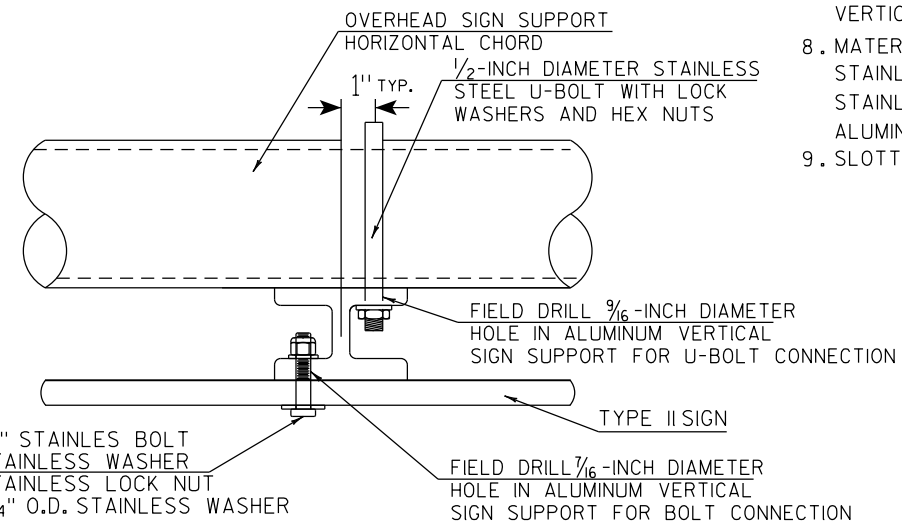
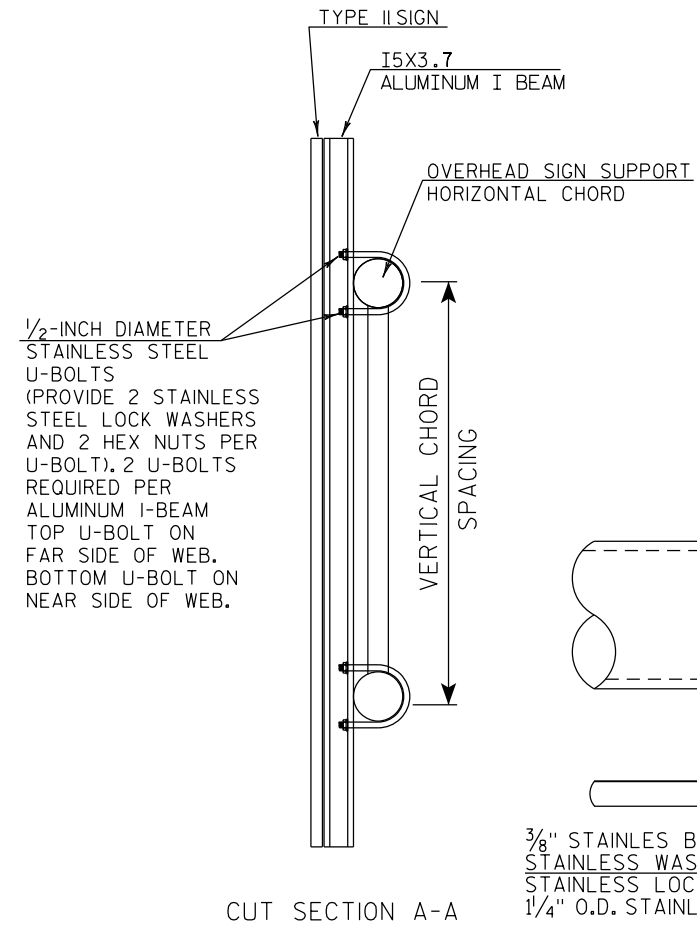
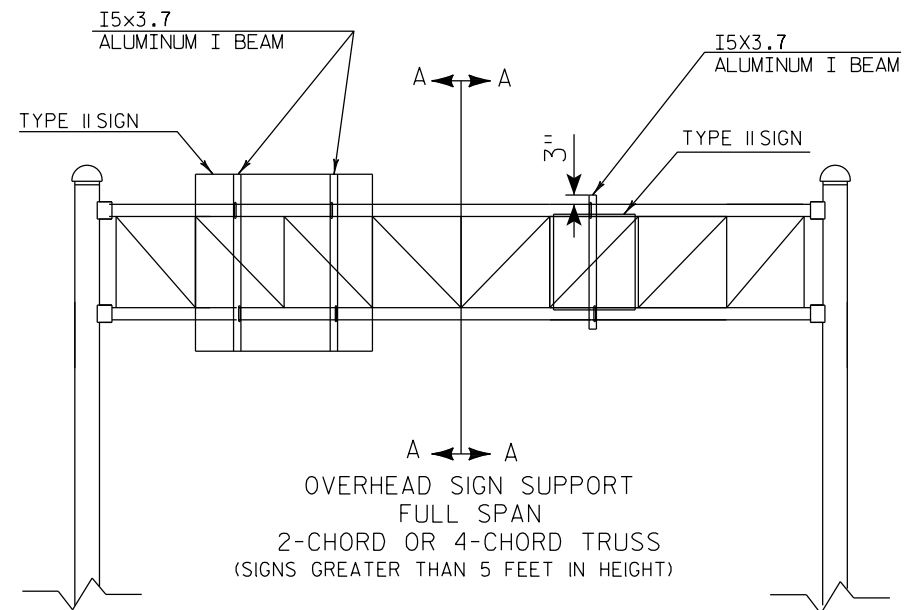
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15

- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. J-Assemblies are considered to be one sign for mounting height.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

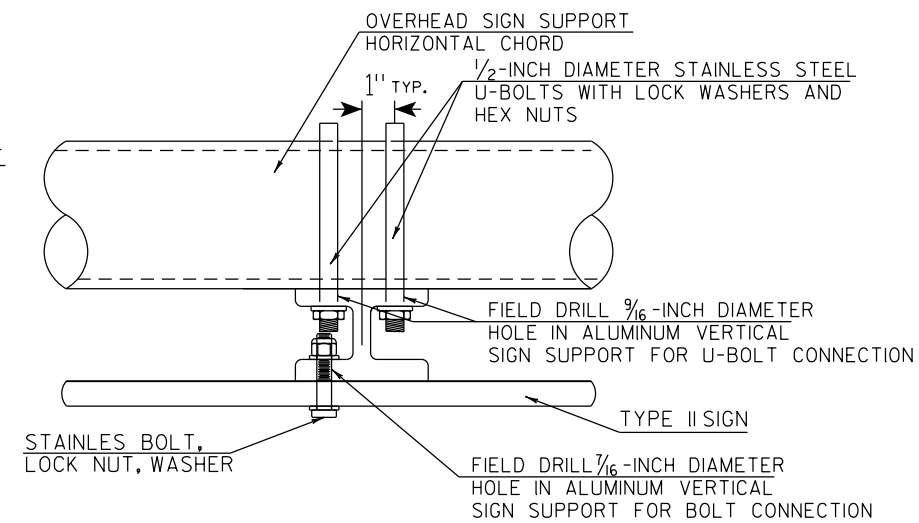
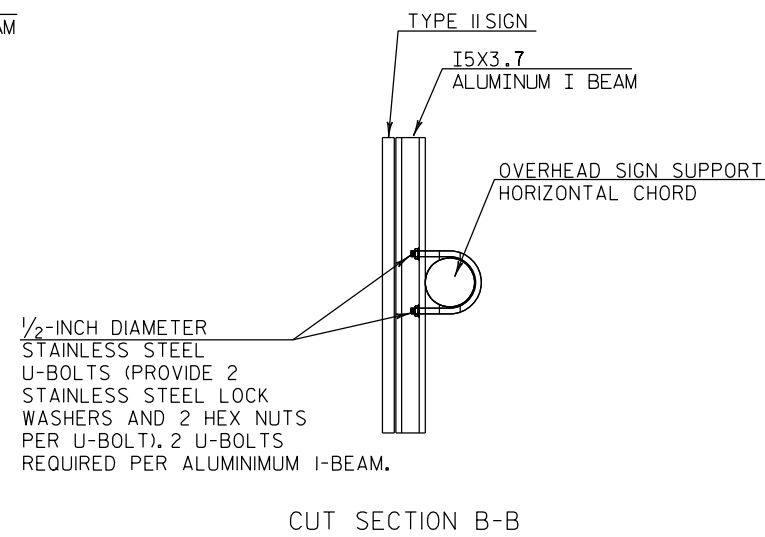
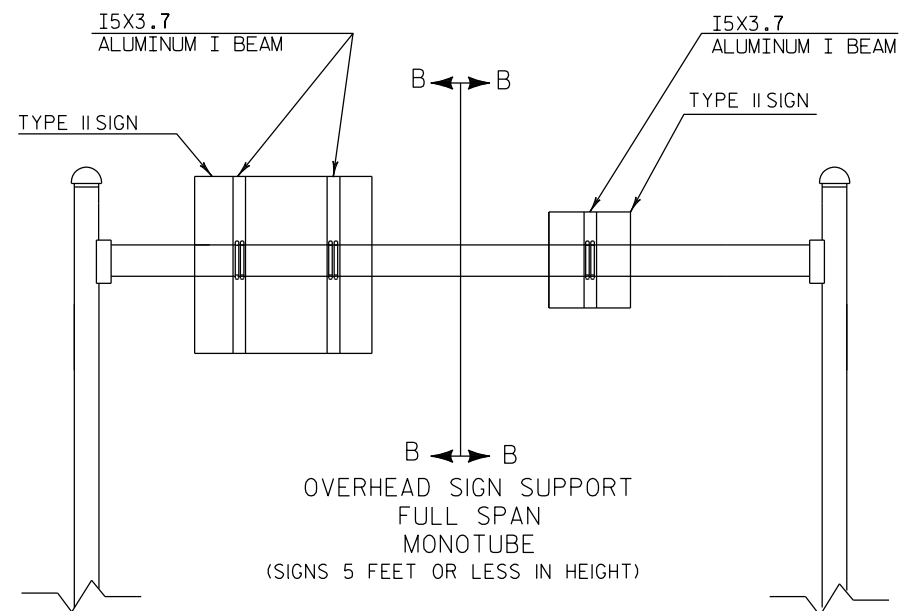
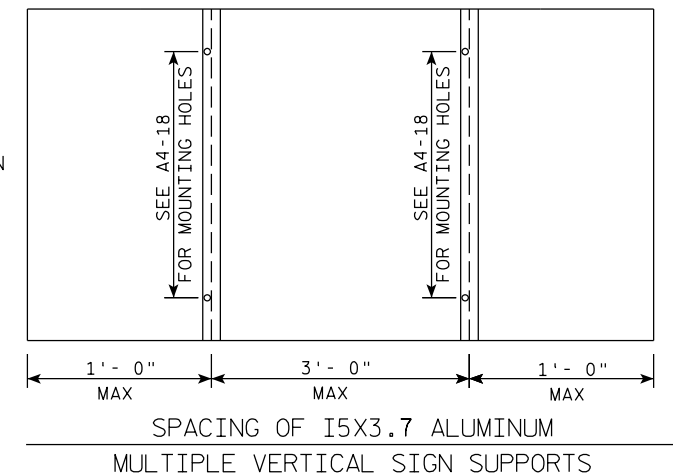
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

GENERAL NOTES

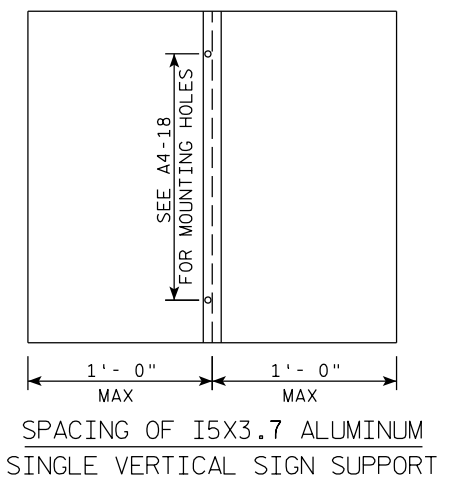
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.
STAINLESS STEEL HEX NUTS ASTM A276.
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

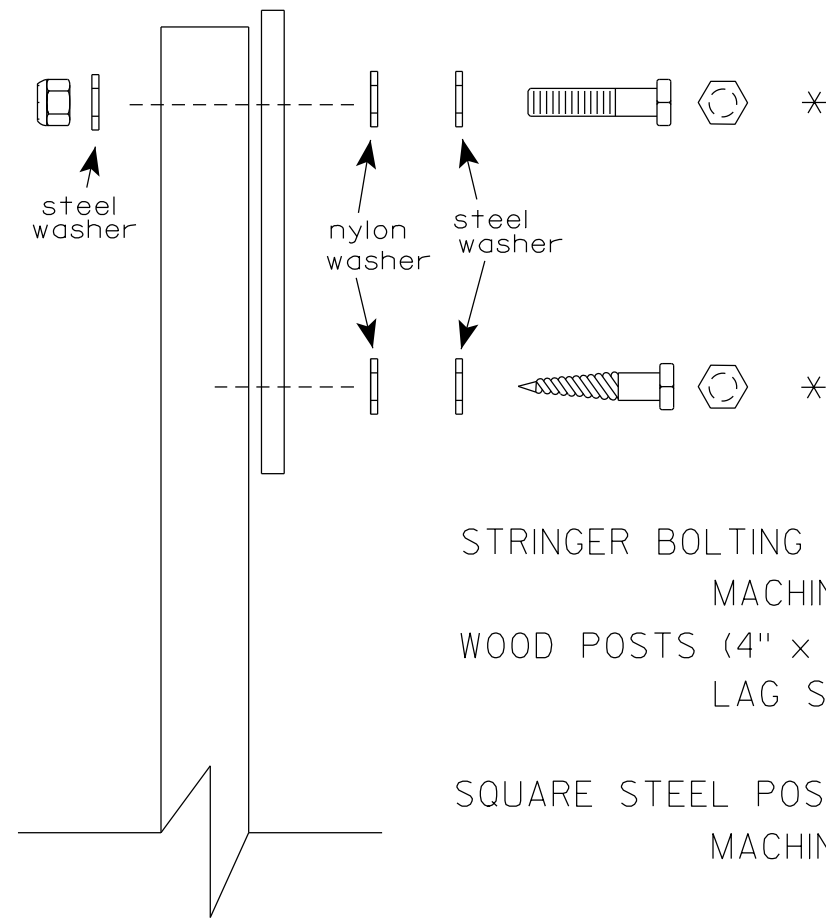
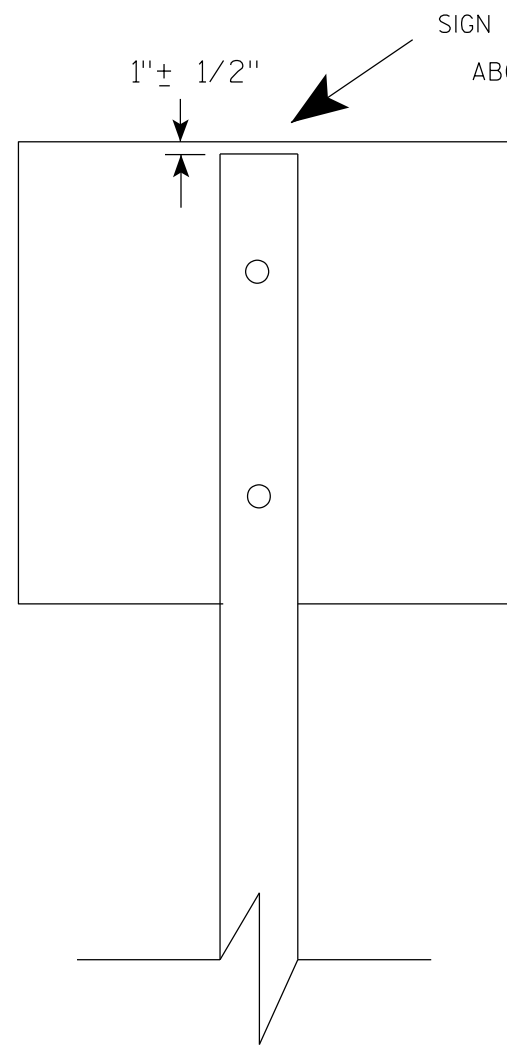


TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7B.1



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

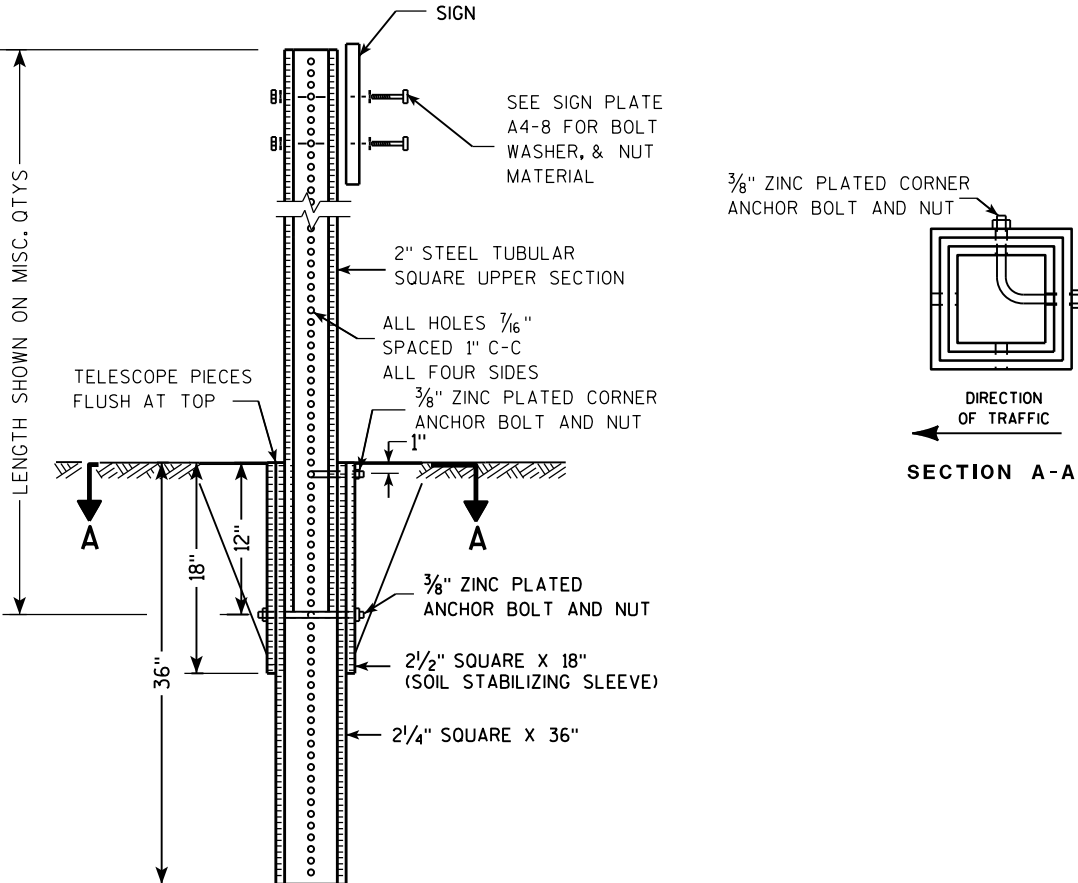
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

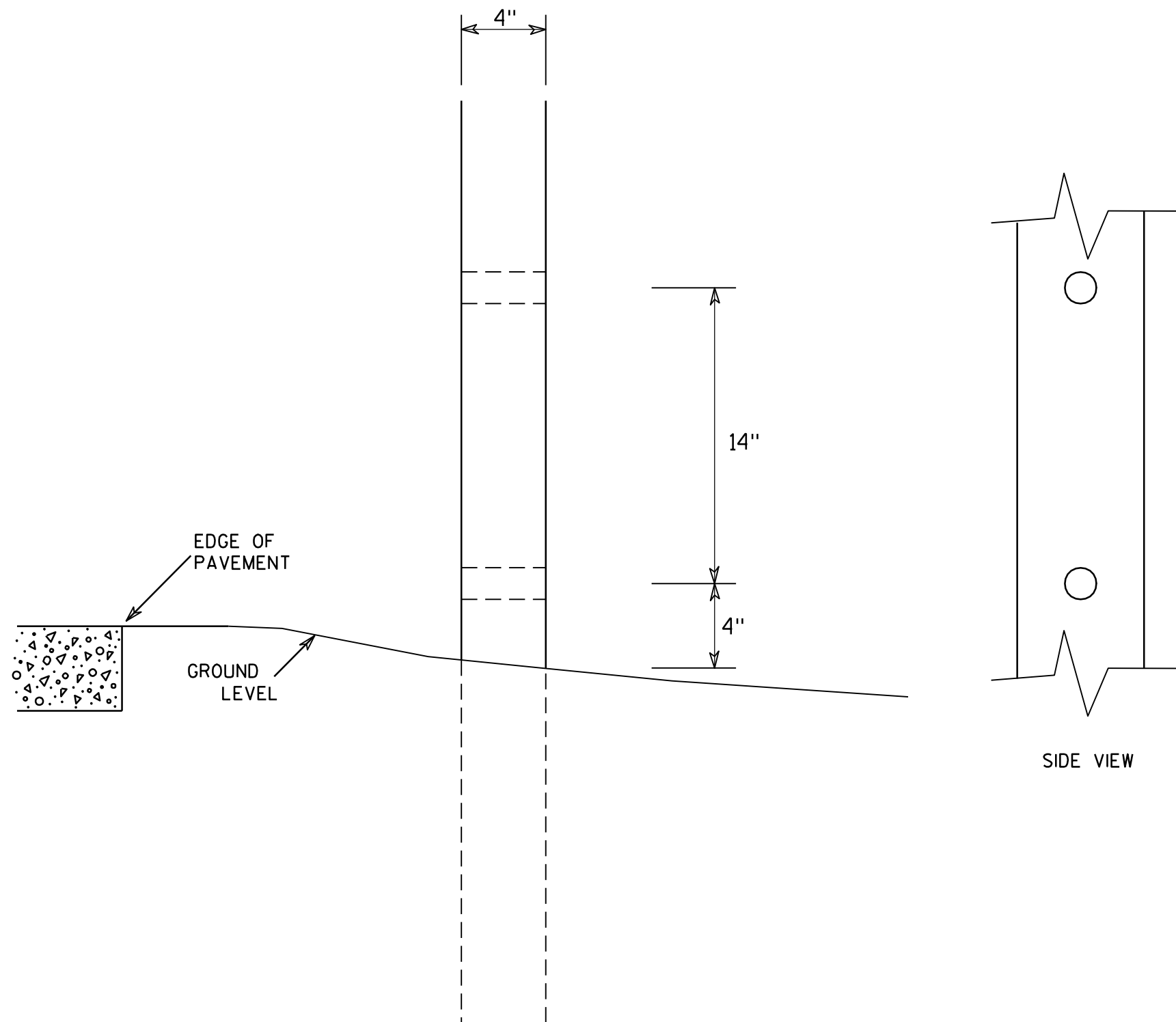
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

7

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

**4 X 6 WOOD POST
MODIFICATIONS**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

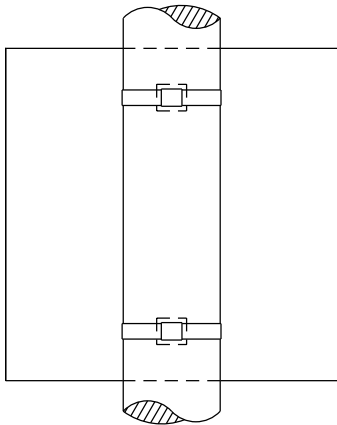
COUNTY:

SHEET NO:

E

BANDING

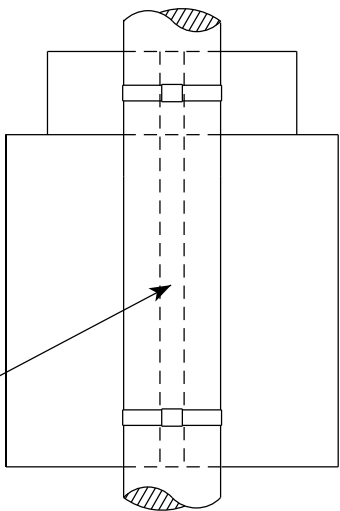
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

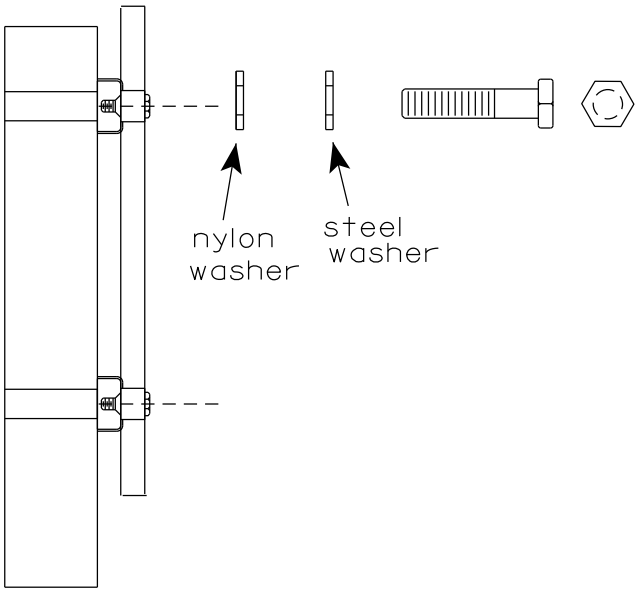
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

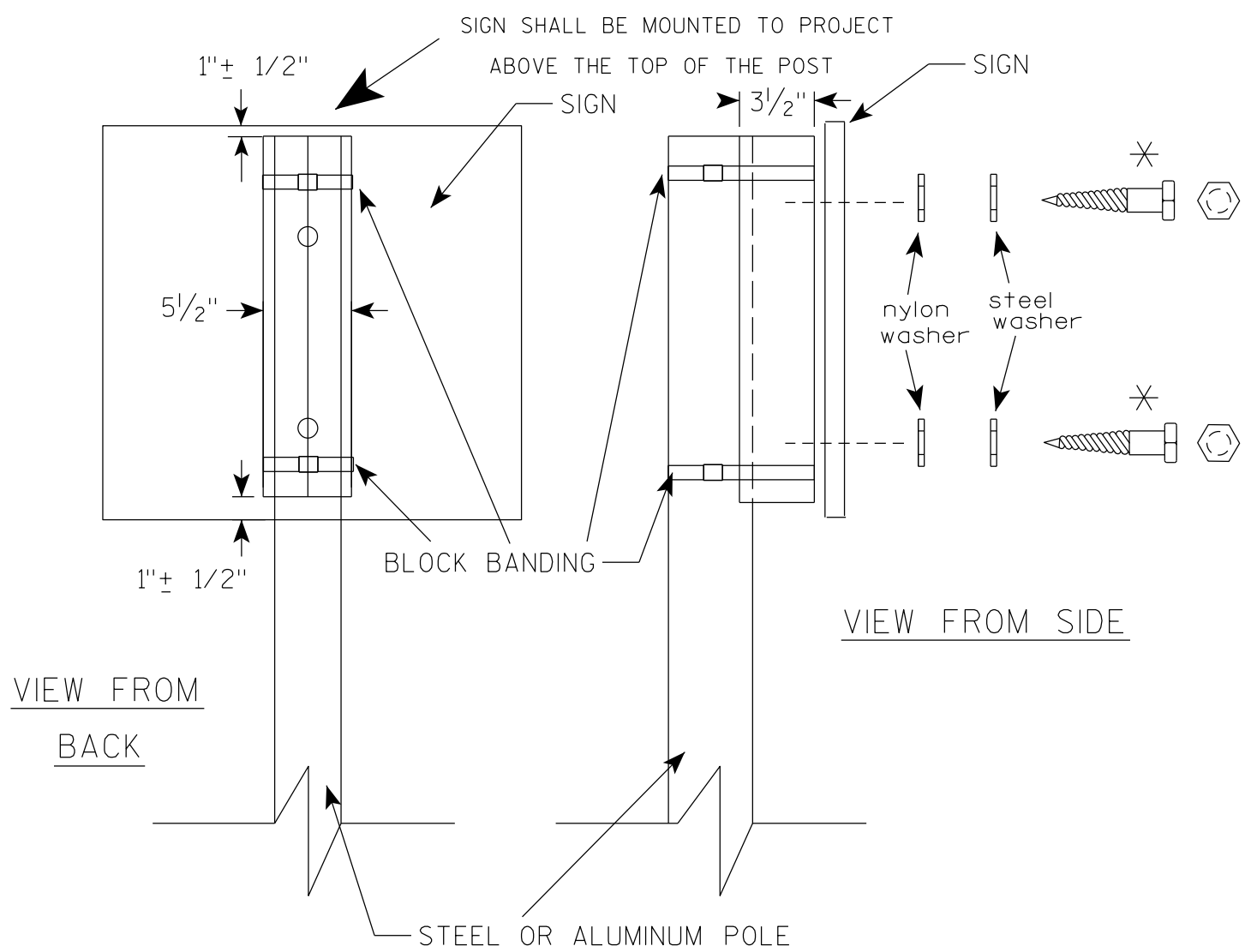


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

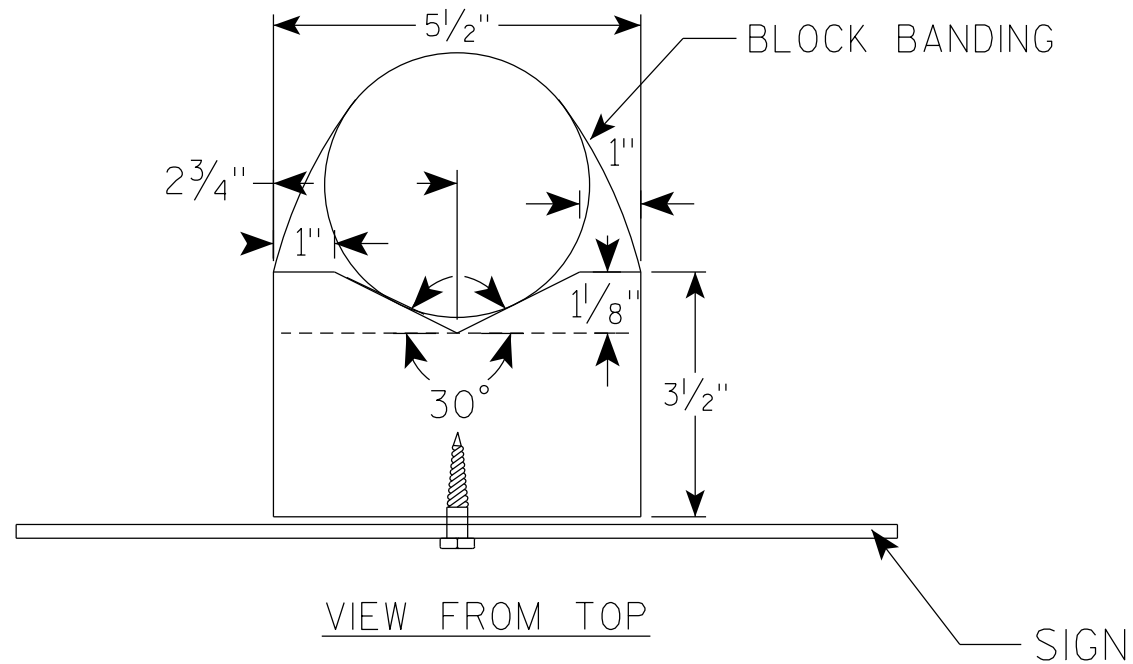
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

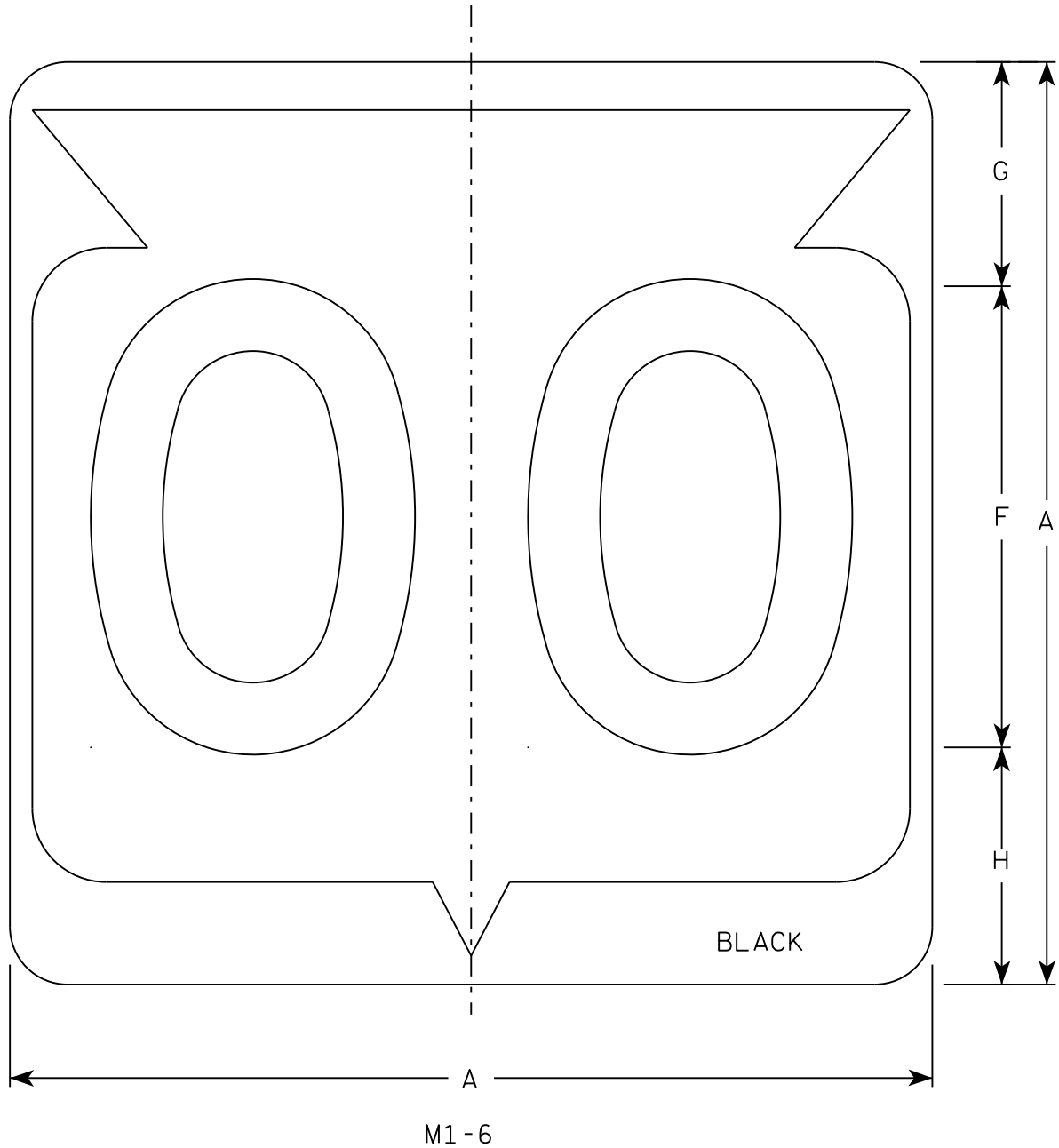
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO:

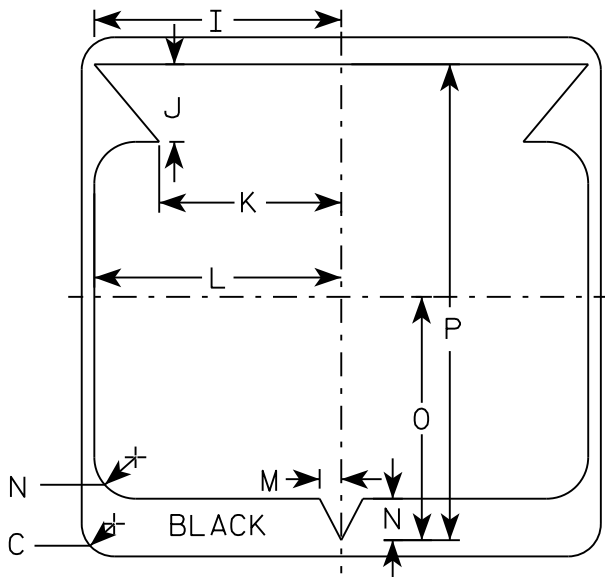
E

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D except 3 number signs Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

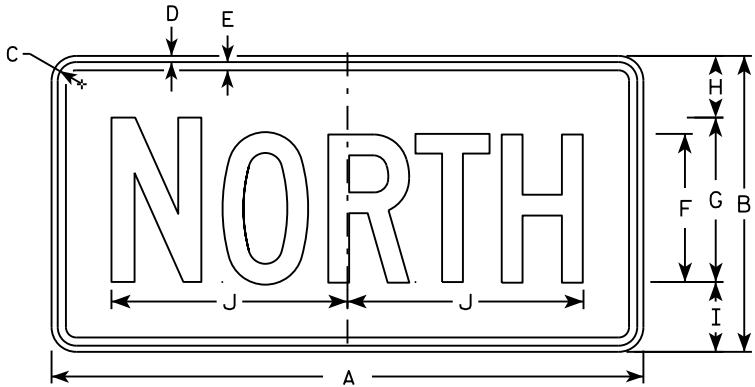
E

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

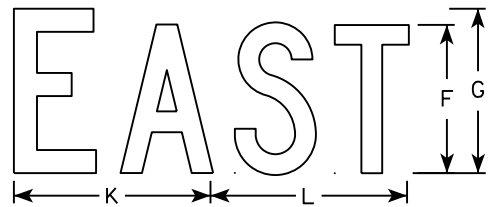
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

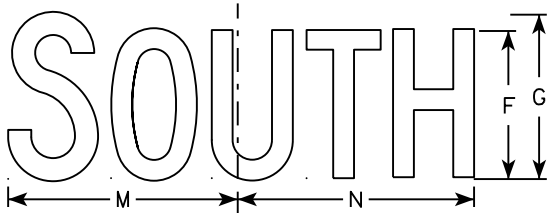
DATE 3/16/18 PLATE NO. M1-6.10



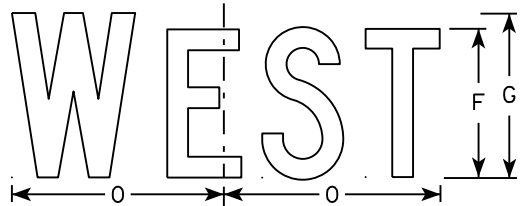
M3-1
MM3-1
MP3-1



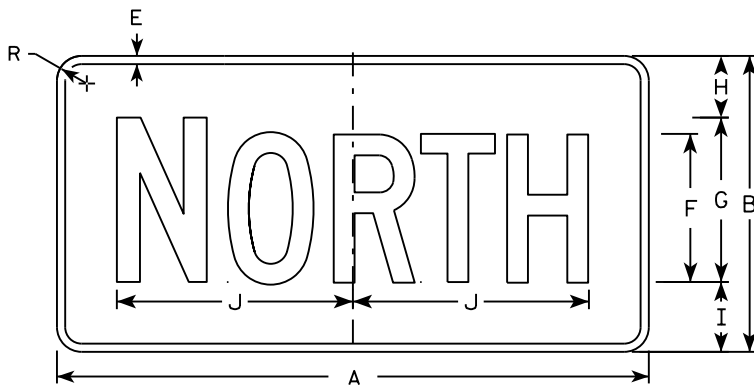
M3-2
MM3-2
MP3-2



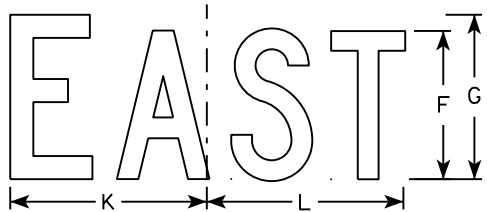
M3-3
MM3-3
MP3-3



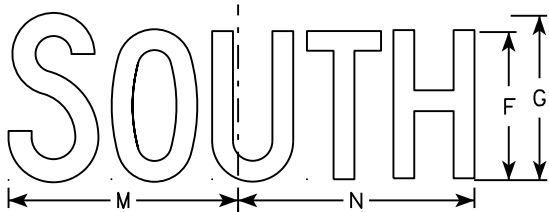
M3-4
MM3-4
MP3-4



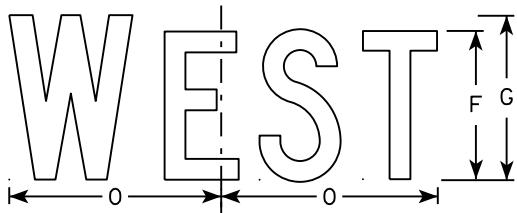
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

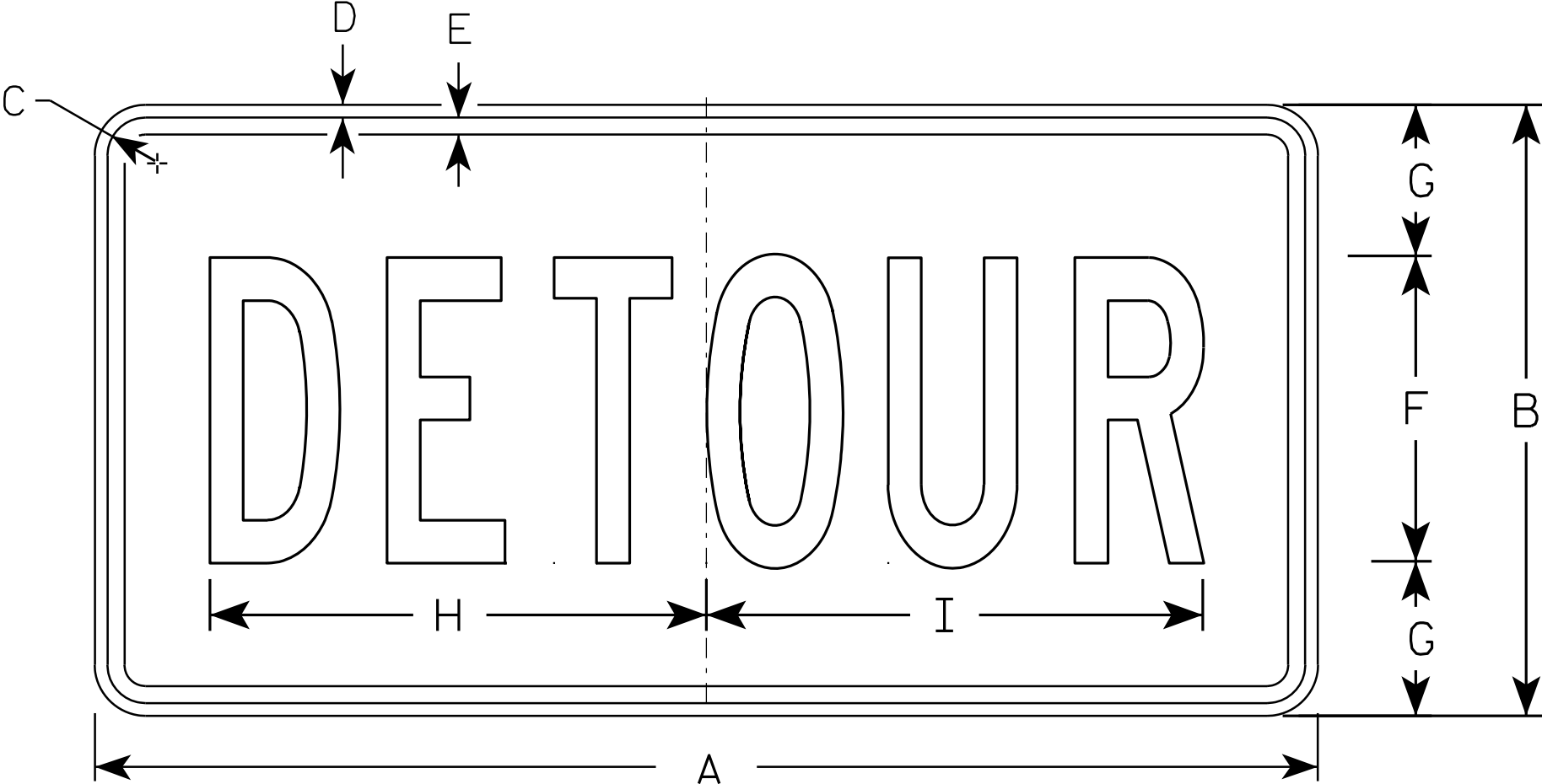
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4 - 8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

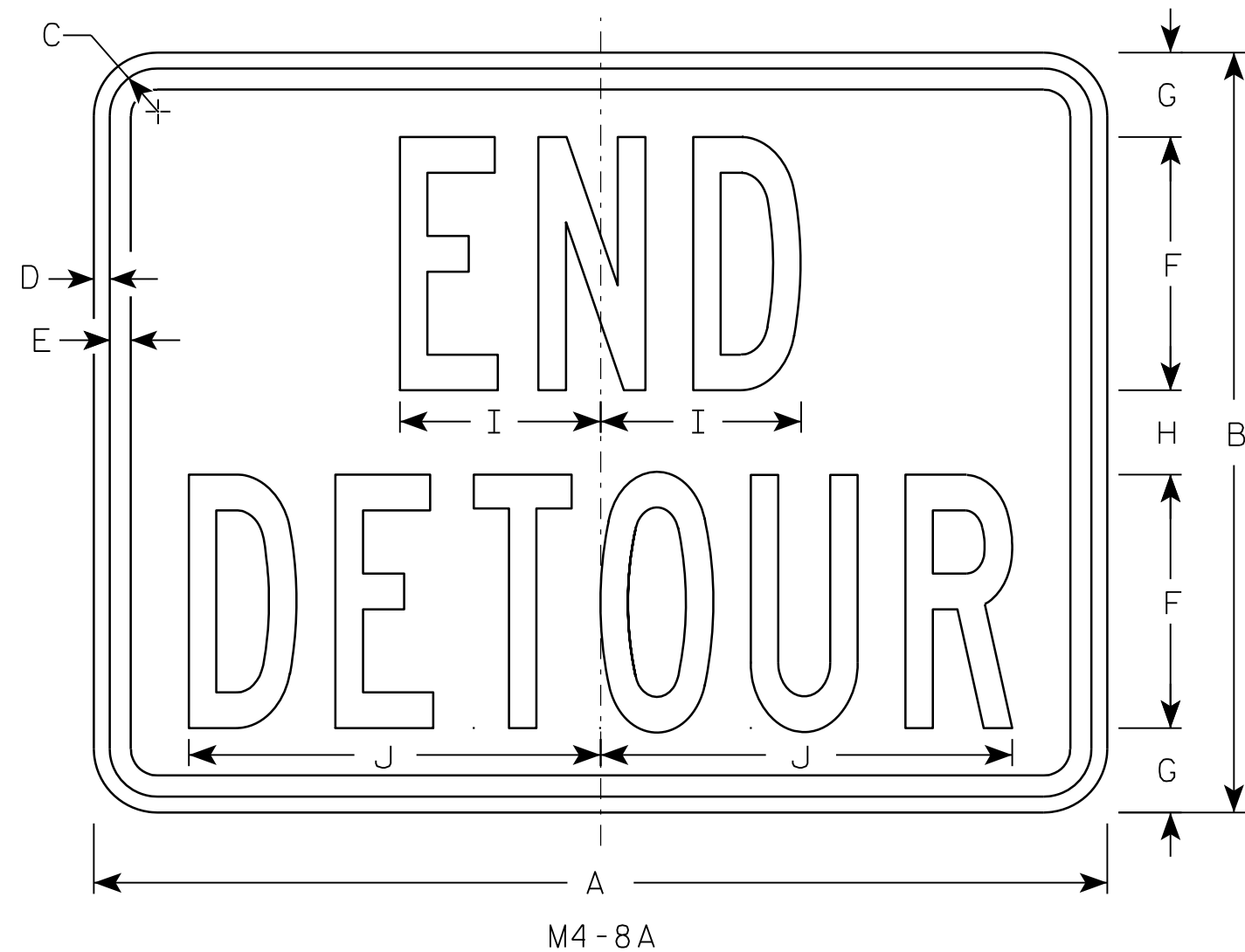
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

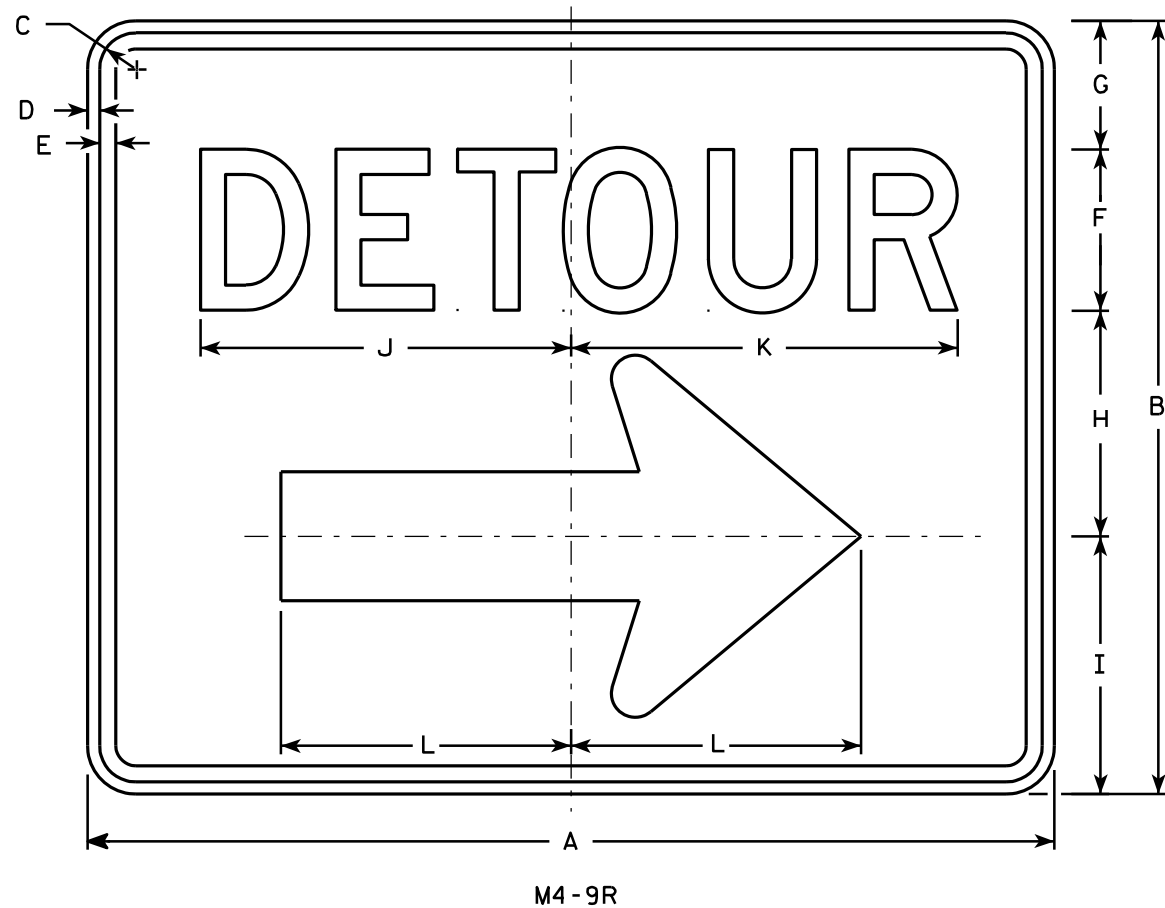
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

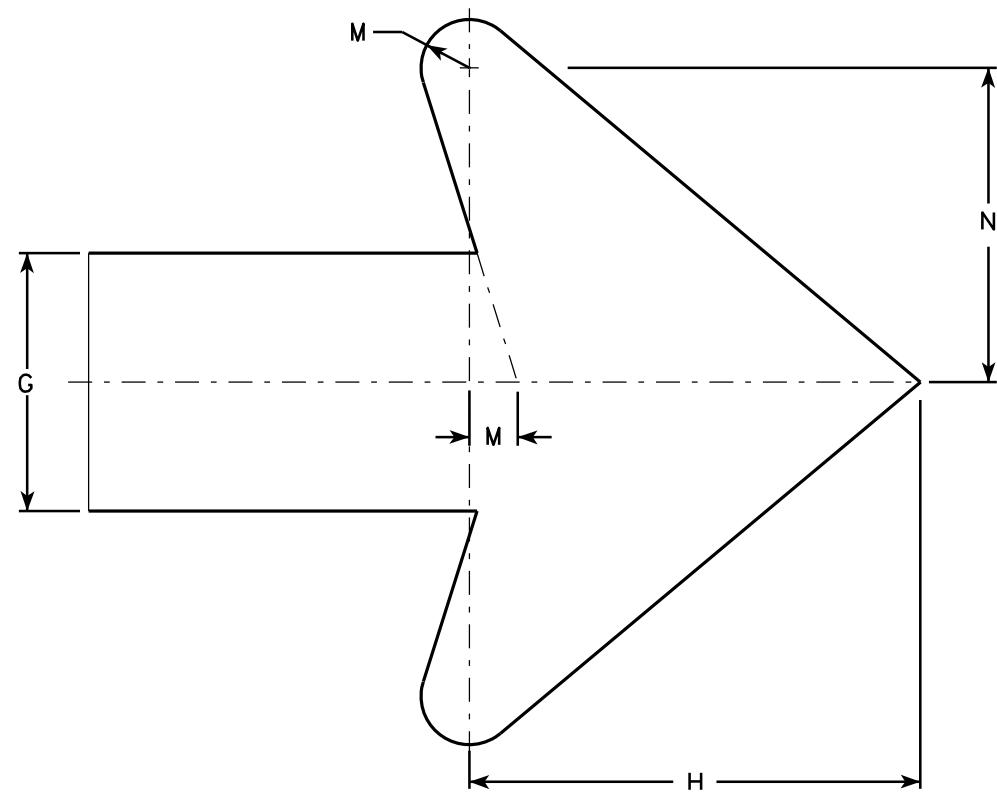
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2



- NOTES**
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Orange
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

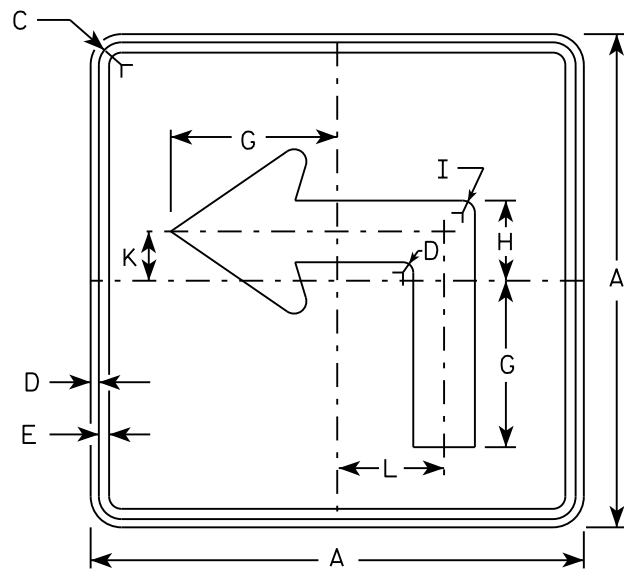
PROJECT NO:

HWY:

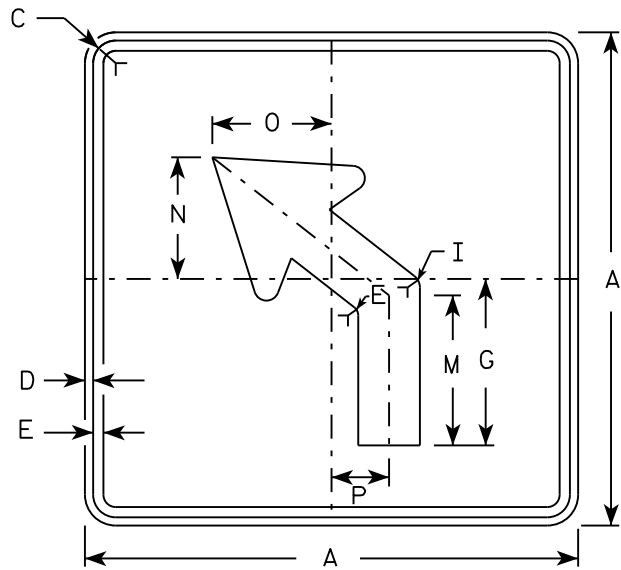
COUNTY:

SHEET NO:

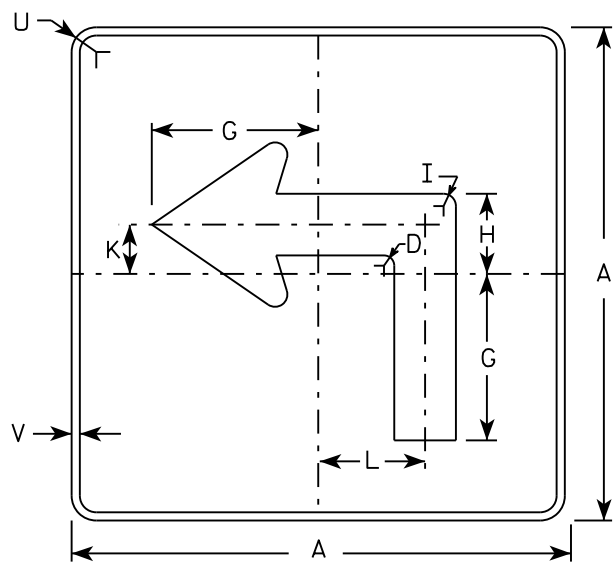
E



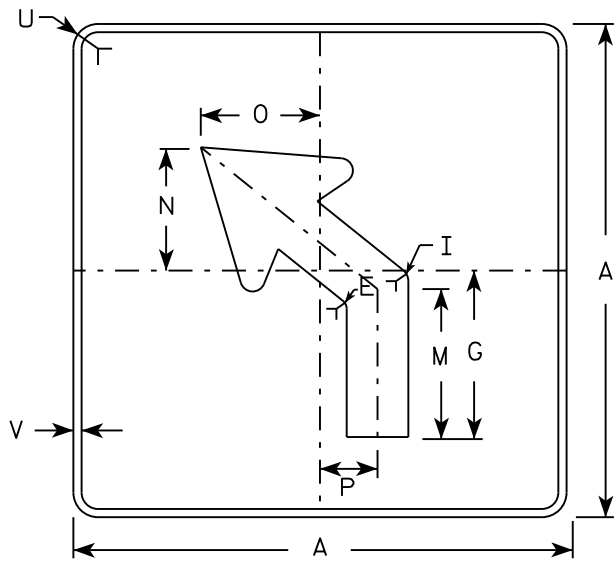
M5-1L
MM5-1L
M05-1L
MP5-1L



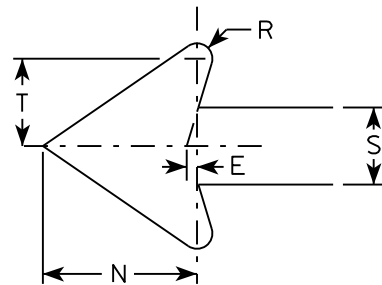
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White
MK5-1 and MK5-2 Background - Green
Message - White
MM5-1 and MM5-2 Background - White
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White
M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
MR5-1 and MR5-2 Background - Brown
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

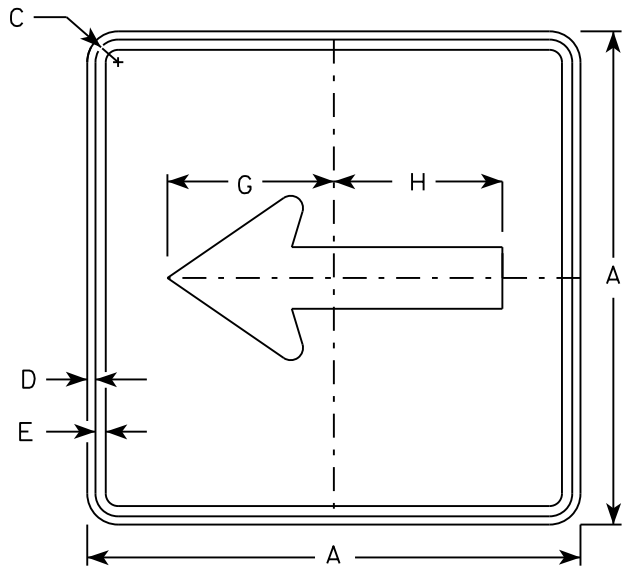
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M5-1 & M5-2

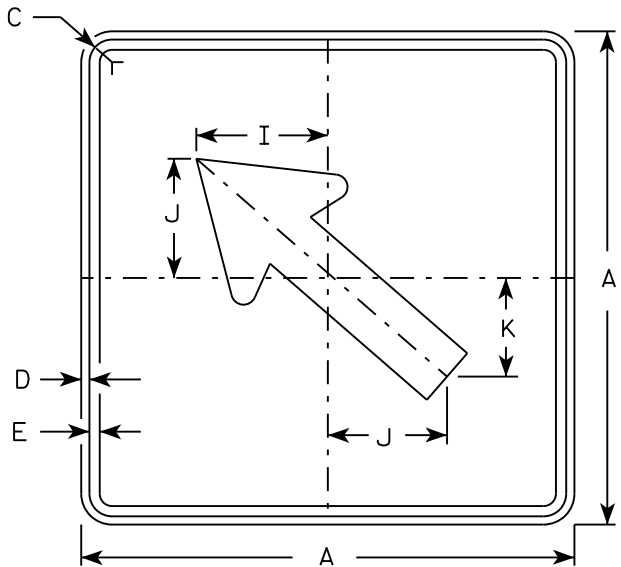
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

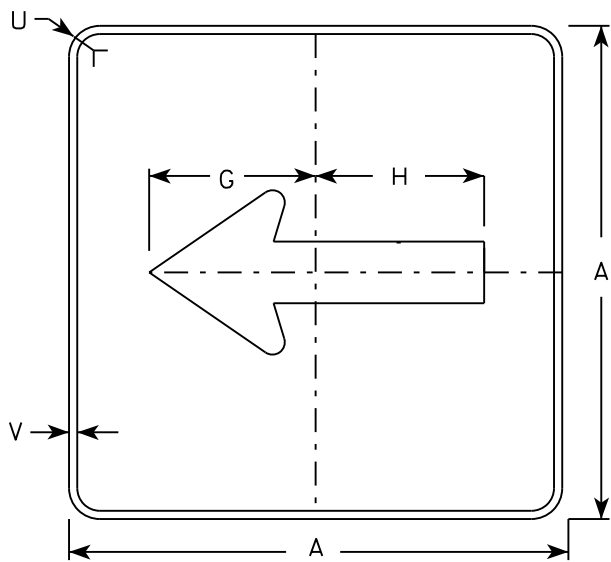
DATE 10/15/15 PLATE NO. M5-1.13



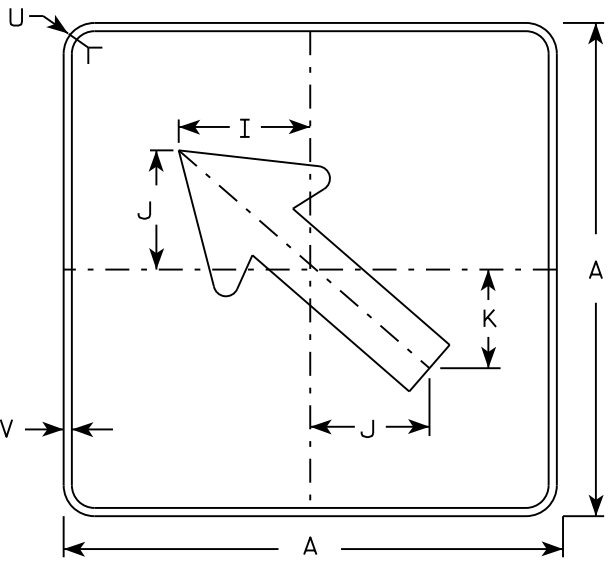
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



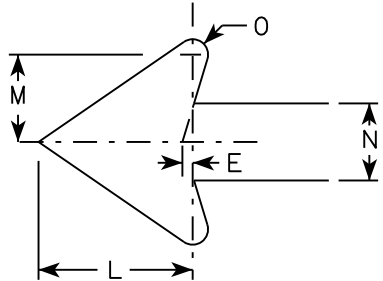
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
Background - See note 4
Message - See note 4
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

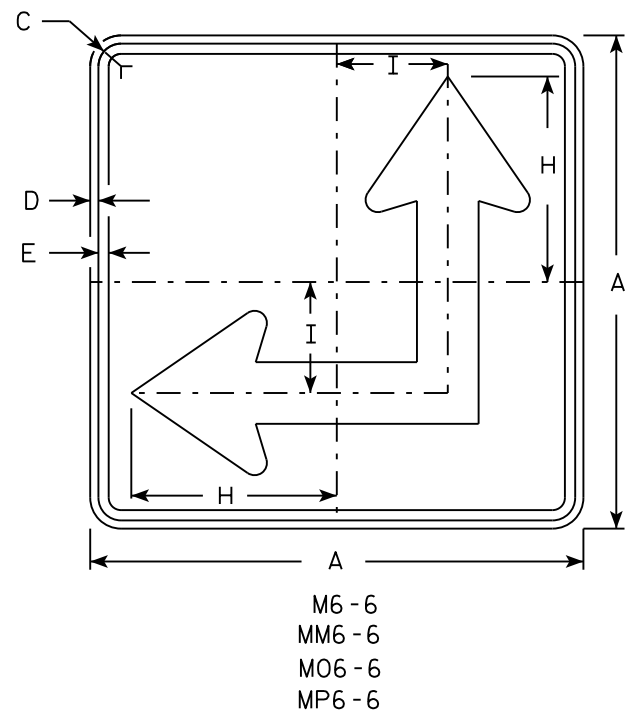
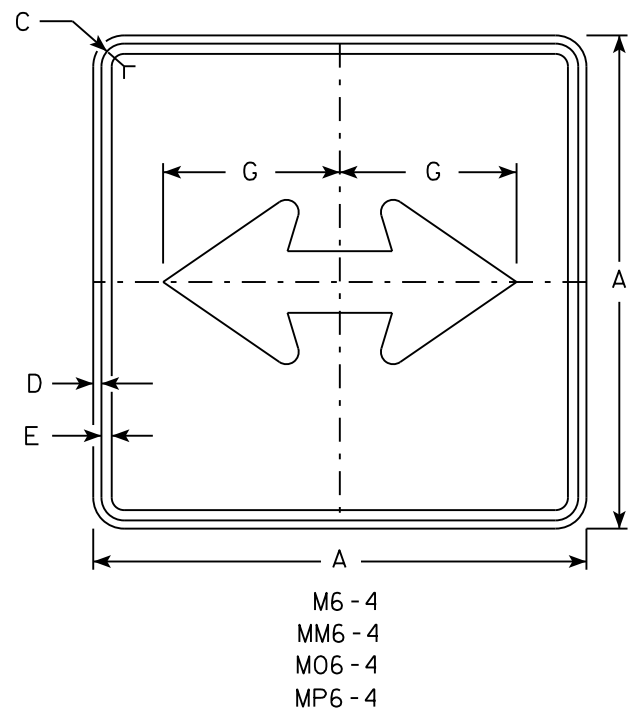
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

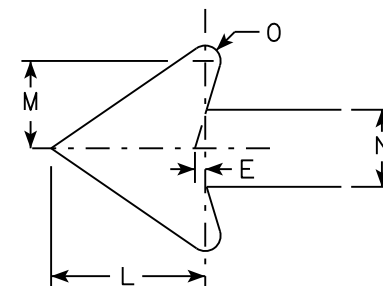
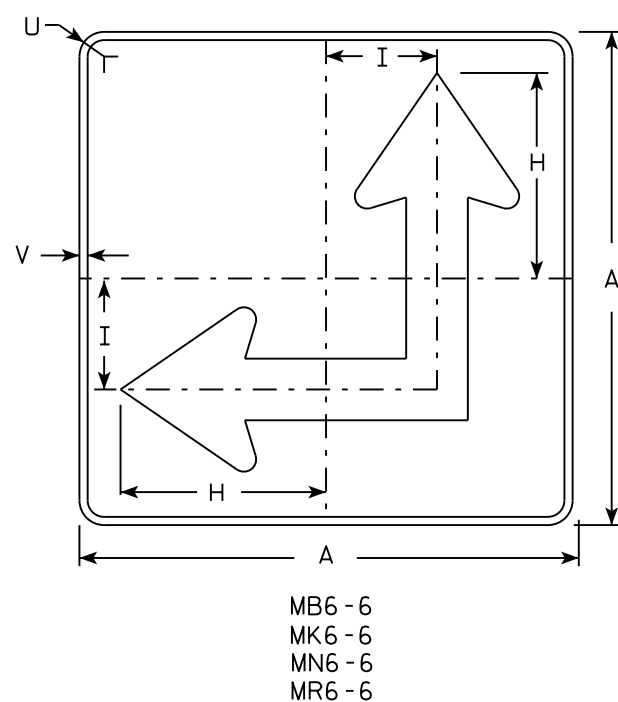
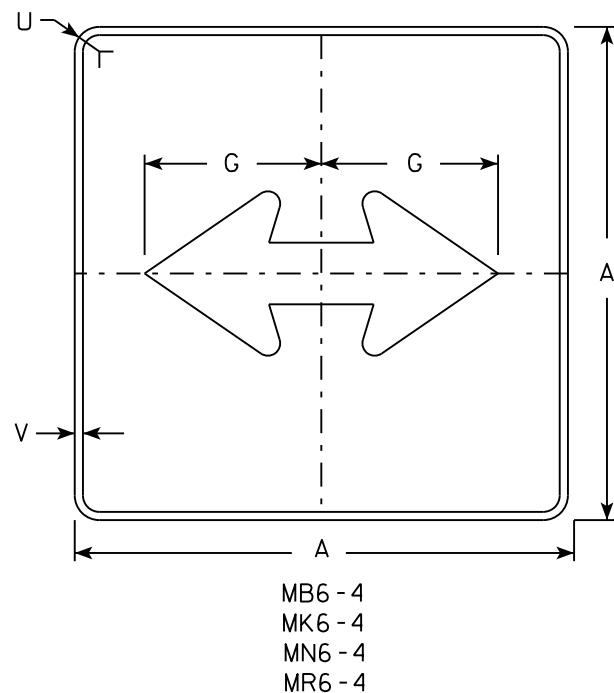
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



- NOTES
- Signs are Type II - Type H except as Shown
 - Color:
Background - See Note 4
Message - See Note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
 - M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

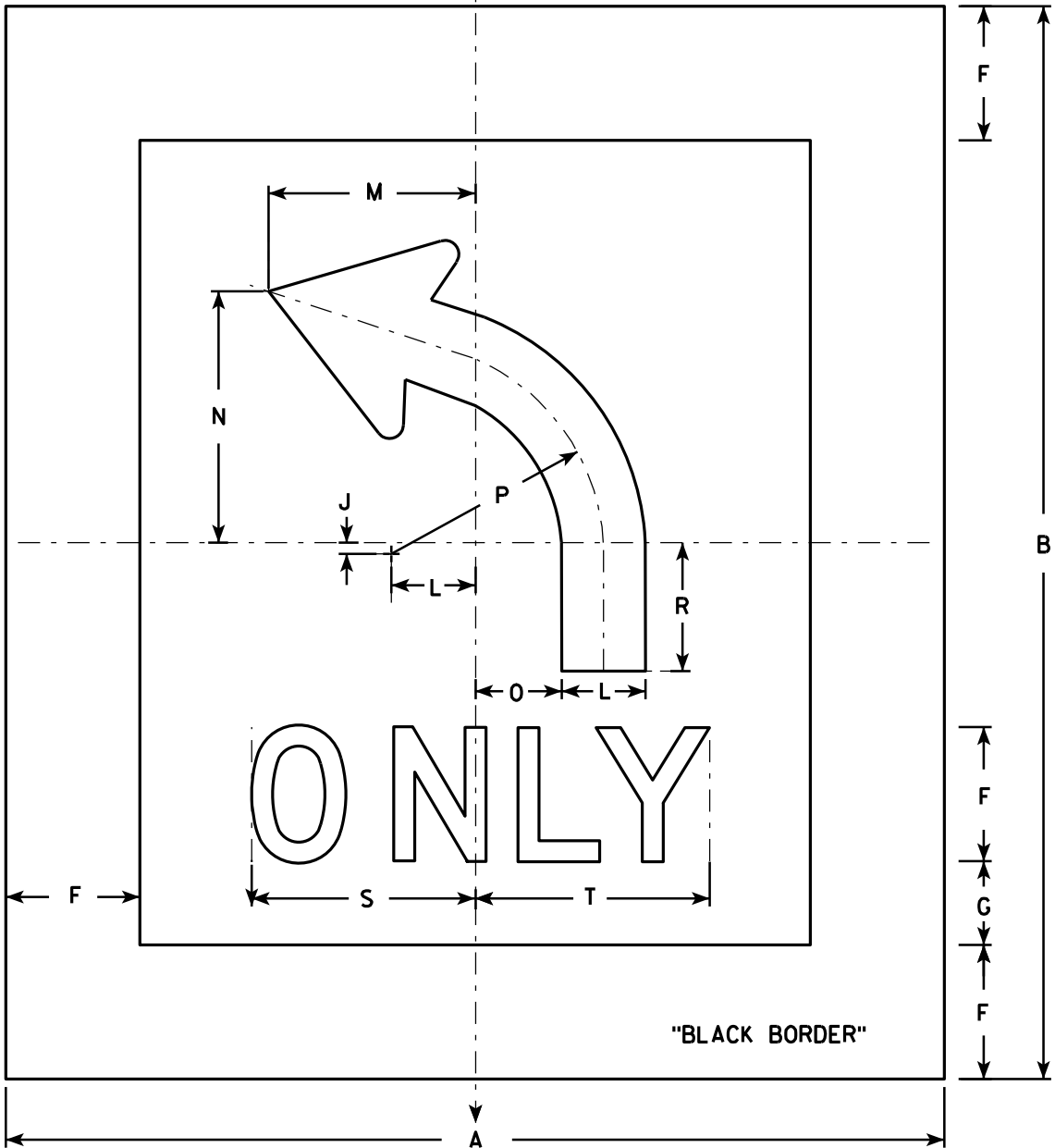
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

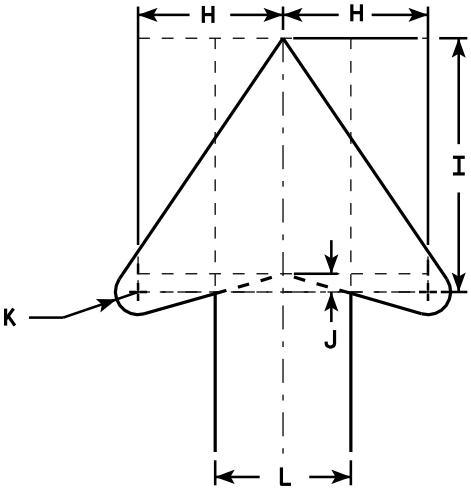
DATE 10/15/15 PLATE NO. M6-4.10



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	3 ¾	4	7	½	⅝	3 ¾	9 ¼	11 ¼	3 ⅞	9 ½		5 ¾	10	10 ½							1.26
2M	42	48				6	3 ¾	4	7	½	⅝	3 ¾	9 ¼	11 ¼	3 ⅞	9 ½		5 ¾	10	10 ½							1.26
3																											
4																											
5																											

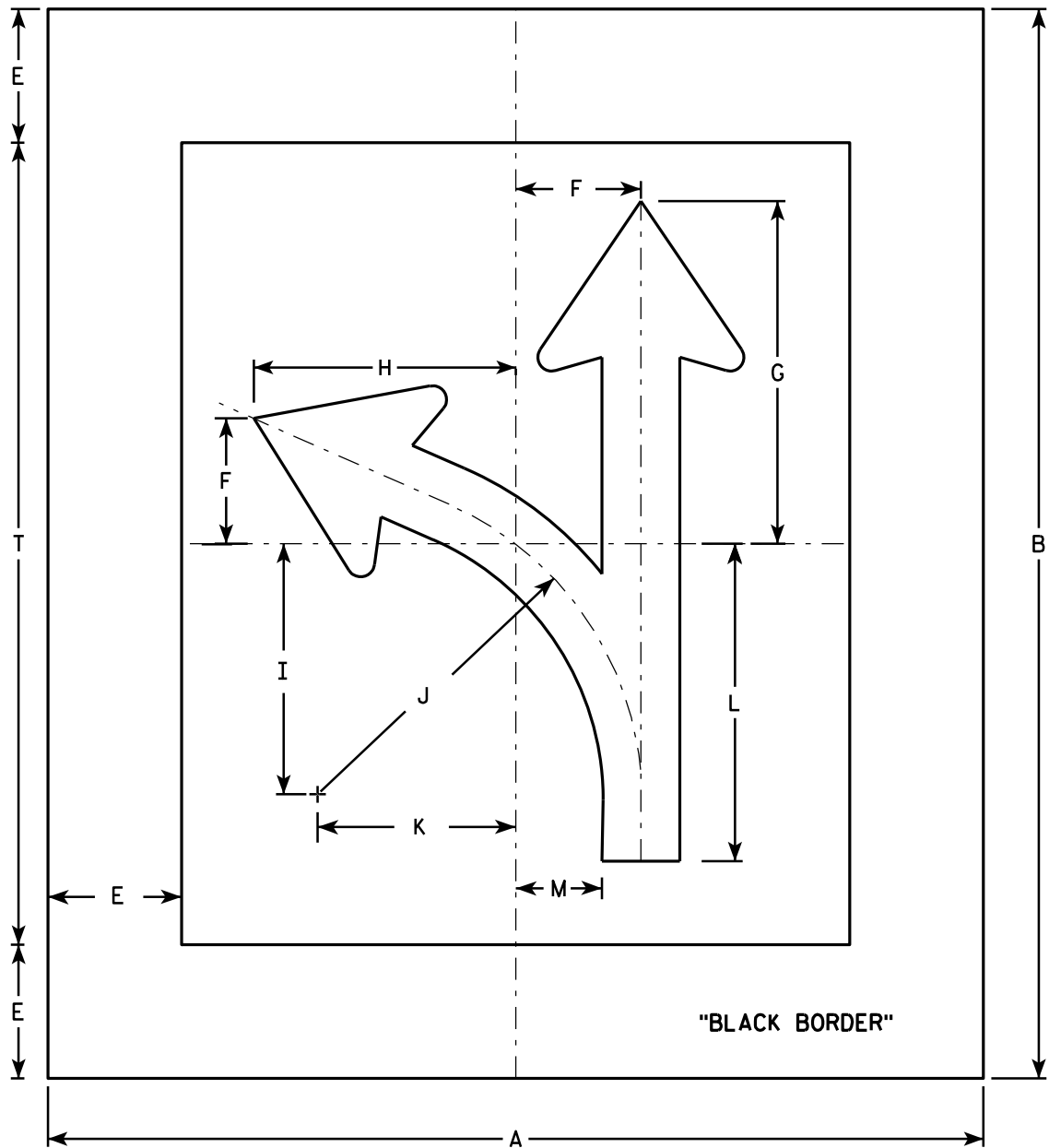
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

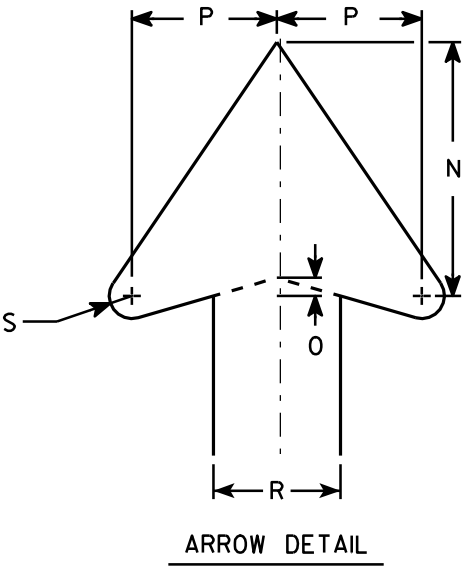
E



R3-6L

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
- 4. R3-6R is the same as R3-6L except curved portion of arrow points right.
- 5. The 6" border is non-reflective black.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

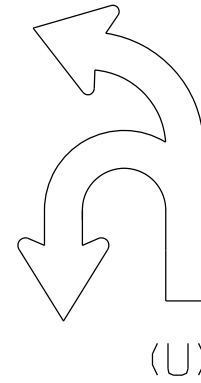
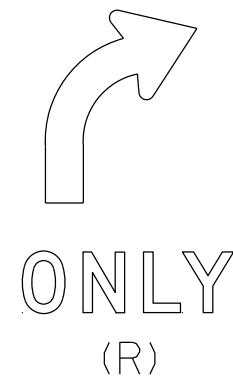
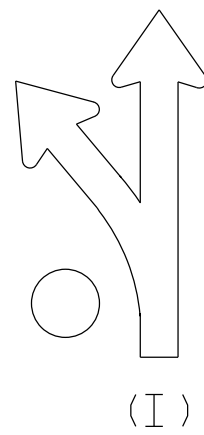
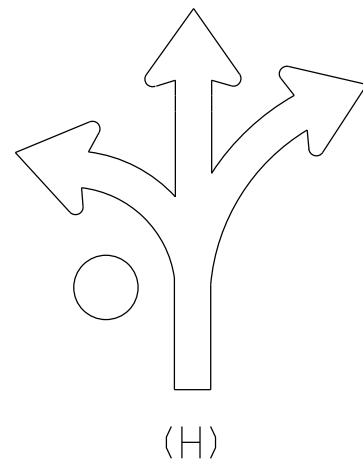
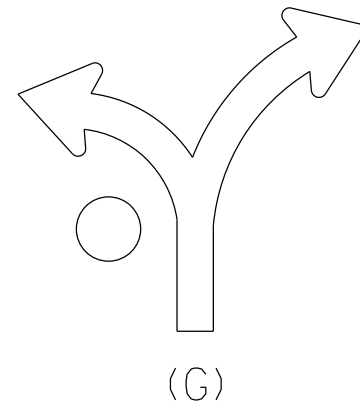
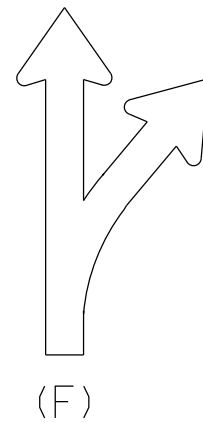
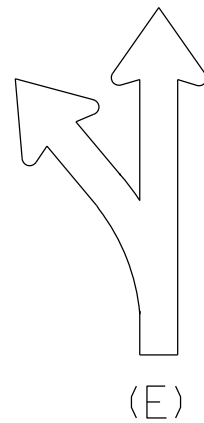
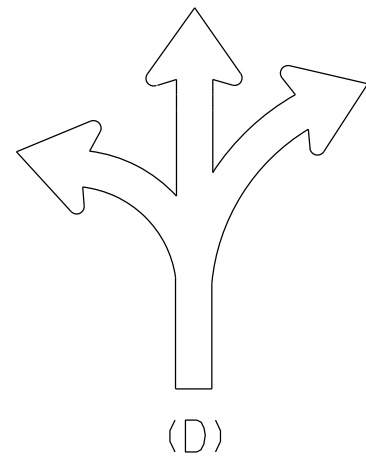
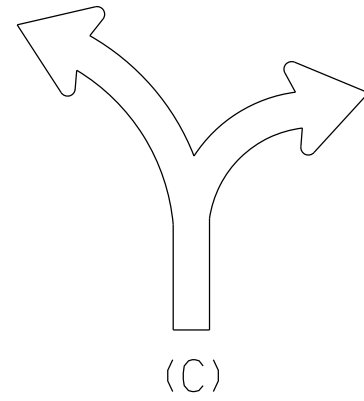
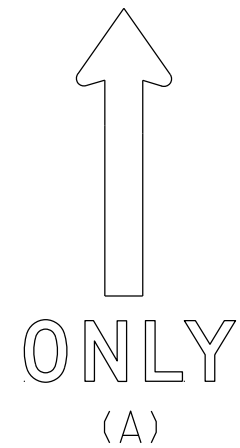
E

STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5



NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

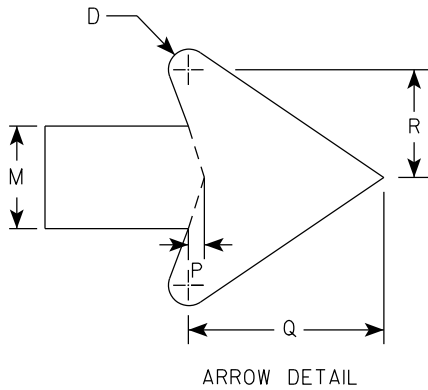
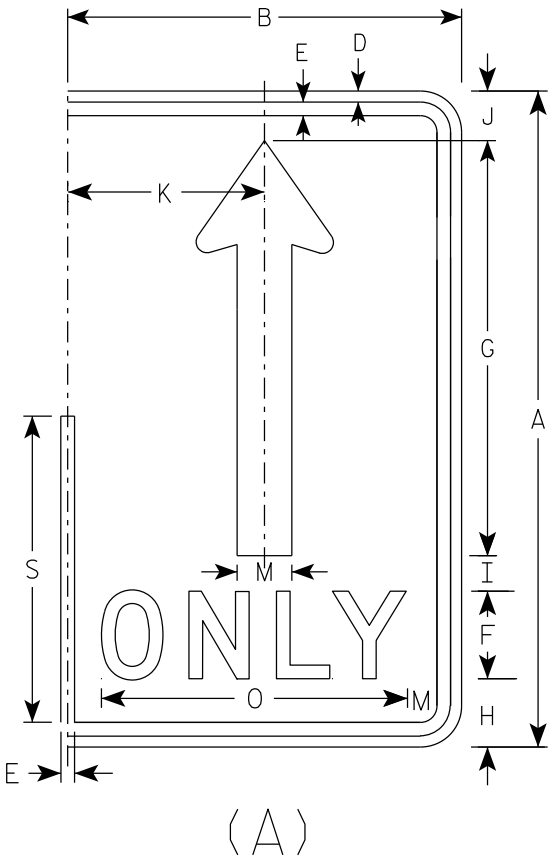
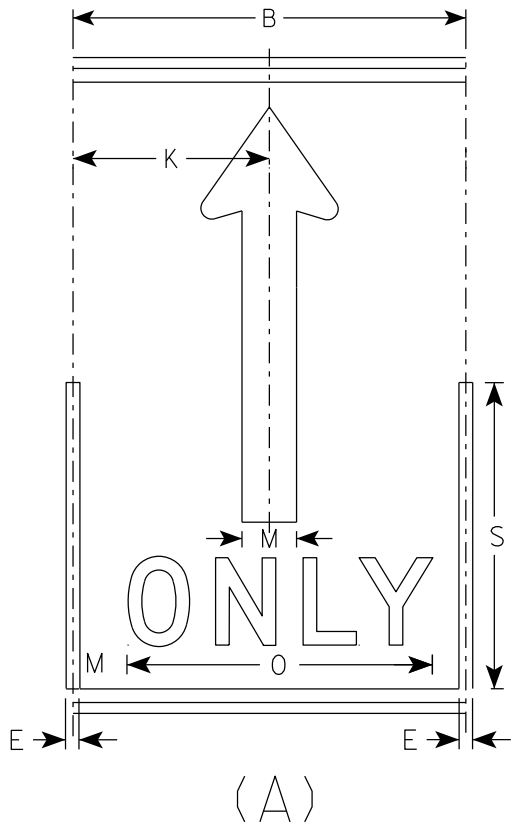
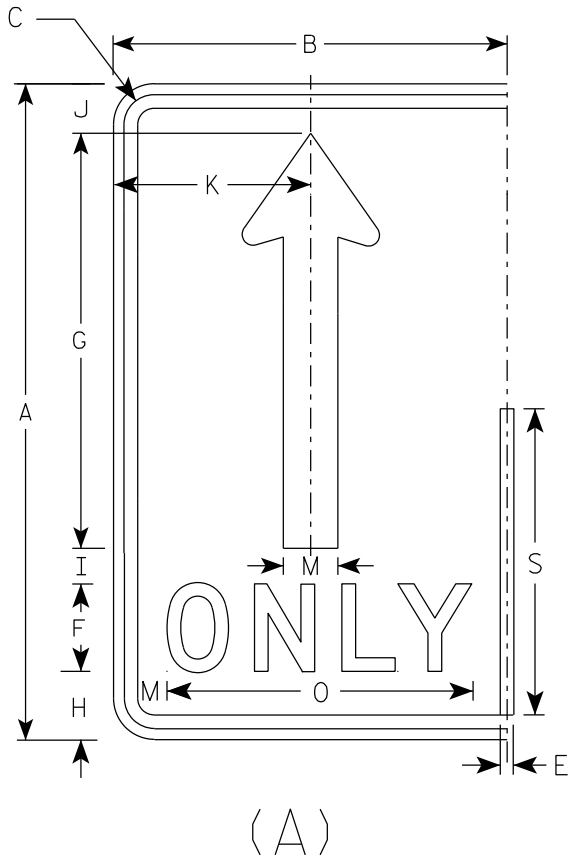
SHEET NO:

E

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	22 3⁄4	3 3⁄4	1 3⁄4	2 3⁄4	12		3		17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

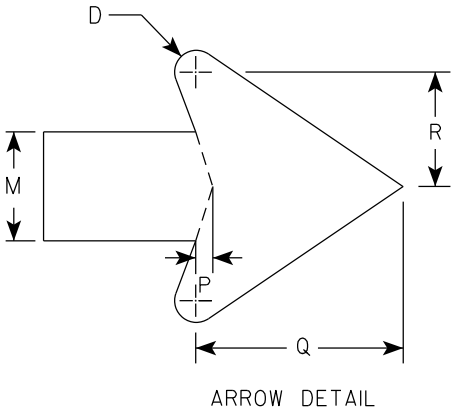
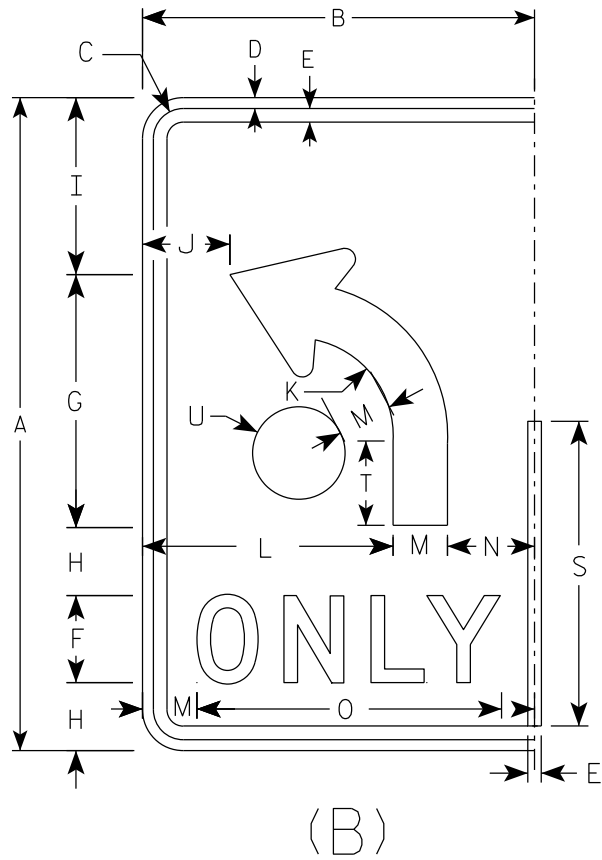
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8	2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0

PROJECT NO:

SHEET NO:

E

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

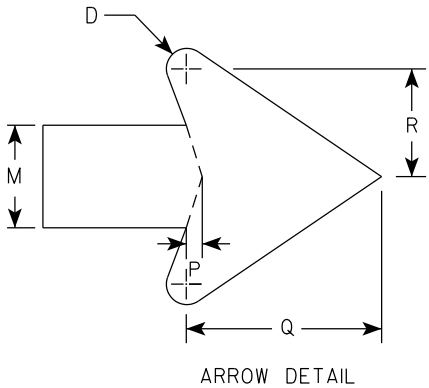
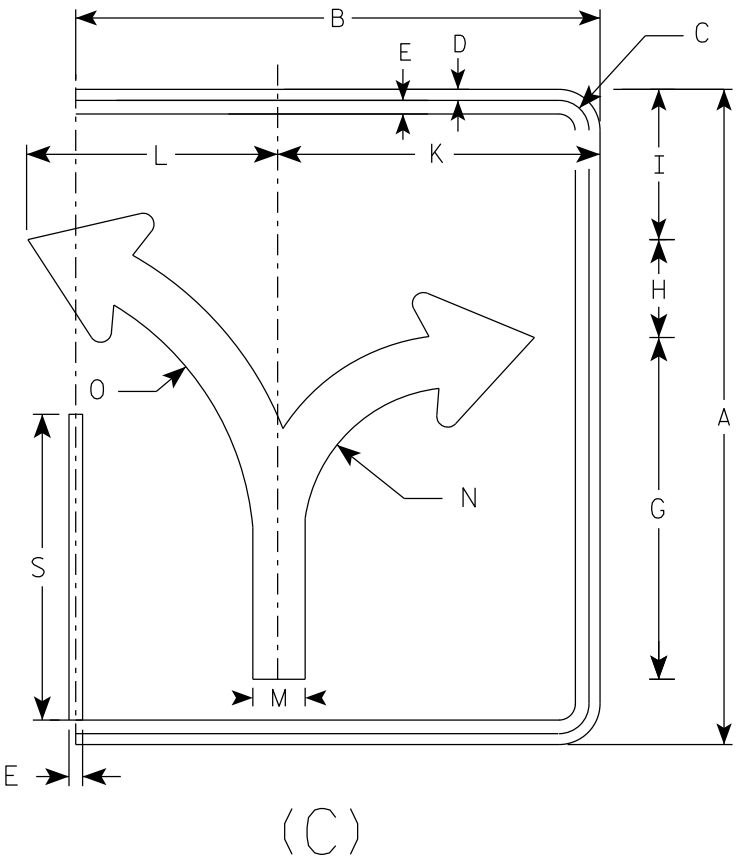
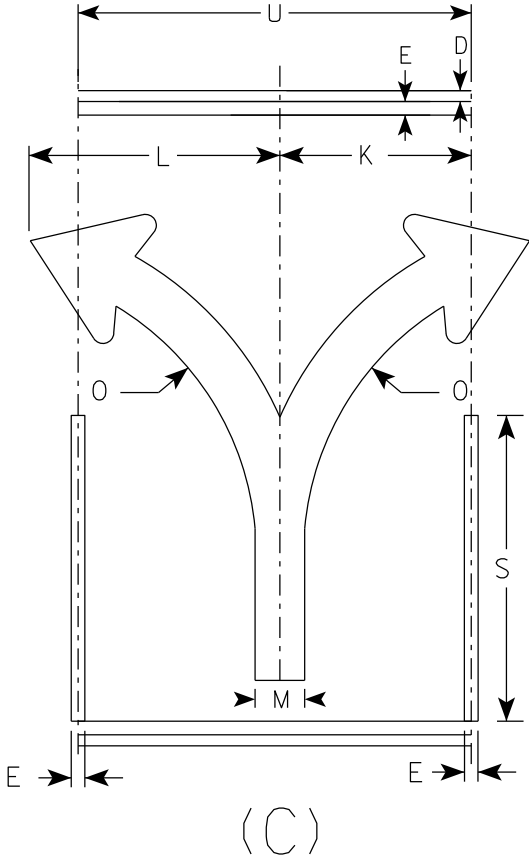
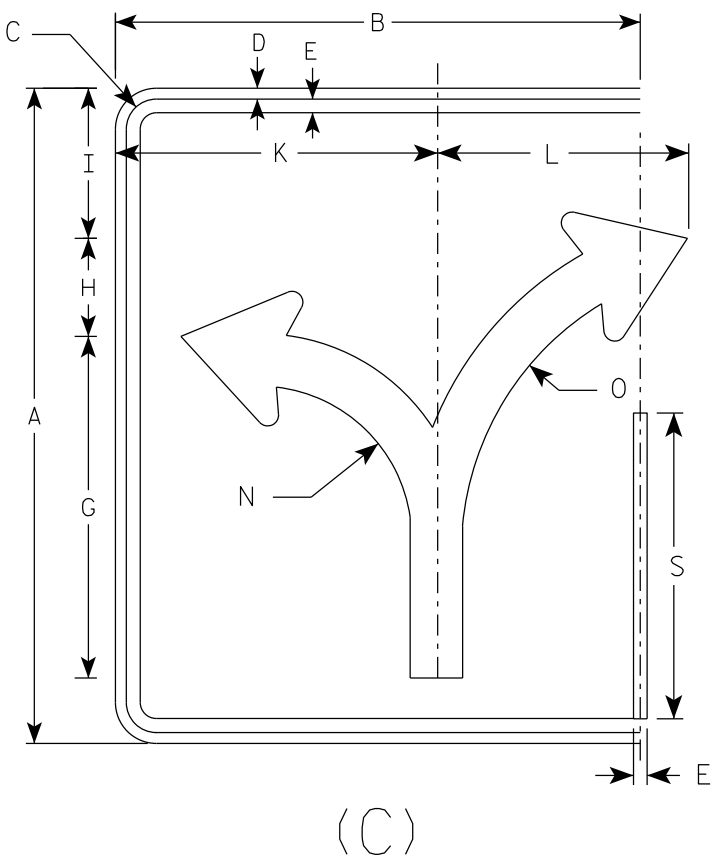
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



7

																											ENDS	MIDDLE
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

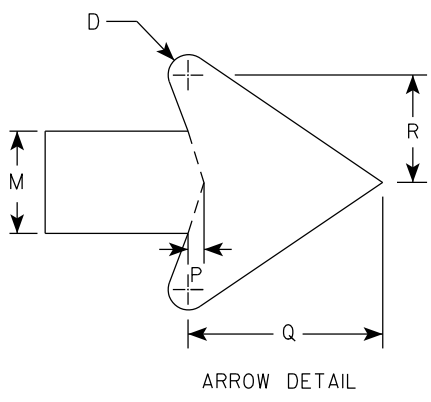
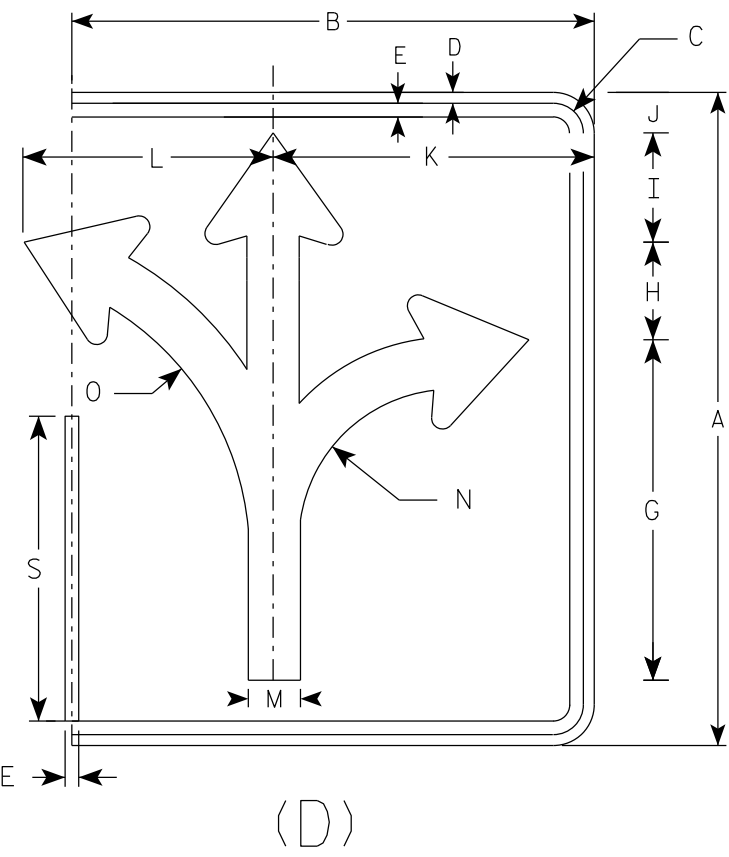
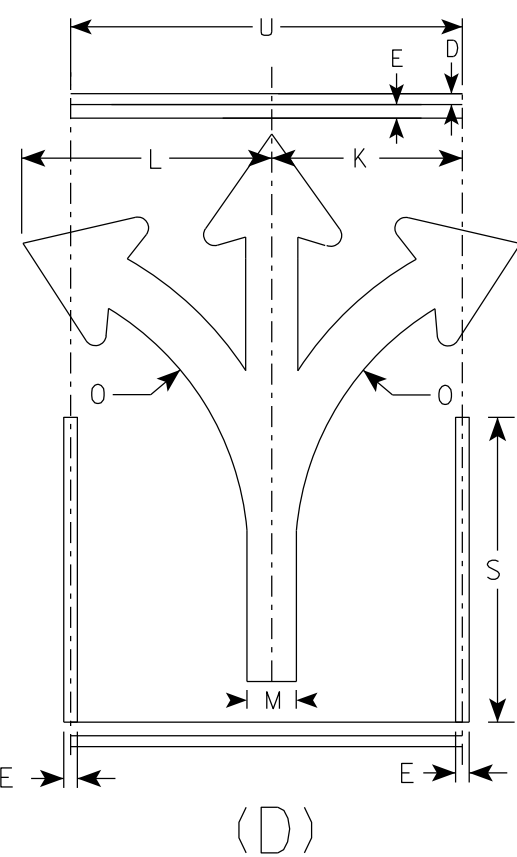
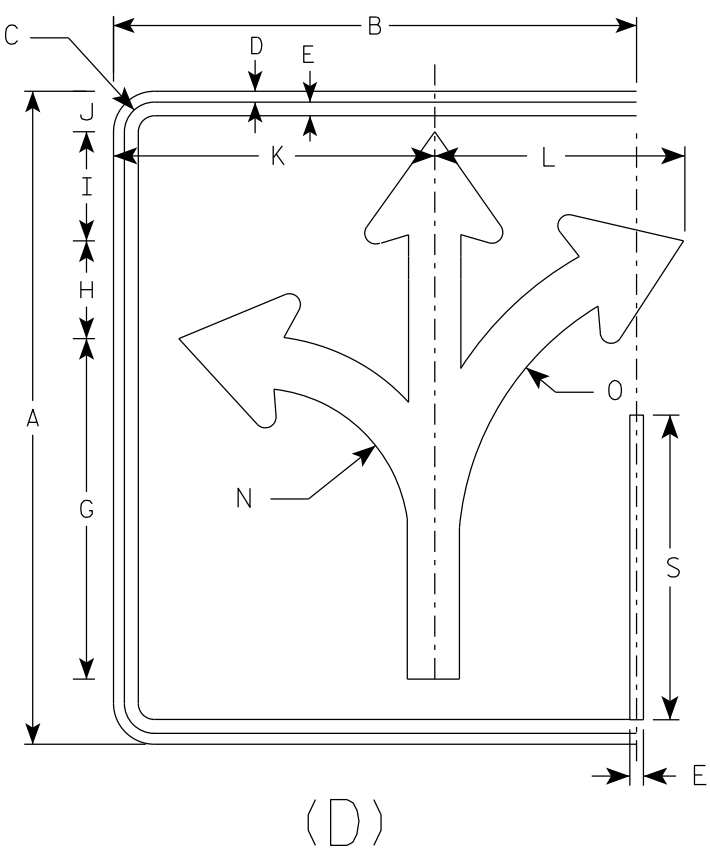
SHEET NO:

E

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



7

																											ENDS	MIDDLE
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	2 1⁄4	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

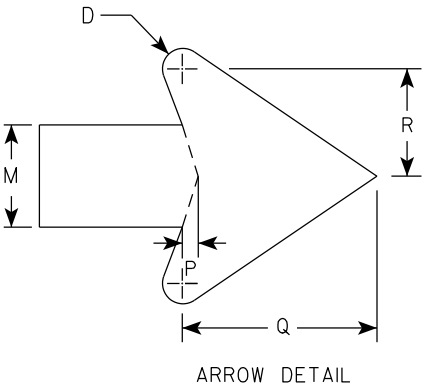
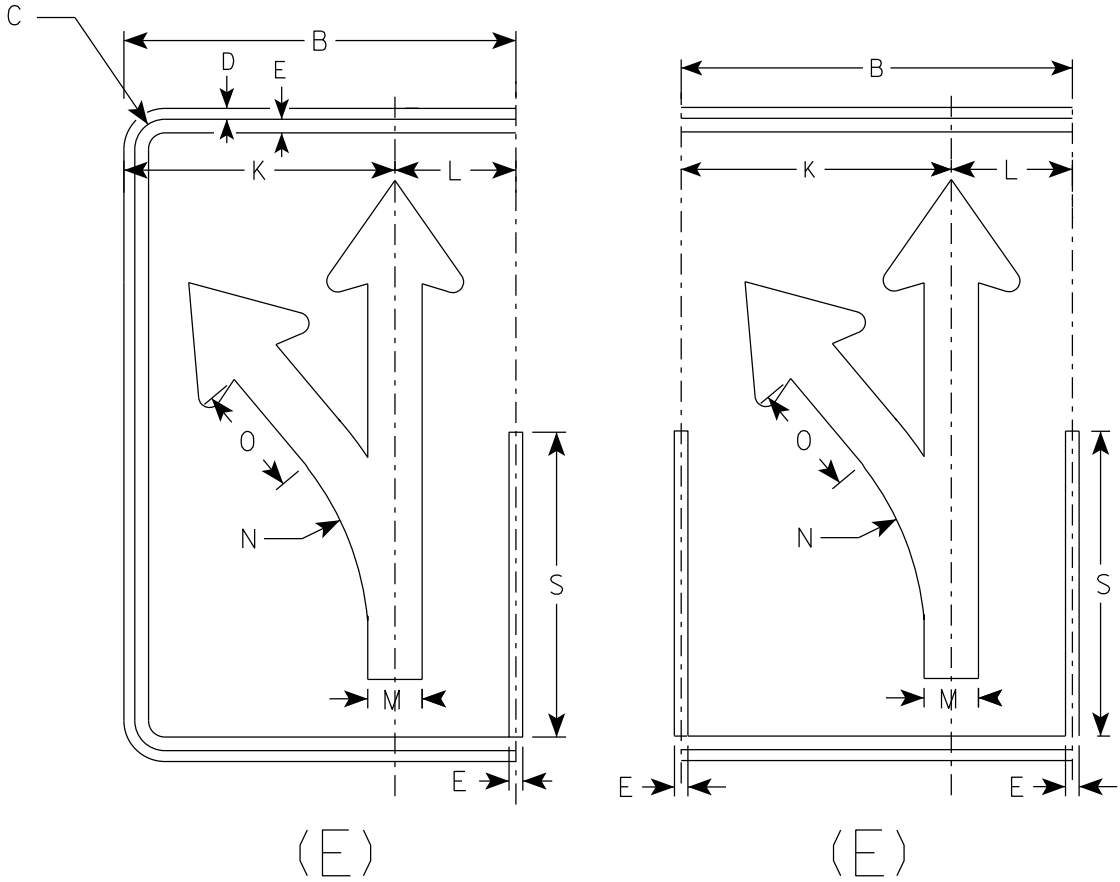
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19

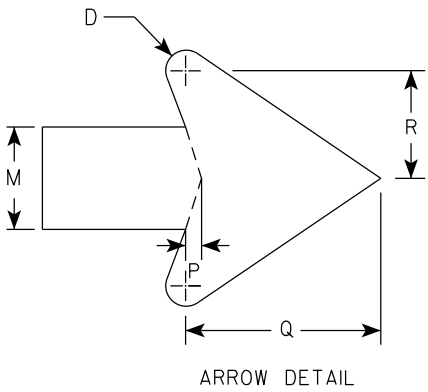
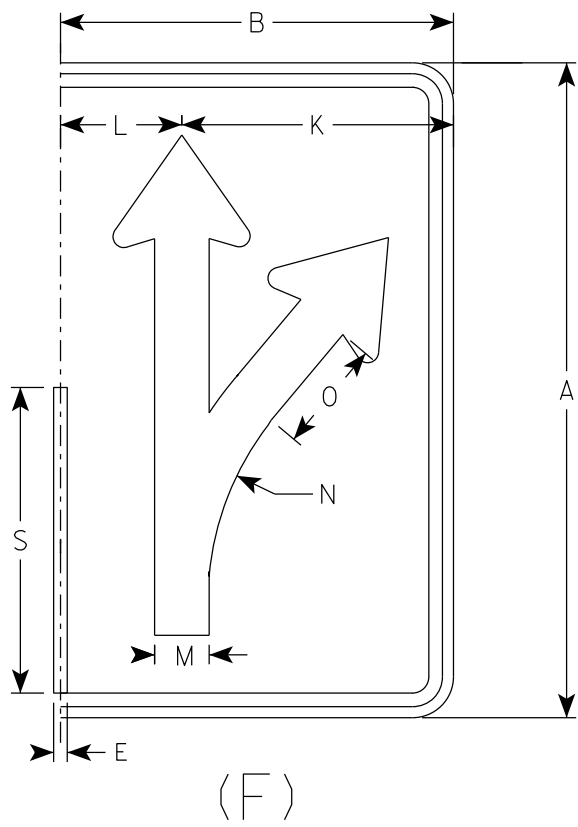
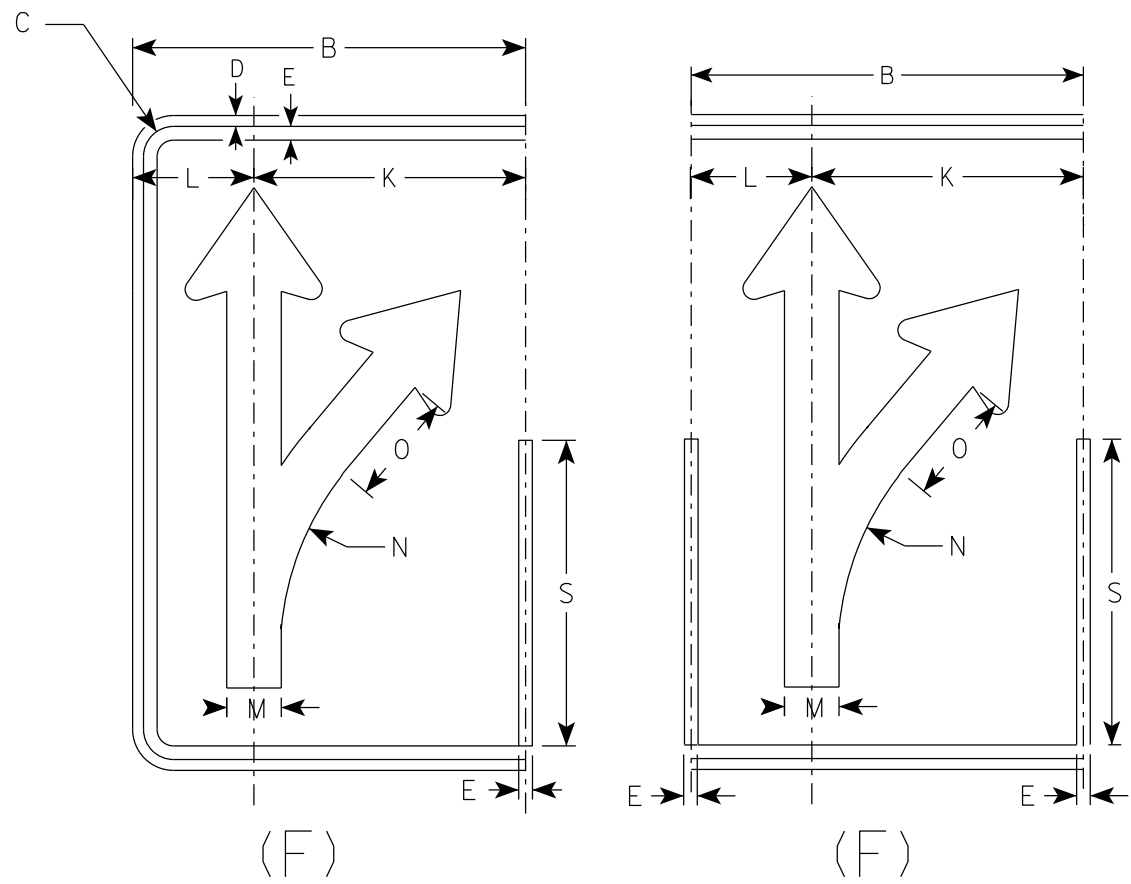
PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

PROJECT NO:

HWY:

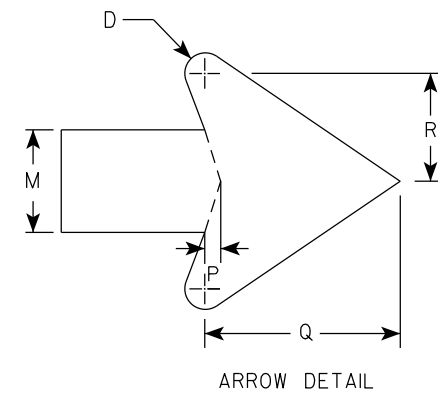
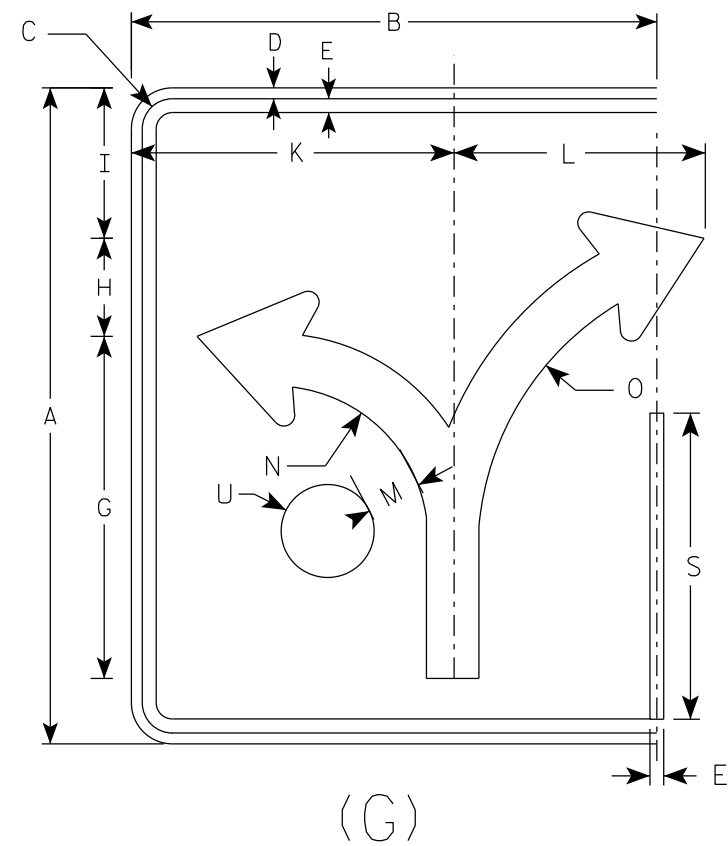
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	½	5⁄8		15 5⁄8	4 ½	6 7⁄8		14 ¾	11 ½	2 3⁄8	7	13 ¼	3⁄8	4 ½	2 ½	14		2 ⅛						5.0
2M	30	24	1 3⁄8	½	5⁄8		15 5⁄8	4 ½	6 7⁄8		14 ¾	11 ½	2 3⁄8	7	13 ¼	3⁄8	4 ½	2 ½	14		2 ⅛						5.0
3	36	30	1 3⁄8	½	5⁄8		18 ¾	5 ½	8 ¼		17 ¼	17 ¼	2 7⁄8	8 3⁄8	16	½	5 ½	3	16 ¾		2 ½						7.5
4	48	36	2 ¼	¾	1		24 7⁄8	7 ¼	11		23 ⅛	18	3 ¾	11 ⅛	21 ¼	5⁄8	7 ⅛	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 ¼	¾	1		24 7⁄8	7 ¼	11		23 ⅛	18	3 ¾	11 ⅛	21 ¼	5⁄8	7 ⅛	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (G) Arrow

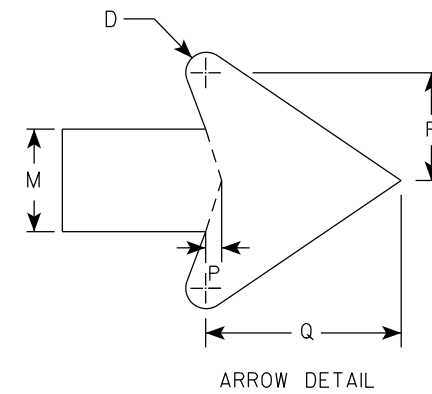
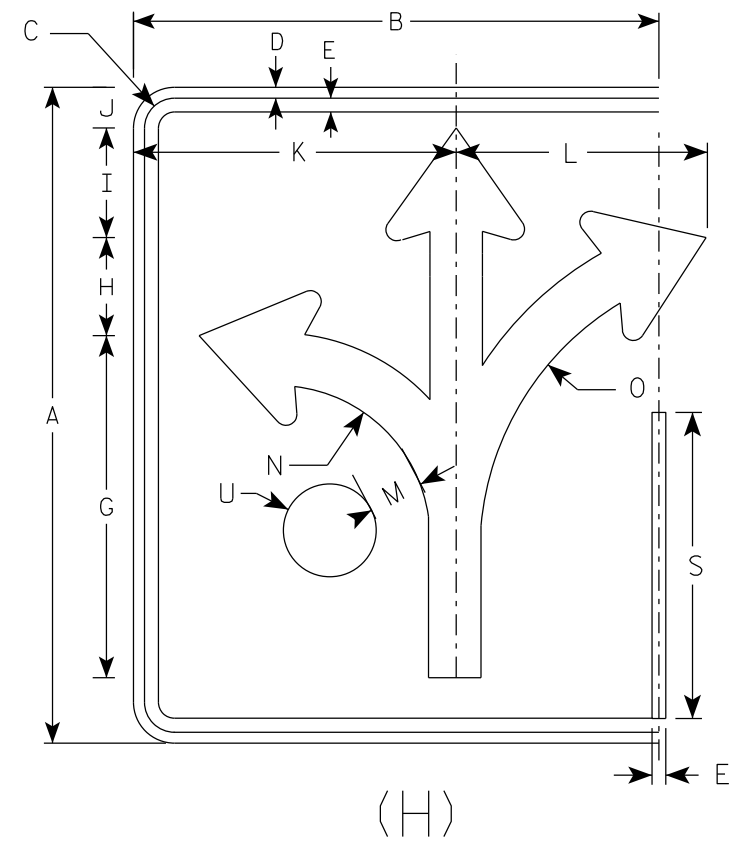
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	3 1⁄8	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

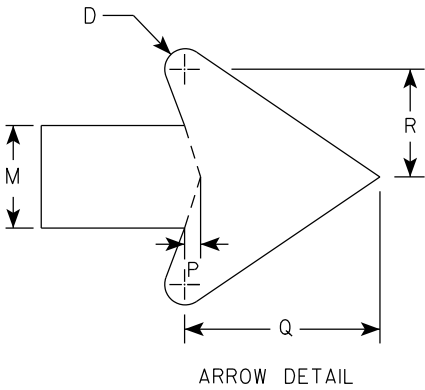
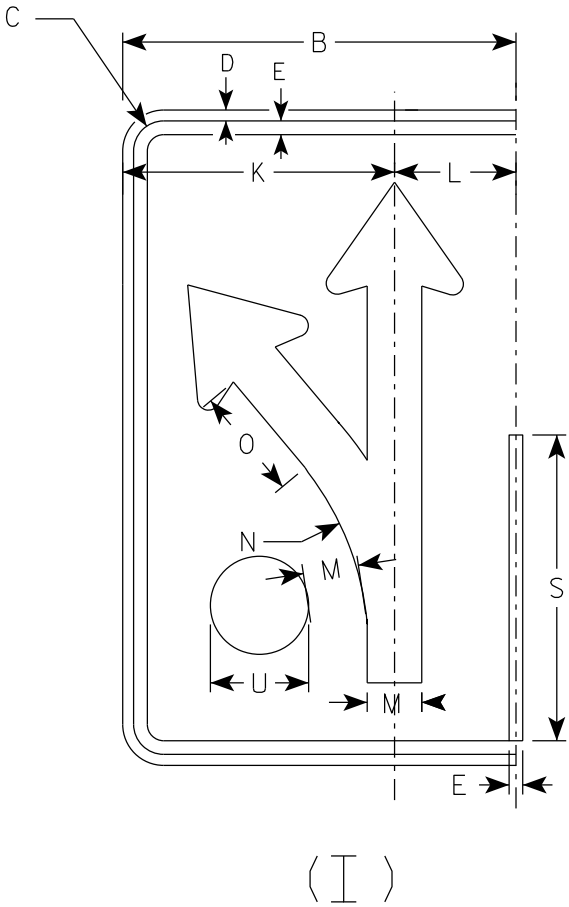
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4		2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

R3-8 (I) Arrow

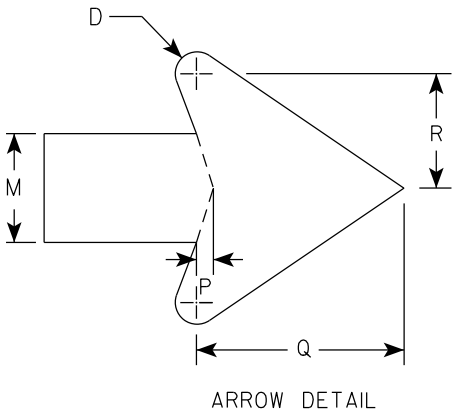
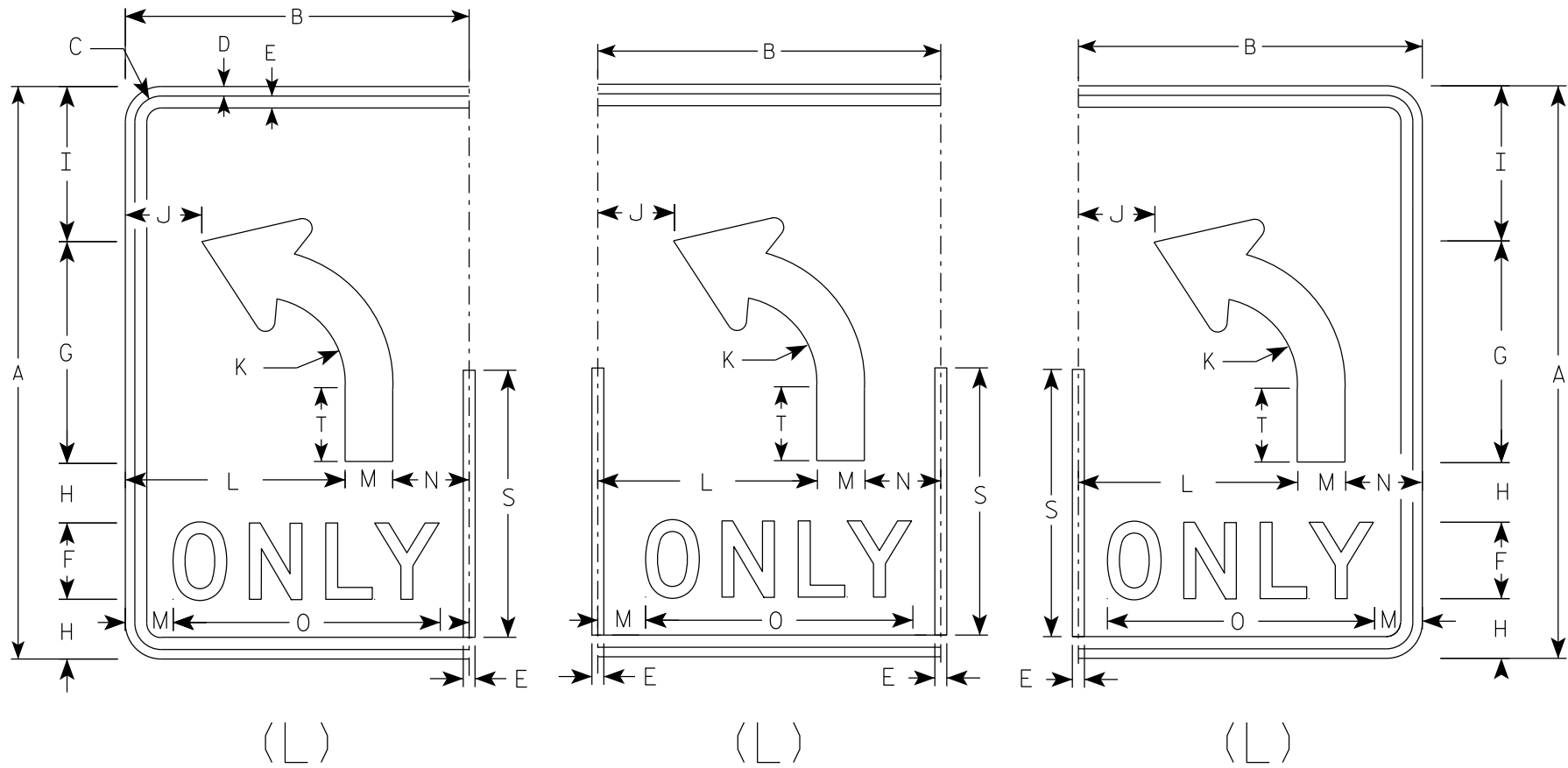
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4		5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

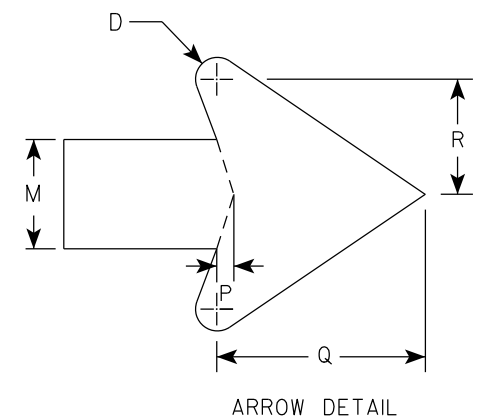
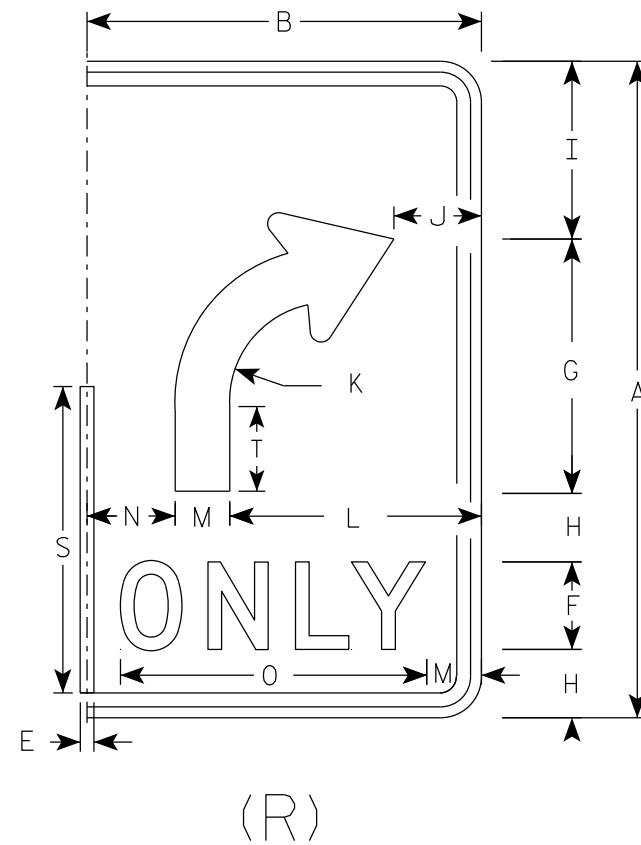
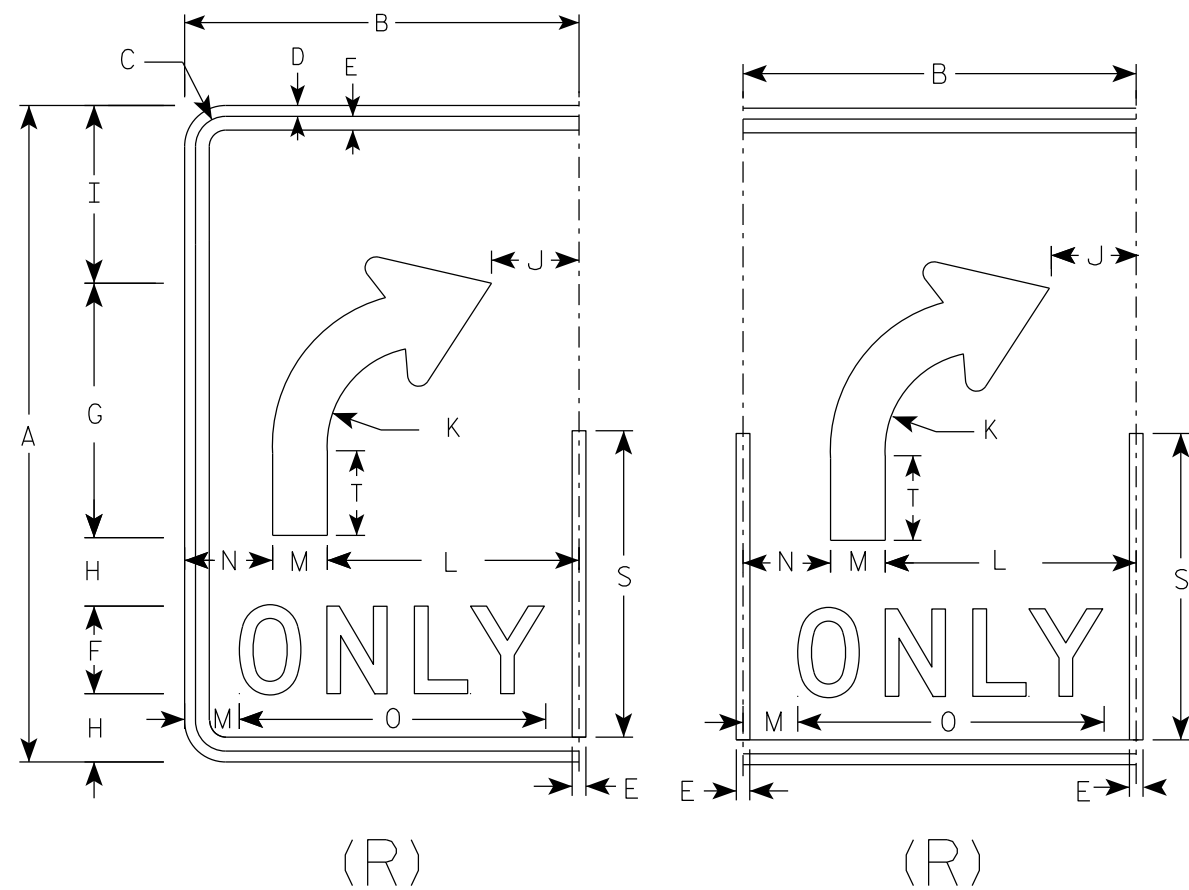
for State Traffic Engineer

DATE 5/21/19

PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (R) Arrow

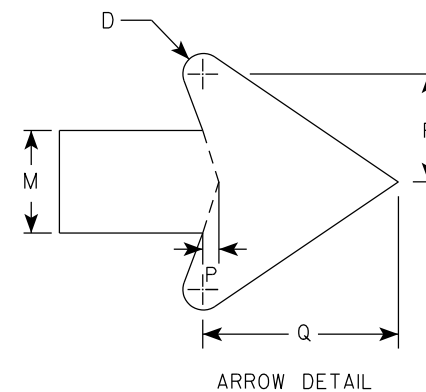
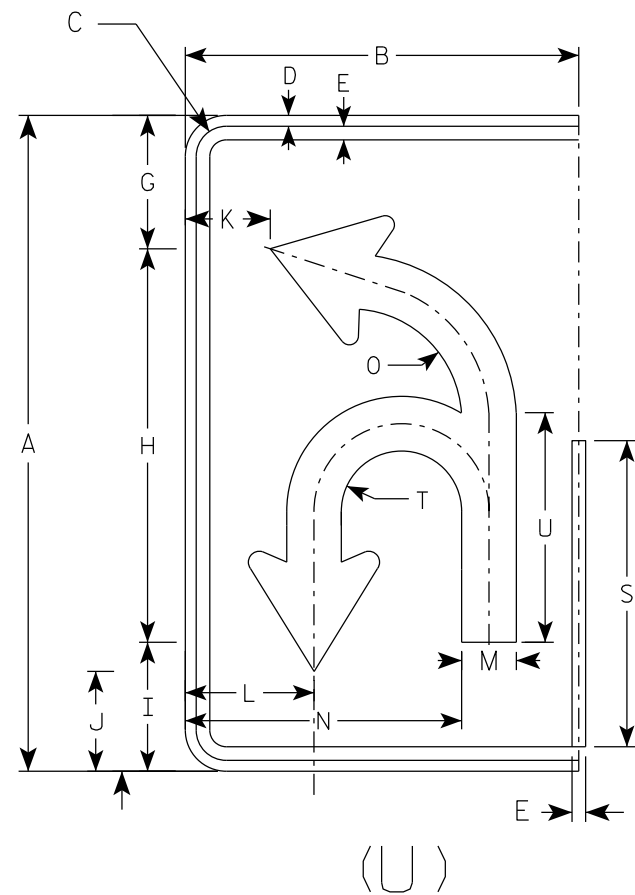
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



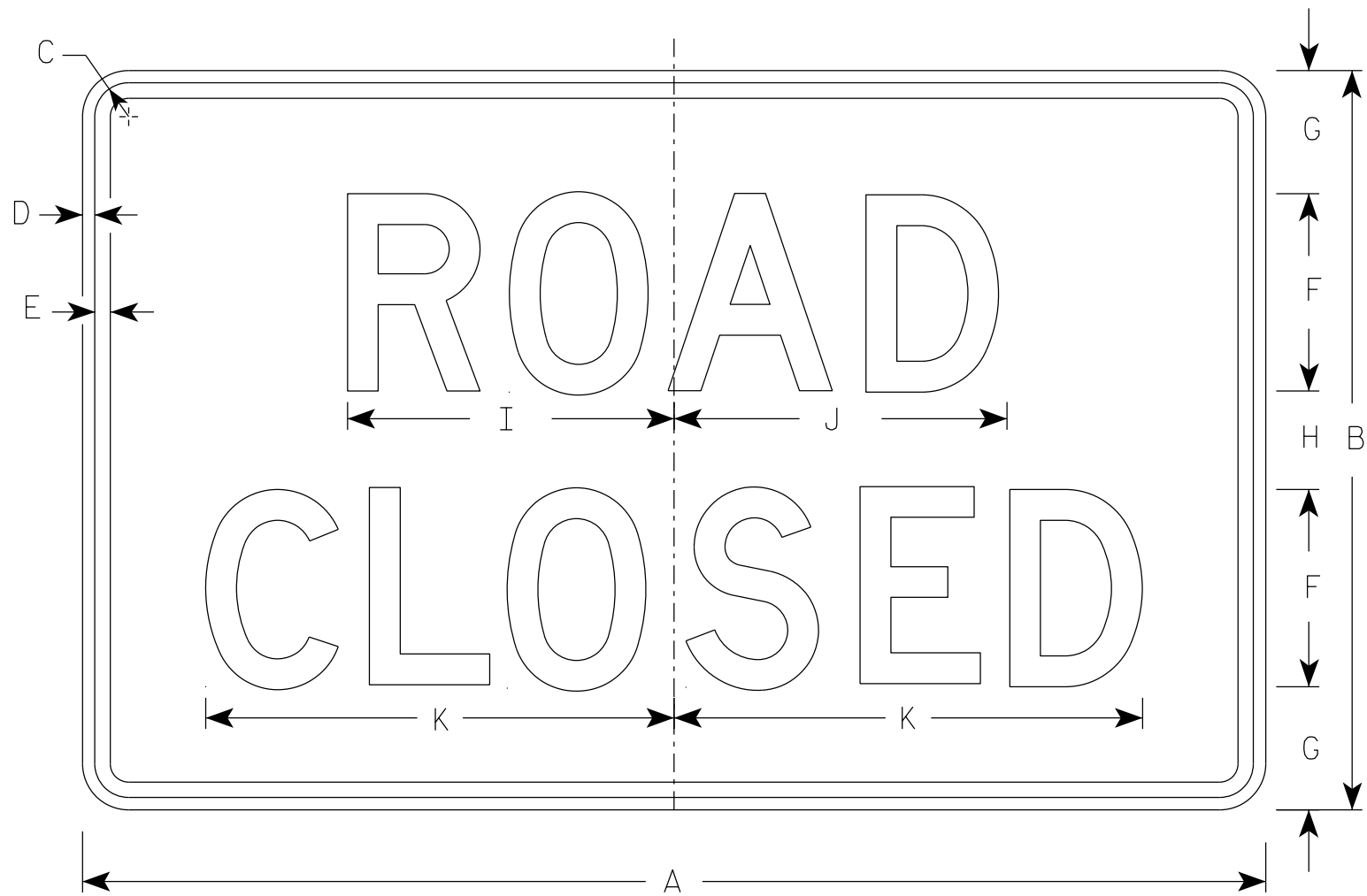
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	½	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 ½	12 5⁄8	5 1⁄8	3⁄8	4 ¾	2 5⁄8	14	2 ¾	10 ½						3.75
2M	30	18	1 3⁄8	½	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 ½	12 5⁄8	5 1⁄8	3⁄8	4 ¾	2 5⁄8	14	2 ¾	10 ½						3.75
3	36	24	1 3⁄8	½	5⁄8		21 7⁄8	21 5⁄8	7 1⁄8	5 ½	5 7⁄8	8 ¼	3	16 3⁄8	6 1⁄8	½	5 ¾	3 1⁄8	16 ¾	3 ¼	12 5⁄8						6.0
4	48	30	2 ¼	¾	1		29 1⁄8	28 ¾	9 3⁄8	7 ¼	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 ¼	22 3⁄8	4 3⁄8	16 ¾						10.0
5	48	30	2 ¼	¾	1		29 1⁄8	28 ¾	9 3⁄8	7 ¼	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 ¼	22 3⁄8	4 3⁄8	16 ¾						10.0

STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

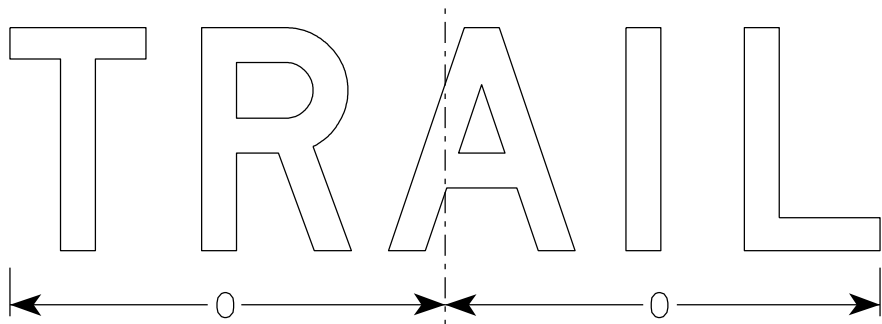


R11-2

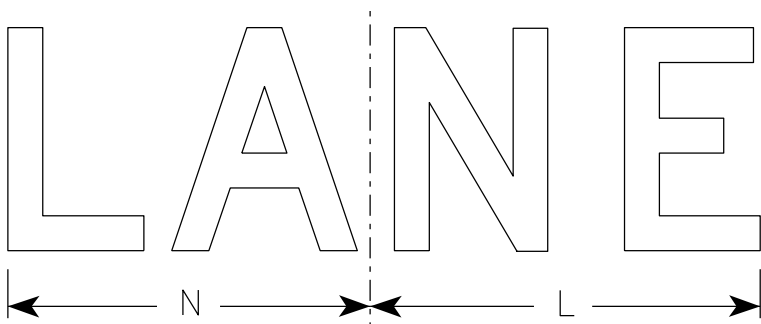
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



R11-2R



R11-2T



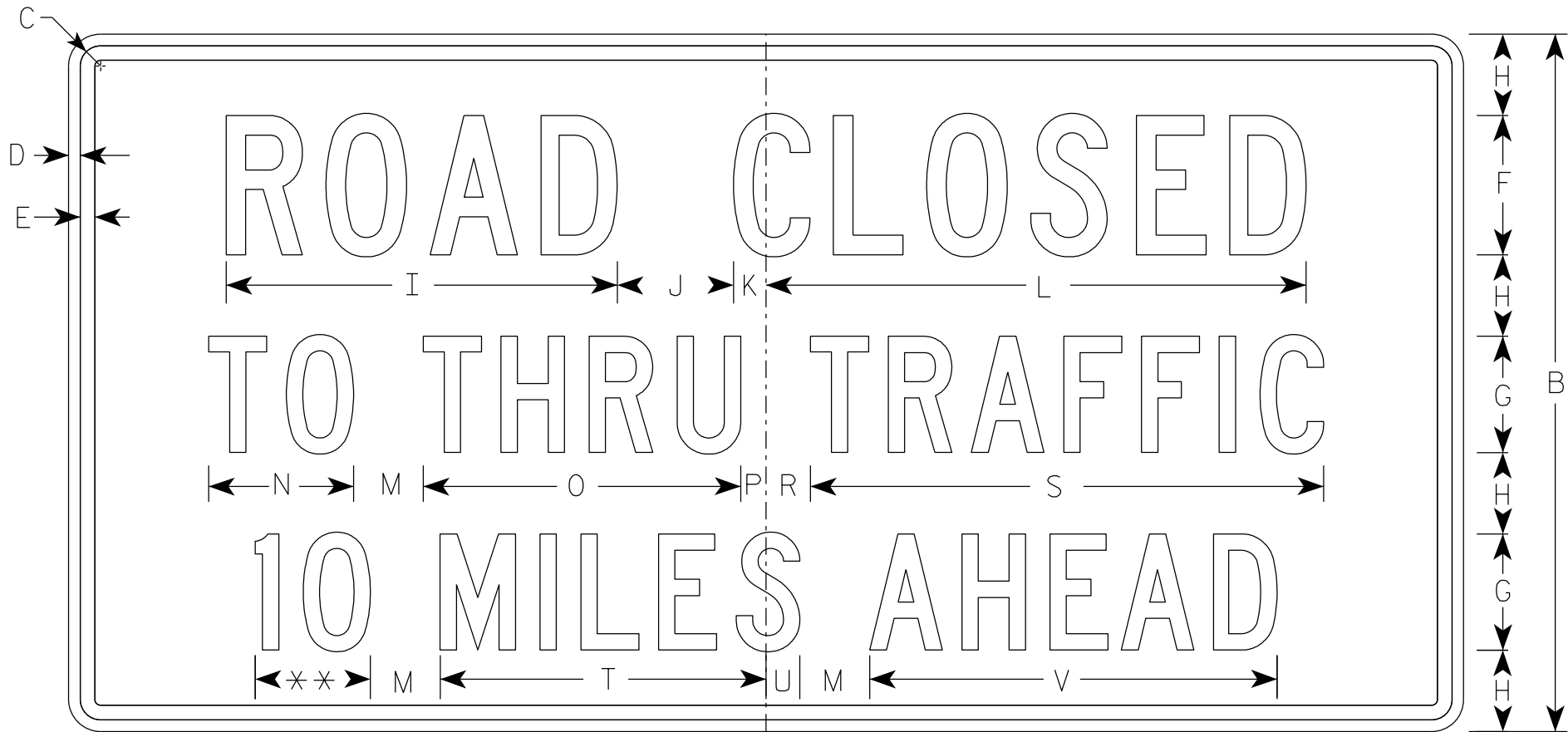
R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8												10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8												10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8												10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8												10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13	15 5⁄8												10.0

STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/29/2021	PLATE NO. R11-2.11

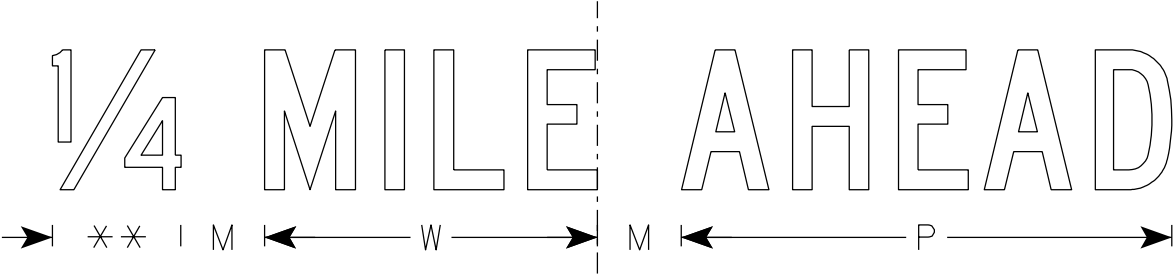
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



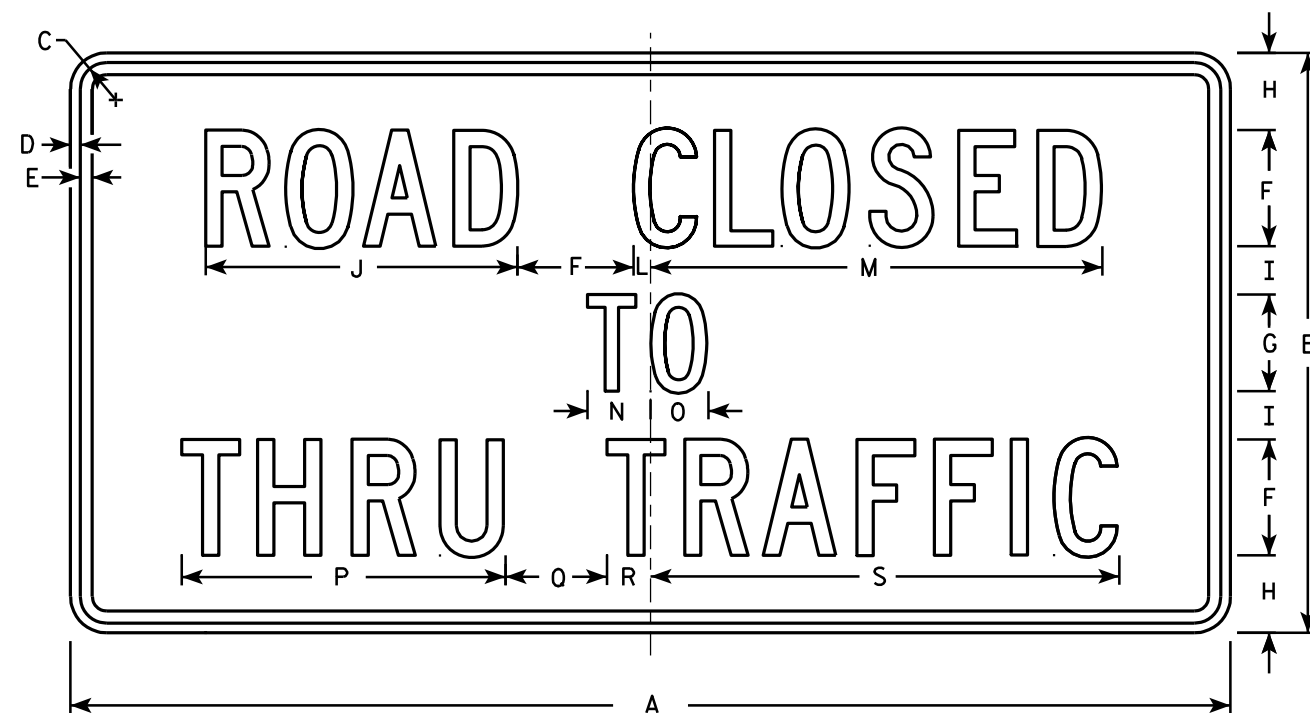
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/14/2021 PLATE NO. R11-3.9



R11-4

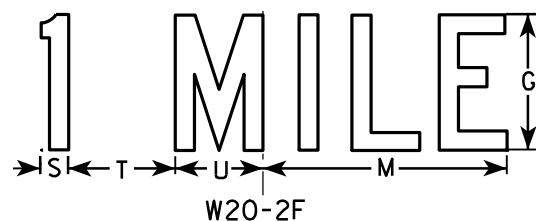
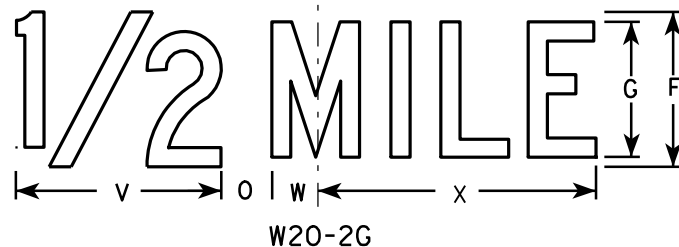
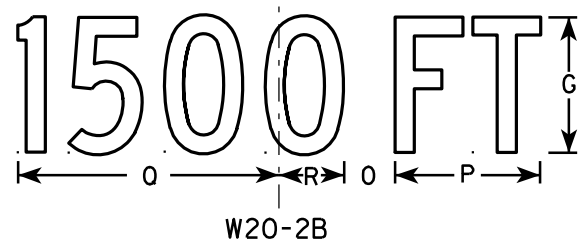
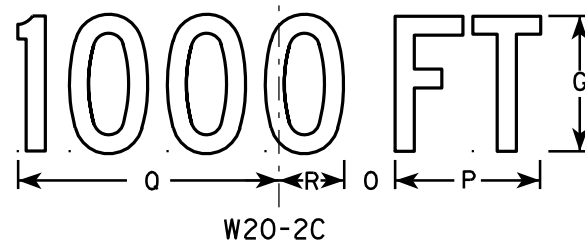
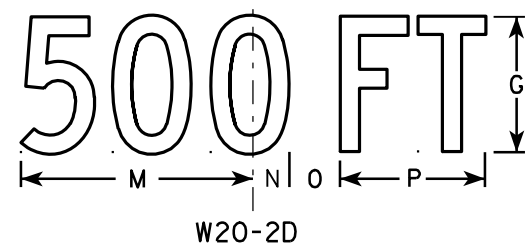
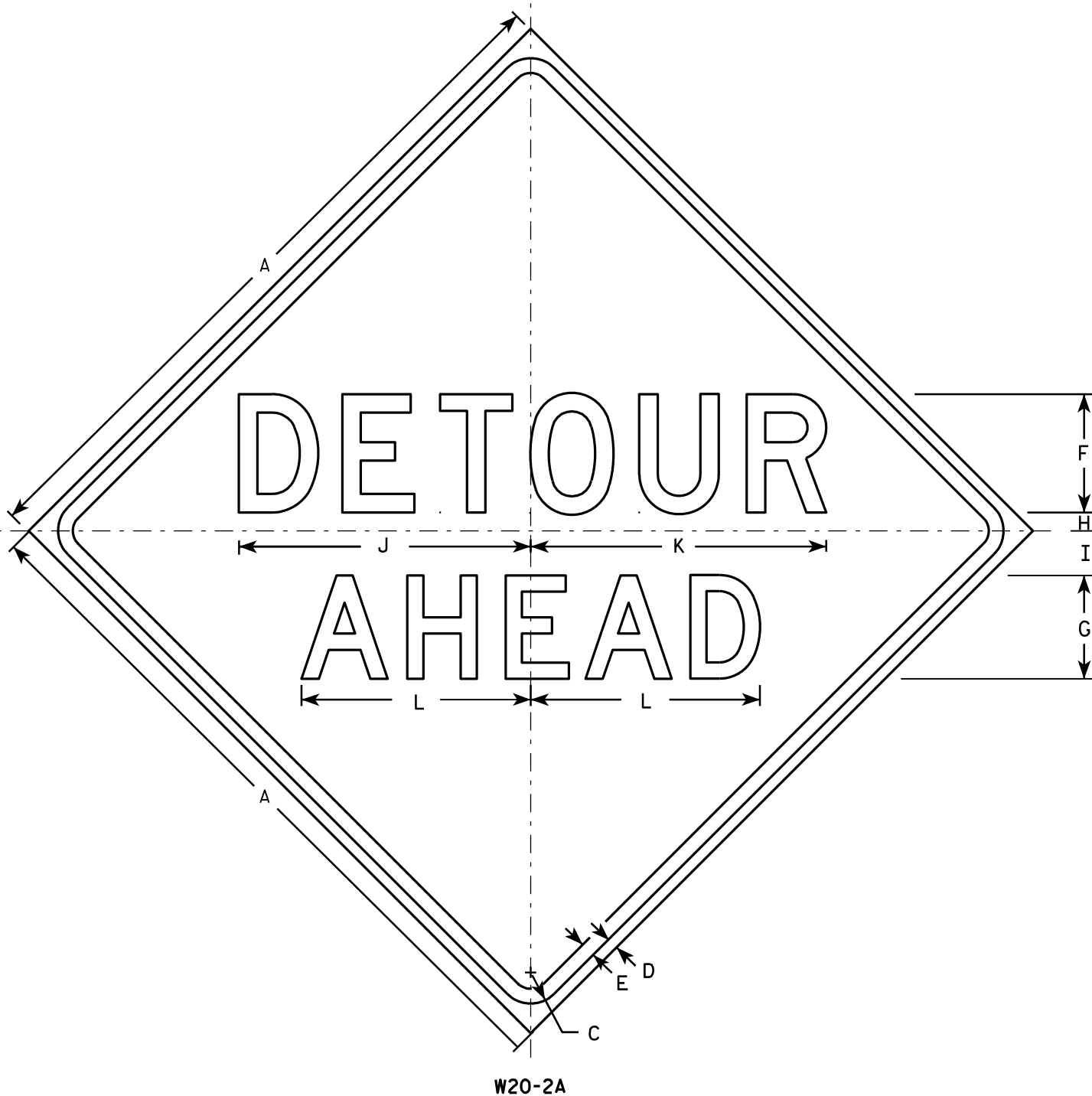
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN	
R11 - 4	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-4.3

PROJECT NO:	HWY:	COUNTY:	SHEET NO:		E
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NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - Orange
 - Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-2.6

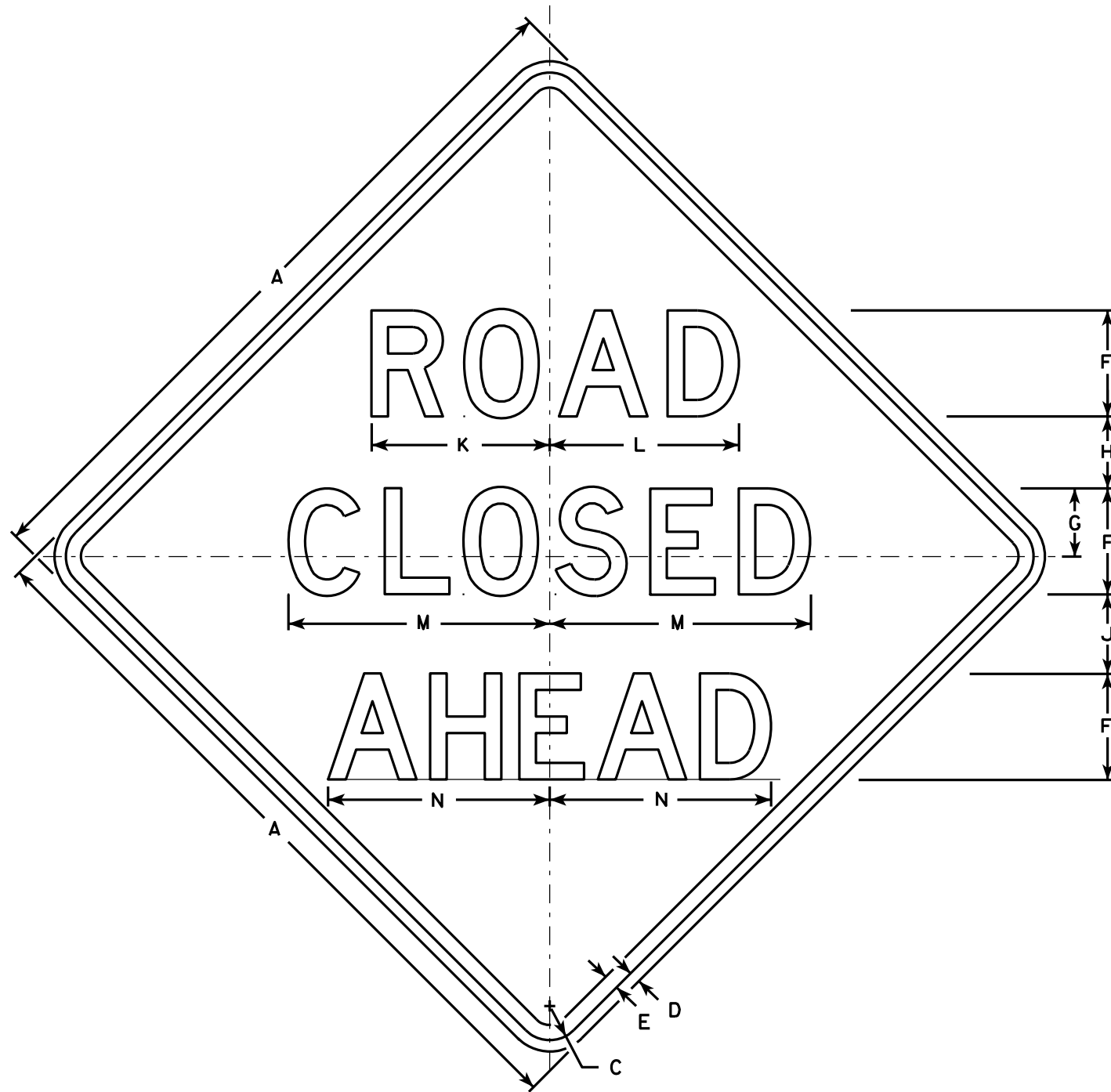
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W20-3A

500 FT

W20-3D

1000 FT

W20-3C

1500 FT

W20-3B

1/2 MILE

W20-3G

1 MILE

W20-3F

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - see note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS; DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS	
STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTREME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE:	1.0 NW (NATURAL WIND GUST) 1.0 TrG (TRUCK INDUCED GUST) 1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ————— f'c = 3,500 PSI

HIGH STRENGTH STEEL REINFORCEMENT, GRADE 60 ————— fy = 60,000 PSI

STRUCTURAL ANGLES, PLATES & BARS - ASTM A709 GRADE 36 ——— fy = 36,000 PSI

HIGH STRENGTH BOLTS - ASTM A3125 GRADE A325 ————— fy = 92,000 PSI

ANCHOR RODS - ASTM F1554 GRADE 55 ————— fy = 55,000 PSI

HEAVY HEX NUTS - ASTM A563 GRADE DH OR ASTM A194 GRADE 2H

WASHERS - ASTM F436

DTI WASHERS - ASTM F959 TYPE 325

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGN FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING THE DRILLING OF THE SHAFT HOLE TO CONFRIM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

TOTAL ESTIMATED QUANTITES

BID ITEM NO.	BID ITEM	UNIT	S-44-0311
531.2042	DRILLING SHAFT 42-INCH	LF	18
531.5130	FOUNDATION SINGLE-SHAFT TYPE MC-III (S-44-0311)	EA	1
532.5130	MONOTUBE CANTILEVER TYPE III (S-44-0311)	EA	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE REFERENCE SYSTEM SYSTEM (WISCRS), OUTAGAMIE COUNTY, NAD 83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE TRUSS OR MONOTUBE BID ITEMS FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¾ THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT (DIA.)".

STRUCTURE DATA

STRUCTURE ID	SIGN AREA	SIGN DEPTH	FOUNDATION TYPE	TRUSS TYPE
S-44-0311	28 SF	4'-0"	TYPE MC-III	

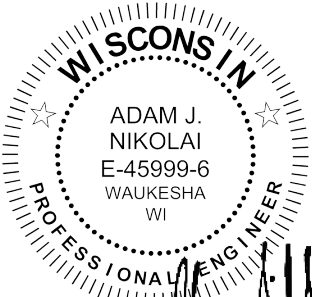
LIST OF DRAWINGS:

- 1. GENERAL NOTES & DESIGN DATA
- 2. LAYOUT S-44-0311

LIST OF STANDARD DESIGN DRAWINGS

- 3. I. MONOTUBE & 2-CHORD TRUSS CONNECTIONS 1
- 4. II. MONOTUBE & 2-CHORD TRUSS CONNECTIONS 2
- 5. III. MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS
- 6. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

THESE ARE STANDARD DESIGN PLANS DEVELOPED AND MAINTAINED BY THE WISDOT. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISDOT BRIDGE MANUAL CHAPTER 39.



02/26/2024

STATE PROJECT NUMBER

4075-41-71

TRAFFIC VOLUME

A.D.T. (2045) = 14,840
R.D.S. = 50 MPH

STRUCTURE DESIGN CONTACTS:


AARON BONK (608) 261-0261
ADAM NIKOLAI (262) 317-3257

NO.	DATE	REVISION	BY
-----	------	----------	----

raSmith
CREATIVITY BEYOND ENGINEERING

100 West Lawrence Street, Suite 412
Appleton, WI 54911-5754
(920) 731-3499
rasmith.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED  SDR **02/26/24**
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE & 2-CHORD

STH 96 EAST OF STH 76

COUNTY OUTAGAMIE TOWN GREENVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY BOS CK'D BY BOS DRAWN BY AJN PLANS CK'D

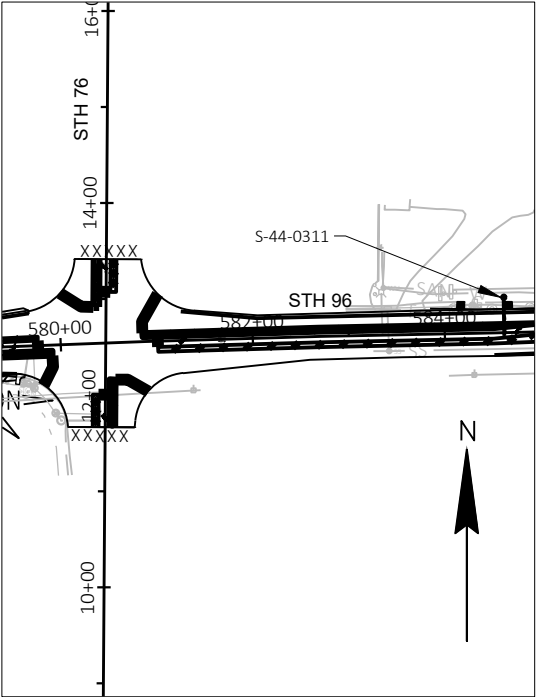
GENERAL NOTES & DESIGN DATA

SHEET 1 OF 2

I.D. 4075-41-71

DATE: 02/26/2024

SCALE =



LOCATION MAP

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 584+61.84, 2.07 (LEFT)
EL 912.62

- ELEVATIONS TAKEN FROM EXISTING GROUND. VERIFY PAVEMENT ELEVATIONS AFTER MILLING AND PLACING OF LEVELING COURSE AND TOP LAYER OF HMA PAVEMENT.

LEGEND

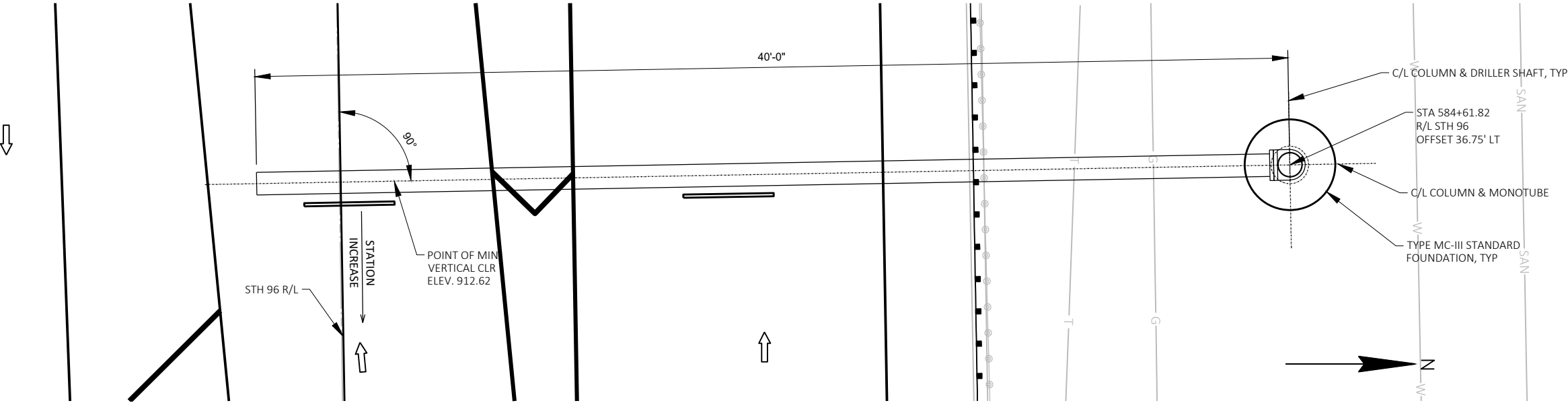
☆ ELEVATIONS GIVEN ALONG C/L STRUCTURE

(XXX) SIGN NUMBER, SEE PLAN DETAILS

■ STANDOFF DIMENSION IS ASSUMED TO BE 2½", BUT IS A MAX. OF 2 x ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

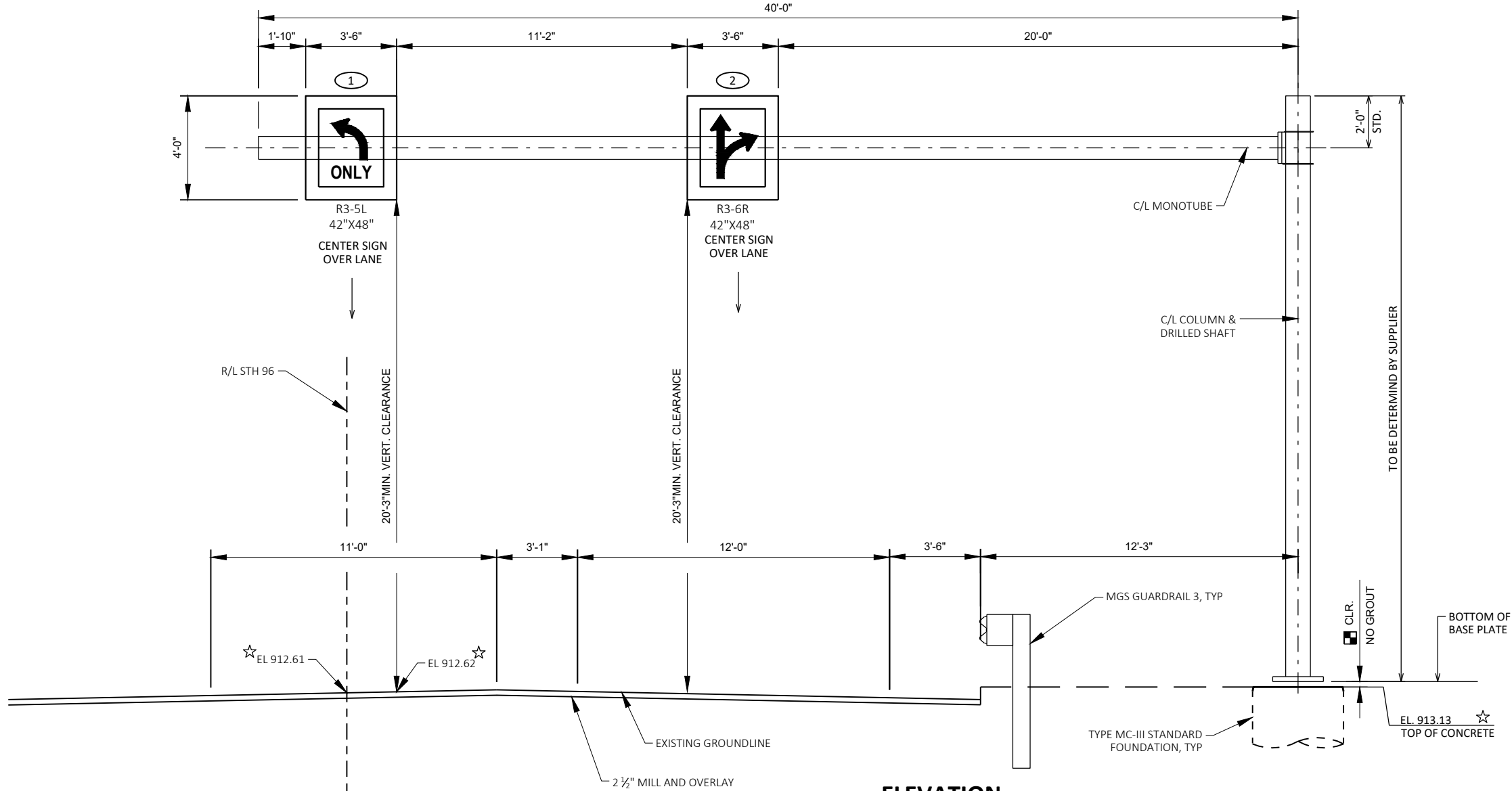
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE S-44-0311			
DRAWN BY		JRM	PLANS CK'D
GENERAL LAYOUT S-44-0311		SHEET 2 OF 2	

SCALE = 1" = 5'



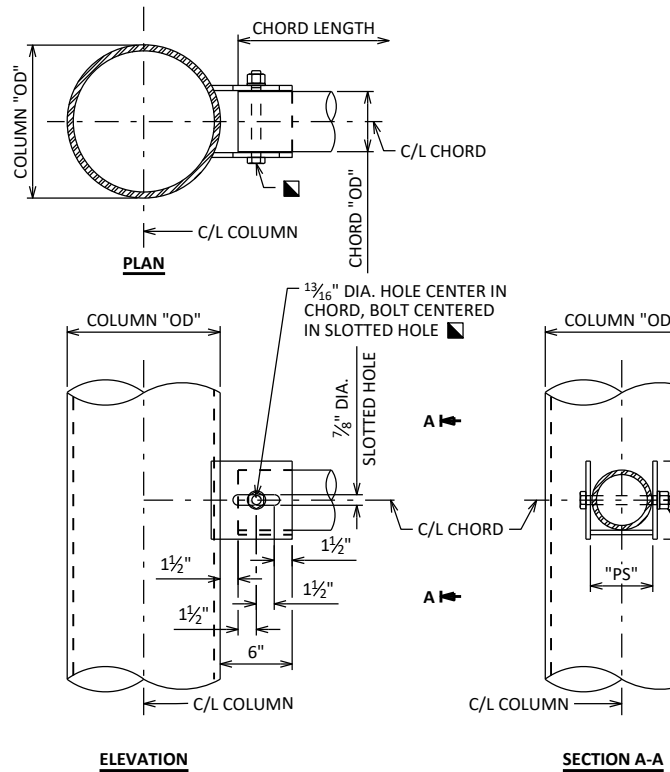
PLAN

STA. 584+61.82 (STH 96 LOOKING UPSTATION
AT FRONT OF SIGN)
385 FT EAST OF STH 76



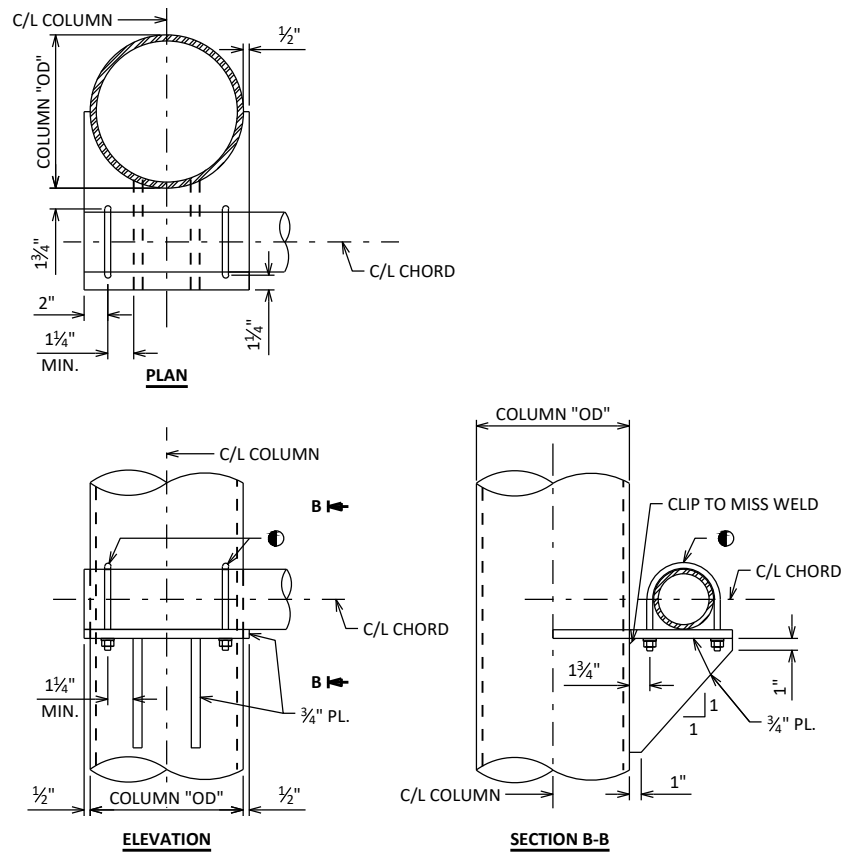
ELEVATION

LOOKING UPSTATION AT FRONT OF SIGN



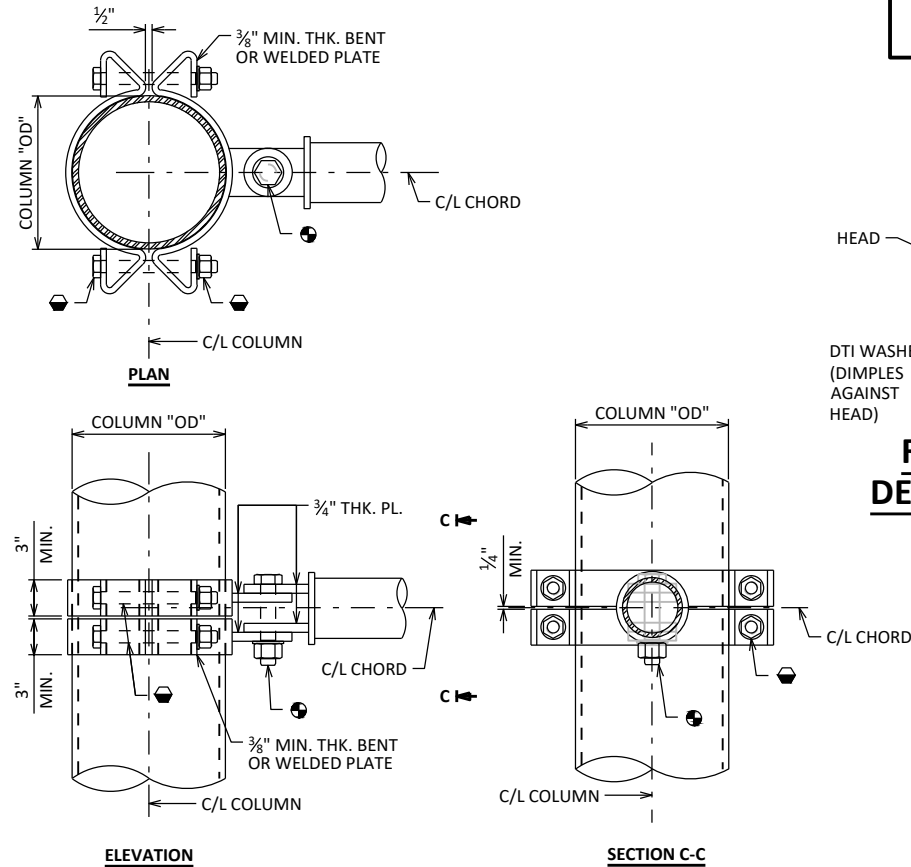
FULL SPAN SADDLE CONNECTION

- PREFERRED OPTION
- 3/4" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT AND WASHER SNUG TIGHT ONLY, DO NOT OVER TIGHTEN
- "PD" = CHORD "OD"/2 + 3/4"
- "PS" = CHORD "OD" + 1/16"



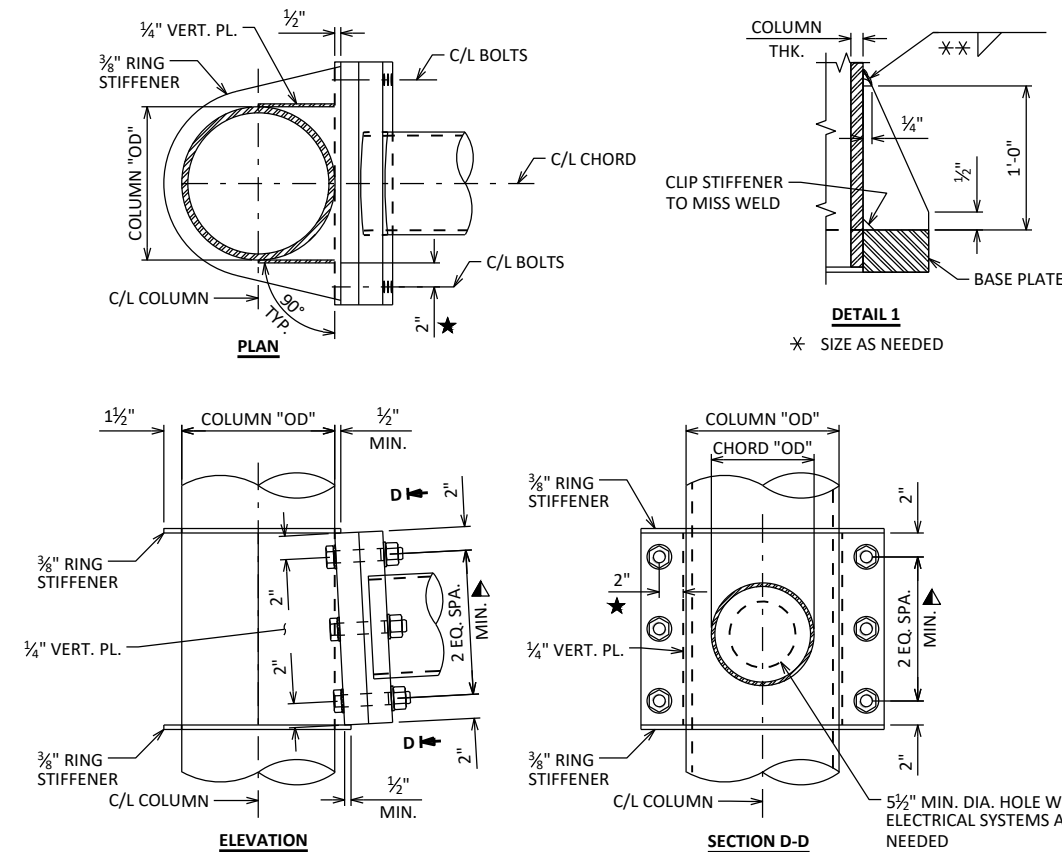
FULL SPAN STIFFENED BEARING CONNECTION

- ALTERNATE 1
- MIN. (2) 1/2" MIN. GALVANIZED OR STAINLESS U-BOLT, LOCK NUT AND WASHER



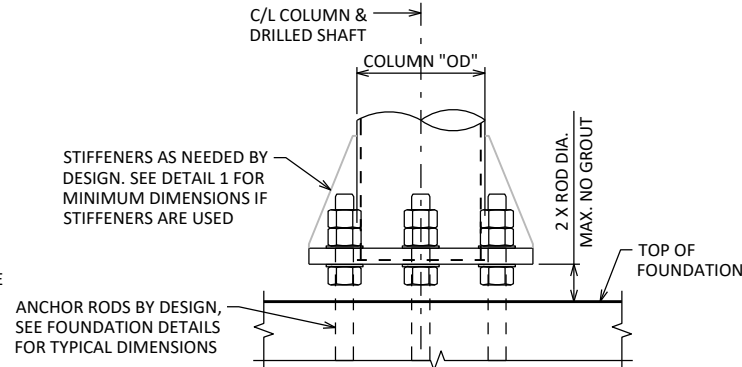
FULL SPAN CLAMP CONNECTION

- ALTERNATE 2 - TAPERED COLUMNS ONLY
- 1 1/4" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER
- 1" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER



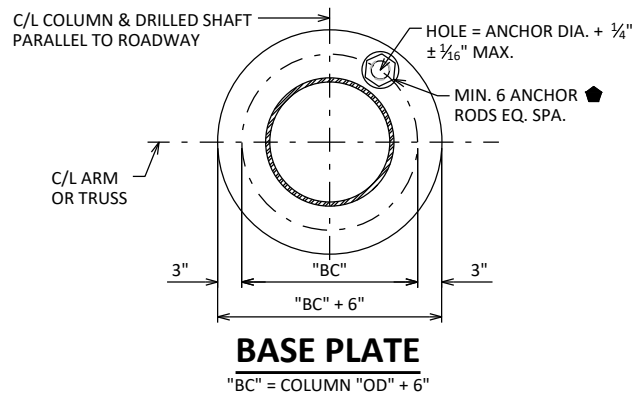
CANTILEVER POST TO CHORD CONNECTION

- ▲ MIN. (6) 1" GALVANIZED A325 HEAVY HEX BOLT, NUT, DTI WASHER AND WASHER
- ★ MIN. DIMENSIONS MEASURED FROM EXT. FACE OF VERTICAL PLATE.

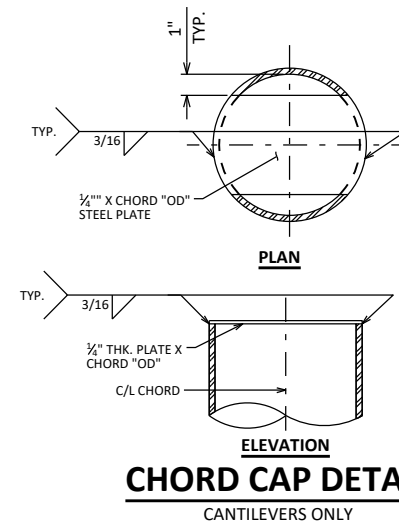


PREFERRED BASE PLATE CONNECTION

- LOOKING AT F.F. OF STRUCTURE.
- ALTERNATE BASE PLATE DESIGNS ALLOWED.

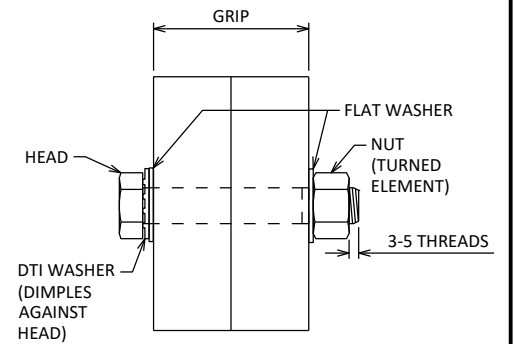
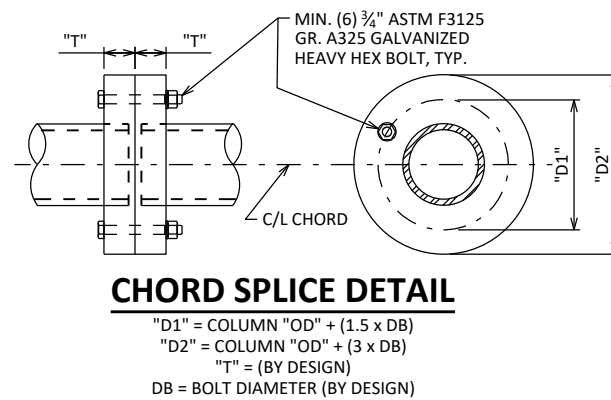


- ◆ ANCHOR SIZE AND ORIENTATION TO BE VERIFIED WITH SHOP DRAWINGS.



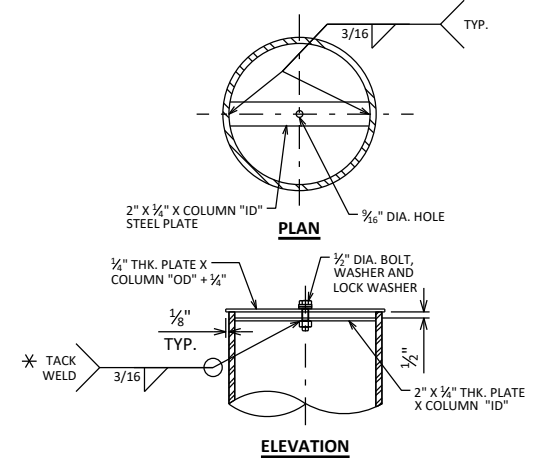
CHORD CAP DETAIL

CANTILEVERS ONLY



RECOMMENDED BOLT DETAIL WITH DTI WASHER

NUT IS TURNED ELEMENT



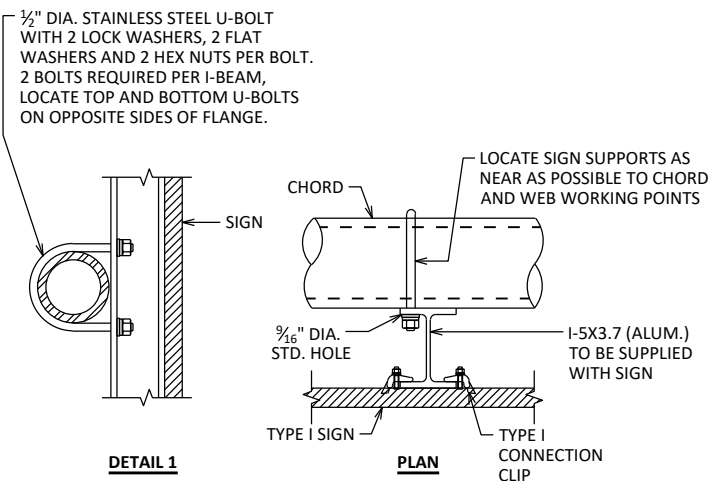
TOWER CAP DETAIL

- ★ PLACE TACK WELD EVERY OTHER FLAT TO SECURE NUT.
- ALTERNATE: USE 1/2" THK. PL. AND DRILL AND TAP HOLE FOR BOLT.

NOTES:

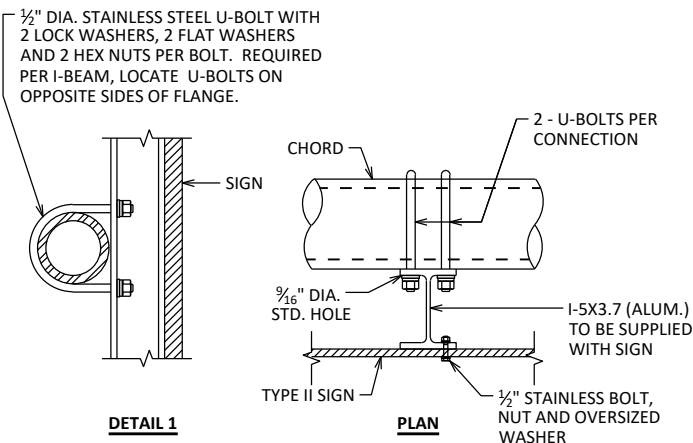
MINIMUM VALUES SHOWN. ALL CONNECTIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURAL LOADS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
UPDATED: JAN. 2023			
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MONOTUBE & 2-CHORD TRUSS CONNECTIONS 1		SHEET I	



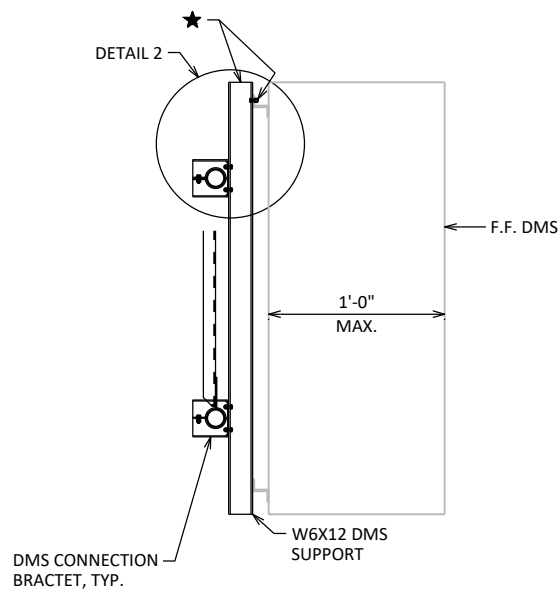
2-CHORD TRUSS SIGN CONNECTION

TYPE I SIGN PANEL SHOWN.
SEE SIGN PLATE MANUAL A4-7A AND A4-7B FOR DETAILS.
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



MONOTUBE SIGN CONNECTION

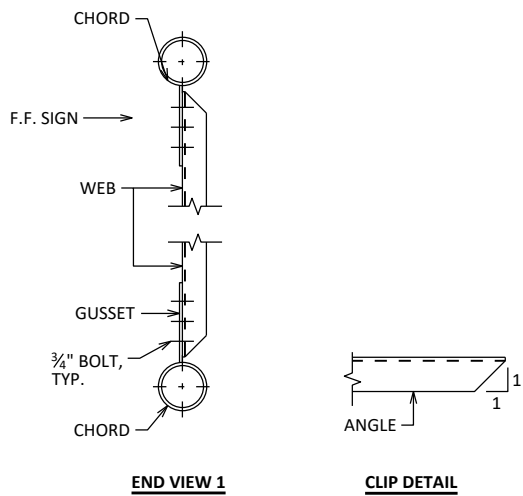
TYPE II SIGN PANEL SHOWN.
SEE SIGN PLATE MANUAL A4-7A AND A4-7B FOR DETAILS.
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



SECTION THRU TRUSS - DMS

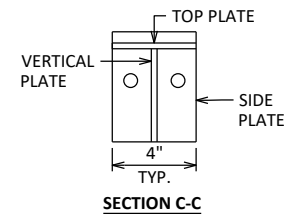
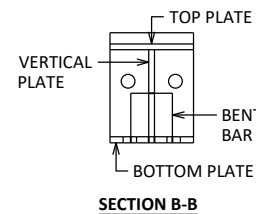
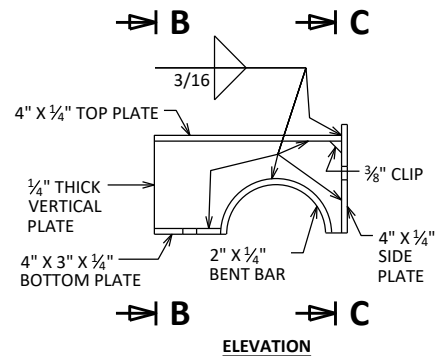
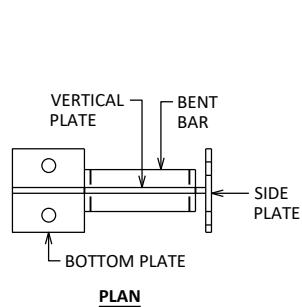
FOR DMS/CATWALK CONNECTIONS

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12



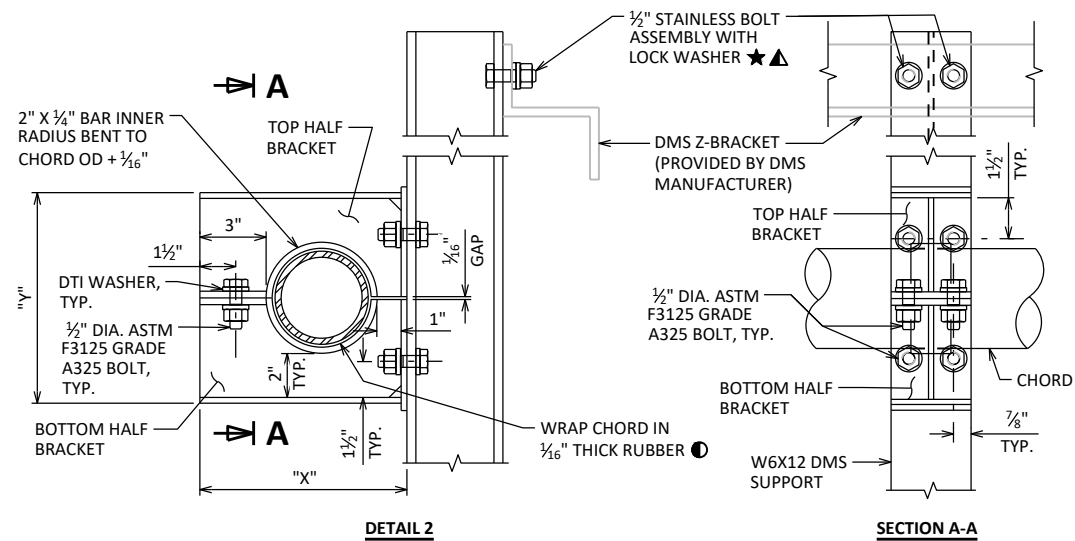
TRUSS CONNECTION DETAILS

MEMBER ORIENTATION FOR BOLTED CONNECTIONS SHOWN, WELDED CONNECTIONS SIMILAR.
ANGLES PREFERRED, OTHER WEB DESIGNS ALLOWED.



DMS WELDED PLATE CONNECTION DETAILS

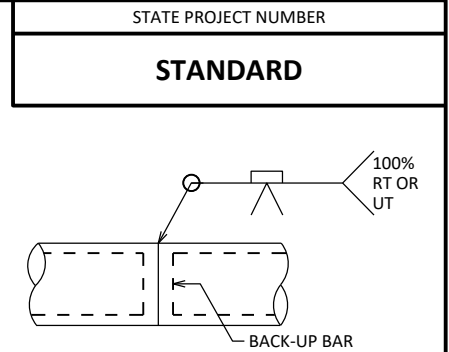
TOP HALF OF BRACKET SHOWN, BOTTOM HALF SIMILAR.



CHORD "OD"	"X"	"Y"
"OD"	"OD" + 4 3/16"	"OD" + 5 1/16"

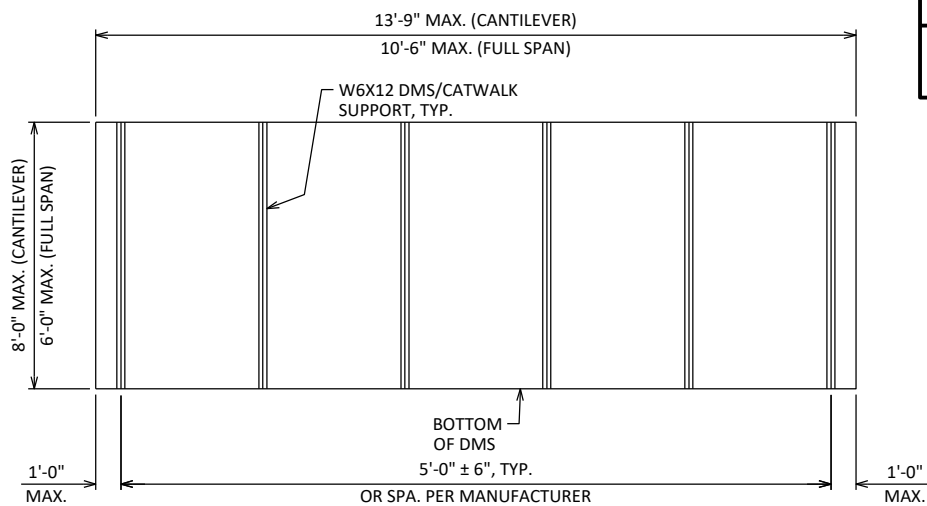
TYPICAL DMS CONNECTION

- NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD. SPEC. 506.2.6.1
- ▲ IF DMS CONNECTION BRACKET IS USED WITH A TYPE II SIGN PANEL, THE BOLT HOLE MUST BE GALVANIZED AND A STAINLESS WASHER USED BETWEEN THE I-BEAM AND SIGN PANEL.



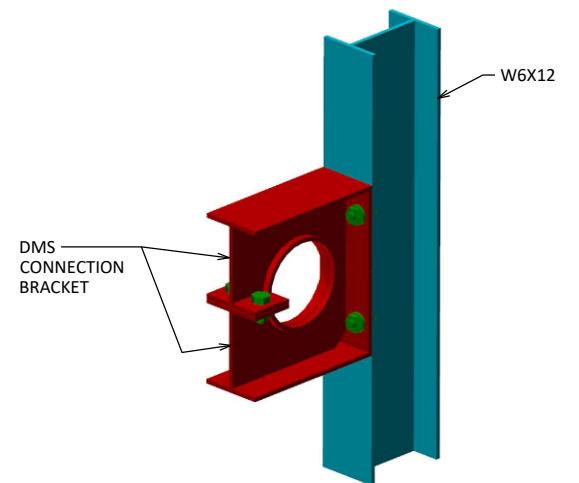
CHORD SPLICE

SEPARATE OPTIONAL SPLICE FROM GUSSET PLATES BY 6" MIN.



DMS MOUNTING POST DETAIL

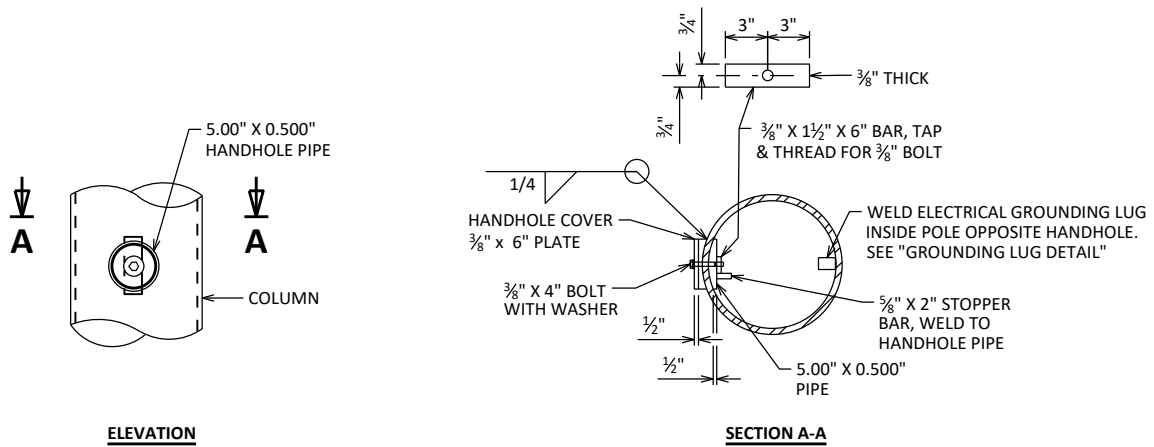
POST SPACING MAY BE ADJUSTED AS REQUIRED IF SPACING CONFLICTS WITH GUSSET PLATES OF TRUSS WITHIN TOLERANCES NOTED.



3-D VIEW OF DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY

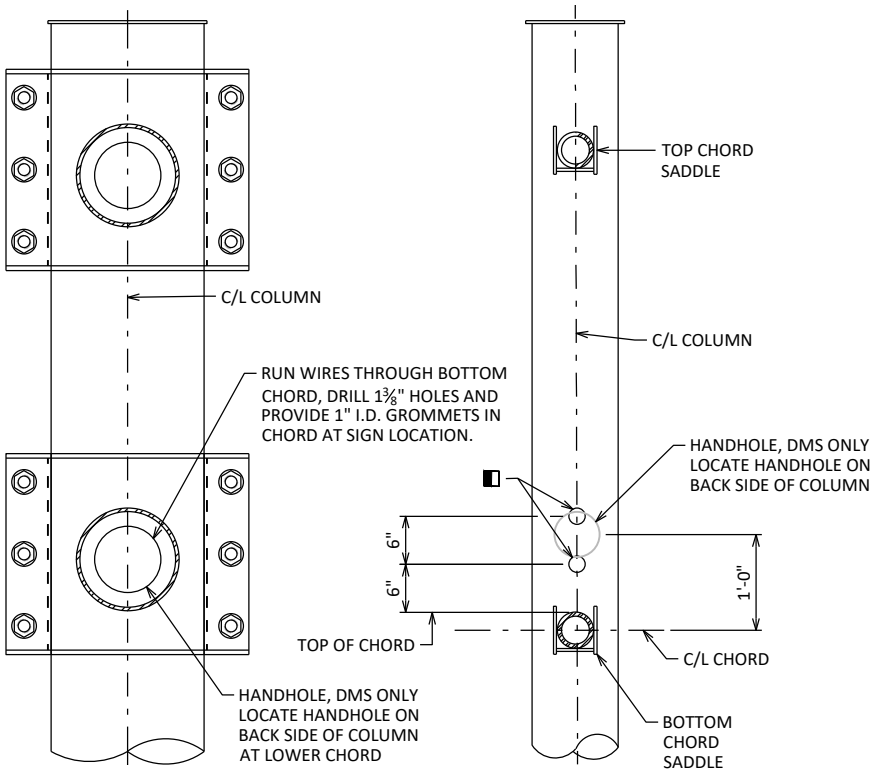
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
UPDATED: OCT. 2023			
DRAWN BY		BOS	PLANS CK'D BOS
MONOTUBE & 2-CHORD TRUSS CONNECTIONS 2		SHEET II	



HANDHOLE DETAILS

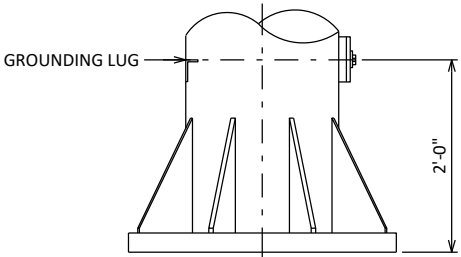
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS OTHERWISE NOTED, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



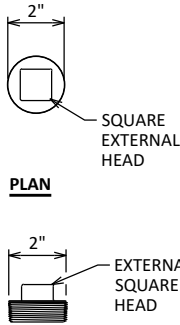
CONDUIT HOLE LOCATIONS

- 2" HOLE WITH STANDARD PIPE THREADS, USE THREADED CONDUIT PLUG FOR UNUSED HOLES

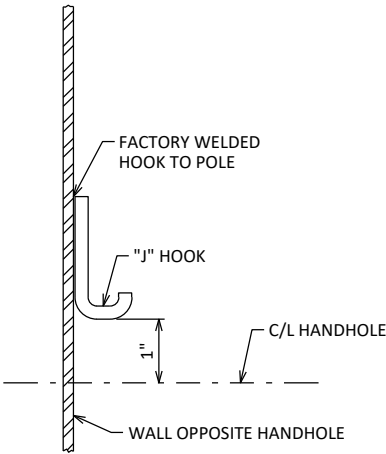


GROUNDING LUG LOCATION

LOOKING AT THE F.F. OF STRUCTURE

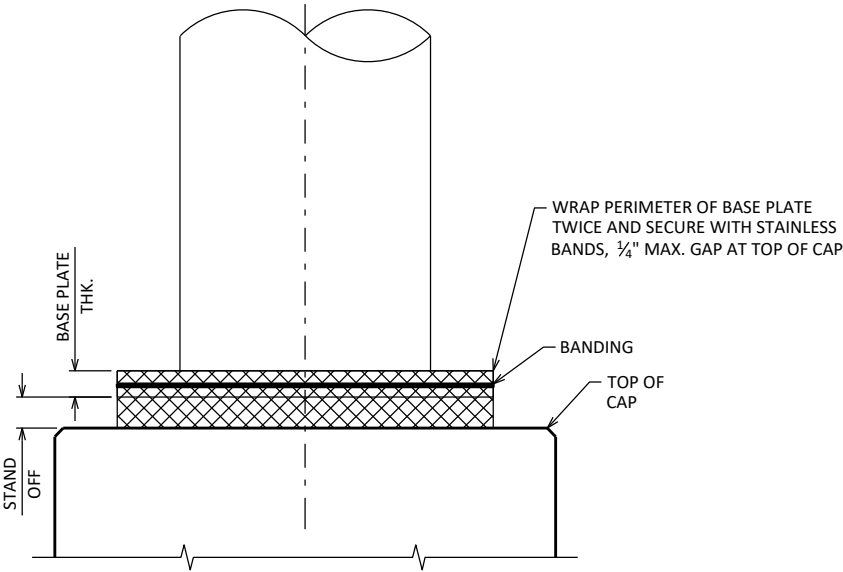


CONDUIT PLUG DETAILS



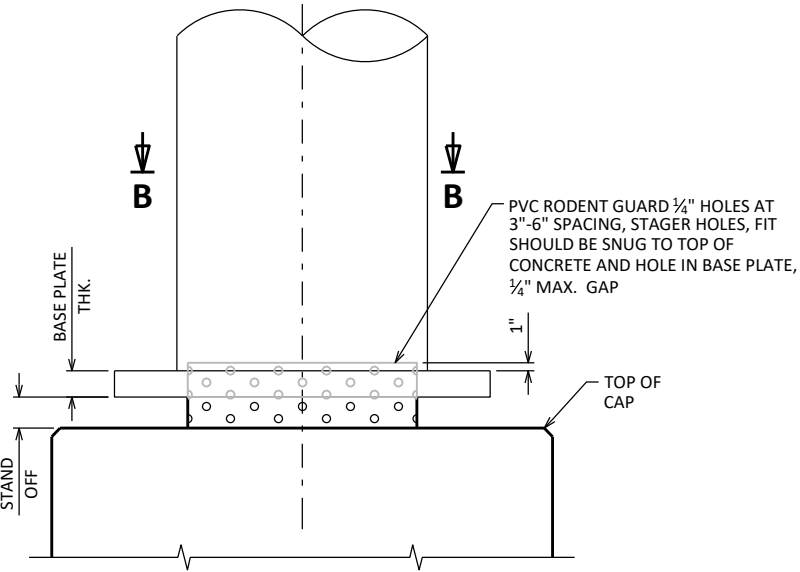
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF THE COLUMN CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



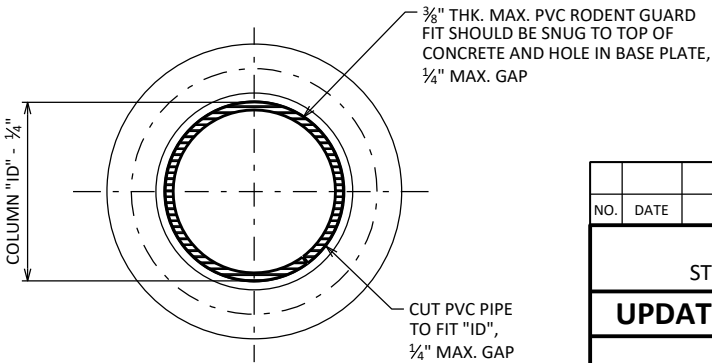
RODENT SCREEN

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT
ANCHOR RODS NOT SHOWN



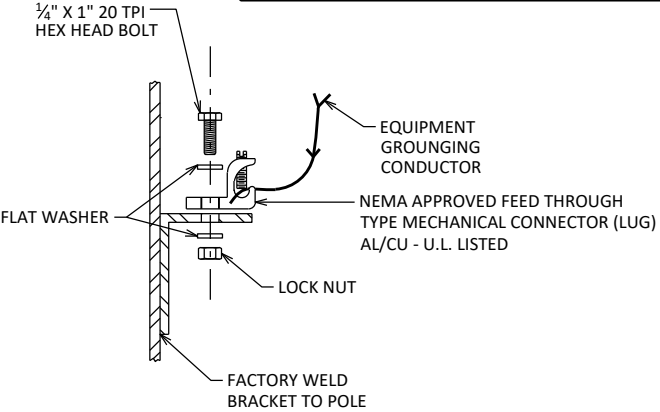
RODENT SCREEN - ALTERNATE

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT
ANCHOR RODS NOT SHOWN



SECTION B-B

STATE PROJECT NUMBER
STANDARD

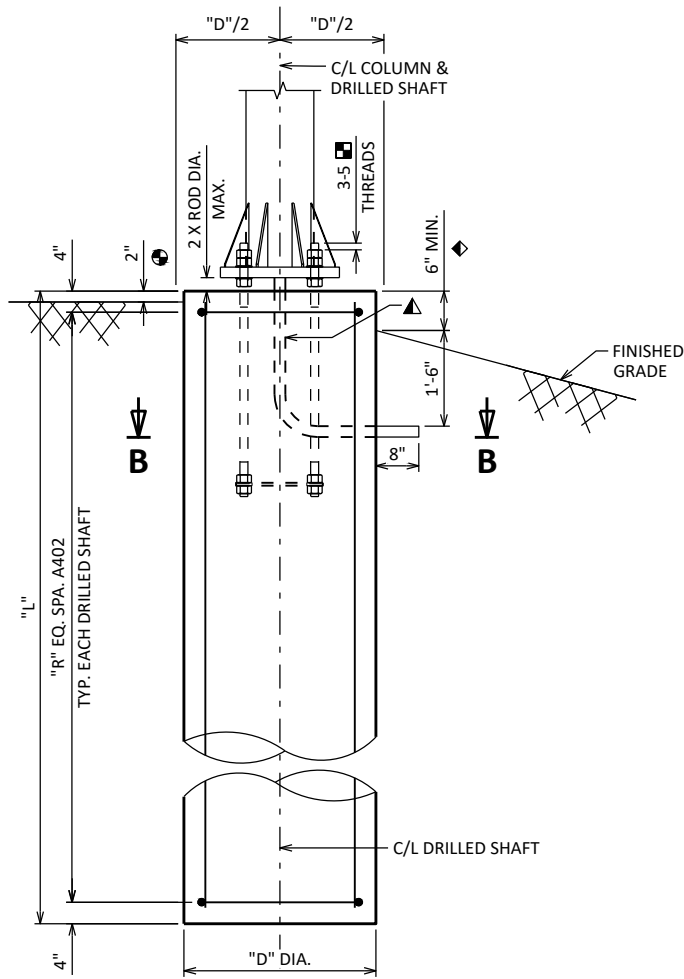


GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

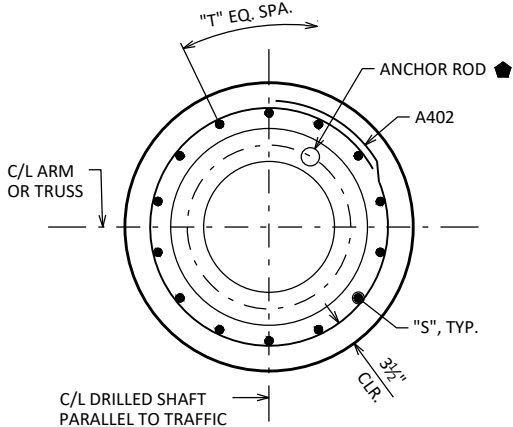
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
UPDATED: JAN. 2023			
DRAWN BY		BOS	PLANS CK'D BOS
MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS		SHEET III	

SCALE = 2:0



ELEVATION

- TYPICAL FOR DRILLED SHAFT FOOTINGS INSTALLED ADJACENT TO SIDEWALKS OR BEHIND CURB AND GUTTER ON LOW SPEED ROADS. TOP OF SHAFT SHALL BE FLUSH IF SURROUNDED BY CONCRETE AND 2" ABOVE FINISHED GRADE FOR ALL OTHER SURFACES.
- TYPICAL FOR EACH DRILLED SHAFT FOOTING INSTALLED ADJACENT TO ROADWAY FACILITIES OR ON SIDE SLOPES WITHIN CLEAR ZONE. BARRIER OR BEAMGUARD MAY BE REQUIRED.



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

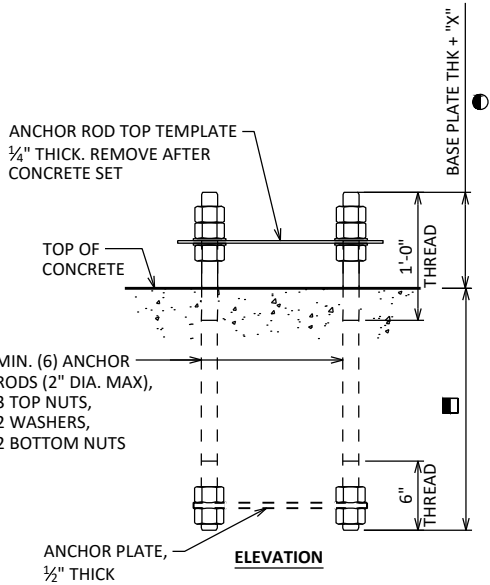
FOUNDATION DIMENSION DATA

STANDARD DESIGN TYPE	FOUNDATION DIMENSIONS					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX.
MFI	2'-0"	12'-0"	12	A801	6	1'-0"
MFII	2'-6"	13'-0"	13	A801	10	1'-5"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	1'-5"
TCI	3'-0"	18'-0"	18	A801	14	1'-10"
TFII	3'-0"	20'-0"	20	A801	14	1'-10"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	2'-4"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	2'-4"
TCIII	4'-0"	23'-0"	23	A1001	14	2'-10"
TCIV	4'-0"	28'-0"	28	A1001	14	2'-10"

ESTIMATED QUANTITIES - FOUNDATION

STANDARD DESIGN TYPE	CONCRETE MASONRY	STEEL REINFORCEMENT HS	FOUNDATION DRILLING (DIA.) (LF)				
	(CY)	(LBS)	24"	30"	36"	42"	48"
MFI	2	240	12	---	---	---	---
MFII	3	410	---	13	---	---	---
MCI/MCII/TFI	4	540	---	17	---	---	---
TCI	5	780	---	---	18	---	---
TFII	6	860	---	---	20	---	---
MCIII/TCII/TFIII	7	970	---	---	---	18	---
MCIV/TFIV	9	1,250	---	---	---	23	---
TCIII	11	1,560	---	---	---	---	23
TCIV	13	1,900	---	---	---	---	28

QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON A SINGLE DRILLED SHAFT. MULTIPLY BY 2 FOR FULL SPAN STRUCTURES.



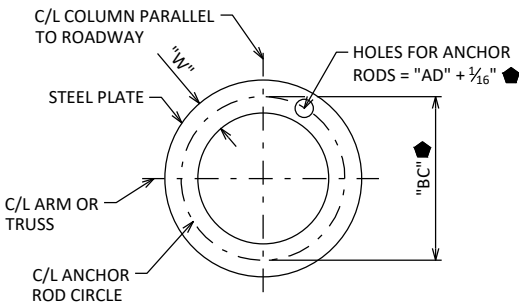
ANCHOR ROD ASSEMBLY DETAILS

- ANCHOR RODS PER ASSEMBLY TO BE DESIGNED BY CONTRACTOR AND SHOWN ON SHOP DRAWINGS. SHOW DIAMETER, NUMBER, ORIENTATION AND EMBEDMENT OF ANCHOR RODS.

CENTER ANCHOR ROD ASSEMBLY AND ENSURE ASSEMBLY IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHORS.

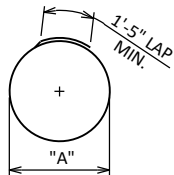
ANCHOR DIAMETER	MAX. STICK OUT
	"X"
1"	5"
1 1/4"	6"
1 1/2"	7"
1 3/4"	8"
2"	9"

- ADD BASE PLATE THICKNESS TO VALUE SHOWN FOR MAX. STICK OUT DIMENSION. CONTRACTOR TO COORDINATE WITH FABRICATOR FOR PROPER ANCHOR PLACEMENT.



ANCHOR PLATE & TOP TEMPLATE

- ANCHOR SIZE, BOLT CIRCLE, AND POSITION TO BE VERIFIED WITH SHOP DRAWINGS.



A402

LEGEND

- ANCHOR ROD STICK OUT IN FINAL CONDITION. EXCESSIVE STICK OUT BEYOND DIMENSION SHOWN TO BE CUT OFF AFTER PLACING STRUCTURE. ANCHORS TO BE ULTRASONIC TESTED TO DETERMINE EMBEDDED LENGTH MEETS REQUIREMENTS PRIOR TO CUTTING. NOTE REMAINING LENGTH ON AS-BUILT.
- 2 - 2" DIA. NON-METALLIC CONDUITS. INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

STANDARD TYPE MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-8"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-8"			DRILLED SHAFT - VERTICAL
A402		14	9'-4"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		10	16'-8"			DRILLED SHAFT - VERTICAL
A402		18	9'-4"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-8"			DRILLED SHAFT - VERTICAL
A402		19	10'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	19'-8"			DRILLED SHAFT - VERTICAL
A402		21	10'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	17'-8"			DRILLED SHAFT - VERTICAL
A402		19	12'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-8"			DRILLED SHAFT - VERTICAL
A402		24	12'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCIII

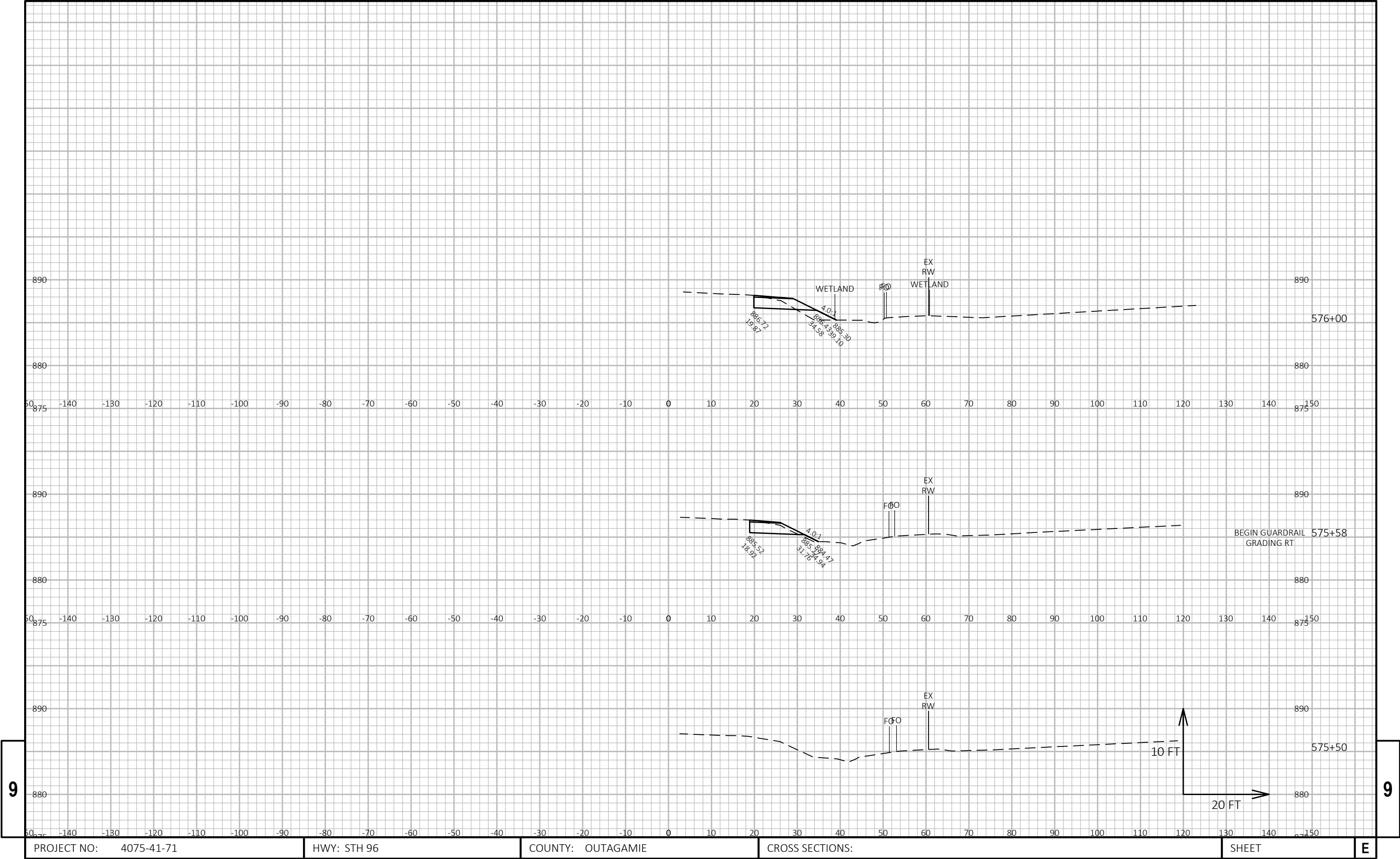
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-8"			DRILLED SHAFT - VERTICAL
A402		24	14'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-8"			DRILLED SHAFT - VERTICAL
A402		29	14'-0"	X		DRILLED SHAFT - HORIZONTAL

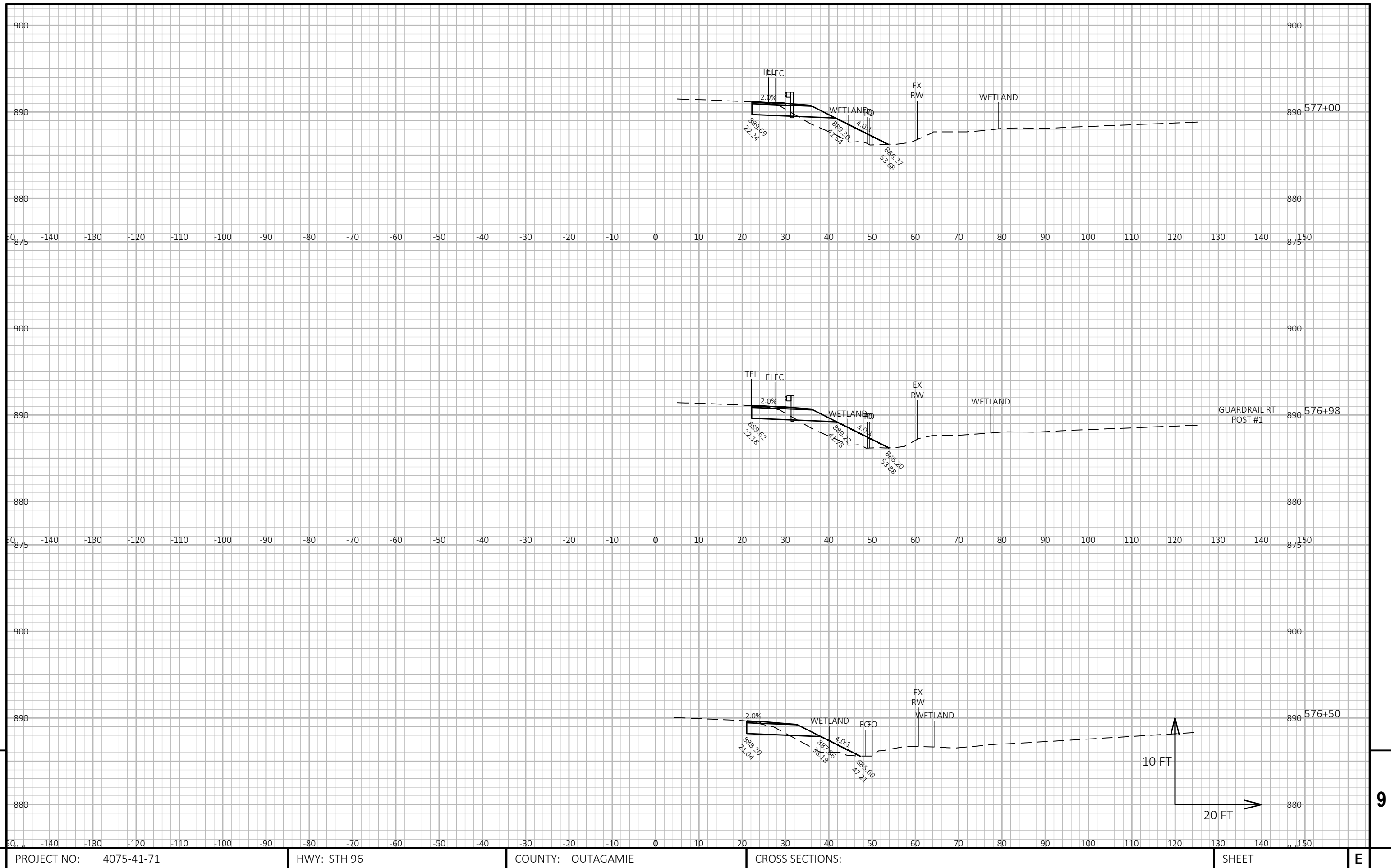
VALUES IN BAR TABLES ARE FOR A SINGLE FOUNDATION ONLY. MULTIPLY BY 2 FOR FULL SPAN STRUCTURES.

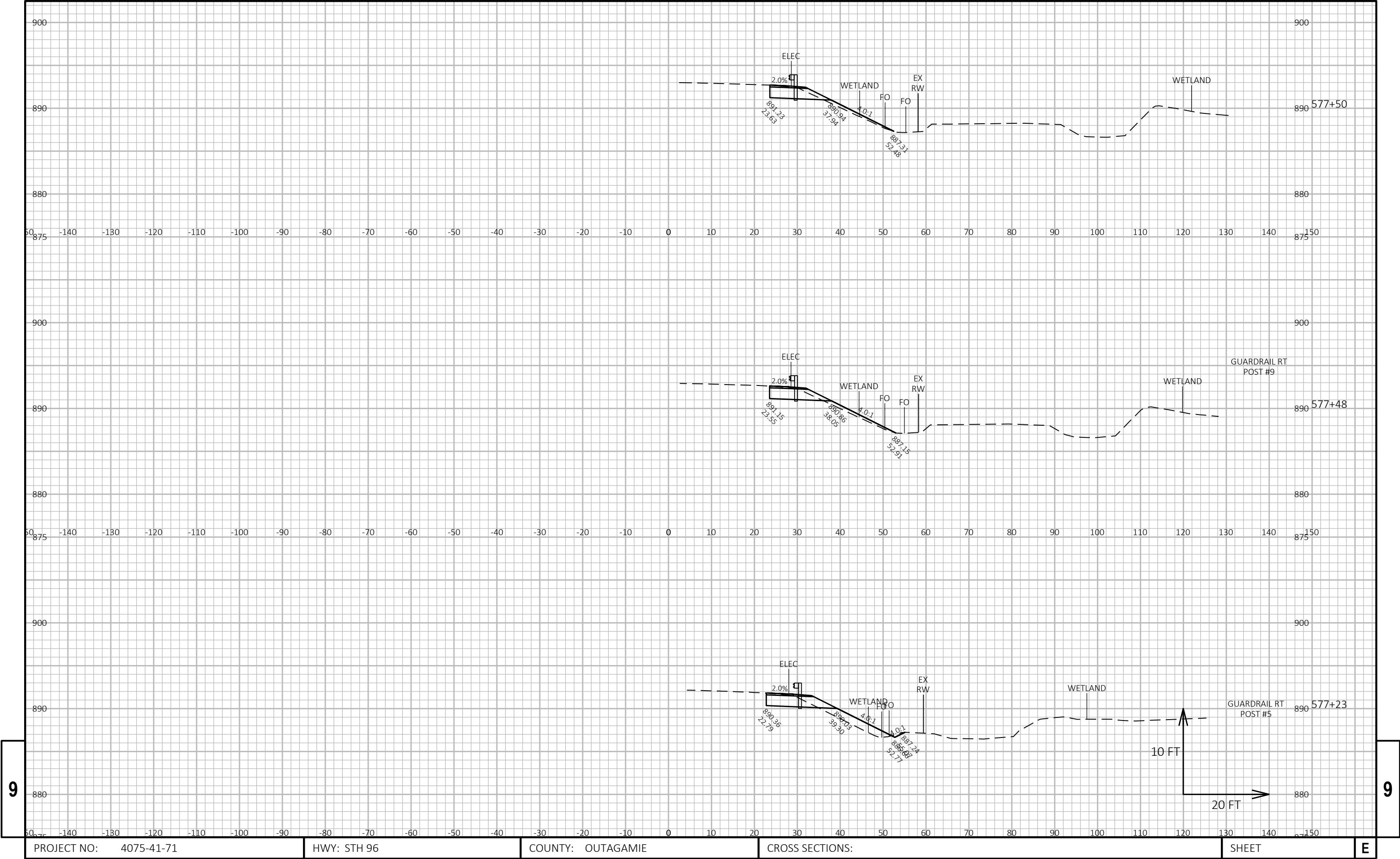
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
UPDATED: OCT. 2023			
DRAWN BY		BOS	PLANS CK'D BOS
MONOTUBE & 2-CHORD TRUSS FOUNDATIONS		SHEET IV	



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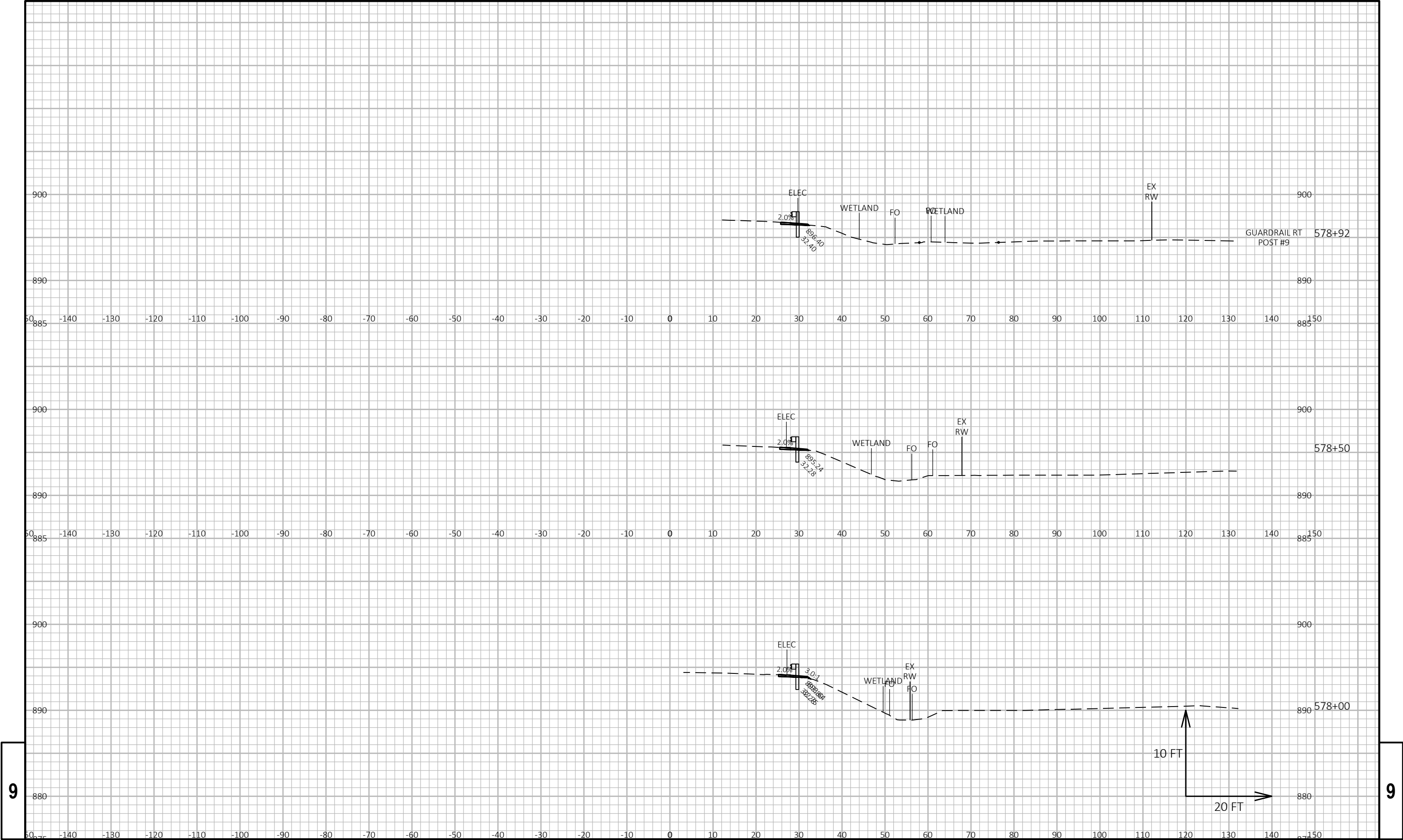
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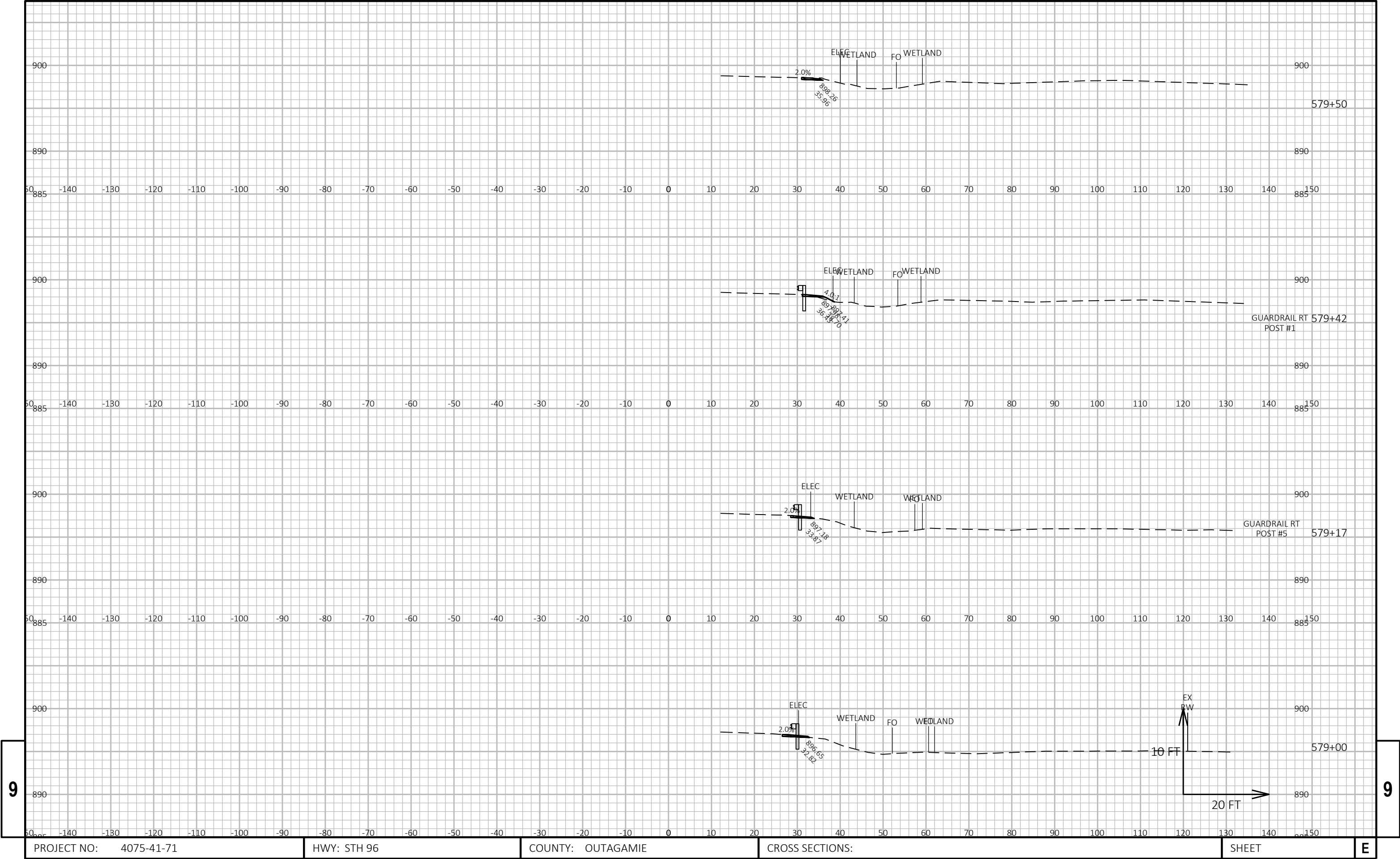
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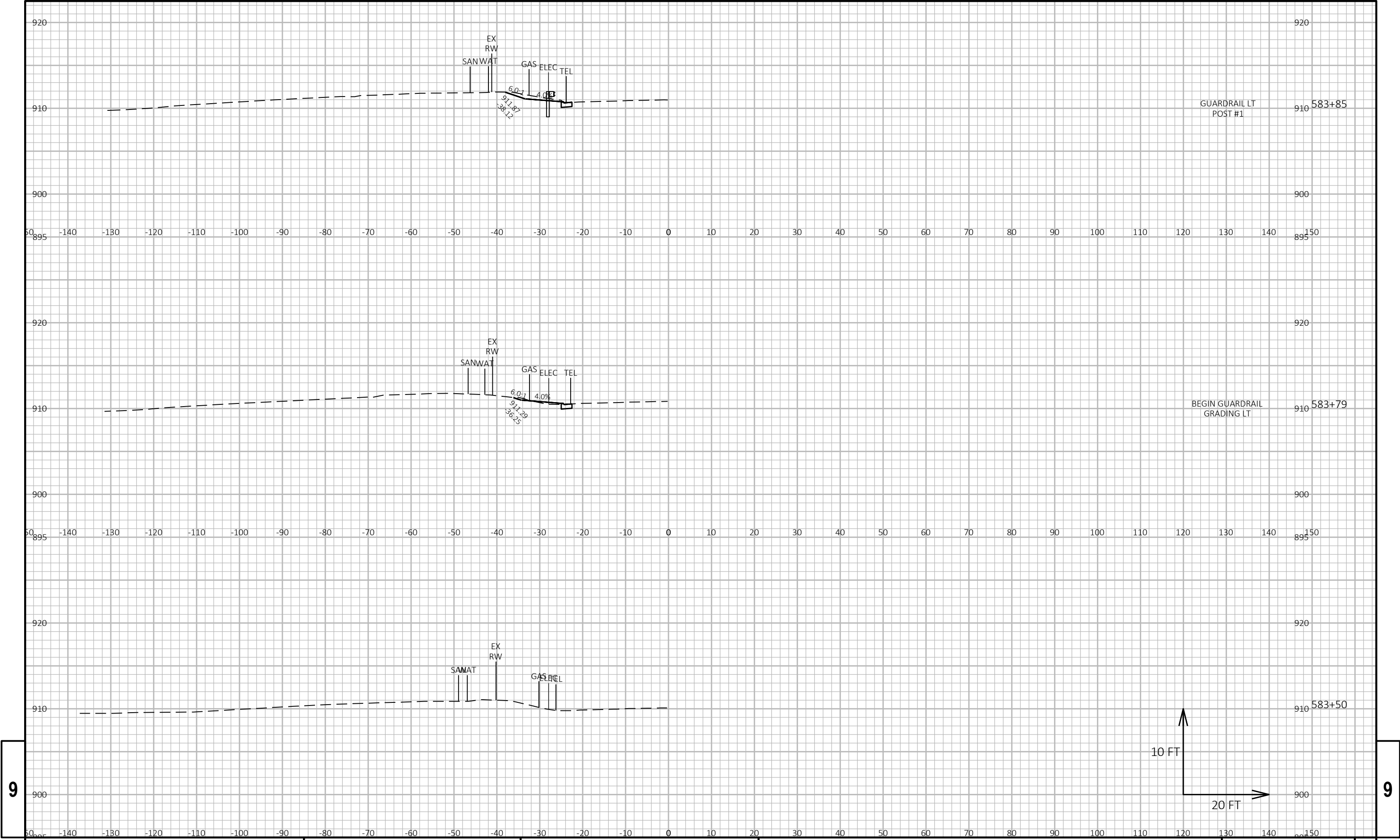
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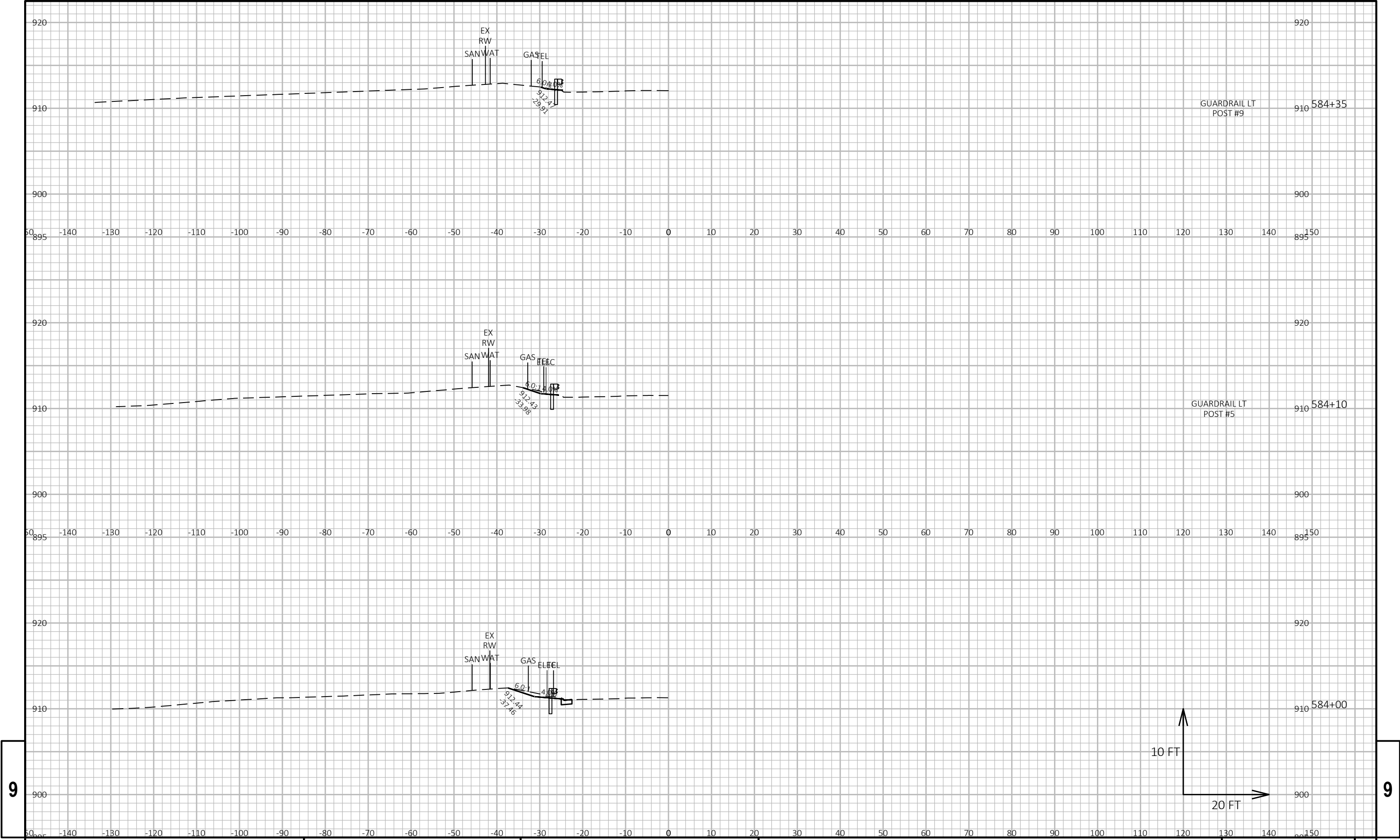
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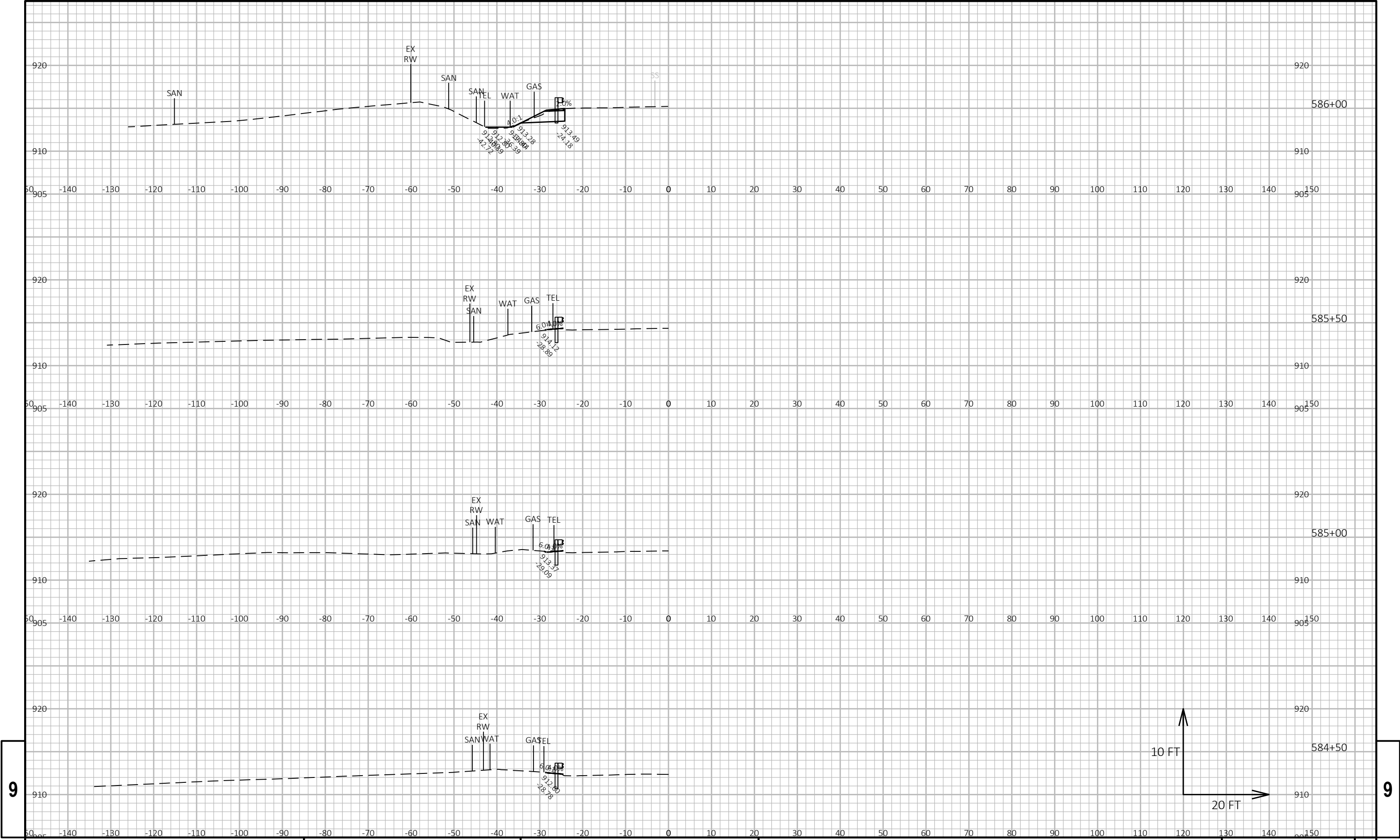
PROJECT NO: 4075-41-71	HWY: STH 96	COUNTY: OUTAGAMIE	CROSS SECTIONS:	SHEET	E
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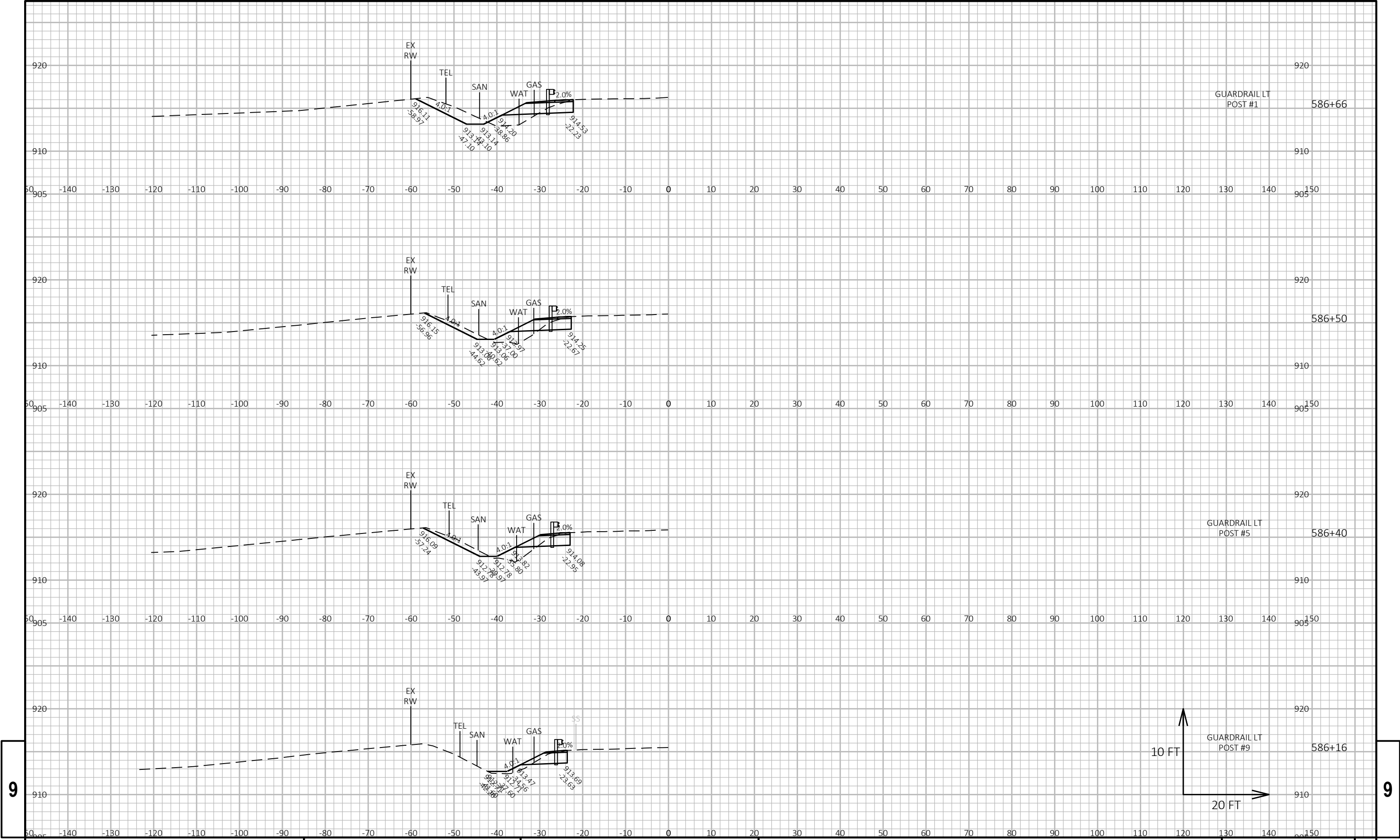
PROJECT NO: 4075-41-71				HWY: STH 96				COUNTY: OUTAGAMIE				CROSS SECTIONS:				SHEET				E
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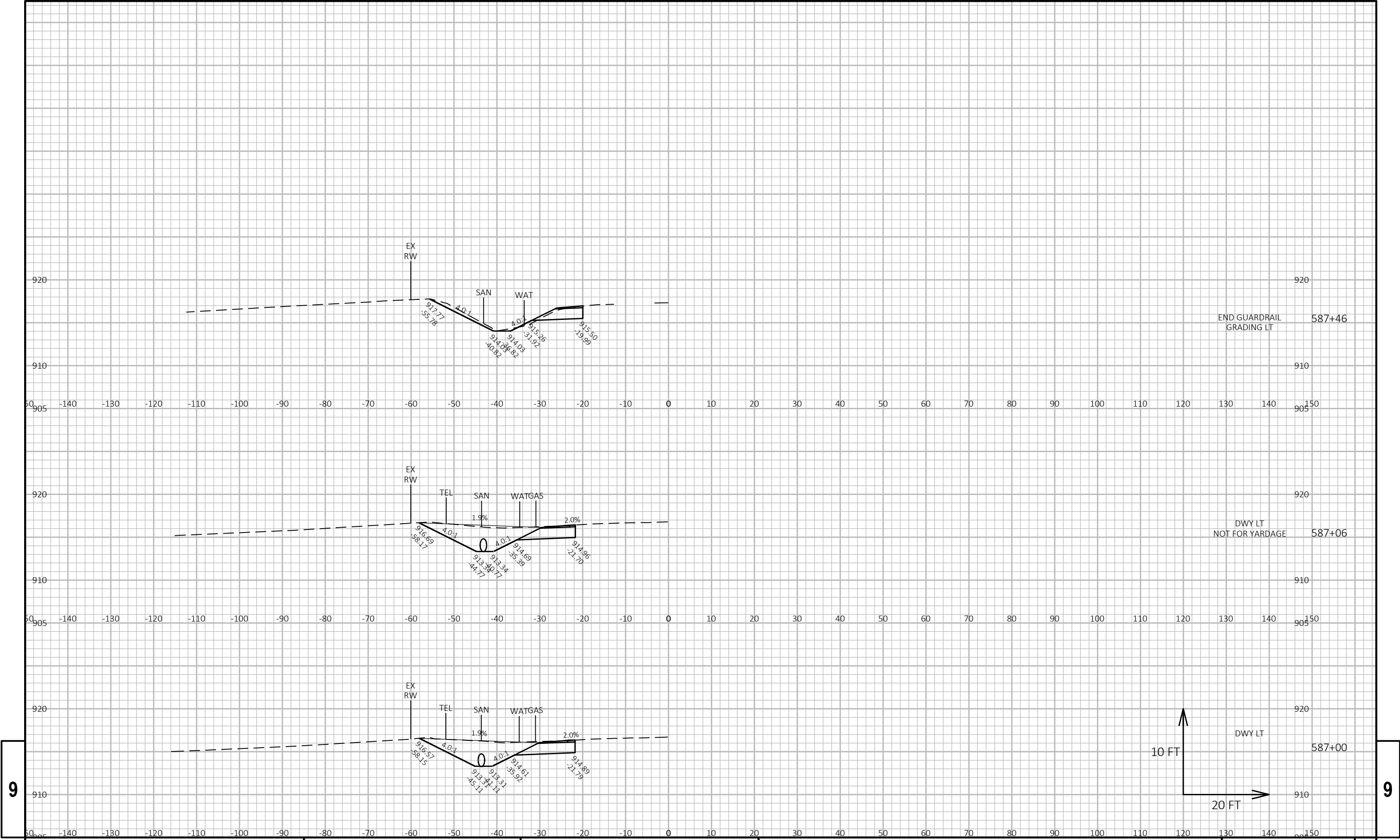
PROJECT NO: 4075-41-71			HWY: STH 96			COUNTY: OUTAGAMIE			CROSS SECTIONS:			SHEET			E
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PROJECT NO: 4075-41-71			HWY: STH 96			COUNTY: OUTAGAMIE			CROSS SECTIONS:			SHEET			E
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