PROJECT ID: **1222-13-71**

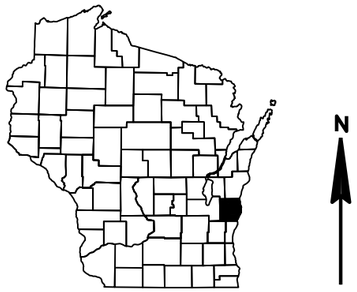
WITH: N/A

COUNTY: **SHEBOYGAN**

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 =



N

DESIGN DESIGNATION

A.A.D.T.	2027	=	28,820
A.A.D.T.	2047	=	30,820
D.H.V.		=	587
D.D.		=	58/42
T.		=	18.2%
DESIGN SPEED		=	70 MPH
ESALS		=	14,060,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PORT WASHINGTON-SHEBOYGAN

WILSON/LIMA ROAD - STH 42

IH 43

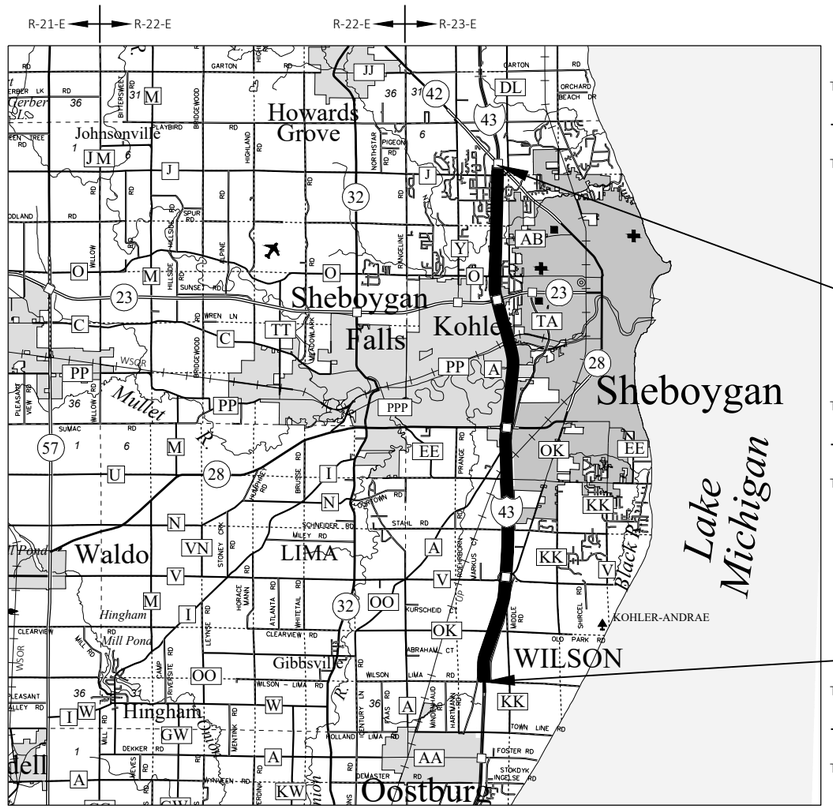
SHEBOYGAN COUNTY

STATE PROJECT NUMBER
1222-13-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1222-13-71		

TRANS 220
PROJECT PLAN
FOR
DESIGN OF UTILITY FACILITY ALTERATIONS OR RELOCATIONS

Date: August 12, 2022



LAYOUT

SCALE 0 3 MI

TOTAL NET LENGTH OF CENTERLINE = 10.396 MI

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	E. DANKE
Project Manager	K. SLEZAK
Regional Examiner	
Regional Supervisor	R. WAGNER

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\010101-TI.DWG PLOT DATE : 6/14/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME :

2

GENERAL NOTES

THE LOCATIONS OF EXISTING UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
TRAFFIC CONTROL
DETOUR PLAN
ALIGNMENT PLAN

DNR LIAISON

JAY SCHIEFELBEIN
2984 SHAWANO AVE
GREEN BAY, WI 54313
(920) 360-3784
jeremiah.schiefelbein@wisconsin.gov

SHEBOYGAN COUNTY HIGHWAY COMMISSIONER

GREG SCHNELL
1211 N 23RD ST
SHEBOYGAN, WI 53082
(920) 459-3822
greg.schnell@sheboygancounty.com

NE REGION SURVEY COORDINATOR

CORMAC MCINNIS, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-5638
cormac.mcinnis@dot.wi.gov

NE REGION DESIGN PROJECT MANAGER

KIM SLEZAK
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-4131
kimberly.slezak@dot.wi.gov

UTILITIES CONTACTS

COMMUNICATIONS

COMPANY NAME
CONTACT NAME
ADDRESS
CITY, STATE, ZIP
PHONE:
EMAIL:

2

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 = _____ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = _____ACRES

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

2

2

N

WILSON/LIMA RD

CTH OK

CTH V

STAHL RD

WEEDEN CREEK RD

STH 28

STH 23

CTH O

MUELLER RD

CTH J

HOWARDS GROVE

BEGIN CONSTRUCTION
STA 2+88.00'SB'

B-59-45

B-59-46

BEGIN PROJECT
STA 2+83.00'NB'
Y=137,853.750
X=204,044.223

50'SB'
50'NB'
IH 43
100'SB'
100'NB'

B-59-37

B-59-35

150'SB'
150'NB'

IH 43 SB R/L

IH 43 NB R/L

200'SB'
200'NB'

B-59-51

B-59-52

B-59-34

B-59-29

250'SB'
250'NB'

B-59-53

B-59-28

300'SB'
300'NB'

B-59-54

B-59-19

350'SB'
350'NB'

B-59-20

CTH PP

B-59-76

B-59-77

400'SB'
400'NB'

B-59-75

B-59-78

B-59-184

B-59-185

450'SB'
450'NB'

B-59-18

B-59-23

B-59-57

500'SB'
500'NB'

B-59-186

B-59-187

IH 43

550'SB'
550'NB'

B-59-25

END CONSTRUCTION
STA 552+53.00'SB'

END PROJECT
STA 551+76.00'NB'
Y=192,101.622
X=205,480.378

B-59-59

STH 42

PIGEON RIVER

SHEBOYGAN

SHEBOYGAN RIVER

WILSON

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET	E

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LAYOUT NAME - 020201-po

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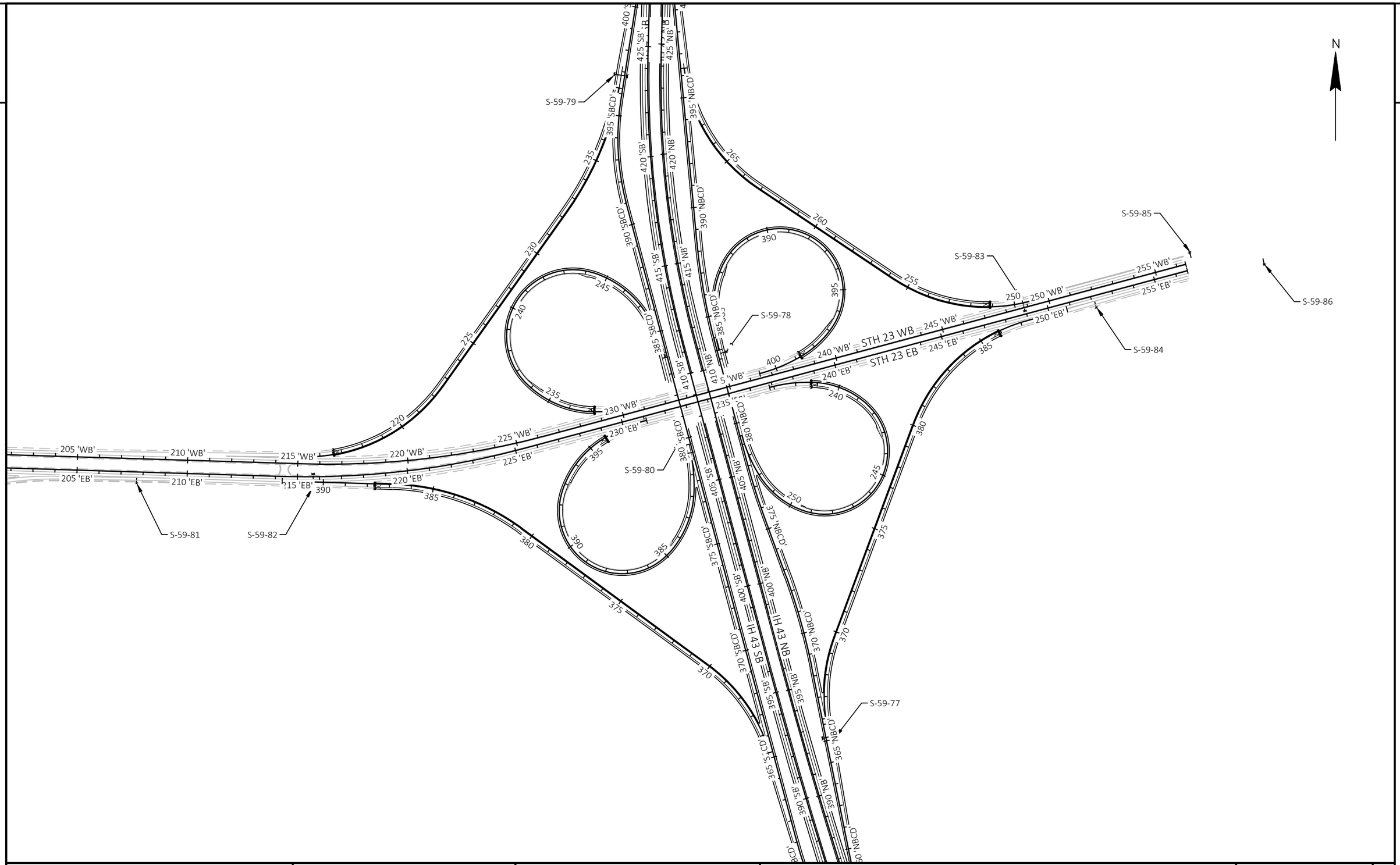
PLOT BY : MARTIN, THOMAS S

PLOT NAME :

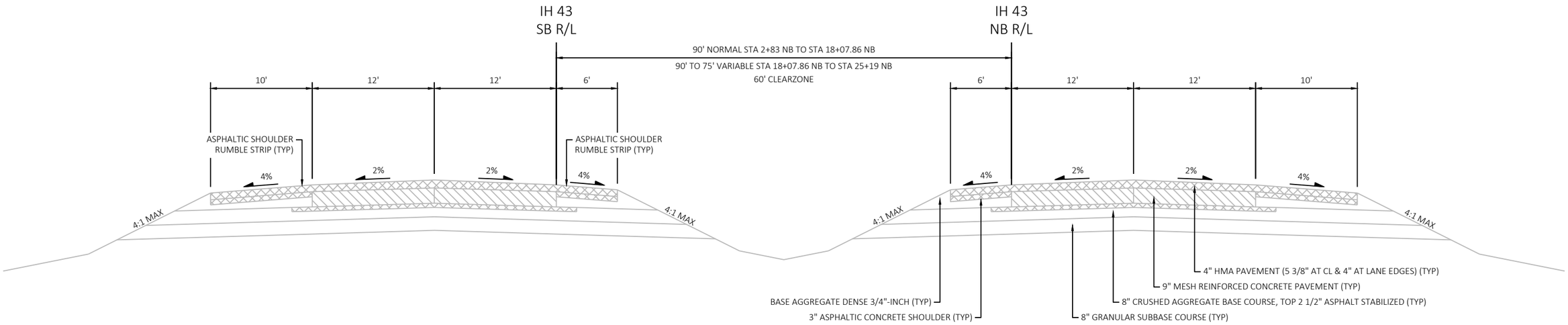
PLOT SCALE : 1 IN:4000 FT

WISDOT/CADDS SHEET 42

2

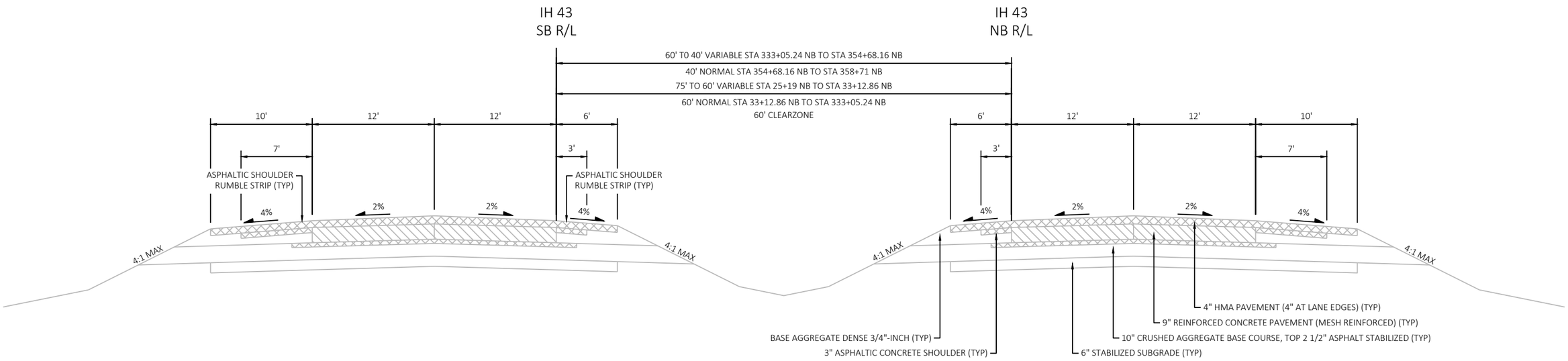


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET	E



EXISTING TYPICAL SECTION IH 43

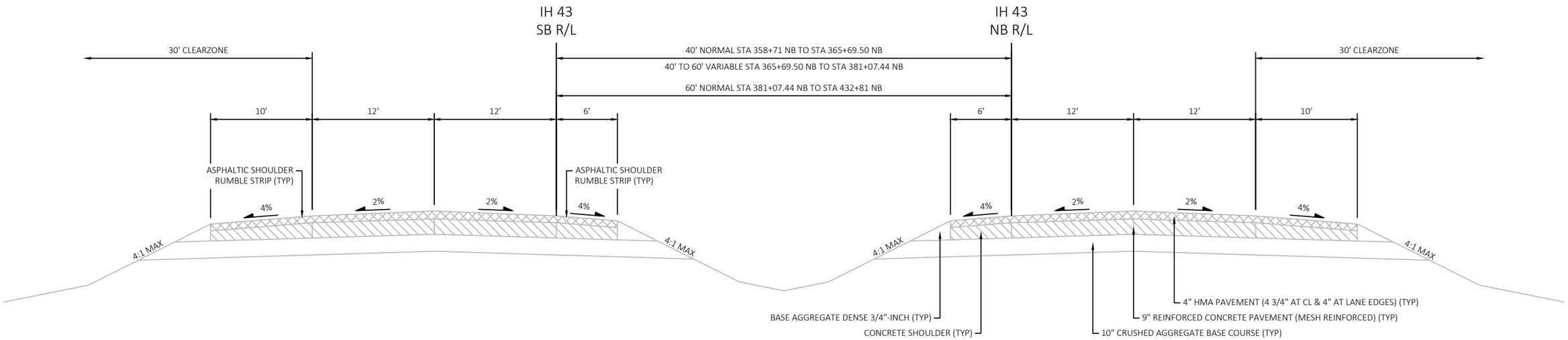
STA 2+83 NB TO STA 25+19 NB



EXISTING TYPICAL SECTION IH 43

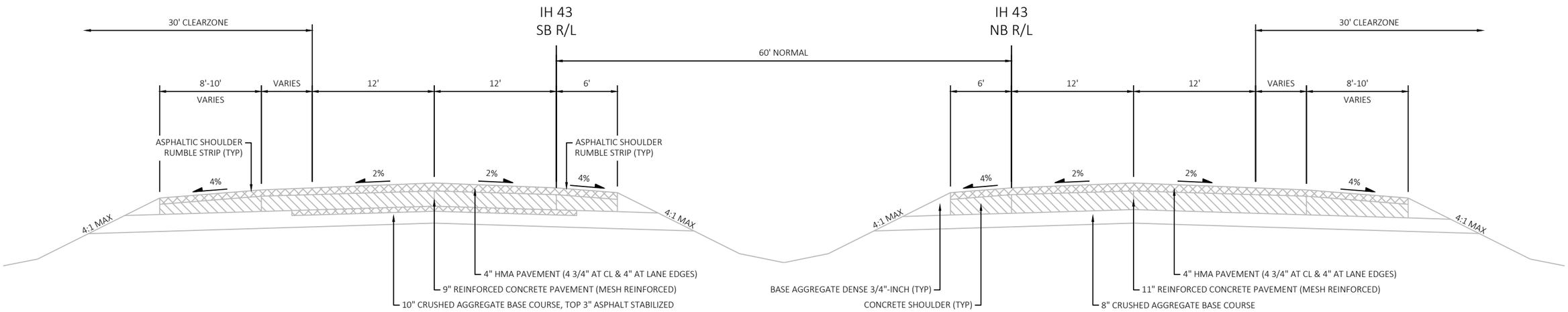
STA 25+19 NB TO STA 358+71 NB

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E



EXISTING TYPICAL SECTION IH 43

STA 358+71 NB TO STA 432+81 NB

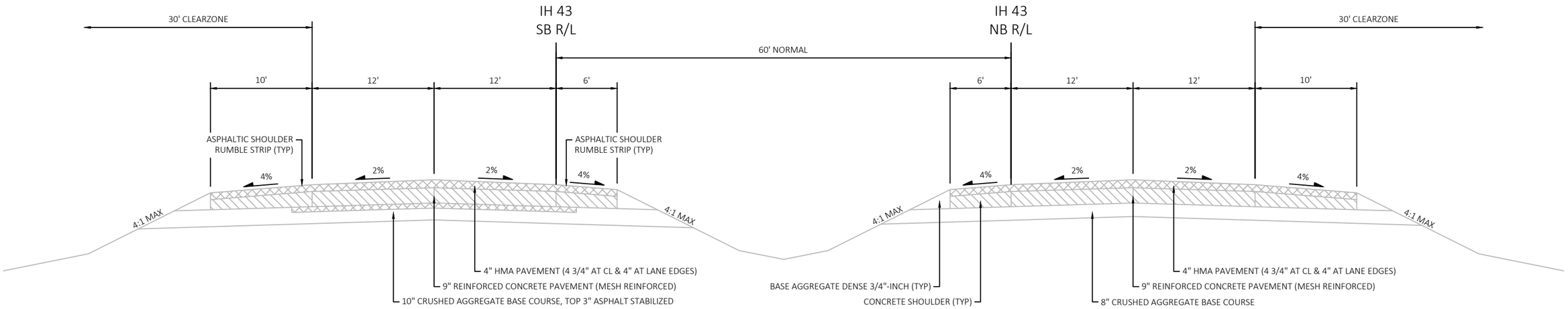


EXISTING TYPICAL SECTION IH 43

STA 432+81 NB TO STA 442+29.31 NB

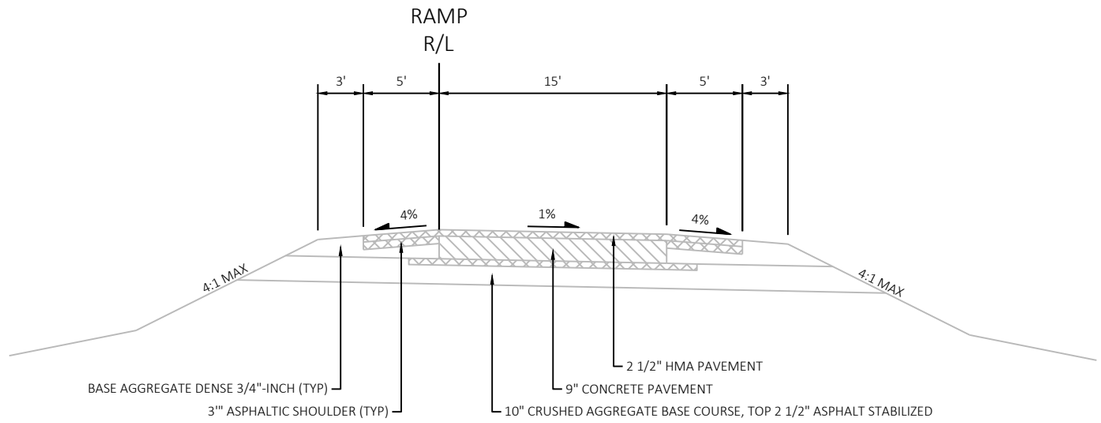
PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

2



EXISTING TYPICAL SECTION IH 43

STA 442+29.31 NB TO STA 551.76 NB

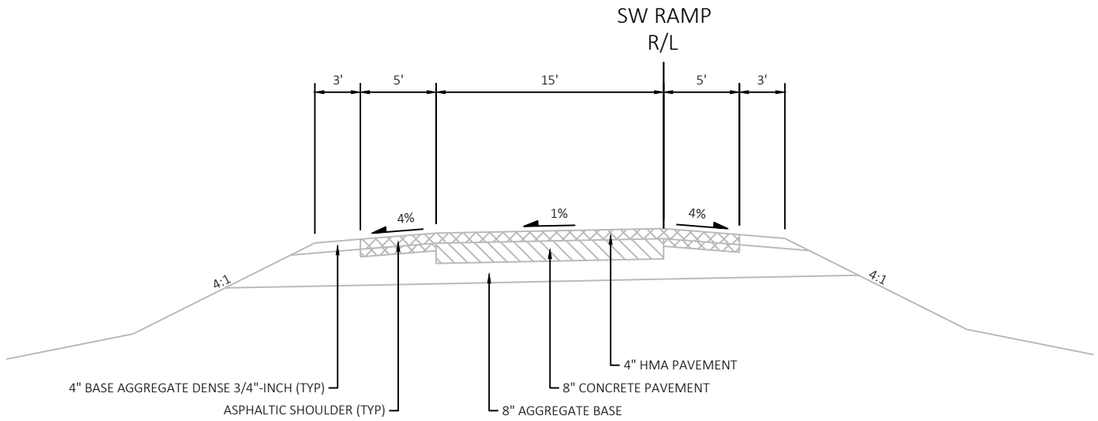


EXISTING TYPICAL SECTION - RAMPS @ CTH V

SE RAMP STA 76+74.24 TO STA 88+91
NE RAMP STA 93+04 TO STA 102+87.15
SW RAMP STA 76+97.24 TO STA 86+50
NW RAMP STA 90+12 TO STA 101+19.10

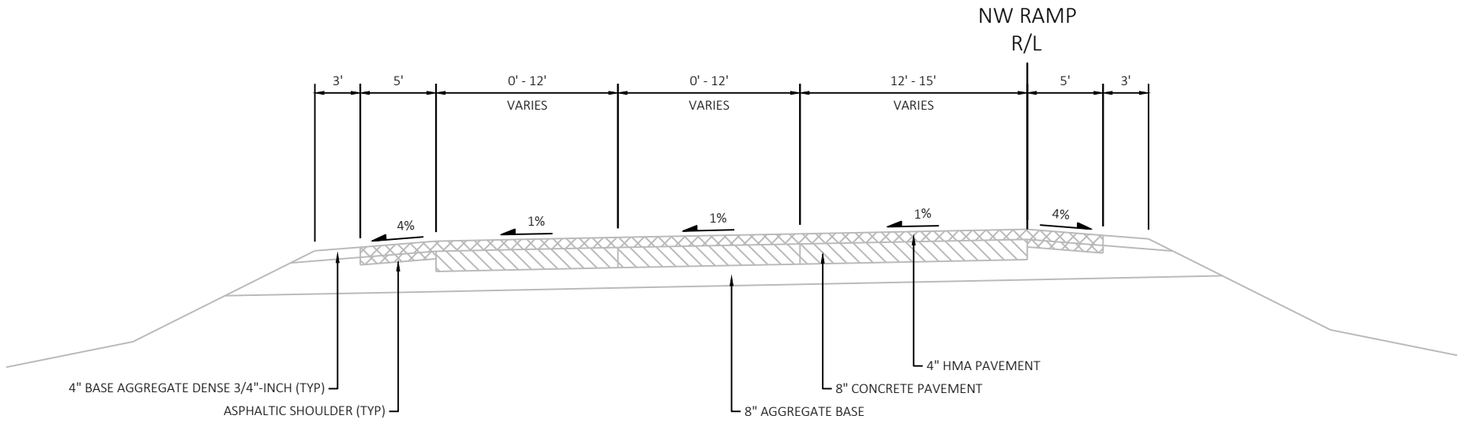
PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

2



EXISTING TYPICAL SECTION - SW RAMP @ STH 28

STA 234+49.31 TO STA 237+71



EXISTING TYPICAL SECTION - NW RAMP @ STH 28

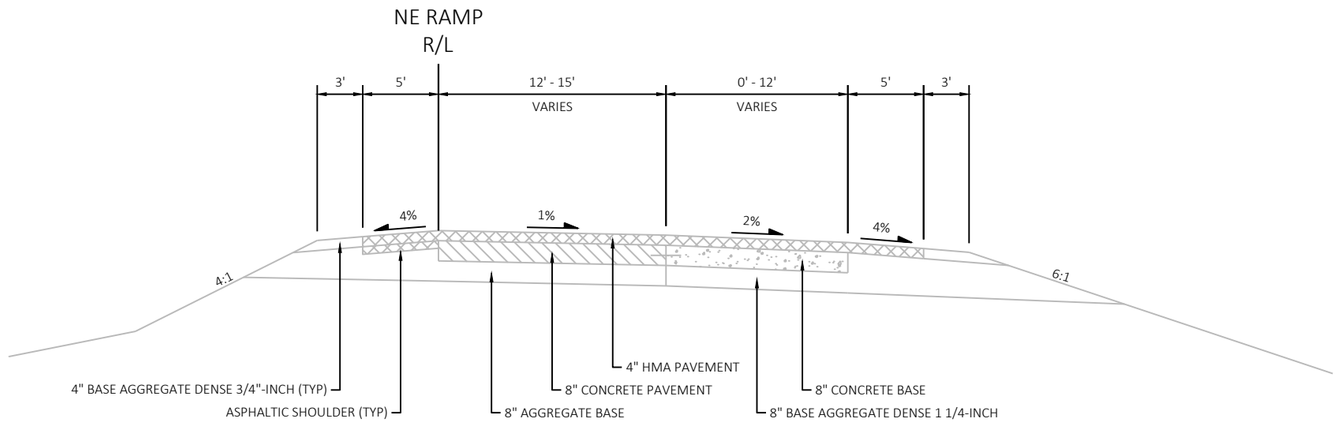
STA 252+06 TO STA 255+76

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

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LAYOUT NAME - 020304-ts

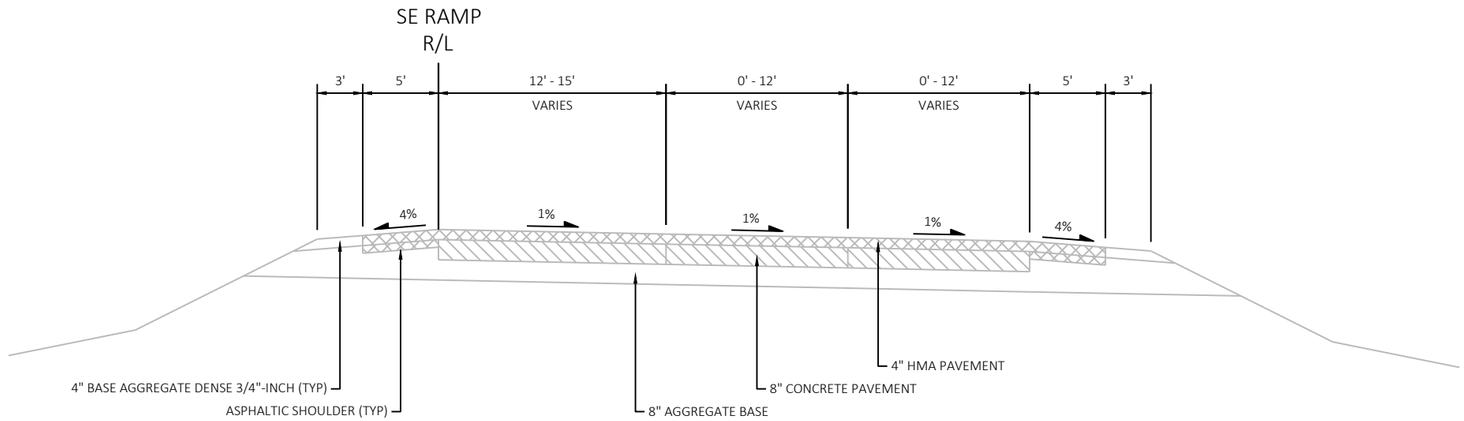
PLOT DATE : 6/14/2022 2:05 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1IN:10 FT

2



EXISTING TYPICAL SECTION - NE RAMP @ STH 28

STA 253+63 TO STA 256+32.05

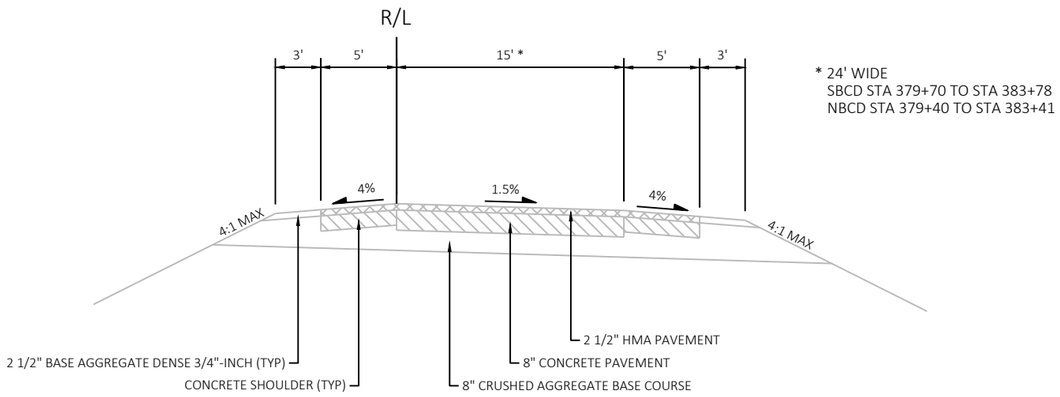


EXISTING TYPICAL SECTION - SE RAMP @ STH 28

STA 232+67.30 TO STA 237+16

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020305-ts
PLOT DATE : 6/14/2022 2:05 PM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1IN:10 FT
WISDOT/CADDS SHEET 42

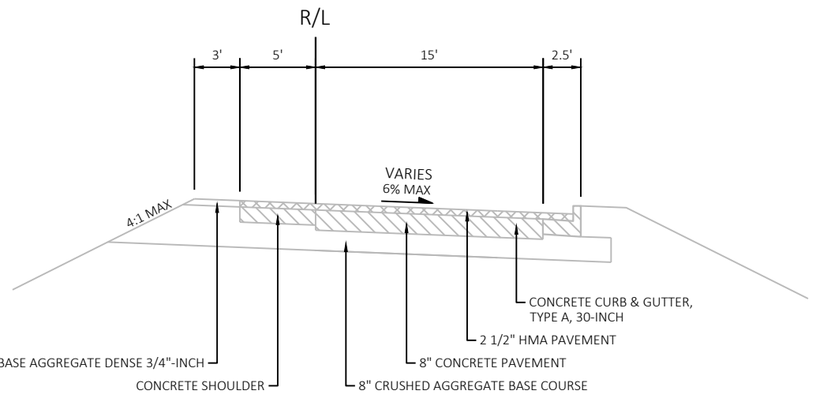


* 24' WIDE
SBCD STA 379+70 TO STA 383+78
NBCD STA 379+40 TO STA 383+41

EXISTING TYPICAL SECTION - IH 43 RAMPS, LOOPS, & COLLECTOR DISTRIBUTORS @ STH 23

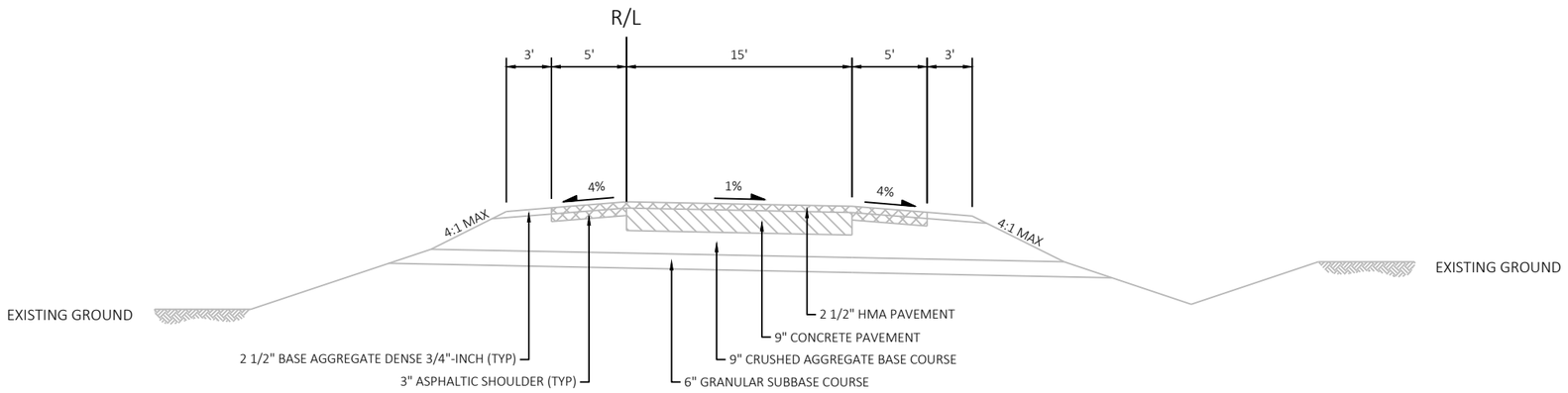
NW LOOP STA 232+85.89 TO STA 235+62
NW LOOP STA 244+11 TO STA 249+62.01
NE LOOP STA 383+39.31 TO STA 386+92
NE LOOP STA 396+93 TO STA 398+76.39
SW LOOP STA 379+61.36 TO STA 384+31
SW LOOP STA 393+15 TO STA 395+83.71
SE LOOP STA 238+70.25 TO STA 242+70
SE LOOP STA 249+55 TO STA 256+94.88

NW RAMP STA 215+24.30 TO STA 238+45.74
NE RAMP STA 249+25.53 TO STA 269+73.11
SW RAMP STA 365+16.32 TO STA 391+86.56
SE RAMP STA 365+75.40 TO STA 389+17.06
NBCD STA 355+36.16 TO STA 402+18.75
SBCD STA 352+78.72 TO STA 404+87.45
SBCD IS REVERSE OF SHOWN TYPICAL



EXISTING TYPICAL SECTION - IH 43 LOOPS WITH CURB & GUTTER @ STH 23

NW LOOP STA 235+62 TO STA 244+11
NE LOOP STA 386+82 TO STA 396+93
SW LOOP STA 384+31 TO STA 393+15
SE LOOP STA 242+70 TO STA 249+55

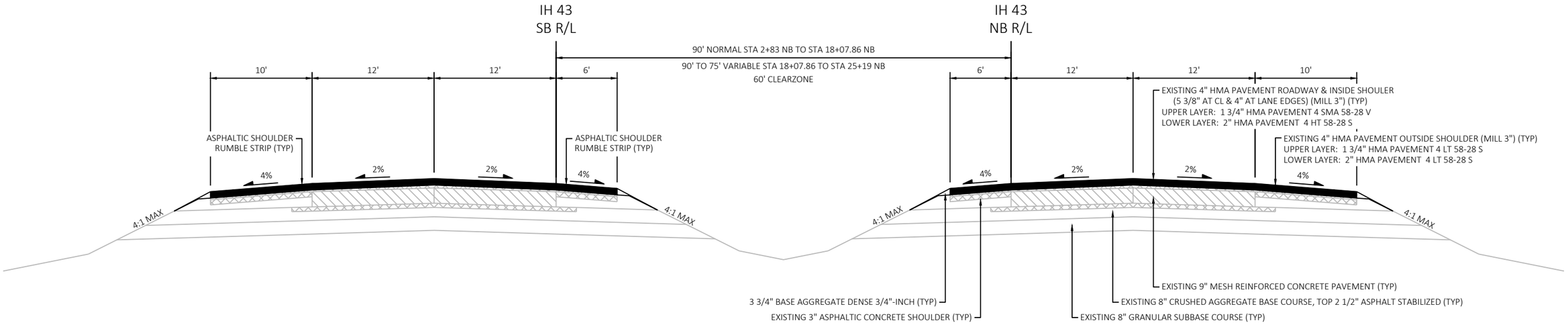


EXISTING TYPICAL SECTION - SE & SW RAMPS @ STH 42

SW RAMP STA 556+08.58 TO STA 562+17
SE RAMP STA 550+98.37 TO STA 557+80

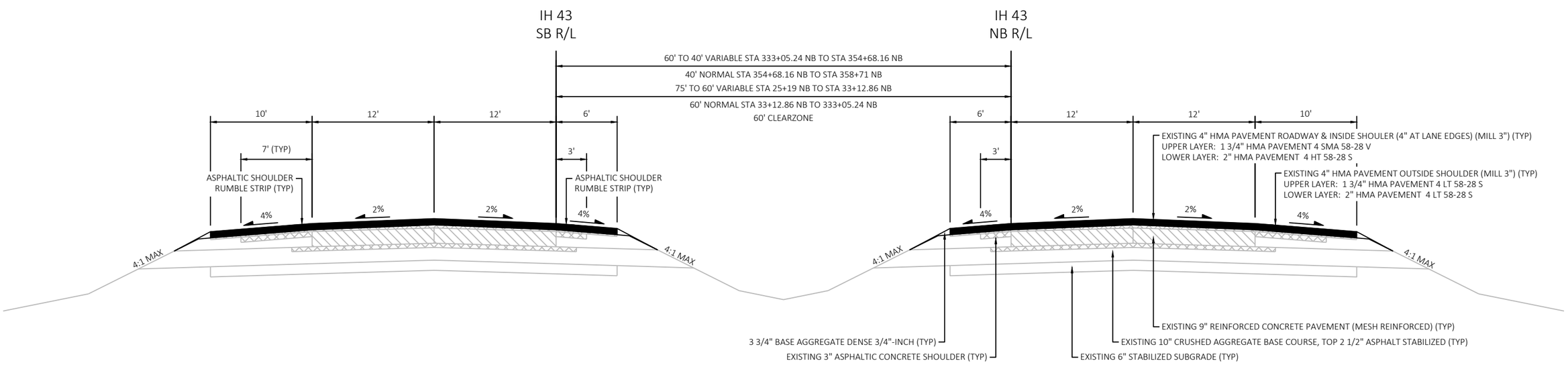
PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

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PLOT DATE : 6/14/2022 2:05 PM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1IN:10 FT



FINISHED TYPICAL SECTION IH 43

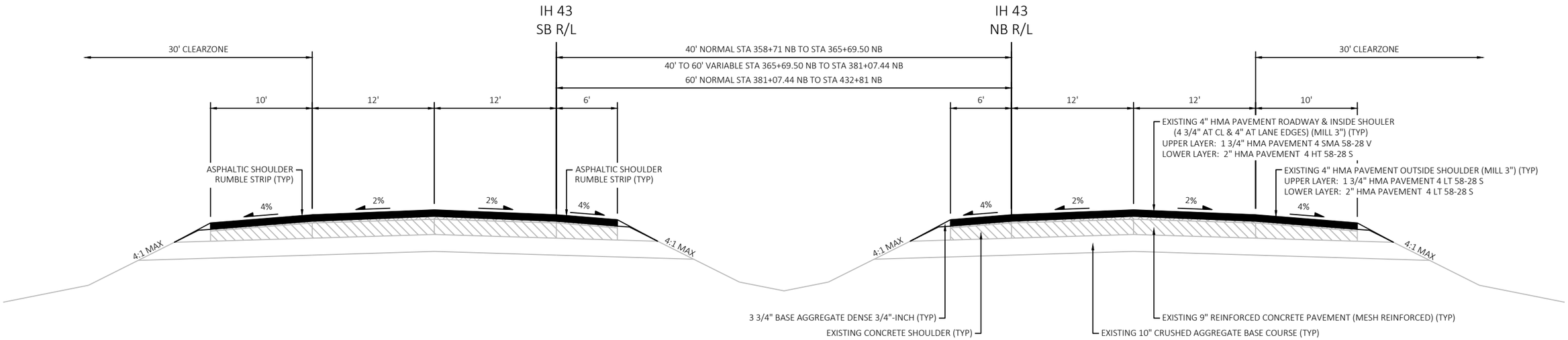
STA 2+83 NB TO STA 25+19 NB



FINISHED TYPICAL SECTION IH 43

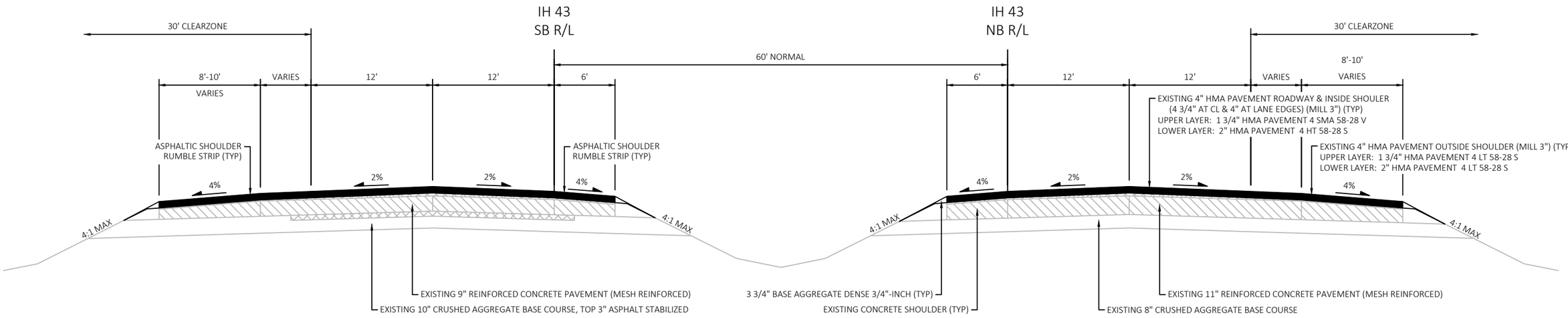
STA 25+19 NB TO STA 358+71 NB

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E



FINISHED TYPICAL SECTION IH 43

STA 358+71 NB TO STA 432+81 NB



FINISHED TYPICAL SECTION IH 43

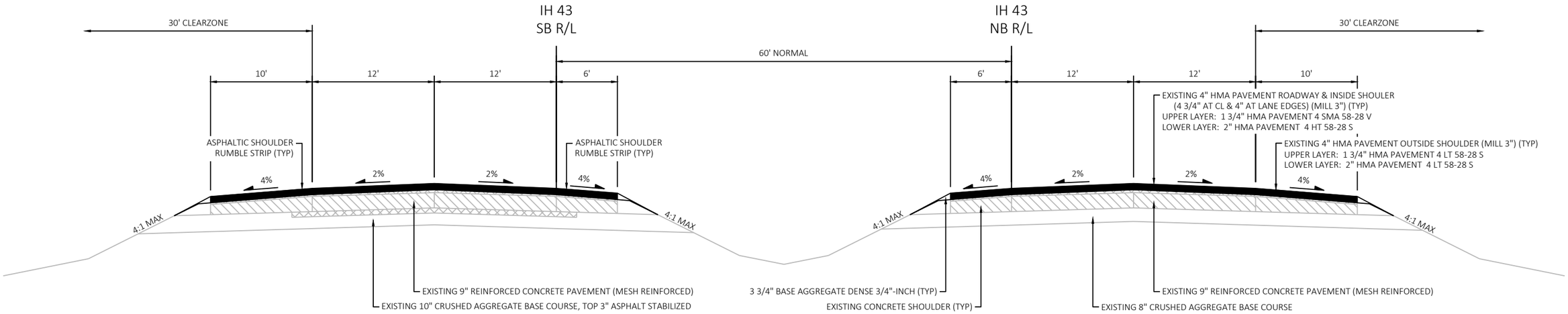
STA 432+81 NB TO STA 442+29.31 NB

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

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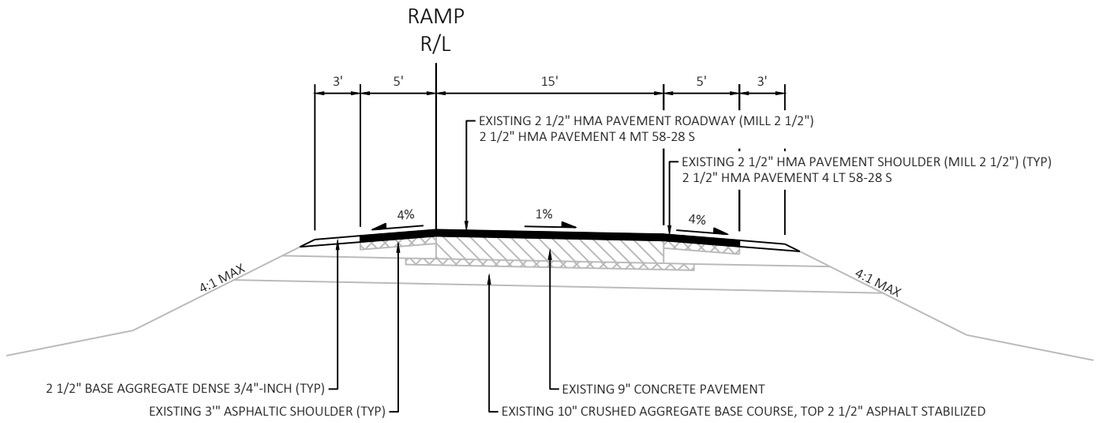
PLOT DATE : 6/14/2022 2:05 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1IN:10 FT

2



FINISHED TYPICAL SECTION IH 43

STA 442+29.31 NB TO STA 551+78 NB



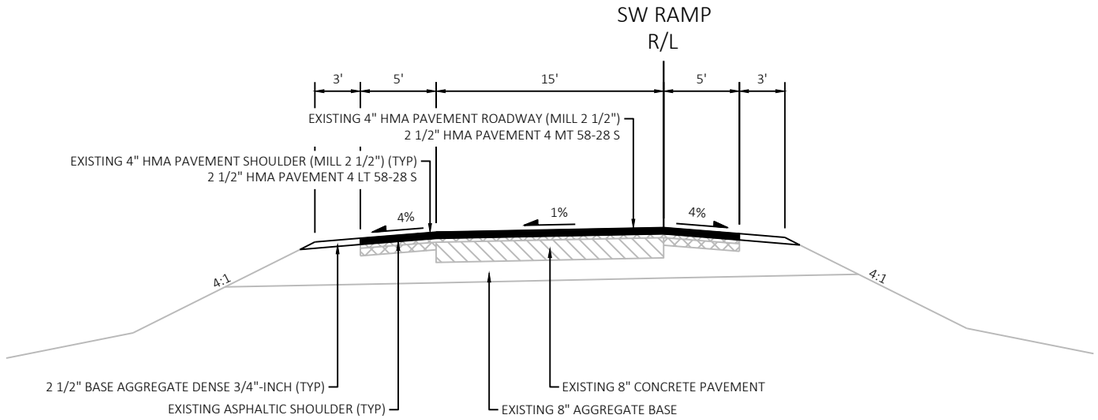
FINISHED TYPICAL SECTION - RAMPS @ CTH V

SE RAMP STA 76+74.24 TO STA 88+91
NE RAMP STA 93+04 TO STA 102+87.15
SW RAMP STA 76+97.24 TO STA 86+50
NW RAMP STA 90+12 TO STA 101+19.10

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

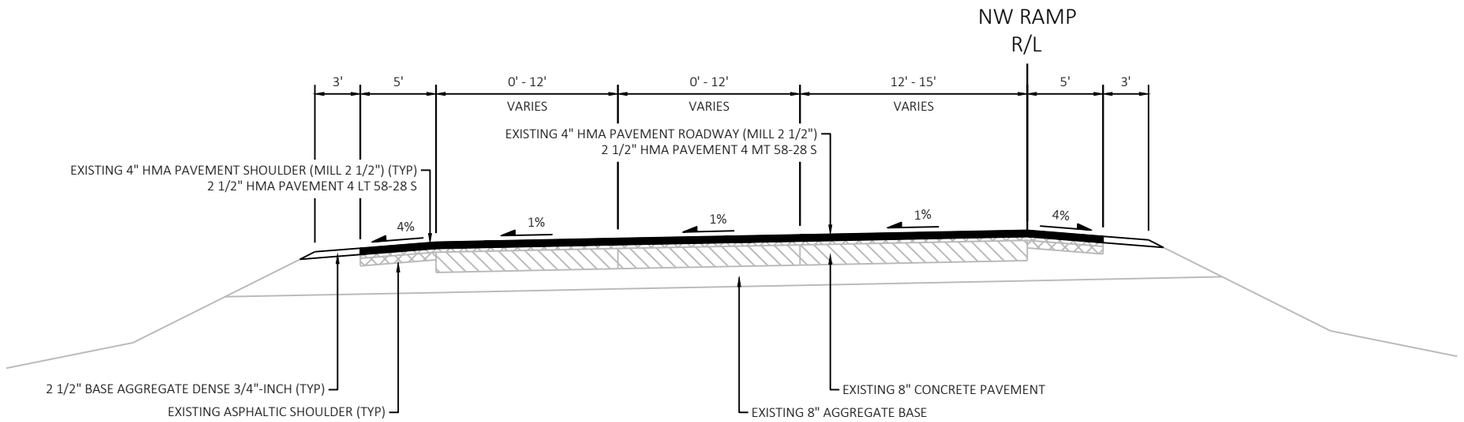
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PLOT DATE : 6/14/2022 2:05 PM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1IN:10 FT
WISDOT/CADDS SHEET 42

2



FINISHED TYPICAL SECTION - SW RAMP @ STH 28

STA 234+49.31 TO STA 237+71



FINISHED TYPICAL SECTION - NW RAMP @ STH 28

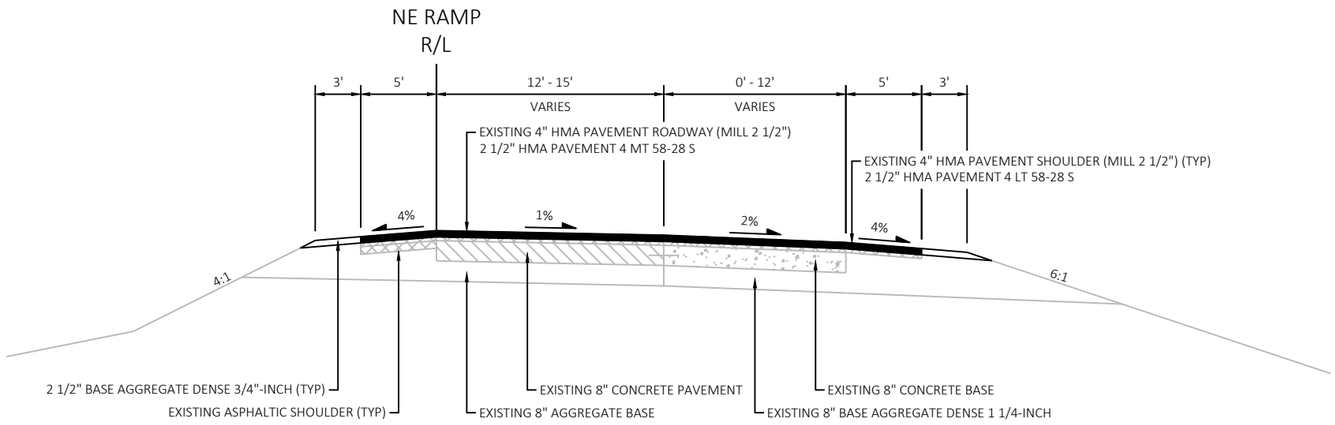
STA 252+06 TO STA 255+76

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020310-ts

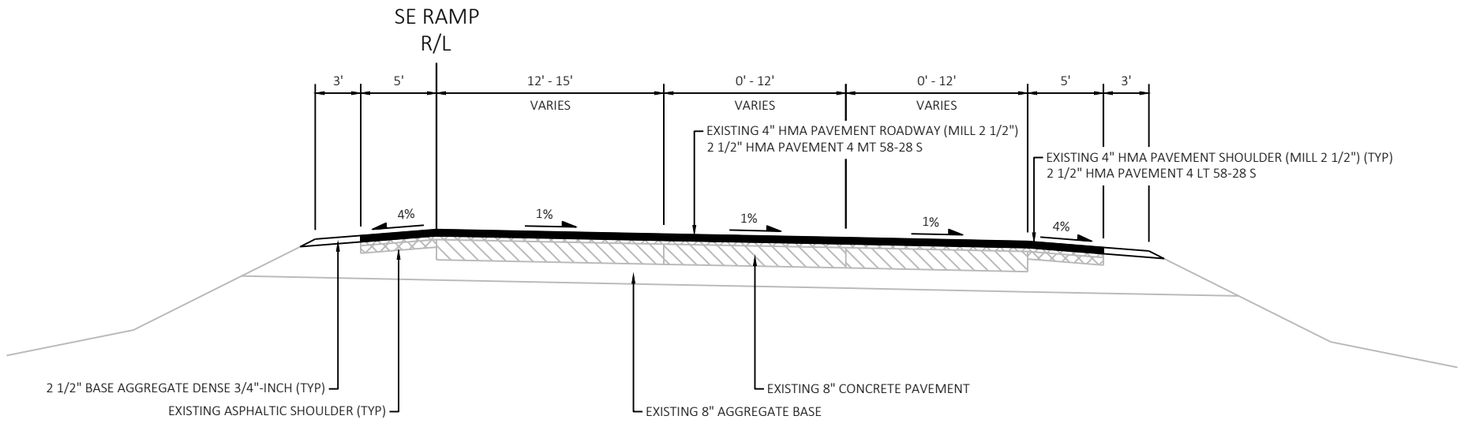
PLOT DATE : 6/14/2022 2:05 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1IN:10 FT

2



FINISHED TYPICAL SECTION - NE RAMP @ STH 28

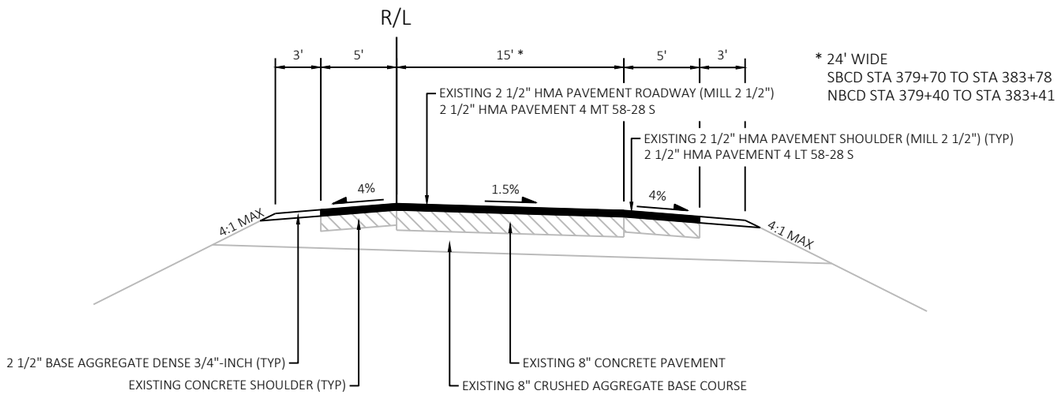
STA 253+63 TO STA 256+32.05



FINISHED TYPICAL SECTION - SE RAMP @ STH 28

STA 232+67.30 TO STA 237+16

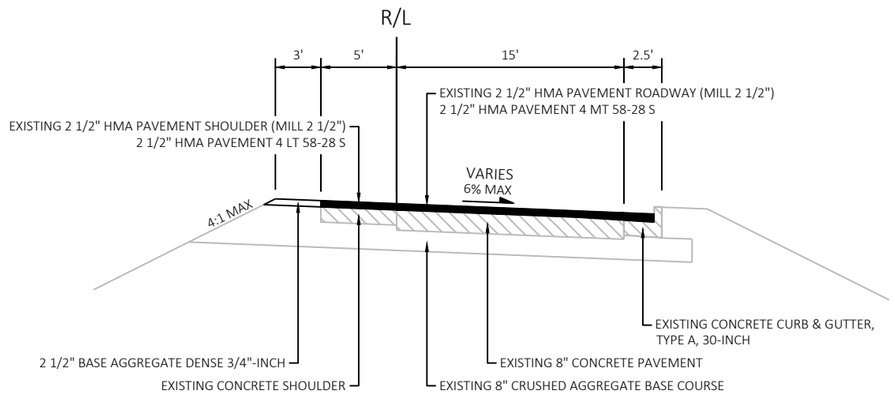
PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E



FINISHED TYPICAL SECTION - IH 43 RAMPS, LOOPS, & COLLECTOR DISTRIBUTORS @ STH 23

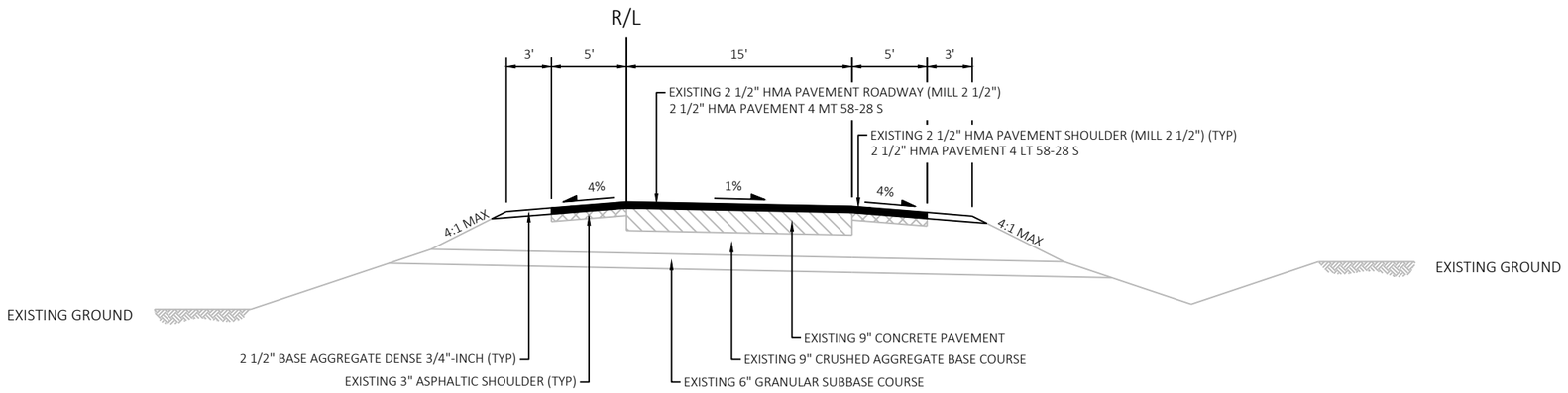
NW LOOP STA 232+85.89 TO STA 235+62
NW LOOP STA 244+11 TO STA 249+62.01
NE LOOP STA 383+39.31 TO STA 386+92
NE LOOP STA 396+93 TO STA 398+76.39
SW LOOP STA 379+61.36 TO STA 384+31
SW LOOP STA 393+15 TO STA 395+83.71
SE LOOP STA 238+70.25 TO STA 242+70
SE LOOP STA 249+55 TO STA 256+94.88

NW RAMP STA 215+24.30 TO STA 238+45.74
NE RAMP STA 249+25.53 TO STA 269+73.11
SW RAMP STA 365+16.32 TO STA 391+86.56
SE RAMP STA 365+75.40 TO STA 389+17.06
NBCD STA 355+36.16 TO STA 402+18.75
SBCD STA 352+78.72 TO STA 404+87.45
SBCD IS REVERSE OF SHOWN TYPICAL



FINISHED TYPICAL SECTION - IH 43 LOOPS WITH CURB & GUTTER @ STH 23

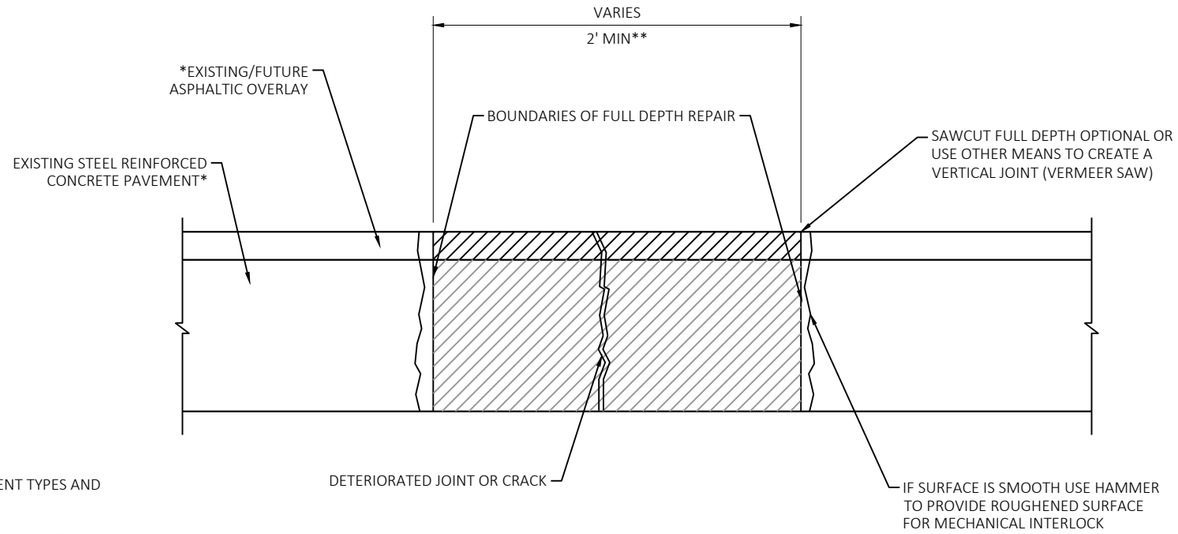
NW LOOP STA 235+62 TO STA 244+11
NE LOOP STA 386+92 TO STA 396+93
SW LOOP STA 384+31 TO STA 393+15
SE LOOP STA 242+70 TO STA 249+55



FINISHED TYPICAL SECTION - SE & SW RAMPS @ STH 42

SW RAMP STA 556+08.58 TO STA 562+17
SE RAMP STA 550+98.37 TO STA 557+80

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	TYPICAL SECTIONS	SHEET	E

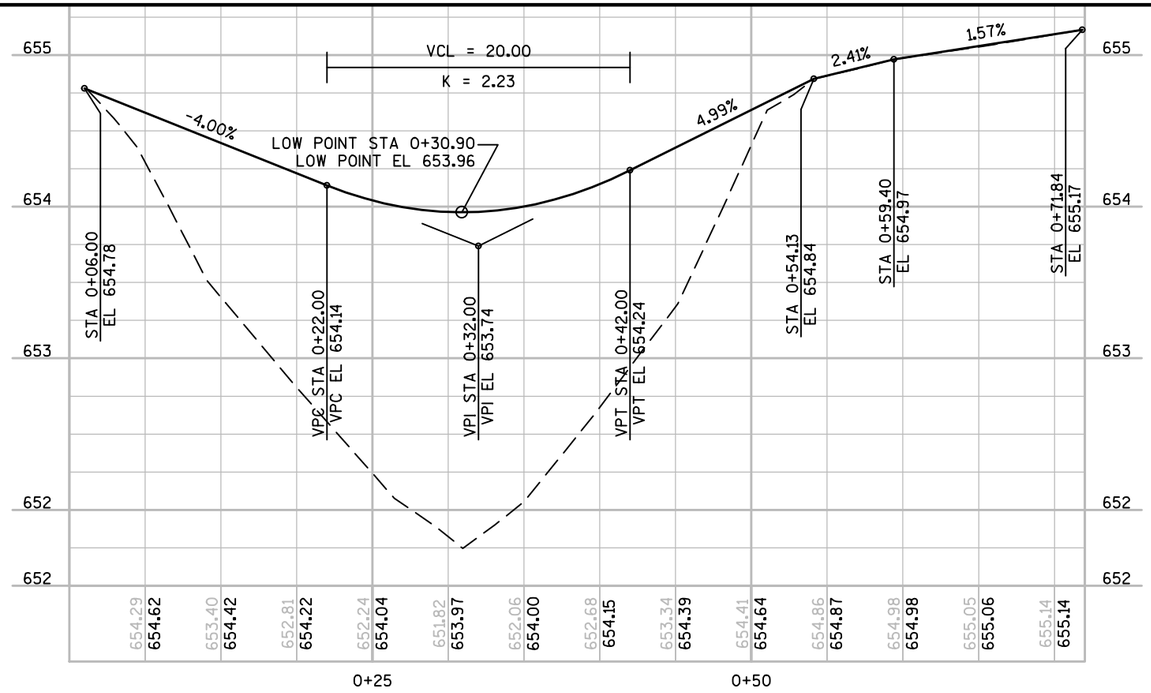


* SEE TYPICAL SECTIONS FOR PAVEMENT TYPES AND THICKNESSES.

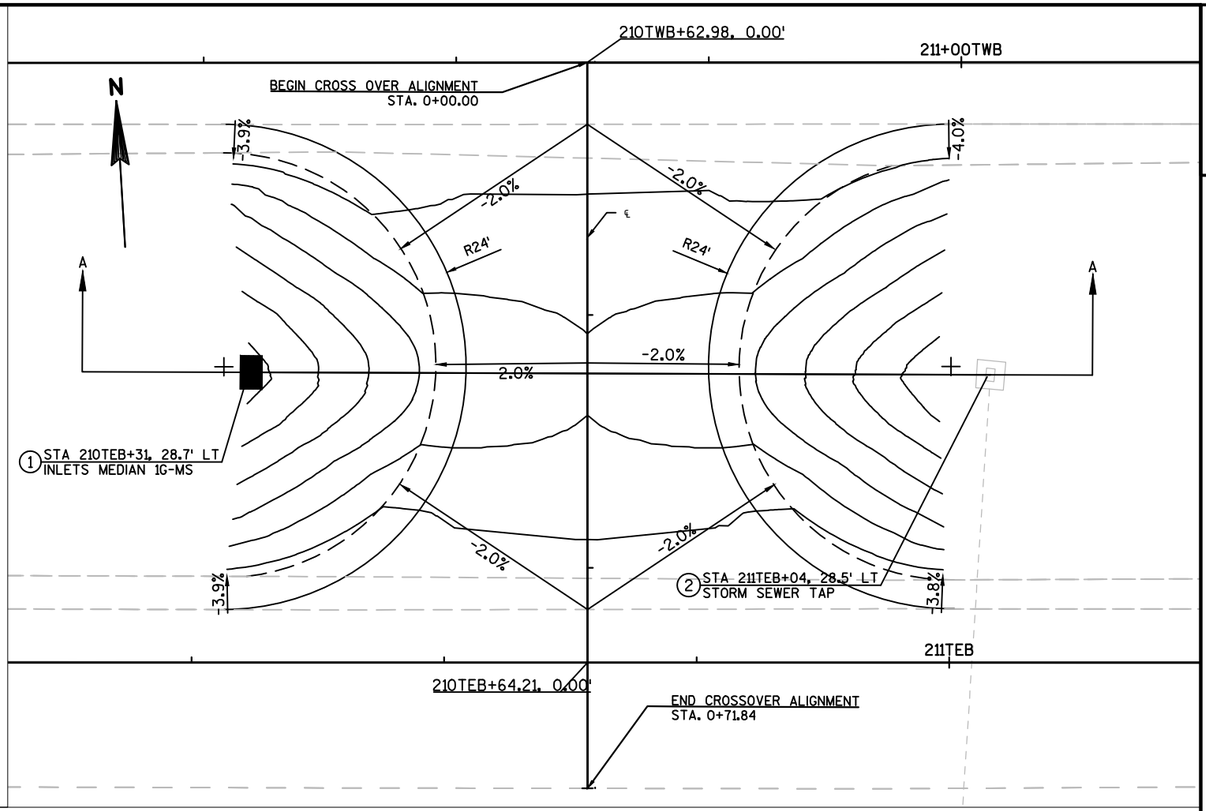
** 2' MINIMUM WIDTH AND 6' MINIMUM LENGTH OR AS DETERMINED IN THE FIELD TO COMPLETELY REMOVE DETERIORATED JOINT

BASE PATCHING CONCRETE

SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS

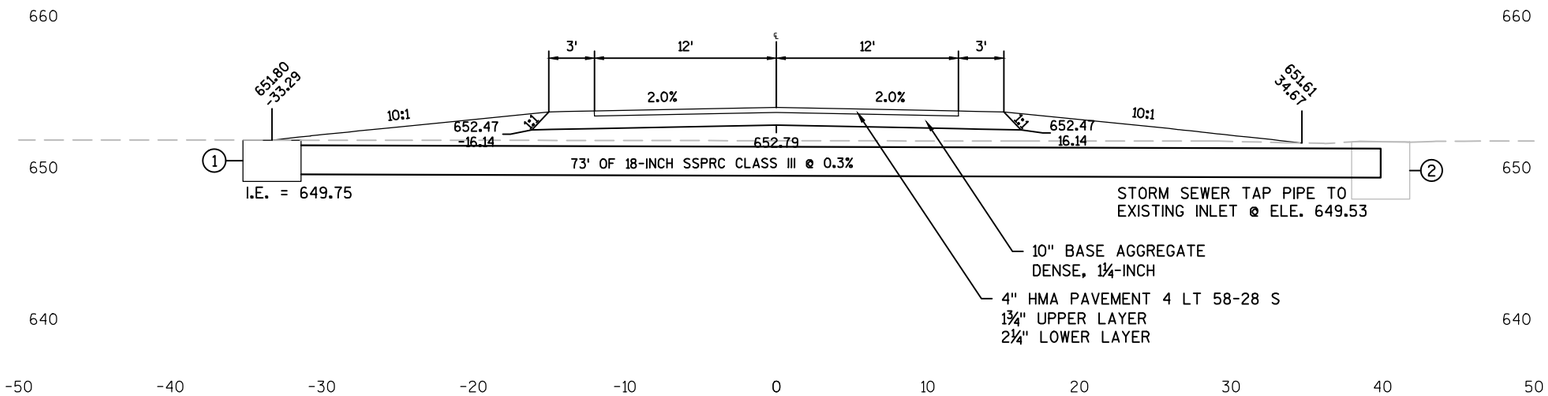


CROSS OVER PROFILE
ALONG ℄



2

NOTE: FOR ADDITIONAL INFORMATION SEE SDD 11 A1:
MAINTENANCE CROSSOVER FOR FREEWAYS



SECTION A-A
MAINTENANCE CROSSOVER
STA 210TEB+31 - STA 211TEB+04

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : N:\PDS\C3D\12250800\12250873\SHEETSPLAN\12250873_CROSSOVER_PD.DWG
LAYOUT NAME - 021013
PLOT DATE : 8/10/2022 12:34 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1:15

2

2

N

EXISTING R/W

360 CSB

365 CSB

370 CSB

370

SW RAMP

IH 43 SB CD

385 'SB'

390 'SB'

IH 43 SB

395 'SB'

400 'SB'

385 'NB'

390 'NB'

IH 43 NB

395 'NB'

400 'NB'

360 NCD

365 NCD

IH 43 NB CD

370 NCD

370

SE RAMP

POST

POST

POST

POST

EXISTING R/W

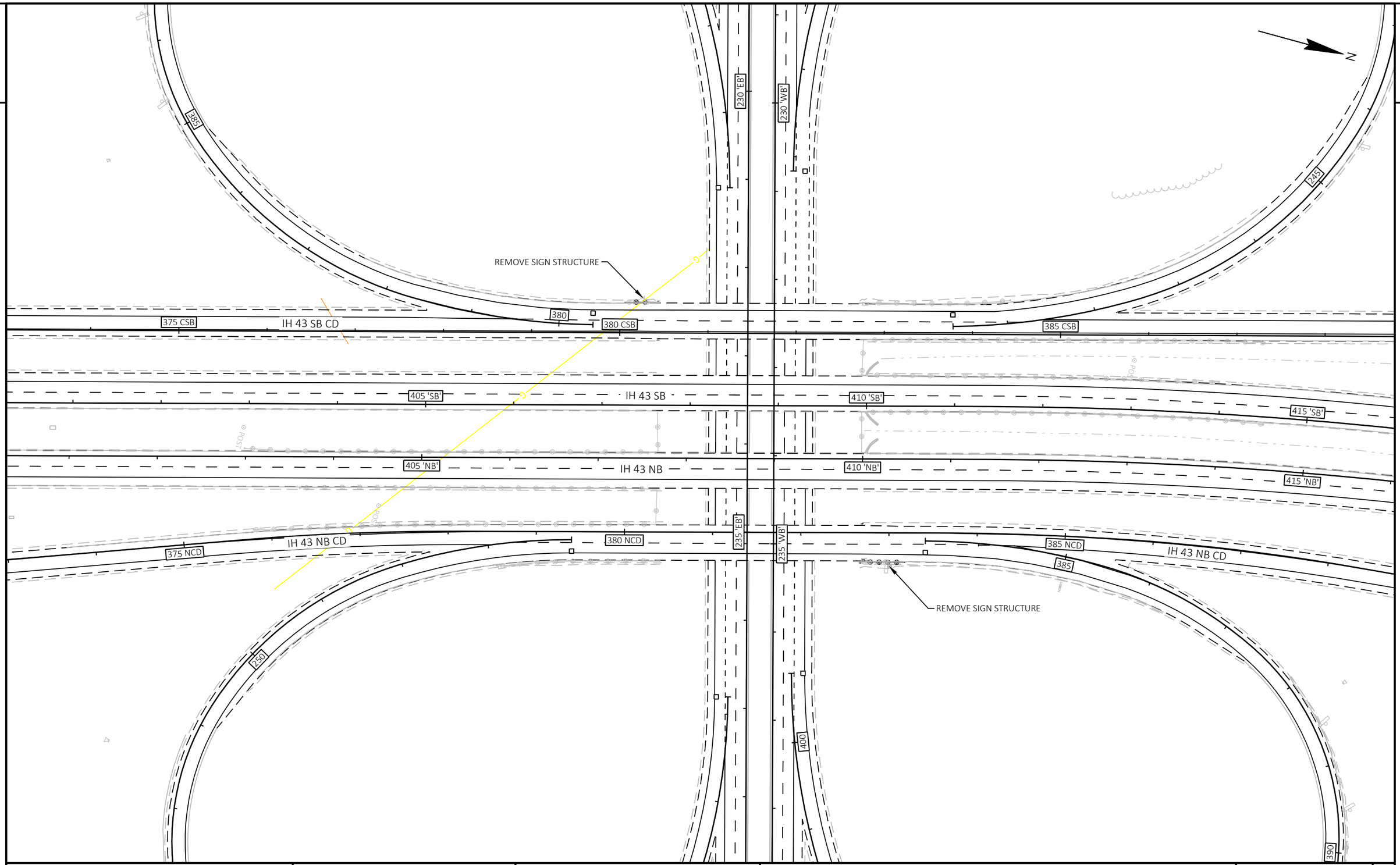
REMOVE SIGN STRUCTURE, SAND BARREL ARRAY AND CONCRETE PADS: BACKFILL WITH BASE AGGREGATE DENSE 3/4-INCH

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURE REMOVALS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021202-PD.DWG
LAYOUT NAME - 021240-pd

PLOT DATE : 8/9/2022 11:09 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURE REMOVALS	SHEET	E

2

N

235

NW RAMP

390 CSB

IH 43 SB CD

395 CSB

420 'SB'

IH 43 SB

420 'NB'

IH 43 NB

390 NCD

IH 43 NB CD

395 NCD

NE RAMP

265

EXISTING R/W

F O

F O

F O

REMOVE SIGN STRUCTURE, SAND BARREL ARRAY AND CONCRETE PADS: BACKFILL WITH BASE AGGREGATE DENSE 3/4-INCH

S

EXISTING R/W

400 CSB

425 'SB'

425 'NB'

430 'SB'

400 NCD

430 'NB'

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURE REMOVALS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021202-PD.DWG
LAYOUT NAME - 021242-pd

PLOT DATE : 8/9/2022 11:10 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

NW RAMP

220

220 'WB'

220 'EB'

EXISTING R/W

ASPHALTIC SURFACE REMOVAL
PAID FOR UNDER EXCAVATION COMMON

210 'WB'

STH 23 WB

215 'WB'

SAWCUT

210 'EB'

STH 23 EB

215 'EB'

390

385

SW RAMP

FO

REMOVE SIGN STRUCTURE, SAND
BARREL ARRAY AND CONCRETE PADS:
BACKFILL WITH BASE AGGREGATE
DENSE 3/4-INCH

EXISTING R/W

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURE REMOVALS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021202-PD.DWG
LAYOUT NAME - 021243-pd

PLOT DATE : 8/9/2022 11:10 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

REMOVE SIGN STRUCTURE, SAND
BARREL ARRAY AND CONCRETE PADS:
BACKFILL WITH BASE AGGREGATE
DENSE 3/4-INCH

EXISTING R/W

NE RAMP

250

245 'WB'

250 'WB'

STH 23 WB

255 'WB'

245 'EB'

250 'EB'

STH 23 EB

255 'EB'

FO

SAN

385

SE RAMP

EXISTING R/W

REMOVE SIGN STRUCTURE, SAND
BARREL ARRAY AND CONCRETE PADS:
BACKFILL WITH BASE AGGREGATE
DENSE 3/4-INCH

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURE REMOVALS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021202-PD.DWG
LAYOUT NAME - 021244-pd

PLOT DATE : 8/9/2022 11:10 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

EXISTING R/W

360 CSB

365 CSB

370 CSB

IH 43 SB CD

SW RAMP

370

385 SB

390 SB

IH 43 SB

395 SB

400 SB

385 NB

390 NB

IH 43 NB

395 NB

400 NB

360 CNB

365 CNB

IH 43 NB CD

370 CNB

370

SE RAMP

EXISTING R/W

POST

S-59-77

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURES	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021203-PD.DWG
LAYOUT NAME - 021245-pd

PLOT DATE : 8/9/2022 1:30 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

S-59-80

S-59-78

375 CSB

IH 43 SB CD

380

380 CSB

385 CSB

405 SB

IH 43 SB

410 SB

415 SB

405 NB

IH 43 NB

410 NB

415 NB

375 CNB

IH 43 NB CD

380 CNB

385 CNB

IH 43 NB CD

385

385

250

400

390

230 EB

230 WB

235 EB

235 WB

245

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURES	SHEET	E

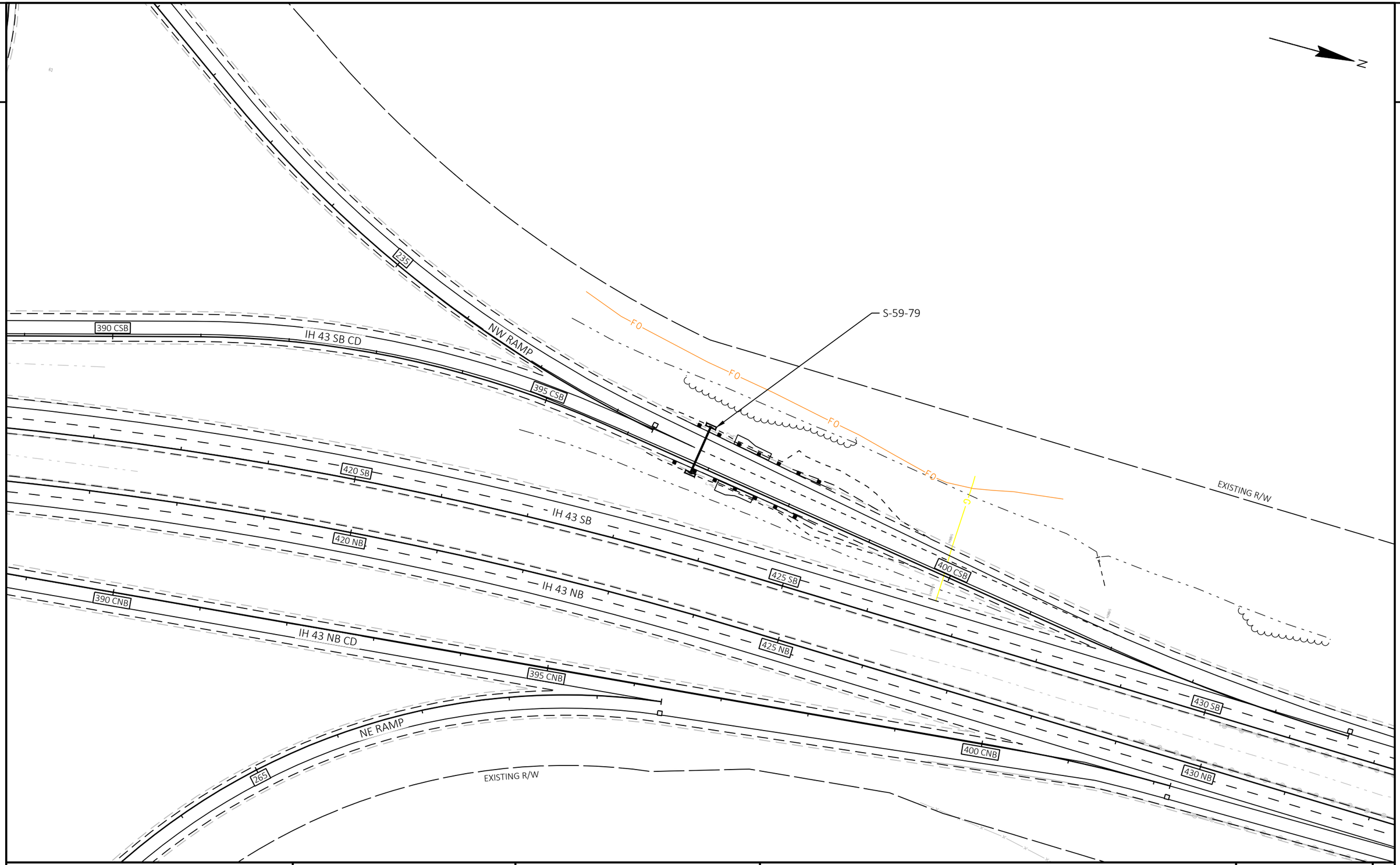
FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021203-PD.DWG
LAYOUT NAME - 021246-pd

PLOT DATE : 8/9/2022 1:30 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

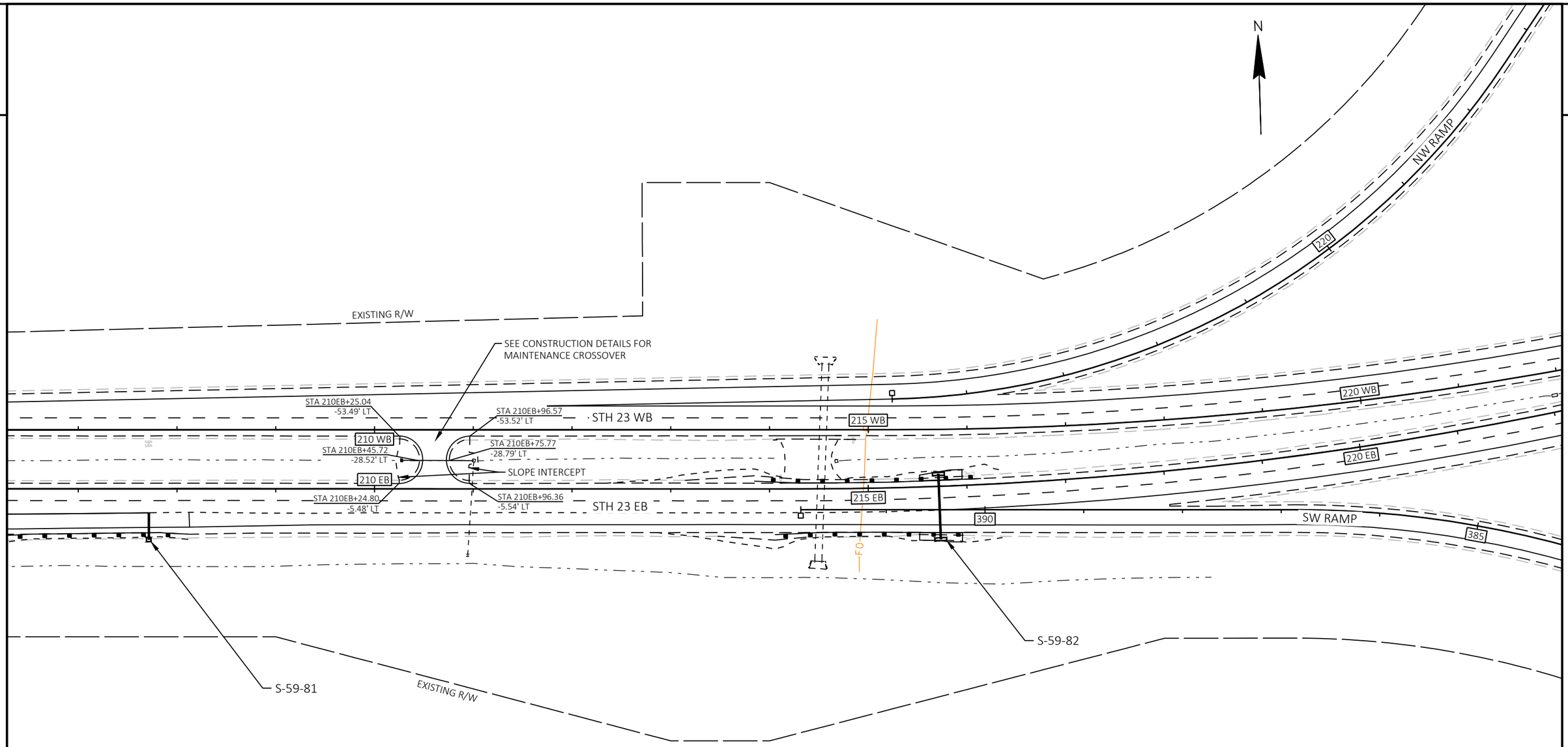


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURES	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021203-PD.DWG
LAYOUT NAME - 021247-pd

PLOT DATE : 8/9/2022 1:30 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURES	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021203-PD.DWG
LAYOUT NAME - 021248-pd
PLOT DATE : 8/9/2022 1:30 PM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

S-59-83

S-59-85

EXISTING R/W

NE RAMP

250

250 WB

STH 23 WB

255 WB

250 EB

STH 23 EB

255 EB

SE RAMP

385

EXISTING R/W

S-59-84

S-59-86

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - SIGN STRUCTURES	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021203-PD.DWG
LAYOUT NAME - 021249-pd

PLOT DATE : 8/9/2022 1:30 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

STA 10'SB'+94.79
-37.51' LT
POST #5

STA 11'SB'+19.81
-37.46' LT
POST #1

STA 4'NB'+14.88
-125.04' LT

STA 4'NB'+54.27
-125.08' LT

STA 10'SB'+69.81
-36.57' LT
POST #9

STA 4'SB'+12.22
5.94' RT

STA 4'SB'+51.62
5.71' RT

STA 8'SB'+17.19
7.79' RT
POST #9

4'SB'+00

6'SB'+00

8'SB'+00

IH 43 SB

10'SB'+00

IH 43 SB R/L

STA 8'SB'+42.17
8.73' RT
POST #5

STA 8'SB'+67.19
8.67' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

4'NB'+00

6'NB'+00

8'NB'+00

IH 43 NB

10'NB'+00

IH 43 NB R/L

STA 4'NB'+04.66
34.24' RT

STA 4'NB'+44.06
33.98' RT

STA 9'NB'+09.63
35.84' RT
POST #9

STA 9'NB'+34.61
36.78' RT
POST #5

STA 9'NB'+59.63
36.72' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021201-pd

PLOT DATE : 6/21/2022 11:14 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

IH 43 NB-CTH V SW RAMP

84

N

IH 43 SB R/L

110'SB'+00

112'SB'+00

IH 43 SB

114'SB'+00

116'SB'+00

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 111'NB'+40.93
-9.04' LT
POST #1

STA 111'NB'+65.95
-9.10' LT
POST #5

110'NB'+00

112'NB'+00

IH 43 NB

114'NB'+00

116'NB'+00

IH 43 NB R/L

STA 111'NB'+90.93
-8.05' LT
POST #9

STA 115'NB'+56.50
-6.09' LT

STA 115'NB'+95.90
-6.33' LT

STA 112'NB'+59.14
36.08' RT
POST #9

STA 115'NB'+74.71
33.69' RT

STA 116'NB'+14.11
33.88' RT

STA 112'NB'+09.14
36.97' RT
POST #1

STA 112'NB'+34.16
37.03' RT
POST #5

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

IH 43 NB-CTH V SE RAMP

84

86

PC: 87+36.77

PT: 89+67.92

MATCH LINE 117+00

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021202-pd

PLOT DATE : 6/21/2022 11:14 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 117+00

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

STA 117'SB'+36.83
-34.39' LT

STA 117'SB'+76.23
-34.23' LT

STA 120'SB'+91.80
-36.78' LT
POST #9

STA 121'SB'+16.78
-37.72' LT
POST #5

STA 121'SB'+41.80
-37.66' LT
POST #1

STA 121'SB'+60.23
7.80' RT
POST #9

IH 43 SB R/L

STA 117'SB'+55.26
6.44' RT

118'SB'+00

120'SB'+00

IH 43 SB

122'SB'+00

124'SB'+00

STA 117'SB'+94.66
6.16' RT

STA 121'SB'+85.21
8.74' RT
POST #5

STA 122'SB'+10.23
8.68' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

118'NB'+00

120'NB'+00

122'NB'+00

IH 43 NB

124'NB'+00

IH 43 NB R/L

94

IH 43 NB-CTH V NW RAMP

96

PC: 96+83.98

N

BP: 90+56.26
EP: 91+04.22

92

94

IH 43 NB-CTH V NE RAMP

96

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021203-pd

PLOT DATE : 6/21/2022 11:14 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021204-pd
PLOT DATE : 6/21/2022 11:14 AM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021205-pd
PLOT DATE : 6/21/2022 11:14 AM
PLOT BY : MARTIN, THOMAS S
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 228+60

MATCH LINE 236+22

MGS
THRIE BEAM

STA 231'SB'+83.99
-34.33' LT

STA 231'SB'+90.12
-34.33' LT

STA 232'SB'+29.52
-34.61' LT

MGS
THRIE BEAM

STA 234'SB'+30.61
-34.58' LT

STA 234'SB'+70.01
-34.33' LT

MGS
GUARDRAIL

230'SB'+00

232'SB'+00

IH 43 SB

IH 43 SB R/L

234'SB'+00

STA 234'SB'+69.74
6.01' RT

STA 235'SB'+09.14
5.79' RT

236'SB'+00

MGS
EAT

STA 228'NB'+81.56
8.60' LT
POST #5

STA 229'NB'+06.54
7.66' LT
POST #9

MGS
GUARDRAIL

MGS
THRIE BEAM

230'NB'+00

232'NB'+00

STA 232'NB'+72.11
-5.84' LT

STA 233'NB'+11.51
-6.10' LT

IH 43 NB

234'NB'+00

MGS
THRIE BEAM

236'NB'+00

STA 233'NB'+08.21
33.79' RT

STA 233'NB'+10.95
33.79' RT

STA 233'NB'+50.34
34.04' RT

IH 43 NB R/L

STA 235'NB'+54.24
34.30' RT

STA 235'NB'+93.64
34.03' RT

MGS
THRIE BEAM

MGS
THRIE BEAM

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021206-pd

PLOT DATE : 6/21/2022 11:14 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 236+22

N

MGS
EAT
STA 238'SB'+10.56
-37.15' LT
POST #5
STA 238'SB'+35.58
-37.09' LT
POST #1
STA 237'SB'+85.58
-36.21' LT
POST #9
STA 238'SB'+74.71
7.92' RT
POST #9
238'SB'+00
240'SB'+00
IH 43 SB
242'SB'+00
IH 43 SB R/L
244'SB
MGS
GUARDRAIL
STA 238'SB'+99.69
8.86' RT
POST #5
MGS
EAT
STA 239'SB'+24.71
8.80' RT
POST #1
238'NB'+00
240'NB'+00
IH 43 NB
242'NB'+00
IH 43 NB R/L
244
STA 237'NB'+21.71
35.76' RT
POST #9
STA 237'NB'+46.70
36.70' RT
POST #5
STA 237'NB'+71.71
36.65' RT
POST #1
MGS
GUARDRAIL
MGS
EAT

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021207-pd

PLOT DATE : 6/21/2022 11:15 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

IH 43 NB-STH 28 SW RAMP

238 240 242

IH 43 SB R/L

266'SB'+00 268'SB'+00 270'SB'+00 IH 43 SB 272'SB'+00

MGS EAT | MGS GUARDRAIL | MGS THRIE BEAM

STA 266'NB'+93.06
8.42' LT
POST #1

STA 267'NB'+18.09
8.49' LT
POST #5

266'NB'+00 268'NB'+00 IH 43 NB 270'NB'+00 272'NB'+00

IH 43 NB R/L

STA 267'NB'+43.07
-7.55' LT
POST #9

STA 271'NB'+21.14
-6.16' LT

STA 271'NB'+60.54
-6.47' LT

STA 268'NB'+09.38
36.53' RT
POST #9

STA 271'NB'+24.95
34.95' RT

STA 271'NB'+64.34
35.24' RT

PT: 266+03.45

STA 267'NB'+59.37
37.41' RT
POST #1

STA 267'NB'+84.39
37.47' RT
POST #5

MGS EAT | MGS GUARDRAIL | MGS THRIE BEAM

238 240 242 244

IH 43 NB-STH 28 SE RAMP

EP: 245+29.89

MATCH LINE 272+70

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021208-pd

PLOT DATE : 6/21/2022 11:15 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

MATCH LINE 272+70

N

248

IH 43 NB-STH 28 NE RAMP

250

252

PC: 252+80.61

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

STA 277'SB'+38.64
-36.57' LT
POST #5

STA 277'SB'+63.66
-36.51' LT
POST #1

STA 273'SB'+58.68
-34.34' LT

STA 273'SB'+98.08
-34.05' LT

STA 277'SB'+13.65
-35.63' LT
POST #9

STA 277'SB'+67.74
8.48' RT
POST #9

STA 273'SB'+62.78
7.21' RT

STA 274'SB'+02.17
6.92' RT

274'SB'+00

276'SB'+00

278'SB'+00

IH 43 SB

280'SB'+00

STA 277'SB'+92.73
9.43' RT
POST #5

STA 278'SB'+17.74
9.38' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

274'NB'+00

276'NB'+00

278'NB'+00

IH 43 NB

280'NB'+00

BP: 245+66.50

PC: 247+83.04

PI: 252+45.12

246

248

250

252

IH 43 NB-STH 28 NE RAMP

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021209-pd

PLOT DATE : 6/21/2022 11:15 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

IH 43 SB R/L

354'SB'+00

356'SB'+00

IH 43 SB

358'SB'+00

360'SB'+00

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

354'NB'+00

356'NB'+00

IH 43 NB

358'NB'+00

360'NB'+00

IH 43 NB R/L

STA 354'NB'+70.31
-8.07' LT
POST #5

STA 354'NB'+95.29
-7.13' LT
POST #9

STA 354'NB'+45.29
-8.01' LT
POST #1

STA 355'NB'+07.84
41.37' RT
POST #9

STA 358'NB'+23.36
-5.29' LT

STA 358'NB'+62.76
-5.55' LT

STA 358'NB'+23.41
39.34' RT

STA 358'NB'+62.81
39.57' RT

PT: 354+07.17

STA 354'NB'+57.84
42.26' RT
POST #1

STA 354'NB'+82.85
42.32' RT
POST #5

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

POST

POST

POST

MATCH LINE 360+50

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021210-pd

PLOT DATE : 6/21/2022 11:15 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

2

2

N

MATCH LINE 360+50

MGS
GUARDRAIL
MGS
THRIE BEAM
STA 361'SB'+13.63
-47.93' LT
STA 360'SB'+74.24
-48.13' LT
STA 361'SB'+24.55
-54.02' LT
POST
116+00
MGS
THRIE BEAM
STA 360'SB'+74.35
6.57' RT
STA 361'SB'+13.75
6.23' RT
362'SB'+00
IH 43 SB
364'SB'+00
MGS
GUARDRAIL
IH 43 SB R/L
PAY LIMIT FOR
STEEL THRIE
BEAM = 37'
366'SB'+00
STEEL THRIE BEAM
BULLNOSE
TERMINAL END
STA 366'SB'+09.41
8.09' RT
POST #12
STA 366'SB'+46.71
11.77' RT
POST #5
368'SB'+00
STA 366'SB'+58.57
15.22' RT
POST #1
STA 366'NB'+63.15
-14.68' LT
POST #1
STA 360'NB'+78.69
-5.87' LT
STA 361'NB'+18.08
-5.20' LT
362'NB'+00
IH 43 NB
364'NB'+00
IH 43 NB R/L
366'NB'+00
STA 366'NB'+51.22
-11.46' LT
POST #5
STA 366'NB'+13.86
-8.44' LT
POST #12
368'NB'+00
MGS
THRIE BEAM
MGS
GUARDRAIL
PAY LIMIT FOR
STEEL THRIE
BEAM = 37'
STEEL THRIE BEAM
BULLNOSE
TERMINAL END
CTH PP
118+00

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021211-pd

PLOT DATE : 6/21/2022 11:15 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

MGS
THRIE BEAM

STA 380'SB CD'+05.42
-34.68' LT

STA 380'SB CD'+46.53
-34.71' LT

BP: 379+61.36

TYPE 2 BARRIER END

PCC: 381+61.78

382'SW LOOP'+00

380'SW LOOP'+00

232'EB'+00

CD'+00

SB CD

376'SB CD'+00

378'SB CD'+00

380'SB CD'+00

STH 23 EB

IH 43 SB R/L

402'SB'+00

404'SB'+00

IH 43 SB

406'SB'+00

408'SB'+00

MGS
EAT

STA 403'NB'+03.80
-8.15' LT
POST #1

STA 403'NB'+28.81
-8.47' LT
POST #5

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 407'NB'+31.84
-6.51' LT

STA 407'NB'+71.23
-7.03' LT

234'EB'+00

MATCH LINE 408+85

402'NB'+00

STA 403'NB'+53.80
-7.79' LT
POST #9

404'NB'+00

IH 43 NB

406'NB'+00

408'NB'+00

IH 43 NB R/L

MGS
EAT

STA 404'NB'+16.28
36.10' RT
POST #9

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 403'NB'+66.29
37.04' RT
POST #1

STA 403'NB'+91.31
37.07' RT
POST #5

STA 407'NB'+31.81
34.61' RT

STA 407'NB'+71.20
35.09' RT

PC: 375+59.86

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 379'NB CD'+99.98
-8.52' LT

STA 380'NB CD'+39.37
-8.77' LT

376'NB CD'+00

378'NB CD'+00

380'NB CD'+00

NB CD'+00

NB CD

STA 376'NB CD'+34.91
-9.43' LT
POST #9

STA 376'NB CD'+10.02
-10.30' LT
POST #5

STA 375'NB CD'+85.10
-10.38' LT
POST #1

PT: 378+13.83

252'SE LOOP'+00

SE LOOP

PCC: 251+95.38

STA 253'SE LOOP'+64.72
26.60' RT
POST #9

STA 380'NB CD'+01.53
32.88' RT

STA 380'NB CD'+40.92
33.39' RT

STA 253'SE LOOP'+12.67
26.15' RT
POST #1

STA 253'SE LOOP'+38.69
27.36' RT
POST #5

EP: 253+94.88

236'EB'+00

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

LOOP'+00

/L

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021212-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 408+85

232'WB'+00

STH 23 WB

234'WB'+00

236'WB'+00

MGS THRIE BEAM

MGS GUARDRAIL

MGS EAT

MISC. TEXT ?

STA 249'NW LOOP'+25.30
27.71' RT
POST #5

STA 248'NW LOOP'+99.39
26.99' RT
POST #1

PCC: 247+61.79

246'NW LOOP'+00

N

STA 382'SB CD'+70.61
-35.25' LT

STA 383'SB CD'+10.01
-34.67' LT

STA 249'NW LOOP'+51.19
27.24' RT
POST #9

248'NW LOOP'+00

382'SB CD'+00

384'SB CD'+00

386'SB CD'+00

388'SB CD'+00

STA 386'SB CD'+77.22
7.74' RT
POST #9

STA 387'SB CD'+02.20
8.35' RT
POST #5

STA 382'SB CD'+72.28
7.09' RT

STA 383'SB CD'+11.67
6.51' RT

STA 387'SB CD'+27.21
7.96' RT
POST #1

MGS THRIE BEAM

MGS GUARDRAIL

MGS EAT

STA 409'SB'+90.27
-35.19' LT

STA 410'SB'+29.66
-34.67' LT

STA 413'SB'+43.75
-35.85' LT
POST #9

STA 413'SB'+68.56
-36.24' LT
POST #5

STA 413'SB'+93.38
-35.76' LT
POST #1

MGS THRIE BEAM

MGS GUARDRAIL

MGS EAT

410'SB'+00

412'SB'+00

IH 43 SB

414'SB'+00

STA 414'SB'+20.69
9.24' RT
POST #5

IH 43 SB R/L

416'SB'+00

STA 409'SB'+90.32
6.98' RT

STA 410'SB'+29.71
6.59' RT

STA 413'SB'+95.66
8.67' RT
POST #9

STA 414'SB'+45.75
8.67' RT
POST #1

MGS THRIE BEAM

MGS GUARDRAIL

MGS EAT

410'NB'+00

412'NB'+00

IH 43 NB

414'NB'+00

416'NB'+00

IH 43 NB R/L

PC: 383+69.44

PC: 411+44.80

382'NB CD'+00

384'NB CD'+00

384'NE LOOP'+00

386'NB CD'+00

388'NB CD'+00

PT: 388+52.95

STA 383'NB CD'+17.37
33.26' RT

STA 382'NB CD'+76.98
32.99' RT

BP: 383+39.31

386'NE LOOP'+00

NE LOOP

PCC: 385+38.62

PCC: 387+38.62

MGS GUARDRAIL

MGS THRIE BEAM

TYPE 2 BARRIER END

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021213-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

400'SB CD'+00

PC: 401+43.31

SB CD

402'SB CD'+00

404'SB CD'+00

EP: 404+87.45

IH 43 SB R/L

SB'+00

428'SB'+00

IH 43 SB

430'SB'+00

432'SB'+00

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 429'NB'+54.99
-8.45' LT
POST #5

STA 429'NB'+29.97
-8.12' LT
POST #1

STA 429'NB'+79.98
-7.77' LT
POST #9

426'NB'+00

428'NB'+00

IH 43 NB

430'NB'+00

432'NB'+00

STA 432'NB'+33.04
-5.99' LT

STA 432'NB'+72.44
-6.15' LT

IH 43 NB R/L

402'NB CD'+00

400'NB CD'+00

NB CD

PC: 400+11.49

EP: 402+18.75

STA 430'NB'+55.59
54.12' RT
POST #9

STA 432'NB'+33.56
49.28' RT

STA 432'NB'+72.96
48.87' RT

STA 430'NB'+05.61
55.86' RT
POST #1

STA 430'NB'+30.63
55.48' RT
POST #5

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

MATCH LINE 433+55

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021214-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 433+55

N

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

EXTRA LINE?

STA 438'SB'+49.66
46.38' LT
POST #5

STA 438'SB'+74.68
46.34' LT
POST #1

STA 434'SB'+32.23
-44.16' LT

STA 434'SB'+71.63
-43.79' LT

STA 438'SB'+24.68
-45.42' LT
POST #9

IH 43 SB R/L

434'SB'+00

436'SB'+00

438'SB'+00

440'SB'+00

IH 43 SB

STA 434'SB'+32.69
6.49' RT

STA 434'SB'+72.08
6.28' RT

STA 436'SB'+62.59
9.21' RT
POST #5

STA 436'SB'+37.61
8.32' RT
POST #9

STA 436'SB'+87.60
9.11' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

434'NB'+00

436'NB'+00

438'NB'+00

440'NB'+00

IH 43 NB

IH 43 NB R/L

STA 434'NB'+20.31
46.03' RT

STA 434'NB'+59.69
44.97' RT

STA 436'NB'+12.75
42.67' RT
POST #9

STA 436'NB'+37.74
42.88' RT
POST #5

STA 436'NB'+62.73
42.10' RT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

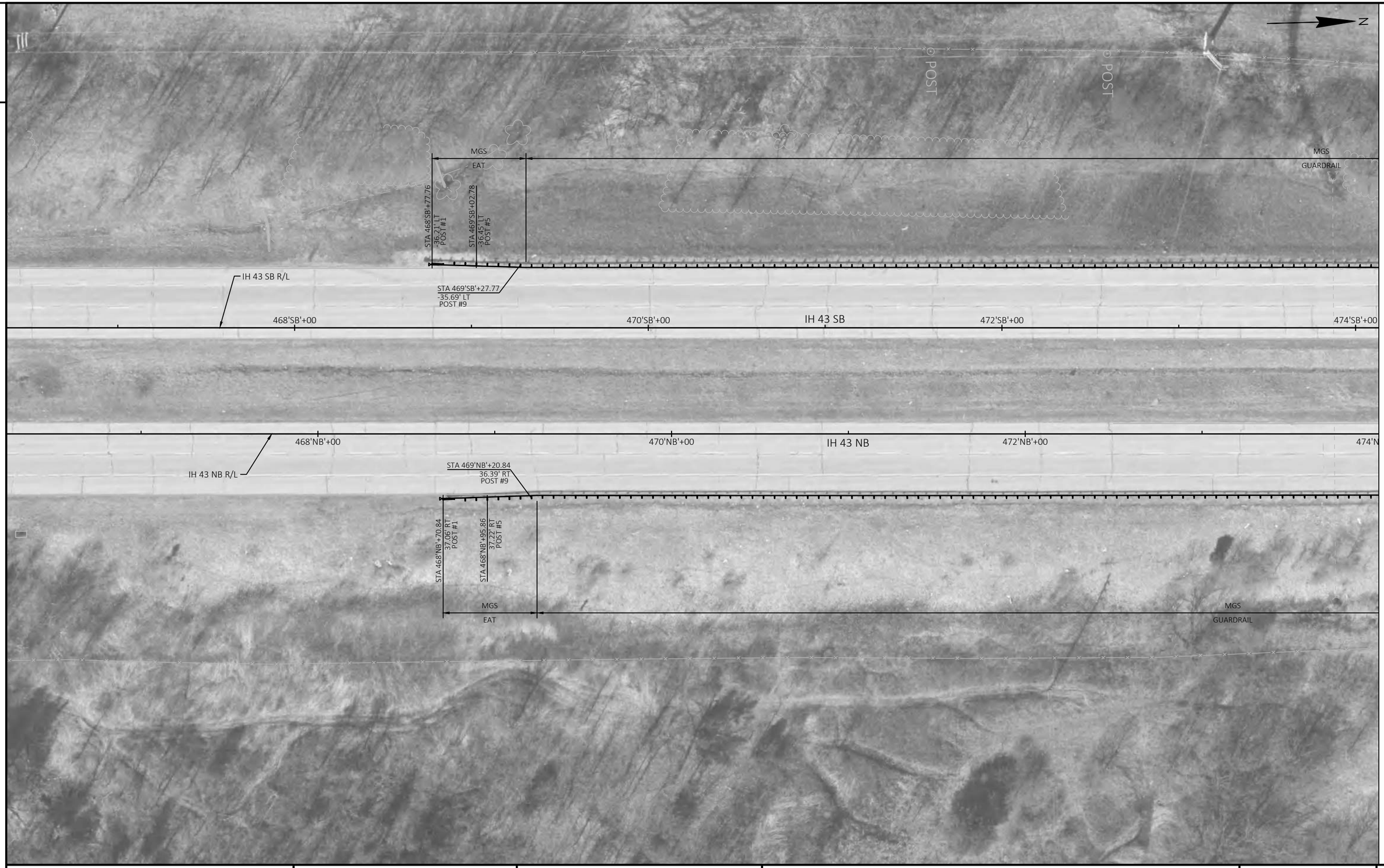
MGS
EAT

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021215-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



MATCH LINE 474+00

2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021216-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

MATCH LINE 474+00

MATCH LINE 481+55

N

SIGN

POST

MGS
THRIE BEAM

STA 478'SB'+30.56
-33.24' LT

STA 478'SB'+69.96
-33.47' LT

MGS
THRIE BEAM

STA 480'SB'+31.80
-33.76' LT

STA 480'SB'+71.20
-34.06' LT

IH 43 SB R/L

476'SB'+00

478'SB'+00

480'SB'+00

IH 43 SB

STA 480'SB'+20.14
6.49' RT

STA 480'SB'+59.53
6.39' RT

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

STA 475'SB'+17
51.49' RT
POST #1

STA 475'SB'+42.02
51.36' RT
POST #5

MGS
THRIE BEAM

MGS
GUARDRAIL

B'+00

476'NB'+00

478'NB'+00

IH 43 NB

480'NB'+00

STA 475'SB'+67.01
52.22' RT
POST #9

STA 477'NB'+44.46
-5.75' LT

STA 477'NB'+83.85
-6.20' LT

STA 477'NB'+11.09
34.68' RT

STA 477'NB'+50.49
35.05' RT

IH 43 NB R/L

STA 479'NB'+11.21
35.01' RT

STA 479'NB'+50.57
36.65' RT

MGS
THRIE BEAM

MGS
THRIE BEAM

MGS
GUARDRAIL

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021217-pd

PLOT DATE : 6/21/2022 11:16 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

SOD

MGS
GUARDRAIL

MGS
EAT

STA 486'SB'+49.07
36.51' LT
POST #5

STA 486'SB'+74.09
36.48' LT
POST #1

STA 486'SB'+24.09
-35.56' LT
POST #9

IH 43 SB R/L

482'SB'+00

STA 482'SB'+62.55
8.85' RT
POST #9

484'SB'+00

IH 43 SB

486'SB'+00

488'SB'+00

MATCH LINE 481+55

STA 482'SB'+87.53
9.74' RT
POST #5

STA 483'SB'+12.54
9.64' RT
POST #1

EXTRA LINEWORK

MGS
EAT

482'NB'+00

484'NB'+00

IH 43 NB

486'NB'+00

488'NB'+00

IH 43 NB R/L

STA 483'NB'+78.56
39.01' RT
POST #9

STA 484'NB'+03.55
39.80' RT
POST #5

STA 484'NB'+28.57
39.58' RT
POST #1

MGS
EAT

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021218-pd

PLOT DATE : 6/21/2022 11:17 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

48+00

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

IH 43 SB R/L

STA 515'SB'+44.73
9.50' RT
POST #5

STA 515'SB'+69.73
9.30' RT
POST #1

510'SB'+00

IH 43 SB

512'SB'+00

514'SB'+00

516'SB'+00

TYPE 2 BARRIER END

STA 512'SB'+03.71
7.43' RT

STA 512'SB'+54.98
7.47' RT

STA 515'SB'+19.76
8.70' RT
POST #9

STA 509'NB'+82.80
-7.28' LT
POST #9

STA 512'NB'+60.83
-5.52' LT

STA 512'NB'+99.59
-5.77' LT

50+00

TYPE 2 BARRIER END

510'NB'+00

IH 43 NB

512'NB'+00

514'NB'+00

516'NB'+00

IH 43 NB R/L

STA 509'NB'+32.80
-8.25' LT
POST #1

STA 509'NB'+57.82
-8.27' LT
POST #5

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

MUELLER RD

52+00

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021219-pd

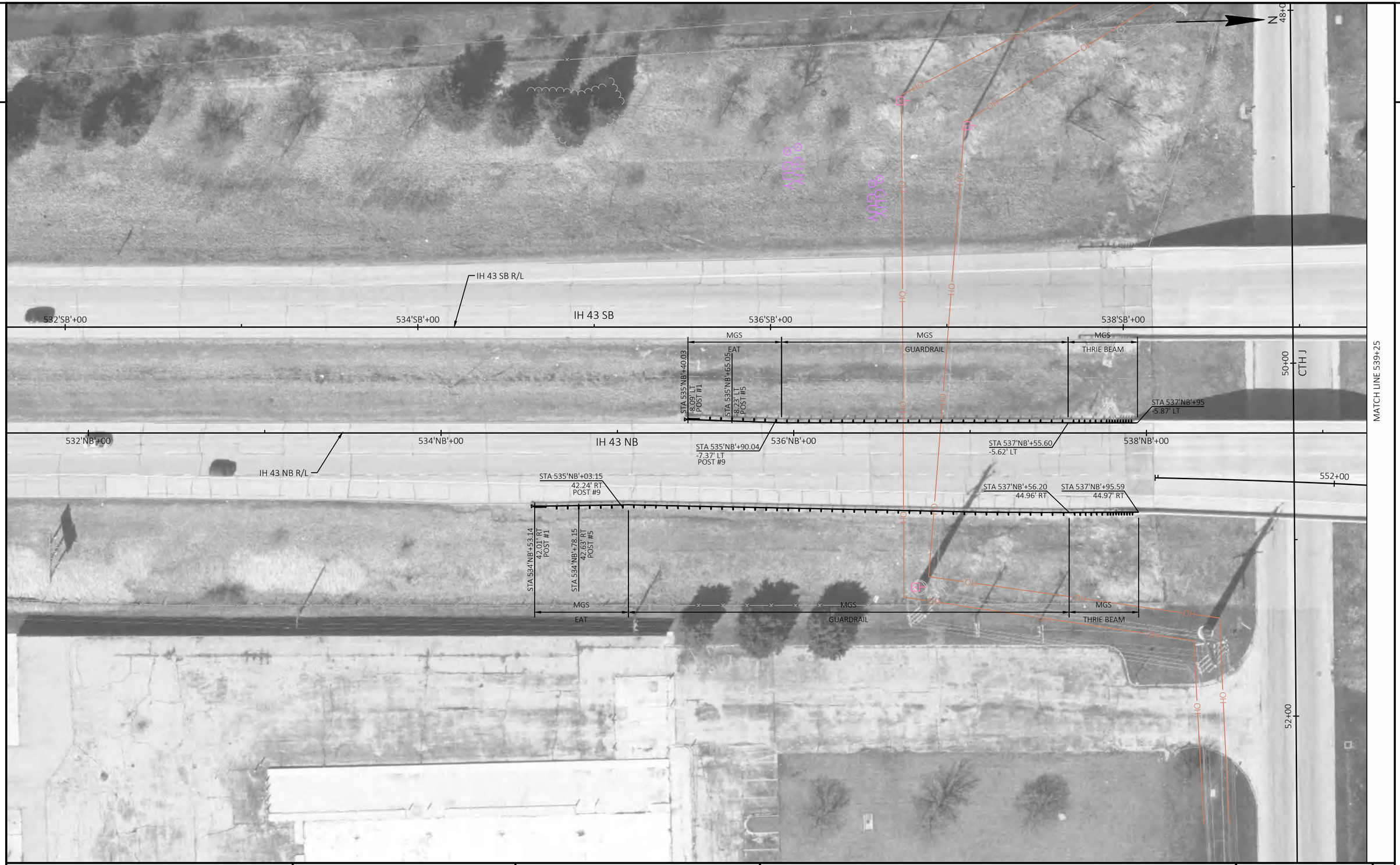
PLOT DATE : 6/21/2022 11:17 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021220-pd

PLOT DATE : 6/21/2022 11:17 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 539+25

MATCH LINE 546+86

N

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

POST

STA 542'SB'+36.58
-55.25' LT
POST #5

STA 542'SB'+61.59
-55.96' LT
POST #1

STA 539'SB'+81.78
-47.21' LT

STA 540'SB'+21.18
-47.78' LT

STA 542'SB'+11.64
-53.55' LT
POST #9

BP: 556+08.58

558+00

IH 43 SB R/L

STA 539'SB'+82.30
6.86' RT

STA 540'SB'+21.70
6.58' RT

540'SB'+00

542'SB'+00

STA 542'NB'+11.56
-51.11' LT
POST #9

IH 43 SB

544'SB'+00

546'SB'+00

STA 542'NB'+36.55
-50.33' LT
POST #5

STA 542'NB'+61.57
-50.55' LT
POST #1

MGS
THRIE BEAM

MGS
GUARDRAIL

MGS
EAT

STA 546'NB'+30.80
-8.26' LT
POST #1

STA 546'NB'+55.82
-8.47' LT
POST #5

MGS
EAT

540'NB'+00

542'NB'+00

IH 43 NB

544'NB'+00

546'NB'+00

STA 546'NB'+80.81
-7.67' LT
POST #9

IH 43 NB R/L

EXTRA LINE WORK

STA 546'NB'+09.72
36.15' RT
POST #9

554+00

556+00

IH 43 STH 42 SE RAMP

558+00

STA 545'NB'+59.71
36.60' RT
POST #1

STA 545'NB'+84.73
36.88' RT
POST #5

MGS
EAT

PT: 555+51.61

PC: 559+11.28

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021221-pd

PLOT DATE : 6/21/2022 11:17 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

MATCH LINE 546+86

IH 43 - STH 42 SW RAMP

562+00

PT: 560+15.19

560+00

MGS
EAT

MGS
GUARDRAIL

MGS
THRIE BEAM

IH 43 SB

STA 548'SB'+28.79
-36.47' LT
POST #1

STA 548'SB'+53.81
-36.67' LT
POST #5

STA 548'SB'+78.80
-35.88' LT
POST #9

STA 550'SB'+31.87
-33.40' LT

STA 550'SB'+71.27
-33.56' LT

548'SB'+00

550'SB'+00

552'SB'+00

554'SB'+00

IH 43 SB R/L

IH 43 SB

MGS
GUARDRAIL

MGS
THRIE BEAM

548'NB'+00

550'NB'+00

552'NB'+00

554'NB'+00

IH 43 NB

STA 549'NB'+33.89
-5.78' LT

STA 549'NB'+73.28
-6.11' LT

STA 548'NB'+87.79
33.96' RT

STA 549'NB'+27.18
34.16' RT

PI: 550+85.38

STH 42

48+00

46+00

IH 43 NB R/L

DOUBLE LINES

MGS
GUARDRAIL

MGS
THRIE BEAM

50+00

560+00

IH 43 STH 42 SE RAMP

PT: 561+39.95

EP: 561+64.67

52+00

N

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021222-pd

PLOT DATE : 6/21/2022 11:17 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

END TYPE

PT: 361+24.67

STA 361'SB CD'+54.57
-28.16' LT

STA 361'SB CD'+93.09
-29.25' LT

360'SB CD'+00

362'SB CD'+00

SB CD

364'SB CD'+00

366'SB CD'+00

366'SW RAMP'+00

SW RAMP

IH 43 SB R/L

386'SB'+00

388'SB'+00

390'SB'+00

IH 43 SB

392'SB'+00

386'NB'+00

388'NB'+00

390'NB'+00

IH 43 NB R/L

IH 43 NB

392'NB'+00

STA 359'NB CD'+15.27
23.23' RT
POST #1

STA 359'NB CD'+40.27
22.11' RT
POST #5

STA 359'NB CD'+65.28
20.99' RT
POST #9

360'NB CD'+00

362'NB CD'+00

NB CD

364'NB CD'+00

366'NB CD'+00

366'SE RAMP'+00

SE RAMP

STA 365'NB CD'+57.26
36.82' RT

MGS
EAT

MGS
GUARDRAIL 3

MGS
TYPE 2 TERMINAL

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021226-pd

PLOT DATE : 6/21/2022 11:17 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

MGS GUARDRAIL

MGS EAT

STA 373'SW RAMP'+16.79 -26.12' LT POST #5

STA 373'SW RAMP'+41.80 -25.70' LT POST #1

STA 372'SW RAMP'+91.80 -25.54' LT POST #9

SW RAMP

368'SW RAMP'+00

370'SW RAMP'+00

372'SW RAMP'+00

374'SW RAMP'+00

SW RAMP

PT: 370+09.37

368'SB CD'+00

396'SB'+00

IH 43 SB R/L

370'SB CD'+00

IH 43 SB

396'NB+00

PT: 396+06.54

IH 43 NB

IH 43 NB R/L

386'SW LOOP

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021227-pd

PLOT DATE : 6/21/2022 11:18 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

PC: 380+58.28

376'SW RAMP'+00

378'SW RAMP'+00

380'SW RAMP'+00

382'SW RAMP'+00

SW RAMP

MGS
BEAMGUARD

SW LOOP

388'SW LOOP'+00

390'SW LOOP'+00

TYPE 2 BARRIER END

MGS
EAT

STA 387'SW LOOP'+19.44
-9.74' LT
POST #9

STA 386'SW LOOP'+95.28
-10.05' LT
POST #5

STA 386'SW LOOP'+71.20
-11.47' LT
POST #1

386'SW LOOP'+00

392'SW LOOP'+00

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021228-pd

PLOT DATE : 6/21/2022 11:18 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

224'NW RAMP'+00

226'NW RAMP'+00

NW RAMP

228'NW RAMP'+00

230'NW RAMP'+00

MGS GUARDRAIL

MGS EAT

240'NW LOOP'+00

NW LOOP

242'NW LOOP'+00

TYPE 2 BARRIER END

STA 238'NW LOOP'+97.53
-9.07' LT
POST #9

STA 238'NW LOOP'+73.26
-9.04' LT
POST #5

STA 238'NW LOOP'+49.02
-10.02' LT
POST #1

238'NW LOOP'+00

PCC: 236+33.67

NW LOOP'+00

STA 241'NW LOOP'+44.26
-7.63' LT

STA 241'NW LOOP'+56.43
-7.34' LT

STA 241'NW LOOP'+68.58
-6.70' LT

STA 241'NW LOOP'+80.74
-4.40' LT

STA 241'NW LOOP'+92.41
-8.51' LT

244'NW LOOP'+00

PCC: 244+31.02

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021223-pd

PLOT DATE : 6/21/2022 11:18 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021224-pd

PLOT DATE : 6/21/2022 11:18 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

2

2

N

204'WB'+00

206'WB'+00

208'WB'+00

STH 23 WB

210'WB'+00

204'EB'+00

206'EB'+00

208'EB'+00

STH 23 EB

210'EB'+00

STA 206'EB'+55.54
45.68' RT
POST #9

STA 206'EB'+30.54
46.88' RT
POST #5

STA 206'EB'+05.54
48.08' RT
POST #1

STA 208'EB'+10.54
45.77' RT

MGS
EAT

MGS
GUARDRAIL 3

MGS
MGS TYPE 2 TERMINAL

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021260-pd

PLOT DATE : 6/21/2022 11:19 AM

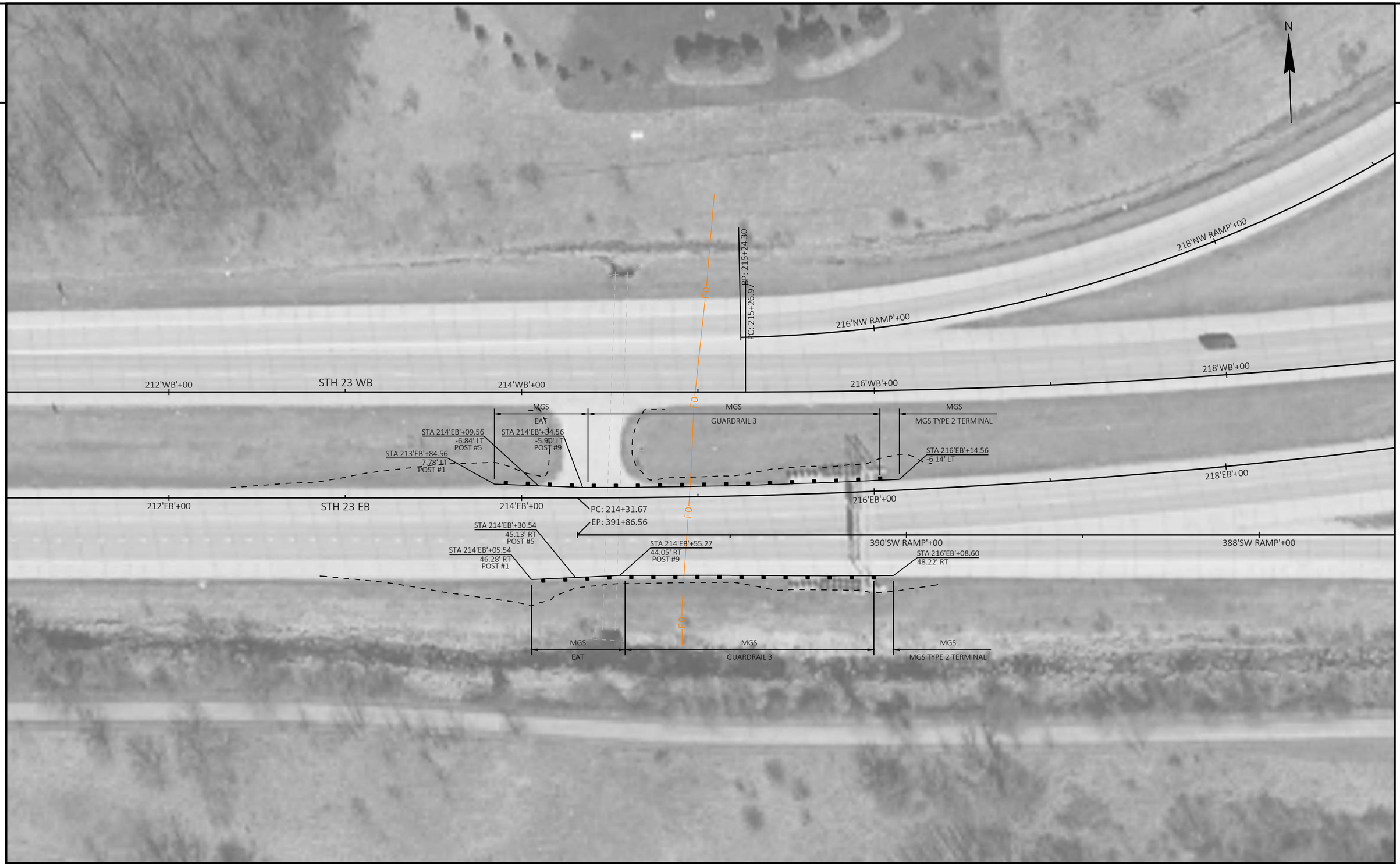
PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

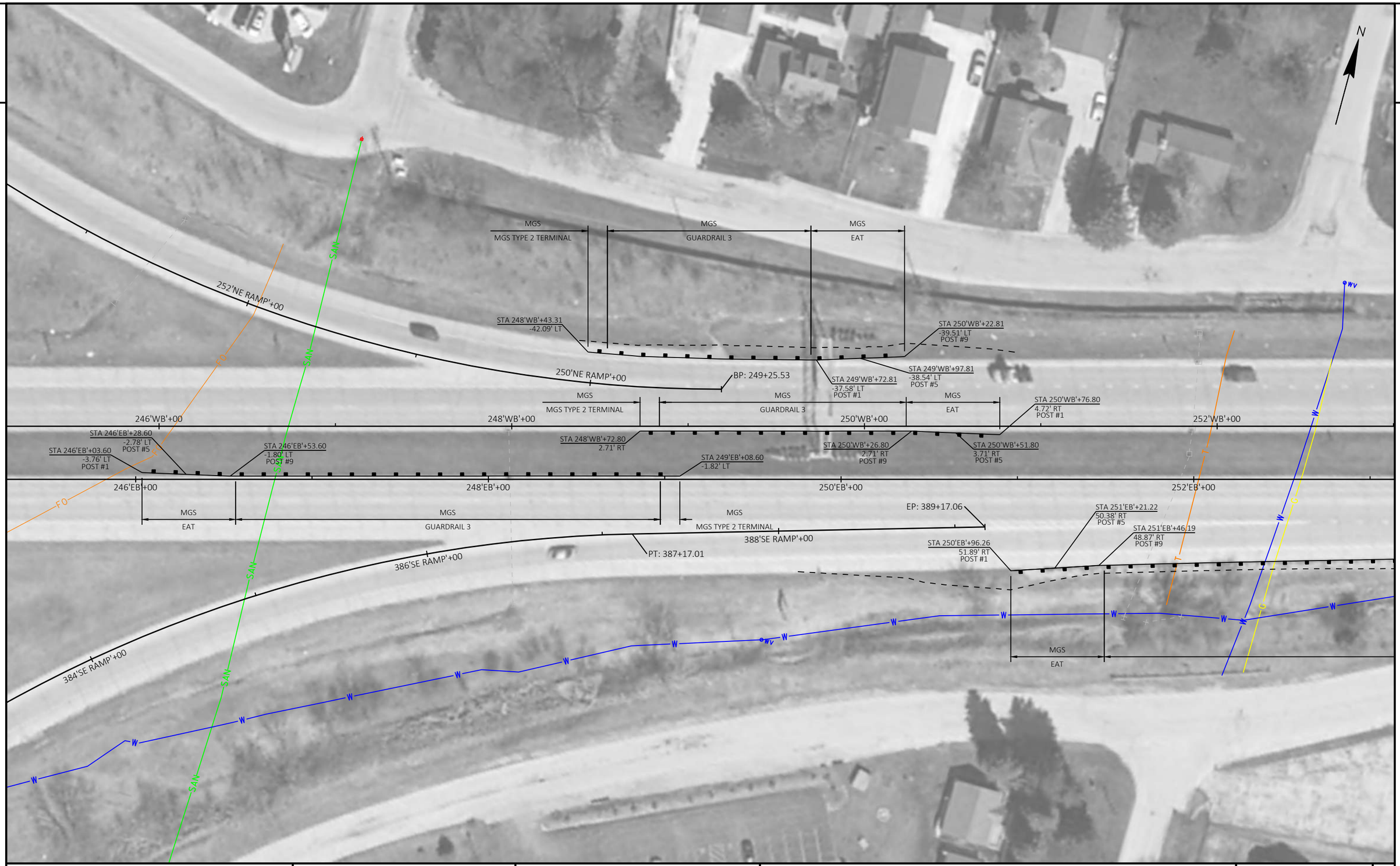


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021261-pd

PLOT DATE : 6/21/2022 11:19 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021262-pd

PLOT DATE : 6/21/2022 11:19 AM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

2

2

N

MGS
MGS TYPE 2 TERMINAL

MGS
GUARDRAIL 3

MGS
EAT

STA 256'WB'+40.81
-39.40' LT

EP: 256+41.69

254'WB'+00

256'WB'+00

EP: 256+54.94

254'EB'+00

256'EB'+00

OH

OH

FO

E

E

W

MGS
GUARDRAIL 3

MGS
MGS TYPE 2 TERMINAL

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - BEAM GUARD	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021263-pd

PLOT DATE : 6/21/2022 11:19 AM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021270-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021271-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021272-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021273-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021274-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

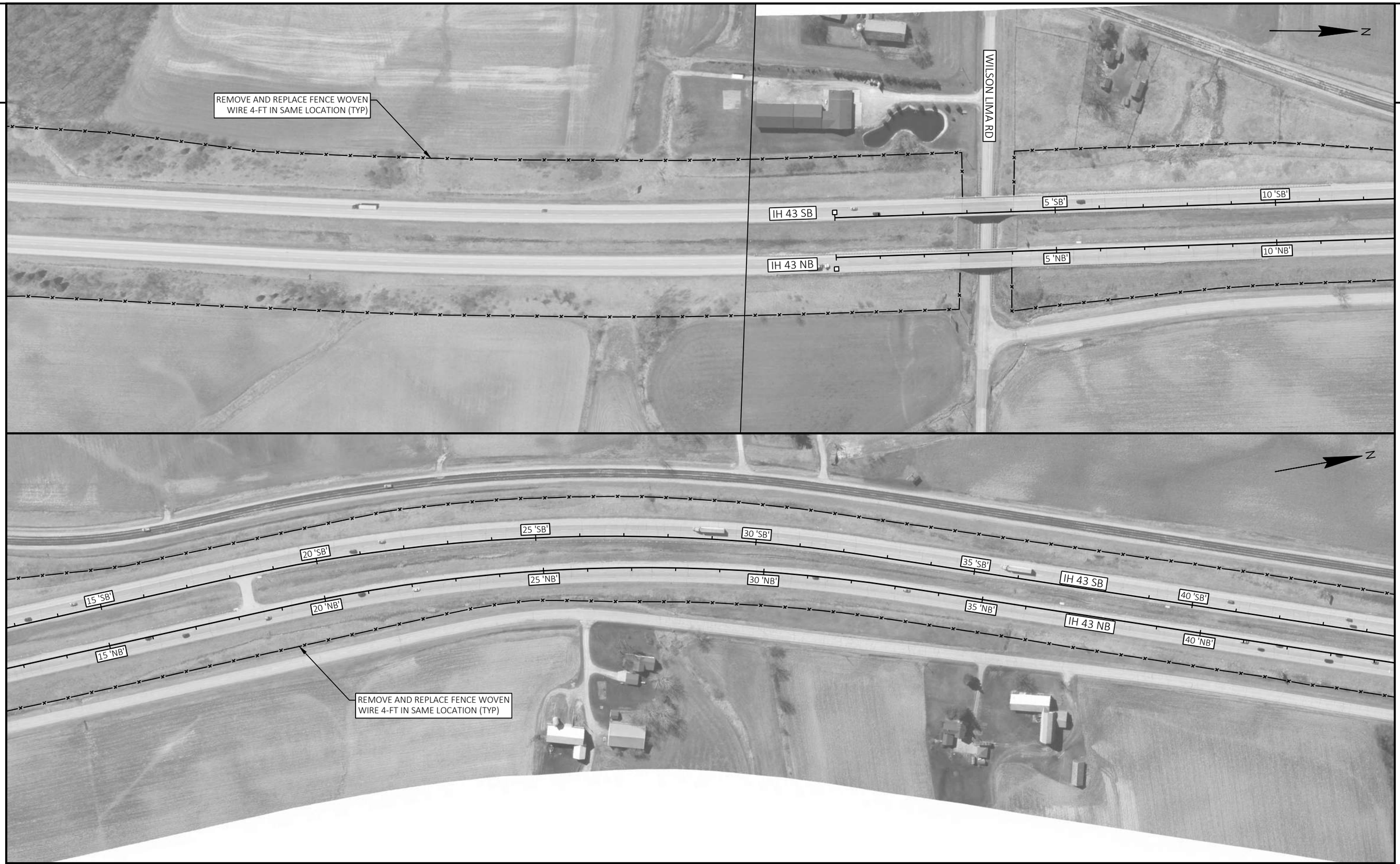


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021275-pd

PLOT DATE : 6/21/2022 1:16 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



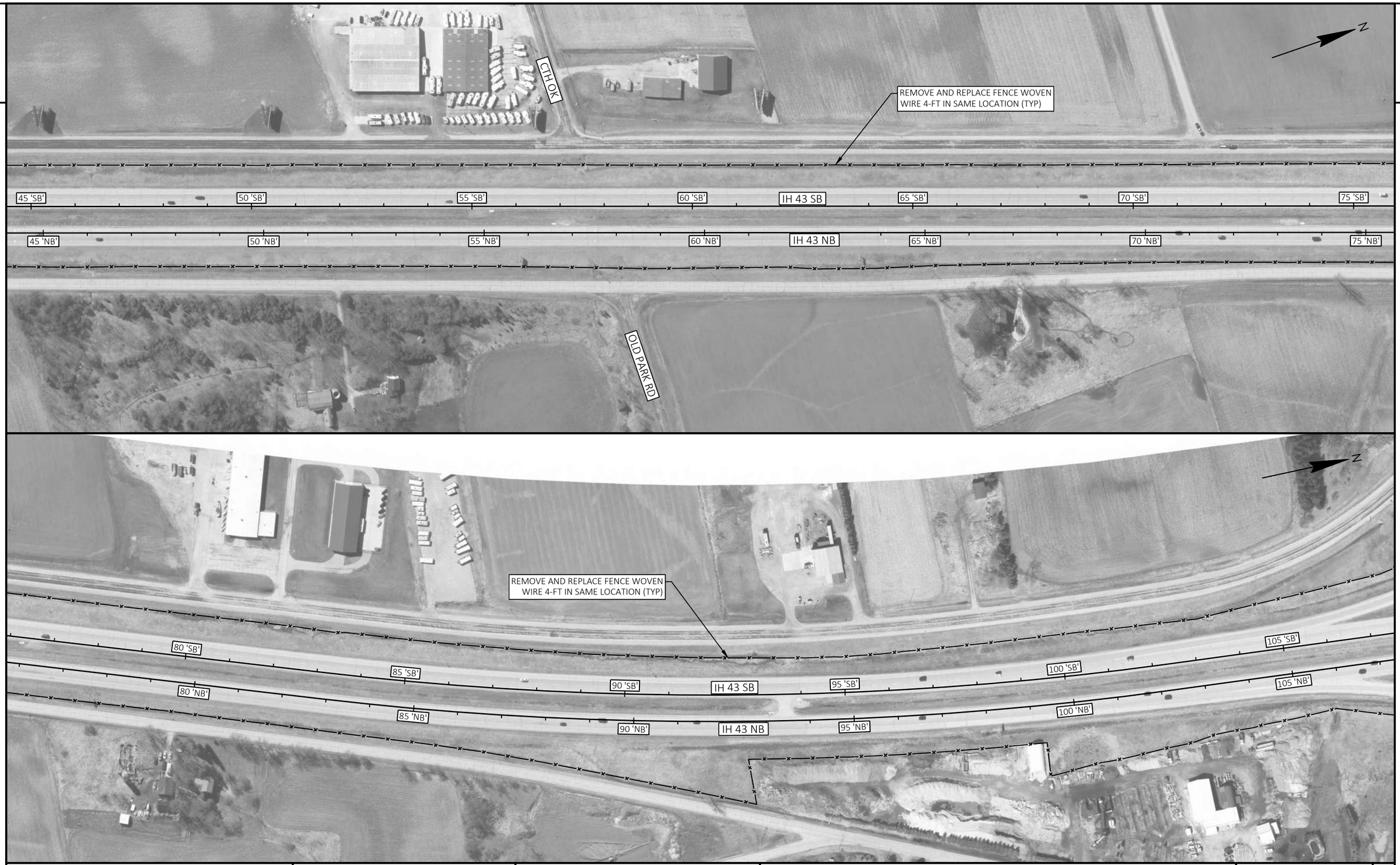
2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021276-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

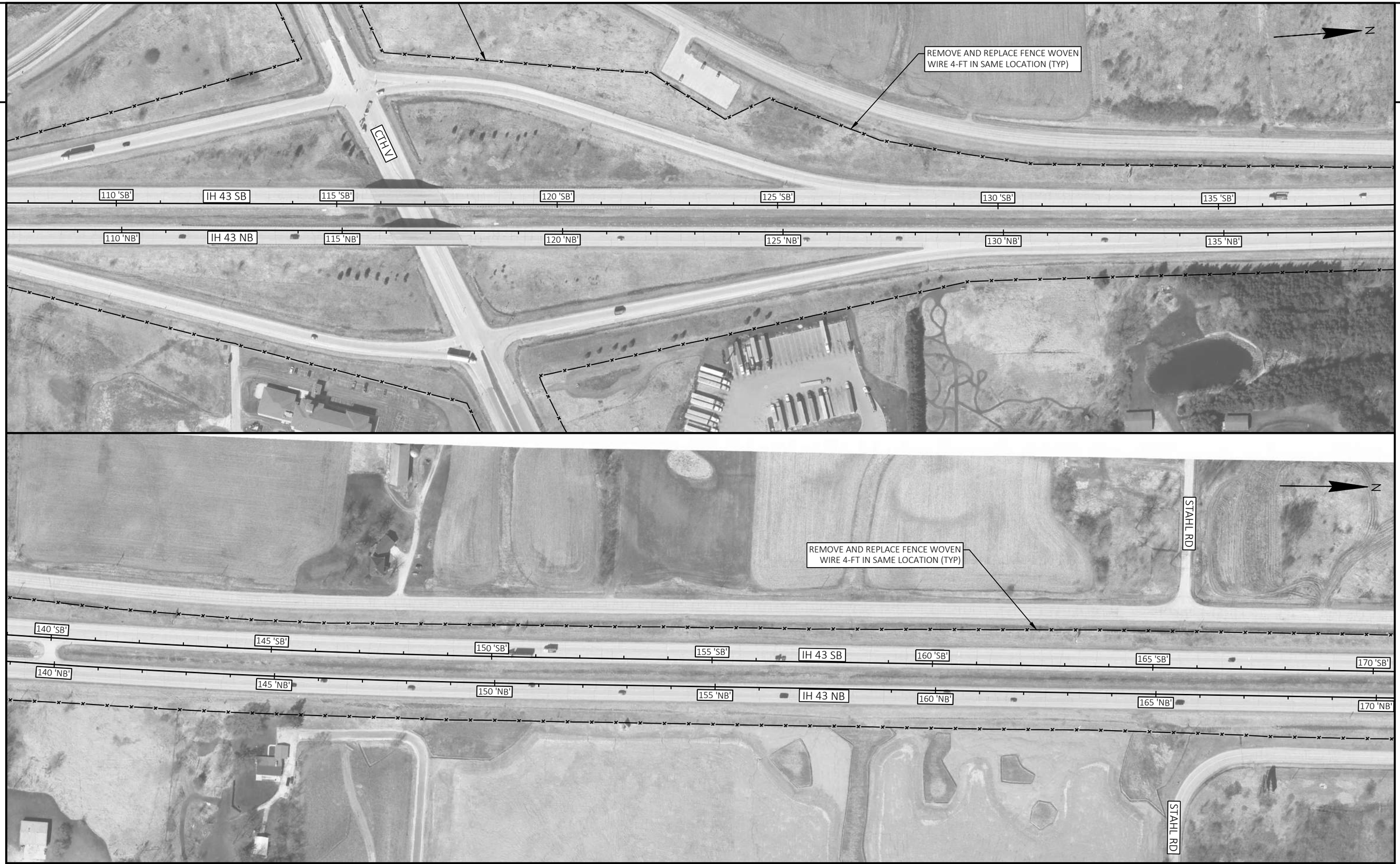


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021277-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

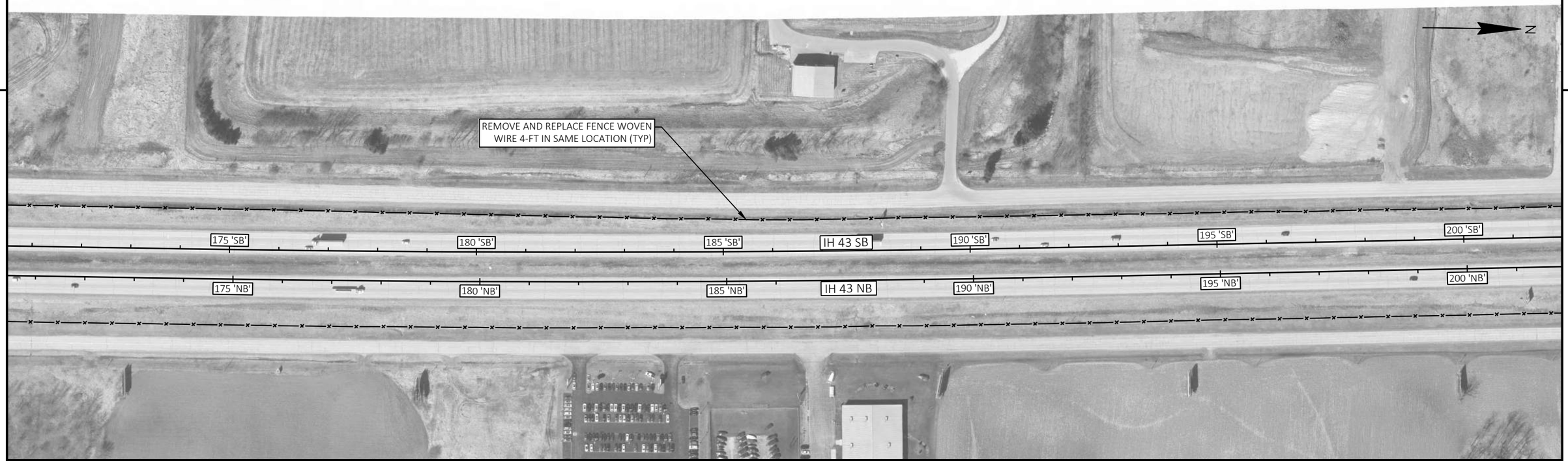
PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

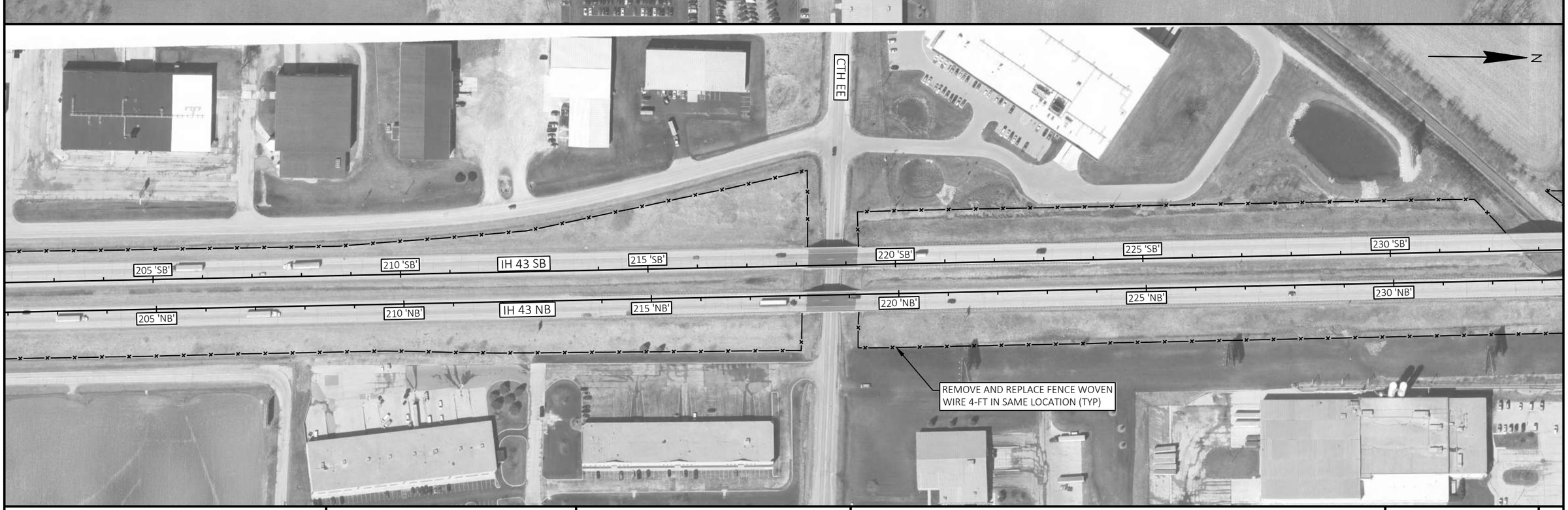
FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021278-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2





PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021279-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



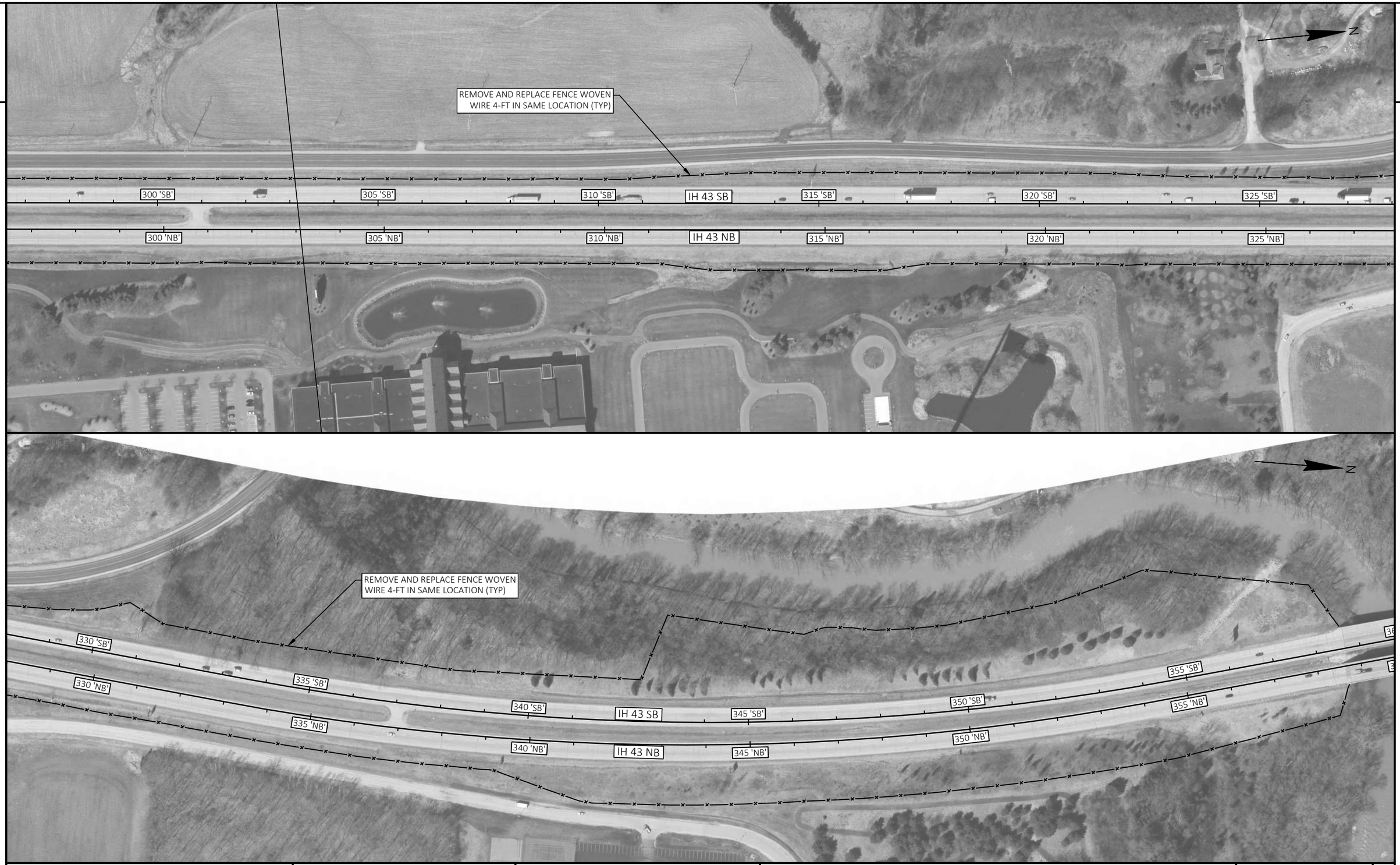
2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021280-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



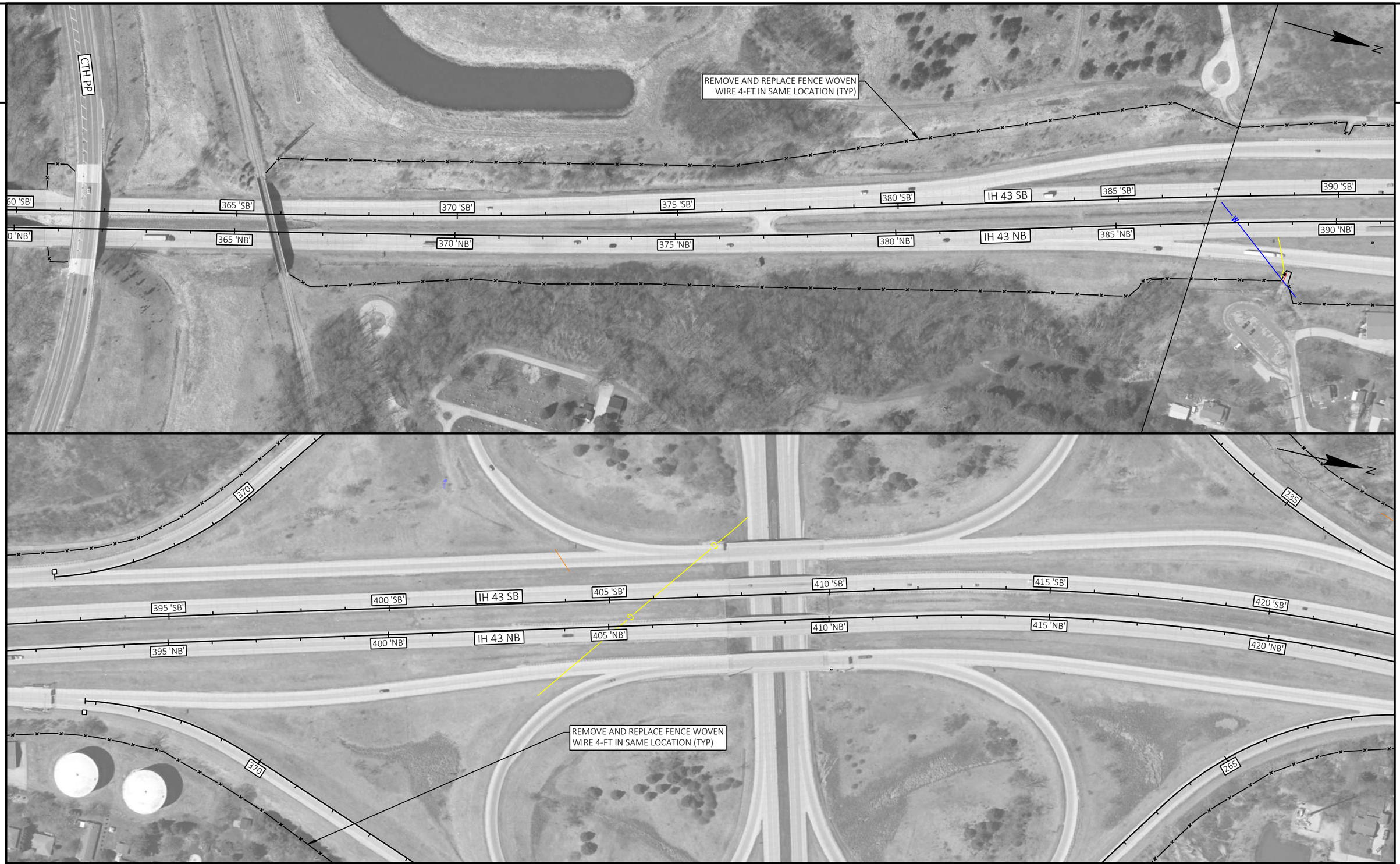
2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021281-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021282-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021283-pd

PLOT DATE : 6/21/2022 1:17 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



2

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021284-pd

PLOT DATE : 6/21/2022 1:18 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

REMOVE AND REPLACE FENCE WOVEN WIRE 4-FT IN SAME LOCATION (TYP)

N

STH 42

550 'SB'

555 'SB'

IH 43 NB

550 'NB'

555 'NB'

IH 43 SB

N

REMOVE AND REPLACE FENCE WOVEN WIRE 4-FT IN SAME LOCATION (TYP)

STH 32

IH 43 SB

IH 43 NB

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021285-pd

PLOT DATE : 6/21/2022 1:18 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:200 FT

2

REMOVE AND REPLACE FENCE WOVEN WIRE 4-FT IN SAME LOCATION (TYP)

CTH AA

IH 43 SB

IH 43 NB

N

REMOVE AND REPLACE FENCE WOVEN WIRE 4-FT IN SAME LOCATION (TYP)

120 SB

120 NB

CTH V

115 SB

115 NB

IH 43 SB

IH 43 NB

N

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021286-pd

PLOT DATE : 6/21/2022 1:18 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

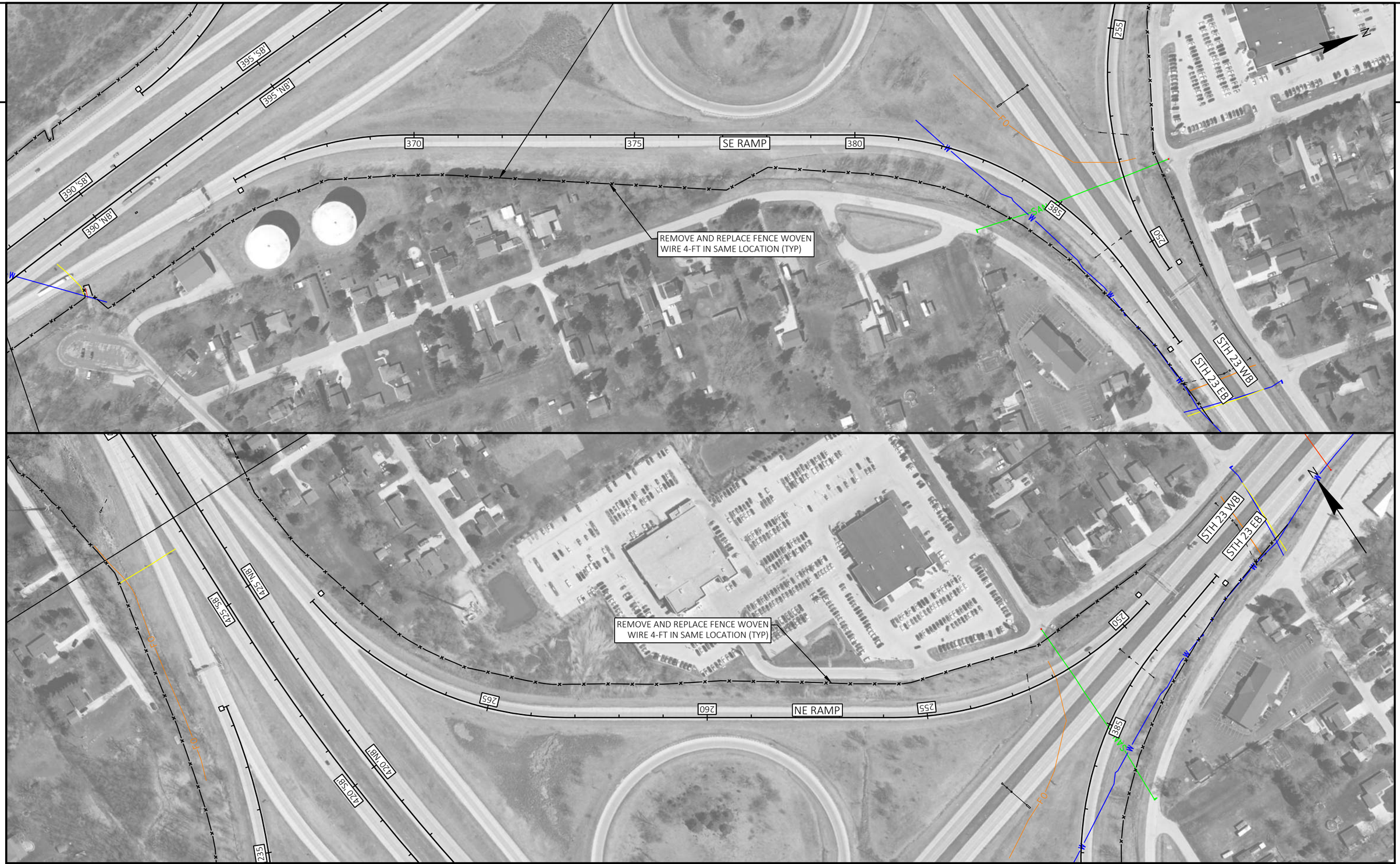
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

2

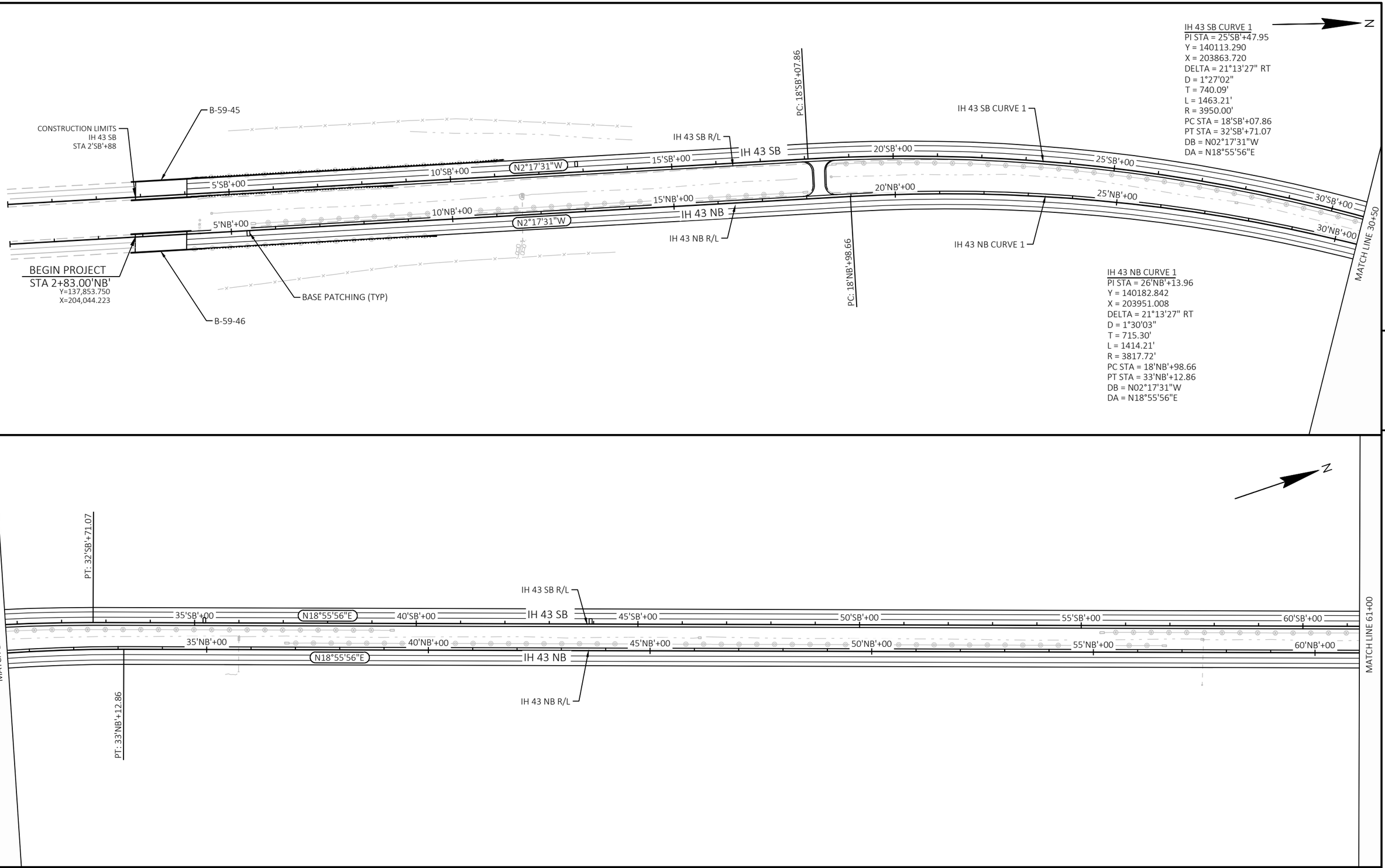
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN DETAILS - FENCING	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\021204-PD.DWG
LAYOUT NAME - 021288-pd

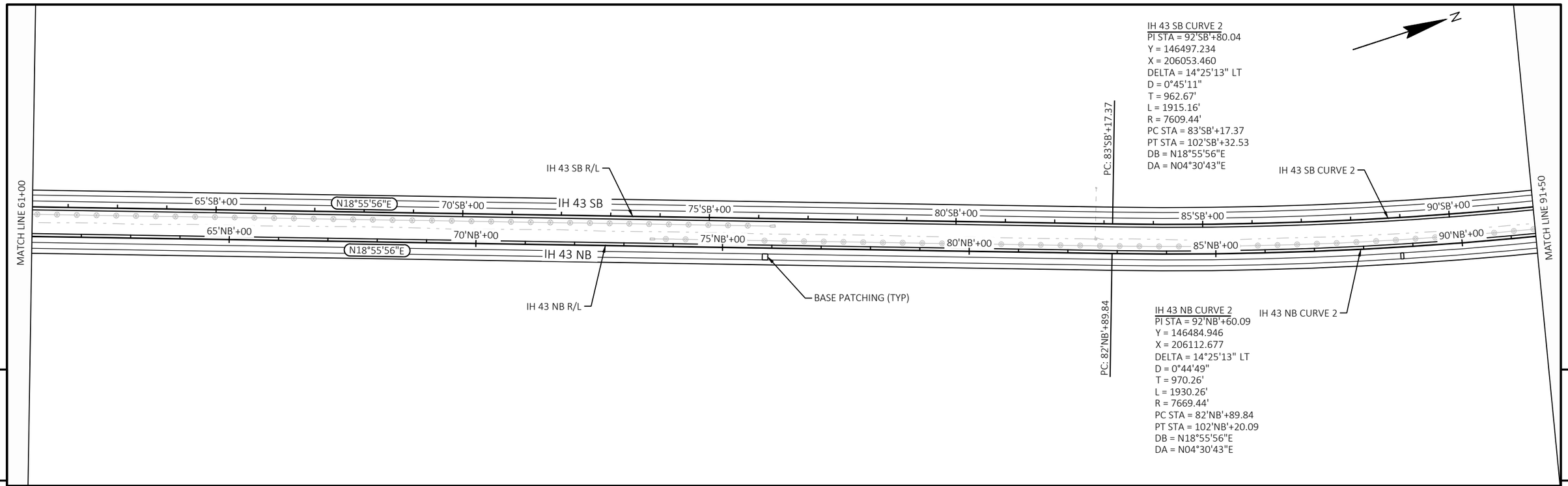
PLOT DATE : 6/21/2022 1:18 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050201-pn

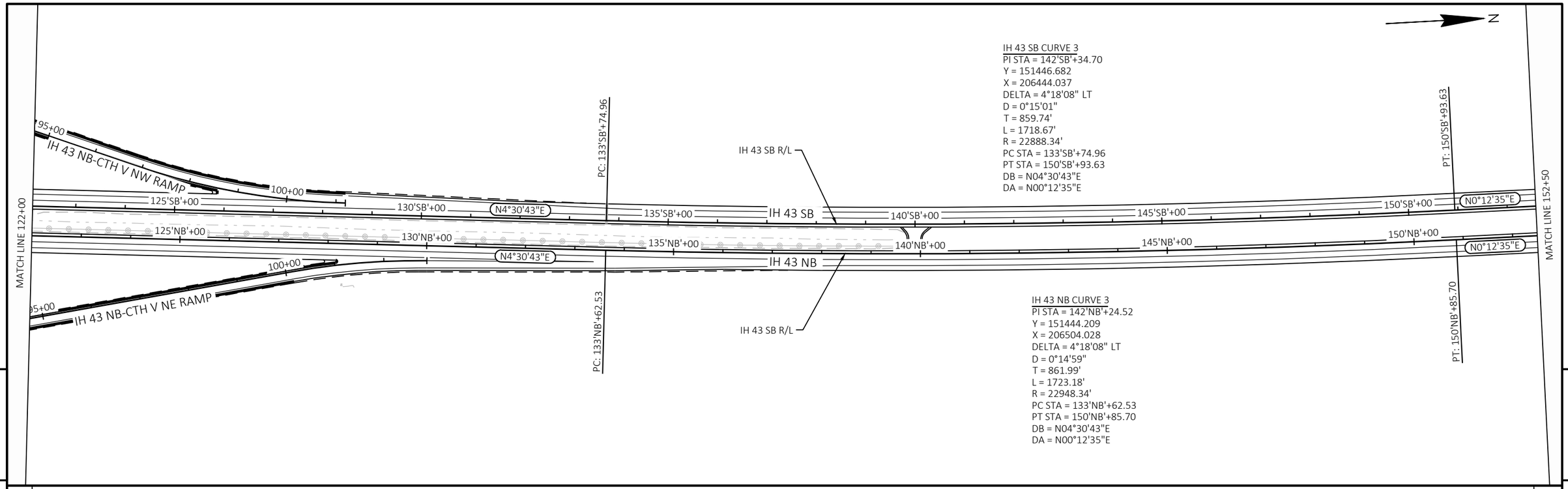
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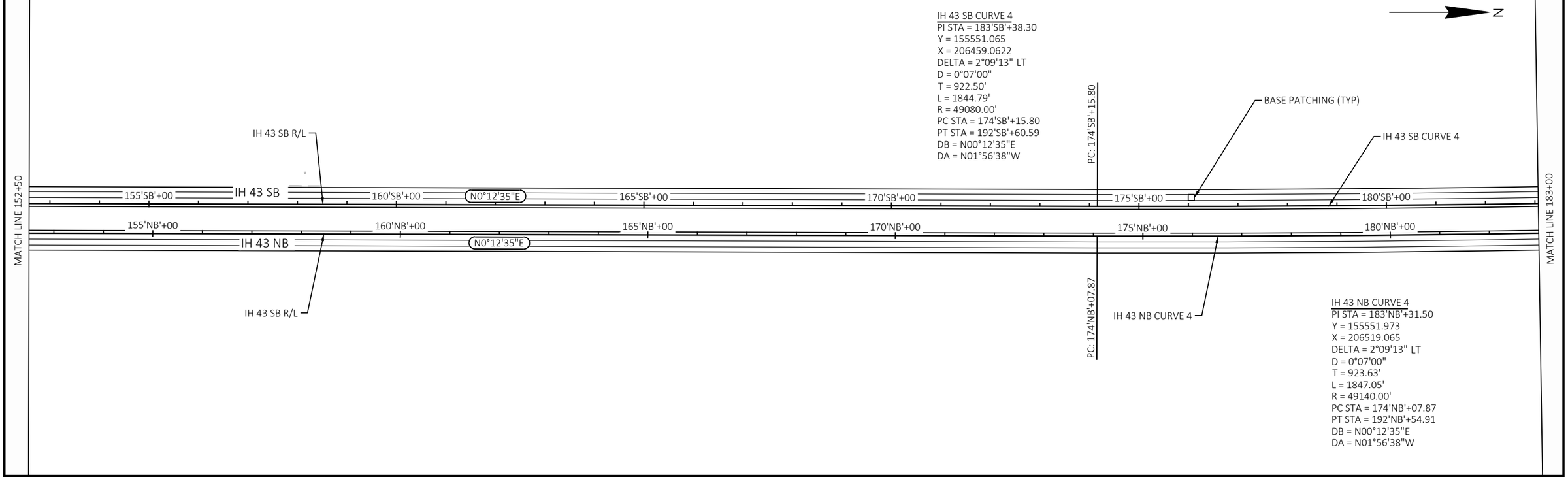


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

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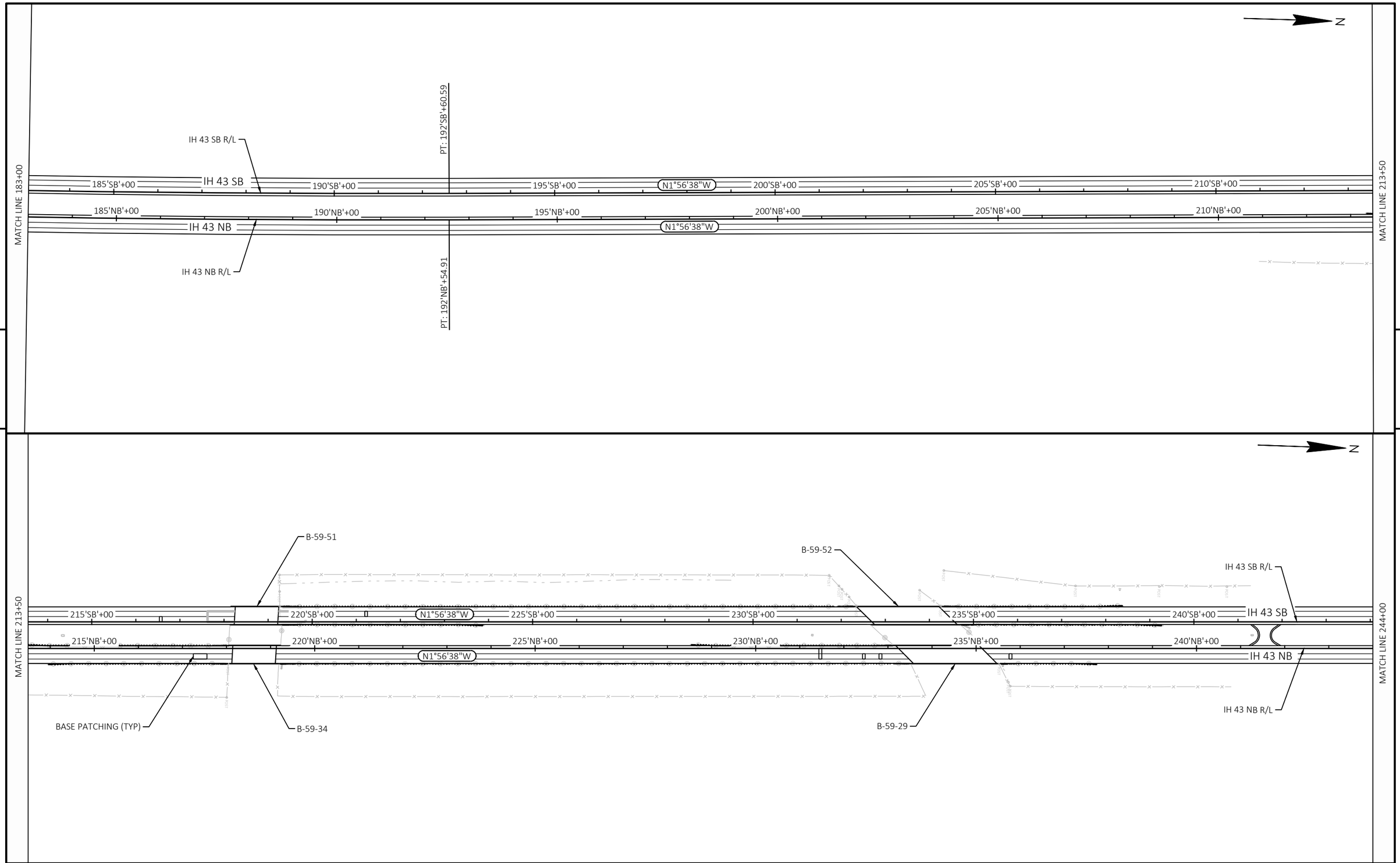


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

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LAYOUT NAME - 050203-pn

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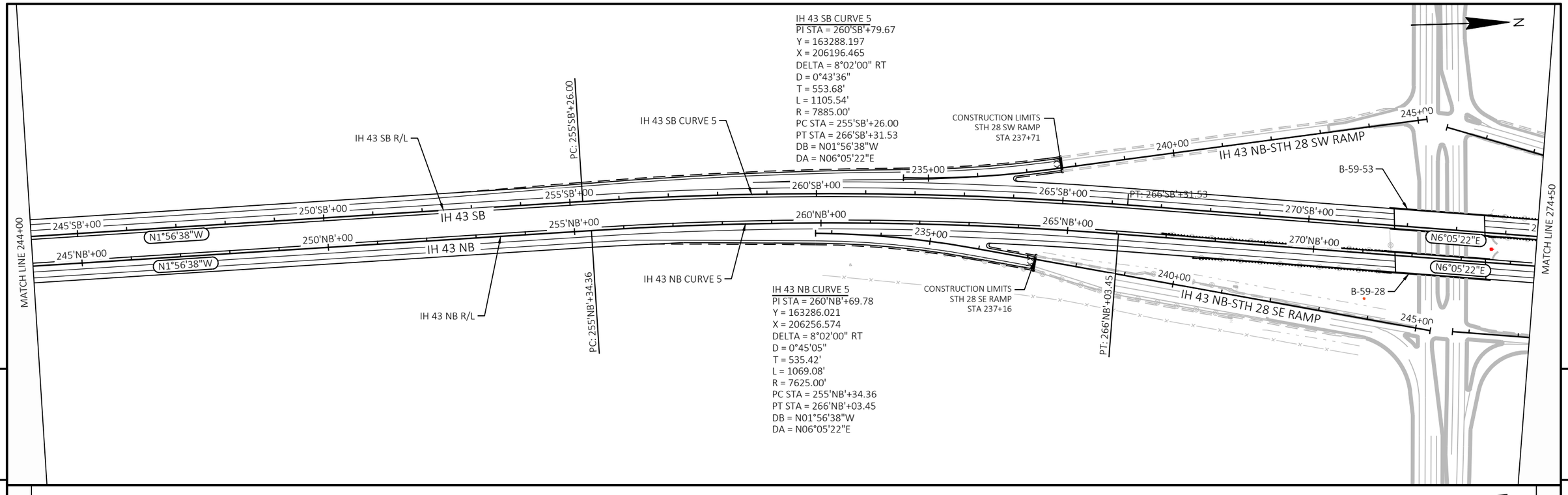
WISDOT/CADDS SHEET 44



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\050201-PN.DWG
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PLOT DATE : 6/14/2022 2:50 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : PLOT SCALE : 1 IN:200 FT

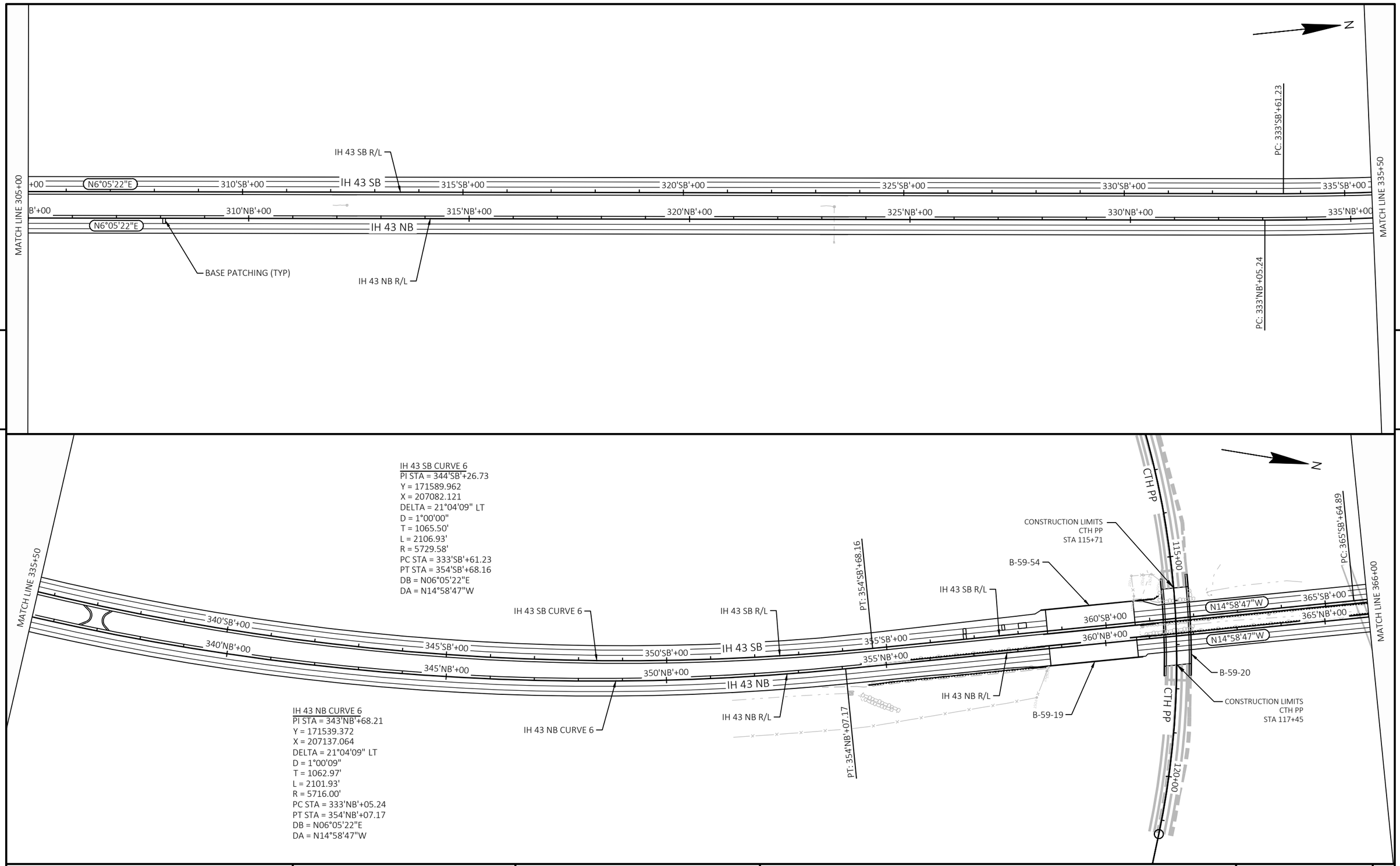


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

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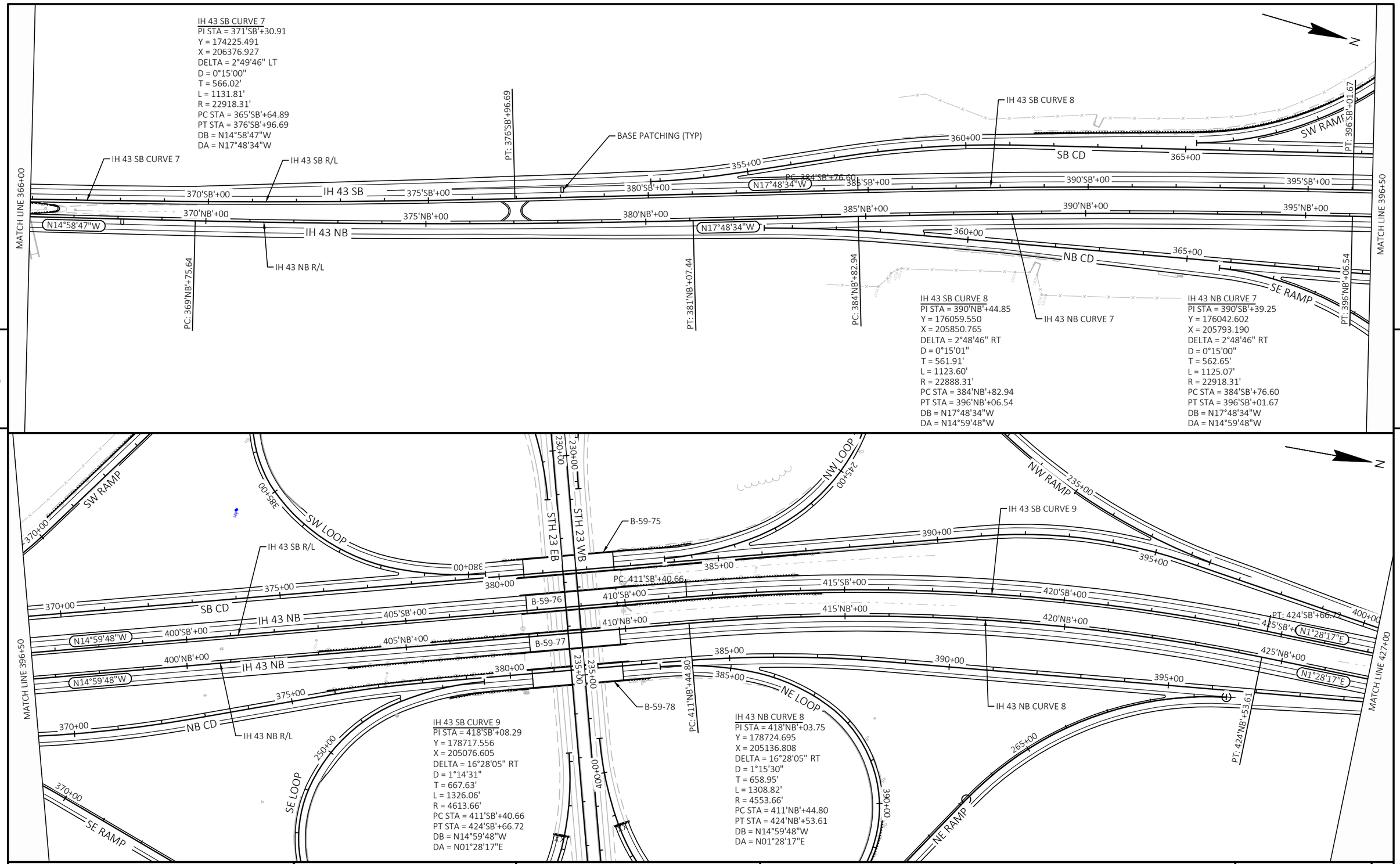
WISDOT/CADDS SHEET 44



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

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LAYOUT NAME - 050206-pn

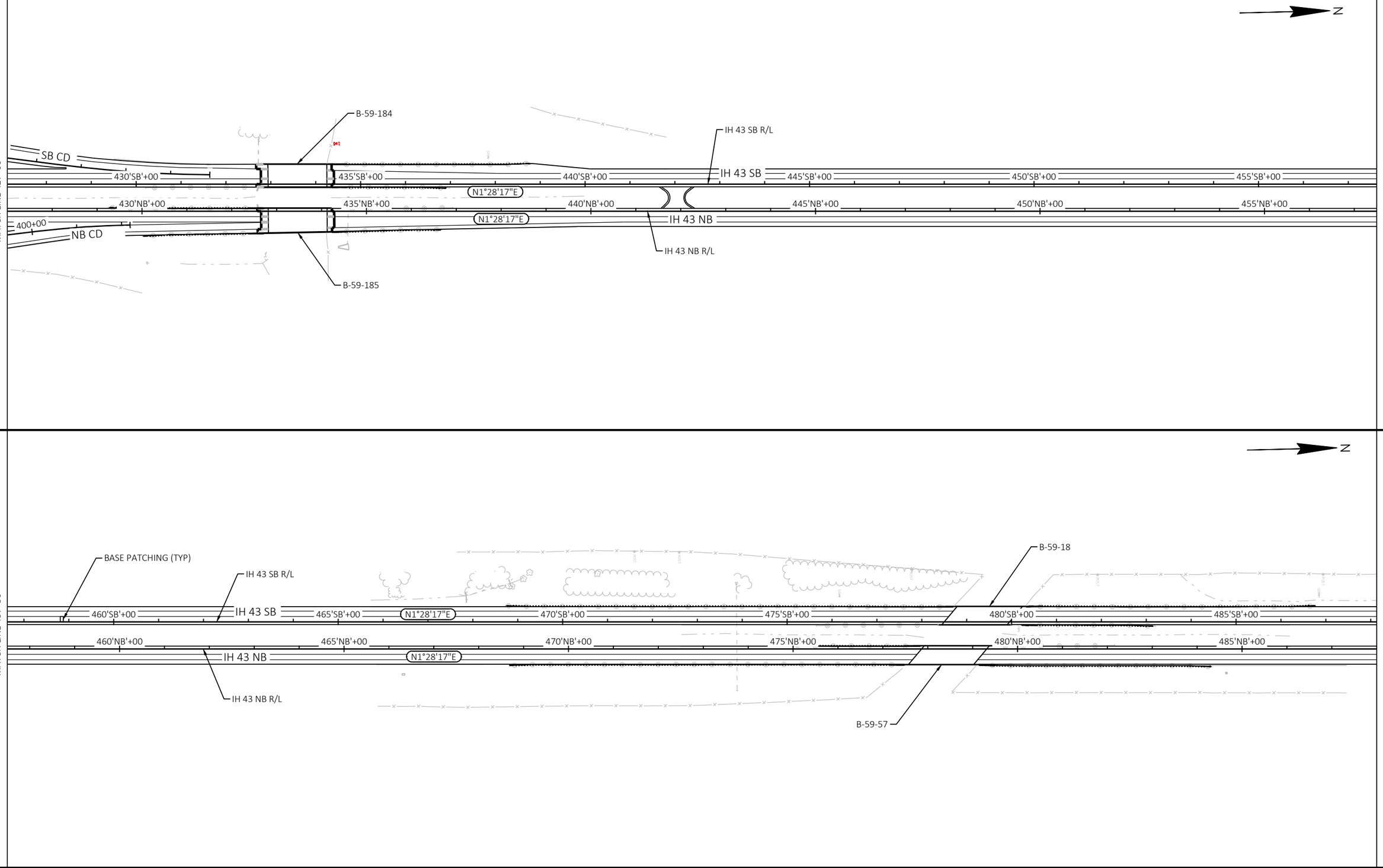
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\050201-PN.DWG
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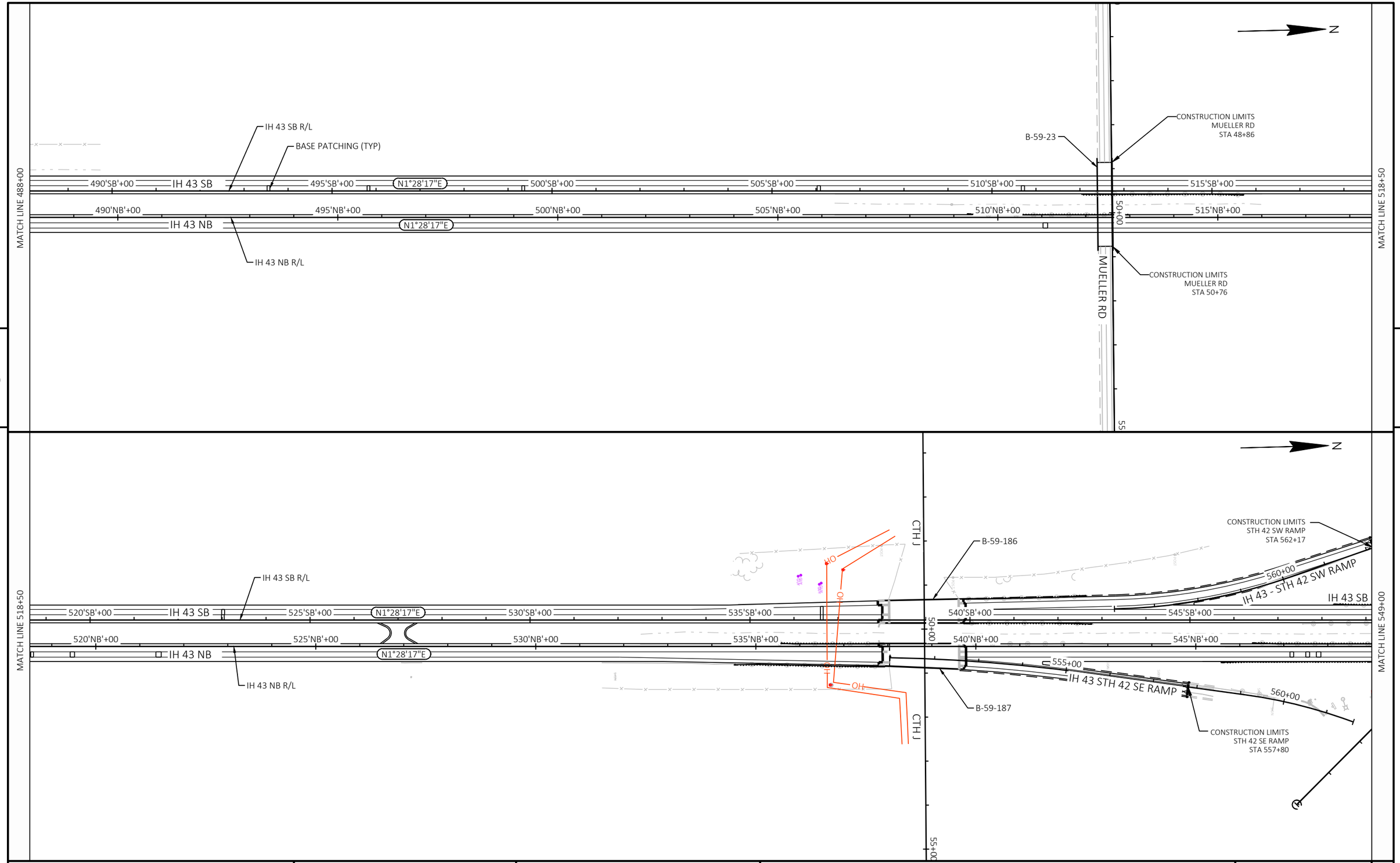
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET E

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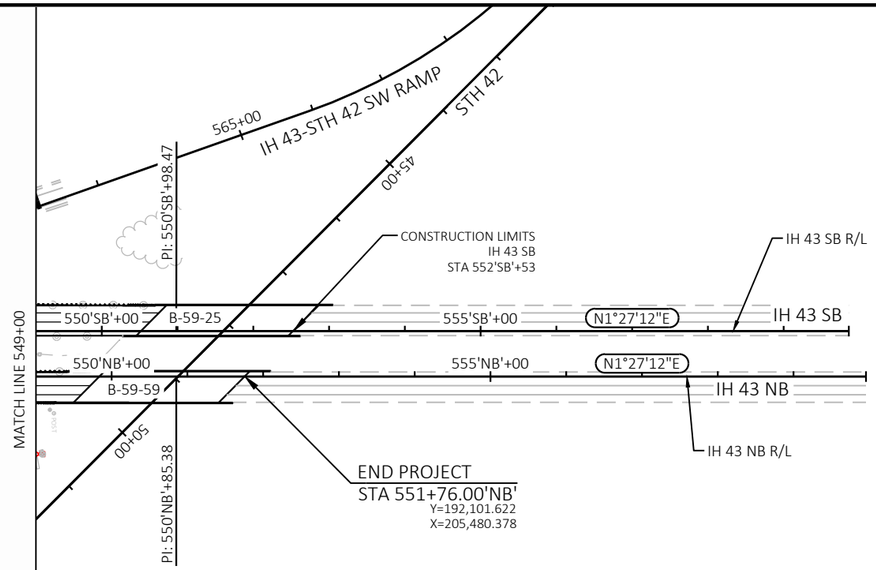
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\050201-PN.DWG
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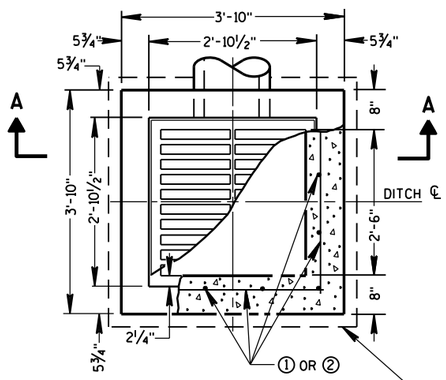


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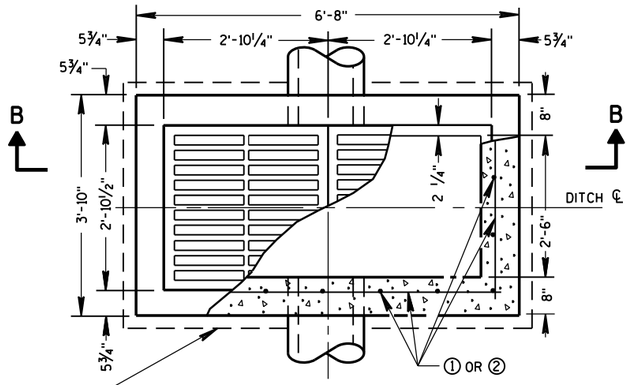
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET	E

SDD 8C8 Inlets Median 1 and 2 Grate

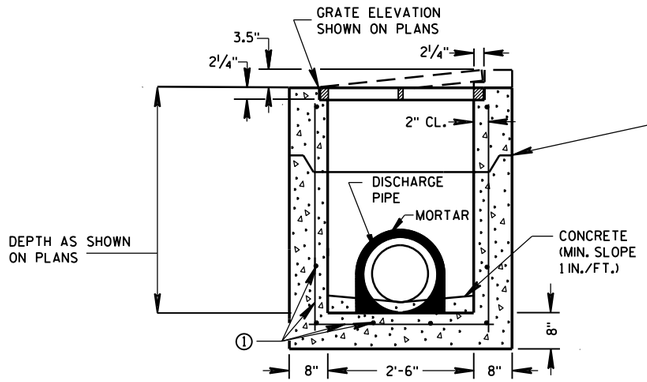


PLAN VIEW

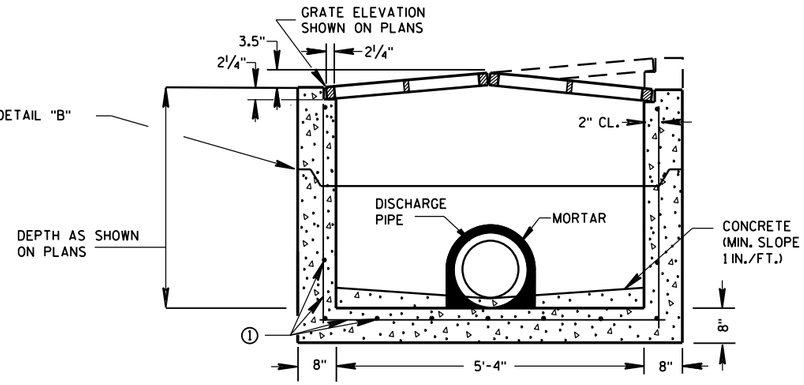


PLAN VIEW

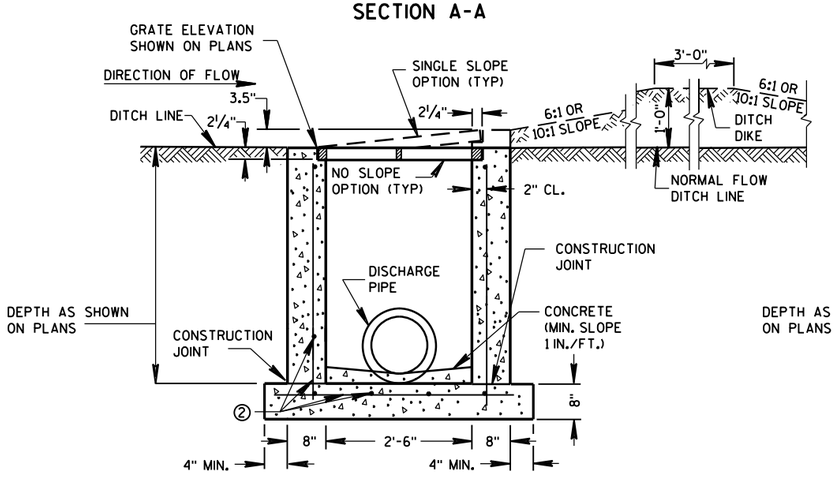
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



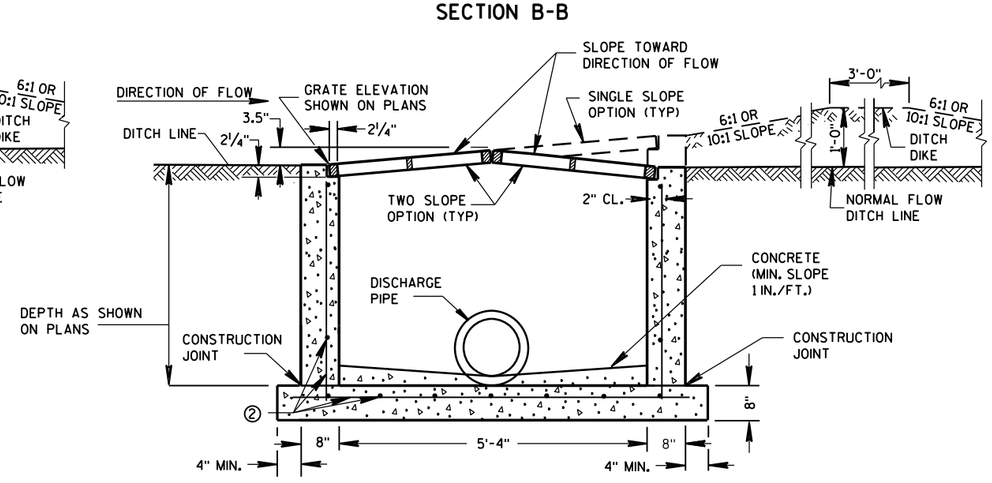
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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

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

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

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

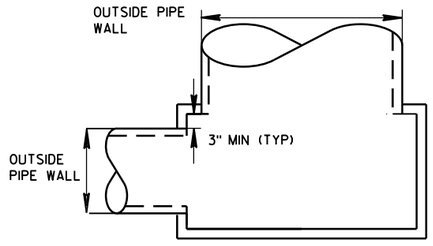
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

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

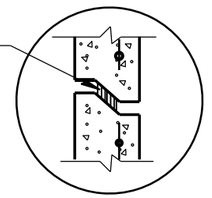
PIPE MATRIX

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



DETAIL "A"

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



DETAIL "B"

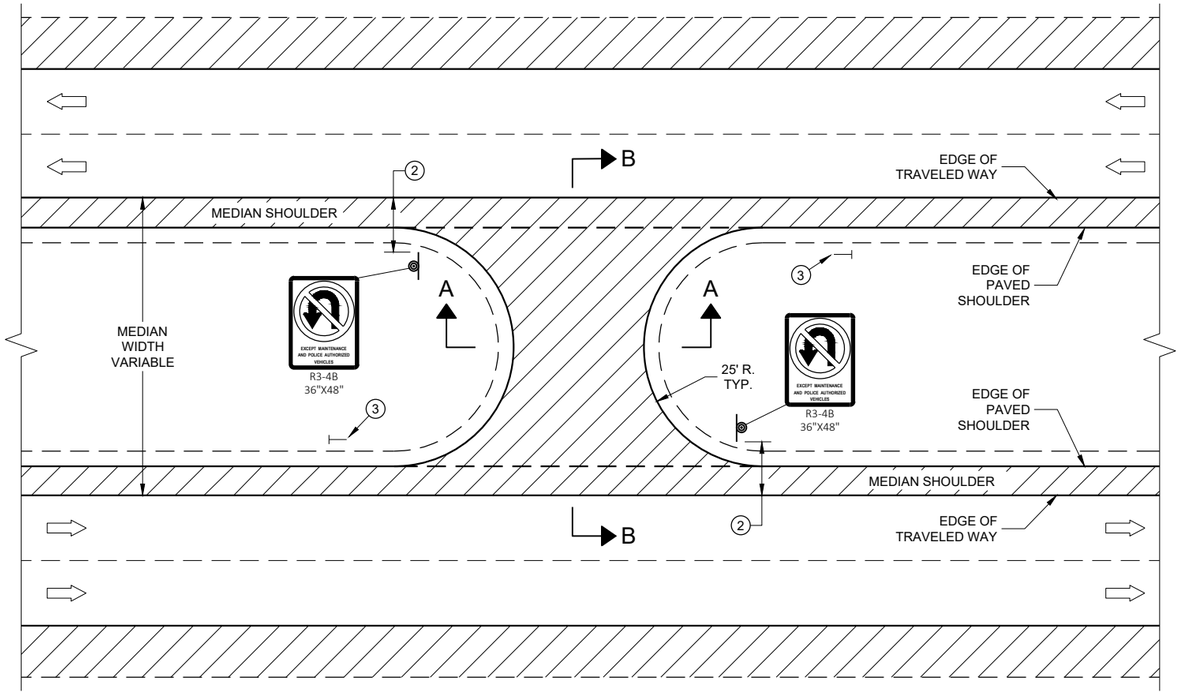
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

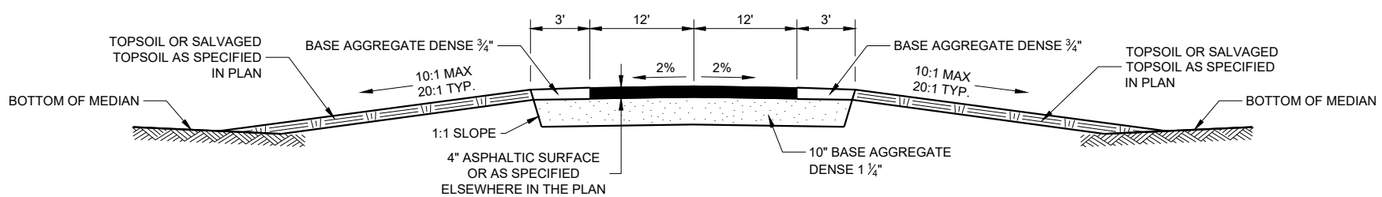
APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

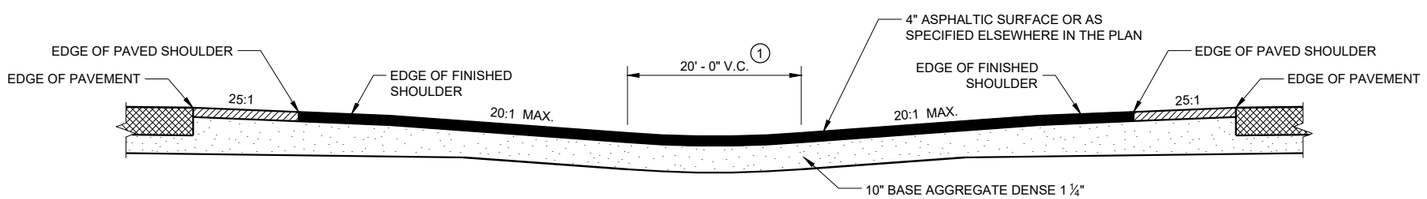
SDD 11A01 Maintenance Crossovers for Freeways



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

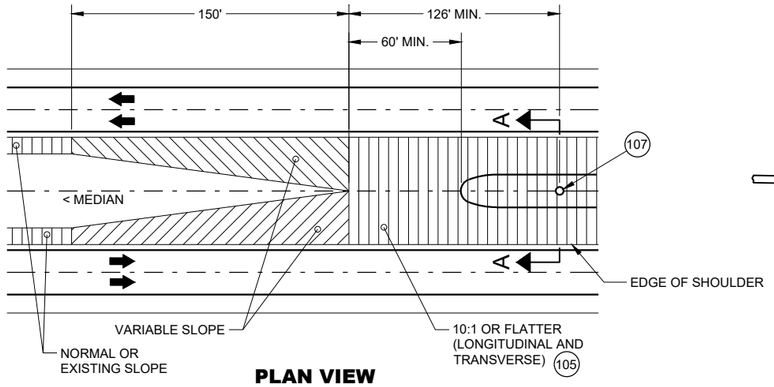
MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

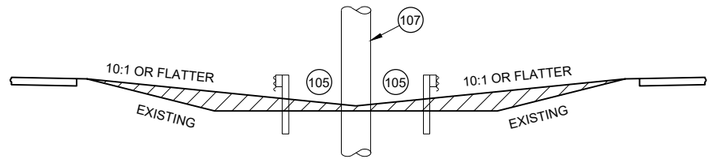
APPROVED
November 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
SDD 11A01 - 06

SDD 14B26-a Steel Thrie Beam Bullnose Terminal



PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

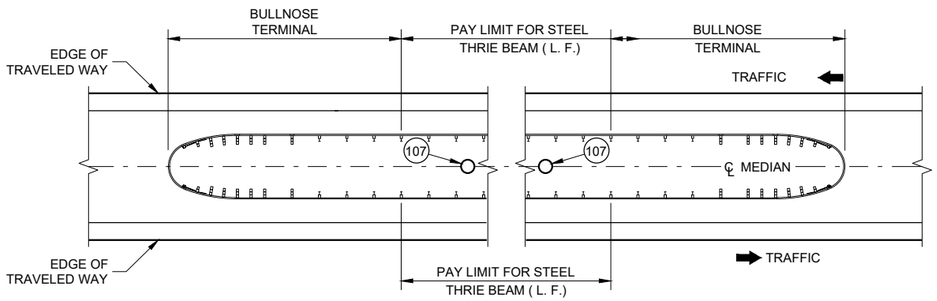
GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

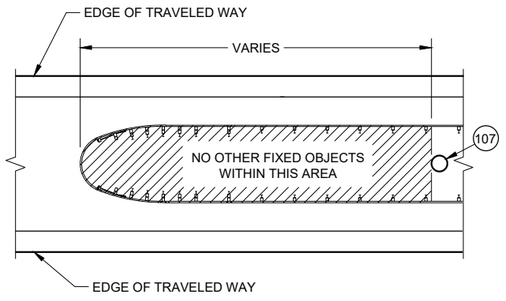
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

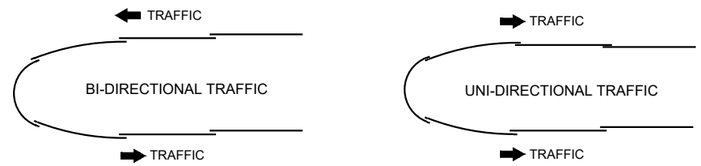
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



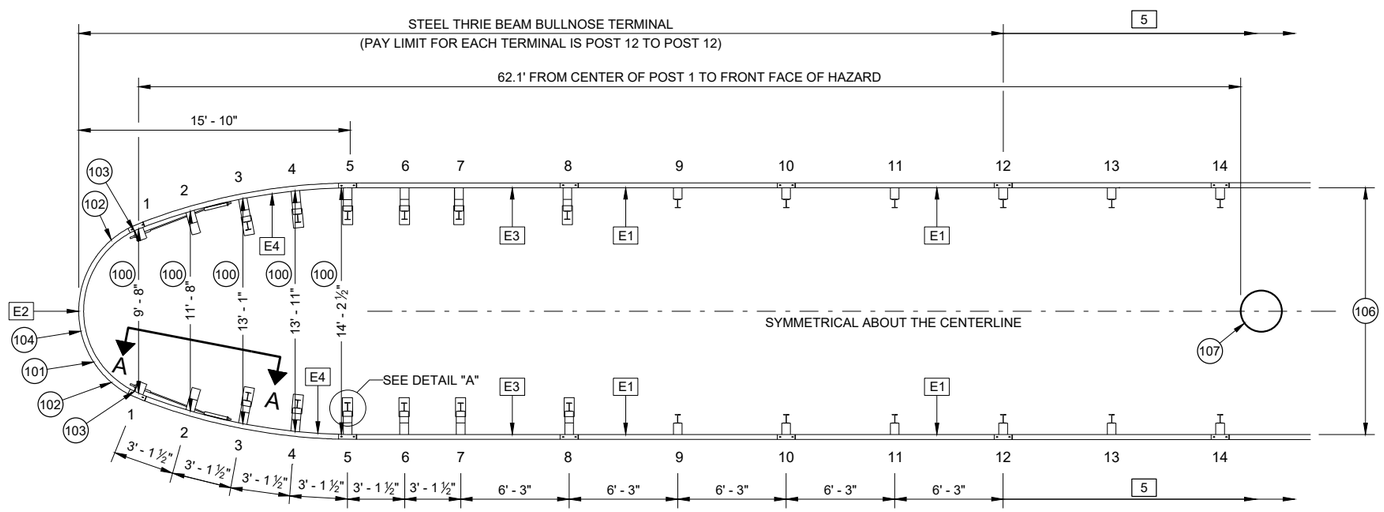
MEDIAN HAZARD PROTECTION PAY LIMITS



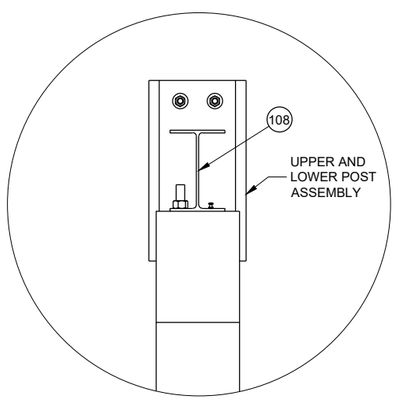
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

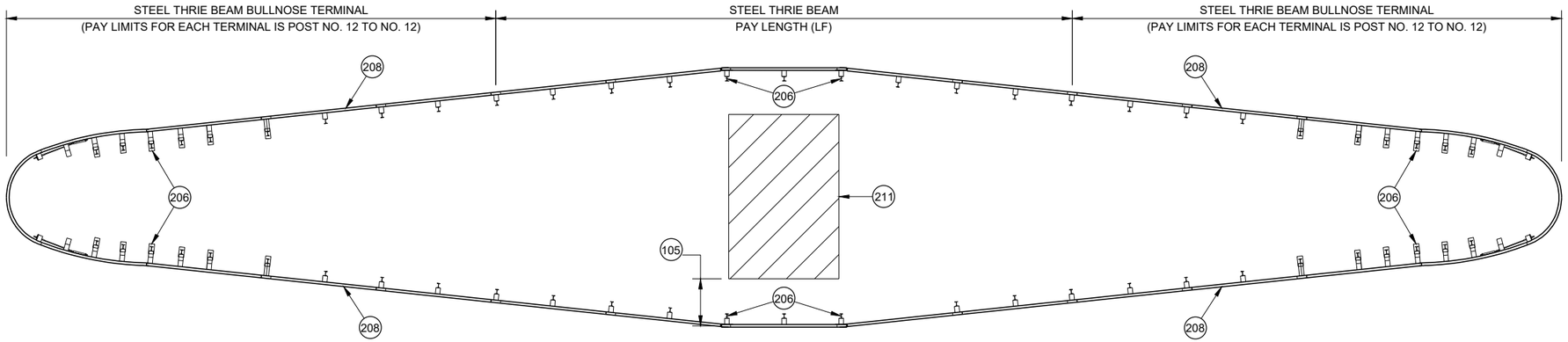
6

SDD 14B26 - 04a

6

SDD 14B26 - 04a

SDD 14B26-b Variable Width Steel Thrie Beam Bullnose Terminal



VARIABLE WIDTH BULLNOSE

GENERAL NOTES

200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.

201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.

202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.

203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.

204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.

205 CONCRETE BARRIER OR BRIDGE RAIL.

206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.

207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.

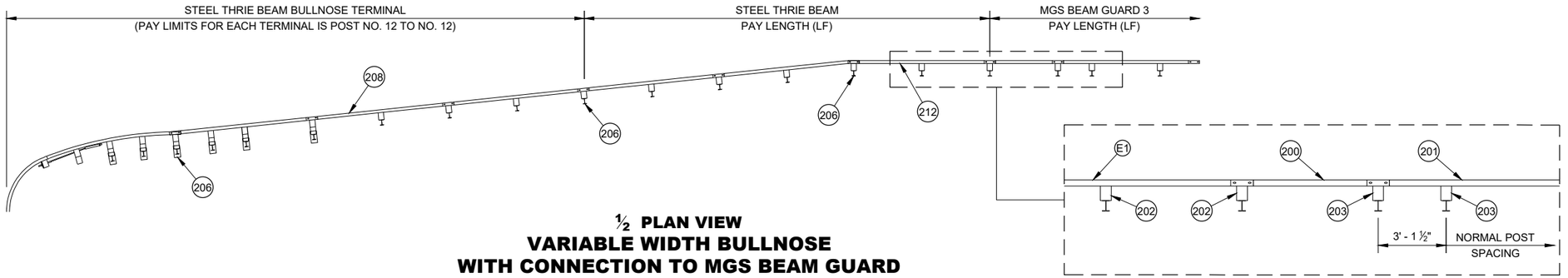
208 SEE PLAN FOR FLARE RATE.

209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.

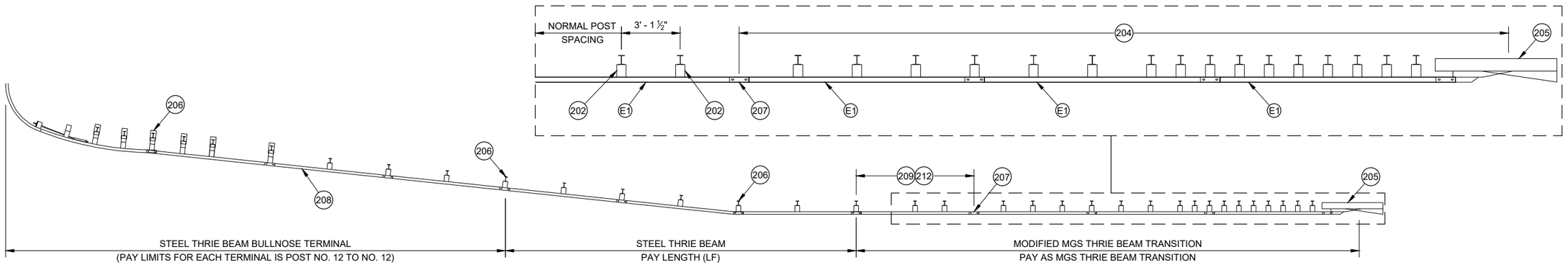
210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

211 WIDER HAZARD TO BE SHIELDED.

212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.



½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO MGS BEAM GUARD

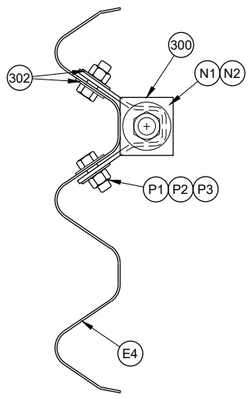


½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

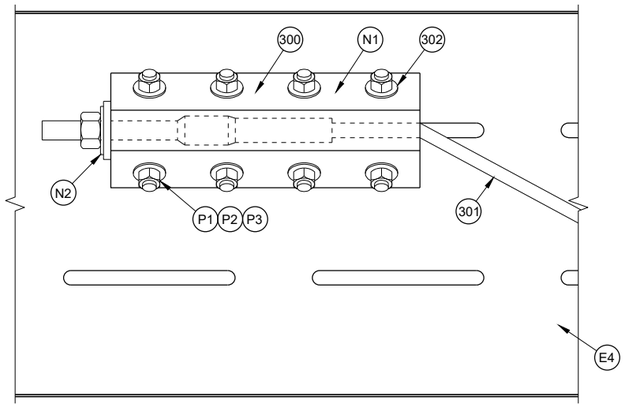
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26-c Steel Thrie Beam Bullnose Terminal

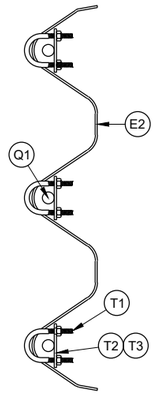


PROFILE VIEW

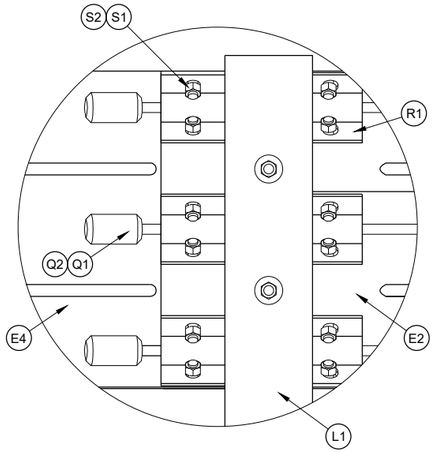
CABLE ANCHOR ASSEMBLY CONNECTION



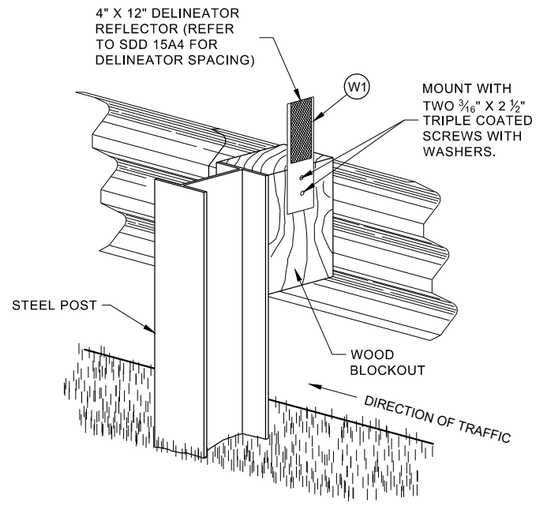
CABLE ANCHOR ASSEMBLY



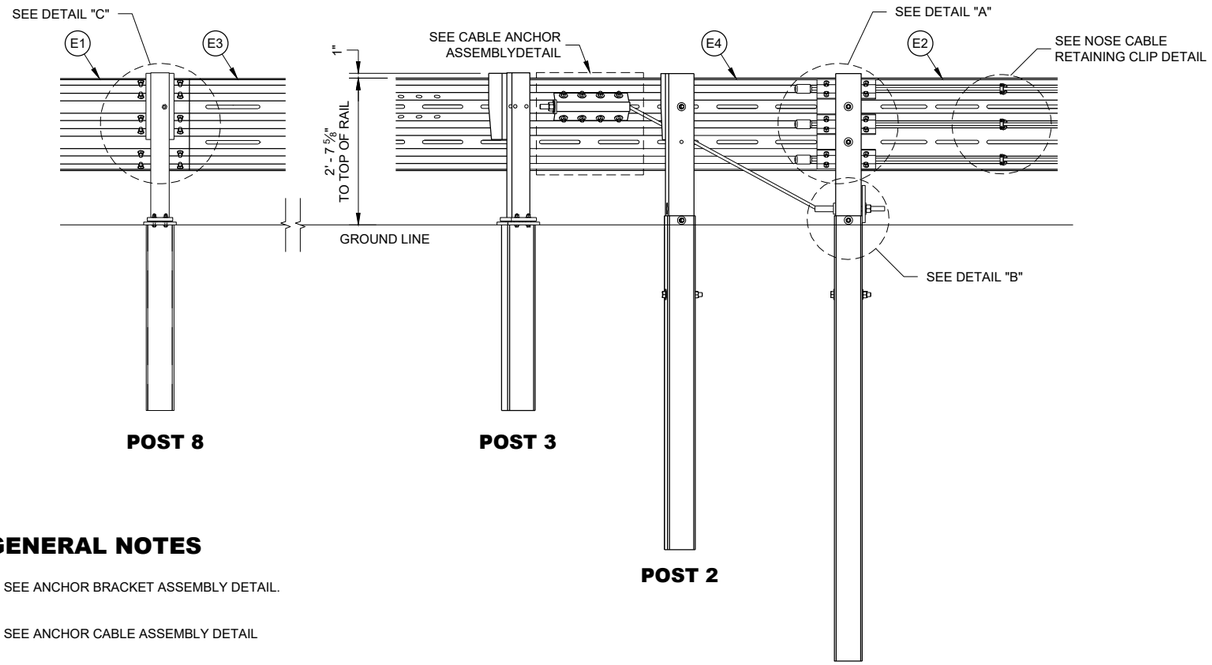
NOSE CABLE RETAINING CLIP



DETAIL "A"

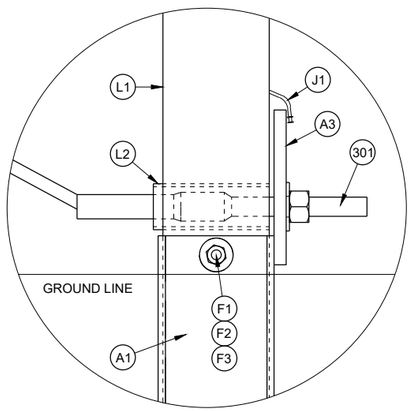


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

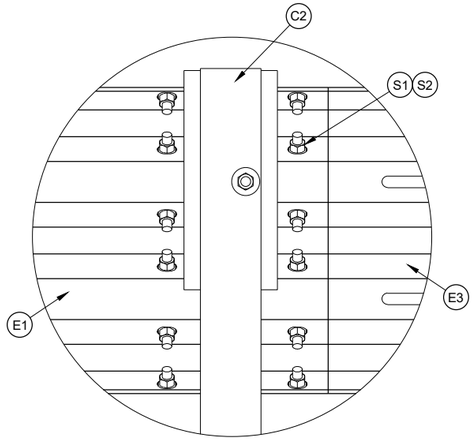


POST 8 **POST 3** **POST 2** **POST 1**

CROSS SECTION A - A



DETAIL "B"



DETAIL "C" THRIE BEAM SPLICE

GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

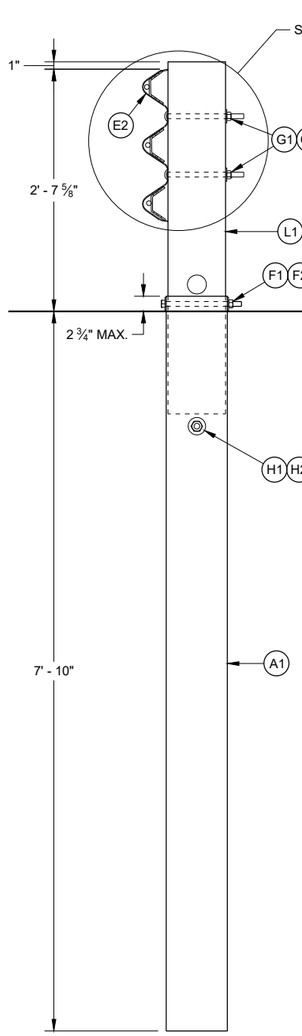
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SDD 14B26 - 04c

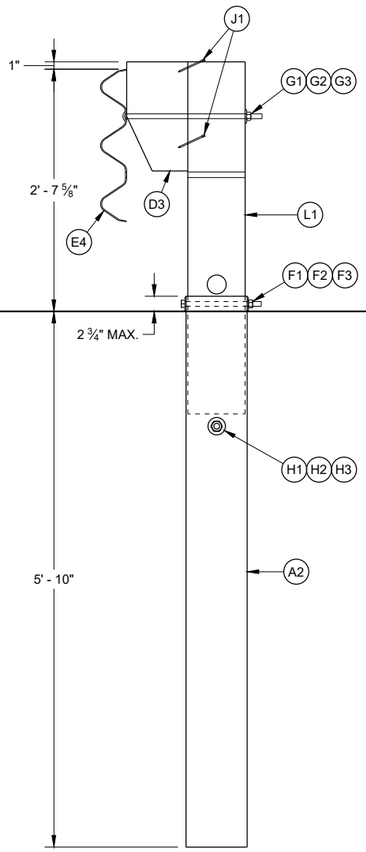
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SDD 14B26 - 04c

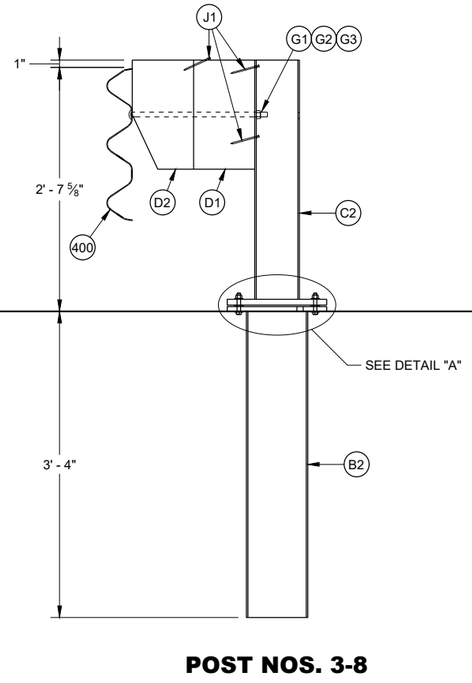
SDD 14B26-d Steel Thrie Beam Bullnose Terminal



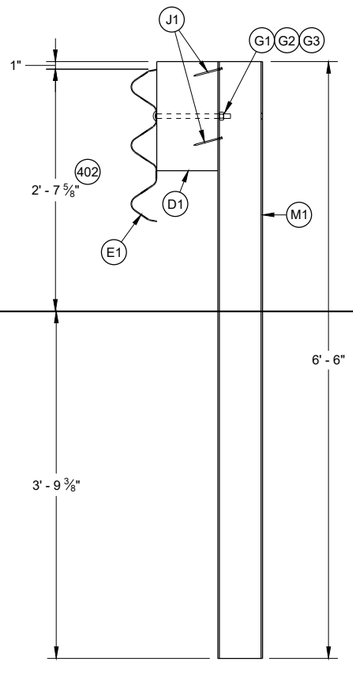
POST NO. 1



POST NO. 2



POST NOS. 3-8



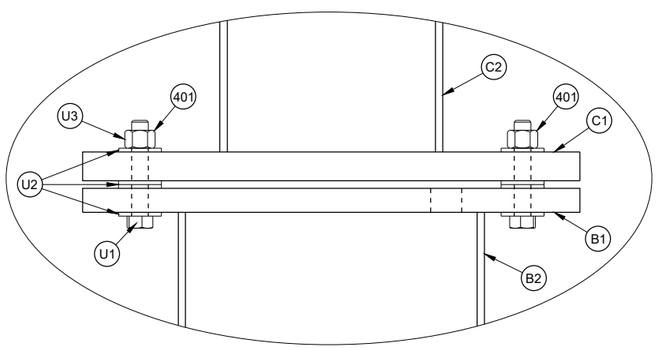
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

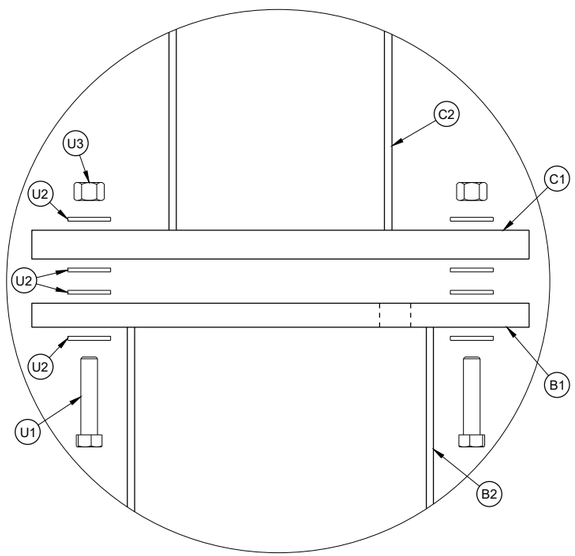
400 RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

401 TORQUE BOLD BETWEEN 60-75 FT-LB

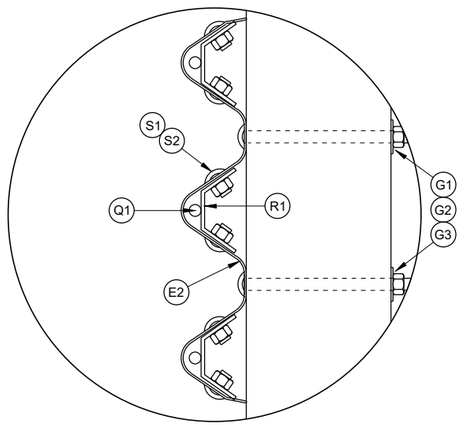
402 HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



DETAIL "B"

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

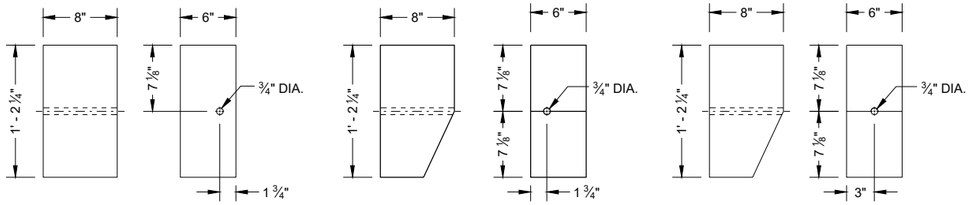
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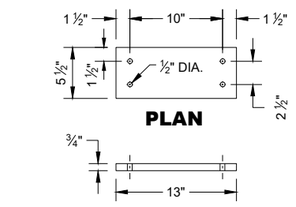
SDD 14B26 - 04d

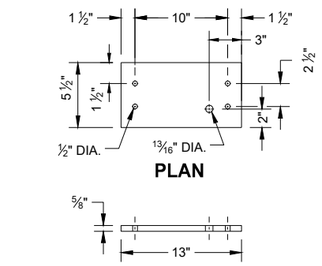
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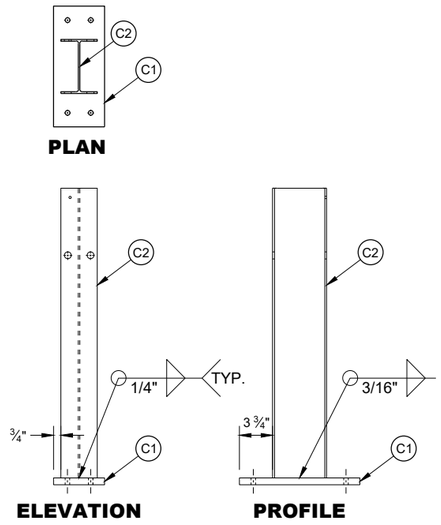
SDD 14B26 - 04d

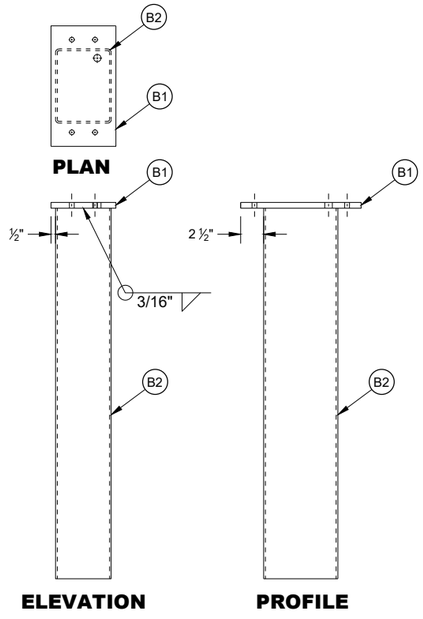
SDD 14B26-e Steel Thrie Beam Bullnose Terminal

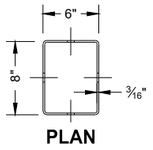




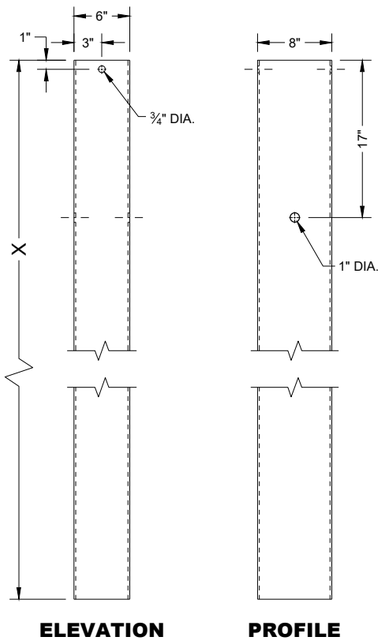


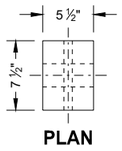


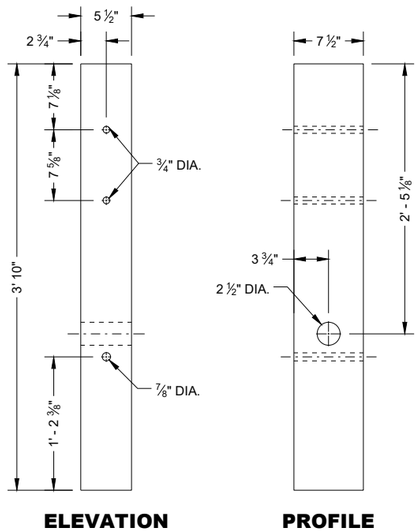


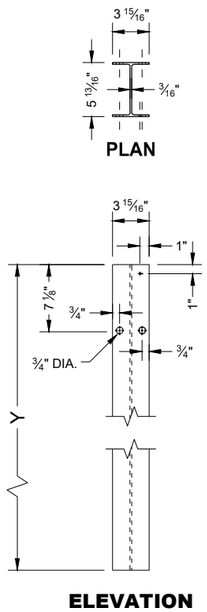


PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 6"









PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 8 5/8"

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

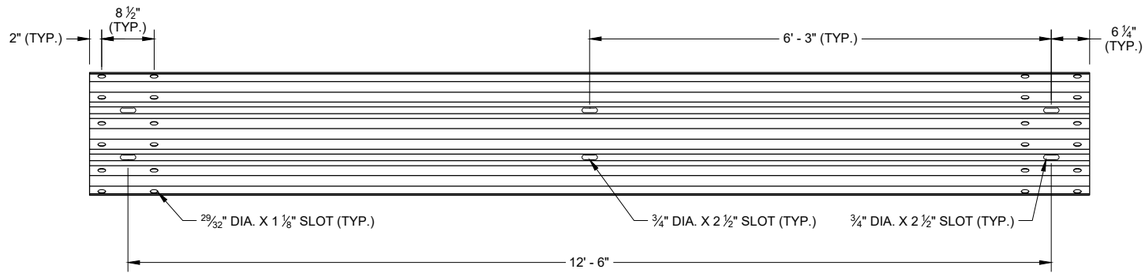
SDD 14B26 - 04e

SDD 14B26 - 04e

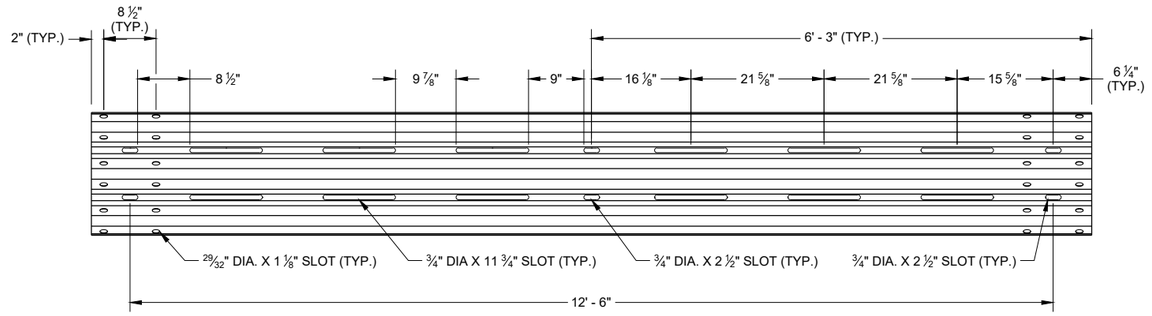
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6

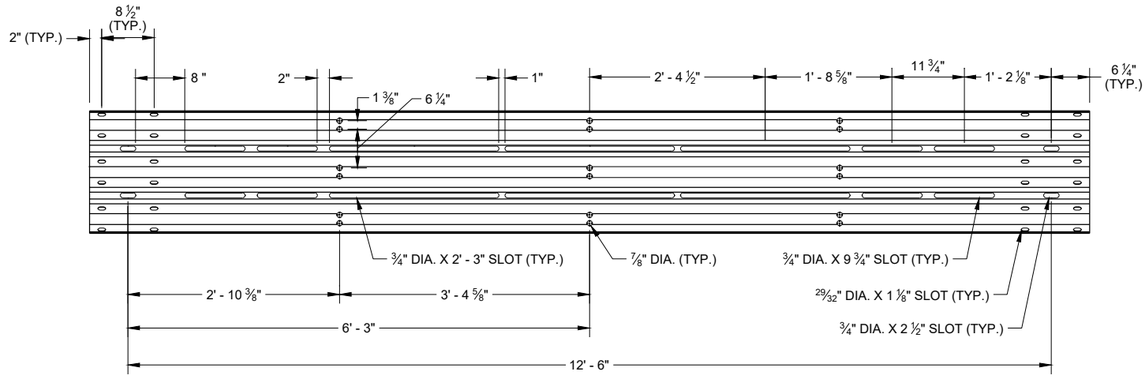
SDD 14B26-f Steel Thrie Beam Bullnose Terminal



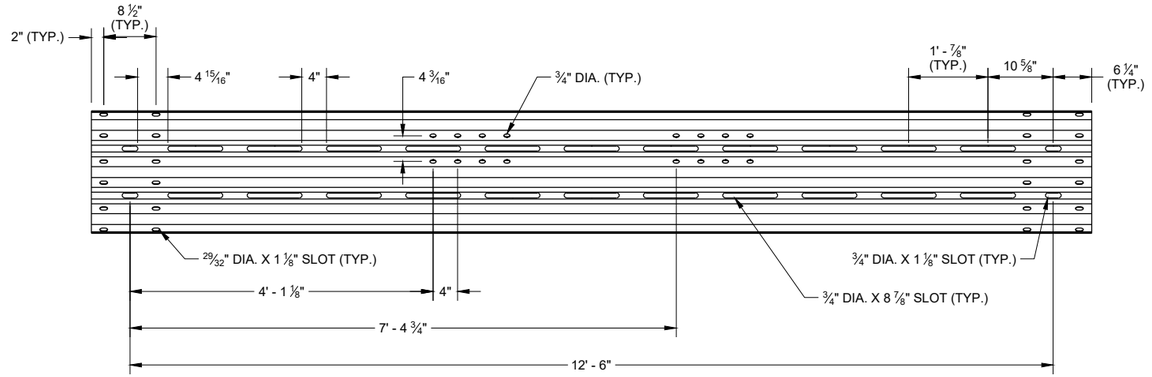
SLOTTED THRIE BEAM RAIL E1



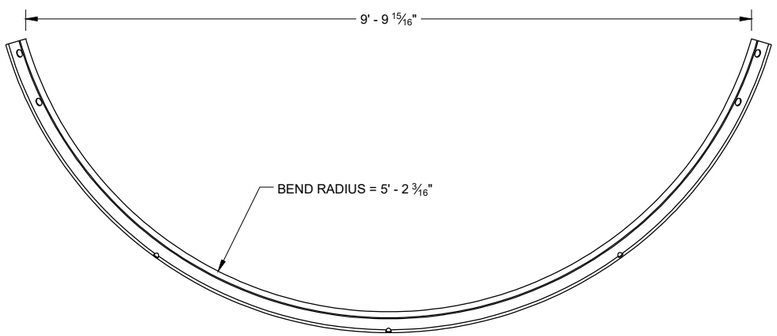
SLOTTED THRIE BEAM RAIL E3



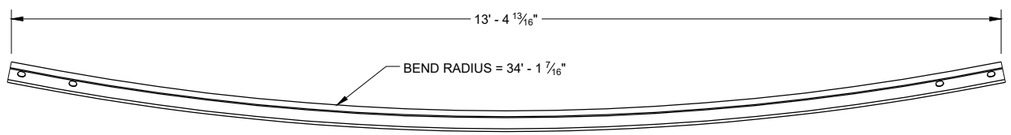
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

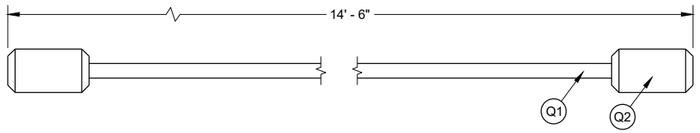
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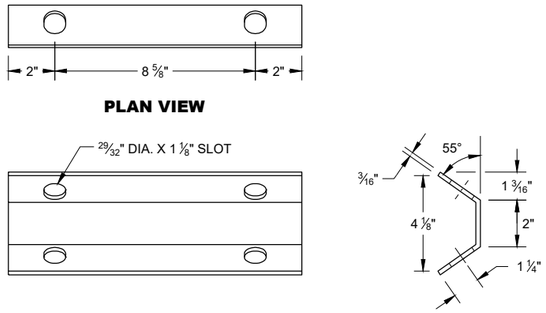
SDD 14B26 - 04f

SDD 14B26 - 04f

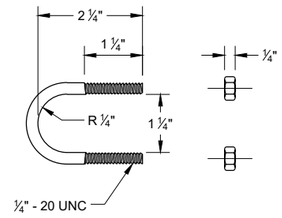
SDD 14B26-g Steel Thrie Beam Bullnose Terminal



NOSE CABLE AND SWAGE BUTTON

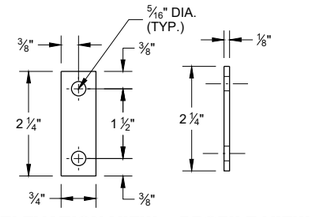


NOSE CABLE ANCHOR (R1)

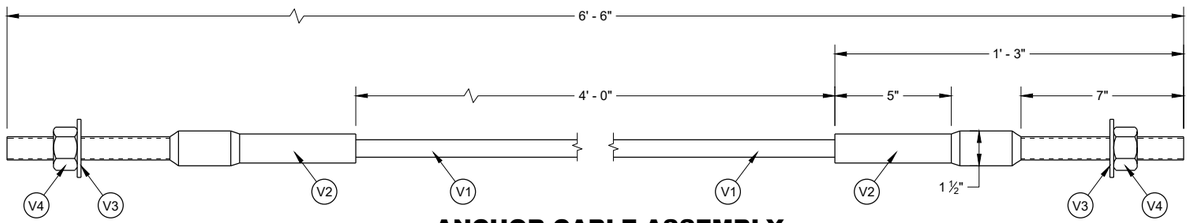


U - BOLT (T1)

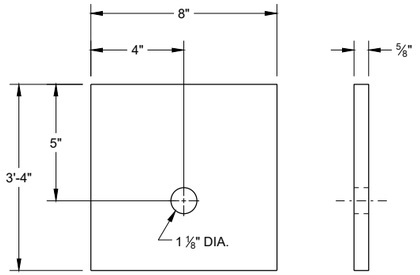
U - BOLT NUT (T3)



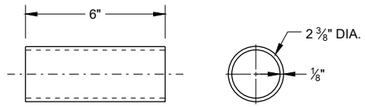
U - BOLT PLATE WASHER (T2)



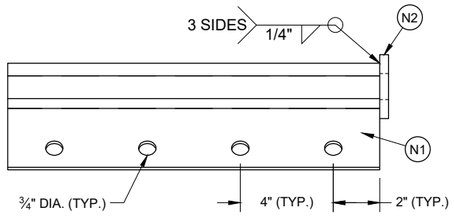
ANCHOR CABLE ASSEMBLY

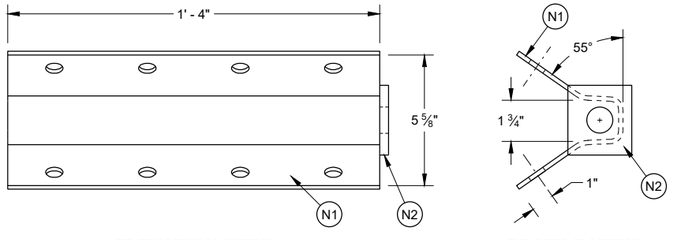


BCT BEARING PLATE (A3)

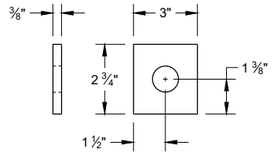


BCT POST SLEEVE (L2)





ANCHOR BRACKET ASSEMBLY (N1)



ANCHOR BRACKET END PLATE (N2)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 04g

6

BILL OF MATERIALS LIST

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
A1	LONG FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A2	FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A3	BEARING PLATE AT POST	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
B1	LOWER SLIP POST ASSEMBLY - 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
B2	LOWER SLIP POST ASSEMBLY - TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
C1	UPPER SLIP POST ASSEMBLY - 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
C2	UPPER SLIP POST ASSEMBLY - POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 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
D1	BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D2	TAPERED BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D3	TAPERED BLOCK FOR BCT POST - WOOD	WISDOT SPEC. 614
E1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E2	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
E3	THRIE BEAM RAIL - PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E4	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
F1	5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
F2	5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
F3	GROUND STRUT AND YOKE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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
G1	5/8 " DIA. POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G2	POST BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G3	POST BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
H1	7/8" DIA. SOIL TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 7/8" ASTM A563DH OR SAE J995 GRADE 5
H2	SOIL TUBE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)
H3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 7/8" ASTM A563DH OR SAE J995 GRADE 5
J1	16D DOUBLE HEAD NAIL	ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)
L1	BCT TIMBER POST	WISDOT SPEC. 614 S4S FINISH ON 4 SIDE
L2	BCT POST SLEEVE	AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B
M1	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 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
M2	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 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
N1	ANCHOR BRACKET	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
N2	ANCHOR BRACKET - BEARING 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

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
P1	5/8" DIA. ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
P2	ANCHOR BRACKET BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
P3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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
Q1	5/8" DIA. NOSE CABLE	6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
Q2	NOSE CABLE-SWAGE BUTTON	COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
R1	NOSE CABLE ANCHOR BRACKET	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
S1	5/8" DIA. SPLICE BOLT - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
S2	SPLICE - BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5
T1	1/4" DIA. NOSE CABLE - U BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
T2	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
T3	U-BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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
U1	7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT	ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5
U2	7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER	ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329
U3	SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM 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
V1	¾" DIA. BCT CABLE	AASHTO M30 / ASTM A741 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN BREAKING STRENGTH OF 42.7 KIPS
V2	ANCHOR CABLE-SWAGE FITTING	UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."
V3	1" DIA. ANCHOR CABLE-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V4	1" DIA. ANCHOR CABLE-NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	REFLECTOR	SEE SDD 15A4

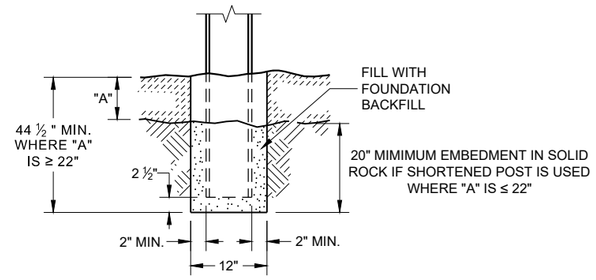
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

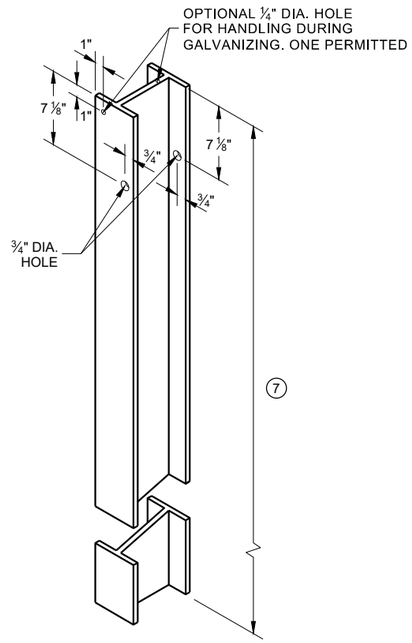
APPROVED
August 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

SDD 14B42-a Midwest Guardrail System (MGS) Guardrail

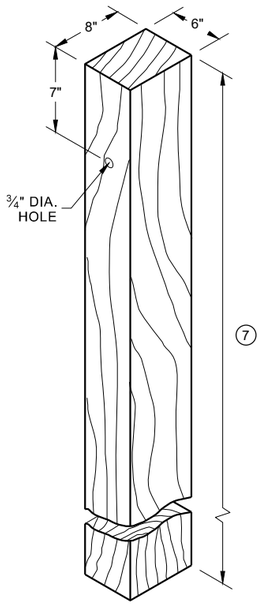
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS 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".



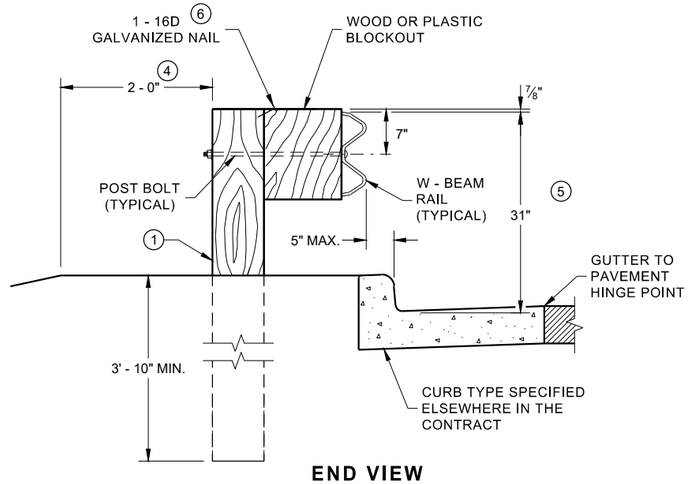
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



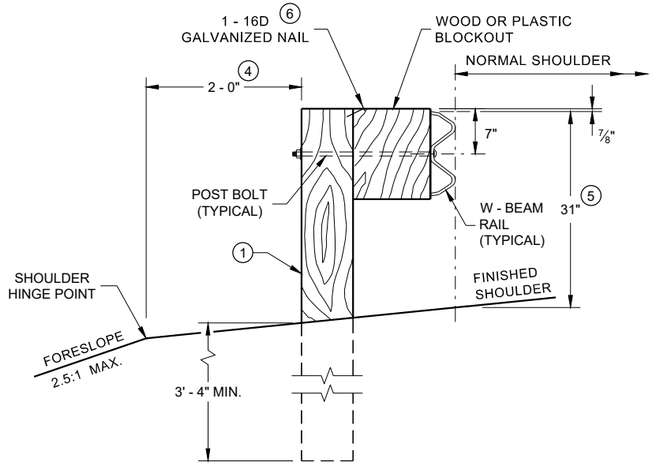
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



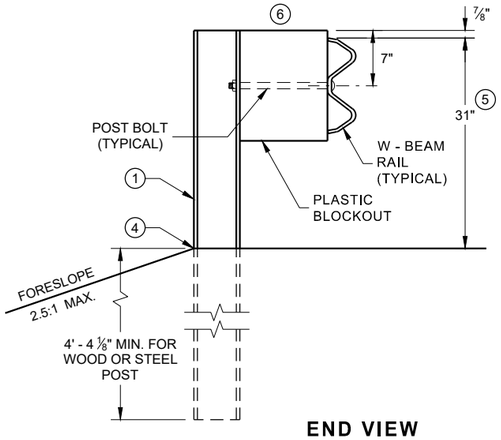
WOOD POST (6" X 8") NOMINAL (1)



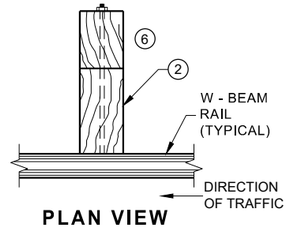
END VIEW
LOCATED ALONG A CURBED ROADWAY



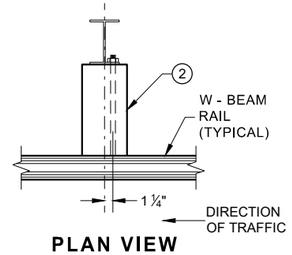
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



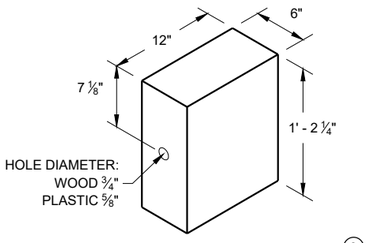
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

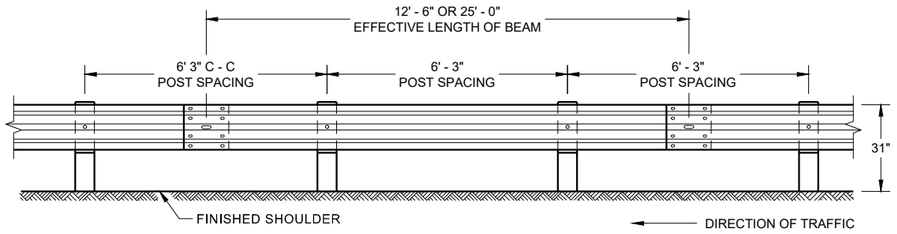
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

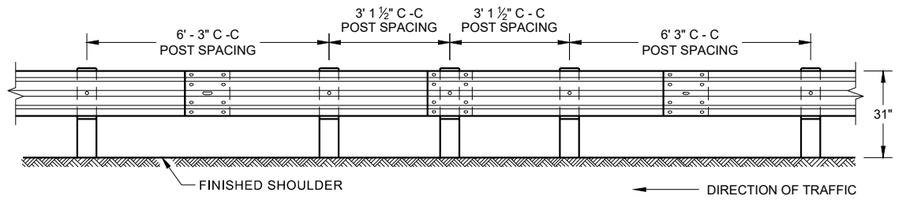
SDD 14B42 - 07a

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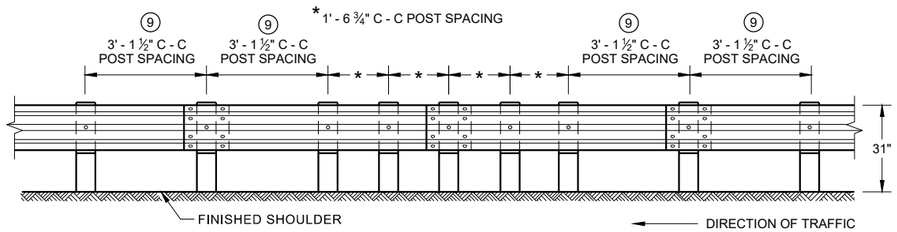
SDD 14B42-b Midwest Guardrail System (MGS) Guardrail



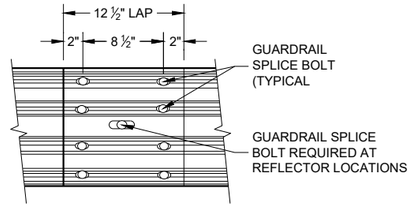
FRONT VIEW
POST SPACING STANDARD INSTALLATION



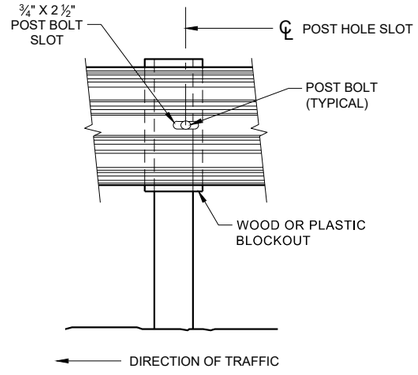
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



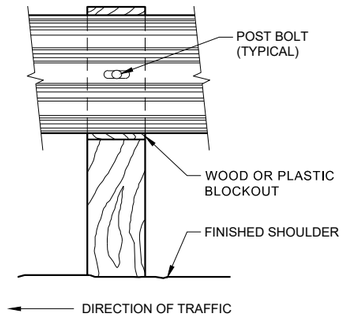
FRONT VIEW
QUARTER POST SPACING (QS)



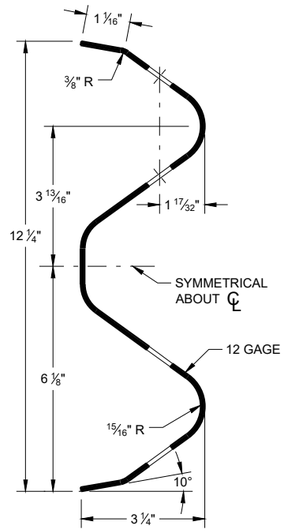
FRONT VIEW
MID-SPAN BEAM SPLICE



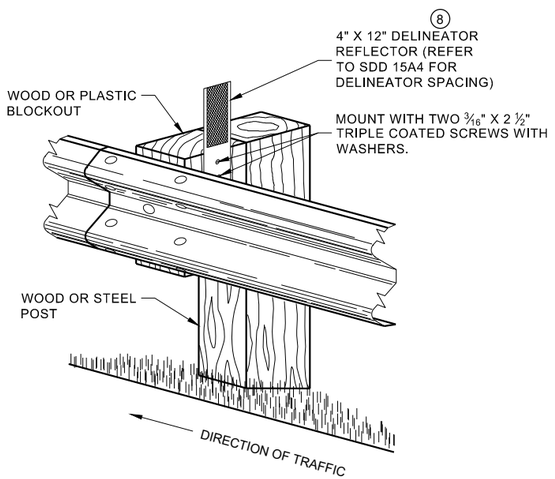
FRONT VIEW AT STEEL POST



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

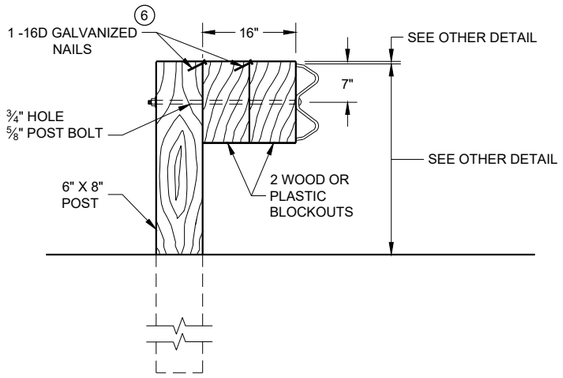
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SDD 14B42 - 07b

6

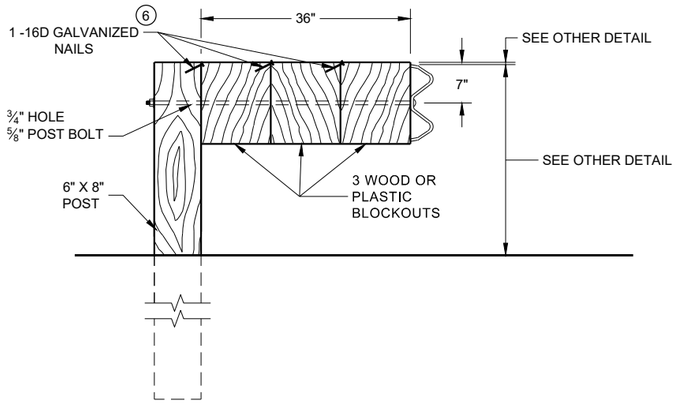
SDD 14B42 - 07b

SDD 14B42-c Midwest Guardrail System (MGS) Guardrail



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.



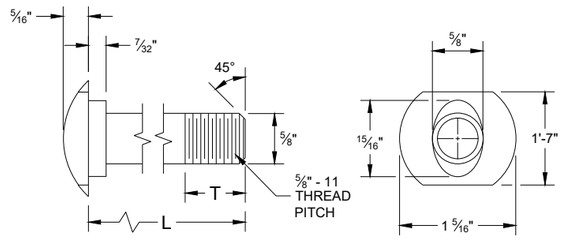
DETAIL FOR 36" BLOCKOUT DEPTH

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.

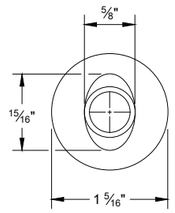
NOTE:

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.

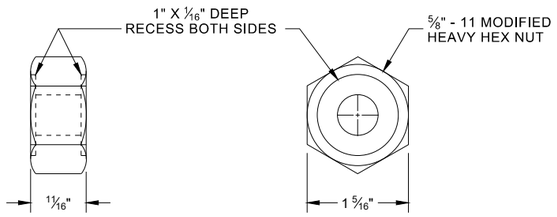


POST BOLT TABLE

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

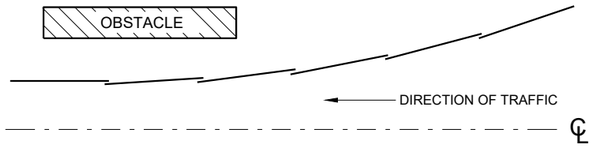


ALTERNATE BOLT HEAD

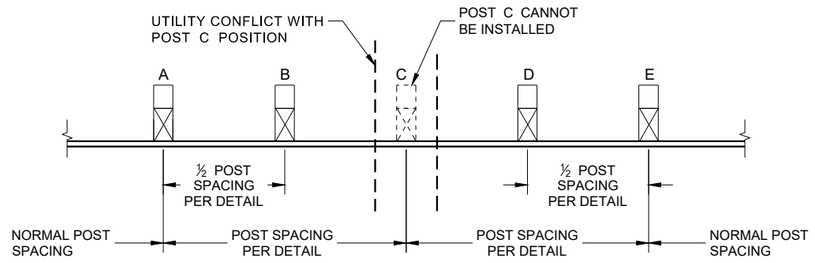


POST BOLT, SPLICE BOLT AND RECESS NUT

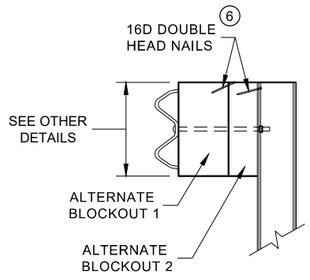
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



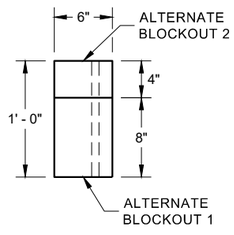
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

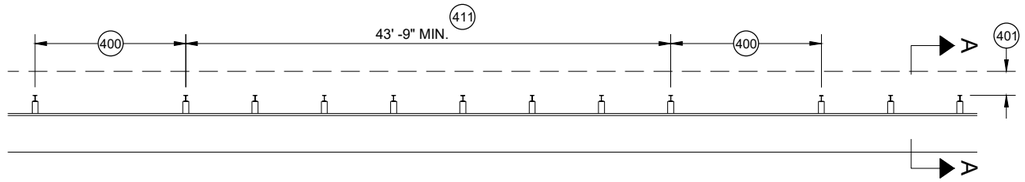
SDD 14B42 - 07c

SDD 14B42 - 07c

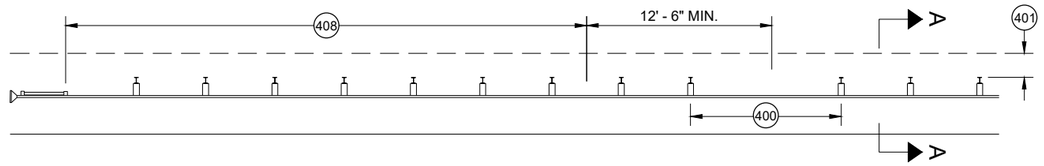
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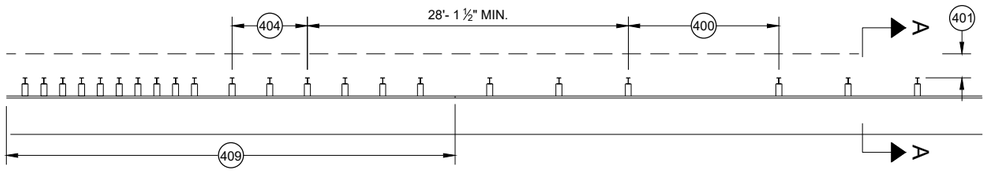
SDD 14B42-d Midwest Guardrail System (MGS) Guardrail



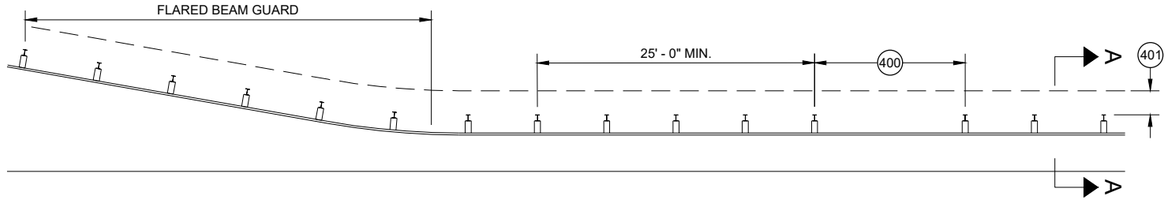
MISSING POST IN MGS GUARDRAIL



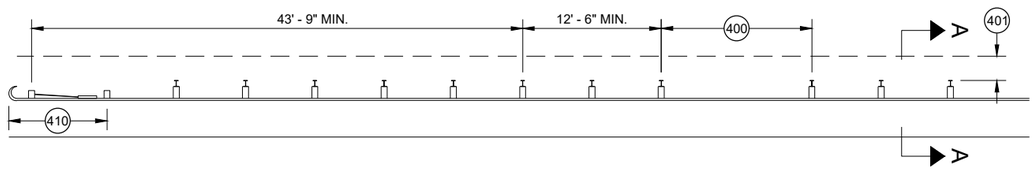
MISSING POST IN MGS GUARDRAIL NEAR EAT



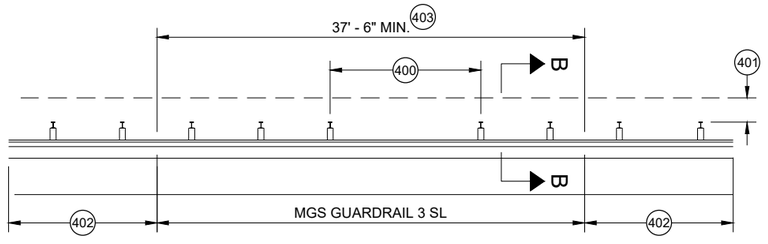
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

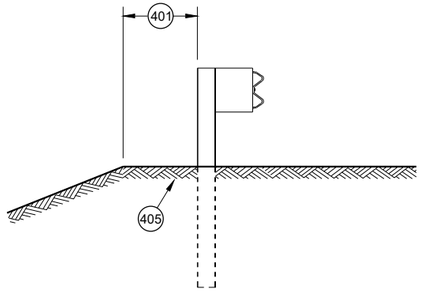


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

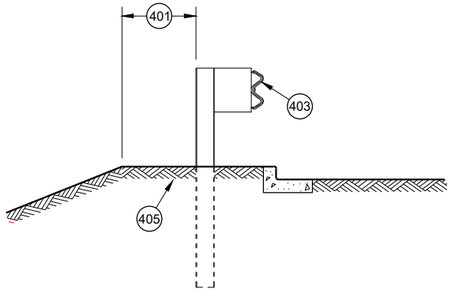


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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 DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 14B42 - 07d

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SDD 14B42 - 07d

SDD 14B44-a Midwest Guardrail System (MGS) Energy Absorbing Terminal

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.

(F) DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

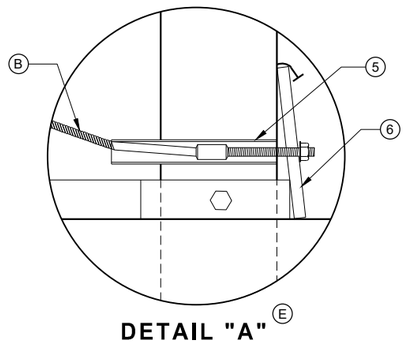
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

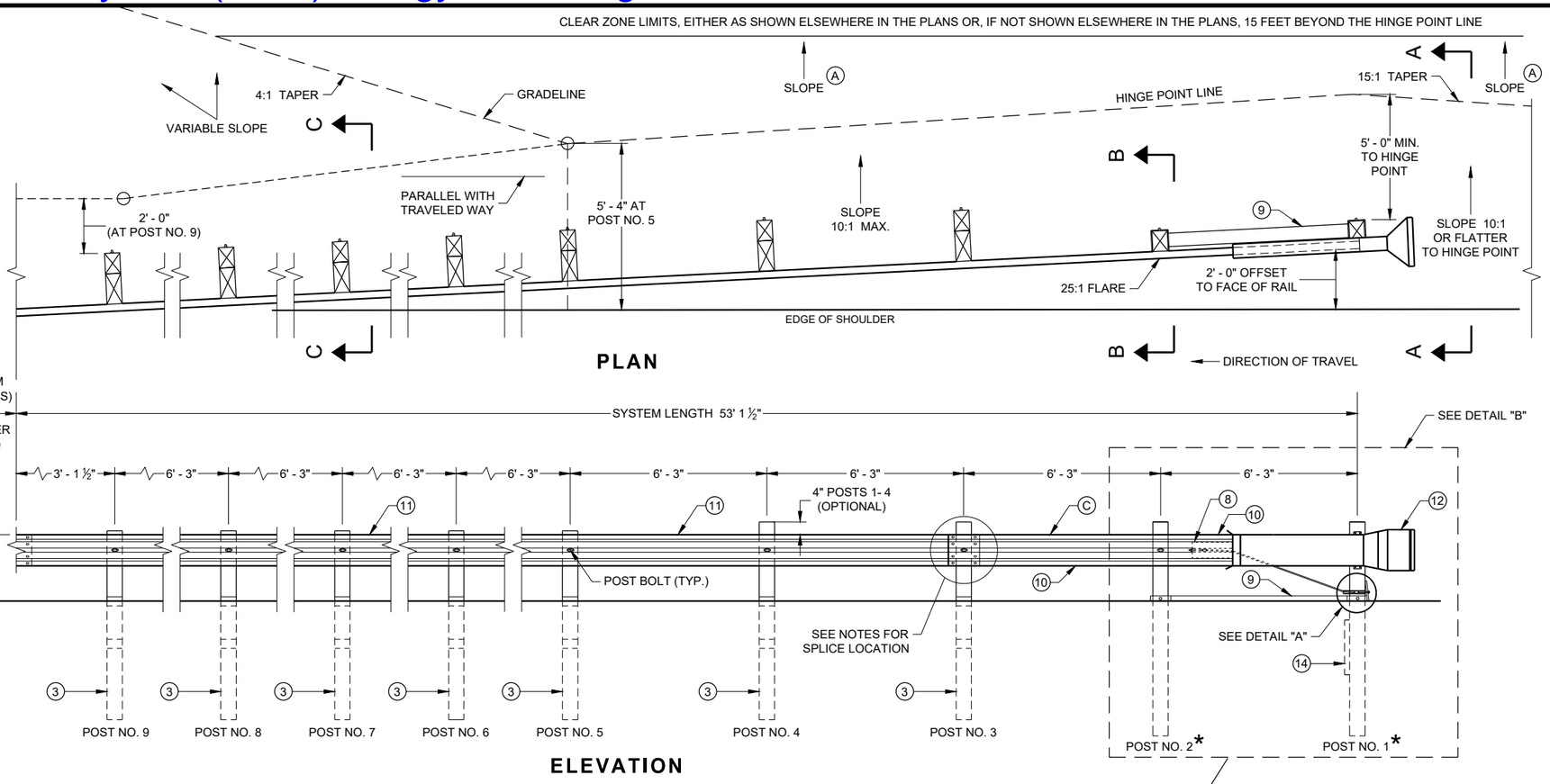
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

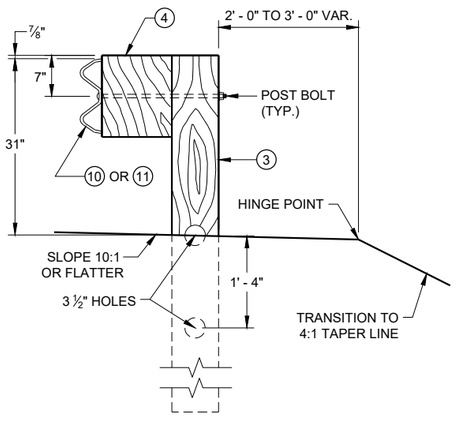
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

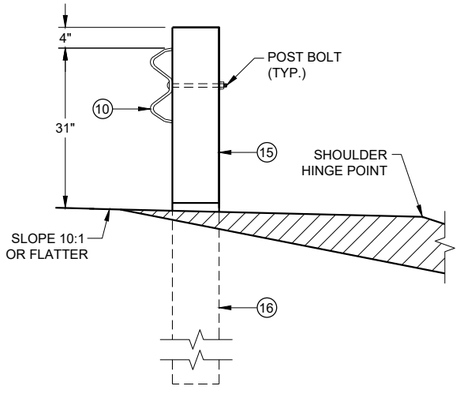


DETAIL "A" (E)

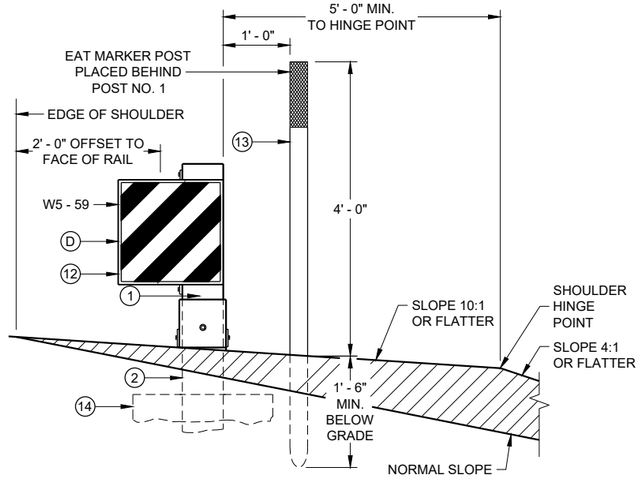




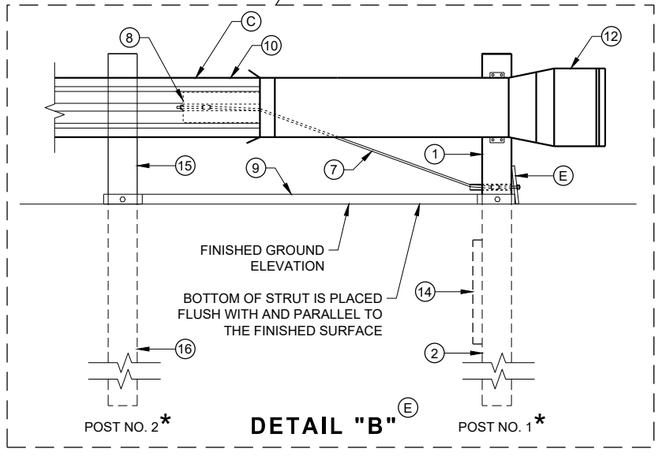
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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)

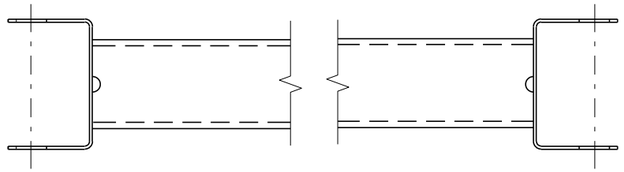
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

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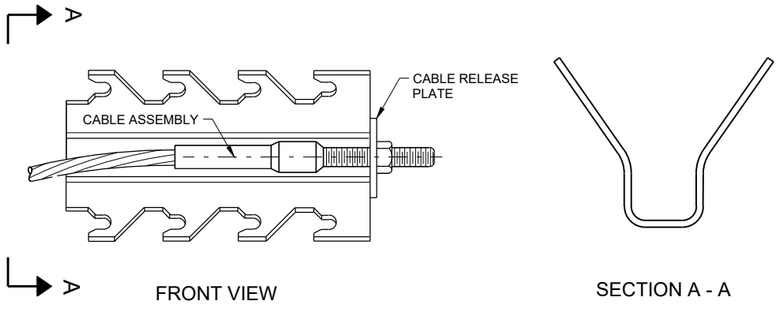
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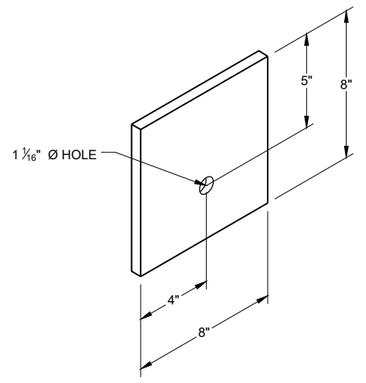
GENERIC GROUND STRUT ⑨ Ⓔ

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 Ⓔ

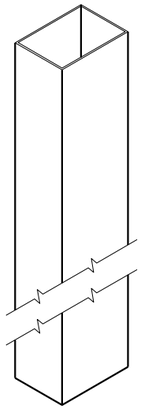


BEARING PLATE ⑥ Ⓔ

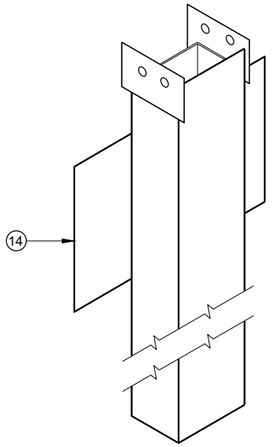
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

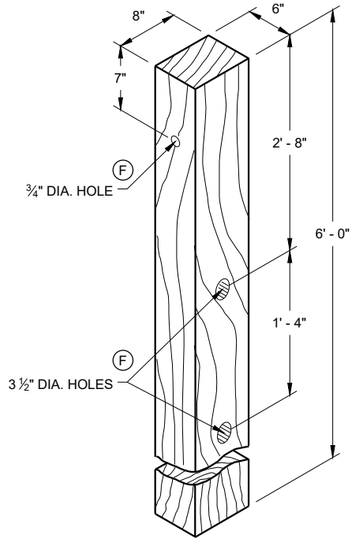
SDD 14B44-c Midwest Guardrail System (MGS) Energy Absorbing Terminal



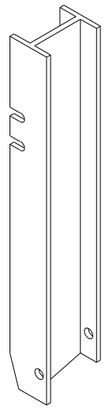
UPPER POST NO. 1 (1) (E)



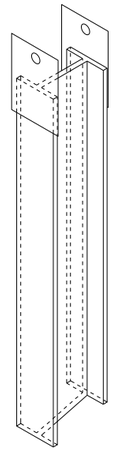
LOWER POST NO. 1 (2) (E)



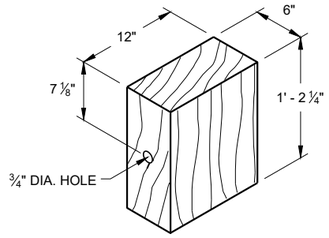
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



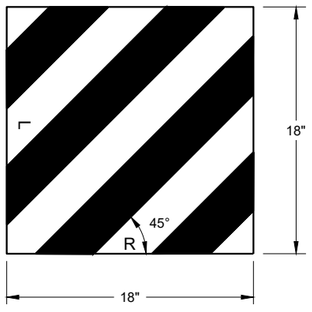
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

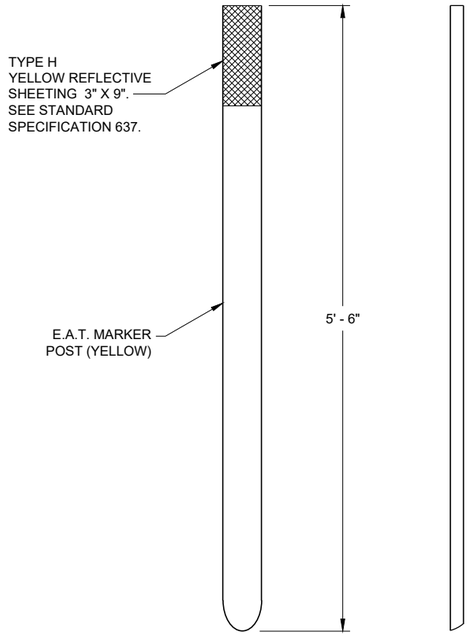


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



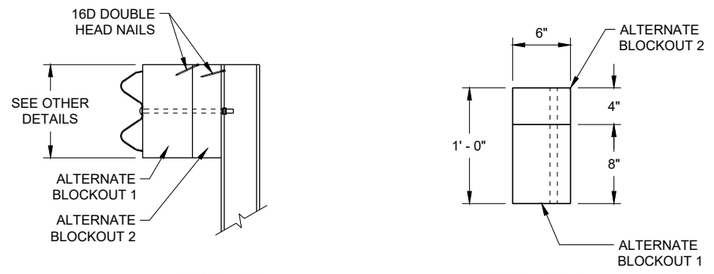
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

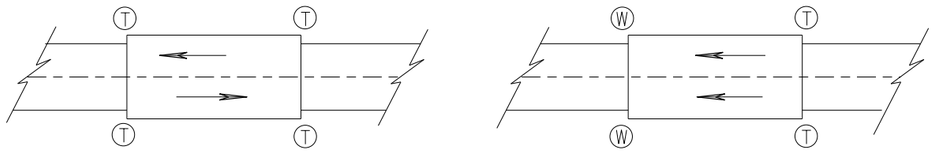
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
7/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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SDD 14B44 - 04c

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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.

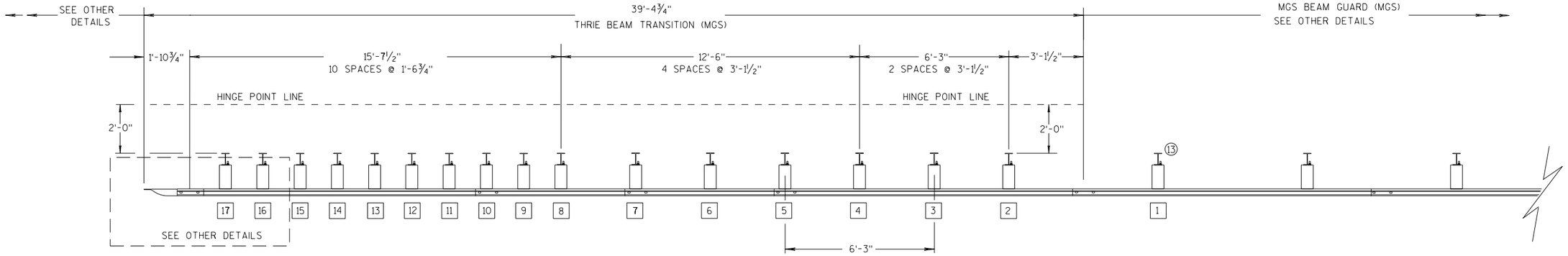
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

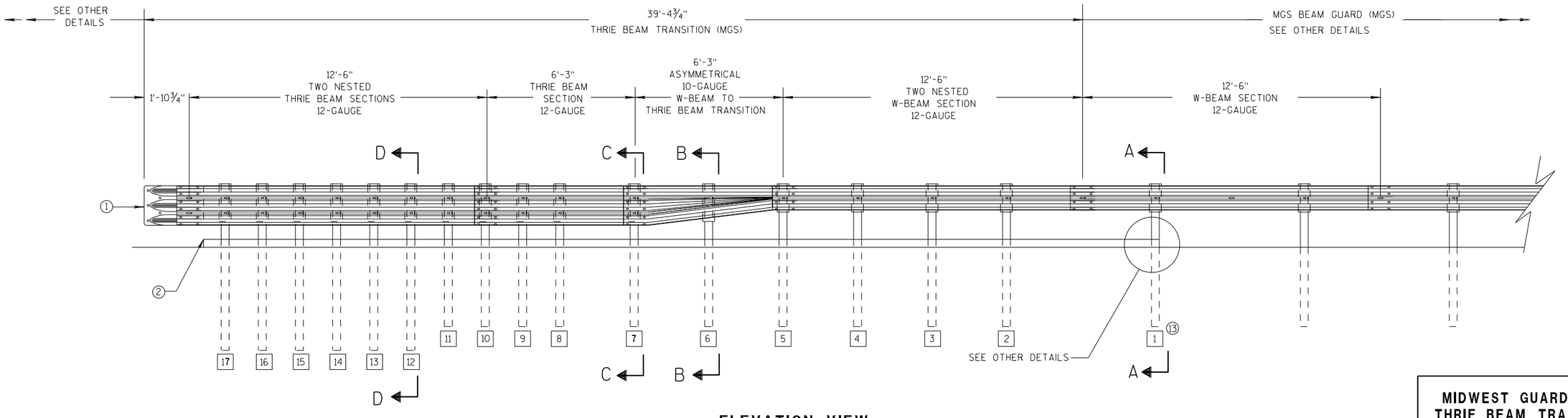
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 TRANSPORTATION

6

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

6

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

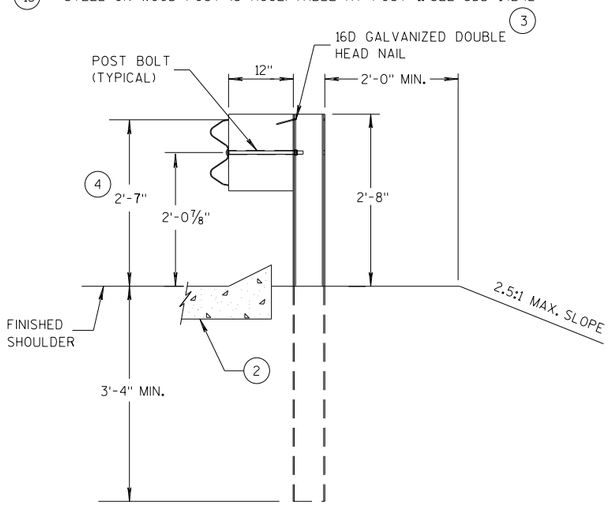
GENERAL NOTES

(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.

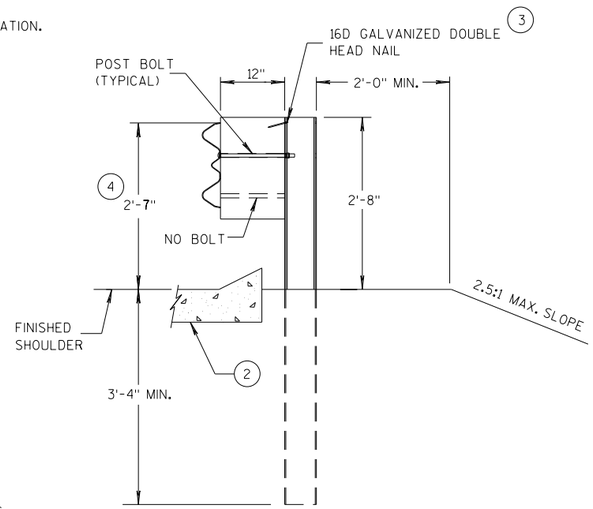
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



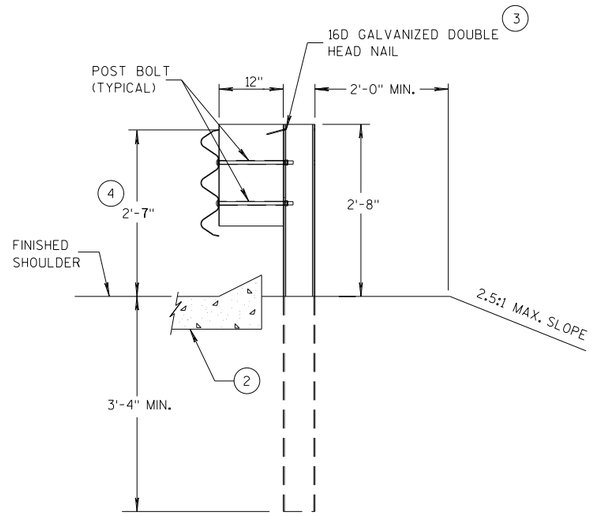
SECTION A-A (13)

POSTS 1-5



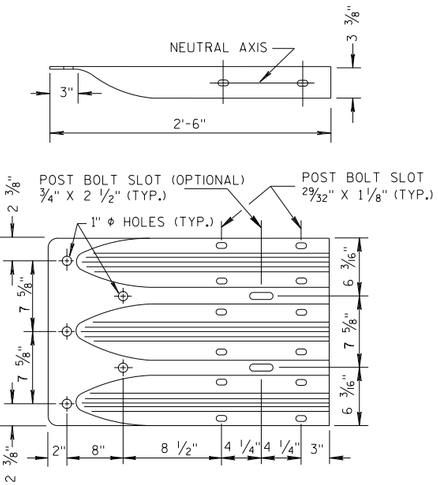
SECTION B-B

POST 6

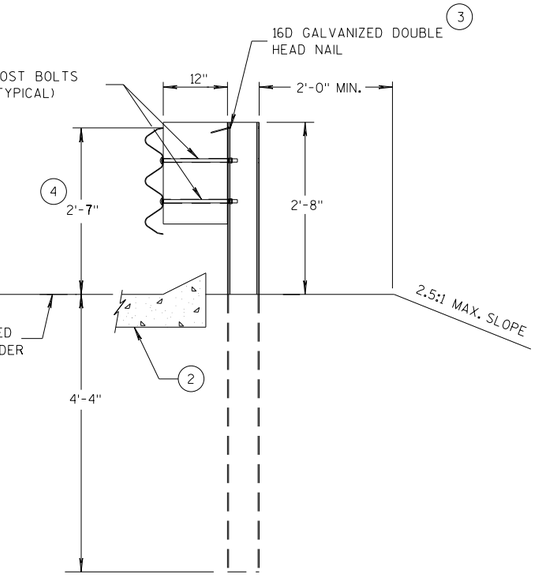


SECTION C-C

POSTS 7-11

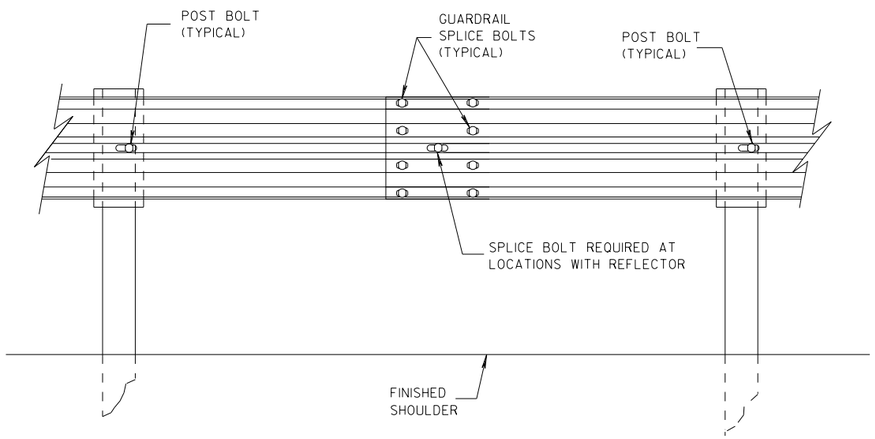


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

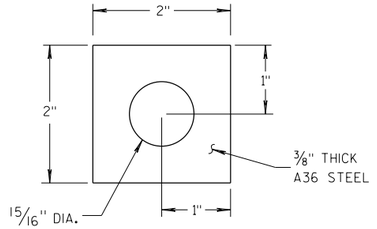
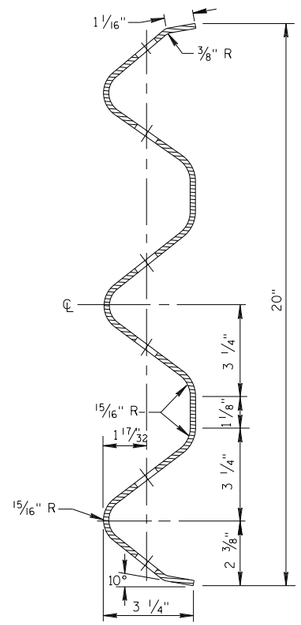


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

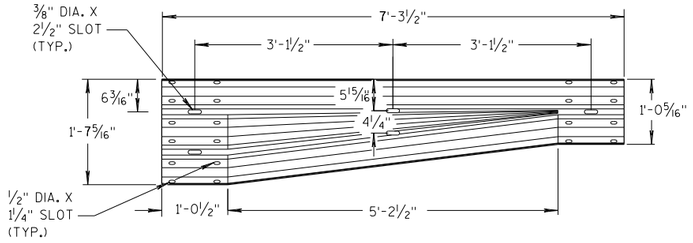
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

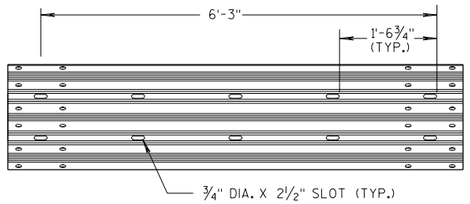
S.D.D. 14 B 45-5b

6

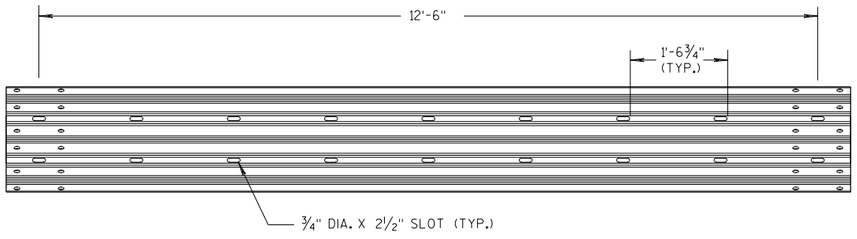
S.D.D. 14 B 45-5b



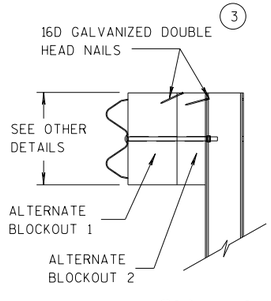
W-BEAM TO THRIE BEAM TRANSITION SECTION



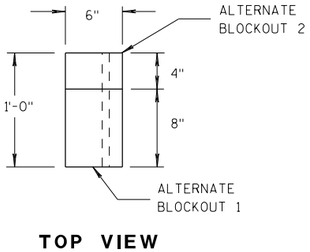
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

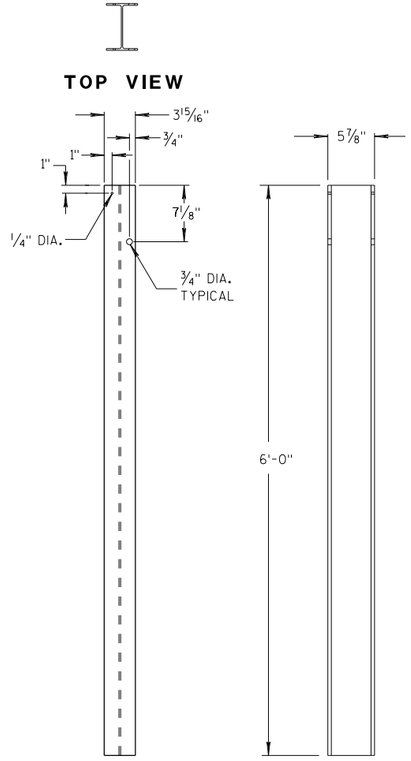


SIDE VIEW



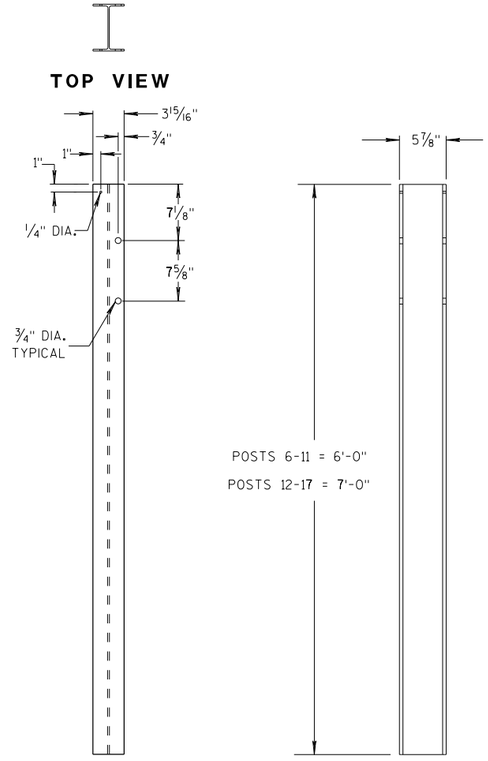
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



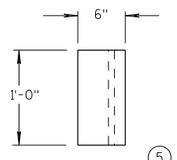
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

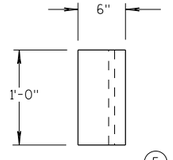


FRONT VIEW SIDE VIEW

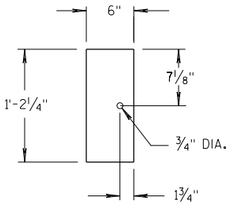
STEEL POSTS 6-17



TOP VIEW (5)

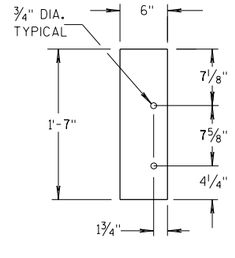


TOP VIEW (5)



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)

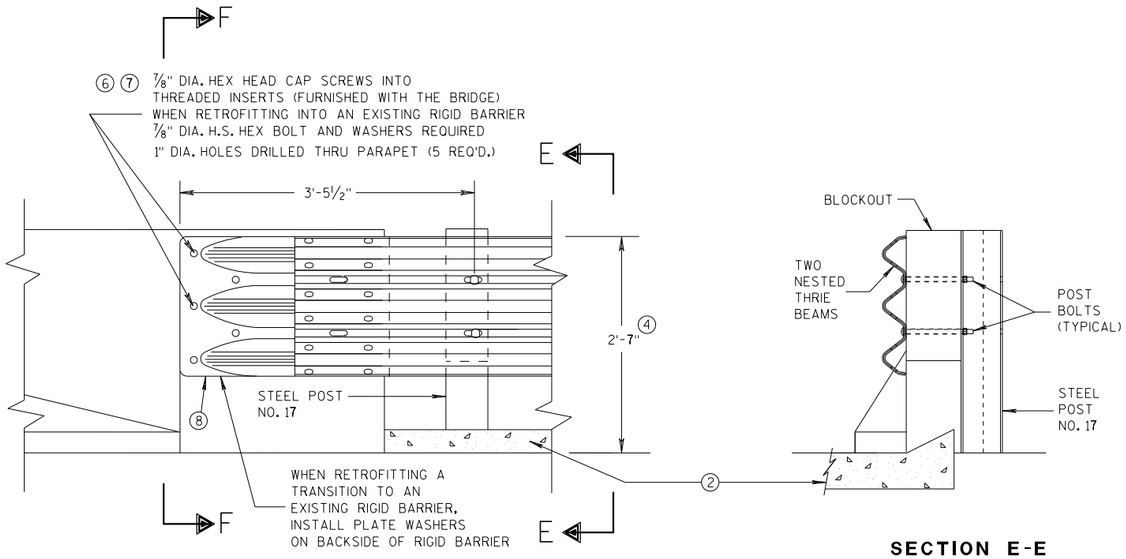
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

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.

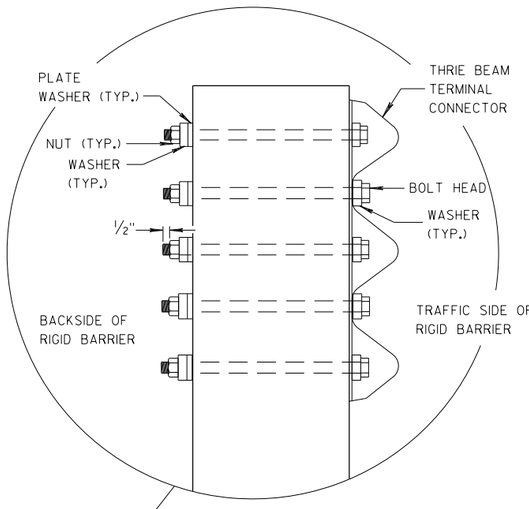
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

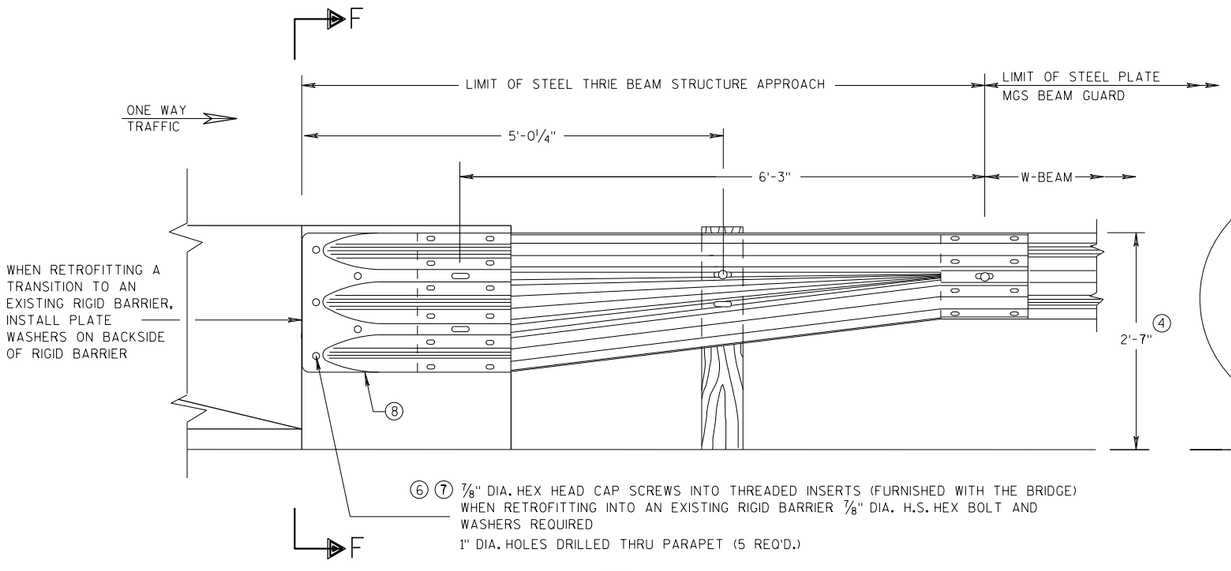
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

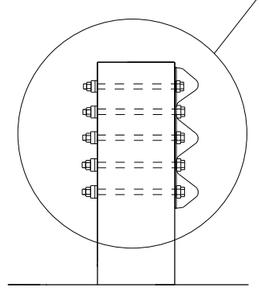
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

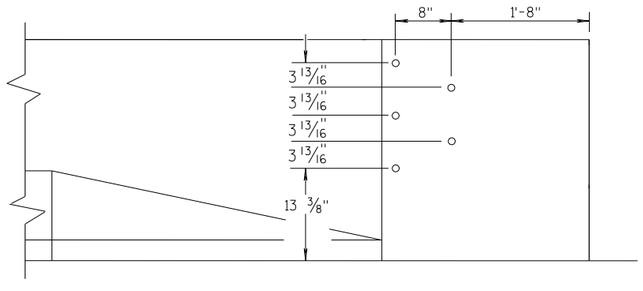




FRONT VIEW



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 DEVELOPMENT UNIT SUPERVISOR
FHWA

6

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

6

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

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.

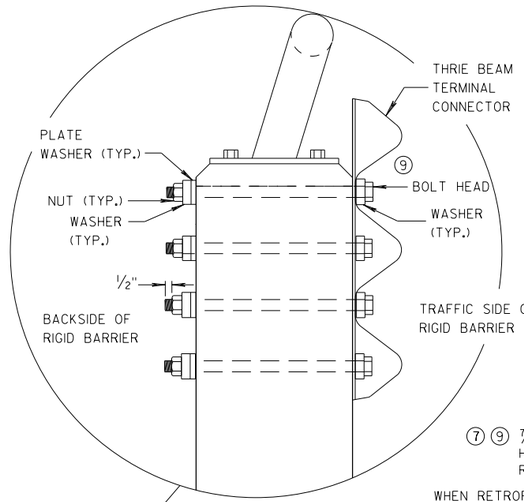
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

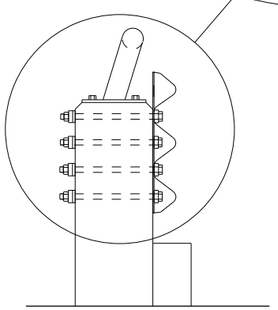
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

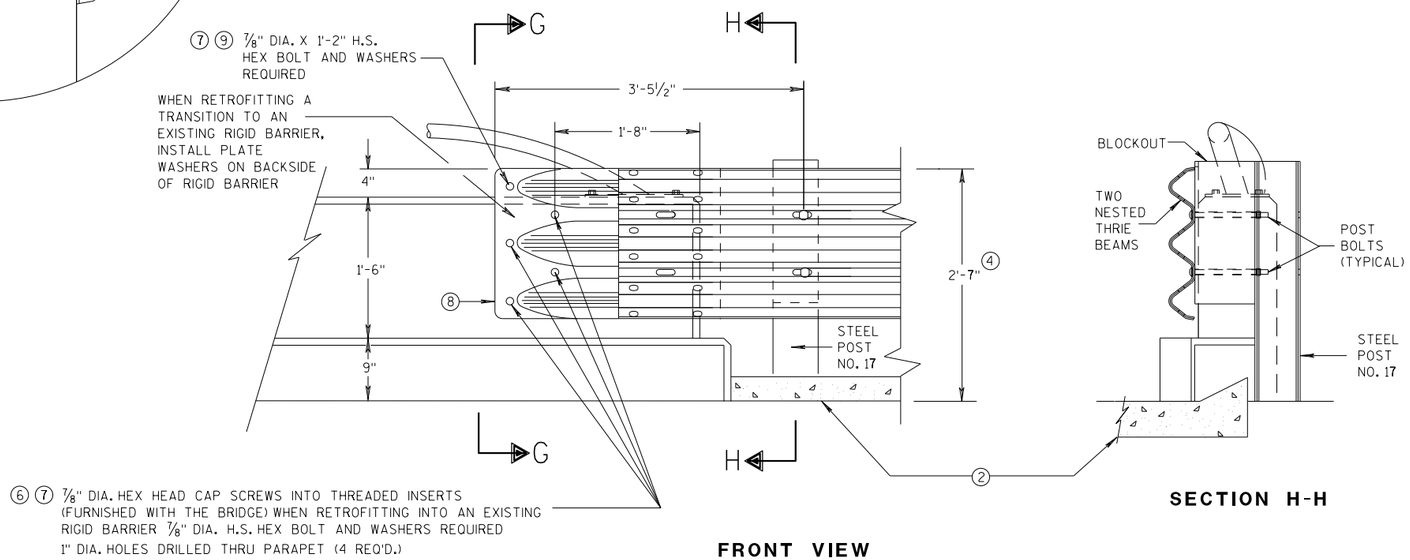
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





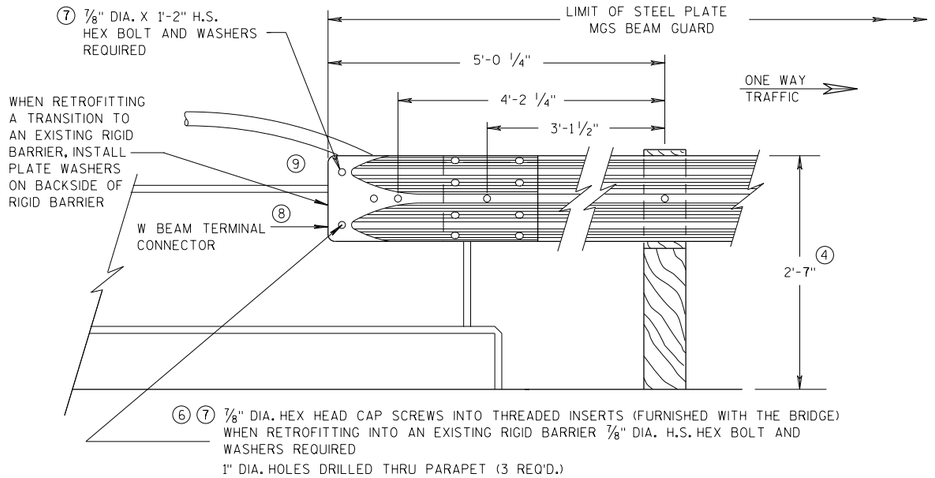
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(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
FHWA

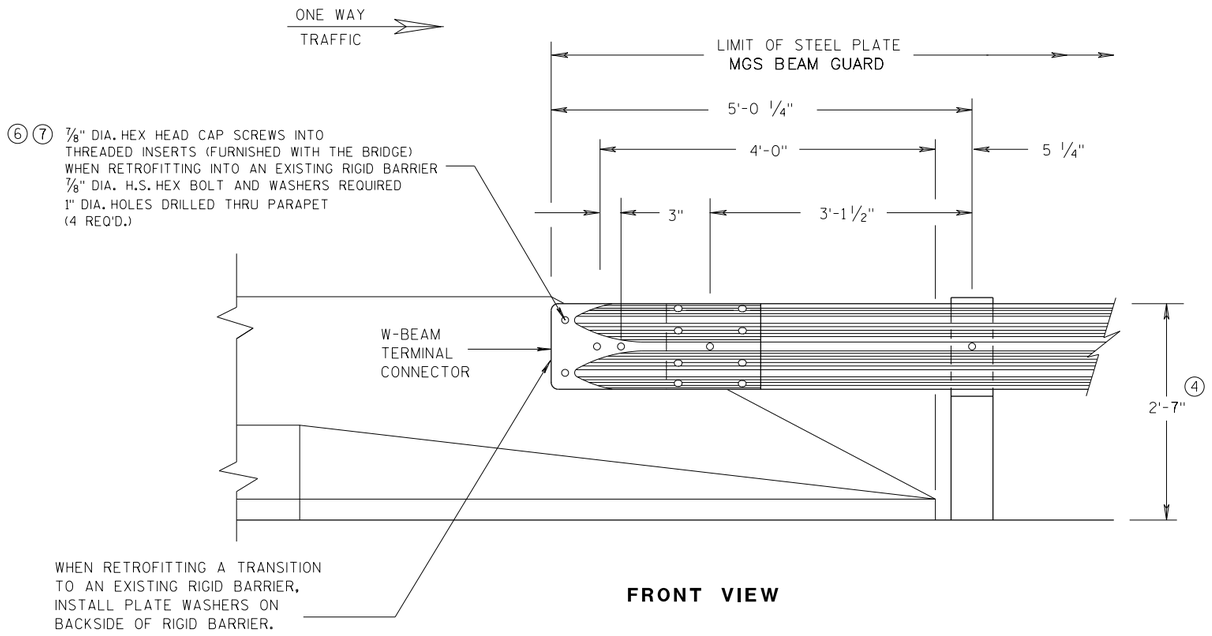
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

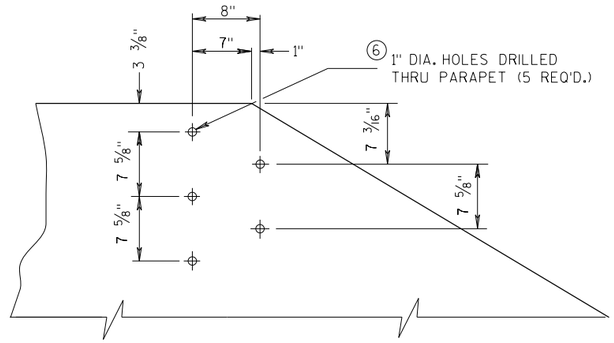
GENERAL NOTES

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

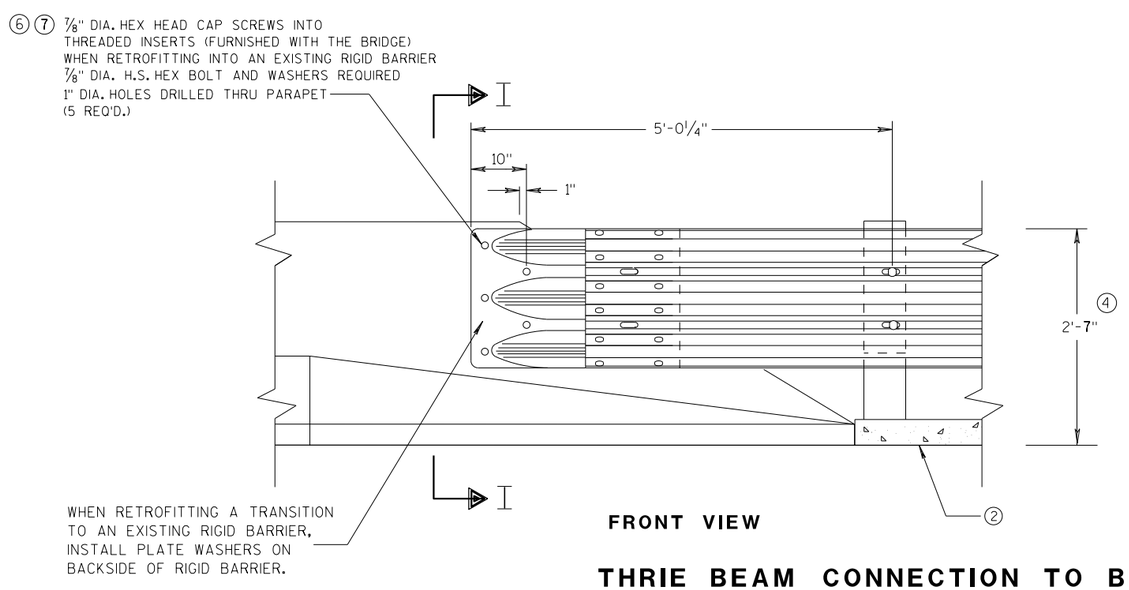
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

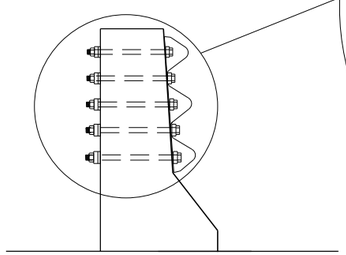
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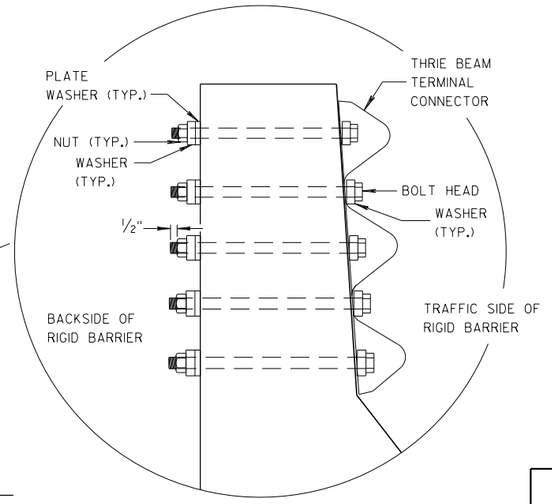
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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07/2018
DATE
FHWA

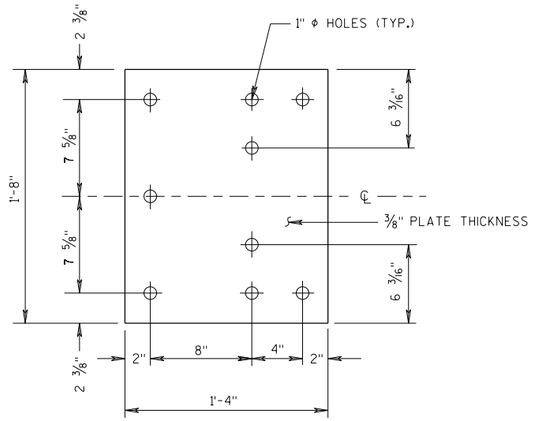
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

6

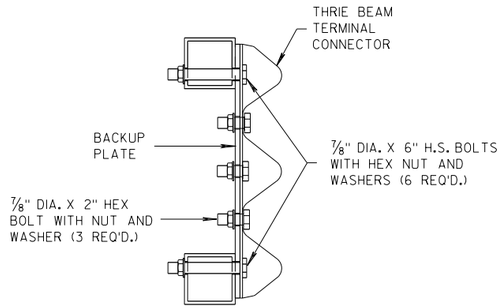
S.D.D. 14 B 45-5f

6

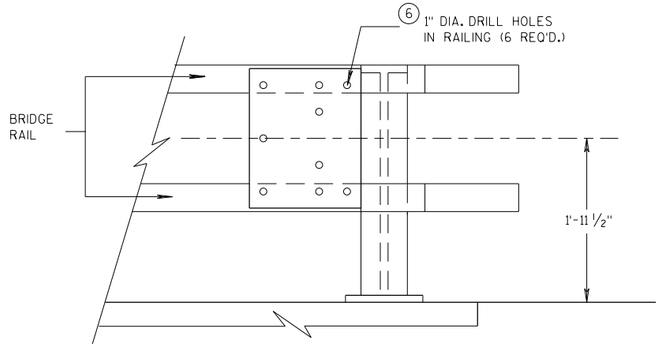
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

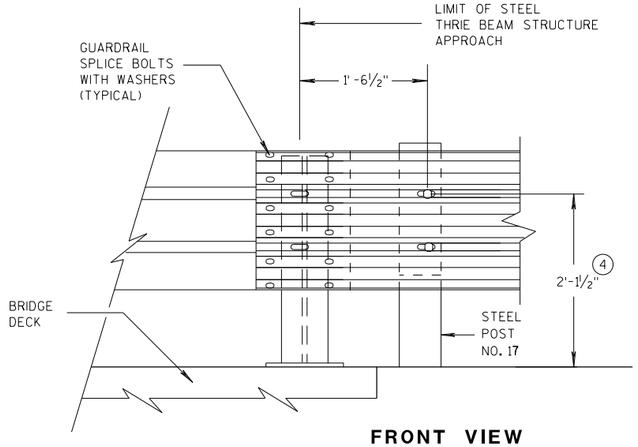


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

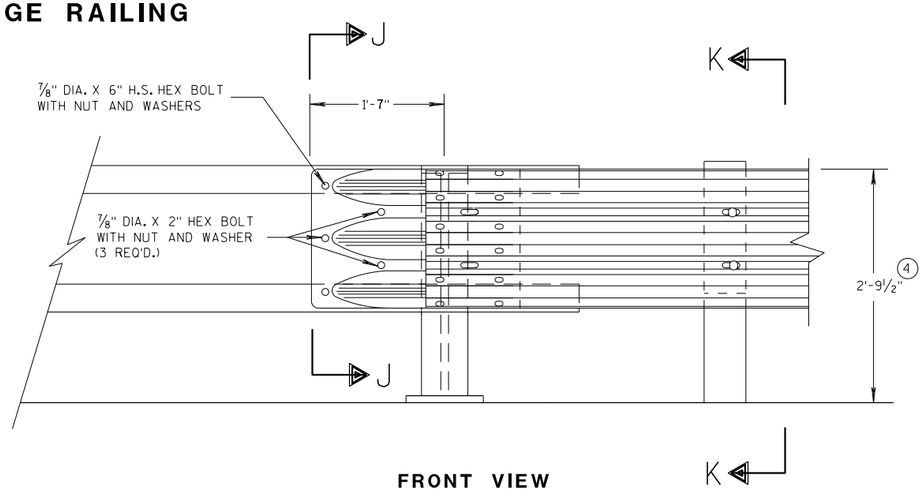
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

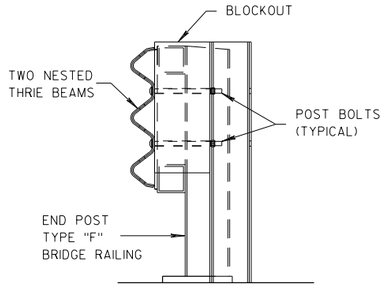


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

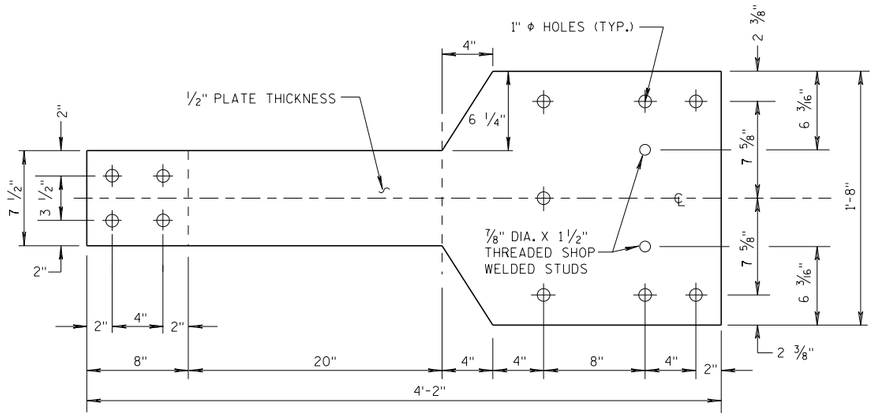
S.D.D. 14 B 45-5g

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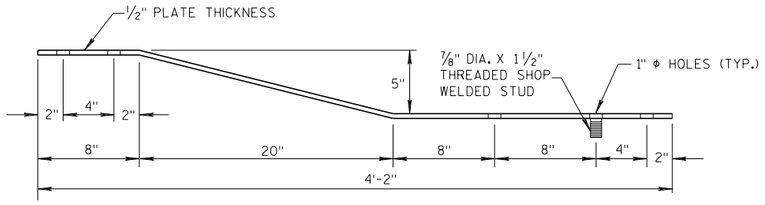
S.D.D. 14 B 45-5g

GENERAL NOTES

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

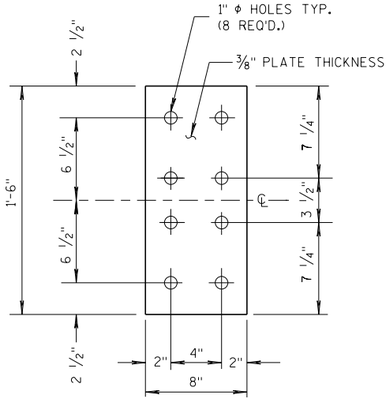


FRONT VIEW



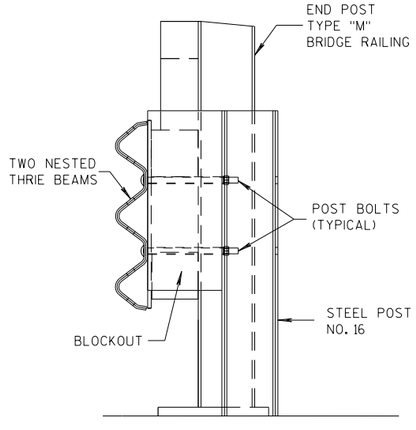
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

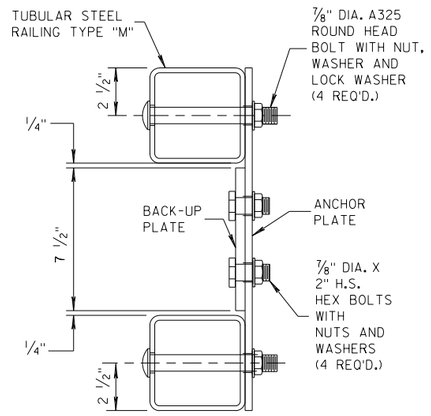


FRONT VIEW

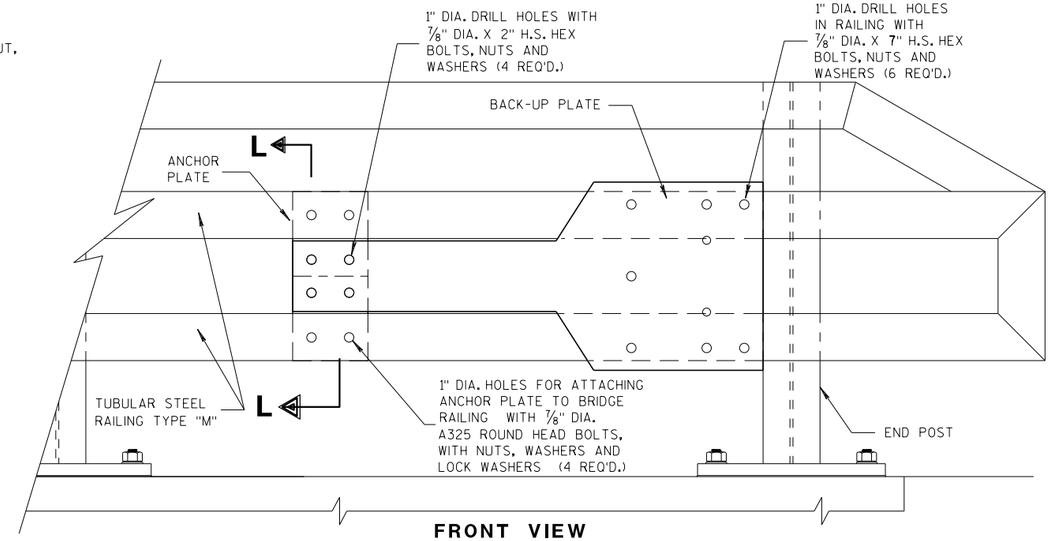
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

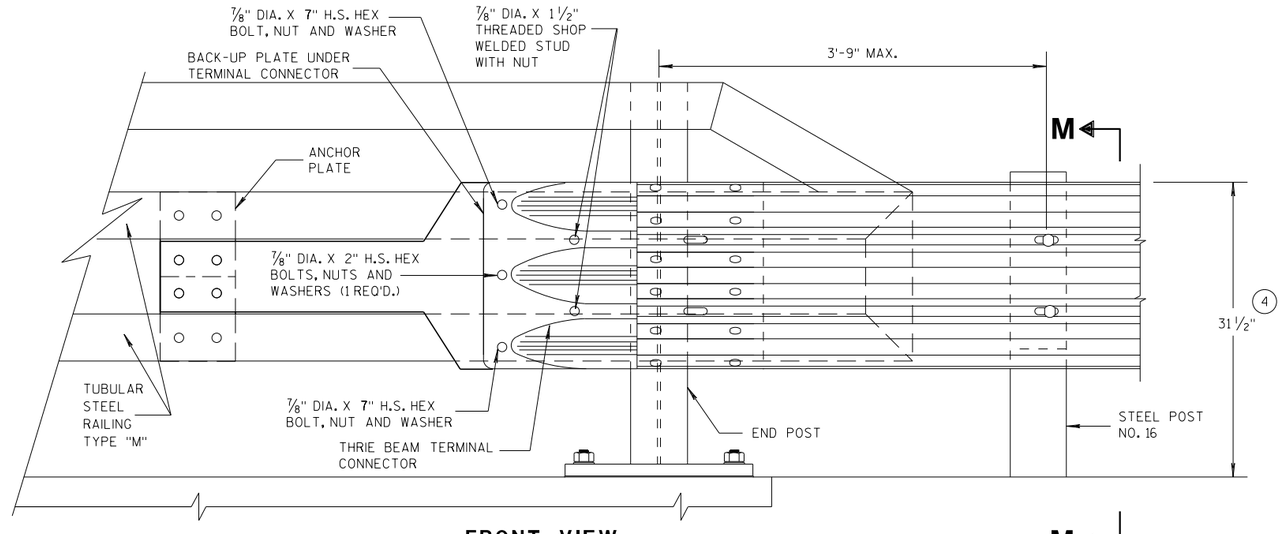


SECTION L-L

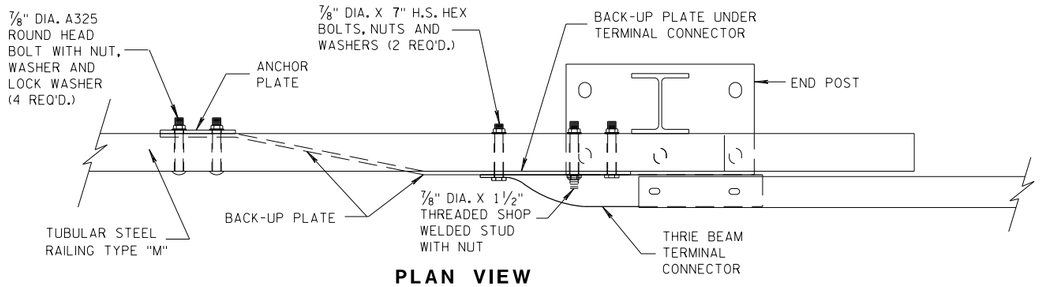


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

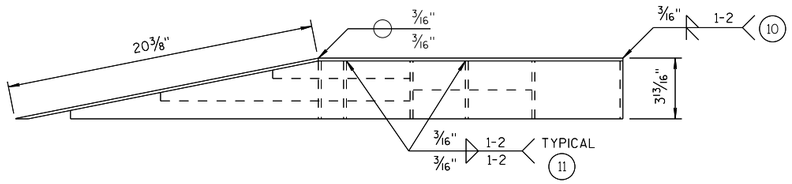
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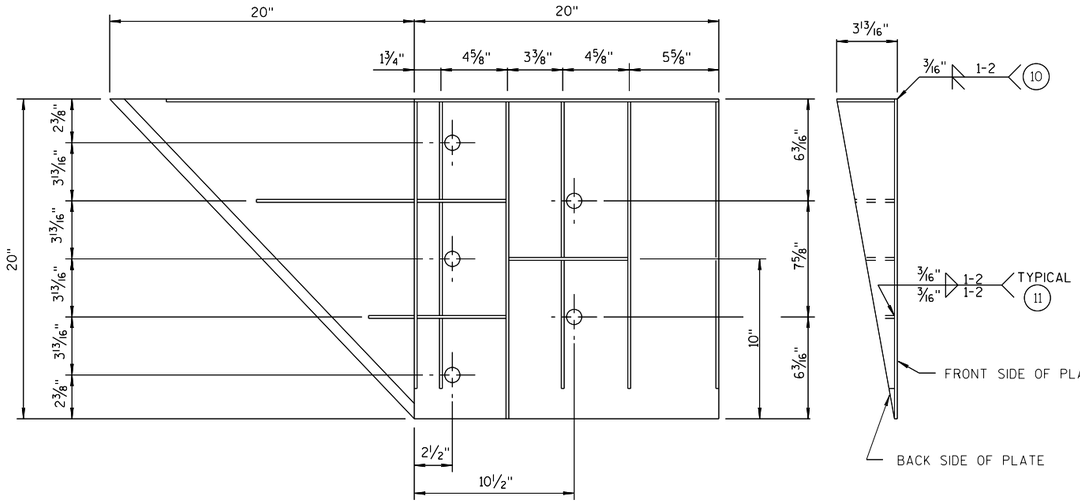
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S.D.D. 14 B 45-5h

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

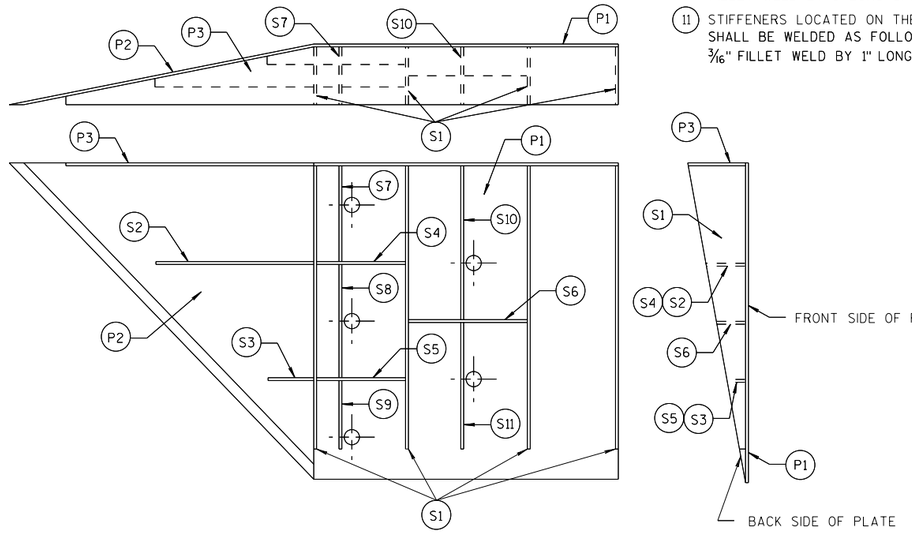


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

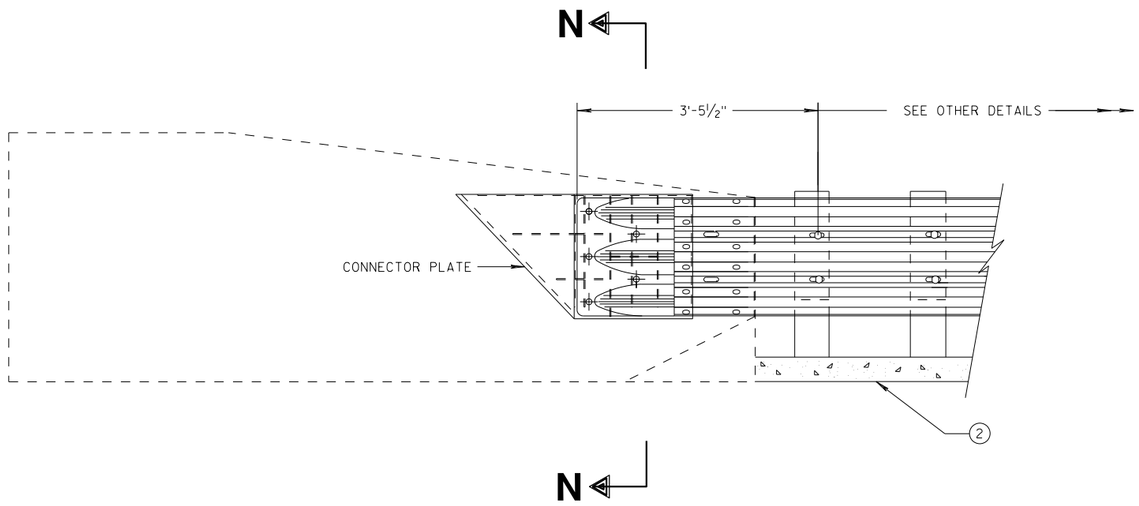
SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

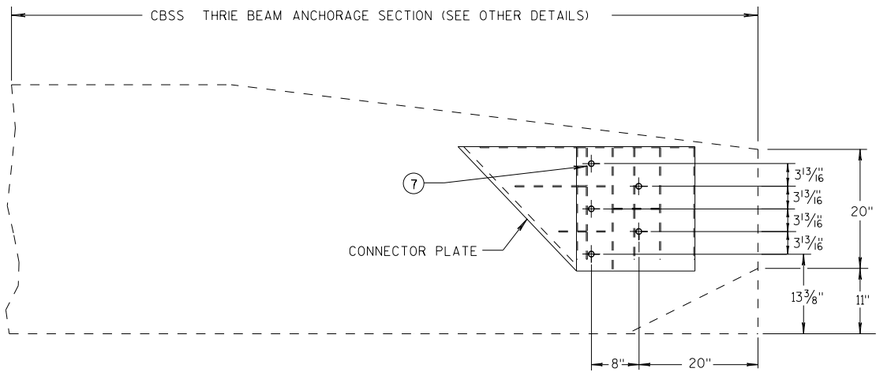
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ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



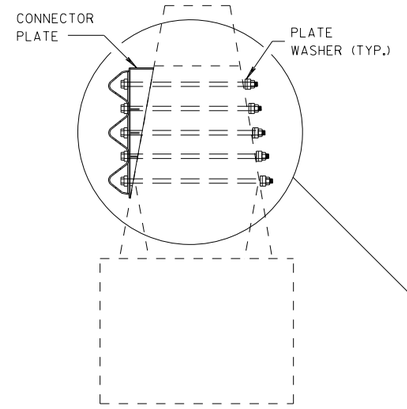
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

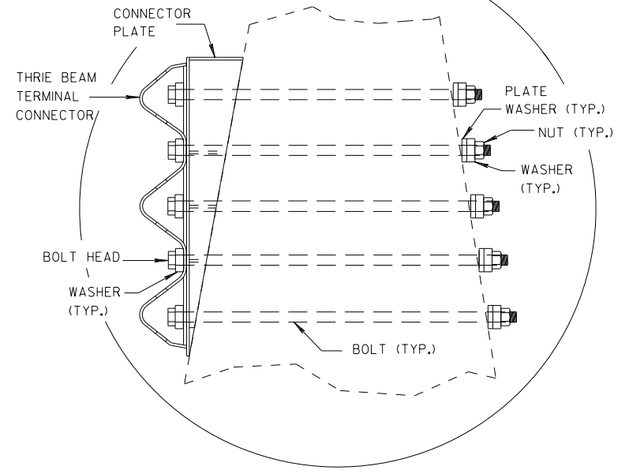
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE BARRIER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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 BARRIER 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.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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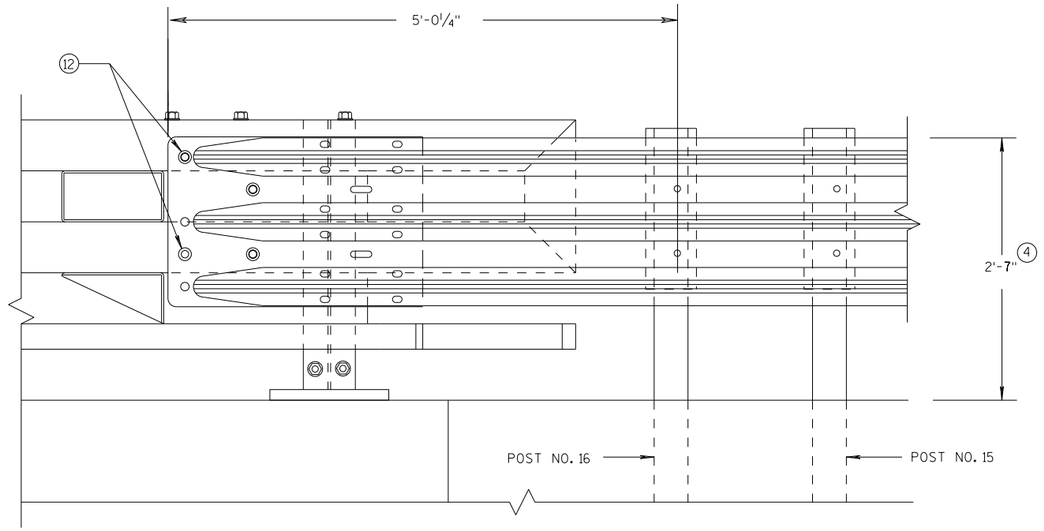
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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

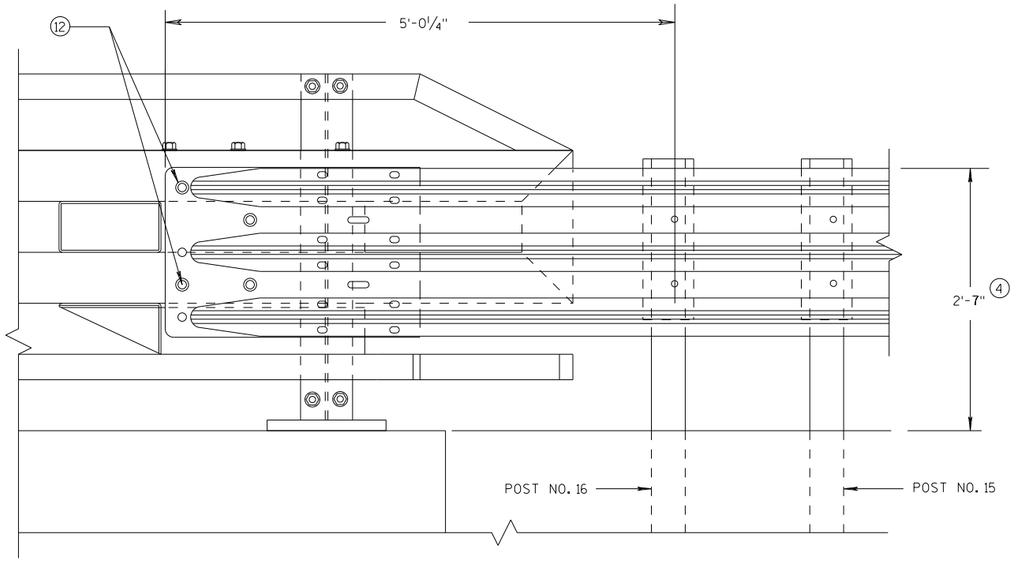
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

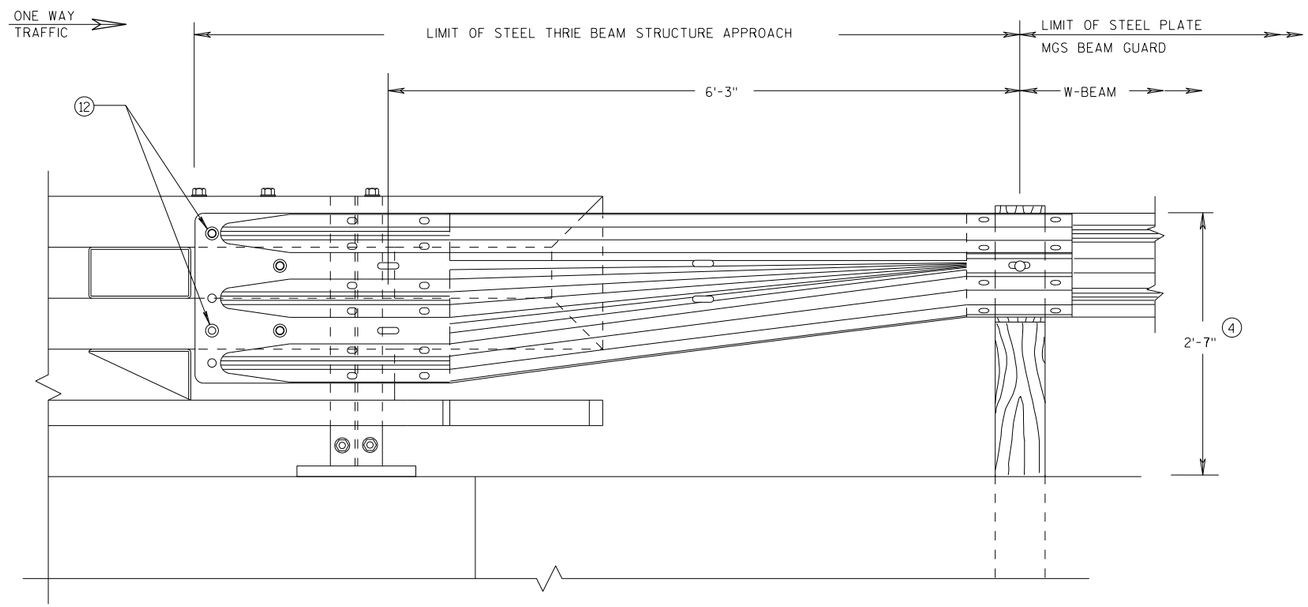
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7/2018
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UNIT SUPERVISOR

FHWA

6
S.D.D. 14 B 45-5k



FRONT VIEW

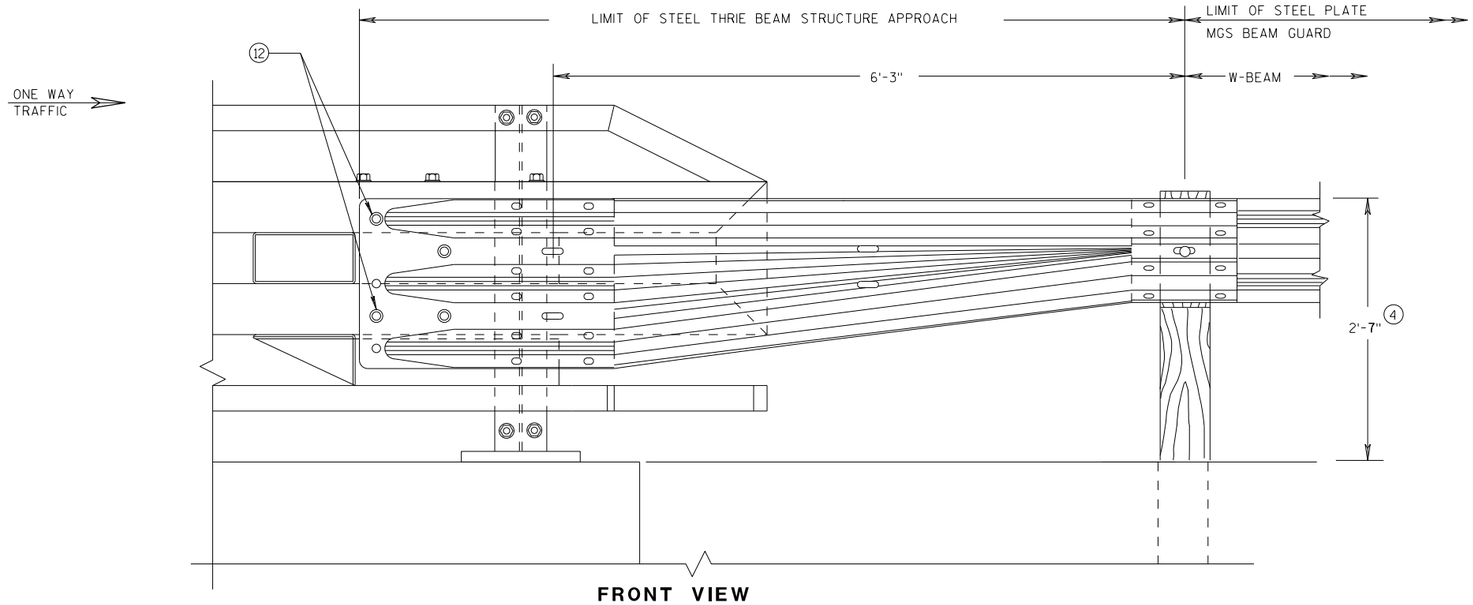
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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FHWA

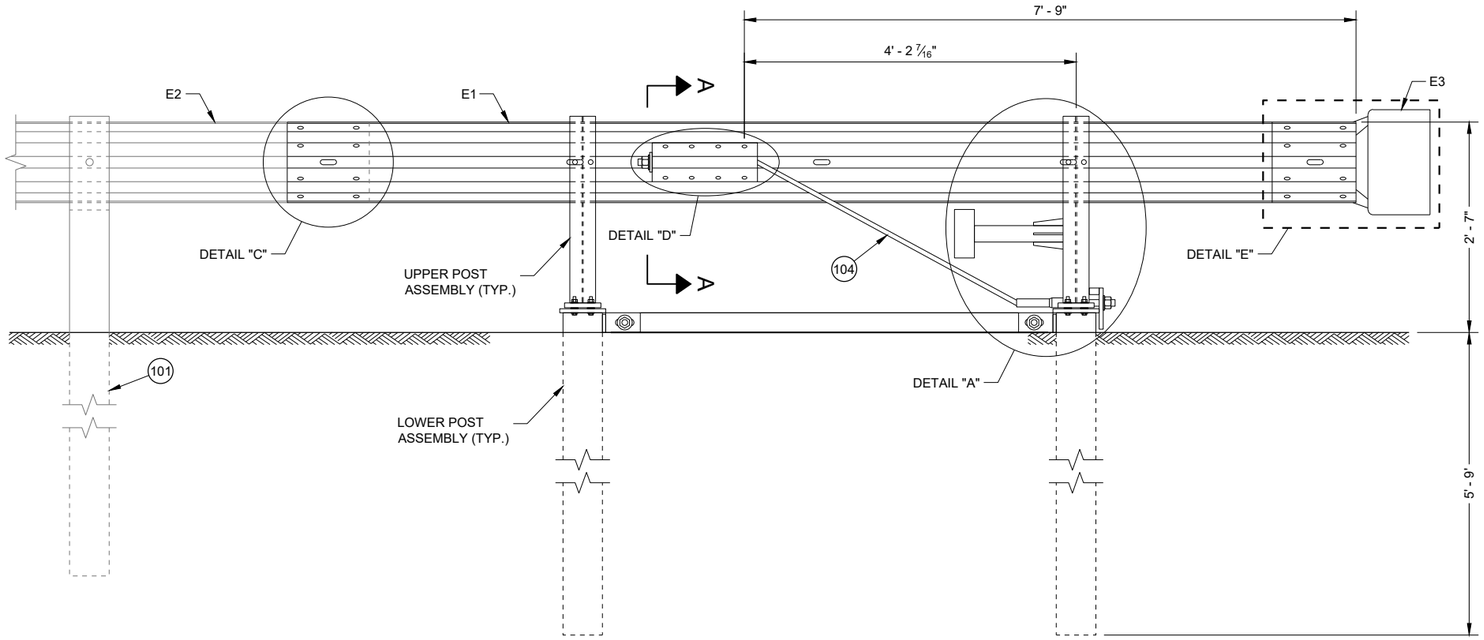
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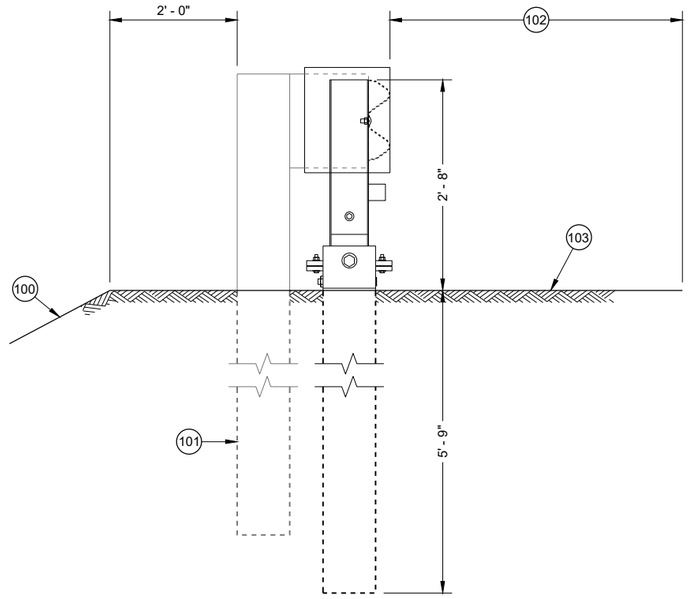
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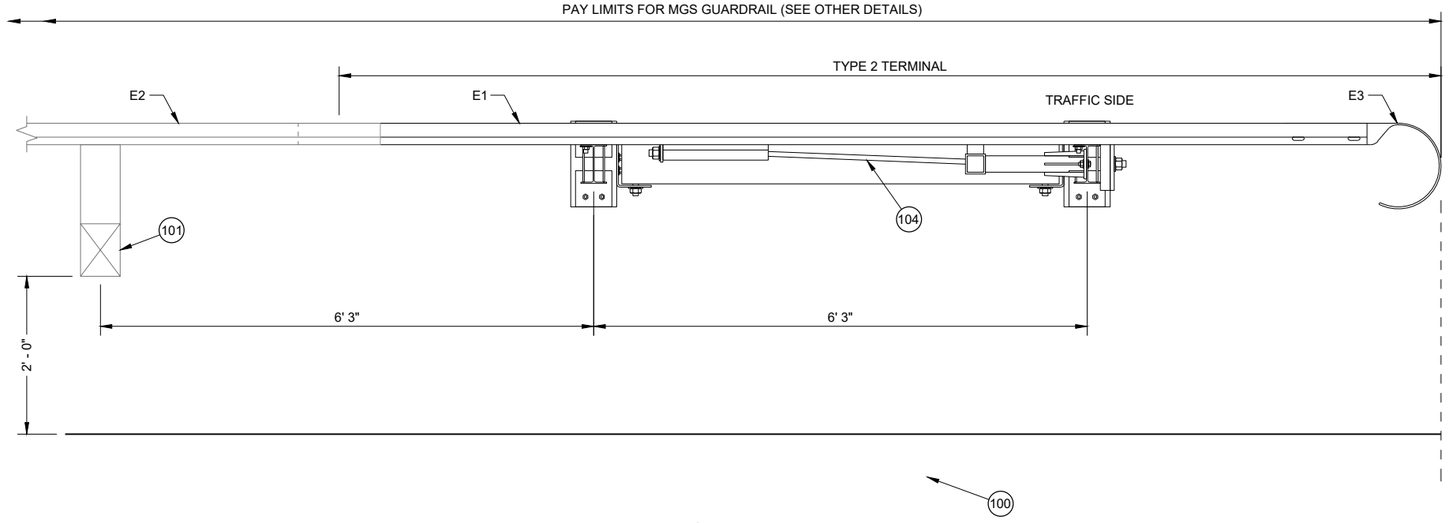
SDD 14B47-a Midwest Guardrail System Type 2 Terminal - Layout



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.
(101) SEE SDD 14B42 FOR MORE INFORMATION.
(102) SHOULDER
(103) MAXIMUM SLOPE IS 10:1.
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

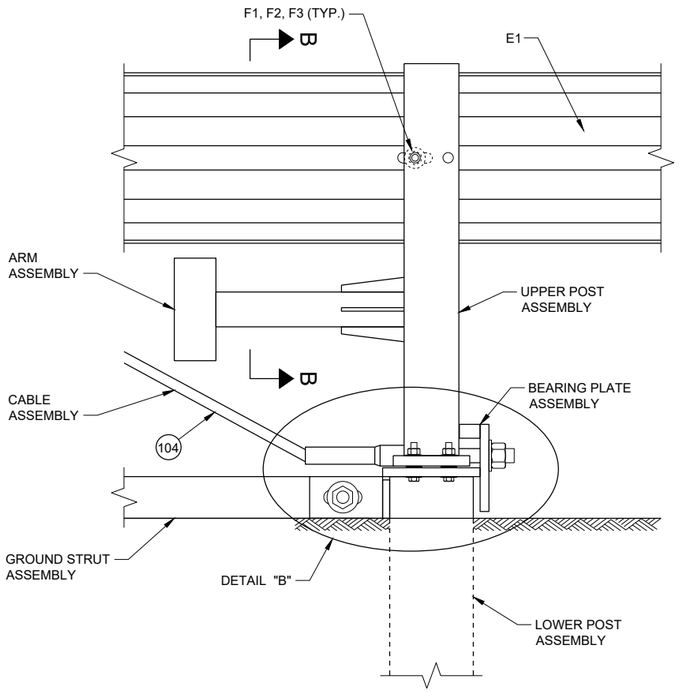
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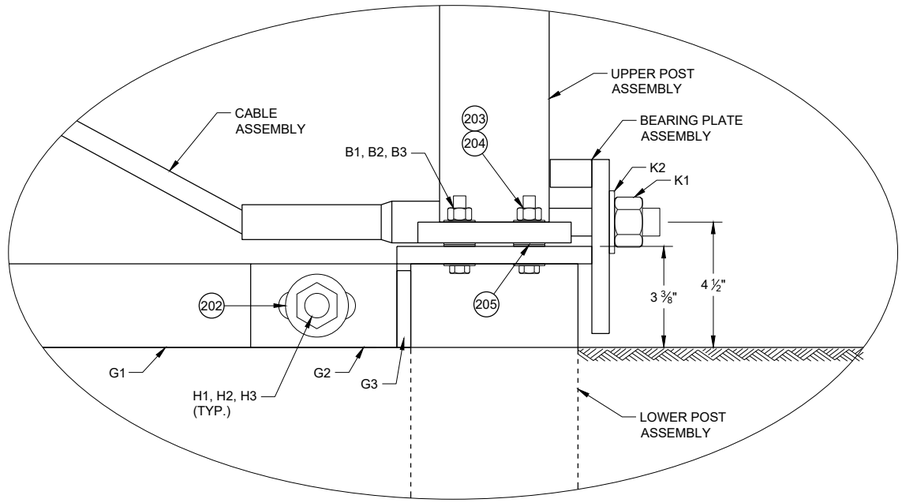
SDD 14B47 - 03a

SDD 14B47 - 03a

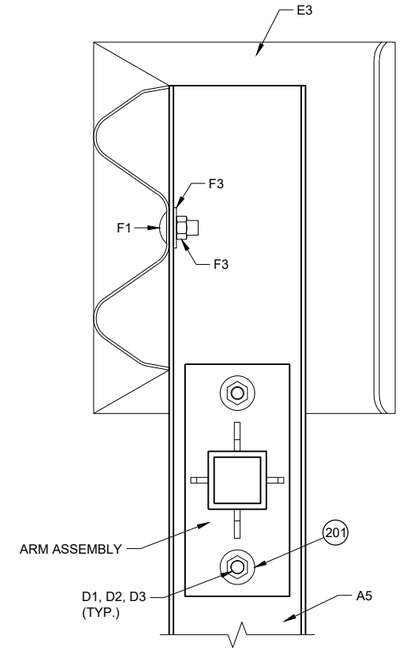
SDD 14B47-b Midwest Guardrail System Type 2 Terminal - Details



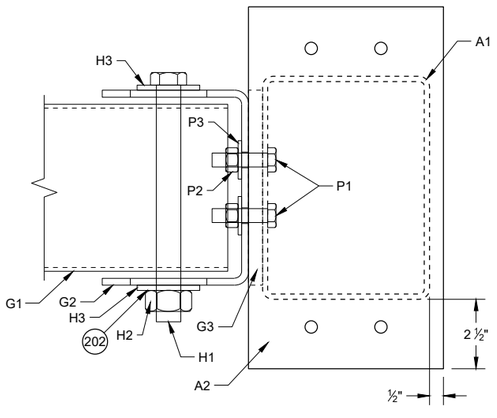
DETAIL "A"



DETAIL "B"

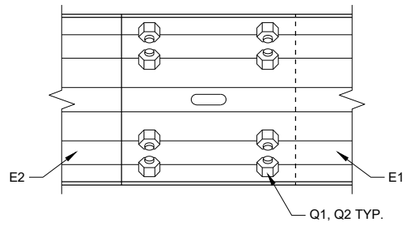


SECTION B - B

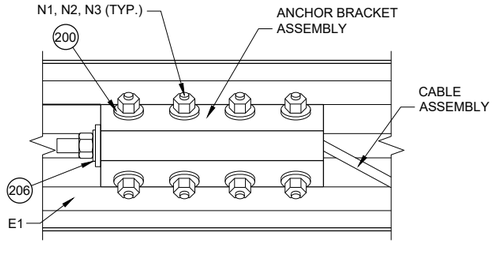


TOP VIEW

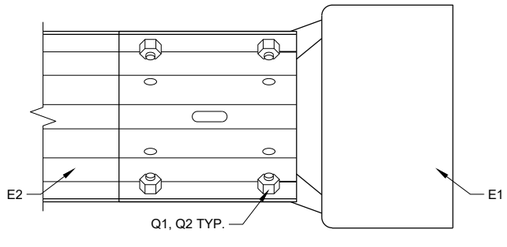
GROUND STRUT CONNECTION DETAIL



DETAIL "C"



DETAIL "D"



DETAIL "E"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

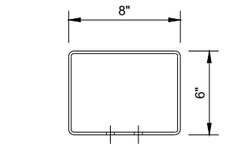
206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

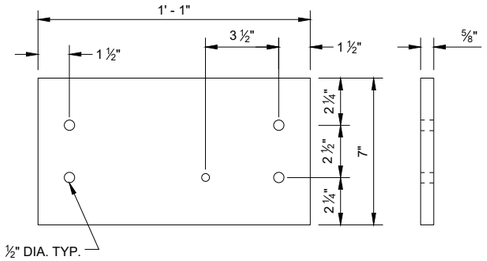
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47 - 03b

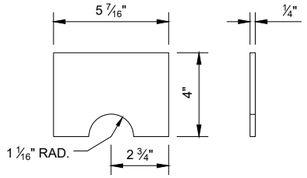
SDD 14B47-c Midwest Guardrail System Type 2 Terminal - Post Components and Assemblies



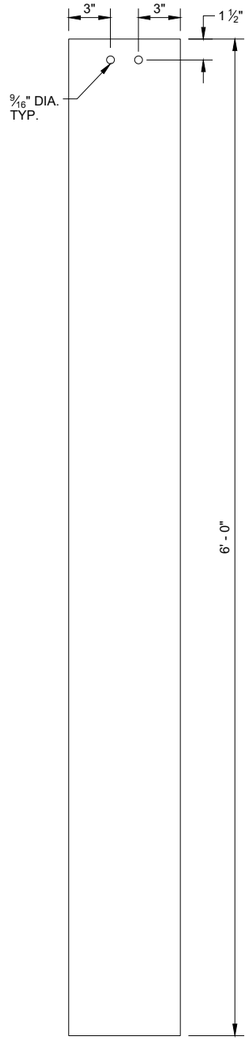
TOP VIEW



LOWER PLATE (A2)

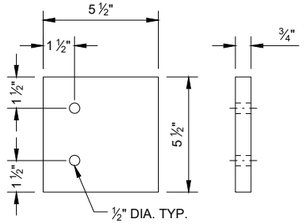


POST GUSSET (A3)

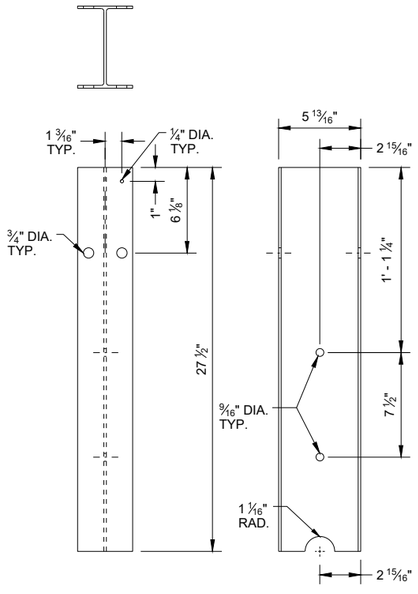


SIDE VIEW

FOUNDATION TUBE (A1)

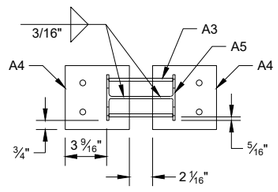


UPPER PLATE (A4)

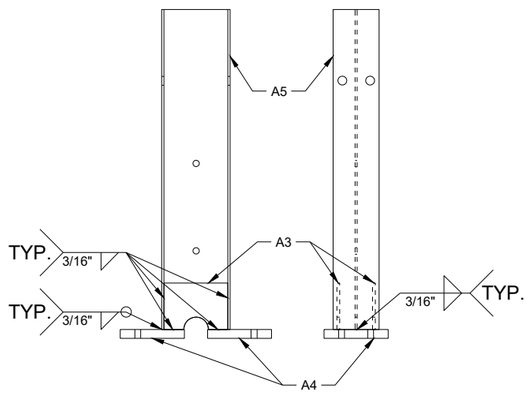


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

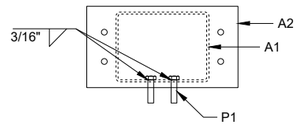


PLAN VIEW

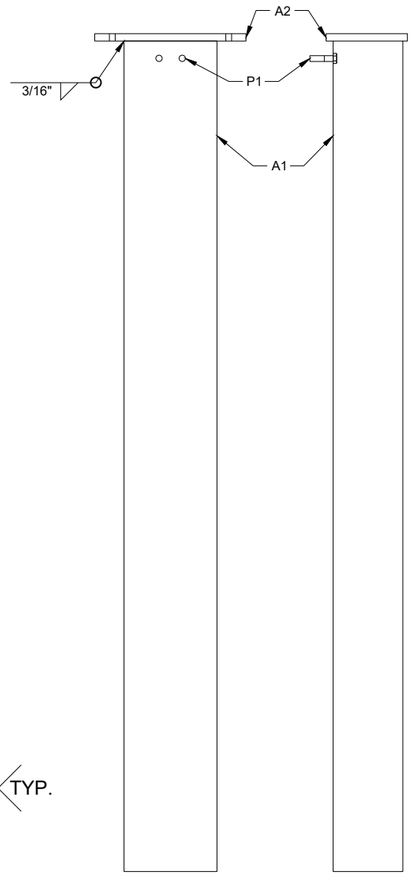


SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

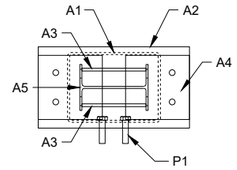


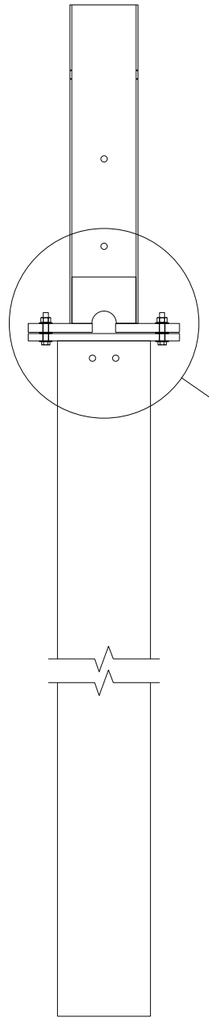
PLAN VIEW



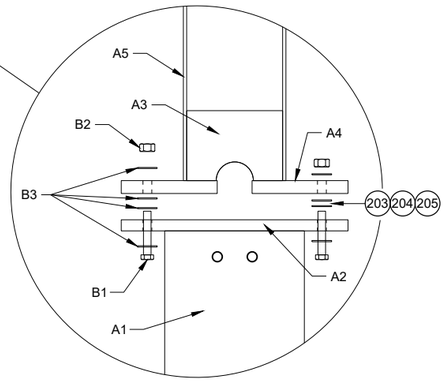
FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY





ASSEMBLED POST



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

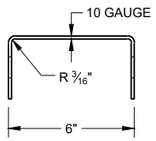
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SDD 14B47 - 03c

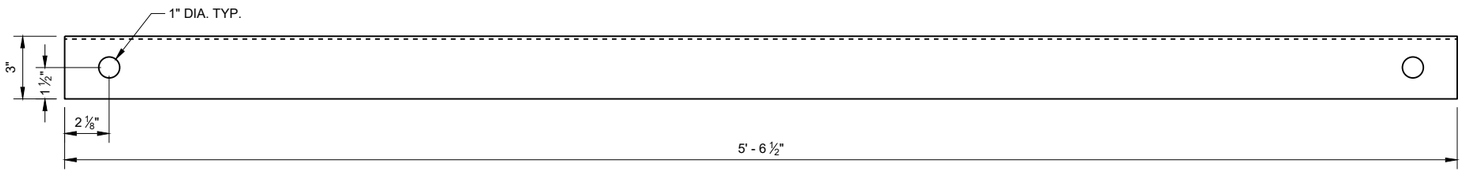
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SDD 14B47 - 03c

SDD 14B47d - Midwest Guardrail System Type 2 Terminal - Ground Strut, Guardrail, Cable Assembly Components

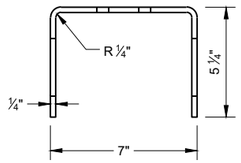


SIDE VIEW

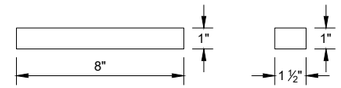


FRONT VIEW

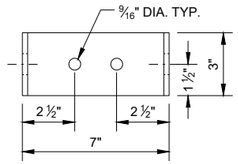
GROUND STRUT CHANNEL (G1)



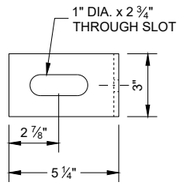
TOP VIEW



BEARING PLATE FLANGE (L2)

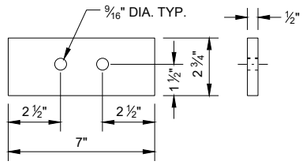


FRONT VIEW

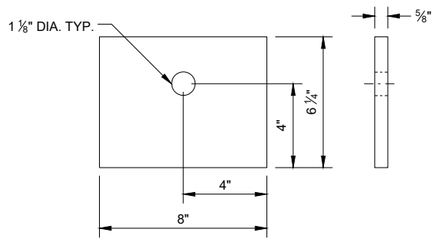


SIDE VIEW

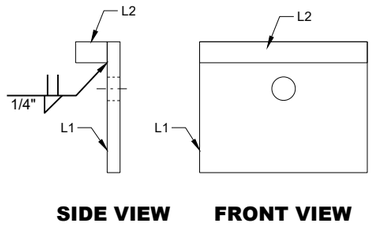
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

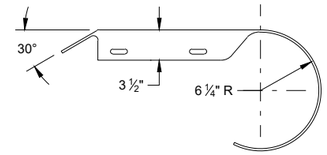


BEARING PLATE (L1)

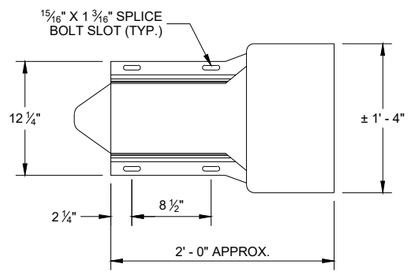


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

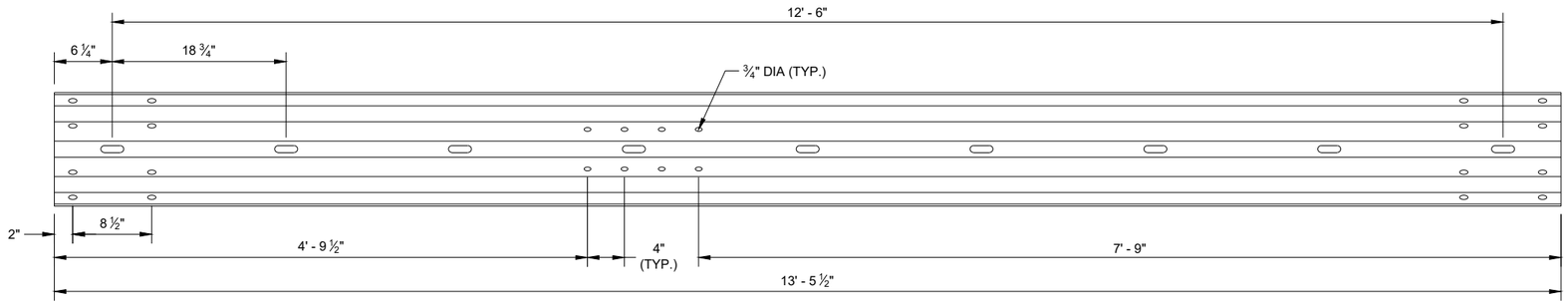


PLAN VIEW

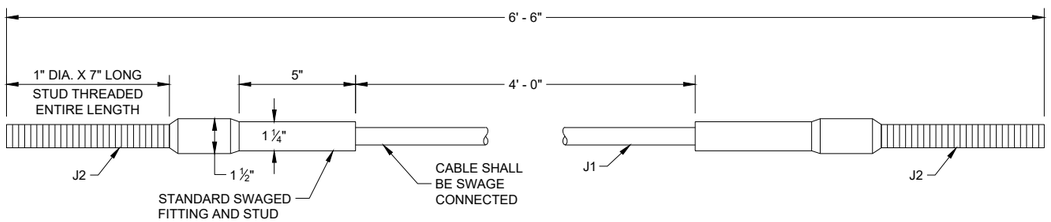


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

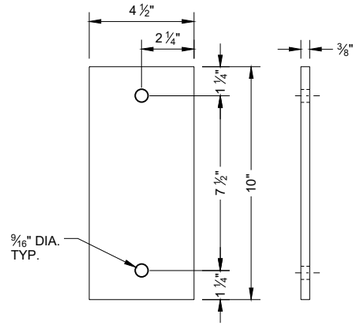
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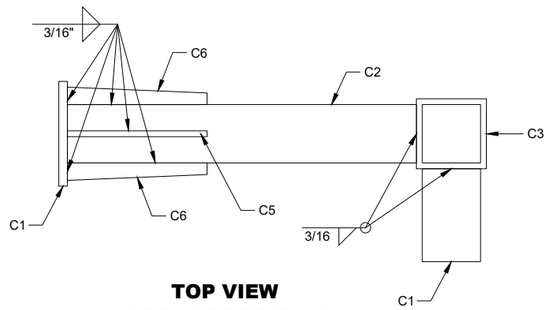
SDD 14B47 - 03d

SDD 14B47 - 03d

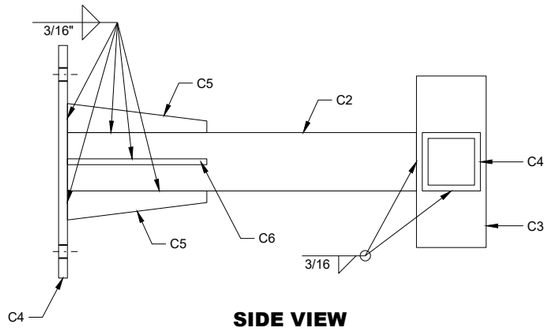
14B47-e Midwest Guardrail System (MGS) Arm Components and Assembly, Cable Bracket Component and Assembly



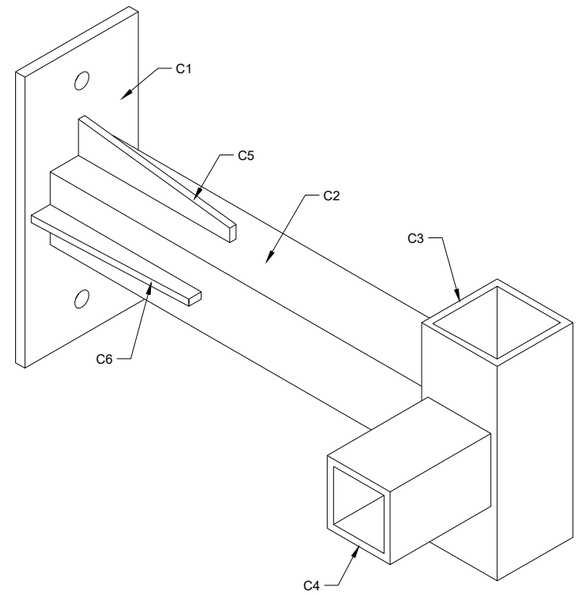
ARM PLATE (C1)



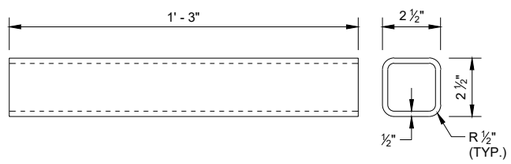
TOP VIEW
ARM ASSEMBLY



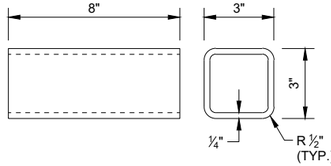
SIDE VIEW
ARM ASSEMBLY



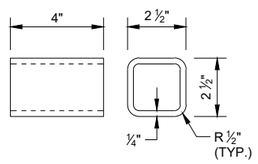
ISOMETRIC VIEW
ARM ASSEMBLY



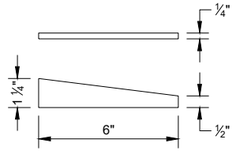
ARM TUBE 1 (C2)



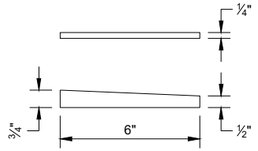
ARM TUBE 2 (C3)



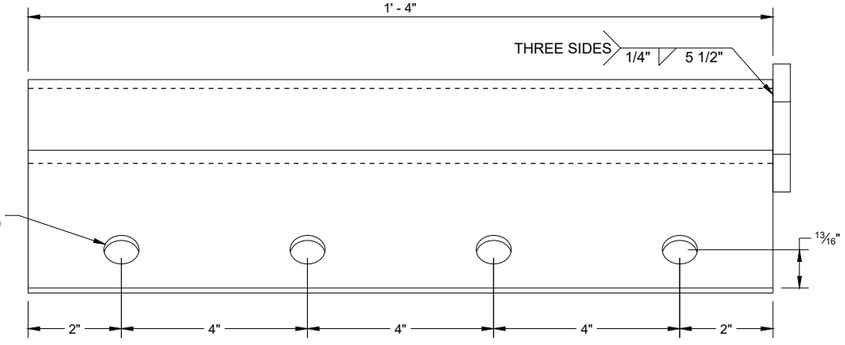
ARM TUBE 3 (C4)

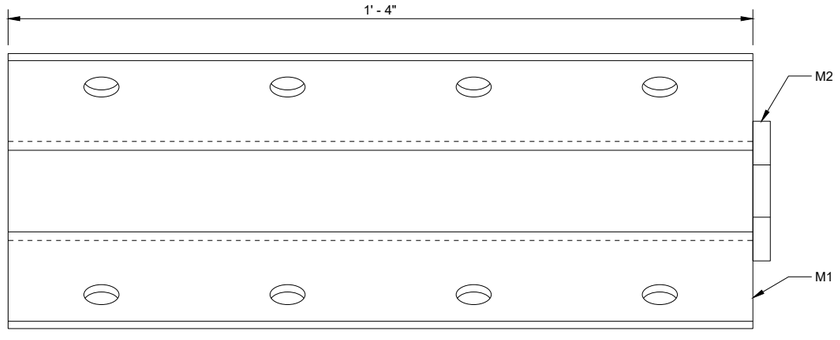


ARM GUSSET PLATE 1 (C5)

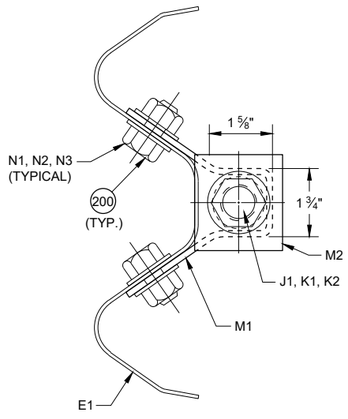


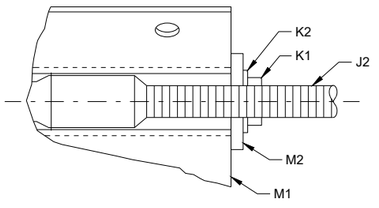
ARM GUSSET PLATE 2 (C6)



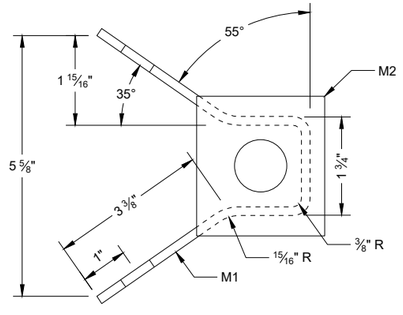


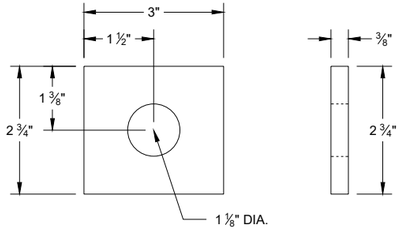
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47 - 03e

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SDD 14B47 - 03e

SDD 14B47-f Midwest Guardrail System Type 2 Terminal - Part List

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER 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	5/8" THICKNESS
A3	POST GUSSET	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	1/4" THICKNESS
A4	UPPER 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	3/4" THICKNESS
A5	TYPE 2 POST	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	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX 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.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	
C1	ARM ASSEMBLY 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	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET 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	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET 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	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	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	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	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	1/4" THICKNESS
G3	GROUND STRUT 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	1/2" THICKNESS

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47 - 03f

SDD 14B47-g Midwest Guardrail System Type 2 Terminal - Part List

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING 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	5/8" THICKNESS
L2	BEARING PLATE FLANGE	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	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	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	
M2	BEAM GUARD ANCHOR 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	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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	1/2" DIA.
P2	FOUNDATION TUBE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDENED WASHER ONLY)	1/2" DIA.
P3	FOUNDATION TUBE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. 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 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

6

6

SDD 14B47 - 03g

SDD 14B47 - 03g

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

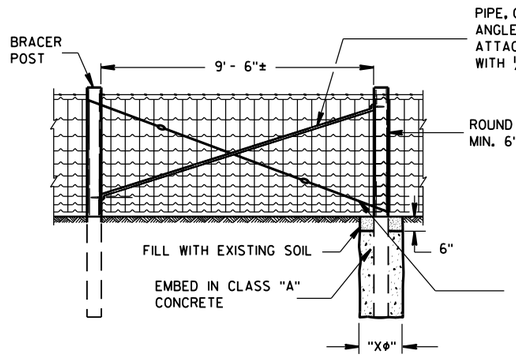
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

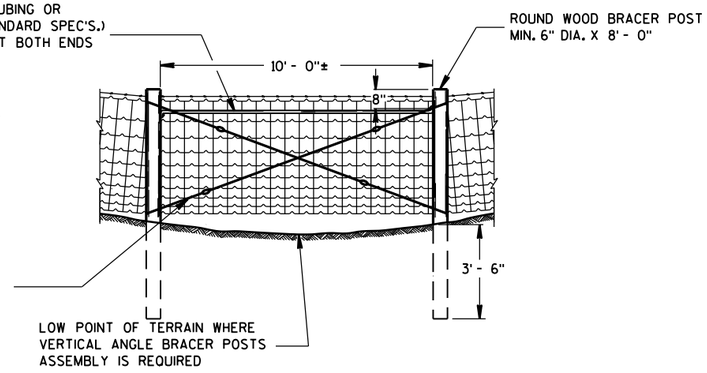
SDD 15B1-a Fence Woven Wire

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

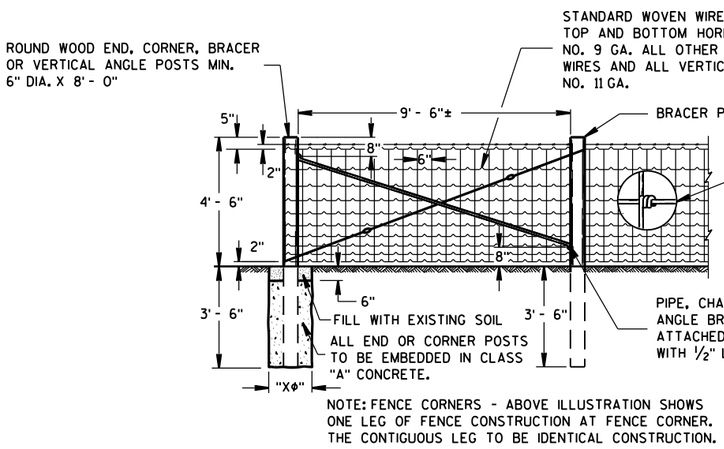
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

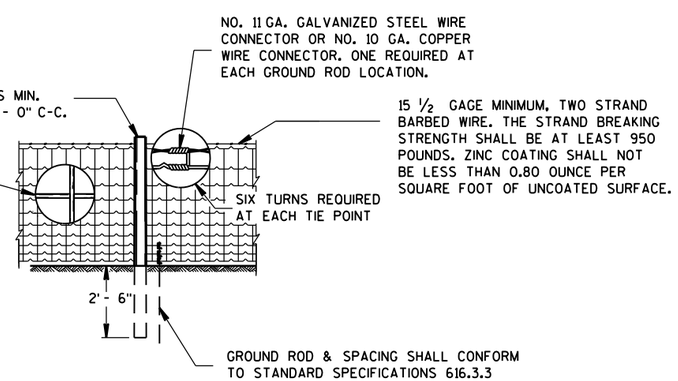
FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

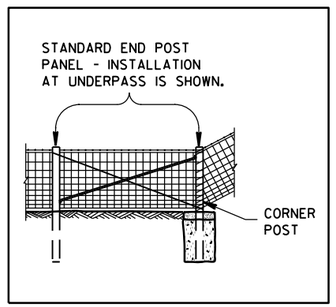
END OR CORNER POSTS ASSEMBLY

ALTERNATE METHODS OF SECURING VERTICAL STAY WIRES TO HORIZONTAL WIRES - SECURELY WELDED OR TWISTED.

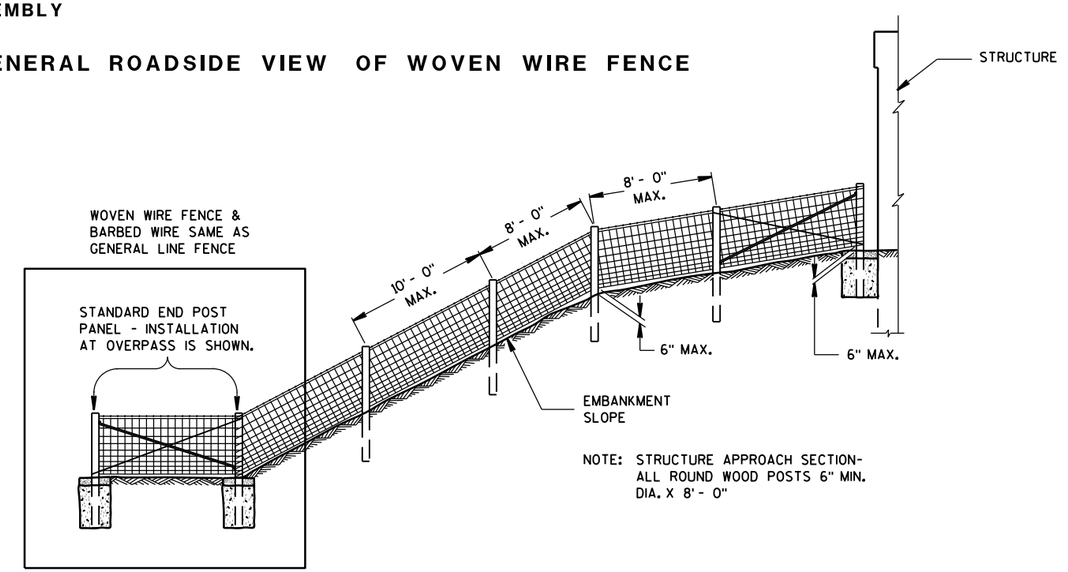


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

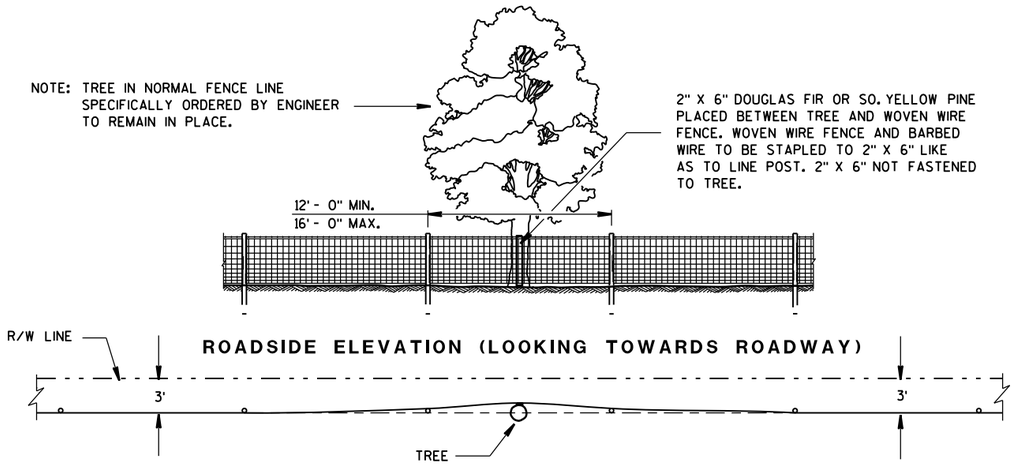
6

S.D.D. 15 B 1-8a

6

S.D.D. 15 B 1-8a

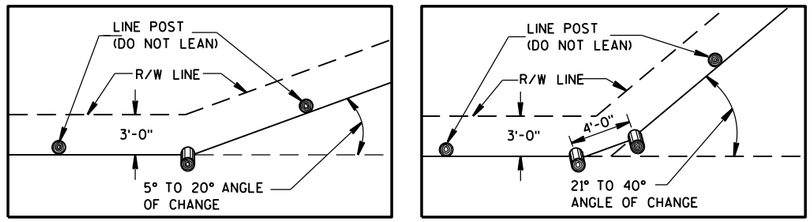
SDD 15b1-b Fence Woven Wire



ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



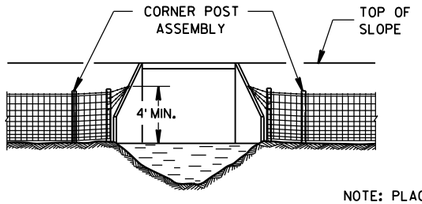
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

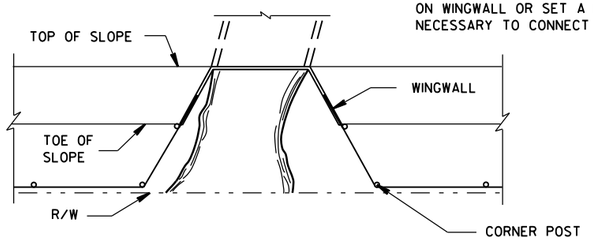
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

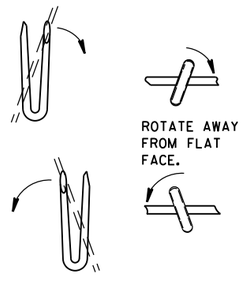
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



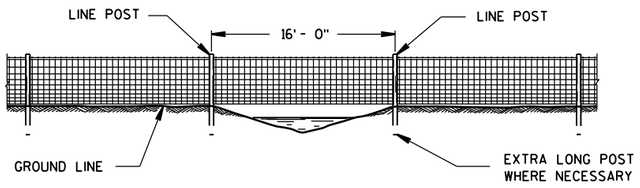
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



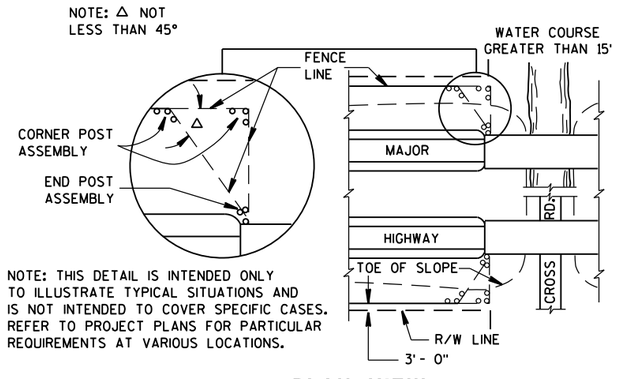
FENCE INSTALLATION TO WINGWALLS



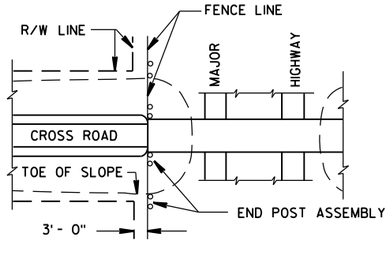
LINE POST



FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

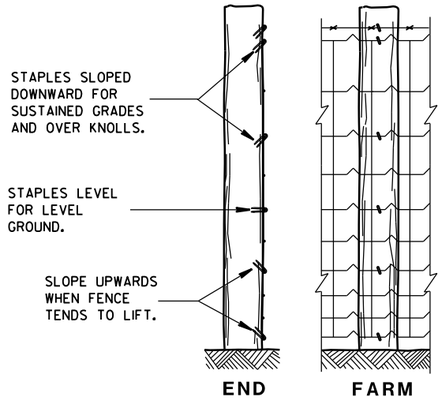


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 1-8b

6

S.D.D. 15 B 1-8b

STATE PROJECT NUMBER

1222-13-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

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

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

WELD TEST AS PER AWS D1.1.

THE STRUCTURE MUST BE ASSEMBLED IN THE SHOP TO ASSURE FIT UP PER SECTION 641.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS.

EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.

CONTRACTOR SHALL VERIFY UTILITY CONFLICTS PRIOR TO CONSTRUCTION OF FOOTINGS.

CENTER MAIN SIGNS VERTICALLY ON TRUSS.

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

SIGN BRIDGE NAME PLATES AND ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SIGN BRIDGE S-59-XX." LOCATE THE NAME PLATE OR ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL NAME PLATE IN ACCORDANCE WITH S.D.D. 12 A 3-10.

ANCHOR RODS SHALL BE PROVIDED WITH TEMPLATES (TOP & BOTTOM) TO MAINTAIN VERTICAL ALIGNMENT AND SPACING DURING CONCRETE PLACEMENT. TEMPLATES SHALL NOT BE WELDED TO THE ANCHOR RODS.

DESIGN DATA

DEAD LOAD - 3 PSF OF SIGN, WT. OF SUPPORTING STRUCTURE
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS

DESIGNED ACCORDING TO THE 6TH EDITION OF AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE +½(WIND *)	133

*MIN. VALUE OF 25 P.S.F. FOR GR. 3

MATERIAL PROPERTIES

CONCRETE MASONRY ——— f'c = 3,500 P.S.I

BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

COLUMN AND CHORD PIPE, API SPEC. 5L GRADE X42 ——— fy = 42,000 P.S.I. **

PLATES, BARS, AND STRUCTURAL ANGLES, ASTM A709 GRADE 36 ——— fy = 36,000 P.S.I.

ANCHOR RODS, ASTM F1554, GRADE 55 ——— fy = 55,000 P.S.I.
ASTM A563 HEAVY HEX NUTS AND ASTM F436 WASHERS

** CONTRACTOR MAY SUBSTITUTE ALTERNATE MATERIALS PER WISDOT BRIDGE MANUAL SECTION 39.3 AT NO ADDITIONAL COST, PROVIDED THAT APPROVAL IS OBTAINED FROM THE DEPARTMENT.

STRUCTURE	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-59-77	468	13'-0"
S-59-79	432	12'-0"
S-59-82	576	12'-0"
S-59-83	450	12'-0"

LIST OF DRAWINGS

1. GENERAL NOTES
2. S-59-77 GENERAL LAYOUT & QUANTITIES
3. S-59-79 GENERAL LAYOUT & QUANTITIES
4. S-59-82 GENERAL LAYOUT & QUANTITIES
5. S-59-83 GENERAL LAYOUT & QUANTITIES
6. FOUNDATION DETAILS
7. SIGN BRIDGE DETAILS
8. SIGN BRIDGE CONNECTION DETAILS
9. S-59-77 SUBSURFACE EXPLORATION
10. S-59-79 SUBSURFACE EXPLORATION
11. S-59-82 SUBSURFACE EXPLORATION
12. S-59-83 SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS

DOMINIQUE BECHLE (608) 261-8205
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-59-77,79,82,83

IH 43 / STH 23 INTERCHANGE

COUNTY	CITY/TOWN/VILLAGE
SHEBOYGAN	SHEBOYGAN/KOHLER

DESIGN SPEC.
AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
DMB	ARC	DMB	ARC

GENERAL NOTES

SHEET 1 OF 12

I.D. 1225-08-00 DATE: MAY 2018

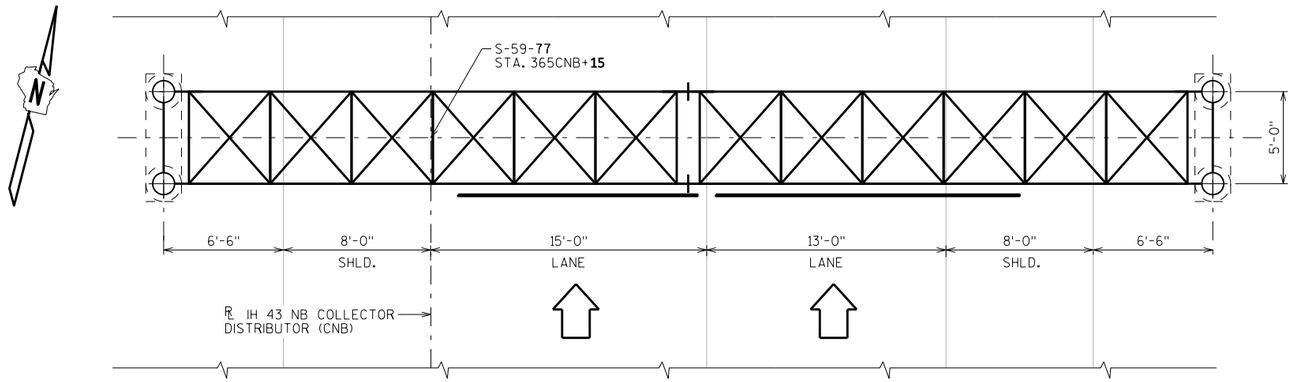
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STATE PROJECT NUMBER

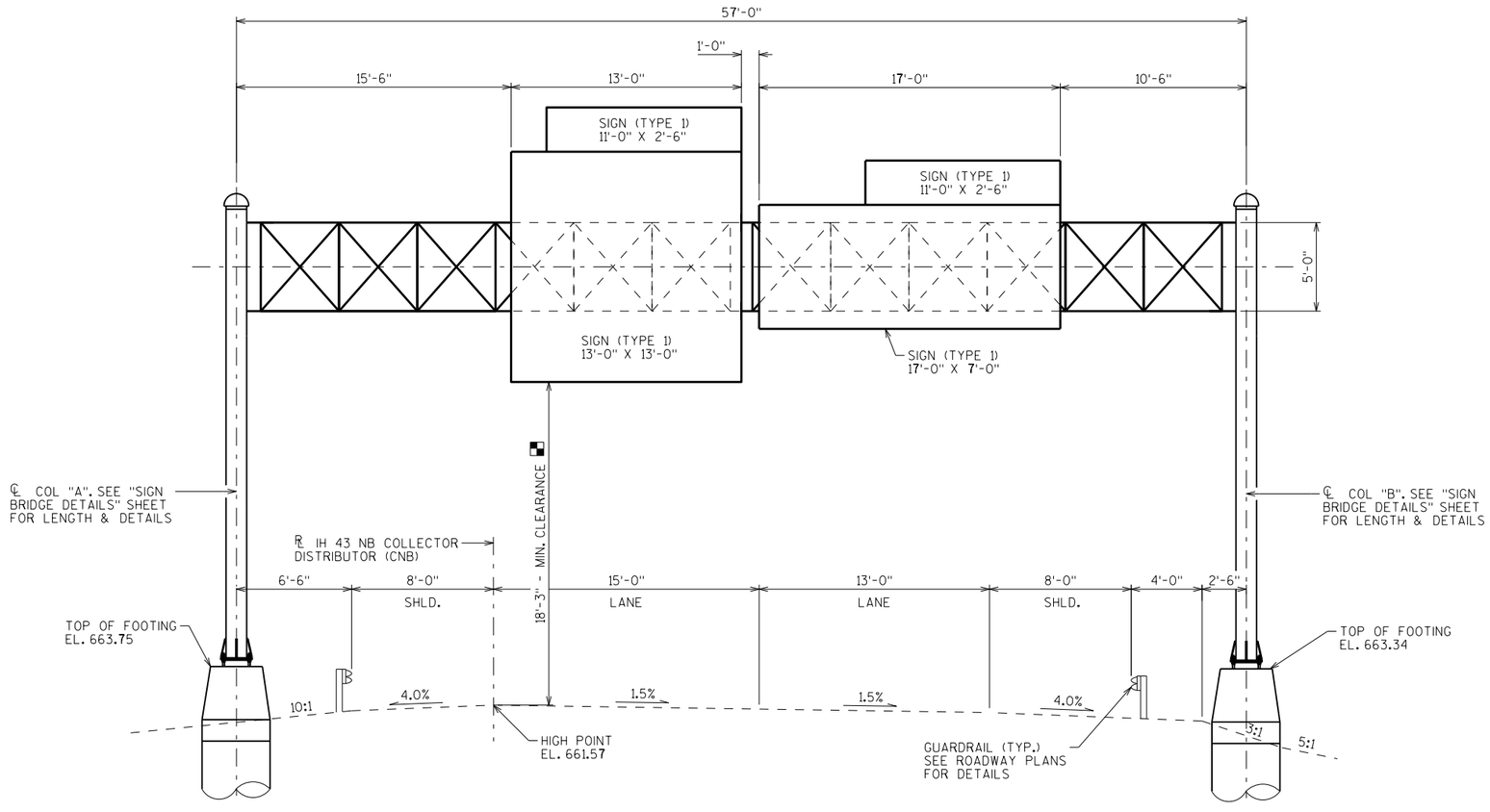
1222-13-71



PLAN

STA. 365CNB+15

NOTE:
EXISTING 55'-0" LONG
4-CHORD SIGN BRIDGE
S-59-02 TO BE REMOVED.
(STA. 364CNB+88±)



ELEVATION

(LOOKING NORTH AT FRONT FACE OF SIGN)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	19,040
641.6600	SIGN BRIDGE S-59-77	LS	1
SPV.0105	REMOVING SIGN BRIDGE S-59-02	LS	1

TRAFFIC VOLUME

IH 43 NB COLLECTOR DISTRIBUTOR

A.D.T. = 6,700
R.D.S. = 70 M.P.H.

■ MIN. CLEARANCE SHOWN IS BASED ON THE MAX SIGN DEPTH NOTED ON SHEET 1.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

S-59-77
GENERAL LAYOUT
& QUANTITIES

SHEET 2

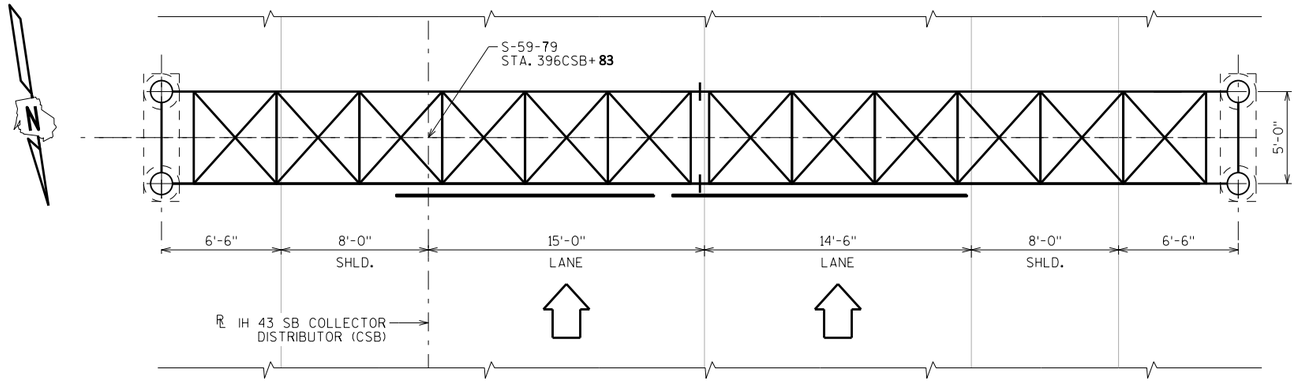
SCALE = 4.00

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8

STATE PROJECT NUMBER

1222-13-71



PLAN

STA. 396CSB+**83**

NOTE:
EXISTING 60'-0" LONG
4-CHORD SIGN BRIDGE
S-59-04 TO BE REMOVED.
(STA. **397 CSB +10** ±)

TOTAL ESTIMATED QUANTITIES

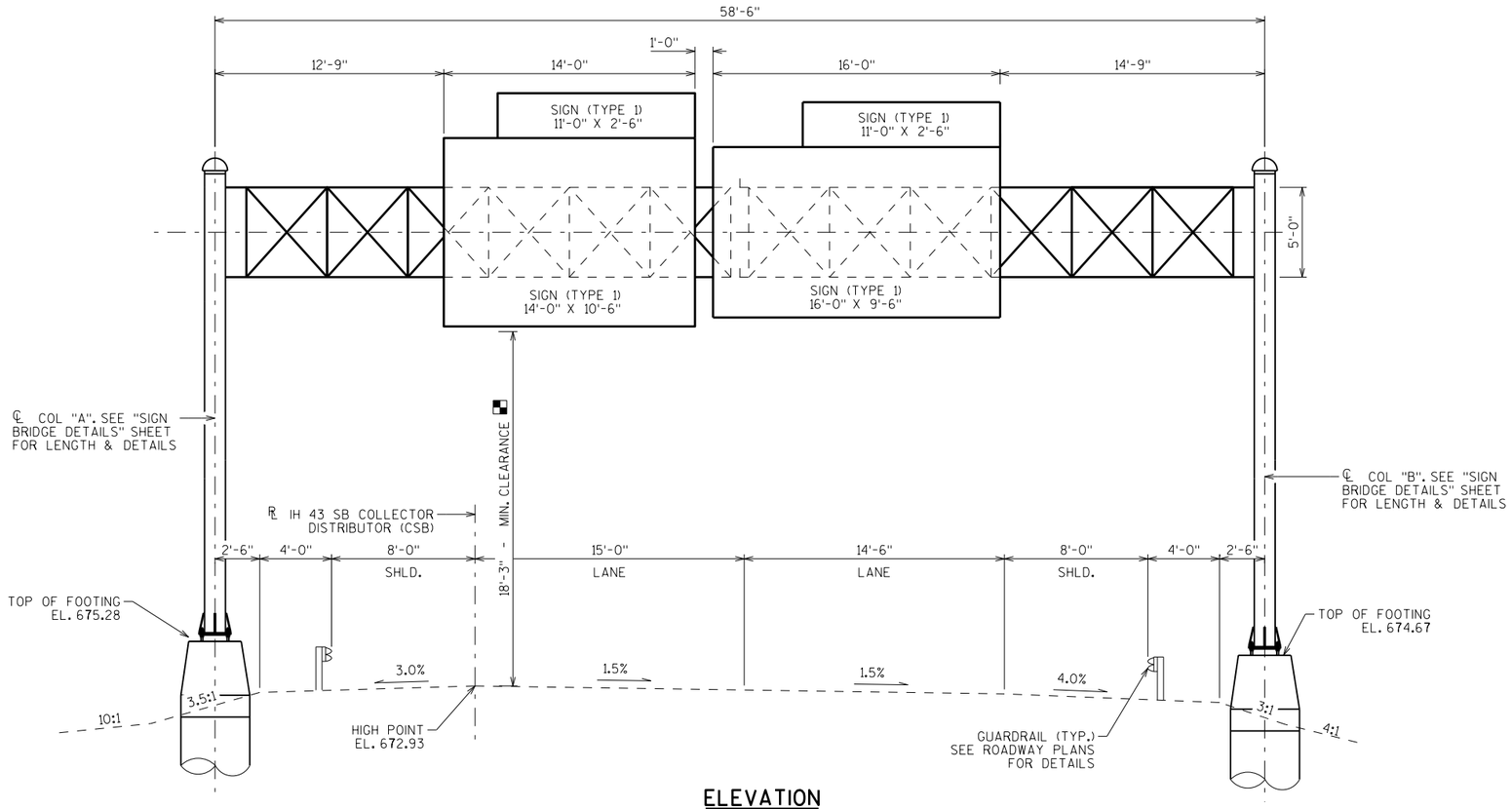
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636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	19,040
641.6600	SIGN BRIDGE S-59-79	LS	1
SPV.0105	REMOVING SIGN BRIDGE S-59-04	LS	1

TRAFFIC VOLUME

IH 43 SB COLLECTOR DISTRIBUTOR

A.D.T. = 2,200
R.D.S. = 70 M.P.H.

■ MIN. CLEARANCE SHOWN IS BASED ON THE MAX SIGN DEPTH NOTED ON SHEET 1.



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF SIGN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

S-59-79
GENERAL LAYOUT
& QUANTITIES

SHEET 3

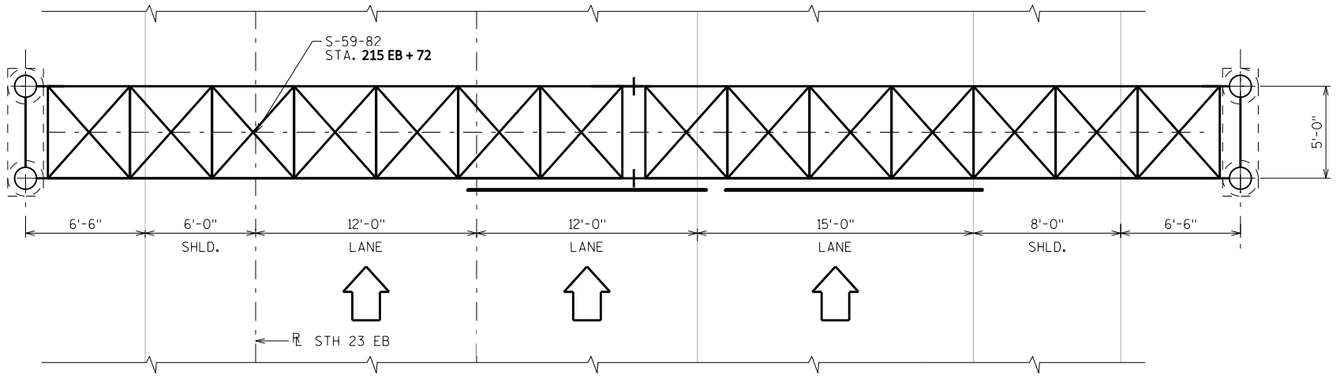
SCALE = 4.00

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STATE PROJECT NUMBER

1222-13-71



PLAN

STA. **215 EB + 72**

NOTE:
EXISTING 65'-0" LONG
4-CHORD SIGN BRIDGE
S-59-06 TO BE REMOVED.
(STA. **216 EB + 02** ±)

TOTAL ESTIMATED QUANTITIES

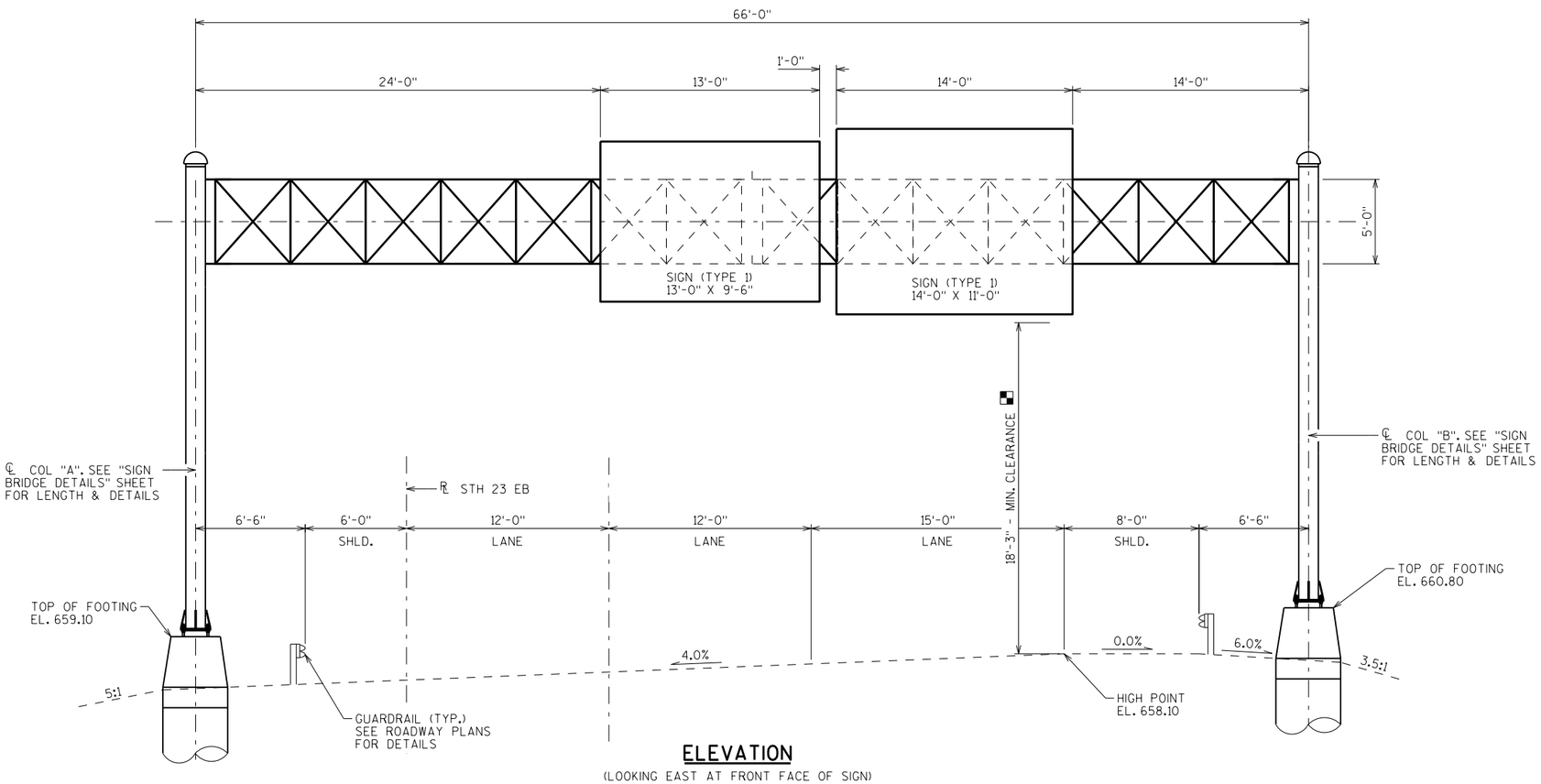
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	19,040
641.6600	SIGN BRIDGE S-59-82	LS	1
SPV.0105	REMOVING SIGN BRIDGE S-59-06	LS	1

TRAFFIC VOLUME

STH 23 EB

A.D.T. = 28,900
R.D.S. = 70 M.P.H.

■ MIN. CLEARANCE SHOWN IS BASED ON THE MAX SIGN DEPTH NOTED ON SHEET 1.



ELEVATION

(LOOKING EAST AT FRONT FACE OF SIGN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

S-59-82
GENERAL LAYOUT
& QUANTITIES

SHEET 4

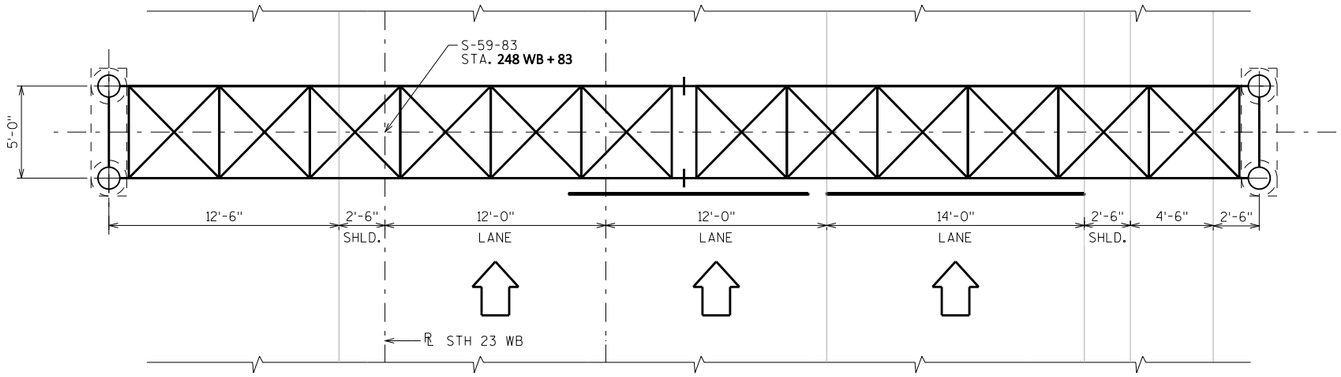
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SCALE = 4.00

STATE PROJECT NUMBER

1222-13-71



PLAN

STA. **248 WB + 83**

NOTE:
EXISTING 65'-0" LONG
4-CHORD SIGN BRIDGE
S-59-09 TO BE REMOVED.
(STA. **249 WB + 76** ±)

TOTAL ESTIMATED QUANTITIES

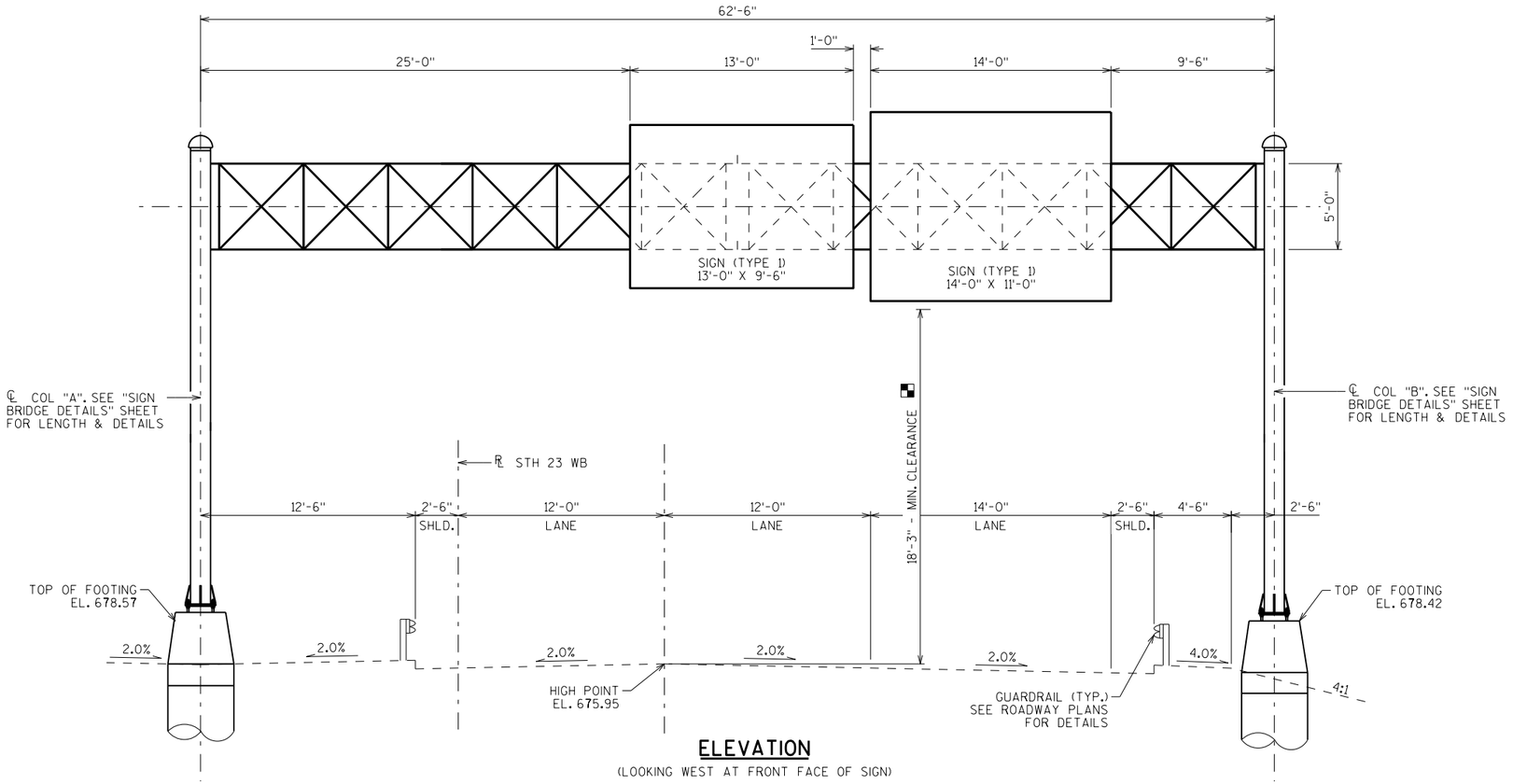
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	19,040
641.6600	SIGN BRIDGE S-59-83	LS	1
SPV.0105	REMOVING SIGN BRIDGE S-59-09	LS	1

TRAFFIC VOLUME

STH 23 WB

A.D.T. = 13,500
R.D.S. = 70 M.P.H.

■ MIN. CLEARANCE SHOWN IS BASED ON THE MAX SIGN DEPTH NOTED ON SHEET 1.



ELEVATION

(LOOKING WEST AT FRONT FACE OF SIGN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

S-59-83
GENERAL LAYOUT
& QUANTITIES

SHEET 5

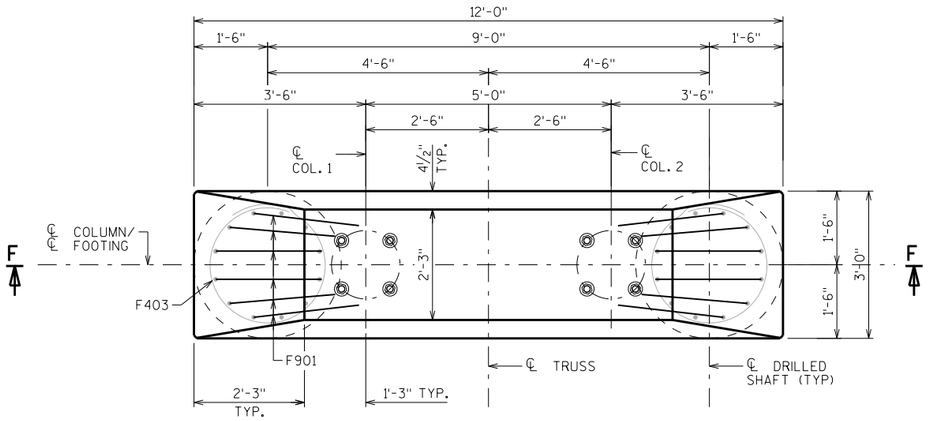
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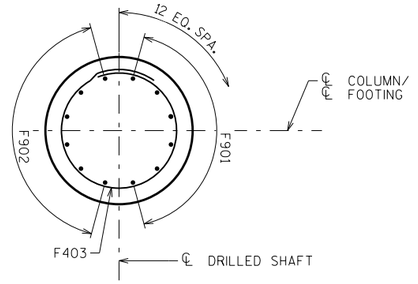
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STATE PROJECT NUMBER

1222-13-71



PLAN



SECTION D-D

BILL OF BARS

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

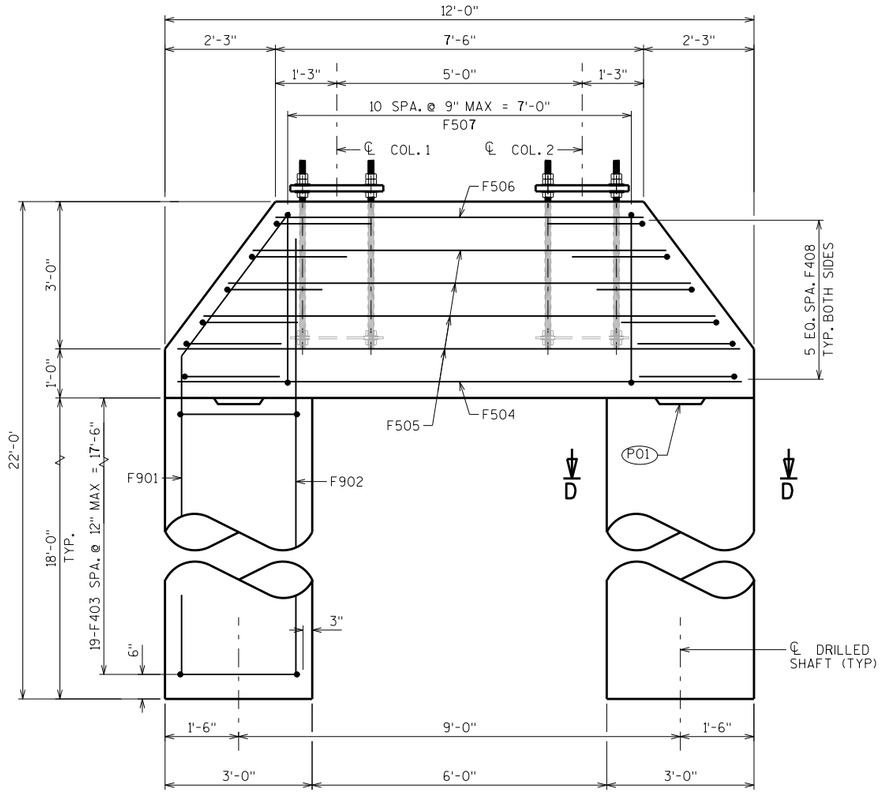
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
F901	X	96	21'-10	X		DRILLED SHAFT VERTICAL
F902	X	96	21'-0"			DRILLED SHAFT VERTICAL
F403	X	304	9'-4"	X		DRILLED SHAFT HOOP
F504	X	48	11'-8"			CAP LONGITUDINAL BOTTOM
F505	X	64	9'-10"		⚠	CAP LONGITUDINAL SIDE
F506	X	32	7'-6"			CAP LONGITUDINAL TOP
F507	X	176	7'-6"	X		CAP STIRRUP
F408	X	96	4'-6"	X	⚠	CAP HORIZONTAL ENDS

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

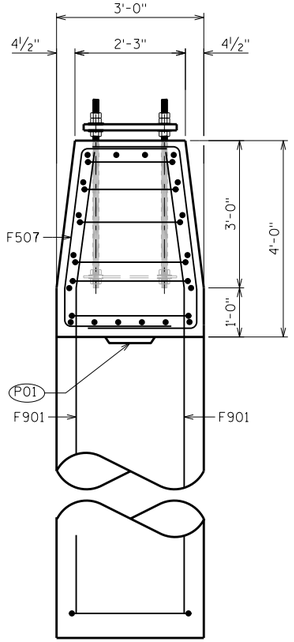
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
F505	16 SERIES OF 4	8'-4" TO 11'-4"
F408	16 SERIES OF 6	4'-2" TO 4'-10"

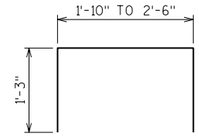
BUNDLE AND TAG EACH SERIES SEPARATELY.



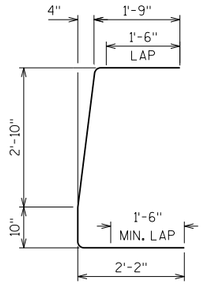
SECTION F-F



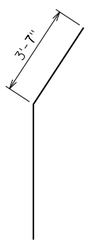
END VIEW



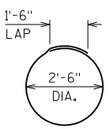
F408



F507



F901



F403

P01 1'-0" x 1'-0" x 4" CONST. JOINT FORMED BY BEVELED KEYWAY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

FOUNDATION DETAILS

SHEET 6

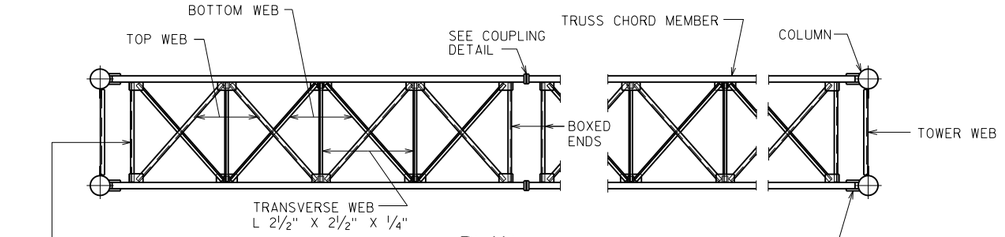
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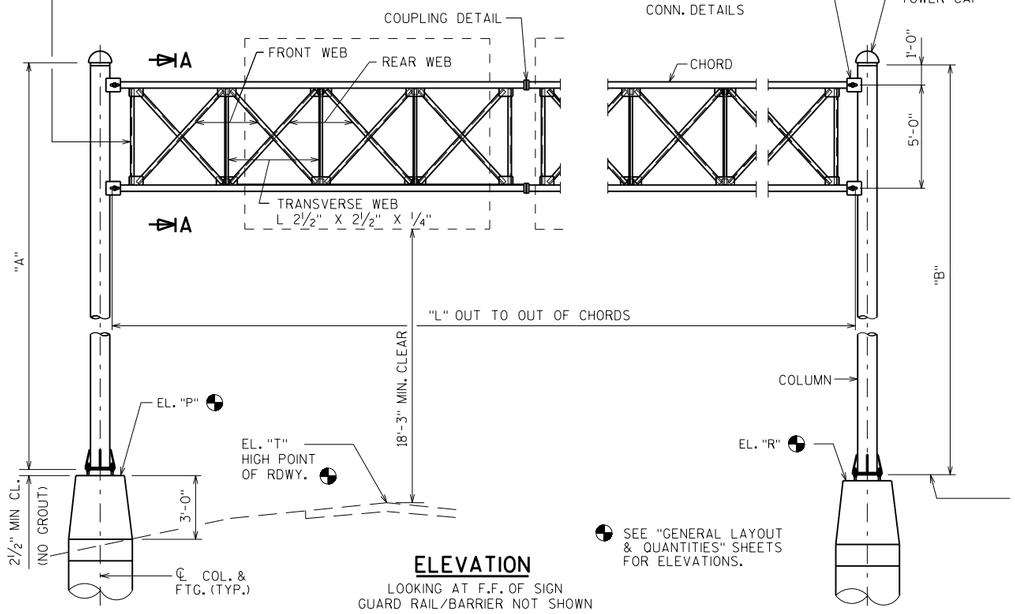
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STATE PROJECT NUMBER

1222-13-71

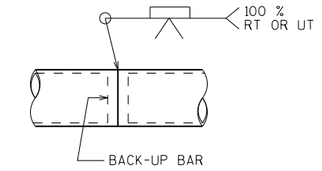


PLAN

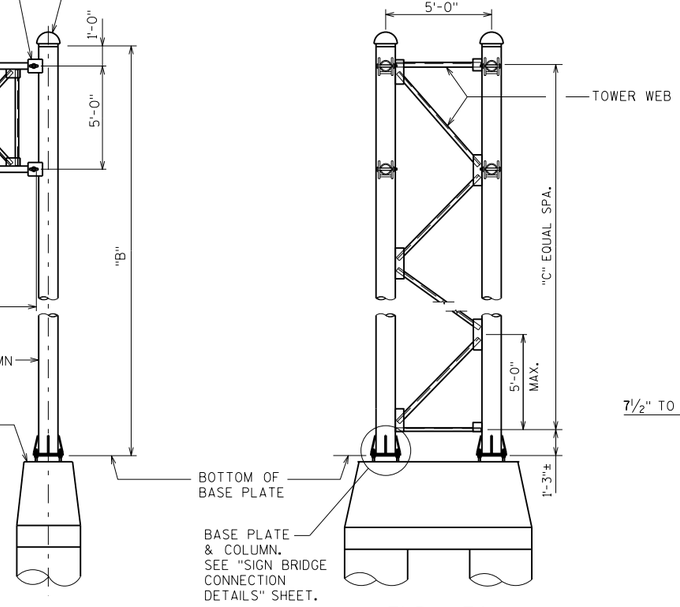


ELEVATION

LOOKING AT F.F. OF SIGN
GUARD RAIL/BARRIER NOT SHOWN



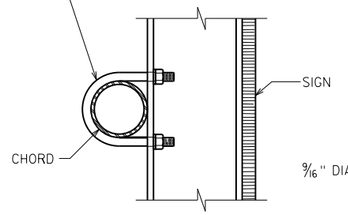
CHORD SHOP SPLICE



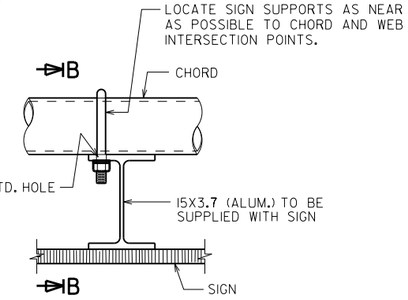
END VIEW

GUARD RAIL/BARRIER NOT SHOWN

½" DIA. STAINLESS STEEL U-BOLT WITH 2 LOCK WASHERS AND 2 HEX NUTS PER BOLT. 2 BOLTS REQUIRED PER I5X3.7. LOCATE TOP & BOTTOM U-BOLT ON OPPOSITE SIDE OF FLANGE.

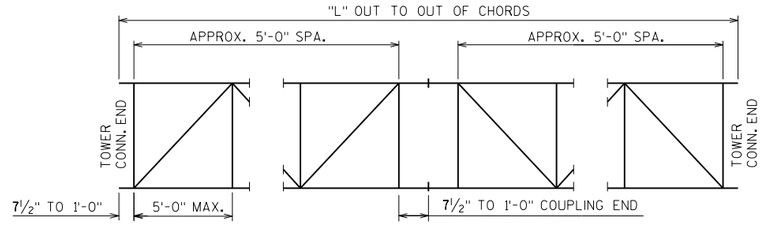


SECTION B-B



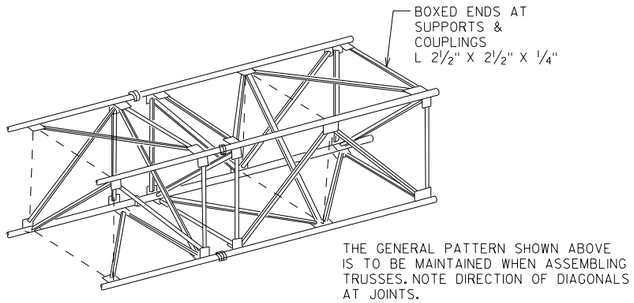
TYPICAL SIGN CONNECTION

FOR TYPE I AND II SIGNS ONLY



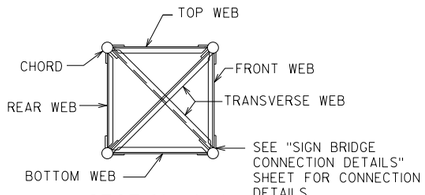
TRUSS ARRANGEMENT

FABRICATOR MAY MAKE TRUSSES ANY LENGTH KEEPING A SECTION A MINIMUM OF 20'-0" & A MULTIPLE OF 5'-0". CHORD FIELD SPLICES SHALL BE MADE WITH COUPLINGS. CHORD SHOP SPLICE SHALL BE THE WELDED SPLICE SHOWN ABOVE.

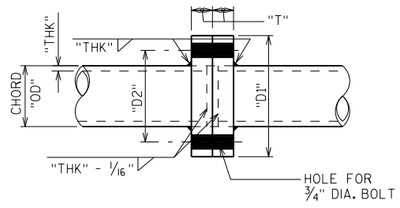


THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. NOTE DIRECTION OF DIAGONALS AT JOINTS.

TYPICAL TRUSS SECTION



SECTION A-A



COUPLING DETAIL

CONTRACTOR SHALL PROVIDE #16 GA. GALVANIZED STEEL SHIMS, AS REQUIRED TO PROVIDE FOR A CAMBER SHOWN IN THE TABLE.

DIMENSIONS, CAMBER & MEMBER SIZES

STRUCTURE	DIMENSIONS					CHORD	TRUSS WEB		COUPLING				COLUMN	TOWER WEB
	"L"	"A"	"B"	"C"	CAMBER	"OD" X "THK"	TOP & BOTTOM	FRONT & REAR	"D1"	"T"	"D2"	NO. OF BOLT	"OD" X "THK"	
S-59-77	55'-10¼"	25'-10⅜"	26'-3¼"	5	⅞"	5 X 0.355	4X4X⅜"	4X4X⅜"	10"	1"	8"	8	10.75 X 0.500	4X4X⅜"
S-59-79	57'-4¼"	25'-2¼"	25'-9⅝"	5	⅞"	5 X 0.355	4X4X⅜"	4X4X⅜"	10"	1"	8"	8	10.75 X 0.500	4X4X⅜"
S-59-82	64'-10¼"	26'-6½"	24'-10⅛"	5	1"	5 X 0.355	4X4X⅜"	4X4X⅜"	10"	1"	8"	8	10.75 X 0.500	4X4X⅜"
S-59-83	61'-4¼"	24'-11"	25'-0⅞"	5	1"	5 X 0.355	4X4X⅜"	4X4X⅜"	10"	1"	8"	8	10.75 X 0.500	4X4X⅜"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

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SHEET 7

SIGN BRIDGE DETAILS

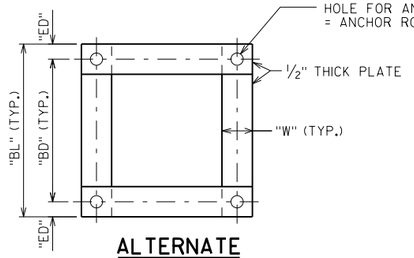
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SCALE = 4.50

STATE PROJECT NUMBER

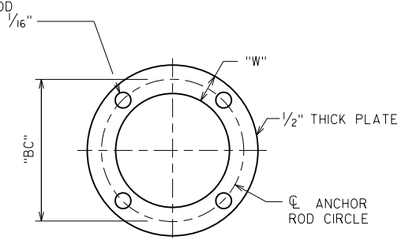
1222-13-71



ALTERNATE

ANCHOR PLATE/TOP TEMPLATE

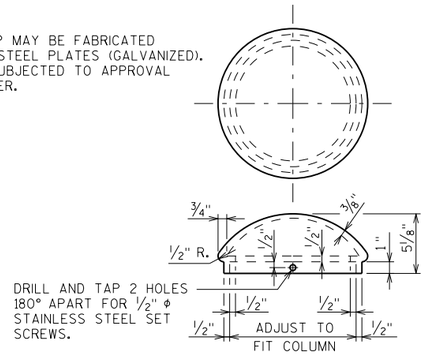
PLAN VIEW



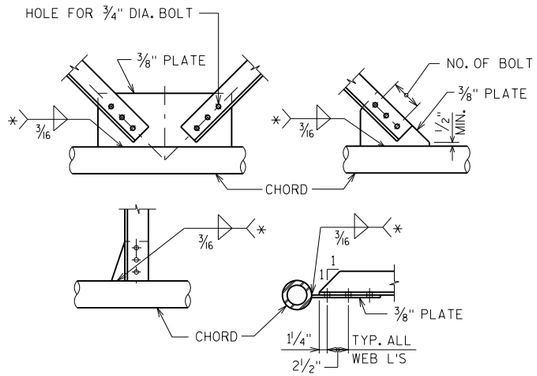
ANCHOR PLATE/TOP TEMPLATE

PLAN VIEW

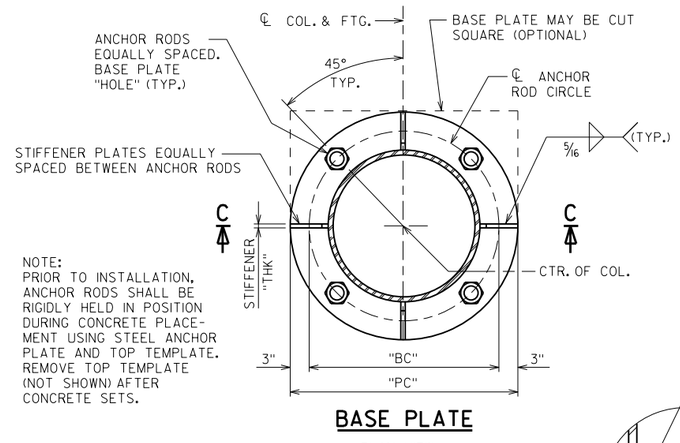
ALTERNATE CAP MAY BE FABRICATED FROM MIN. 3/16" STEEL PLATES (GALVANIZED). DETAILS ARE SUBJECTED TO APPROVAL BY THE ENGINEER.



TOWER CAP DETAIL

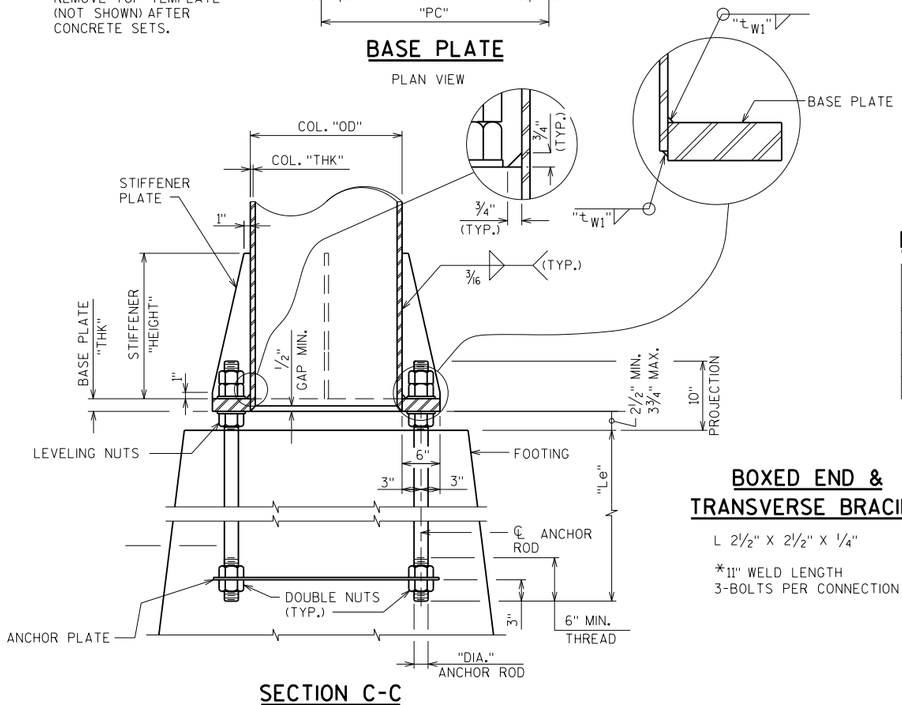


TYPICAL TRUSS CONNECTION DETAILS



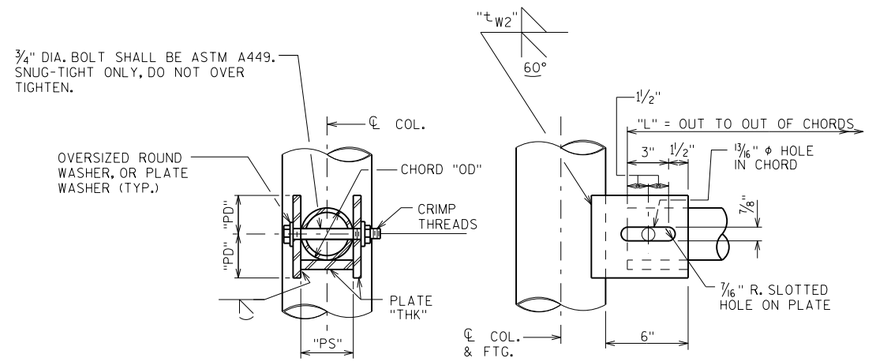
BASE PLATE

PLAN VIEW



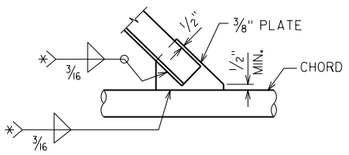
SECTION C-C

3/4" DIA. BOLT SHALL BE ASTM A449. SNUG-TIGHT ONLY, DO NOT OVER TIGHTEN.



TOWER CONNECTION DETAILS

BOLT AND HOLE DIMENSIONS SHOWN ARE MINIMUM



TYPICAL WELDED ALTERNATE

BOXED END & TRANSVERSE BRACING

L 2 1/2" X 2 1/2" X 1/4"

*11" WELD LENGTH
3-BOLTS PER CONNECTION

BASE PLATE, COLUMN STIFFENER, ANCHOR ROD & TOWER CONNECTION

STRUCTURE	BASE PLATE					ANCHOR PLATE/TOP TEMPLATE				STIFFENER PLATE		ANCHOR ROD		TOWER CONNECTION			
	"BC"	"PC"	"THK"	"HOLE"	"tW1"	"W"	"BD"	"ED"	"BL"	"THK"	"HEIGHT"	"DIA."	"Le"	"PD"	"PS"	"THK"	"tW2"
S-59-77	1'-4 3/4"	1'-10 3/4"	1 3/4"	2 1/16"	5/16"	3 1/2"	11 7/8"	1 3/4"	1'-3 3/8"	5/8"	12"	1 3/4"	2'-6"	3 1/4"	5 3/16"	3/8"	3/16"
S-59-79	1'-4 3/4"	1'-10 3/4"	1 3/4"	2 1/16"	5/16"	3 1/2"	11 7/8"	1 3/4"	1'-3 3/8"	5/8"	12"	1 3/4"	2'-6"	3 1/4"	5 3/16"	3/8"	3/16"
S-59-82	1'-4 3/4"	1'-10 3/4"	1 3/4"	2 1/16"	5/16"	3 1/2"	11 7/8"	1 3/4"	1'-3 3/8"	5/8"	12"	1 3/4"	2'-6"	3 1/4"	5 3/16"	3/8"	3/16"
S-59-83	1'-4 3/4"	1'-10 3/4"	1 3/4"	2 1/16"	5/16"	3 1/2"	11 7/8"	1 3/4"	1'-3 3/8"	5/8"	12"	1 3/4"	2'-6"	3 1/4"	5 3/16"	3/8"	3/16"

WEB MEMBER CONNECTIONS

STRUCTURE	TRUSS WEB			TOWER WEB		
	ANGLE SIZE	*WELD LENGTH	NO. OF BOLT	ANGLE SIZE	*WELD LENGTH	NO. OF BOLT
S-59-77	4X4X3/8"	26"	8	4X4X3/8"	26"	8
S-59-79	4X4X3/8"	26"	8	4X4X3/8"	26"	8
S-59-82	4X4X3/8"	26"	8	4X4X3/8"	26"	8
S-59-83	4X4X3/8"	26"	8	4X4X3/8"	26"	8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY DMB | PLANS CK'D. ARC

SIGN BRIDGE CONNECTION DETAILS

SHEET 8

SCALE = 1.00

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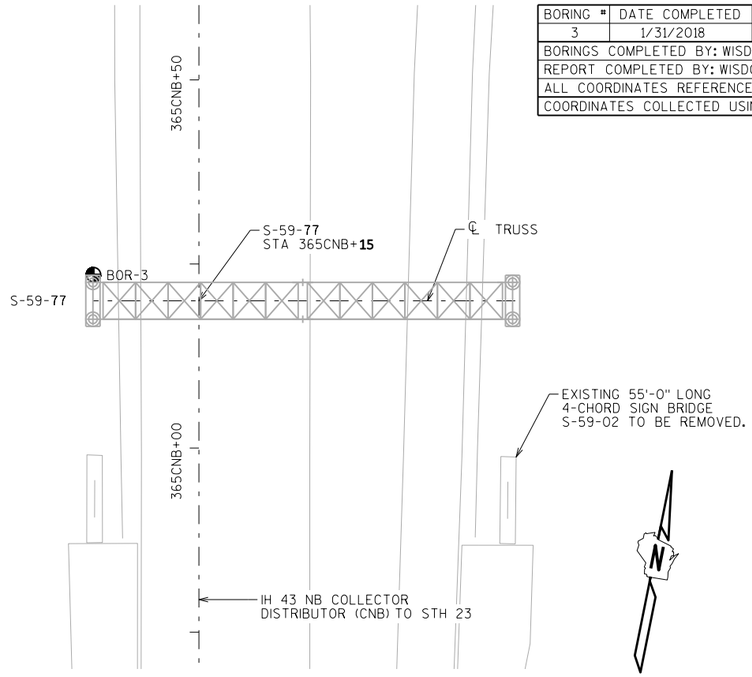
STATE PROJECT NUMBER

1222-13-71

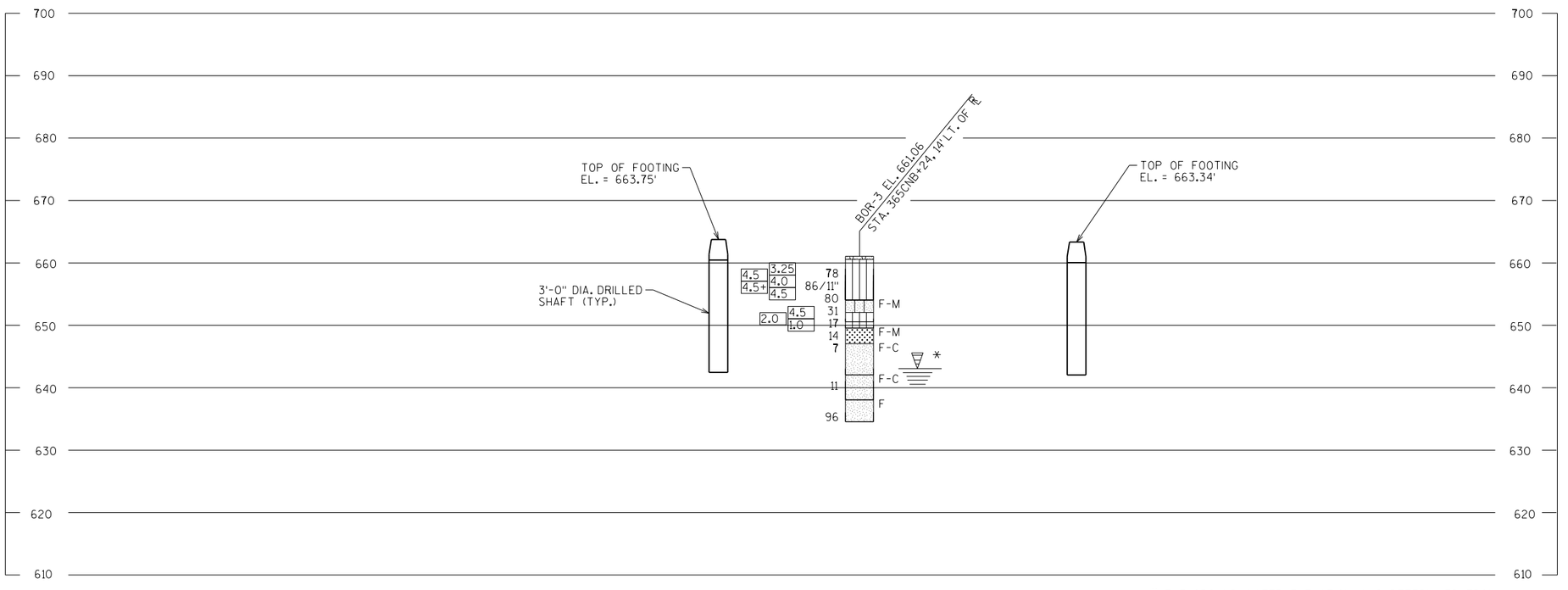
FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEMS. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEMS. DESIGN INCLUDES AN ALLOWABLE STRESS INCREASE OF 33% AND A SAFETY FACTOR OF 3.

S-59-77 SOIL PARAMETERS (BORING B-3)					
SOIL DESCRIPTION	FRICTION ANGLE	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SHAFT RESISTANCE (PSF)	ALLOWABLE BASE RESISTANCE (PSF)
6" TOPSOIL OVER SILT, BROWN, V STIFF-HARD, SOME F-C SAND, SOME F-C GRAVEL (ELEVATION 661.1' - 654.1')	0	8,000	130	825	26,000
SAND, BROWN, V DENSE, SILTY, SOME F-M GRAVEL (ELEVATION 654.1' - 652.1')	38	0	135	1,000	16,000
SILT, BROWN, HARD-V STIFF, SOME F-M SAND, LITTLE F-M GRAVEL (ELEVATION 652.1' - 650.6')	0	9,000	120	825	31,000
SILT, BROWN, STIFF, SOME CLAY, LITTLE F-M SAND (ELEVATION 650.6' - 649.6')	0	1,500	120	350	7,100
SAND, BROWN, FIRM, FINE-MEDIUM (ELEVATION 649.6' - 647.1')	33	0	120	475	3,600
SAND, GRAY/BROWN, LOOSE, TR FINE-MEDIUM GRAVEL (ELEVATION 647.1' - 642.1')	32	0	115	350	6,000
SAND, GRAY, FIRM, FINE-COARSE, LITTLE FINE-COARSE GRAVEL (ELEVATION 642.1' - 638.1')	32	0	120	475	20,000
SAND, GRAY/BROWN, VERY DENSE, FINE, SOME SILT (ELEVATION 638.1' - 634.6')	42	0	140	1,850	20,000



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	1/31/2018	176284	205885
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) SHEBOYGAN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY EQUIPMENT			

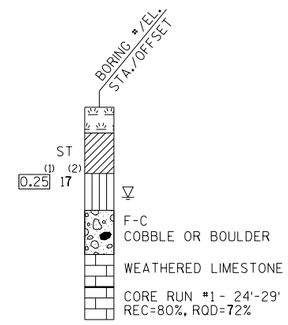


* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY TLP/DMB | PLANS CK'D. ARC

S-59-77
SUBSURFACE
EXPLORATION

SHEET 9

SCALE = 10.00

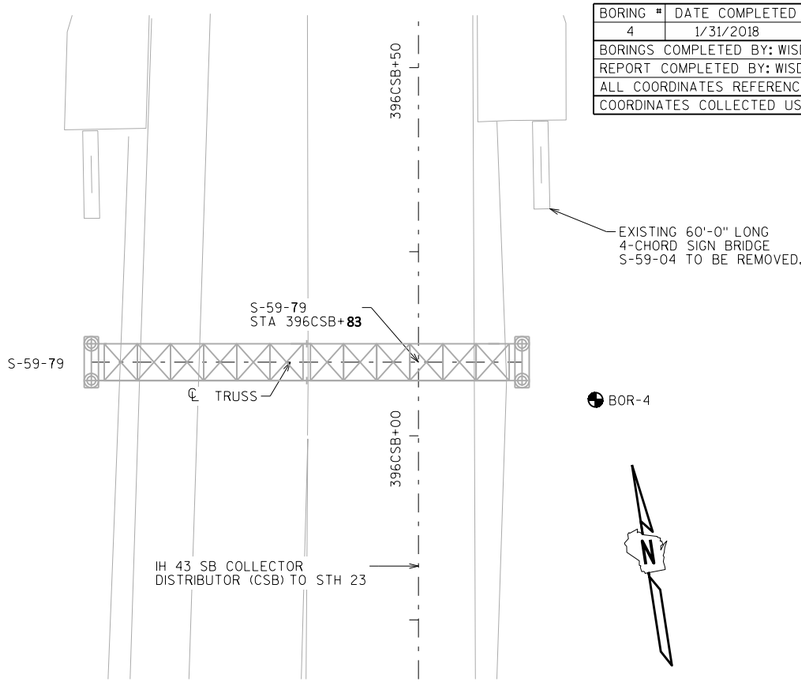
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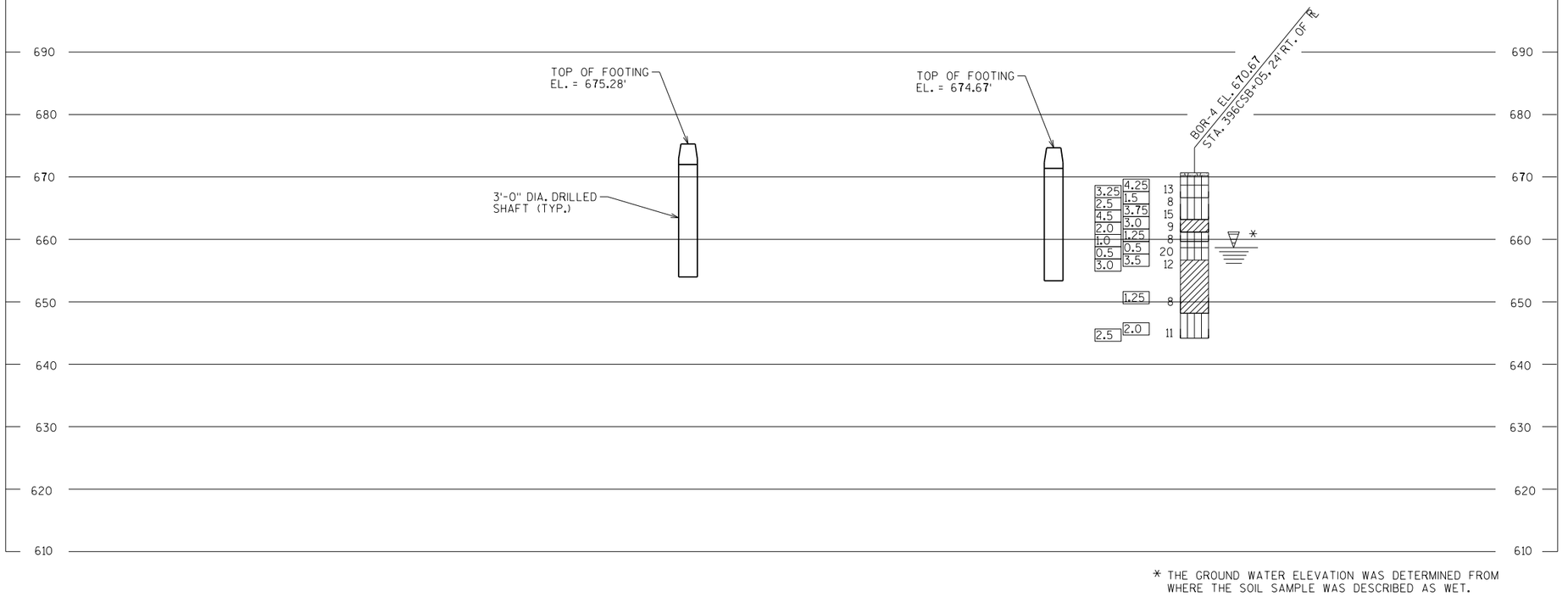
FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEMS. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEMS. DESIGN INCLUDES AN ALLOWABLE STRESS INCREASE OF 33% AND A SAFETY FACTOR OF 3.

S-59-79 SOIL PARAMETERS (BORING B-4)					
SOIL DESCRIPTION	FRICTION ANGLE	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SHAFT RESISTANCE (PSF)	ALLOWABLE BASE RESISTANCE (PSF)
6" TOPSOIL OVER SILT, BROWN, SOME FINE SAND (ELEVATION 670.7' - 668.7')	0	250	120	90	1,100
SILT, BROWN, HARD-VERY STIFF TR. FINE GRAVEL, LITTLE F SAND, LITTLE CLAY (ELEVATION 668.7' - 666.7')	0	7,500	130	850	22,000
SILT, BROWN, STIFF-V STIFF, LITTLE F SAND, TR F GRAVEL, SOME CLAY (ELEVATION 666.7' - 663.2')	0	5,000	130	825	18,000
CLAY, BROWN, V STIFF-HARD, LITTLE SILT, TR F-C SAND (ELEVATION 663.2' - 661.2')	0	7,500	130	850	24,000
SILT, BROWN, V STIFF-STIFF, LITTLE F SAND, SOME CLAY (ELEVATION 661.2' - 659.7')	0	3,000	120	550	10,500
SILT, BROWN, STIFF, LITTLE CLAY, LITTLE F SAND (ELEVATION 659.7' - 658.7')	0	2,000	120	350	7,200
SILT, BROWN, MED-SOFT, TR CLAY, LITTLE F SAND (ELEVATION 658.7' - 656.7')	0	1,000	115	175	4,000
CLAY, BROWN, V STIFF, SOME SILT, TR F SAND (ELEVATION 656.7' - 648.2')	0	6,000	130	825	24,000
SILT, BROWN, V STIFF, LITTLE F-C SAND, SOME CLAY, TR F GRAVEL (ELEVATION 648.2' - 644.2')	0	4,000	130	675	16,000



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
4	1/31/2018	179277	205008
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) SHEBOYGAN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

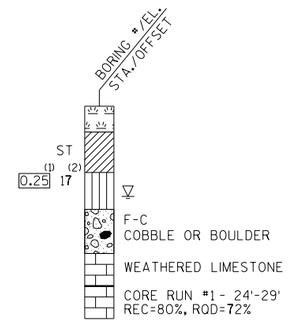
STATE PROJECT NUMBER

1222-13-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY TLP/DMB | PLANS CK'D. ARC

S-59-79 SUBSURFACE EXPLORATION

SHEET 10

SCALE = 10.00

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STATE PROJECT NUMBER

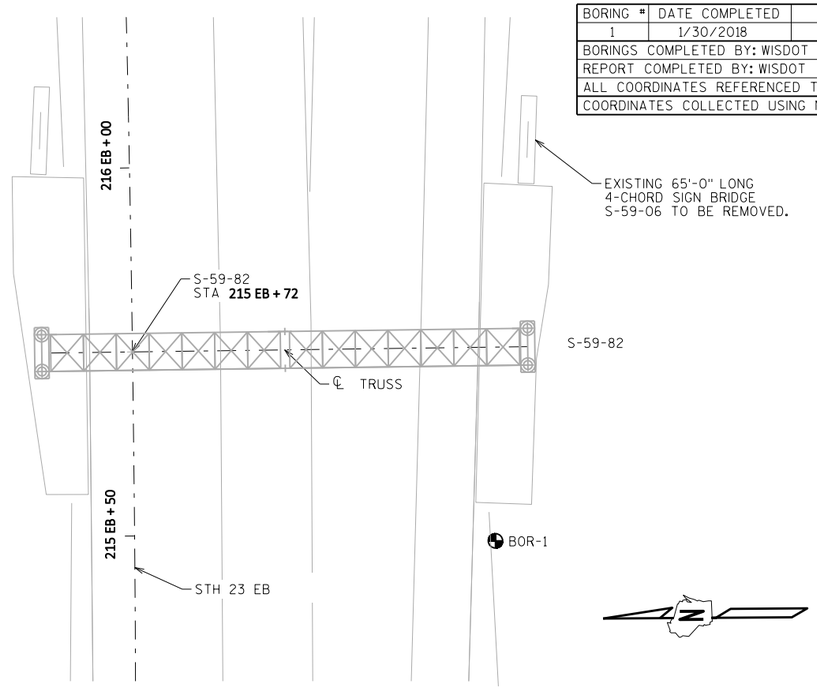
1222-13-71

FOUNDATION DATA

THE FOLLOWING SOIL PARAMETERS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEMS. IF VARIATIONS IN THE SOIL PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEMS. DESIGN INCLUDES AN ALLOWABLE STRESS INCREASE OF 33% AND A SAFETY FACTOR OF 3.

S-59-82 SOIL PARAMETERS (BORING B-1)

SOIL DESCRIPTION	FRICTION ANGLE	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SHAFT RESISTANCE (PSF)	ALLOWABLE BASE RESISTANCE (PSF)
SHOULDER GRAVEL (ELEVATION 658.1' - 656.1')	36	0	120	100	18,000
SAND, BROWN, DENSE, F-M, LITTLE SILT (ELEVATION 656.1' - 653.6')	36	0	130	400	15,500
SAND, BROWN, FIRM, FINE-MEDIUM, TRACE SILT (ELEVATION 653.6' - 647.1')	34	0	120	475	9,500
SAND, BROWN, FIRM, F-M, LITTLE SILT (ELEVATION 647.1' - 645.1')	32	0	120	450	7,000
SAND, BROWN, VERY LOOSE, FINE-MEDIUM (ELEVATION 645.1' - 640.1')	28	0	100	425	2,000
SAND, BROWN, FINE-COARSE, TRACE GRAVEL (ELEVATION 640.1' - 631.1')	33	0	120	225	9,000

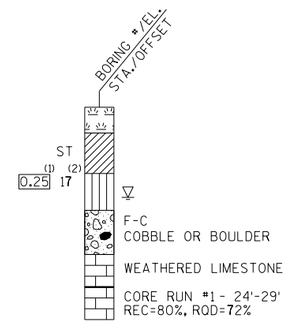


BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/30/2018	177418	203549
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) VERNON COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

MATERIAL SYMBOLS

ASPHALT, CONCRETE, SAND, BOULDERS OR COBBLES, SHALE, TOPSOIL, FILL, CLAY, LIMESTONE, SANDSTONE, PEAT, GRAVEL, SILT, BEDROCK (UNKNOWN), IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

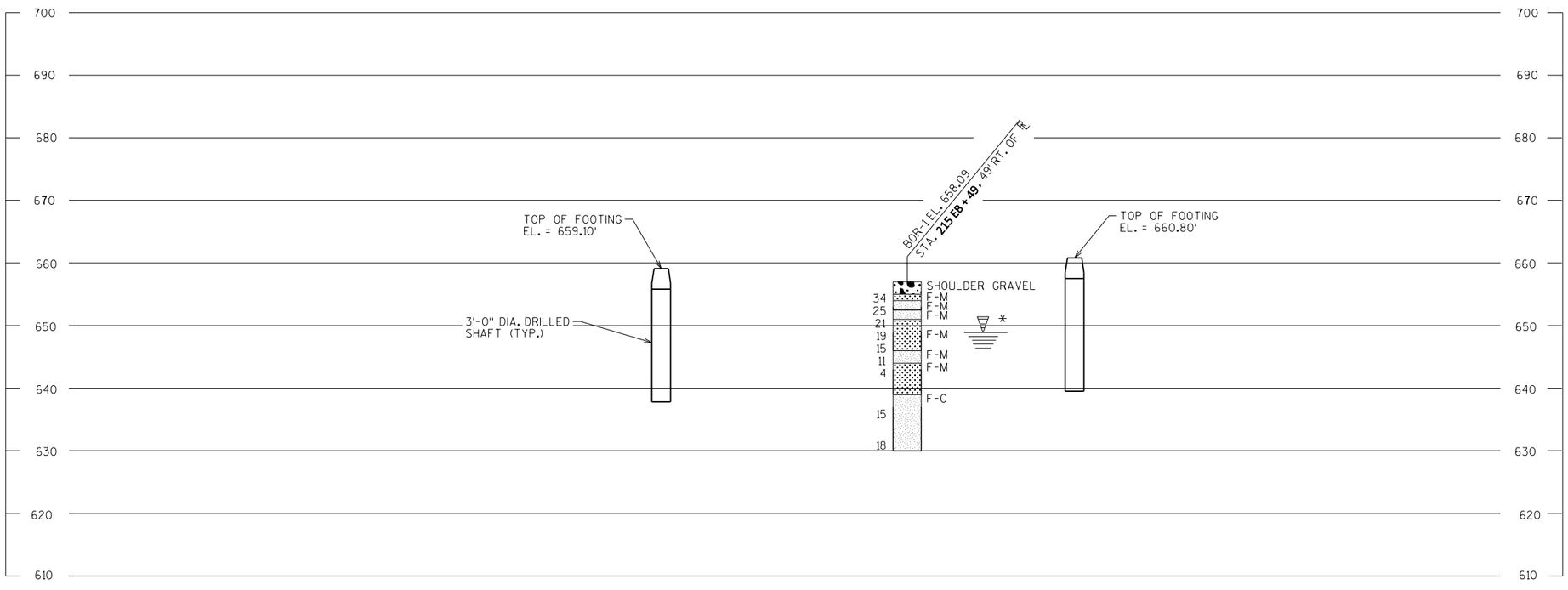
▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY TLP/DMB | PLANS CK'D. ARC

S-59-82
SUBSURFACE
EXPLORATION

SHEET 11

SCALE = 10.00

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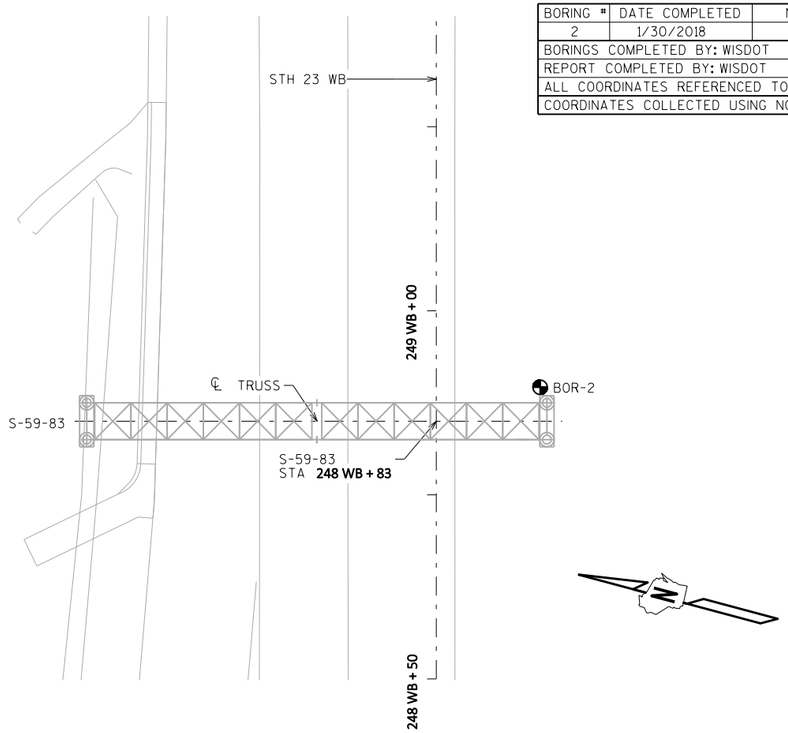
STATE PROJECT NUMBER

1222-13-71

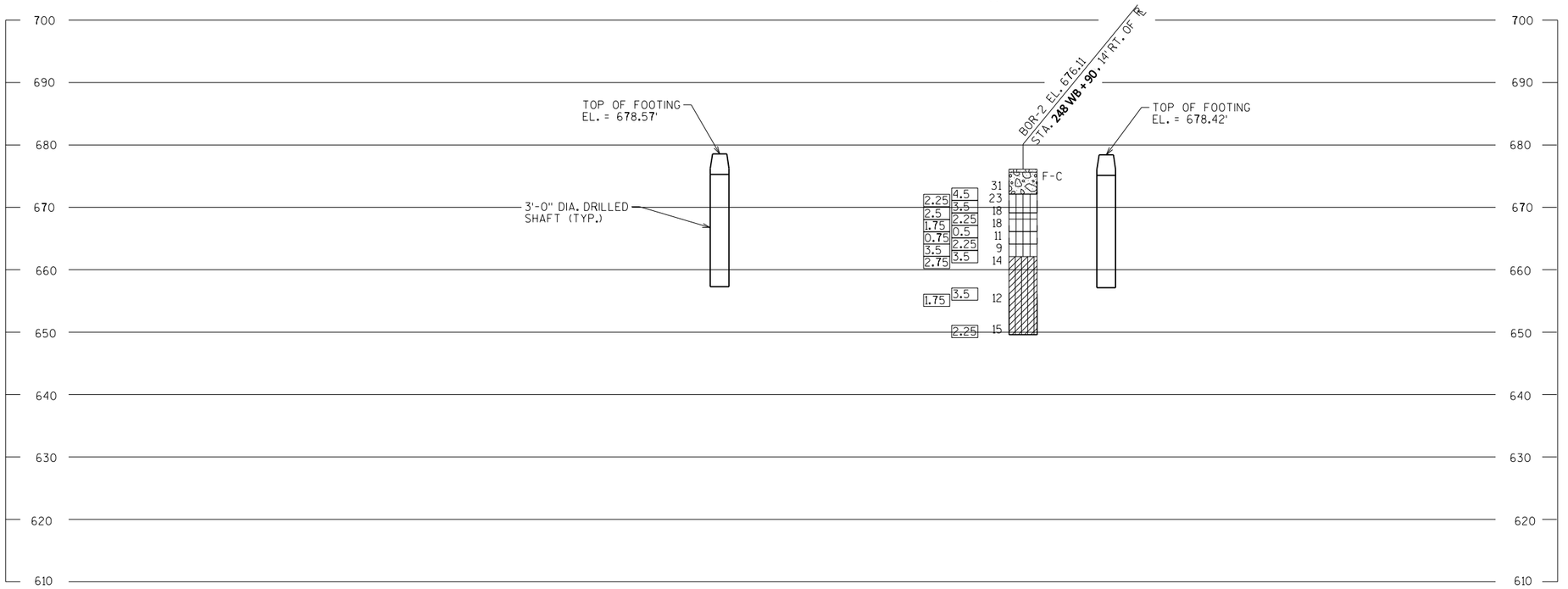
FOUNDATION DATA

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S-59-83 SOIL PARAMETERS (BORING B-2)					
SOIL DESCRIPTION	FRICTION ANGLE	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SHAFT RESISTANCE (PSF)	ALLOWABLE BASE RESISTANCE (PSF)
TOPSOIL OVER SAND & GRAVEL, BROWN, DENSE, FINE-COARSE, TRACE SILT (ELEVATION 676.1' - 672.1')	36	0	130	225	12,000
SILT, BROWN, HARD-V STIFF, SOME F-M SAND, LITTLE F-C GRAVEL (ELEVATION 672.1' - 669.1')	0	8,000	130	850	23,000
SILT, BROWN, VERY STIFF-STIFF, TRACE FINE SAND (ELEVATION 669.1' - 666.1')	0	4,500	130	725	15,000
SILT, BROWN/GRAY, SOFT-MEDIUM, LITTLE VERY FINE SAND (ELEVATION 666.1' - 664.1')	0	1,500	120	275	5,500
SILT, BROWN, VERY STIFF, LITTLE FINE SAND, SOME CLAY (ELEVATION 664.1' - 662.1')	0	6,000	130	825	23,000
CLAY, BROWN, VERY STIFF-STIFF, SILTY, TRACE FINE-MED SAND (ELEVATION 662.1' - 649.6')	0	6,000	130	825	24,000



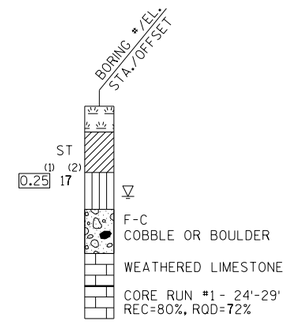
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	1/30/2018	178221	206808
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) SHEBOYGAN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-59-77,79,82,83

DRAWN BY TLP/DMB | PLANS CK'D. ARC

S-59-83
SUBSURFACE
EXPLORATION

SHEET 12

SCALE = 10.00

8

8

STATE PROJECT NUMBER

1222-13-71

MATERIAL PROPERTIES

CONCRETE MASONRY - f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 - fy = 60,000 P.S.I.

COLUMN PIPE, API SPEC. 5L GRADE X42, PSL-2 - fy = 42,000 P.S.I. **

CHORD PIPE, API SPEC. 5L GRADE X42 - fy = 42,000 P.S.I. **

PLATES, BARS AND STRUCTURAL ANGLES, ASTM A709 GRADE 36 - fy = 36,000 P.S.I.

ANCHOR RODS, ASTM F1554, GRADE 55 - fy = 55,000 P.S.I.
ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.

** CONTRACTOR MAY SUBSTITUTE ALTERNATE MATERIALS PER WISDOT BRIDGE MANUAL SECTION 39.3 AT NO ADDITIONAL COST, PROVIDED THAT APPROVAL IS OBTAINED FROM THE DEPARTMENT.

DESIGN DATA

DEAD LOAD - 3 PSF OF SIGN (INCLUDING SUPPORTING BRACKETS), CATWALK, LIGHTS AND RAILINGS.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.
FATIGUE - CATEGORY I WITHOUT GALLOPING WIND EFFECTS.

DESIGNED ACCORDING TO THE 4TH EDITION AND INTERIM REVISIONS OF AASHTO "STANDARD SPECIFICTIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

STRUCTURE	DESIGN SIGN AREA	MAX. SIGN DEPTH
S-59-78	264 SF	13'-0"
S-59-80	264 SF	12'-0"
S-59-81	264 SF	12'-0"
S-59-84	264 SF	12'-0"
S-59-85	264 SF	12'-0"
S-59-86	264 SF	12'-0"

FOUNDATION DATA

ALLOWABLE SOIL BEARING PRESSURE = 4,000 P.S.F.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

ALL STRUCTURAL STEEL MEMBERS, PLATES, ANCHOR RODS, H.S. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" ϕ (DIAMETER) A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI.

PREFABRICATE CAMBER INTO THE HORIZONTAL SUPPORT PROVIDING AN AMOUNT "Y" AT END OF TRUSS SHOWN IN "CAMBER DIAGRAM". DO NOT RAKE COLUMN BY ADJUSTMENT OF LEVELING NUTS.

WELD TEST AS PER AWS D1.1.

THE STRUCTURE MUST BE ASSEMBLED IN THE SHOP TO ASSURE FIT UP PER SECTION 641.3.3 OF THE WISDOT STANDARD SPECIFICATIONS.

EXACT LOCATION OF SIGN BRIDGE SHALL BE DETERMINED BY THE REGION TRAFFIC ENGINEER.

SEE SIGN PLATE NO. A4-6 OF THE SIGN PLATE MANUAL FOR INSTRUCTION ON CENTERING SIGN VERTICALLY ON TRUSS.

HANDHOLES ARE NOT REQUIRED.

PROVIDE AN IDENTIFICATION PLAQUE FOR SIGN BRIDGE CANTILEVERED SUPPORT, TO BE CONSIDERED INCIDENTAL TO SIGN "SIGN BRIDGE CANTILEVERED S-59-XX".

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE ¼" THE LENGTH OF THE CANTILEVER TRUSS, 2'-0" DEEPER THAN CENTER OF CHORDS AND SHALL BE CENTERED VERTICALLY ON THE TRUSS. SIGN SIZES APPLICABLE TO EACH STRUCTURE ARE NOTED ON EACH "S-59-XX SIGN BRIDGE LAYOUT" SHEET. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE CONSIDERED INCIDENTAL TO "SIGN BRIDGE CANTILEVERED S-59-XX" BID ITEMS.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	S-59-78	S-59-80	S-59-81	S-59-84	S-59-85	S-59-86	TOTAL
⚠	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8	8	8	8	8	8	48
	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	990	990	990	990	990	990	5,940
	641.1200	SIGN BRIDGE CANTILEVERED S-59-78	LS	1	———	———	———	———	———	1
	641.1200	SIGN BRIDGE CANTILEVERED S-59-80	LS	———	1	———	———	———	———	1
	641.1200	SIGN BRIDGE CANTILEVERED S-59-81	LS	———	———	1	———	———	———	1
	641.1200	SIGN BRIDGE CANTILEVERED S-59-84	LS	———	———	———	1	———	———	1
	641.1200	SIGN BRIDGE CANTILEVERED S-59-85	LS	———	———	———	———	1	———	1
	641.1200	SIGN BRIDGE CANTILEVERED S-59-86	LS	———	———	———	———	———	1	1
	SPV.0105	REMOVING SIGN BRIDGE S-59-003	LS	1	———	———	———	———	———	1
	SPV.0105	REMOVING SIGN BRIDGE S-59-005	LS	———	1	———	———	———	———	1
	SPV.0105	REMOVING SIGN BRIDGE S-59-010	LS	———	———	———	———	———	1	1

⚠ PAYMENT FOR EXCAVATION IS INCLUDED WITH "SIGN SUPPORTS CONCRETE MASONRY".

LIST OF DRAWINGS

1. GENERAL NOTES & QUANTITIES
2. S-59-78 SIGN BRIDGE LAYOUT
3. S-59-80 SIGN BRIDGE LAYOUT
4. S-59-81 SIGN BRIDGE LAYOUT
5. S-59-84 SIGN BRIDGE LAYOUT
6. S-59-85 SIGN BRIDGE LAYOUT
7. S-59-86 SIGN BRIDGE LAYOUT
8. GALVANIZED STEEL CANTILEVER SIGN TRUSS
9. GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS
10. CANTILEVER TRUSS FOOTING

STRUCTURE DESIGN CONTACTS:
ALEXANDER CRABTREE (608) 266-3686
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCT. S-59-78,80,81,84-86

IH 43 / STH 23 INTERCHANGE

COUNTY	TOWN/CITY/VILLAGE
SHEBOYGAN	SHEBOYGAN/KOHLER

DESIGN SPEC.
AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
ARC	JDM	ARC	JDM

GENERAL NOTES & QUANTITIES

SHEET 1 OF 10

I.D. 1225-08-00

DATE: NOV. 2017

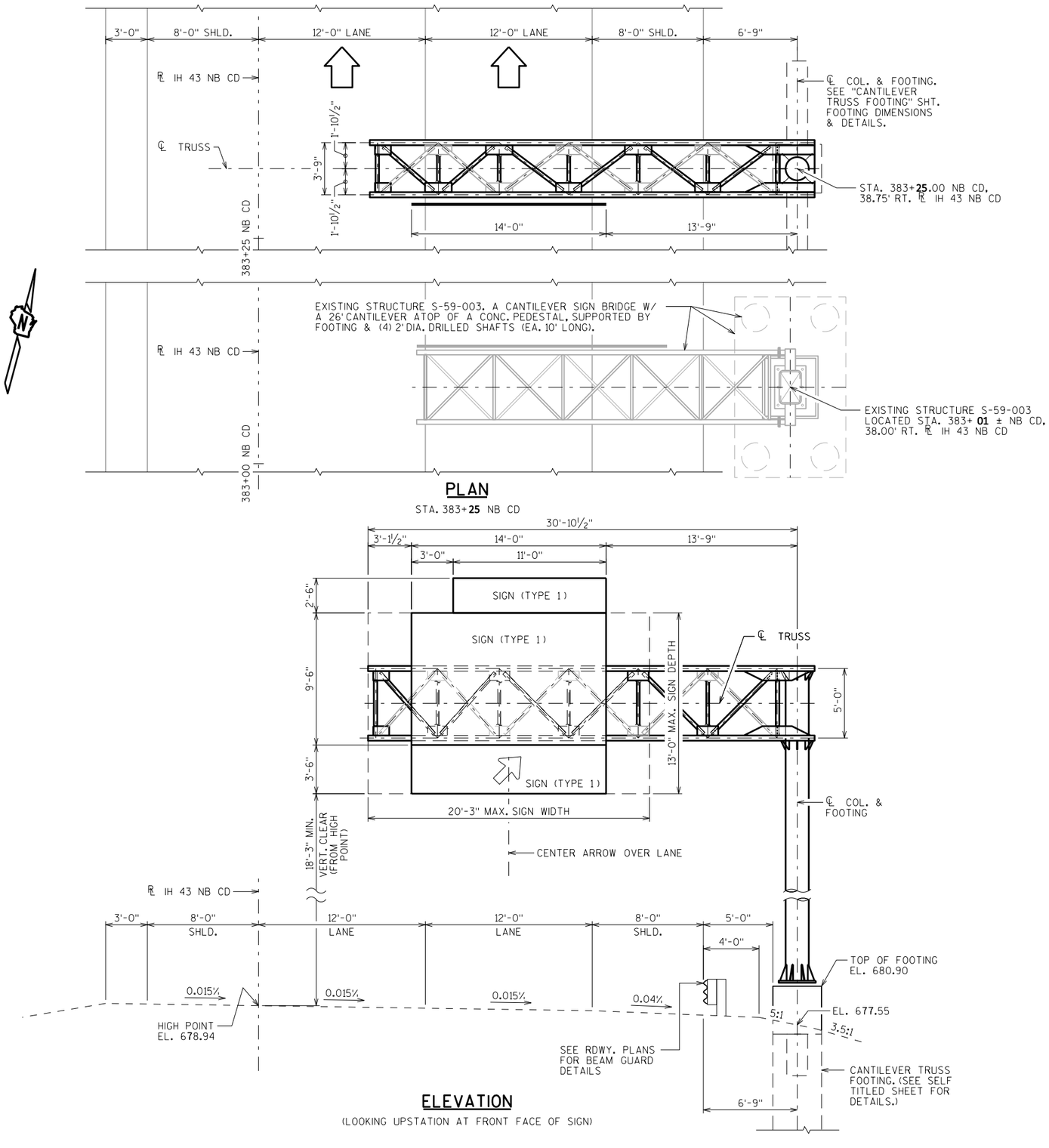
SCALE = 4.00

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8

STATE PROJECT NUMBER

1222-13-71



TRAFFIC VOLUME

IH 43 NB CD

A.D.T. = 4,600

R.D.S. = 70 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-78
SIGN BRIDGE
LAYOUT

SHEET 2

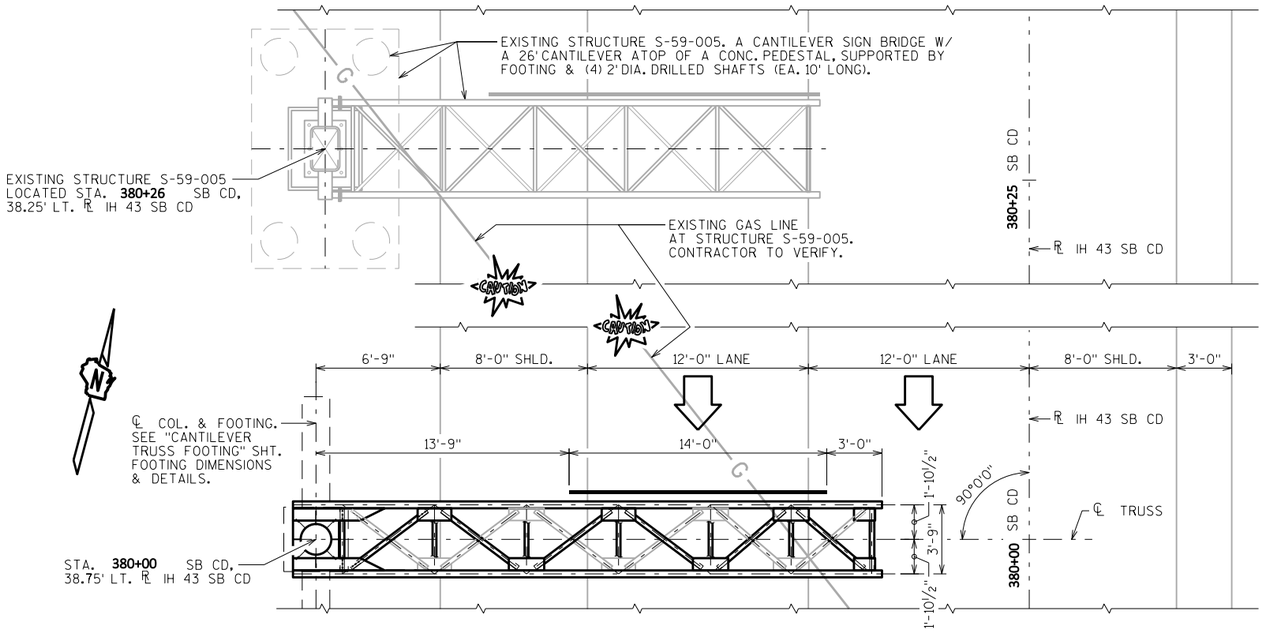
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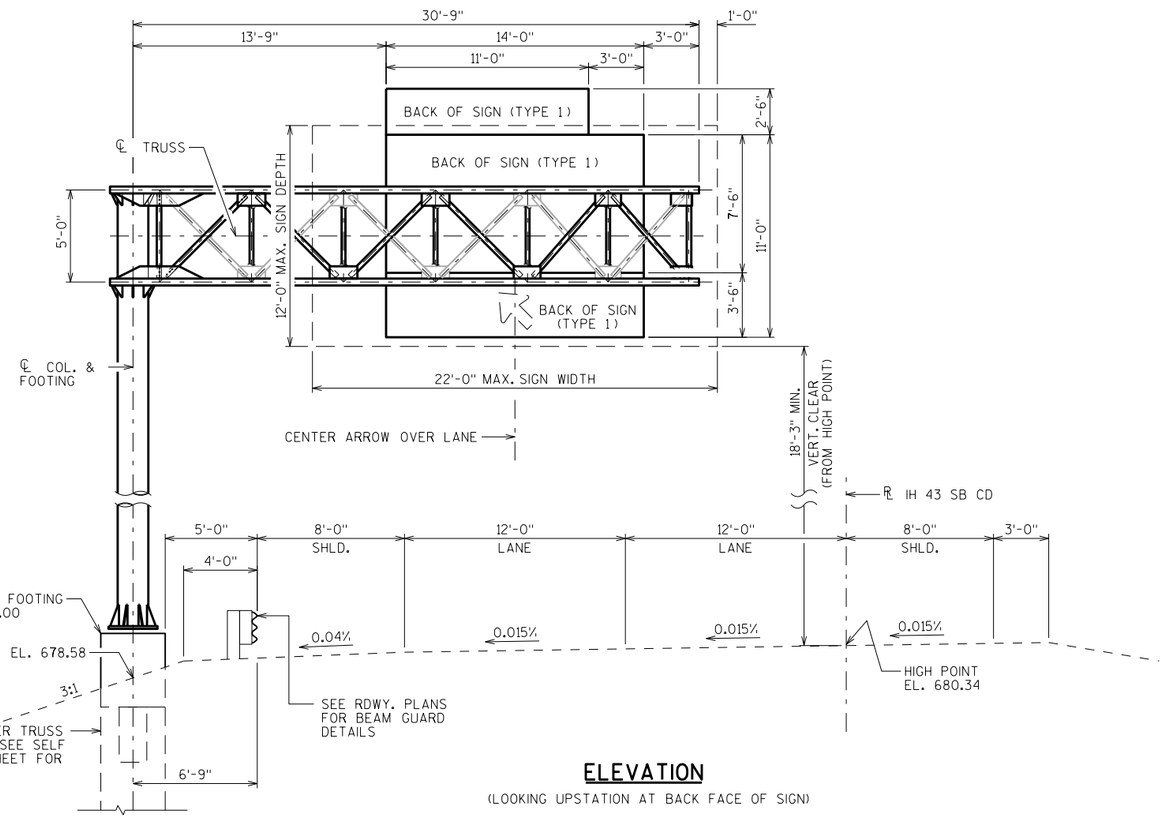
STATE PROJECT NUMBER

1222-13-71



PLAN

STA. 380+00 SB CD



ELEVATION

(LOOKING UPSTATION AT BACK FACE OF SIGN)

TRAFFIC VOLUME

IH 43 SB CD

A.D.T. = 6,000

R.D.S. = 70 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-80
SIGN BRIDGE
LAYOUT

SHEET 3

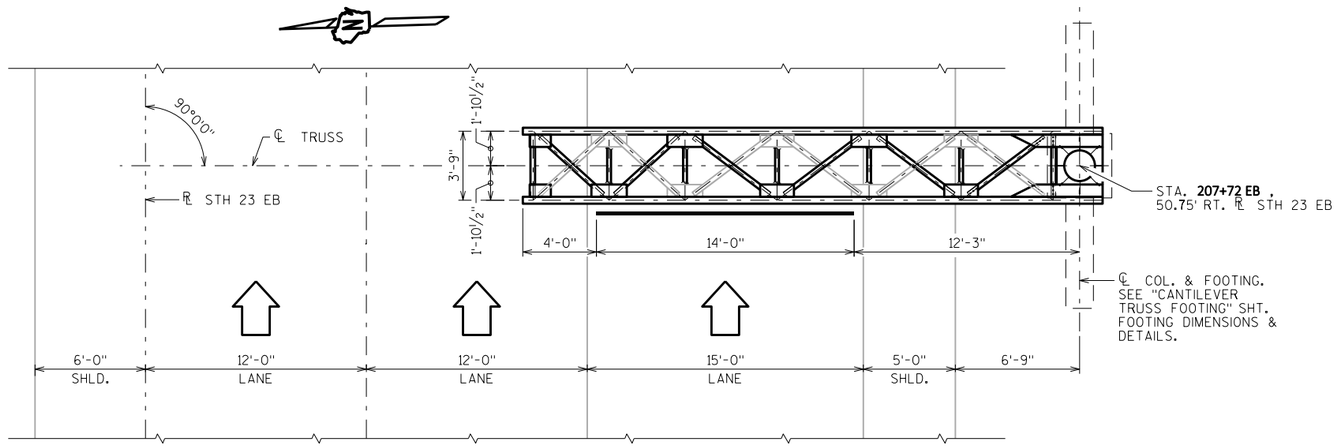
SCALE = 4.00

8

8

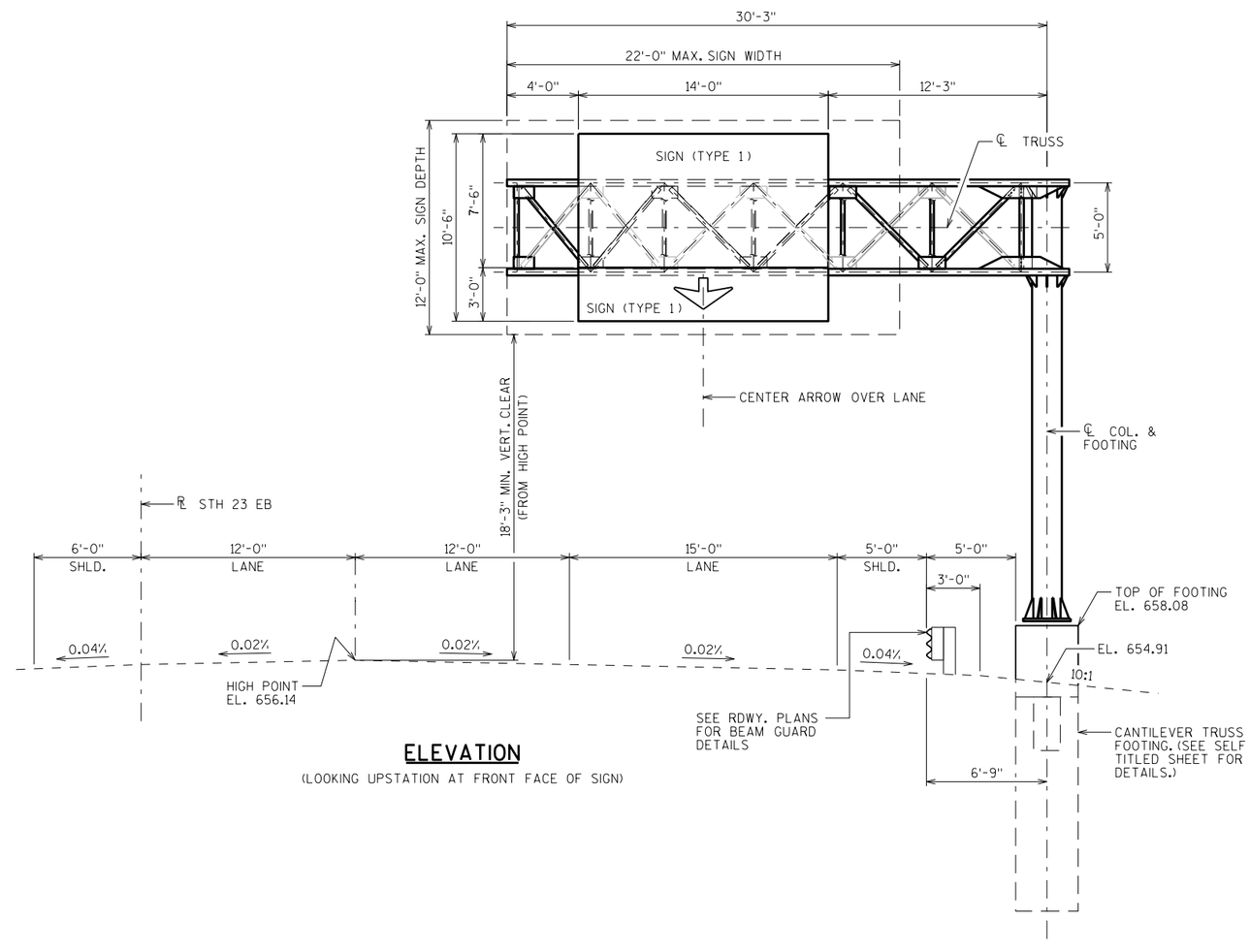
STATE PROJECT NUMBER

1222-13-71



PLAN

STA. **207+72** EB



ELEVATION

(LOOKING UPSTATION AT FRONT FACE OF SIGN)

TRAFFIC VOLUME

STH 23 EB

A.D.T. = 28,900

R.D.S. = 70 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-81
SIGN BRIDGE
LAYOUT

SHEET 4

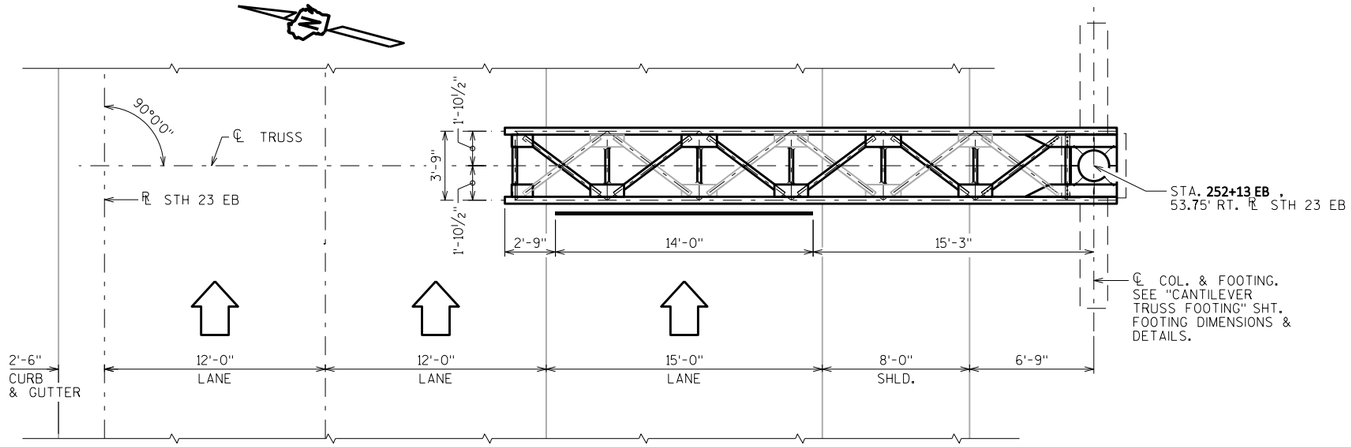
SCALE = 4.00

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8

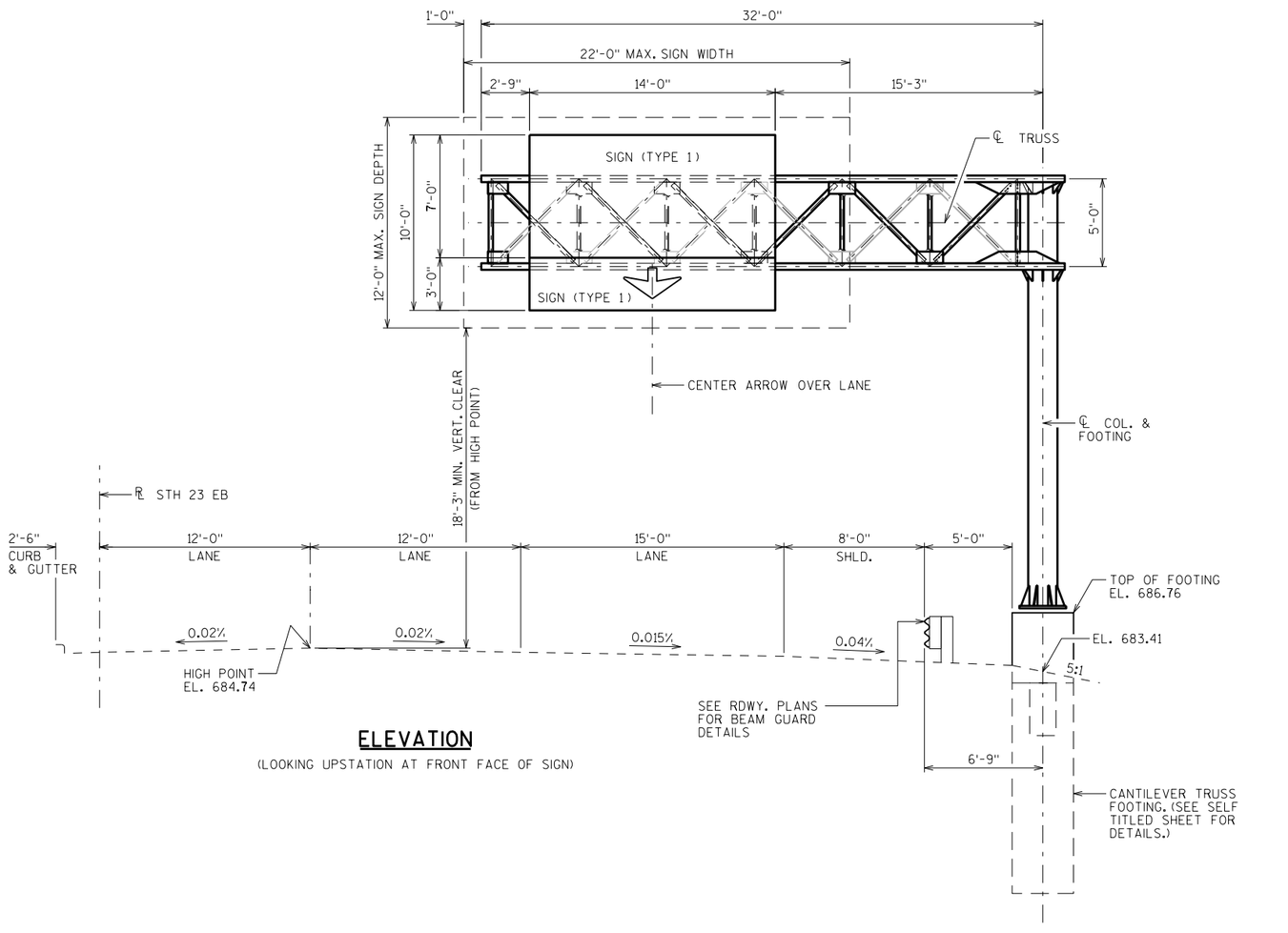
STATE PROJECT NUMBER

1222-13-71



PLAN

STA. **252+13** EB



ELEVATION

(LOOKING UPSTATION AT FRONT FACE OF SIGN)

TRAFFIC VOLUME

STH 23 EB

A.D.T. = 13,550

R.D.S. = 50 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-84
SIGN BRIDGE LAYOUT

SHEET 5

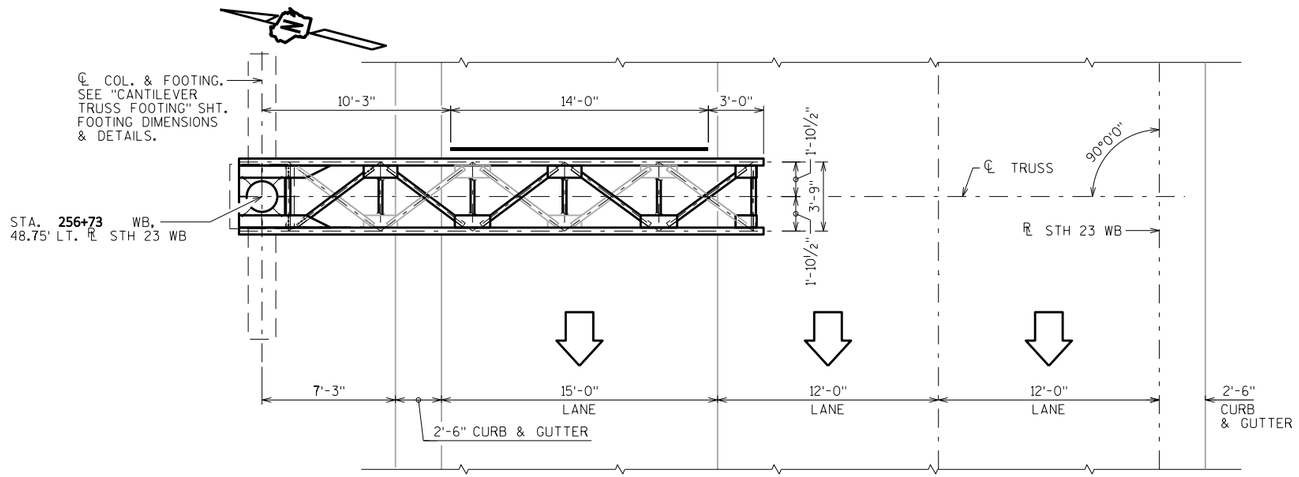
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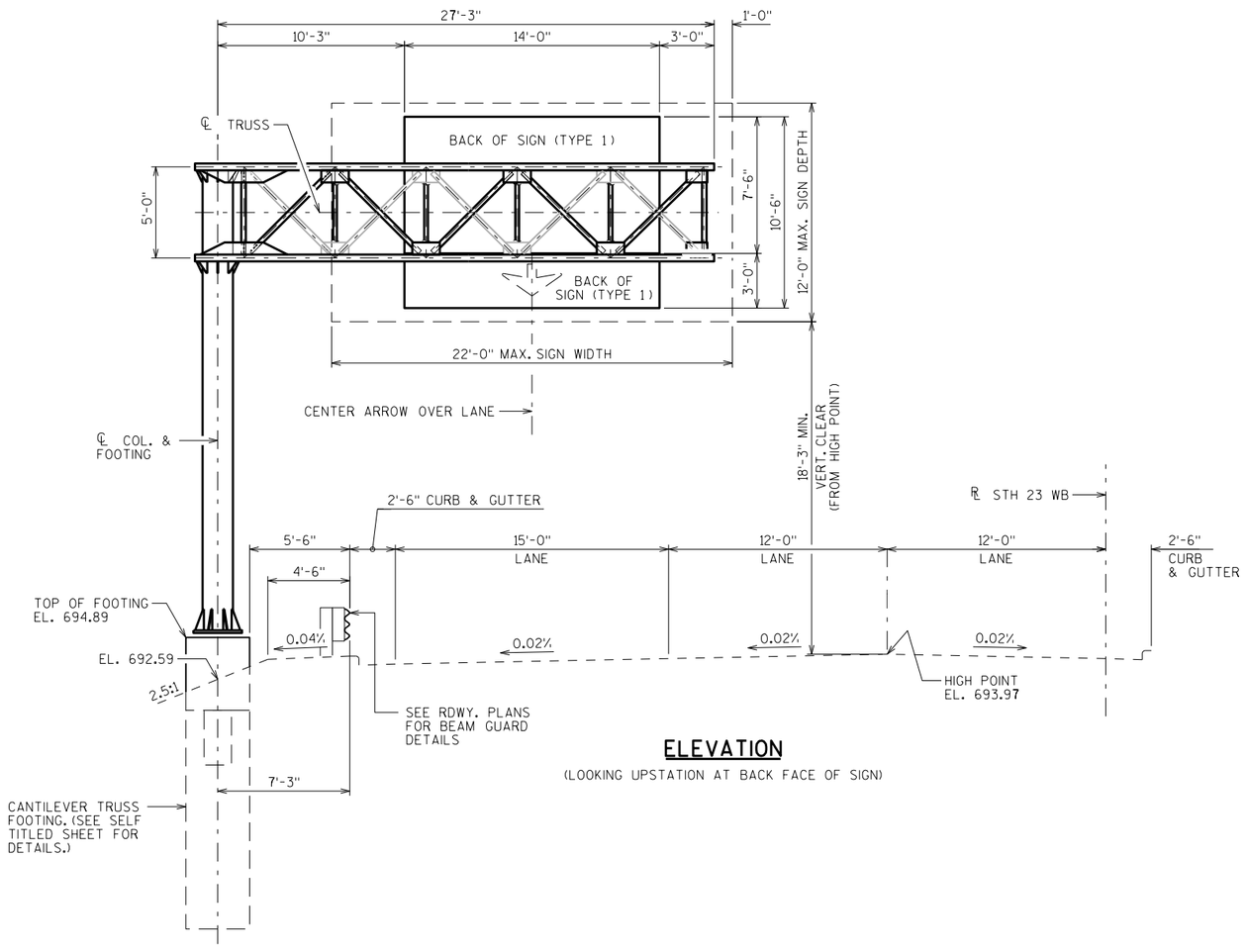
STATE PROJECT NUMBER

1222-13-71



PLAN

STA. 256+73 WB



ELEVATION

(LOOKING UPSTATION AT BACK FACE OF SIGN)

TRAFFIC VOLUME

STH 23 EB

A.D.T. = 13,550

R.D.S. = 50 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-85
SIGN BRIDGE
LAYOUT

SHEET 6

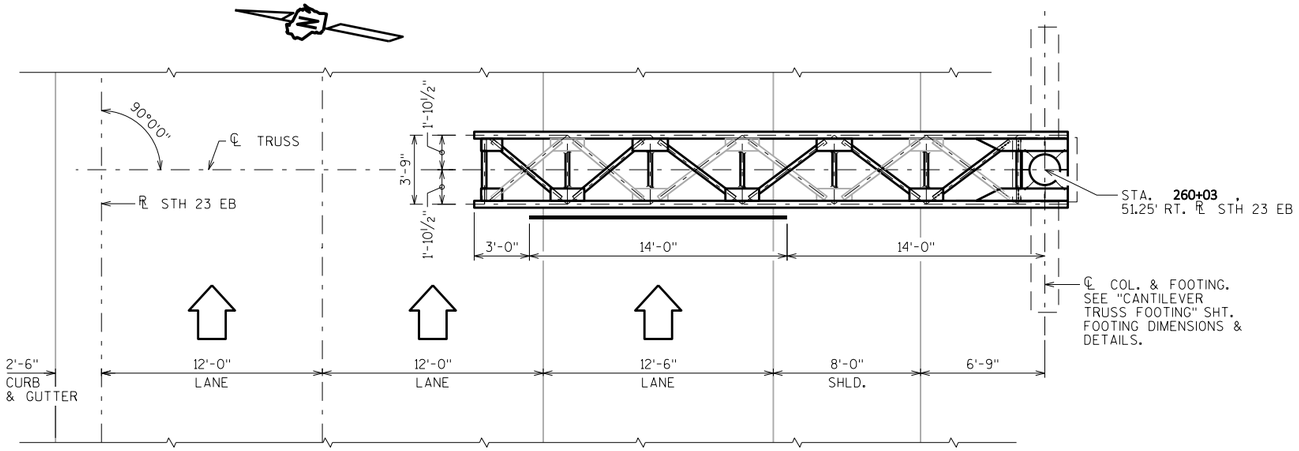
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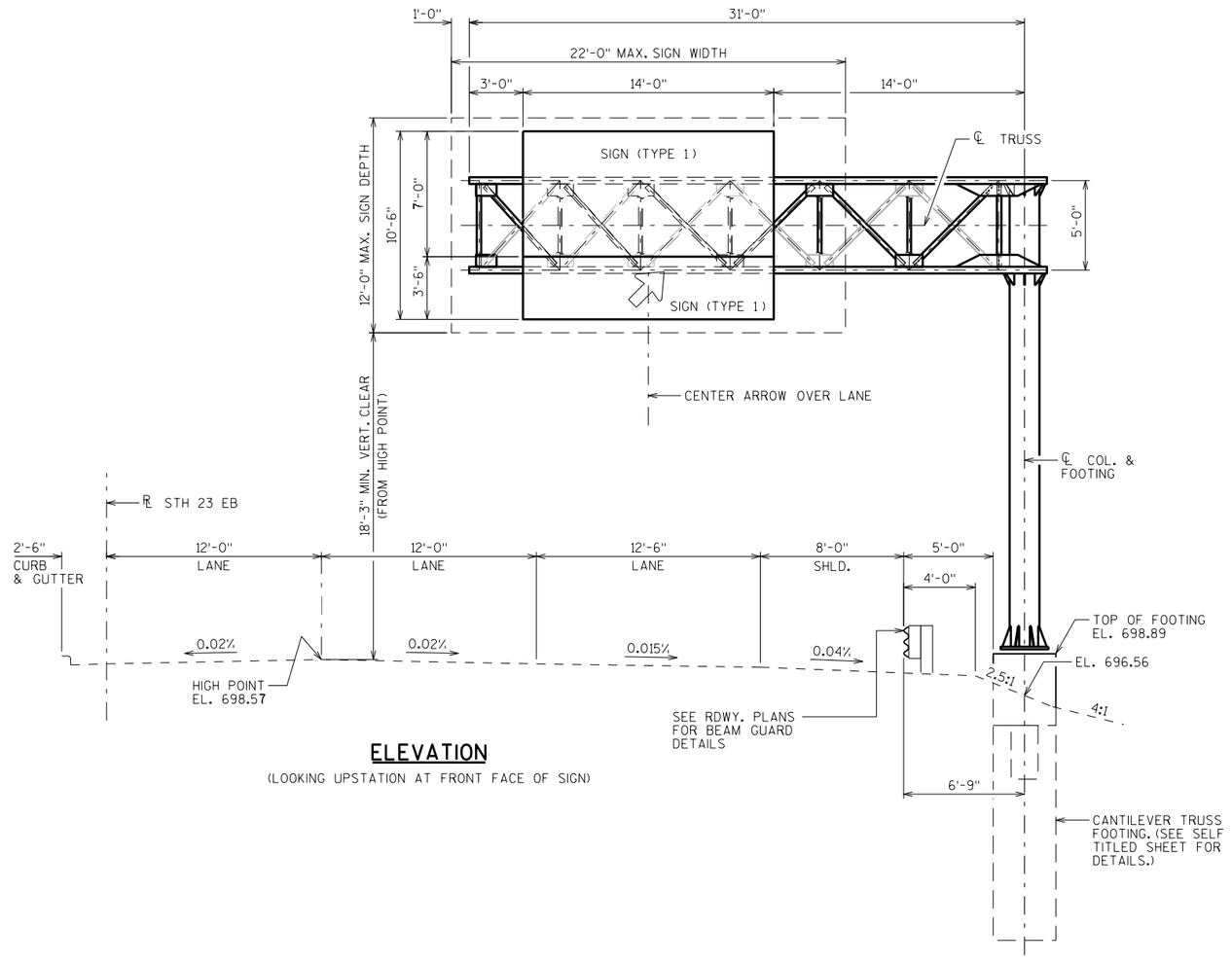
STATE PROJECT NUMBER

1222-13-71



PLAN

STA. **260+03** EB



ELEVATION

(LOOKING UPSTATION AT FRONT FACE OF SIGN)

TRAFFIC VOLUME

STH 23 EB

A.D.T. = 13,500

R.D.S. = 50 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

S-59-86
SIGN BRIDGE LAYOUT

SHEET 7

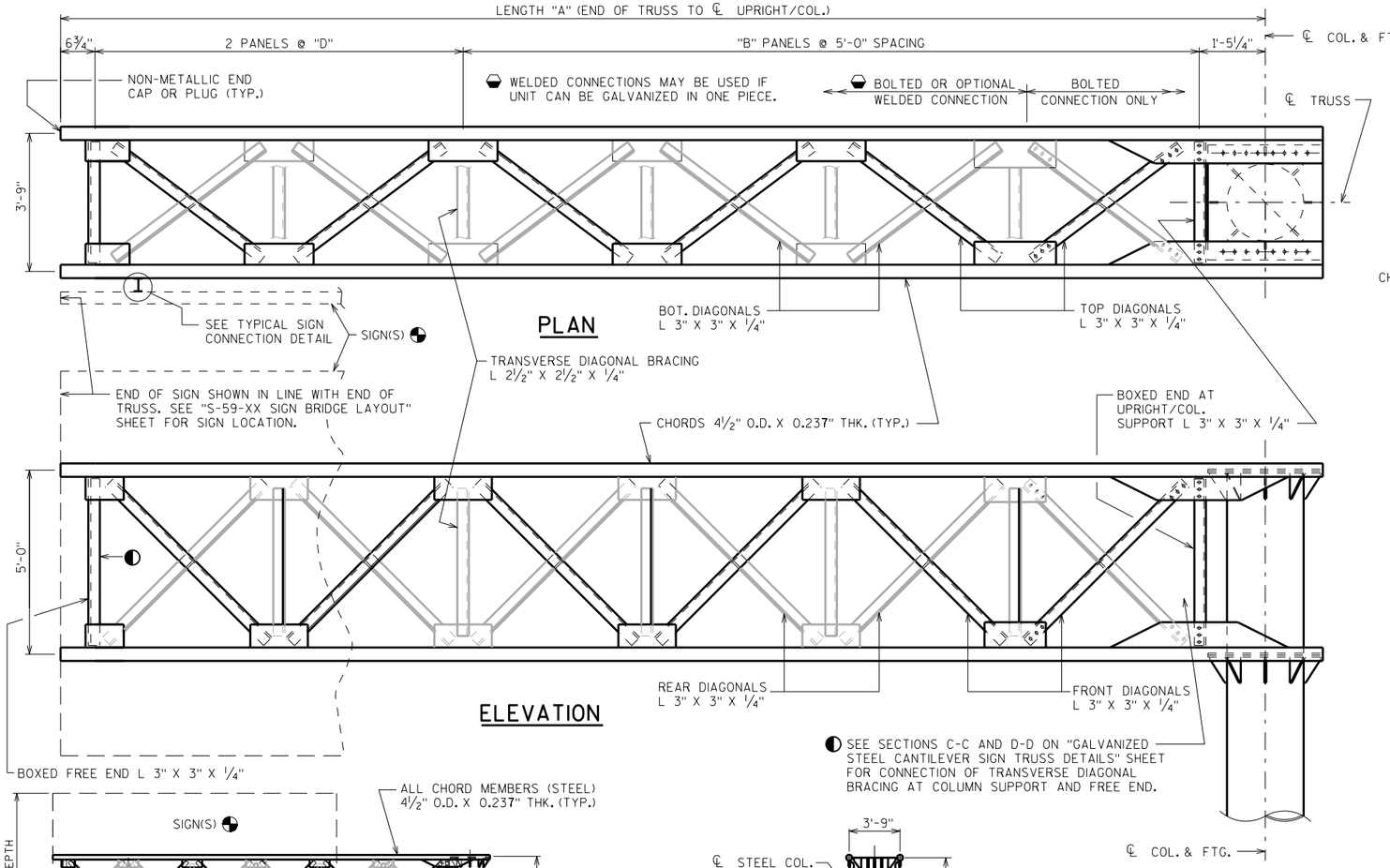
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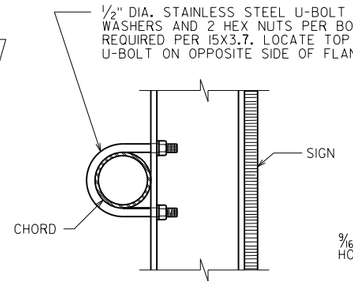
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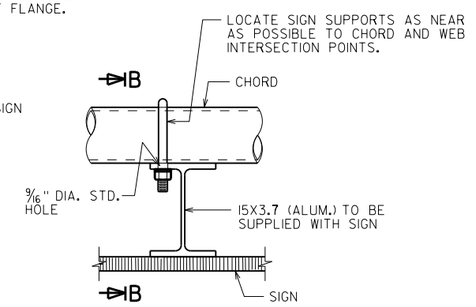
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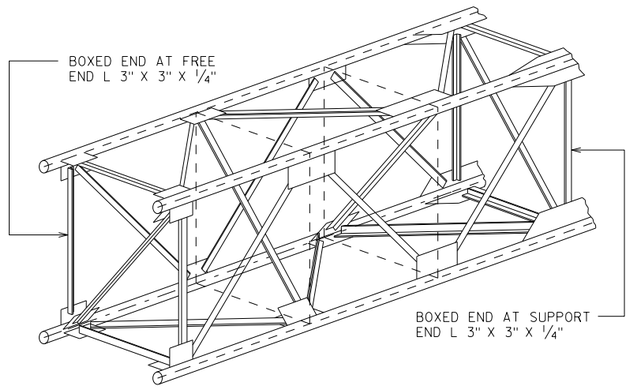
STATE PROJECT NUMBER

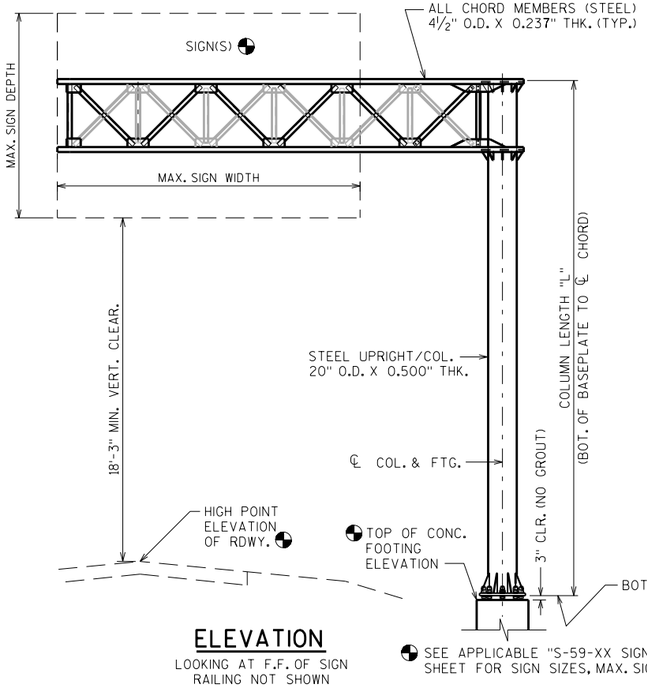
1222-13-71

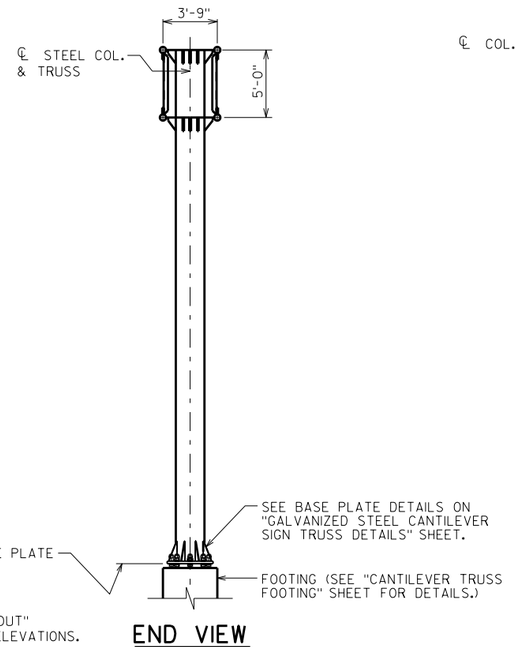


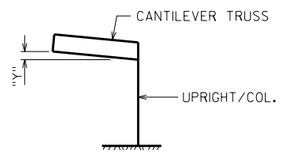












DIMENSIONS & CAMBER VALUES

STRUCTURE	"A"	"L"	"B"	"D"	"Y"
S-59-78	30'-10½"	25'-1"	4	4'-5¼"	2¼"
S-59-80	30'-9"	25'-11"	4	4'-4½"	2⅜"
S-59-81	30'-3"	24'-7"	4	4'-1½"	2⅛"
S-59-84	32'-0"	24'-6"	4	5'-0"	2½"
S-59-85	27'-3"	25'-7"	3	5'-1½"	1⅝"
S-59-86	31'-0"	26'-3"	4	4'-6"	2⅜"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

GALVANIZED STEEL CANTILEVER SIGN TRUSS

SHEET 8

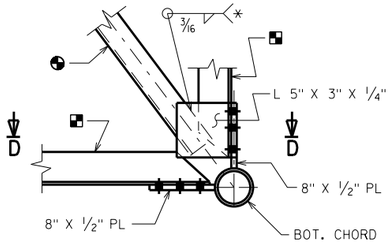
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8

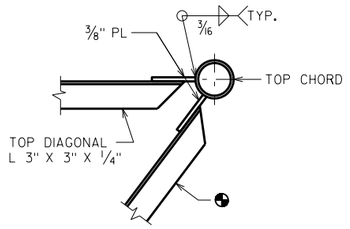
SCALE = 2.25

STATE PROJECT NUMBER

1222-13-71



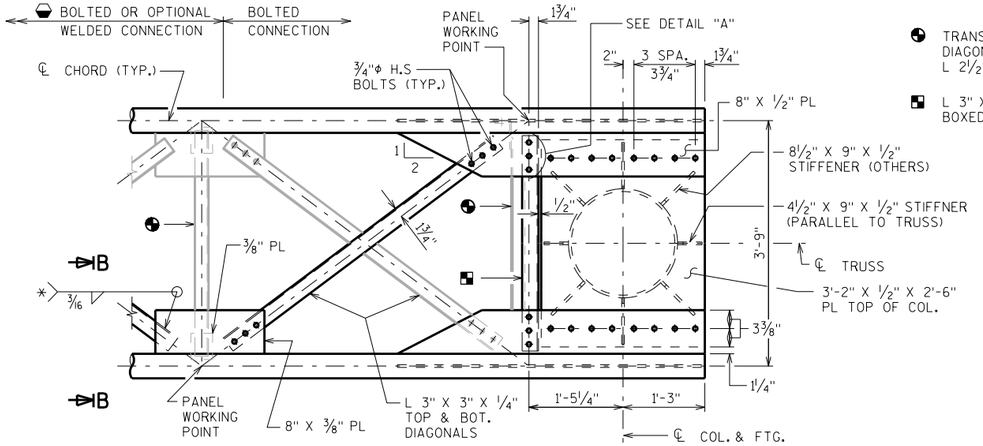
SECTION C-C



SECTION B-B

ANGLE SIZE	*WELD LENGTH (MIN.)
L 2 1/2"×2 1/2"×1/4"	7"
L 3"×3"×1/4"	8"

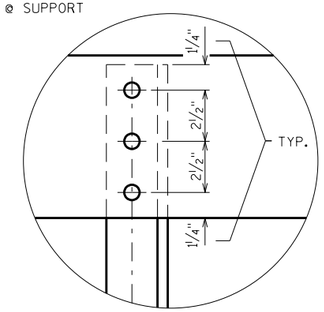
WELDED CONNECTIONS MAY BE USED IF UNIT CAN BE GALVANIZED IN ONE PIECE.



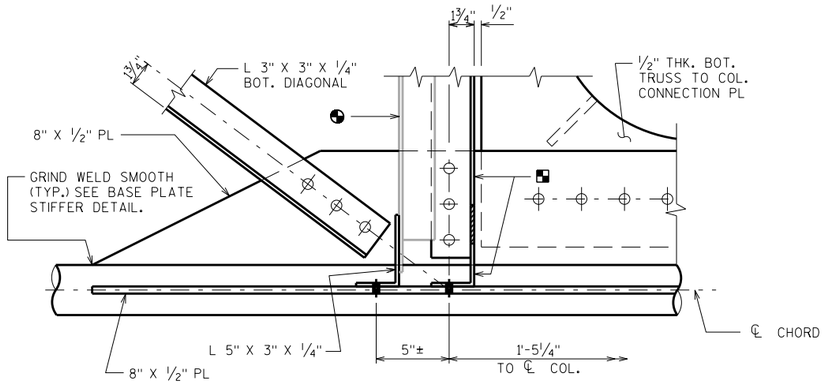
PLAN TRUSS TO COLUMN

TRANSVERSE DIAGONAL BRACING L 2 1/2" X 2 1/2" X 1/4"

L 3" X 3" X 1/4" BOXED END @ SUPPORT

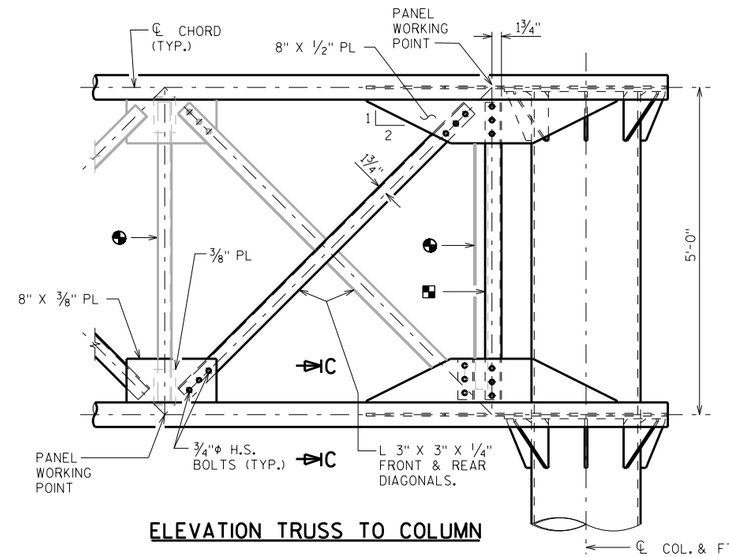


DETAIL "A"

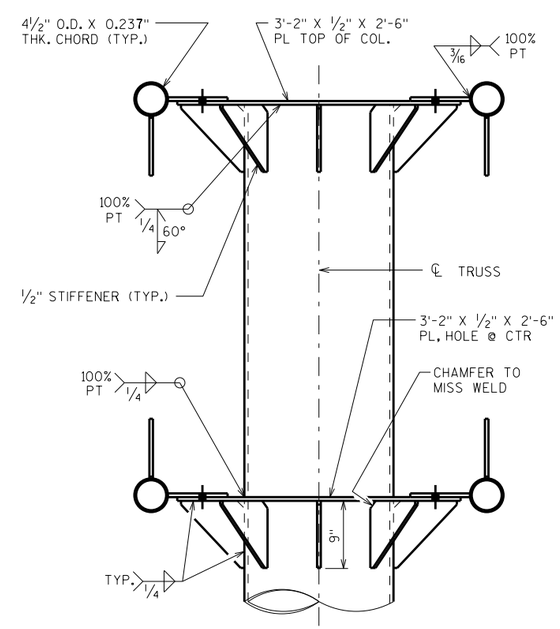


SECTION D-D

(LOOKING DOWN @ BOT. HORIZ. PLANE @ FRONT CHORD)

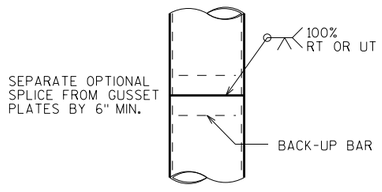


ELEVATION TRUSS TO COLUMN

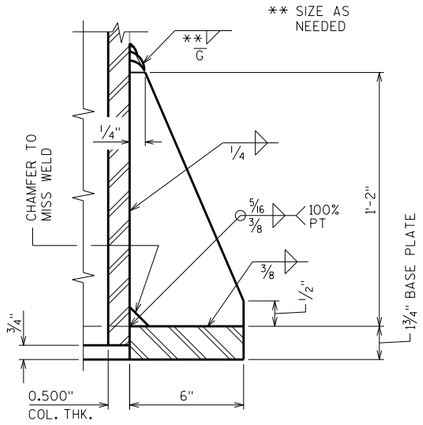


END VIEW TRUSS TO COLUMN

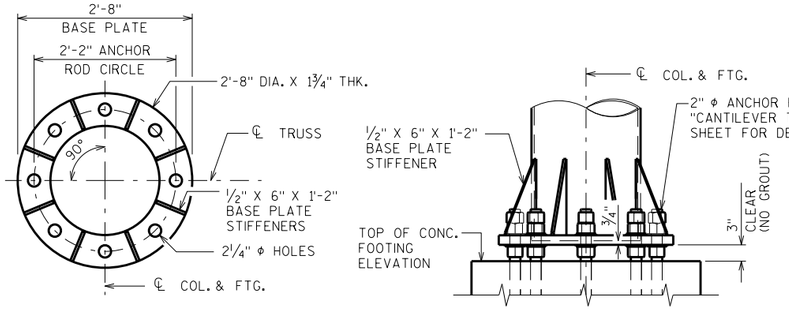
(WEB MEMBERS NOT SHOWN)



OPTIONAL COLUMN OR CHORD SPLICE DETAIL



BASE PLATE STIFFENER DETAIL



BASE PLATE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCT. S-59-78,80,81,84-86

DRAWN BY: ARC | PLANS CK'D.: JDM

GALVANIZED STEEL CANTILEVER SIGN TRUSS DETAILS

SHEET 9

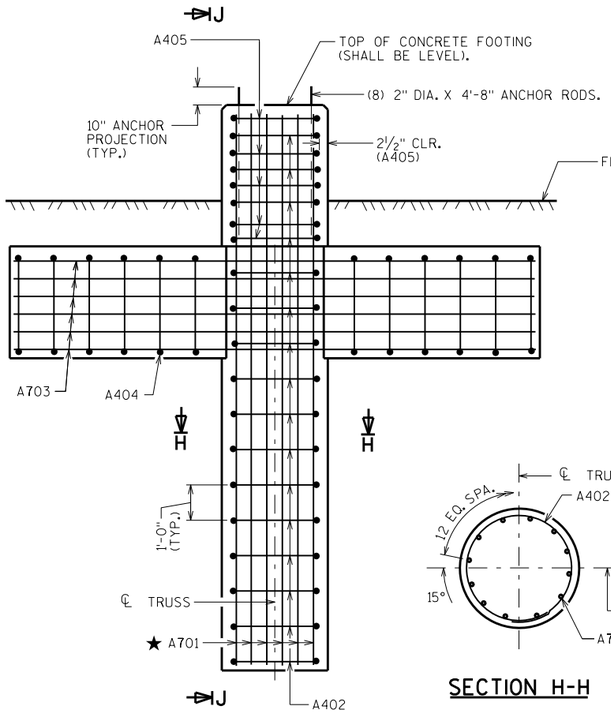
SCALE = 2.25

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8

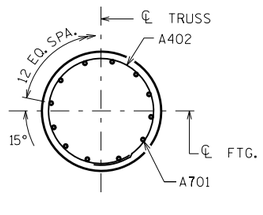
STATE PROJECT NUMBER

1222-13-71

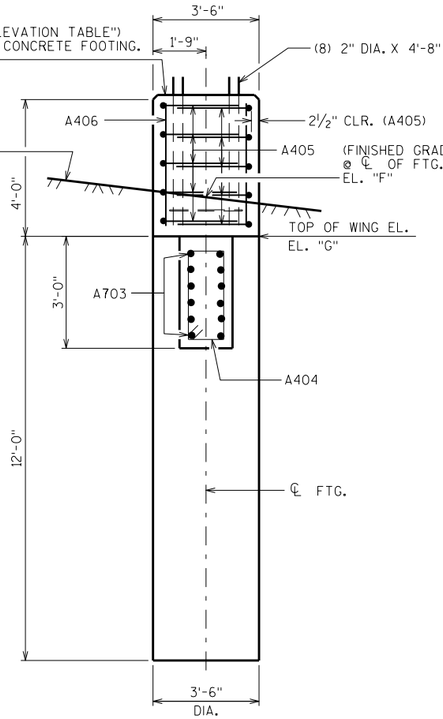


ELEVATION

★ PLACE A701 BARS TO MISS ANCHOR RODS



SECTION H-H

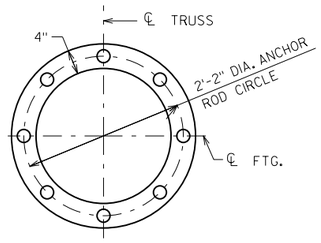


SECTION J-J

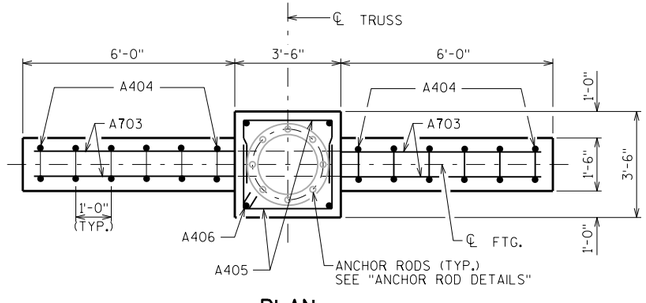
SHOWING WING AND CAP STEEL ONLY

ELEVATION TABLE

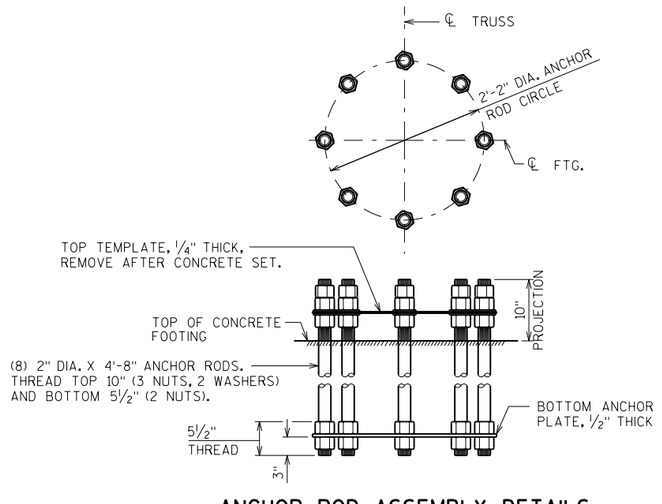
STRUCTURE	EL. "E"	EL. "F"	EL. "G"
S-59-78	680.90	677.55	676.90
S-59-80	681.00	678.58	677.00
S-59-81	658.08	654.91	654.08
S-59-84	686.76	683.41	682.76
S-59-85	694.89	692.59	690.89
S-59-86	698.89	696.56	694.89



TOP TEMPLATE AND BOTTOM ANCHOR PLATE



PLAN



ANCHOR ROD ASSEMBLY DETAILS

NOTES

CONTRACTOR SHALL VERIFY UTILITY CONFLICTS PRIOR TO CONSTRUCTION OF FOOTING.

FOOTING BELOW THE WINGS SHALL BE EXCAVATED BY THE USE OF CIRCULAR AUGER.

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

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

BENDING DIMENSIONS ARE OUT TO OUT OF BAR.

CENTER ANCHOR ROD ASSEMBLY TO MISS BAR STEEL REINFORCEMENT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED ON PLAN. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURE IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

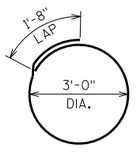
PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

UNLESS NOTED ON PLAN, REMOVE ALL CASING AND FORMS USED TO CONSTRUCT THE FOOTING PRIOR TO BACKFILLING AROUND THE FOOTING. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE IN LAYERS OF 1'-0" OR LESS.

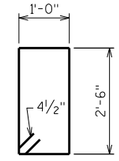
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A701	X	12	15'-6"		SHAFT - VERT. REINF.
A402	X	16	11'-2"	X	SHAFT - HOOPS
A703	X	12	15'-0"		WINGS - HORIZ.
A404	X	12	7'-6"	X	WINGS - STIRRUPS
A405	X	10	7'-11"	X	SHAFT - TOP - HORIZ.
A406	X	4	3'-6"		SHAFT - TOP - VERT.

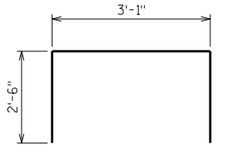
("BILL OF BARS" TABLE FOR EACH FOOTING. TOTAL QTY. SHOWN ON "GENERAL NOTES & QUANTITIES" SHT.)



A402



A404



A405

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

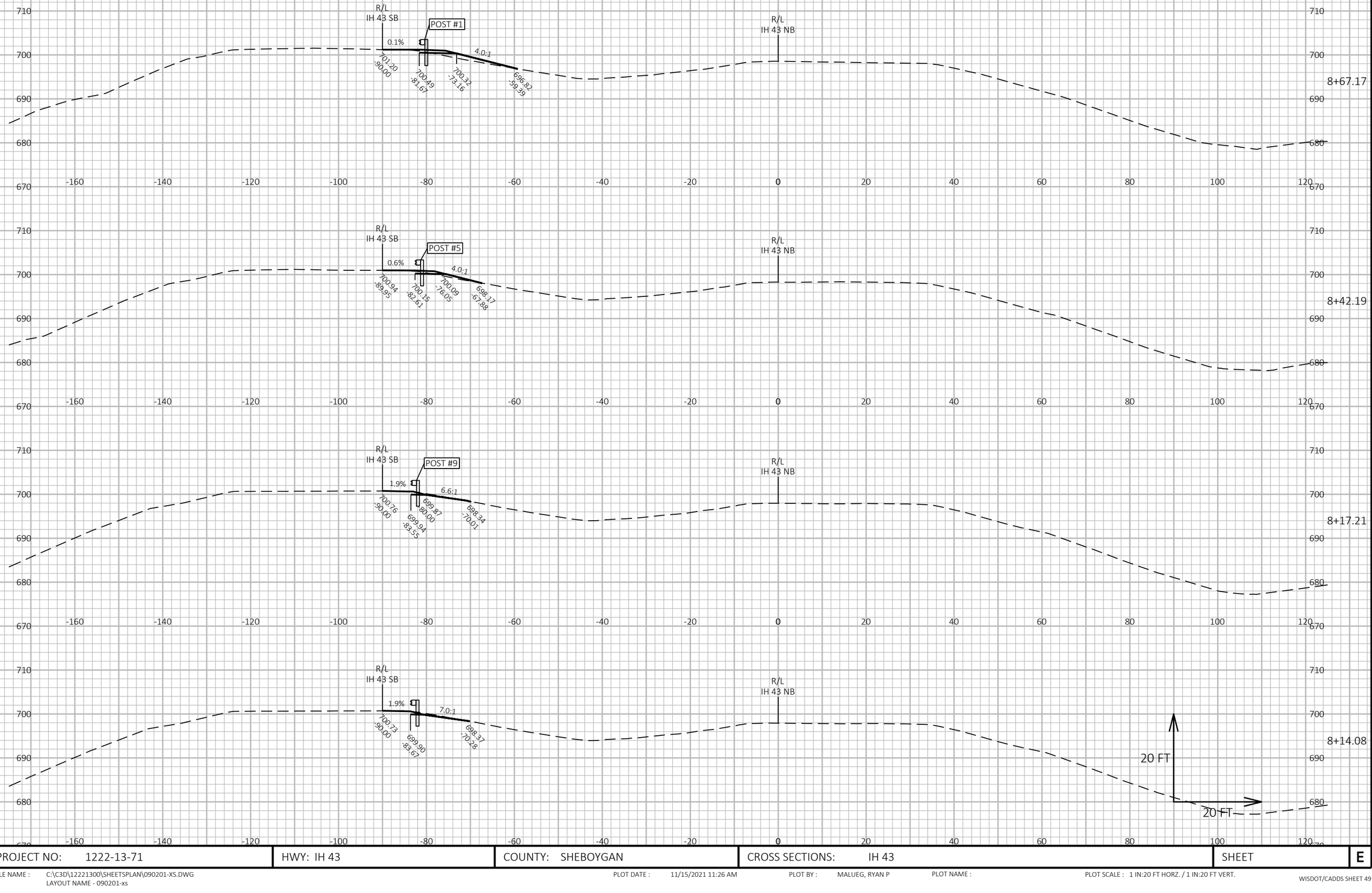
STRUCT. S-59-78,80,81,84-86

DRAWN BY ARC | PLANS CK'D. JDM

CANTILEVER TRUSS FOOTING

SHEET 10

SCALE = 1.0



9

9

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

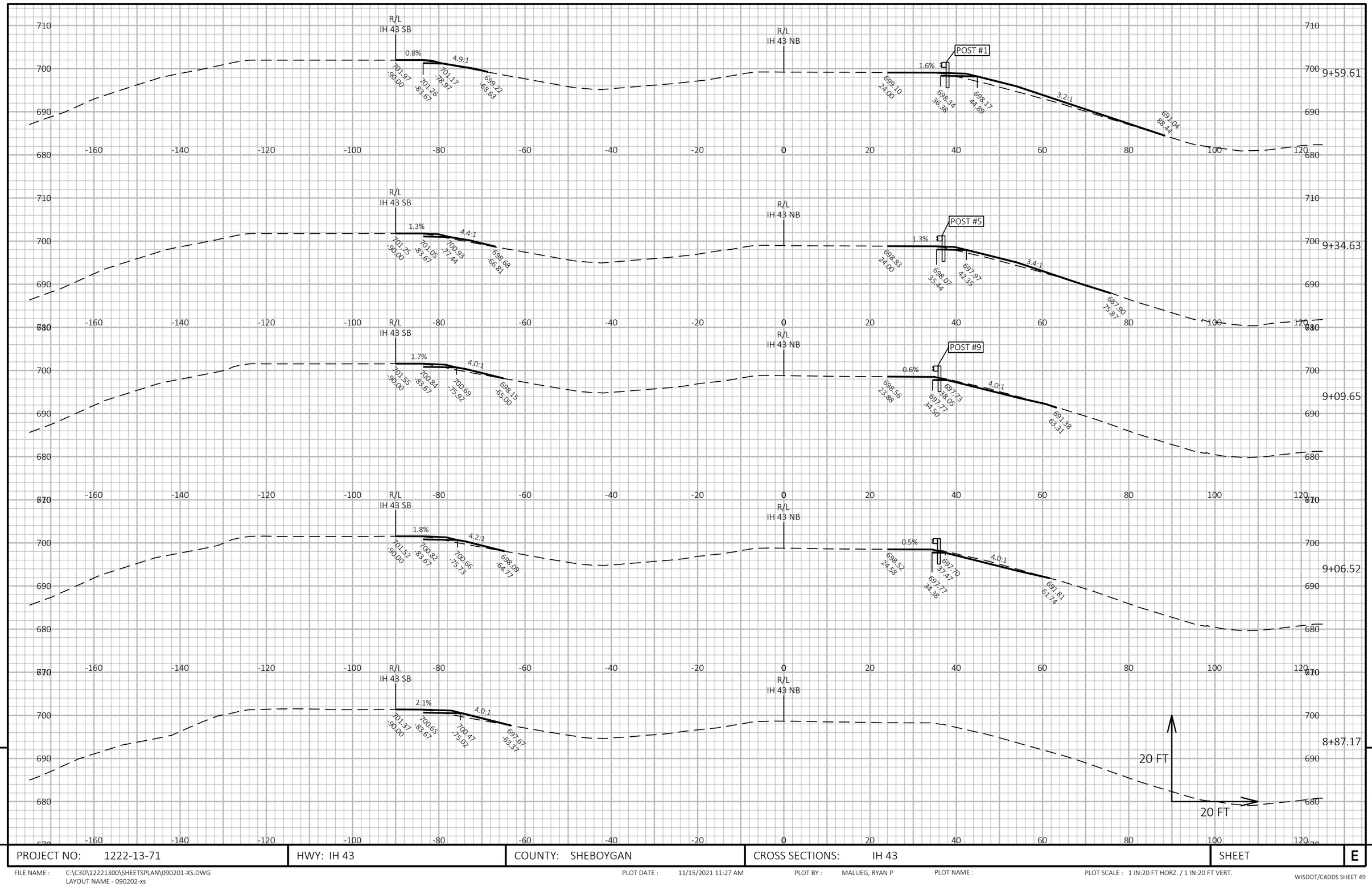
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LAYOUT NAME - 090201-xs

PLOT DATE : 11/15/2021 11:26 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

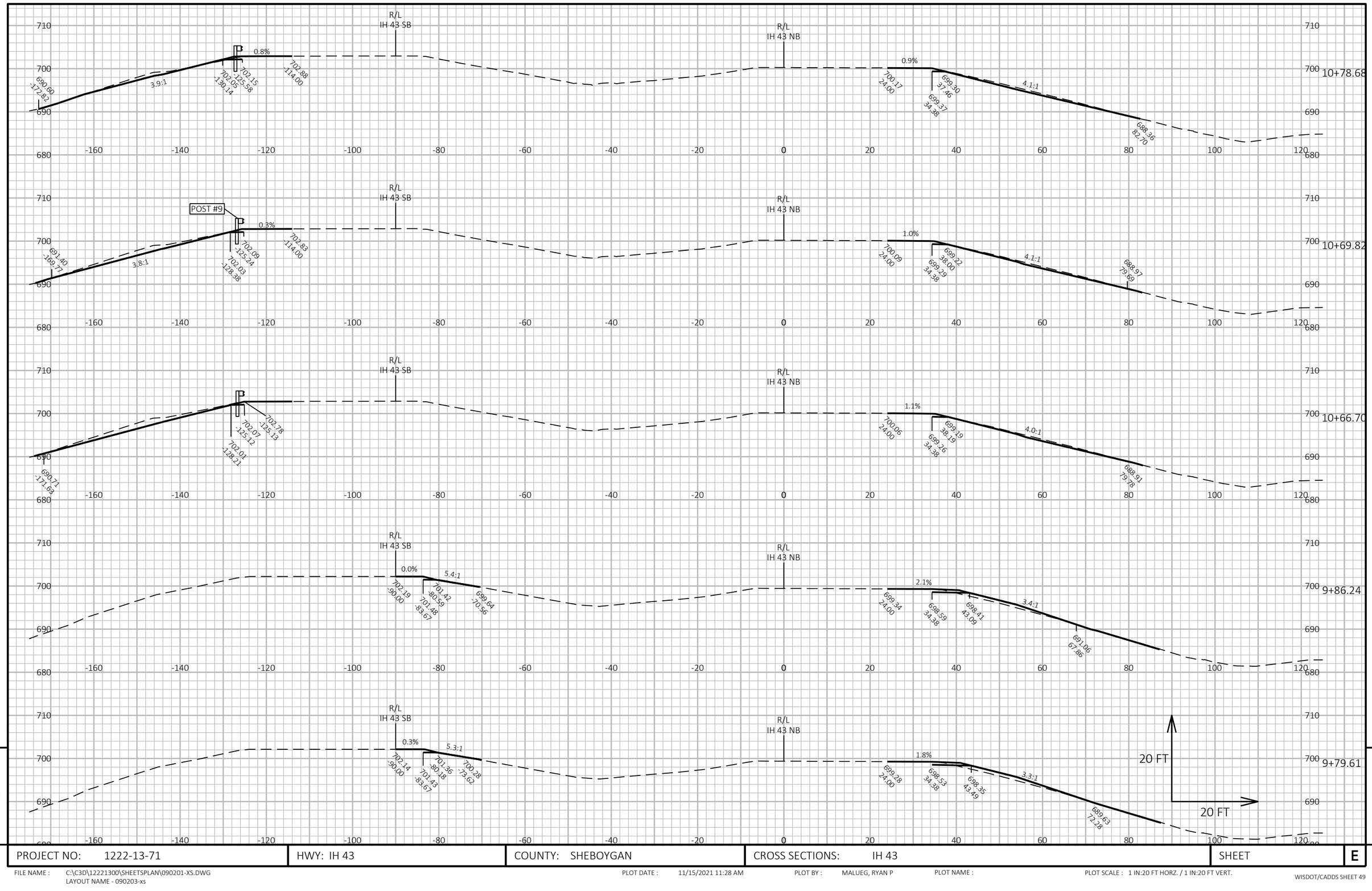
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LAYOUT NAME - 090202-xs

PLOT DATE : 11/15/2021 11:27 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

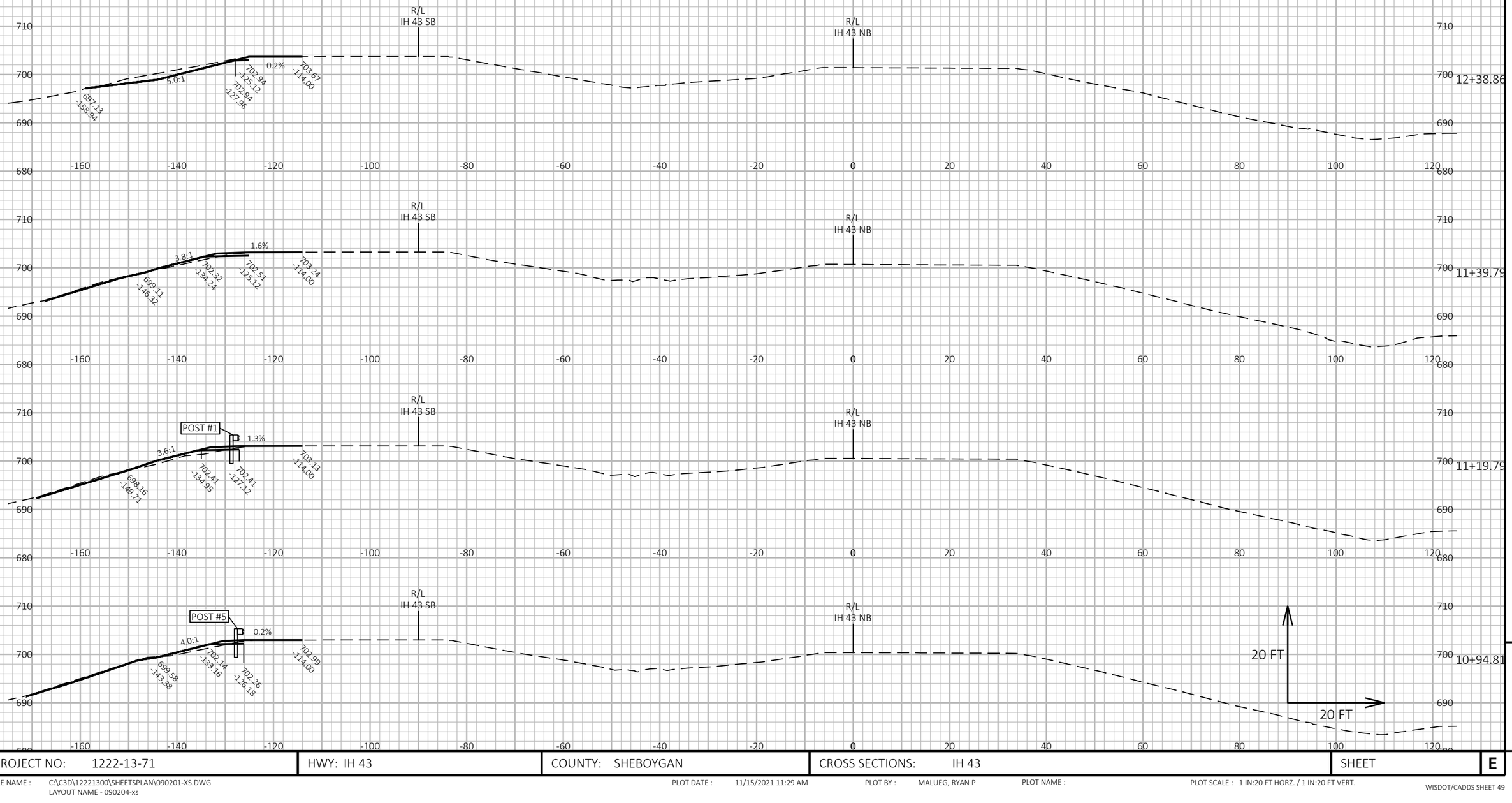
9

PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 11/15/2021 11:28 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

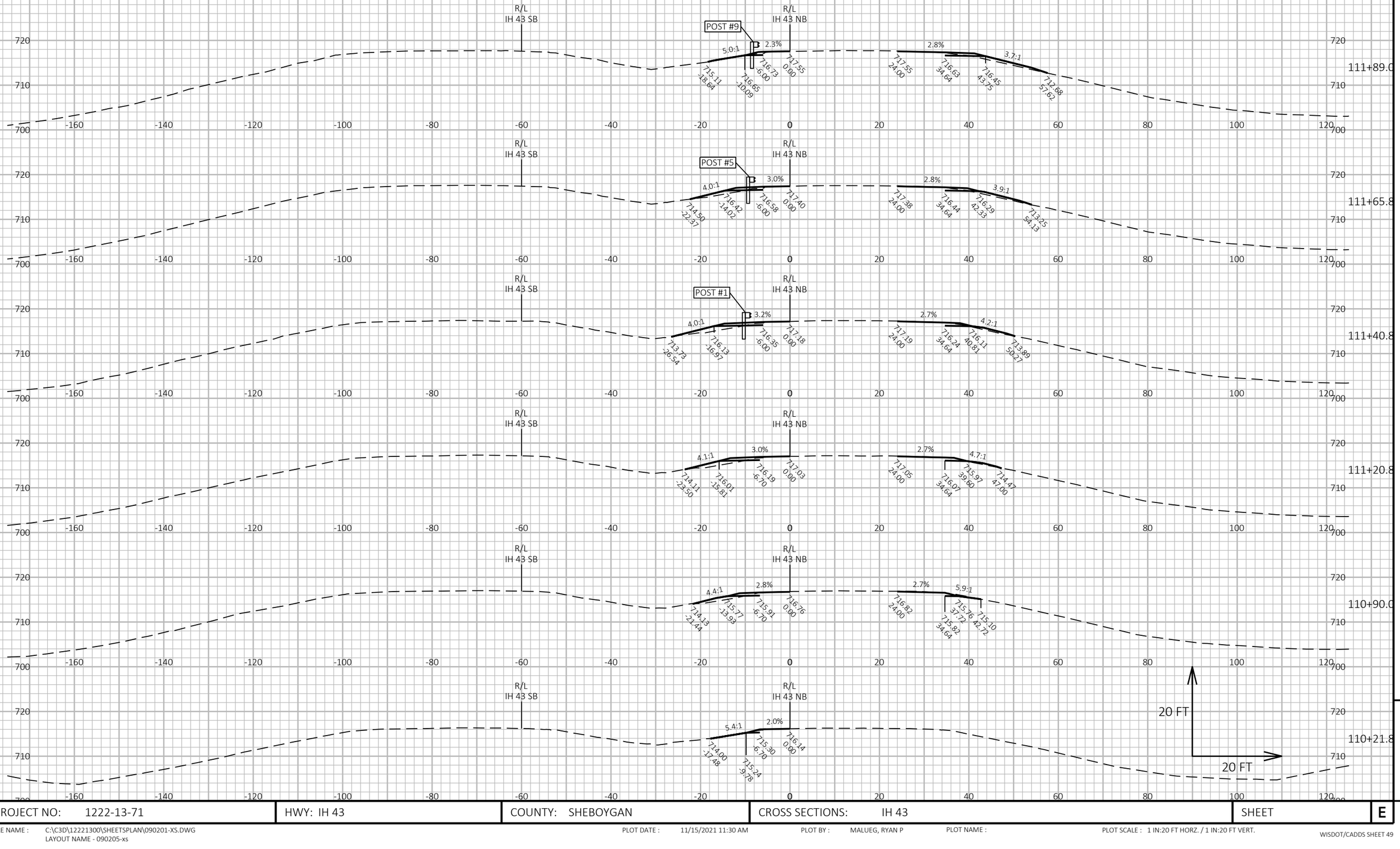
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090204-xs

PLOT DATE : 11/15/2021 11:29 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

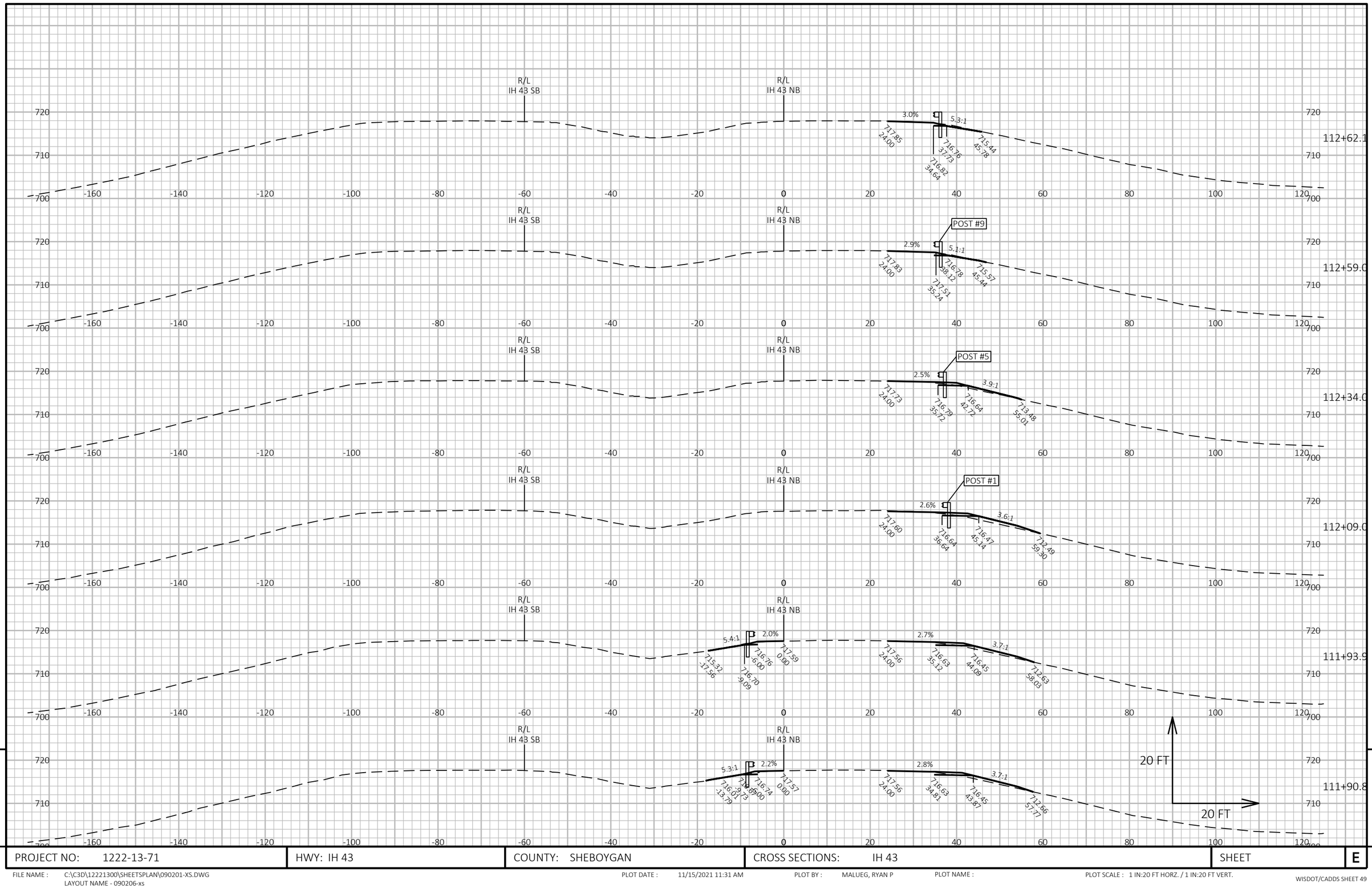
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LAYOUT NAME - 090205-xs

PLOT DATE : 11/15/2021 11:30 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

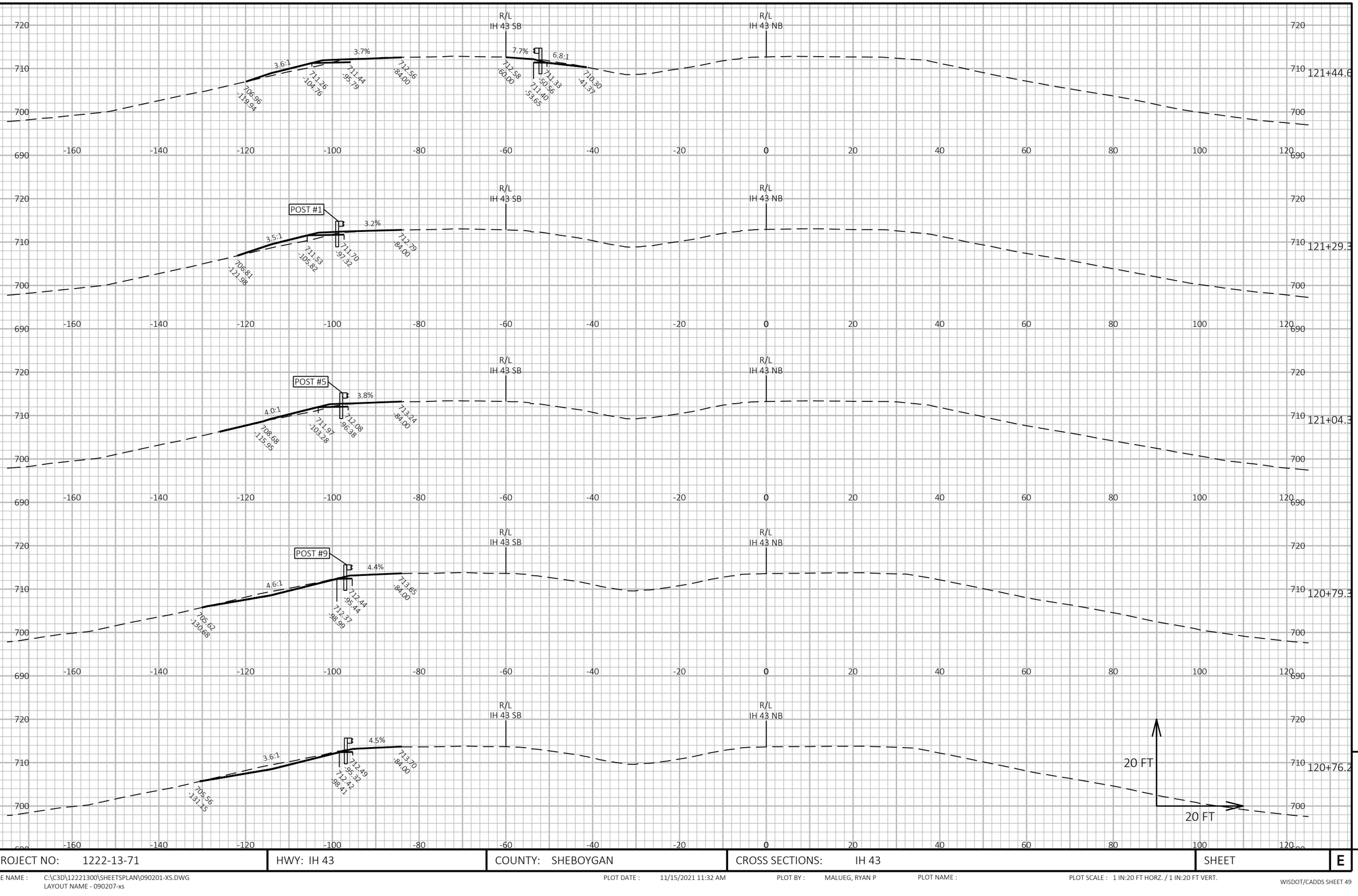
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 11/15/2021 11:31 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



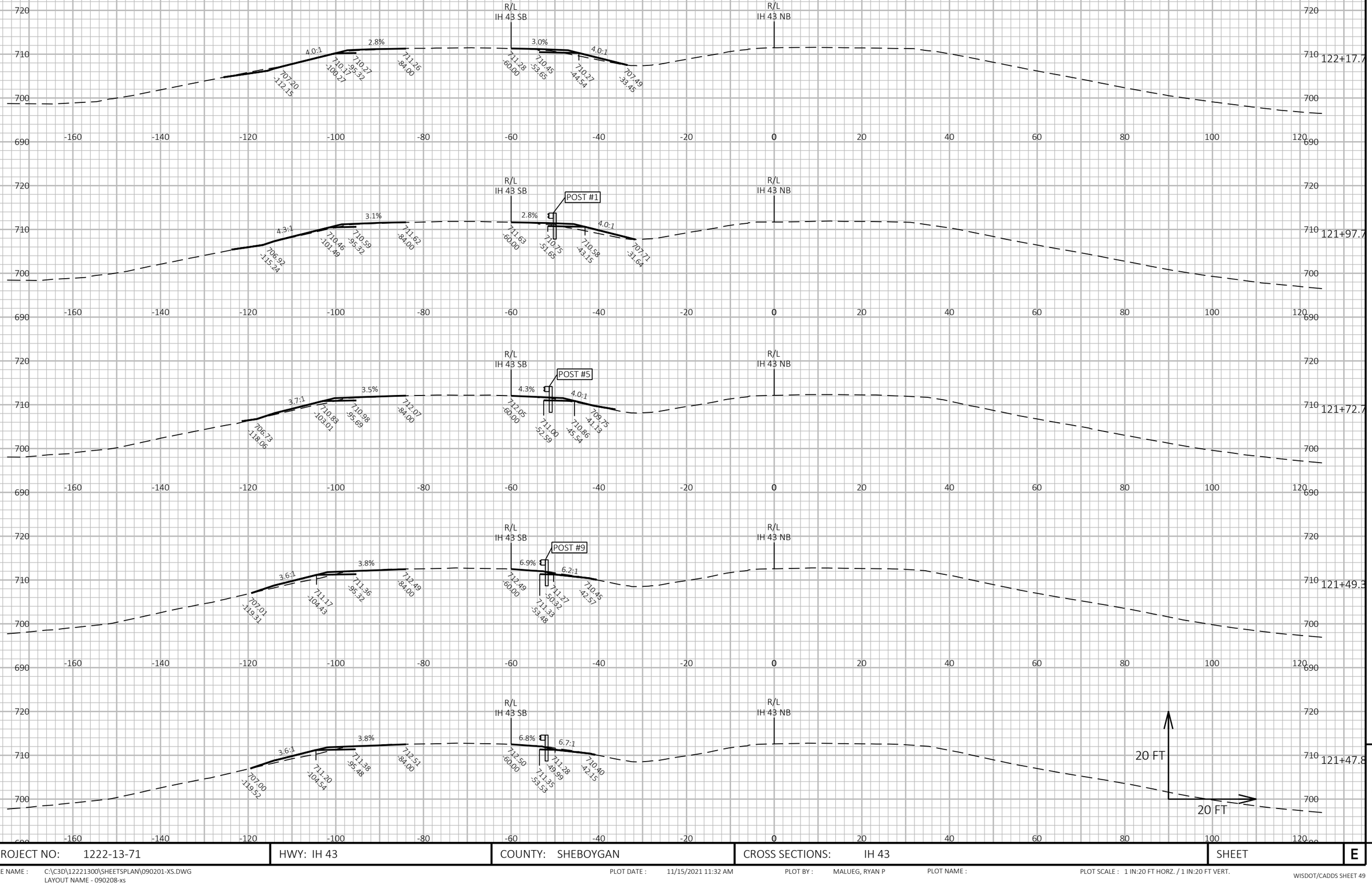
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090207-xs

PLOT DATE : 11/15/2021 11:32 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



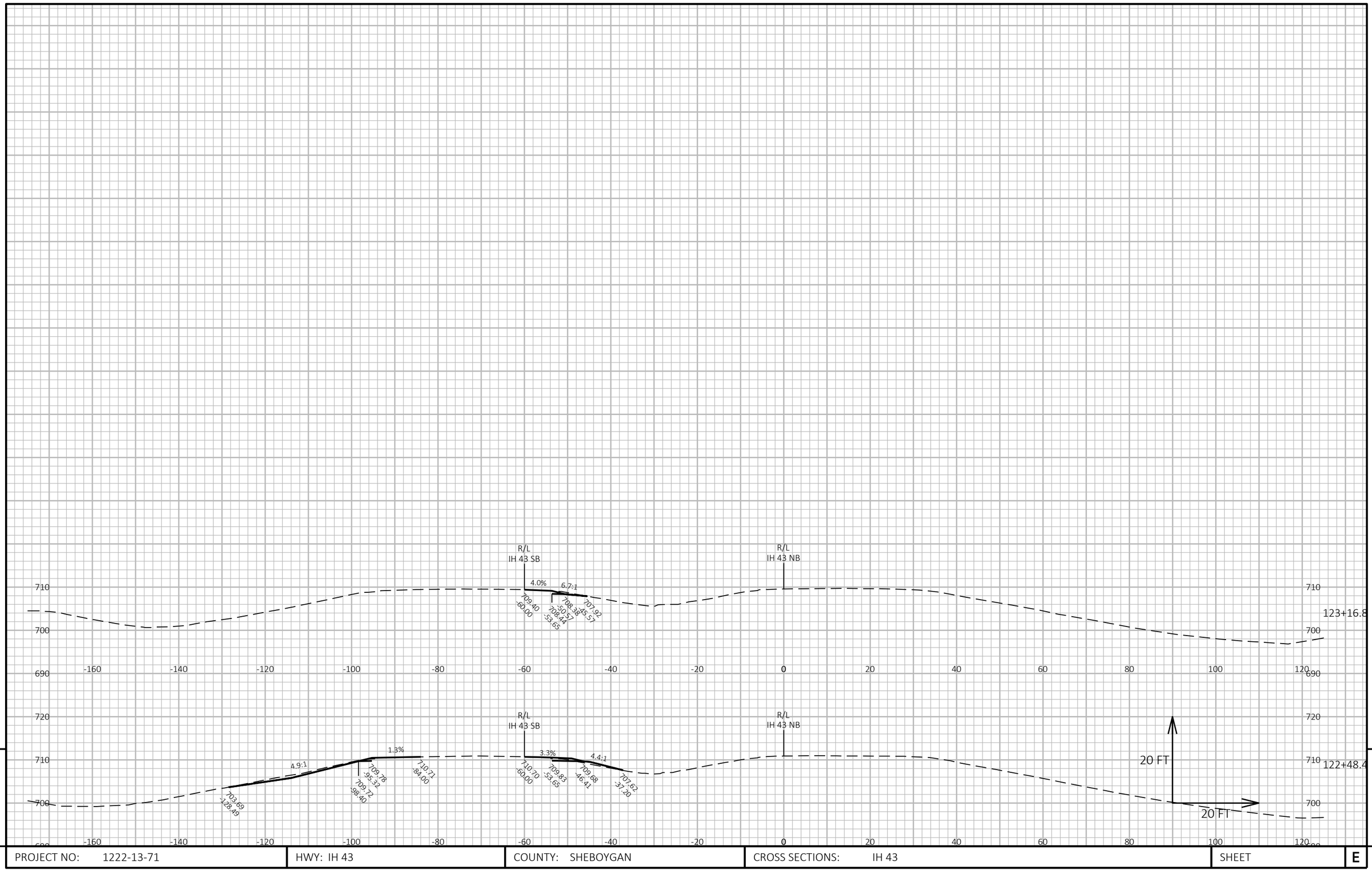
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090208-xs

PLOT DATE : 11/15/2021 11:32 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090209-xs

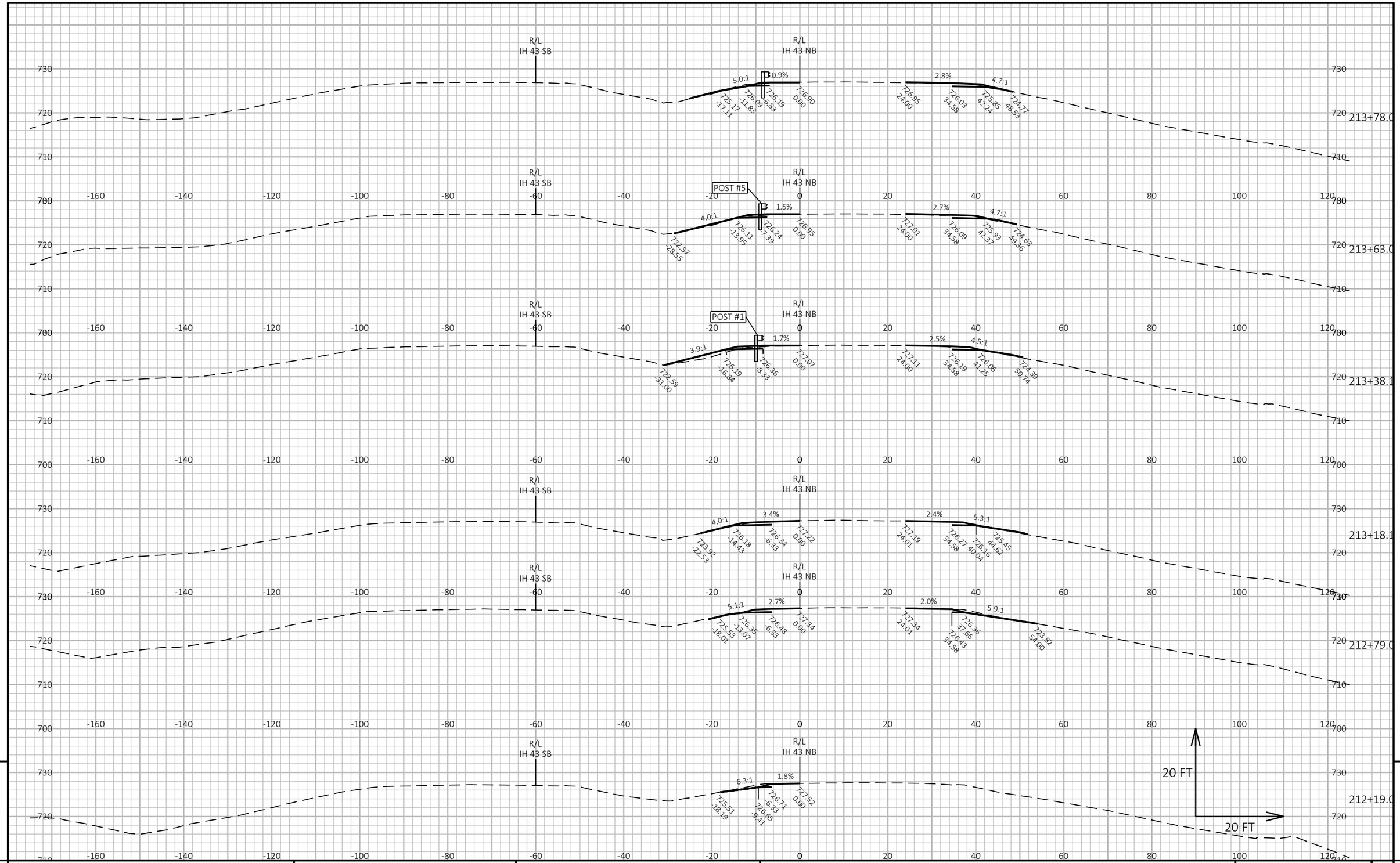
PLOT DATE : 11/15/2021 11:33 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090210-xs

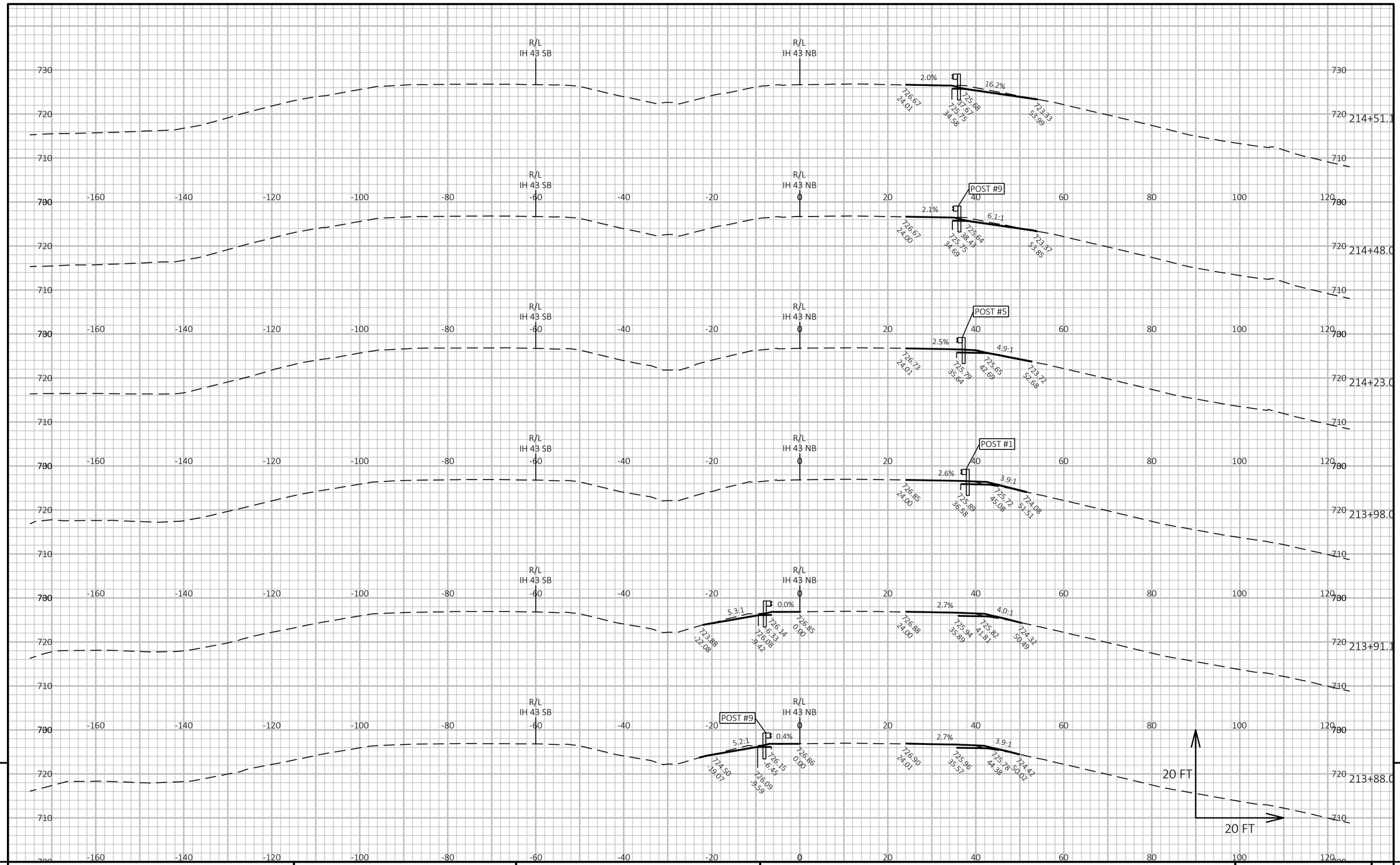
PLOT DATE : 11/15/2021 11:57 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

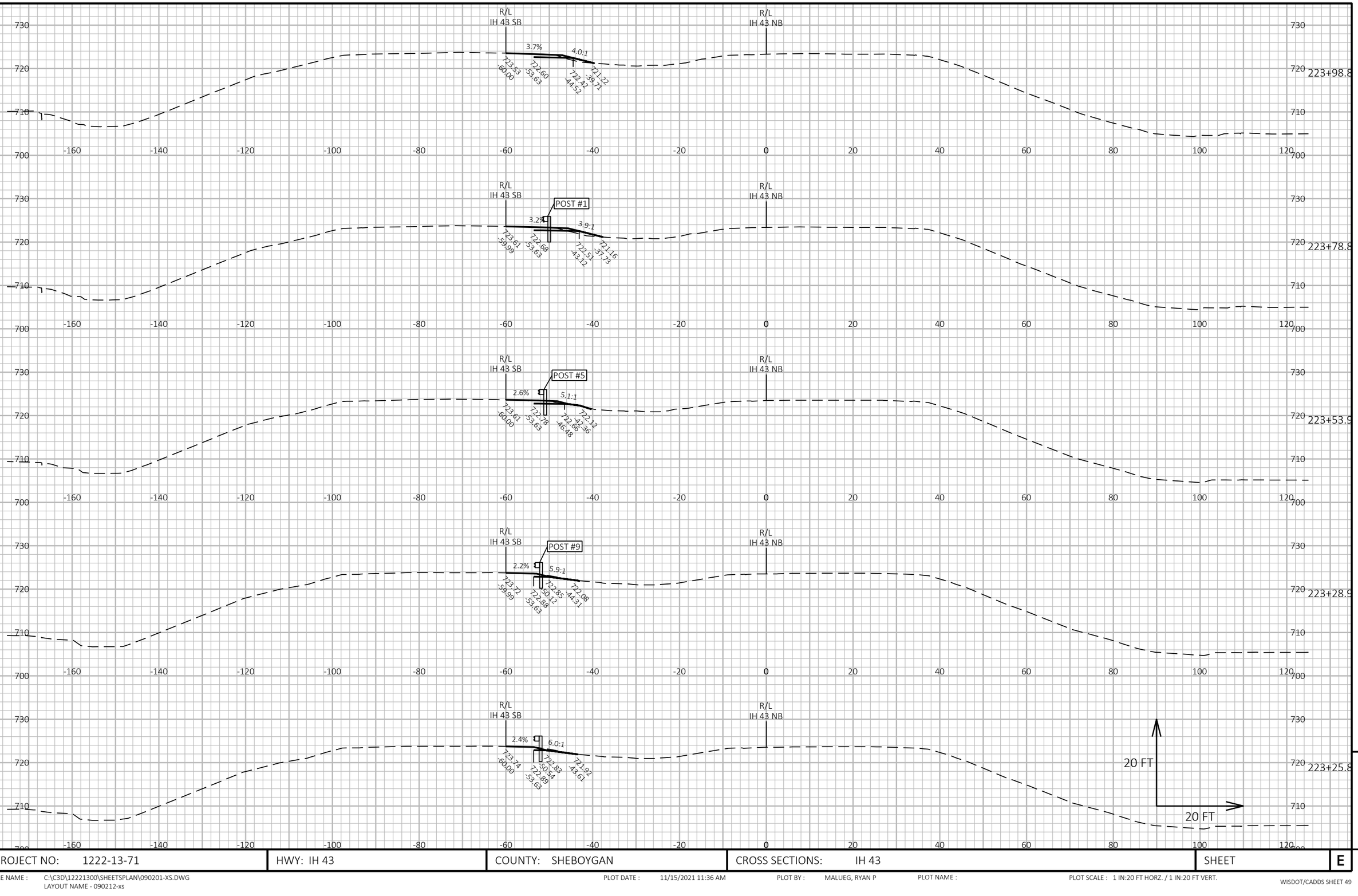
FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 11/15/2021 11:58 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



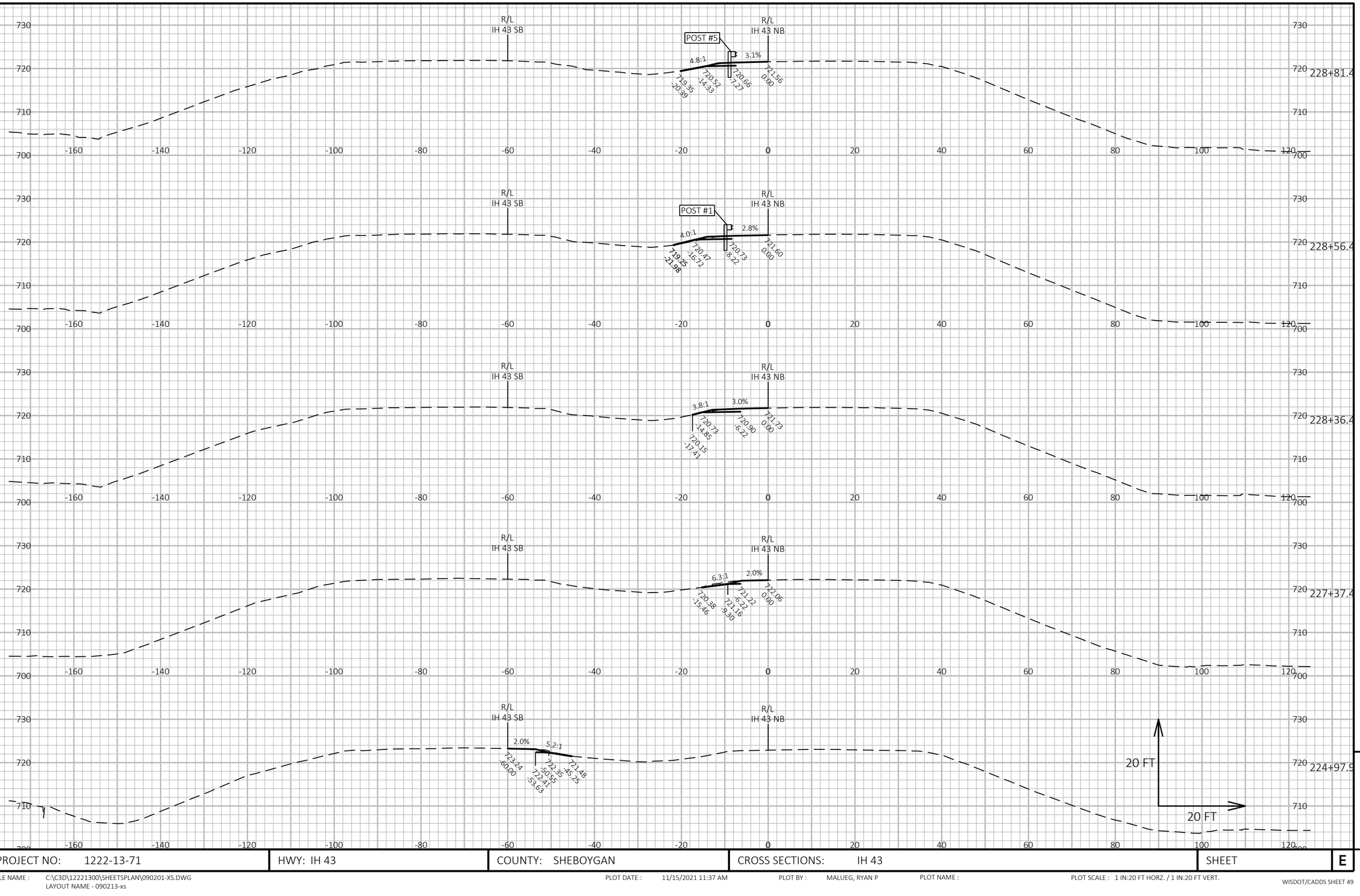
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 11/15/2021 11:36 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



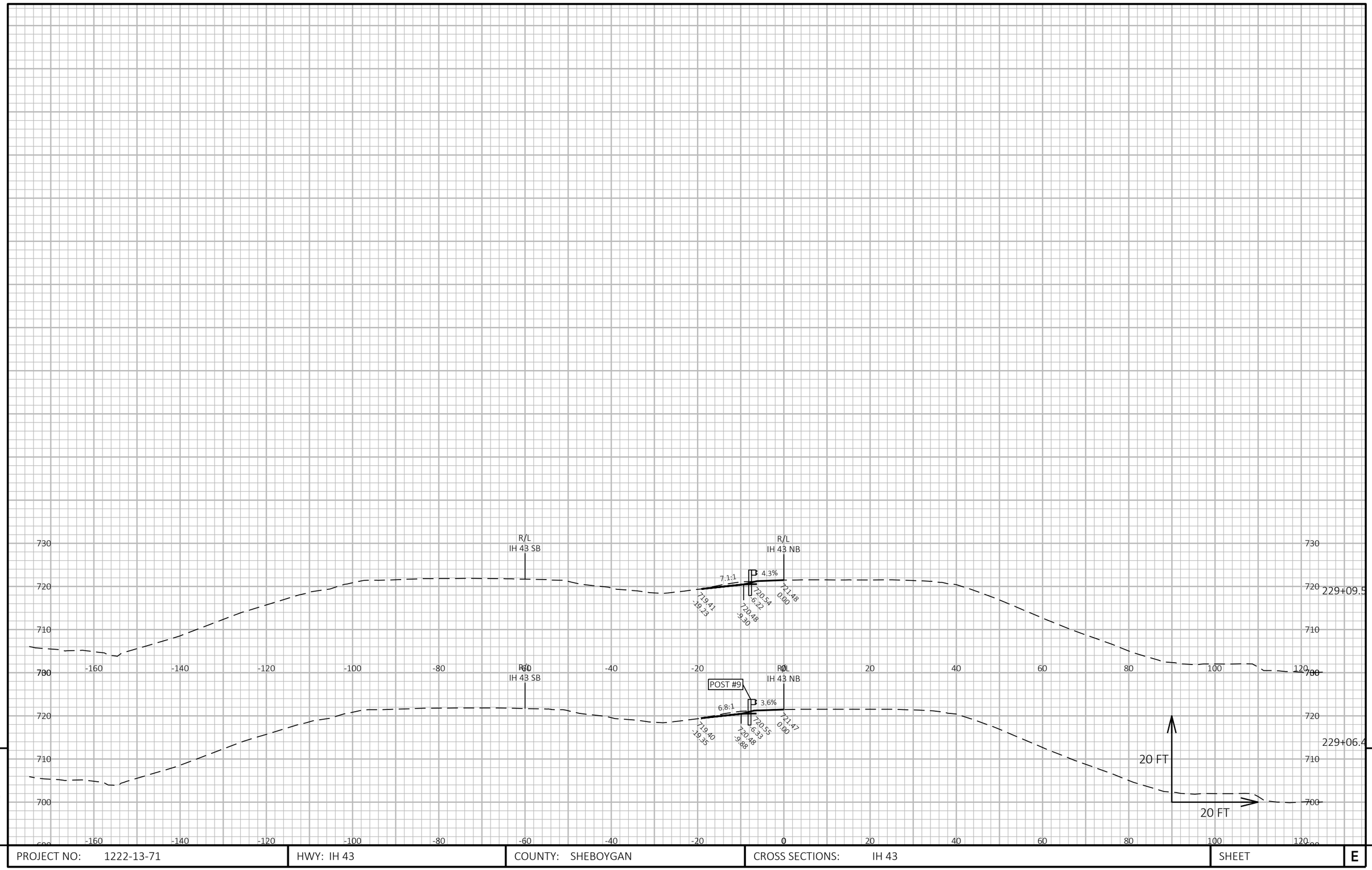
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090213-xs

PLOT DATE : 11/15/2021 11:37 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

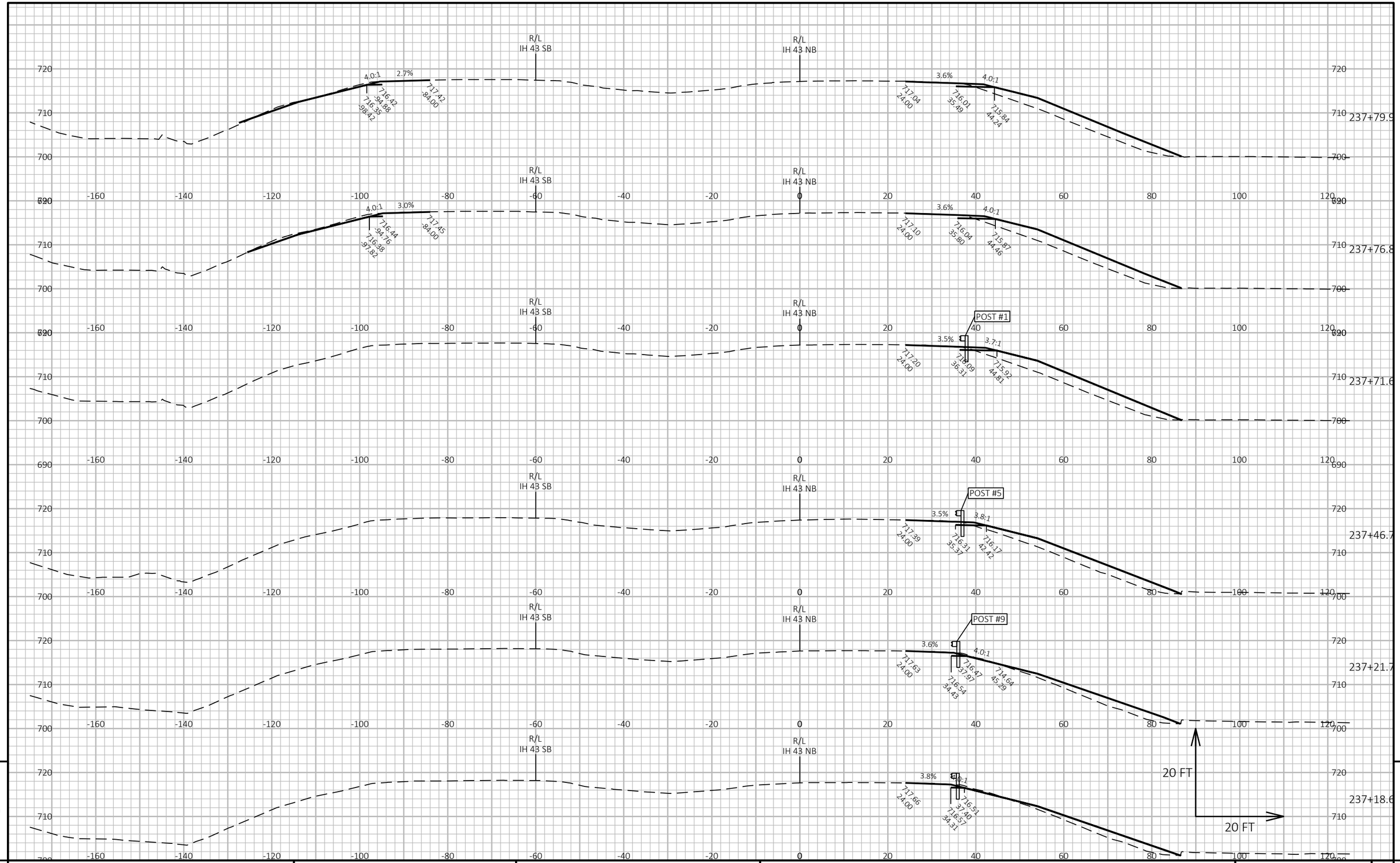
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LAYOUT NAME - 090214-xs

PLOT DATE : 11/15/2021 11:38 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

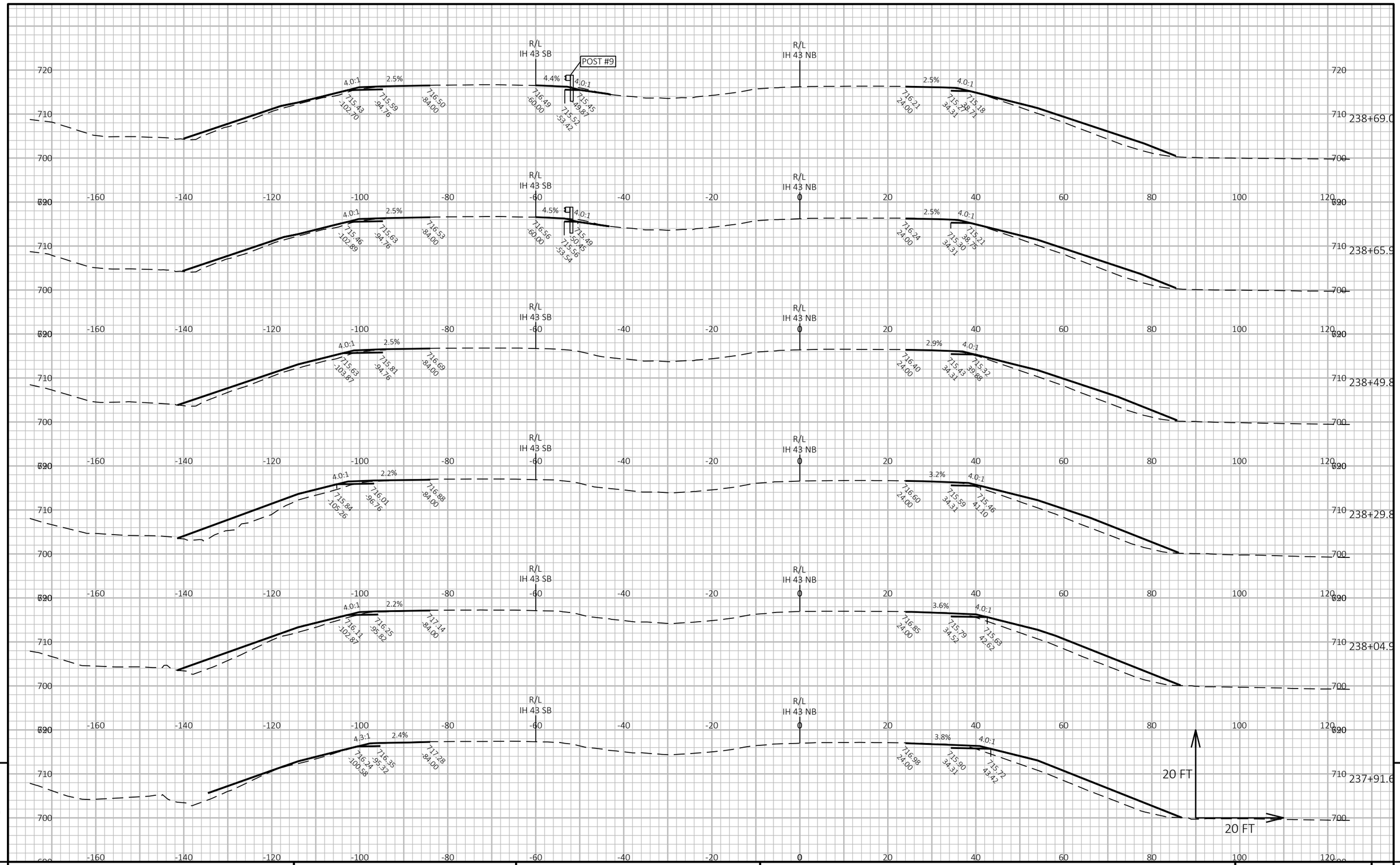
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090215-xs

PLOT DATE : 11/15/2021 11:39 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

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FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090216-xs

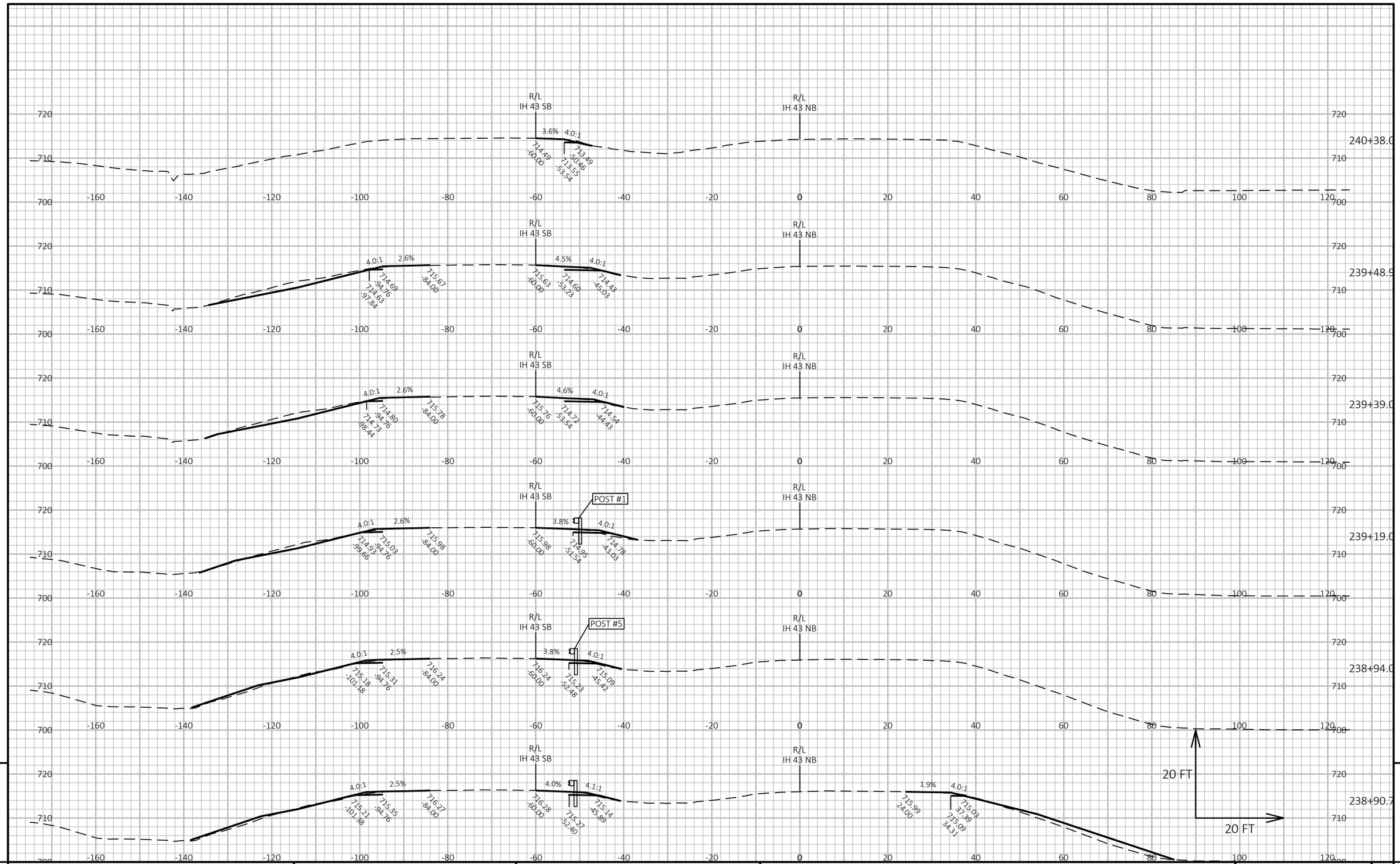
PLOT DATE : 11/15/2021 11:39 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

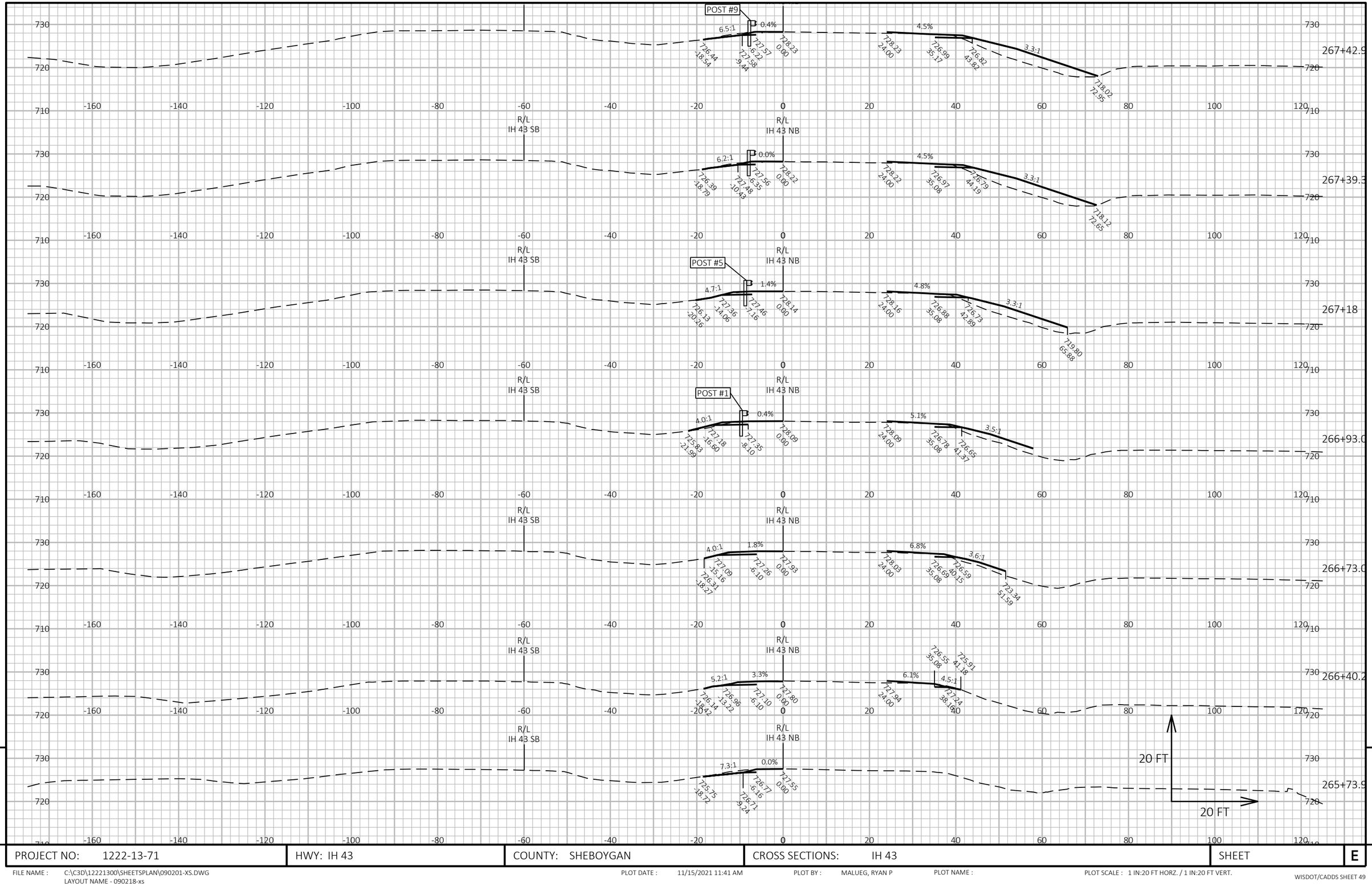
FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090217-xs

PLOT DATE : 11/15/2021 11:40 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



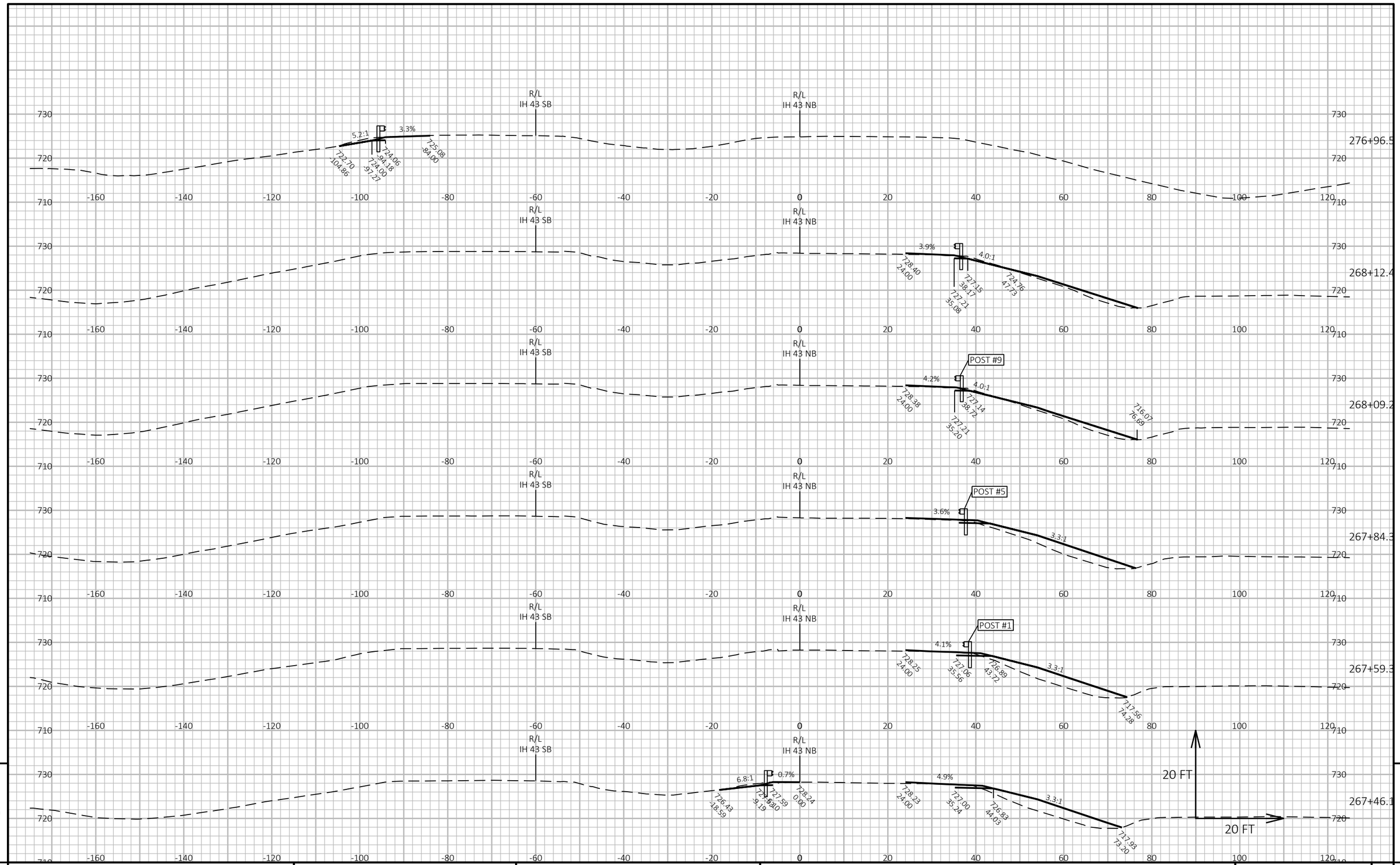
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 11/15/2021 11:41 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

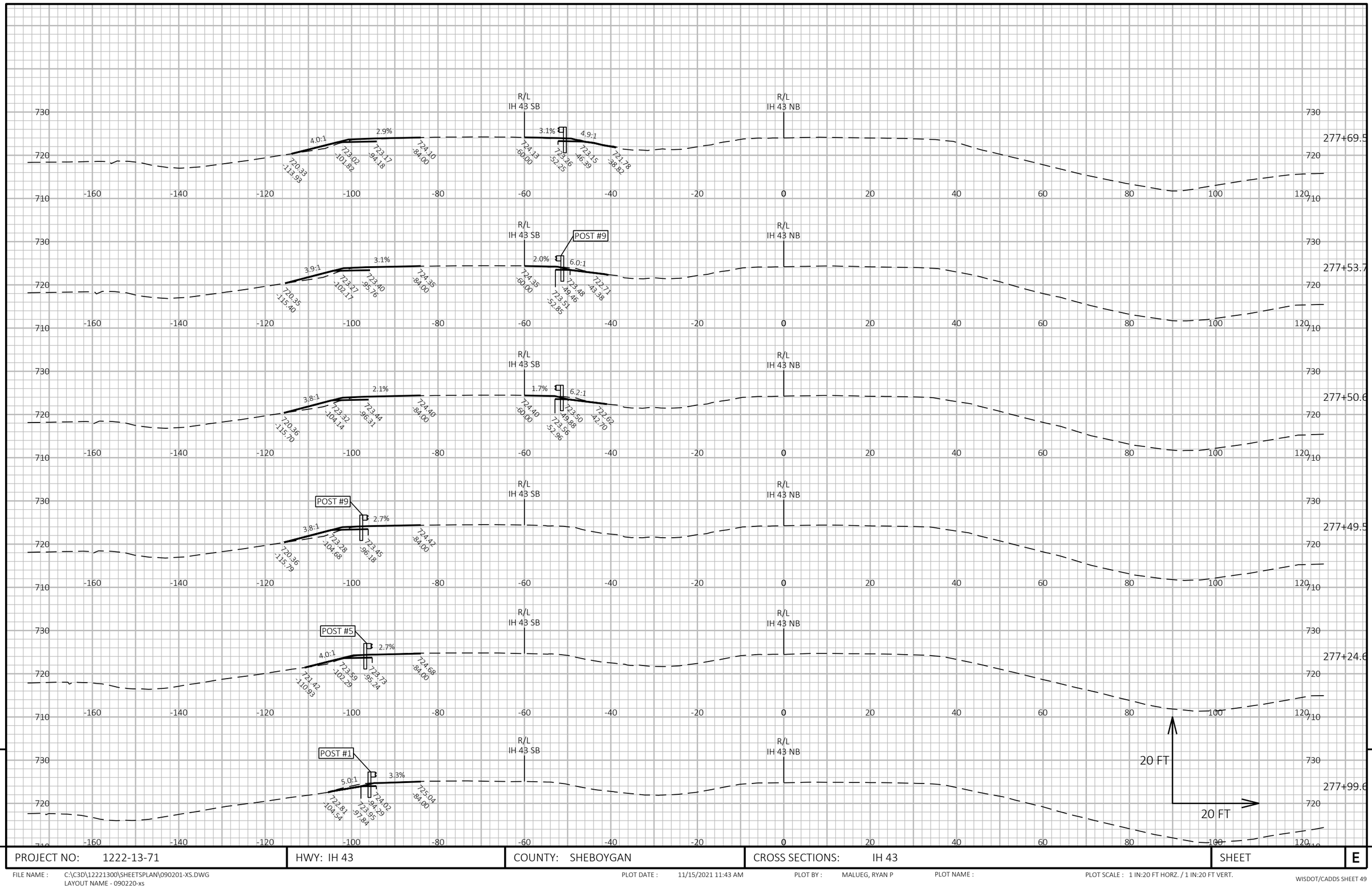


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090219-xs

PLOT DATE : 11/15/2021 11:42 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

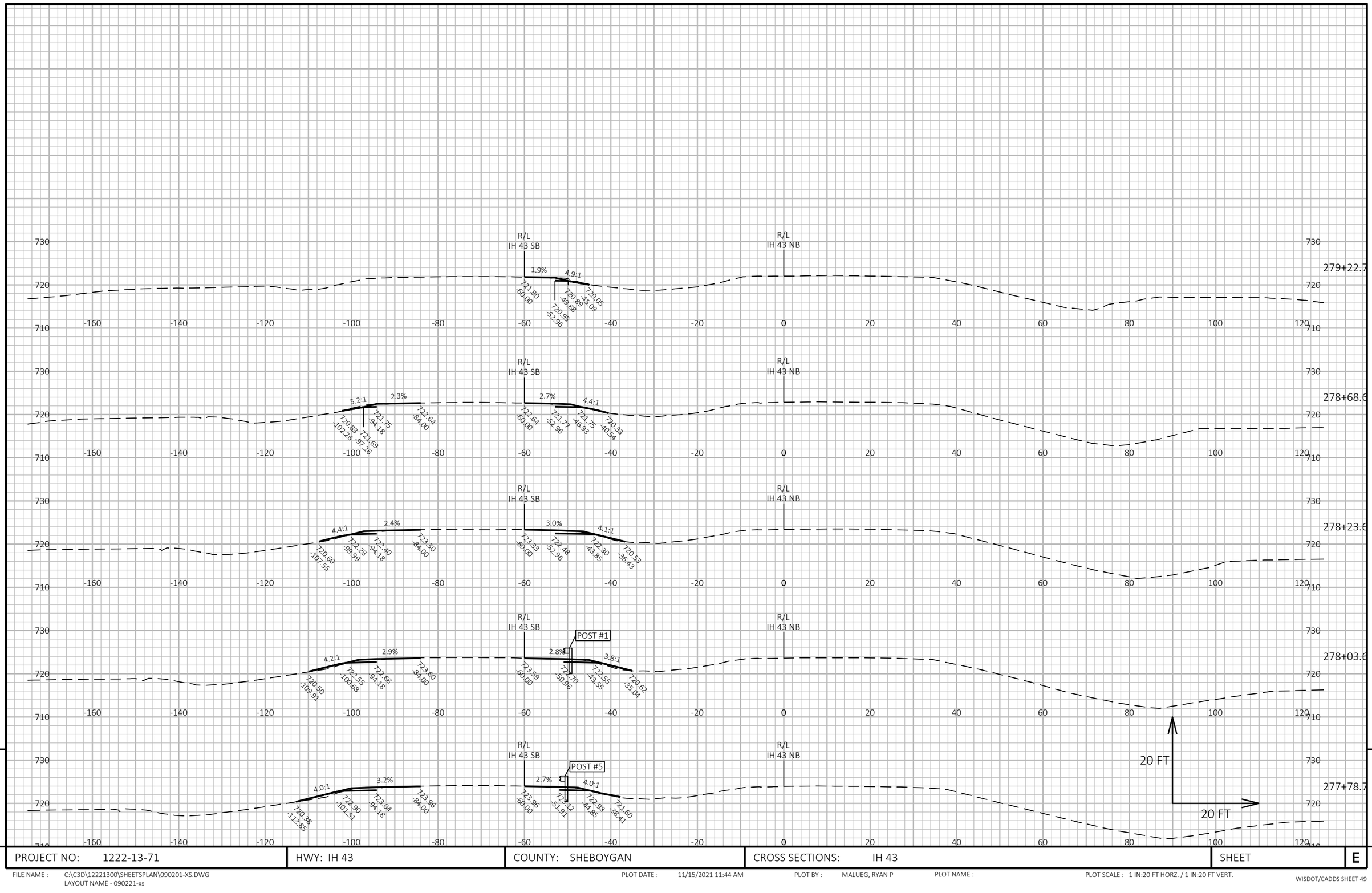
FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090220-xs

PLOT DATE : 11/15/2021 11:43 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

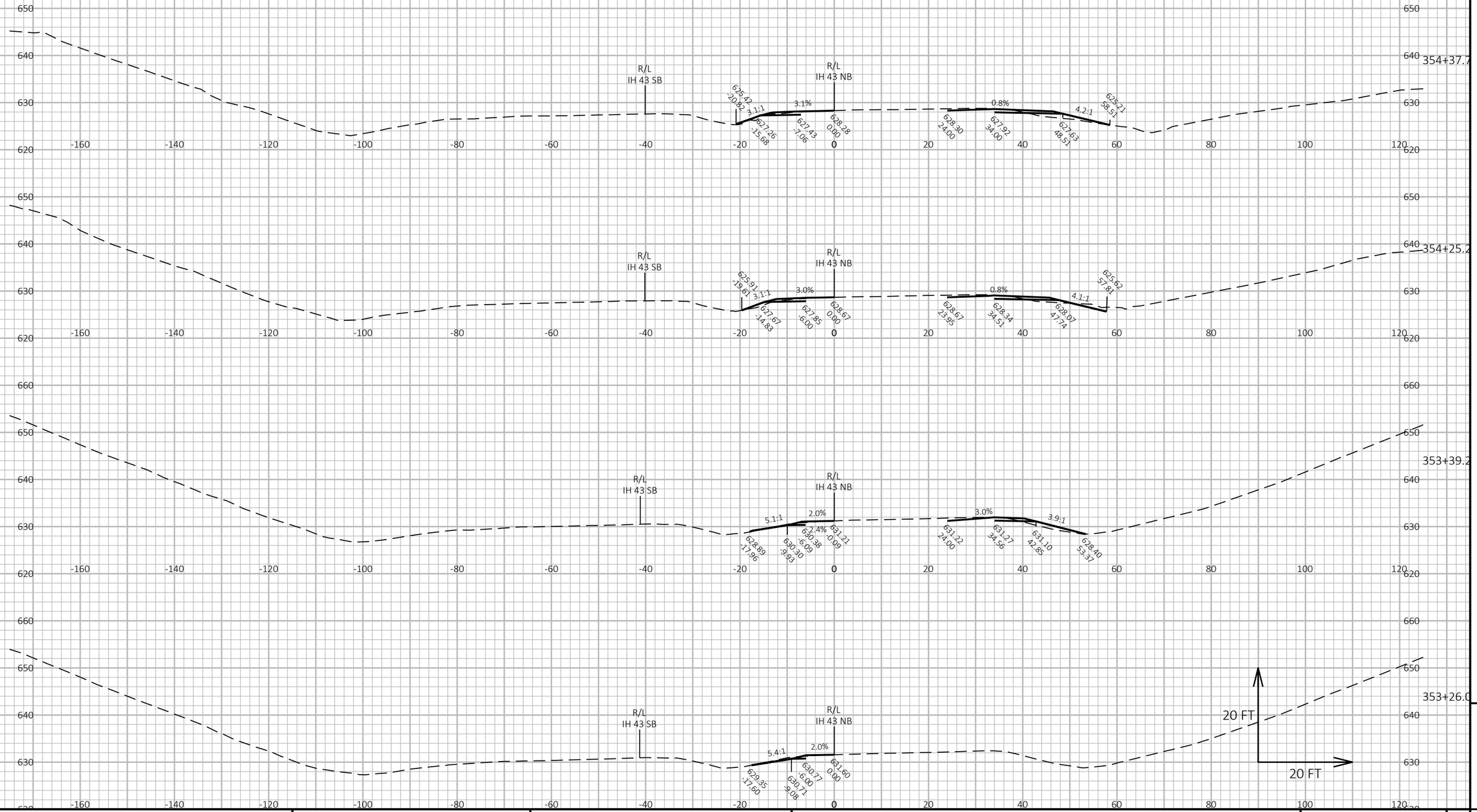
FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090221-xs

PLOT DATE : 11/15/2021 11:44 AM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

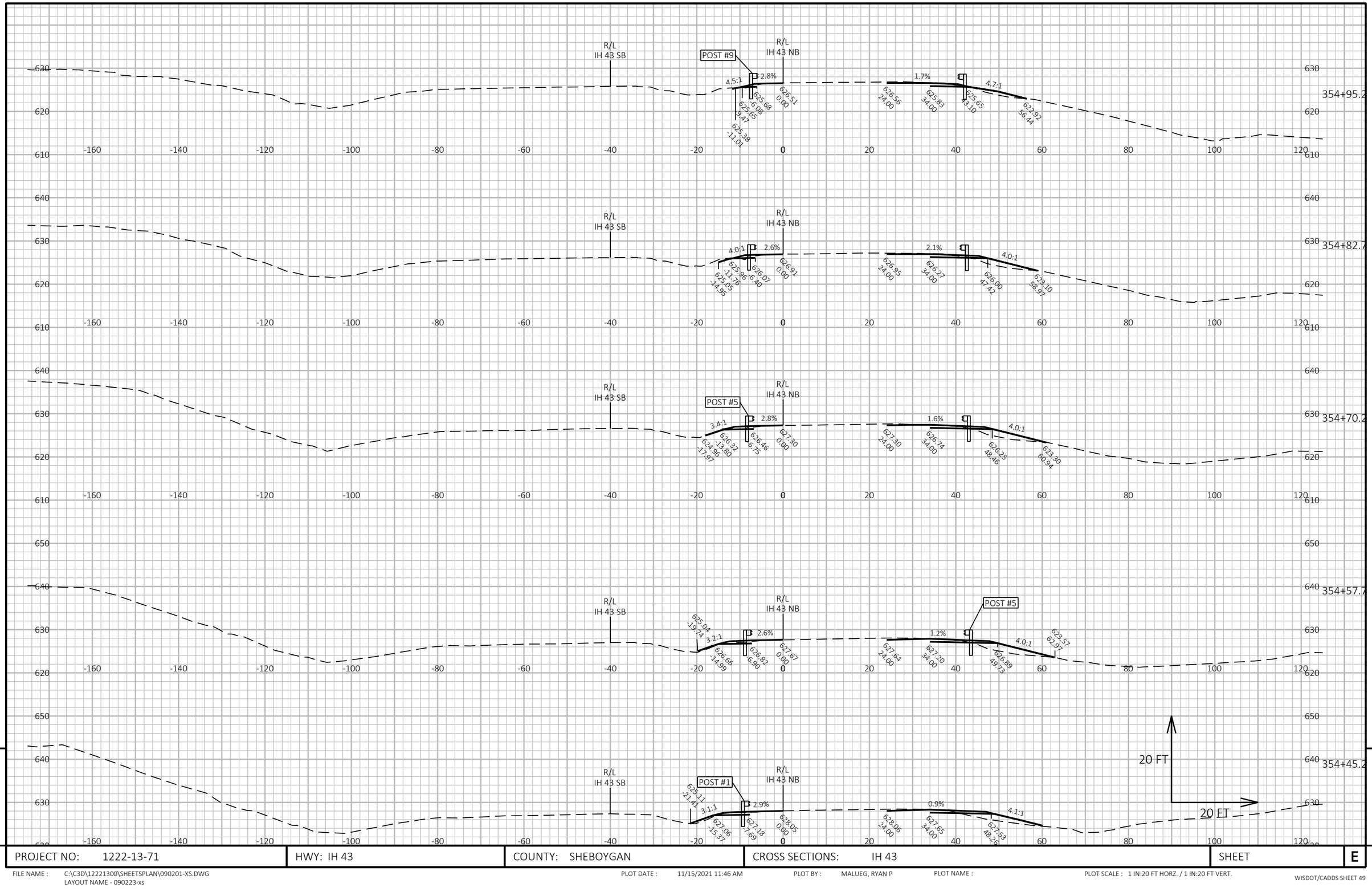


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090222-xs

PLOT DATE : 11/15/2021 11:45 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

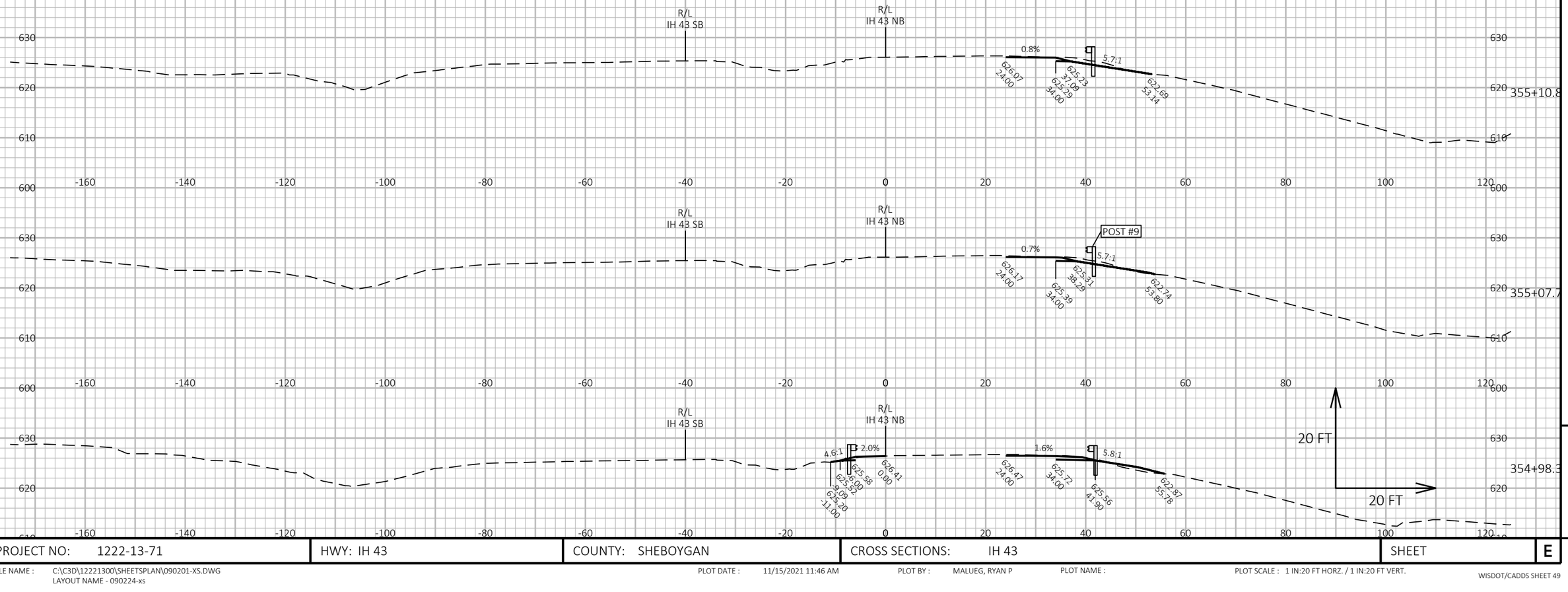
WISDOT/CADDS SHEET 49



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090223-xs

PLOT DATE : 11/15/2021 11:46 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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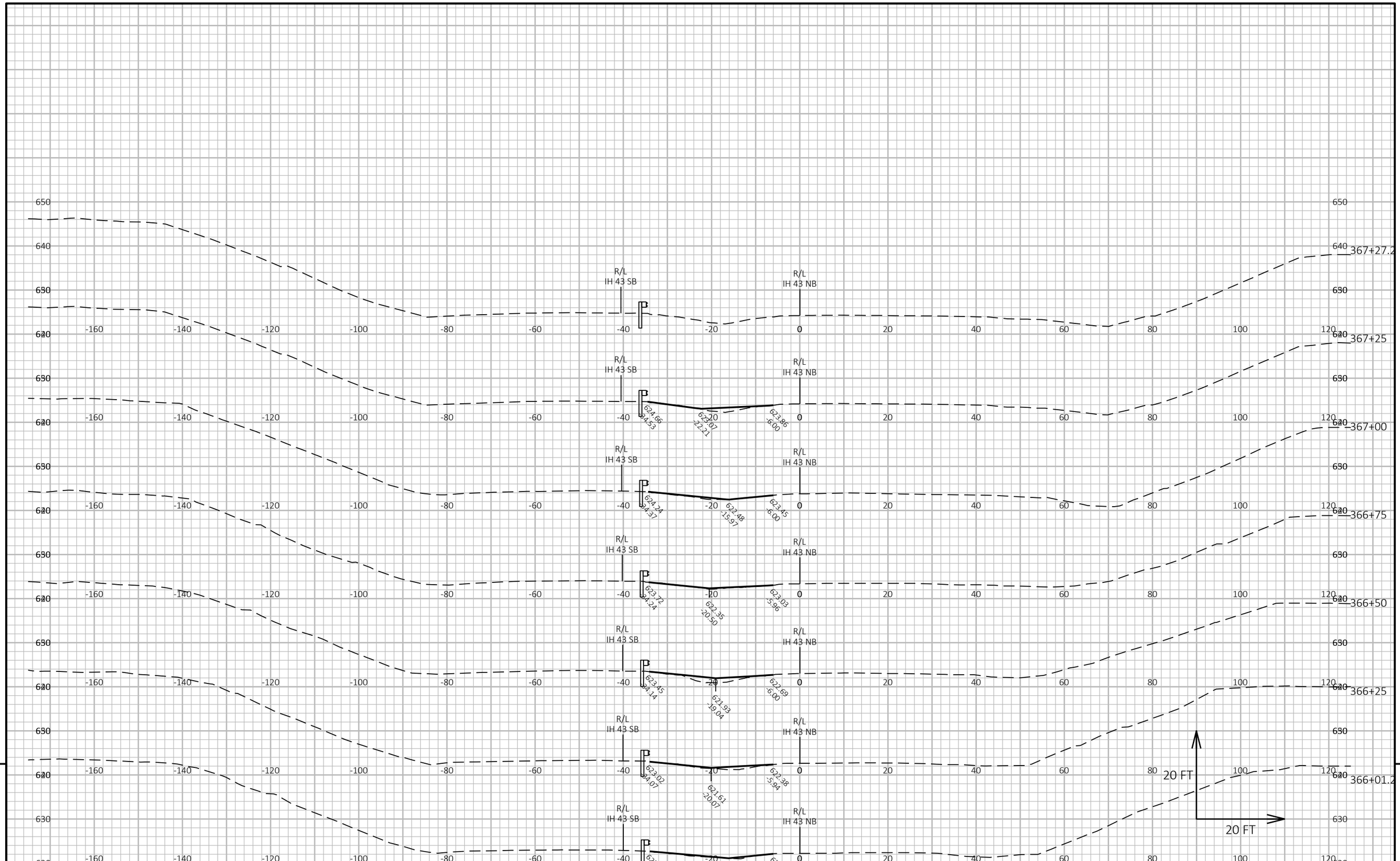
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090224-xs

PLOT DATE : 11/15/2021 11:46 AM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

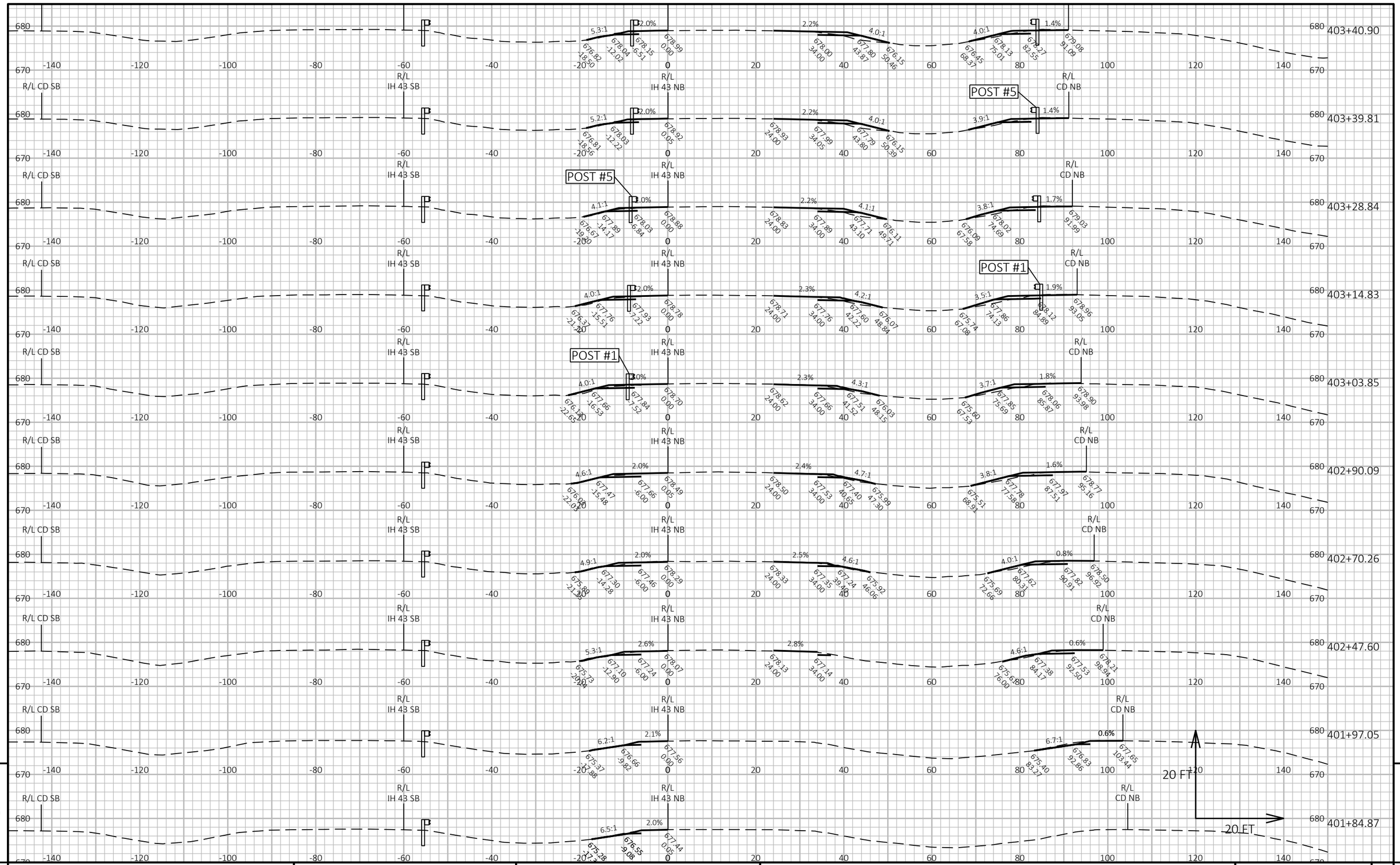
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LAYOUT NAME - 090225-xs

PLOT DATE : 11/15/2021 3:28 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

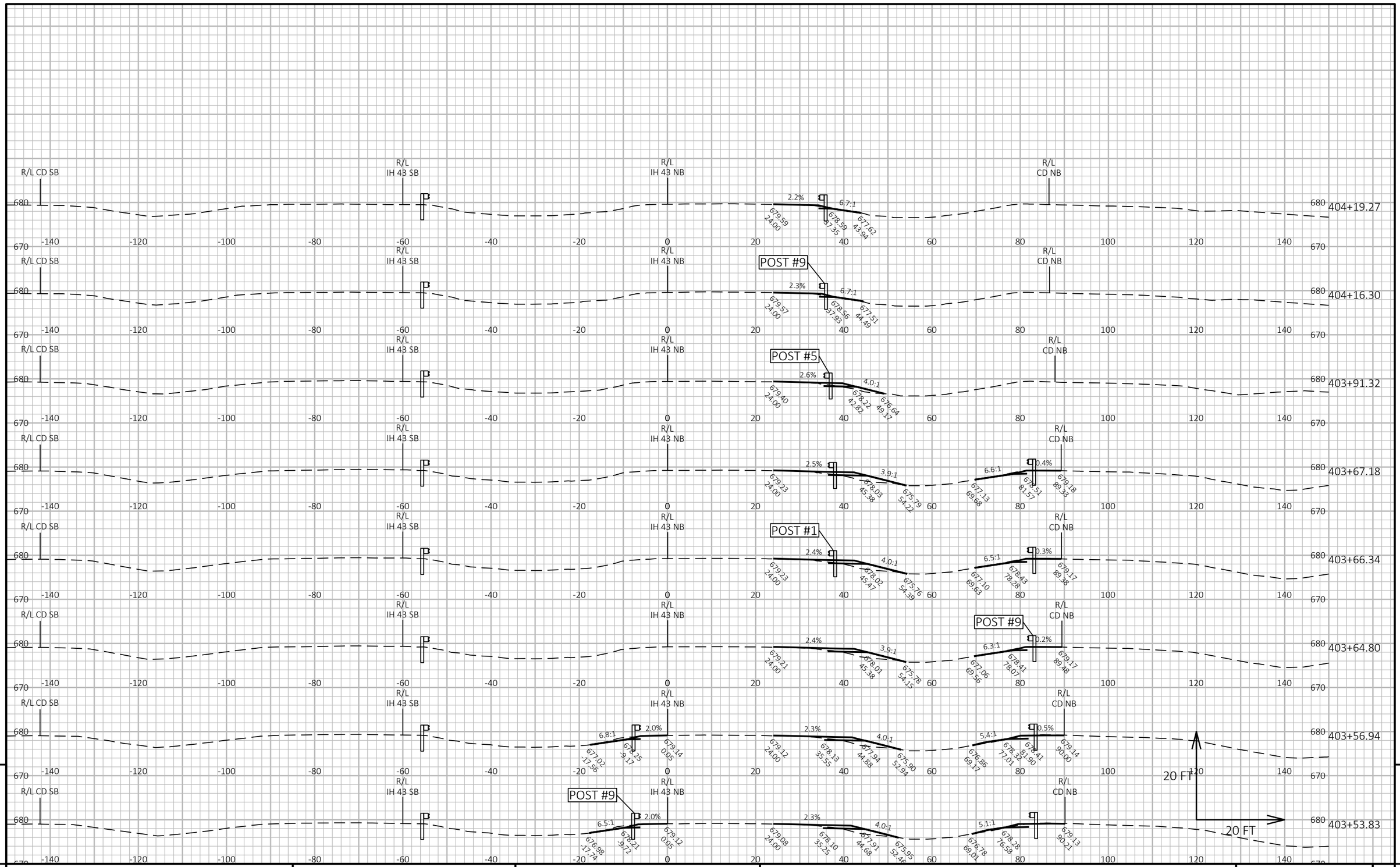
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LAYOUT NAME - 090226-xs

PLOT DATE : 11/15/2021 3:29 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090227-xs

PLOT DATE : 11/15/2021 3:29 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

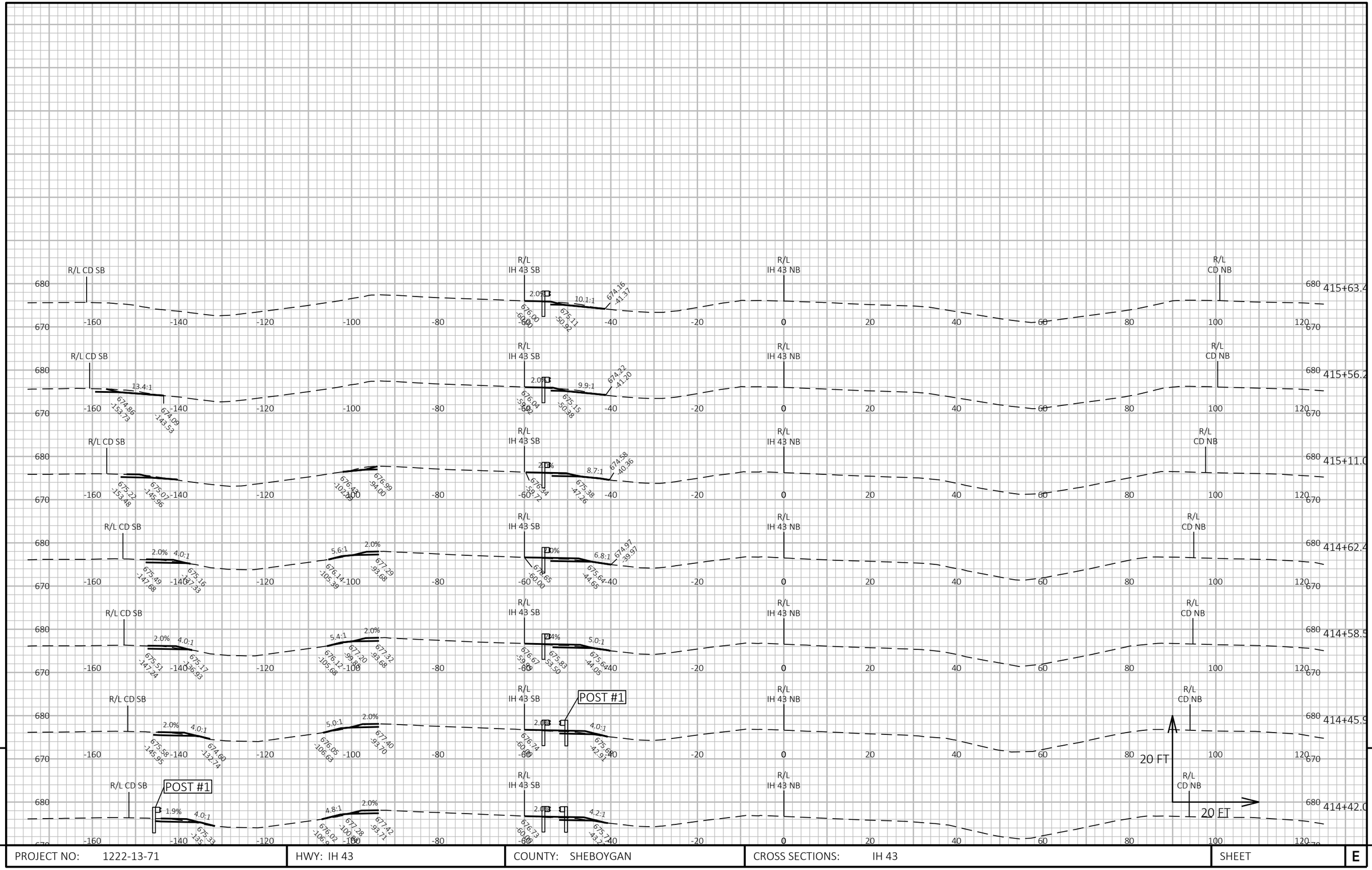
FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090228-xs

PLOT DATE : 11/15/2021 3:30 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

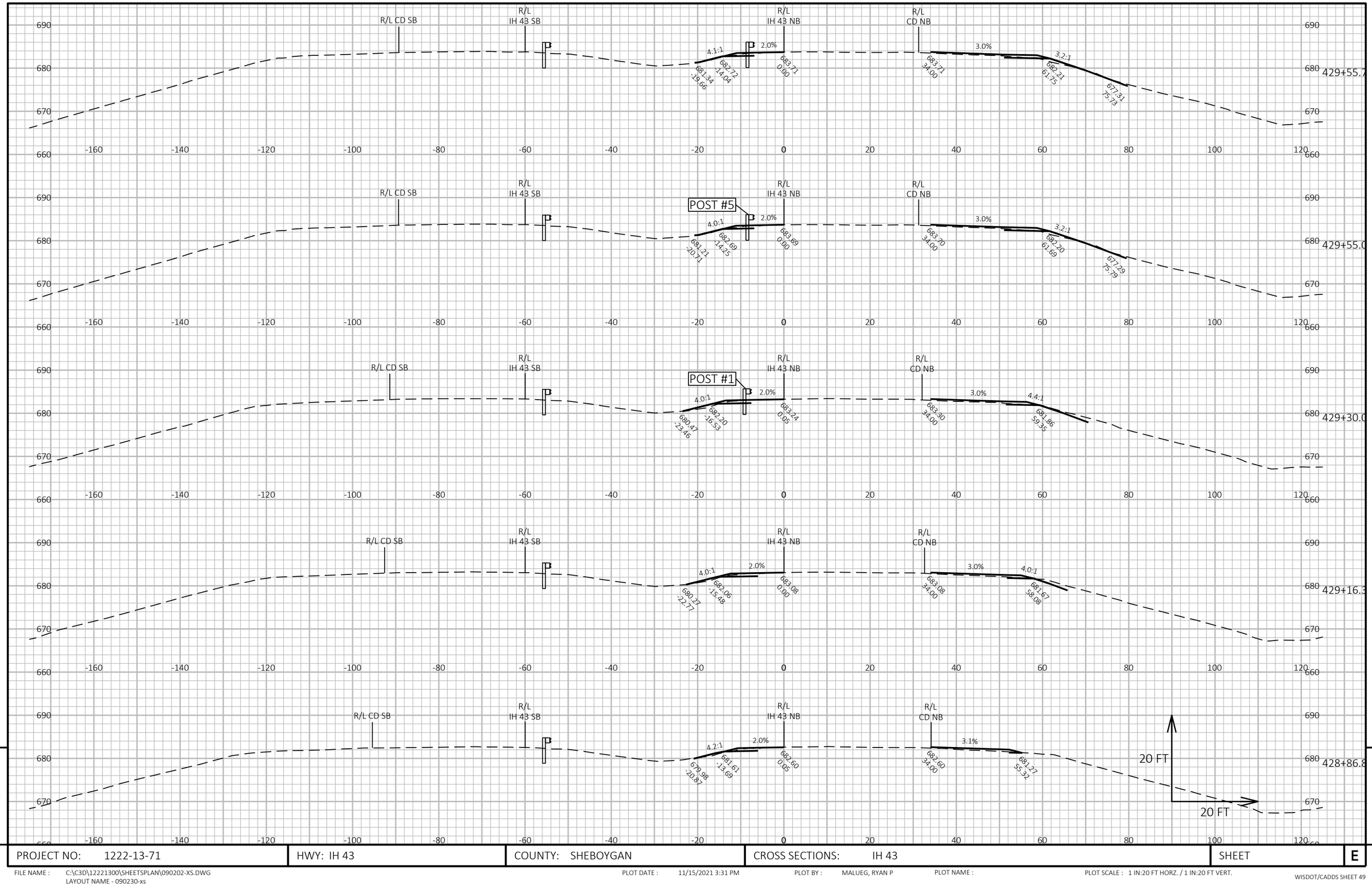


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090229-xs

PLOT DATE : 11/15/2021 3:31 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



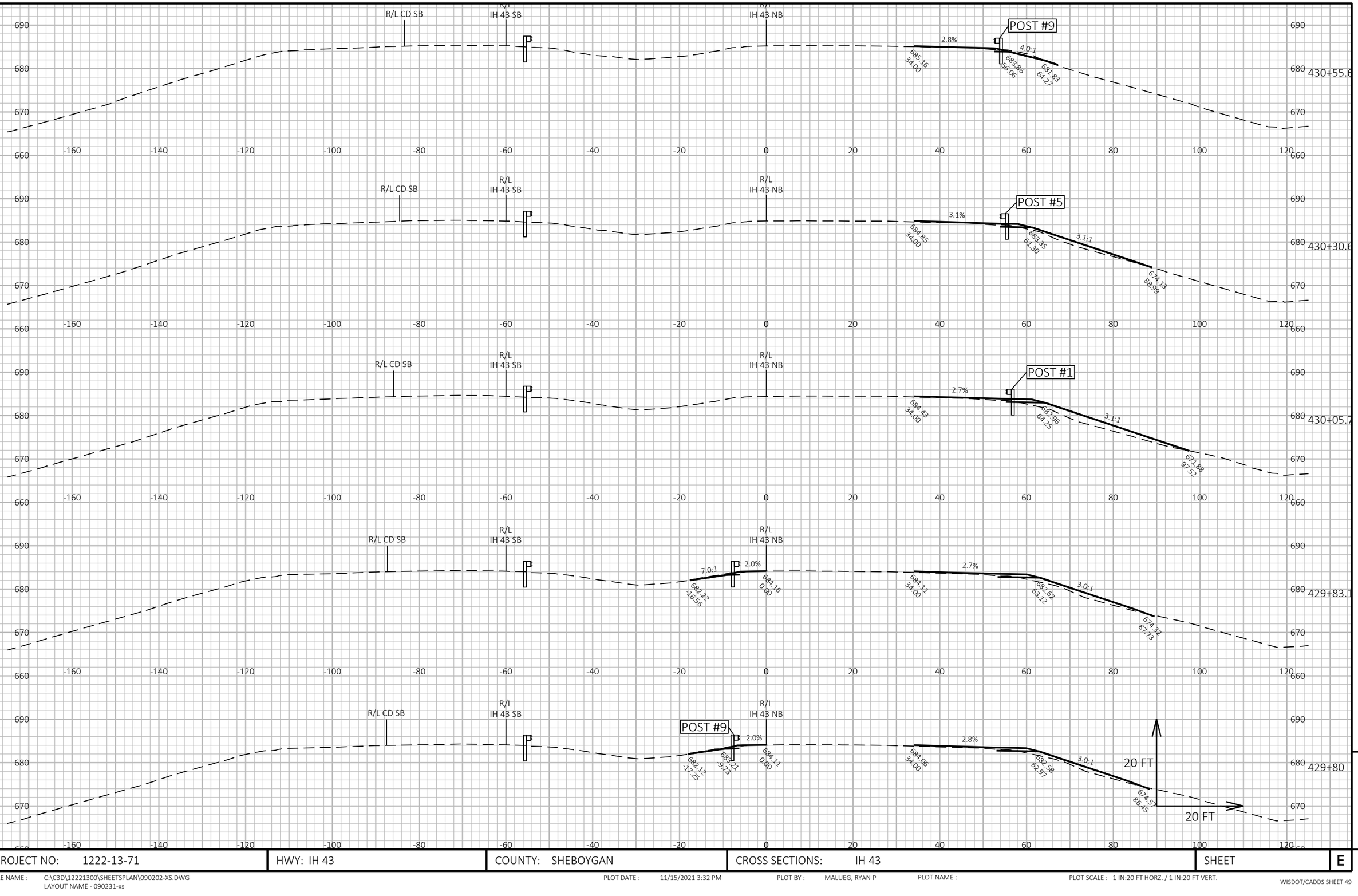
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090230-xs

PLOT DATE : 11/15/2021 3:31 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

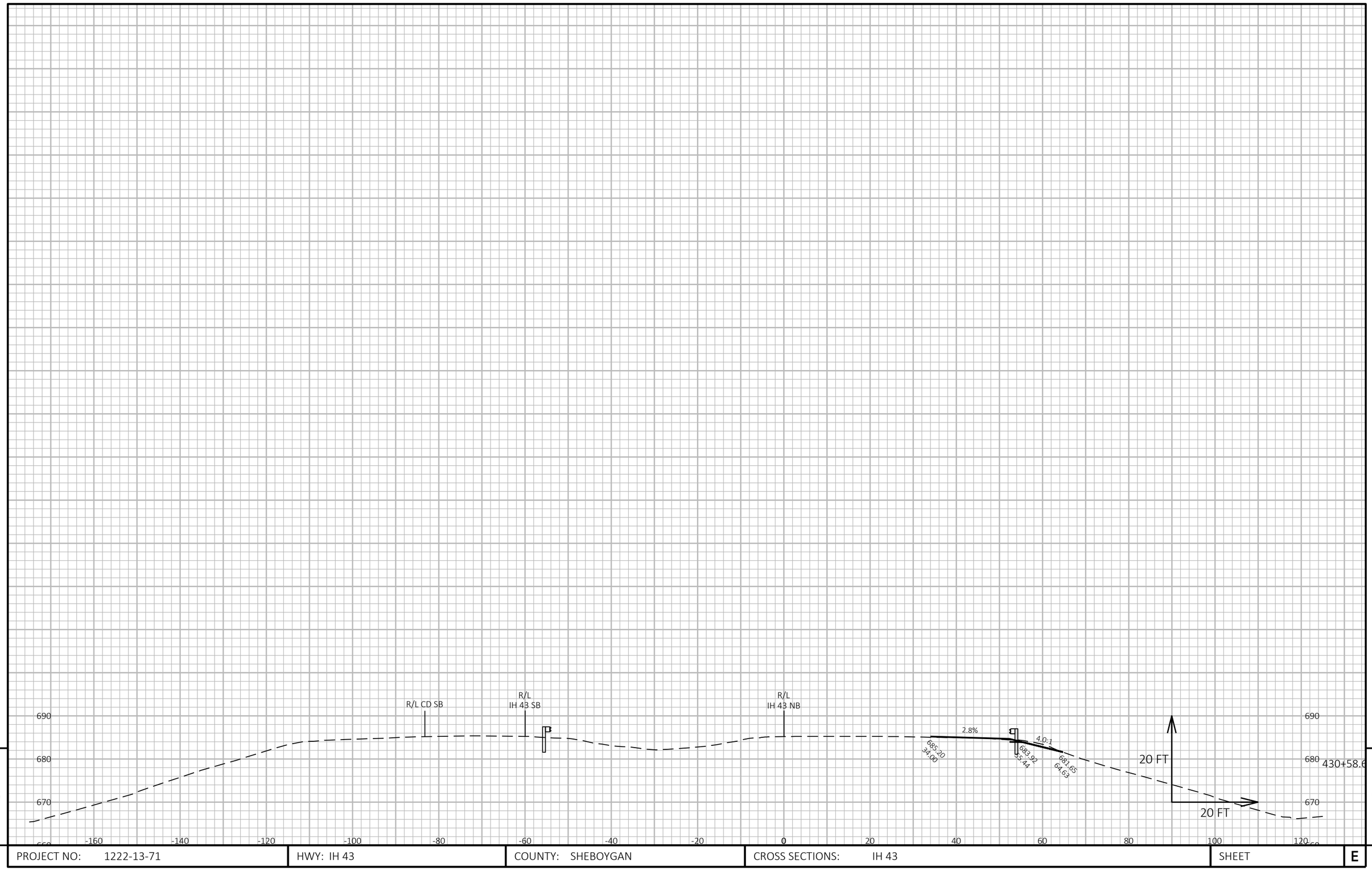
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LAYOUT NAME - 090231-xs

PLOT DATE : 11/15/2021 3:32 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

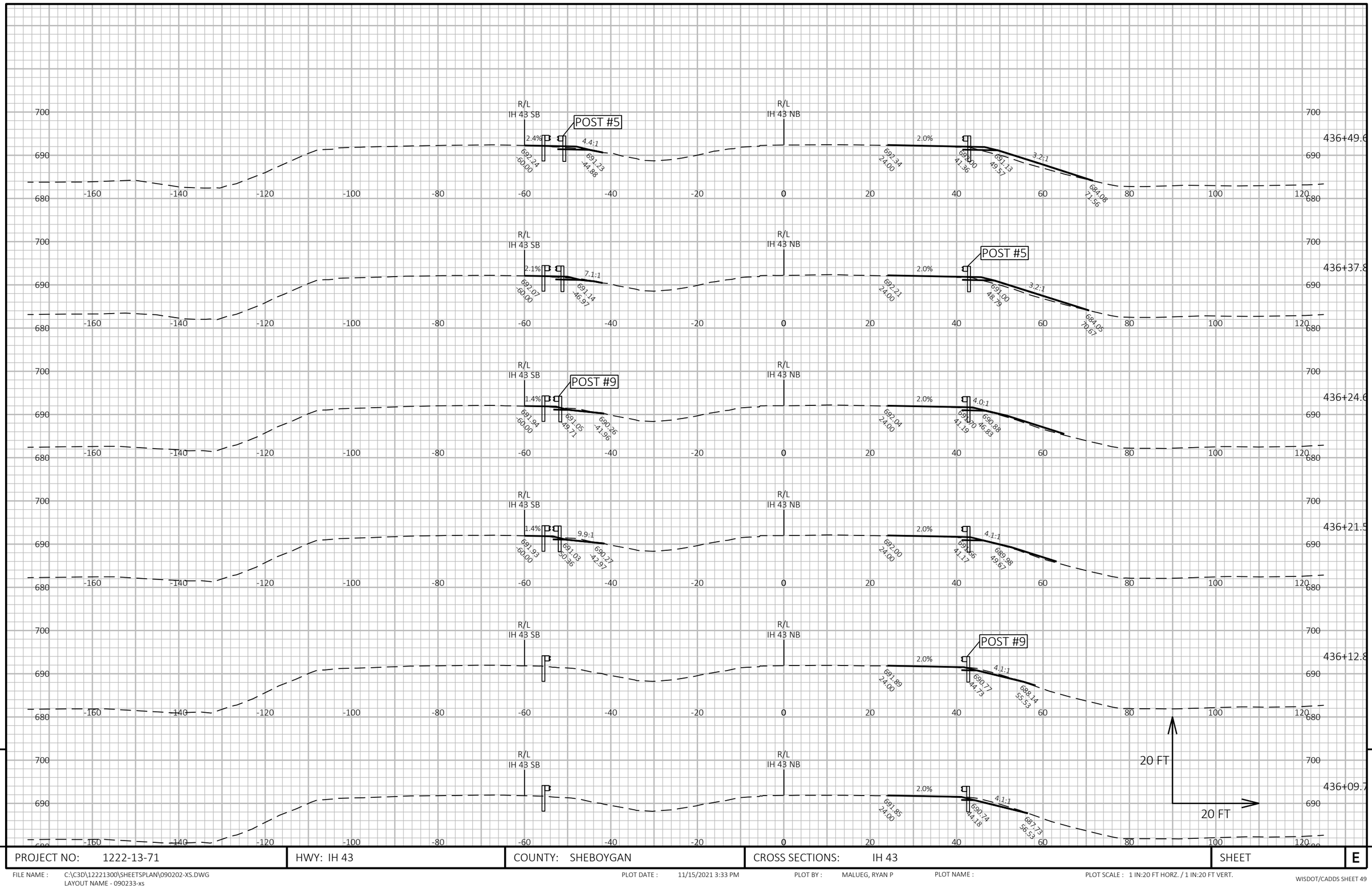
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LAYOUT NAME - 090232-xs

PLOT DATE : 11/15/2021 3:33 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

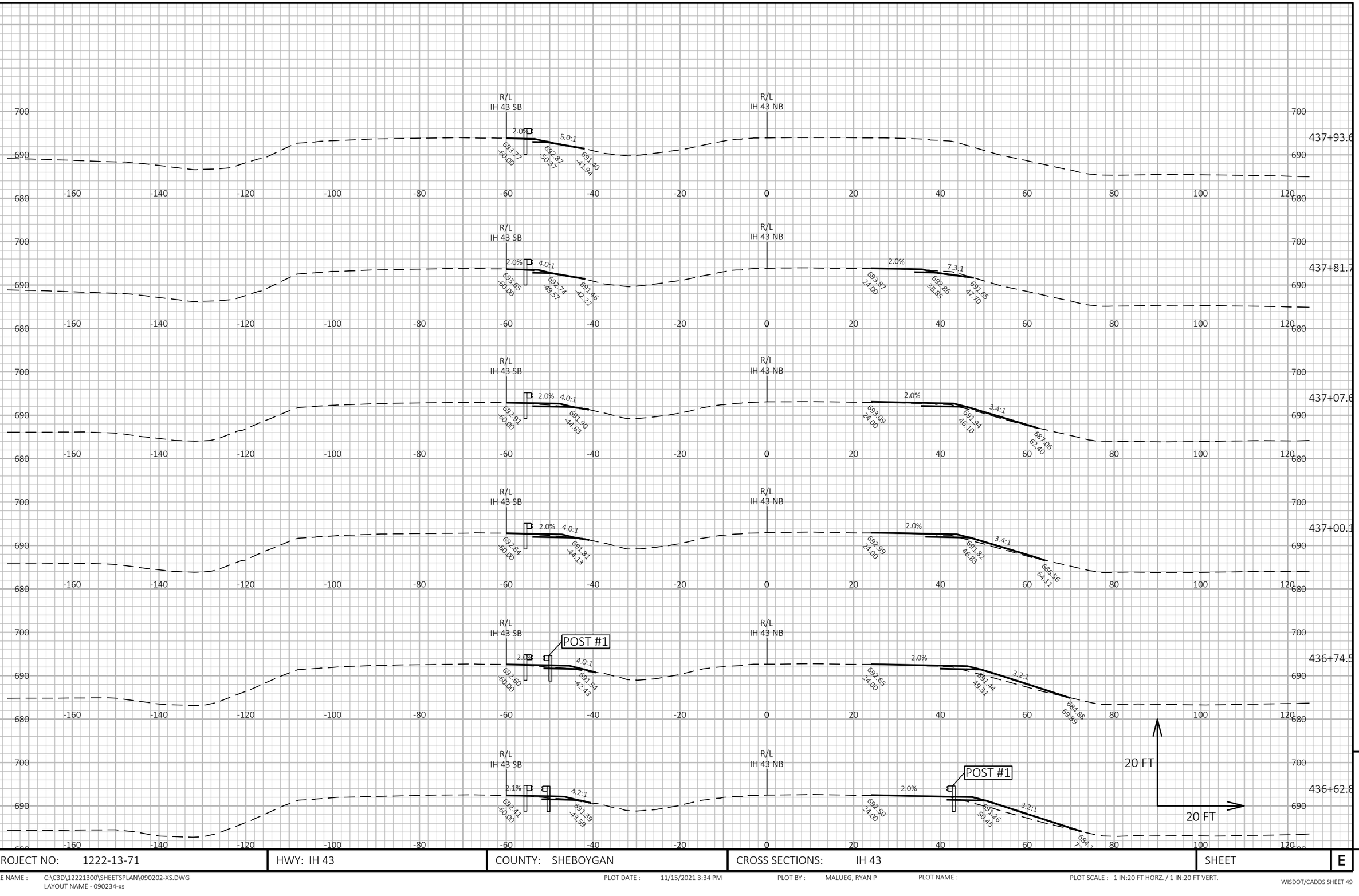
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LAYOUT NAME - 090233-xs

PLOT DATE : 11/15/2021 3:33 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090234-xs

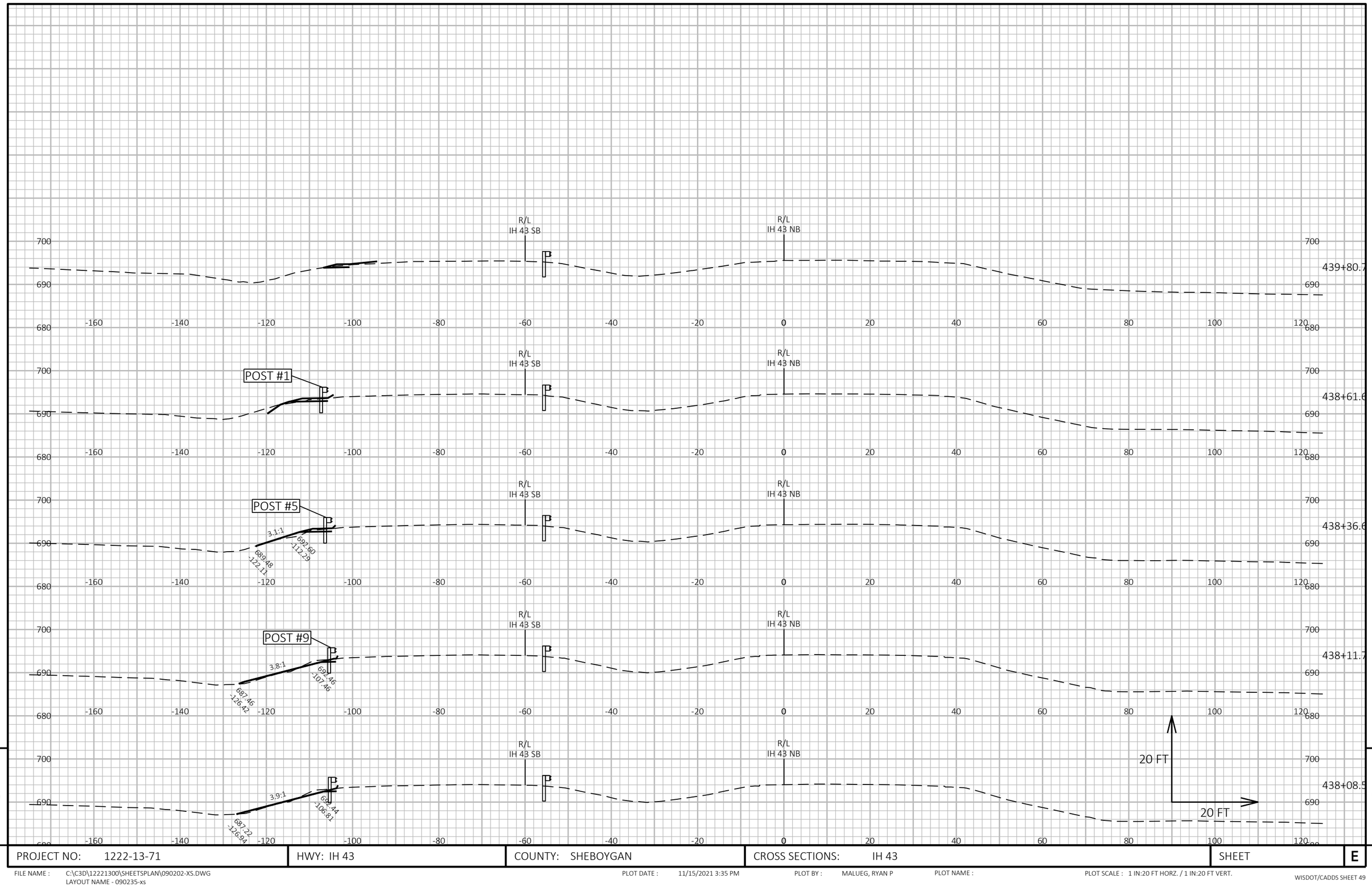
PLOT DATE : 11/15/2021 3:34 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

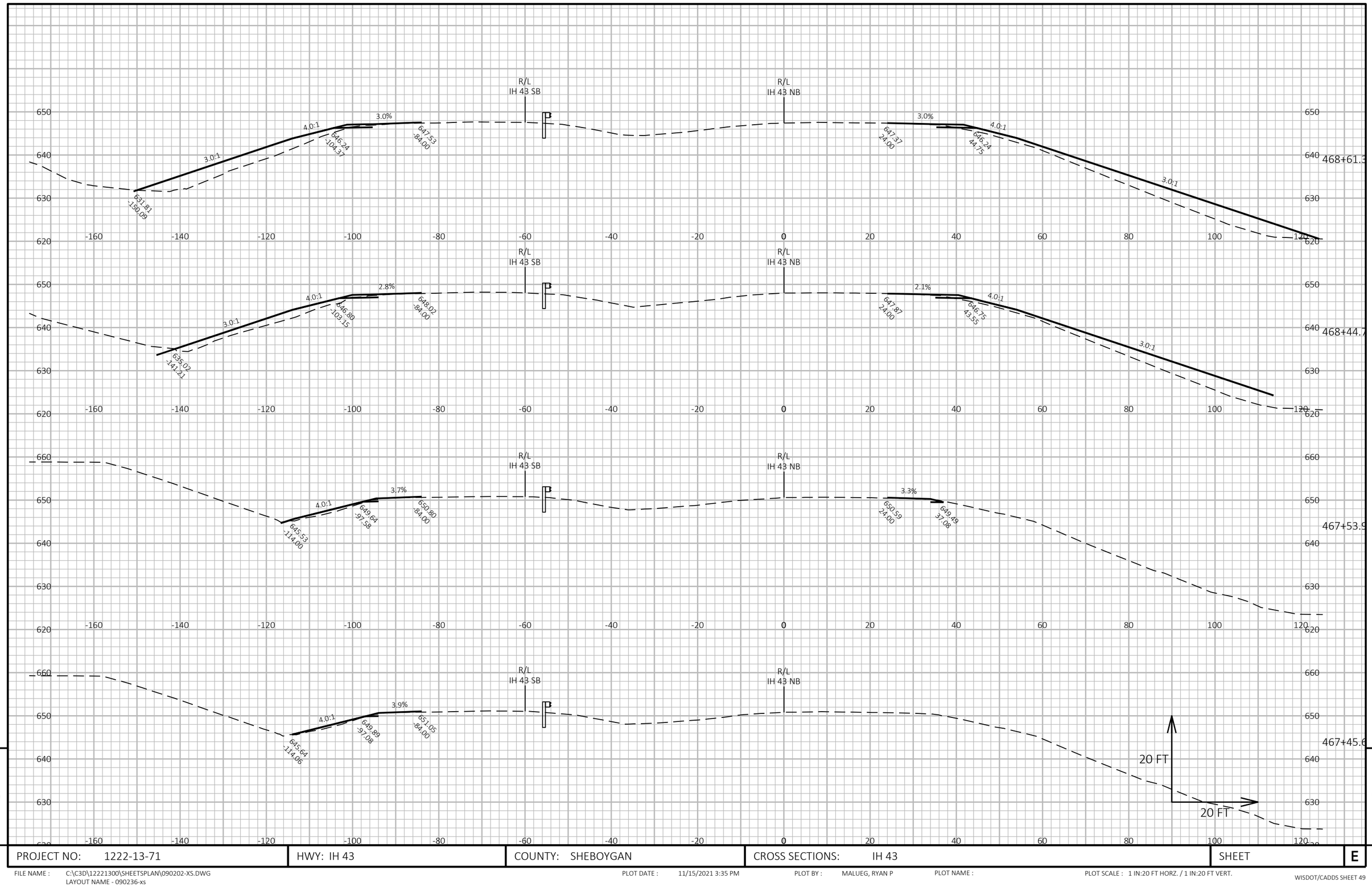
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LAYOUT NAME - 090235-xs

PLOT DATE : 11/15/2021 3:35 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

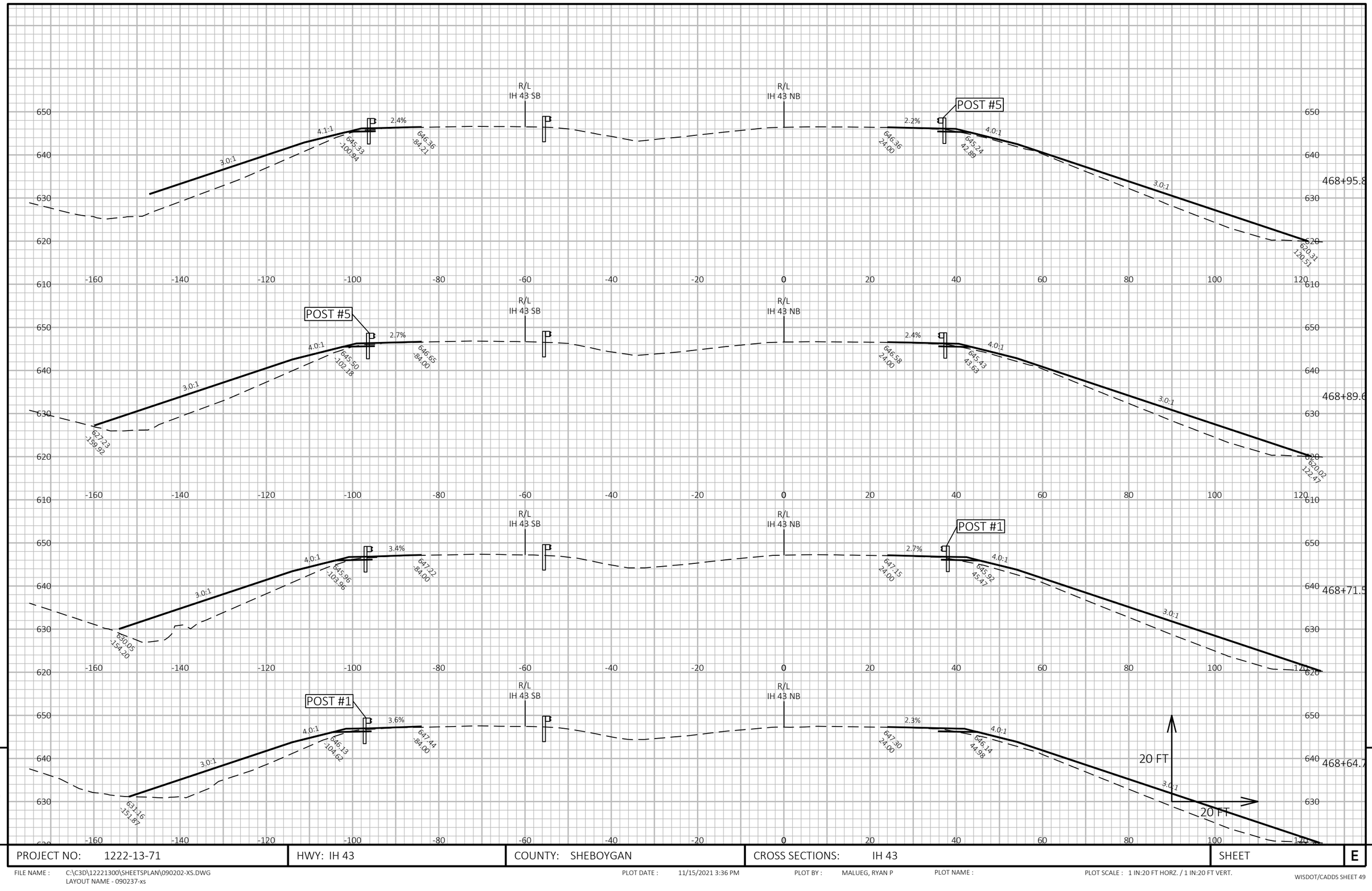


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090236-xs

PLOT DATE : 11/15/2021 3:35 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

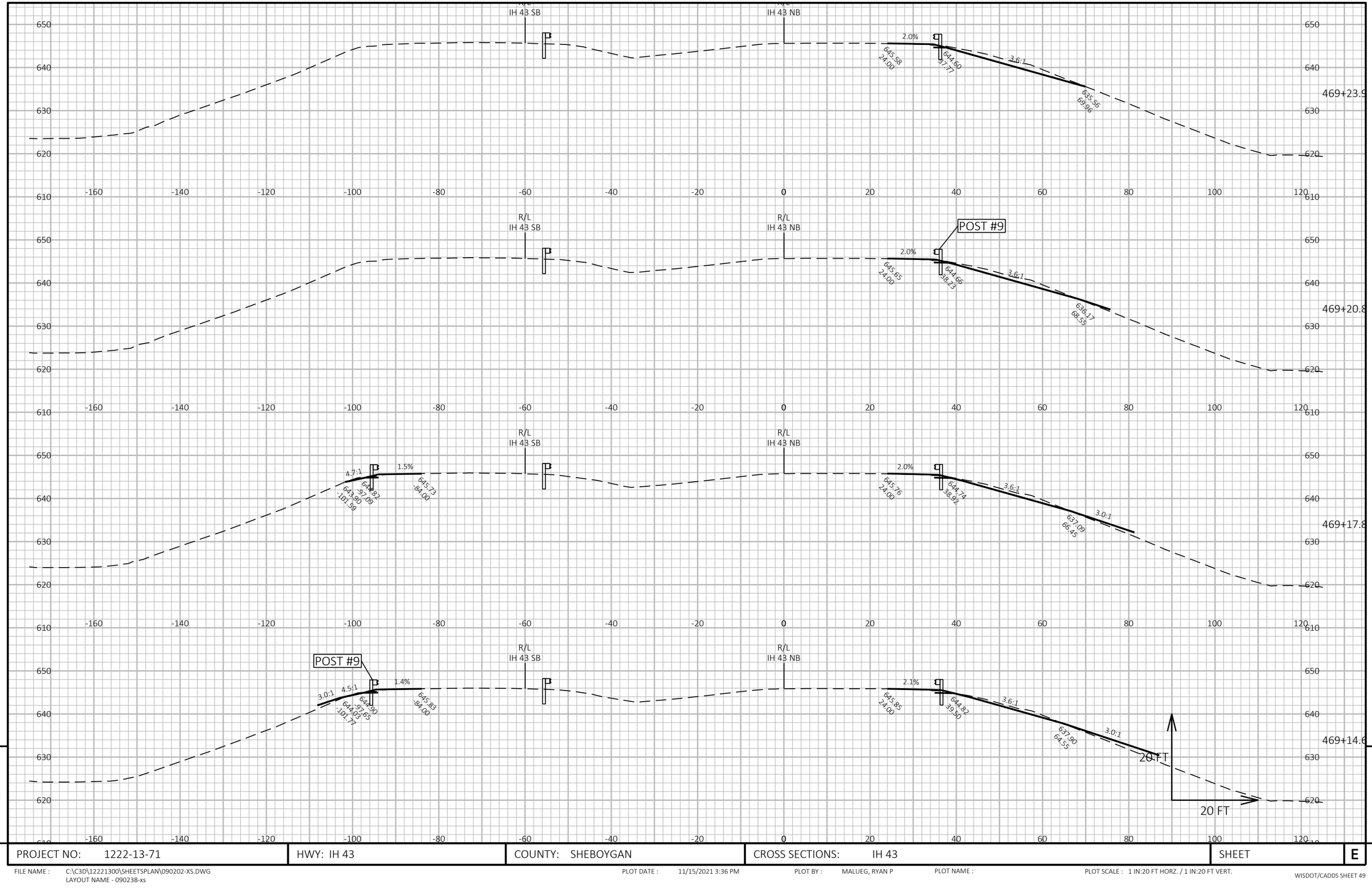
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LAYOUT NAME - 090237-xs

PLOT DATE : 11/15/2021 3:36 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

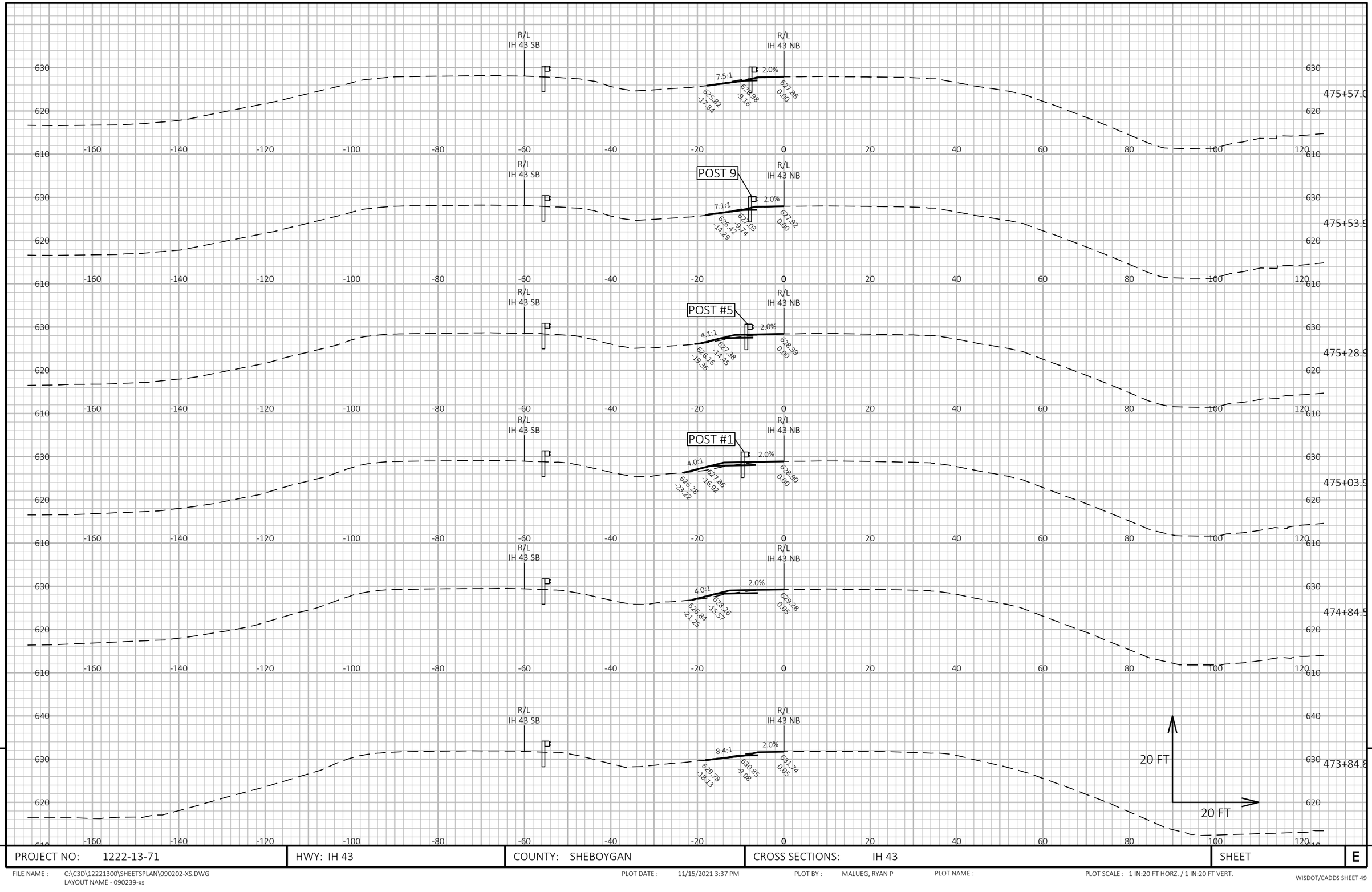
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LAYOUT NAME - 090238-xs

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PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

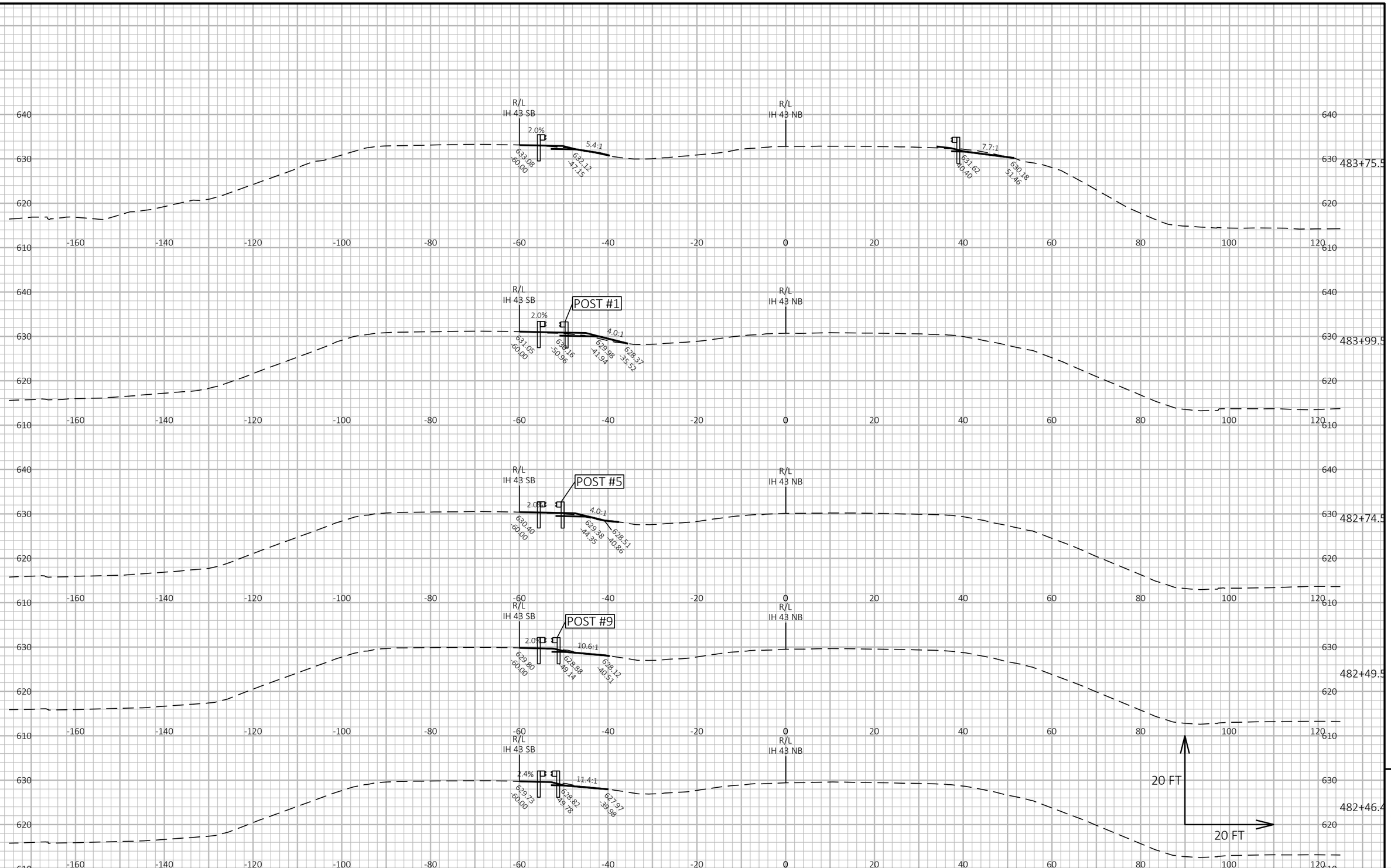


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090239-xs

PLOT DATE : 11/15/2021 3:37 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

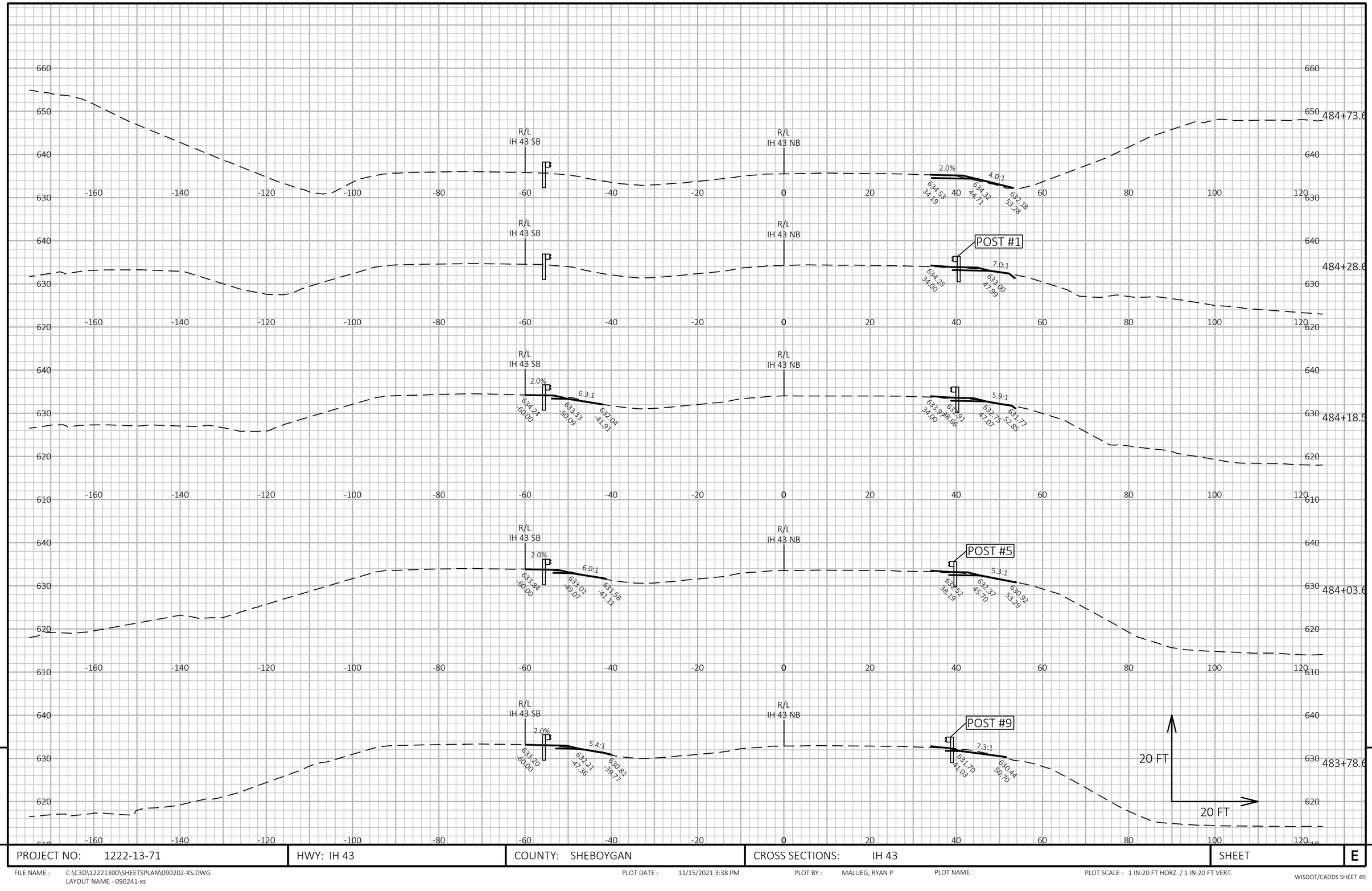
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LAYOUT NAME - 090240-xs

PLOT DATE : 11/15/2021 3:38 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090241-xs

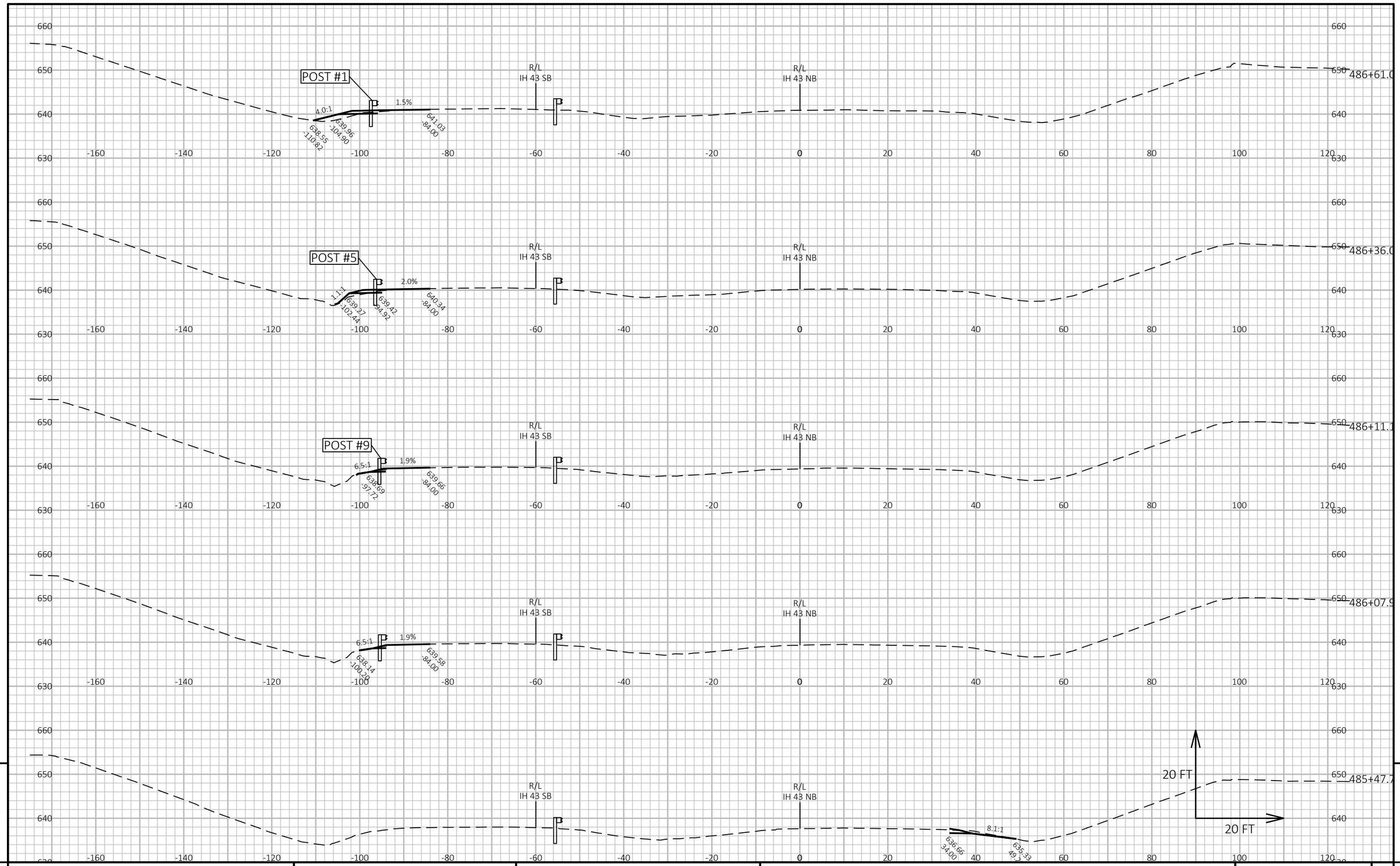
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PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



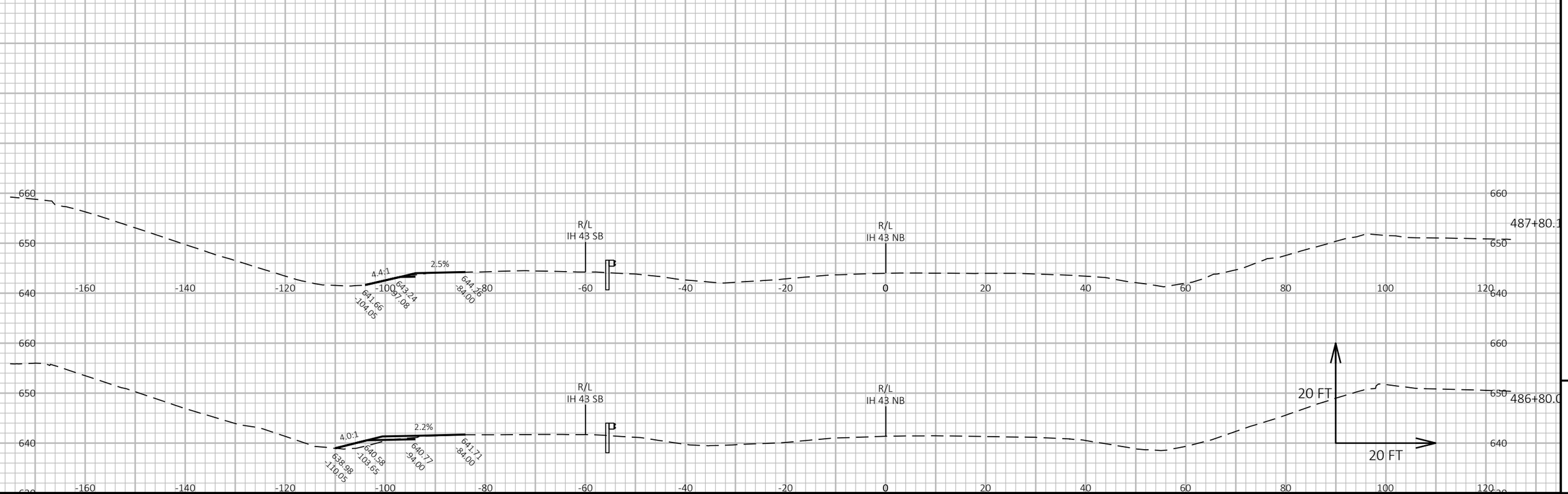
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

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LAYOUT NAME - 090242-xs

PLOT DATE : 11/15/2021 3:39 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

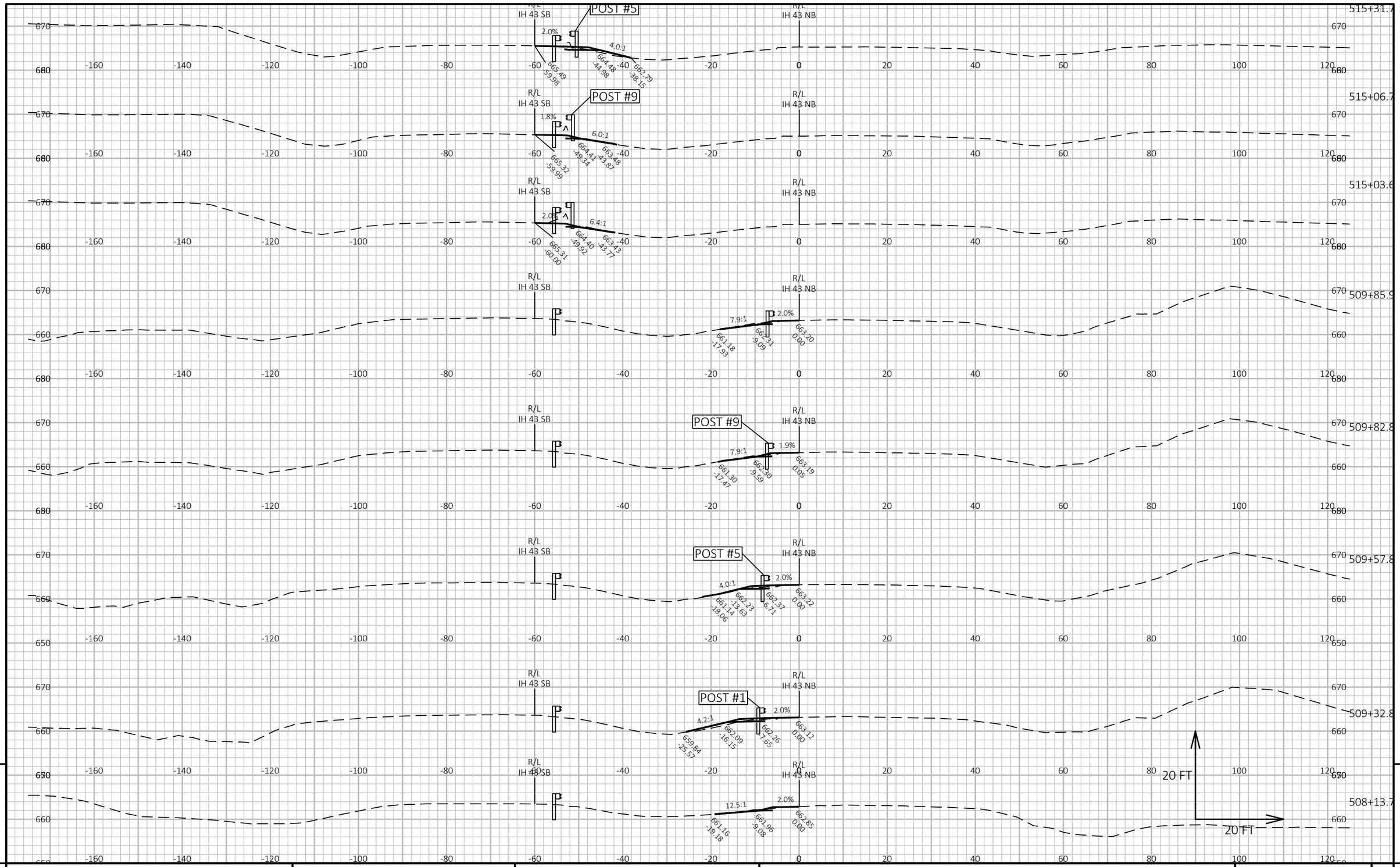
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LAYOUT NAME - 090243-xs

PLOT DATE : 11/15/2021 3:40 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

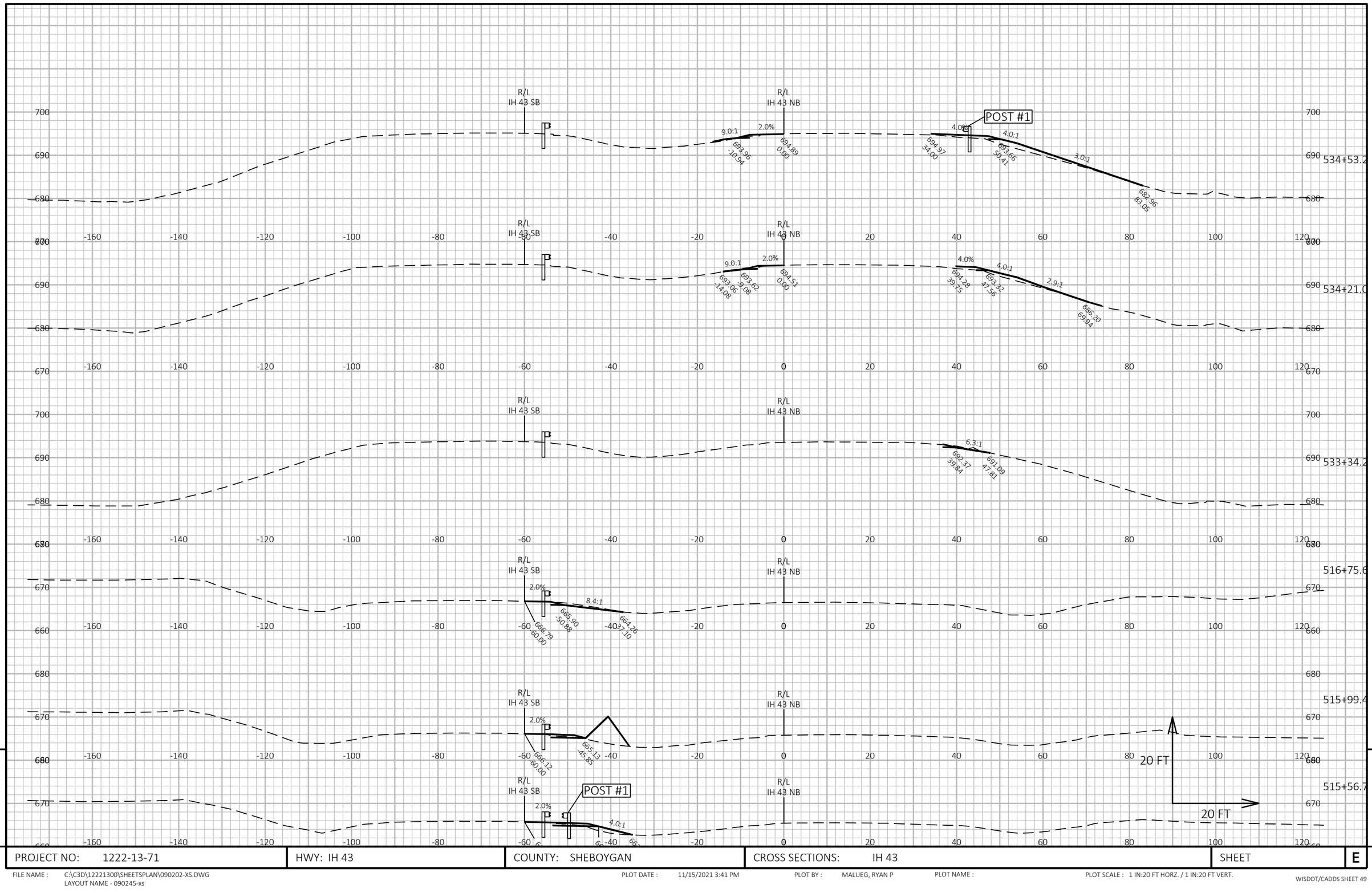
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LAYOUT NAME - 090244-xs

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PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



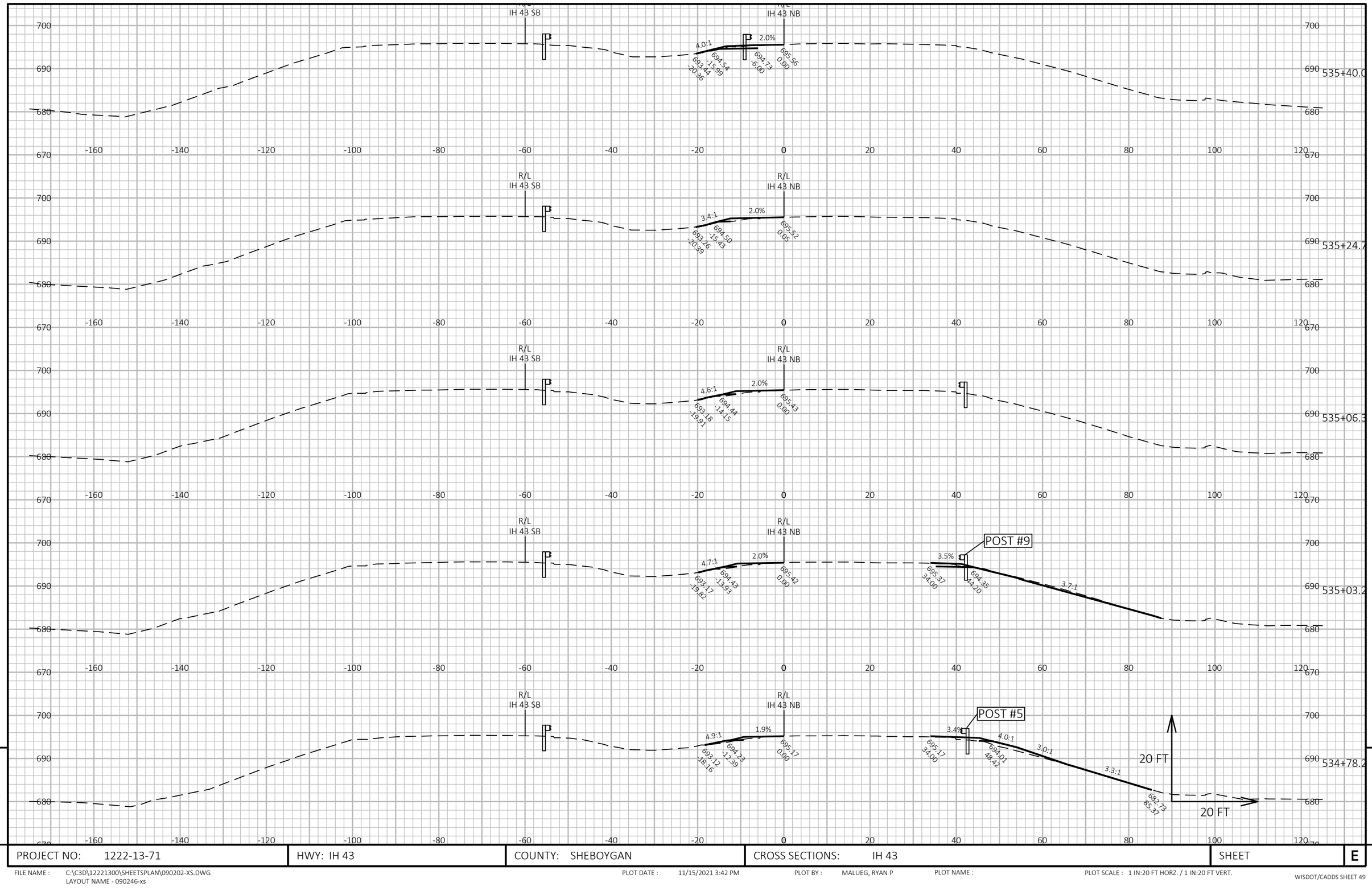
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090245-xs

PLOT DATE : 11/15/2021 3:41 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

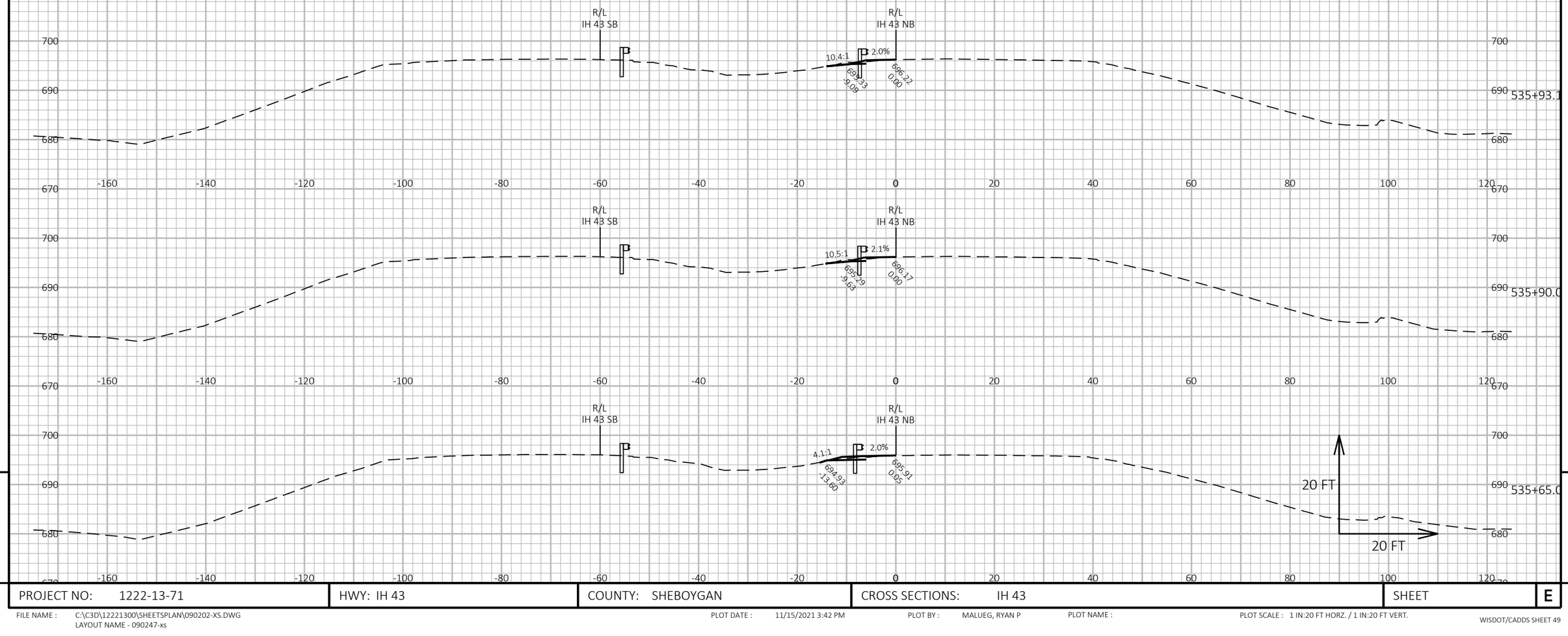
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LAYOUT NAME - 090246-xs

PLOT DATE : 11/15/2021 3:42 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



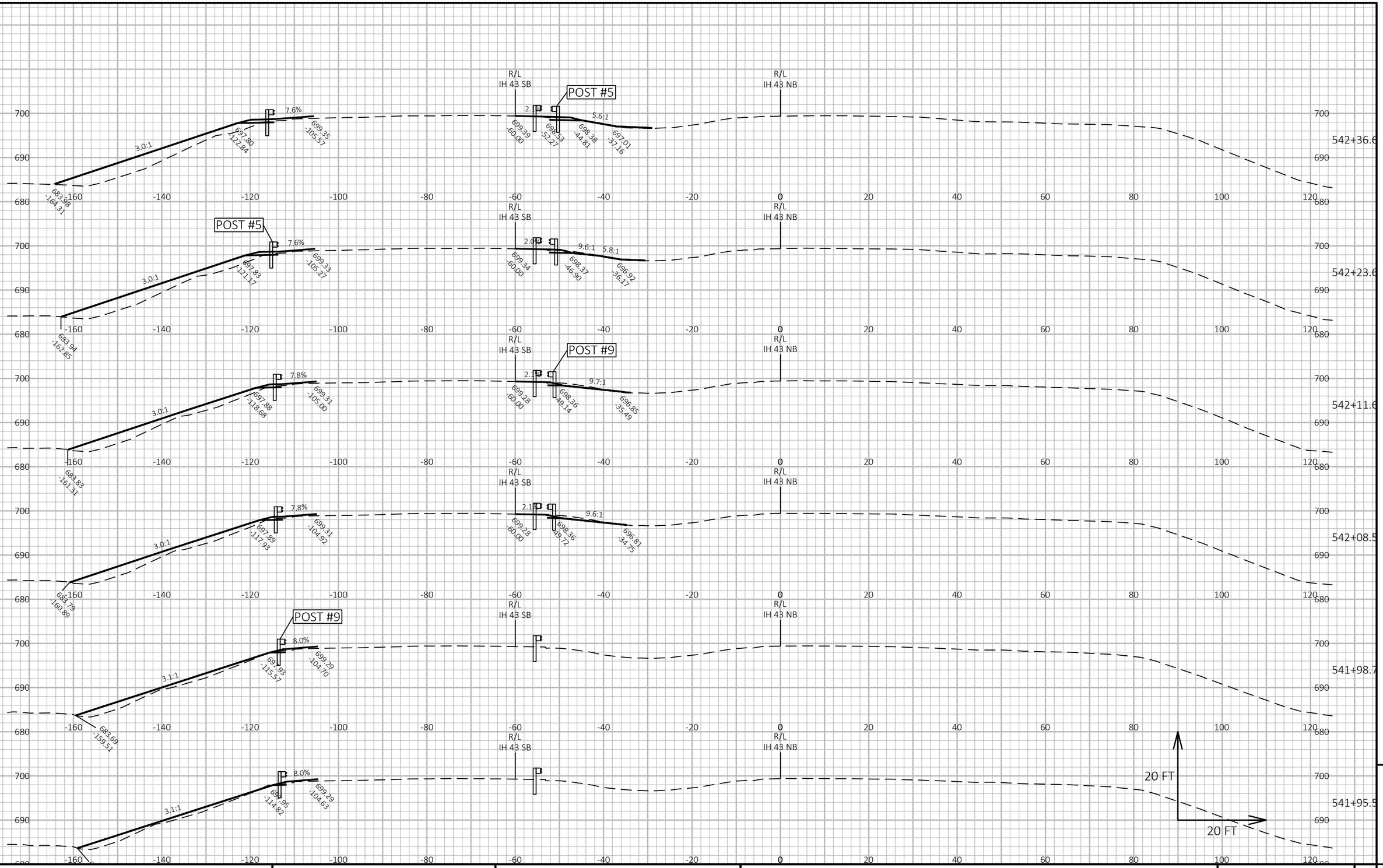
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090247-xs

PLOT DATE : 11/15/2021 3:42 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



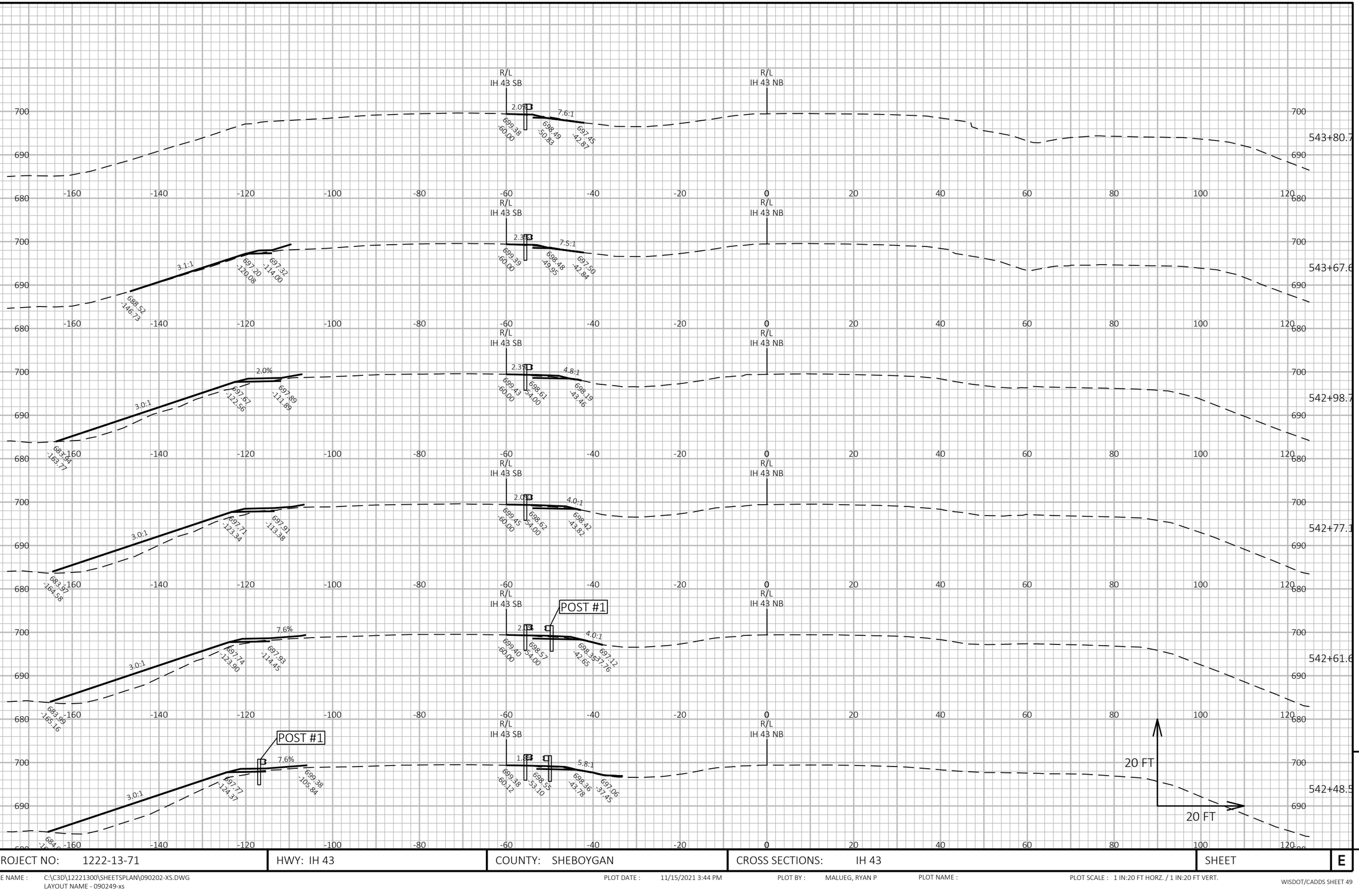
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090248-xs

PLOT DATE : 11/15/2021 3:43 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

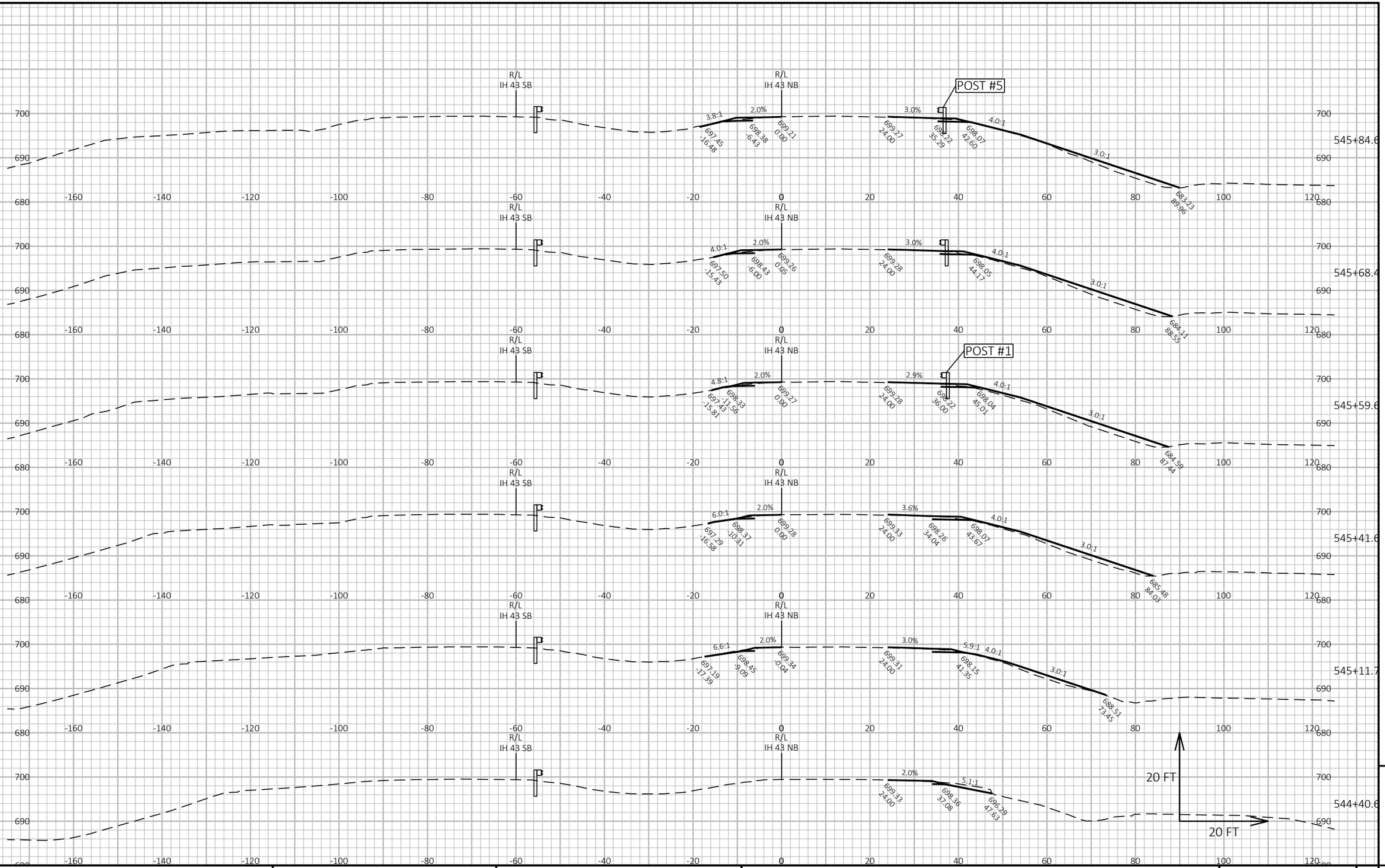
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LAYOUT NAME - 090249-xs

PLOT DATE : 11/15/2021 3:44 PM

PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

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LAYOUT NAME - 090250-xs

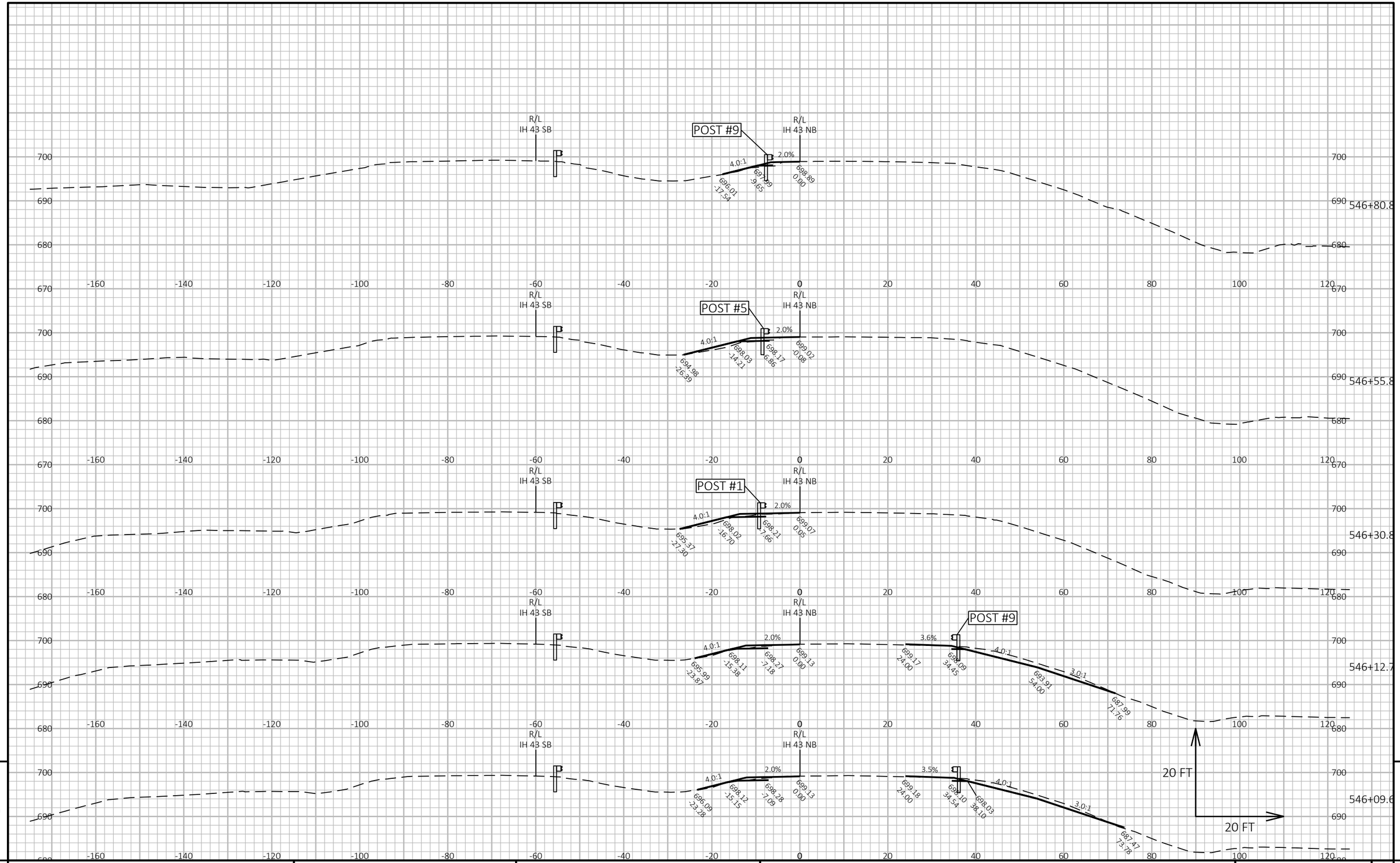
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PLOT BY : MALUEG, RYAN P

PLOT NAME :

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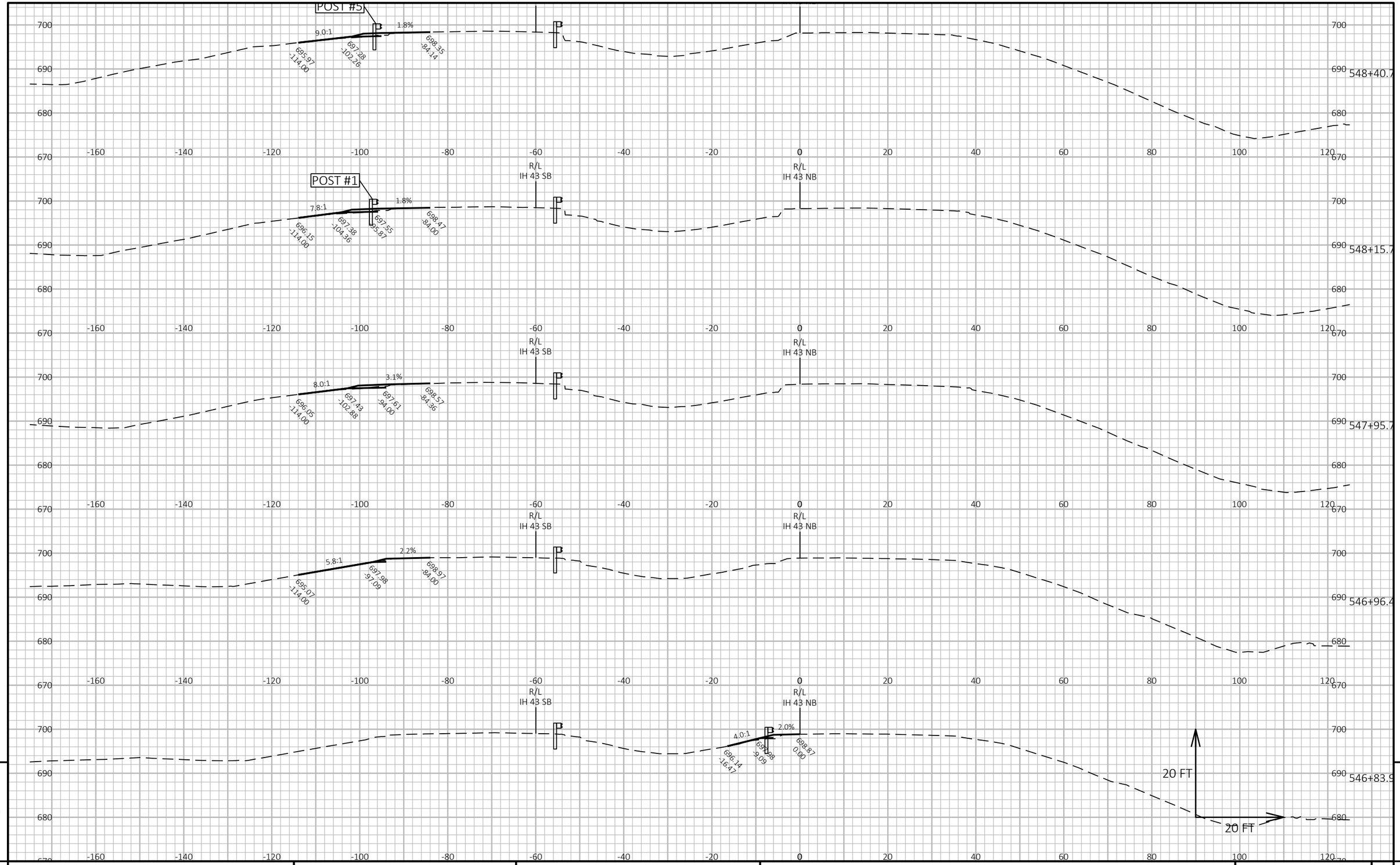
WISDOT/CADDS SHEET 49



PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090251-xs

PLOT DATE : 11/15/2021 3:45 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

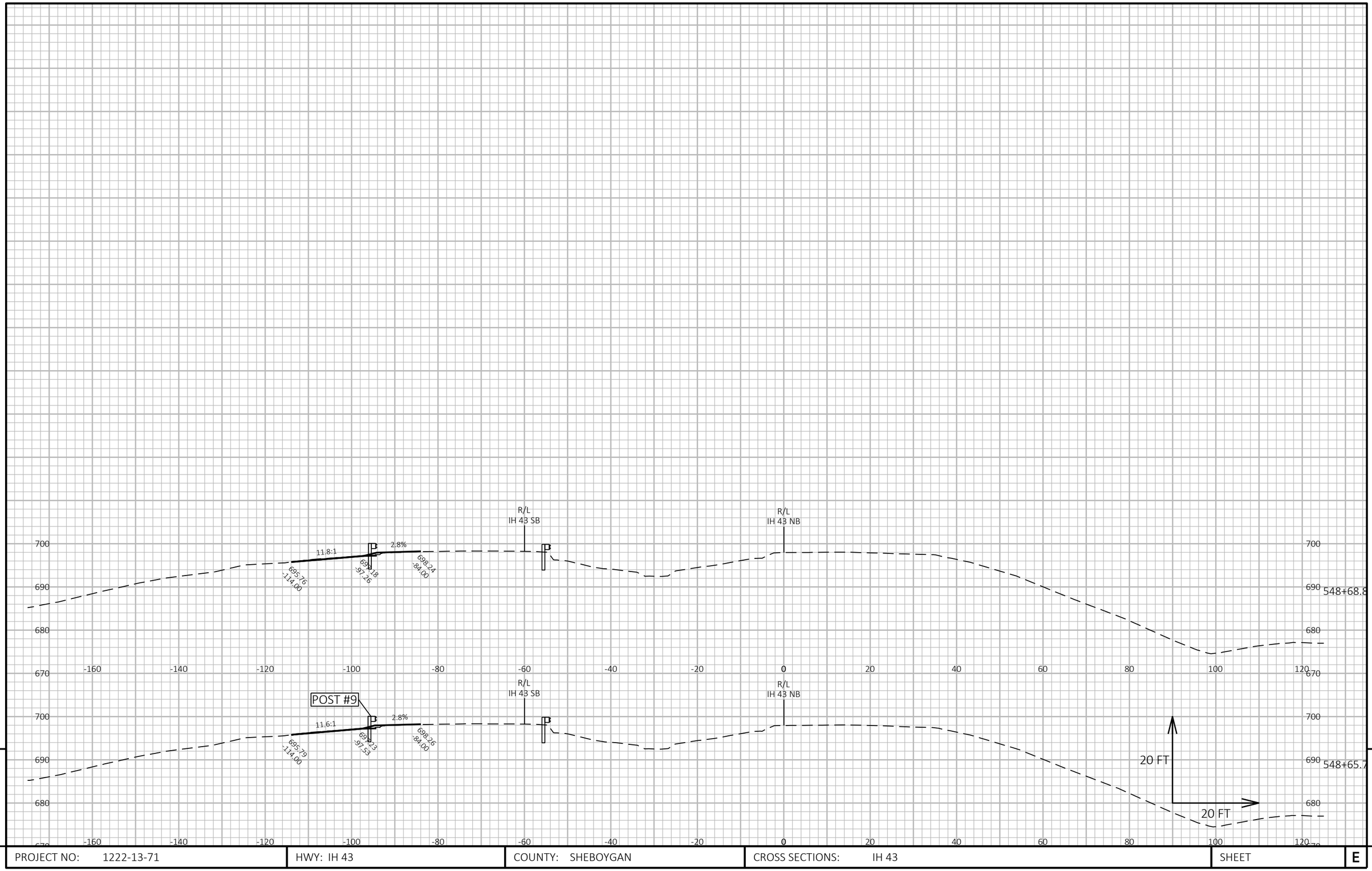


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

FILE NAME : C:\C3D\12221300\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090252-xs

PLOT DATE : 11/15/2021 3:46 PM PLOT BY : MALUEG, RYAN P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: IH 43	SHEET	E

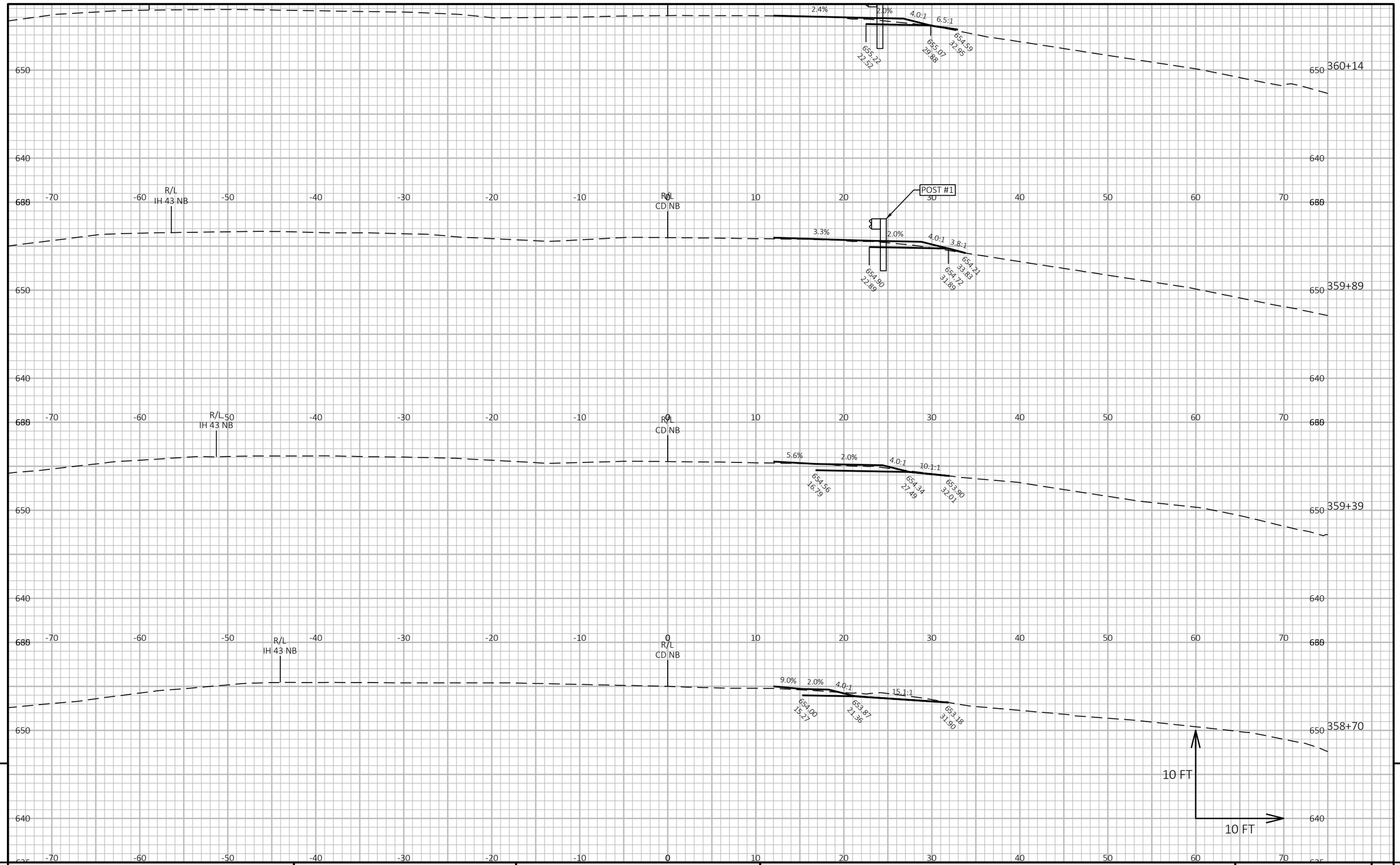
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LAYOUT NAME - 090253-xs

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PLOT BY : MALUEG, RYAN P

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

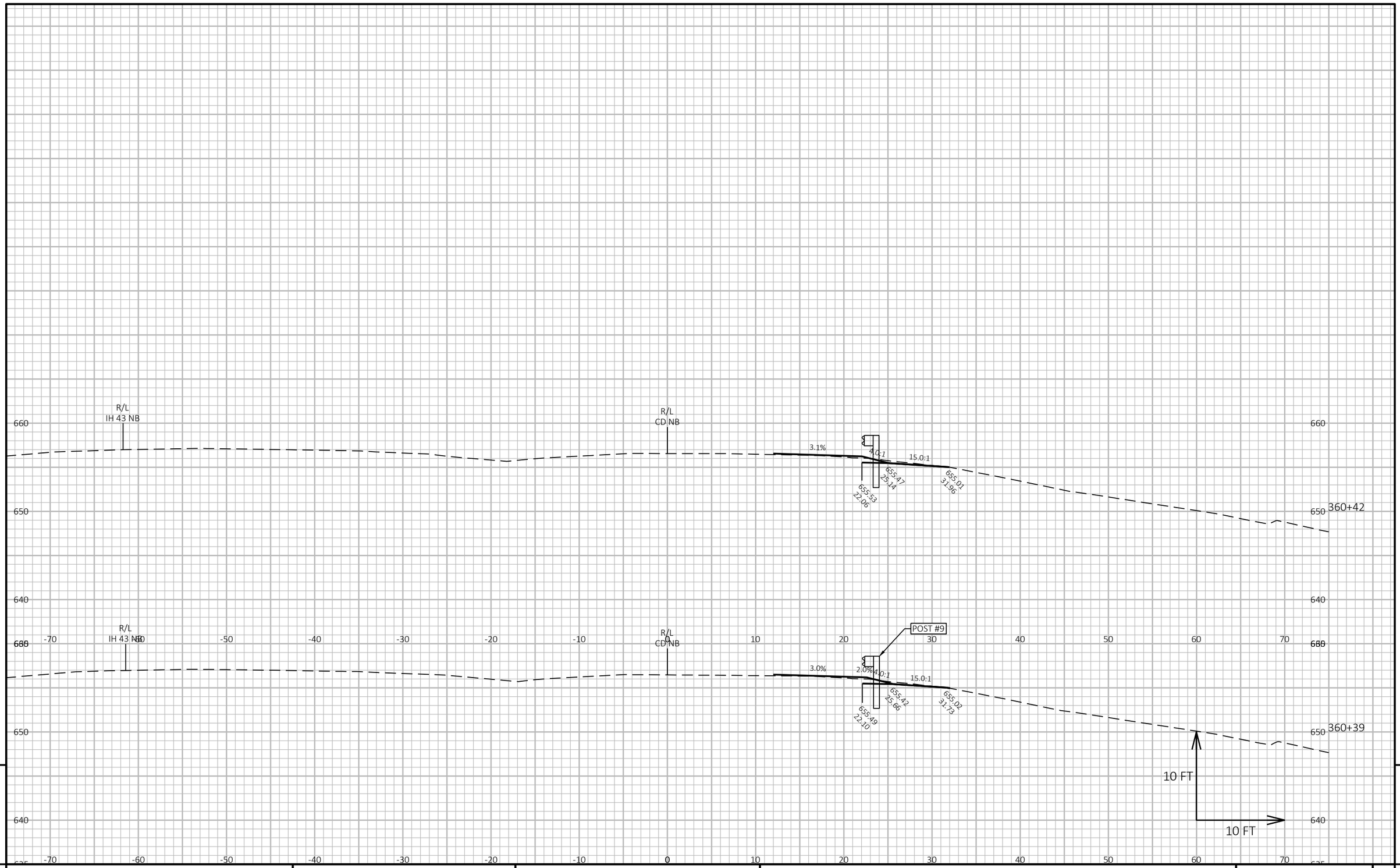


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: CD NB	SHEET E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902300-xs

PLOT DATE : 11/16/2021 2:05 PM PLOT BY : MARTIN, THOMAS S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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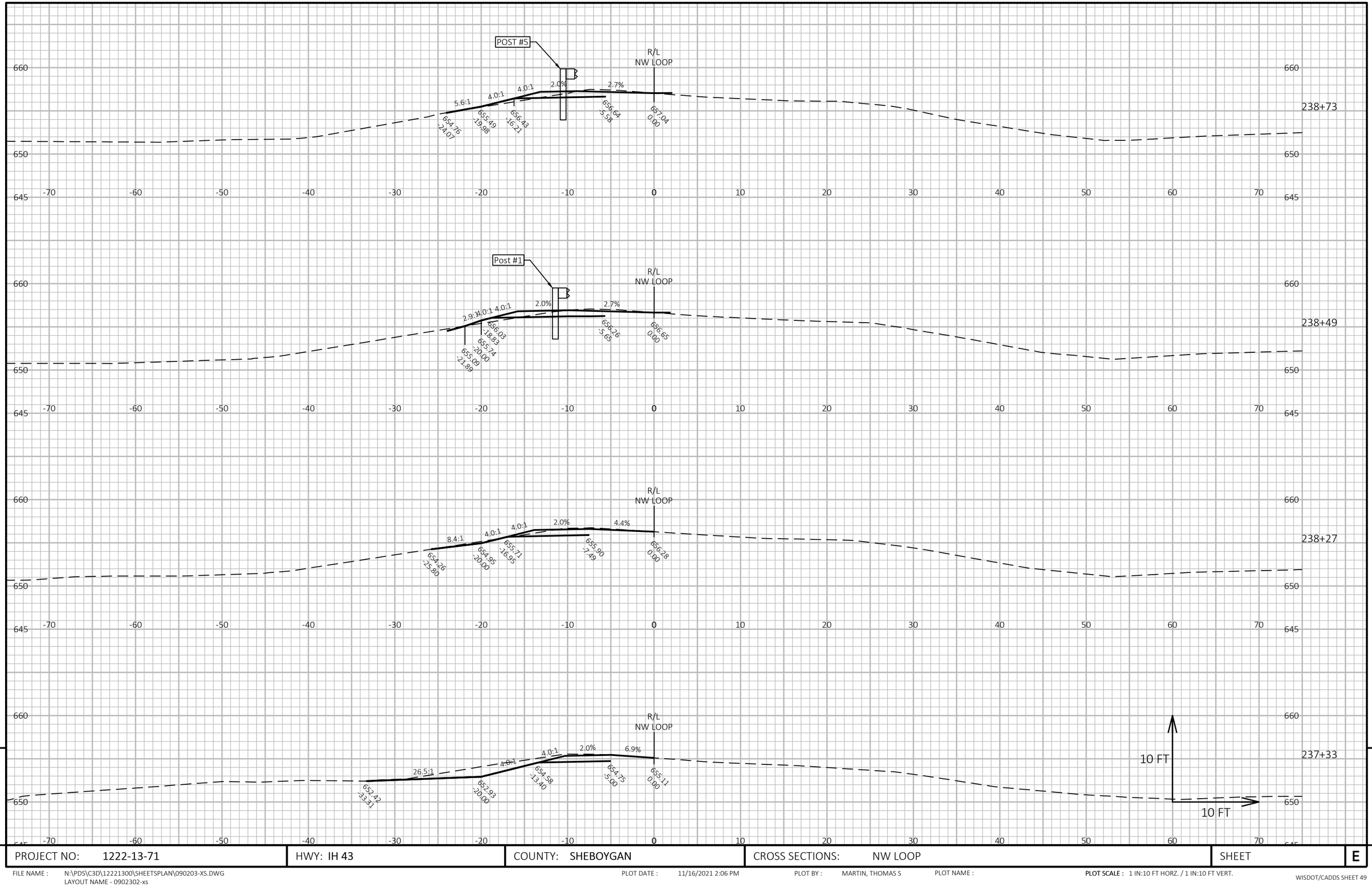
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: CD NB	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902301-xs

PLOT DATE : 11/16/2021 2:06 PM PLOT BY : MARTIN, THOMAS S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NW LOOP	SHEET	E

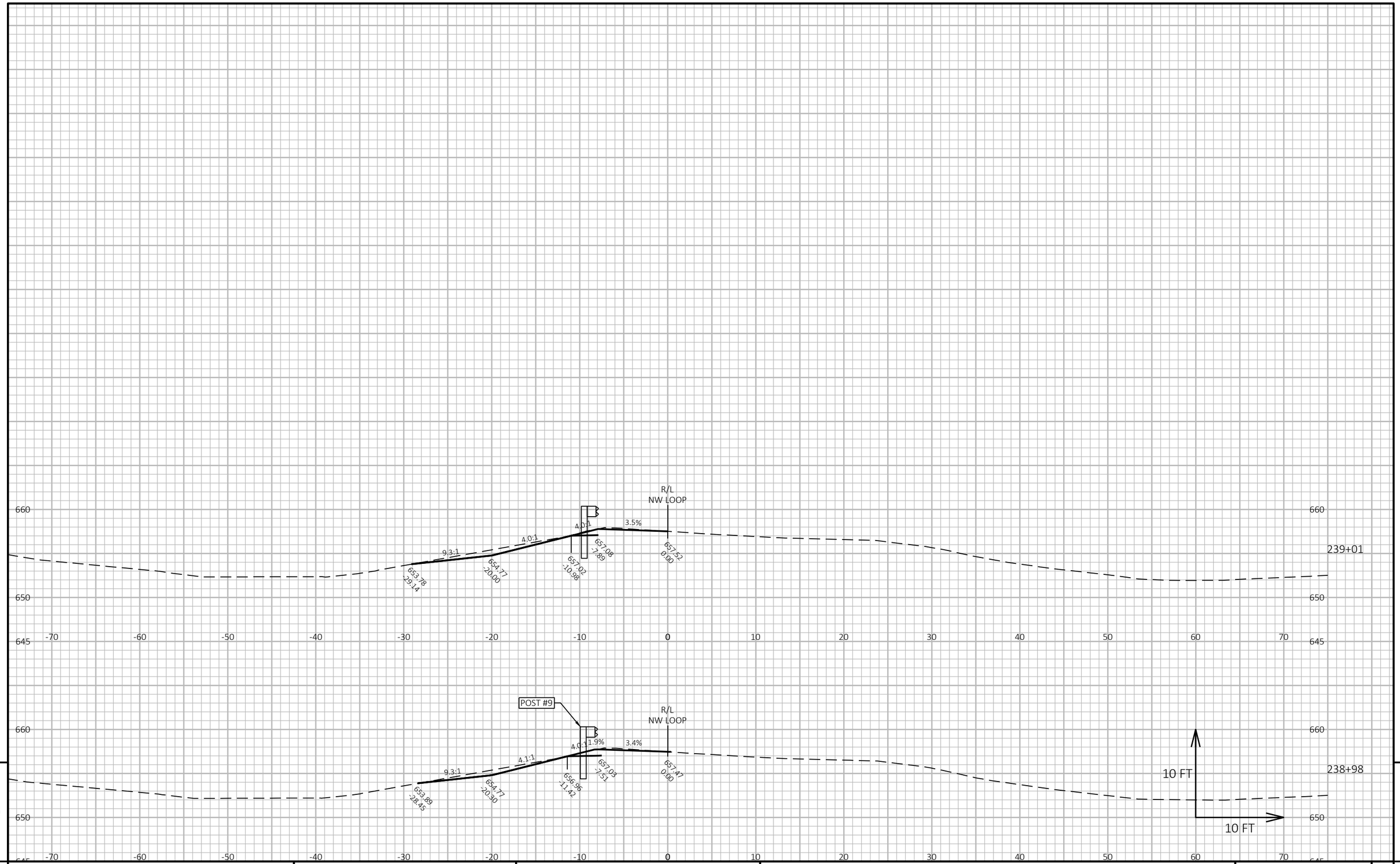
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LAYOUT NAME - 0902302-xs

PLOT DATE : 11/16/2021 2:06 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NW LOOP	SHEET	E

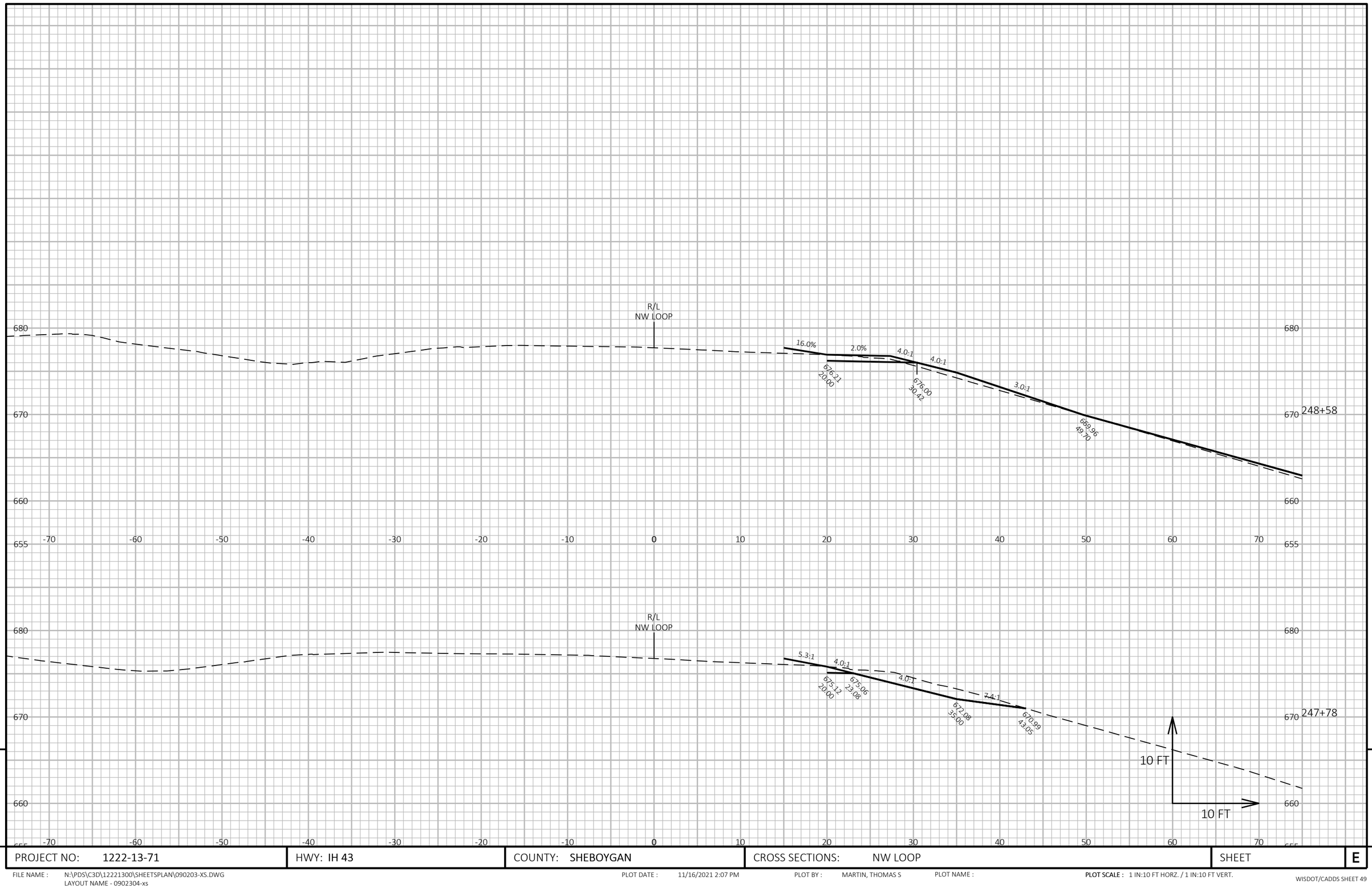
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LAYOUT NAME - 0902303-xs

PLOT DATE : 11/16/2021 2:07 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



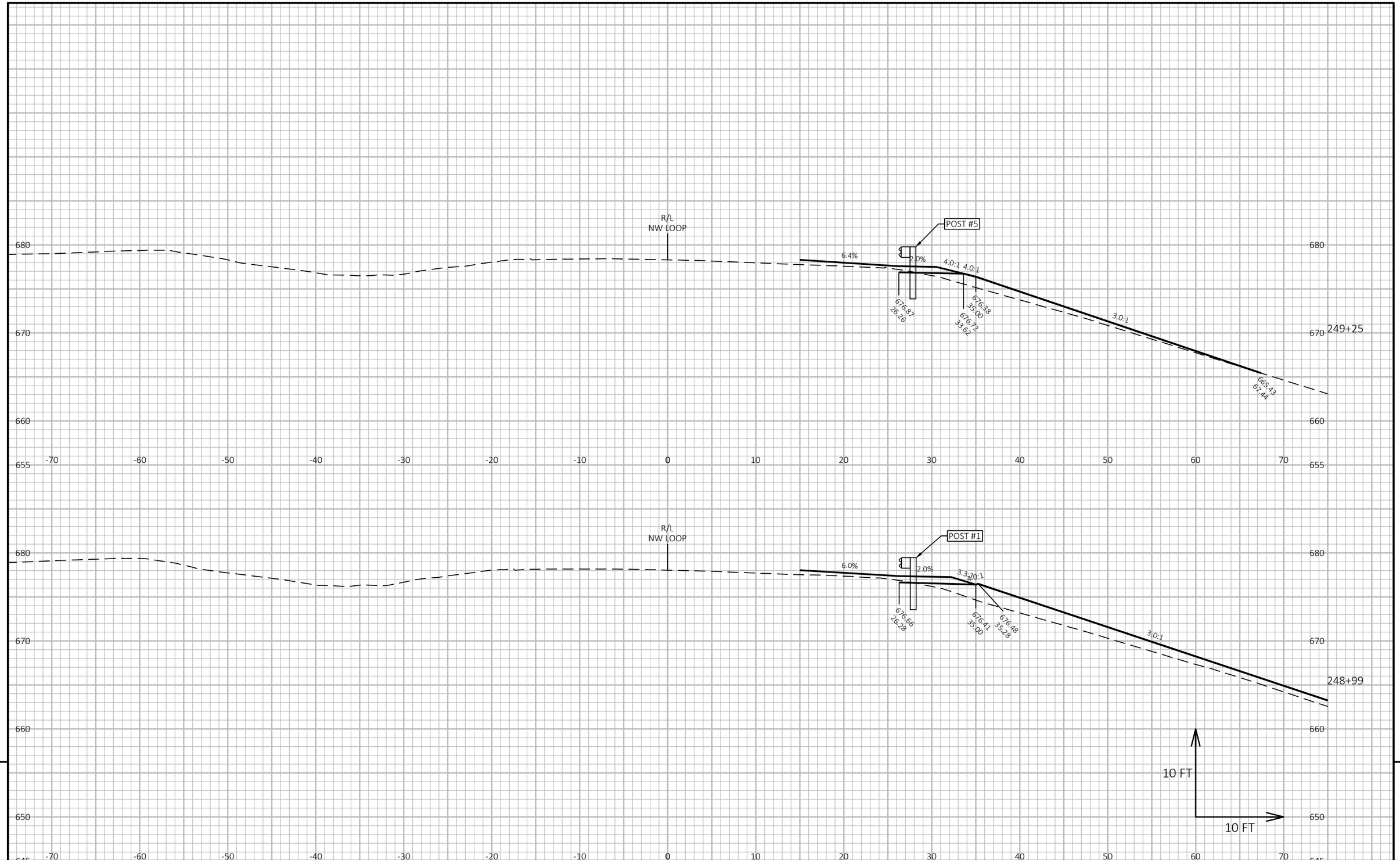
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NW LOOP	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\090203-XS.DWG
LAYOUT NAME - 0902304-xs

PLOT DATE : 11/16/2021 2:07 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NW LOOP	SHEET	E

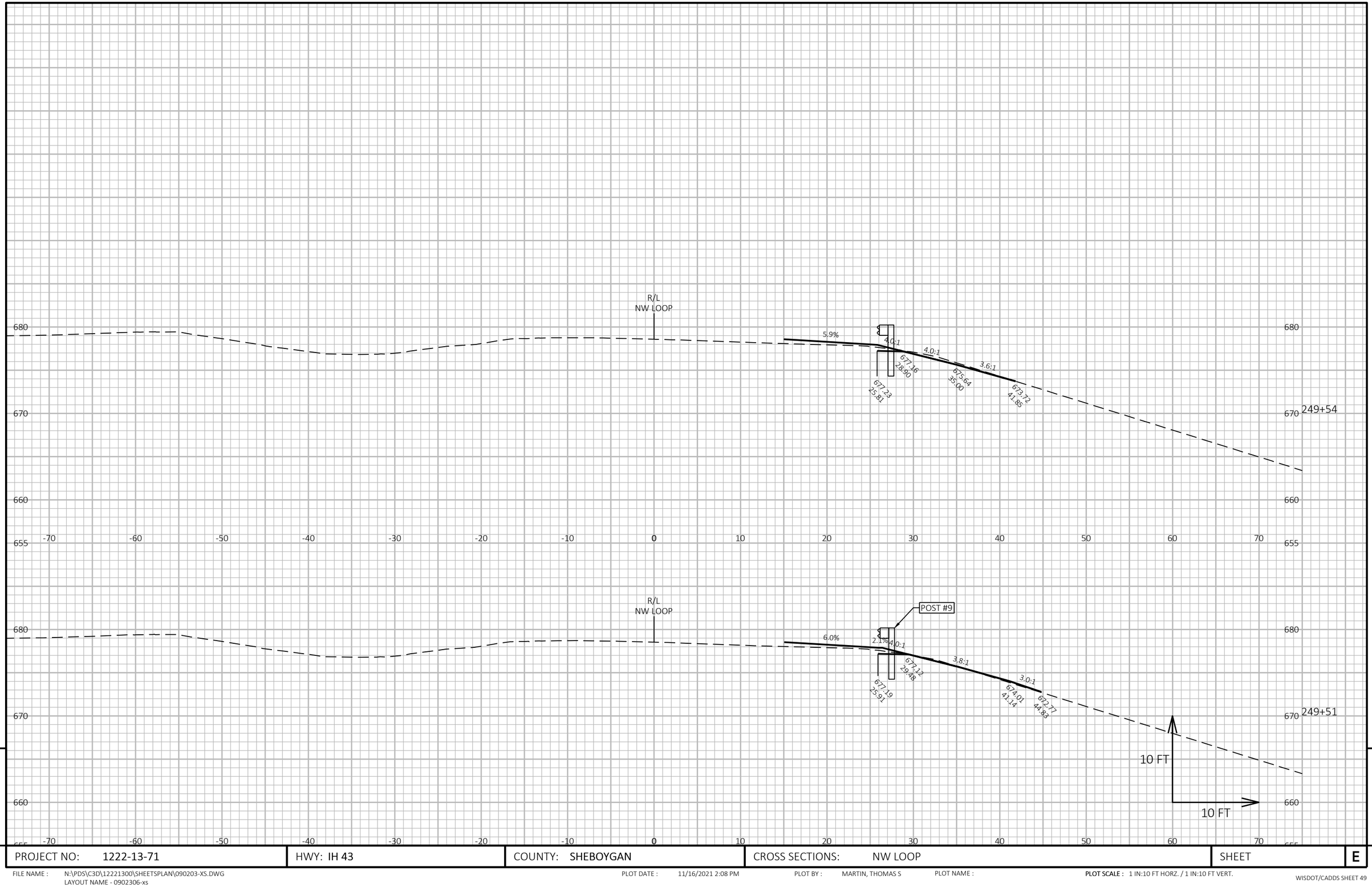
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LAYOUT NAME - 0902305-xs

PLOT DATE : 11/16/2021 2:07 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NW LOOP	SHEET	E

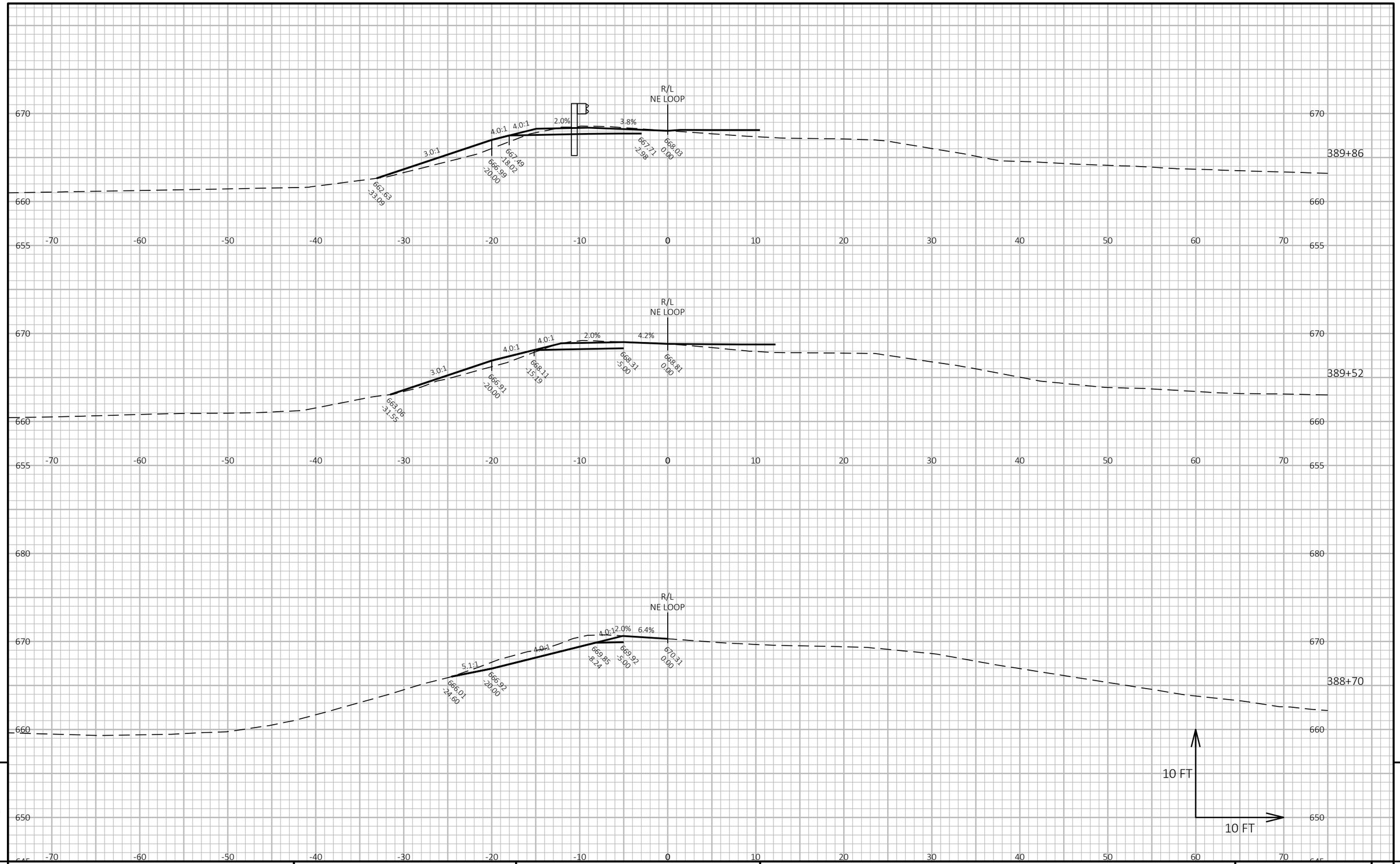
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LAYOUT NAME - 0902306-xs

PLOT DATE : 11/16/2021 2:08 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NE LOOP	SHEET	E

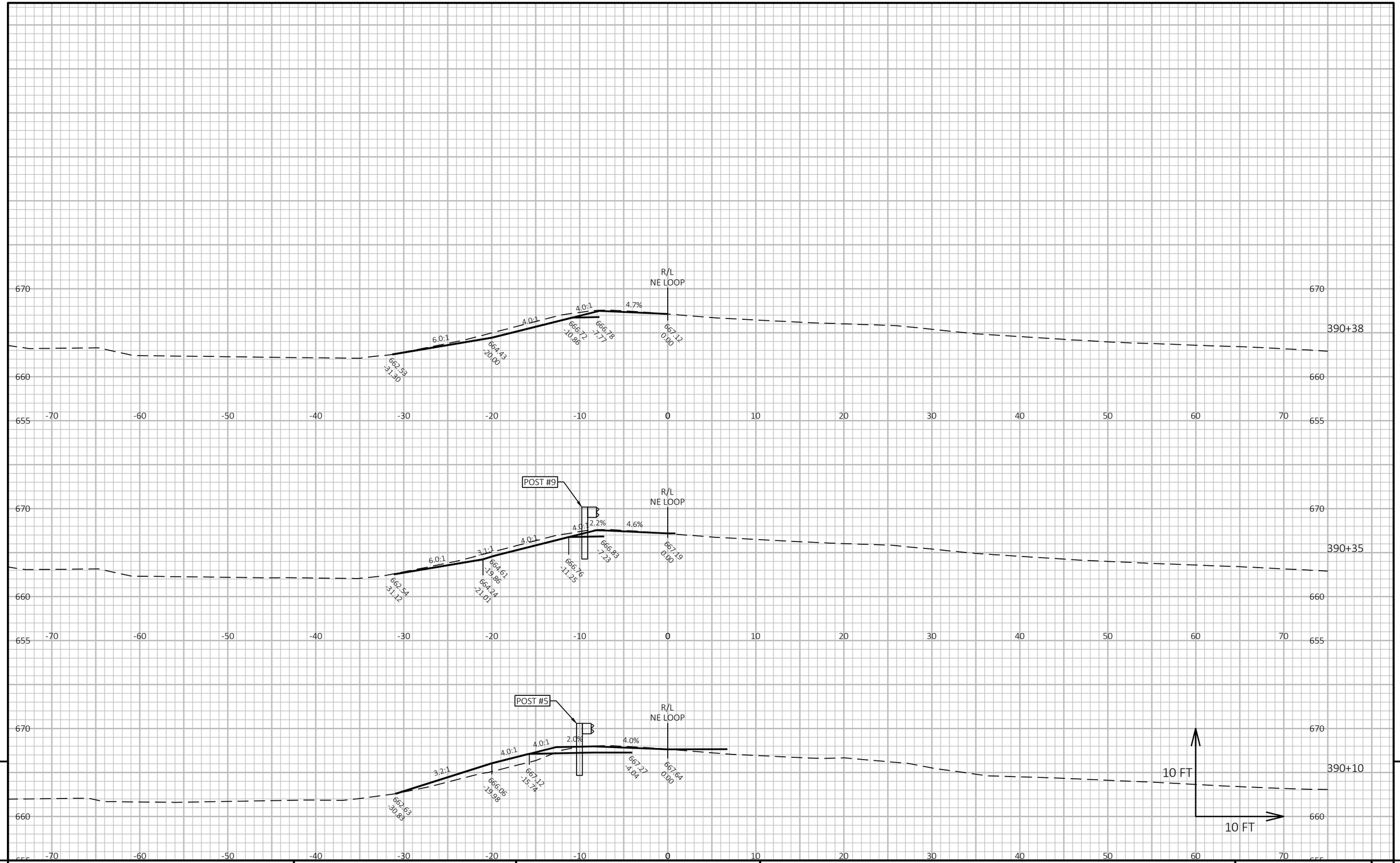
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PLOT BY : MARTIN, THOMAS S

PLOT NAME :

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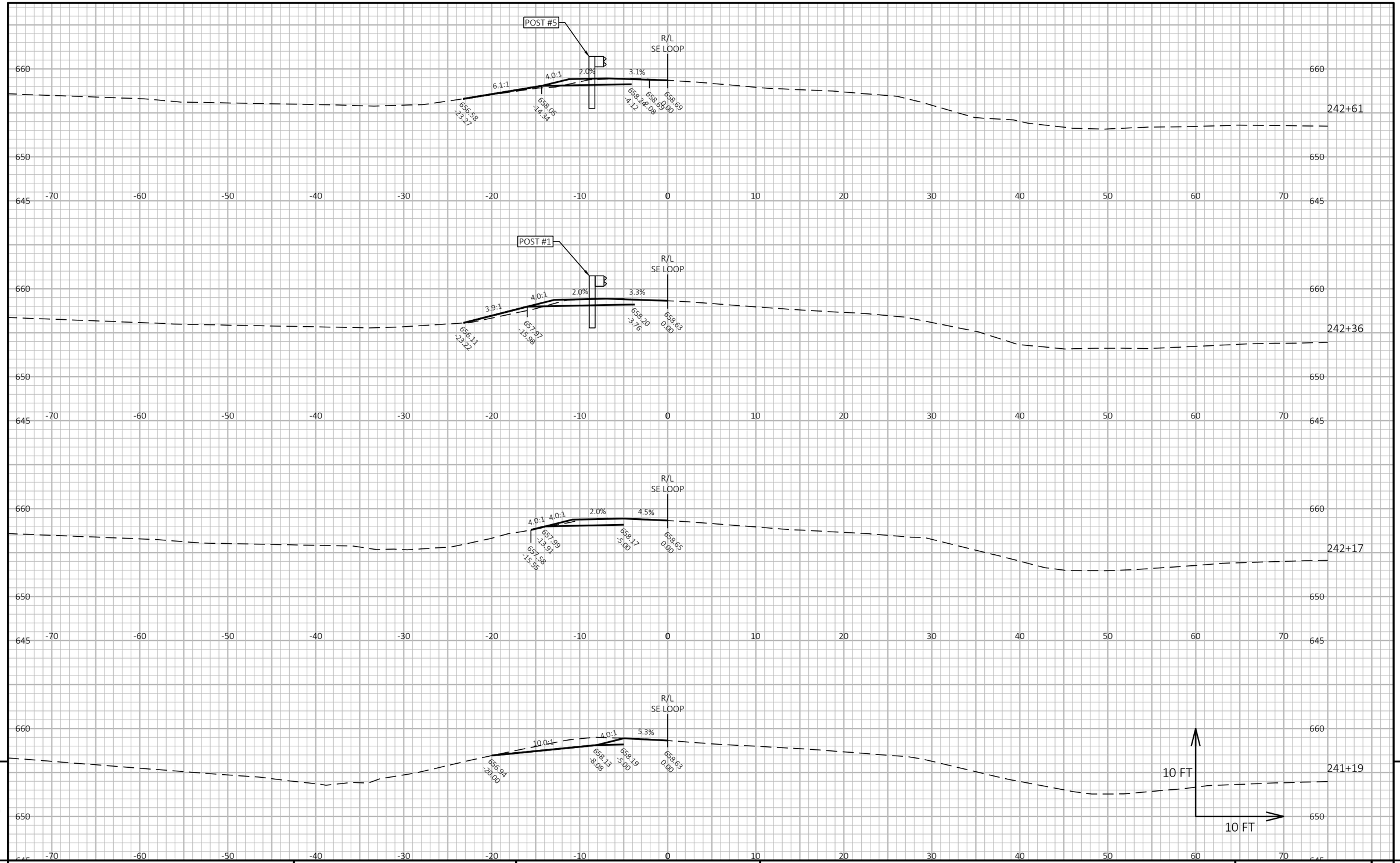


PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: NE LOOP	SHEET	E

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LAYOUT NAME - 0902308-xs

PLOT DATE : 11/16/2021 2:09 PM PLOT BY : MARTIN, THOMAS S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SE LOOP	SHEET	E

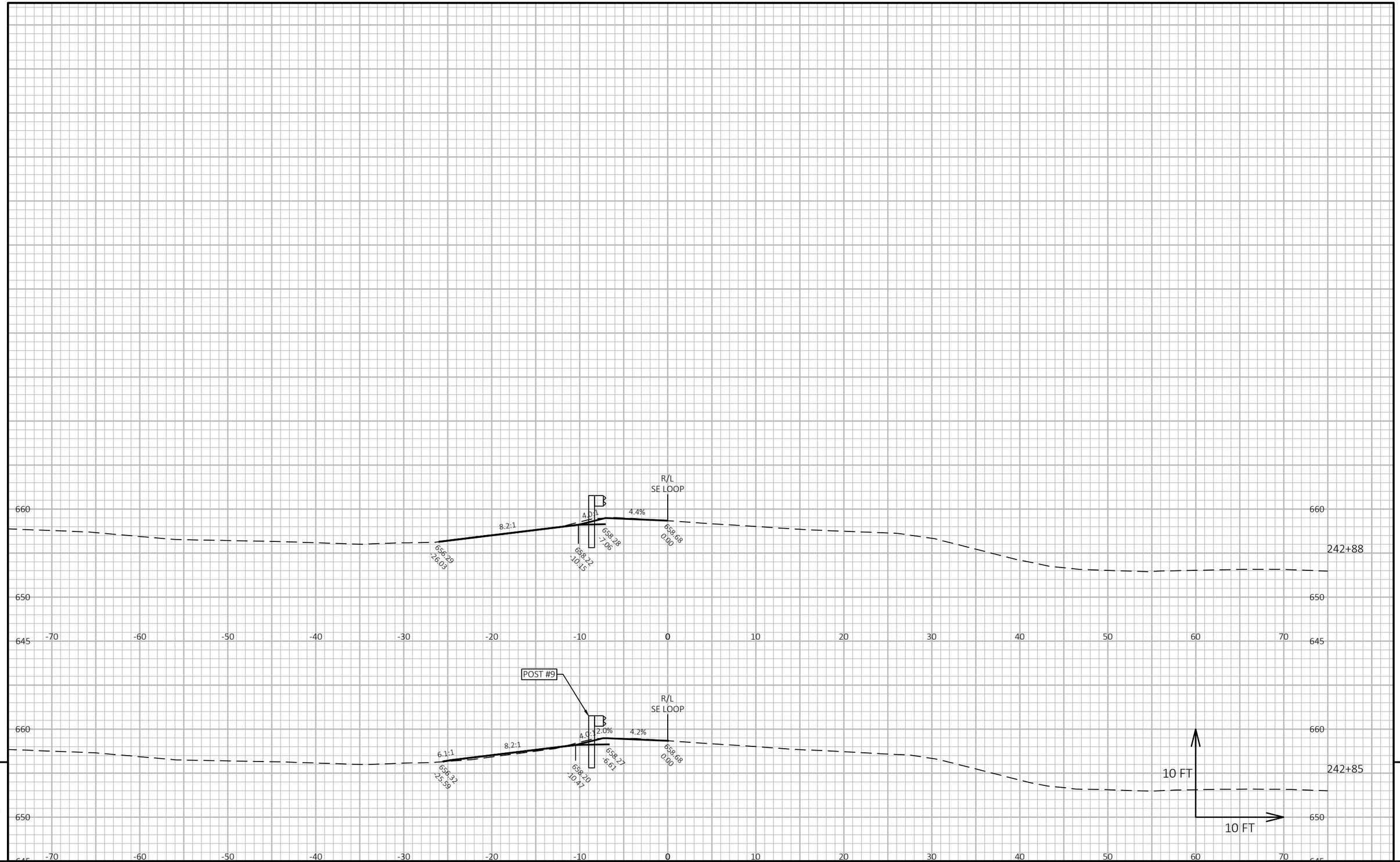
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PLOT DATE : 11/16/2021 2:09 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SE LOOP	SHEET	E

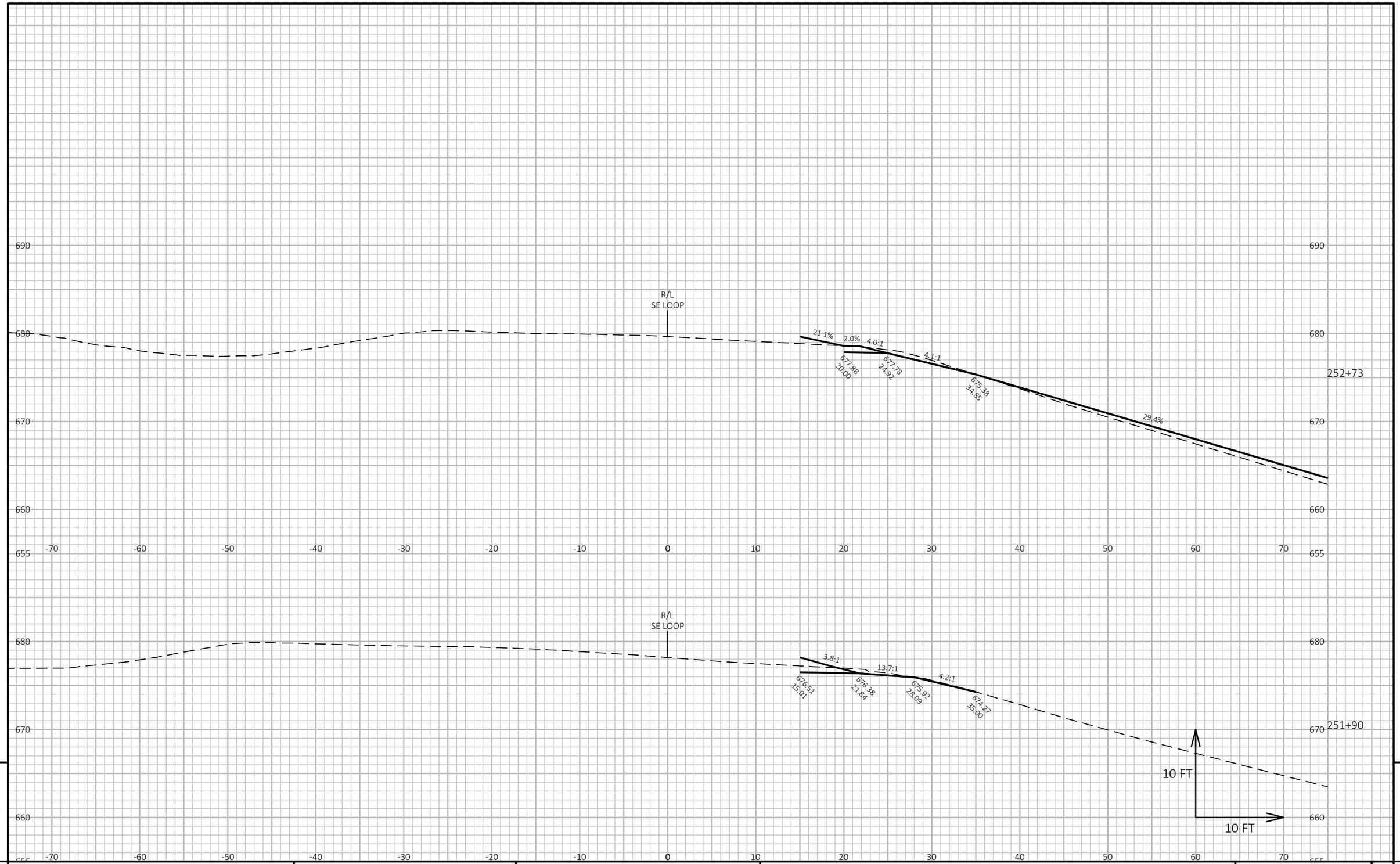
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PLOT DATE : 11/16/2021 2:10 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SE LOOP	SHEET	E

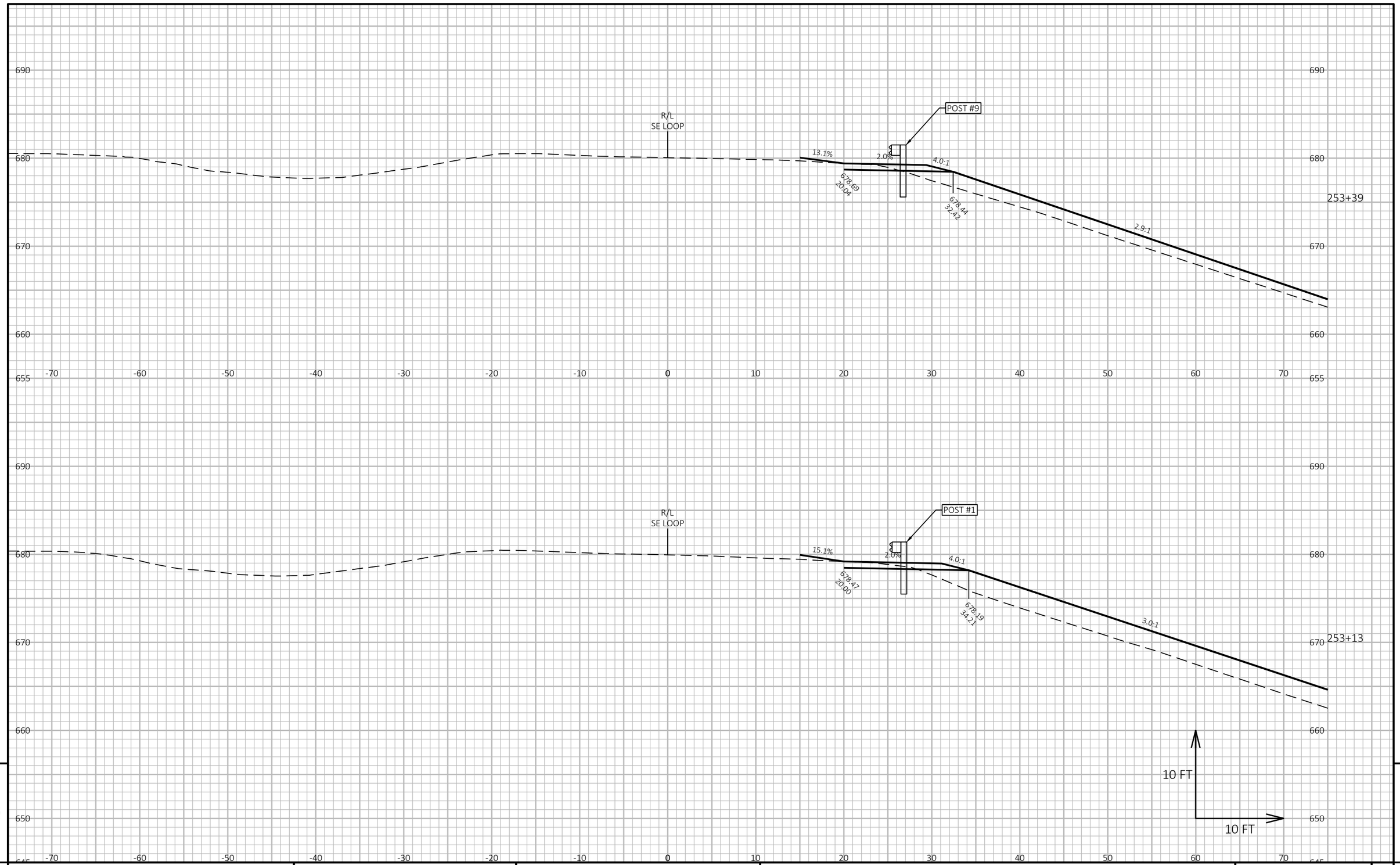
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LAYOUT NAME - 0902311-xs

PLOT DATE : 11/16/2021 2:10 PM PLOT BY : MARTIN, THOMAS S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SE LOOP	SHEET	E

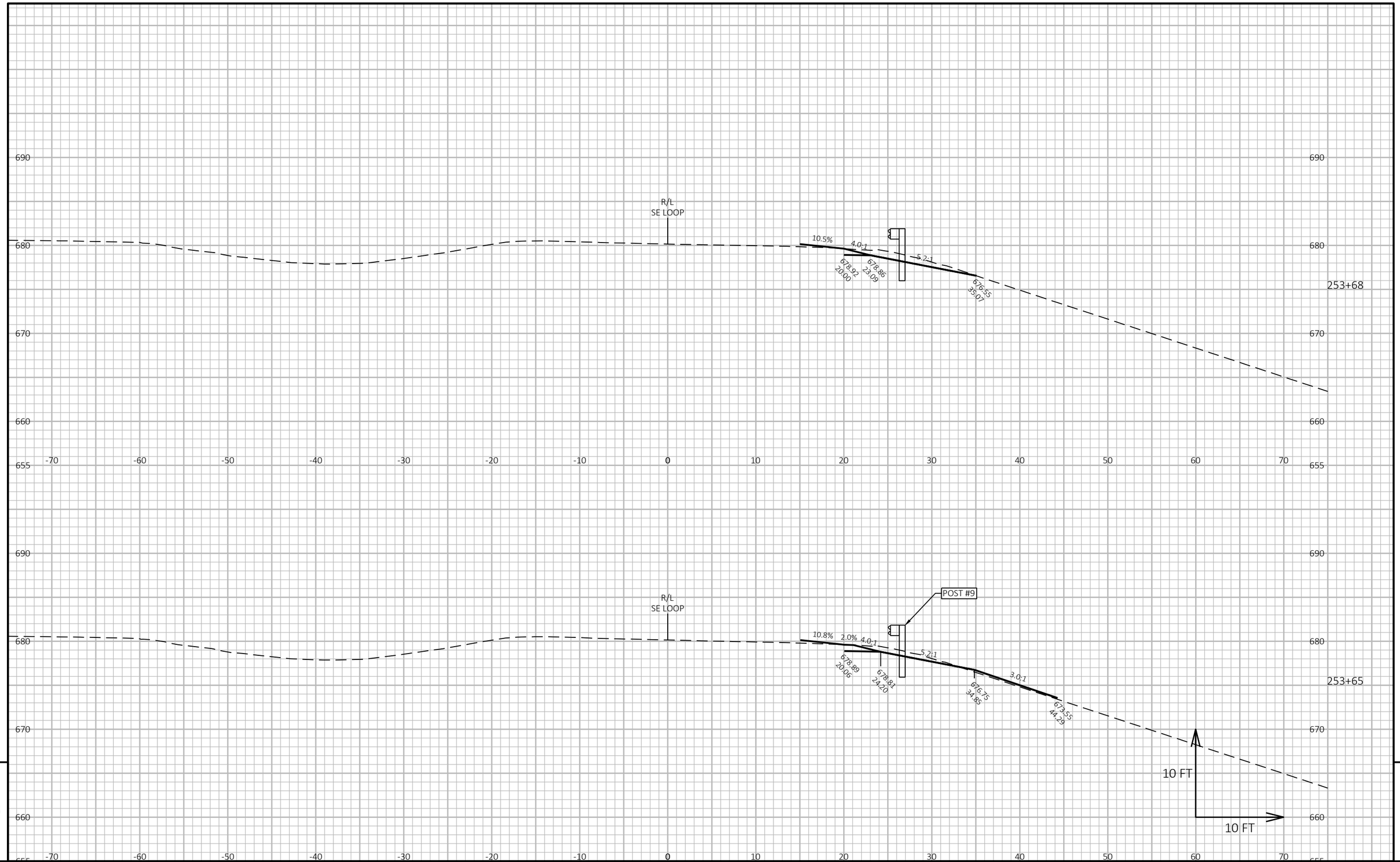
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PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SE LOOP	SHEET	E

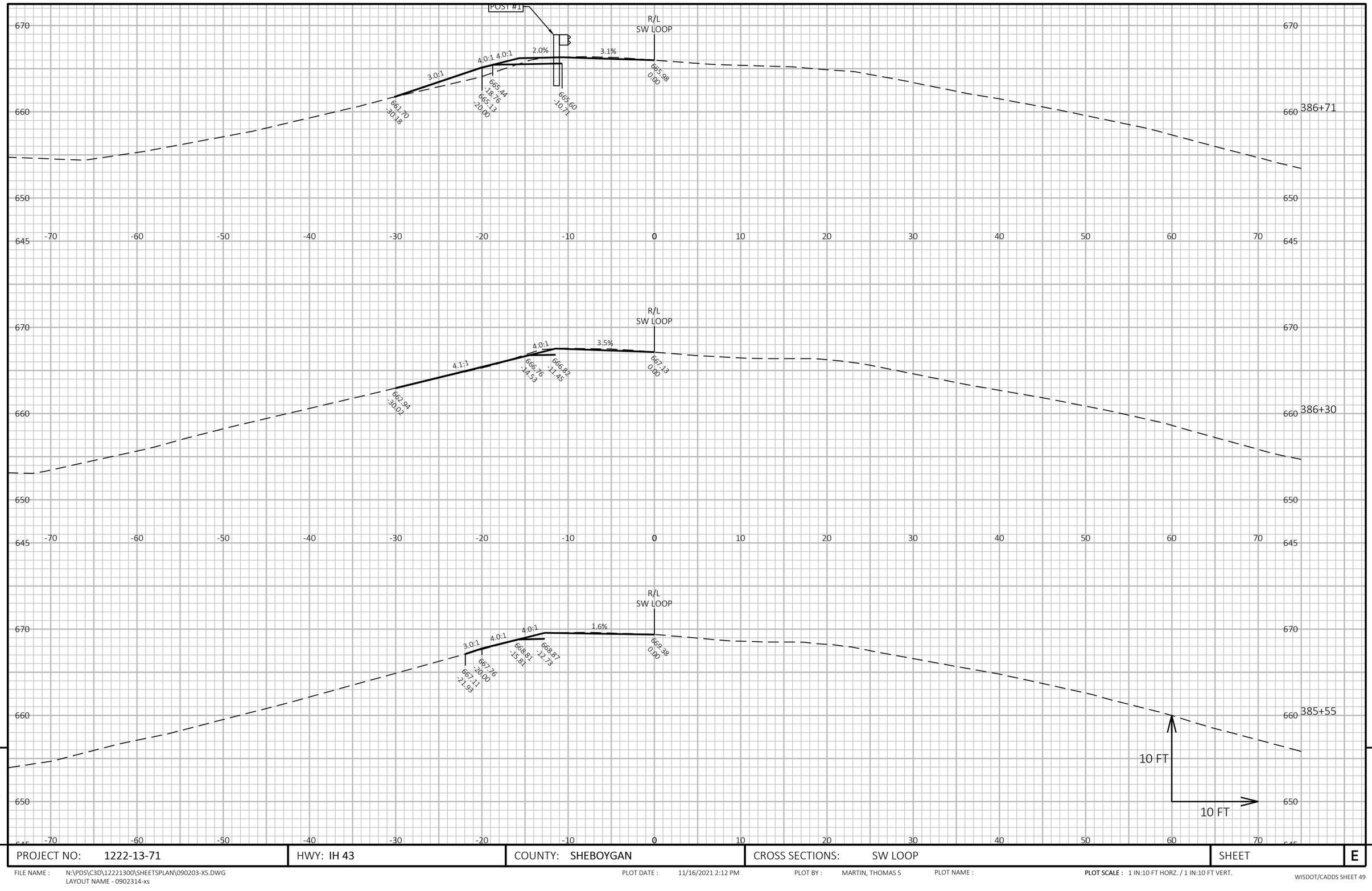
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PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



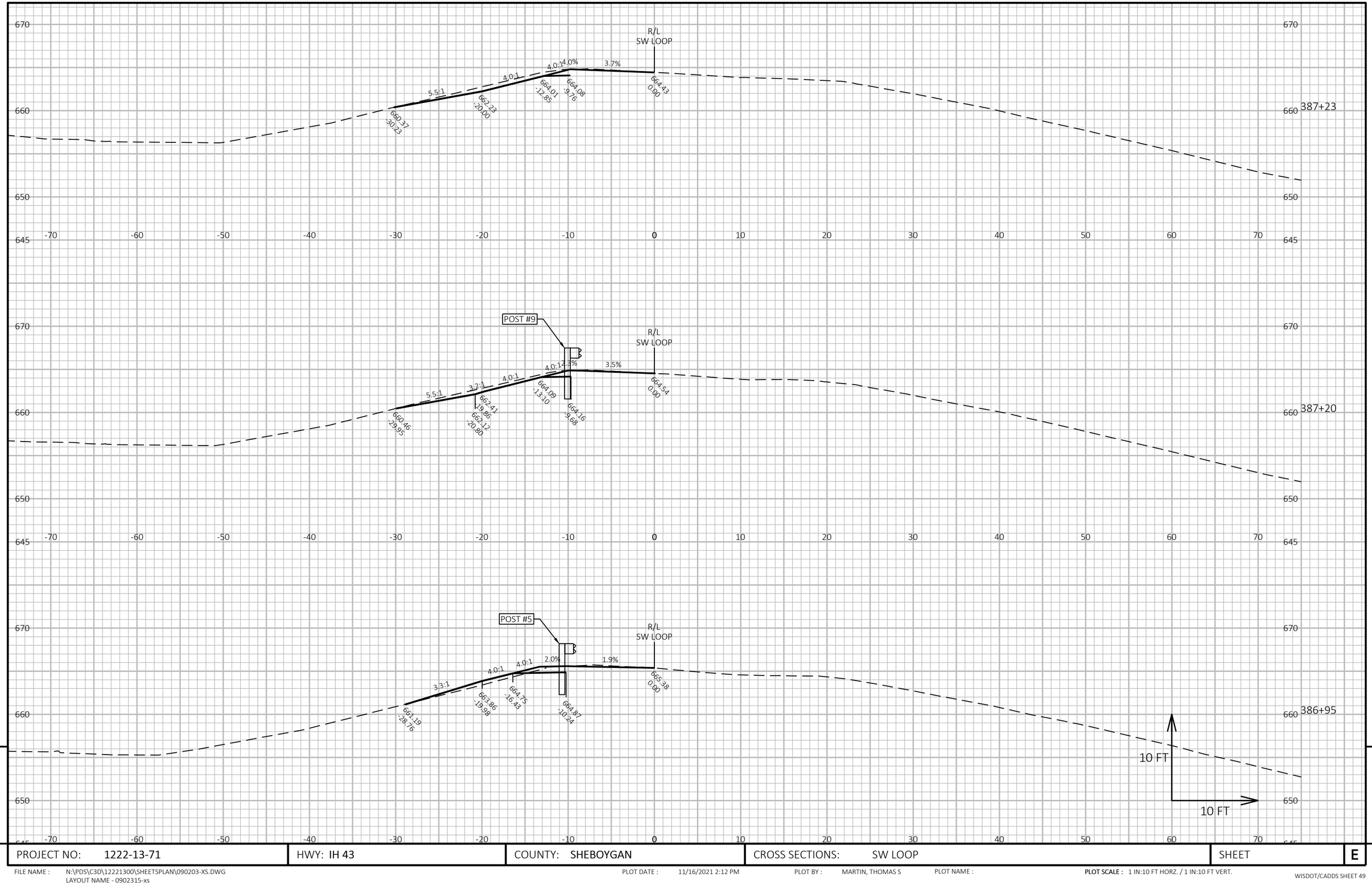
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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SW LOOP	SHEET	E

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LAYOUT NAME - 0902314-xs

PLOT DATE : 11/16/2021 2:12 PM PLOT BY : MARTIN, THOMAS S PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1222-13-71	HWY: IH 43	COUNTY: SHEBOYGAN	CROSS SECTIONS: SW LOOP	SHEET	E

FILE NAME : N:\PDS\C3D\12221300\SHEETSPLAN\090203-XS.DWG
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PLOT DATE : 11/16/2021 2:12 PM

PLOT BY : MARTIN, THOMAS S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.