EAU

PROJECT ID: 1050-02-73

WITH: N/A

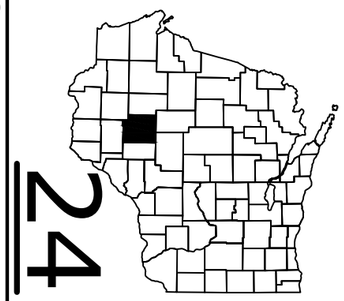
COUNTY: CHIPPEWA

OCTOBER 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 222



N

DESIGN DESIGNATION 1050-02-03

A.A.D.T.	(2027)	=	14,780
A.A.D.T.	(2047)	=	15,540
D.H.V.		=	1880
D.D.		=	50/50
T.		=	23.7%
DESIGN SPEED		=	70 MPH
ESALS		=	9,580,000

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ELK MOUND - CHIPPEWA FALLS

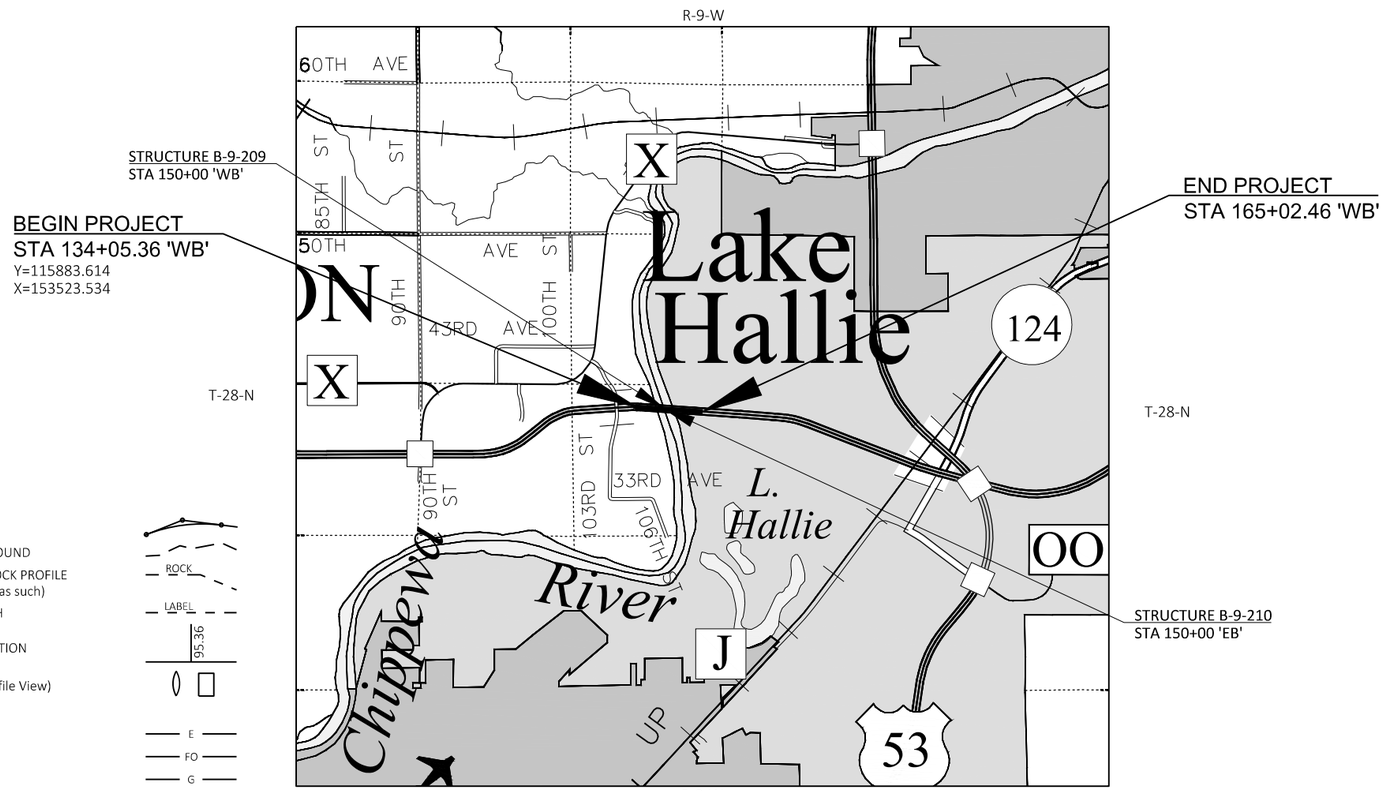
CHIPPEWA RIVER BR B090210 & B090209

STH 29

CHIPPEWA COUNTY

STATE PROJECT NUMBER
1050-02-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1050-02-73		



LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CHIPPEWA 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 18.

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'ER')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ORIGINAL PLANS PREPARED BY

JT ENGINEERING

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE
WISCONSIN
PROFESSIONAL ENGINEER

04/23/2026

DATE: 4/23/26 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING INC.
Designer	JT ENGINEERING INC.
Project Manager	TOU YANG
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG

APPROVED FOR THE DEPARTMENT — Digitally signed by Tou X. Yang Date: 2026.04.24 07:09:56-05'00'

DATE: (Signature)

E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\010101-TI.DWG PLOT DATE : 4/23/2026 12:09 PM PLOT BY : JAY HILLE PLOT NAME :

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 = 5.79 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.58 ACRES

GENERAL NOTES

THERE ARE NO KNOWN UTILITY FACILITIES WITHIN THE PROJECT AREA. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THIS.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

STANDARD ABBREVIATIONS

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

SEQUENCE OF PLANS AND DETAILS IN SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
REMOVAL DETAILS
PLAN DETAILS
EROSION CONTROL
TRAFFIC CONTROL AND CONSTRUCTION STAGING
ALIGNMENT DETAILS

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

WISDOT CONTACT

TOU YANG, PE
WISDOT NW REGION PROJECT SUPERVISOR
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
(715) 833-5570
TOU.YANG@DOT.WI.GOV

DESIGN CONTACT

CHRIS MARCUM, PE
CONSULTANT PROJECT MANAGER
16855 CTY HWY X, SUITE 2
CHIPPEWA FALLS, WI 54729
(715) 861-4823
CHRISM@JT-ENGINEERING.COM

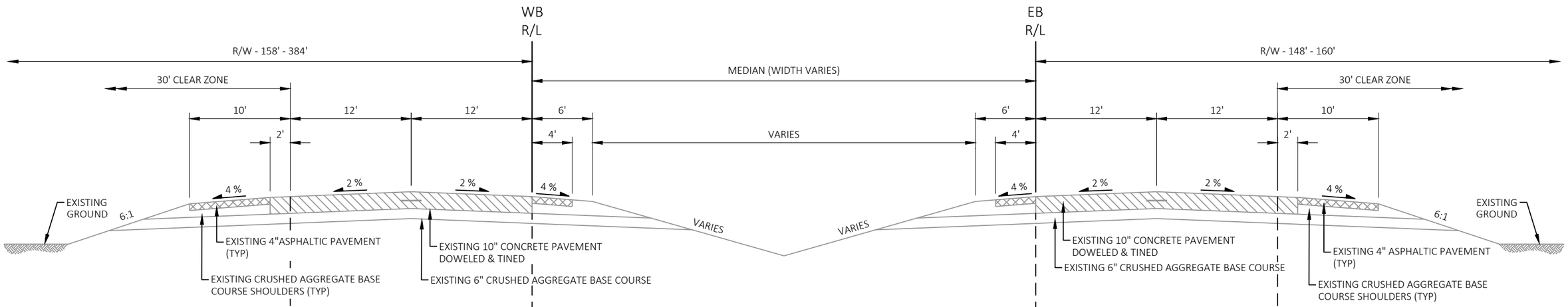
WISCONSIN DNR LIAISON

LEAH NICOL
DNR NORTHWEST
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
LEAH.NICOL@WISCONSIN.GOV

2

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - Plan 1 IN 200 FT
PLOT DATE : 8/17/2026 7:50 AM
PLOT BY : JAY HILLE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

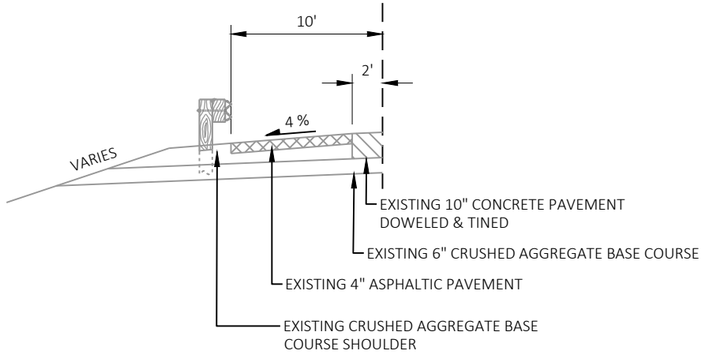


EXISTING TYPICAL SECTION - STH 29

STA 134+04 'WB' - 146+24 'WB'
STA 153+79 'WB' - 165+02 'WB'

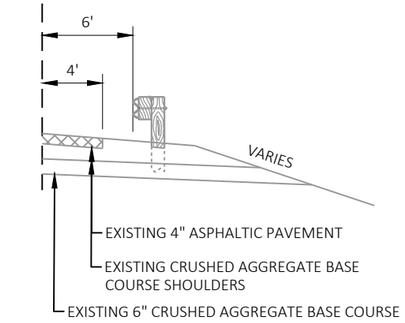
EXISTING TYPICAL SECTION - STH 29

STA 133+70 'EB' - 146+45 'EB'
STA 153+58 'EB' - 165+00 'EB'



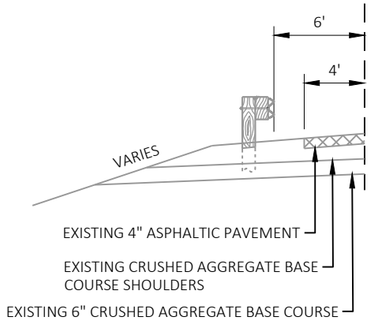
EXISTING GUARDRAIL - STH 29

STA 143+96 - 146+30 'WB'
STA 153+54 - 156+01 'WB'



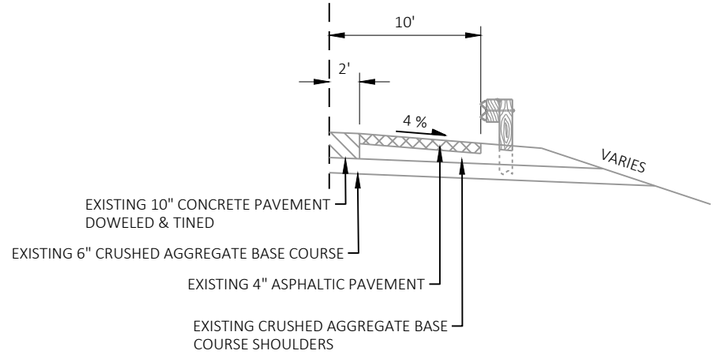
EXISTING GUARDRAIL - STH 29

STA 134+04 - 136+94 'WB'
STA 153+54 - 156+01 'WB'



EXISTING GUARDRAIL - STH 29

STA 143+17 - 146+14 'EB'



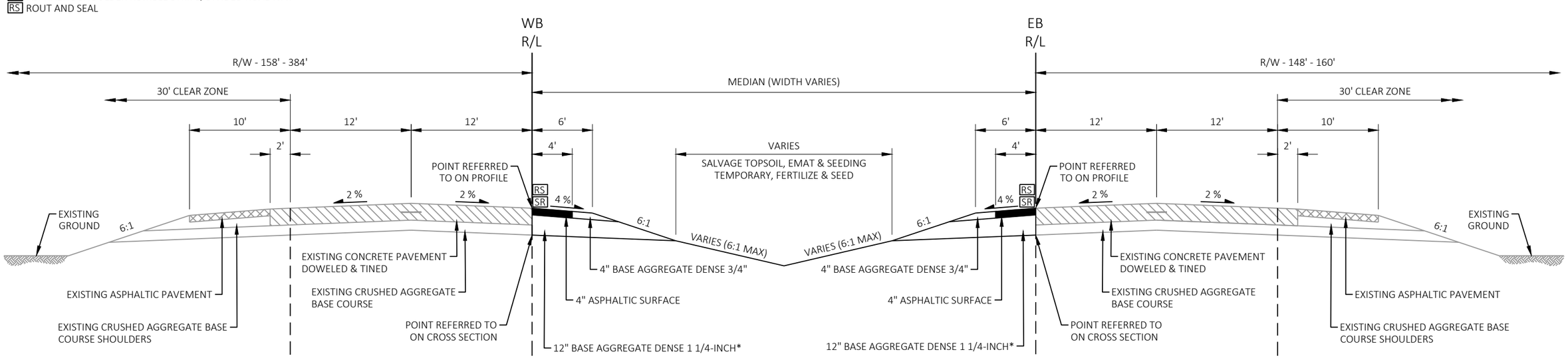
EXISTING GUARDRAIL - STH 29

STA 143+89 - 146+37 'EB'

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 4	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 01-10ft
PLOT DATE : 5/1/2026 1:45 PM
PLOT BY : STEVE LIPPERT
PLOT NAME :
PLOT SCALE : 1:10
WISDOT/CADDS SHEET 42

SR ASPHALTIC SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
RS ROUT AND SEAL



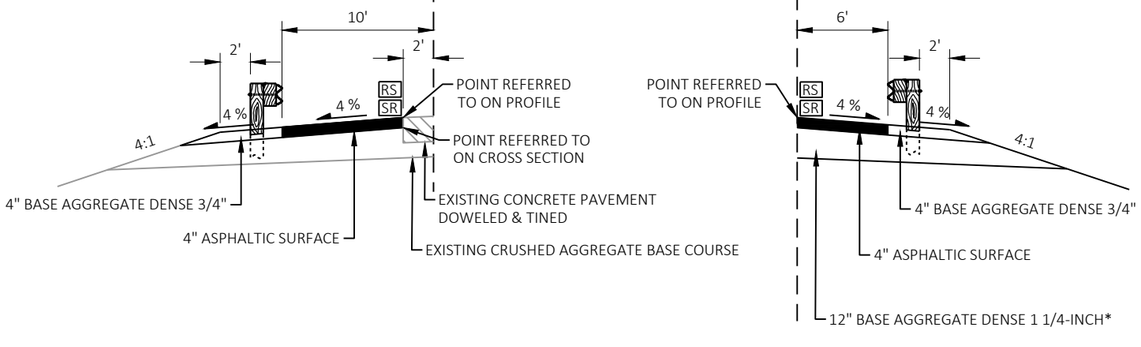
FINISHED TYPICAL SECTION - STH 29

STA 134+04 'WB' - 146+24 'WB'
STA 153+79 'WB' - 165+02 'WB'

FINISHED TYPICAL SECTION - STH 29

STA 133+70 'EB' - 146+45 'EB'
STA 153+58 'EB' - 165+00 'EB'

*CONTRACTOR CAN UTILIZE EXISTING BASE AGGREGATE DENSE FROM CROSSOVER CONSTRUCTION.

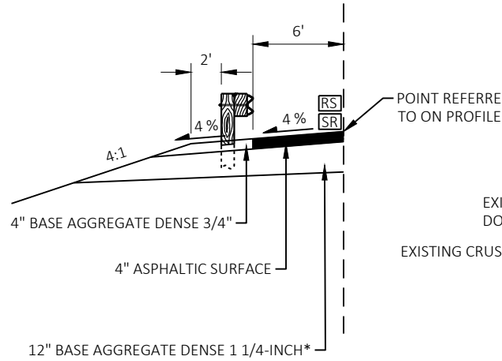


FINISHED GUARDRAIL - STH 29

STA 142+21 'WB' - 146+28 'WB'
STA 152+56 'WB' - 157+23 'WB'

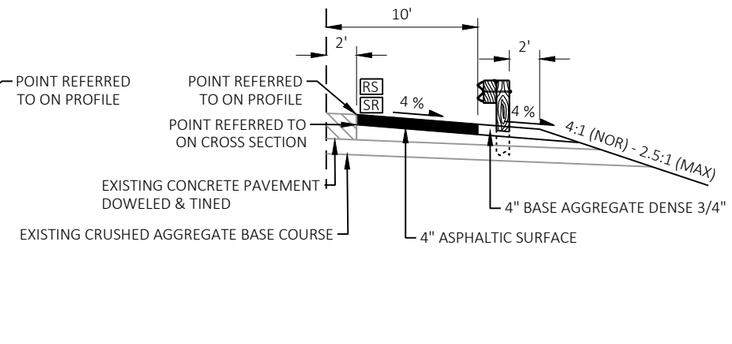
FINISHED GUARDRAIL - STH 29

STA 134+04 'WB' - 136+94 'WB'
STA 153+88 'WB' - 158+51 'WB'



FINISHED GUARDRAIL - STH 29

STA 141+86 'EB' - 146+14 'EB'



FINISHED GUARDRAIL - STH 29

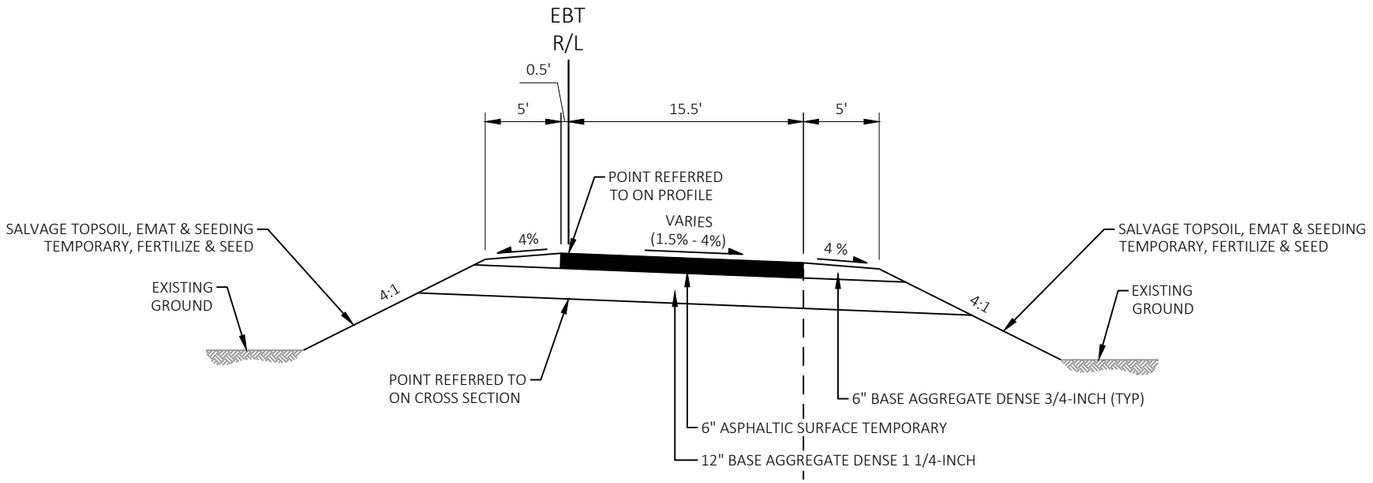
STA 142+85 'EB' - 146+37 'EB'

*CONTRACTOR CAN UTILIZE EXISTING BASE AGGREGATE DENSE FROM CROSSOVER CONSTRUCTION.

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 5	E

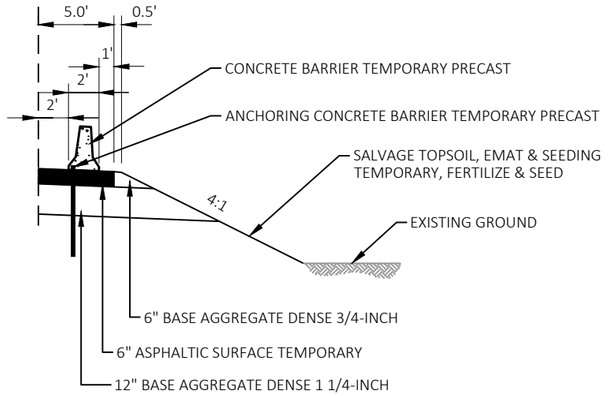
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 02-10ft
PLOT DATE : 5/1/2026 1:45 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1:10

2



FINISHED TYPICAL SECTION - EASTBOUND TEMPORARY CROSSOVER

STA 35+04 - 46+00 'EBT'
STA 53+55 - 65+09 'EBT'

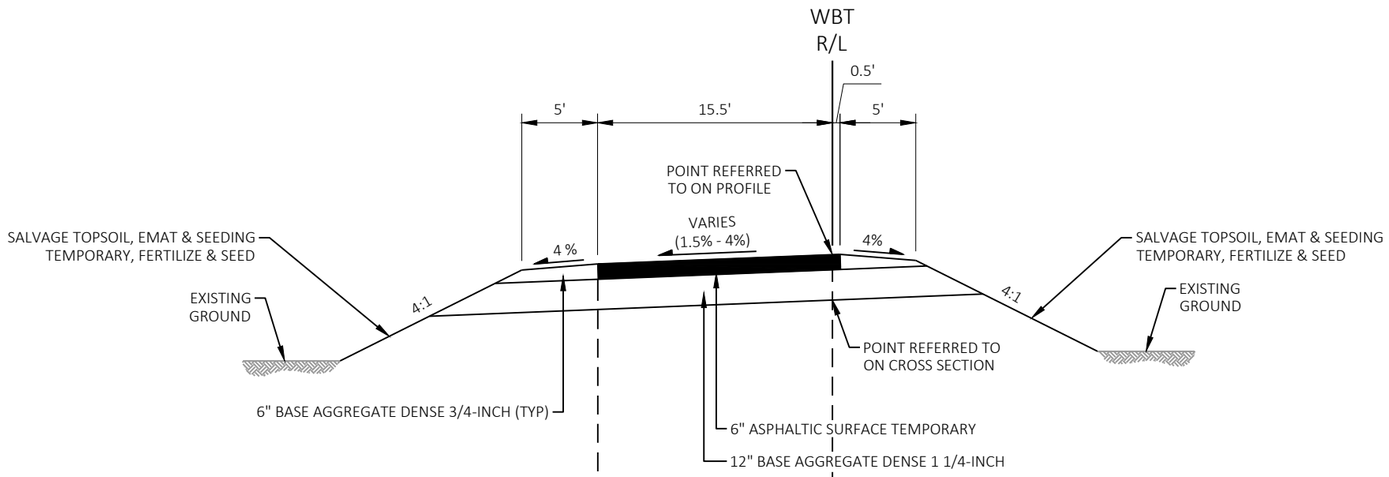


CONCRETE BARRIER TEMPORARY PRECAST:
STA 43+08 - 46+00 'EBT'
STA 53+55 - 56+47 'EBT'

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 6	E

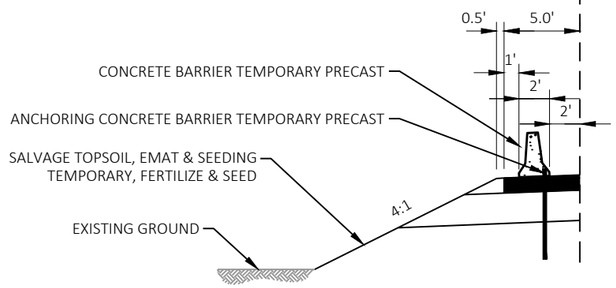
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 03-10ft
PLOT DATE : 5/1/2026 1:45 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1:10
WISDOT/CADDS SHEET 42

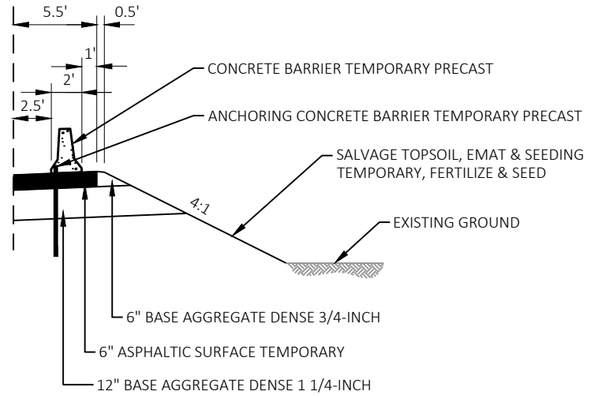
2



FINISHED TYPICAL SECTION - WESTBOUND TEMPORARY CROSSOVER

STA 34+00 - 46+81 'WBT'
STA 53+55 - 65+09 'WBT'



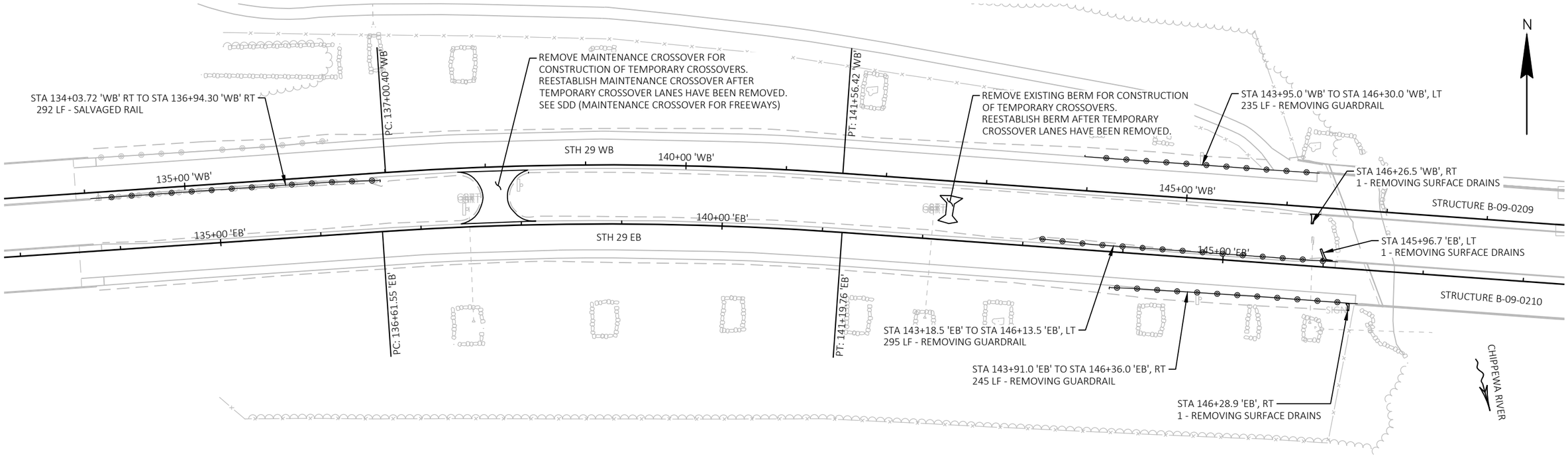


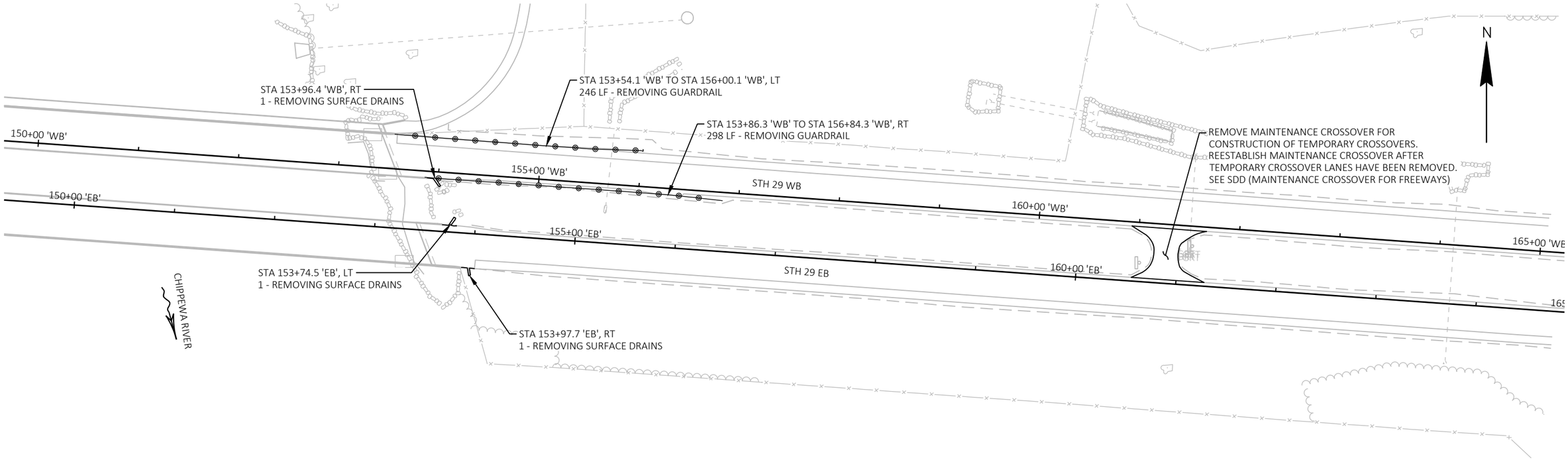
CONCRETE BARRIER TEMPORARY PRECAST:
STA 43+57 - 46+50 'WBT'
STA 54+05 - 57+00 'WBT'

CONCRETE BARRIER TEMPORARY PRECAST:
STA 34+00 - 37+05 'WBT'

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 7	E

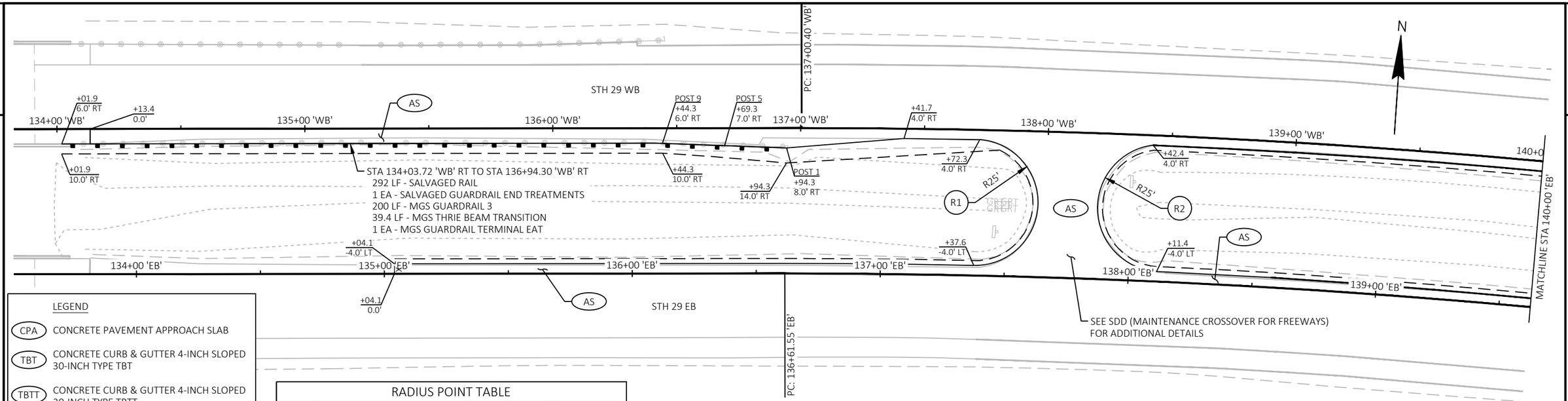
2





PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	REMOVAL DETAILS	SHEET 8	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\021101-RM.DWG
LAYOUT NAME - EC_Median 1
PLOT DATE : 8/17/2026 7:52 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

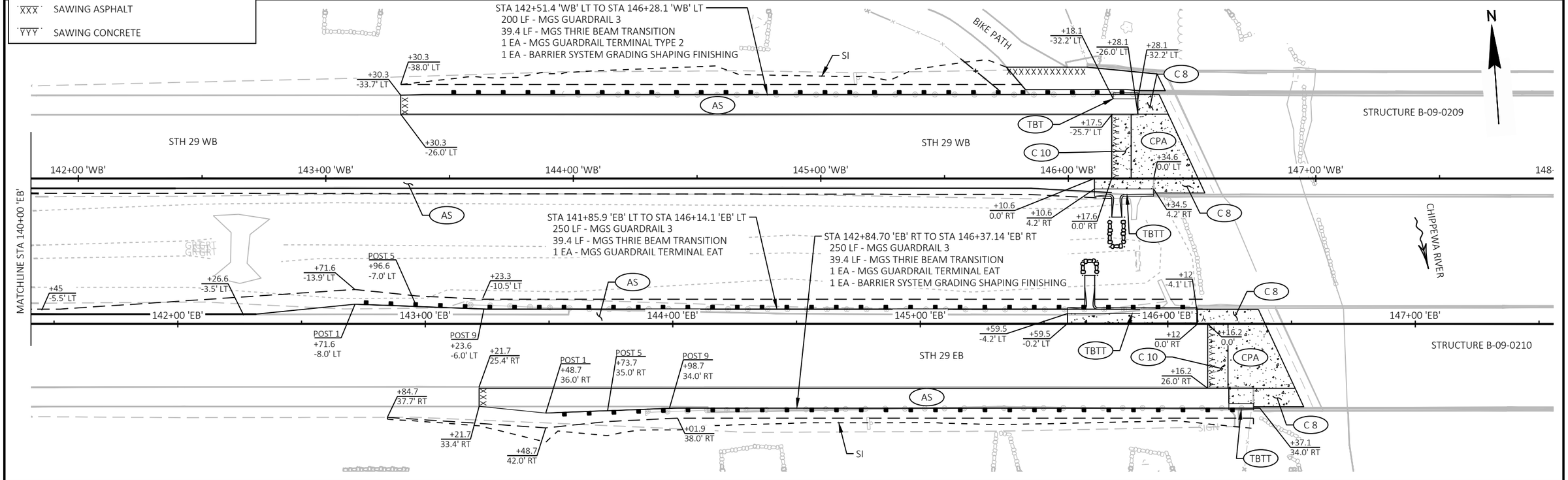


LEGEND

- (CPA) CONCRETE PAVEMENT APPROACH SLAB
- (TBT) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT
- (TBTT) CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT
- (AS) ASPHALTIC SURFACE
- (C 8) CONCRETE PAVEMENT 8-INCH
- (C 10) CONCRETE PAVEMENT 10-INCH
- 'XXX' SAWING ASPHALT
- 'YYY' SAWING CONCRETE

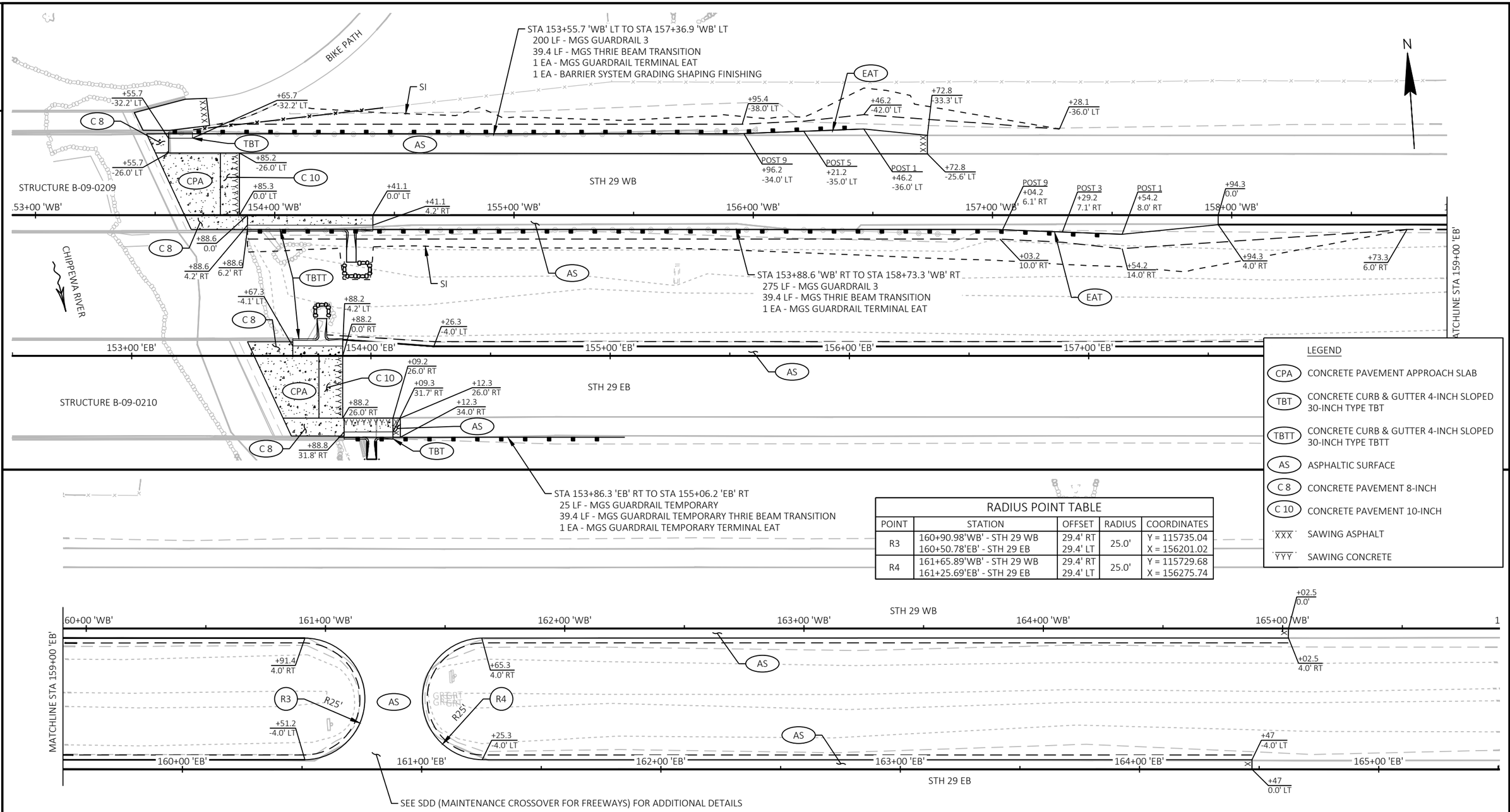
RADIUS POINT TABLE

POINT	STATION	OFFSET	RADIUS	COORDINATES
R1	137+70.94'WB' - STH 29 WB 137+37.64'EB' - STH 29 EB	29.3' RT 29.3' LT	25.0'	Y = 115878.49 X = 153889.68
R2	138+45.98'WB' - STH 29 WB 138+11.34'EB' - STH 29 EB	29.3' RT 29.3' LT	25.0'	Y = 115881.03 X = 153964.00



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN DETAILS	SHEET 9	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - PD_01
PLOT DATE : 8/17/2026 9:22 AM
PLOT BY : JAY HILLE
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

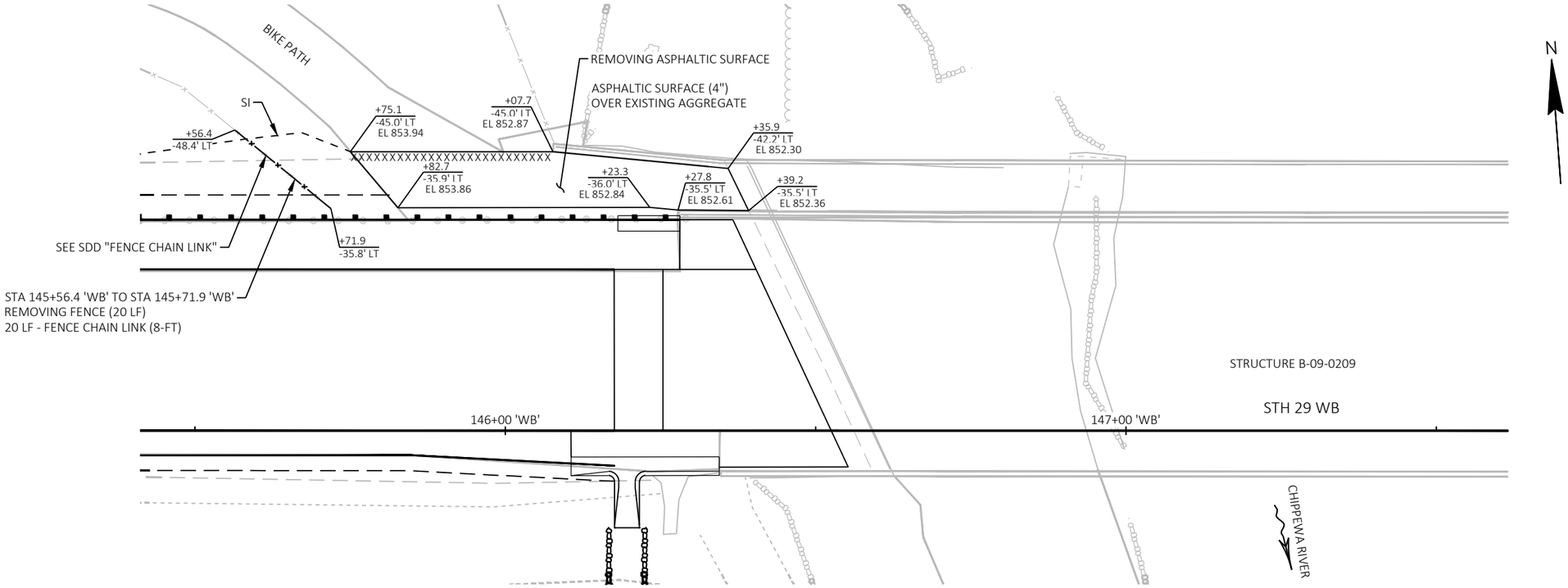


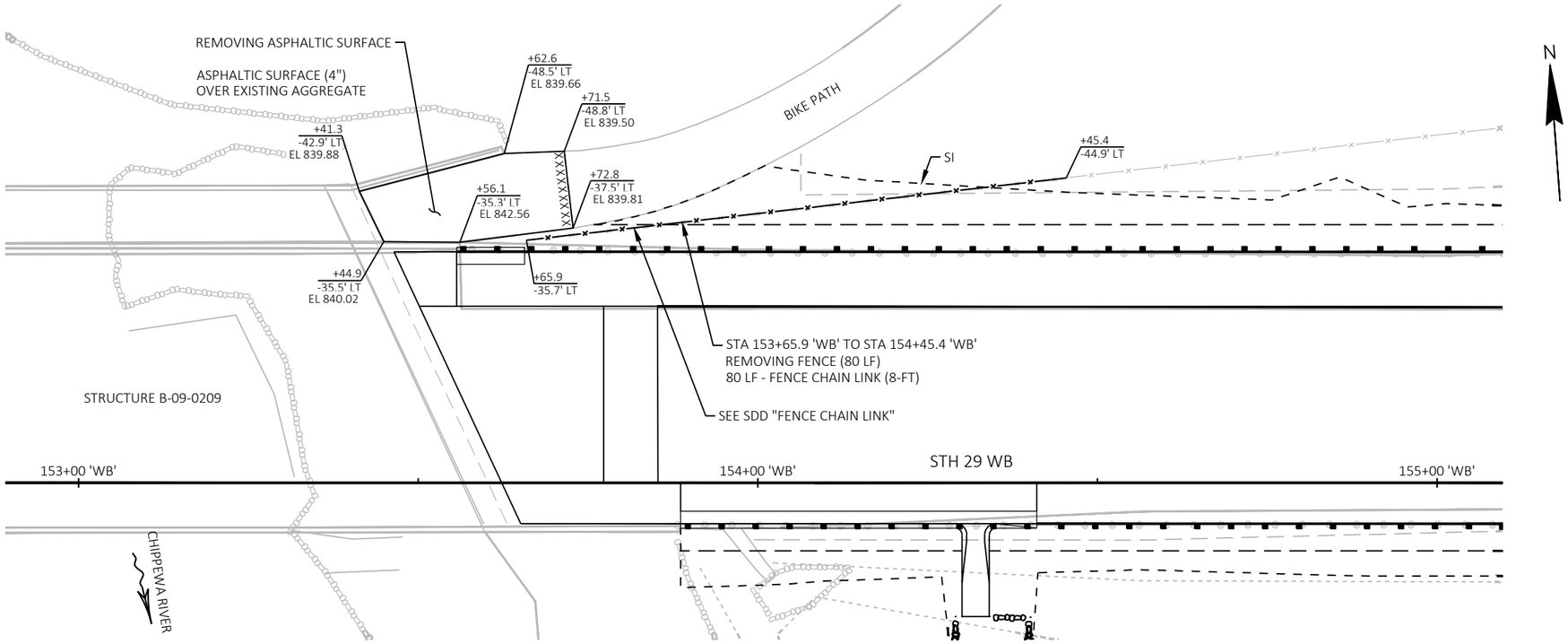
RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATES
R3	160+90.98'WB' - STH 29 WB 160+50.78'EB' - STH 29 EB	29.4' RT 29.4' LT	25.0'	Y = 115735.04 X = 156201.02
R4	161+65.89'WB' - STH 29 WB 161+25.69'EB' - STH 29 EB	29.4' RT 29.4' LT	25.0'	Y = 115729.68 X = 156275.74

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN DETAILS	SHEET 10	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - PD_02
PLOT DATE : 8/17/2026 9:22 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2





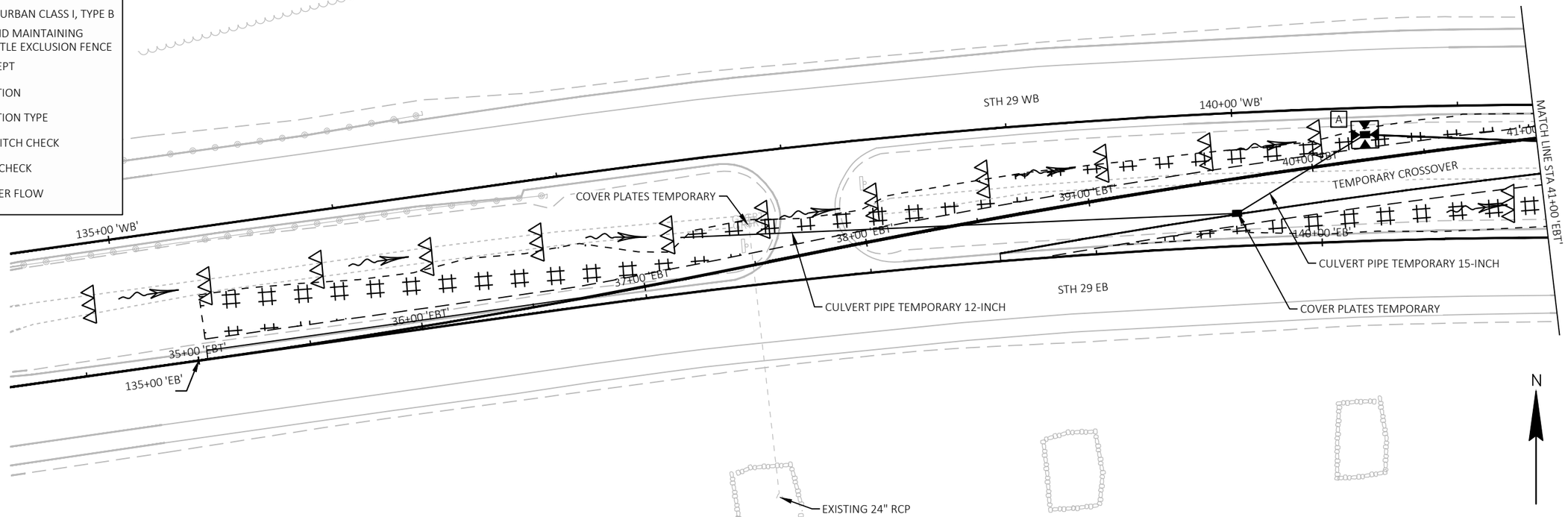
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN DETAILS -FENCING	SHEET 11	E

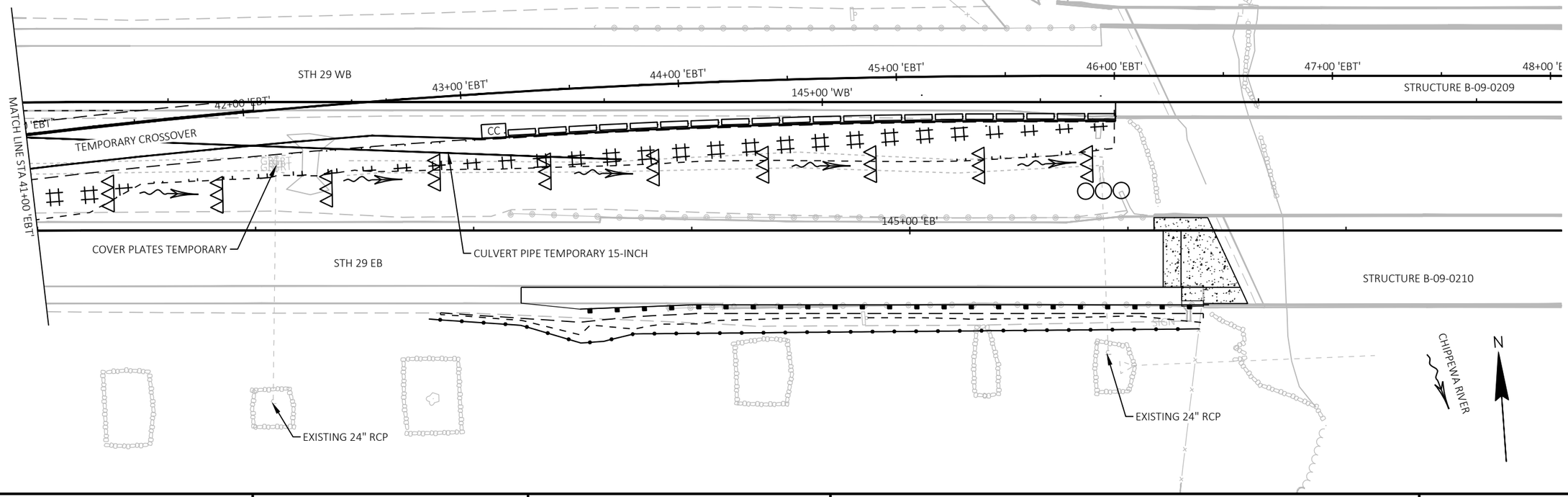
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\027101-FN.DWG
LAYOUT NAME - PD-Fen_01
PLOT DATE : 8/17/2026 9:25 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 44

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW





PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 EBT CROSSOVER	SHEET 12	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022001-EC_EBT.DWG
LAYOUT NAME - EC_EBT 1

PLOT DATE : 8/17/2026 9:45 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

EXISTING 18" RCP
(EXIST PIPE LAID FLAT)

STRUCTURE B-09-0209

53+00 'EBT'

54+00 'EBT'

55+00 'EBT'

56+00 'EBT'

STH 29 WB

155+00 'WB'

57+00 'EBT'

58+00 'EBT'

TEMPORARY CROSSOVER

CULVERT PIPE TEMPORARY 15-INCH

155+00 'EB'

STRUCTURE B-09-0210

STH 29 EB

MATCH LINE STA 41+00 'EBT'

CHIPPEWA RIVER

N

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

EXISTING 18" RCP

N

STH 29 WB

160+00 'WB'

COVER PLATES TEMPORARY

165+00 'WB'

CULVERT PIPE TEMPORARY 15-INCH

CULVERT PIPE TEMPORARY 18-INCH

A

MATCH LINE STA 41+00 'EBT'

60+00 'EBT'

TEMPORARY CROSSOVER

61+00 'EBT'

62+00 'EBT'

63+00 'EBT'

64+00 'EBT'

160+00 'EB'

COVER PLATES TEMPORARY

STH 29 EB

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 EBT CROSSOVER	SHEET 13	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022001-EC_EBT.DWG
LAYOUT NAME - EC_EBT 2

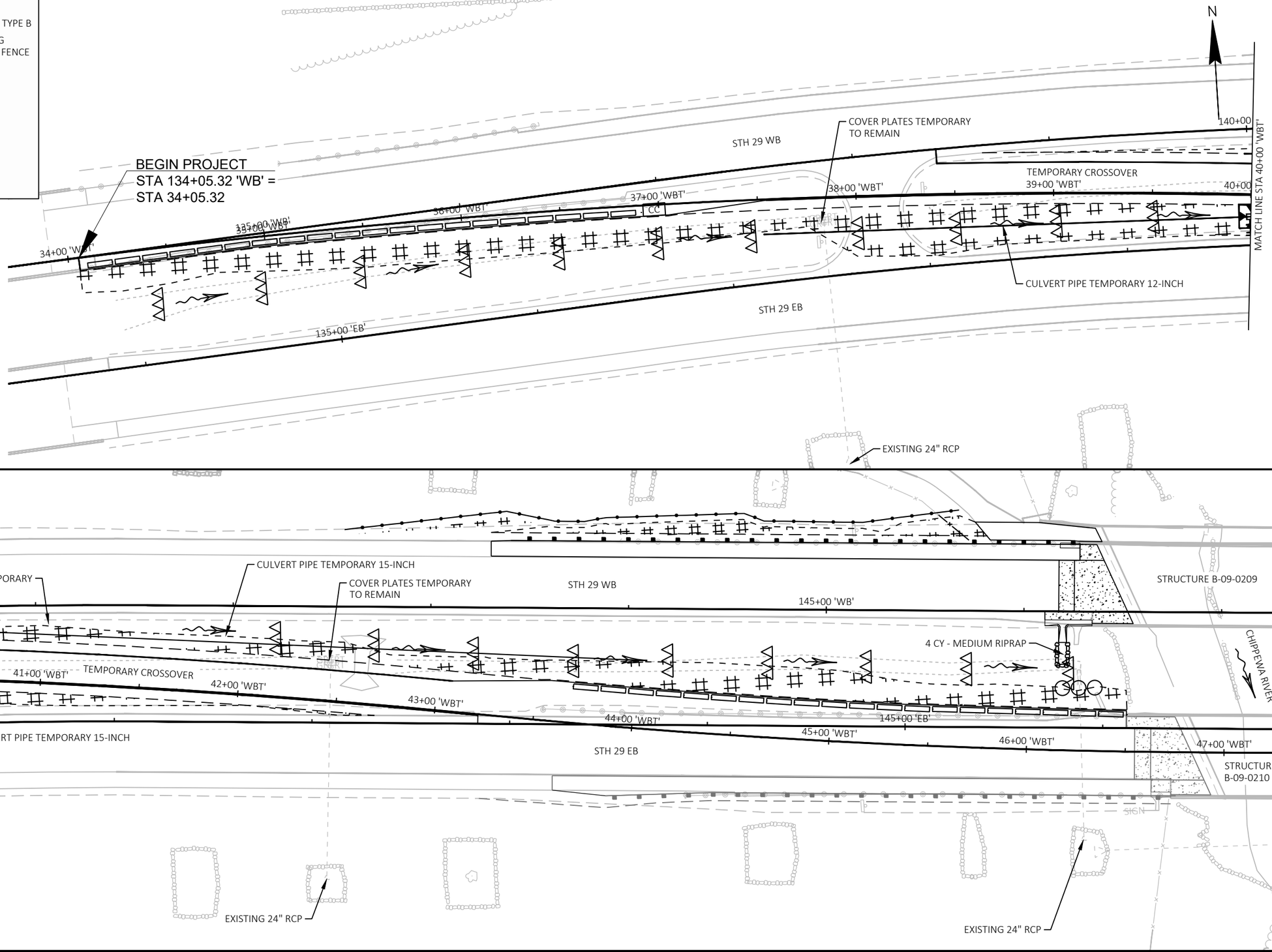
PLOT DATE : 8/17/2026 9:45 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 WBT CROSSOVER	SHEET 14	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022002-EC_WBT.DWG
LAYOUT NAME - EC_WBT 1

PLOT DATE : 8/17/2026 9:49 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

EXISTING 18" RCP
(EXIST PIPE LAID FLAT)

N

STRUCTURE B-09-0209

STH 29 WB

155+00 'WB'

4 CY - MEDIUM RIPRAP

MATCH LINE STA 59+00 'WBT'

CC

155+00 'EB'

52+00 'WBT'

53+00 'WBT'

54+00 'WBT'

55+00 'WBT'

56+00 'WBT'

57+00 'WBT'

58+00 'WBT'

TEMPORARY CROSSOVER

59+00

STRUCTURE B-09-0210

STH 29 EB

CHIPPEWA RIVER

EXISTING 18" RCP

COVER PLATES TEMPORARY

160+00 'WB'

COVER PLATES TEMPORARY
TO REMAIN

STH 29 WB

MATCH LINE STA 59+00 'WBT'

'WBT'

TEMPORARY CROSSOVER

60+00 'WBT'

61+00 'WBT'

62+00 'WBT'

63+00 'WBT'

64+00 'WBT'

A

160+00 'EB'

END PROJECT
STA 165+02.46 'WB' =
STA 65+03.95 'WBT'

165+00 '

STH 29 EB

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 WBT CROSSOVER	SHEET 15	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022002-EC_WBT.DWG
LAYOUT NAME - EC_WBT 2

PLOT DATE : 8/17/2026 9:49 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

BEGIN PROJECT
STA 134+05.32 'WB'

STH 29 WB

STH 29 EB

MATCH LINE STA 140+00 'EB'

EXISTING 24" RCP

N

MATCH LINE STA 140+00 'EB'

STH 29 WB

STH 29 EB

CHIPPEWA RIVER

2 CY - MEDIUM RIPRAP

EXISTING 24" RCP

N

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 MEDIAN	SHEET 16	E

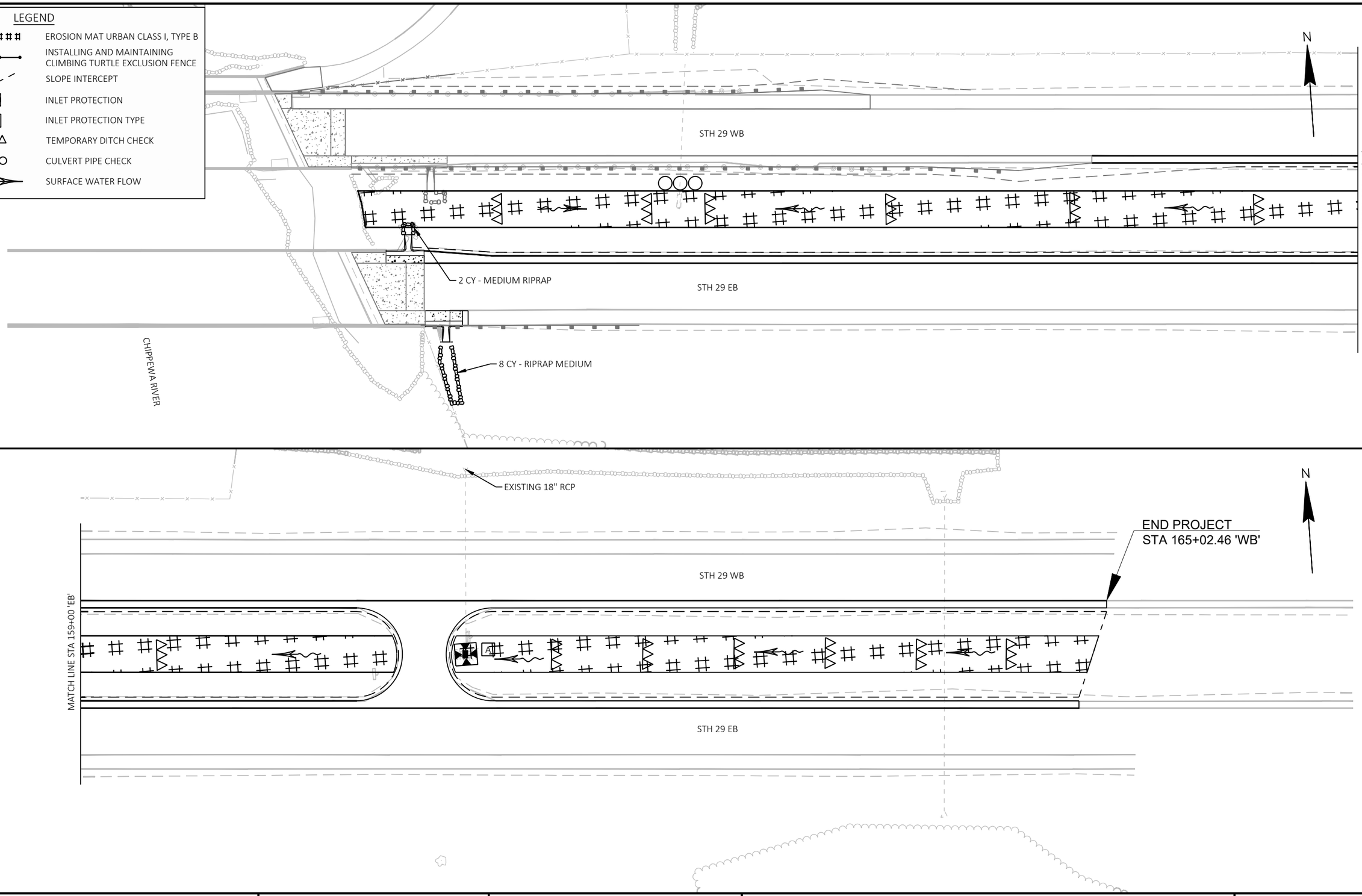
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022003-EC_MEDIAN.DWG
LAYOUT NAME - EC_Median 1

PLOT DATE : 8/17/2026 9:52 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW



2

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	EROSION CONTROL - STH 29 MEDIAN	SHEET 17	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\022003-EC_MEDIAN.DWG
LAYOUT NAME - EC_Median 2

PLOT DATE : 8/17/2026 9:52 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- TRAFFIC CONTROL FLOW ARROW
- WORK ZONE
- CONCRETE BARRIER TEMPORARY PRECAST
- CC — CRASH CUSHIONS TEMPORARY

TRAFFIC STAGE 1A:

1. MAINTAIN EB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE EB INSIDE LANE)
2. MAINTAIN WB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE WB INSIDE LANE)

CONSTRUCTION STAGE 1A:

1. REMOVE EXISTING MEDIAN SHOULDER AT TIE-IN LOCATIONS.
2. CONSTRUCT 'EB' TEMPORARY CROSSOVER

TRAFFIC CONTROL GENERAL NOTES

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

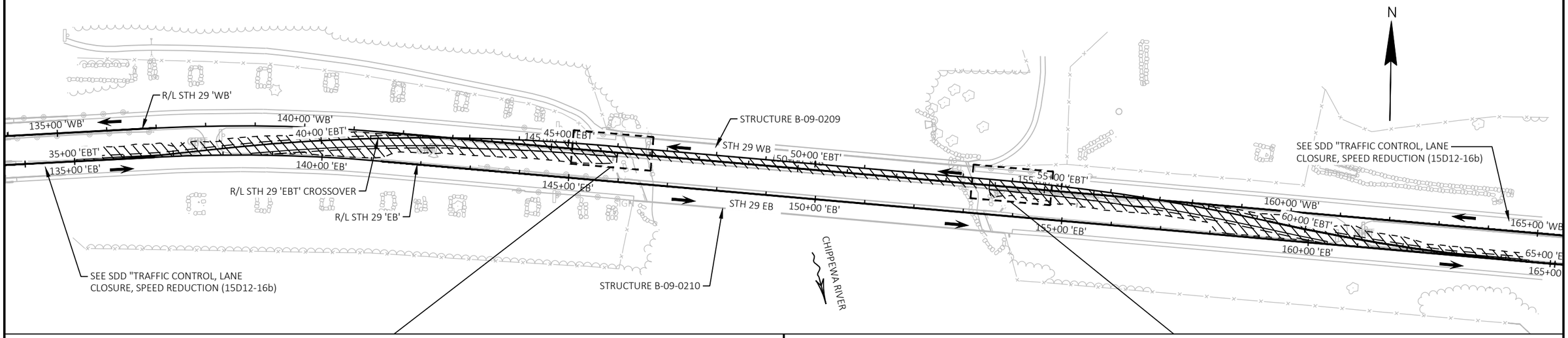
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

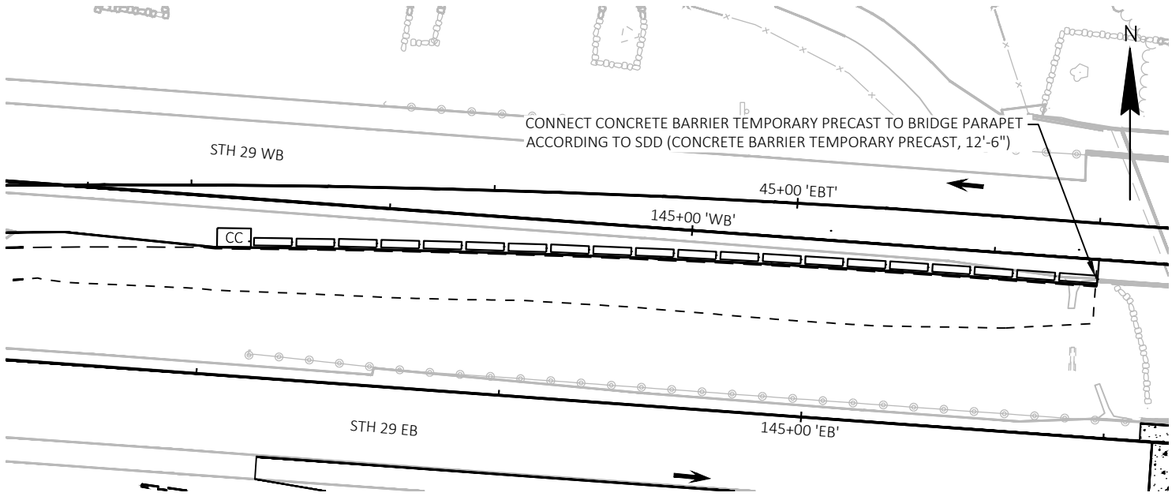
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

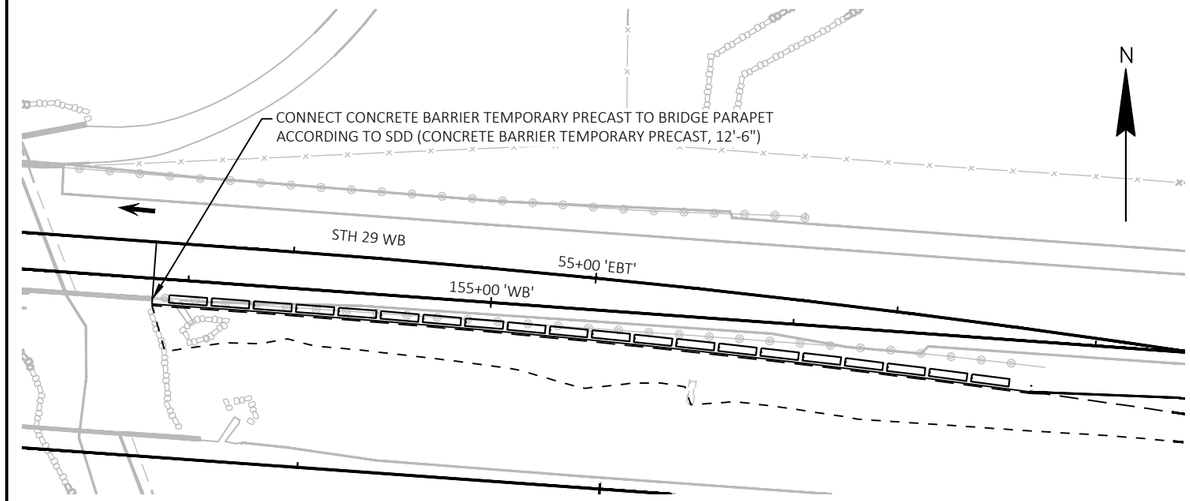
REDUCE THE REGULATORY SPEED LIMIT TO 55 MPH ON STH 29 WHEN TRAFFIC IS REDUCED TO A SINGLE LANE IN THAT DIRECTION.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.







PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 1A OVERVIEW	SHEET 18	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026101-S1.DWG
LAYOUT NAME - STAGE 1A

PLOT DATE : 8/17/2026 10:01 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

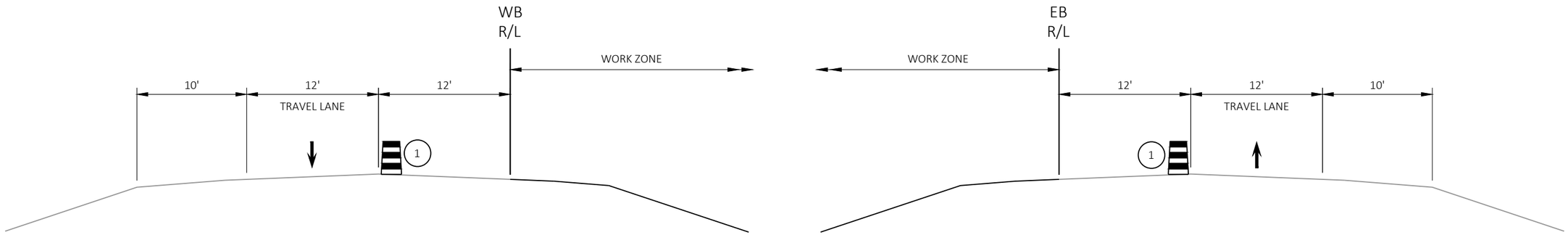
2

LEGEND

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL FLOW ARROW

1 DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, DRUMS MAY BE SHIFTED TO LANE LINE ONLY IN AREAS WITH CONSTRUCTION ACTIVITIES AS APPROVED BY THE ENGINEER ALLOWABLE HOURS



STAGE 1A

CONSTRUCT STH 29 EBT CROSSOVER

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 1A DETAIL	SHEET 19	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026101-S1.DWG
LAYOUT NAME - STAGE 1A (2)
PLOT DATE : 8/17/2026 10:01 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

LEGEND

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER

TRAFFIC CONTROL FLOW ARROW

WORK ZONE

TRAFFIC STAGE 1B:

1. STRUCTURE B-09-0210 IS CLOSED FOR REPAIRS.
2. EASTBOUND TEMPORARY CROSSOVER HAS MOVED EB TRAFFIC ONTO STRUCTURE B-09-0209.

CONSTRUCTION STAGE 1B:

1. STRUCTURE B-09-0210 REHABILITATION WORK.
2. GUARDRAIL REPLACEMENT IN SW QUADRANT OF STRUCTURE B-09-0210
3. CONSTRUCT TEMPORARY GUARDRAIL ITEMS ON SE QUADRANT OF STRUCTURE B-09-0210.

TRAFFIC CONTROL GENERAL NOTES

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

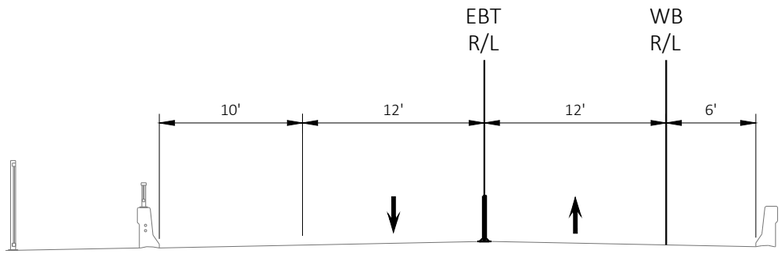
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

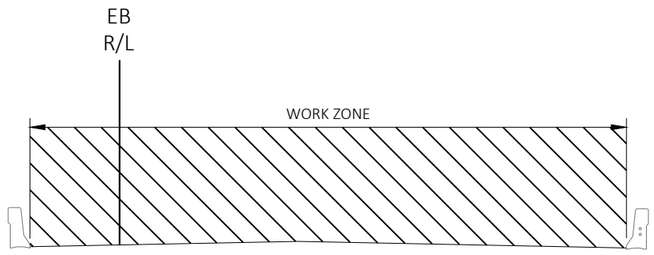
REDUCE THE REGULATORY SPEED LIMIT TO 55 MPH ON STH 29 WHEN TRAFFIC IS REDUCED TO A SINGLE LANE IN THAT DIRECTION.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.



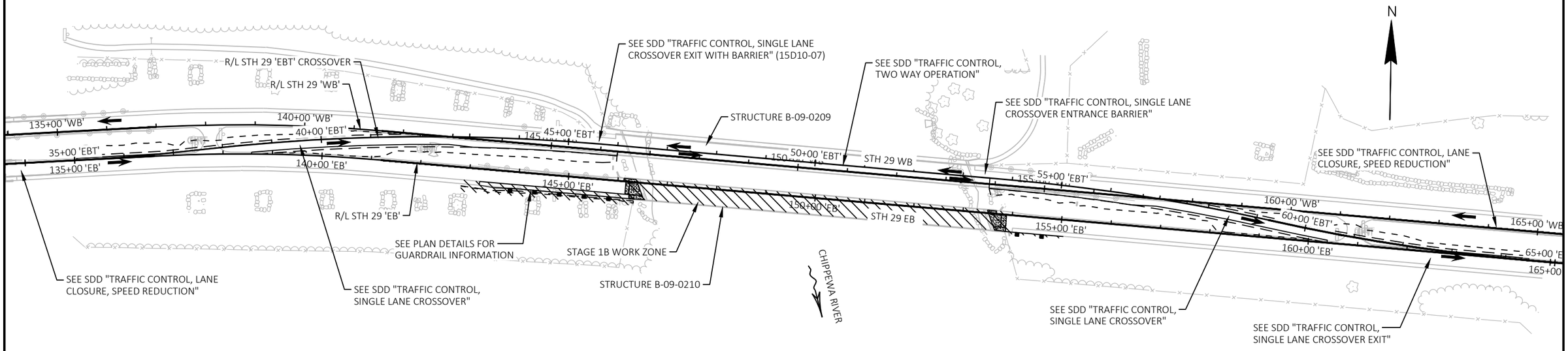
STRUCTURE B-09-0209



STRUCTURE B-09-0210

STAGE 1B

COMPLETE WORK ON B-09-0210



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 1B OVERVIEW	SHEET 20	E

2

LEGEND

TRAFFIC CONTROL FLOW ARROW

WORK ZONE

CONCRETE BARRIER TEMPORARY PRECAST

TRAFFIC STAGE 2A:

1. MAINTAIN EB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE EB INSIDE LANE)
2. MAINTAIN WB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE WB INSIDE LANE)

CONSTRUCTION STAGE 2A:

1. REMOVE EXISTING MEDIAN SHOULDER AT TIE-IN LOCATIONS.
2. REMOVE 'EB' TEMPORARY CROSSOVER.
3. CONSTRUCT 'WB' TEMPORARY CROSSOVER

TRAFFIC CONTROL GENERAL NOTES

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

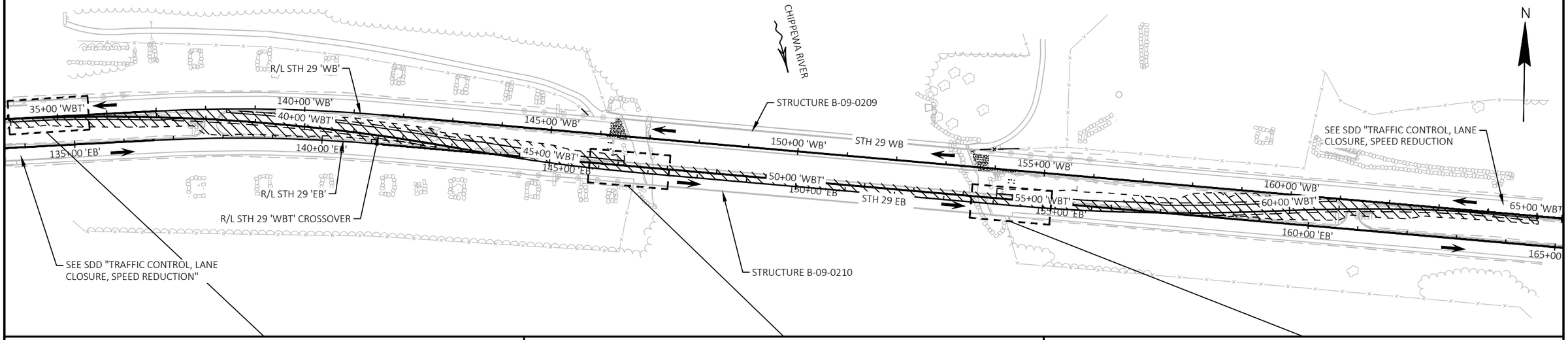
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

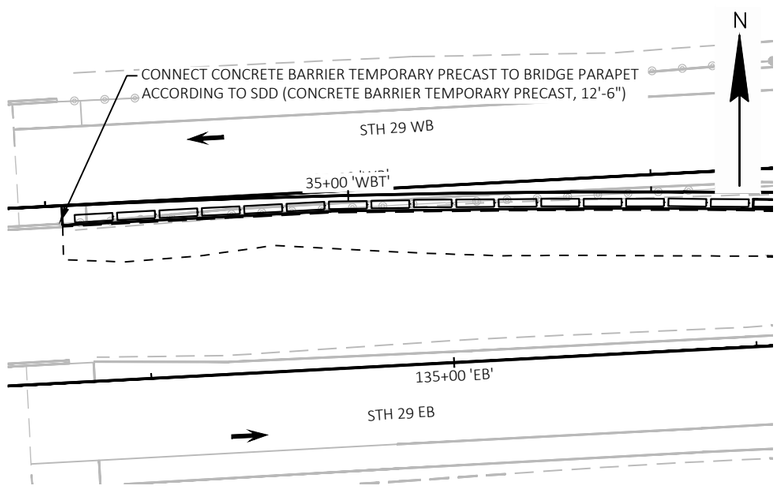
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

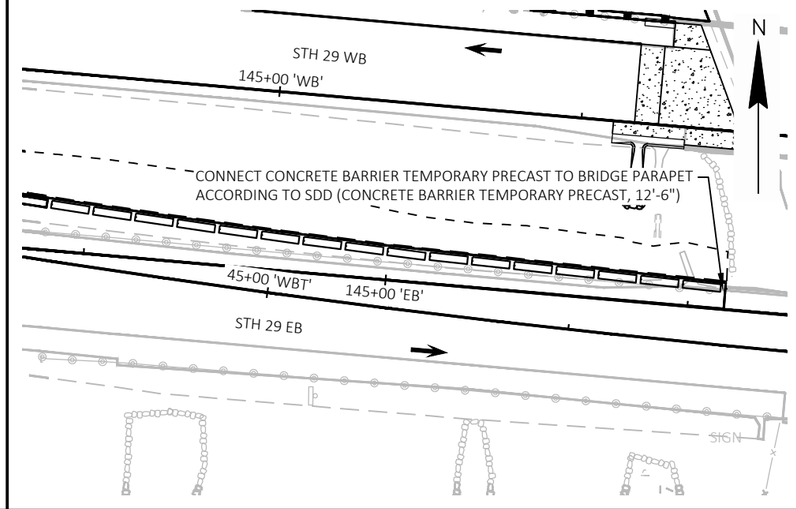
REDUCE THE REGULATORY SPEED LIMIT TO 55 MPH ON STH 29 WHEN TRAFFIC IS REDUCED TO A SINGLE LANE IN THAT DIRECTION.

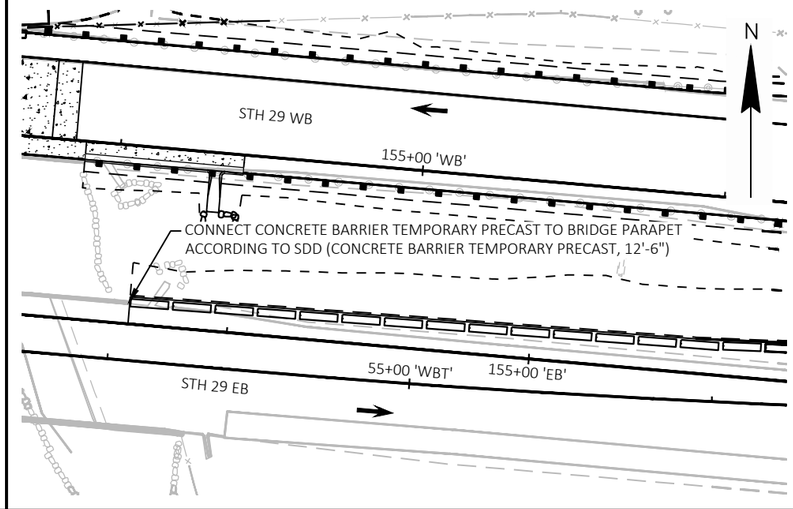
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.









PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 2A OVERVIEW	SHEET 21	E

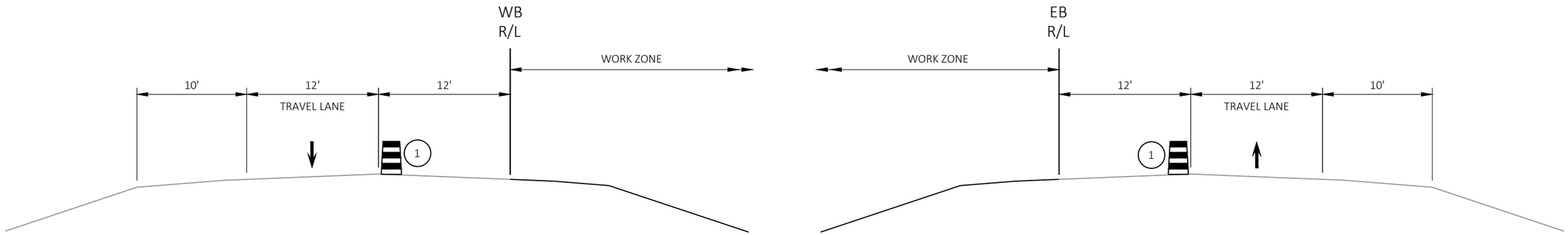
2

LEGEND

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL FLOW ARROW

1 DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, DRUMS MAY BE SHIFTED TO LANE LINE ONLY IN AREAS WITH CONSTRUCTION ACTIVITIES AS APPROVED BY THE ENGINEER ALLOWABLE HOURS



STAGE 2A

CONSTRUCT STH 29 WBT CROSSOVER

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 2A DETAIL	SHEET 22	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026201-S2.DWG
LAYOUT NAME - STAGE 2A (2)
PLOT DATE : 8/17/2026 10:06 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 42

2

LEGEND

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER

TRAFFIC CONTROL FLOW ARROW

WORK ZONE

TRAFFIC STAGE 2B:

1. STRUCTURE B-09-0209 IS CLOSED FOR REPAIRS.
2. WESTBOUND TEMPORARY CROSSOVER HAS MOVED WB TRAFFIC ONTO STRUCTURE B-09-0210.

CONSTRUCTION STAGE 2B:

1. STRUCTURE B-09-0209 REHABILITATION WORK.
2. GUARDRAIL REPLACEMENT IN NW, NE, & SE QUADRANT OF STRUCTURE B-09-0209.
3. CONSTRUCT CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES ON SW QUADRANT OF STRUCTURE B-09-0219.

TRAFFIC CONTROL GENERAL NOTES

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

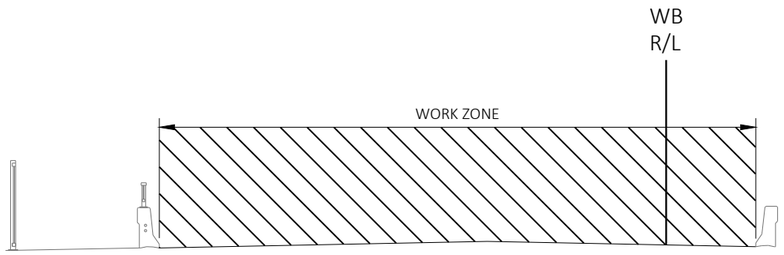
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

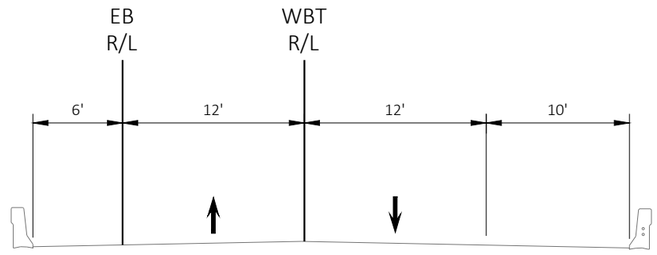
REDUCE THE REGULATORY SPEED LIMIT TO 55 MPH ON STH 29 WHEN TRAFFIC IS REDUCED TO A SINGLE LANE IN THAT DIRECTION.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.



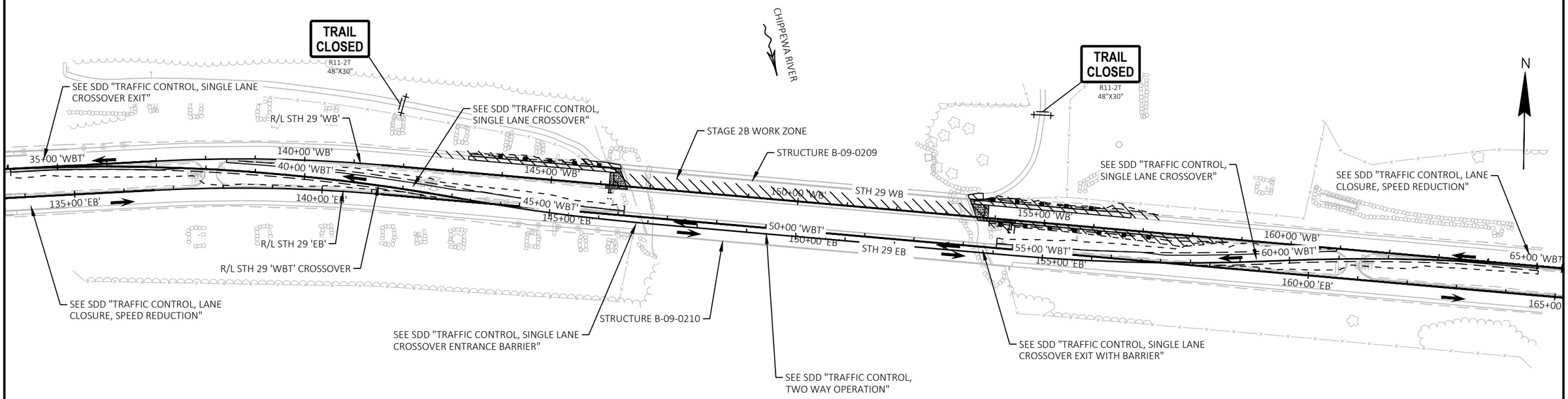
STRUCTURE B-09-0209



STRUCTURE B-09-0210

STAGE 2B

COMPLETE WORK ON B-09-0209



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 2B OVERVIEW	SHEET 23	E

2

LEGEND

TRAFFIC CONTROL FLOW ARROW

WORK ZONE

TRAFFIC STAGE 3A:

1. MAINTAIN EB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE EB INSIDE LANE)
2. MAINTAIN WB TRAFFIC ON EXISTING OUTSIDE LANE (CLOSE WB INSIDE LANE)

CONSTRUCTION STAGE 3A:

1. REMOVE 'WB' TEMPORARY CROSSOVER
2. GUARDRAIL REPLACEMENT IN NW QUADRANT OF STRUCTURE B-09-0210.
3. CONSTRUCT CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES ON NE QUADRANT OF STRUCTURE B-09-0210.
4. REMOVE TEMPORARY STORM SEWER ITEMS.
5. RESTORE MEDIAN.

TRAFFIC CONTROL GENERAL NOTES

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

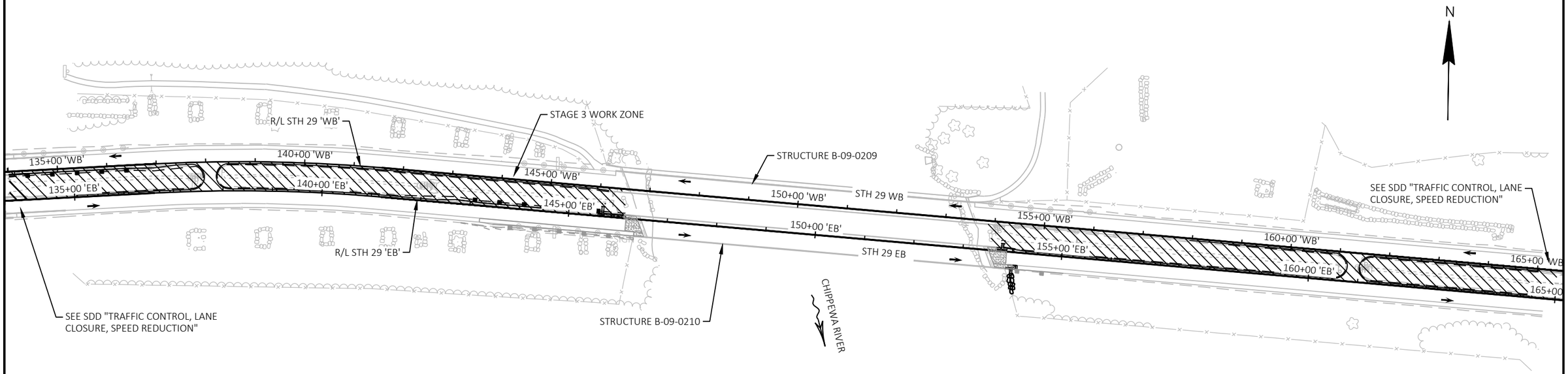
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

REDUCE THE REGULATORY SPEED LIMIT TO 55 MPH ON STH 29 WHEN TRAFFIC IS REDUCED TO A SINGLE LANE IN THAT DIRECTION.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS.



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 3A OVERVIEW	SHEET 24	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026301-S3.DWG
LAYOUT NAME - STAGE 3 A

PLOT DATE : 8/17/2026 10:10 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

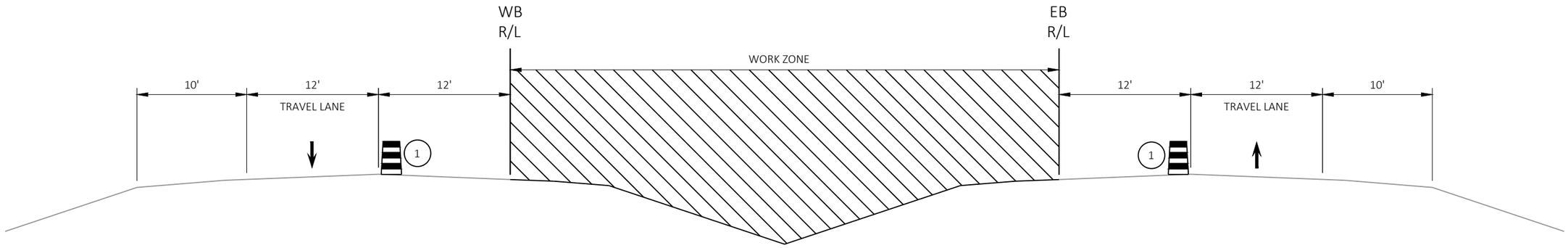
2

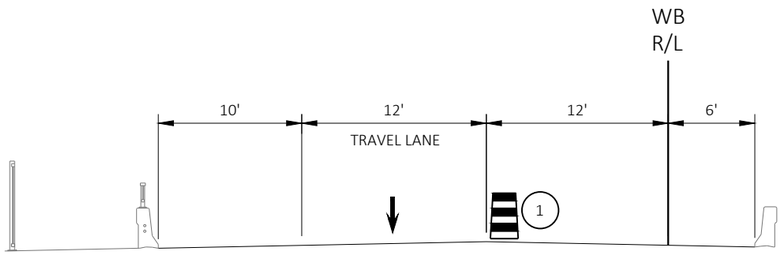
LEGEND

TRAFFIC CONTROL DRUM

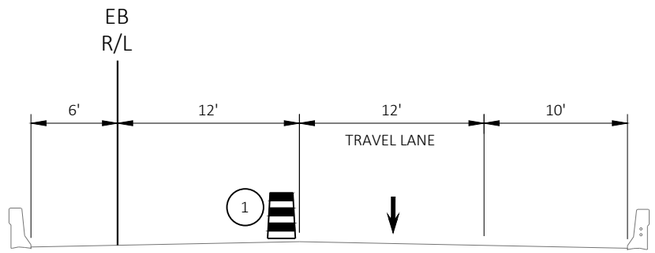
TRAFFIC CONTROL FLOW ARROW

1 DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, DRUMS MAY BE SHIFTED TO LANE LINE ONLY IN AREAS WITH CONSTRUCTION ACTIVITIES AS APPROVED BY THE ENGINEER ALLOWABLE HOURS





STRUCTURE B-09-0209



STRUCTURE B-09-0210

STAGE 3A

REMOVE STH 29 WB TEMPORARY CROSSOVER
RESTORE MEDIAN

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 3A DETAIL	SHEET 25	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026301-S3.DWG
LAYOUT NAME - STAGE 3 A1
PLOT DATE : 8/17/2026 10:10 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 42

2

LEGEND

TRAFFIC CONTROL FLOW ARROW

WORK ZONE

TRAFFIC STAGE 3B:

1. MAINTAIN EB TRAFFIC ON EXISTING INSIDE LANE (CLOSE EB OUTSIDE LANE)
2. MAINTAIN WB TRAFFIC ON ALL LANES.

CONSTRUCTION STAGE 3B:

1. REMOVE TEMPORARY GUARDRAIL ITEMS ON SE QUADRANT OF STRUCTURE B-09-0210.
2. CONSTRUCT CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES ON SE QUADRANT OF STRUCTURE B-09-0210.

TRAFFIC CONTROL GENERAL NOTES

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

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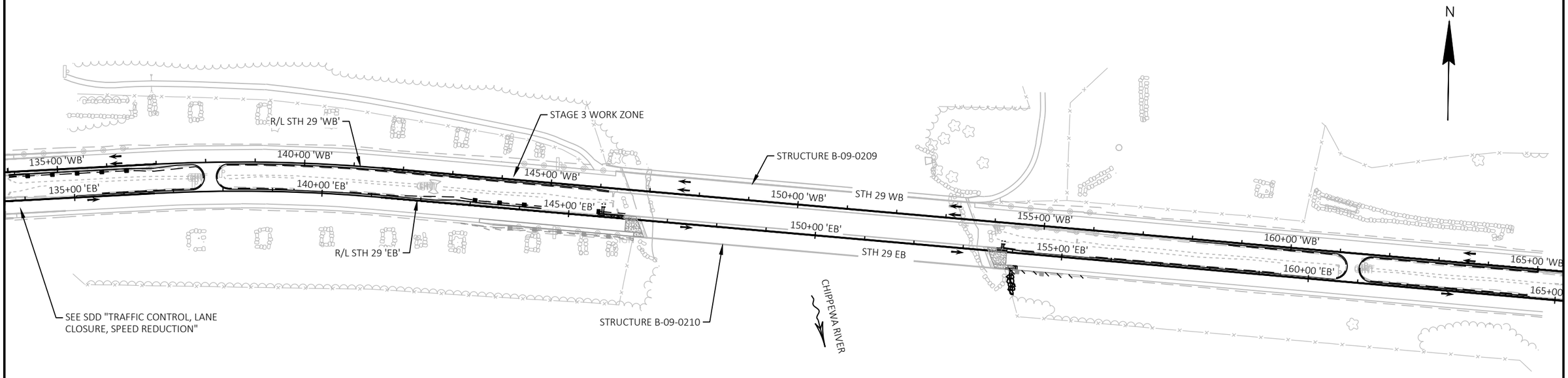


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 3B OVERVIEW	SHEET 26	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026301-S3.DWG
LAYOUT NAME - STAGE 3 B

PLOT DATE : 8/17/2026 10:11 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

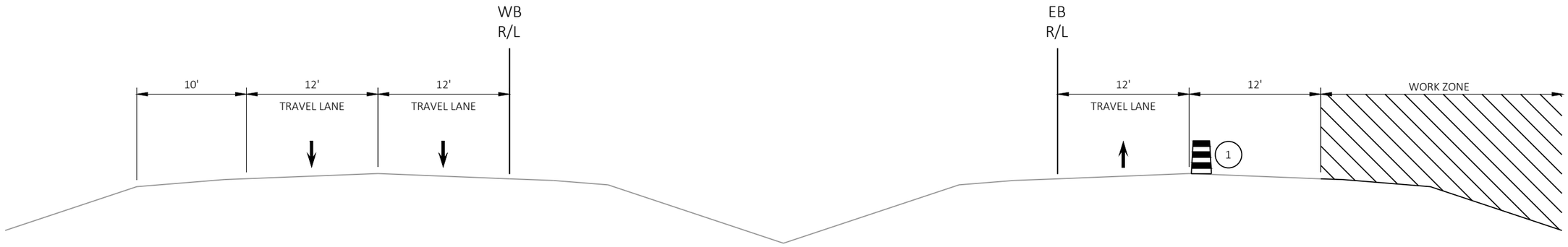
2

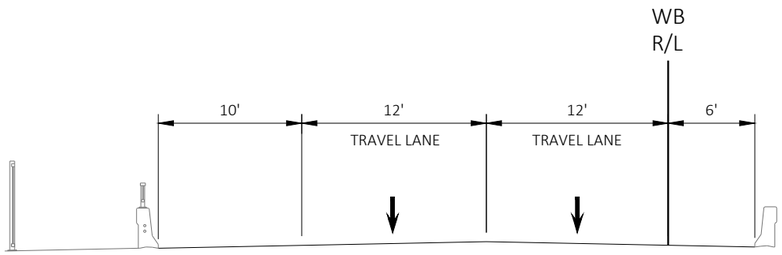
LEGEND

TRAFFIC CONTROL DRUM

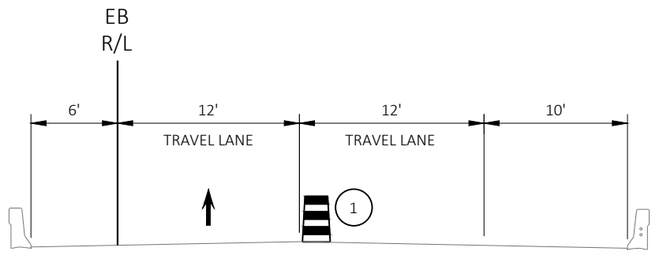
TRAFFIC CONTROL FLOW ARROW

1 DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, DRUMS MAY BE SHIFTED TO LANE LINE ONLY IN AREAS WITH CONSTRUCTION ACTIVITIES AS APPROVED BY THE ENGINEER ALLOWABLE HOURS





STRUCTURE B-09-0209



STRUCTURE B-09-0210

STAGE 3B

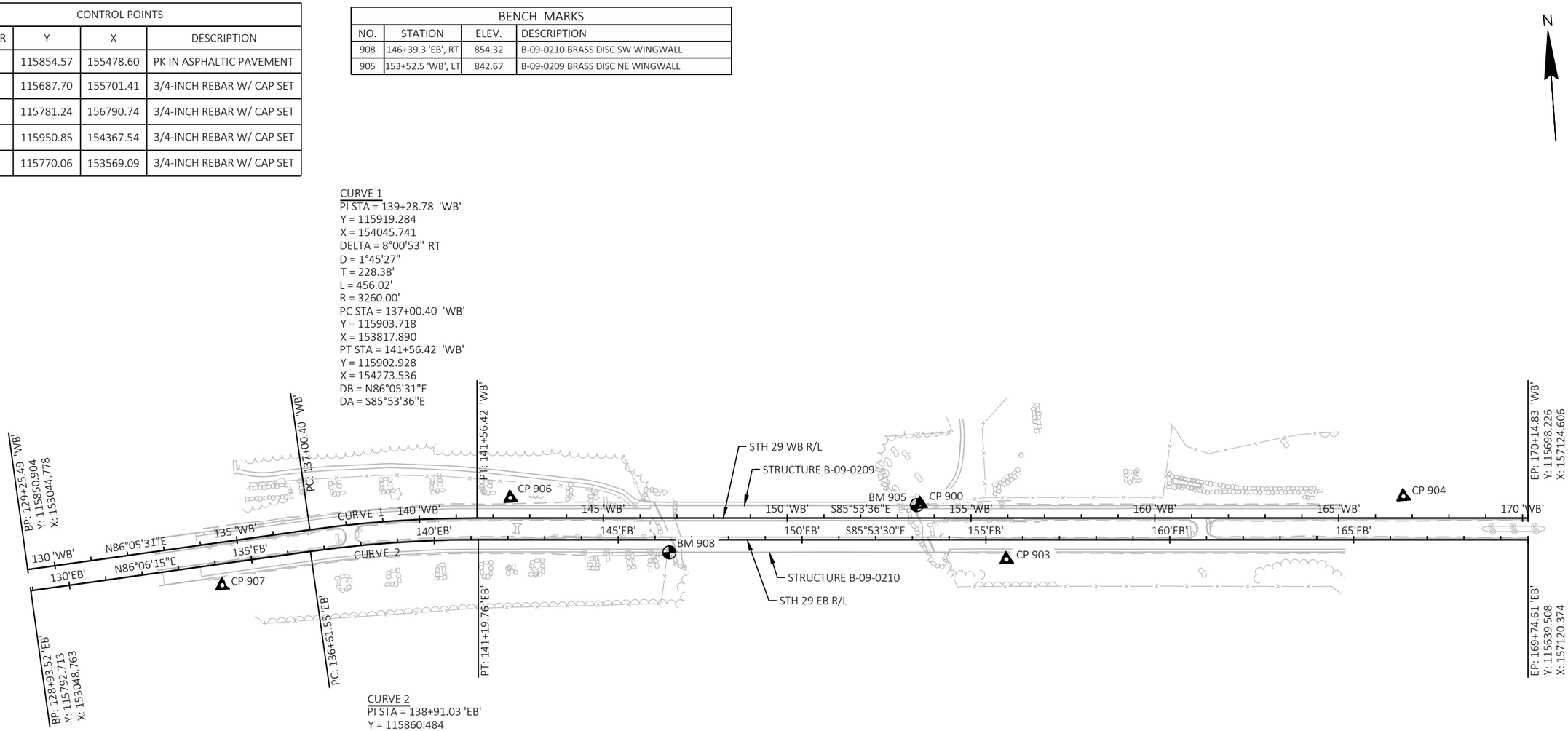
REMOVE TEMPORARY GUARDRAIL ITEMS
CONSTRUCT CONCRETE SURFACE DRAINS

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	TRAFFIC CONTROL AND CONSTRUCTION STAGING - STAGE 3B DETAIL	SHEET 27	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\026301-S3.DWG
LAYOUT NAME - STAGE 3 B1
PLOT DATE : 8/17/2026 10:11 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 42

CONTROL POINTS			
CP NUMBER	Y	X	DESCRIPTION
CP 900	115854.57	155478.60	PK IN ASPHALTIC PAVEMENT
CP 903	115687.70	155701.41	3/4-INCH REBAR W/ CAP SET
CP 904	115781.24	156790.74	3/4-INCH REBAR W/ CAP SET
CP 906	115950.85	154367.54	3/4-INCH REBAR W/ CAP SET
CP 907	115770.06	153569.09	3/4-INCH REBAR W/ CAP SET

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
908	146+39.3 'EB', RT	854.32	B-09-0210 BRASS DISC SW WINGWALL
905	153+52.5 'WB', LT	842.67	B-09-0209 BRASS DISC NE WINGWALL



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	ALIGNMENT DETAILS STH 29	SHEET 28	E

CONTROL POINTS			
CP NUMBER	Y	X	DESCRIPTION
CP 900	115854.57	155478.60	PK IN ASPHALTIC PAVEMENT
CP 903	115687.70	155701.41	3/4-INCH REBAR W/ CAP SET
CP 904	115781.24	156790.74	3/4-INCH REBAR W/ CAP SET
CP 906	115950.85	154367.54	3/4-INCH REBAR W/ CAP SET
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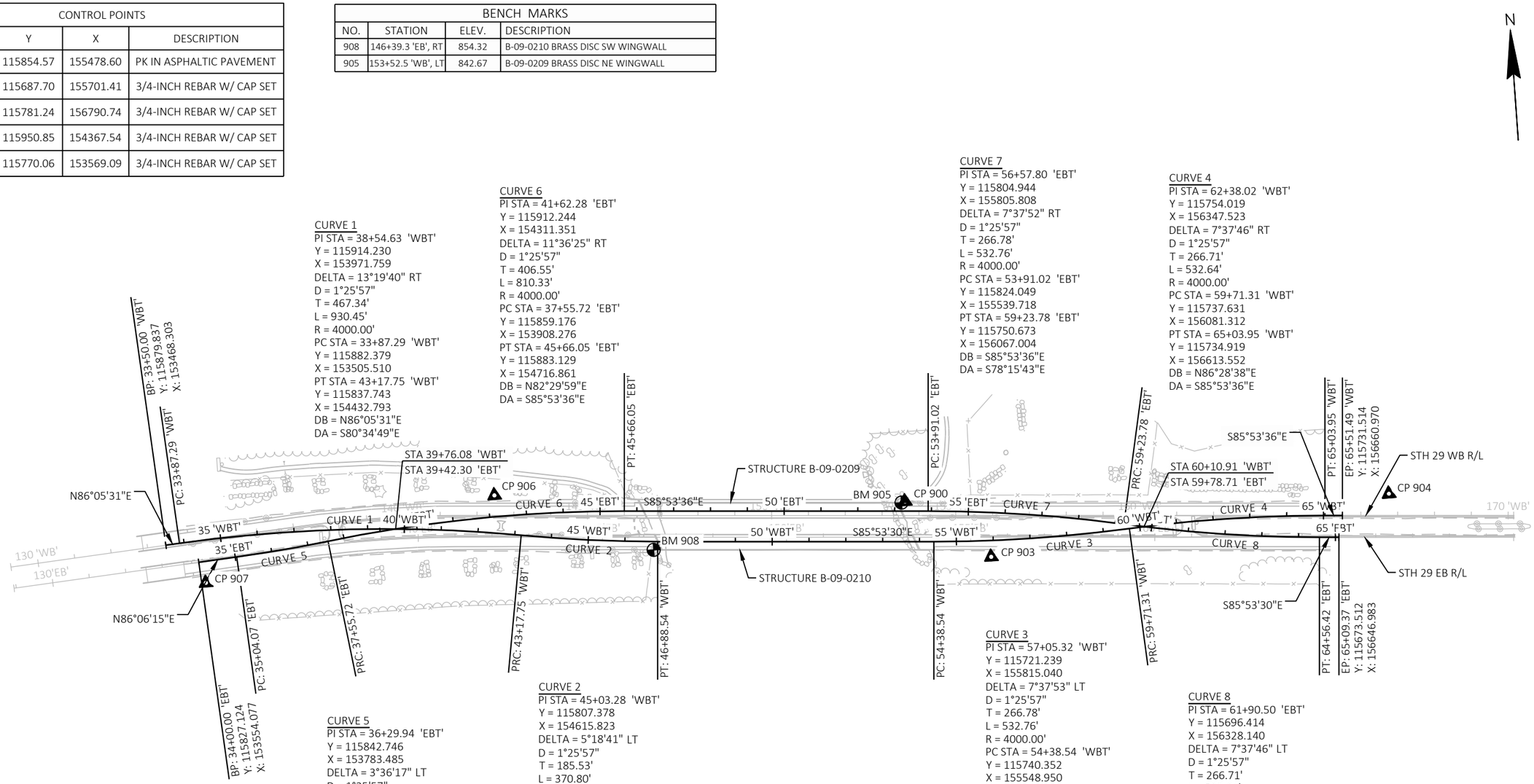


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	ALIGNMENT DETAILS TEMPORARY BYPASS	SHEET 29	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\027202-AD.DWG
LAYOUT NAME - 02
PLOT DATE : 5/1/2026 1:48 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:300 FT

1050-02-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. B-09-0209	EACH	1.000	1.000
0004	203.0270	Removing Structure Over Waterway Debris Capture (structure) 01. B-09-0210	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	430.000	430.000
0008	204.0110	Removing Asphaltic Surface	SY	2,790.000	2,790.000
0010	204.0165	Removing Guardrail	LF	1,316.000	1,316.000
0012	204.0170	Removing Fence	LF	100.000	100.000
0014	204.0190	Removing Surface Drains	EACH	6.000	6.000
0016	204.0220	Removing Inlets	EACH	1.000	1.000
0018	205.0100	Excavation Common	CY	7,022.000	7,022.000
0020	206.1001	Excavation for Structures Bridges (structure) 01. B-09-0210	EACH	1.000	1.000
0022	206.1001	Excavation for Structures Bridges (structure) 02. B-09-0209	EACH	1.000	1.000
0024	210.1500	Backfill Structure Type A	TON	1,665.000	1,665.000
0026	213.0100	Finishing Roadway (project) 01. 1050-02-73	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,384.000	1,384.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	7,432.000	7,432.000
0032	415.0080	Concrete Pavement 8-Inch	SY	152.000	152.000
0034	415.0100	Concrete Pavement 10-Inch	SY	99.000	99.000
0036	415.0410	Concrete Pavement Approach Slab	SY	244.000	244.000
0038	415.6000.S	Rout and Seal	LF	5,272.000	5,272.000
0040	416.0610	Drilled Tie Bars	EACH	18.000	18.000
0042	416.0620	Drilled Dowel Bars	EACH	52.000	52.000
0044	455.0605	Tack Coat	GAL	946.000	946.000
0046	465.0105	Asphaltic Surface	TON	562.000	562.000
0048	465.0125	Asphaltic Surface Temporary	TON	2,171.000	2,171.000
0050	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	5,131.000	5,131.000
0052	502.0100	Concrete Masonry Bridges	CY	136.000	136.000
0054	502.3101	Expansion Device	LF	99.000	99.000
0056	502.3111.S	Expansion Device Modular	LF	99.000	99.000
0058	502.3200	Protective Surface Treatment	SY	3,180.000	3,180.000
0060	502.3205	Pigmented Surface Sealer Reseal	SY	545.000	545.000
0062	502.3210	Pigmented Surface Sealer	SY	20.000	20.000
0064	502.4206	Adhesive Anchors No. 6 Bar	EACH	410.000	410.000
0066	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	23,030.000	23,030.000
0068	509.0301	Preparation Decks Type 1	SY	171.000	171.000
0070	509.0302	Preparation Decks Type 2	SY	73.000	73.000
0072	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	3,094.000	3,094.000
0074	509.1000	Joint Repair	SY	115.000	115.000
0076	509.1500	Concrete Surface Repair	SF	40.000	40.000
0078	509.2000	Full-Depth Deck Repair	SY	15.000	15.000
0080	509.2100.S	Concrete Masonry Deck Repair	CY	119.000	119.000
0082	509.2500	Concrete Masonry Overlay Decks	CY	172.000	172.000
0084	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-09-0210	SY	3,094.000	3,094.000
0086	513.9006.S	Removing and Resetting Tubular Railing (structure) 01. B-09-0209	EACH	1.000	1.000
0088	514.0900	Adjusting Floor Drains	EACH	4.000	4.000
0090	516.0500	Rubberized Membrane Waterproofing	SY	58.000	58.000
0092	520.2012	Culvert Pipe Temporary 12-Inch	LF	247.000	247.000
0094	520.2015	Culvert Pipe Temporary 15-Inch	LF	781.000	781.000
0096	520.2018	Culvert Pipe Temporary 18-Inch	LF	56.000	56.000
0098	601.0584	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBT	LF	20.000	20.000

1050-02-73

Line	Item	Item Description	Unit	Total	Qty
0100	601.0586	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBTT	LF	159.000	159.000
0102	602.3010	Concrete Surface Drains	CY	4.500	4.500
0104	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,307.000	1,307.000
0106	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,307.000	1,307.000
0108	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	1,307.000	1,307.000
0110	606.0200	Riprap Medium	CY	20.000	20.000
0112	611.0642	Inlet Covers Type MS	EACH	2.000	2.000
0114	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0116	611.8120.S	Cover Plates Temporary	EACH	7.000	7.000
0118	614.0010	Barrier System Grading Shaping Finishing	EACH	3.000	3.000
0120	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0122	614.0920	Salvaged Rail	LF	292.000	292.000
0124	614.0925	Salvaged Guardrail End Treatments	EACH	1.000	1.000
0126	614.1000	MGS Guardrail Temporary	LF	25.000	25.000
0128	614.1100	MGS Guardrail Temporary Thrie Beam Transition	LF	39.400	39.400
0130	614.1200	MGS Guardrail Temporary Terminal EAT	EACH	1.000	1.000
0132	614.2300	MGS Guardrail 3	LF	1,375.000	1,375.000
0134	614.2500	MGS Thrie Beam Transition	LF	236.400	236.400
0136	614.2610	MGS Guardrail Terminal EAT	EACH	5.000	5.000
0138	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0140	616.0208	Fence Chain Link 8-FT	LF	100.000	100.000
0142	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1050-02-73	EACH	1.000	1.000
0144	619.1000	Mobilization	EACH	1.000	1.000
0146	624.0100	Water	MGAL	178.000	178.000
0148	625.0500	Salvaged Topsoil	SY	15,671.000	15,671.000
0150	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0152	628.1910	Mobilizations Emergency Erosion Control	EACH	7.000	7.000
0154	628.2008	Erosion Mat Urban Class I Type B	SY	15,671.000	15,671.000
0156	628.7005	Inlet Protection Type A	EACH	9.000	9.000
0158	628.7504	Temporary Ditch Checks	LF	2,006.000	2,006.000
0160	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0162	629.0210	Fertilizer Type B	CWT	14.000	14.000
0164	630.0171	Seeding Mixture No. 70A	LB	91.000	91.000
0166	630.0200	Seeding Temporary	LB	424.000	424.000
0168	630.0400	Seeding Nurse Crop	LB	179.000	179.000
0170	630.0500	Seed Water	MGAL	117.000	117.000
0172	633.0100	Delineator Posts Steel	EACH	4.000	4.000
0174	633.0500	Delineator Reflectors	EACH	4.000	4.000
0176	633.1100	Delineators Temporary	EACH	90.000	90.000
0178	634.0616	Posts Wood 4x6-Inch x 16-FT	EACH	1.000	1.000
0180	638.2102	Moving Signs Type II	EACH	7.000	7.000
0182	638.4000	Moving Small Sign Supports	EACH	9.000	9.000
0184	642.5001	Field Office Type B	EACH	1.000	1.000
0186	643.0300	Traffic Control Drums	DAY	26,890.000	26,890.000
0188	643.0420	Traffic Control Barricades Type III	DAY	1,639.000	1,639.000
0190	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	153.000	153.000
0192	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	153.000	153.000
0194	643.0705	Traffic Control Warning Lights Type A	DAY	1,816.000	1,816.000
0196	643.0715	Traffic Control Warning Lights Type C	DAY	3,115.000	3,115.000

1050-02-73

Line	Item	Item Description	Unit	Total	Qty
0198	643.0810	Traffic Control Connected Arrow Boards	DAY	449.000	449.000
0200	643.0900	Traffic Control Signs	DAY	10,825.000	10,825.000
0202	643.1050	Traffic Control Signs PCMS	DAY	77.000	77.000
0204	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	449.000	449.000
0206	643.3165	Temporary Marking Line Paint 6-Inch	LF	15,636.000	15,636.000
0208	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	2,903.000	2,903.000
0210	643.5000	Traffic Control	EACH	1.000	1.000
0212	645.0120	Geotextile Type HR	SY	67.000	67.000
0214	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	6,850.000	6,850.000
0216	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	1,520.000	1,520.000
0218	646.9000	Marking Removal Line 4-Inch	LF	10,280.000	10,280.000
0220	650.4000	Construction Staking Storm Sewer	EACH	6.000	6.000
0222	650.4500	Construction Staking Subgrade	LF	8,344.000	8,344.000
0224	650.5000	Construction Staking Base	LF	8,344.000	8,344.000
0226	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	27.000	27.000
0228	650.6501	Construction Staking Structure Layout (structure) 01. B-09-0210	EACH	1.000	1.000
0230	650.6501	Construction Staking Structure Layout (structure) 02. B-09-0209	EACH	1.000	1.000
0232	650.7000	Construction Staking Concrete Pavement	LF	148.000	148.000
0234	650.9911	Construction Staking Supplemental Control (project) 01. 1050-02-73	EACH	1.000	1.000
0236	650.9920	Construction Staking Slope Stakes	LF	8,344.000	8,344.000
0238	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	48.000	48.000
0240	690.0150	Sawing Asphalt	LF	137.000	137.000
0242	690.0250	Sawing Concrete	LF	252.000	252.000
0244	715.0502	Incentive Strength Concrete Structures	DOL	2,508.000	2,508.000
0246	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 149+95.35 'EB'	EACH	1.000	1.000
0248	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	1,313.000	1,313.000
0250	SPV.0060	Special 01. Temporary Inlet, Median 1 Grate	EACH	5.000	5.000
0252	SPV.0060	Special 02. Temporary Inlet Covers Type MS	EACH	5.000	5.000
0254	SPV.0180	Special 01. Abutment Seat Cleaning and Sealing	SY	76.000	76.000

REMOVAL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0165 REMOVING GUARDRAIL LF	204.0170 REMOVING FENCE LF	204.0190 REMOVING SURFACE DRAINS EACH
0010	143+13	-	146+55	WB	100	330	235	20	1
0010	142+25	-	146+55	EB	120	310	537	0	2
0010	153+46	-	156+73	WB	100	330	544	80	1
0010	153+48	-	153+98	EB	110	0	0	0	2
0010	35+04	-	65+09	EBT	0	900	0	0	0
0010	34+00	-	65+09	WBT	0	920	0	0	0
				TOTAL 0010	430	2,790	1,316	100	6

BASE AGGREGATE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
0010	133+70	-	165+00	EB	148	726	18
0010	146+60	-	165+02	WB	273	1,372	33
0010	35+04	-	65+09	EBT	469	2,598	62
0010	34+00	-	65+09	WBT	494	2,736	65
				TOTAL 0010	1,384	7,432	178

CONCRETE PAVEMENT SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0100 CONCRETE PAVEMENT 10-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
0010	145+59	-	146+55	EB	33	24	61	2	13
0010	153+46	-	154+41	EB	40	29	61	4	13
0010	145+59	-	146+55	WB	31	23	61	0	13
0010	153+48	-	154+02	WB	48	23	61	12	13
				TOTAL 0010	152	99	244	18	52

ASPHALT SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	415.6000.S ROUT AND SEAL LF	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF
0010	133+70	-	165+00	EB	2,375	74	237	0	2,350
0010	146+60	-	165+02	WB	2,897	96	325	0	2,781
0010	35+04	-	65+09	EBT	0	358	0	1,002	0
0010	34+00	-	65+09	WBT	0	418	0	1,169	0
				TOTAL 0010	5,272	946	562	2,171	5,131

ANCILLARY CONCRETE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	601.0584 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT LF	601.0586 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT LF	602.3010 CONCRETE SURFACE DRAINS CY	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
0010	145+59	-	146+12	EB LT	0	52.5	1.0	2	8
0010	146+25	-	146+35	EB RT	0	10	0.0	0	0
0010	153+67	-	153+82	EB LT	0	13.5	1.1	2	8
0010	153+89	-	154+02	EB RT	0	13.5	0.7	8	27
0010	146+18	-	146+28	WB LT	10	0	0.0	0	0
0010	146+18	-	146+34	WB RT	0	10	0.7	4	12
0010	153+56	-	153+66	WB LT	10	0	0.0	0	0
0010	153+89	-	154+41	WB RT	0	52.5	1.0	4	12
				TOTAL 0010	20	152	4.5	20	67

TEMPORARY DRAINAGE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0220 REMOVING INLETS EACH	520.2012 CULVERT PIPE TEMPORARY 12-INCH LF	520.2015 CULVERT PIPE TEMPORARY 15-INCH LF	520.2018 CULVERT PIPE TEMPORARY 18-INCH LF	611.0642 INLET COVERS TYPE MS EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.8120.S COVER PLATES TEMPORARY EACH	628.7005 INLET PROTECTION TYPE A EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	SPV.0060.01 SPECIAL (01. TEMPORARY INLET, MEDIAN 1 GRATE) EACH	SPV.0060.02 SPECIAL (02. TEMPORARY INLET COVERS TYPE MS) EACH	OFFSET	GRATE ELEVATION	INVERT ELEVATION	REMARKS
0010	35+04	-	65+09	EBT	0	247	781	56	0	0	5	3	5	5	5	-	-	-	-
0010	34+00	-	65+09	WBT	0	0	0	0	0	0	2	3	0	0	0	-	-	-	-
0010	UNDISTRIBUTED			MEDIAN	0	0	0	0	0	0	0	3	0	0	0	-	-	-	-
0010	161+11			EB	1	0	0	0	2	1	0	0	1	0	0	29.5' LT	844.920	841.220	MEDIAN
				TOTAL 0010	1	247	781	56	2	1	7	9	6	5	5				

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)	WASTE	COMMENT
DIVISION 1										
STAGE 1A	35+04.07/64+56.00	STH 29	1,461	251	1,210	829	1,036	174	174	
STAGE 1B	142+84.70/146+34.45	STH 29	55	0	55	5	6	49	49	
DIVISION 1 SUBTOTAL			1,516	251	1,265	834	1,043	222	222	
DIVISION 2										
STAGE 2A	34+50.00/65+00.00	STH 29	2,398	13	2,385	428	535	1,850	1,850	
STAGE 2B	143+17.63/157+79.62	STH 29	204	35	169	4	5	164	164	
DIVISION 2 SUBTOTAL			2,602	48	2,554	432	540	2,014	2,014	
DIVISION 3										
STAGE 3	135+04.07/164+89.41	STH 29	2,904	58	2,846	540	675	2,171	2,171	
DIVISION 3 SUBTOTAL			2,904	58	2,846	540	675	2,171	2,171	
GRAND TOTAL			7,022	357	6,665	1,806	2,258	4,407	4,407	
TOTAL COMMON EXC			7,022							

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = 1.25
WITH THE FOLLOWING SELECTION: **EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR**
(6) 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.

3

CONCRETE BARRIER SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF
0010	35+04	-	65+09	EBT	500	500	500
0010	34+00	-	65+09	WBT	807	807	807
				TOTAL 0010	1,307	1,307	1,307

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	43+19	EBT	1	4	OM-3R (W05- 58R)	TL-3	UNIDIRECTIONAL	RT	TEMPORARY CONCRETE BARRIER
0010	56+37	WB	1	4	OM-3L (W05- 58L)	TL-3	UNIDIRECTIONAL	LT	TEMPORARY CONCRETE BARRIER
0010	36+91	WBT	1	4	OM-3L (W05- 58L)	TL-3	UNIDIRECTIONAL	LT	TEMPORARY CONCRETE BARRIER
0010	56+88	WBT	1	4	OM-3R (W05- 58R)	TL-3	UNIDIRECTIONAL	RT	TEMPORARY CONCRETE BARRIER
		TOTAL 0010	4						

3

BARRIER SYSTEM GRADING SHAPING FINISHING

CATEGORY	STATION	TO	STATION	LOCATION	** 614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	* 625.0500 SALVAGED TOPSOIL SY	* 628.2008 EROSION MAT URBAN CLASS I TYPE B SY	* 629.0210 FERTILIZER TYPE B CWT	* 630.0171 SEEDING MIXTURE NO. 70A LB	* 630.0200 SEEDING TEMPORARY LB	* 630.0400 SEEDING NURSE CROP LB	* 630.0500 SEED WATER MGAL
0010	142+51	-	146+28	WB LT	1	161	161	1	1	5	2	1
0010	142+85	-	146+37	EB RT	1	96	96	1	1	3	1	1
0010	153+56	-	157+37	WB LT	1	164	164	1	1	5	2	1
				TOTAL 0010	3	421	421	3	3	13	5	3

*ITEMS SHOWN FOR REFERENCE ONLY. ITEMS INCIDENTAL TO THE ITEM BARRIER SYSTEM GRADING SHAPING FINISHING.

**GUARDRAIL LOCATIONS NOT SHOWN IN TABLE ARE COVERED BY EXCAVATION COMMON AND CROSSOVER RESTORTATION.

TEMPORARY GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.1000 MGS GUARDRAIL TEMPORARY LF	614.1100 MGS GUARDRAIL TEMPORARY THRIE BEAM TRANSITION LF	614.1200 MGS GUARDRAIL TEMPORARY TERMINAL EAT EACH
0010	153+86	-	155+06	EB RT	25	39.4	1
				TOTAL 0010	25	39.4	1

SALVAGED GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.0920 SALVAGED RAIL LF	614.0925 SALVAGED GUARDRAIL END TREATMENTS EACH
0010	134+04	-	136+94	WB	292	1
				TOTAL 0010	292	1

GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
0010	134+04	-	136+94	WB RT	200	39.4	1	0
0010	141+86	-	146+14	EB LT	250	39.4	1	0
0010	142+51	-	146+28	WB LT	200	39.4	0	1
0010	142+85	-	146+37	EB RT	250	39.4	1	0
0010	153+56	-	157+37	WB LT	200	39.4	1	0
0010	153+89	-	158+73	WB RT	275	39.4	1	0
				TOTAL 0010	1,375	236.4	5	1

3

FENCE CHAIN LINK 8-FT

CATEGORY	STATION	TO	STATION	LOCATION	616.0208 FENCE CHAIN LINK 8-FT LF
0010	145+56	-	145+72	WB	20
0010	153+66	-	154+45	WB	80
				TOTAL 0010	100

DELINEATOR SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH	633.1100 DELINEATORS TEMPORARY EACH
0010	137+75	-	138+50	WB	2	2	0
0010	160+90	-	161+70	WB	2	2	0
0010	35+04	-	65+09	EBT	0	0	45
0010	34+00	-	65+09	WBT	0	0	45
				TOTAL 0010	4	4	90

SIGNING SUMMARY

CATEGORY	STATION	ALIGNMENT	LOCATION	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	MESSAGE
0010	137+75	EB	LT	0	1	1	NO U-TURNS
0010	138+50	WB	RT	0	1	1	NO U-TURNS
0010	144+78	EB	RT	0	1	1	MILE 74
0010	146+15	EB	RT	0	1	2	CHIPPEWA RIVER
0010	154+80	WB	LT	0	1	2	CHIPPEWA RIVER
0010	160+90	WB	RT	0	1	1	NO U-TURNS
0010	161+70	EB	LT	0	1	1	NO U-TURNS
0010		UNDISTRIBUTED		1	0	0	
			TOTAL 0010	1	7	9	

3

LANDSCAPING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0171 SEEDING MIXTURE NO. 70A LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	630.0500 SEED WATER MGAL	999.2100.S INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE LF
0010	35+00	-	46+00	EBT	1,794	1	1	1,794	345	0	2	7	49	13	14	400
0010	53+50	-	64+57	EBT	1,542	1	1	1,542	225	0	1	6	42	12	12	0
0010	34+00	-	46+50	WBT	2,039	1	1	2,039	300	0	2	8	56	15	15	320
0010	54+00	-	65+04	WBT	2,021	1	1	2,021	210	0	2	8	55	15	15	330
0010		UNDISTRIBUTED		MEDIAN	5,060	2	2	5,060	525	6	4	44	137	88	38	0
		UNDISTRIBUTED			3,215	1	1	3,215	401	2	3	18	85	36	23	263
				TOTAL 0010	15,671	7	7	15,671	2,006	8	14	91	424	179	117	1,313

3

TRAFFIC CONTROL SUMMARY

CATEGORY	STAGE	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS NUMBER	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NUMBER	643.0420 DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NUMBER	643.0705 DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NUMBER	643.0715 DAY	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS NUMBER	643.0810 DAY	643.0900 TRAFFIC CONTROL SIGNS NUMBER	643.0900 DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS NUMBER	643.1050 DAY	643.1220 TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS NUMBER	643.1220 DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	1A	30	30	900	2	60	0	0	0	0	10	300	2	60	30	900	2	14	2	60	0	-
0010	1B	82	169	13,858	10	820	77	77	8	656	16	1,312	2	164	58	4,756	2	14	2	164	0	-
0010	2A	20	30	600	2	40	0	0	0	0	10	200	2	40	30	600	2	14	2	40	0	-
0010	2B	63	169	10,647	10	630	77	77	8	504	16	1,008	2	126	58	3,654	2	14	2	126	0	-
0010	2B	15	0	0	2	30	0	0	0	0	0	0	0	0	2	30	0	0	0	0	0	TRAIL CLOSURE
0010	3A	26	30	780	2	52	0	0	0	0	10	260	2	52	30	780	2	14	2	52	0	-
0010	3B	7	15	105	1	7	0	0	0	656	5	35	1	7	15	105	1	7	1	7	0	
0010	PROJECT	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-
	TOTAL 0010			26,890		1,639	153	153		1,816		3,115		449		10,825		77		449	1	

PAVEMENT MARKING SUMMARY

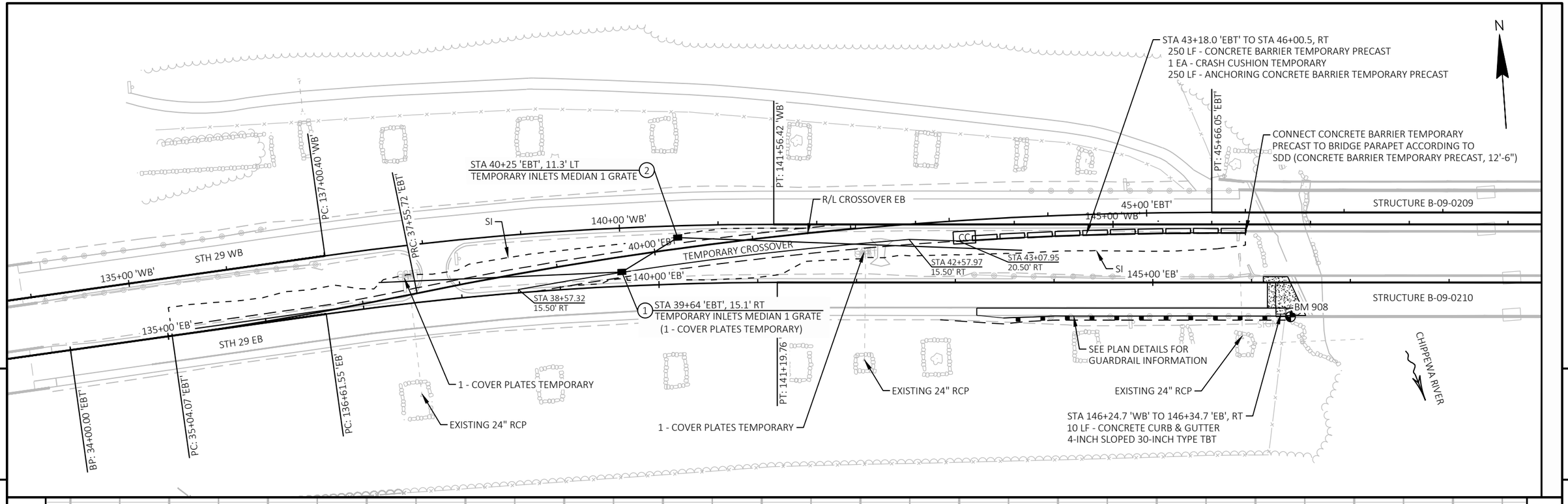
CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF
0010	133+70	-	165+00	EB	0	0	3,500	760	5,290
0010	146+60	-	165+02	WB	0	0	3,350	760	4,990
0010	35+04	-	65+09	EBT	9,330	1,442	0	0	0
0010	34+00	-	65+09	WBT	6,306	1,461	0	0	0
				TOTAL 0010	15,636	2,903	6,850	1,520	10,280

SAWING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
0010	133+70	-	165+00	EB	50	144
0010	146+60	-	165+02	WB	87	108
				TOTAL 0010	137	252

CONSTRUCTION STAKING SUMMARY

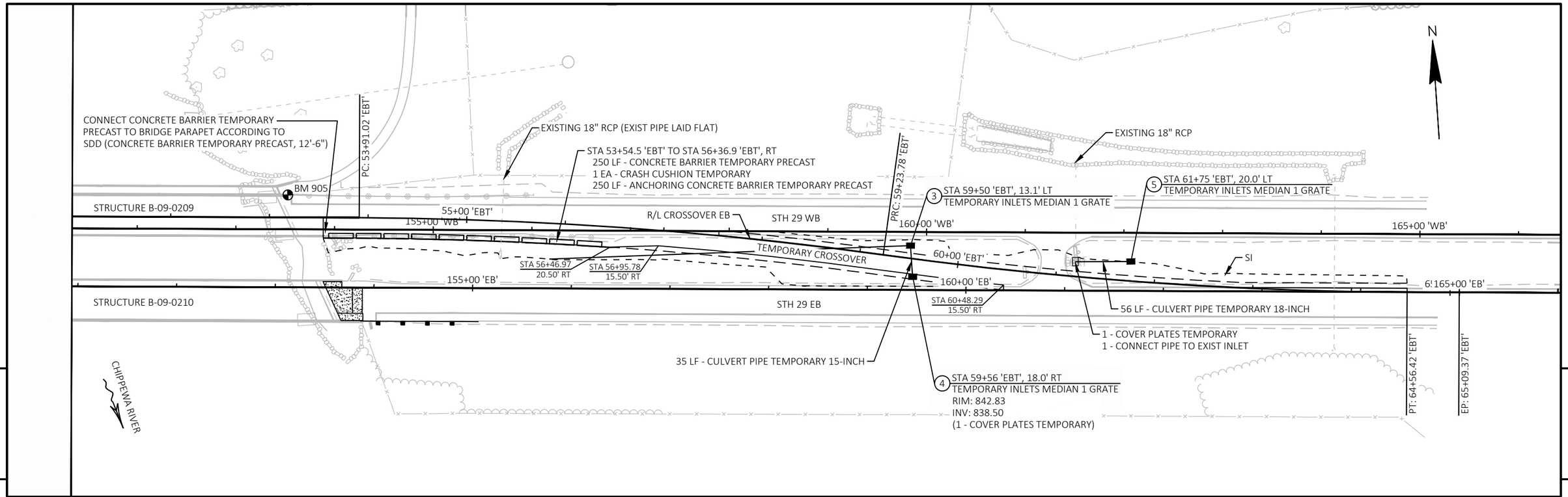
CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-09-0210) EACH	650.6501.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (02. B-09-0209) EACH	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1050-02-73) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	133+70	-	165+00	EB	2,420	2,420	0	0	0	85	0	2,420
0010	145+56	-	165+02	WB	1,236	1,236	0	0	0	63	0	1,236
0010	35+04	-	65+09	EBT	2,295	2,295	0	0	0	0	0	2,295
0010	34+00	-	65+03	WBT	2,393	2,393	0	0	0	0	0	2,393
0010	PROJECT				0	0	0	0	0	0	1	0
0020	B-09-0210				0	0	0	1	0	0	0	0
0030	B-09-0209				0	0	0	0	1	0	0	0
				TOTAL 0010	8,344	8,344	0	1	1	148	1	8,344



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 EBT CROSSOVER	SHEET 38	E

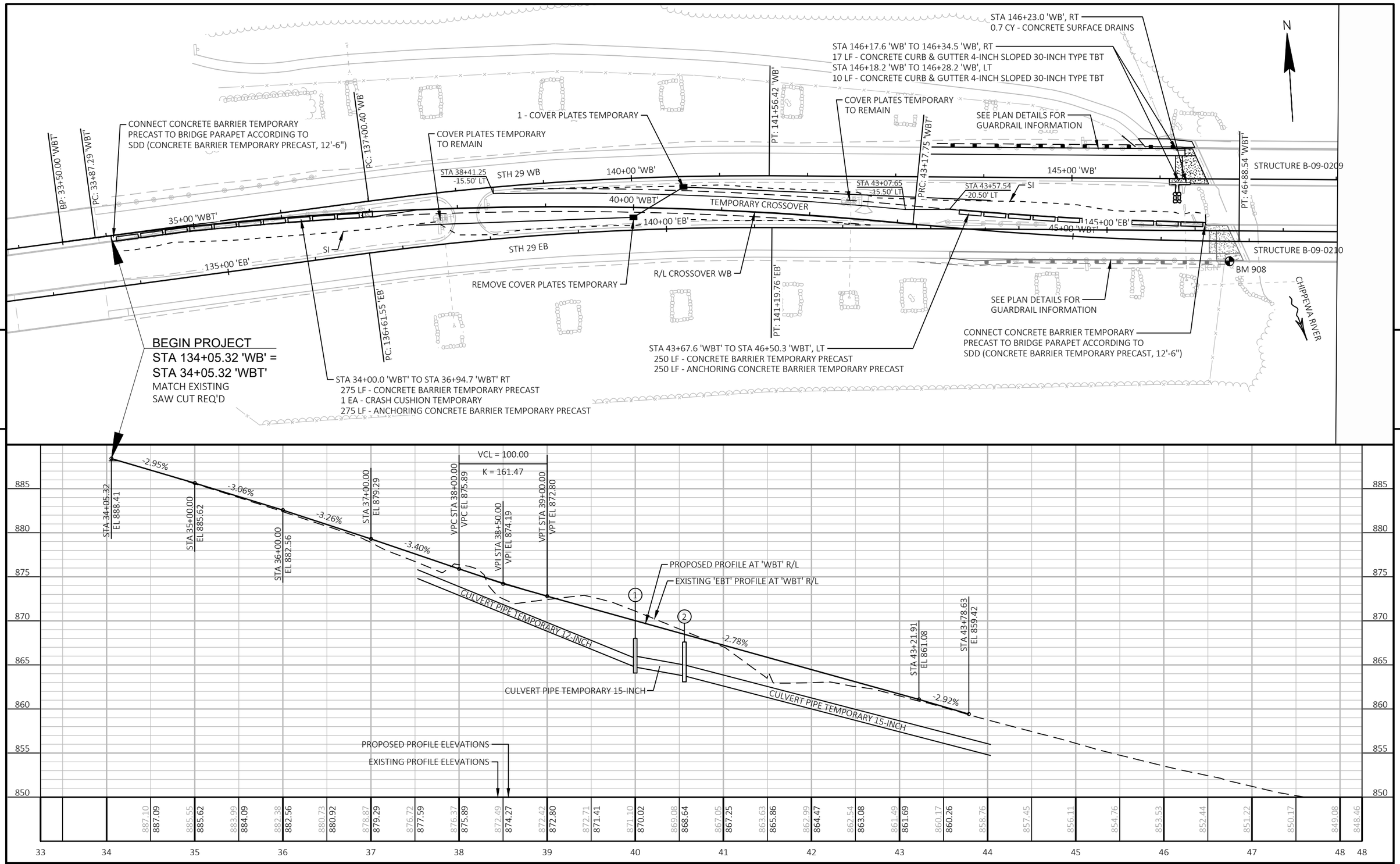
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050101-PP_EBT.DWG
LAYOUT NAME - EBT_1

PLOT DATE : 8/17/2026 10:58 AM PLOT BY : JAY HILLE PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 EBT CROSSOVER	SHEET 39	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050101-PP_EBT.DWG
LAYOUT NAME - EBT_2
PLOT DATE : 8/17/2026 10:58 AM
PLOT BY : JAY HILLE
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 WBT CROSSOVER	SHEET 40	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050102-PP_WBT.DWG
LAYOUT NAME - WBT_1

PLOT DATE : 5/1/2026 1:49 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 153+88.6 'WB' TO 154+41.1 'WB', RT
52.5 LF - CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT
STA 153+55.6 'WB' TO 153+65.6 'WB', LT
10 LF - CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT

STA 154+32.0 'WB', RT
1.0 CY - CONCRETE SURFACE DRAINS

SEE PLAN DETAILS FOR GUARDRAIL INFORMATION

STA 54+06.0 'WBT' TO STA 56+88.6 'WBT', LT
281.5 LF - CONCRETE BARRIER TEMPORARY PRECAST
1 EA - CRASH CUSHION TEMPORARY
281.5 LF - ANCHORING CONCRETE BARRIER TEMPORARY PRECAST

PM 905

PC: 54+38.54 'WBT'

STRUCTURE B-09-0209

155+00 'WB'

SI

STH 29 WB

PRC: 59+71.31 'WBT'

1 - COVER PLATES TEMPORARY

COVER PLATES TEMPORARY TO REMAIN

STA 60+95.02
-15.50' LT

60+00 'WB'

65+00 'WBT'

PT: 65+03.95 'WBT'

EP: 65+51.49 'WBT'

N

155+00 'EB'

55+00 'WBT'

TEMPORARY CROSSOVER

60+00 'WBT'

160+00 'EB'

SI

STRUCTURE B-09-0210

STA 57+48.62
-15.50' LT

STH 29 EB

165+00 'EB'

SEE PLAN DETAILS FOR GUARDRAIL INFORMATION

STA 56+98.65
-20.50' LT

REMOVE COVER PLATES TEMPORARY

TEMPORARY INLETS MEDIAN 2 GRATE TO REMAIN

CONNECT CONCRETE BARRIER TEMPORARY PRECAST TO BRIDGE PARAPET ACCORDING TO SDD (CONCRETE BARRIER TEMPORARY PRECAST, 12'-6")

R/L CROSSOVER WB

CHIPPEWA RIVER

END PROJECT
STA 165+02.46 'WB' =
STA 65+03.95 'WBT'
MATCH EXISTING
SAW CUT REQ'D

5

5

STA 57+50.00
EL 841.53

STA 58+00.00
EL 841.95

VPC STA 58+62.50
VPC EL 842.70

VPI STA 59+50.00
VPI EL 843.75

VPT STA 60+37.50
VPT EL 845.70

VPC STA 60+50.00
VPC EL 845.98

VPI STA 61+00.00
VPI EL 847.10

VPT STA 61+50.00
VPT EL 848.53

STA 62+00.00
EL 849.96

STA 63+00.00
EL 852.95

STA 64+00.00
EL 856.02

STA 65+03.95
EL 859.04

VCL = 175.00
K = 168.95

VCL = 100.00
K = 159.57

0.86%
1.20%
2.23%
2.86%
2.99%
3.07%
2.91%

EXISTING PROFILE AT 'WBT' R/L
PROPOSED 'EBT' PROFILE AT 'WBT' R/L

CULVERT PIPE TEMPORARY 15-INCH

CULVERT PIPE TEMPORARY 18-INCH

PROPOSED PROFILE ELEVATIONS
EXISTING PROFILE ELEVATIONS

870	865	860	855	850	845	840	835

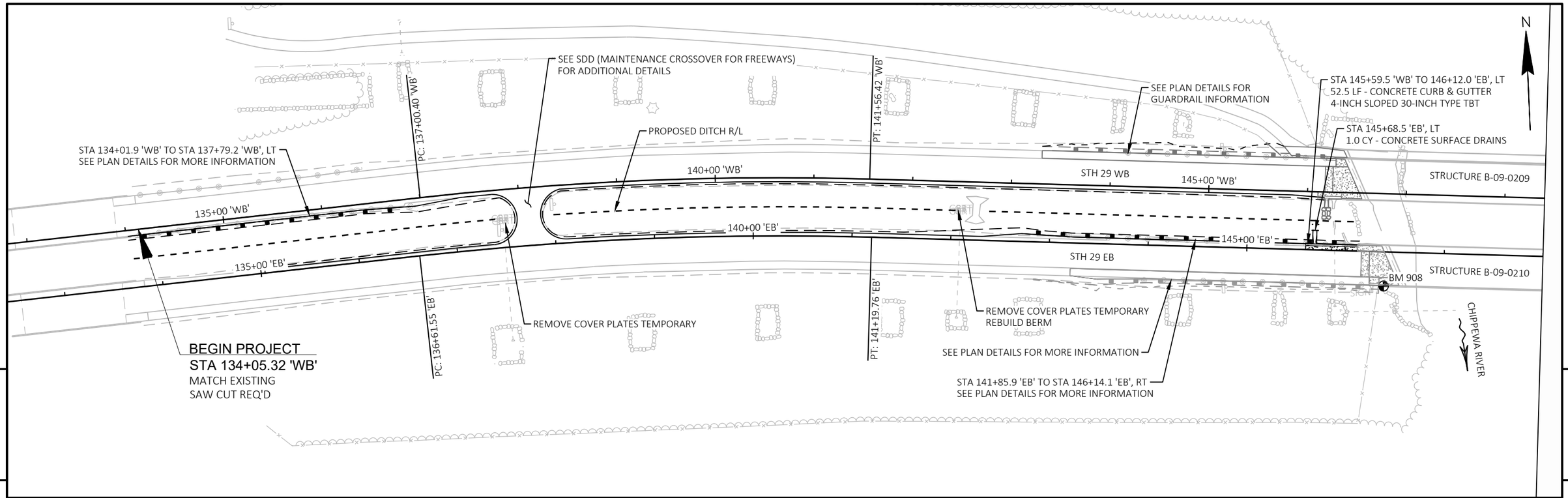
842.81	842.45	841.87	841.37	840.98	840.67	840.43	840.25	840.17	840.31	840.56	840.82	841.12	841.53	841.53	842.05	841.95	841.95	842.55	840.71	843.19	843.75	843.98	844.72	844.91	844.67	845.98	845.63	847.18	848.14	848.53	849.19	849.96	850.92	851.45	852.71	852.95	854.38	854.48	855.97	856.02	857.48	857.47	858.93	858.93	860.29

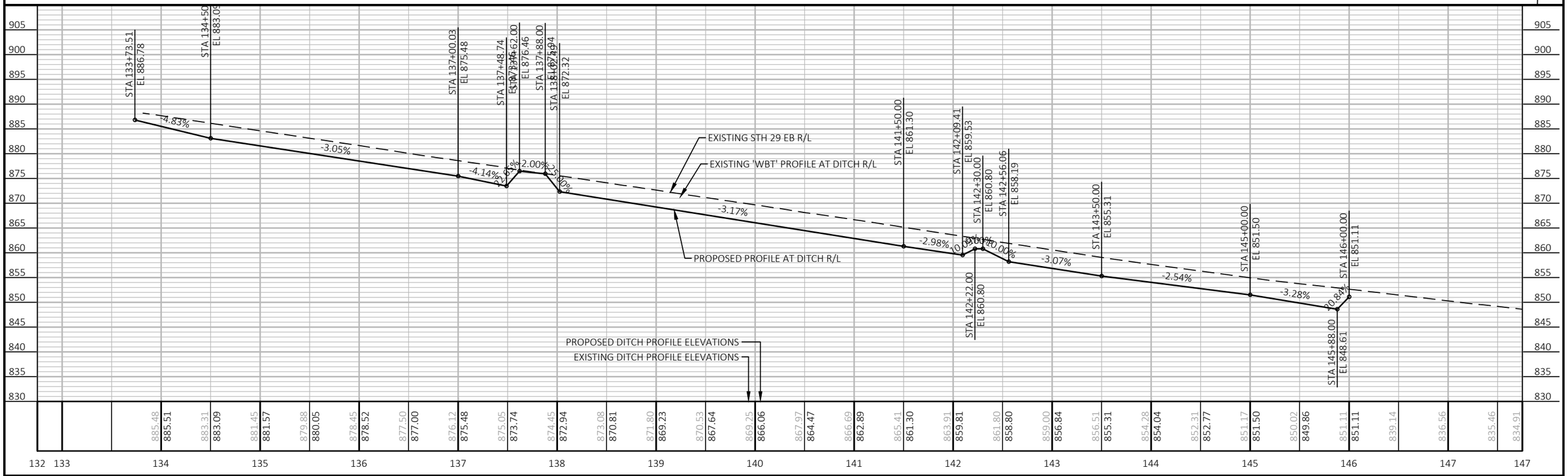
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 WBT CROSSOVER	SHEET 41	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050102-PP_WBT.DWG
LAYOUT NAME - WBT_2

PLOT DATE : 5/1/2026 1:49 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

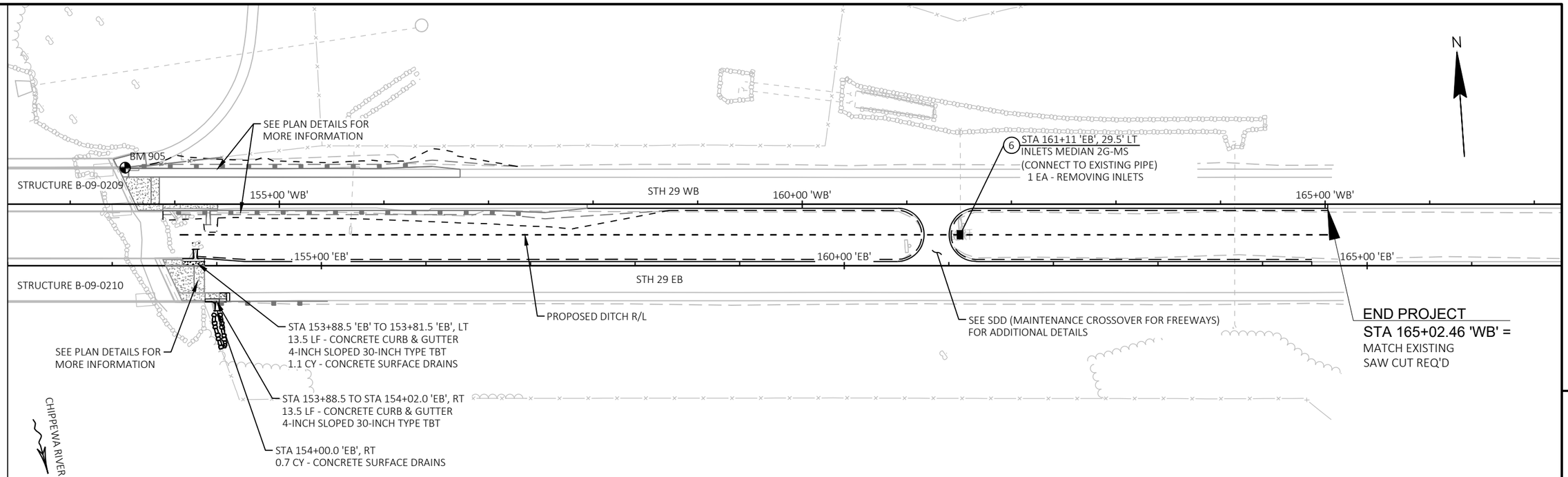


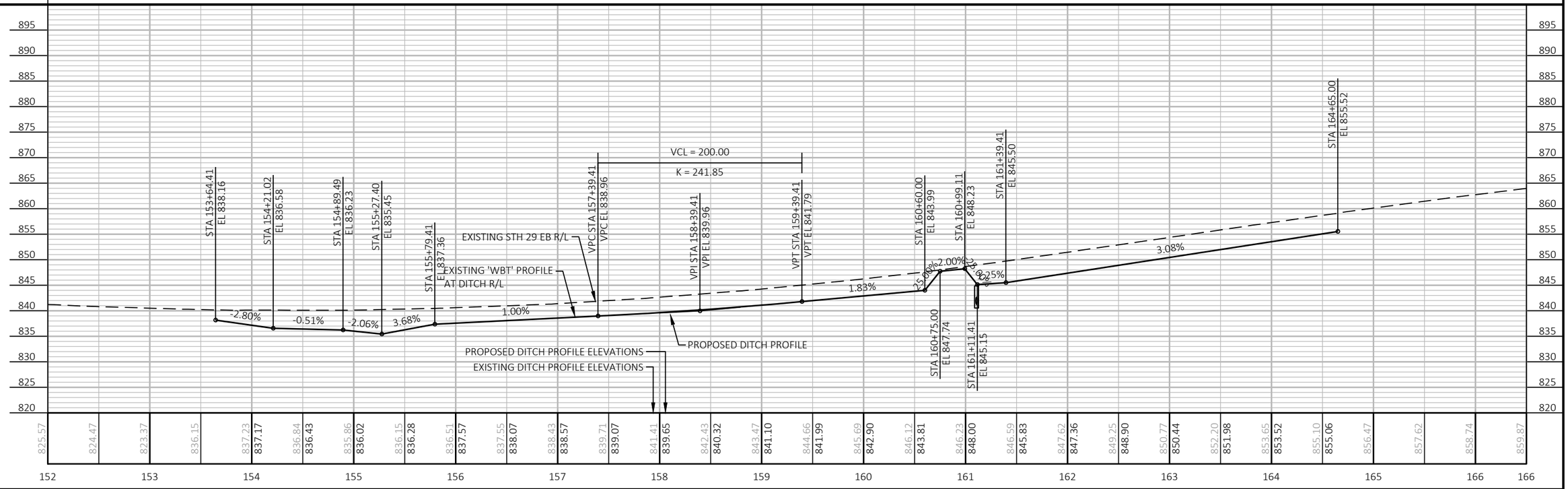


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 MEDIAN	SHEET 42	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050103-PP_MEDIAN.DWG
LAYOUT NAME - Median_1

PLOT DATE : 5/1/2026 1:49 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	PLAN AND PROFILE: STH 29 MEDIAN	SHEET 43	E

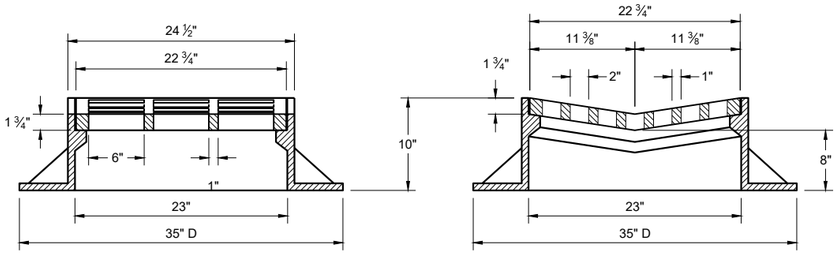
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\050103-PP_MEDIAN.DWG
LAYOUT NAME - Median_2

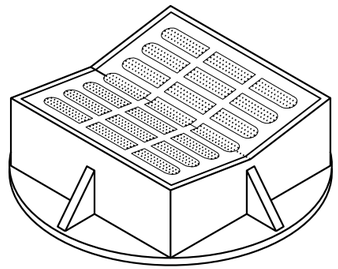
PLOT DATE : 5/1/2026 1:49 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:100 FT

Standard Detail Drawing List

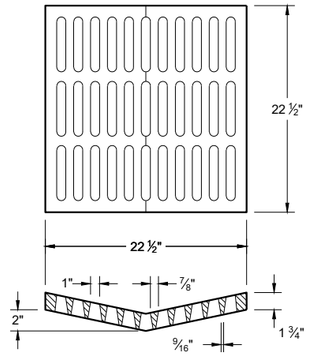
08A05-22B	INLET COVERS TYPE B, B-A, C, MS, MS-A, DW & WM
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C11-15A	RURAL DOWELED CONCRETE PAVEMENT
13C11-15B	RURAL DOWELED CONCRETE PAVEMENT
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14D01-01	TURTLE EXCLUSION FENCE CLIMBING TURTLE
15A04-08C	DELINEATOR POST WITH REFLECTIVE SHEETING
15A04-08E	DELINEATOR POST WITH REFLECTIVE SHEETING
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-11A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D05-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER
15D06-07	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D10-07	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER
15D11-10	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-16B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

6





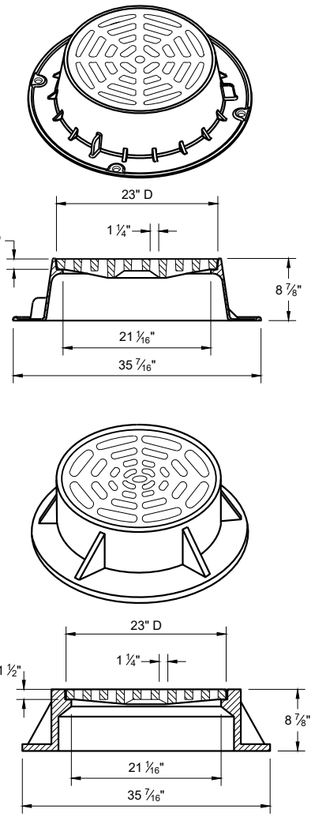
TYPE "B"



ALTERNATE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

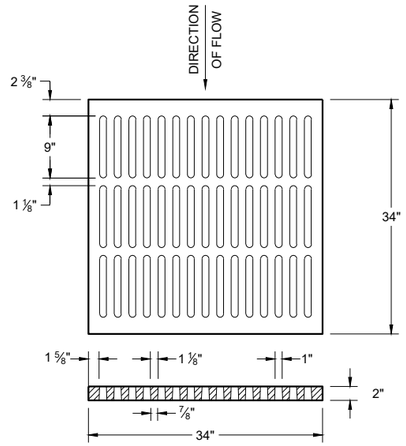
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

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

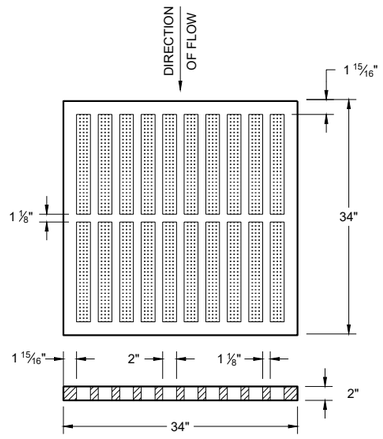
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

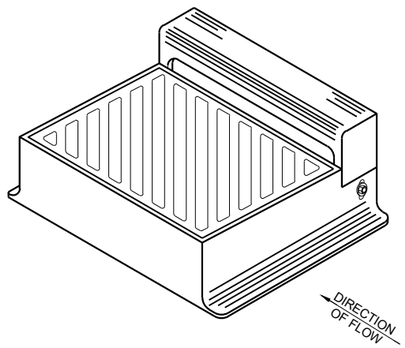
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



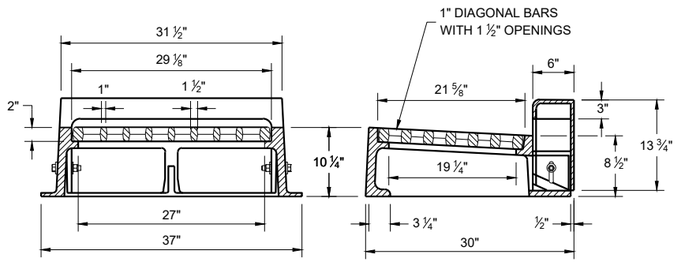
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE

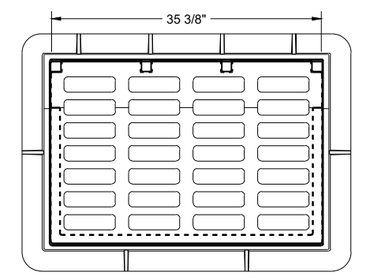


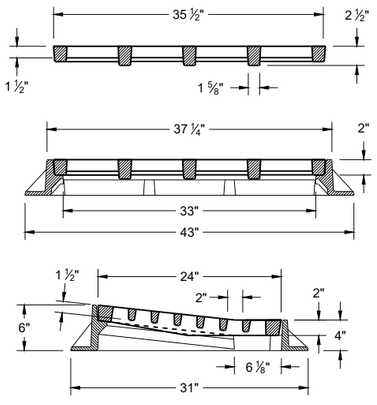
DIAGONAL SLOTS SHALL BE ORIENTEDTO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.

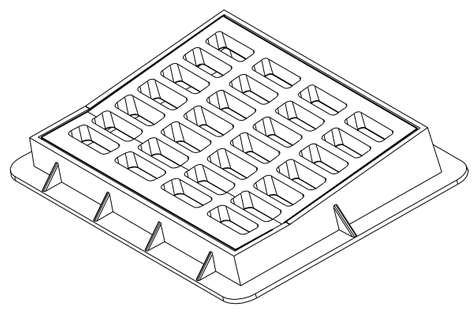


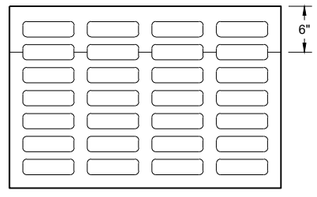
TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"









TYPE "DW"

NOTES: FOR USE IN A SUMP CONDITION. THIS OPTION IS ONLY TO BE USED IF NO OTHER INLETS ARE APPLICABLE.

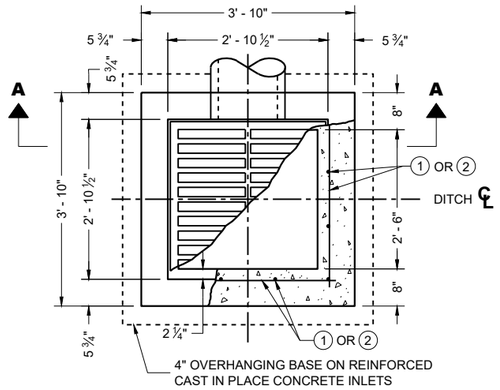
INLET COVERS
TYPES B, B-A, C,
MS, MS-A ,DW AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

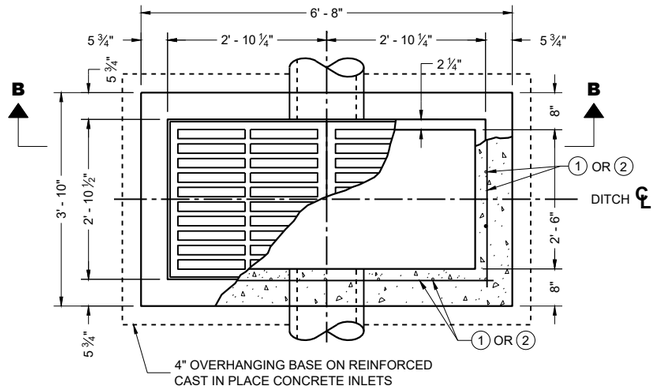
APPROVED
February 2025 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

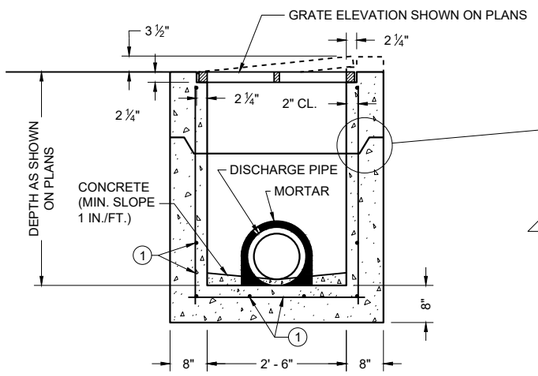
6
SDD 08A05-22b



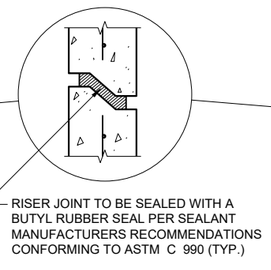
PLAN VIEW

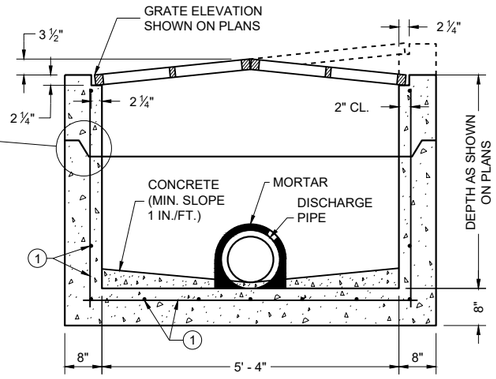


PLAN VIEW

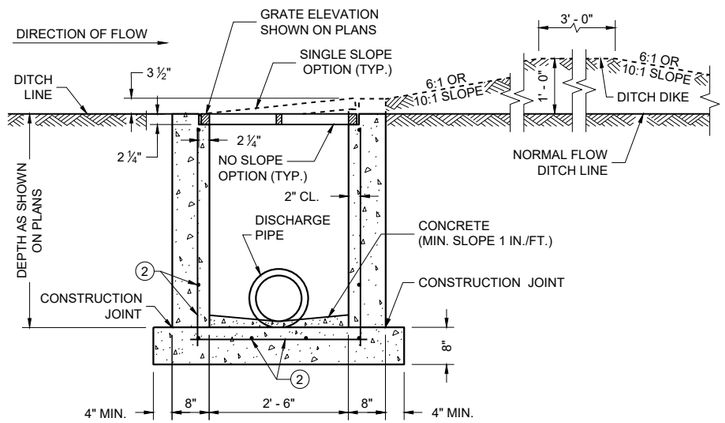


PRECAST REINFORCED CONCRETE SECTION A - A



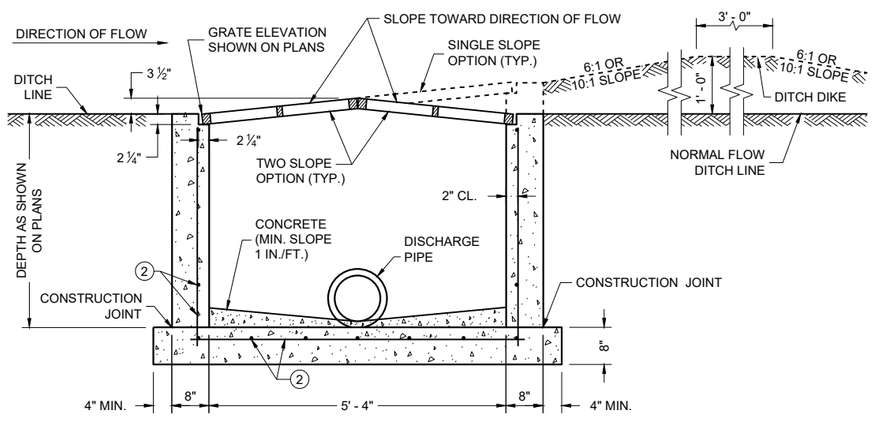


PRECAST REINFORCED CONCRETE SECTION B - B



REINFORCED CAST IN PLACE CONCRETE SECTION A - A

INLETS MEDIAN 1 GRATE



REINFORCED CAST IN PLACE CONCRETE SECTION B - B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

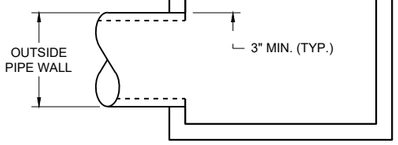
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

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

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES 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.



DETAIL "A"

PIPE MATRIX

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

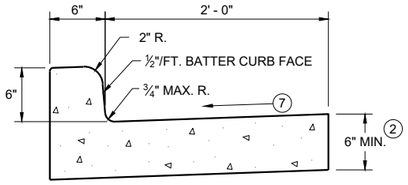
INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

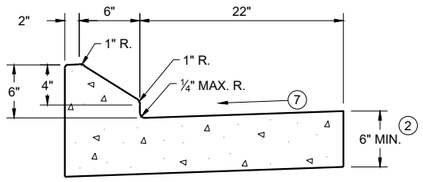
APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

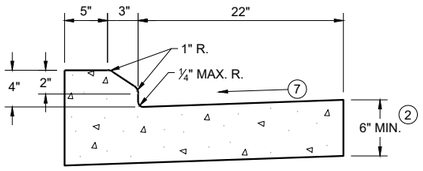
6
SDD 08C08-03



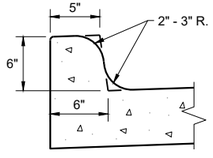
TYPES A (1) & D



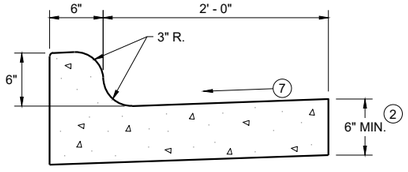
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

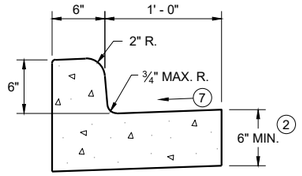


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



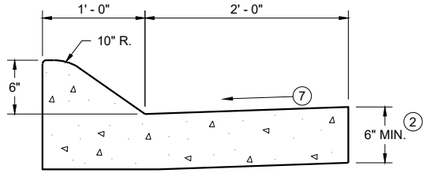
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

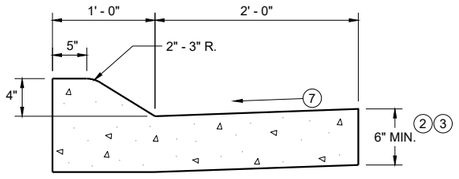


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

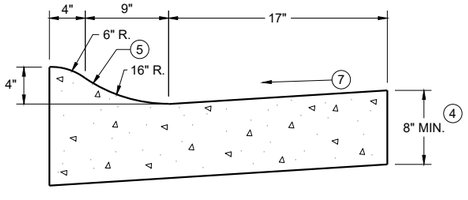


6" SLOPED CURB TYPES A (1) & D



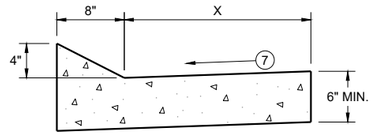
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T
CONCRETE CURB AND GUTTER 30"

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

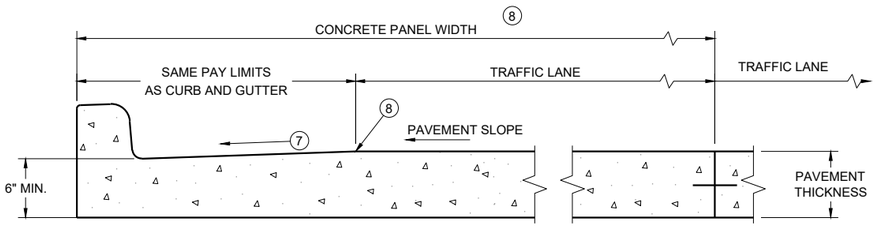


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

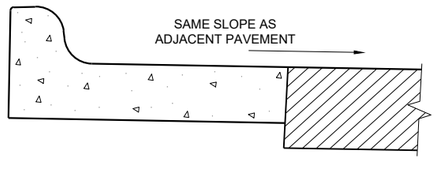
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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 GUTTER (6)
(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.

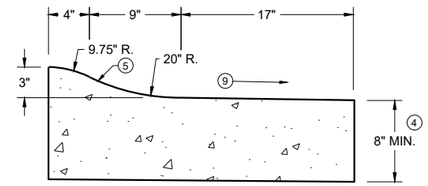
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(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) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



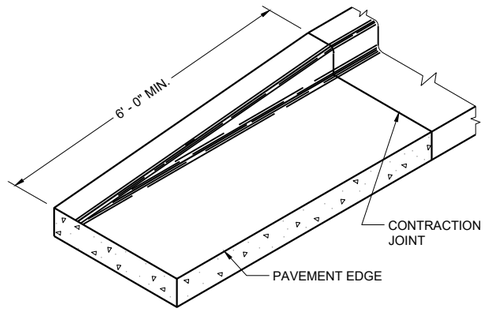
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

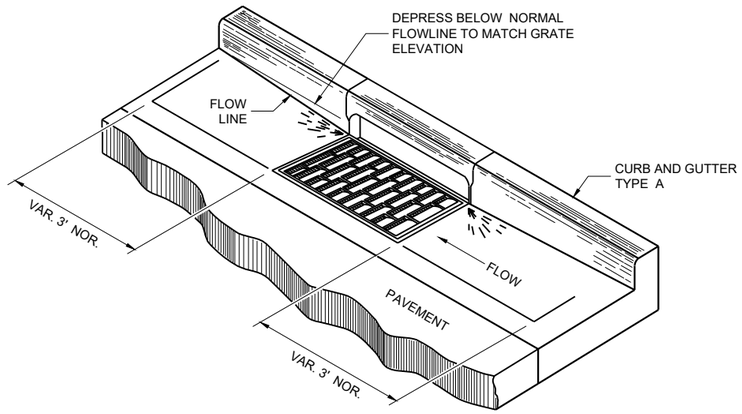
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01-24a



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.

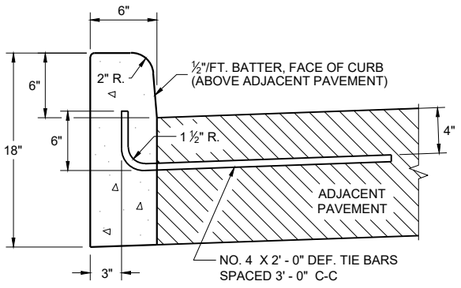
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

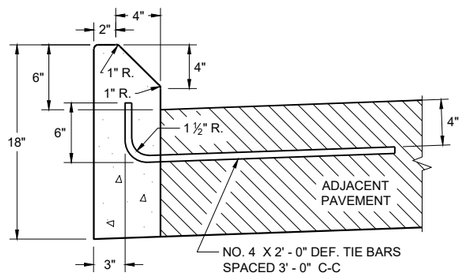
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

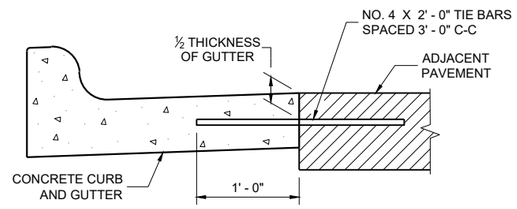


TYPES A (1) & D

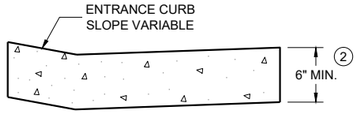


TYPES G (1) & J

CONCRETE CURB

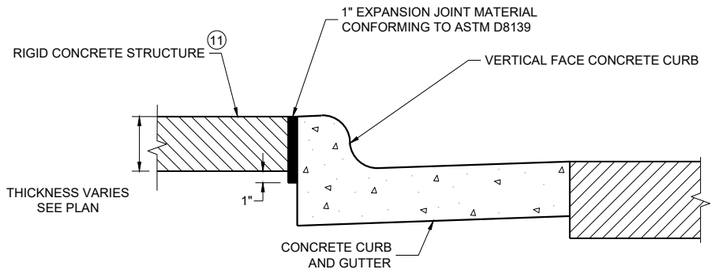


TYPICAL TIE BAR LOCATION (1)

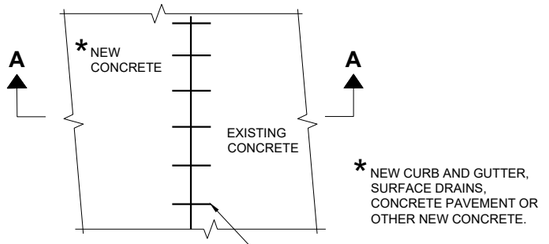


DRIVEWAY ENTRANCE CURB (10)

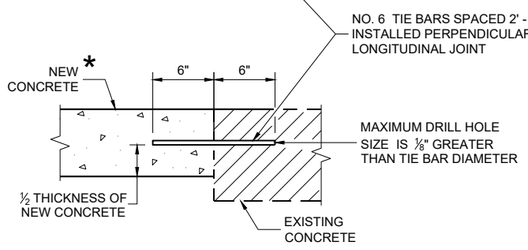
(WHEN DIRECTED BY THE ENGINEER)



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-24b

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

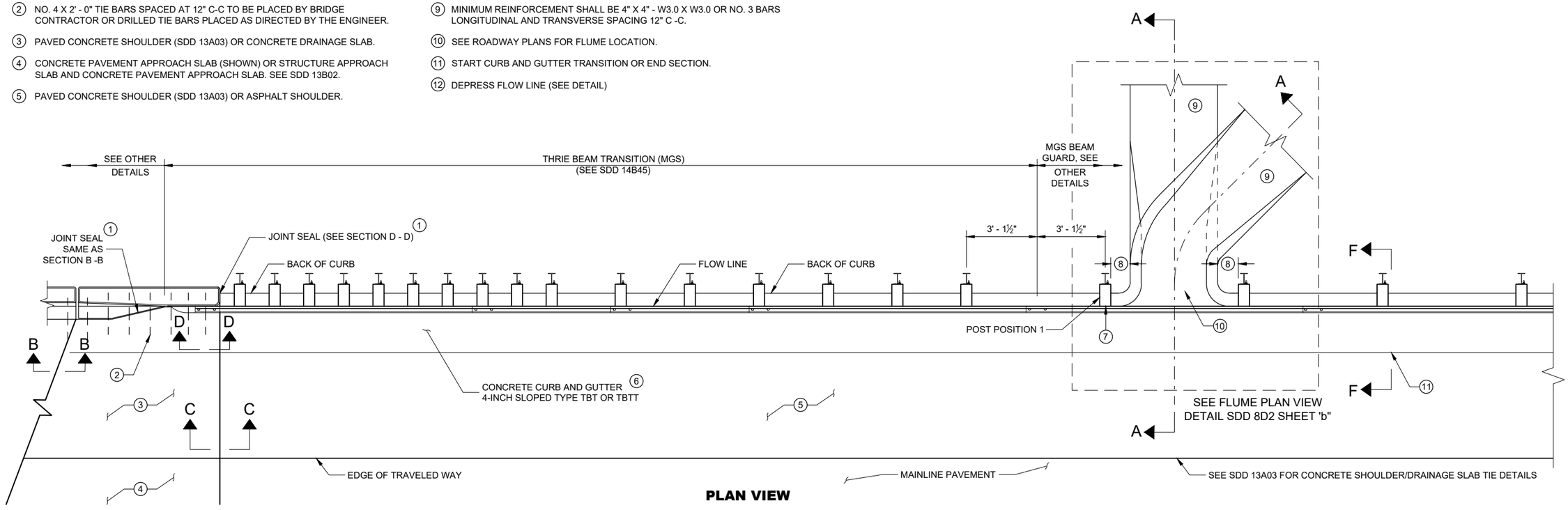
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

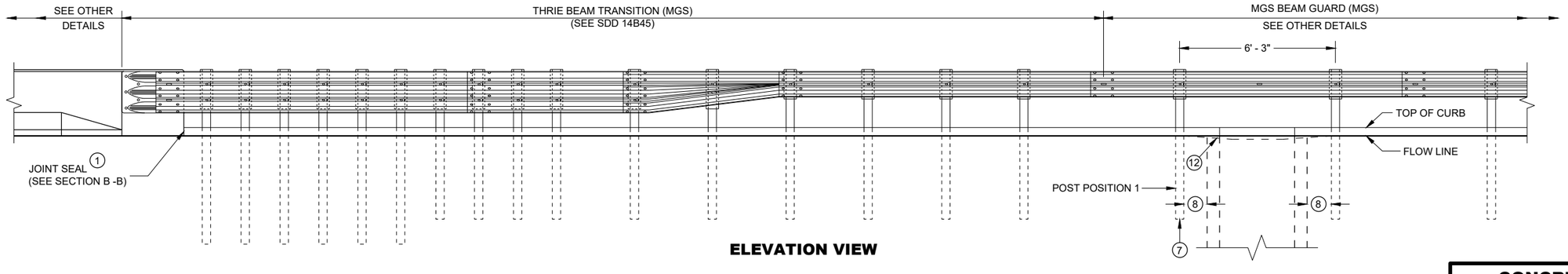
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



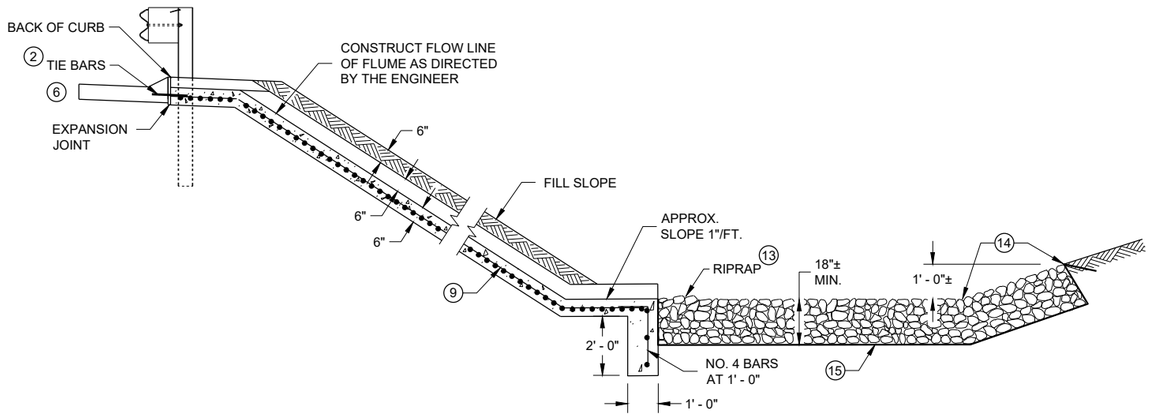
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

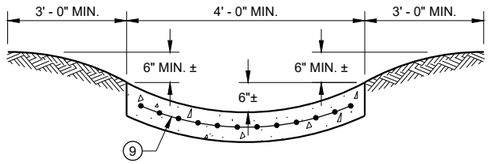
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 08a

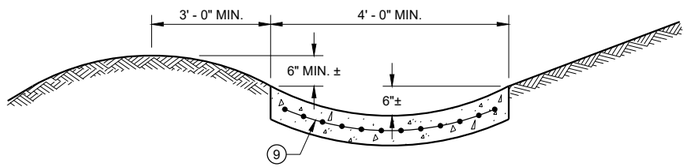
SDD 08D02 - 08a



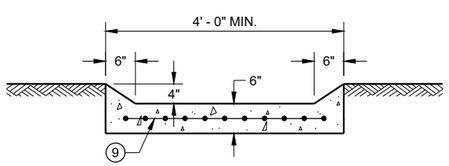
SECTION A - A



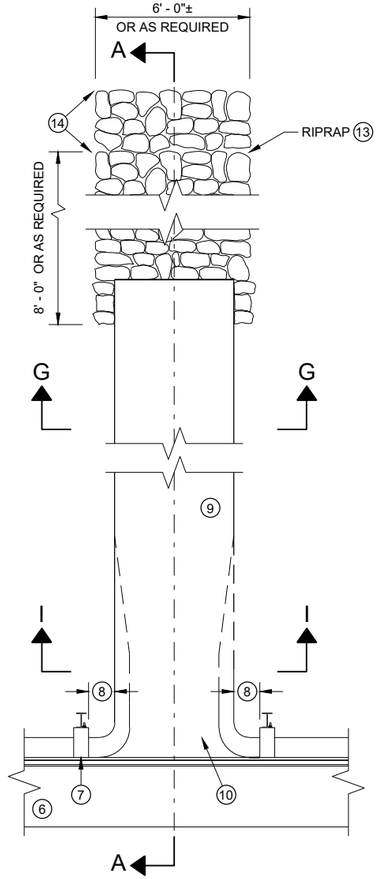
SECTION G - G



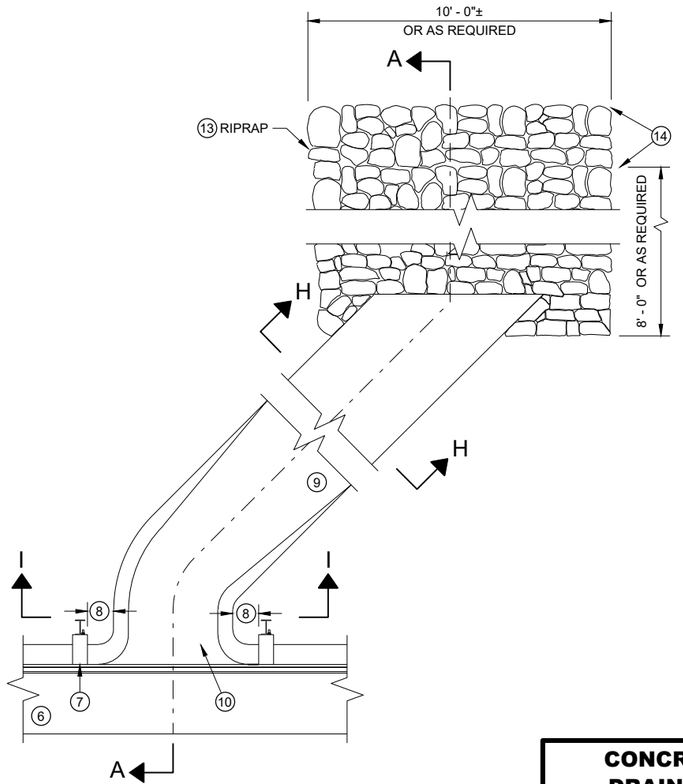
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

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

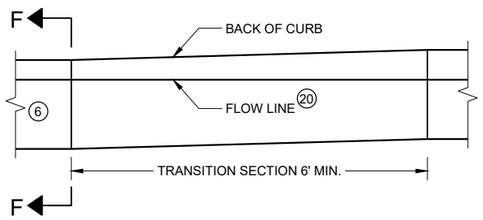
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

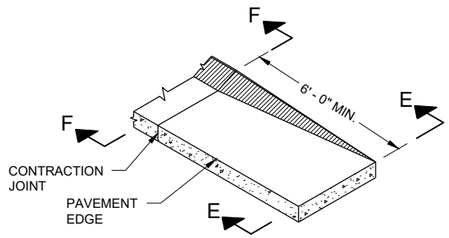
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

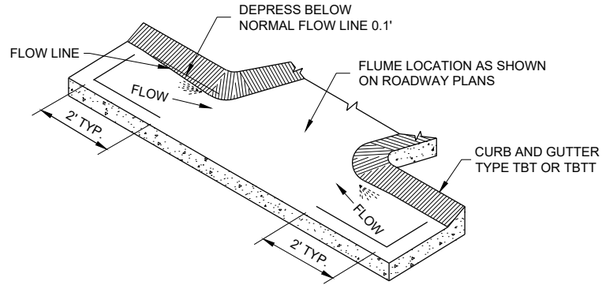
SDD 08D02 - 08b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

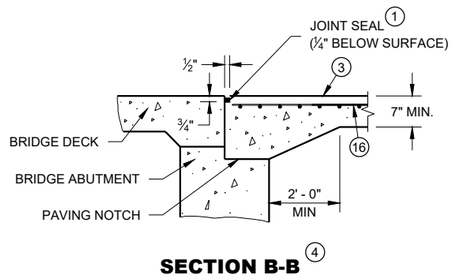
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

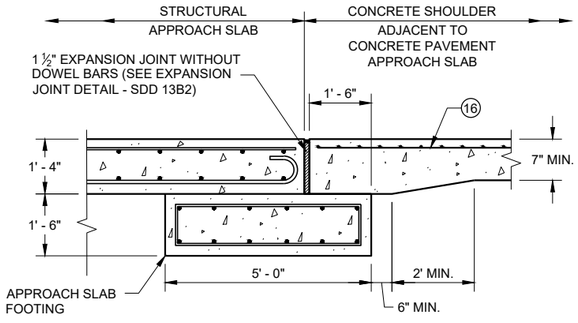
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

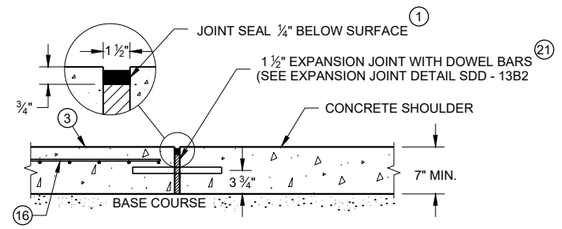
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



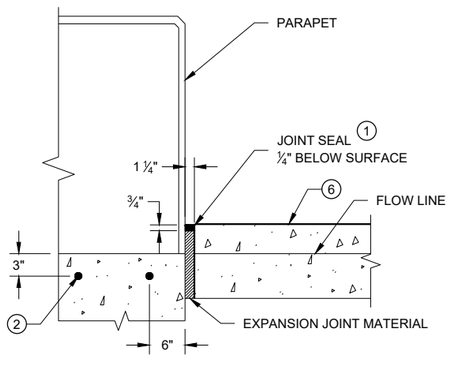
SECTION B-B (4)



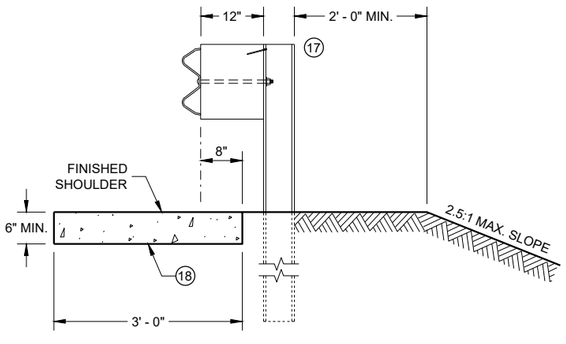
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



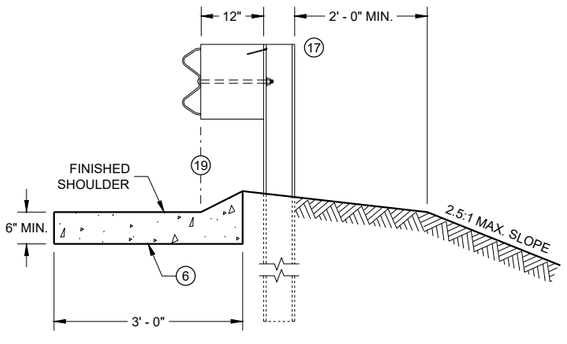
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

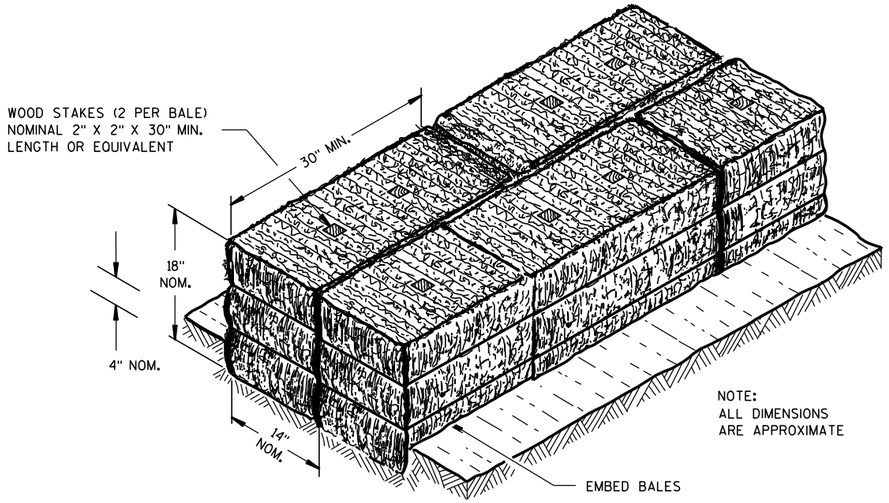
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

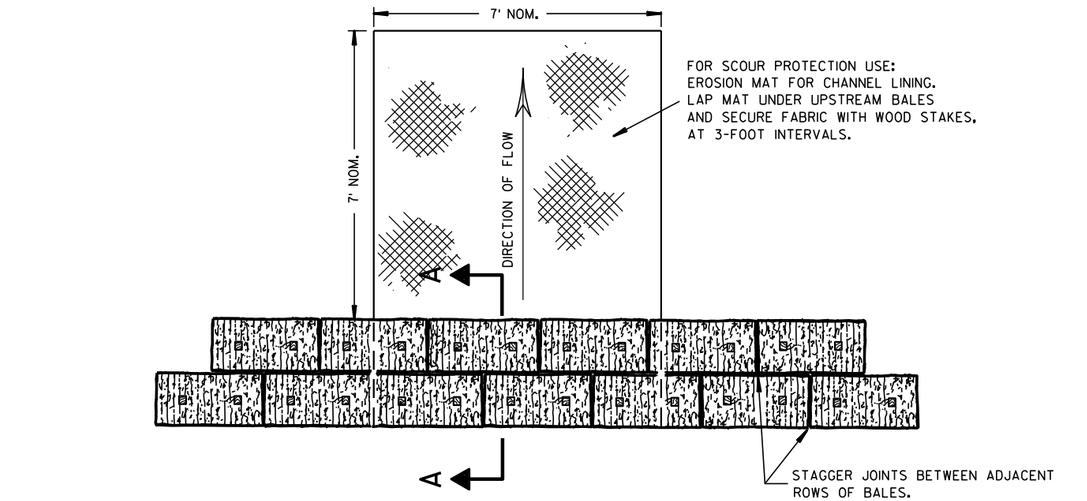
APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

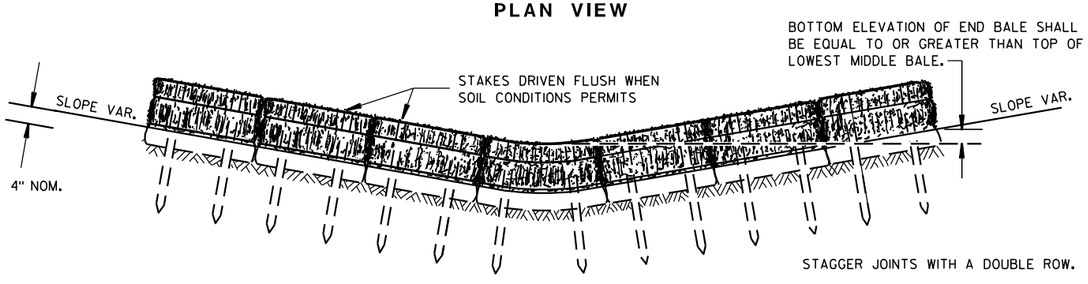
6
SDD 08D02 - 08c



SECTION A-A



PLAN VIEW



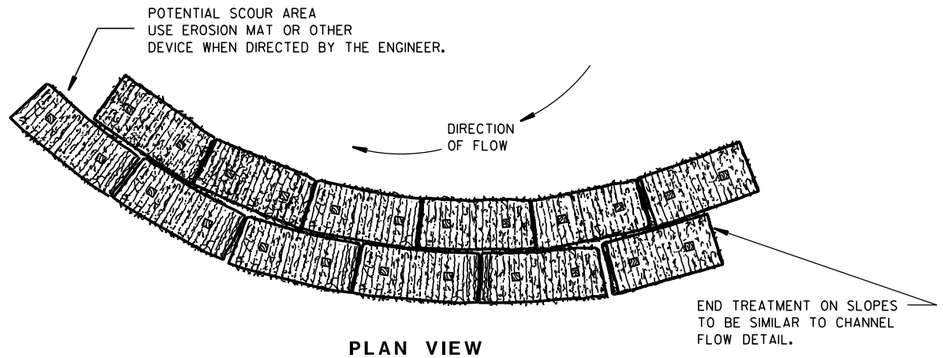
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

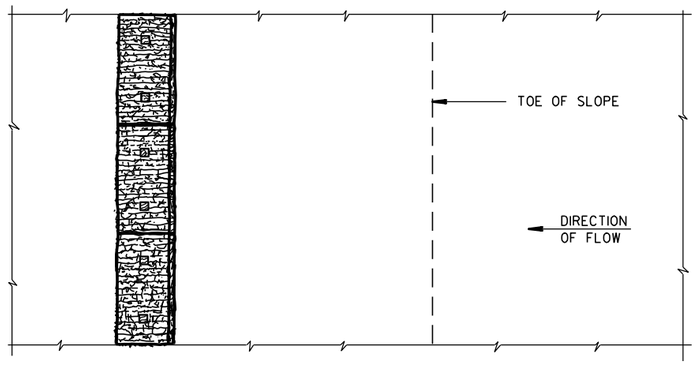
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

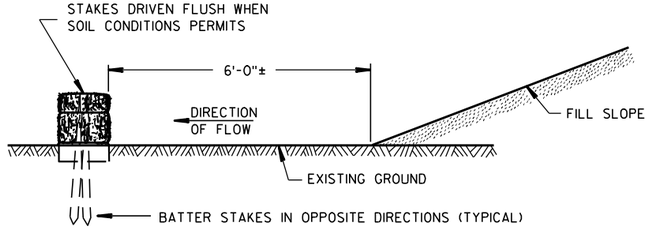


PLAN VIEW

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

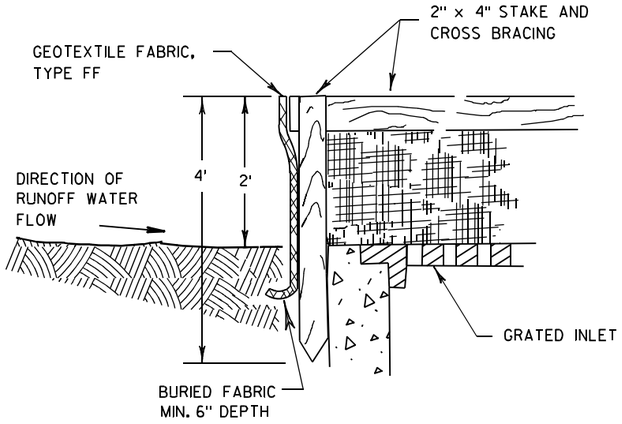
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

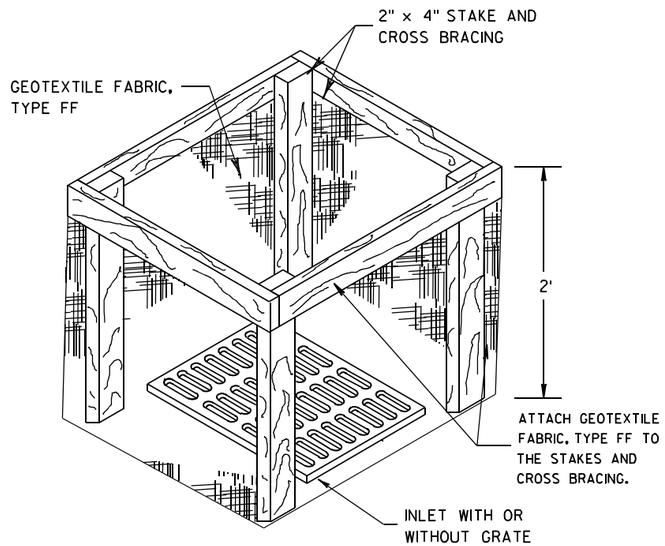
APPROVED

6/04/02 — DATE

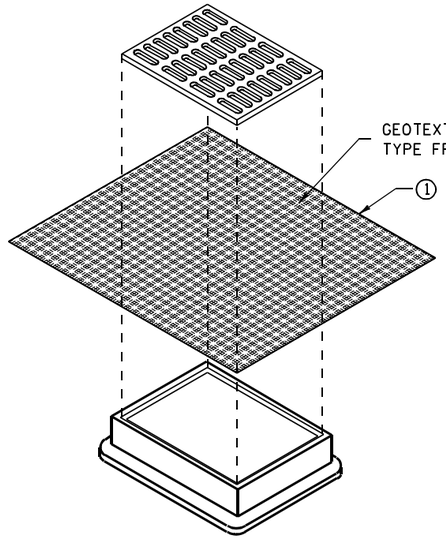
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



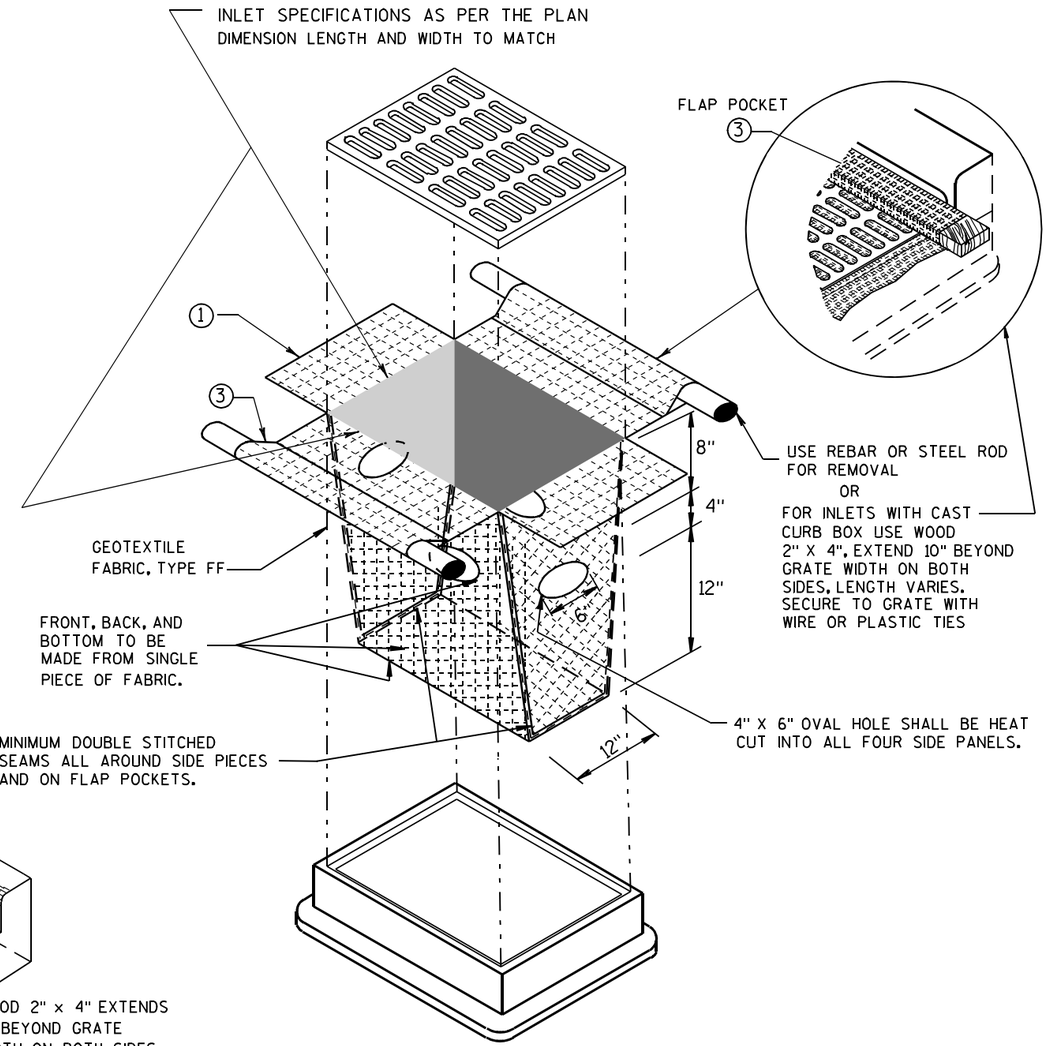


INLET PROTECTION, TYPE A



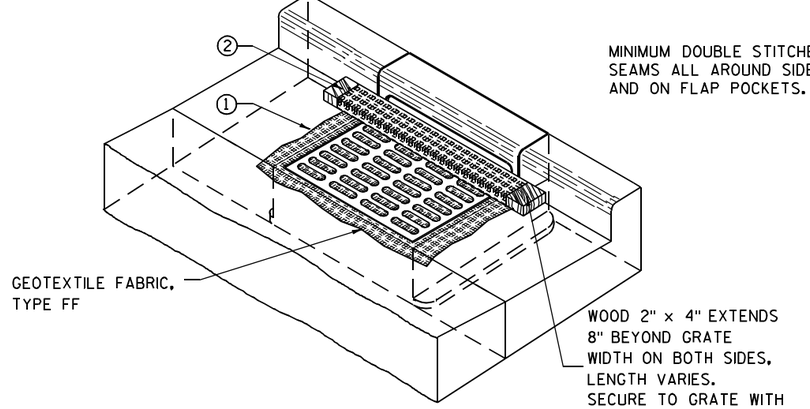
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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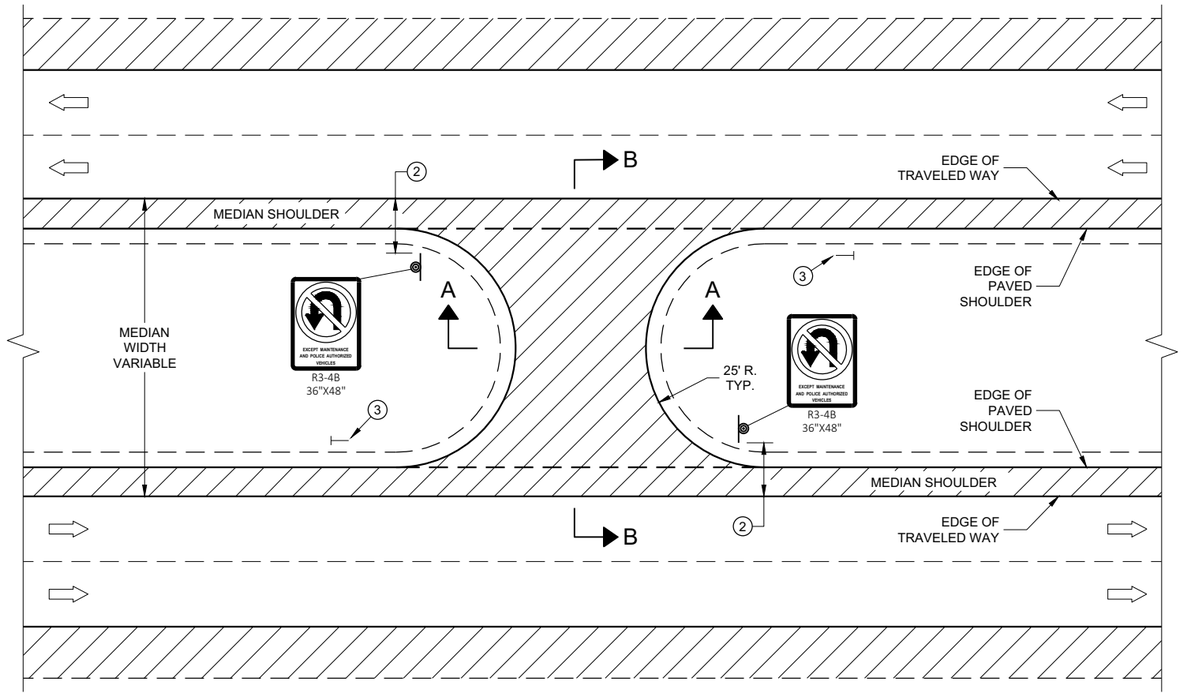
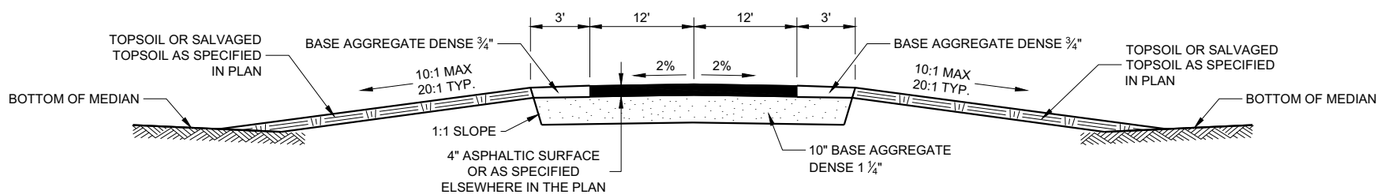
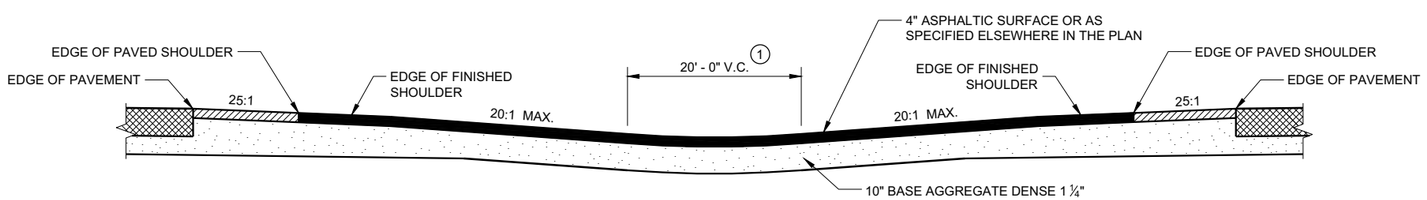
S.D.D. 8 E 10-2



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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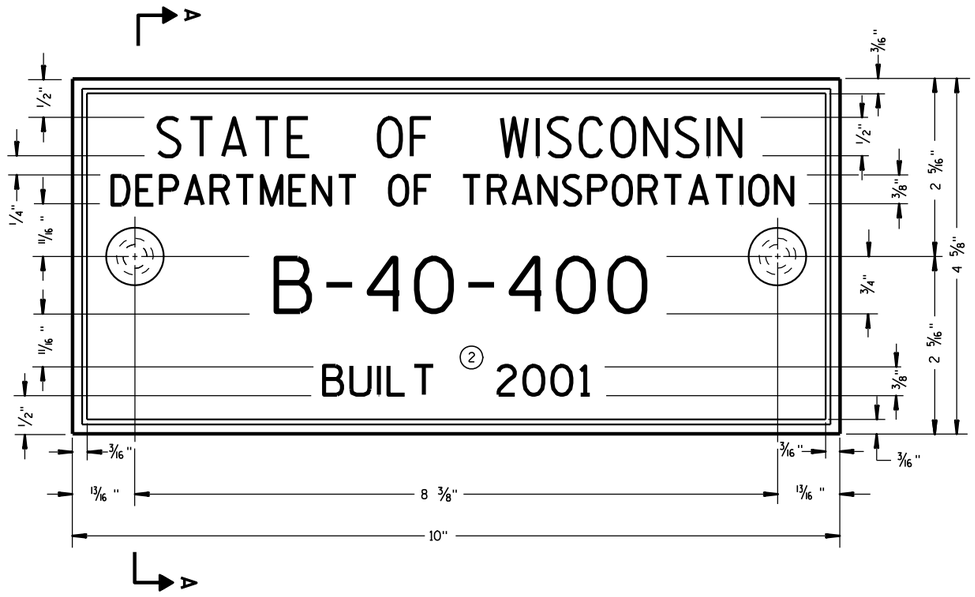
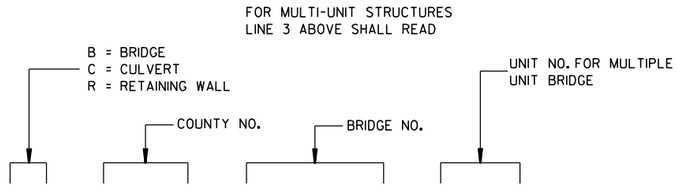
SDD 11A01 - 06



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

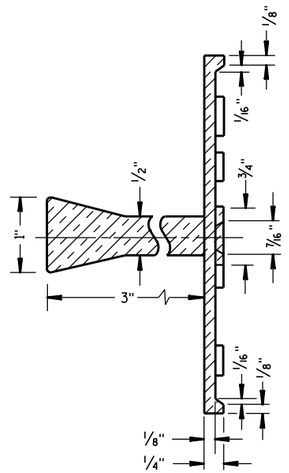
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

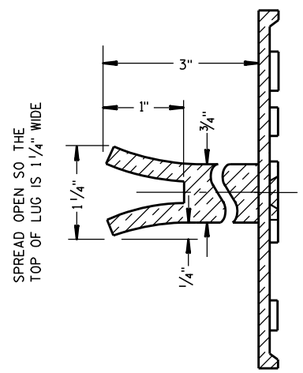
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

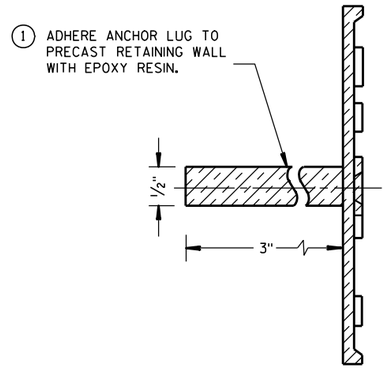
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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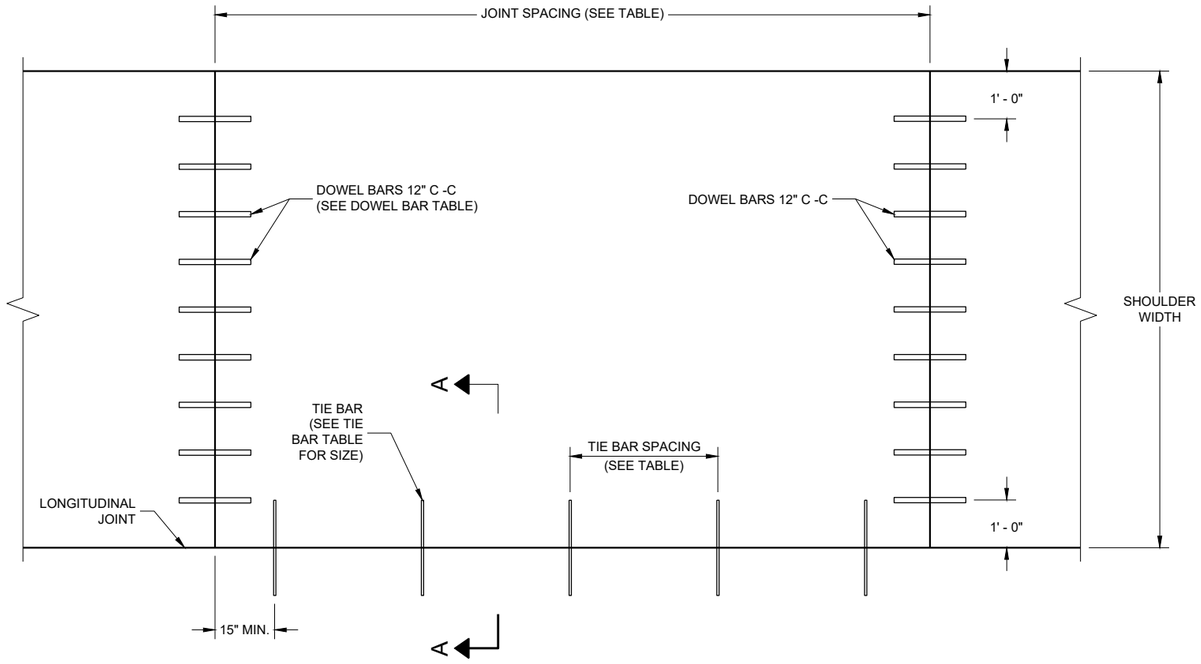
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES.

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

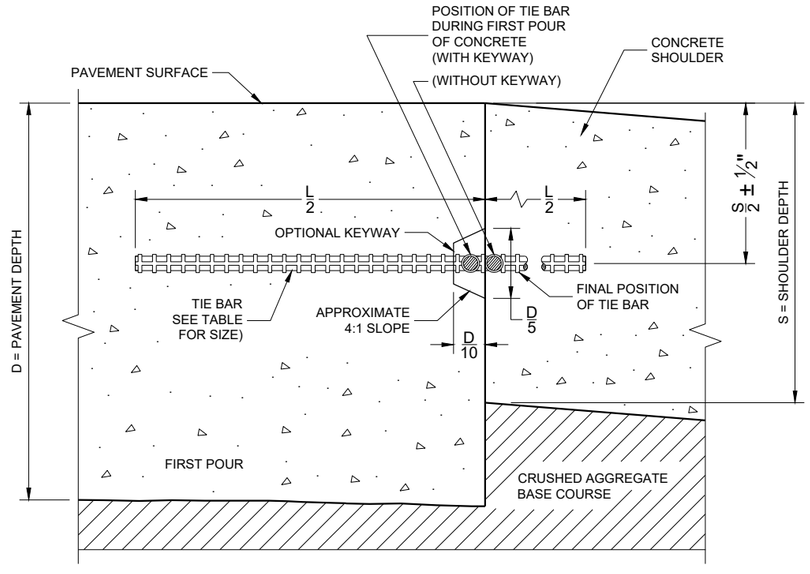
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

FHWA

SDD 13A03 - 07

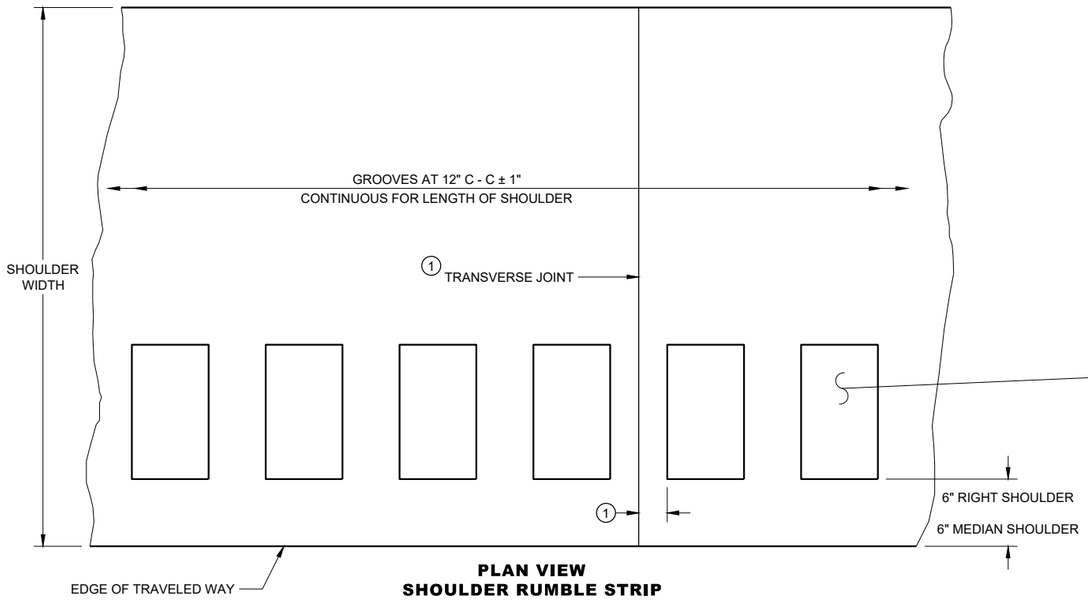
SDD 13A03 - 07

GENERAL NOTES

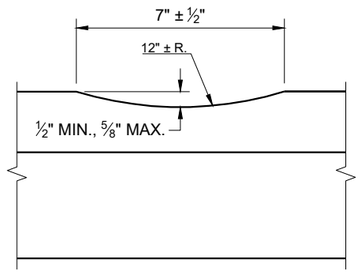
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

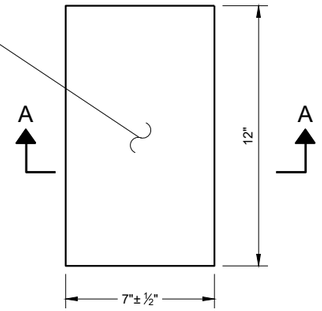
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



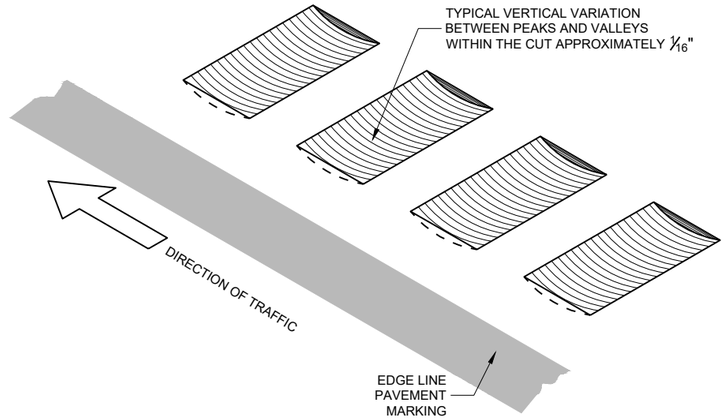
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

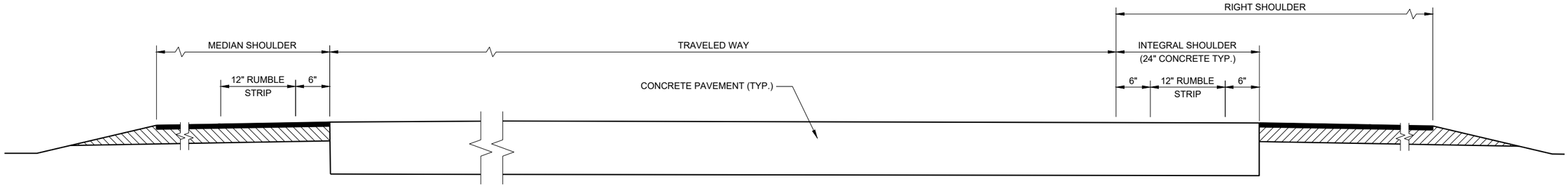


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

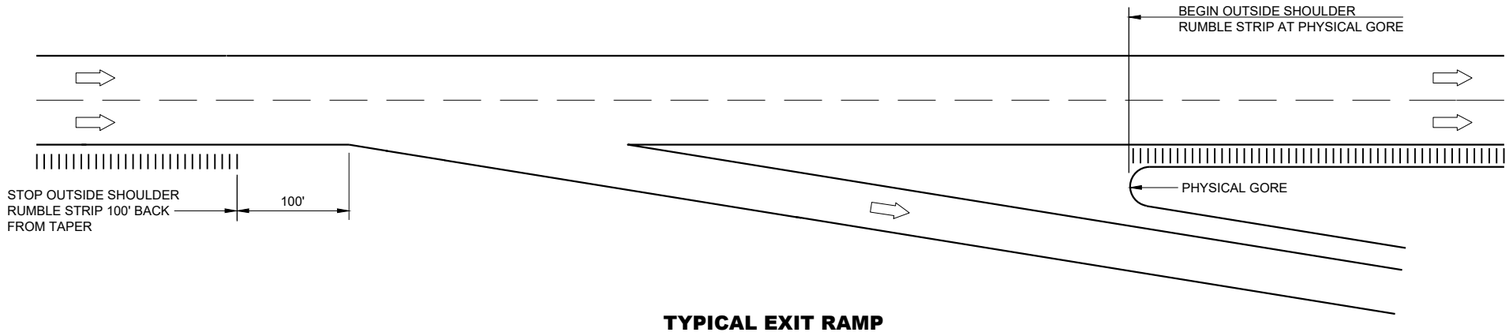
PLACEMENT DETAIL FOR RUMBLE STRIP



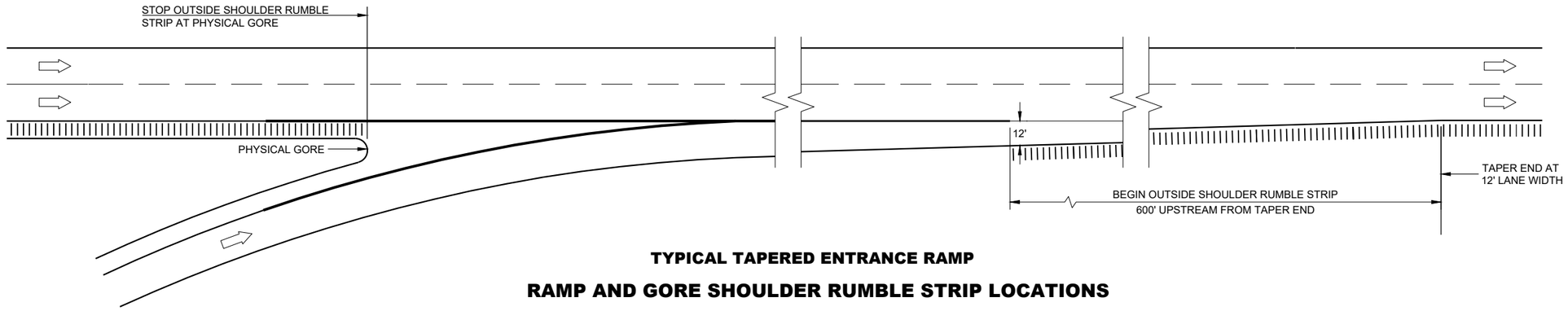
SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

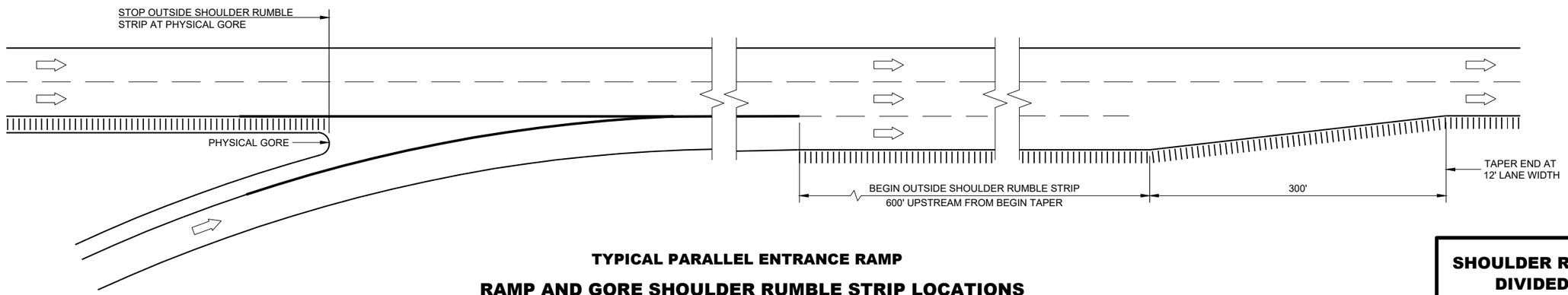


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

DIRECTION OF TRAFFIC

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

FHWA

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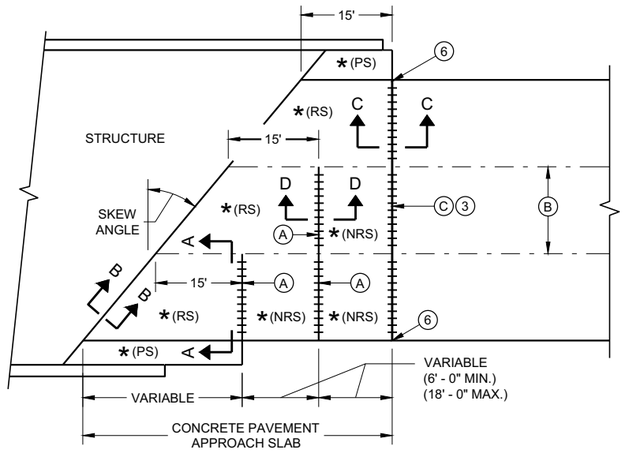
SDD 13A05-06b



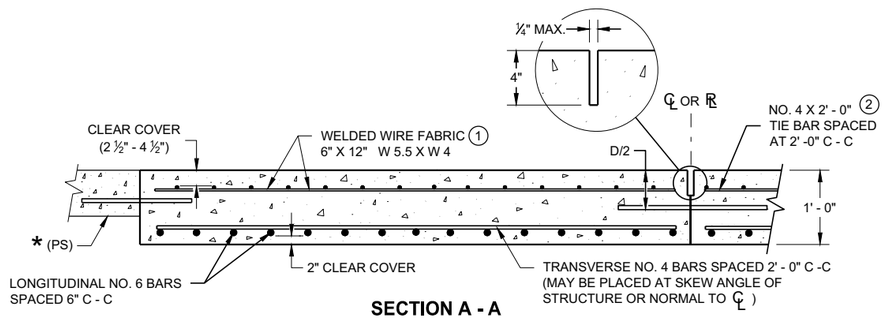
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

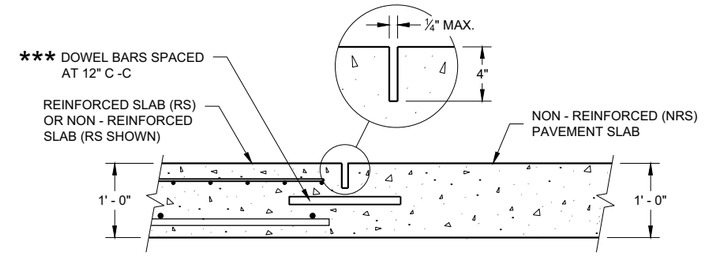
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

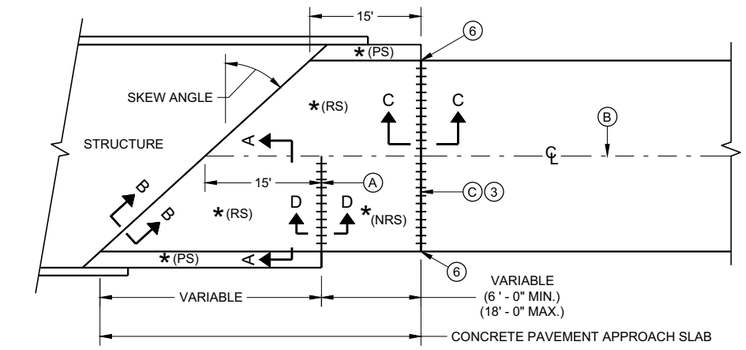
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

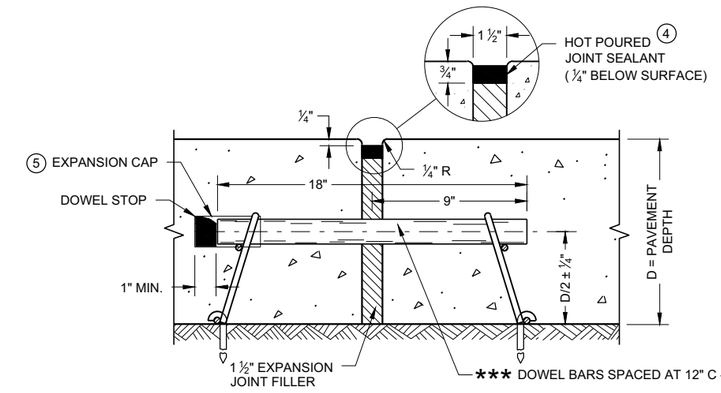


SECTION D - D
CONTRACTION JOINT

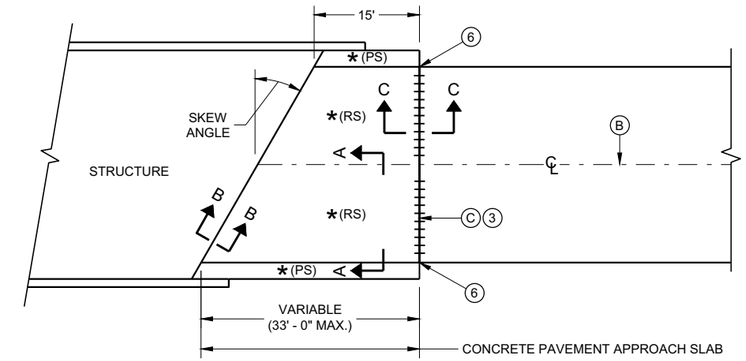


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

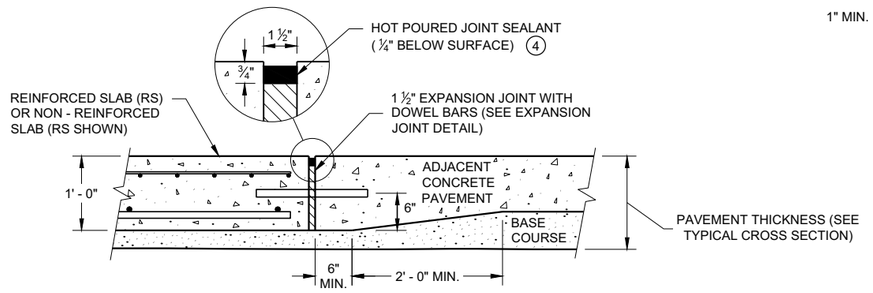


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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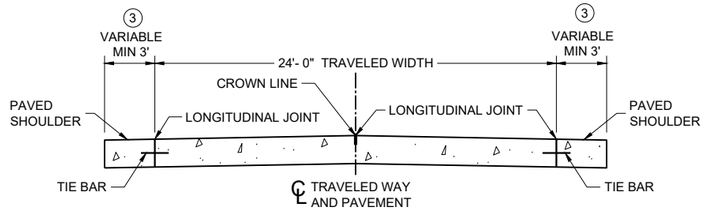
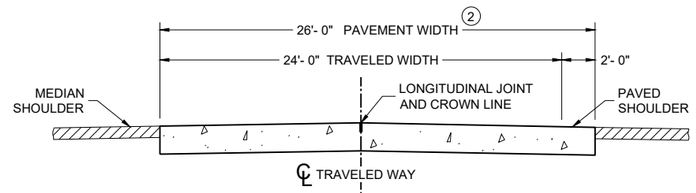
SDD 13B02 - 09a

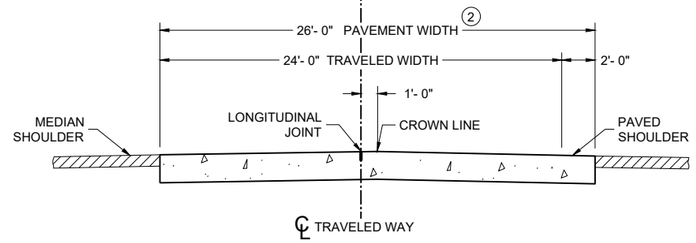


SECTION A - A

TWO-LANE TWO-WAY HIGHWAY (1)



SECTION B - B



ALTERNATIVE SECTION B - B

DIVIDED HIGHWAY (1)

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

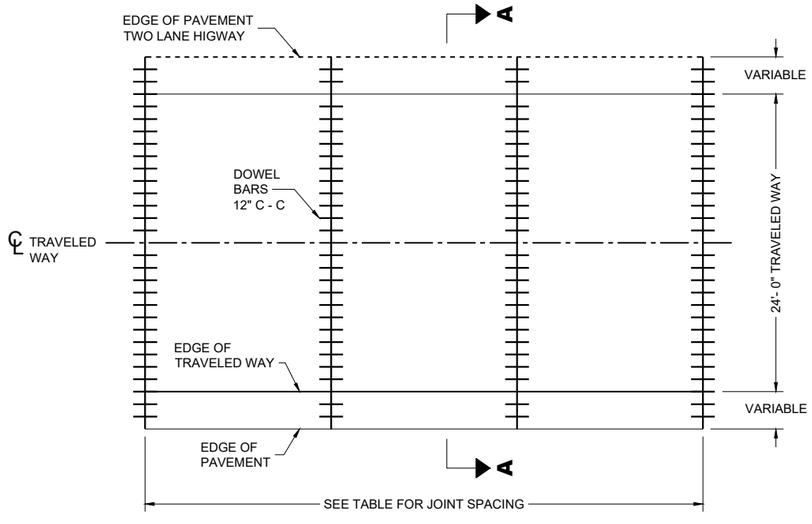
(1) REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

(2) MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED "PAVED SHOULDER" AS CONCRETE PAVEMENT.

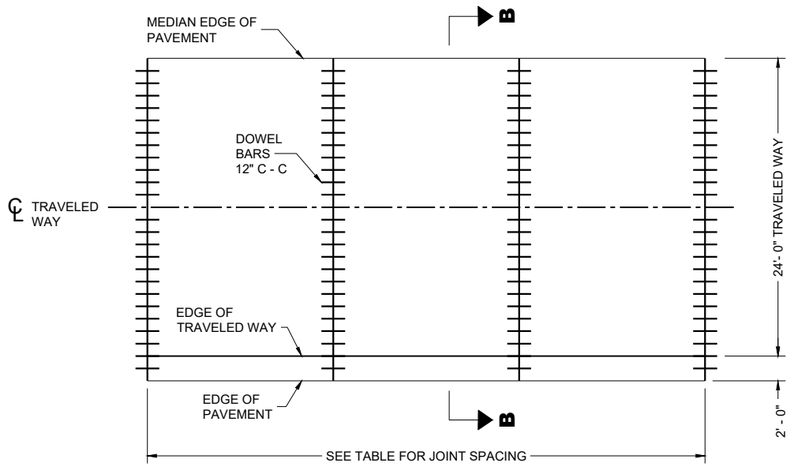
(3) SHOULDER WIDTHS LESS THAN 3 FEET SHALL BE PAVED INTEGRAL TO THE MAINLINE CONCRETE PAVEMENT, SEE SECTION B-B.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'



CONTRACTION JOINT LAYOUT FOR TWO-LANE TWO-WAY HIGHWAY

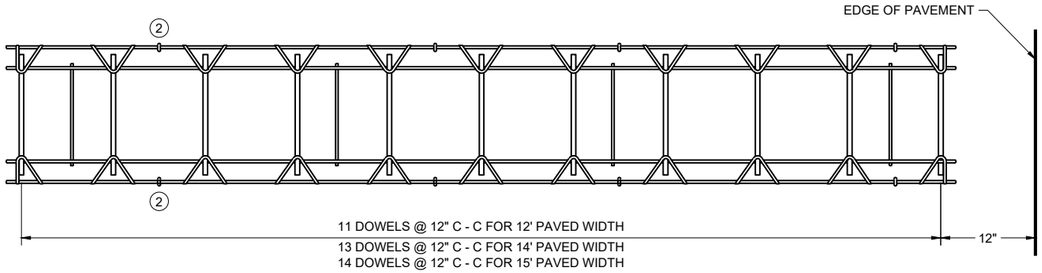


CONTRACTION JOINT LAYOUT FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 13C11-15a



PLAN VIEW

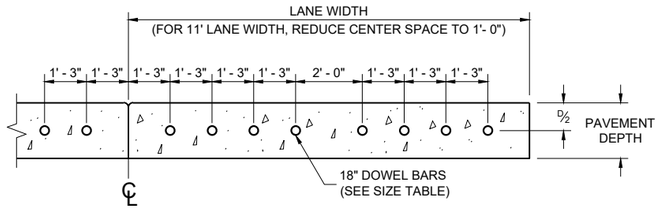
SIDE VIEW

(NORMAL TO CENTERLINE)

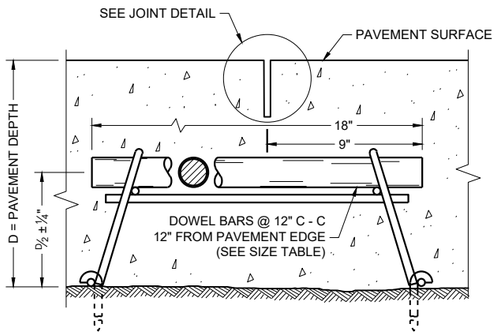
CONTRACTION JOINT DOWEL ASSEMBLY (1)

GENERAL NOTES

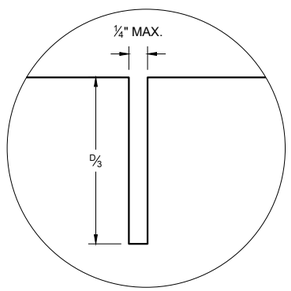
1. OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
2. SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
3. FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.
4. PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
5. INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
6. APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
7. ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



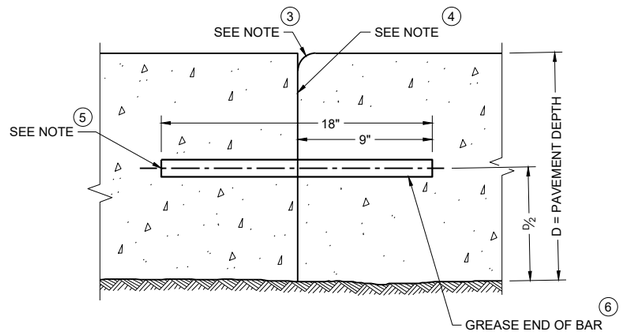
DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



DOWELED CONTRACTION JOINT



JOINT DETAIL



TRANSVERSE CONSTRUCTION JOINT

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPERVISOR

FHWA

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SDD 13C11-15b

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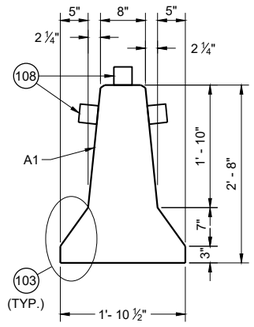
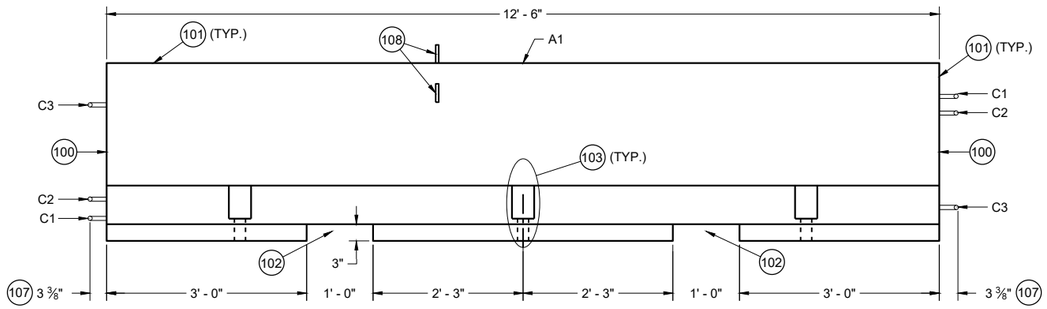


CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

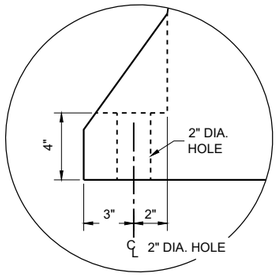
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

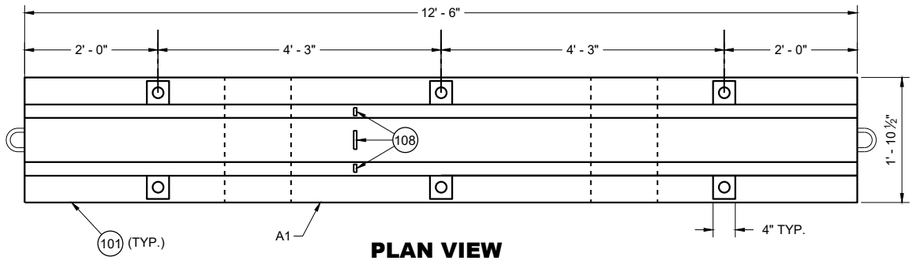
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

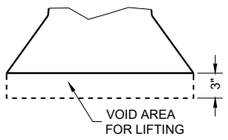


ANCHOR BLOCK DETAIL

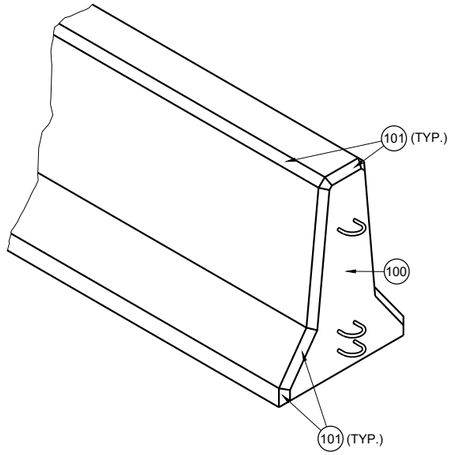


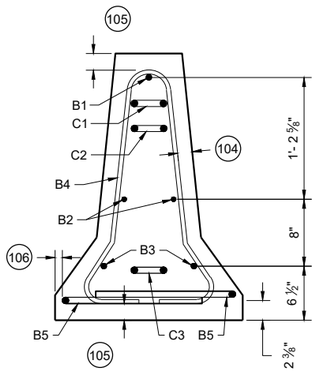
PLAN VIEW

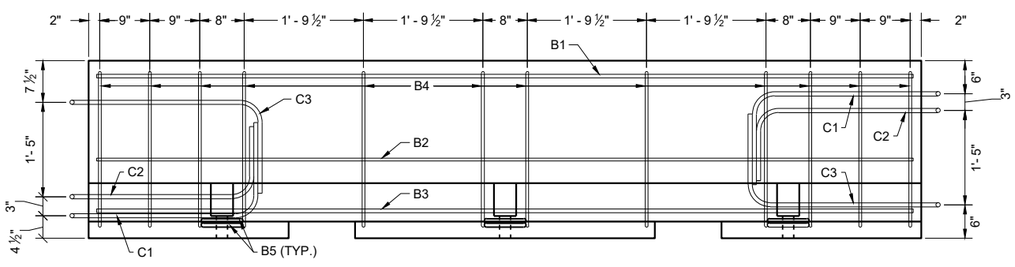
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







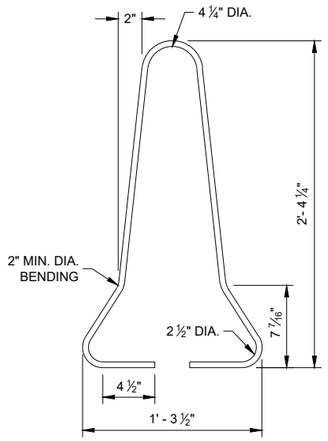
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

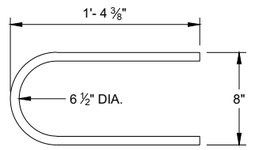
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

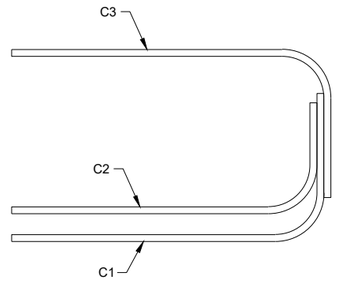
6
SDD 14B07-16a



B4 BAR DETAIL

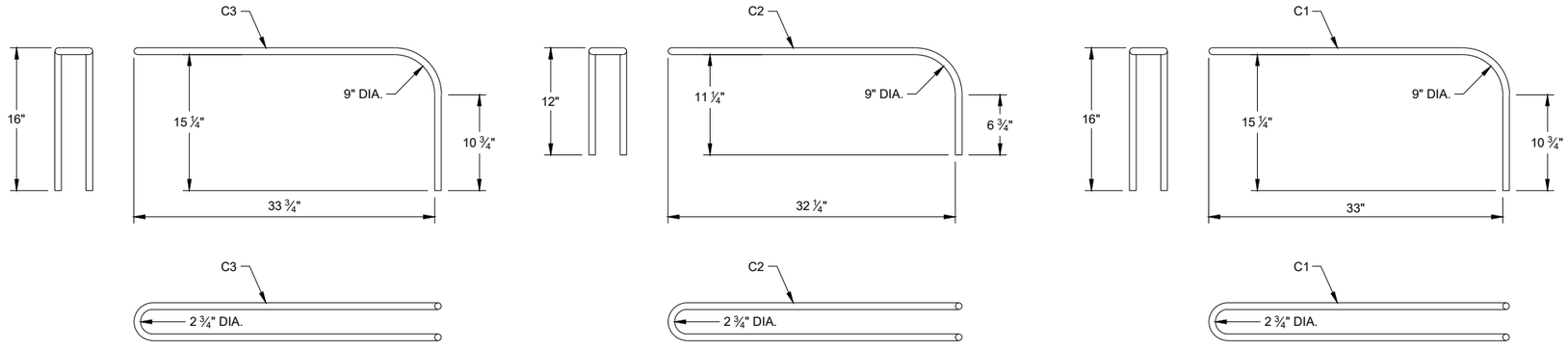


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



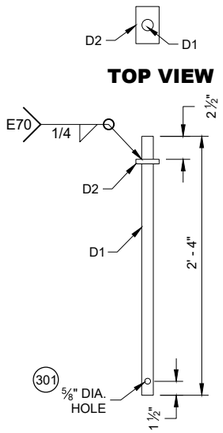
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

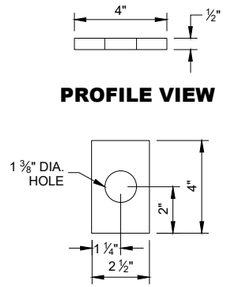
SDD 14B07-16b



TOP VIEW

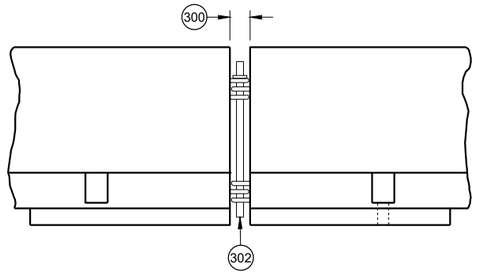
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

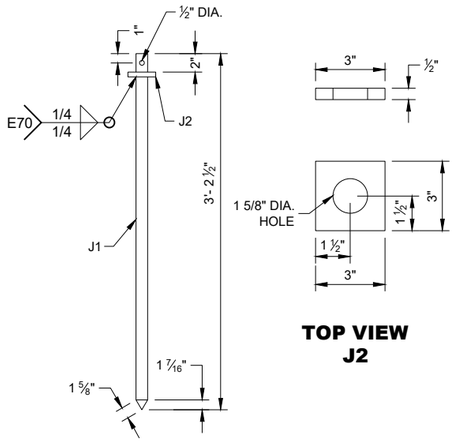
306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.

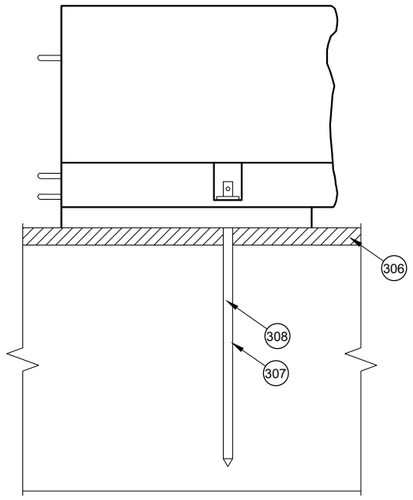
TOP VIEW



TOP VIEW J2

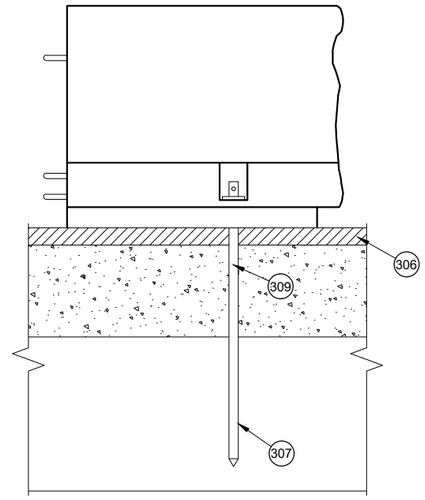
PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY



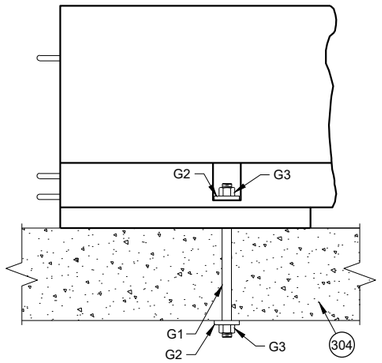
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



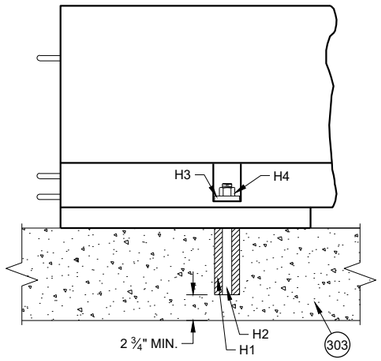
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION 305



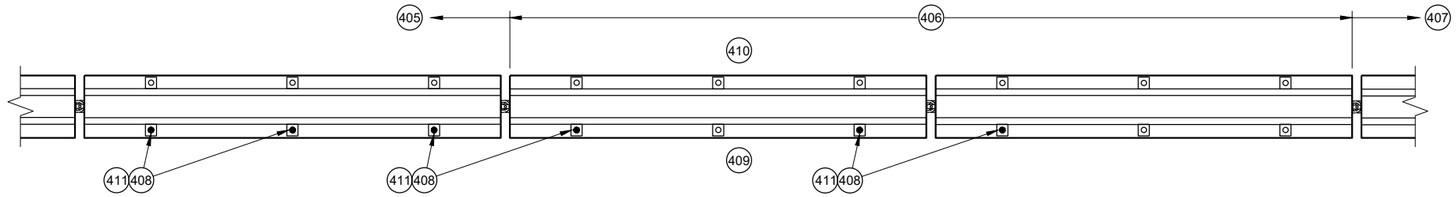
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION 305

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

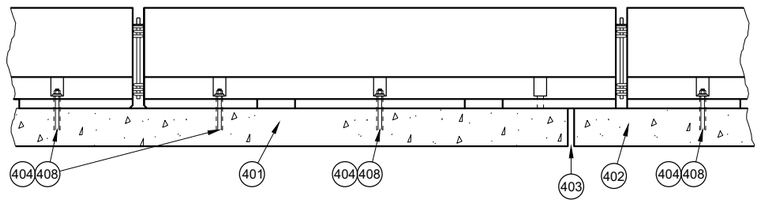
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16c



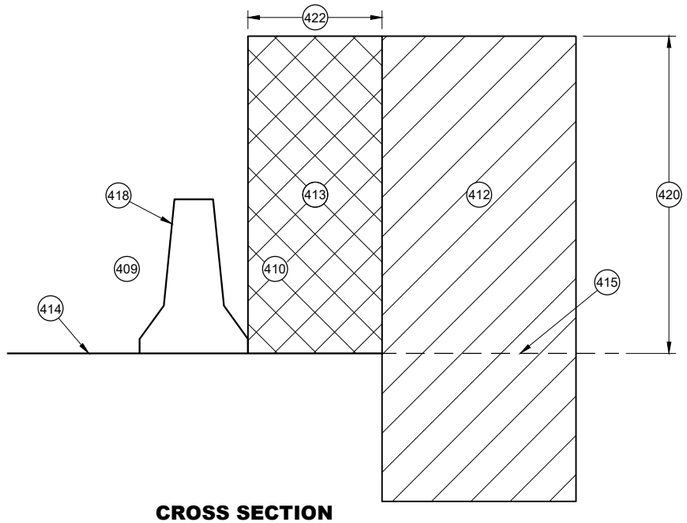
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



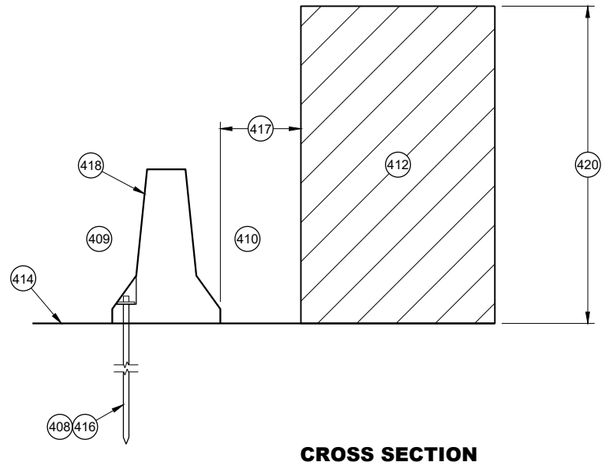
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



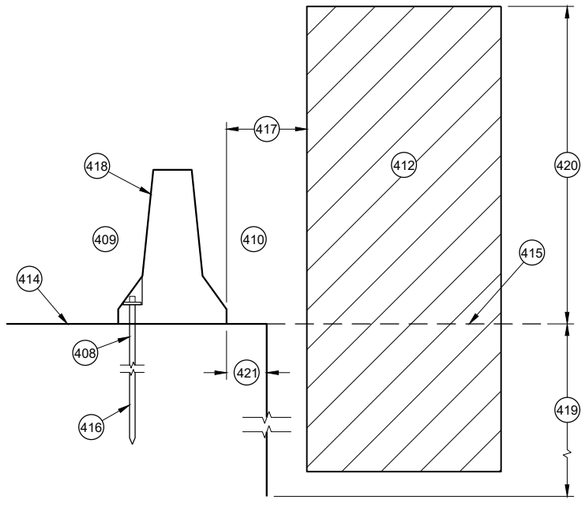
CROSS SECTION

FREE STANDING BARRIER



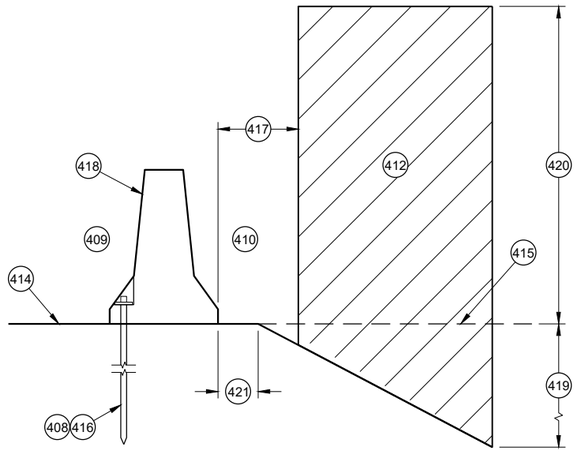
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16d

GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

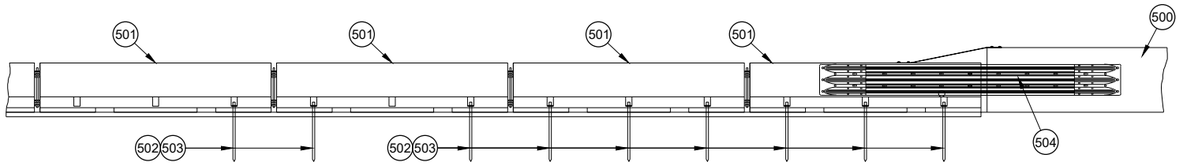
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

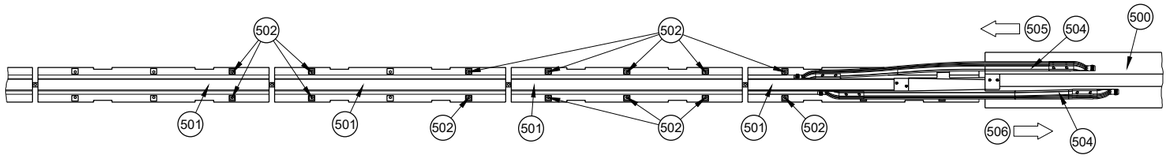
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

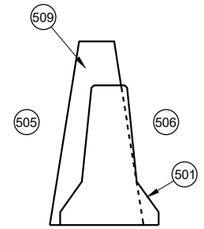
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



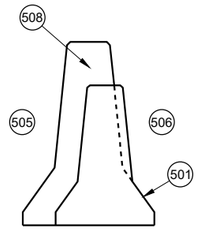
PROFILE VIEW



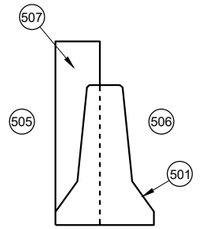
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

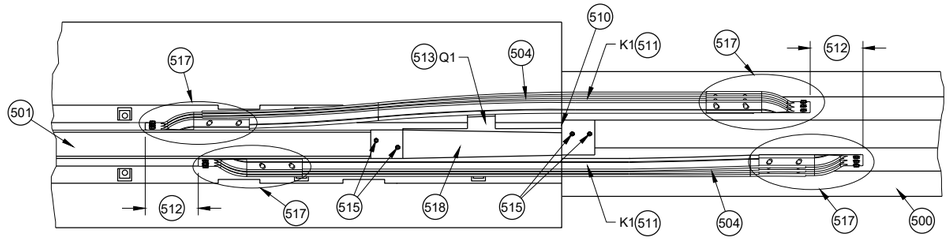


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

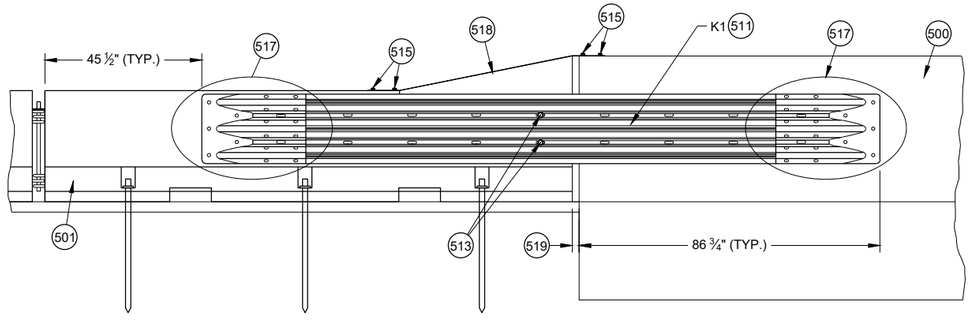


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

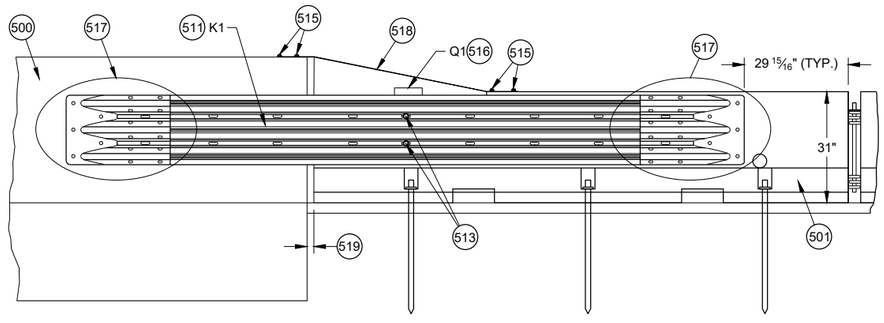
PLAN VIEW
TRANSITION TO RIGID BARRIER



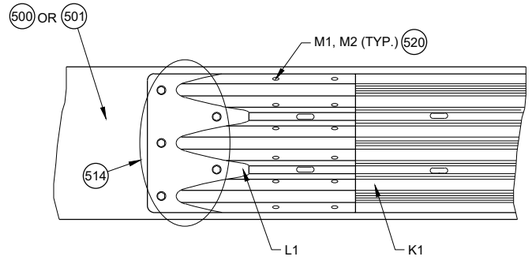
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16e

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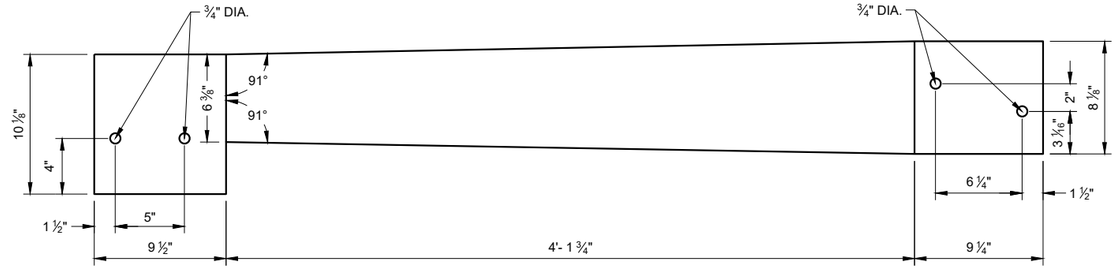
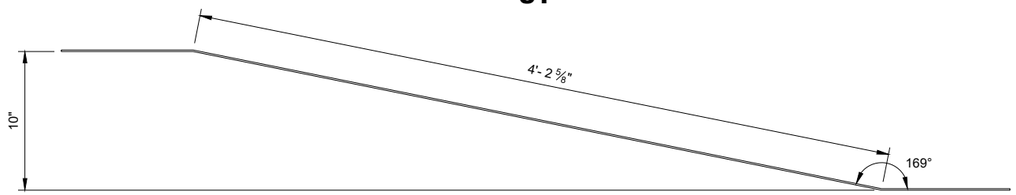


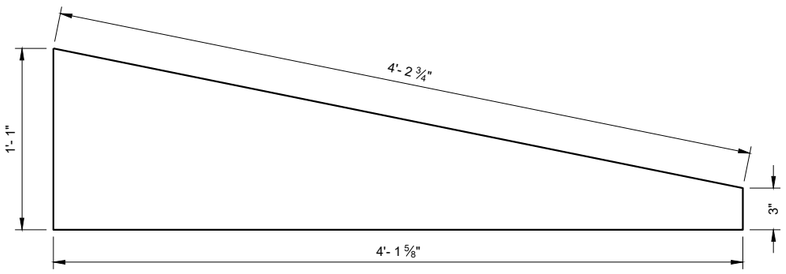
TOP VIEW

S1



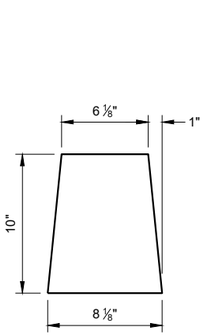
ELEVATION VIEW

S1



SIDE VIEW

S3



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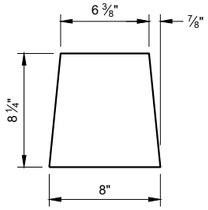

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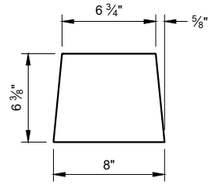
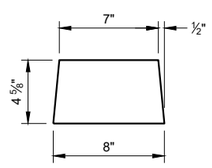
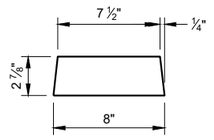


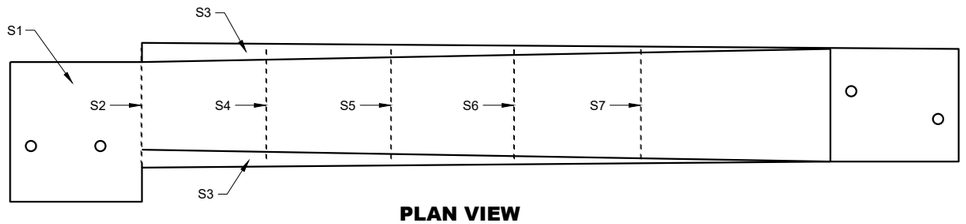
S5



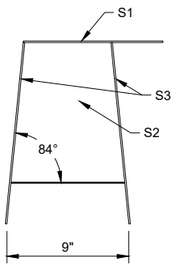
S6



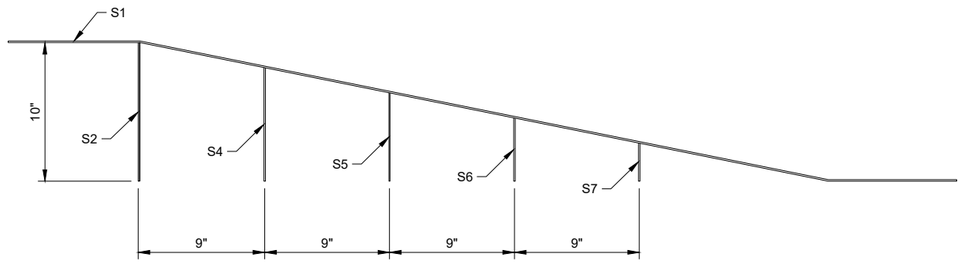
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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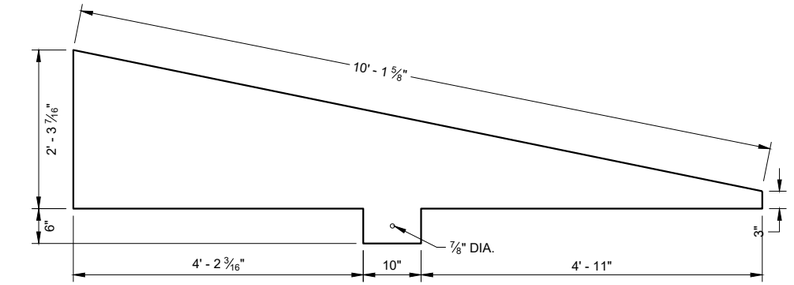
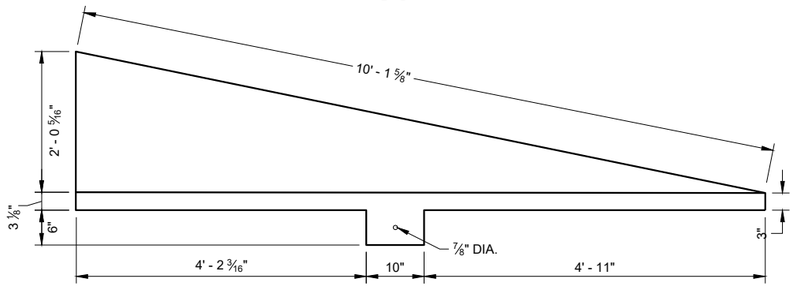
SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

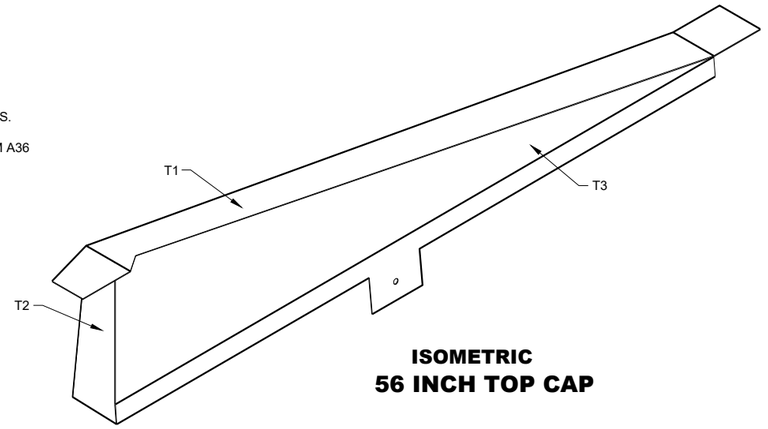
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

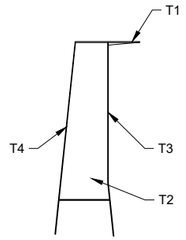
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

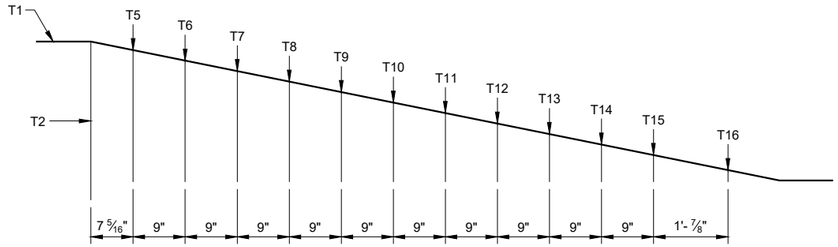
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



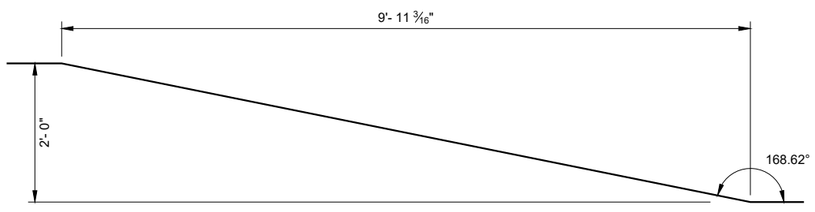
ISOMETRIC
56 INCH TOP CAP



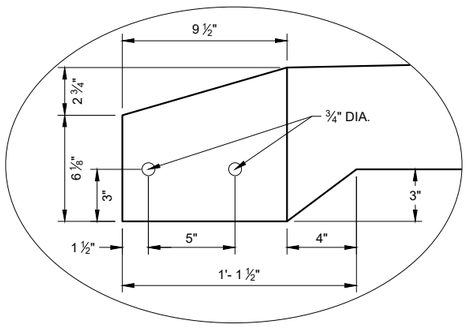
END VIEW
56 INCH TOP CAP



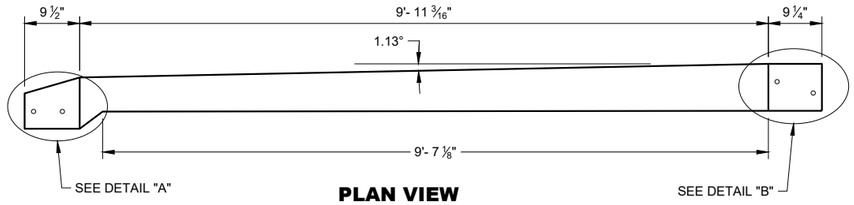
SIDE VIEW (700)
56 INCH TOP CAP



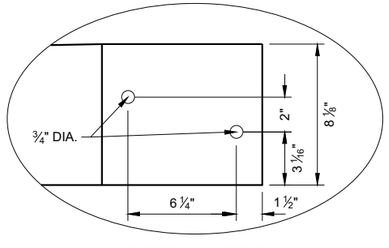
SIDE VIEW
TOP PLATE T1



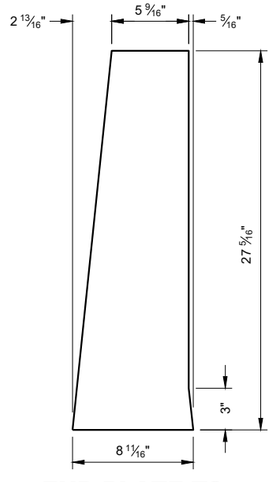
DETAIL "A"



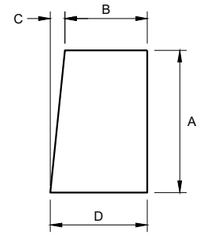
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

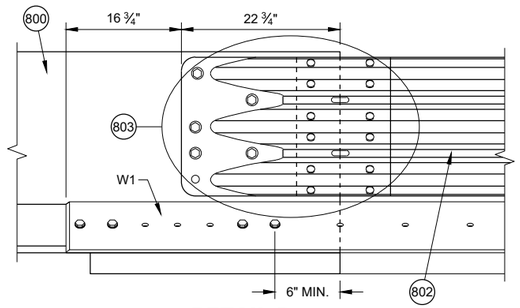
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

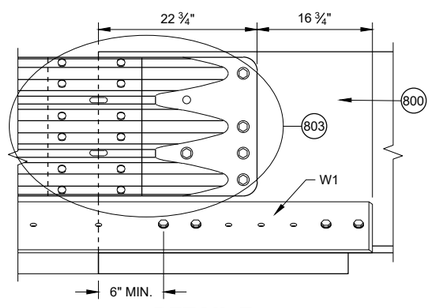
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

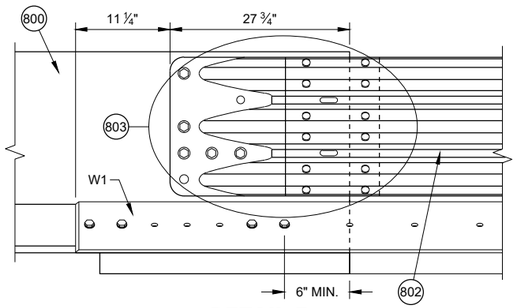
SDD 14B07-16g



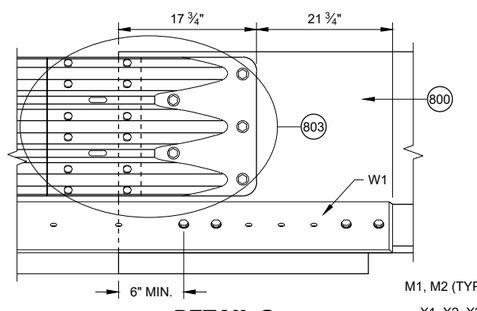
DETAIL D



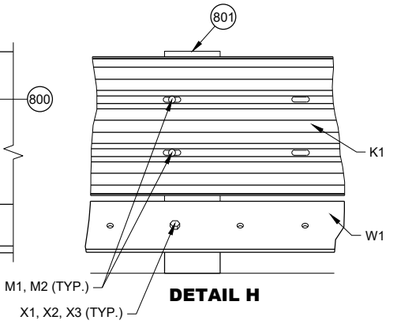
DETAIL E



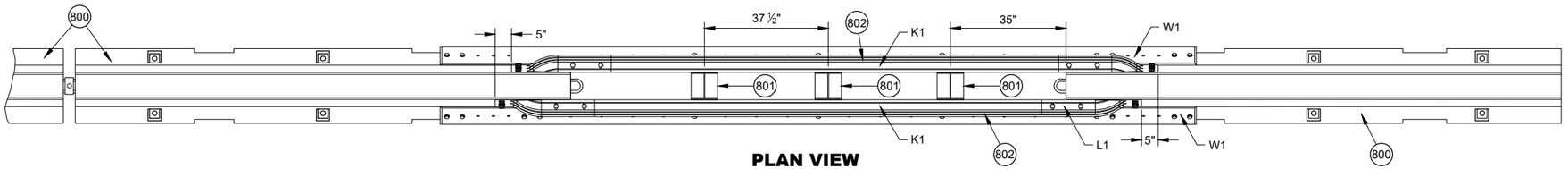
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

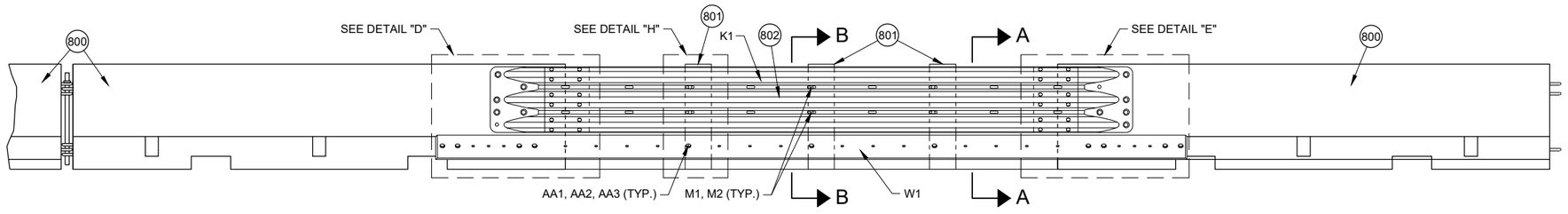
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

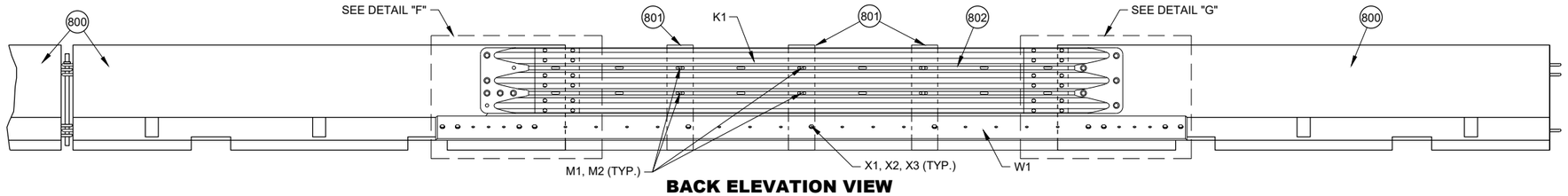
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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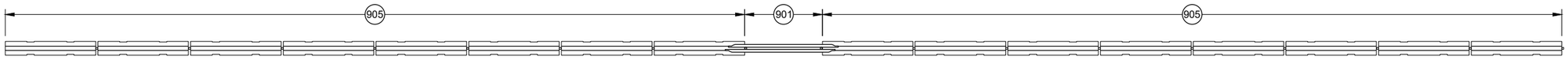
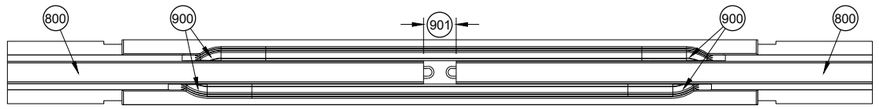
SDD 14B07-16h



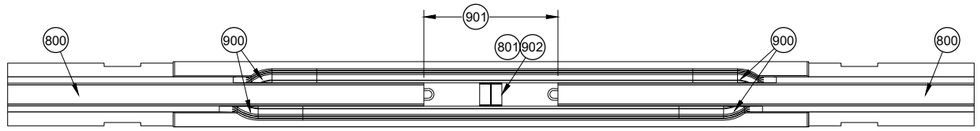
PLAN VIEW
GAP WITHIN SPACING



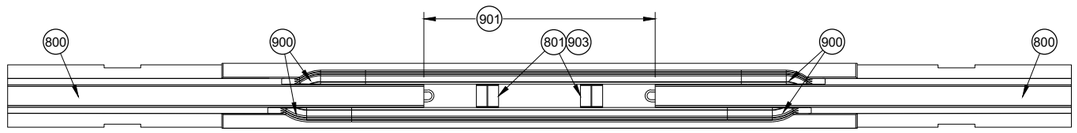
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

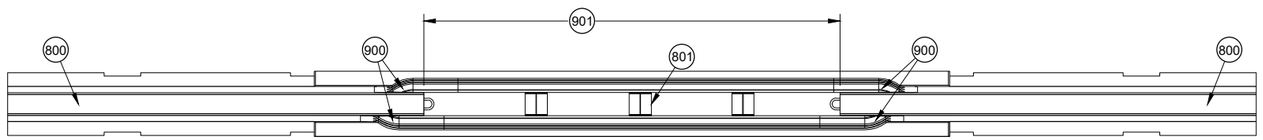
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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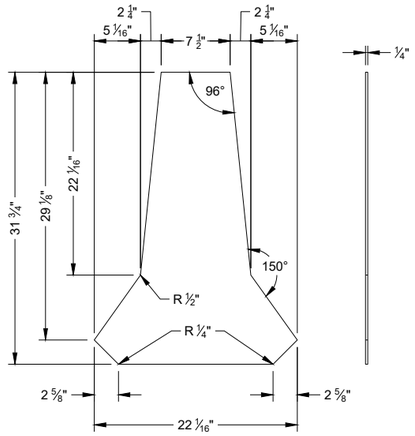
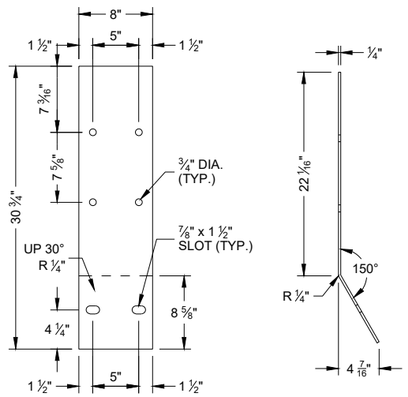
SDD 14B07-16i



PROFILE VIEW SIDE VIEW

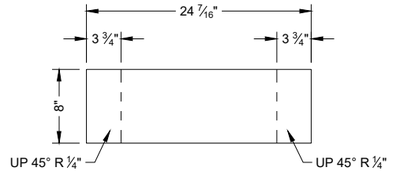
STIFFENER ASSEMBLY CENTER PANEL U1



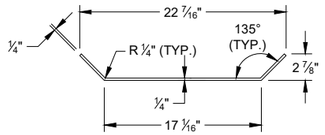
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

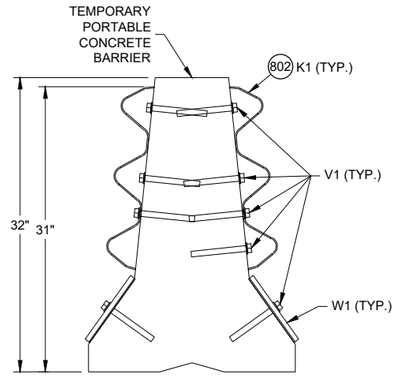


FLAT PATTERN

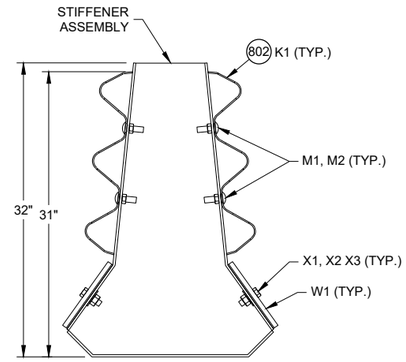


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

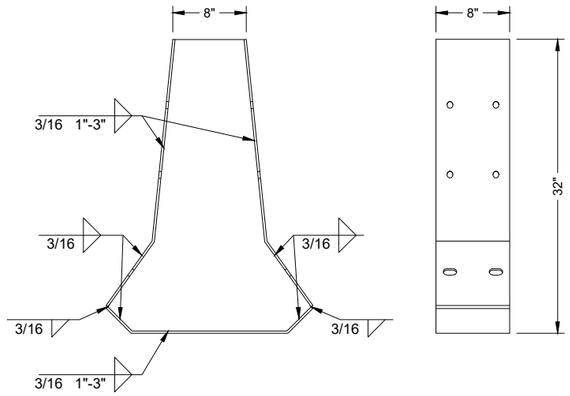


SECTION A - A



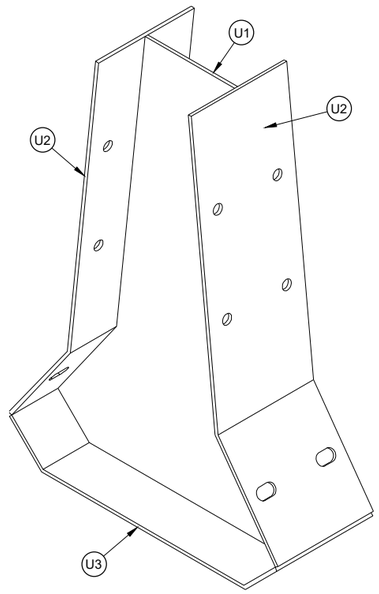
SECTION B - B

PLAN VIEW



PROFILE VIEW

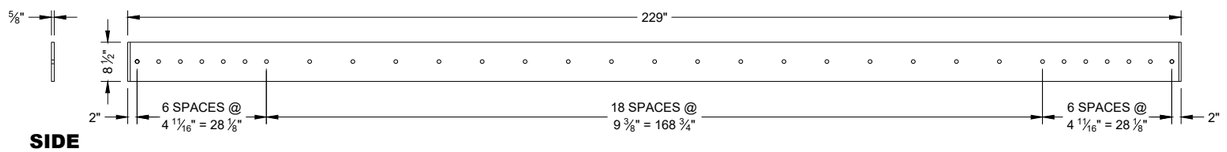
SIDE VIEW



ISOMETRIC

GAP STIFFENER ASSEMBLY

PLAN VIEW



SIDE VIEW

ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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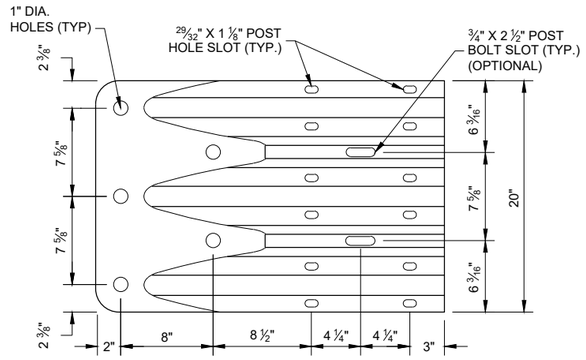
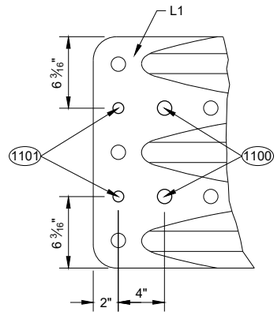
SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

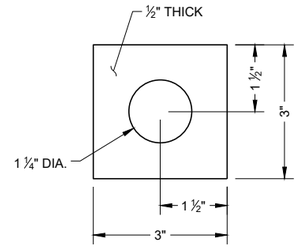


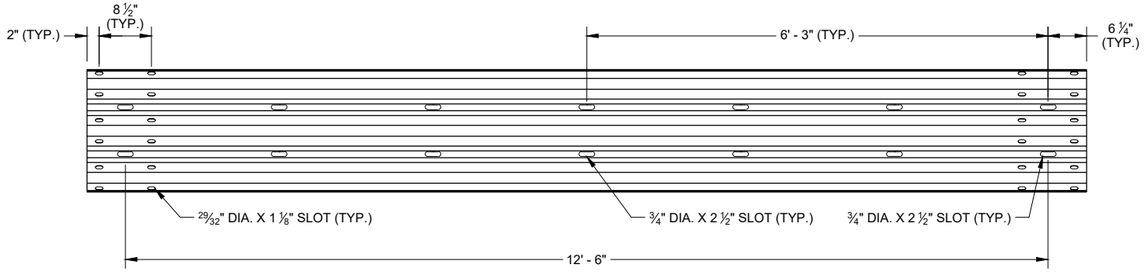
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

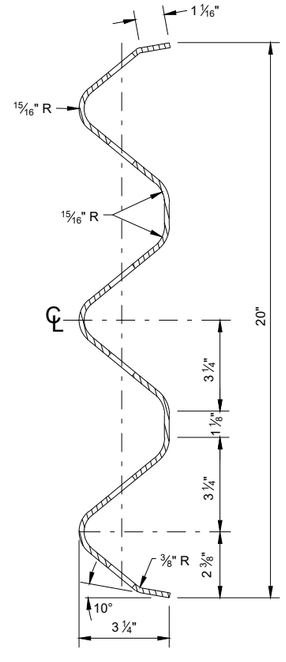
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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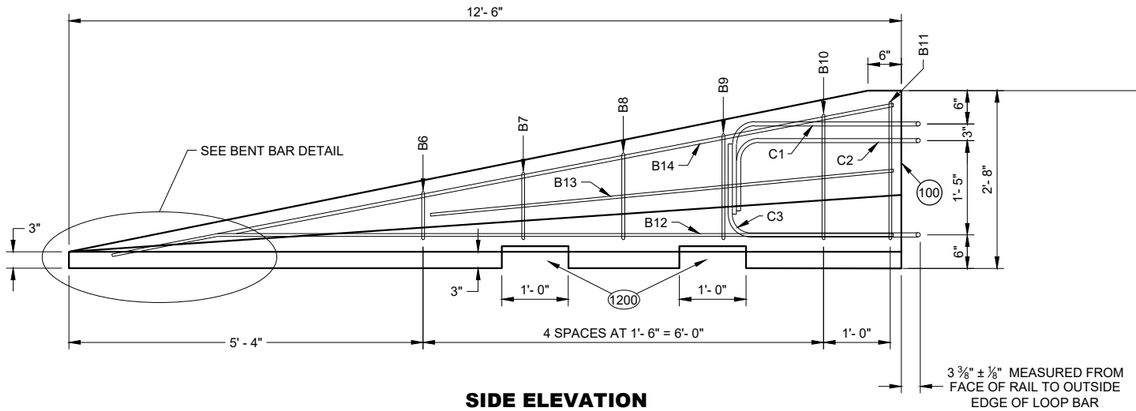
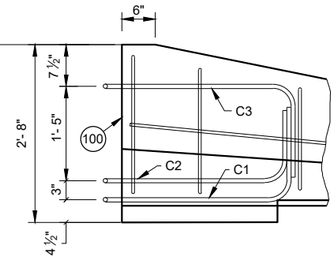


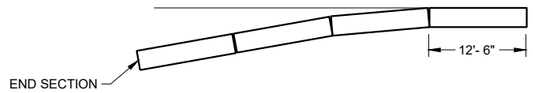
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

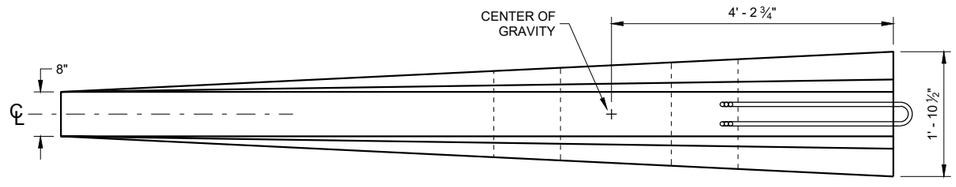
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

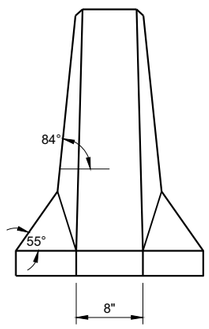


FLARE AT BARRIER END

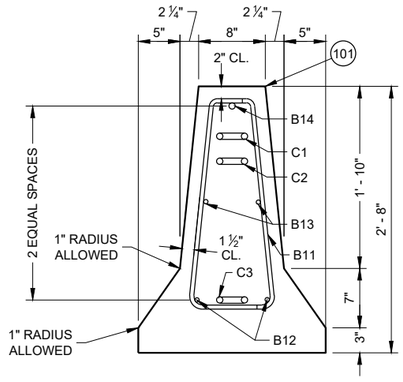
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



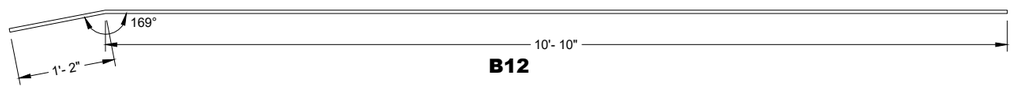
PLAN VIEW



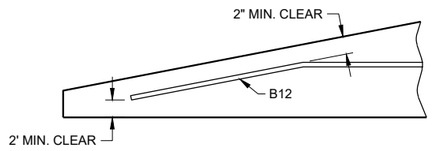
FRONT ELEVATION



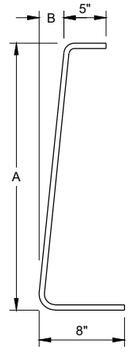
END SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

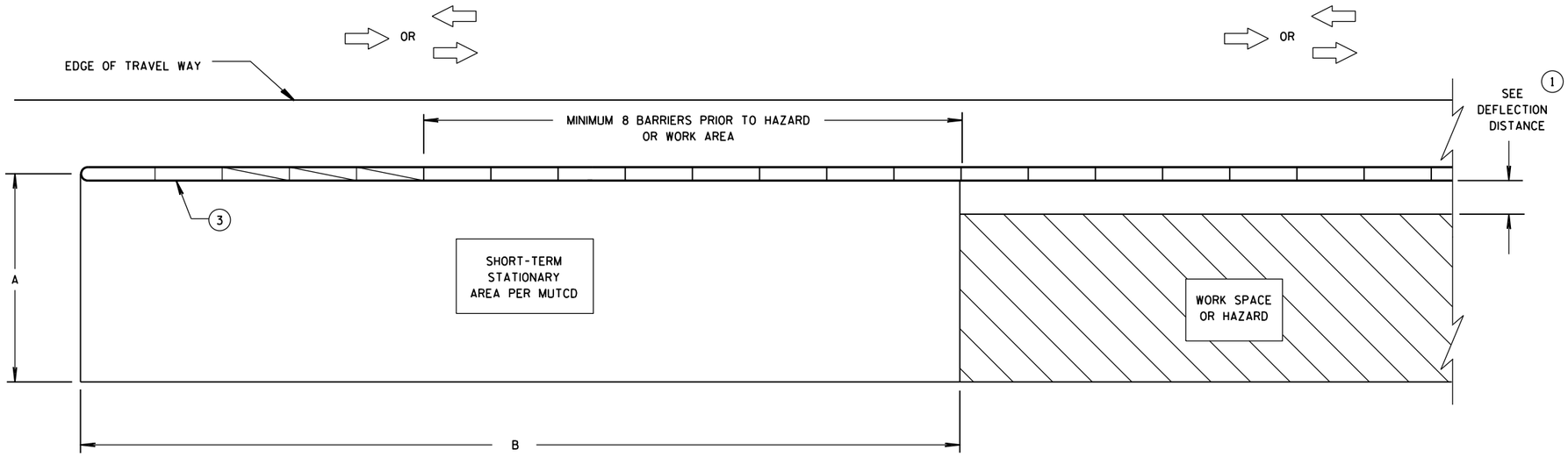
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n



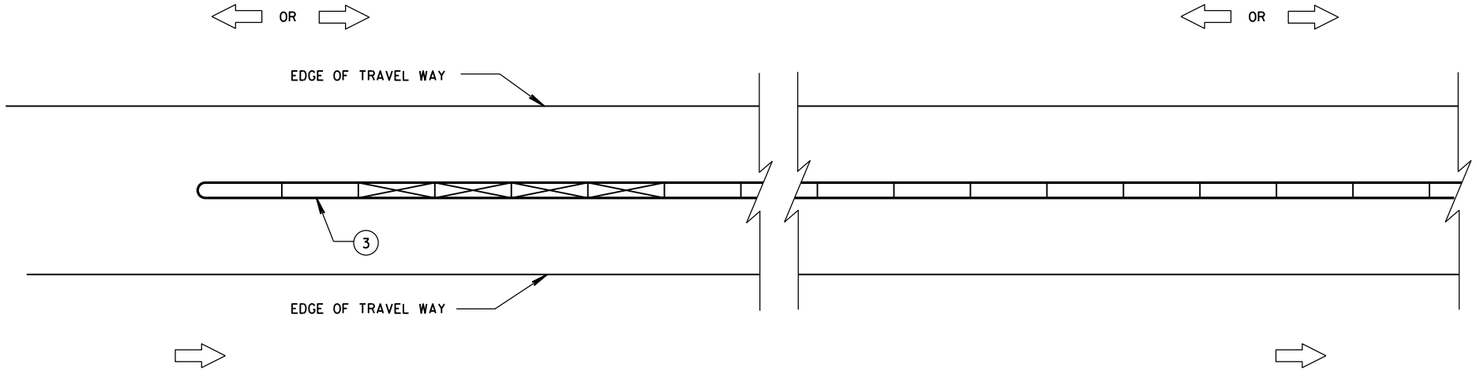
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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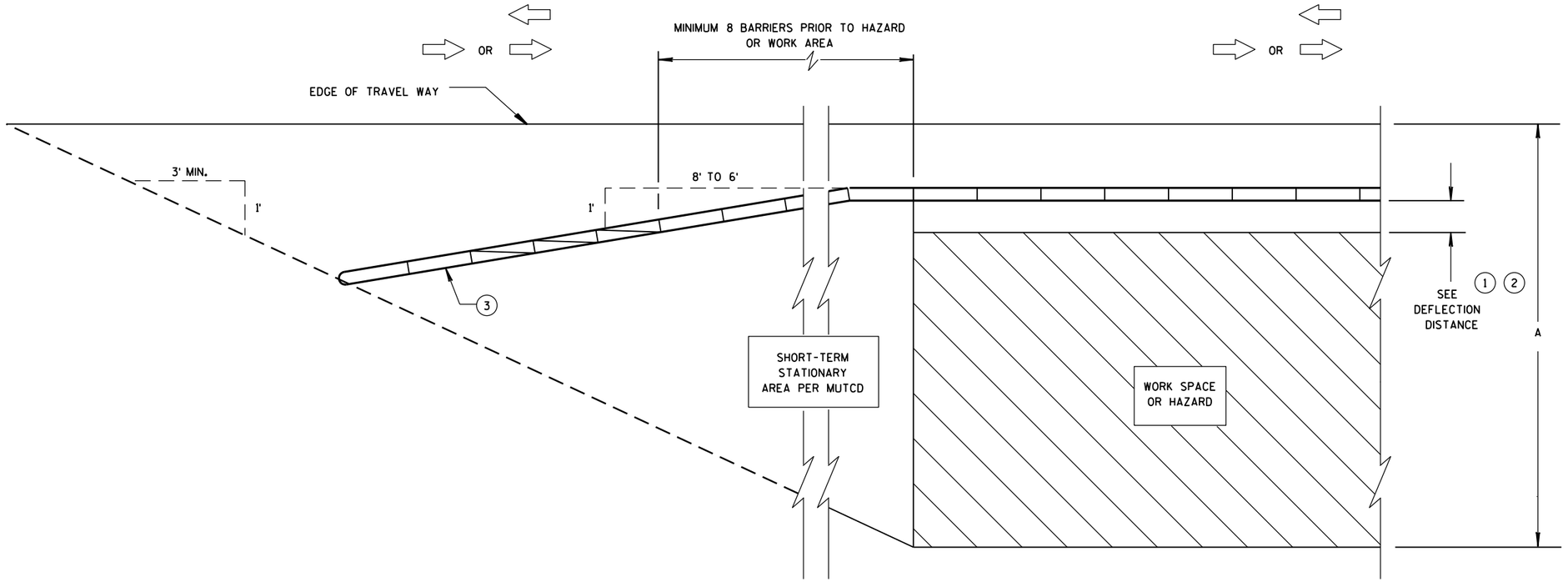
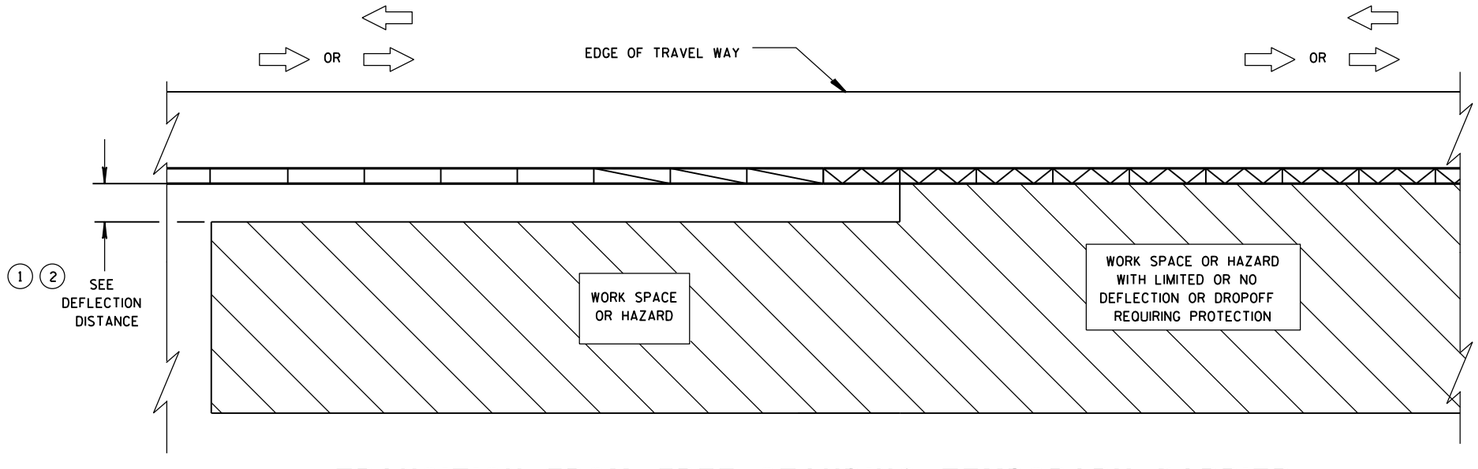
S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2b

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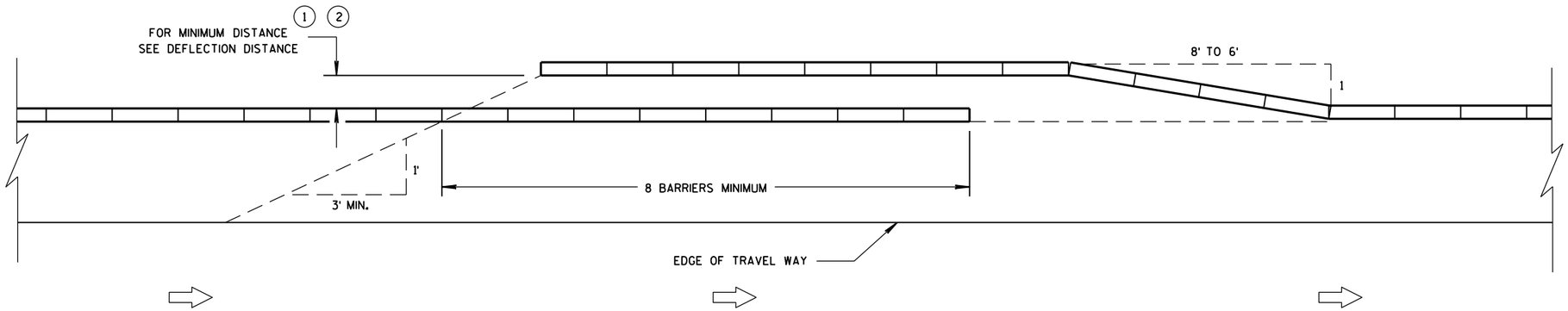
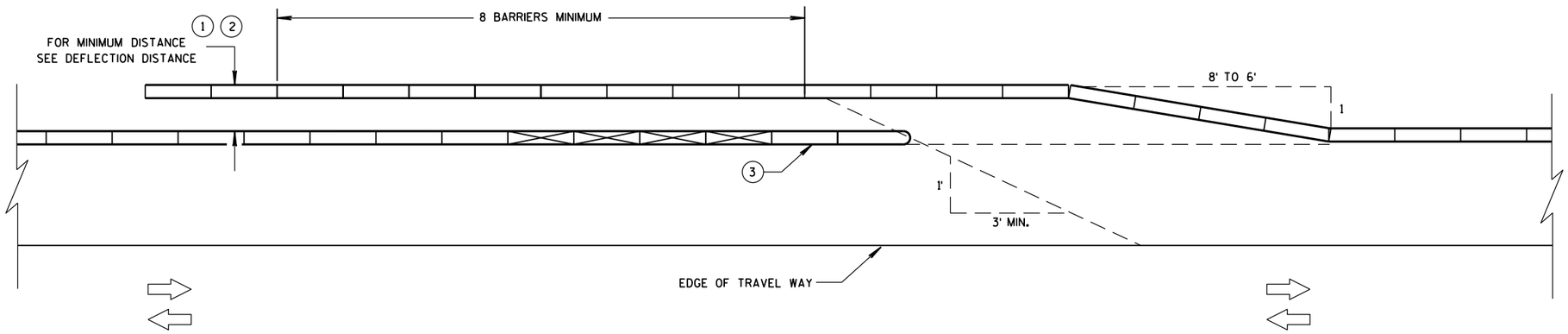
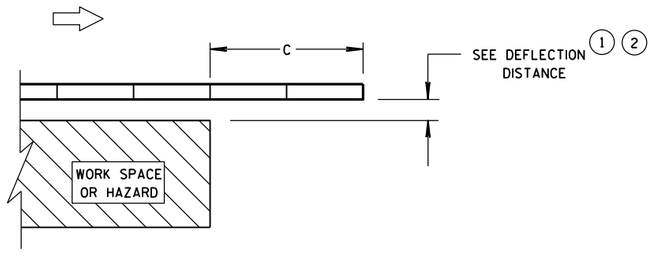
S.D.D. 14 B 8-2b



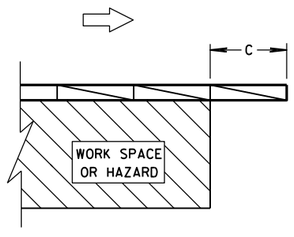
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

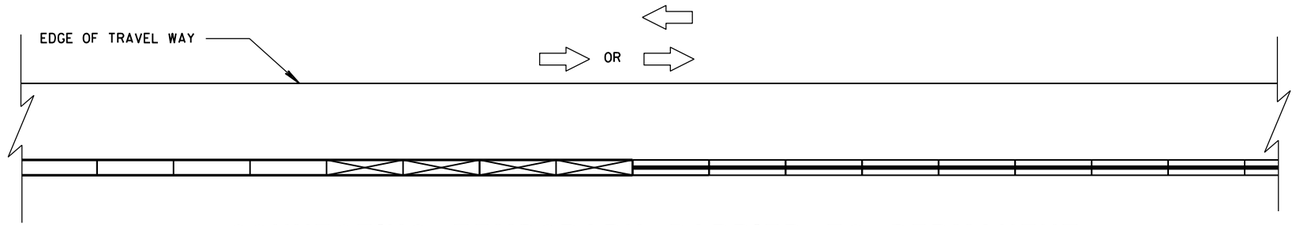
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

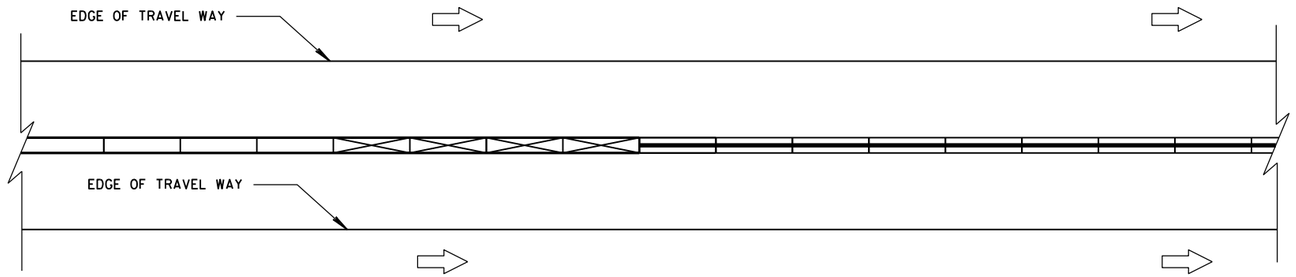
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

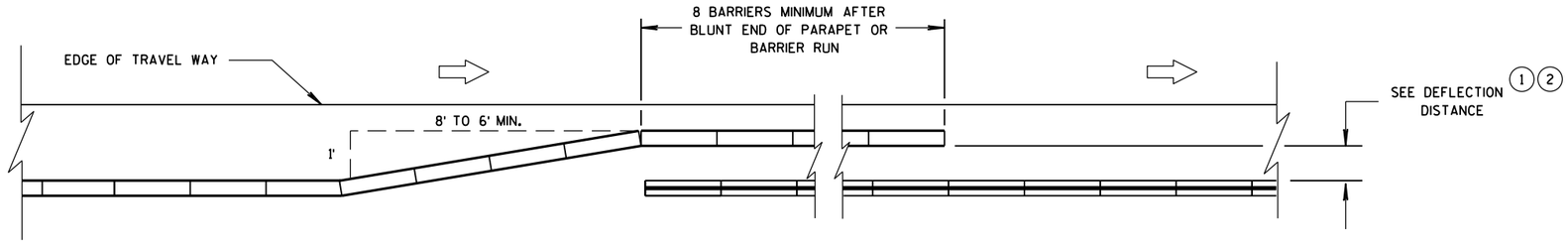
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

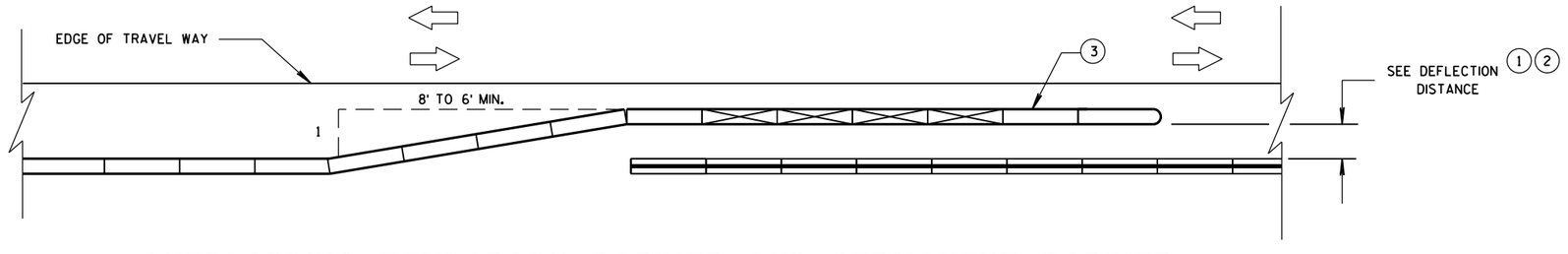
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

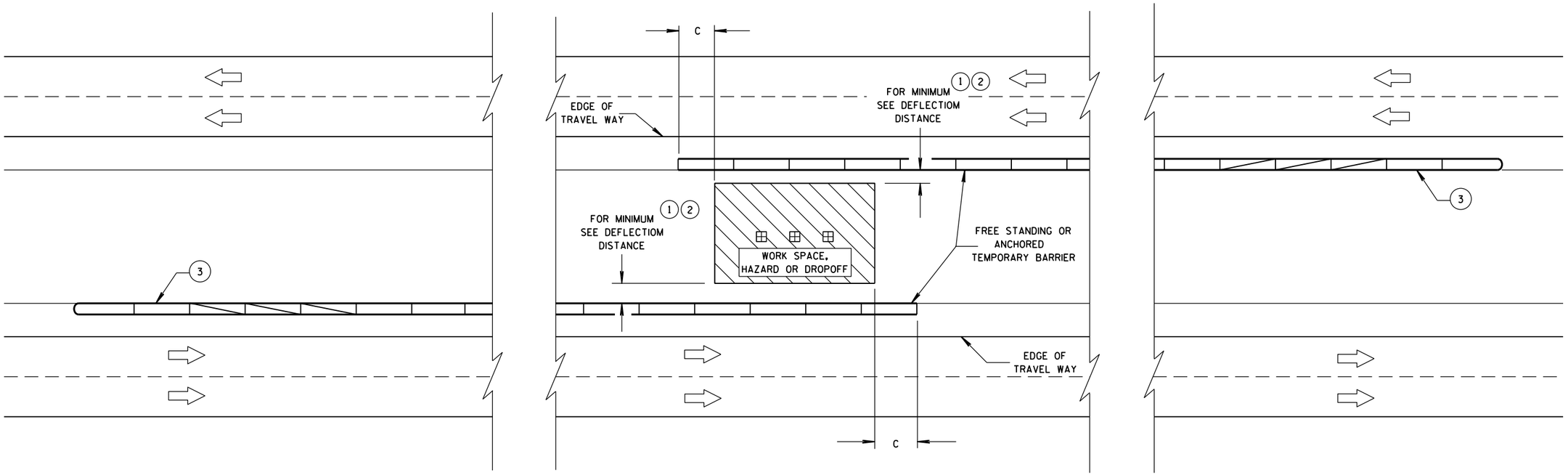
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

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S.D.D. 14 B 8-2e

6

S.D.D. 14 B 8-2e

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

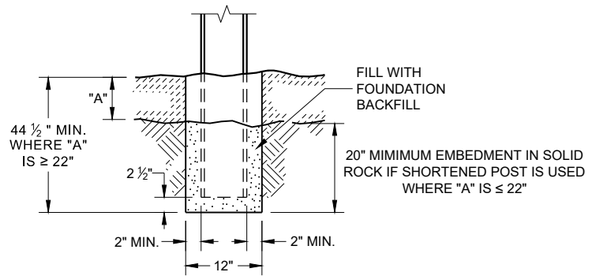
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

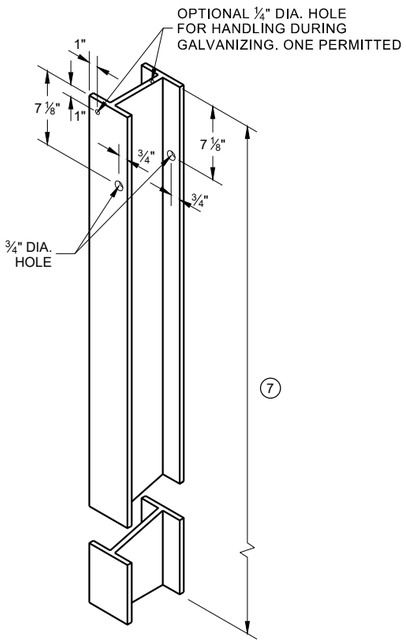
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

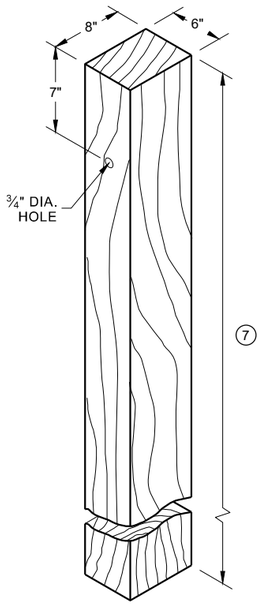
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



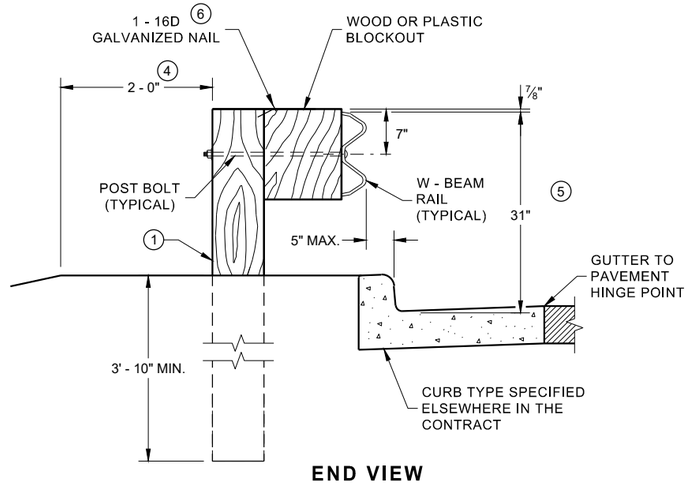
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



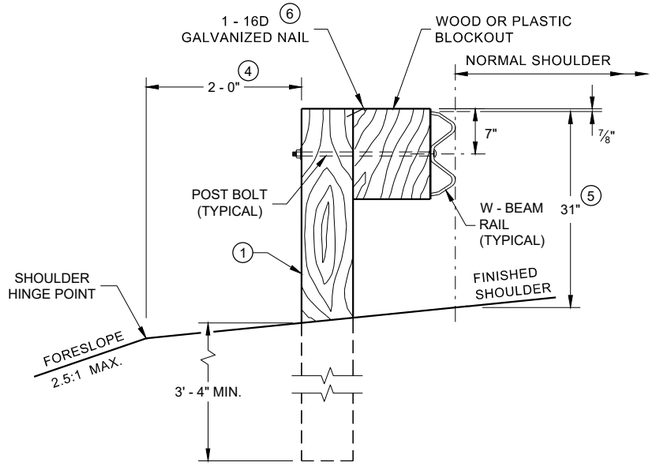
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



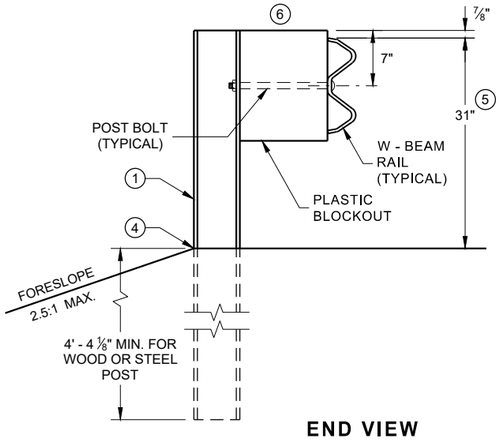
WOOD POST (6" X 8") NOMINAL (1)



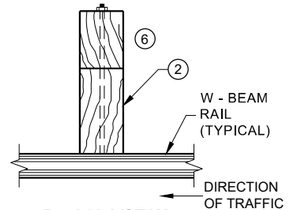
END VIEW
LOCATED ALONG A CURBED ROADWAY



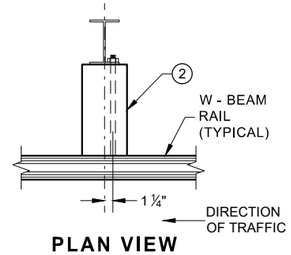
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



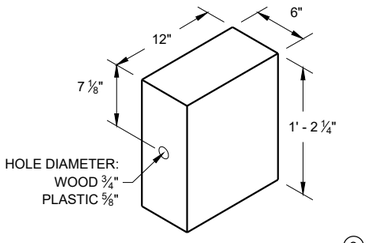
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

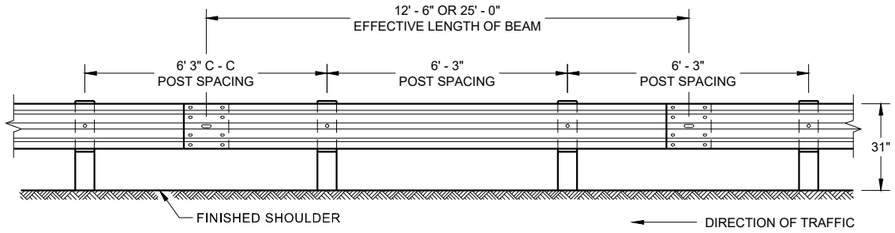
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

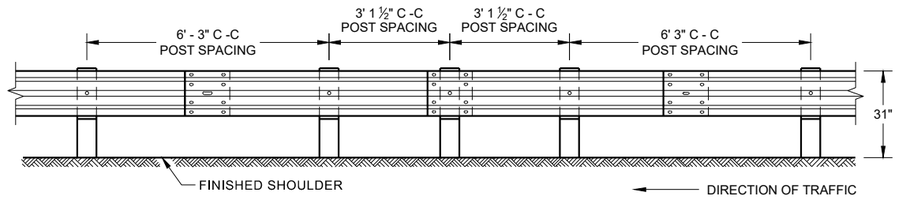
SDD 14B42 - 07a

6

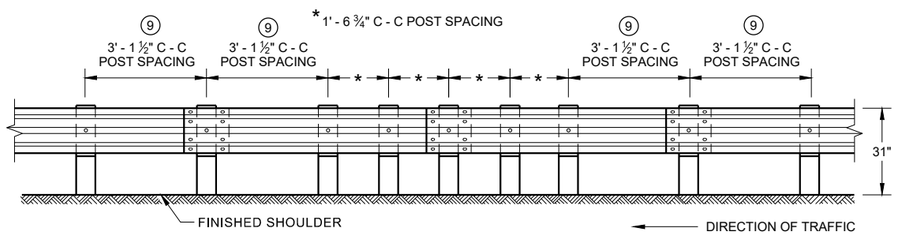
SDD 14B42 - 07a



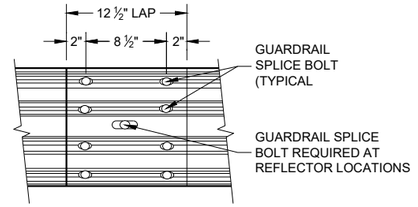
FRONT VIEW
POST SPACING STANDARD INSTALLATION



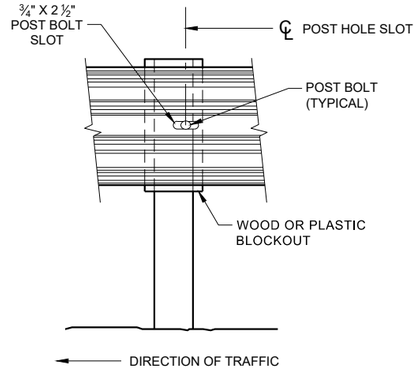
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



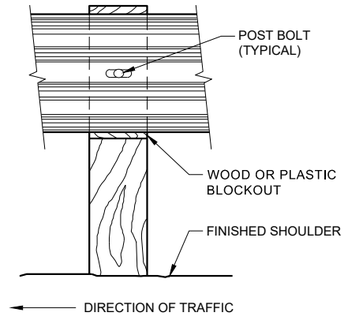
FRONT VIEW
QUARTER POST SPACING (QS)



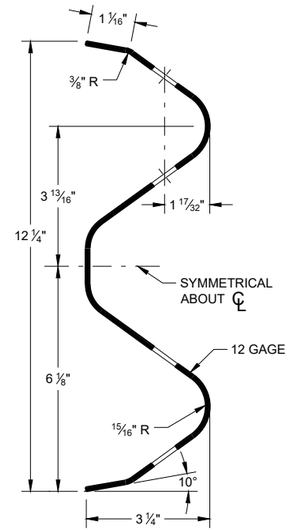
FRONT VIEW
MID-SPAN BEAM SPLICE



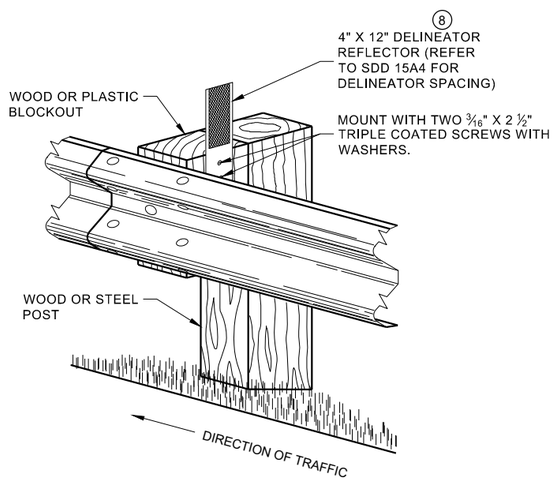
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

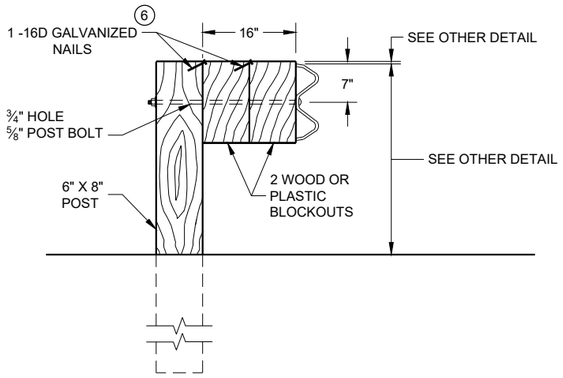
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

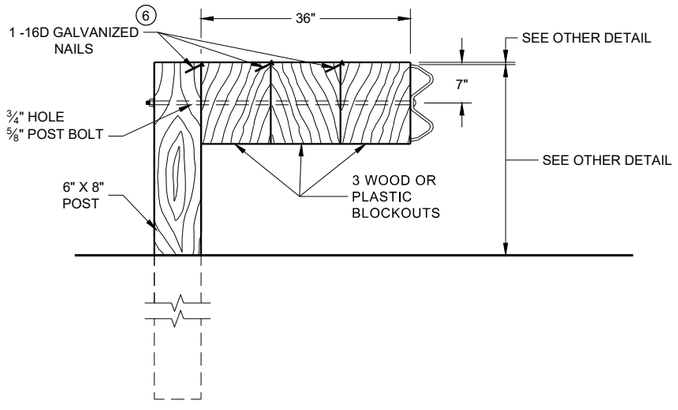
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

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



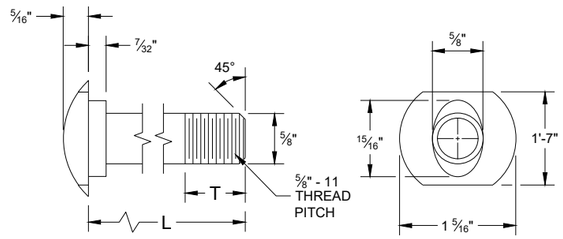
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

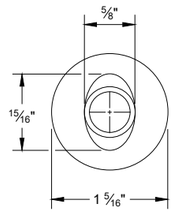
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

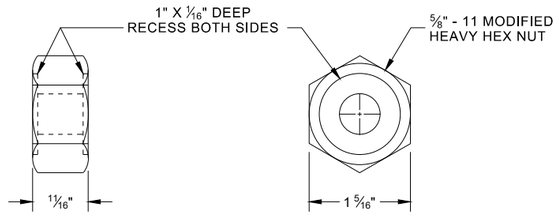


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

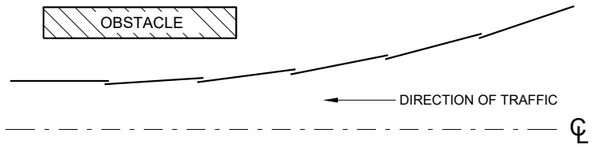


ALTERNATE BOLT HEAD

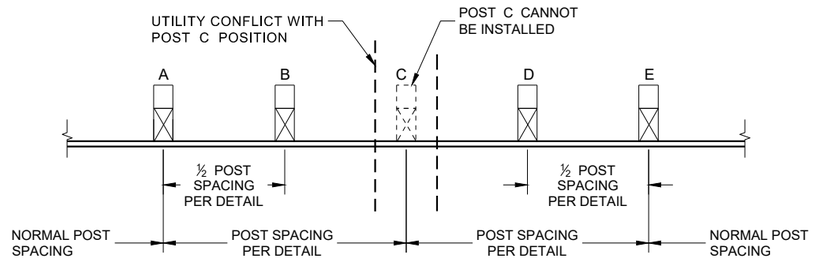


POST BOLT, SPLICE BOLT AND RECESS NUT

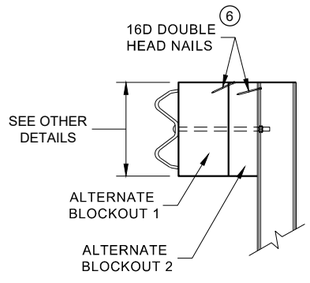
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



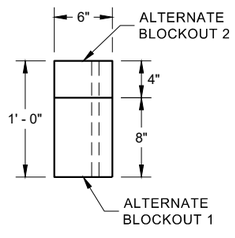
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

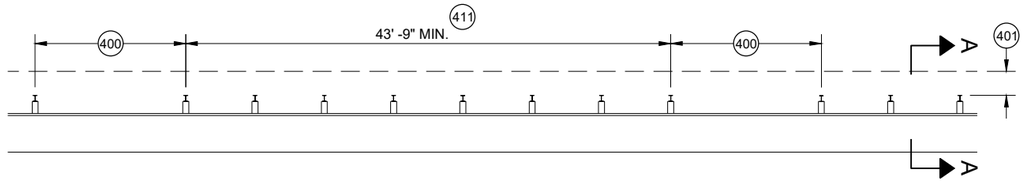
SDD 14B42 - 07c

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

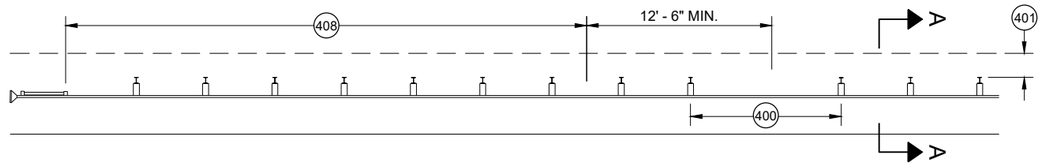
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

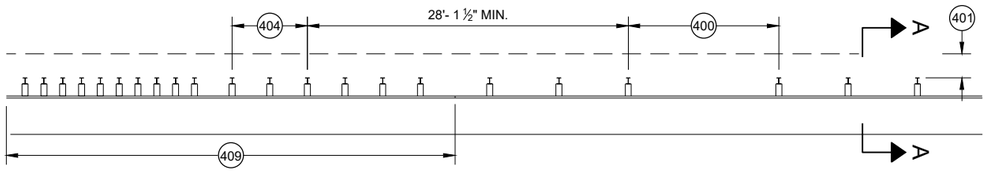
SDD 14B42 - 07c



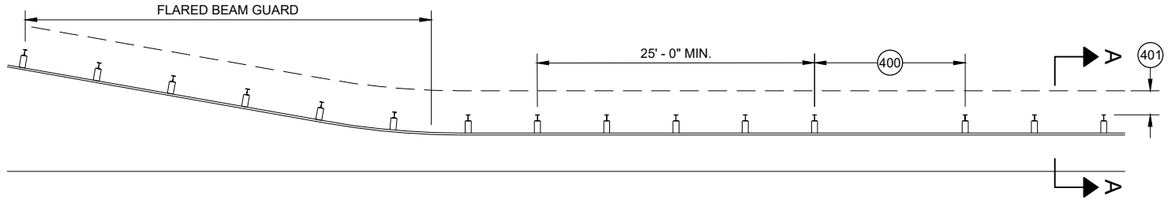
MISSING POST IN MGS GUARDRAIL



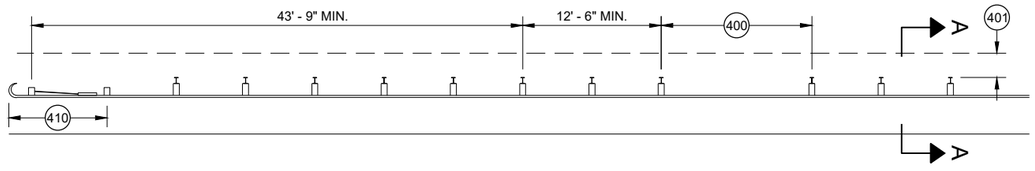
MISSING POST IN MGS GUARDRAIL NEAR EAT



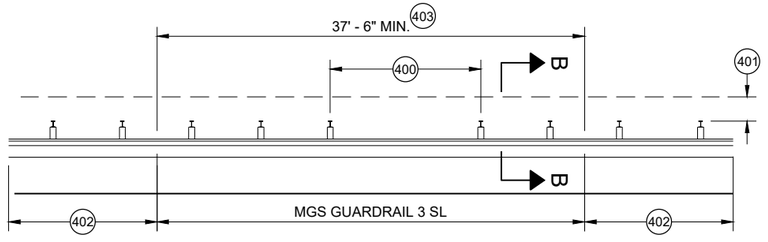
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

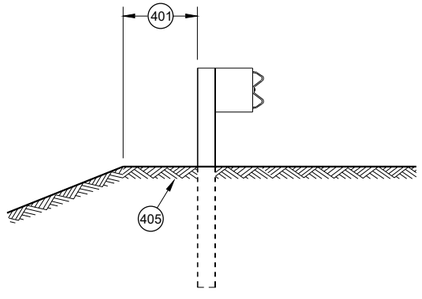


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

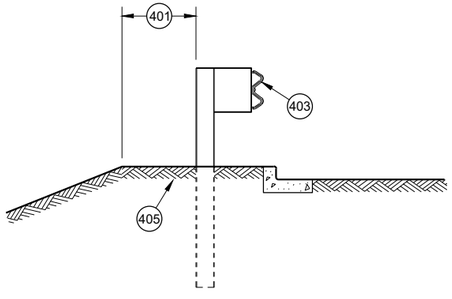


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

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SDD 14B42 - 07d

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

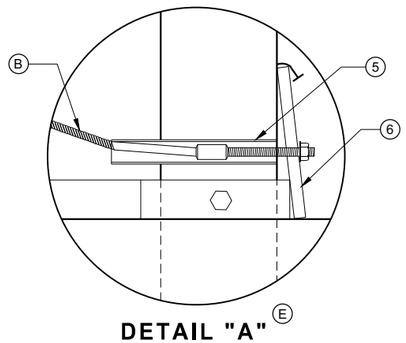
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

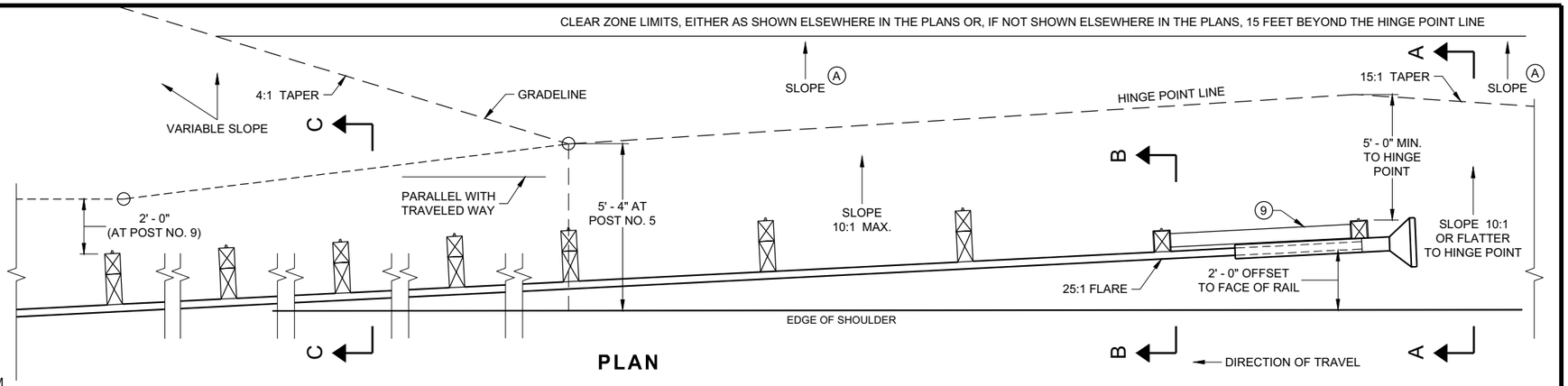
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

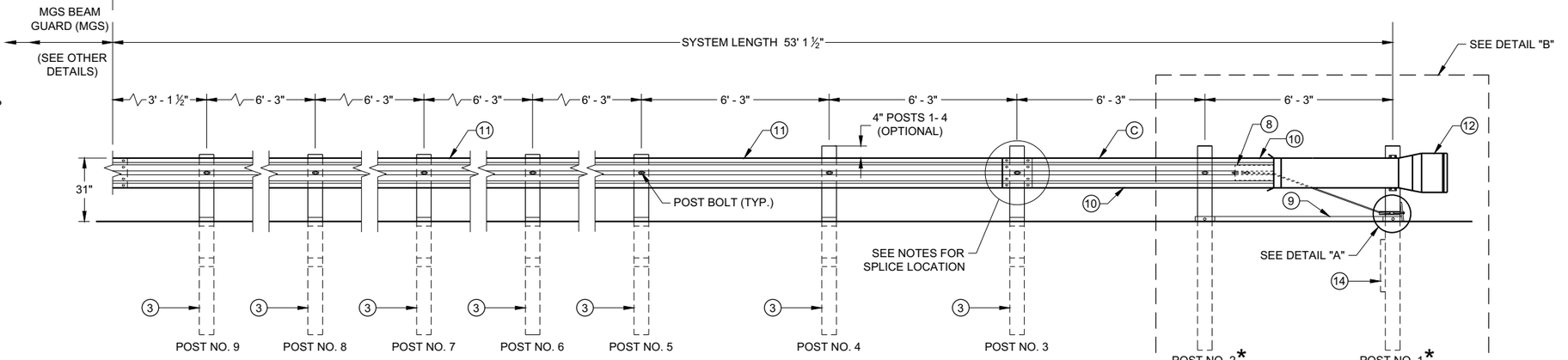
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



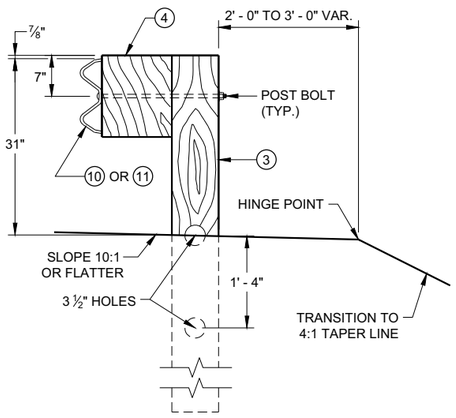
DETAIL "A" (E)



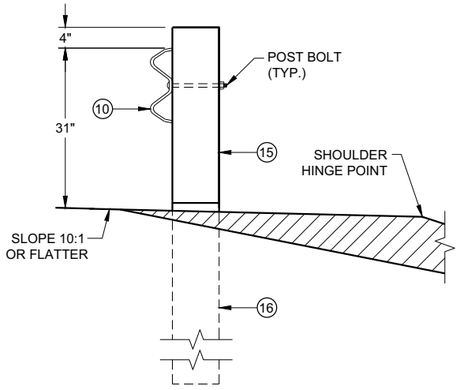
PLAN



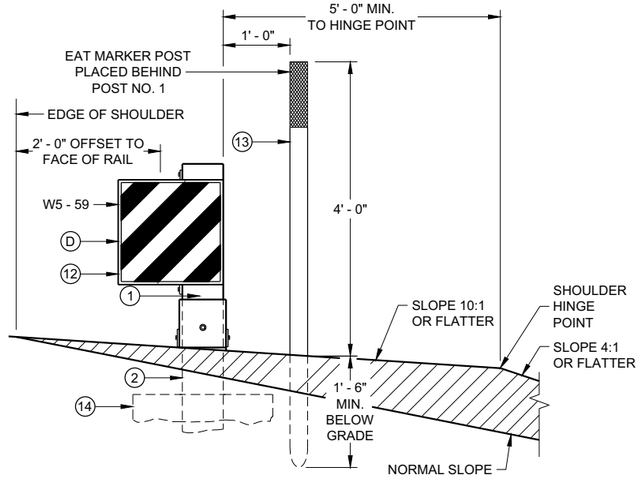
ELEVATION



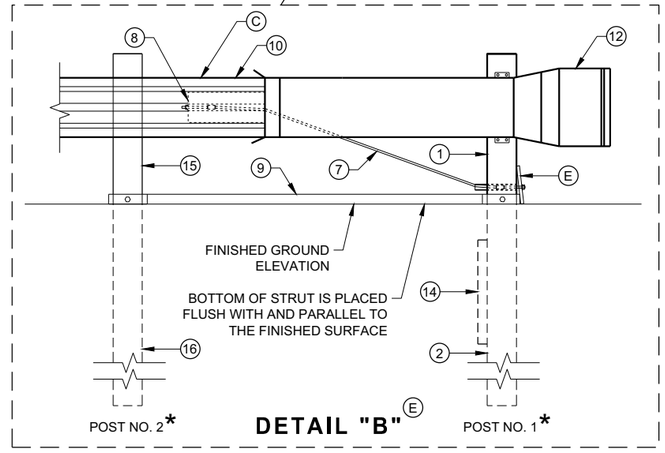
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



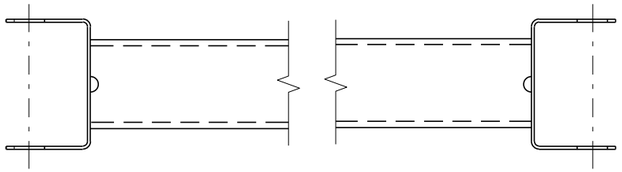
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

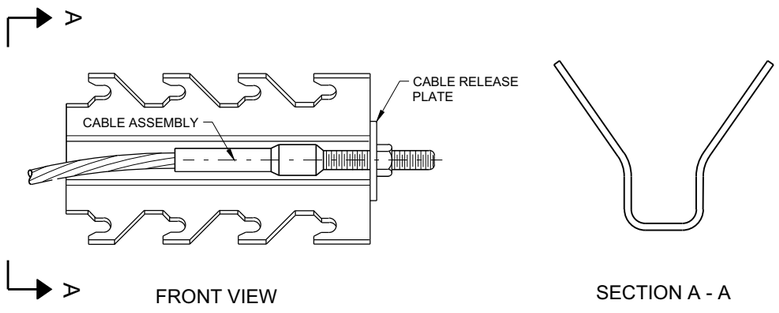
SDD 14B44 - 04a



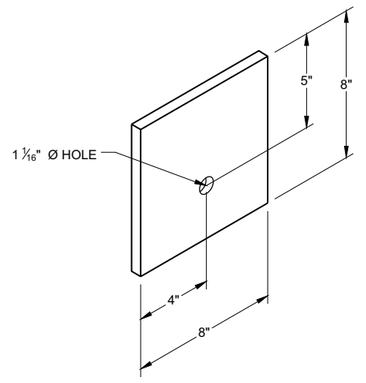
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

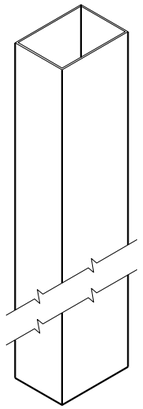
6

SDD 14B44 - 04b

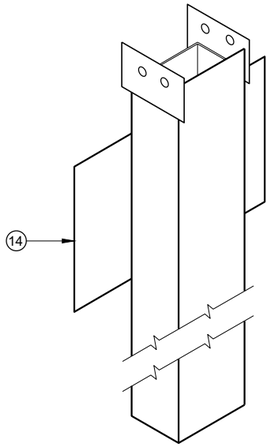
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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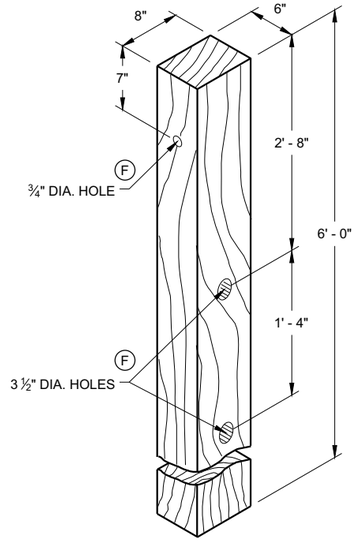
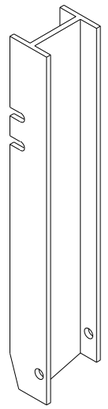


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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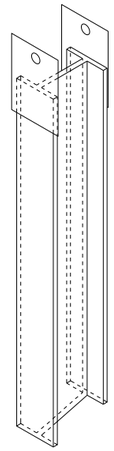

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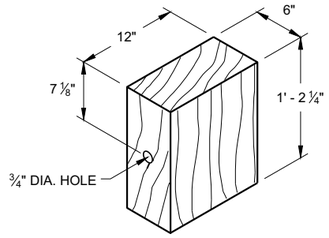
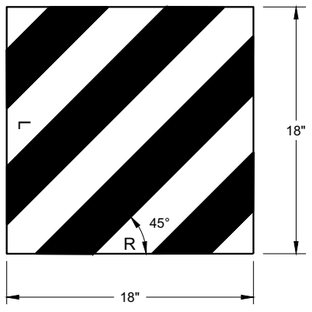
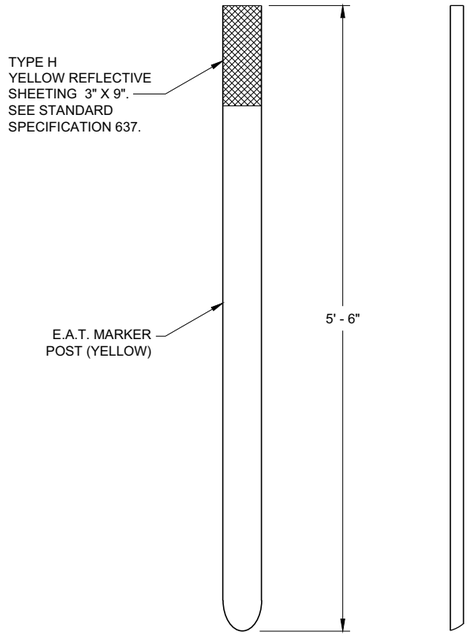


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



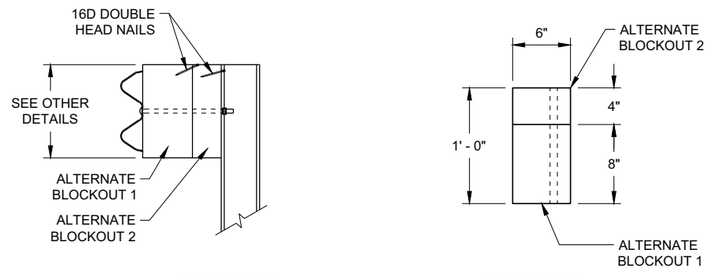
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

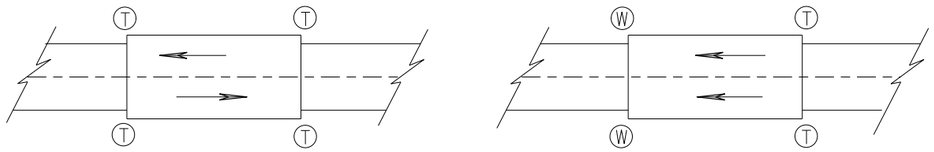
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

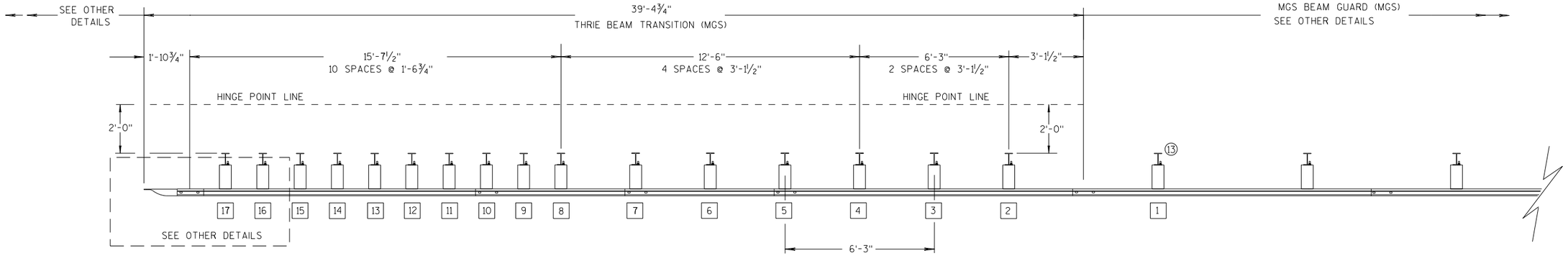
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

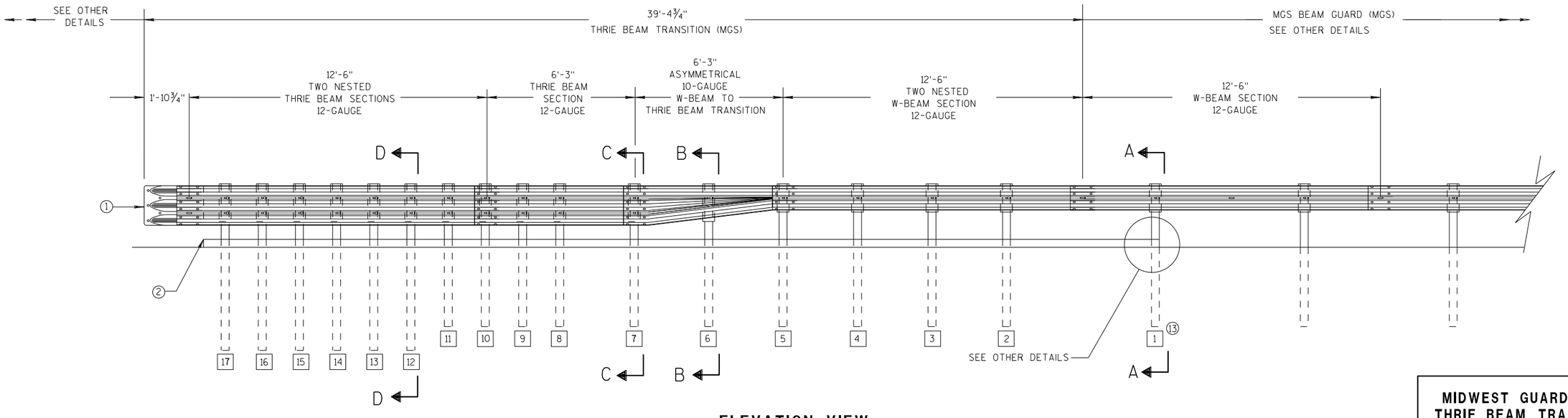
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

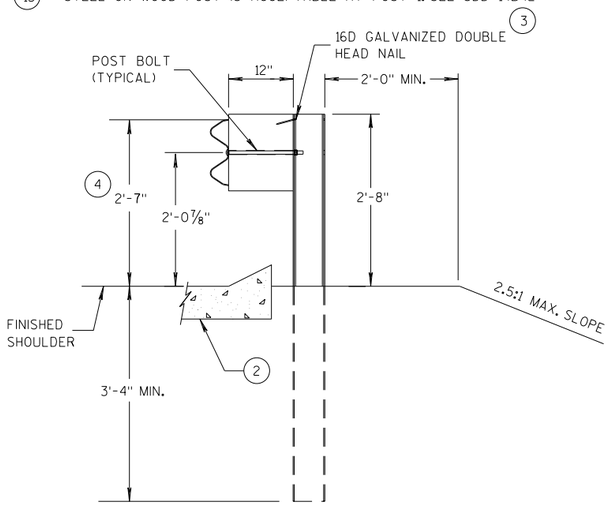
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

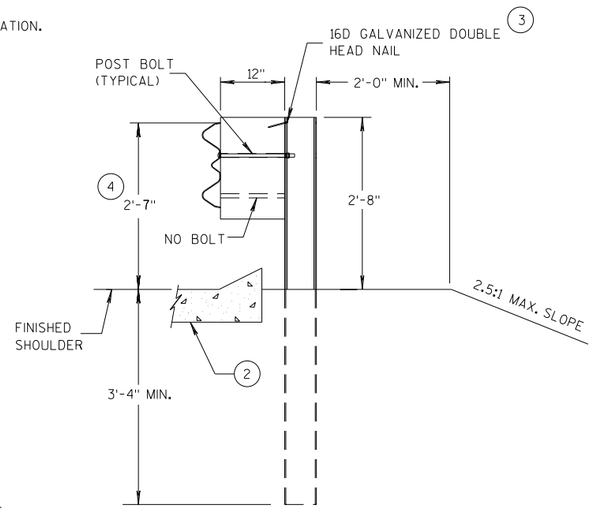
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



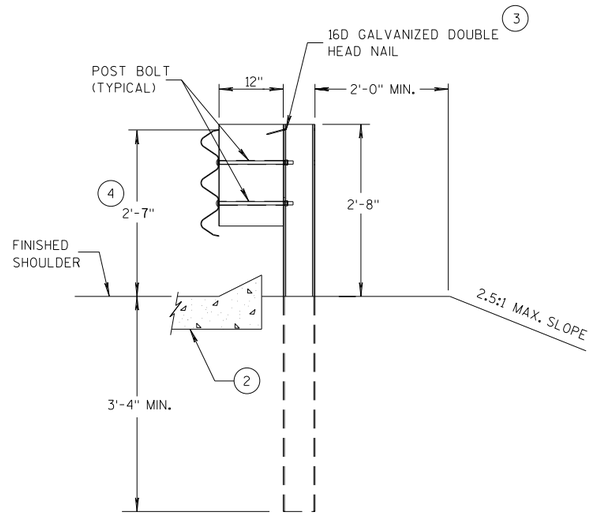
SECTION A-A (13)

POSTS 1-5



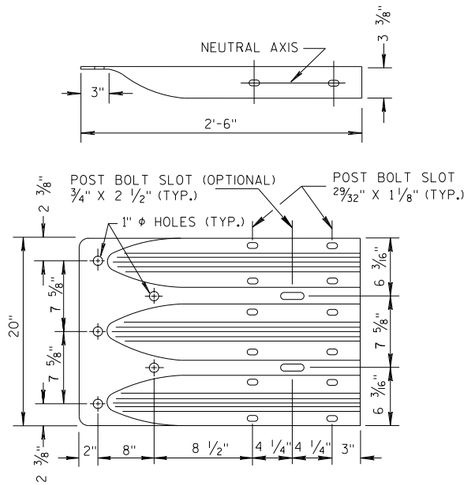
SECTION B-B

POST 6

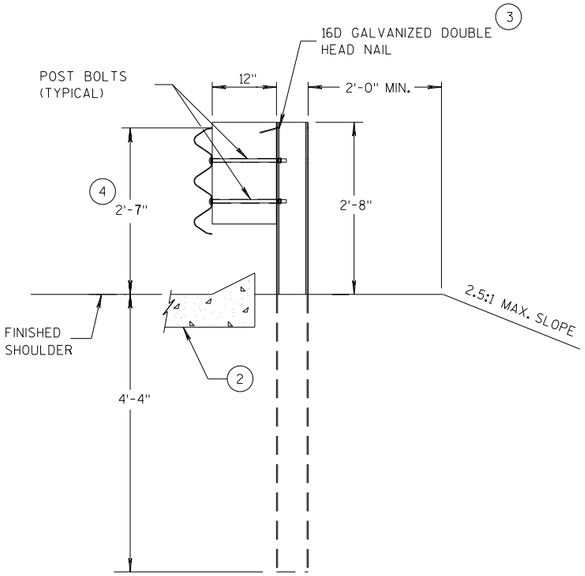


SECTION C-C

POSTS 7-11

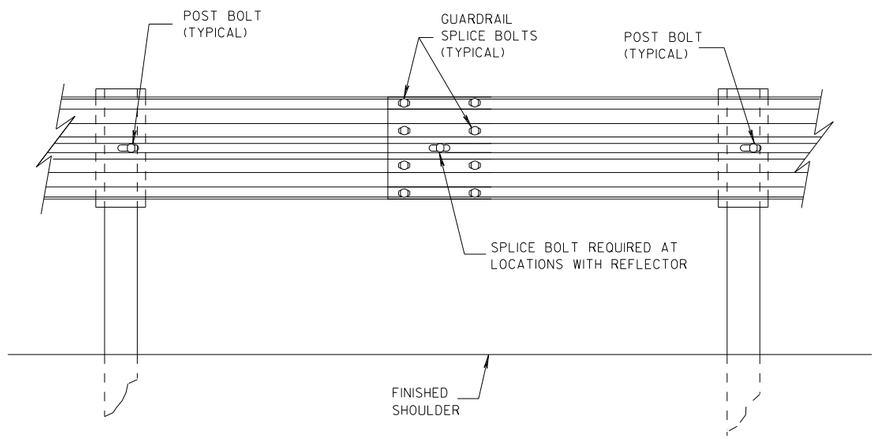


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

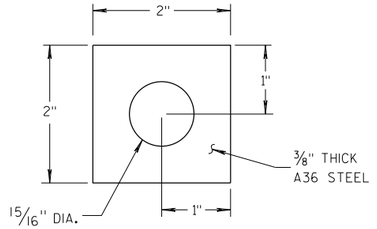
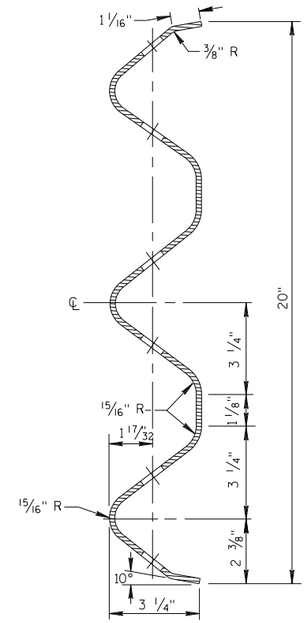


PLATE WASHER DETAIL



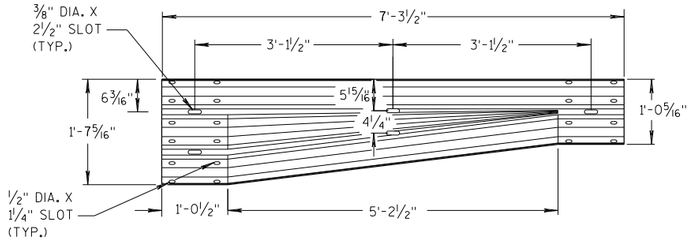
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

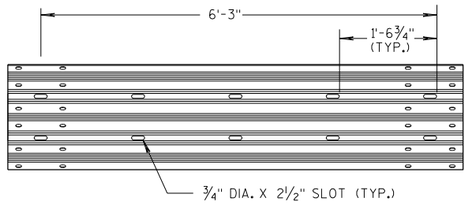
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

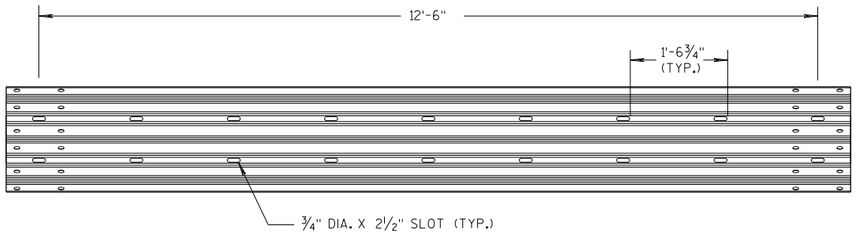
S.D.D. 14 B 45-5b



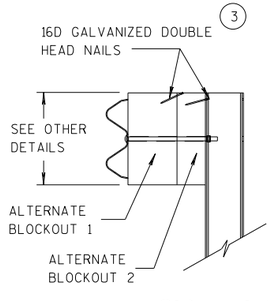
W-BEAM TO THRIE BEAM TRANSITION SECTION



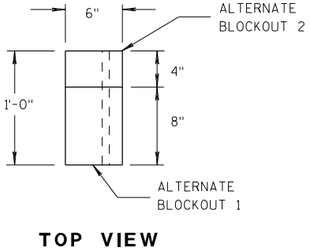
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

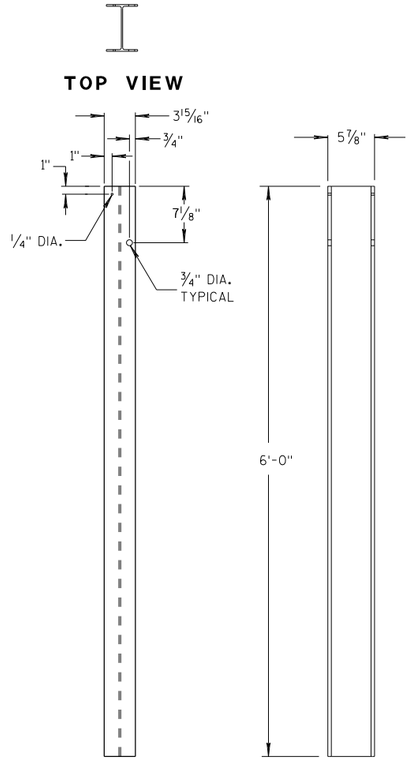


SIDE VIEW



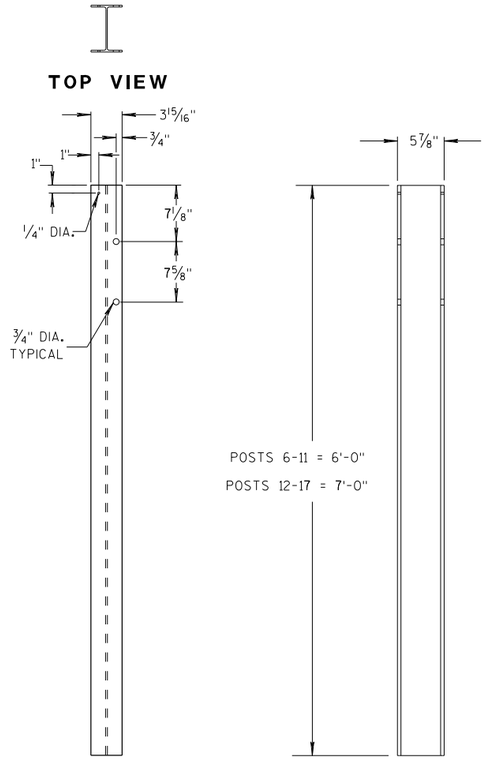
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



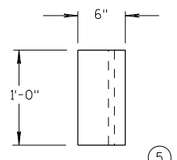
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

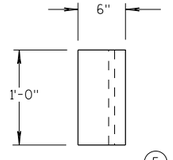


FRONT VIEW SIDE VIEW

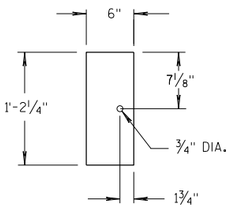
STEEL POSTS 6-17



TOP VIEW (5)

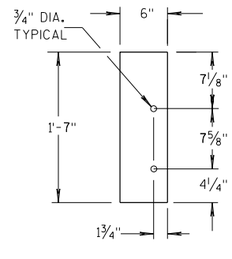


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

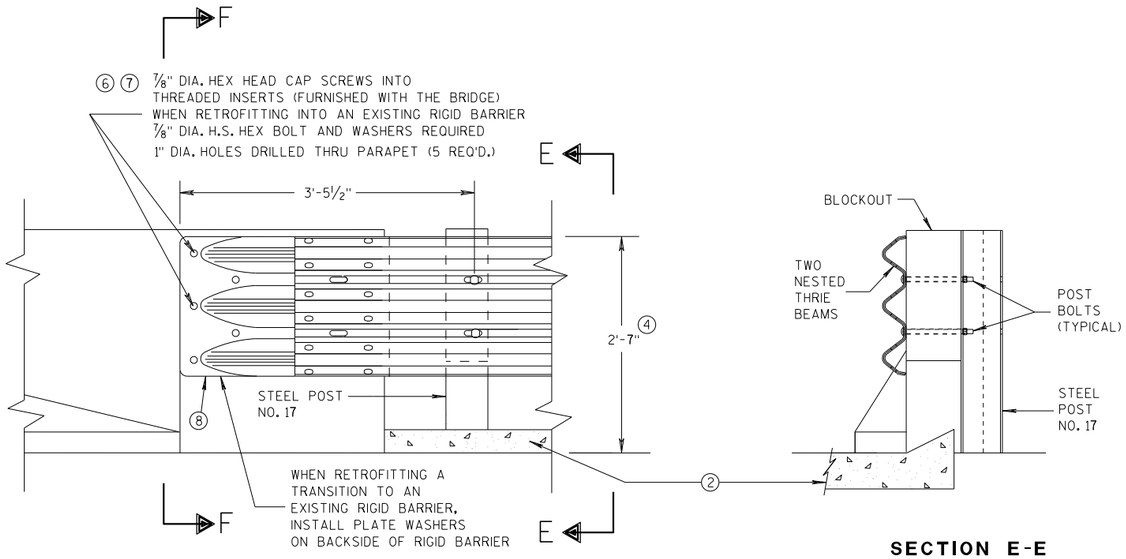
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

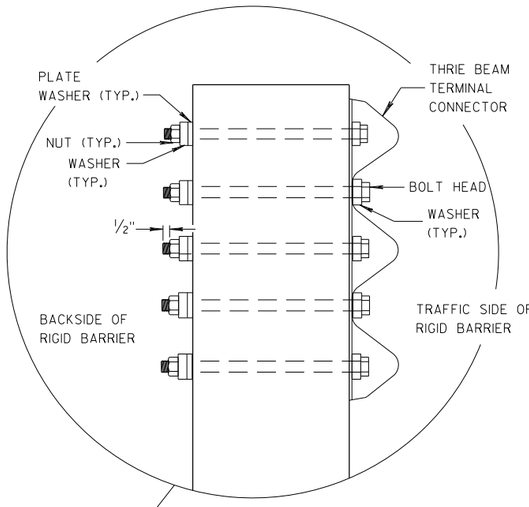
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

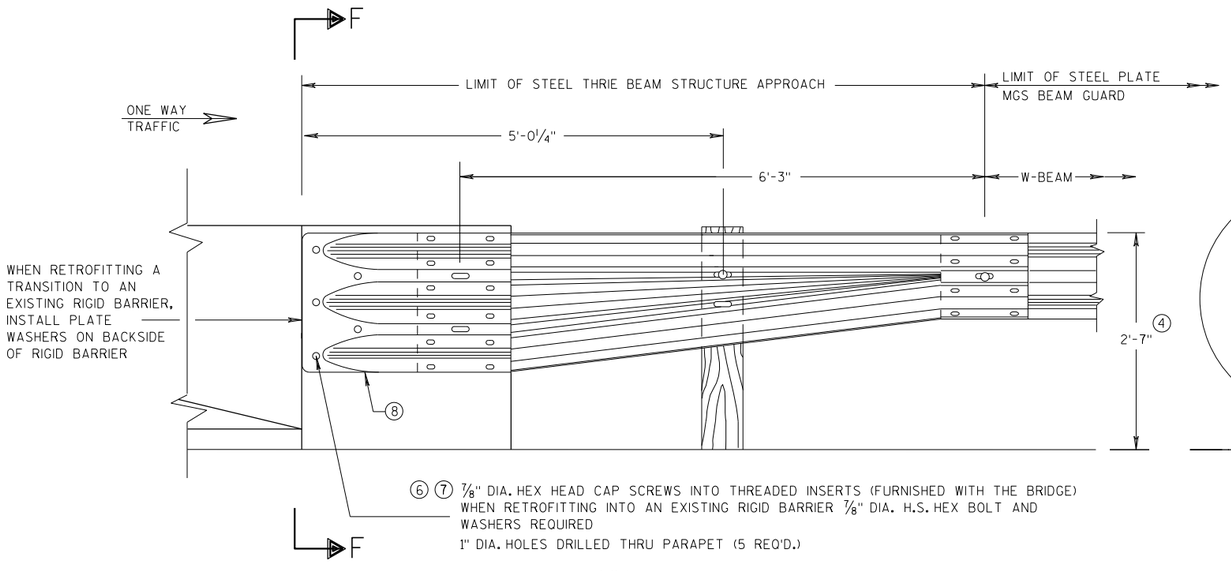
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

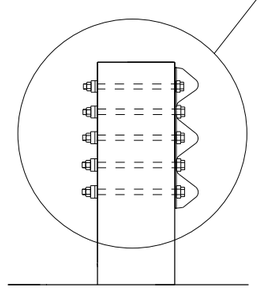
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

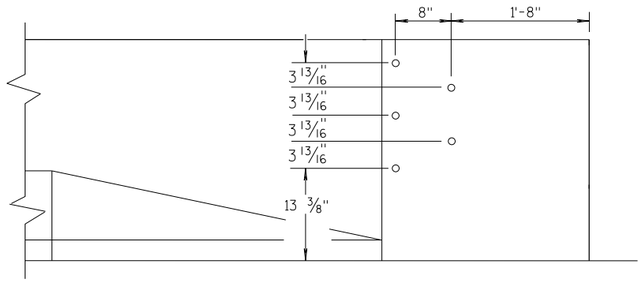




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS — NT
FHWA

6

S.D.D. 14 B 45-5d

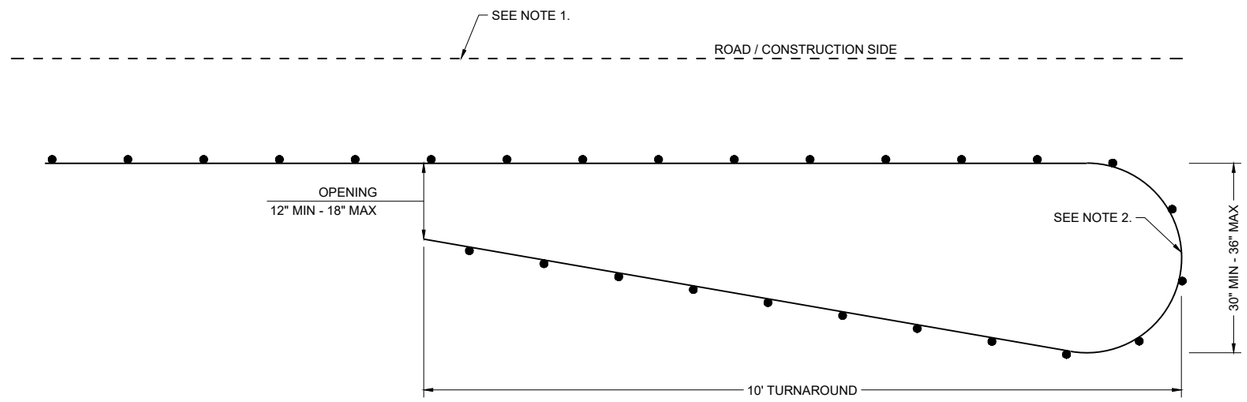
6

S.D.D. 14 B 45-5d

GENERAL NOTES:

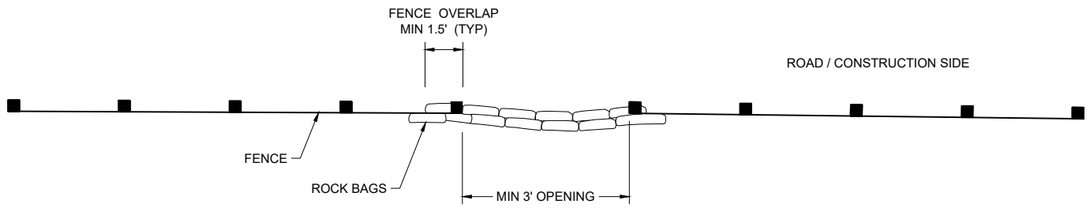
1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.
3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.
4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.

   SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

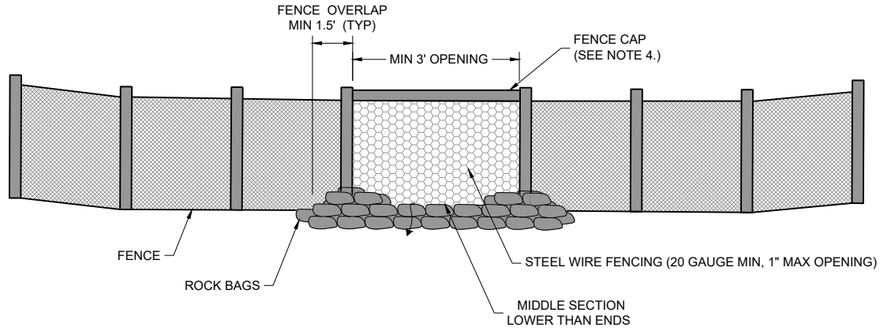


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL



PLAN VIEW



FRONT VIEW

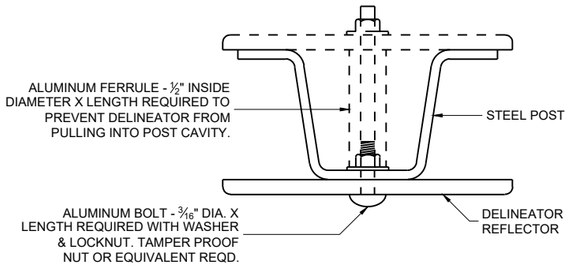
CLIMBING TURTLE FENCE RELIEF DETAIL

TURTLE EXCLUSION FENCE
CLIMBING TURTLE

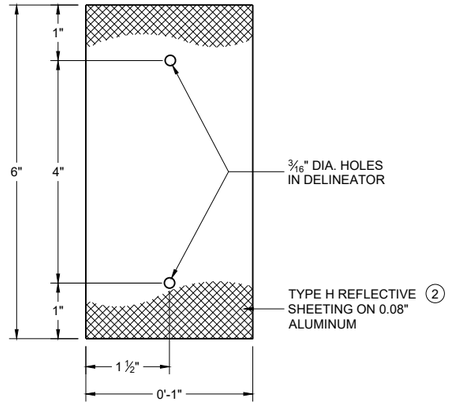
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
AUGUST 2025 — DATE
/S/ ALYSSA BARRETTE
CHIEF STATEWIDE ENVIRONMENTAL SERVICES
BUREAU OF TECHNICAL SER

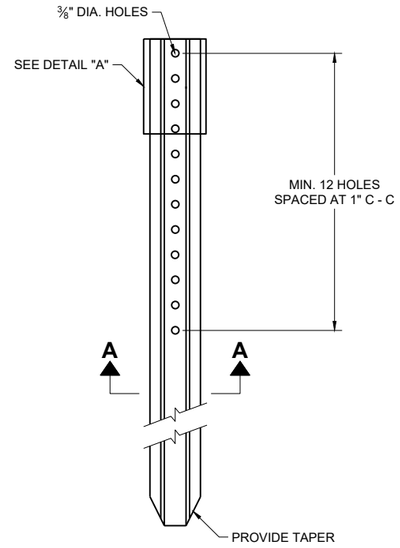
FHWA



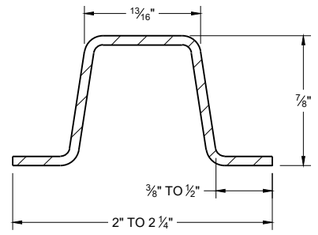
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



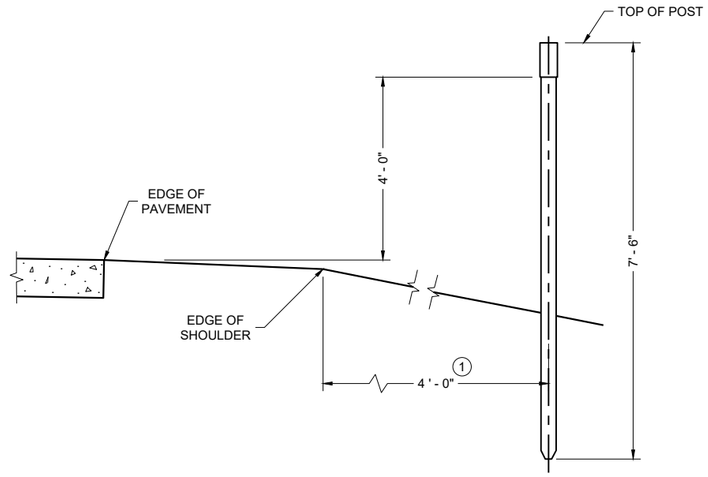
SECTION A - A

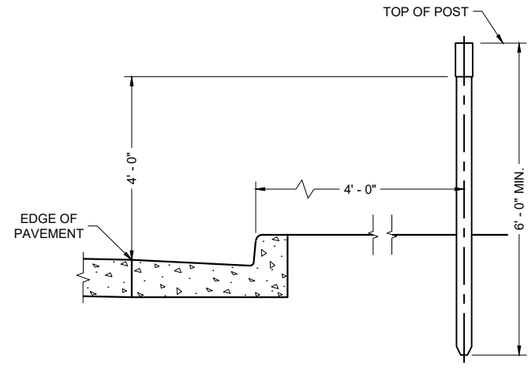
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

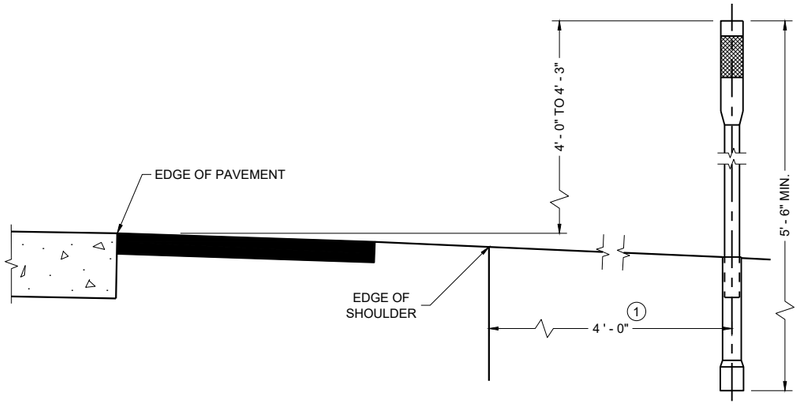
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

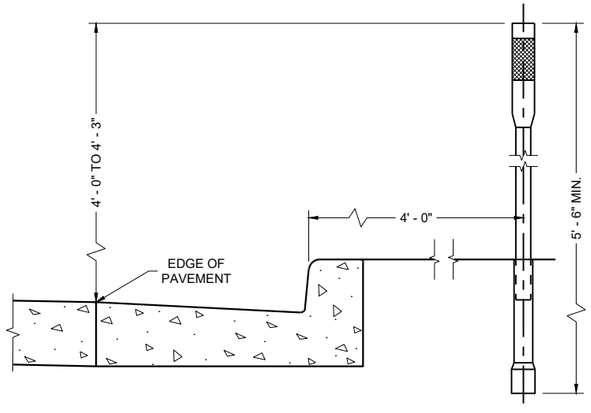
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

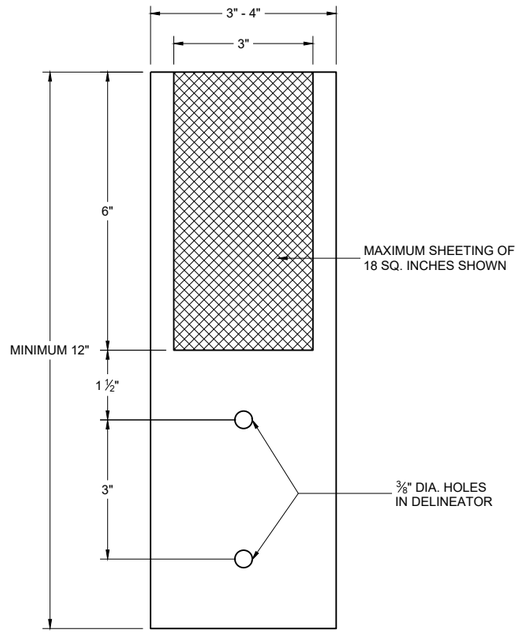
DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer

FHWA

6
SDD 15A04-08c



4" x 12" DELINEATOR
WITH REFLECTIVE SHEETING

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

DELINEATOR POST
WITH REFLECTIVE SHEETING

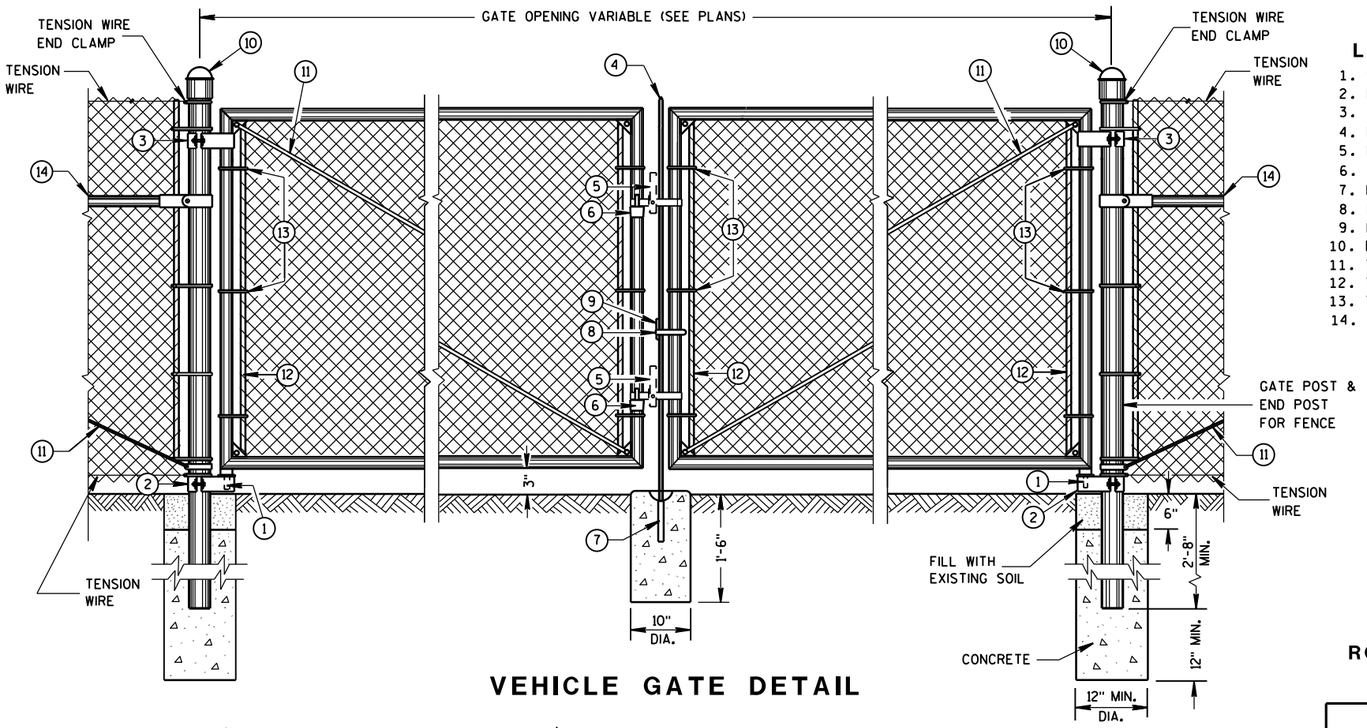
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024
DATE

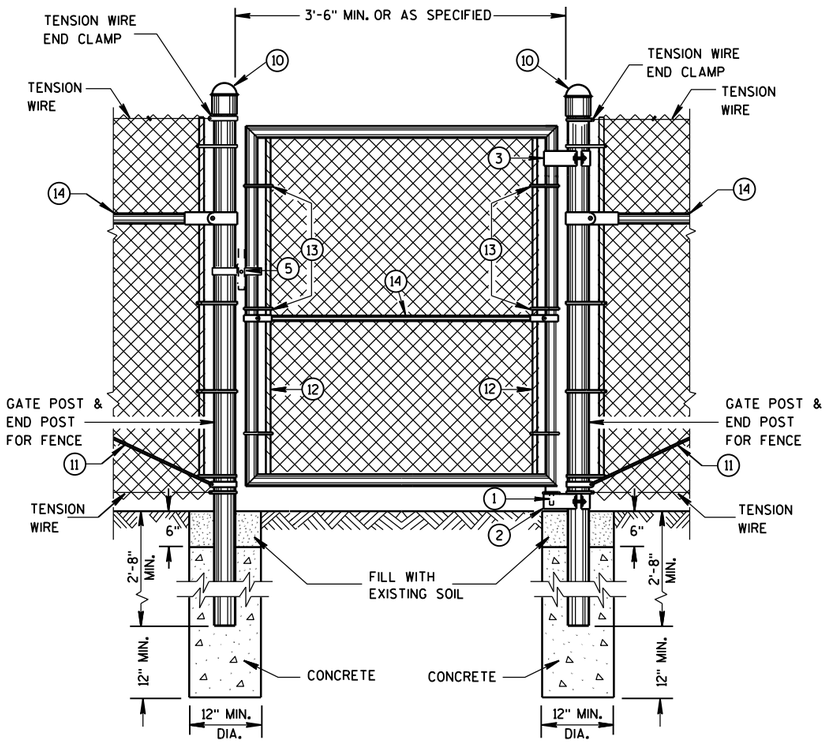
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

6
SDD 15A04-08e



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

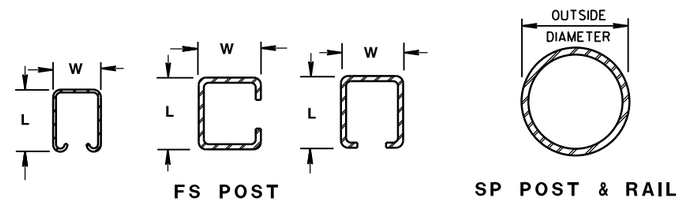
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

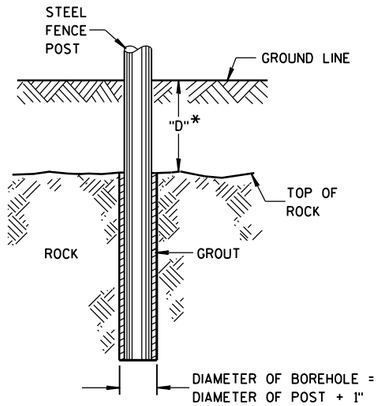
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

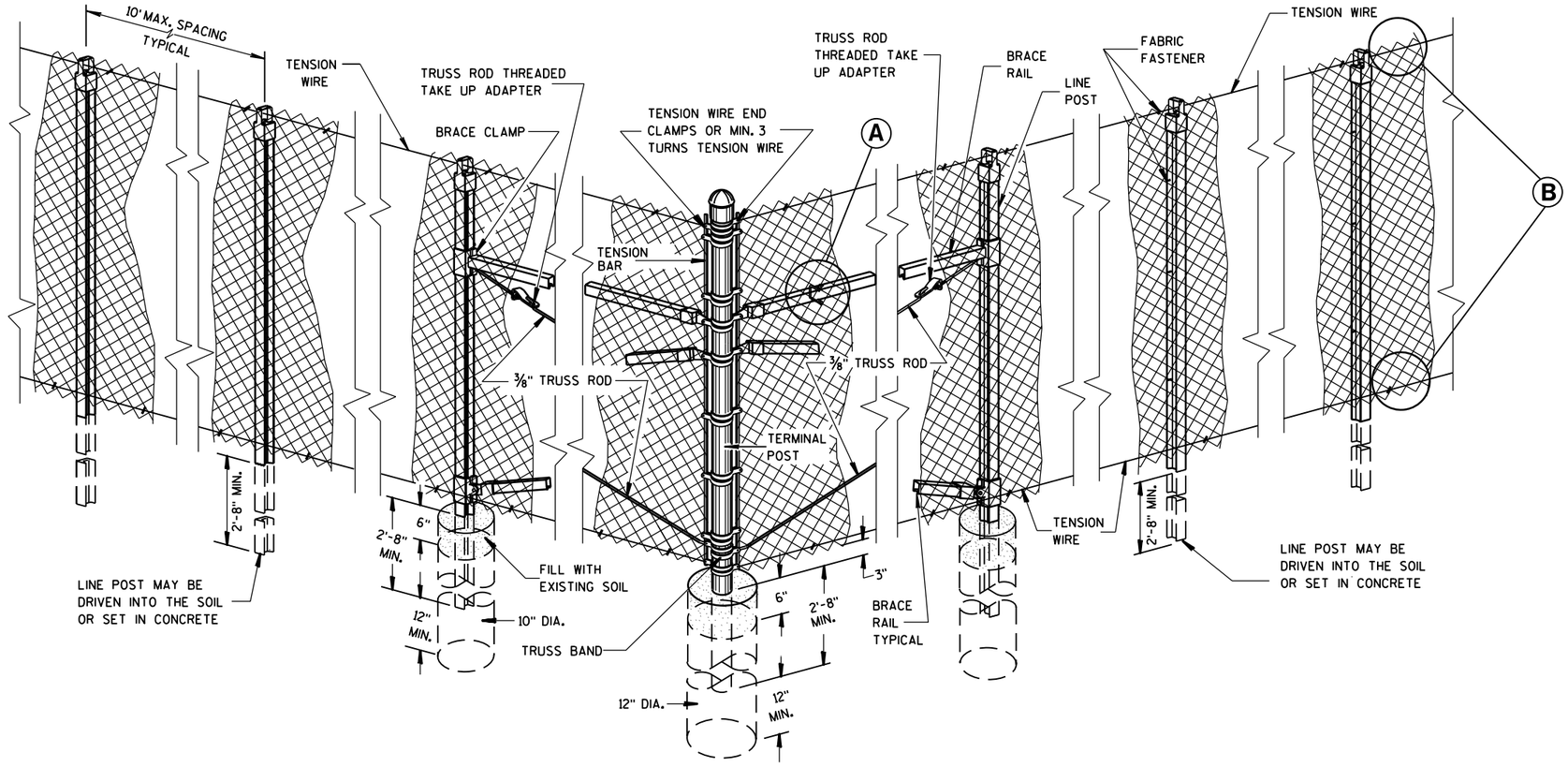
6

S.D.D. 15 B 3-15a

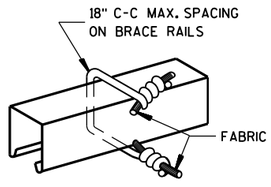


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



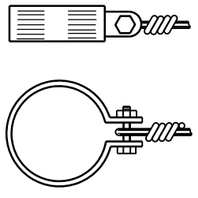
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



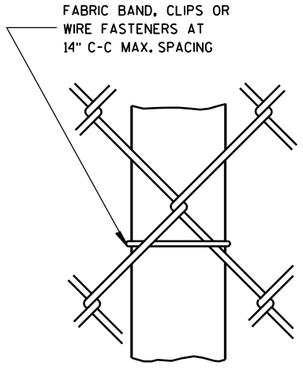
BRACE RAIL

FABRIC FASTENER

Ⓐ



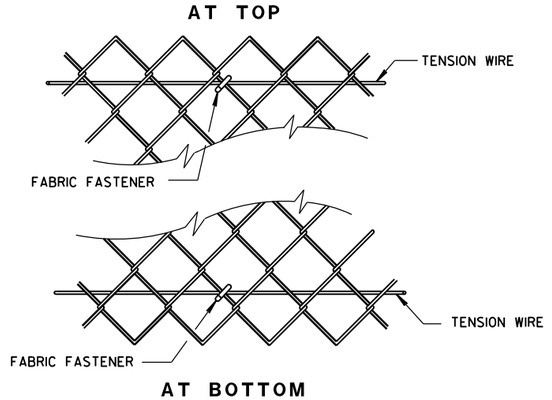
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

6

S.D.D. 15 B 3-15b

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.

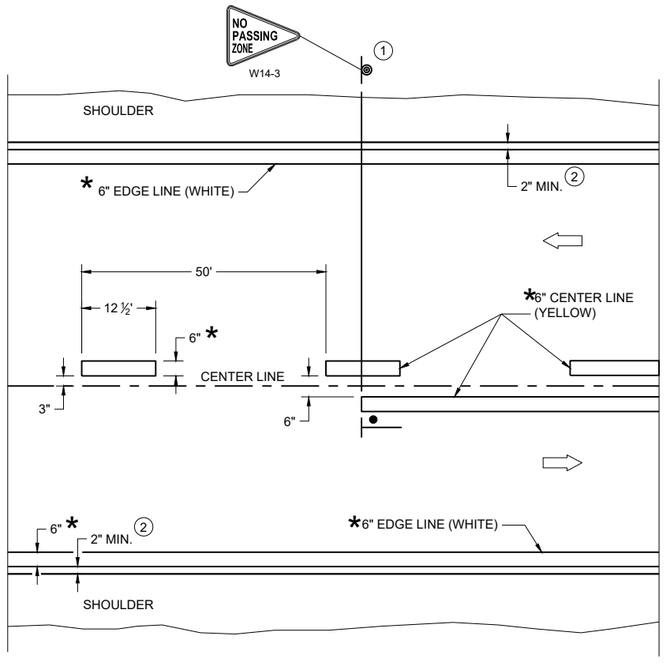
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

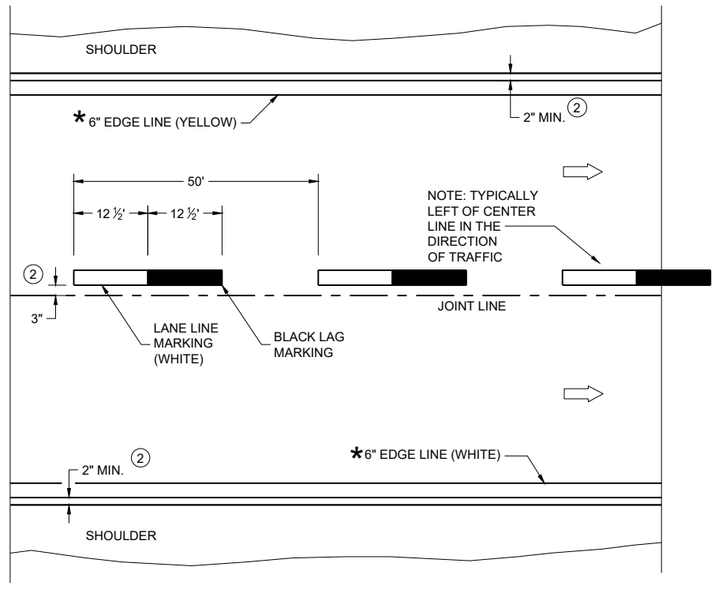
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC

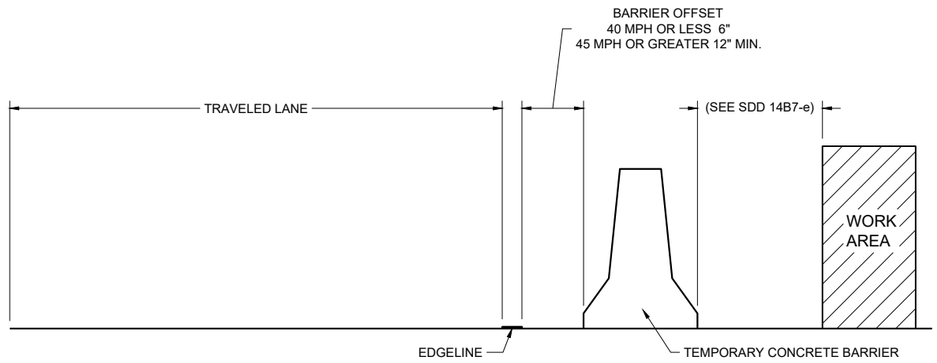


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	

6
SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

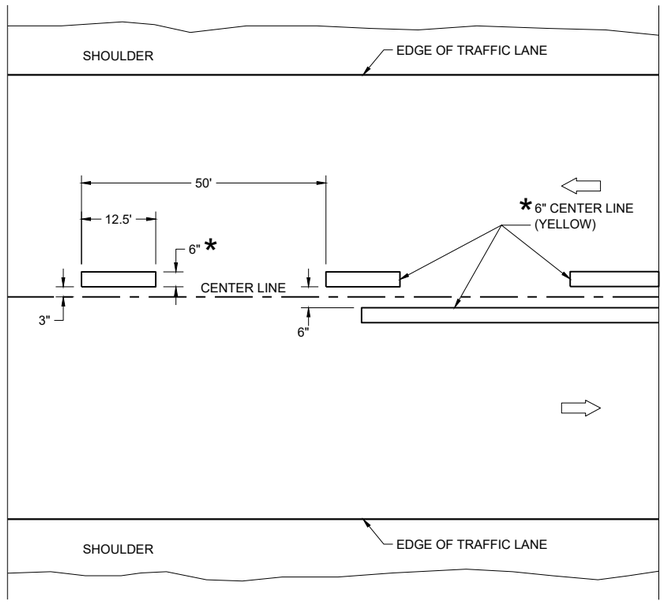
GENERAL NOTES

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

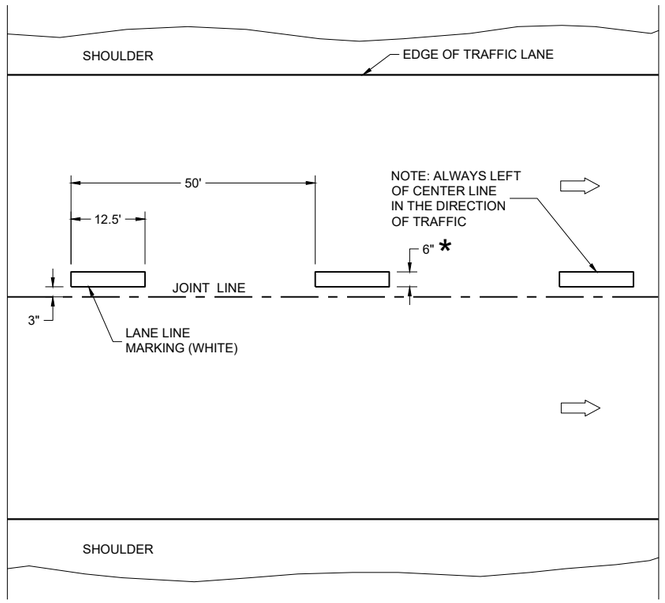
LEGEND

DIRECTION OF TRAFFIC

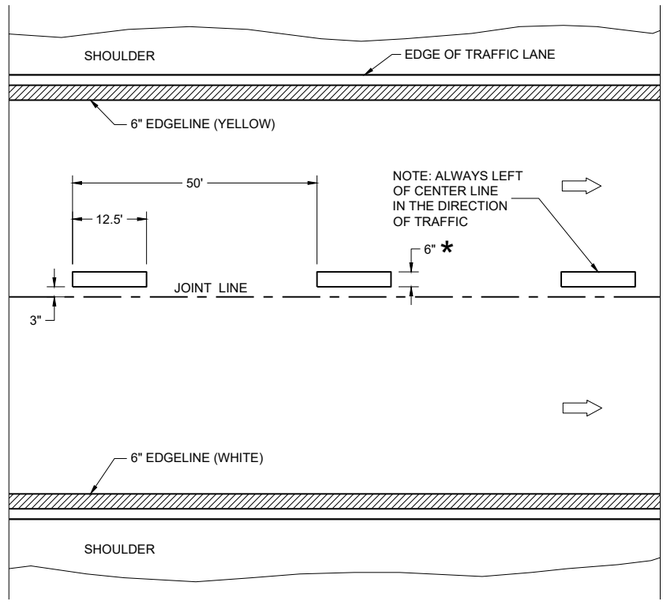
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

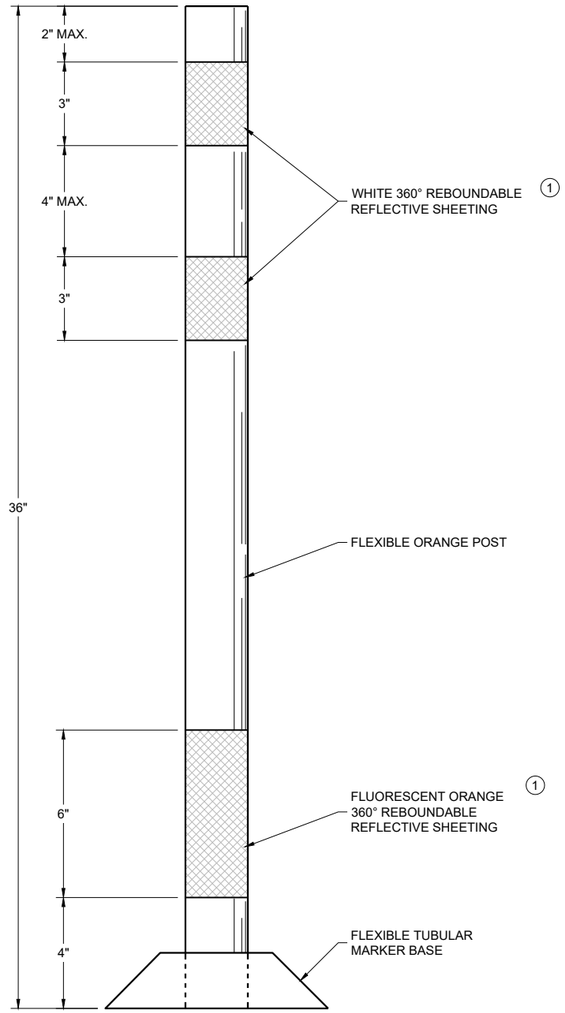
FHWA

6

SDD 15C08-24b

6

SDD 15C08-24b



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

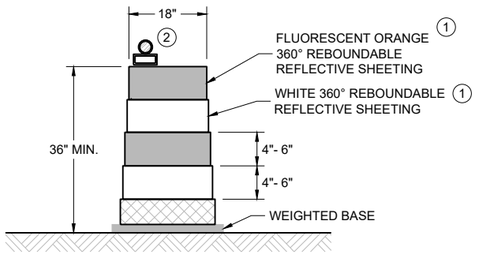
CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

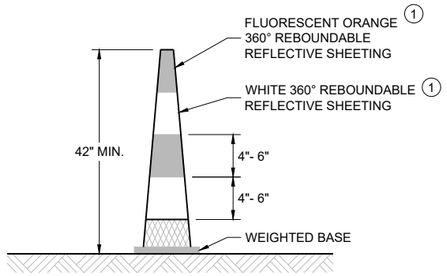
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

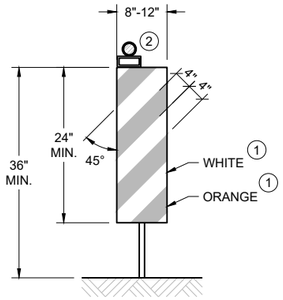
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

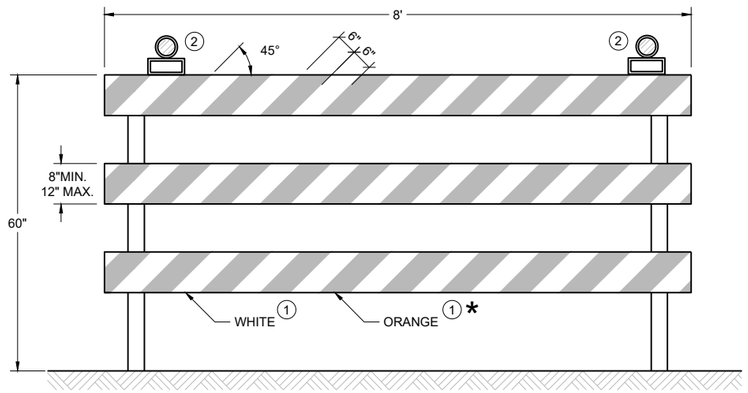
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE 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

February 2026
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15C11-11b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

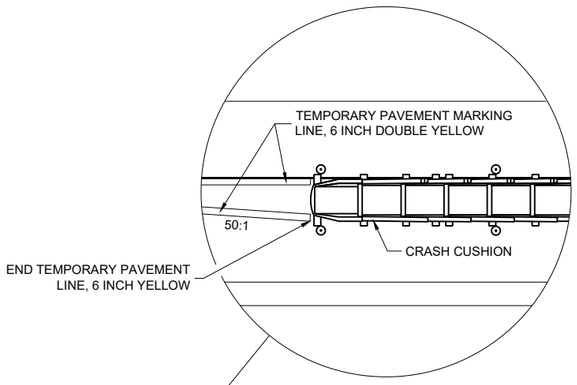
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

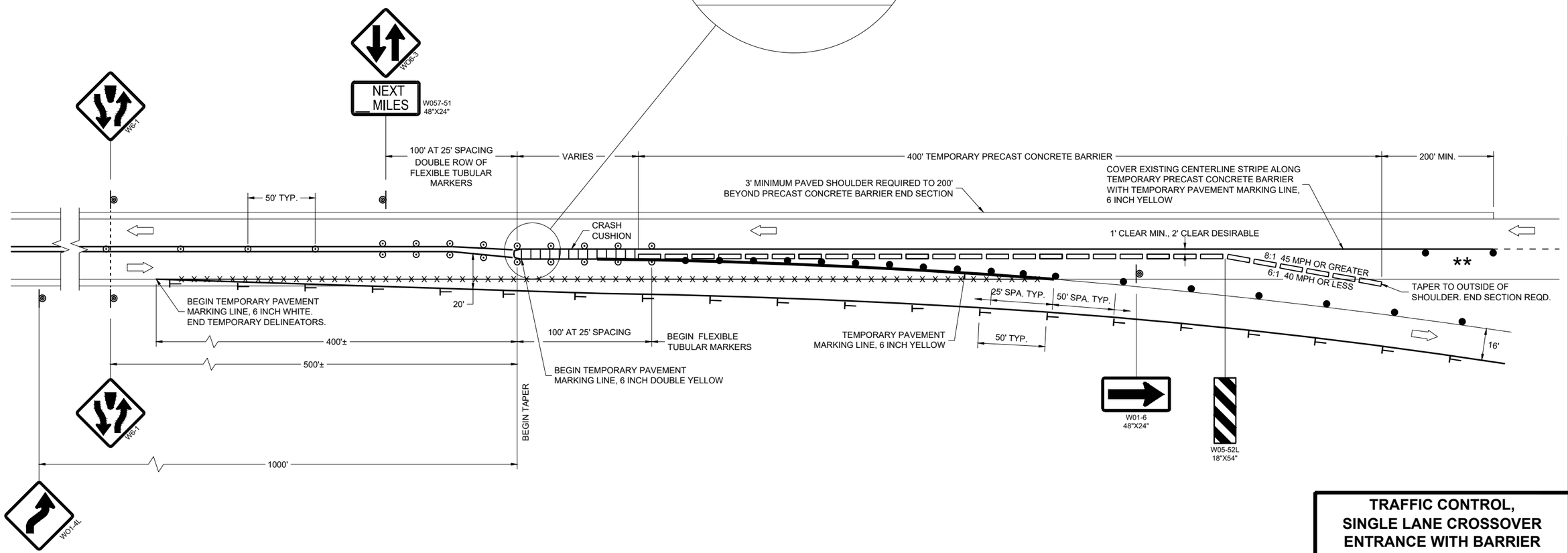
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

** SEE SDD 15D12 FOR LANE CLOSURE DETAILS.





TRAFFIC CONTROL, SINGLE LANE CROSSOVER ENTRANCE WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

6 SDD 15D05-07

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR, FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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.

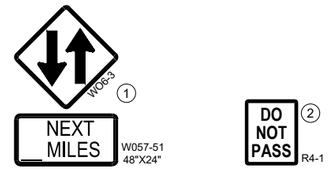
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

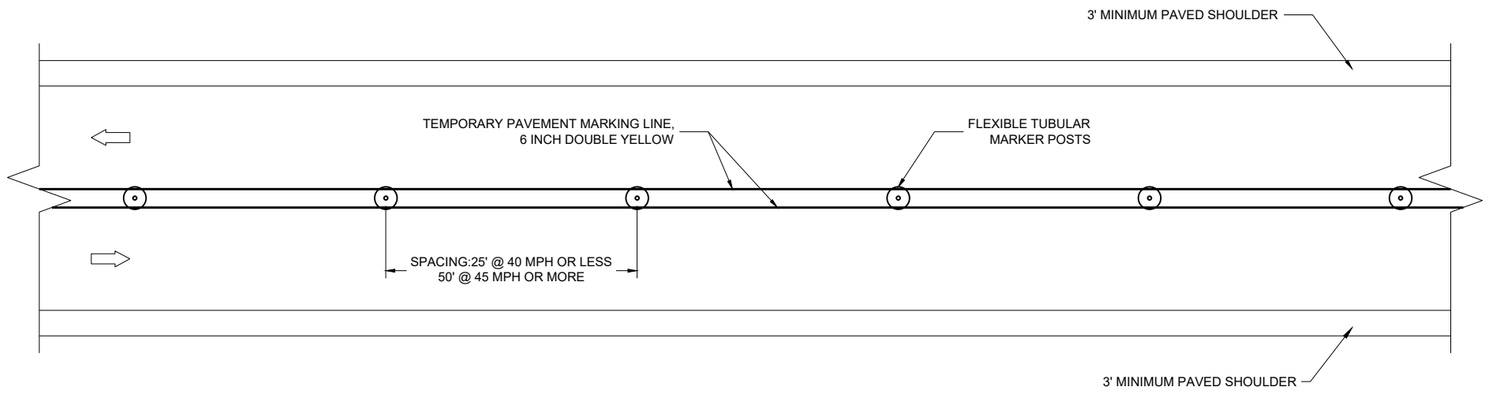
A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50 FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.



1. THE WO6-3 AND WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND / OR 500 FEET BEYOND ANY SIDE ROAD. THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN THE SIGNS.
2. CONVENTIONAL: 24" X 30"
   FREEWAY AND EXPRESSWAY: 36" X 48"



TWO LANE, TWO WAY OPERATION

6

SDD 15D06-07

TRAFFIC CONTROL
TWO LANE TWO WAY
OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

SDD 15D06-07

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE / TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE RESPECTIVE EDGE LINE MARKING
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

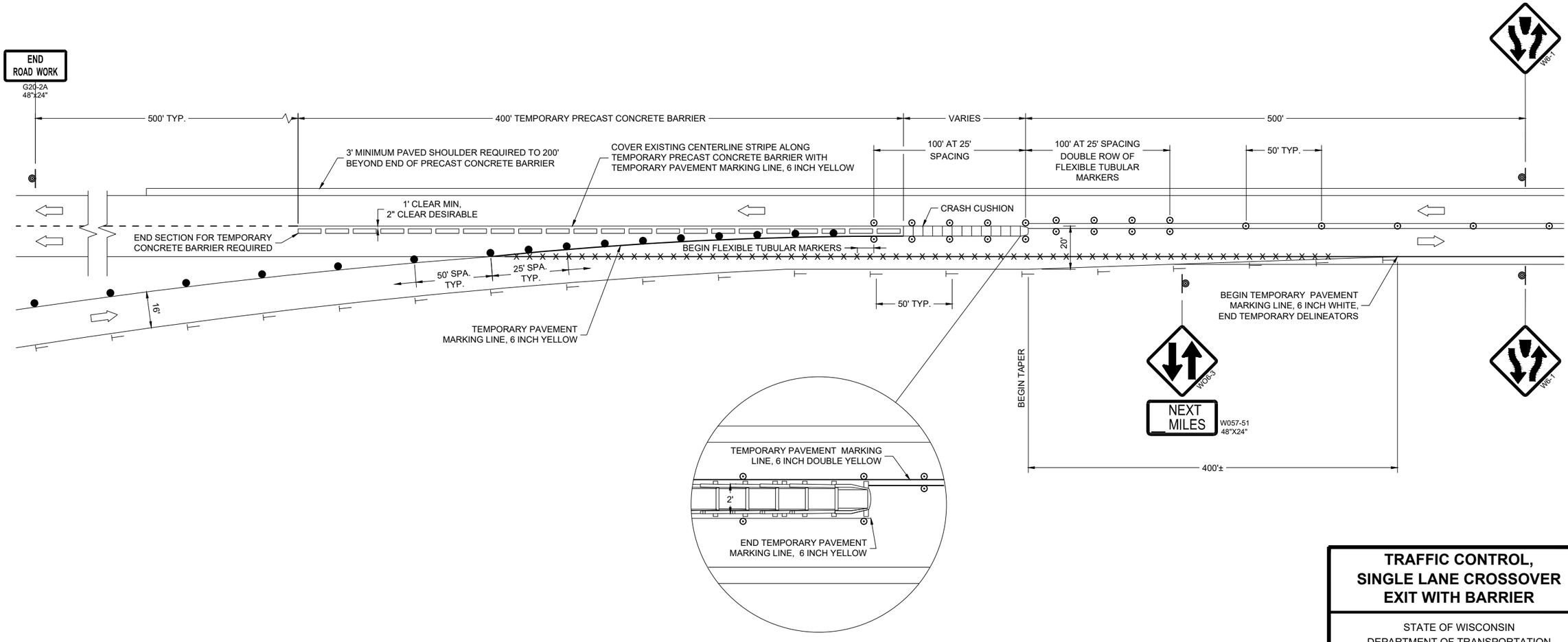
"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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.

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' DESIRABLE) DISTANCE TO EXISTING SIGNS.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.



TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER

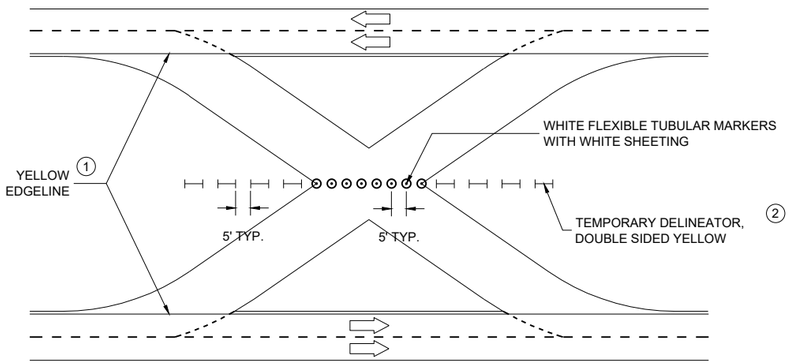
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6
SDD 15D10-07

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- DELINEATOR FLEXIBLE / TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST WITH SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- TYPE "A" WARNING LIGHT (FLASHING)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS
- WORK AREA



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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.

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 PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

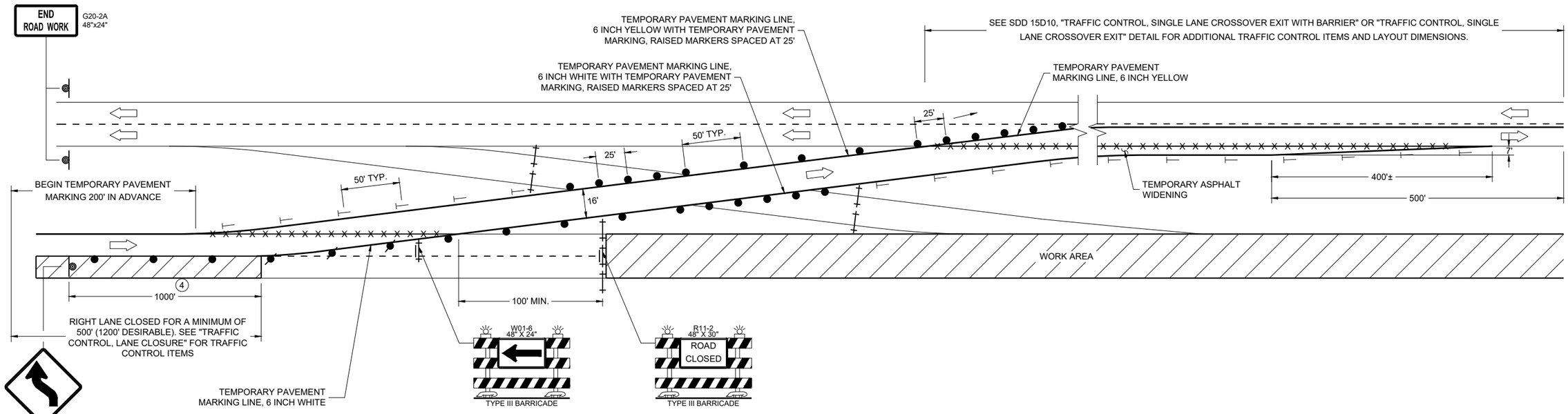
FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.

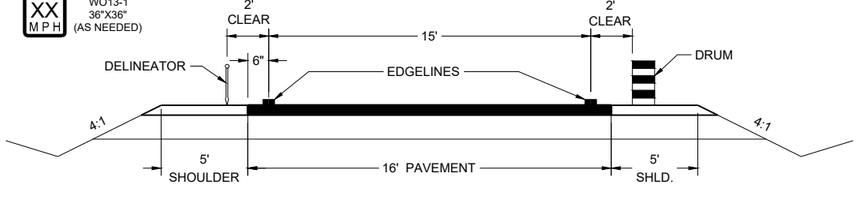
(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.

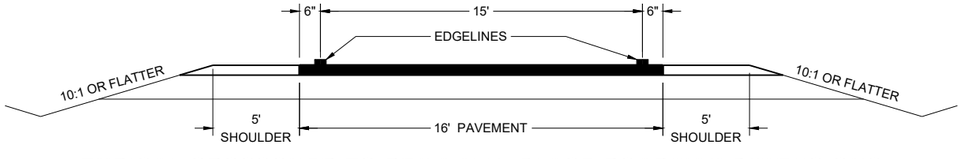
(3) USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(4) IF BEGINNING OF LANE SHIFT IS 1200' OR LESS FROM THE END OF FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200' AFTER THE END OF THE LANE CLOSURE TAPER.





TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS
(SEE PLAN FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS
(SEE PLAN FOR ROADWAY DESIGN ELEMENTS)

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6 SDD 15D11-10

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" SIGNS ARE THE SAME AS "W" SIGNS 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.

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

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.

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

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

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.

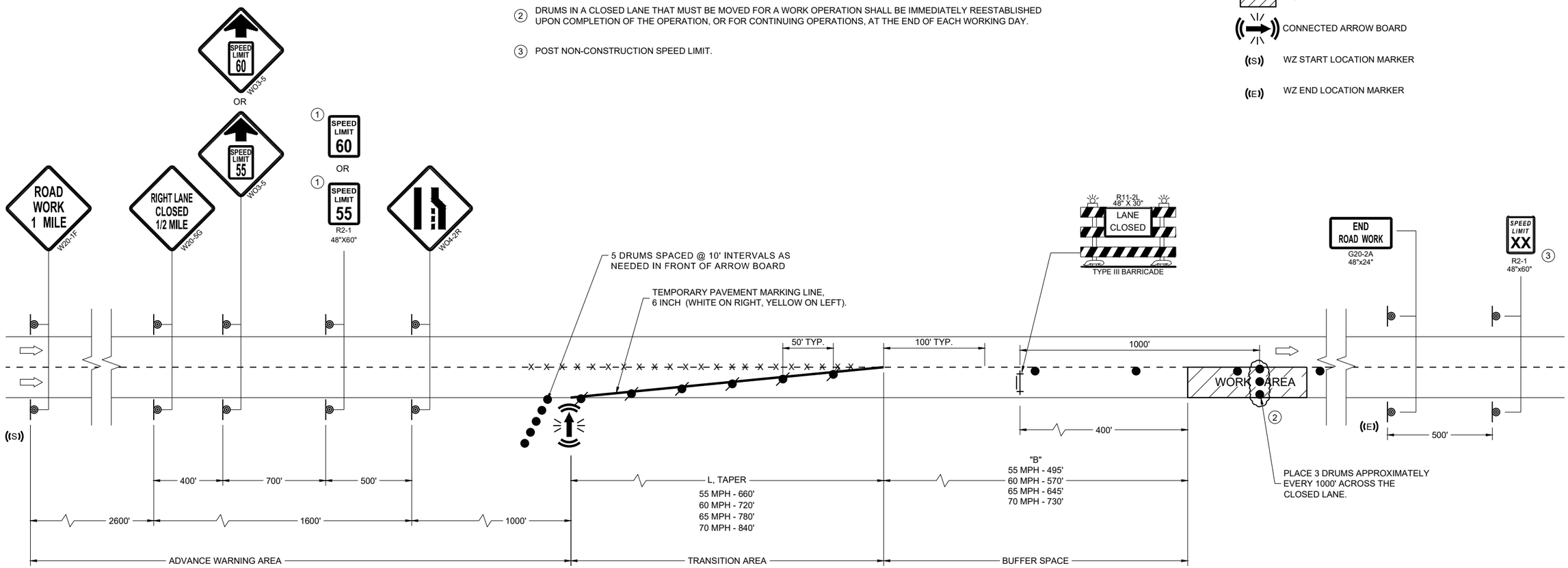
(1) A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES.

(2) DRUMS 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.

(3) POST NON-CONSTRUCTION SPEED LIMIT.

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
- CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

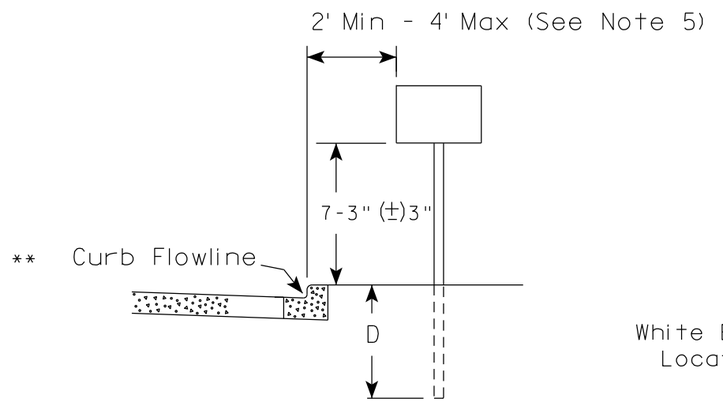
APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

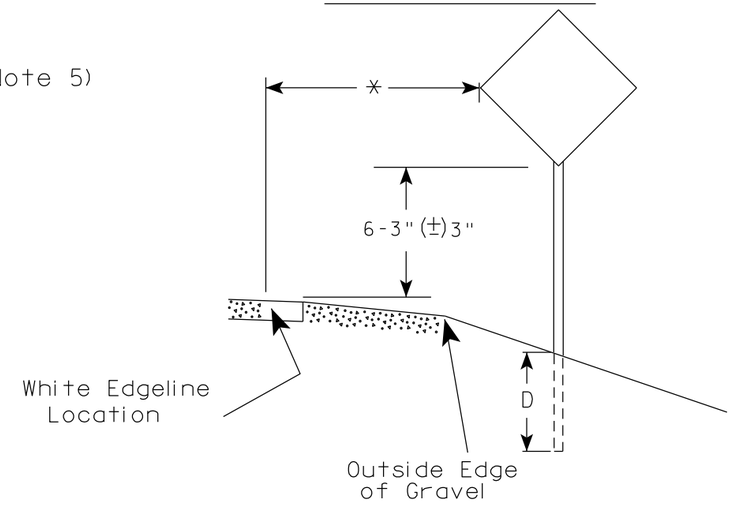
6

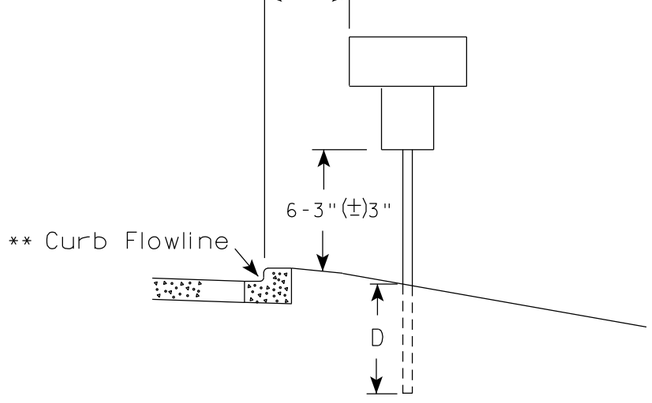
SDD 15D12-16b

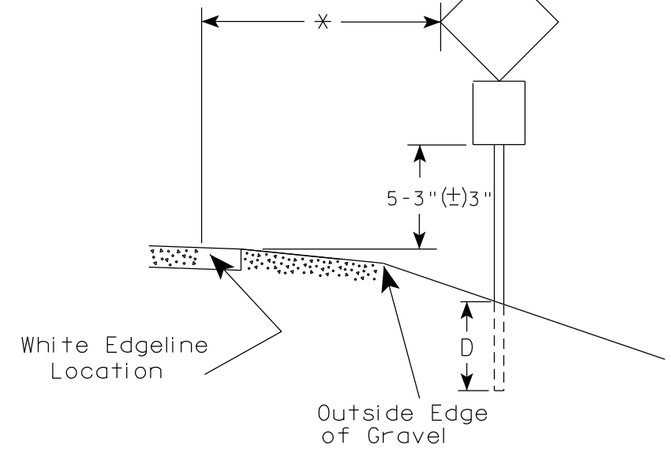
URBAN AREA



RURAL AREA (See Note 2)







** 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.

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" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

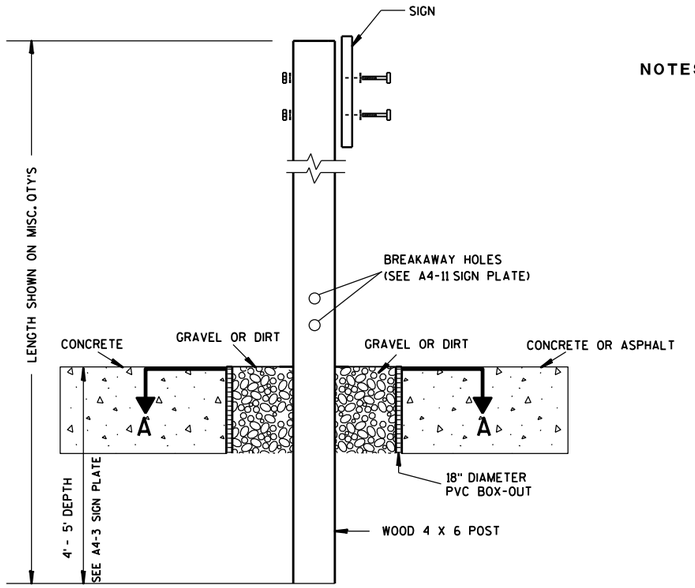
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

7

7

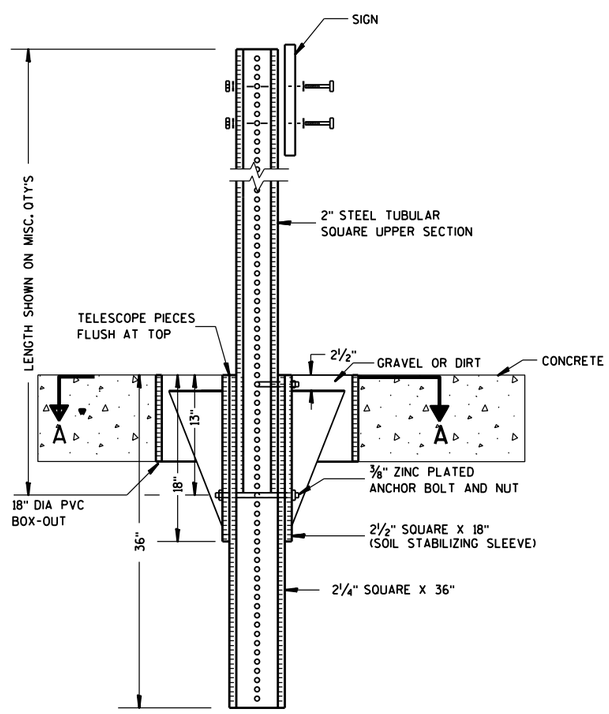
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E



ELEVATION VIEW

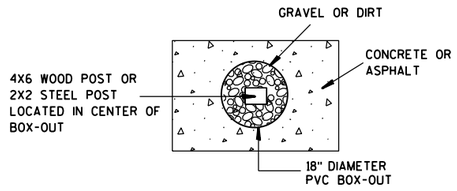
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

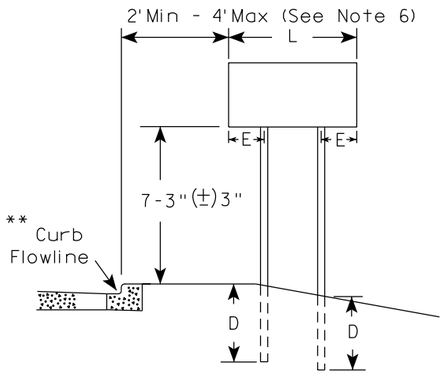
APPROVED Matthew R Rauch
for State Traffic Engineer

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

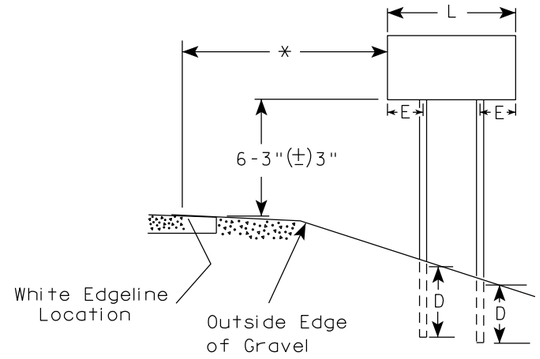
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

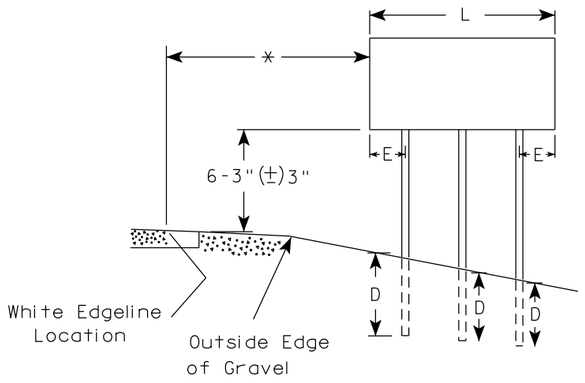
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

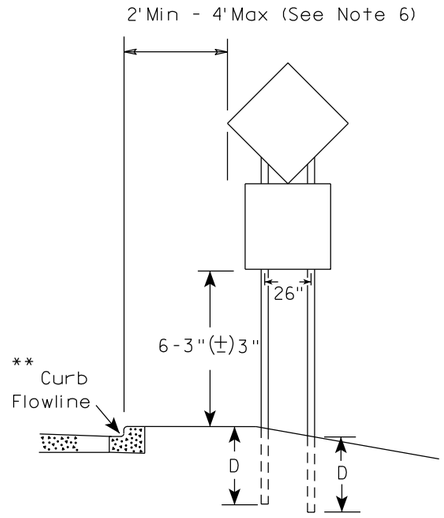
URBAN AREA



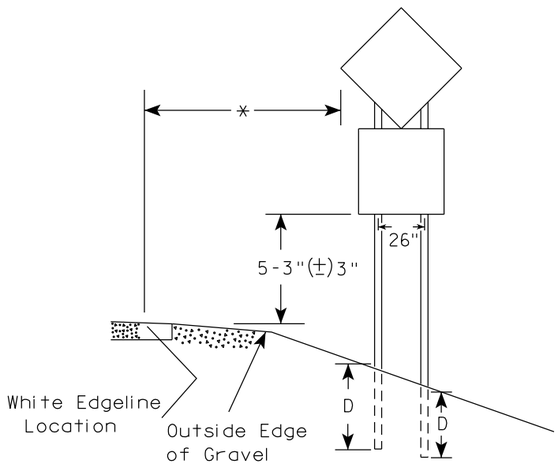
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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"

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" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 3".

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

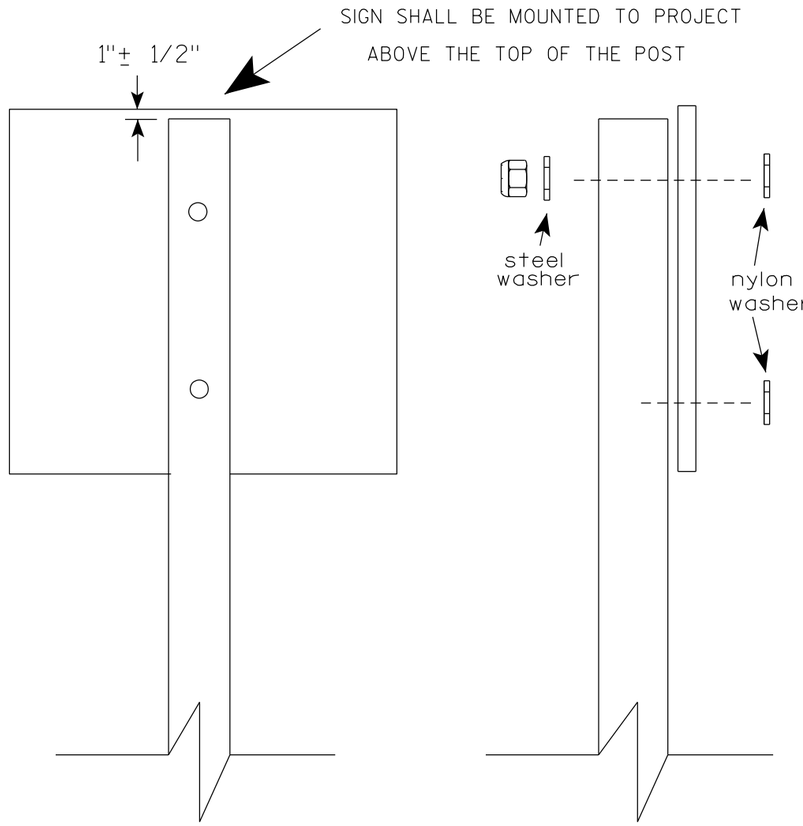
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

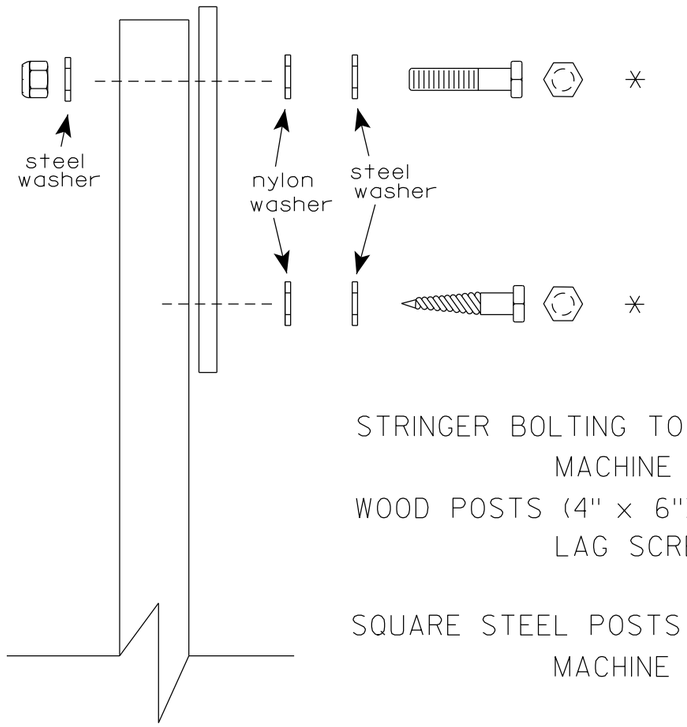
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E





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

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

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 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 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 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 Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

SHEET NO: 109 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

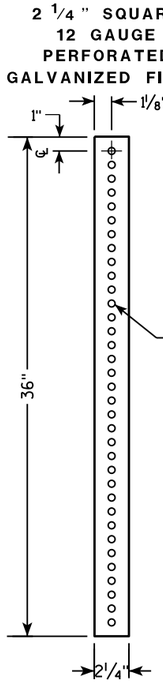
WISDOT/CADDS SHEET 42

7

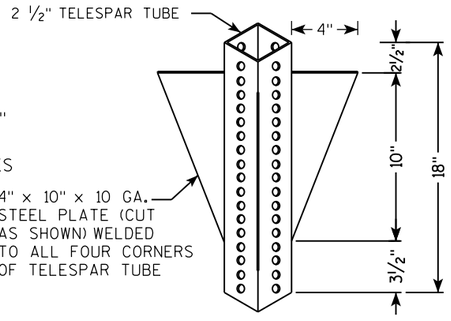
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

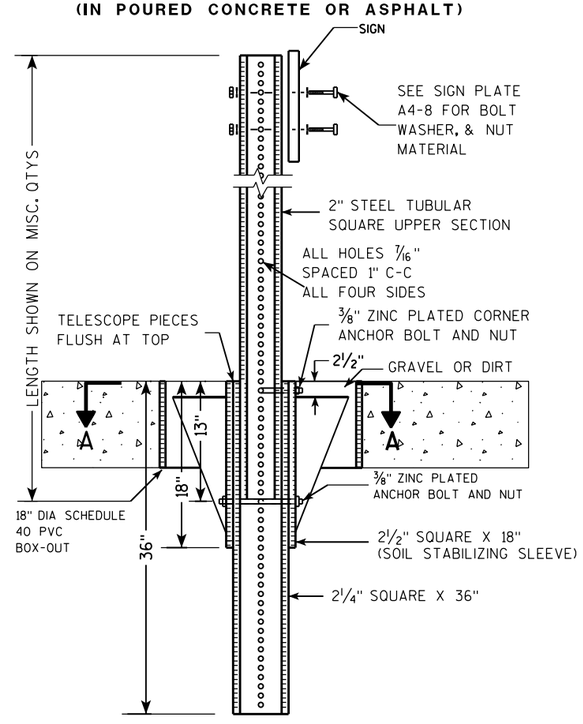
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



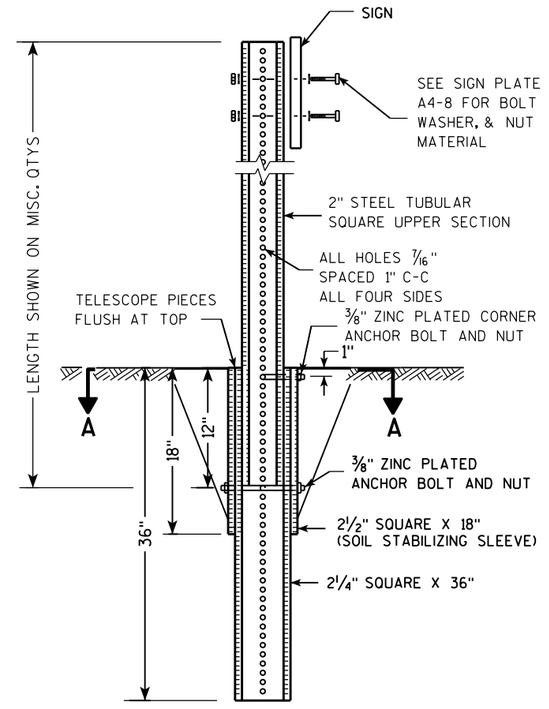
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

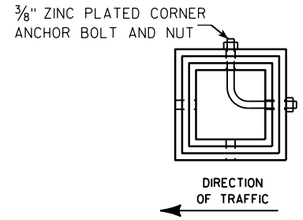


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

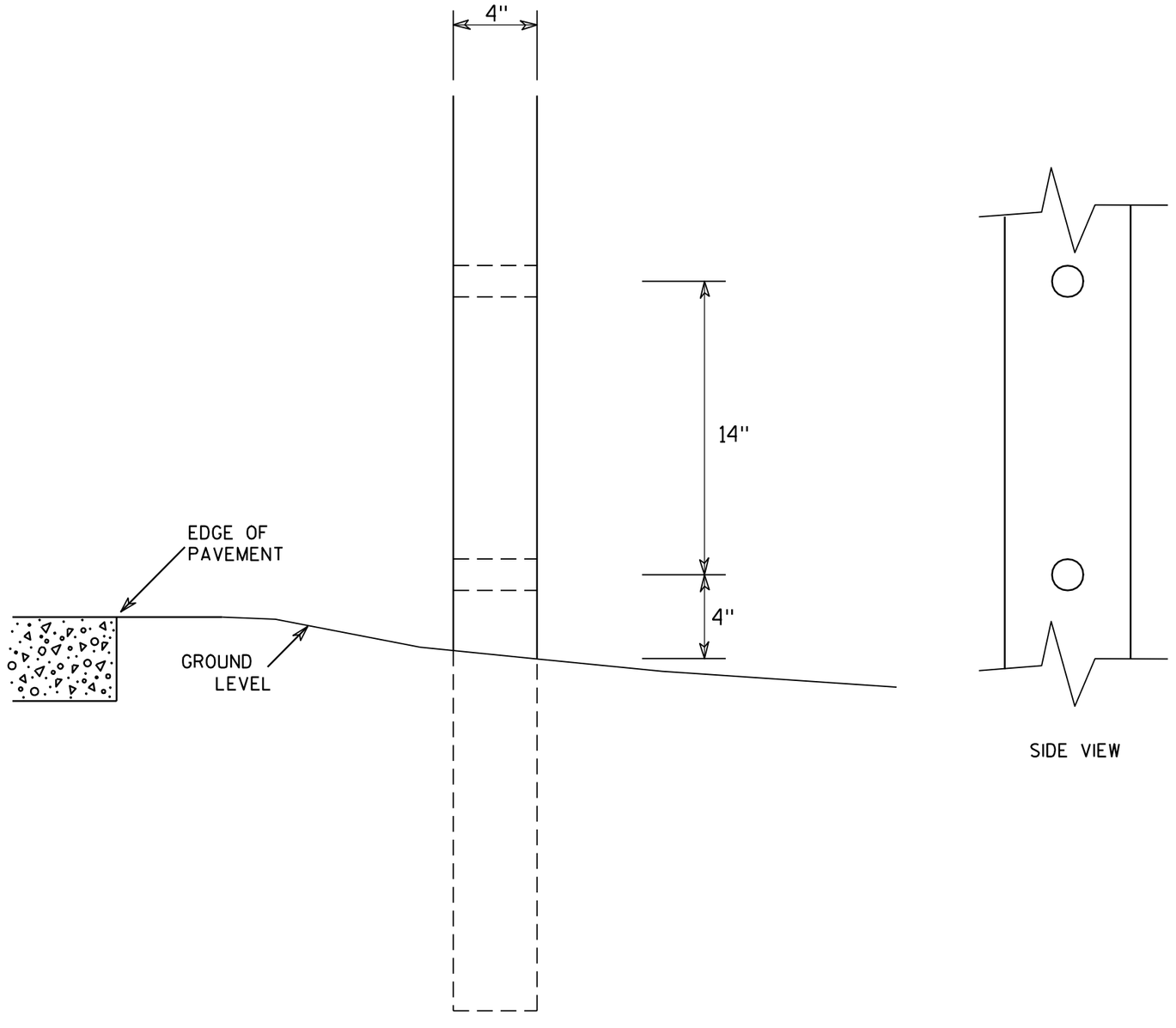
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

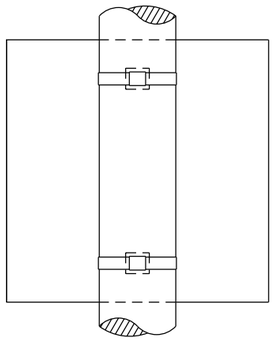
APPROVED Chester J Spang for State Traffic Engineer

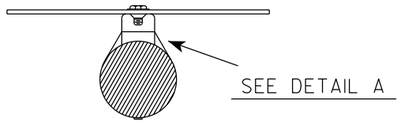
DATE 3/27/97 PLATE NO. A4-11.2

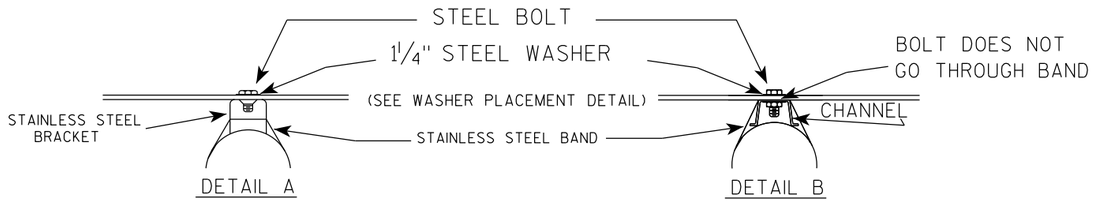
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E

BANDING

SINGLE SIGN



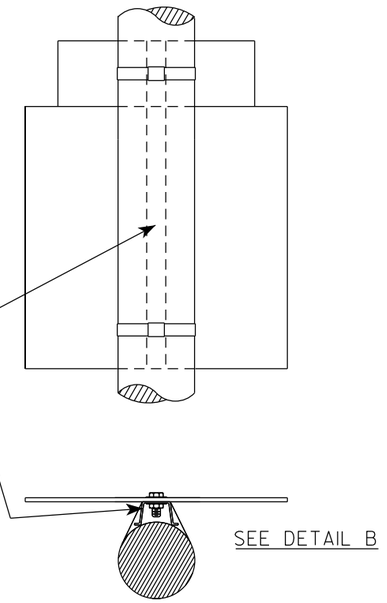




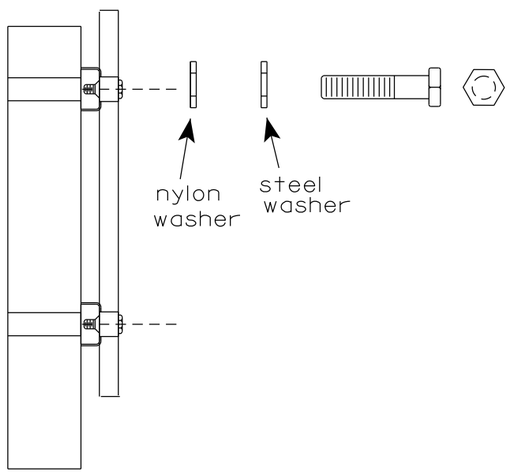
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" 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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" 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

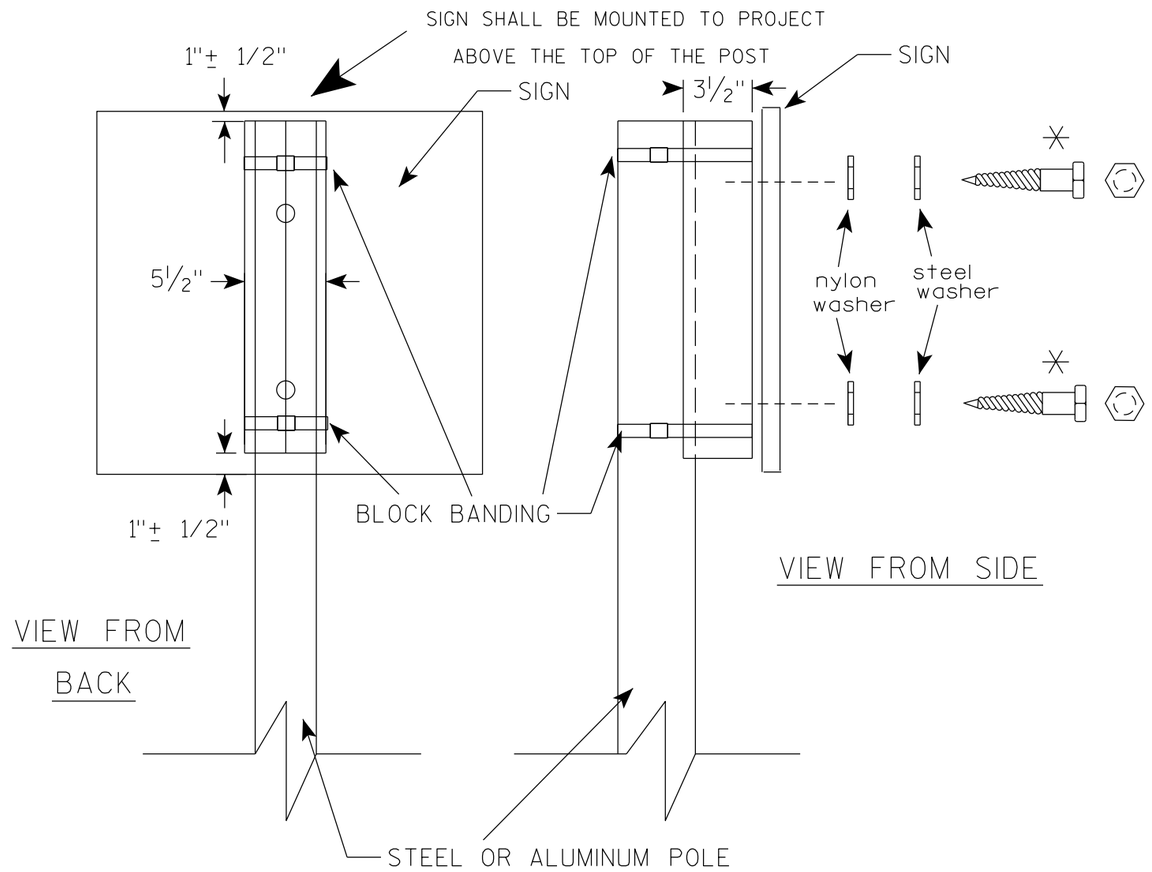
DATE 6/10/19 PLATE NO. A5-9.4

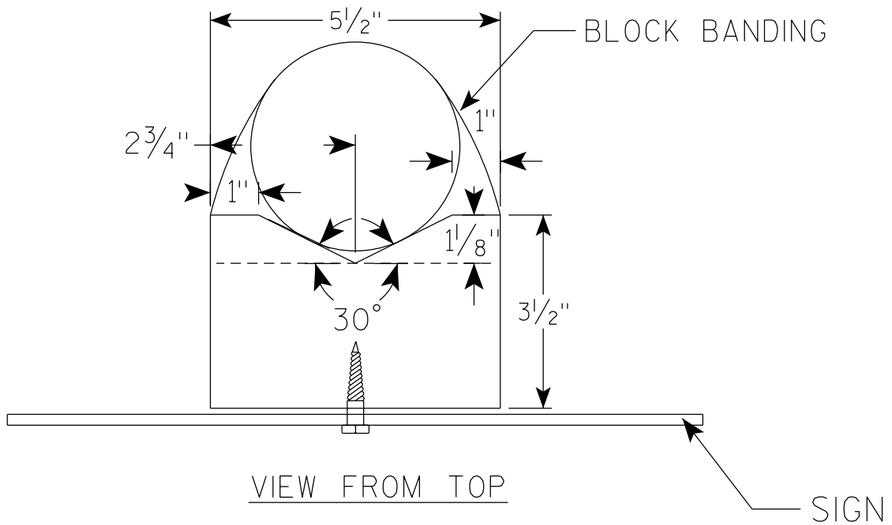
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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, ¾" 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 NORNALLY 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 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

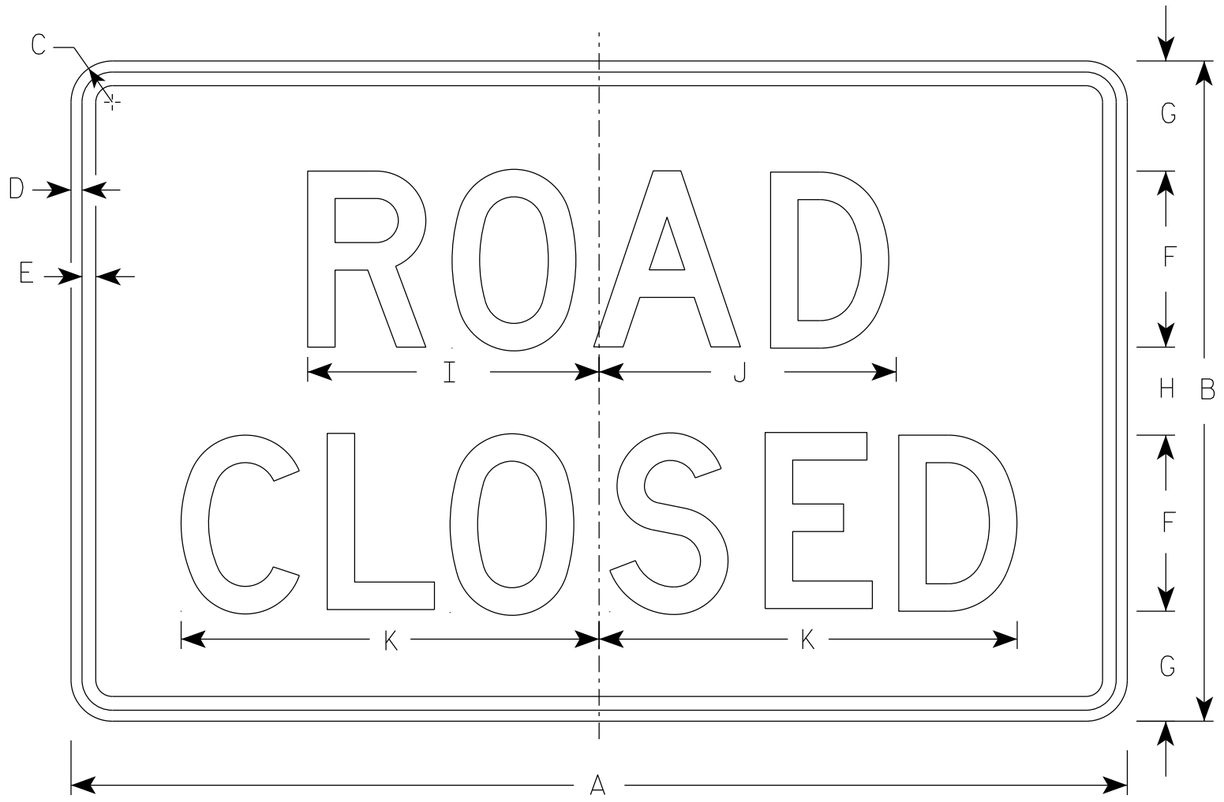
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

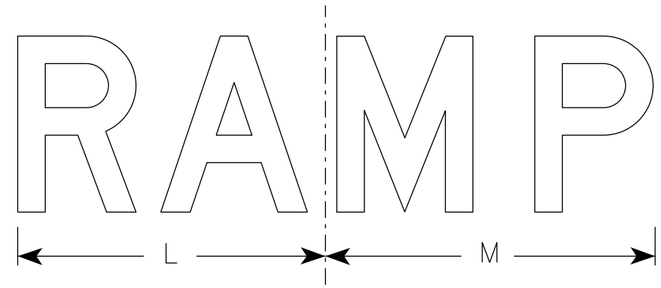
SHEET NO: 113 E



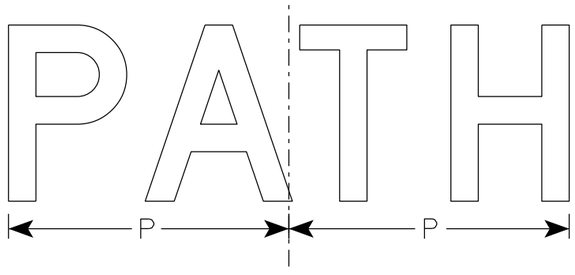
R11-2

NOTES

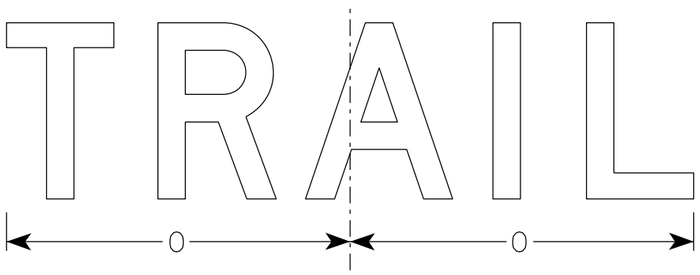
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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



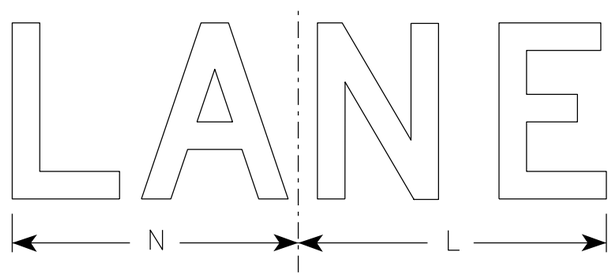
R11-2R



R11-2C



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8	12 3/4											10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/3/26 PLATE NO. R11-2.13

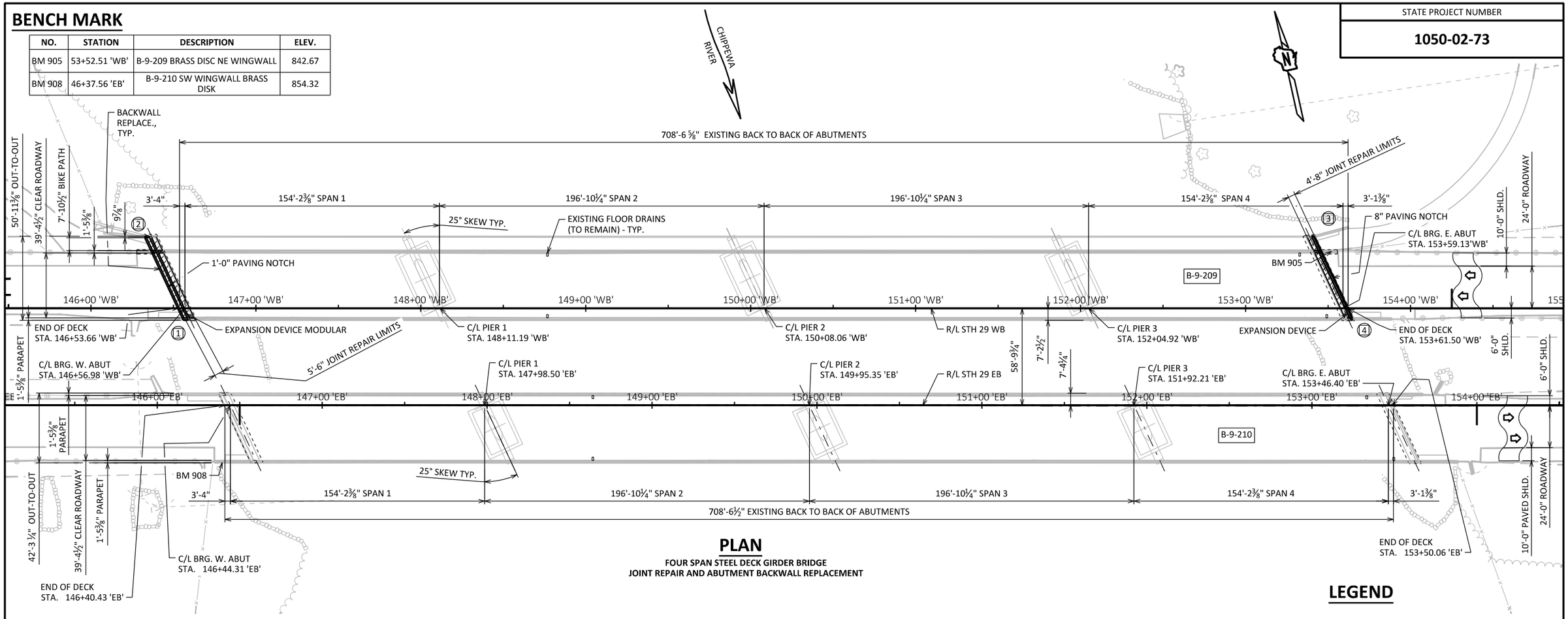
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM 905	53+52.51 'WB'	B-9-209 BRASS DISC NE WINGWALL	842.67
BM 908	46+37.56 'EB'	B-9-210 SW WINGWALL BRASS DISK	854.32

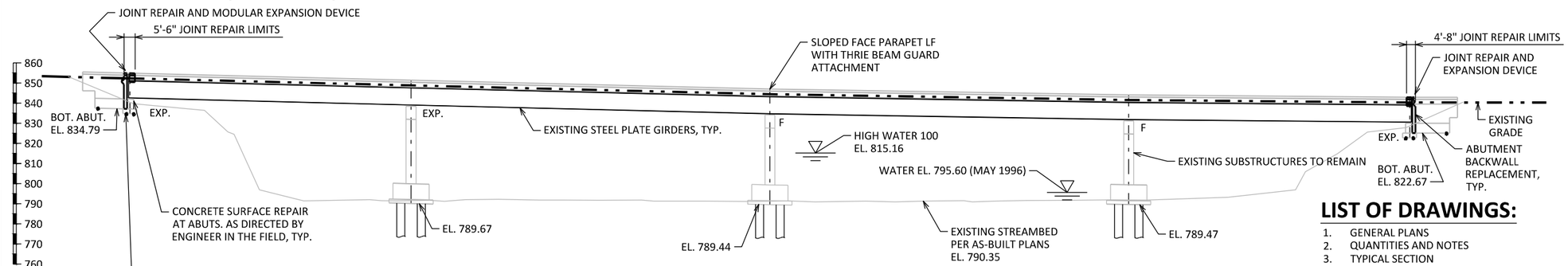
STATE PROJECT NUMBER

1050-02-73



PLAN

FOUR SPAN STEEL DECK GIRDER BRIDGE
JOINT REPAIR AND ABUTMENT BACKWALL REPLACEMENT



ELEVATION

LOOKING NORTH
NORMAL TO CHIPPEWA RIVER

LEGEND

	LIMITS OF JOINT REPAIR
(X)	INDICATES WINGWALL NUMBER
F	INDICATES FIXED BEARING
EXP.	INDICATES EXPANSION BEARING

LIST OF DRAWINGS:

1. GENERAL PLANS
2. QUANTITIES AND NOTES
3. TYPICAL SECTION
4. ABUTMENT REMOVAL SECTION
5. WEST ABUTMENT
6. EAST ABUTMENT
7. SIDEWALL RECONSTRUCTION
8. JOINT REPAIR SECTIONS AT WEST ABUTMENT
9. WEST ABUTMENT JOINT REPAIR (1 OF 4)
10. WEST ABUTMENT JOINT REPAIR (2 OF 4)
11. WEST ABUTMENT JOINT REPAIR (3 OF 4)
12. WEST ABUTMENT JOINT REPAIR (4 OF 4)
13. JOINT REPAIR SECTIONS AT EAST ABUTMENT
14. EAST ABUTMENT JOINT REPAIR (1 OF 4)
15. EAST ABUTMENT JOINT REPAIR (2 OF 4)
16. EAST ABUTMENT JOINT REPAIR (3 OF 4)
17. EAST ABUTMENT JOINT REPAIR (4 OF 4)
18. TYPICAL PARAPET REPAIR
19. WEST STUB WINGWALL PARAPET REPAIR
20. STEEL PIPE RAILING
21. STEEL BIKE PATH RAILING
22. BILL OF BARS

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE WISCONSIN
PROFESSIONAL ENGINEER
08/18/2026

STRUCTURE DESIGN CONTACTS:

CHRISTOPHER MARCUM, PE	(715) 861-4823
AARON BONK	608-261-0261

NO.	DATE	REVISION	BY

jt ENGINEERING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JLR 08/18/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-9-209

STH 29 WB OVER CHIPPEWA RIVER

COUNTY	TOWN/VILLAGE
CHIPPEWA	WHEATON/LAKE HALLIE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
RAC	CJM	CJM	VJD/JMR

GENERAL PLAN

SHEET 1 OF 22
115

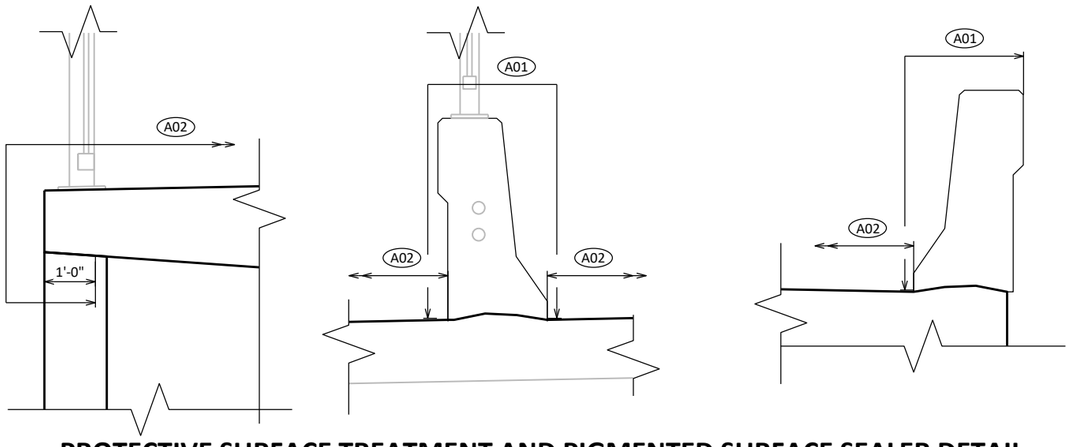
SCALE = 60

I.D. 1050-02-03

DATE: MARCH 2026

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	E. ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS B-9-209	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGE B-9-209	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	445	470	915
502.0100	CONCRETE MASONRY BRIDGES	CY	---	39.1	34.6	74
502.3101	EXPANSION DEVICE B-9-209	LF	55	---	---	55
502.3111.S	EXPANSION DEVICE MODULAR	LF	55	---	---	55
502.3200	PROTECTIVE SURFACE TREATMENT	SY	35	15	15	65
502.3210	PIGMENTED SURFACE SEALER	SY	7	2	2	11
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	---	112	114	226
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,670	4,680	4,120	11,470
509.1000	JOINT REPAIR	SY	64	---	---	64
509.1500	CONCRETE SURFACE REPAIR	SF	---	6	4	10
509.2100.S	CONCRETE MASONRY DECK REPAIR	SY	14.1	---	---	15
513.9006.S	REMOVING AND RESETTING TUBULAR RAILING B-9-209	EACH	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	18	18	36
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	13	6	5	24
SPV.0180	ABUTMENT SEAT CLEANING AND SEALING	SY	---	21	21	42
	NON-BID ITEMS					
	NAME PLATE					1



PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER DETAIL

(A01) COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS ON THE FRONT FACE, BACK FACE (MEDIAN PARAPET ONLY), AND TOP OF THE NEWLY CONSTRUCTED PARAPET SEGMENTS WITHIN THE JOINT REPAIR LIMITS.

(A02) COAT WITH "PROTECTIVE SURFACE TREATMENT " AS PER THE STANDARD SPECIFICATIONS . "PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE TOP SURFACE OF THE DECK, NORTH EDGE OF SLAB, AND BOTTOM 1'-0" OF THE NORTH OVERHANG LOCATED WITHIN THE JOINT REPAIR LIMITS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SHOWN OTHERWISE.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CHIPPEWA 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 18.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-209" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE EXPOSED TOP OF DECK SURFACES, NORTH EDGE OF SLAB, AND BOTTOM 1'-0" OF THE NORTH OVERHANG LOCATED WITHIN THE JOINT REPAIR LIMITS AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, BACK FACE (MEDIAN PARAPET ONLY), AND THE TOP OF THE PARAPETS LOCATED WITHIN THE JOINT REPAIR LIMITS.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. DIMENSIONS HAVE BEEN CONVERTED FROM METRIC UNITS TO IMPERIAL UNITS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 2005.

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

THE COST FOR PARAPET REMOVAL WITHIN THE LIMITS OF JOINT REPAIR SHALL BE INCLUDED IN THE SQUARE YARD BID ITEM "JOINT REPAIR".

THE PAY LIMITS OF "REMOVING STRUCTURE" SHALL INCLUDE VOLUMES OCCUPIED BY EACH ABUTMENT BACKWALL.

THE PAY LIMITS OF "CONCRETE MASONRY BRIDGES" DO NOT INCLUDE AREAS OF JOINT REPAIR AS DENOTED IN THE PLANS.

DESIGN DATA

LIVE LOAD:

TAKEN FROM HSI 03/26/2024
DESIGN LOADING: HS-20
INVENTORY RATING: HS-24
OPERATING RATING: HS-40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
JOINT REPAIR — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

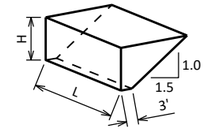
BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

TRAFFIC DATA

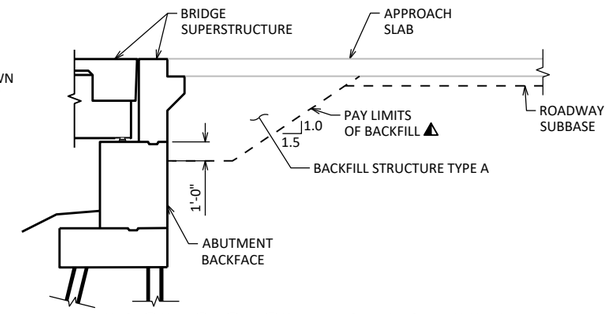
FEATURE ON: STH 29 WB

ADT = 14,780 (2027)
ADT = 15,540 (2047)
R.D.S. = 70 MPH

ABUTMENT BACKFILL DIAGRAM



L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT FROM BEAM SEAT TO TOP OF BACKWALL (FT) PLUS ONE FOOT BELOW BEAM SEAT
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

SCOPE OF WORK

- REPLACE EXISTING ABUTMENT BACKWALLS.
- REPLACE EXPANSION JOINTS AT EACH ABUTMENT.

STATE PROJECT NUMBER
1050-02-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY CJM | PLANS CK'D VJD/JMR

QUANTITIES AND NOTES

SHEET 2 OF 22
116

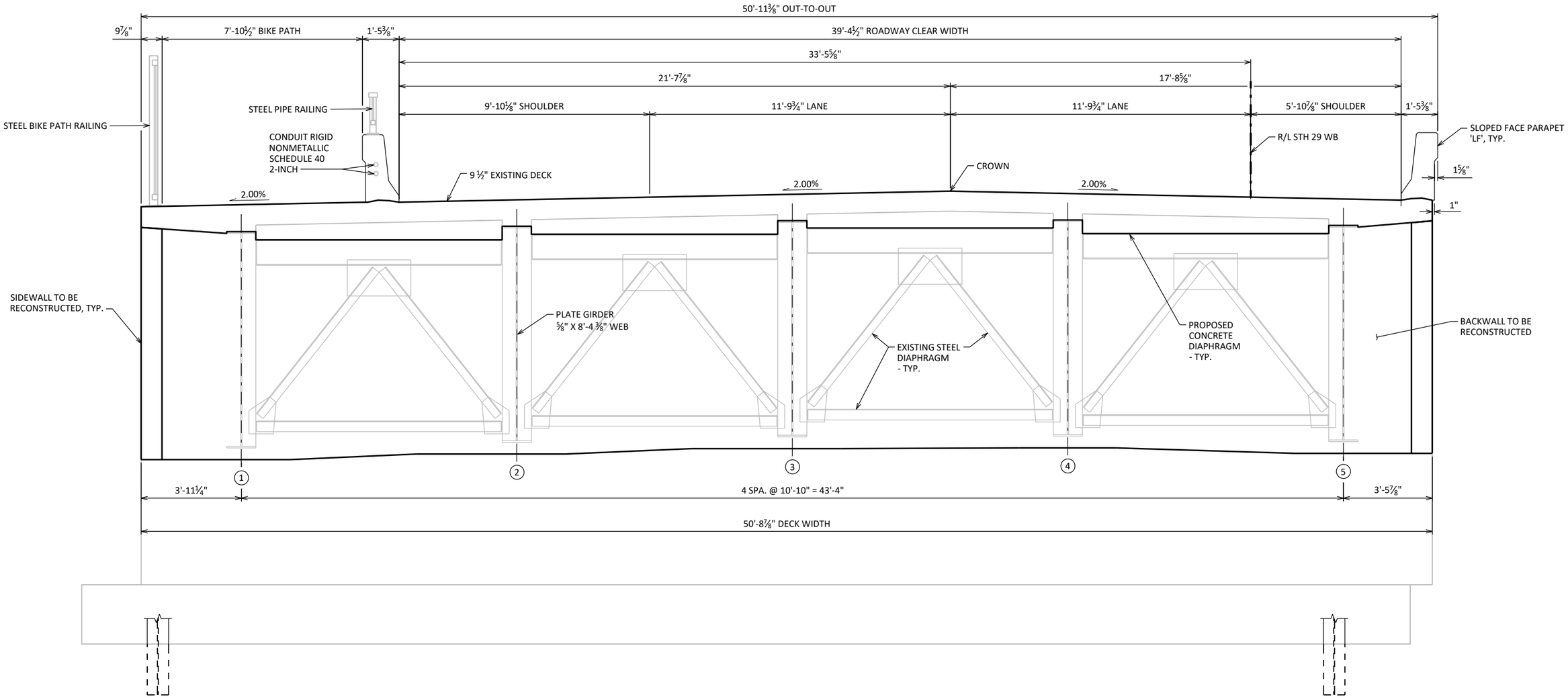
SCALE =

8

8

STATE PROJECT NUMBER

1050-02-73



CROSS SECTION THRU JOINT REPAIR

LOOKING EAST
SHOWN AT JOINT REPLACEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY CJM | PLANS CK'D VJD/JMR

TYPICAL SECTION

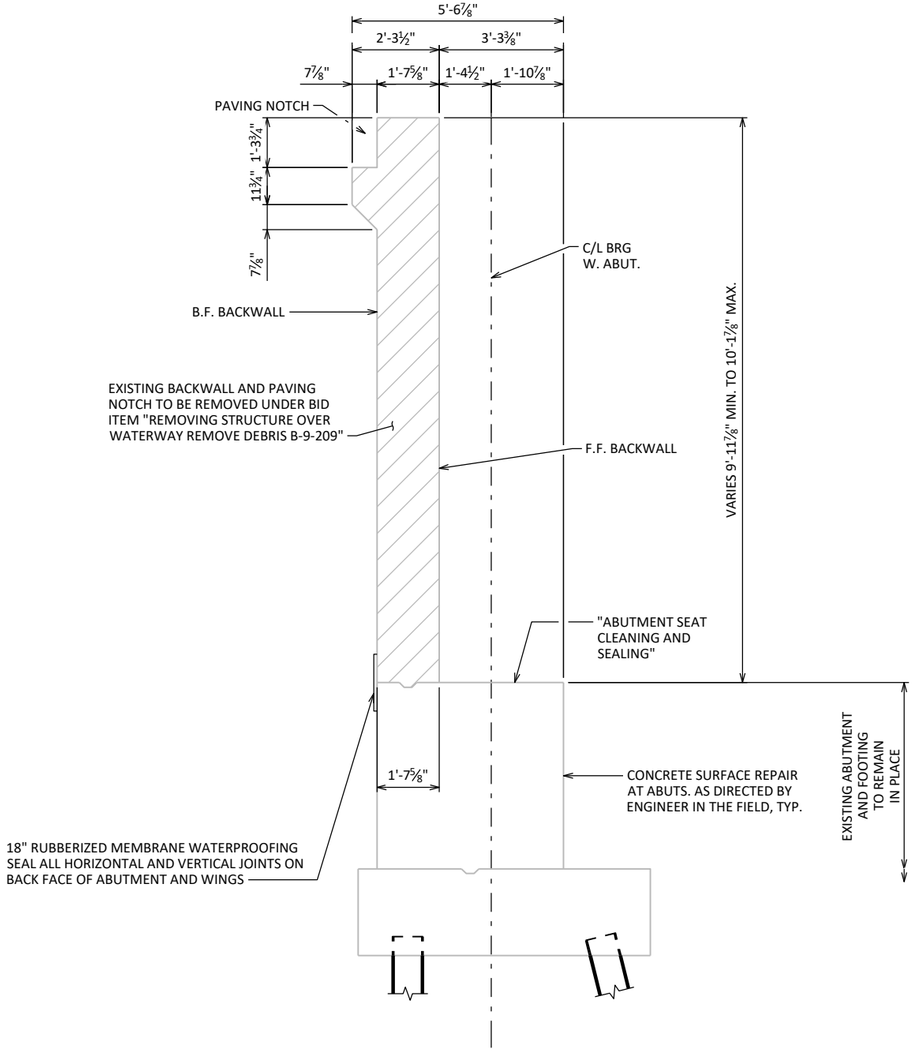
SHEET 3 OF 22
117

SCALE = 4

8

8

STATE PROJECT NUMBER
1050-02-73



EXISTING WEST ABUTMENT SECTION

BERM AND SHORING DETAILS NOT SHOWN FOR CLARITY
JOINT DETAILS NOT SHOWN FOR CLARITY
MODULAR JOINT EXISTS AT THE WEST ABUTMENT
DIMENSIONS ARE SHOWN NORMAL TO C/L ABUTMENT

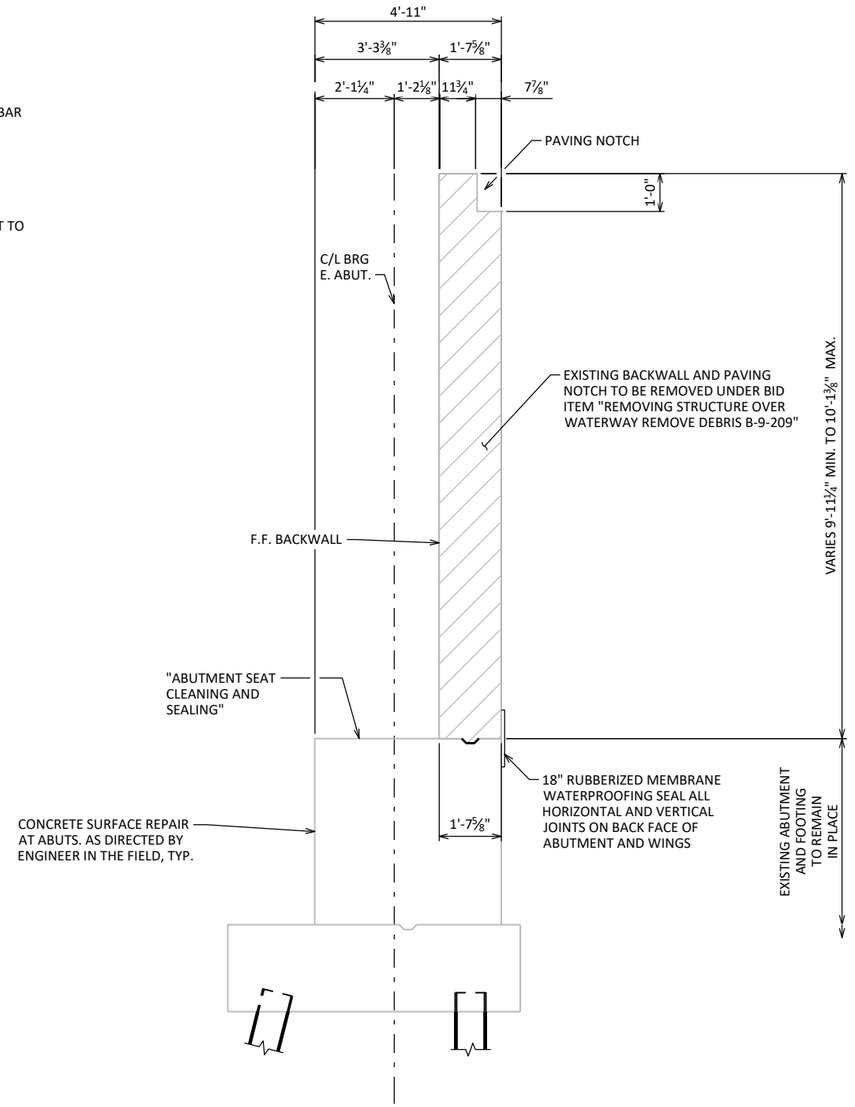
SALVAGE NOTES

REMOVE SIDEWALLS (NOT SHOWN), AND SALVAGE 24*BAR DIAMETERS OF VERTICAL BAR STEEL AT SIDEWALLS.

NO EXISTING ABUTMENT BACKWALL VERTICAL AND HORIZONTAL BAR STEEL TO REMAIN.

VERTICAL WING WALL BAR STEEL TO REMAIN ADJACENT TO BACKWALL REPLACEMENT.

NO PARAPET BAR STEEL TO REMAIN AT JOINT REPLACEMENT AREAS.



EXISTING EAST ABUTMENT SECTION

BERM AND SHORING DETAILS NOT SHOWN FOR CLARITY
JOINT DETAILS NOT SHOWN FOR CLARITY
STRIP SEAL JOINT EXISTS AT THE EAST ABUTMENT
DIMENSIONS ARE SHOWN NORMAL TO C/L ABUTMENT

LIMITS OF ABUTMENT BACKWALL AND PAVING NOTCH REMOVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY CJM | PLANS CK'D JMR

ABUTMENT REMOVAL SECTION

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SCALE = 4

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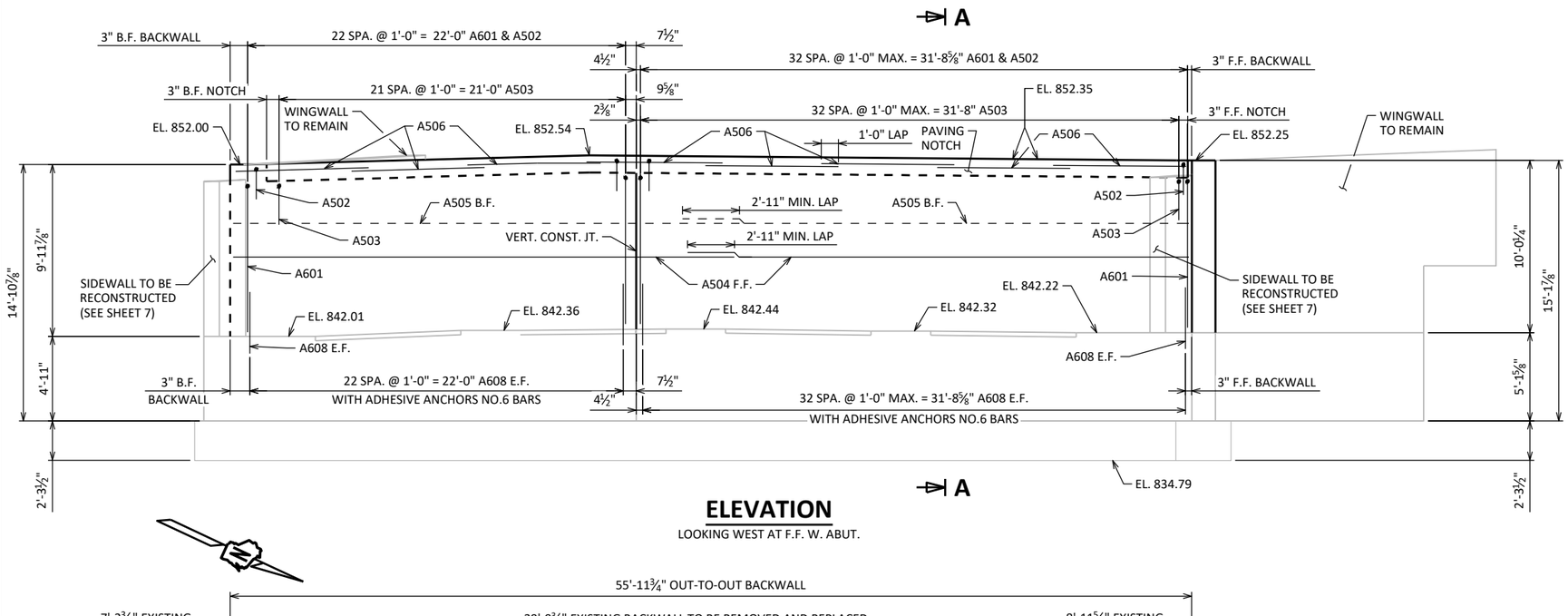
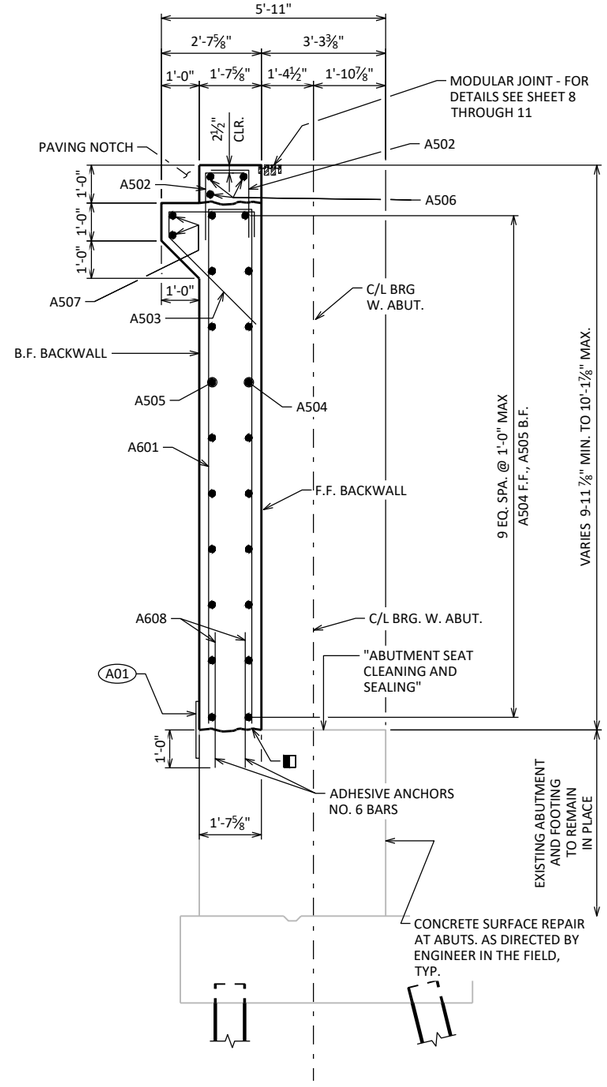
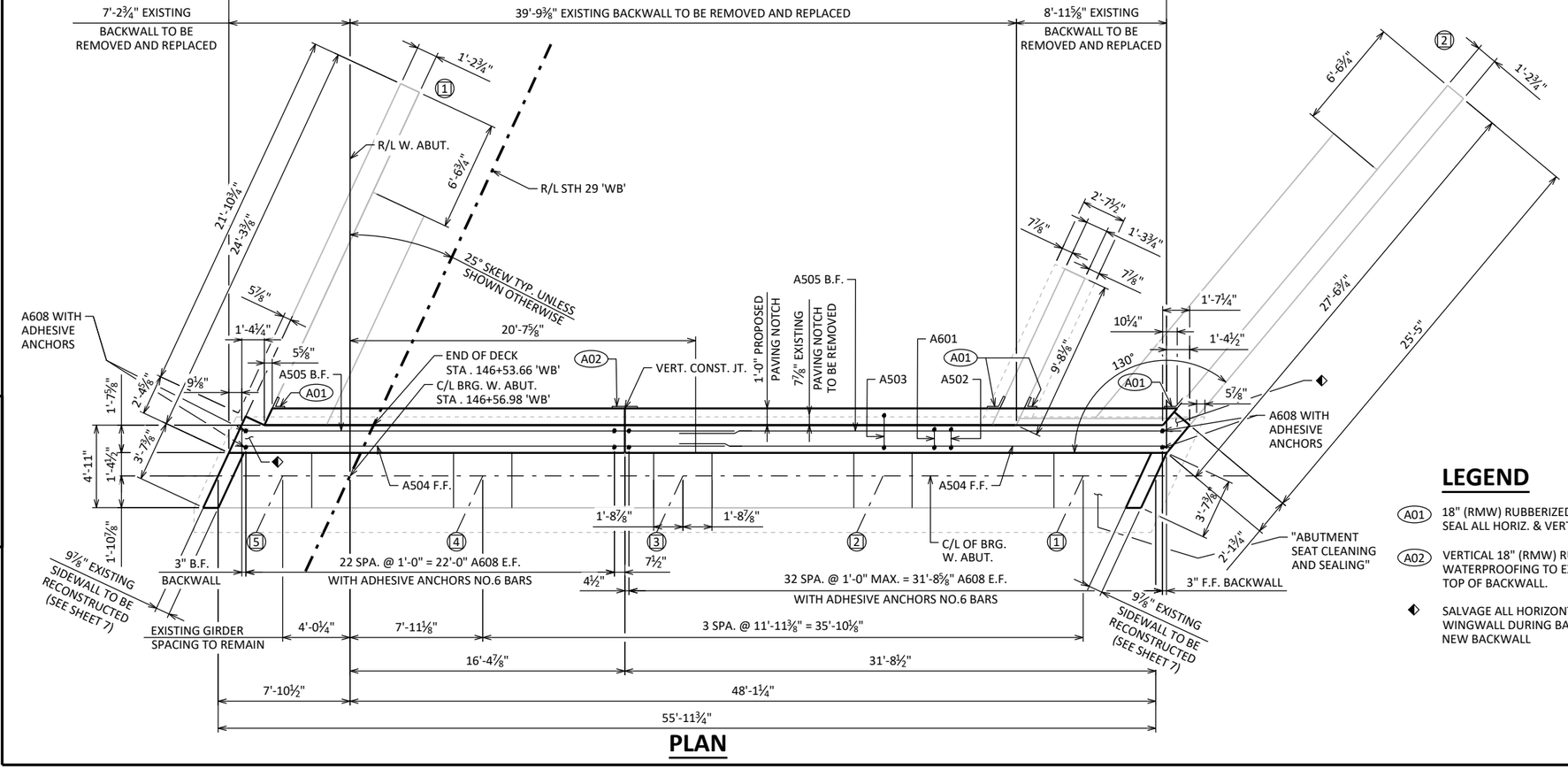
1050-02-73



ELEVATION

LOOKING WEST AT F.F. W. ABUT.





PLAN

LEGEND

- (A01) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A02) VERTICAL 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF BACKWALL.
- ◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT

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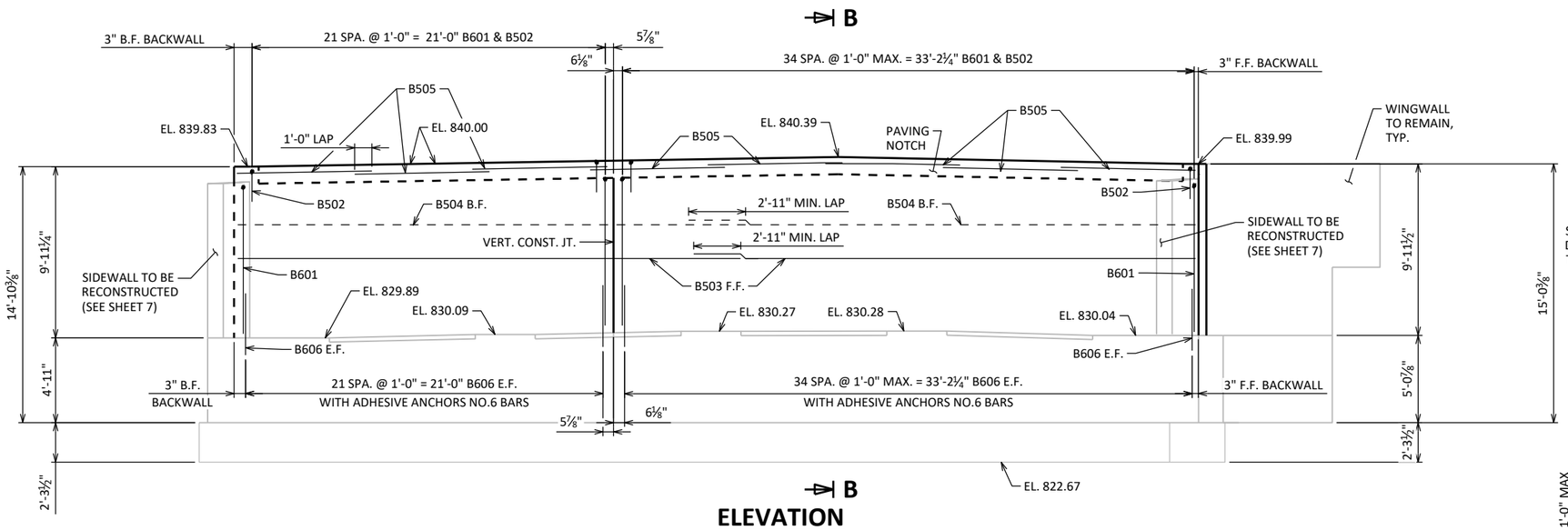
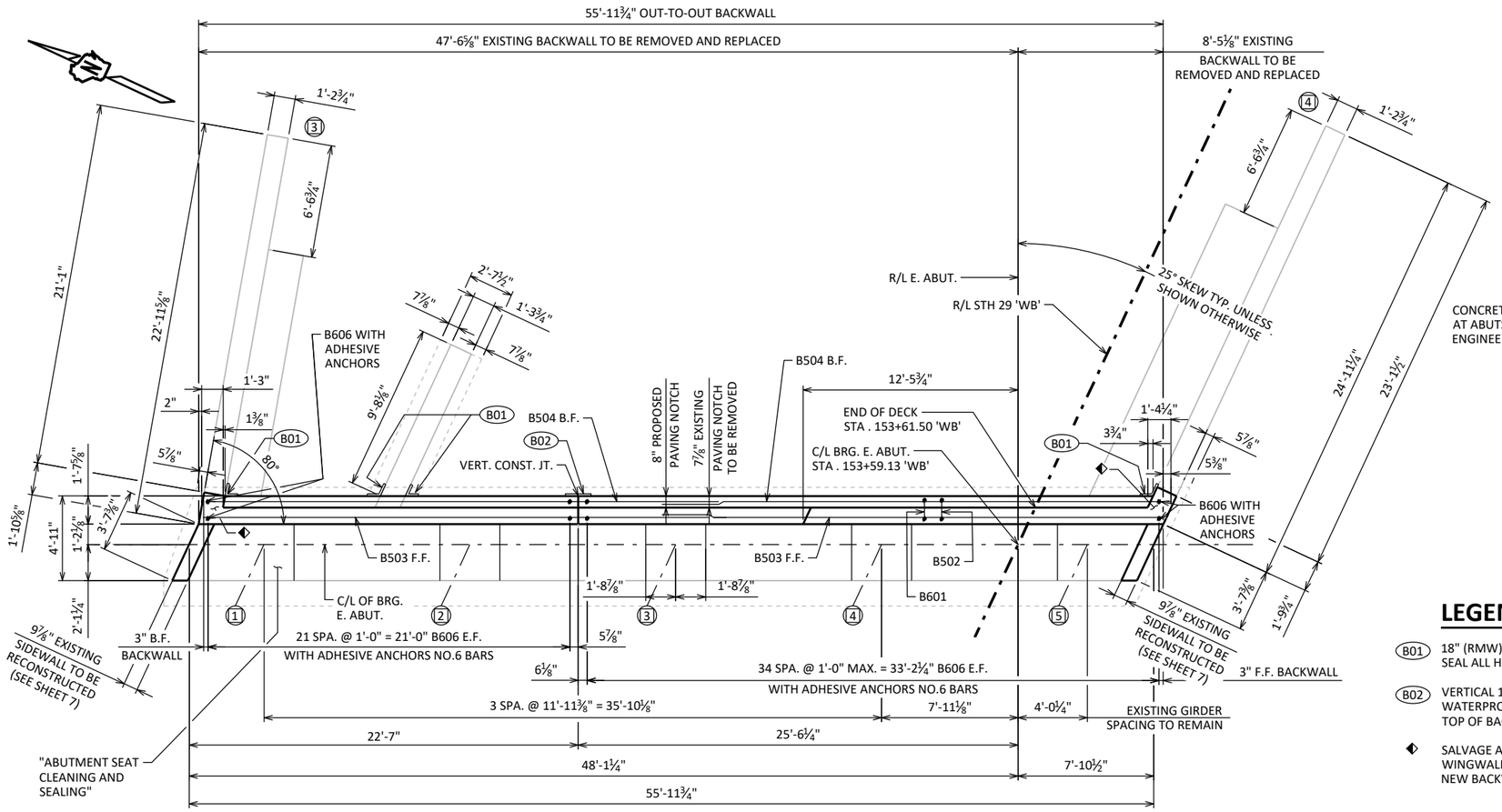
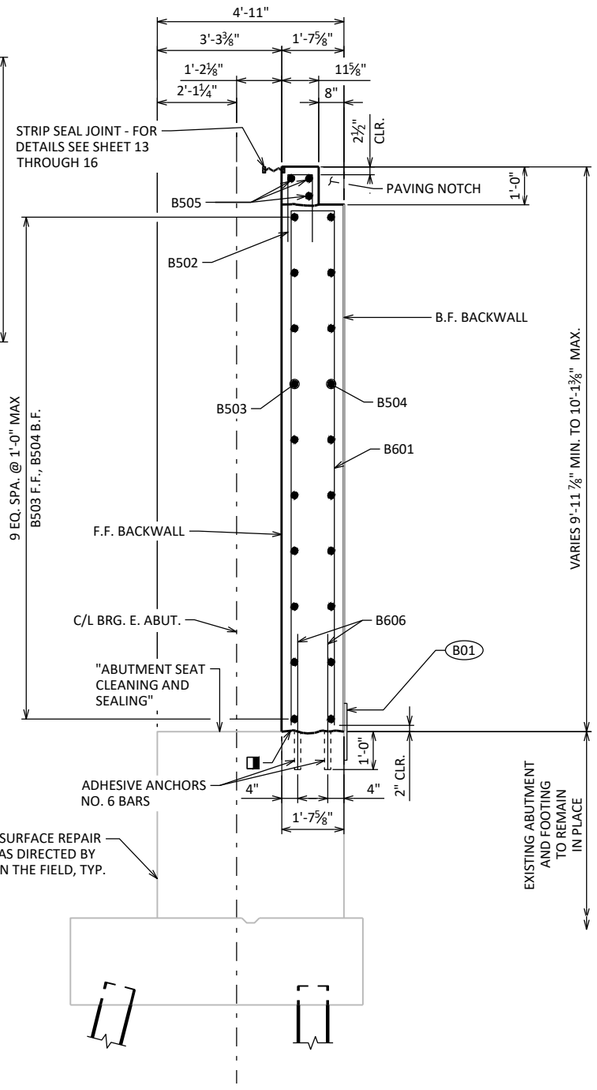


B ELEVATION

LOOKING EAST AT F.F. E. ABUT.



PLAN



SECTION B-B

LEGEND

- (B01) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (B02) VERTICAL 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF BACKWALL.
- ◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT

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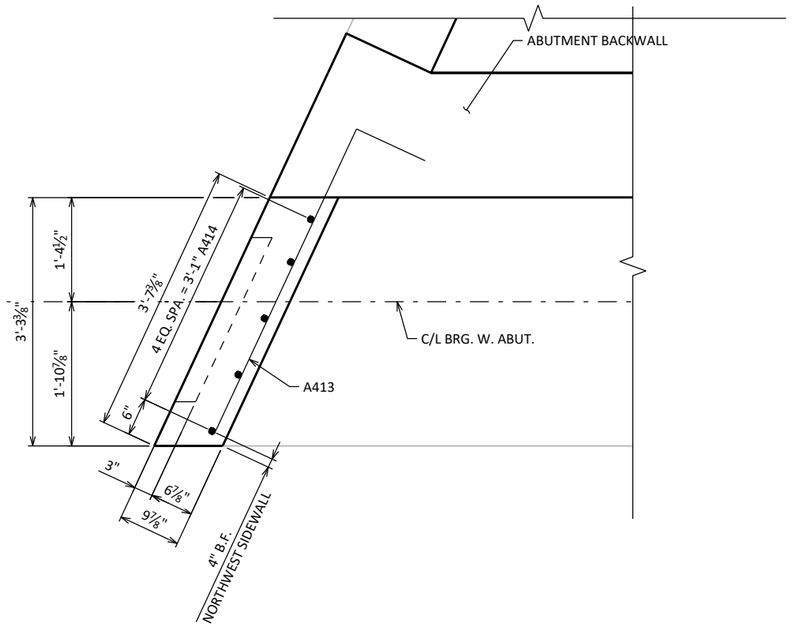
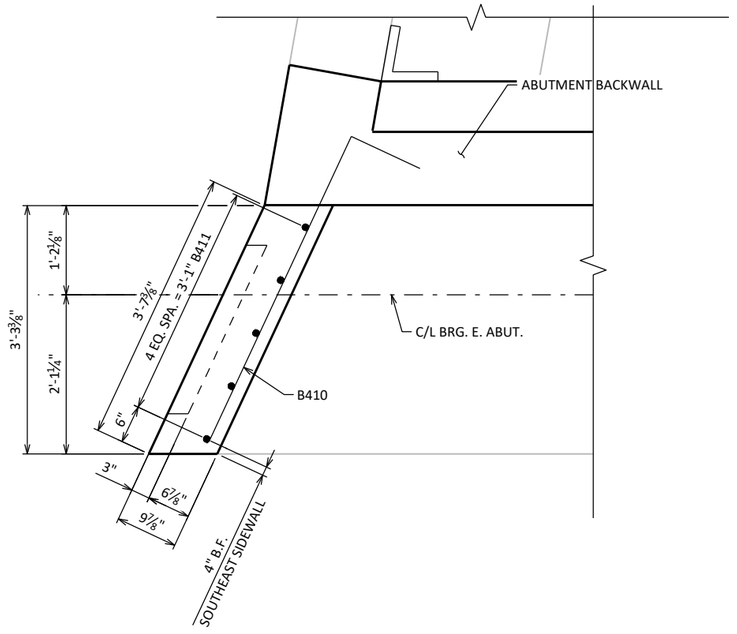


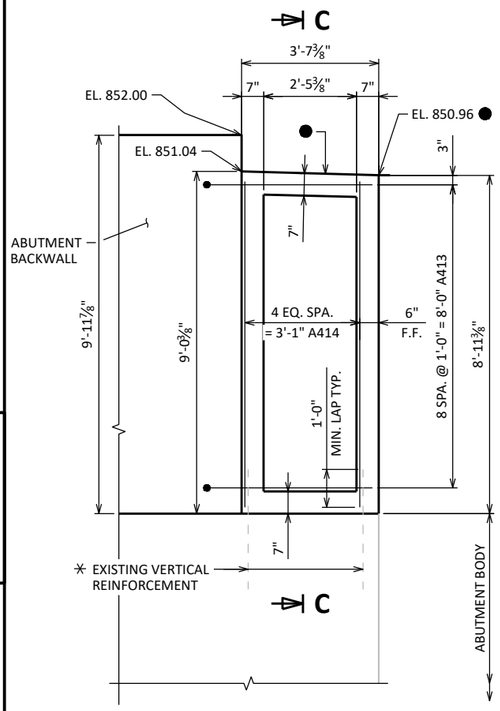
WEST SIDEWALL PART PLAN

SHOWING SOUTHWEST SIDEWALL (NORTHWEST SIMILAR)

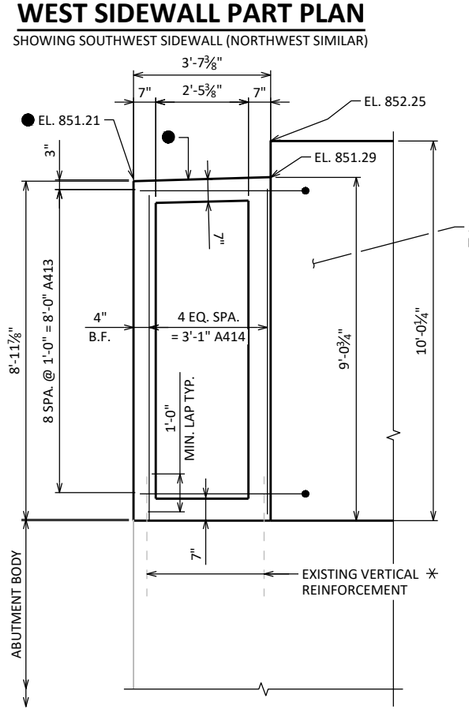


EAST SIDEWALL PART PLAN

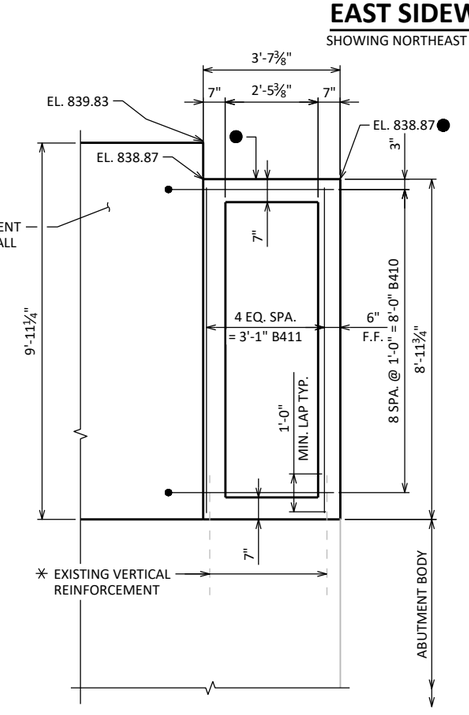
SHOWING NORTHEAST SIDEWALL (SOUTHEAST SIMILAR)



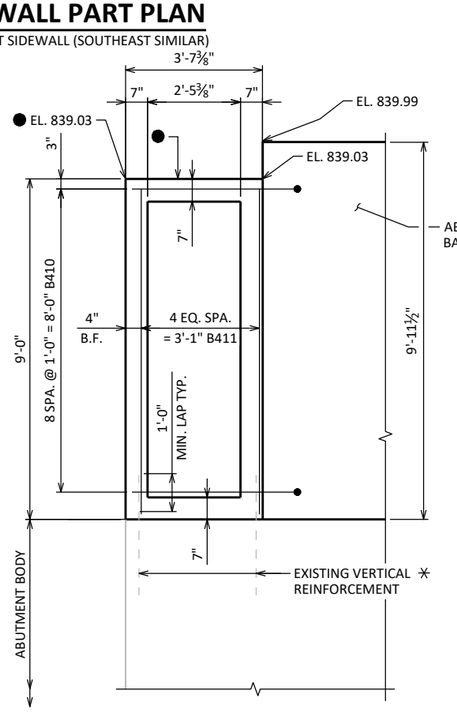
SOUTHWEST ELEVATION



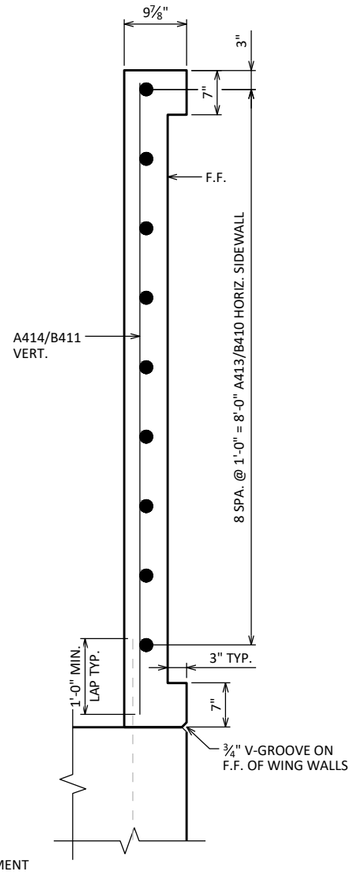
NORTHWEST ELEVATION



NORTHEAST ELEVATION



SOUTHEAST ELEVATION



SECTION C-C

ALL SIDEWALLS SIMILAR

LEGEND

- ✳ EXISTING SIDEWALL VERTICAL REINFORCEMENT TO BE INCORPORATED INTO NEW SIDEWALL BY A MIN. OF A 24*BOLT DIAMETER LAP.
- ● TOP OF SIDEWALL IS 2" CLEAR OF BOTTOM OF DECK.

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STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D CJM

SIDEWALL RECONSTRUCTION

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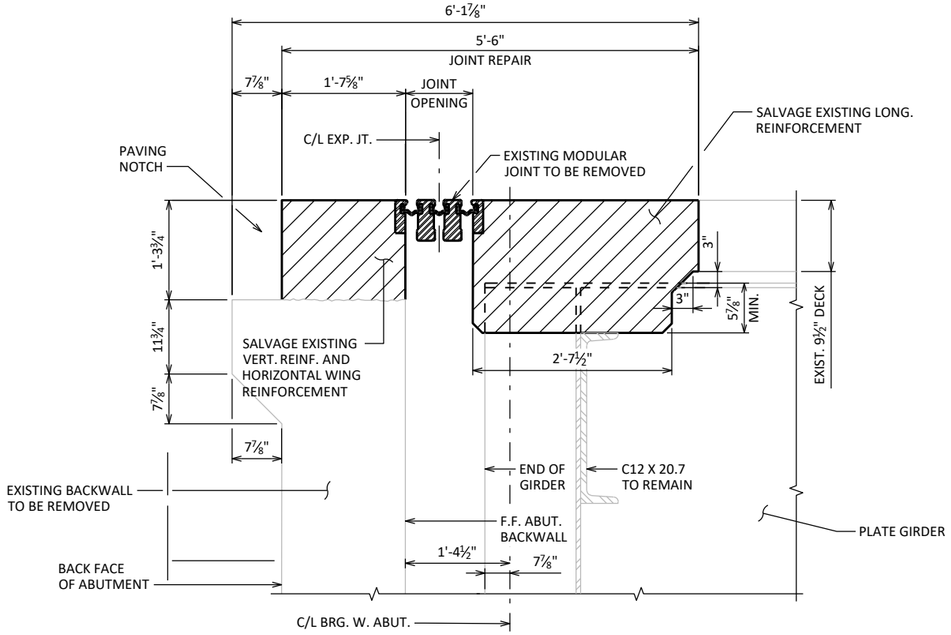
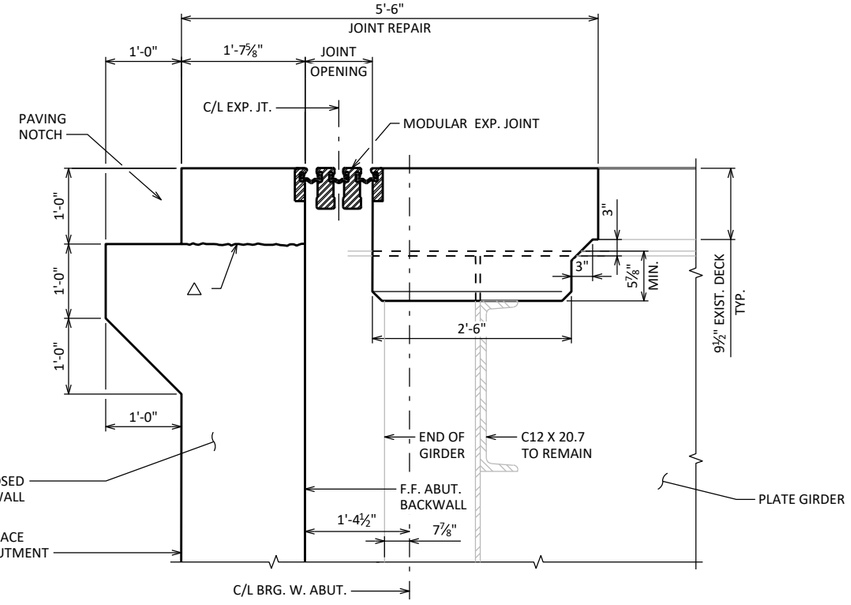


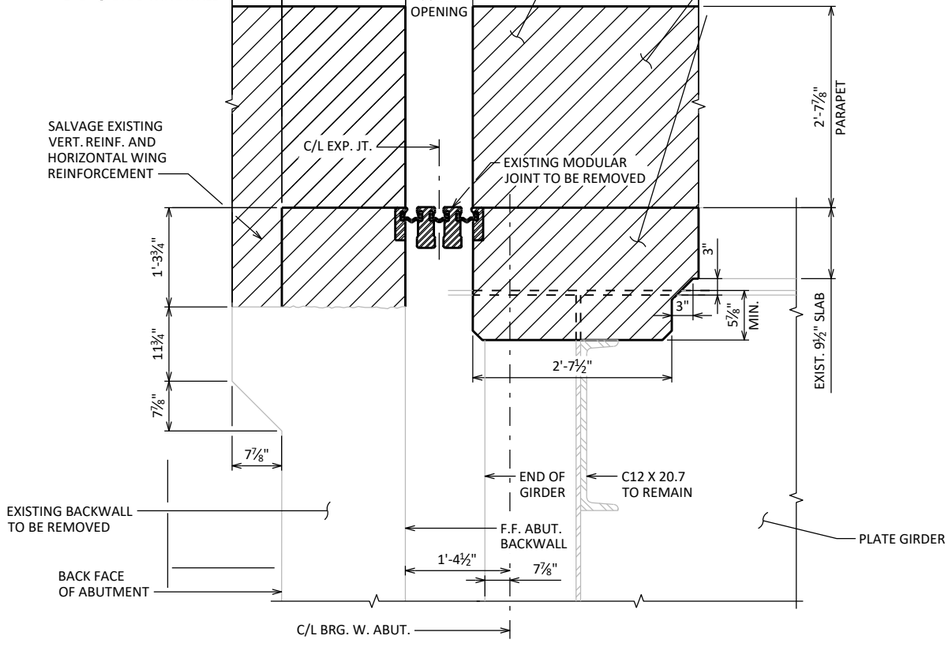
SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



PROPOSED SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
SHOWING EDGE OF DECK REMOVALS AT W. ABUT.
NORMAL TO C/L SUBSTRUCTURE

LEGEND

LIMITS OF JOINT REPAIR AND REMOVAL AREA.

△ POUR CONCRETE ABOVE THE CONSTRUCTION JOINT AFTER OVERLAY PLACEMENT AND MATCH ELEVATION. STRIKE OFF AND LEAVE ROUGH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

JOINT REPAIR SECTIONS AT WEST ABUTMENT

SHEET 8 OF 22

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SCALE = 2.00

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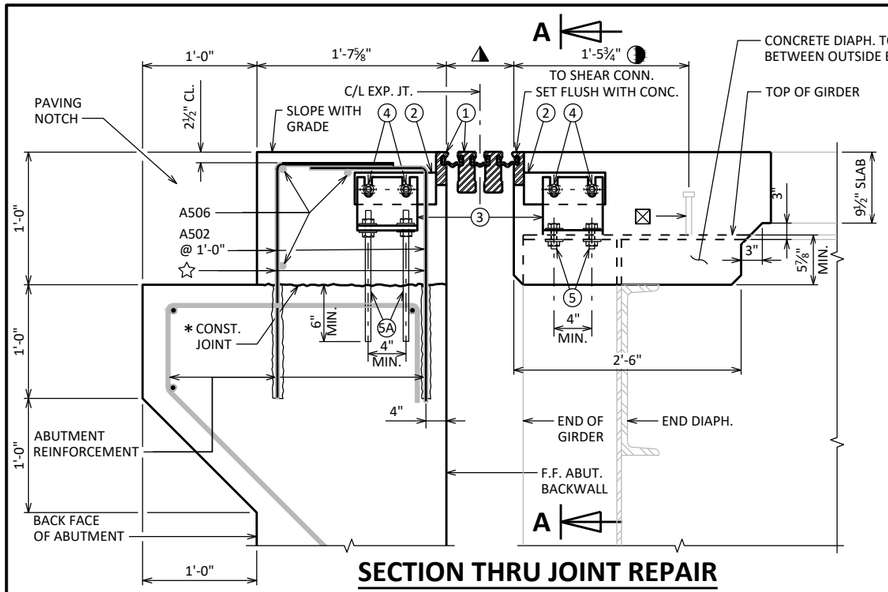
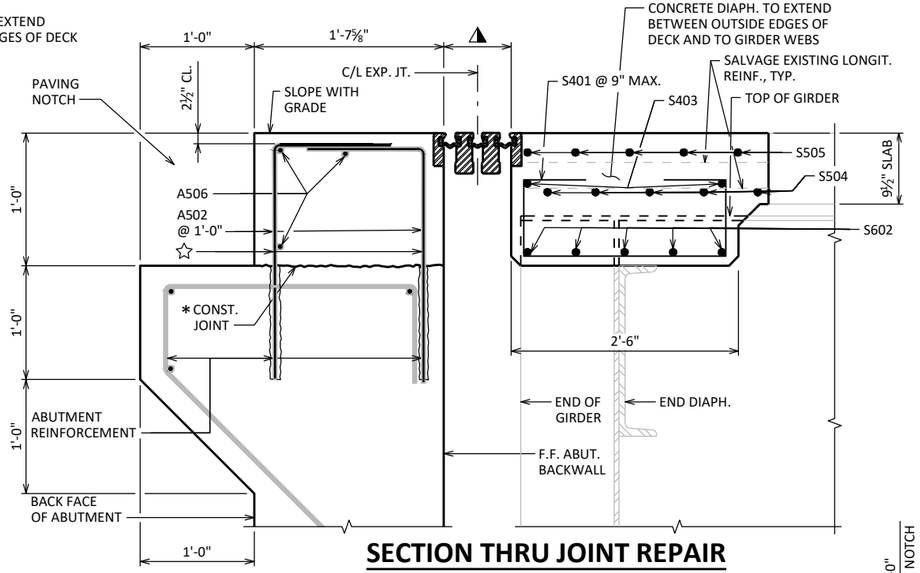


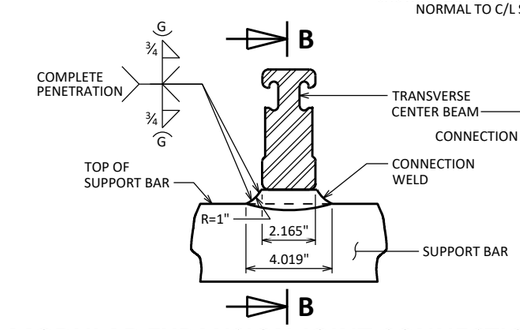
SECTION THRU JOINT REPAIR

SHOWING EXPANSION DEVICE COMPONENTS
NORMAL TO C/L SUBSTRUCTURE

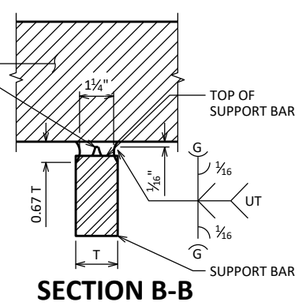


SECTION THRU JOINT REPAIR

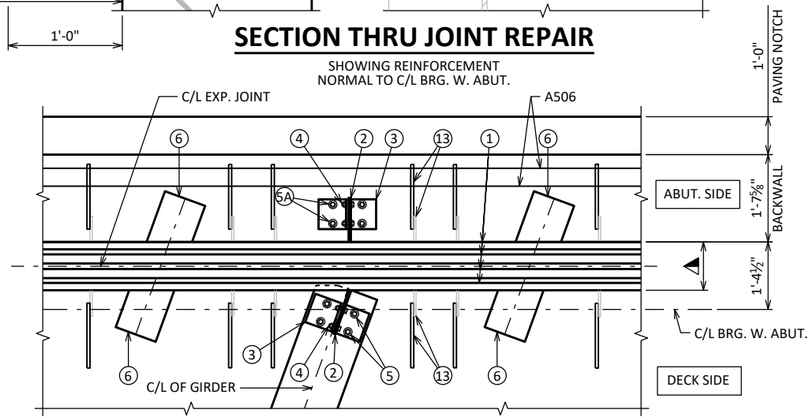
SHOWING REINFORCEMENT
NORMAL TO C/L BRG. W. ABUT.



MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION



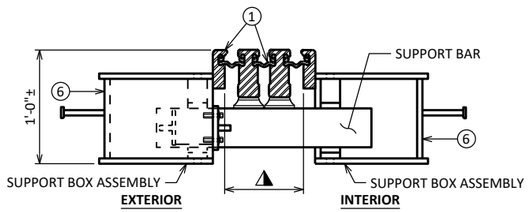
SECTION B-B



PART PLAN

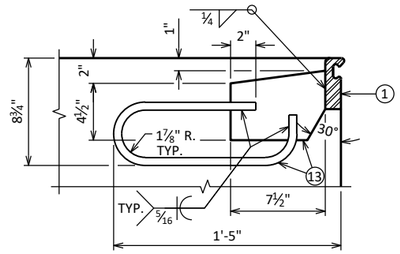
NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS.

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.



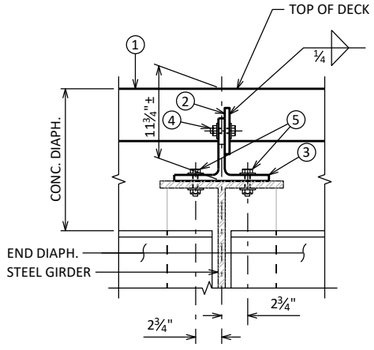
JOIT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN
PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A-A

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE, ON PARAPET ROADWAY FACE OR ABOVE SIDEWALK SURFACE (FOR RAISED SIDEWALK).

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS, PARAPET PLATES, SIDEWALK PLATES, AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE MODULAR B-9-209", LF

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT., TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

LEGEND - WEST ABUTMENT

1. MODULAR EXPANSION JOINT DEVICE, 3 CELLS
2. ½" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4
4. ¾" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
5A. ¾" DIA. THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET OR SIDEWALK, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN
11. ¾" DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7 & NO. 14 AS SHOWN
12. ¾" DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE
13. ½" PLATE WITH ¾" DIA. LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE

∗ POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

▲ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN ①.

◑ DIMENSION IS PARALLEL TO C/L GIRDER.

☒ IF SHEAR CONNECTOR(S) ARE DAMAGED DURING CONSTRUCTION, REPLACEMENT OF CONNECTORS WILL BE INCIDENTAL TO BID ITEM "JOINT REPAIR"

☆ (2) COATED L-SHAPED ADHESIVE ANCHORS NO. 5 BAR. EMBED 12" IN CONCRETE. SPACE AT 1'-0". PLACE ADHESIVE ANCHORS AFTER MODULAR JOINT IS IN POSITION.

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. ⅜" IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-5)°F) TO (+85°F).

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (1 OF 4)

SHEET 9 OF 22
123

SCALE = 2.00

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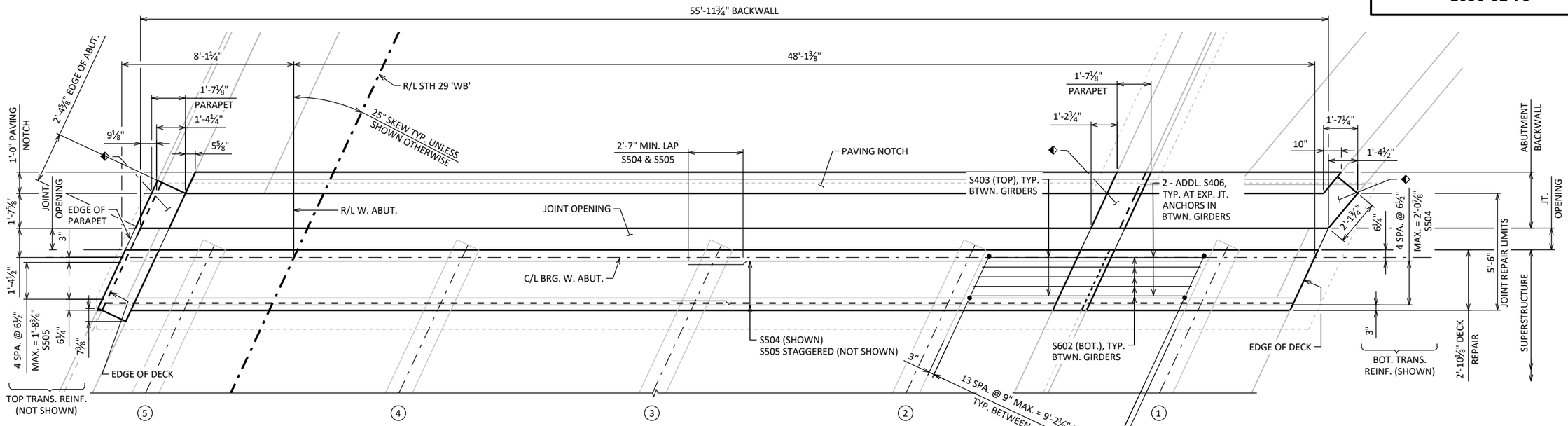
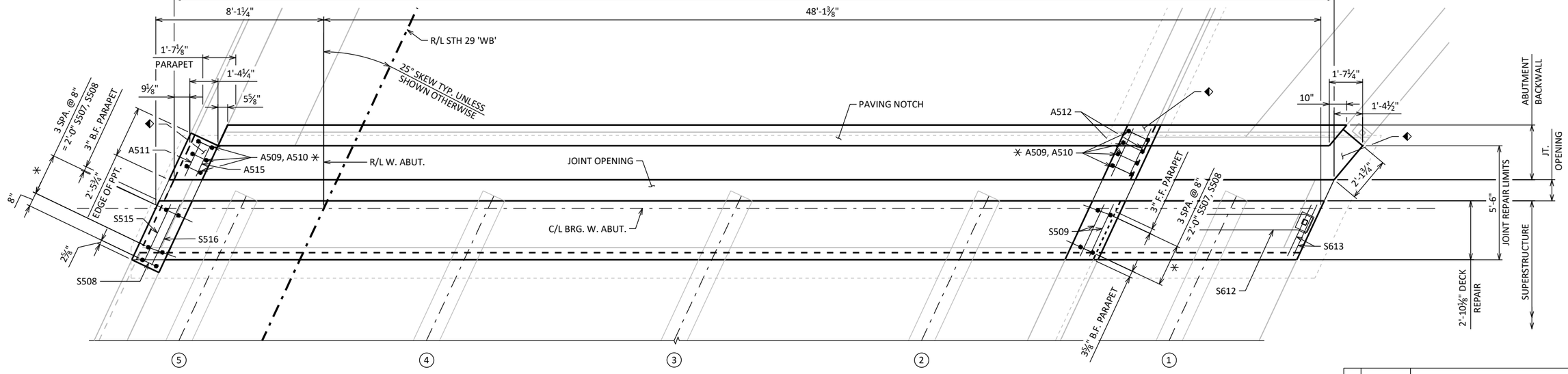
STATE PROJECT NUMBER

1050-02-73



WEST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING HAUNCH AND SLAB REINFORCEMENT
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 5 FOR ABUTMENT REINFORCEMENT



WEST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING PARAPET REINFORCEMENT
FOR PARAPET REINFORCEMENT SPACING ON ABUTMENT SEE SHEET 17 AND 18
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 5 FOR ABUTMENT REINFORCEMENT

NOTE:

SAVE AND INCORPORATE 1'-6" MIN. EXISTING TRANSVERSE REINFORCING BARS INTO NEW DECK POUR.

DIMENSIONS FOR PARAPET REINFORCEMENT ARE MEASURED ALONG EDGE OF DECK - NOT PARAPET OVERHANG. DIMENSION LOCATION TYPICAL FOR MEDIAN PARAPET.

LEGEND:

- ◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL AND PARAPETS DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL
- ✳ FAN PARAPET REINFORCEMENT AS NEEDED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (2 OF 4)

SHEET 10 OF 22

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STATE PROJECT NUMBER

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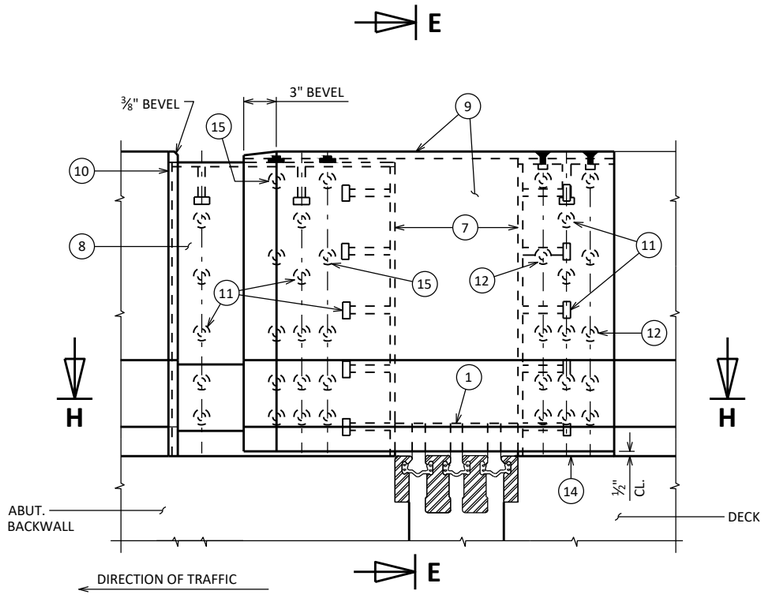
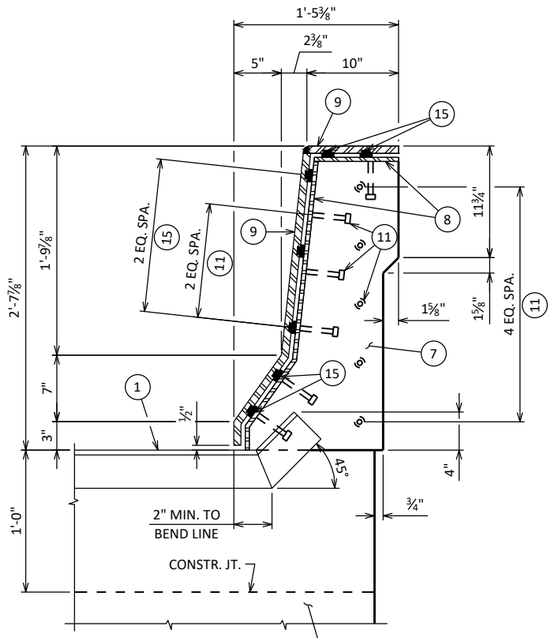
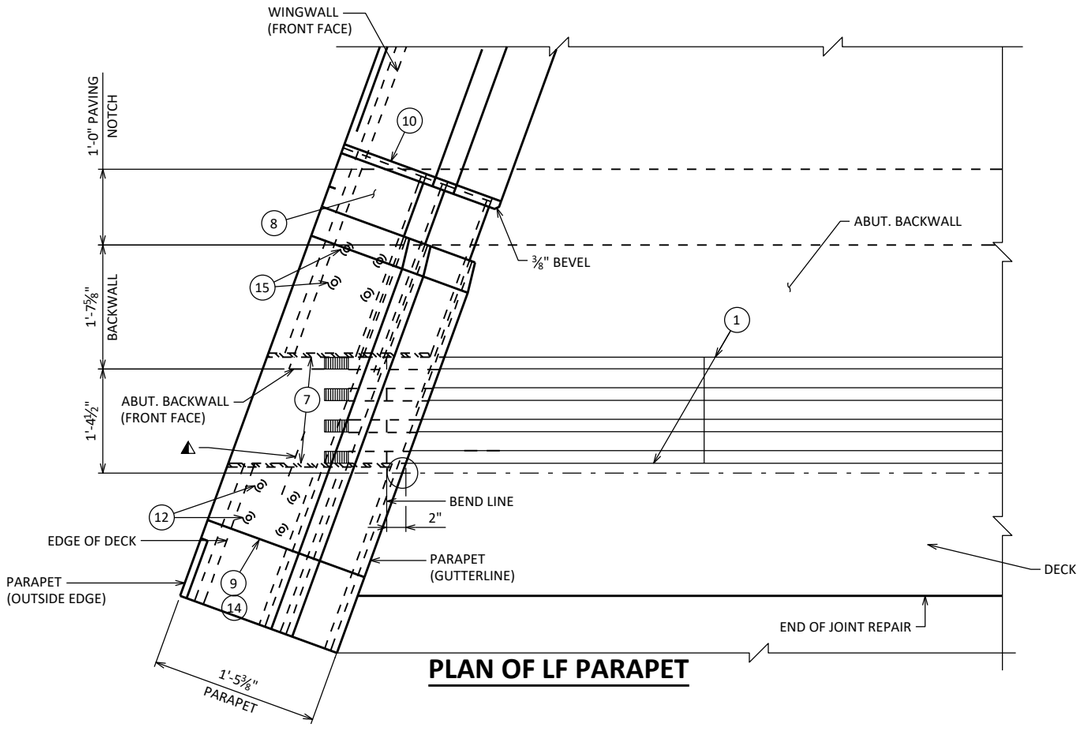


ELEVATION OF PARAPET

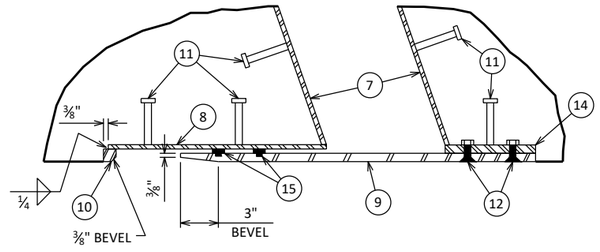


SECTION E-E

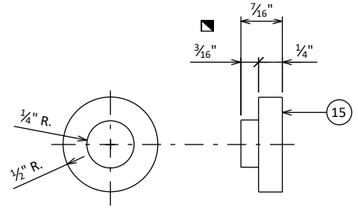
THRU SOUTH LF PARAPET



PLAN OF LF PARAPET



SECTION H-H



ADIPRENE BUTTON DETAIL

⚠ MITER EXTRUSION ENDS AS REQUIRED TO PROVIDE CLEARANCE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (3 OF 4)

SHEET 11 OF 22

125

SCALE = 2.00

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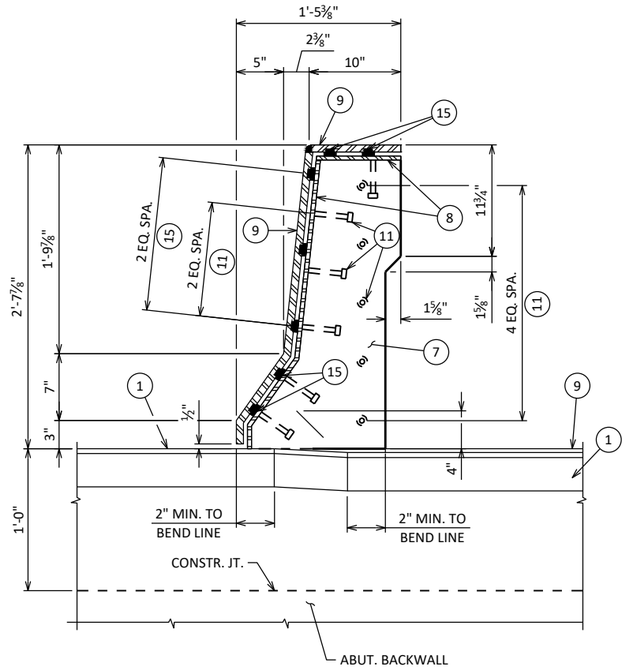
8

STATE PROJECT NUMBER

1050-02-73

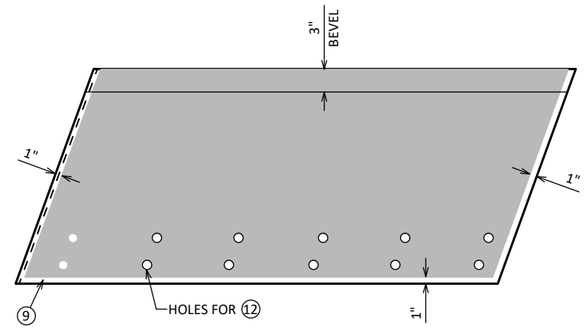
NOTE:

MODULAR EXPANSION JOINT DEVICE RUNS UNDERNEATH MEDIAN PARAPET AND TO THE EDGE OF DECK/BACKWALL ON THE NORTH END.



SECTION E-E

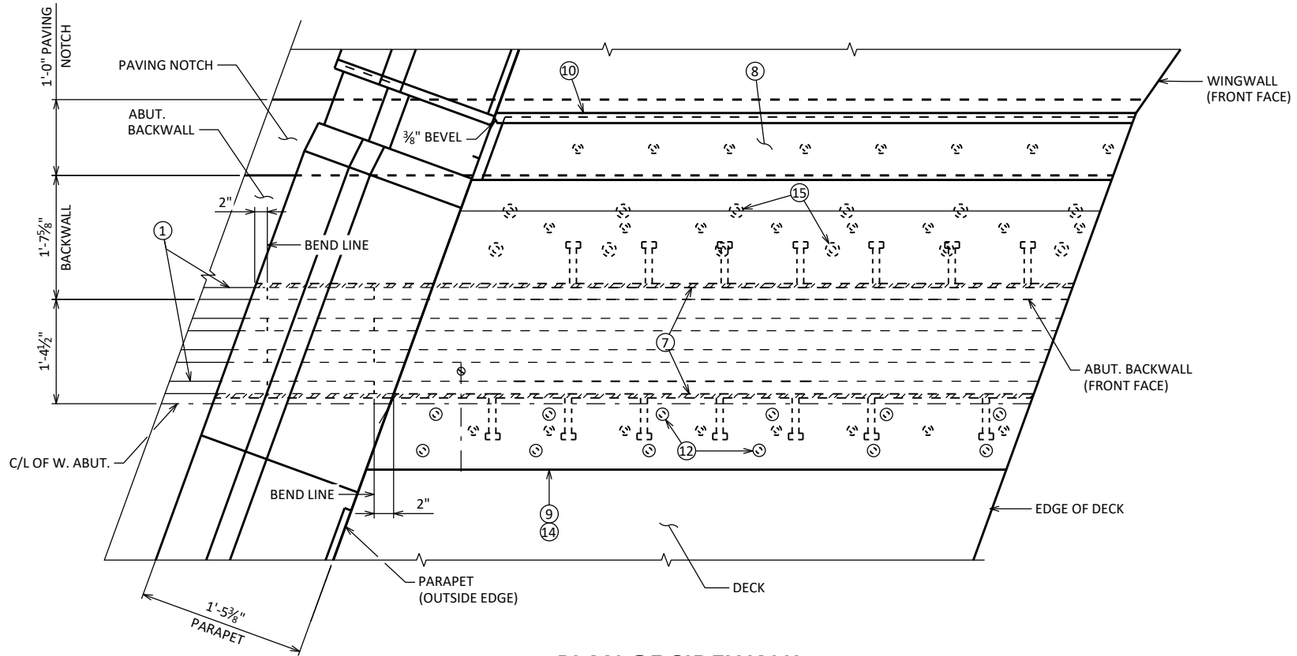
THRU MEDIAN LF PARAPET



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE ◥

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

◥ PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE). GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.



PLAN OF SIDEWALK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (4 OF 4)

SHEET 12 OF 22

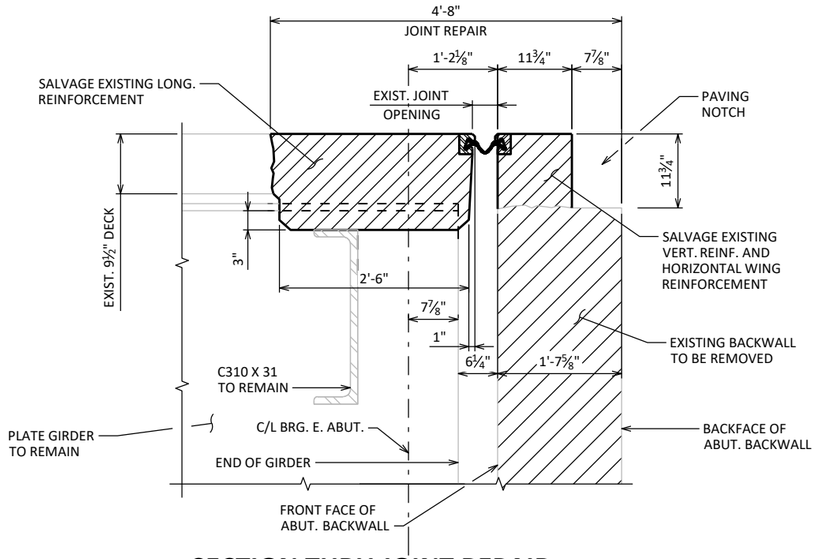
126

8

8

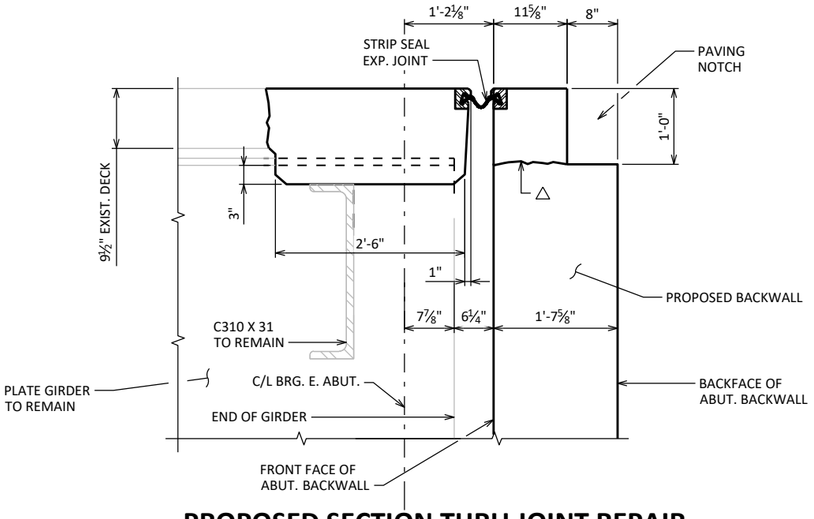
NORMAL TO C/L BRG. E. ABUT.

STATE PROJECT NUMBER
1050-02-73



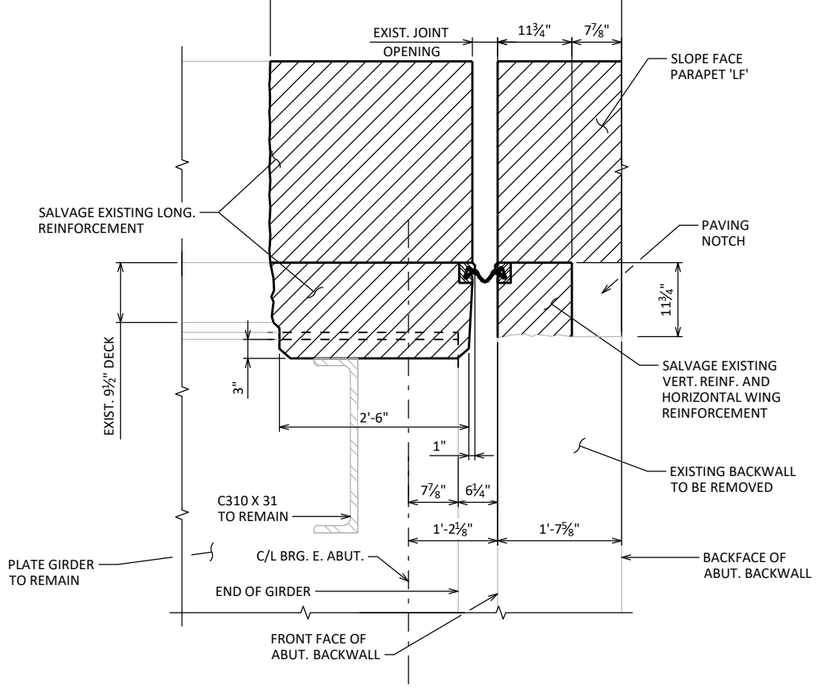
SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



PROPOSED SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
SHOWING PROPOSED WORK AT E. ABUT.



SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
SHOWING EDGE OF DECK REMOVALS AT E. ABUT.
NORMAL TO C/L SUBSTRUCTURE

LEGEND

LIMITS OF JOINT REPAIR AND REMOVAL AREA.

△ POUR CONCRETE ABOVE THE CONSTRUCTION JOINT AFTER OVERLAY PLACEMENT AND MATCH ELEVATION. STRIKE OFF AND LEAVE ROUGH

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

JOINT REPAIR SECTIONS AT EAST ABUTMENT

SHEET 13 OF 22

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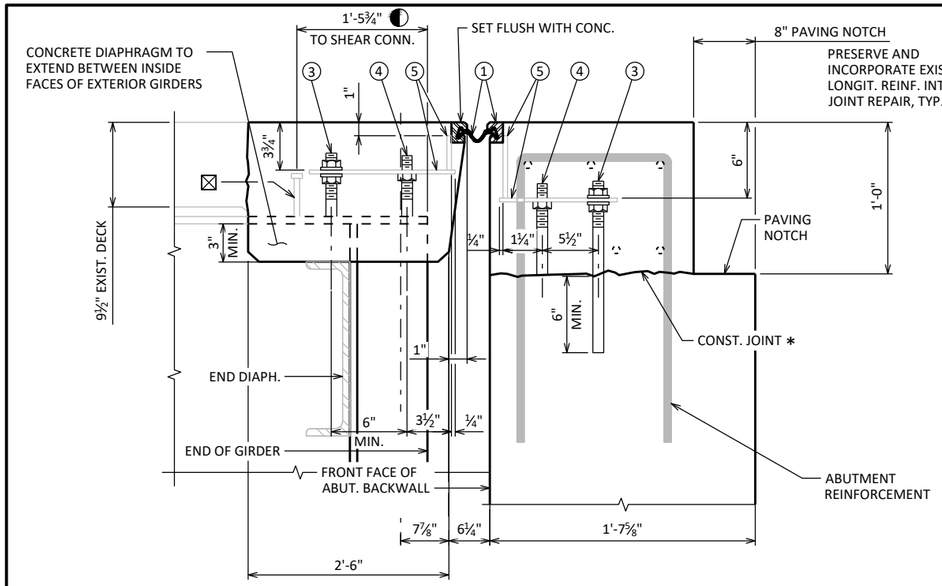
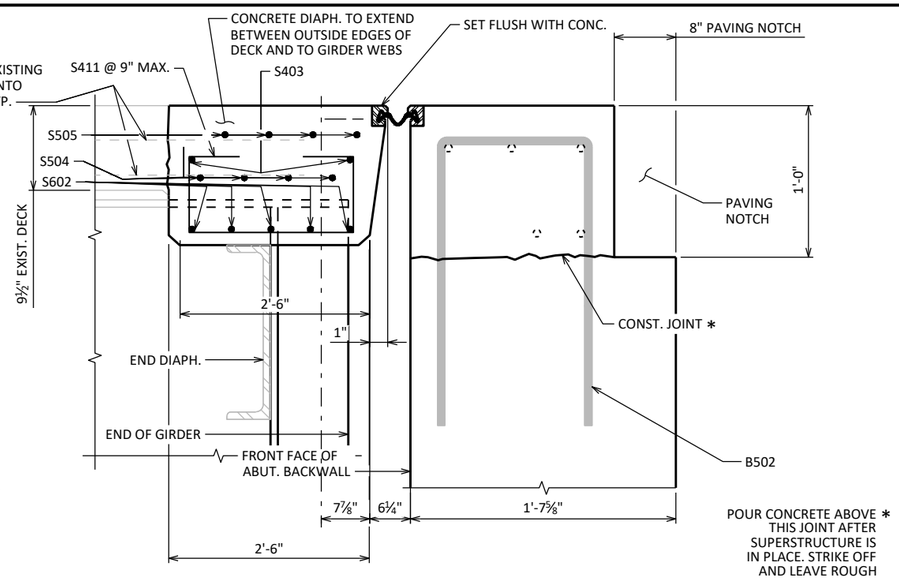
8

8



SECTION THRU ABUTMENT JOINT REPAIR

SHOWING EXPANSION DEVICE COMPONENTS
NORMAL TO C/L BRG. E. ABUT.

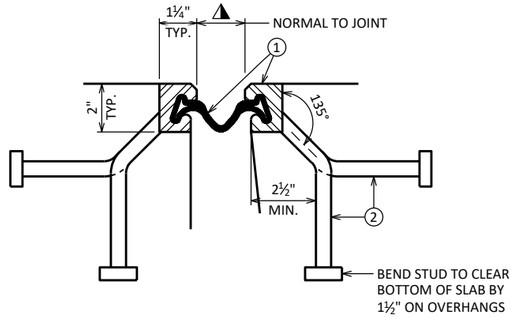


SECTION THRU ABUTMENT JOINT REPAIR

SHOWING REINFORCEMENT
NORMAL TO C/L BRG. E. ABUT.

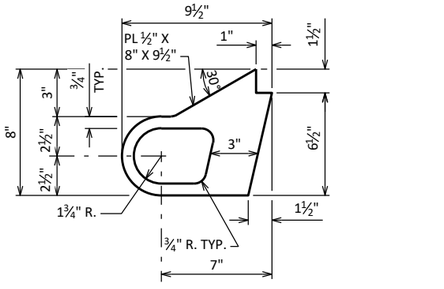
LEGEND - EAST ABUTMENT

1. NEOPRENE STRIP SEAL (5-INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 10½" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
11. SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.
12. GALVANIZED PLATE 3 8" X 10" X 2'-2" WITH HOLES FOR NO. 7.

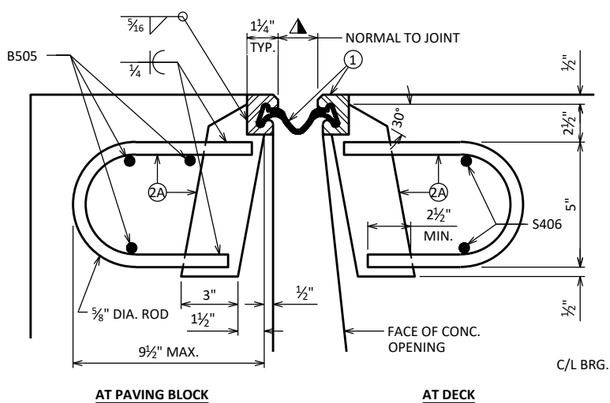


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

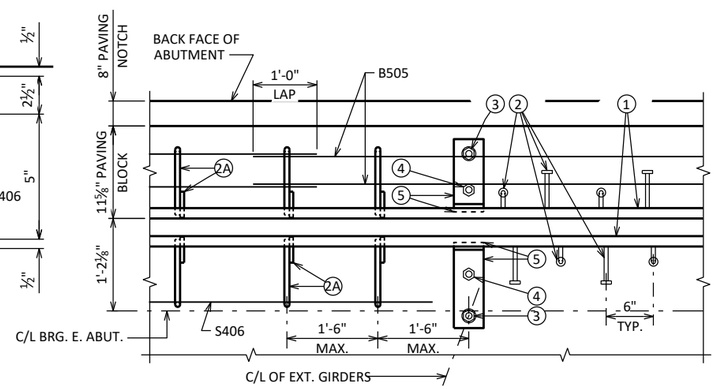


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-9-209", LF.

LEGEND

◭ HORIZ. BOLT LOCATIONS FOR 12 SAME AS FOR SECTION B-B.

◹ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

∗ POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH

☒ IF SHEAR CONNECTOR(S) ARE DAMAGED DURING CONSTRUCTION, REPLACEMENT OF CONNECTORS WILL BE INCIDENTAL TO BID ITEM "JOINT REPAIR"

◐ DIMENSION IS PARALLEL TO C/L GIRDER

◭ TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1⅝"
45°	2⅜"
-5°	3⅜"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUT. JOINT REPAIR (1 OF 4)

SHEET 14 OF 22
128

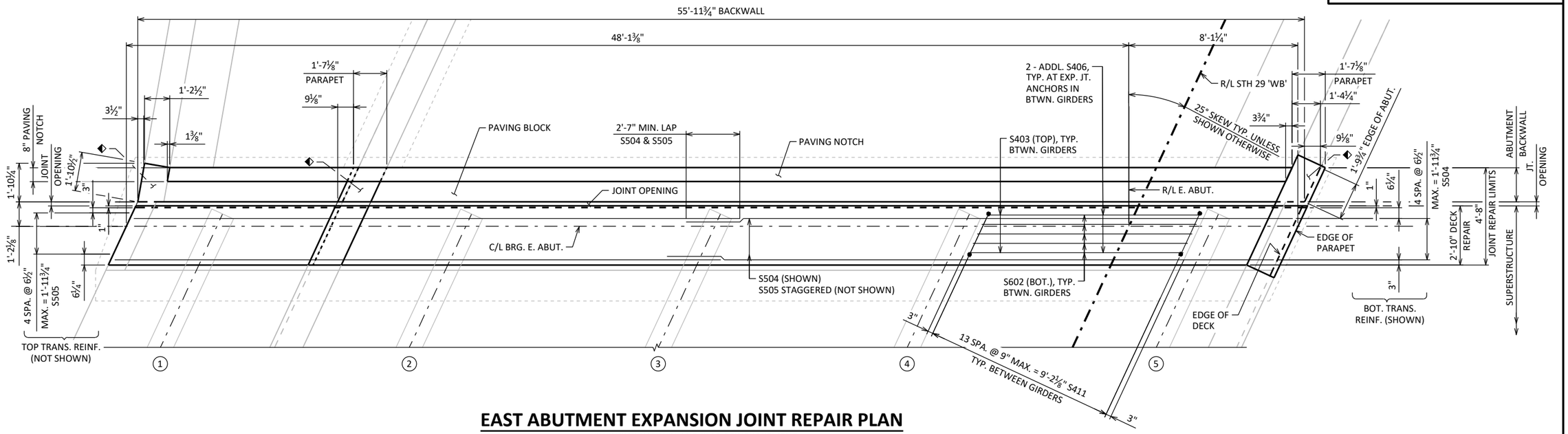
SCALE = 2.00

8

8

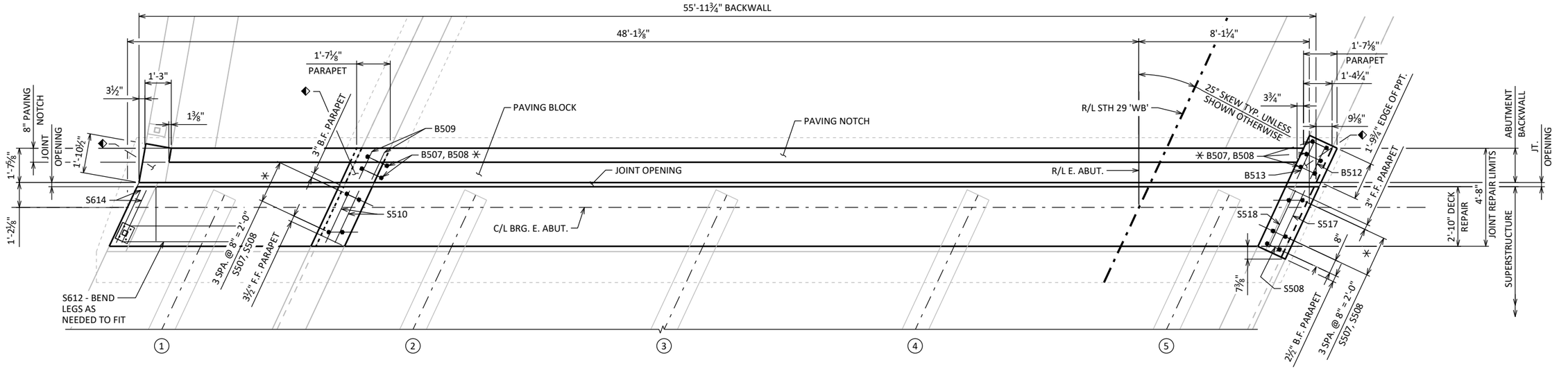
STATE PROJECT NUMBER

1050-02-73



EAST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING HAUNCH AND SLAB REINFORCEMENT
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 6 FOR ABUTMENT REINFORCEMENT



EAST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING PARAPET REINFORCEMENT
FOR PARAPET REINFORCEMENT SPACING ON ABUTMENT SIDE - SEE SHEET 17
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 6 FOR ABUTMENT REINFORCEMENT

NOTE:

SAVE AND INCORPORATE 1'-6" MIN. EXISTING TRANSVERSE REINFORCING BARS INTO NEW DECK POUR.

DIMENSIONS FOR PARAPET REINFORCEMENT ARE MEASURED ALONG EDGE OF DECK - NOT PARAPET OVERHANG. DIMENSION LOCATION TYPICAL FOR MEDIAN PARAPET.

LEGEND:

- ◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL AND PARAPETS DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL
- ✳ FAN PARAPET REINFORCEMENT AS NEEDED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT JOINT REPAIR (2 OF 4)

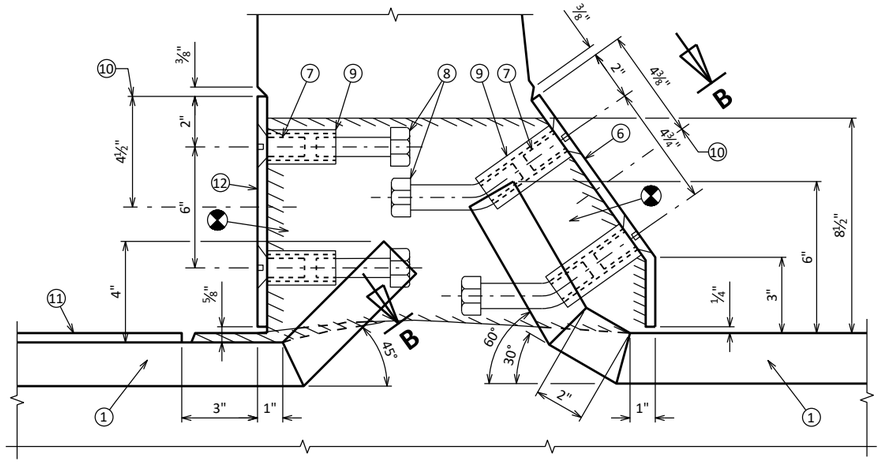
SHEET 15 OF 22
129

8

8

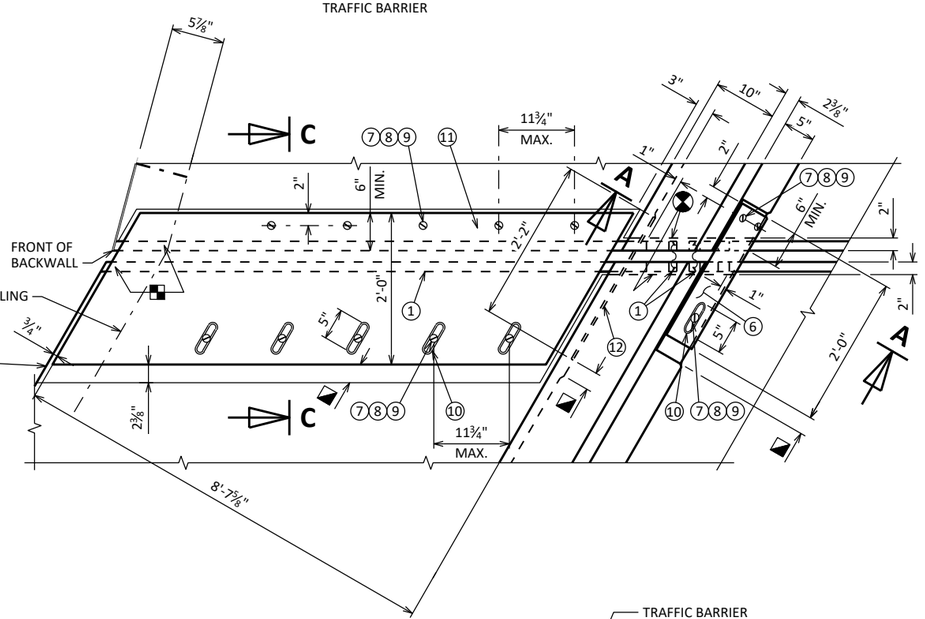
STATE PROJECT NUMBER

1050-02-73

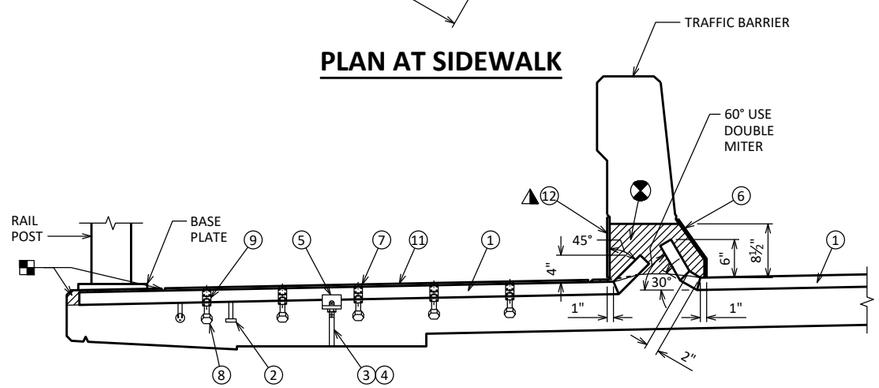


SECTION A-A

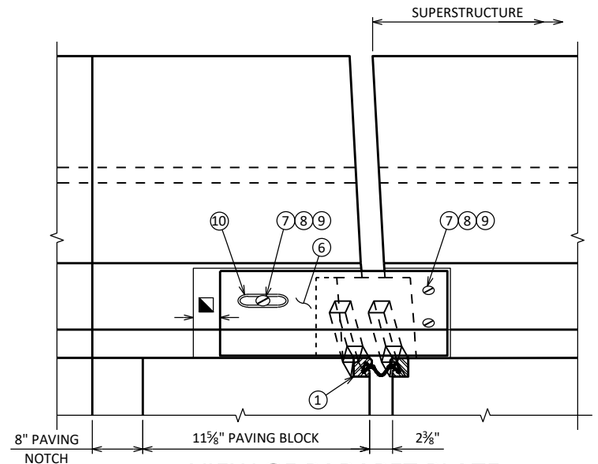
TRAFFIC BARRIER



PLAN AT SIDEWALK

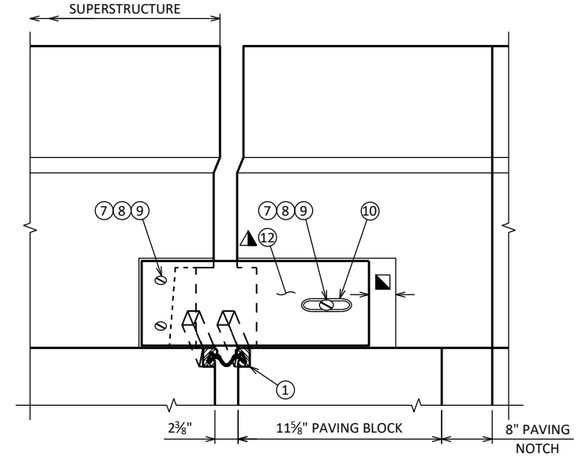


SECTION AT SIDEWALK



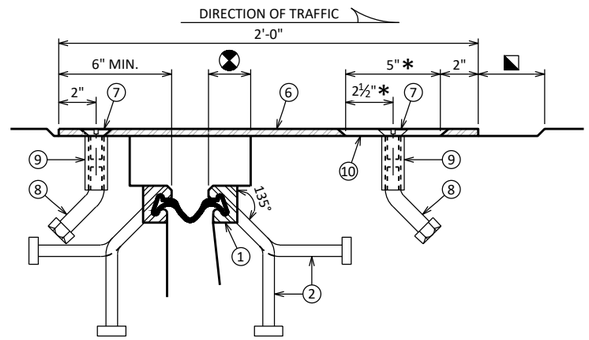
VIEW OF PARAPET PLATE FROM ROADWAY

TRAFFIC BARRIER



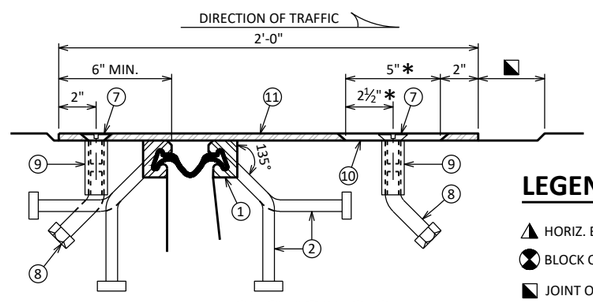
VIEW OF PARAPET PLATE FROM SIDEWALK

TRAFFIC BARRIER



SECTION B-B

* DIMENSION ALONG DIRECTION OF MOVEMENT



SECTION C-C

PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY.

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

LEGEND

- HORIZ. BOLT LOCATIONS FOR (12) SAME AS FOR SECTION B-B.
- BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- JOINT OPENING DIMENSION ALONG SKEW PLUS ½".
- BLOCK OUT CONCRETE ABOVE AND AT END OF EXTRUSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT JOINT REPAIR (3 OF 4)

SHEET 16 OF 22

130

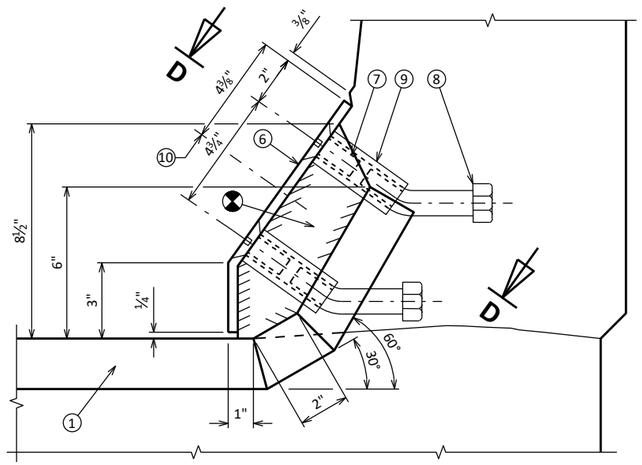
SCALE = 2.00

8

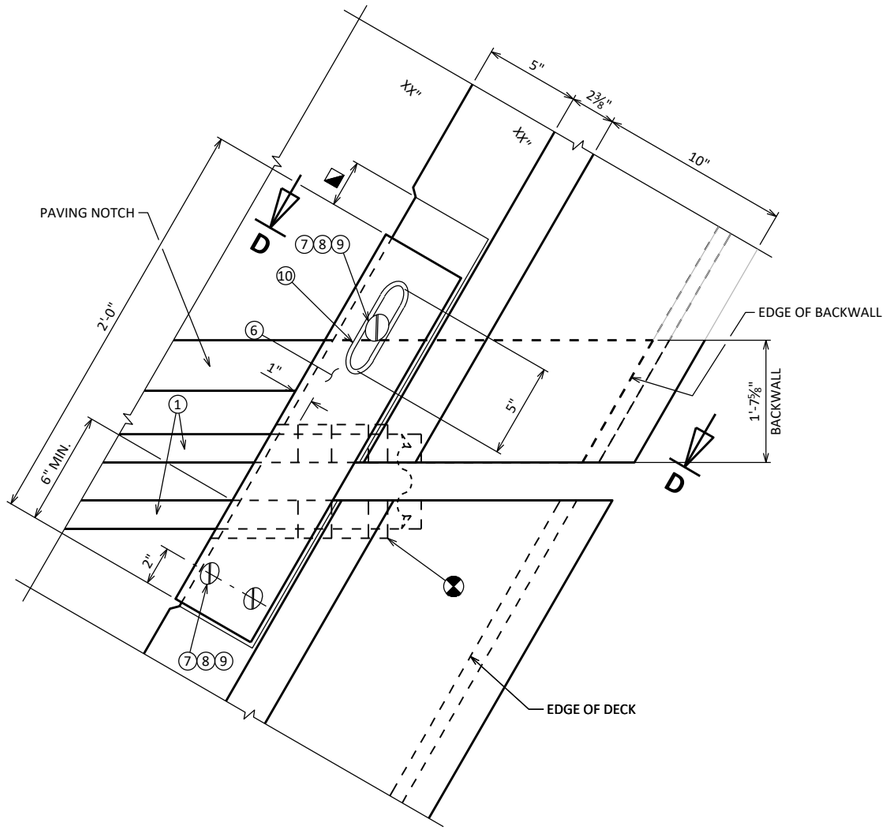
8

STATE PROJECT NUMBER

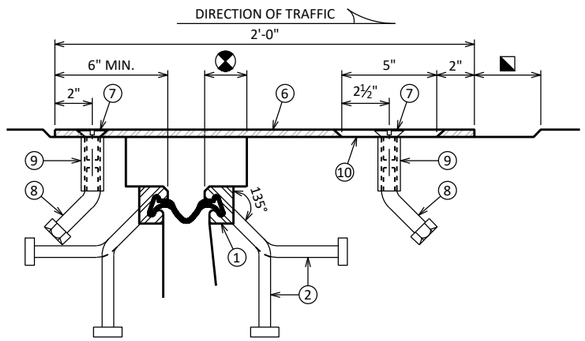
1050-02-73



SECTION D-D



PLAN



SECTION E-E

LEGEND

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT JOINT REPAIR (4 OF 4)

SHEET 17 OF 22

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8

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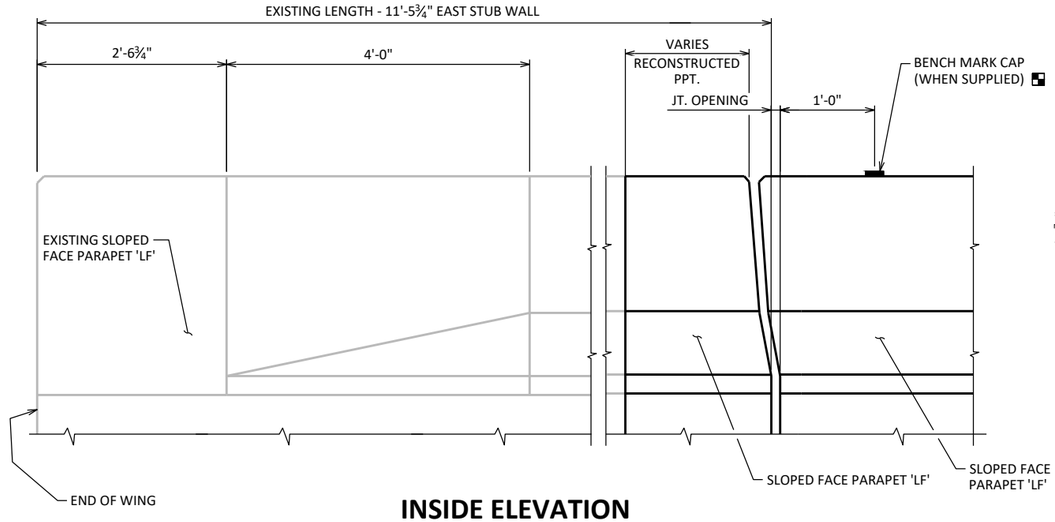
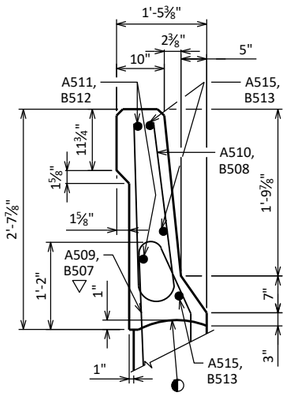


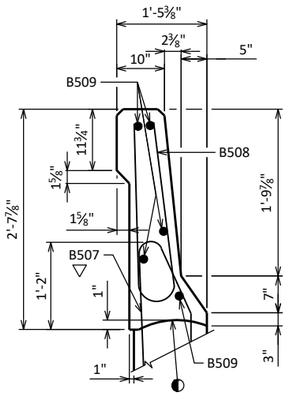
INSIDE ELEVATION

WING 4 CORNER SHOWN, WING 3 AND WEST STUB WINGWALL SIMILAR



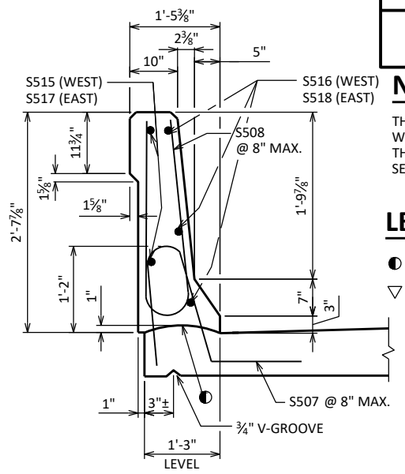
SECTION C-C

EXTERIOR PARAPETS



SECTION C-C

EAST STUB WINGWALL



SECTION THRU PARAPET ON BRIDGE

EXTERIOR PARAPETS

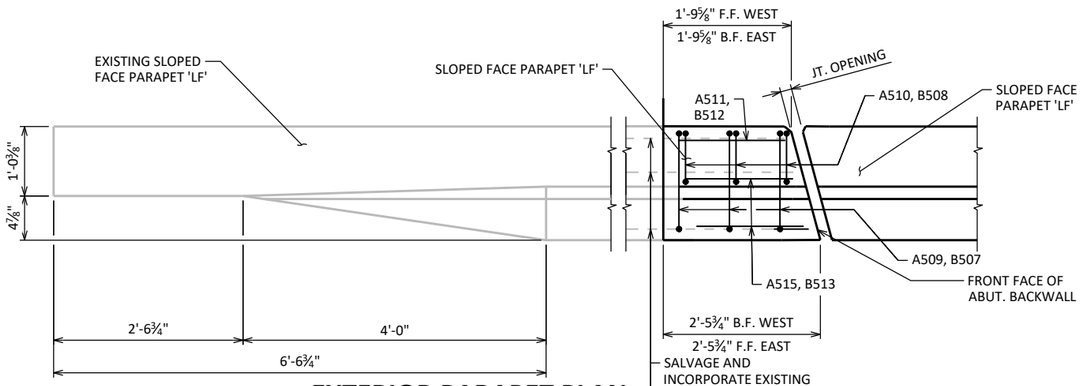
NOTE:

THIS SHEET APPLIES TO ALL LOCATIONS EXCEPT WEST MEDIAN PARAPET AT ABUTMENTS, WITH THE EXCEPTION OF THE EAST MEDIAN PARAPET SECTION VIEWS BEING SIMILAR TO SHEET 18.

LEGEND

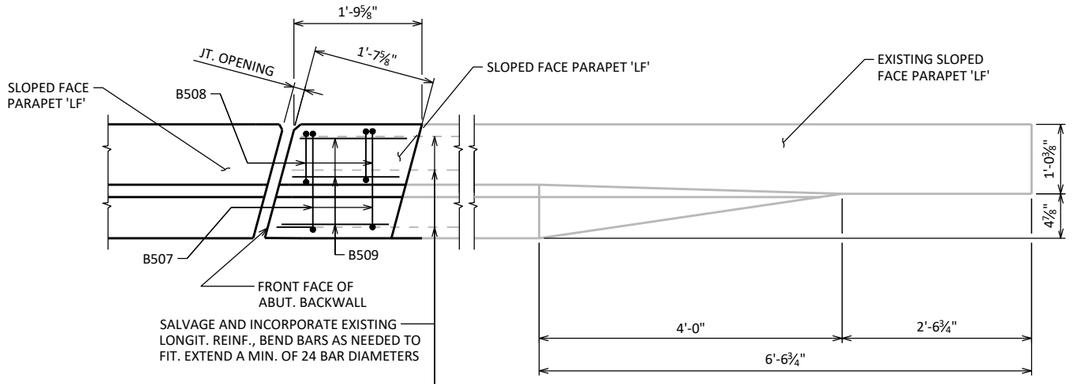
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ A509/B507 BARS TO BE TIED TO ABUTMENT BACKWALL STEEL BEFORE BACKWALL IS POURED.

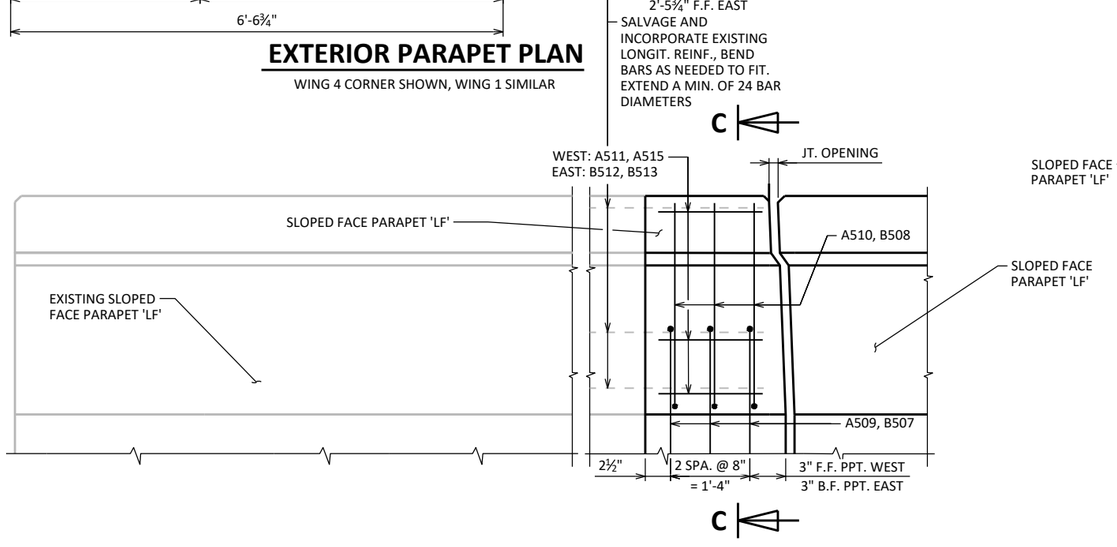


EXTERIOR PARAPET PLAN

WING 4 CORNER SHOWN, WING 1 SIMILAR

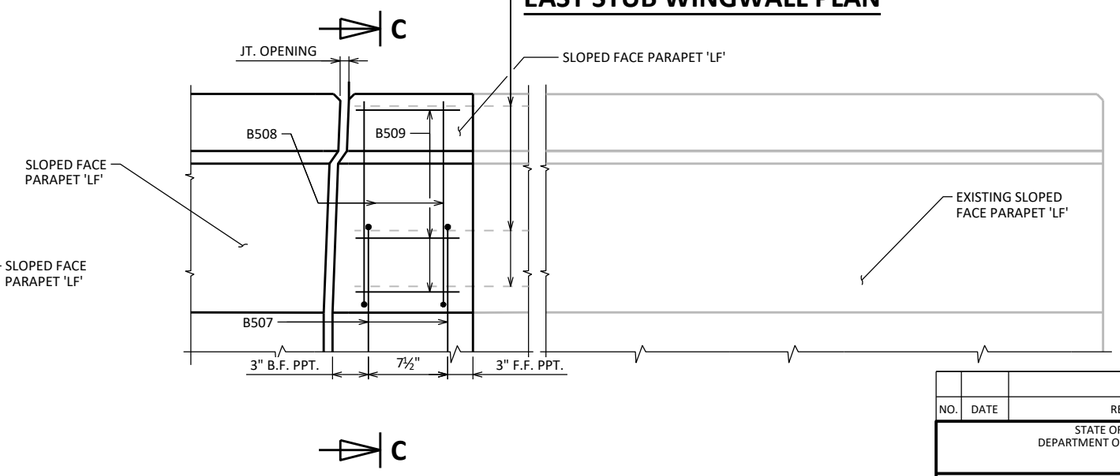


EAST STUB WINGWALL PLAN



EXTERIOR PARAPET OUTSIDE ELEVATION

WING 4 CORNER SHOWN, WING 1 SIMILAR



EAST STUB WINGWALL OUTSIDE ELEVATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER

1050-02-73

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

TYPICAL PARAPET REPAIR

SHEET 18 OF 22

132

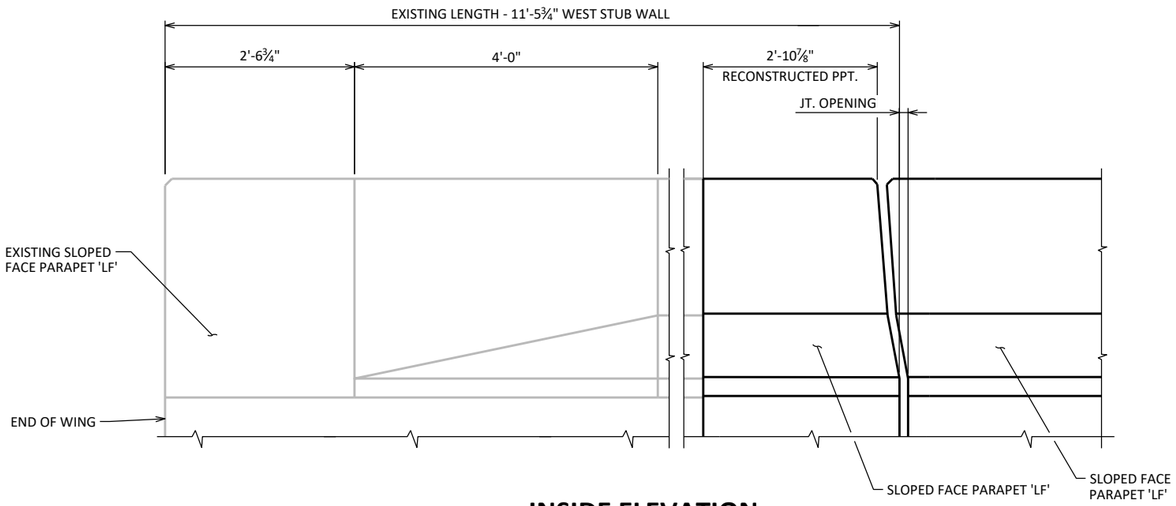
SCALE = 2.00

8

8

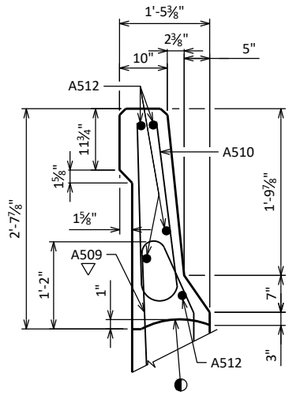
STATE PROJECT NUMBER

1050-02-73

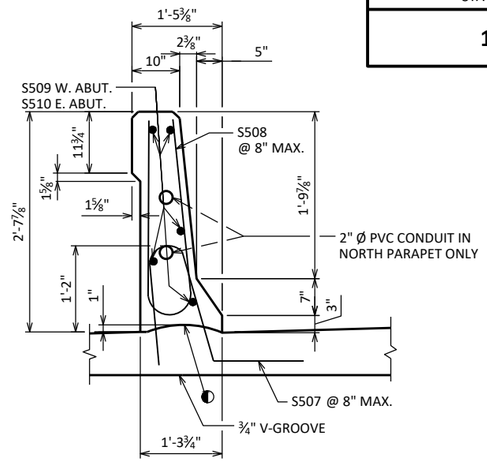


INSIDE ELEVATION

WEST MEDIAN PARAPET SHOWN

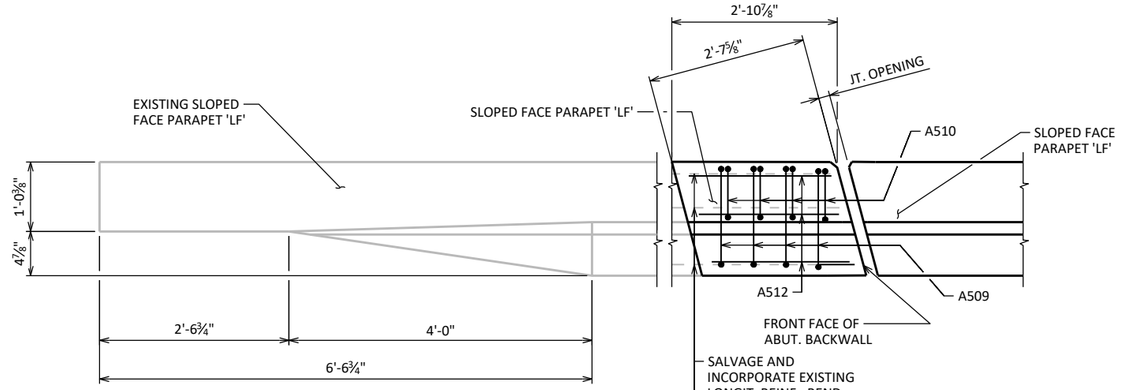


SECTION C-C



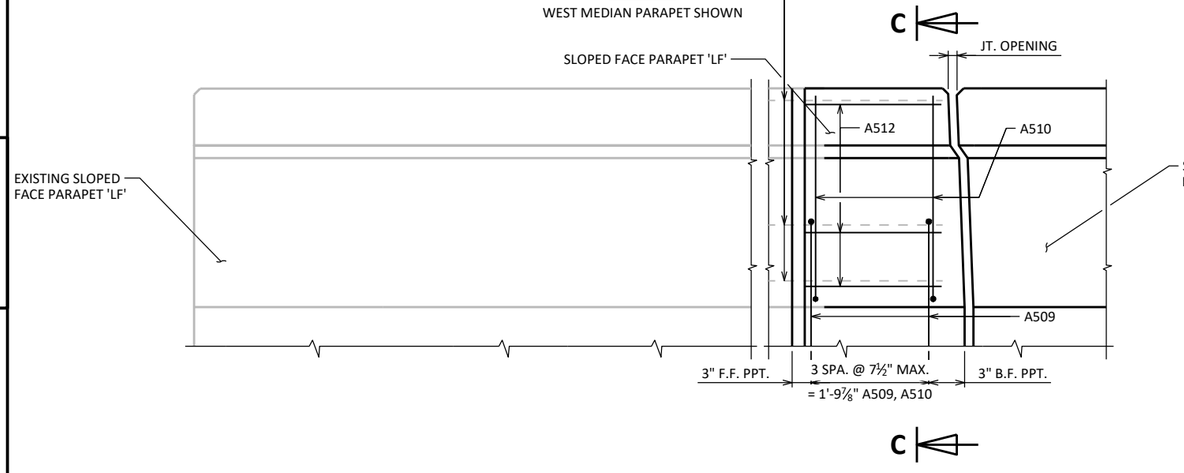
SECTION THRU PARAPET ON BRIDGE

MEDIAN PARAPETS



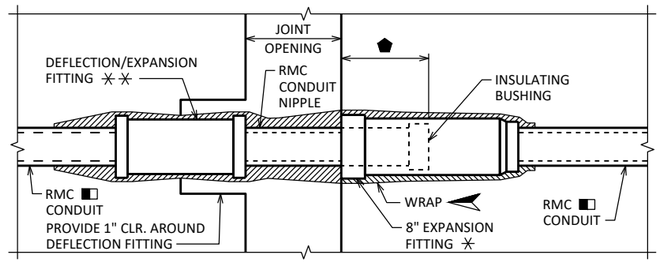
PLAN

WEST MEDIAN PARAPET SHOWN



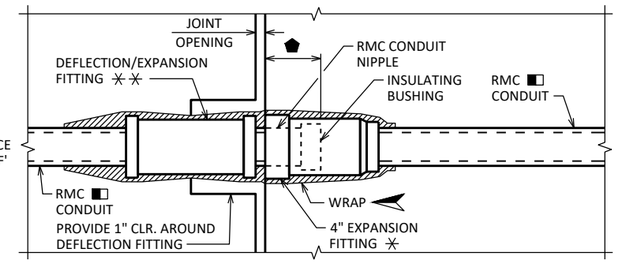
OUTSIDE ELEVATION

WEST MEDIAN PARAPET SHOWN



DEFLECTION/EXPANSION AND 8" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 8" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY.



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY.

NOTES

THIS SHEET APPLIES TO ONLY WEST MEDIAN PARAPET AT ABUTMENTS.

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

LEGEND

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ A509 BARS TO BE TIED TO ABUTMENT BACKWALL STEEL BEFORE BACKWALL IS POURED.

◧ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◥ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

✳ EXPANSION FITTING REQUIREMENTS (IF USED):
- 4" TOTAL MOVEMENT WITH BONDING JUMPER
- 8" TOTAL MOVEMENT WITH BONDING JUMPER

✳✳ DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

WEST STUB WINGWALL PARAPET REPAIR

SHEET 19 OF 22

133

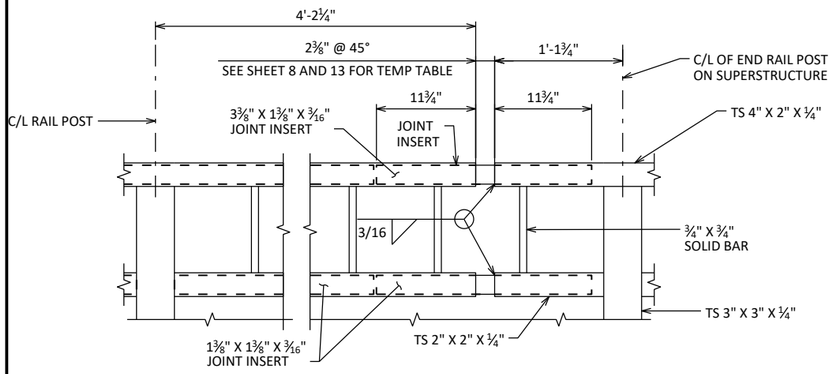
SCALE = 2.00

8

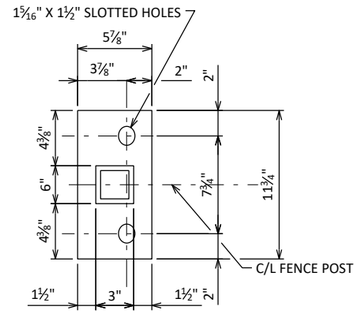
8

STATE PROJECT NUMBER

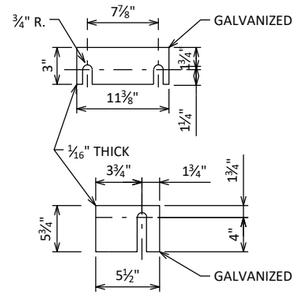
1050-02-73



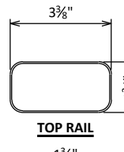
EXPANSION JOINT DETAILS AT ABUTMENTS



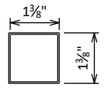
POST PLATE



POST SHIM DETAILS



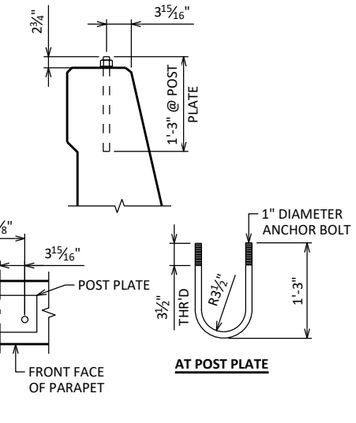
TOP RAIL



CENTER RAIL

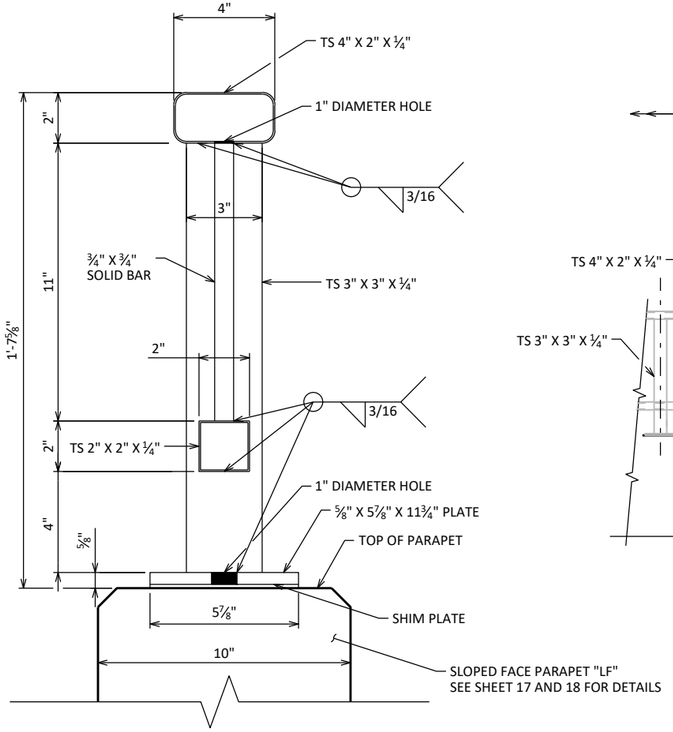
JOINT INSERT

USE SOLID BAR OR FABRICATED TUBE WITH DIMENSIONS SHOWN BY ¾" THICK. SHAPE CORNERS TO PROVIDE ⅛" CLEAR EACH SIDE TO INSIDE OF TS

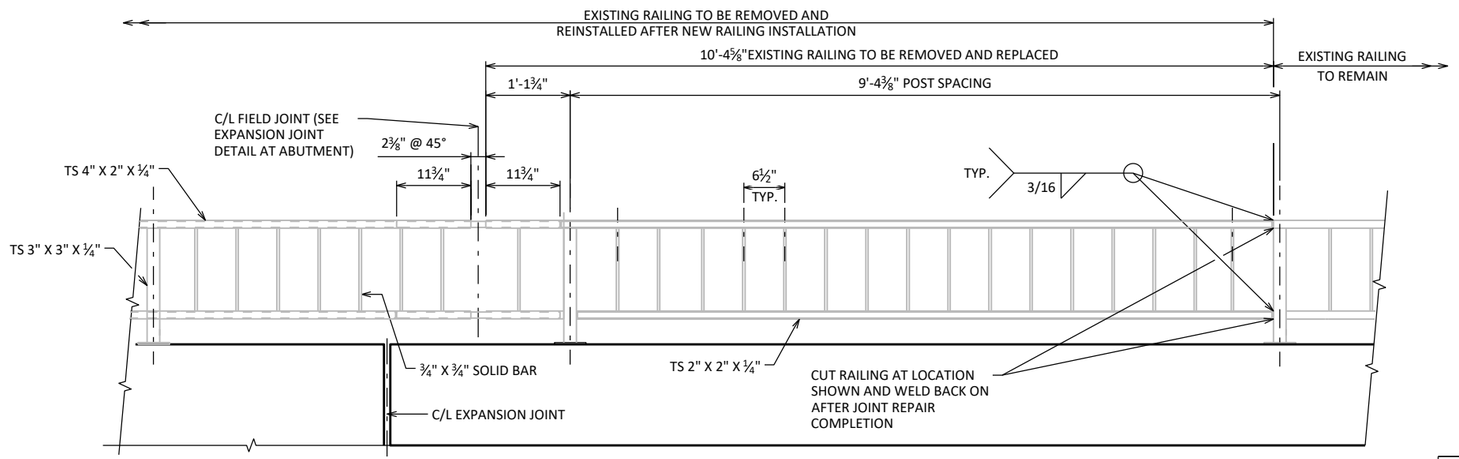


AT POST PLATE

ANCHOR BOLT DETAILS



POST DETAIL



INSIDE ELEVATION OF RAILING

SHOWING WEST ABUTMENT
(EAST ABUTMENT SIMILAR)

NOTES

BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, NUTS, WASHERS, AND TOP 3⅞" OF ANCHOR BOLTS SHALL BE GALVANIZED.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED BLACK STD. COLOR NO. 27038.

STEEL PIPE RAILING TEMPORARY REMOVAL AND REINSTALLMENT SHALL BE INCIDENTAL TO BID ITEM "REMOVING AND RESETTING TUBULAR RAILING B-9-209".

ALL NEW HARDWARE INCLUDING NEW BASE PLATE, ANCHOR BOLTS, NUTS, WASHERS, AND SHIMS SHALL BE INCIDENTAL TO BID ITEM "REMOVING AND RESETTING TUBULAR RAILING B-9-209".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

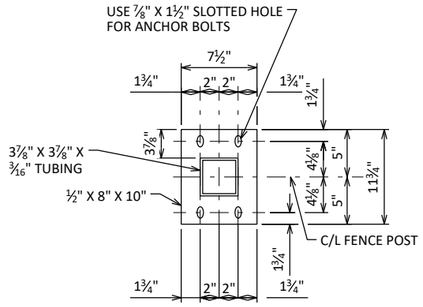
STEEL PIPE RAILING

SHEET 20 OF 22
134

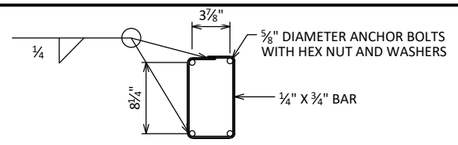
SCALE = 2.00

8

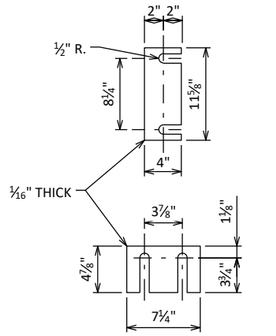
8



BASE PLATE

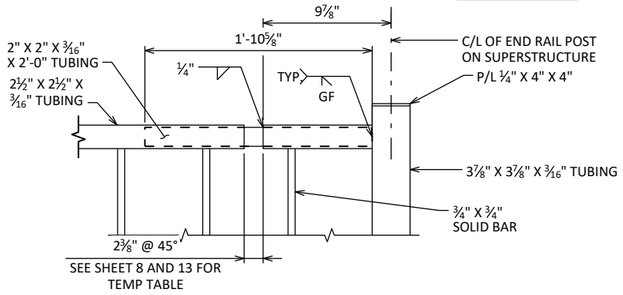


SECTION X-X

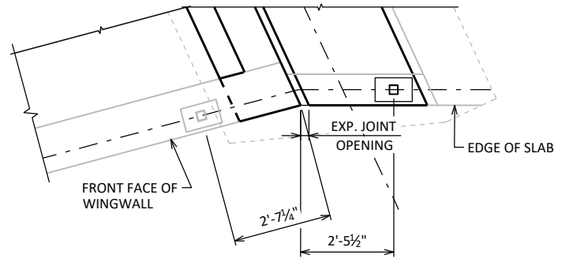


SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

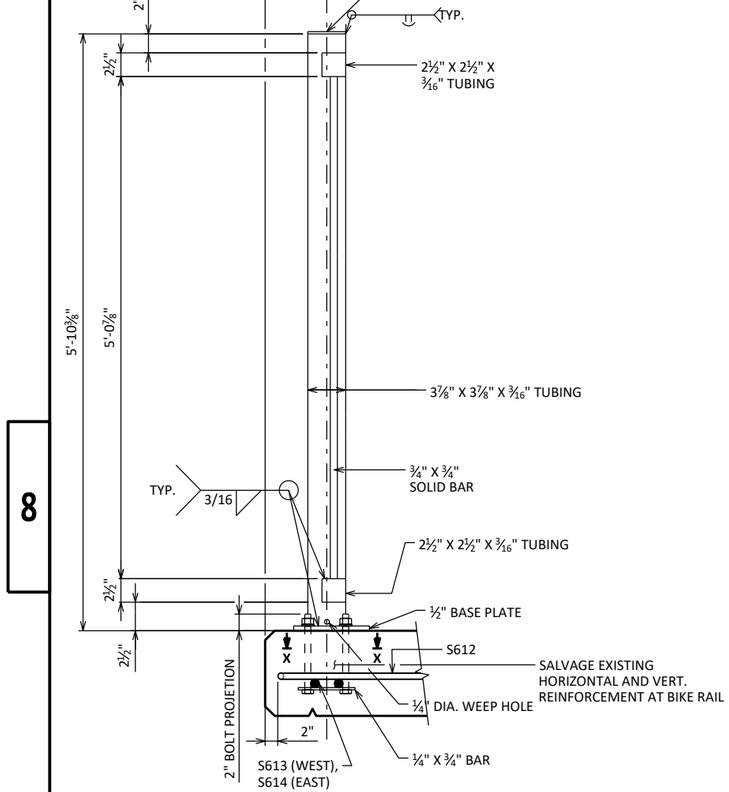


EXPANSION JOINT DETAILS AT ABUTMENTS

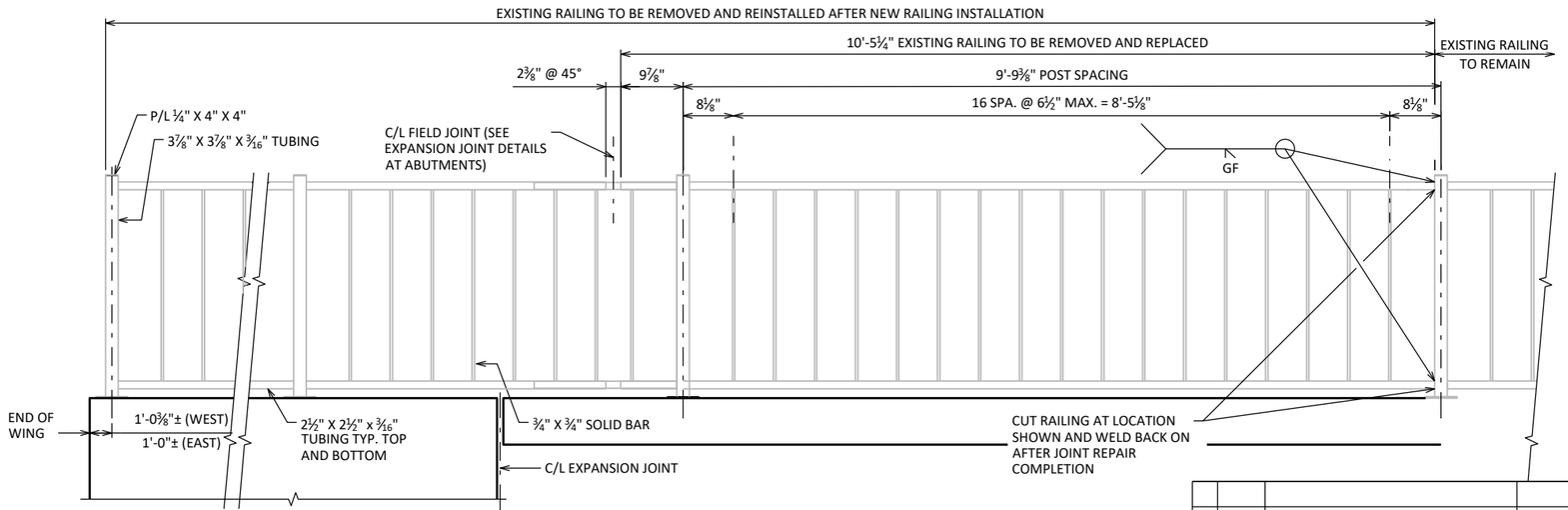


PLAN OF RAILING AT EXPANSION JOINTS

SHOWING WING 3 (WING 2 SIMILAR)



SECTION THRU RAIL POST



INSIDE ELEVATION OF RAILING

SHOWING WEST ABUTMENT
(EAST ABUTMENT SIMILAR)

STATE PROJECT NUMBER

1050-02-73

NOTES

BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, NUTS, WASHERS, AND TOP 3" OF ANCHOR BOLTS SHALL BE GALVANIZED.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDES ONLY THE DIMENSIONED LIMITS LISTED IN DETAIL "INSIDE ELEVATION OF RAILING"

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED BLACK STD. COLOR NO. 27038.

STEEL BIKE PATH RAILING TEMPORARY REMOVAL AND REINSTALLMENT SHALL BE INCIDENTAL TO BID ITEM "REMOVING AND RESETTING TUBULAR RAILING B-9-209".

ALL NEW HARDWARE INCLUDING NEW BASE PLATE, ANCHOR BOLTS, NUTS, WASHERS, AND SHIMS SHALL BE INCIDENTAL TO BID ITEM "REMOVING AND RESETTING TUBULAR RAILING B-9-209".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

STEEL BIKE PATH RAILING

SHEET 21 OF 22
135

SCALE = 2.00

8

8

STATE PROJECT NUMBER

1050-02-73

BILL OF BARS

FOR WEST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A601	X	56	18'-2"	X	BODY BACKWALL VERT.
A502	X	112	2'-10"	X	EAST BODY BACKWALL VERT. TOP
A503	X	55	6'-10"	X	BODY BACKWALL VERT. PAVING BLOCK
A504	X	20	29'-2"		BODY BACKWALL HORIZ. F.F.
A505	X	20	29'-2"		BODY BACKWALL HORIZ. B.F.
A506	X	24	7'-10"		BODY BACKWALL HORIZ. TOP
A507	X	4	27'-9"		BODY BACKWALL HORIZ. @ CORBEL
A608	X	112	4'-2"		BACKWALL VERT. DOWELS E.F.
A509	X	5	4'-7"	X	PARAPET VERT.
A510	X	5	4'-10"	X	PARAPET VERT.
A511	X	2	1'-11"		PARAPET HORIZ.
A512	X	5	2'-6"		PARAPET HORIZ.
A413	X	18	5'-4"	X	SIDEWALL HORIZ.
A414	X	10	8'-7"		SIDEWALL VERT.
A515	X	3	1'-4"		PARAPET HORIZ.

BILL OF BARS

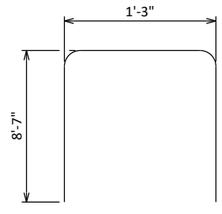
FOR EAST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B601	X	57	18'-2"	X	BODY BACKWALL VERT.
B502	X	57	4'-0"	X	BODY BACKWALL VERT. TOP
B503	X	20	29'-2"		BODY BACKWALL HORIZ. F.F.
B504	X	20	29'-2"		BODY BACKWALL HORIZ. B.F.
B505	X	24	7'-10"		BODY BACKWALL HORIZ. TOP
B606	X	114	4'-2"		BACKWALL VERT. DOWELS E.F.
B507	X	5	4'-7"	X	PARAPET VERT.
B508	X	5	4'-10"	X	PARAPET VERT.
B509	X	5	1'-5"		PARAPET HORIZ.
B410	X	18	5'-4"	X	SIDEWALL HORIZ.
B411	X	10	8'-7"		SIDEWALL VERT.
B512	X	2	1'-7"		PARAPET HORIZ.
B513	X	3	1'-8"		PARAPET HORIZ.

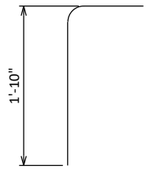
BILL OF BARS

FOR SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	56	5'-4"	X	HAUNCH VERT. @ WEST ABUT.
S602	X	40	10'-2"		HAUNCH HORIZ. BOT.
S403	X	16	10'-2"		HAUNCH HORIZ. IN DECK SLAB
S504	X	20	29'-1"		DECK BOT. TRANS @ ABUT.
S505	X	20	29'-1"		DECK TOP TRANS. @ ABUT.
S406	X	8	11'-6"		DECK TRANS @ EXP. DEVICE
S507	X	16	4'-2"	X	PARAPET VERT. @ ABUT.
S508	X	18	4'-10"	X	PARAPET VERT. @ ABUT.
S509	X	5	2'-9"		PARAPET HORIZ. @ W. ABUT.
S510	X	5	2'-9"		PARAPET HORIZ. @ E. ABUT.
S411	X	56	5'-0"	X	HAUNCH VERT. @ EAST ABUT.
S612	X	2	12'-6"	X	SLAB @ RAIL POSTS
S613	X	2	2'-9"		SLAB @ RAIL POSTS - WEST
S614	X	2	2'-5"		SLAB @ RAIL POSTS - EAST
S515	X	2	2'-9"		PARAPET HORIZ. @ W. ABUT.
S516	X	3	3'-0"		PARAPET HORIZ. @ W. ABUT.
S517	X	2	3'-3"		PARAPET HORIZ. @ E. ABUT.
S518	X	3	3'-1"		PARAPET HORIZ. @ E. ABUT.



A501



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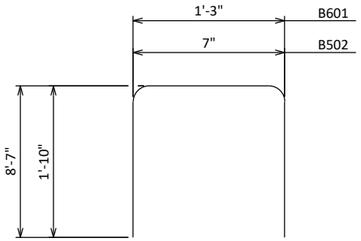
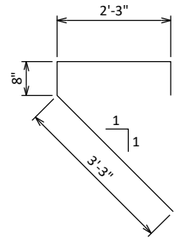


B501, B502



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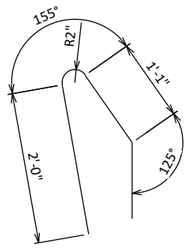

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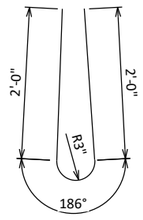

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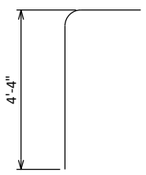

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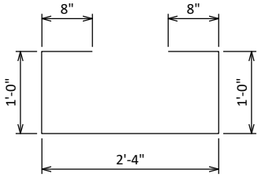

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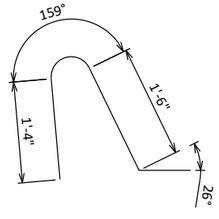

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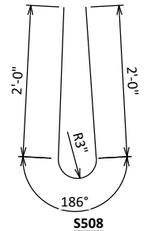

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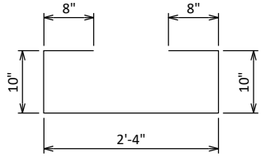

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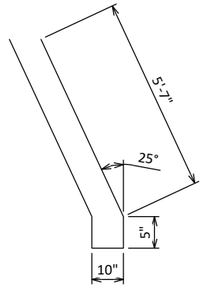


S612

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-209

DRAWN BY RAC | PLANS CK'D JMR

BILL OF BARS

SHEET 22 OF 22

136

8

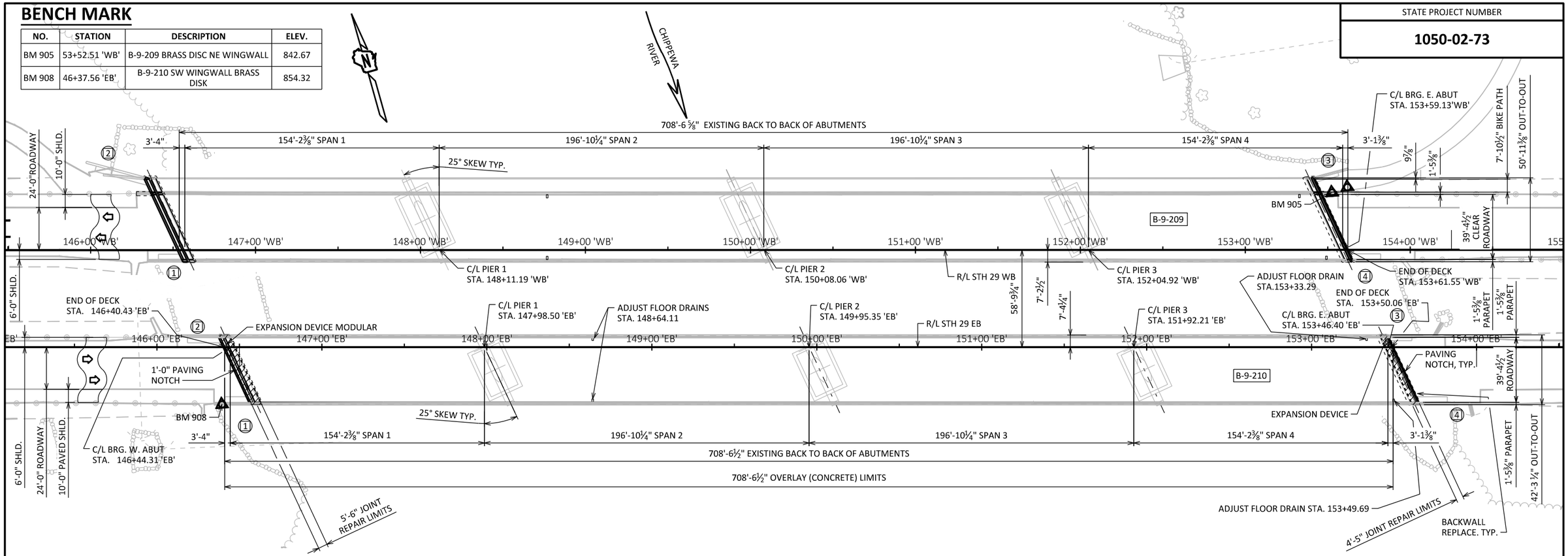
8

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM 905	53+52.51 'WB'	B-9-209 BRASS DISC NE WINGWALL	842.67
BM 908	46+37.56 'EB'	B-9-210 SW WINGWALL BRASS DISK	854.32

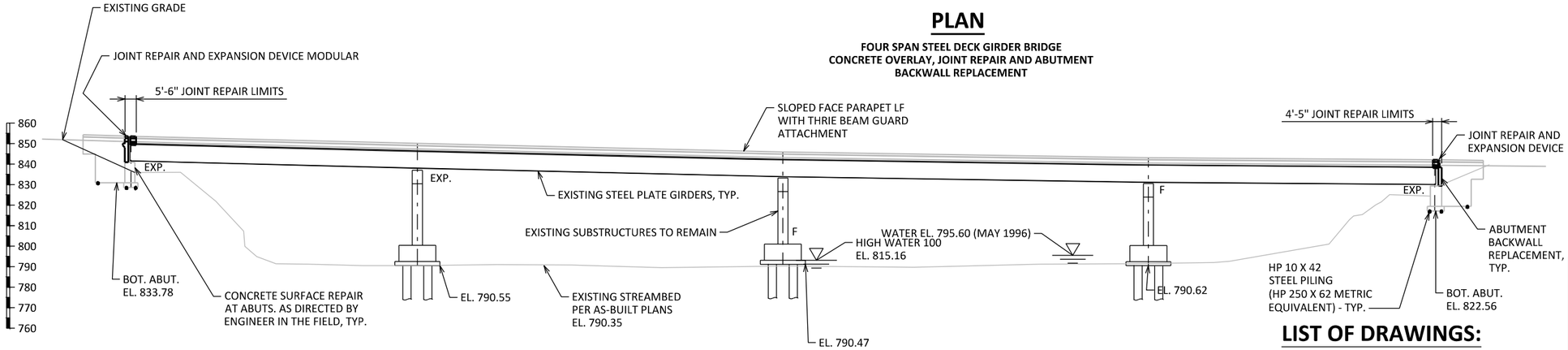
STATE PROJECT NUMBER

1050-02-73



PLAN

FOUR SPAN STEEL DECK GIRDER BRIDGE
CONCRETE OVERLAY, JOINT REPAIR AND ABUTMENT BACKWALL REPLACEMENT



ELEVATION

LOOKING NORTH
NORMAL TO CHIPPEWA RIVER

LEGEND

	LIMITS OF JOINT REPAIR
(X)	INDICATES WINGWALL NUMBER
F	INDICATES FIXED BEARING
EXP.	INDICATES EXPANSION BEARING

LIST OF DRAWINGS:

1. GENERAL PLANS
2. QUANTITIES AND NOTES
3. TYPICAL SECTION
4. DECK PREPARATION AREAS
5. ABUTMENT REMOVAL SECTION
6. WEST ABUTMENT
7. EAST ABUTMENT
8. SIDEWALL RECONSTRUCTION
9. JOINT REPAIR SECTIONS AT WEST ABUTMENT
10. WEST ABUTMENT JOINT REPAIR (1 OF 3)
11. WEST ABUTMENT JOINT REPAIR (2 OF 3)
12. WEST ABUTMENT JOINT REPAIR (3 OF 3)
13. JOINT REPAIR SECTIONS AT EAST ABUTMENT
14. EAST ABUTMENT JOINT REPAIR (1 OF 3)
15. EAST ABUTMENT JOINT REPAIR (2 OF 3)
16. EAST ABUTMENT JOINT REPAIR (3 OF 3)
17. PARAPET REPAIR
18. BILL OF BARS

STRUCTURE DESIGN CONTACTS:
CHRISTOPHER MARCUM, PE (715) 861-4823
AARON BONK 608-261-0261

WISCONSIN
CHRISTOPHER J. MARCUM
44676
EAU CLAIRE WISCONSIN
PROFESSIONAL ENGINEER
07/14/2026

NO.	DATE	REVISION	BY

jt ENGINEERING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JTLR 07/16/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-9-210

STH 29 EB OVER CHIPPEWA RIVER

COUNTY	TOWN/VILLAGE
CHIPPEWA	WHEATON/LAKE HALLIE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
RAC	CJM	CJM	VJD/JMR

GENERAL PLAN

SHEET 1 OF 18
137

SCALE = 60

I.D. 1050-02-03 DATE: APRIL 2026

8

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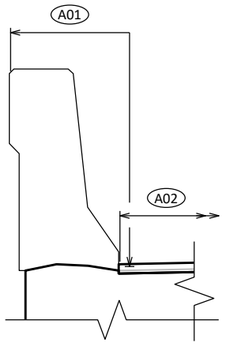
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	E. ABUT.	TOTALS
203.0270	REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE B-9-210	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-9-210	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	365	385	750
502.0100	CONCRETE MASONRY BRIDGES	CY		32.6	28.9	62
502.3101	EXPANSION DEVICE	LF	44	---	---	44
502.3111.S	EXPANSION DEVICE MODULAR	LF	44	---	---	44
502.3200	PROTECTIVE SURFACE TREATMENT	SY	3,095	10	10	3,115
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	545	---	---	545
502.3210	PIGMENTED SURFACE SEALER	SY	5	2	2	9
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	---	92	92	184
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4,260	3,890	3,410	11,560
509.0301	PREPARATION DECKS TYPE 1	SY	171	---	---	171
509.0302	PREPARATION DECKS TYPE 2	SY	73	---	---	73
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	3,094	---	---	3,094
509.1000	JOINT REPAIR	SY	51	---	---	51
509.1500	CONCRETE SURFACE REPAIR	SF	5	10	15	30
509.2000	FULL-DEPTH DECK REPAIR	SY	15	---	---	15
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	103.1	---	---	104
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	172	---	---	172
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-9-210	SY	3,094	---	---	3,094
514.0900	ADJUSTING FLOOR DRAINS	EACH	4	---	---	4
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	11	11	22
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	13	6	5	24
999.2000.S	INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM STA. 149+95.35 'EB'	EACH	1	---	---	1
SPV.0180	ABUTMENT SEAT CLEANING AND SEALING	SY	---	17	17	34
	NON-BID ITEMS					
	NAME PLATE					1

SCOPE OF WORK

- REMOVAL OF EXISTING CONCRETE OVERLAY AND PLACEMENT OF NEW OVERLAY.
- REPLACE EXISTING ABUTMENT BACKWALLS.
- REPLACE EXPANSION JOINTS AT EACH ABUTMENT.



PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER DETAIL

A01 COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS ON THE ROADWAY FACE AND TOP OF THE NEW CONCRETE PARAPETS WITHIN THE JOINT REPAIR LIMIT. "PIGMENTED SURFACE SEALER RESEAL" SHALL BE APPLIED TO THE ROADWAY FACE AND TOP OF THE EXISTING PARAPETS AS PER THE STANDARD SPECIFICATIONS LOCATED WITHIN THE CONCRETE OVERLAY AREAS, EXCLUDING THE JOINT REPAIR SECTIONS.

A02 COAT WITH "PROTECTIVE SURFACE TREATMENT " AS PER THE STANDARD SPECIFICATIONS . "PROTECTIVE SURFACE TREATMENT" SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE CONCRETE OVERLAY.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. DIMENSIONS HAVE BEEN CONVERTED FROM METRIC UNITS TO IMPERIAL UNITS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF THE NEW CONCRETE OVERLAY, JOINT REPAIR SECTIONS, AND TO THE HORIZONTAL AND VERTICAL SURFACES OF PAVING NOTCHES.

"PIGMENTED SURFACE SEALER" SHALL BE APPLIED TO THE ROADWAY FACE AND TOP OF THE NEW CONCRETE PARAPETS WITHIN THE JOINT REPAIR LIMIT. "PIGMENTED SURFACE SEALER RESEAL" SHALL BE APPLIED TO THE ROADWAY FACE AND TOP OF THE EXISTING PARAPETS IN THE DECK OVERLAY AREAS, EXCLUDING THE JOINT REPAIR SECTIONS.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

SEALING CONCRETE OVERLAY CRACKS WITHIN 7 DAYS OF CURE COMPLETION IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS WITH PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.

THE AVERAGE OVERLAY THICKNESS IS BASED ON THE MINIMUM OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CHIPPEWA 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 18.

CONCRETE SURFACE REPAIR SHALL BE USED FOR NEEDED REPAIRS ALONG THE ABUTMENT FRONT FACES. LOCATIONS AND LIMITS OF REPAIRS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE FIRST DIGIT OF A THREE DIGIT OR FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

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

ALL PREVIOUS PATCHES WILL BE REMOVED UNDER PREPARATION DECK BID ITEMS.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

THE COST FOR PARAPET REPLACEMENT WITHIN THE LIMITS OF JOINT REPAIR SHALL BE INCLUDED IN THE CUBIC YARD BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING CONCRETE OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY B-9-210".

THE COST FOR PARAPET REMOVAL WITHIN THE LIMITS OF JOINT REPAIR SHALL BE INCLUDED IN THE SQUARE YARD BID ITEM "JOINT REPAIR".

THE PAY LIMITS OF "REMOVING STRUCTURE" SHALL INCLUDE VOLUMES OCCUPIED BY EACH ABUTMENT BACKWALL.

THE PAY LIMITS OF "CONCRETE MASONRY BRIDGES" DO NOT INCLUDE AREAS OF JOINT REPAIR AS DENOTED IN THE PLANS.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-9-210" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

STATE PROJECT NUMBER

1050-02-73

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-22
OPERATING RATING: HS-38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

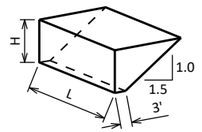
MATERIAL PROPERTIES:

CONCRETE MASONRY:
OVERLAY DECKS & JOINT REPAIR — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

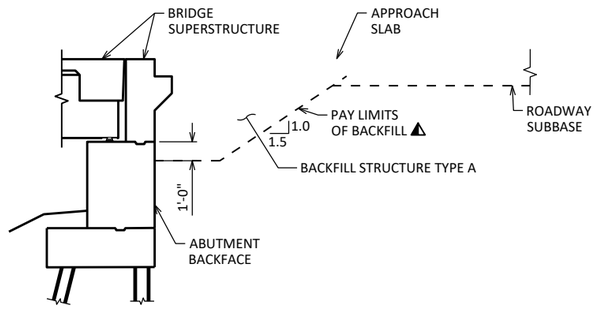
TRAFFIC DATA

FEATURE ON: STH 29 EB
ADT = 14,780 (2027)
ADT = 15,540 (2047)
R.D.S. = 70 MPH



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT FROM BEAM SEAT TO TOP OF BACKWALL (FT) PLUS ONE FOOT BELOW BEAM SEAT
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY CJM | PLANS CK'D VJD/JMR

QUANTITIES AND NOTES

SHEET 2 OF 18
138

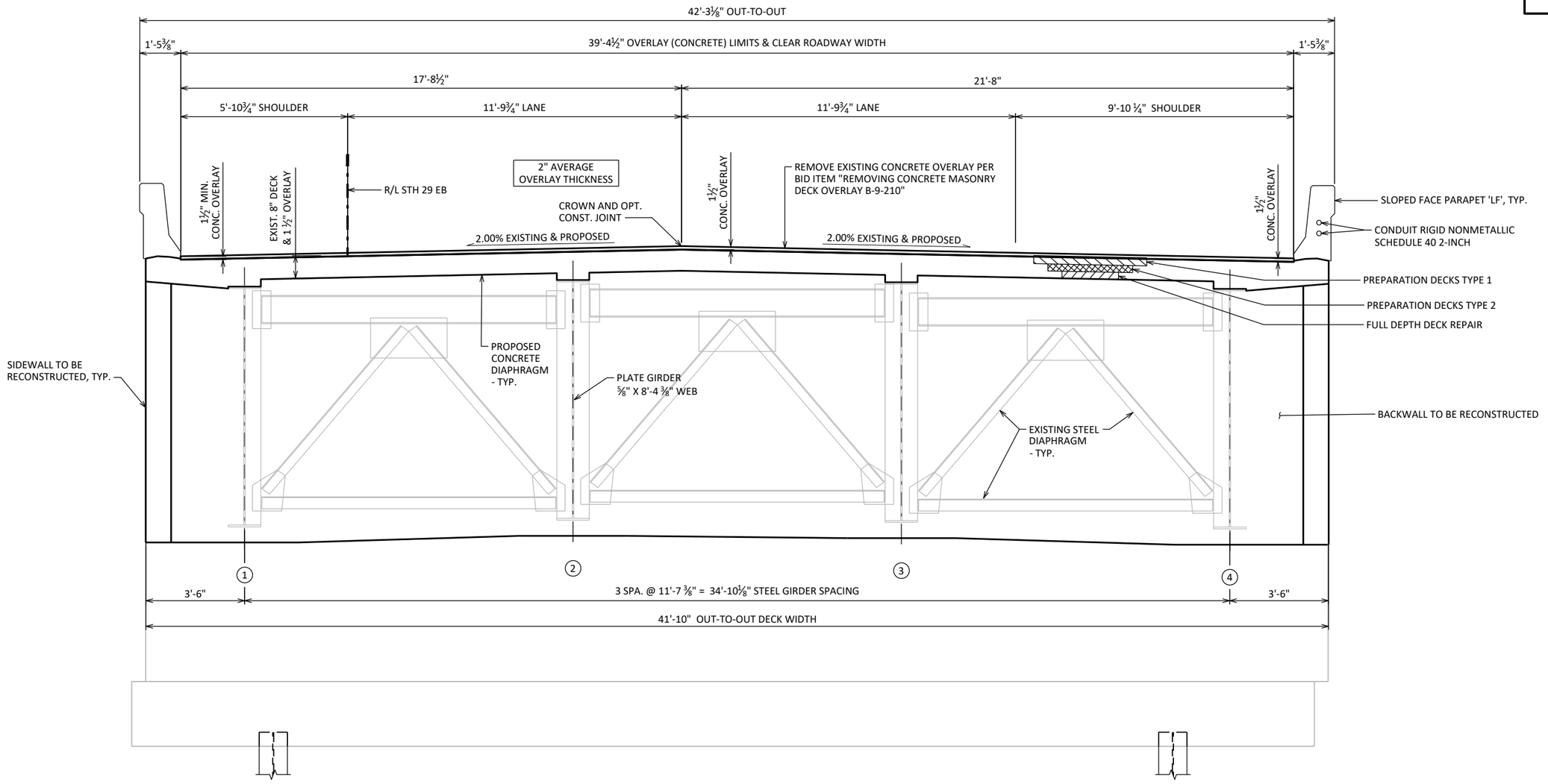
SCALE =

8

8

STATE PROJECT NUMBER

1050-02-73



CROSS SECTION THRU JOINT REPAIR

LOOKING EAST
SHOWN AT JOINT REPLACEMENT

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY CJM | PLANS CK'D VJD/JMR

TYPICAL SECTION

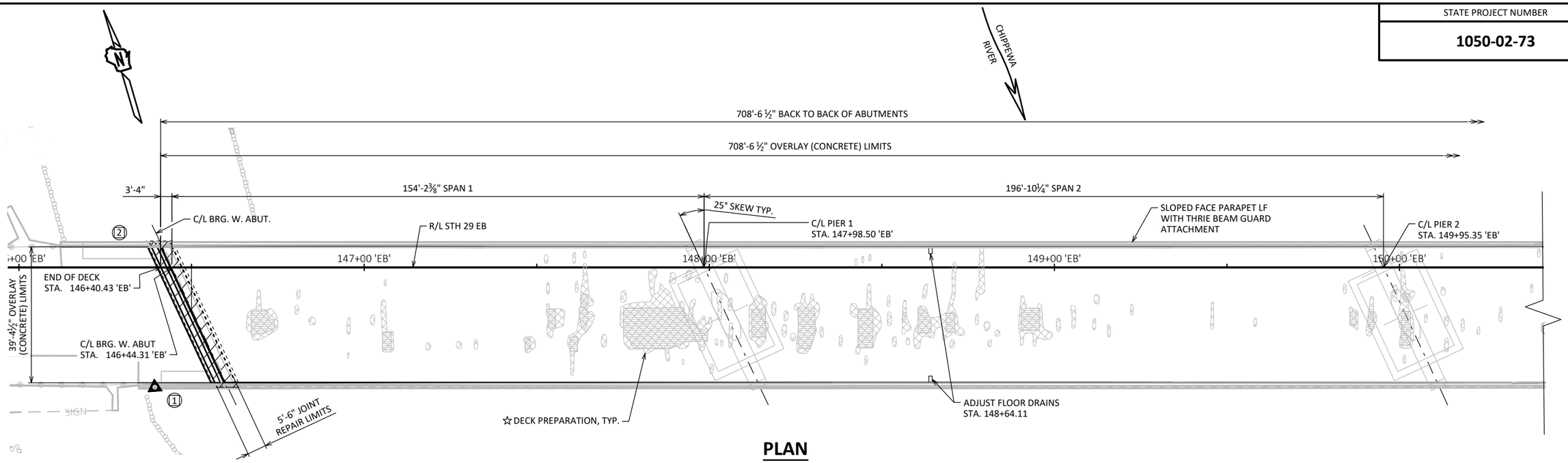
SHEET 3 OF 18

139

SCALE = 4

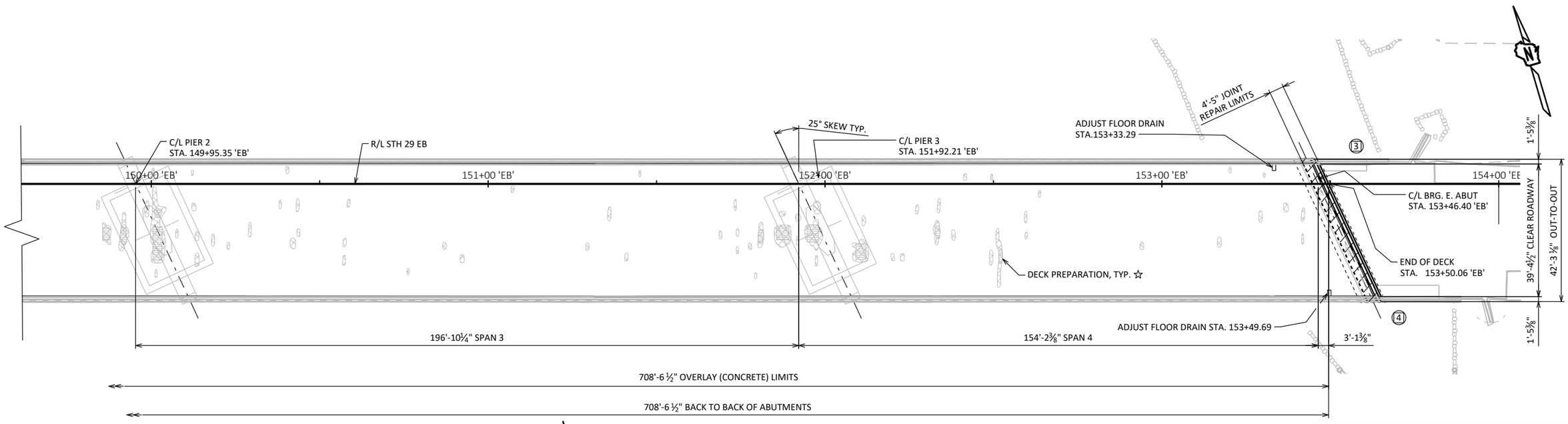
STATE PROJECT NUMBER

1050-02-73



PLAN

SHOWING SPAN 1 & 2 DECK PREPARATION AREAS



PLAN

SHOWING SPAN 3 & 4 DECK PREPARATION AREAS

LEGEND

☆ SURVEY TYPE: INFRARED THERMOGRAPHY & SOUNDING
SURVEY COMPLETED DATE: SEPTEMBER 2024

(X) INDICATES WINGWALL NUMBER

DECK PREPARATION AREA TYPE 1 - 171 SY

DECK PREPARATION AREA TYPE 2 - 73 SY

NOTE

DECK PREPARATION AREAS DO NOT INCLUDE AREAS WITHIN THE JOINT REPAIR LIMITS. RESULTS OF THE INFRARED THERMOGRAPHIC SCAN WITHIN THE JOINT REPAIR AREAS ARE SHOWN FOR INFORMATION ONLY.

FULL DEPTH DECK REPAIR TO BE USED AS-NEEDED AND AS DIRECTED BY THE FIELD ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY CJM/RAC | PLANS CK'D VJD/JMR

DECK PREPARATION AREAS

SHEET 4 OF 18

140

SCALE = 30

8

8

STATE PROJECT NUMBER

1050-02-73

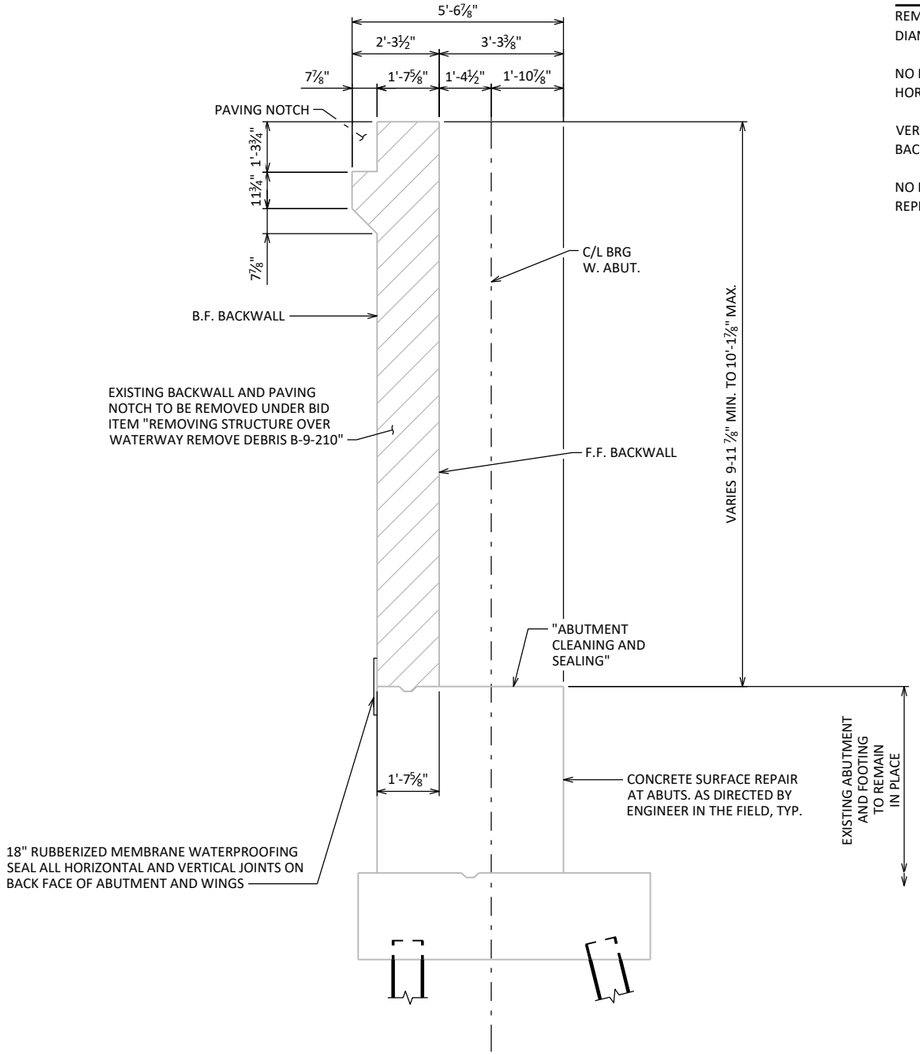
SALVAGE NOTES

REMOVE SIDEWALLS (NOT SHOWN), AND SALVAGE 24*BAR DIAMETERS OF VERTICAL BAR STEEL AT SIDEWALLS.

NO EXISTING ABUTMENT BACKWALL VERTICAL AND HORIZONTAL BAR STEEL TO REMAIN.

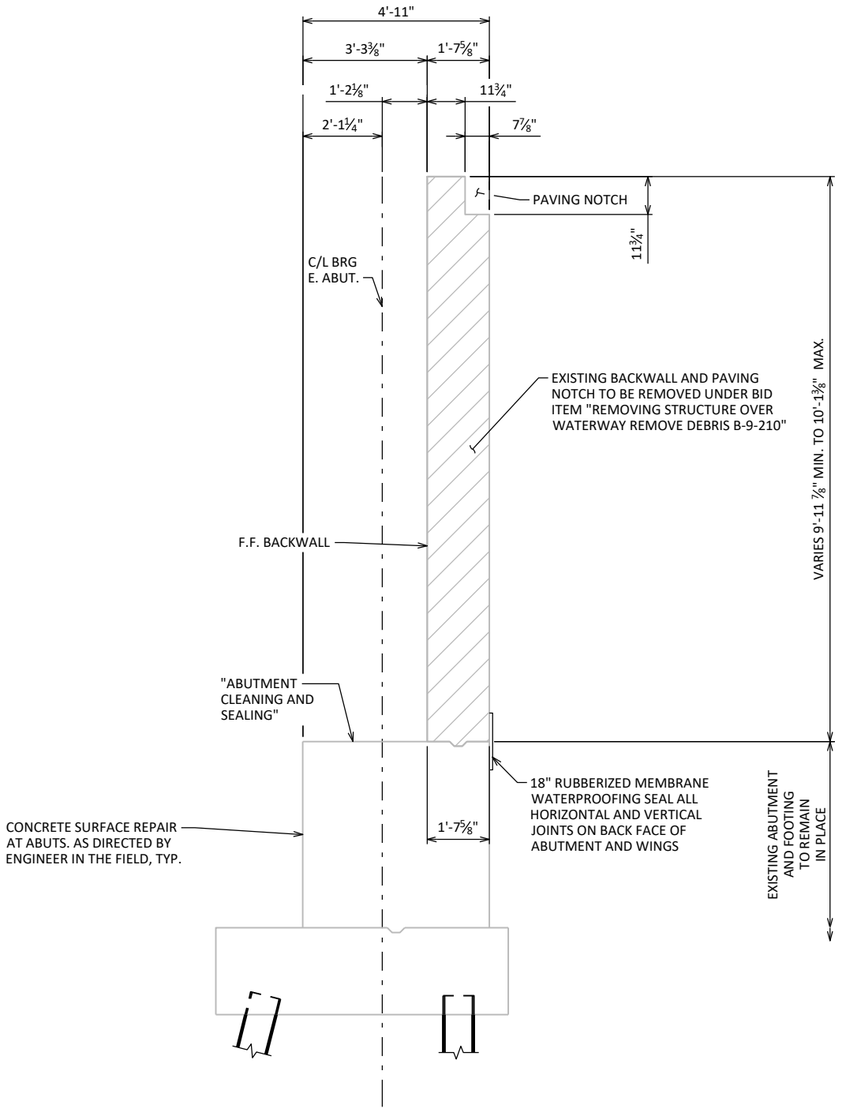
VERTICAL WING WALL BAR STEEL TO REMAIN ADJACENT TO BACKWALL REPLACEMENT.

NO PARAPET BAR STEEL TO REMAIN AT JOINT REPLACEMENT AREAS.



EXISTING WEST ABUTMENT SECTION

BERM AND SHORING DETAILS NOT SHOWN FOR CLARITY
JOINT DETAILS NOT SHOWN FOR CLARITY
MODULAR JOINT EXISTS AT THE WEST ABUTMENT
DIMENSIONS ARE SHOWN NORMAL TO C/L ABUTMENT



EXISTING EAST ABUTMENT SECTION

BERM AND SHORING DETAILS NOT SHOWN FOR CLARITY
JOINT DETAILS NOT SHOWN FOR CLARITY
STRIP SEAL JOINT EXISTS AT THE EAST ABUTMENT
DIMENSIONS ARE SHOWN NORMAL TO C/L ABUTMENT

LIMITS OF ABUTMENT BACKWALL AND PAVING NOTCH REMOVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY CJM/RAC | PLANS CK'D JMR

ABUTMENT REMOVAL SECTION

SHEET 5 OF 18

141

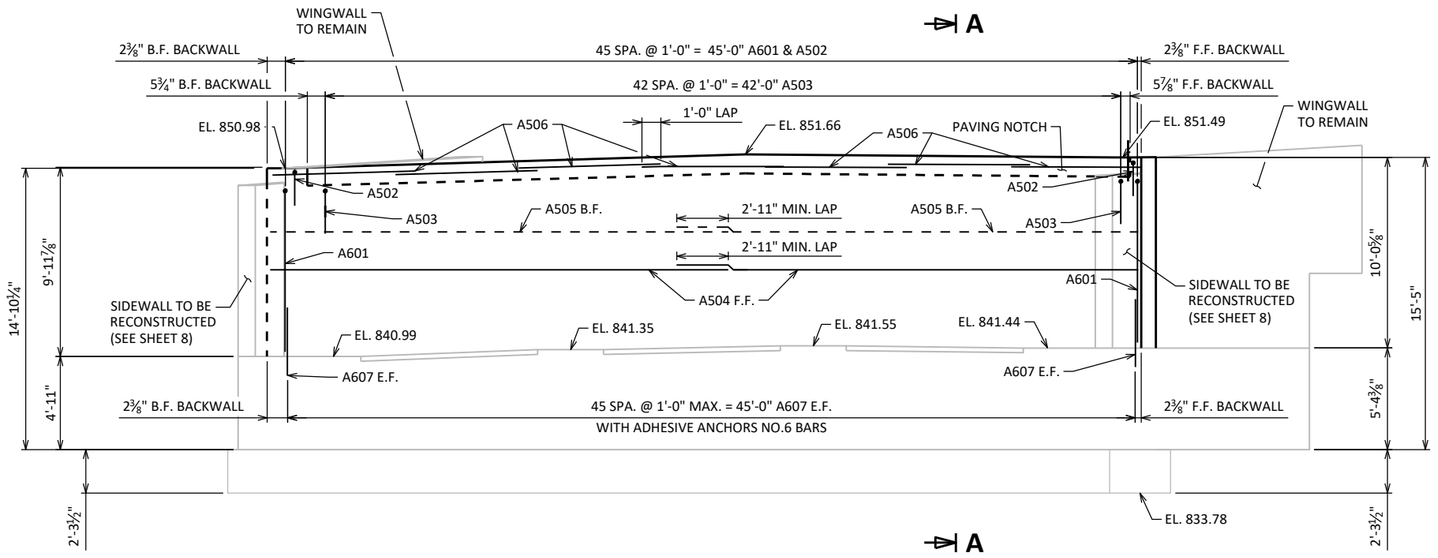
SCALE = 4

8

8

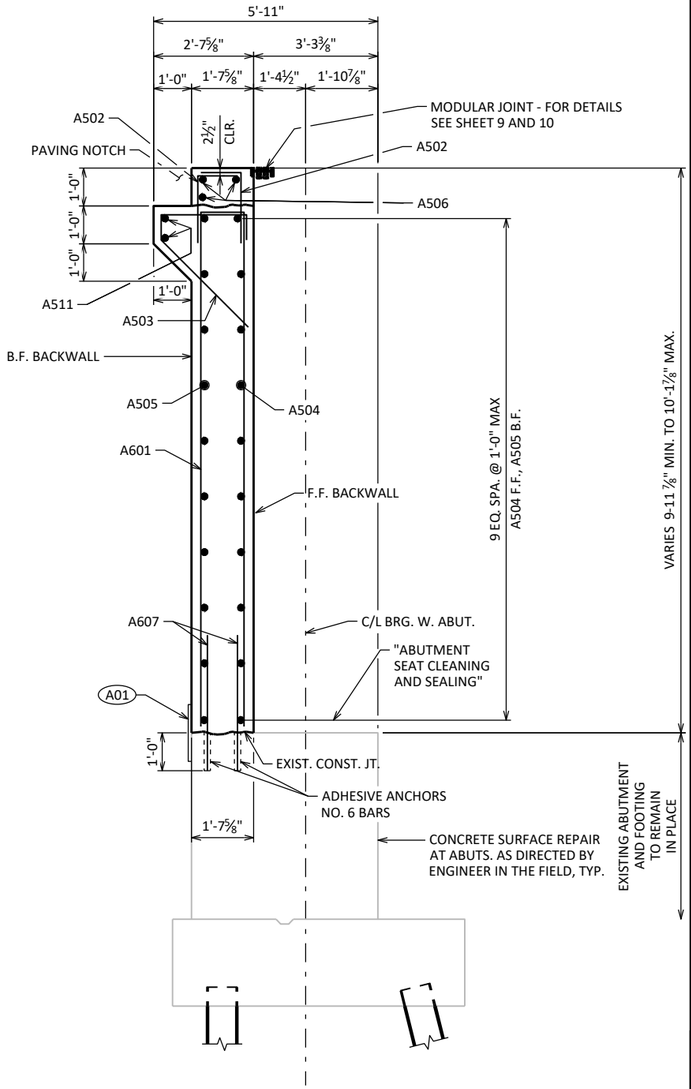
STATE PROJECT NUMBER

1050-02-73

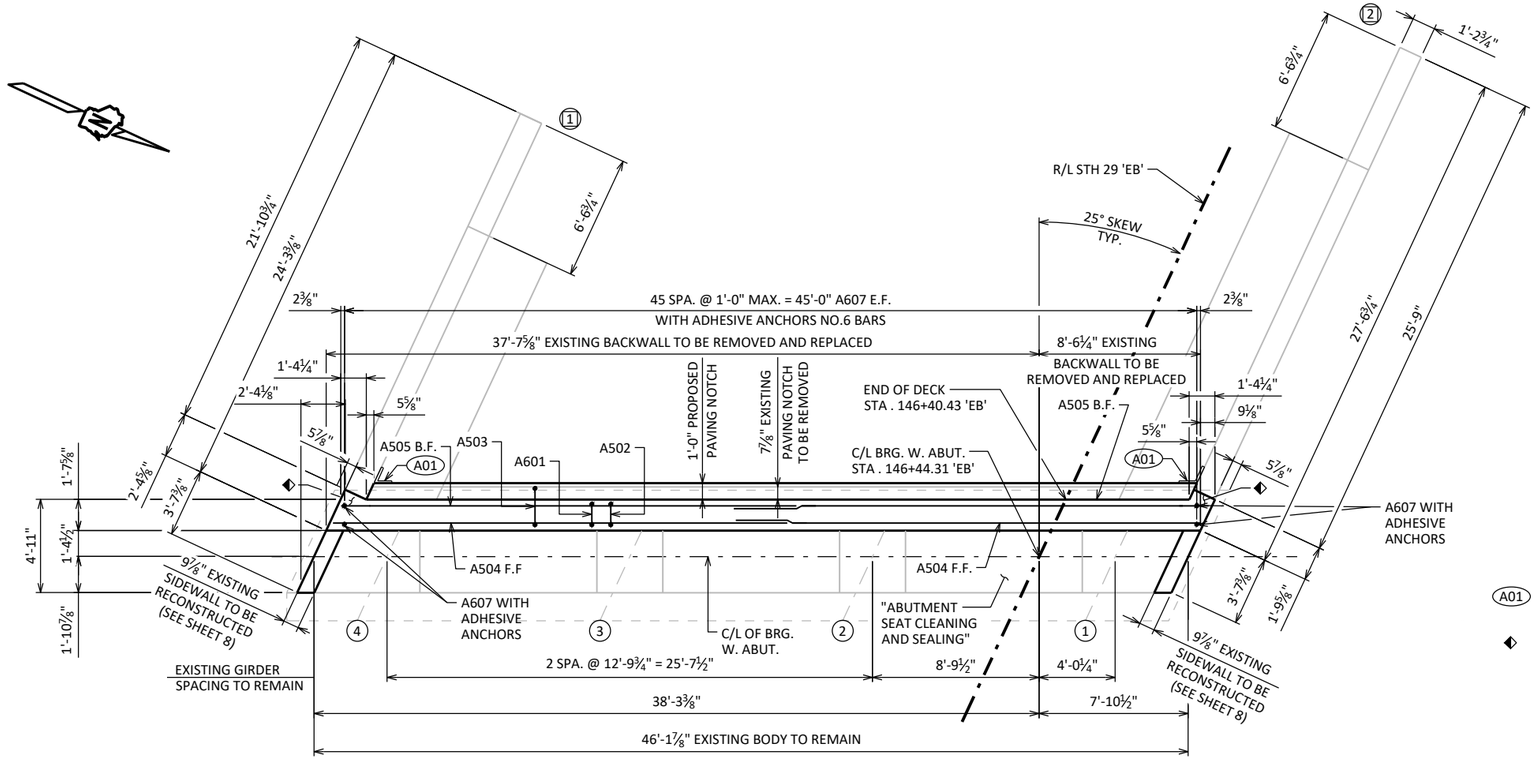


ELEVATION

(LOOKING WEST)



SECTION A-S



PLAN

LEGEND

(A01) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.

◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT

SHEET 6 OF 18

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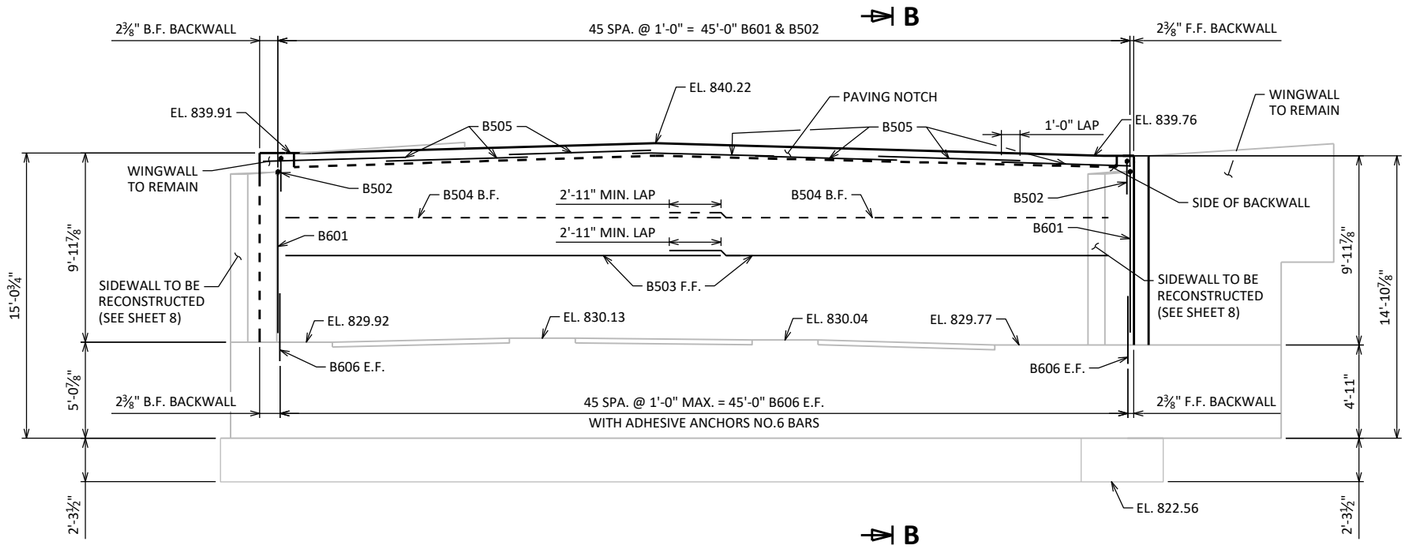
8

8

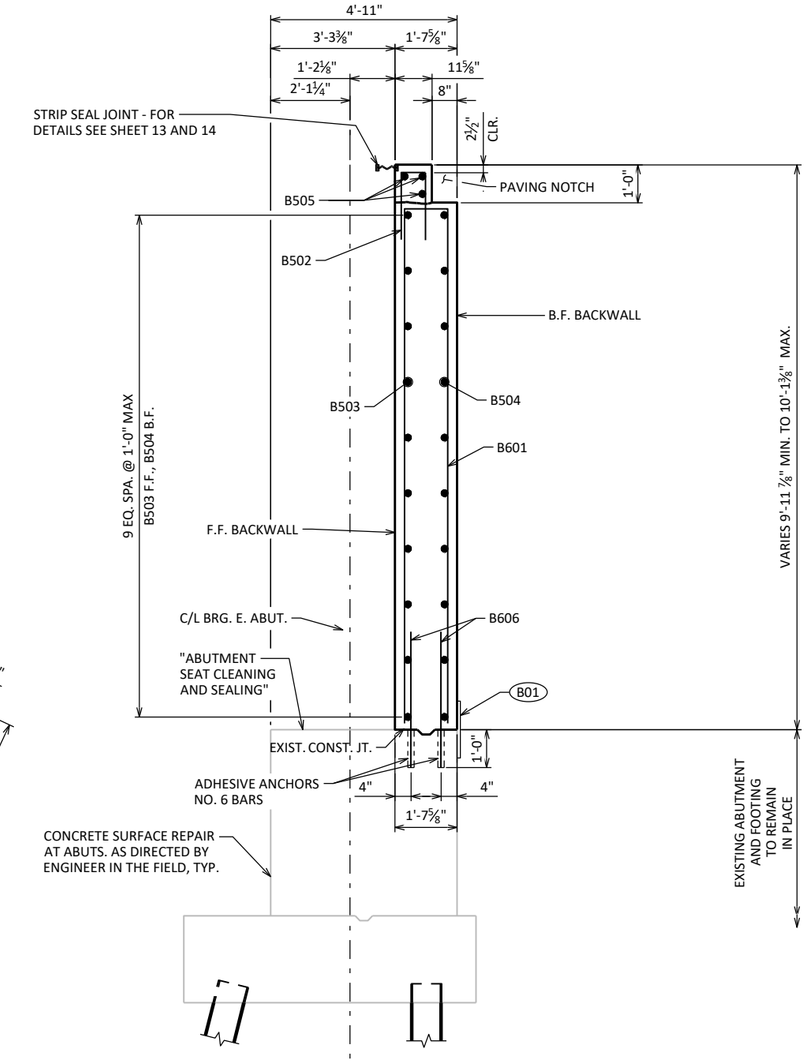
STATE PROJECT NUMBER

1050-02-73

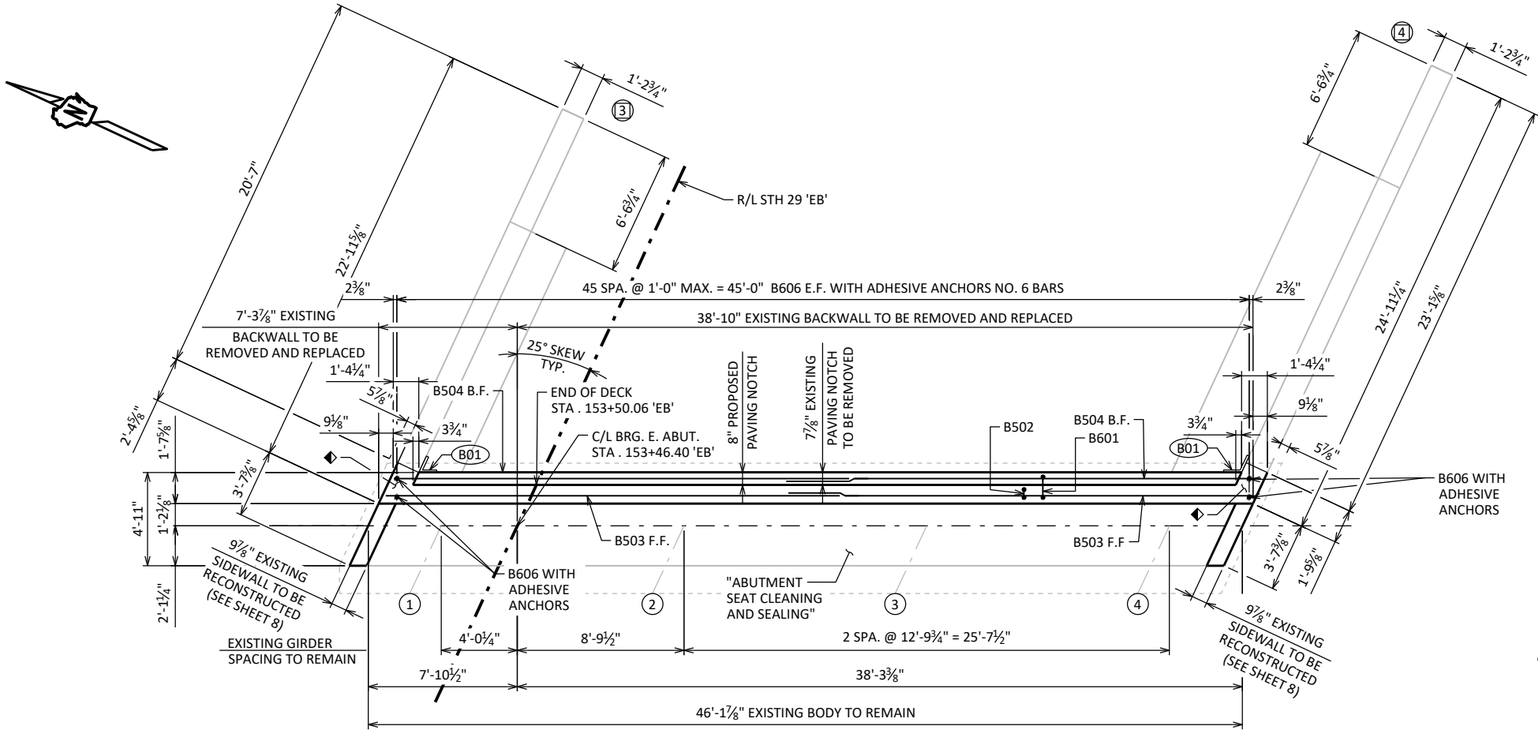


ELEVATION

(LOOKING EAST)



SECTION B-B



PLAN

LEGEND

(B01) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.

◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT

SHEET 7 OF 18

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STATE PROJECT NUMBER

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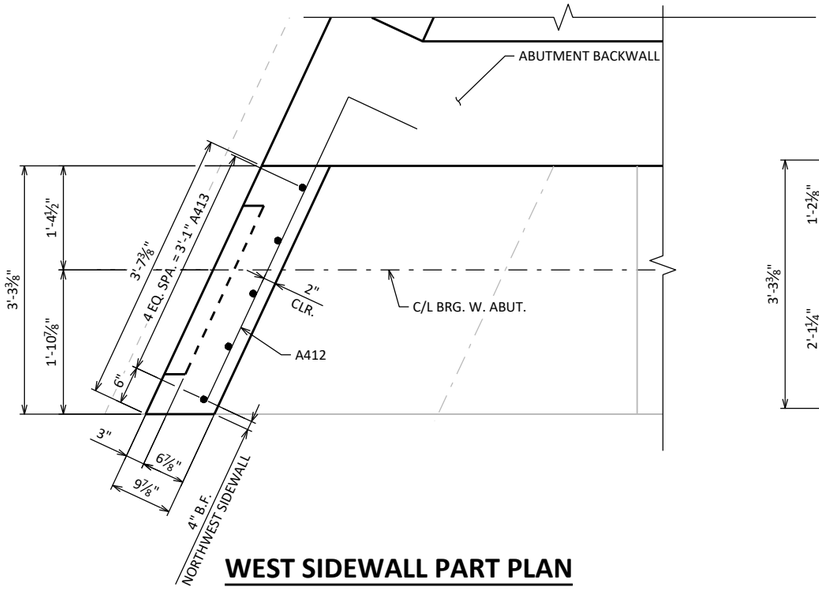
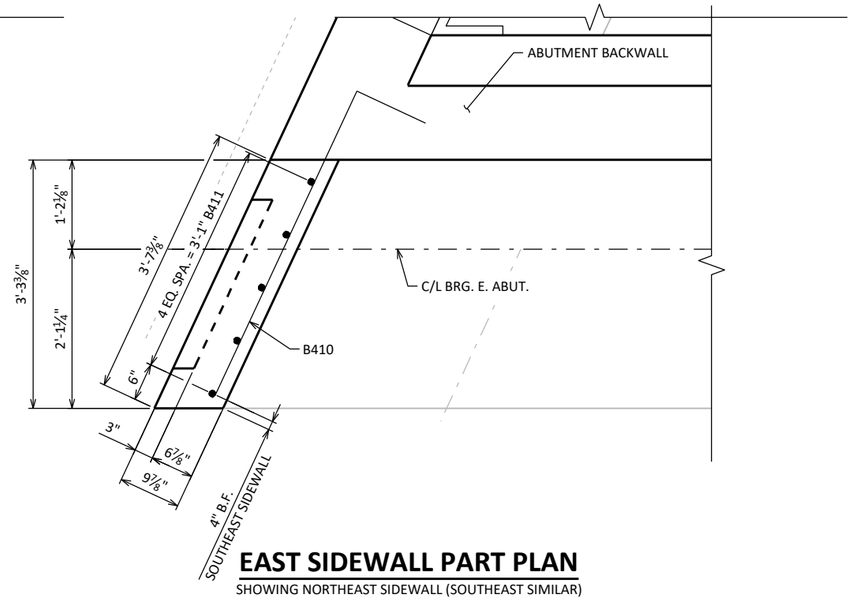


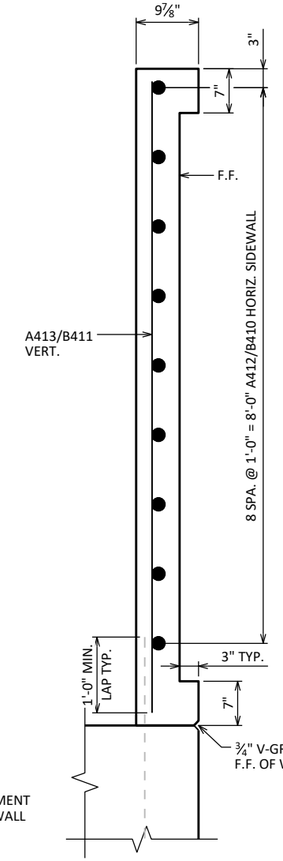
WEST SIDEWALL PART PLAN

SHOWING SOUTHWEST SIDEWALL (NORTHWEST SIMILAR)



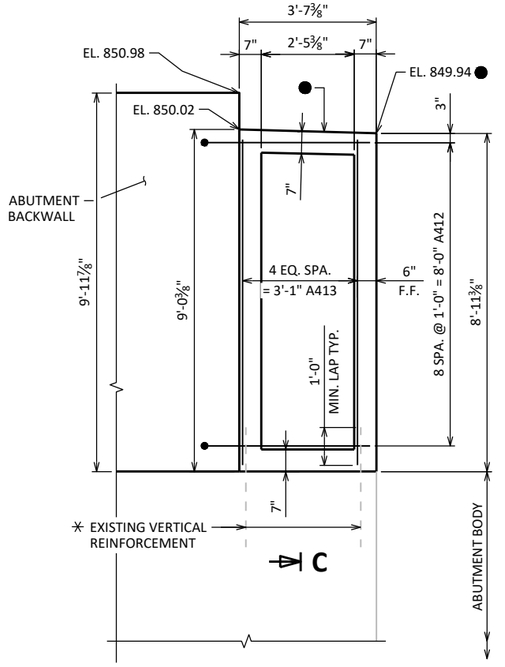
EAST SIDEWALL PART PLAN

SHOWING NORTHEAST SIDEWALL (SOUTHEAST SIMILAR)

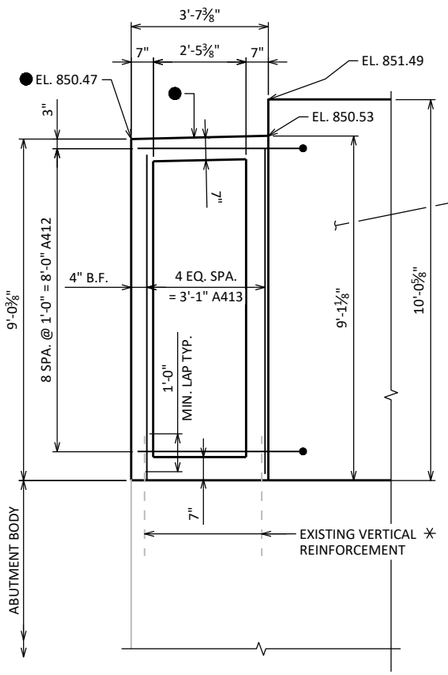


SECTION C-C

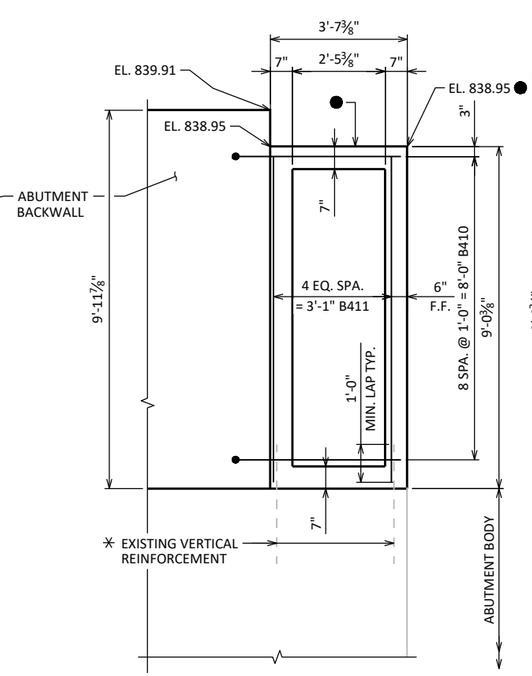
ALL SIDEWALLS SIMILAR



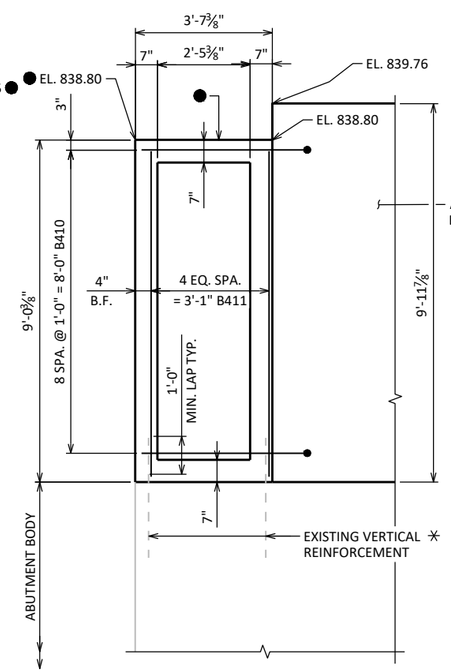
SOUTHWEST ELEVATION



NORTHWEST ELEVATION



NORTHEAST ELEVATION



SOUTHEAST ELEVATION

LEGEND

✳ EXISTING SIDEWALL VERTICAL REINFORCEMENT TO BE INCORPORATED INTO NEW SIDEWALL BY A MIN. OF A 24*BOLT DIAMETER LAP.

● TOP OF SIDEWALL IS 2" CLEAR OF BOTTOM OF DECK.

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DRAWN BY RAC | PLANS CK'D CJM

SIDEWALL RECONSTRUCTION

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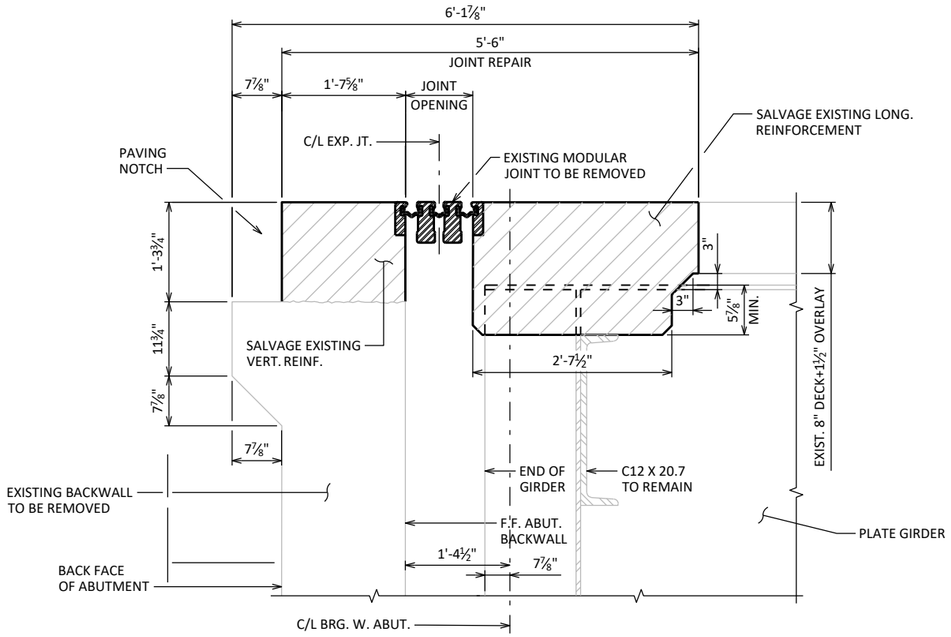
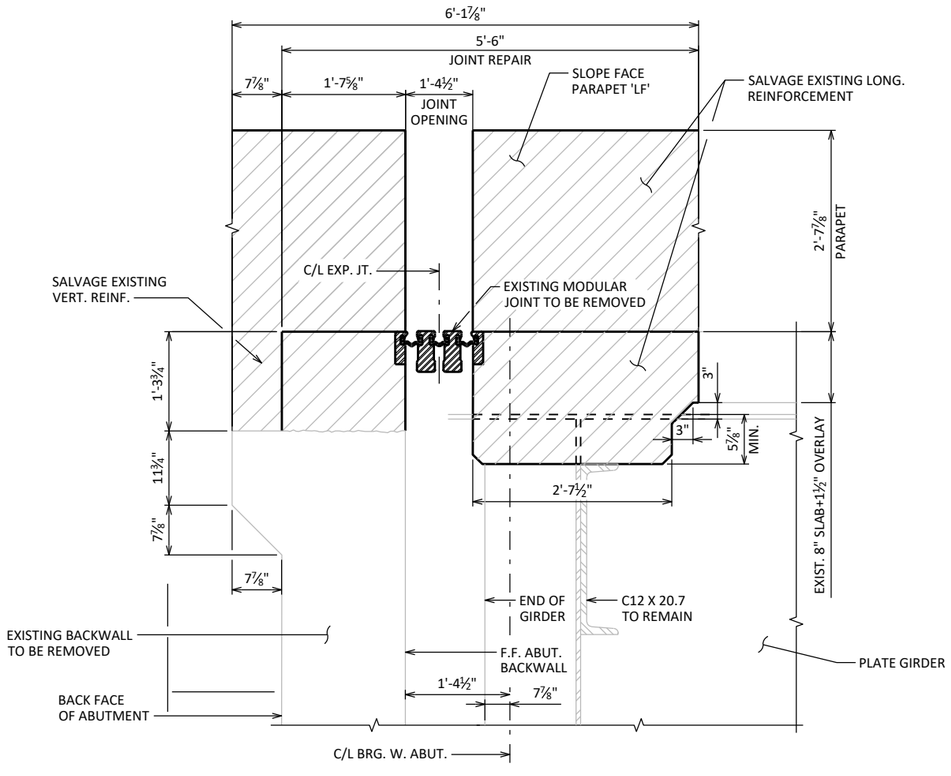


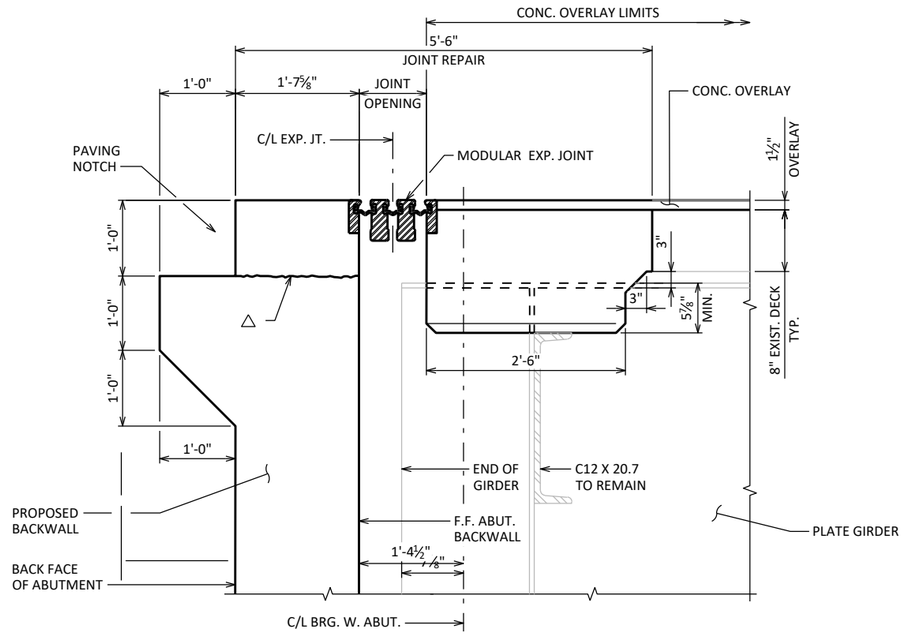
SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
SHOWING EDGE OF DECK REMOVALS AT W. ABUT.
NORMAL TO C/L SUBSTRUCTURE



PROPOSED SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE

LEGEND

LIMITS OF JOINT REPAIR AND REMOVAL AREA.

△ POUR CONCRETE ABOVE THE CONSTRUCTION JOINT AFTER OVERLAY PLACEMENT AND MATCH ELEVATION. STRIKE OFF AND LEAVE ROUGH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

JOINT REPAIR SECTIONS AT WEST ABUTMENT

SHEET 9 OF 18

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SCALE = 2.00

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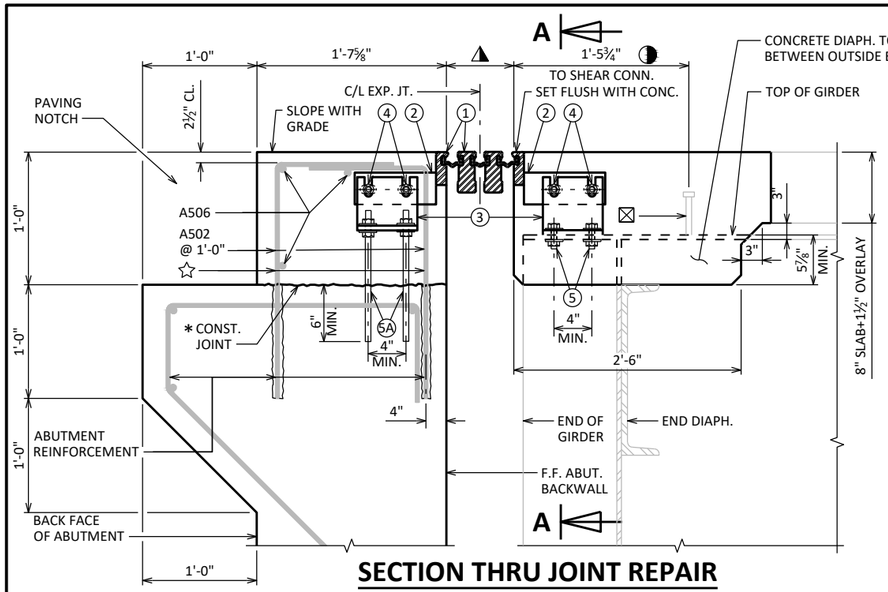
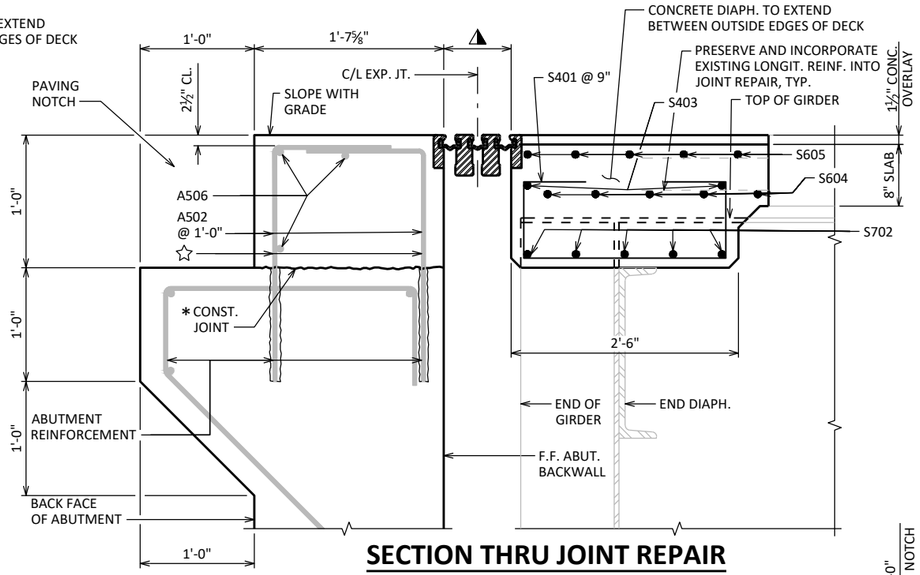
STATE PROJECT NUMBER

1050-02-73



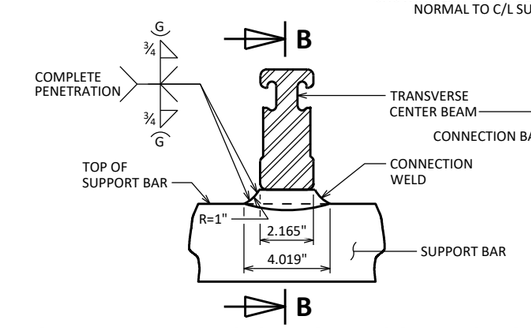
SECTION THRU JOINT REPAIR

SHOWING EXPANSION DEVICE COMPONENTS NORMAL TO C/L SUBSTRUCTURE

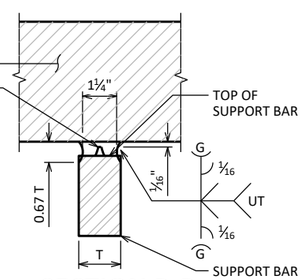


SECTION THRU JOINT REPAIR

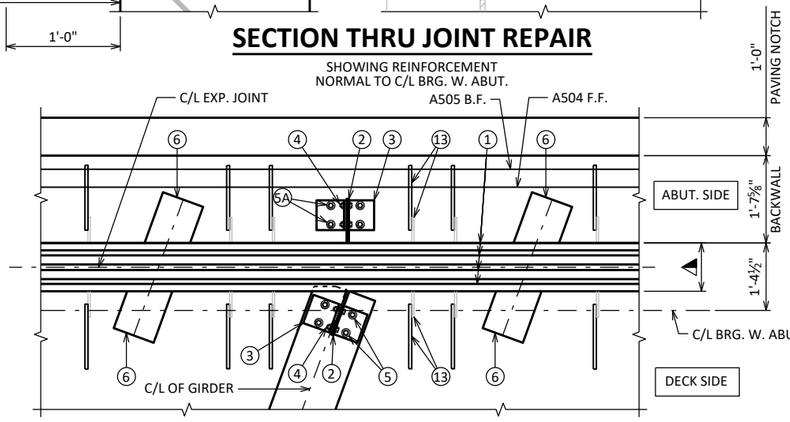
SHOWING REINFORCEMENT NORMAL TO C/L BRG. W. ABUT.



MODULAR EXPANSION JOINT CONNECTION DETAIL AND WELD SPECIFICATION



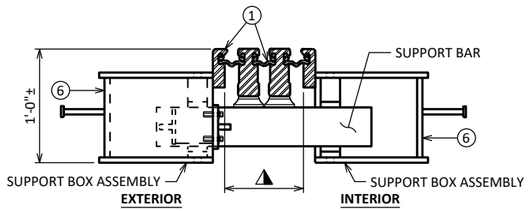
SECTION B-B



PART PLAN

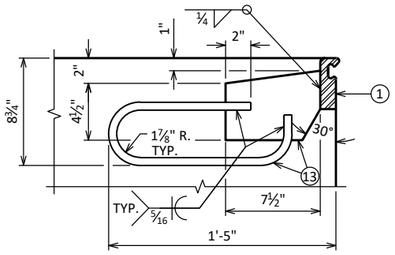
NOTE:
MODULAR EXPANSION DEVICE DESIGN AND DETAILS ARE SPECIFIC TO THE MANUFACTURER SELECTED FROM THOSE LISTED IN THE SPECIAL PROVISIONS.

SUPPORT BOXES ARE SHOWN FOR GENERAL INFORMATION AND LOCATION MAY VARY ACCORDING TO FABRICATOR DESIGN. SPACE SUPPORT BOXES TO MISS GIRDER TOP FLANGES WHEN POSSIBLE, BUT NOT TO EXCEED MAXIMUM SPACING PER SPECIAL PROVISIONS.



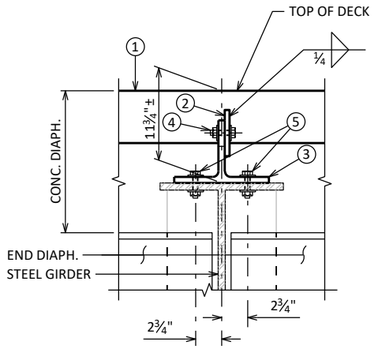
JOINT DETAIL

AT SUPPORT BAR & SUPPORT BOX ASSEMBLY



ANCHORAGE DETAIL

PLACE ADJACENT TO SUPPORT BOXES IN PAVING BLOCK @ ABUT. & IN DECK @ CONC. DIAPH.



SECTION A-A

LEGEND - WEST ABUTMENT

1. MODULAR EXPANSION JOINT DEVICE, 3 CELLS
2. ½" PLATE, ONE PER GIRDER MIN. PROVIDE 2 - 1" X 2" MIN. SLOTTED HOLES PLACED HORIZONTALLY FOR NO. 4.
3. WT 6 X 29 (OR EQUIVALENT BUILT UP T-SECTION). ONE PER GIRDER. PROVIDE 2 - 1" X 3" MIN. SLOTTED HOLES PLACED VERTICALLY IN WEB OF WT FOR BOLTS NO. 4
4. ¾" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. (A325 GALV.)
5. ¾" DIA. HIGH STRENGTH BOLTS WITH NUTS & WASHERS. FIELD DRILL HOLES IN GIRDER TOP FLANGE. (A325 GALV.)
5A. ¾" DIA. THREADED ROD WITH 2 NUTS & WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES. (GALV.)
6. SUPPORT BOX ASSEMBLY FOR SUPPORT BAR (SPA. PER MANUFACTURER). FABRICATE BOX FROM ½" PLATES
7. ⅜" BULKHEAD PLATE. WELD TO NO. 1, NO. 8 AND NO. 14. WHEN CONDUIT IS PRESENT IN PARAPET OR SIDEWALK, ACCOMMODATE FOR BY PROVIDING OPENING IN NO. 7
8. INSIDE PLATE. FABRICATE FROM ⅜" PLATE
9. OUTSIDE PLATE. FABRICATE FROM ⅝" PLATE
10. ⅞" SQUARE BAR. WELD TO NO. 8 AS SHOWN
11. ¾" DIA. X 4" LONG STUDS. WELD TO NO. 8, NO. 7 & NO. 14 AS SHOWN
12. ¾" DIA. X 2" STAINLESS STEEL FLAT CTSK. SLOTTED HEAD CAP SCREWS WITH ANTI-SEIZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE
13. ½" PLATE WITH ¾" DIA. LOOP ANCHOR FABRICATED AS SHOWN. SPACED AT MANUFACTURER'S SPEC.
14. INSIDE PLATE. FABRICATE FROM ⅝" PLATE
15. ADIPRENE BUTTON. SEE DETAIL. SET IN OUTSIDE PLATE

∗ POUR CONC. ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONC. IS IN PLACE. STRIKE OFF & LEAVE ROUGH.

◭ MANUFACTURER'S RECOMMENDED JOINT OPENING BASED ON THE TEMPERATURE ON THE DAY OF PLACEMENT PER TEMPERATURE TABLE. THE MODULAR EXPANSION DEVICE SHALL HAVE THE NUMBER OF CELLS AS INDICATED IN ①.

◑ DIMENSION IS PARALLEL TO C/L GIRDER.

☆ (2) COATED L-SHAPED ADHESIVE ANCHORS NO. 5 BAR. EMBED 12" IN CONCRETE. SPACE AT 1'-0". PLACE ADHESIVE ANCHORS AFTER MODULAR JOINT IS IN POSITION.

☒ IF SHEAR CONNECTOR(S) ARE DAMAGED DURING CONSTRUCTION, REPLACEMENT OF CONNECTORS WILL BE INCIDENTAL TO BID ITEM "JOINT REPAIR"

TEMP. TABLE

TEMPERATURE TABLE FOR SETTING JOINT OPENINGS TO BE DETERMINED BY JOINT MANUFACTURER WITH THE FOLLOWING DESIGN DATA:

1. ⅜" IN. OF MOVEMENT PER 10° F
2. MEDIAN TEMPERATURE OF 45° F
3. TEMP. RANGE IN TABLE FROM (-5)°F) TO (+95°F).

A TABLE OF JOINT OPENINGS BASED ON ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE GLAND.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

NO EXPANSION JOINT PROTRUSIONS PERMITTED ABOVE ROADWAY SURFACE, ON PARAPET ROADWAY FACE OR ABOVE SIDEWALK SURFACE (FOR RAISED SIDEWALK).

THE EXPANSION JOINT SEALS SHALL BE PLACED, BONDED & SEALED AS RECOMMENDED BY THE MANUFACTURER. FORM WORK SHALL BE PLACED BETWEEN THE SUPPORT BOXES TO PREVENT CONCRETE INTRUSION INTO THE SUPPORT BOX. A TECHNICAL REPRESENTATIVE OF THE MANUFACTURER SHALL BE PRESENT DURING INSTALLATION. PRIOR TO SETTING THE JOINT ASSEMBLY INTO POSITION, THE PROJECT ENGINEER SHALL DETERMINE THE PROPER JOINT OPENING.

EXPANSION JOINT EXTRUSIONS SHALL BE FABRICATED TO CONFORM TO ROADWAY CROWN & GRADE. FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST BARS, PLATES, WT-SECTION, ANCHORAGE LOOP, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THIS ASSEMBLY SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS, PARAPET PLATES, SIDEWALK PLATES, AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE MODULAR B-9-210", LF

BAR STEEL REINF. IN DECK AND CONC. DIAPHRAGM SHALL BE RESPACED AS NECESSARY TO ALLOW PLACEMENT OF JOINT ASSEMBLY. TOP TRANSVERSE BARS, ADJACENT TO MOD. JT., TO BE CUT AND PLACED BETWEEN JT. SUPPORT SYSTEM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (1 OF 3)

SHEET 10 OF 18
146

SCALE = 2.00

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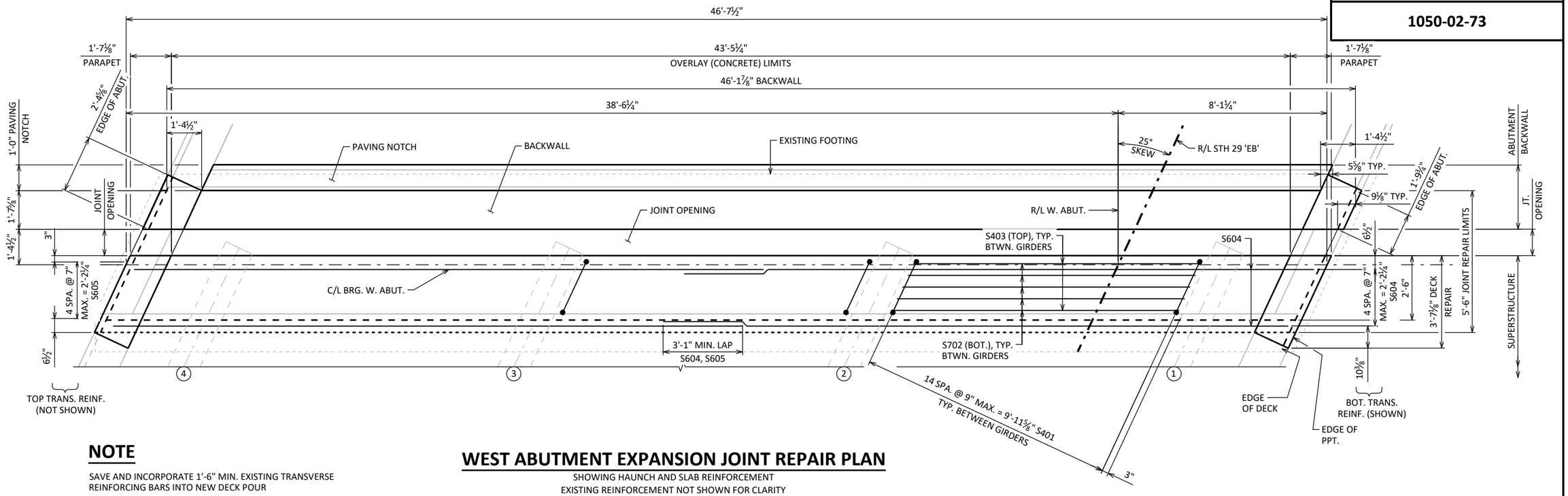
STATE PROJECT NUMBER

1050-02-73

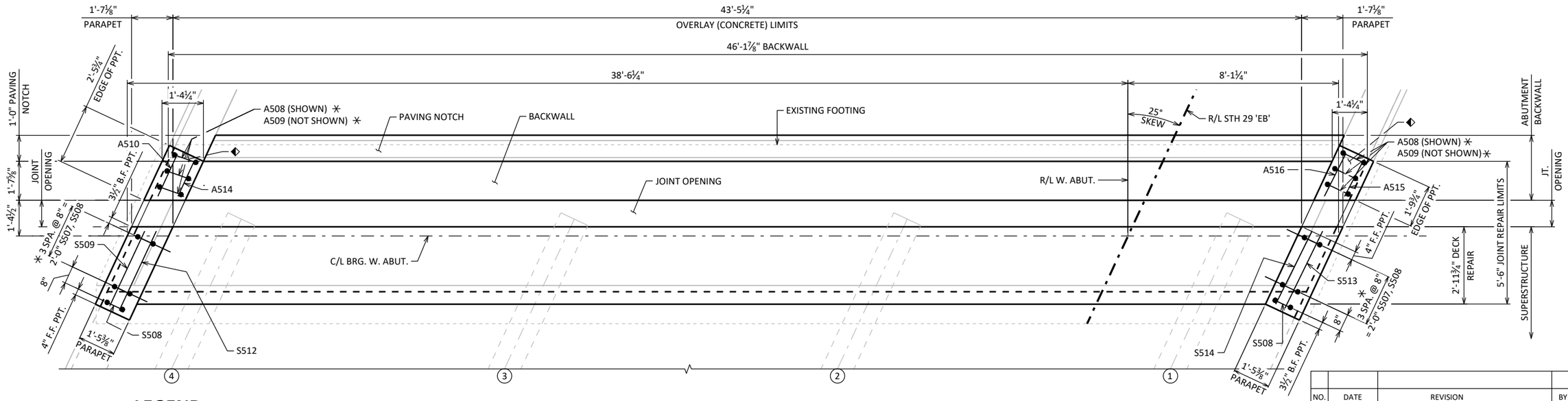


NOTE

SAVE AND INCORPORATE 1'-6" MIN. EXISTING TRANSVERSE REINFORCING BARS INTO NEW DECK POUR

WEST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING HAUNCH AND SLAB REINFORCEMENT
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 6 FOR ABUTMENT REINFORCEMENT



LEGEND

⚹ FAN PARAPET REINFORCEMENT AS NEEDED

◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

WEST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING PARAPET REINFORCEMENT
FOR PARAPET REINFORCEMENT SPACING ON ABUTMENT SIDE - SEE SHEET 17
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 6 FOR ABUTMENT REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (2 OF 3)

SHEET 11 OF 18

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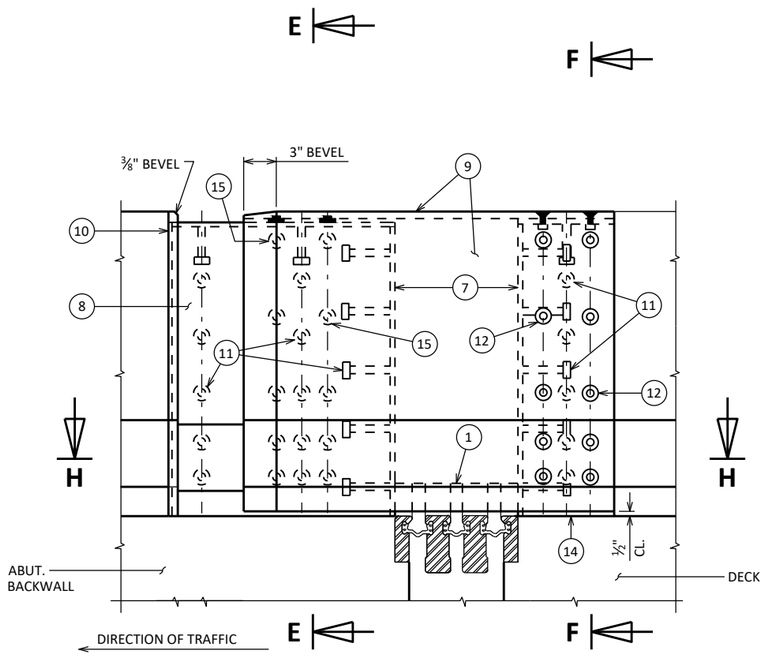
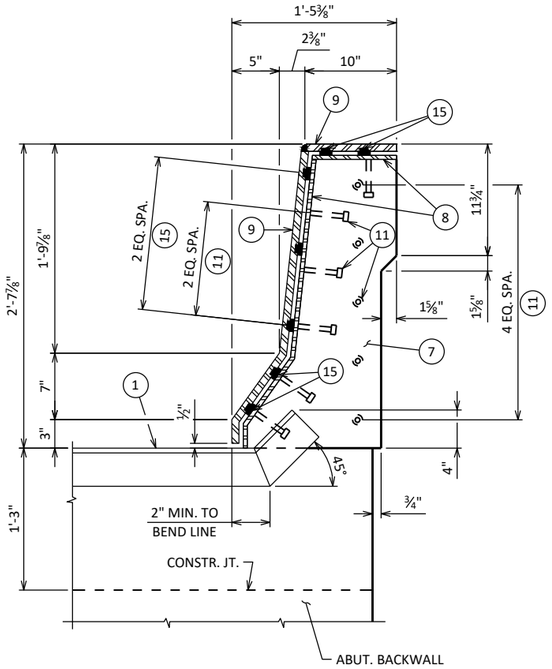
STATE PROJECT NUMBER

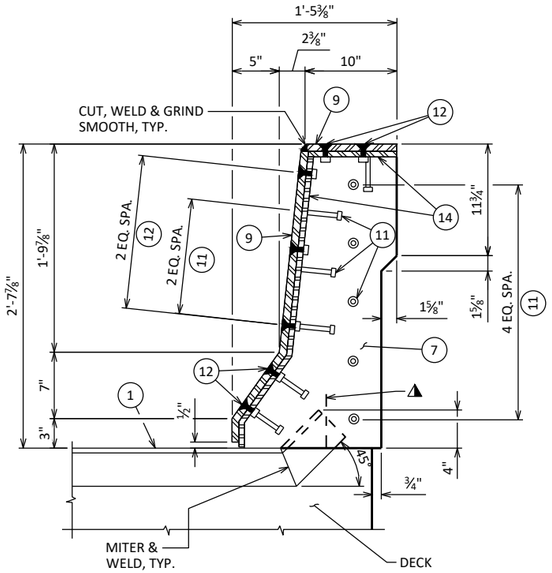
1050-02-73



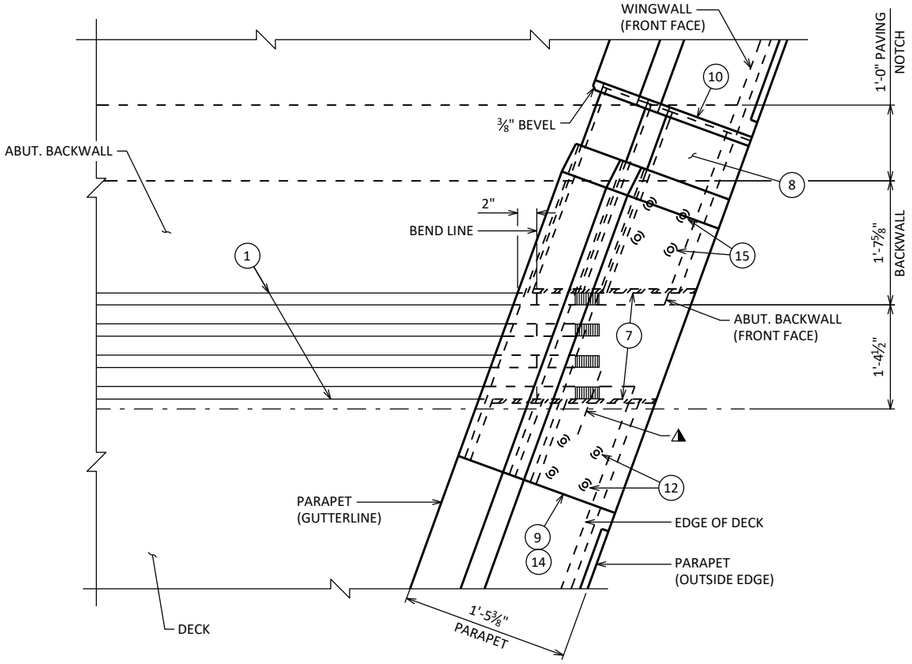
ELEVATION OF PARAPET



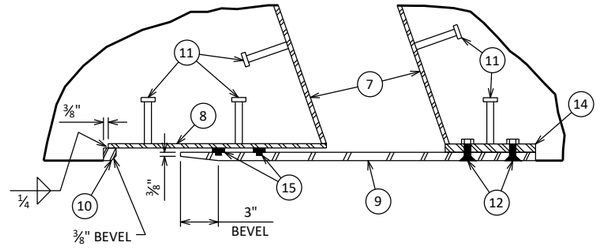
SECTION E-E



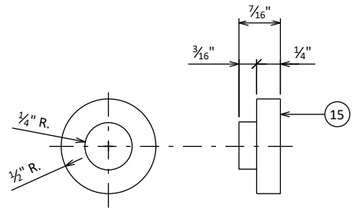
SECTION F-F



PLAN OF PARAPET



SECTION H-H



ADIPRENE BUTTON DETAIL

⚠ MITER EXTRUSION ENDS AS REQUIRED TO PROVIDE CLEARANCE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

WEST ABUTMENT JOINT REPAIR (3 OF 3)

SHEET 12 OF 18

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SCALE = 2.00

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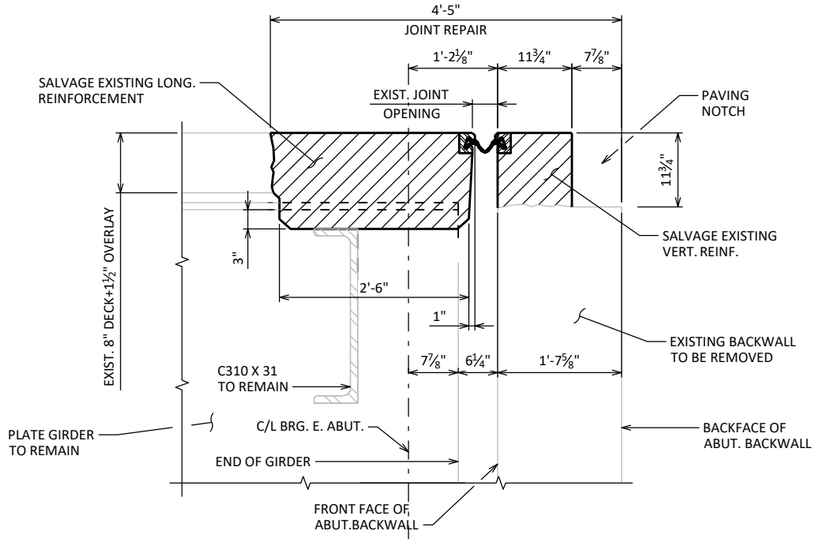
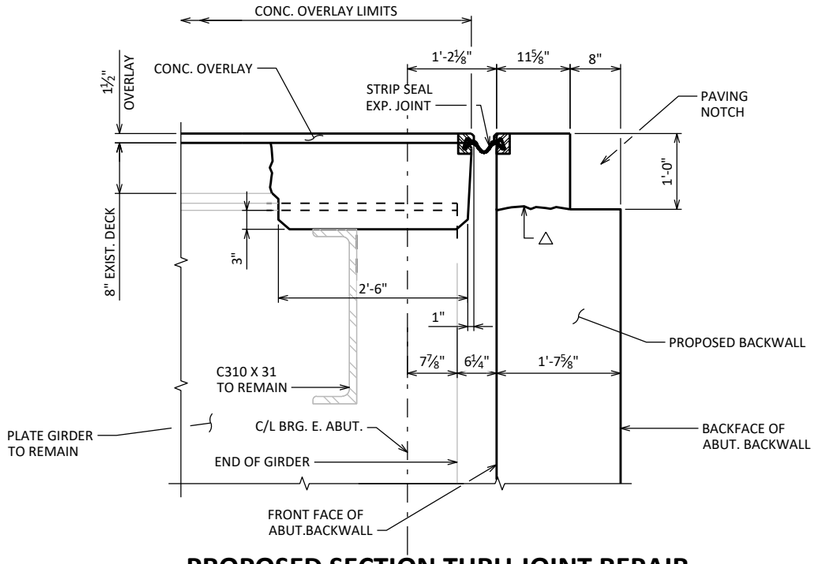
NORMAL TO C/L BRG. E. ABUT.

STATE PROJECT NUMBER
1050-02-73



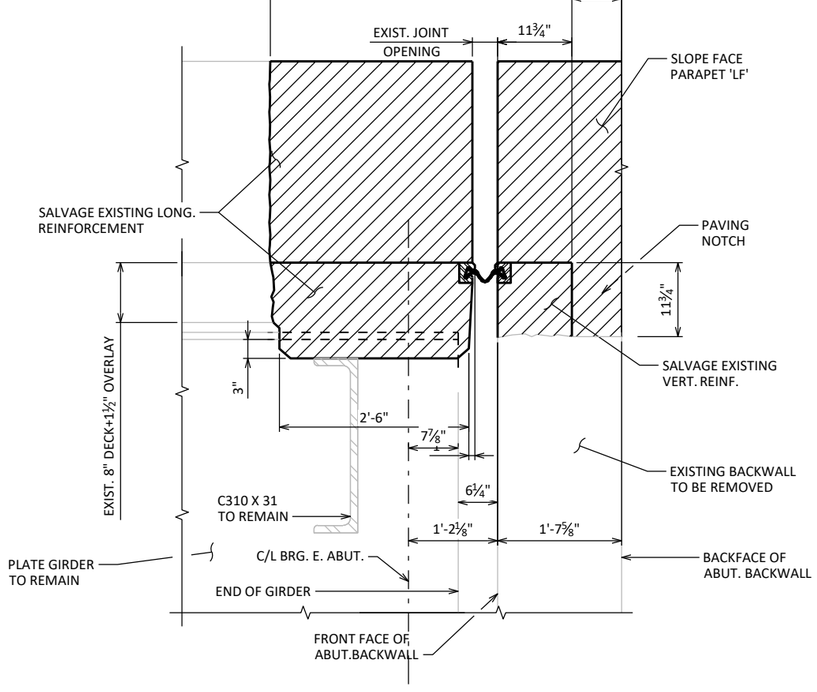
SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



PROPOSED SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
NORMAL TO C/L SUBSTRUCTURE



SECTION THRU JOINT REPAIR

LOOKING NORTHWEST
SHOWING EDGE OF DECK REMOVALS AT E. ABUT.
NORMAL TO C/L SUBSTRUCTURE

LEGEND

- LIMITS OF JOINT REPAIR AND REMOVAL AREA.
- △ POUR CONCRETE ABOVE THE CONSTRUCTION JOINT AFTER OVERLAY PLACEMENT AND MATCH ELEVATION. STRIKE OFF AND LEAVE ROUGH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

JOINT REPAIR SECTIONS AT EAST ABUTMENT

SHEET 13 OF 18

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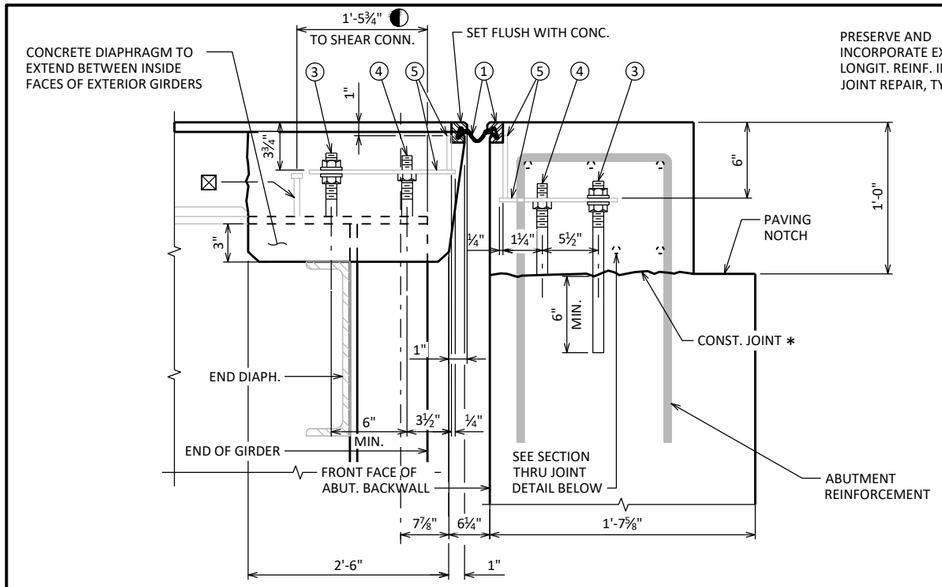
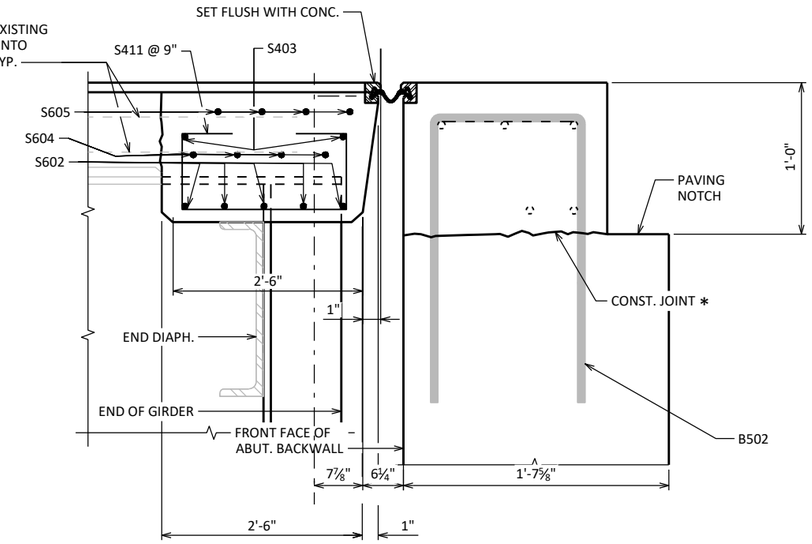
STATE PROJECT NUMBER

1050-02-73



SECTION THRU ABUTMENT JOINT REPAIR

SHOWING EXPANSION DEVICE COMPONENTS
NORMAL TO C/L BRG. E. ABUT.

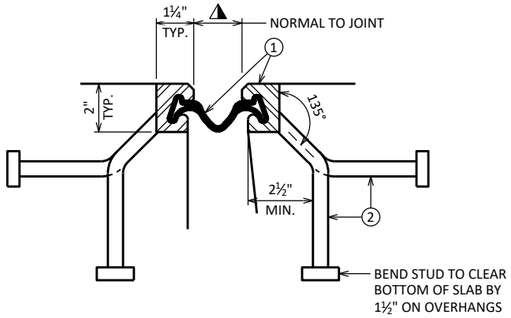


SECTION THRU ABUTMENT JOINT REPAIR

SHOWING REINFORCEMENT
NORMAL TO C/L BRG. E. ABUT.

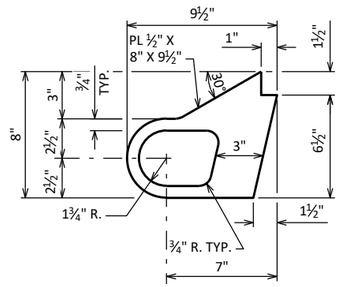
LEGEND - EAST ABUTMENT

1. NEOPRENE STRIP SEAL (5-INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 10½" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
11. SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.
12. GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

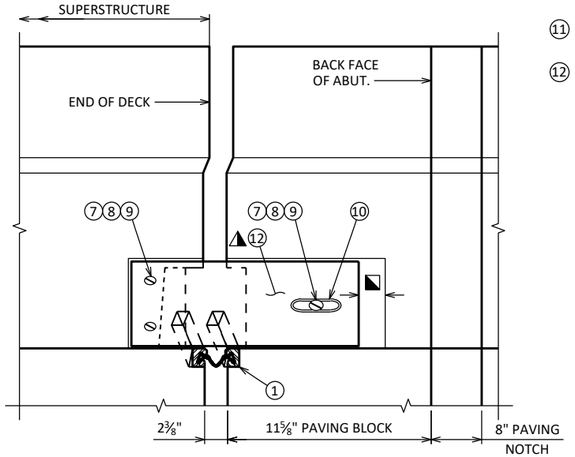


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



VIEW OF PARAPET PLATE FROM SIDEWALK

AT WINGS 3 AND 4

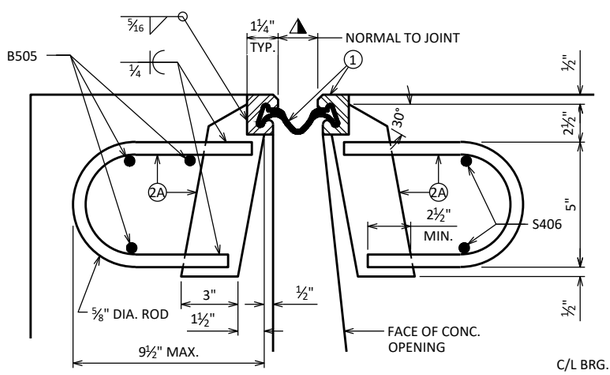
LEGEND

- ⚠ HORIZ. BOLT LOCATIONS FOR 12 SAME AS FOR SECTION B-B.
- ◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".
- * POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH
- ☒ IF SHEAR CONNECTOR(S) ARE DAMAGED DURING CONSTRUCTION, REPLACEMENT OF CONNECTORS WILL BE INCIDENTAL TO BID ITEM "JOINT REPAIR"
- ◐ DIMENSION IS PARALLEL TO C/L GIRDER

⚠ TEMPERATURE TABLE

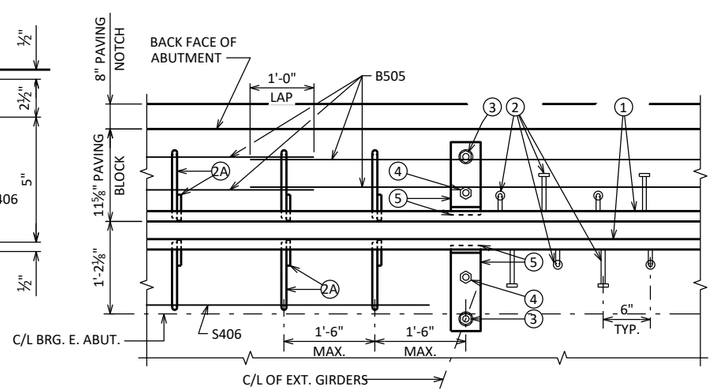
SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1⅝"
45°	2⅜"
-5°	3⅜"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-9-210", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUT. JOINT REPAIR (1 OF 3)

SHEET 14 OF 18

150

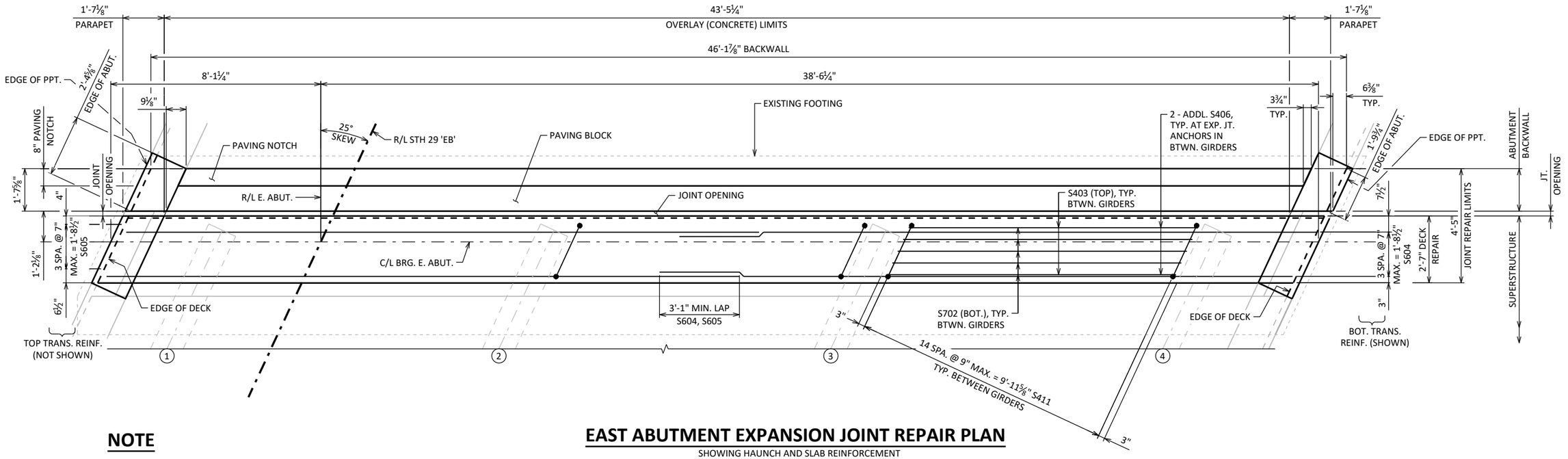
SCALE = 2.00

8

8

STATE PROJECT NUMBER

1050-02-73

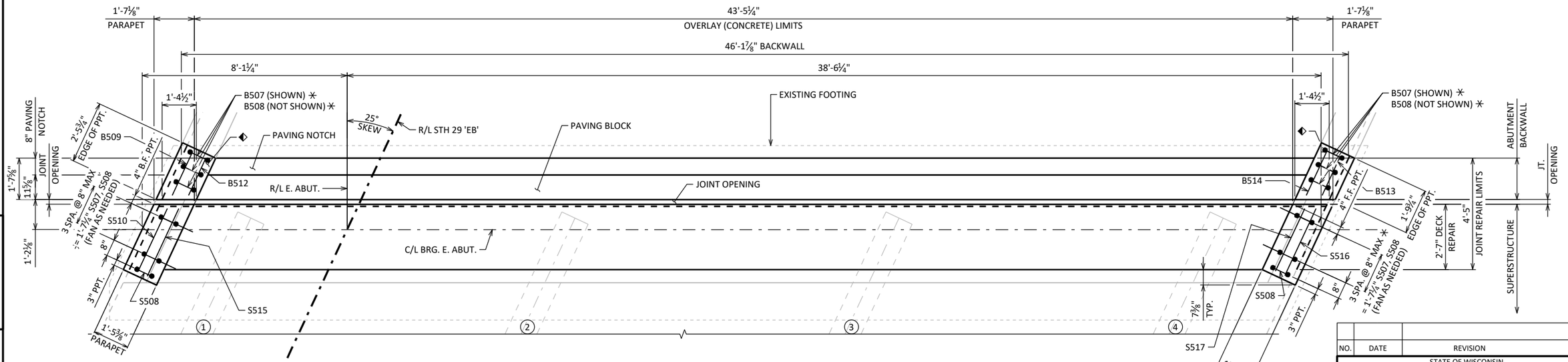


NOTE

SAVE AND INCORPORATE 1'-6" MIN. EXISTING TRANSVERSE REINFORCING BARS INTO NEW DECK POUR

EAST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING HAUNCH AND SLAB REINFORCEMENT
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 7 FOR ABUTMENT REINFORCEMENT



EAST ABUTMENT EXPANSION JOINT REPAIR PLAN

SHOWING PARAPET REINFORCEMENT
FOR PARAPET REINFORCEMENT SPACING ON ABUTMENT SIDE - SEE SHEET 16
EXISTING REINFORCEMENT NOT SHOWN FOR CLARITY
SEE SHEET 7 FOR ABUTMENT REINFORCEMENT

LEGEND

⚹ FAN PARAPET REINFORCEMENT AS NEEDED

◆ SALVAGE ALL HORIZONTAL REBAR ENCOUNTERED IN WINGWALL DURING BACKWALL REMOVAL FOR REUSE IN NEW BACKWALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT JOINT REPAIR (2 OF 3)

SHEET 15 OF 18

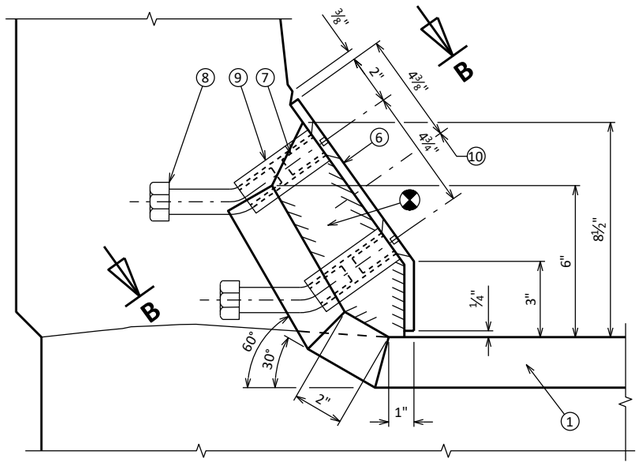
151

8

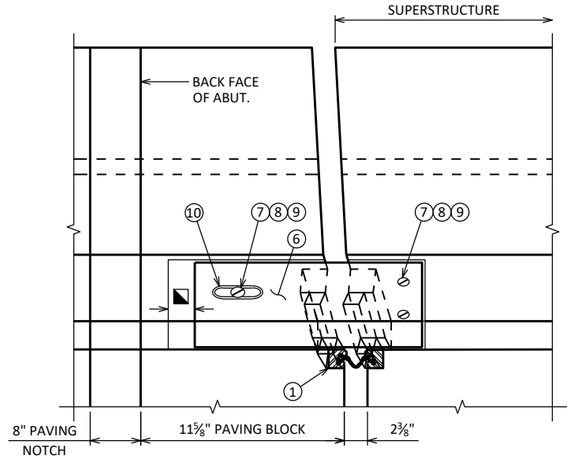
8

STATE PROJECT NUMBER

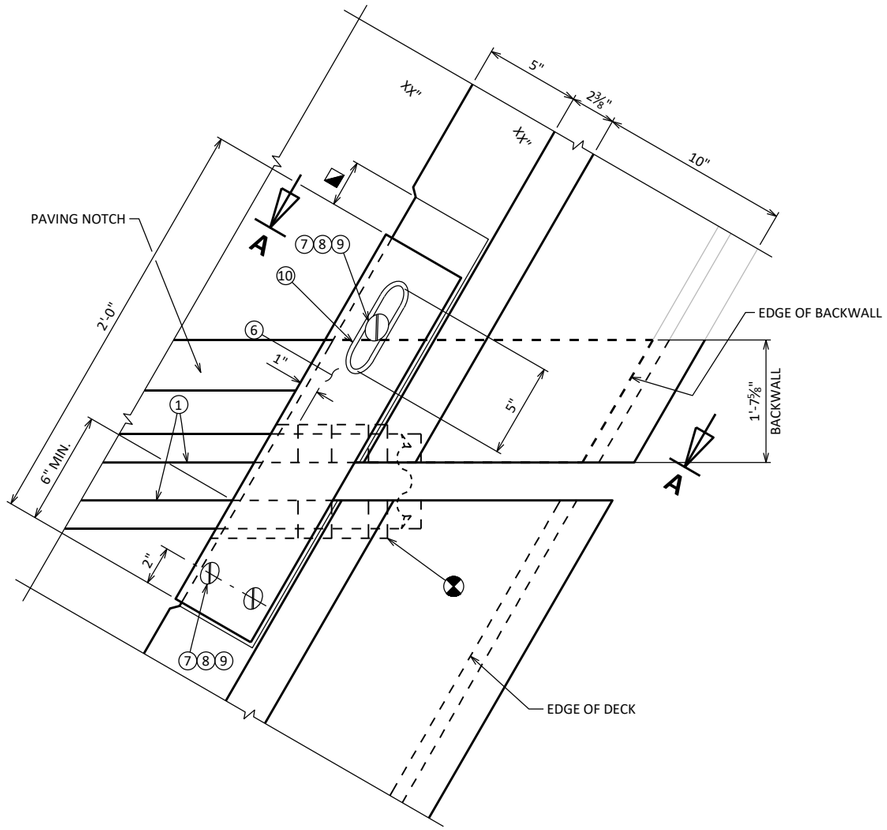
1050-02-73



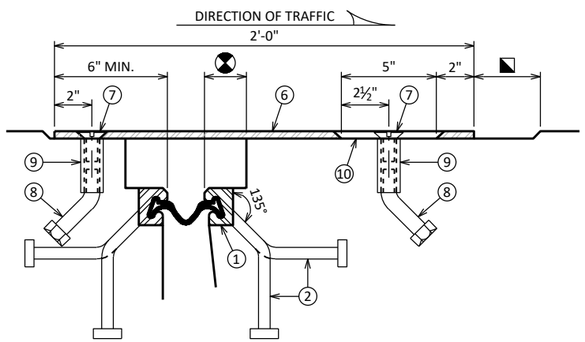
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

EAST ABUTMENT JOINT REPAIR (3 OF 3)

SHEET 16 OF 18

152

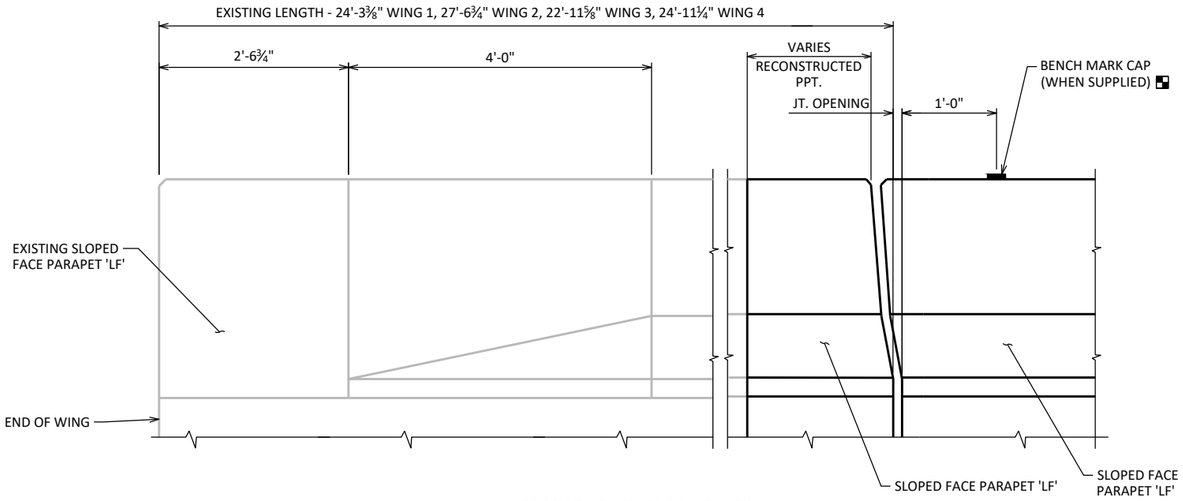
SCALE = 2.00

8

8

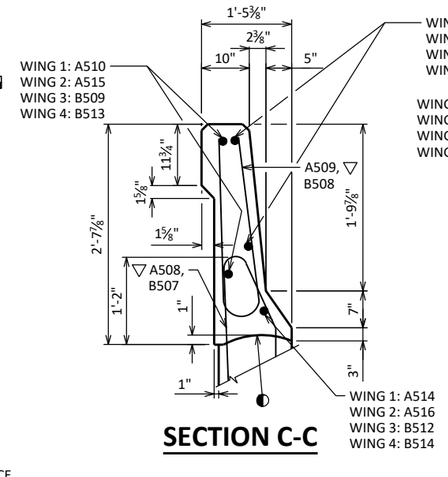
STATE PROJECT NUMBER

1050-02-73

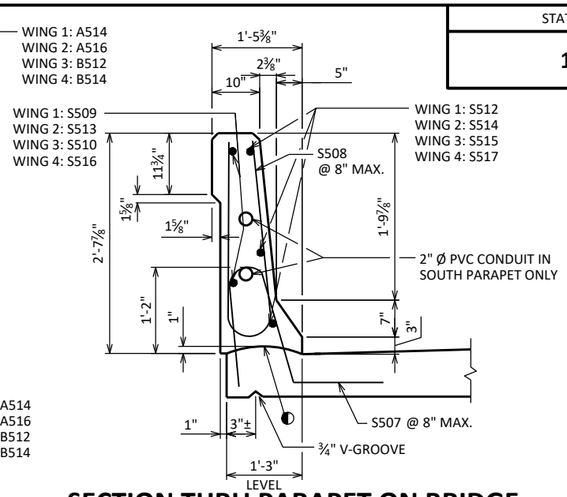


INSIDE ELEVATION

NW/SE CORNER SHOWN, NE/SW SIMILAR

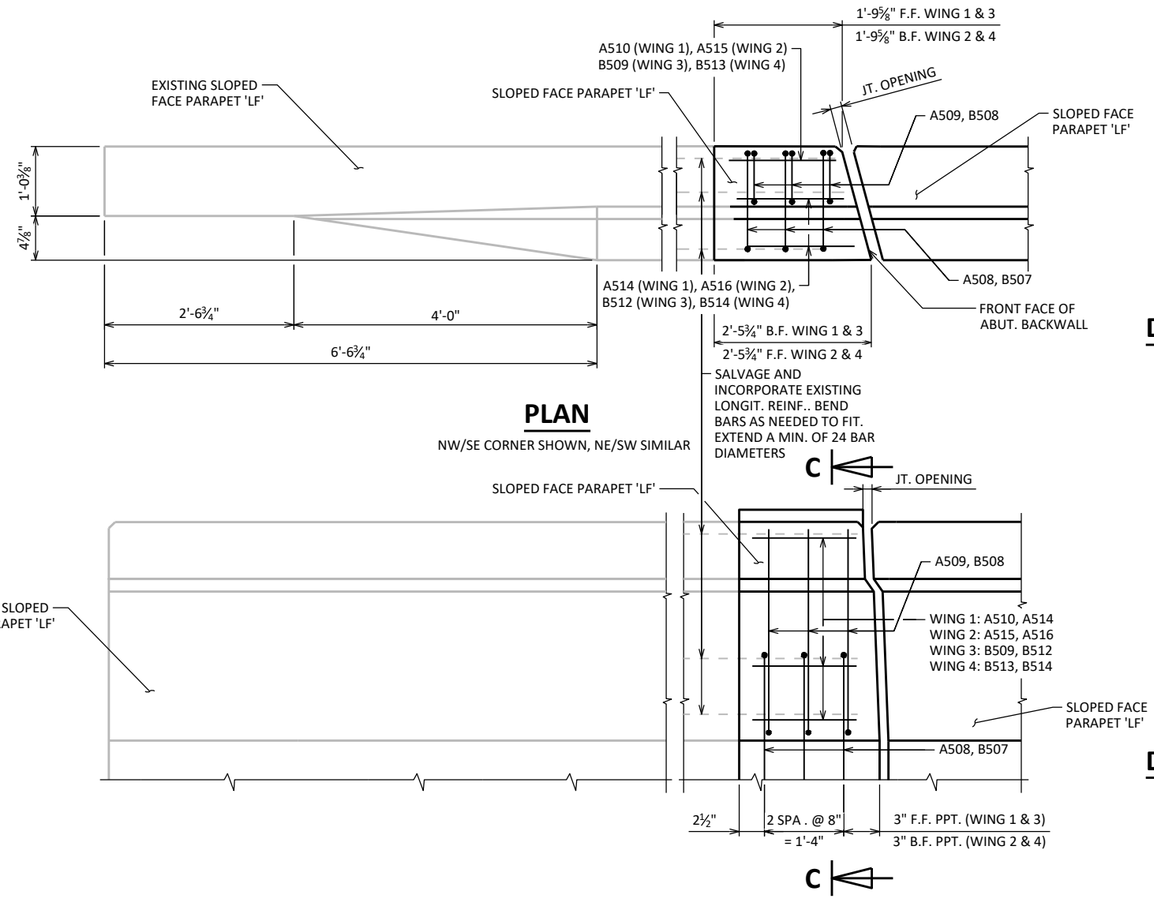


SECTION C-C



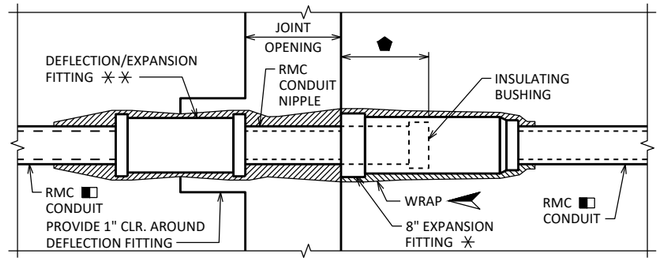
SECTION THRU PARAPET ON BRIDGE

SEE "ABUTMENT JOINT REPAIR PLAN" ON SHEETS 10 AND 14 FOR PLAN VIEW DETAILS



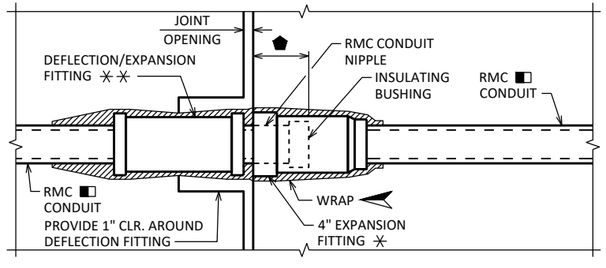
OUTSIDE ELEVATION

NW/SE CORNER SHOWN, NE/SW SIMILAR



DEFLECTION/EXPANSION AND 8" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 8" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY.



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY.

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

LEGEND

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ A508/B507 AND A509/B508 BARS TO BE TIED TO ABUTMENT BACKWALL STEEL BEFORE BACKWALL IS POURED.

◧ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

◥ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

✳ EXPANSION FITTING REQUIREMENTS (IF USED):
- 4" TOTAL MOVEMENT WITH BONDING JUMPER
- 8" TOTAL MOVEMENT WITH BONDING JUMPER

✳✳ DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

PARAPET REPAIR

SHEET 17 OF 18

153

SCALE = 2.00

8

8

STATE PROJECT NUMBER

1050-02-73

BILL OF BARS

FOR WEST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A601	X	46	18'-2"	X	BODY BACKWALL VERT.
A502	X	92	2'-10"	X	BODY BACKWALL VERT. TOP
A503	X	43	6'-10"	X	BODY BACKWALL VERT. PAVING BLOCK
A504	X	20	24'-4"		BODY BACKWALL HORIZ. F.F.
A505	X	20	24'-4"		BODY BACKWALL HORIZ. B.F.
A506	X	21	7'-6"		BODY BACKWALL HORIZ. TOP
A607	X	92	4'-2"		BACKWALL VERT. DOWELS E.F.
A508	X	6	4'-7"	X	PARAPET VERT.
A509	X	6	4'-10"	X	PARAPET VERT.
A510	X	2	1'-11"		PARAPET HORIZ. B.F.
A511	X	4	22'-11"		BODY BACKWALL HORIZ. @ CORBEL
A412	X	18	5'-4"	X	SIDEWALL HORIZ.
A413	X	10	8'-7"		SIDEWALL VERT.
A514	X	3	1'-6"		PARAPET HORIZ. F.F.
A515	X	2	1'-5"		PARAPET HORIZ. B.F.
A516	X	3	1'-7"		PARAPET HORIZ. F.F.

BILL OF BARS

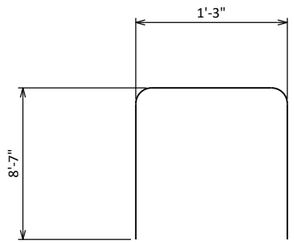
FOR EAST ABUTMENT

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B601	X	46	18'-2"	X	BODY BACKWALL VERT.
B502	X	46	4'-0"	X	BODY BACKWALL VERT. TOP
B503	X	20	24'-4"		BODY BACKWALL HORIZ. F.F.
B504	X	20	24'-4"		BODY BACKWALL HORIZ. B.F.
B505	X	21	7'-6"		BODY BACKWALL HORIZ. TOP
B606	X	92	4'-2"		BACKWALL VERT. DOWELS E.F.
B507	X	6	4'-7"	X	PARAPET VERT.
B508	X	6	4'-10"	X	PARAPET VERT.
B509	X	2	1'-11"		PARAPET HORIZ. B.F.
B410	X	18	5'-4"	X	SIDEWALL HORIZ.
B411	X	10	8'-7"		SIDEWALL VERT.
B512	X	3	1'-6"		PARAPET HORIZ. F.F.
B513	X	2	1'-5"		PARAPET HORIZ. B.F.
B514	X	3	1'-7"		PARAPET HORIZ. F.F.

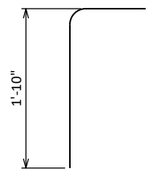
BILL OF BARS

FOR SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S401	X	45	5'-4"	X	HAUNCH VERT. @ W. ABUT.
S702	X	90	11'-2"		HAUNCH HORIZ. BOT.
S403	X	12	11'-2"		HAUNCH HORIZ. IN DECK SLAB
S604	X	20	24'-5"		DECK BOT. TRANS @ ABUT.
S605	X	20	24'-5"		DECK TOP TRANS. @ ABUT.
S406	X	12	12'-0"		DECK TRANS @ EXP. DEVICE
S507	X	16	4'-2"	X	PARAPET VERT. @ ABUT.
S508	X	20	4'-10"	X	PARAPET VERT. @ ABUT.
S509	X	2	3'-1"		PARAPET HORIZ. @ W. ABUT. B.F.
S510	X	2	2'-7"		PARAPET HORIZ. @ E. ABUT. B.F.
S411	X	45	5'-0"	X	HAUNCH VERT. @ E. ABUT.
S512	X	3	3'-2"		PARAPET HORIZ. @ W. ABUT. F.F.
S513	X	2	3'-5"		PARAPET HORIZ. @ W. ABUT. B.F.
S514	X	3	3'-1"		PARAPET HORIZ. @ W. ABUT. F.F.
S515	X	3	2'-9"		PARAPET HORIZ. @ E. ABUT. F.F.
S516	X	2	2'-11"		PARAPET HORIZ. @ E. ABUT. B.F.
S517	X	3	2'-10"		PARAPET HORIZ. @ E. ABUT. F.F.



A501



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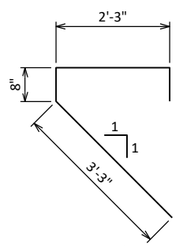

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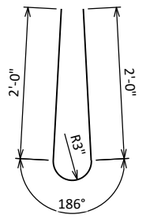
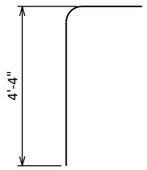
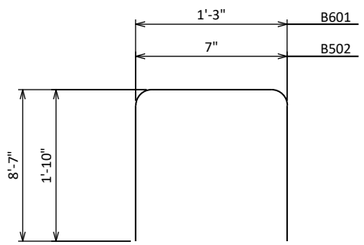


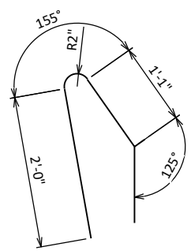
A509, B508



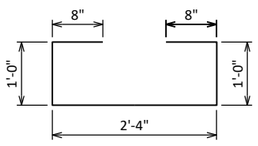
A412/B410



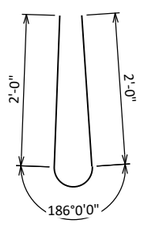
B501, B502



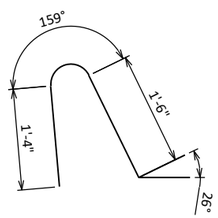
A508, B507



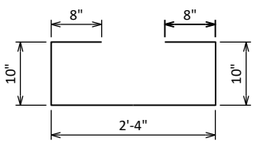
S401



S508



S507



S411

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-9-210

DRAWN BY RAC | PLANS CK'D JMR

BILL OF BARS

SHEET 18 OF 18

154

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.25	1.00 NOTE 5	1.00 NOTE 7	NOTE 8
35+04.07	3504.07	0.00	19.59	4.07	0.00	0.00	0	0	0	0	0	0	0	0	0
35+50.00	3550.00	45.93	19.84	4.02	0.00	0.00	34	7	0	0	34	0	0	0	27
36+00.00	3600.00	50	19.59	3.95	0.00	0.00	37	7	0	0	71	0	0	0	57
36+50.00	3650.00	50	19.37	3.59	0.00	0.00	36	7	0	0	107	0	0	0	86
37+00.00	3700.00	50	16.08	3.62	0.00	0.00	33	7	0	0	140	0	0	0	112
37+50.00	3750.00	50	16.51	0.00	6.23	0.00	30	3	6	0	170	8	0	0	132
38+00.00	3800.00	50	20.21	0.00	5.64	0.00	34	0	11	0	204	21	0	0	152
38+50.00	3850.00	50	17.30	4.03	30.53	0.00	35	4	33	0	239	63	0	0	142
39+00.00	3900.00	50	13.70	0.00	39.91	0.00	29	4	65	0	268	144	0	0	85
39+50.00	3950.00	50	4.53	0.00	40.18	0.00	17	0	74	0	285	236	0	0	10
40+00.00	4000.00	50	9.82	0.00	37.87	0.00	13	0	72	0	298	326	0	0	-67
40+50.00	4050.00	50	19.55	0.00	29.84	0.00	27	0	63	0	325	405	0	0	-119
41+00.00	4100.00	50	18.02	0.00	25.06	0.00	35	0	51	0	360	469	0	0	-148
41+50.00	4150.00	50	8.21	0.00	24.52	0.00	24	0	46	0	384	526	0	0	-181
42+00.00	4200.00	50	10.06	0.00	23.00	0.00	17	0	44	0	401	581	0	0	-219
42+50.00	4250.00	50	14.71	4.26	8.63	0.00	23	4	29	0	424	618	0	0	-237
43+00.00	4300.00	50	14.31	4.25	13.61	0.00	27	8	21	0	451	644	0	0	-244
43+50.00	4350.00	50	15.28	4.34	9.94	0.00	27	8	22	0	478	671	0	0	-252
44+00.00	4400.00	50	15.99	4.34	4.49	0.00	29	8	13	0	507	688	0	0	-248
44+50.00	4450.00	50	15.31	4.12	6.21	0.00	29	8	10	0	536	700	0	0	-239
45+00.00	4500.00	50	16.03	4.33	5.55	0.00	29	8	11	0	565	714	0	0	-232
45+50.00	4550.00	50	16.65	4.60	2.47	0.00	30	8	7	0	595	723	0	0	-219
46+00.00	4600.00	50	24.58	7.61	0.00	0.00	38	11	2	0	633	725	0	0	-194
46+50.00	4650.00	50	0.00	0.00	0.00	0.00	23	7	0	0	656	725	0	0	-178
47+00.00	4700.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
47+50.00	4750.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
48+00.00	4800.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
48+50.00	4850.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
49+00.00	4900.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
49+50.00	4950.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
50+00.00	5000.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
50+50.00	5050.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
51+00.00	5100.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
51+50.00	5150.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
52+00.00	5200.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
52+50.00	5250.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
53+00.00	5300.00	50	0.00	0.00	0.00	0.00	0	0	0	0	656	725	0	0	-178
53+54.54	5354.54	54.54	16.34	2.26	1.95	0.00	17	2	2	0	673	728	0	0	-166
54+00.00	5400.00	45.46	16.78	5.87	0.01	0.00	28	7	2	0	701	730	0	0	-147
54+50.00	5450.00	50	14.45	4.48	0.57	0.00	29	10	1	0	730	731	0	0	-129
55+00.00	5500.00	50	14.74	4.16	1.77	0.00	27	8	2	0	757	734	0	0	-113
55+50.00	5550.00	50	16.49	4.03	4.29	0.00	29	8	6	0	786	741	0	0	-99
56+00.00	5600.00	50	17.93	6.88	7.84	0.00	32	10	11	0	818	755	0	0	-91
56+50.00	5650.00	50	18.47	4.43	5.57	0.00	34	10	12	0	852	770	0	0	-82
57+00.00	5700.00	50	20.65	4.50	2.55	0.00	36	8	8	0	888	780	0	0	-64
57+50.00	5750.00	50	21.45	4.23	4.68	0.00	39	8	7	0	927	789	0	0	-42
58+00.00	5800.00	50	21.62	4.47	8.20	0.00	40	8	12	0	967	804	0	0	-25
58+50.00	5850.00	50	22.24	0.00	12.94	0.00	41	4	20	0	1008	829	0	0	-13
59+00.00	5900.00	50	21.14	0.01	18.51	0.00	40	0	29	0	1048	865	0	0	-9
59+50.00	5950.00	50	11.88	0.00	19.44	0.00	31	0	35	0	1079	909	0	0	-22
60+00.00	6000.00	50	9.87	0.00	18.86	0.00	20	0	35	0	1099	953	0	0	-46
60+50.00	6050.00	50	17.39	3.54	15.13	0.00	25	3	31	0	1124	991	0	0	-62
61+00.00	6100.00	50	52.08	0.03	0.00	0.00	64	3	14	0	1188	1009	0	0	-19
61+50.00	6150.00	50	18.72	4.39	9.40	0.00	66	4	9	0	1254	1020	0	0	32
62+00.00	6200.00	50	17.73	4.35	2.56	0.00	34	8	11	0	1288	1034	0	0	44
62+50.00	6250.00	50	16.81	4.45	0.02	0.00	32	8	2	0	1320	1036	0	0	66
63+00.00	6300.00	50	16.87	4.39	0.00	0.00	31	8	0	0	1351	1036	0	0	89
63+50.00	6350.00	50	19.20	4.45	0.00	0.00	33	8	0	0	1384	1036	0	0	114
64+00.00	6400.00	50	20.44	4.43	0.00	0.00	37	8	0	0	1421	1036	0	0	143
64+50.00	6450.00	50	18.92	4.27	0.00	0.00	36	8	0	0	1457	1036	0	0	171
64+56.00	6456.00	6	18.69	4.25	0.00	0.00	4	1	0	0	1461	1036	0	0	174

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT 1.00	EXPANDED FILL 1.25	EXPANDED EBS BACKFILL 1.00	REDUCED EBS IN FILL 1.00	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
142+84.70	14284.70	0.00	4.12	0.00	0.00	0.00	0	0.00	0	0	0	0	0	0	0
143+48.70	14348.70	64	4.17	0.00	0.47	0.00	10	0.00	1	0	10	1	0	0	9
143+73.68	14373.68	24.98	4.36	0.00	0.00	0.00	4	0.00	0	0	14	1	0	0	13
143+98.81	14398.81	25.13	4.31	0.00	0.00	0.00	4	0.01	0	0	18	1	0	0	17
144+53.56	14453.56	54.75	4.70	0.00	0.07	0.00	9	0.00	0	0	27	1	0	0	26
145+03.56	14503.56	50	3.70	0.00	0.48	0.00	8	0.00	1	0	35	3	0	0	32
145+53.56	14553.56	50	3.57	0.00	0.72	0.00	7	0.00	1	0	42	4	0	0	38
146+03.56	14603.56	50	4.25	0.00	0.10	0.00	7	0.00	1	0	49	5	0	0	44
146+34.45	14634.45	30.89	6.12	0.00	2.27	0.00	6	0.00	1	0	55	6	0	0	49

9

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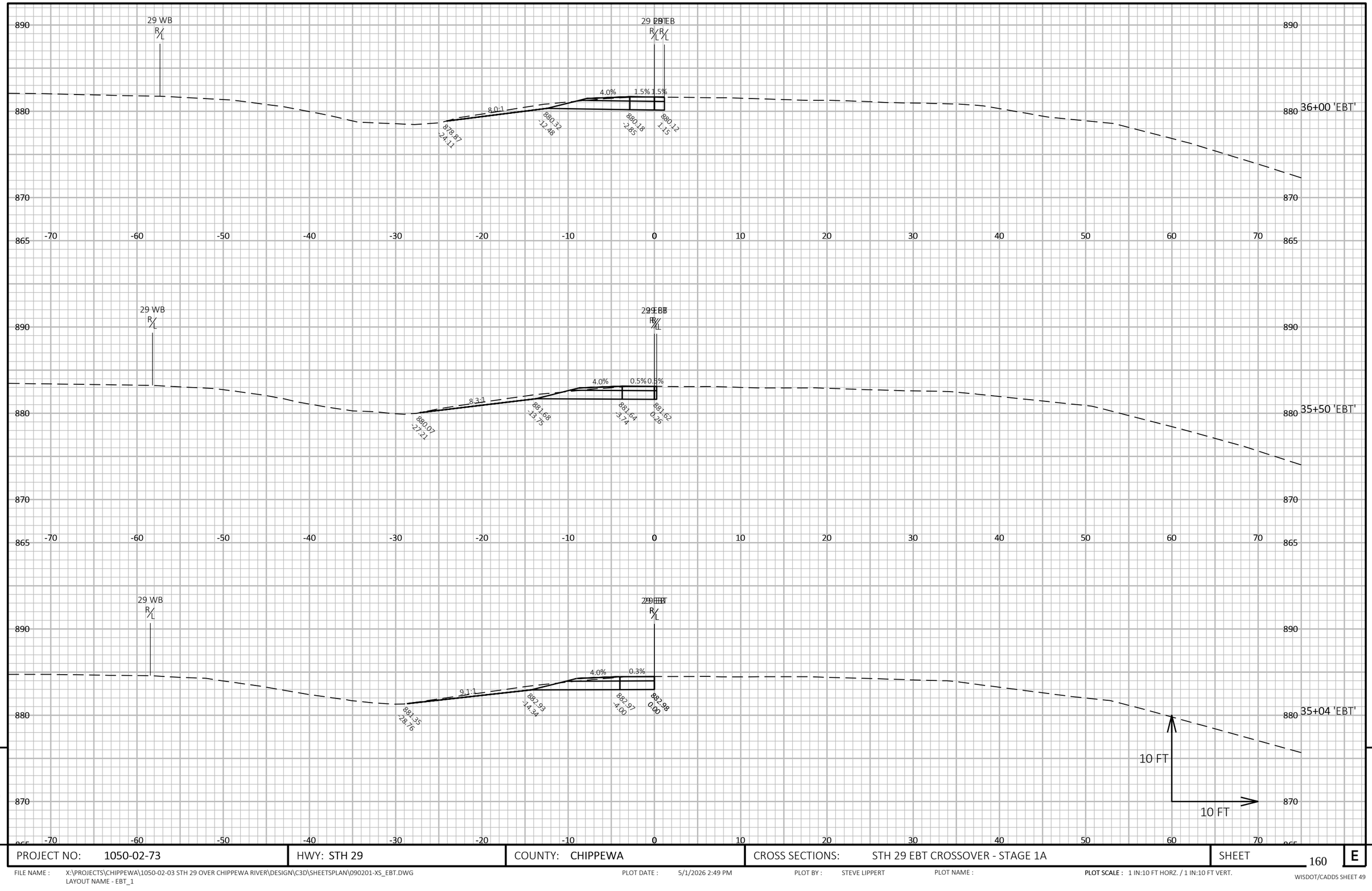
PROJECT NO: 1050-02-73 | HWY: STH 29 | COUNTY: CHIPPEWA | EARTHWORK DATA - STAGE 1B | SHEET 156 | E

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	EXPANDED EBS BACKFILL 1.00 NOTE 5	REDUCED EBS IN FILL 1.00 NOTE 7	MASS ORDINATE NOTE 8
34+50.00	3450.00	0.00	19.79	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0
35+00.00	3500.00	50	15.66	0.00	0.37	0.00	33	0	0	0	33	0	0	0	33
35+50.00	3550.00	50	15.90	0.00	2.20	0.00	29	0	2	0	62	3	0	0	60
36+00.00	3600.00	50	17.13	0.00	4.65	0.00	31	0	6	0	93	10	0	0	83
36+50.00	3650.00	50	19.86	0.00	5.17	0.00	34	0	9	0	127	21	0	0	106
37+00.00	3700.00	50	20.96	0.00	5.79	0.00	38	0	10	0	165	34	0	0	131
37+50.00	3750.00	50	20.34	0.00	10.13	0.00	38	0	15	0	203	53	0	0	151
38+00.00	3800.00	50	87.91	0.44	0.00	0.00	100	0	9	0	303	64	0	0	239
38+50.00	3850.00	50	66.14	0.96	1.46	0.00	143	1	1	0	446	65	0	0	380
39+00.00	3900.00	50	71.37	0.94	1.39	0.00	127	2	3	0	573	69	0	0	501
39+50.00	3950.00	50	75.90	0.00	0.38	0.00	136	1	2	0	709	71	0	0	634
40+00.00	4000.00	50	74.58	0.00	0.04	0.00	139	0	0	0	848	71	0	0	773
40+50.00	4050.00	50	55.63	0.00	0.80	0.00	121	0	1	0	969	73	0	0	893
41+00.00	4100.00	50	35.05	0.00	2.03	0.00	84	0	3	0	1053	76	0	0	973
41+50.00	4150.00	50	17.19	0.42	2.18	0.00	48	0	4	0	1101	81	0	0	1016
42+00.00	4200.00	50	8.88	1.89	10.78	0.00	24	2	12	0	1125	96	0	0	1023
42+50.00	4250.00	50	14.71	0.45	18.68	0.00	22	2	27	0	1147	130	0	0	1009
43+00.00	4300.00	50	16.60	0.00	20.43	0.00	29	0	36	0	1176	175	0	0	993
43+50.00	4350.00	50	17.91	0.00	16.62	0.00	32	0	34	0	1208	218	0	0	983
44+00.00	4400.00	50	19.12	0.00	16.81	0.00	34	0	31	0	1242	256	0	0	978
44+50.00	4450.00	50	16.92	0.00	10.77	0.00	33	0	26	0	1275	289	0	0	978
45+00.00	4500.00	50	14.54	0.00	4.92	0.00	29	0	15	0	1304	308	0	0	989
45+50.00	4550.00	50	14.15	0.00	1.67	0.00	27	0	6	0	1331	315	0	0	1008
46+00.00	4600.00	50	13.54	0.00	1.43	0.00	26	0	3	0	1357	319	0	0	1030
46+50.00	4650.00	50	13.08	0.00	0.00	0.00	25	0	1	0	1382	320	0	0	1054
47+00.00	4700.00	50	0.00	0.00	0.00	0.00	12	0	0	0	1394	320	0	0	1066
47+50.00	4750.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
48+00.00	4800.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
48+50.00	4850.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
49+00.00	4900.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
49+50.00	4950.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
50+00.00	5000.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
50+50.00	5050.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
51+00.00	5100.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
51+50.00	5150.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
52+00.00	5200.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
52+50.00	5250.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
53+00.00	5300.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
53+50.00	5350.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1394	320	0	0	1066
54+05.86	5405.86	55.86	20.60	0.00	0.00	0.00	21	0	0	0	1415	320	0	0	1087
54+50.00	5450.00	44.14	15.17	0.00	2.46	0.00	29	0	2	0	1444	323	0	0	1114
55+00.00	5500.00	50	14.25	0.00	2.76	0.00	27	0	5	0	1471	329	0	0	1134
55+50.00	5550.00	50	14.75	0.00	5.32	0.00	27	0	7	0	1498	338	0	0	1153
56+00.00	5600.00	50	14.87	0.00	7.36	0.00	27	0	12	0	1525	353	0	0	1165
56+50.00	5650.00	50	15.46	0.00	10.60	0.00	28	0	17	0	1553	374	0	0	1171
57+00.00	5700.00	50	17.37	0.00	10.96	0.00	30	0	20	0	1583	399	0	0	1176
57+50.00	5750.00	50	22.67	0.00	8.90	0.00	37	0	18	0	1620	421	0	0	1191
58+00.00	5800.00	50	33.33	0.70	4.87	0.00	52	1	13	0	1672	438	0	0	1226
58+50.00	5850.00	50	46.00	0.07	5.73	0.00	73	1	10	0	1745	450	0	0	1285
59+00.00	5900.00	50	50.40	0.00	6.47	0.00	89	0	11	0	1834	464	0	0	1360
59+50.00	5950.00	50	48.76	0.00	0.29	0.00	92	0	6	0	1926	471	0	0	1445
60+00.00	6000.00	50	37.34	0.00	3.22	0.00	80	0	3	0	2006	475	0	0	1521
60+50.00	6050.00	50	35.92	0.59	3.58	0.00	68	1	6	0	2074	483	0	0	1581
61+00.00	6100.00	50	27.94	0.61	5.32	0.00	59	1	8	0	2133	493	0	0	1629
61+50.00	6150.00	50	26.95	0.00	5.55	0.00	51	1	10	0	2184	505	0	0	1666
62+00.00	6200.00	50	15.50	0.00	8.41	0.00	39	0	13	0	2223	521	0	0	1689
62+50.00	6250.00	50	15.34	0.00	1.64	0.00	29	0	9	0	2252	533	0	0	1707
63+00.00	6300.00	50	16.45	0.00	0.00	0.00	29	0	2	0	2281	535	0	0	1733
63+50.00	6350.00	50	16.21	0.00	0.00	0.00	30	0	0	0	2311	535	0	0	1763
64+00.00	6400.00	50	15.70	0.00	0.00	0.00	30	0	0	0	2341	535	0	0	1793
64+50.00	6450.00	50	15.57	0.00	0.00	0.00	29	0	0	0	2370	535	0	0	1822
65+00.00	6500.00	50	14.85	0.00	0.00	0.00	28	0	0	0	2398	535	0	0	1850

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT 1.00	EXPANDED FILL 1.25	EXPANDED EBS BACKFILL 1.00	REDUCED EBS IN FILL 1.00	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
143+17.63	14317.63	0.00	5.73	0.00	0.03	0.00	0	0	0	0	0	0	0	0	0
143+37.18	14337.18	19.55	5.43	0.00	0.51	0.00	4	0	0	0	4	0	0	0	4
143+62.16	14362.16	24.98	5.12	0.00	0.00	0.00	5	0	0	0	9	0	0	0	9
143+87.14	14387.14	24.98	4.92	0.00	0.00	0.00	5	0	0	0	14	0	0	0	14
144+00.00	14400.00	12.86	5.15	0.00	0.00	0.00	2	0	0	0	16	0	0	0	16
144+50.00	14450.00	50	5.31	0.00	0.00	0.00	10	0	0	0	26	0	0	0	26
145+00.00	14500.00	50	4.82	0.00	0.00	0.00	9	0	0	0	35	0	0	0	35
145+50.00	14550.00	50	6.65	0.00	0.00	0.00	11	0	0	0	46	0	0	0	46
146+00.00	14600.00	50	3.99	0.00	0.00	0.00	10	0	0	0	56	0	0	0	56
146+28.13	14628.13	28.13	6.64	0.00	0.00	0.00	6	0	0	0	62	0	0	0	62
147+00.00	14700.00	71.87	0.00	0.00	0.00	0.00	9	0	0	0	71	0	0	0	71
147+50.00	14750.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
148+00.00	14800.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
148+50.00	14850.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
149+00.00	14900.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
149+50.00	14950.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
150+00.00	15000.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
150+50.00	15050.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
151+00.00	15100.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
151+50.00	15150.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
152+00.00	15200.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
152+50.00	15250.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
153+00.00	15300.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
153+50.00	15350.00	50	0.00	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
153+56.40	15356.40	6.4	2.35	0.00	0.00	0.00	0	0	0	0	71	0	0	0	71
153+86.73	15386.73	30.33	2.68	0.00	0.00	0.00	3	0	0	0	74	0	0	0	74
154+00.00	15400.00	13.27	23.56	0.00	0.00	0.00	6	0	0	0	80	0	0	0	80
154+50.00	15450.00	50	10.14	1.14	0.00	0.00	31	1	0	0	111	0	0	0	110
155+00.00	15500.00	50	8.57	1.23	0.26	0.00	17	2	0	0	128	0	0	0	125
155+50.00	15550.00	50	9.01	1.23	0.00	0.00	16	2	0	0	144	0	0	0	139
155+96.40	15596.40	46.4	10.48	1.56	0.00	0.00	17	2	0	0	161	0	0	0	154
156+21.26	15621.26	24.86	10.37	2.13	0.00	0.00	10	2	0	0	171	0	0	0	162
156+46.24	15646.24	24.98	9.48	2.90	1.14	0.00	9	2	1	0	180	1	0	0	168
156+66.94	15666.94	20.7	8.57	3.73	2.53	0.00	7	3	1	0	187	3	0	0	171
157+04.24	15704.24	37.3	3.69	4.66	0.00	0.00	8	6	2	0	195	5	0	0	170
157+29.23	15729.23	24.99	3.31	4.72	0.00	0.00	3	4	0	0	198	5	0	0	169
157+54.21	15754.21	24.98	3.14	5.85	0.00	0.00	3	5	0	0	201	5	0	0	167
157+79.62	15779.62	25.41	3.00	7.28	0.00	0.00	3	6	0	0	204	5	0	0	164

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	EXPANDED EBS BACKFILL 1.00 NOTE 5	REDUCED EBS IN FILL 1.00 NOTE 7	MASS ORDINATE NOTE 8
135+04.07	13504.07	0.00	10.61	0.76	13.83	0.00	0	0	0	0	0	0	0	0	0
135+50.00	13550.00	45.93	12.95	0.71	10.31	0.00	20	1	21	0	20	26	0	0	-7
136+00.00	13600.00	50	15.84	0.89	6.87	0.00	27	1	16	0	47	46	0	0	-1
136+50.00	13650.00	50	21.13	0.81	3.01	0.00	34	2	9	0	81	58	0	0	20
137+00.00	13700.00	50	26.70	2.10	1.07	0.00	44	3	4	0	125	63	0	0	56
137+50.00	13750.00	50	45.32	1.50	1.18	0.00	67	3	2	0	192	65	0	0	117
138+00.00	13800.00	50	26.78	2.06	17.94	0.00	67	3	18	0	259	88	0	0	159
138+50.00	13850.00	50	38.95	0.00	11.29	0.00	61	2	27	0	320	121	0	0	184
139+00.00	13900.00	50	46.54	0.00	14.57	0.00	79	0	24	0	399	151	0	0	233
139+50.00	13950.00	50	54.78	0.00	12.18	0.00	94	0	25	0	493	183	0	0	296
140+00.00	14000.00	50	66.47	0.00	4.65	0.00	112	0	16	0	605	203	0	0	388
140+50.00	14050.00	50	69.93	0.00	4.89	0.00	126	0	9	0	731	214	0	0	502
141+00.00	14100.00	50	77.11	0.00	2.17	0.00	136	0	7	0	867	223	0	0	630
141+50.00	14150.00	50	86.81	0.00	0.36	0.00	152	0	2	0	1019	225	0	0	779
142+00.00	14200.00	50	90.22	0.00	0.10	0.00	164	0	0	0	1183	225	0	0	943
142+50.00	14250.00	50	60.96	0.32	0.00	0.00	140	0	0	0	1323	225	0	0	1083
143+00.00	14300.00	50	57.41	0.88	0.00	0.00	110	1	0	0	1433	225	0	0	1192
143+50.00	14350.00	50	44.37	1.43	0.00	0.00	94	2	0	0	1527	225	0	0	1284
144+00.00	14400.00	50	26.70	1.44	2.71	0.00	66	3	3	0	1593	229	0	0	1343
144+50.00	14450.00	50	18.08	1.43	6.35	0.00	41	3	8	0	1634	239	0	0	1371
145+00.00	14500.00	50	14.77	1.35	7.94	0.00	30	3	13	0	1664	255	0	0	1382
145+50.00	14550.00	50	12.55	1.25	7.31	0.00	25	2	14	0	1689	273	0	0	1388
145+94.35	14594.35	44.35	19.54	1.16	0.71	0.00	26	2	7	0	1715	281	0	0	1403
146+50.00	14650.00	55.65	0.00	0.00	0.00	0.00	20	1	1	0	1735	283	0	0	1421
147+00.00	14700.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
147+50.00	14750.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
148+00.00	14800.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
148+50.00	14850.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
149+00.00	14900.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
149+50.00	14950.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
150+00.00	15000.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
150+50.00	15050.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
151+00.00	15100.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
151+50.00	15150.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
152+00.00	15200.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
152+50.00	15250.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
153+00.00	15300.00	50	0.00	0.00	0.00	0.00	0	0	0	0	1735	283	0	0	1421
153+50.00	15350.00	50	0.00	0.00	26.33	0.00	0	0	24	0	1735	313	0	0	1391
153+67.24	15367.24	17.24	6.80	0.93	17.02	0.00	2	0	14	0	1737	330	0	0	1375
154+00.00	15400.00	32.76	5.31	0.92	23.27	0.00	7	1	24	0	1744	360	0	0	1351
154+50.00	15450.00	50	7.49	0.89	9.19	0.00	12	2	30	0	1756	398	0	0	1324
155+00.00	15500.00	50	12.63	0.81	2.93	0.00	19	2	11	0	1775	411	0	0	1327
155+50.00	15550.00	50	11.96	0.85	6.97	0.00	23	2	9	0	1798	423	0	0	1337
156+00.00	15600.00	50	17.92	0.83	3.70	0.00	28	2	10	0	1826	435	0	0	1350
156+50.00	15650.00	50	27.56	0.85	0.58	0.00	42	2	4	0	1868	440	0	0	1385
157+00.00	15700.00	50	33.82	1.19	0.00	0.00	57	2	1	0	1925	441	0	0	1439
157+50.00	15750.00	50	43.23	1.96	0.00	0.00	71	3	0	0	1996	441	0	0	1507
158+00.00	15800.00	50	42.50	0.15	6.19	0.00	79	2	6	0	2075	449	0	0	1576
158+50.00	15850.00	50	49.15	0.00	11.11	0.00	85	0	16	0	2160	469	0	0	1641
159+00.00	15900.00	50	53.88	0.00	19.68	0.00	95	0	29	0	2255	505	0	0	1700
159+50.00	15950.00	50	57.73	0.00	4.93	0.00	103	0	23	0	2358	534	0	0	1774
160+00.00	16000.00	50	57.35	0.00	2.62	0.00	107	0	7	0	2465	543	0	0	1873
160+50.00	16050.00	50	61.93	0.13	0.00	0.00	110	0	2	0	2575	545	0	0	1980
161+00.00	16100.00	50	26.68	0.87	18.57	0.00	82	1	17	0	2657	566	0	0	2040
161+50.00	16150.00	50	53.08	0.60	0.00	0.00	74	1	17	0	2731	588	0	0	2092
162+00.00	16200.00	50	25.95	0.79	1.21	0.00	73	1	1	0	2804	589	0	0	2162
162+50.00	16250.00	50	13.84	0.58	4.65	0.00	37	1	5	0	2841	595	0	0	2192
163+00.00	16300.00	50	9.48	0.42	6.81	0.00	22	1	11	0	2863	609	0	0	2199
163+50.00	16350.00	50	6.30	0.50	8.67	0.00	15	1	14	0	2878	626	0	0	2196
164+00.00	16400.00	50	4.84	0.67	8.43	0.00	10	1	16	0	2888	646	0	0	2185
164+50.00	16450.00	50	4.96	0.63	6.79	0.00	9	1	14	0	2897	664	0	0	2175
164+89.41	16489.41	39.41	4.92	0.00	5.17	0.00	7	0	9	0	2904	675	0	0	2171



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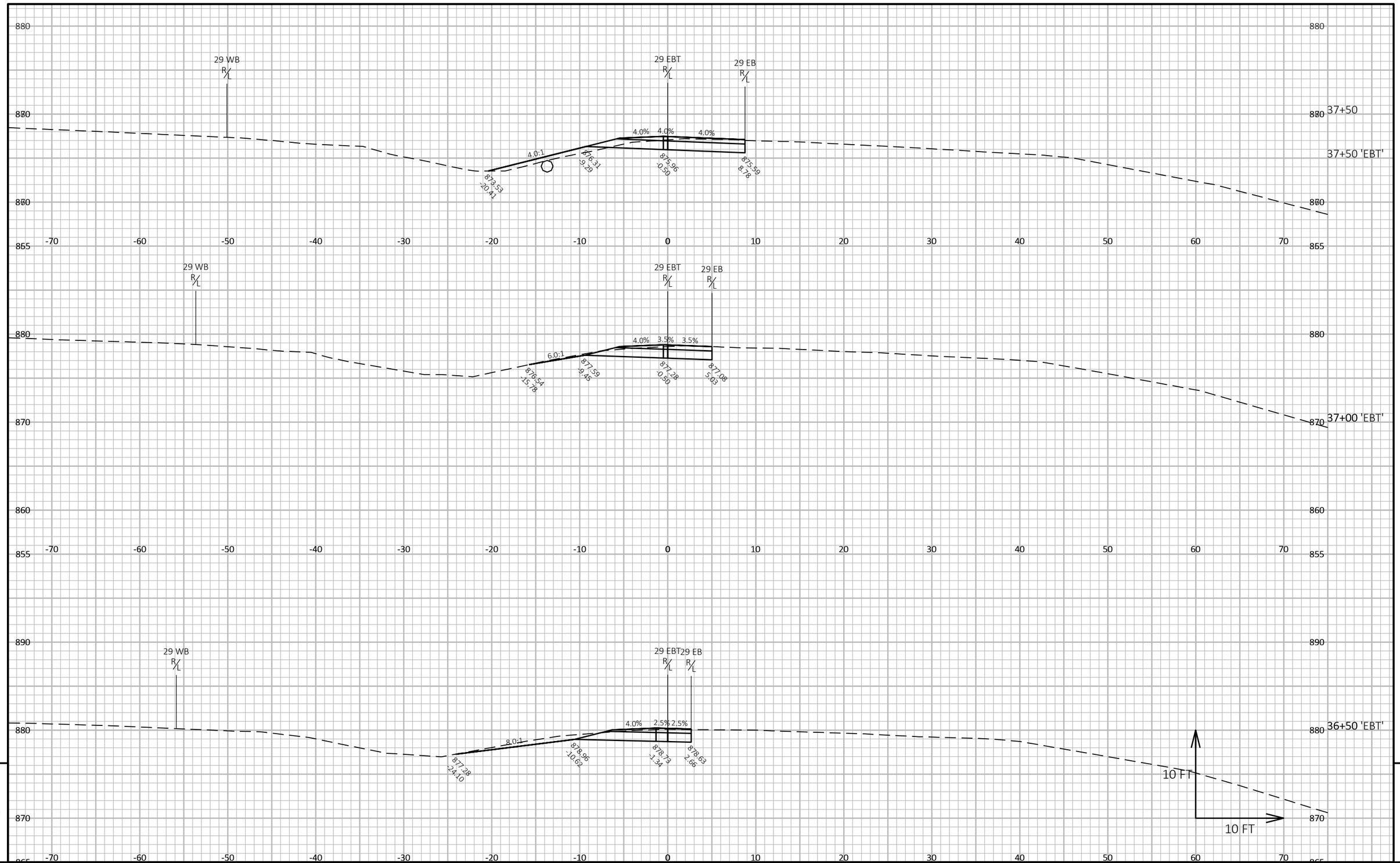
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 160	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_1

PLOT DATE : 5/1/2026 2:49 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

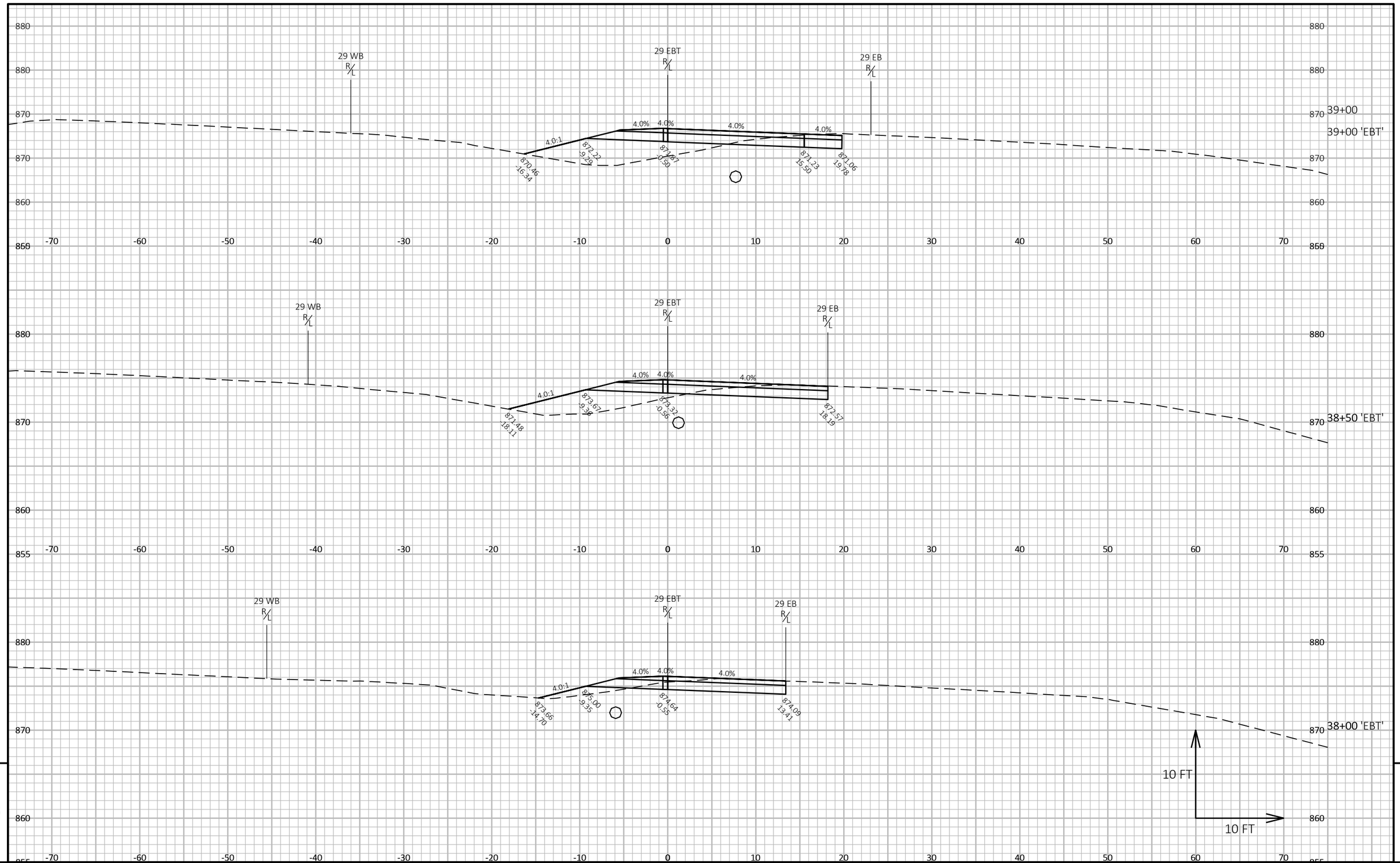
9

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 161	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_2

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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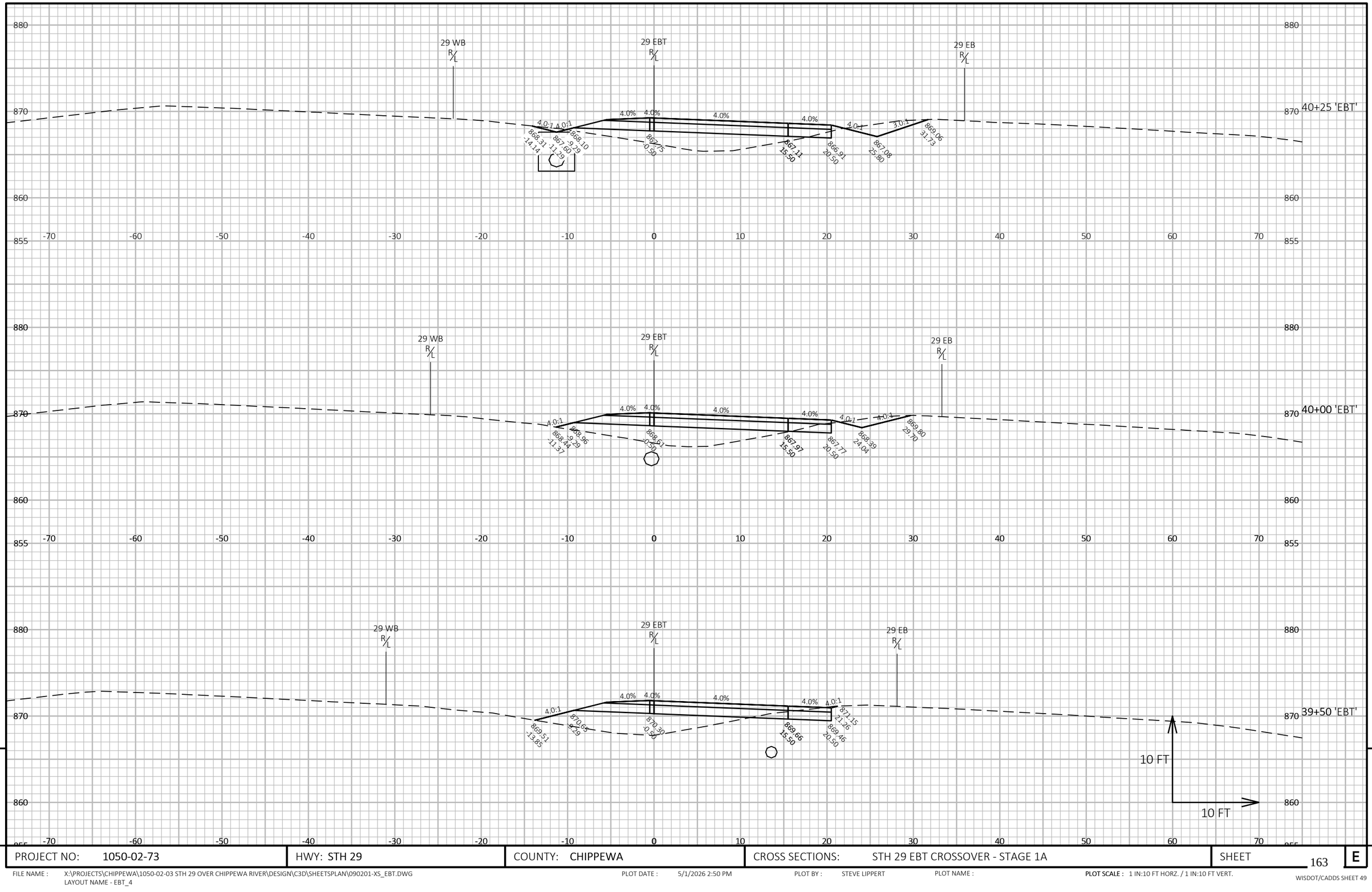
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 162	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_3

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

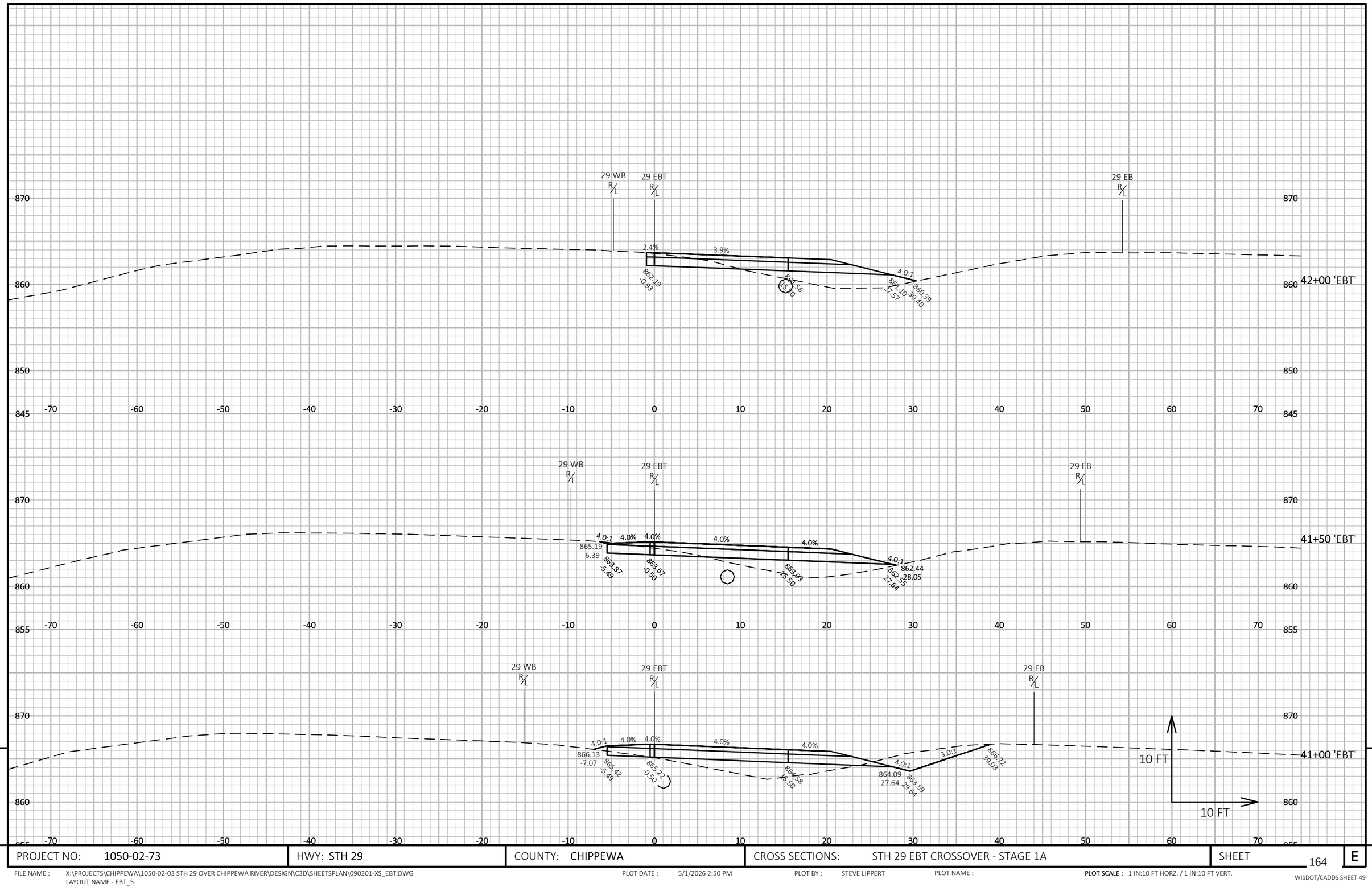


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 163 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_4

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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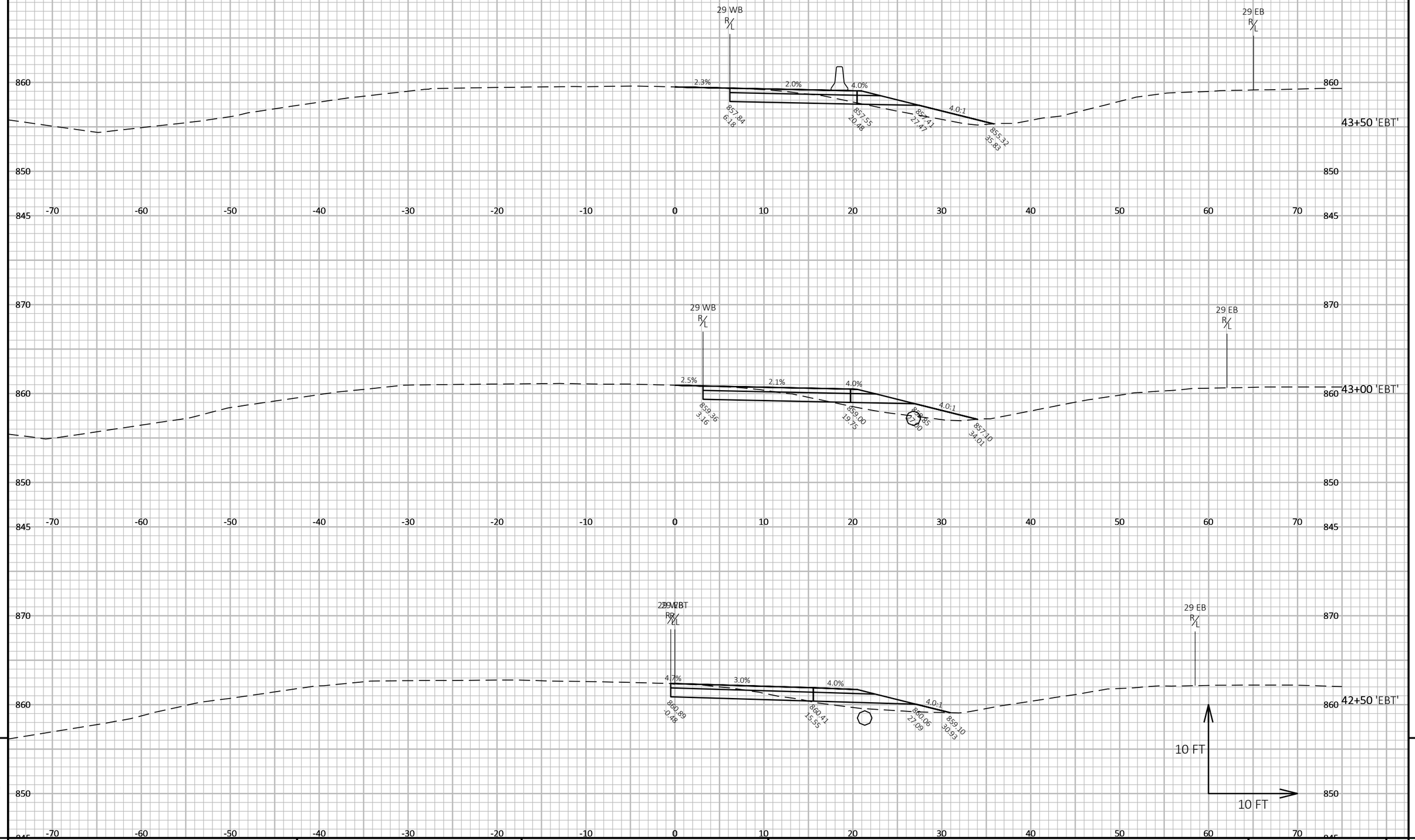
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 164	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_5

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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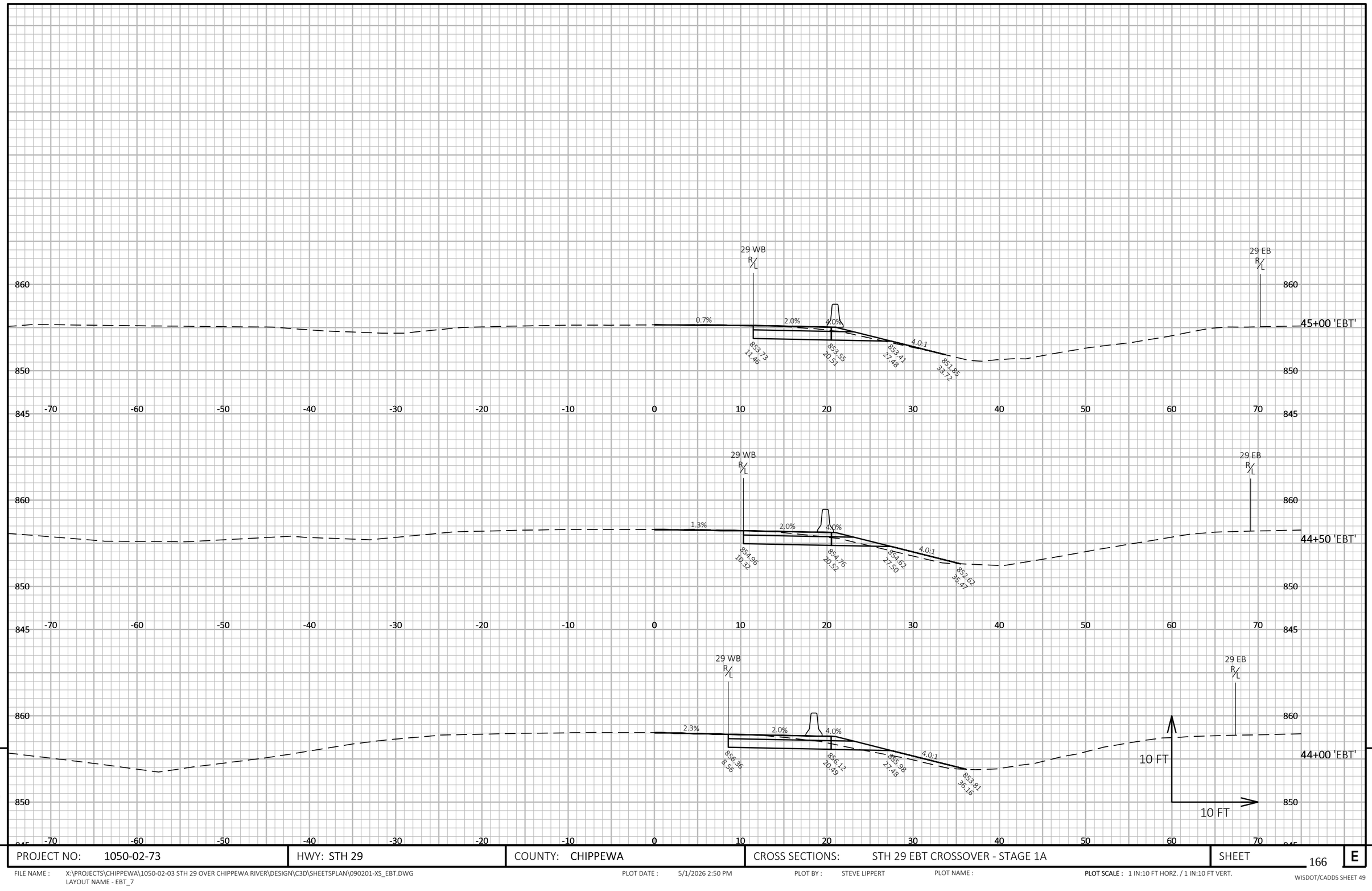
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 165	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_6

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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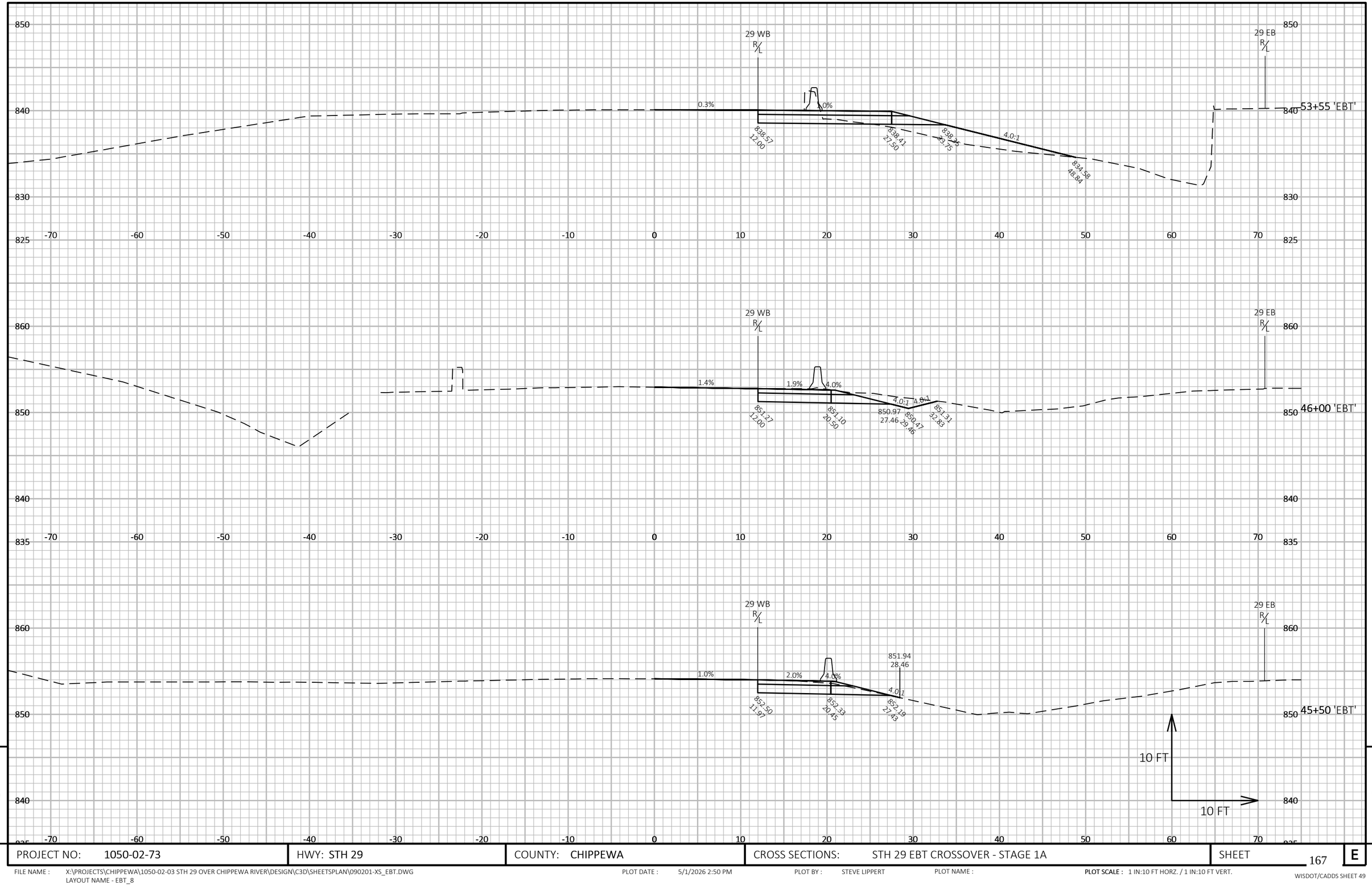
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 166	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_7

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

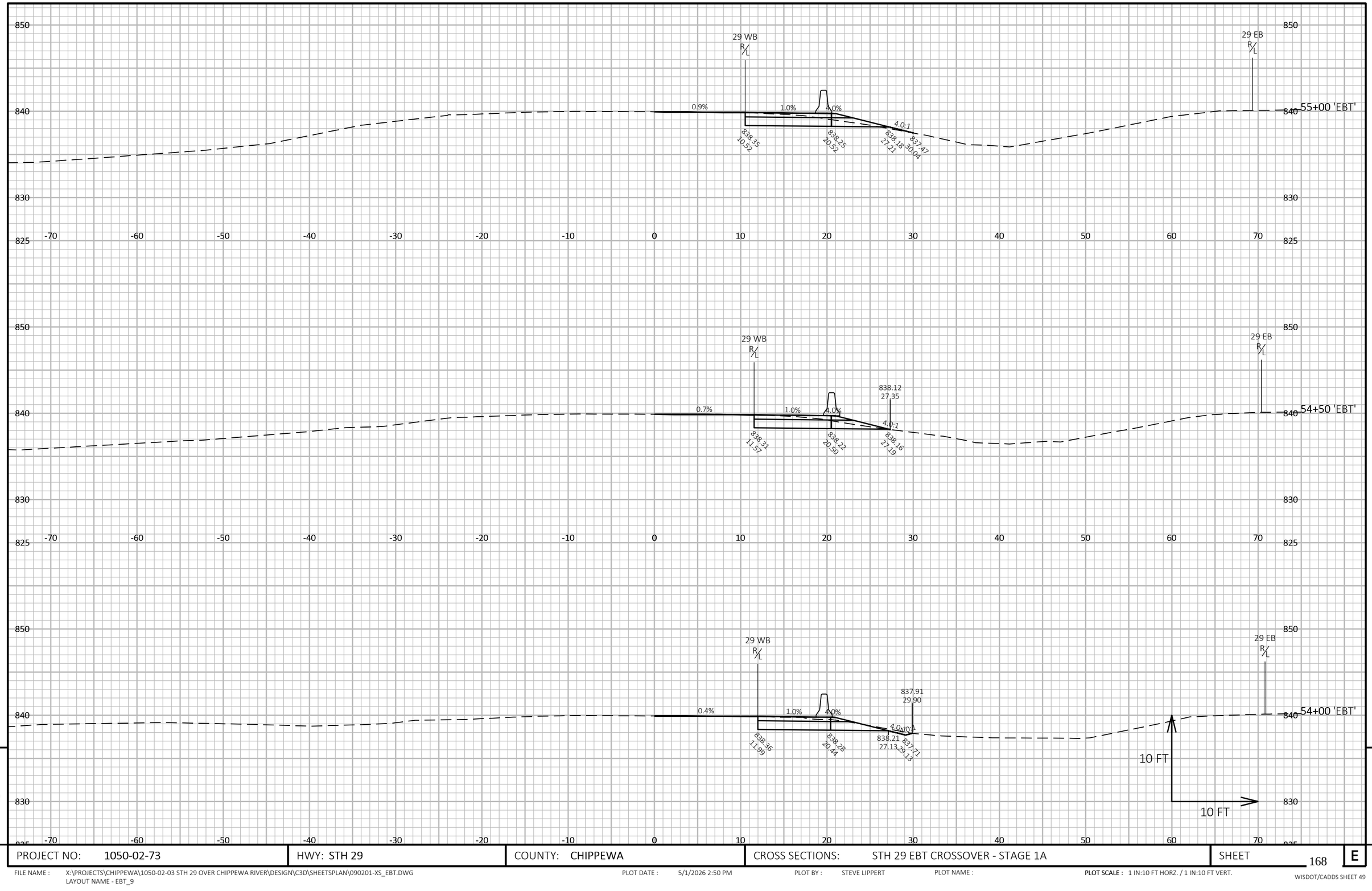


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 167	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_8

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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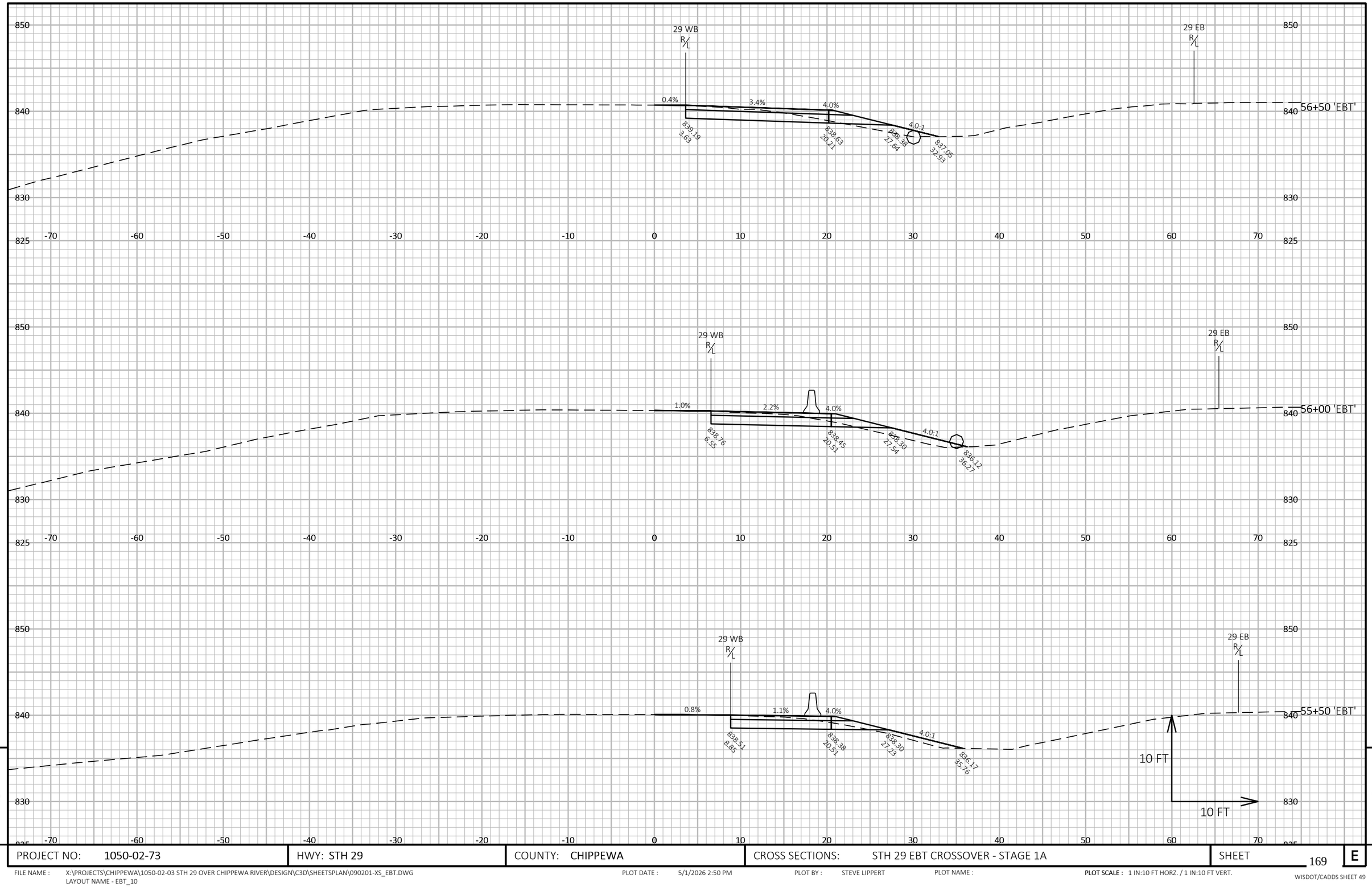
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 168	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_9

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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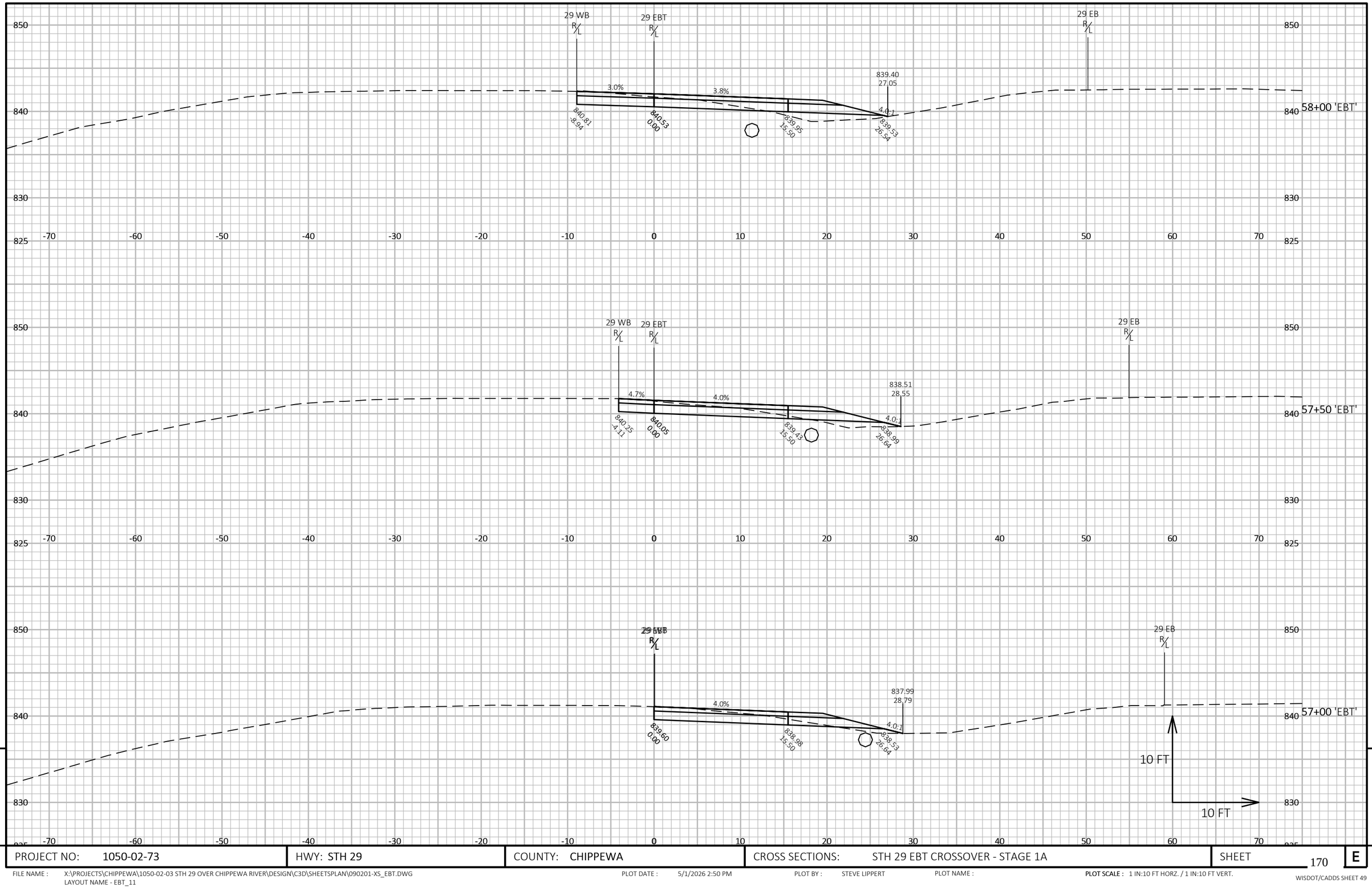
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 169	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_10

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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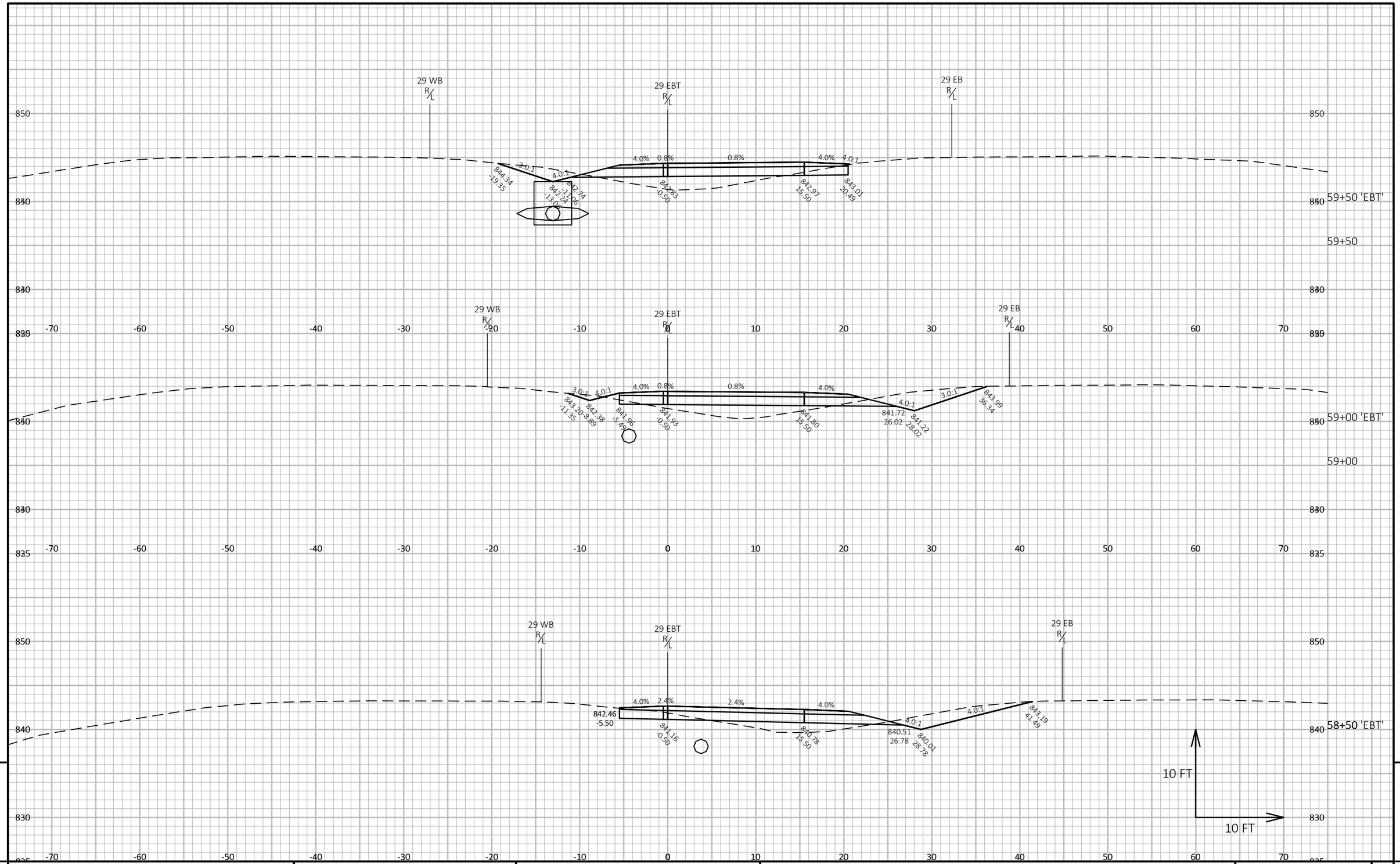
9

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 170	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_11

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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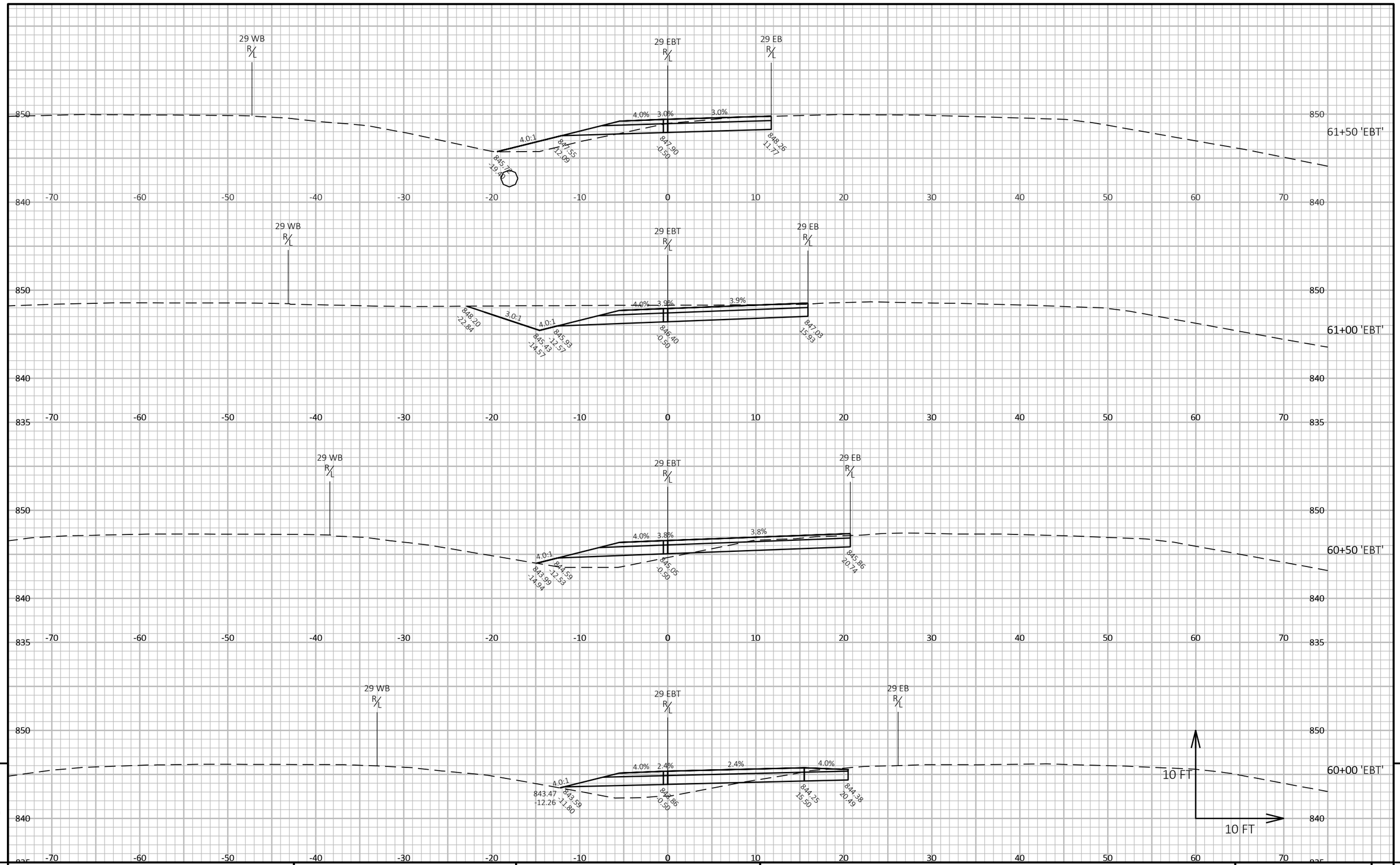
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 171	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_12

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

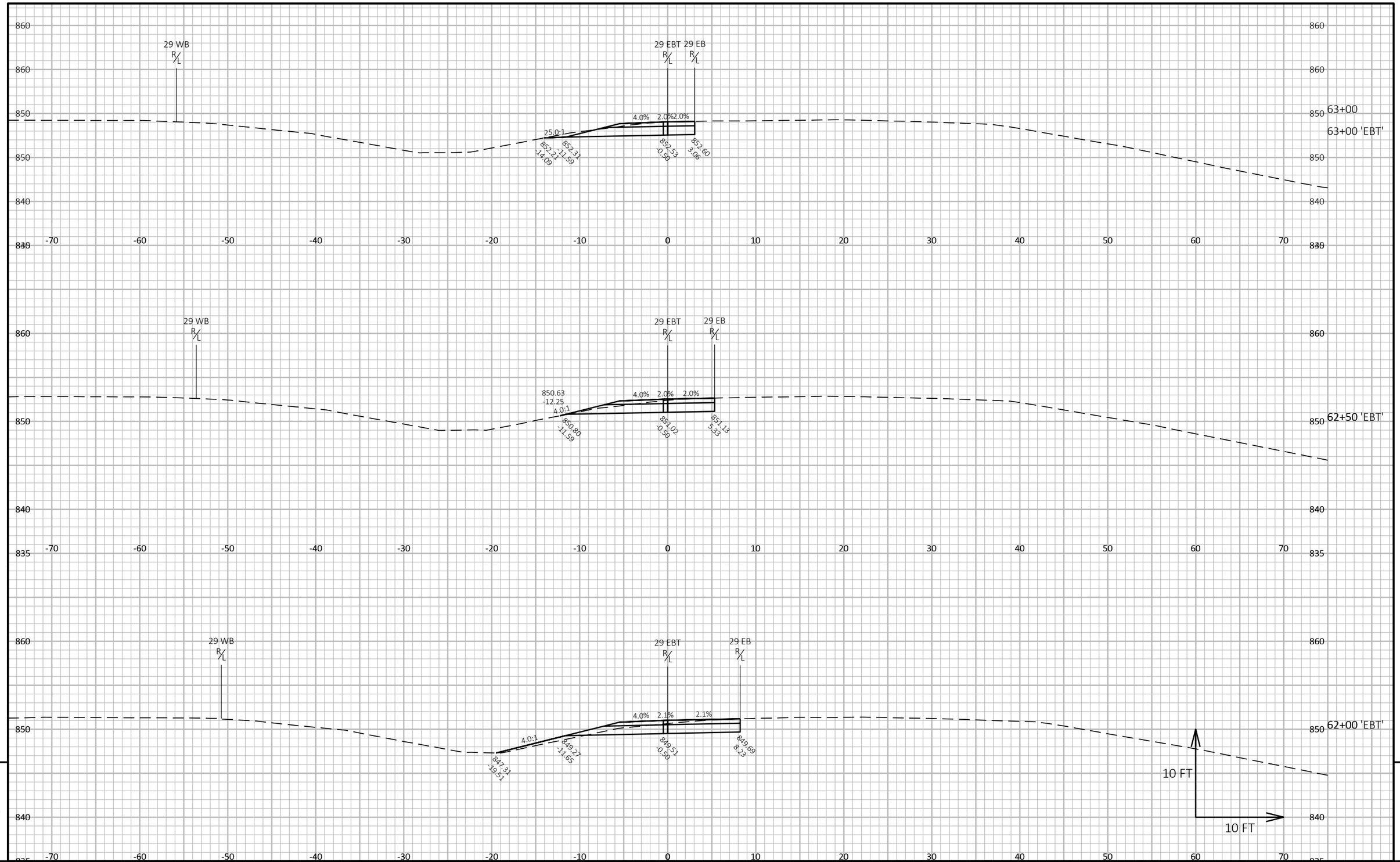


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 172	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_13

PLOT DATE : 5/1/2026 2:50 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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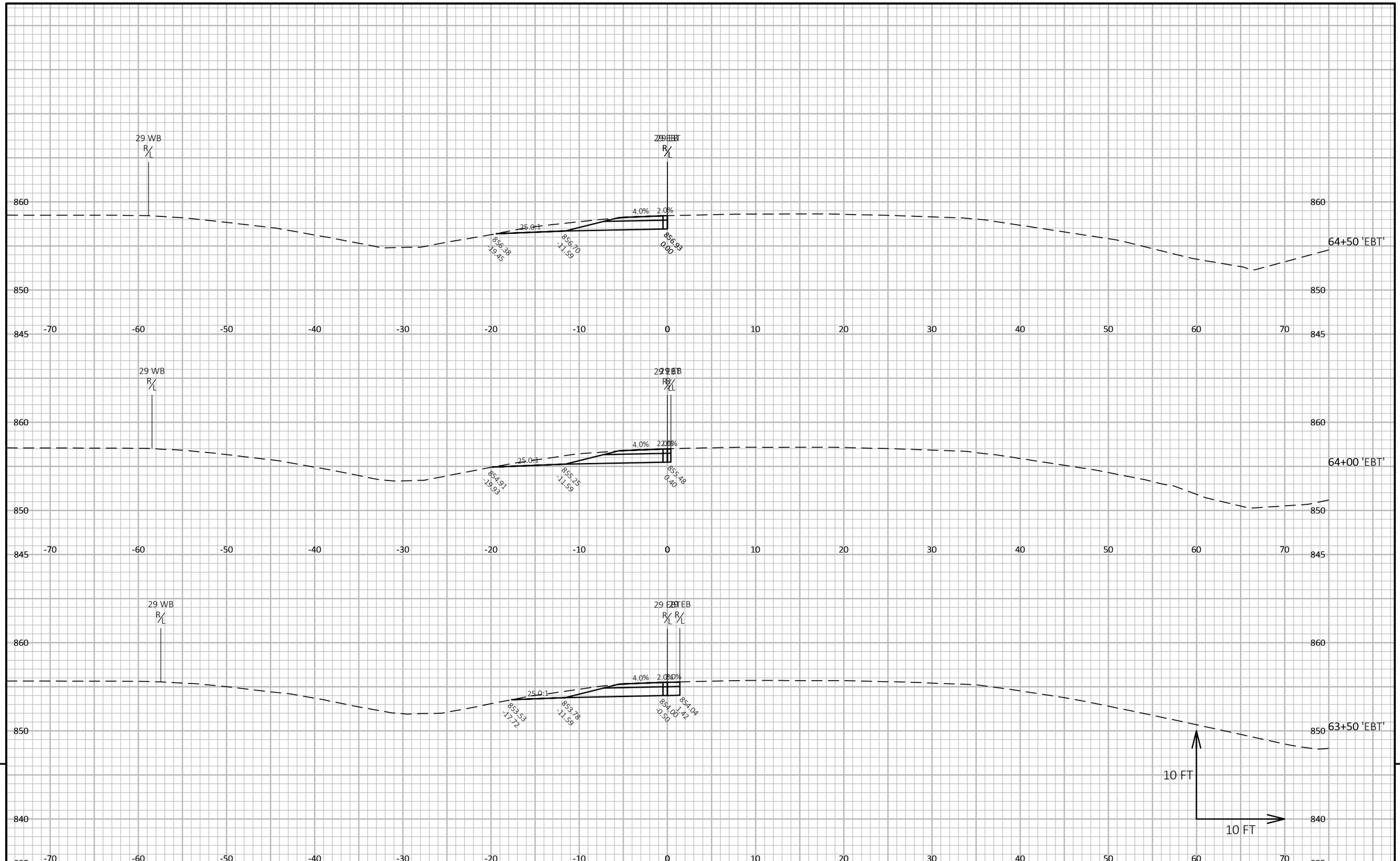
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 173	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_14

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

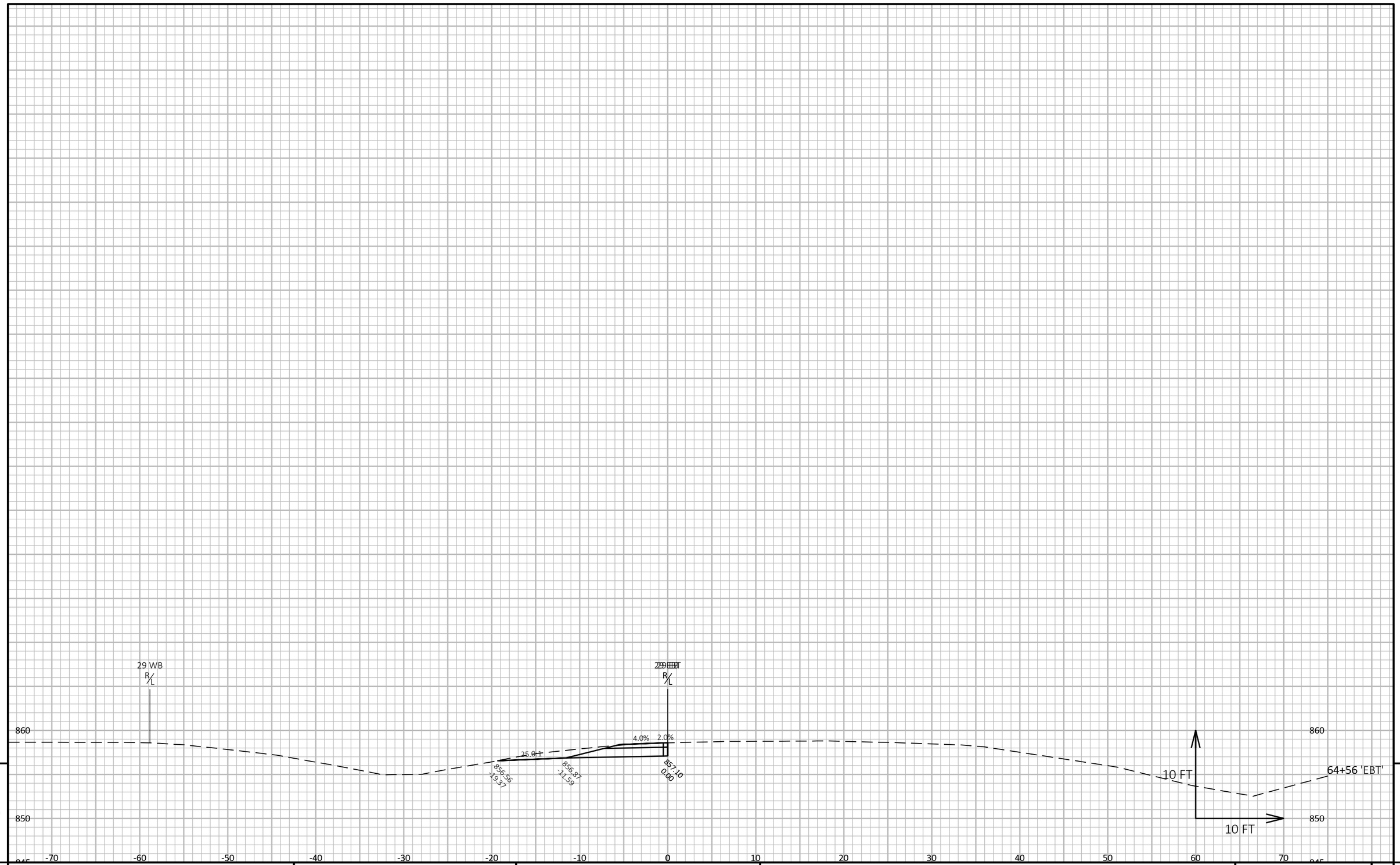


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 174	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_15

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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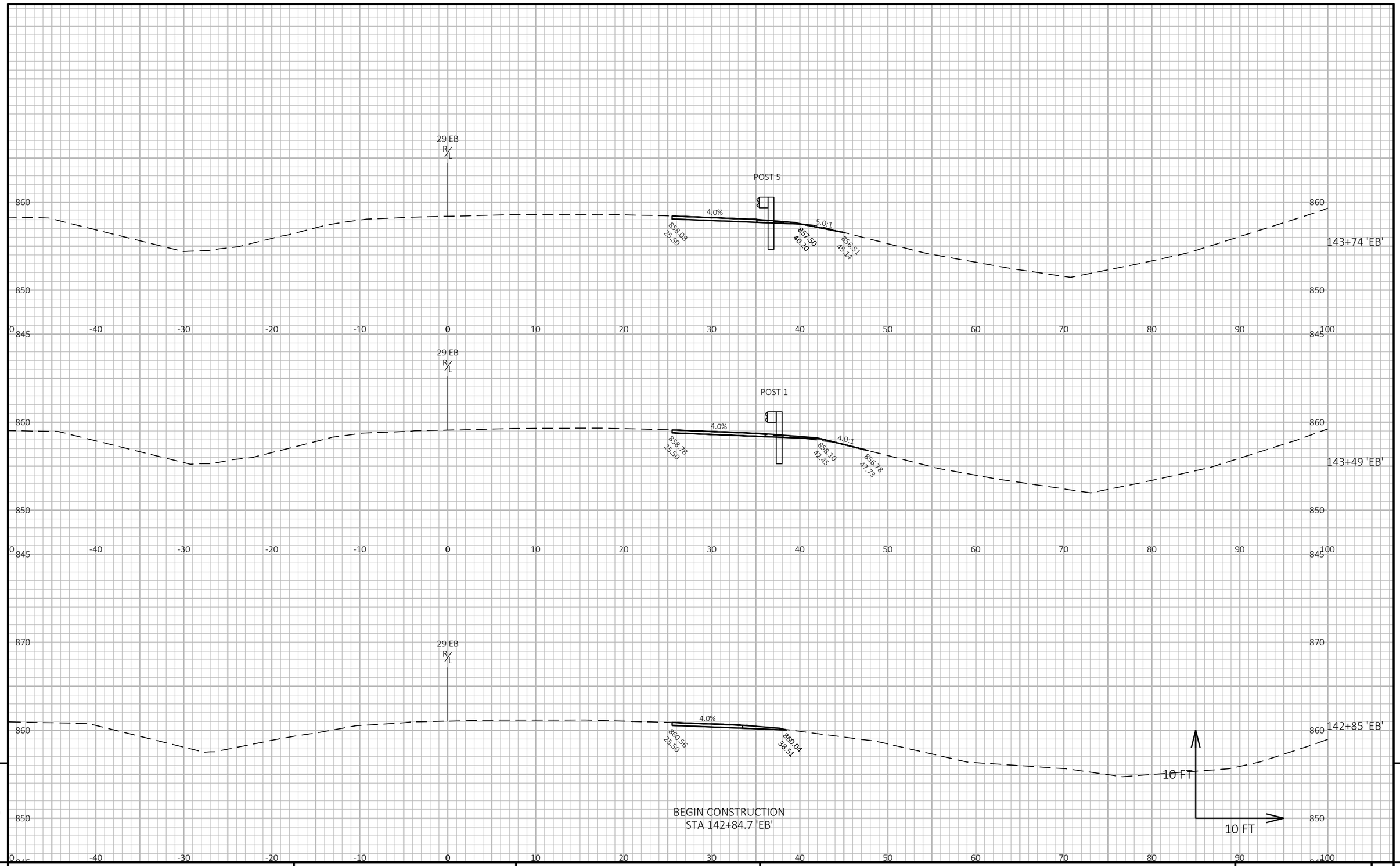
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EBT CROSSOVER - STAGE 1A	SHEET 175	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090201-XS_EBT.DWG
LAYOUT NAME - EBT_16

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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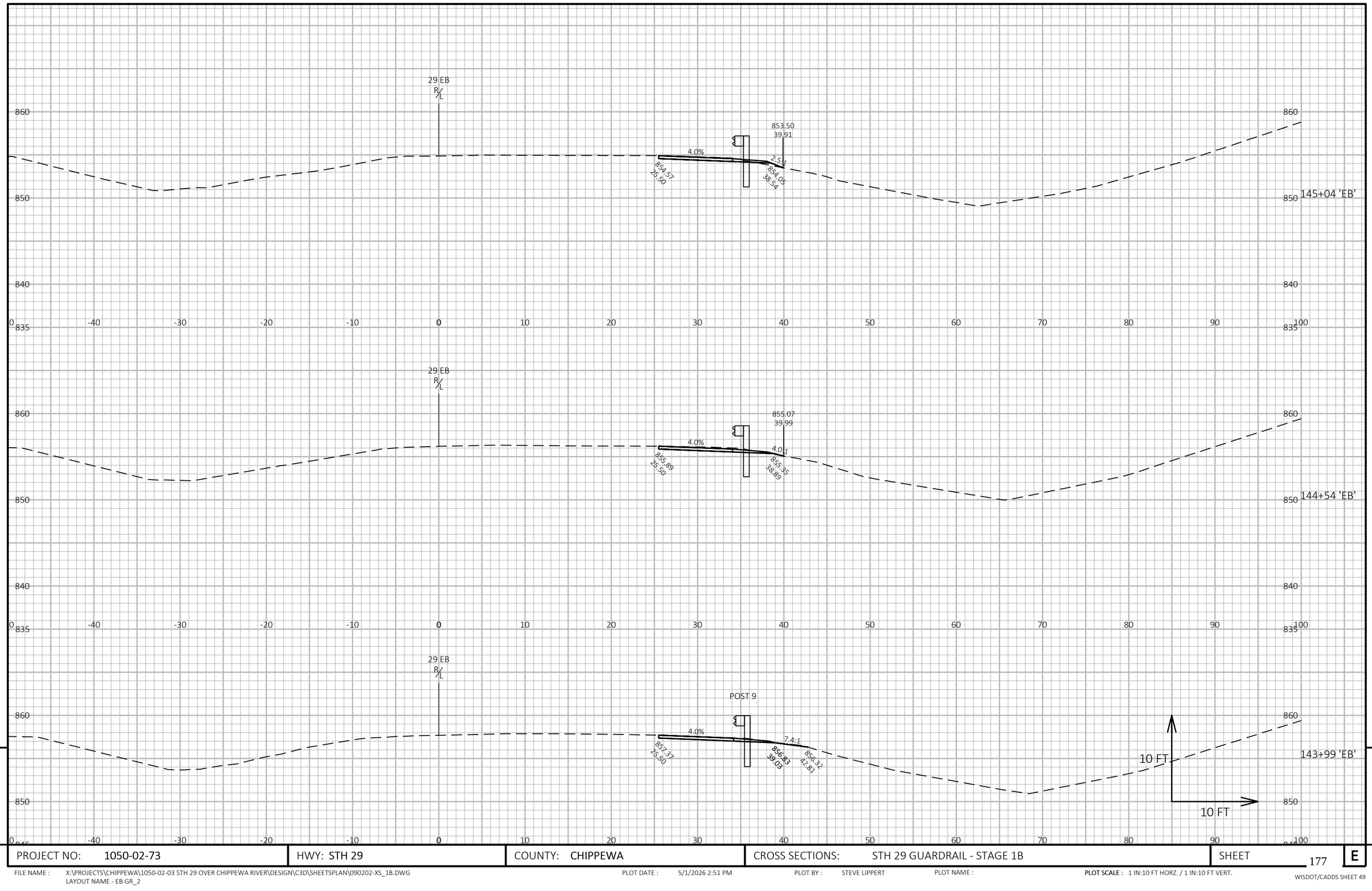
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 1B	SHEET 176	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090202-XS_1B.DWG
LAYOUT NAME - EB GR_1

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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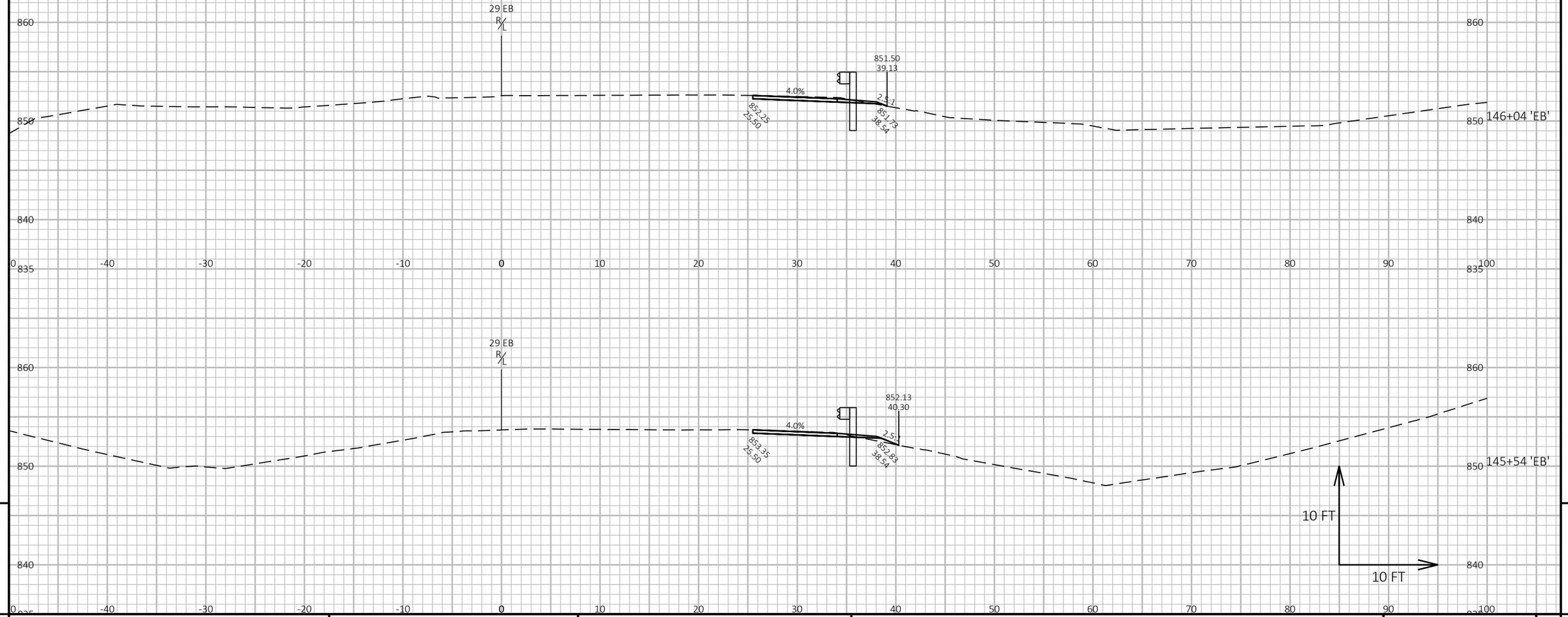
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 1B	SHEET 177	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090202-XS_1B.DWG
LAYOUT NAME - EB GR_2

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 1B	SHEET 178	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090202-XS_1B.DWG
LAYOUT NAME - EB GR_3

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 146+37.1 'EB'

29 EB
R/L

4.0%

2.5:1

851.58
25.50

851.05
38.54

849.58
42.22

146+34 'EB'

860
850
840
830

10 FT
10 FT

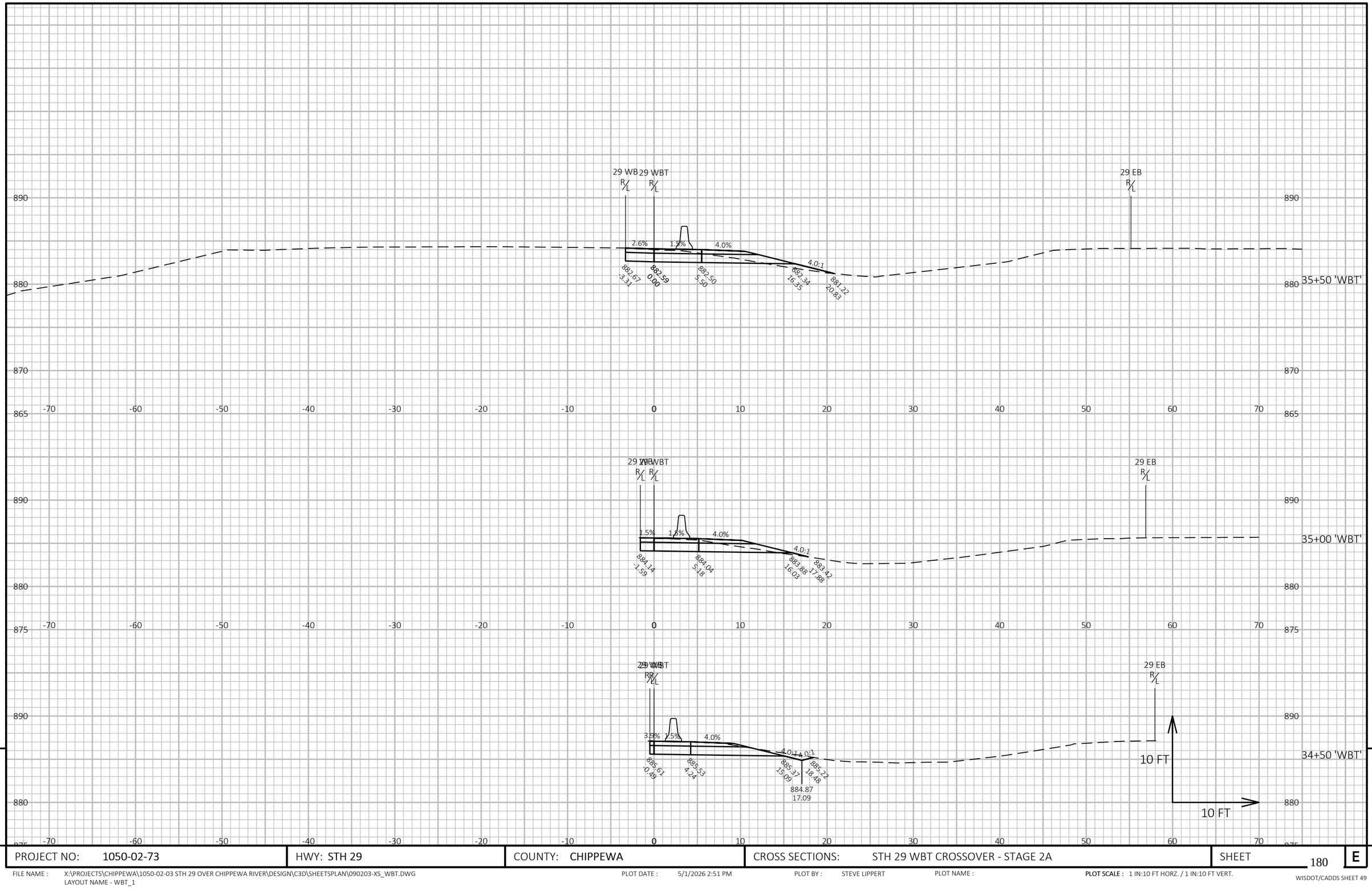
-40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100

9 9

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 1B	SHEET 179	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090202-XS_1B.DWG
LAYOUT NAME - EB GR_4

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

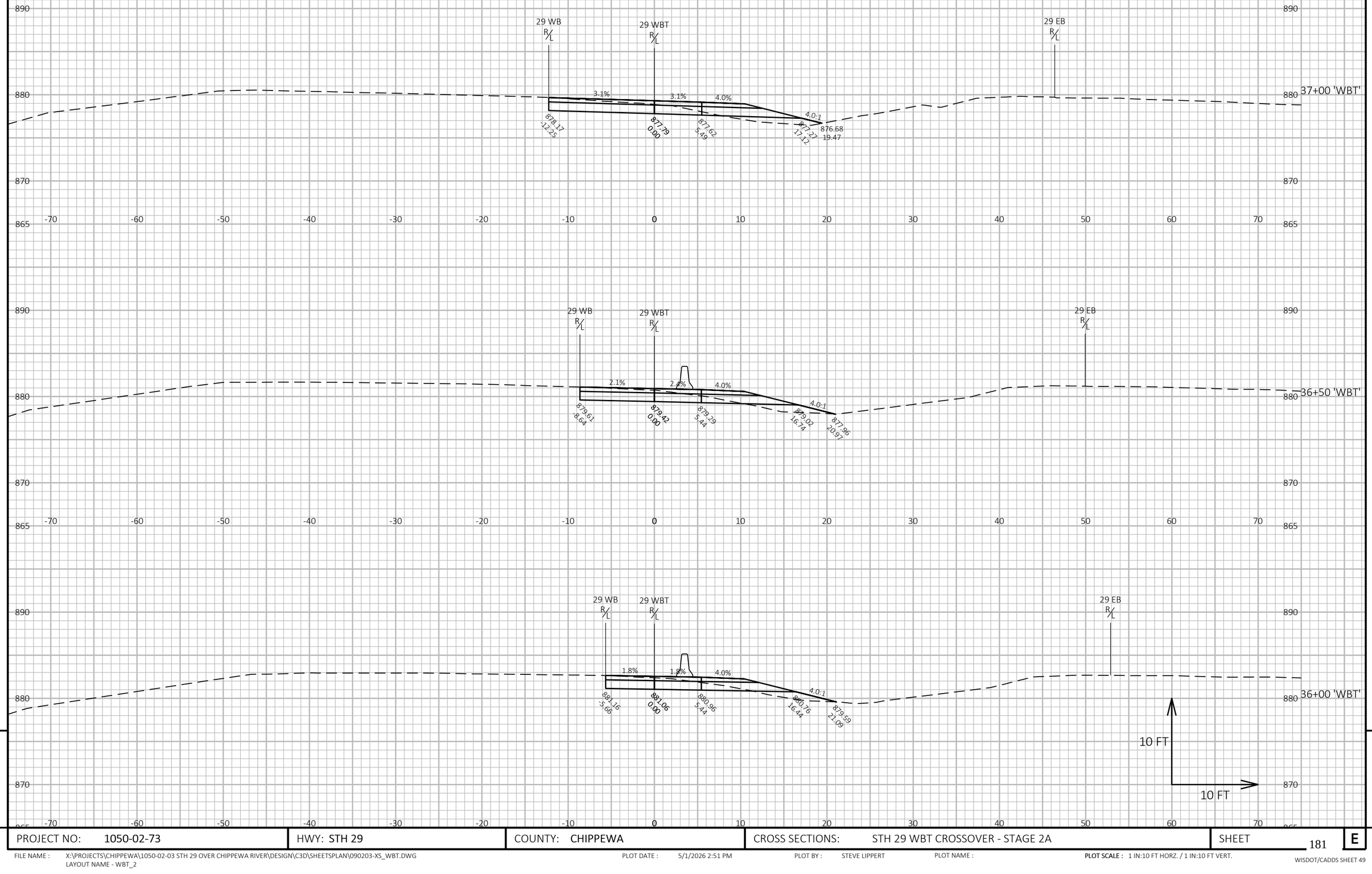


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 180	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_1

PLOT DATE : 5/1/2026 2:51 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 181	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_2

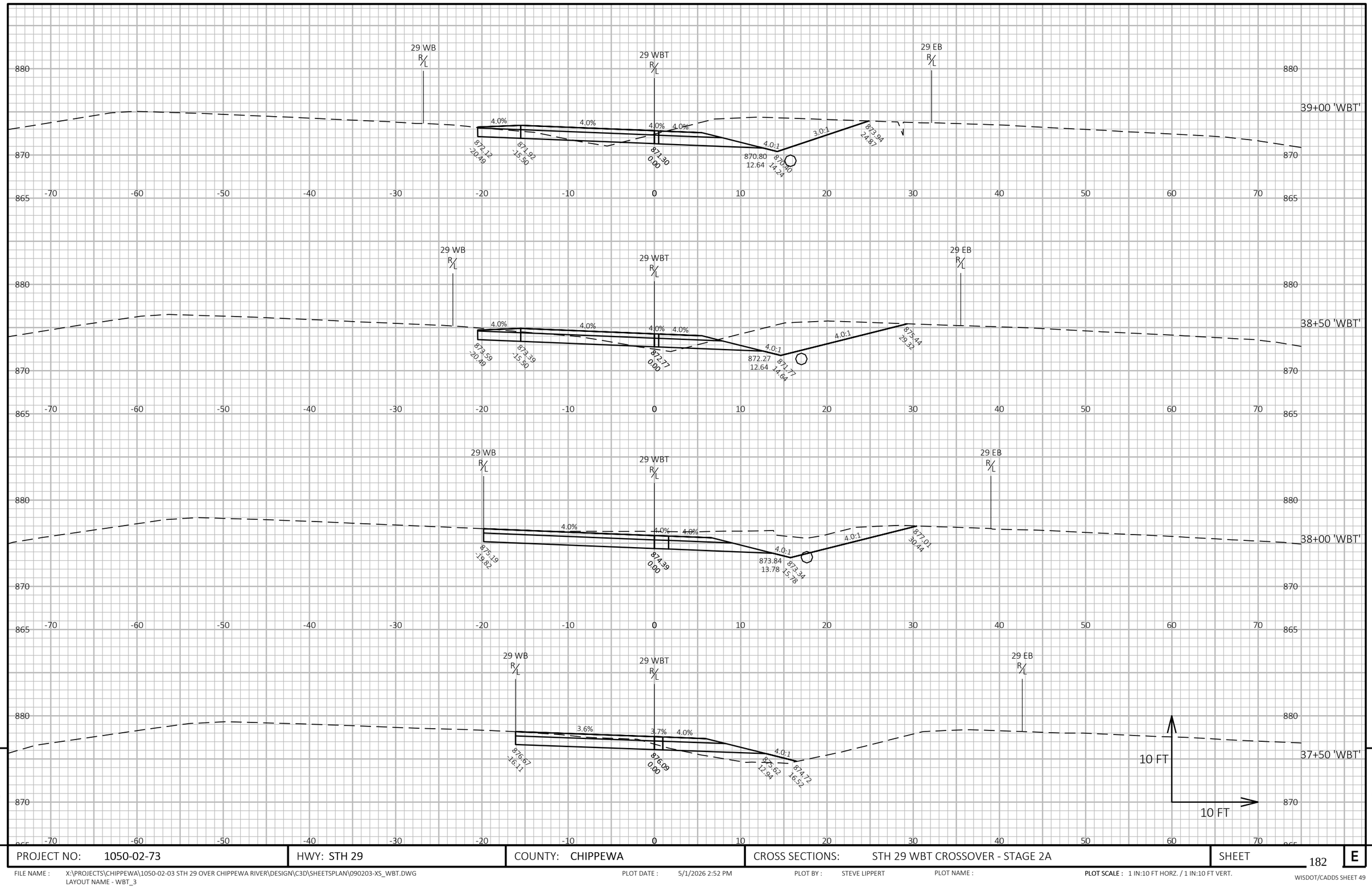
PLOT DATE : 5/1/2026 2:51 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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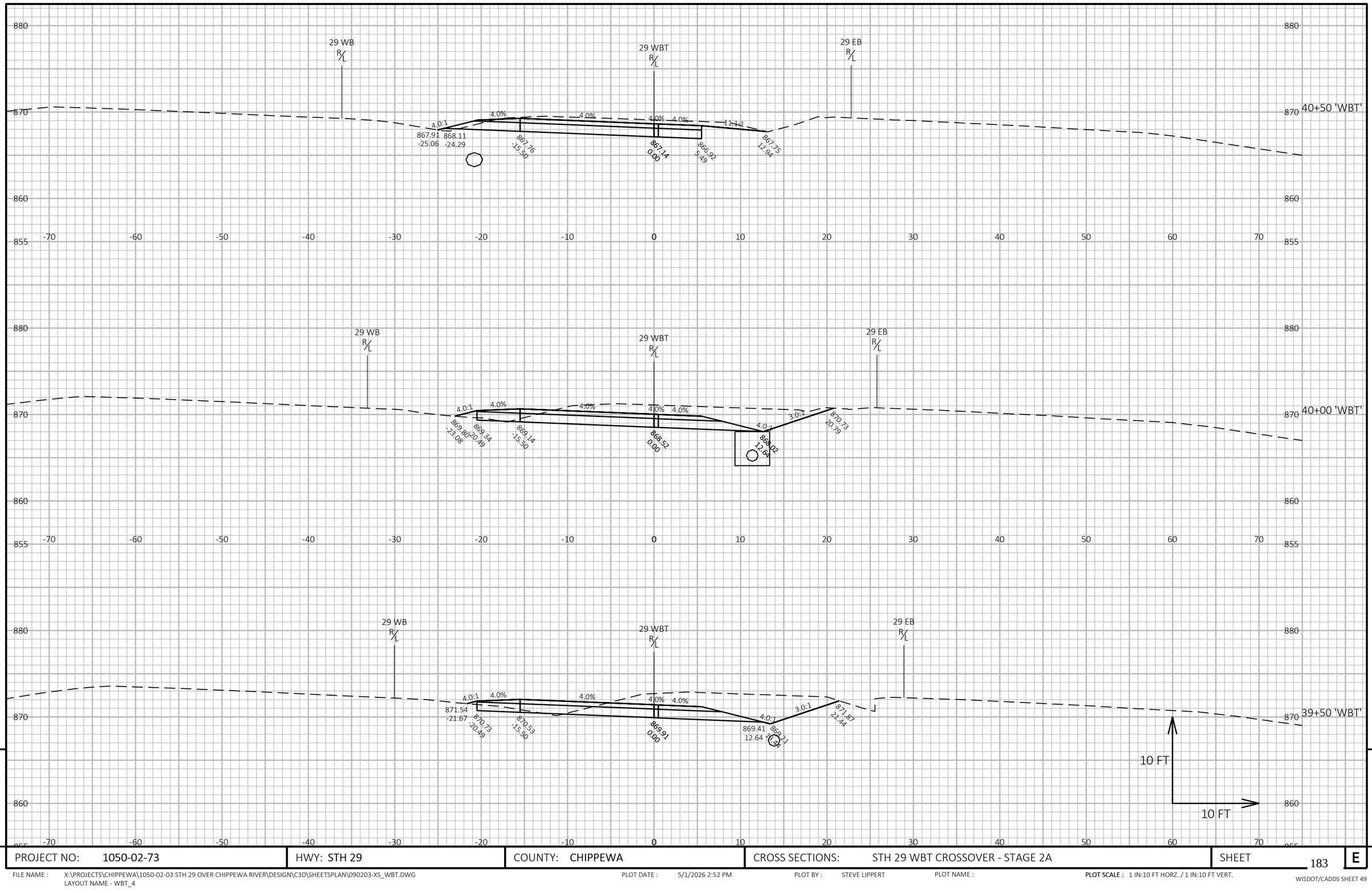
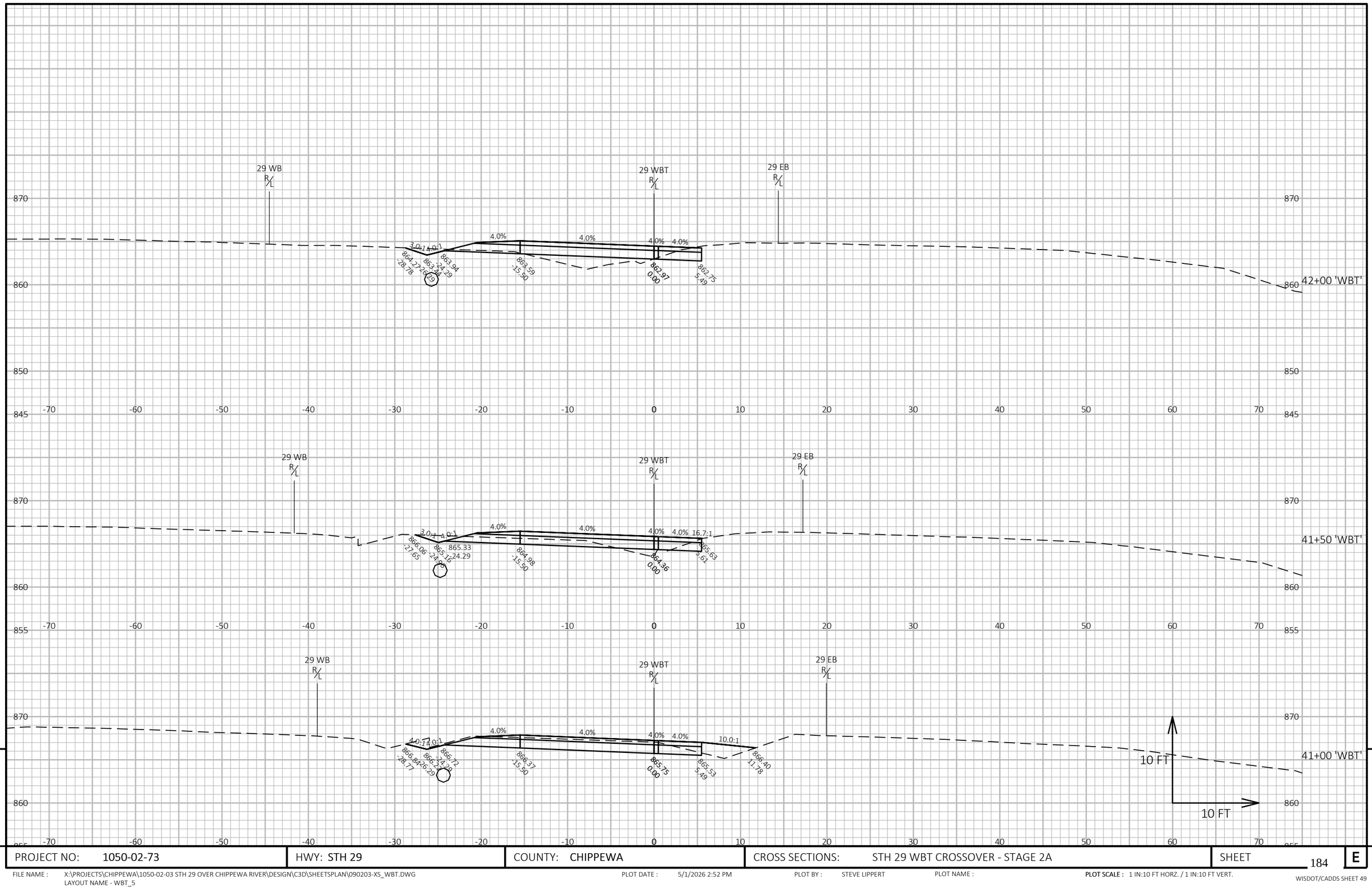
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 182	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_3

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49


880
870
860
855
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
29 WB
R/L
29 WBT
R/L
29 EB
R/L
40+50 'WBT'
4.0:1
4.0%
867.91
-25.06
868.11
-24.29
867.76
-15.50
867.14
0.00
866.92
5.49
867.75
12.94
40+00 'WBT'
869.80
-23.08
869.34
-20.49
868.14
-15.50
868.52
0.00
868.92
12.64
870.73
20.73
39+50 'WBT'
871.54
-21.67
870.73
-20.49
870.53
-15.50
869.91
0.00
869.41
12.64
869.21
13.81
871.87
21.44
10 FT
10 FT



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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 184	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_5

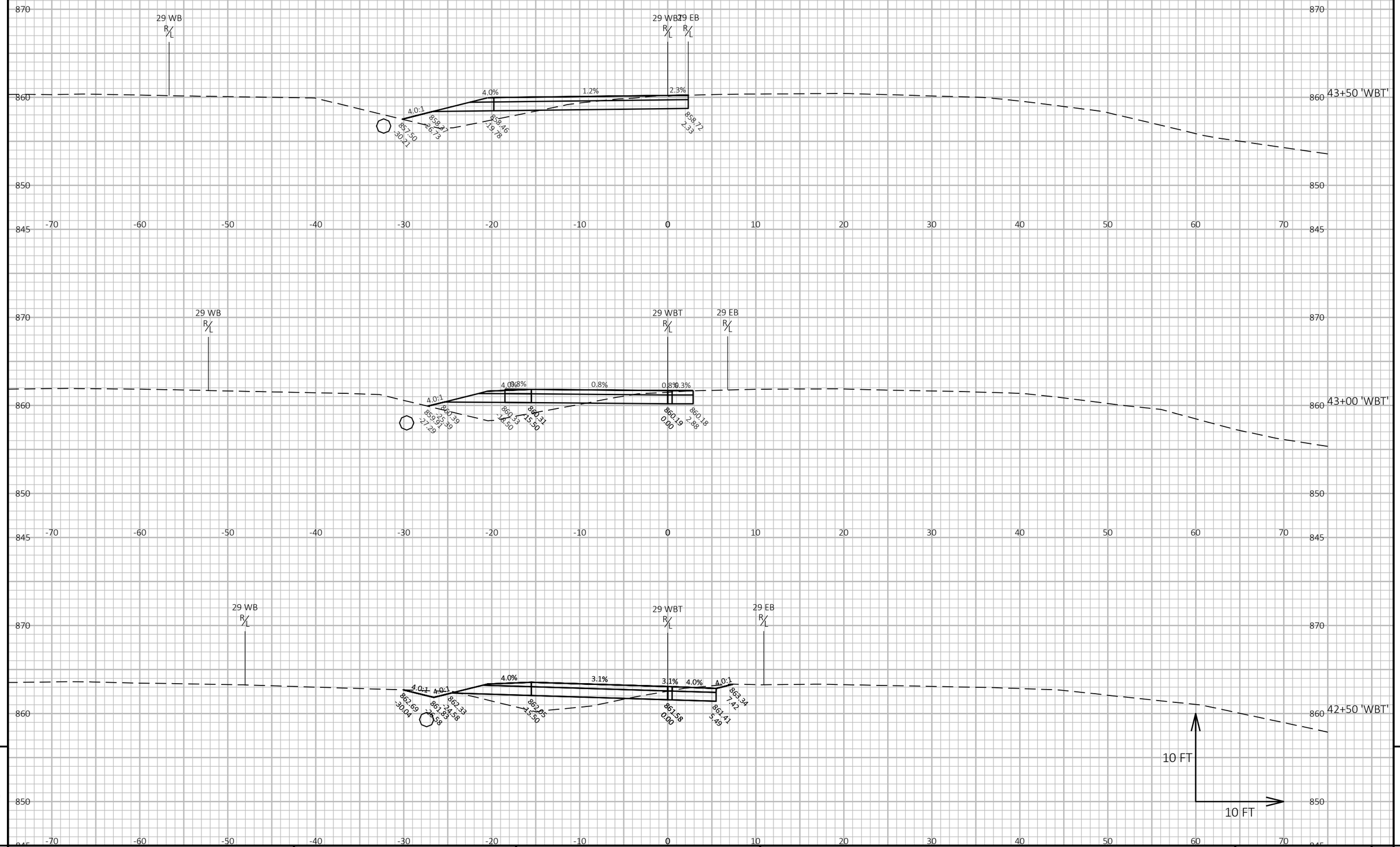
PLOT DATE : 5/1/2026 2:52 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

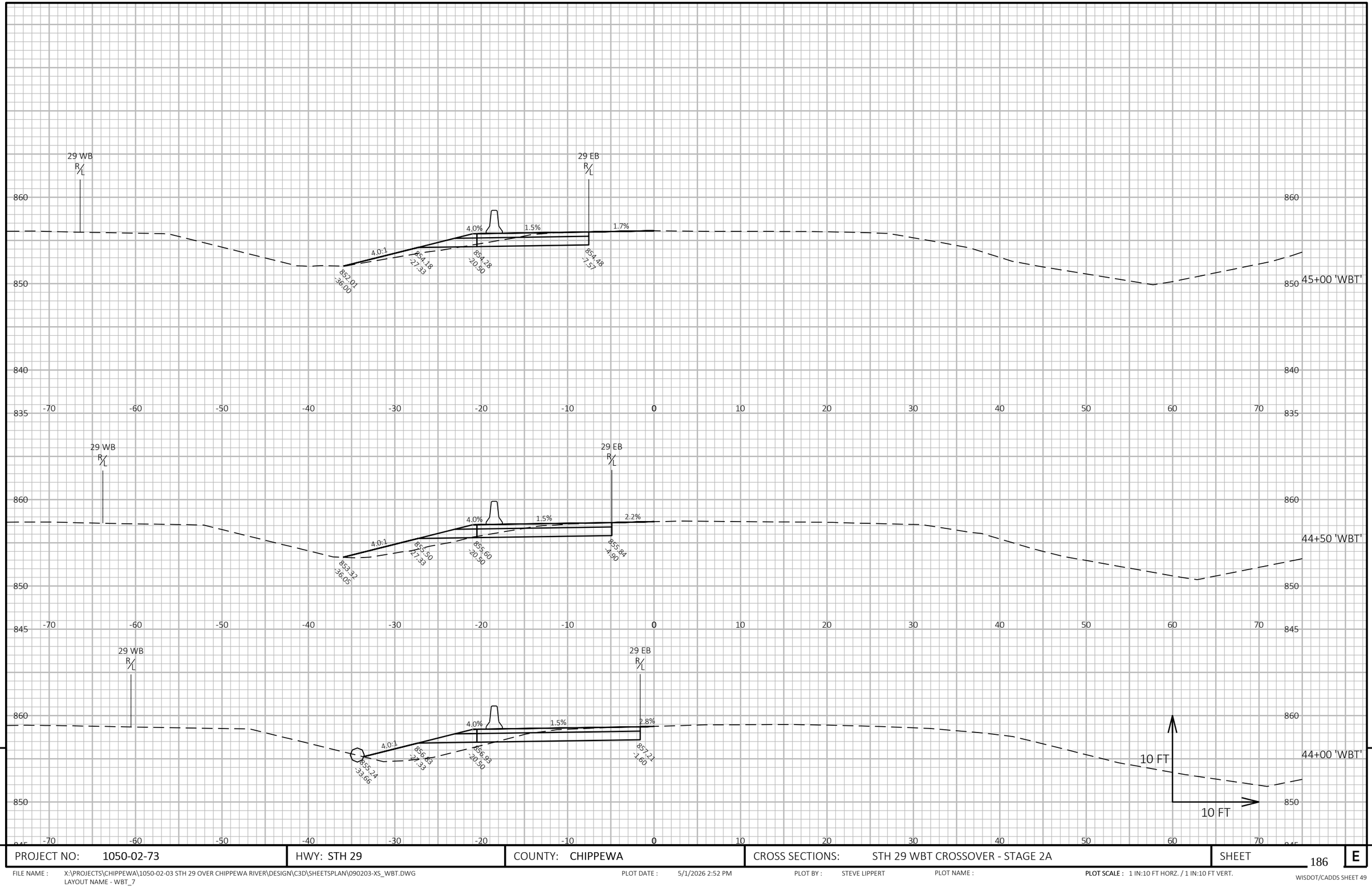


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 185 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_6

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 186	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_7

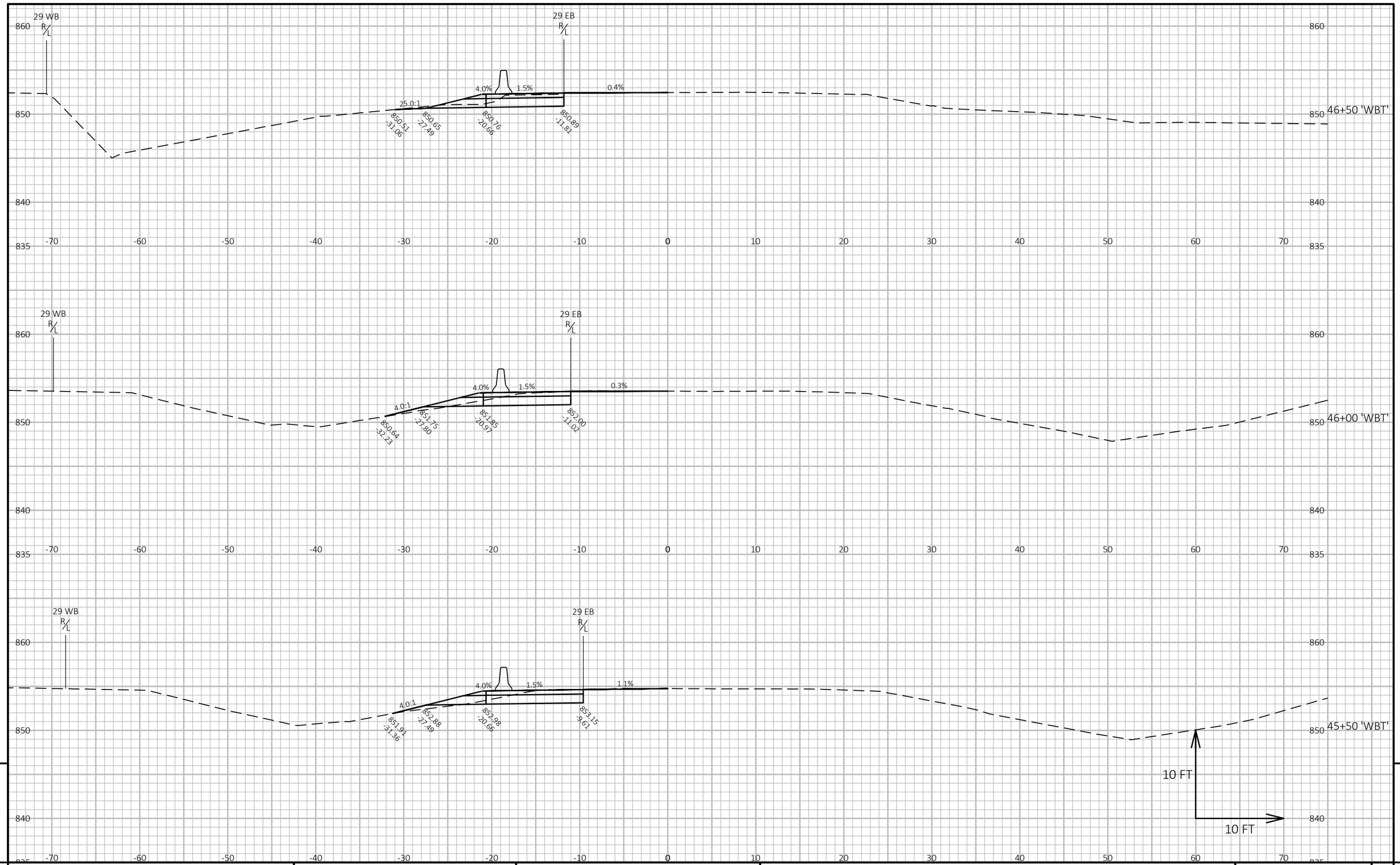
PLOT DATE : 5/1/2026 2:52 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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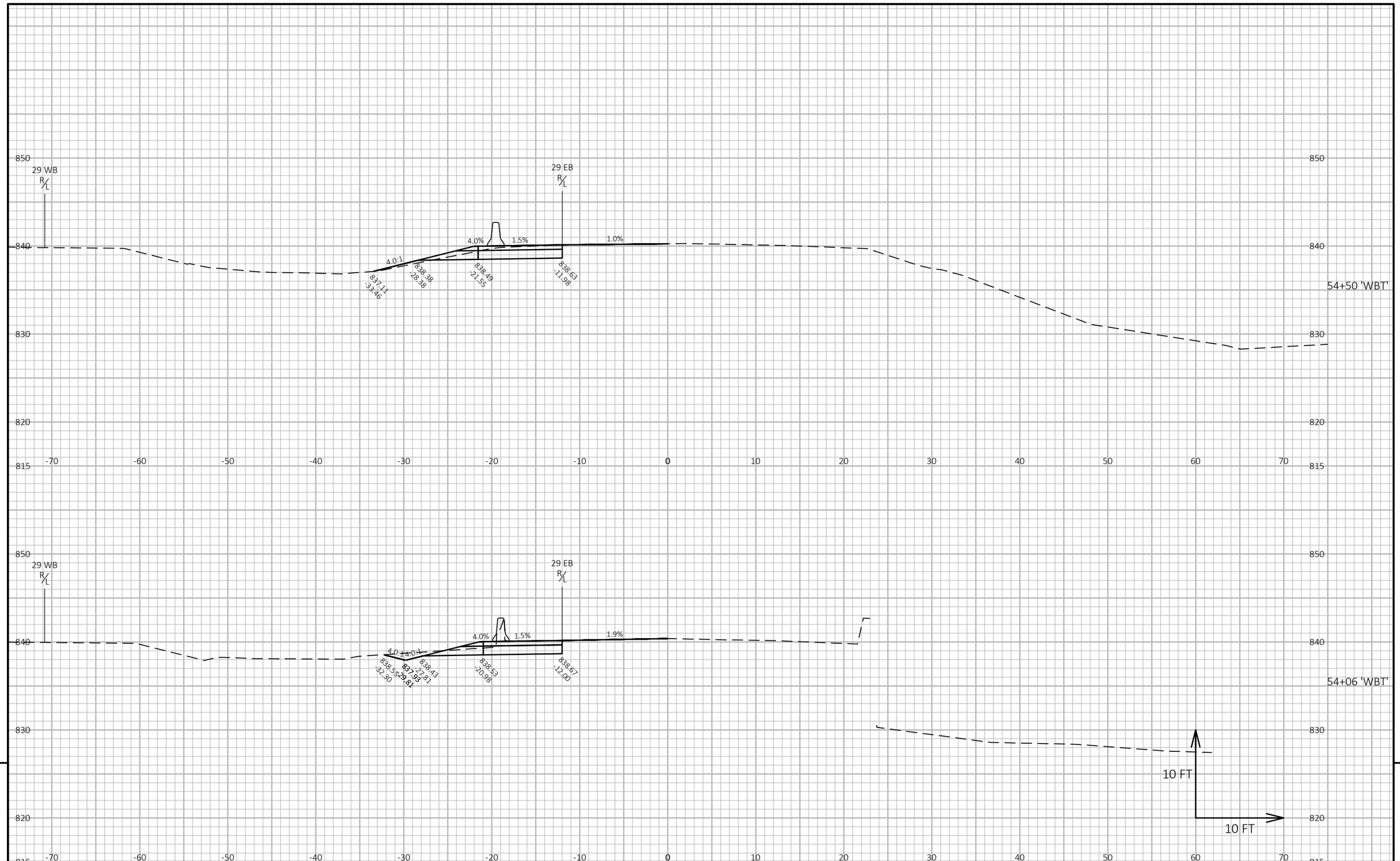
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 187	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_8

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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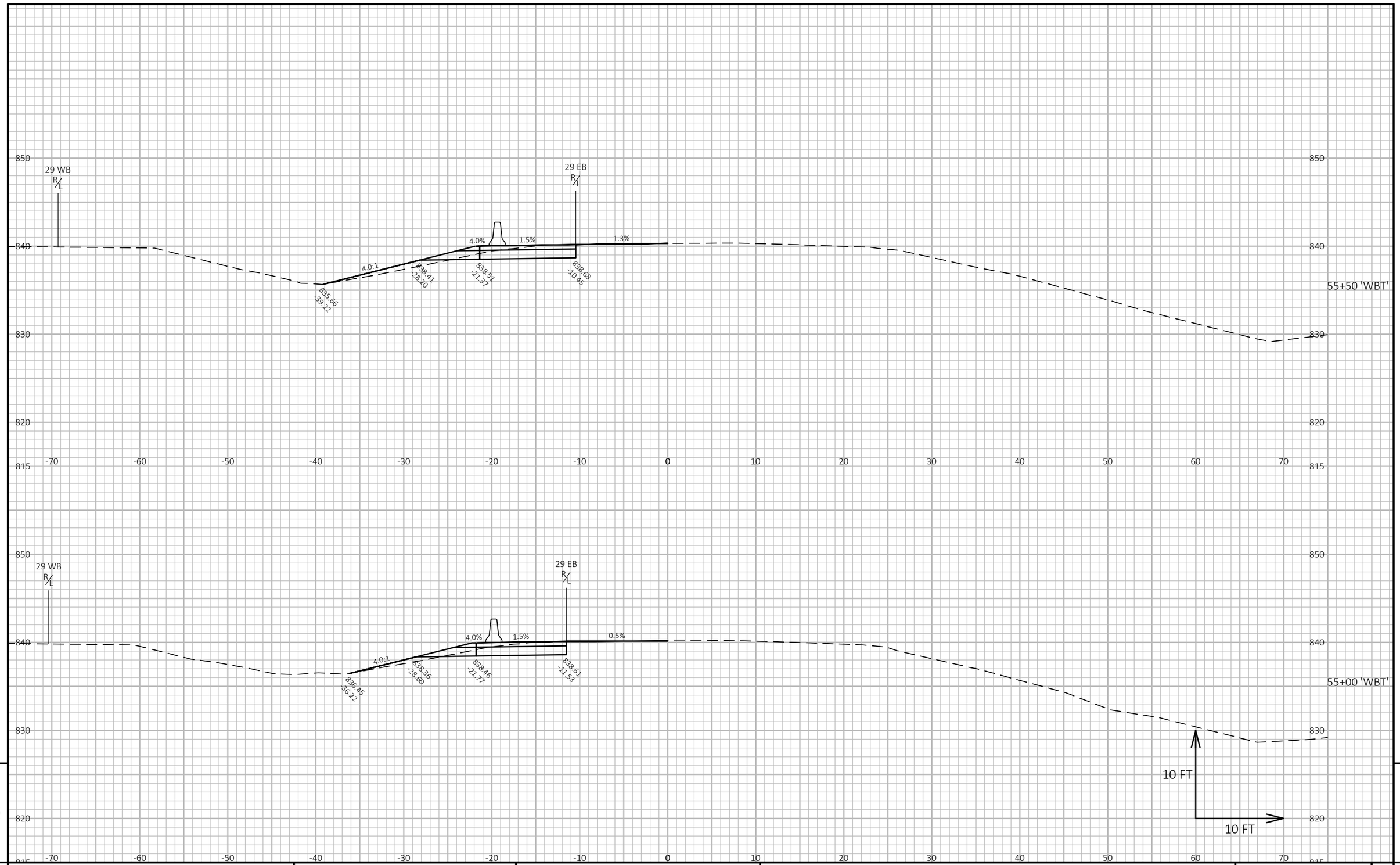
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 188	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_9

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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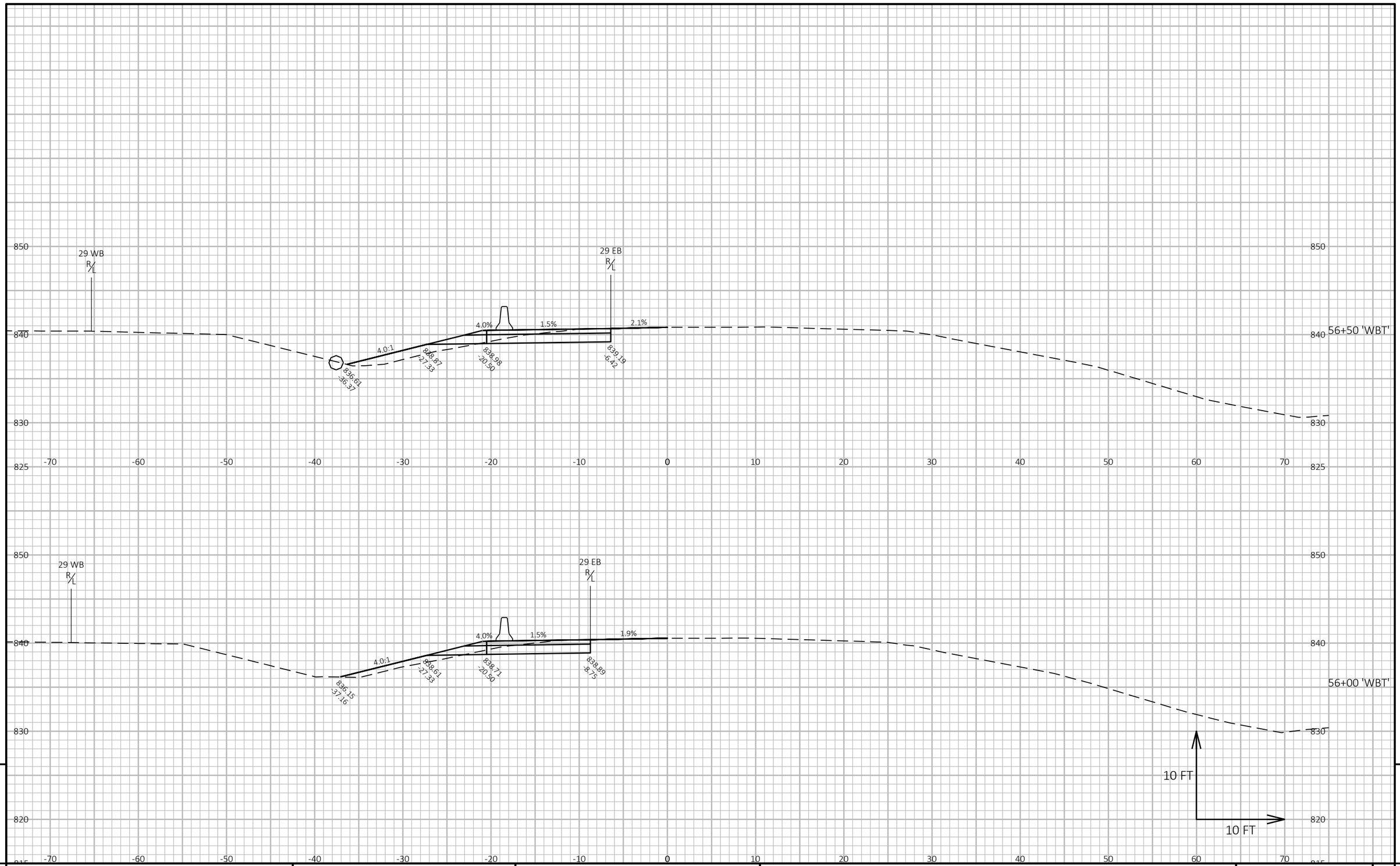
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 189	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_10

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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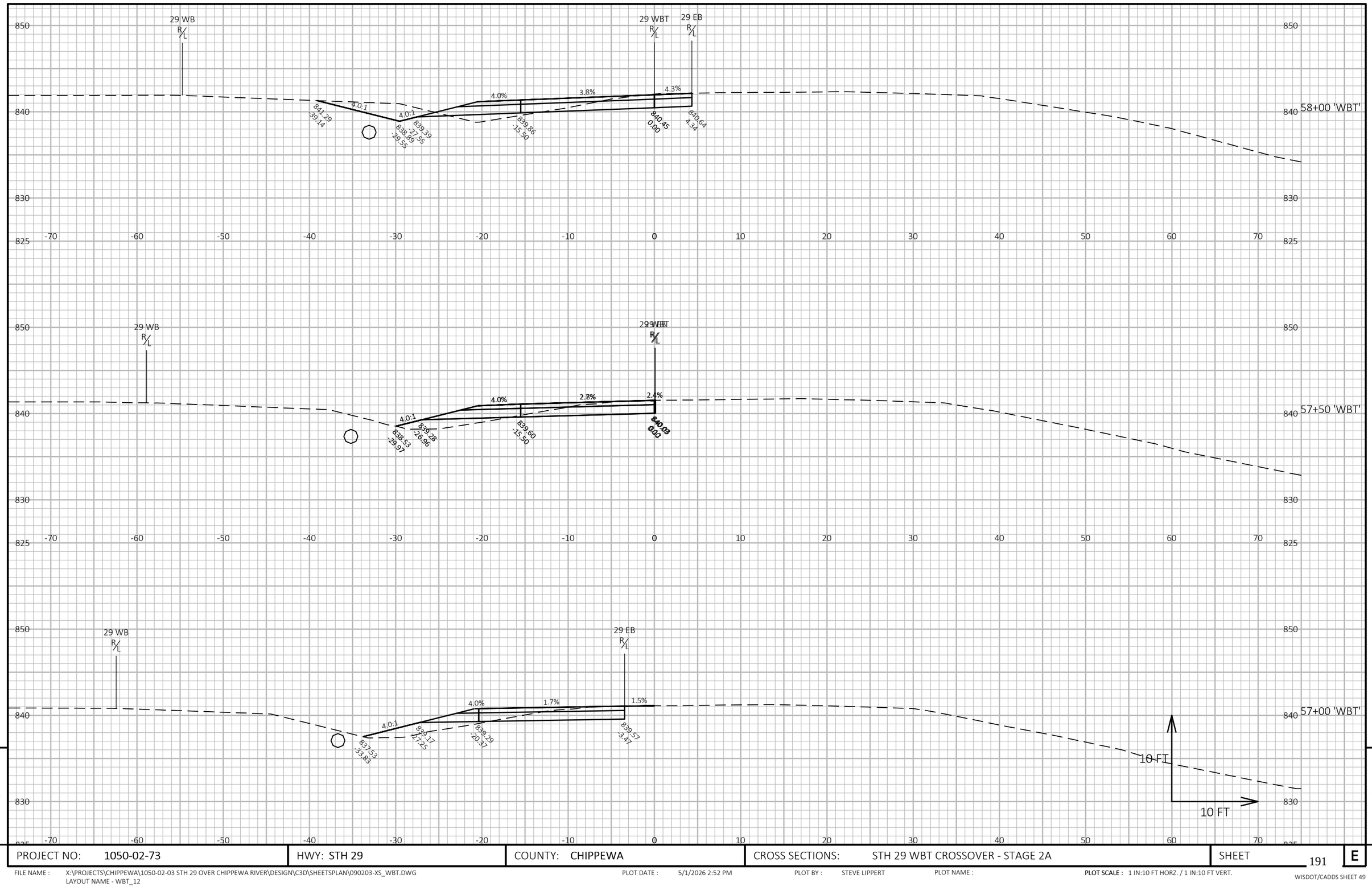
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 190	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_11

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 191	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_12

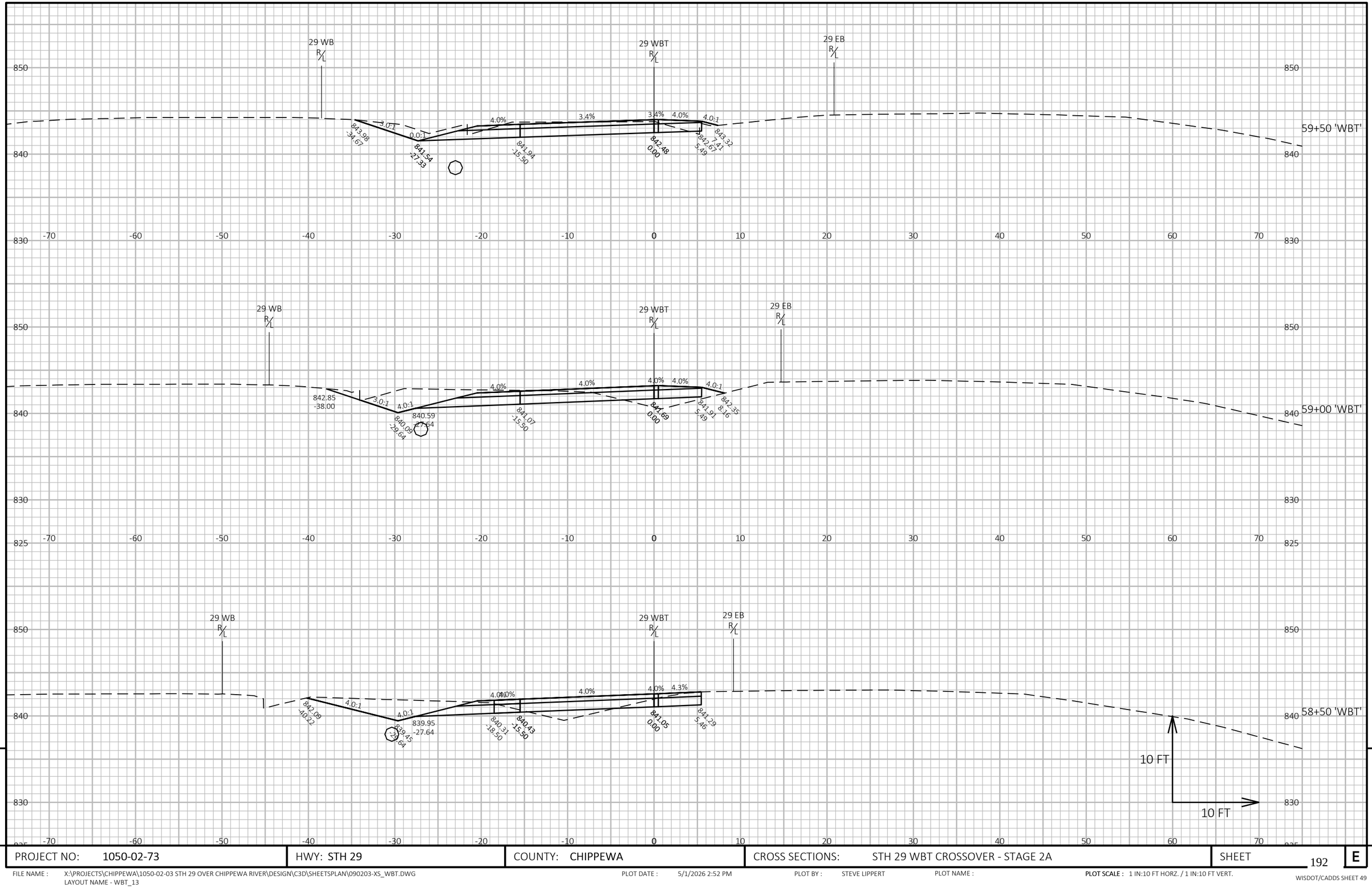
PLOT DATE : 5/1/2026 2:52 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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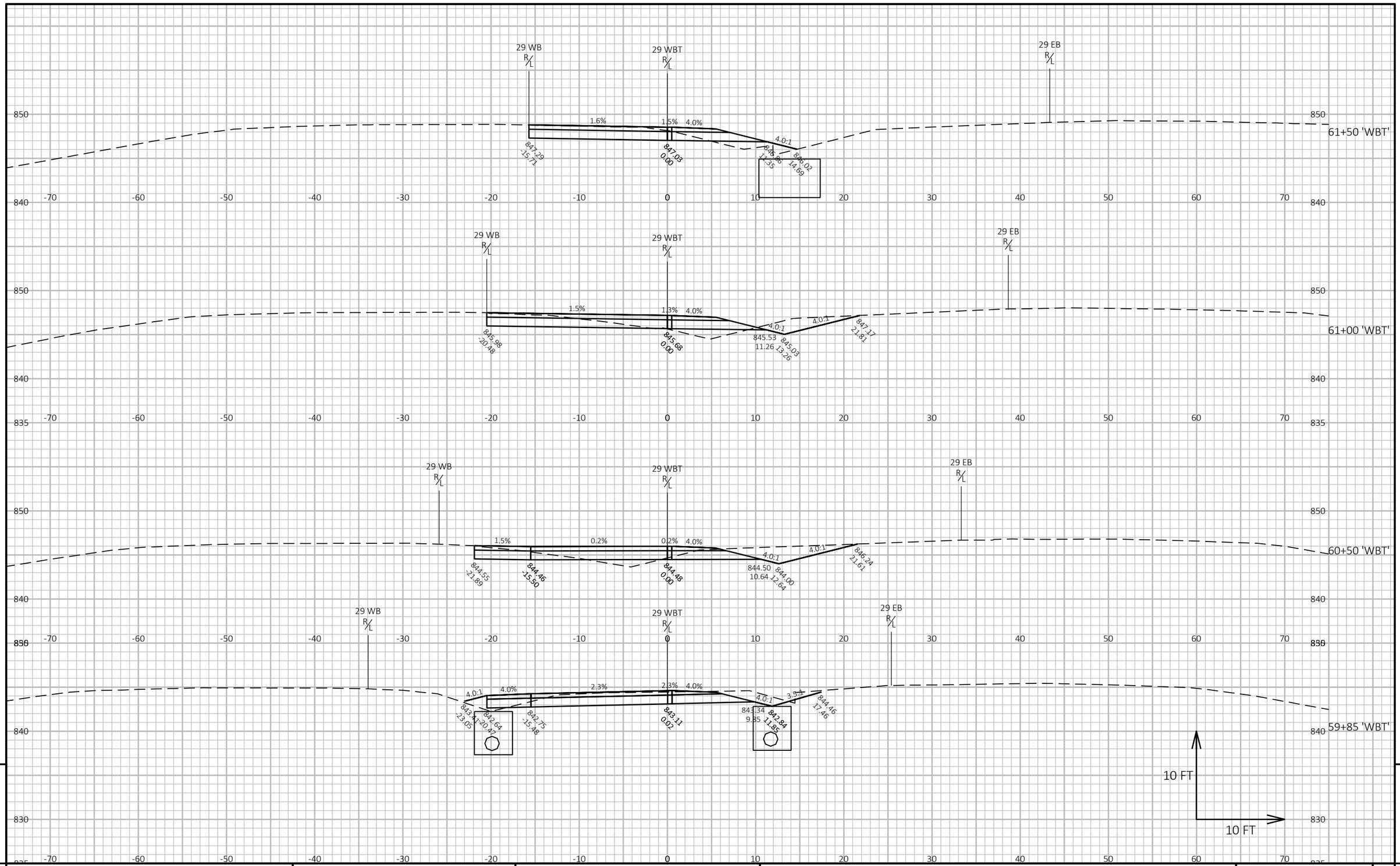
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 192	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_13

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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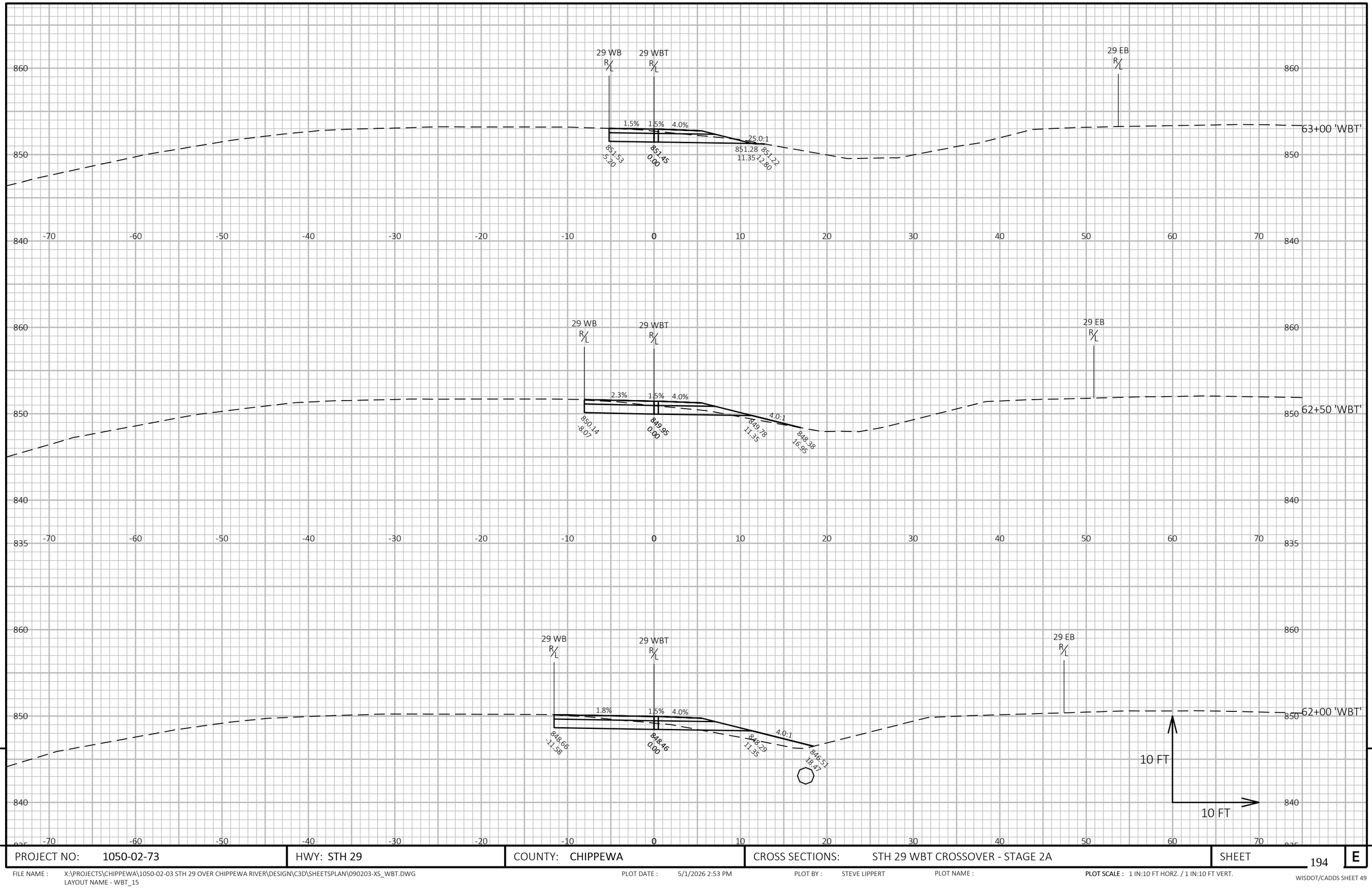
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 193	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_14

PLOT DATE : 5/1/2026 2:52 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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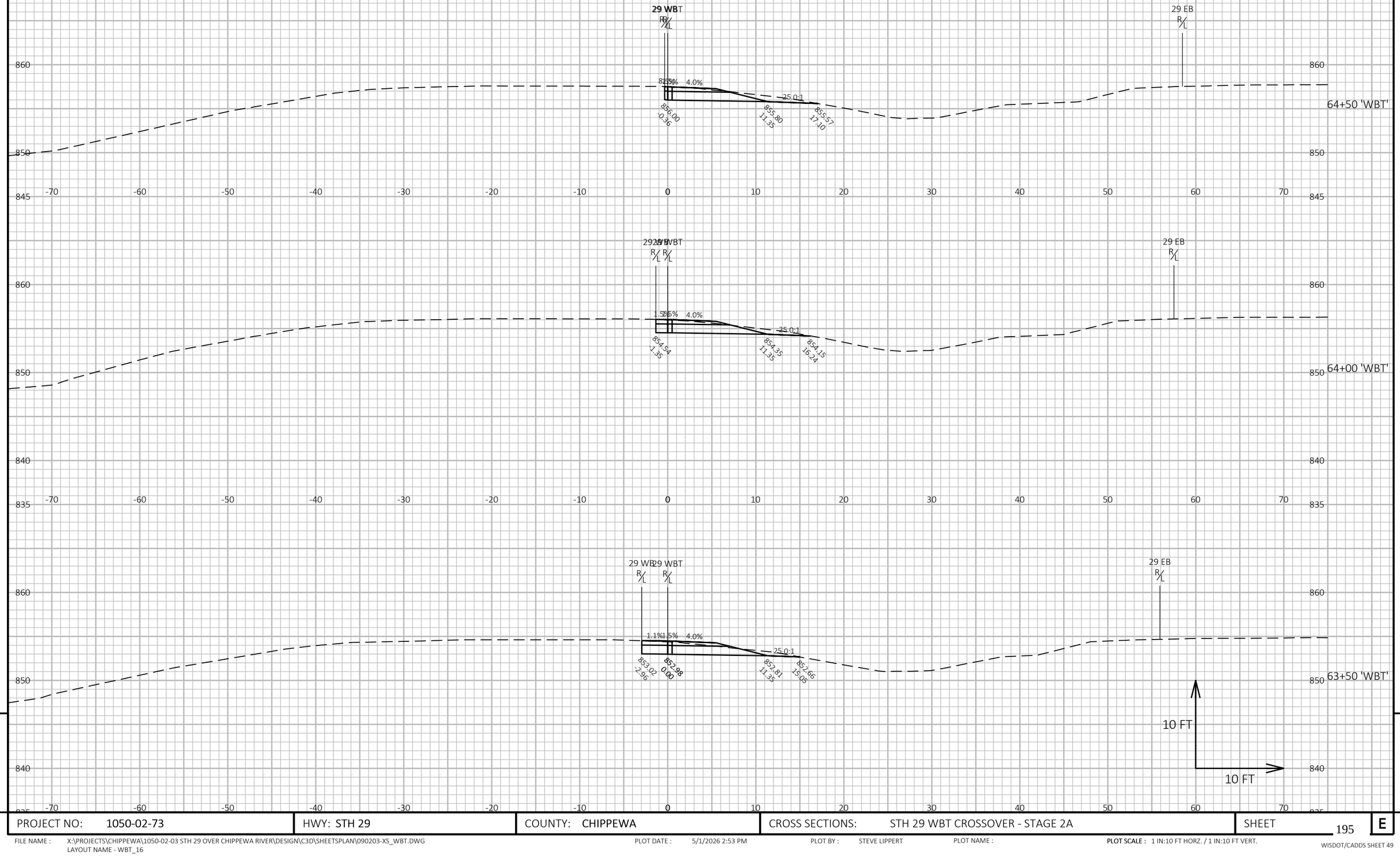
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 194	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_15

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

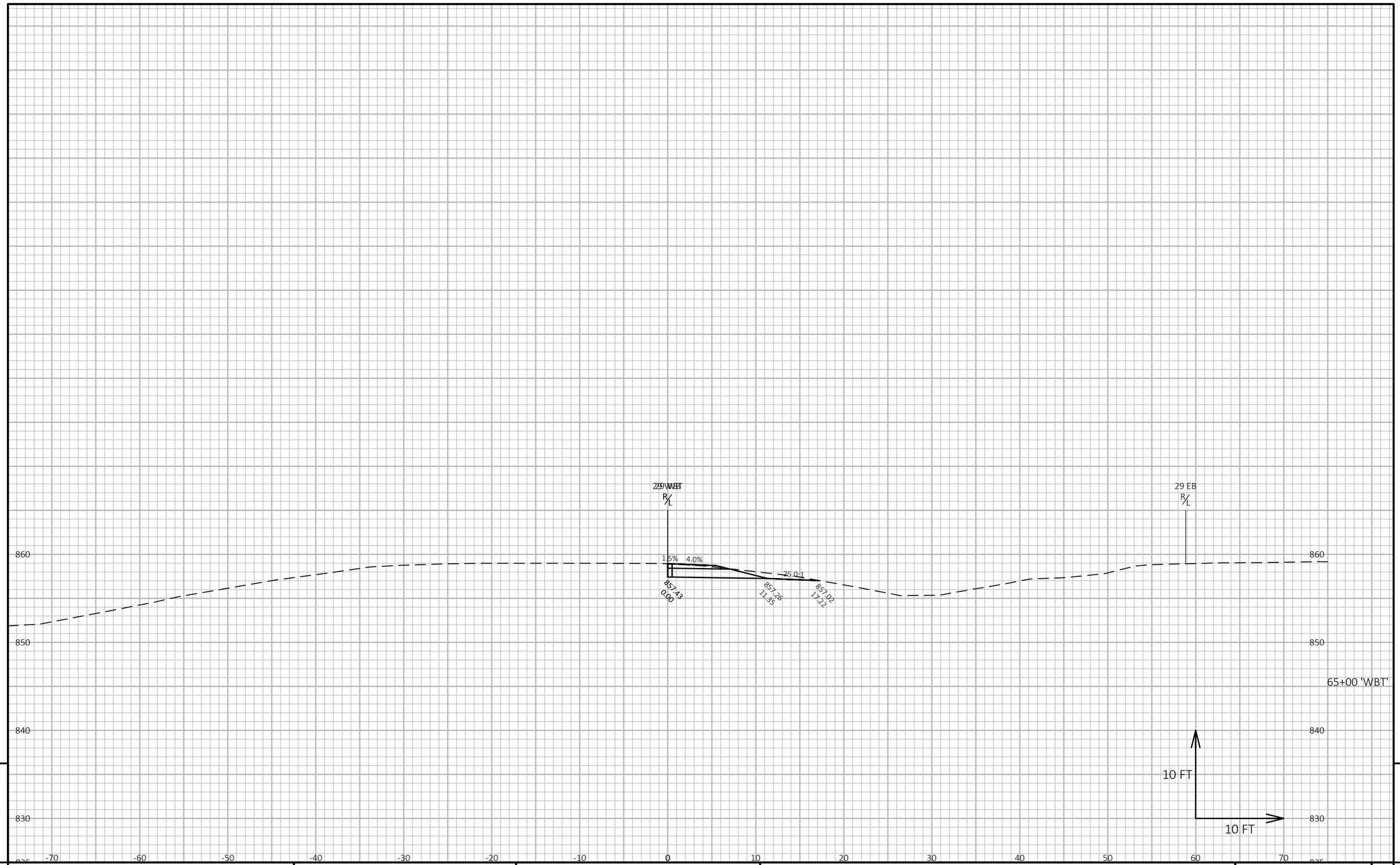


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 195	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_16

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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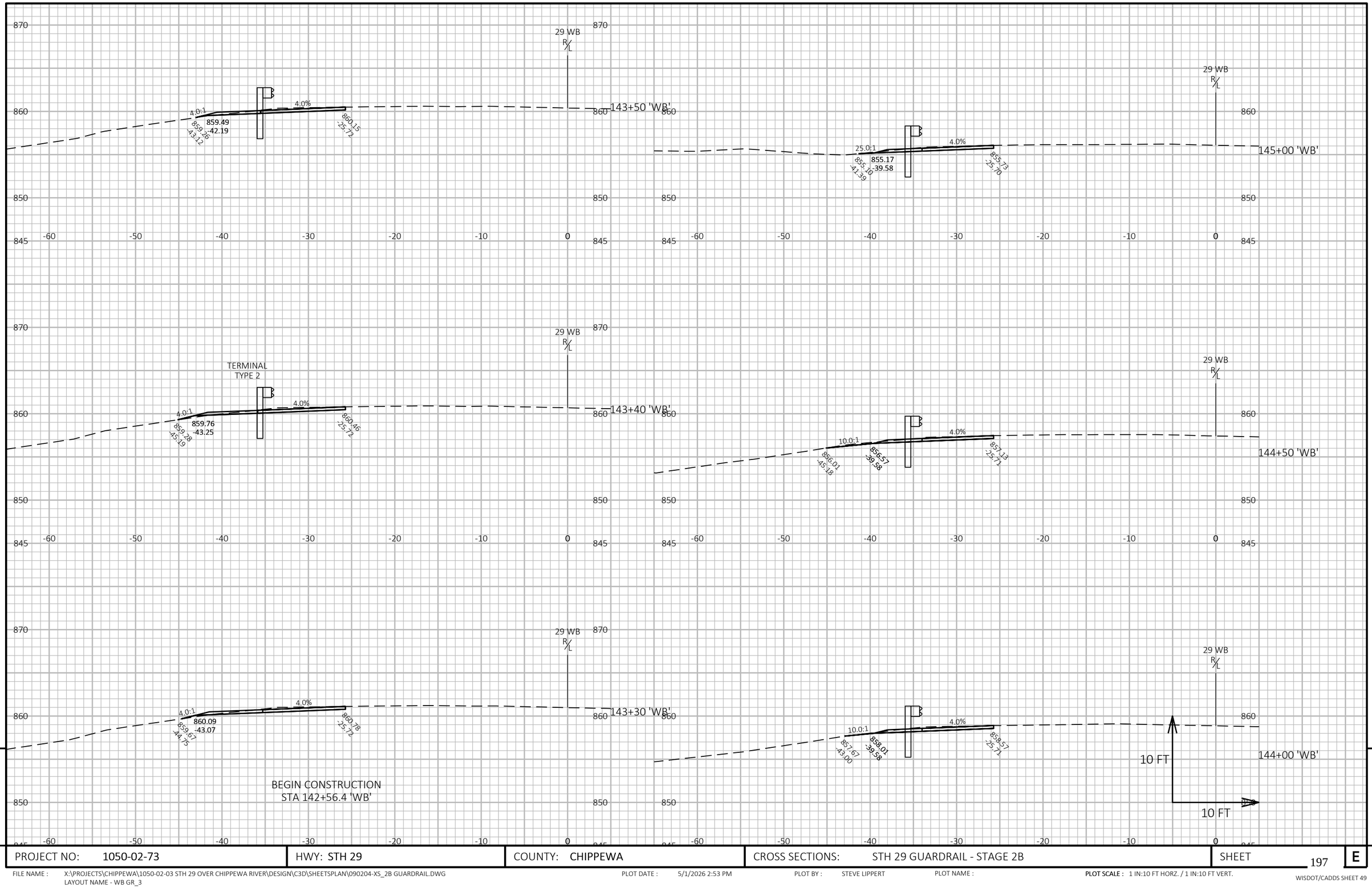
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WBT CROSSOVER - STAGE 2A	SHEET 196	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090203-XS_WBT.DWG
LAYOUT NAME - WBT_17

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



BEGIN CONSTRUCTION
STA 142+56.4 'WB'

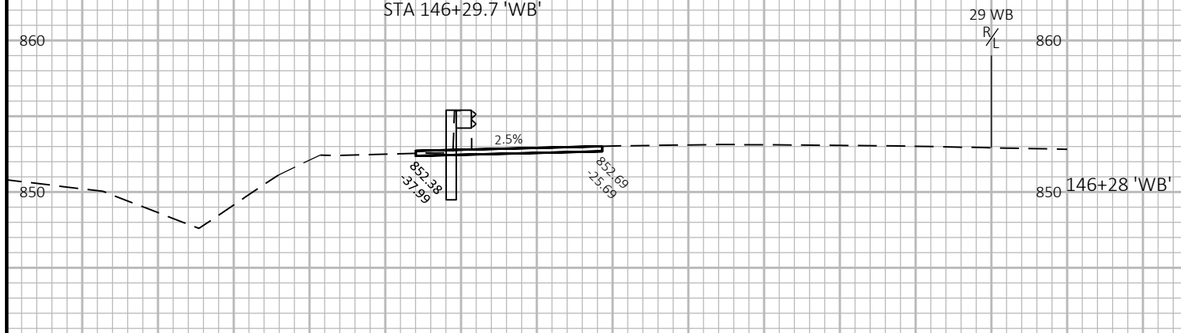
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 197	E

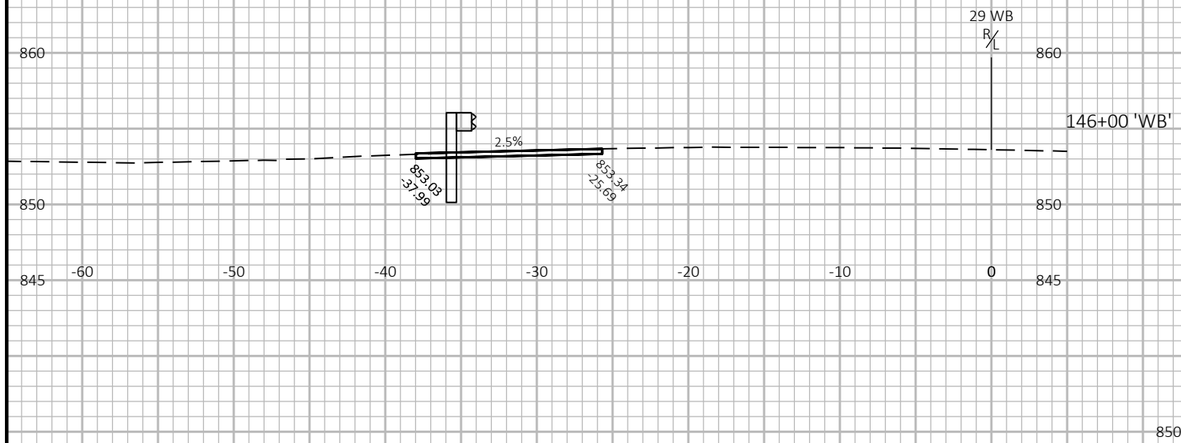
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_3

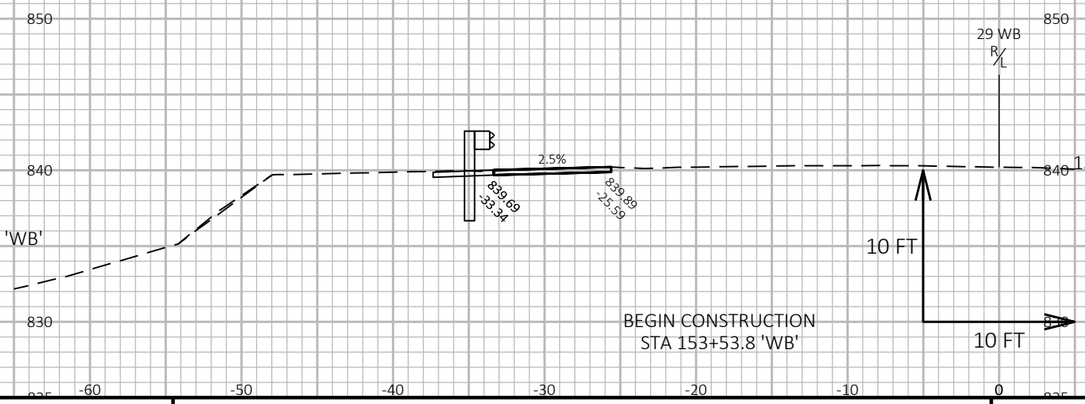
PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 146+29.7 'WB'







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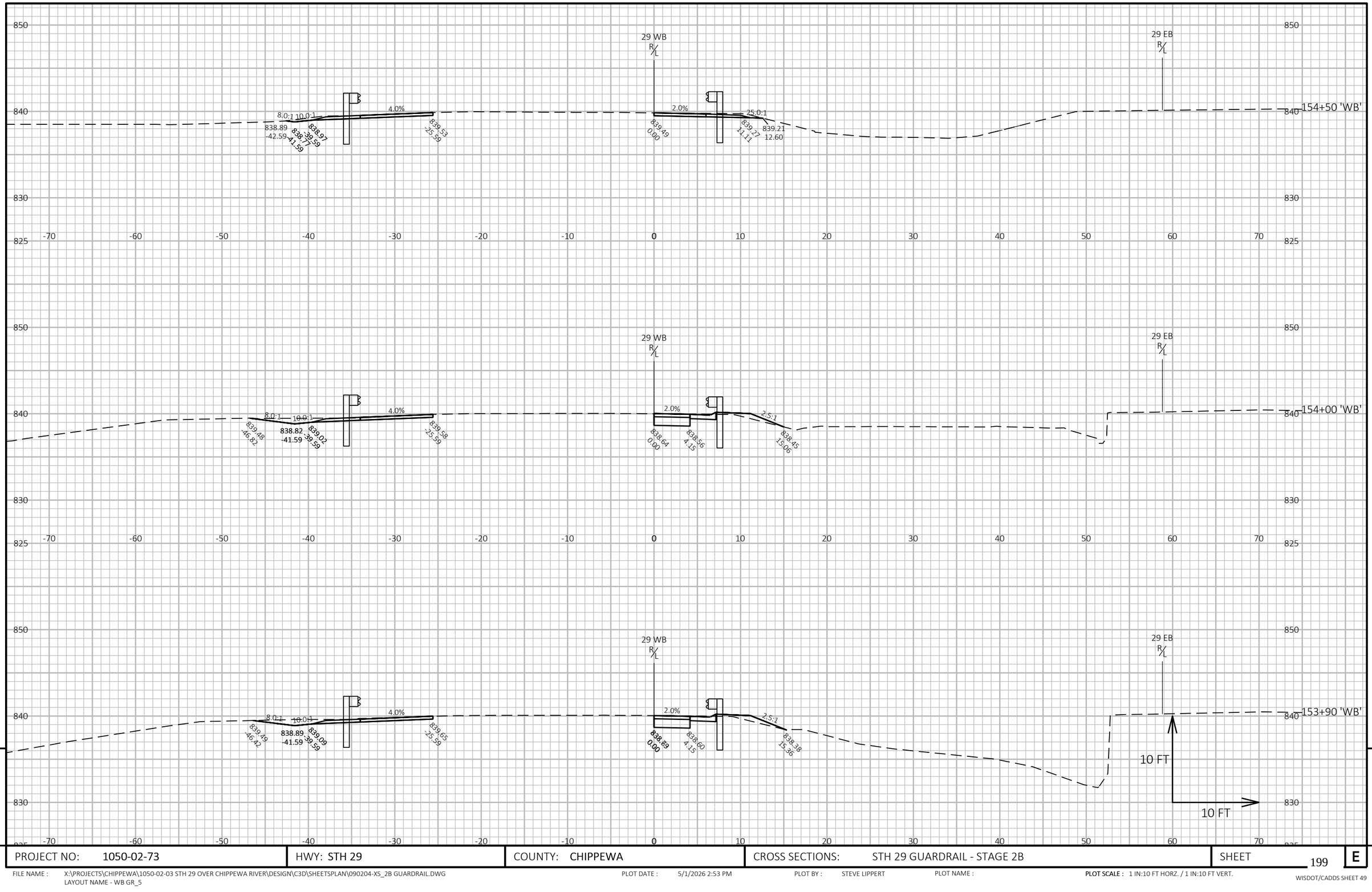
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 198	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_4

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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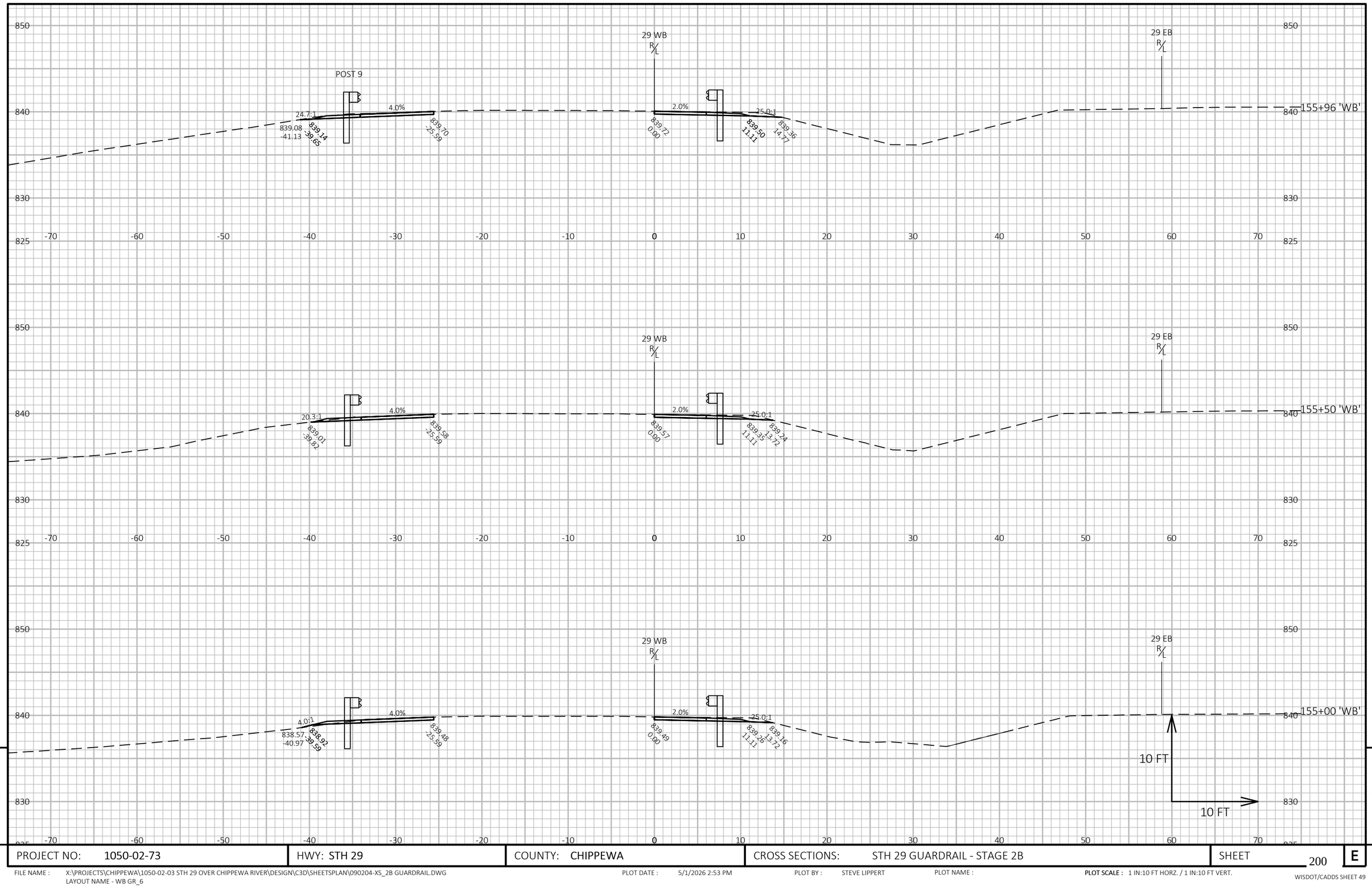
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 199	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_5

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

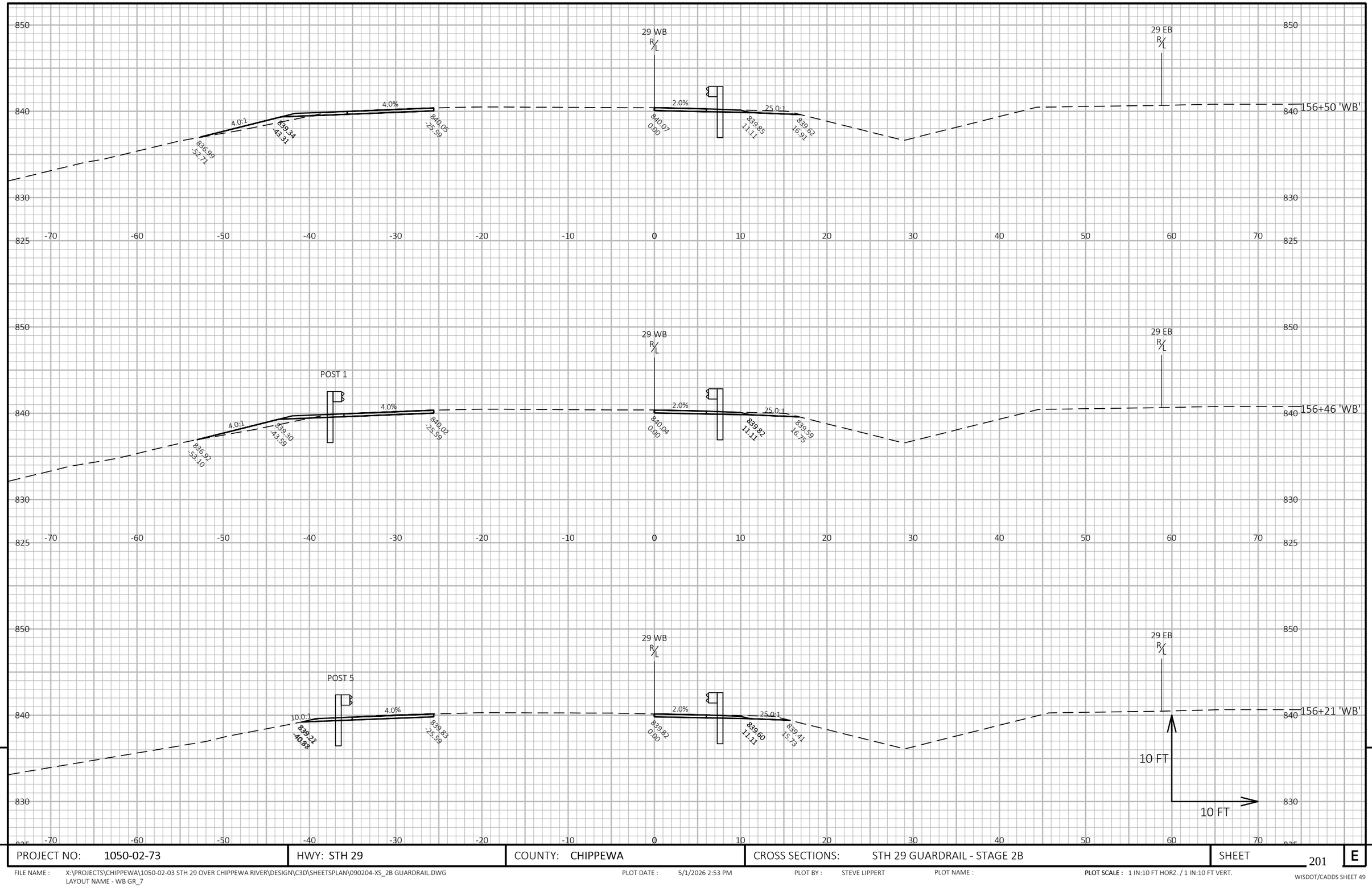
WISDOT/CADDS SHEET 49



PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 200	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_6

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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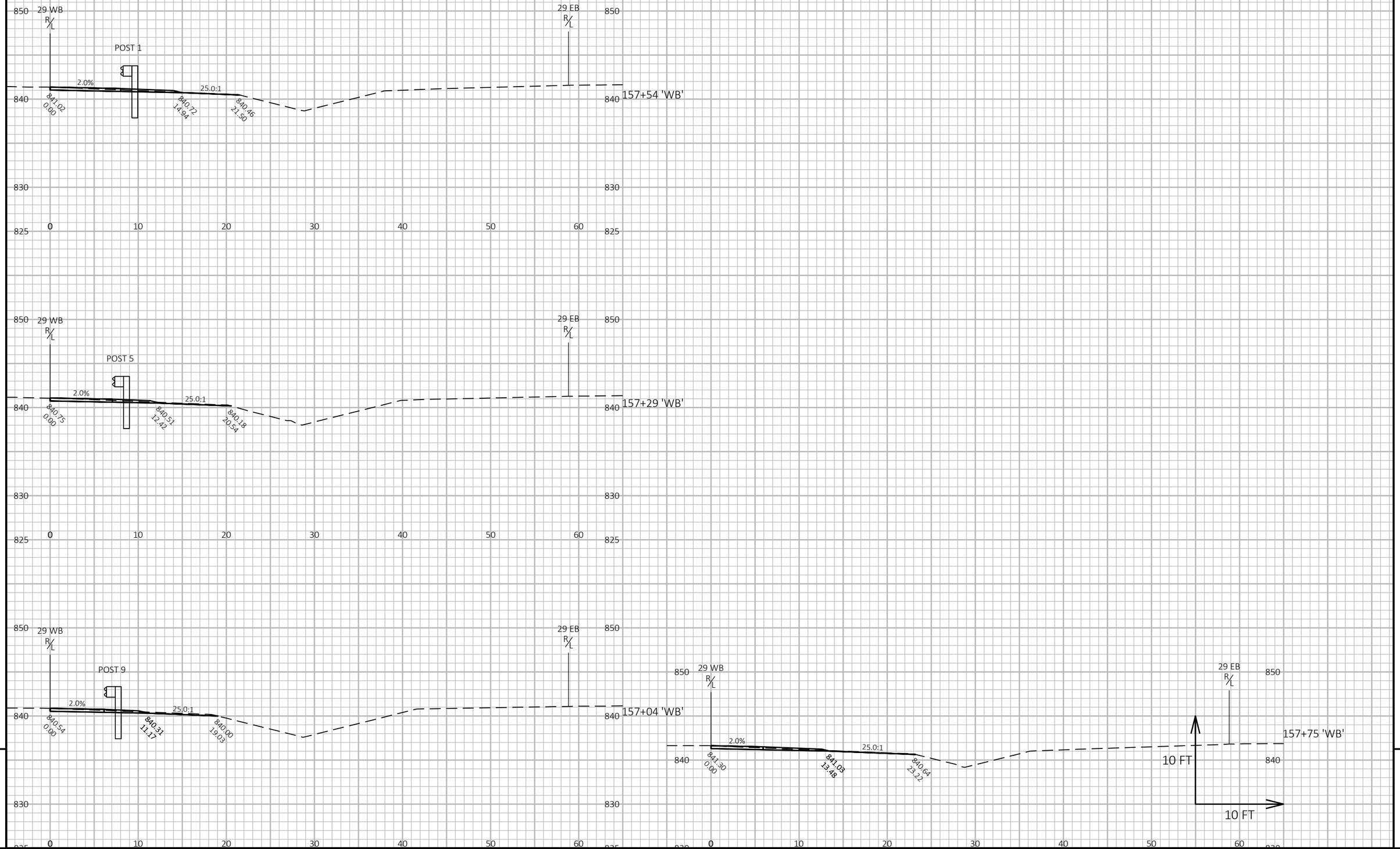
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 201	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_7

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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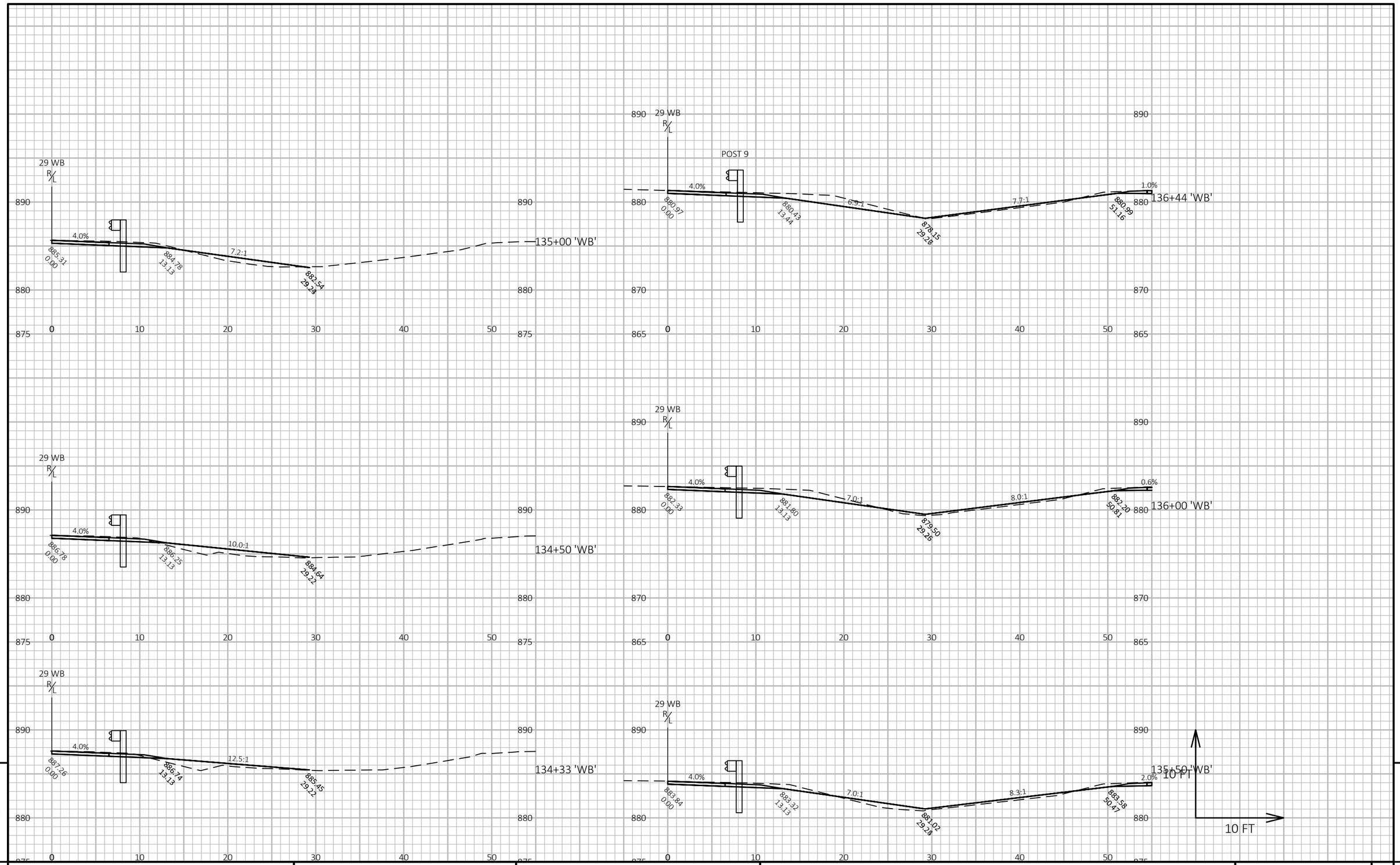
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 GUARDRAIL - STAGE 2B	SHEET 202	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090204-XS_2B GUARDRAIL.DWG
LAYOUT NAME - WB GR_8

PLOT DATE : 5/1/2026 2:53 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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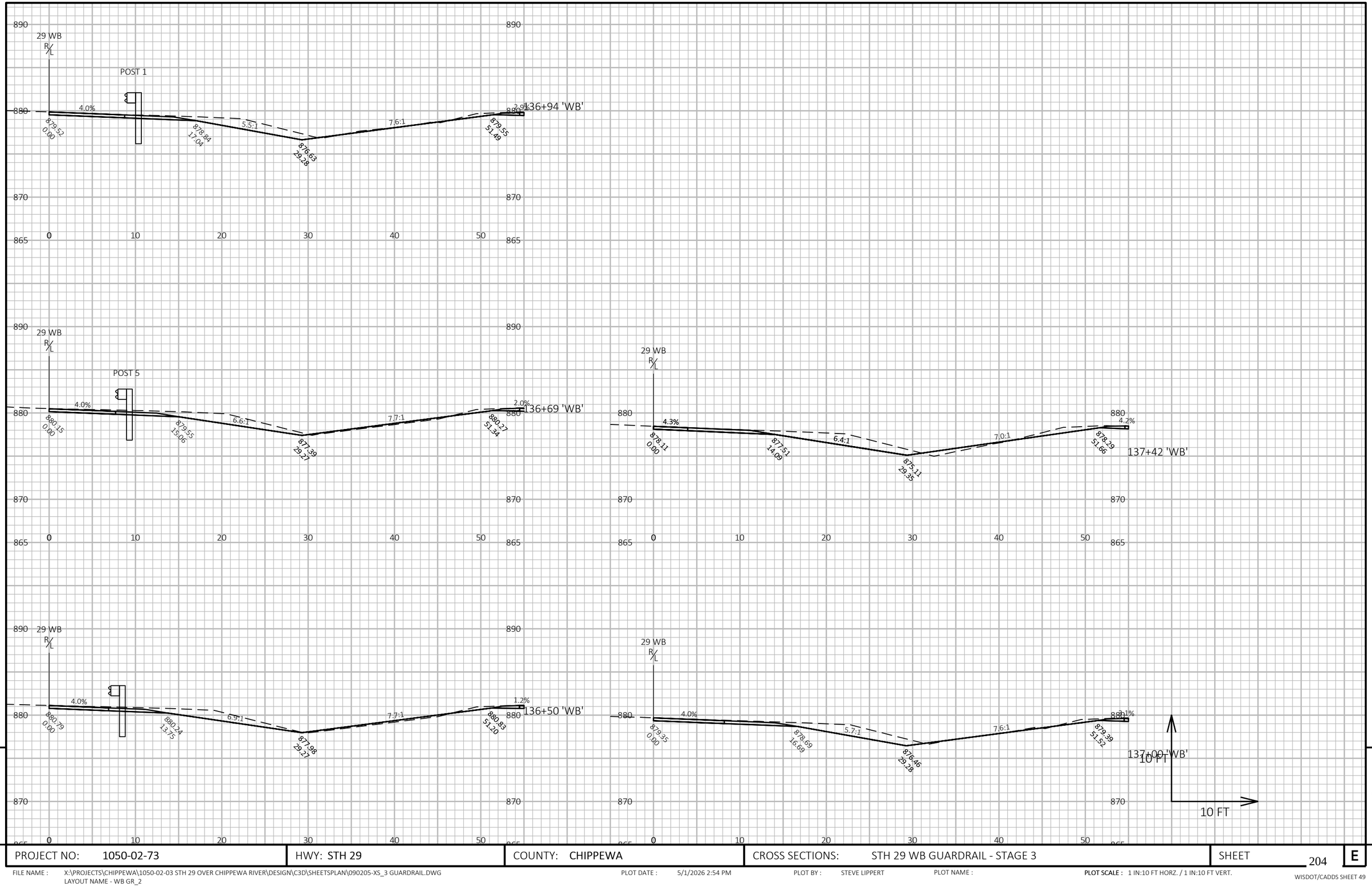
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB GUARDRAIL - STAGE 3	SHEET 203	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090205-XS_3 GUARDRAIL.DWG
LAYOUT NAME - WB GR_1

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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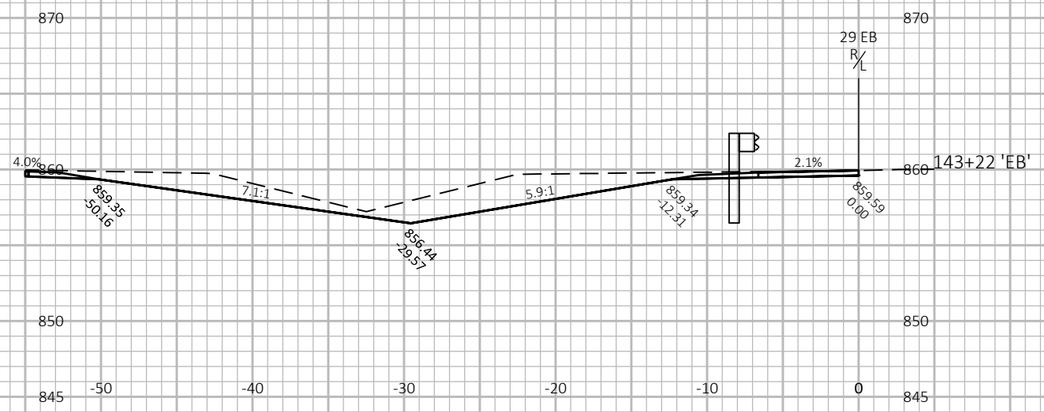
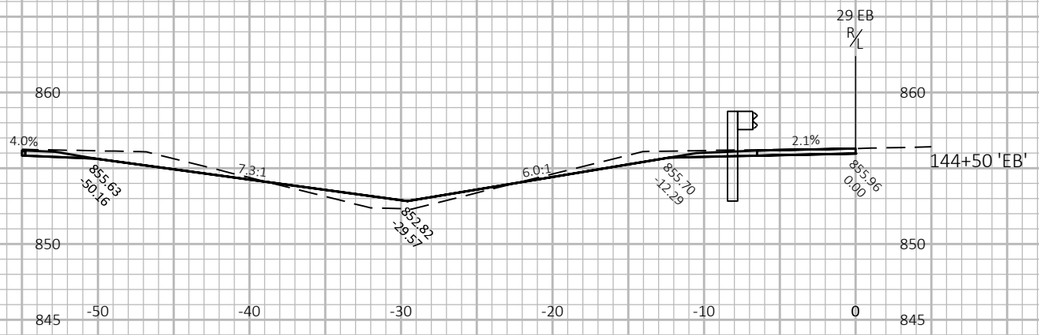
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 WB GUARDRAIL - STAGE 3	SHEET 204	E

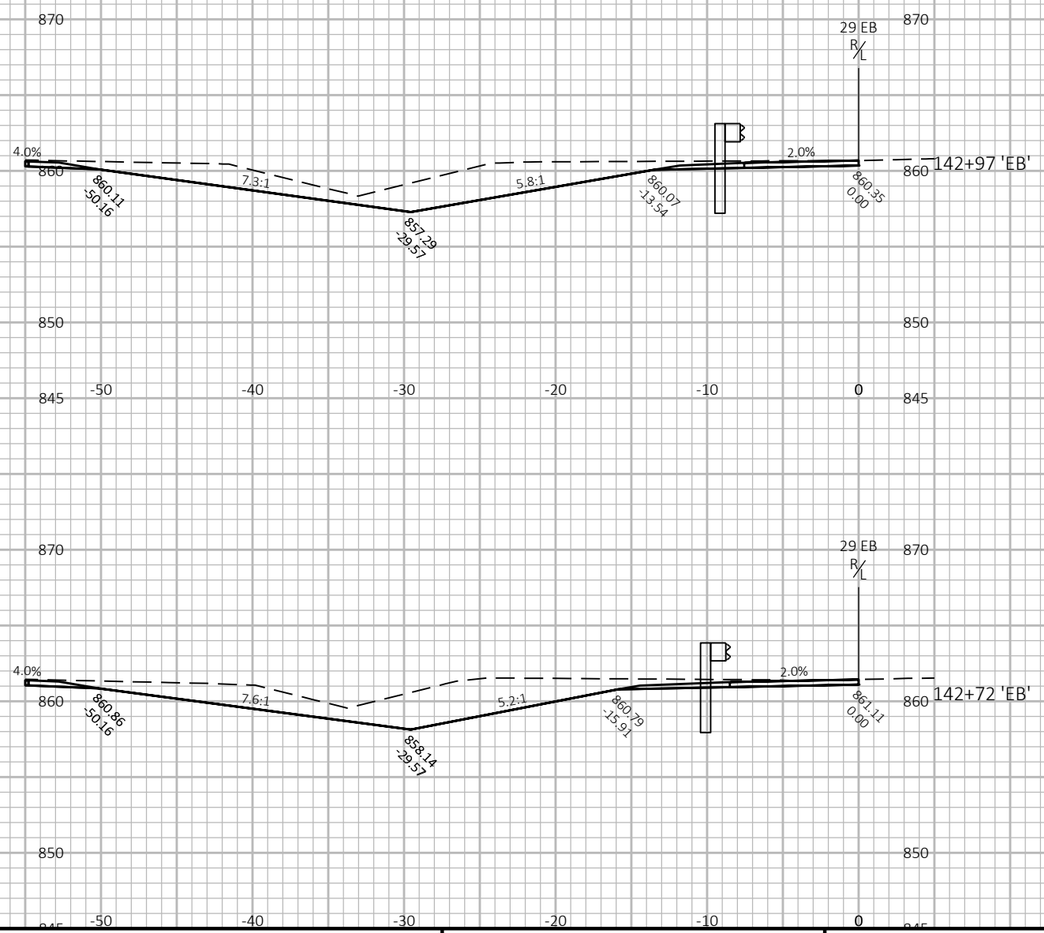
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090205-XS_3 GUARDRAIL.DWG
LAYOUT NAME - WB GR_2

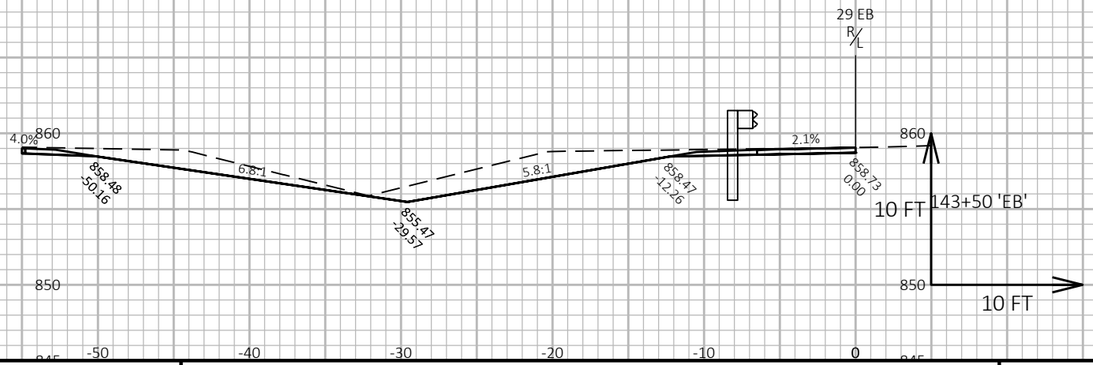
PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







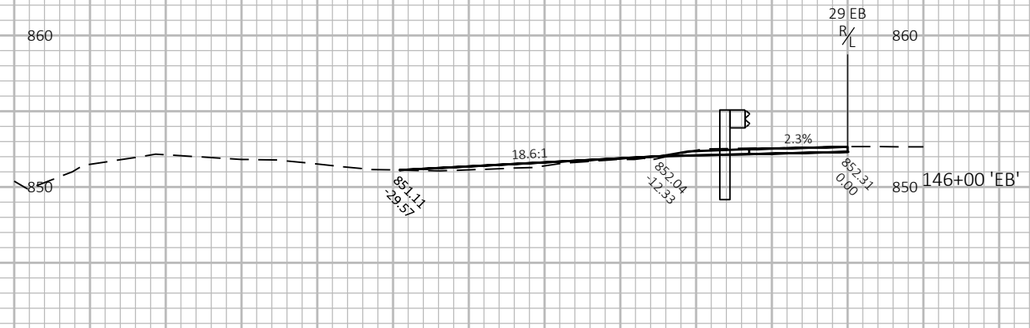


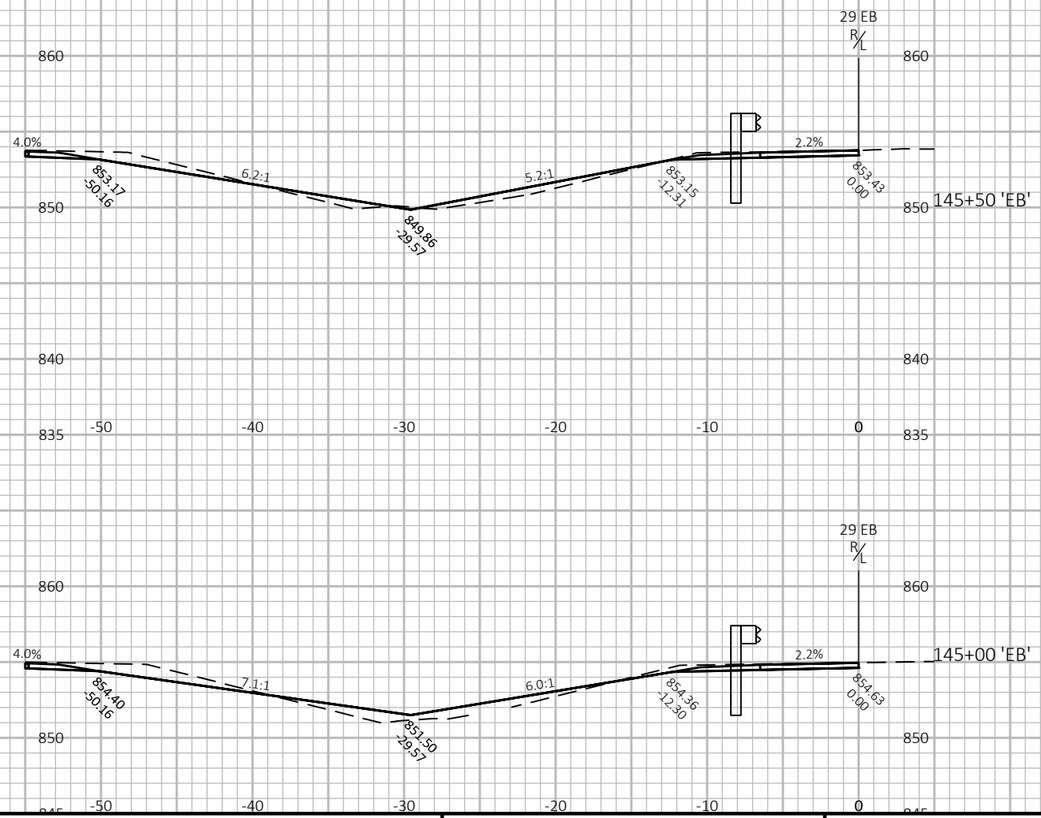
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB GUARDRAIL - STAGE 3	SHEET 205	E

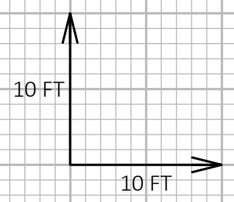
FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090205-XS_3 GUARDRAIL.DWG
LAYOUT NAME - EB GR_01

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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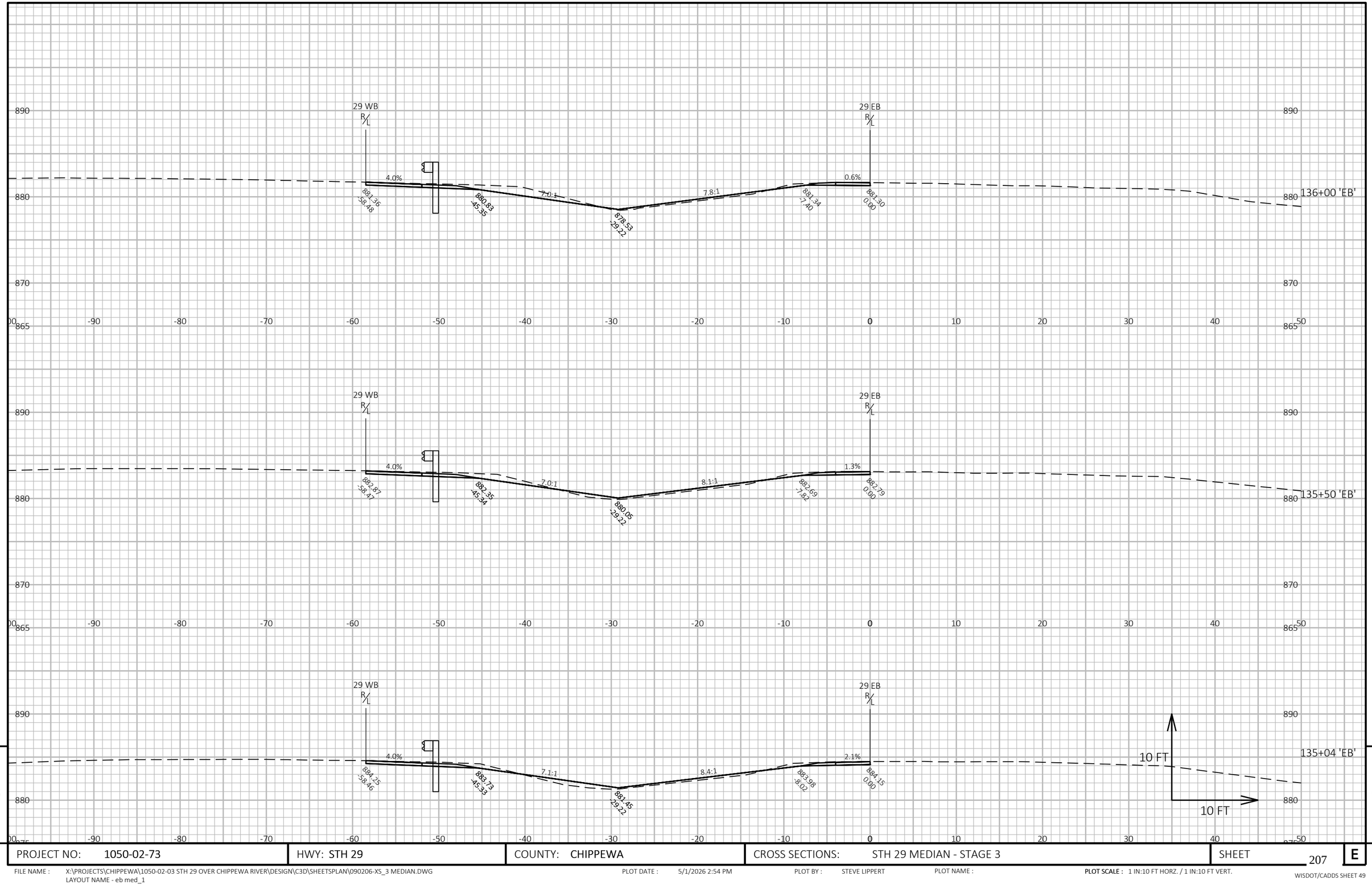
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 EB GUARDRAIL - STAGE 3	SHEET 206	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090205-XS_3 GUARDRAIL.DWG
LAYOUT NAME - EB GR_02

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 207	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_1

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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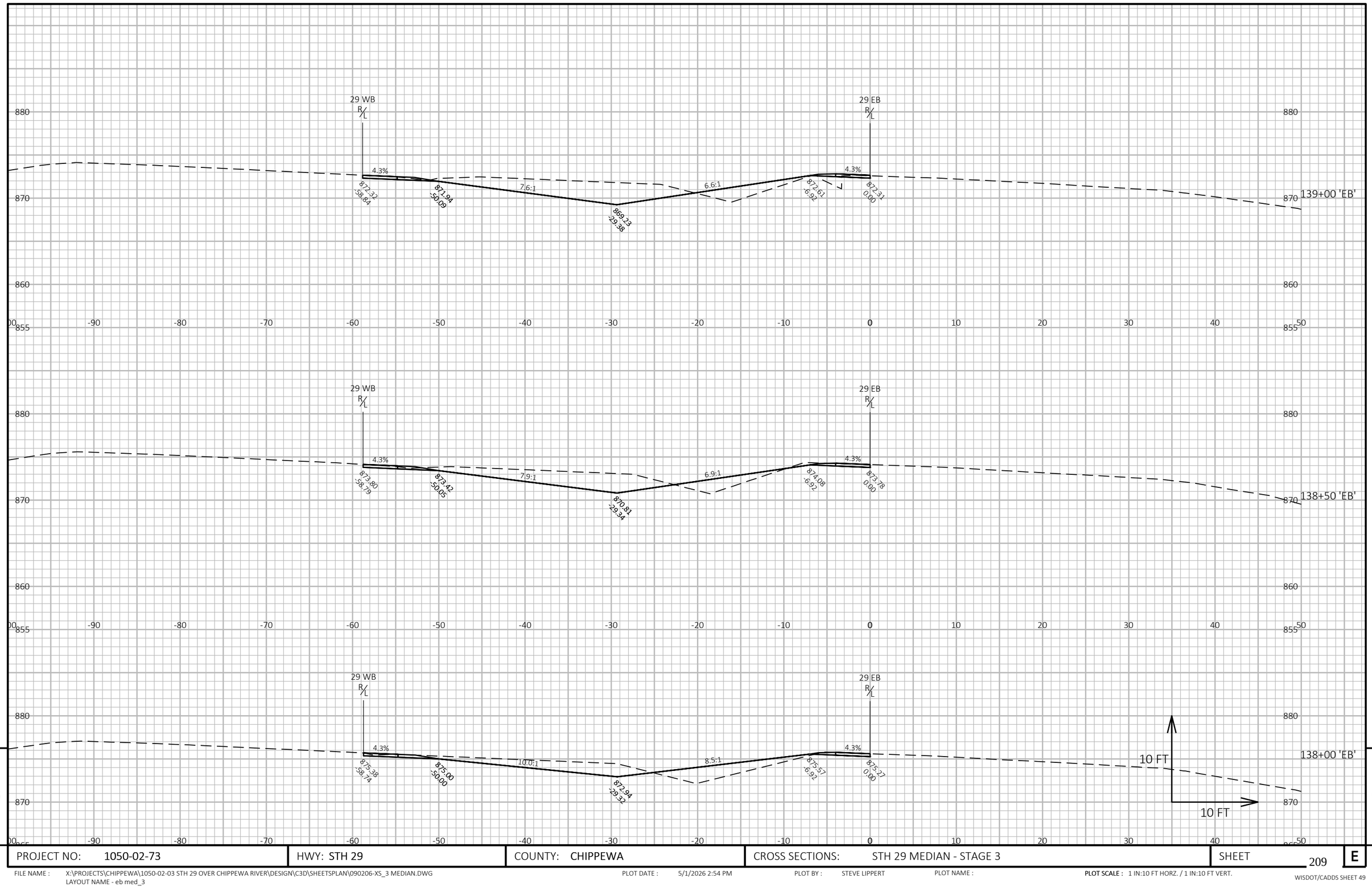
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 208	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_2

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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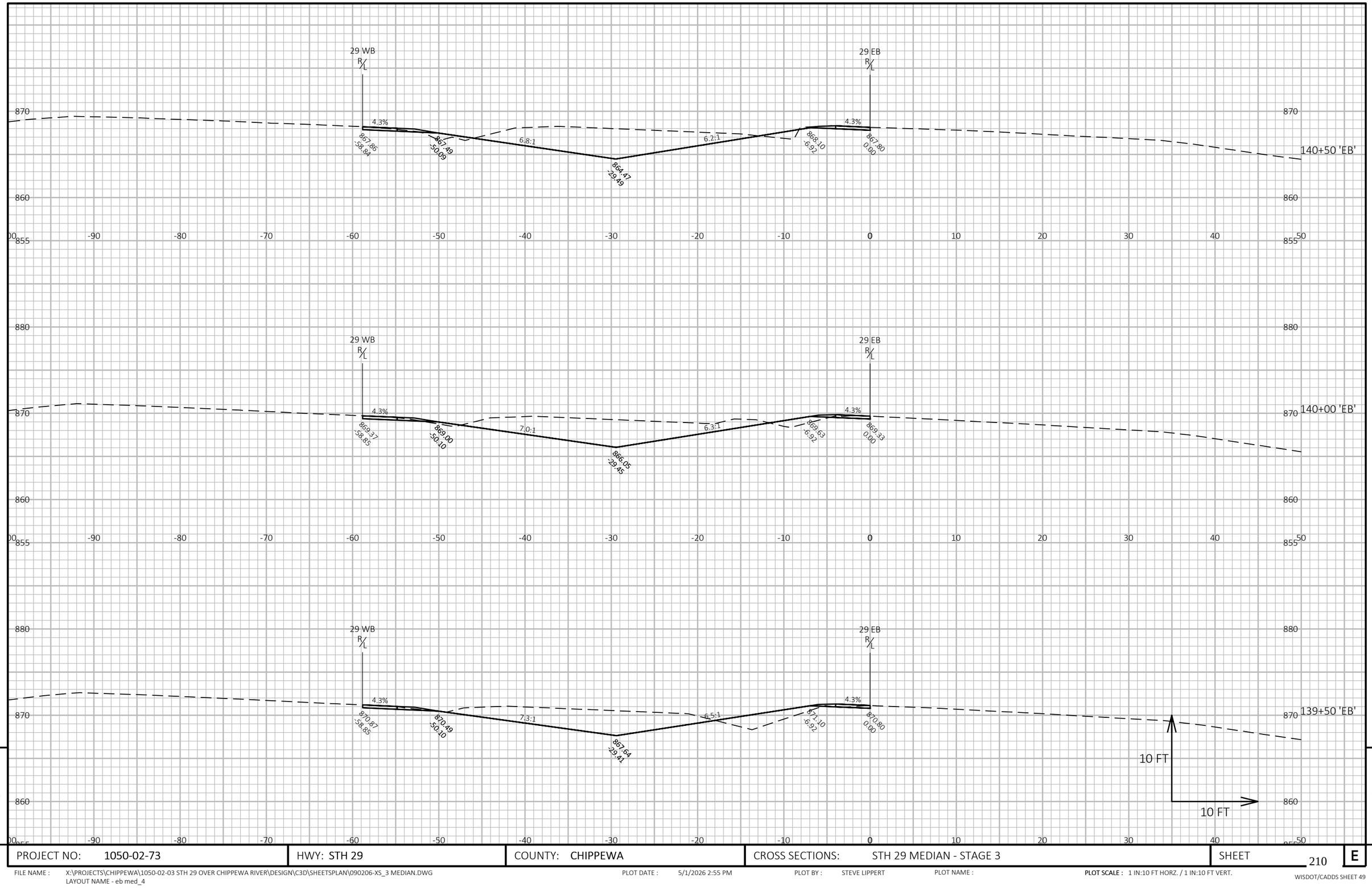
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 209	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_3

PLOT DATE : 5/1/2026 2:54 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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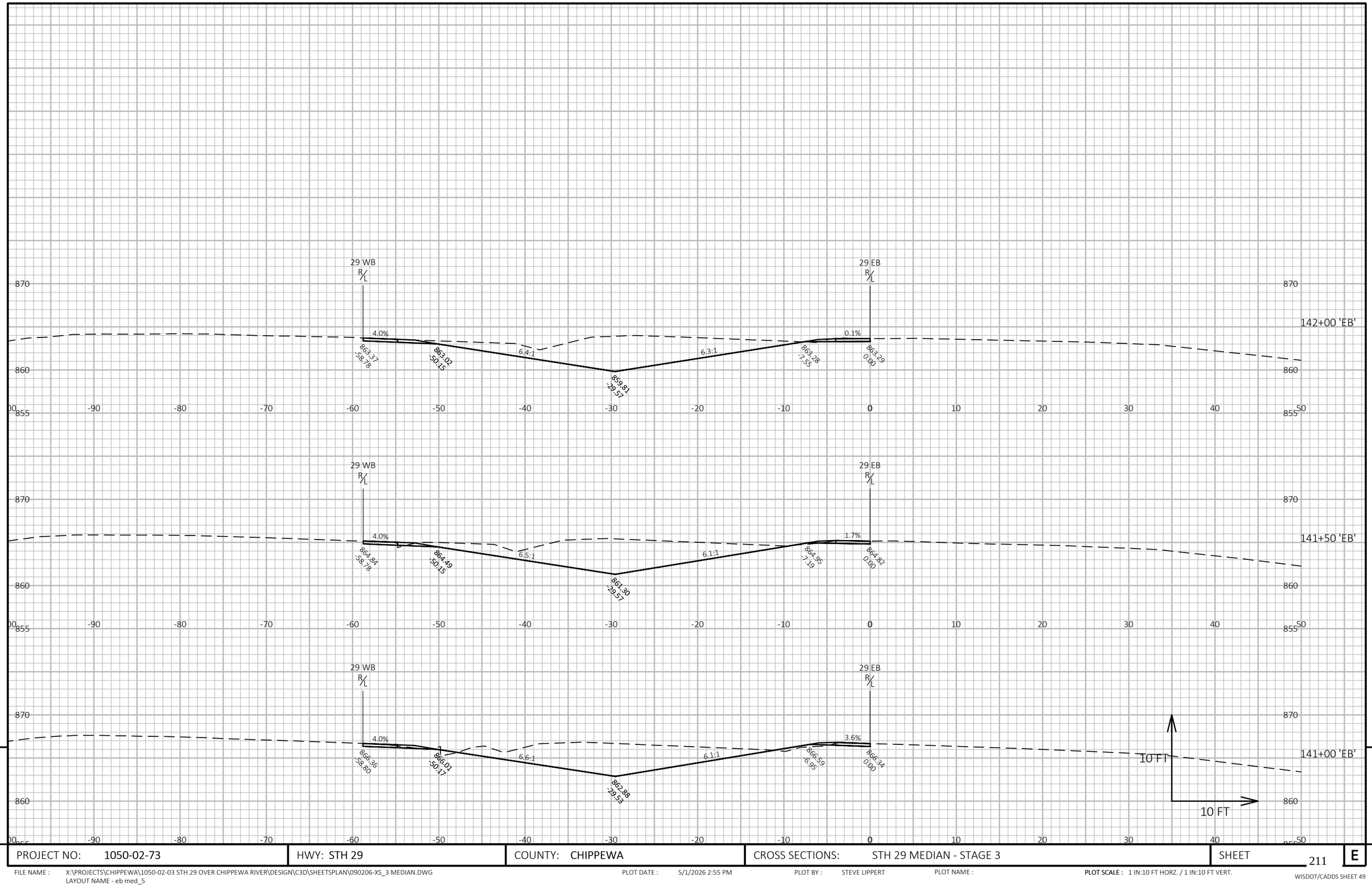
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 210	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_4

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

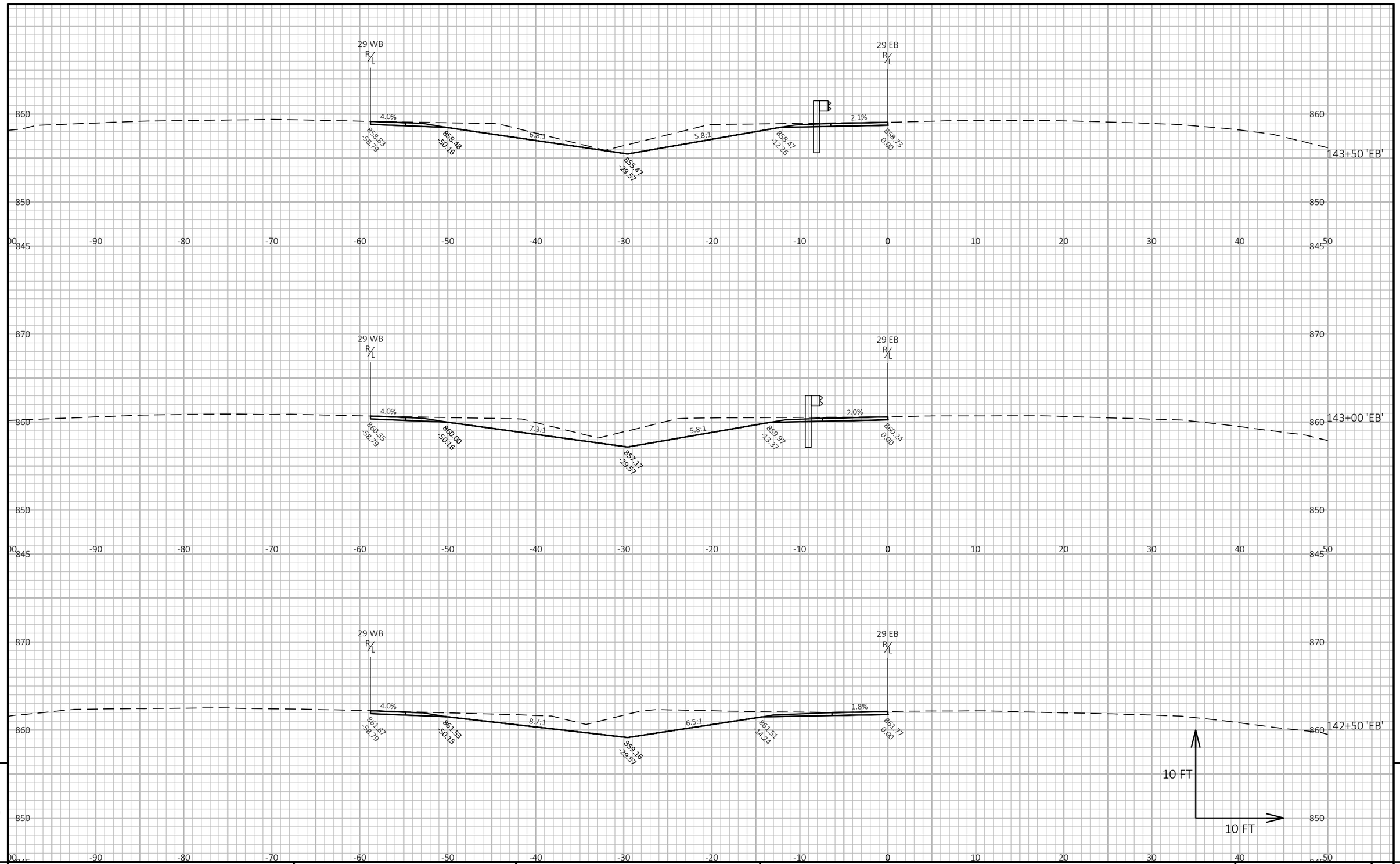


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 211 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_5

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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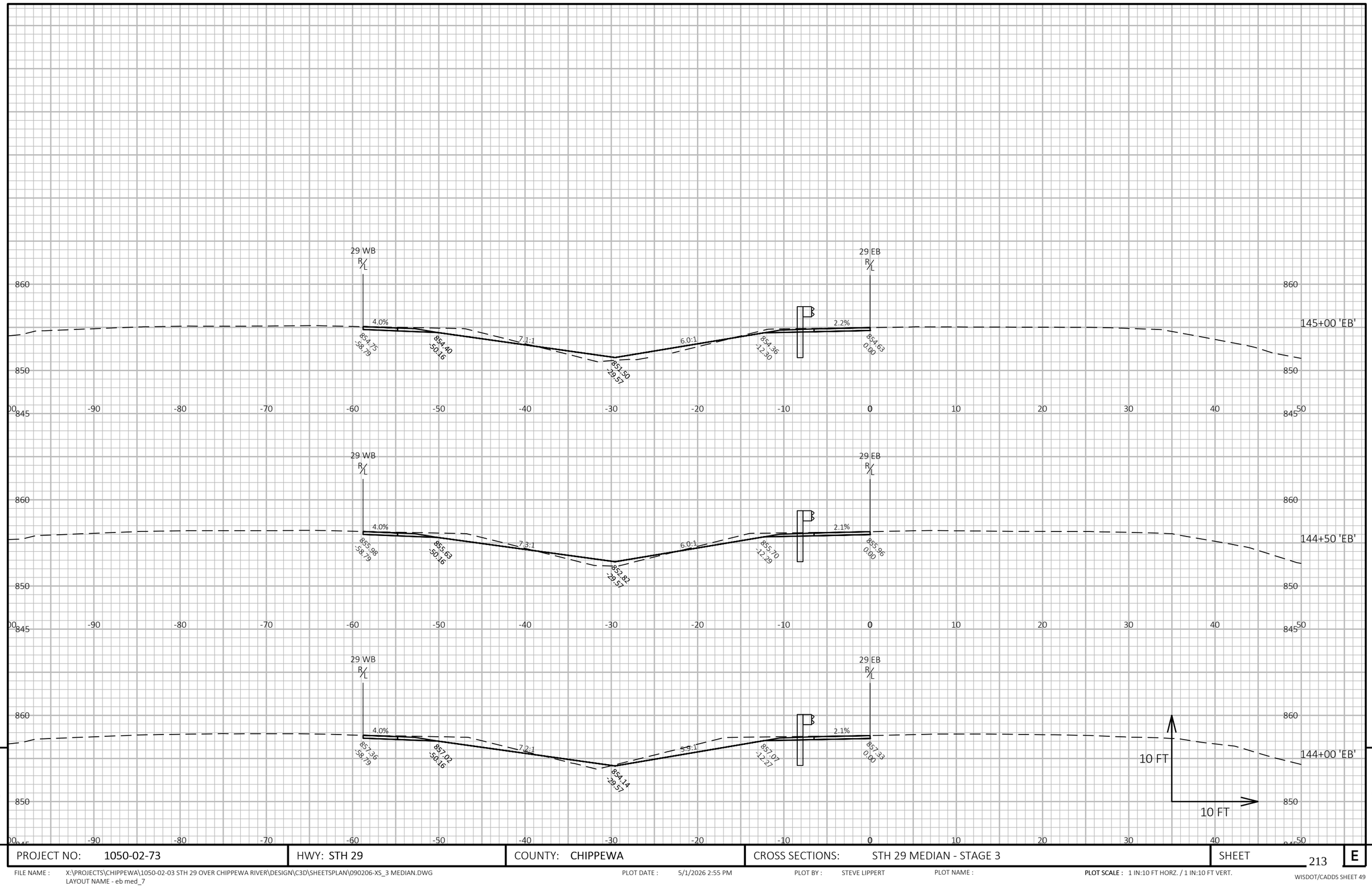
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 212	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_6

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

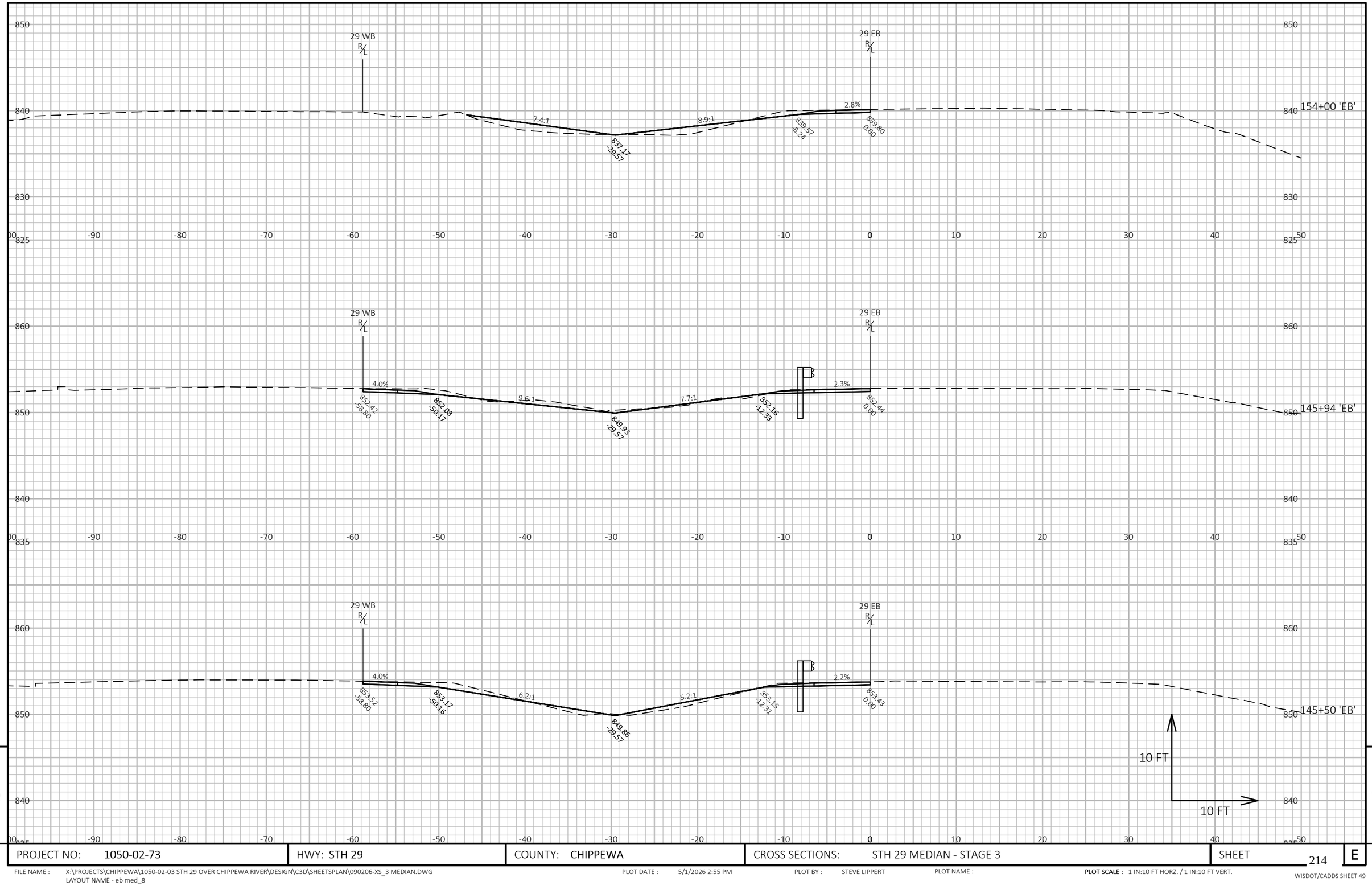


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 213 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_7

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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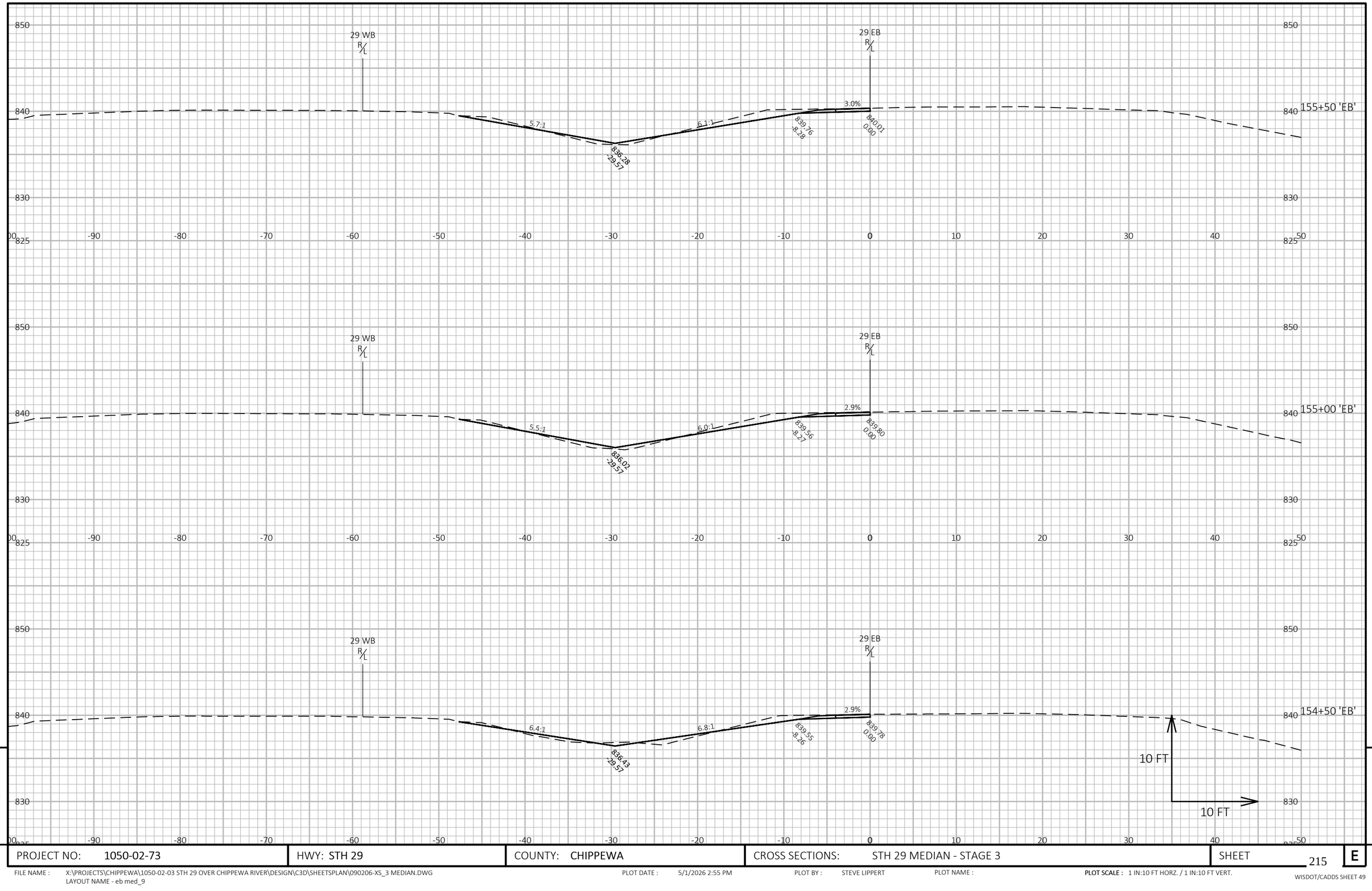
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 214	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_8

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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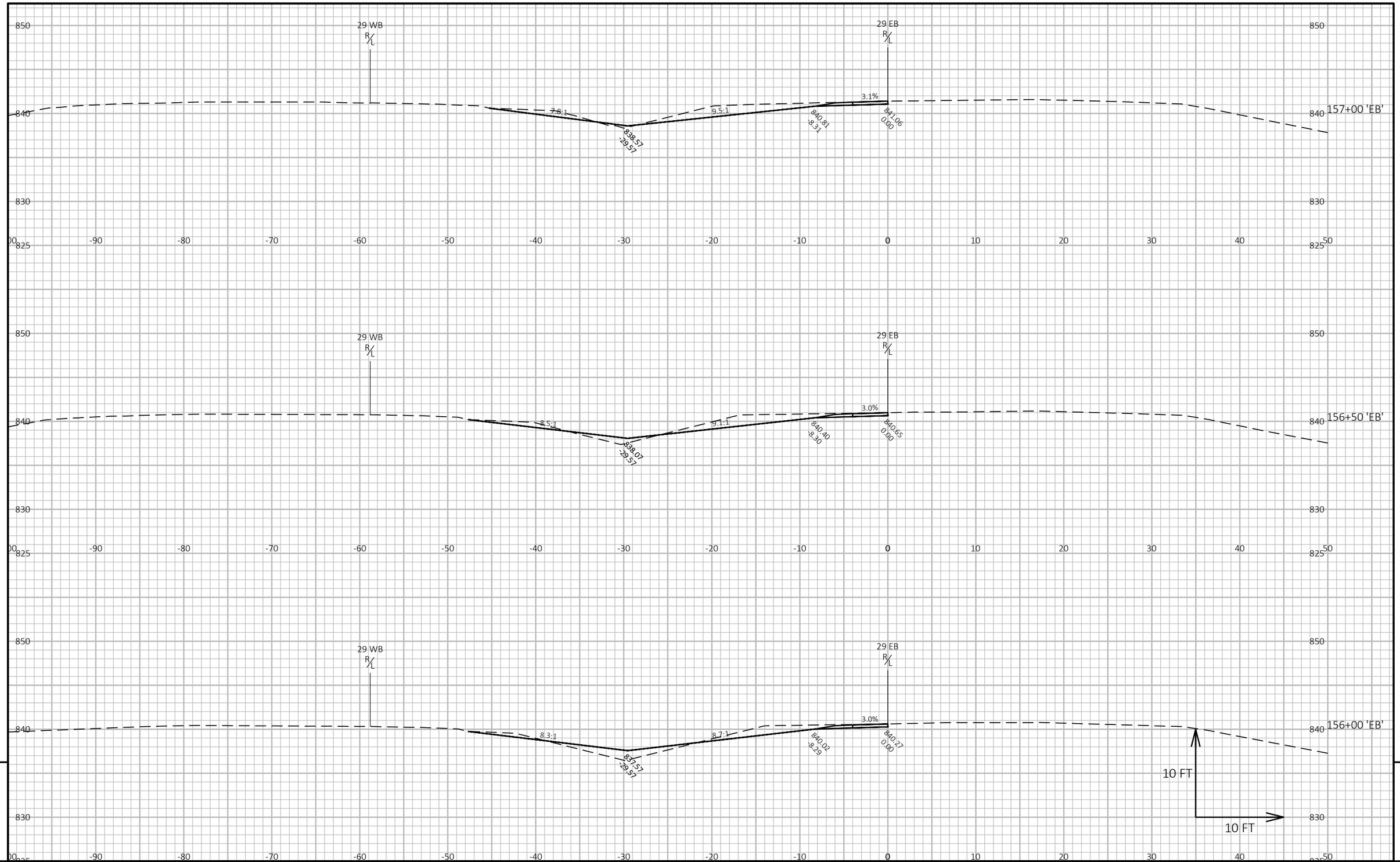
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 215	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_9

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

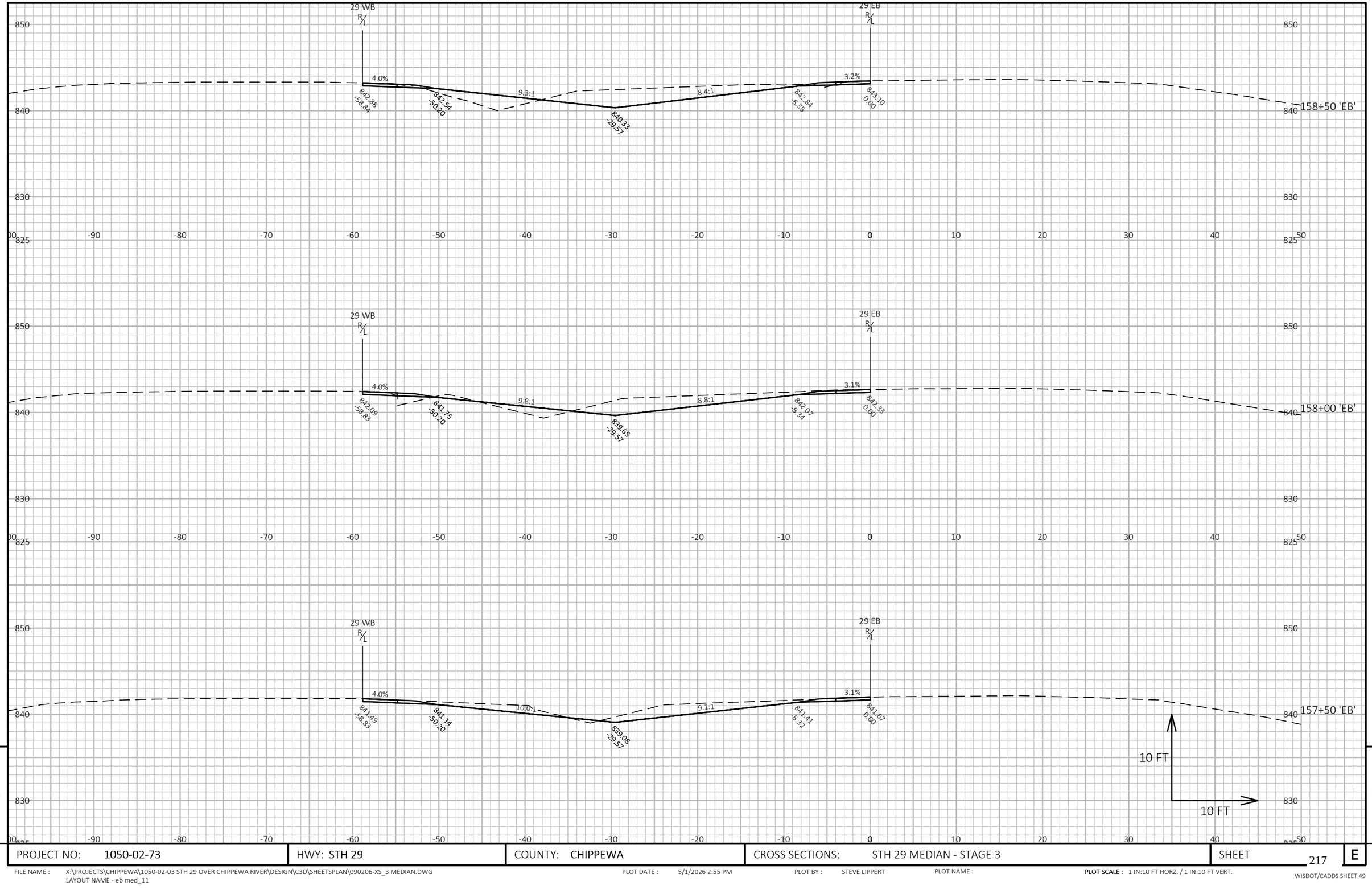


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 216	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_10

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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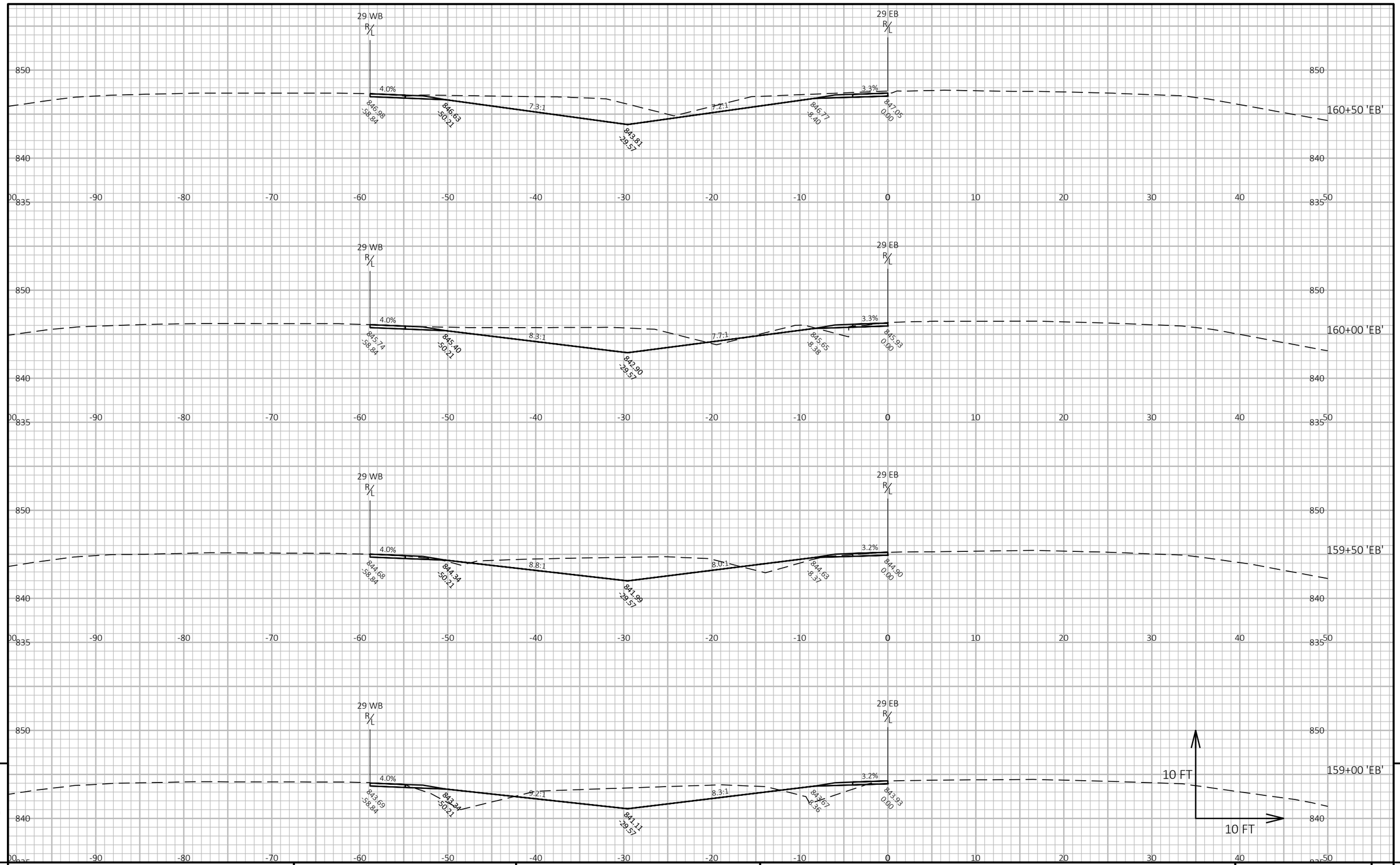
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 217	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_11

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

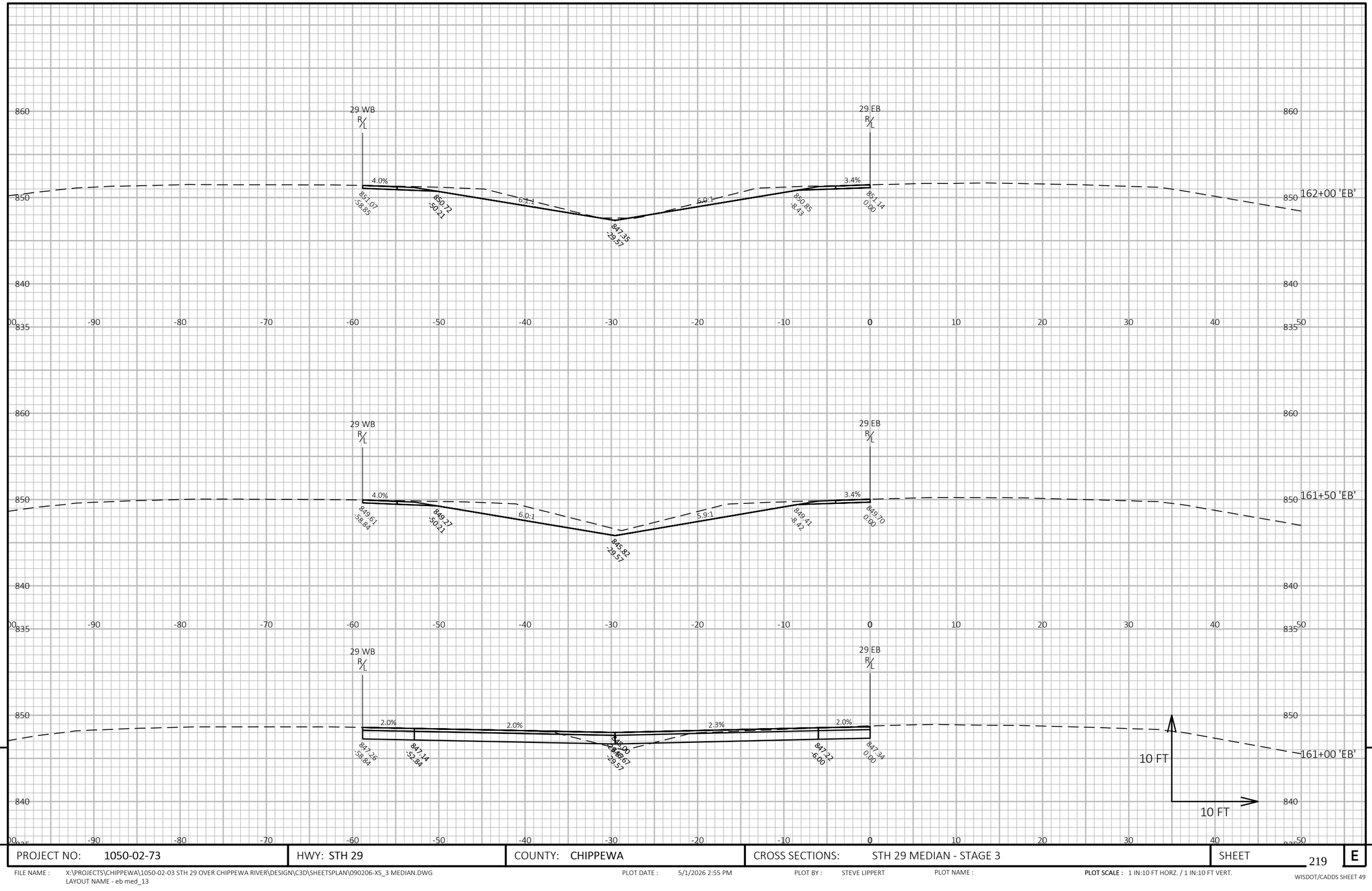


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 218 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_12

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

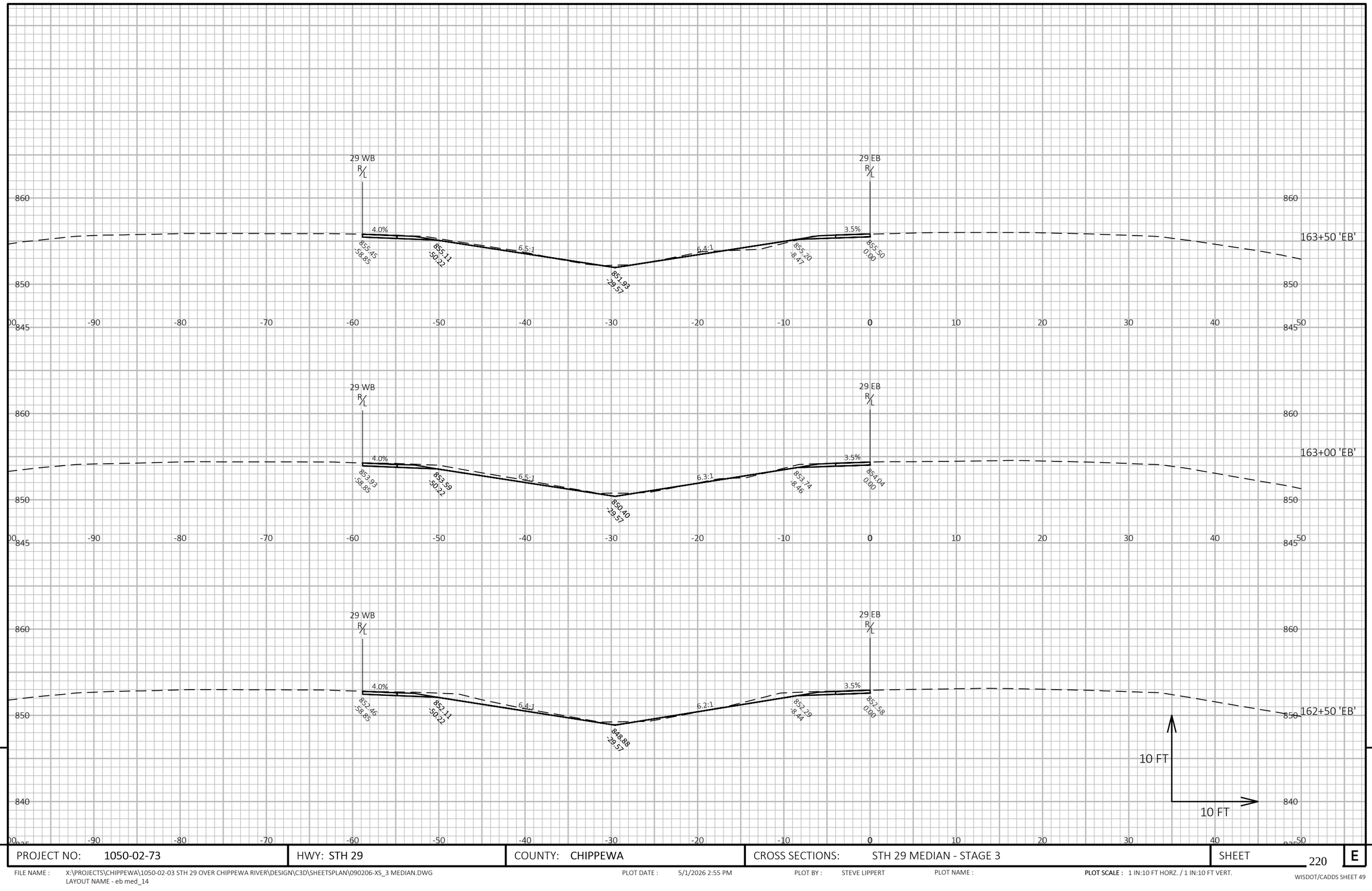


PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 219 E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_13

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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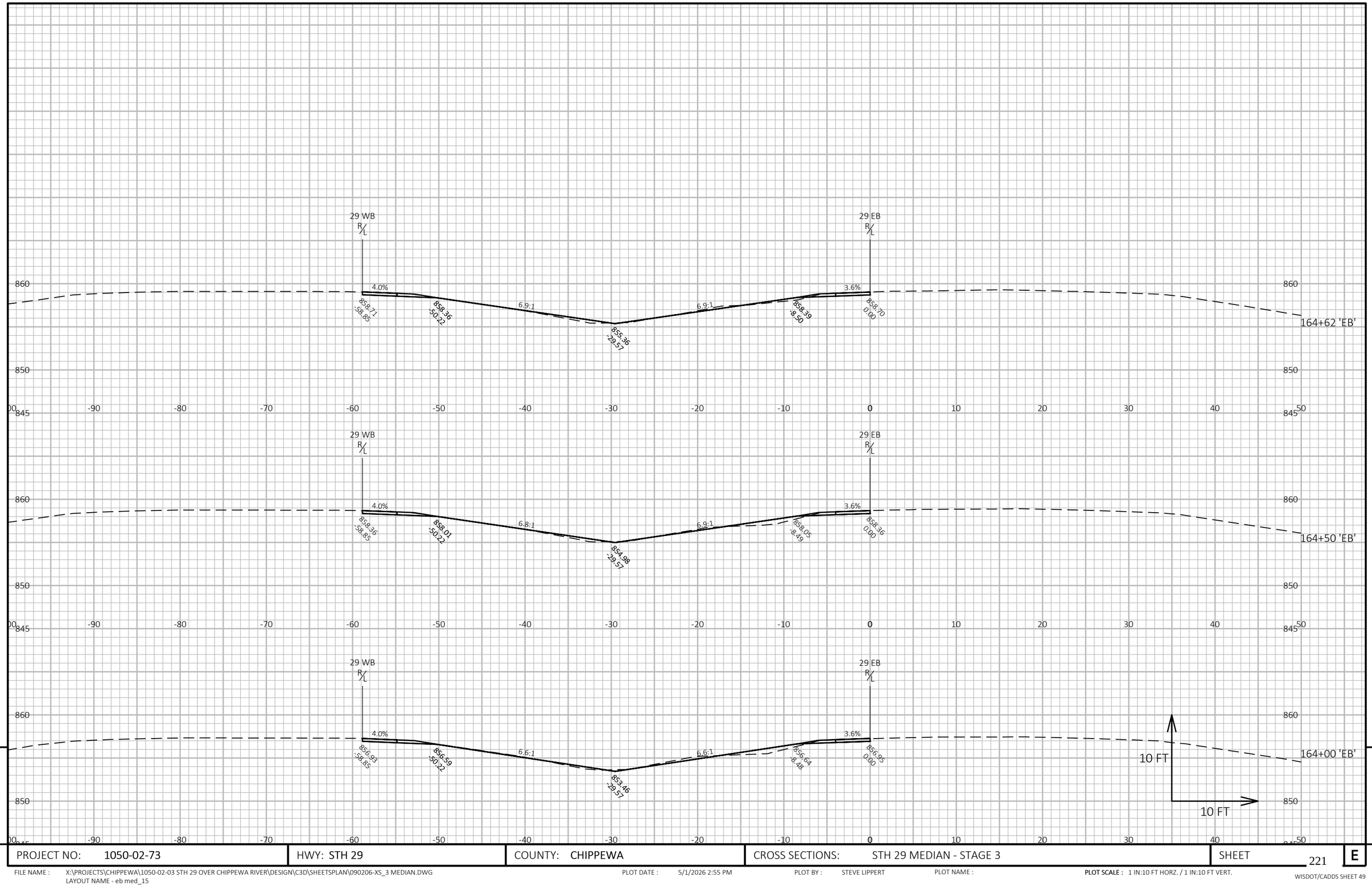
PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 220	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_14

PLOT DATE : 5/1/2026 2:55 PM PLOT BY : STEVE LIPPERT PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 1050-02-73	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 MEDIAN - STAGE 3	SHEET 221	E

FILE NAME : X:\PROJECTS\CHIPPEWA\1050-02-03 STH 29 OVER CHIPPEWA RIVER\DESIGN\C3D\SHEETSPLAN\090206-XS_3 MEDIAN.DWG
LAYOUT NAME - eb med_15

PLOT DATE : 5/1/2026 2:55 PM

PLOT BY : STEVE LIPPERT

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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