

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MAUSTON - WISCONSIN DELLS

NORTH COUNTY LINE TO STH 13

USH 12

SAUK COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5880-01-70	WISC 2024110	1

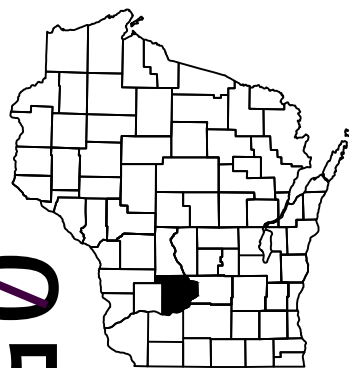
ORDER OF SHEETS

Section No.	Title
1	1
2	2
3	3
3	3
4	Right of Way Plat
5	5
6	6
7	7
8	Structure Plans
9	9
9	9

TOTAL SHEETS = 238

STATE PROJECT NUMBER
5880-01-70

BEGIN PROJECT
 STA 10+22.79
 Y=299440.0000
 X=635062.0000

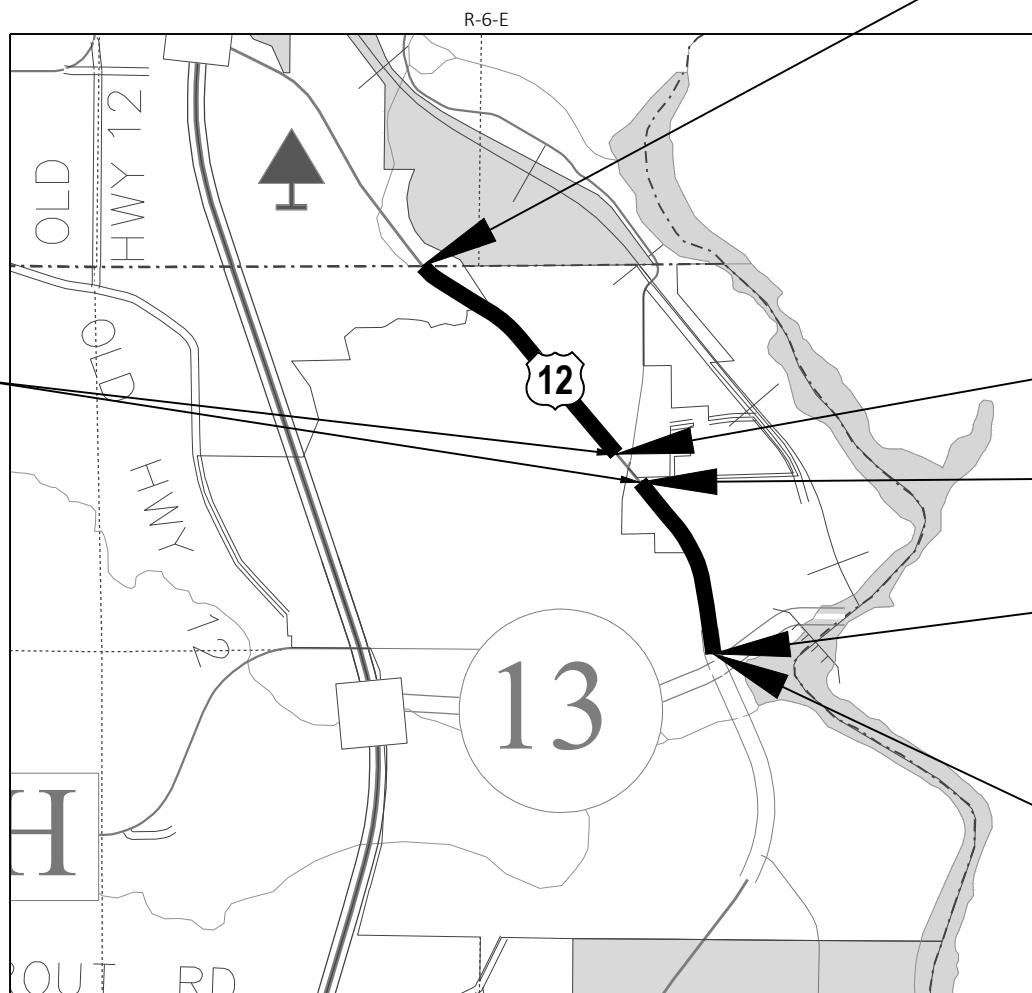


05

DESIGN DESIGNATION

A.A.D.T. (2026)	=	5,100
A.A.D.T. (2046)	=	6,400
D.H.V.	=	768
D.D.	=	50/50
T.	=	8.0%
DESIGN SPEED	=	50 MPH STH 13 TO CTH A, 60 MPH CTH A TO NORTH COUNTY LINE
ESALS	=	720,000

EXCEPTION TO NET CL LENGTH
 STA 41+50.04 - STA 60+57.50



END CONSTRUCTION
 STA 41+50.04

BEGIN CONSTRUCTION
 STA 60+57.50

END PROJECT
 STA 82+61.32

END CONSTRUCTION
 STA 83+20.32

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 1.021 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), SAUK 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.

ORIGINAL PLANS PREPARED BY



J. Malenofski
 (Professional Engineer Signature)

DATE: 7/21/2023

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY	_____
Surveyor	CBS SQUARED, INC.
Designer	CBS SQUARED, INC.
Project Manager	GREGORY BRECKA
Regional Examiner	SW REGION
Regional Supervisor	MARC SCHWEIGER

APPROVED FOR THE DEPARTMENT
 DATE: 7/24/23 *[Signature]*
 (Signature)

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GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED OR EROSION MATTED AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.

A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

EXACT LOCATION OF ALL DRIVEWAY ENTRANCES TO BE REVIEWED AND APPROVED BY THE ENGINEER.

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.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION OF 0.05 GAL/SY AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

HMA PAVEMENT ON USH 12 WILL BE PLACED IN TWO LAYERS CONSISTING OF 2 INCHES OF HMA PAVEMENT 4 MT 58-28 S (UPPER LAYER) AND 3 INCHES OF HMA PAVEMENT 3 MT 58-28 S (LOWER LAYER).

STANDARD ABBREVIATIONS

AP	ACCESS POINT	INV	INVERT
AC	ACRE	JT	JOINT
AGG	AGGREGATE	LT	LEFT
ASPH	ASPHALTIC	LF	LINEAR FOOT
BL	BASELINE	MH	MANHOLE
BM	BENCH MARK	MP	MARKER POST
CB	CATCH BASIN	MB	MESSAGE BOARD
CL	CENTER LINE	NOM	NOMINAL
CONC	CONCRETE	NB	NORTHBOUND
CO	COUNTY	PAVT	PAVEMENT
CABC	CRUSHED AGGREGATE BASE	PERM	PERMANENT
COURSE		PU	PIPE UNDERDRAIN
CY	CUBIC YARD	PCC	PORTLAND CEMENT CONCRETE
CULV	CULVERT	PE	PRIVATE ENTRANCE
CP	CULVERT PIPE	PROJ	PROJECT
C&G	CURB AND GUTTER	PL	PROPERTY LINE
DIA	DIAMETER	RL	REFERENCE LINE
DWY	DRIVEWAY	RT	RIGHT
EB	EASTBOUND	R/W	RIGHT OF WAY
ELEV	ELEVATION	RDWY	ROADWAY
EW	ENDWALL	SHLDR	SHOULDER
ENT	ENTRANCE	SB	SOUTHBOUND
EXC	EXCAVATION	SS	STORM SEWER
FP	FENCE POST	TEL	TELEPHONE
FERT	FERTILIZE	TEMP	TEMPORARY
F	FILL	TER	TERRACE
FG	FINISHED GRADE	TV	TELEVISION
FL	FLOW LINE	UG	UNDERGROUND
FO	FIBER OPTIC	VOL	VOLUME
FT	FOOT	W	WATER
HYD	HYDRANT	WB	WESTBOUND
INL	INLET		
INTERS	INTERSECTION		

ELECTRICITY - TRANSMISSION

ATC MANAGEMENT, INC
DOUG VOSBERG (PRIMARY CONTACT)
2489 RINDEN RD
COTTAGE GROVE, WI 53527
(608) 877-7650
DVOSBERG@ATCLLC.COM

ELECTRICITY

CITY OF WISCONSIN DELLS
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51 ILLINOIS AVE
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KLEIS@DELLSCITYGOV.COM

WATER

CITY OF WISCONSIN DELLS
SCOTT MCCLYMAN (PRIMARY CONTACT)
51 ILLINOIS AVE
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(608) 253-2542
SMCCLYMAN@DELLSCITYGOV.COM

COMMUNICATION

SPECTRUM
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2701 DANIELS ST
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GLEN.JAKUSZ@CHARTER.COM

GAS/PETROLEUM

ALLIANT ENERGY
MICHAEL JACOBS (PRIMARY CONTACT)
520 COMMERCIAL AVE
BARABOO, WI 53913
(608) 574-3152
MICHAELJACOBS@ALLIANTENERGY.COM

SANITARY SEWER

CITY OF WISCONSIN DELLS
CHRIS TOLLAKSEN (PRIMARY CONTACT)
300 LACROSSE ST
WISCONSIN DELLS, WI 53965
(608) 253-2542
CTOLLAKSEN@DELLSCITYGOV.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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .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 = 12.702 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 7.949 ACRES

ORDER OF SECTION 2 SHEETS

- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- EROSION CONTROL
- STORM SEWER
- PAVEMENT MARKING AND SIGNING
- TRAFFIC CONTROL DETAILS
- DETOUR PLAN
- ALTERNATE ROUTE PLAN



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

OTHER CONTACTS

DESIGN CONTACT

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APPLETON, WI 54913
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JMALENOSKI@CBSQUAREDINC.COM

WISDOT CONTACT

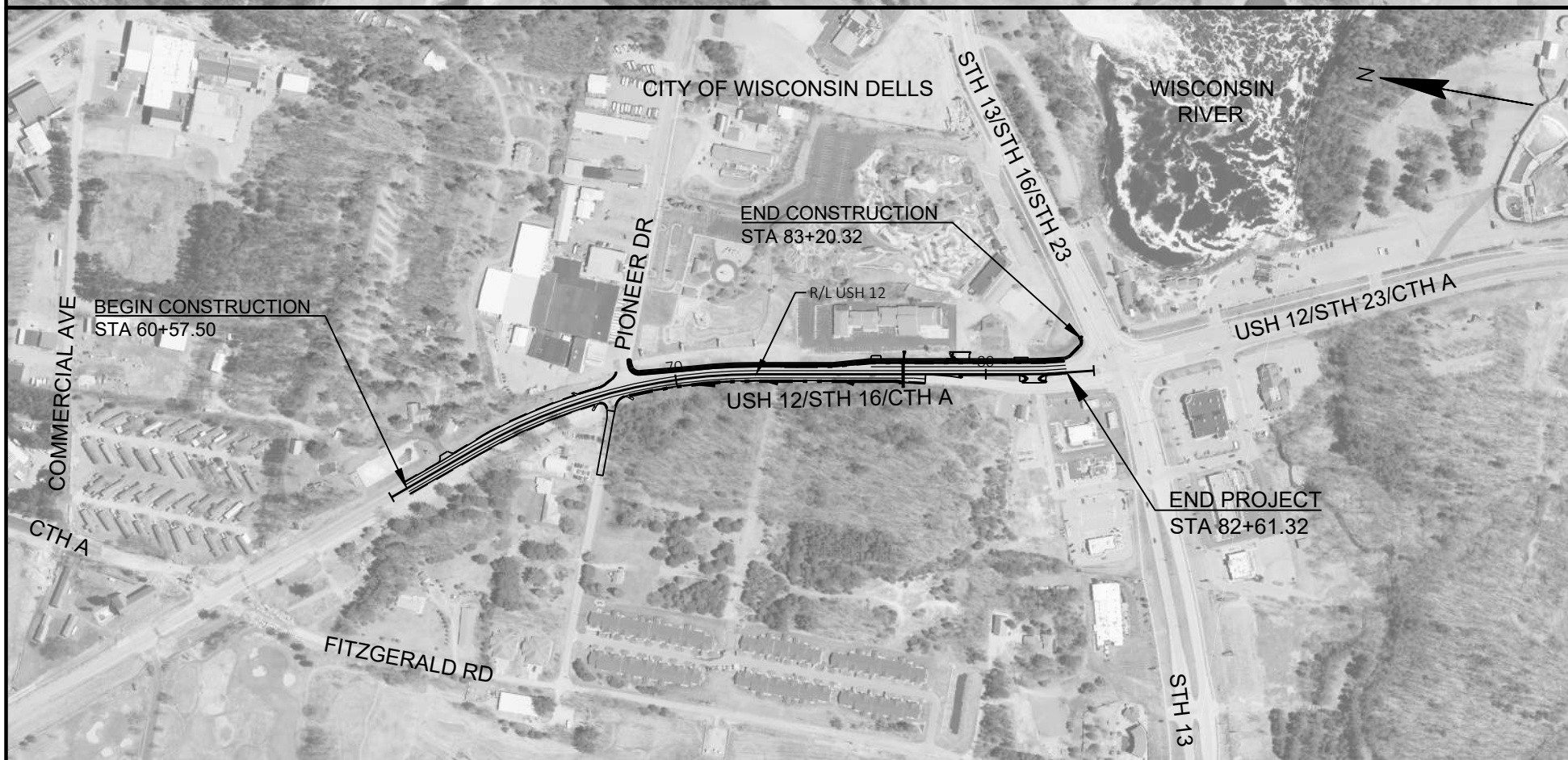
GREGORY BRECKA
2101 WRIGHT ST
MADISON, WI 53704
(608) 516-6524
GREGORY.BRECKA@DOT.WI.GOV

WISCONSIN DNR CONTACT

SOUTHERN REGION
ANDREW BARTA
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FITCHBURG, WI 53711
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ANDREW.BARTA@WISCONSIN.GOV

WISDOT CONTACT - TRAFFIC SIGNALS

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3550 MORMON COULEE RD
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COLLIN.WEBB@DOT.WI.GOV



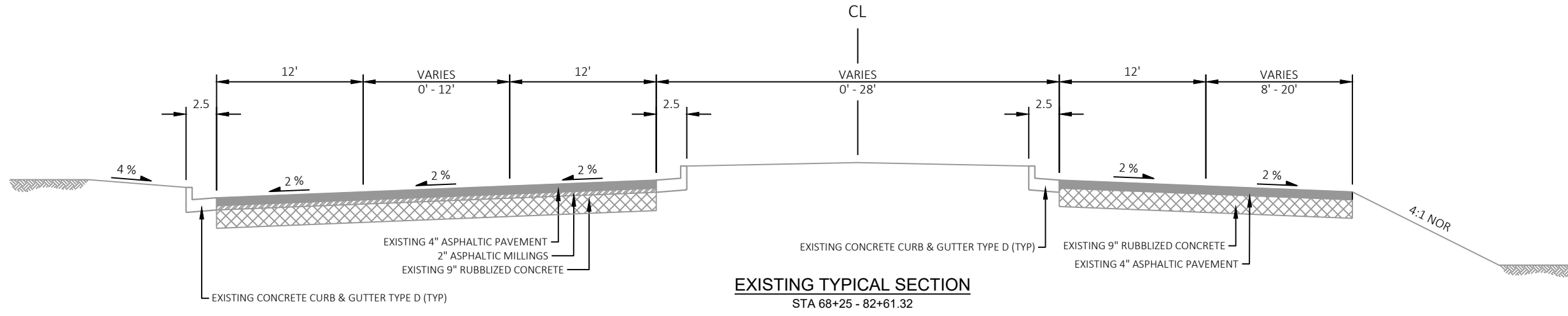
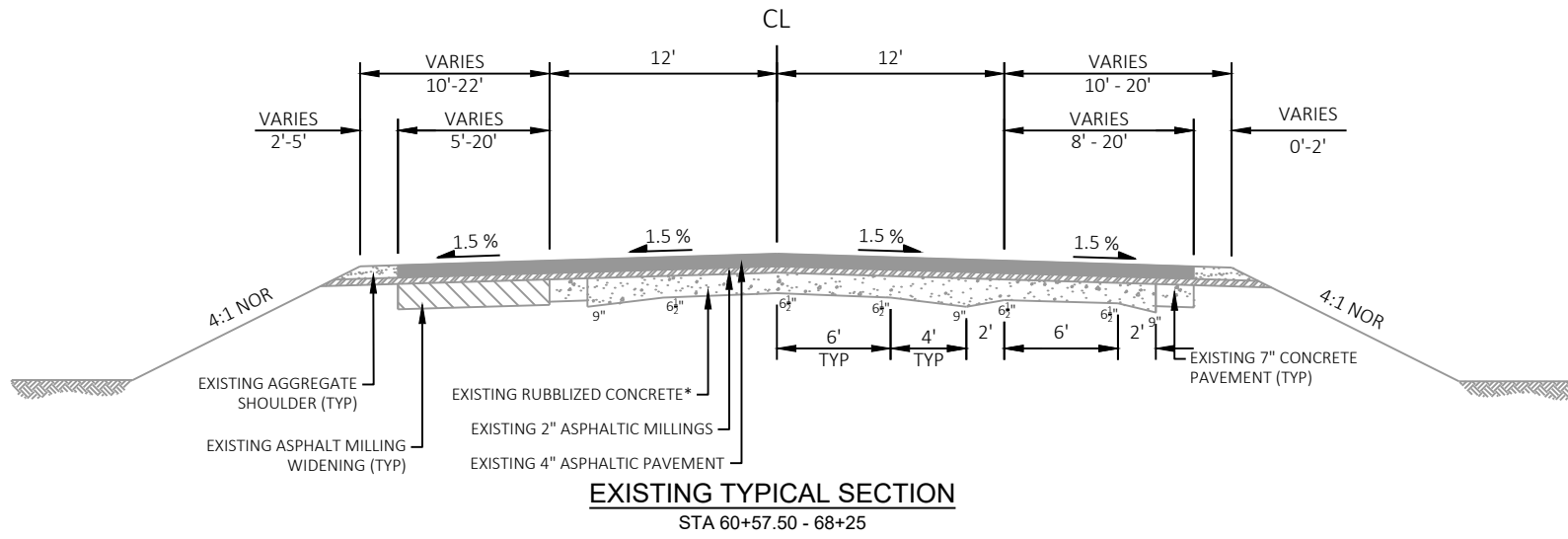
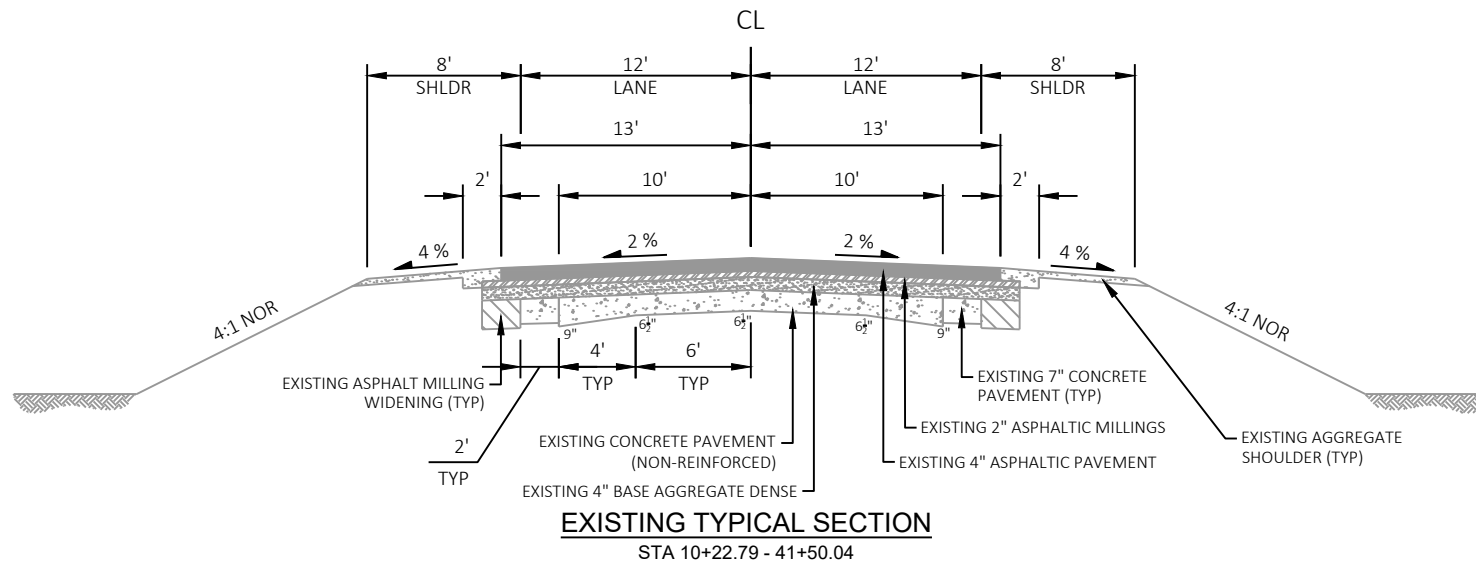
PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	PROJECT OVERVIEW	SHEET	E
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NOTE:

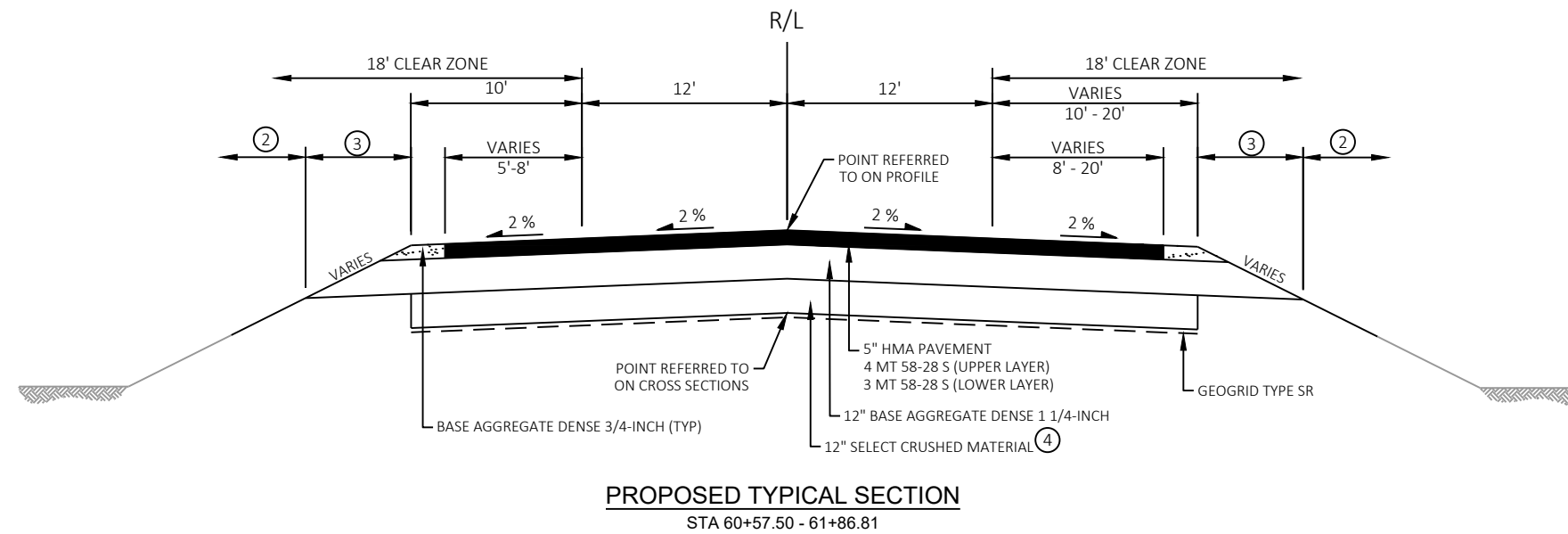
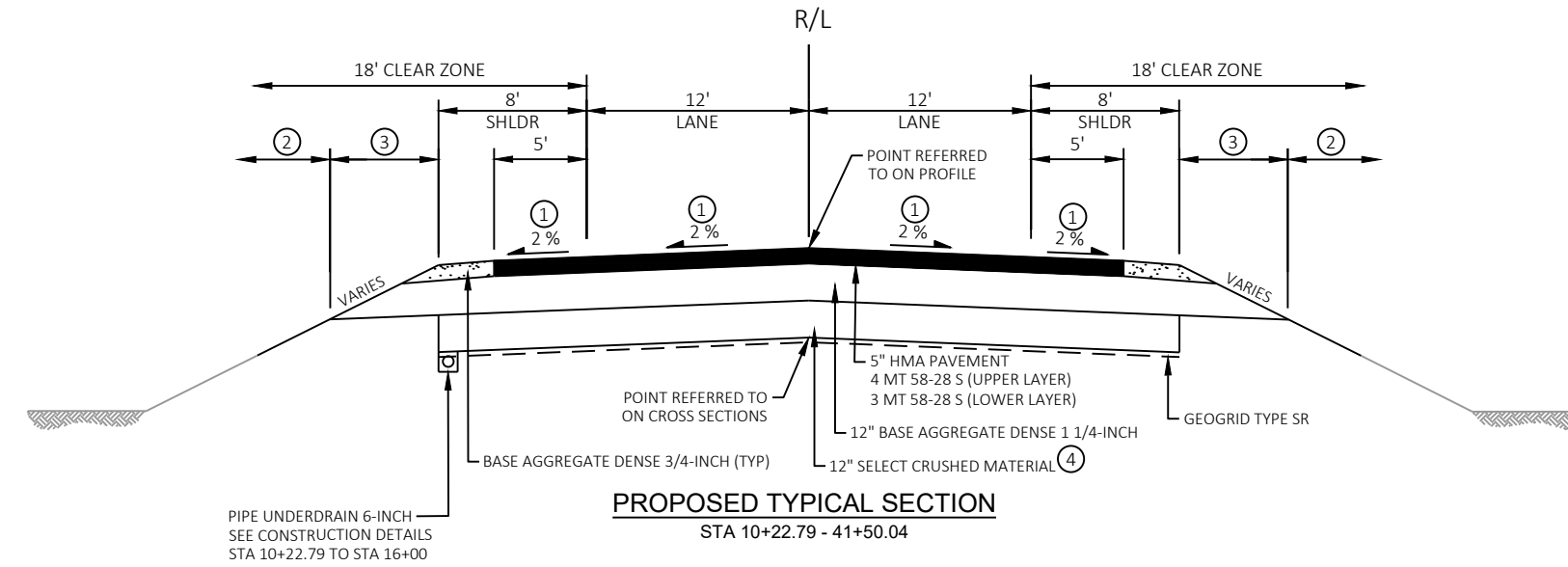
ROADWAY IS SUPERELEVATED AT LOCATIONS OF HORIZONTAL CURVES. SEE PLAN SHEETS FOR LOCATIONS AND SUPERELEVATION RATES.

DEPTHS AS SHOWN ARE APPROXIMATE AND BASED UPON AVAILABLE AS-BUILT INFORMATION. ACTUAL DEPTHS MAY VARY.

*EXISTING CONCRETE PAVEMENT (NON-REINFORCED) STA 60+57.50 TO 61+87 AND EXISTING RUBBLIZED CONCRETE STA 61+87 TO 68+25. BOTH TYPES OF EXISTING PAVEMENT TO BE PAID UNDER ITEM "REMOVING CONCRETE PAVEMENT".

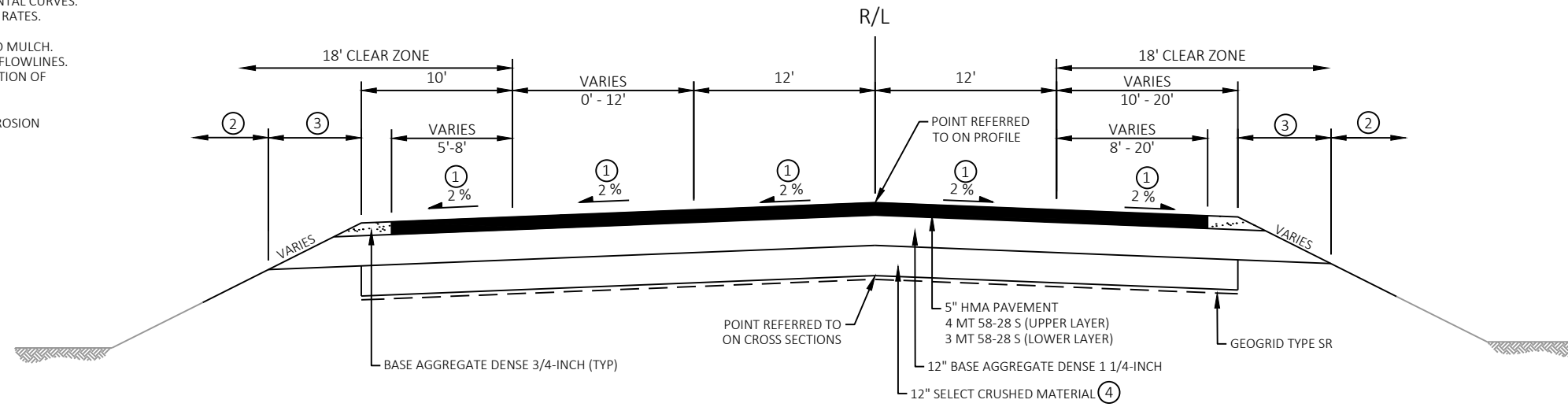


- NOTES:
- ① ROADWAY IS SUPERELEVATED AT LOCATIONS OF HORIZONTAL CURVES. SEE PLAN SHEETS FOR LOCATIONS AND SUPERELEVATION RATES.
 - ② SALVAGED TOPSOIL, NO. 10 OR NO. 80 SEED, FERTILIZER TYPE B, AND MULCH. EROSION MAT ON SLOPES STEEPER THAN 3:1 AND DITCH FLOWLINES. REFER TO EROSION CONTROL PLANS FOR TYPE AND LOCATION OF EROSION CONTROL ITEMS.
 - ③ NO. 10 OR NO. 80 SEED & TYPE B FERTILIZER REQUIRED. REFER TO EROSION CONTROL PLANS.
 - ④ SEE CONSTRUCTION DETAIL 'DRAINAGE RELIEF TRENCH'.

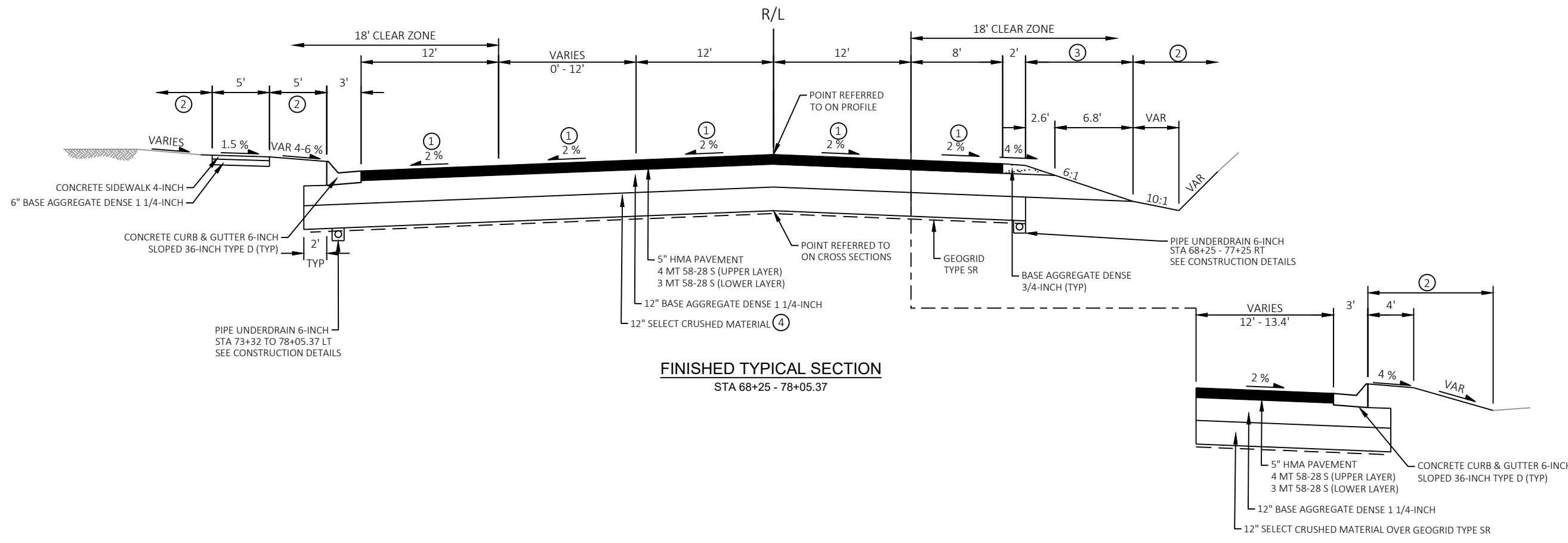


NOTES:

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- ③ NO. 10 SEED & TYPE B FERTILIZER REQUIRED. REFER TO EROSION CONTROL PLANS.
- ④ SEE CONSTRUCTION DETAIL 'DRAINAGE RELIEF TRENCH'.



PROPOSED TYPICAL SECTION
STA 61+86.81 - 68+25

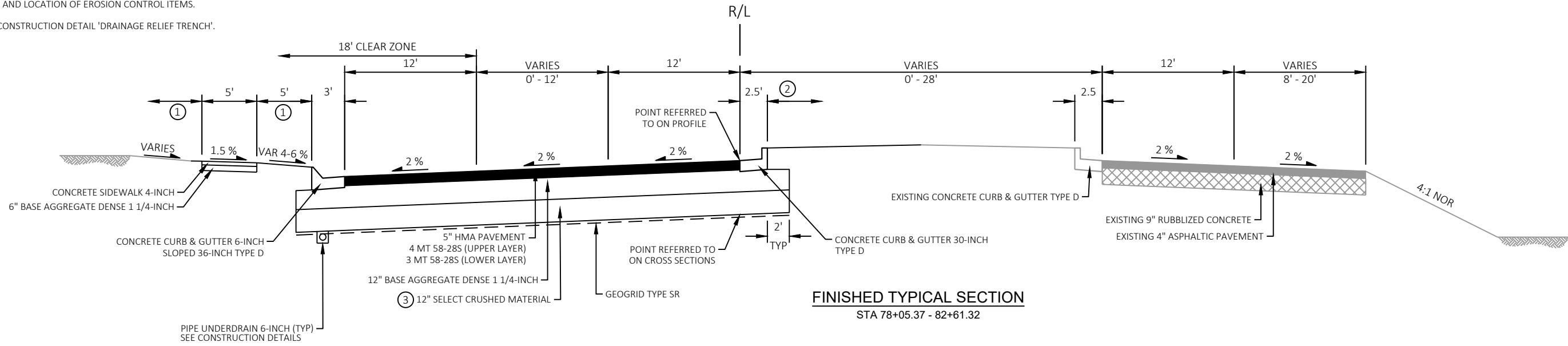


FINISHED TYPICAL SECTION
STA 68+25 - 78+05.37

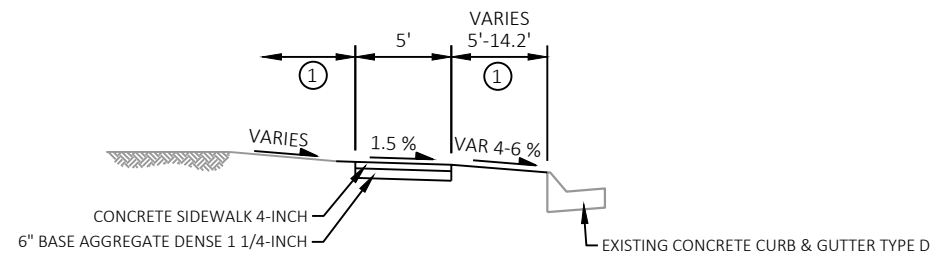
FINISHED TYPICAL PARTIAL SECTION
STA 77+50 - 78+04 RT

NOTES:

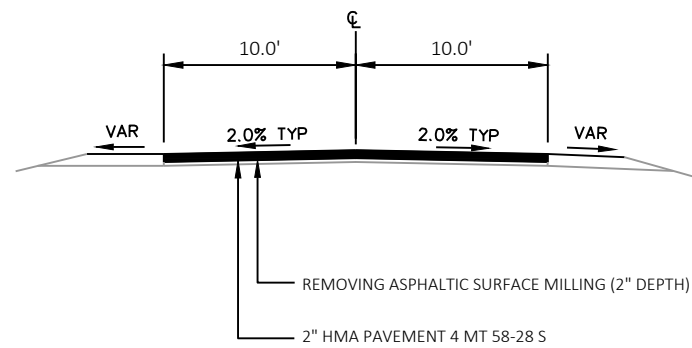
- ① SALVAGED TOPSOIL, FERTILIZER, SEED, AND MULCH OR EROSION MAT. EROSION MAT ON SLOPES STEEPER THAN 3:1 AND DITCH FLOWLINES. REFER TO EROSION CONTROL PLANS FOR TYPE AND LOCATION OF EROSION CONTROL ITEMS.
- ② SALVAGED TOPSOIL, FERTILIZER, SEED, AND EROSION MAT OR ASPHALTIC SURFACE TO MATCH EXISTING. REFER TO EROSION CONTROL PLANS FOR TYPE AND LOCATION OF EROSION CONTROL ITEMS.
- ③ SEE CONSTRUCTION DETAIL 'DRAINAGE RELIEF TRENCH'.



FINISHED TYPICAL SECTION
STA 78+05.37 - 82+61.32



FINISHED TYPICAL SECTION
STA 82+61.32 LT - 83+20.32 LT



FINISHED TYPICAL SECTION
PIONEER DRIVE
STA 197+29 - 199+38.5

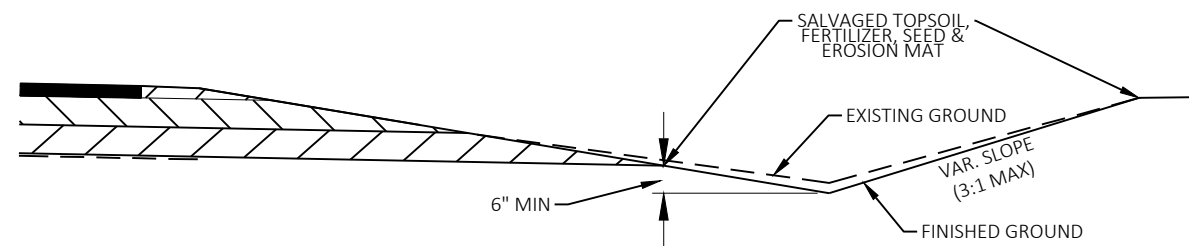
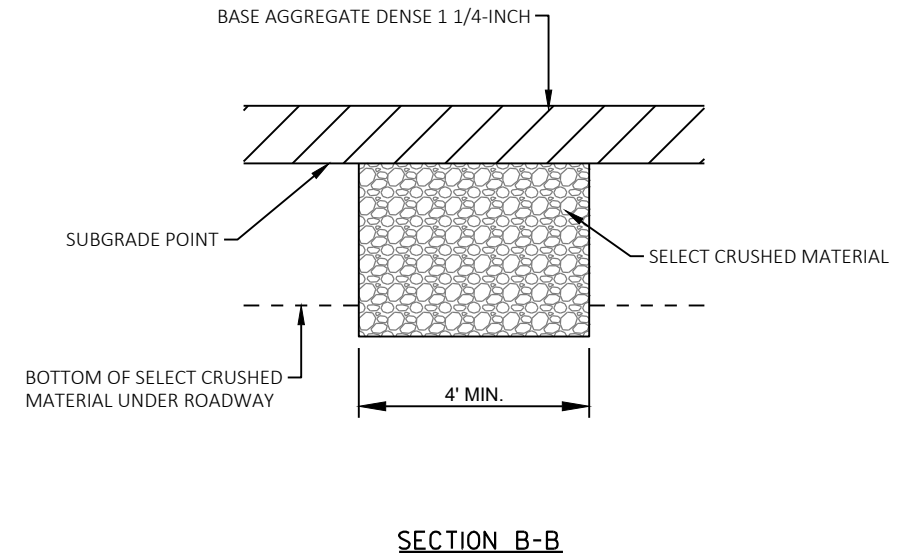
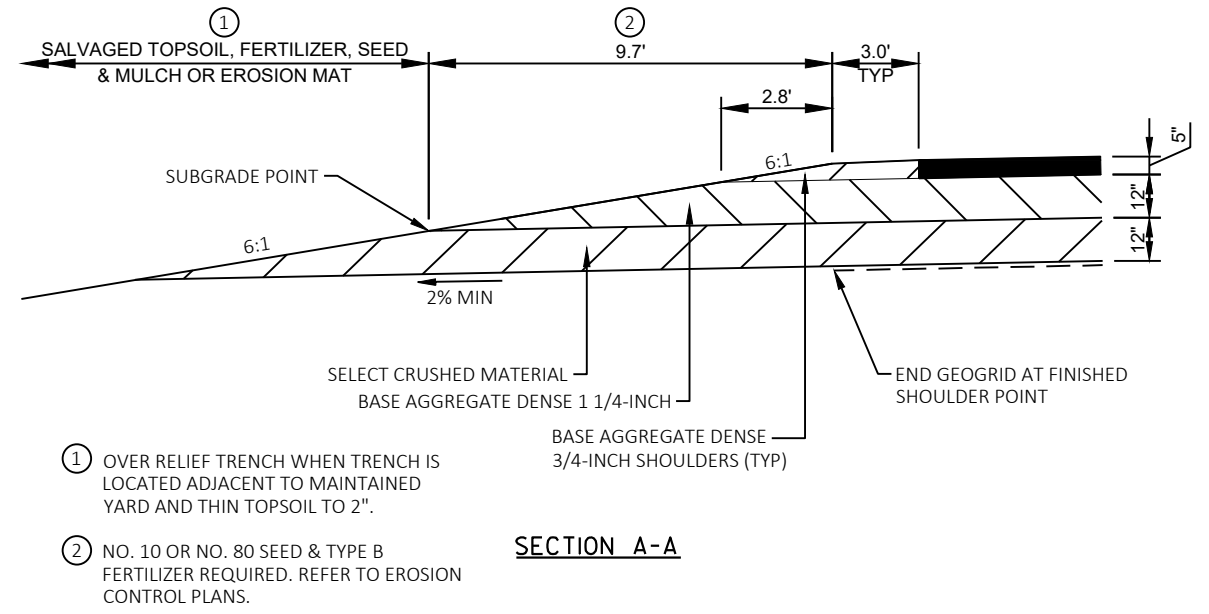
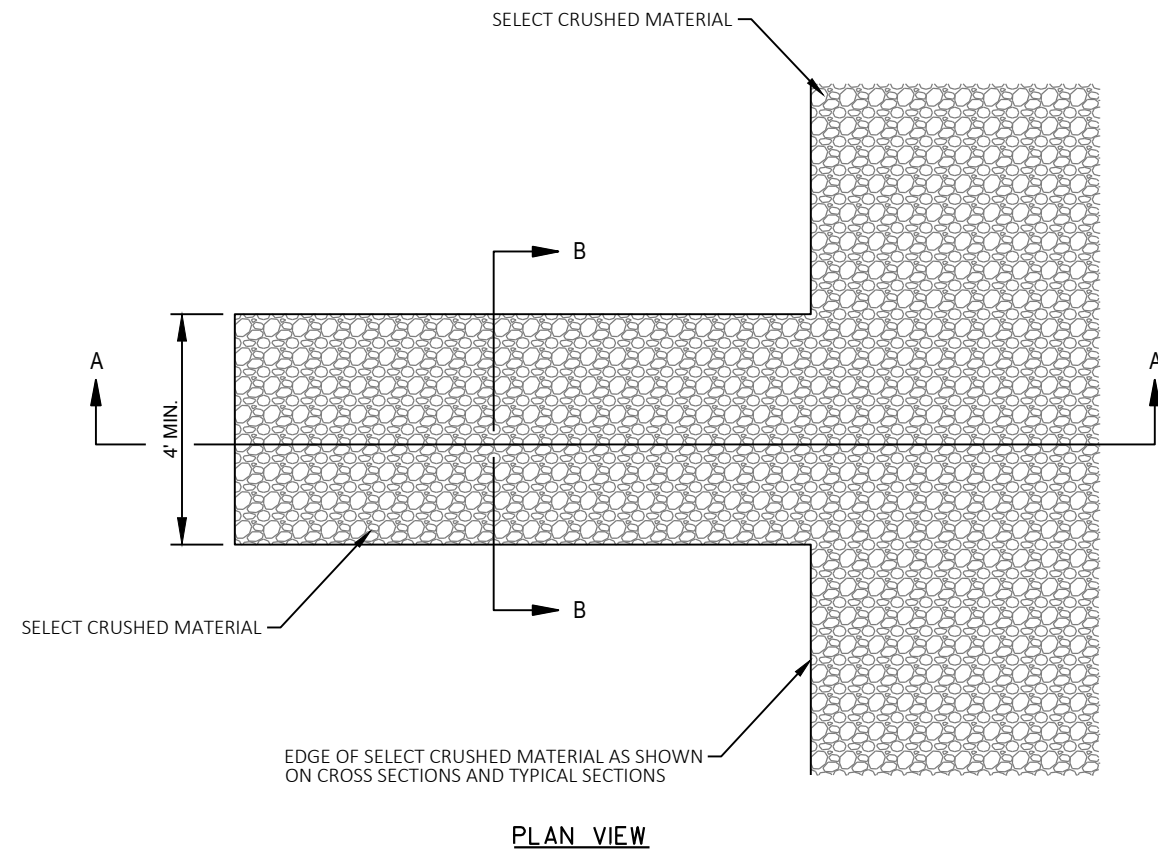
SUPERELEVATION DATA

STA	LOCATION	LT UNPAVED SHLDR	LT LANE	RT LANE	RT UNPAVED SHLDR
8+40	END NORMAL CROWN	-4.00%	-2.00%	-2.00%	-4.00%
8+93	LEVEL CROWN	-4.00%	-2.00%	0.00%	0.00%
9+47	REVERSE CROWN	-4.00%	-2.00%	2.00%	2.00%
10+00	LOW SHOULDER MATCH	-4.00%	-4.00%	4.00%	4.00%
10+53	BEGIN FULL SUPER	-6.00%	-6.00%	6.00%	6.00%
13+00	RT UNPAVED SHLDR TRANSITION	-6.00%	-6.00%	6.00%	6.00%
13+50	RT UNPAVED SHLDR TRANSITION	-4.00%	-6.00%	6.00%	-2.00%
13+67	END FULL SUPER	-4.00%	-6.00%	6.00%	-2.00%
14+21	LOW SHOULDER MATCH	-4.00%	-4.00%	4.00%	-2.00%
14+74	REVERSE CROWN	-4.00%	-2.00%	2.00%	-2.00%
15+27	LEVEL CROWN	-4.00%	-2.00%	0.00%	-2.00%
15+81	BEGIN NORMAL CROWN	-4.00%	-2.00%	-2.00%	-4.00%
18+61	END NORMAL CROWN	-4.00%	-2.00%	-2.00%	-4.00%
19+15	LEVEL CROWN	0.00%	0.00%	-2.00%	-4.00%
19+68	REVERSE CROWN	2.00%	2.00%	-2.00%	-4.00%
20+21	LOW SHOULDER MATCH	4.00%	4.00%	-4.00%	-4.00%
20+64	BEGIN FULL SUPER	5.60%	5.60%	-5.60%	-5.60%
24+00	RT UNPAVED SHLDR TRANSITION	5.60%	5.60%	-5.60%	-4.00%
26+32	END FULL SUPER	5.60%	5.60%	-5.60%	-4.00%
26+75	LOW SHOULDER MATCH	4.00%	4.00%	4.00%	-4.00%
27+28	REVERSE CROWN	2.00%	2.00%	-2.00%	-4.00%
27+81	LEVEL CROWN	0.00%	0.00%	-2.00%	-4.00%
28+34	BEGIN NORMAL CROWN	4.00%	-2.00%	2.00%	-4.00%
28+34	BEGIN NORMAL SHOULDER	-2.00%	-2.00%	-2.00%	-4.00%
29+00	MANUAL STATION	4.00%	-2.00%	2.00%	-4.00%

STA	LOCATION	LT UNPAVED SHLDR	LT LANE	RT LANE	RT UNPAVED SHLDR
62+10	END NORMAL CROWN	-4.00%	-2.00%	-2.00%	-4.00%
62+58	LEVEL CROWN	-4.00%	0.00%	-2.00%	-2.00%
63+06	REVERSE CROWN	-4.00%	2.00%	-2.00%	-2.00%
63+40	BEGIN FULL SUPER	-4.00%	3.40%	-3.40%	-3.40%
64+50	LT UNPAVED SHLDR TRANSITION	-4.00%	3.40%	-3.40%	-3.40%
65+50	LT UNPAVED SHLDR TRANSITION	3.40%	3.40%	-3.40%	-3.40%
72+19	END FULL SUPER	3.40%	3.40%	-3.40%	-3.40%
72+69	REVERSE CROWN	2.00%	2.00%	-2.00%	-2.00%
73+41	LEVEL CROWN	0.00%	0.00%	-2.00%	-2.00%
74+13	BEGIN NORMAL CROWN	-4.00%	-2.00%	-2.00%	-4.00%

NOTE: 50 MPH DESIGN SPEED (4% EMAX)
 NORTH TRANSITION 2-LANE UNDIVIDED HIGHWAY W/ ROTATION ABOUT CL
 SOUTH TRANSITION: 4-LANE UN-DIVIDED HIGHWAY W/ ROTATION ABOUT CL

BORING LOCATIONS			
NO.	STATION	OFFSET	DEPTHS/GEOLOGY DESCRIPTION
BM-1	79+78	33' RT	6" BITUMINOUS PAVEMENT OVER 15" BASE OVER SAND FILL
BM-2	74+24	18' RT	5" BITUMINOUS PAVEMENT OVER 9" CONCRETE OVER 16" BASE OVER BEDROCK
BM-3	63+68	12' RT	6" BITUMINOUS PAVEMENT OVER 7" CONCRETE OVER 12" BASE OVER SAND FILL
BM-4	60+51	15' RT	5.5" BITUMINOUS PAVEMENT OVER 9.5" BASE OVER SAND FILL
BM-5	43+61	12' LT	6" BITUMINOUS PAVEMENT OVER 3" BASE OVER 6" RUBBALIZED CONCRETE OVER 9" BASE OVER SAND FILL
BM-6	38+33	6' LT	4.5" BITUMINOUS PAVEMENT OVER 2" BASE OVER 5" CONCRETE OVER 2" BASE OVER SAND FILL
BM-7	33+05	9' LT	5.5" BITUMINOUS PAVEMENT OVER 4" BASE OVER 7" CONCRETE OVER 4" BASE OVER SAND FILL
BM-8	24+07	3' LT	6" BITUMINOUS PAVEMENT OVER 3" BASE OVER 5" CONCRETE OVER SAND FILL
BM-9	19+85	3' RT	4" BITUMINOUS PAVEMENT OVER 2" BITUMINOUS BASE OVER 5.5" CONCRETE OVER SAND FILL
BM-10	13+51	6' RT	5.5" BITUMINOUS PAVEMENT OVER 5" BASE OVER 5" CONCRETE OVER SAND FILL



RELIEF TRENCH DITCHING DETAIL

RELIEF TRENCH DITCHING IS ANTICIPATED AT THE FOLLOWING APPROXIMATE LOCATIONS OR AS DETERMINED BY THE ENGINEER:

- | | |
|--------------|--------------|
| STA 28+00 RT | STA 30+50 RT |
| STA 36+00 RT | STA 38+50 LT |
| STA 63+00 RT | STA 65+50 RT |

FEATHER DITCHING OUT TO MATCH EXISTING APPROXIMATELY 50 FEET EACH DIRECTION FROM RELIEF TRENCH OR AS REQUIRED TO PROVIDE DRAINAGE OR AS DIRECTED BY THE ENGINEER.

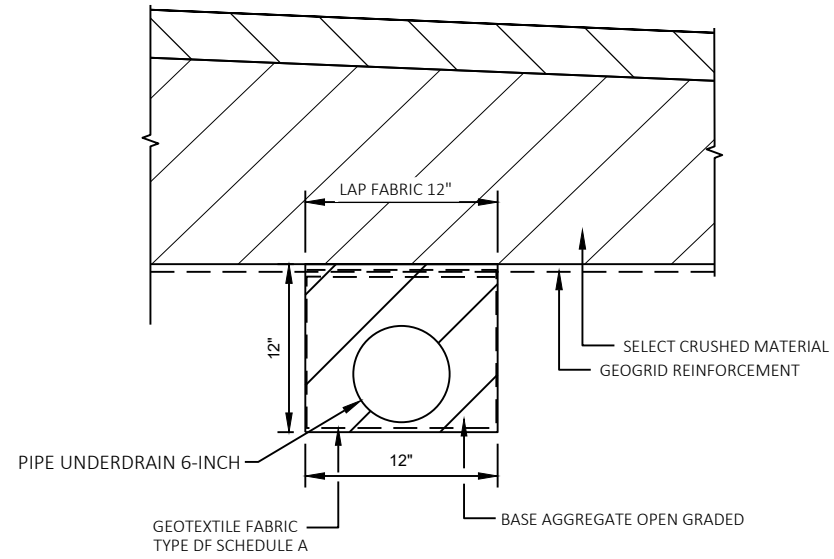
EXCAVATION REQUIRED TO CONSTRUCT RELIEF TRENCH DITCHING INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL. SALVAGED TOPSOIL, FERTILIZER, SEED, & EROSION MAT TO BE PAID FOR UNDER CONTRACT BID ITEMS.

DRAINAGE RELIEF TRENCH

CONSTRUCT DRAINAGE RELIEF TRENCHES EVERY 250 FEET AND AT SAG POINTS OR AT THE FOLLOWING APPROXIMATE LOCATIONS AND AS DETERMINED BY THE ENGINEER:

- | | |
|-------------------|-------------------|
| STA 15+50 RT | STA 16+00 LT |
| STA 16+50 RT | STA 20+50 RT |
| STA 22+50 RT | STA 28+00 RT |
| STA 30+50 LT & RT | STA 33+00 LT & RT |
| STA 36+00 LT & RT | STA 38+50 LT & RT |
| STA 41+50 LT & RT | STA 60+57 LT & RT |
| STA 63+00 RT | STA 65+50 RT |

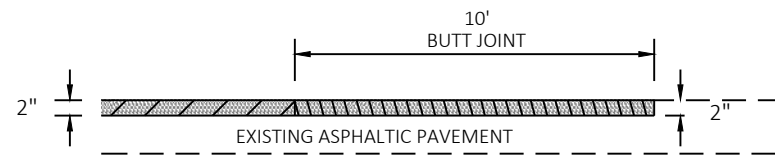
EXCAVATION REQUIRED TO CONSTRUCT DRAINAGE RELIEF TRENCH INCIDENTAL TO THE ITEM SELECT CRUSHED MATERIAL



PIPE UNDERDRAIN

SEE SDD 'EDGEDRAIN OUTLET AND OUTFALL MARKERS' FOR OUTFALL INFORMATION. OUTFALLS ARE ANTICIPATED AT THE FOLLOWING APPROXIMATE LOCATIONS OR AS DETERMINED BY THE ENGINEER:

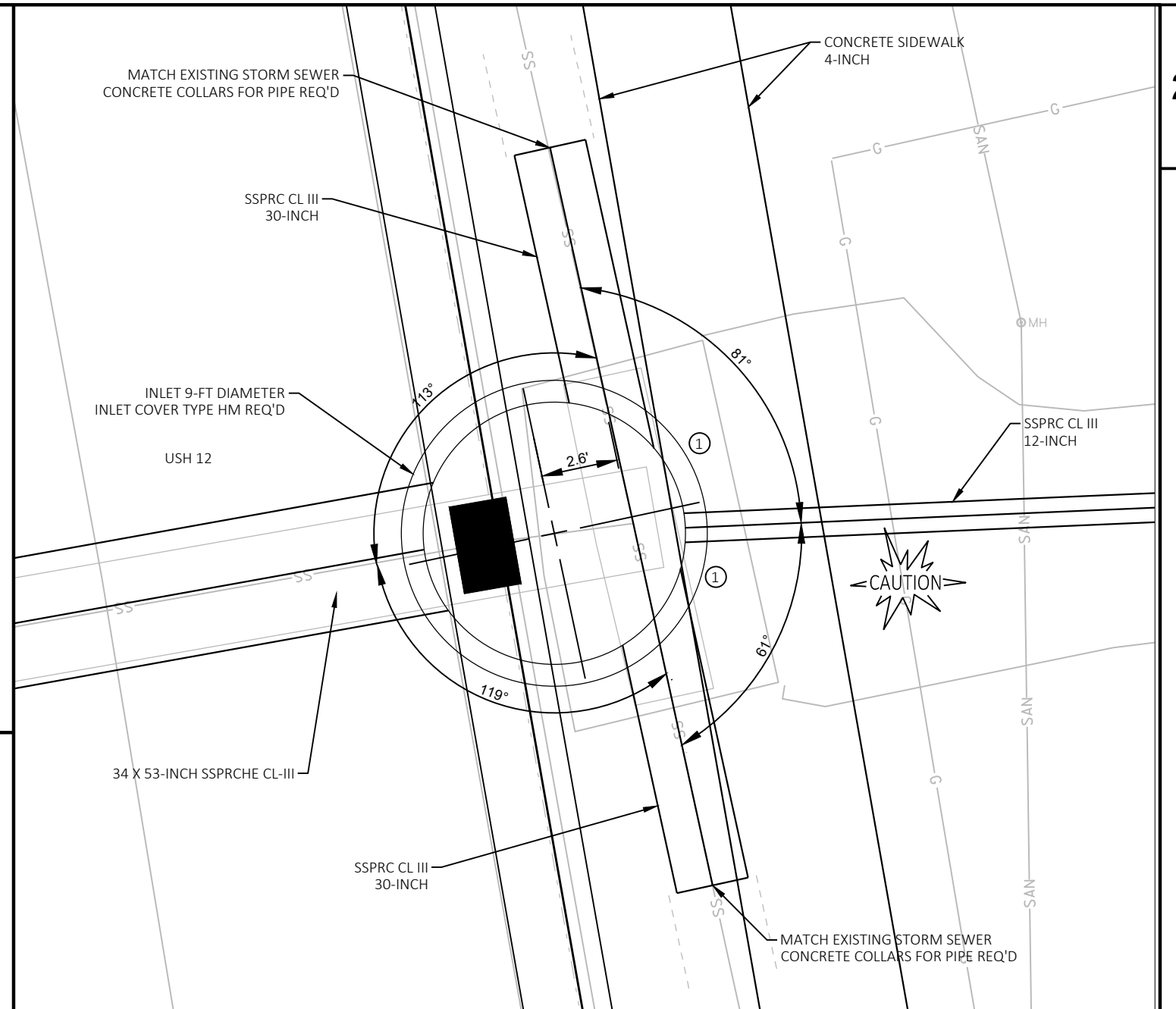
- STA 12+50 LT
- STA 70+75-71+25 RT (SKEWED OUTFALL)
- STA 73+00-73+30 RT (SKEWED OUTFALL)
- STA 75+50-75+75 RT (SKEWED OUTFALL)
- STA 77+25 RT



- HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

NOTE: SAWING IS INCIDENTAL TO REMOVING ASPHALTIC SURFACE BUTT JOINTS BID ITEM.

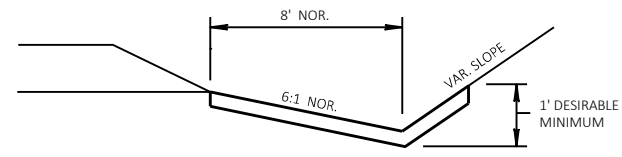
BUTT JOINT
PIONEER RD



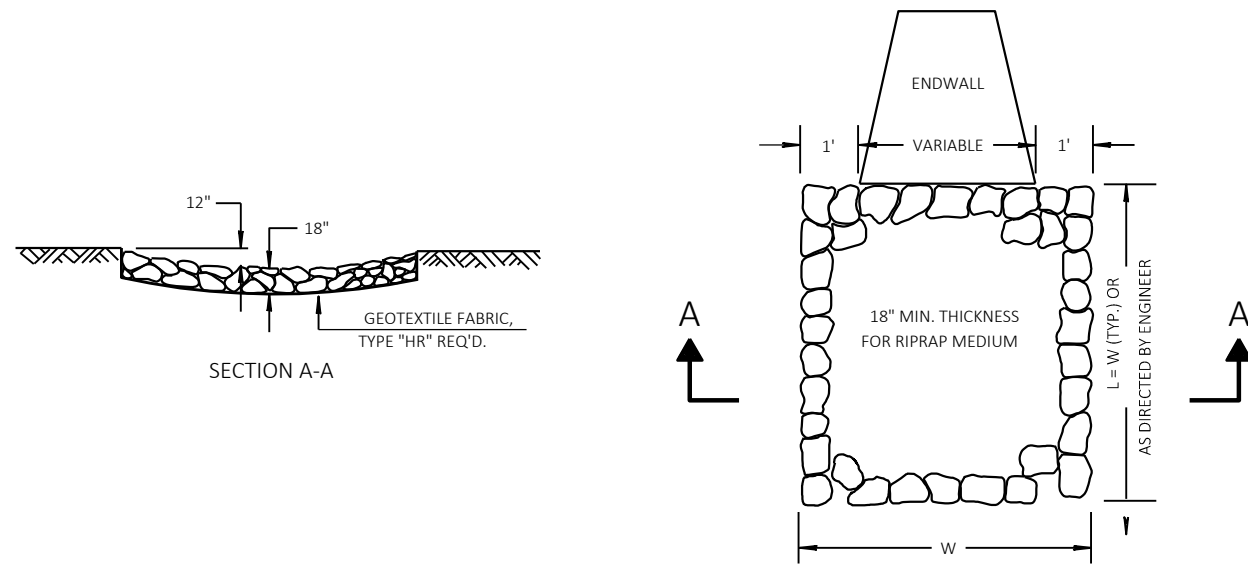
INLET 9-FT DIAMETER
USH 12
STA 77+34 LT

NOTES:

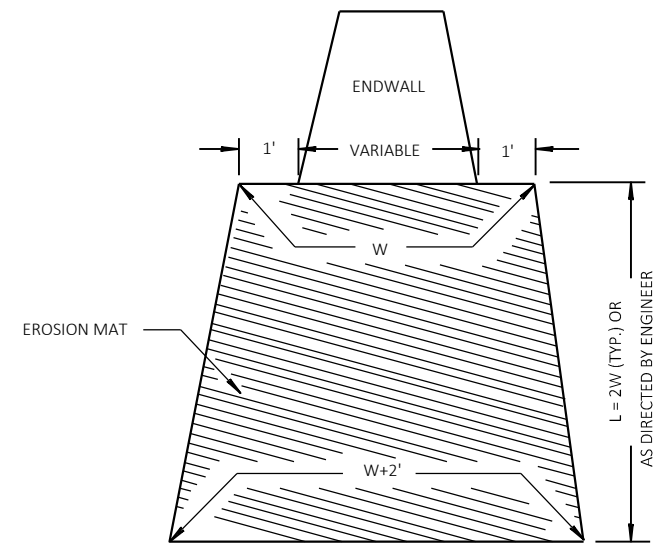
- ① 1' MINIMUM AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN OUTSIDE PIPE WALLS
- EXISTING PIPE LOCATIONS AS SHOWN ARE APPROXIMATE



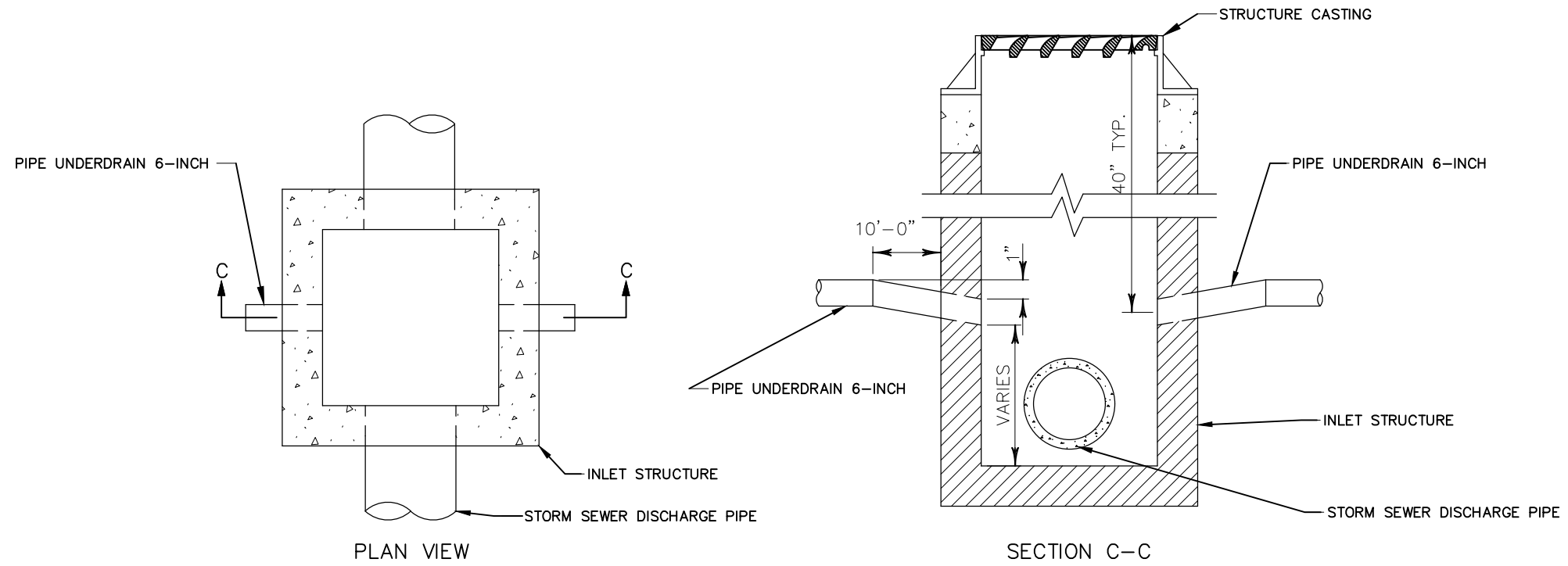
EROSION MAT DETAIL FOR DITCHES



RIPRAP TREATMENT AT CULVERTS



EROSION MAT TREATMENT AT CULVERTS



UNDERDRAIN OUTFALL AT DRAINAGE STRUCTURE

NOTES

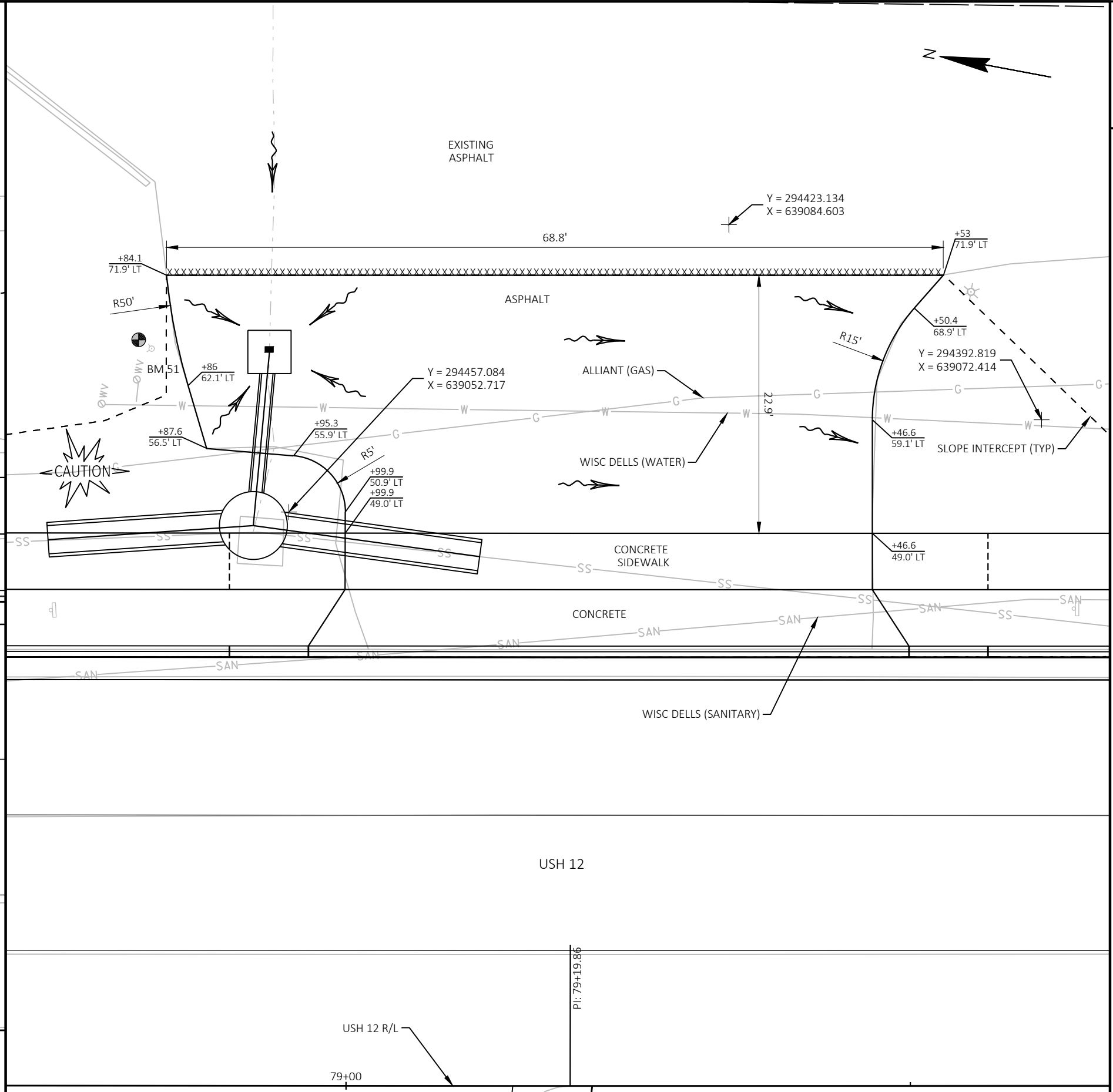
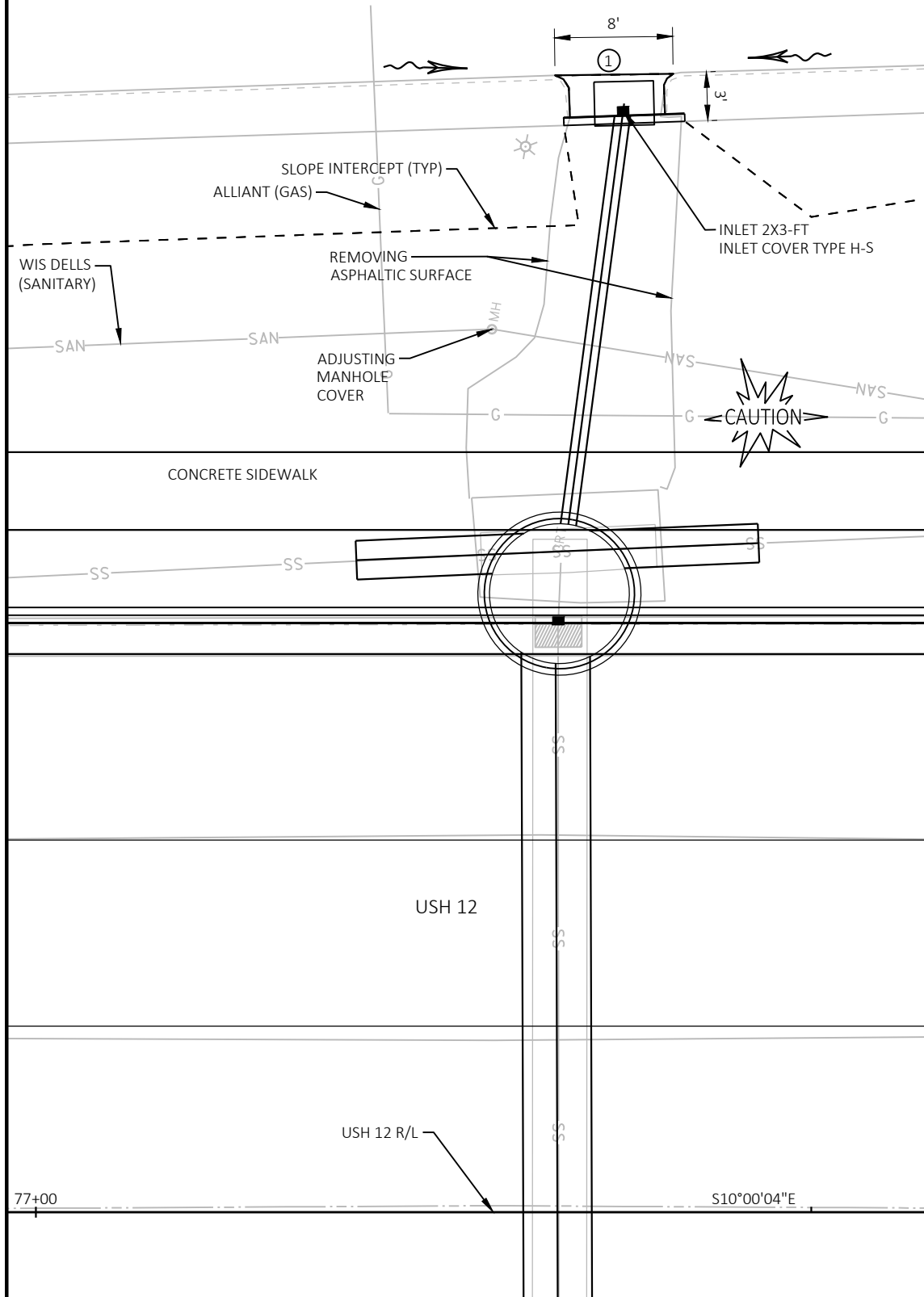
- 1. SEE TYPICAL SECTIONS, STORM SEWER, AND PLANS FOR PIPE UNDERDRAIN LOCATIONS.

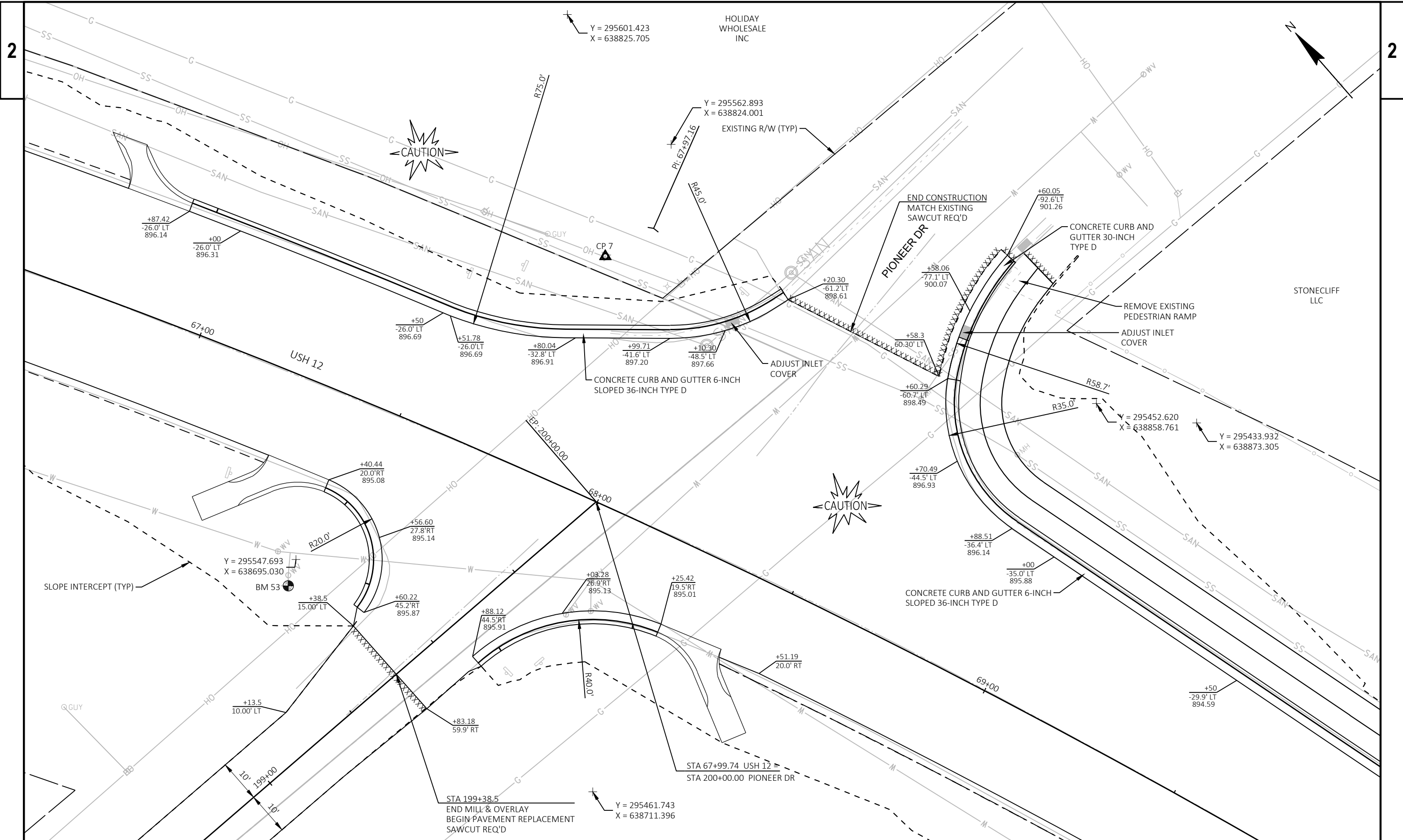
NOTES:

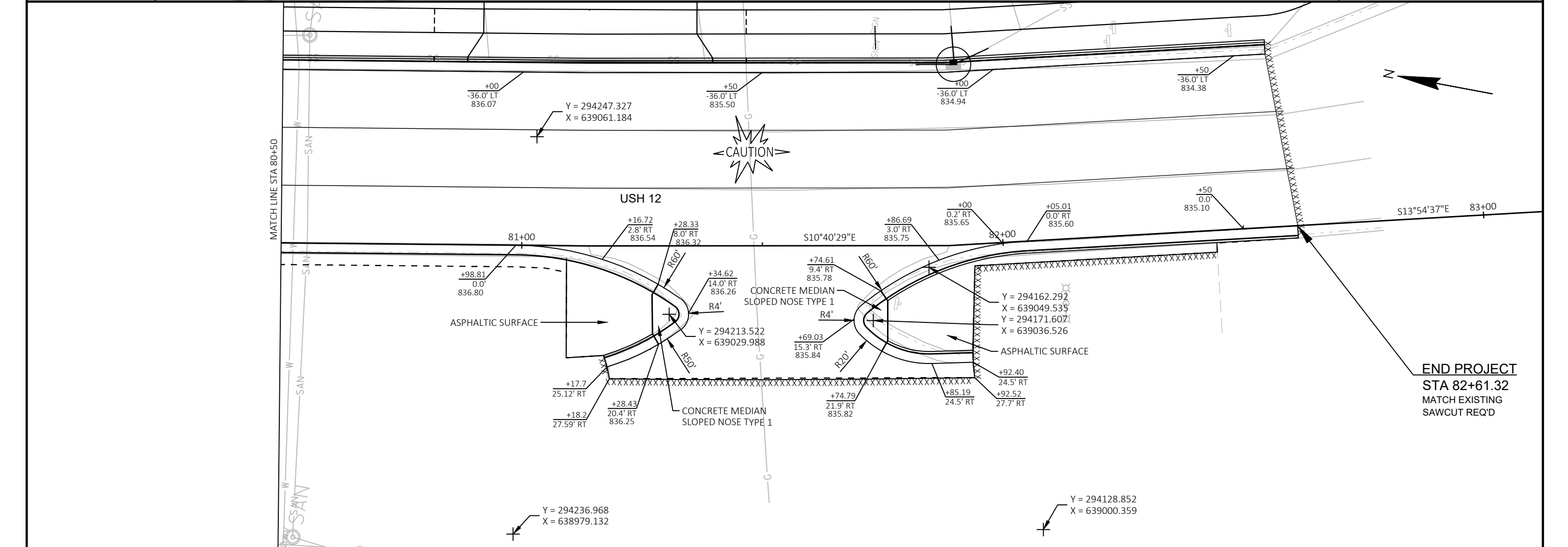
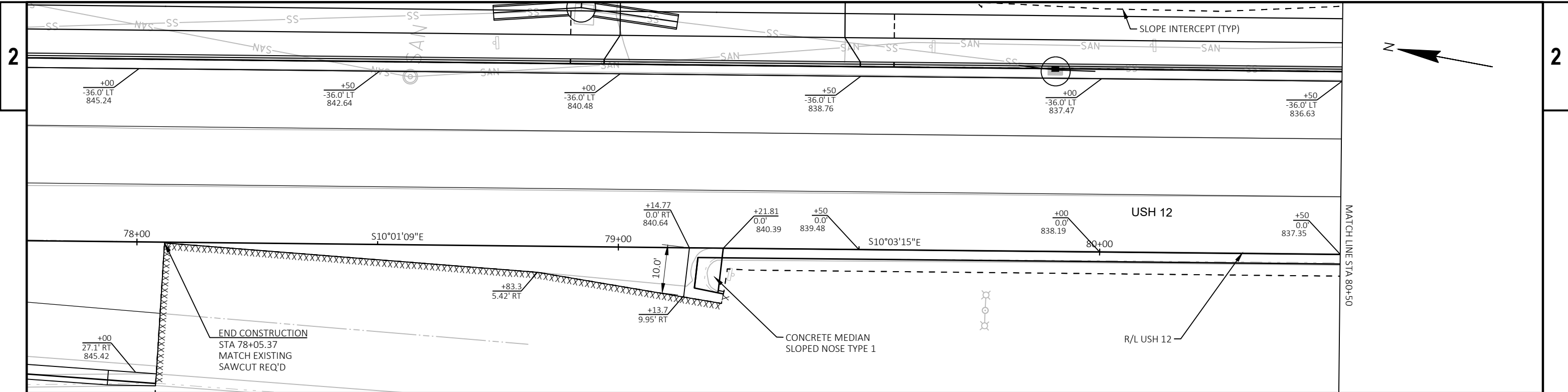
① SAWCUT AND REMOVE EXISTING ASPHALTIC SURFACE WITHIN SIDEWALK OPENING.

POUR CONCRETE CURB & GUTTER WITHIN OPENING. CURB HEAD TO MATCH AND BE TIED TO EXISTING CURB. TOTAL GUTTER WIDTH TO BE APPROXIMATELY 2.5' TO MATCH FRONT EDGE OF EXISTING SIDEWALK. TO BE PAID UNDER BID ITEM 'CONCRETE CURB & GUTTER 30-INCH TYPE D'.

OPENING SHALL ALLOW FOR PARKING LOT TO DRAIN TO INLET.







PROJECT NO: 5880-01-70

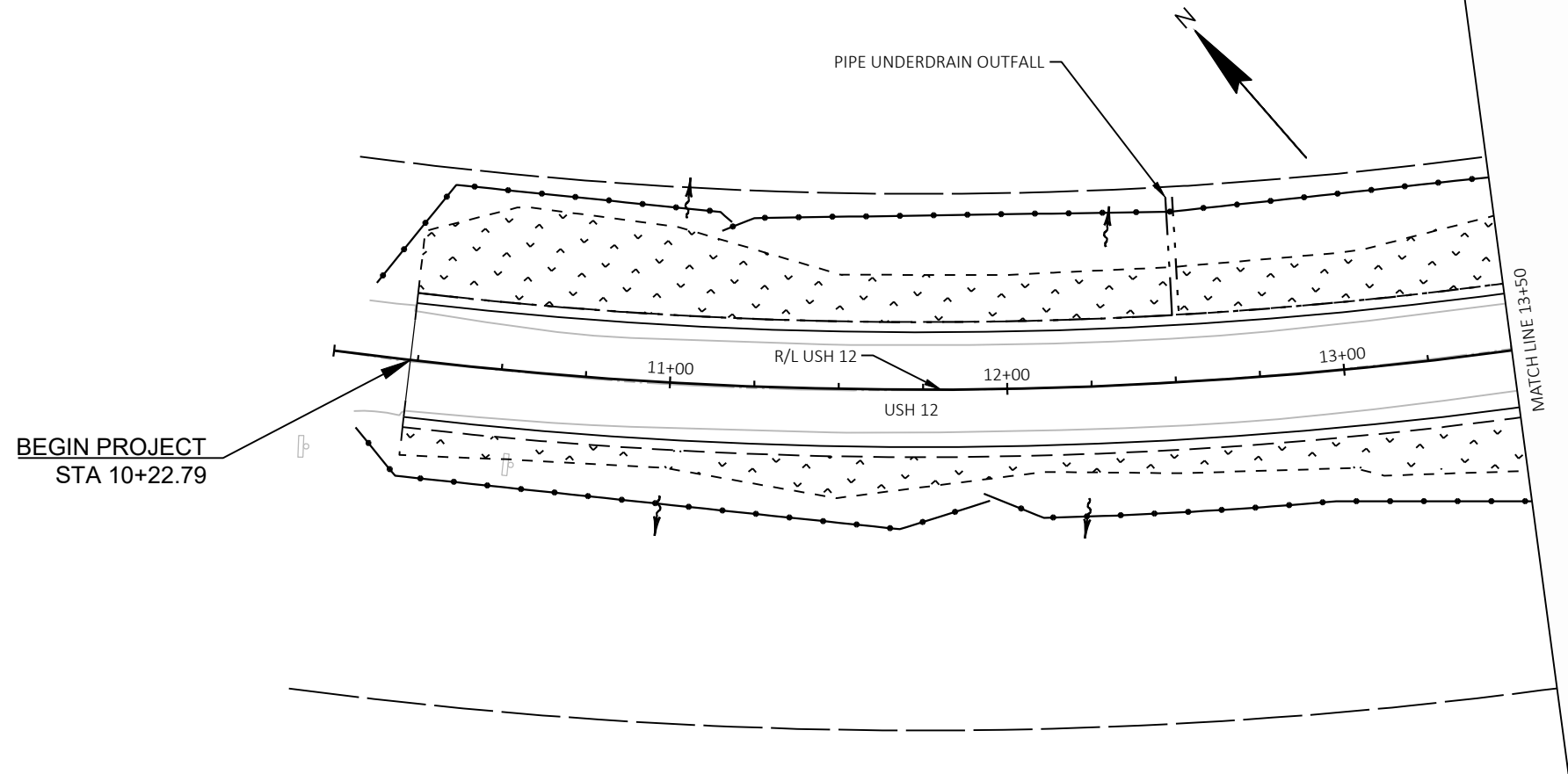
HWY: USH 12

COUNTY: SAUK

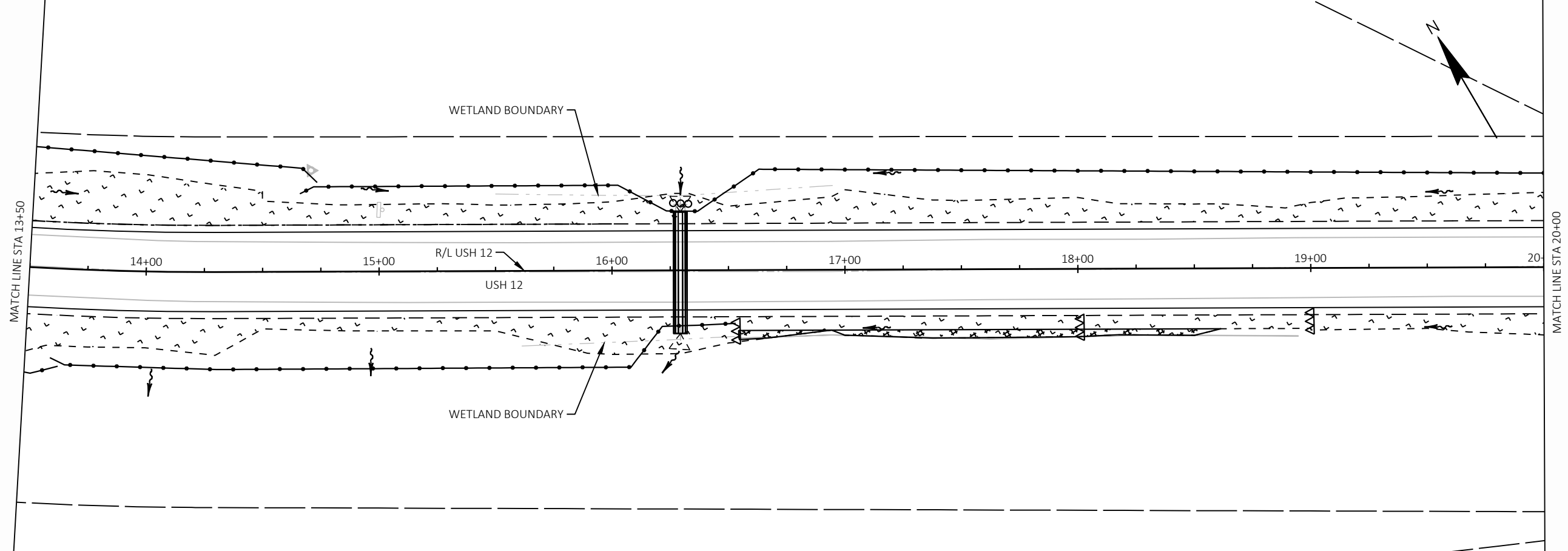
INTERSECTION DETAILS & PAVING GRADES

SHEET

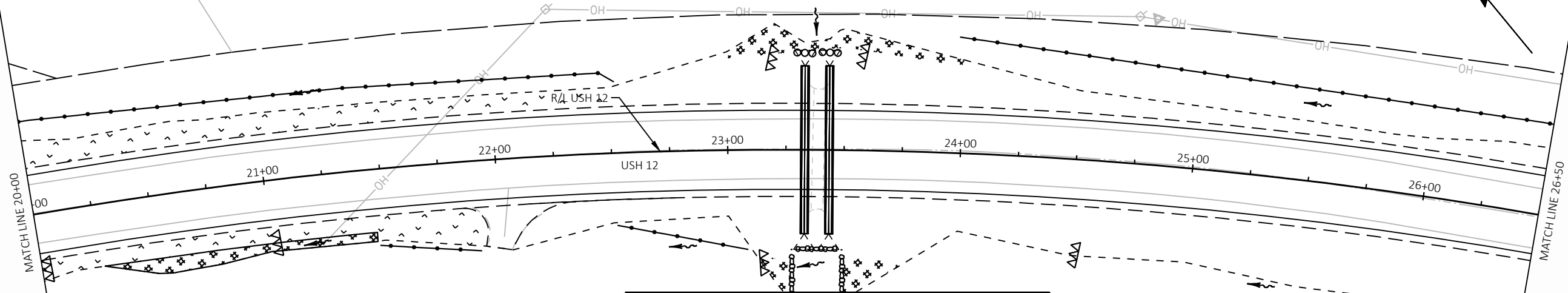
E



LEGEND	
#####	EROSION MAT CLASS I, TYPE A OR B
+++	EROSION MAT CLASS II, TYPE B
~~~~~	SEEDING MIXTURE NO. 80 AND WEED FREE MULCH
—●—●—●—●—	SILT FENCE
—○—○—○—○—	RIP RAP
- - - - -	SLOPE INTERCEPT
ASPH	ASPHALTIC FLUME
⊗	INLET PROTECTION
A B C	INLET PROTECTION TYPE
△△△	TEMPORARY DITCH CHECK
∞∞	CULVERT PIPE DITCH CHECK
⊕	ROCK BAGS
→	SURFACE WATER FLOW

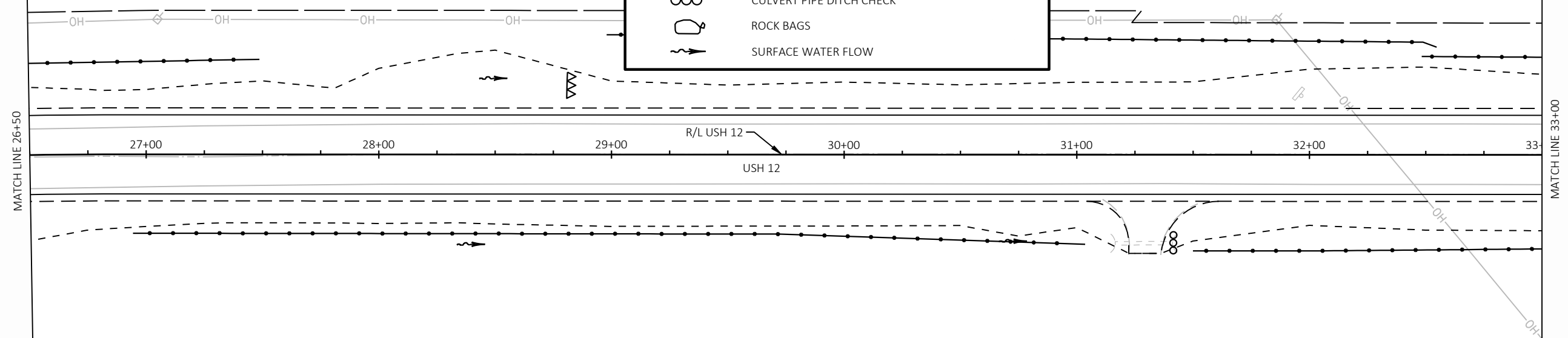


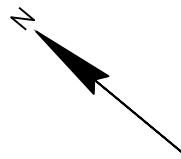




**LEGEND**

#####	EROSION MAT CLASS I, TYPE A OR B
++++	EROSION MAT CLASS II, TYPE B
~~~~~	SEEDING MIXTURE NO. 80 AND WEED FREE MULCH
—●—●—●—	SILT FENCE
—○—○—○—	RIP RAP
- - - -	SLOPE INTERCEPT
ASPH	ASPHALTIC FLUME
⊗	INLET PROTECTION
A B C	INLET PROTECTION TYPE
△△	TEMPORARY DITCH CHECK
∞∞	CULVERT PIPE DITCH CHECK
⊕	ROCK BAGS
~>	SURFACE WATER FLOW





MATCH LINE 33+00

MATCH LINE 39+50

00 34+00 35+00 R/L USH 12 36+00 37+00 38+00 39+00

USH 12

OH OH OH

OH OH OH OH

LEGEND

#####	EROSION MAT CLASS I, TYPE A OR B
++++	EROSION MAT CLASS II, TYPE B
~~~~~	SEEDING MIXTURE NO. 80 AND WEED FREE MULCH
—●—●—●—●—	SILT FENCE
—○—○—○—○—	RIP RAP
- - - - -	SLOPE INTERCEPT
ASPH	ASPHALTIC FLUME
⊗	INLET PROTECTION
A B C	INLET PROTECTION TYPE
△△△	TEMPORARY DITCH CHECK
∞∞	CULVERT PIPE DITCH CHECK
⬭	ROCK BAGS
~>	SURFACE WATER FLOW

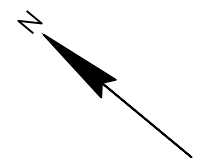
MATCH LINE 39+50

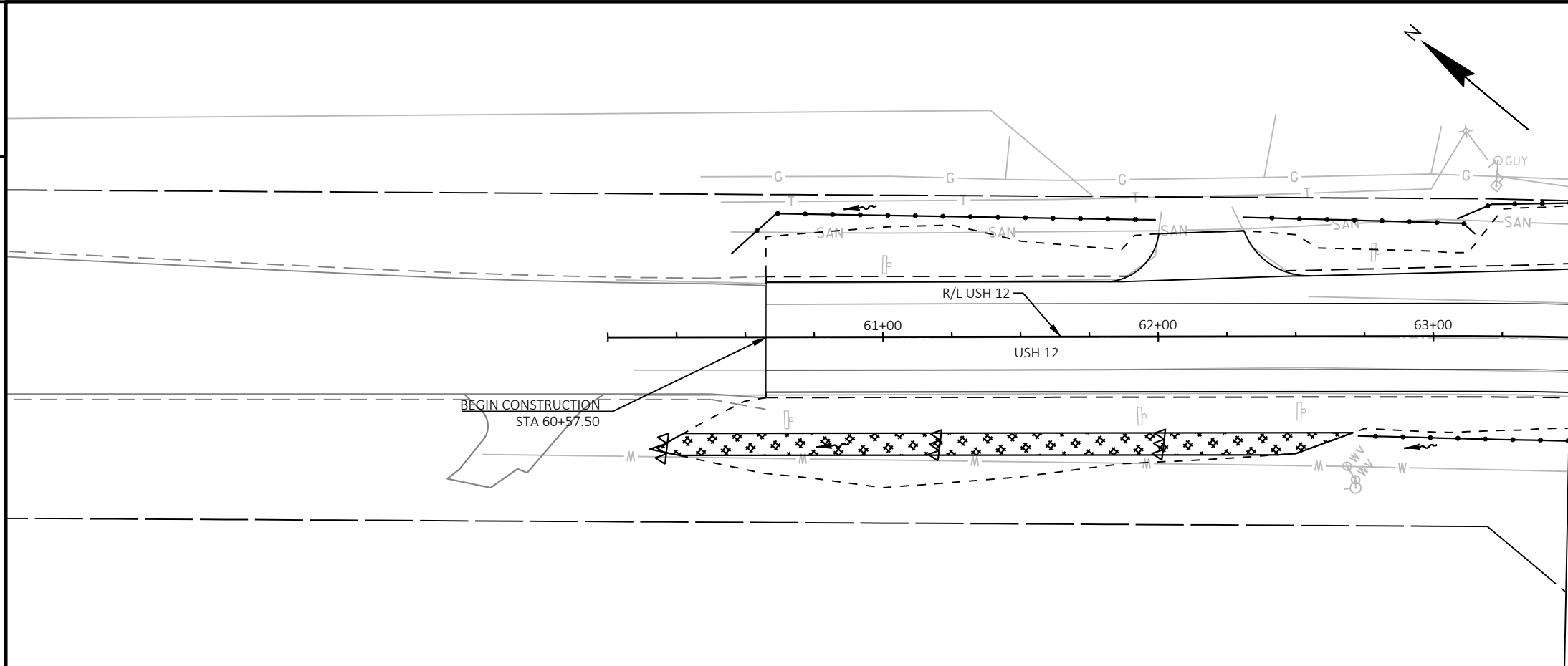
40+00 R/L USH 12 41+00

USH 12

OH OH OH OH OH

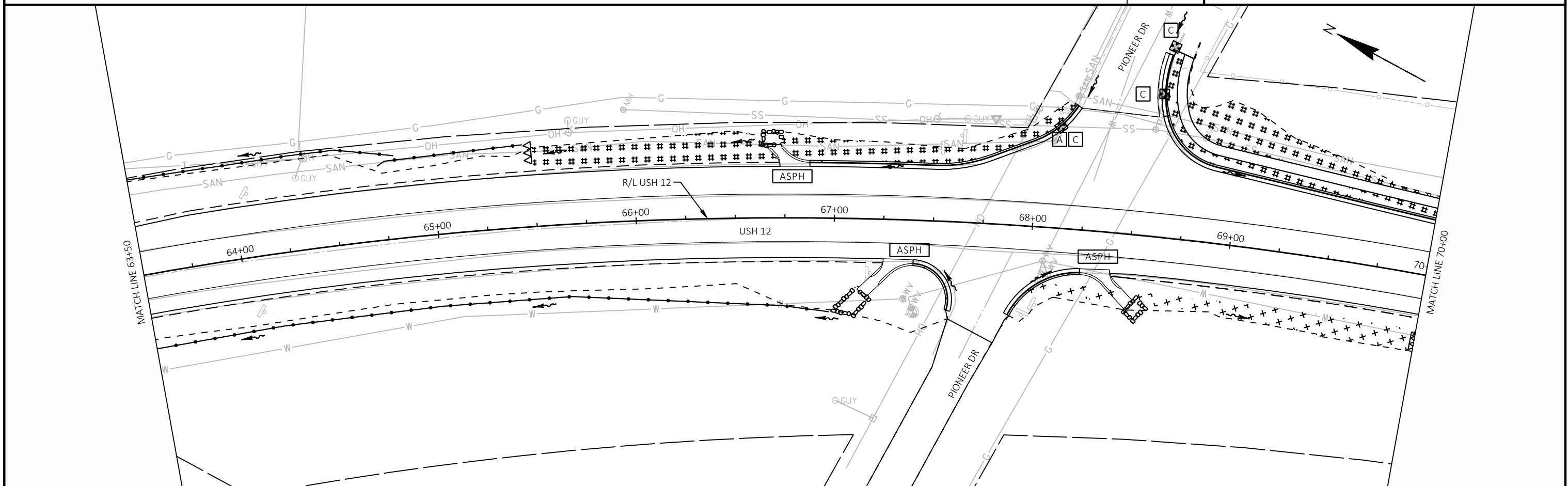
END CONSTRUCTION  
STA 41+50.04





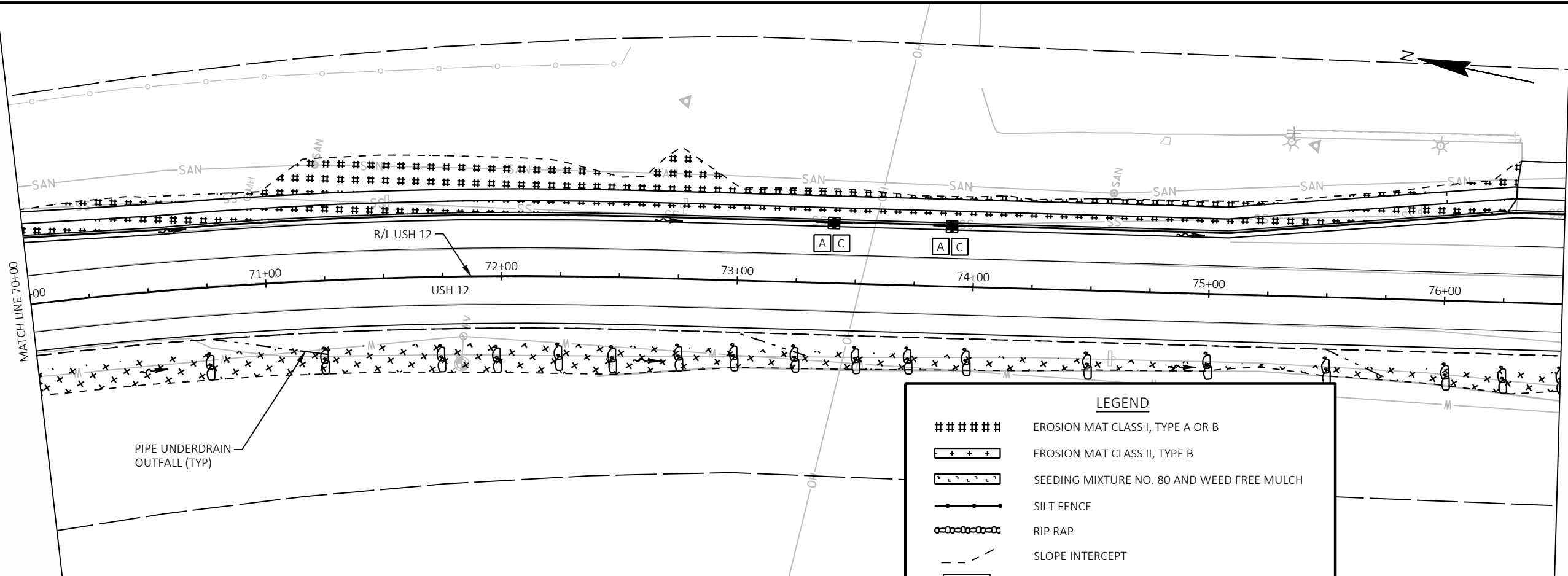
MATCH LINE 63+50

LEGEND	
#####	EROSION MAT CLASS I, TYPE A OR B
+ + +	EROSION MAT CLASS II, TYPE B
~ ~ ~ ~ ~	SEEDING MIXTURE NO. 80 AND WEED FREE MULCH
—●—●—●—●—●—	SILT FENCE
—○—○—○—○—○—	RIP RAP
- - -	SLOPE INTERCEPT
ASPH	ASPHALTIC FLUME
⊗	INLET PROTECTION
A B C	INLET PROTECTION TYPE
△△△	TEMPORARY DITCH CHECK
∞∞	CULVERT PIPE DITCH CHECK
⊖	ROCK BAGS
~ ~ ~	SURFACE WATER FLOW



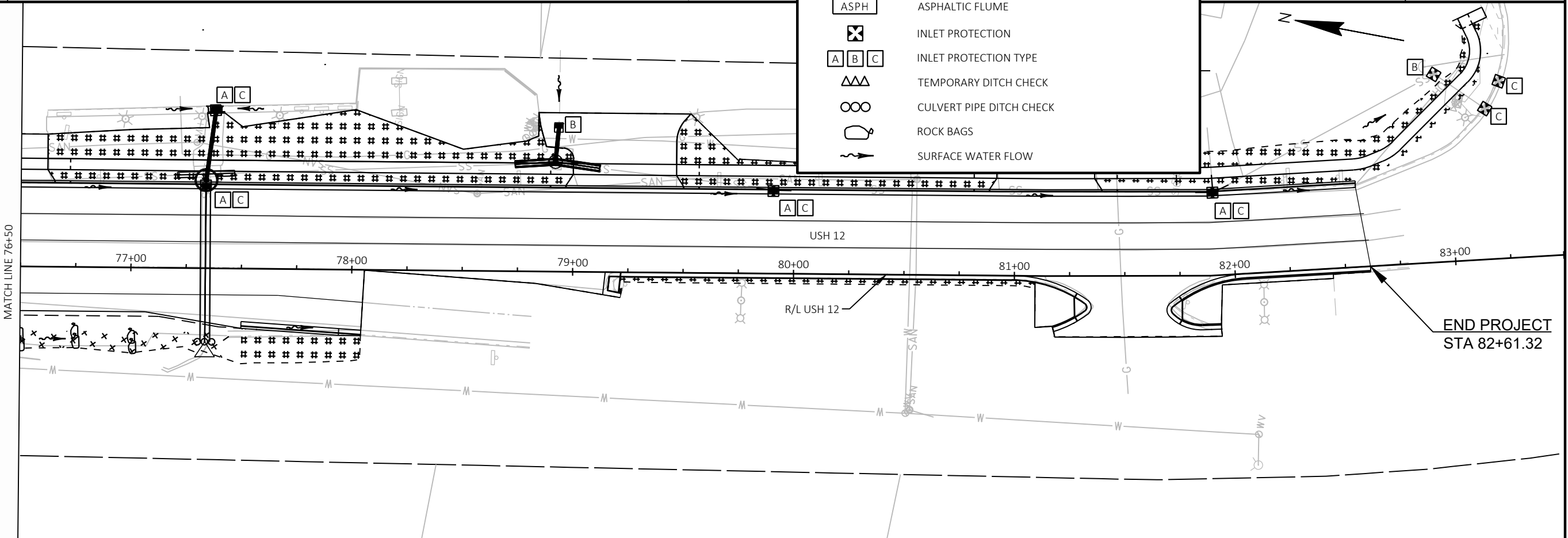
MATCH LINE 63+50

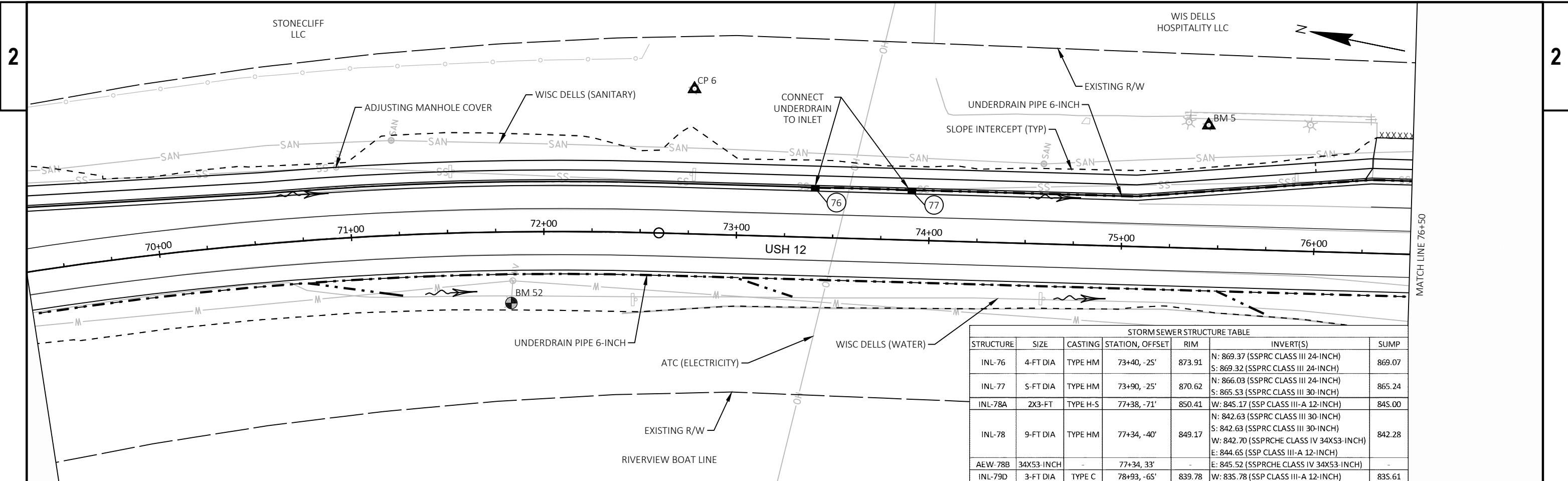
MATCH LINE 70+00



**LEGEND**

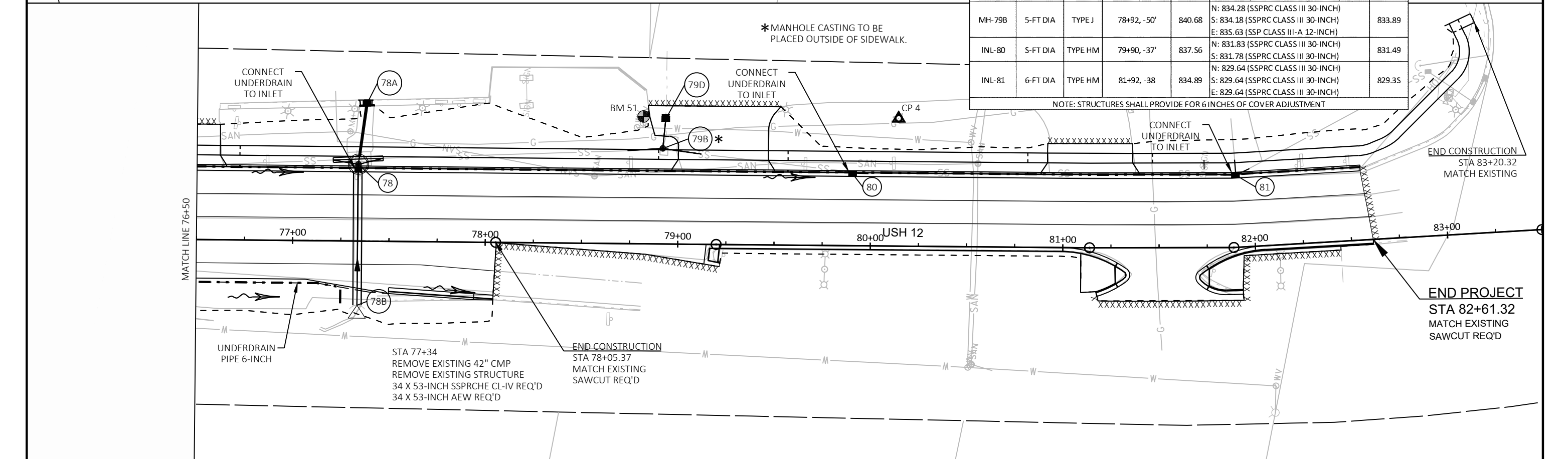
#####	EROSION MAT CLASS I, TYPE A OR B
++++	EROSION MAT CLASS II, TYPE B
.....	SEEDING MIXTURE NO. 80 AND WEED FREE MULCH
—●—●—●—	SILT FENCE
—○—○—○—	RIP RAP
- - - -	SLOPE INTERCEPT
ASPH	ASPHALTIC FLUME
⊗	INLET PROTECTION
A B C	INLET PROTECTION TYPE
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE DITCH CHECK
⊖	ROCK BAGS
→	SURFACE WATER FLOW

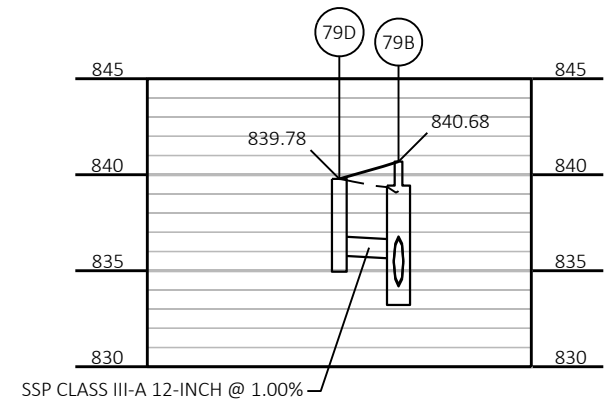
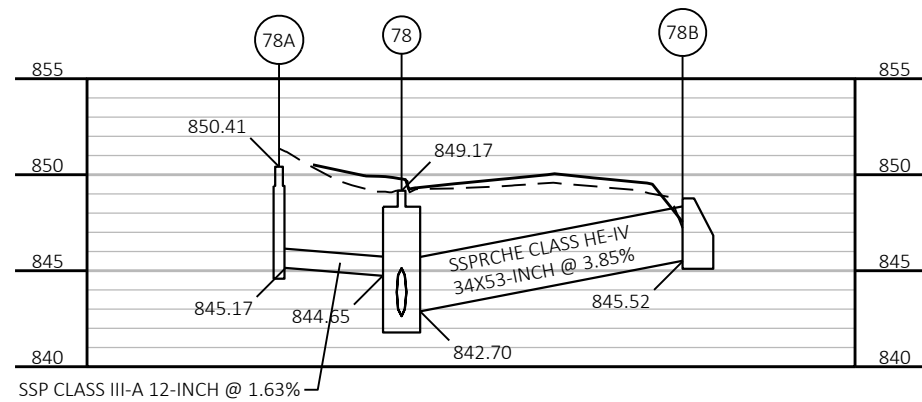
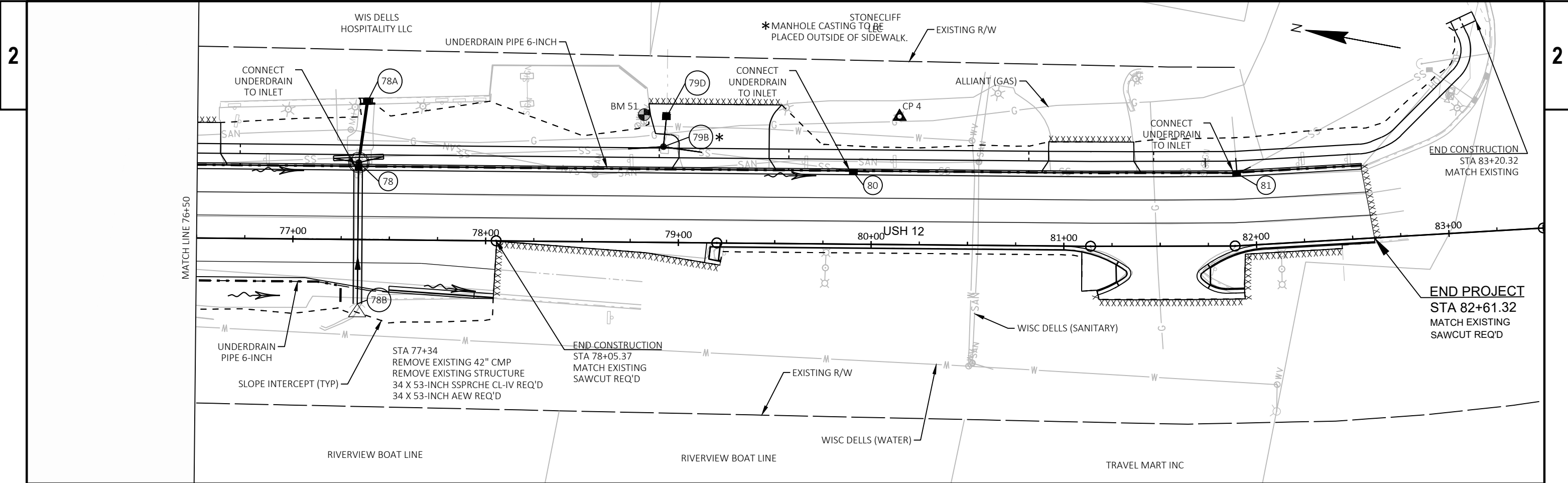




STORM SEWER STRUCTURE TABLE						
STRUCTURE	SIZE	CASTING	STATION, OFFSET	RIM	INVERT(S)	SUMP
INL-76	4-FT DIA	TYPE HM	73+40, -25'	873.91	N: 869.37 (SSPRC CLASS III 24-INCH)	869.07
					S: 869.32 (SSPRC CLASS III 24-INCH)	
INL-77	5-FT DIA	TYPE HM	73+90, -25'	870.62	N: 866.03 (SSPRC CLASS III 24-INCH)	865.24
					S: 865.53 (SSPRC CLASS III 30-INCH)	
INL-78A	2X3-FT	TYPE H-S	77+38, -71'	850.41	W: 845.17 (SSP CLASS III-A 12-INCH)	845.00
INL-78	9-FT DIA	TYPE HM	77+34, -40'	849.17	N: 842.63 (SSPRC CLASS III 30-INCH)	842.28
					S: 842.63 (SSPRC CLASS III 30-INCH)	
					W: 842.70 (SSPRC CLASS IV 34X53-INCH)	
					E: 844.65 (SSP CLASS III-A 12-INCH)	
AEW-78B	34X53-INCH	-	77+34, 33'	-	E: 845.52 (SSPRC CLASS IV 34X53-INCH)	-
INL-79D	3-FT DIA	TYPE C	78+93, -65'	839.78	W: 835.78 (SSP CLASS III-A 12-INCH)	835.61
MH-79B	5-FT DIA	TYPE J	78+92, -50'	840.68	N: 834.18 (SSPRC CLASS III 30-INCH)	833.89
					E: 835.63 (SSP CLASS III-A 12-INCH)	
INL-80	5-FT DIA	TYPE HM	79+90, -37'	837.56	N: 831.83 (SSPRC CLASS III 30-INCH)	831.49
					S: 831.78 (SSPRC CLASS III 30-INCH)	
INL-81	6-FT DIA	TYPE HM	81+92, -38	834.89	N: 829.64 (SSPRC CLASS III 30-INCH)	829.35
					S: 829.64 (SSPRC CLASS III 30-INCH)	
					E: 829.64 (SSPRC CLASS III 30-INCH)	

NOTE: STRUCTURES SHALL PROVIDE FOR 6 INCHES OF COVER ADJUSTMENT





NOTES:  
EXACT LOCATIONS OF SIGN PENNANTS AND CENTERLINE MARKING TO BE DETERMINED UNDER THE LOCATING NO-PASS ZONES BID ITEM.

2

2

BEGIN PROJECT  
STA 10+22.79

Sauk Co  
REMOVE

Sauk Co  
12-2  
VARIES"x15"  
(1-1)

REMOVE  
ADOPT A HIGHWAY  
155-56  
30"x18"  
(1-2)

REMOVE  
W BELLS  
LIONS CLUB  
155-56P  
30"x18"  
(1-3)

PAVEMENT MARKING LEGEND	
(6Y)	MARKING LINE EPOXY 6-INCH (YELLOW) (12.5' DASH 37.5' SKIP)
(6DY)	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
(6SY)	MARKING LINE EPOXY 6-INCH (SINGLE YELLOW)
(6GY)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
(6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
(6W1)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (12.5' WHITE, 12.5' BLACK, 25' GAP)
(6W2)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (3' DASH 9' SKIP)
(8W)	MARKING OUTFALL EPOXY (8"x 8" WHITE)
(10W)	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
(12Y)	MARKING LINE EPOXY 12-INCH (YELLOW)(25' SPACING C-C)

MATCH LINE STA 13+50

Rocky Arbor  
State Park  
REMOVE

Rocky Arbor  
State Park  
D7-53L  
54"x36"  
(1-4)

(6W)

(6GY)

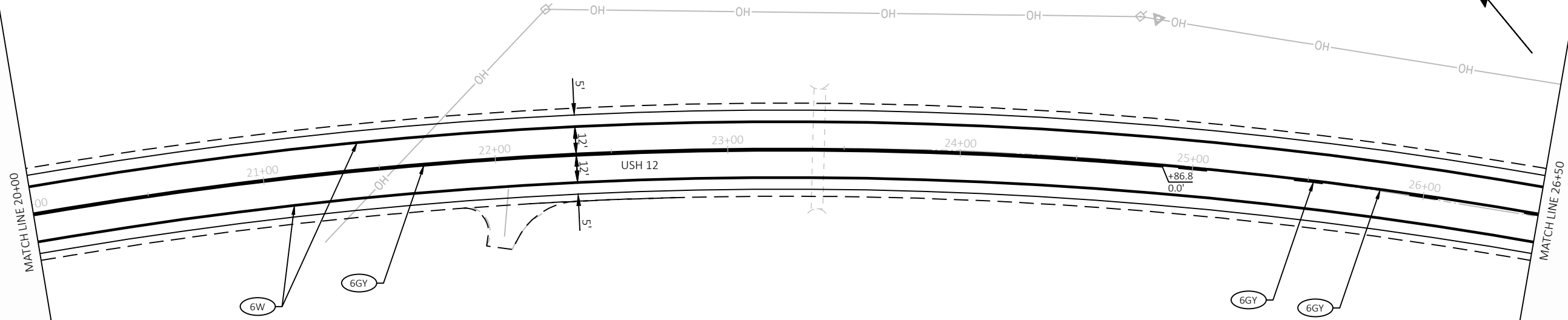
14+00 15+00 16+00 17+00 18+00 19+00 20+00

MATCH LINE STA 20+00

NOTES:  
EXACT LOCATIONS OF SIGN PENNANTS AND CENTERLINE MARKING TO BE DETERMINED UNDER THE LOCATING NO-PASS ZONES BID ITEM.

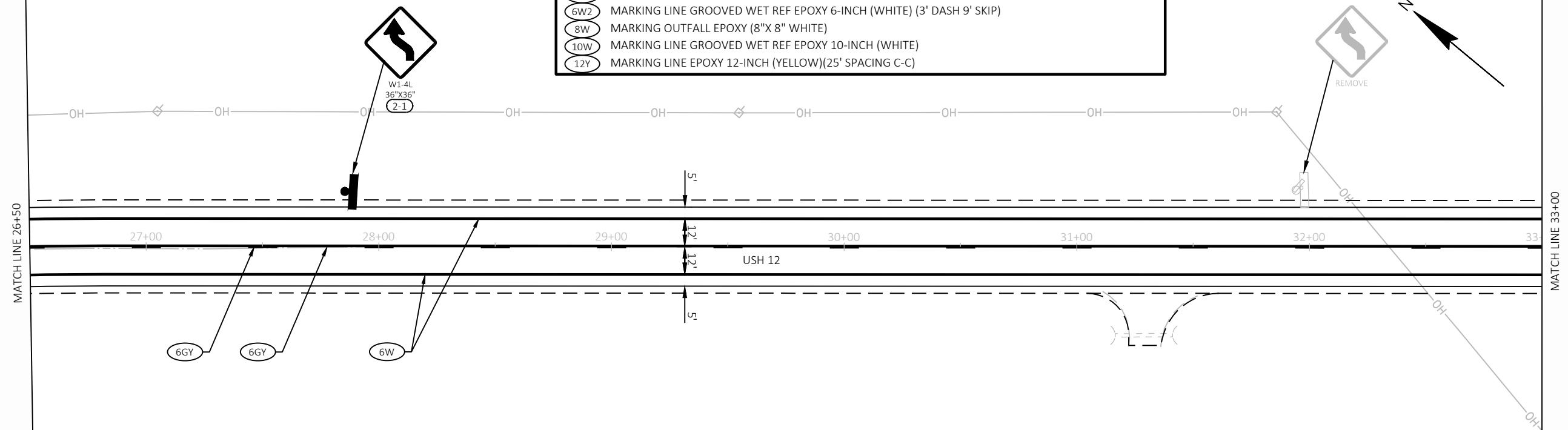
2

2



**PAVEMENT MARKING LEGEND**

6Y	MARKING LINE EPOXY 6-INCH (YELLOW) (12.5' DASH 37.5' SKIP)
6DY	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
6SY	MARKING LINE EPOXY 6-INCH (SINGLE YELLOW)
6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
6W	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
6W1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (12.5' WHITE, 12.5' BLACK, 25' GAP)
6W2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (3' DASH 9' SKIP)
8W	MARKING OUTFALL EPOXY (8"X 8" WHITE)
10W	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
12Y	MARKING LINE EPOXY 12-INCH (YELLOW)(25' SPACING C-C)





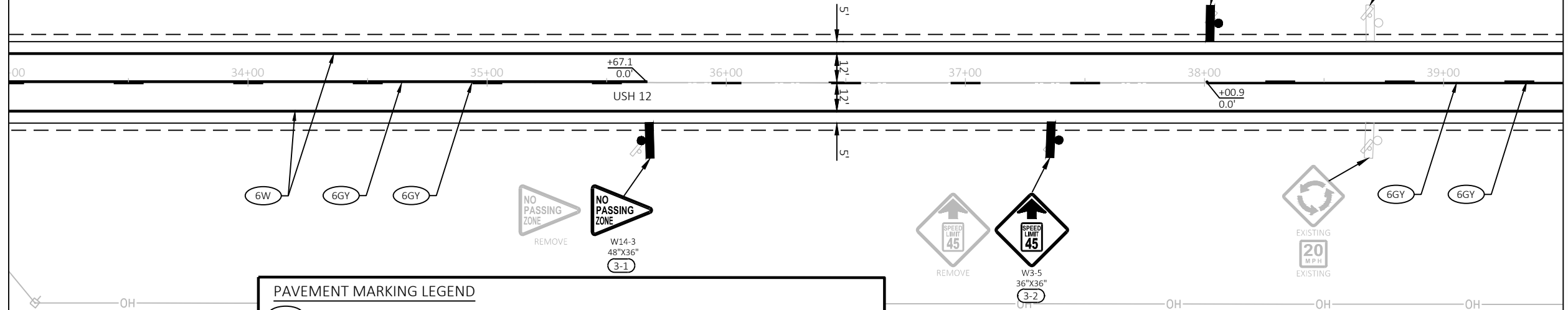
NOTES:  
EXACT LOCATIONS OF SIGN PENNANTS AND CENTERLINE MARKING TO BE DETERMINED UNDER THE LOCATING NO-PASS ZONES BID ITEM.

2

2

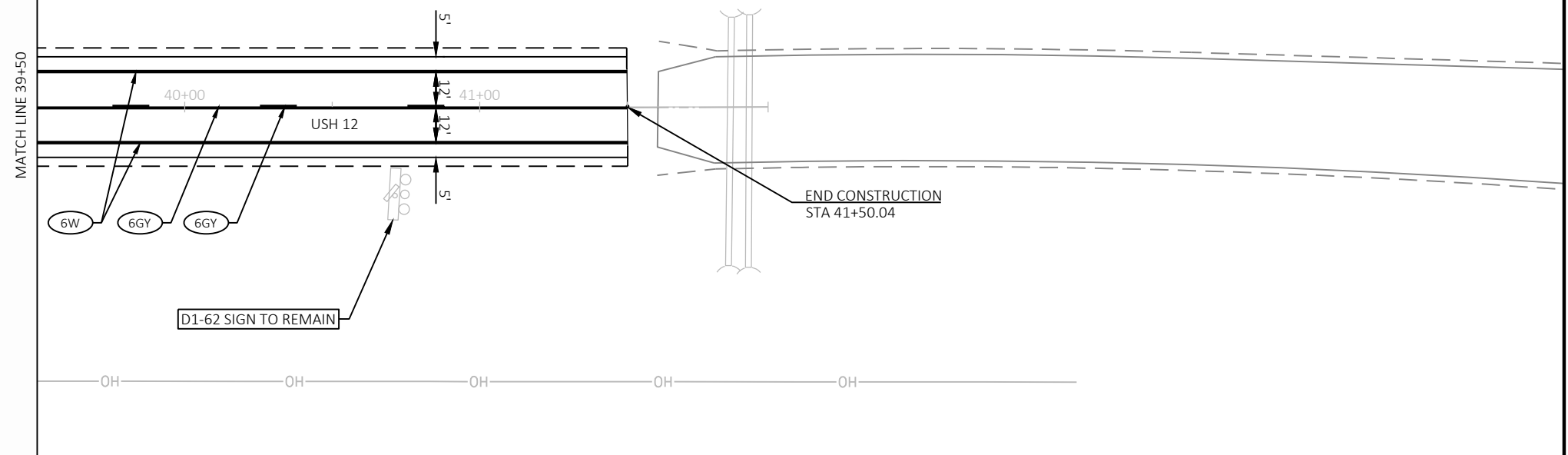
MATCH LINE 33+00

MATCH LINE 39+50

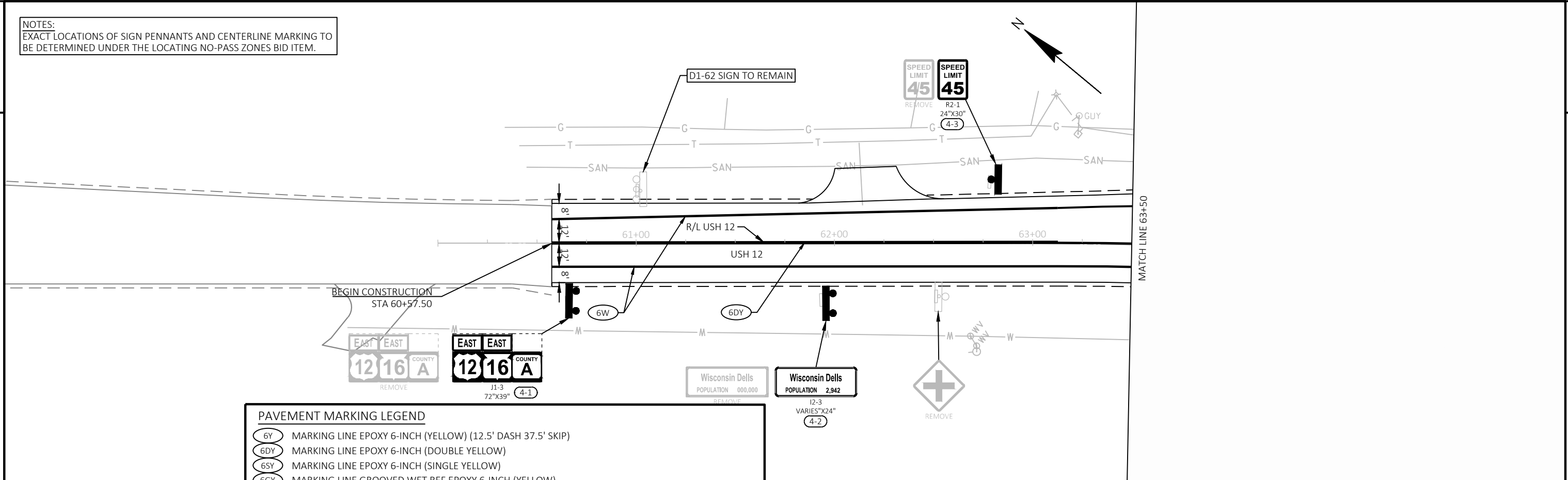


**PAVEMENT MARKING LEGEND**

6Y	MARKING LINE EPOXY 6-INCH (YELLOW) (12.5' DASH 37.5' SKIP)
6DY	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
6SY	MARKING LINE EPOXY 6-INCH (SINGLE YELLOW)
6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
6W	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
6W1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (12.5' WHITE, 12.5' BLACK, 25' GAP)
6W2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (3' DASH 9' SKIP)
8W	MARKING OUTFALL EPOXY (8\"X 8\" WHITE)
10W	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
12Y	MARKING LINE EPOXY 12-INCH (YELLOW)(25' SPACING C-C)



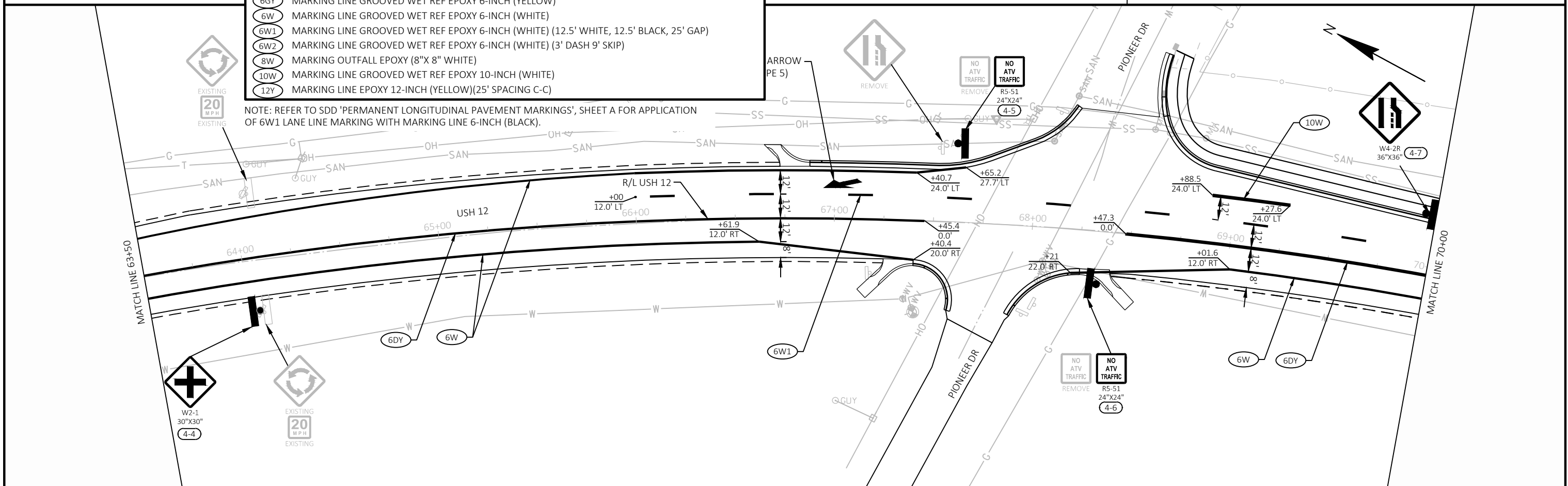
NOTES:  
EXACT LOCATIONS OF SIGN PENNANTS AND CENTERLINE MARKING TO  
BE DETERMINED UNDER THE LOCATING NO-PASS ZONES BID ITEM.



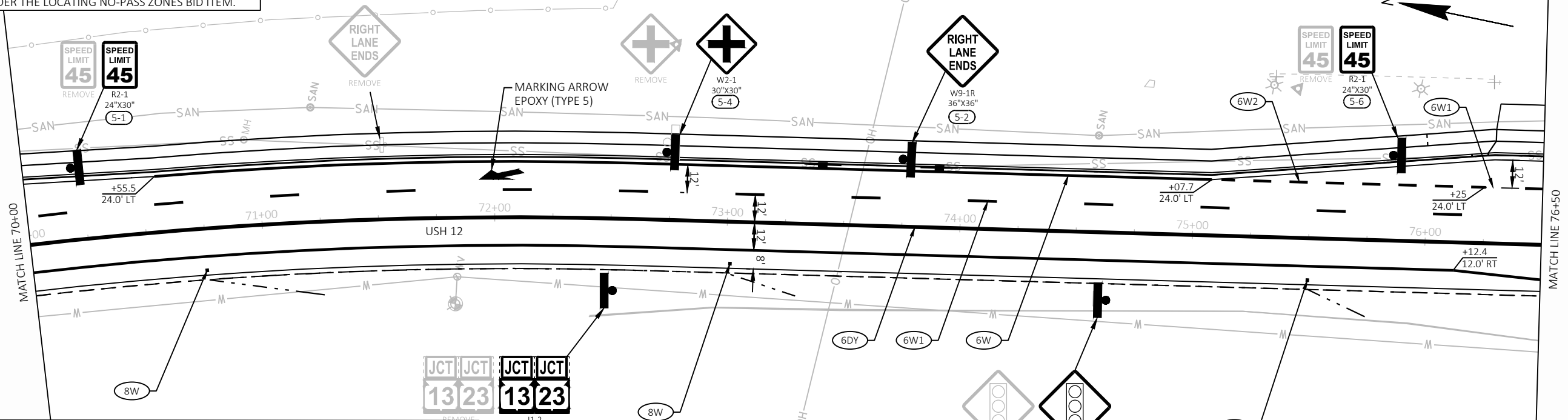
**PAVEMENT MARKING LEGEND**

- (6Y) MARKING LINE EPOXY 6-INCH (YELLOW) (12.5' DASH 37.5' SKIP)
- (6DY) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (6SY) MARKING LINE EPOXY 6-INCH (SINGLE YELLOW)
- (6GY) MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- (6W) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- (6W1) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (12.5' WHITE, 12.5' BLACK, 25' GAP)
- (6W2) MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (3' DASH 9' SKIP)
- (8W) MARKING OUTFALL EPOXY (8"X 8" WHITE)
- (10W) MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- (12Y) MARKING LINE EPOXY 12-INCH (YELLOW)(25' SPACING C-C)

NOTE: REFER TO SDD 'PERMANENT LONGITUDINAL PAVEMENT MARKINGS', SHEET A FOR APPLICATION OF 6W1 LANE LINE MARKING WITH MARKING LINE 6-INCH (BLACK).



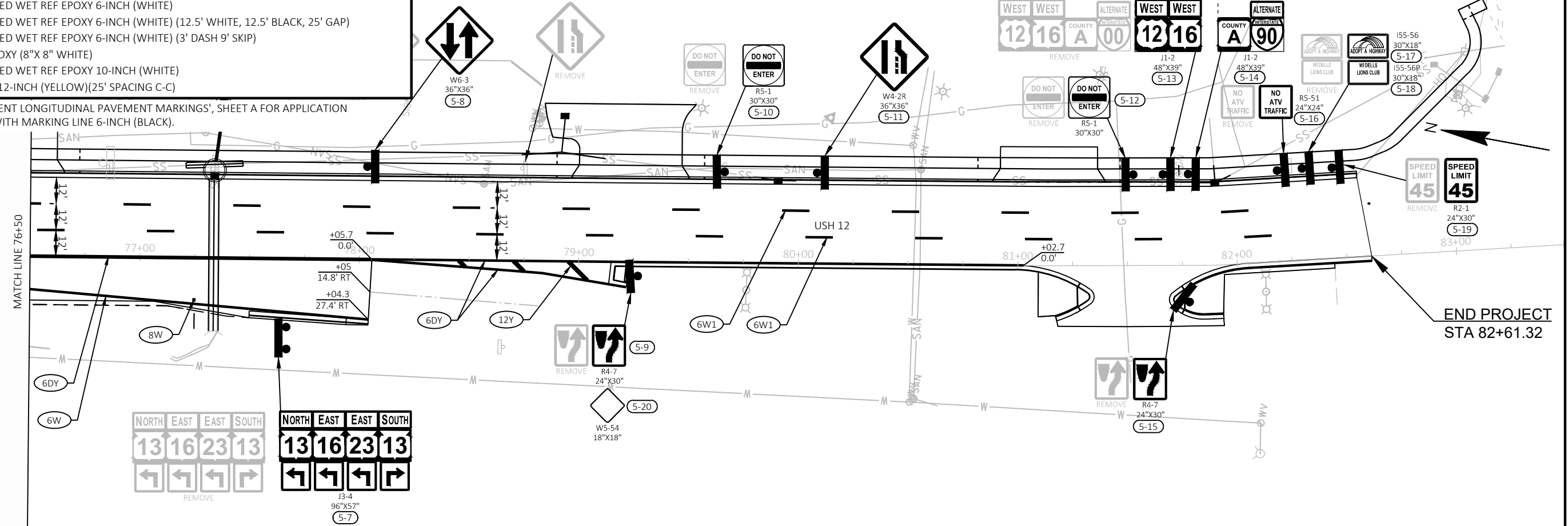
NOTES:  
EXACT LOCATIONS OF SIGN PENNANTS AND CENTERLINE MARKING TO BE DETERMINED UNDER THE LOCATING NO-PASS ZONES BID ITEM.



**PAVEMENT MARKING LEGEND**

- 6Y MARKING LINE EPOXY 6-INCH (YELLOW) (12.5' DASH 37.5' SKIP)
- 6DY MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- 6SY MARKING LINE EPOXY 6-INCH (SINGLE YELLOW)
- 6GY MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 6W MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 6W1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (12.5' WHITE, 12.5' BLACK, 25' GAP)
- 6W2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) (3' DASH 9' SKIP)
- 8W MARKING OUTFALL EPOXY (8"X 8" WHITE)
- 10W MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 12Y MARKING LINE EPOXY 12-INCH (YELLOW)(25' SPACING C-C)

NOTE: REFER TO SDD 'PERMANENT LONGITUDINAL PAVEMENT MARKINGS', SHEET A FOR APPLICATION OF 6W1 LANE LINE MARKING WITH MARKING LINE 6-INCH (BLACK).



**TRAFFIC CONTROL GENERAL NOTES**

ALL TRAFFIC CONTROL SIGNS AND DEVICES AND THEIR LOCATION SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD), THE PLANS, SPECIFICATIONS, CONTRACT AND APPLICABLE STANDARD DETAIL DRAWINGS.

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 ARE 48" X 48" UNLESS OTHERWISE NOTED.













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

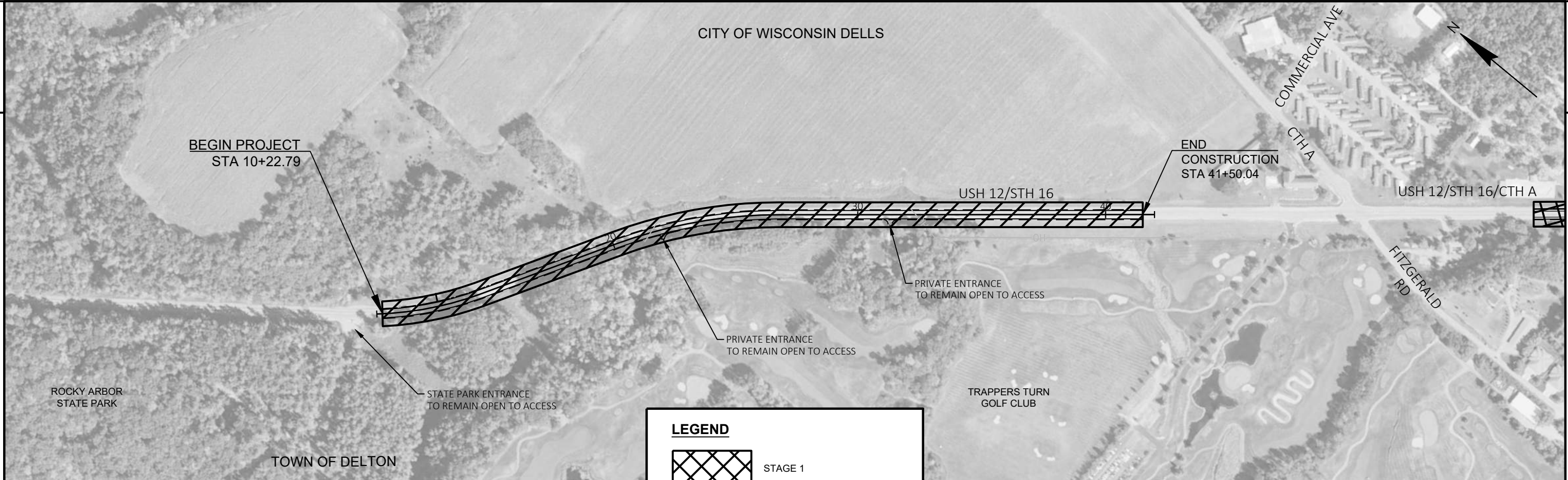
ALL SIGNS INAPPROPRIATE TO THE WORKZONE, INCLUDING PRE-EXISTING SIGNING, SHALL BE COVERED, REMOVED, OR ALTERED AS SPECIFIED IN THE PLANS AND/OR SPECIALS PROVISIONS OR AS DIRECTED BY THE ENGINEER.

**GENERAL TRAFFIC CONTROL REQUIREMENTS:**



1. UTILIZE SDD "TRAFFIC CONTROL, DROP-OFF SIGNING" TO FURTHER MITIGATE THE ADJACENT LANE DROP-OFFS AND GUTTER TO LANE DROP-OFF.
2. ACCESS TO PROPERTIES WITHIN THE WORKZONE SHALL BE MAINTAINED AT ALL TIMES UNLESS COORDINATED DIRECTLY WITH THE PROPERTY OWNER AND ENGINEER. PROVIDE ACCESS ON A DRIVING SURFACE CONSISTING OF CRUSHED AGGREGATE BASE COURSE SURFACE AT A MINIMUM.
3. ACCESS TO DRIVEWAYS WILL BE CLOSED TEMPORARILY DURING VARIOUS OPERATIONS. CONTRACTOR SHALL COORDINATE CLOSURES WITH THE ENGINEER AND PROPERTY OWNER.
4. WHERE TWO DRIVEWAYS SERVE THE PROPERTY, WORK SHALL BE STAGED TO REQUIRE ONE DRIVEWAY TO REMAIN OPEN.
5. THE EXISTING TRAFFIC SIGNALS AT THE INTERSECTION OF USH 12 AND STH 13 WILL REQUIRE TIMING ADJUSTMENTS DURING CONSTRUCTION. THE SPECIAL PROVISIONS SHALL BE FOLLOWED FOR ADJUSTMENT OF SIGNAL TIMING.

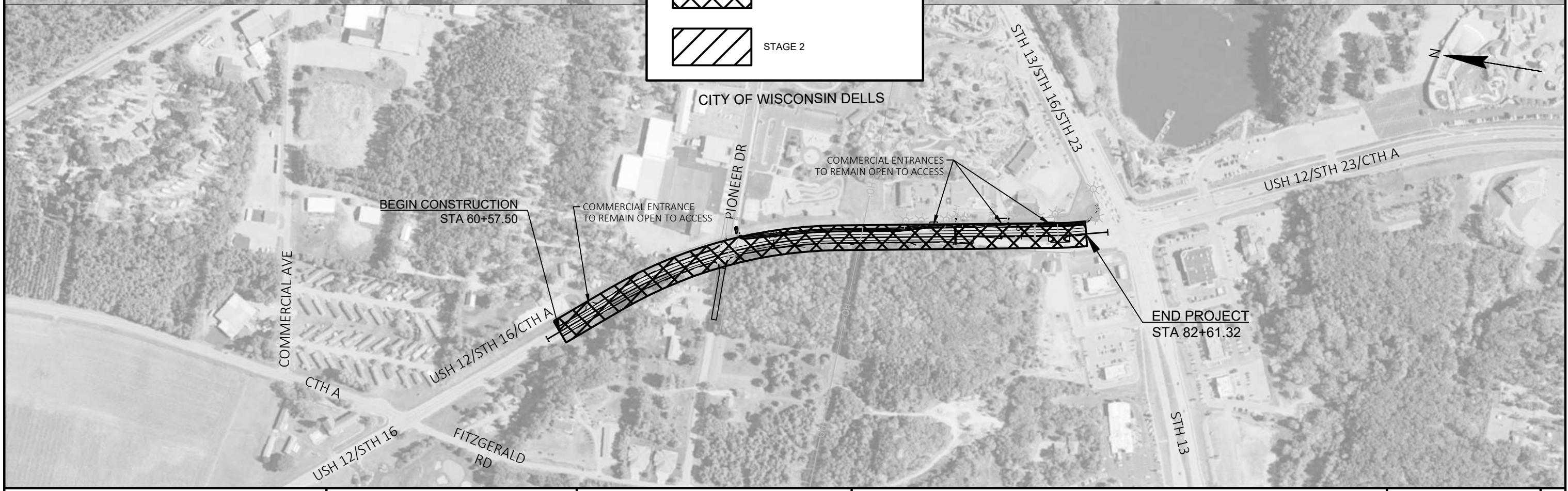
**TRAFFIC CONTROL LEGEND**

	TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL LINE
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH 3' SKIP, 9' GAP (WHITE)



**LEGEND**

	STAGE 1
	STAGE 2



**NOTE:**  
CLOSE ROAD PER SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES

**END ROAD WORK**  
G20-2A  
48"X24"

**ROAD CLOSED TO THRU TRAFFIC 1.0 MILES AHEAD**  
R11-3  
60"X30"

**ROAD CLOSED TO THRU TRAFFIC**  
R11-4  
60"X30"

**ROAD CLOSED TO THRU TRAFFIC**  
R11-4  
60"X30"

**EAST 12**  
M3-2  
24"X12"  
M1-4  
24"X24"

**EAST 12**  
M3-2  
24"X12"  
M1-4  
24"X24"

**ROAD CLOSED AHEAD**  
W20-3A

**ROAD CLOSED 1000 FT**  
W20-3C

**ROAD CLOSED AHEAD**  
W20-3A

**ROAD CLOSED AHEAD**  
W20-3A

USH 12/STH 16

USH 12/STH 16

CTH A

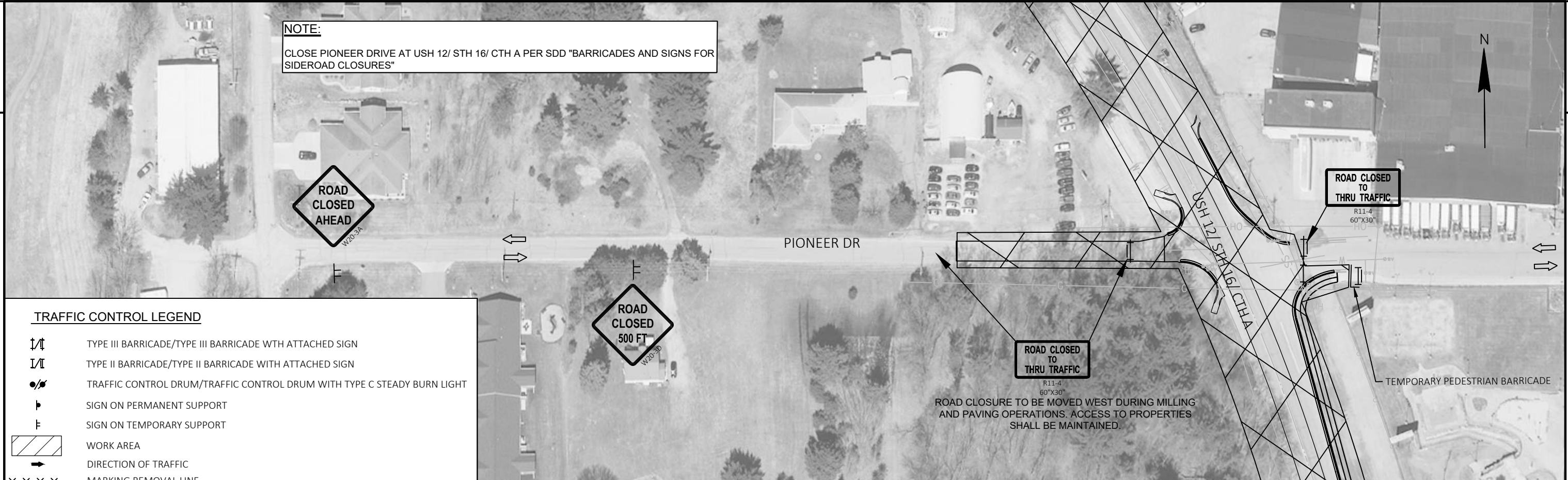
USH 12/STH 16/CTH A

FITZGERALD RD

**TRAFFIC CONTROL LEGEND**

- TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
- TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)
- TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH 3' SKIP, 9' GAP (WHITE)

**NOTE:**  
 CLOSE PIONEER DRIVE AT USH 12/ STH 16/ CTH A PER SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES"



**TRAFFIC CONTROL LEGEND**

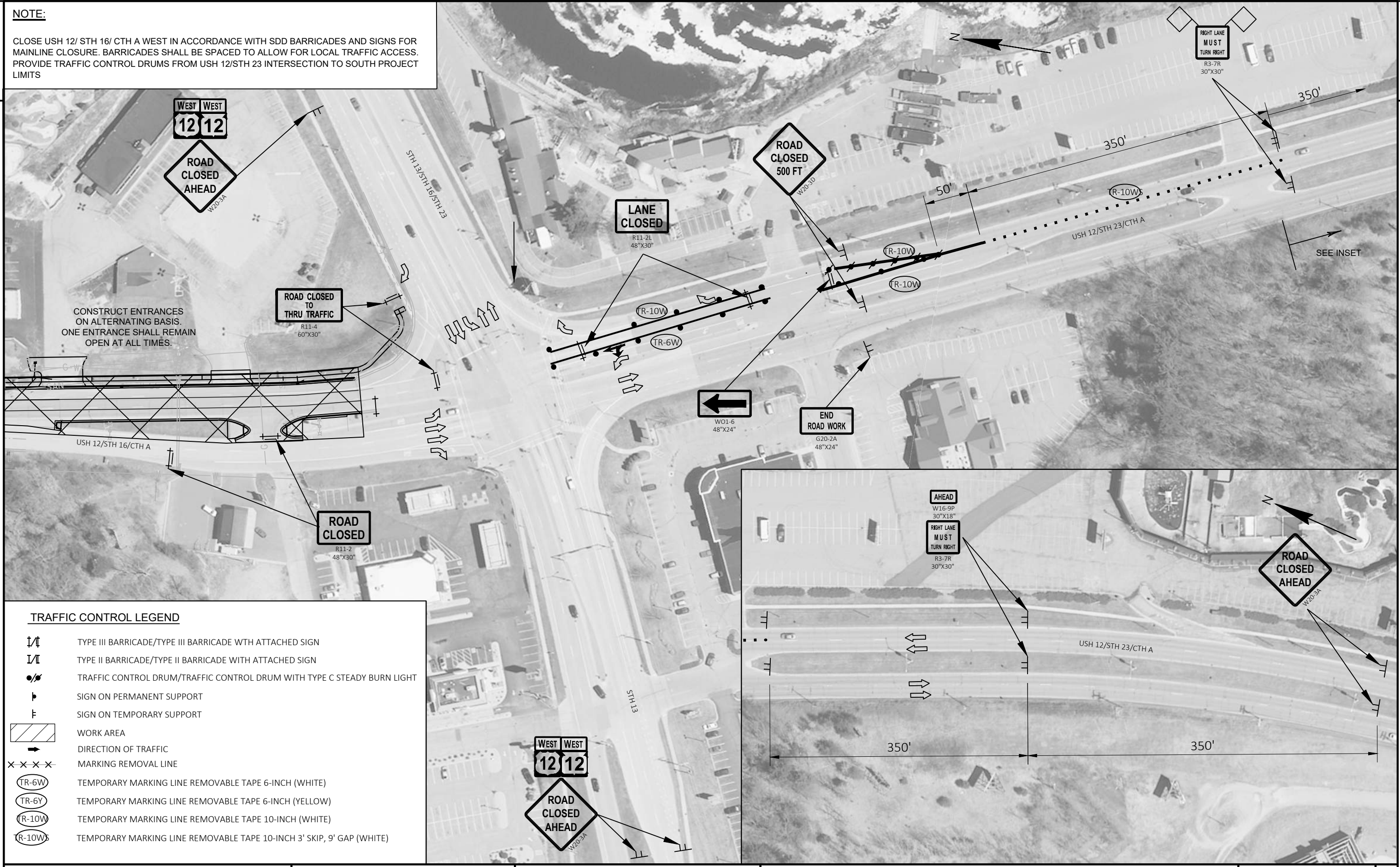
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	TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL LINE
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH 3' SKIP, 9' GAP (WHITE)








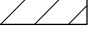


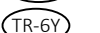
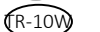


**NOTE:**  
 CLOSE USH 12/STH 16/CTH A WEST IN ACCORDANCE WITH SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURE. BARRICADES SHALL BE SPACED TO ALLOW FOR LOCAL TRAFFIC ACCESS. PROVIDE TRAFFIC CONTROL DRUMS FROM USH 12/STH 23 INTERSECTION TO SOUTH PROJECT LIMITS

2

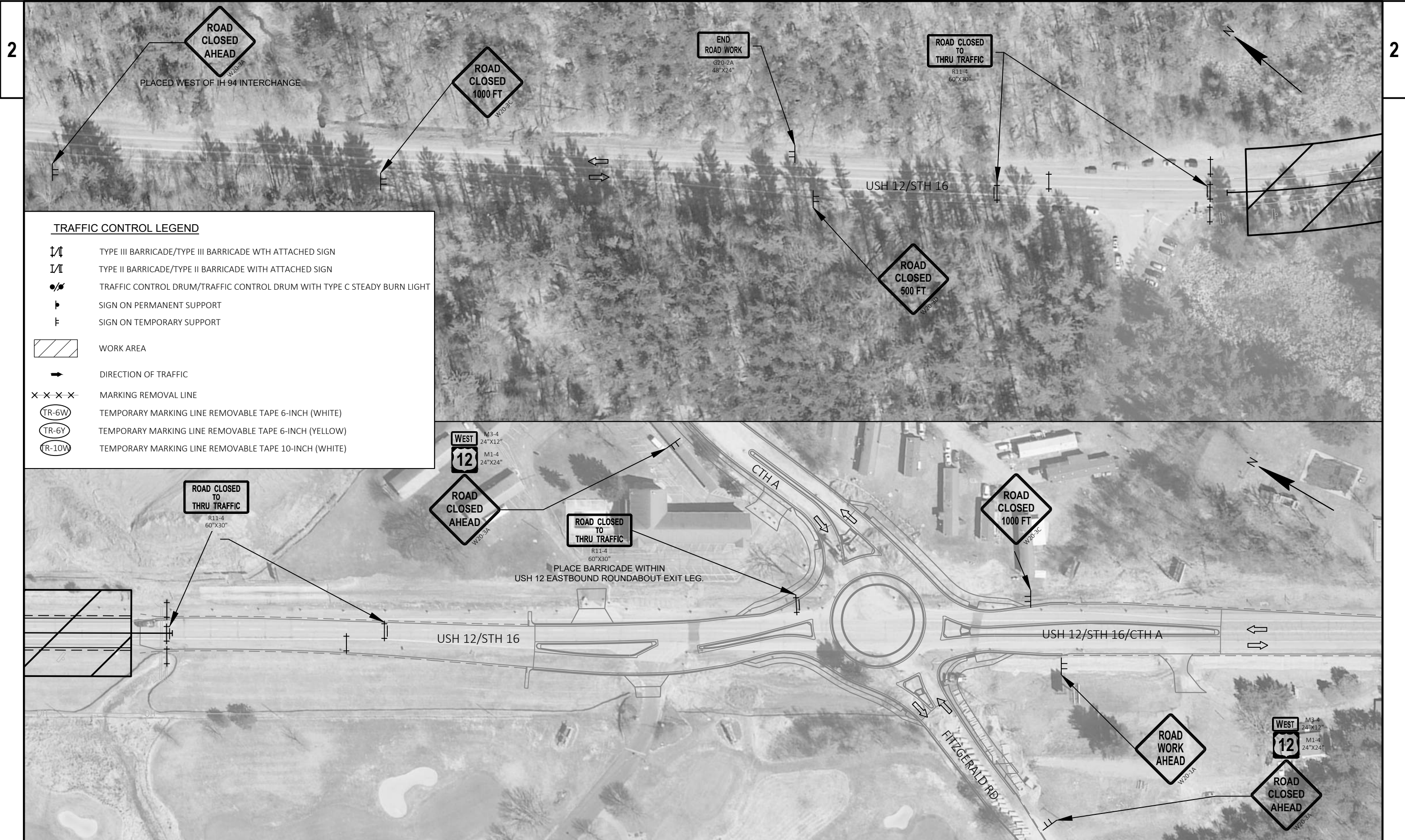
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










**TRAFFIC CONTROL LEGEND**

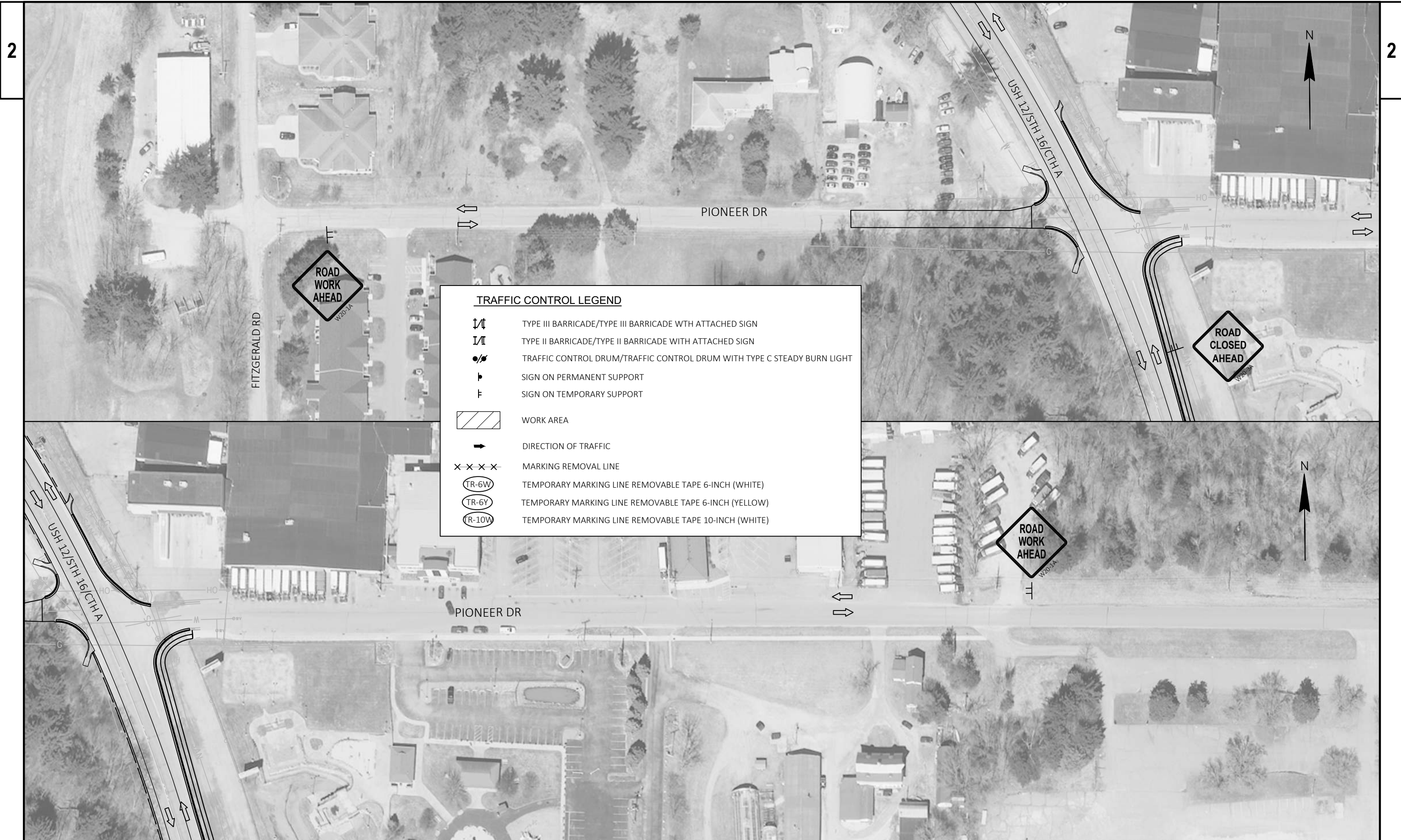
-  TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  MARKING REMOVAL LINE
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH 3' SKIP, 9' GAP (WHITE)



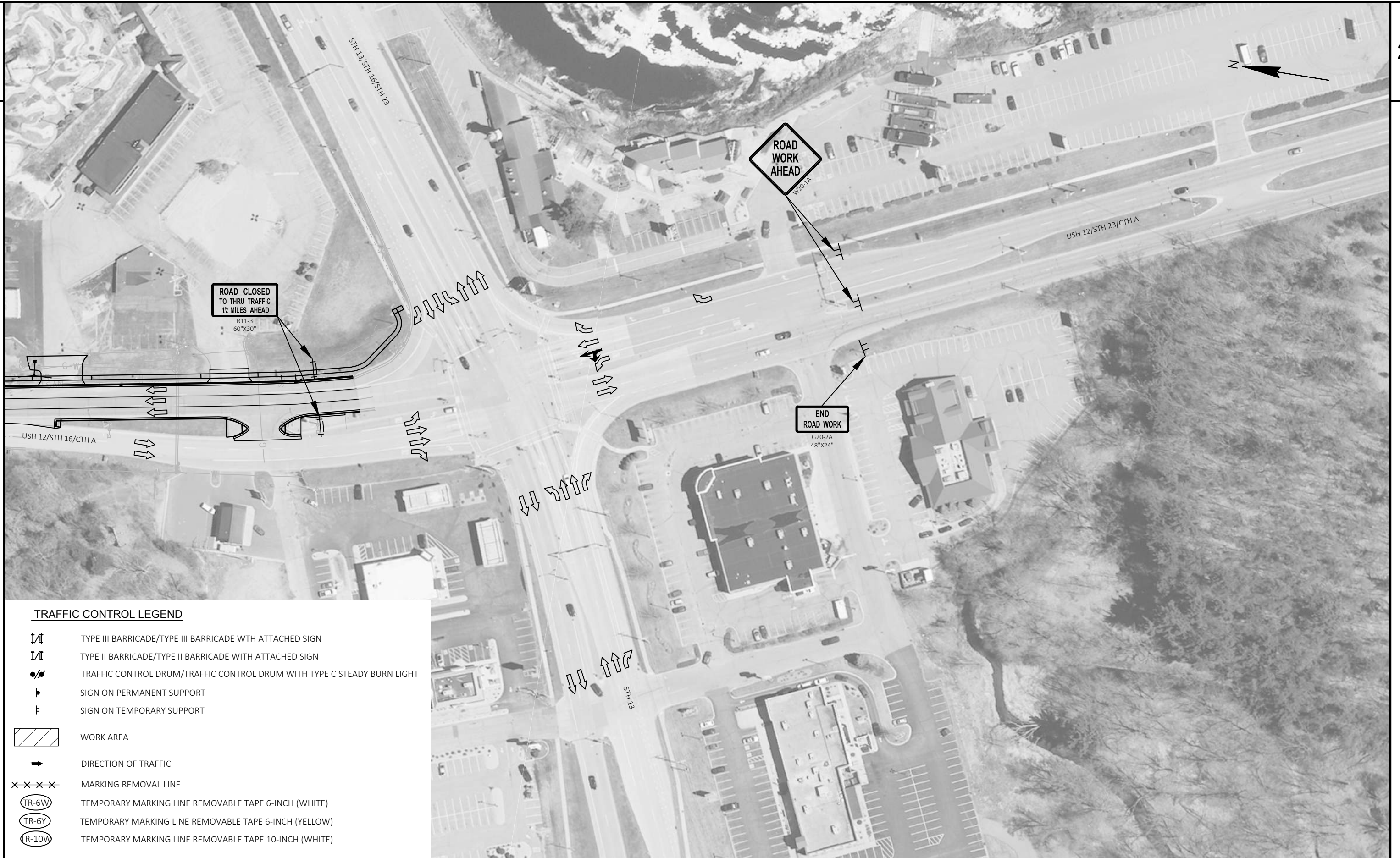


**TRAFFIC CONTROL LEGEND**






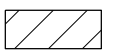





-  TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  MARKING REMOVAL LINE
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)



TRAFFIC CONTROL LEGEND	
	TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	MARKING REMOVAL LINE
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)



**TRAFFIC CONTROL LEGEND**

-  TYPE III BARRICADE/TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE II BARRICADE/TYPE II BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM/TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  MARKING REMOVAL LINE
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH (WHITE)

PROJECT NO: 5880-01-70

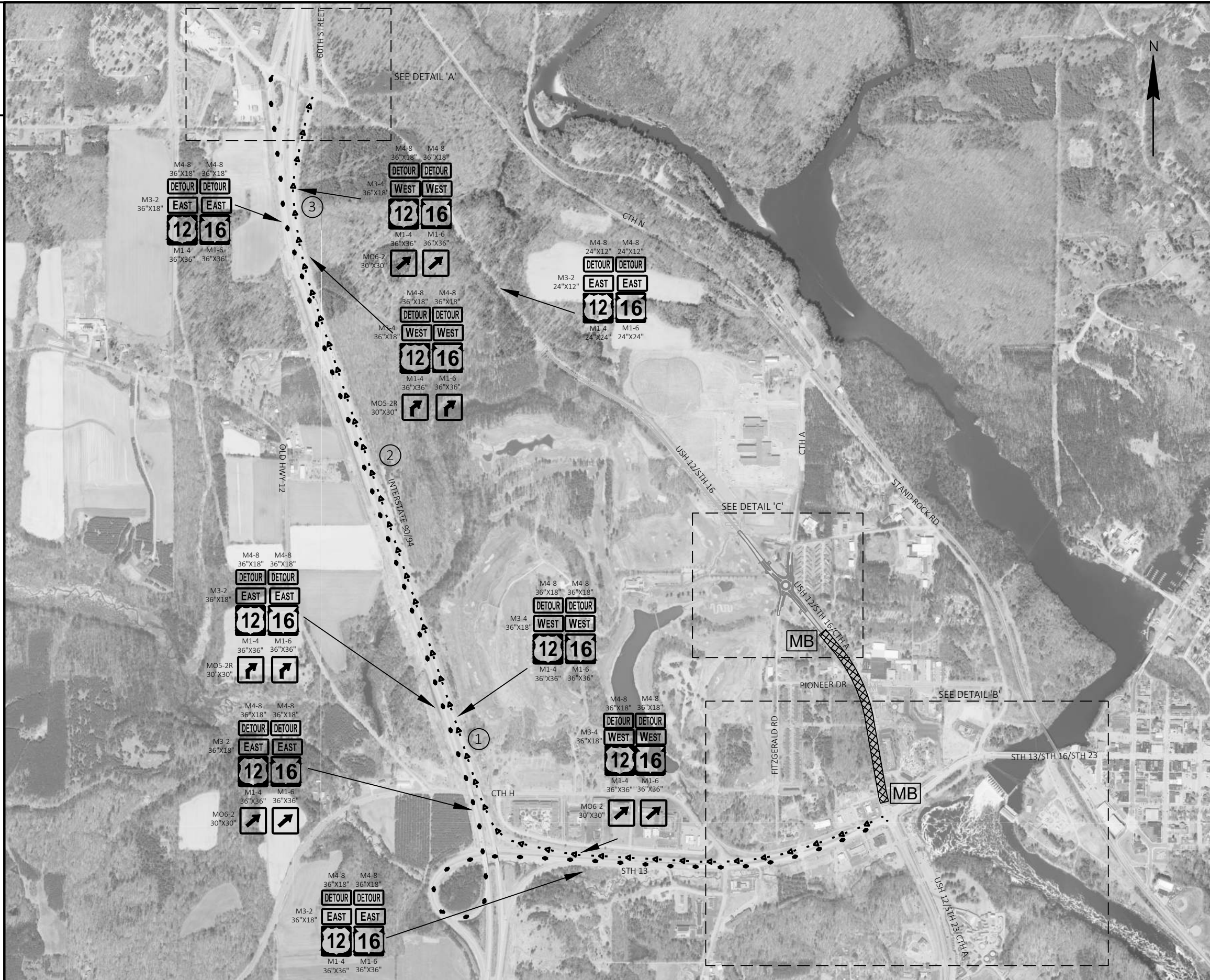
HWY: USH 12

COUNTY: SAUK

TRAFFIC CONTROL - STAGE 2






SHEET

E



# DETOUR ROUTE OVERVIEW STAGE 1

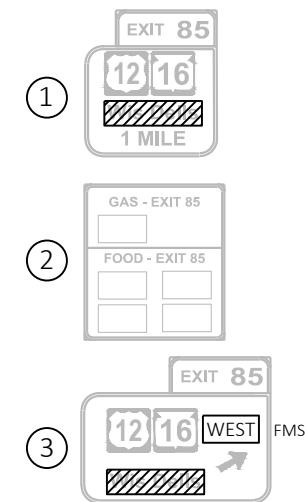
### LEGEND:

-  - STAGE 1 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  - COVERING SIGNS
-  - TRAFFIC CONTROL SIGNS PCMS

PCMS MESSAGE OVERVIEW		
SIGN OWNER	7 DAYS PRIOR TO CLOSURE	
	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)
CONTRACTOR	HWY 12 CLOSED	STARTING X/XX/XX

### NOTES:

1. SEE TRAFFIC CONTROL PLANS FOR ADDITIONAL TRAFFIC CONTROL SIGNING.
2. SEE ALTERNATE ROUTE PLAN SHEETS FOR INTERSTATE 90 ALTERNATE ROUTE SIGNING.
3. MODIFICATIONS TO TOURIST-ORIENTED DIRECTIONAL SIGNS TO BE BY OTHERS.



*MODIFICATIONS BY OTHERS

PROJECT NO: 5880-01-70

HWY: USH 12

COUNTY: SAUK






DETOUR PLAN - STAGE 1

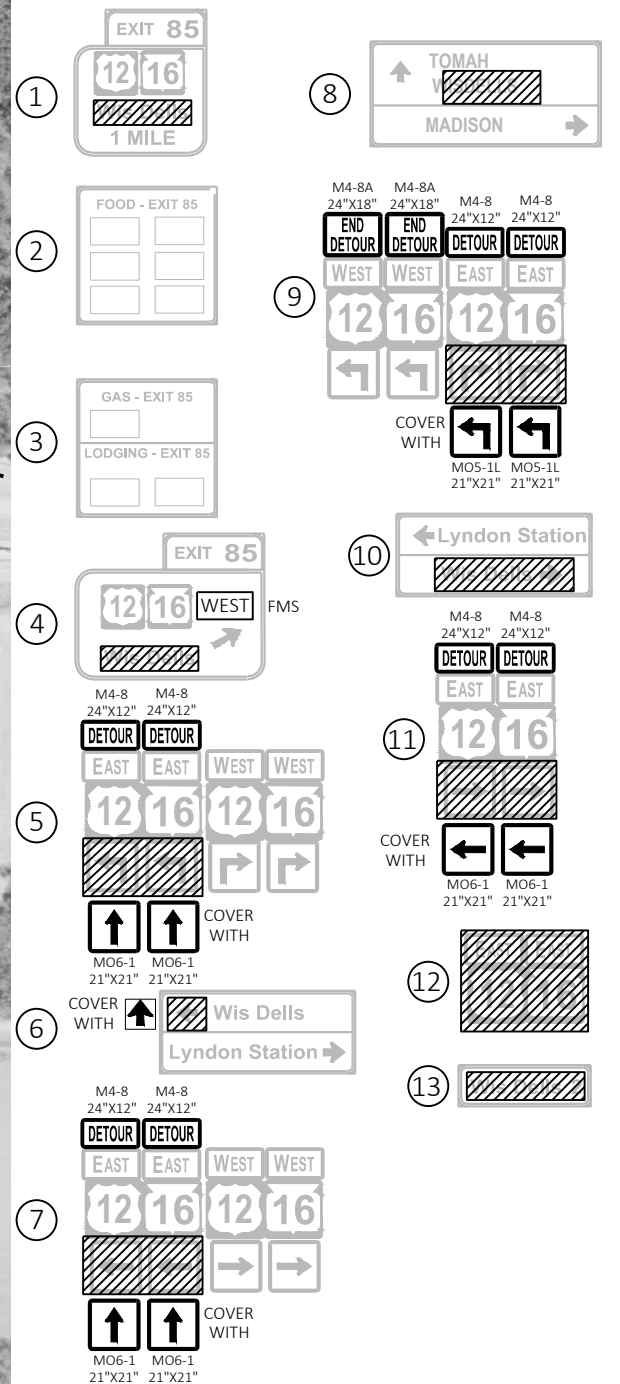
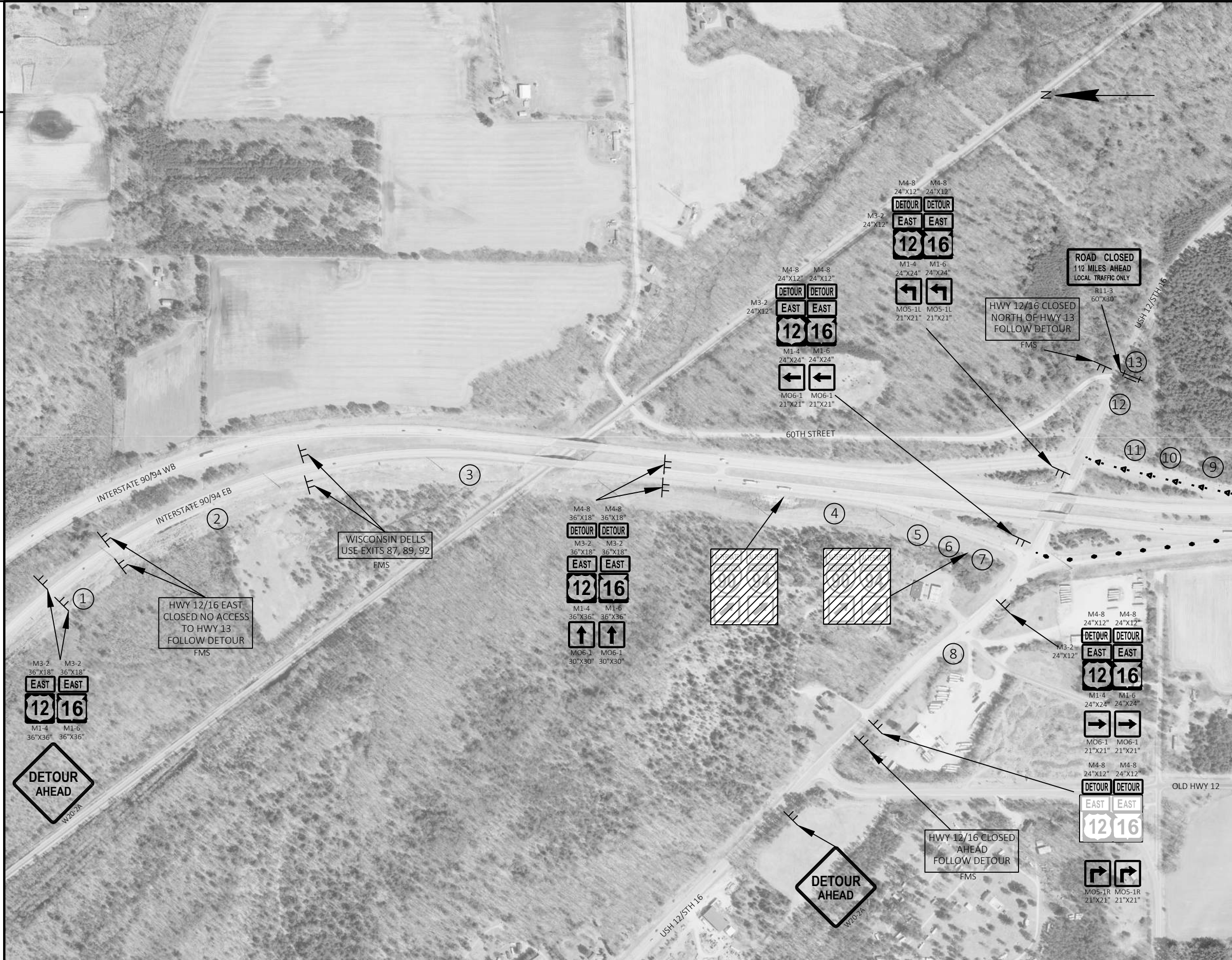
SHEET

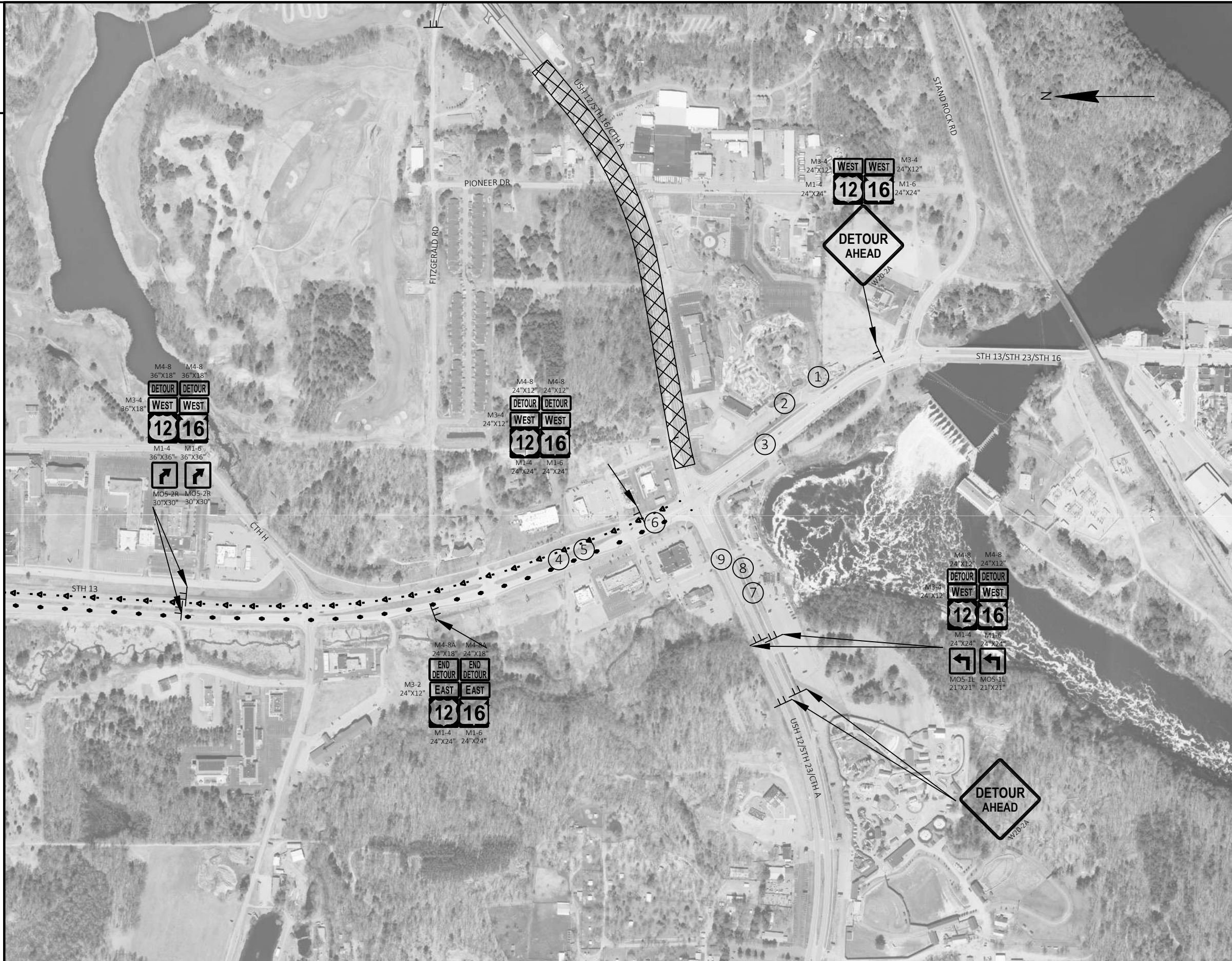
E

# DETOUR ROUTE - STAGE 1 DETAIL 'A'

### LEGEND:






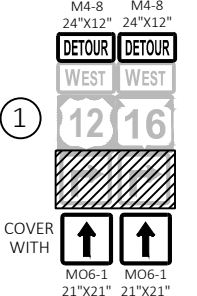

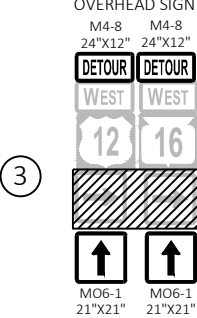
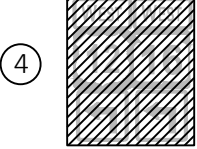

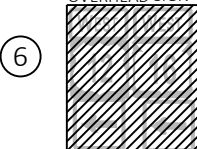

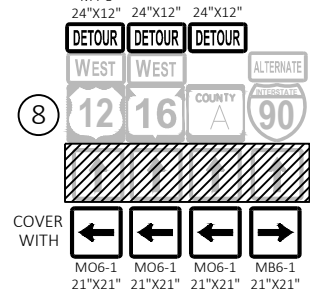
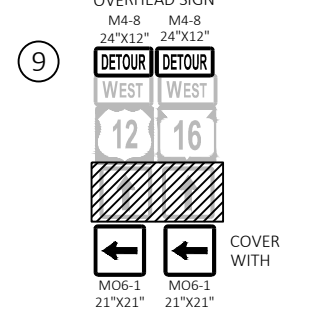
-  - STAGE 1 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  - FIXED MESSAGE SIGN
-  - COVERING SIGNS

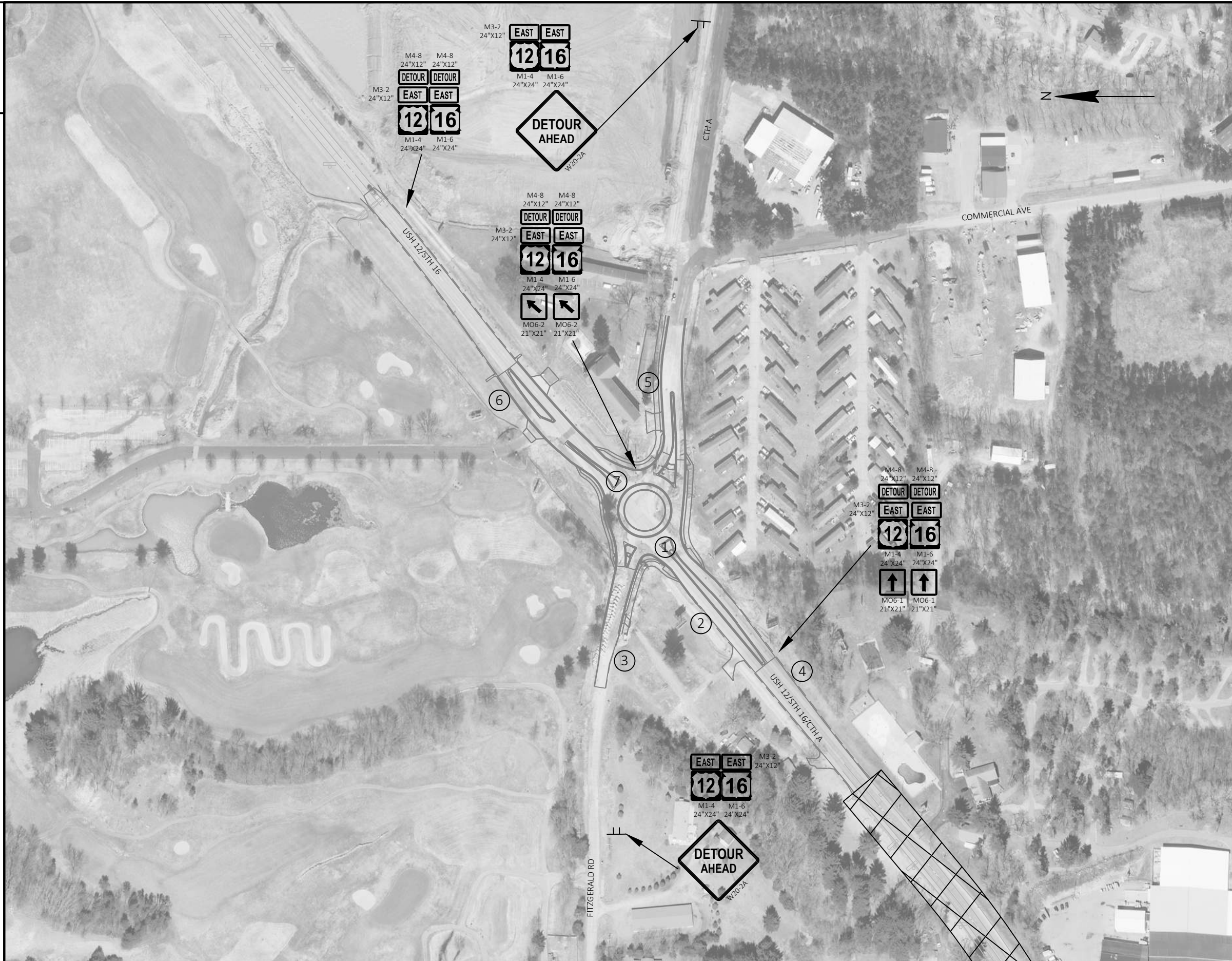




# DETOUR ROUTE - STAGE 1 DETAIL 'B'






### LEGEND:

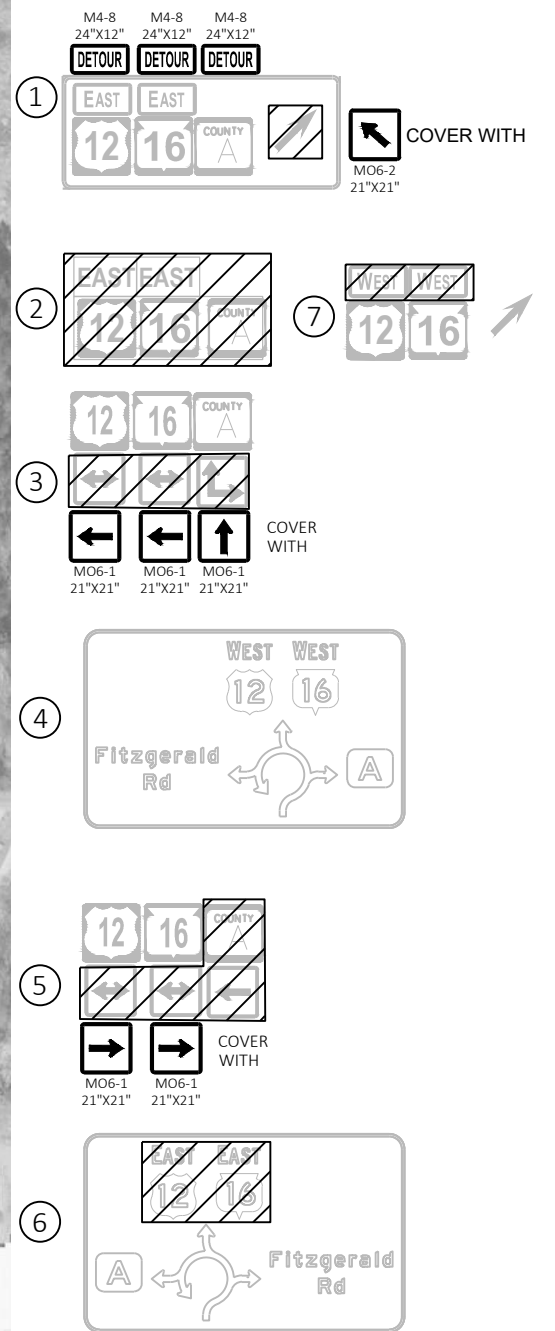
-  - STAGE 1 WORKZONE
  -  - USH 12 WB DETOUR ROUTE
  -  - USH 12 EB DETOUR ROUTE
  -  FMS - FIXED MESSAGE SIGN
  -  - COVERING SIGNS
- 1 
  - 2 
  - 3 
  - 4 
  - 5 
  - 6 
  - 7 
  - 8 
  - 9 



# DETOUR ROUTE - STAGE 1 DETAIL 'C'






### LEGEND:

-  - STAGE 1 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  - FIXED MESSAGE SIGN
-  - COVERING SIGNS



# DETOUR ROUTE OVERVIEW STAGE 2

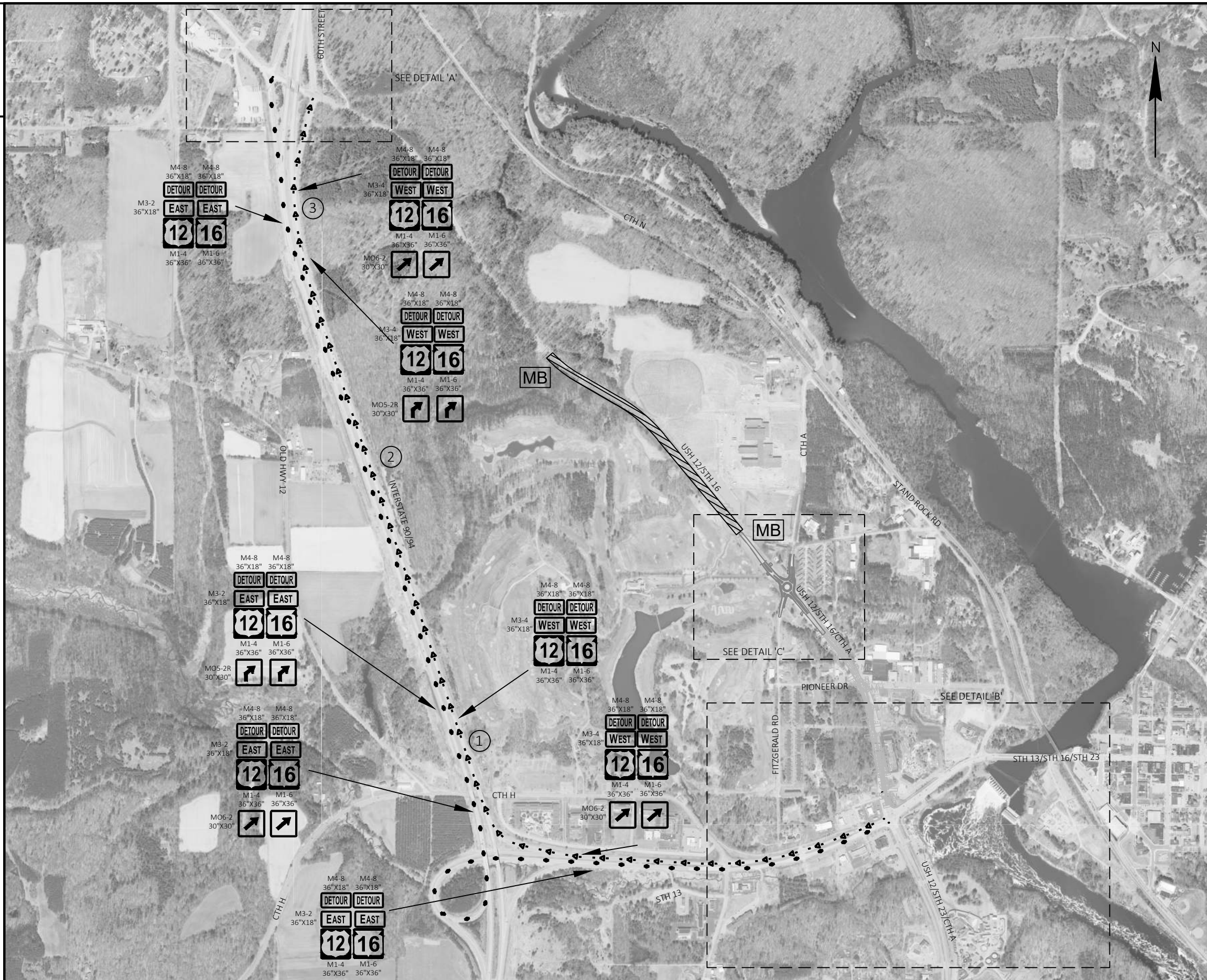
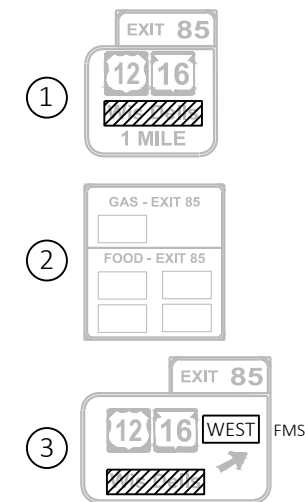
### LEGEND:

-  - STAGE 2 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  - COVERING SIGNS
-  - TRAFFIC CONTROL SIGNS PCMS

PCMS MESSAGE OVERVIEW		
SIGN OWNER	7 DAYS PRIOR TO CLOSURE	
	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)
CONTRACTOR	HWY 12 CLOSED	STARTING X/XX/XX

### NOTES:






1. SEE TRAFFIC CONTROL PLANS FOR ADDITIONAL TRAFFIC CONTROL SIGNING.
2. SEE ALTERNATE ROUTE PLAN SHEETS FOR INTERSTATE 90 ALTERNATE ROUTE SIGNING.
3. MODIFICATIONS TO TOURIST-ORIENTED DIRECTIONAL SIGNS TO BE BY OTHERS.

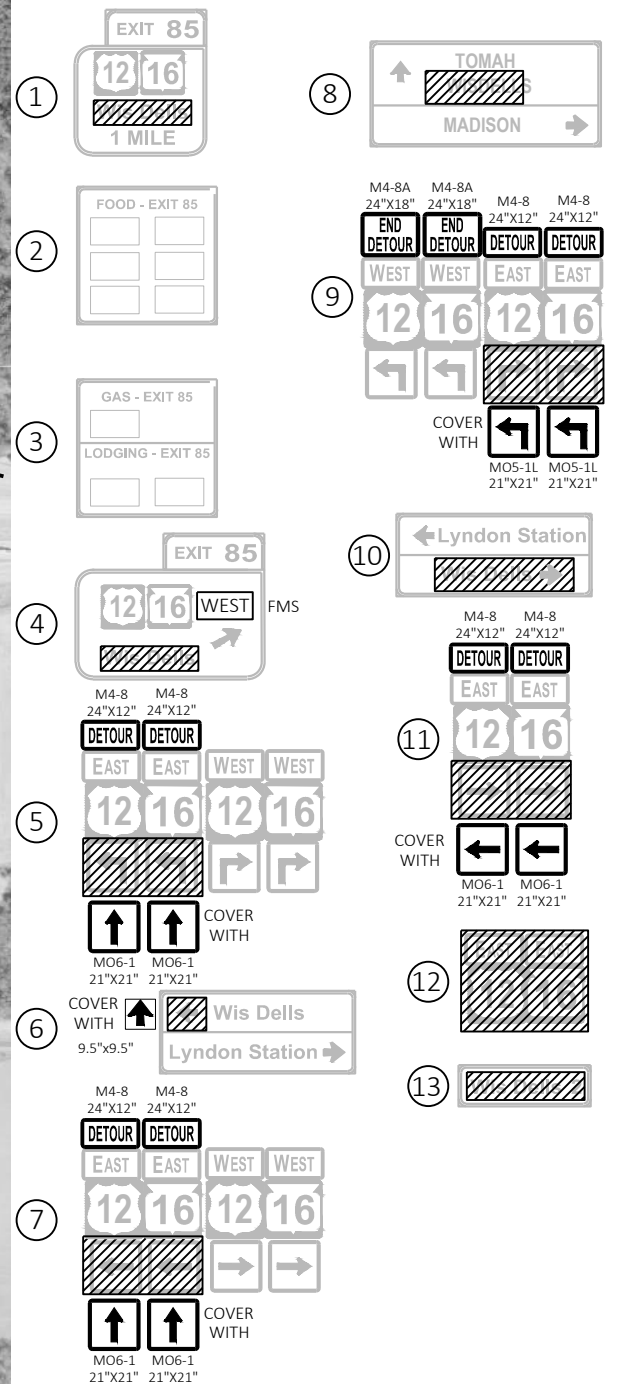
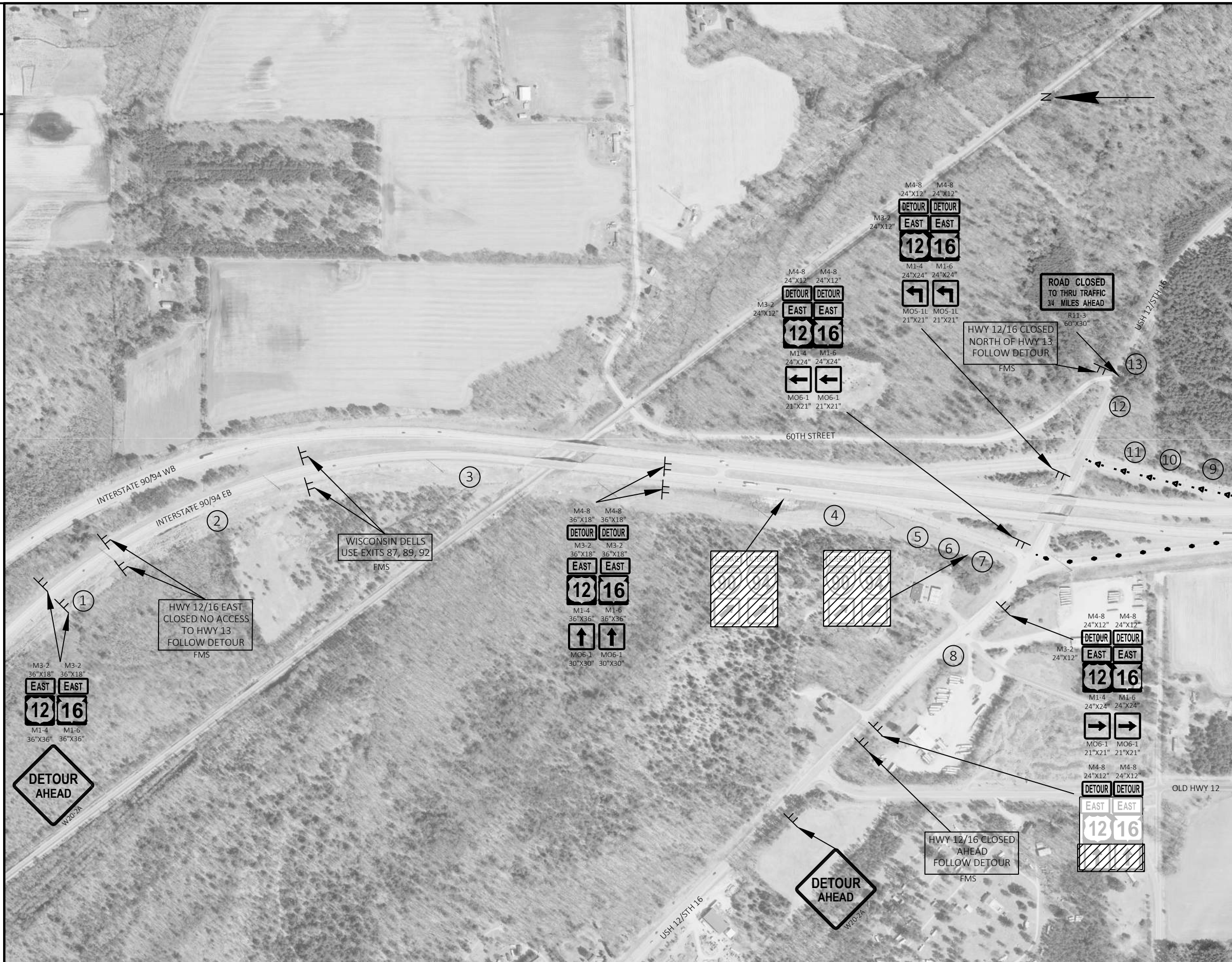


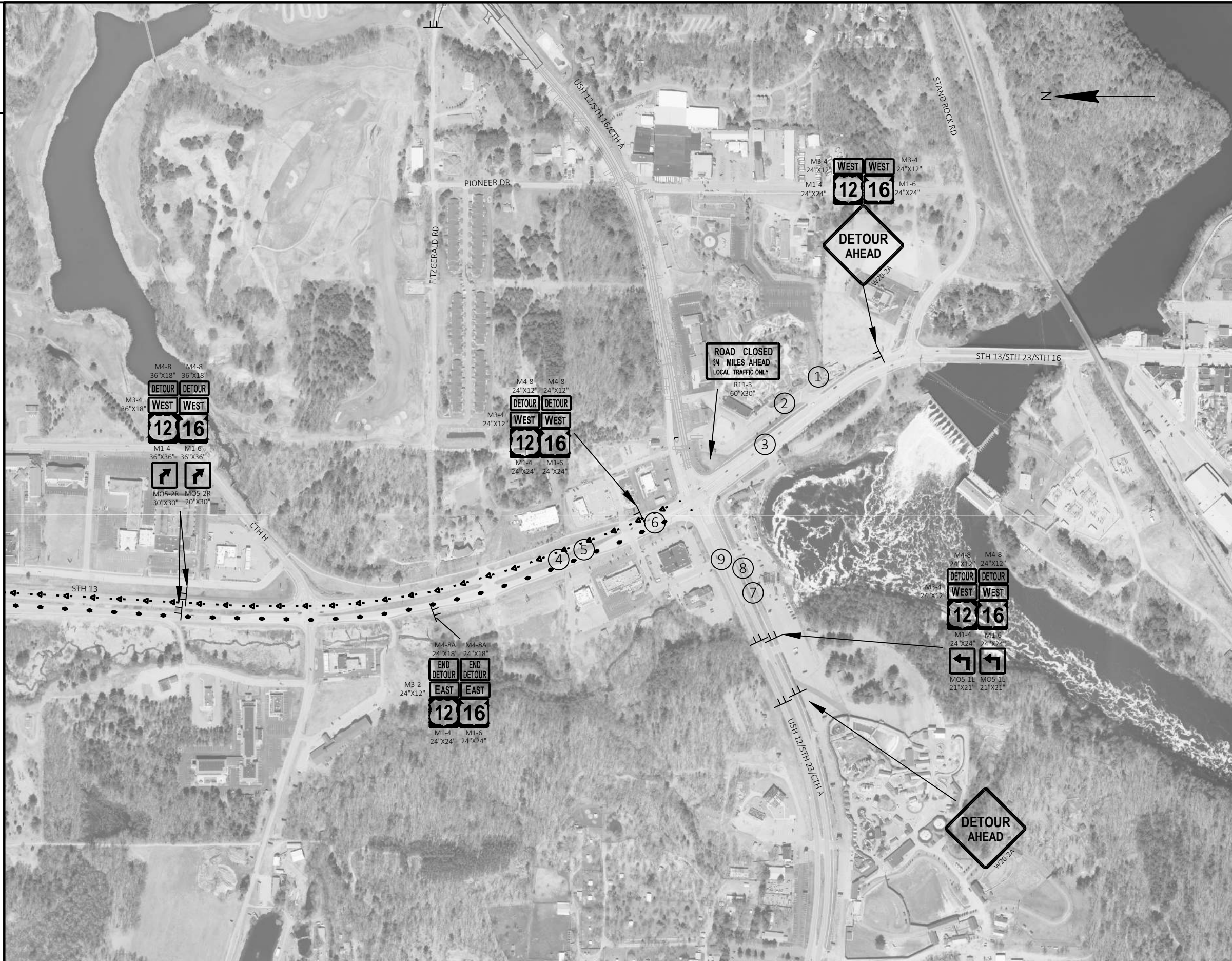


# DETOUR ROUTE - STAGE 2 DETAIL 'A'

### LEGEND:






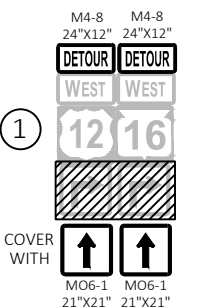

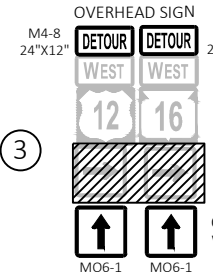
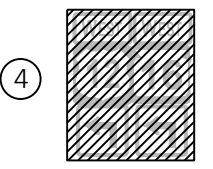

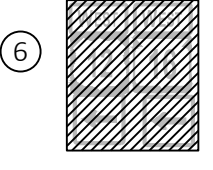

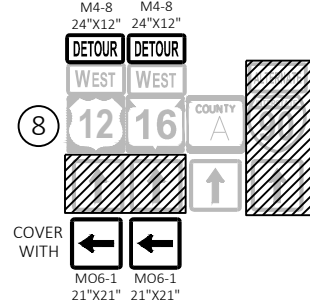
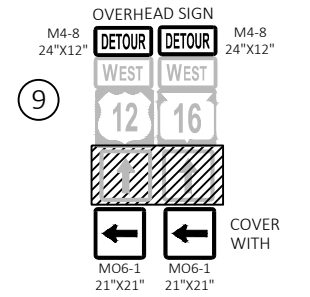
-  - STAGE 2 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  - FIXED MESSAGE SIGN
-  - COVERING SIGNS





## DETOUR ROUTE - STAGE 2 DETAIL 'B'






### LEGEND:

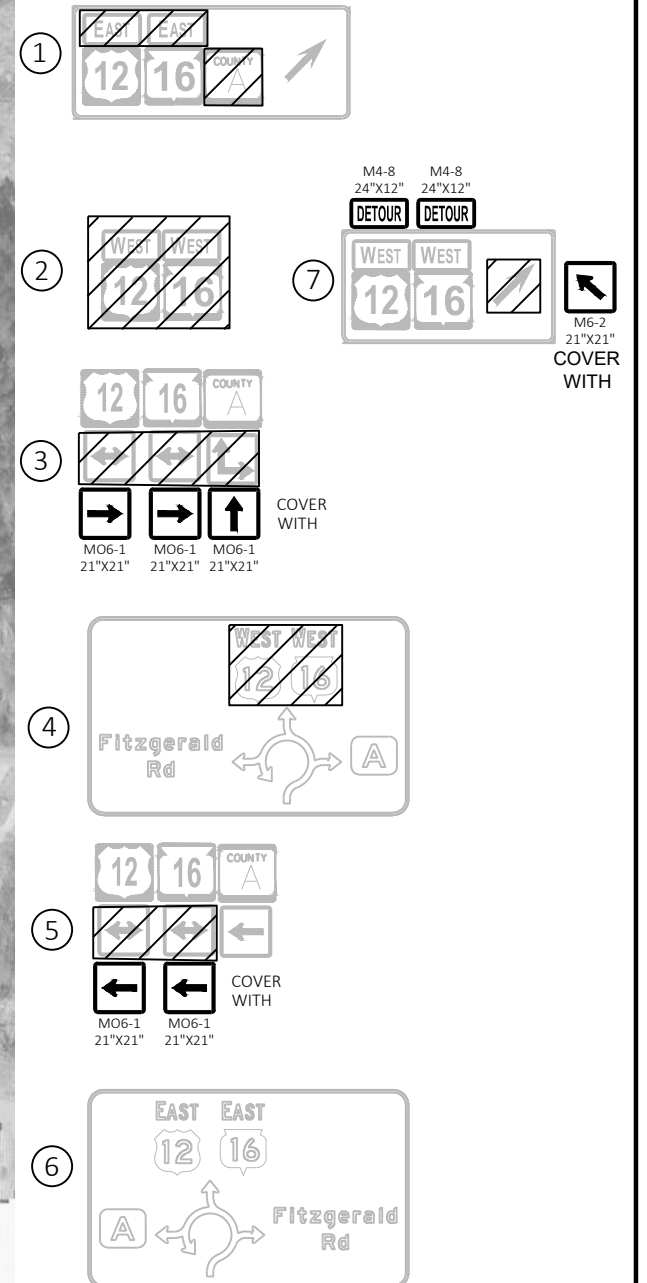
-  - STAGE 2 WORKZONE
  -  - USH 12 WB DETOUR ROUTE
  -  - USH 12 EB DETOUR ROUTE
  -  - FIXED MESSAGE SIGN
  -  - COVERING SIGNS
- ① 
  - ② 
  - ③ 
  - ④ 
  - ⑤ 
  - ⑥ 
  - ⑦ 
  - ⑧ 
  - ⑨ 

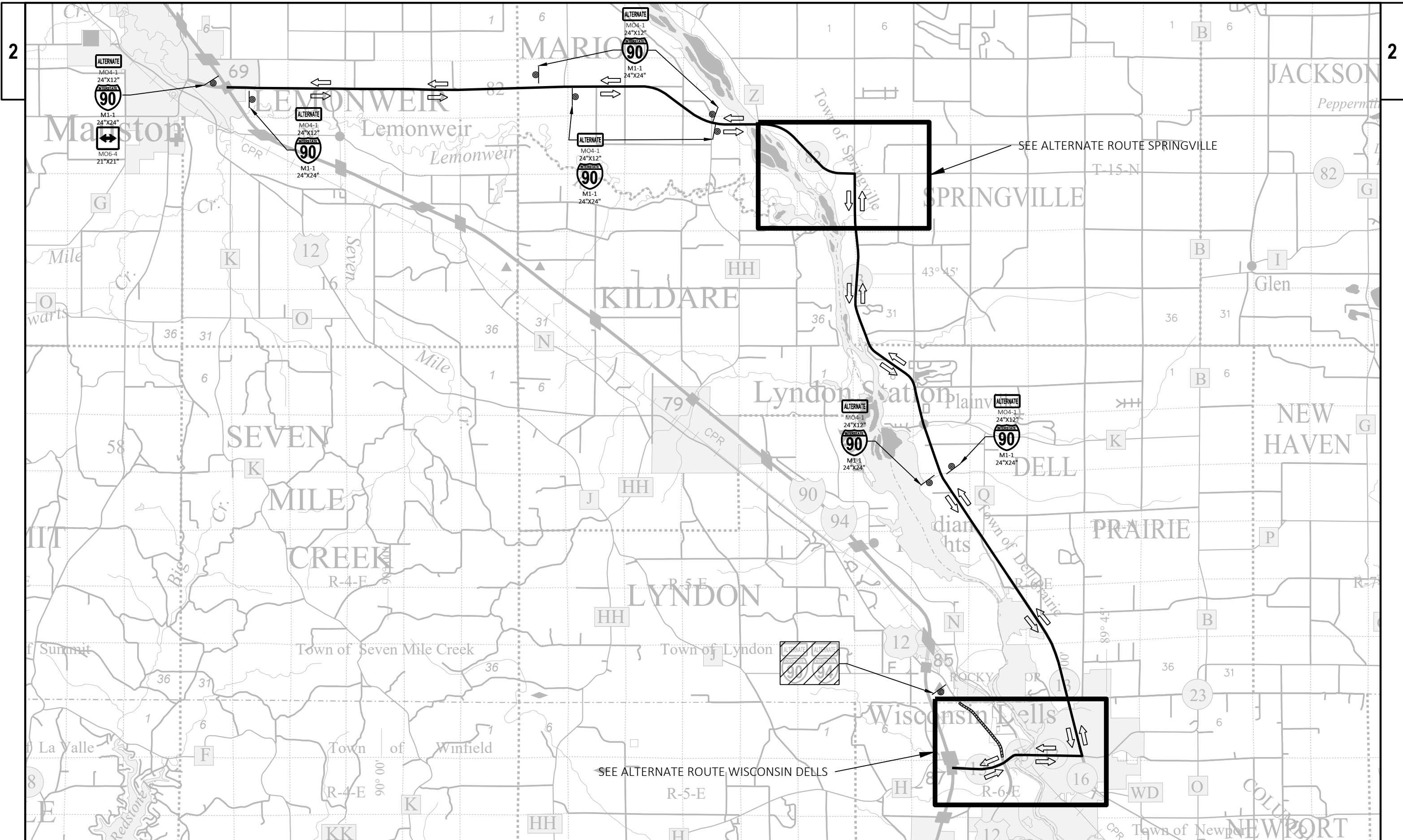


## DETOUR ROUTE - STAGE 2 DETAIL 'C'

### LEGEND:

-  - STAGE 2 WORKZONE
-  - USH 12 WB DETOUR ROUTE
-  - USH 12 EB DETOUR ROUTE
-  FMS - FIXED MESSAGE SIGN
-  - COVERING SIGNS





PROJECT NO: 5880-01-70

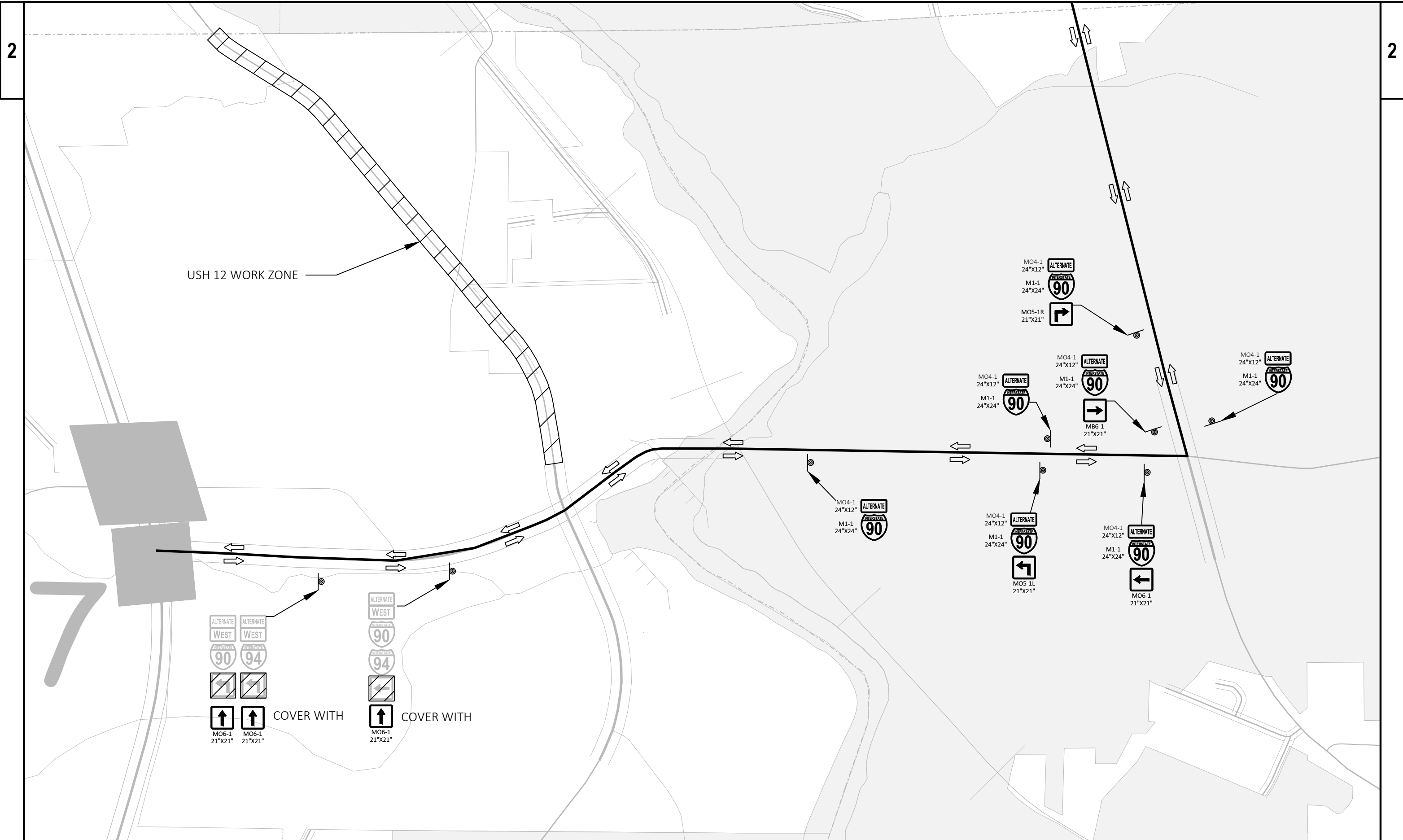
HWY: USH 12

COUNTY: SAUK

ALTERNATE ROUTE OVERVIEW

SHEET

E



PROJECT NO: 5880-01-70

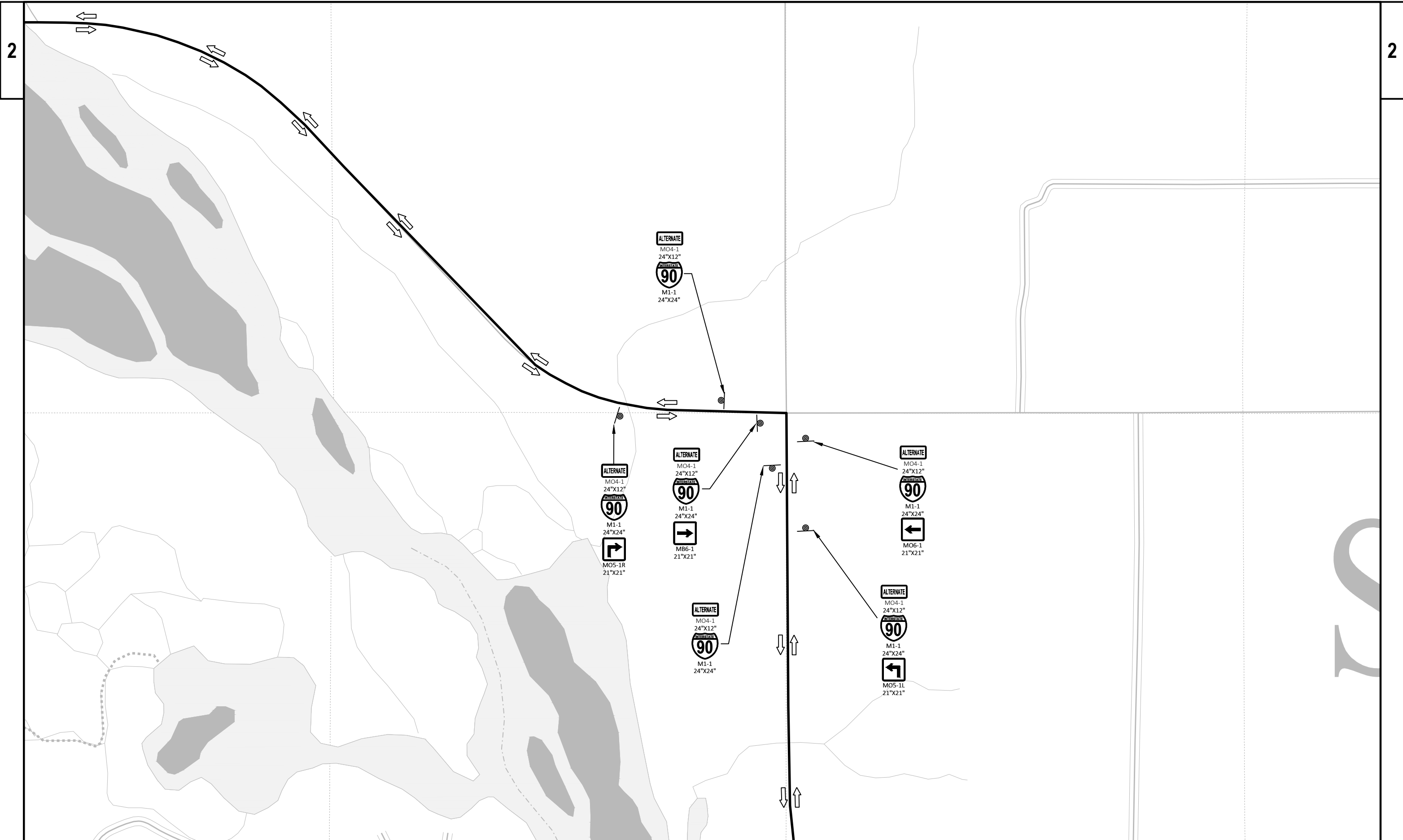
HWY: USH 12

COUNTY: SAUK

ALTERNATE ROUTE - WISCONSIN DELLS

SHEET

E



2

2

PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	ALTERNATE ROUTE - SPRINGVILLE	SHEET	E
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FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\023301-AW.DWG PLOT DATE : 7/31/2023 6:09 PM PLOT BY : JOE MALENOFSKI PLOT NAME :

WISDOT/CADD SHEET 42

Estimate Of Quantities

5880-01-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. Sta 16+29	EACH	1.000	1.000
0004	203.0220	Removing Structure (structure) 02. Sta 23+29	EACH	1.000	1.000
0006	203.0220	Removing Structure (structure) 03. Sta 77+34	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	17,580.000	17,580.000
0010	204.0110	Removing Asphaltic Surface	SY	460.000	460.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	22.000	22.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	470.000	470.000
0016	204.0150	Removing Curb & Gutter	LF	500.000	500.000
0018	204.0155	Removing Concrete Sidewalk	SY	8.000	8.000
0020	204.0210	Removing Manholes	EACH	4.000	4.000
0022	204.0220	Removing Inlets	EACH	1.000	1.000
0024	204.0245	Removing Storm Sewer (size) 01. 24-Inch	LF	24.000	24.000
0026	204.0245	Removing Storm Sewer (size) 02. 30-Inch	LF	102.000	102.000
0028	205.0100	Excavation Common	CY	23,635.000	23,635.000
0030	213.0100	Finishing Roadway (project) 01. 5880-01-70	EACH	1.000	1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,070.000	1,070.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	22,490.000	22,490.000
0036	305.0410	Aggregate Detours	TON	25.000	25.000
0038	310.0110	Base Aggregate Open-Graded	TON	123.000	123.000
0040	312.0110	Select Crushed Material	TON	21,700.000	21,700.000
0042	371.2000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	EACH	26.000	26.000
0044	416.0610	Drilled Tie Bars	EACH	30.000	30.000
0046	455.0605	Tack Coat	GAL	396.000	396.000
0048	460.2000	Incentive Density HMA Pavement	DOL	4,210.000	4,210.000
0050	460.6223	HMA Pavement 3 MT 58-28 S	TON	3,916.000	3,916.000
0052	460.6224	HMA Pavement 4 MT 58-28 S	TON	2,668.000	2,668.000
0054	465.0105	Asphaltic Surface	TON	81.000	81.000
0056	465.0115	Asphaltic Surface Detours	TON	25.000	25.000
0058	465.0315	Asphaltic Flumes	SY	53.000	53.000
0060	465.0520	Asphaltic Rumble Strips, Shoulder	LF	6,260.000	6,260.000
0062	465.0560	Asphaltic Rumble Strips, Centerline	LF	3,130.000	3,130.000
0064	520.8000	Concrete Collars for Pipe	EACH	11.000	11.000
0066	521.1042	Apron Endwalls for Culvert Pipe Steel 42-Inch	EACH	4.000	4.000
0068	521.3142	Culvert Pipe Corrugated Steel 42-Inch	LF	144.000	144.000
0070	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	2.000	2.000
0072	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	399.000	399.000
0074	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	1,695.000	1,695.000
0076	602.0405	Concrete Sidewalk 4-Inch	SF	7,660.000	7,660.000
0078	602.0810	Concrete Driveway 6-Inch	SY	143.000	143.000
0080	606.0200	Riprap Medium	CY	24.000	24.000
0082	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	48.000	48.000
0084	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	24.000	24.000
0086	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	102.000	102.000
0088	608.2434	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 34x53-Inch	LF	73.000	73.000
0090	611.0530	Manhole Covers Type J	EACH	2.000	2.000
0092	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0094	611.0627	Inlet Covers Type HM	EACH	5.000	5.000
0096	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0098	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0100	611.2005	Manholes 5-FT Diameter	EACH	3.000	3.000

Estimate Of Quantities

5880-01-70

Line	Item	Item Description	Unit	Total	Qty
0102	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0104	611.3003	Inlets 3-FT Diameter	EACH	1.000	1.000
0106	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0108	611.8110	Adjusting Manhole Covers	EACH	6.000	6.000
0110	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0112	611.8120.S	Cover Plates Temporary	EACH	5.000	5.000
0114	612.0106	Pipe Underdrain 6-Inch	LF	2,353.000	2,353.000
0116	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	188.000	188.000
0118	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	6.000	6.000
0120	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5880-01-70	EACH	1.000	1.000
0122	619.1000	Mobilization	EACH	1.000	1.000
0124	620.0300	Concrete Median Sloped Nose	SF	203.000	203.000
0126	624.0100	Water	MGAL	495.000	495.000
0128	625.0500	Salvaged Topsoil	SY	18,120.000	18,120.000
0130	627.0200	Mulching	SY	12,837.000	12,837.000
0132	628.1504	Silt Fence	LF	6,060.000	6,060.000
0134	628.1520	Silt Fence Maintenance	LF	6,060.000	6,060.000
0136	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0138	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0140	628.2002	Erosion Mat Class I Type A	SY	160.000	160.000
0142	628.2004	Erosion Mat Class I Type B	SY	525.000	525.000
0144	628.2023	Erosion Mat Class II Type B	SY	1,050.000	1,050.000
0146	628.7005	Inlet Protection Type A	EACH	7.000	7.000
0148	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0150	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0152	628.7504	Temporary Ditch Checks	LF	141.000	141.000
0154	628.7555	Culvert Pipe Checks	EACH	41.000	41.000
0156	628.7570	Rock Bags	EACH	300.000	300.000
0158	629.0210	Fertilizer Type B	CWT	13.000	13.000
0160	630.0110	Seeding Mixture No. 10	LB	148.000	148.000
0162	630.0180	Seeding Mixture No. 80	LB	22.000	22.000
0164	630.0200	Seeding Temporary	LB	29.000	29.000
0166	630.0500	Seed Water	MGAL	410.000	410.000
0168	633.5200	Markers Culvert End	EACH	4.000	4.000
0170	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	14.000	14.000
0172	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	19.000	19.000
0174	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	2.000	2.000
0176	637.2210	Signs Type II Reflective H	SF	204.500	204.500
0178	637.2230	Signs Type II Reflective F	SF	101.750	101.750
0180	638.2602	Removing Signs Type II	EACH	34.000	34.000
0182	638.3000	Removing Small Sign Supports	EACH	35.000	35.000
0184	642.5401	Field Office Type D	EACH	1.000	1.000
0186	643.0300	Traffic Control Drums	DAY	1,225.000	1,225.000
0188	643.0410	Traffic Control Barricades Type II	DAY	125.000	125.000
0190	643.0420	Traffic Control Barricades Type III	DAY	2,651.000	2,651.000
0192	643.0705	Traffic Control Warning Lights Type A	DAY	3,375.000	3,375.000
0194	643.0715	Traffic Control Warning Lights Type C	DAY	350.000	350.000
0196	643.0900	Traffic Control Signs	DAY	32,618.000	32,618.000
0198	643.0910	Traffic Control Covering Signs Type I	EACH	10.000	10.000
0200	643.0920	Traffic Control Covering Signs Type II	EACH	66.000	66.000



Estimate Of Quantities

5880-01-70

Line	Item	Item Description	Unit	Total	Qty
0202	643.1000	Traffic Control Signs Fixed Message	SF	177.000	177.000
0204	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0206	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	520.000	520.000
0208	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	810.000	810.000
0210	643.5000	Traffic Control	EACH	1.000	1.000
0212	645.0111	Geotextile Type DF Schedule A	SY	1,320.000	1,320.000
0214	645.0120	Geotextile Type HR	SY	90.000	90.000
0216	645.0220	Geogrid Type SR	SY	27,000.000	27,000.000
0218	646.2020	Marking Line Epoxy 6-Inch	LF	3,607.000	3,607.000
0220	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	16,618.000	16,618.000
0222	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	39.000	39.000
0224	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0226	646.5520	Marking Outfall Epoxy	EACH	5.000	5.000
0228	646.7120	Marking Diagonal Epoxy 12-Inch	LF	25.000	25.000
0230	648.0100	Locating No-Passing Zones	MI	0.600	0.600
0232	650.4000	Construction Staking Storm Sewer	EACH	8.000	8.000
0234	650.4500	Construction Staking Subgrade	LF	5,332.000	5,332.000
0236	650.5000	Construction Staking Base	LF	5,332.000	5,332.000
0238	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,086.000	2,086.000
0240	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0242	650.9500	Construction Staking Sidewalk (project) 01. 5880-01-70	EACH	1.000	1.000
0244	650.9911	Construction Staking Supplemental Control (project) 01. 5880-01-70	EACH	1.000	1.000
0246	650.9920	Construction Staking Slope Stakes	LF	5,332.000	5,332.000
0248	690.0150	Sawing Asphalt	LF	286.000	286.000
0250	690.0250	Sawing Concrete	LF	447.000	447.000
0252	740.0440	Incentive IRI Ride	DOL	10,670.000	10,670.000
0254	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	450.000	450.000
0256	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0258	SPV.0060	Special 01. Inlets 9-FT Diameter	EACH	1.000	1.000
0260	SPV.0060	Special 02. Adjusting Water Valve Boxes	EACH	5.000	5.000
0262	SPV.0090	Special 01. Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 38x60-Inc	LF	52.000	52.000
0264	SPV.0090	Special 02. Watermain Insulation	LF	1,129.000	1,129.000
0266	SPV.0180	Special 01. Weed Free Mulch	SY	3,570.000	3,570.000

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)	WASTE	COMMENT
			CUT (2)	EBS EXCAVATION (3)				FACTOR 1.25			
DIVISION 1											
EWK-12-S	60+20.25/82+56.00	USH 12	10,710	1,075	4,464	6,246	254	318	5,929	5,929	
DIVISION 1 SUBTOTAL			10,710	1,075	4,464	6,246	254	318	5,929	5,929	
DIVISION 2											
EWK-12-N	10+22.79/41+50.00	USH 12	10,770	1,080	3,934	6,836	220	275	6,561	6,561	
DIVISION 2 SUBTOTAL			10,770	1,080	3,934	6,836	220	275	6,561	6,561	
GRAND TOTAL			21,480	2,155	8,398	13,082	474	593	12,490	12,490	
TOTAL COMMON EXC			23,635								

**NOTES:**

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL. ASSUEMED 10% UNDISTRIBUTED AS DIRECTED BY THE ENGINEER.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXPANDED FILL FACTOR = 1.25
- EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR**
- (7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

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205-REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY
<b>STAGE 1</b>										
0010	60+58	-	82+61	USH 12	9,240	460	-	-	-	-
0010	66+87	-	68+19	USH 12 LT	-	-	-	-	140	-
0010	68+62	-	70+56	USH 12 LT	-	-	-	-	240	8
0010	77+37	-	77+37	USH 12 LT	-	-	-	-	-	-
0010	80+99	-	82+61	USH 12 RT	-	-	-	-	120	-
0010	197+29	-	199+39	PIONEER DRIVE	-	-	22	470	-	-
STAGE 1 SUBTOTAL					9,240	460	22	470	500	8
<b>STAGE 2</b>										
0010	10+23	-	41+50	USH 12	8,340	-	-	-	-	-
STAGE 2 SUBTOTAL					8,340	0	0	0	0	0
TOTAL 0010					17,580	460	22	470	500	8

305 - 645 BASE COURSE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4- INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	624.0100 WATER MGAL	645.0220 GEOGRID TYPE SR SY	REMARKS
<b>STAGE 1</b>										
0010	60+58	-	82+61	USH 12	230	9,780	10,400	210	13,100	
0010	60+58	-	82+61	USH 12	-	-	10	-	-	RELIEF TRENCHES
0010	60+58	-	82+61	USH 12	50	200	200	5	-	UNDISTRIBUTED
STAGE 1 SUBTOTAL					280	9,980	10,610	215	13,100	
<b>STAGE 2</b>										
0010	10+23	-	41+50	USH 12	710	11,900	10,900	260	13,900	
0010	10+23	-	41+50	USH 12	-	-	60	-	-	RELIEF TRENCHES
0010	10+23	-	41+50	USH 12	30	-	-	5	-	DRIVEWAYS
0010	10+23	-	41+50	USH 12	50	200	200	5	-	UNDISTRIBUTED
STAGE 2 SUBTOTAL					790	12,100	11,160	270	13,900	
TOTAL 0010					1,070	22,080	21,770	485	27,000	
<b>STAGE 1</b>										
0030	60+58	-	82+61	USH 12	-	410	-	10	-	DRIVEWAYS AND SIDEWALK
TOTAL 0030					-	410	-	10	-	
PROJECT TOTAL					1,070	22,490	21,770	495	27,000	

465.0315 - ASPHALTIC FLUMES

CATEGORY	STATION	TO	STATION	LOCATION	465.0315 ASPHALTIC FLUMES SY	REMARKS
0010	66+73	-	68+41	USH 12	53	NW, NE, SW quadrants of Pioneer Dr intersestion
TOTAL 0010					53	

465-HMA

CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE TON	465.0105	465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	REMARKS
<b>STAGE 1</b>												
0010	60+58	-	82+61	USH 12	161	1,930	1,290	-	-	-	-	
0010	197+29	-	199+39	PIONEER DRIVE	4	-	53	-	-	-	-	
0010	61+82	-	81+40	USH 12	-	-	-	81	-	-	-	DRIVEWAYS
STAGE 1 SUBTOTAL					165	1,930	1,343	81				
<b>STAGE 2</b>												
0010	10+23	-	41+50	USH 12	163	1,400	934	0	-	3,130		
STAGE 2 SUBTOTAL					163	1,400	934	0	0	3,130		
TOTAL 0010					328	3,330	2,277	81	0	3,130		
<b>STAGE 2</b>												
0020	10+23	-	41+50	USH 12	68	586	391	-	6,260	-		
TOTAL 0020					68	586	391	0	6,260	0		
PROJECT TOTAL					396	3,916	2,668	81	6,260	3,130		

305-465 - MAINTAINING DETOURS

CATEGORY	LOCATION	305.0410 AGGREGATE DETOURS TON	465.0115 ASPHALTIC SURFACE DETOURS TON	REMARKS
0010	PROJECT	25	25	MAINTAINING DETOUR
TOTAL 0010		25	25	

371.2000.S

CATEGORY	STATION	TO	STATION	LOCATION	371.2000.S QMP BASE AGGREGATE DENSE 1 1/4- INCH COMPACTION EACH	REMARKS
0010	10+23	-	41+50	USH 12	12	STAGE 2
0010	60+58	-	82+61	USH 12	14	STAGE 1
TOTAL 0010					26	

522 - CULVERTS

CATEGORY	STATION	LOCATION	203.0220.01 REMOVING STRUCTURE (STRUCTURE) (01. STA 16+29) EACH	203.0220.02 REMOVING STRUCTURE (STRUCTURE) (02. STA 23+29) EACH	521.1042 APRON ENDWALLS FOR CULVERT PIPE STEEL 42-INCH EACH	521.3142 CULVERT PIPE CORRUGATED STEEL 42-INCH LF	522.2638 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 38X60-INCH EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	SPV.0090.01 SPECIAL (01. CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 38X60-INCH) LF	REMARKS
0010	16+29	USH 12	1	-	-	-	2	2	1	52	EXISTING 42"x42" CONCRETE BOX CULVERT
0010	23+39	USH 12	-	1	4	144	-	2	2	-	EXISTING 60" CMP
TOTAL 0010			1	1	4	144	2	4	3	52	

3

601 - CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	601.0411 CONCRETE CURB & GUTTER 30- INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6- INCH SLOPED 36- INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	66+87	-	68+20	USH 12 LT	3	-	144	144
0010	67+40	-	67+60	USH 12 RT	-	-	33	33
0010	67+88	-	68+25	USH 12 RT	-	-	45	45
0010	68+60	-	82+57	USH 12 LT	6	21	1,419	1,440
0010	77+34	-	77+34	USH 12 LT	6	8	-	-
0010	77+50	-	78+04	USH 12 RT	3	-	54	54
0010	79+14	-	81+35	USH 12 RT	6	250	-	250
0010	81+69	-	82+61	USH 12 RT	6	120	-	120
TOTAL 0010					30	399	1,695	2,086

602 - CONCRETE SIDEWALK

CATEGORY	STATION	TO	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4- INCH SF	602.0810 CONCRETE DRIVEWAY 6- INCH SY	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	650.9500.01 CONSTRUCTION STAKING SIDEWALK (PROJECT) (01. 5880-01-70) EACH
0010	79+14	-	79+22	USH 12 RT	-	-	78	-
0010	81+27	-	81+76	USH 12 RT	-	-	125	-
TOTAL 0010					0	0	203	0
0030	68+65	-	83+20	USH 12 LT	7,660	143	-	1
TOTAL 0030					7,660	143	0	1
PROJECT TOTAL					7,660	143	203	1

3

606 - RIPRAP

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
0010	23+40	-	23+40	USH 12 RT	26	50	
0010	66+62	-	66+76	PIONEER DR - NE	8	30	END OF FLUME
0010	66+99	-	67+21	PIONEER DR - NW	8	30	END OF FLUME
0010	68+46	-	68+68	PIONEER DR - SW	8	30	END OF FLUME
TOTAL 0010					24	90	

612 - UNDERDRAIN

CATEGORY	STATION	TO	STATION	LOCATION	310.0110 BASE AGGREGATE OPEN-GRADED TON	612.0106 PIPE UNDERDRAIN 6- INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6- INCH EACH	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY
<b>STAGE 1</b>									
0010	68+25	-	77+25	USH 12 RT	50	879	118	4	490
0010	73+32	-	82+57	USH 12 LT	50	905	-	-	510
STAGE 1 SUBTOTAL					100	1,784	118	4	1,000
<b>STAGE 2</b>									
0010	10+23	-	16+00	USH 12 LT	30	569	70	2	320
STAGE 2 SUBTOTAL					30	569	70	2	320
TOTAL 0010					130	2,353	188	6	1,320

611 - STORM SEWER

CATEGORY	STATION	TO	STATION	LOCATION	STR NO.	PIPE NO.	REMOVING STRUCTURE (STRUCTURE) (03. STA 77+34) EACH	REMOVING MANHOLES EACH	REMOVING INLETS EACH	REMOVING STORM SEWER (SIZE) (01. 24- INCH) LF	REMOVING STORM SEWER (SIZE) (02. 30- INCH) LF	CONCRETE COLLARS FOR PIPE EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.2434 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 34X53-INCH LF	REMARKS
203.0220.03      204.0210      204.0220      204.0245.01      204.0245.02      520.8000      608.0312      608.0324      608.0330																	
STAGE 1																	
0010	68+08	-	68+08	43.6' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING SANITARY MANHOLE
0010	68+11	-	68+11	51.2' LT	-	-	-	-	-	-	-	-	-	-	-	-	
0010	68+57	-	68+57	53.8' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING STORM MANHOLE
0010	68+60	-	68+60	72.2' LT	-	-	-	-	-	-	-	-	-	-	-	-	
0010	68+82	-	68+82	52.1' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING STORM MANHOLE
0010	70+94	-	70+94	36.8' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING STORM MANHOLE
0010	73+40	-	73+40	25.4' LT	76	-	-	1	-	16	-	2	-	16	-	-	
0010	73+90	-	73+90	25.4' LT	77	-	-	1	-	8	-	2	-	8	8	-	
0010	77+34	-	77+34	39.9' LT	78	-	1	-	-	-	16	-	-	-	16	-	EXISTING VAULT, 42"x54" CONCRETE BOX CULVERT, 36" CMP
0010	77+34	-	77+34	USH 12	-	78B-78	-	-	-	-	-	-	-	-	-	73	EXISTING PIPE REMOVAL INCLUDED REMOVING OLD STRUCTURE
0010	77+34	-	77+34	33' RT	78B	-	-	-	-	-	-	-	-	-	-	-	
0010	78+56	-	78+56	35' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING SANITARY MANHOLE
0010	79+90	-	79+90	37.4' LT	80	-	-	1	-	16	-	2	-	16	-	-	
0010	80+56	-	80+56	43.2' LT	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING SANITARY MANHOLE
0010	81+92	-	81+92	37.6' LT	81	-	-	1	-	24	-	3	-	24	-	-	
TOTAL 0010							1	4	-	24	64	9	-	24	64	73	
STAGE 1																	
0030	77+38	-	77+38	71.5' LT	78A	-	-	-	-	-	-	-	-	-	-	-	
0030	77+38	-	77+34	USH 12	-	78A-78	-	-	-	-	-	-	32	-	-	-	
0030	78+92	-	78+92	49.7' LT	79B	-	-	1	-	38	-	2	-	38	-	-	
0030	78+93	-	78+93	65.1' LT	79D	-	-	-	-	-	-	-	-	-	-	-	
0030	78+93	-	78+92	USH 12	-	79D-79B	-	-	-	-	-	-	16	-	-	-	
TOTAL 0030							-	-	1	-	38	2	48	-	38	-	
PROJECT TOTAL							1	4	1	24	102	11	48	24	102	73	

611 - STORM SEWER

611.0530 611.0612 611.0627 611.0639 611.2004 611.2005 611.2006 611.3003 611.3230 611.8110 611.8115 611.8120.S 650.4000 SPV.0060.01

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CATEGORY	STATION	TO	STATION	LOCATION	STR NO.	PIPE NO.	MANHOLE	INLET	INLET	INLET	MANHOLES	MANHOLES	MANHOLES	INLETS 3-FT	INLETS	ADJUSTING	ADJUSTING	COVER	CONSTRUCTION	SPECIAL (01.	REMARKS
							COVERS	COVERS	COVERS	COVERS	4-FT	5-FT	6-FT			MANHOLE	INLET	PLATES	STAKING STORM	INLETS 9-FT	
							TYPE J	TYPE C	TYPE HM	TYPE H-S	DIAMETER	DIAMETER	DIAMETER	DIAMETER	DIAMETER	COVERS	COVERS	TEMPORARY	SEWER	DIAMETER)	
							EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
<b>STAGE 1</b>																					
0010	68+08	-	68+08	43.6' LT	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	EXISTING SANITARY MANHOLE
0010	68+11	-	68+11	51.2' LT	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	
0010	68+57	-	68+57	53.8' LT	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-	-	EXISTING STORM MANHOLE
0010	68+60	-	68+60	72.2' LT	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	
0010	68+82	-	68+82	52.1' LT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	EXISTING STORM MANHOLE
0010	70+94	-	70+94	36.8' LT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	EXISTING STORM MANHOLE
0010	73+40	-	73+40	25.4' LT	76	-	-	-	1	-	1	-	-	-	-	-	-	-	1	-	
0010	73+90	-	73+90	25.4' LT	77	-	-	-	1	-	-	1	-	-	-	-	-	-	1	-	
0010	77+34	-	77+34	39.9' LT	78	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	EXISTING VAULT, 42"x54" CONCRETE BOX CULVERT, 36" CMP EXISTING PIPE REMOVAL INCLUDED REMOVING OLD STRUCTURE
0010	77+34	-	77+34	USH 12	-	78B-78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	77+34	-	77+34	33' RT	78B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	78+56	-	78+56	35' LT	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	EXISTING SANITARY MANHOLE
0010	79+90	-	79+90	37.4' LT	80	-	-	-	1	-	-	1	-	-	-	-	-	-	1	-	
0010	80+56	-	80+56	43.2' LT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	EXISTING SANITARY MANHOLE
0010	81+92	-	81+92	37.6' LT	81	-	-	-	1	-	-	1	-	-	-	-	-	-	1	-	
TOTAL 0010							1	-	5	-	1	2	1	-	-	6	2	5	5	1	
<b>STAGE 1</b>																					
0030	77+38	-	77+38	71.5' LT	78A	-	-	-	-	1	-	-	-	1	-	-	-	-	1	-	
0030	77+38	-	77+34	USH 12	-	78A-78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0030	78+92	-	78+92	49.7' LT	79B	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	
0030	78+93	-	78+93	65.1' LT	79D	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	
0030	78+93	-	78+92	USH 12	-	79D-79B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL 0030							1	1	-	1	-	1	-	1	1	-	-	-	3	-	
PROJECT TOTAL							2	1	5	1	1	3	1	1	1	6	2	5	8	1	

625 - 630 RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	625.0500	627.0200	628.2002	628.2004	628.2023	629.0210	630.0110	630.0180	630.0200	630.0500	SPV.0180.01
					SALVAGED	MULCHING	EROSION MAT	EROSION MAT	EROSION MAT	FERTILIZER TYPE	SEEDING	SEEDING	SEEDING	SEED WATER	SPECIAL (01.
					TOPSOIL	SY	CLASS I TYPE A	CLASS I TYPE B	CLASS II TYPE B	B	MIXTURE NO. 10	MIXTURE NO. 80	TEMPORARY	MGAL	WEED FREE
					SY	SY	SY	SY	SY	CWT	LB	LB	LB		MULCH)
															SY
<b>STAGE 1</b>															
0010	60+58	-	82+61	USH 12 LT	3,050	2,930	-	120	-	2	33	-	-	69	-
0010	60+58	-	82+61	USH 12 RT	3,100	2,050	-	210	840	2	25	-	-	70	-
STAGE 1 SUBTOTAL					6,150	4,980	-	330	840	4	58	-	-	139	-
<b>STAGE 2</b>															
0010	10+23	-	41+50	USH 12 LT	4,370	2,600	70	-	-	3	29	10	10	98	1,700
0010	10+23	-	41+50	USH 12 RT	3,970	2,680	55	85	-	3	31	7	10	89	1,150
STAGE 2 SUBTOTAL					8,340	5,280	125	85	-	6	60	17	20	187	2,850
0010	PROJECT			UNDISTRIBUTED (25%)	3,630	2,577	35	110	210	3	30	5	9	84	720
TOTAL 0010					18,120	12,837	160	525	1,050	13	148	22	29	410	3,570

PROJECT NO: 5880-01-70

HWY: USH 12

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET:

E

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628 - MOBILIZATION EC

CATEGORY	STATION	TO	STATION	LOCATION	628.1905	628.1910	REMARKS
					MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	
STAGE 1							
0010	60+58	-	82+61		3	2	
STAGE 1 SUBTOTAL					3	2	
STAGE 2							
0010	10+23	-	41+50		3	2	
STAGE 2 SUBTOTAL					3	2	
TOTAL 0010					6	4	

628 - EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.7504	628.7555	628.7570	REMARKS
					TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	ROCK BAGS EACH	
0010	10+23	-	41+50	USH 12 LT	43	29	-	STAGE 2
0010	10+23	-	41+50	USH 12 RT	49	2	-	STAGE 2
0010	60+58	-	82+61	USH 12 LT	10	-	-	STAGE 1
0010	60+58	-	82+61	USH 12 RT	39	10	300	STAGE 1
TOTAL 0010					141	41	300	

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628 - INLET PROTECTION

CATEGORY	STATION	TO	STATION	LOCATION	628.7005	628.7010	628.7015	REMARKS
					INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE B EACH	INLET PROTECTION TYPE C EACH	
0010	68+10	-	68+70	USH 12 LT	1	-	3	PIONEER DR
0010	73+40	-	73+90	USH 12 LT	2	-	2	
0010	77+30	-	83+25	USH 12 LT	4	2	6	
TOTAL 0010					7	2	11	

628 - SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	REMARKS
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	
0010	10+23	-	41+50	USH 12 LT	2,920	2,920	STAGE 2
0010	10+23	-	41+50	USH 12 RT	2,220	2,220	STAGE 2
0010	60+58	-	82+61	USH 12 LT	500	500	STAGE 1
0010	60+58	-	82+61	USH 12 RT	420	420	STAGE 1
TOTAL 0010					6,060	6,060	

643 - TC COVERING SIGNS

CATEGORY	LOCATION	NO. OF SIGNS	NO. OF CYCLES	643.0910		643.0920		REMARKS
				TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	
0010	DETOUR ROUTE	4	1	4	25	1	26	STAGE 1
0010	DETOUR ROUTE	4	1	4	25	1	25	STAGE 2
0010	ALTERNATE ROUTE	-	-	-	4	1	4	STAGE 1
0010	ALTERNATE ROUTE	-	-	-	4	1	4	STAGE 2
0010	UNDISTRIBUTED (PROJECT)			2			7	
TOTAL 0010				10			66	

643 - TEMP MARKING

CATEGORY	STATION	TO	STATION	LOCATION	643.3180		643.3280	REMARKS
					TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW LF	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE LF	TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH LF	
0010	60+58	-	82+61	STAGE 1	260	260	405	
SUBTOTAL					260	260	405	
TOTAL 0010					520		810	



634-638 SIGNING

CATEGORY	STATION	LOCATION	SIGN #	SIGN CODE	SIZE IN X IN	DESCRIPTION	634.0614	634.0616	634.0618	637.2210	637.2230	638.2602	638.3000	MOUNTED ON SAME POST AS SIGN #	REMARKS
							POSTS WOOD 4X6-INCH X 14- FT EACH	POSTS WOOD 4X6-INCH X 16- FT EACH	POSTS WOOD 4X6-INCH X 18- FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH		
0010	0+00	RT	1-1	I2-2	48 X 15	SAUK COUNTY	1	-	-	5.00	-	1	1		
0010	10+56	RT	1-2	I55-56	30 X 18	ADOPT-A-HIGHWAY	-	1	-	3.75	-	1	1		
0010	10+56	RT	1-3	I55-57P	30 X 18	WI DELLS LIONS CLUB	-	-	-	3.75	-	1	-	1-4	
0010	14+99	LT	1-4	D7-53L	66 X 36	ROCKY ARBOR STATE PARK W/ARROW	-	1	-	16.50	-	1	1		
0010	27+87	LT	2-1	W1-4L	36 X 36	ROAD CURVES AHEAD	-	1	-	-	9.00	1	1		
0010	35+66	RT	3-1	W14-3	48 X 36	NO PASSING ZONE	-	1	-	-	12.00	1	1		
0010	37+37	RT	3-2	W3-5	36 X 36	SPEED REDUCTION AHEAD 45 MPH SYMBOL	-	1	-	-	9.00	1	1		
0010	38+04	LT	3-3	W14-3	48 X 36	NO PASSING ZONE	-	1	-	-	12.00	1	1		
0010	60+61	RT	4-1	J1-3	72 X 39	JUNCTION OR END ASSEMBLY	-	2	-	19.50	-	1	2		
0010	31+97	RT	4-2	I2-3	102 X 24	MUNICIPALITY POPULATION SIGN	2	-	-	17.00	-	1	2		
0010	62+81	LT	4-3	R2-1	24 X 30	SPEED LIMIT 45	1	-	-	5.00	-	1	1		
0010	66+04	RT	4-4	W2-1	30 X 30	CROSS ROAD SYMBOL	-	1	-	-	6.25	1	1		
0010	67+62	LT	4-5	R5-51	24 X 24	NO ATV TRAFFIC	1	-	-	4.00	-	1	1		
0010	68+33	RT	4-6	R5-51	24 X 24	NO ATV TRAFFIC	1	-	-	4.00	-	1	1		
0010	66+04	LT	4-7	W4-2R	36 X 36	RIGHT LANE ENDS SYMBOL	-	1	-	-	9.00	1	1		
0010	70+22	LT	5-1	R2-1	24 X 30	SPEED LIMIT	1	-	-	5.00	-	1	1		
0010	71+54	LT	5-2	W9-1R	36 X 36	RIGHT LANE ENDS	-	1	-	-	9.00	1	1		
0010	72+49	RT	5-3	J1-2	48 X 39	JUNCTION OR END ASSEMBLY	-	1	-	13.00	-	1	1		
0010	72+75	LT	5-4	W2-1	30 X 30	CROSS ROAD SYMBOL	-	1	-	-	6.25	1	1		
0010	74+62	RT	5-5	W3-3	36 X 36	SIGNAL AHEAD	-	1	-	-	9.00	1	1		
0010	75+87	LT	5-6	R2-1	24 X 30	SPEED LIMIT 45	1	-	-	5.00	-	1	1		
0010	77+65	RT	5-7	J3-4	96 X 57	DIRECTIONAL ASSMBLY	-	-	2	38.00	-	1	2		
0010	78+05	LT	5-8	W6-3	36 X 36	TWO-WAY TRAFFIC SYMBOL	-	1	-	-	9.00	1	1		
0010	79+25	RT	5-9	R4-7	24 X 30	KEEP RIGHT	1	-	-	5.00	-	1	1		
0010	79+64	LT	5-10	R5-1	30 X 30	DO NOT ENTER	1	-	-	6.25	-	1	1		
0010	80+10	LT	5-11	W4-2R	36 X 36	RIGHT LANE ENDS SYMBOL	-	1	-	-	9.00	1	1		
0010	81+51	LT	5-12	R5-1	30 X 30	DO NOT ENTER	1	-	-	6.25	-	1	1		
0010	81+68	LT	5-13	J1-2	48 X 39	JUNCTION OR END ASSEMBLY	-	1	-	13.00	-	1	1		
0010	81+79	LT	5-14	J1-2	48 X 39	JUNCTION OR END ASSEMBLY	-	1	-	13.00	-	1	1		
0010	81+77	RT	5-15	R4-7	24 X 30	KEEP RIGHT	1	-	-	5.00	-	1	1		
0010	82+22	LT	5-16	R5-51	24 X 24	NO ATV TRAFFIC	1	-	-	4.00	-	1	1		
0010	82+34	LT	5-17	I55-56	30 X 18	ADOPT-A-HIGHWAY	-	1	-	3.75	-	1	1		
0010	82+34	LT	5-18	I55-56P	30 X 18	WI DELLS LIONS CLUB	-	-	-	3.75	-	1	-	5-18	
0010	82+47	LT	5-19	R2-1	24 X 30	SPEED LIMIT	1	-	-	5.00	-	1	1		
0010	79+25	RT	5-20	W5-54D	18 X 18	OBJECT MARKER	-	-	-	-	2.25	-	-	5-9	4' MOUNT HEIGHT
TOTAL 0010							14	19	2	204.50	101.75	34	35		

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643 - TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	DURATION** DAYS	EACH**	643.0300	643.0410	643.0420	643.0705	643.0715	643.0900	643.1000					
							TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE II DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	TRAFFIC CONTROL SIGN DAY	TRAFFIC CONTROL FIXED MESSAGE SF					
0010	60+58	-	82+61	STAGE 1	55	21	1,155	2	110	34	1,870	41	2,255	6	330	32	1,760	-
0010	---	---	---	STAGE 1 DETOUR	55	---	---	---	---	---	---	---	---	---	---	293	16,115	177
0010	10+23	-	41+50	STAGE 2	38	---	---	---	---	17	646	20	760	---	---	18	684	-
0010	---	---	---	STAGE 2 DETOUR	38	---	---	---	---	---	---	2	76	---	---	280	10,640	-
0010	---	---	---	ALTERNATE ROUTE	93	---	---	---	---	---	---	---	---	---	---	49	1,862	-
UNDISTRIBUTED (5%)							70	15	135	174	20	1,557	-					
TOTAL 0010							1,225	125	2,651	3,375	350	32,618	177					

**FOR INFORMATION ONLY

3

643.1050 - PCMS

CATEGORY	LOCATION	EACH**	DAY	REMARKS
0010	USH 12	2	14	STAGE 1
0010	USH 12	2	14	STAGE 2
TOTAL 0010			28	

643.5000 - TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	10+23	-	82+61	PROJECT	1
TOTAL 0010					1

648.0100 - NO PASSING ZONES

CATEGORY	STATION	TO	STATION	LOCATION	MI
0010	10+23	-	41+50	USH 12	0.60
TOTAL 0010					0.60

646 - PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.5020	646.5520	646.7120	646.4040	646.2040					646.2020	REMARKS
					MARKING ARROW EPOXY WHITE	MARKING OUTFALL EPOXY WHITE	MARKING DIAGONAL EPOXY 12-INCH YELLOW	MARKING LINE GROOVED WET REF EPOXY 10-INCH WHITE	MARKING LINE GROOVED WET REF EPOXY 6-INCH					MARKING LINE EPOXY 6-INCH YELLOW	
					EACH	EACH	LF	LF	WHITE 3' LINE 9'SKIP LF	WHITE 12.5' LINE 37.5'SKIP LF	YELLOW 12.5' LINE 37.5'SKIP LF	YELLOW 12.5' LINE 37.5'SKIP LF	BLACK 12.5' LINE 37.5'SKIP LF	LF	
STAGE 1															
0010	60+58	-	66+00	USH 12	-	-	-	-	1,085	-	-	-	-	-	1,085
0010	66+00	-	75+08	USH 12	2	2	-	39	2,892	-	238	-	-	238	1,612
0010	75+08	-	82+61	USH 12	-	2	25	-	297	117	363	-	-	363	910
STAGE 1 SUBTOTAL					2	4	25	39	4,274	117	600	0	0	600	3,607
STAGE 2															
0010	10+23	-	24+87	USH 12	-	1	-	-	2,928	-	-	2,928	-	-	-
0010	24+87	-	35+67	USH 12	-	-	-	-	2,161	-	-	1,080	270	-	-
0010	35+67	-	38+01	USH 12	-	-	-	-	468	-	-	-	58	-	-
0010	38+01	-	41+50	USH 12	-	-	-	-	698	-	-	349	87	-	-
STAGE 2 SUBTOTAL					0	1	0	0	6,255	0	0	4,357	415	0	0
TOTAL 0010					2	5	25	39				16,618			3,607

PROJECT NO: 5880-01-70

HWY: USH 12

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET:

E

3

650 - STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5880-01-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	
PROJECT	0010	10+23	82+61	USH 12	—	—	1	—	
STAGE 1	0010	60+58	-	82+61	USH 12	2,204	2,204	—	2,204
STAGE 1 SUBTOTAL					2,204	2,204	—	2,204	
STAGE 2	0010	1022.79	-	41+50	USH 12	3,128	3,128	—	3,128
STAGE 2 SUBTOTAL					3,128	3,128	—	3,128	
TOTAL 0010					5,332	5,332	1	5,332	

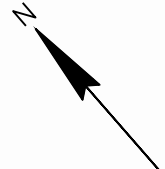
690 - SAWING

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
STAGE 1							
0010	60+58	-	60+58	USH 12	-	41	W LIMITS
0010	62+00	-	62+31	USH 12	31	-	ASPHALT CE
0010	67+59	-	67+83	USH 12	26	-	W PIONEER DR
0010	68+20	-	68+62	USH 12	77	10	E PIONEER DR
0010	76+31	-	76+62	USH 12	31	-	ASPHALT CE
0010	77+34	-	77+34	USH 12 LT	8	-	PARKING LOT
0010	78+04	-	79+22	USH 12	-	149	E LIMITS EB LANE
0010	78+84	-	79+53	USH 12	69	-	ASPHALT CE
0010	80+92	-	81+36	USH 12	44	-	ASPHALT CE
0010	81+17	-	82+44	USH 12	-	155	MEDIAN
0010	82+57	-	82+61	USH 12	-	42	E LIMITS WB LANE
STAGE 1 SUBTOTAL					286	397	
STAGE 2							
0010	10+23	-	10+23	USH 12	-	24	W LIMITS
0010	41+50	-	41+50	USH 12	-	26	E LIMITS
STAGE 2 SUBTOTAL					—	50	
TOTAL 0010					286	447	

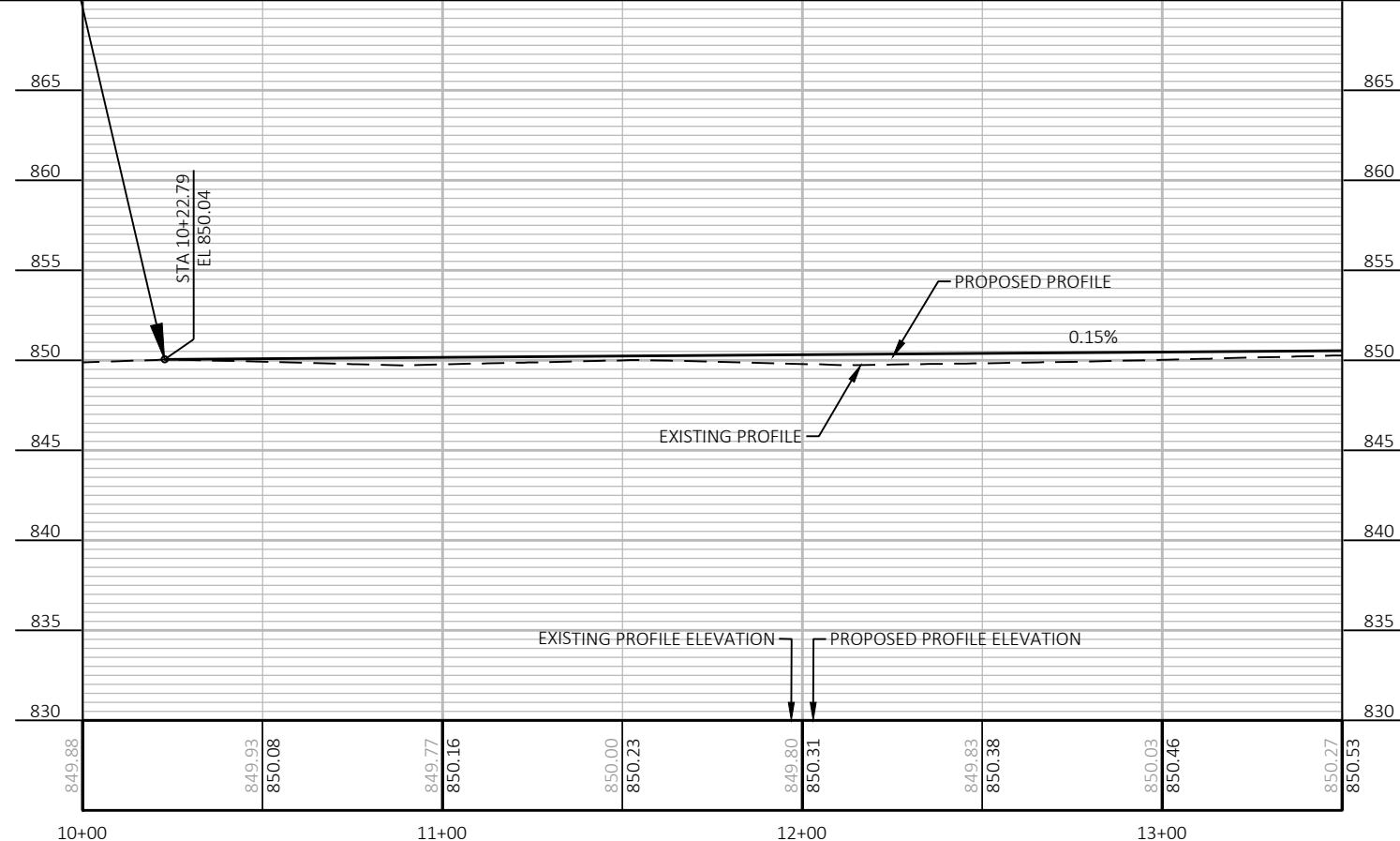
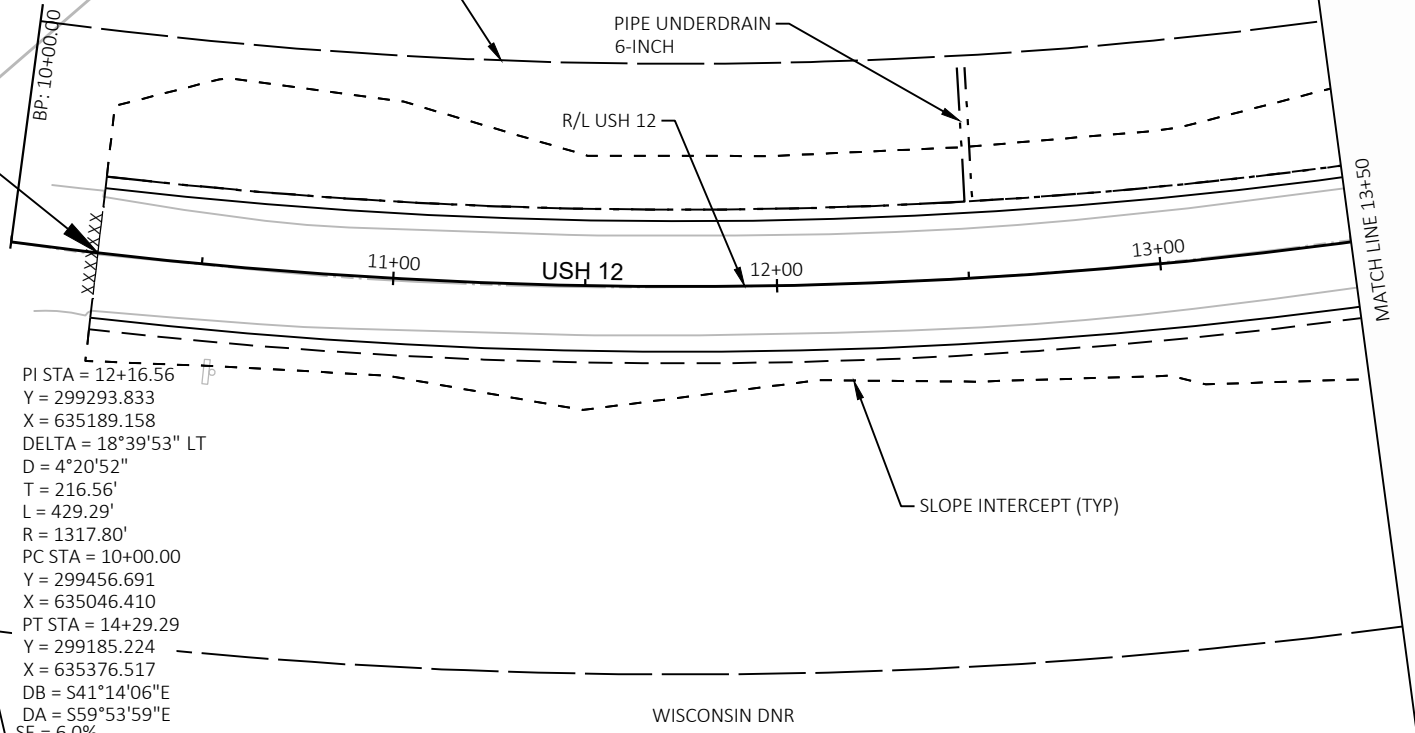
3

SPV-CITY UTILITIES

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 SPECIAL (02. ADJUSTING WATER VALVE BOXES) EACH	SPV.0090.02 SPECIAL (02. WATERMAIN INSULATION) LF	REMARKS
0030	60+50	-	62+00	USH 12 RT	-	150	
0030	66+75	-	76+50	USH 12 RT	5	975	
0030	78+91	-	78+91	USH 12 LT	-	4	STORM SEWER CROSSING
TOTAL 0030					5	1,129	



**BEGIN PROJECT**  
 STA 10+22.79  
 Y = 299439.685  
 Y = 635061.577  
 MATCH EXISTING  
 SAWCUT REQ'D



PROJECT NO: 5880-01-70

HWY: USH 12

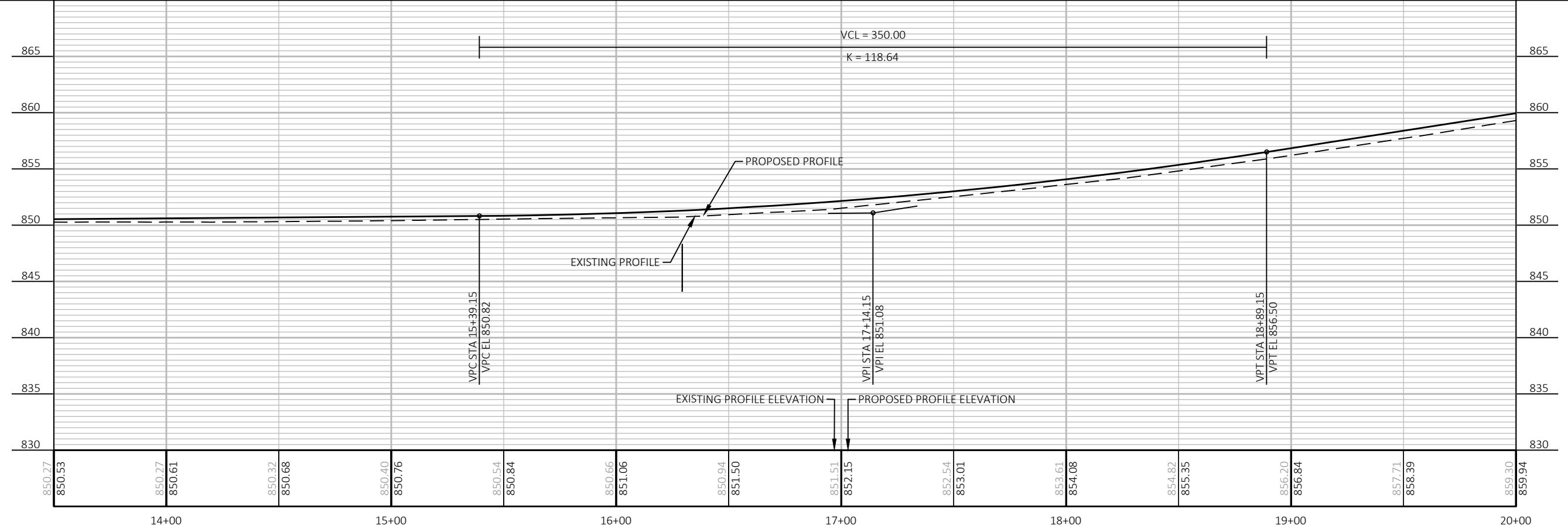
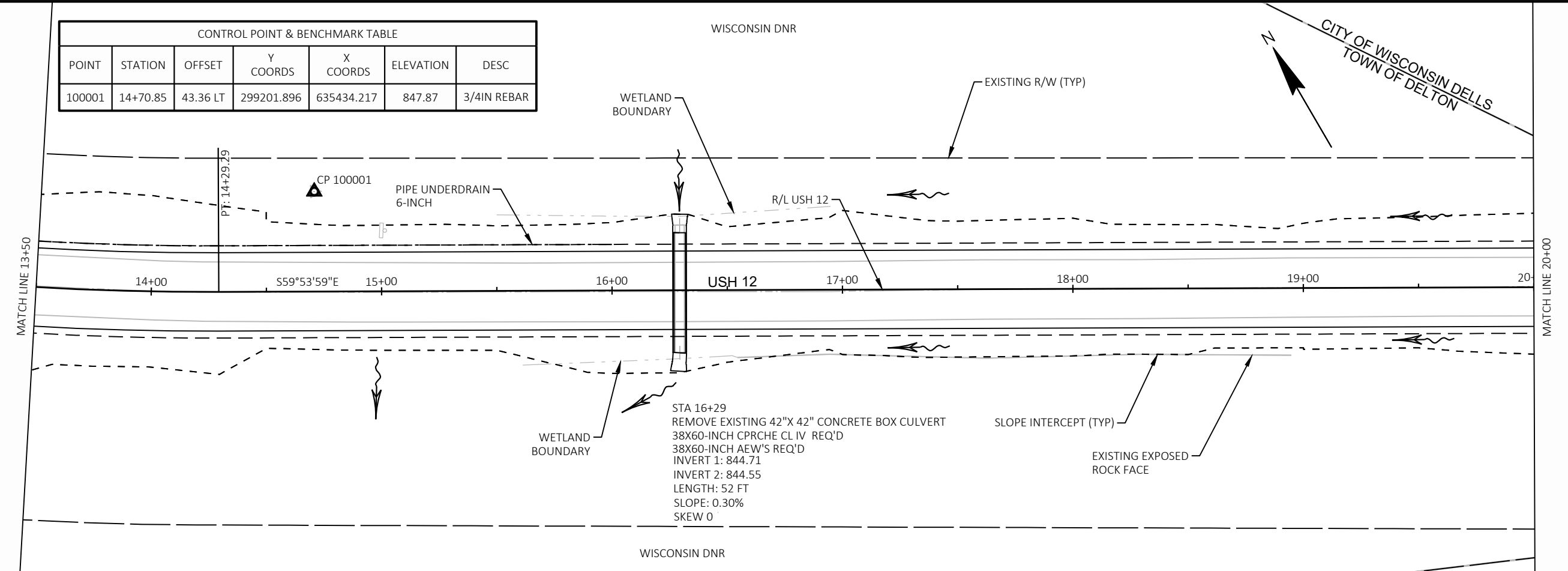
COUNTY: SAUK

PLAN AND PROFILE: USH 12

SHEET

**E**

CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
100001	14+70.85	43.36 LT	299201.896	635434.217	847.87	3/4IN REBAR



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      PLAN AND PROFILE: USH 12      SHEET: 5

CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
100002	24+79.94	62.61 LT	298656.068	636296.405	876.69	3/4IN REBAR

TODD R. NELSON

MATCH LINE 20+00  
PC: 20+13.86  
S59°53'59"E

CITY OF WISCONSIN DELLS  
CITY TOWN OF DELTON

STA 22+04 RT  
CONSTRUCT AGG PE

PI STA = 23+51.24  
Y = 298722.854  
X = 636174.142  
DELTA = 20°14'31" RT  
D = 3°01'53"  
T = 337.38'  
L = 667.72'  
R = 1890.00'  
PC STA = 20+13.86  
Y = 298892.052  
X = 635882.262  
PT STA = 26+81.58  
Y = 298463.118  
X = 636389.456  
DB = S59°53'59"E  
DA = S39°39'28"E  
SE = 5.6%

NLS, LLC

EXISTING R/W

SCHOOL DISTRICT OF WISCONSIN DELLS

EXISTING R/W

SLOPE INTERCEPT (TYP)

WISC DELLS  
(ELECTRICITY)

R/L USH 12

USH 12

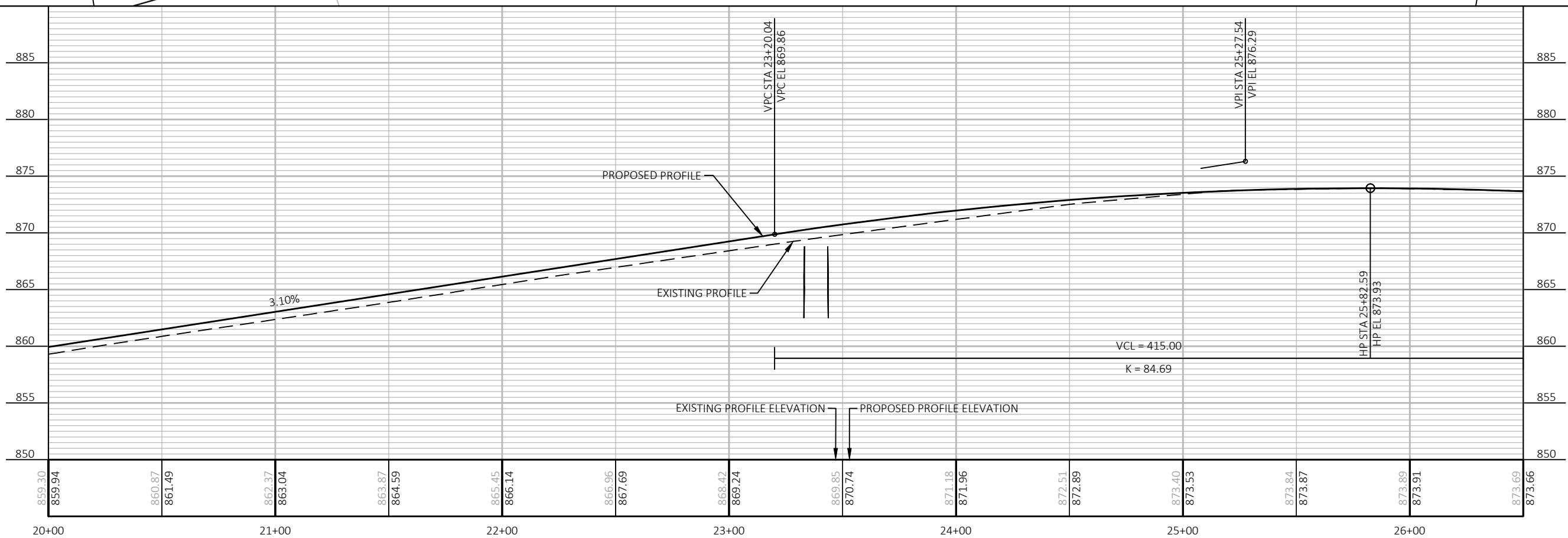
CP 100002

MATCH LINE 20+00

MATCH LINE 26+50

5

5



PROJECT NO: 5880-01-70

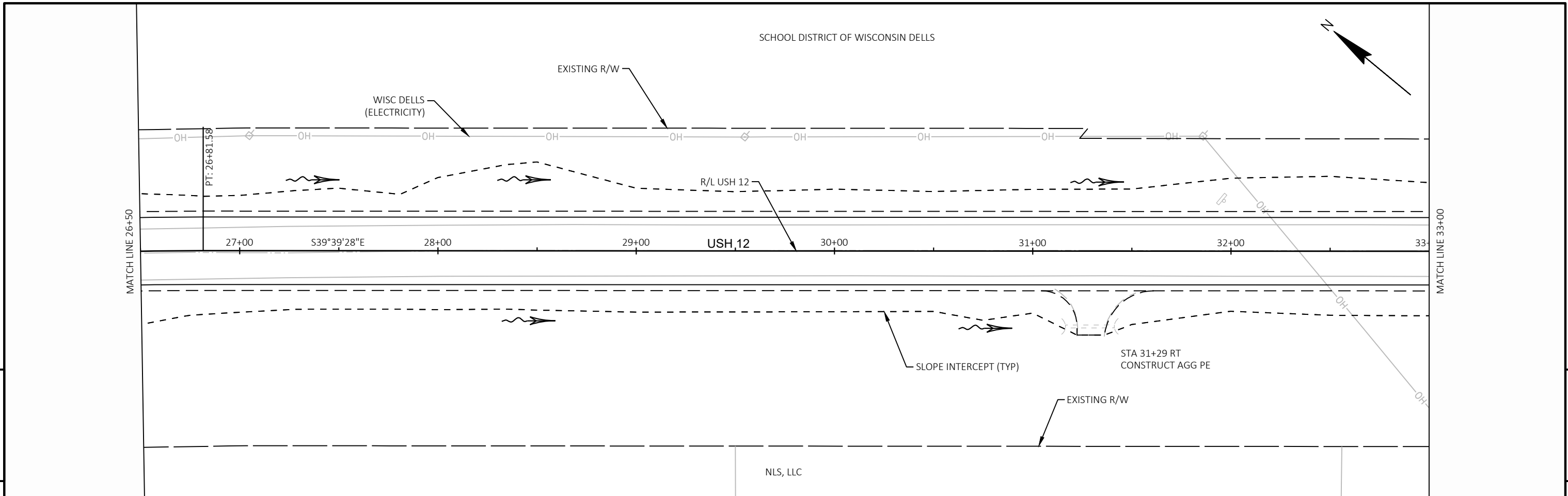
HWY: USH 12

COUNTY: SAUK

PLAN AND PROFILE: USH 12

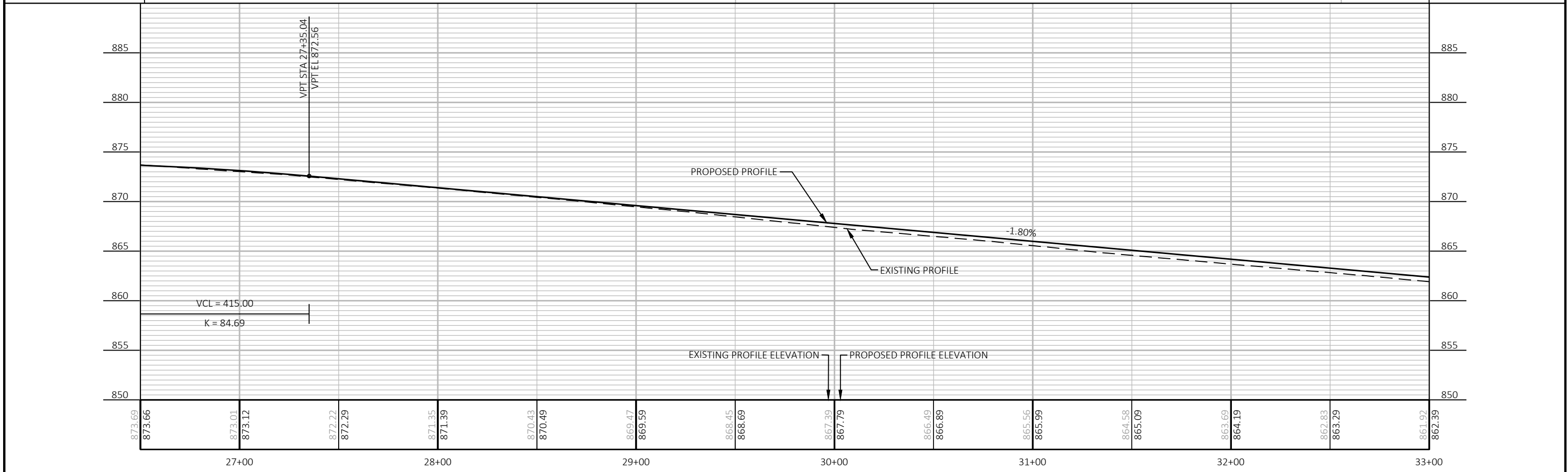
SHEET

E

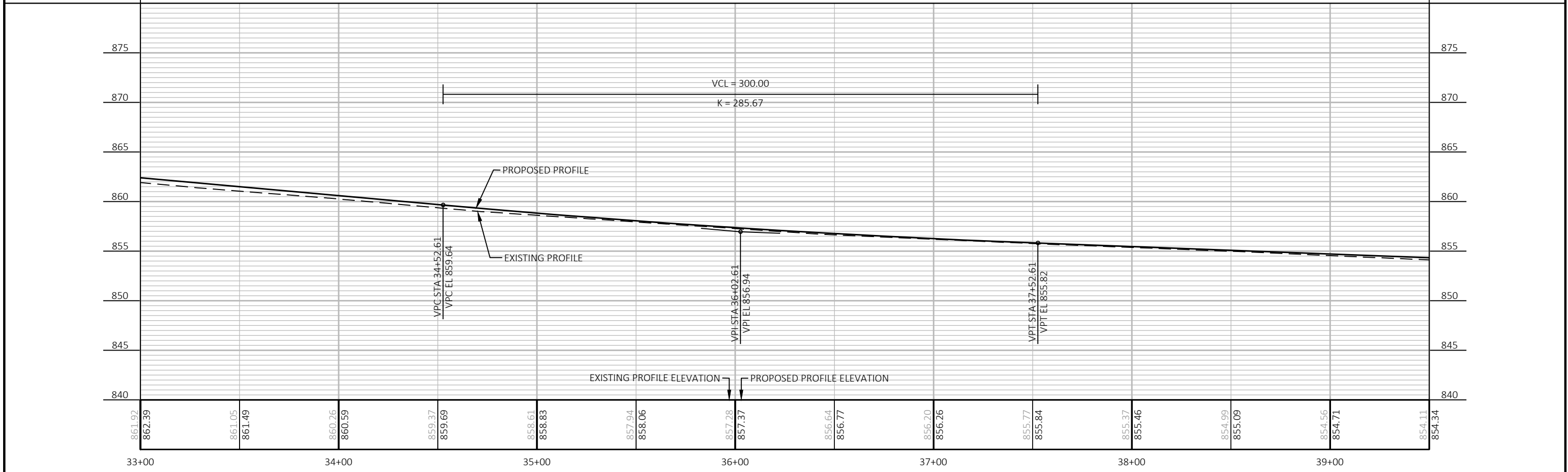
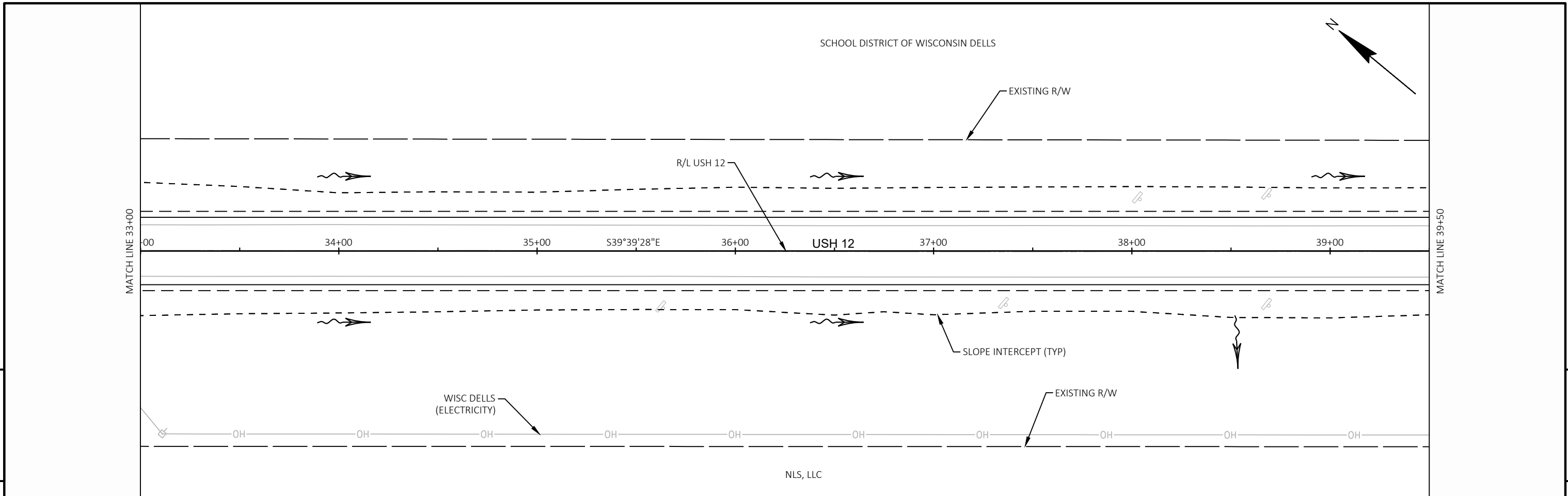


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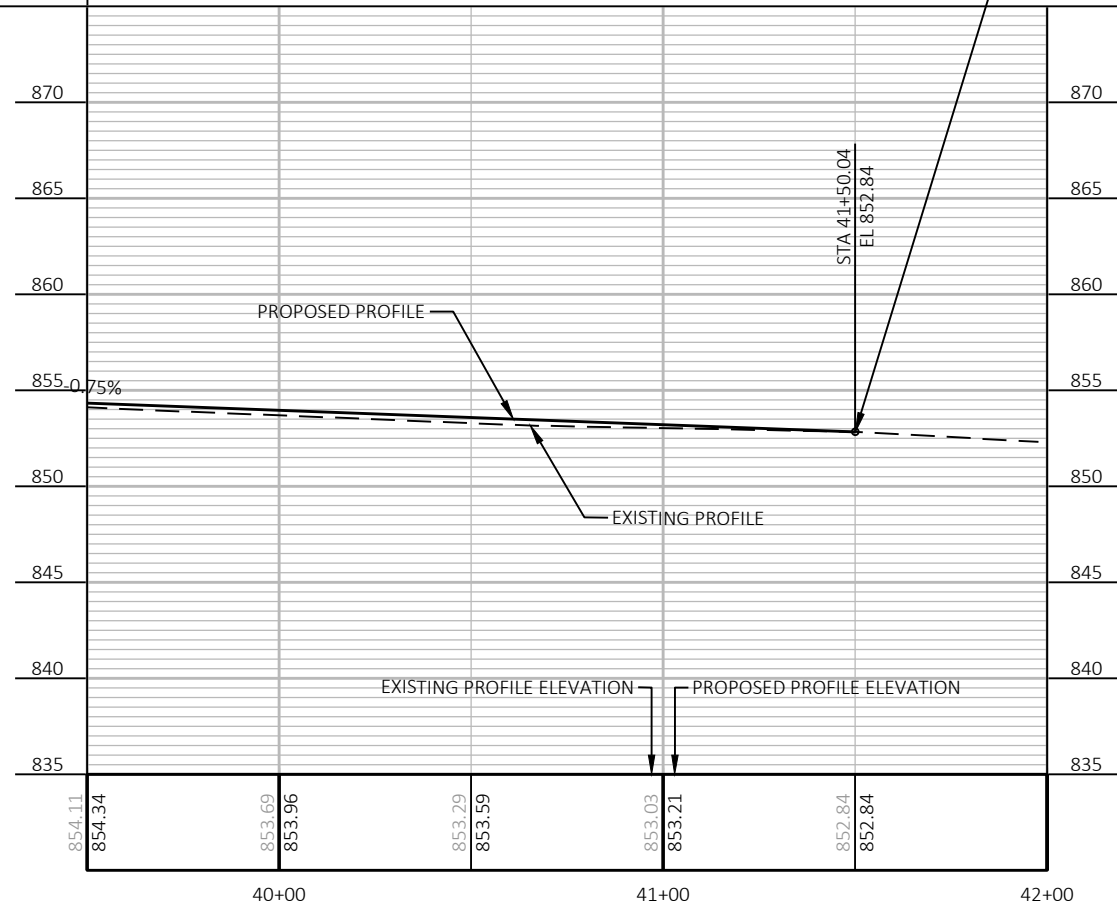
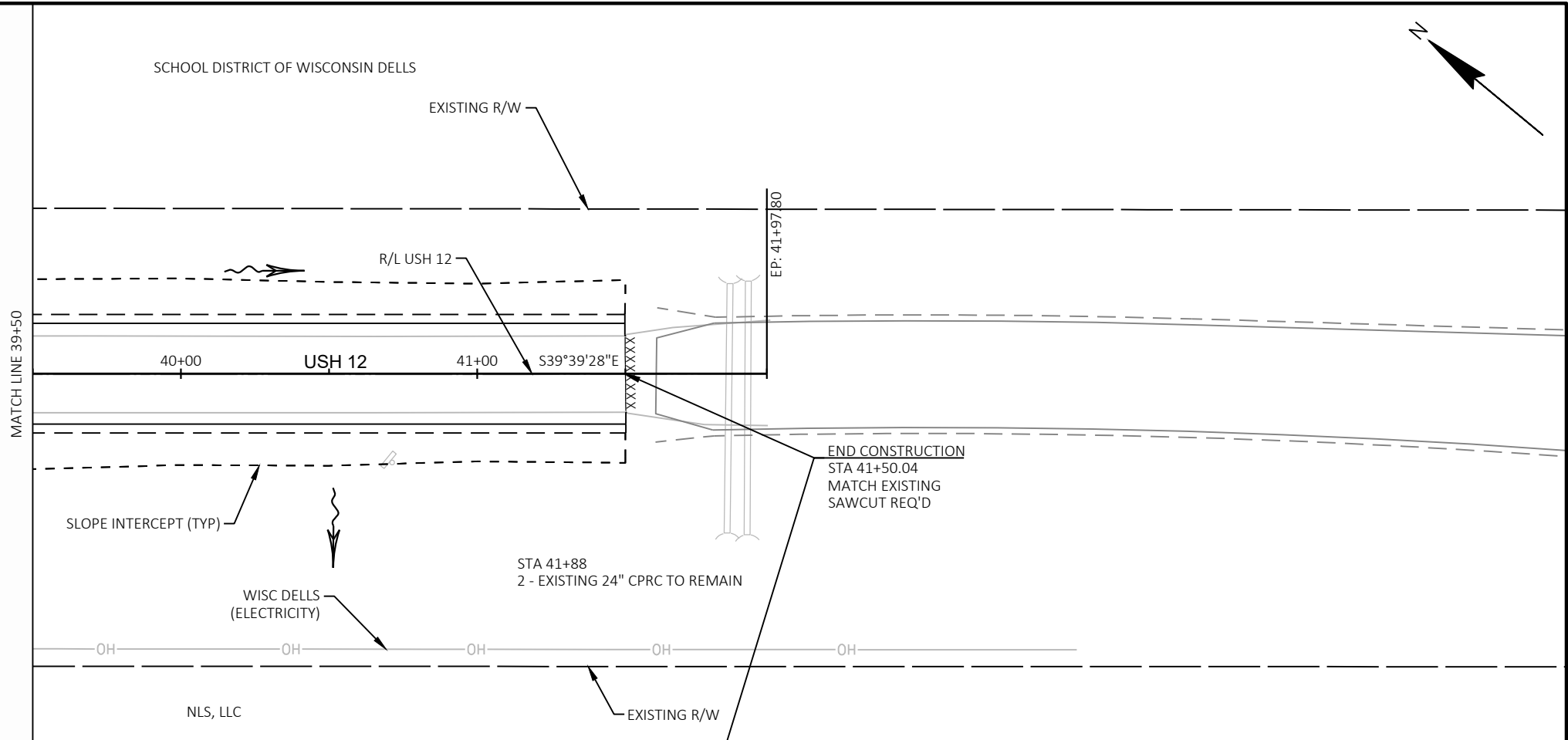


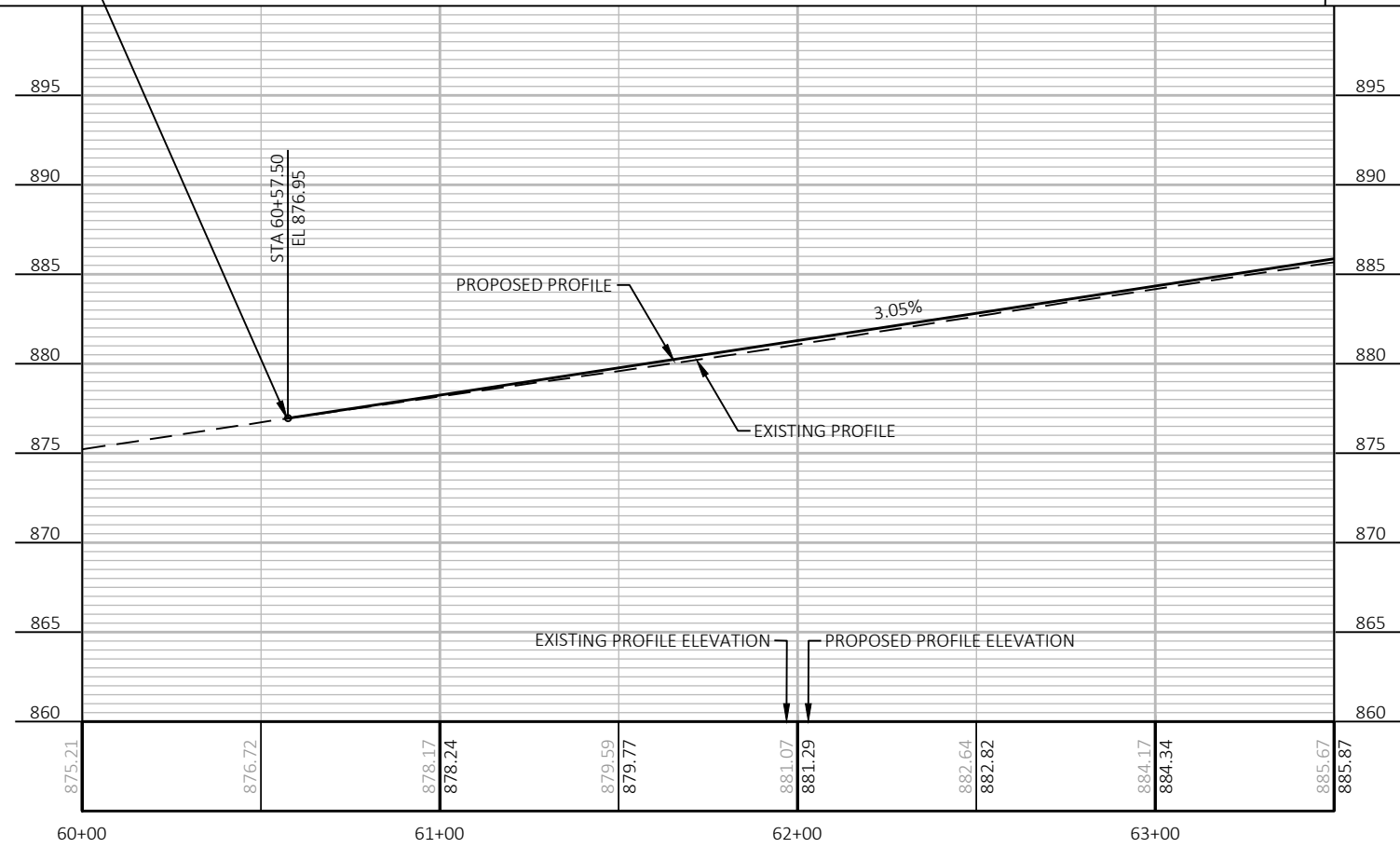
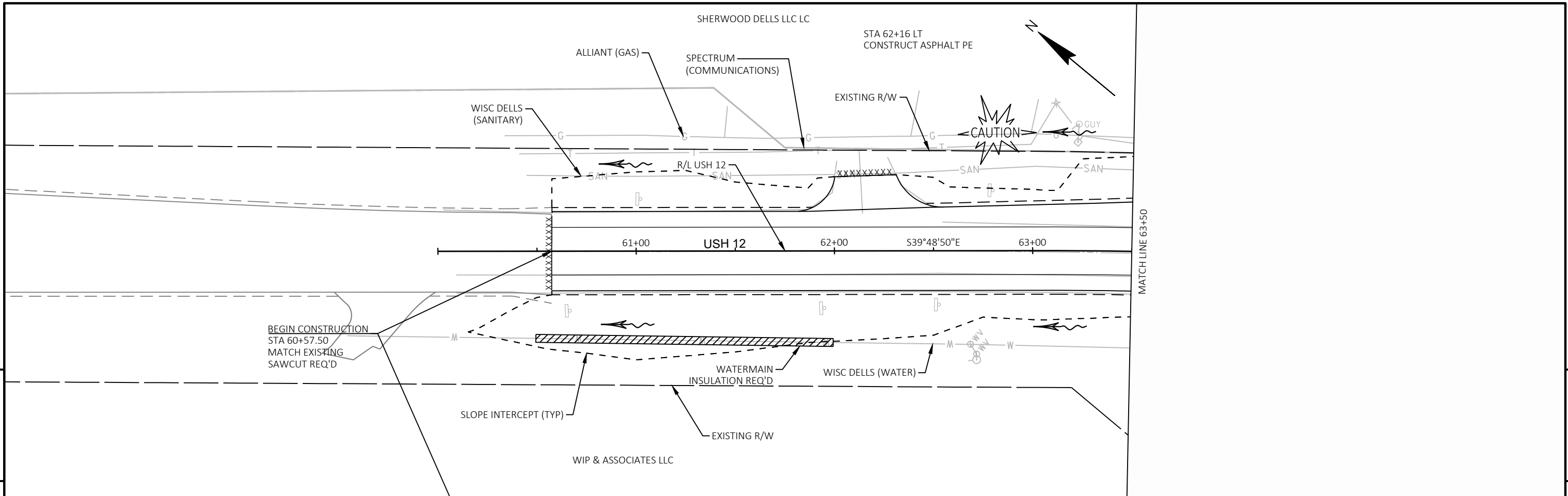
PROJECT NO: 5880-01-70 HWY: USH 12 COUNTY: SAUK PLAN AND PROFILE: USH 12 SHEET E



PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	PLAN AND PROFILE: USH 12	SHEET	<b>E</b>
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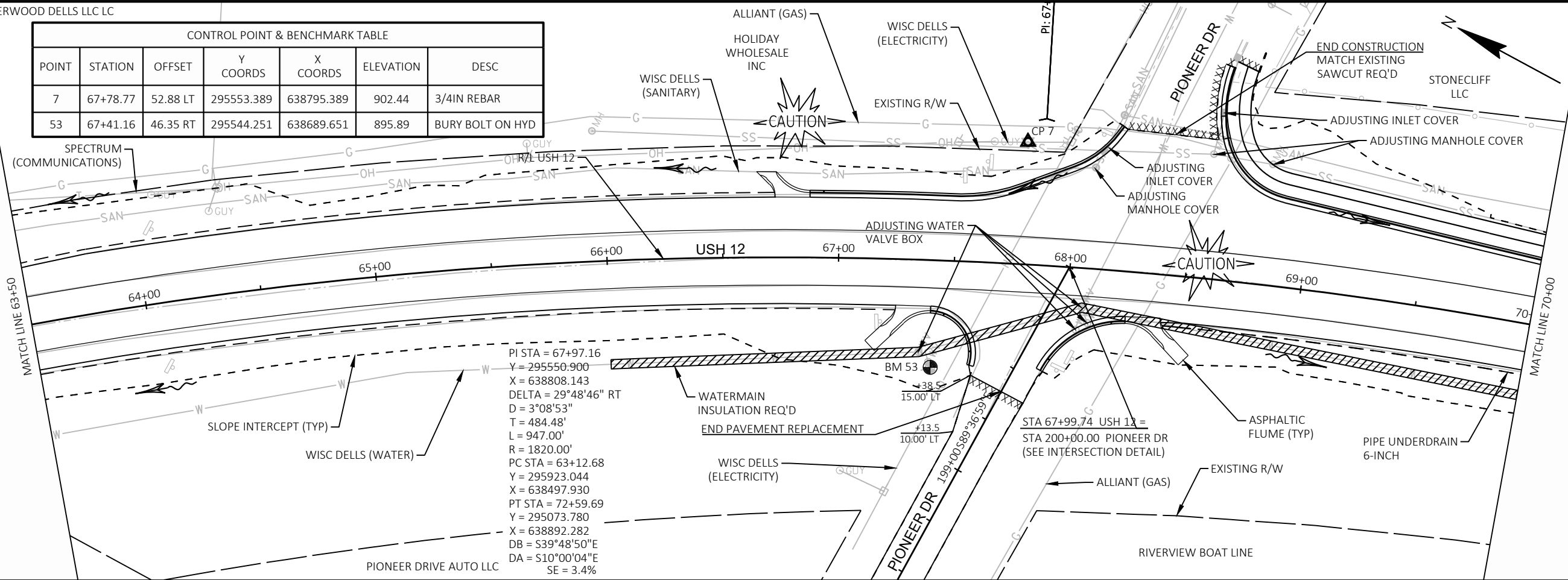




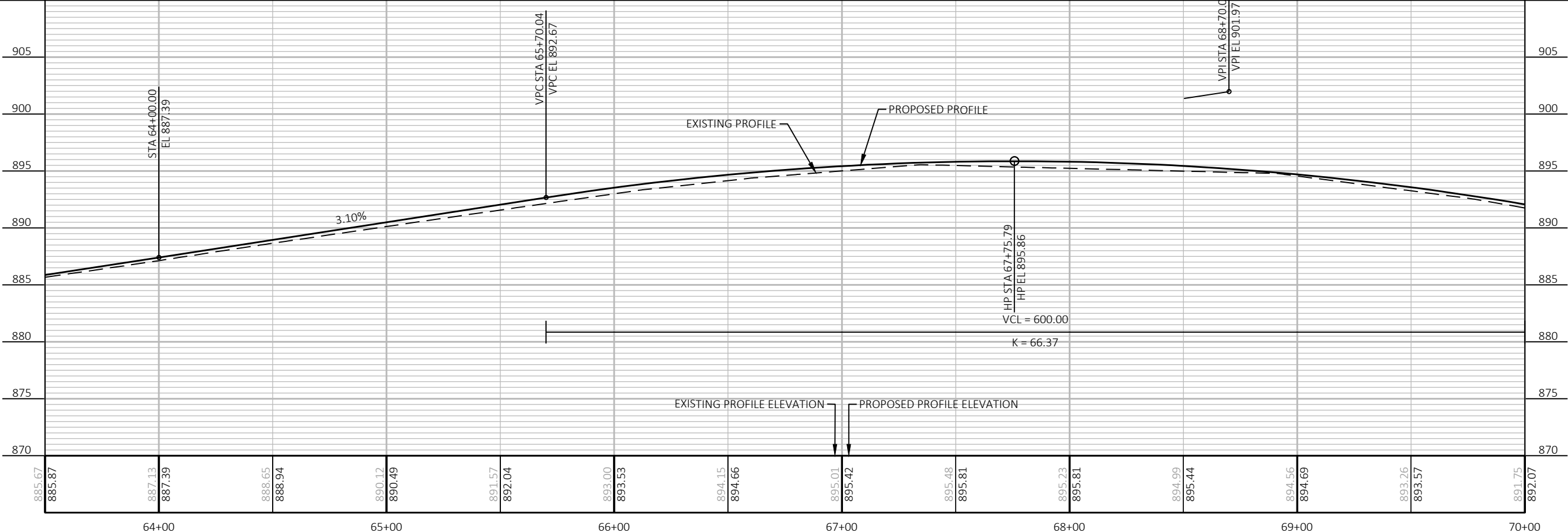


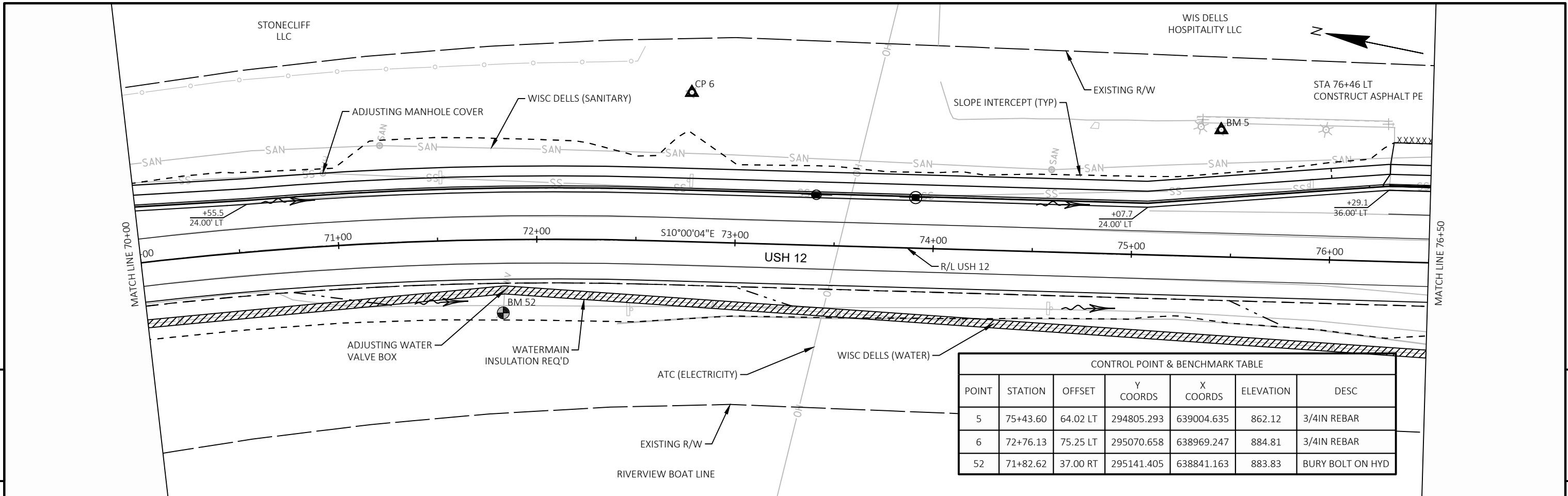
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      PLAN AND PROFILE: USH 12      SHEET **E**

CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
7	67+78.77	52.88 LT	295553.389	638795.389	902.44	3/4IN REBAR
53	67+41.16	46.35 RT	295544.251	638689.651	895.89	BURY BOLT ON HYD

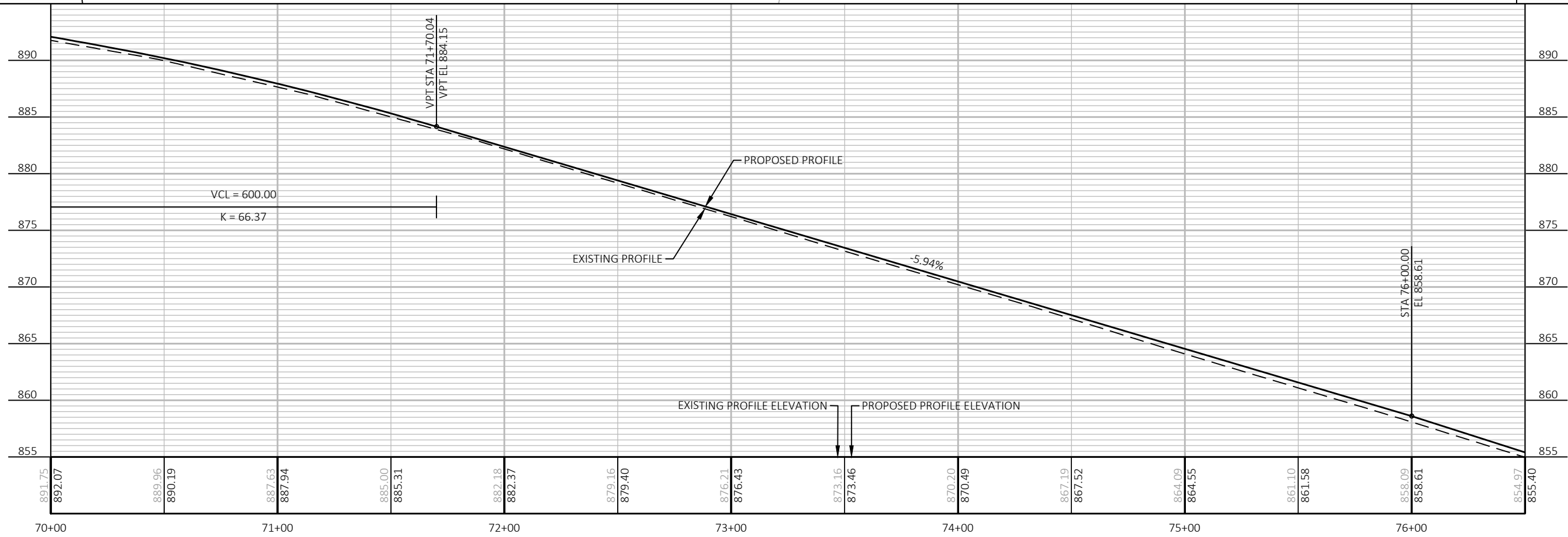


PI STA = 67+97.16  
 Y = 295550.900  
 X = 638808.143  
 DELTA = 29°48'46" RT  
 D = 3°08'53"  
 T = 484.48'  
 L = 947.00'  
 R = 1820.00'  
 PC STA = 63+12.68  
 Y = 295923.044  
 X = 638497.930  
 PT STA = 72+59.69  
 Y = 295073.780  
 X = 638892.282  
 DB = S39°48'50"E  
 DA = S10°00'04"E  
 SE = 3.4%

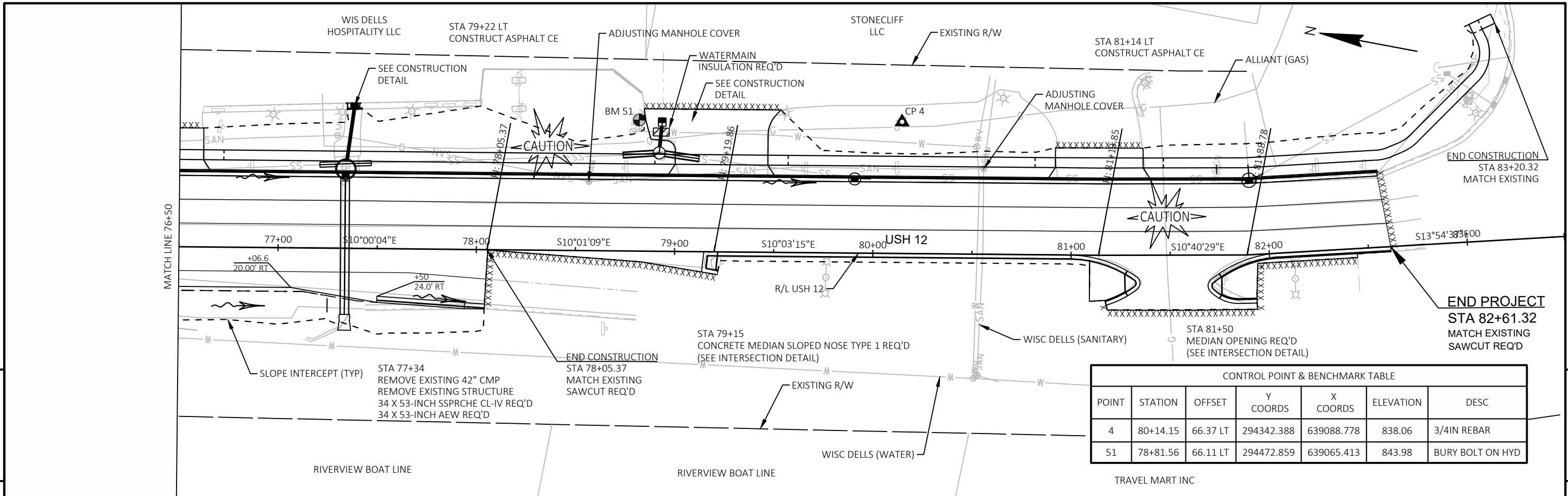




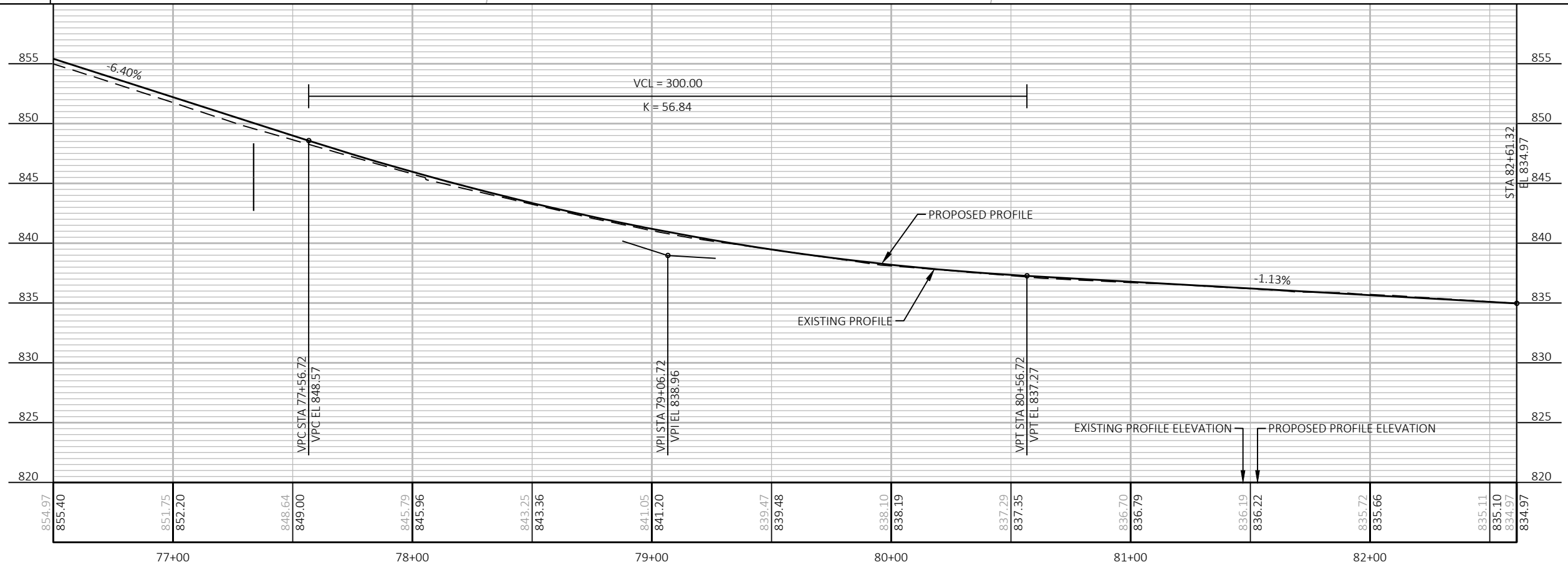
CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
5	75+43.60	64.02 LT	294805.293	639004.635	862.12	3/4IN REBAR
6	72+76.13	75.25 LT	295070.658	638969.247	884.81	3/4IN REBAR
52	71+82.62	37.00 RT	295141.405	638841.163	883.83	BURY BOLT ON HYD



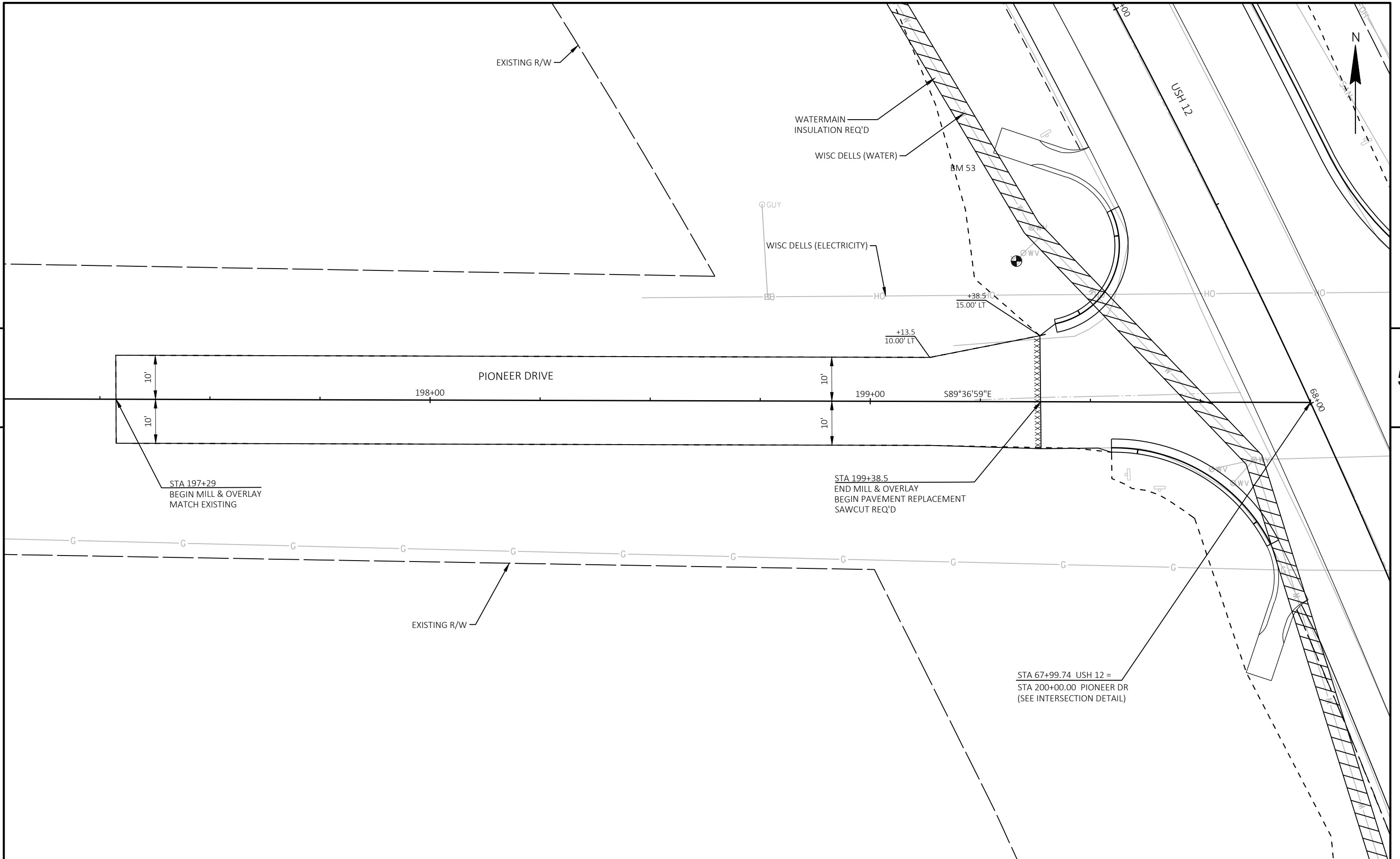
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      PLAN AND PROFILE: USH 12      SHEET: 5



CONTROL POINT & BENCHMARK TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	DESC
4	80+14.15	66.37 LT	294342.388	639088.778	838.06	3/4IN REBAR
51	78+81.56	66.11 LT	294472.859	639065.413	843.98	BURY BOLT ON HYD



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      PLAN AND PROFILE: USH 12      SHEET: E



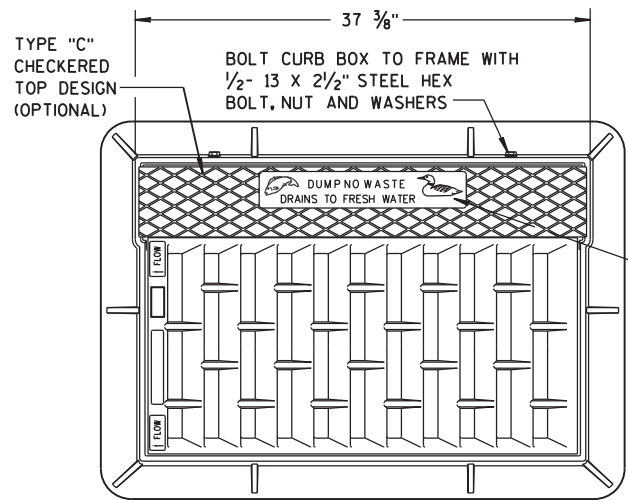
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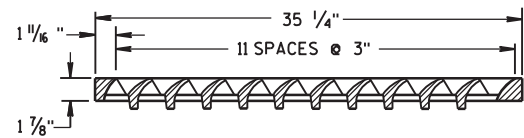
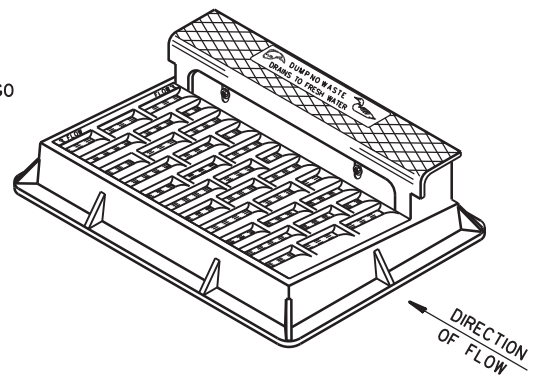
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## Standard Detail Drawing List

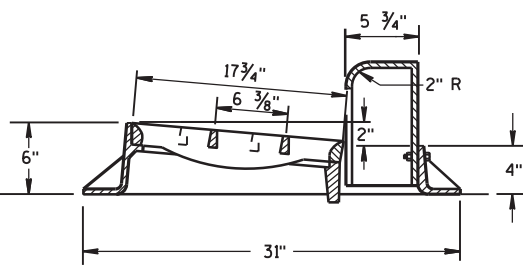
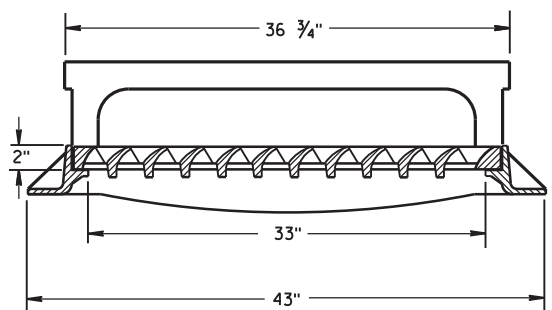
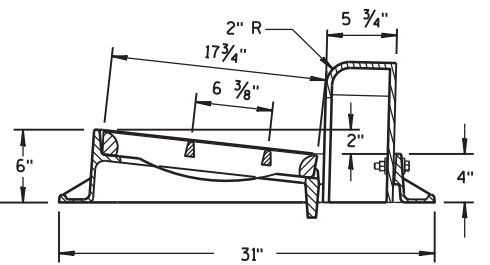
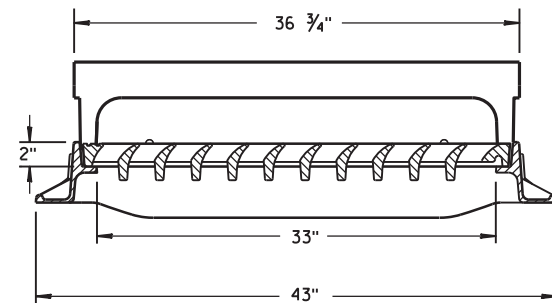
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D18-03	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
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
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
11B02-02	CONCRETE MEDIAN NOSE
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04B	CENTERLINE RUMBLE STRIPS - CONCRETE
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
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
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
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
15C19-08B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C21-11	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



**NOTE:  
GRATE IS REVERSIBLE.**

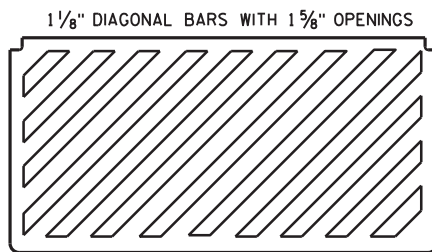


**NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"**

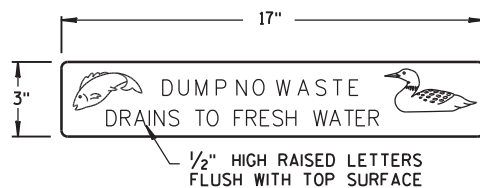


**TYPE "H"**

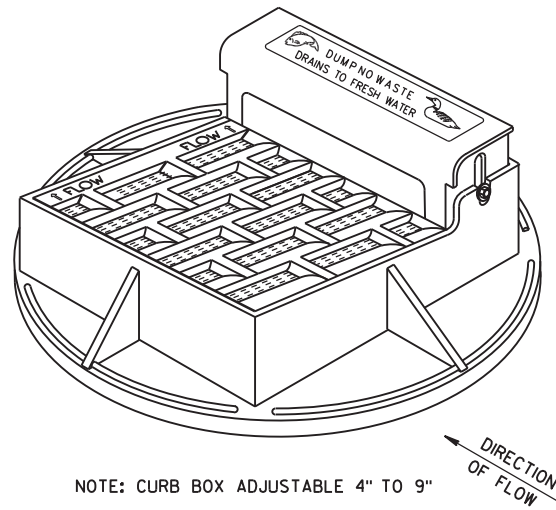
**NOTE: EITHER CASTING IS ACCEPTABLE**



**SPECIAL GRATE FOR  
TYPE "H" COVER**  
(MEASURES 35 1/4" X 17 3/4" X 2")  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

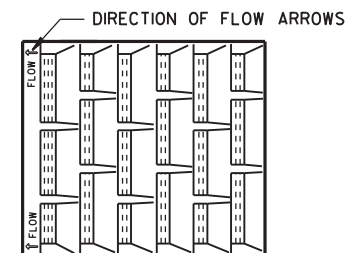


**LOGO DETAIL**

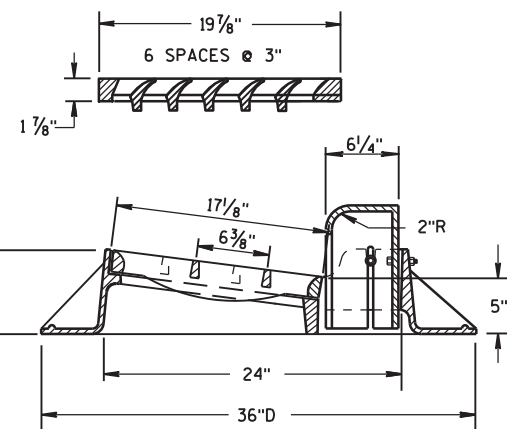
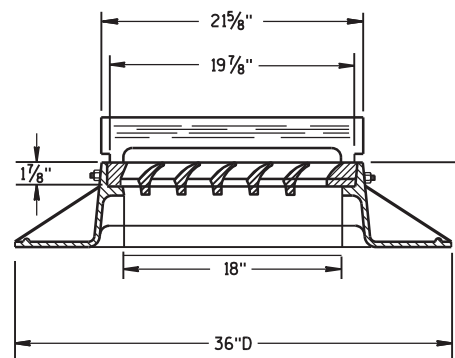


**NOTE: CURB BOX ADJUSTABLE 4" TO 9"**

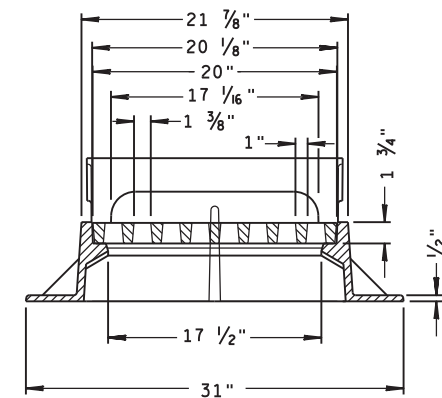
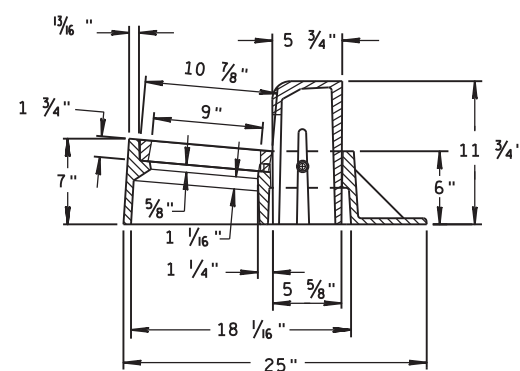
**NOTE:  
GRATE IS REVERSIBLE.**



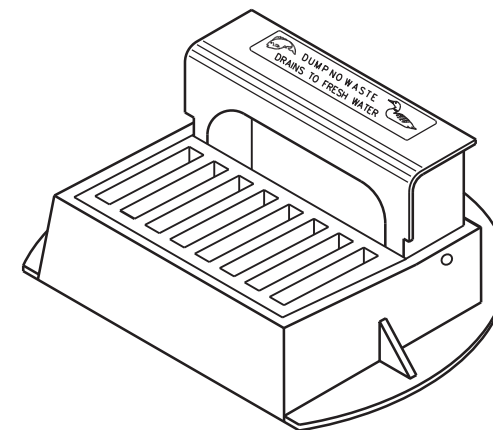
**SPECIAL GRATE FOR  
TYPE "A" COVER**  
(MEASURES 19 3/4" X 17" X 1 1/8")  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



**TYPE "A"**



**TYPE "Z"**

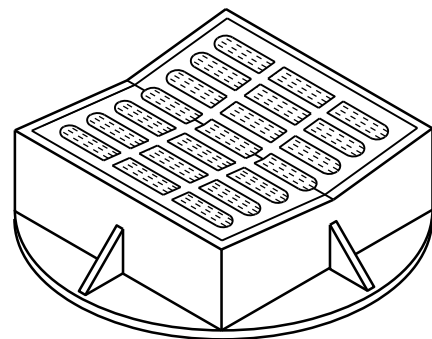
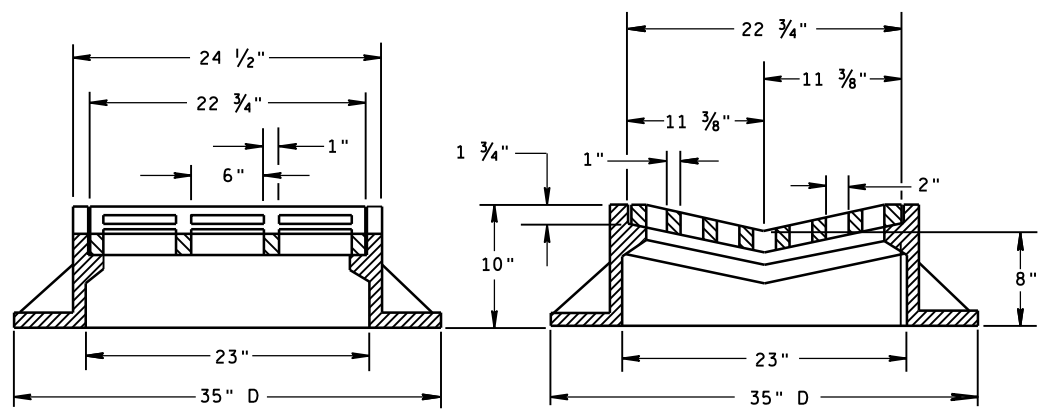


**INLET COVERS  
TYPE A, H, A-S, H-S & Z**

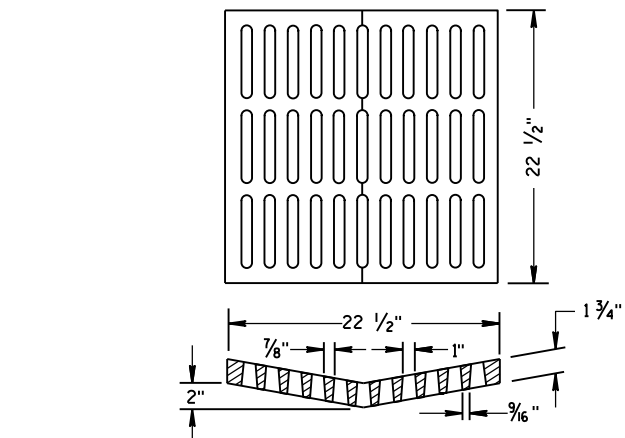
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: 11-27-13  
DATE: /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



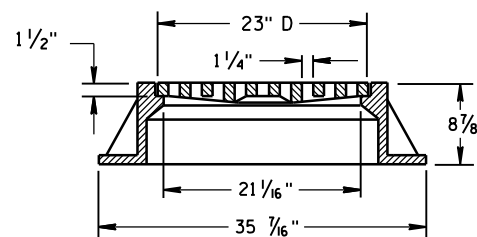
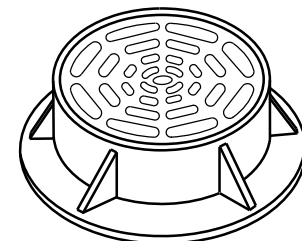
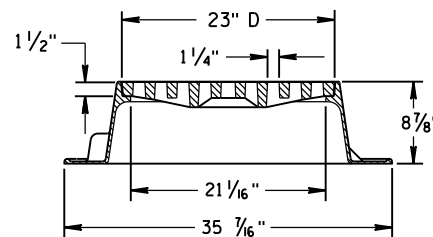
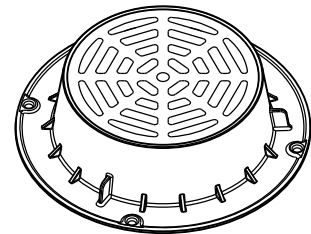


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

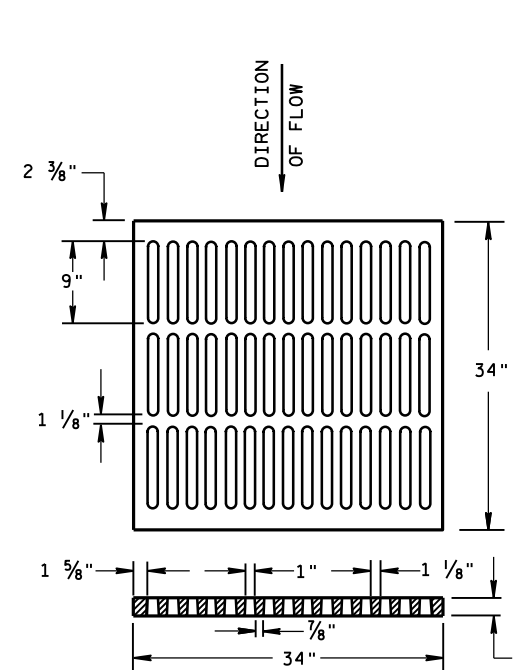
NOTE: EITHER CASTING IS ACCEPTABLE

**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.

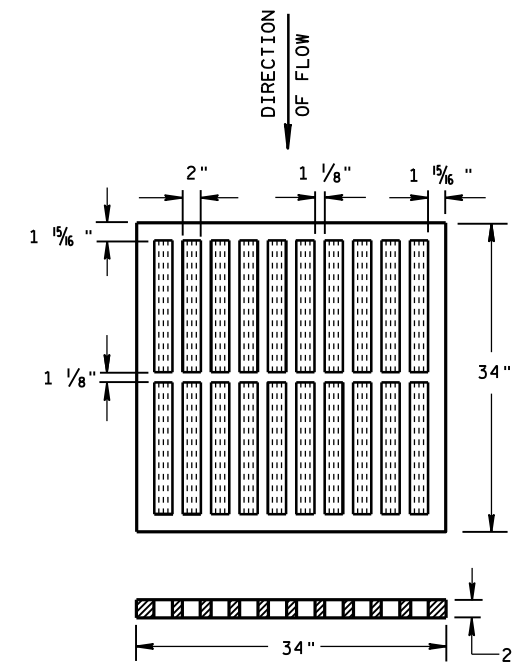
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



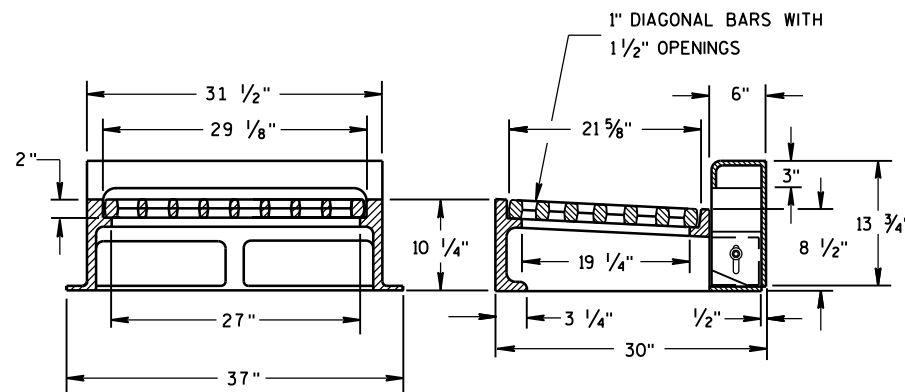
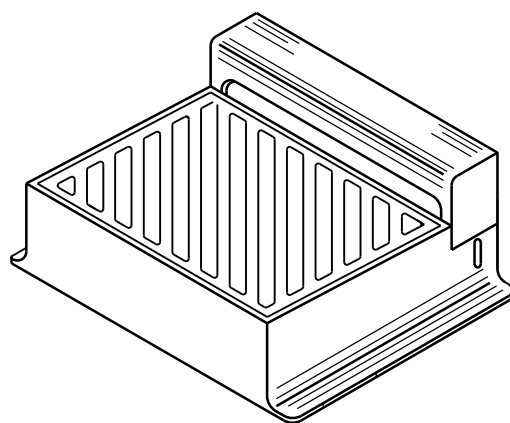
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR 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 DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

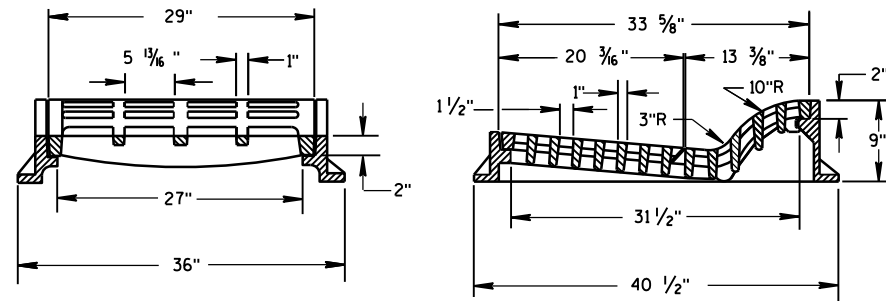
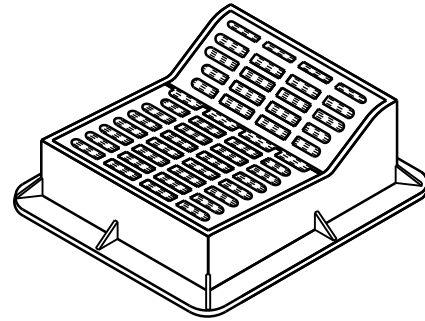
TYPE "WM"

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

INLET COVERS  
TYPE B, B-A, C,  
MS, MS-A, & WM

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 11/27/2013 /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
FHWA



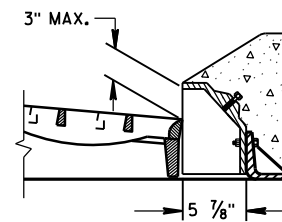
**TYPE "F"**

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

**GENERAL NOTES**

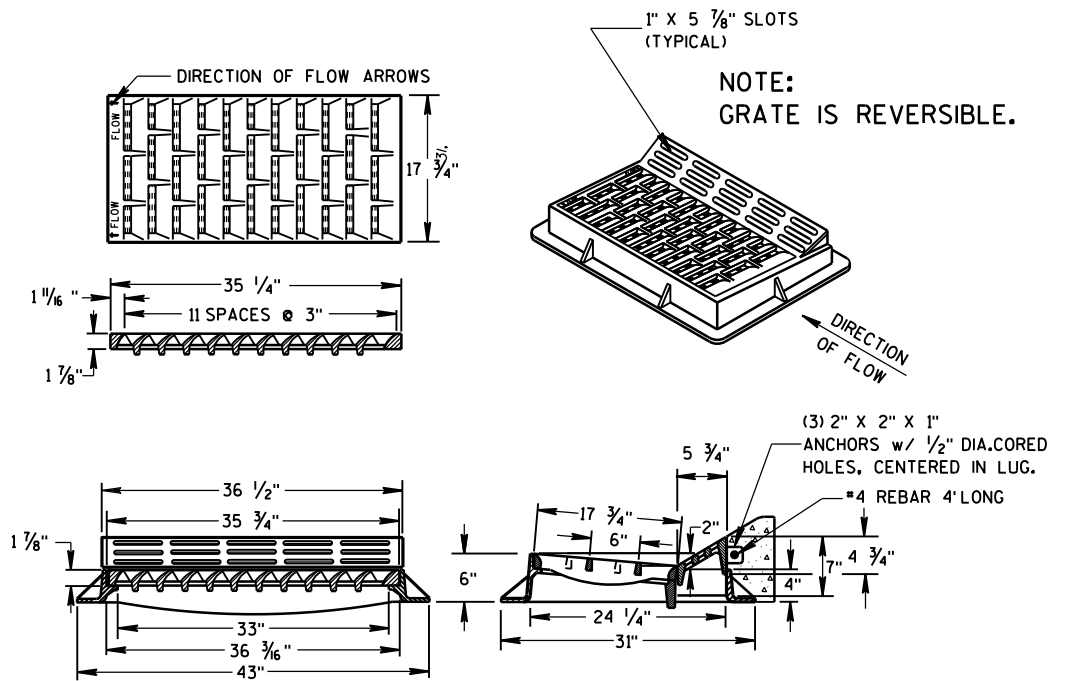
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



**ALTERNATIVE CURB BOX FOR TYPE "HM" COVER**

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH NOTED AS TYPE HM-GJ ON DRAINAGE TABLE



**TYPE "HM"**

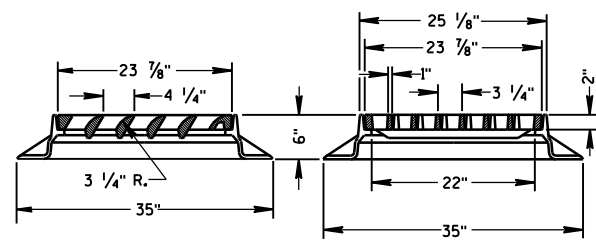
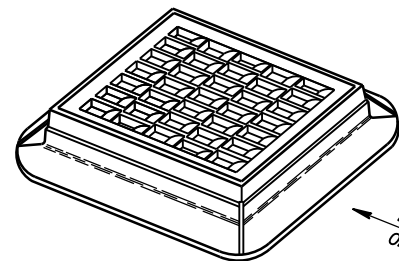
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM" COVER NOTED AS TYPE HM-S ON DRAINAGE TABLE

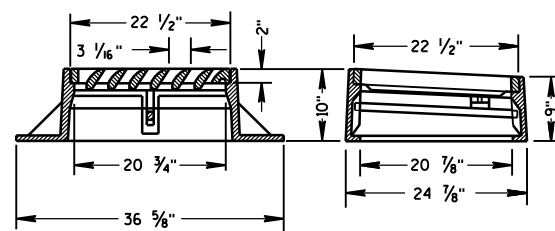
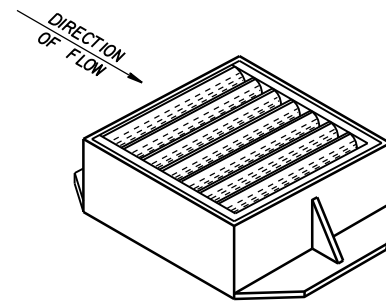
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

6

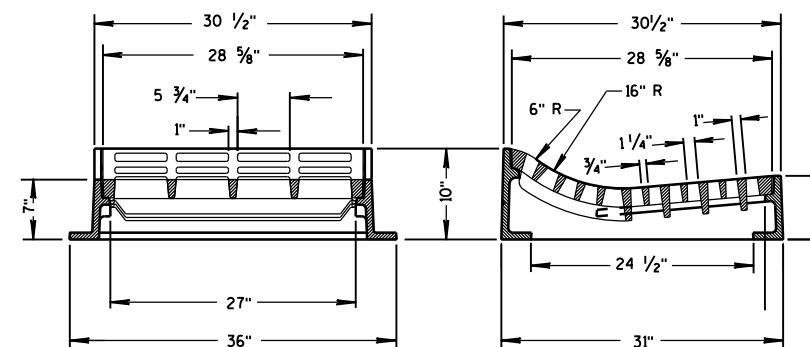
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**TYPE "S"**

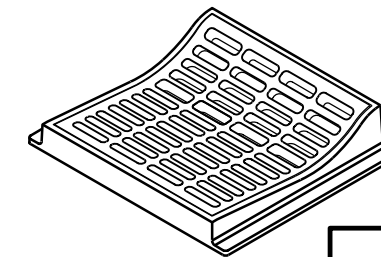


**TYPE "V"**



**TYPE "T"**

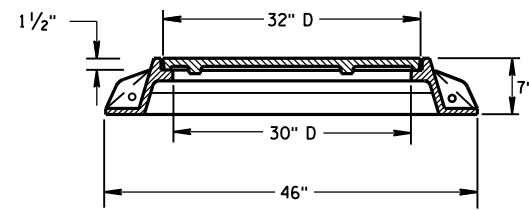
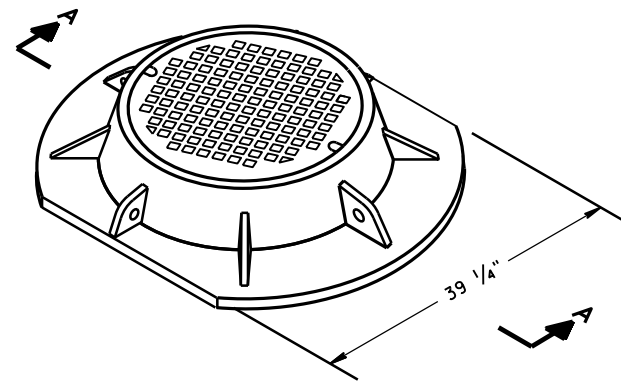
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



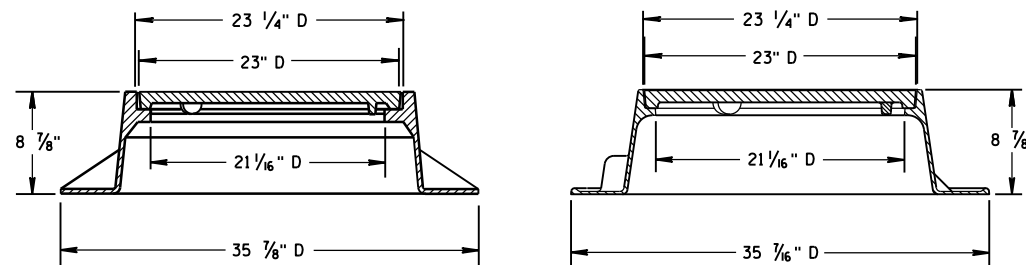
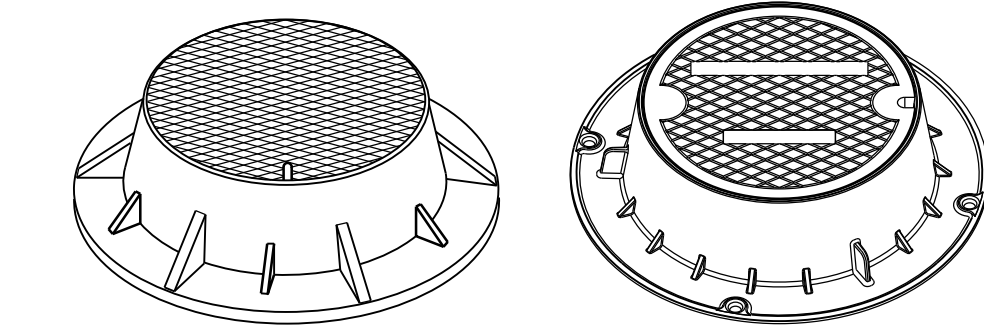
**INLET COVERS**  
TYPE F, HM, HM-S, S, T, V,  
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/27/2013 DATE /s/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
FHWA



SECTION A-A  
TYPE "K"



TYPE "J"

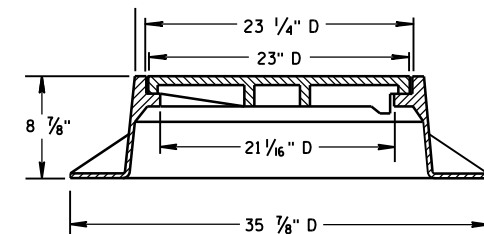
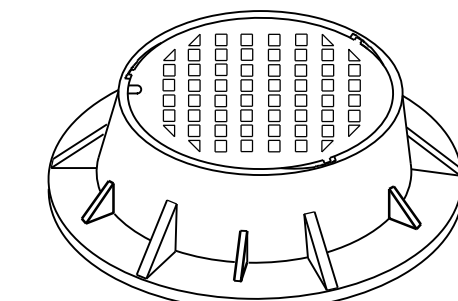
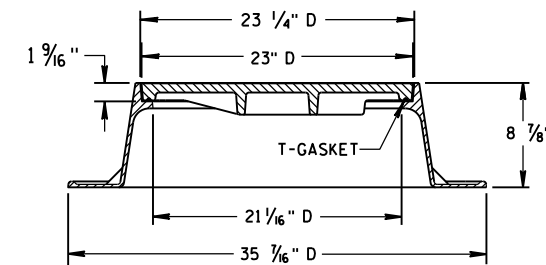
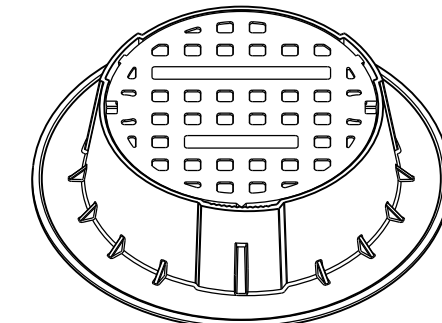
NOTE: EITHER CASTING IS ACCEPTABLE

**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 MANHOLE 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.



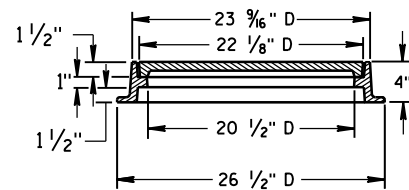
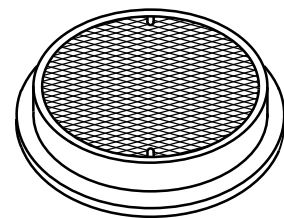
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

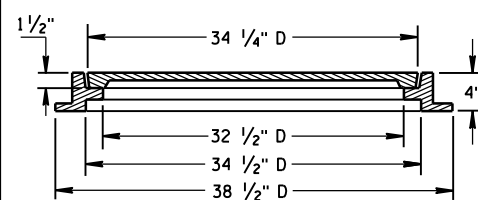
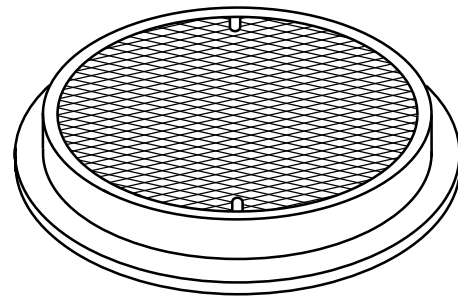
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

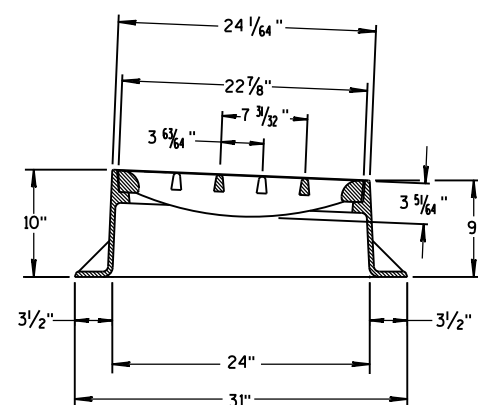
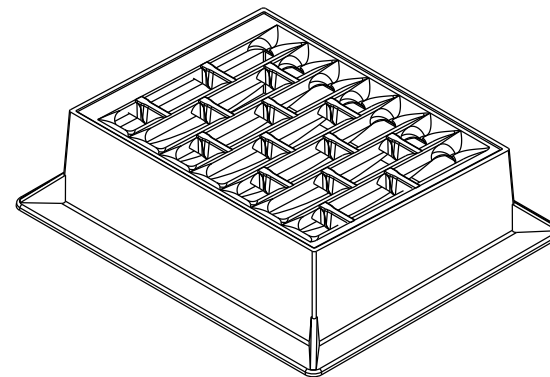
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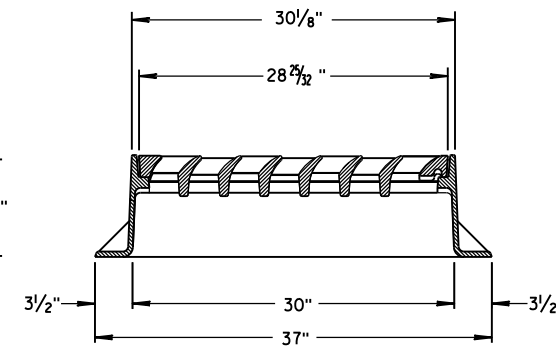
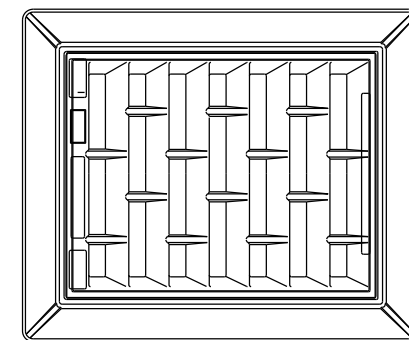
TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"



6

S.D.D. 8 A 5-19d

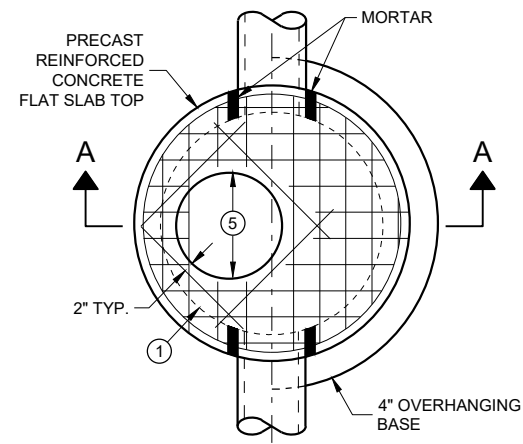
S.D.D. 8 A 5-19d

INLET COVER TYPE BW  
MANHOLE COVERS, TYPE K,  
J, J-S, L & M

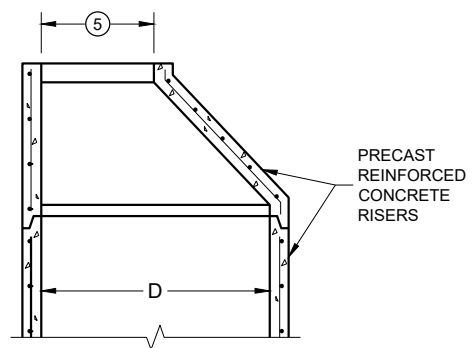
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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11/27/2013  
DATE  
FHWA

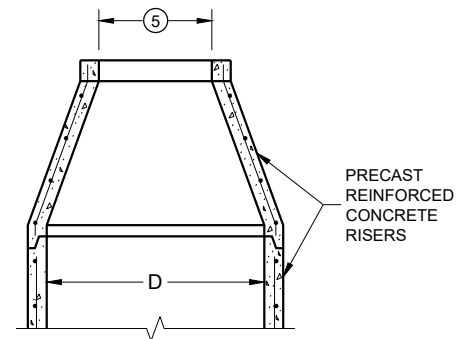
/s/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



**PLAN VIEW  
CIRCULAR OPENING**



**OPTIONAL PRECAST  
REINFORCED CONCRETE  
ECCENTRIC TOP**



**OPTIONAL PRECAST  
REINFORCED CONCRETE  
CONCENTRIC TOP**

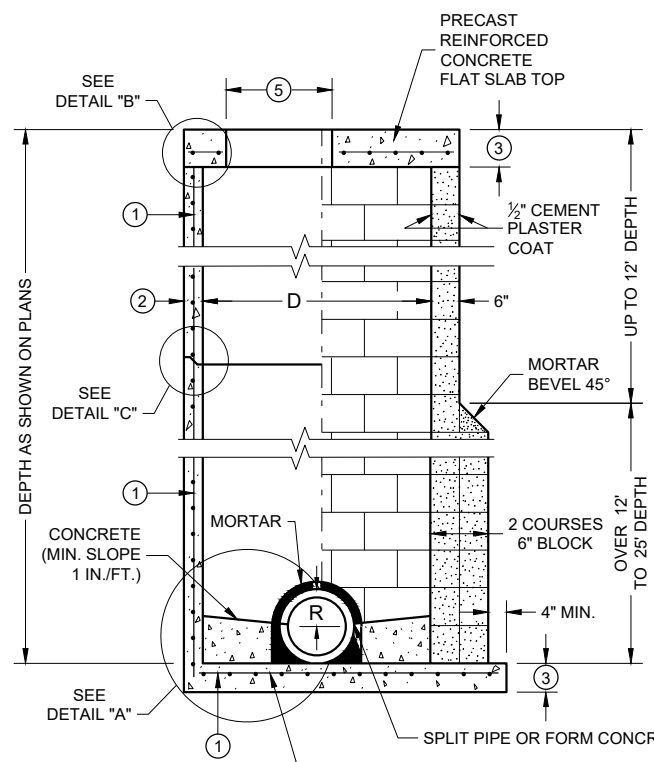
**MANHOLE COVER OPENING MATRIX**

MANHOLE COVER TYPE OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

**PIPE MATRIX**

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

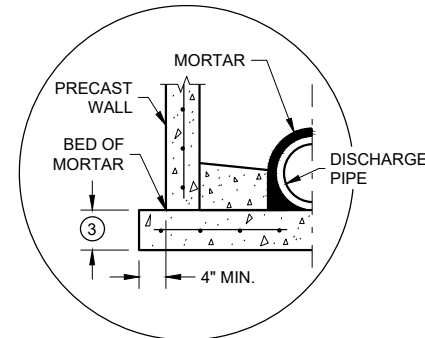
*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.



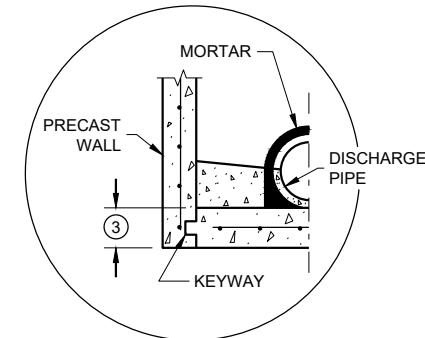
**SECTION A - A**

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE ①**

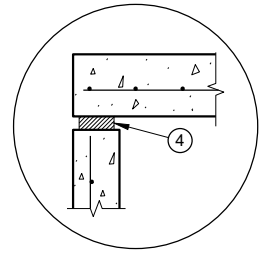


**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

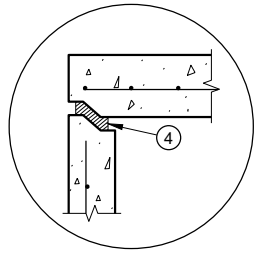


**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION**

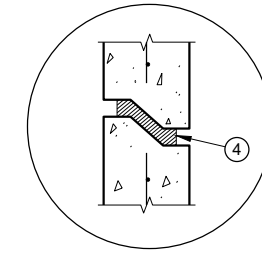
**DETAIL "A"**



**TOP WITH PLAIN END JOINT**



**TOP WITH TONGUE AND GROOVE JOINT**



**RISER WITH TONGUE AND GROOVE JOINT**

**DETAIL "B"**

**DETAIL "C"**

**MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER**

**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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

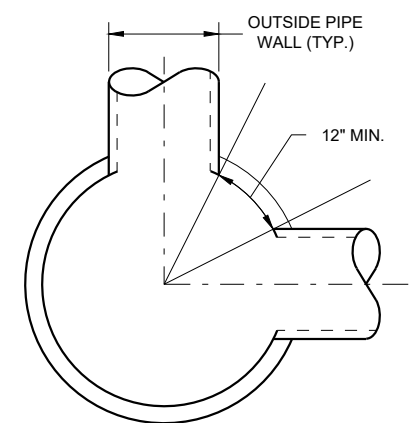
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- ③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- ④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- ⑤ SEE MANHOLE COVER OPENING MATRIX.

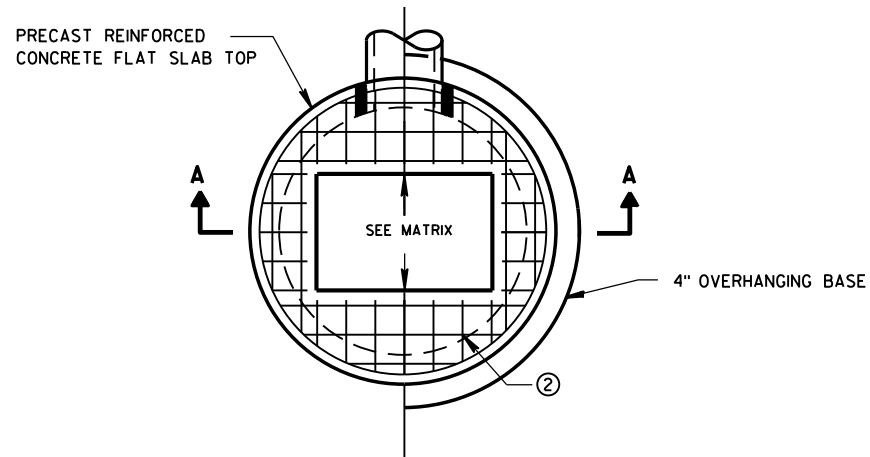


**MINIMUM HORIZONTAL PIPE SEPARATION**

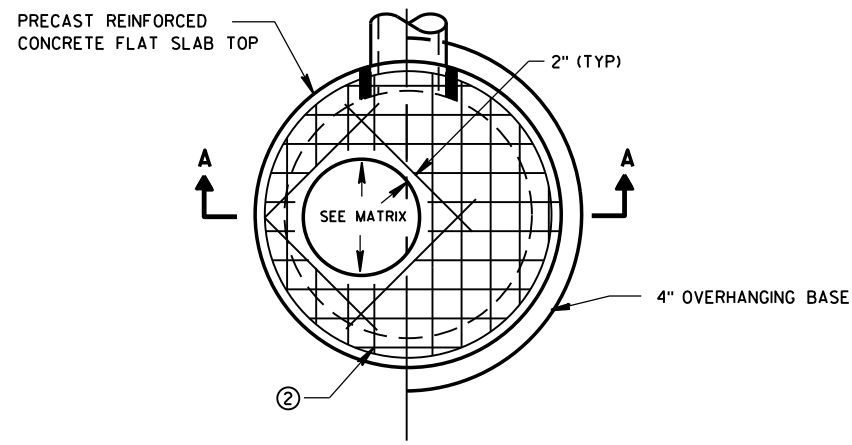
**MANHOLES, 3-FT, 4-FT  
5-FT, 6-FT, 7-FT, 8-FT, 9-FT  
AND 10-FT DIAMETER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

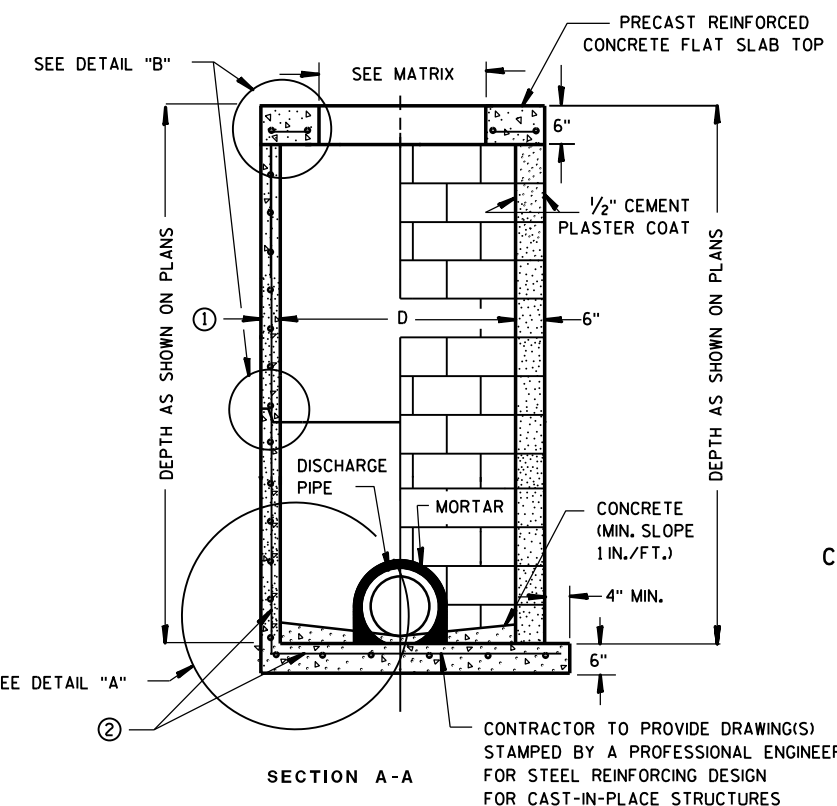
APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER  
FHWA



PLAN VIEW RECTANGULAR OPENING



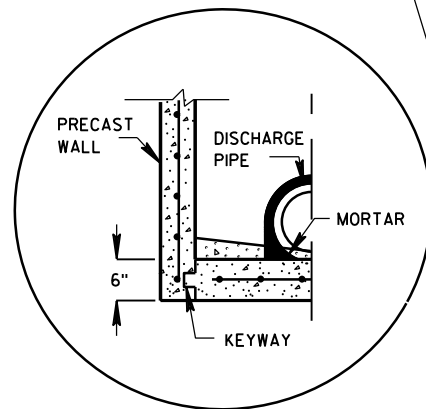
PLAN VIEW CIRCULAR OPENING



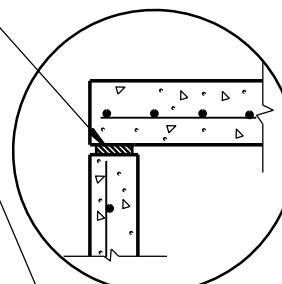
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE OR CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

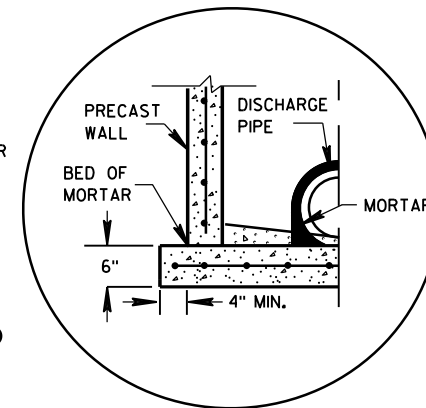
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



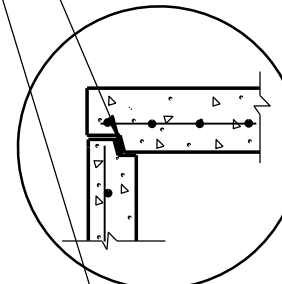
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



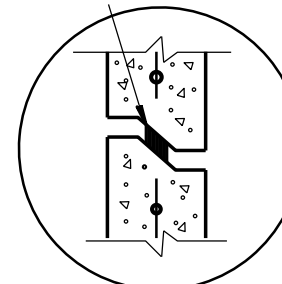
TOP WITH TONGUE AND GROOVE JOINT



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

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 UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

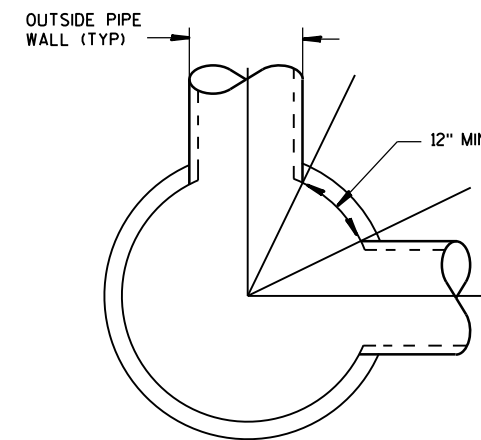
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X	X	
	2X2.5			X								
	2X3						X					
	2.5X3					X						



DETAIL "C"

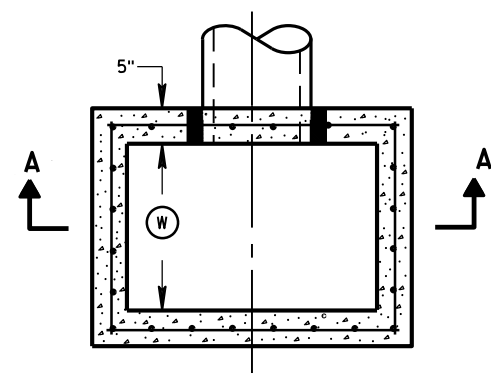
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

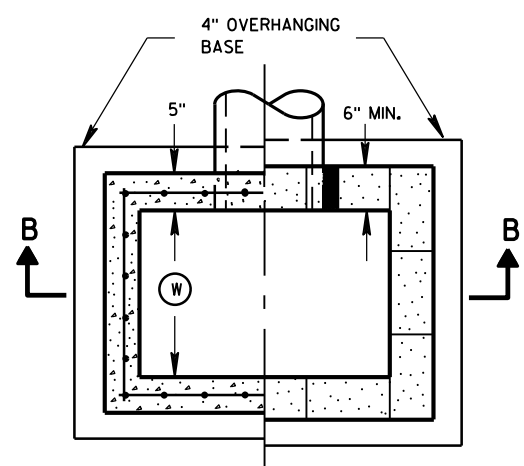
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

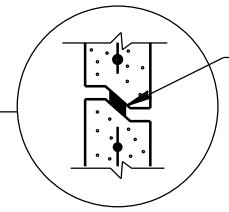
APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR



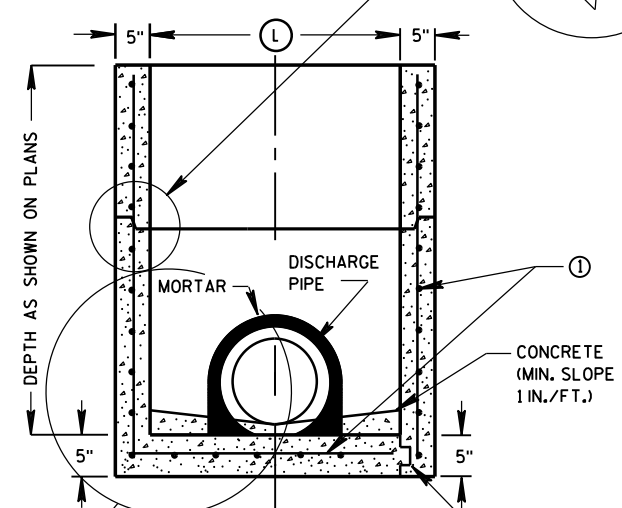
PLAN VIEW



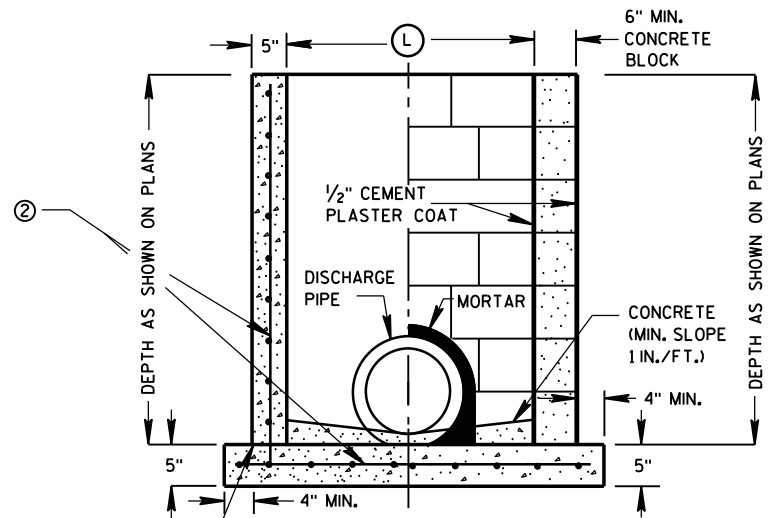
PLAN VIEW



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



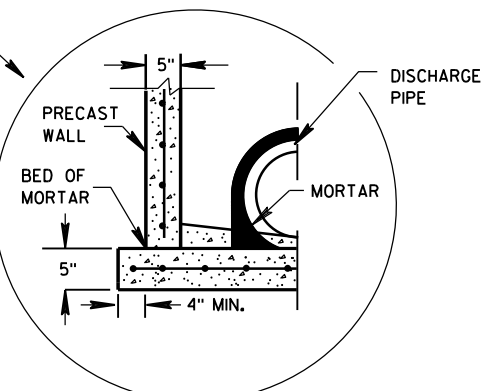
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE  
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE  
 KEYWAY

CONSTRUCTION JOINT  
 CAST-IN-PLACE REINFORCED CONCRETE  
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**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 UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH 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.

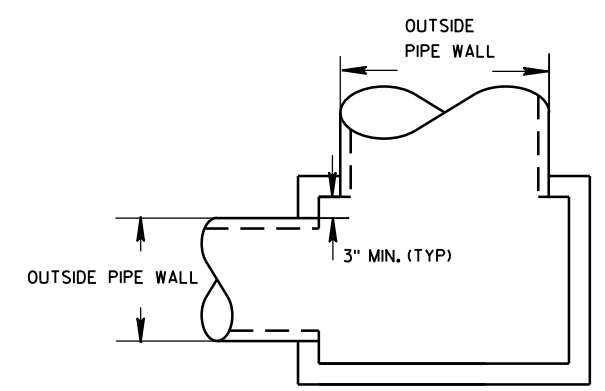
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**INLET COVER MATRIX**

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



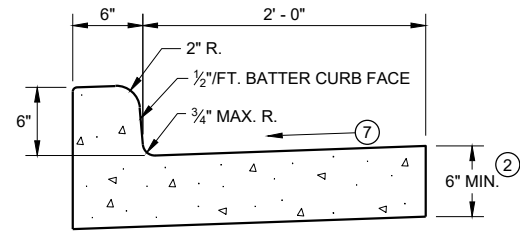
DETAIL "A"

**INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT**

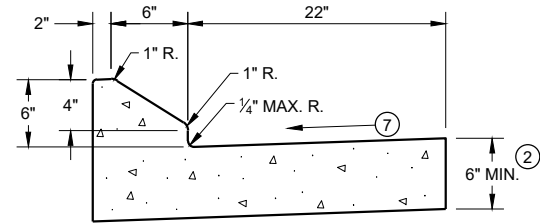
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

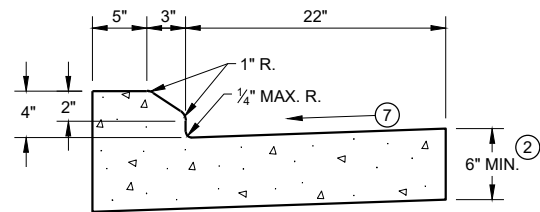
APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR



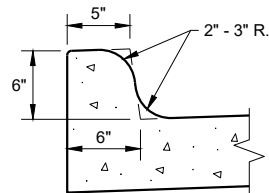
**TYPES A¹ & D**



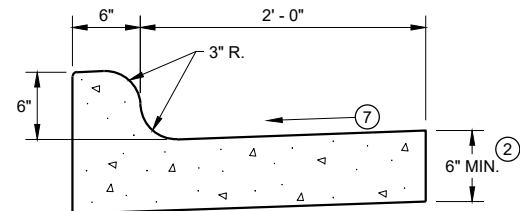
**6" SLOPED CURB TYPES G¹ & J**



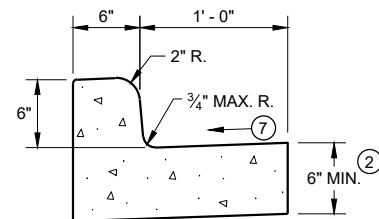
**4" SLOPED CURB TYPES G¹ & J**



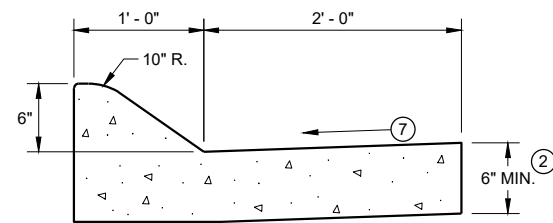
**TYPES K¹ & L**  
(OPTIONAL CURB SHAPE)



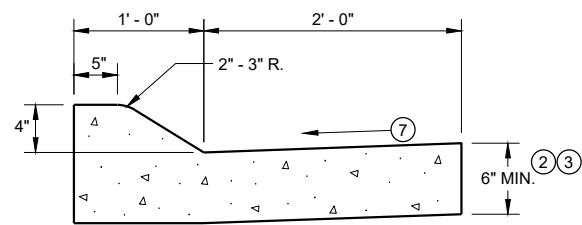
**TYPES K¹ & L**  
**CONCRETE CURB AND GUTTER 30"**



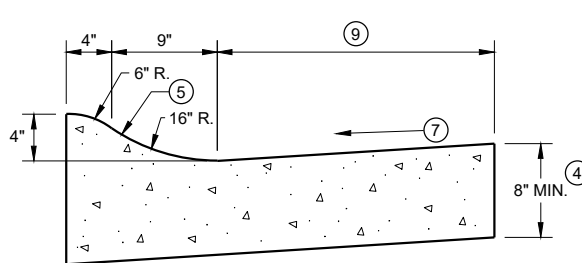
**TYPES A¹ & D**  
**CONCRETE CURB AND GUTTER 18"**



**6" SLOPED CURB TYPES A¹ & D**

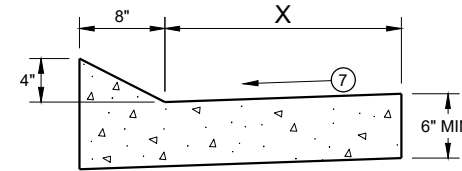


**4" SLOPED CURB TYPES A¹ & D**  
**CONCRETE CURB AND GUTTER 36"**



**4" SLOPED CURB TYPES R¹ & T**

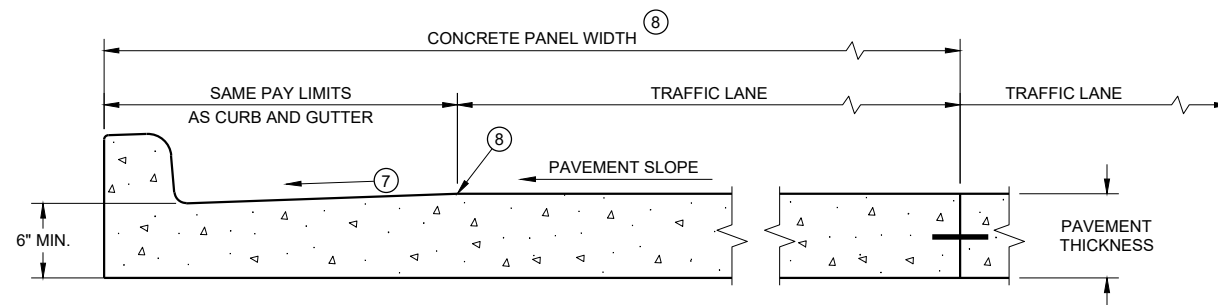
TBT & TBTT	X
30"	22"
36"	28"



**TYPES TBT & TBTT¹**  
**CONCRETE CURB AND GUTTER**

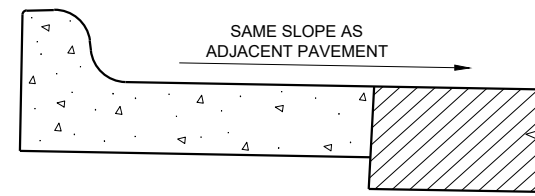
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



**PARTIAL SECTION OF PAVEMENT* WITH INTEGRAL CURB AND GUTTER**

* BIKE LANE IS NOT SHOWN



**REVERSE SLOPE GUTTER⁶**  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

**GENERAL NOTES**

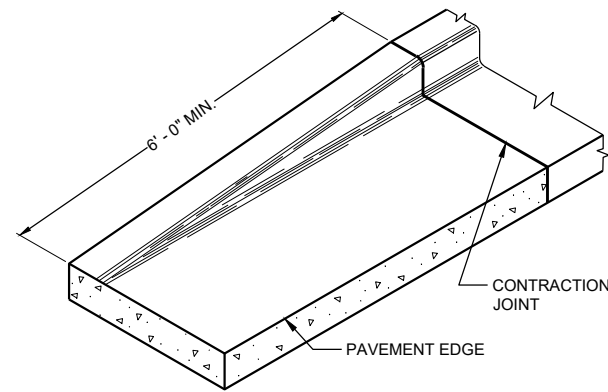
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

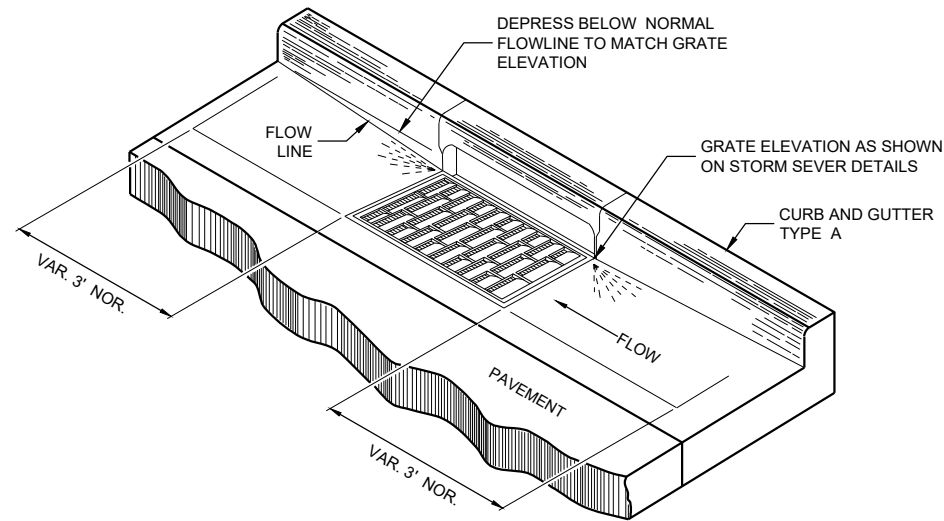
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



**END SECTION CURB AND GUTTER**



**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

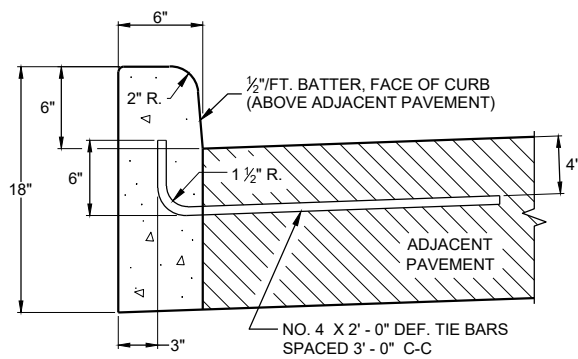
**GENERAL NOTES**

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

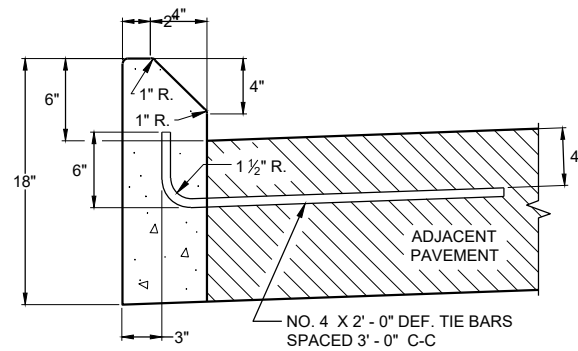
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

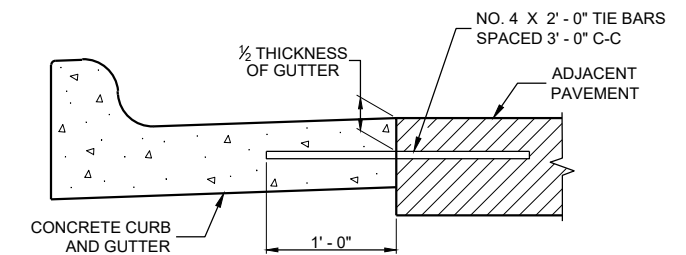
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



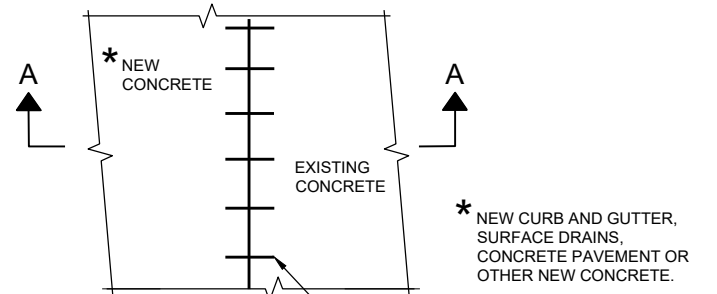
**TYPES A^① & D**



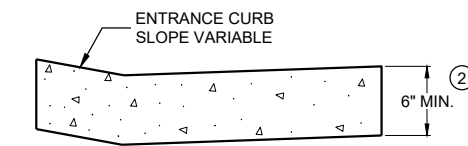
**TYPES G^① & J  
CONCRETE CURB**



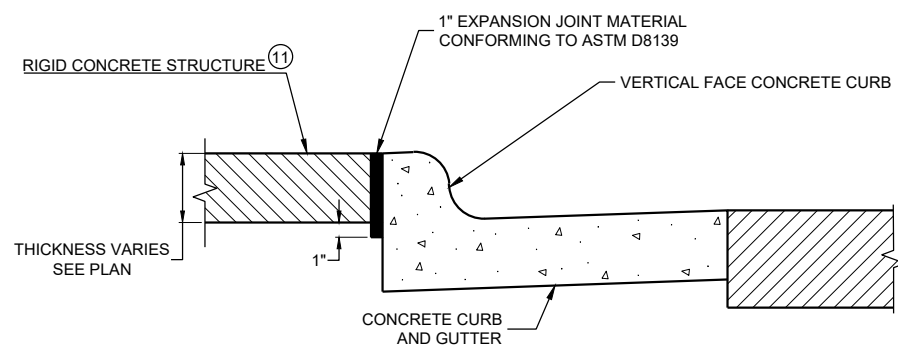
**TYPICAL TIE BAR LOCATION^①**



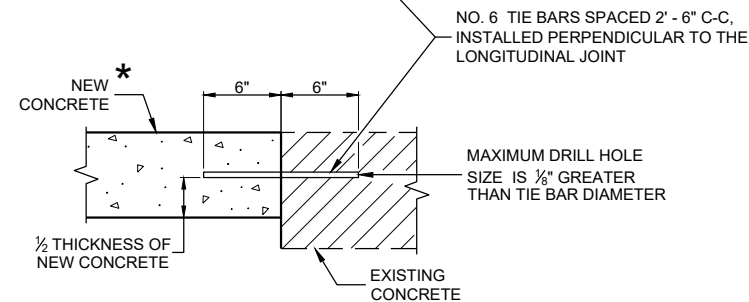
**PLAN VIEW**



**DRIVEWAY ENTRANCE CURB^⑩  
(WHEN DIRECTED BY THE ENGINEER)**



**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪**



**SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT**

**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

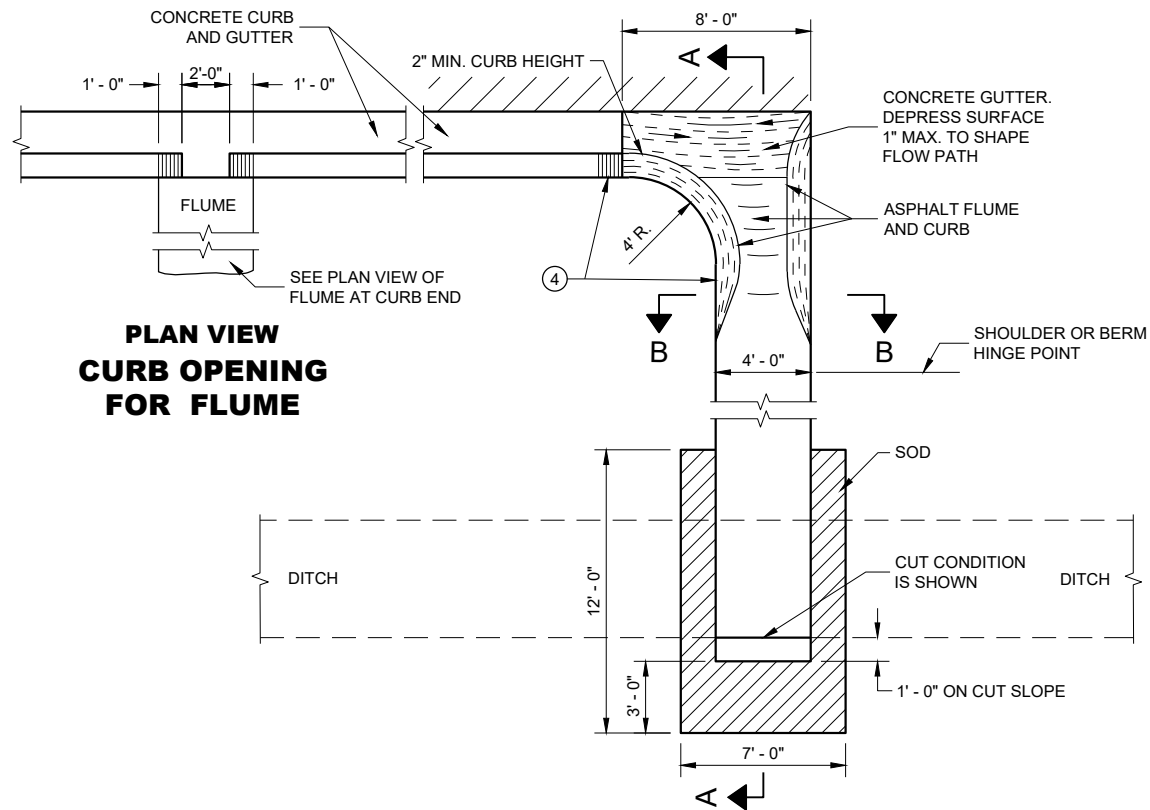
APPROVED  
DATE May 2023 /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



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

### ASPHALTIC FLUME



**PLAN VIEW  
CURB OPENING  
FOR FLUME**

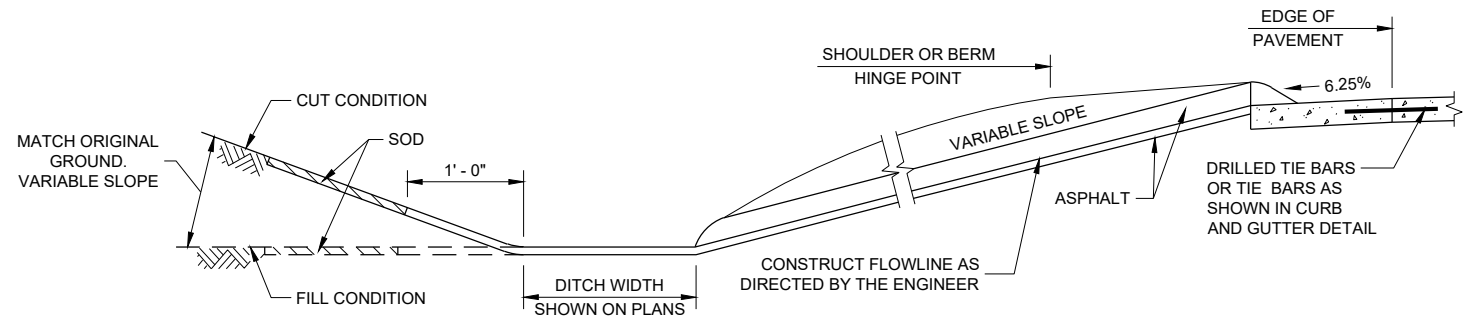
**PLAN VIEW  
FLUME AT CURB END**

### GENERAL NOTES

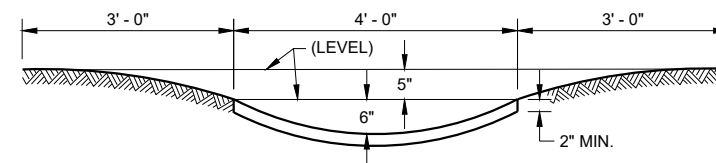
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

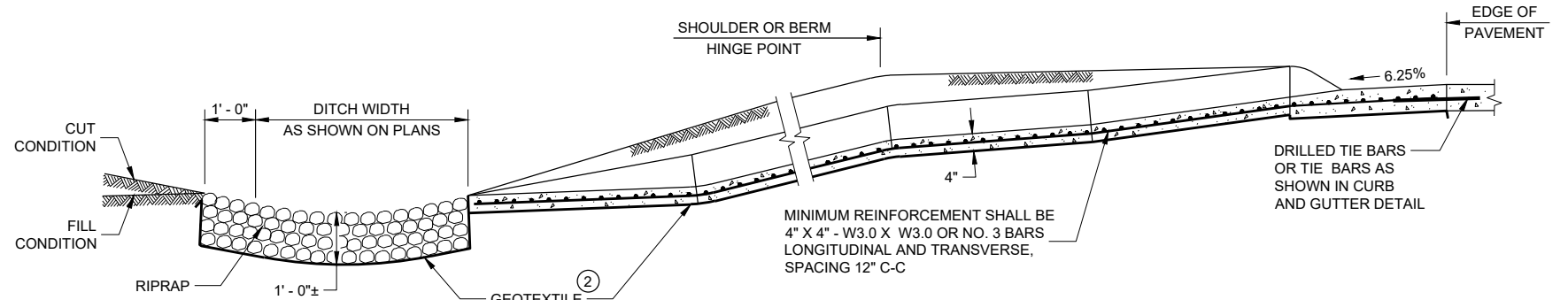
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- 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.



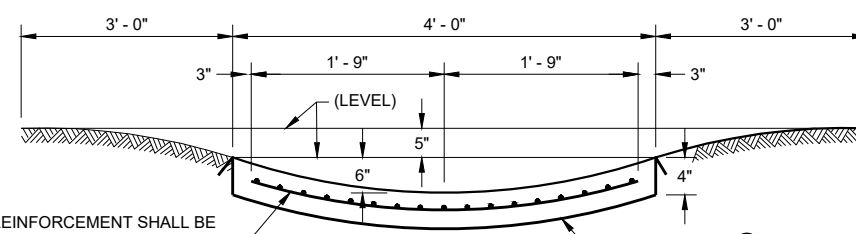
**SECTION A - A**



**SECTION B - B**



**SECTION C - C**



**SECTION D - D**

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

6

6

SDD 08D04 - 07

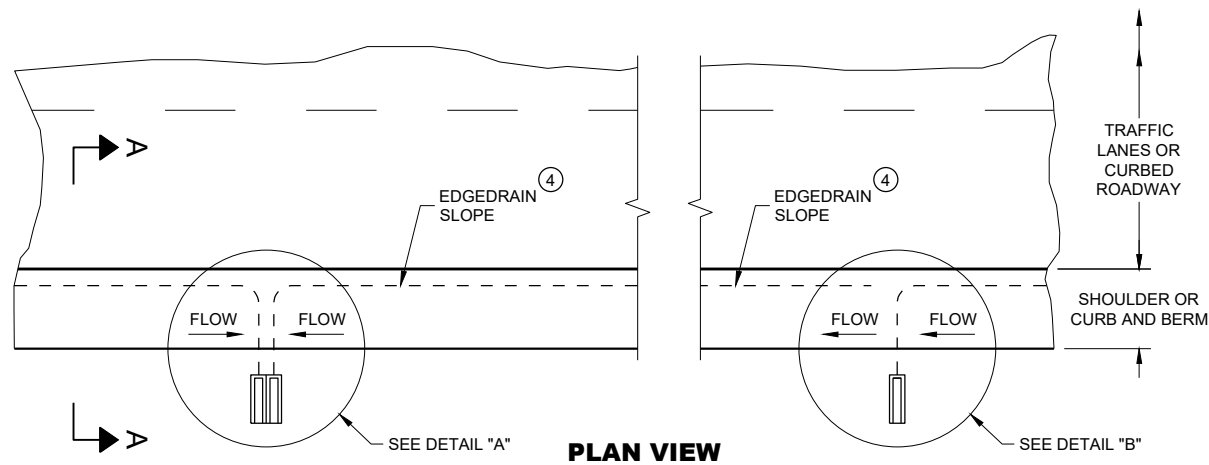
SDD 08D04 - 07

### CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

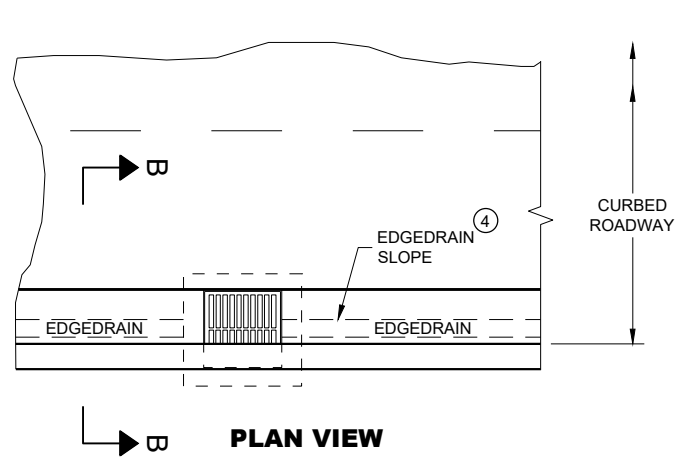
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE May 2023 /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA



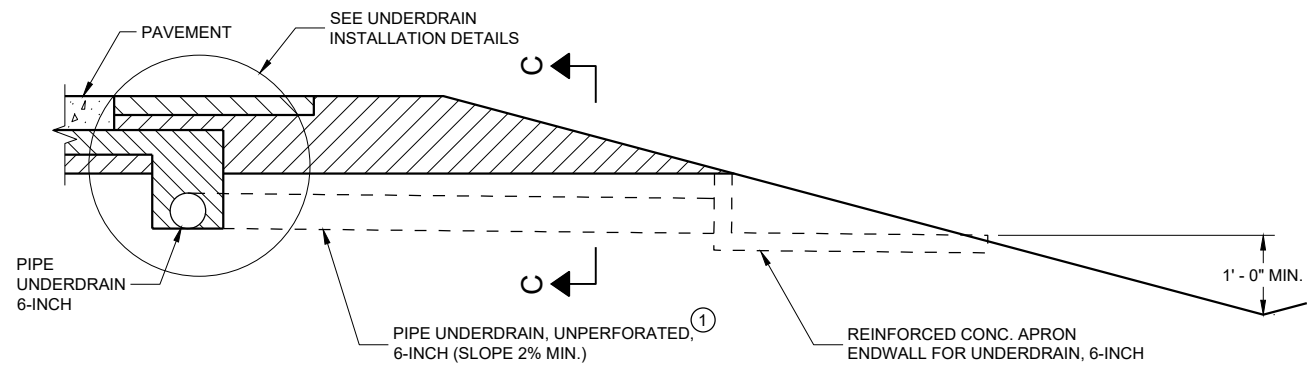
**ROADWAY WITH SHOULDERS OR CURBS  
(EDGEDRAIN CONNECTS TO ROADSIDE) ②**



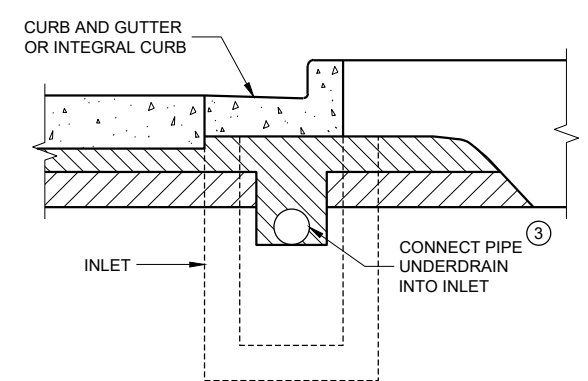
**ROADWAY WITH CURBS  
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**

**GENERAL NOTES**

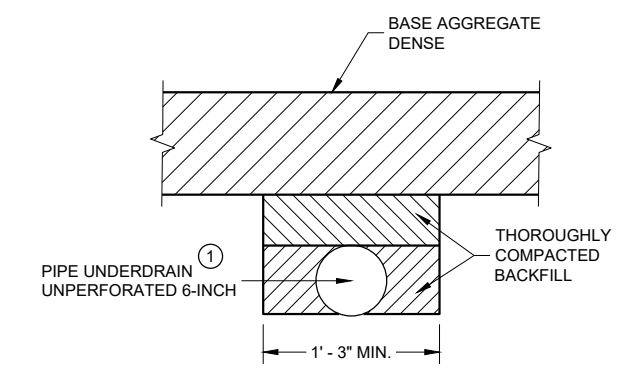
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:  
  
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.  
  
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
  - ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
  - ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
  - ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



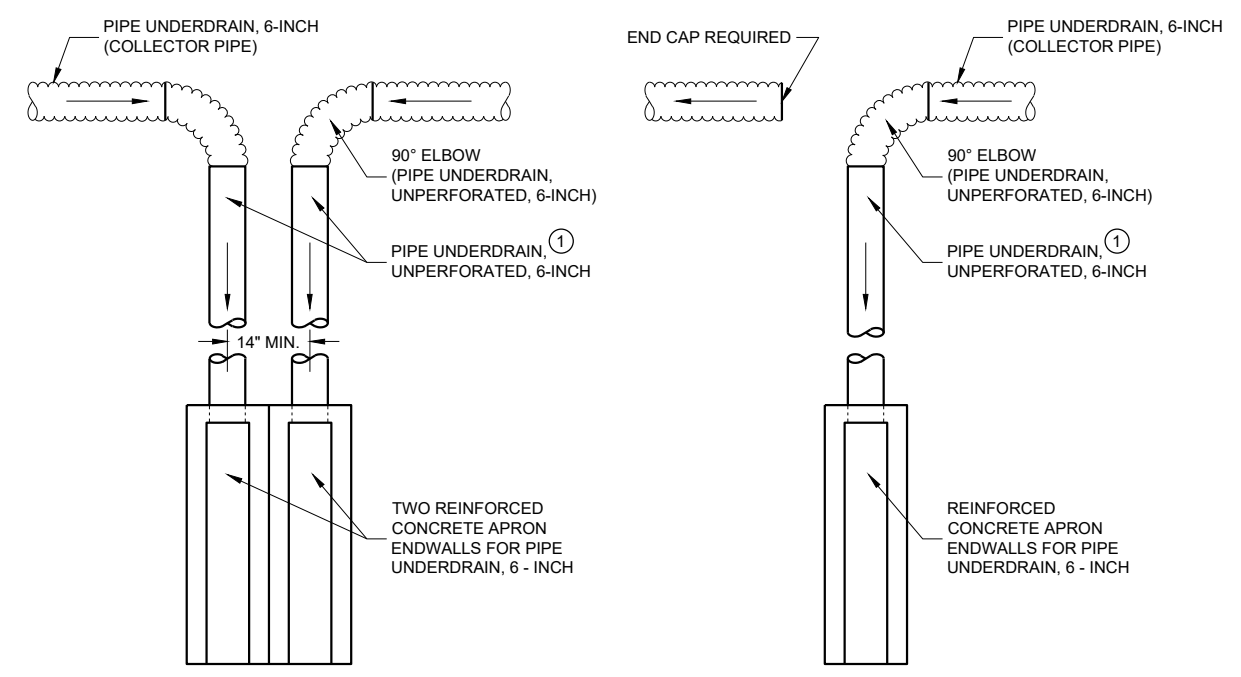
**SECTION A - A  
RURAL CROSS SECTION**



**SECTION B - B  
URBAN CROSS SECTION**



**SECTION C - C  
TRENCH FOR OUTFALL PIPE**



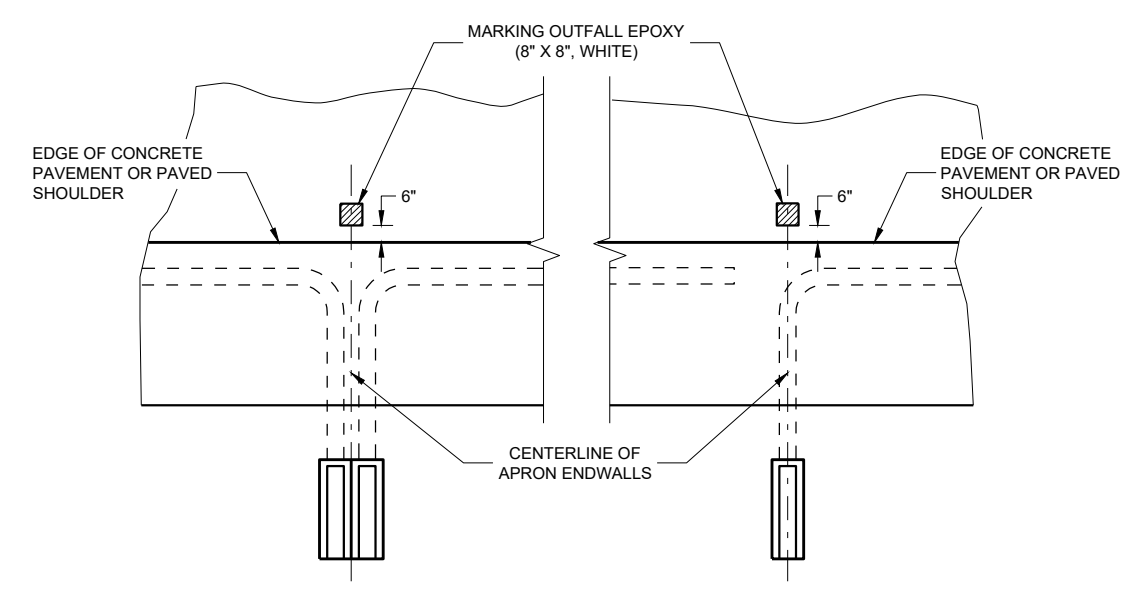
**DETAIL "A"**

TO BE USED AT LOW POINT LOCATIONS

**DETAIL "B"**

TO BE USED AT INTERMEDIATE LOCATIONS

**TYPICAL DRAIN OUT DETAILS**



LOW POINT LOCATIONS

INTERMEDIATE LOCATIONS

**PAVEMENT MARKINGS FOR OUTFALL MARKERS**

**EDGEDRAIN OUTLET  
AND OUTFALL MARKERS**

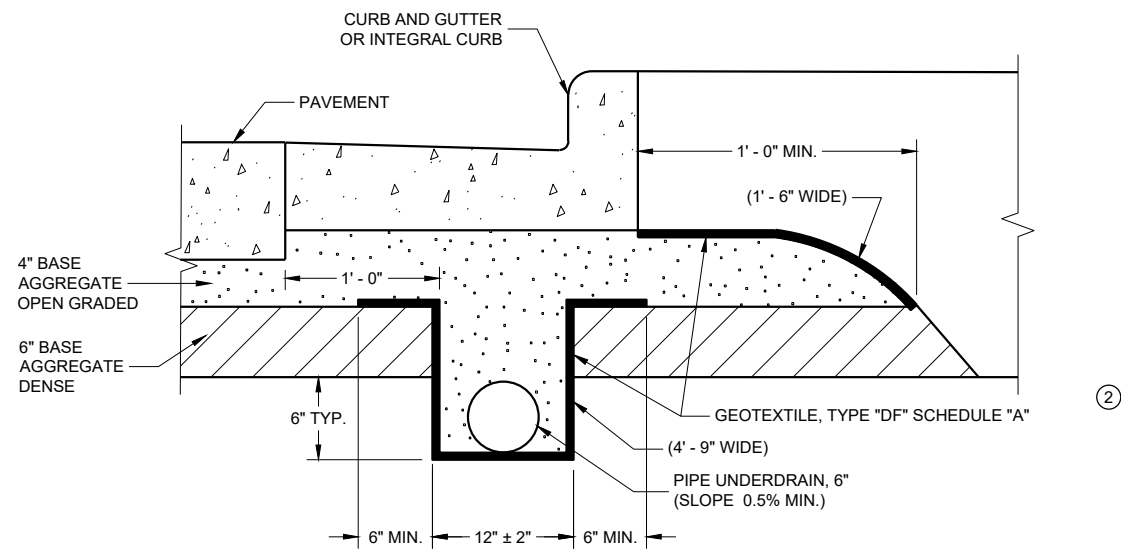
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

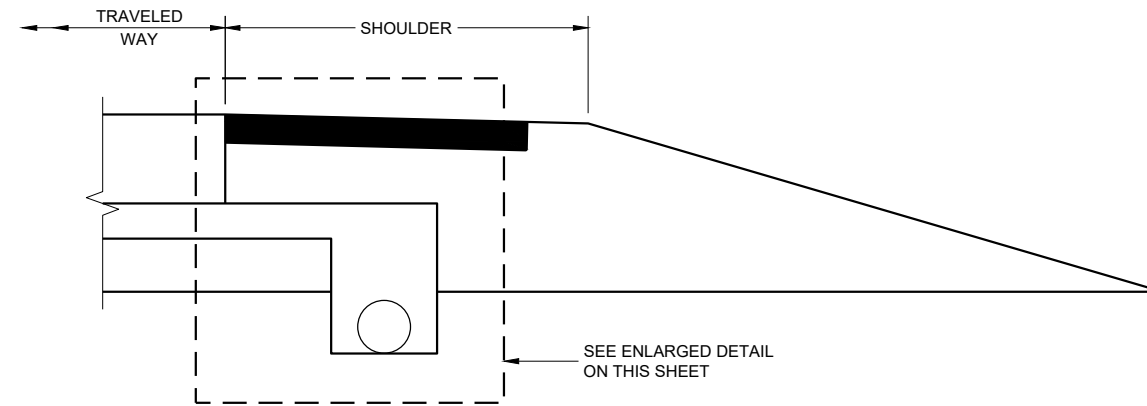
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

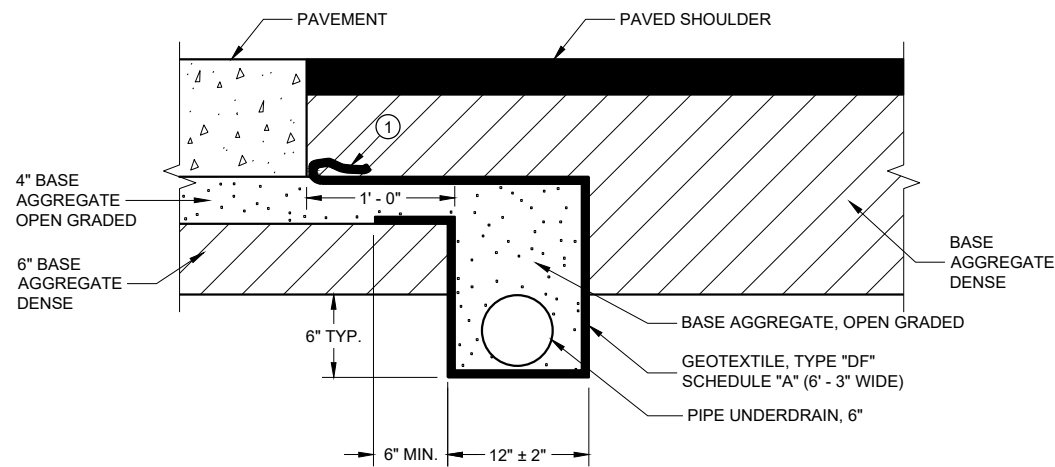
- ① FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.
- ② TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.



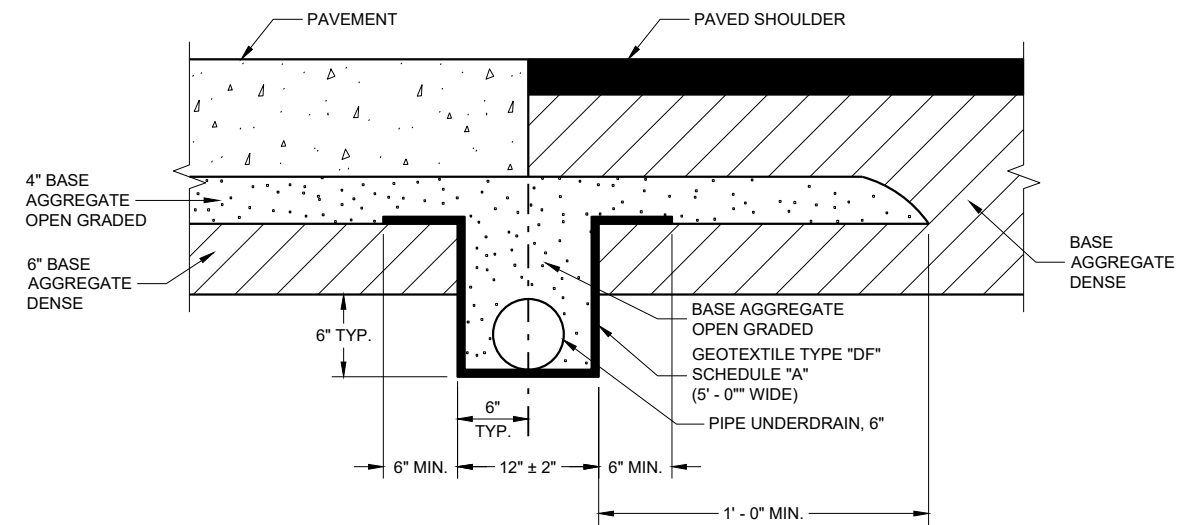
**EGEDRAIN IN URBAN ROADWAY**



**RURAL CROSS SECTION**



**POST PAVING INSTALLATION**  
(QUANTITIES ARE BASED ON THIS DETAIL)



**PRE-PAVING INSTALLATION ALTERNATIVE**

**EGEDRAIN IN RURAL ROADWAY**

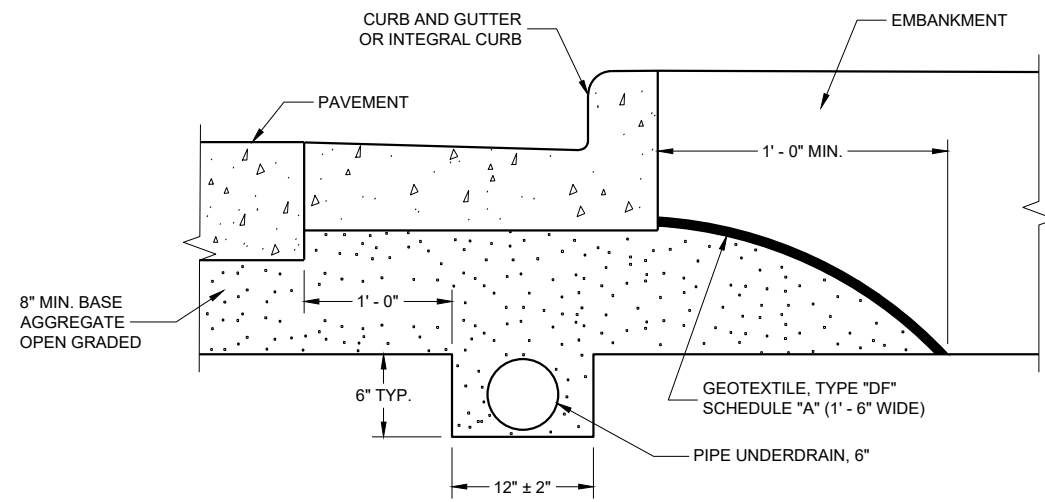
**EGEDRAIN AND BASE  
AGGREGATE OPEN GRADED**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

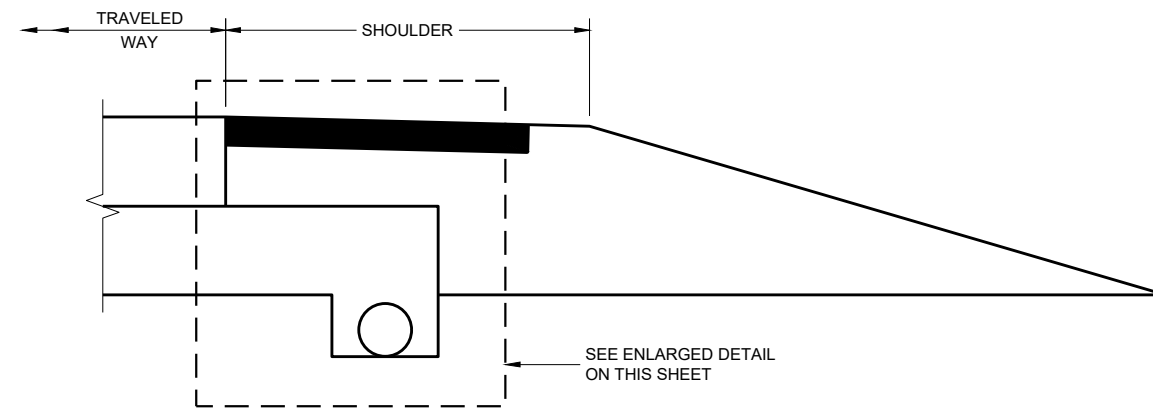
**GENERAL NOTES**

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

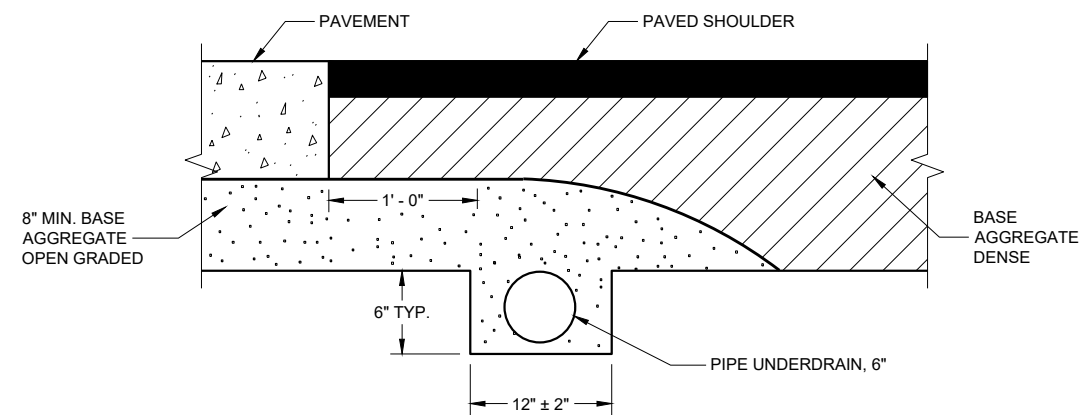
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



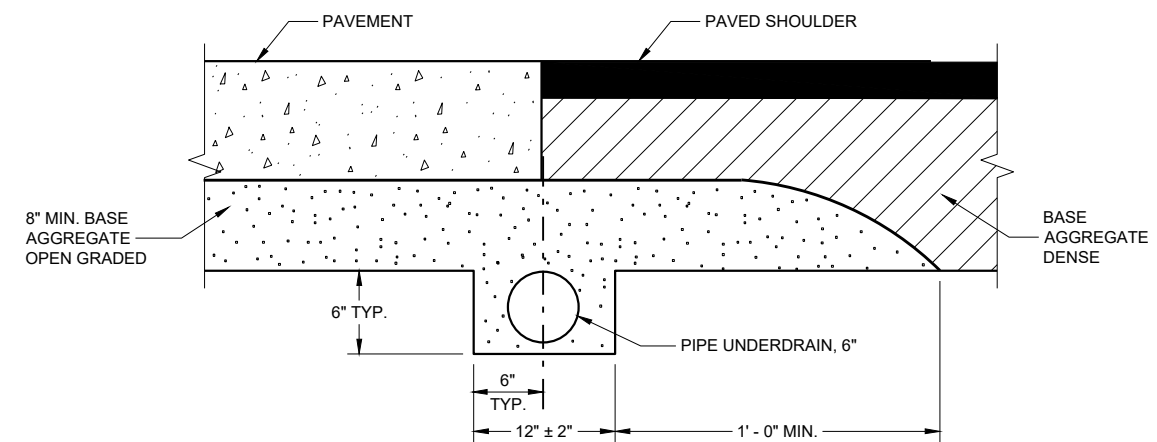
**EDGEDRAIN IN URBAN ROADWAY**



**RURAL CROSS SECTION**



**POST PAVING INSTALLATION**  
(QUANTITIES ARE BASED ON THIS DETAIL)



**PRE-PAVING INSTALLATION ALTERNATIVE**

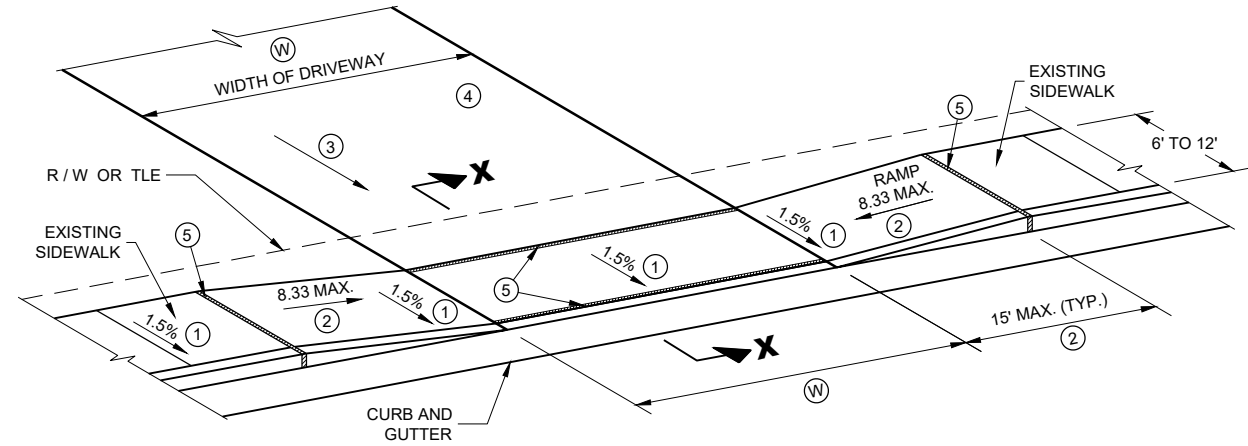
**EDGEDRAIN IN RURAL ROADWAY**

**EDGEDRAIN AND BASE AGGREGATE OPEN GRADED**

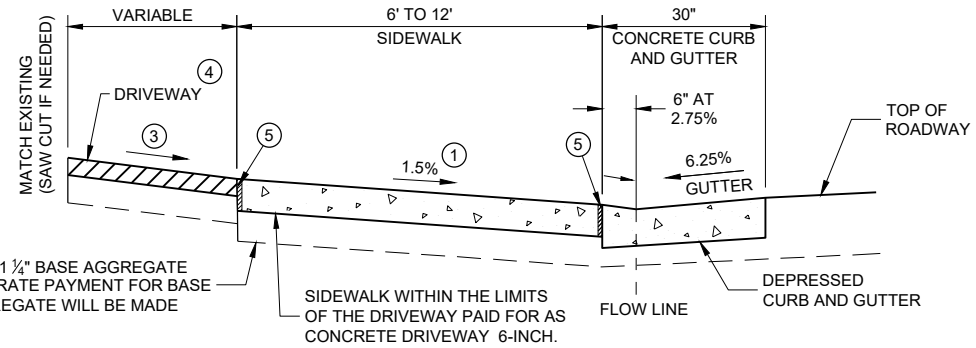
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2015 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR

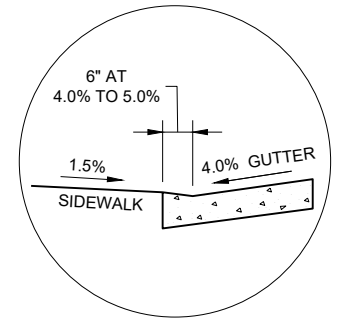
FHWA



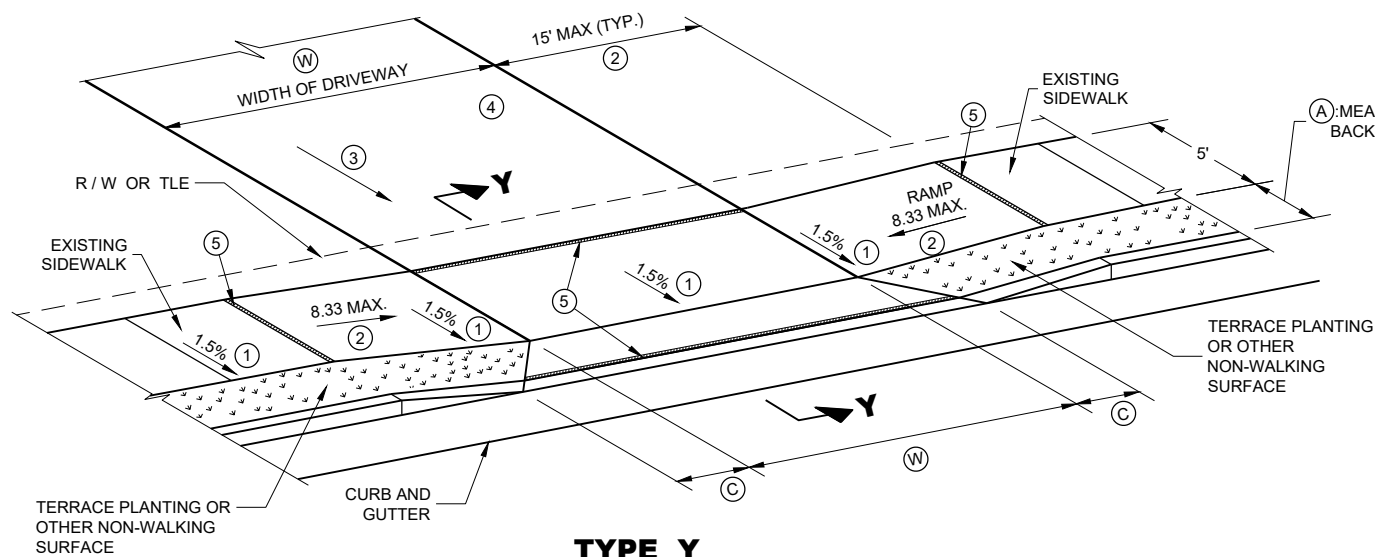
**TYPE X**  
**SIDWALK ABUTS CURB AND GUTTER**  
**TERRACE VARIES 0 TO 3 FEET**



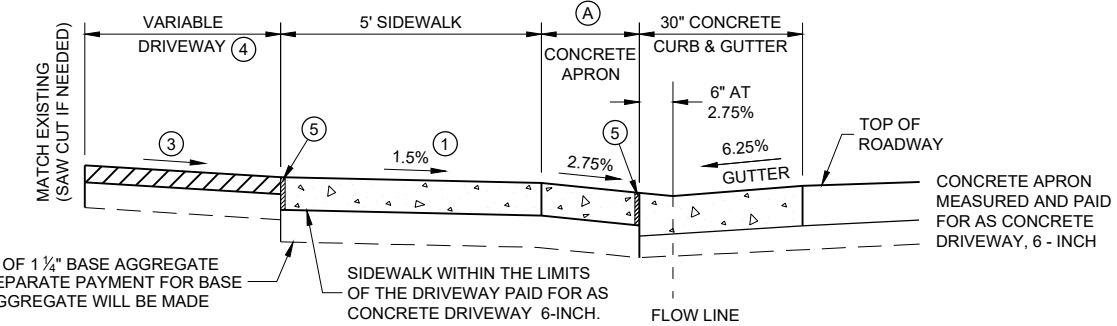
**SECTION X - X**



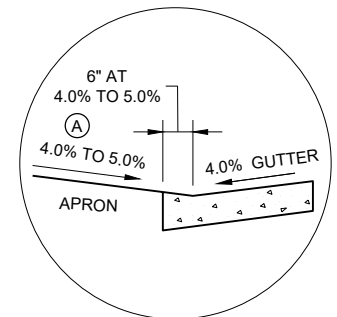
**SECTION X - X**  
**4% GUTTER SLOPE**



**TYPE Y**  
**SIDWALK WITH NARROWER TERRACE**  
**TERRACE VARIES 4 TO 6 FEET**



**SECTION Y - Y**  
**DRIVEWAY DETAIL WITH CONCRETE**  
**CURB AND GUTTER**  
**(URBAN AND SUBURBAN)**



**SECTION Y - Y**  
**4% GUTTER SLOPE**

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)  
 16' MIN. - 35' MAX. COMMERCIAL (CE)

**TABLE Y**

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

(A): MEASURE FROM BACK OF CURB

6" OF 1 1/4" BASE AGGREGATE SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

**GENERAL NOTES**

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

- ① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- ② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

- ③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM  
 10.5% UP AWAY FROM SIDEWALK (SAG)  
 8.5% DOWN AWAY FROM SIDEWALK (CREST)  
 ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

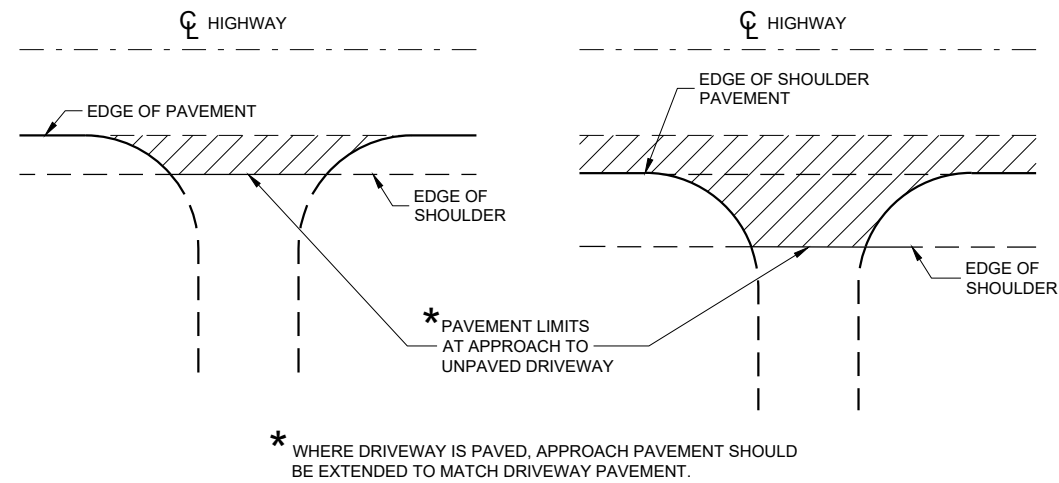
- ④ DRIVEWAY TYPES
  - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
  - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
  - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

- ⑤ 1/2" EXPANSION JOINT FILLER

**DRIVEWAY AND**  
**SIDWALK RAMPS**  
**TYPES X AND Y**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

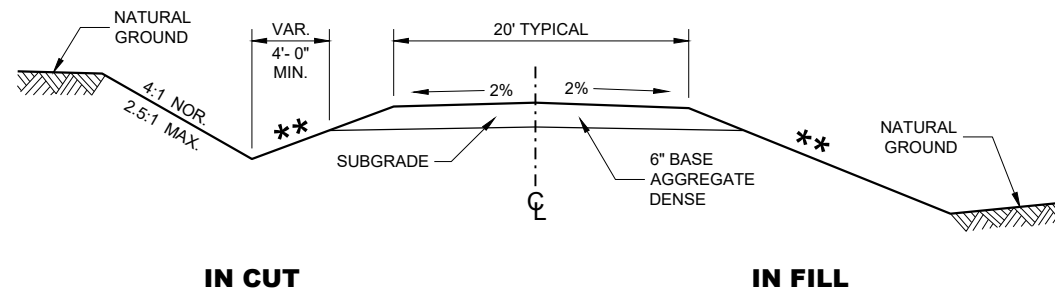
APPROVED  
 February 2022 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 ENGINEER



**PLAN VIEW**  
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**  
(PAVED SHOULDER ON HIGHWAY)

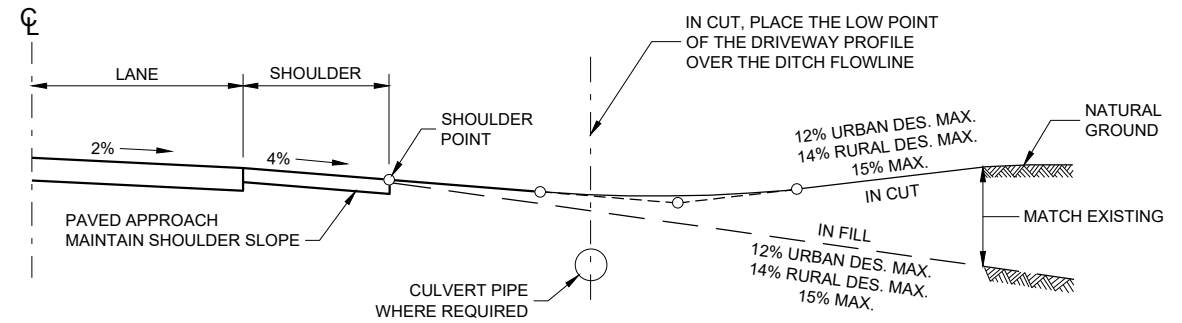
**RURAL DRIVEWAY INTERSECTION DETAIL  
(NO CURB AND GUTTER OR SIDEWALK)**



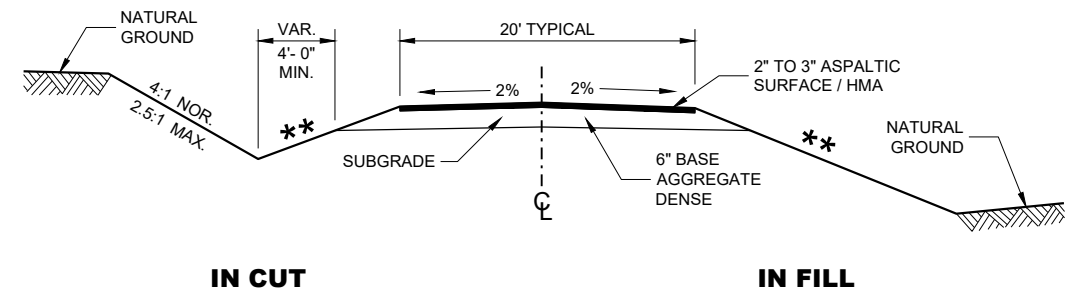
**TYPICAL CROSS SECTION FOR  
PRIVATE DRIVE OR FIELD ENTRANCE  
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



**TYPICAL DRIVEWAY PROFILES**



**TYPICAL CROSS SECTION FOR  
PRIVATE DRIVE OR FIELD ENTRANCE  
ASPHALTIC SURFACE**

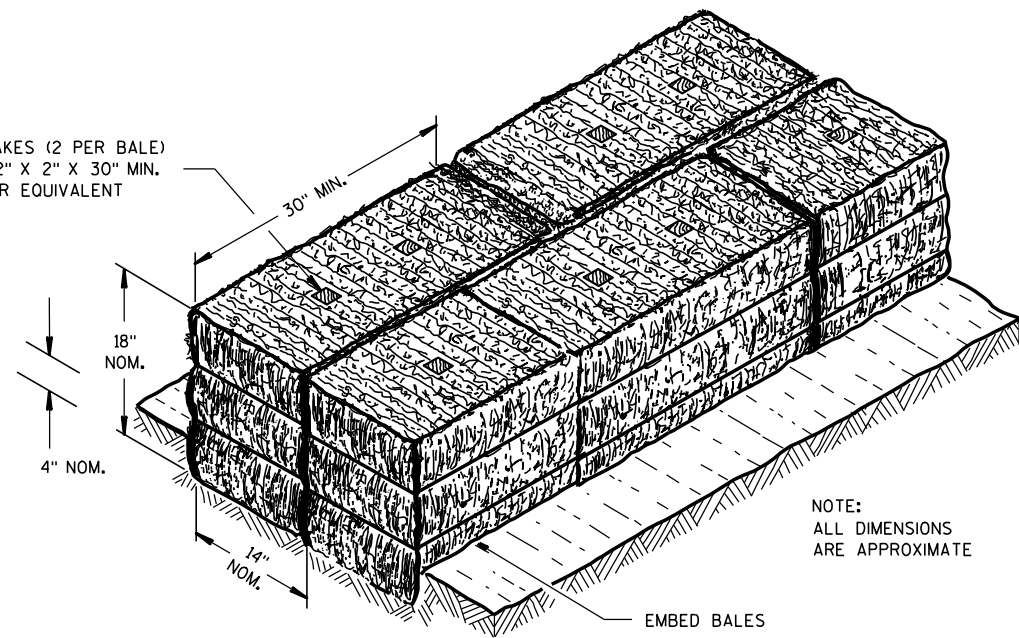
**DRIVEWAYS WITHOUT CURB AND GUTTER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2017 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

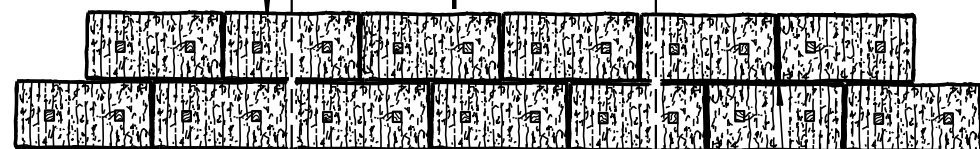
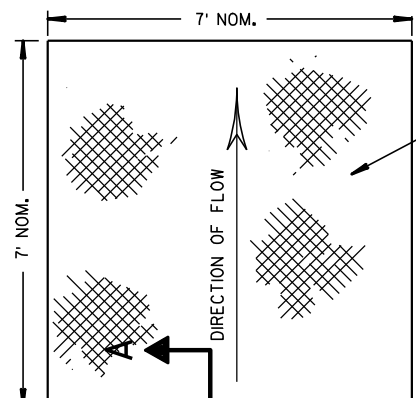
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

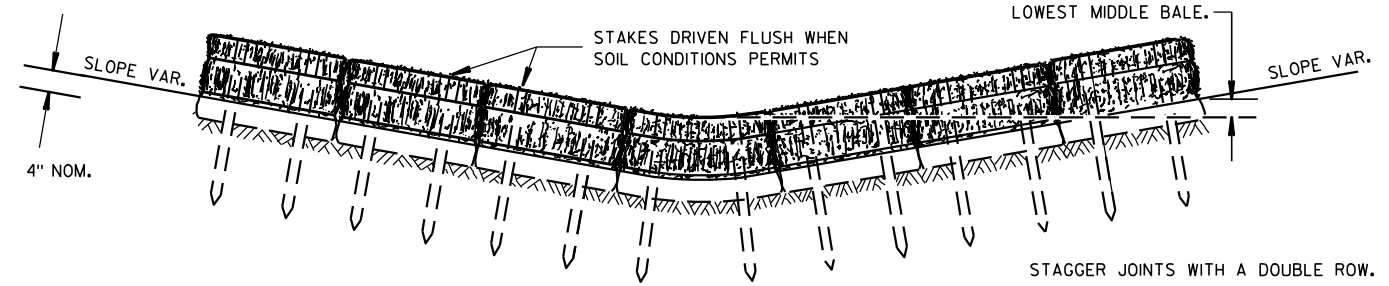
SECTION A-A



STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



STAGGER JOINTS WITH A DOUBLE ROW.

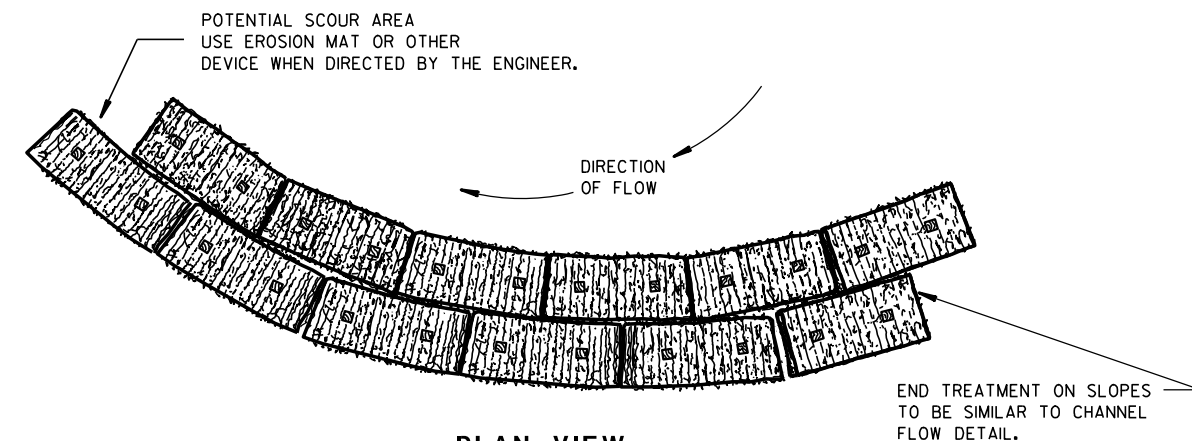
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

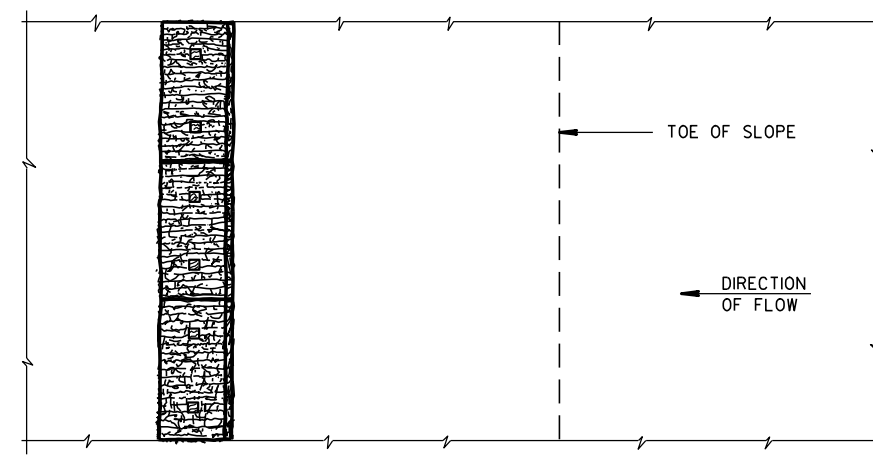
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

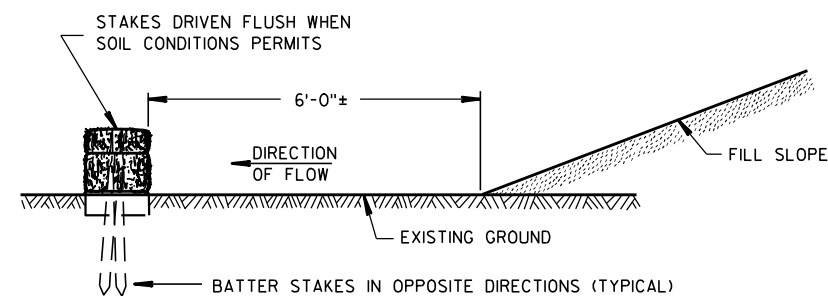


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

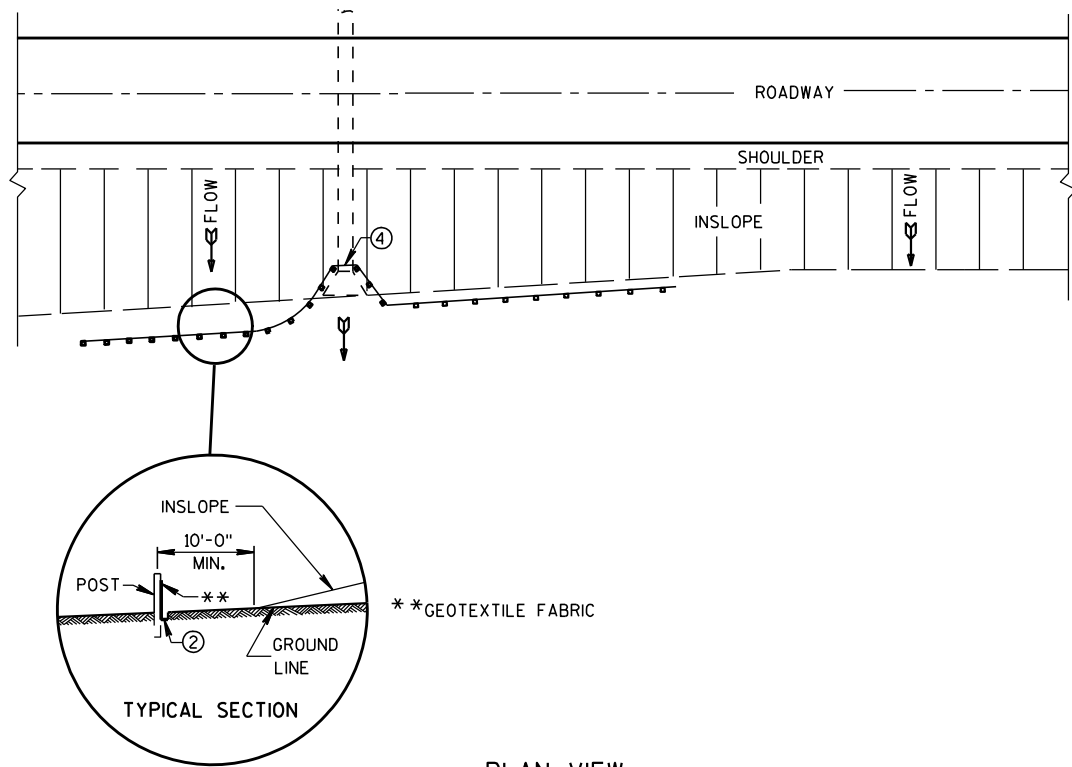
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

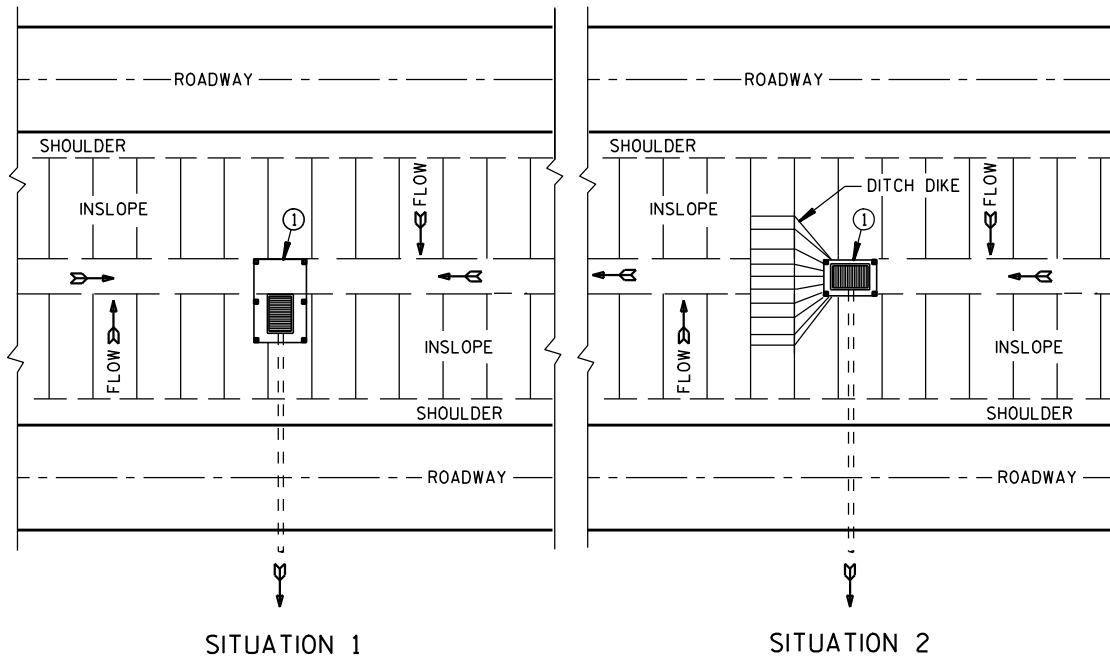
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

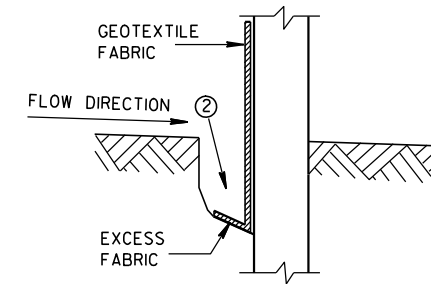


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

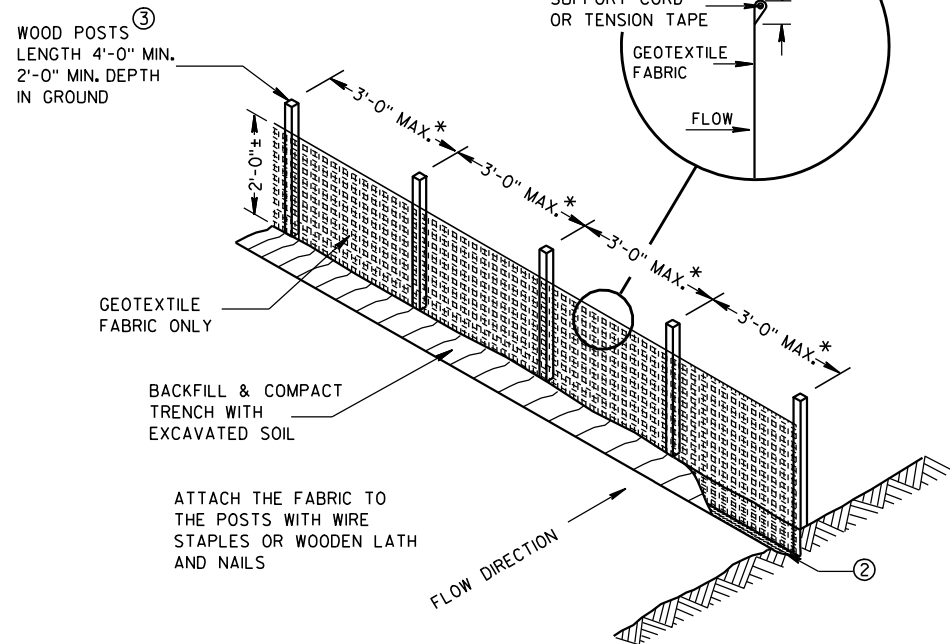
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" 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.



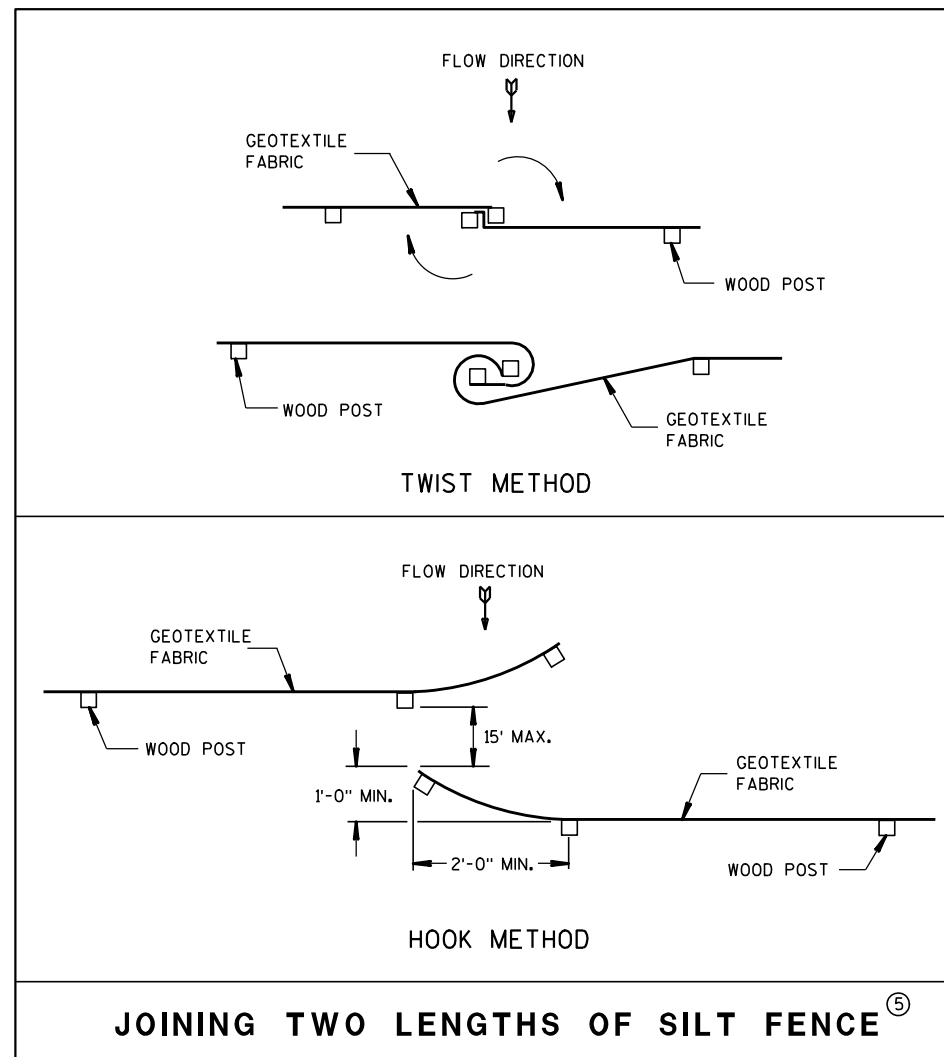
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

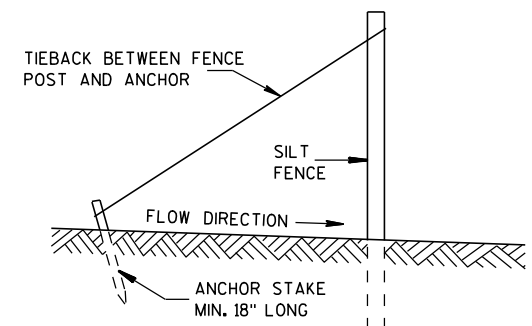


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



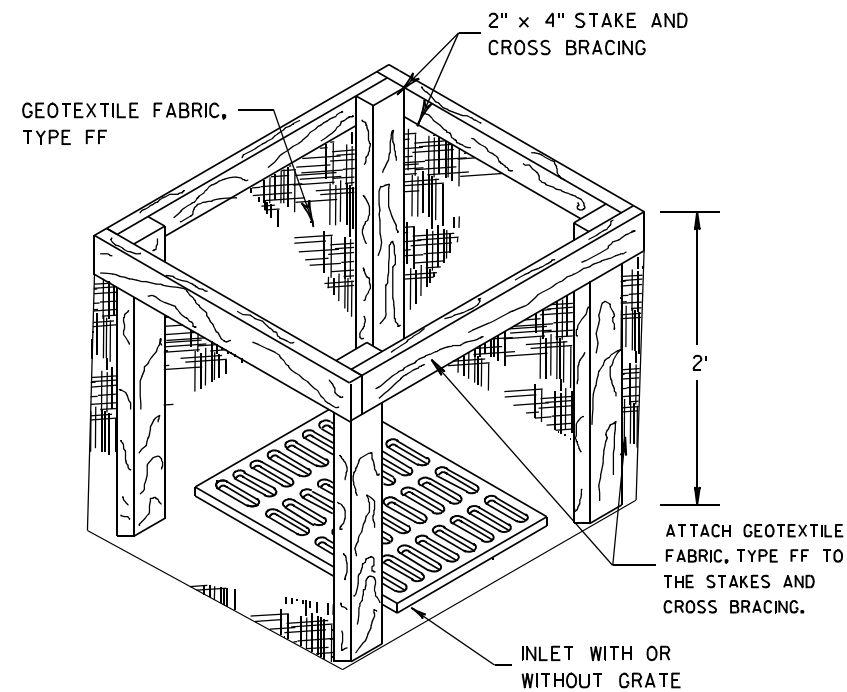
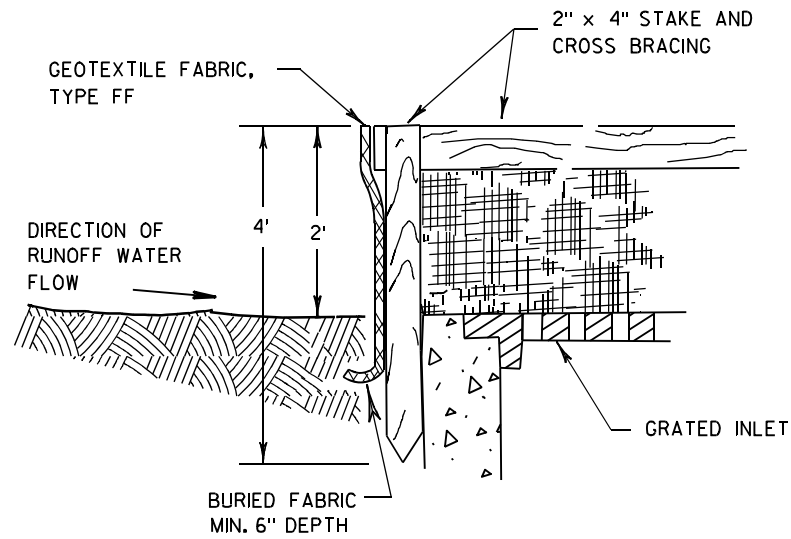
SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
4-29-05 /S/ Beth Canestra  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA





**INLET PROTECTION, TYPE A**

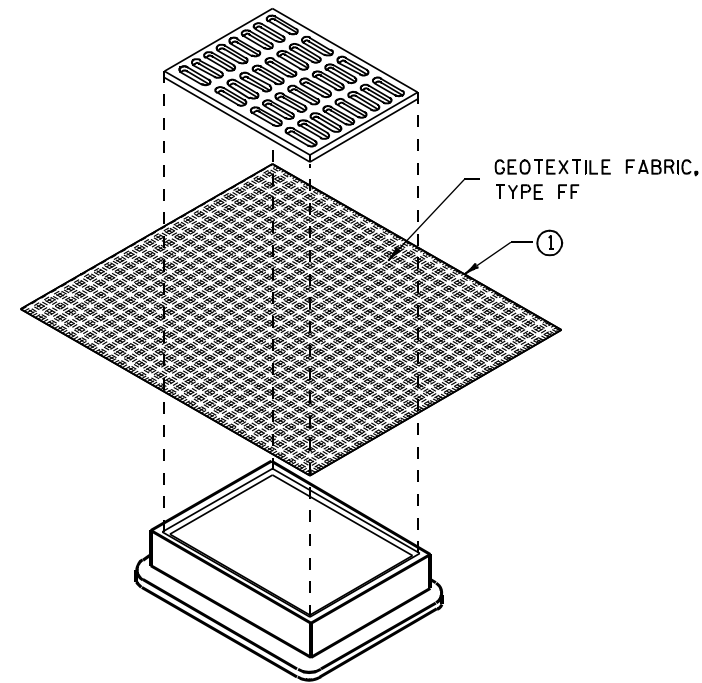
**GENERAL NOTES**

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.

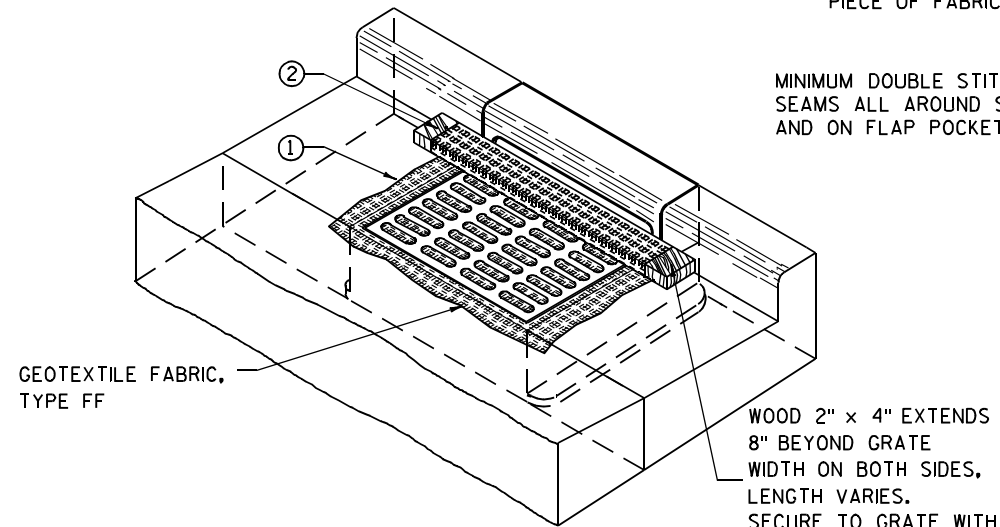
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

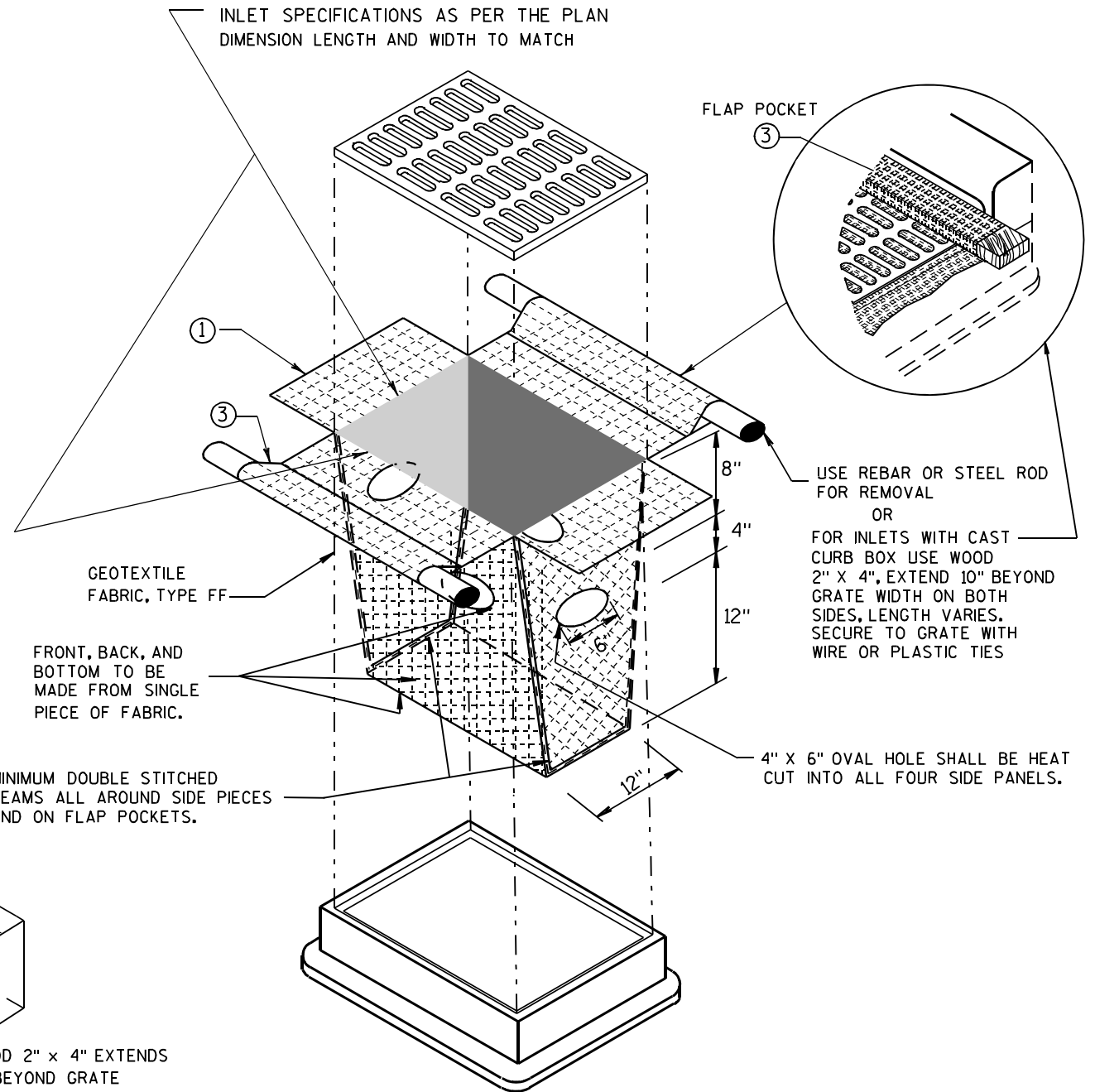
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**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.

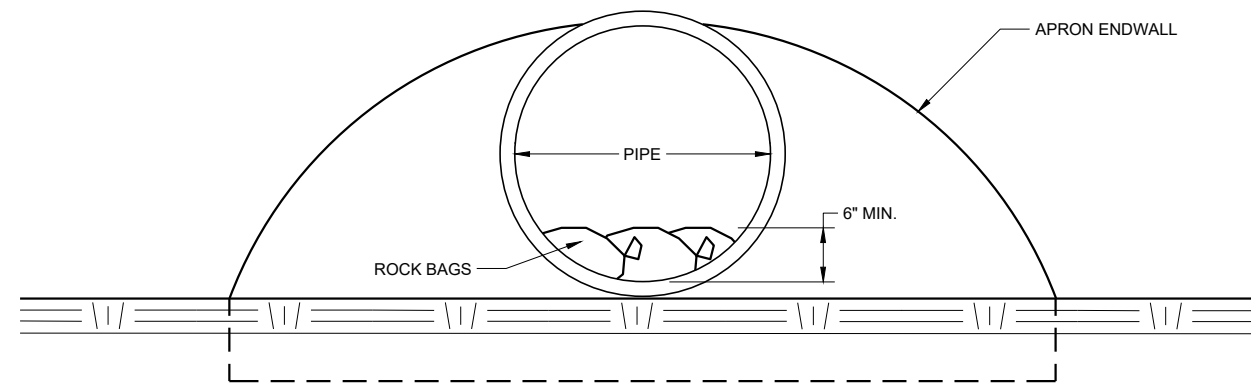
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



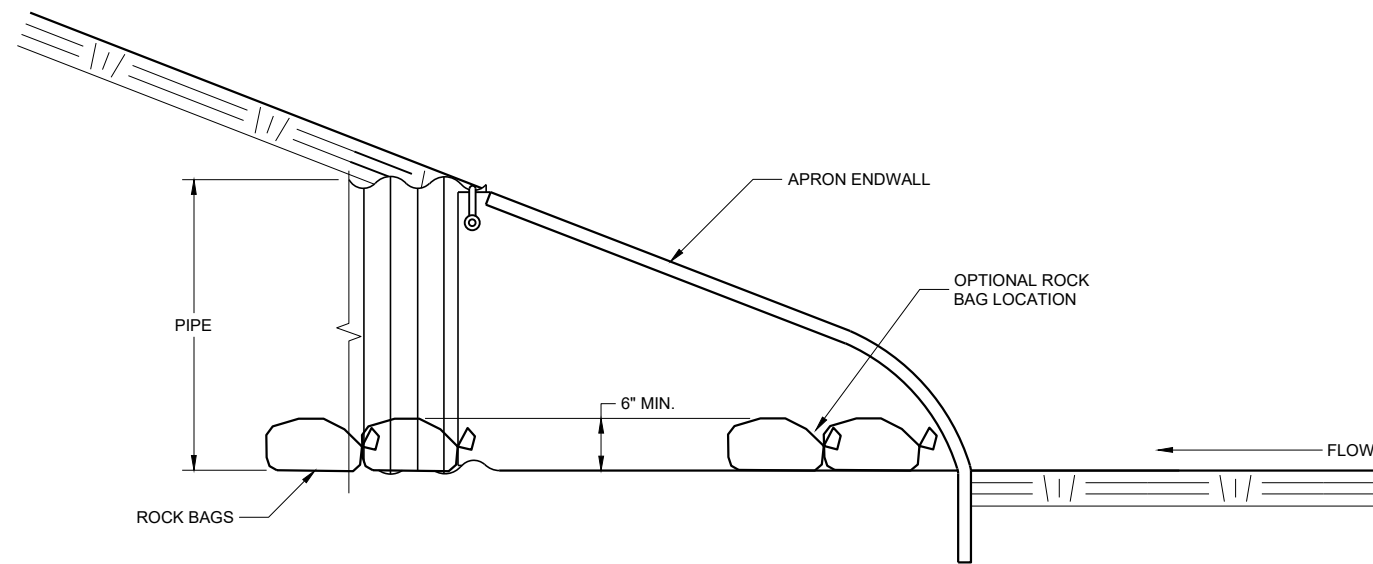
**INLET PROTECTION, TYPE D**

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

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/S/ Beth Connestra 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 /S/ Daniel Schave  
DATE EROSION CONTROL ENGINEER

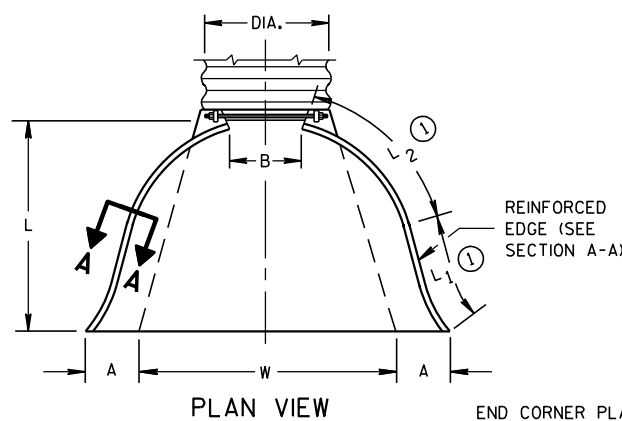
FHWA

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.	

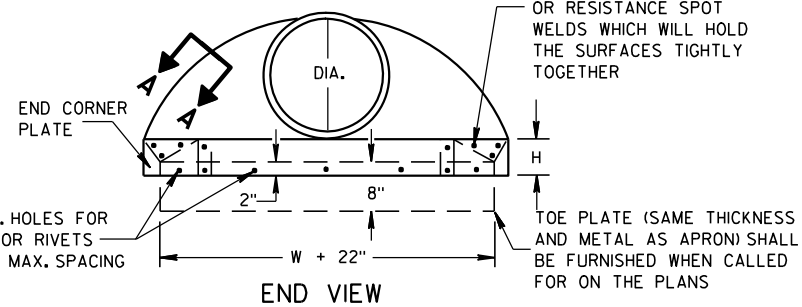
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	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 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	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	

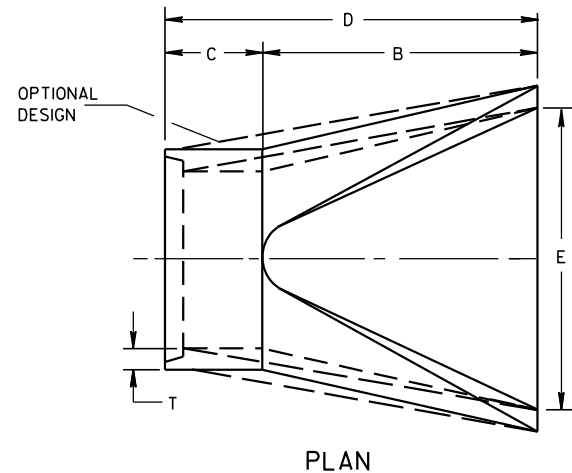
* MINIMUM  
** MAXIMUM



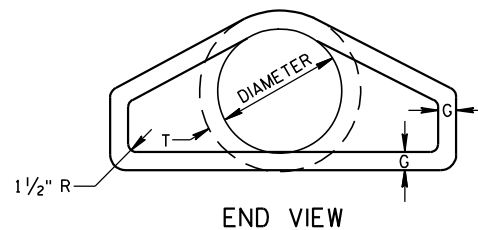
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



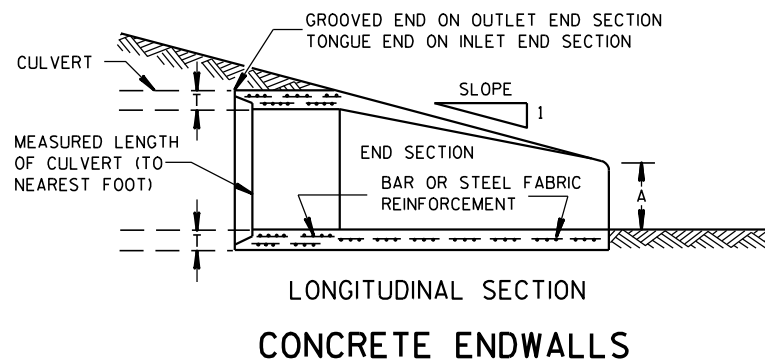
SIDE ELEVATION  
METAL ENDWALLS



PLAN

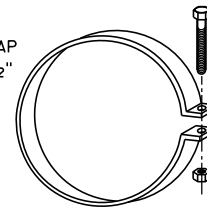


END VIEW

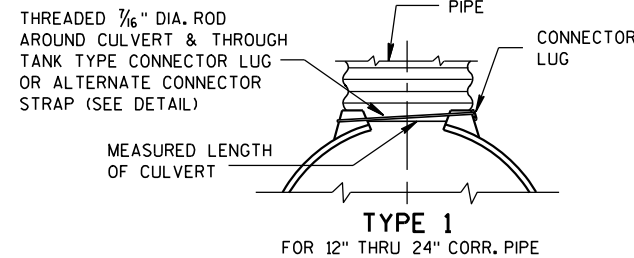


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

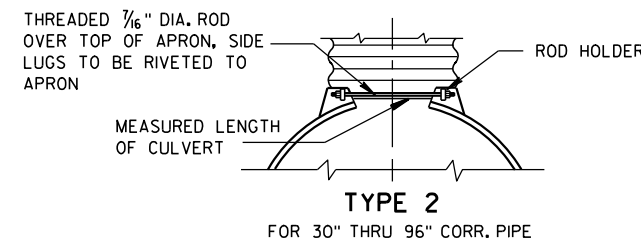
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



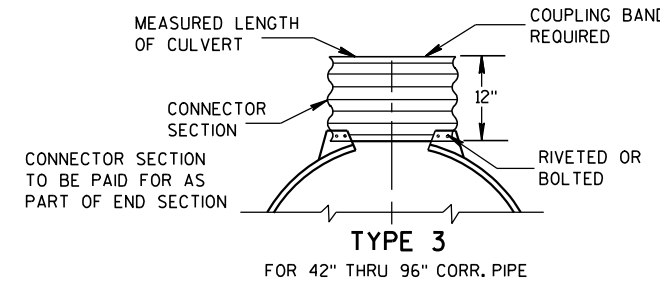
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



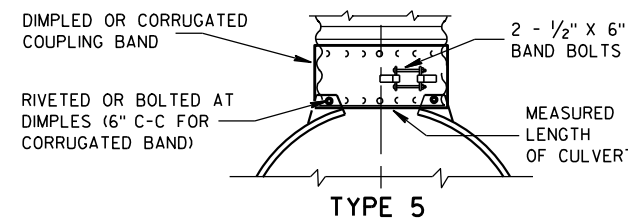
TYPE 1  
FOR 12" THRU 24" CORR. PIPE



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



TYPE 5  
ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

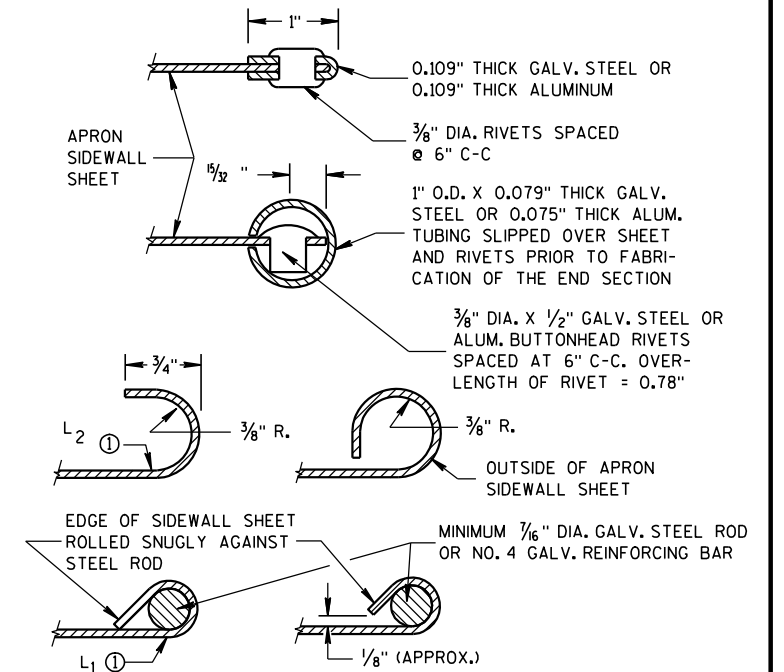
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

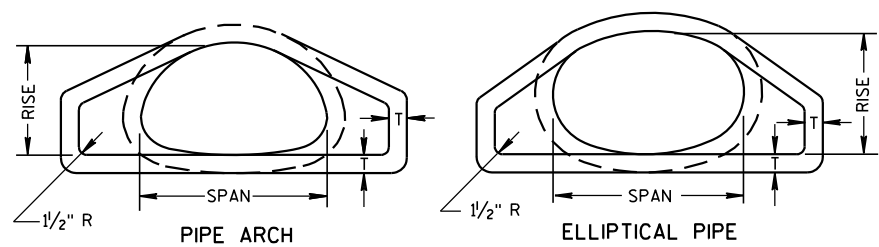
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

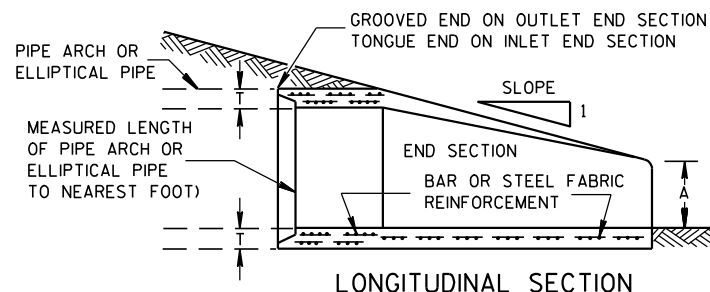
APRON ENDWALLS FOR  
CULVERT PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

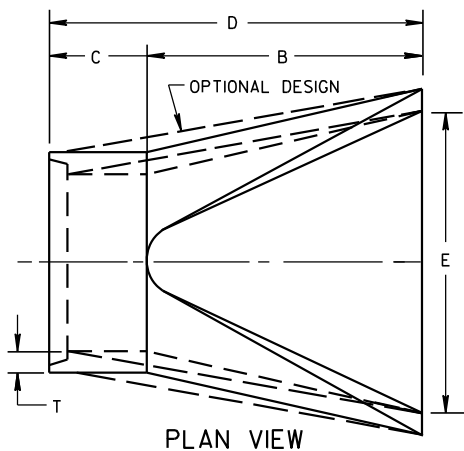


END VIEW



LONGITUDINAL SECTION

CONCRETE ENDWALLS



PLAN VIEW

**2- 2/3" X 1/2" CORRUGATIONS**

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

**3" X 1" CORRUGATIONS**

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

**REINFORCED CONCRETE PIPE ARCH**

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 5/8	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

**REINFORCED CONCRETE ELLIPTICAL PIPE**

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

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.

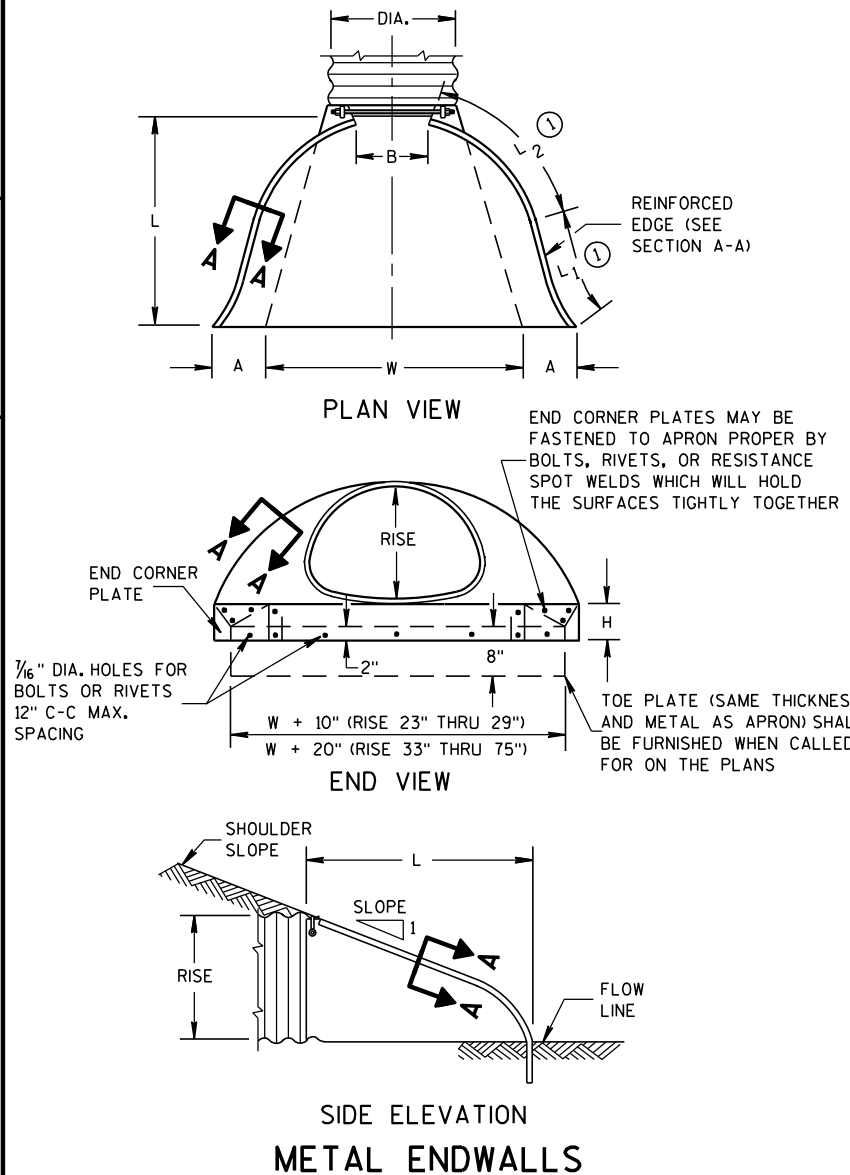
CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH PERIMETER.

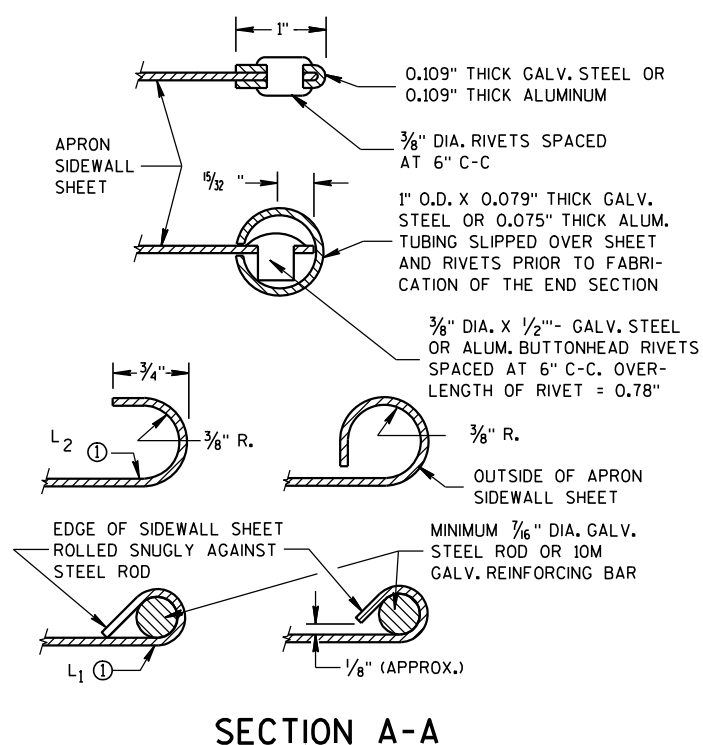
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER 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.

⓪ FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



METAL ENDWALLS

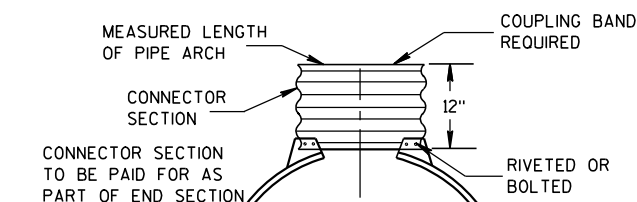


SECTION A-A



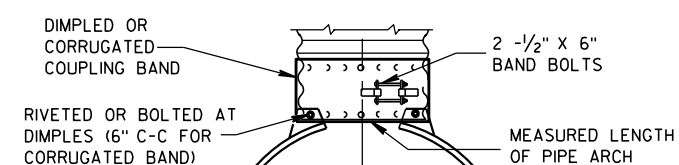
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR: ALL SIZES CORRUGATED PIPE ARCHES

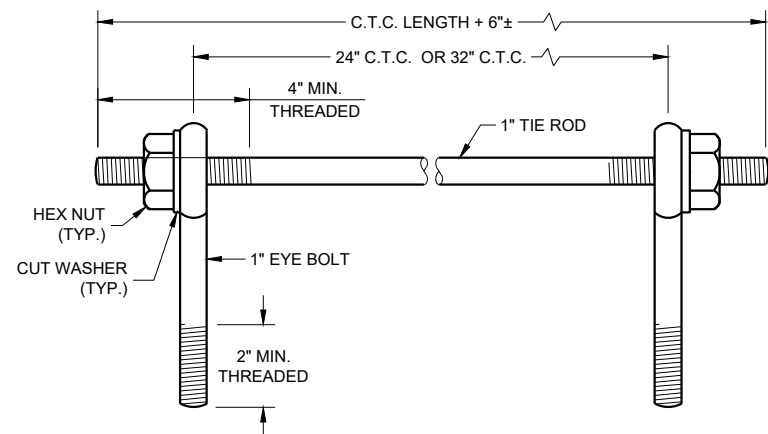
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

**APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE**

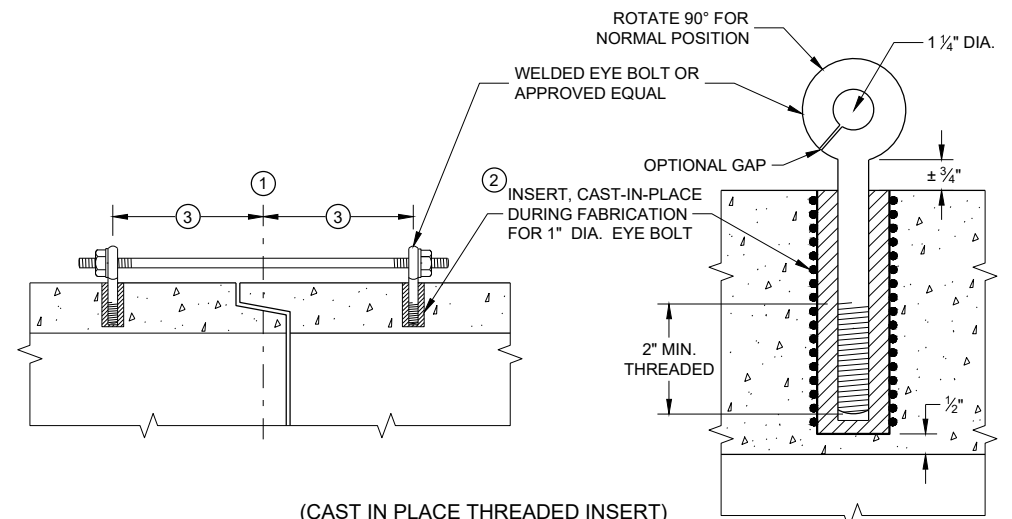
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**EYE BOLTS AND TIE ROD**

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)**



**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

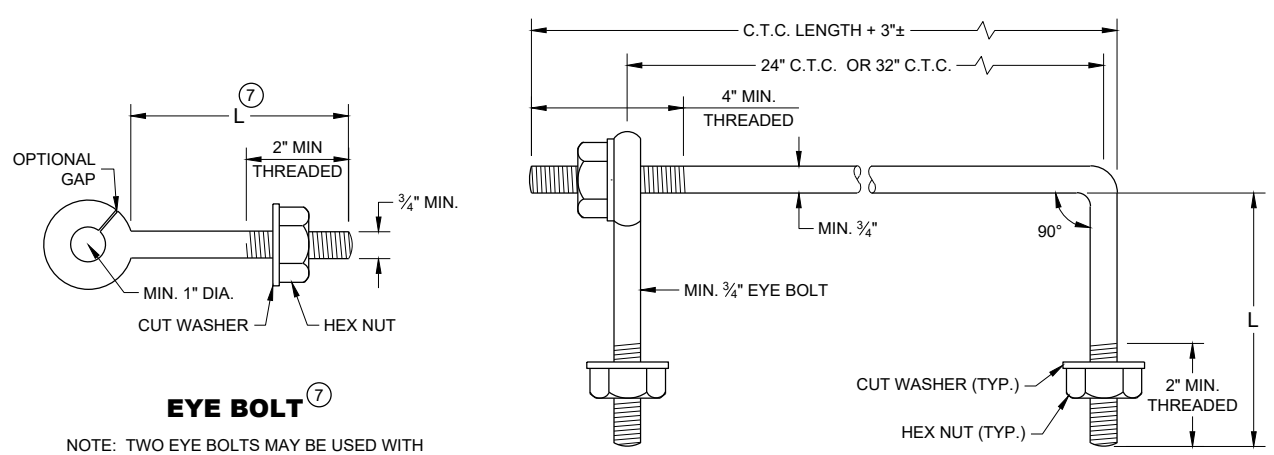
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

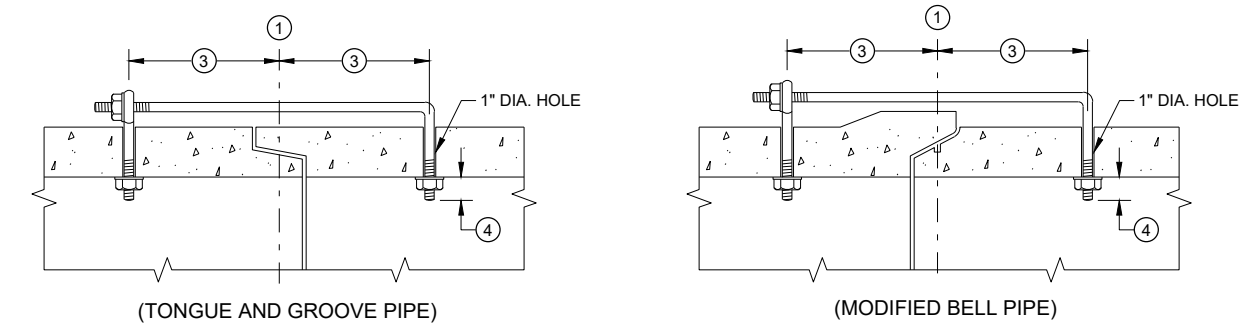
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION 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**



**LONGITUDINAL SECTION**

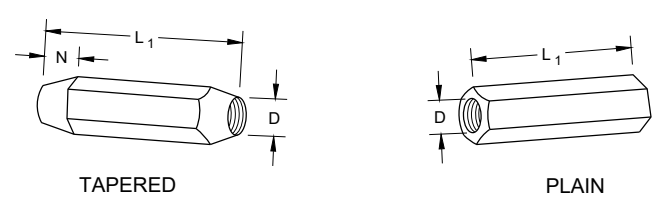
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)**

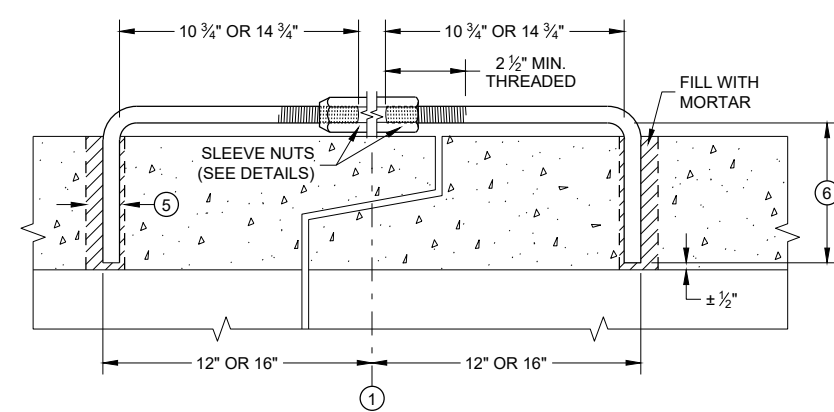
**ADJUSTABLE TIE ROD TABLE**

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

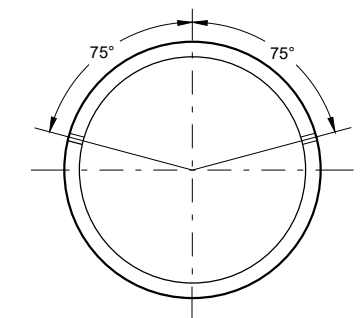


**RIGHT AND LEFT THREADS SLEEVE NUTS**



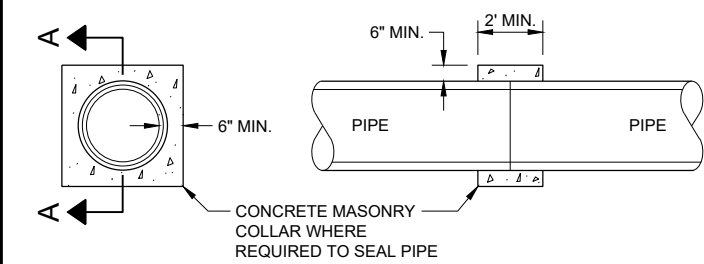
**LONGITUDINAL SECTION**

**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**

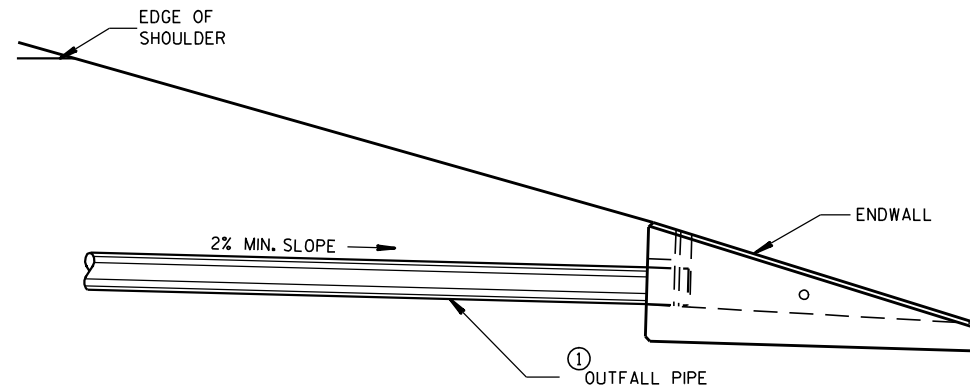
**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

** APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

**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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

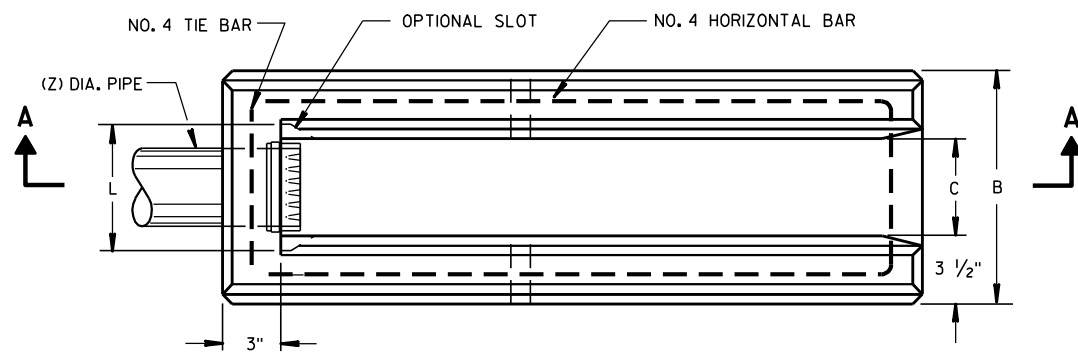
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

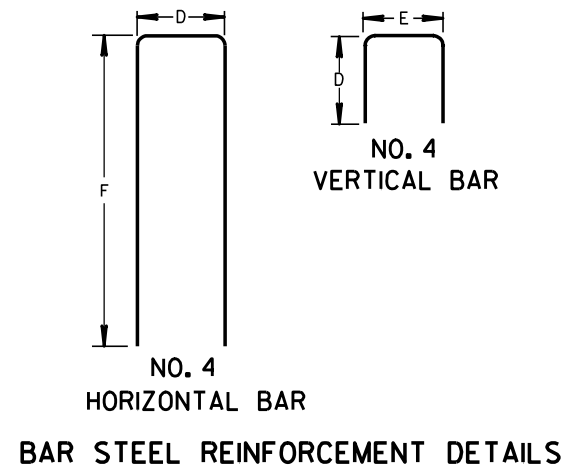
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

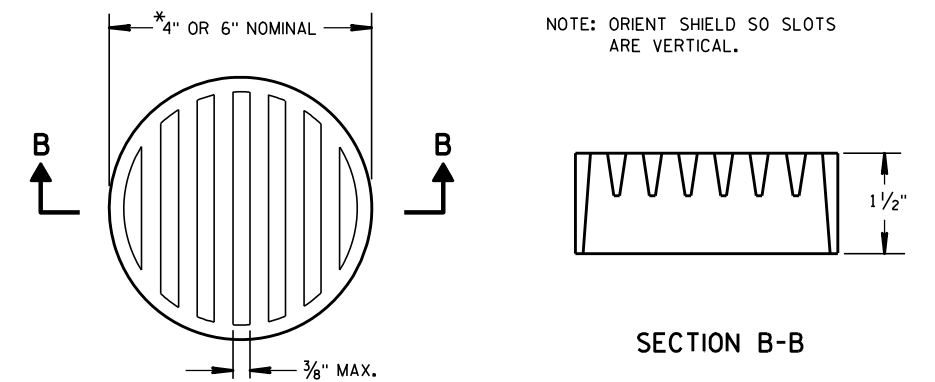
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PLAN VIEW

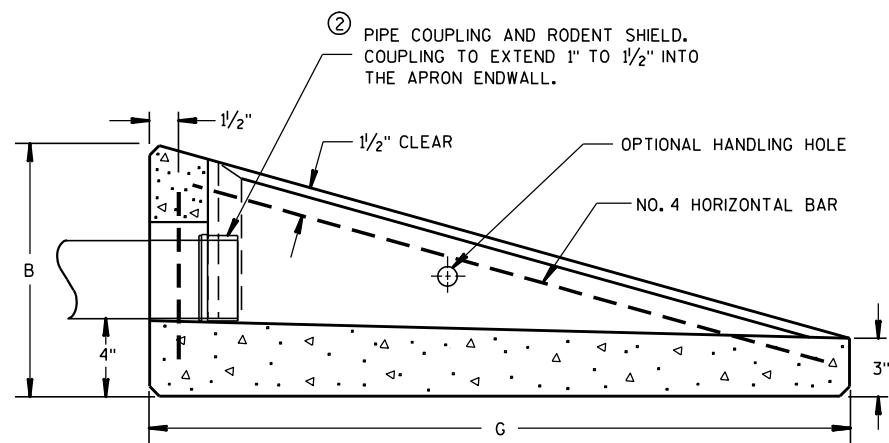


BAR STEEL REINFORCEMENT DETAILS



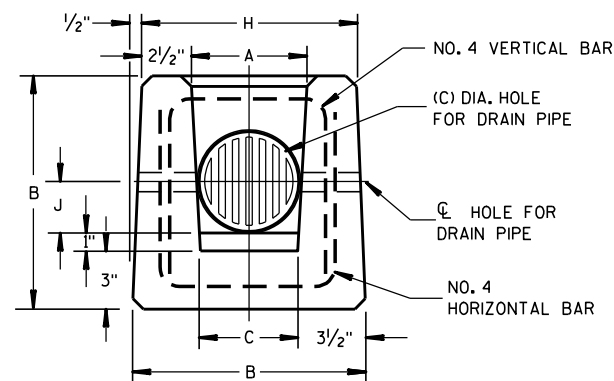
② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A

CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

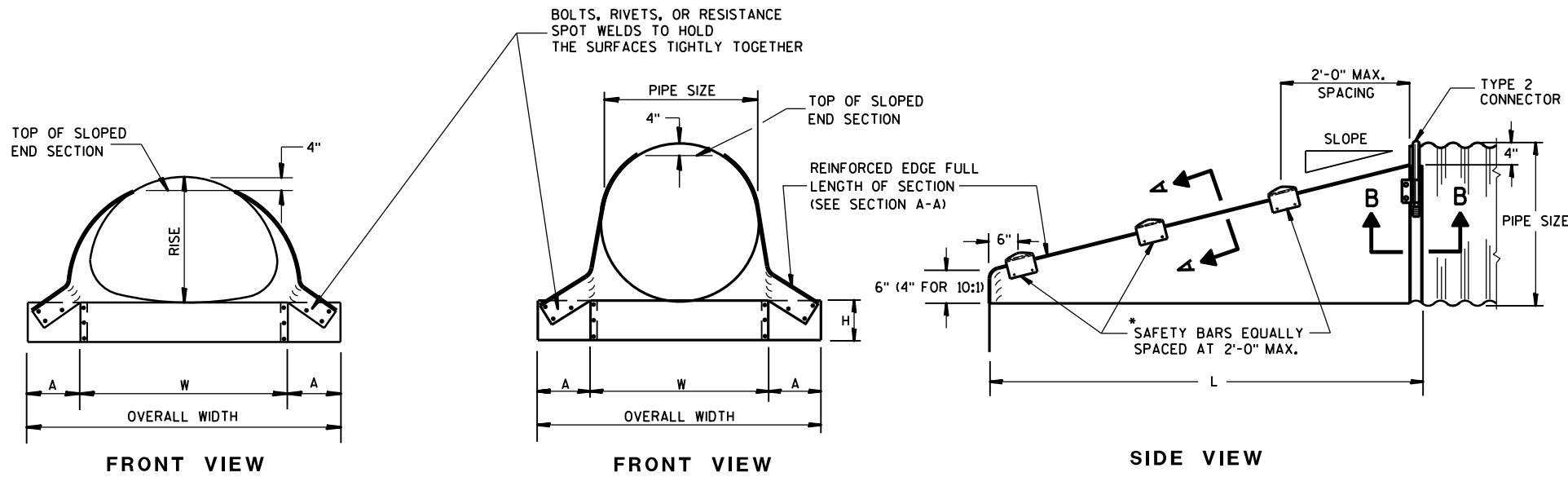
**REINFORCED  
CONCRETE APRON ENDWALL  
FOR PIPE UNDERDRAIN**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



**GENERAL NOTES**

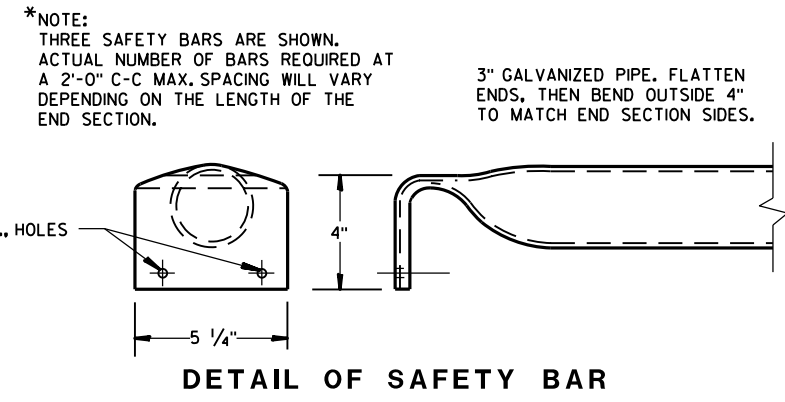
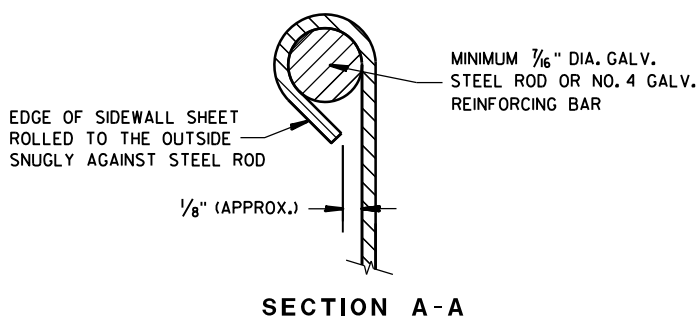
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

**STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS**

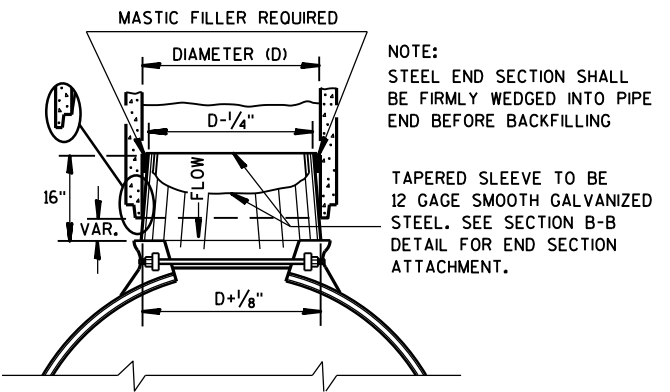
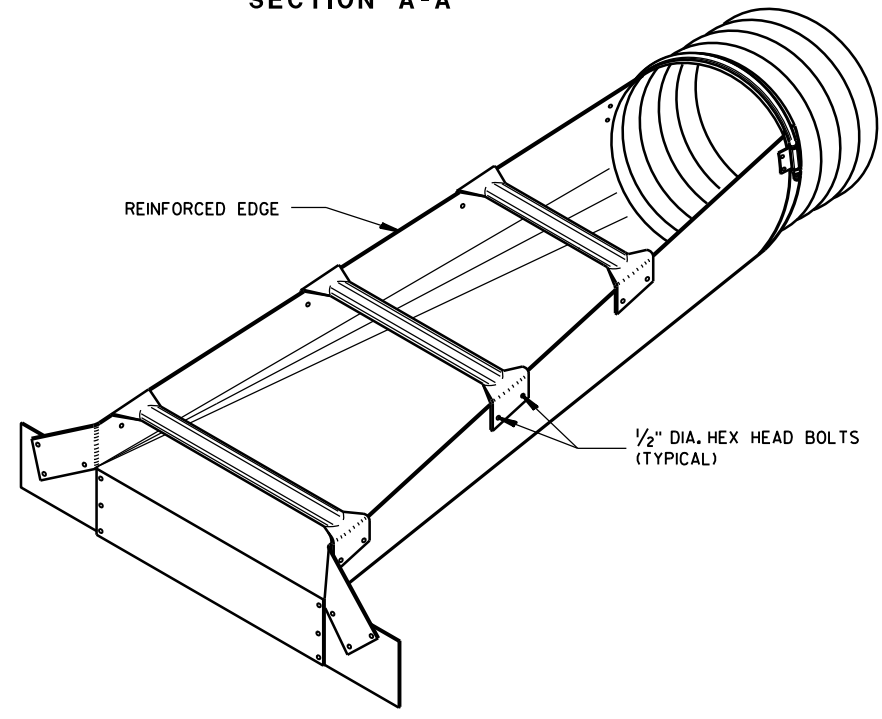
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	—	—
48	.109	16	12	54	86	4:1	152	6:1	228	—	—
54	.109	16	12	60	92	4:1	176	6:1	264	—	—
60	.109	16	12	66	98	4:1	200	6:1	300	—	—



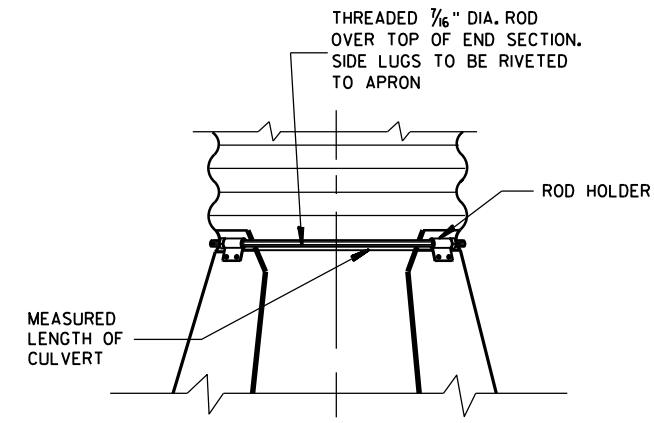
**STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS**

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS					
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	—	—
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	—	—
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	—	—

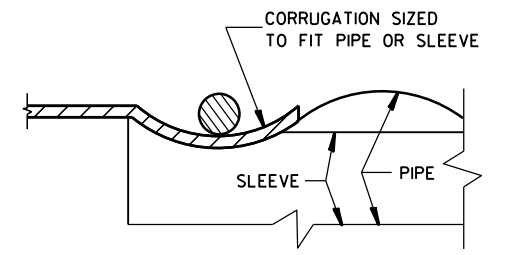
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".  
 ② ACTUAL SLOPE GREATER THAN 10:1.



**STEEL ADAPTER SLEEVE FOR CONCRETE PIPE**



**TYPE 2 CONNECTION DETAIL**



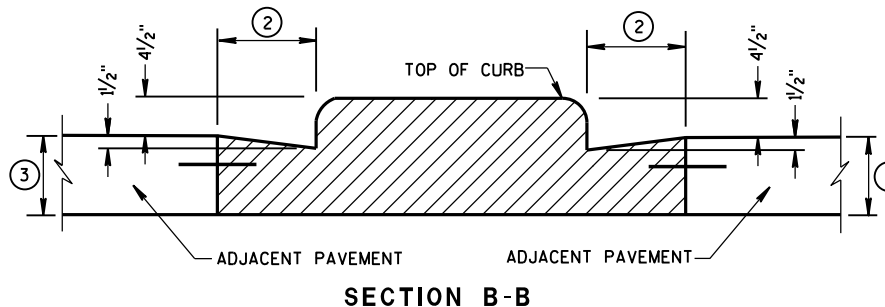
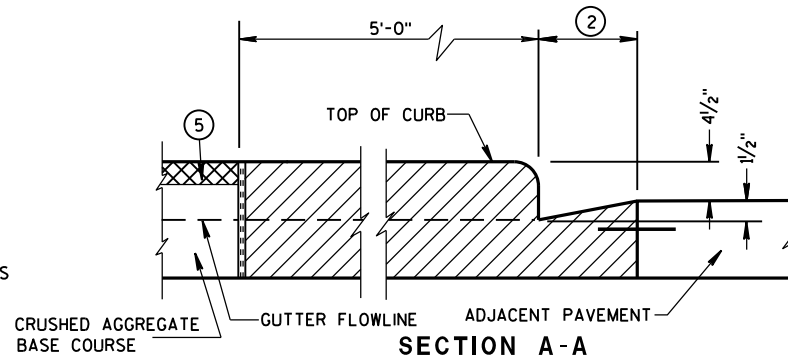
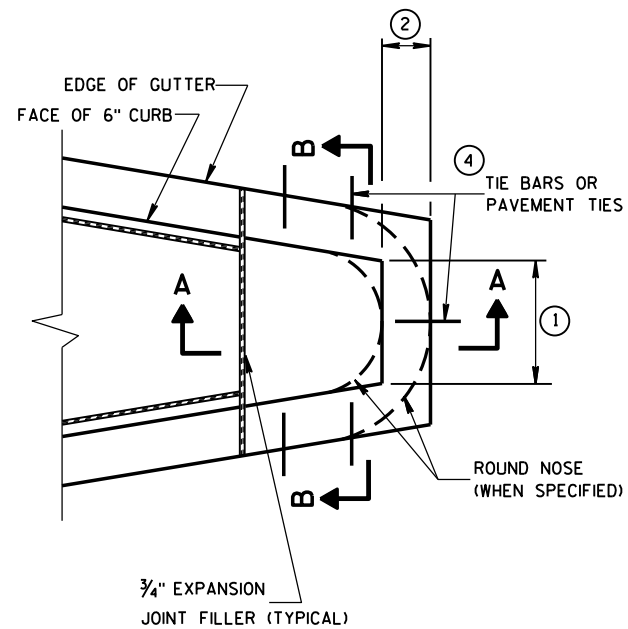
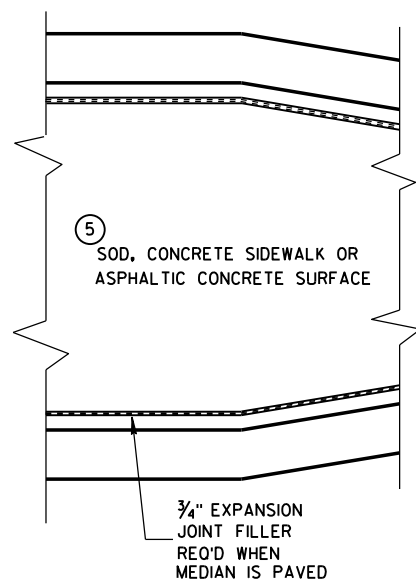
**SECTION B-B**

**STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 9/14/2012 /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

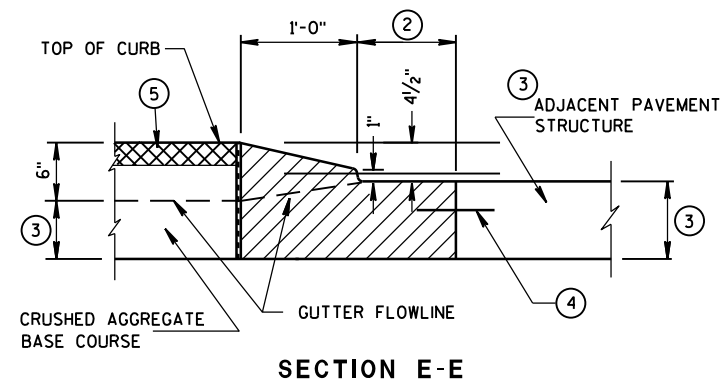
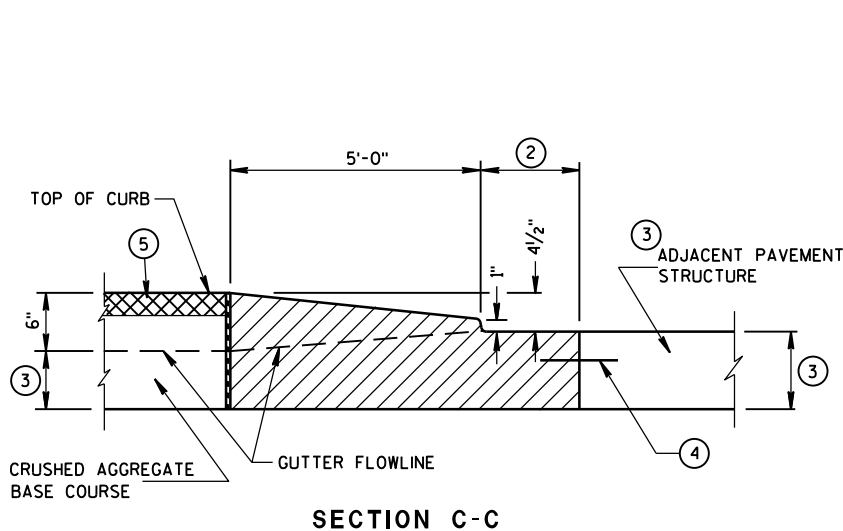
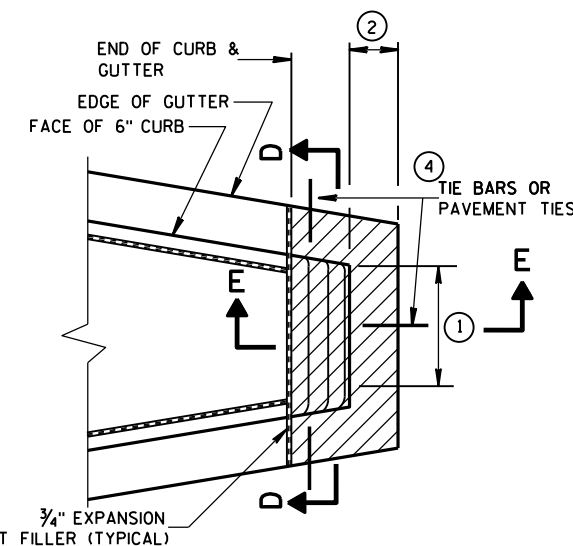


CONCRETE MEDIAN BLUNT NOSE DETAIL

**GENERAL NOTES**

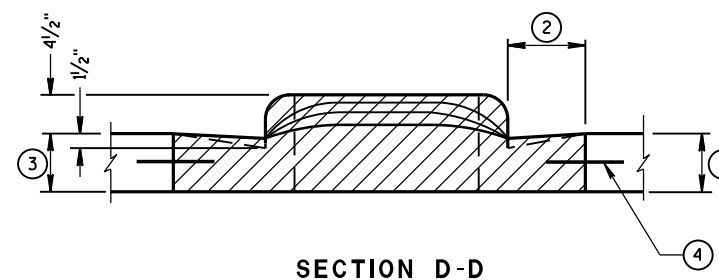
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



<b>CONCRETE MEDIAN NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

6

S.D.D. 11 B 2-2

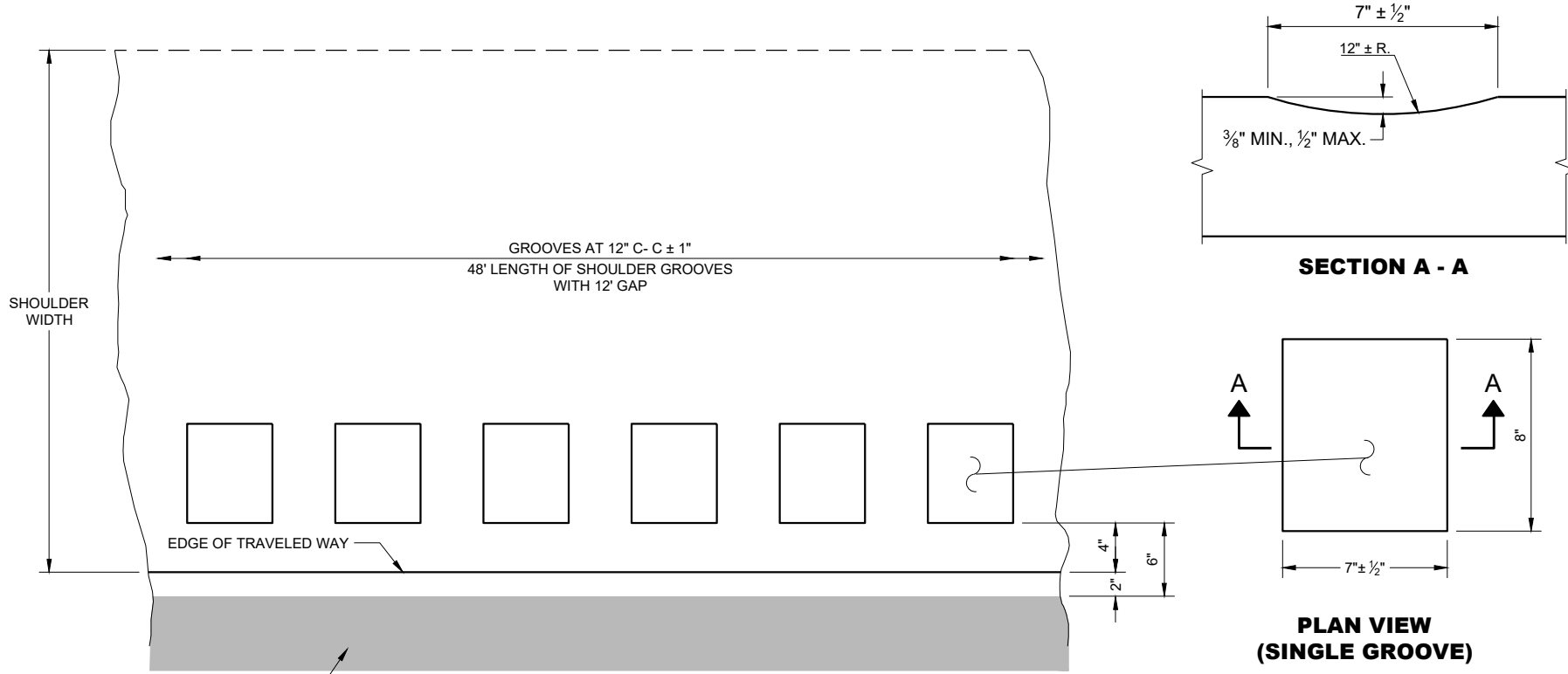
S.D.D. 11 B 2-2



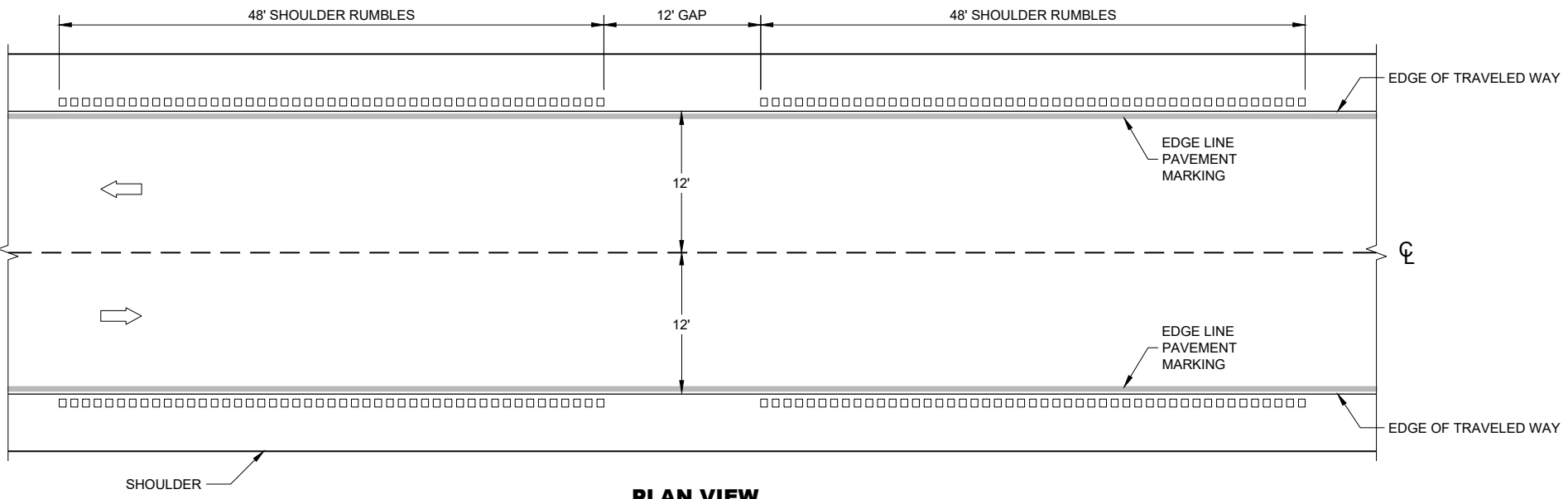
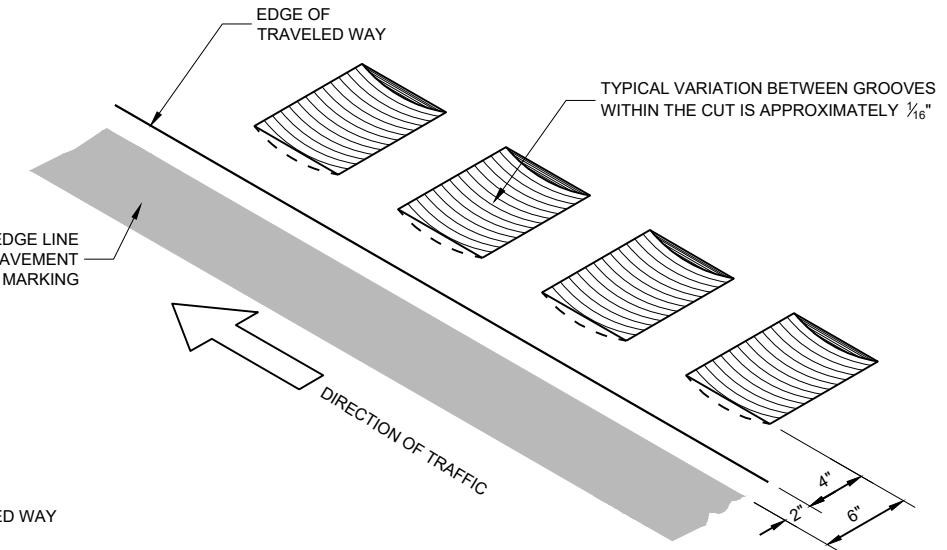
**GENERAL NOTES**

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

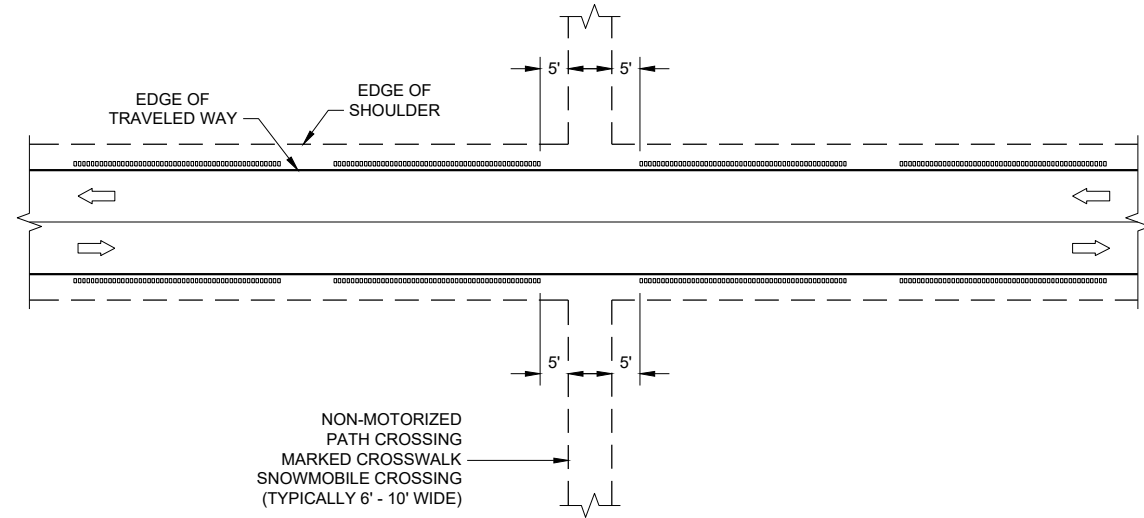


**PLAN DETAIL VIEW SHOULDER WITH GROOVES**

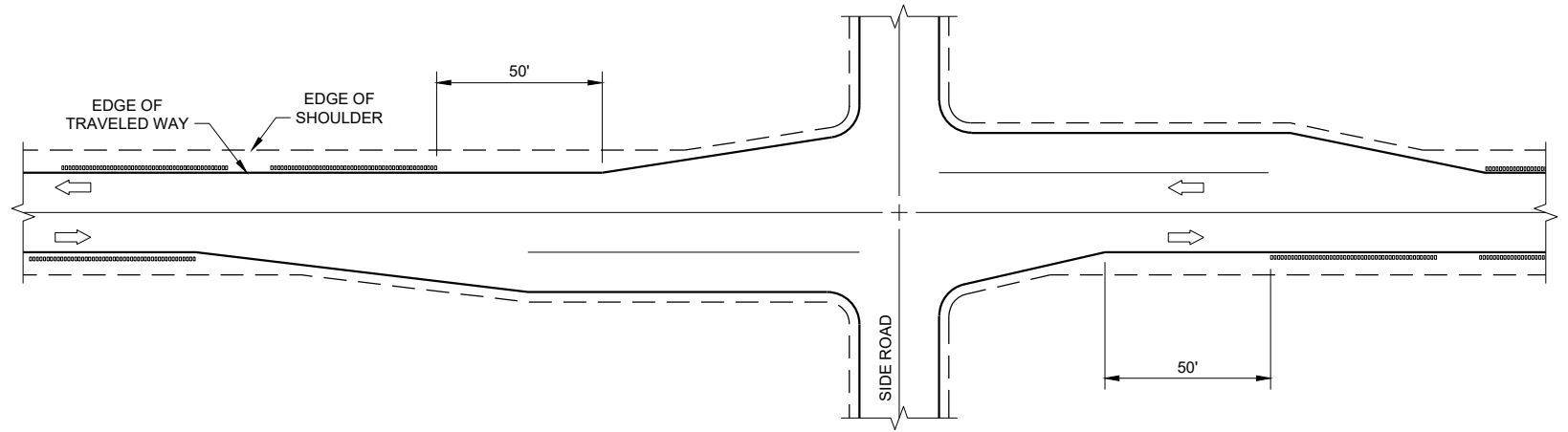


**SHOULDER RUMBLE STRIPS - ASPHALT**

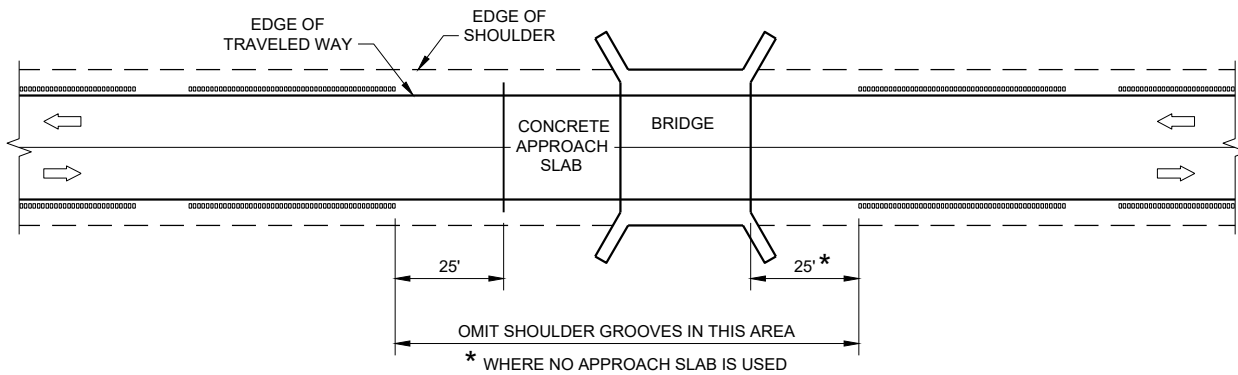
<b>SHOULDER RUMBLE STRIPS ASPHALT</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



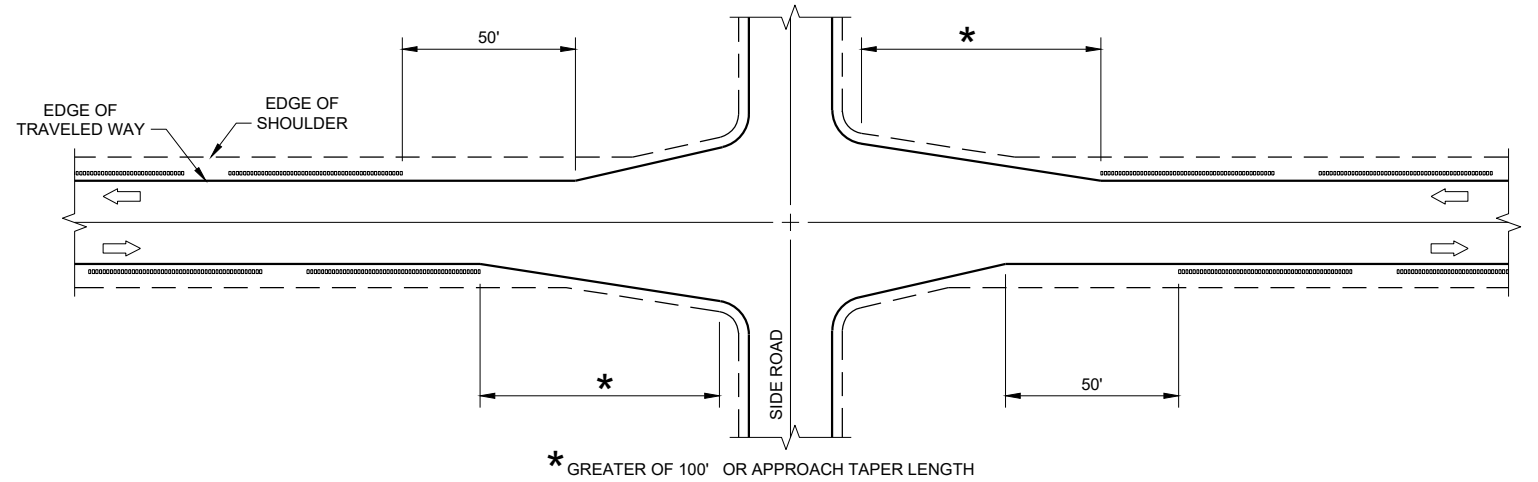
**GROOVES AT MISCELLANEOUS CROSSINGS**



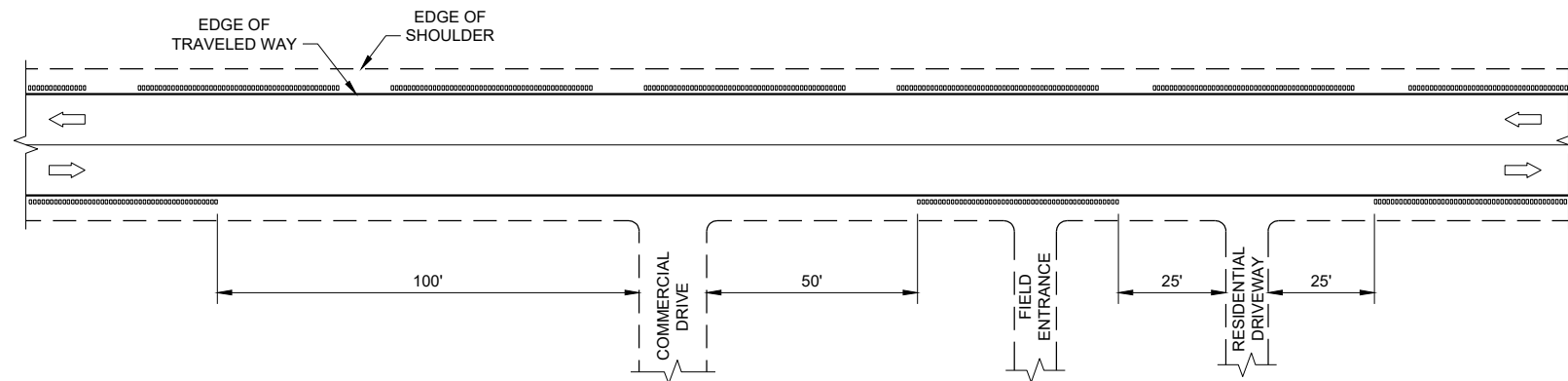
**GROOVES AT RIGHT TURN LANE**



**GROOVES AT BRIDGES**



**GROOVES AT INTERSECTIONS WITH APPROACH TAPER**



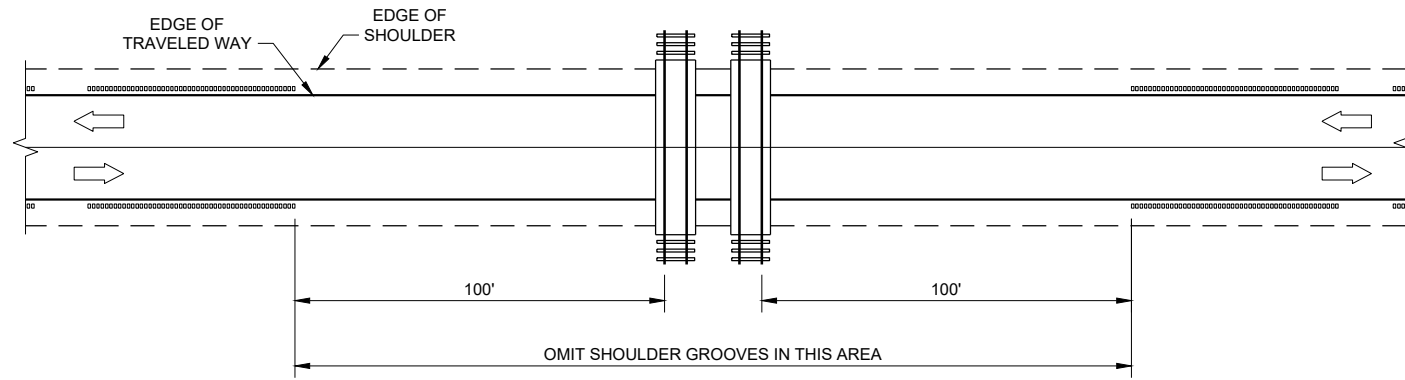
**GROOVES AT DRIVEWAYS**

**GENERAL NOTES**

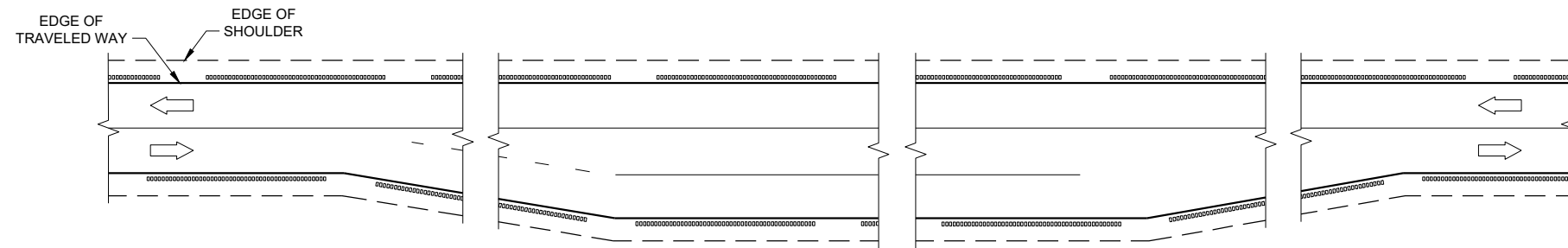
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**SHOULDER AND EDGE LINE  
RUMBLE STRIPS  
CROSSINGS, INTERSECTIONS,  
BRIDGES, DRIVEWAYS**

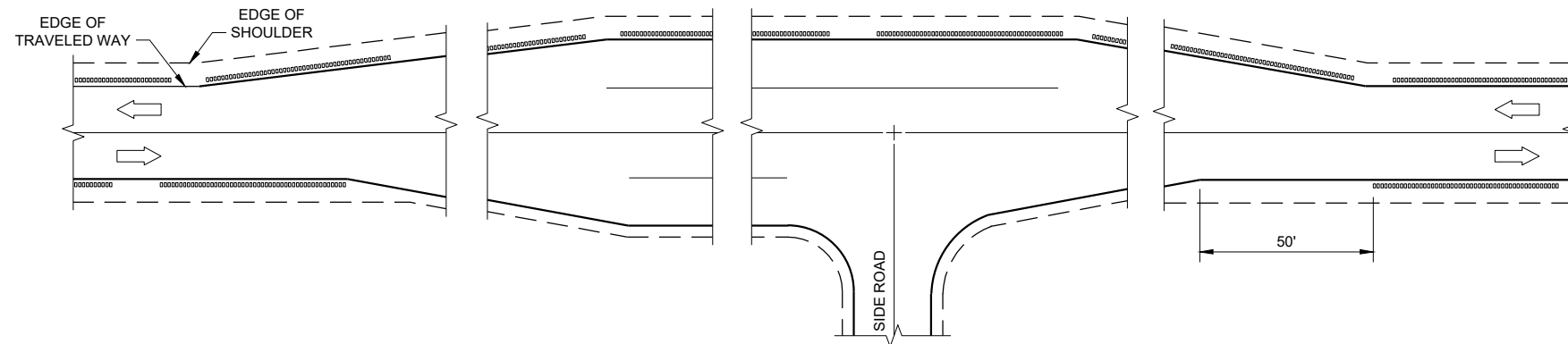
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**GROOVES AT RAILROADS**



**GROOVES AT PASSING AND CLIMBING LANES**



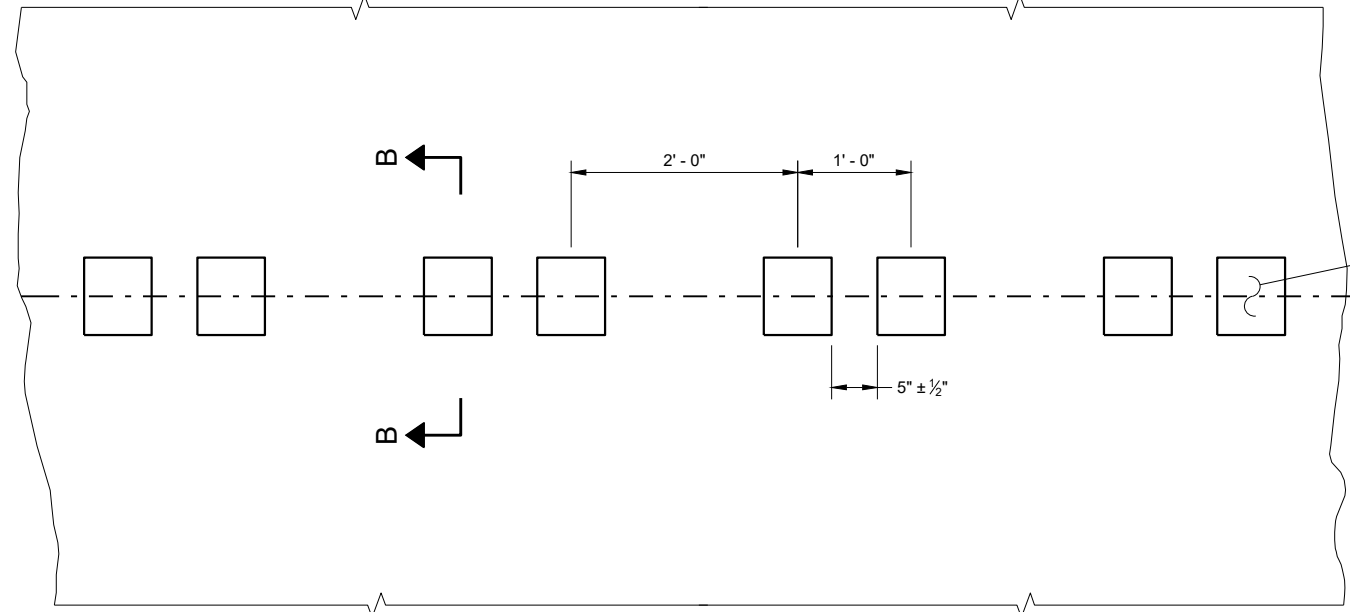
**GROOVES AT BYPASS LANES**

<b>SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
<small>FHWA</small>	

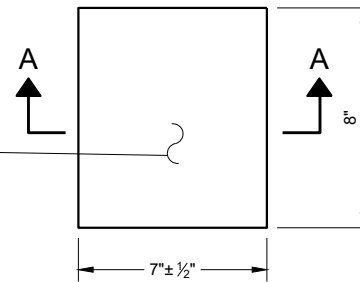
**GENERAL NOTES**

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

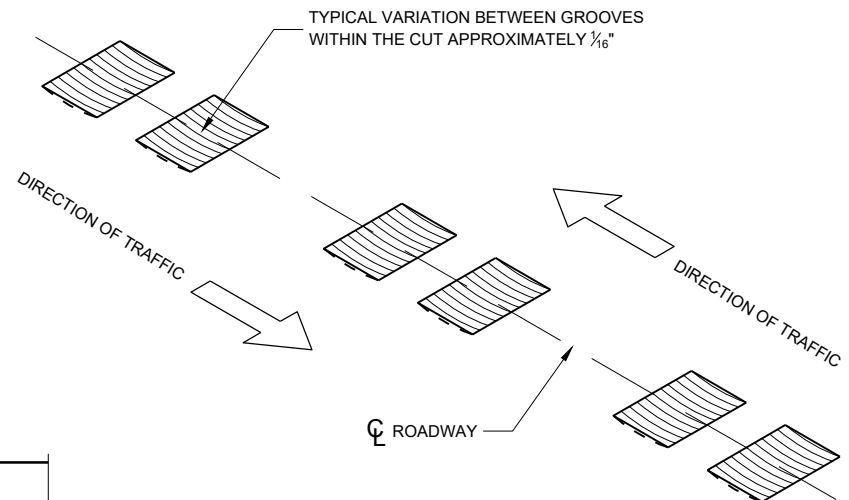
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



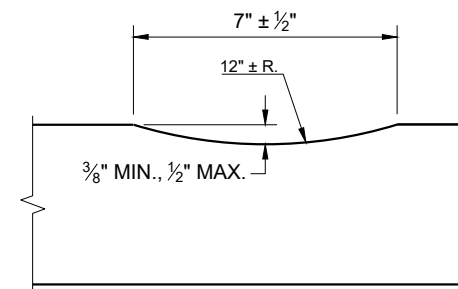
**PLAN DETAIL VIEW**



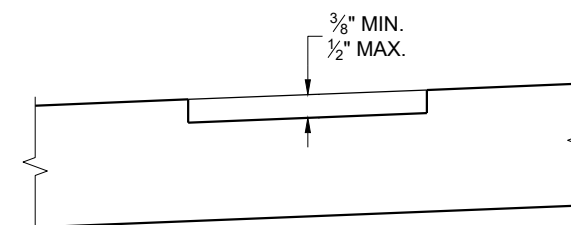
**PLAN VIEW (SINGLE GROOVE)**



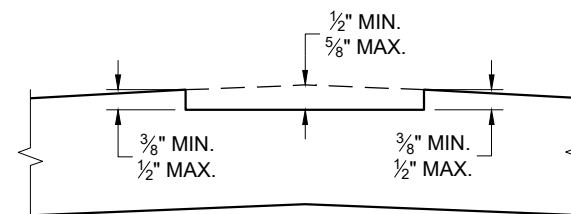
**ISOMETRIC**



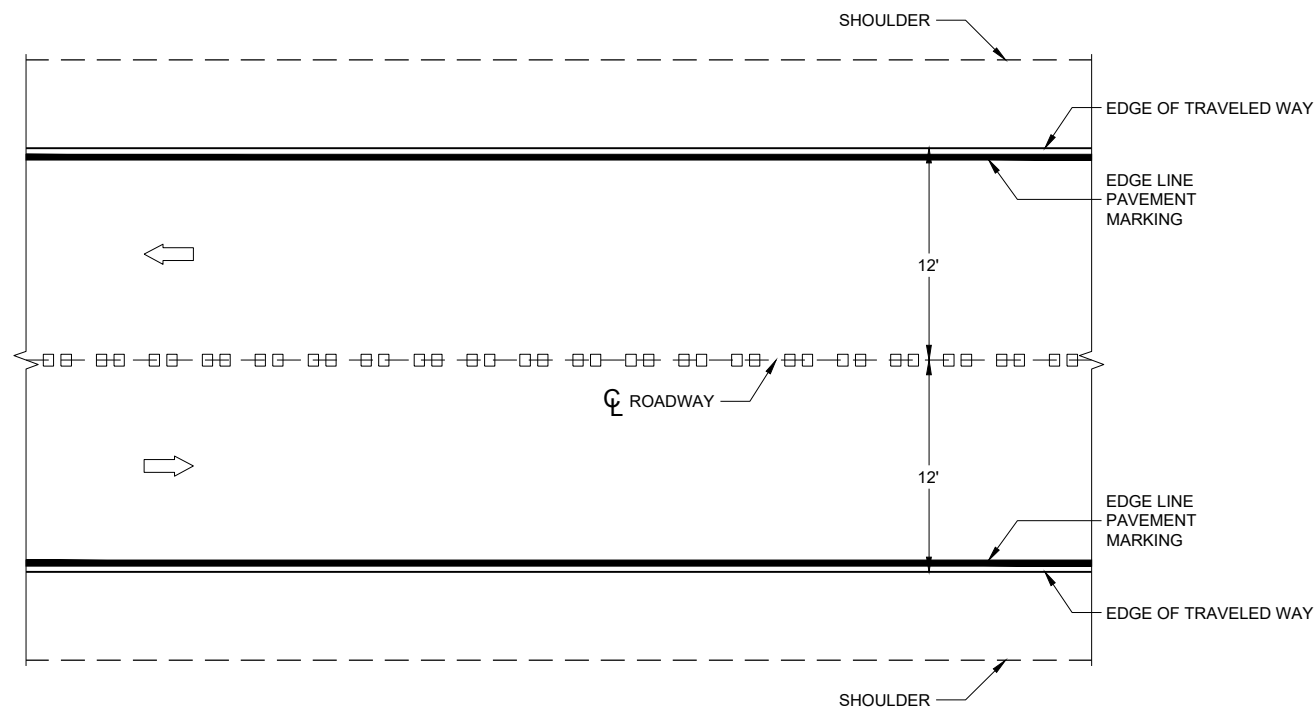
**SECTION A - A**



**SECTION B - B SUPERELEVATED ROADWAY**



**SECTION B - B CROWNED ROADWAY**



**PLAN VIEW**

**CENTERLINE RUMBLE STRIPS - ASPHALT**

**CENTERLINE RUMBLE STRIPS - ASPHALT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

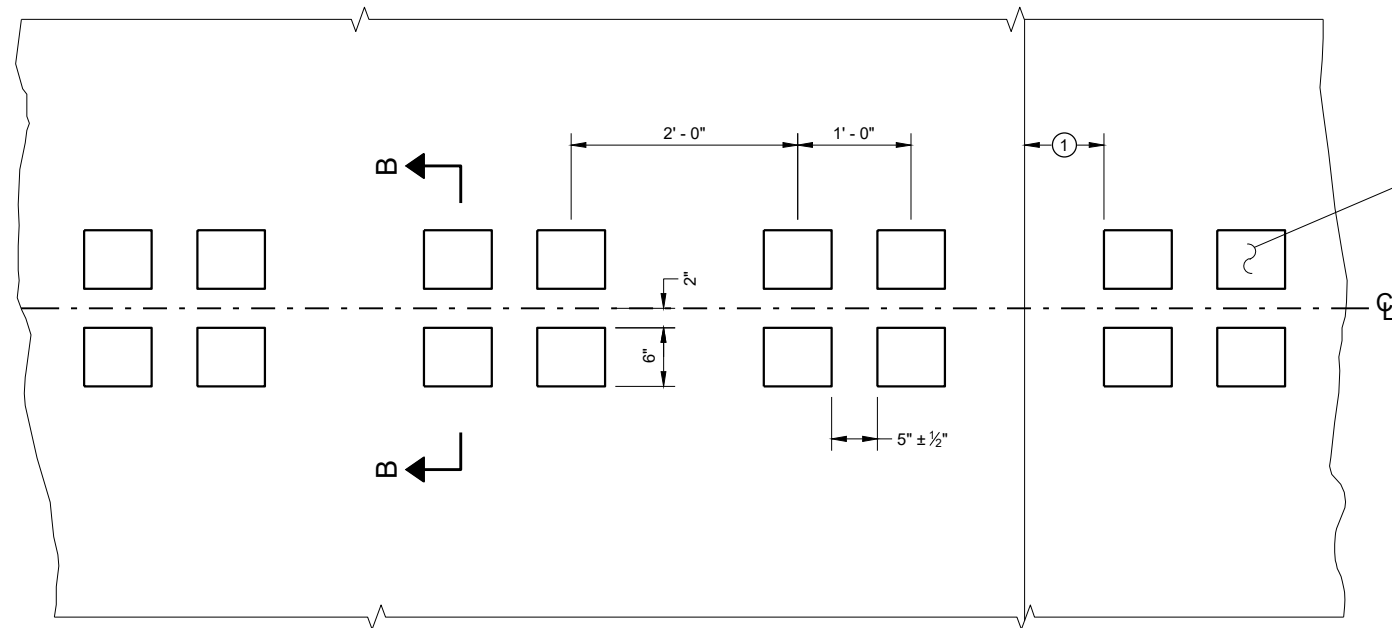
**GENERAL NOTES**

SDD 13A11, SHEET "d" SHOWS THE LOCATION OF RUMBLE STRIPS AT INTERSECTIONS, INTERSECTIONS WITH LEFT TURN LANES, BRIDGES, COMMERCIAL AND RESIDENTIAL DRIVEWAYS AND RAILROAD CROSSINGS.

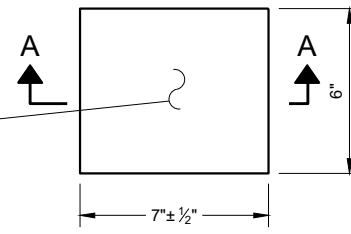
TEMPORARY PAVEMENT MARKINGS ARE TYPICALLY PLACED PRIOR TO RUMBLE STRIP INSTALLATION. PERMANENT MARKINGS ARE INSTALLED AFTER RUMBLE STRIP INSTALLATION.

CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

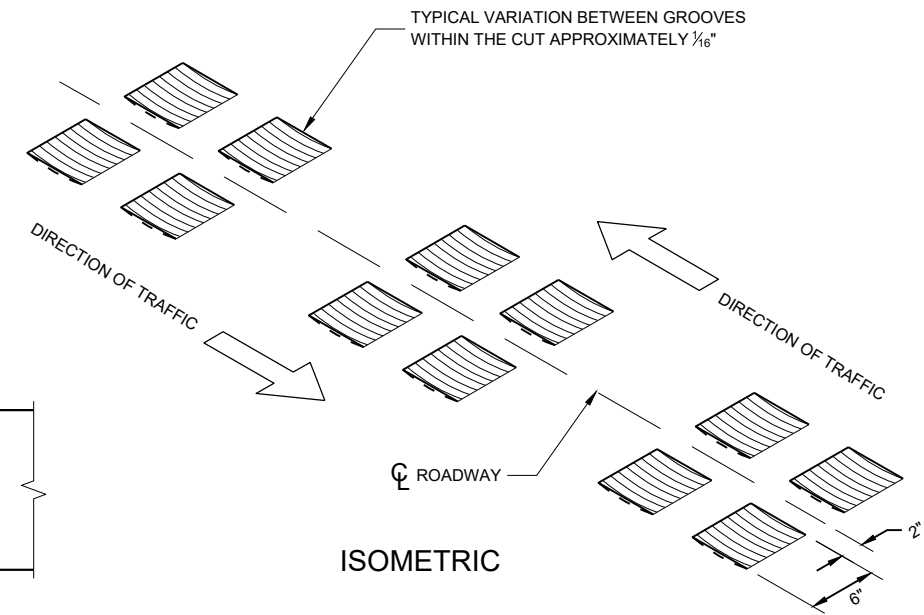
① CONCRETE PAVEMENT RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES FROM TRANSVERSE JOINTS.



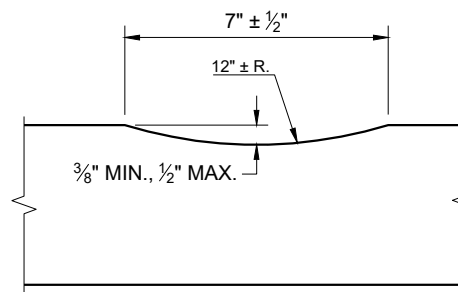
**PLAN DETAIL VIEW**



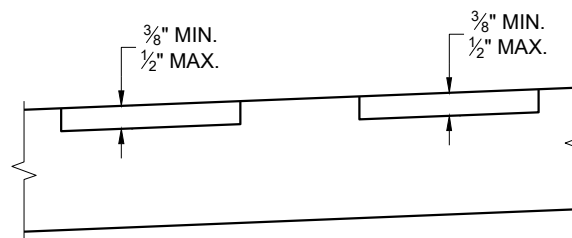
**PLAN VIEW  
(SINGLE GROOVE)**



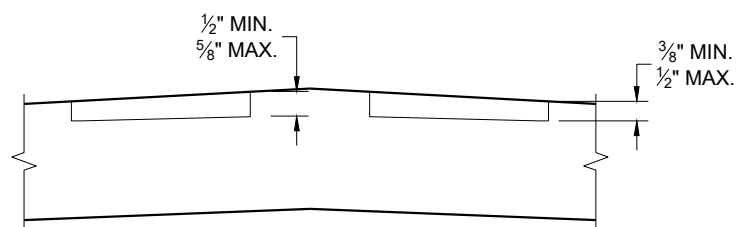
**ISOMETRIC**



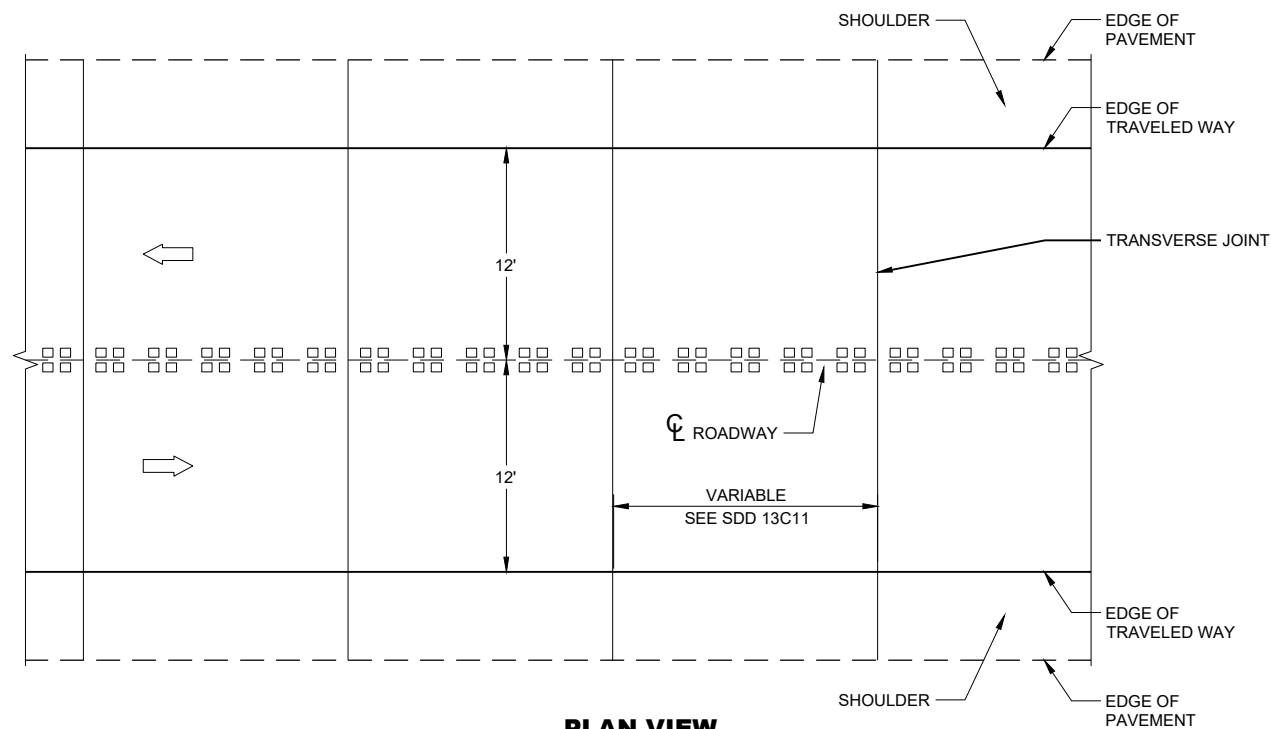
**SECTION A - A**



**SECTION B - B  
SUPERELEVATED ROADWAY**



**SECTION B - B  
CROWNED ROADWAY**

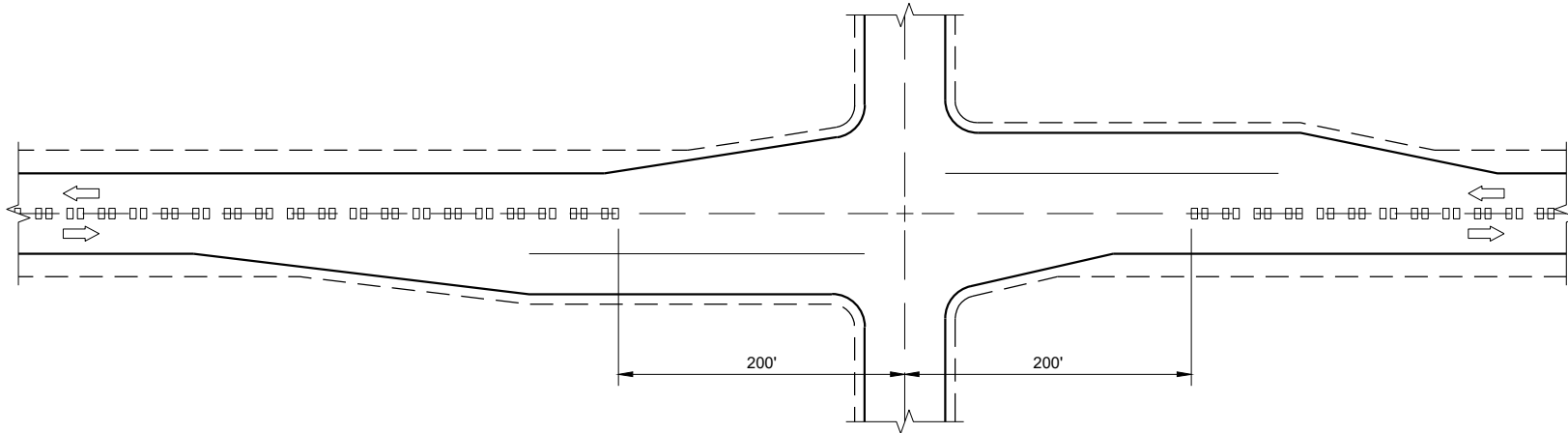


**PLAN VIEW**

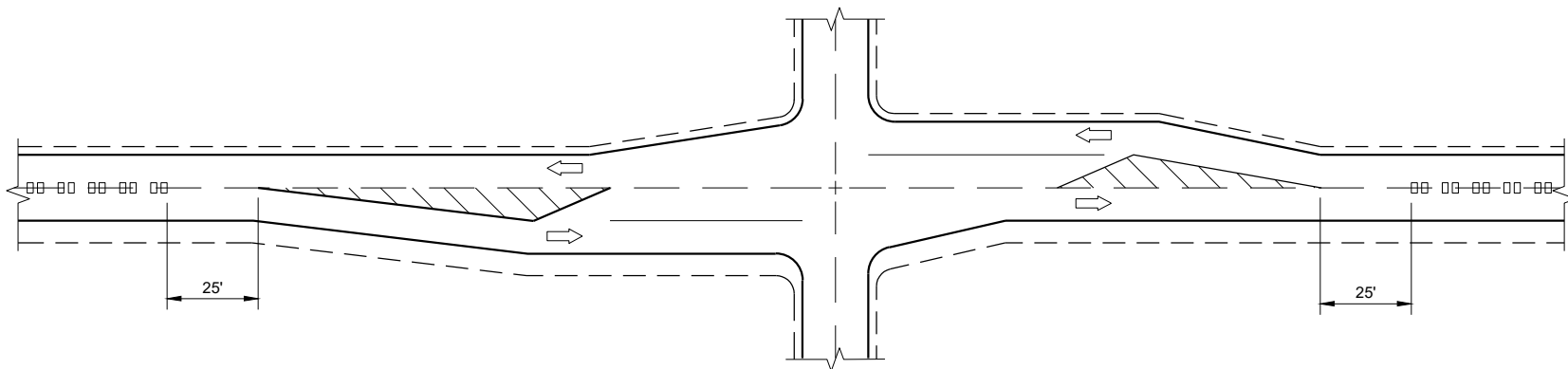
**CENTERLINE RUMBLE STRIPS - CONCRETE**

**CENTERLINE RUMBLE STRIPS - CONCRETE**

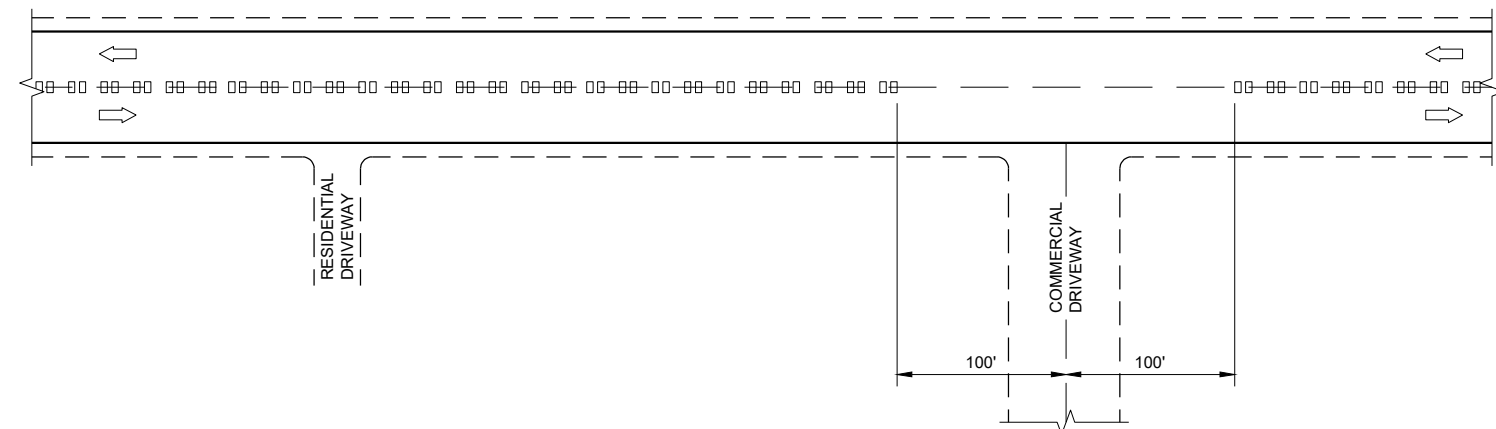
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CENTERLINE GROOVES AT INTERSECTIONS**



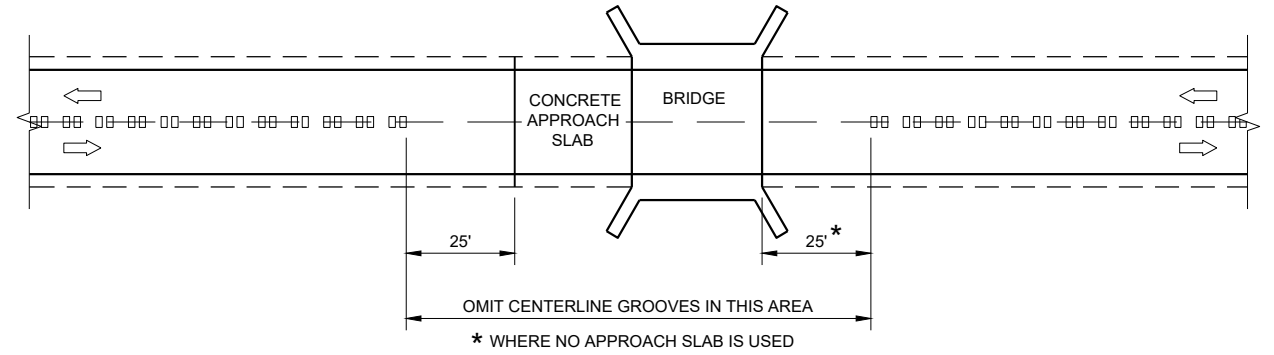
**CENTERLINE GROOVES AT INTERSECTIONS  
(WITH LEFT TURN LANES)**



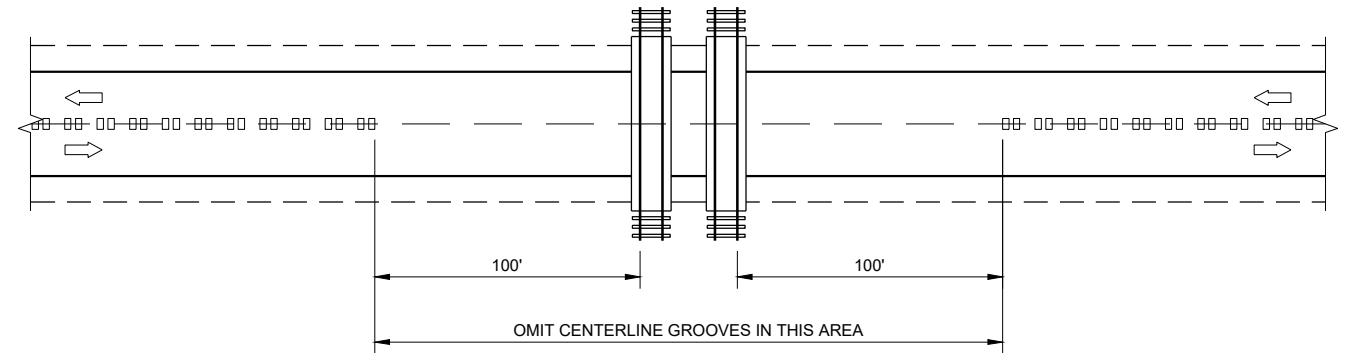
**CENTERLINE GROOVES AT DRIVEWAYS^①**

**GENERAL NOTES**

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



**CENTERLINE GROOVES AT BRIDGES**



**CENTERLINE GROOVES AT RAILROADS**

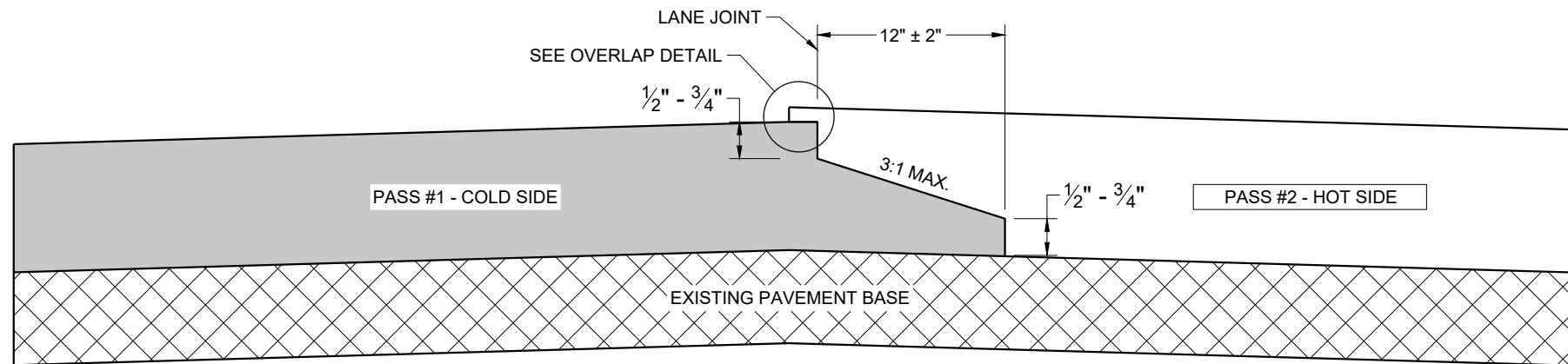
6

6

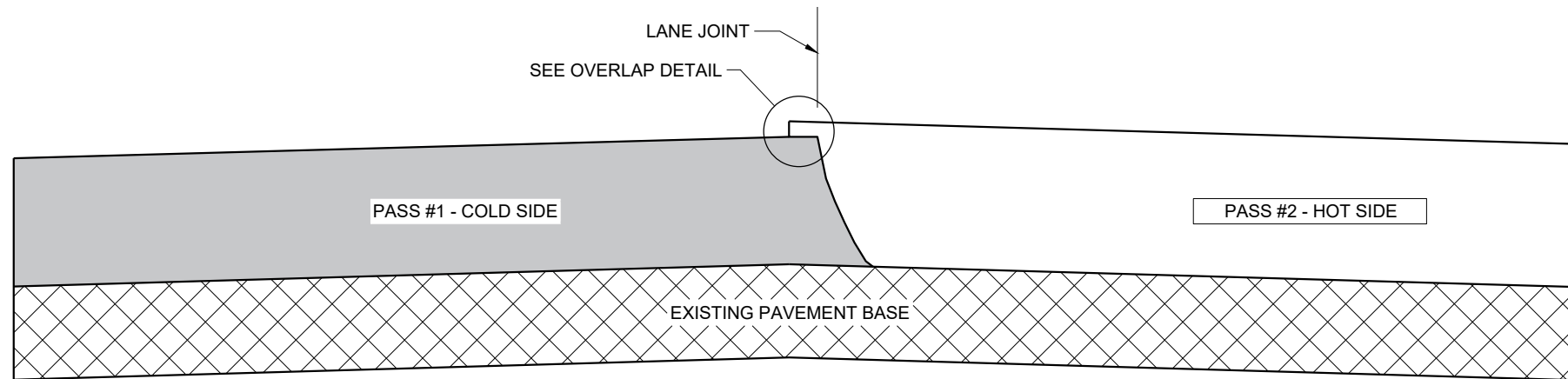
SDD 13A11 - 04d

SDD 13A11 - 04d

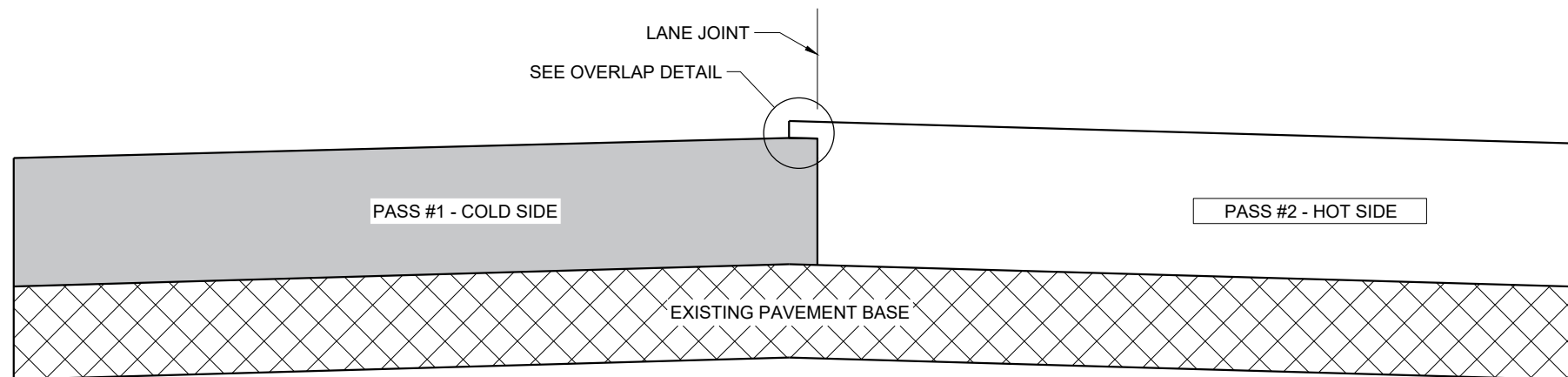
<b>CENTER LINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ John Jenkins ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

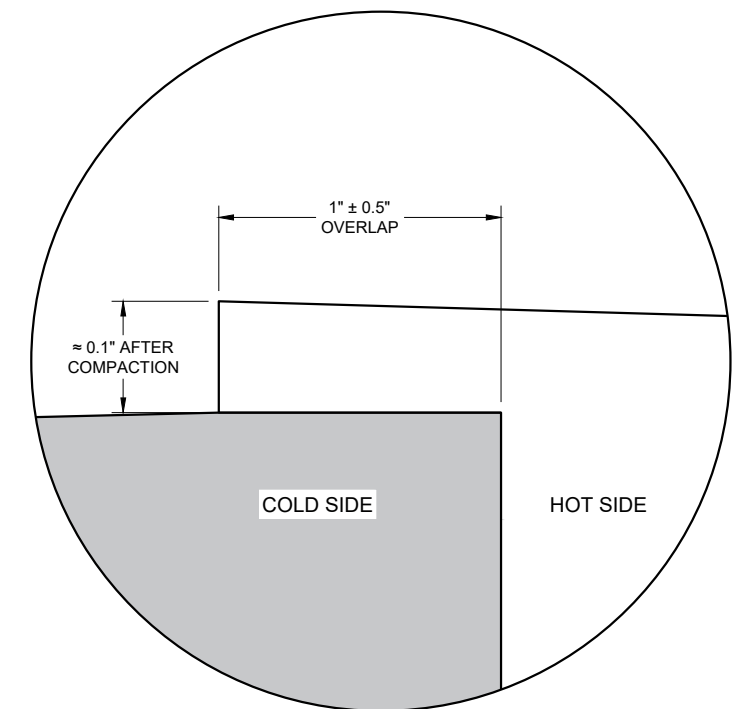
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)**

6

6

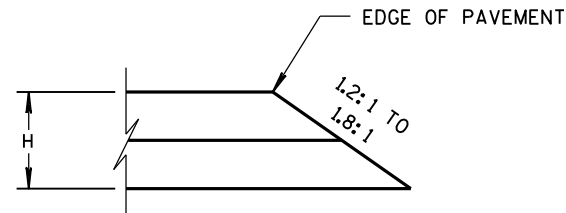
SDD 13C19 - 03

SDD 13C19 - 03

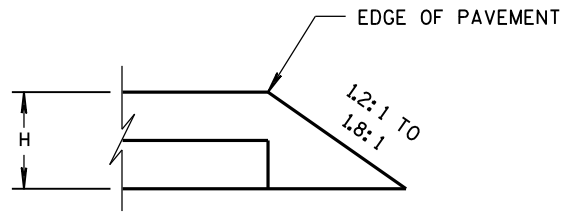
**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

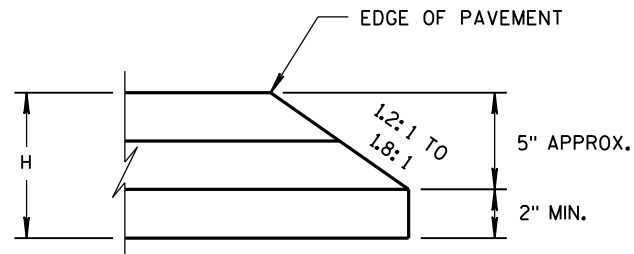
APPROVED  
November 2020 DATE /S/ Steven Hefel  
HMA PAVEMENT ENGINEER  
FHWA



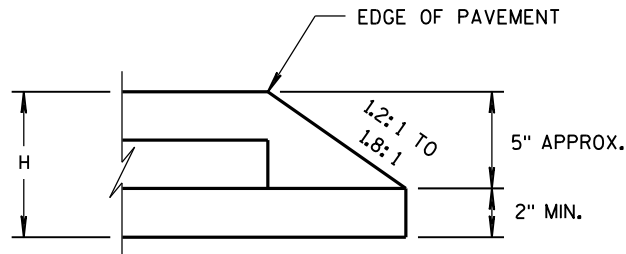
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

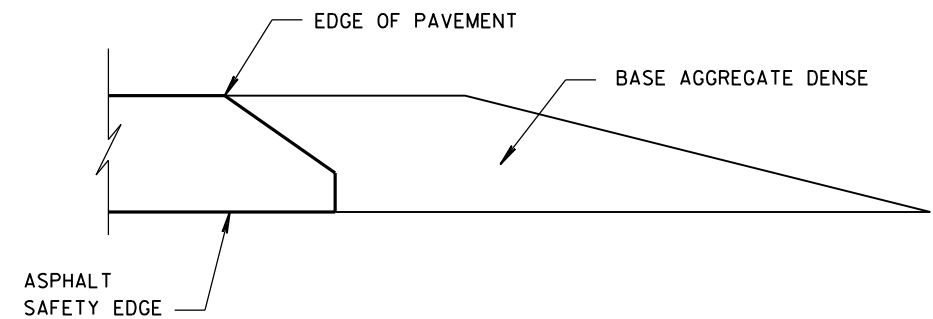


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

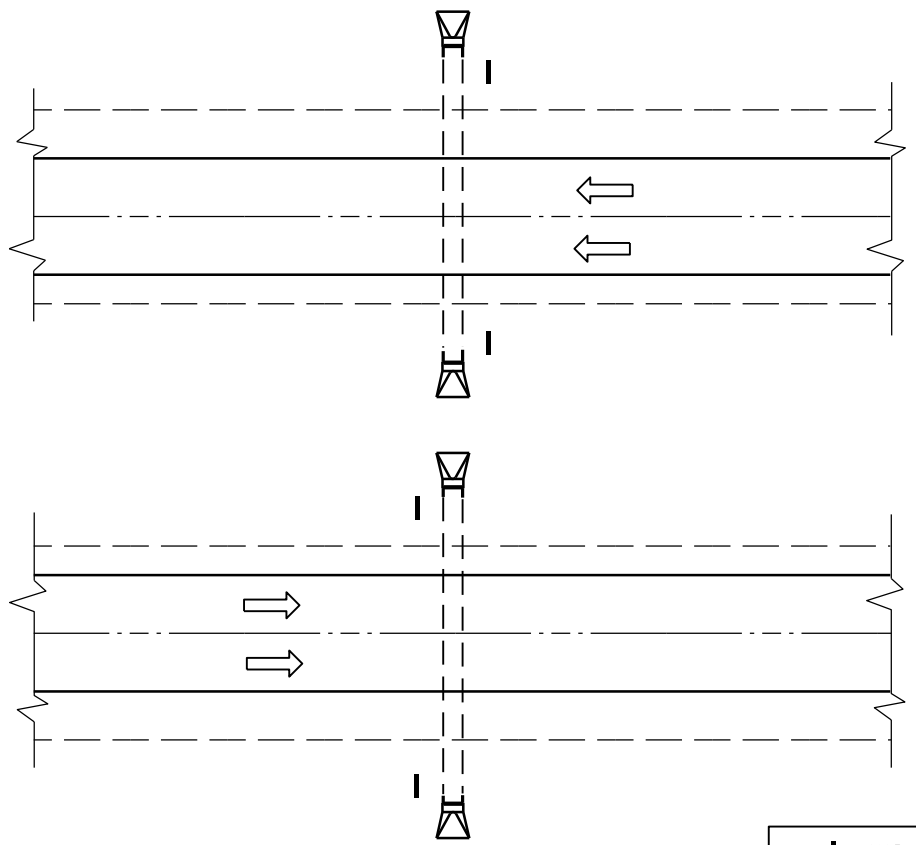
6

S.D.D. 14 B 29-1

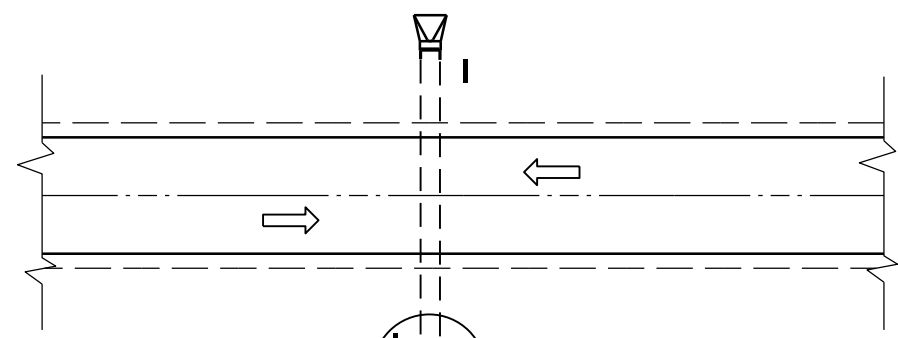
S.D.D. 14 B 29-1

SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

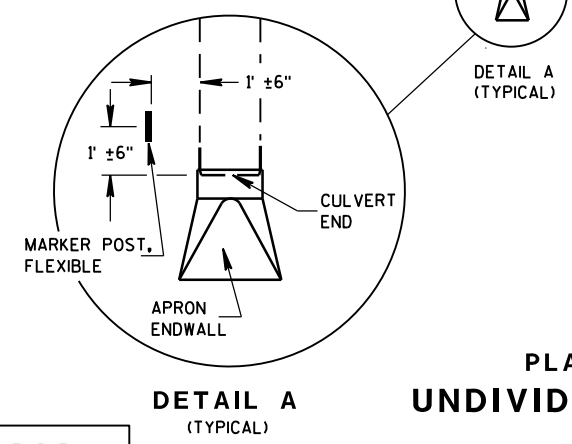




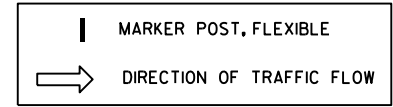
PLAN VIEW  
DIVIDED HIGHWAY



PLAN VIEW  
UNDIVIDED HIGHWAY



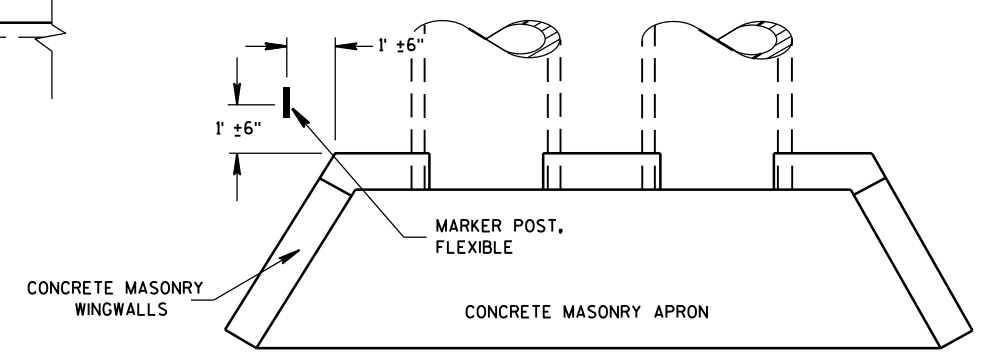
DETAIL A  
(TYPICAL)



FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

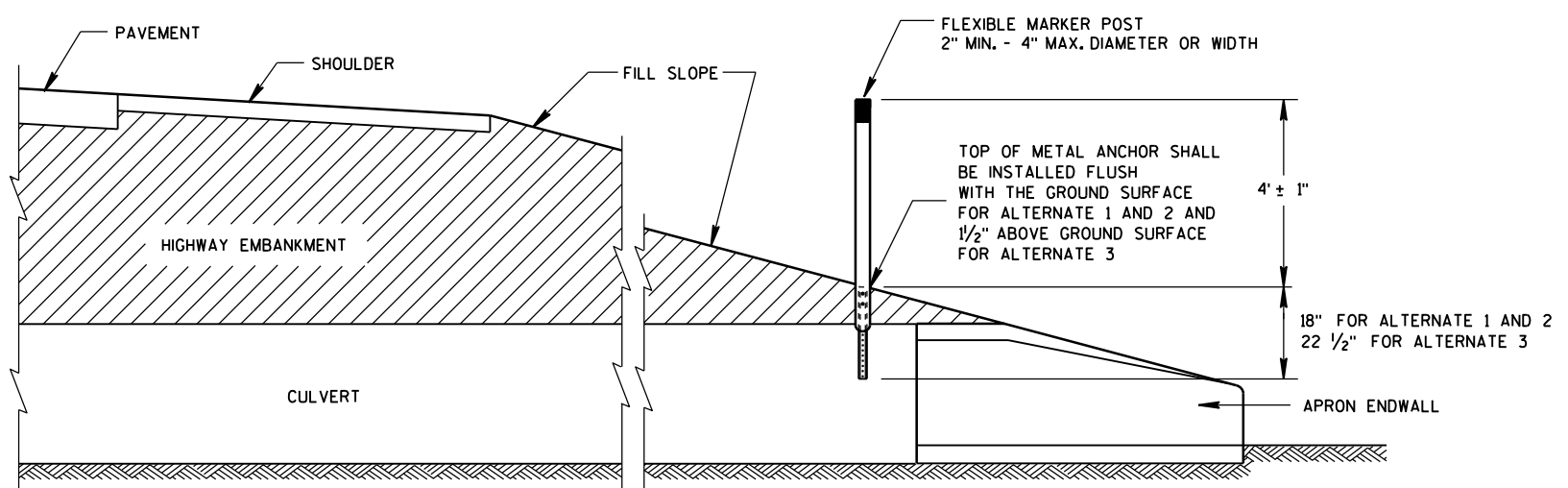
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

6

6



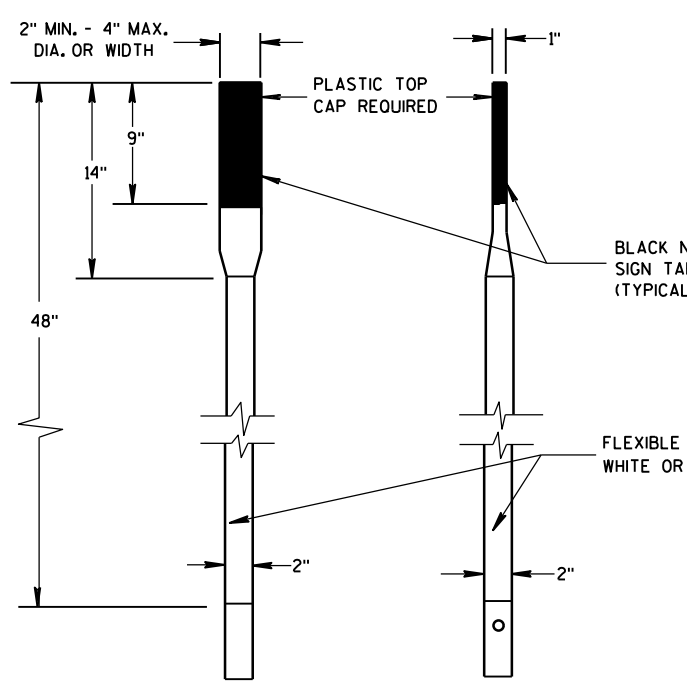
CROSS SECTION  
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST  
FOR CULVERT END

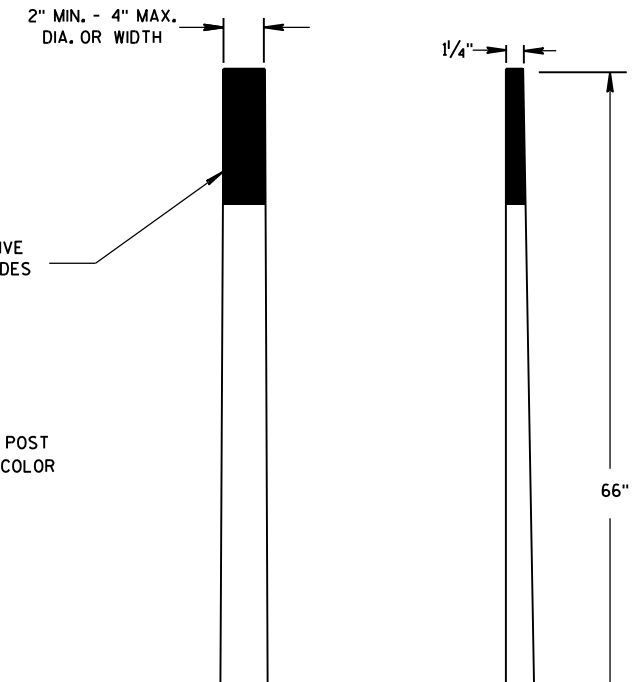
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

S.D.D. 15 A 3-2a

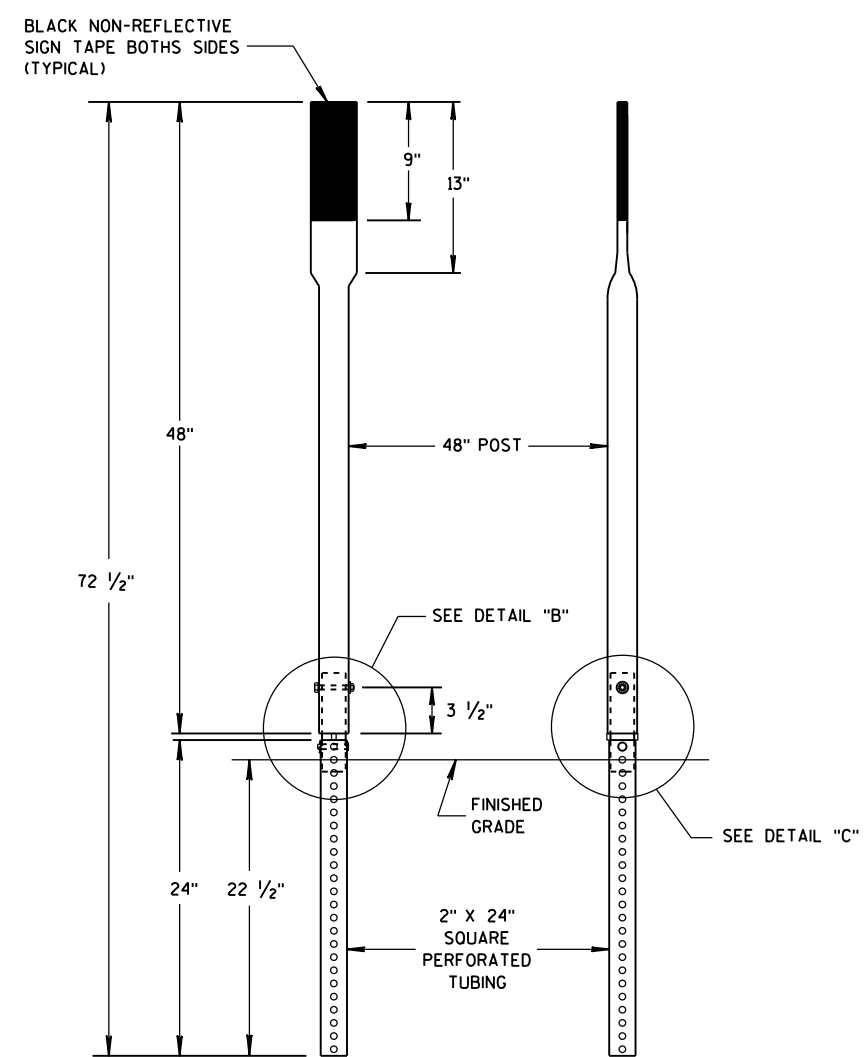
S.D.D. 15 A 3-2a



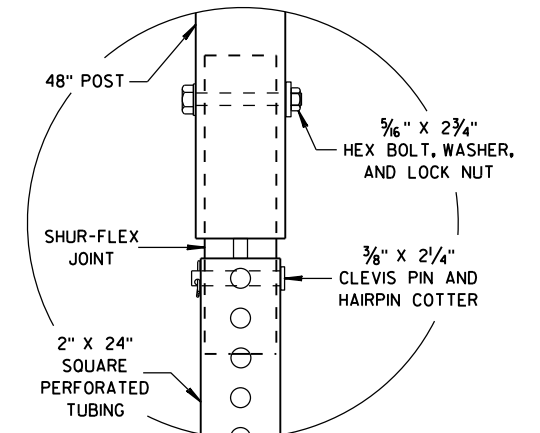
FRONT VIEW SIDE VIEW  
ALTERNATE 1



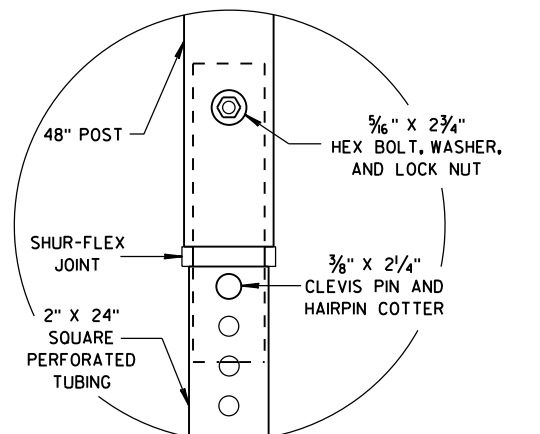
FRONT VIEW SIDE VIEW  
ALTERNATE 2



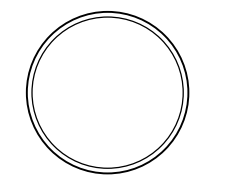
FRONT VIEW SIDE VIEW  
ALTERNATE 3



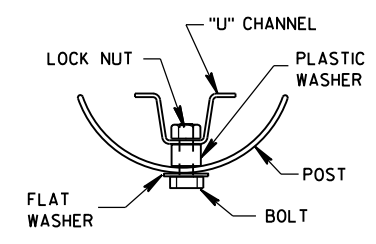
DETAIL B



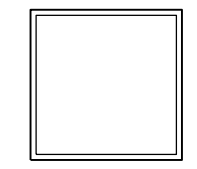
DETAIL C



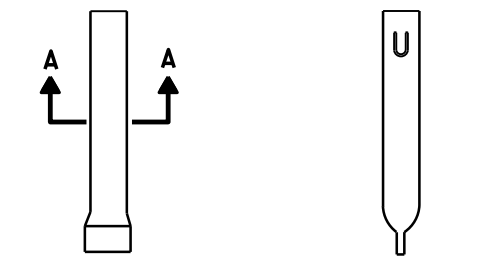
SECTION A-A



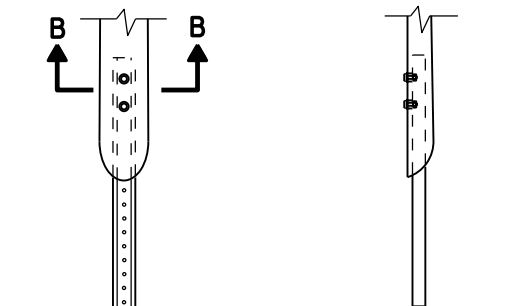
SECTION B-B



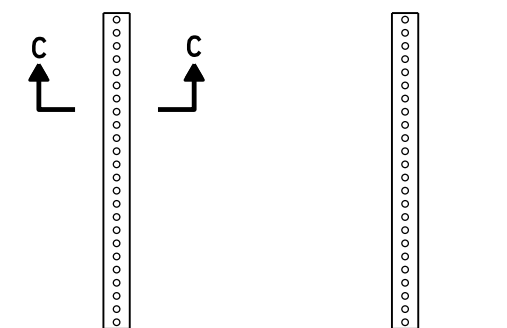
SECTION C-C



FRONT VIEW SIDE VIEW  
ALTERNATE 1



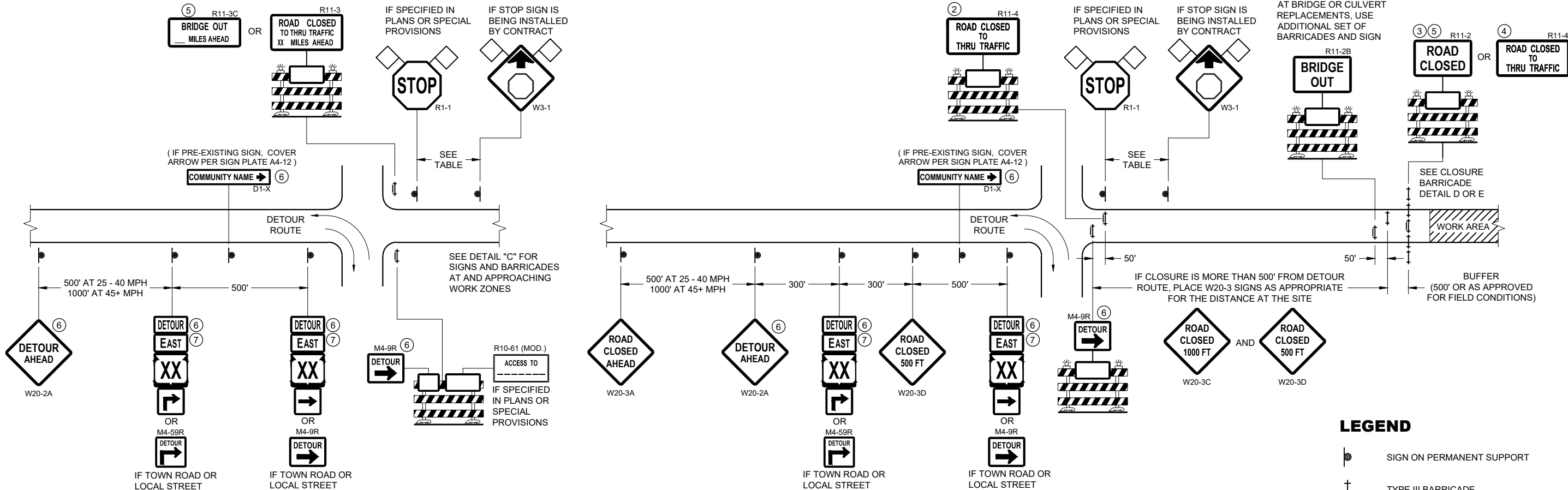
FRONT VIEW SIDE VIEW  
ALTERNATE 2



FRONT VIEW SIDE VIEW  
ALTERNATE 3

**FLEXIBLE MARKER POST ANCHORS**

<b>FLEXIBLE MARKER POST FOR CULVERT END</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

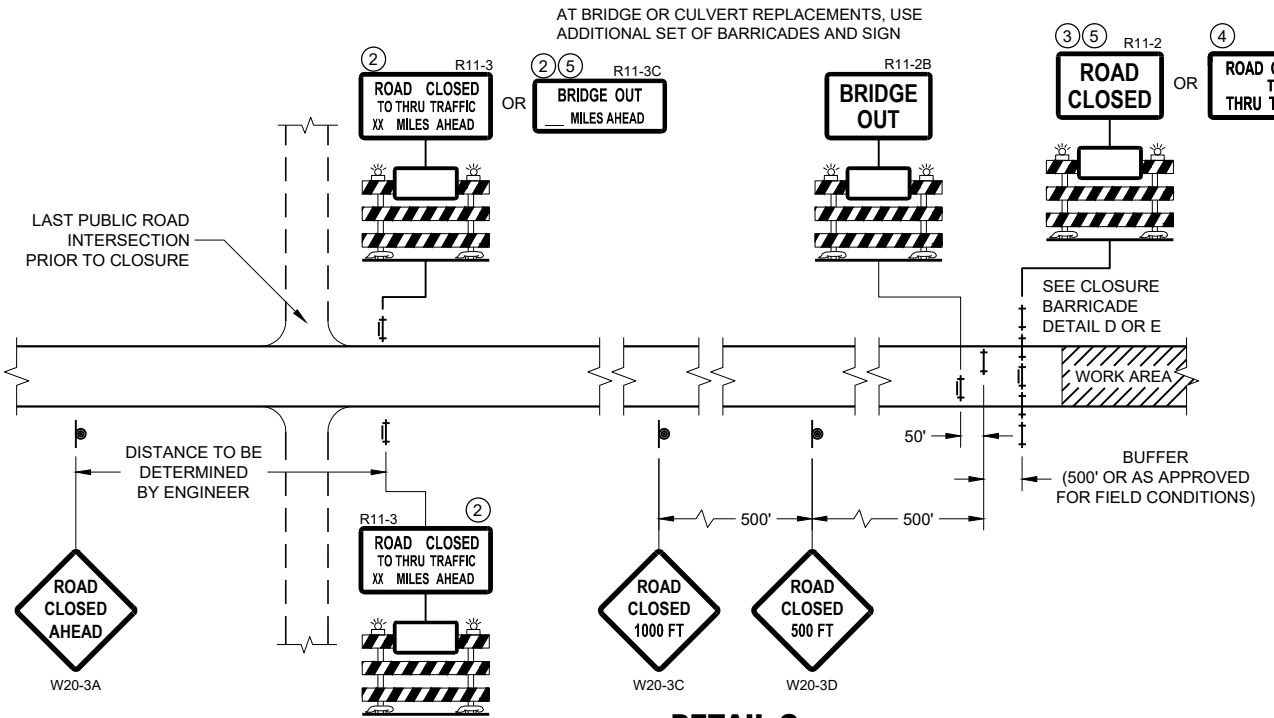
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**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)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- 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

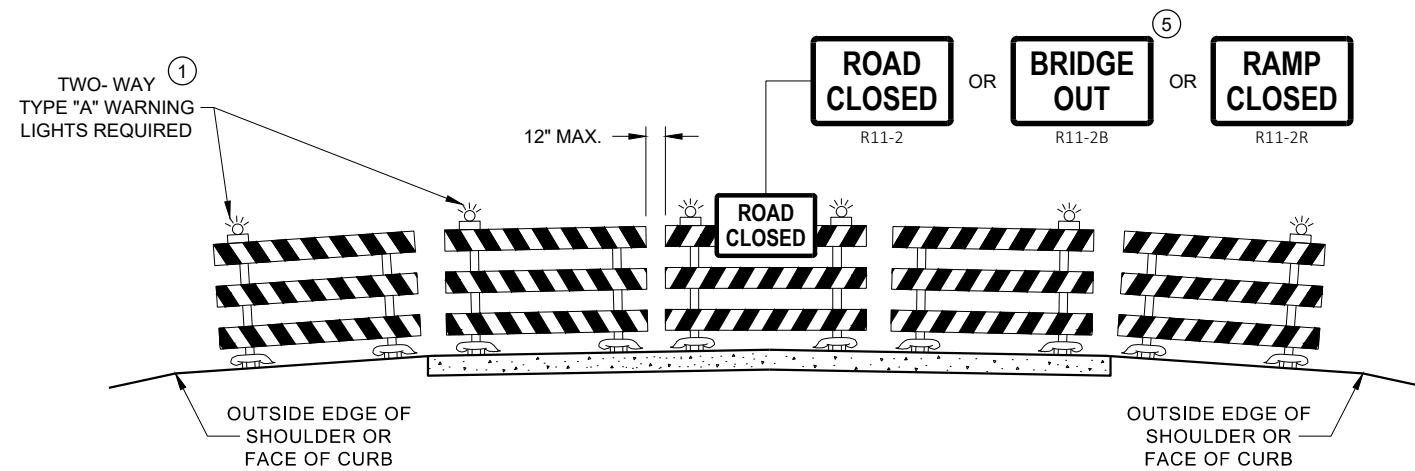


**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

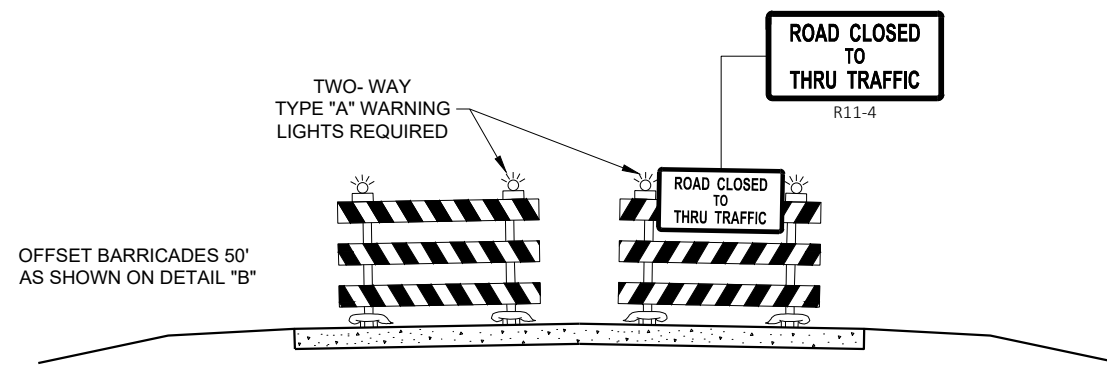
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE 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:

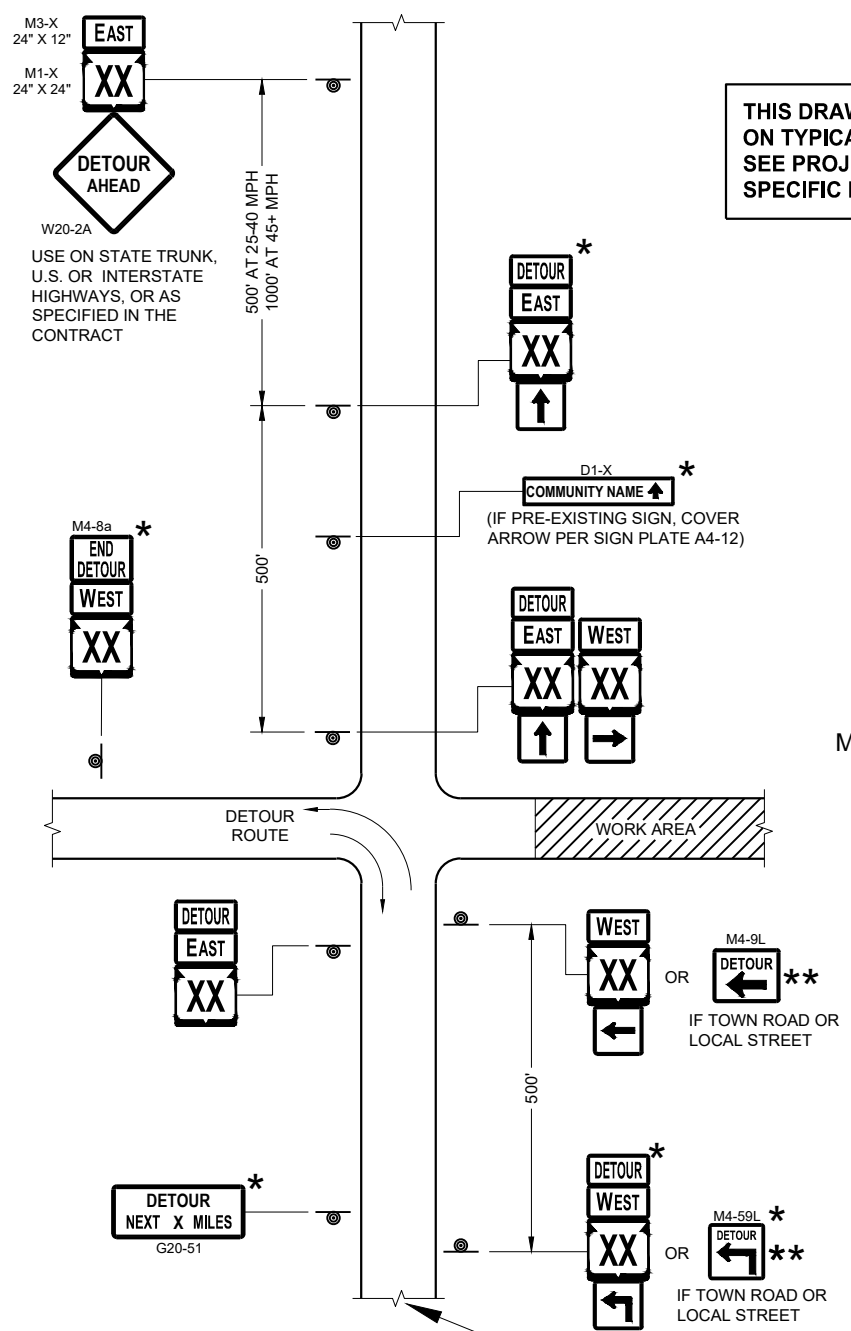
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" 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



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

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

**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.

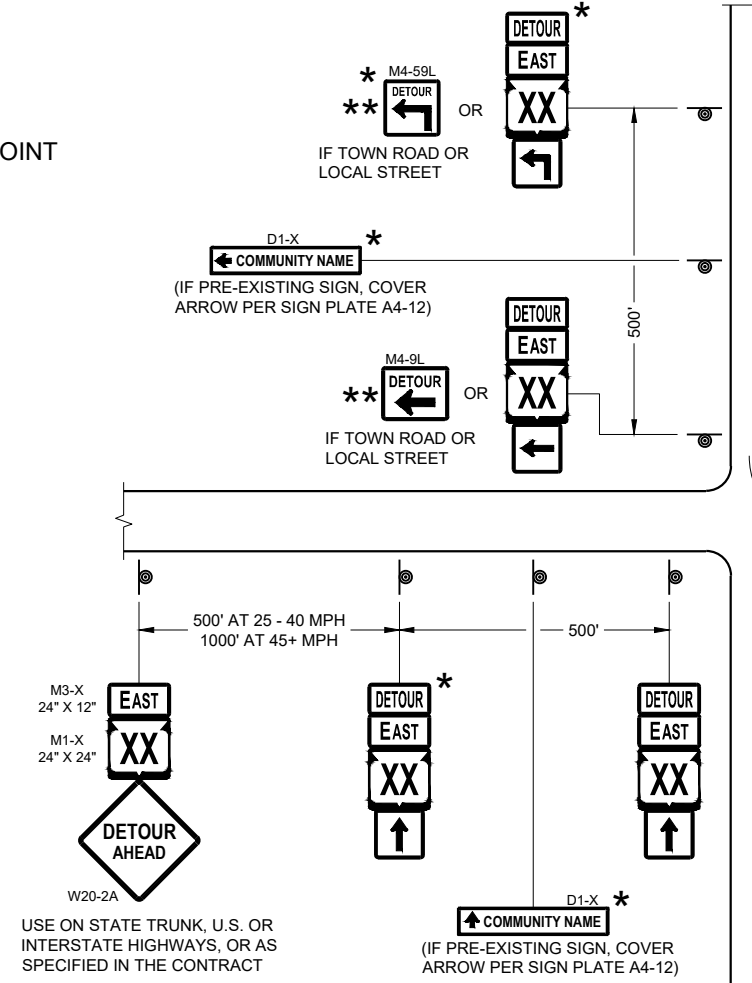
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

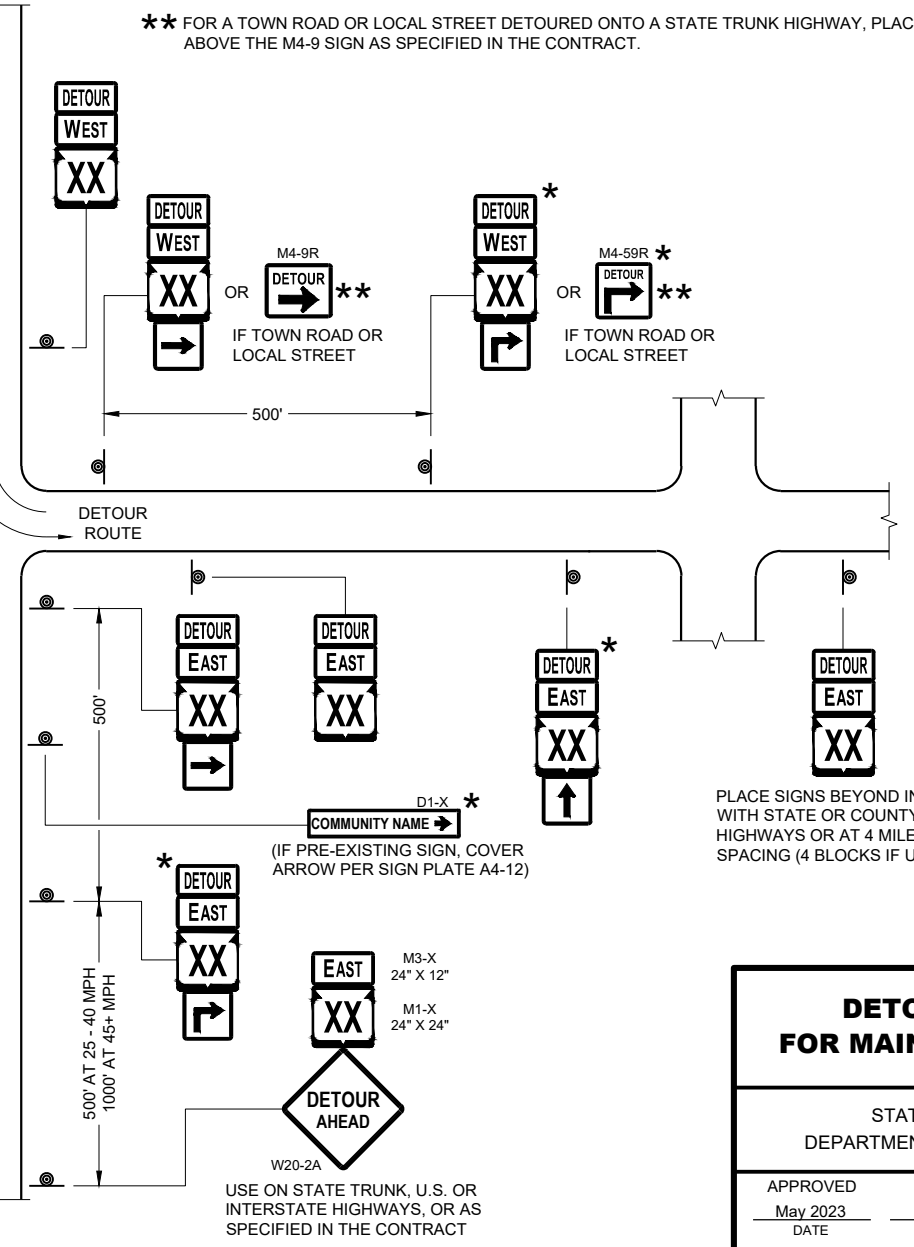
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R 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.

MATCH POINT



**DETAIL F  
DETOUR SIGNING**



**DETOUR SIGNING  
FOR MAINLINE CLOSURES**

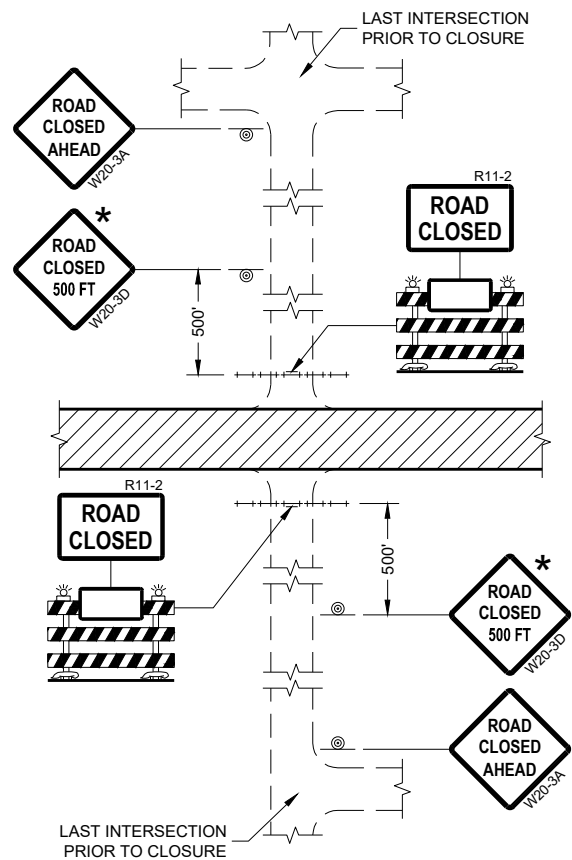
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

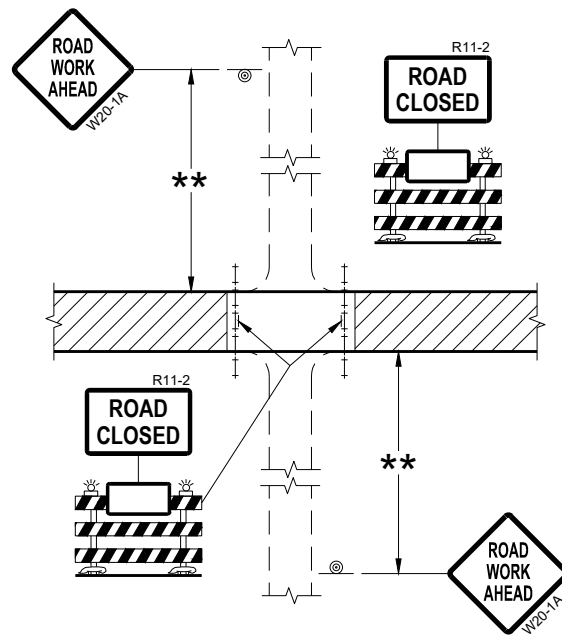
FHWA

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

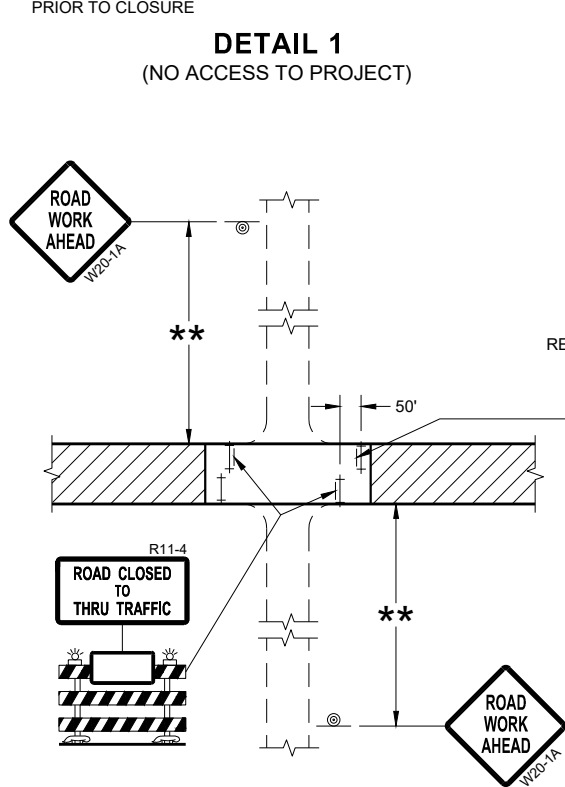
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)



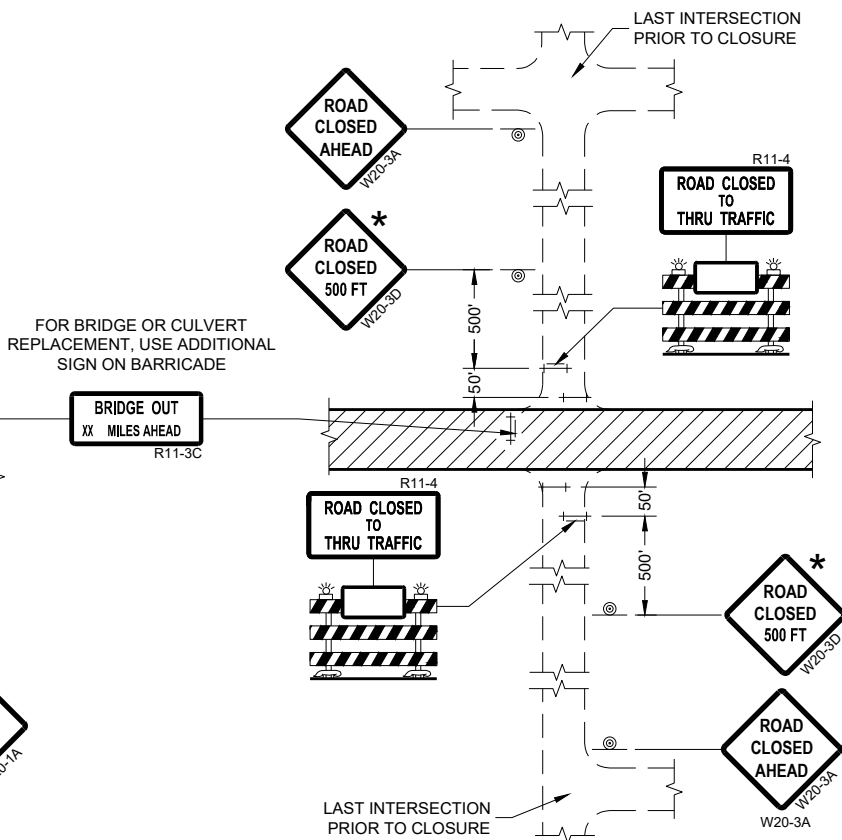
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT 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

**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.

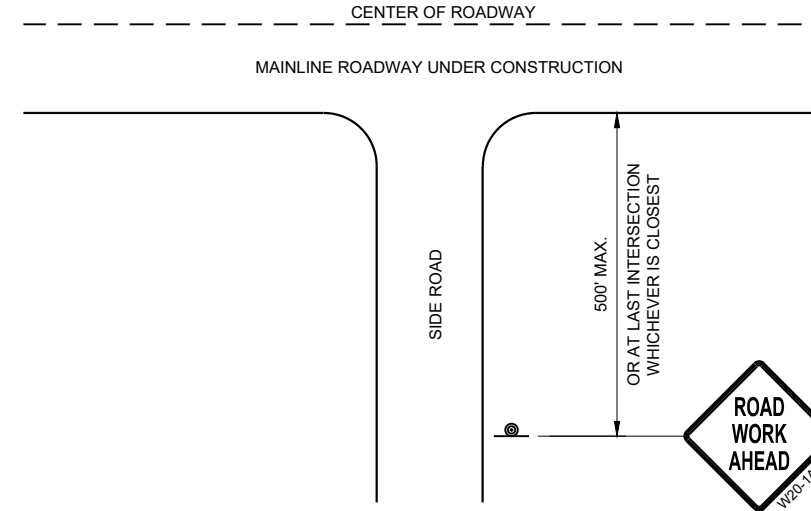
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

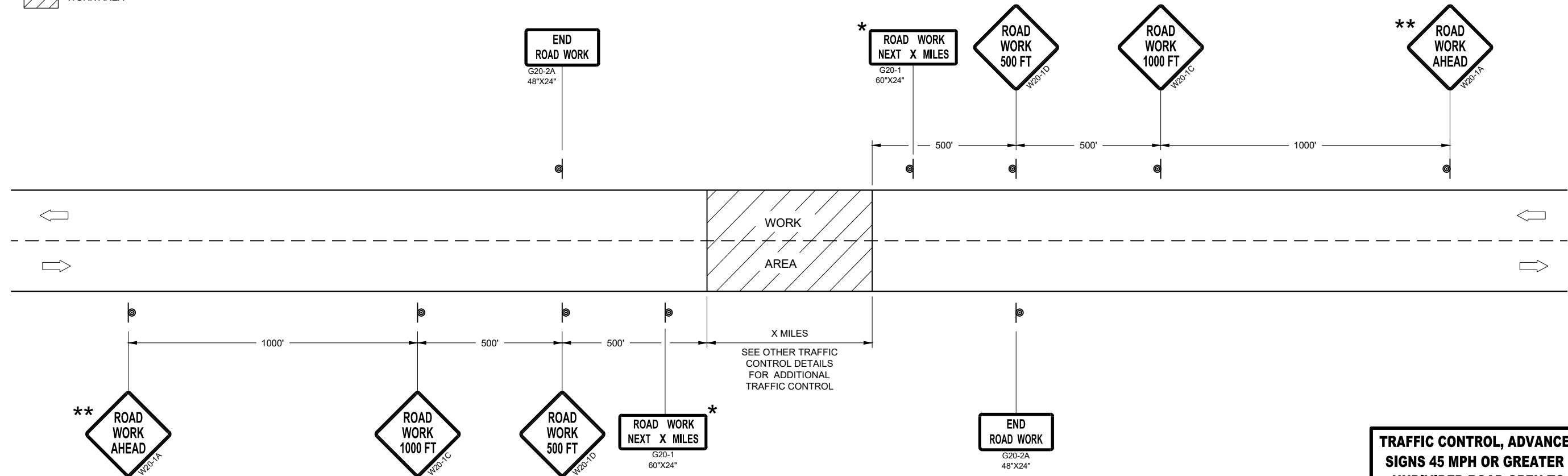
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**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  
DATE July 2018 /S/ Andrew Heidtke  
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. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

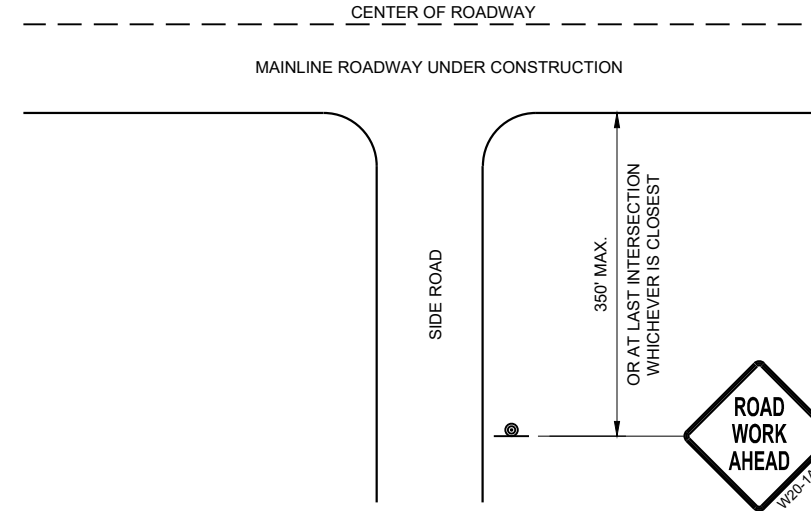
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

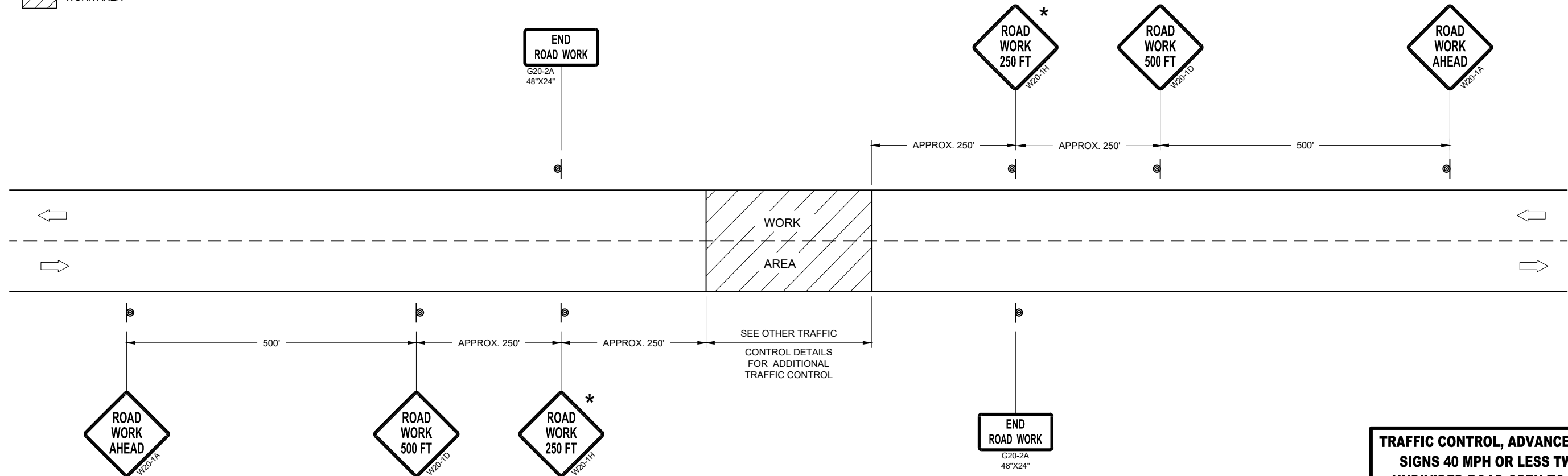
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

**LEGEND**

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



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

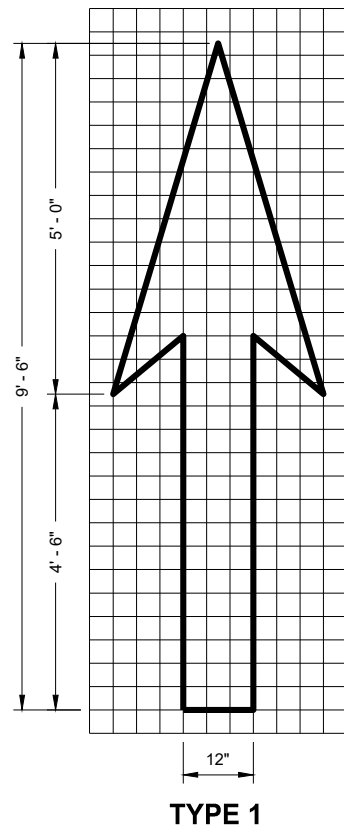
**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 40 MPH OR LESS TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

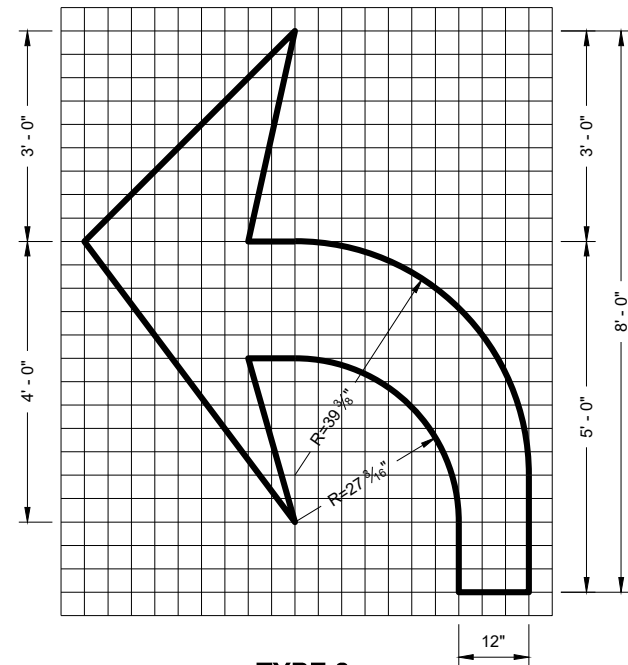
APPROVED  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

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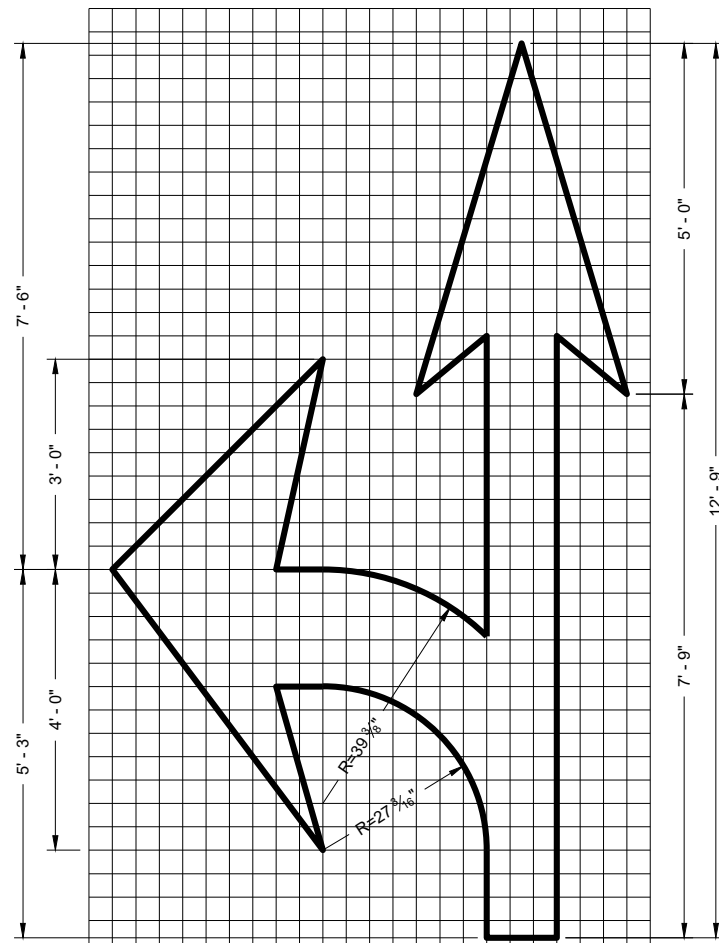




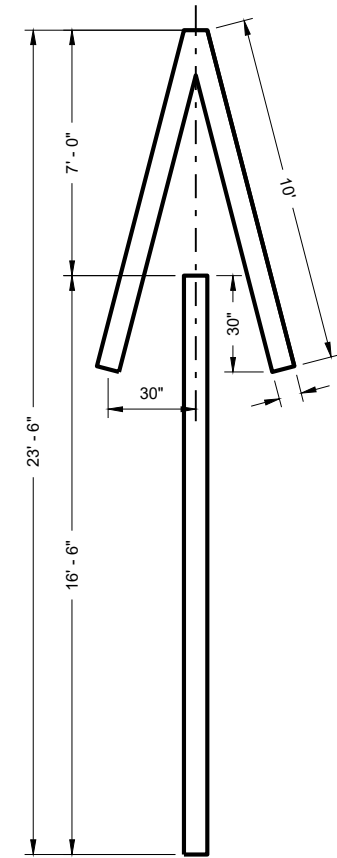
TYPE 1



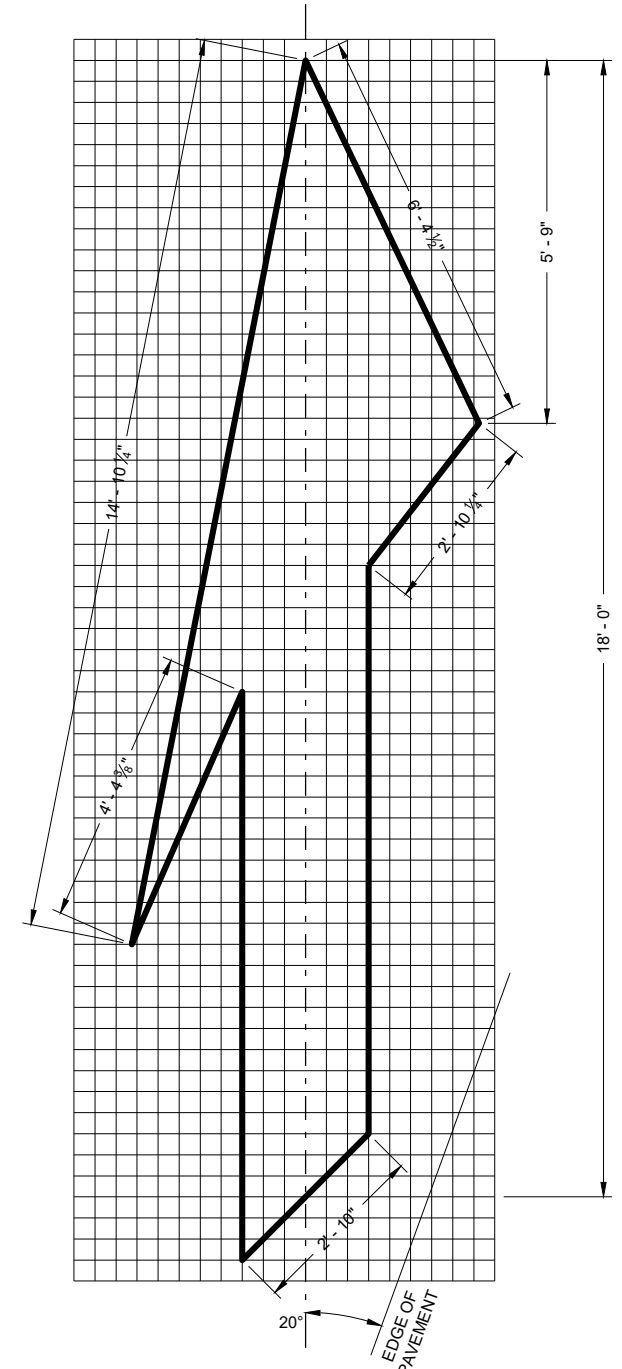
TYPE 2



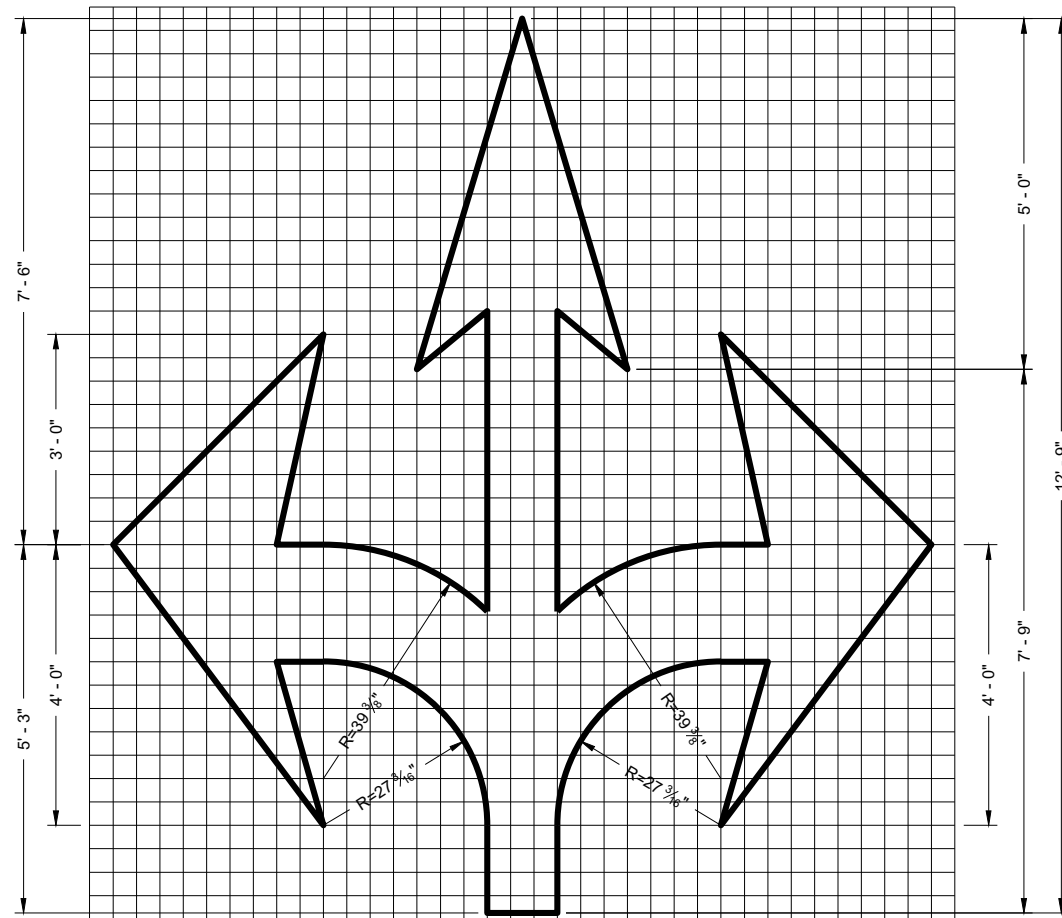
TYPE 3



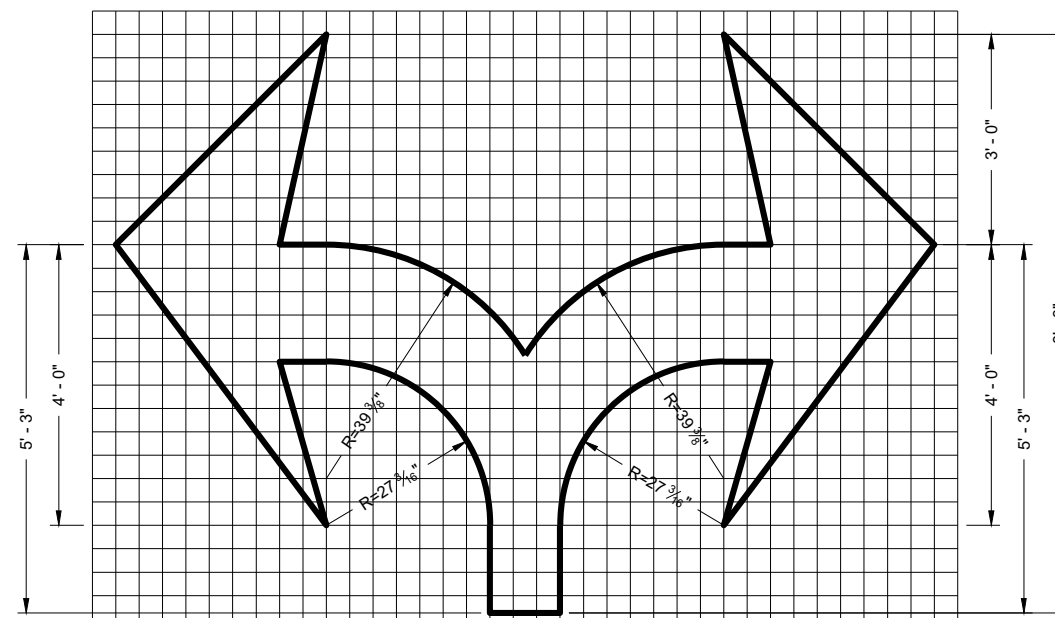
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

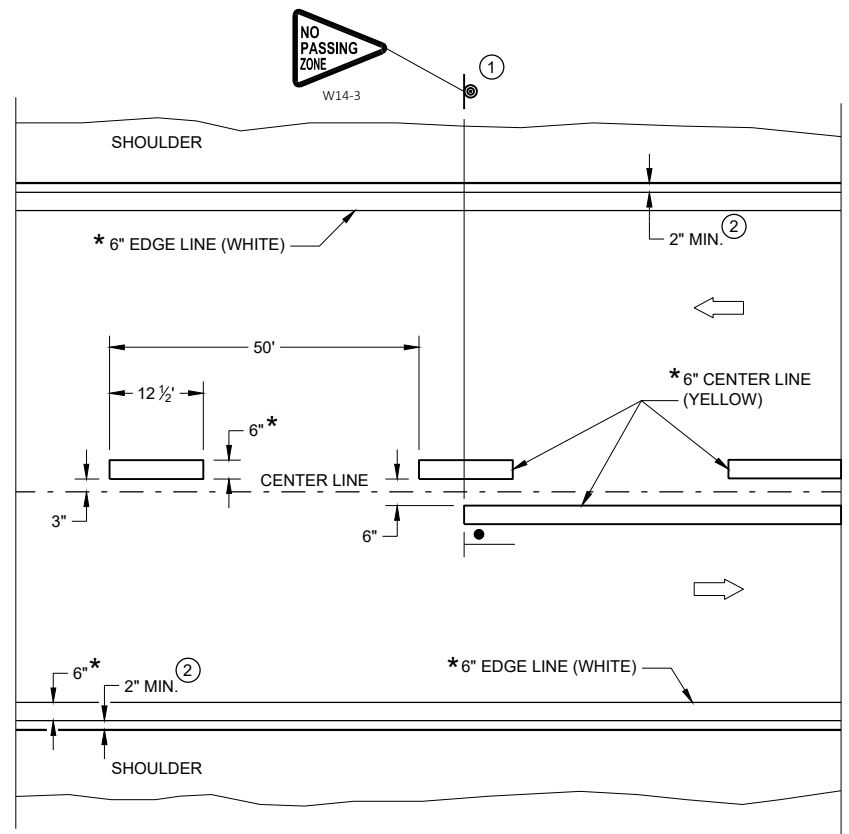
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

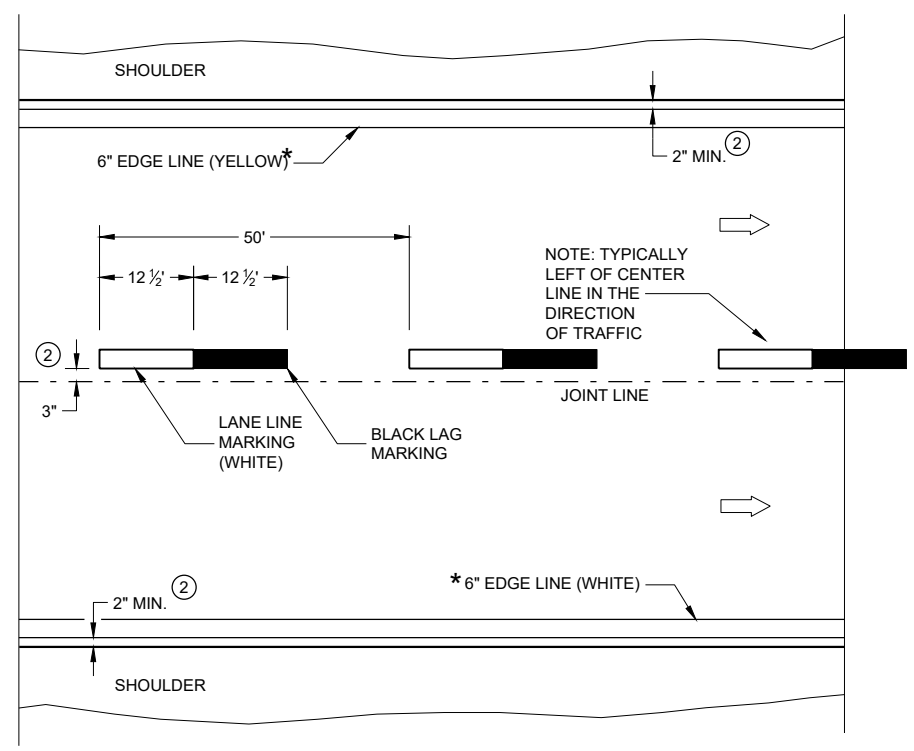
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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**

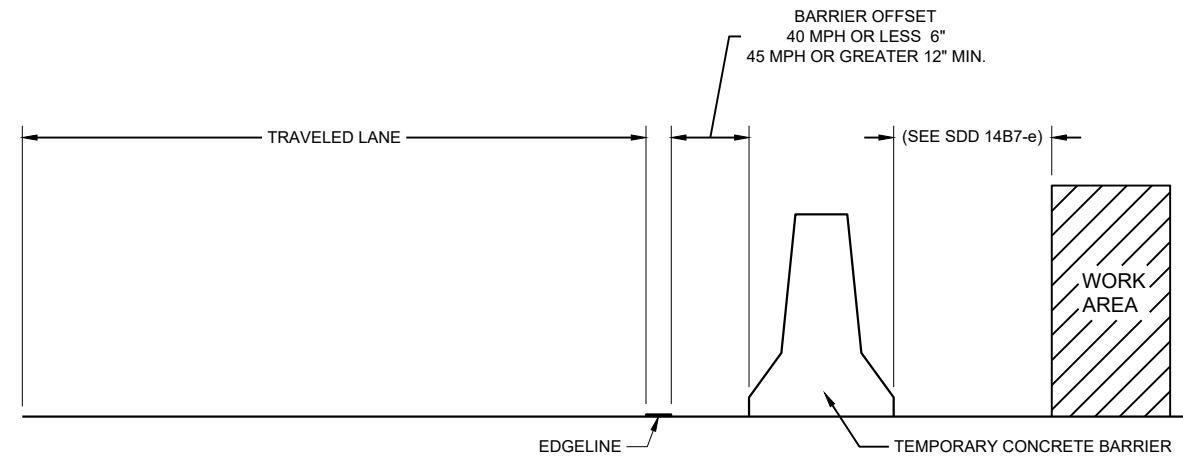
- ① "T" MARKING
- ② SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



**TEMPORARY BARRIER OFFSET FROM EDGELINE**

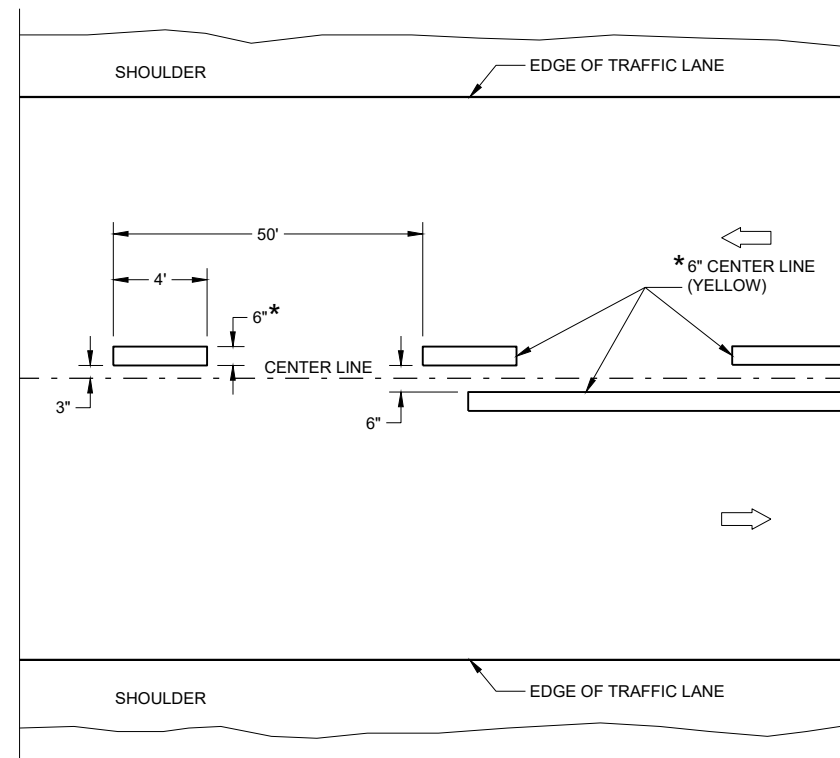
**GENERAL NOTES**

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

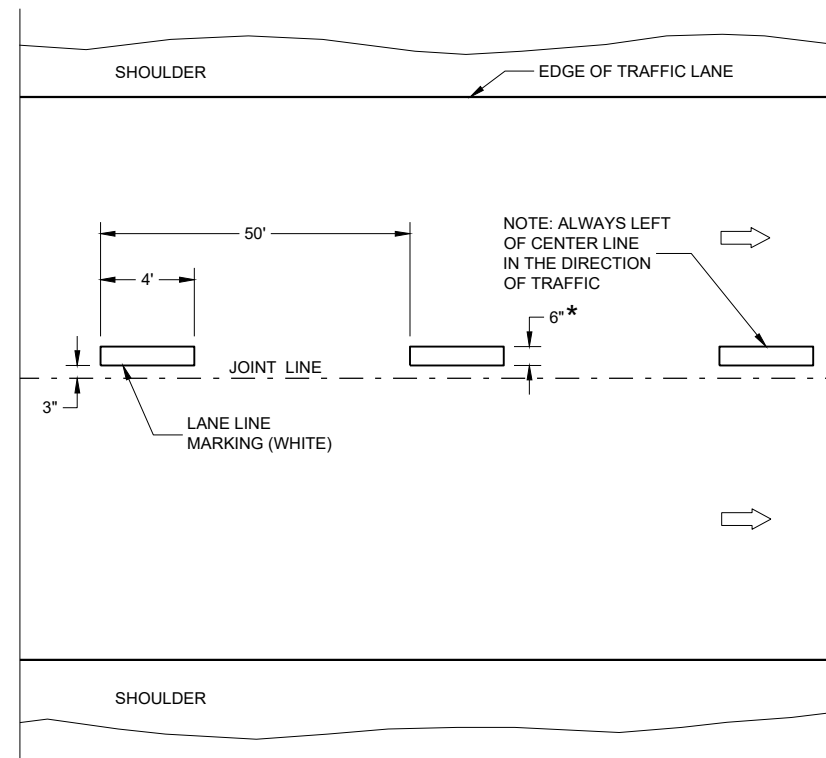
**LEGEND**

➡ DIRECTION OF TRAFFIC

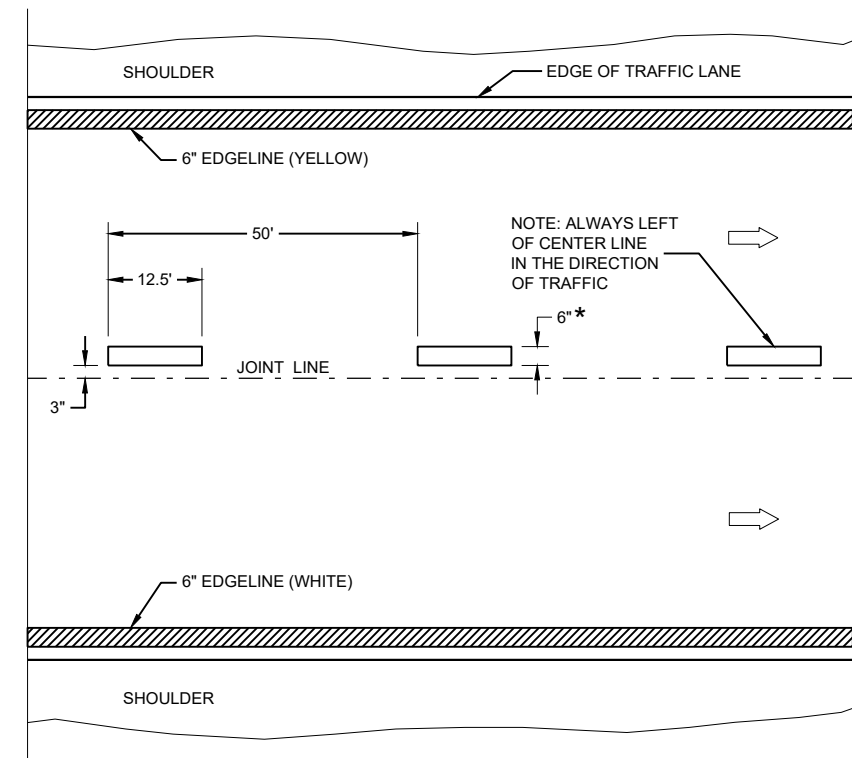
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**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 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

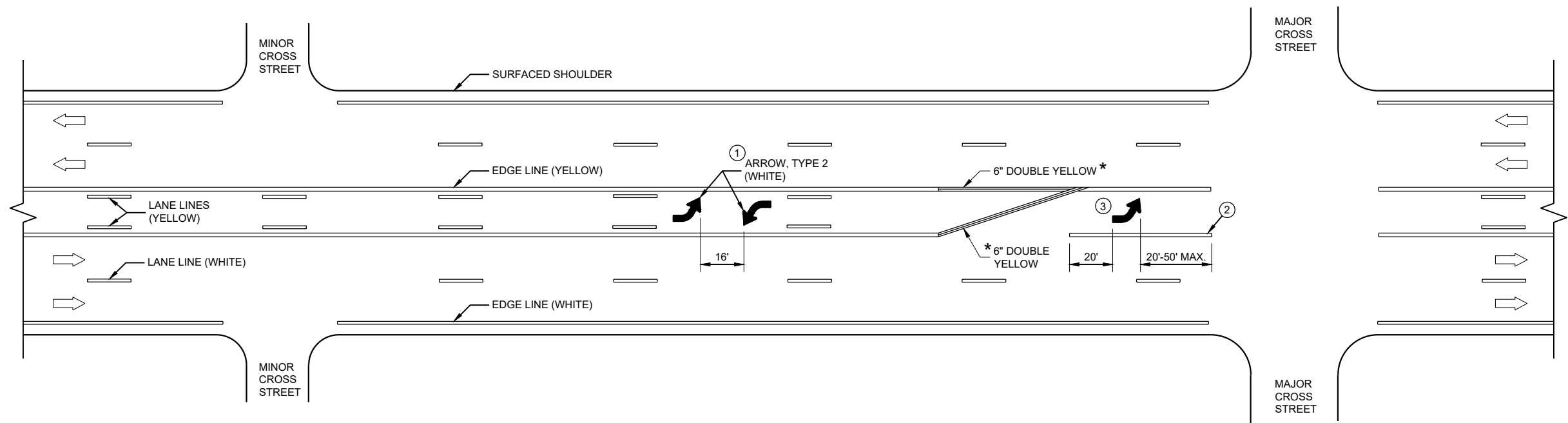
FHWA

**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



**TWO WAY LEFT TURN LANE**

**PAVEMENT MARKING  
(TURN LANES)**

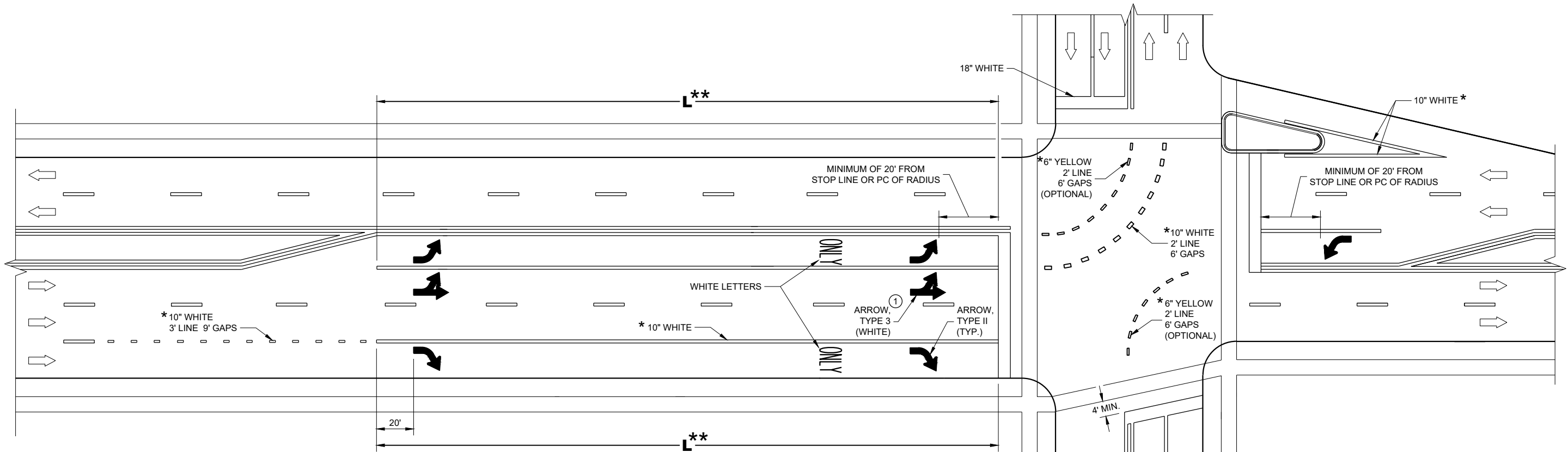
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

6

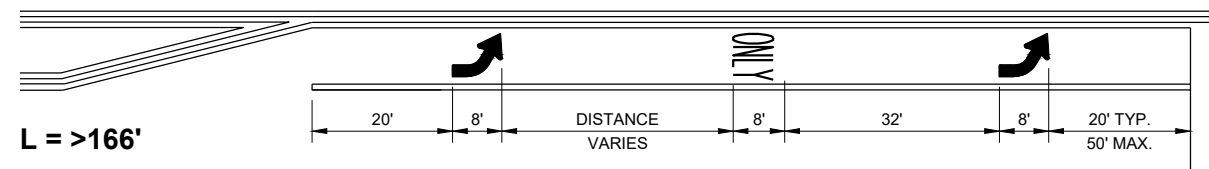
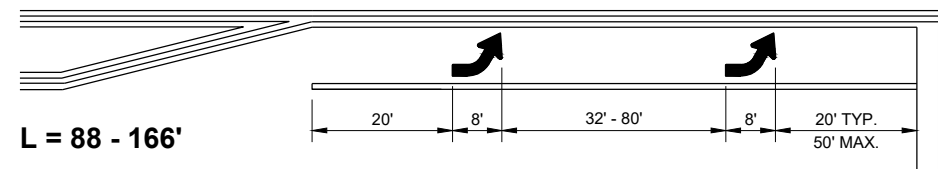
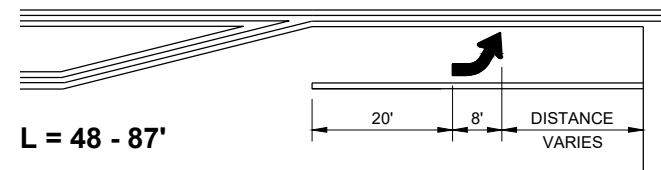
SDD 15C08-23C

SDD 15C08-23C



**TURN LANE OPTIONS**

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



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

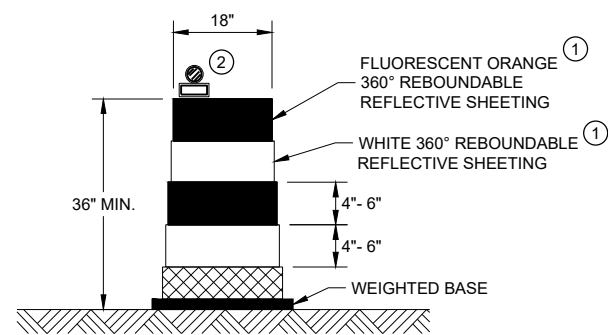
➡ DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

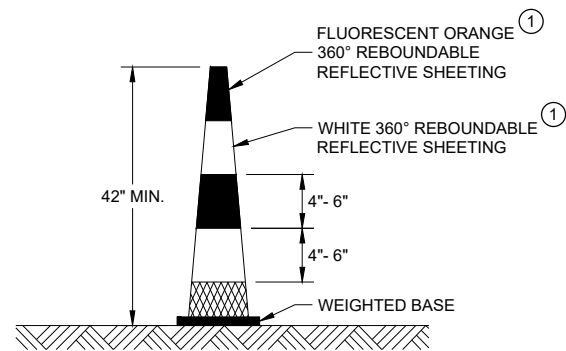
**PAVEMENT MARKING  
(TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



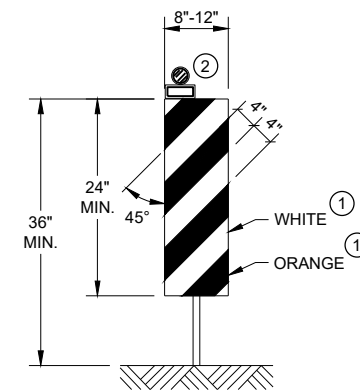
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



**42" CONE**

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

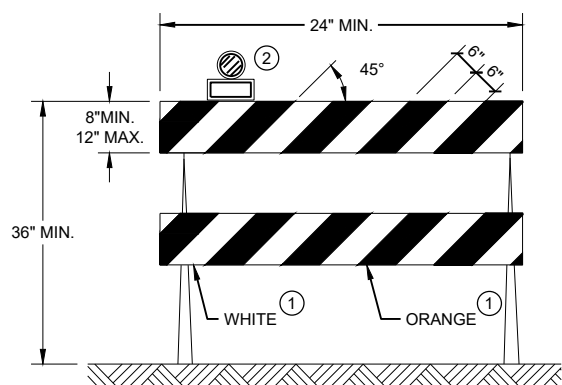


**VERTICAL PANEL**

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

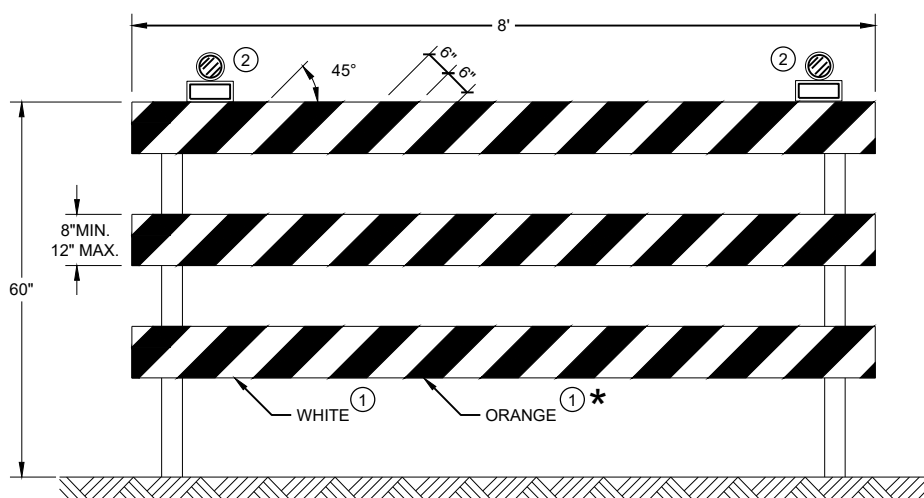
**GENERAL NOTES**

- 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.



**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.






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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**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.

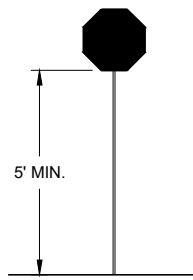
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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.



**STOP/SLOW PADDLE ON SUPPORT STAFF**

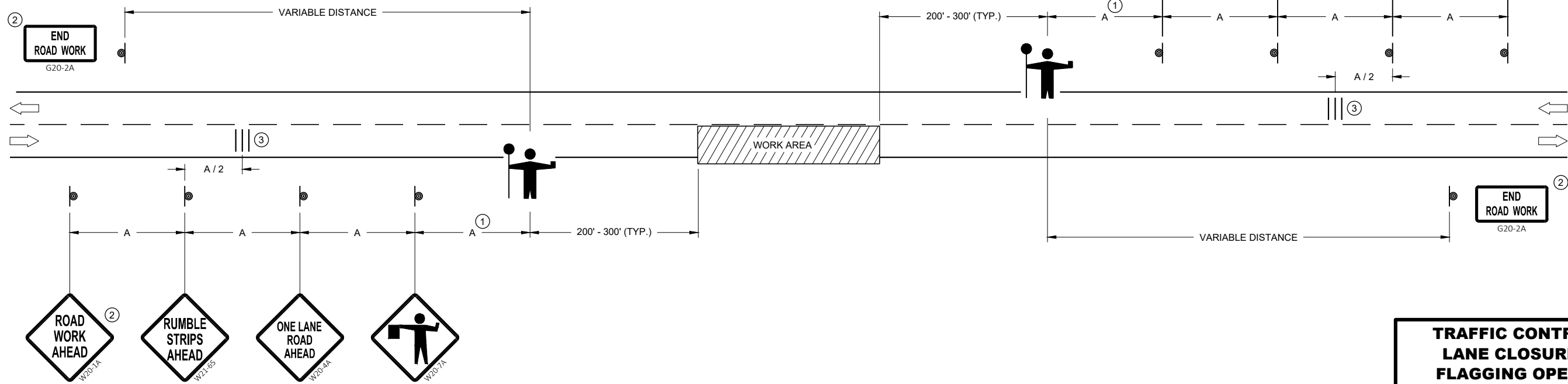
**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



W03-4

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".

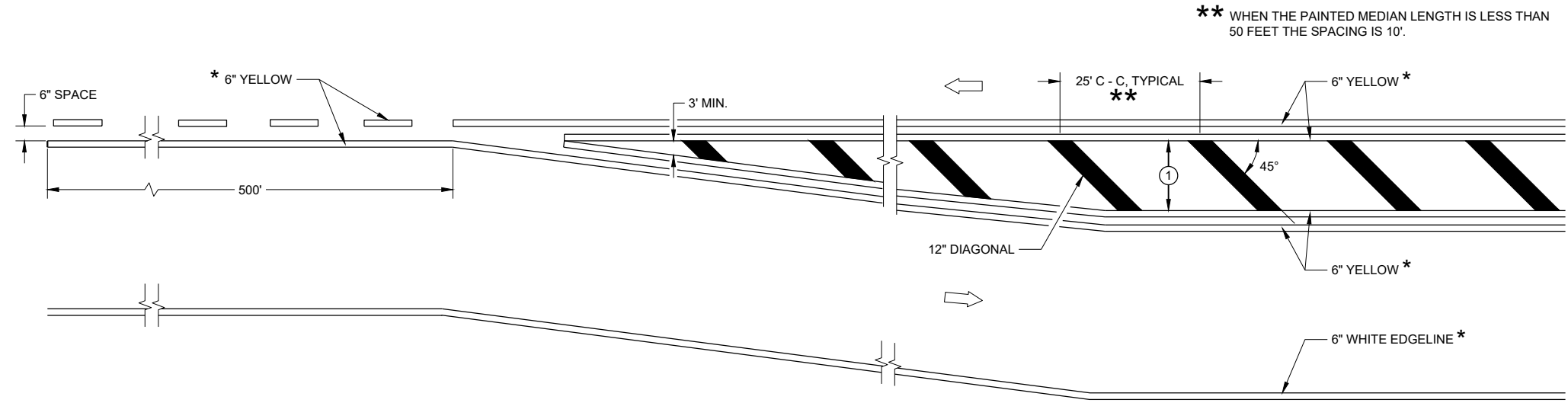


**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA



**MEDIAN ISLAND DETAIL**

****** WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.

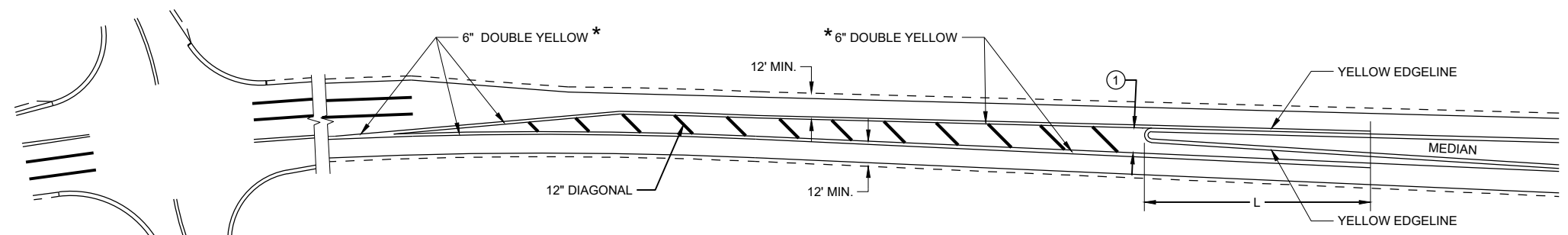
**GENERAL NOTES**

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.

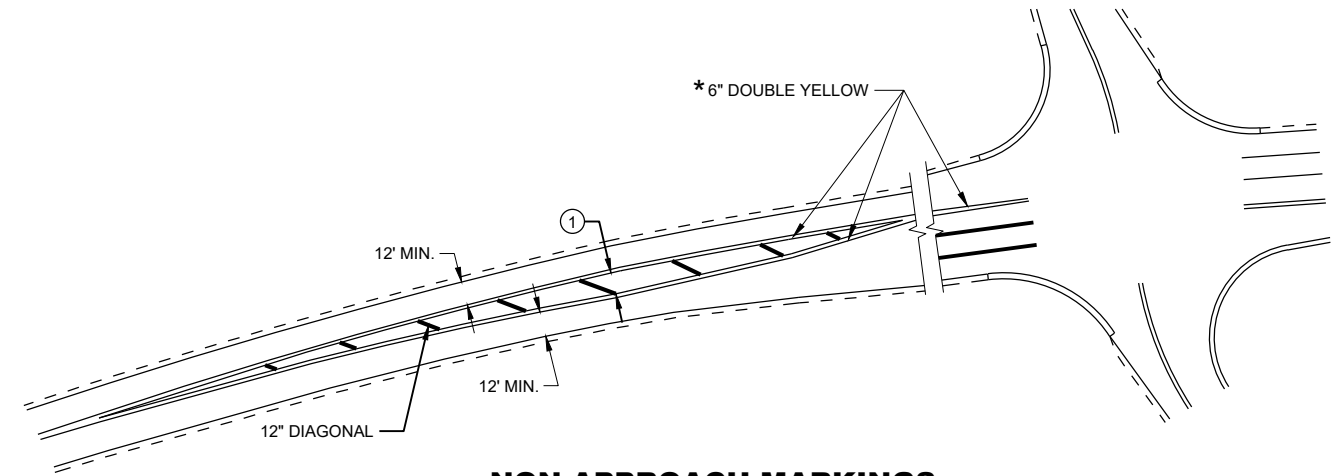
➔ DIRECTION OF TRAVEL

* 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**

6

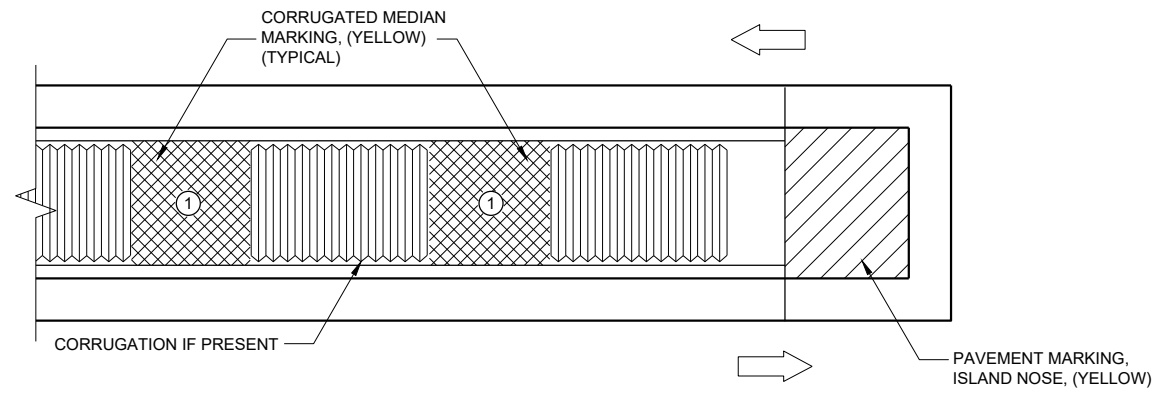
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SDD 15C18-08a

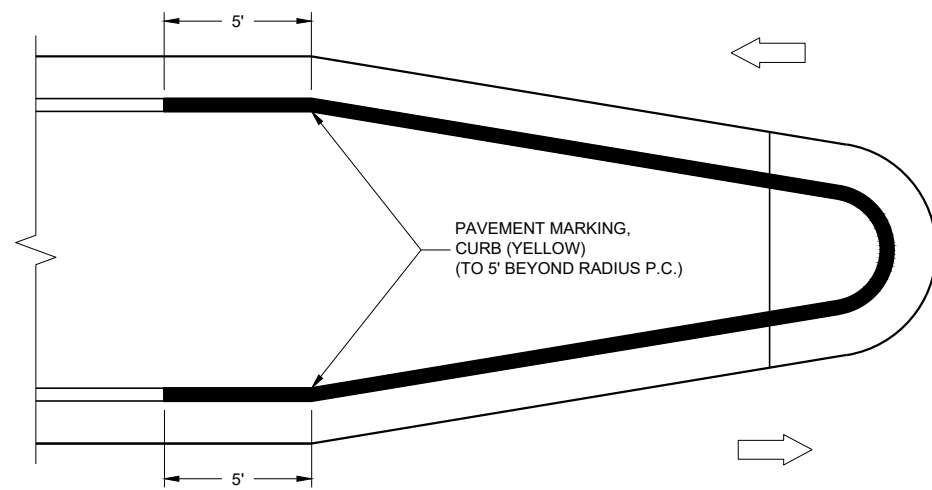
SDD 15C18-08a

<b>MEDIAN ISLAND PAVEMENT MARKINGS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

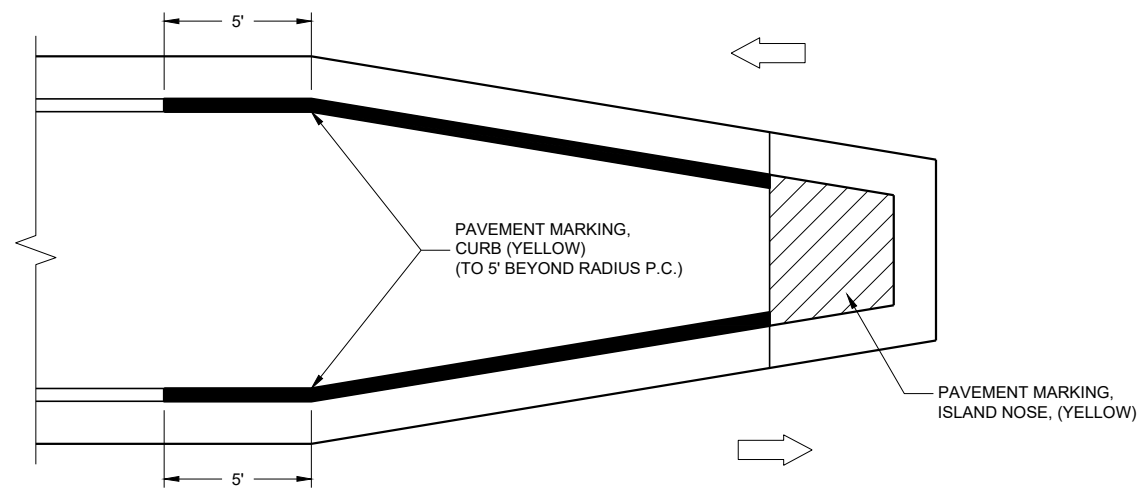




**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**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 /S/ Jeannie Silver  
DATE STATE SIGNING AND MARKING  
ENGINEER  
FHWA

**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.

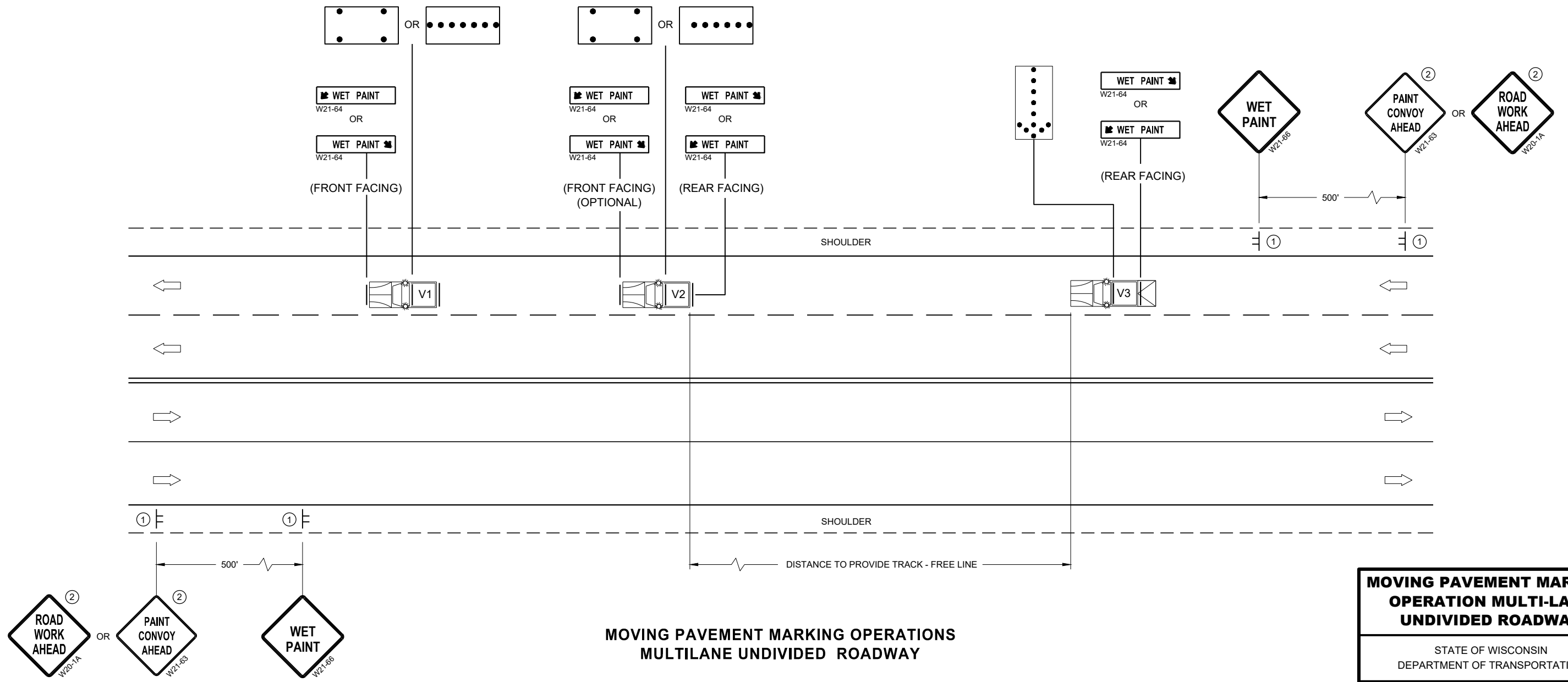
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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.

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**MOVING PAVEMENT MARKING OPERATIONS  
MULTILANE UNDIVIDED ROADWAY**

<b>MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

SDD 15C19-08b

SDD 15C19-08b

### 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

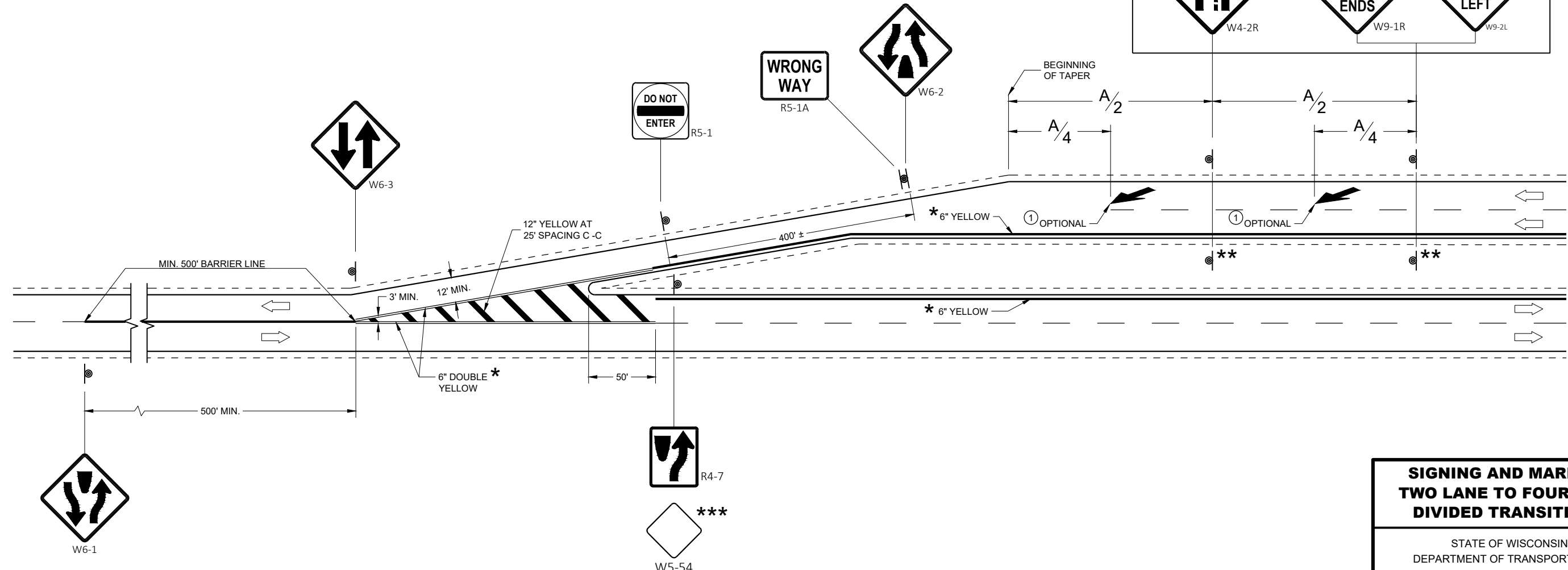
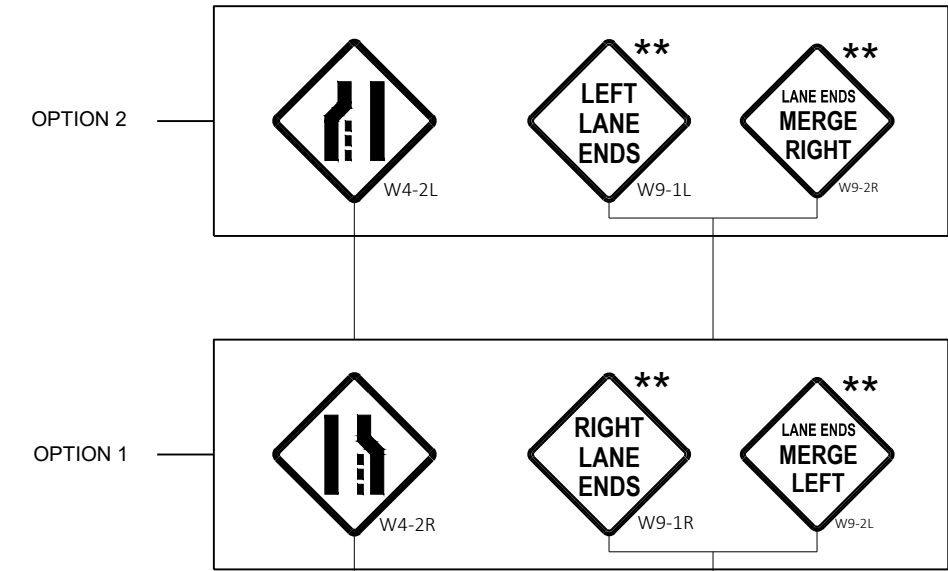
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

⊙ 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

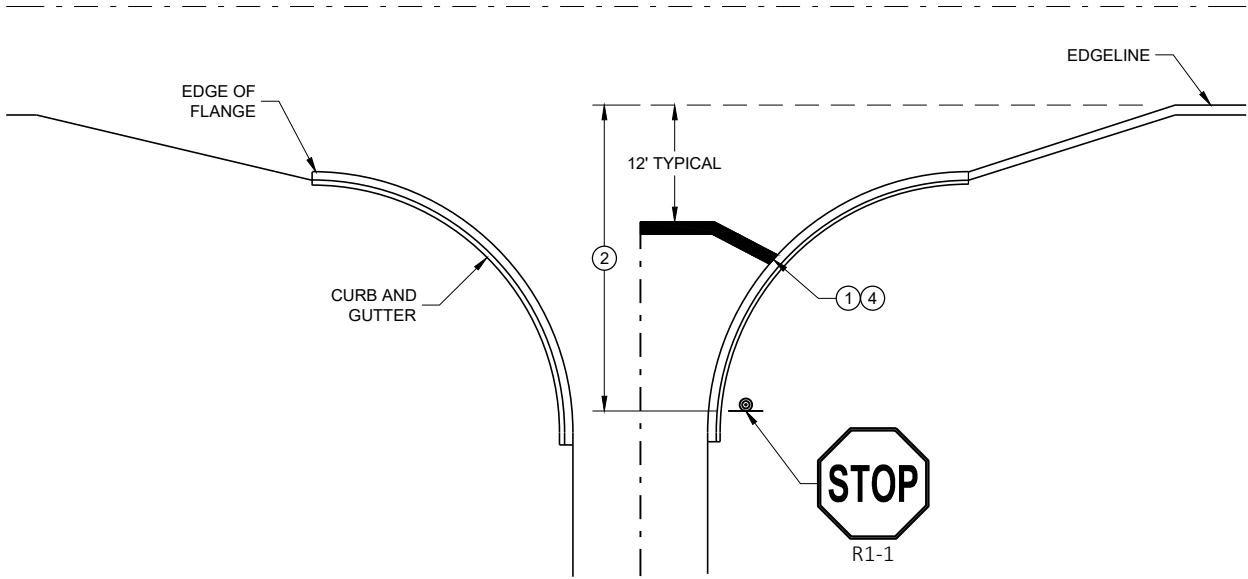
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2023 /S/ Matthew Rauch  
STATE SIGNING AND MARKING ENGINEER

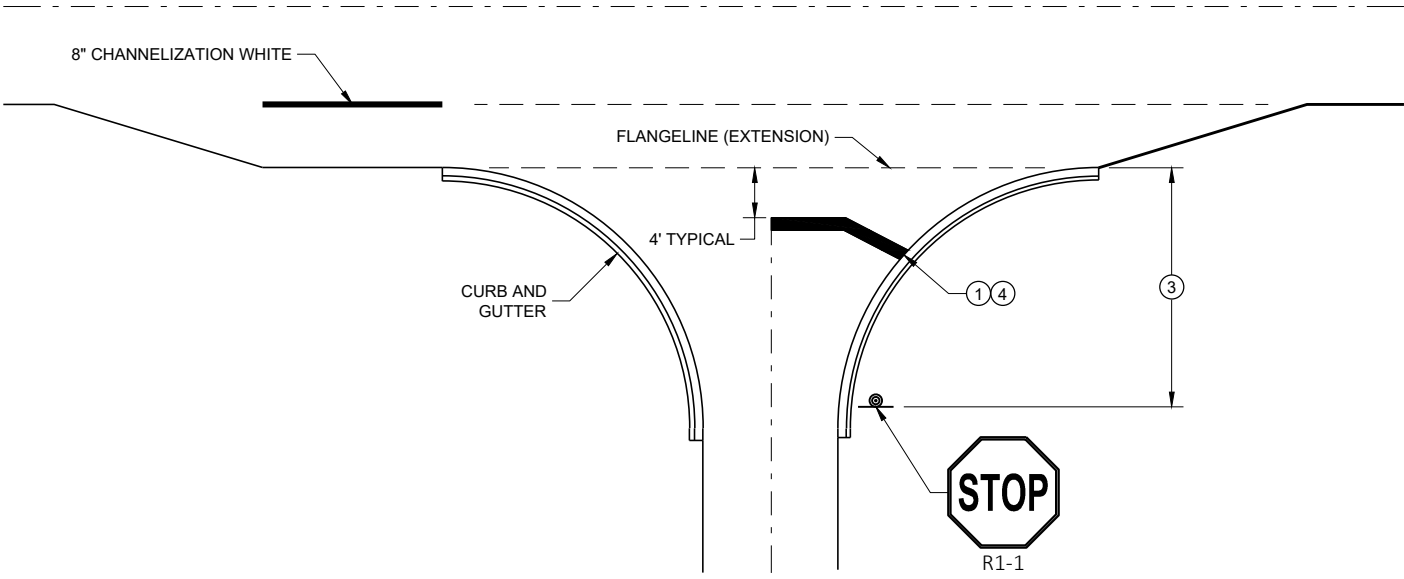
**GENERAL NOTES**

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

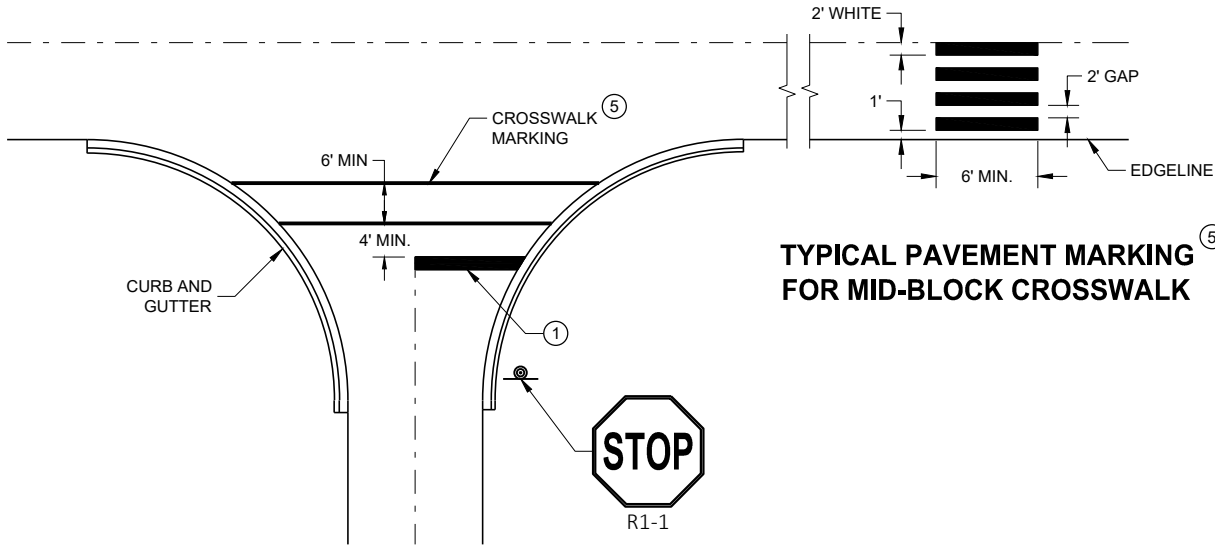
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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.



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

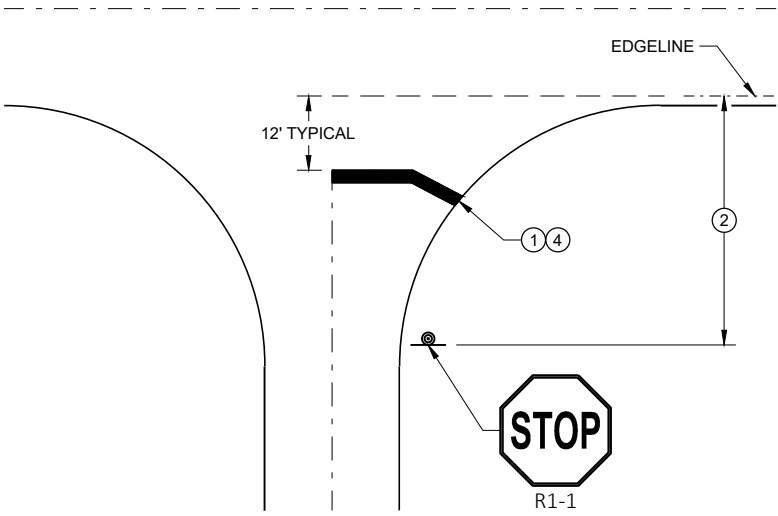


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



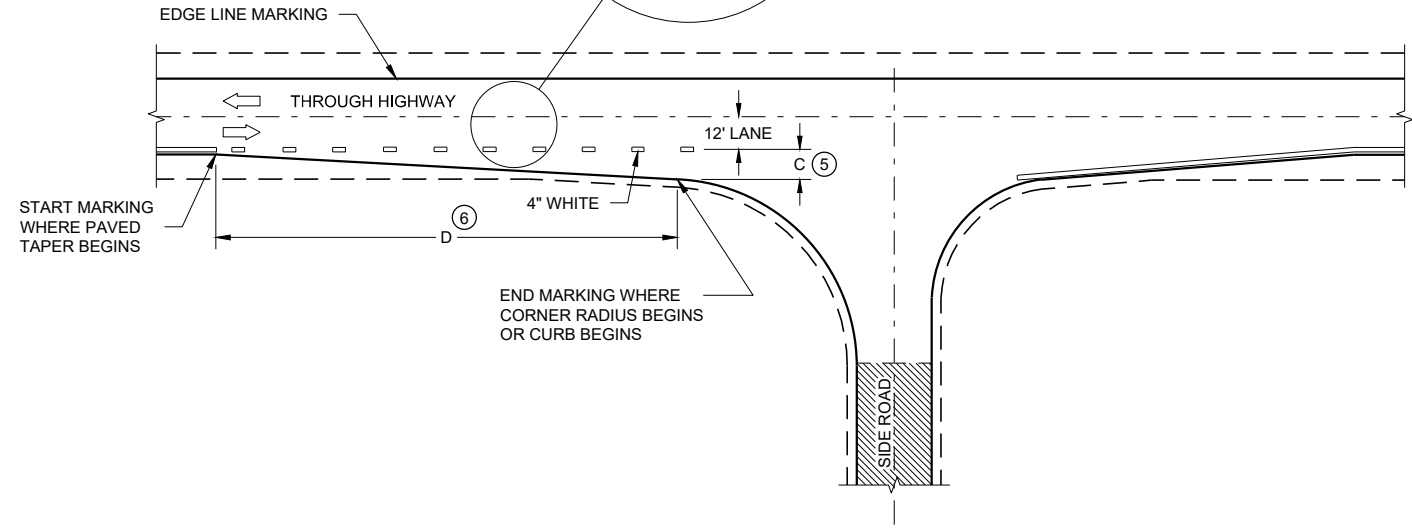
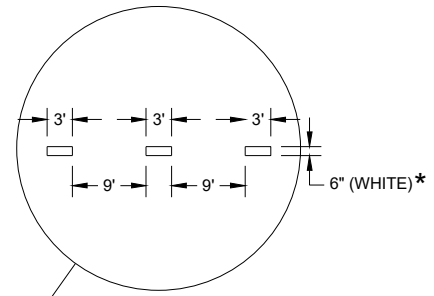
**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

**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



**MINOR INTERSECTION**

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

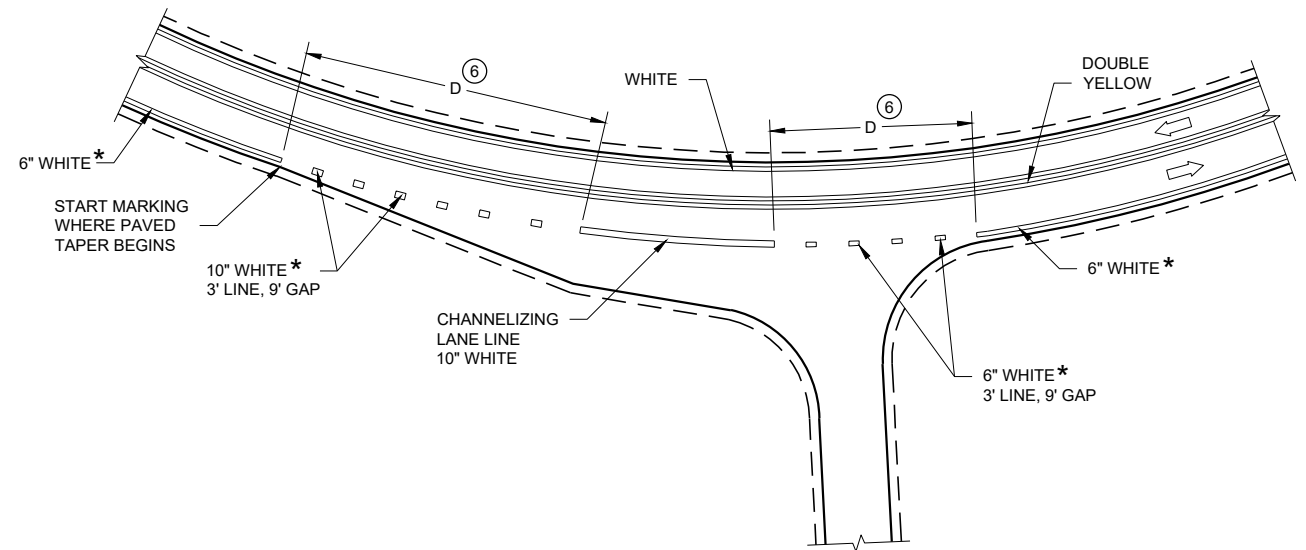
**GENERAL NOTES**

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

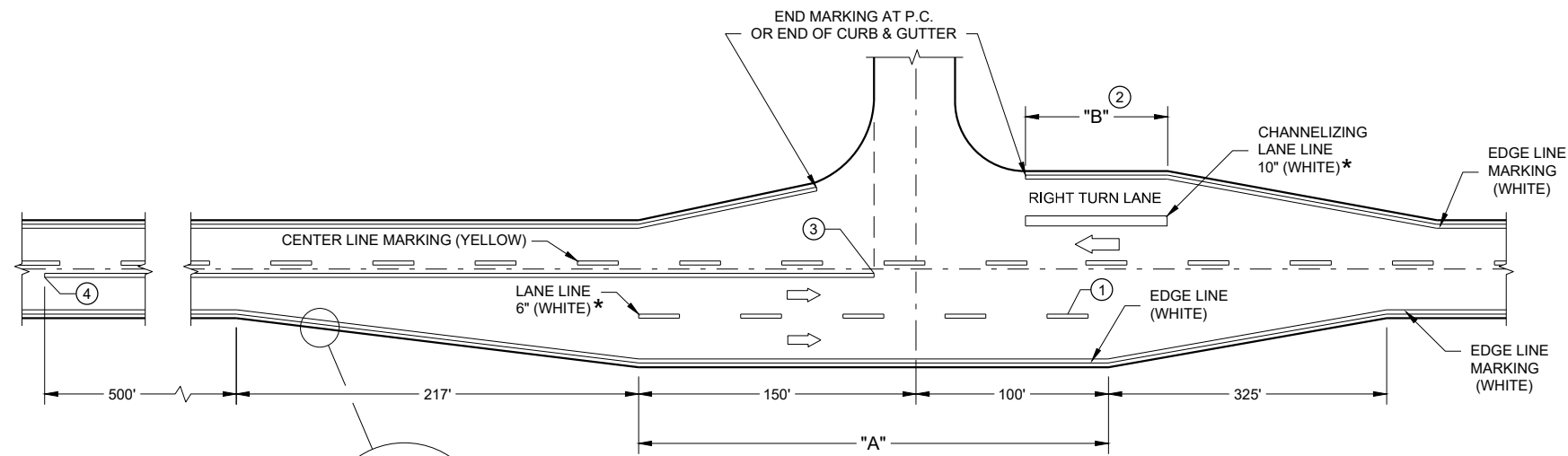
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

**LEGEND**

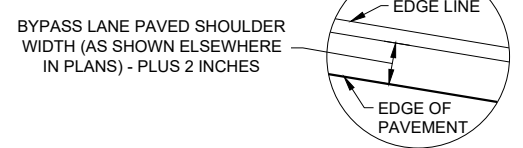
➔ DIRECTION OF TRAVEL



**INTERSECTION ON OUTSIDE OF CURVE**



**MAJOR INTERSECTIONS  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**



**PAVEMENT MARKING  
(INTERSECTIONS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

## GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.










WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

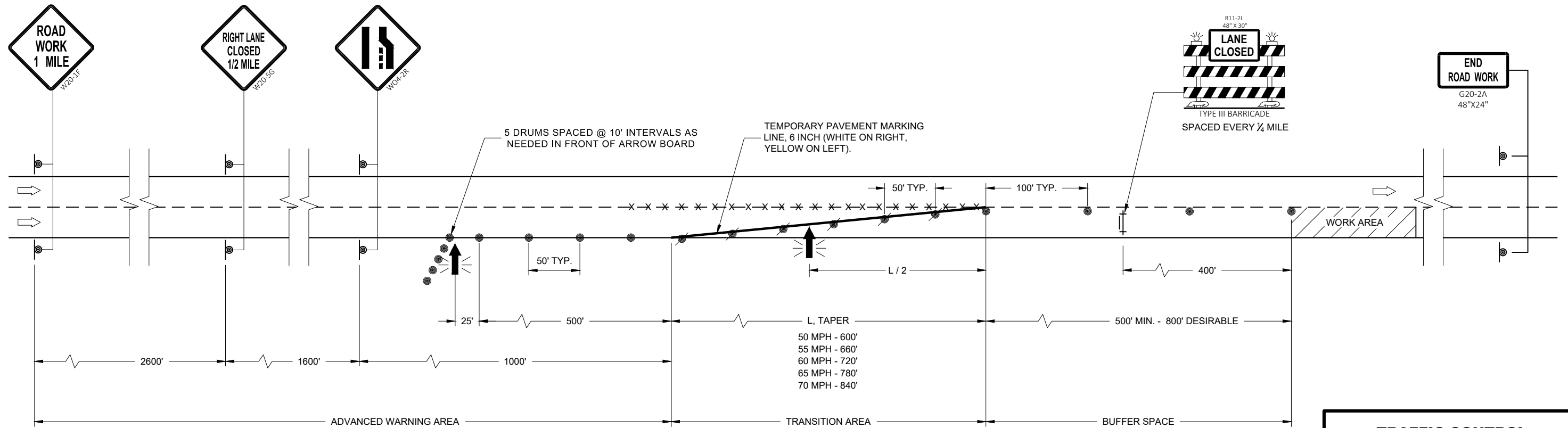
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

## LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD

6

SDD 15D12 - 11a












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SDD 15D12 - 11a

<b>TRAFFIC CONTROL LANE CLOSURE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

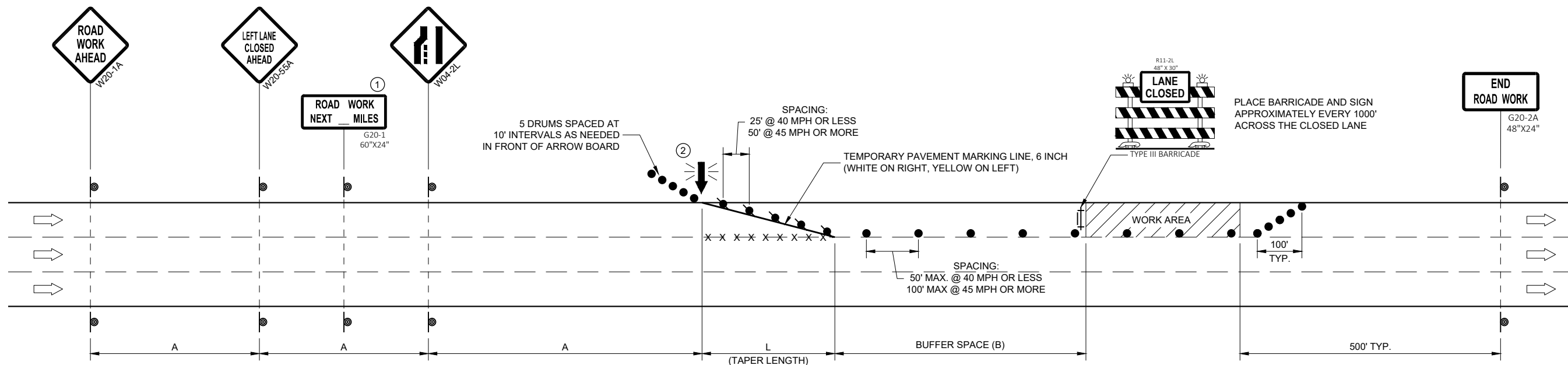
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE 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.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

**TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA










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SDD 15D20-07a

SDD 15D20-07a

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE 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.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

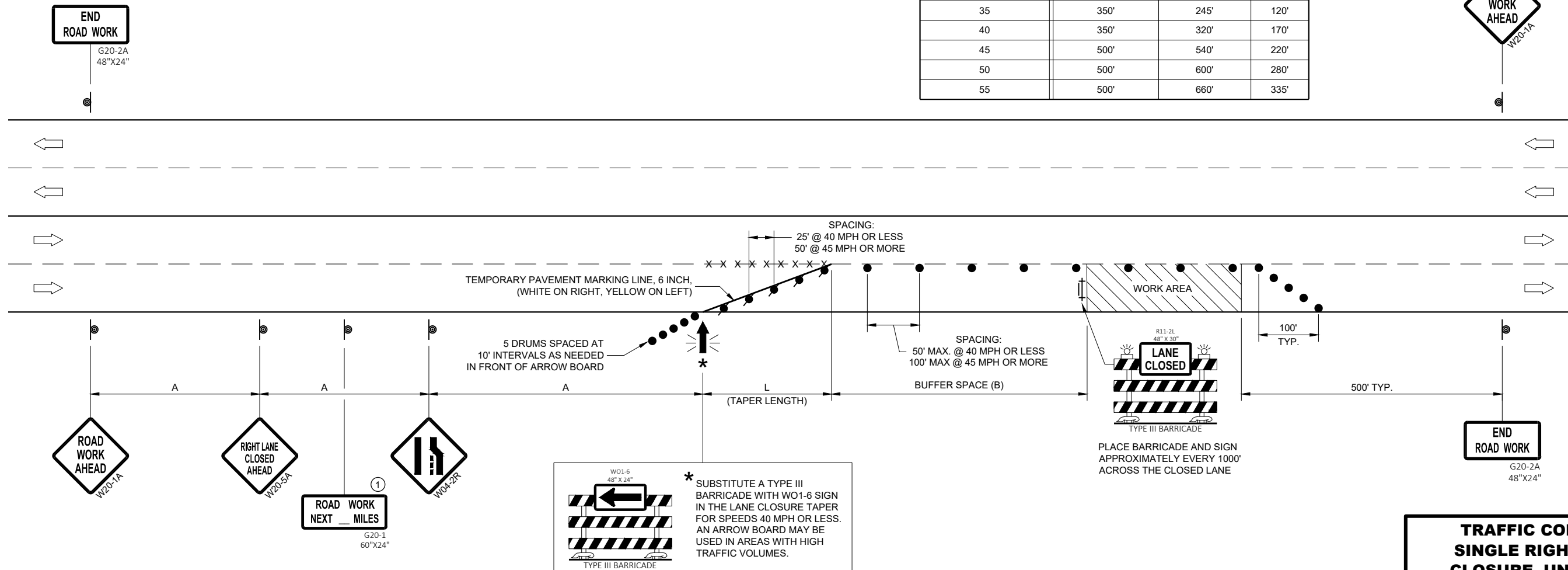
① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



6

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SDD 15D20-07b

SDD 15D20-07b

**TRAFFIC CONTROL,  
SINGLE RIGHT LANE  
CLOSURE, UNDIVIDED  
NON-FREEWAY/EXPRESSWAY**










STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

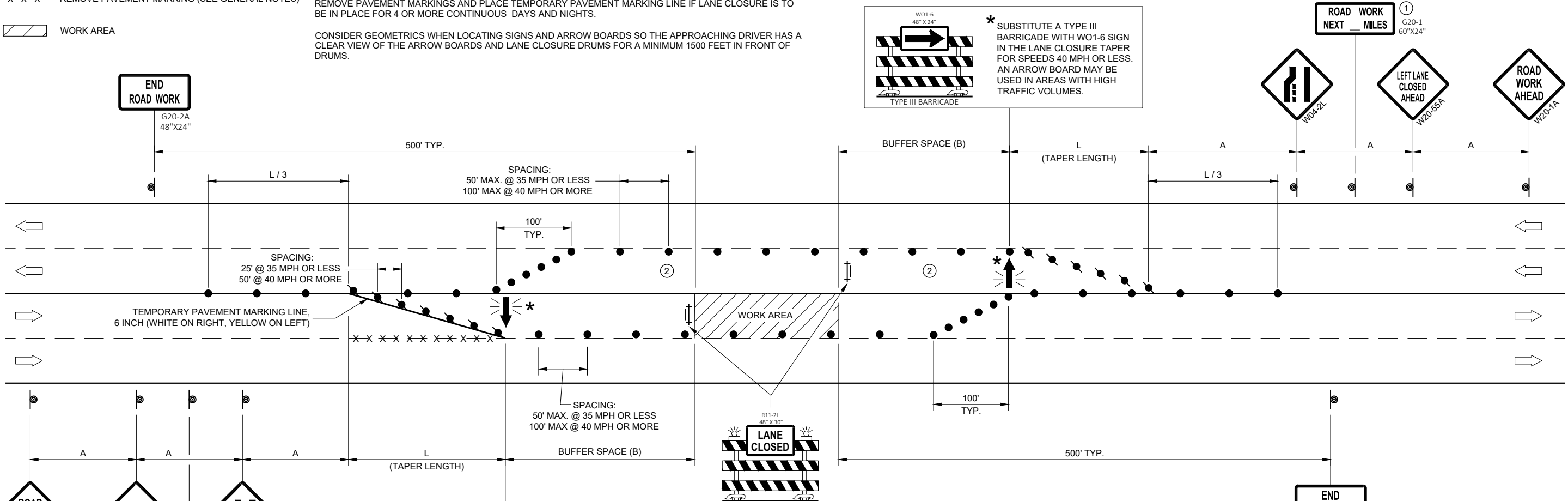
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

BARRICADES IN A CLOSED LANE 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.

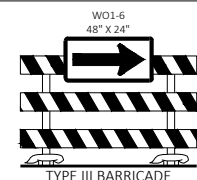
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

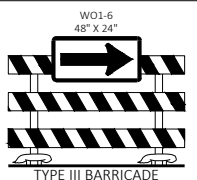
- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**



*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**



**R11-2L 48"X30"**



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

**TRAFFIC CONTROL,  
SINGLE LEFT LANE  
CLOSURE, UNDIVIDED  
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

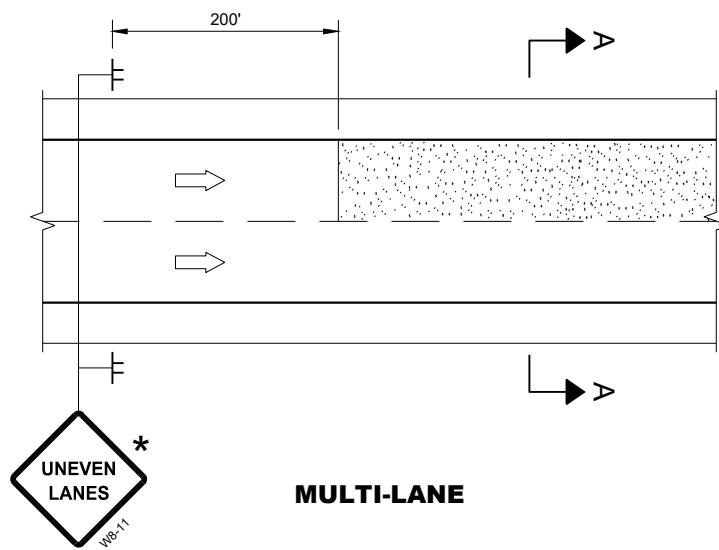
FHWA

6

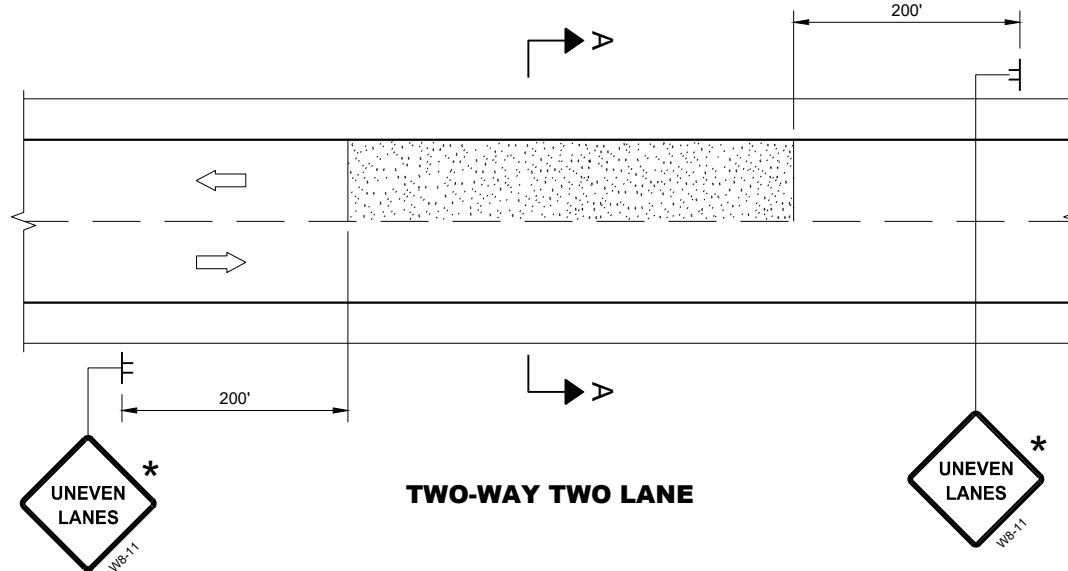
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SDD 15D20-07C

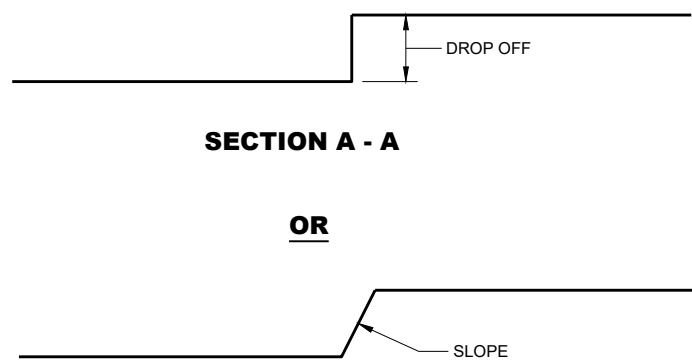
SDD 15D20-07C



**MULTI-LANE**



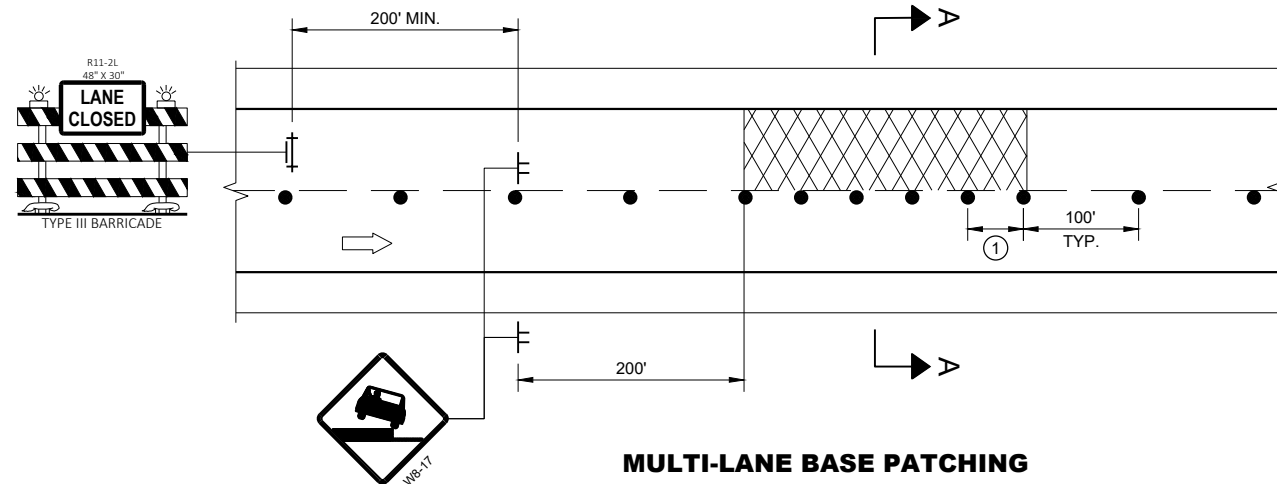
**TWO-WAY TWO LANE**



**SECTION A - A**

**OR**

**SECTION A - A**



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**

**GENERAL NOTES**

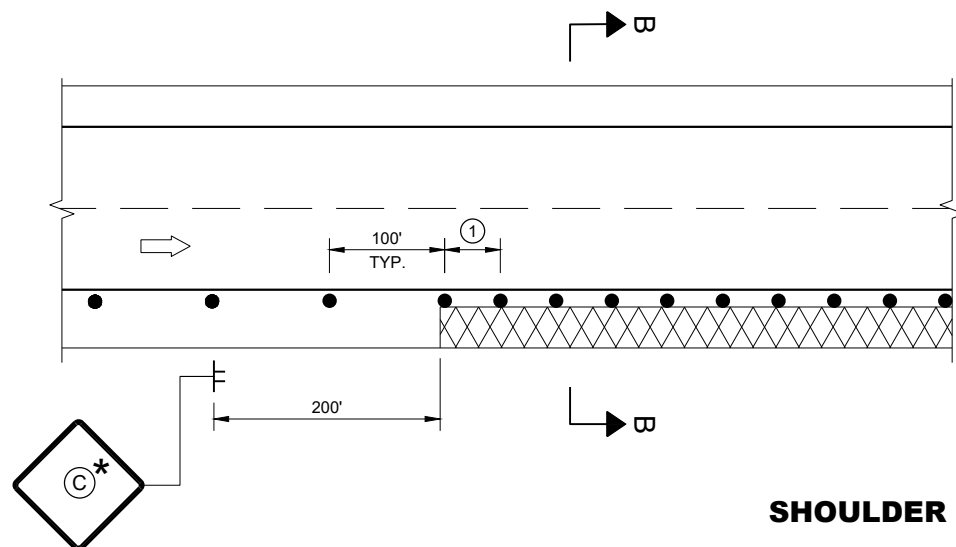
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

**LEGEND**

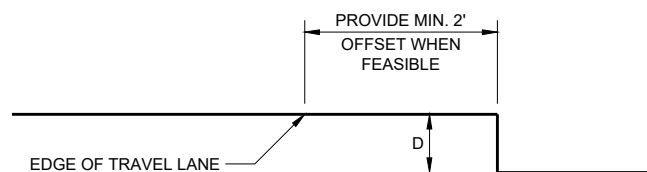
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



**SHOULDER DROP-OFFS**



**SECTION B - B**

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,  
DROP-OFF SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Andrew Heidtke  
DATE DATE WORK ZONE 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.

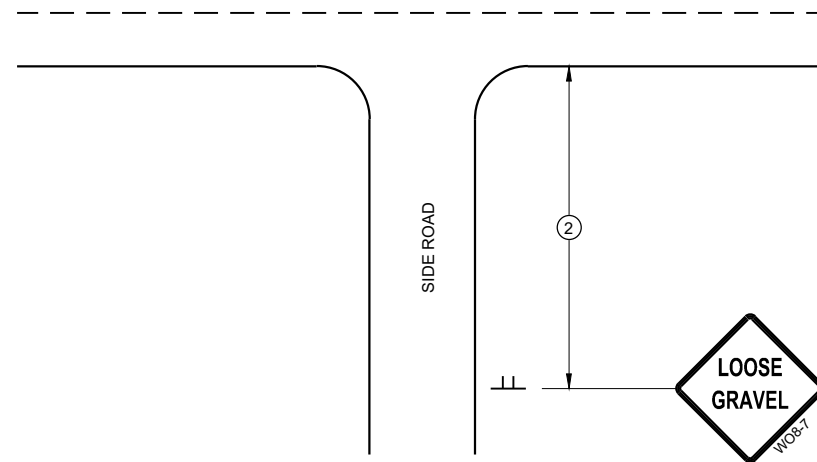
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

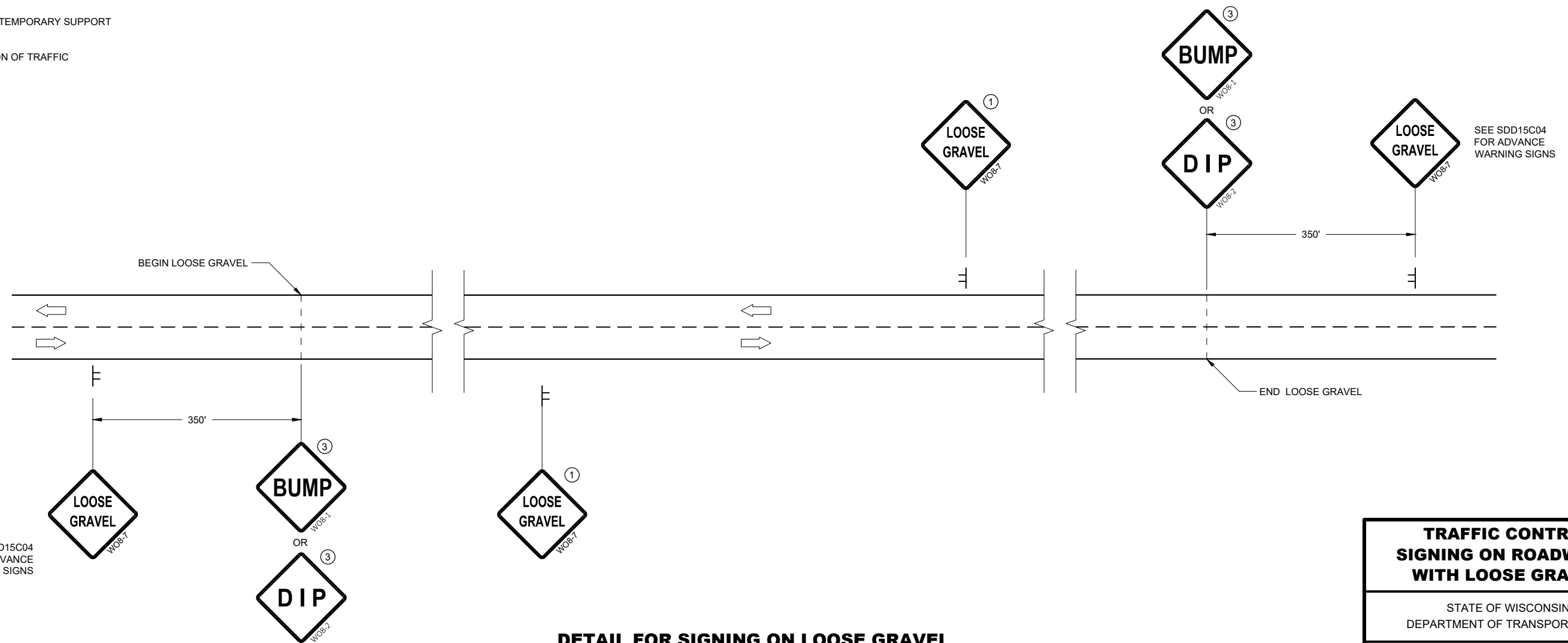
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

**LEGEND**

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



**TYPICAL SIDE ROAD APPROACH SIGN DETAIL**



**DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES**

<b>TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	





6

6

SDD 15D45 - 03

SDD 15D45 - 03

**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.

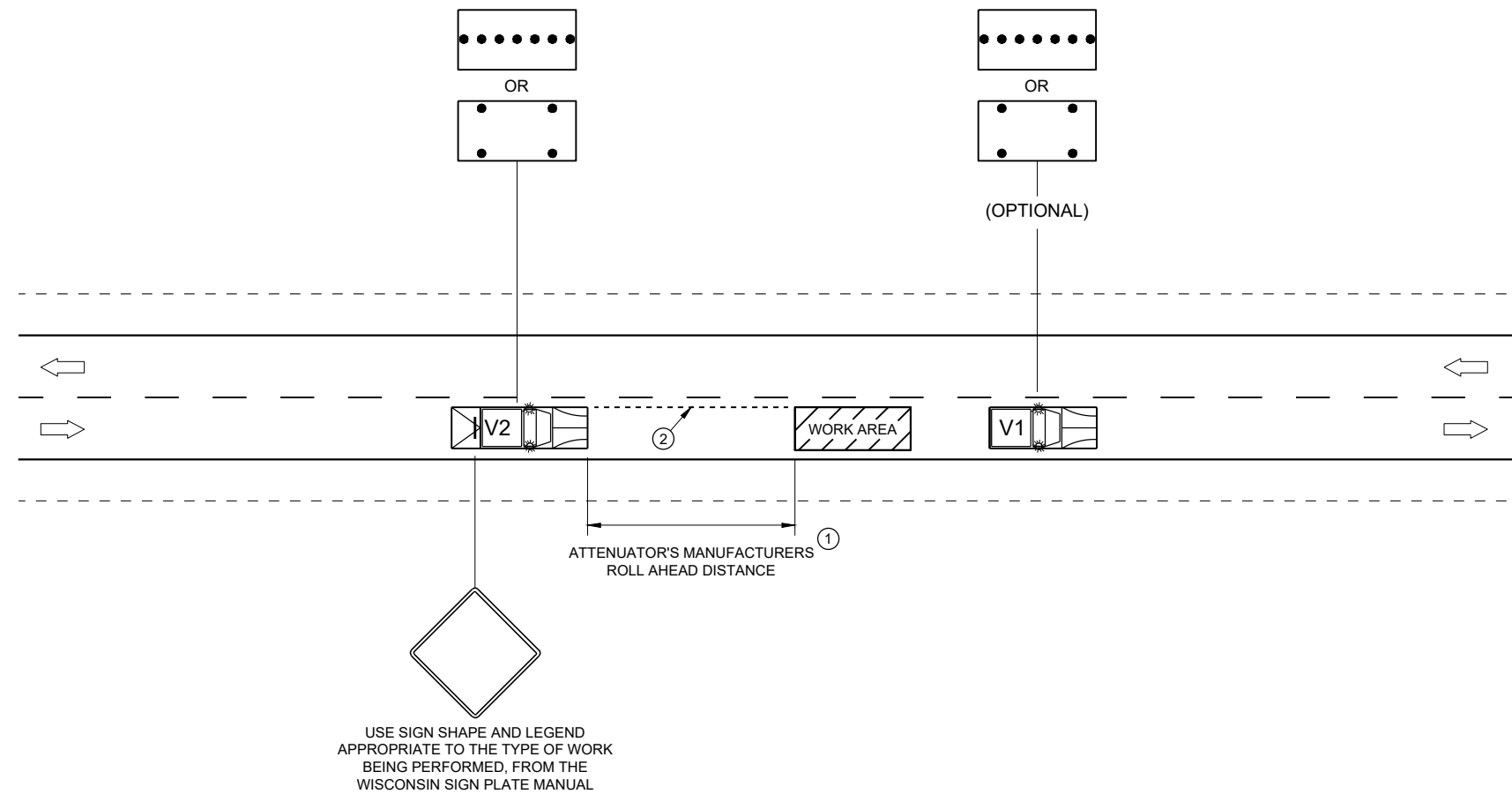
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

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.



6

6

SDD 15D51 - 01

SDD 15D51 - 01

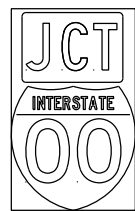
**TRAFFIC CONTROL,  
MOBILE OPERATIONS ON  
AN UNDIVIDED ROADWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

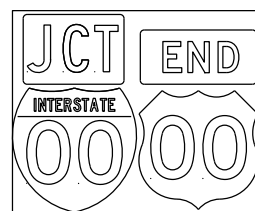
APPROVED  
February 2021 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER

FHWA

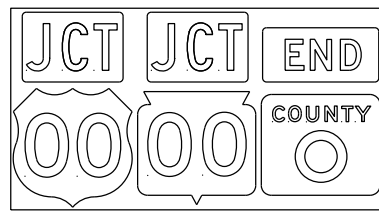
# TYPICAL ASSEMBLIES



J1-1



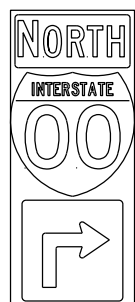
J1-2



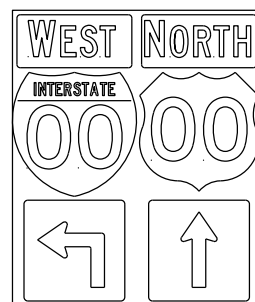
J1-3



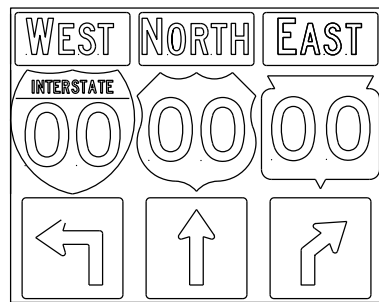
JR1-1



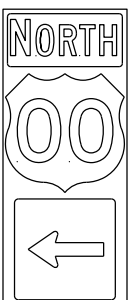
J2-1



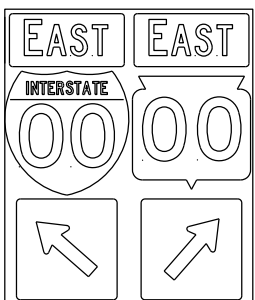
J2-2



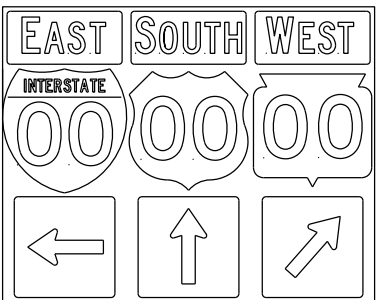
J2-3



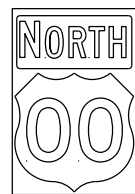
J3-1



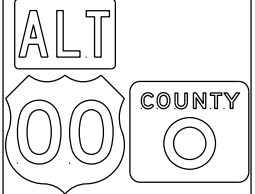
J3-2



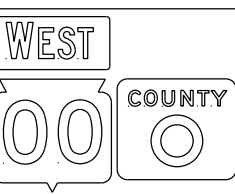
J3-3



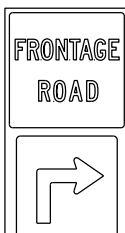
J4-1



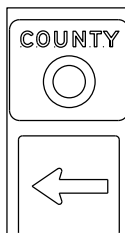
J4-2



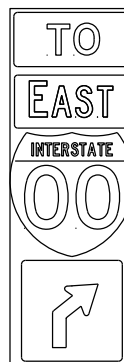
J4-2



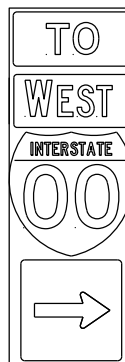
J12-1



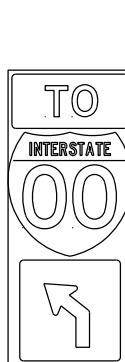
J13-1



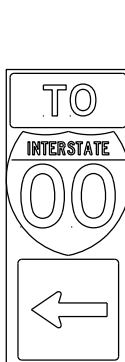
J32-1



J33-1



J22-1



J23-1



JR13-1



JR23-1

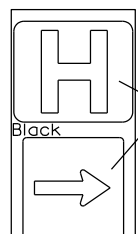


JR99-1



JV

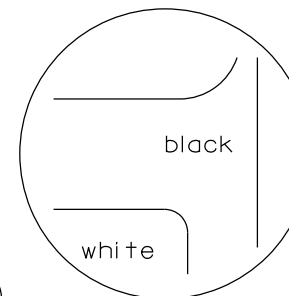
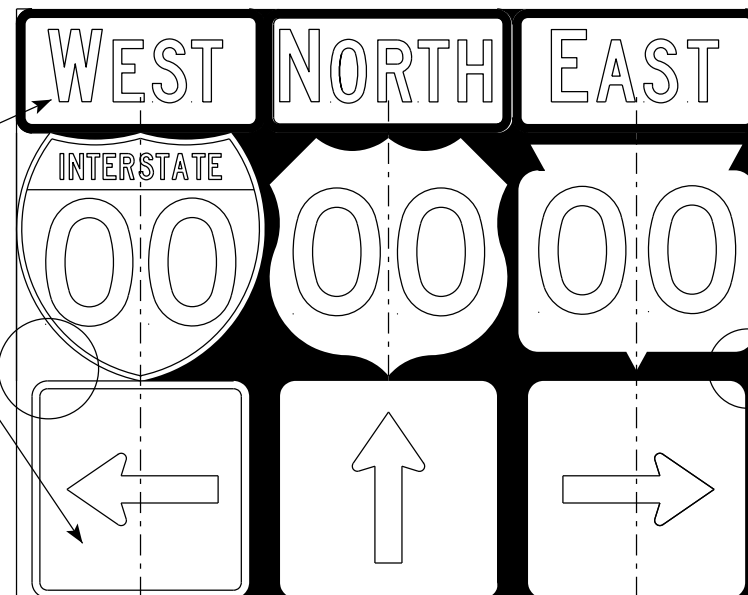
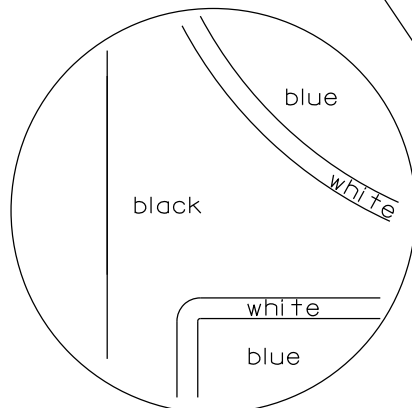
(Typical Vertical J-Assembly See Note 10 and 11)



JH-1

Blue Background

blue background with interstate



black background

## NOTES

- Signs are Type II - Type H Reflective
- Color:
  - Background - Black Non-reflective
  - Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

### ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/18/21

PLATE NO. A2-1S.9

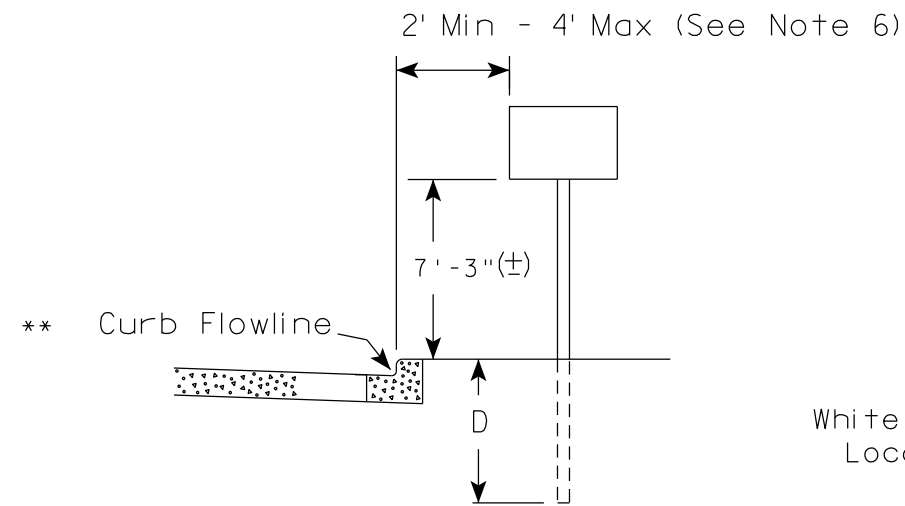
PROJECT NO:

SHEET NO:

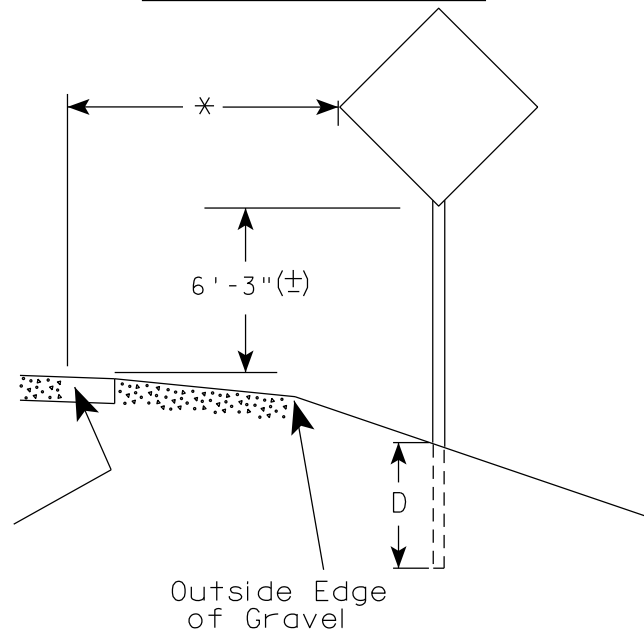
E

URBAN AREA

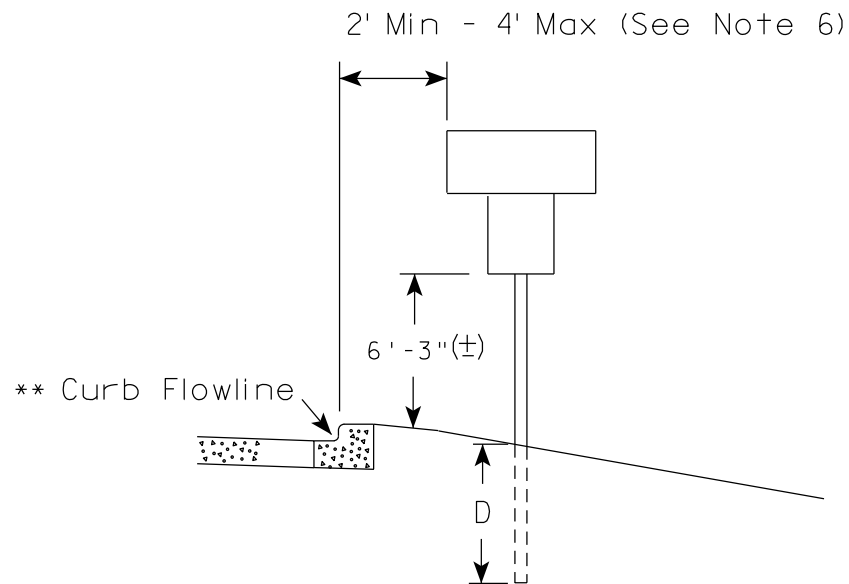
RURAL AREA (See Note 2)



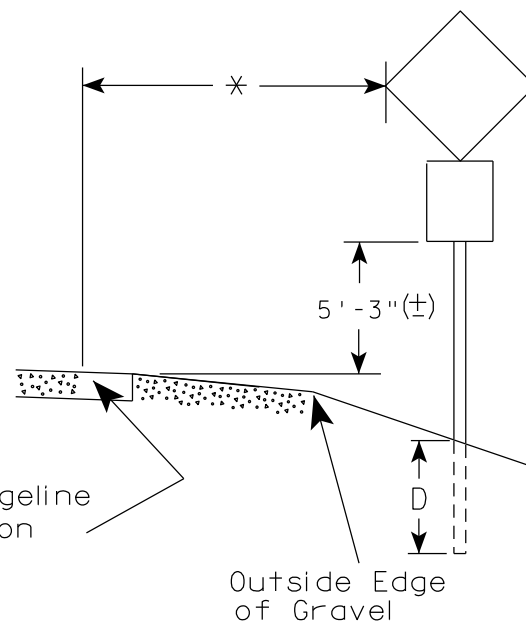
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. 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" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

7

7

* * 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.

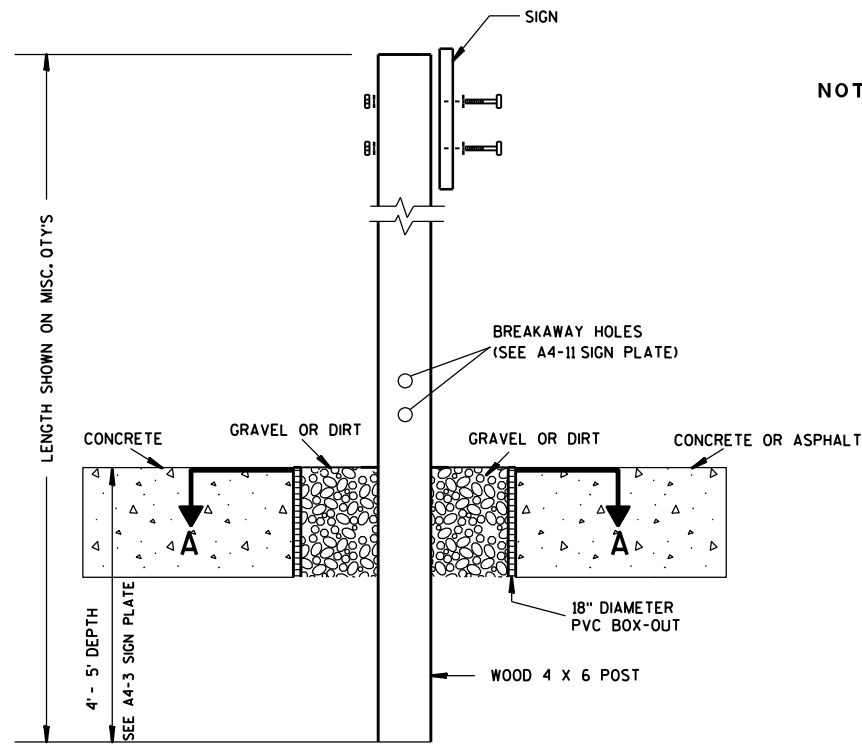
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

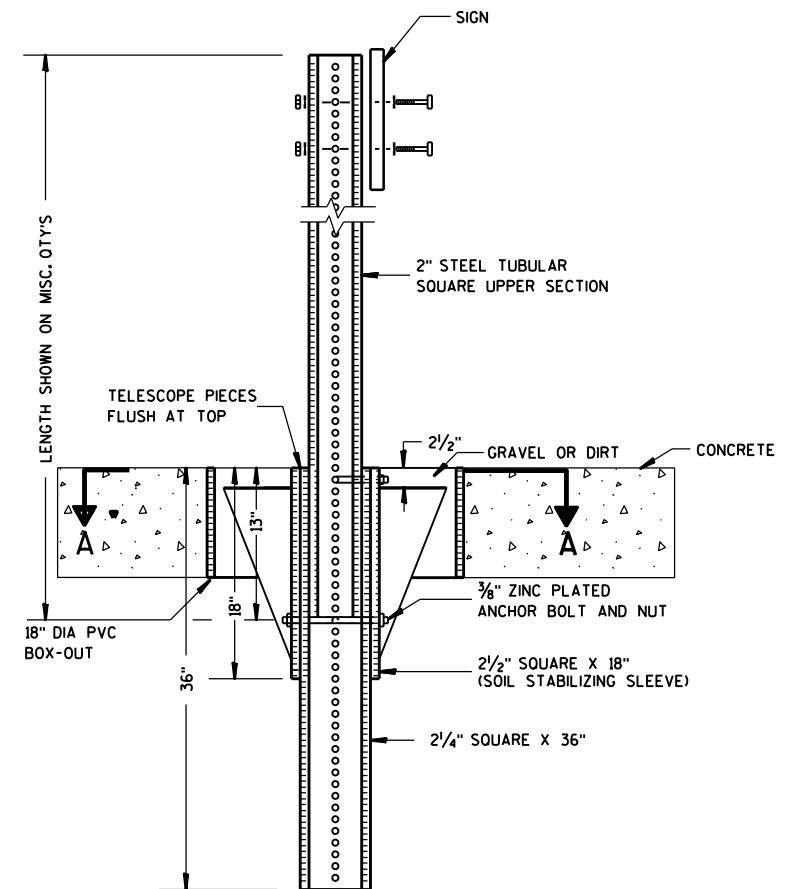
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

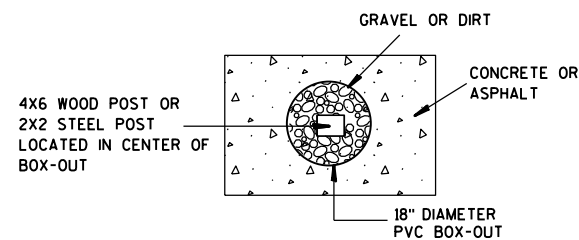
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

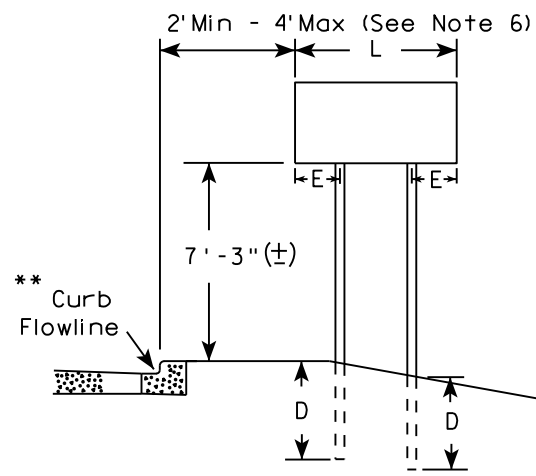
**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

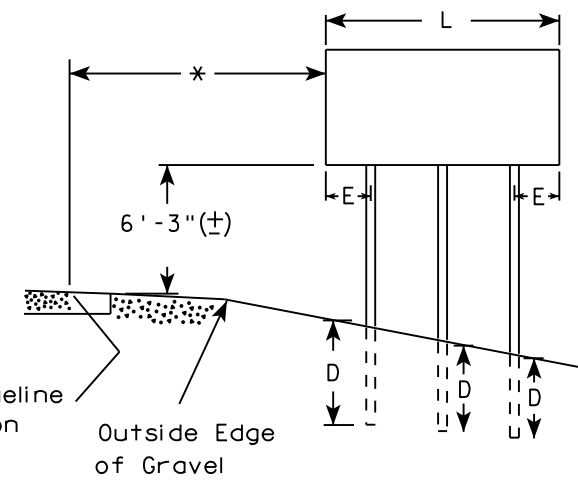
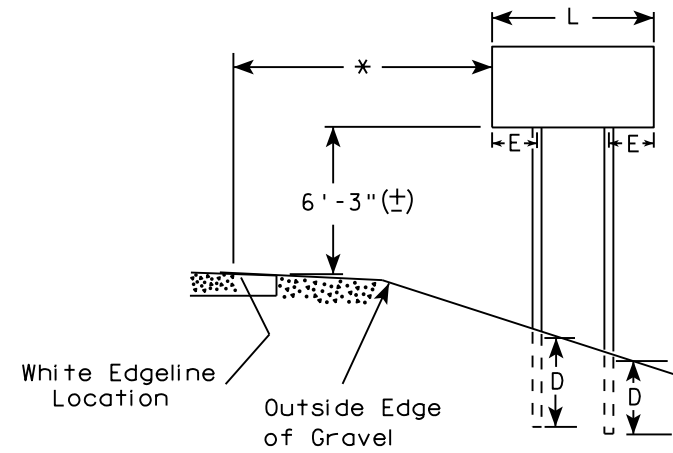
GENERAL NOTES

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" (±).

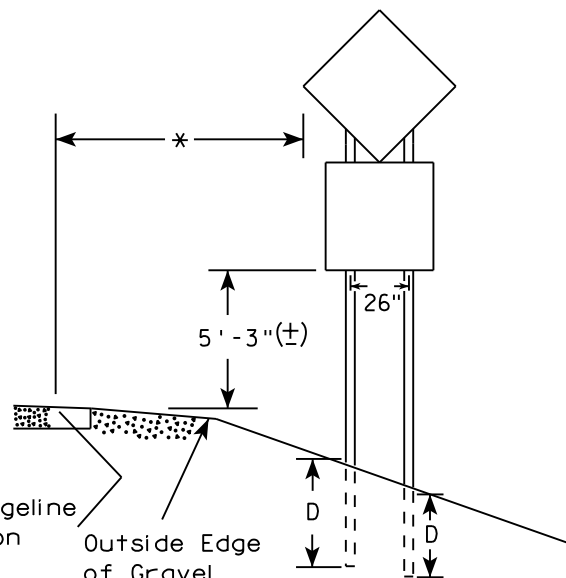
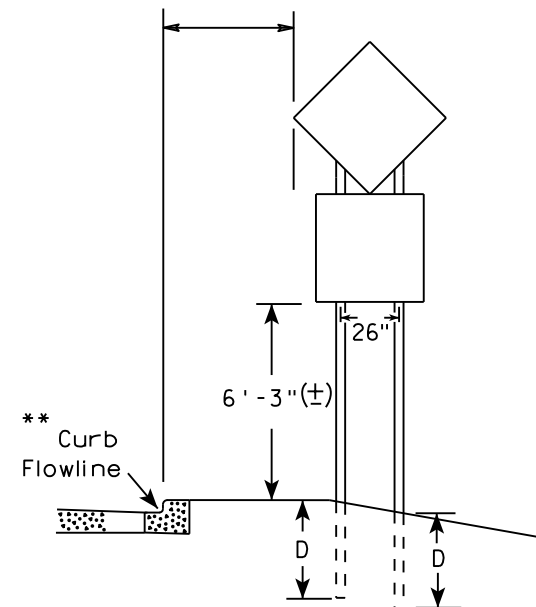
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

* 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.

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'

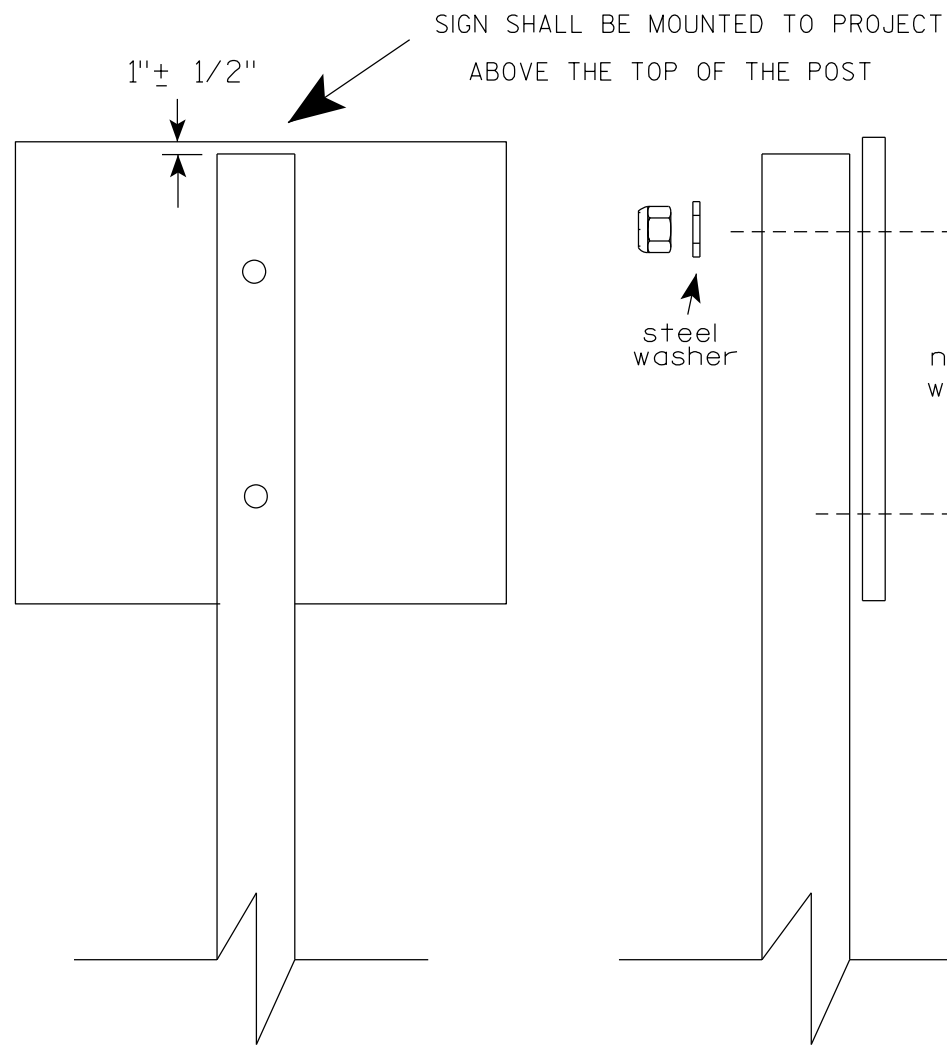
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15





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

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- 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.

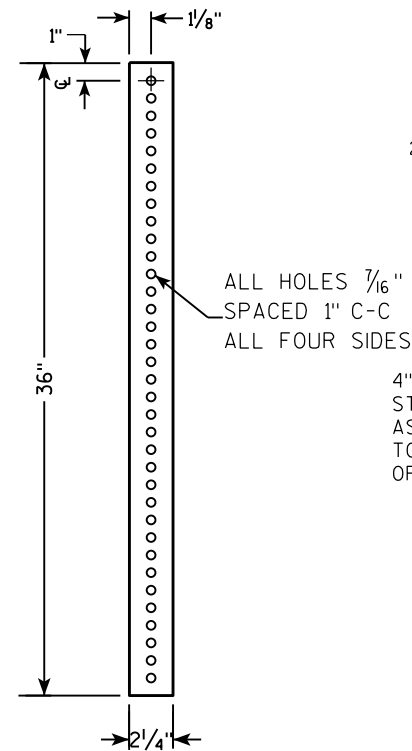
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- 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.

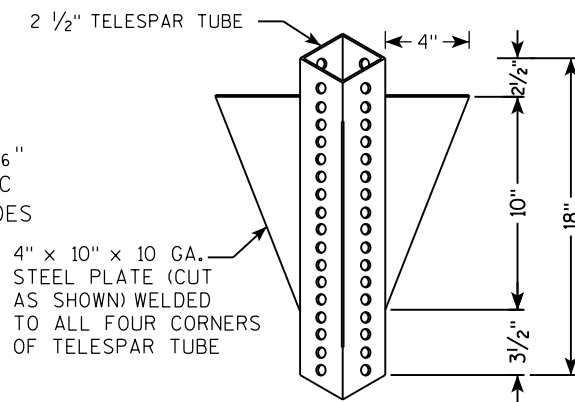
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

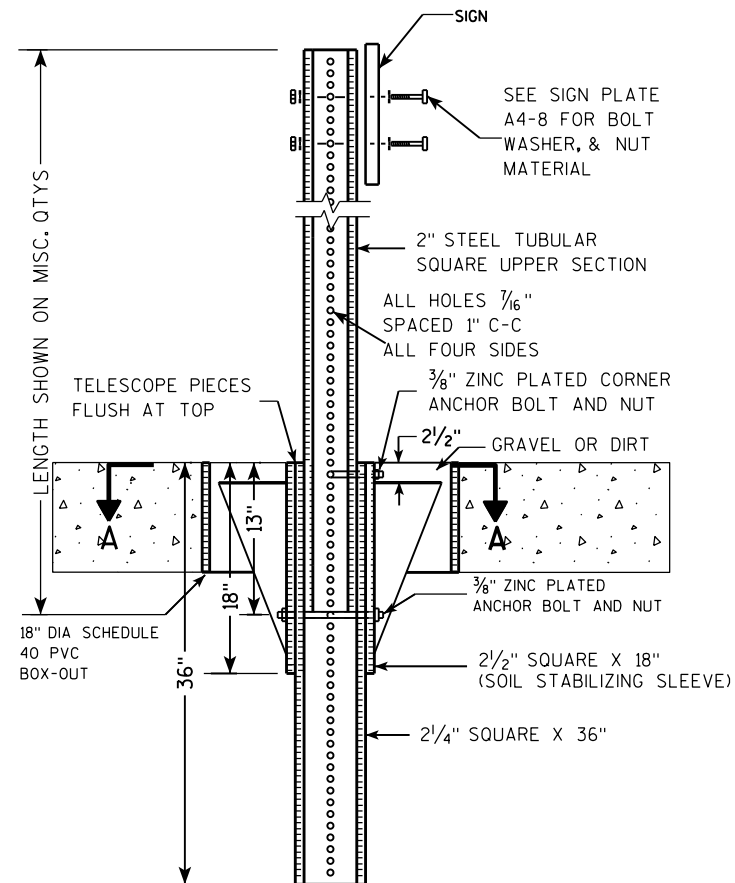
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



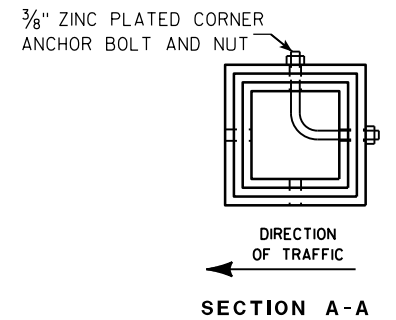
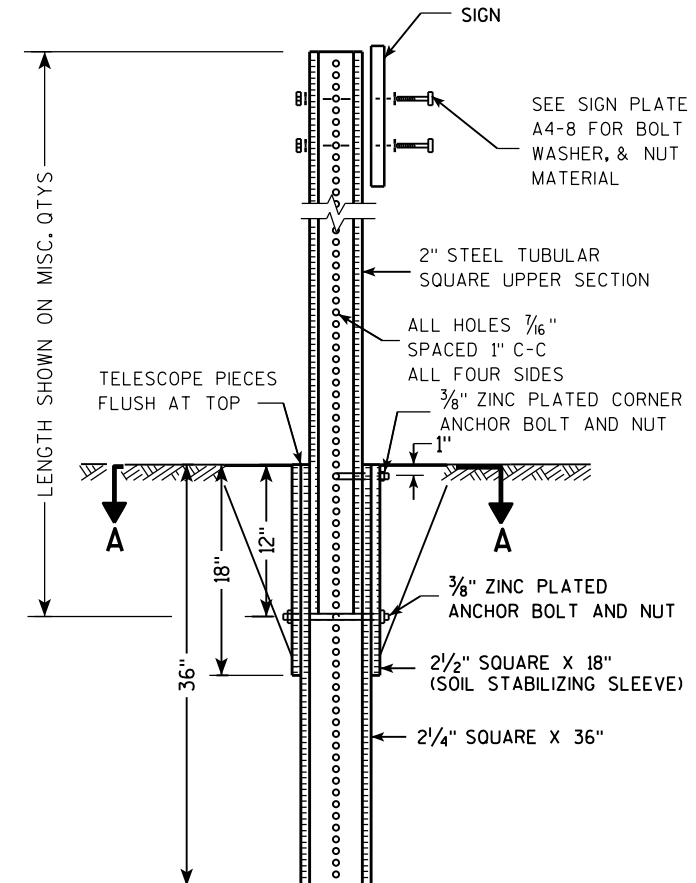
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**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

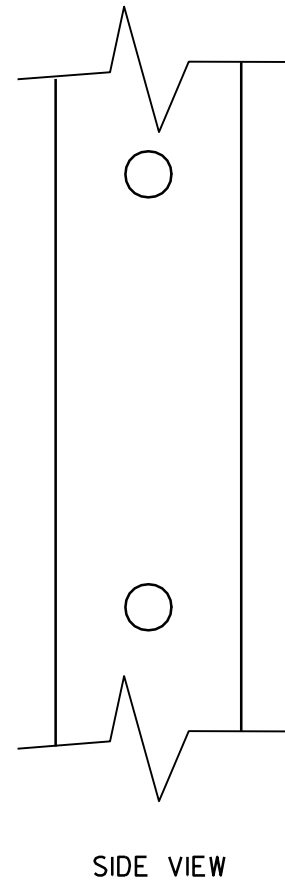
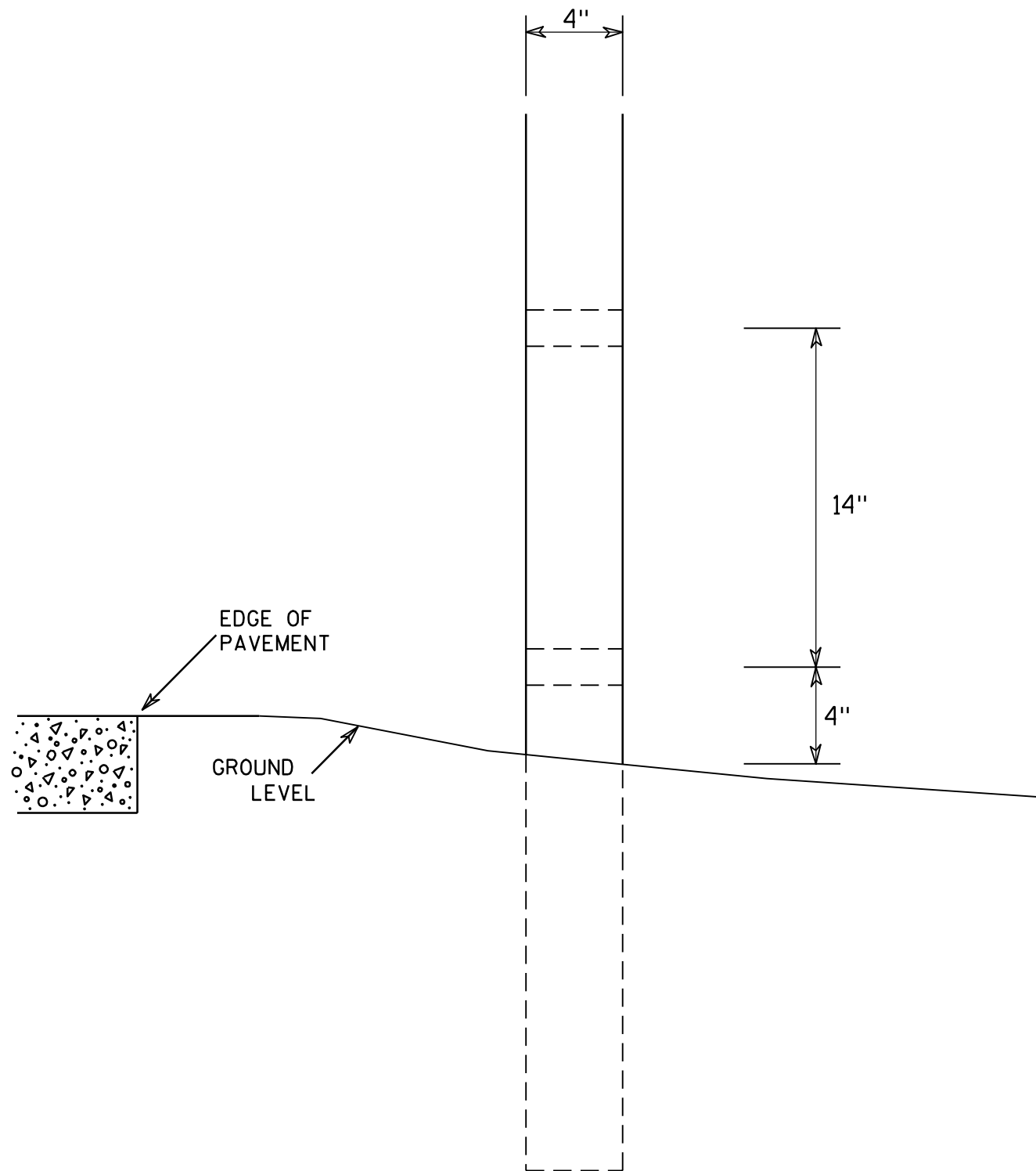
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

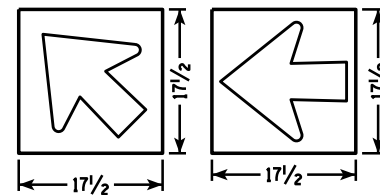
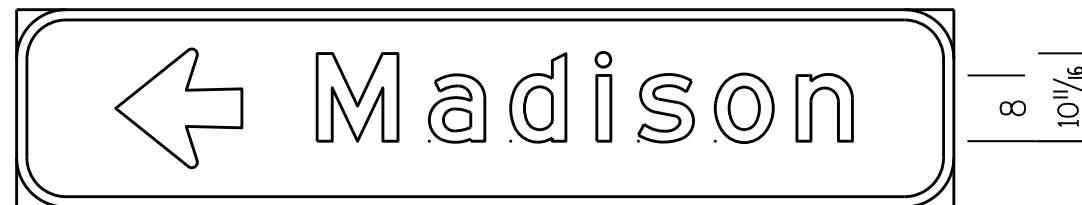
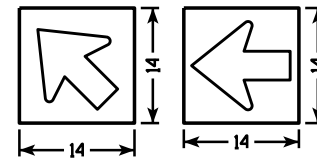
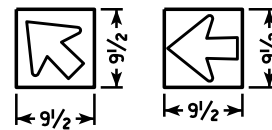
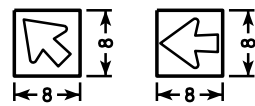
7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# SIGN LAYOUT WITH VARIOUS SIZED MESSAGES

## GENERAL NOTES

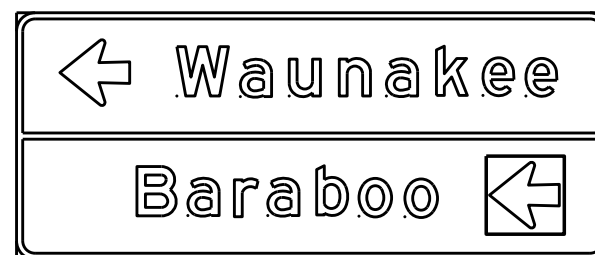
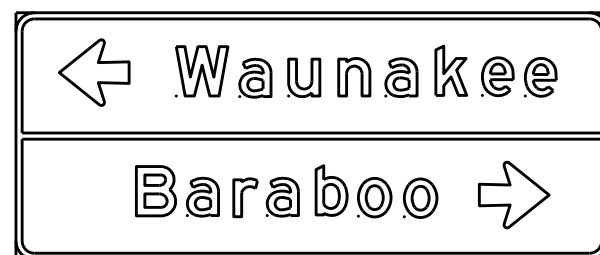
- Materials shall conform to Standard Specification Section 637.  
Base - Sheet Aluminum 0.040" Thickness  
Sheeting - Orange Type F Reflective  
Arrow - Black Non-Reflective
- Arrow signs shall be fastened to permanent sign by either aluminum rivets or aluminum self-tapping sheet metal screws. There shall be a minimum of 2 fasteners used per arrow sign.
- There shall be a spacer consisting of a 0.08" nylon washer between the back of the arrow sign and the face of the permanent sign.
- Arrows are per standard plate A1-2
- Use separate arrow sign for each destination
- Tilt arrow is always at 45 degrees
- Arrow is centered on arrow sign



Lower Case Copy Size	Standard Width (Single Arrow)	2 Line Tilt Arrow Cover Width	3 Line Tilt Arrow Cover Width	Height
3 3/4" Series C	8	9 1/2	14 1/2	8
4 1/2" Series D & E	9 1/2	10	15	9 1/2
6" Series D & E	14	16	20 1/2	14
8" Series E	17 1/2	20 1/2	25	17 1/2

### BEFORE

### AFTER

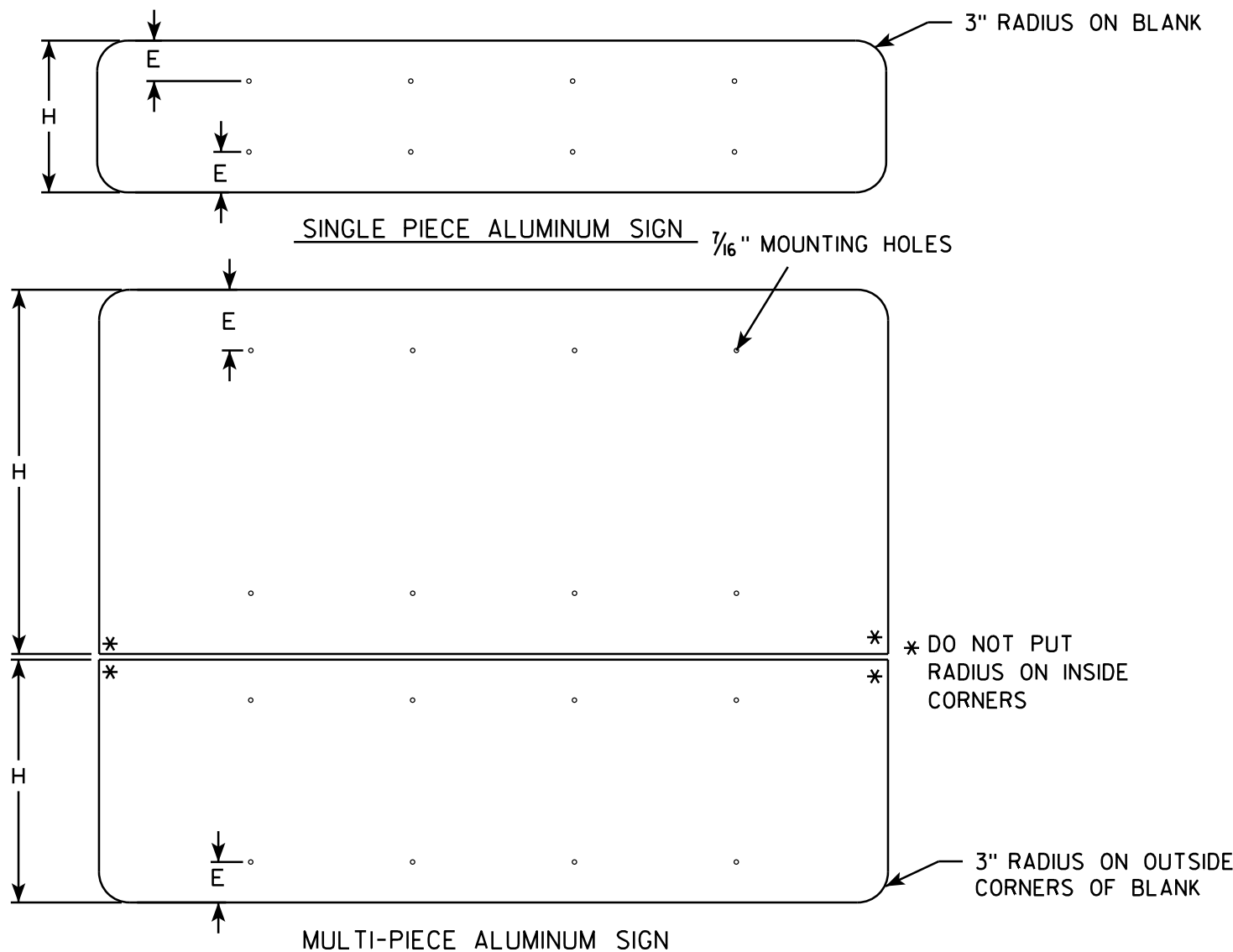


### DESTINATION DIRECTIONAL ARROW FOR DETOUR SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 10/08/14 PLATE NO. A4-12.2

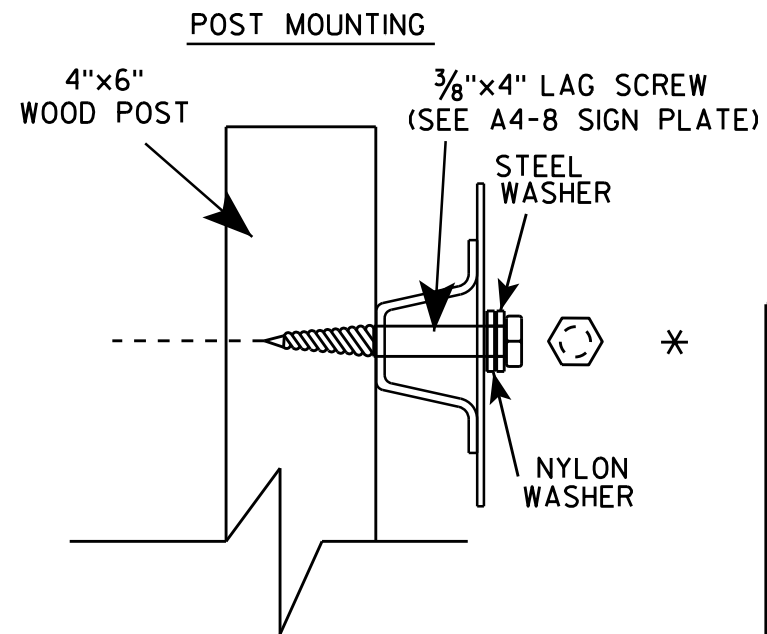
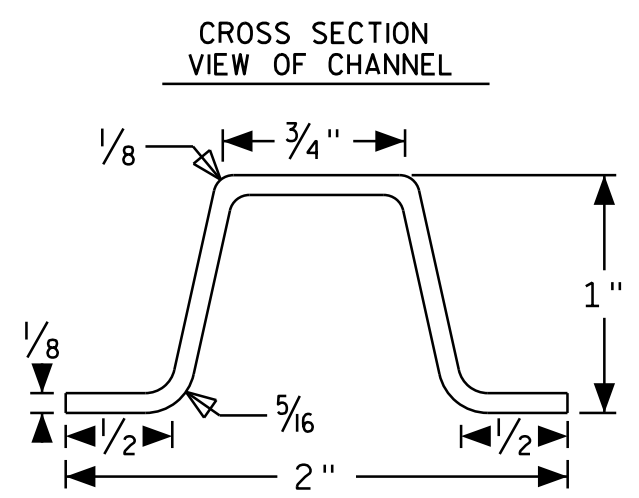
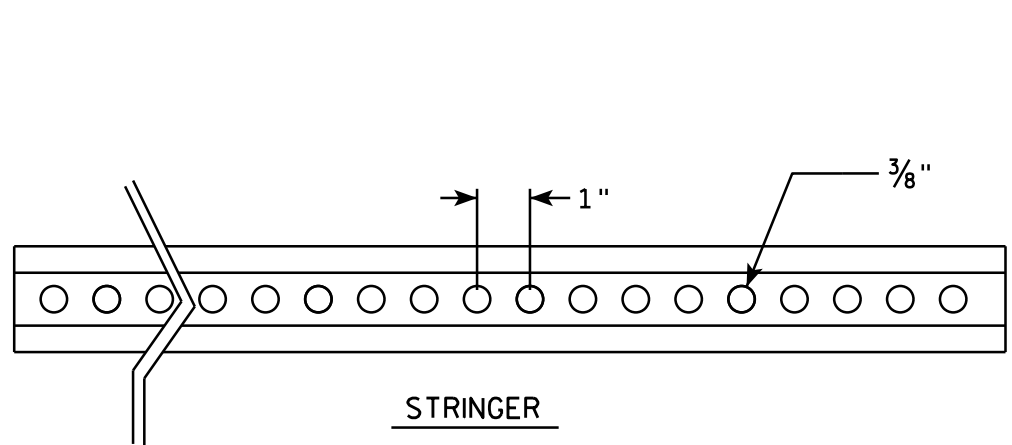


## GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE  $\frac{7}{16}$ " DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 $\frac{1}{2}$ " 33 $\frac{1}{2}$ " 50 $\frac{1}{2}$ " 67 $\frac{1}{2}$ "
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 $\frac{1}{2}$ " 38 $\frac{1}{2}$ " 57 $\frac{1}{2}$ " 76 $\frac{1}{2}$ "
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 $\frac{1}{2}$ " 43 $\frac{1}{2}$ " 64 $\frac{1}{2}$ " 85 $\frac{1}{2}$ "
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

7



7

**SIGN STRINGER MOUNTING REQUIREMENTS**

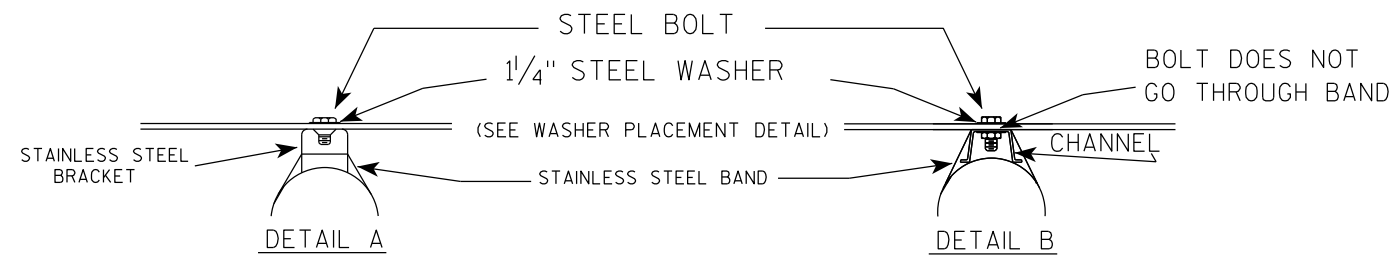
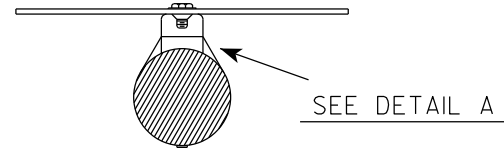
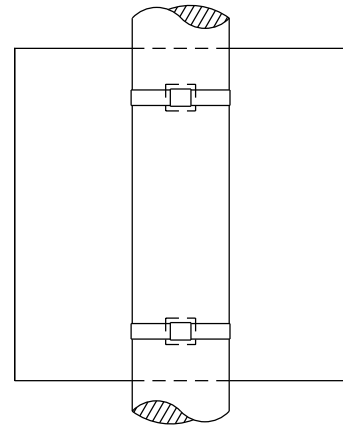
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

# BANDING

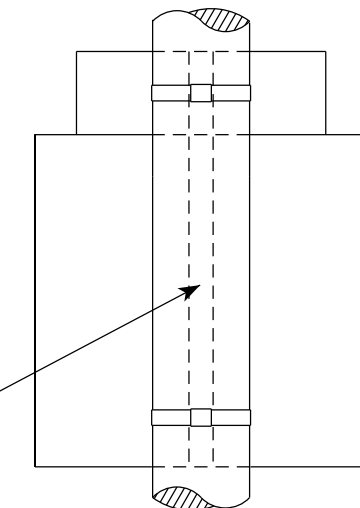
SINGLE SIGN



## 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 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

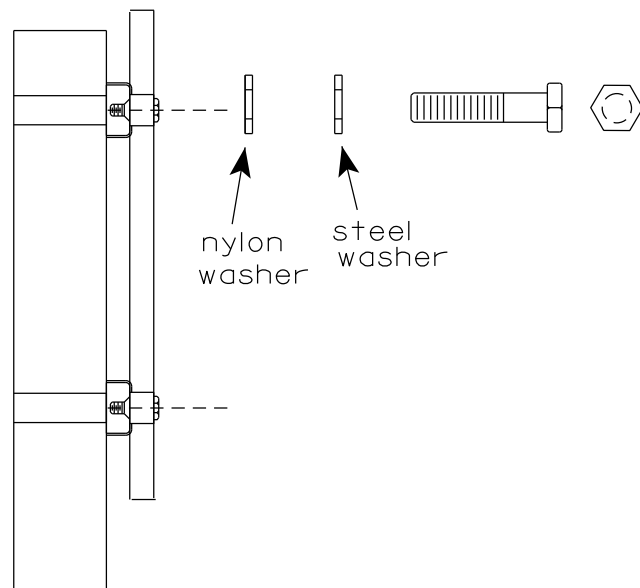
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



WASHER PLACEMENT



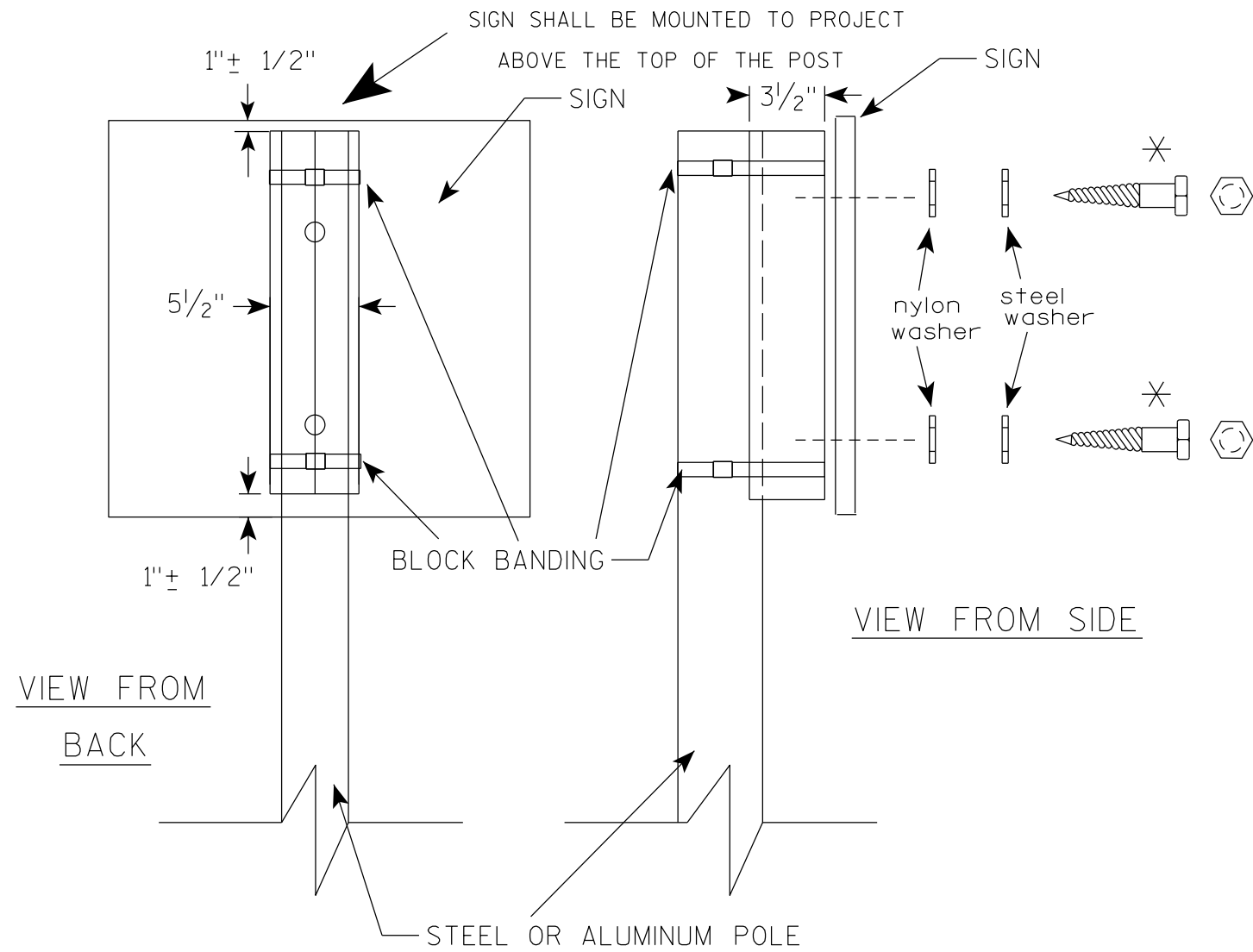
WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

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



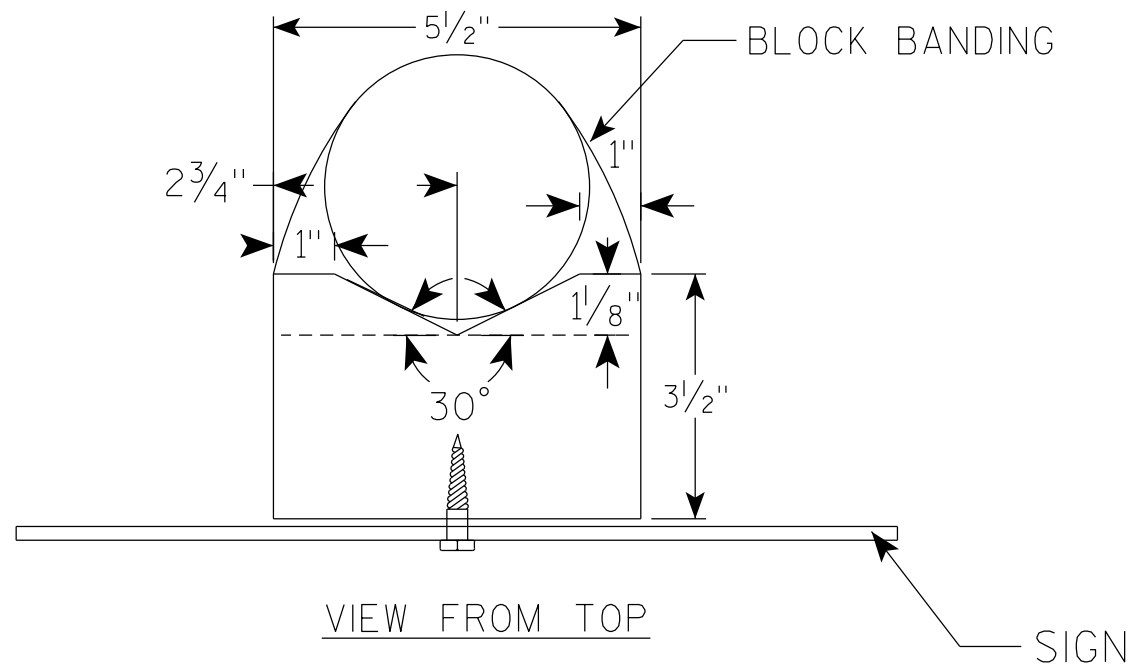
VIEW FROM  
BACK

VIEW FROM SIDE

STEEL OR ALUMINUM POLE

7

7



VIEW FROM TOP

SIGN

### 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, 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 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

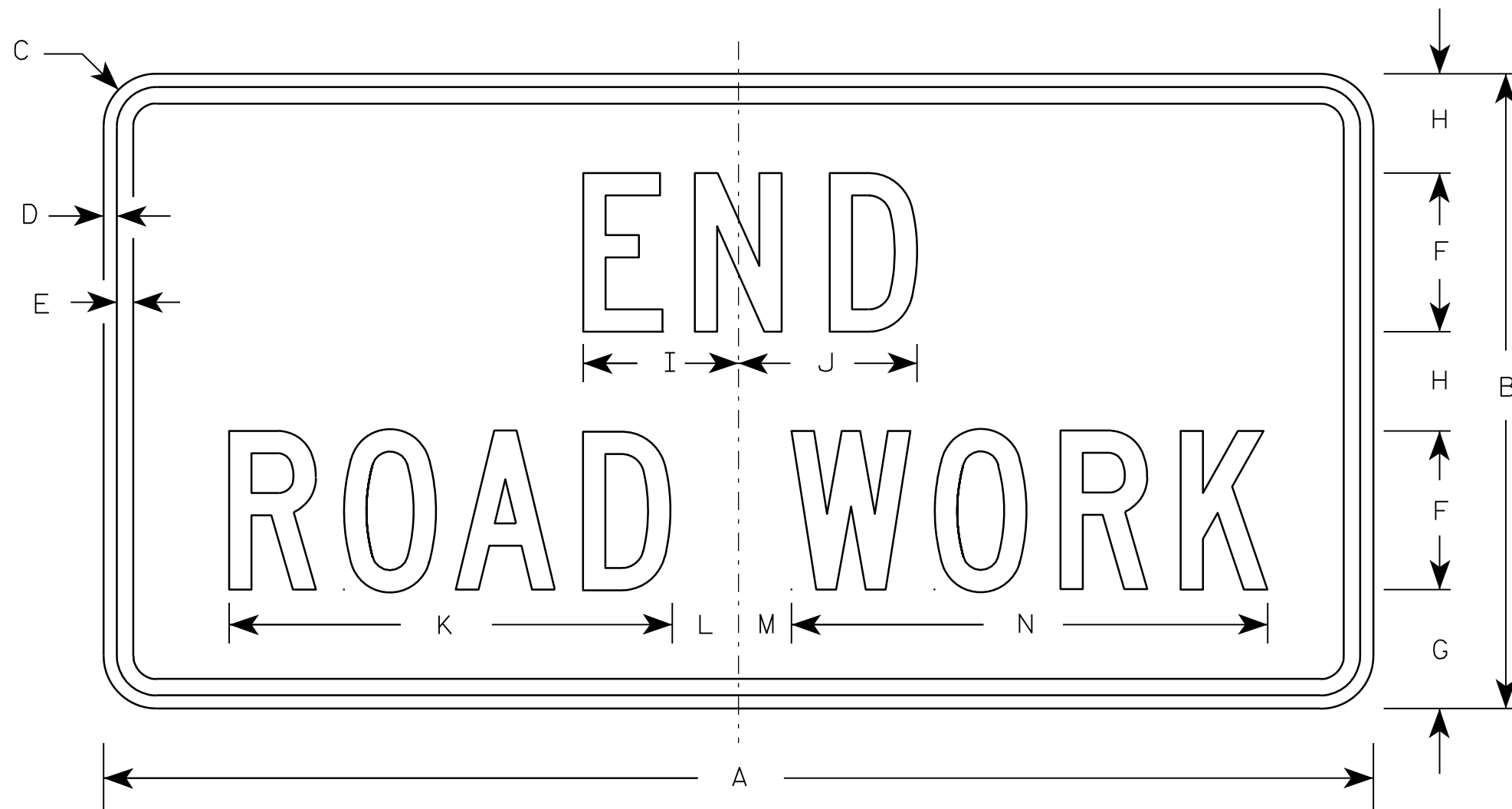
PROJECT NO:

SHEET NO:

E

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 - 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.



G20-2A

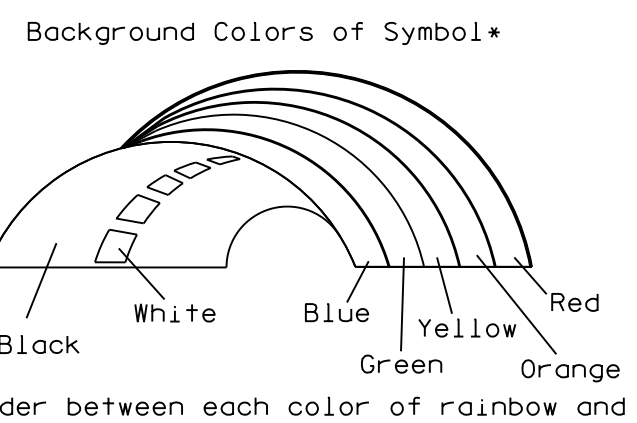
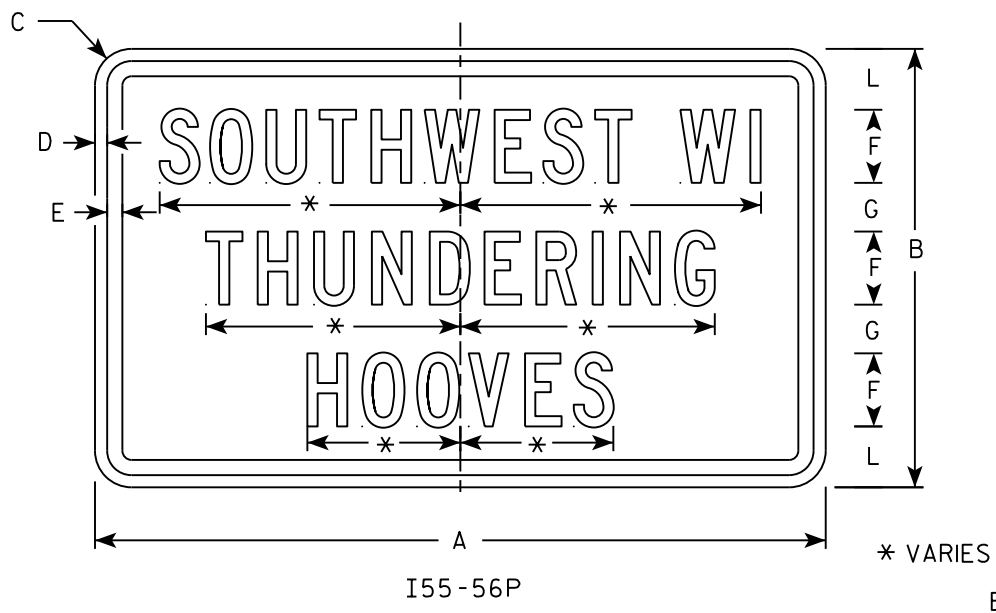
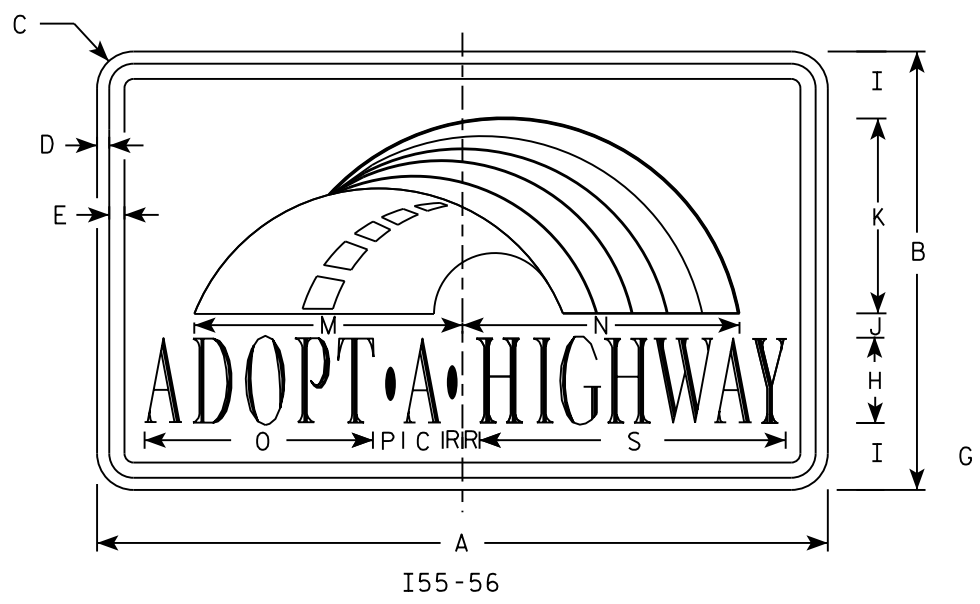
Metric equivalent  
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

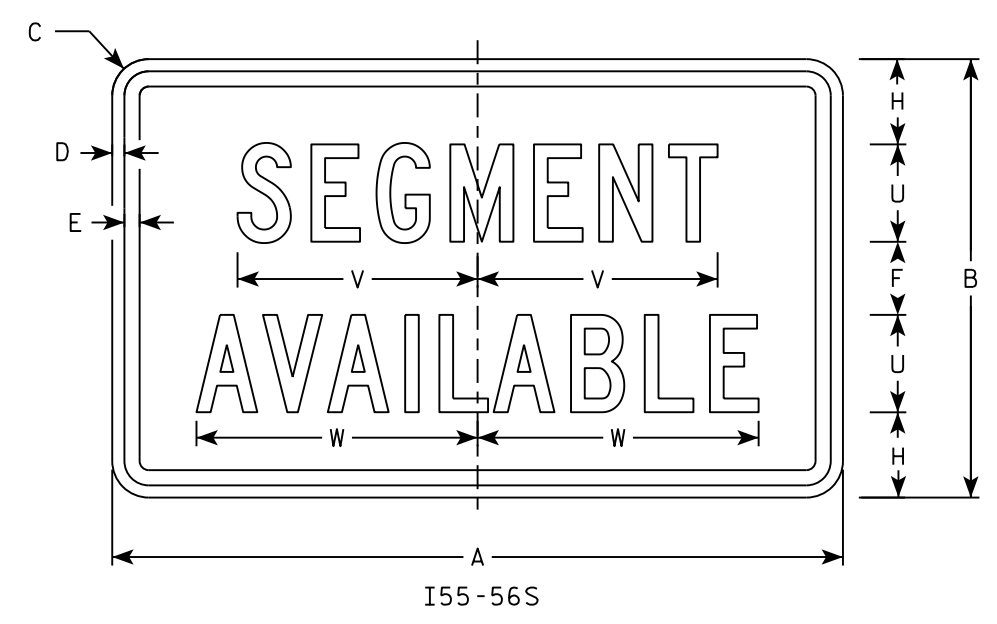
STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8





**NOTES**

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue  
Adopt a Highway - Red  
All other Text - Blue
5. Adopt a Highway - Dutch 8011L  
All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign 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	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

**STANDARD SIGN**  
I55-56

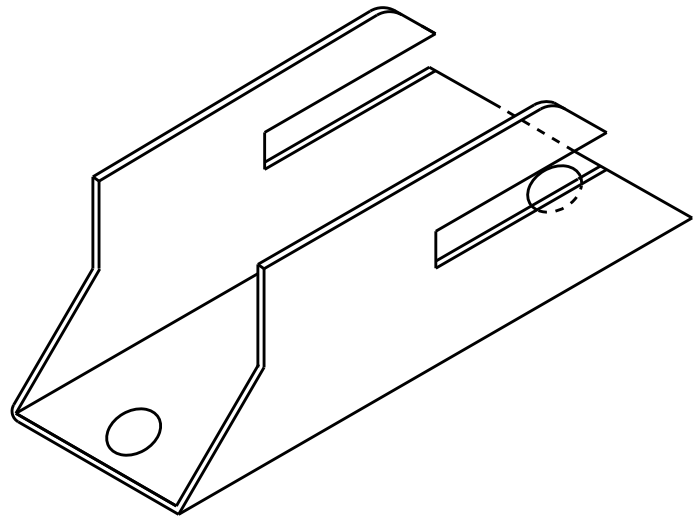
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

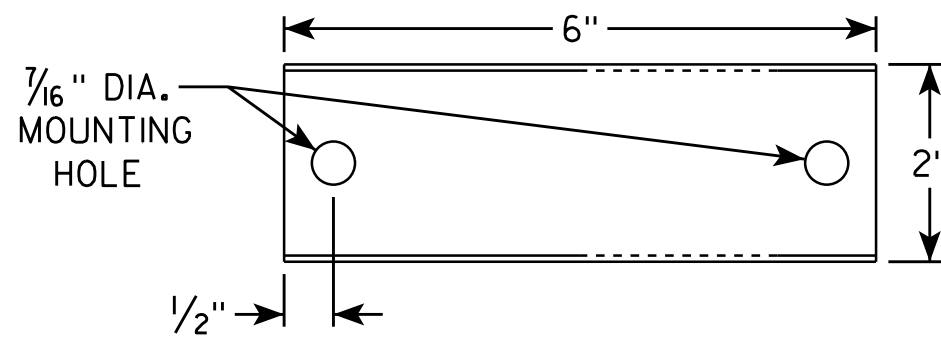
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

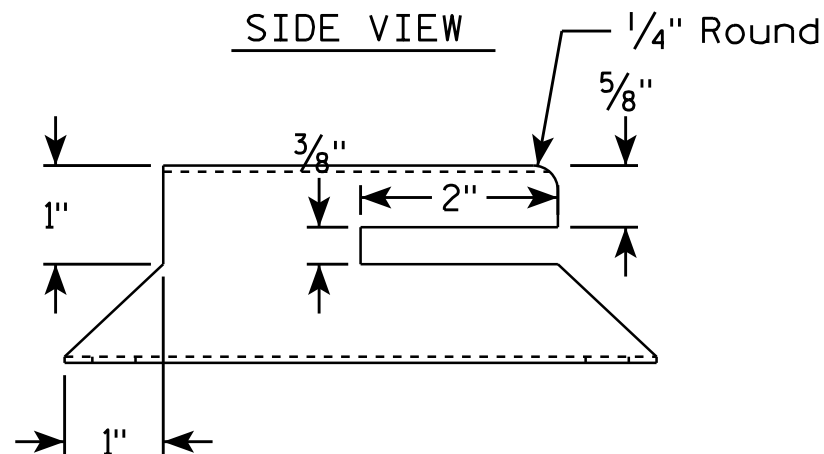
ISOMETRIC VIEW



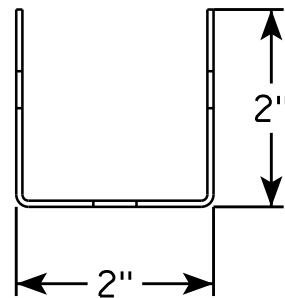
TOP VIEW



SIDE VIEW



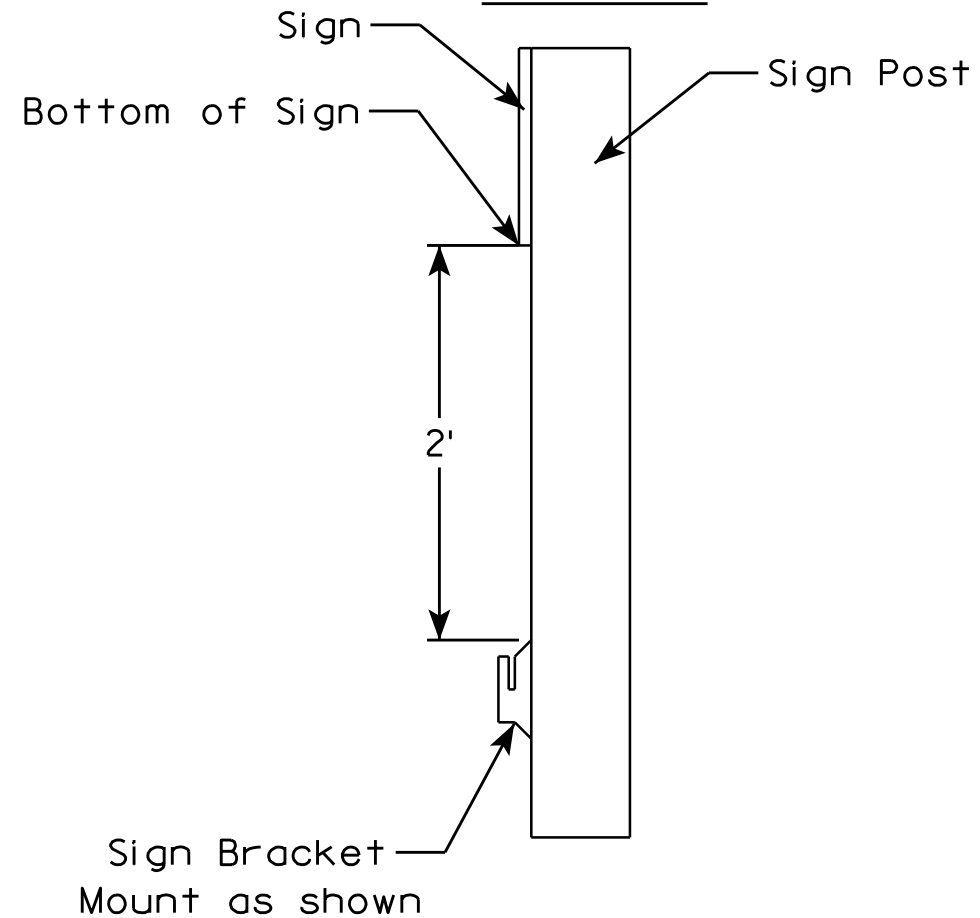
END VIEW



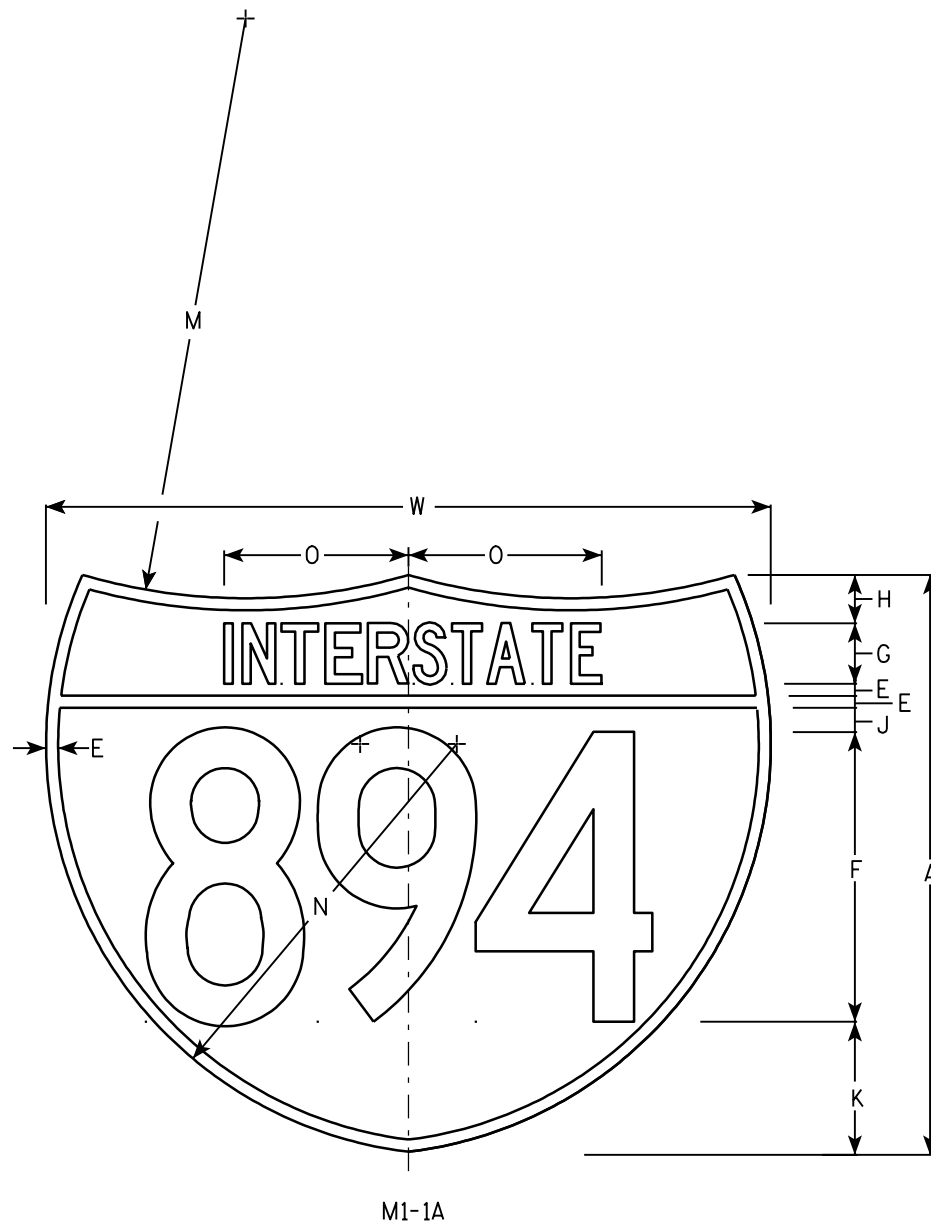
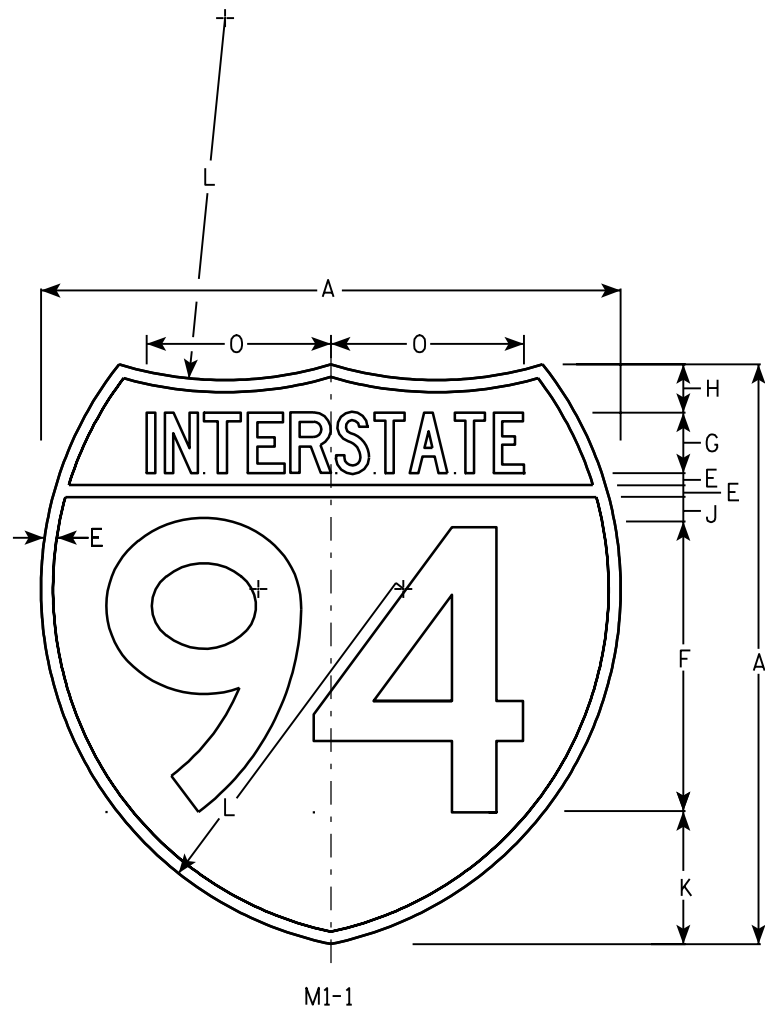
NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET I55-56B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLATE NO: I55-56B.2



NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Top Red - Bottom Blue (See Note 6)  
Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
5. M1-1 - Numerals - D  
Interstate - C  
M1-1A - All copy - C
6. Permanent Signs  
Message - Type H Reflective  
Detour or other temporary signs  
Background - Reflective  
Message - Reflective

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m ²	M1-1A Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER  
M1-1 FOR ASSEMBLIES

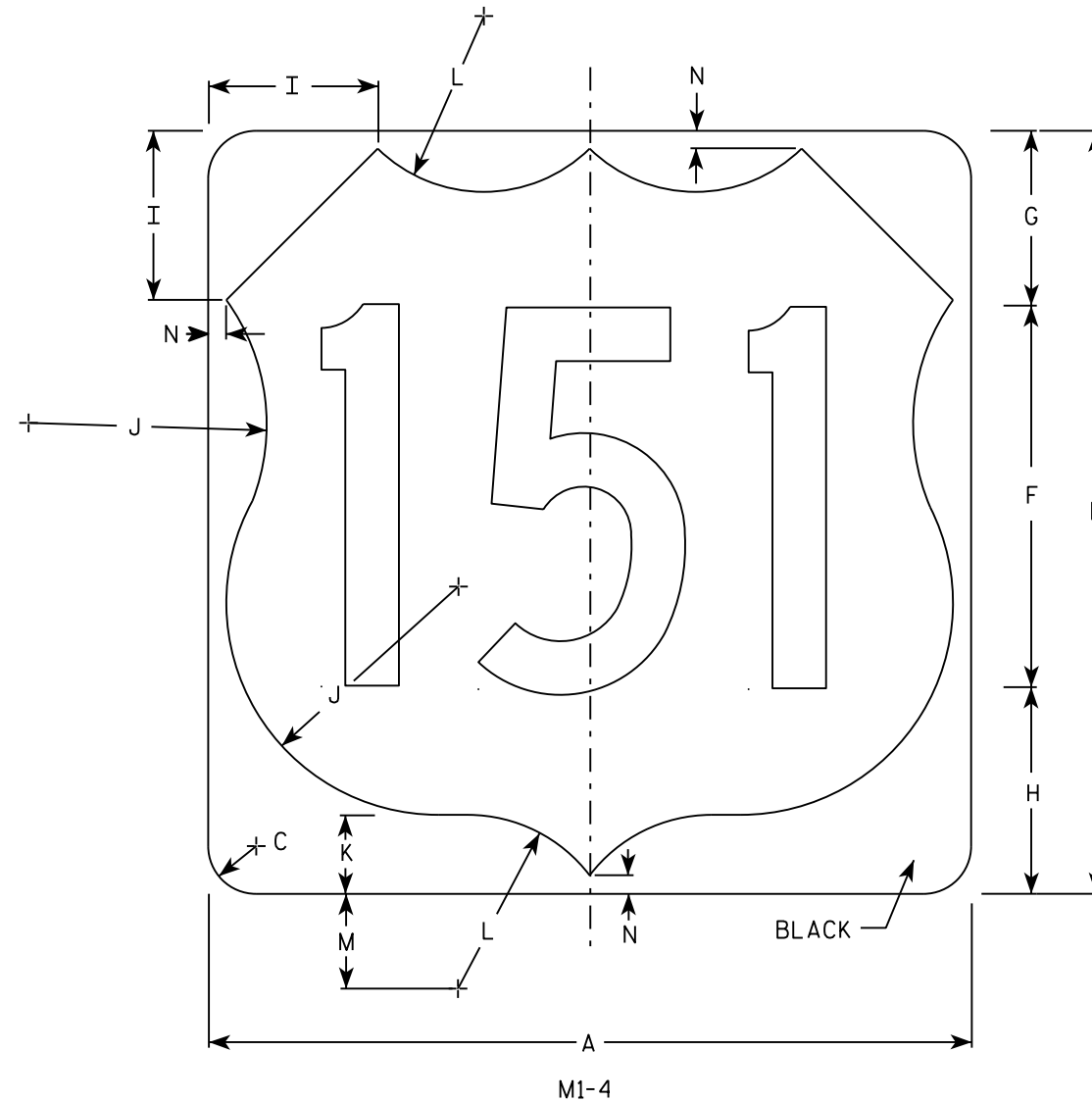
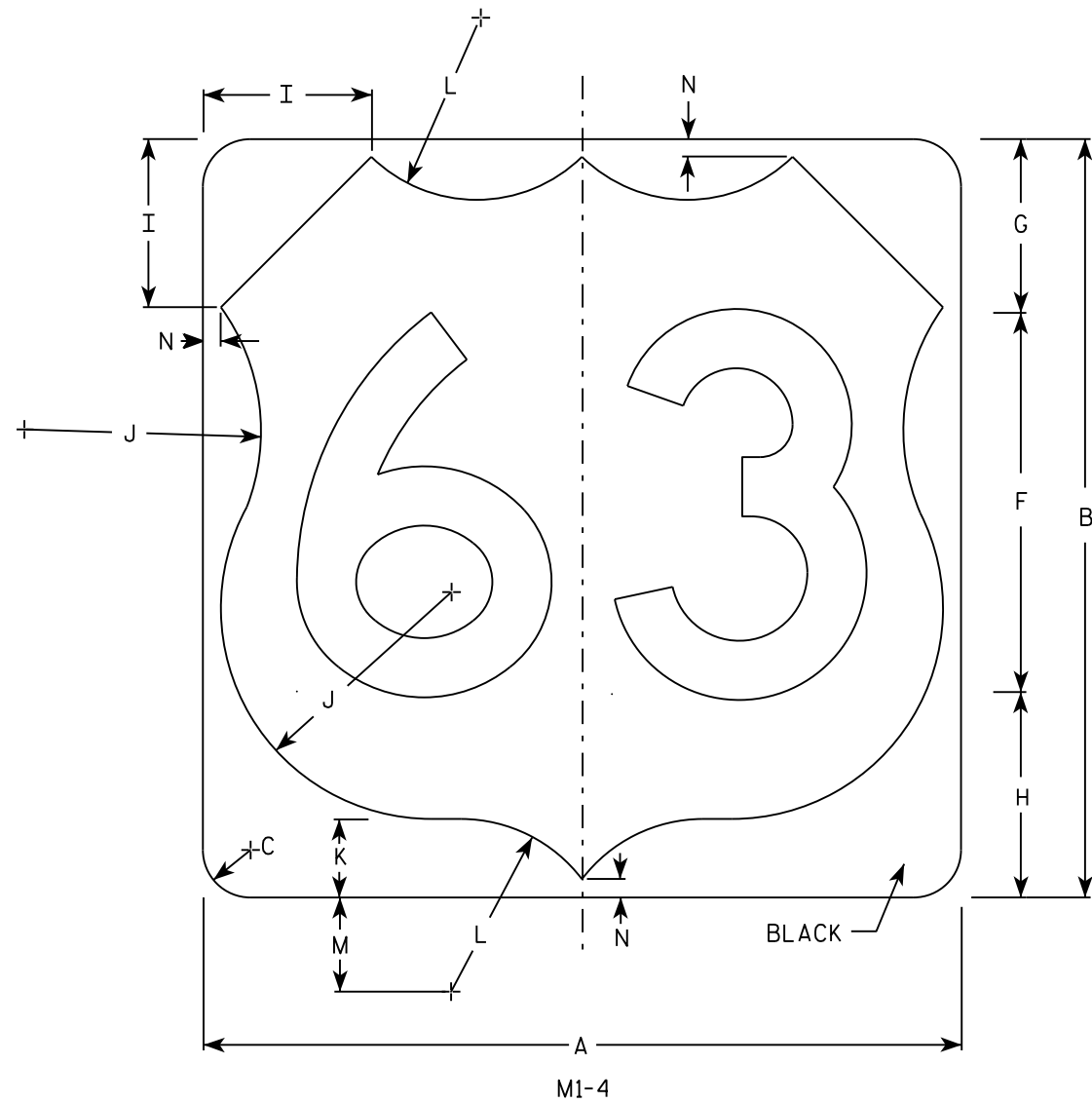
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

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

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

USH MARKER  
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

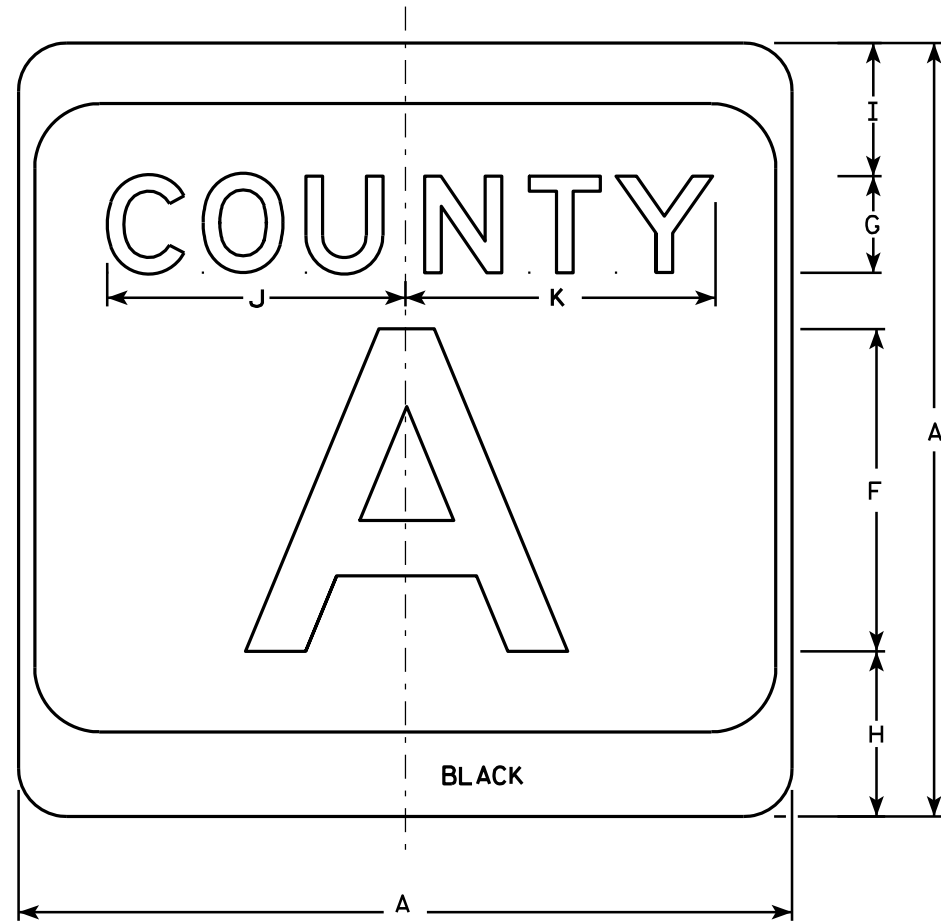
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

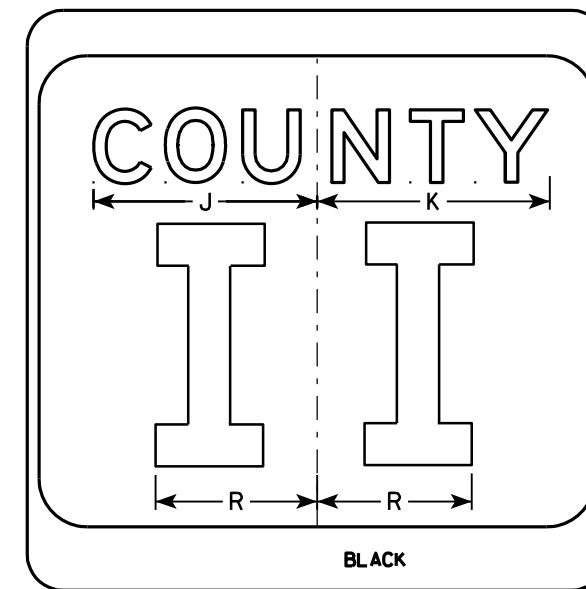
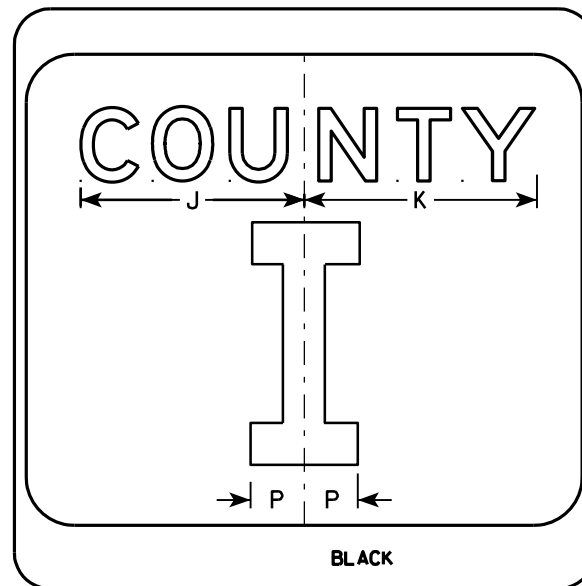
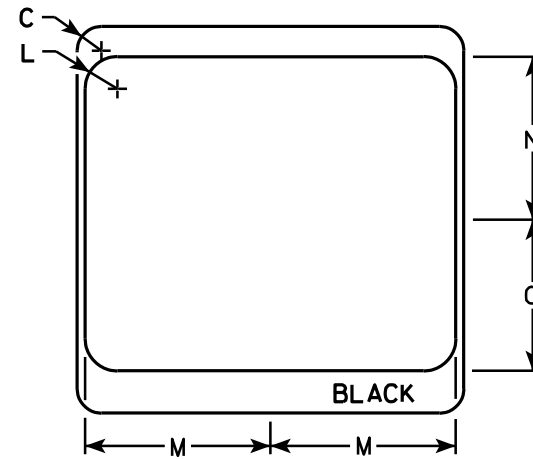
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

**NOTES**

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White & Black - See Note 7  
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. Message Series E for 1 letter.  
Message Series D for 2 letters unless message is too big then Series C.  
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs  
Background - Type H Reflective  
Detour or temporary Signs  
Background - Reflective



M1-5A



7

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			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

**CTH MARKER**  
**M1-5A FOR ASSEMBLIES**

WISCONSIN DEPT OF TRANSPORTATION

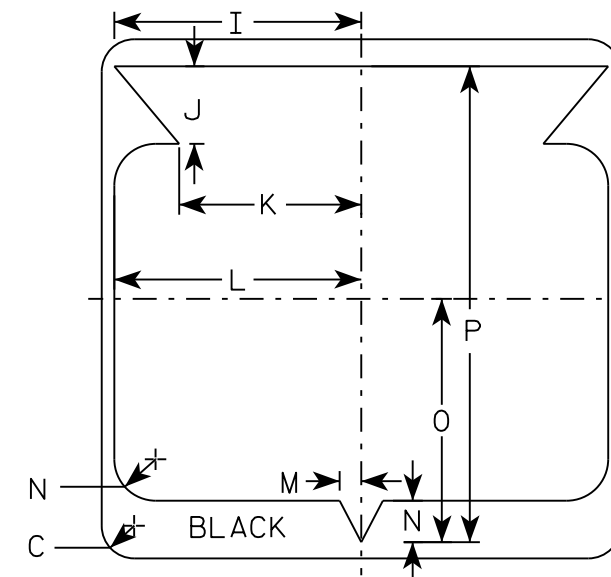
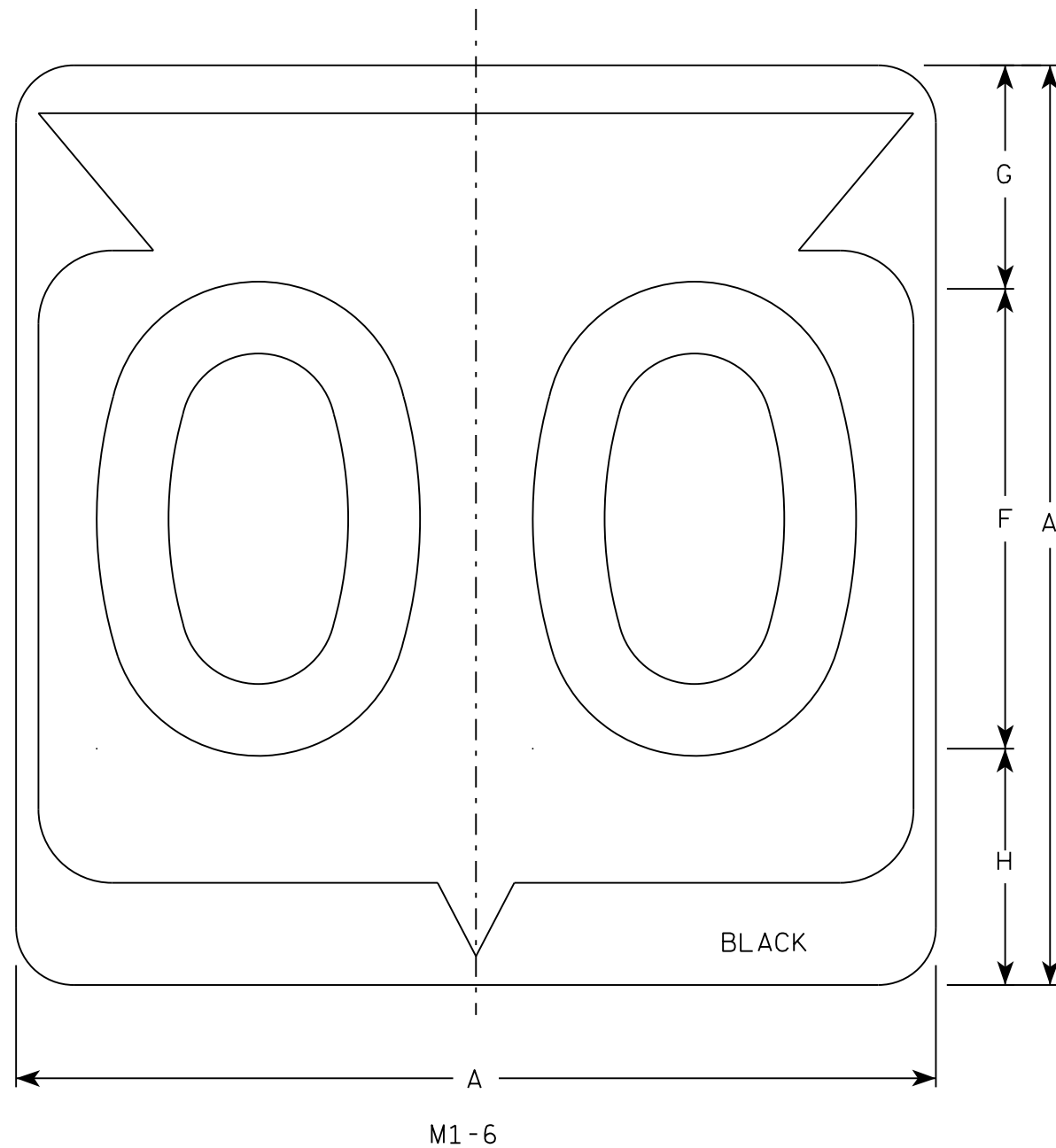
APPROVED *Matthew R. Raub*  
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

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 - 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.



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

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

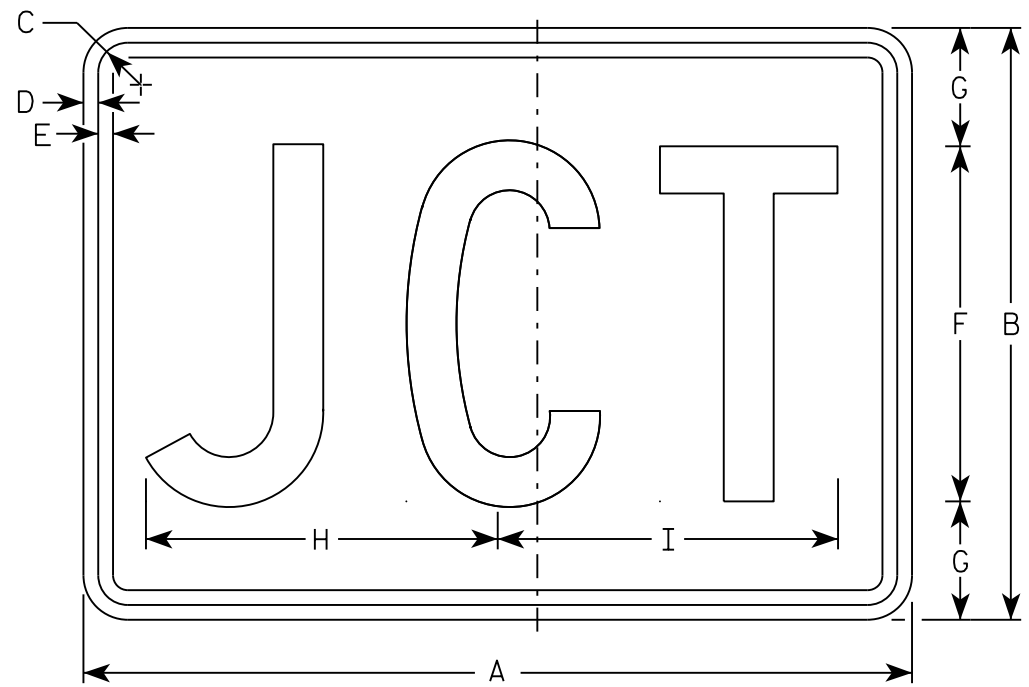
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

7

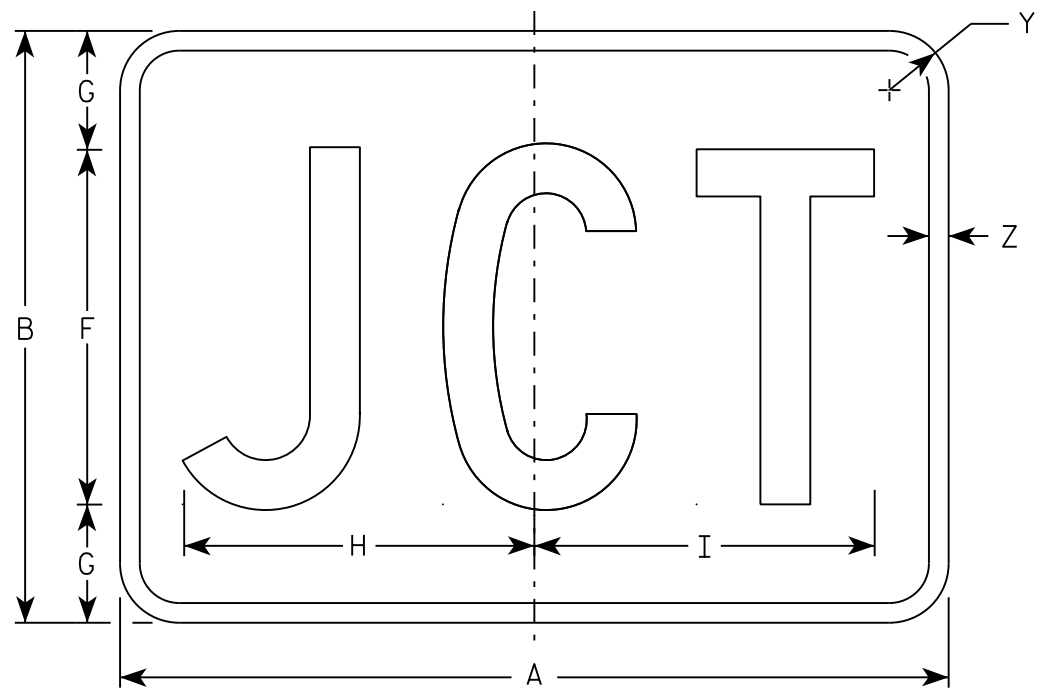
7

NOTES

1. Sign is 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. M2-1 Background - White  
 Message - Black  
 MB2-1 Background - Blue  
 Message - White  
 MK2-1 Background - Green  
 Message - White  
 MM2-1 Background - White  
 Message - Green  
 MN2-1 Background - Brown  
 Message - White  
 MP2-1 Background - White  
 Message - Blue  
 MR2-1 Background - Brown  
 Message - Yellow



M2-1  
MM2-1  
MP2-1



MB2-1  
MK2-1  
MN2-1  
MR2-1

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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN  
M2-1

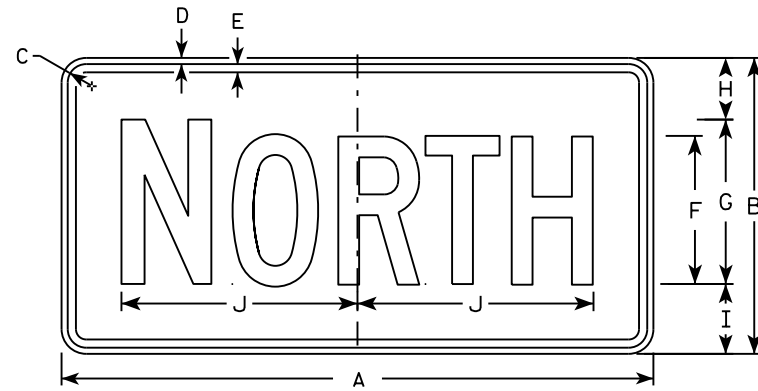
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

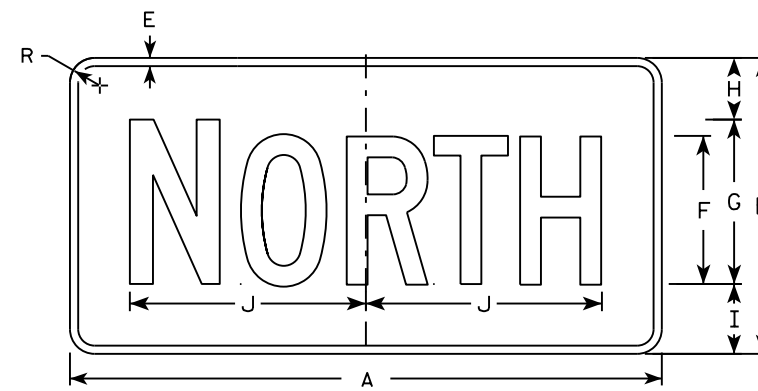
DATE 10/15/15 PLATE NO. M2-1.12

NOTES

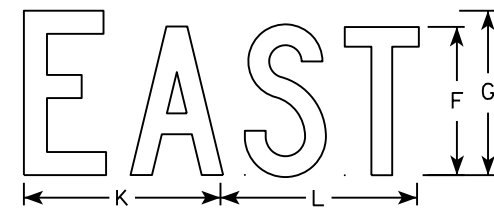
- All Signs Type II - Type H
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4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



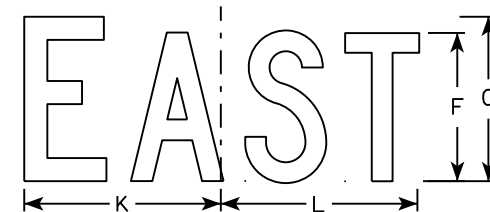
M3-1  
MM3-1  
MP3-1



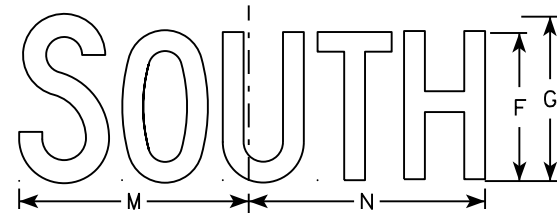
MB3-1  
MK3-1  
MN3-1



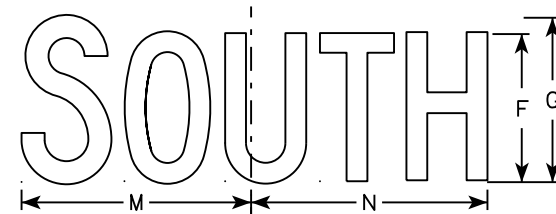
M3-2  
MM3-2  
MP3-2



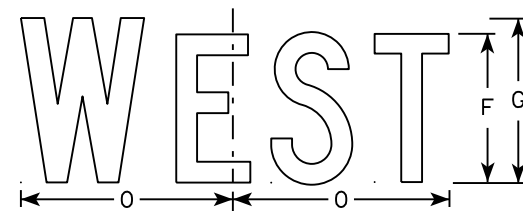
MB3-2  
MK3-2  
MN3-2



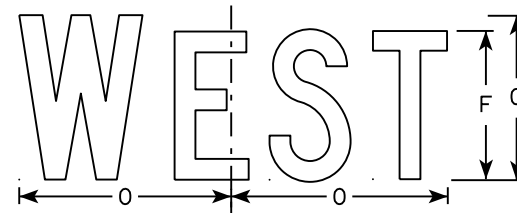
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

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	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

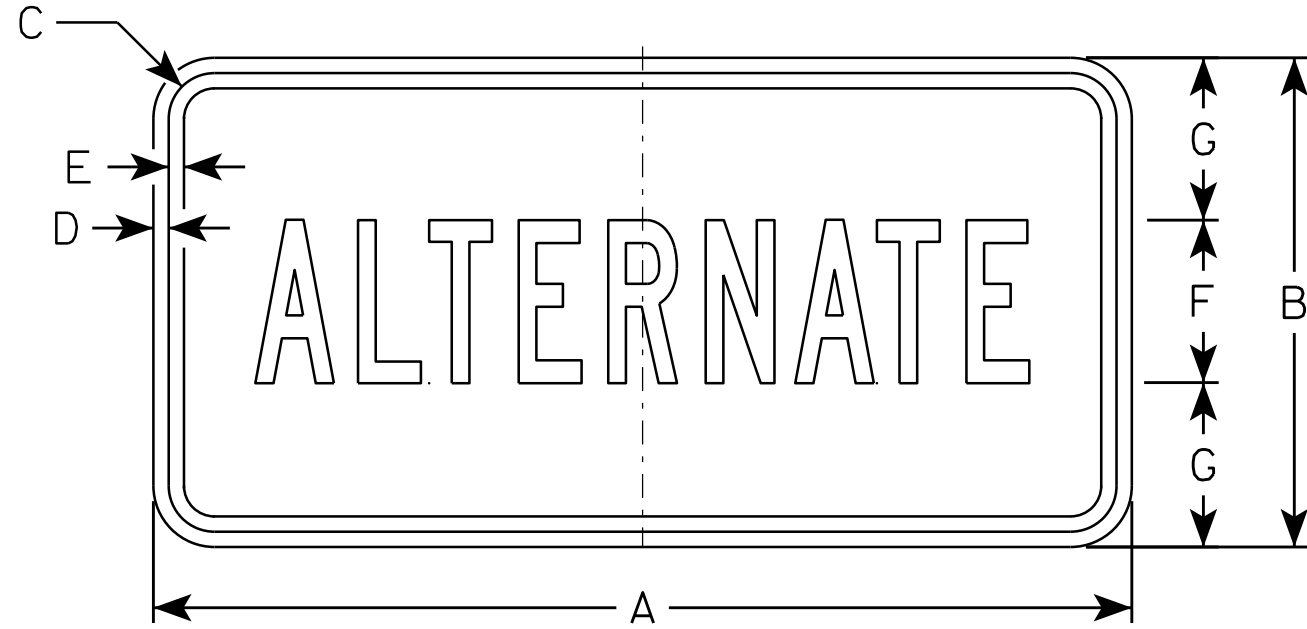
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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



NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
  - Background - See Note 5
  - Message - See note 5
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.
5. M4-1 Background - White  
Message - Black
- MB4-1 Background - Blue  
Message - White
- M04-1 Background - Orange - Type F  
Message - Black



M4 - 1  
M04 - 1



MB4 - 1

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	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

**STANDARD SIGN**  
**M4 - 1**

WISCONSIN DEPT OF TRANSPORTATION

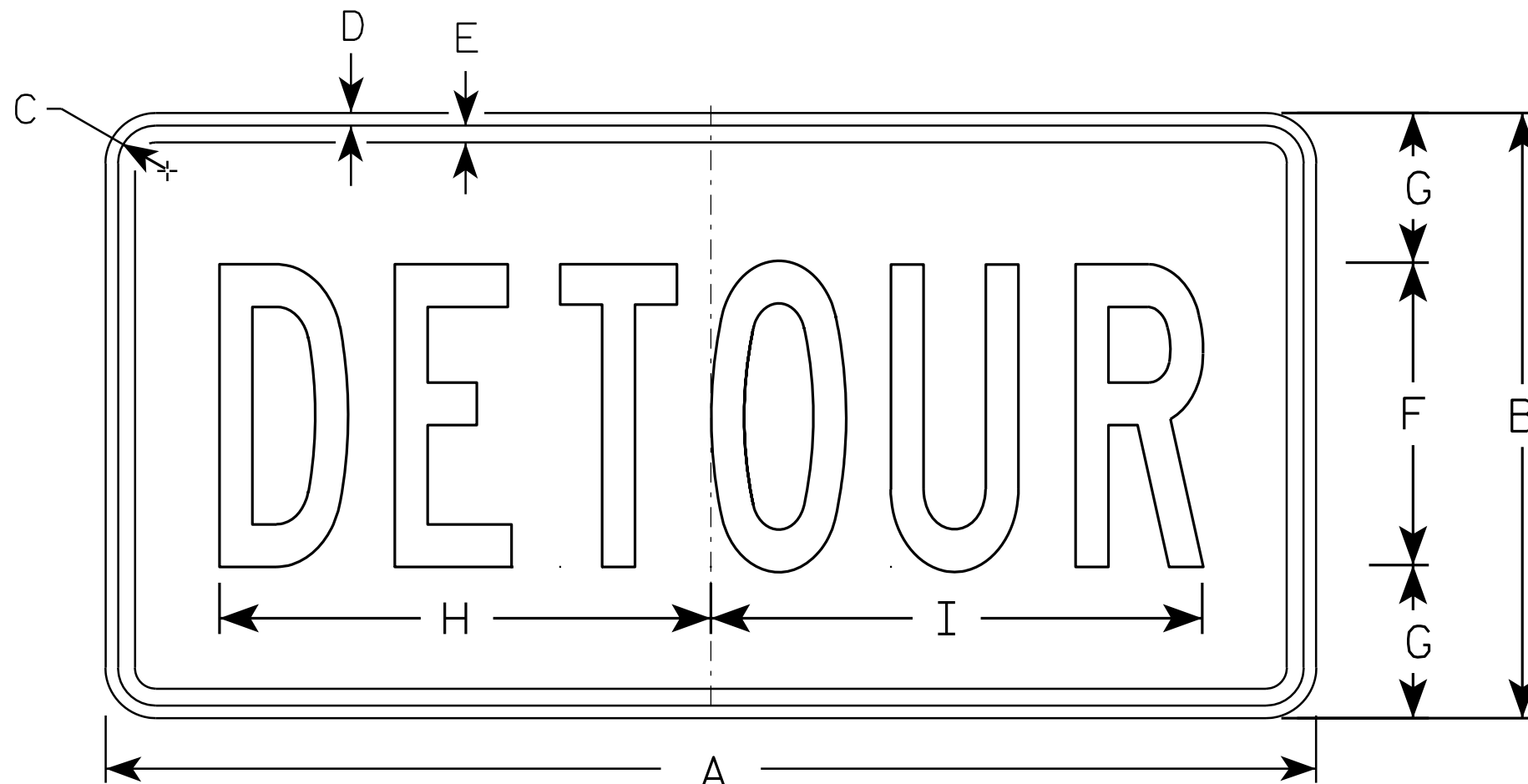
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 6/30/14 PLATE NO. M4-1.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

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

7

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	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

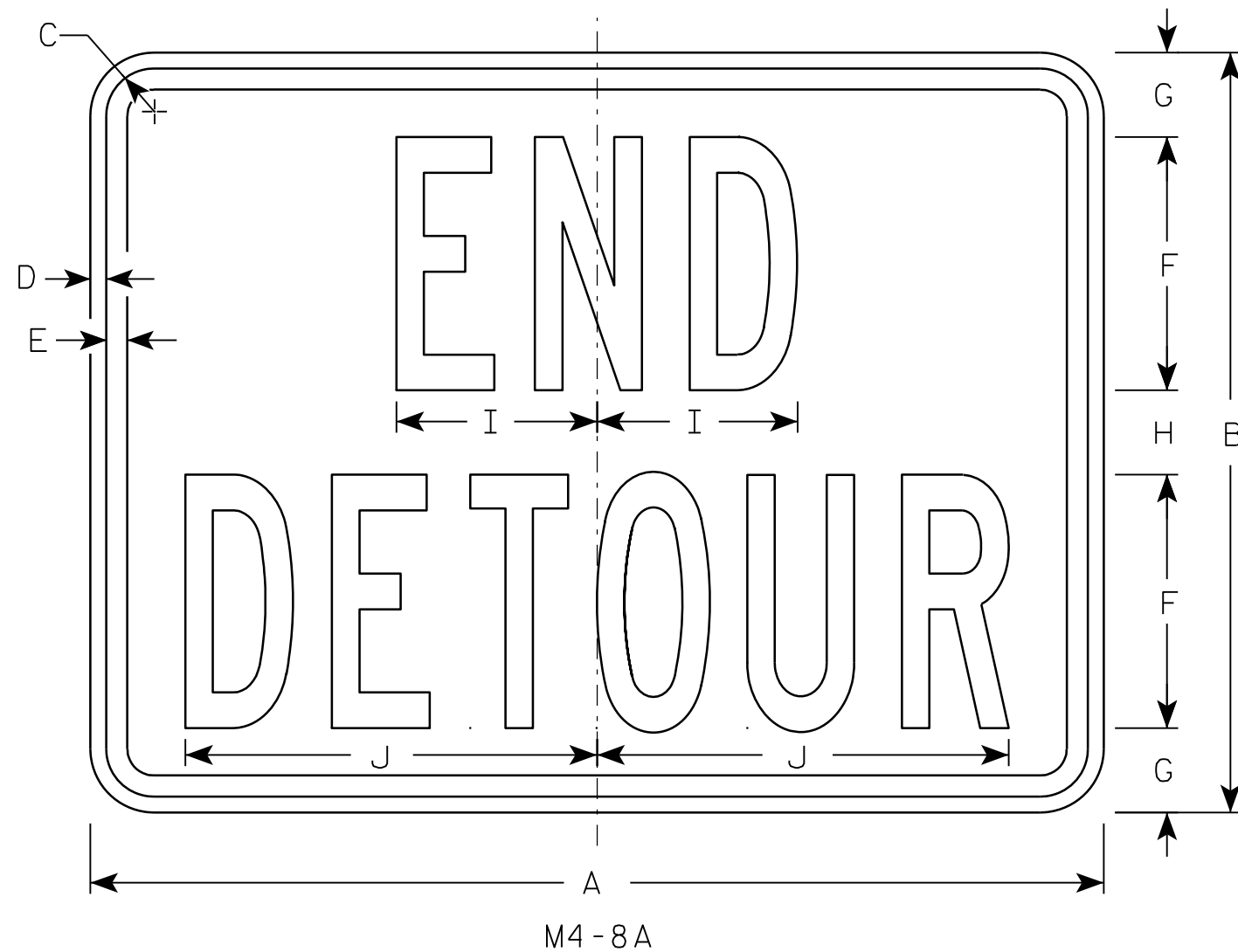
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

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

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																											

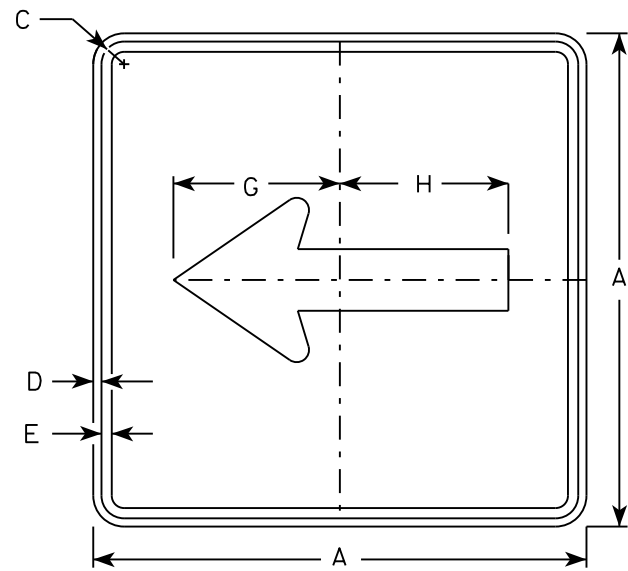
STANDARD SIGN  
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

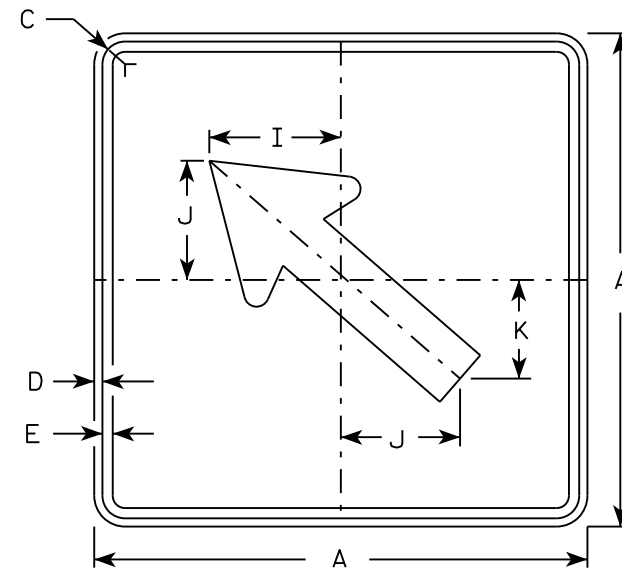
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

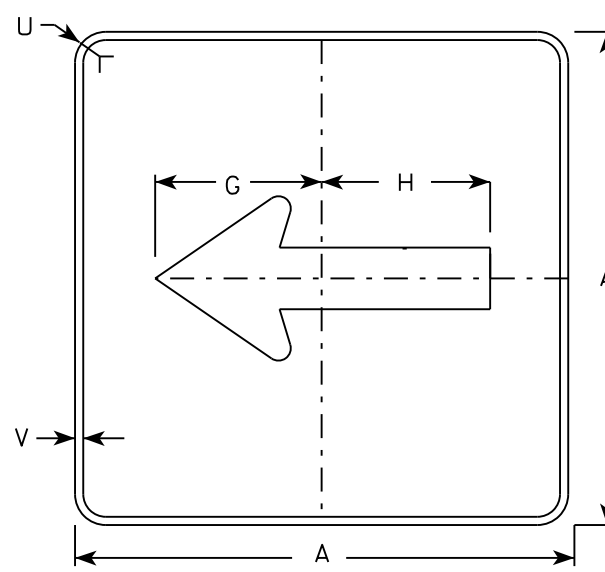
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



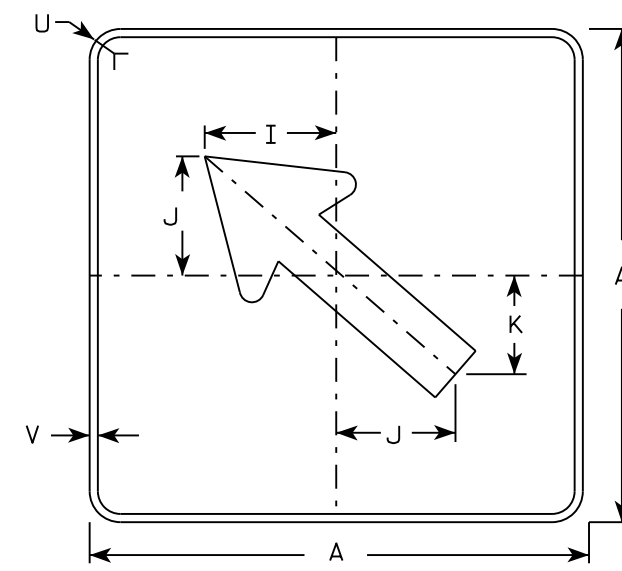
M6-1  
MM6-1  
M06-1  
MP6-1



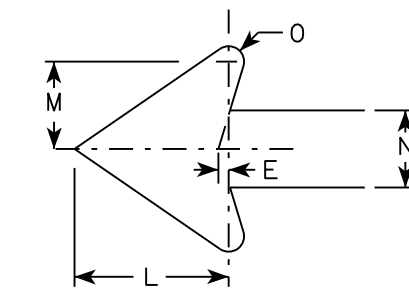
M6-2  
MM6-2  
M06-2  
MP6-2



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



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



NOTES

- 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.
- M6-1 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

7

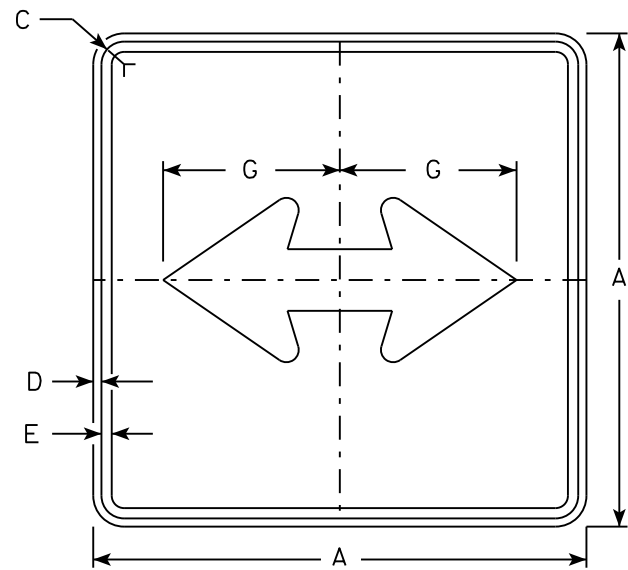
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10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

STANDARD SIGN  
M6-1 & M6-2  
SERIES

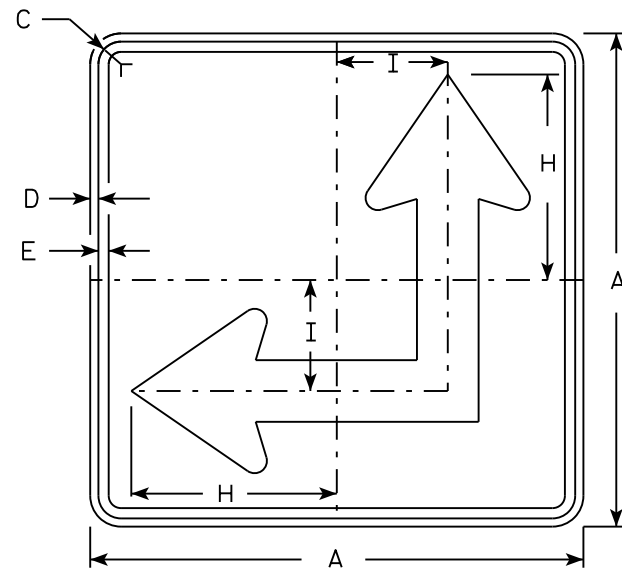
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

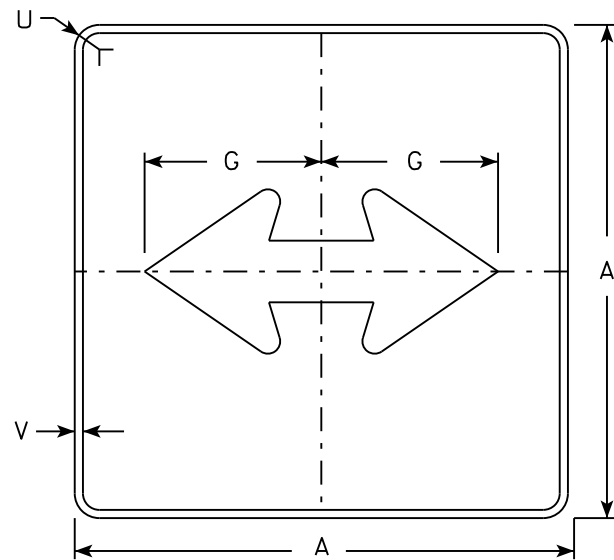
DATE 10/15/15 PLATE NO. M6-1.15



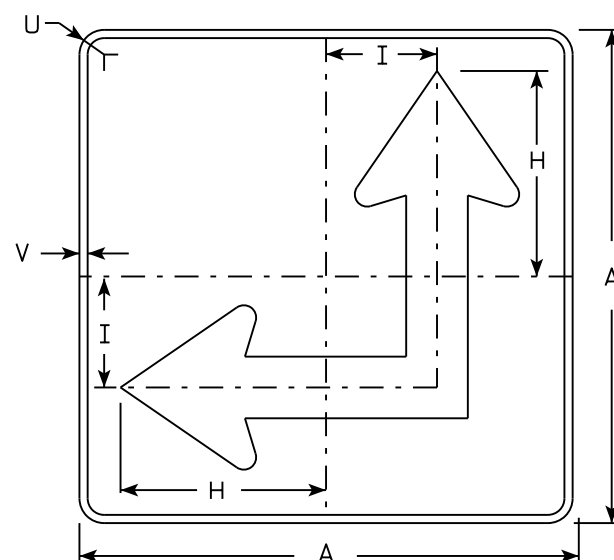
M6-4  
MM6-4  
M06-4  
MP6-4



M6-6  
MM6-6  
M06-6  
MP6-6



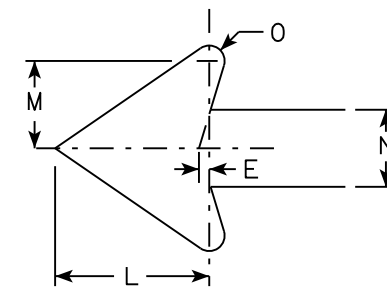
MB6-4  
MK6-4  
MN6-4  
MR6-4



MB6-6  
MK6-6  
MN6-6  
MR6-6

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.



7

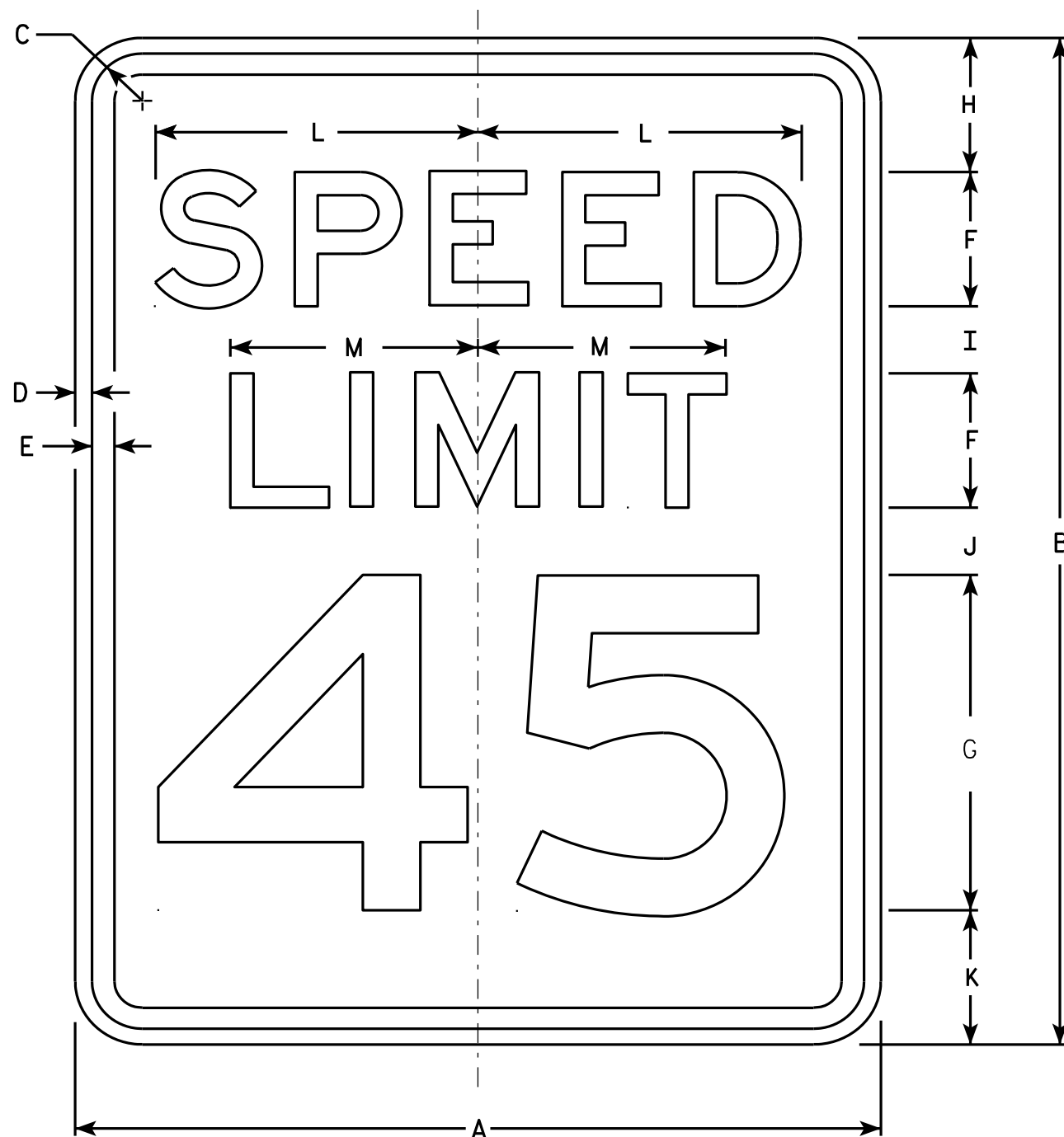
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12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

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



R2-1

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 - E
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 and optically adjust spacing to achieve proper balance.

7

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN  
R2-1

WISCONSIN DEPT OF TRANSPORTATION

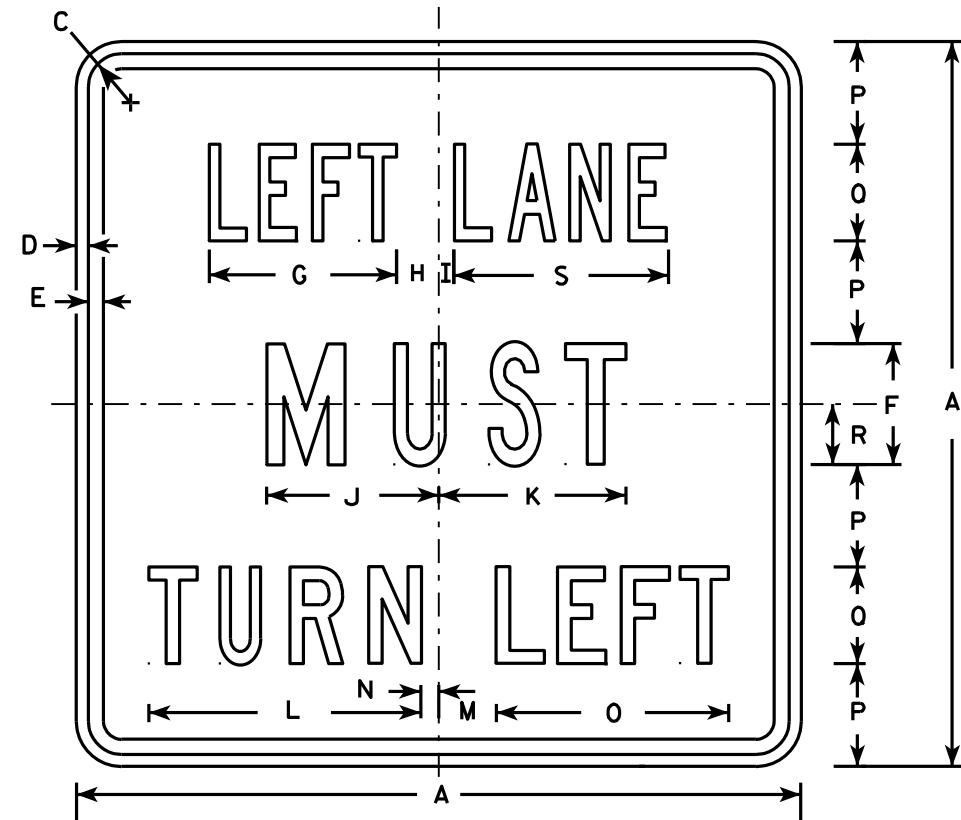
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

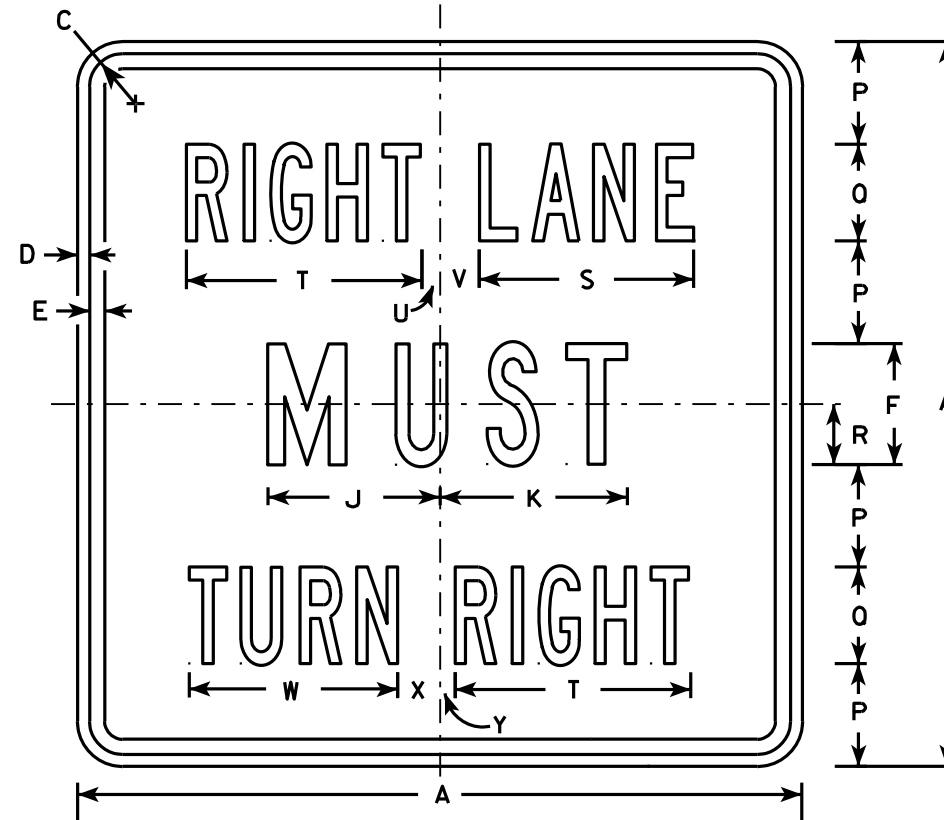
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

**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 - Line 1 is Series B.  
Line 2 is Series C.  
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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.



R3-7L



R3-7R

7

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	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

**STANDARD SIGN**  
**R3-7L & R3-7R**

*WISCONSIN DEPT OF TRANSPORTATION*

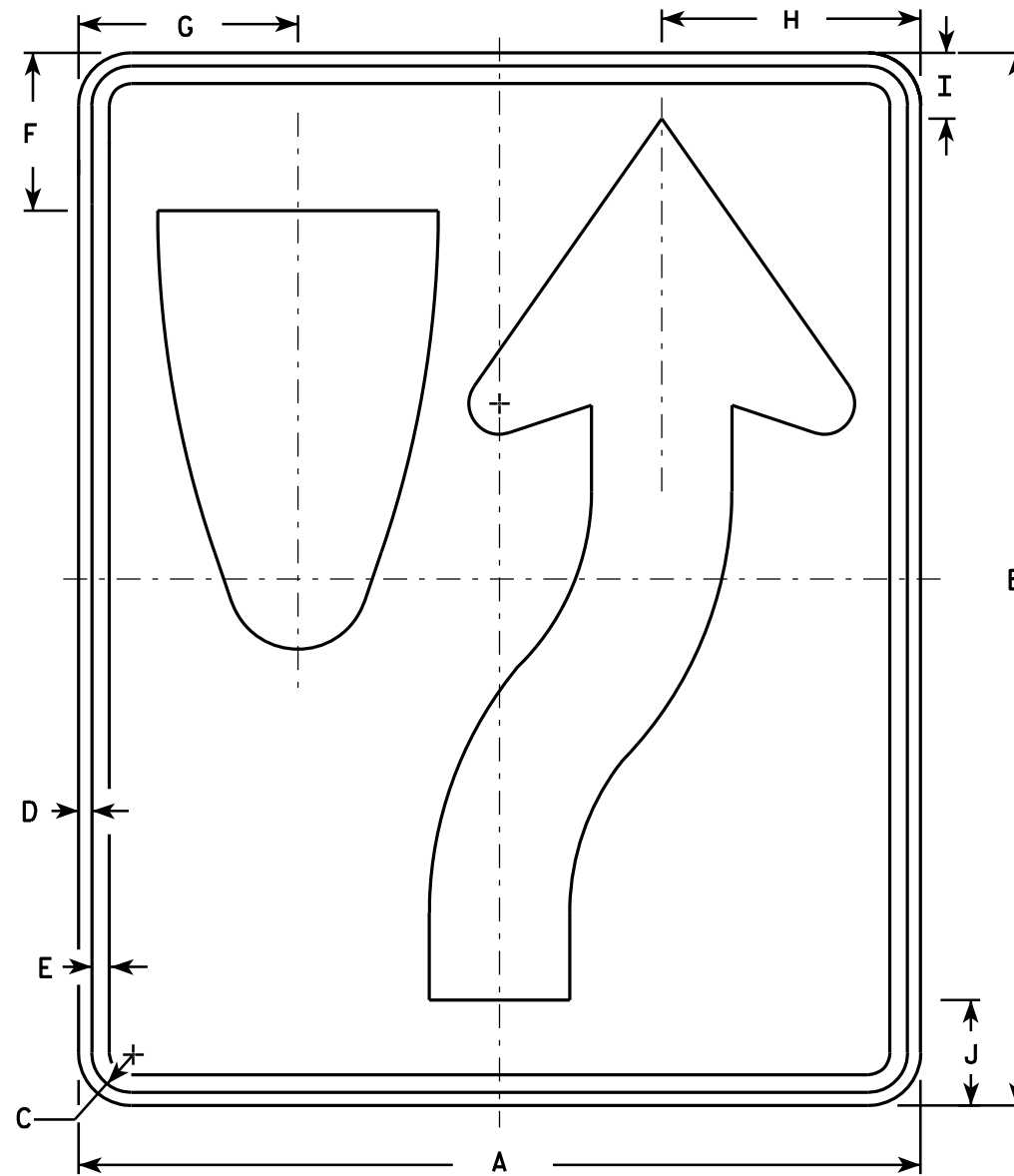
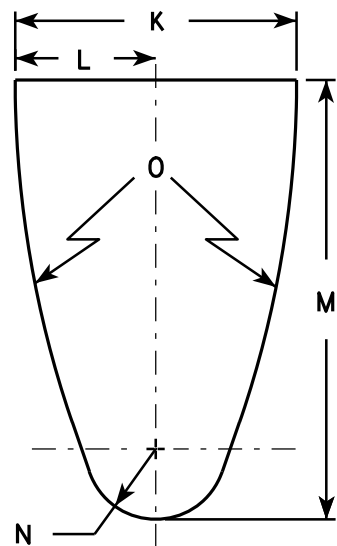
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

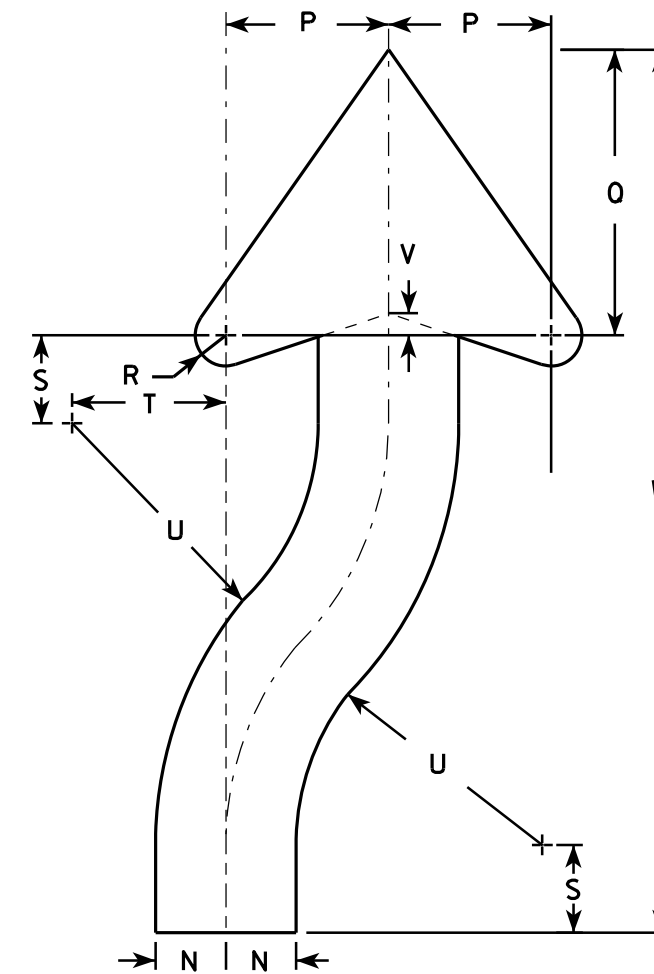
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:  
Background - White  
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

**STANDARD SIGN**  
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

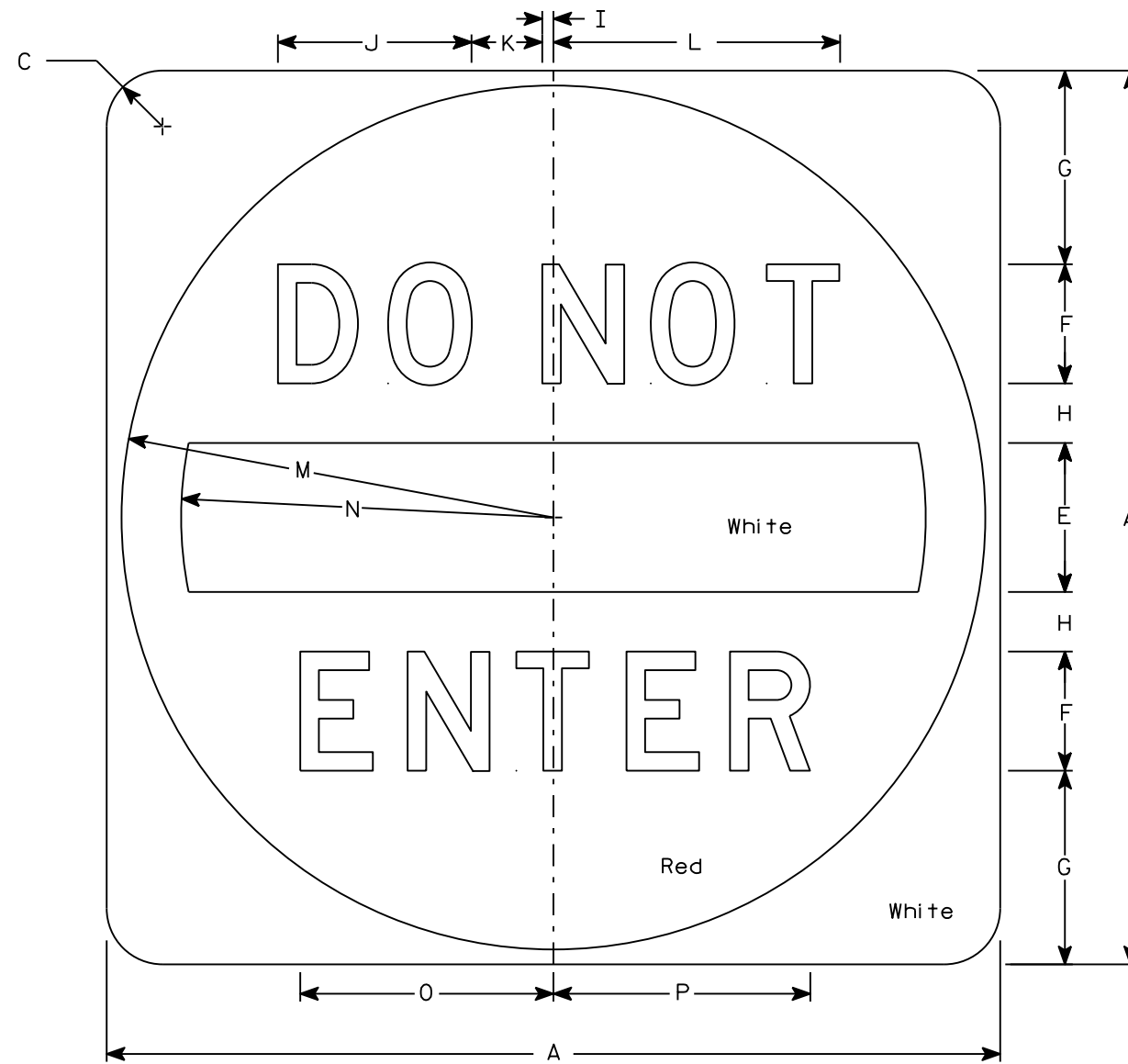
DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

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



R5-1

7

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		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

STANDARD SIGN  
R5-1

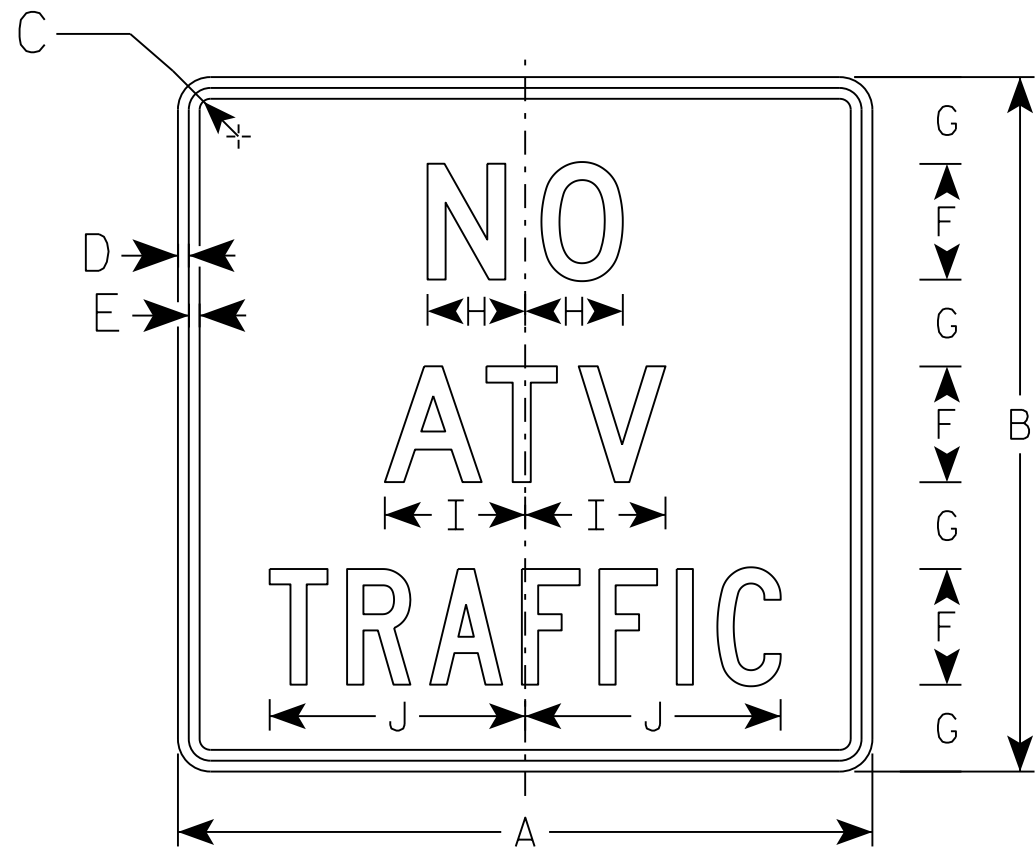
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

NOTES

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



R5-51

7

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	24	24	1 1/8	3/8	3/8	4	3	3 3/8	4 7/8	8 7/8																	4.0
2M	24	24	1 1/8	3/8	3/8	4	3	3 3/8	4 7/8	8 7/8																	4.0
3																											
4																											
5																											

STANDARD SIGN  
R5-51

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WISCONSIN DEPT OF TRANSPORTATION

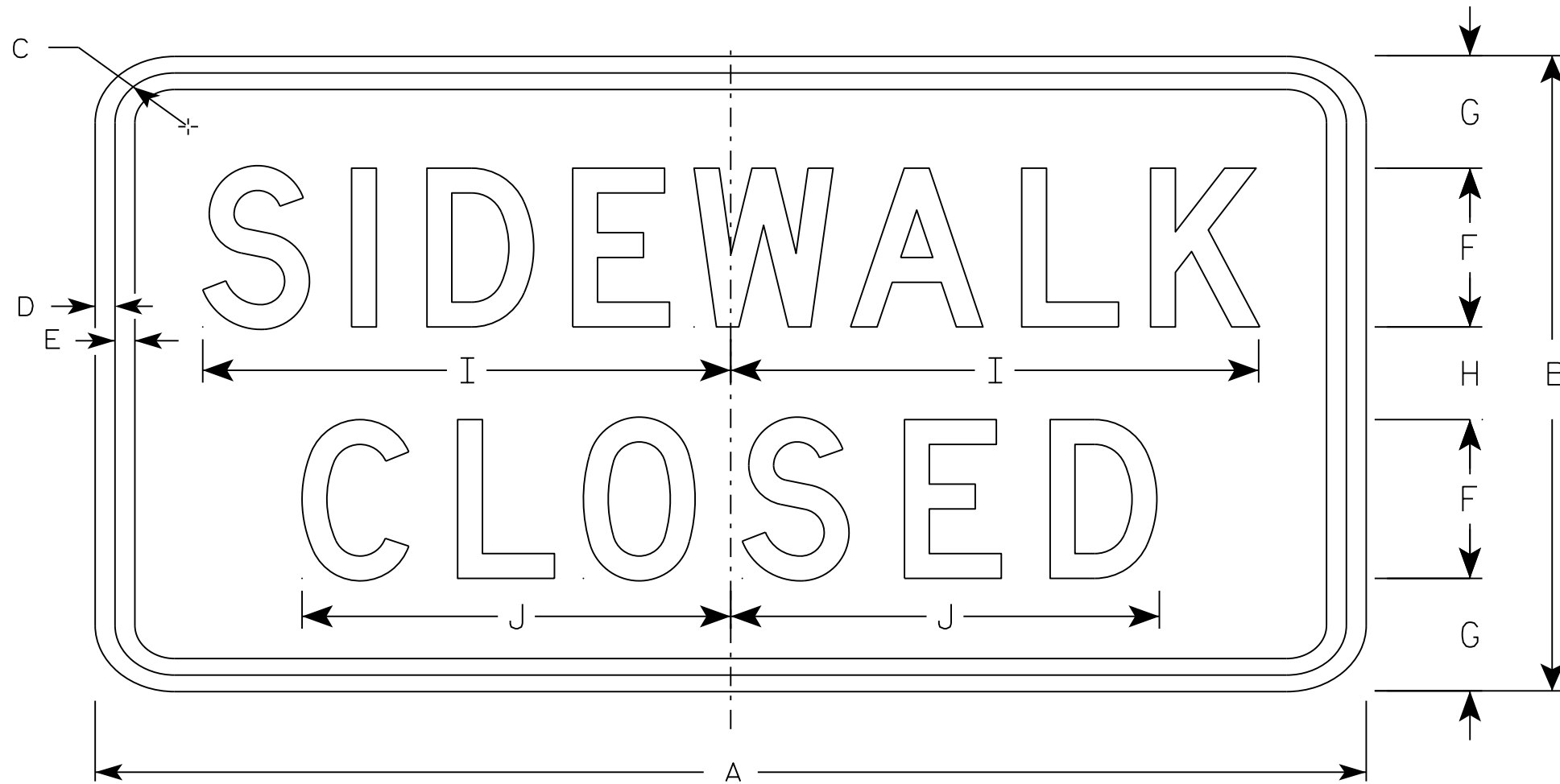
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 5/16/18 PLATE NO. R5-51.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

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.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



R9-9

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	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN  
R9-9

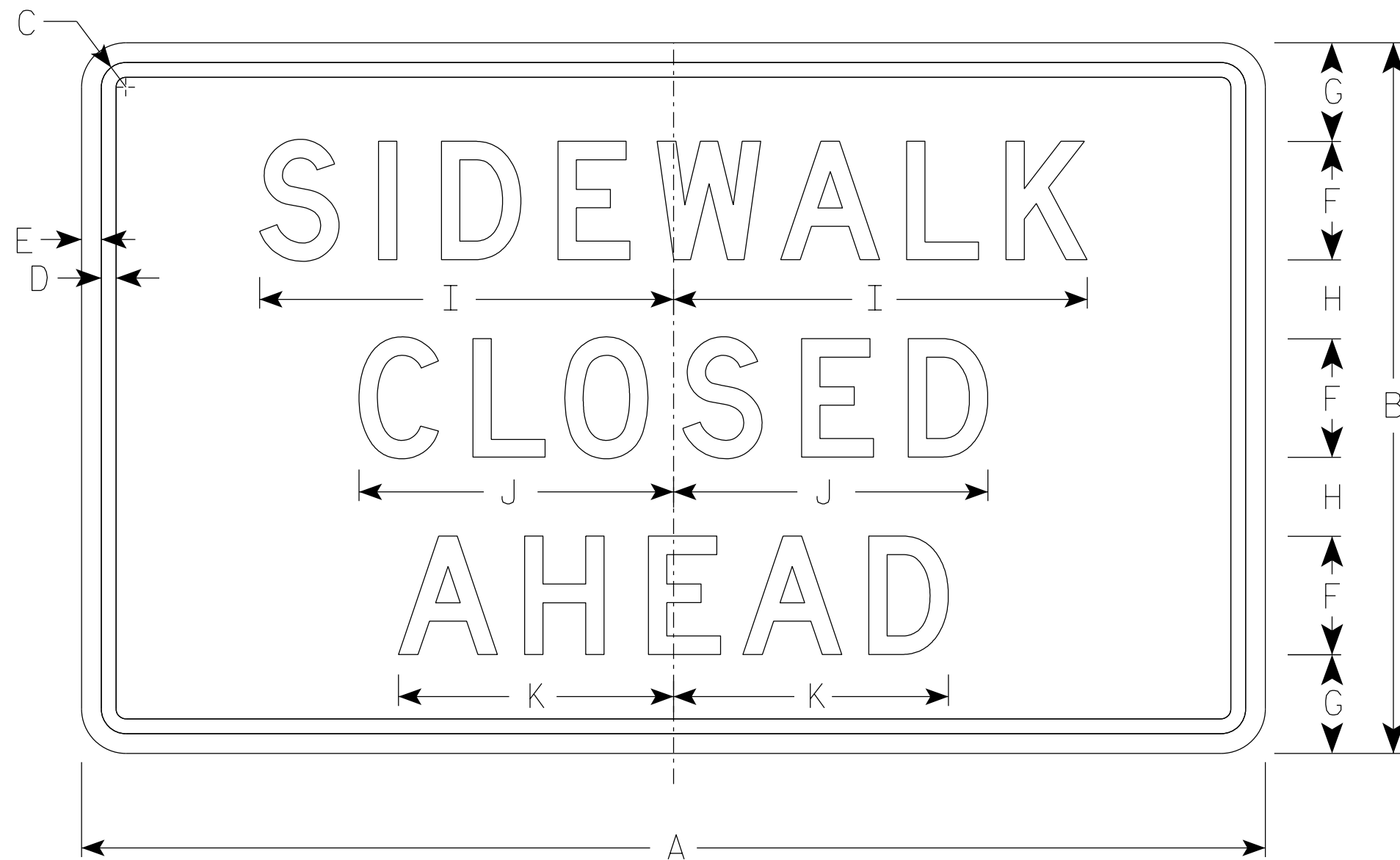
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE NO. R9-9.6

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.



R9-9A

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 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
2M	30	18	1 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
3																											
4																											
5																											

STANDARD SIGN  
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

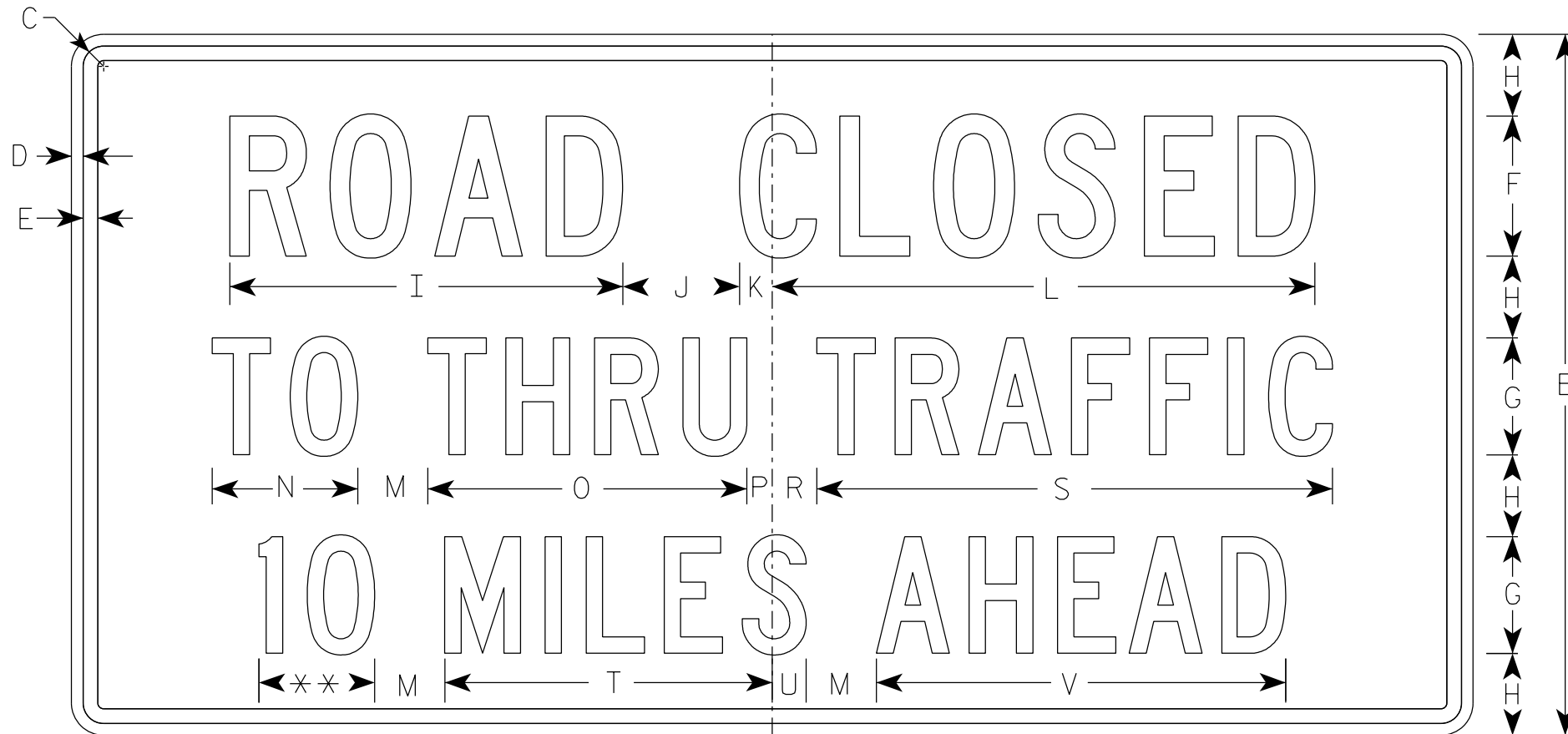
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/31/2020 PLATE NO. R9-9A.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

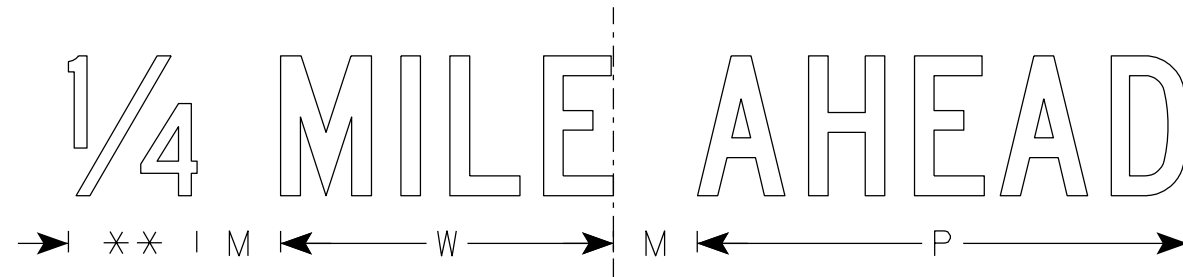
NOTES

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

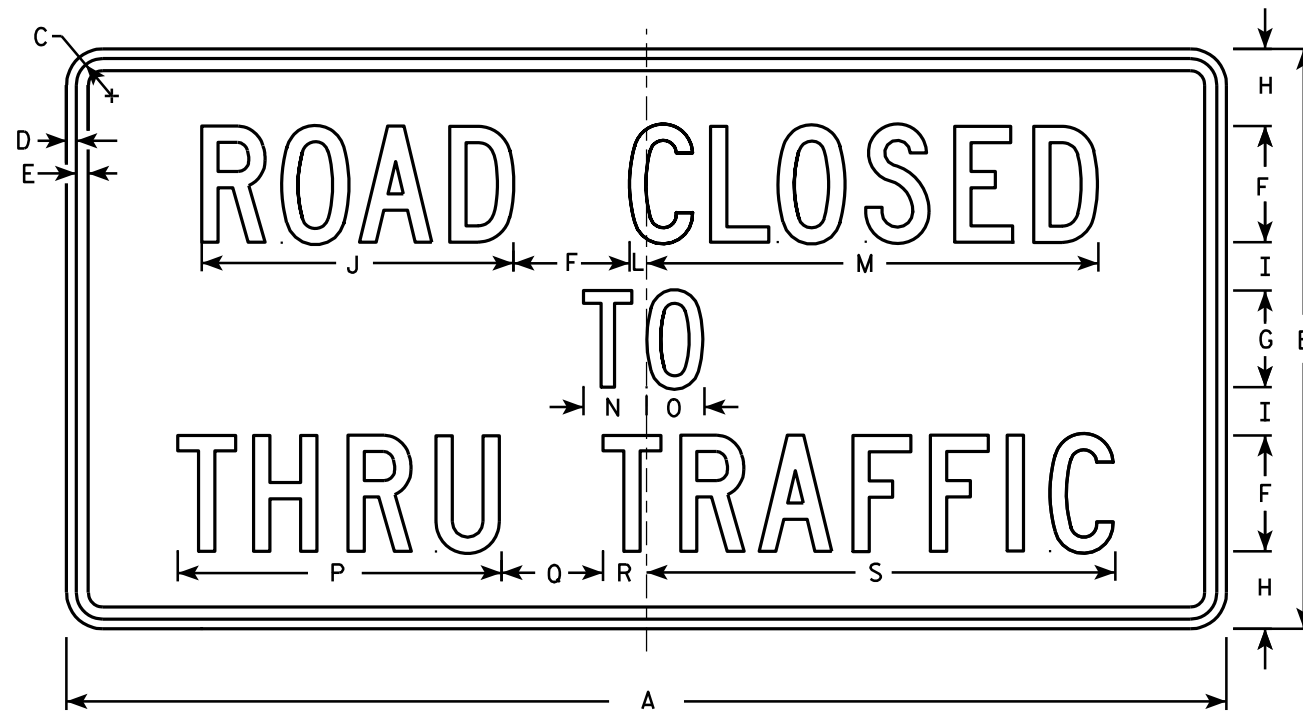
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

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.



R11-4

7

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	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

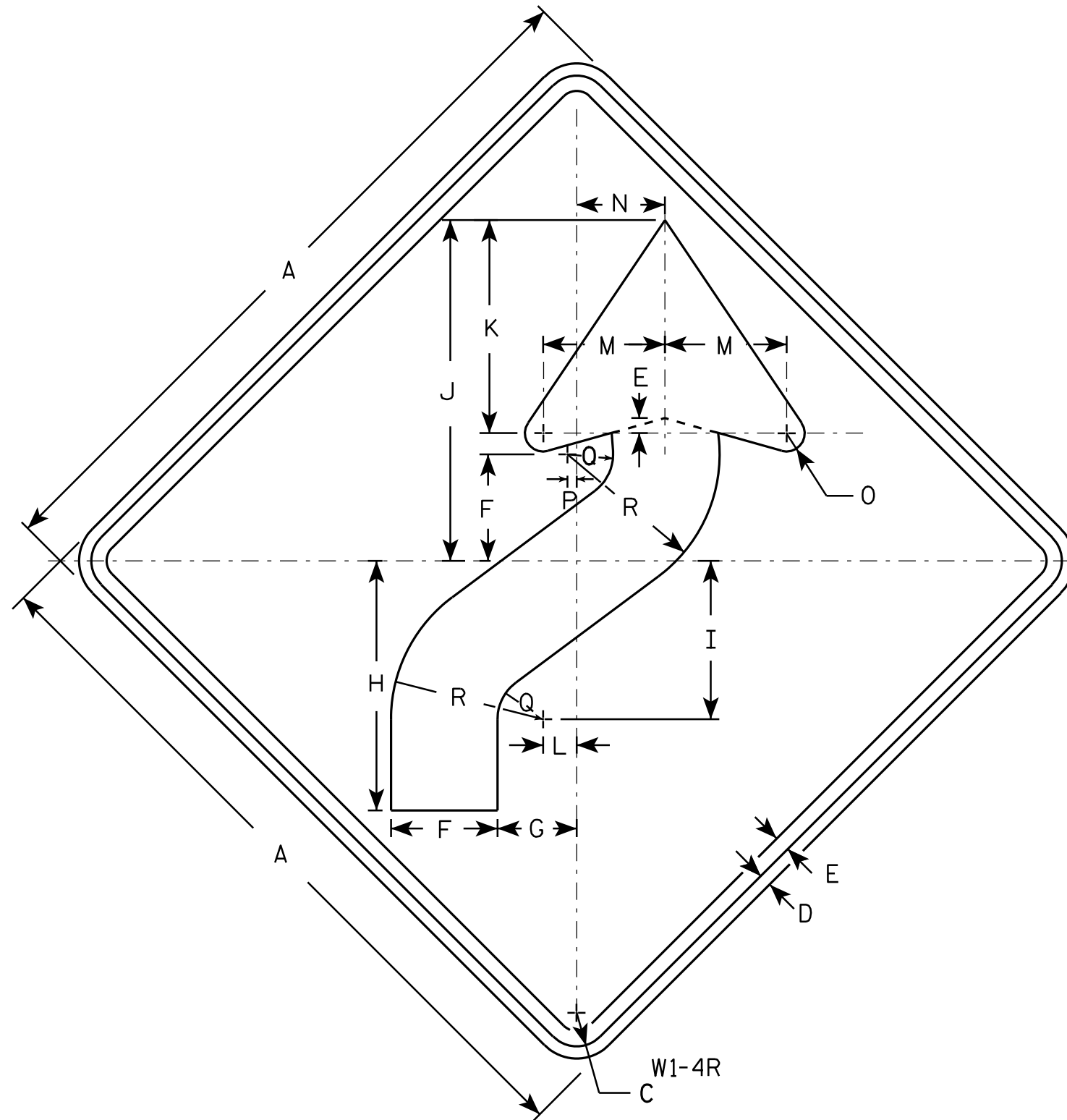
**STANDARD SIGN**  
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*  
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
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. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

7

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	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

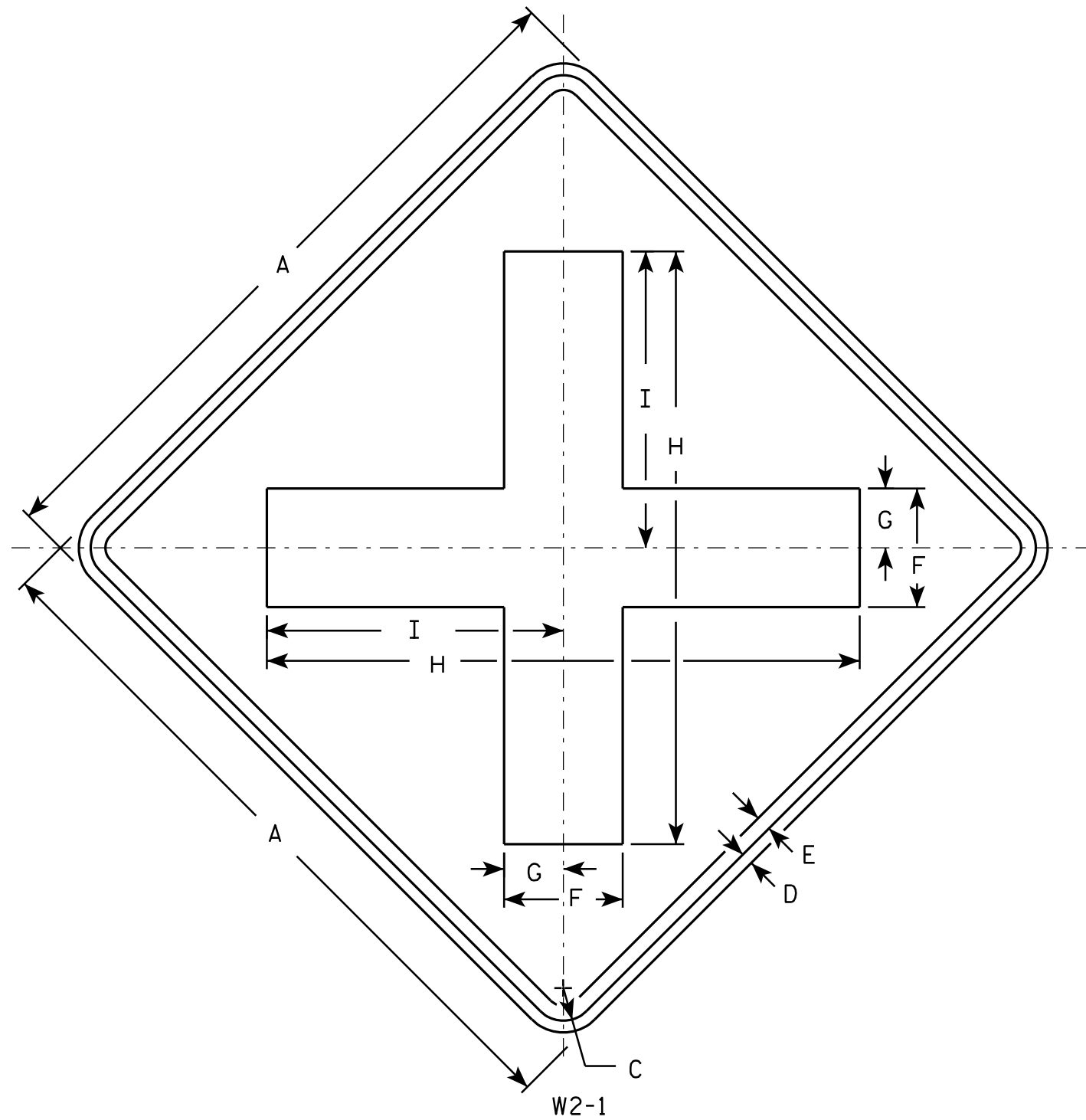
STANDARD SIGN  
W1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
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.

7

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	24		1 1/8	3/8	1/2	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

**STANDARD SIGN**  
**W2-1**

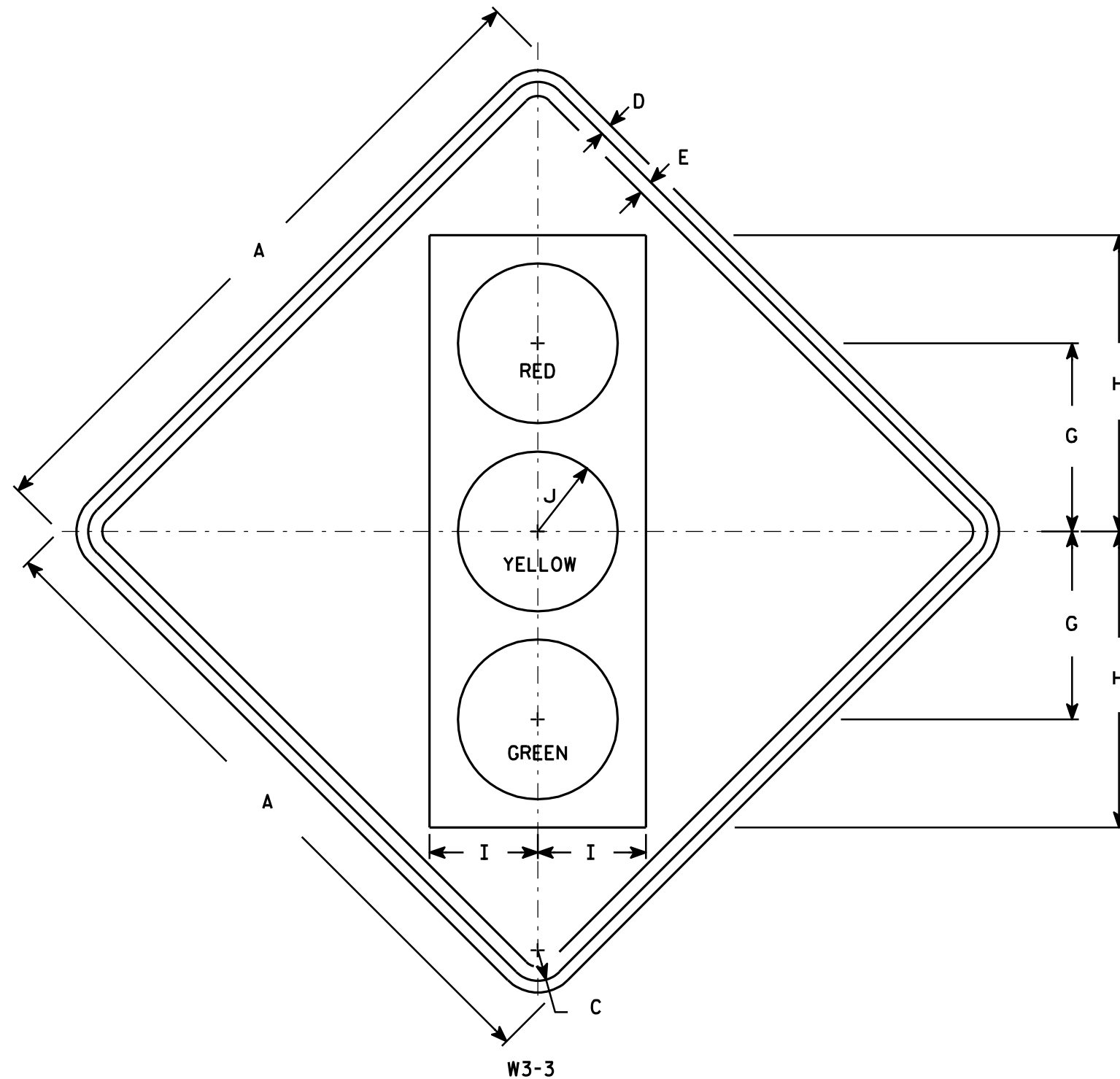
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E





**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
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. Symbol and border are non-reflective black.  
Top circle - Type H ReflectORIZED Red  
Center circle - Same as background  
Bottom circle - Type H ReflectORIZED Green

7

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	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

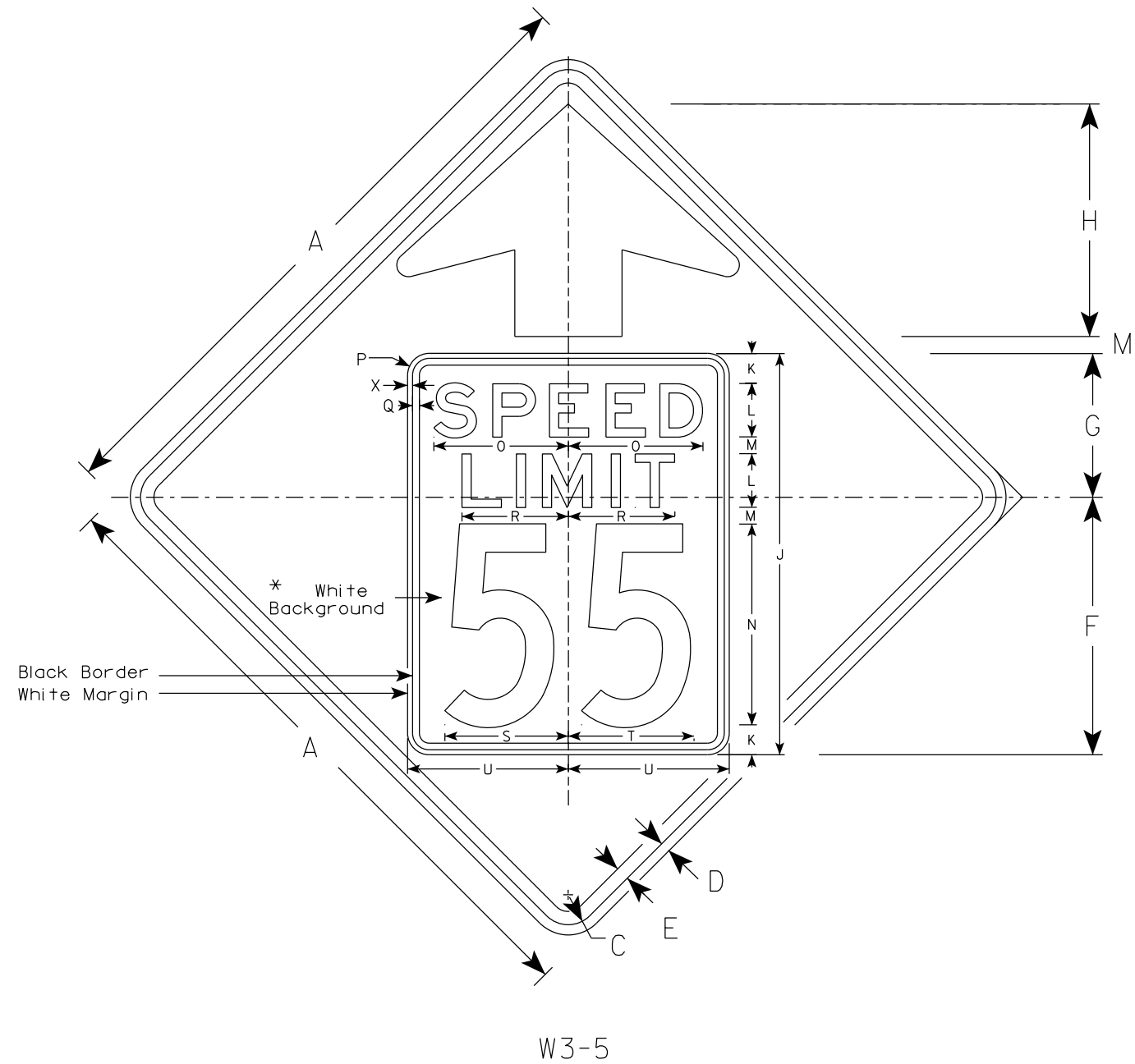
**STANDARD SIGN**  
**W3-3**

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

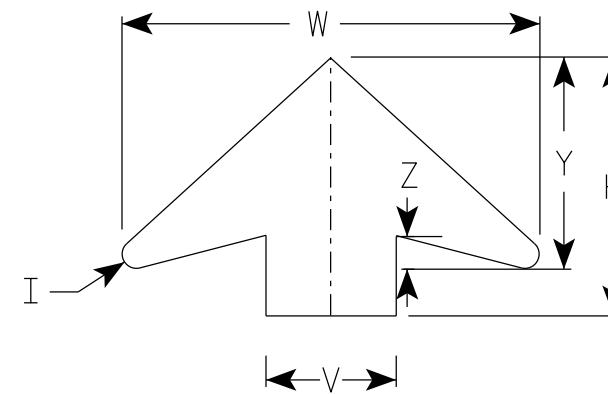
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: *  
Background - Yellow* (Type F Reflective)  
Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

W3-5

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																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN  
W3-5

WISCONSIN DEPT OF TRANSPORTATION

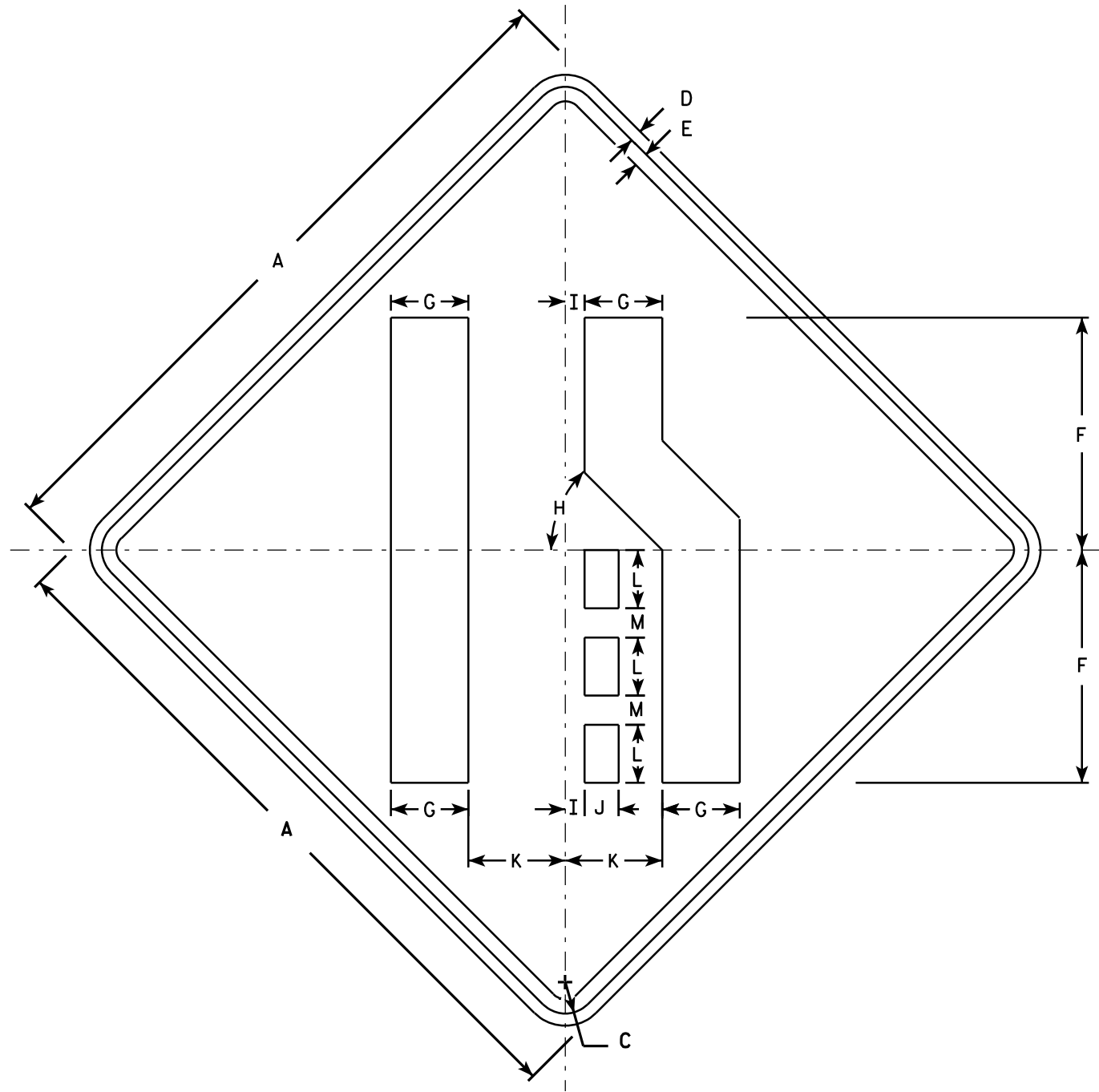
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 7/27/2020 PLATE NO. W3-5.6

PROJECT NO:

SHEET NO:

**E**



W4-2R

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
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. W4-2L is the same as W4-2R except the symbols reversed along the vertical centerline.

7

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	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

**STANDARD SIGN**  
**W4-2**

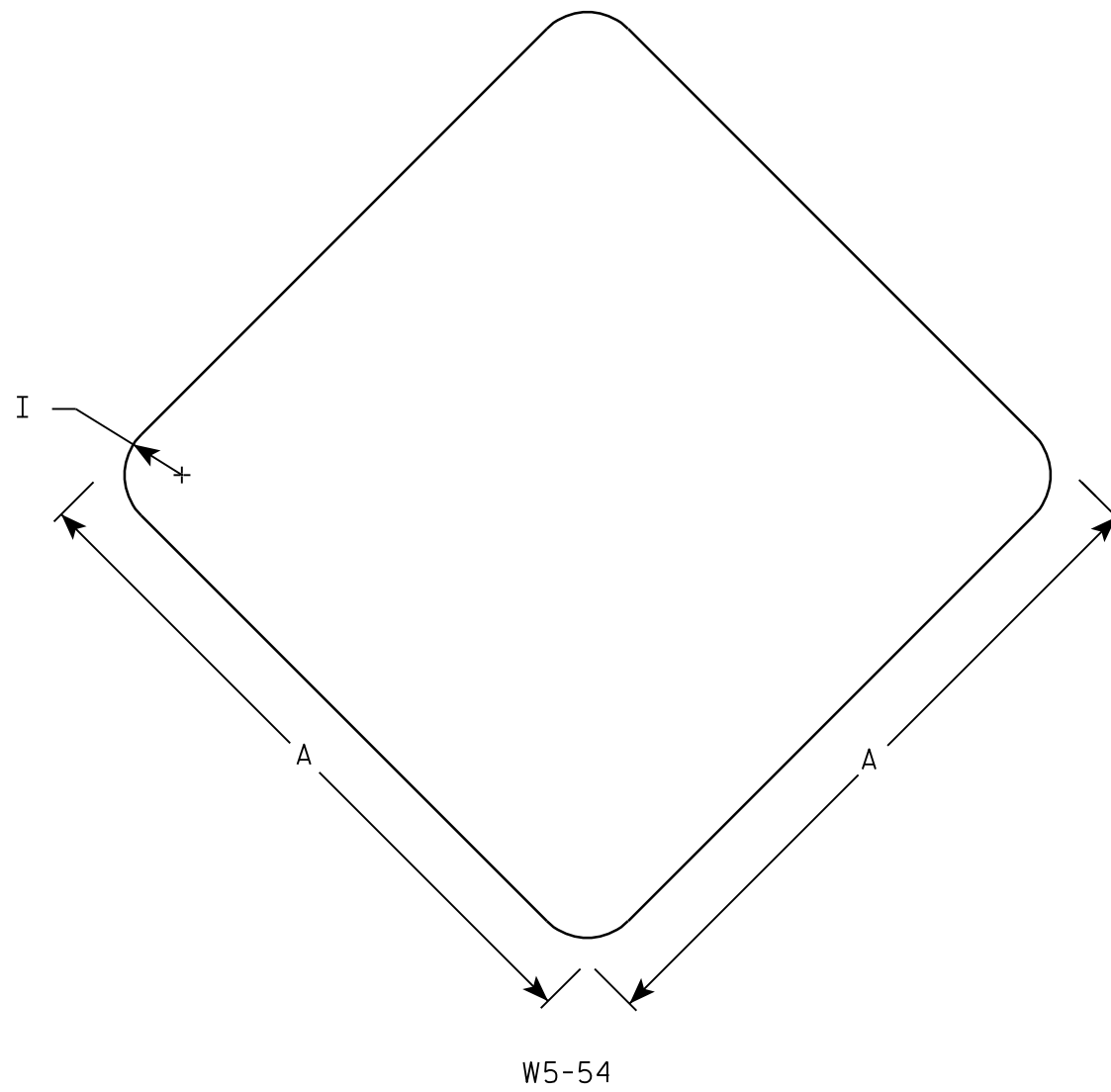
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.



7

7

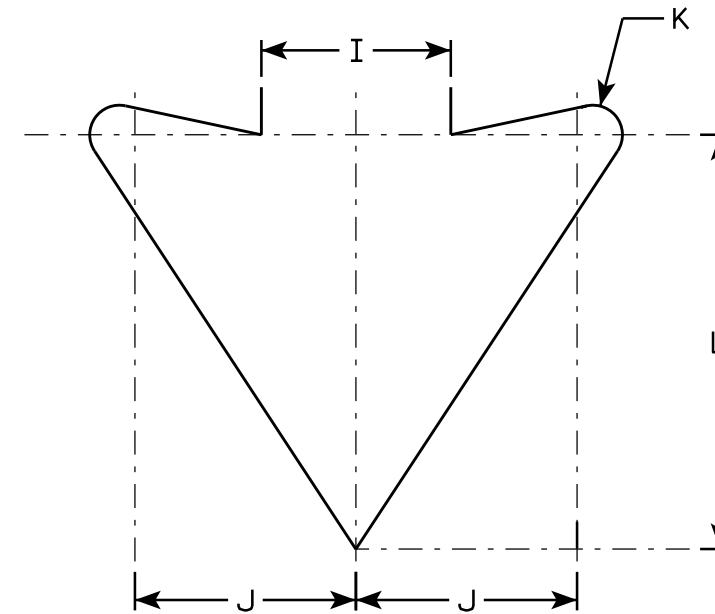
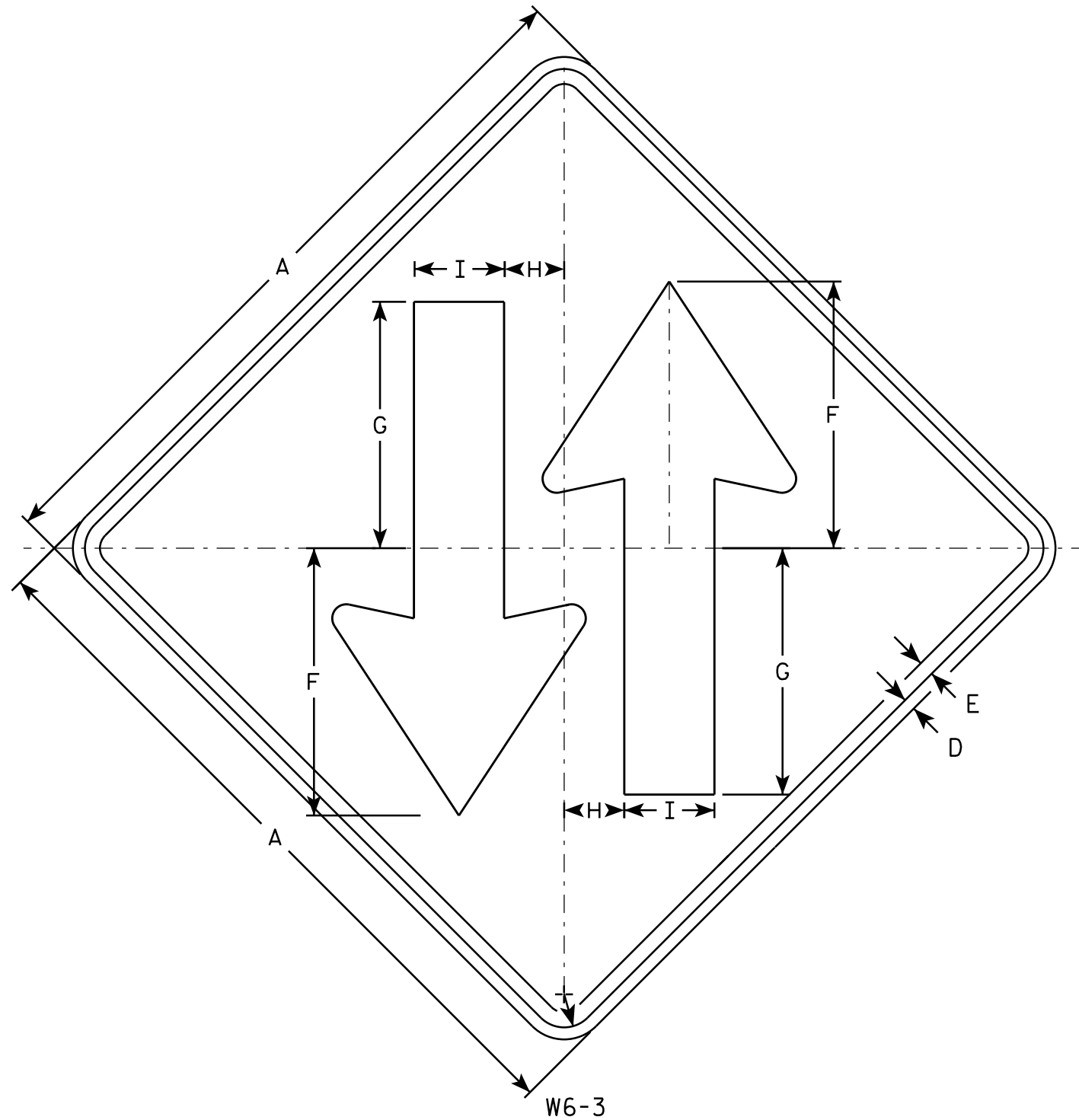
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 1/2																		2.25
2M	18								1 1/2																		2.25
3																											
4																											
5																											

<b>STANDARD SIGN</b>	
W5-54	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
<small>APPROVED</small>	<i>Matthew R Rauch</i> <small>For State Traffic Engineer</small>
<small>DATE</small> 11/3/10	<small>PLATE NO.</small> W5-54.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO: <b>E</b>
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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 - Yellow  
Message - Black
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.



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	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

W6-3

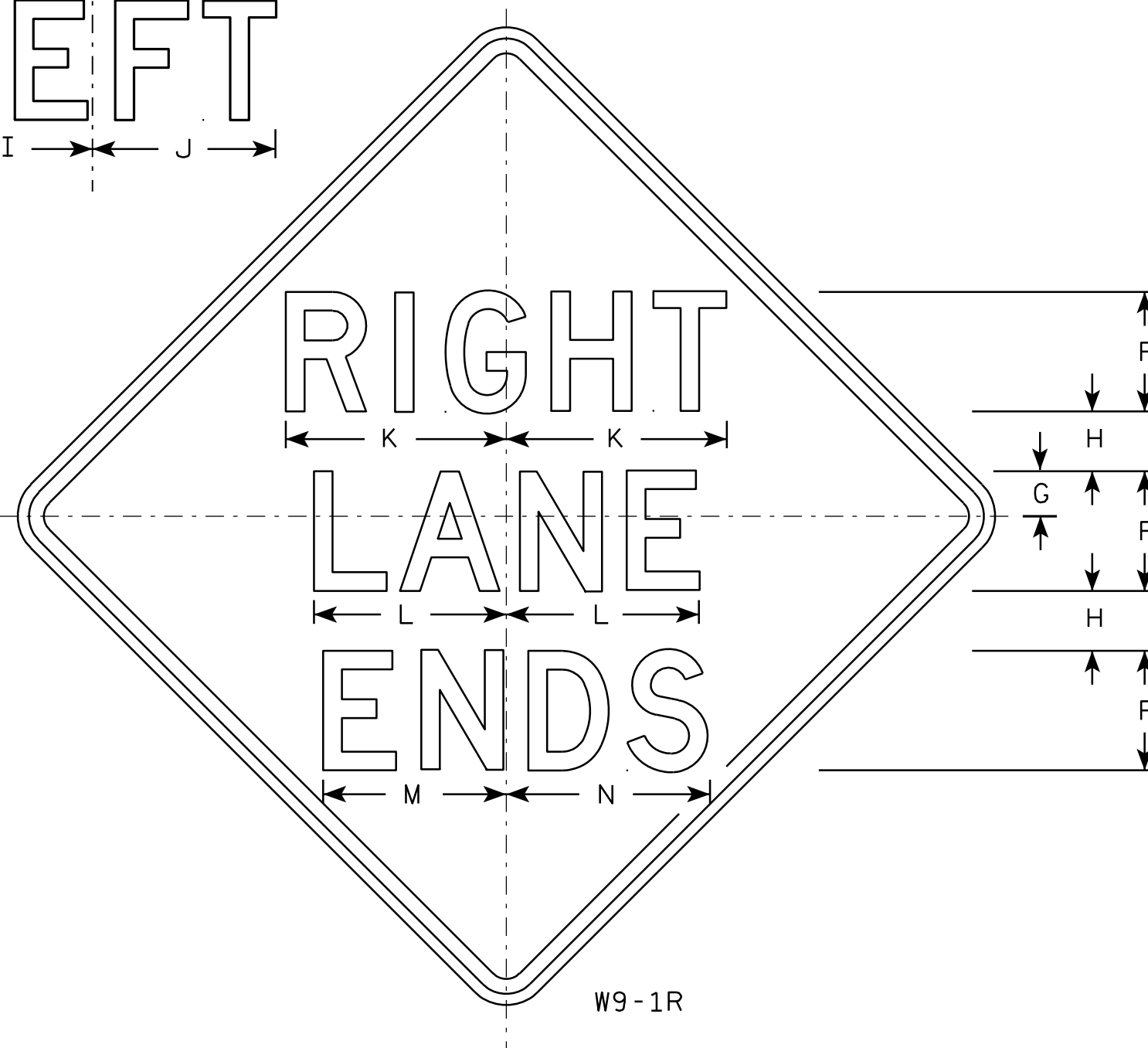
**STANDARD SIGN**  
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
For State Traffic Engineer

DATE 3/10/16 PLATE NO. W6-3.11

LEFT



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
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. W9-1L same as W9-1R except the word Left replaces Right.

7

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	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

**STANDARD SIGN**  
W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W9-1.8

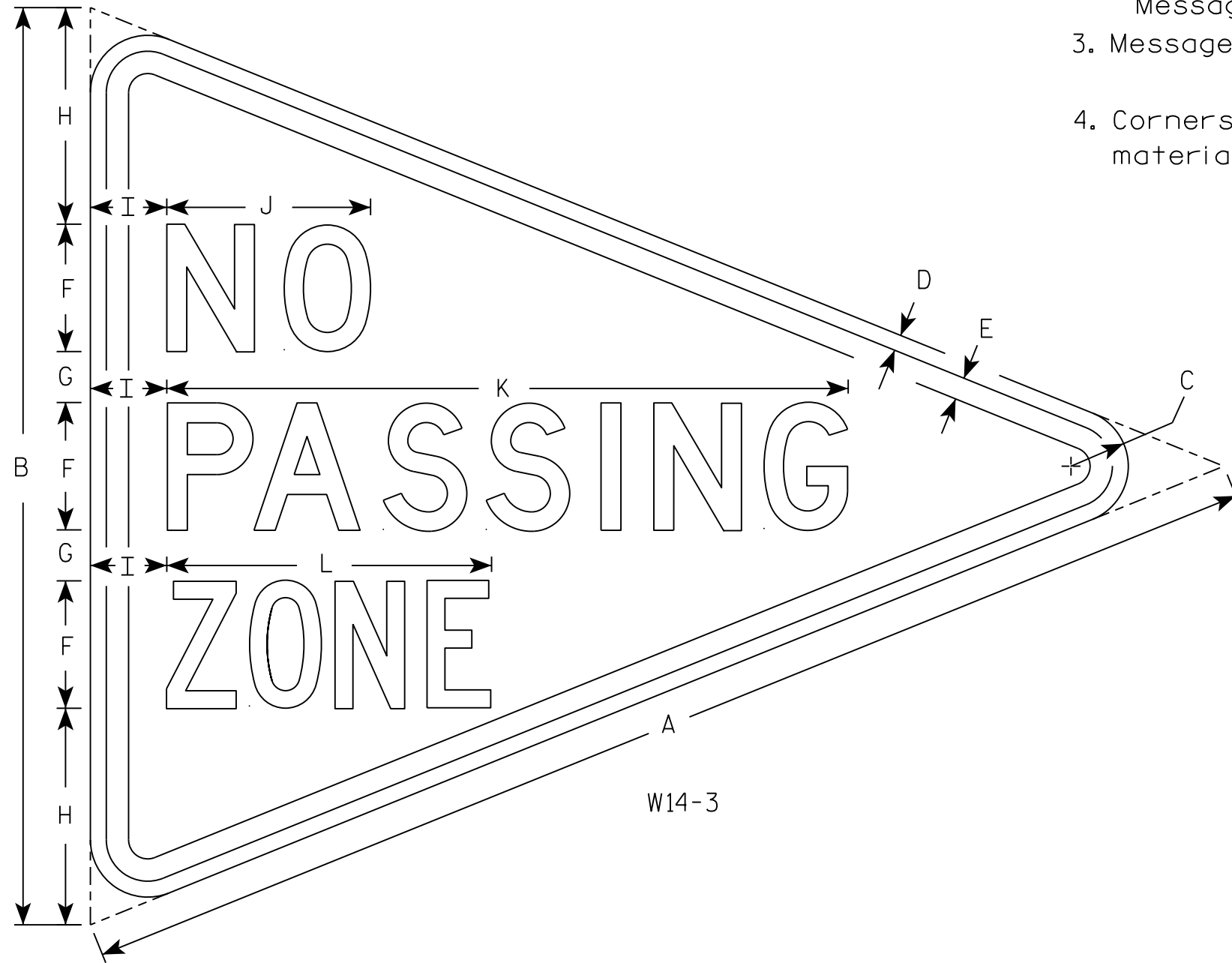
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - Lines 1 and 2 are Series D.  
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



7

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	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN  
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - C



W16-9P

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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN  
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
State Traffic Engineer

DATE 3/7/19 PLATE NO. W16-9P.7

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

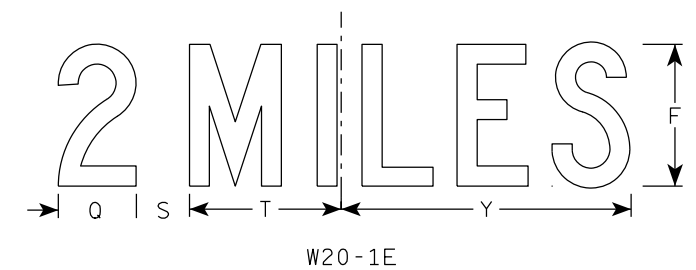
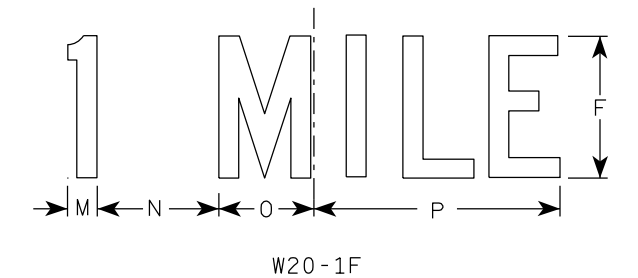
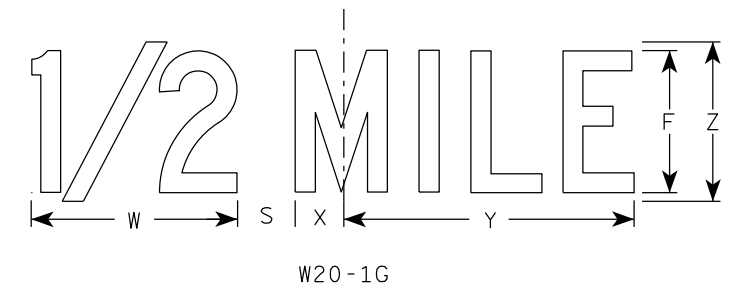
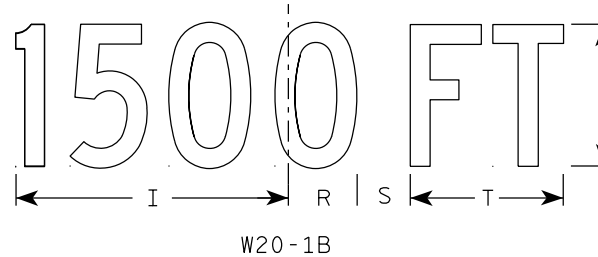
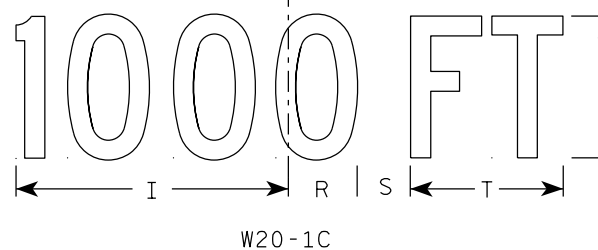
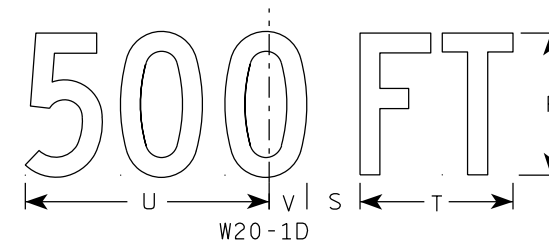
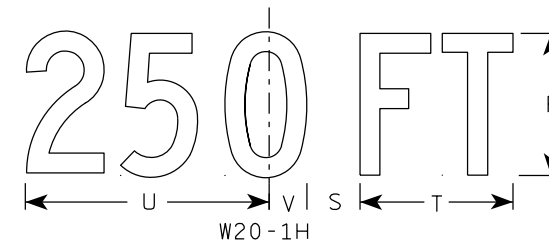
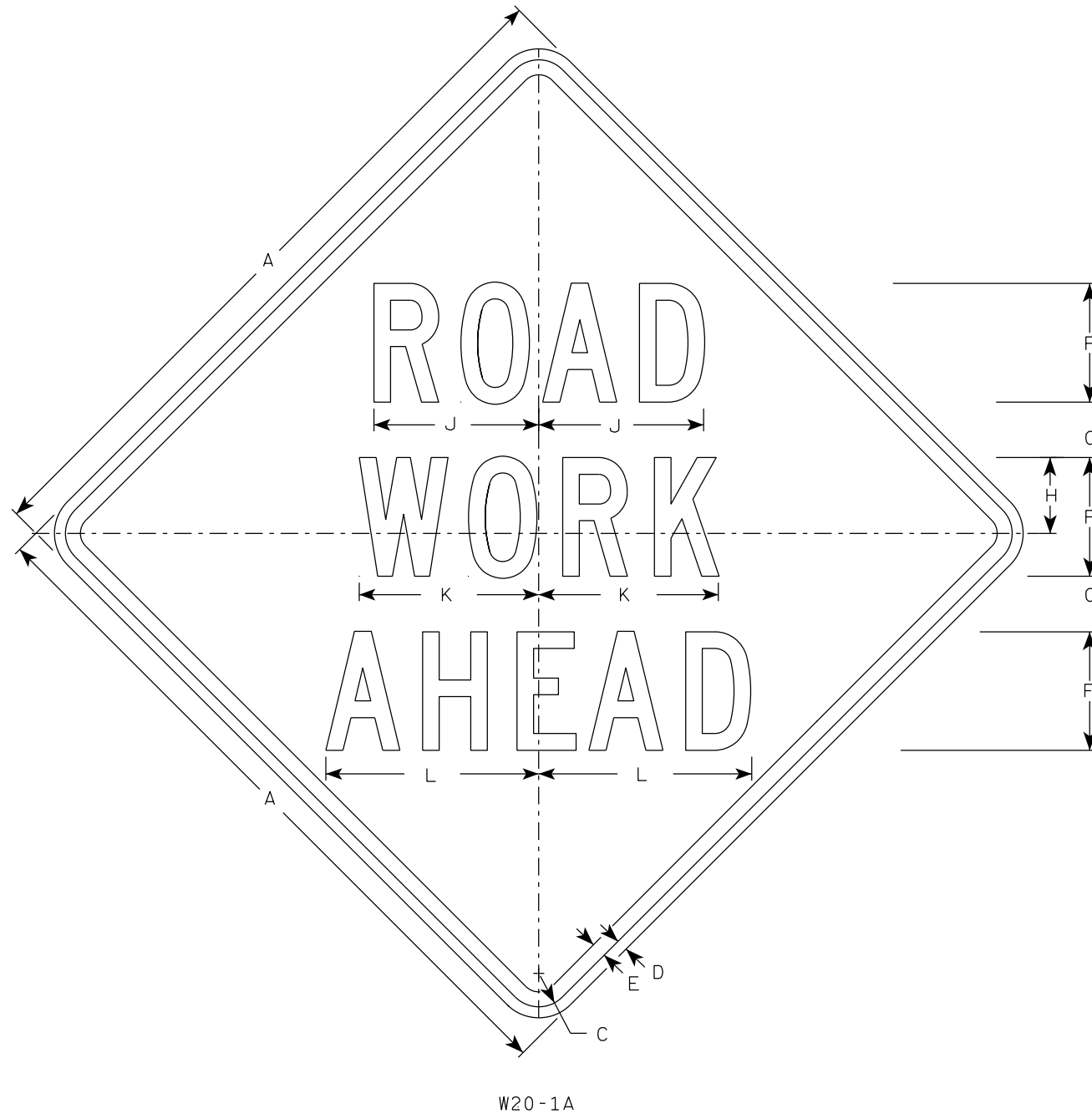
7

7



**NOTES**

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
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.



W20-1A

W20-1C

W20-1B

W20-1G

W20-1F

W20-1E

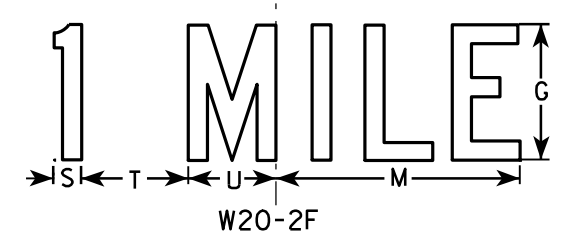
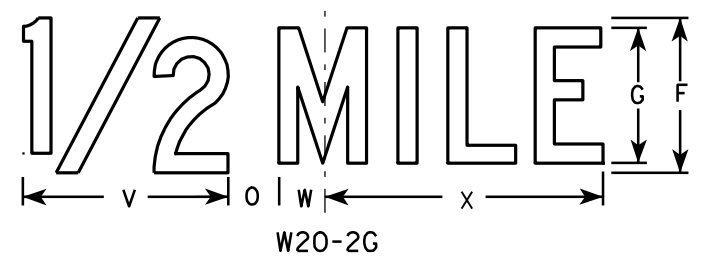
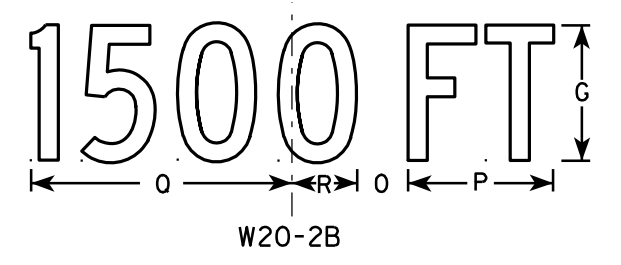
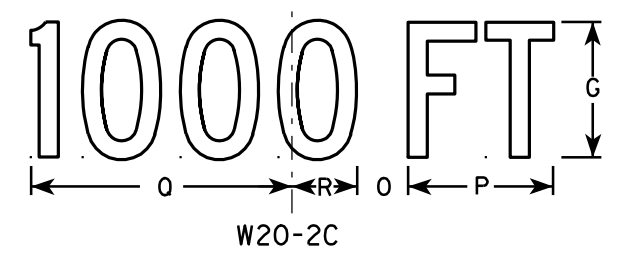
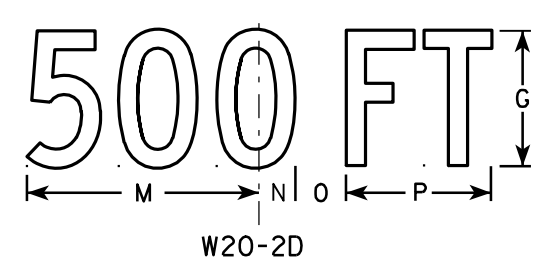
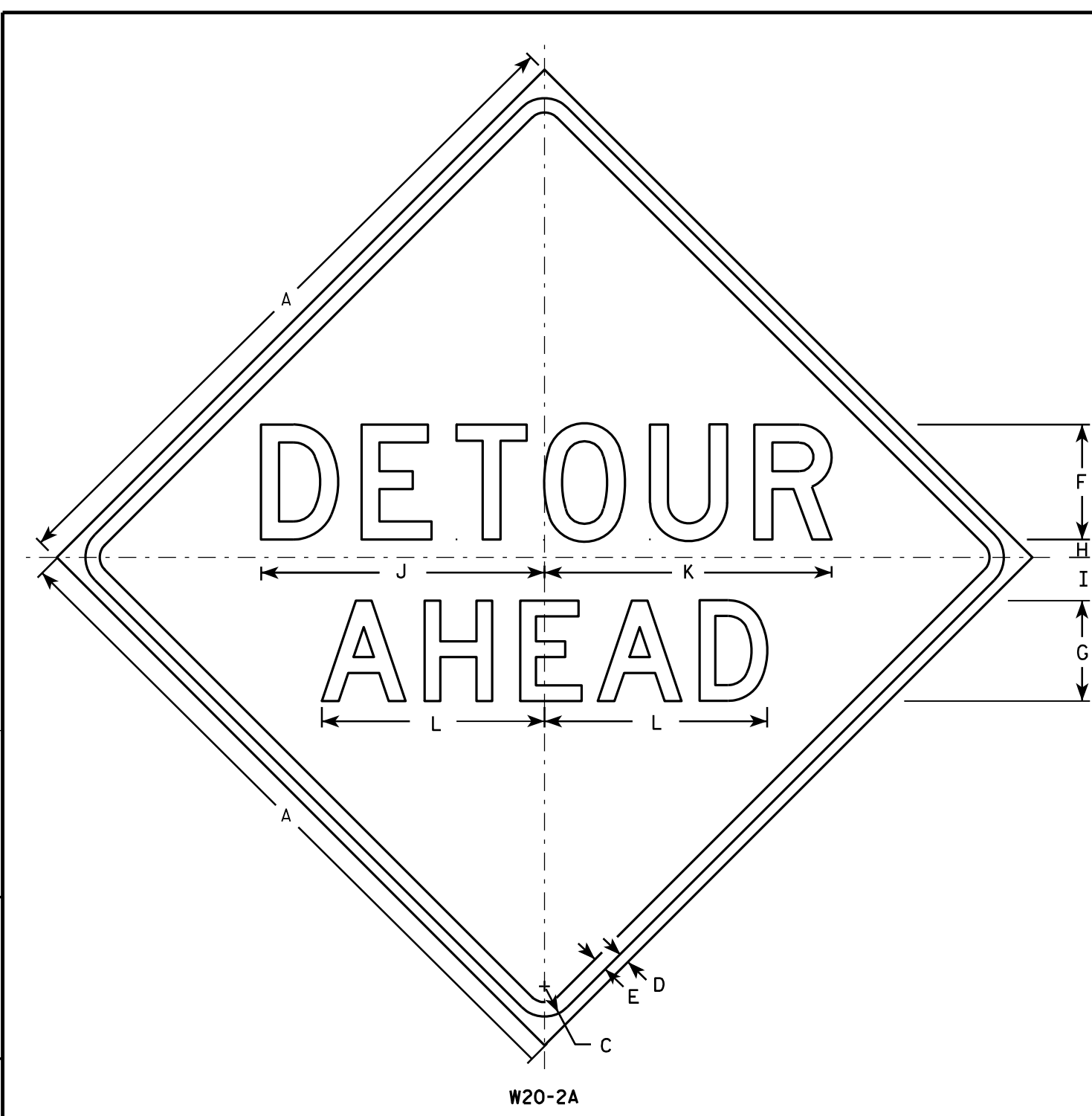
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



**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.

7

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	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

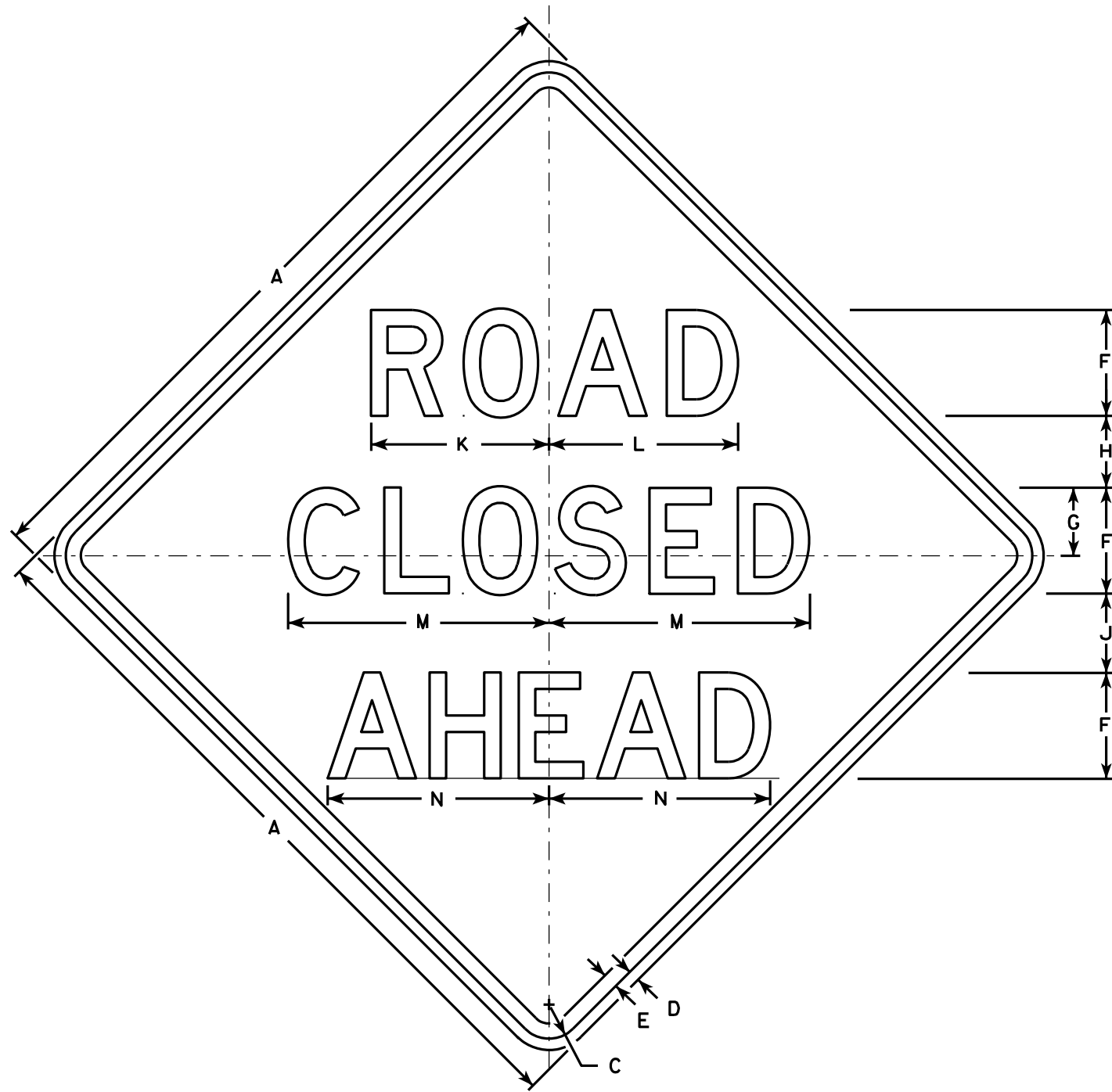
**STANDARD SIGN**  
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

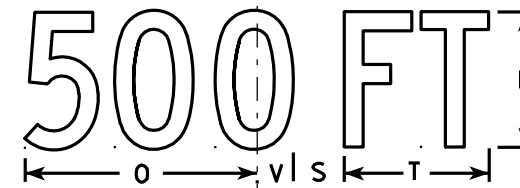
APPROVED *Matthew R. Raub*  
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

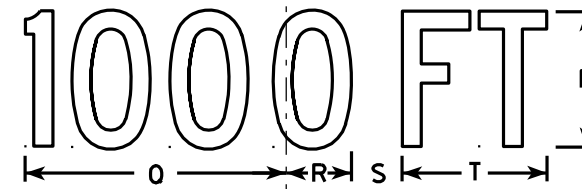
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



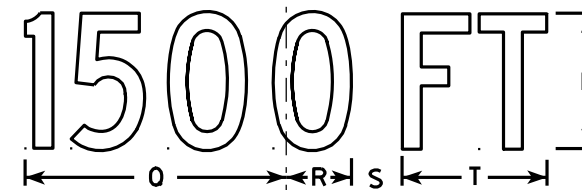
W20-3A



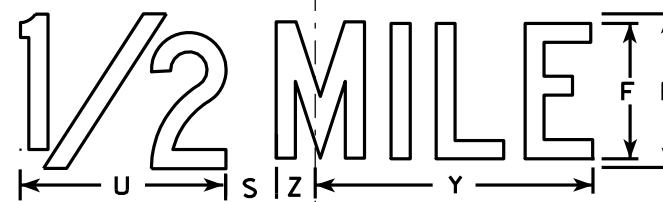
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

**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. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

7

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	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

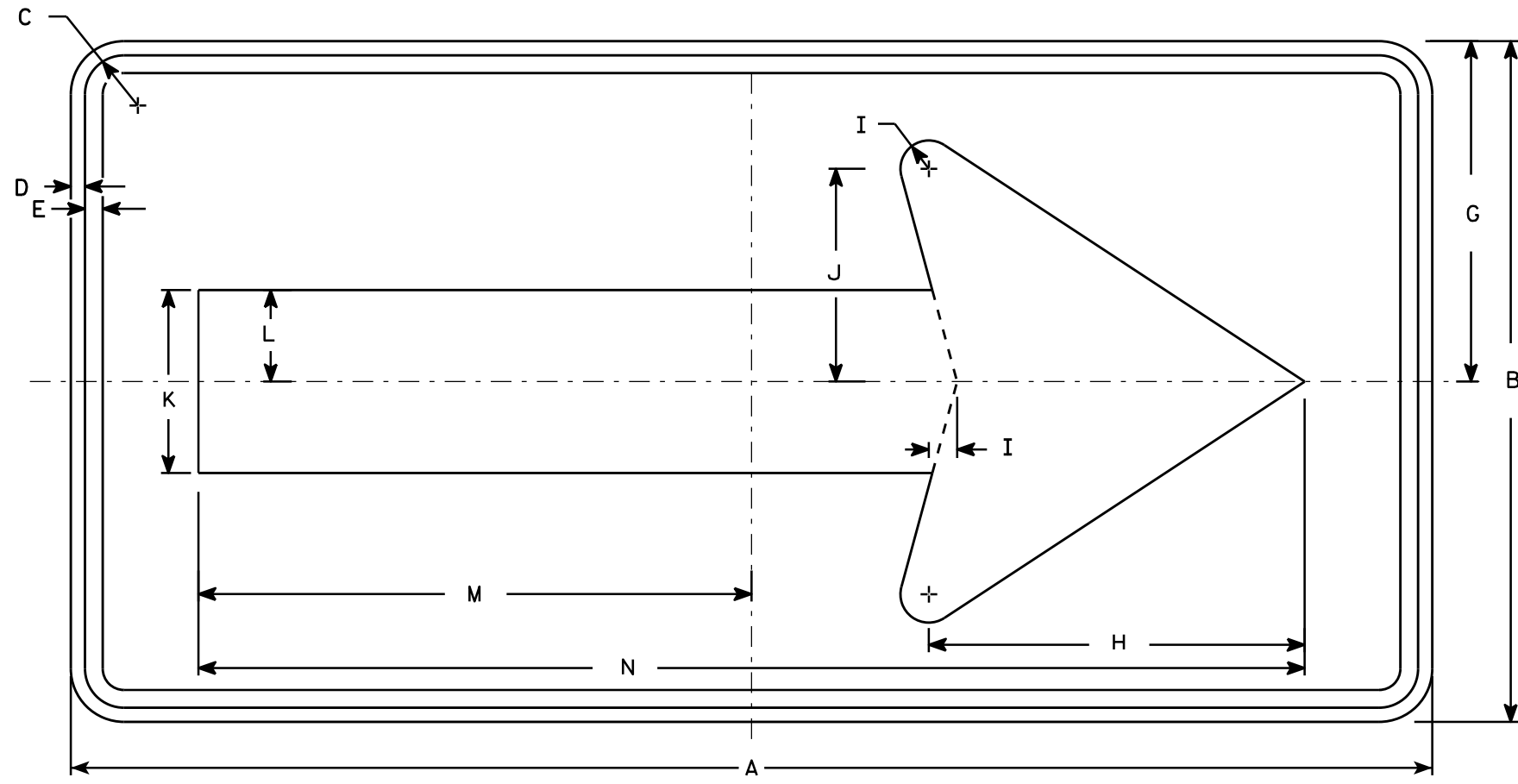
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

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. 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.



W01-6

7

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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	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

**STANDARD SIGN**  
**W01-6**

*WISCONSIN DEPT OF TRANSPORTATION*

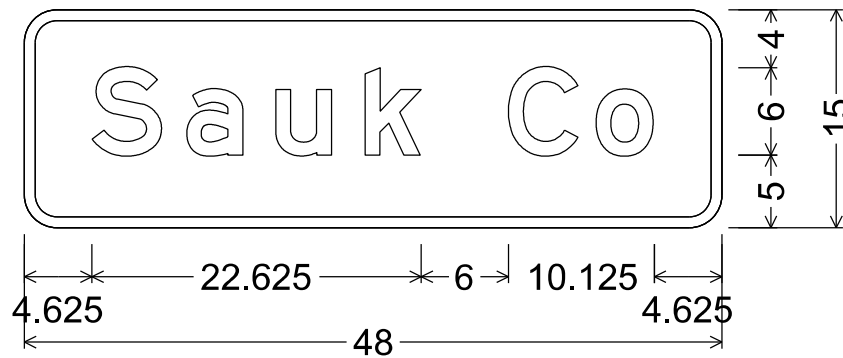
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

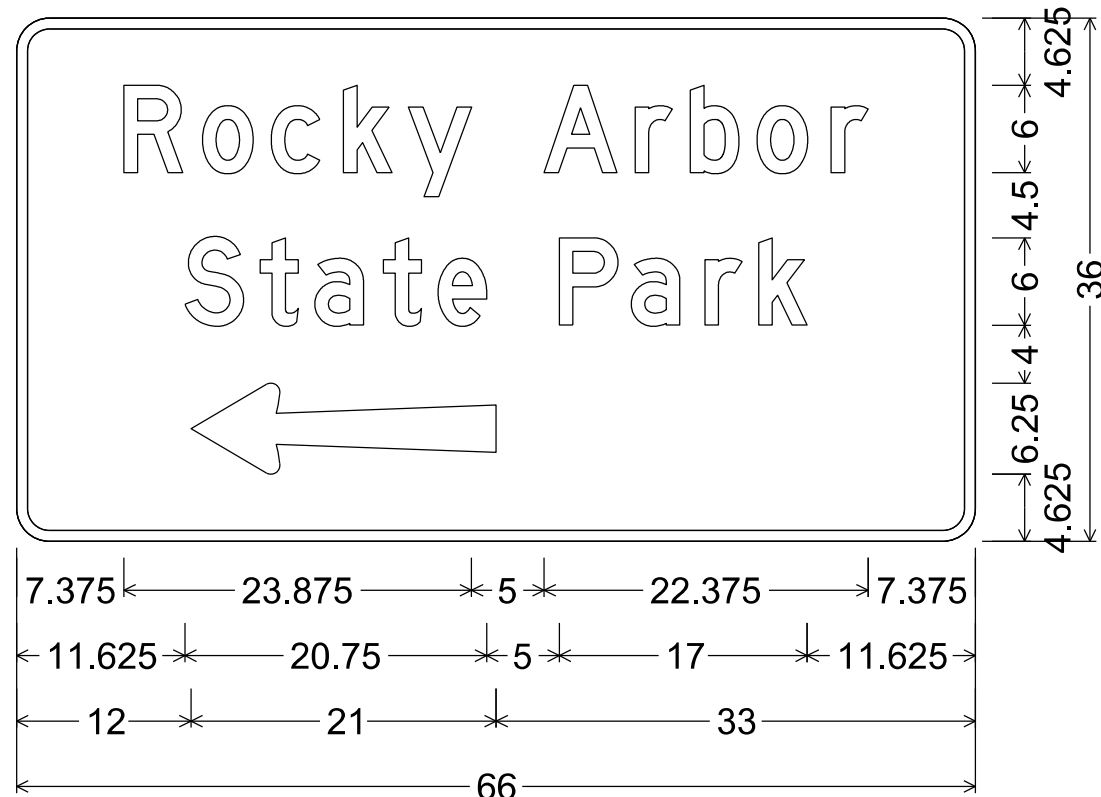
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

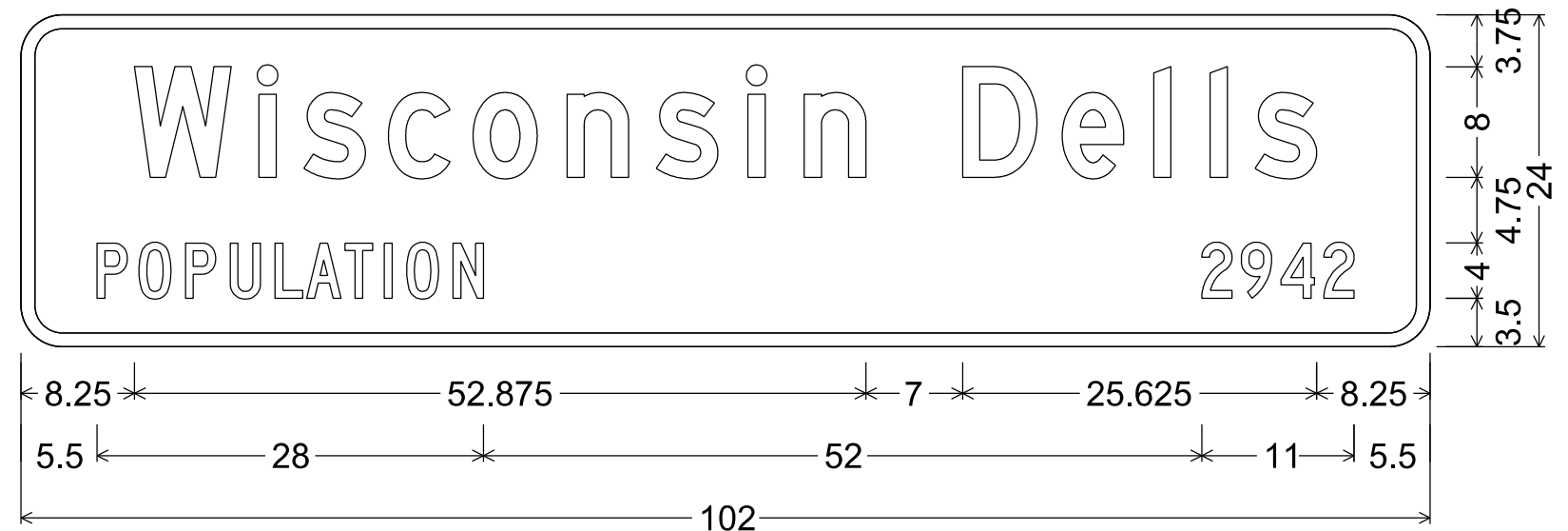
1. All Signs Type II - Type H Reflective
2. Color:  
Background - Green except as noted.  
Message - White
3. Message Series - E except as noted.



I2-2; 2.250" Radius, 0.750" Border



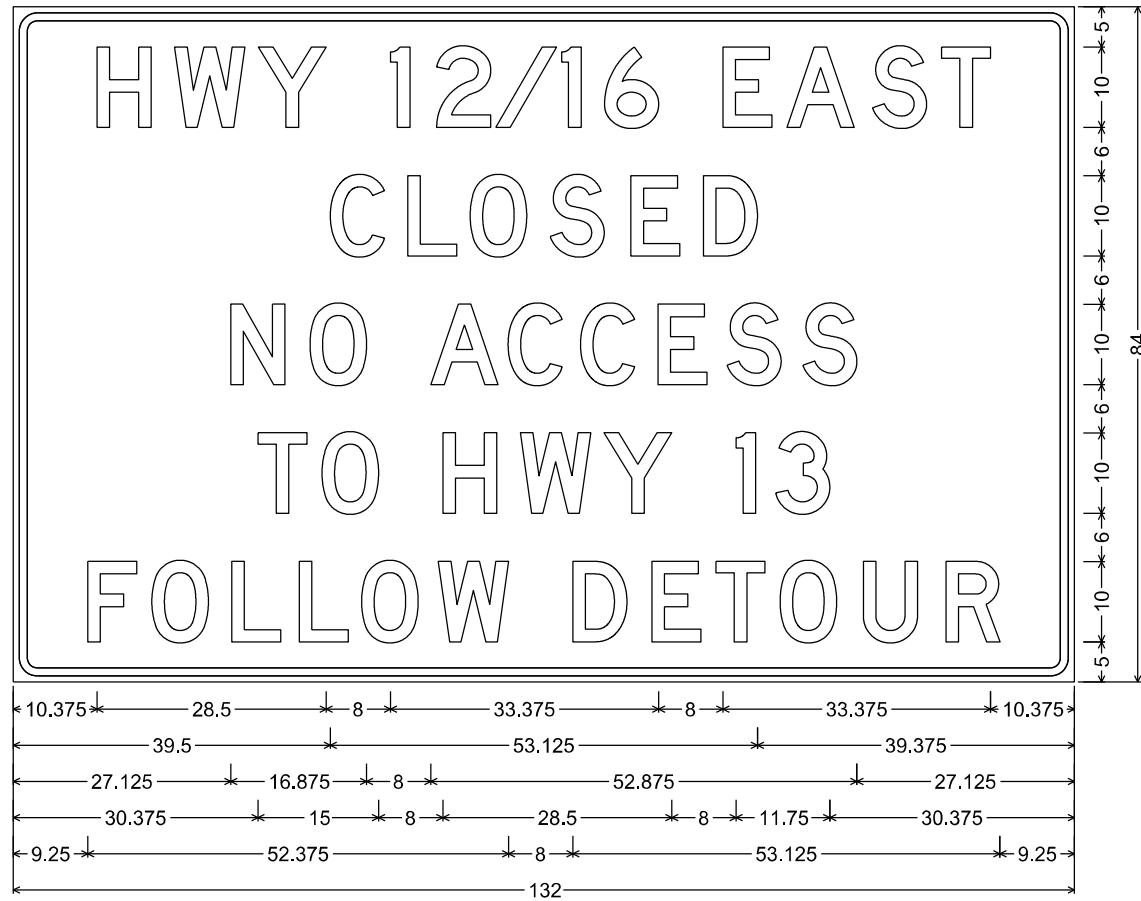
D7-53L; 2.250" Radius, 0.750" Border, White on Brown  
"Rocky", D; "Arbor", D; "State", D ; "Park", D



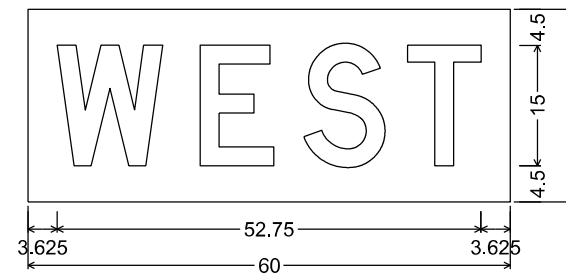
I2-3; 3.000" Radius, 1.000" Border  
"Wisconsin", D; "Dells", D; "POPULATION", C; "2942", C

NOTES

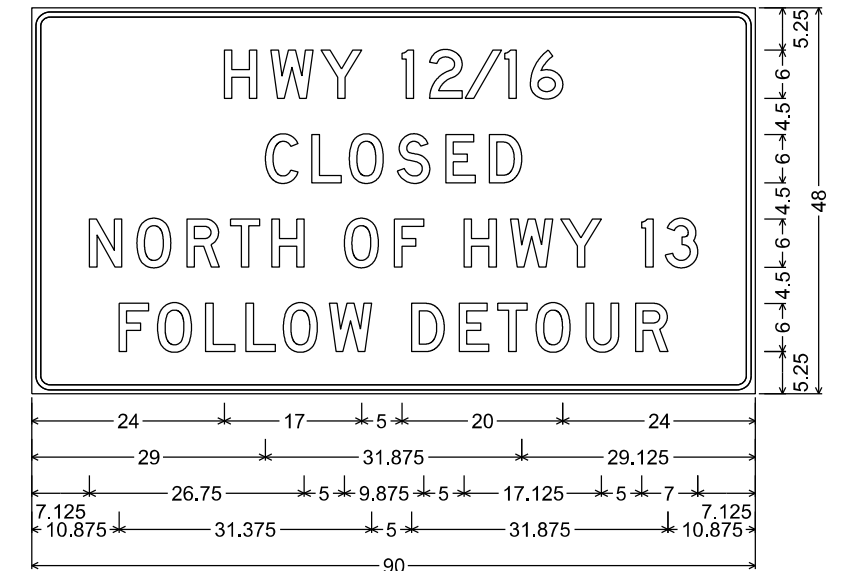
1. Fixed Message Signs Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D except as noted



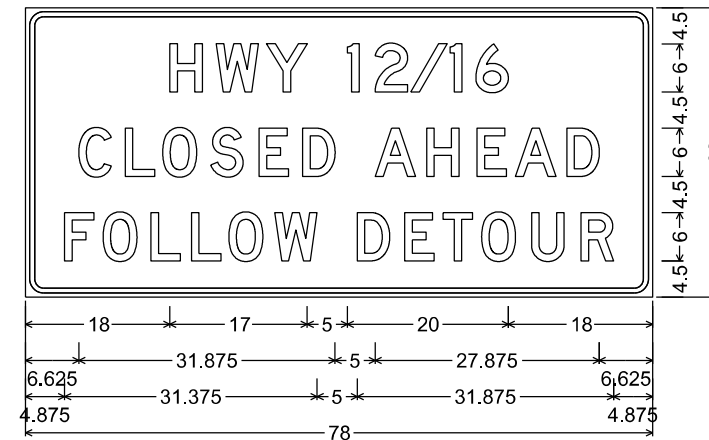
3.000" Radius, 1.000" Border, 0.750" Indent



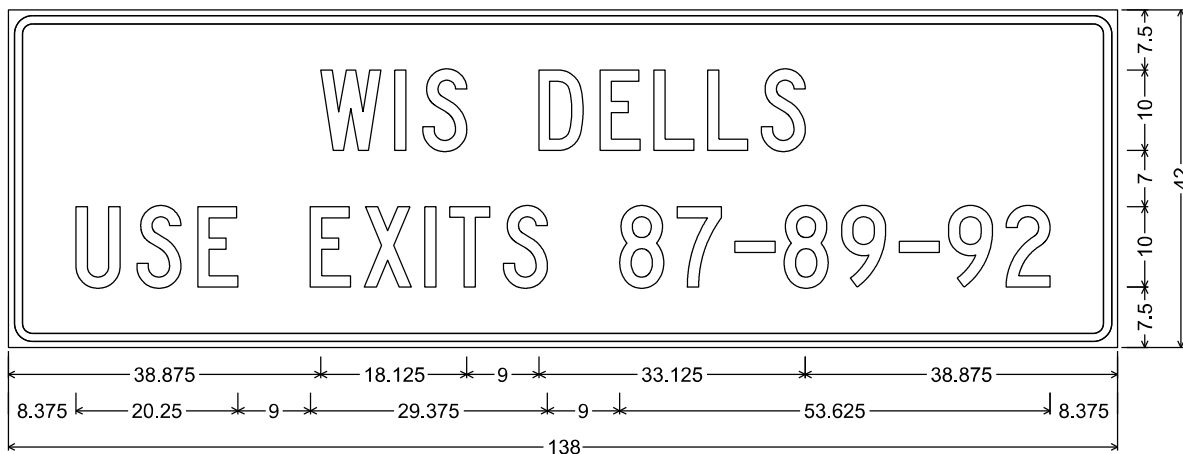
No border, Black on Fluorescent orange;  
"WEST", D;



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent



3.000" Radius, 1.000" Border, 0.750" Indent

"WIS", C; "DELLS", C; "USE", C; "EXITS", C; "87-89-92", C

DIVISION 1 - 12-SOUTH											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
60+20.25	6020.25	0.00	0.23	0	0.00	0	0	0	0	0	0
60+57.53	6057.53	37.28	145.43	42.73	1.95	101	29	1	101	1	71
61+00.00	6100.00	42.47	145.36	45.49	3.16	229	69	4	330	6	226
61+50.00	6150.00	50.00	138.90	45.49	0.50	263	84	3	593	10	401
62+00.00	6200.00	50.00	132.60	61.84	0.00	251	99	0	844	10	553
62+15.69	6215.69	15.69	128.77	62.73	0.00	76	36	0	920	10	593
62+50.00	6250.00	34.31	118.25	47.06	0.10	157	70	0	1,077	10	680
63+00.00	6300.00	50.00	110.34	46.69	0.80	212	87	1	1,289	11	804
63+50.00	6350.00	50.00	112.55	49.61	13.11	206	89	13	1,495	28	905
64+00.00	6400.00	50.00	112.59	50.51	11.18	208	93	22	1,703	55	992
64+50.00	6450.00	50.00	106.91	50.14	10.56	203	93	20	1,906	80	1,077
65+00.00	6500.00	50.00	101.73	50.11	0.00	193	93	10	2,099	93	1,165
65+50.00	6550.00	50.00	96.00	50.12	0.04	183	93	0	2,282	93	1,255
66+00.00	6600.00	50.00	91.43	50.3	0.98	174	93	1	2,456	94	1,334
66+50.00	6650.00	50.00	98.25	50.33	0.02	176	93	1	2,632	95	1,416
67+00.00	6700.00	50.00	119.96	53.86	7.68	202	96	7	2,834	104	1,513
67+50.00	6750.00	50.00	120.39	56.89	7.95	223	103	14	3,057	121	1,616
68+00.00	6800.00	50.00	171.44	85.68	3.69	270	132	11	3,327	135	1,740
68+50.00	6850.00	50.00	215.39	87.26	0.01	358	160	3	3,685	139	1,934
69+00.00	6900.00	50.00	160.07	63.87	1.99	348	140	2	4,033	141	2,140
69+50.00	6950.00	50.00	140.21	57.95	1.75	278	113	3	4,311	145	2,301
70+00.00	7000.00	50.00	135.89	54.11	1.07	256	104	3	4,567	149	2,449
70+50.00	7050.00	50.00	122.03	52.07	1.20	239	98	2	4,806	151	2,588
71+00.00	7100.00	50.00	118.83	50.55	1.57	223	95	3	5,029	155	2,712
71+50.00	7150.00	50.00	117.02	51.64	6.84	218	95	8	5,247	165	2,825
72+00.00	7200.00	50.00	127.78	50.31	6.37	227	94	12	5,474	180	2,943
72+50.00	7250.00	50.00	130.18	50.68	1.62	239	94	7	5,713	189	3,079
73+00.00	7300.00	50.00	135.33	50.9	0.00	246	94	2	5,959	191	3,229
73+50.00	7350.00	50.00	137.66	50.9	0.00	253	94	0	6,212	191	3,388
74+00.00	7400.00	50.00	135.20	50.9	0.00	253	94	0	6,465	191	3,547
74+50.00	7450.00	50.00	127.42	50.9	0.37	243	94	0	6,708	191	3,696
75+00.00	7500.00	50.00	120.68	50.9	0.72	230	94	1	6,938	193	3,831
75+50.00	7550.00	50.00	125.92	55.44	0.55	228	98	1	7,166	194	3,959
76+00.00	7600.00	50.00	130.37	60.8	1.71	237	108	2	7,403	196	4,086
76+50.00	7650.00	50.00	142.79	63.9	1.25	253	115	3	7,656	200	4,220
77+00.00	7700.00	50.00	148.77	63.9	3.92	270	118	5	7,926	206	4,366
77+50.00	7750.00	50.00	159.54	75.88	14.81	285	129	17	8,211	228	4,501
78+00.00	7800.00	50.00	192.11	74.61	4.69	326	139	18	8,537	250	4,665
78+50.00	7850.00	50.00	119.21	45.67	0.19	288	111	5	8,825	256	4,836
79+00.00	7900.00	50.00	123.60	50.97	7.13	225	89	7	9,050	265	4,963

CONTINUED ON NEXT PAGE

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATER	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT - SALVAGED PAVT) -(FILL * FILL FACTOR

9

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CONTINUED FROM PREVIOUS PAGE

DIVISION 1 - 12-SOUTH											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDNATE
79+19.86	7919.86	19.86	135.32	45.47	0.83	95	35	3	9,145	269	5,019
79+50.00	7950.00	30.14	121.19	45.44	4.48	143	51	3	9,288	273	5,108
80+00.00	8000.00	50.00	117.03	45.41	0.41	221	84	5	9,509	279	5,238
80+50.00	8050.00	50.00	118.29	45.37	0.79	218	84	1	9,727	280	5,371
81+00.00	8100.00	50.00	118.57	45.33	0.00	219	84	1	9,946	281	5,505
81+14.38	8114.38	14.38	125.97	46.4	0.00	65	24	0	10,011	281	5,546
81+50.00	8150.00	35.62	169.05	72.38	6.61	195	78	4	10,206	286	5,658
82+00.00	8200.00	50.00	116.88	45.38	5.75	265	109	11	10,471	300	5,800
82+50.00	8250.00	50.00	114.66	44.73	7.03	214	83	12	10,685	315	5,916
82+56.00	8256.00	6.00	114.29	44.66	6.99	25	10	2	10,710	318	5,929
			TOTALS			10,710	4,464	254			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATER	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDNATE	(CUT - SALVAGED PAVT) -(FILL * FILL FACTOR

9

9



DIVISION 2 - 12-NORTH											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
10+22.79	1022.79	0.00	106.19	34.14	0.01	0	0	0	0	0	0
10+50.00	1050.00	27.21	113.36	34.28	0.00	111	34	0	111	0	77
11+00.00	1100.00	50.00	103.59	34.58	0.00	201	64	0	312	0	214
11+50.00	1150.00	50.00	97.10	33.88	0.91	186	63	1	498	1	336
12+00.00	1200.00	50.00	83.52	34.5	0.12	167	63	1	665	3	439
12+50.00	1250.00	50.00	83.57	33.82	0.47	155	63	1	820	4	529
13+00.00	1300.00	50.00	88.05	34.49	2.58	159	63	3	979	8	622
13+50.00	1350.00	50.00	91.50	33.63	11.11	166	63	13	1,145	24	708
14+00.00	1400.00	50.00	95.42	33.98	6.72	173	63	17	1,318	45	797
14+50.00	1450.00	50.00	86.37	34.14	0.00	168	63	6	1,486	53	895
15+00.00	1500.00	50.00	84.36	34.14	0.00	158	63	0	1,644	53	990
15+50.00	1550.00	50.00	91.23	34.14	0.00	163	63	0	1,807	53	1,090
16+00.00	1600.00	50.00	88.15	34.14	8.74	166	63	8	1,973	63	1,183
16+29.37	1629.37	29.37	80.77	34.14	10.56	92	37	10	2,065	75	1,225
16+50.00	1650.00	20.63	80.73	34.14	5.49	62	26	6	2,127	83	1,254
17+00.00	1700.00	50.00	80.45	34.14	0.58	149	63	6	2,276	90	1,332
17+50.00	1750.00	50.00	85.86	34.14	0.01	154	63	1	2,430	91	1,422
18+00.00	1800.00	50.00	84.27	34.14	0.09	158	63	0	2,588	91	1,517
18+50.00	1850.00	50.00	79.81	34.14	0.00	152	63	0	2,740	91	1,606
19+00.00	1900.00	50.00	72.65	34.14	0.12	141	63	0	2,881	91	1,684
19+50.00	1950.00	50.00	68.65	34.14	2.11	131	63	2	3,012	94	1,749
20+00.00	2000.00	50.00	71.57	34.14	1.95	130	63	4	3,142	99	1,811
20+50.00	2050.00	50.00	81.04	33.23	1.37	141	62	3	3,283	103	1,887
21+00.00	2100.00	50.00	74.51	34.12	1.40	144	62	3	3,427	106	1,965
21+50.00	2150.00	50.00	73.23	34.74	0.97	137	64	2	3,564	109	2,035
22+00.00	2200.00	50.00	80.43	33.29	0.79	142	63	2	3,706	111	2,112
22+50.00	2250.00	50.00	74.55	35.09	1.17	143	63	2	3,849	114	2,189
23+00.00	2300.00	50.00	70.57	33.41	5.06	134	63	6	3,983	121	2,253
23+33.17	2333.17	33.17	67.22	33.65	50.25	85	41	34	4,068	164	2,254
23+43.50	2343.50	10.33	71.01	34.03	64.81	26	13	22	4,094	191	2,240
23+50.00	2350.00	6.50	104.21	34.26	35.46	21	8	12	4,115	206	2,238
24+00.00	2400.00	50.00	73.32	34.53	2.01	164	64	35	4,279	250	2,294
24+50.00	2450.00	50.00	92.60	33.41	0.52	154	63	2	4,433	253	2,383
25+00.00	2500.00	50.00	99.02	35.28	0.18	177	64	1	4,610	254	2,494
25+50.00	2550.00	50.00	113.99	33.23	0.04	197	63	0	4,807	254	2,628
26+00.00	2600.00	50.00	118.55	34.42	0.02	215	63	0	5,022	254	2,780
26+50.00	2650.00	50.00	108.58	34.88	0.36	210	64	0	5,232	254	2,926
27+00.00	2700.00	50.00	103.44	34.14	0.00	196	64	0	5,428	254	3,058
27+50.00	2750.00	50.00	107.36	34.14	0.00	195	63	0	5,623	254	3,190
28+00.00	2800.00	50.00	115.95	34.14	0.00	207	63	0	5,830	254	3,334

CONTINUED ON NEXT PAGE

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATER	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT - SALVAGED PAVT) -(FILL * FILL FACTOR

9

9

PROJECT NO: 5880-01-70

HWY: USH 12

COUNTY: SAUK

EARTHWORK DATA

SHEET

E

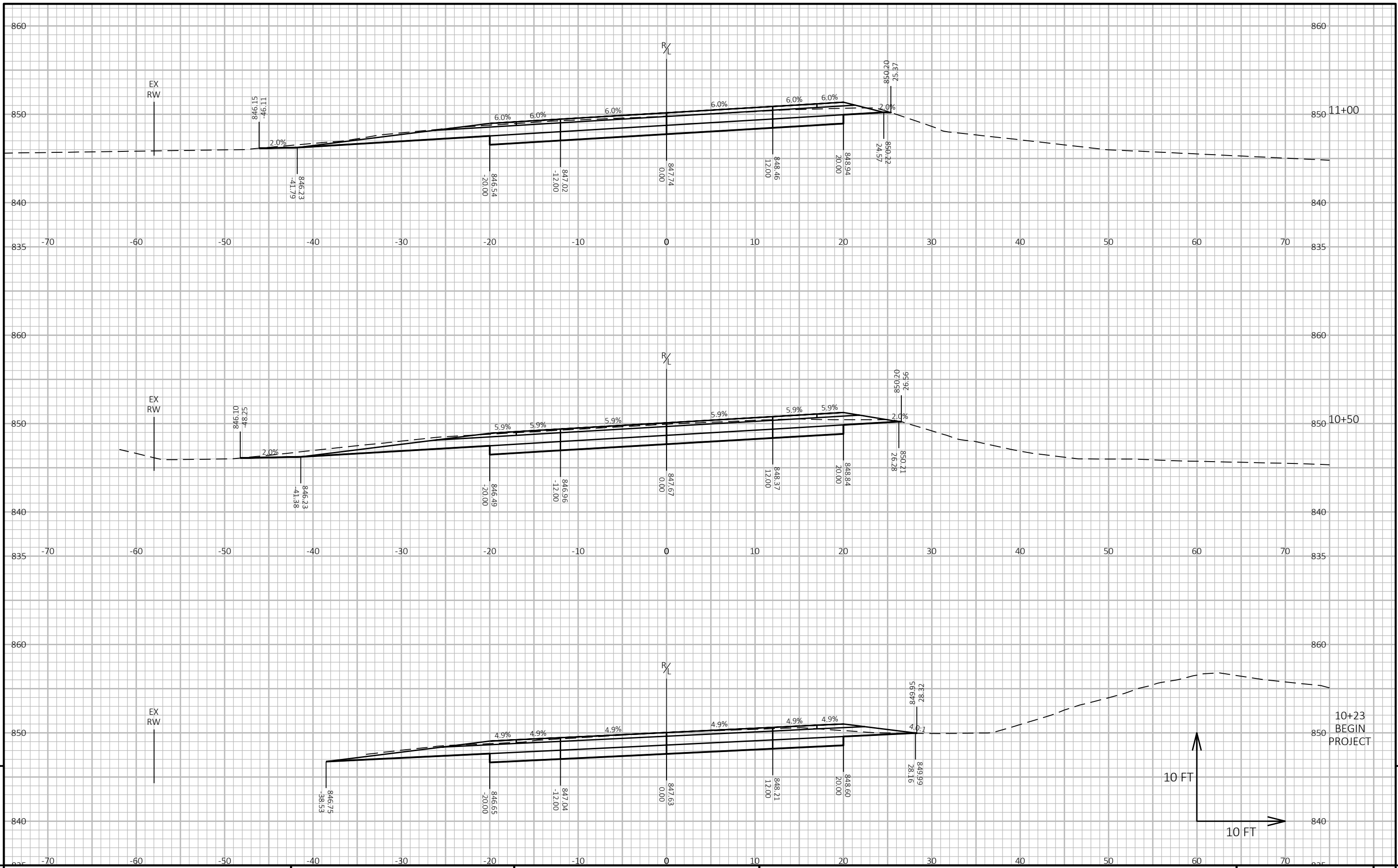
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DIVISION 2 - 12-NORTH											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
28+50.00	2850.00	50.00	109.81	34.14	0.02	209	63	0	6,039	254	3,480
29+00.00	2900.00	50.00	104.02	34.14	0.75	198	63	1	6,237	255	3,614
29+50.00	2950.00	50.00	98.76	34.14	0.33	188	63	1	6,425	256	3,738
30+00.00	3000.00	50.00	92.51	34.14	0.30	177	63	1	6,602	258	3,851
30+50.00	3050.00	50.00	90.85	34.14	0.05	170	63	0	6,772	258	3,958
31+00.00	3100.00	50.00	90.81	34.14	0.13	168	63	0	6,940	258	4,063
31+29.35	3129.35	29.35	102.28	34.14	0.12	105	37	0	7,045	258	4,131
31+50.00	3150.00	20.65	93.48	34.14	0.14	75	26	0	7,120	258	4,180
32+00.00	3200.00	50.00	87.57	34.14	0.84	168	63	1	7,288	259	4,283
32+50.00	3250.00	50.00	84.27	34.14	3.57	159	63	4	7,447	264	4,374
33+00.00	3300.00	50.00	84.90	34.14	1.96	157	63	5	7,604	270	4,462
33+50.00	3350.00	50.00	87.95	34.14	0.82	160	63	3	7,764	274	4,555
34+00.00	3400.00	50.00	90.12	34.14	0.31	165	63	1	7,929	275	4,656
34+50.00	3450.00	50.00	92.19	34.14	0.19	169	63	0	8,098	275	4,762
35+00.00	3500.00	50.00	98.03	34.14	0.01	176	63	0	8,274	275	4,875
35+50.00	3550.00	50.00	104.63	34.14	0.00	188	63	0	8,462	275	5,000
36+00.00	3600.00	50.00	106.69	34.14	0.00	196	63	0	8,658	275	5,133
36+50.00	3650.00	50.00	102.96	34.14	0.42	194	63	0	8,852	275	5,264
37+00.00	3700.00	50.00	108.43	34.14	0.00	196	63	0	9,048	275	5,397
37+50.00	3750.00	50.00	107.44	34.14	0.00	200	63	0	9,248	275	5,534
38+00.00	3800.00	50.00	106.72	34.14	0.00	198	63	0	9,446	275	5,669
38+50.00	3850.00	50.00	106.69	34.14	0.00	198	63	0	9,644	275	5,804
39+00.00	3900.00	50.00	103.63	34.14	0.00	195	63	0	9,839	275	5,936
39+50.00	3950.00	50.00	99.31	34.14	0.00	188	63	0	10,027	275	6,061
40+00.00	4000.00	50.00	96.92	34.14	0.00	182	63	0	10,209	275	6,180
40+50.00	4050.00	50.00	96.44	34.14	0.00	179	63	0	10,388	275	6,296
41+00.00	4100.00	50.00	102.33	34.14	0.00	184	63	0	10,572	275	6,417
41+50.00	4150.00	50.00	111.81	24.54	0.00	198	54	0	10,770	275	6,561
			TOTALS			10,770	3,934	220			

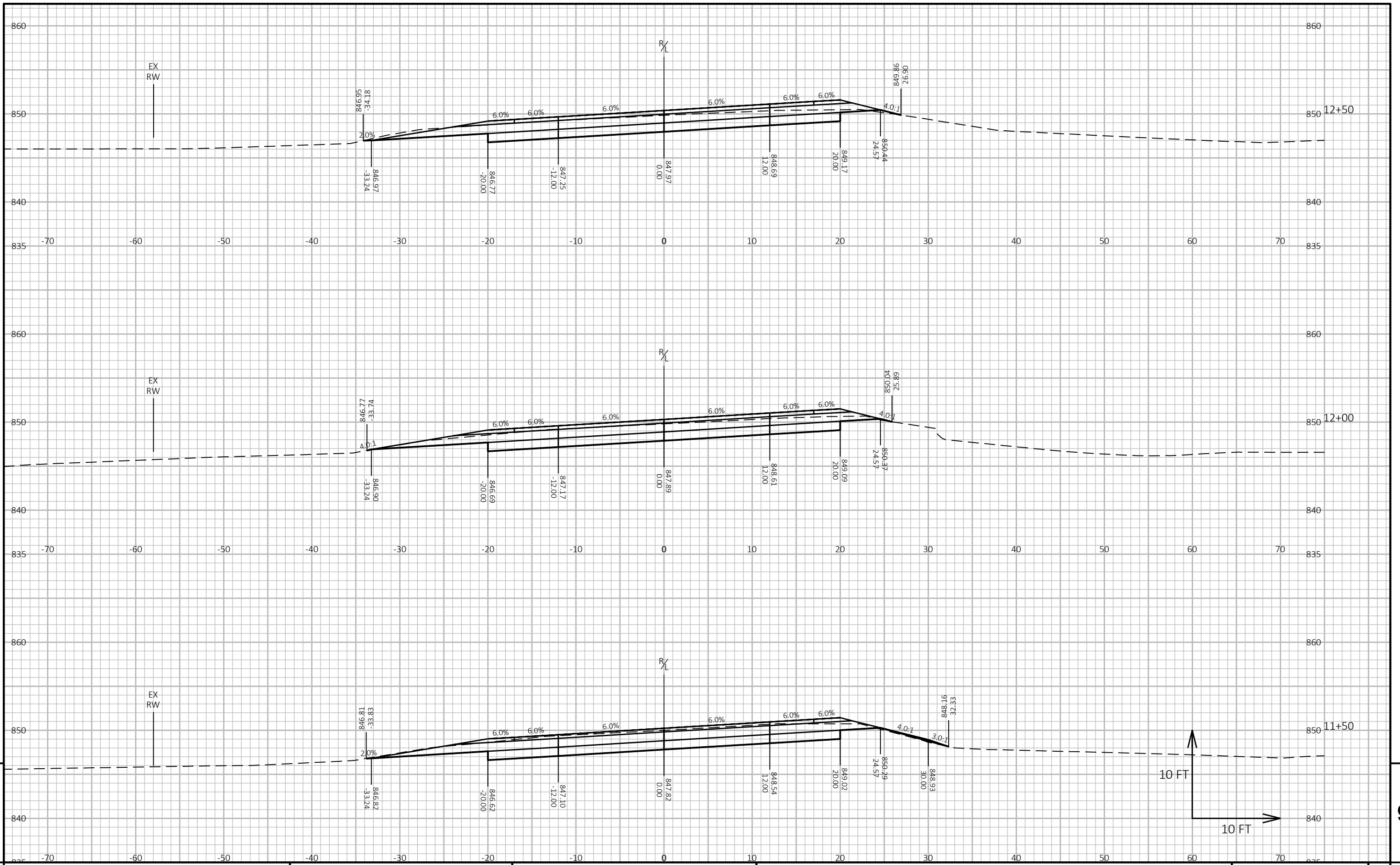
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATER	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT - SALVAGED PAVT) -(FILL * FILL FACTOR

9

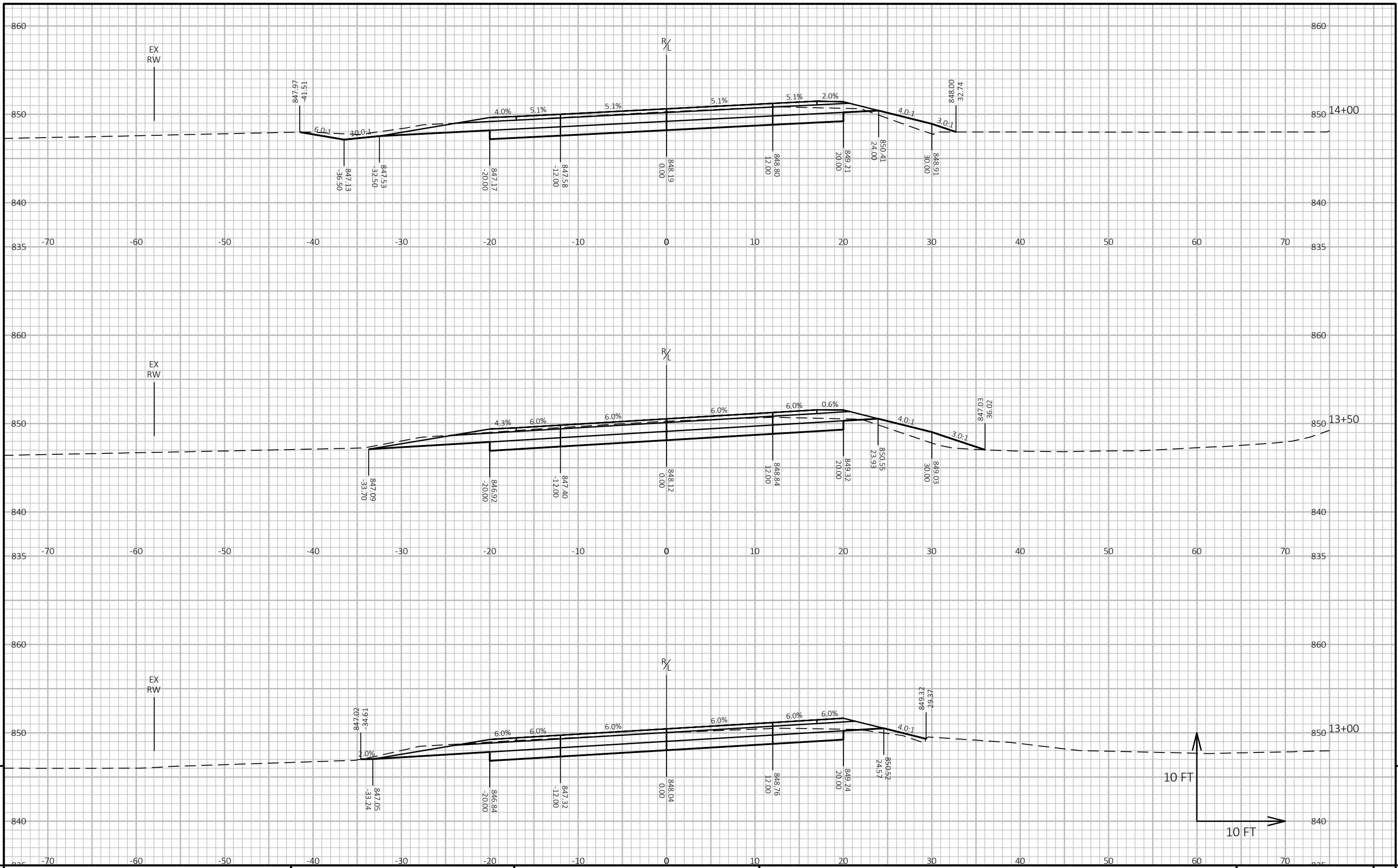
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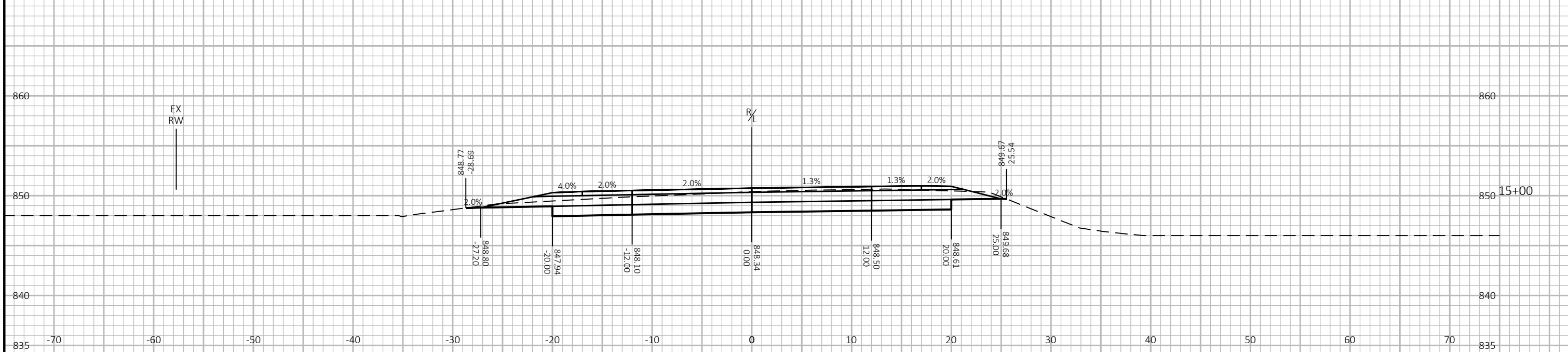
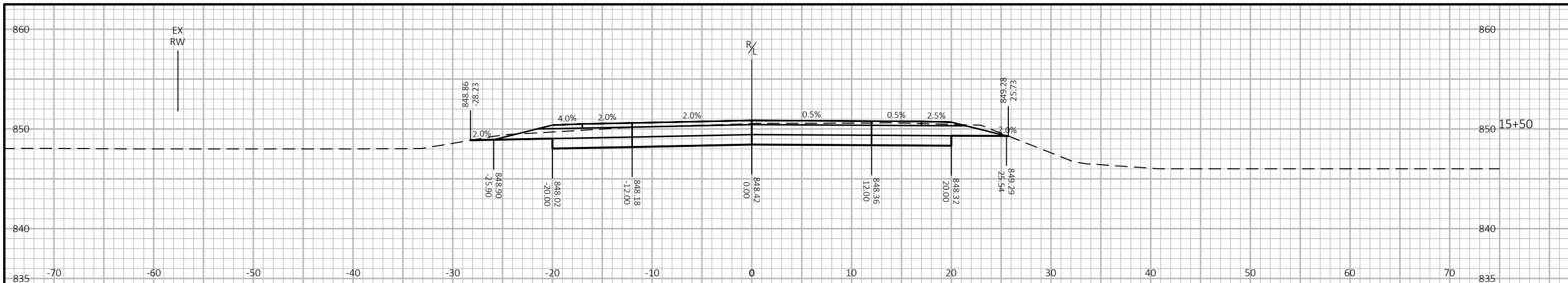
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



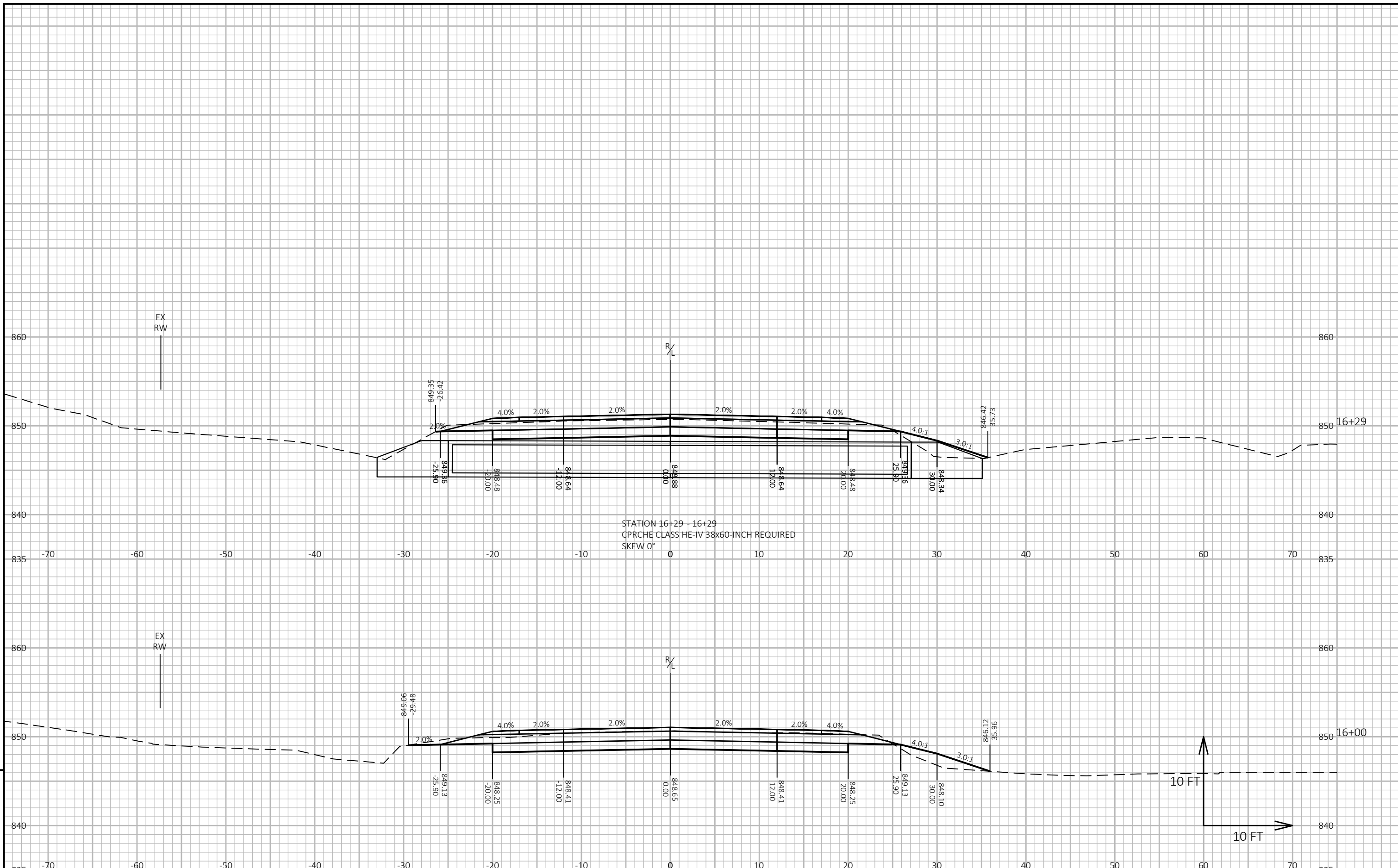
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



PROJECT NO: 5880-01-70

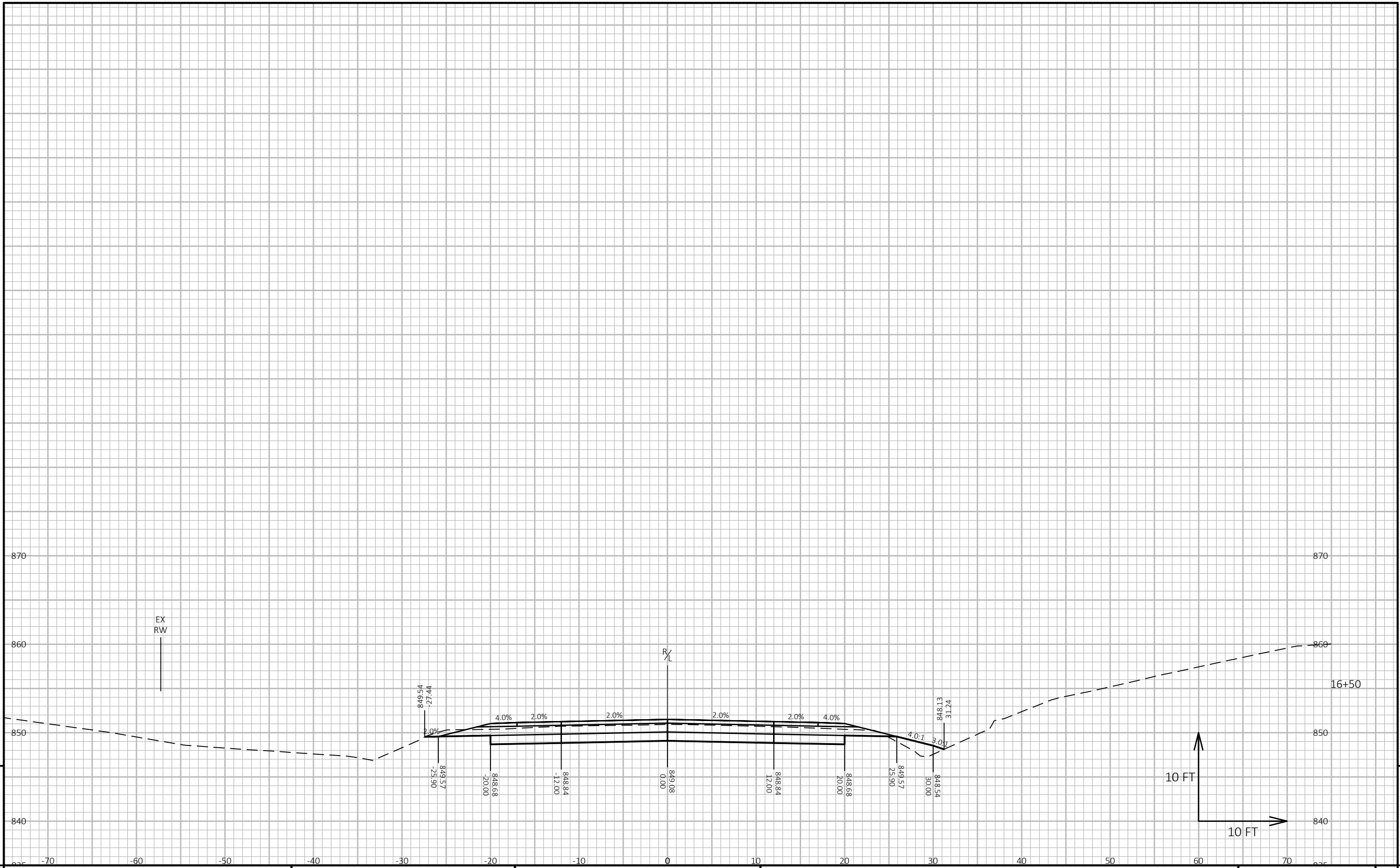
HWY: USH 12

COUNTY: SAUK

CROSS SECTIONS: USH 12

SHEET

E



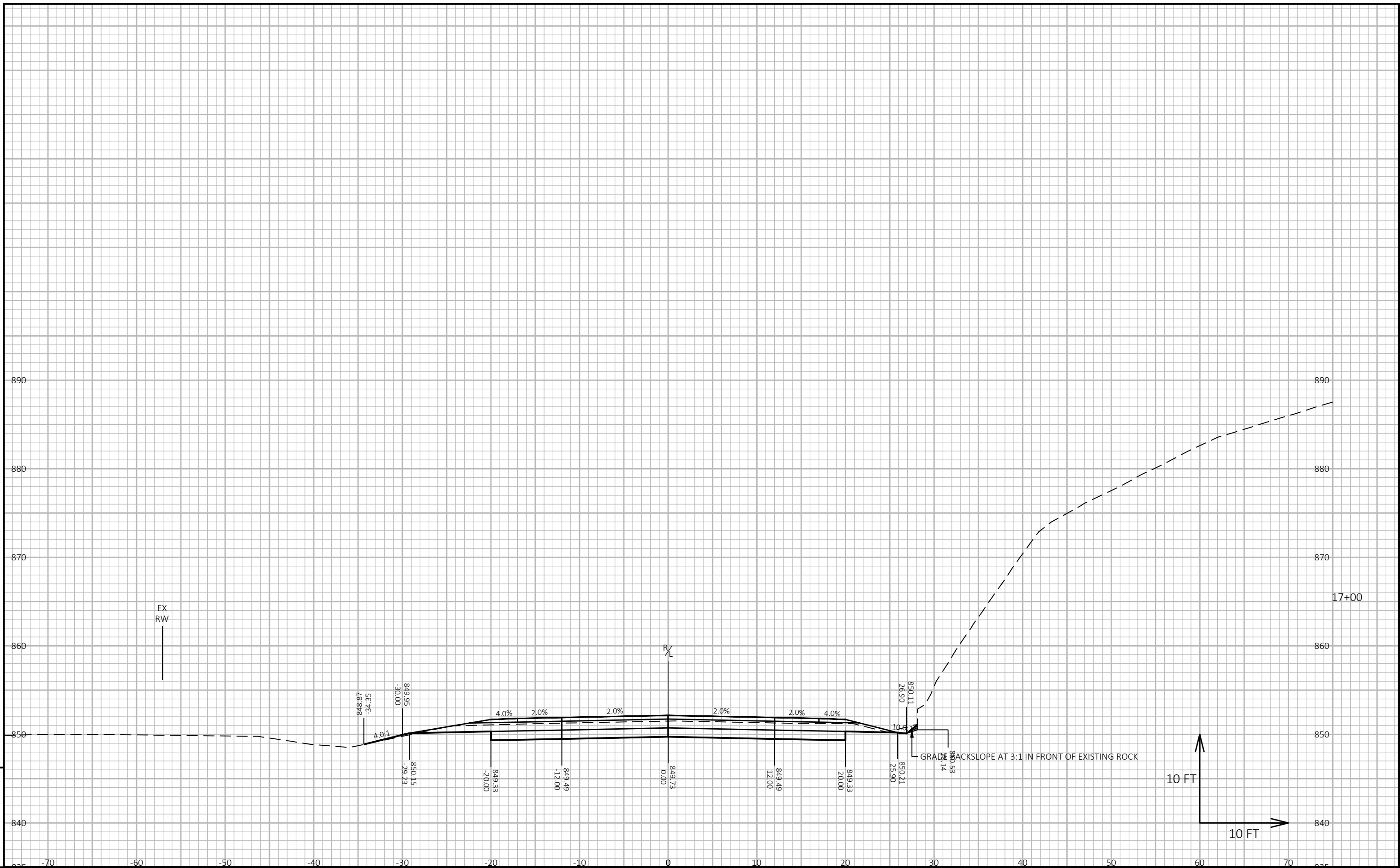
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET E

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PROJECT NO: 5880-01-70

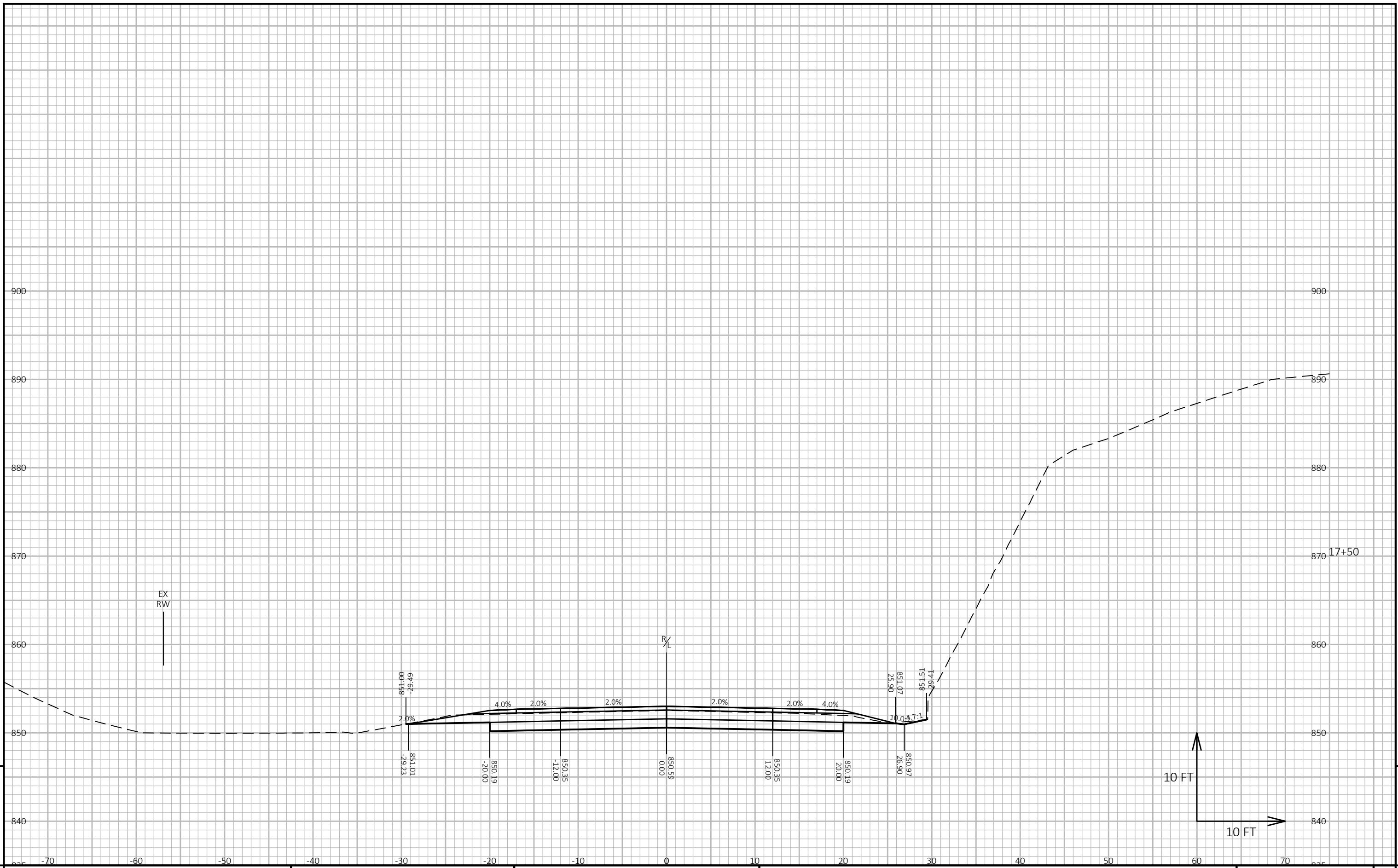
HWY: USH 12

COUNTY: SAUK

CROSS SECTIONS: USH 12

SHEET

E



EX  
RW

R/L

17+50

10 FT

10 FT

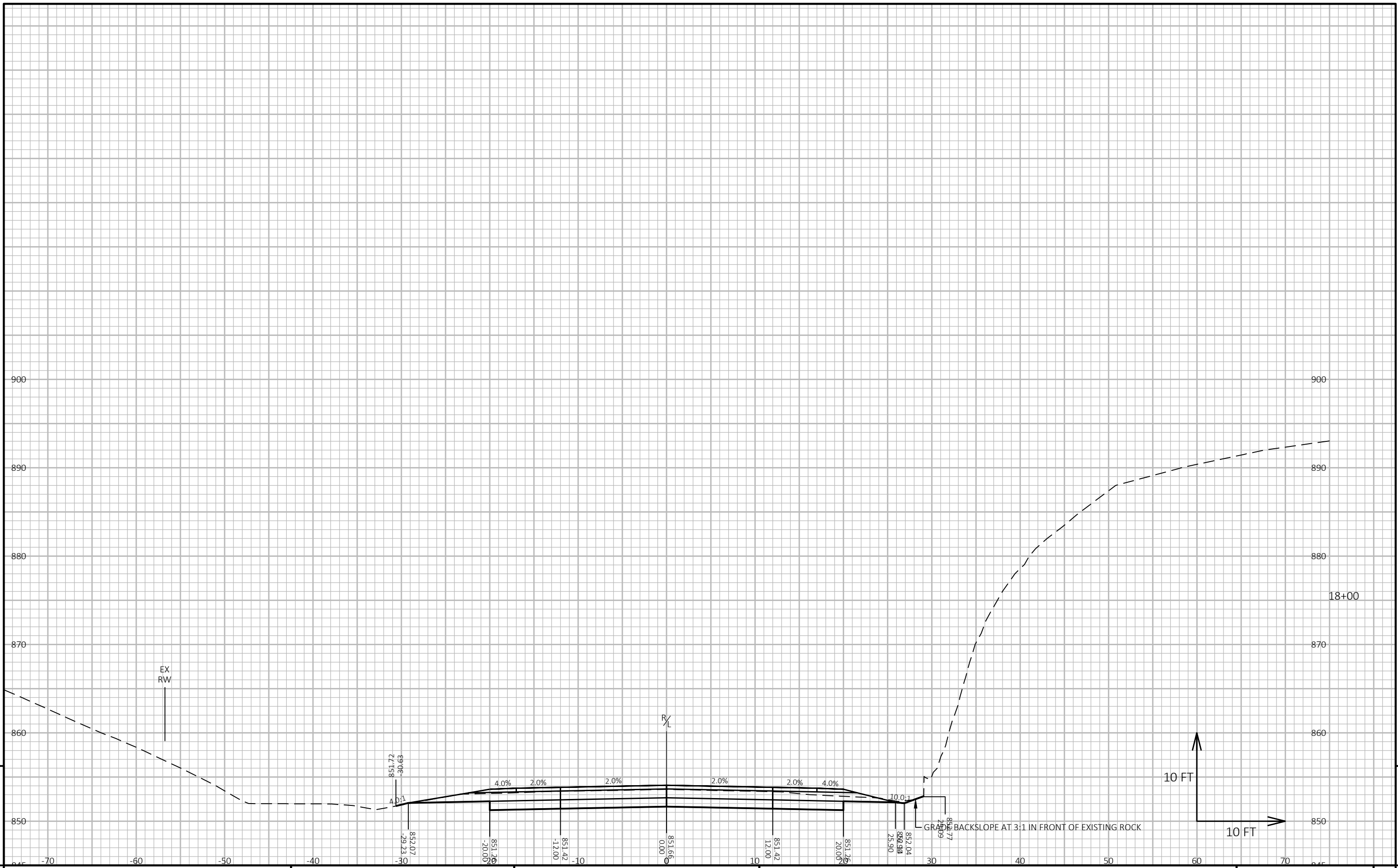
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\090201-XS-NORTH.DWG      PLOT DATE : 7/21/2023 2:22 PM      PLOT BY : JOE MALENOFSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 08



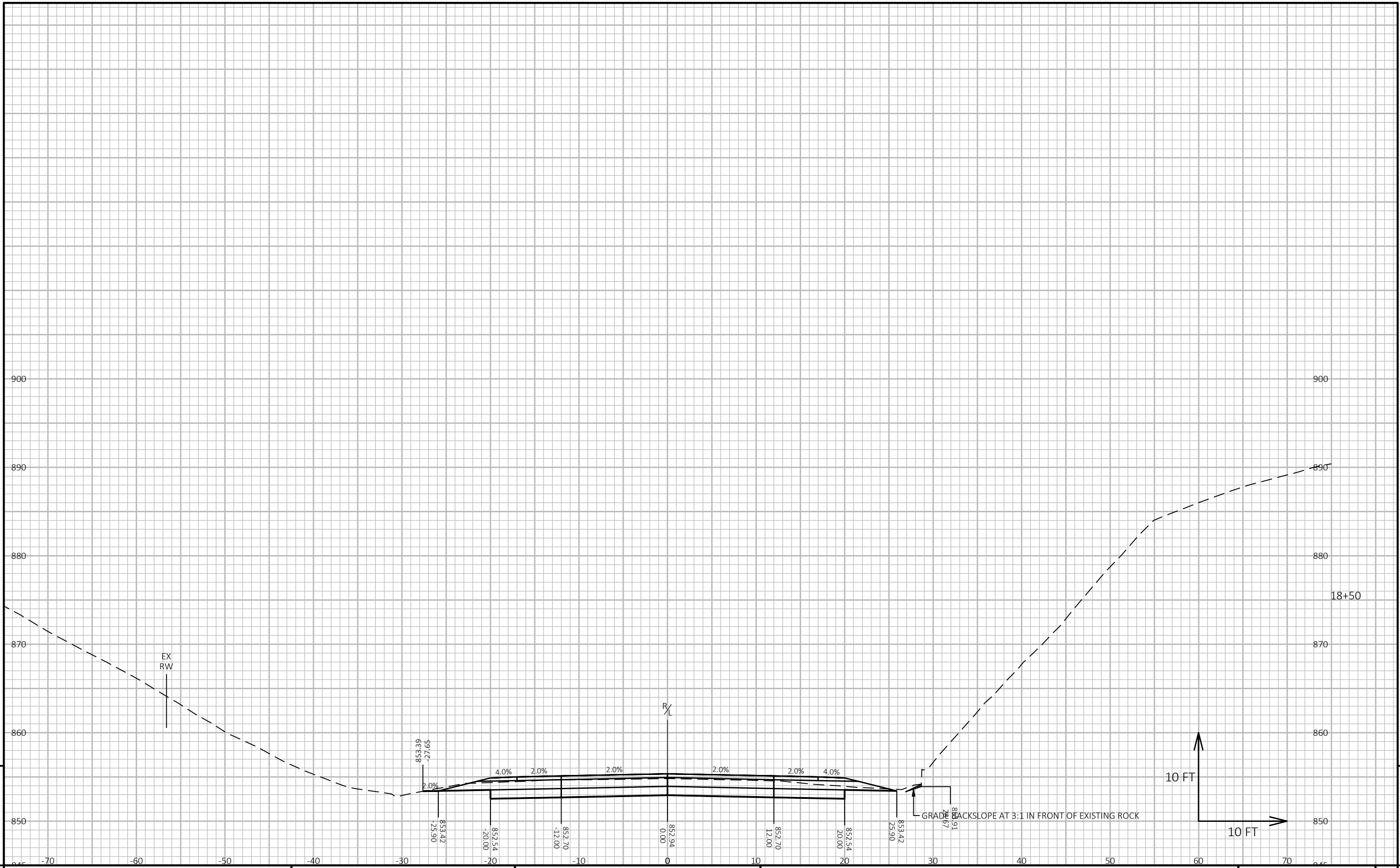
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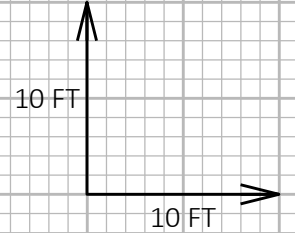
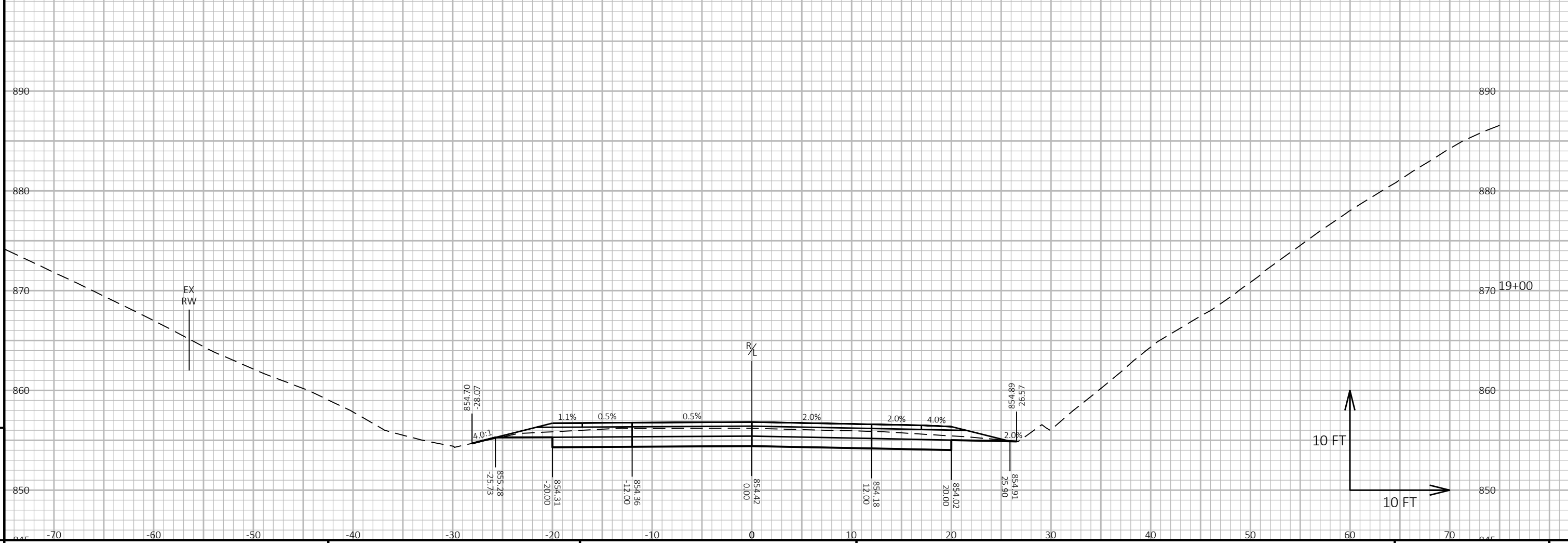
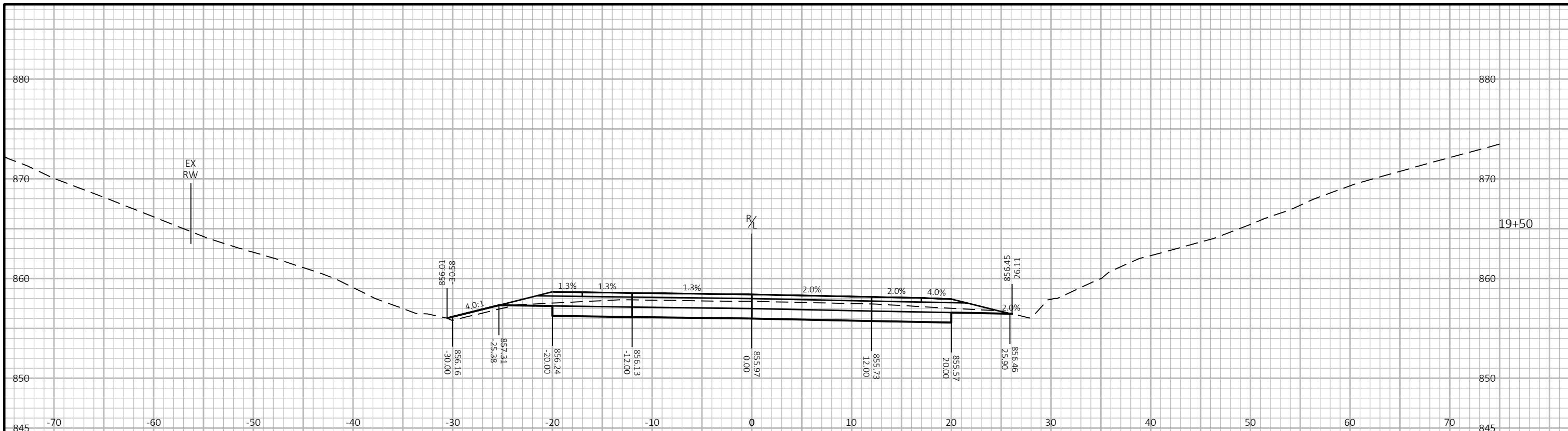
PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	CROSS SECTIONS: USH 12	SHEET	E
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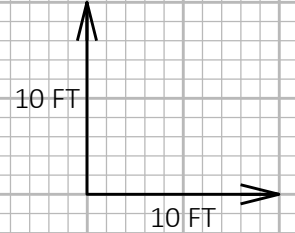
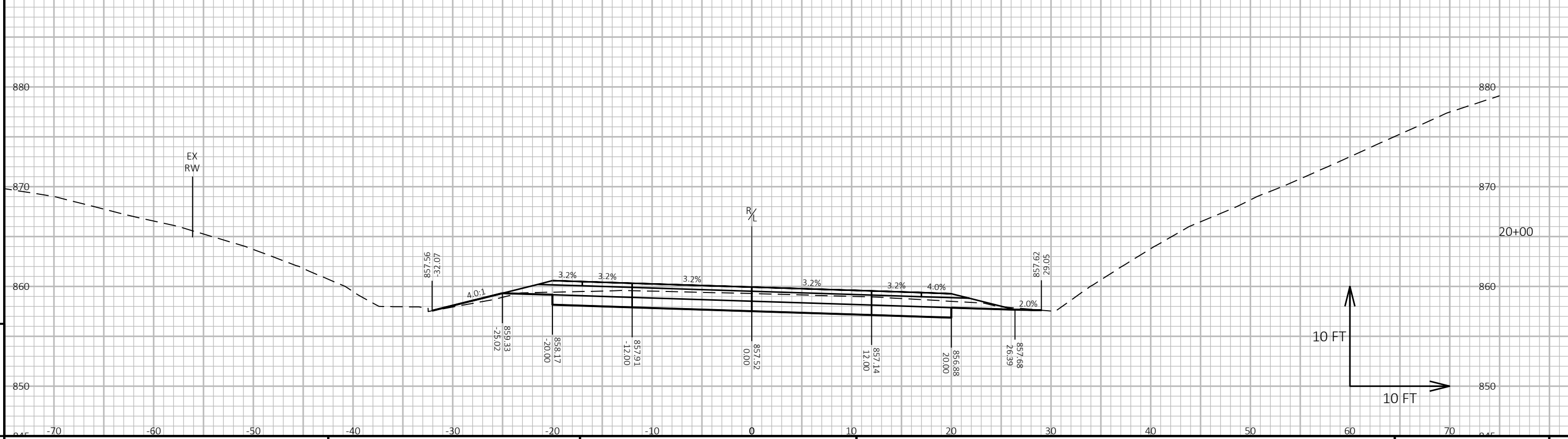
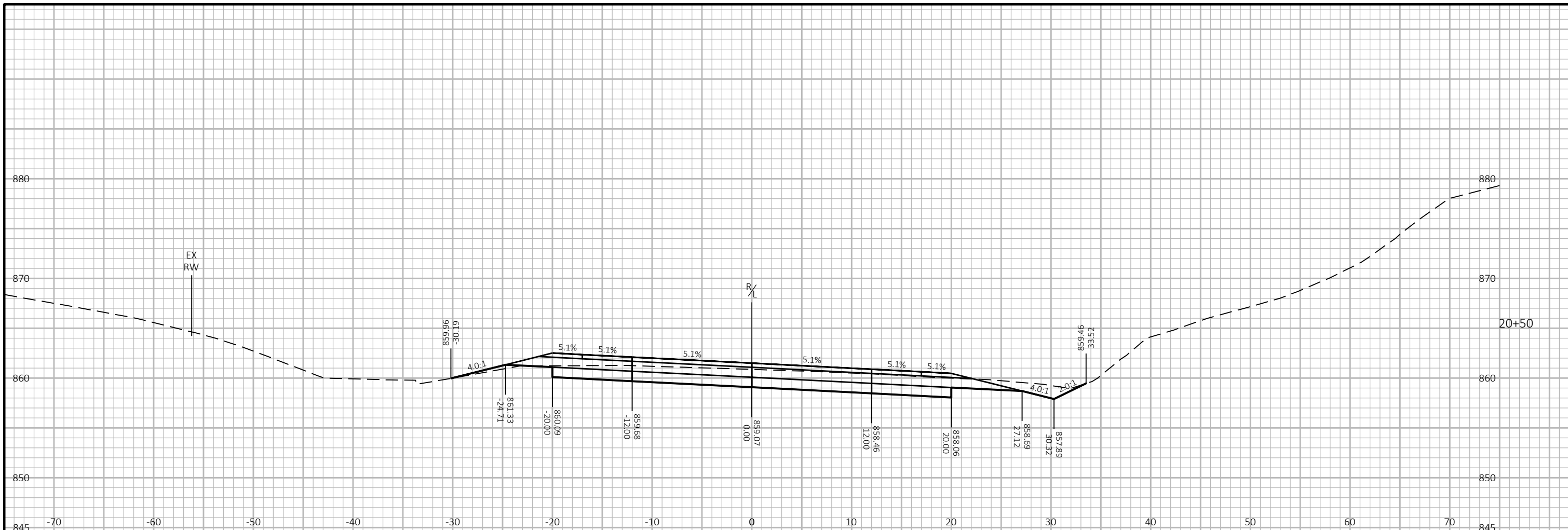
LAYOUT NAME - 09



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



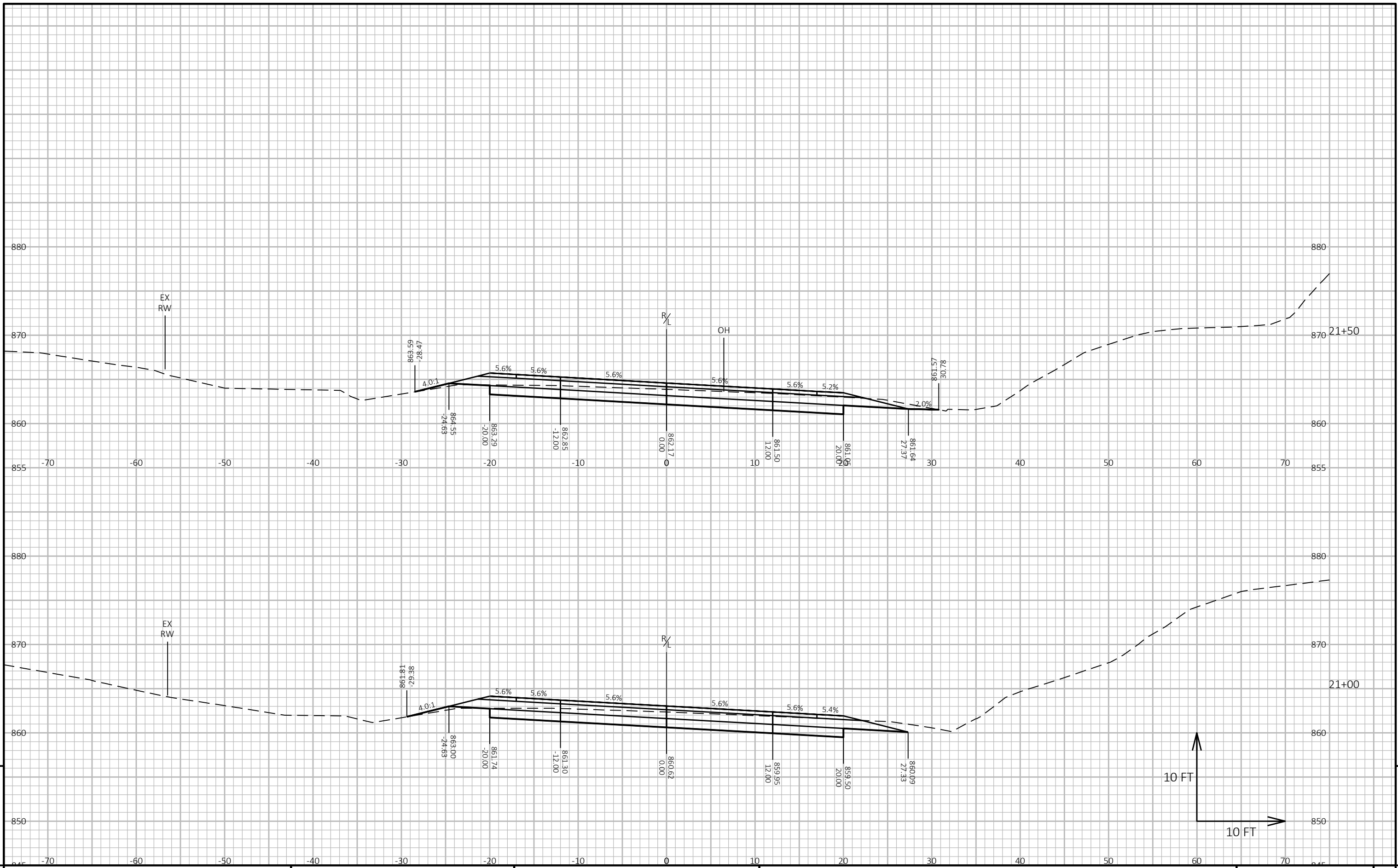
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\090201-XS-NORTH.DWG      PLOT DATE : 7/21/2023 2:22 PM      PLOT BY : JOE MALENOFSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

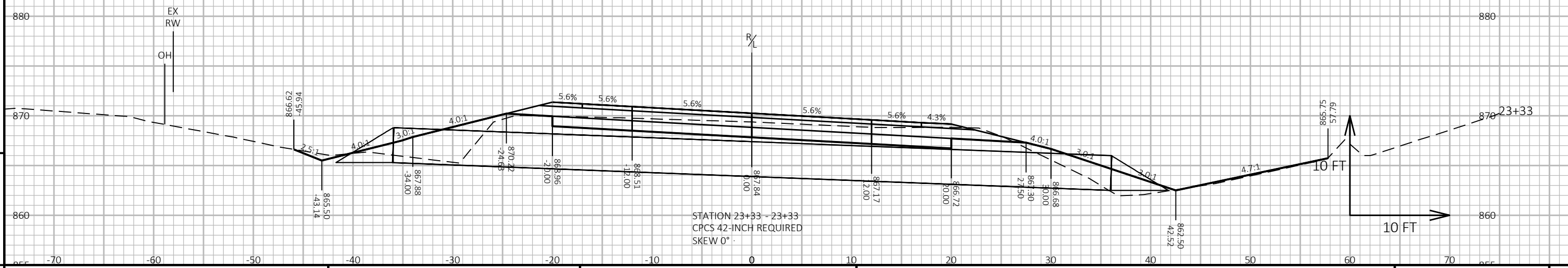
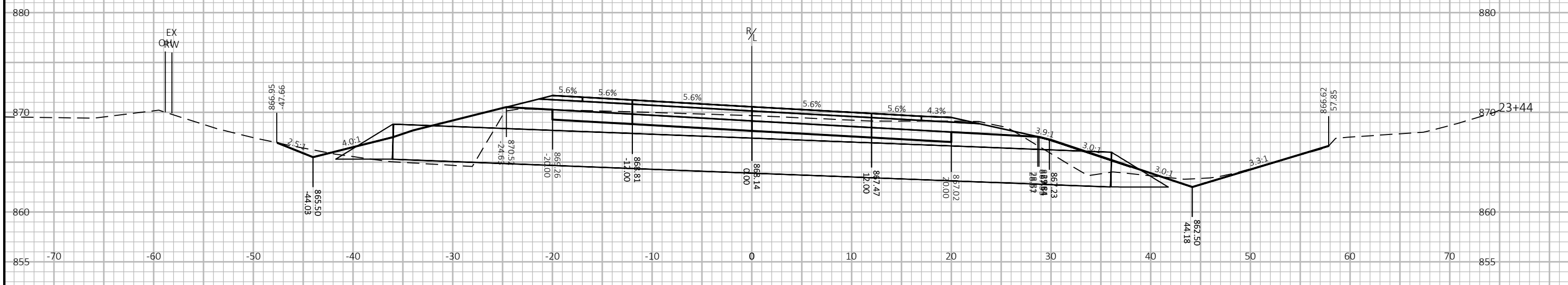
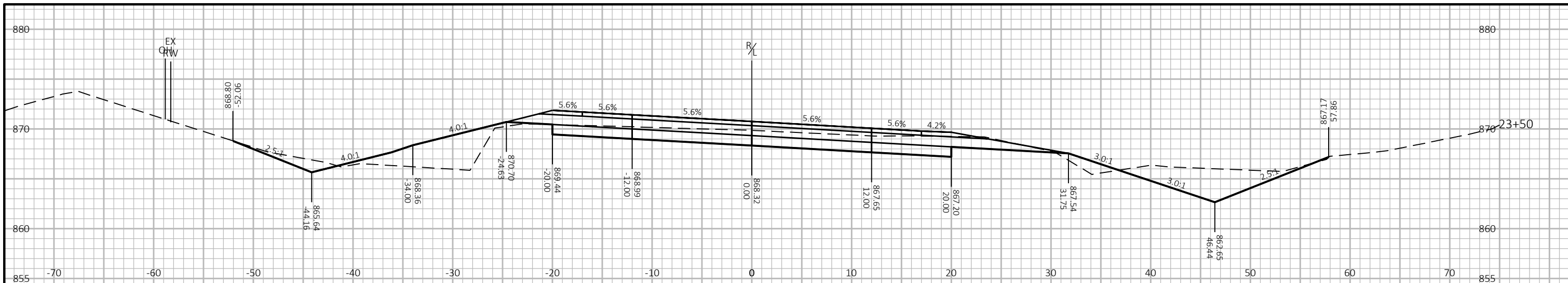
LAYOUT NAME - 12



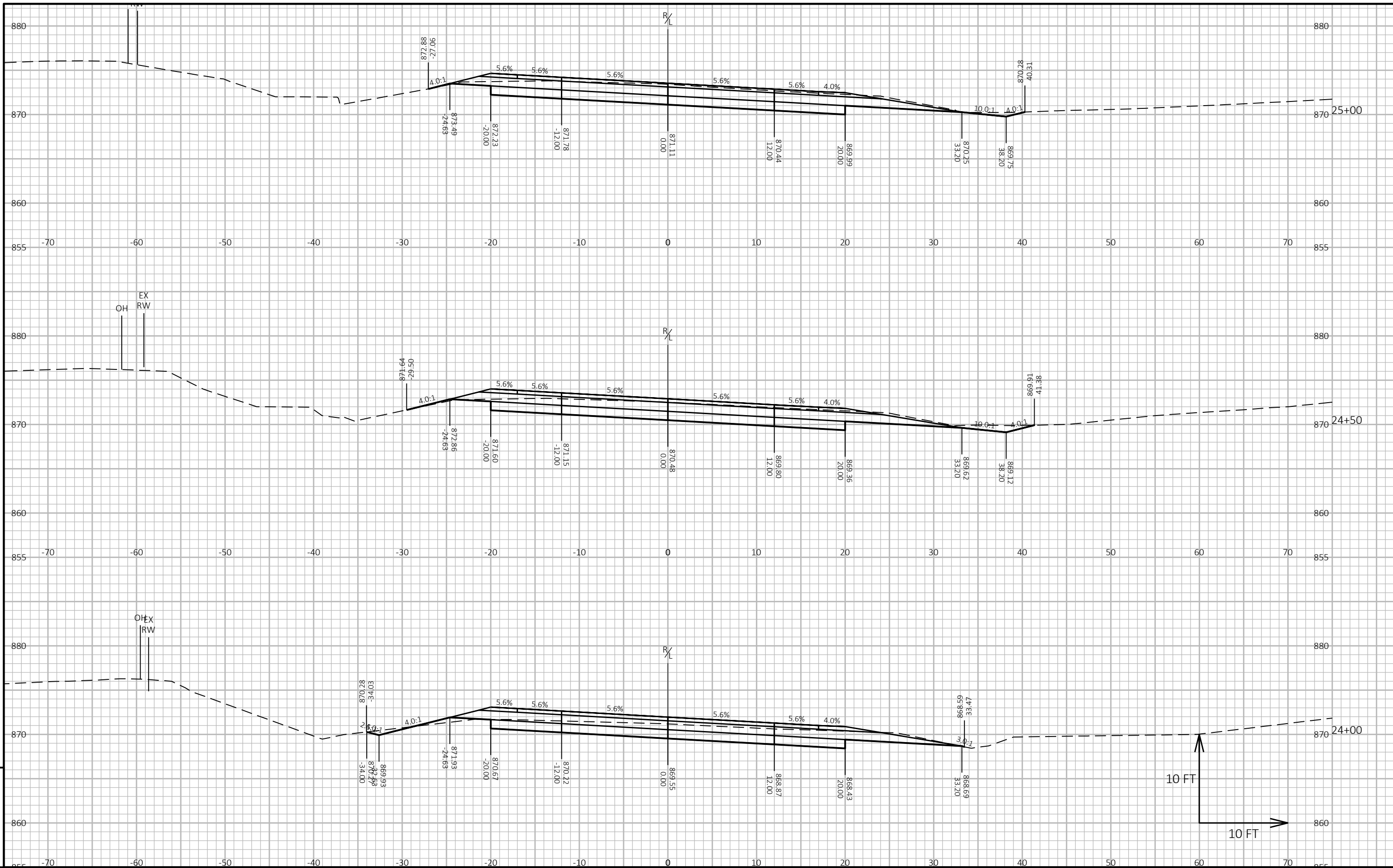
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



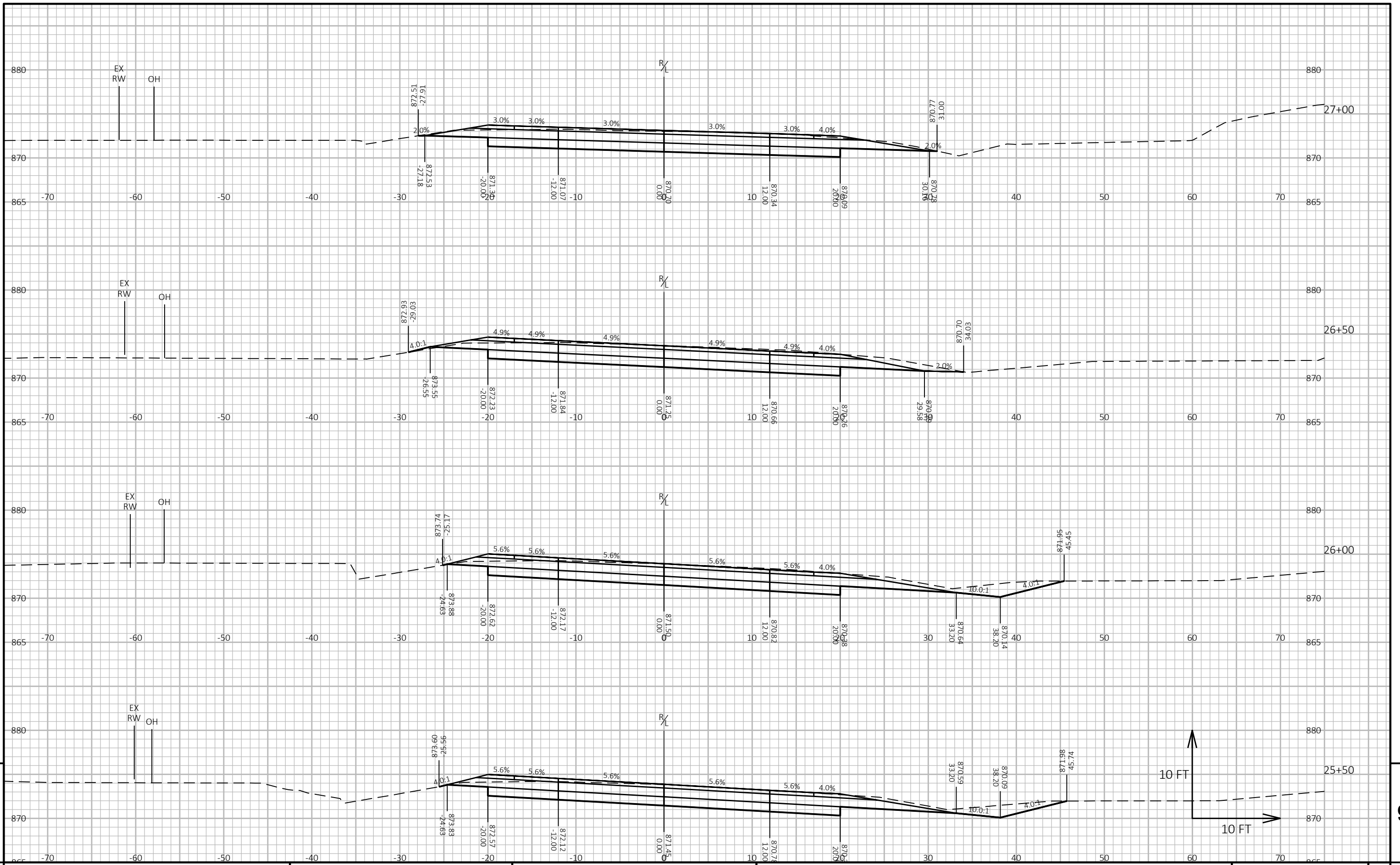




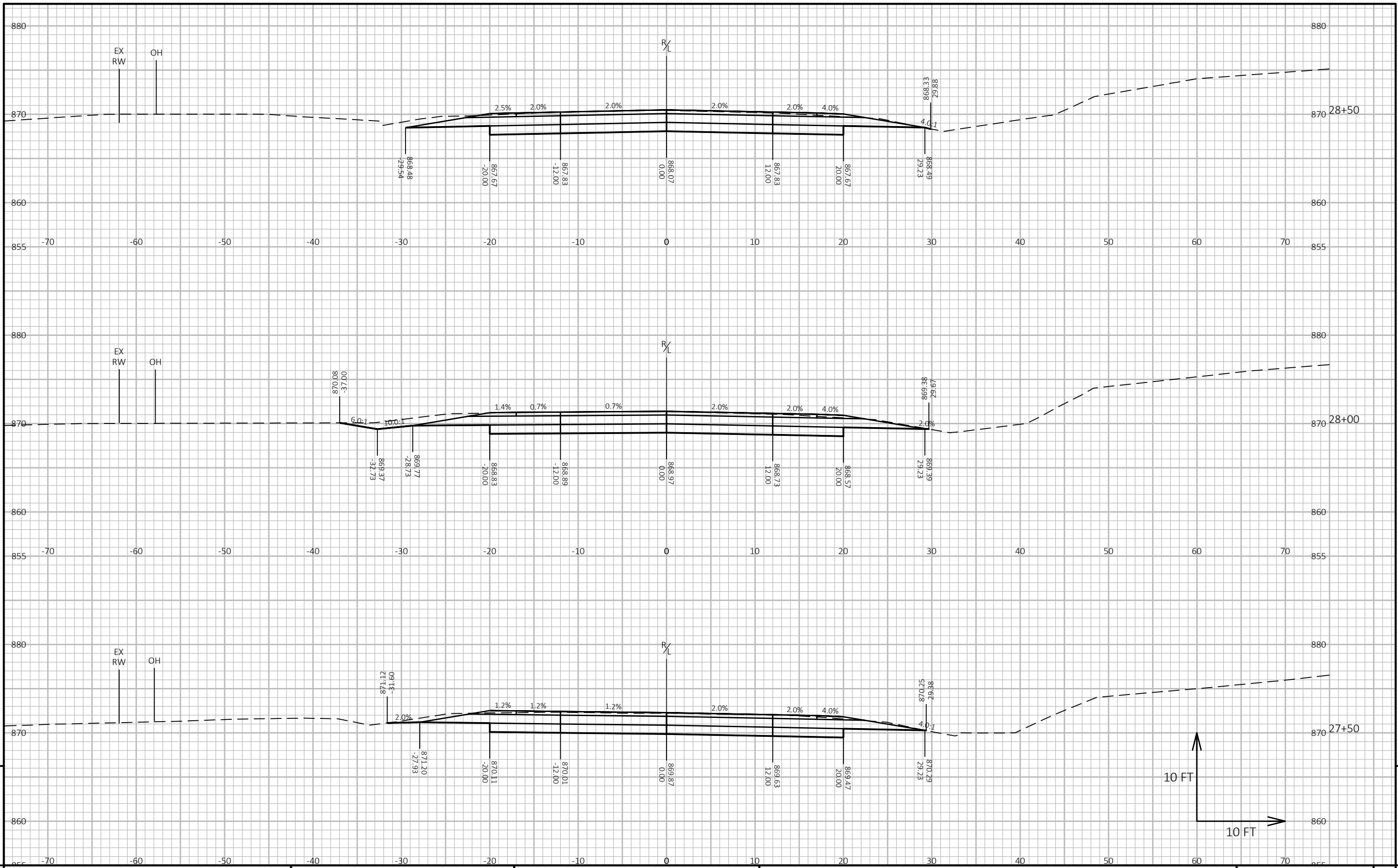
STATION 23+33 - 23+33  
 CPCS 42-INCH REQUIRED  
 SKEW 0°



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

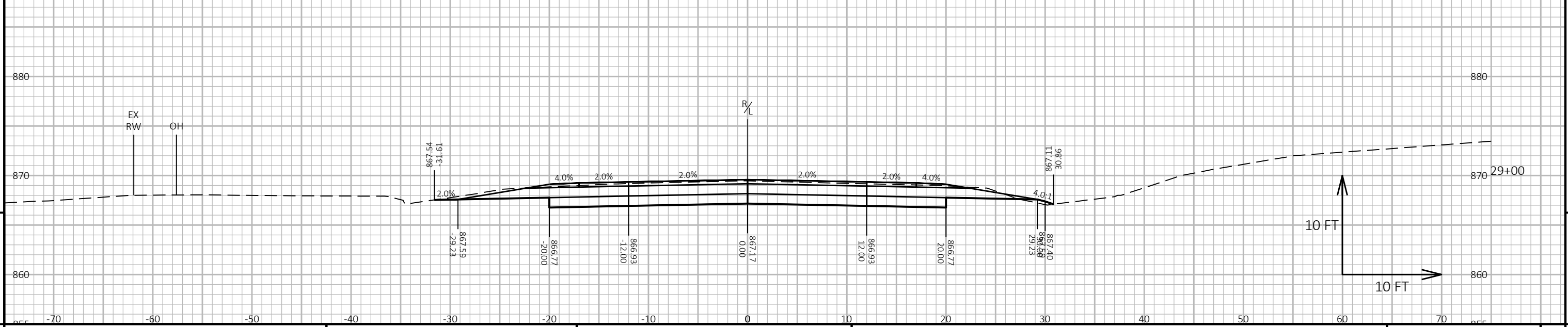
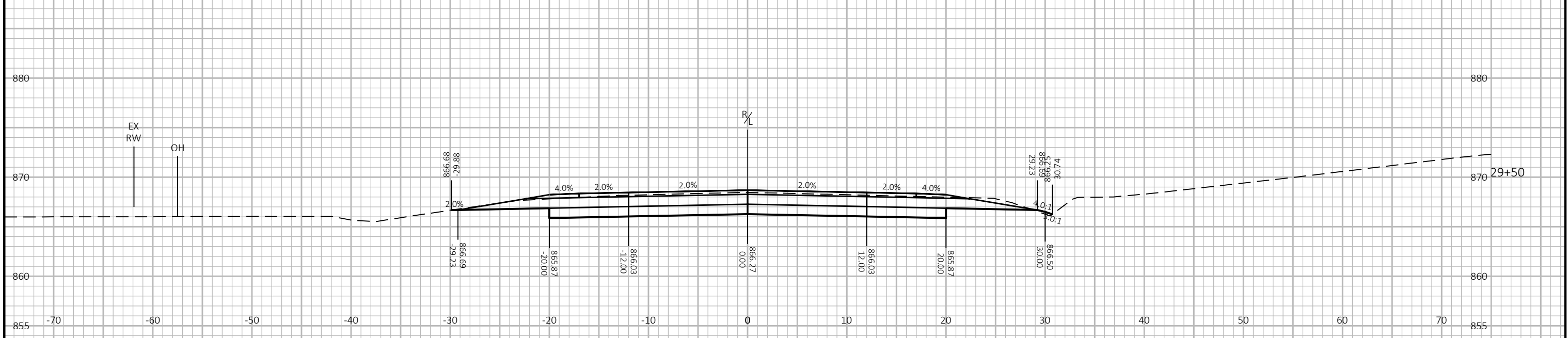
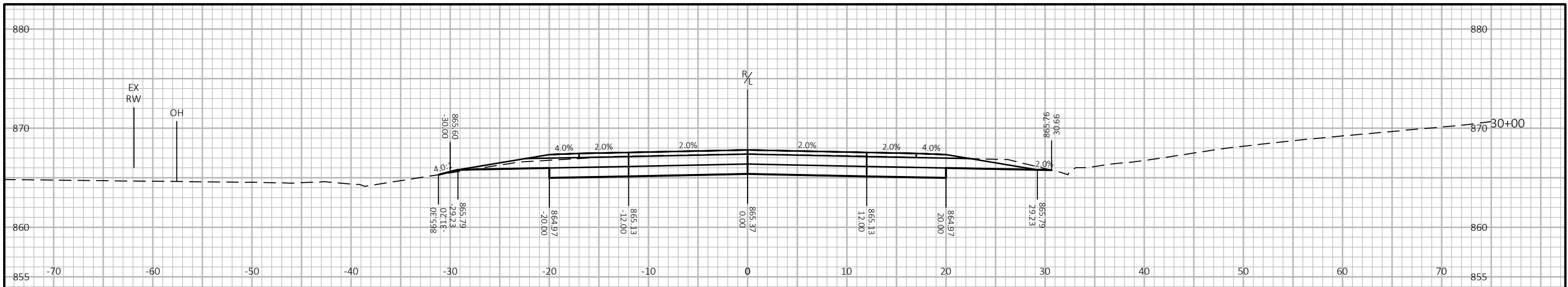


PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9

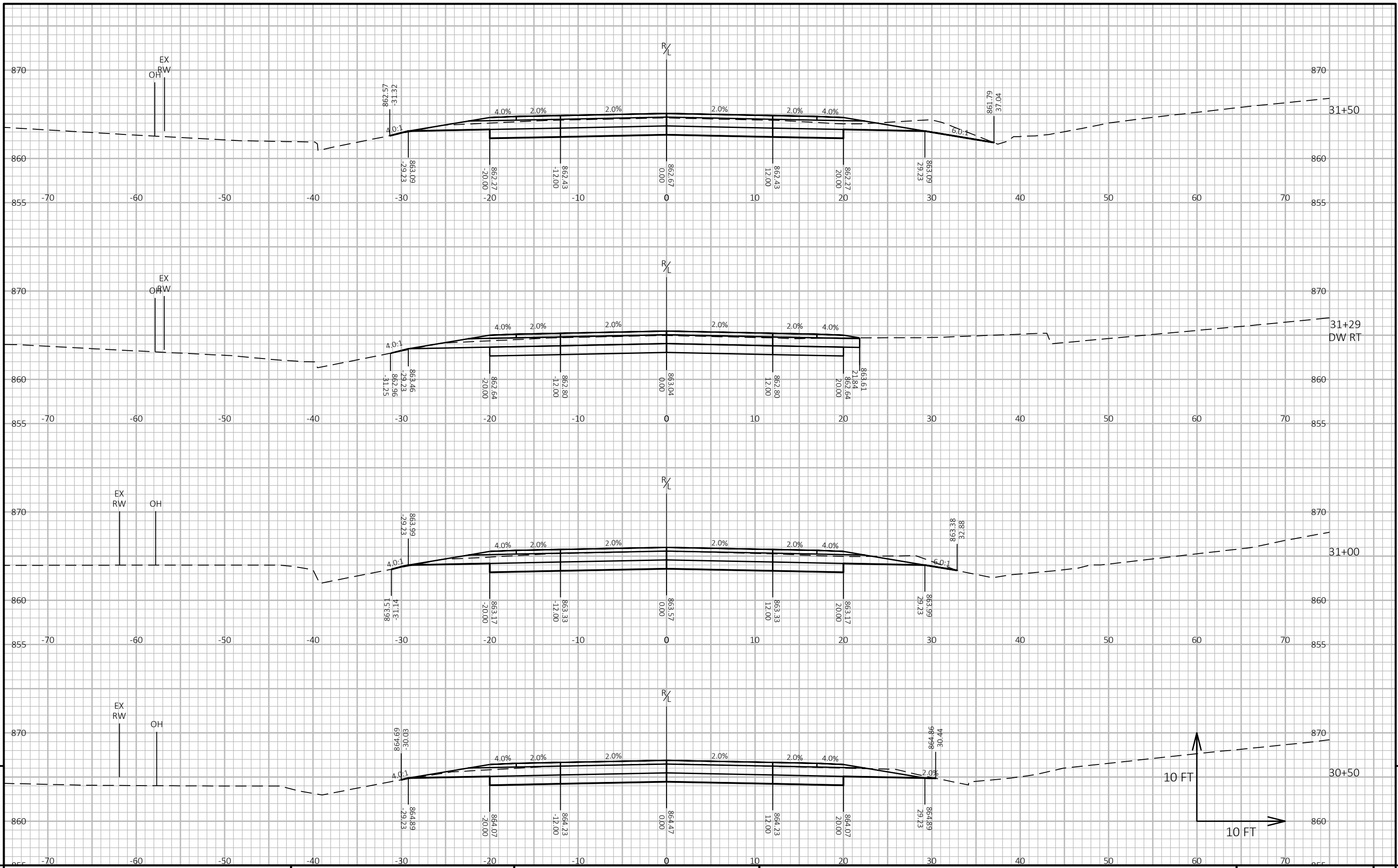


9
10 FT
10 FT
9

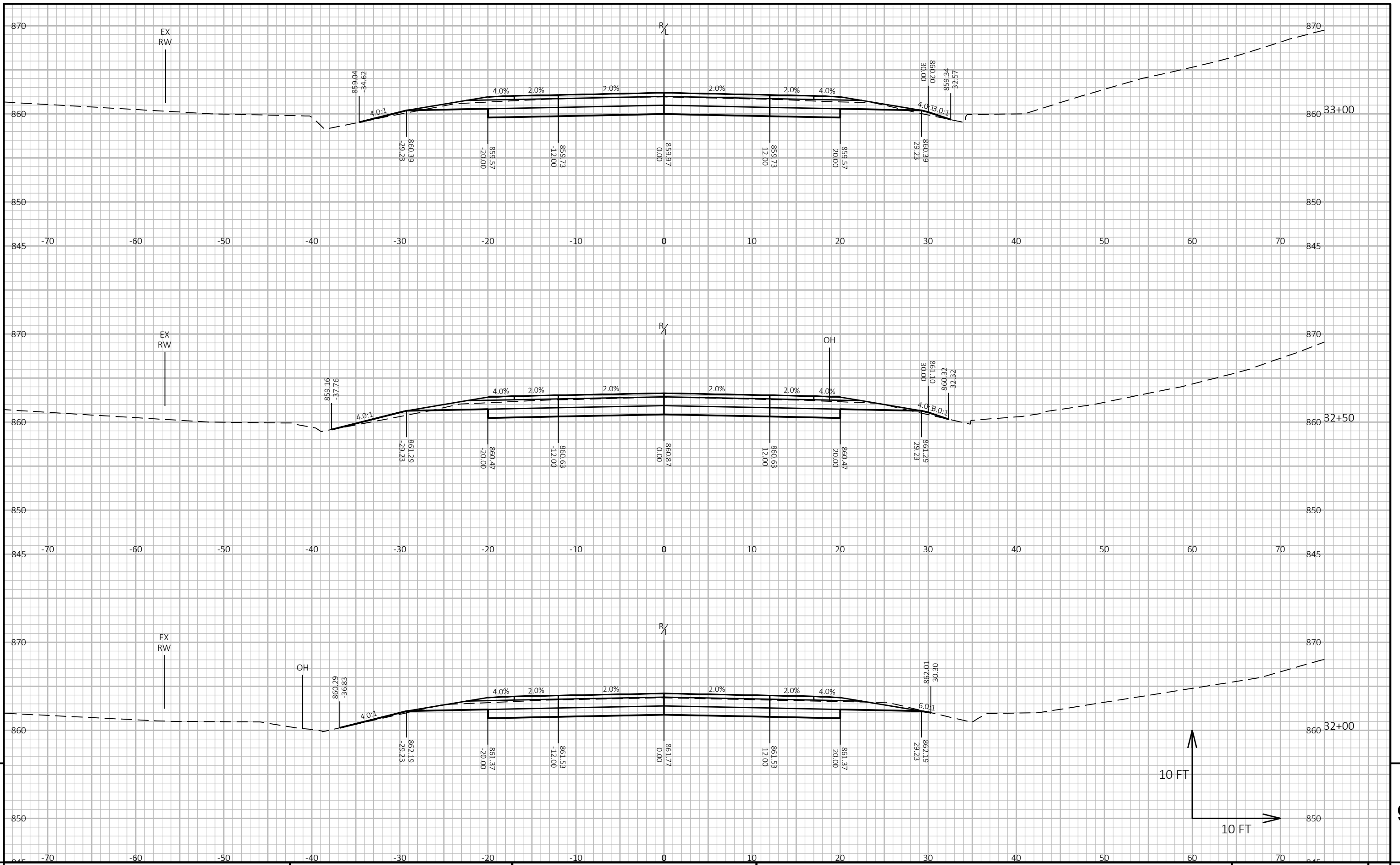
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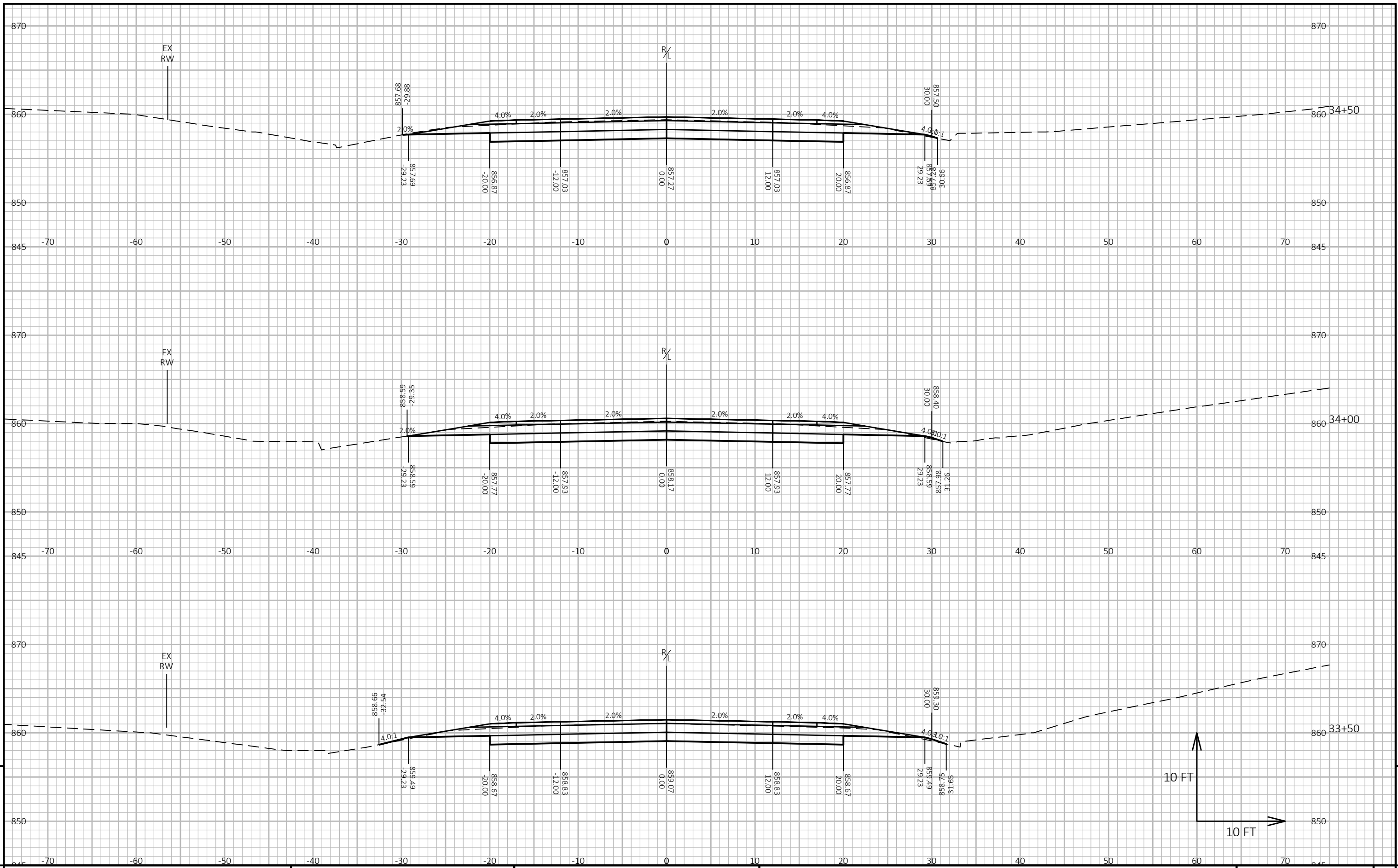
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



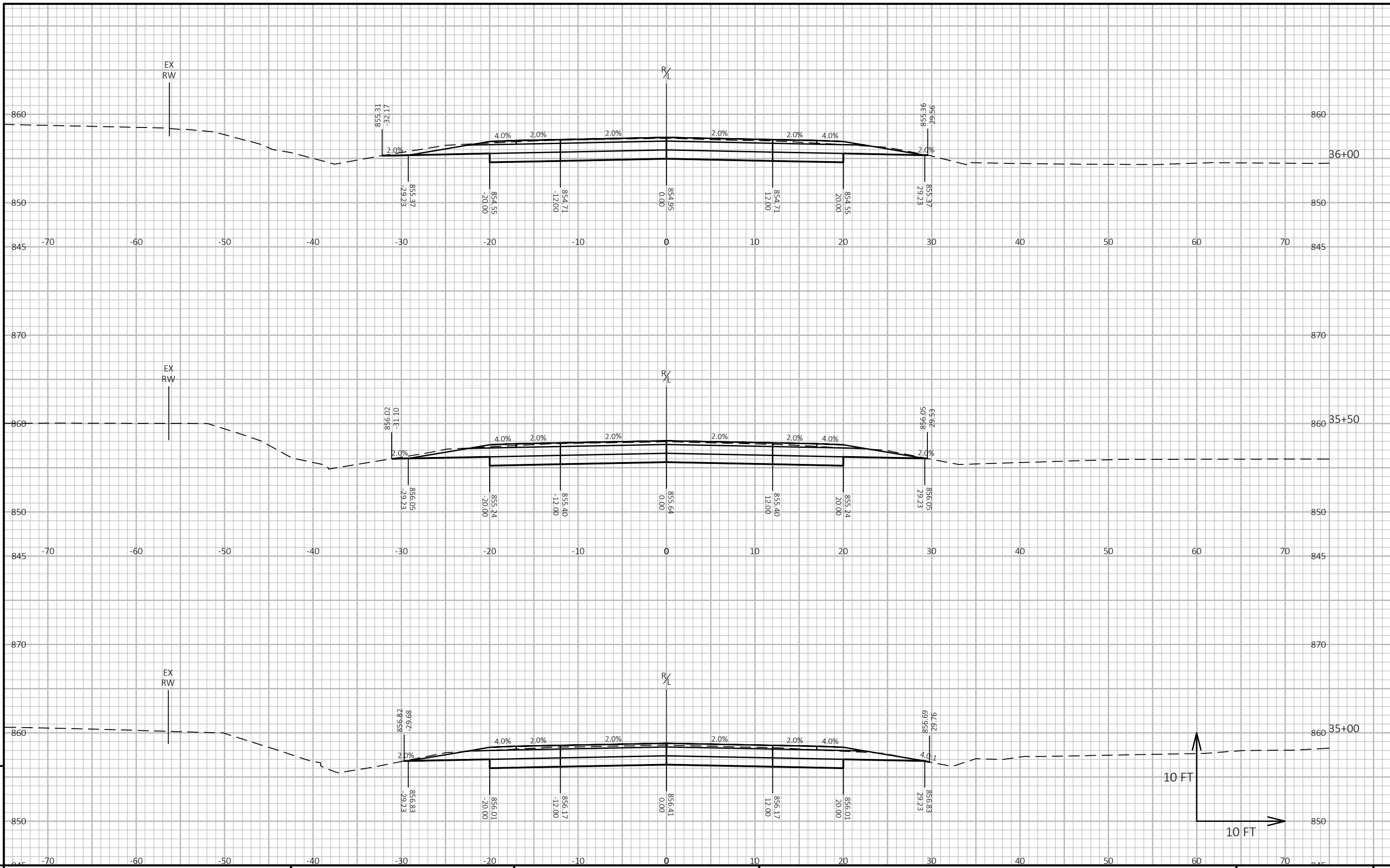
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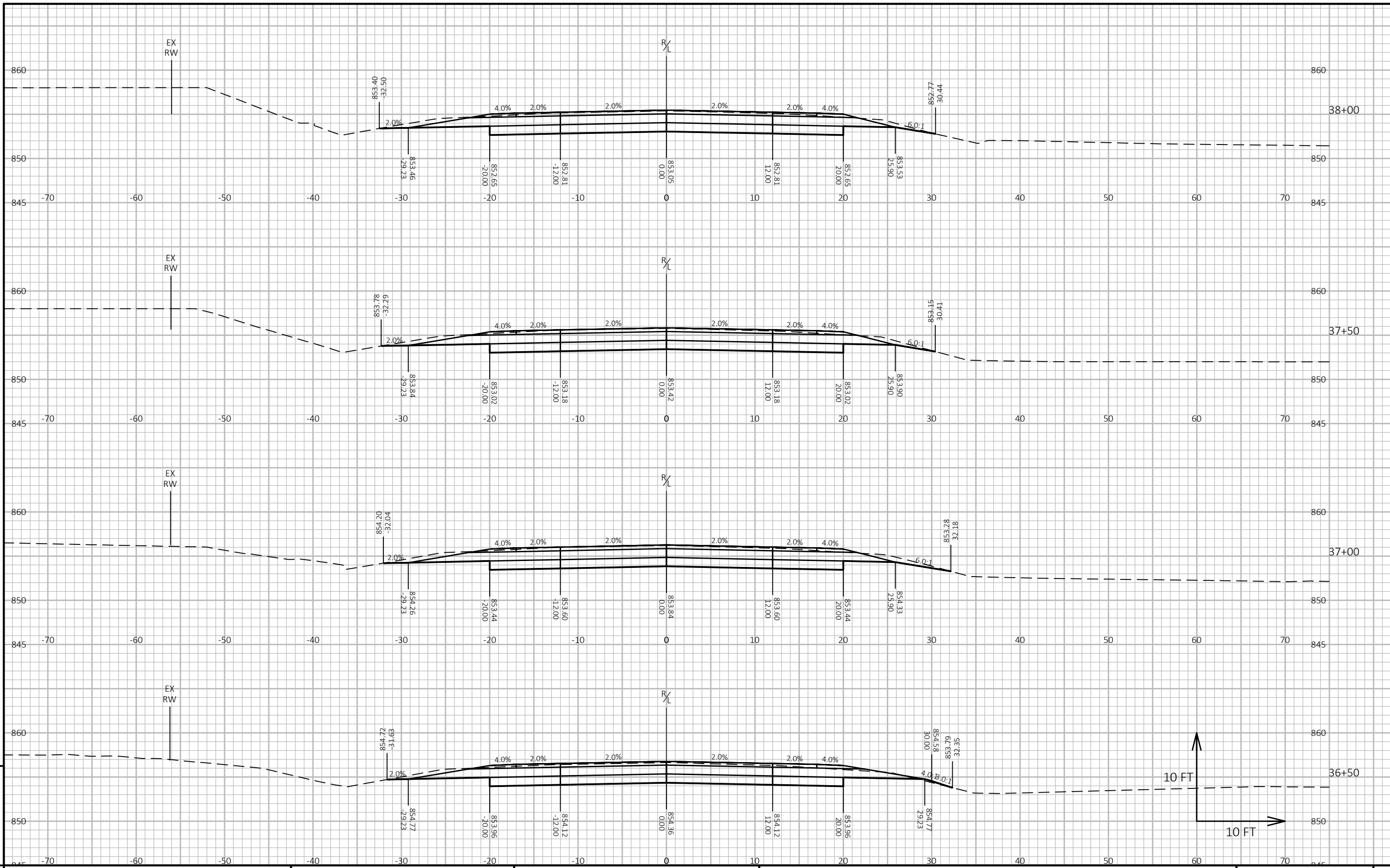
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\090201-XS-NORTH.DWG      PLOT DATE : 7/21/2023 2:22 PM      PLOT BY : JOE MALENOFSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

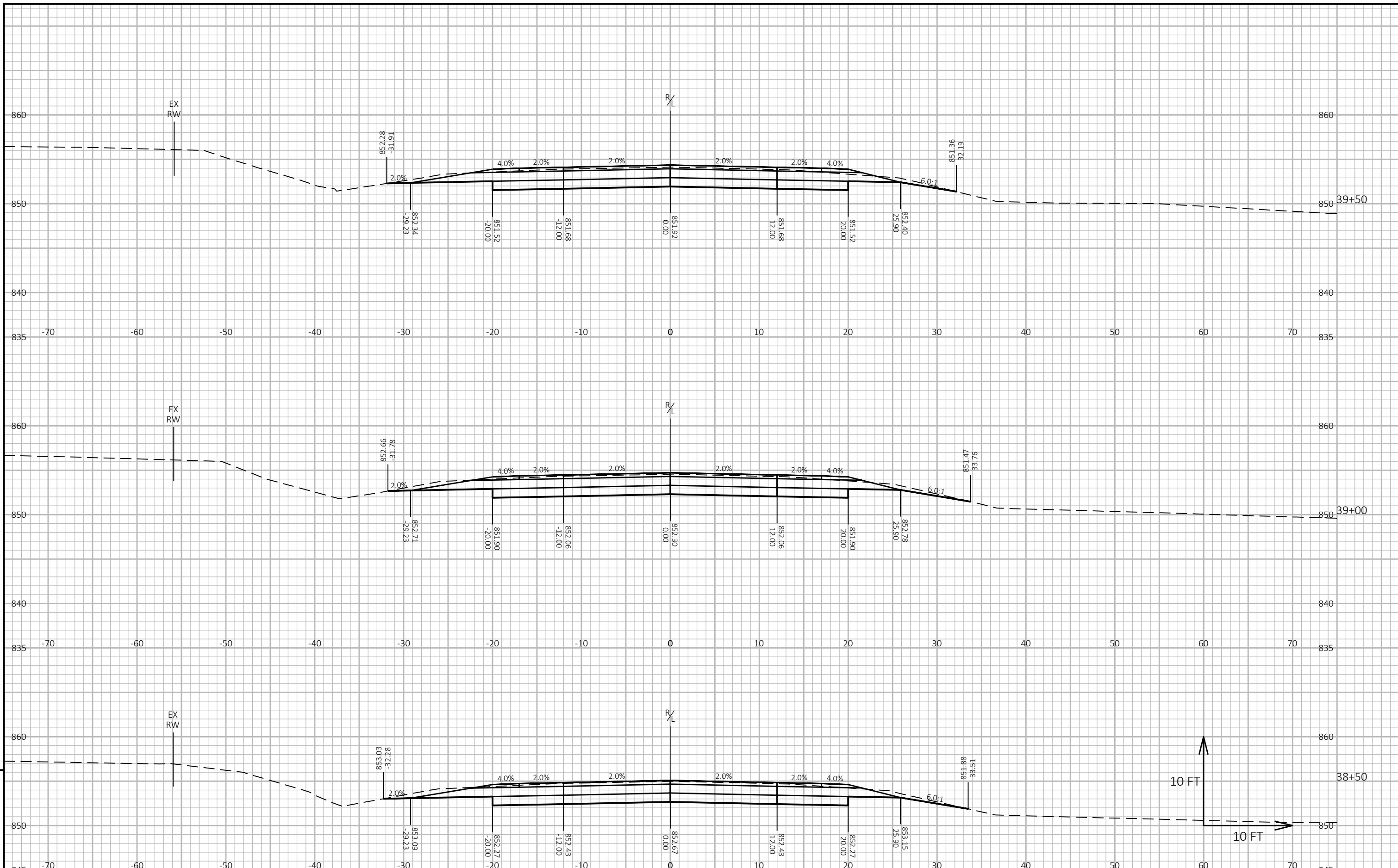




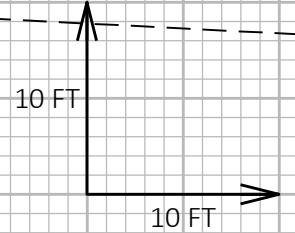
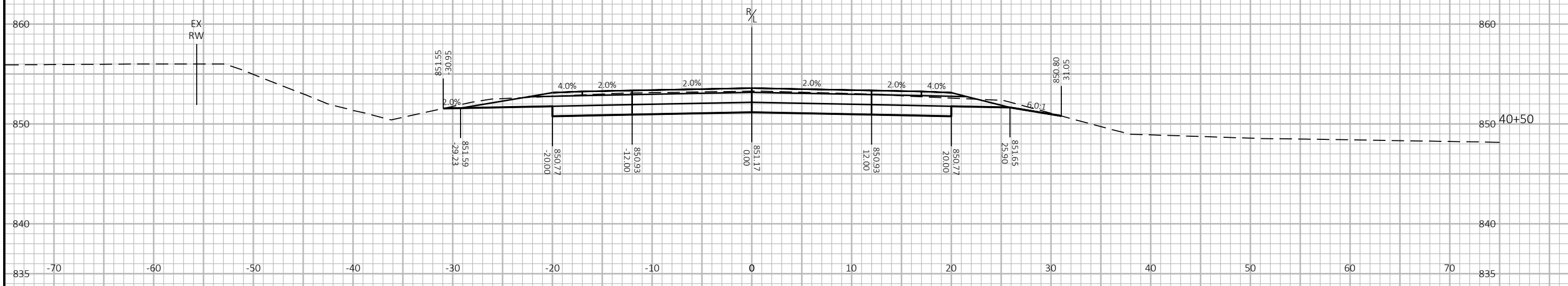
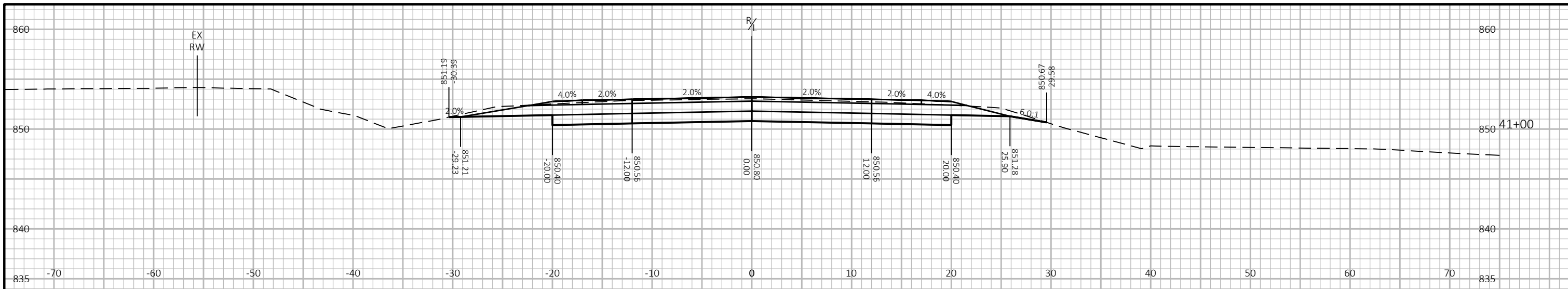
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



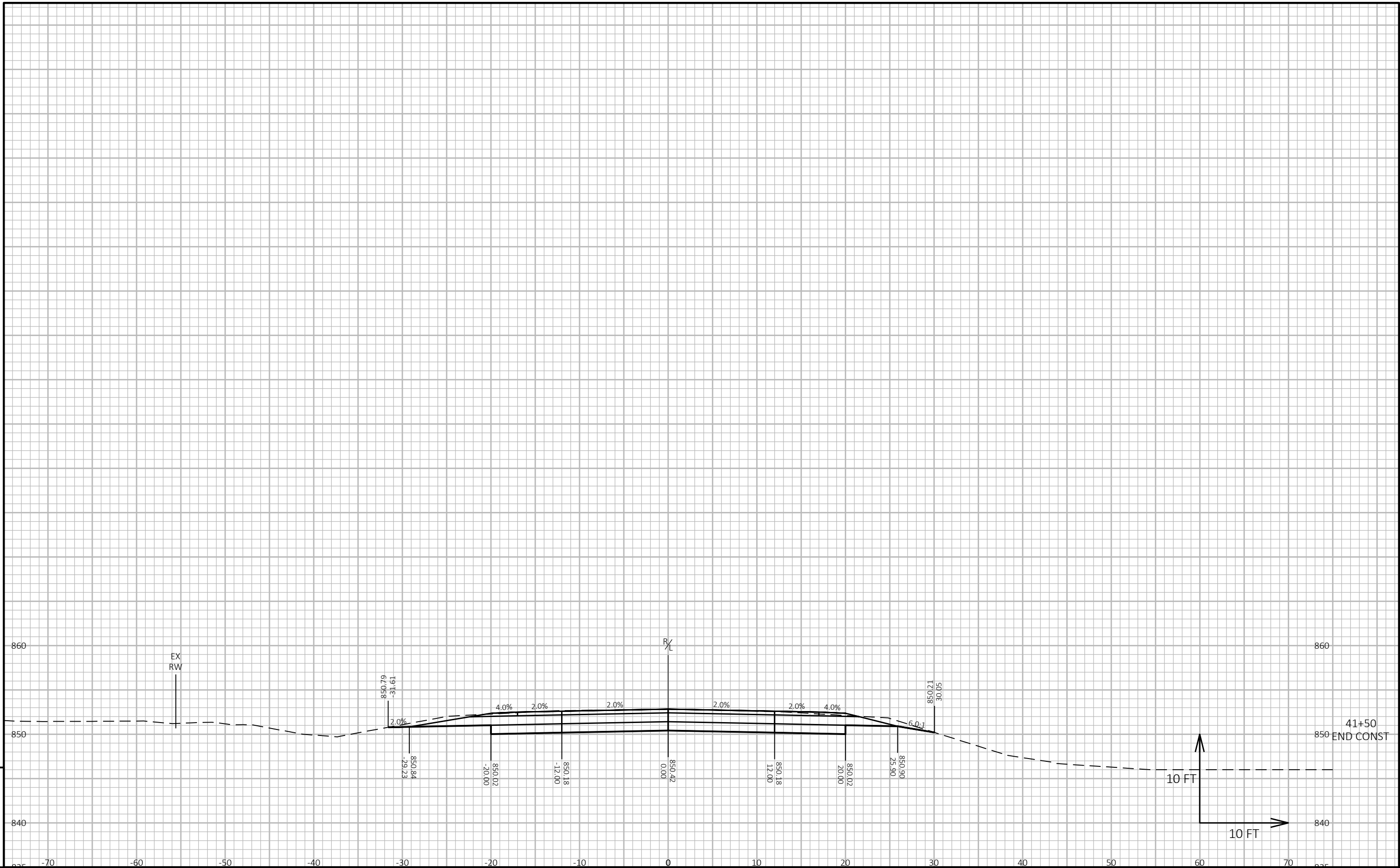
PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70

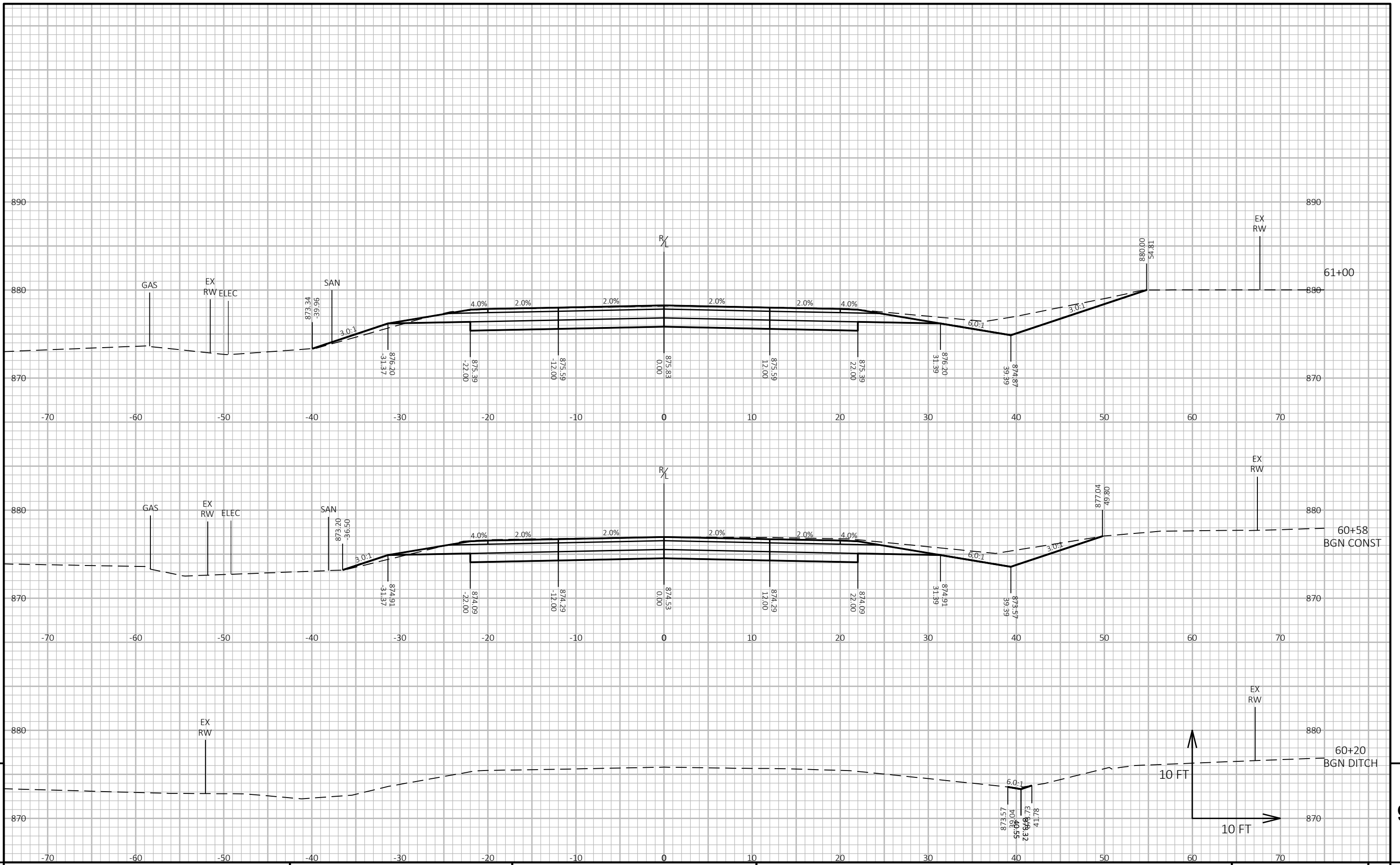
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COUNTY: SAUK

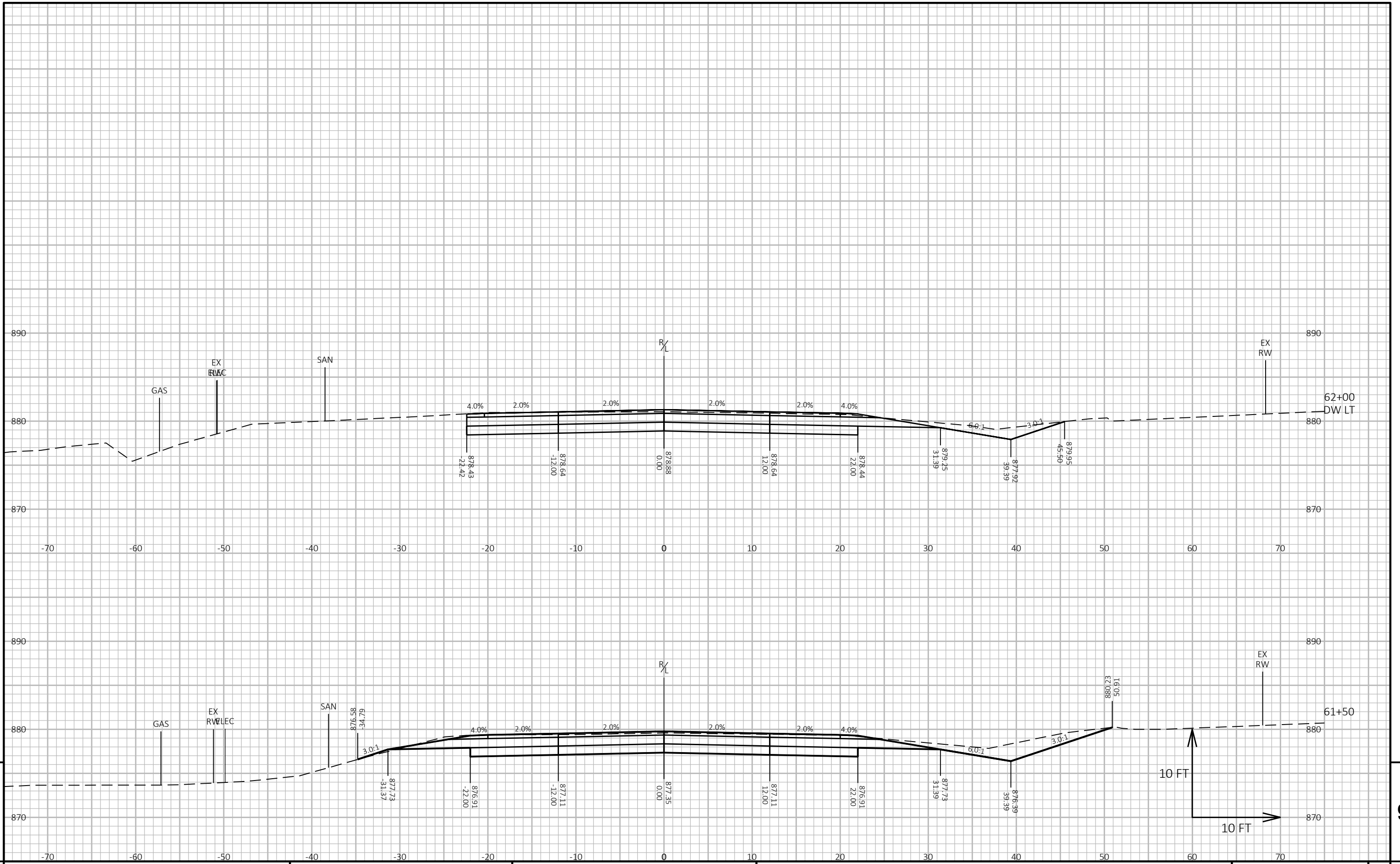
CROSS SECTIONS: USH 12

SHEET

E



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70

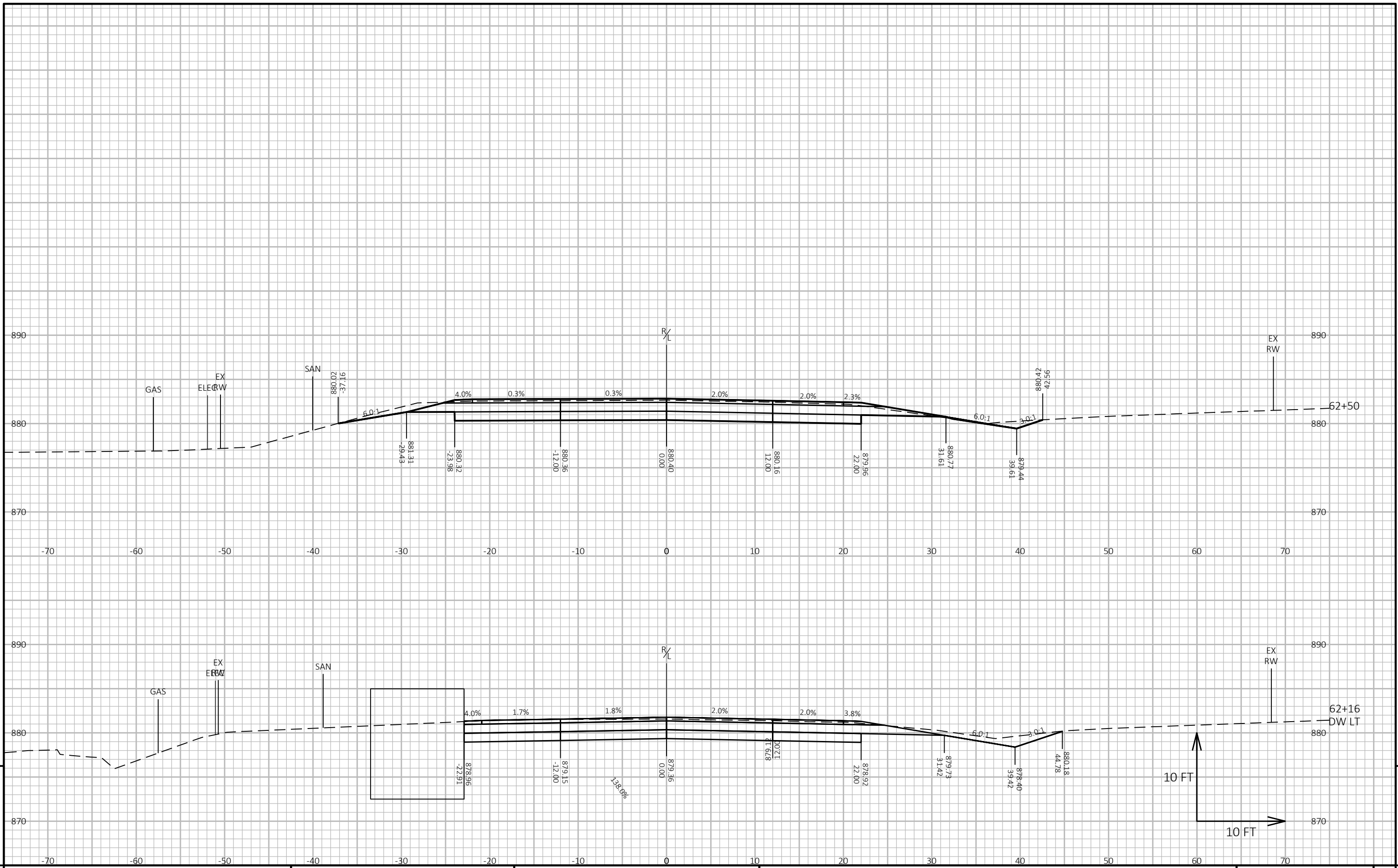
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COUNTY: SAUK

CROSS SECTIONS: USH 12

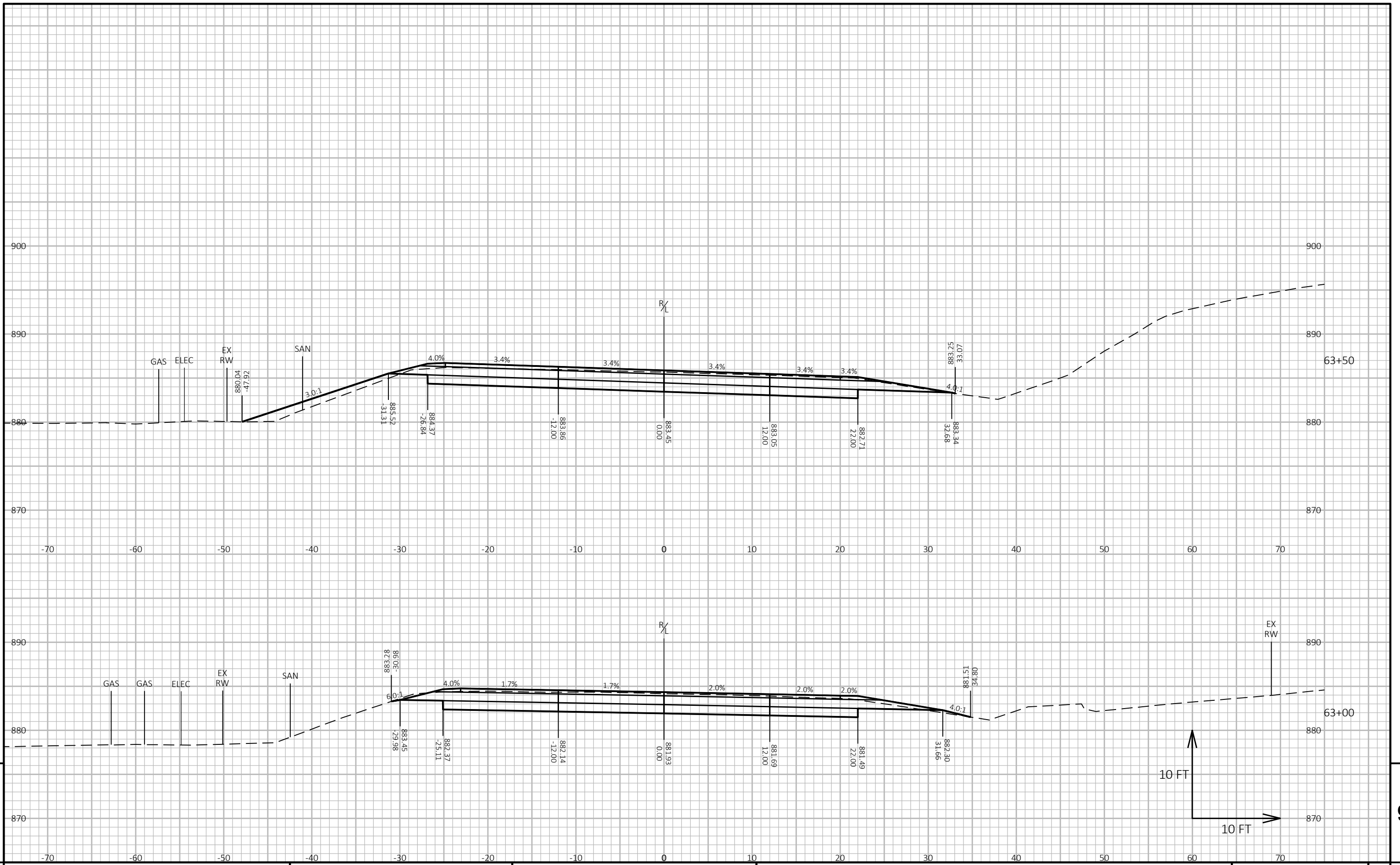
SHEET

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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



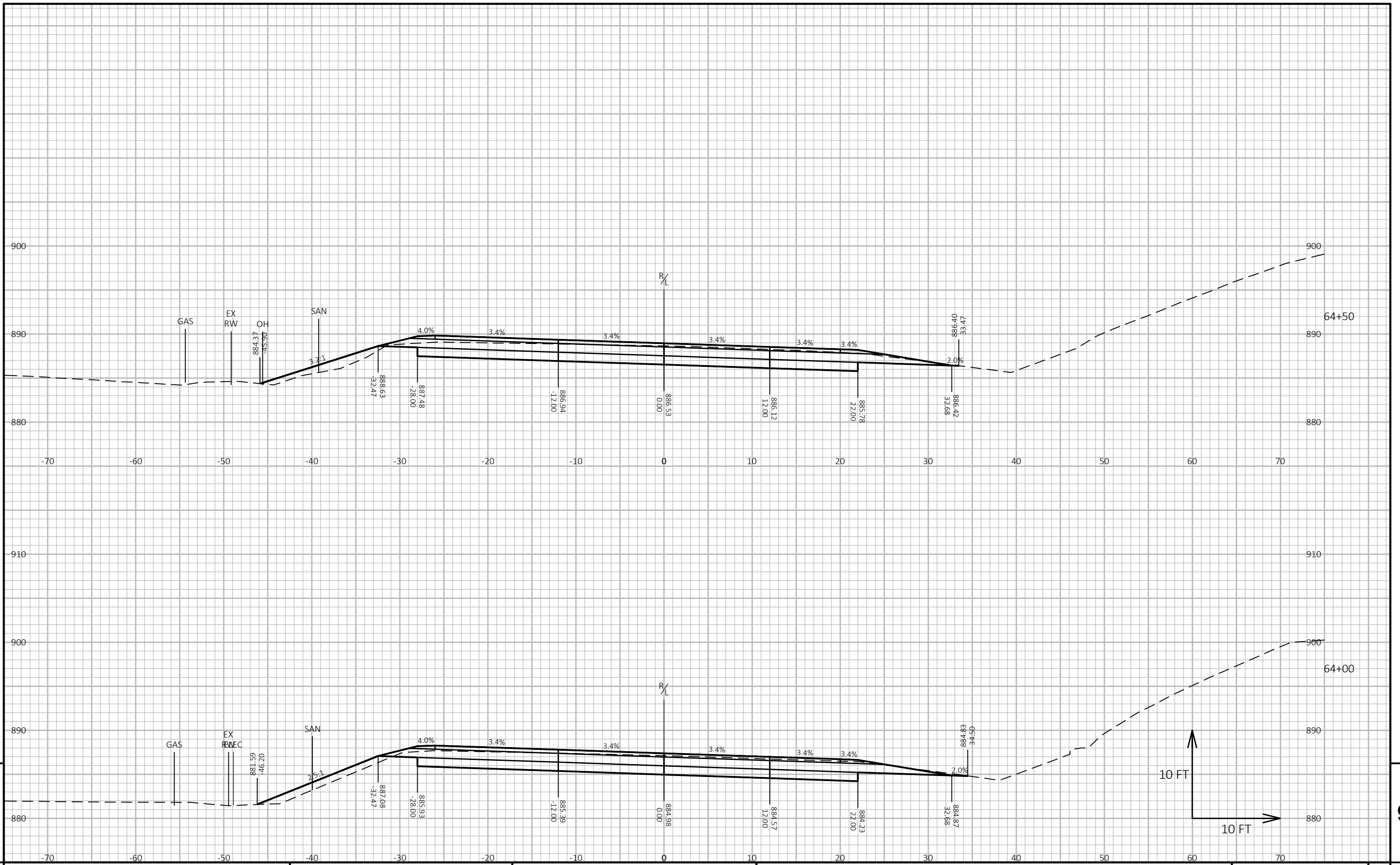


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PROJECT NO: 5880-01-70 HWY: USH 12 COUNTY: SAUK CROSS SECTIONS: USH 12 SHEET E

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PROJECT NO: 5880-01-70

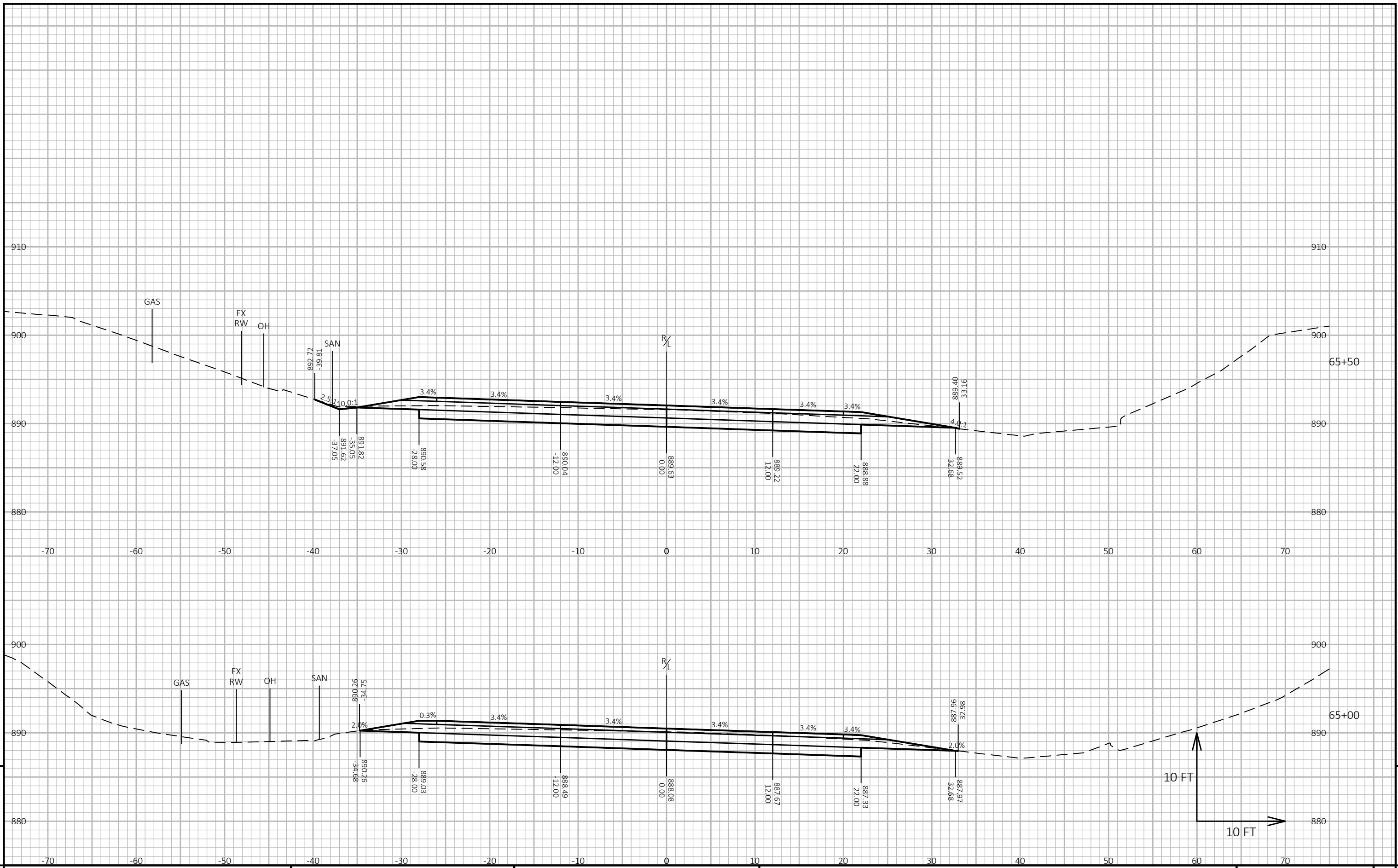
HWY: USH 12

COUNTY: SAUK

CROSS SECTIONS: USH 12

SHEET

E



PROJECT NO: 5880-01-70

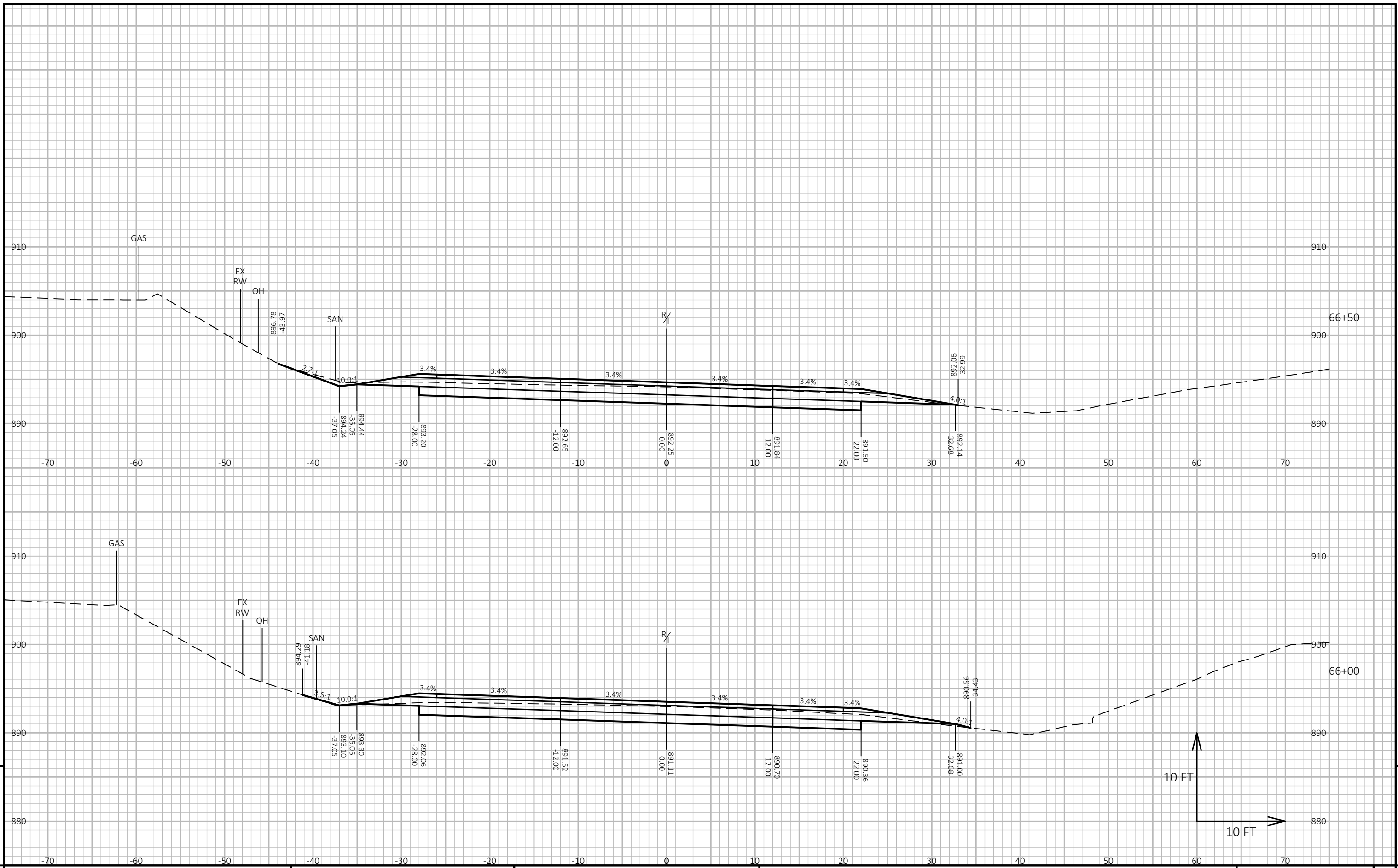
HWY: USH 12

COUNTY: SAUK

CROSS SECTIONS: USH 12

SHEET

E



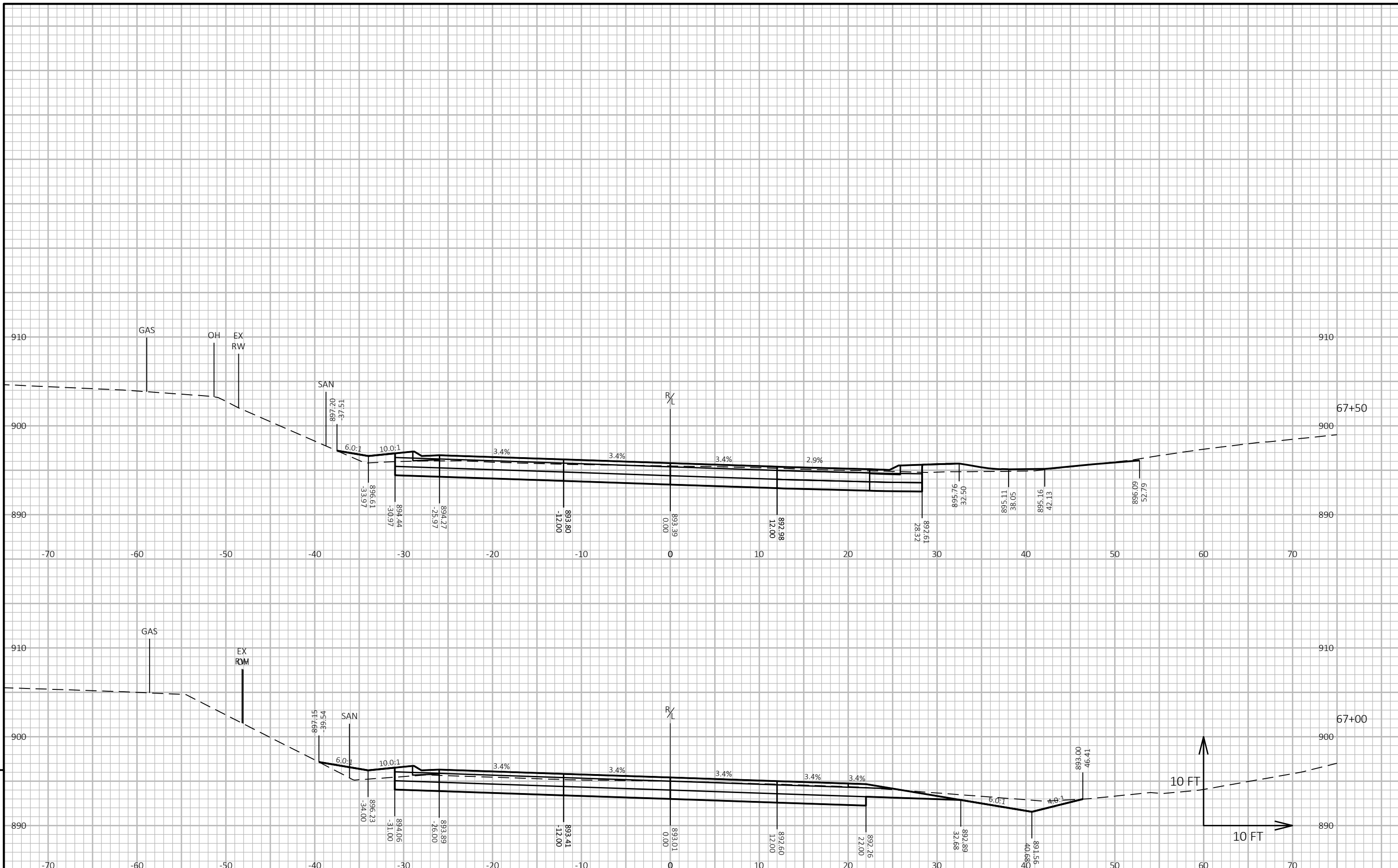
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9

PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\090202-XS-SOUTH.DWG      PLOT DATE : 7/21/2023 2:23 PM      PLOT BY : JOE MALENOFSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 07



PROJECT NO: 5880-01-70

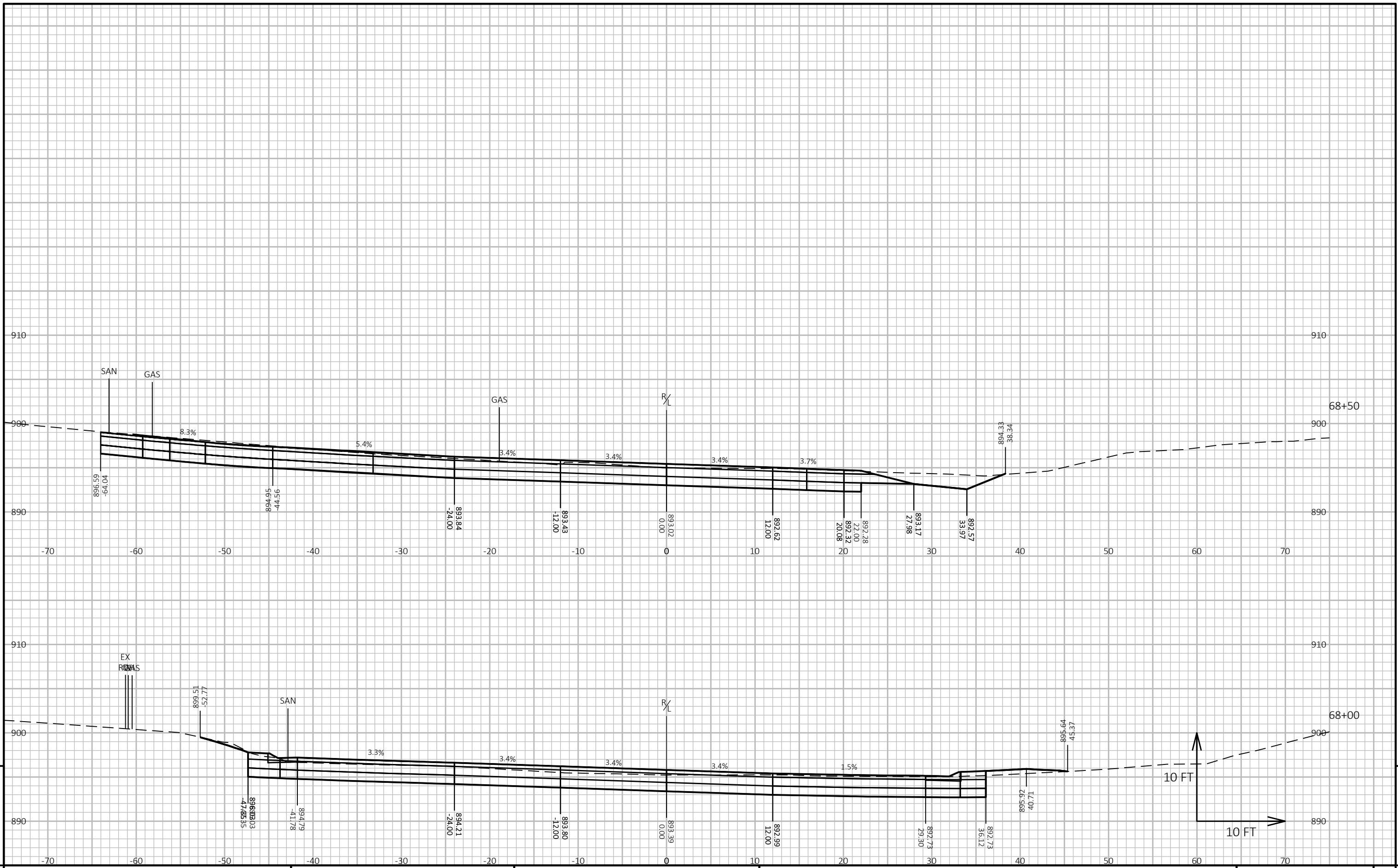
HWY: USH 12

COUNTY: SAUK

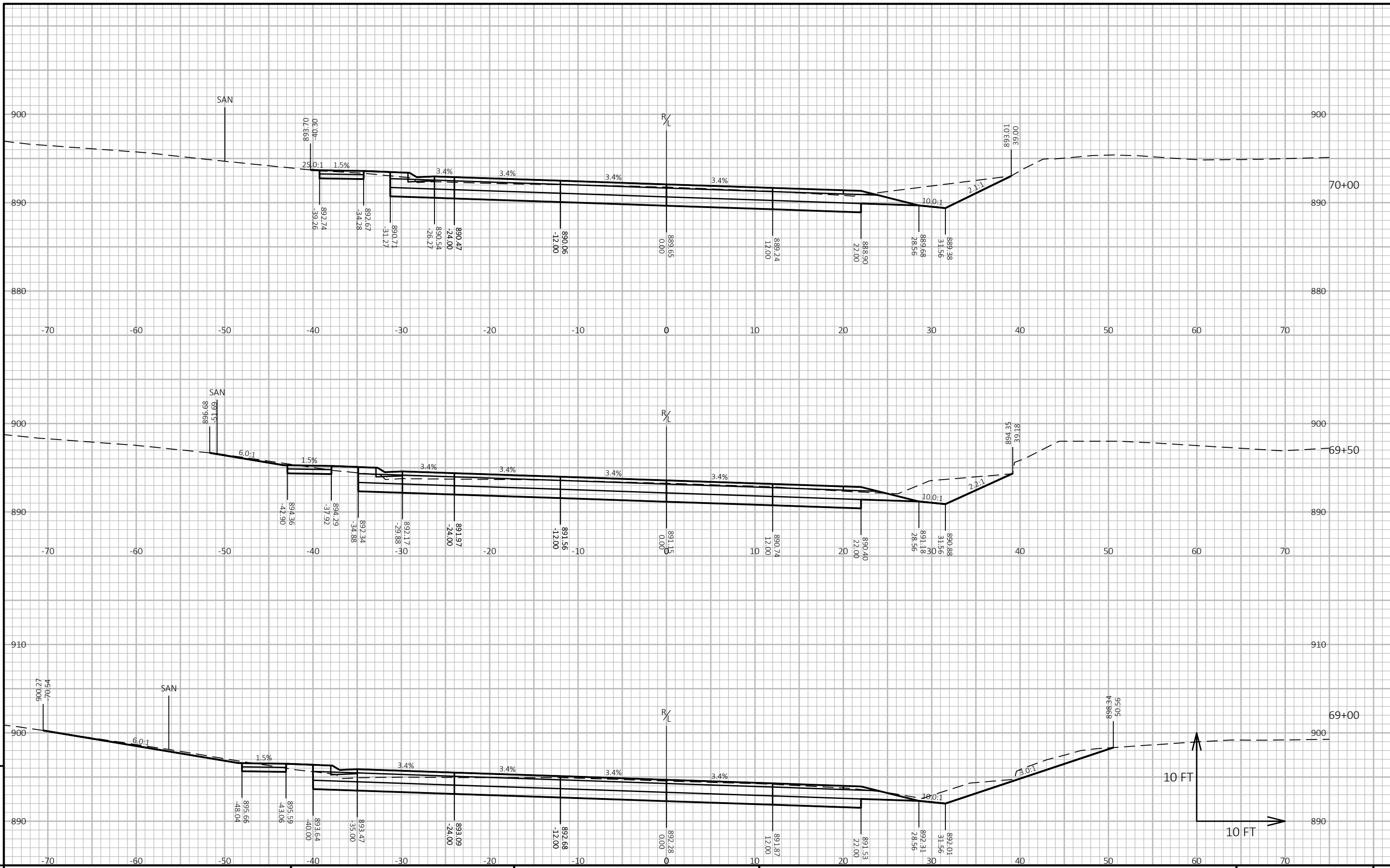
CROSS SECTIONS: USH 12

SHEET

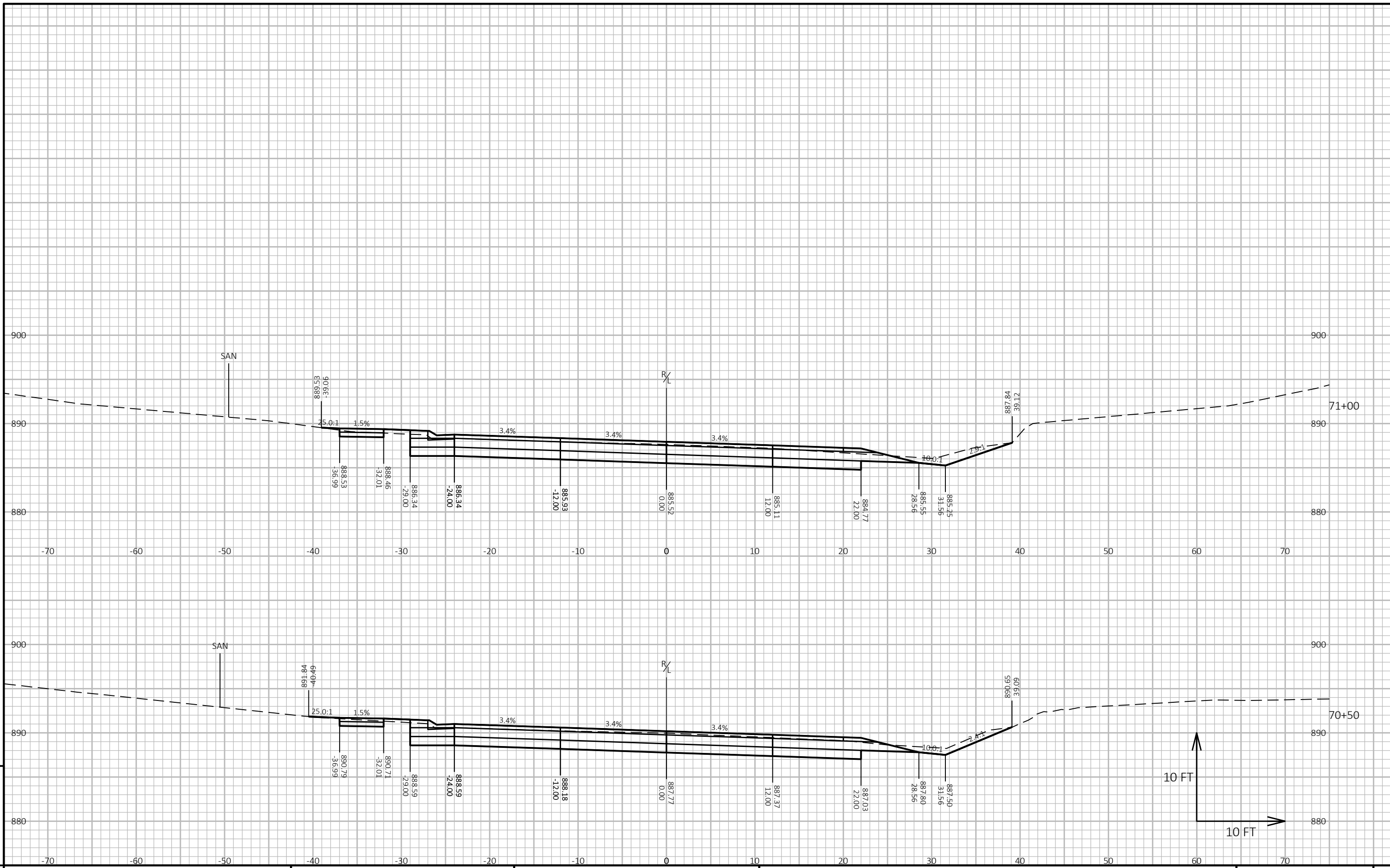
E



PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	CROSS SECTIONS: USH 12	SHEET E
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70

HWY: USH 12

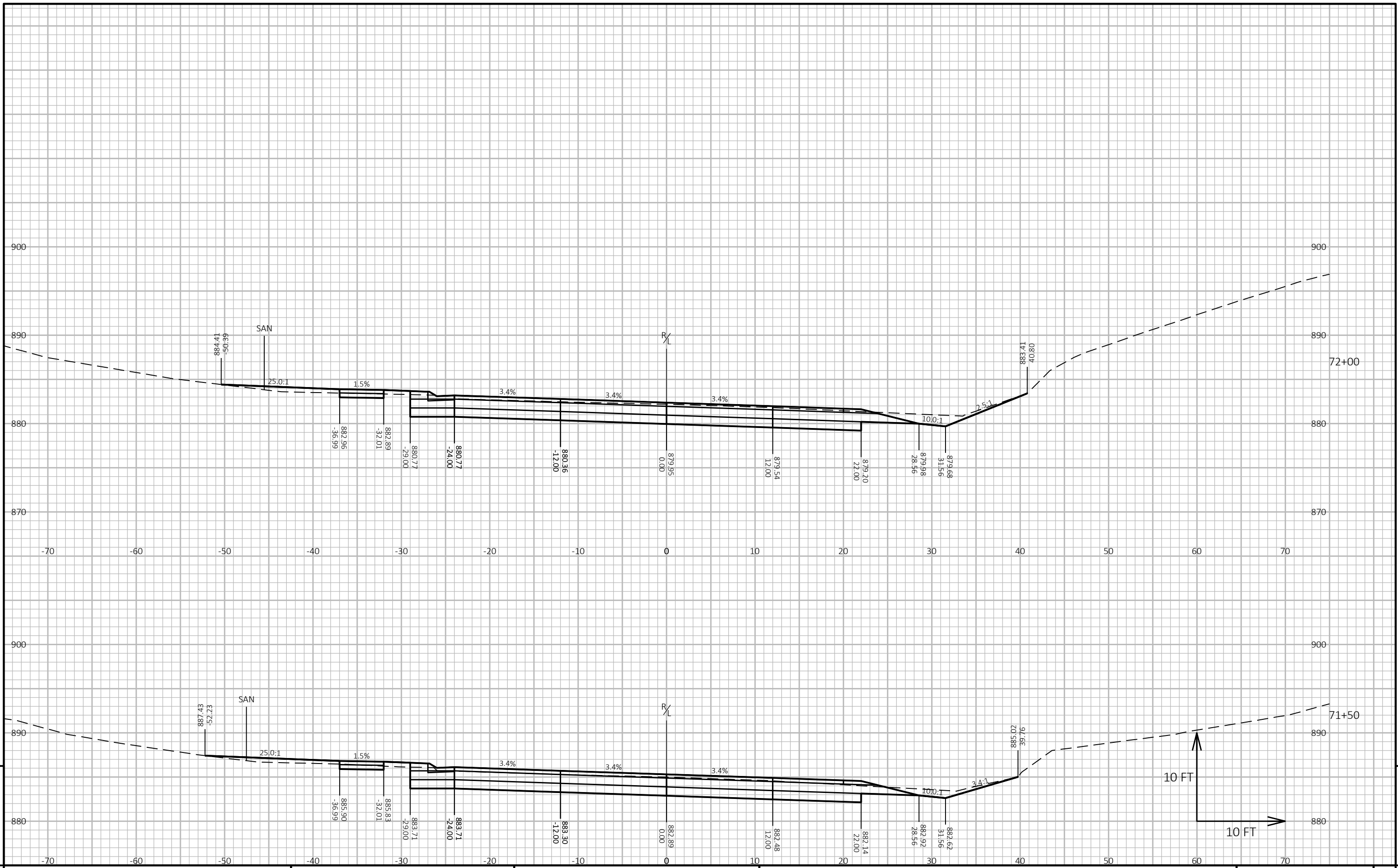
COUNTY: SAUK

CROSS SECTIONS: USH 12

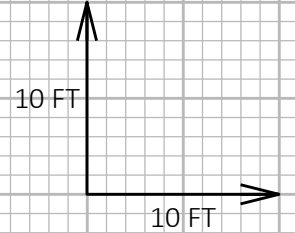
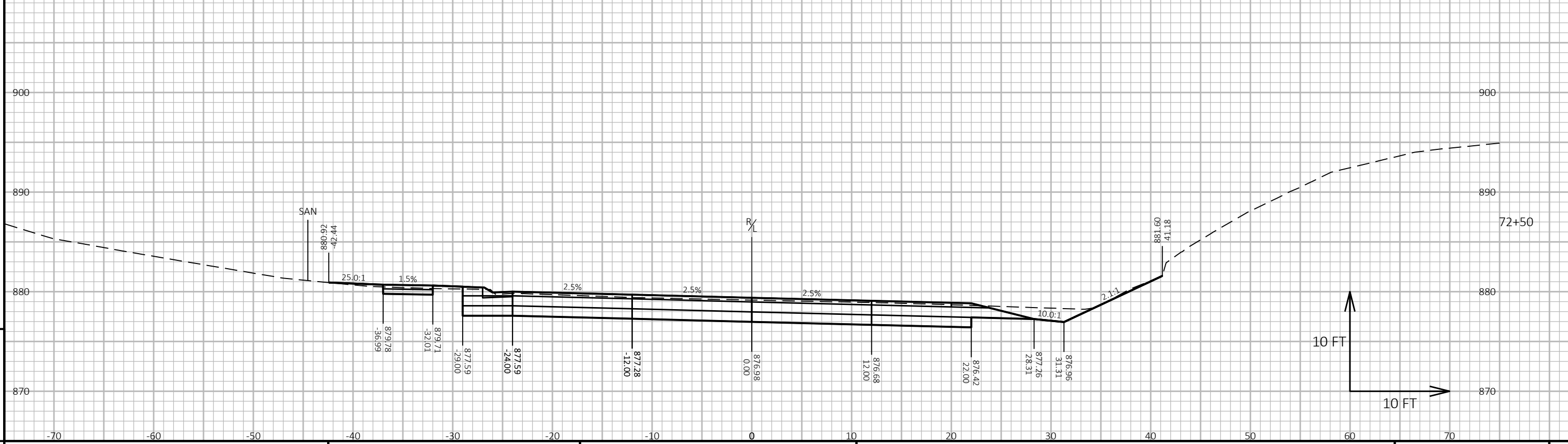
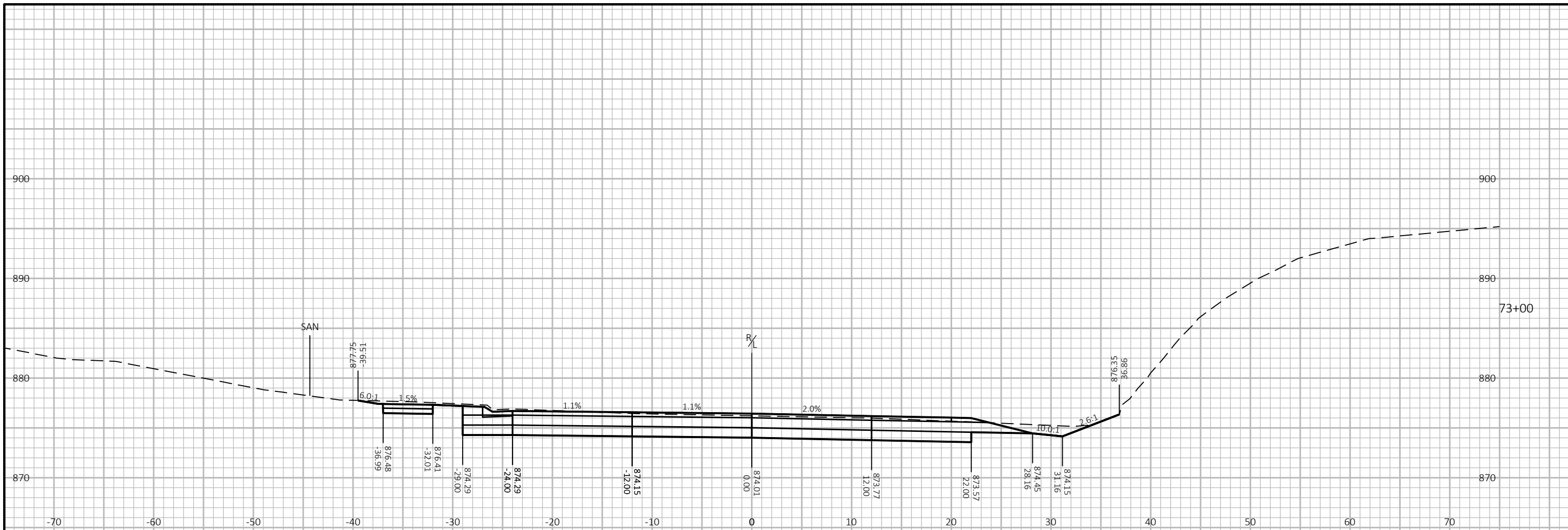
SHEET

E

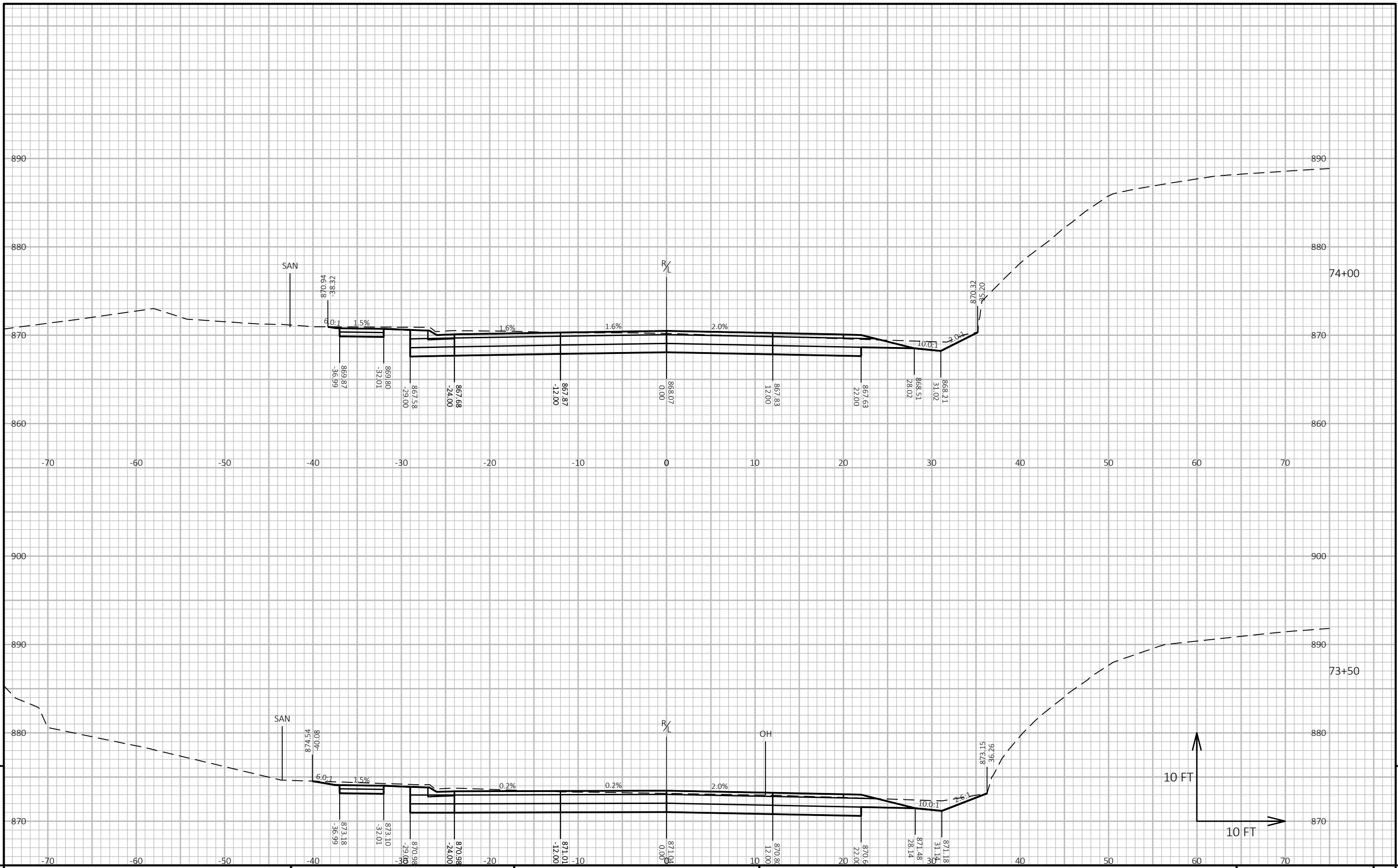




PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	CROSS SECTIONS: USH 12
SHEET			E



PROJECT NO: 5880-01-70	HWY: USH 12	COUNTY: SAUK	CROSS SECTIONS: USH 12	SHEET E
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PROJECT NO: 5880-01-70

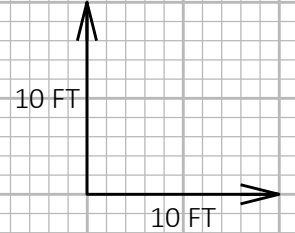
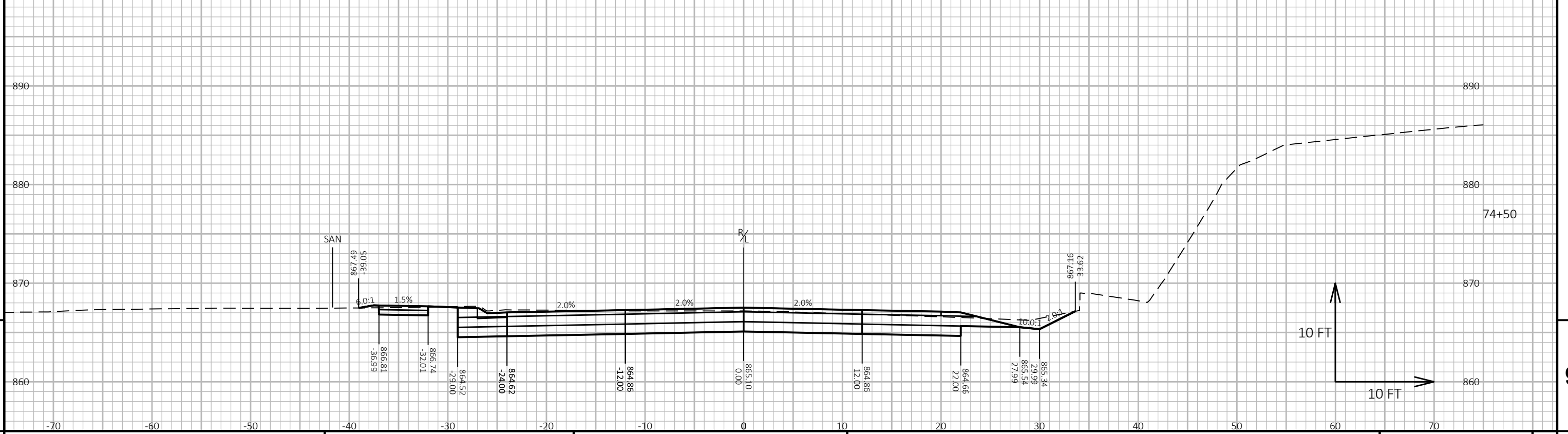
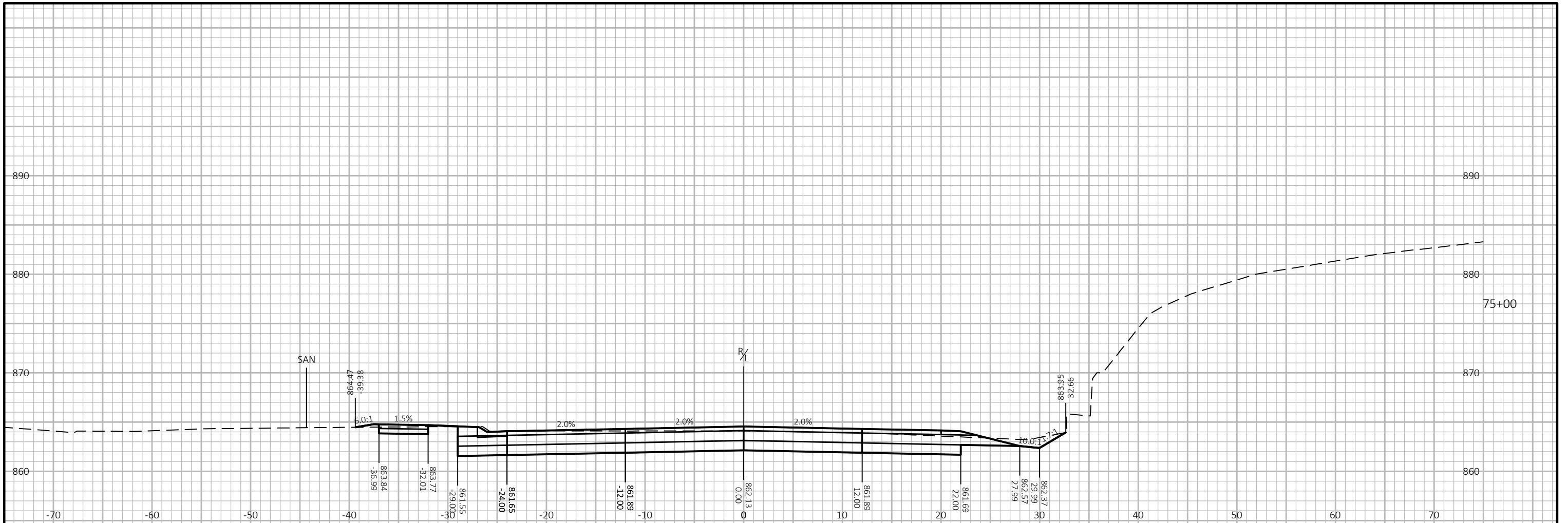
HWY: USH 12

COUNTY: SAUK

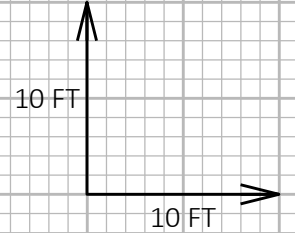
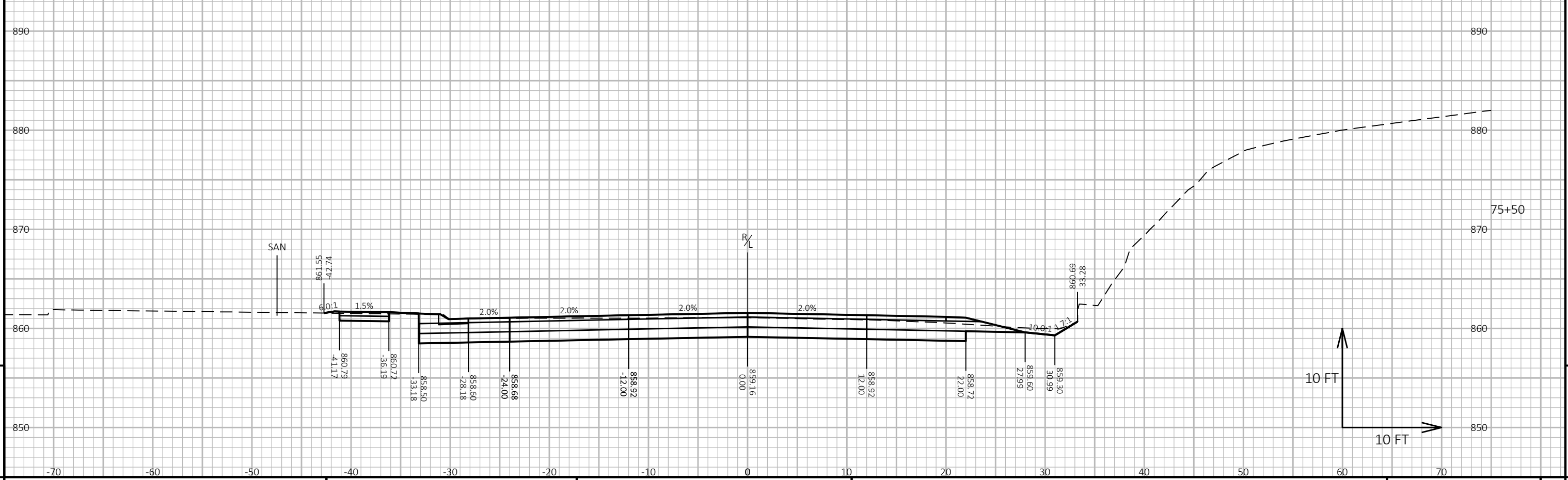
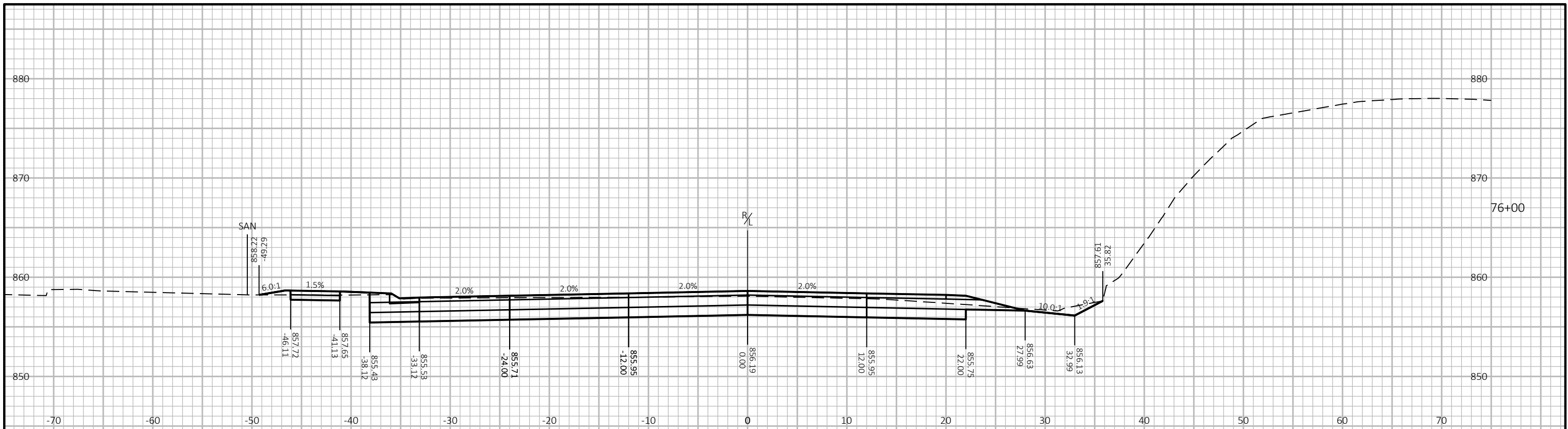
CROSS SECTIONS: USH 12

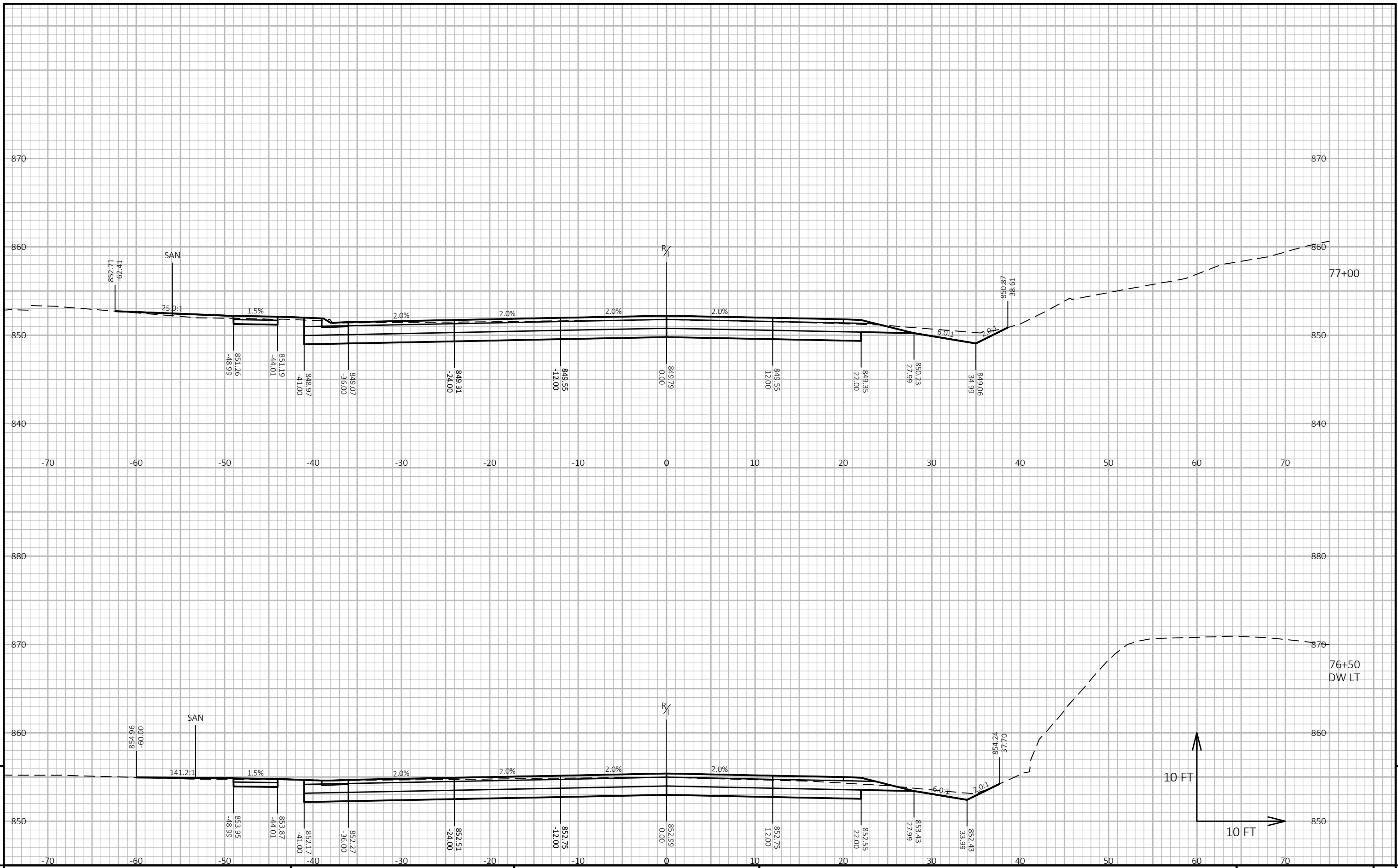
SHEET

E

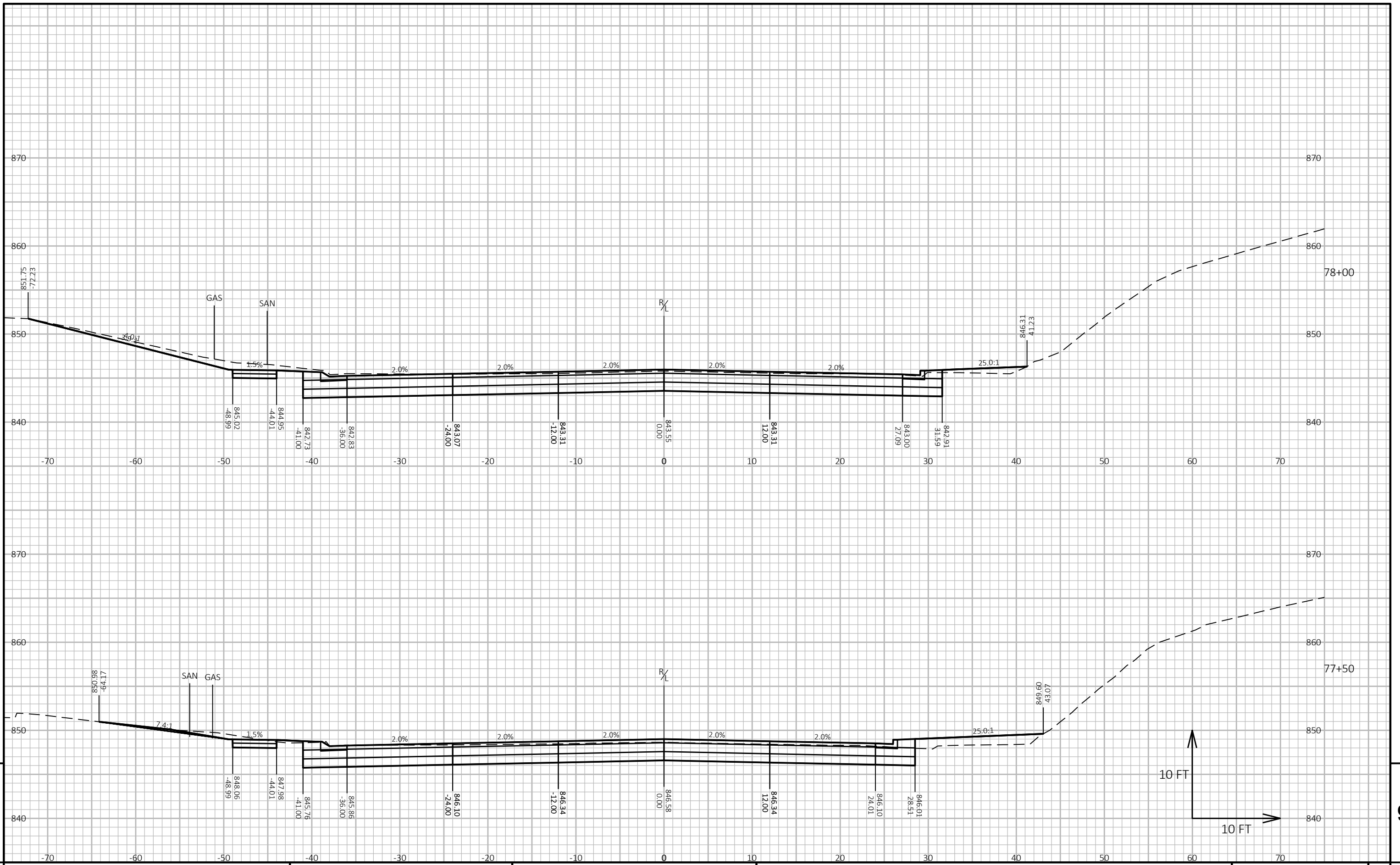


PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

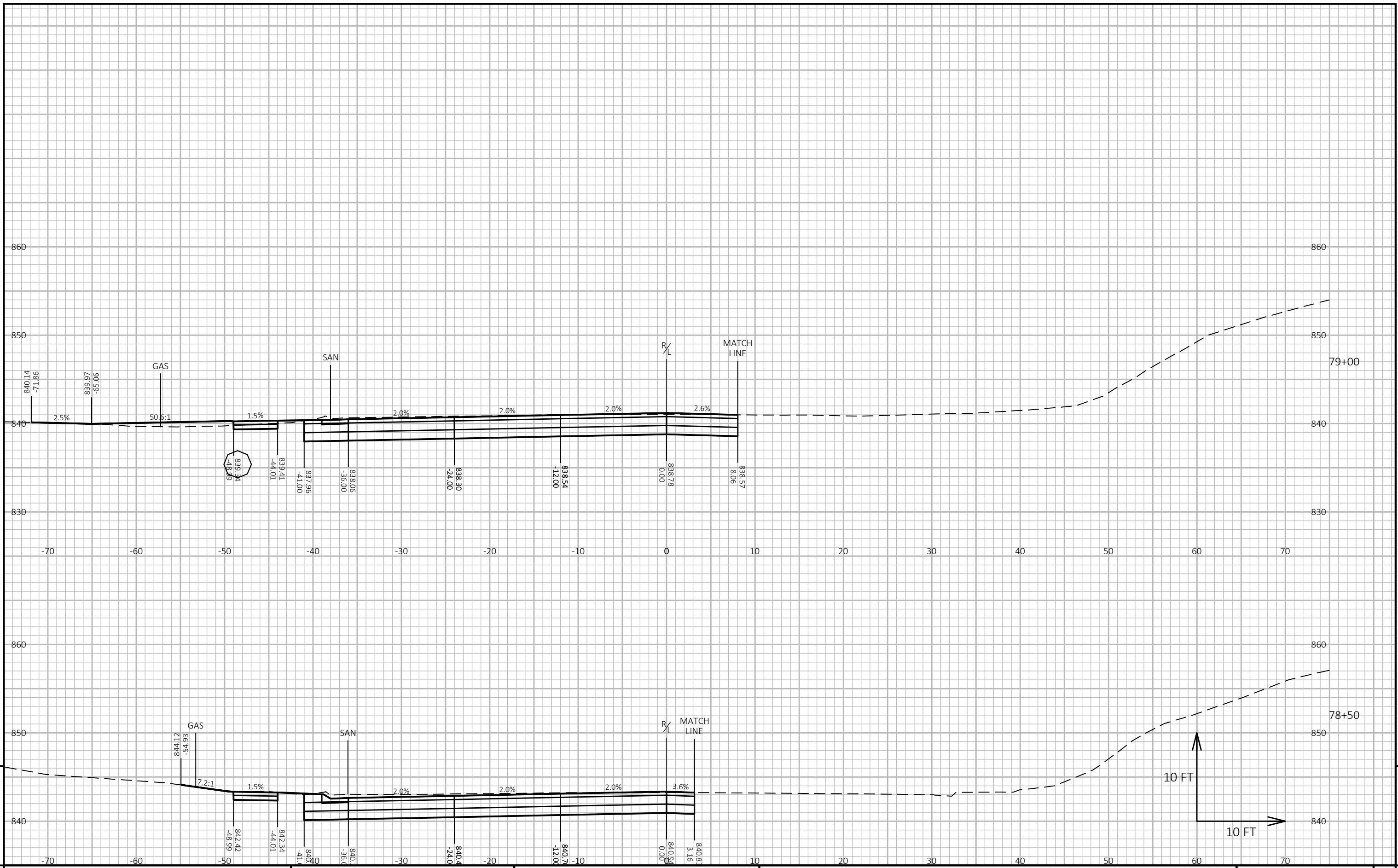




PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9

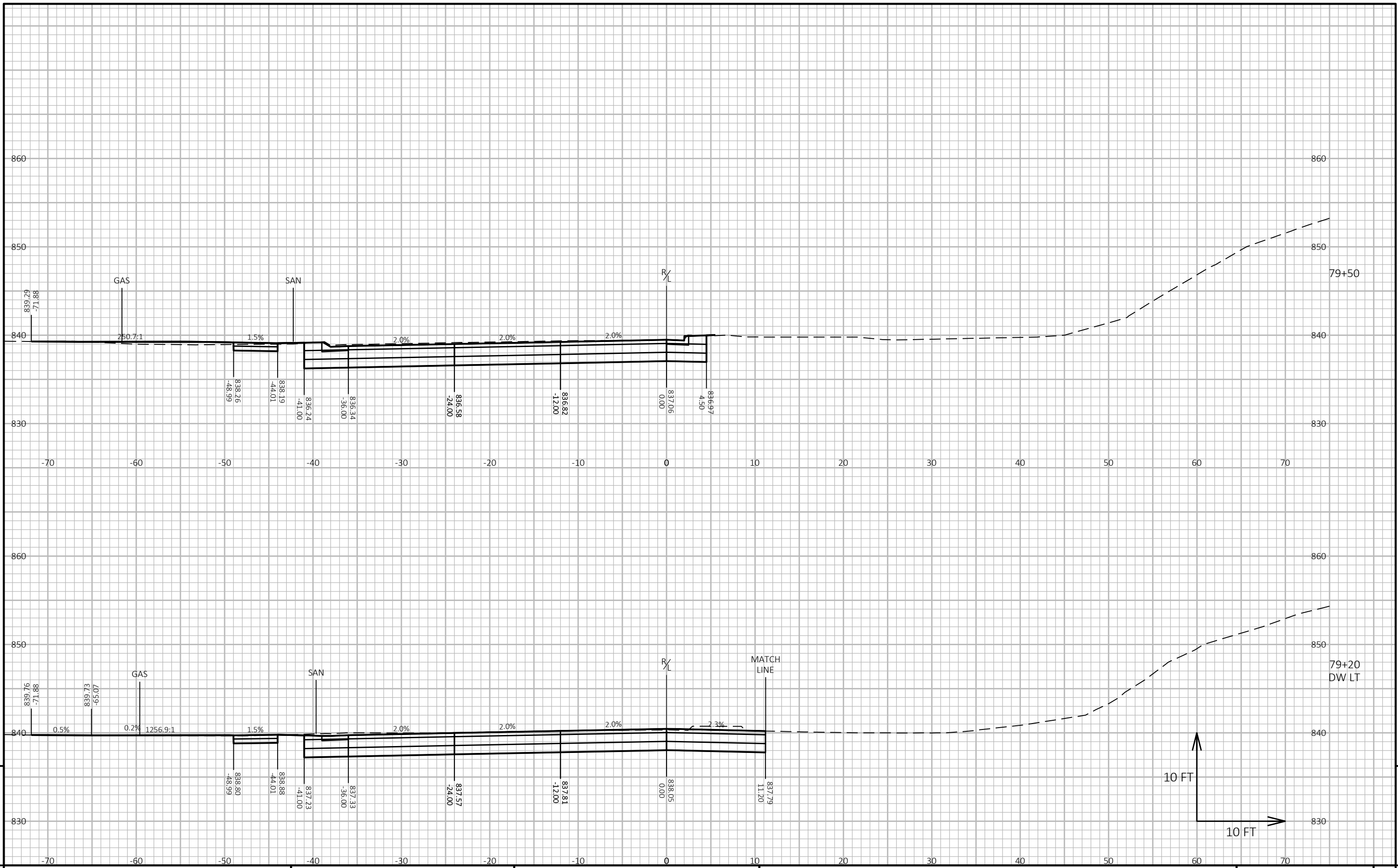


PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



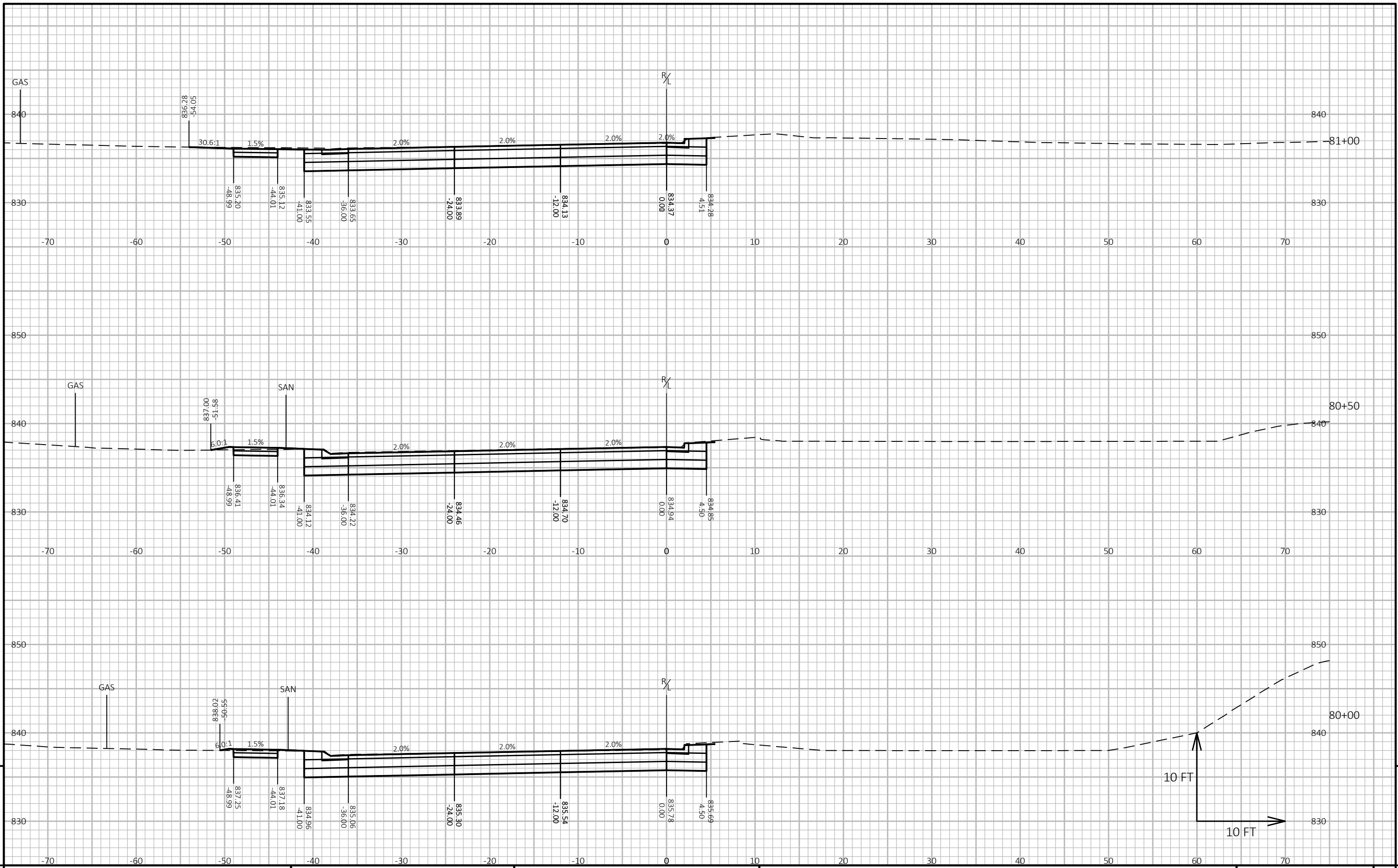


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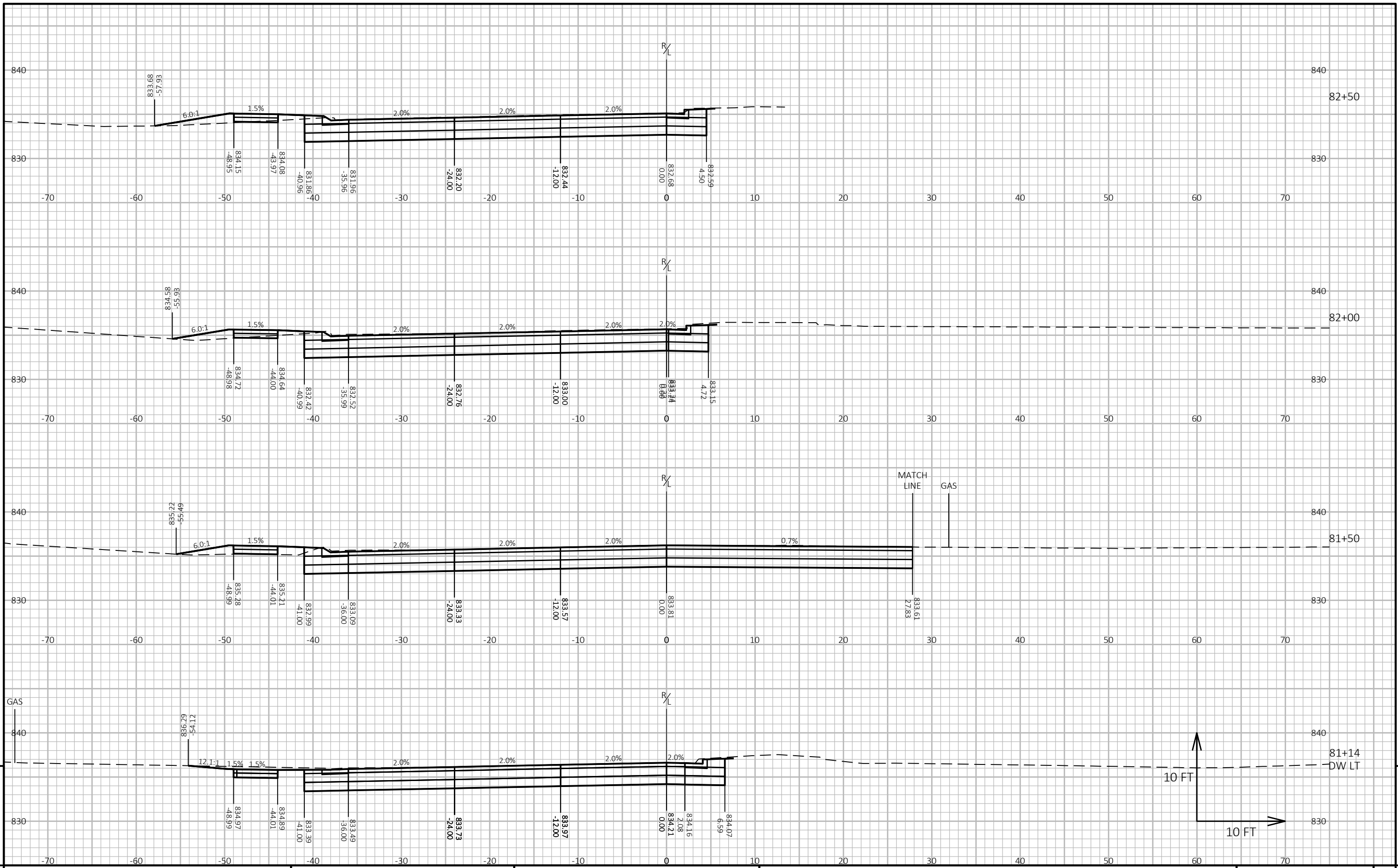
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PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

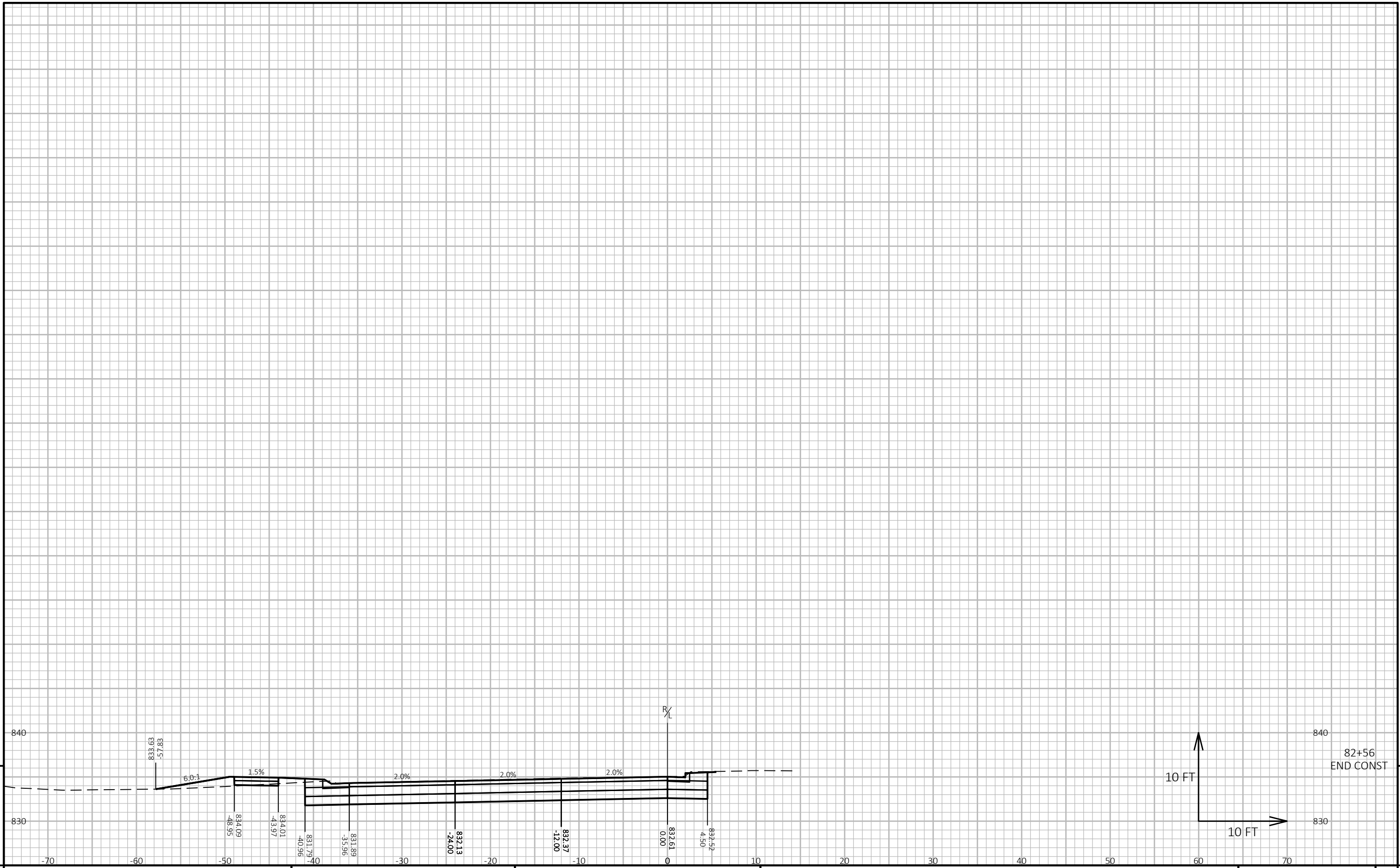
FILE NAME : O:\PDS\C3D\58800100\SHEETSPLAN\090202-XS-SOUTH.DWG      PLOT DATE : 7/21/2023 2:24 PM      PLOT BY : JOE MALENOSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E



PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET 9



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9

PROJECT NO: 5880-01-70      HWY: USH 12      COUNTY: SAUK      CROSS SECTIONS: USH 12      SHEET      E

FILE NAME : O:\PDS\C3D\58800100\SHEETSP\090202-XS-SOUTH.DWG      PLOT DATE : 7/21/2023 2:24 PM      PLOT BY : JOE MALENOWSKI      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 23

# Notes



## ***Wisconsin Department of Transportation***

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