MAD

NOVEMBER 2020

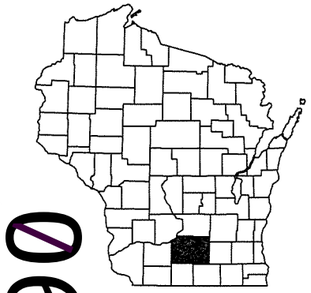
PROJECT ID: 3070-04-61

WITH: N/A

COUNTY: DANE

ORDER OF SHEETS

TOTAL SHEETS = 138



90

N

DESIGN DESIGNATION

A.A.D.T.	2023	=	5,180
A.A.D.T.	2043	=	6,370
D.H.V.		=	379
D.D.		=	50/50
T.		=	13.1%
DESIGN SPEED		=	30-55 MPH
ESALS		=	1,300,000

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

I39 - COLUMBUS

NORTH STREET TO SCHOOL STREET

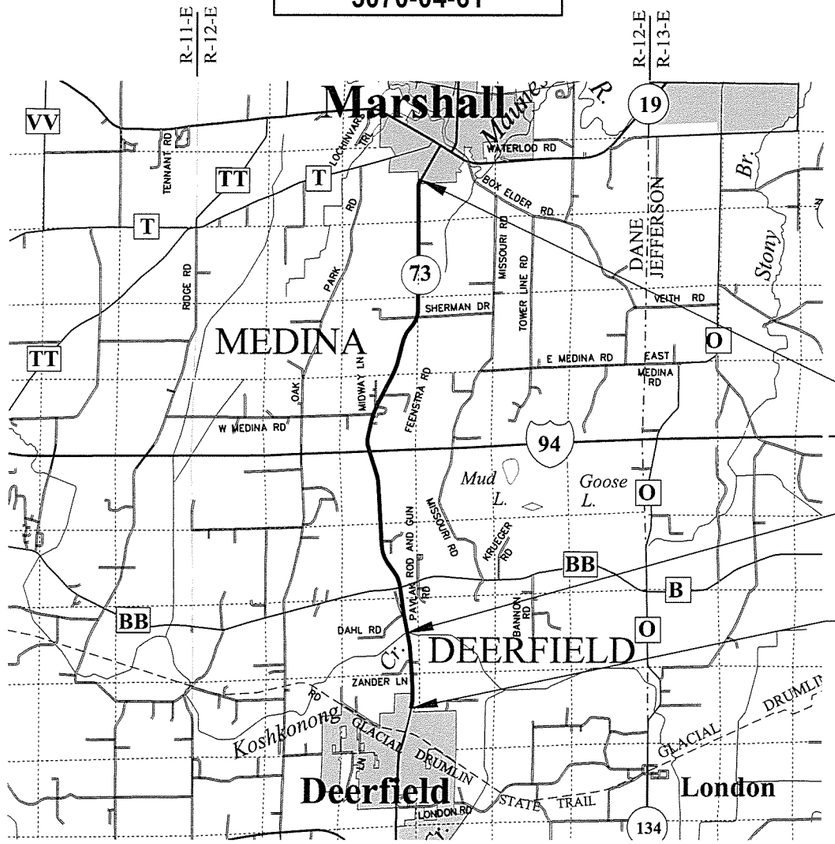
STH 73

DANE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3070-04-61	WISC 2020531	1

STATE PROJECT NUMBER

3070-04-61



END PROJECT
STA 518+00.00
T-8-N
T-7-N

EXCEPTION TO NET CENTERLINE LENGTH
STA 177+98.30 TO STA 178+31.58

BEGIN PROJECT
STA 125+83.00
Y=477,679.464
X=904,375.575

LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 7.421 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET.

VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES. ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012.)

emcs inc

1600 Aspen Commons, Suite 230
Middleton, WI 53562
608.827.8810 Fax 608.833.3198

WISCONSIN
MICHAEL C. McCARTHY
E-29197
MENOMONEE FALLS, WI
PROFESSIONAL ENGINEER

10/22/19 (Date) Michael C. McCarthy (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS, INC.
Designer	EMCS, INC.
Project Manager	AMY COUGHLIN
Regional Examiner	SW REGION
Regional Supervisor	BRENDA SCHOENFELD

APPROVED FOR THE DEPARTMENT

DATE: 10-22-2019 Amy Coughlin (Signature)

E

ORDER OF SECTION 2 SHEETS

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.
- PRIOR TO THE PLACEMENT OF MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- TOPSOIL SHALL BE PLACED 1 INCH BELOW THE TOP OF ADJACENT CONCRETE CURBS OR SIDEWALKS.
- THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND MULCHED OR AS DIRECTED BY THE ENGINEER.
- (SALVAGED) TOPSOIL AND MULCH HAS BEEN COMPUTED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS PLUS 5 FT BEYOND THE TOE OF SLOPE. SEEDING AND FERTILIZER HAS BEEN COMPUTED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS PLUS 10 FT.
- FERTILIZER SHALL NOT BE USED WITHIN 20' OF NAVIGABLE WATERWAYS OR WETLANDS.
- EXISTING CONCRETE PADS AROUND MANHOLES SHALL REMAIN.
- A CONVERSION FACTOR OF 2.10 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3/4-INCH.
- A CONVERSION FACTOR OF 2.00 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 1 1/4-INCH.
- A CONVERSION FACTOR OF 112 LB/SY/IN IS USED TO ESTIMATE QUANTITIES FOR HMA PAVEMENT.
- ASPHALTIC PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	HMA PAVEMENT ITEM
4.00"	1.75" (UPPER) 2.25" (LOWER)	4 MT 58-28 S (UPPER) 3 MT 58-28 S (LOWER)
2.25"	2.25"	4 MT 58-28 S
6.00"	1.75" (UPPER) 2.25" (MIDDLE) 2.00" (LOWER)	4 MT 58-28 S (UPPER) 3 MT 58-28 S (MIDDLE) 3 MT 58-28 S (LOWER)

UTILITY CONACTS

COMMUNICATIONS

CHARTER COMMUNICATIONS
KIRK UPPERMAN
2701 DANIELS ST
MADISON, WI 53718
PHONE: (608)209-3206
EMAIL: KIRK.UPPERMAN@CHARTER.COM

CENTURYLINK
STEVE BISHOP
130 4TH STREET
BARABOO, WI 53913
PHONE: (608)355-7501
CELL: (608)963-8594
EMAIL: STEVEN.BISHOP@CENTURYLINK.COM

FRONTIER COMMUNICATIONS OF WI LLC
JERRY MOORE
2222 WEST WI STREET
PORTAGE, WI 53901
PHONE: (608) 742-9507
CELL: (608) 346-0353
EMAIL: JERALD.R.MOORE@FTR.COM

WISCONSIN DEPARTMENT OF TRANSPORTATION
JEFF MADSON
433 WEST ST PAUL AVENUE, SUITE 300
MILWAUKEE, WI 53203-3007
PHONE: (414) 225-3723
EMAIL: JEFFREY.MADSON@DOT.WI.GOV

ELECTRIC

ALLIANT ENERGY - ELECTRIC
BENJAMIN BLOYER
1521 PROGRESS LANE
STOUGHTON, WI 53589
PHONE: (608)877-1648
EMAIL: BENJAMINBLOYER@ALLIANTENERGY.COM

WE ENERGIES - ELECTRIC
BRYAN STOEHR
500 S 116TH ST
WEST ALLIS, WI 53214
PHONE: (414)944-5516
EMAIL: BRYAN.STOEHR@WE-ENERGIES.COM

SEWER

DEERFIELD PUBLIC WORKS - SEWER
JOHN DOYLE
4 N MAIN ST
P.O. BOX 66
DEERFIELD, WI 53531
PHONE: (608)764-5497
EMAIL: JDOYLE@DEERFIELDWI.COM

MARSHALL WATER AND SEWER UTILITY - SEWER
BRIAN P KOLL
616 W KAREM DR
P.O. BOX 45
MARSHALL, WI 53559-0045
PHONE: (608)655-3814
EMAIL: BKOLL@MARSHALL-WI.COM

WATER

DEERFIELD PUBLIC WORKS - WATER
JOHN DOYLE
4 N MAIN ST
P.O. BOX 66
DEERFIELD, WI 53531
PHONE: (608)764-5497
EMAIL: JDOYLE@DEERFIELDWI.COM

MARSHALL WATER AND SEWER UTILITY - WATER
BRIAN P KOLL
616 W KAREM DR
P.O. BOX 45
MARSHALL, WI 53559-0045
PHONE: (608)655-3814
EMAIL: BKOLL@MARSHALL-WI.COM

GAS/PETROLEUM

ALLIANT ENERGY - GAS/PETROLEUM
BENJAMIN BLOYER
1521 PROGRESS LANE
STOUGHTON, WI 53589
PHONE: (608)877-1648
EMAIL: BENJAMINBLOYER@ALLIANTENERGY.COM

WE ENERGIES - GAS/PETROLEUM
DAN BANDOR
500 S 116TH ST
WEST ALLIS, WI 53214
PHONE: (414) 994-5632
CELL: (414) 254-1865
EMAIL: DANIEL.BANDOR@WE-ENERGIES.COM

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

OTHER AGENCIES

WDNR LIASON

DNR SOUTH CENTRAL REGION HEADQUARTERS
ERIC HEGGELUND
3911 FISH HATCHERY RD
FITCHBURG, WI 53711
PHONE: (608)275-3301
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

WISDOT DESIGN

PROJECT MANAGER
WISDOT SW REGION
AMY COUGHLIN
2101 WRIGHT ST
MADISON, WI 53704
PHONE: (608)245-5358
EMAIL: AMY.COUGHLIN@DOT.WI.GOV

CONSULTANT DESIGN

EMCS, INC.
MIKE MCCARTHY
1600 ASPEN COMMONS, SUITE 230
MIDDLETON, WI 53562
PHONE: (608)827-8810
EMAIL: MMCCARTHY@EMCSINC.COM

STANDARD ABBREVIATIONS

AE,AEW	APRON ENDWALL
MGAL	1000 GALLONS
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE

2

N

TOWN OF DEERFIELD

TOWN OF MEDINA

VILLAGE OF DEERFIELD

VILLAGE OF MARSHALL

NORTH ST

ZANDER LN

JINI'S LN

DAHL RD

KOSHKONONG CREEK

CTH BB

GRAFFIN RD

STH 73

I-94

W MEDINA RD

MIDWAY LN

HIGH CHAPARRAL RD

FEENSTRA RD

UNNAMED WATERWAY

UNNAMED WATERWAY

SHERMAN DR

KRONEMAN RD

SCHOOL ST

120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500

STRUCTURE B-13-158

STRUCTURE B-13-159

BEGIN PROJECT
STA 125+83.00
BEGIN MILL & OVERLAY

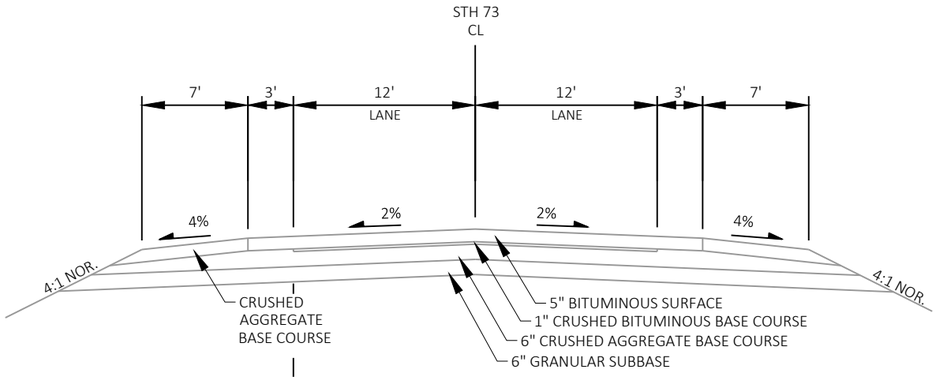
EXCEPTION TO NET CENTERLINE LENGTH
STRUCTURE B-13-939
STA 177+98.30 TO STA 178+31.58

END CONSTRUCTION
STA 519+05.00

END PROJECT
STA 518+00.00
END MILL & OVERLAY

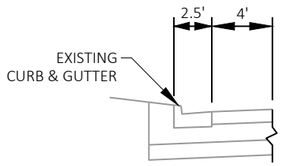
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E

2



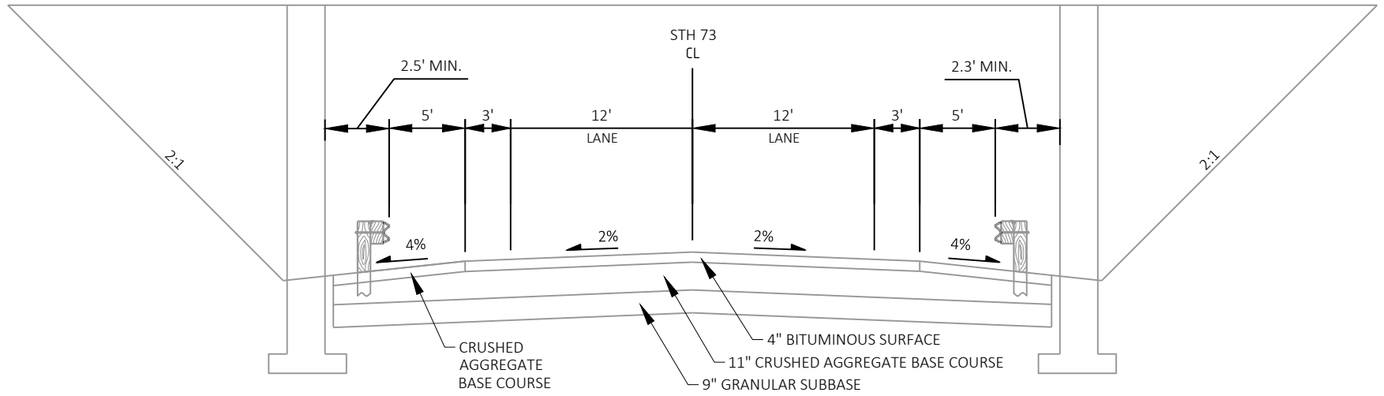
TYPICAL EXISTING SECTION

STH 73
STA 125+83.00 - STA 292+17.14



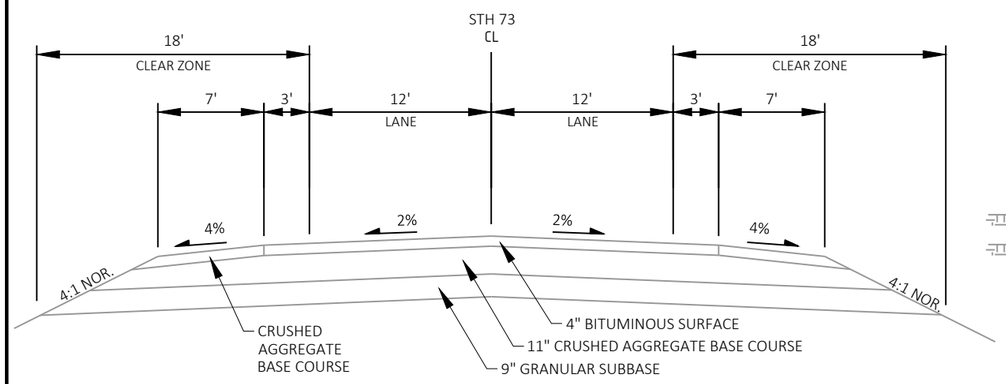
TYPICAL EXISTING SECTION

STH 73
STA 125+82.90 - STA 130+42.40



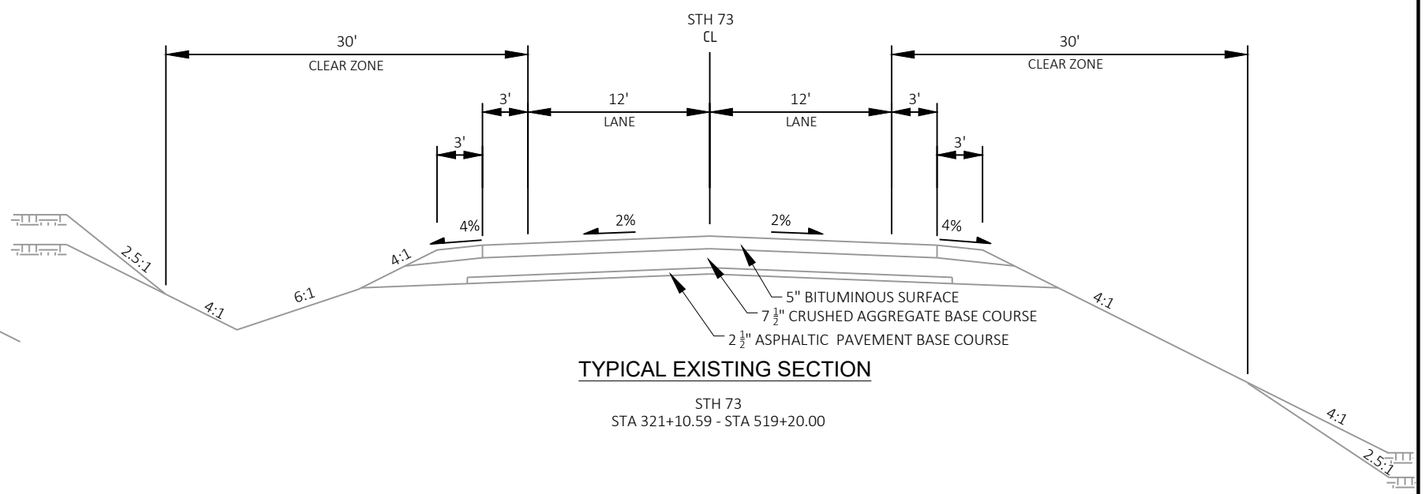
TYPICAL EXISTING UNDER BRIDGE SECTION

STH 73 UNDER IH 94 OVERPASS STRUCTURES
STA 308+44.85 - STA 309+80.00



TYPICAL EXISTING SECTION

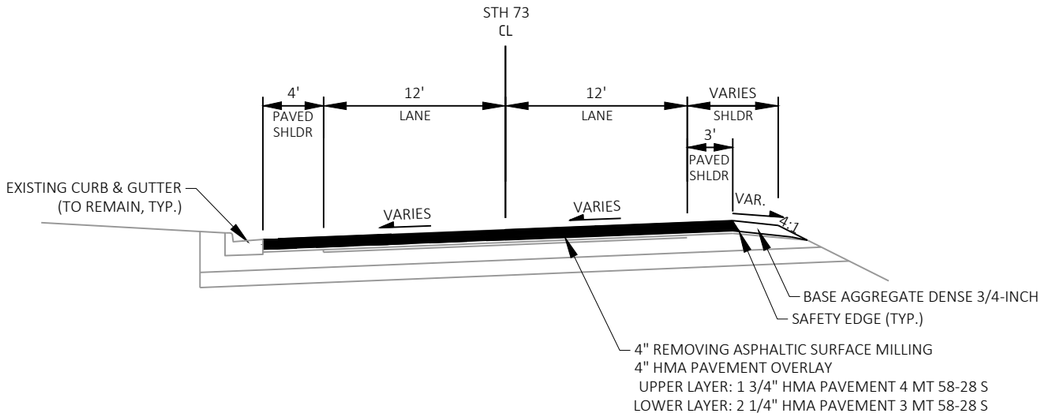
STH 73
STA 292+17.14 - STA 308+44.85
STA 309+80.00 - STA 321+10.59



TYPICAL EXISTING SECTION

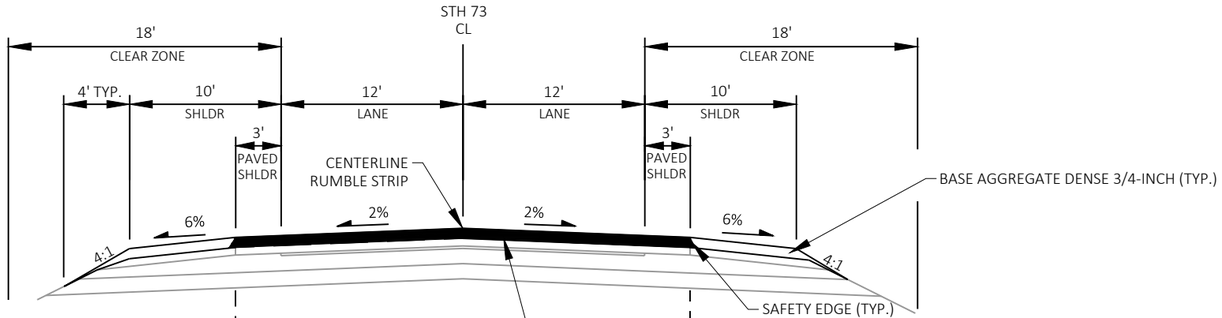
STH 73
STA 321+10.59 - STA 519+20.00

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

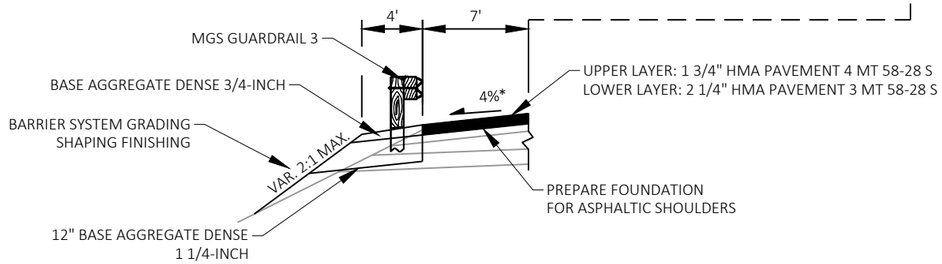
STH 73
STA 125+83.00 - STA 130+42.40



TYPICAL FINISHED SECTION

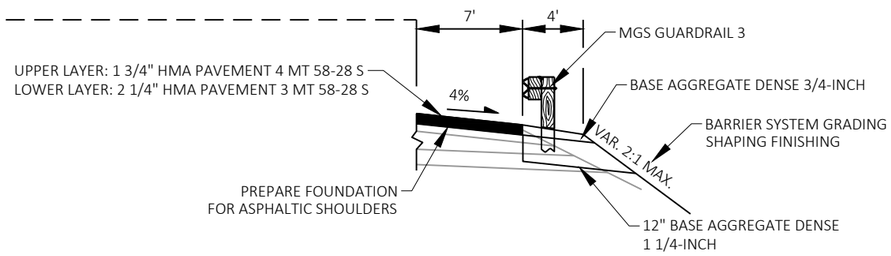
STH 73
STA 130+42.40 - STA 292+17.14

* 2% FROM STA 232+70.36 TO STA 241+54.65



TYPICAL FINISHED SECTION

STH 73
STA 176+94.53 - STA 177+99.55
STA 178+31.38 - STA 179+97.67
STA 232+70.36 - STA 241+54.65

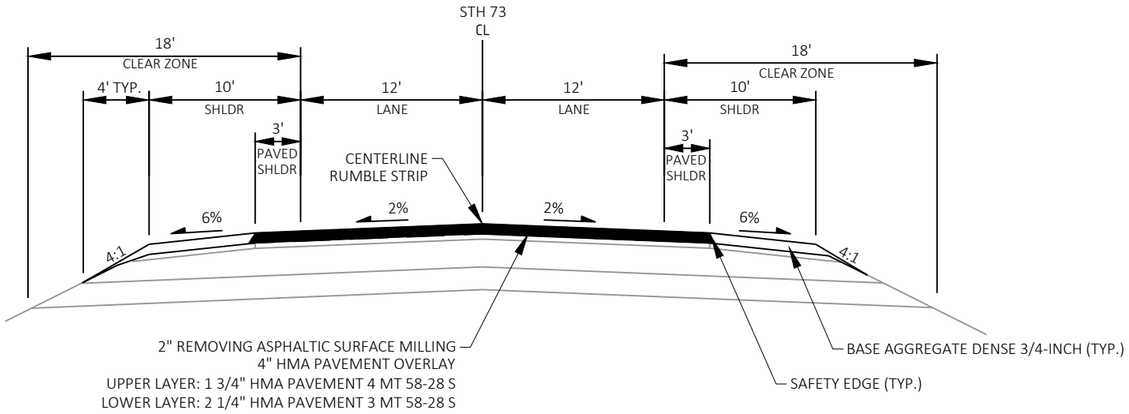


TYPICAL FINISHED SECTION

STH 73
STA 130+66.16 - STA 142+05.81
STA 176+56.93 - STA 177+99.46
STA 178+30.46 - STA 179+47.99
STA 183+60.09 - STA 191+80.25

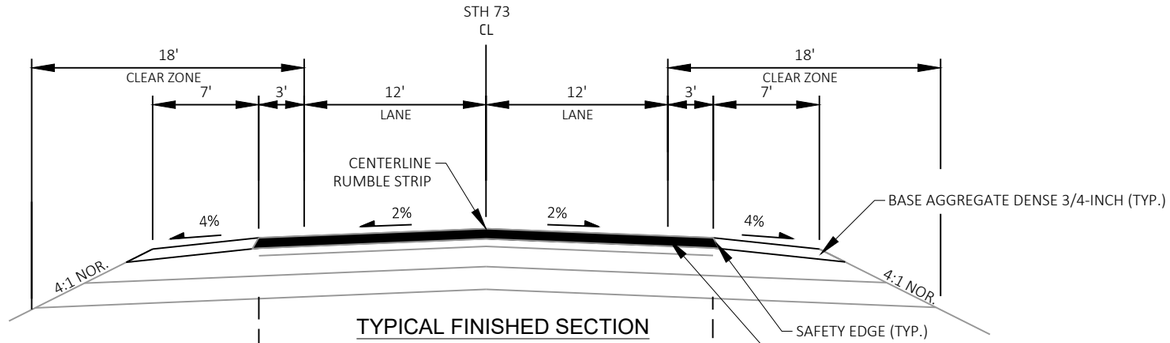
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	TYPICAL SECTIONS	SHEET 5	E

2



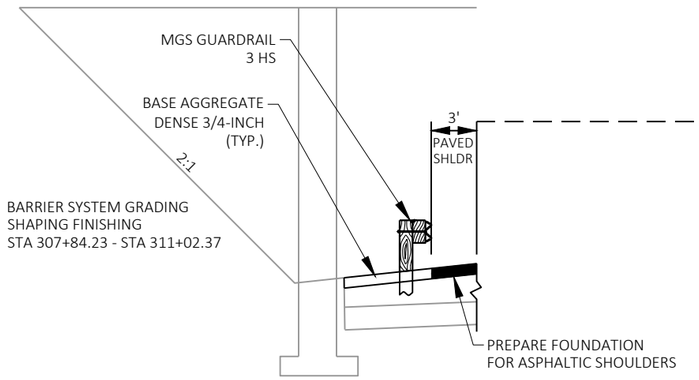
TYPICAL FINISHED SECTION

STH 73
STA 292+17.14 - STA 305+58.76
STA 312+49.29 - STA 321+10.59



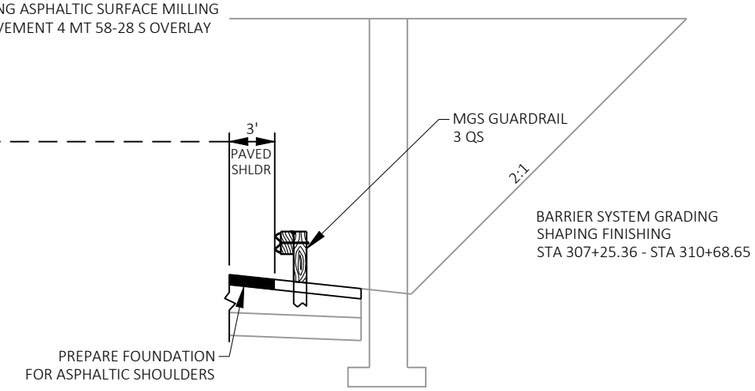
TYPICAL FINISHED SECTION

STH 73 AT IH 94
STA 305+58.76 - STA 312+49.29



TYPICAL FINISHED UNDER BRIDGE SECTION

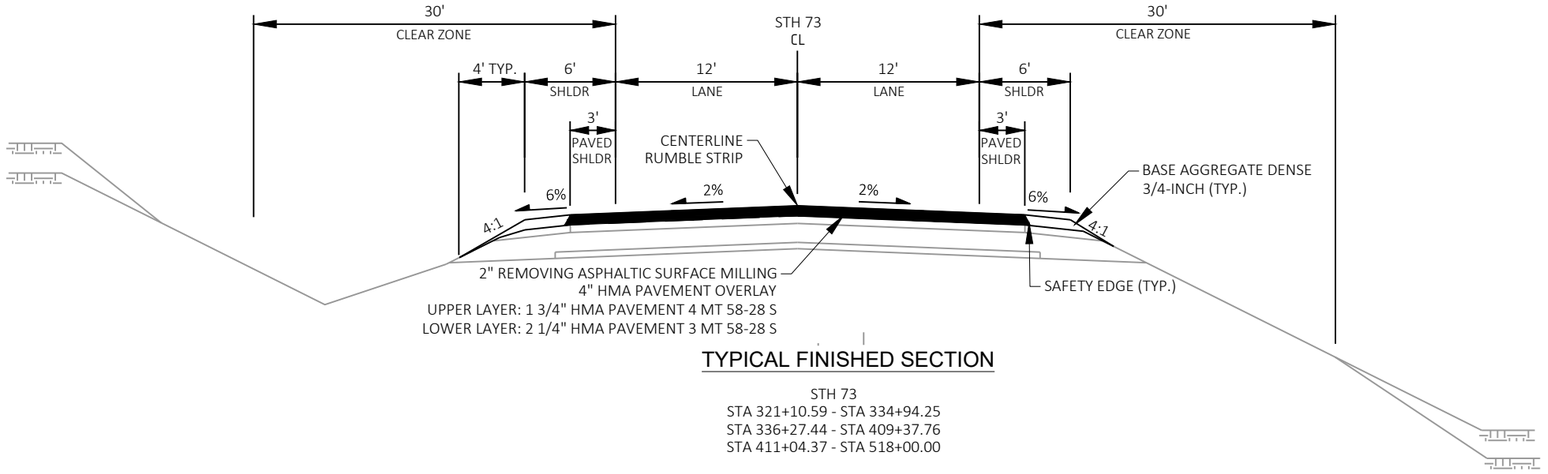
STH 73 UNDER IH 94 OVERPASS STRUCTURES
STA 308+49.69 - STA 310+12.19



TYPICAL FINISHED UNDER BRIDGE SECTION

STH 73 UNDER IH 94 OVERPASS STRUCTURES
STA 308+15.75 - STA 309+78.25

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	TYPICAL SECTIONS	SHEET 6	E



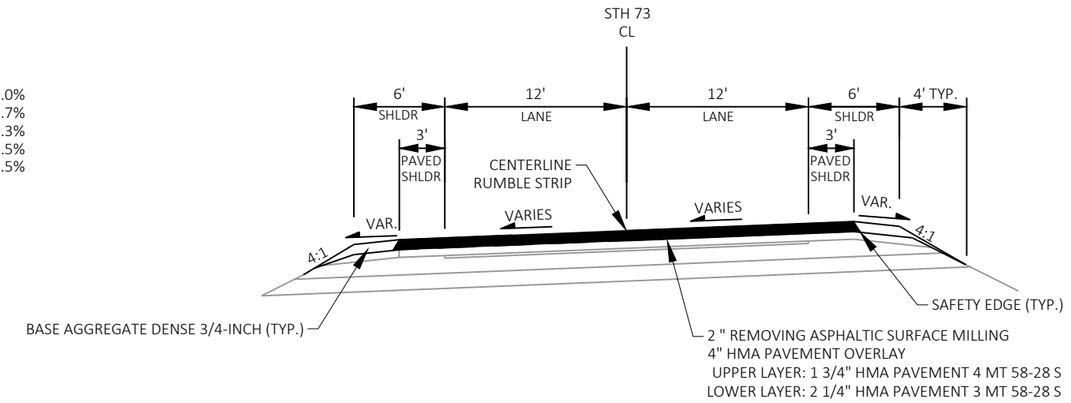
TYPICAL FINISHED SECTION

STH 73
STA 321+10.59 - STA 334+94.25
STA 336+27.44 - STA 409+37.76
STA 411+04.37 - STA 518+00.00

NOTE:
CORRECT THE SUPERELEVATION CROSS SLOPE WITH VARIABLE DEPTH MILLING AND MAINTAIN A 2" MILLING DEPTH AT THE CENTERLINE.

SUPERELEVATION CORRECTIONS:
STA 333+83.95 - STA 337+10.42 = 5.0%
STA 343+52.44 - STA 347+89.49 = 2.7%
STA 362+91.55 - STA 379+37.08 = 2.3%
STA 391+13.64 - STA 399+45.33 = 5.5%
STA 403+50.96 - STA 416+44.07 = 5.5%

VARIABLE DEPTH MILLING:
STA 333+47.95 - STA 337+99.42
STA 343+57.44 - STA 347+84.49
STA 363+03.56 - STA 379+25.08
STA 390+68.64 - STA 399+90.33
STA 403+05.96 - STA 416+89.07

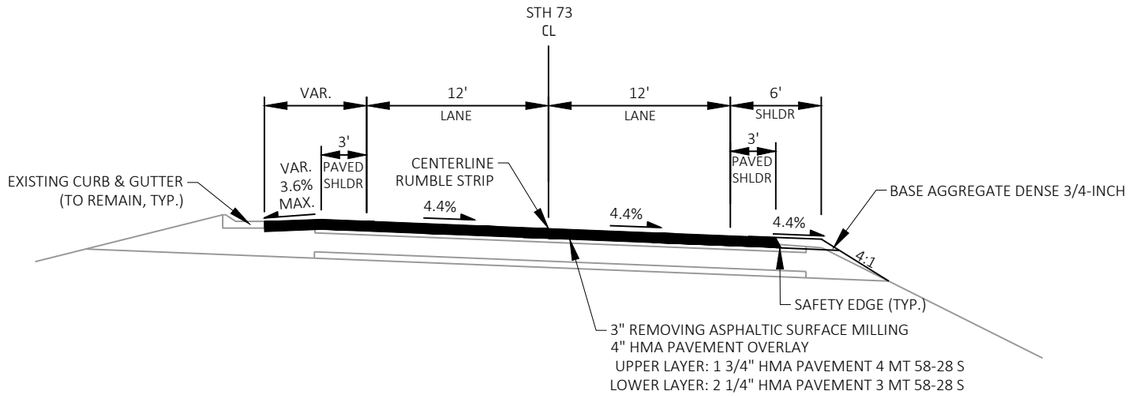


TYPICAL FINISHED SECTION

STH 73
SUPER ELEVATION
(SEE SUPER ELEVATION TABLE)

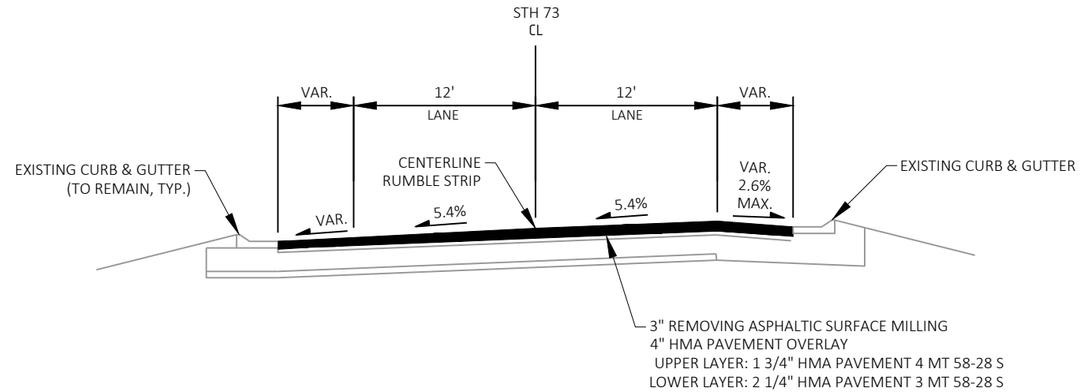
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	TYPICAL SECTIONS	SHEET 7	E

2



TYPICAL FINISHED SECTION

STH 73 AT MEDINA RD
STA 334+94.25 - STA 336+27.44



TYPICAL FINISHED SECTION

STH 73 AT SHERMAN DR
STA 409+37.76 - STA 411+04.37

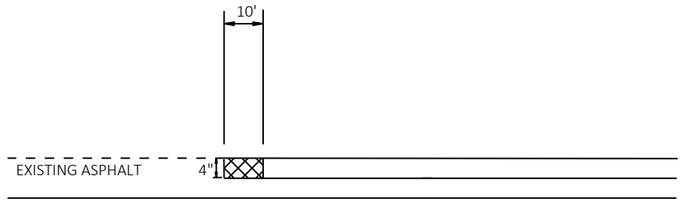
DESCRIPTION	STATION	LEFT LANE AND PAVED SHOULDER	RIGHT LANE AND PAVED SHOULDER
END NORMAL	332+41.95	-2.0%	-2.0%
LEVEL CROWN	332+94.95	0.0%	-2.0%
REVERSE CROWN	333+47.95	2.0%	-2.0%
BEGIN CURVE	333+83.95		
BEGIN FULL SUPER	334+27.95	5.0%	-5.0%
END FULL SUPER	336+66.42	5.0%	-5.0%
END CURVE	337+10.42		
REVERSE CROWN	337+46.42	2.0%	-2.0%
LEVEL CROWN	337+99.42	0.0%	-2.0%
BEGIN NORMAL	338+52.42	-2.0%	-2.0%

DESCRIPTION	STATION	LEFT LANE AND PAVED SHOULDER	RIGHT LANE AND PAVED SHOULDER
END NORMAL	342+51.44	-2.0%	-2.0%
LEVEL CROWN	343+04.44	0.0%	-2.0%
REVERSE CROWN	343+57.44	2.0%	-2.0%
BEGIN CURVE	343+52.44		
BEGIN FULL SUPER	343+76.44	2.7%	-2.7%
END FULL SUPER	347+65.49	2.7%	-2.7%
REVERSE CROWN	347+84.49	2.0%	-2.0%
END CURVE	347+89.49		
LEVEL CROWN	348+37.49	0.0%	-2.0%
BEGIN NORMAL	348+90.49	-2.0%	-2.0%

DESCRIPTION	STATION	LEFT LANE AND PAVED SHOULDER	RIGHT LANE AND PAVED SHOULDER
END NORMAL	361+97.56	-2.0%	-2.0%
LEVEL CROWN	362+50.56	-2.0%	0.0%
REVERSE CROWN	363+03.56	-2.0%	2.0%
BEGIN CURVE	362+91.56		
BEGIN FULL SUPER	363+11.56	-2.3%	2.3%
END FULL SUPER	379+17.08	-2.3%	2.3%
REVERSE CROWN	379+25.08	-2.0%	2.0%
END CURVE	379+37.08		
LEVEL CROWN	379+78.08	-2.0%	0.0%
BEGIN NORMAL	380+31.08	-2.0%	-2.0%

DESCRIPTION	STATION	LEFT LANE AND PAVED SHOULDER	RIGHT LANE AND PAVED SHOULDER
END NORMAL	389+62.64	-2.0%	-2.0%
LEVEL CROWN	390+15.64	0.0%	-2.0%
REVERSE CROWN	390+68.64	2.0%	-2.0%
BEGIN CURVE	391+13.64		
BEGIN FULL SUPER	391+62.64	5.5%	-5.5%
END FULL SUPER	398+96.33	5.5%	-5.5%
END CURVE	399+45.33		
REVERSE CROWN	399+90.33	2.0%	-2.0%
LEVEL CROWN	400+43.33	0.0%	-2.0%
BEGIN NORMAL	400+96.33	-2.0%	-2.0%

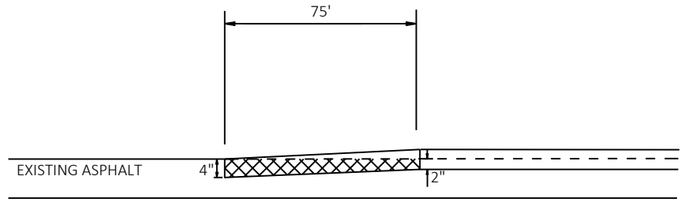
DESCRIPTION	STATION	LEFT LANE AND PAVED SHOULDER	RIGHT LANE AND PAVED SHOULDER
END NORMAL	401+99.96	-2.0%	-2.0%
LEVEL CROWN	402+52.96	-2.0%	0.0%
REVERSE CROWN	403+05.96	-2.0%	2.0%
BEGIN CURVE	403+50.96		
BEGIN FULL SUPER	403+99.96	-5.5%	5.5%
END FULL SUPER	415+95.07	-5.5%	5.5%
END CURVE	416+44.07		
REVERSE CROWN	416+89.07	-2.0%	2.0%
LEVEL CROWN	417+42.07	-2.0%	0.0%
BEGIN NORMAL	417+95.07	-2.0%	-2.0%



REQUIRED AT STA 125+83

STH 73 DETAIL

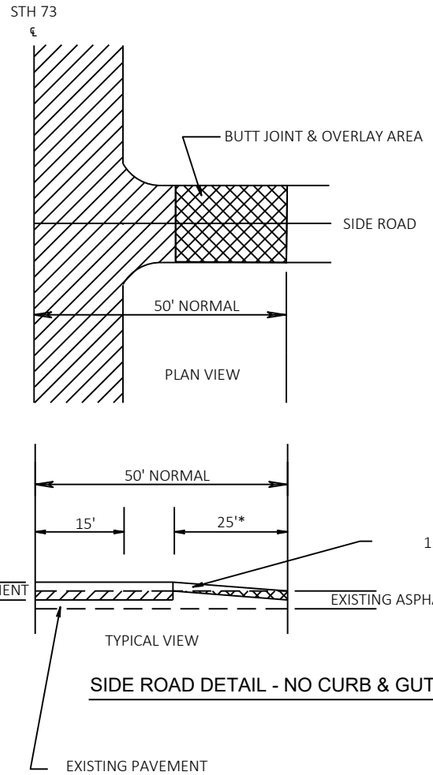
PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS



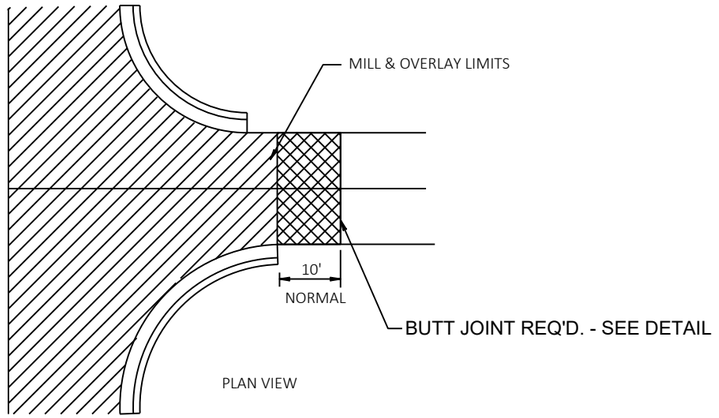
REQUIRED AT STA 518+00 AND BRIDGE APPROACHES STA 177+98 AND STA 178+31

STH 73 DETAIL

PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS



SIDE ROAD DETAIL - NO CURB & GUTTER



SIDE ROAD DETAIL - CURB & GUTTER TO REMAIN

REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALT SURFACE MILLING '

REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALT SURFACE , BUTT JOINTS' MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE SIDE ROAD PAVING.

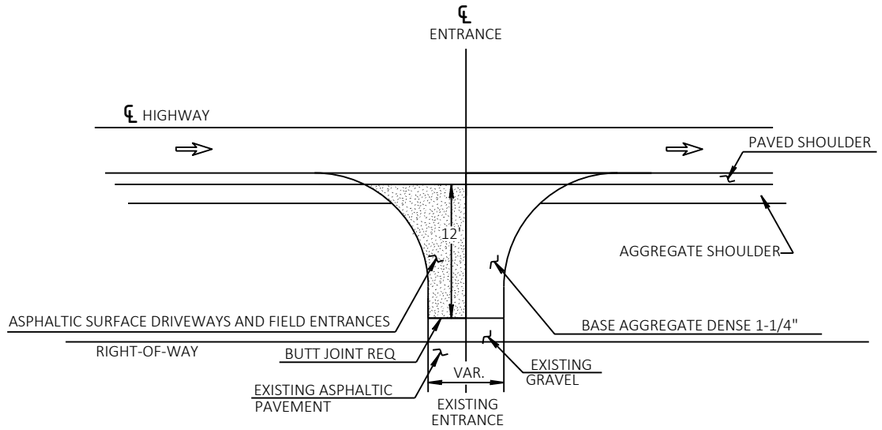
SIDE ROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 1.75" MINIMUM AT JOINT

*REMOVING ASPHALTIC SURFACE BUTT JOINT LENGTH EQUALS 25-FEET ON SIDE ROADS WITH NO CURB AND GUTTER AND 10-FEET ON SIDE ROADS WITH CURB AND GUTTER

BUTT JOINT DETAILS

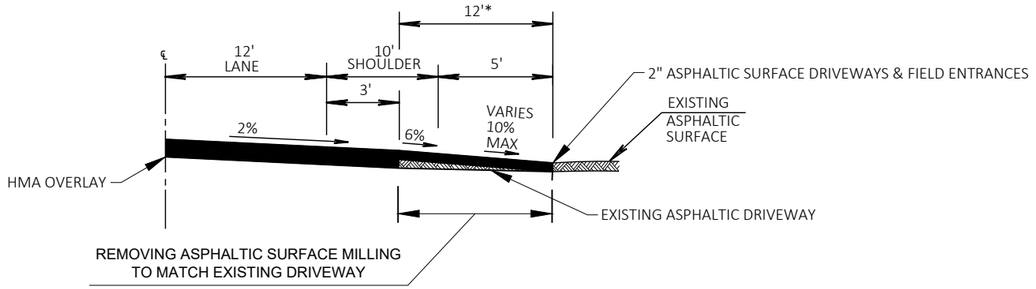
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 10	E

2



PLAN VIEW

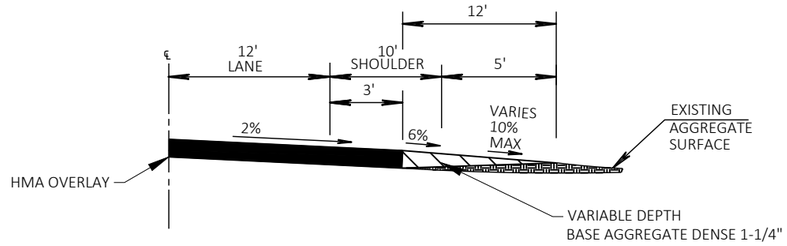
RURAL DRIVEWAY & FIELD ENTRACE INTERSECTION DETAIL



PROFILE VIEW

RURAL DRIVEWAY & FIELD ENTRANCE WITH ASPHALTIC SURFACE

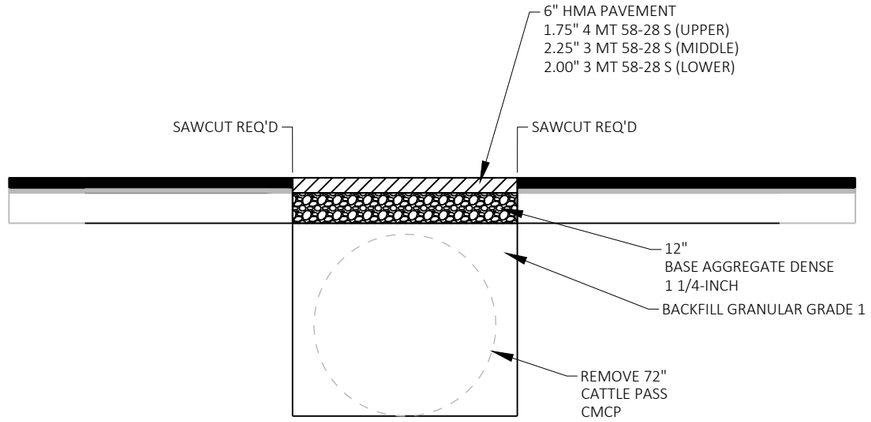
*OR LIMIT TO BE DETERMINED BY ENGINEER TO ENSURE DRAINAGE



PROFILE VIEW

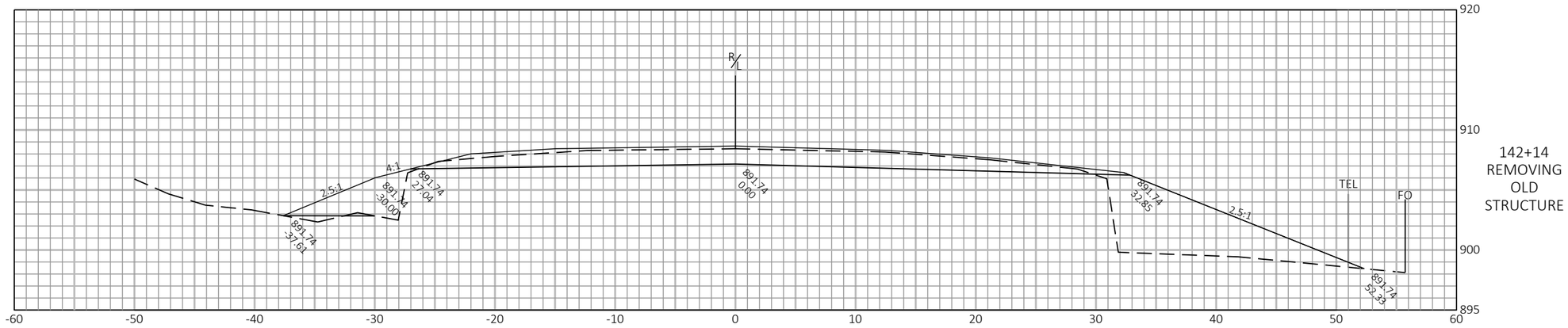
RURAL DRIVEWAY & FIELD ENTRANCE WITH AGGREGATE SURFACE

2



REMOVING OLD STRUCTURE DETAIL

STA 142+14



REMOVING OLD STRUCTURE CROSS SECTION

STA 142+14

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 12	E

FILE NAME : Y:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - 03

PLOT DATE : 7/27/2020 9:45 AM PLOT BY : CORY INMAN PLOT NAME : PLOT SCALE : 1 IN:10 FT

2

SCHOOL STREET

CAUTION

WE ENGERGIES (GAS)

519+11.88
56.80 LT

R38'

WE ENGERGIES
(ELECTRIC)

GUY POLE

RADIAL RAMP

- BACK OF CURB RADIUS: 38 FT
- CURB RAMP LANDING DISTANCE (XR): 12.92 FT
- RADIAL CHORD LENGTH: 8.69 FT

FIELD VERIFY RADII PRIOR TO INSTALLING RADIAL WARNING FIELDS

SEE SDD:

"CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS" AND

"CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES"

LEGEND

- ASPHALTIC SURFACE PATCHING
- XXXX SAWING CONCRETE/ASPHALT
- CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (1) CONCRETE SIDEWALK 4-INCH
- (2) CONCRETE CURB & GUTTER 30-INCH TYPE D

ALL WORK TO OCCUR IN EXISTING R/W

518+84.08
31.28 LT

518+83.71
30.94'LT
856.34
MATCH EXISTING

518+82.24
29.59 LT

R/W

1.70' MIN

12.92'

STA 518+98.74
28.73 LT
856.36

STA 519+04.74
28.70 LT
856.56
MATCH EXISTING

0.3%

3.4%

-1.5%

STA 518+82.95
28.83 LT
856.47
MATCH EXISTING

STA 518+85.83
28.81 LT
856.33

8.69'

2.8%

1.5%

STA 519+04.72
24.61 LT
856.46
MATCH EXISTING

STA 518+98.71
23.73 LT
856.29

MH

STA 518+88.87
23.79 LT
856.31
MATCH EXISTING

SS

STA 518+97.74
21.28 LT
855.95
MATCH EXISTING

STA 518+92.62
23.77 LT
856.20

STA 518+96.99
19.42 LT
856.16
MATCH EXISTING

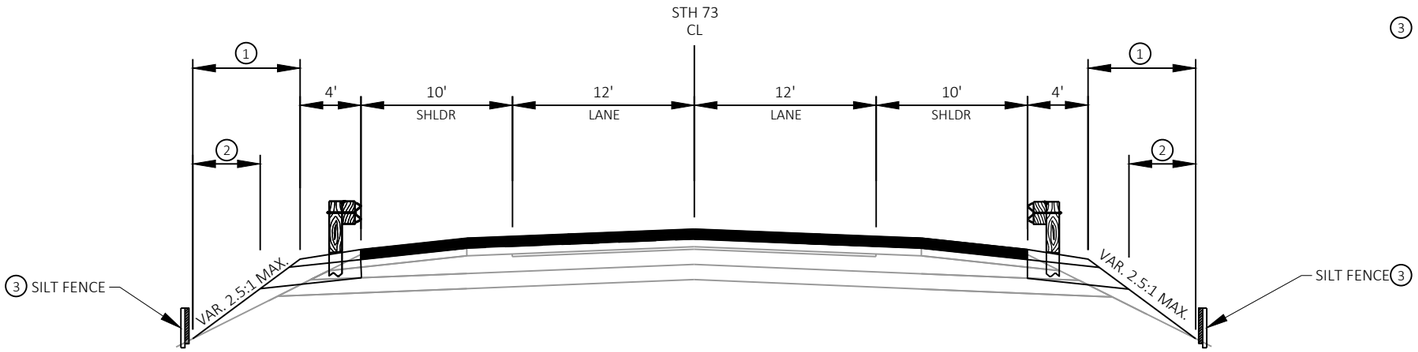
STH 73

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CONSTRUCTION DETAIL - CURB RAMP REPLACEMENT	SHEET 13	E

FILE NAME : Y:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021003_cd-CurbRamp

PLOT DATE : 7/14/2020 3:02 PM PLOT BY : CORY INMAN PLOT NAME : PLOT SCALE : 1 IN:5 FT

2



TYPICAL EROSION CONTROL SECTION

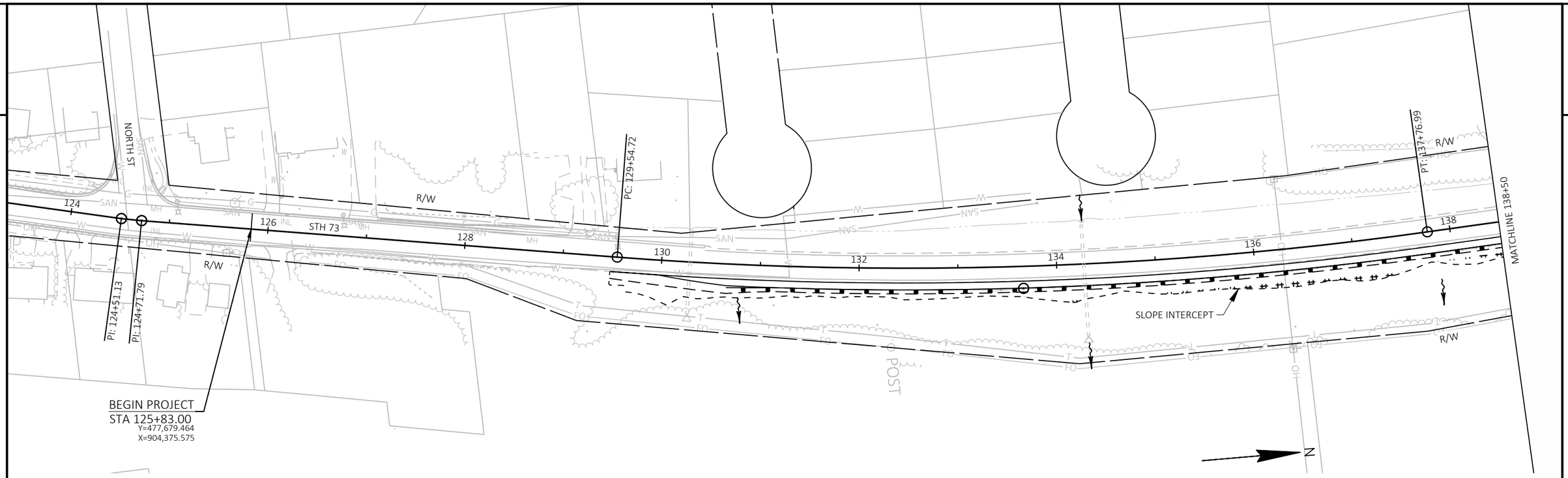
STH 73 - GUARDRAIL SECTIONS

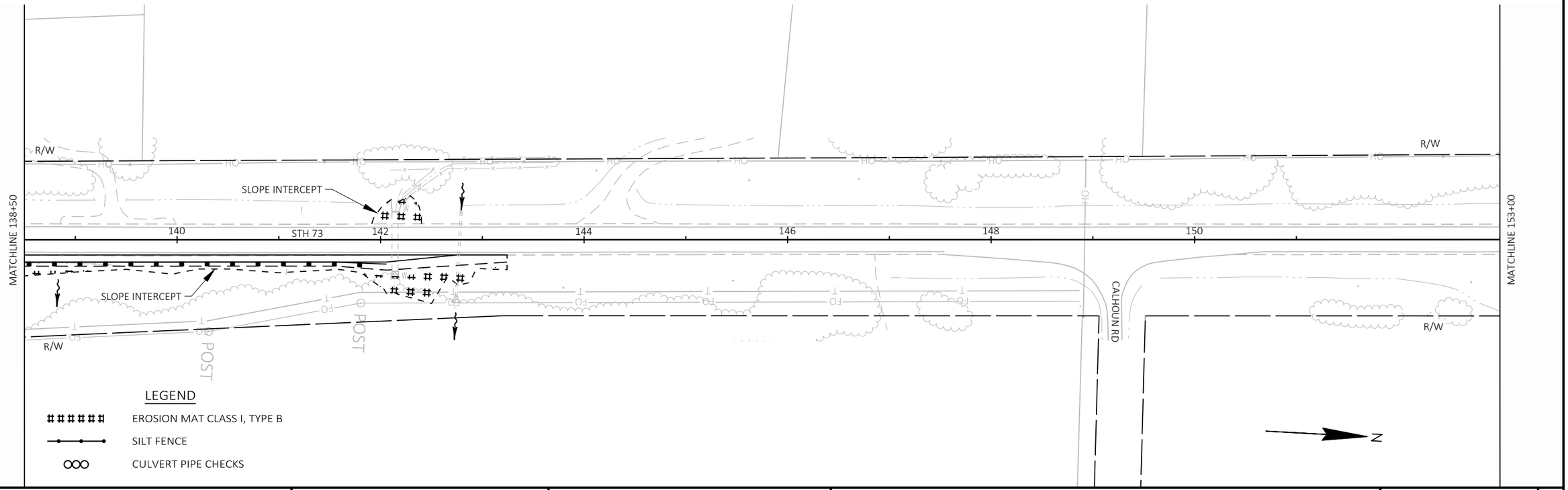
LEGEND

1. SEED & FERTILIZER
2. SLOPES 3:1 AND STEEPER - SALVAGED TOPSOIL & EROSION MAT CLASS I TYPE B
   SLOPES LESS THAN 3:1 - SALVAGED TOPSOIL & MULCH
3. PLACE SILT FENCE WITHIN 3-FEET OF SLOPE INTERCEPT IN WETLAND AREAS

NOTE: SEED, FERTILIZER AND SALVAGED TOPSOIL ARE INCIDENTAL TO "BARRIER SYSTEM GRADING SHAPING FINISHING" ITEM.

2

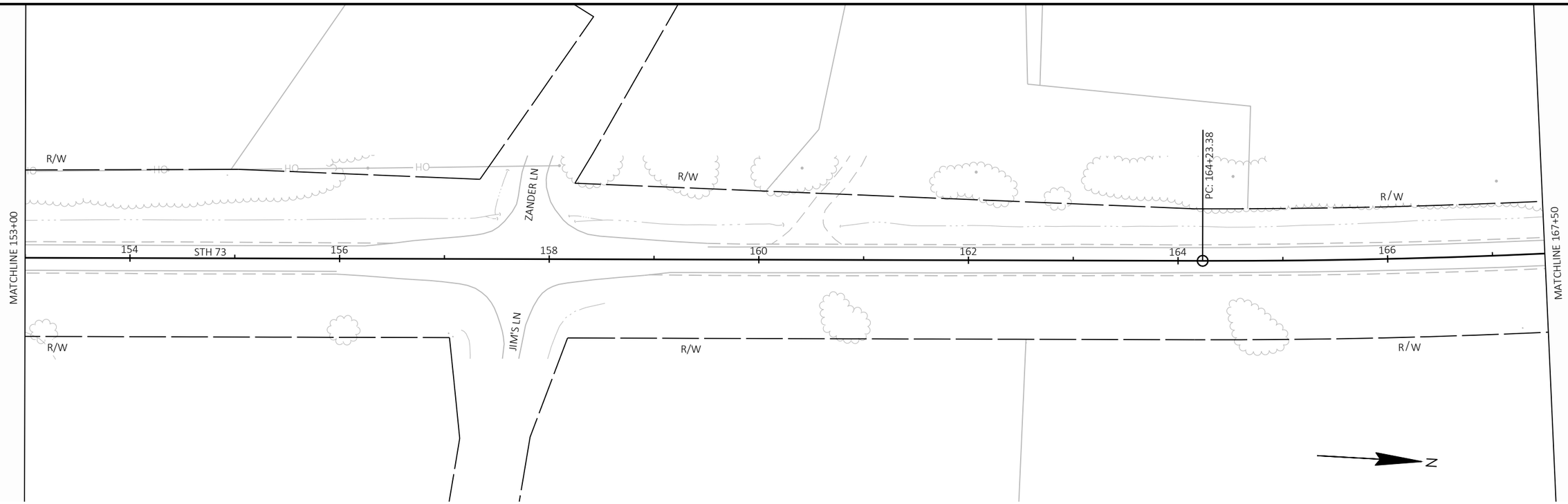


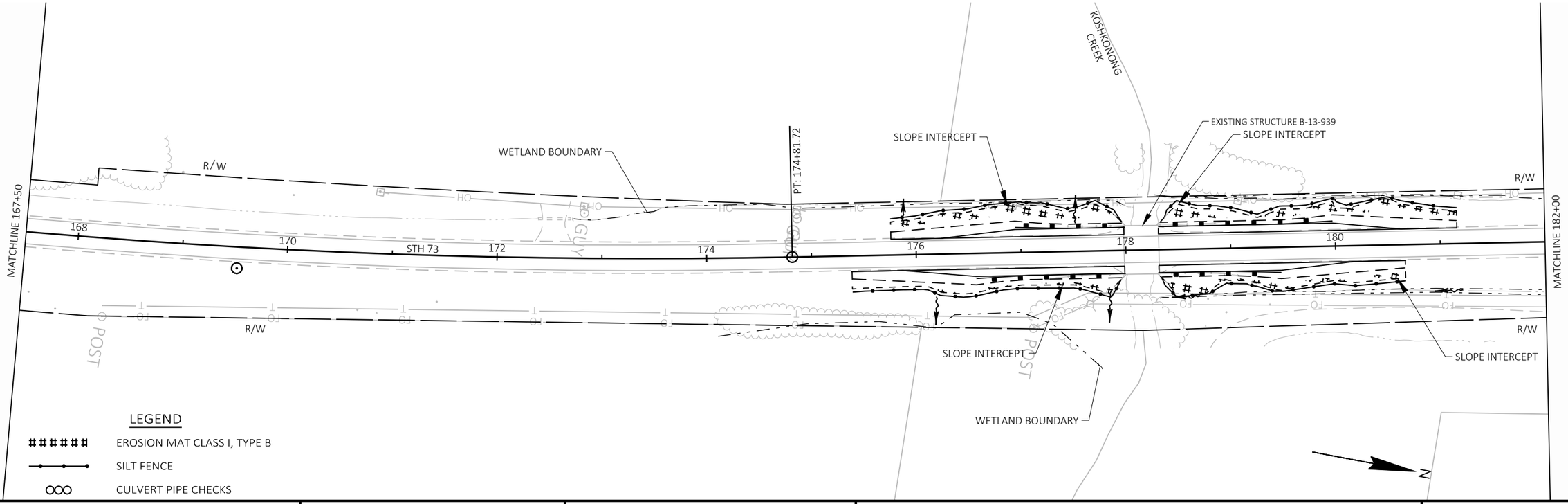


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 15	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_ec
PLOT DATE : 10/18/2019 11:31 AM
PLOT BY : KEVIN DRUNASKY
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

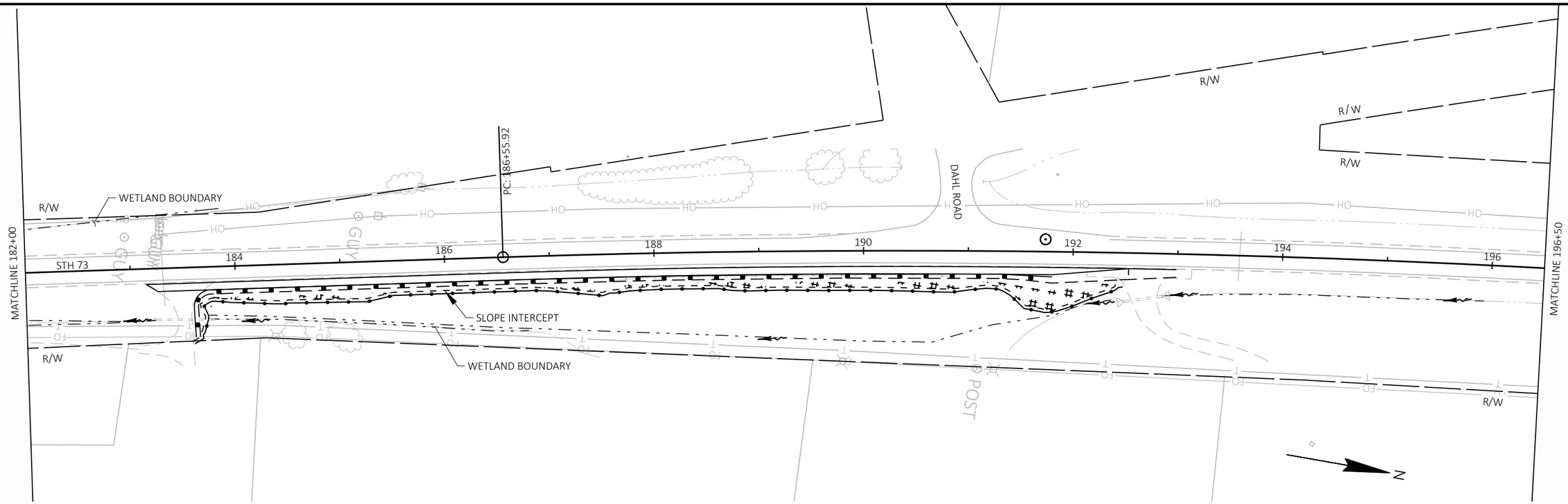


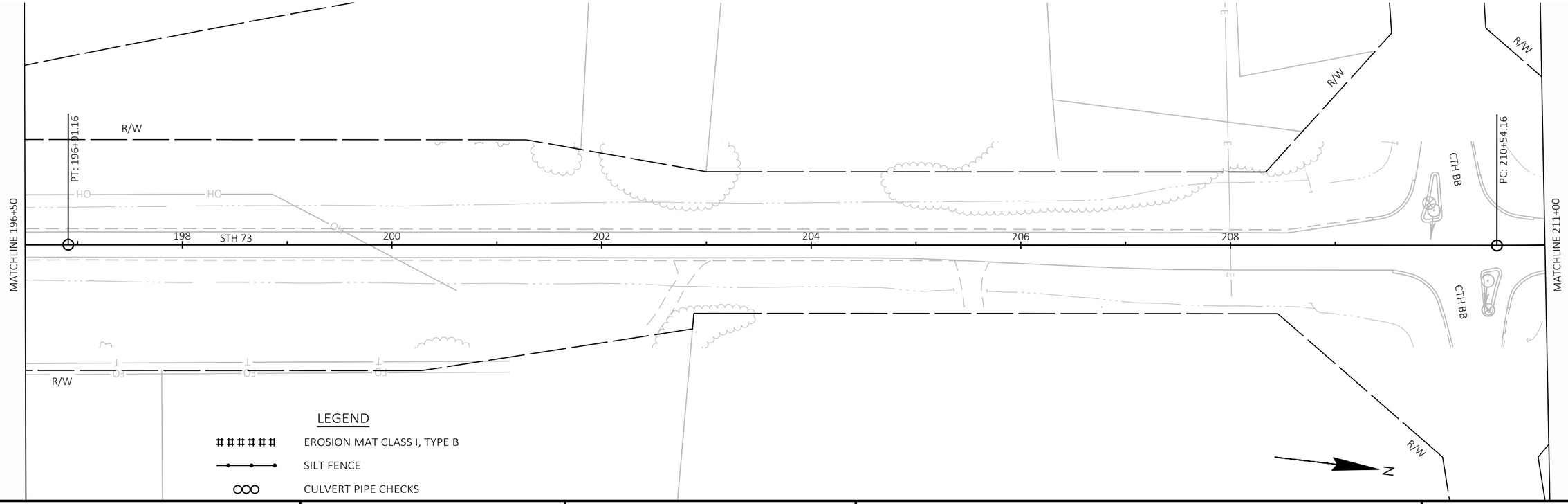


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 16	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022002_ec
PLOT DATE : 10/18/2019 11:32 AM
PLOT BY : KEVIN DRUNASKY
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2





PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 17	E

2

2

MATCHLINE 211+00

R/W

212

STH 73

214

216

218

220

222

224

PT: 222+14.87

R/W

MATCHLINE 225+50

HO

R/W

R/W

N

WETLAND BOUNDARY

PC: 226+10.46

WETLAND BOUNDARY

R/W

SLOPE INTERCEPT

R/W

226

228

230

232

234

236

238

MATCHLINE 225+50

MATCHLINE 240+00

R/W

R/W

N

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

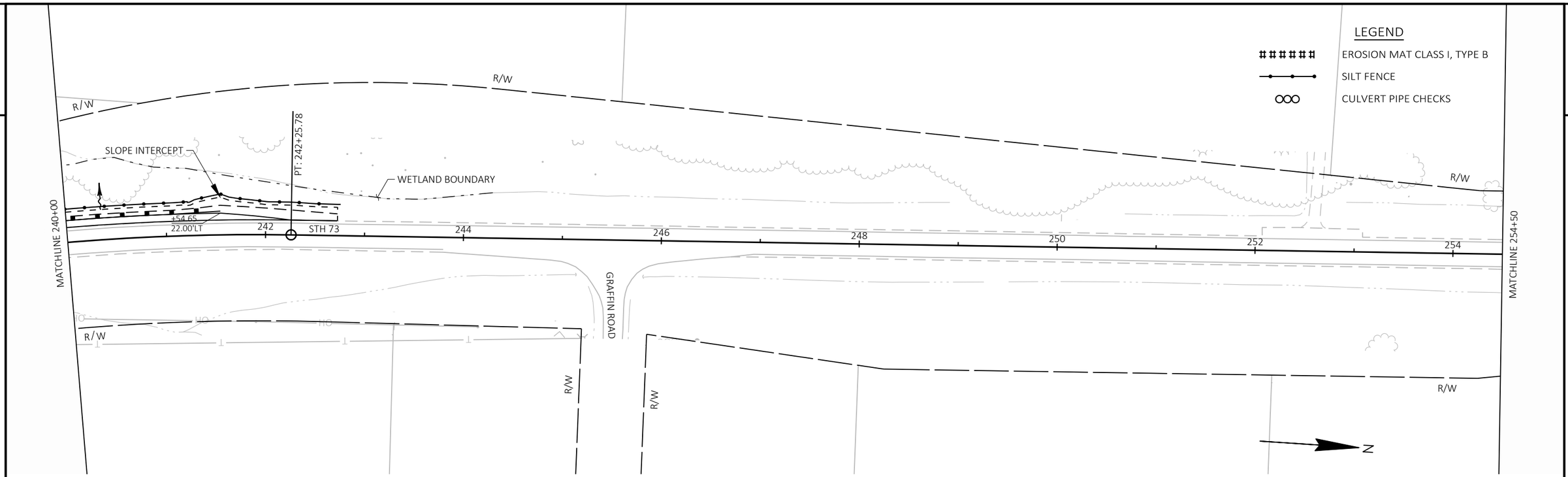
CULVERT PIPE CHECKS

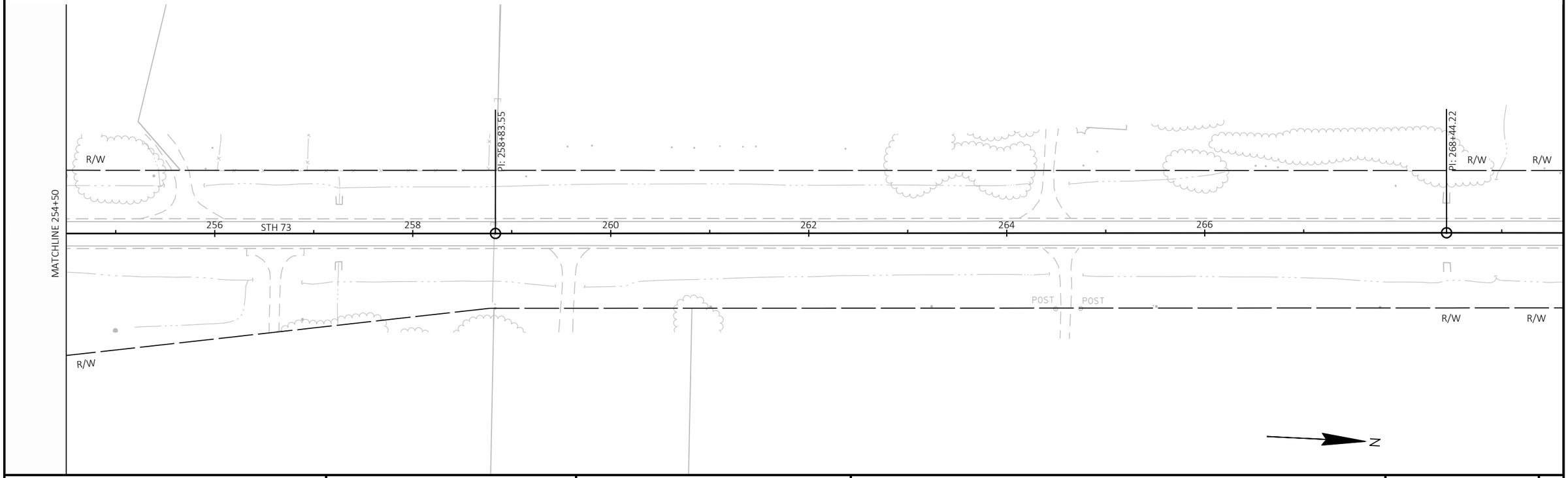
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 18	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022004_ec

PLOT DATE : 10/18/2019 11:33 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

2





PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 19	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022005_ec

PLOT DATE : 10/18/2019 11:33 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

CULVERT PIPE CHECKS

R/W

I-94 EB EXIT RAMP

I-94

I-94

I-94 WB ENTRANCE RAMP

SLOPE INTERCEPT

300 302 STH 73 304 306 308 310 312

MATCHLINE 312+50

SLOPE INTERCEPT

SLOPE INTERCEPT

TEMPORARY DITCH CHECK

EXISTING STRUCTURE B-13-158

EXISTING STRUCTURE B-13-159

PC: 310+85.62

I-94 EB ENTRANCE RAMP

I-94

I-94

I-94 WB EXIT RAMP

N

R/W

PT: 321+10.59

R/W

R/W

316 STH 73 318 320 322 324

682.66

314

MATCHLINE 312+50

R/W

R/W

PRIVATE DRIVE

R/W

R/W

N

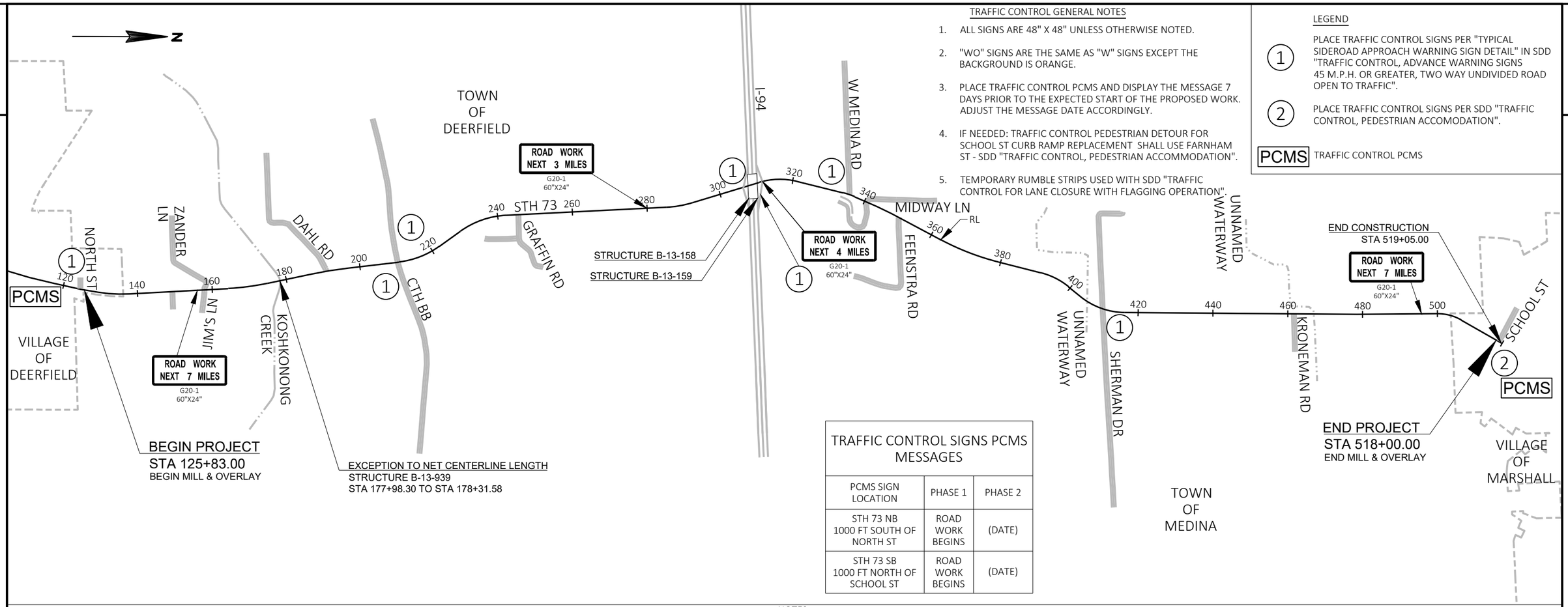
2

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	EROSION CONTROL	SHEET 20	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022006_ec

PLOT DATE : 10/18/2019 11:34 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



TRAFFIC CONTROL GENERAL NOTES

1. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
3. PLACE TRAFFIC CONTROL PCMS AND DISPLAY THE MESSAGE 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK. ADJUST THE MESSAGE DATE ACCORDINGLY.
4. IF NEEDED: TRAFFIC CONTROL PEDESTRIAN DETOUR FOR SCHOOL ST CURB RAMP REPLACEMENT SHALL USE FARNHAM ST - SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION".
5. TEMPORARY RUMBLE STRIPS USED WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".

LEGEND

(1) PLACE TRAFFIC CONTROL SIGNS PER "TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL" IN SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

(2) PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMODATION".

PCMS TRAFFIC CONTROL PCMS

TRAFFIC CONTROL SIGNS PCMS MESSAGES

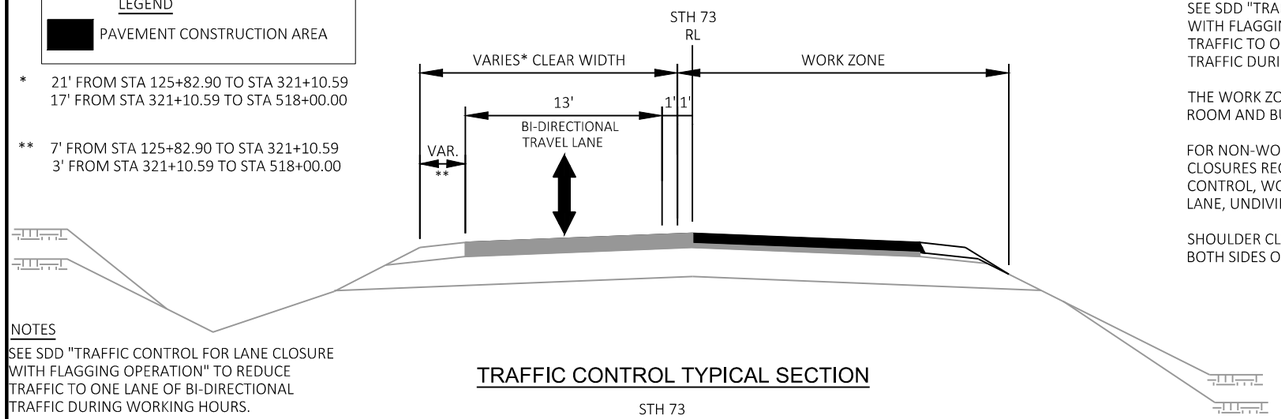
PCMS SIGN LOCATION	PHASE 1	PHASE 2
STH 73 NB 1000 FT SOUTH OF NORTH ST	ROAD WORK BEGINS	(DATE)
STH 73 SB 1000 FT NORTH OF SCHOOL ST	ROAD WORK BEGINS	(DATE)

LEGEND

PAVEMENT CONSTRUCTION AREA

* 21' FROM STA 125+82.90 TO STA 321+10.59
17' FROM STA 321+10.59 TO STA 518+00.00

** 7' FROM STA 125+82.90 TO STA 321+10.59
3' FROM STA 321+10.59 TO STA 518+00.00



NOTES

SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" TO REDUCE TRAFFIC TO ONE LANE OF BI-DIRECTIONAL TRAFFIC DURING WORKING HOURS.

THE WORK ZONE AS SHOWN INCLUDES WORKING ROOM AND BUFFER TO LIVE TRAFFIC.

SAME DAY PAVING IS REQUIRED ON ALL MILLED SURFACES.

TRAFFIC CONTROL TYPICAL SECTION

STH 73

TYPICAL STAGING FOR MILL AND OVERLAY OPERATIONS
(WORK ZONE FOR STH 73 NB SHOWN, MIRROR TYPICAL SECTION FOR STH 73 SB WORK ZONE)

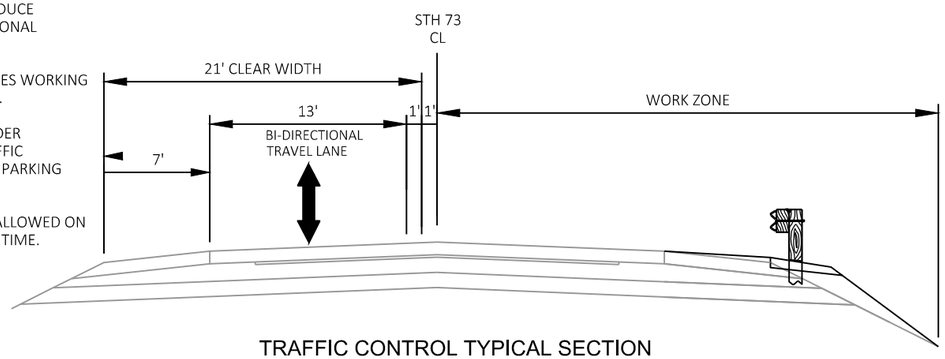
NOTES

SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" TO REDUCE TRAFFIC TO ONE LANE OF BI-DIRECTIONAL TRAFFIC DURING WORKING HOURS.

THE WORK ZONE AS SHOWN INCLUDES WORKING ROOM AND BUFFER TO LIVE TRAFFIC.

FOR NON-WORKING HOURS, SHOULDER CLOSURES REQUIRED. SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY.

SHOULDER CLOSURES WILL NOT BE ALLOWED ON BOTH SIDES OF STH 73 AT THE SAME TIME.



TRAFFIC CONTROL TYPICAL SECTION

STH 73

TYPICAL STAGING FOR GUARDRAIL OPERATIONS
(WORK ZONE FOR STH 73 NB SHOWN, MIRROR TYPICAL SECTION FOR STH 73 SB WORK ZONE)

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	TRAFFIC CONTROL	SHEET 21	E

Estimate Of Quantities

3070-04-61

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0200	Removing Old Structure (station) 01. 142+14	LS	1.000	1.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	4,140.000	4,140.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	138,870.000	138,870.000
0014	204.0150	Removing Curb & Gutter	LF	17.000	17.000
0016	204.0155	Removing Concrete Sidewalk	SY	7.000	7.000
0018	204.0165	Removing Guardrail	LF	2,246.000	2,246.000
0020	204.0180	Removing Delineators and Markers	EACH	3.000	3.000
0022	205.0100	Excavation Common	CY	28.000	28.000
0024	209.1500	Backfill Granular Grade 1	TON	128.000	128.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	54.000	54.000
0028	213.0100	Finishing Roadway (project) 01. 3070-04-61	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	8,344.000	8,344.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,725.000	2,725.000
0034	455.0605	Tack Coat	GAL	19,829.000	19,829.000
0036	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0038	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0040	460.2005	Incentive Density PWL HMA Pavement	DOL	23,260.000	23,260.000
0042	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	31,970.000	31,970.000
0044	460.2010	Incentive Air Voids HMA Pavement	DOL	32,150.000	32,150.000
0046	460.6223	HMA Pavement 3 MT 58-28 S	TON	17,735.000	17,735.000
0048	460.6224	HMA Pavement 4 MT 58-28 S	TON	14,418.000	14,418.000
0050	465.0110	Asphaltic Surface Patching	TON	2.000	2.000
0052	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	176.000	176.000
0054	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	31,574.000	31,574.000
0056	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0058	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	4.000	4.000
0060	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0062	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	17.000	17.000
0064	602.0405	Concrete Sidewalk 4-Inch	SF	72.000	72.000
0066	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	19.000	19.000
0068	614.0010	Barrier System Grading Shaping Finishing	EACH	9.000	9.000
0070	614.2300	MGS Guardrail 3	LF	2,875.000	2,875.000
0072	614.2310	MGS Guardrail 3 HS	LF	187.500	187.500
0074	614.2320	MGS Guardrail 3 QS	LF	162.500	162.500
0076	614.2350	MGS Guardrail Short Radius	LF	76.000	76.000
0078	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600

Line	Item	Item Description	Unit	Total	Qty
0080	614.2610	MGS Guardrail Terminal EAT	EACH	12.000	12.000
0082	614.2630	MGS Guardrail Short Radius Terminal	EACH	2.000	2.000
0084	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3070-04-61	EACH	1.000	1.000
0086	619.1000	Mobilization	EACH	1.000	1.000
0088	621.0100	Landmark Reference Monuments	EACH	3.000	3.000
0090	624.0100	Water	MGAL	120.000	120.000
0092	625.0100	Topsoil	SY	145.000	145.000
0094	627.0200	Mulching	SY	55.000	55.000
0096	628.1504	Silt Fence	LF	3,730.000	3,730.000
0098	628.1520	Silt Fence Maintenance	LF	11,180.000	11,180.000
0100	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0102	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0104	628.2004	Erosion Mat Class I Type B	SY	2,380.000	2,380.000
0106	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0108	628.7555	Culvert Pipe Checks	EACH	9.000	9.000
0110	629.0205	Fertilizer Type A	CWT	0.600	0.600
0112	630.0130	Seeding Mixture No. 30	LB	5.000	5.000
0114	630.0500	Seed Water	MGAL	60.000	60.000
0116	633.5200	Markers Culvert End	EACH	1.000	1.000
0118	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	17.000	17.000
0120	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0122	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	3.000	3.000
0124	638.2102	Moving Signs Type II	EACH	20.000	20.000
0126	638.3000	Removing Small Sign Supports	EACH	24.000	24.000
0128	642.5201	Field Office Type C	EACH	1.000	1.000
0130	643.0300	Traffic Control Drums	DAY	1,590.000	1,590.000
0132	643.0900	Traffic Control Signs	DAY	1,999.000	1,999.000
0134	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0136	643.5000	Traffic Control	EACH	1.000	1.000
0138	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	75,333.000	75,333.000
0140	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	1,132.000	1,132.000
0142	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	54,544.500	54,544.500
0144	646.6120	Marking Stop Line Epoxy 18-Inch	LF	121.000	121.000
0146	648.0100	Locating No-Passing Zones	MI	7.430	7.430
0148	649.0105	Temporary Marking Line Paint 4-Inch	LF	52,987.000	52,987.000
0150	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	53,106.500	53,106.500
0152	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0154	650.8000	Construction Staking Resurfacing Reference	LF	39,183.000	39,183.000
0156	650.9000	Construction Staking Curb Ramps	EACH	1.000	1.000

3070-04-61

Line	Item	Item Description	Unit	Total	Qty
0158	650.9910	Construction Staking Supplemental Control (project) 01. 3070-04-61	LS	1.000	1.000
0160	690.0150	Sawing Asphalt	LF	81.000	81.000
0162	690.0250	Sawing Concrete	LF	9.000	9.000
0164	740.0440	Incentive IRI Ride	DOL	14,860.000	14,860.000
0166	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0168	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	3,000.000	3,000.000
0170	SPV.0060	Special 01. Utility Line Opening (ULO)	EACH	2.000	2.000
0172	SPV.0060	Special 02. Verify Landmark Reference Monuments	EACH	3.000	3.000

3

CLEARING AND GRUBBING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	STH 73	142+00	-	143+00	RT	1	1
		232+00	-	235+00	LT	3	3
	TOTALS					4	4

REMOVING OLD STRUCTURE

CATEGORY	LOCATION	STATION	OFFSET	203.0200.01 REMOVING OLD STRUCTURE (STA 142+14) LS	205.0100 EXCAVATION COMMON CY	209.1500 BACKFILL GRANULAR GRADE 1 TON	COMMENTS
0010	STH 73	142+14	LT/RT	1	28	128	72" CATTLE PASS
	TOTAL			1	28	128	

3

REMOVING GUARDRAIL

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	204.0165 REMOVING GUARDRAIL LF
0010	STH 73	133+29	-	139+45	RT	619
	STH 73	177+30	-	177+98	LT	68
	STH 73	177+33	-	177+98	RT	66
	STH 73	178+32	-	178+97	LT	66
	STH 73	178+32	-	179+07	RT	75
	STH 73	187+58	-	190+88	RT	329
	STH 73	235+08	-	239+24	LT	420
	STH 73	307+58	-	310+60	RT	303
	STH 73	307+70	-	310+69	LT	300
TOTAL						2,246

REMOVING DELINEATORS AND MARKERS

CATEGORY	LOCATION	STATION	OFFSET	204.0180 EACH
0010	STH 73	142+14	LT & RT	2
		307+81	LT	1
TOTALS				3

REMOVING ASPHALTIC SURFACE ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	COMMENTS
0010	STH 73	125+83	-	125+93	LT/RT	30	--	BEGIN PROJECT
	STH 73	125+93	-	210+00	LT/RT	--	27,910	-
	STH 73	177+23	-	177+98	LT/RT	250	--	SOUTH OF B-13-939
	STH 73	178+31	-	179+06	LT/RT	250	--	NORTH OF B-13-939
	STH 73	210+00	-	306+00	LT/RT	--	32,000	-
	STH 73	306+00	-	350+00	LT/RT	--	14,670	-
	STH 73	350+00	-	410+00	LT/RT	--	20,000	-
	STH 73	410+00	-	517+25	LT/RT	--	36,600	-
	STH 73	517+25	-	518+00	LT/RT	250	--	END PROJECT
	STH 73 INTERSECTIONS	125+83	-	518+00	LT/RT	1,960	7,690	INCLUDES TURN LANES AND WIDENED SHOULDERS
	STH 73 DRIVEWAYS	125+83	-	518+00	LT/RT	1,400	--	-
	TOTALS					4,140	138,870	

3

PREPARE FOUNDATION ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	COMMENTS
0010	STH 73	129+97	-	142+76	RT	13	MGS WIDENING AREA
	STH 73	175+87	-	177+99	RT	3	MGS WIDENING AREA
	STH 73	176+25	-	177+99	LT	2	MGS WIDENING AREA
	STH 73	178+31	-	180+18	RT	2	MGS WIDENING AREA
	STH 73	178+31	-	180+63	LT	3	MGS WIDENING AREA
	STH 73	183+15	-	192+53	RT	10	MGS WIDENING AREA
	STH 73	232+04	-	242+26	LT	11	MGS WIDENING AREA
	STH 73	306+98	-	311+30	RT	5	-
	STH 73	307+10	-	311+23	LT	5	-
	TOTAL					54	

BASE AGGREGATE ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	COMMENTS
0010	STH 73	125+83	-	210+00	LT/RT	1,998	--	LT/RT SHOULDERS
	STH 73	210+00	-	321+11	LT/RT	2,962	--	LT/RT SHOULDERS
	STH 73	321+11	-	410+00	LT/RT	1,177	--	LT/RT SHOULDERS
	STH 73	410+00	-	518+00	LT/RT	1,437	--	LT/RT SHOULDERS
	STH 73	129+48	-	143+24	RT	195	659	MGS WIDENING AREA
	STH 73	175+38	-	177+98	RT	47	154	MGS WIDENING AREA
	STH 73	175+76	-	177+99	LT	43	139	MGS WIDENING AREA
	STH 73	178+35	-	180+66	RT	44	144	MGS WIDENING AREA
	STH 73	178+31	-	181+16	LT	51	166	MGS WIDENING AREA
	STH 73	183+65	-	192+99	RT	124	424	MGS WIDENING AREA
	STH 73	232+71	-	242+72	LT	149	499	MGS WIDENING AREA
	STH 73	306+98	-	311+30	RT	57	98	MGS WIDENING AREA
	STH 73	307+10	-	311+42	LT	60	71	MGS WIDENING AREA
	STH 73 DRIVEWAYS	125+83	-	518+00	LT/RT	--	245	-
	STH 73	125+83	-	130+42	RT	--	--	RT SHOULDER
	STH 73	305+59	-	306+98	RT	--	--	RT SHOULDER
	STH 73	305+59	-	307+10	LT	--	--	LT SHOULDER
	STH 73	311+30	-	312+49	RT			RT SHOULDER
	STH 73	311+42	-	312+49	LT			LT SHOULDER
	STH 73	141+89	-	142+39	LT/RT	--	126	72" CATTLE PASS REMOVAL
	TOTALS					8,344	2,725	

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ASPHALTIC ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	COMMENTS
0010	STH 73	125+83	-	210+00	LT/RT	3,912	3,540	2,739	--	-
	STH 73	210+00	-	305+59	LT/RT	4,461	4,015	3,123	--	-
	STH 73	305+59	-	312+49	LT/RT	161	--	290	--	BETWEEN IH 94 RAMPS
	STH 73	312+49	-	350+00	LT/RT	1,750	1,575	1,225	--	-
	STH 73	350+00	-	410+00	LT/RT	2,800	2,520	1,960	--	-
	STH 73	410+00	-	518+00	LT/RT	5,159	4,643	3,611	--	-
	STH 73 DRIVEWAYS	125+83	-	518+00	LT/RT	98	--	137	176	-
	STH73/CALHOUN RD			149+18	RT	42	37	29	--	-
	STH73/JIM'S LN			157+66	RT	47	42	33	--	-
	STH73/ZANDER LN			157+86	LT	51	46	36	--	-
	STH 73/DAHL RD			190+89	LT	46	41	32	--	-
	STH 73/CTH BB			210+08	LT	135	121	94	--	-
	STH 73/CTH BB			210+34	RT	129	117	91	--	-
	STH 73/GRAFFIN RD			245+49	RT	45	41	32	--	-
	STH 73/IH 94 EB ENTRANCE RAMP			306+38	RT	36	--	65	--	INCLUDES RT LANE
	STH 73/IH 94 EB EXIT RAMP			306+75	LT	20	--	36	--	-
	STH 73/IH 94 WB EXIT RAMP			311+63	RT	21	--	39	--	-
	STH 73/IH 94 WB ENTRANCE RAMP			311+80	LT	40	--	73	--	INCLUDES RT LANE
	STH 73/ POTRATZ DR			329+26	RT	31	28	22	--	-
	STH 73/W MEDINA RD			335+41	LT	77	69	54	--	-
	STH 73/HIGH CHAPARRAL RD			341+16	RT	55	49	38	--	-
	STH 73/MIDWAY LN			341+40	LT	69	62	48	--	-
	STH 73/FEENSTRA RD			350+70	RT	62	56	43	--	-
	STH 73/SHERMAN DR			409+88	LT	96	86	67	--	-
	STH 73/SHERMAN DR			410+59	RT	75	68	53	--	-
	STH 73/KRONEMAN DR			461+47	RT	33	30	23	--	-
	STH 73/WHISTLE ST			510+06	RT	145	130	101	--	INCLUDES WIDENED SHOULDER
	STH 73	129+97	-	142+76	RT	66	119	93	--	MGS WIDENING AREA
	STH 73	175+87	-	177+99	RT	10	17	14	--	MGS WIDENING AREA
	STH 73	176+25	-	177+99	LT	8	14	11	--	MGS WIDENING AREA
	STH 73	178+31	-	180+18	RT	8	15	12	--	MGS WIDENING AREA
	STH 73	178+31	-	180+63	LT	11	19	15	--	MGS WIDENING AREA
	STH 73	183+15	-	192+53	RT	49	88	68	--	MGS WIDENING AREA
	STH 73	232+04	-	242+26	LT	52	94	73	--	MGS WIDENING AREA
	STH 73	306+98	-	311+30	RT	15	27	21	--	MGS WIDENING AREA
	STH 73	307+10	-	311+23	LT	14	25	19	--	MGS WIDENING AREA
	TOTALS					19,829	17,735	14,418	176	

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PWL ITEMS

CATEGORY	LOCATION	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH
0010	STH 73 - PROJECT	1	1
	TOTALS	1	1

ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL

465.0475

CATEGORY	LOCATION	STATION	TO	STATION	LF
0010	STH 73	130+42	-	147+18	1,676
	STH 73	151+18	-	156+80	562
	STH 73	160+80	-	177+73	1,693
	STH 73	178+57	-	188+90	1,033
	STH 73	192+90	-	208+06	1,516
	STH 73	212+06	-	243+46	3,140
	STH 73	247+46	-	304+48	5,702
	STH 73	308+48	-	309+84	136
	STH 73	313+84	-	328+26	1,442
	STH 73	330+26	-	333+41	315
	STH 73	337+41	-	339+00	159
	STH 73	343+00	-	348+38	538
	STH 73	352+38	-	408+14	5,576
	STH 73	412+14	-	459+47	4,733
	STH 73	463+47	-	497+00	3,353
	TOTAL				31,574

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PWL MIXTURE USE TABLE

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANES (NB AND SB)	125+08 - 305+59, 312+49 - 518+00	UPPER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 4 MT 58-28 S	10,070	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12 FOOT DRIVING LANES (NB AND SB)	305+59 - 312+49	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	240	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12 FOOT DRIVING LANES (NB AND SB)	125+08 - 305+59, 312+49 - 518+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 MT 58-28 S	12,950	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
SHOULDERS, TURN LANES, INTERSECTIONS	125+08 - 305+59, 312+49 - 518+00	UPPER LAYER	HMA PAVEMENT 3 MT 58-28 S	HMA PAVEMENT 4 MT 58-28 S	4,050	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, TURN LANES, INTERSECTIONS	305+59 - 312+49	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	50	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE
SHOULDERS, TURN LANES, INTERSECTIONS	125+08 - 305+59, 312+49 - 518+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 MT 58-28 S	4,790	2.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE

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PEDESTRIAN CURB RAMP

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	465.0110 ASPHALTIC SURFACE PATCHING TON	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	602.0405 CONCRETE SIDEWALK 4-INCH SF
0010	STH 73	518+83	-	519+05	LT	17	7	2	17	19	72
	TOTALS					17	7	2	17	19	72

3

ENDWALL ITEMS

CATEGORY	LOCATION	STATION	OFFSET	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	633.5200 MARKERS CULVERT END EACH
0010	STH 73	307+81.45	34.0' LT	1	1
	TOTAL			1	1

NOTE
1) STATION OFFSETS SHOWN ARE TO THE CENTER OF INLET STRUCTURES OR END OF PIPE AT APRON ENDWALLS (NOT INCLUDING LENGTH OF ENDWALL).

CULVERT PIPE ITEMS

CATEGORY	LOCATION	STATION	OFFSET	STATION	OFFSET	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE	203.0100 REMOVING SMALL PIPE CULVERTS EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	COMMENTS
0010	STH 73	307+81.45	30.0' LT	307+81.45	34.0' LT	882.73	882.69	1.00%	1	1	4	CONNECT TO EXISTING 24" CPRC, REMOVE EXIST. 24" AEW
	TOTALS								1	1	4	

BARRIER SYSTEM GRADING SHAPING FINISHING

						614.0010	*	**	**	**	*	*	*	**
CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	BARRIER SYSTEM GRADING SHAPING FINISHING EACH	EXCAVATION COMMON CY	FILL CY	BORROW CY	SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 30 LB	CONSTRUCTION STAKING SLOPE STAKES LF
0010	STH 73	129+48	-	143+24	RT	1	241	162	--	696	120	0.8	25	1,376
	STH 73	175+38	-	177+98	RT	1	100	73	--	70	--	0.1	3	260
	STH 73	175+76	-	177+99	LT	1				214	--	0.2	6	223
	STH 73	178+35	-	180+66	RT	1	99	40	--	157	--	0.2	5	231
	STH 73	178+31	-	181+16	LT	1				232	--	0.2	6	285
	STH 73	183+65	-	192+99	RT	1	131	118	--	463	--	0.5	16	934
	STH 73	232+71	-	242+72	LT	1	291	3	--	283	190	0.4	13	1,001
	STH 73	306+98	-	311+30	RT	1	75	46	22	102	100	0.1	3	432
	STH 73	307+10	-	311+42	LT	1				43	40	0.1	2	432
	UNDISTRIBUTED					--	--	--	--	565	110	1.0	20	--
	TOTALS					9	937	442	22	2,825	560	3.6	99	5,174

*NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING. ADDITIONAL QUANTITIES SHOWN ELSEWHERE.
**NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING.

GUARDRAIL ITEMS

						614.2300	614.2310	614.2320	614.2500	614.2610	614.2350	614.2630
CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	MGS GUARDRAIL 3 LF	MGS GUARDRAIL 3 HS LF	MGS GUARDRAIL 3 QS LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	MGS GUARDRAIL SHORT RADIUS LF	MGS GUARDRAIL SHORT RADIUS TERMINAL EACH
0010	STH 73	130+66	-	142+06	RT	1,037.5	--	--	--	2	--	--
	STH 73	176+56		177+99	RT	50	--	--	39.4	1	--	--
	STH 73	176+95	-	178+00	LT	12.5	--	--	39.4	1	--	--
	STH 73	178+30	-	179+48	RT	25	--	--	39.4	1	--	--
	STH 73	178+31	-	179+98	LT	75	--	--	39.4	1	--	--
	STH 73	183+65	-	191+80	RT	750	--	--	--	1	26	1
	STH 73	232+75	-	241+55	LT	825	--	--	--	1	50	1
	STH 73	307+25		310+69	RT	50	25	162.5	--	2	--	--
	STH 73	307+84	-	310+02	LT	50	162.5	--	--	2	--	--
	TOTALS					2,875	187.5	162.5	157.6	12	76	2

LANDMARK REFERENCE MONUMENTS ITEMS

CATEGORY	LOCATION	STATION	DESCRIPTION	621.0100 LANDMARK REFERENCE MONUMENTS EACH	SPV.0060.02 VERIFY LANDMARK REFERENCE MONUMENTS EACH
0010	PROJECT	423+66	IN PAVEMENT	1	1
		450+16	IN PAVEMENT	1	1
		476+80	IN PAVEMENT	1	1
	TOTALS			3	3

WATER ITEMS

CATEGORY	LOCATION	624.0100 WATER MGAL	630.0500 SEED WATER MGAL
0010	PROJECT-BASE COMPACTION	110	--
	PROJECT-COMMON EXCAVATION	10	--
	PROJECT	--	60
	TOTALS	120	60

EROSION CONTROL AND RESTORATION ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	627.0200* MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	629.0205* FERTILIZER TYPE A CWT	630.0130* SEEDING MIXTURE NO. 30 LB	COMMENTS
0010	STH 73	129+48	-	143+24	RT	--	--	--	--	580	--	--	--	--	--
	STH 73	141+89	-	142+39	LT	110	--	--	40	90	--	--	0.4	2	72" CATTLE PASS REMOVAL
	STH 73	175+38	-	177+98	RT	--	260	780	--	70	--	--	--	--	--
	STH 73	175+76	-	177+99	LT	--	220	660	--	210	--	--	--	--	--
	STH 73	178+35	-	180+66	RT	--	230	690	--	160	--	--	--	--	--
	STH 73	178+31	-	181+16	LT	--	290	870	--	230	--	--	--	--	--
	STH 73	183+65	-	192+99	RT	--	980	2,940	--	460	--	--	--	--	--
	STH 73	232+71	-	242+72	LT	--	1,000	3,000	--	100	--	--	--	--	--
	STH 73	306+98	-	311+30	RT	--	--	--	--	--	10	6	--	--	--
	STH 73	307+10	-	311+42	LT	--	--	--	--	--	--	--	--	--	--
	STH 73	519+00			LT	5	--	--	5	--	--	--	0.1	1	CURB RAMP
	UNDISTRIBUTED					30	750	2,240	10	480	10	3	0.1	2	--
	TOTALS					145	3,730	11,180	55	2,380	20	9	0.6	5	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EROSION CONTROL MOBILIZATION

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	STH 73	5	2
	TOTALS	5	2

FIELD OFFICE

CATEGORY	LOCATION	642.5201 FIELD OFFICE TYPE C EACH
0010	PROJECT	1
	TOTAL	1

3

TRAFFIC CONTROL ITEMS

		643.0300		643.0900		643.1050		
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		
CATEGORY	LOCATION	NO.	DAY	NO.	DAY	NO.	DAY	COMMENTS
0010	BEGIN/END PROJECT	--	--	--	--	2	14	--
	SIDEROADS	--	--	7	623	--	--	--
	"ROAD WORK NEXT X MILES"	--	--	4	356	--	--	--
	CATTLE PASS REMOVAL	10	40	--	--	--	--	--
	GUARDRAIL SHOULDER CLOSURES	--	1,550	--	540	--	--	FOR NON-WORK HOURS
	PROJECT 3070-04-61	--	--	--	480	--	--	FLAGGING OPERATIONS
	TOTALS		1,590		1,999		14	

TRAFFIC CONTROL

		643.5000
		TRAFFIC CONTROL
CATEGORY	LOCATION	EACH
0010	PROJECT	1
	TOTAL	1

3

MOVING SIGNS

					634.0614	634.0616	634.0618	638.2102	638.3000	
CATEGORY	LOCATION	STATION	OFFSET	SIGN MESSAGE	POSTS WOOD 4X6-INCH X 14-FT EACH	POSTS WOOD 4X6-INCH X 16-FT EACH	POSTS WOOD 4X6-INCH X 18-FT EACH	MOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
0010	STH 73	130+44	RT	SPEED LIMIT 55, SPEED LIMIT 30	--	1	--	1	1	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		133+21	RT	DIRECTIONAL ASSEMBLY - NORTH STH 73/IH 94 ALT	--	1	--	1	1	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		141+07	RT	MARSHALL 8	--	2	--	1	2	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		307+29	LT	DIRECTIONAL ASSEMBLY WITH ARROWS - IH 94 EAST/ALT, NO RT	--	--	2	1	2	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		307+93	RT	MADISON W/ LT ARROW	2	--	--	1	2	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		310+29	LT	MILWAUKEE W/ LT ARROW	2	--	--	1	2	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		310+98	RT	DIRECTIONAL ASSEMBLY WITH ARROW - IH 94 WEST, NO RT TURN	--	--	1	1	1	REINSTALL SIGN AT EXISTING LOCATION AFTER MGS GRADING
		PROJECT	LT/RT	NO PASSING ZONE	13	--	--	13	13	REINSTALL SIGNS AFTER LOCATING NO PASSING ZONES
	TOTALS				17	4	3	20	24	

3

LONG LINE PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH 12.5' LINE 37.5' SKIP YELLOW LF	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH SOLID YELLOW LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH 12.5' LINE 37.5' SKIP YELLOW LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH SOLID YELLOW LF	COMMENTS
0010	STH 73	125+83	-	147+00	LT/RT	--	--	--	4,234.0	DOUBLE
	STH 73	125+83	-	147+00	LT/RT	--	4,234.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	147+00	-	158+79	RT	--	--	300.0	1,179.0	SOLID LT, SKIPS RT
	STH 73	147+00	-	158+79	LT/RT	300.0	1,179.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	158+79	-	164+23	LT/RT	--	--	137.5	544.0	SKIPS LT, SOLID RT
	STH 73	164+23	-	170+00	LT/RT	--	--	150.0	--	SKIPS
	STH 73	164+23	-	170+00	LT/RT	150.0	--	--	--	SKIPS, AFTER CL RUMBLE STRIPS
	STH 73	170+00	-	175+81	LT/RT	--	--	150.0	581.0	SOLID LT, SKIPS RT
	STH 73	170+00	-	175+81	LT/RT	150.0	581.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73									
	STH 73	175+81	-	203+33	LT/RT	--	--	700.0	--	SKIPS
	STH 73	175+81	-	203+33	LT/RT	700.0	--	--	--	SKIPS, AFTER CL RUMBLE STRIPS
	STH 73	203+33	-	214+27	LT/RT	--	--	275.0	1,094.0	SKIPS LT, SOLID RT
	STH 73	203+33	-	214+27	LT/RT	275.0	1,094.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
	CTH BB	209+72	-	210+36	LT	--	62.0	--	--	INTERSECTION MARKINGS
	CTH BB	210+05	-	210+71	RT	--	80.0	--	--	INTERSECTION MARKINGS
	STH 73	214+27	-	250+00	LT/RT	--	--	--	7,146.0	DOUBLE
	STH 73	214+27	-	250+00	LT/RT	--	7,146.0	--	--	DOUBLE
	STH 73	250+00	-	261+00	LT/RT	--	--	275.0	1,100.0	SOLID LT, SKIPS RT
	STH 73	250+00	-	261+00	LT/RT	275.0	1,100.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	261+00	-	273+00	LT/RT	--	--	300.0	--	SKIPS
	STH 73	261+00	-	273+00	LT/RT	300.0	--	--	--	SKIPS, AFTER CL RUMBLE STRIPS
	STH 73	273+00	-	284+00	LT/RT	--	--	275.0	1,100.0	SKIPS LT, SOLID RT
	STH 73	273+00	-	284+00	LT/RT	275.0	1,100.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
	STH 73	284+00	-	306+40	LT/RT	--	--	--	4,480.0	DOUBLE
	STH 73	284+00	-	306+40	LT/RT	--	4,480.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	IH 94 EB EXIT RAMP	306+41	-	306+97	LT	--	106.0	--	--	INTERSECTION MARKINGS
	IH 94 EB ENTRANCE RAMP	306+49	-	306+69	RT	--	35.0	--	--	INTERSECTION MARKINGS
	STH 73	307+14	-	311+24	LT/RT	--	--	--	820.0	DOUBLE
	STH 73	307+14	-	311+24	LT/RT	--	820.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	311+90	-	343+52	LT/RT	--	--	--	6,324.0	DOUBLE
	STH 73	311+90	-	343+52	LT/RT	--	6,324.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	IH 94 WB EXIT RAMP	311+36	-	311+98	RT	--	147.0	--	--	INTERSECTION MARKINGS
	IH 94 WB ENTRACE RAMP	311+52	-	311+66	LT	--	31.0	--	--	INTERSECTION MARKINGS
	STH 73	343+52	-	355+00	LT/RT	--	--	287.5	1,148.0	SOLID LT, SKIPS RT
	STH 73	343+52	-	355+00	LT/RT	287.5	1,148.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	355+00	-	357+33	LT/RT	--	--	62.5	--	SKIPS
	STH 73	355+00	-	357+33	LT/RT	62.5	--	--	--	SKIPS, AFTER CL RUMBLE STRIPS
	STH 73	357+33	-	369+00	LT/RT	--	--	300.0	1,167.0	SKIPS LT, SOLID RT
	STH 73	357+33	-	369+00	LT/RT	300.0	1,167.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
SHEET TOTALS						2,775.0	29,667.0	3,212.5	30,917.0	
						32,442.0		34,129.5		

NOTE: INSTALL MARKING LINE SAME DAY EPOXY 4-INCH (YELLOW CENTERLINE) ON THE UPPER HMA PAVEMENT LAYER ON THE SAME DAY PAVEMENT IS PLACED. INSTALL MARKING LINE EPOXY 4-INCH (YELLOW CENTERLINE) AFTER THE CENTERLINE RUMBLE STRIPS ARE INSTALLED.

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LONG LINE PAVEMENT MARKING ITEMS (CONT.)

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH 12.5' LINE 37.5' SKIP YELLOW LF	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH SOLID YELLOW LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH 12.5' LINE 37.5' SKIP YELLOW LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH SOLID YELLOW LF	COMMENTS
0010	STH 73	369+00	-	372+46	LT/RT	--	--	--	692.0	DOUBLE
	STH 73	369+00	-	372+46	LT/RT	--	692.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	372+46	-	383+16	LT/RT	--	--	275.0	1,070.0	SOLID LT, SKIPS RT
	STH 73	372+46	-	383+16	LT/RT	275.0	1,070.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	383+16	-	392+34	LT/RT	--	--	237.5	918.0	SKIPS LT, SOLID RT
	STH 73	383+16	-	392+34	LT/RT	237.5	918.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
	STH 73	392+34	-	430+00	LT/RT	--	--	--	7,532.0	DOUBLE
	STH 73	392+34	-	430+00	LT/RT	--	7,532.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	430+00	-	439+54	LT/RT	--	--	250.0	954.0	SOLID LT, SKIPS RT
	STH 73	430+00	-	439+54	LT/RT	250.0	954.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	439+54	-	441+00	LT/RT	--	--	--	292.0	DOUBLE
	STH 73	439+54	-	441+00	LT/RT	--	292.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	441+00	-	450+29	LT/RT	--	--	237.5	929.0	SKIPS LT, SOLID RT
	STH 73	441+00	-	450+29	LT/RT	237.5	929.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
	STH 73	450+29	-	451+04	LT/RT	--	--	--	150.0	DOUBLE
	STH 73	450+29	-	451+04	LT/RT	--	150.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	451+04	-	462+38	LT/RT	--	--	287.5	1,134.0	SOLID LT, SKIPS RT
	STH 73	451+04	-	462+38	LT/RT	287.5	1,134.0	--	--	SOLID LT, SKIPS RT, AFTER CL RUMBLE STRIPS
	STH 73	462+38	-	474+14	LT/RT	--	--	300.0	--	SKIPS
	STH 73	462+38	-	474+14	LT/RT	300.0	--	--	--	SKIPS, AFTER CL RUMBLE STRIPS
	STH 73	474+14	-	485+55	LT/RT	--	--	287.5	1,141.0	SKIPS LT, SOLID RT
	STH 73	474+14	-	485+55	LT/RT	287.5	1,141.0	--	--	SKIPS LT, SOLID RT, AFTER CL RUMBLE STRIPS
	STH 73	485+55	-	497+00	LT/RT	--	--	--	2,290.0	DOUBLE
	STH 73	485+55	-	497+00	LT/RT	--	2,290.0	--	--	DOUBLE, AFTER CL RUMBLE STRIPS
	STH 73	497+00	-	503+63	LT/RT	--	1,326.0	--	--	DOUBLE
	STH 73	503+63	-	518+00	LT/RT	362.5	1,437.0	--	--	SOLID LT, SKIPS RT
SHEET TOTALS						2,237.5	19,865.0	1,875.0	17,102.0	
PROJECT TOTALS						5,012.5	49,532.0	5,087.5	48,019.0	
PROJECT TOTALS						54,544.5		53,106.5		

NOTE: INSTALL MARKING LINE SAME DAY EPOXY 4-INCH (YELLOW CENTERLINE) ON THE UPPER HMA PAVEMENT LAYER ON THE SAME DAY PAVEMENT IS PLACED. INSTALL MARKING LINE EPOXY 4-INCH (YELLOW CENTERLINE) AFTER THE CENTERLINE RUMBLE STRIPS ARE INSTALLED.

LONG LINE PAVEMENT MARKING ITEMS (CONT.)

						646.1040			646.3040	646.6120	
						MARKING LINE GROOVED WET REF EPOXY 4-INCH			MARKING LINE GROOVED WET REF EPOXY 8-INCH	MARKING STOP LINE EPOXY 18-INCH	
CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	SOLID WHITE LF	3' LINE 9' SKIP WHITE LF	12.5' LINE 37.5' SKIP WHITE LF	LF	LF	COMMENTS
0010	STH 73	125+83	-	147+54	RT	2,177	--	--	--	--	EDGELINE RT
	STH 73	130+42	-	157+30	LT	2,686	--	--	--	--	EDGELINE LT
	STH 73	147+54	-	148+76	RT	--	33	--	--	--	INTERSECTION SKIPS
	STH 73	149+60	-	155+97	RT	637	--	--	--	--	EDGELINE RT
	STH 73	155+97	-	157+14	RT	--	30	--	--	--	INTERSECTION SKIPS
	STH 73	158+09	-	209+55	RT	5,147	--	--	--	--	EDGELINE RT
	STH 73	158+48	-	159+51	LT	--	27	--	--	--	INTERSECTION SKIPS
	STH 73	159+51	-	190+50	LT	3,098	--	--	--	--	EDGELINE LT
	STH 73	191+28	-	192+34	LT	--	27	--	--	--	INTERSECTION SKIPS
	STH 73	192+34	-	209+36	LT	1,703	--	--	--	--	EDGELINE LT
	STH 73	207+02	-	209+54	RT	--	--	--	252	--	RT LANE
	CTH BB	209+72	-	210+36	LT	33	--	--	--	28	INTERSECTION MARKINGS
	CTH BB	210+05	-	210+71	RT	29	--	--	--	27	INTERSECTION MARKINGS
	STH 73	210+92	-	213+37	LT	--	--	--	245	--	RT LANE
	STH 73	210+92	-	306+60	LT	9,575	--	--	--	--	EDGELINE LT
	STH 73	211+03	-	243+80	RT	3,276	--	--	--	--	EDGELINE RT
	STH 73	243+80	-	244+93	RT	--	30	--	--	--	INTERSECTION SKIPS
	STH 73	245+97	-	306+22	RT	6,039	--	--	--	--	EDGELINE RT
	STH 73	304+38	-	306+01	RT	--	--	--	163	--	RT LANE
	IH 94 EB EXIT RAMP	306+41	-	306+97	LT	--	--	--	--	30	INTERSECTION MARKINGS
	STH 73	306+69	-	311+36	RT	469	--	--	--	--	EDGELINE RT
	STH 73	306+97	-	311+52	LT	458	--	--	--	--	EDGELINE LT
	IH 94 WB EXIT RAMP	311+36	-	311+98	RT	--	--	--	--	36	INTERSECTION MARKINGS
	STH 73	311+98	-	328+63	RT	1,686	--	--	--	--	EDGELINE RT
	STH 73	311+98	-	334+94	LT	2,316	--	--	--	--	EDGELINE LT
	STH 73	312+24	-	313+81	LT	--	--	--	157	--	RT LANE
	STH 73	328+63	-	328+93	RT	--	9	--	--	--	INTERSECTION SKIPS
	STH 73	329+77	-	339+98	RT	1,019	--	--	--	--	EDGELINE RT
	STH 73	336+30	-	337+10	LT	--	21	--	--	--	INTERSECTION SKIPS
	STH 73	337+10	-	340+35	LT	326	--	--	--	--	EDGELINE LT
	STH 73	339+98	-	340+30	RT	--	9	--	--	--	INTERSECTION SKIPS
	STH 73	341+66	-	349+51	LT	785	--	--	--	--	EDGELINE RT
	STH 73	341+67	-	341+91	LT	--	6	--	--	--	INTERSECTION SKIPS
	STH 73	341+91	-	409+38	LT	6,747	--	--	--	--	EDGELINE LT
	STH 73	349+51	-	349+67	RT	--	6	--	--	--	INTERSECTION SKIPS
	STH 73	351+06	-	409+07	RT	5,803	--	--	--	--	EDGELINE RT
	STH 73	409+07	-	409+70	RT	--	18	--	--	--	INTERSECTION SKIPS
	STH 73	410+84	-	412+69	LT	--	48	--	--	--	INTERSECTION SKIPS
	STH 73	411+05	-	460+98	RT	4,998	--	--	--	--	EDGELINE RT
	STH 73	412+69	-	517+96	LT	10,533	--	--	--	--	EDGELINE LT
	STH 73	461+96	-	509+30	RT	4,726	--	--	--	--	EDGELINE RT
	STH 73	506+16	-	509+32	RT	--	--	--	315	--	RT TURN LANE
	STH 73	508+96	-	511+64	LT	--	--	75	--	--	PASSING LANE
	STH 73	510+72	-	517+96	RT	728	--	--	--	--	EDGELINE RT
PROJECT TOTALS						74,994	264	75	1,132	121	
							75,333				

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TEMPORARY LONG LINE PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH 4' LINE 46' SKIP YELLOW LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH SOLID YELLOW LF	COMMENTS
0010	STH 73	125+83	-	147+00	LT/RT	--	4,234	DOUBLE
	STH 73	147+00	-	158+79	RT	96	1,179	SOLID LT, SKIPS RT
	STH 73	158+79	-	164+23	LT/RT	44	544	SKIPS LT, SOLID RT
	STH 73	164+23	-	170+00	LT/RT	48	--	SKIPS
	STH 73	170+00	-	175+81	LT/RT	48	581	SOLID LT, SKIPS RT
	STH 73	175+81	-	203+33	LT/RT	224	--	SKIPS
	STH 73	203+33	-	214+27	LT/RT	88	1,094	SKIPS LT, SOLID RT
	CTH BB	209+72	-	210+36	LT	--	62	INTERSECTION MARKINGS
	CTH BB	210+05	-	210+71	RT	--	80	INTERSECTION MARKINGS
	STH 73	214+27	-	250+00	LT/RT	--	7,146	DOUBLE
	STH 73	250+00	-	261+00	LT/RT	88	1,100	SOLID LT, SKIPS RT
	STH 73	261+00	-	273+00	LT/RT	96	--	SKIPS
	STH 73	273+00	-	284+00	LT/RT	88	1,100	SKIPS LT, SOLID RT
	STH 73	284+00	-	306+40	LT/RT	--	4,480	DOUBLE
	IH 94 EB EXIT RAMP	306+41	-	306+97	LT	--	106	INTERSECTION MARKINGS
	IH 94 EB ENTRANCE RAMP	306+49	-	306+69	RT	--	35	INTERSECTION MARKINGS
	STH 73	307+14	-	311+24	LT/RT	--	820	DOUBLE
	STH 73	311+90	-	343+52	LT/RT	--	6,324	DOUBLE
	IH 94 WB EXIT RAMP	311+36	-	311+98	RT	--	147	INTERSECTION MARKINGS
	IH 94 WB ENTRACE RAMP	311+52	-	311+66	LT	--	31	INTERSECTION MARKINGS
	STH 73	343+52	-	355+00	LT/RT	92	1,148	SOLID LT, SKIPS RT
	STH 73	355+00	-	357+33	LT/RT	20	--	SKIPS
	STH 73	357+33	-	369+00	LT/RT	96	1,167	SKIPS LT, SOLID RT
	STH 73	369+00	-	372+46	LT/RT	--	692	DOUBLE
	STH 73	372+46	-	383+16	LT/RT	88	1,070	SOLID LT, SKIPS RT
	STH 73	383+16	-	392+34	LT/RT	76	918	SKIPS LT, SOLID RT
	STH 73	392+34	-	430+00	LT/RT	--	7,532	DOUBLE
	STH 73	430+00	-	439+54	LT/RT	80	954	SOLID LT, SKIPS RT
	STH 73	439+54	-	441+00	LT/RT	--	292	DOUBLE
	STH 73	441+00	-	450+29	LT/RT	76	929	SKIPS LT, SOLID RT
	STH 73	450+29	-	451+04	LT/RT	--	150	DOUBLE
	STH 73	451+04	-	462+38	LT/RT	92	1,134	SOLID LT, SKIPS RT
	STH 73	462+38	-	474+14	LT/RT	96	--	SKIPS
	STH 73	474+14	-	485+55	LT/RT	92	1,141	SKIPS LT, SOLID RT
	STH 73	485+55	-	503+63	LT/RT	--	3,616	DOUBLE
	STH 73	503+63	-	518+00	LT/RT	116	1,437	SOLID LT, SKIPS RT
TOTALS						1,744	51,243	
						52,987		

NOTE: INSTALL TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW CENTERLINE) ON THE LOWER HMA PAVEMENT LAYER ON THE SAME DAY PAVEMENT IS PLACED.

LOCATING NO-PASSING ZONES

CATEGORY	LOCATION	STATION	TO	STATION	648.0100 LOCATING NO-PASSING ZONES MI
0010	STH 73	125+83	-	518+00	7.43
	TOTAL				7.43

CONSTRUCTION STAKING ITEMS

CATEGORY	LOCATION	STATION	OFFSET	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 3070-04-61 LS
0010	STH 73	125+83 - 177+98	LT & RT	-	5,215	-	-
		178+32 - 518+00	LT & RT	1	33,968		
		518+82 - 519+05	LT	-	-	1	-
		PROJECT	-	-	-	-	1
	TOTALS			1	39,183	1	1

SAWING

CATEGORY	LOCATION	STATION	TO	STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	COMMENTS
0010	STH 73	141+89			LT/RT	30	-	72" CATTLE PASS REMOVAL
			142+39		LT/RT	30	-	72" CATTLE PASS REMOVAL
		518+82	-	519+05	LT	21	9	CURB RAMP
	TOTALS					81	9	

UTILITY LINE OPENING (ULO)

CATEGORY	LOCATION	STATION	OFFSET	SPV.0060.01 EACH	COMMENTS
0010	STH 73	306+25.36	RT	1	MGS EAT
		307+81.45	LT	1	24-INCH CPRC EXTENSION
	TOTALS			2	

BENCHMARKS				
NO.	STATION	ELEV.	OFFSET	DESCRIPTION
BM609	125+64.07	878.660	24.23' LT	SSE BOLT HYD

PI STA = 133+67.45
Y = 478453.733
X = 904501.562
DELTA = 12°20'03"
D = 1°30'00"
T = 412.73'
L = 822.27'
R = 3819.72'
PC STA = 129+54.72
PT STA = 137+76.99
EXISTING SE = 4.5%
PROPOSED SE = MATCH EXISTING

CP 560
¾" REBAR WITH CAP
STA 130+85.43, 22.66' LT
X=904431.58
Y=478178.57
ELEV. = 891.80

N10° 39' 20.27"E
20.662

NORTH ST

BM609

ALLIANT ENERGY (GAS)

ALLIANT ENERGY (ELEC)

R/W

PC: 129+54.72

PT: 137+76.99

MATCHLINE 138+50

124 126 128 130 132 134 136 138

STH 73

N9° 14' 31.36"E
482.933

DEERFIELD PUBLIC WORKS - SANITARY
(NOT SURVEYED)

PI: 124+51.13

PI: 124+71.79

DEERFIELD PUBLIC WORKS - WATER
(NOT SURVEYED)

REMOVING ASPHALTIC SURFACE BUTT JOINT
STA 125+83 TO STA 126+58

+48.36
22.00'RT

+96.56
15.00'RT

+66.16
22.00'RT

EAT POST 1
+66.16
24.00'RT

+66.16
29.90'RT

+91.01
27.33'RT

+15.87
26.00'RT

MGS GUARDRAIL 3

REMOVING GUARDRAIL

SLOPE INTERCEPT

FRONTIER (FIBER OPTIC)
(NOT SURVEYED)

FRONTIER (TELECOMMUNICATIONS)
(NOT SURVEYED)

WE ENERGIES (ELEC)

BEGIN PROJECT
STA 125+83.00
Y=477,679.464
X=904,375.575
MATCH EXISTING
BUTT JOINT REQ

5

5

MATCHLINE 138+50

MATCHLINE 153+00

140 142 144 146 148 150

STH 73

N3° 05' 31.43"W
2646.384

142+14.17 REMOVING OLD STRUCTURE
EXISTING 72" CATTLE PASS
2-REMOVING DELINEATORS AND MARKERS

WE ENERGIES (ELEC)

SLOPE INTERCEPT

MGS GUARDRAIL 3

SLOPE INTERCEPT

+56.93
26.00'RT

+80.81
27.90'RT

+24.25
22.00'RT

+05.81
22.00'RT

+75.81
15.00'RT

EAT POST 1
+05.81
24.00'RT
+05.81
29.90'RT

FRONTIER (TELECOMMUNICATIONS)
(NOT SURVEYED)

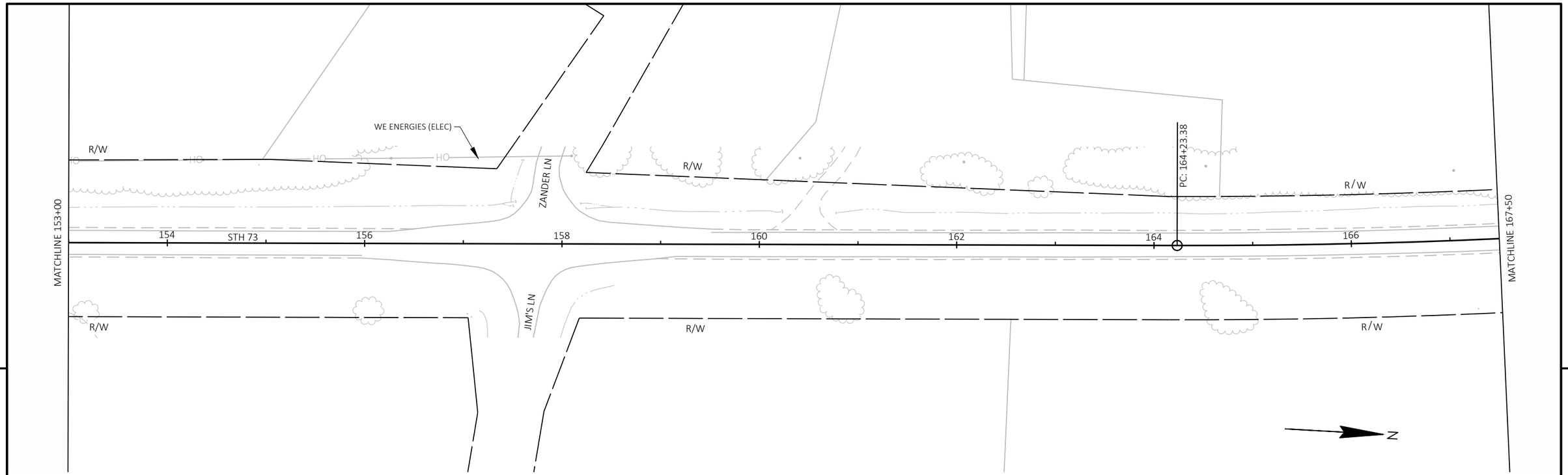
FRONTIER (FIBER OPTIC)
(NOT SURVEYED)

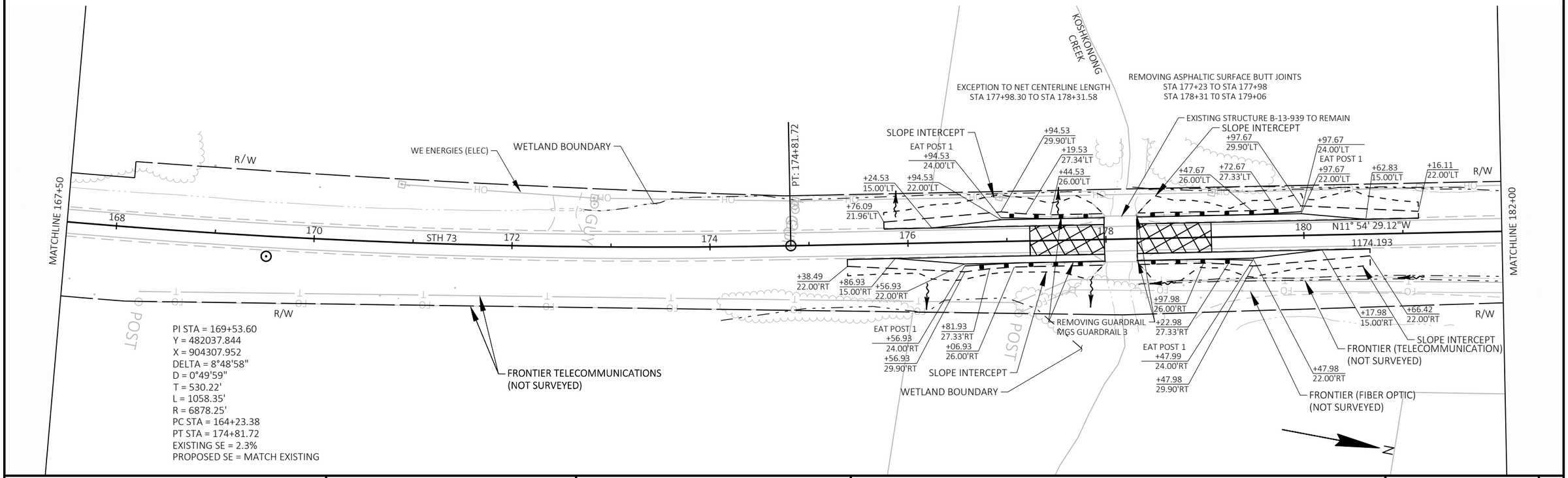
CLEARING AND GRUBBING
STA 142+00 - 143+00

CALHOUN RD

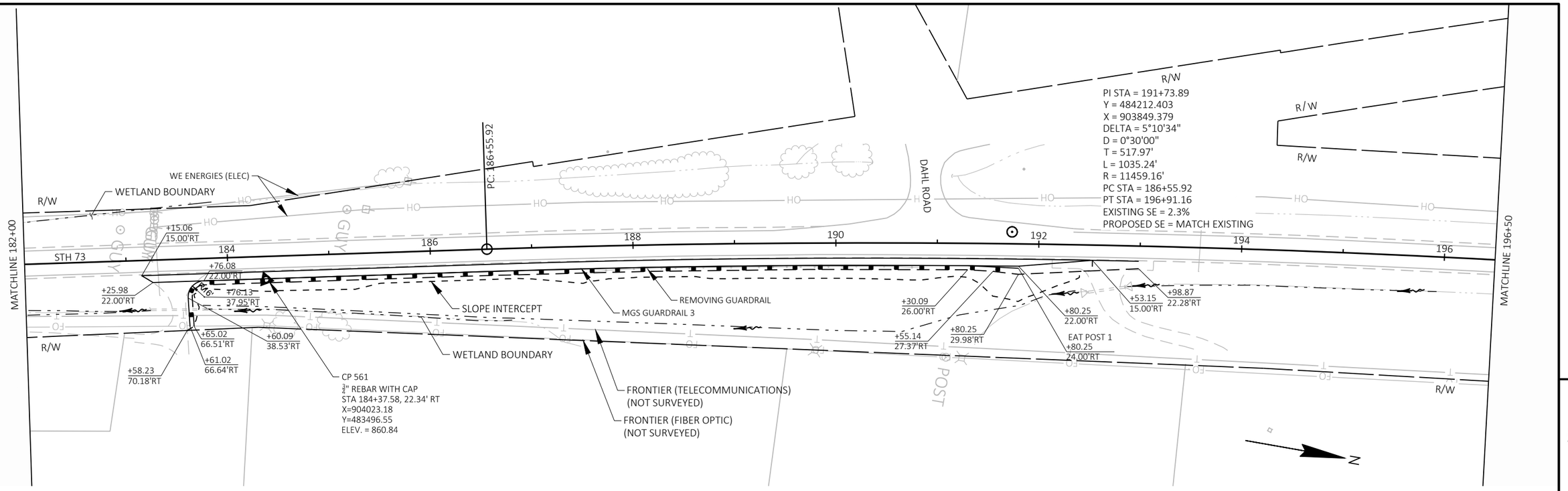
R/W

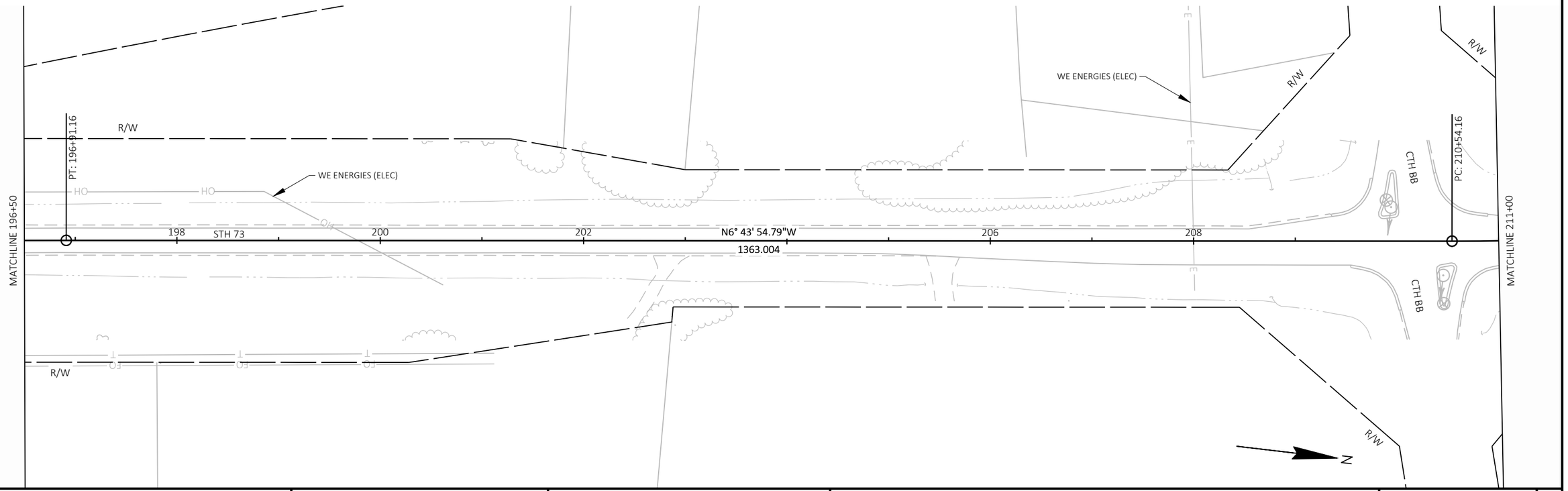
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 38	E





PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 39 E





PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 40	E

PI STA = 216+47.25
Y = 486669.409
X = 903559.361
DELTA = 29°01'04"
D = 2°30'00"
T = 593.09'
L = 1160.71'
R = 2291.83'
PC STA = 210+54.16
PT STA = 222+14.87
EXISTING SE = 6.4%
PROPOSED SE = MATCH EXISTING

R/W
MATCHLINE 211+00
212
STH 73
214
216
218
220
222
224
PT: 222+14.87
N35° 44' 58.56"W
695.588
MATCHLINE 225+50
HO

CP 562
¾" REBAR WITH CAP
STA 222+96.34, 23.64' RT
X=903184.44
Y=487230.68
ELEV. = 879.03

CLEARING AND GRUBBING
STA 232+70 - STA 233+30 TO 100' LT
STA 233+30 - STA 235+00 TO 40' LT

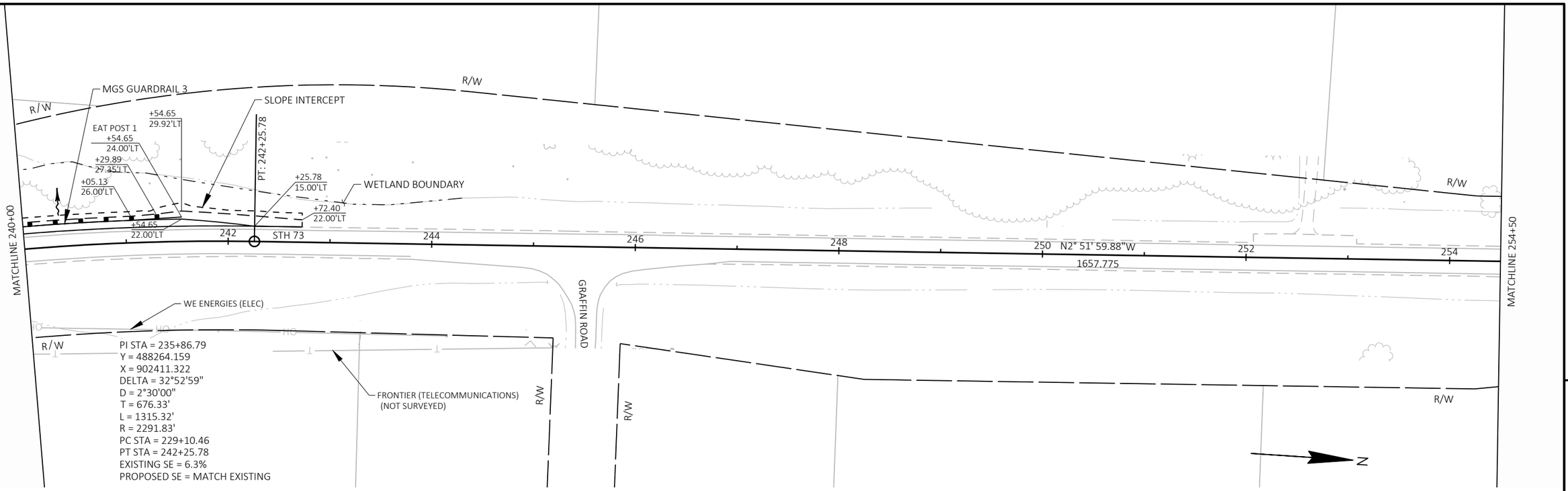
+70.69
82.30'LT
+70.36
54.18'LT
+03.64
15.00'LT
+72.94
22.00'LT
+74.55
82.25'LT
+74.26
54.13'LT
+01.62
54.00'LT
+01.62
26.00'LT
+01.62
22.00'LT
R32
WETLAND BOUNDARY
PC: 229+10.46
SLOPE INTERCEPT
REMOVING GUARDRAIL
MGS GUARDRAIL 3
WE ENERGIES (ELEC)
226
228
230
232
234
236
238
MATCHLINE 225+50
MATCHLINE 240+00

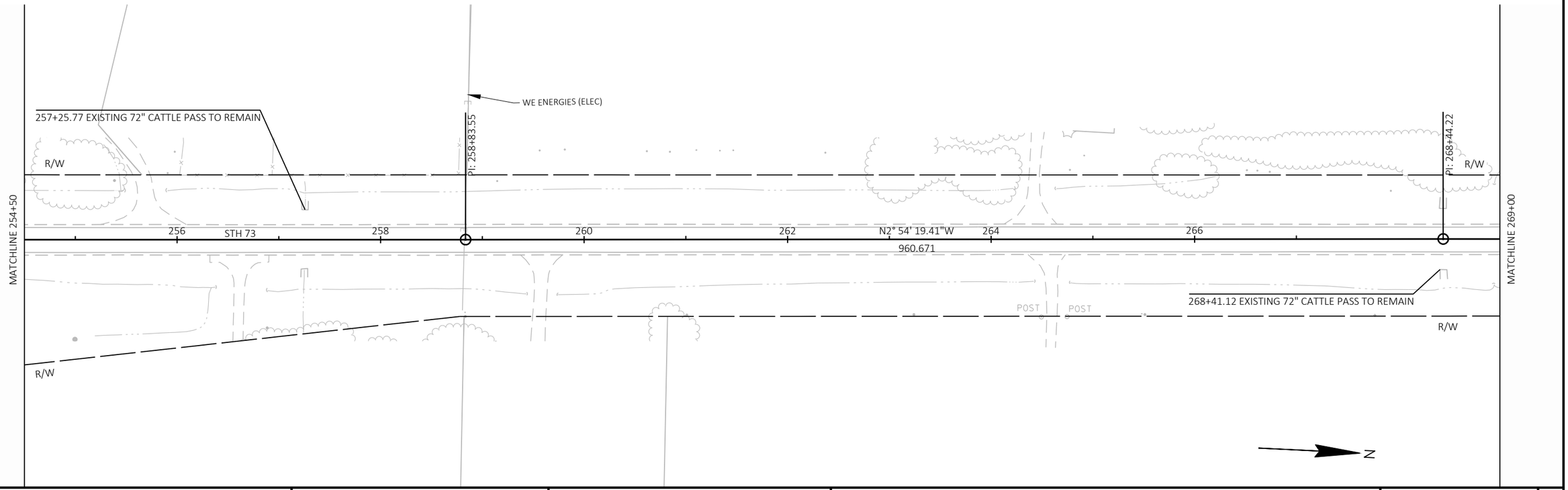
PI STA = 235+86.79
Y = 488264.159
X = 902411.322
DELTA = 32°52'59"
D = 2°30'00"
T = 676.33'
L = 1315.32'
R = 2291.83'
PC STA = 229+10.46
PT STA = 242+25.78
EXISTING SE = 6.3%
PROPOSED SE = MATCH EXISTING

FRONTIER (TELECOMMUNICATIONS)
(NOT SURVEYED)

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 41	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050204-pn
PLOT DATE : 10/30/2019 10:58 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

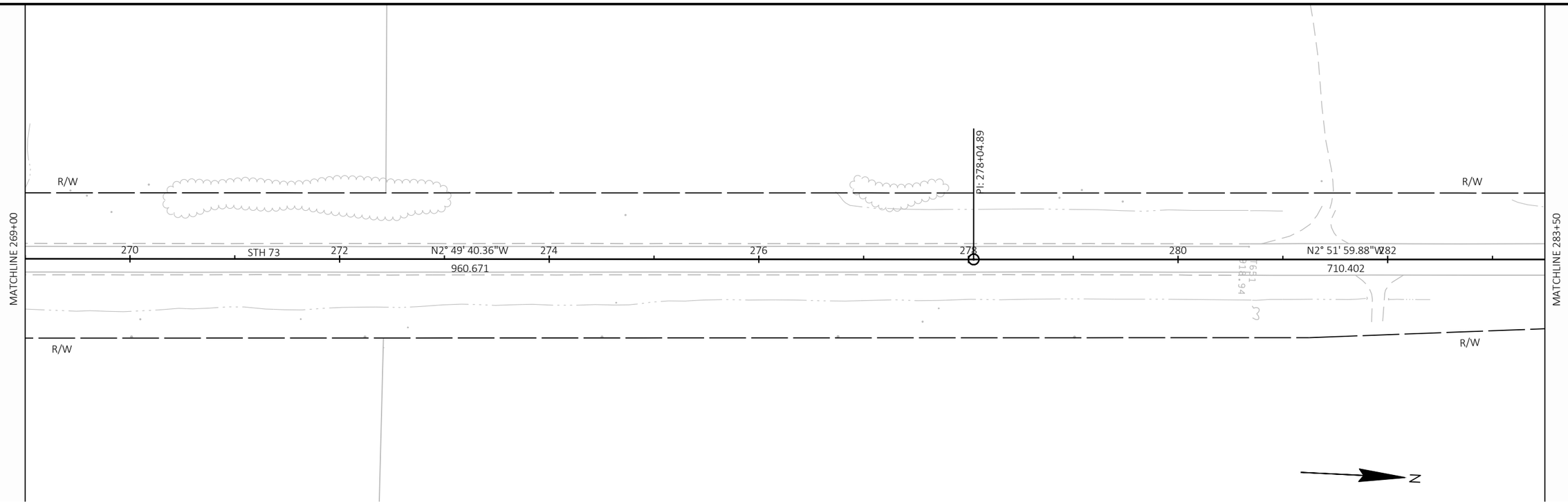




PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 42	E

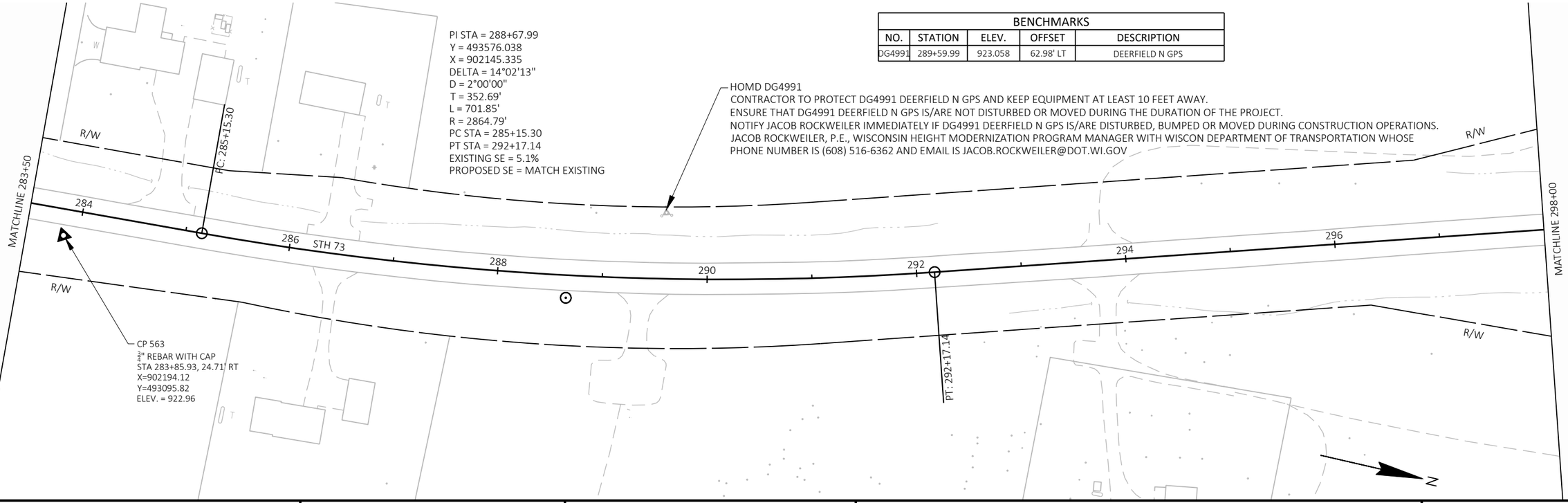
FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050205-pn

PLOT DATE : 10/30/2019 10:59 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5



BENCHMARKS				
NO.	STATION	ELEV.	OFFSET	DESCRIPTION
DG4991	289+59.99	923.058	62.98' LT	DEERFIELD N GPS

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 43	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050206-pn
PLOT DATE : 10/30/2019 10:59 AM
PLOT BY : KEVIN DRUNASKY
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

STA 307+81.45 LT
4'-CPRC 24-INCH
1-APRON ENDWALLS FOR CPRC 24-INCH REQ
1-REMOVING SMALL PIPE CULVERTS REQ (REMOVE EXISTING 24-INCH CPRC AEW)
1-REMOVING DELINEATORS AND MARKERS REQ
1-MARKERS CULVERT END REQ
UTILITY LINE OPENING (ULO)

299+04.22 EXISTING 72" CATTLE PASS TO REMAIN

MATCHLINE 298+00

N16° 54' 12.95"W
1868.476

STH 73

306+25.36 RT
UTILITY LINE OPENING (ULO)
FOR MGS EAT INSTALLATION

I-94 EB ENTRANCE RAMP

I-94 EB EXIT RAMP

I-94 WB ENTRANCE RAMP

I-94 WB EXIT RAMP

SLOPE INTERCEPT

EXISTING PULL BOX TO REMAIN
SEE SPECIAL PROVISIONS

REMOVING GUARDRAIL

+09.51
24.72'LT

+84.23
28.58'LT

+49.69
18.00'LT
START MGS
GUARDRAIL
3HS

+49.97
22.00'LT

EAT POST 1
+84.23
22.68'LT

+34.10
23.11'LT

+09.52
19.23'LT

+12.00
22.00'LT

+12.19
18.00'LT
END MGS
GUARDRAIL
3HS

WISDOT (ELEC)
+52.42
24.88'LT

+02.37
30.43'LT

EAT POST 1
+02.37
24.53'LT

+42.33
32.10'LT

+23.05
22.27'LT

+98.44
22.83'RT

+15.75
27.00'RT

+78.25
18.00'RT

+98.42
28.78'RT

EAT POST 1
+25.36
24.45'RT

+75.49
24.88'RT

+30.09
25.06'RT

END MGS GUARDRAIL 3QS
START GUARDRAIL 3HS

+25.36
30.35'RT

+90.73
19.78'RT
START MGS
GUARDRAIL
3HS

+15.75
18.00'RT
START MGS
GUARDRAIL
3QS END 3HS

+78.25
22.00'RT

+15.49
24.88'RT

EXISTING STRUCTURE
B-13-158 TO REMAIN

EXISTING STRUCTURE
B-13-159 TO REMAIN

+03.19
19.78'RT
END MGS
GUARDRAIL 3HS
START MGS
GUARDRAIL

+41.70
26.68'RT

EAT POST 1
+68.65
24.46'RT

+68.65
30.36'RT

PC: 310+85.62

SLOPE
INTERCEPT

MATCHLINE 312+50

PI STA = 316+10.77
Y = 496203.700
X = 901346.810
DELTA = 30°44'57"
D = 3°00'00"
T = 525.15'
L = 1024.97'
R = 1909.86'
PC STA = 310+85.62
PT STA = 321+10.59
EXISTING SE = 7.0%
PROPOSED SE = MATCH EXISTING

PT: 321+10.59

STH 73

MATCHLINE 312+50

MATCHLINE 327+00

PRIVATE DRIVE

CP 510
ALUM. CAP
STA 313+72.70, 29.82' RT
X=901466.40
Y=495985.80
ELEV. = 881.14

R/W

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 44	E

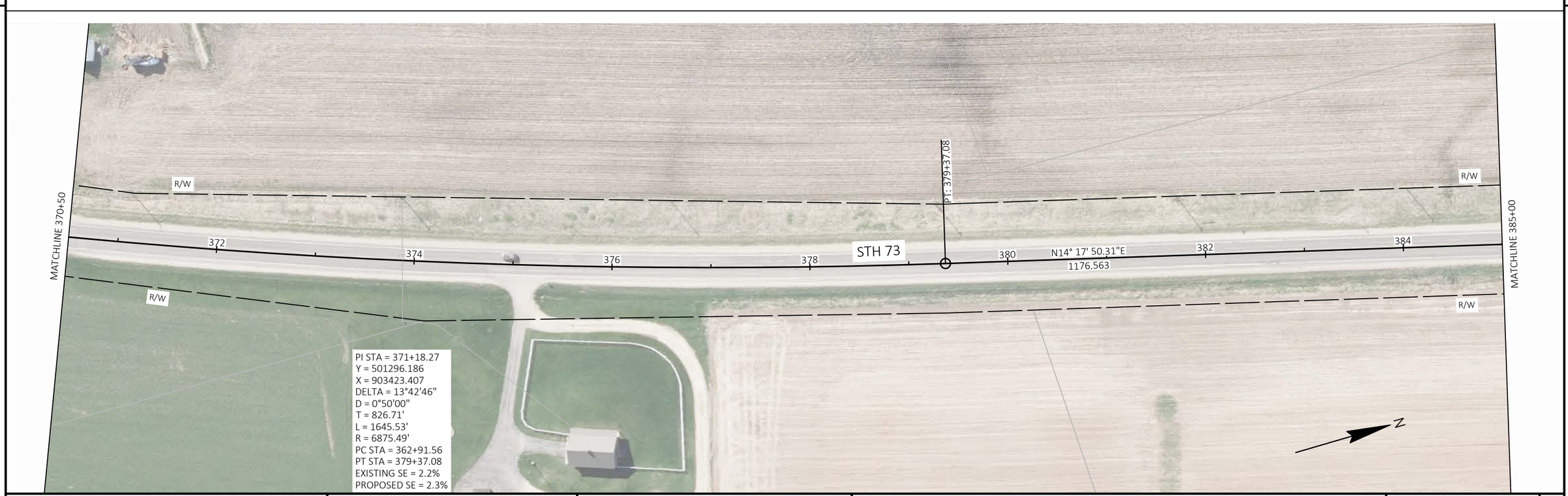
FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050207-pn

PLOT DATE : 10/30/2019 11:00 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 45	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050208-pn

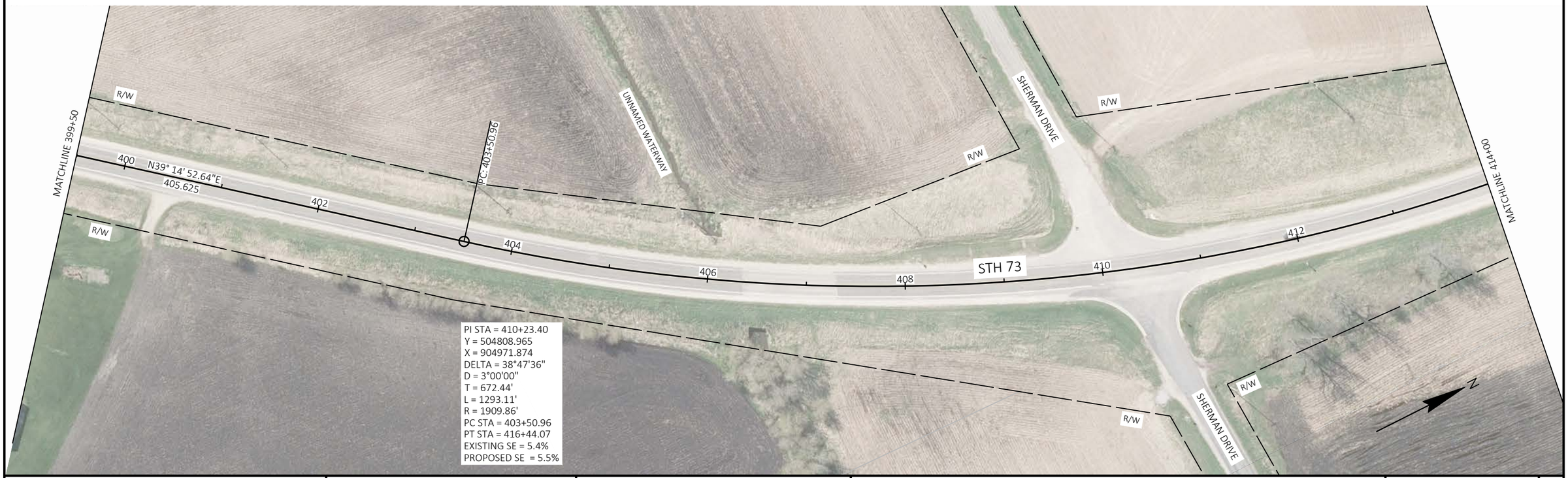
PLOT DATE : 10/30/2019 11:28 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 46 E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050209-pn

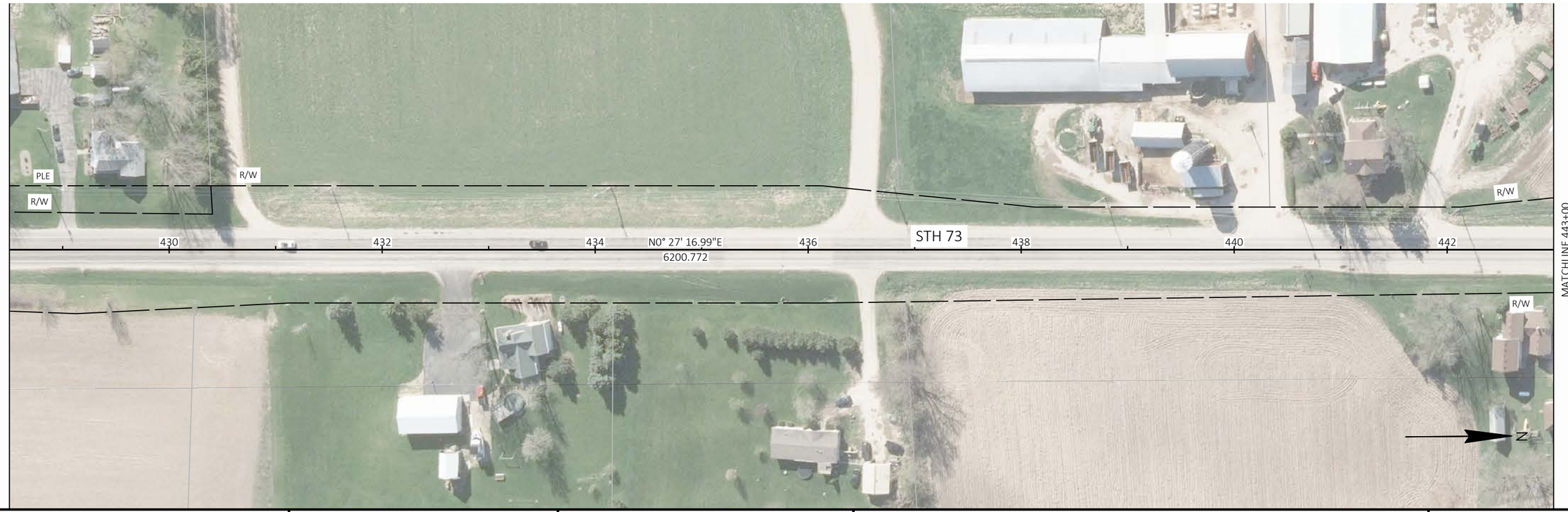
PLOT DATE : 10/30/2019 11:29 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 47	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050210-pn

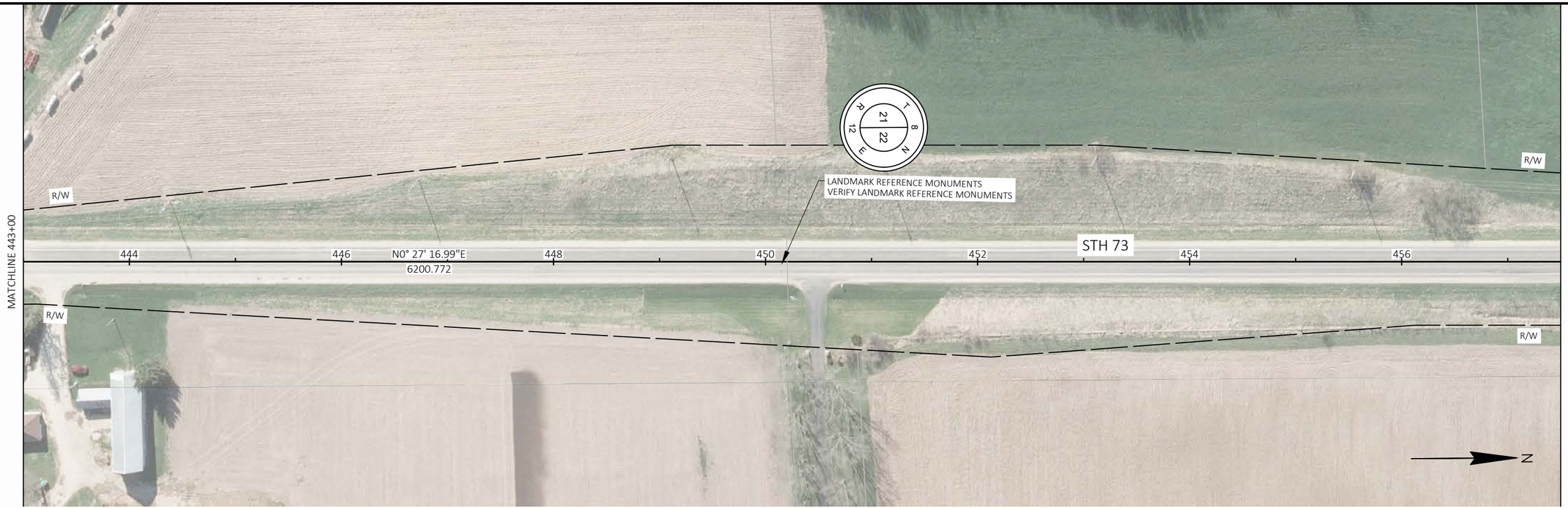
PLOT DATE : 10/30/2019 11:29 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

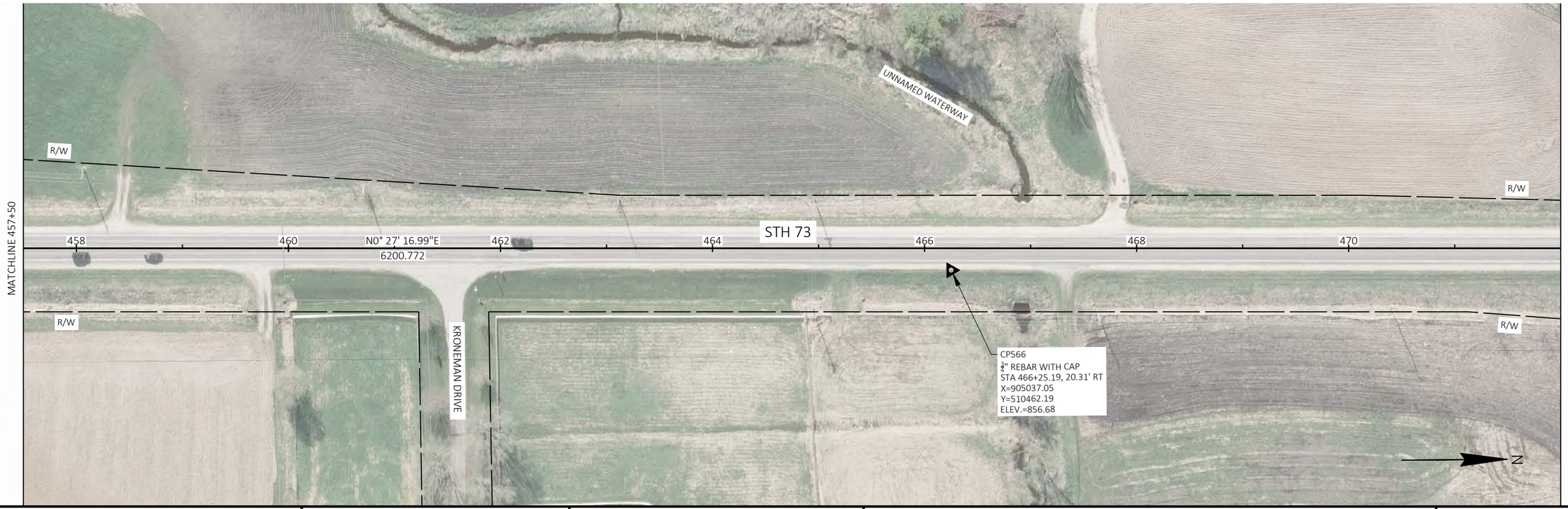


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 48	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050211-pn

PLOT DATE : 10/30/2019 11:30 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 49	E

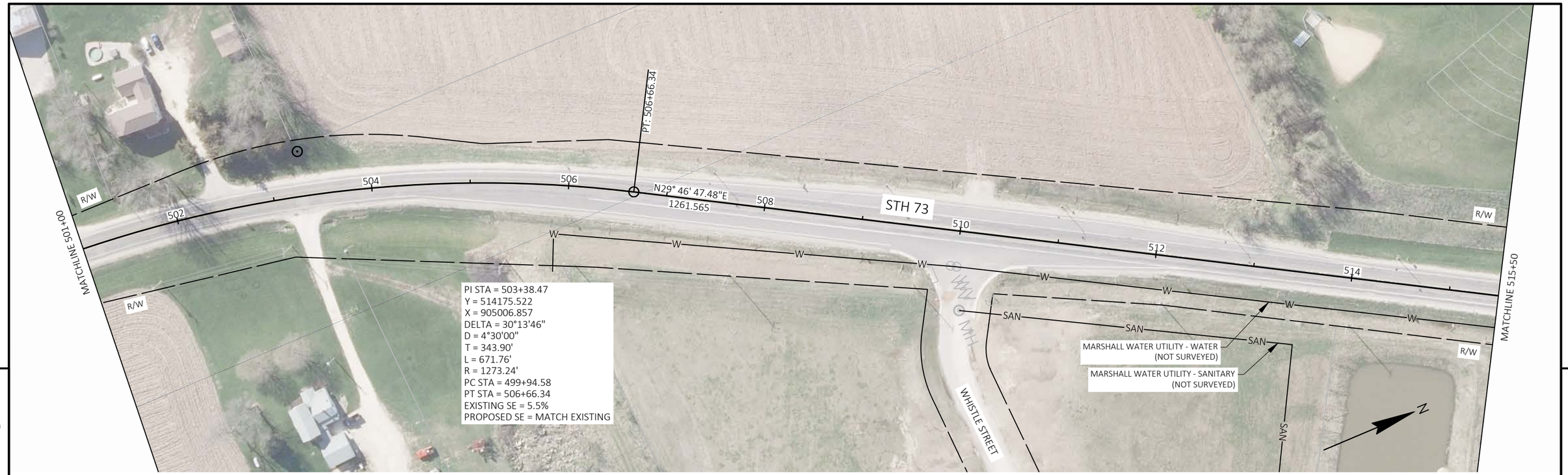
FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050212-pn

PLOT DATE : 10/30/2019 11:31 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 50	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\050202_PN.DWG
LAYOUT NAME - 050213-pn

PLOT DATE : 10/30/2019 11:31 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:100 FT

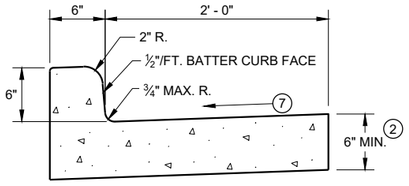


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	PLAN	SHEET 51 E

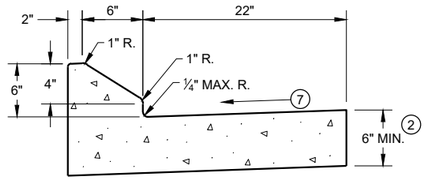
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-02	HMA LONGITUDINAL JOINTS
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS

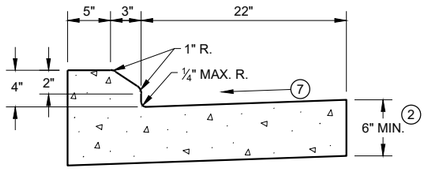
6



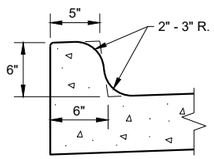
TYPES A[1] & D



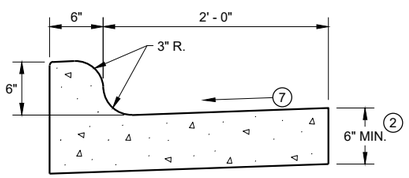
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

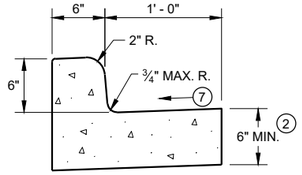


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



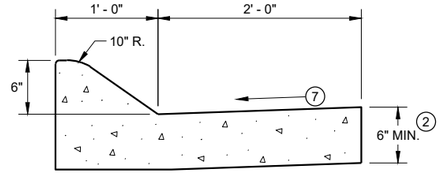
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

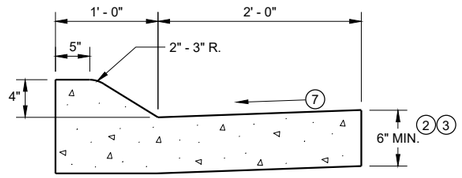


TYPES A[1] & D

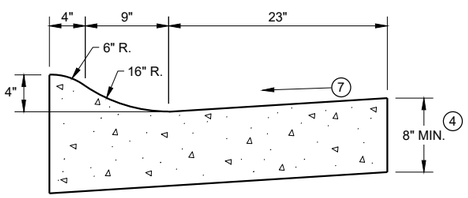
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



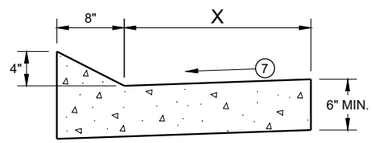
4" SLOPED CURB TYPES A[1] & D



4" SLOPED CURB TYPES R[1] & T[5]

CONCRETE CURB AND GUTTER 36"

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

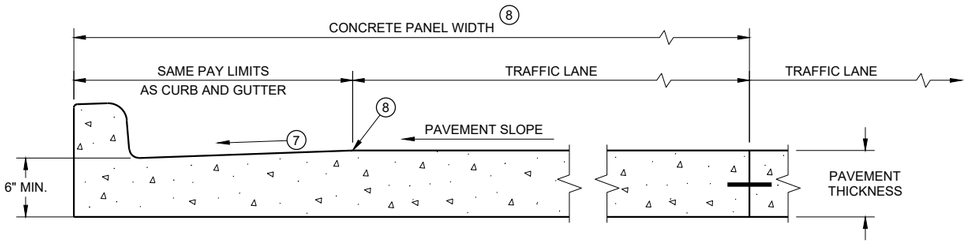


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

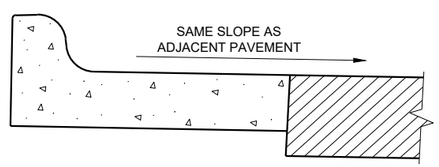
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER[6]
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

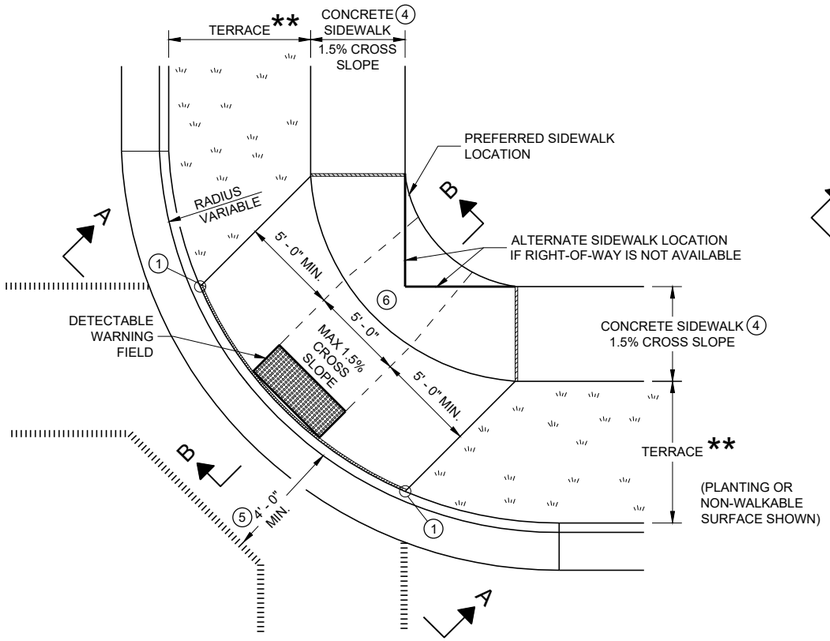
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH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

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

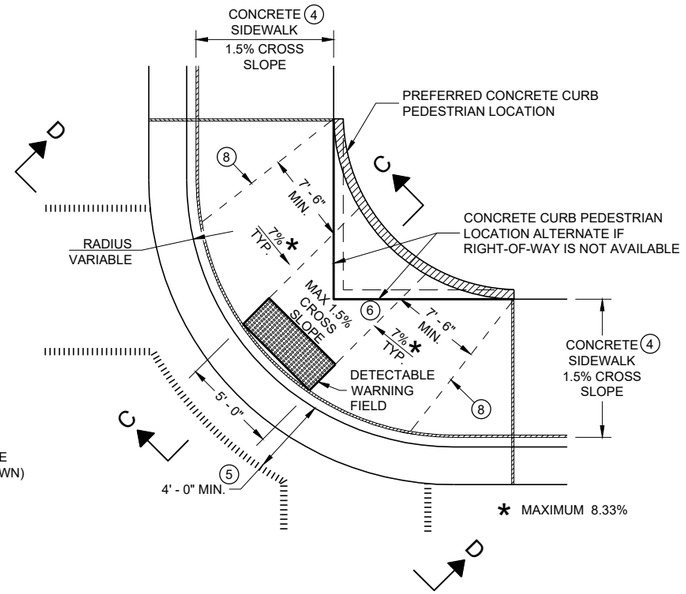
SDD 08D01 - 21a
SDD 08D01 - 21a



PLAN VIEW

CURB RAMP TYPE 1

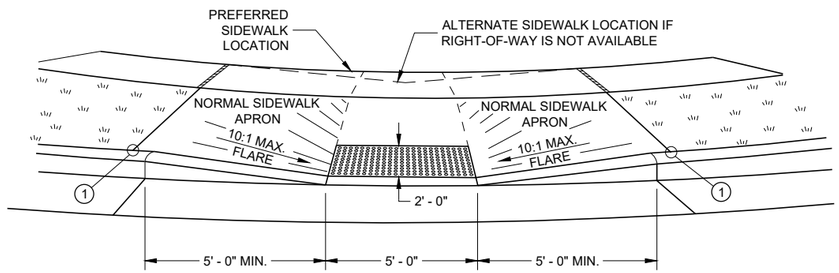
(CENTER OF CORNER RADIUS)



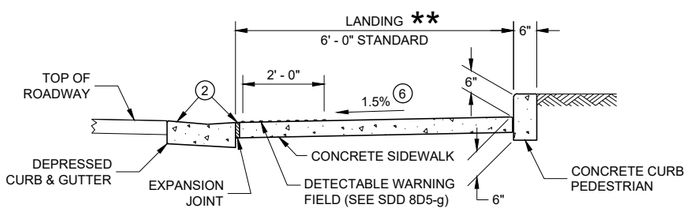
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

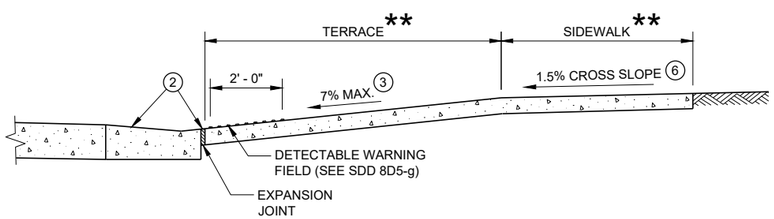


VIEW A - A FOR TYPE 1

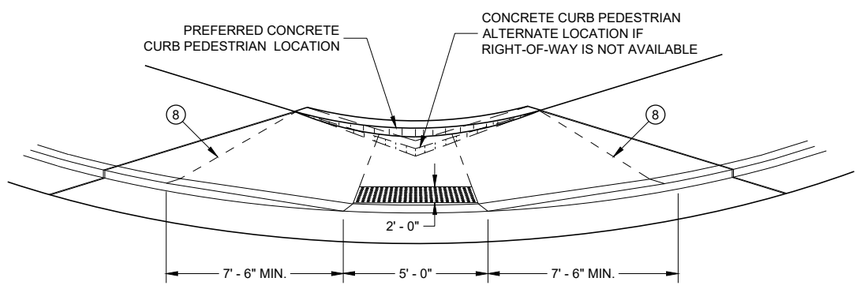


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

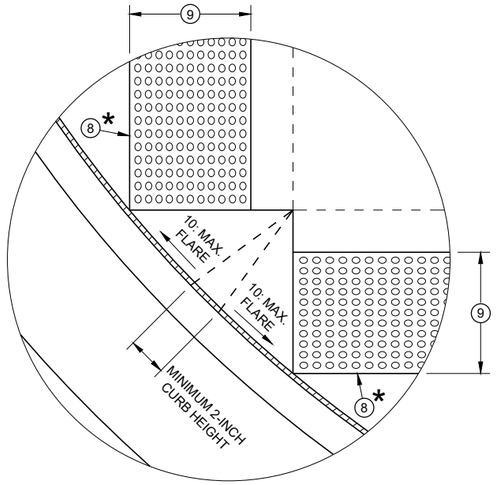
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

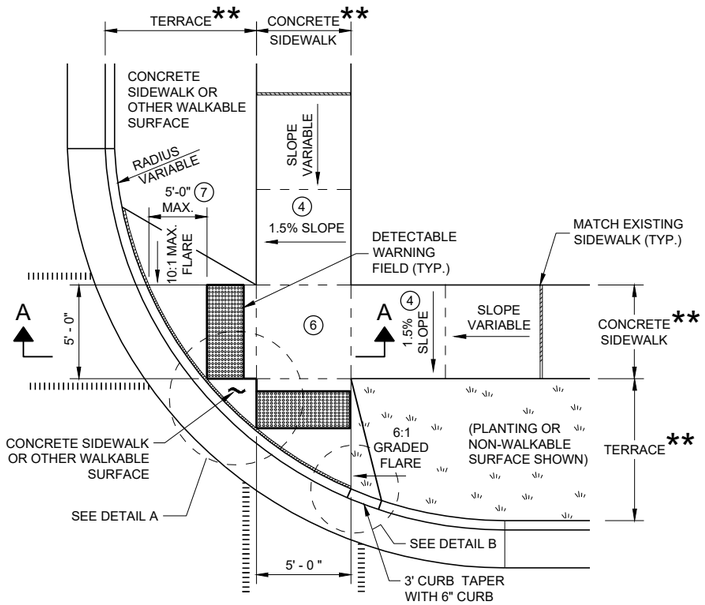
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a
SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

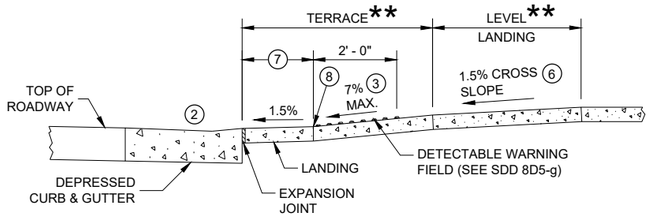
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

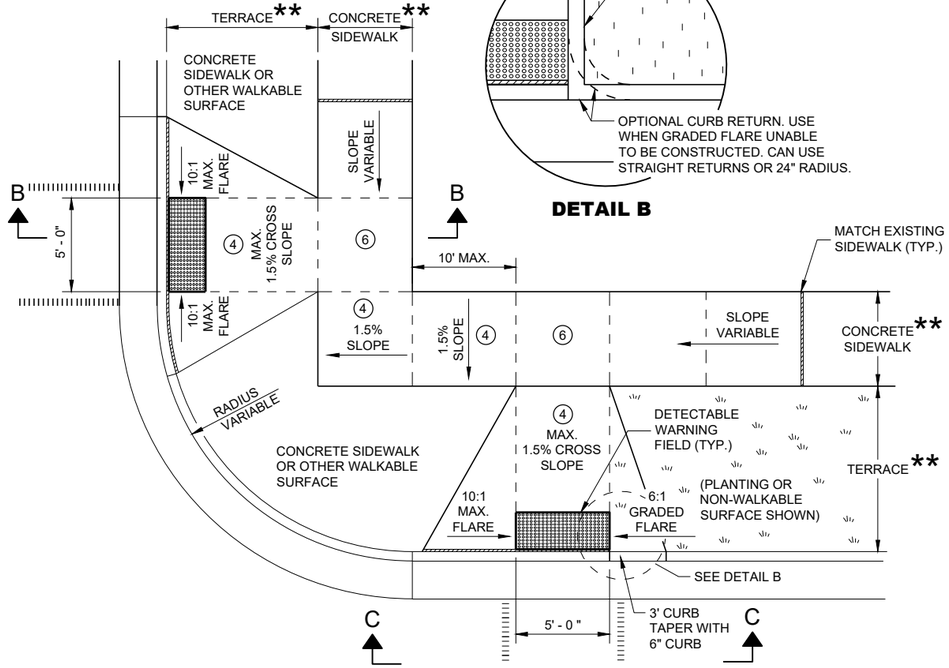
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



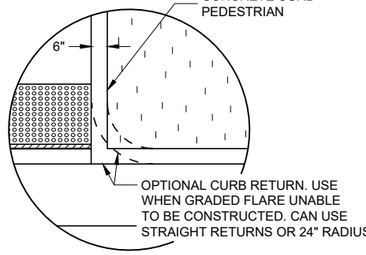
SECTION A - A FOR TYPE 2

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

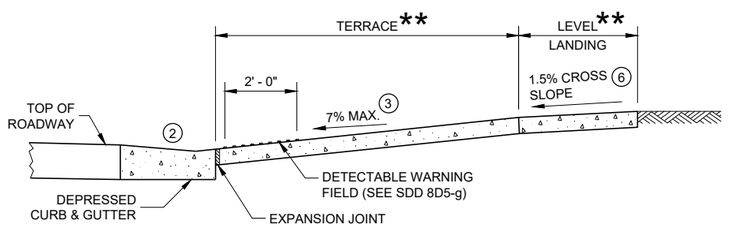
** WIDTH SHOWN ELSEWHERE IN THE PLANS



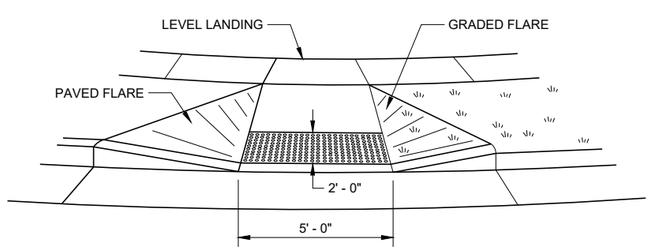
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



DETAIL B



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

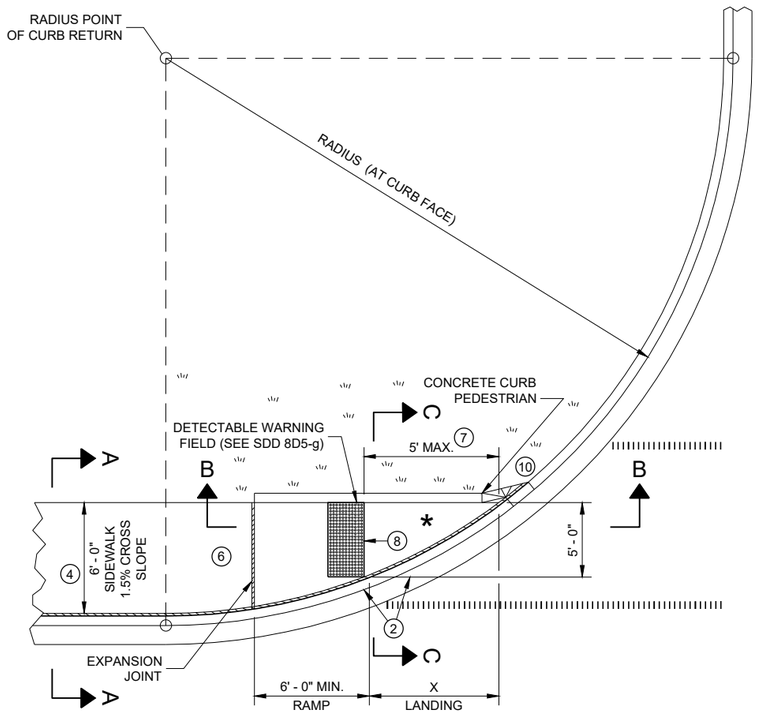
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

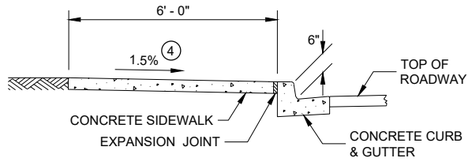


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

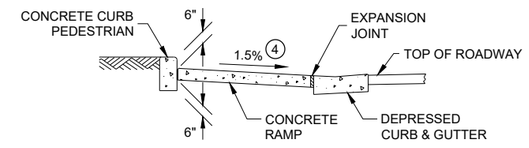
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

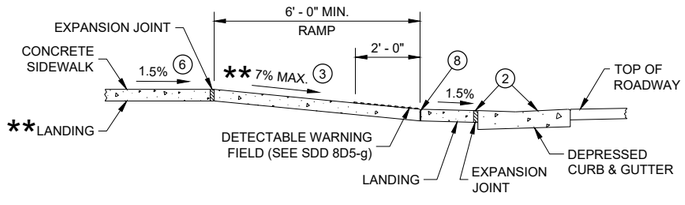
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



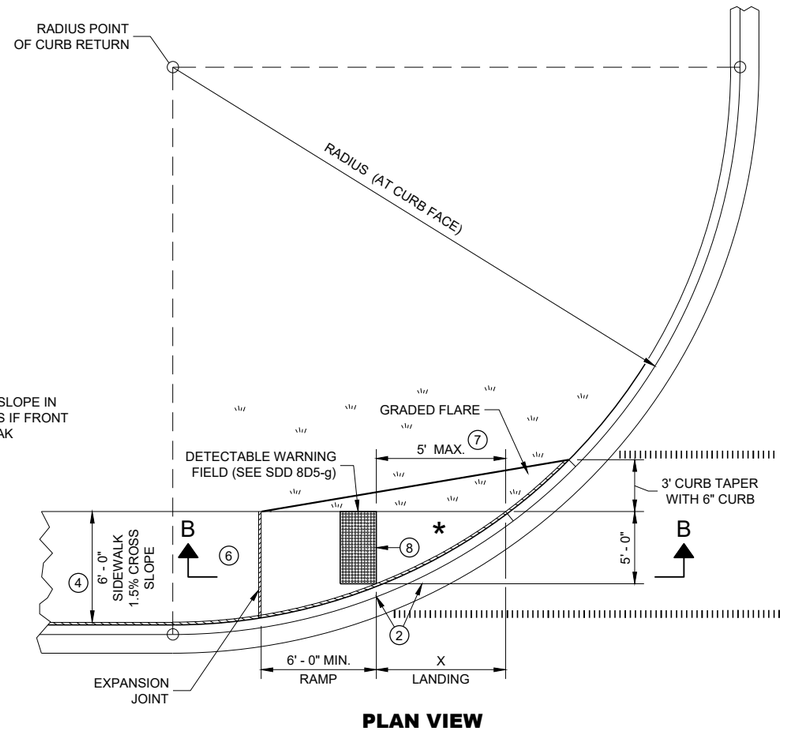
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

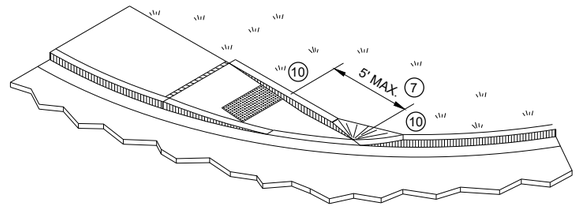
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

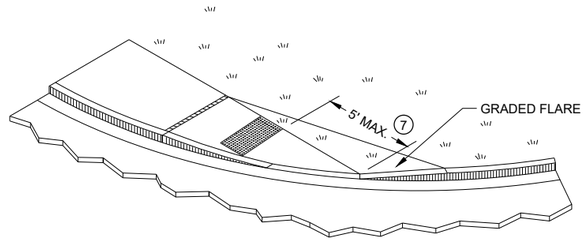


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A

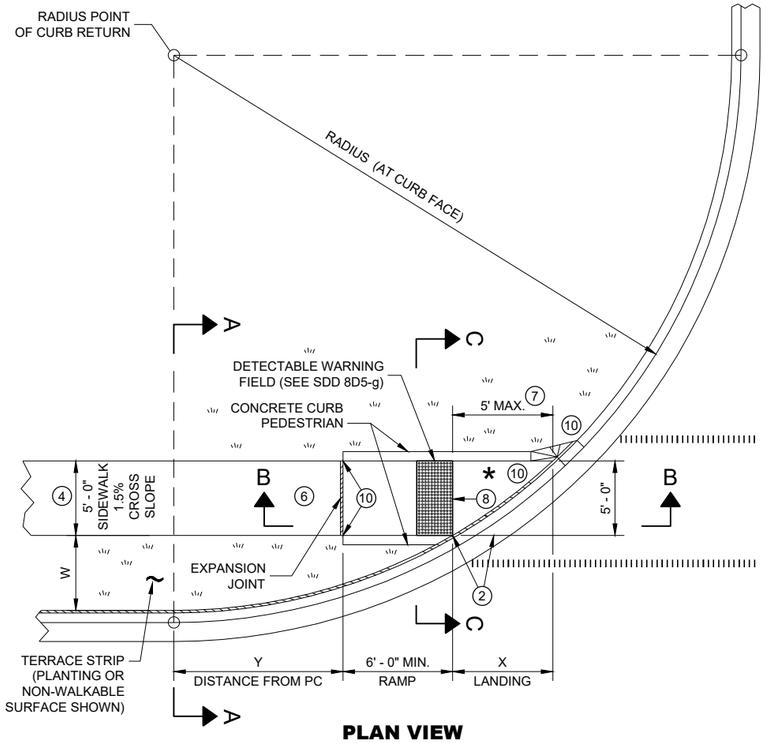


ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05 - 20c

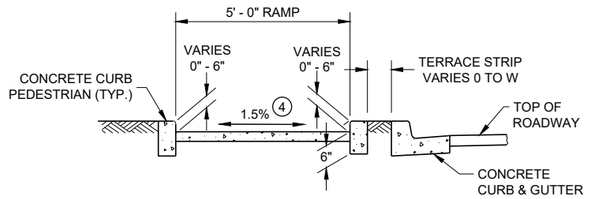


PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

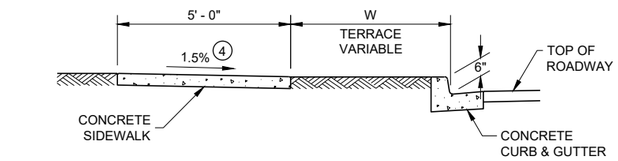
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

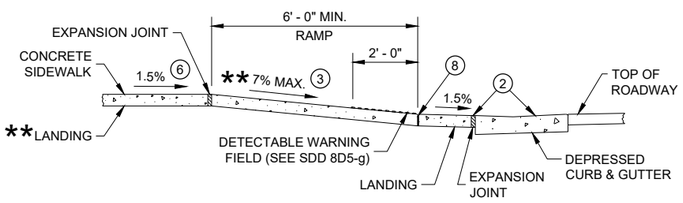
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



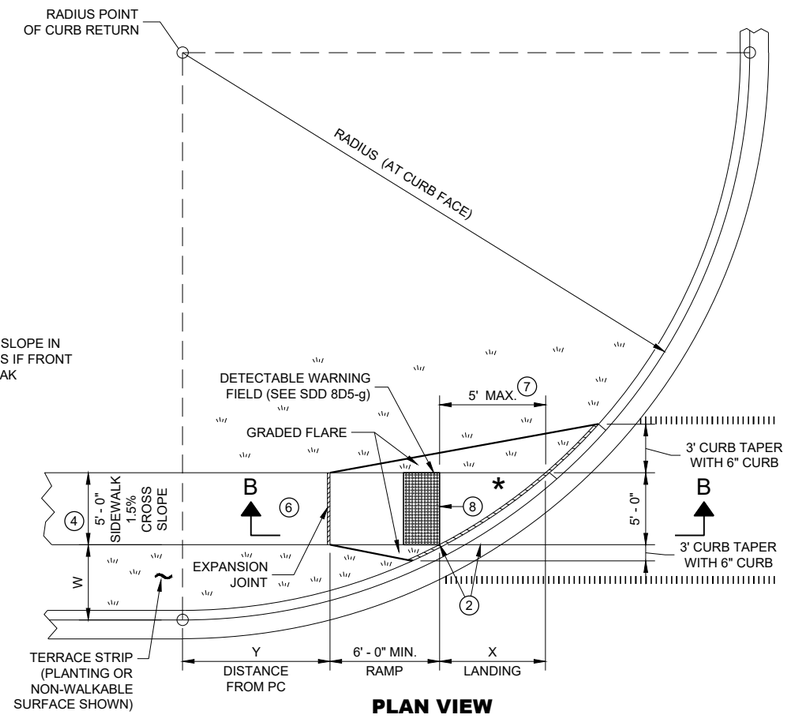
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

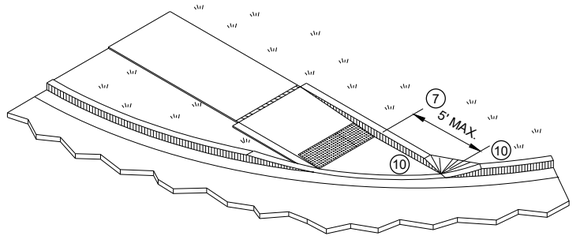
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

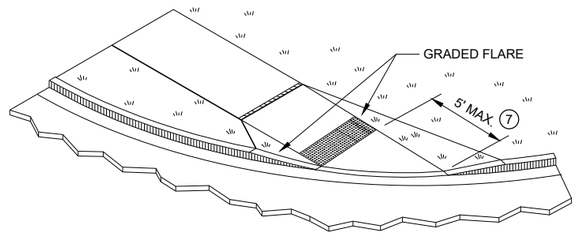


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



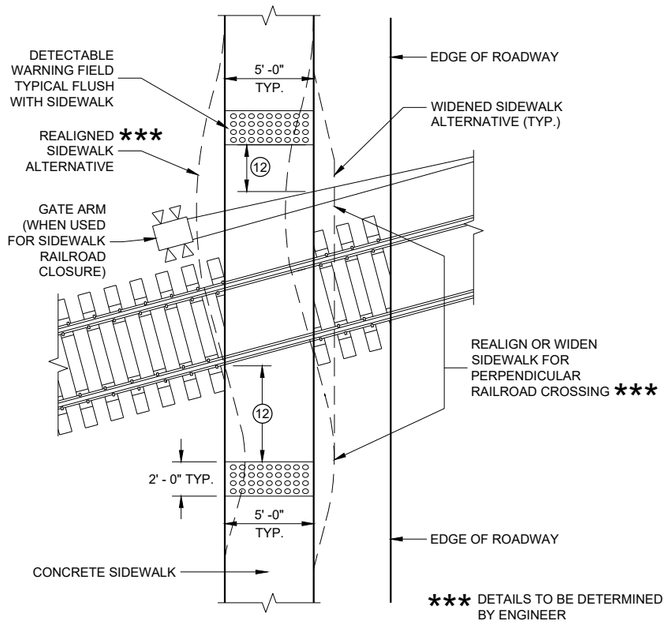
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

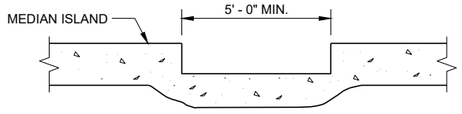
6

SDD 08D05 - 20d

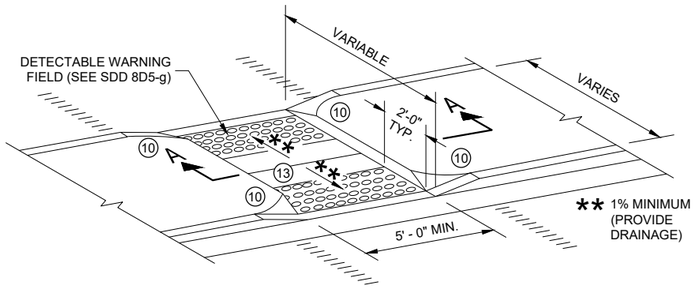


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

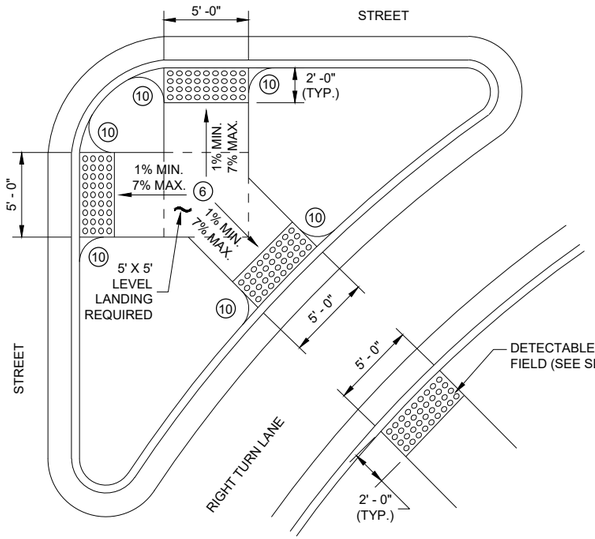
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

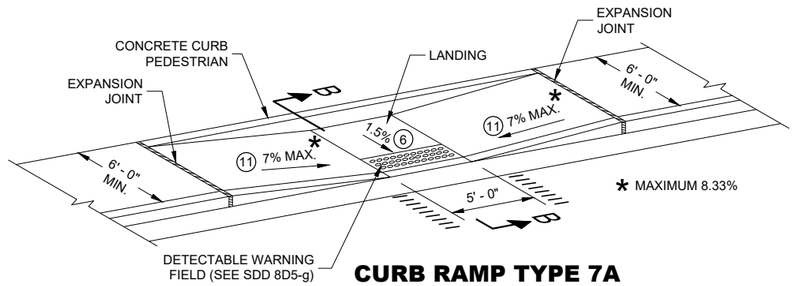
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

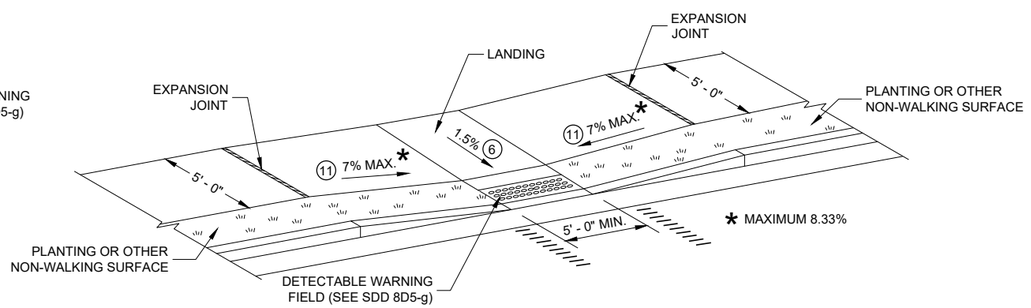
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

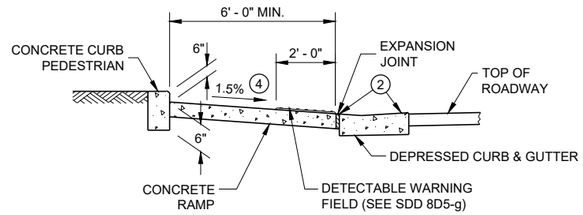
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

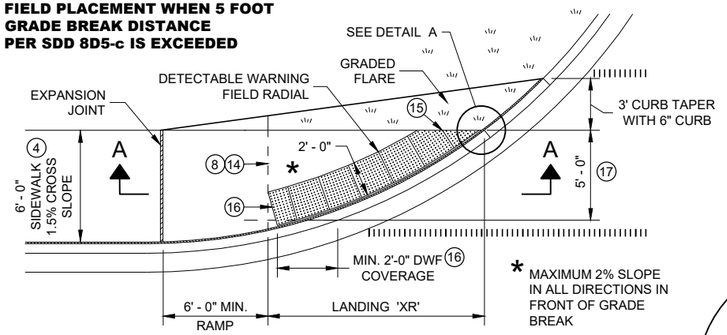


SECTION B - B FOR TYPE 7A

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

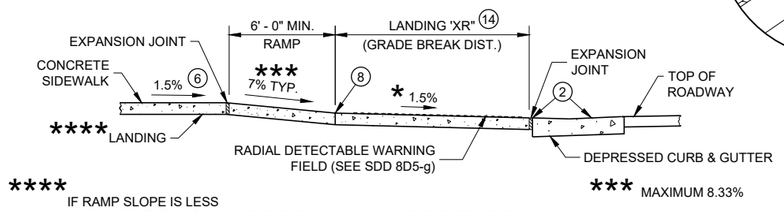
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

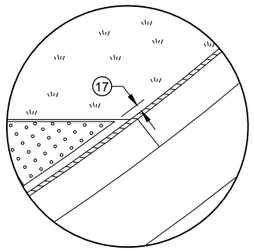
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1



DETAIL A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

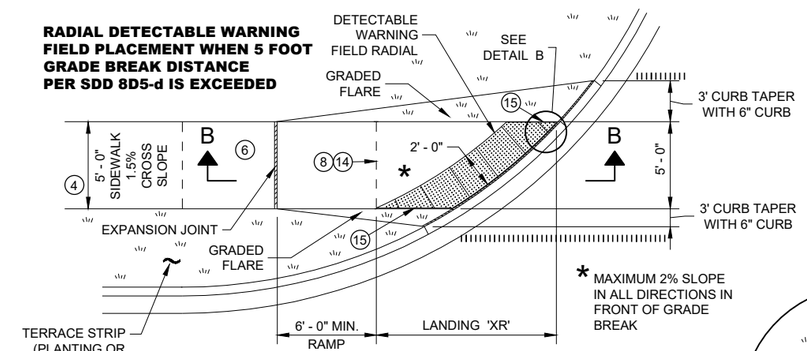
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

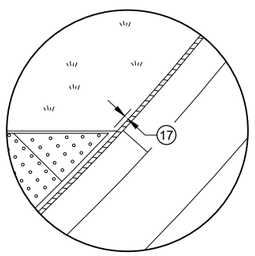
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



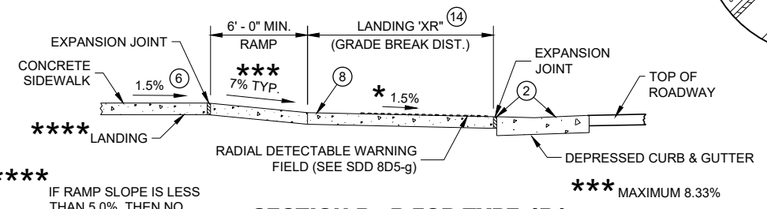
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

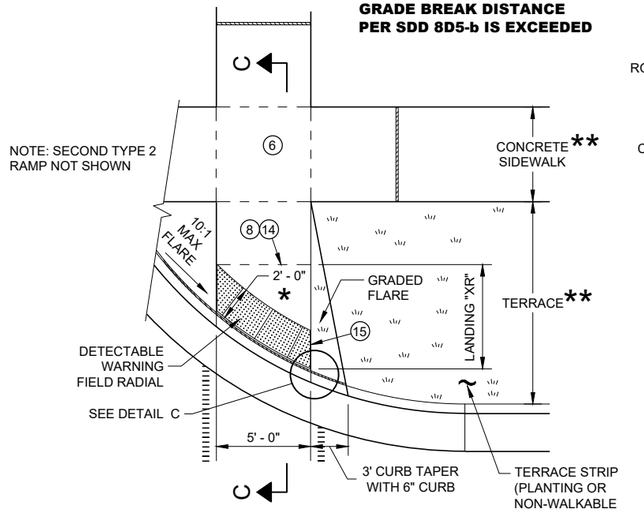


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

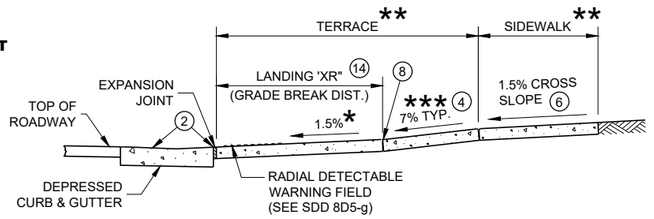


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

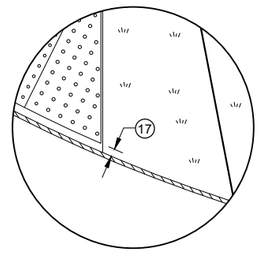


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



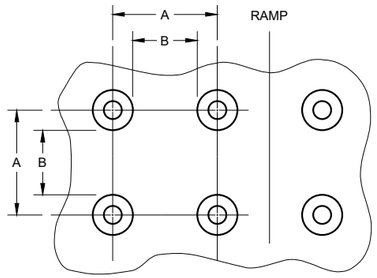
DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

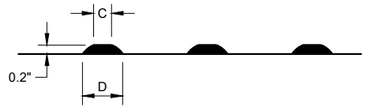
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

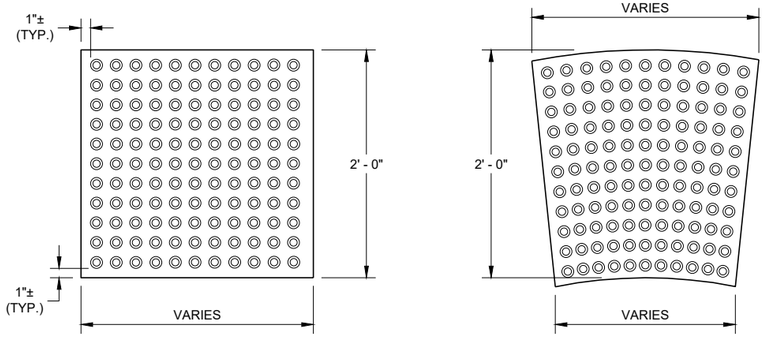


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

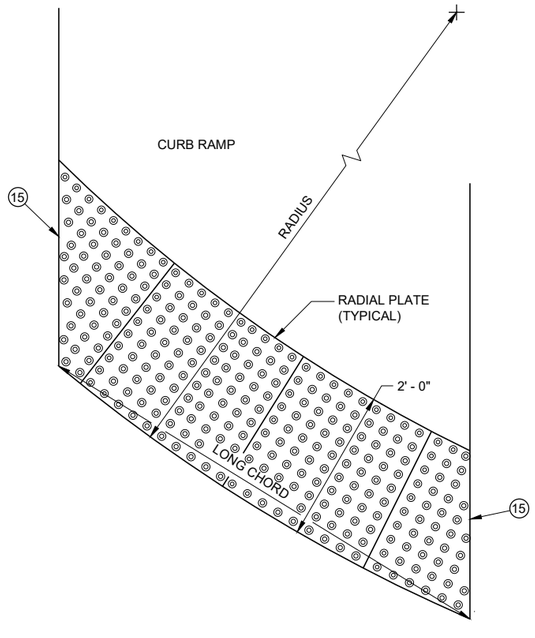
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

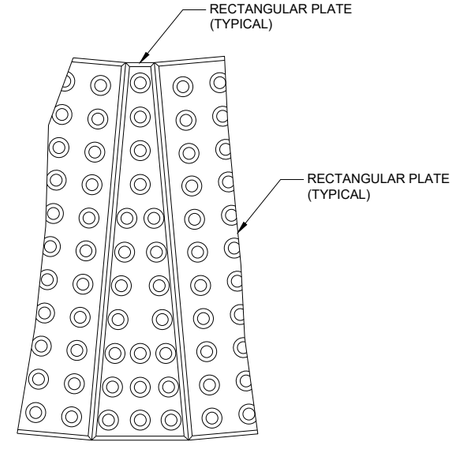
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

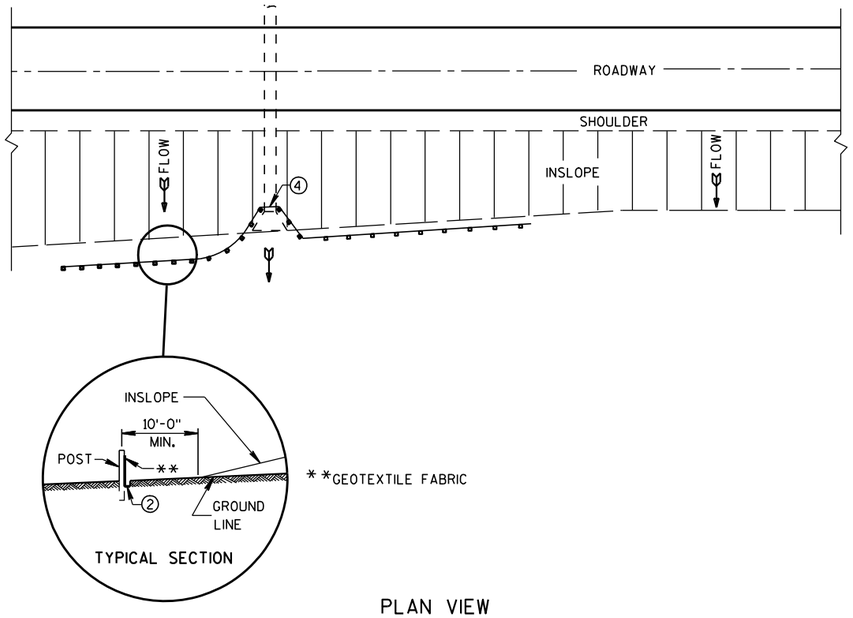
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

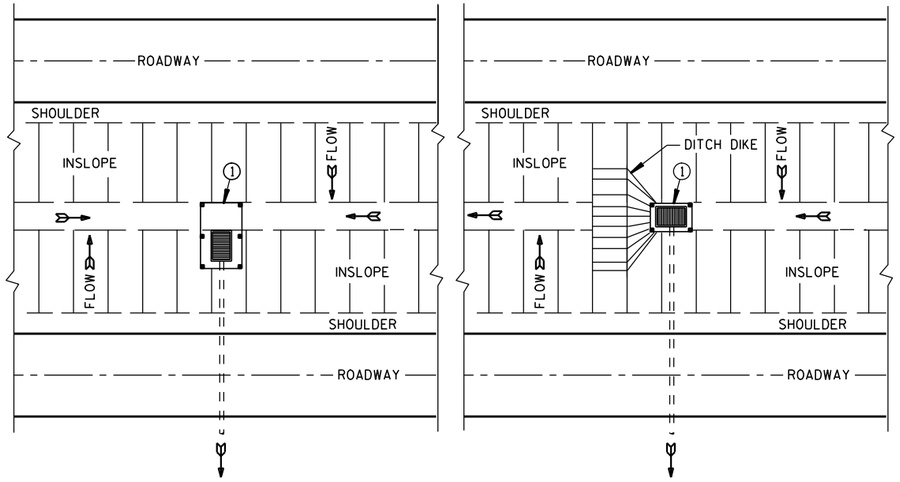
6

SDD 08D05 - 20g



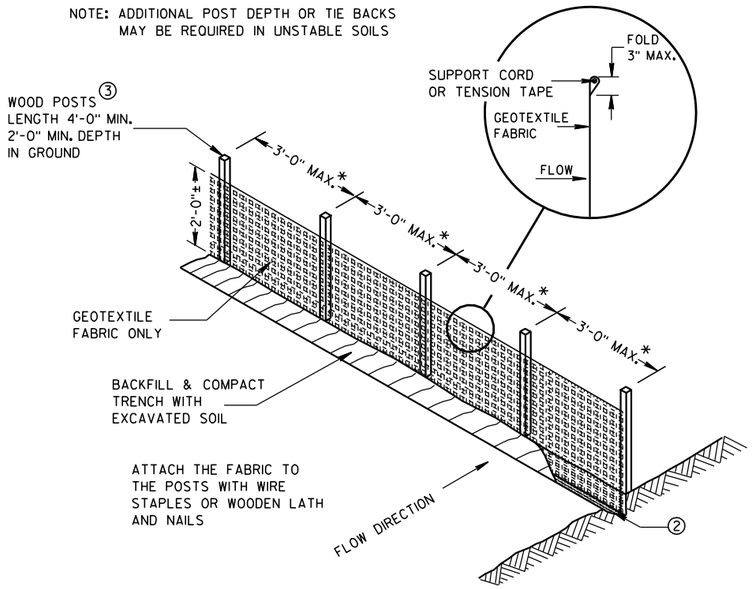
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



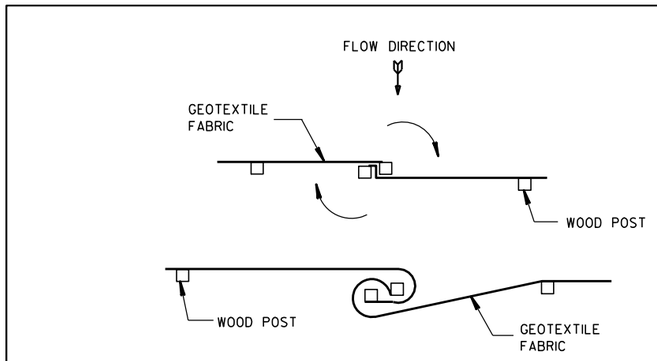
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

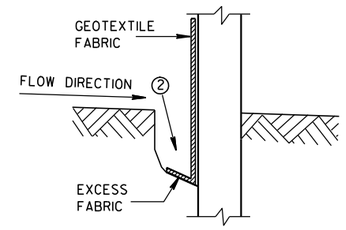


JOINING TWO LENGTHS OF SILT FENCE 5

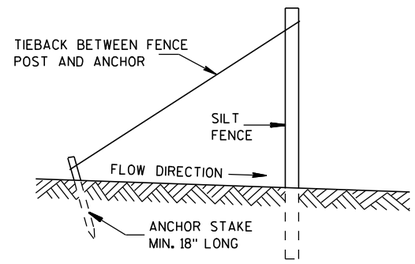
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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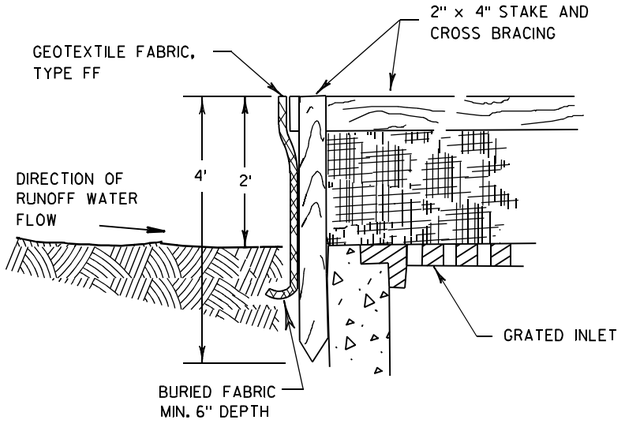
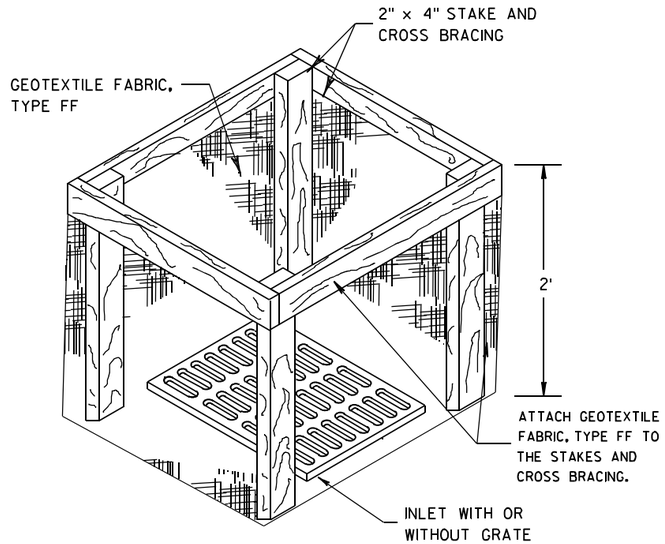
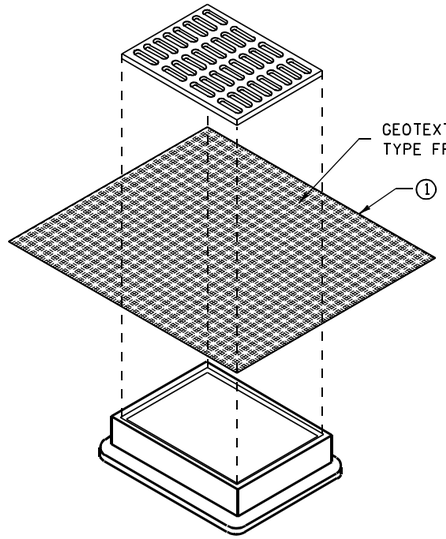
S.D.D. 8 E 9-6



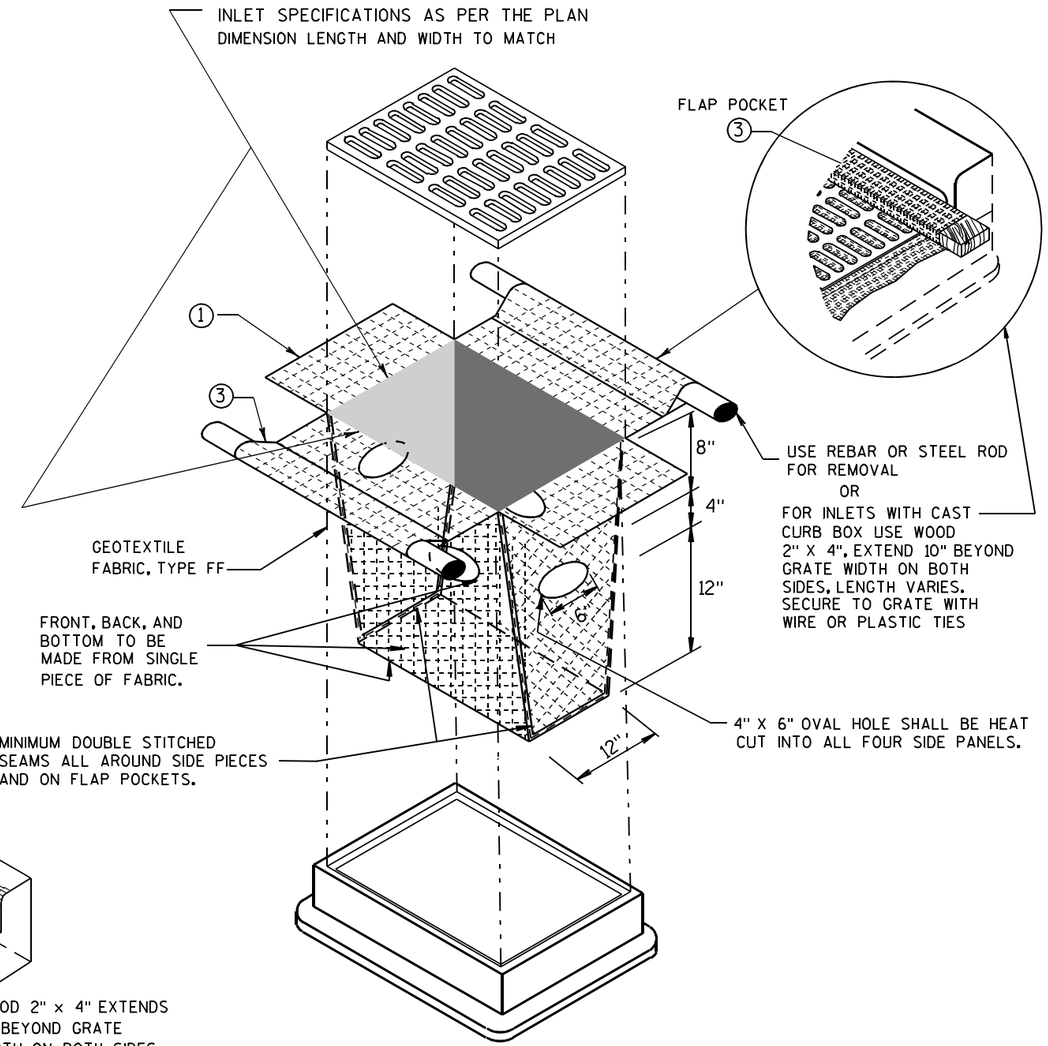


INLET PROTECTION, TYPE A



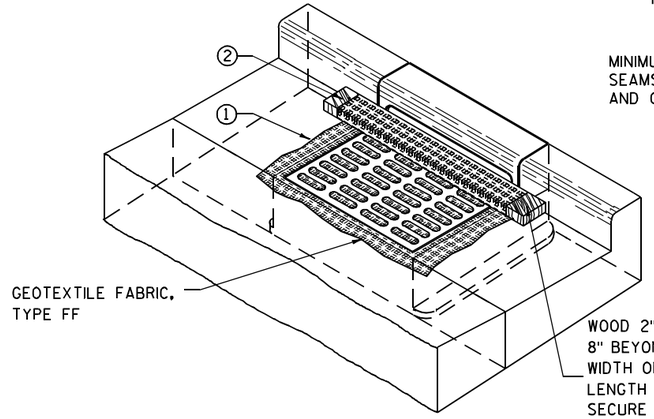
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

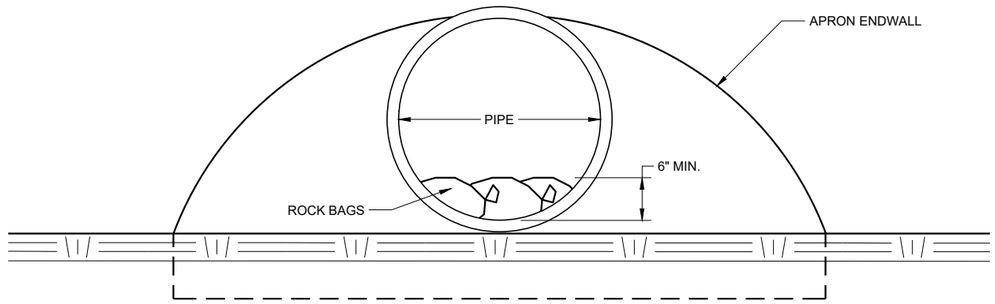
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

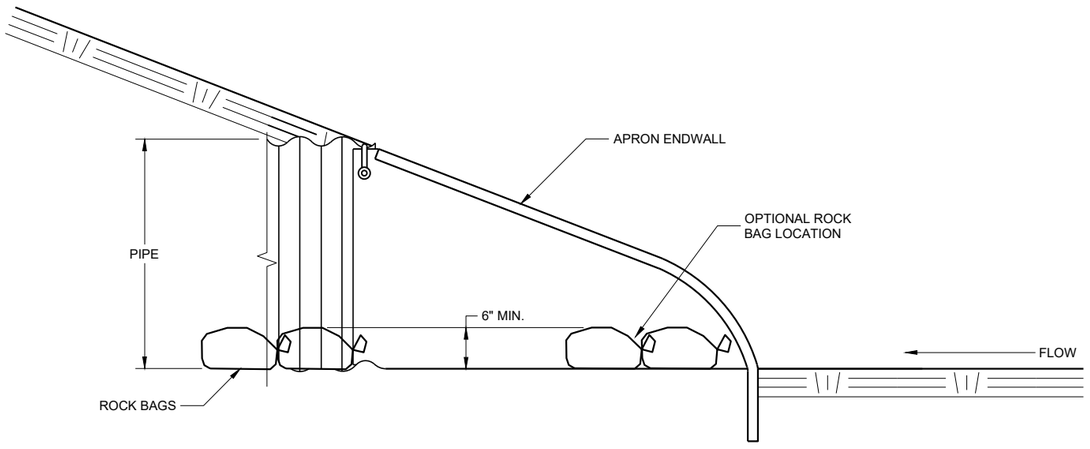
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

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

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

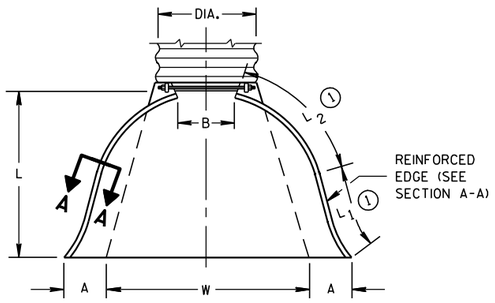
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

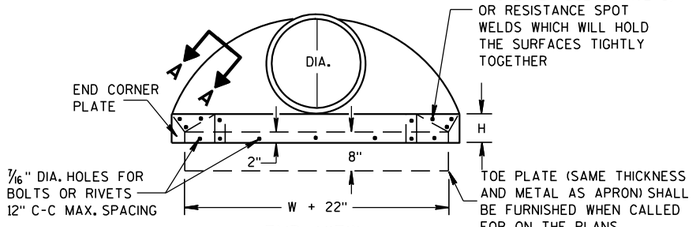
REINFORCED CONCRETE APRON ENDWALLS

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

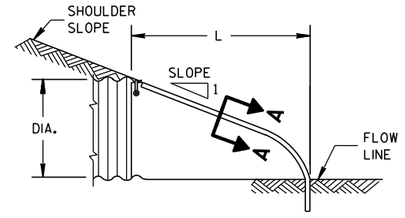
*MINIMUM
**MAXIMUM



PLAN VIEW

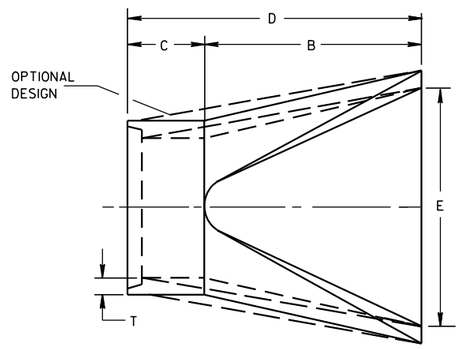


END VIEW

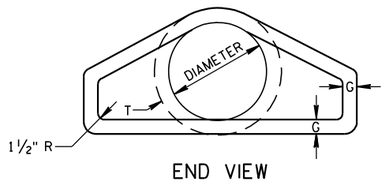


SIDE ELEVATION

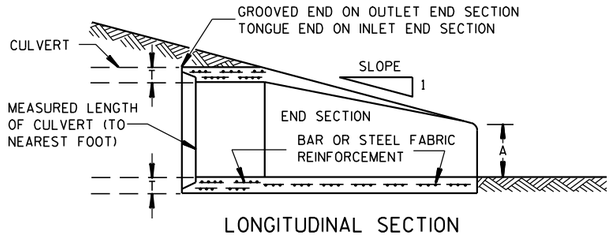
METAL ENDWALLS



PLAN

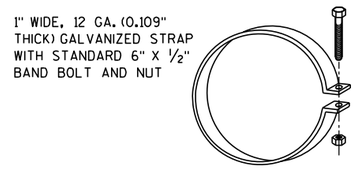


END VIEW



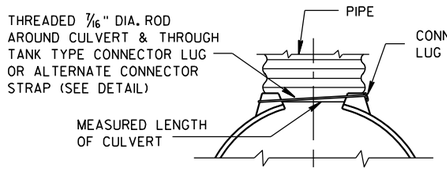
LONGITUDINAL SECTION

CONCRETE ENDWALLS

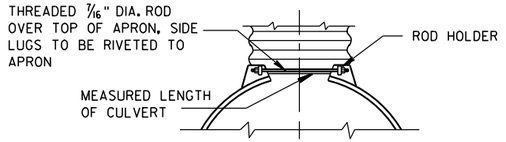


ALTERNATE FOR TYPE 1 CONNECTION

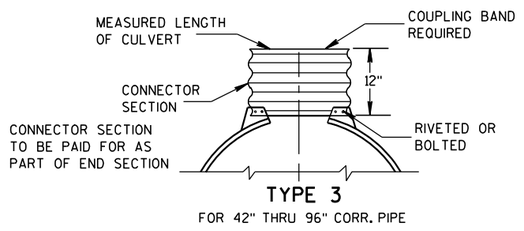
END SECTION CONNECTOR STRAP



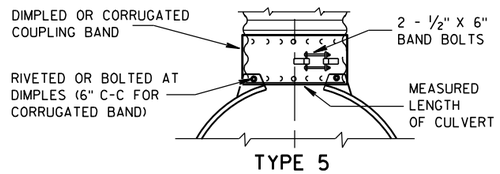
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

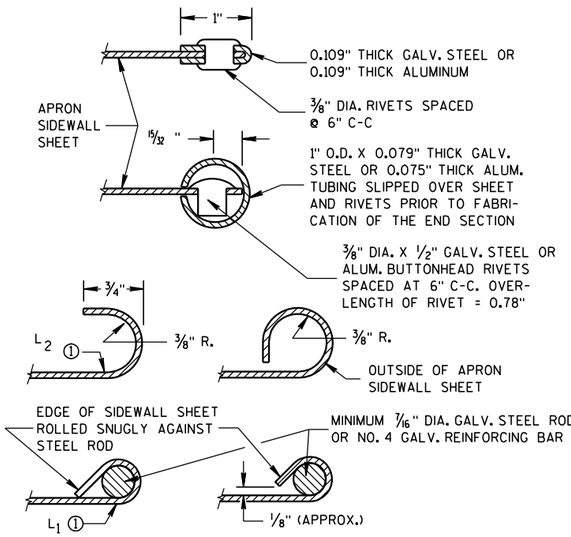
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

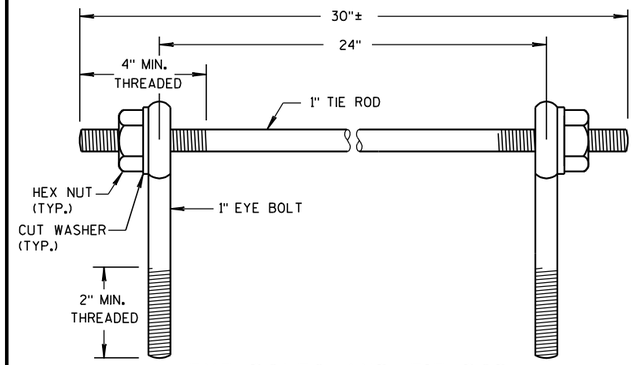
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

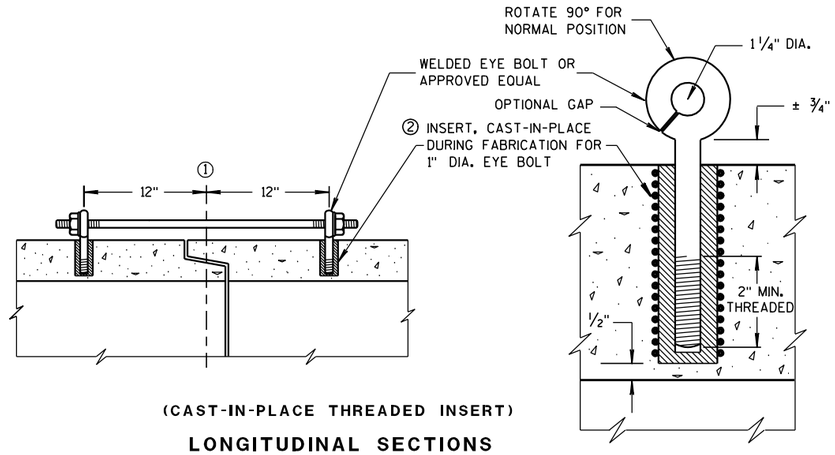
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

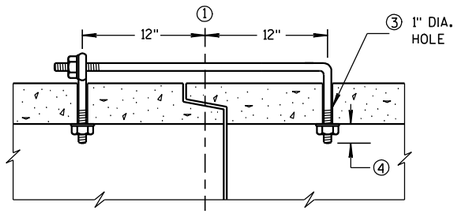
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

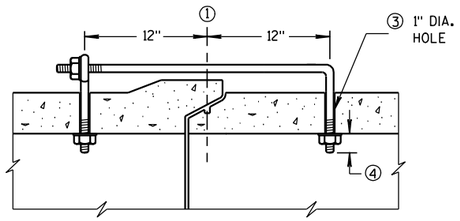
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

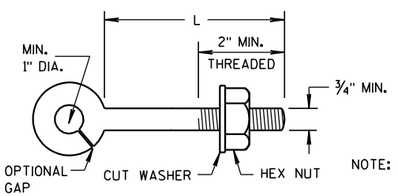


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

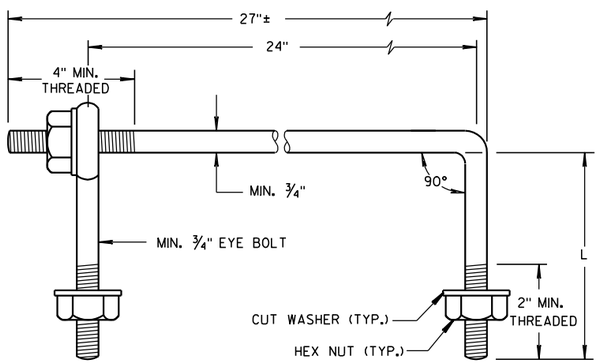
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

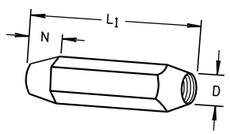
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

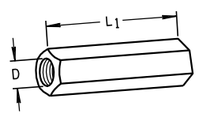
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



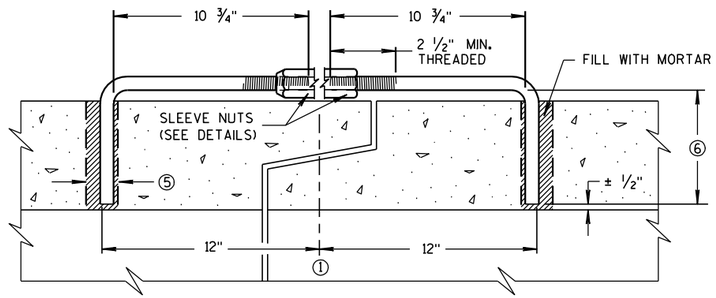
TAPERED



PLAIN

RIGHT AND LEFT THREADS

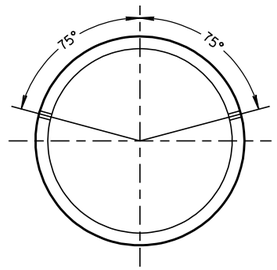
SLEEVE NUTS



LONGITUDINAL SECTION

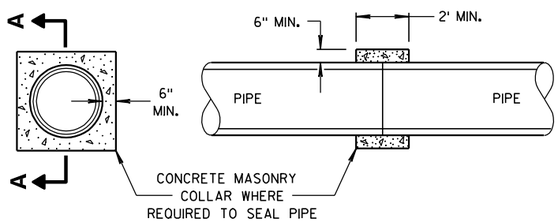
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

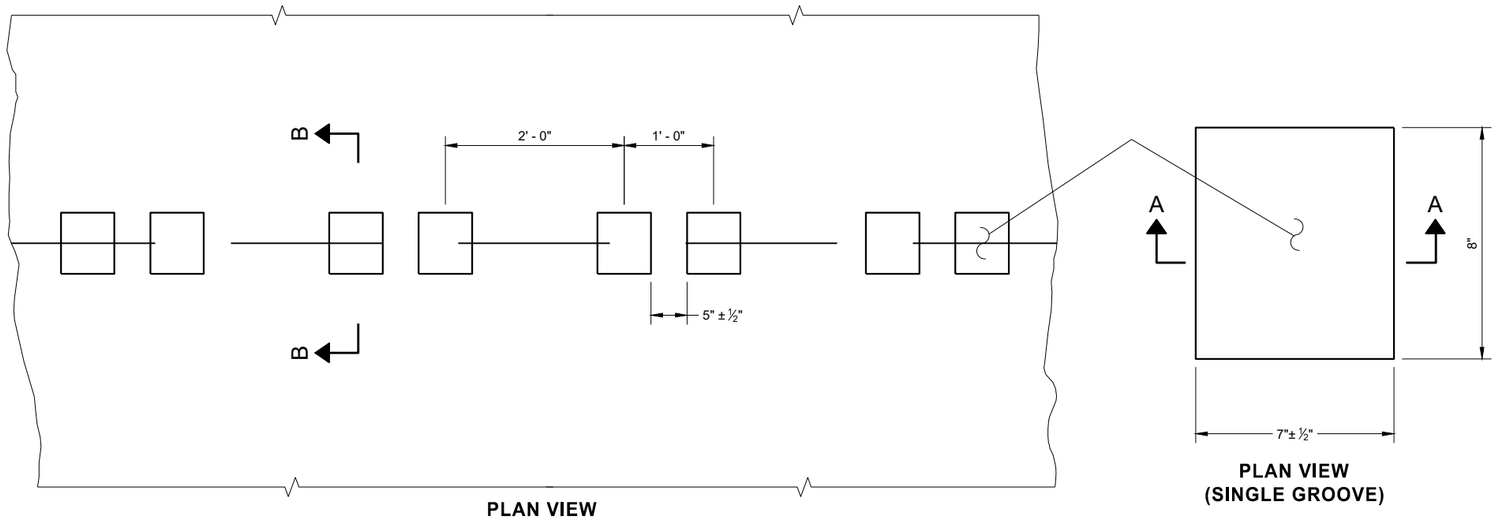
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
65
FHWA

6

S.D.D. 8 F 4-7



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

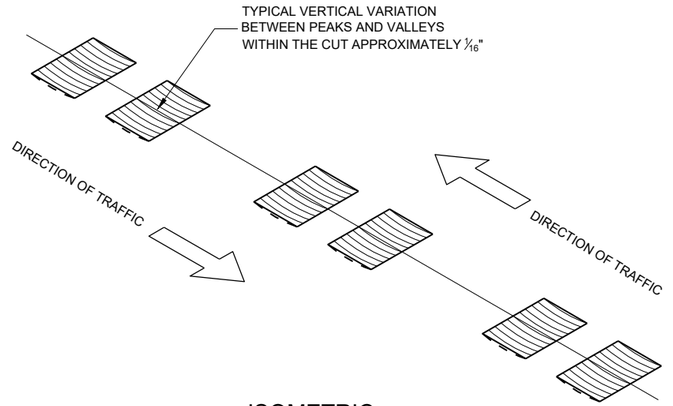
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

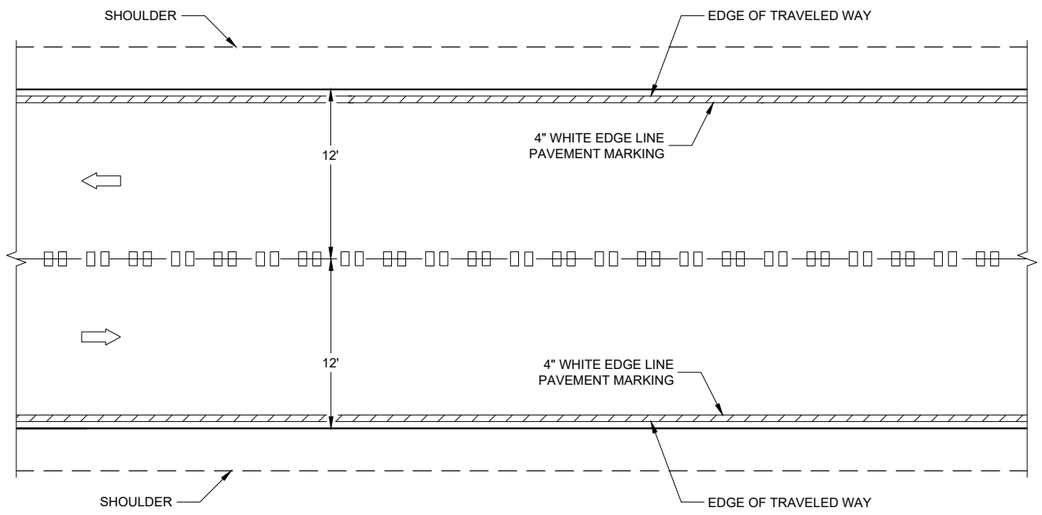
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

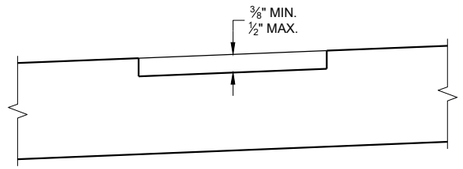
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



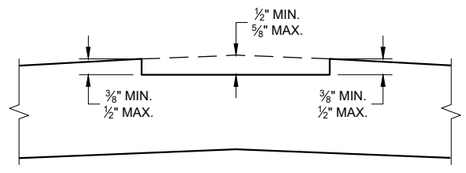
ISOMETRIC



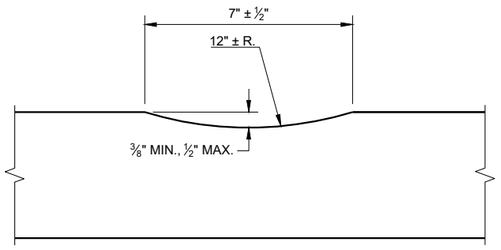
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

6

SDD 13A11 - 03a

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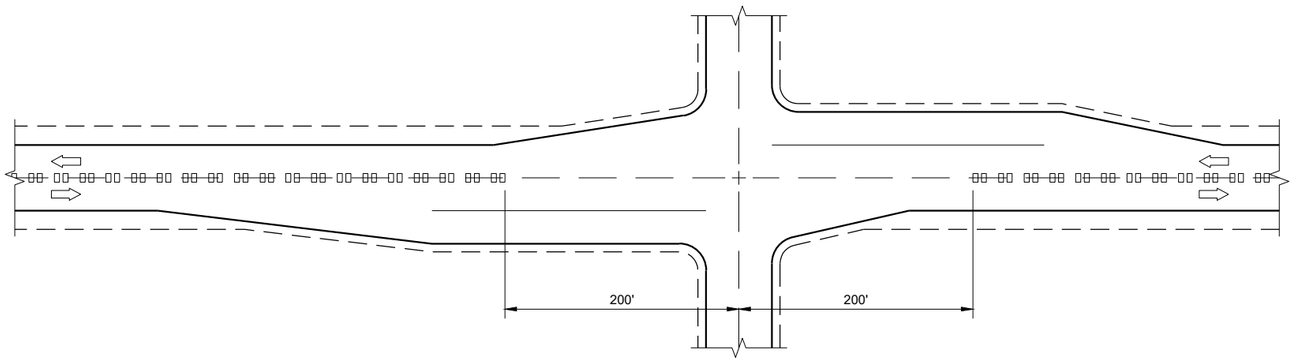
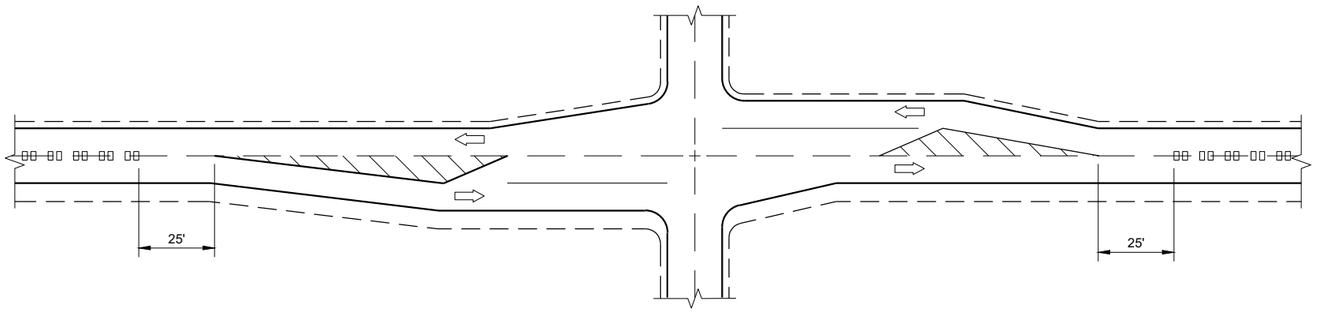
SDD 13A11 - 03a

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

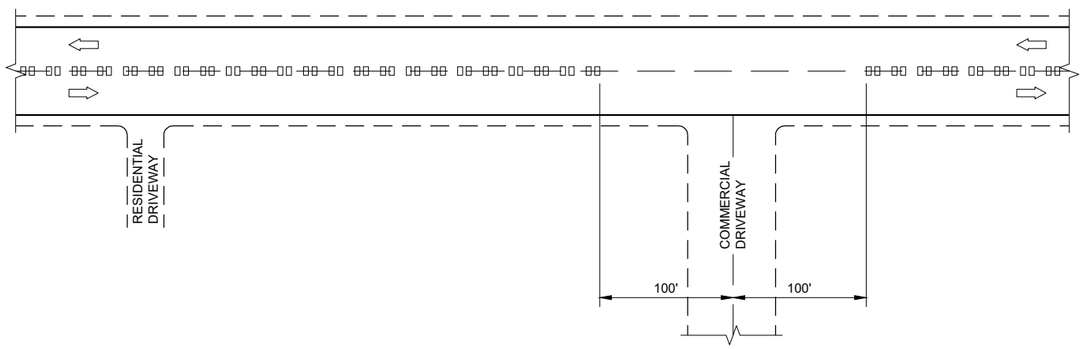
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



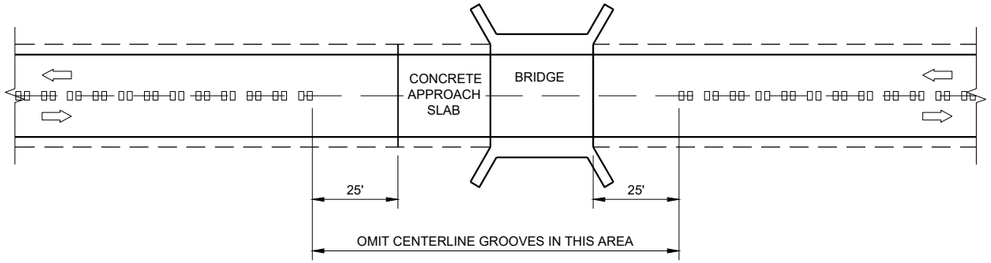
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



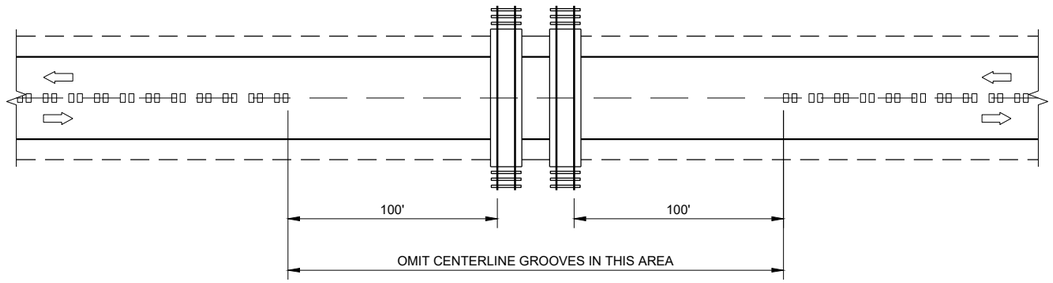
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

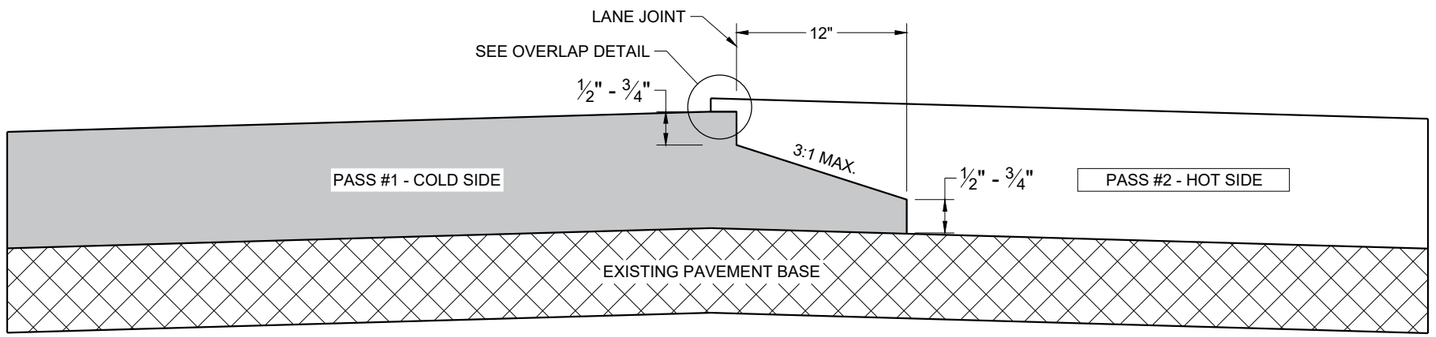
2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

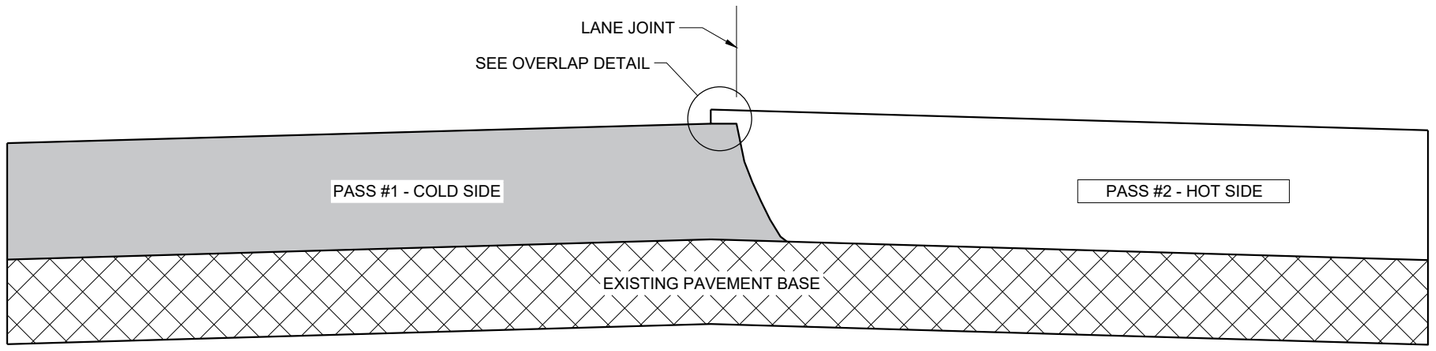
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

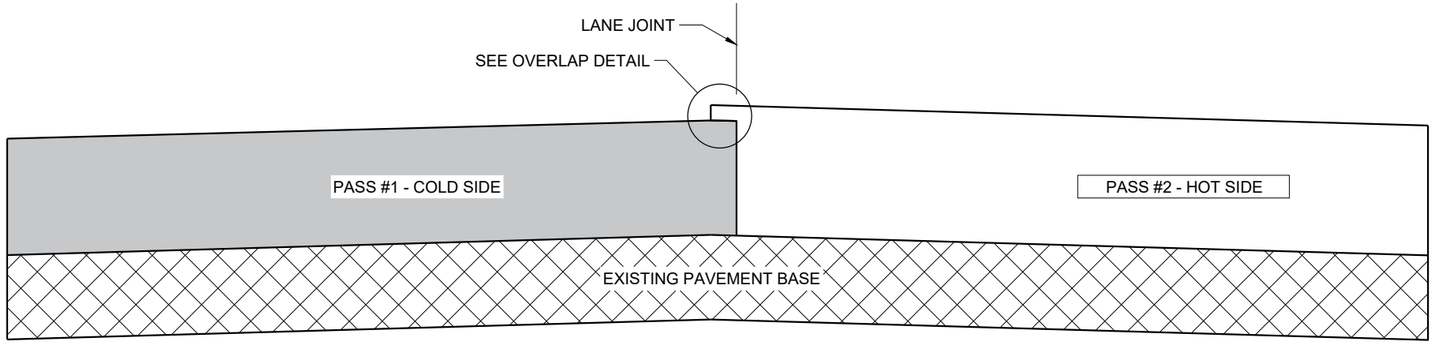
6
SDD 13A11 - 03b



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
OF MILLED LONGITUDINAL JOINT

GENERAL NOTES

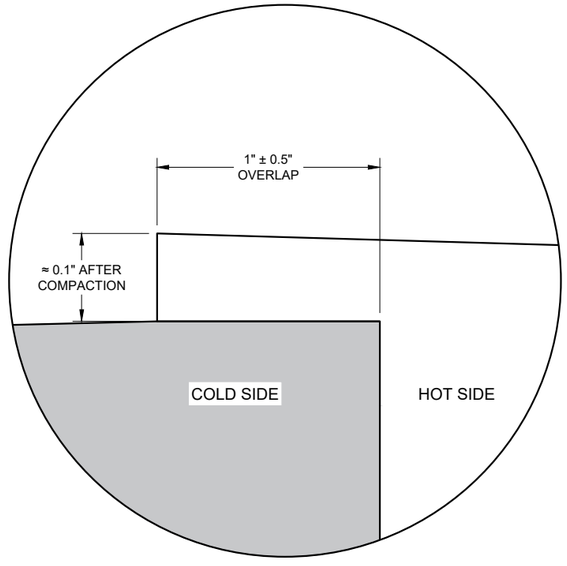
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION.

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

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

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



OVERLAP DETAIL (TYPICAL)

6

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SDD 13C19 - 02

SDD 13C19 - 02

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

(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.

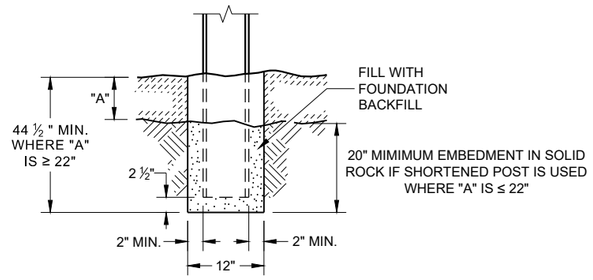
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

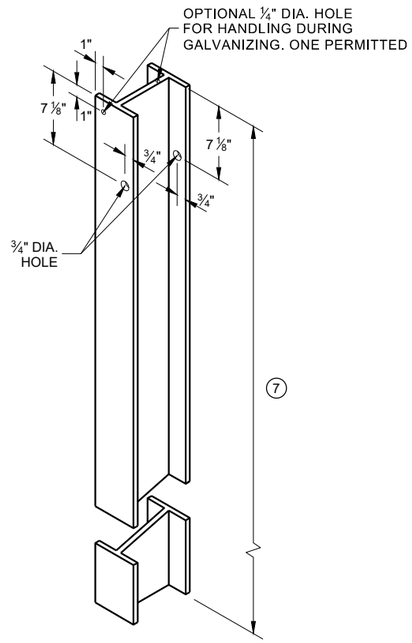
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

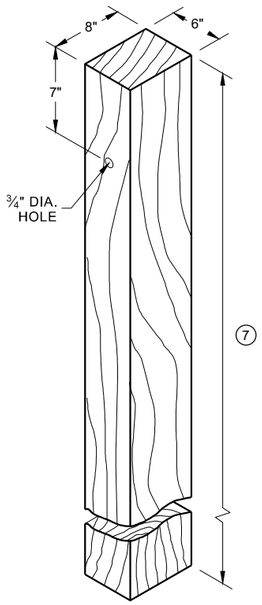
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



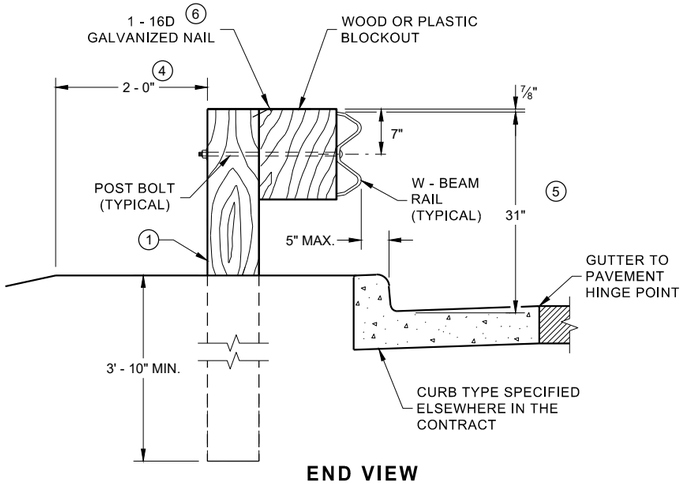
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



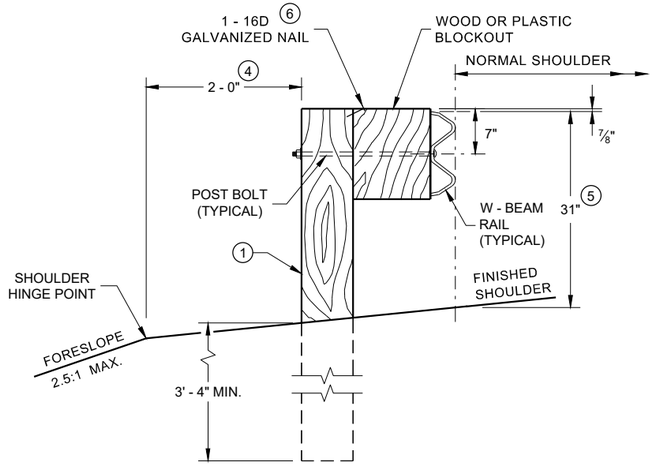
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



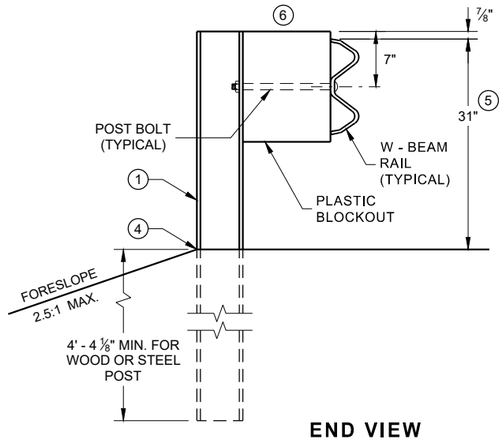
WOOD POST (6" X 8") NOMINAL (1)



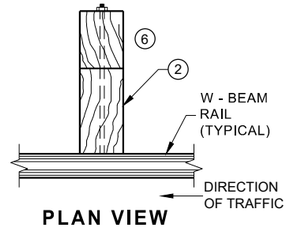
END VIEW
LOCATED ALONG A CURBED ROADWAY



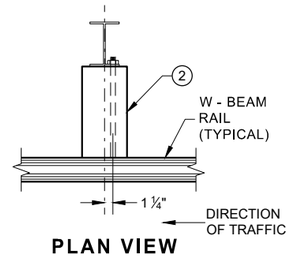
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



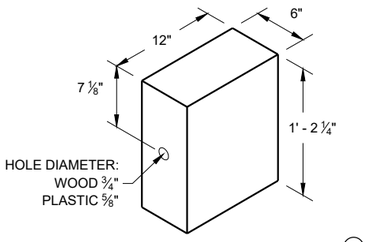
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



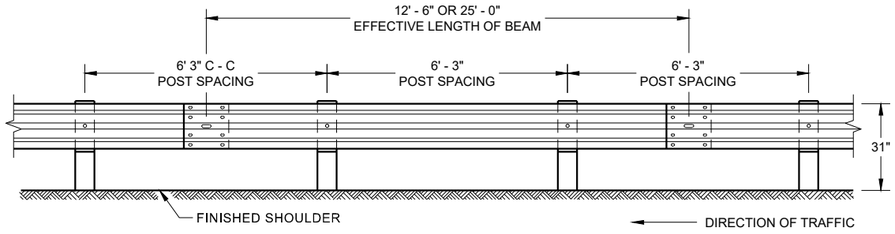
PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



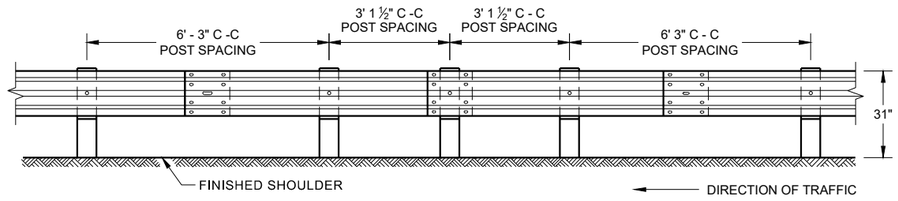
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

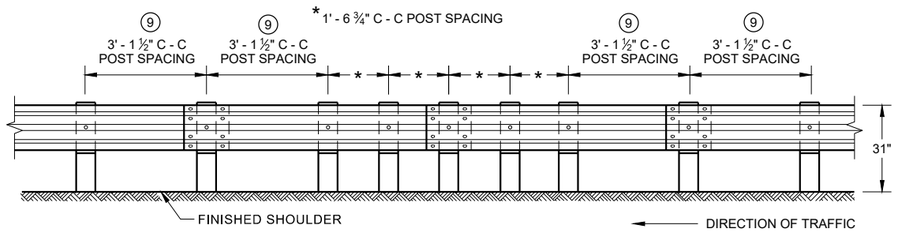
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



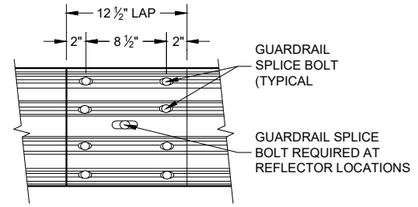
FRONT VIEW
POST SPACING STANDARD INSTALLATION



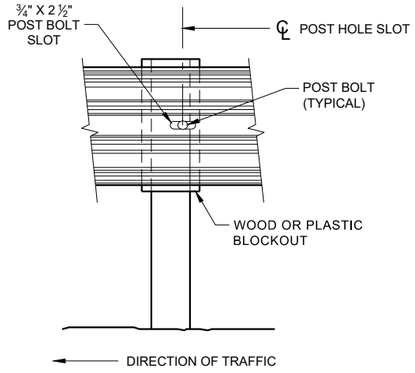
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



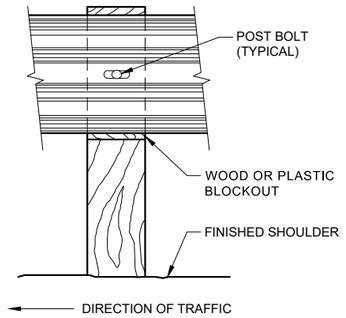
FRONT VIEW
QUARTER POST SPACING (QS)



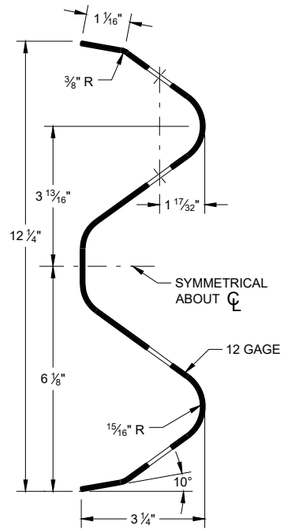
FRONT VIEW
MID-SPAN BEAM SPLICE



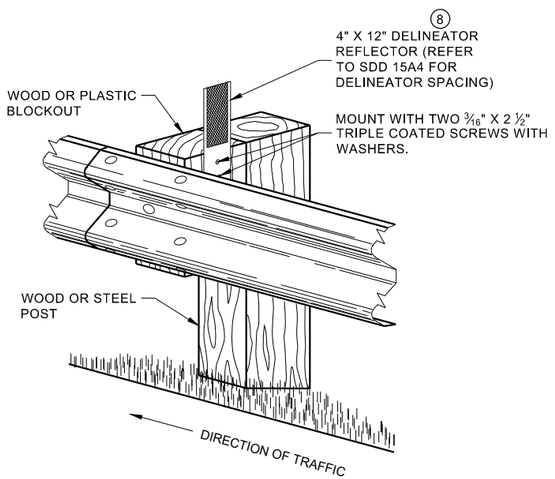
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

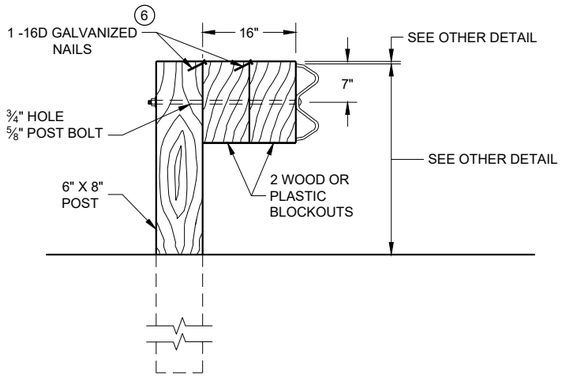
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

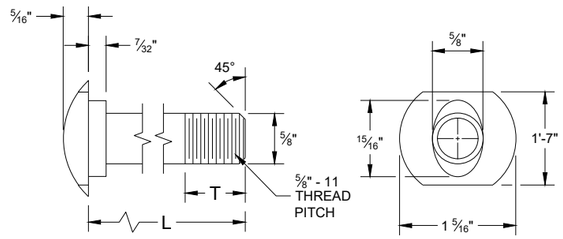


DETAIL FOR 16" BLOCKOUT DEPTH

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.

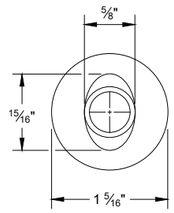
NOTE:

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.

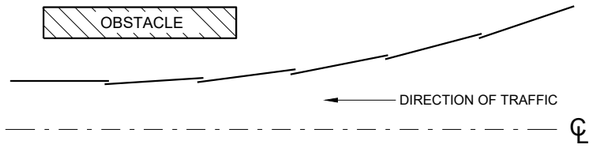


POST BOLT TABLE

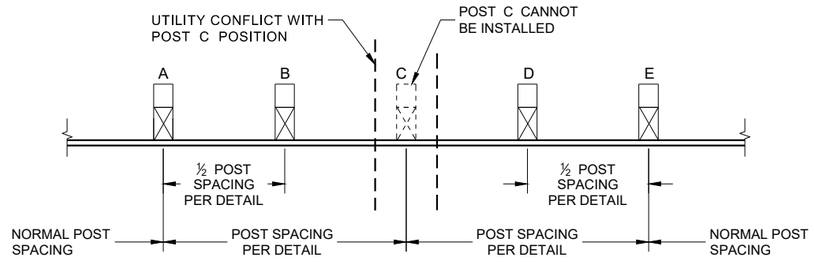
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



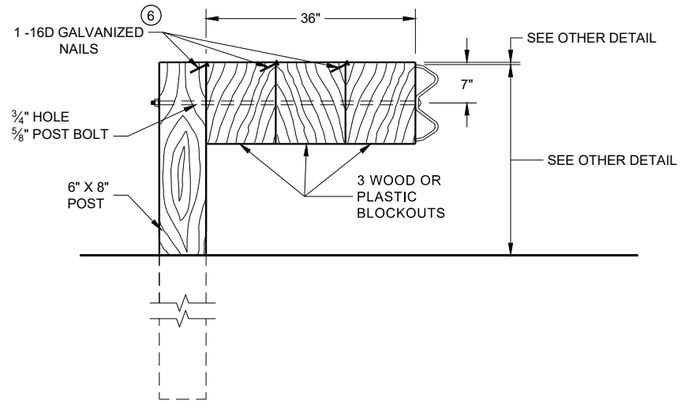
ALTERNATE BOLT HEAD



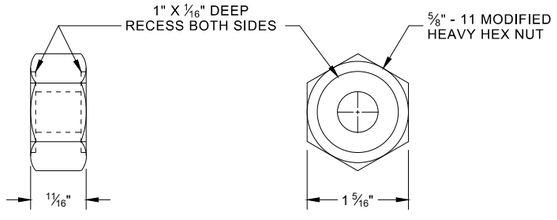
PLAN VIEW
BEAM LAPPING DETAIL



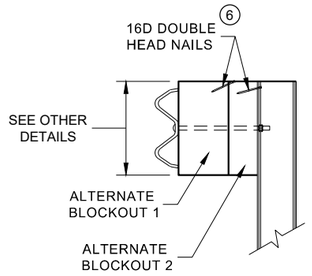
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



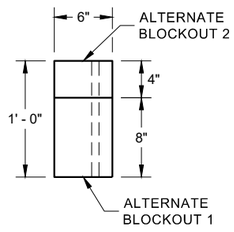
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

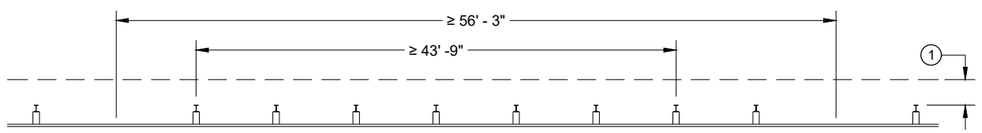
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

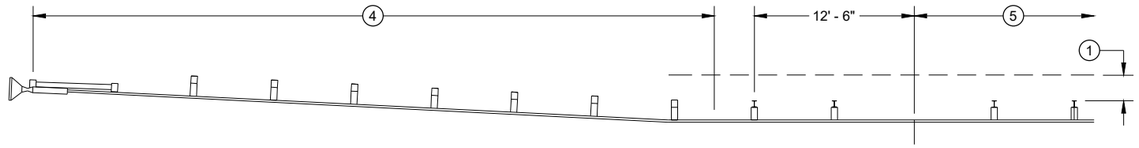
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

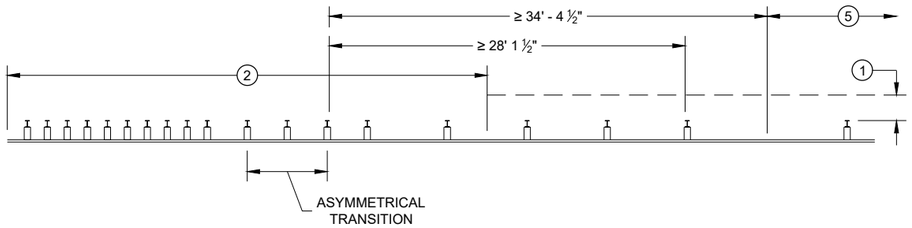
SDD 14B42 - 06c



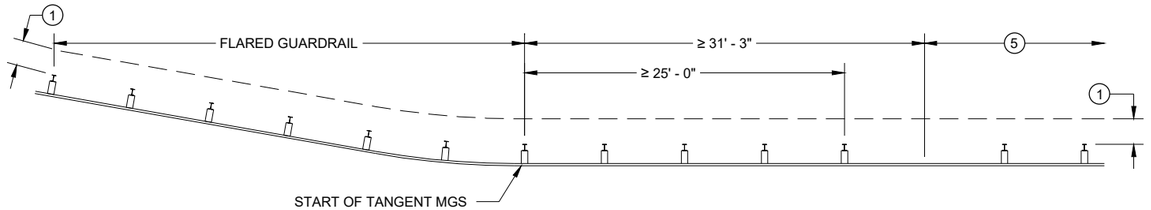
MISSING POST IN NORMAL BEAM GUARD RUN



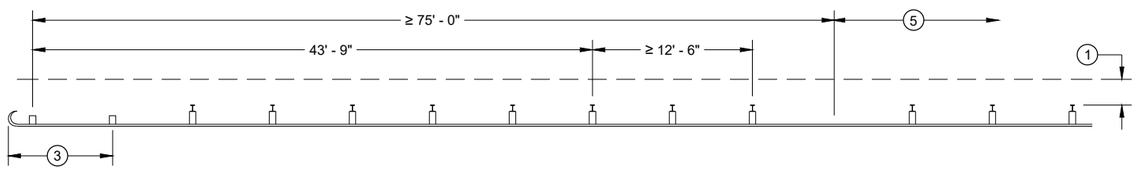
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



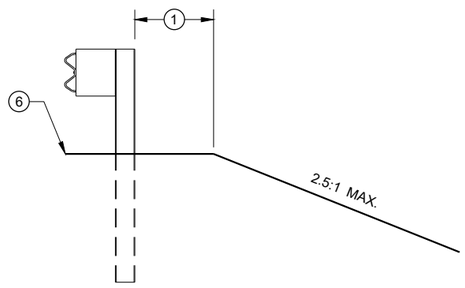
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

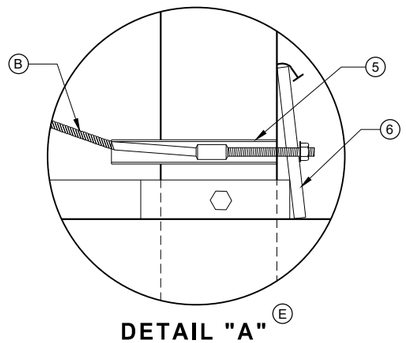
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

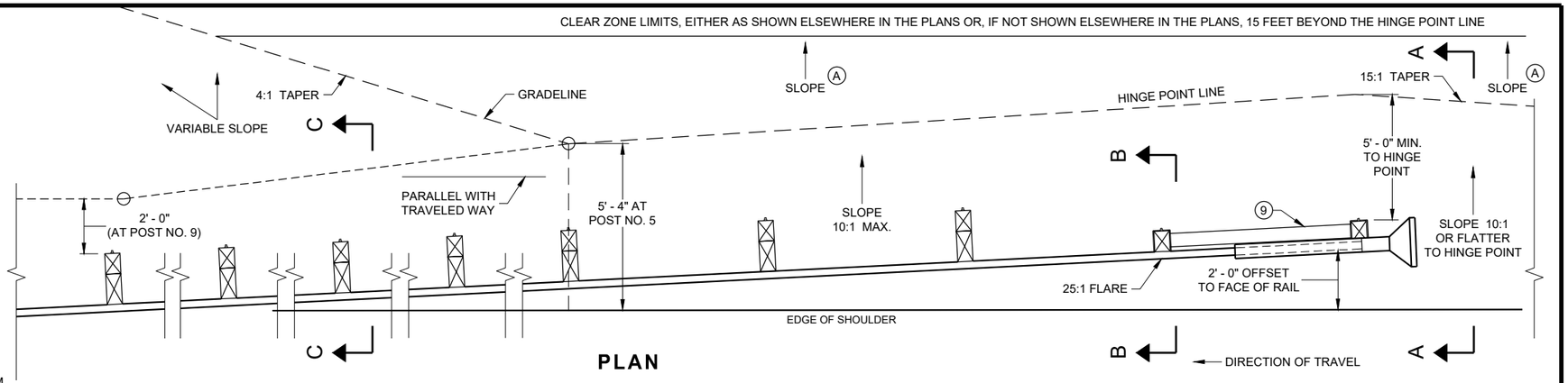
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

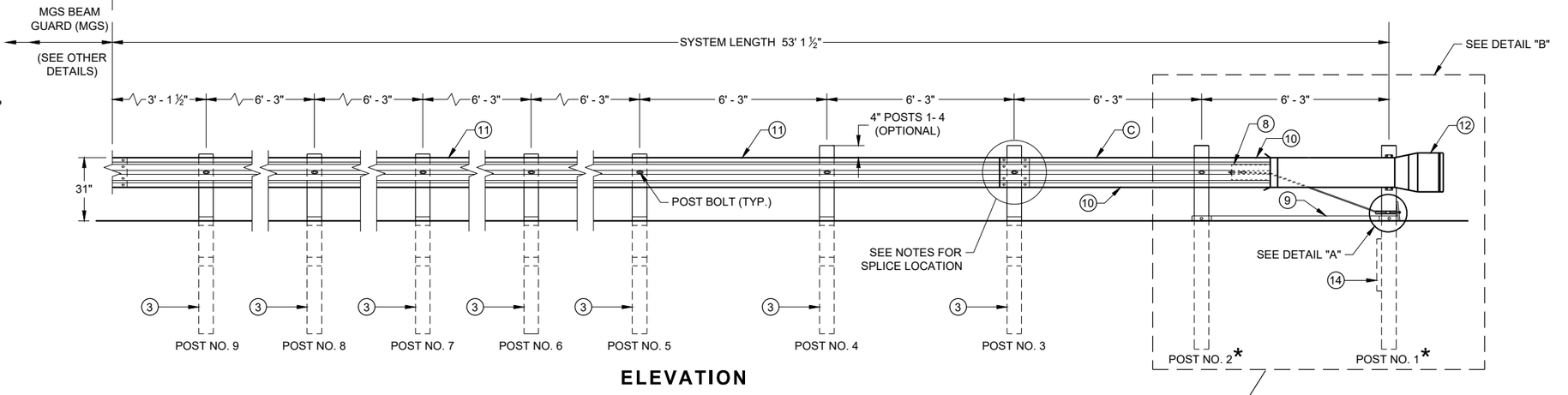
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



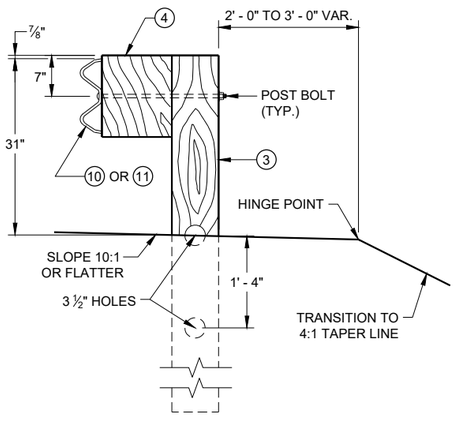
DETAIL "A" (E)



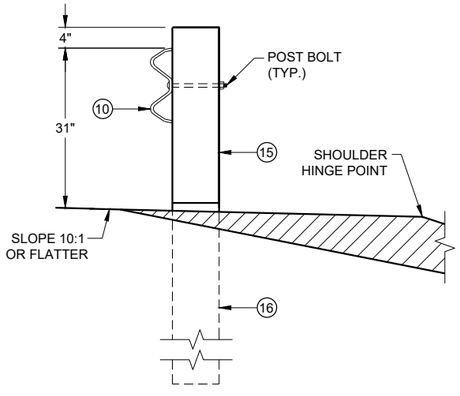
PLAN



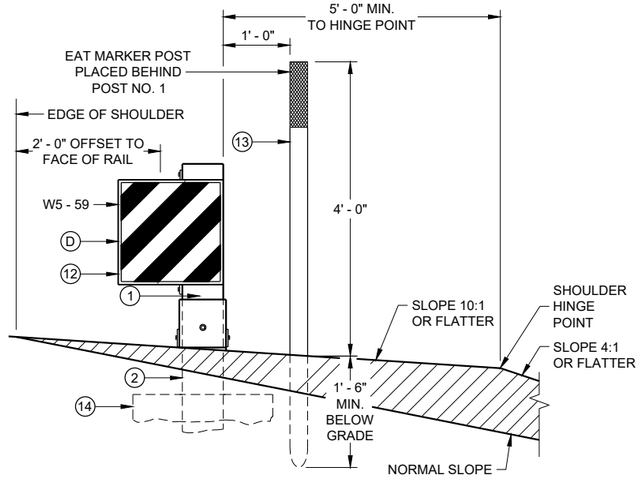
ELEVATION



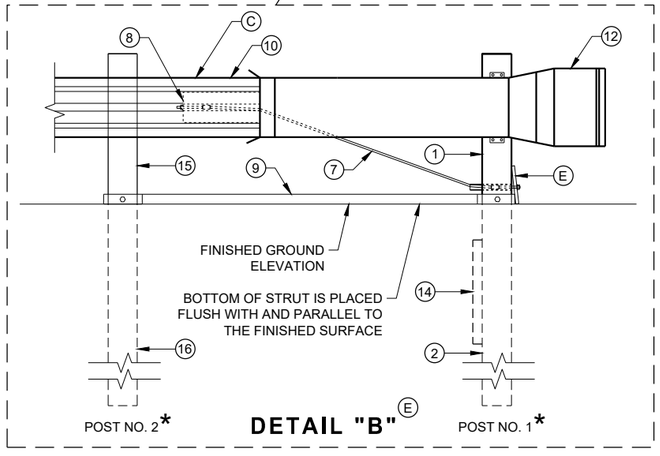
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



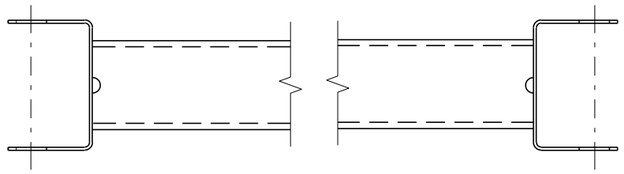
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

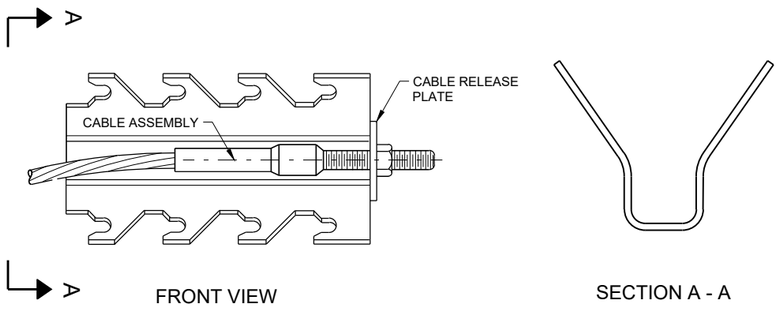
SDD 14B44 - 04a



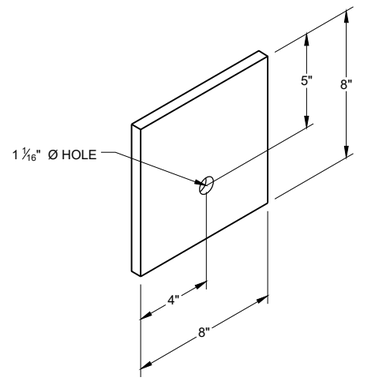
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

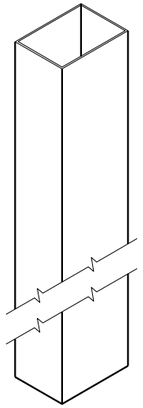
6

SDD 14B44 - 04b

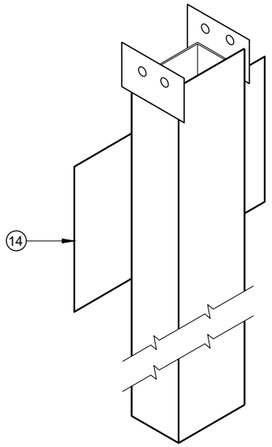
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

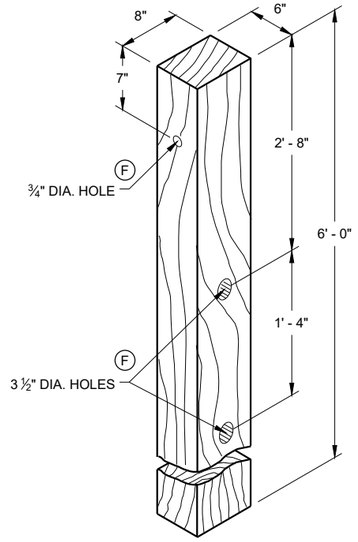
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



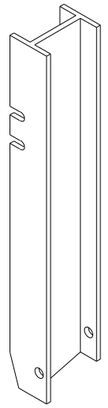
UPPER POST NO. 1 (1) (E)



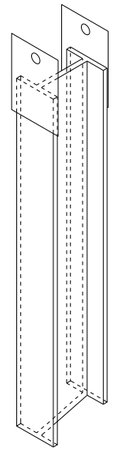
LOWER POST NO. 1 (2) (E)



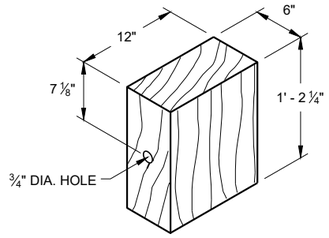
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



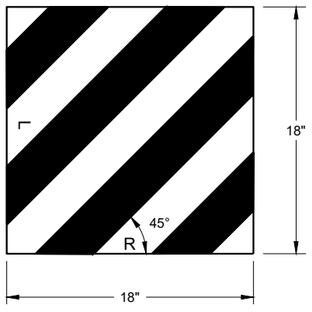
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

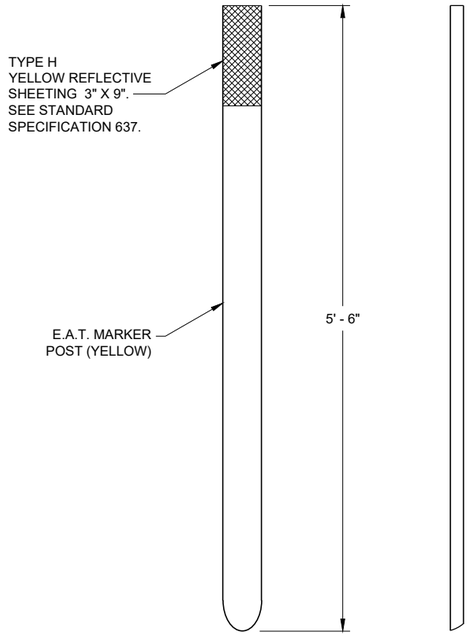


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



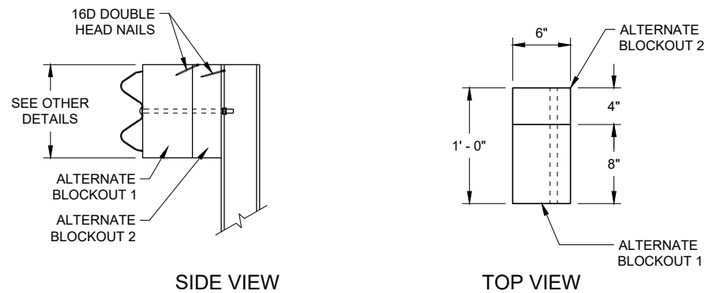
W5 - 59

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)

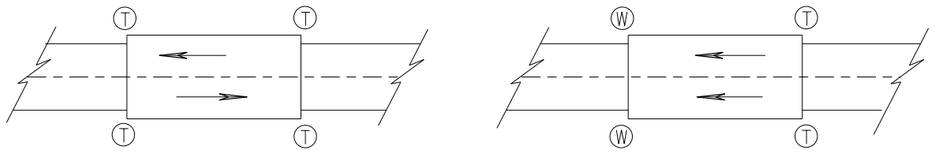
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

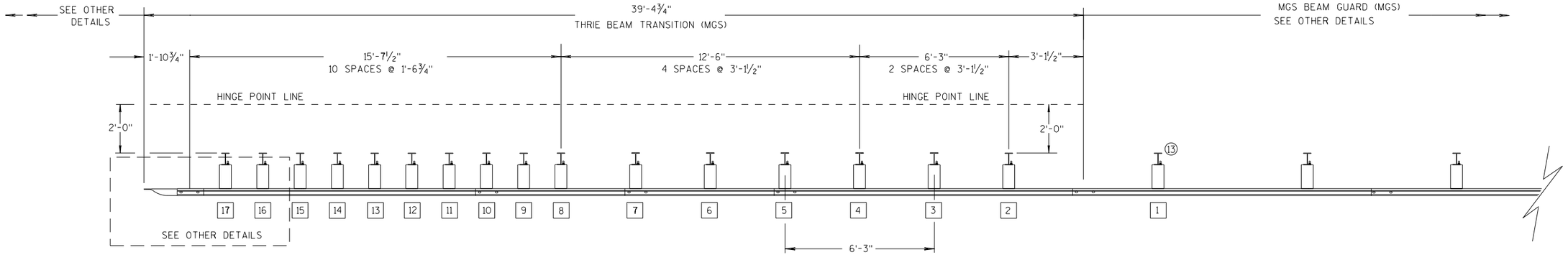
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

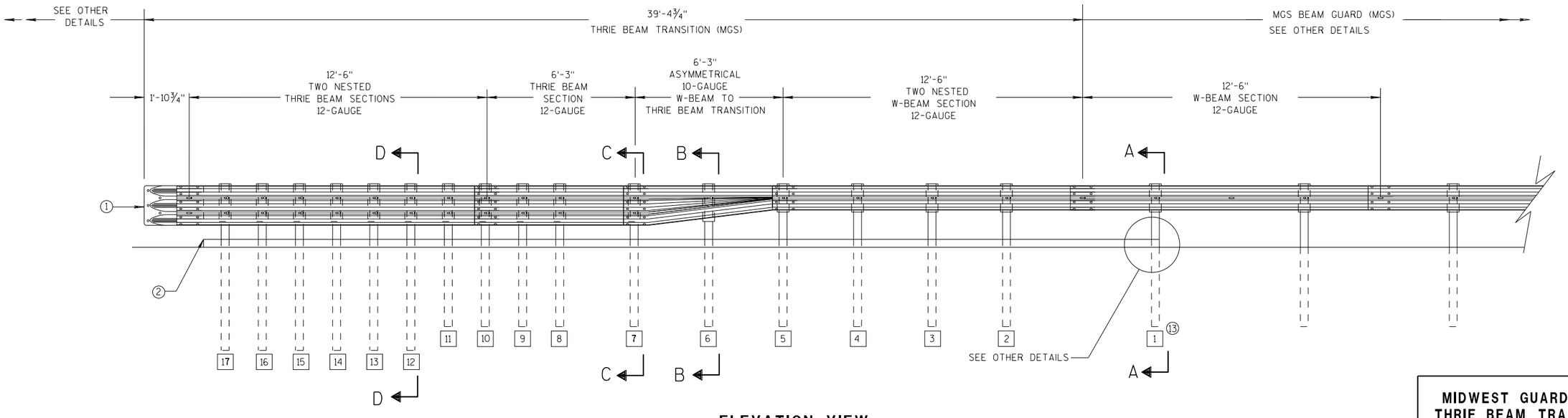
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

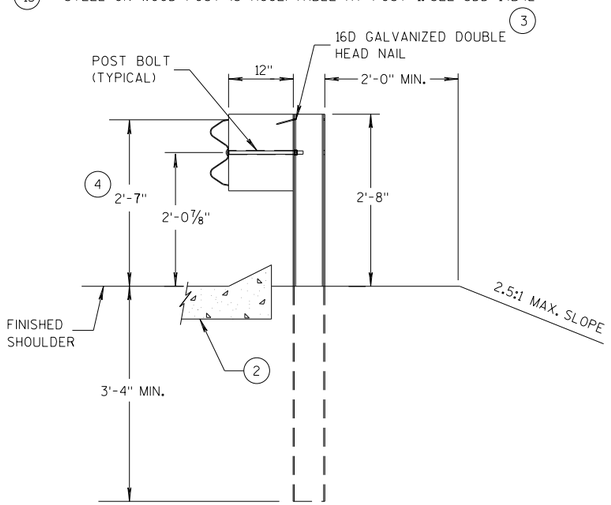
GENERAL NOTES

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

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

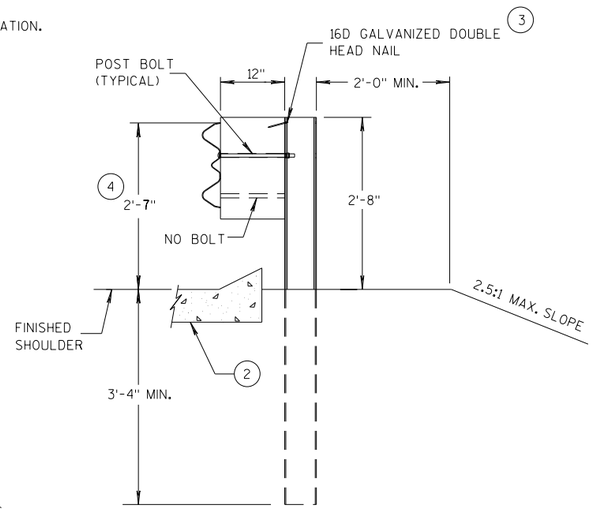
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



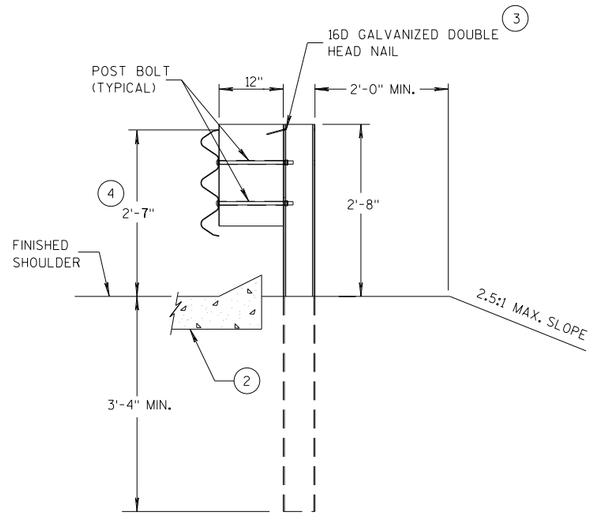
SECTION A-A (13)

POSTS 1-5



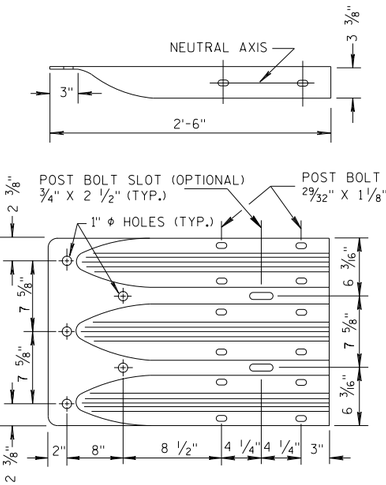
SECTION B-B

POST 6

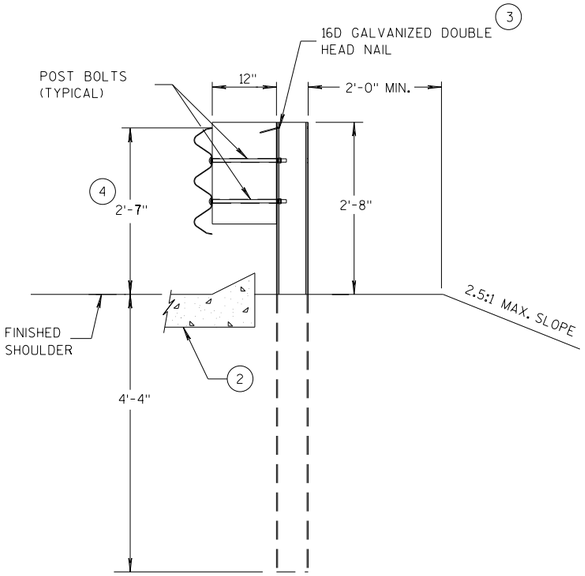


SECTION C-C

POSTS 7-11

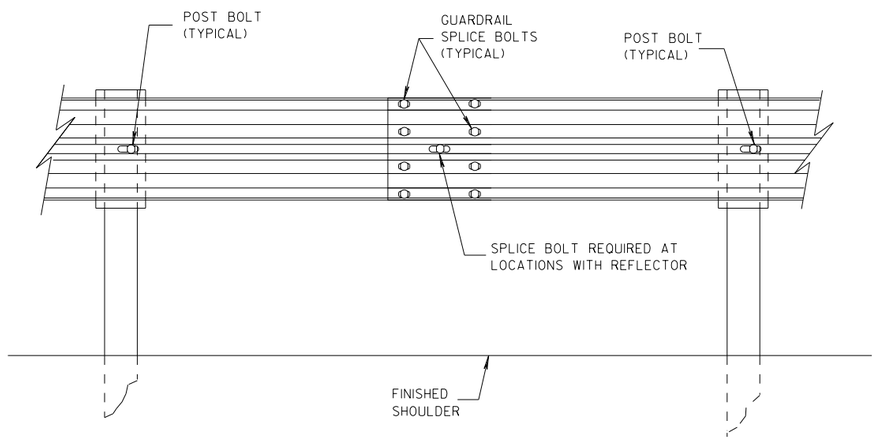


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

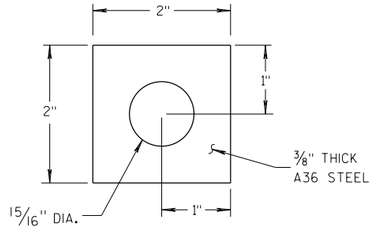
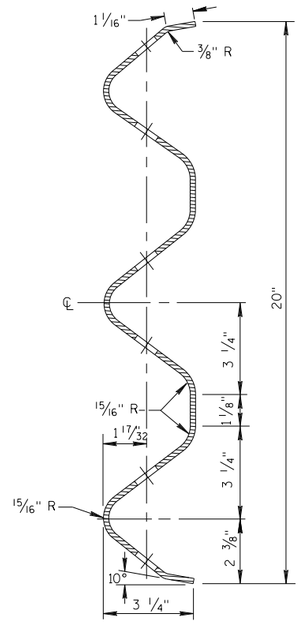


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 77

6

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

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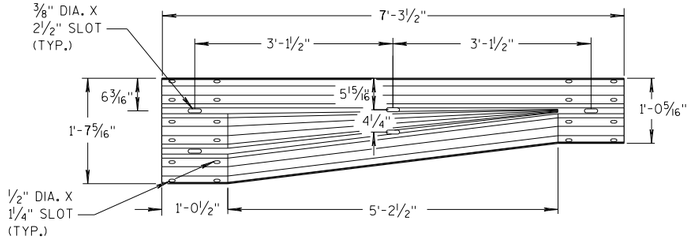
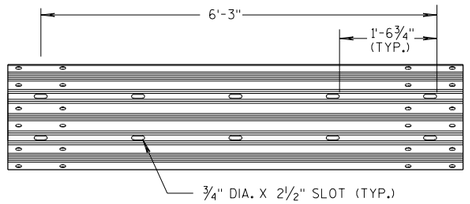
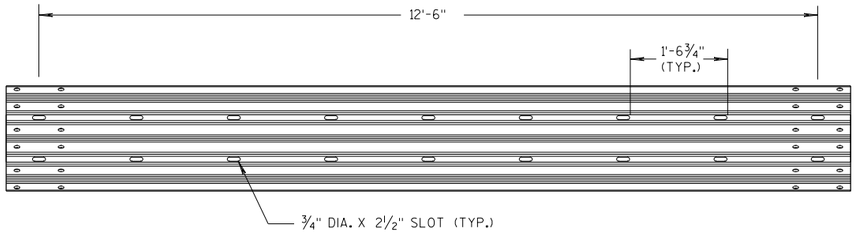
S.D.D. 14 B 45-5b



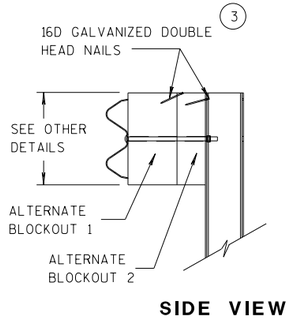
W-BEAM TO THRIE BEAM TRANSITION SECTION



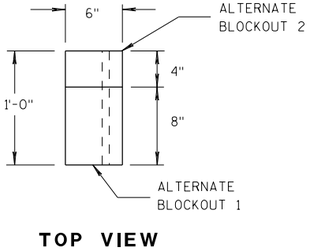
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

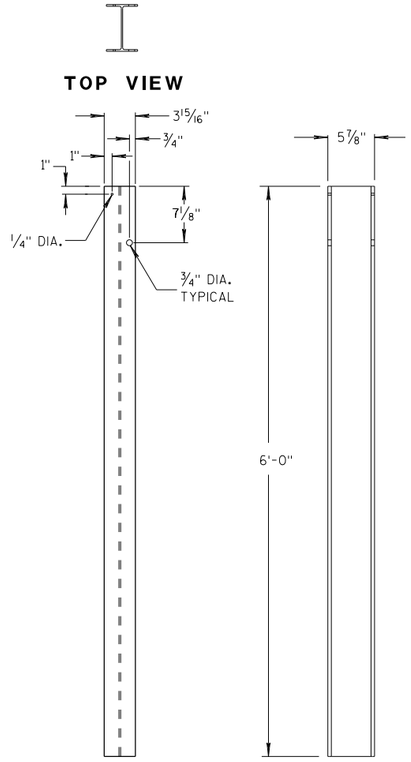


SIDE VIEW



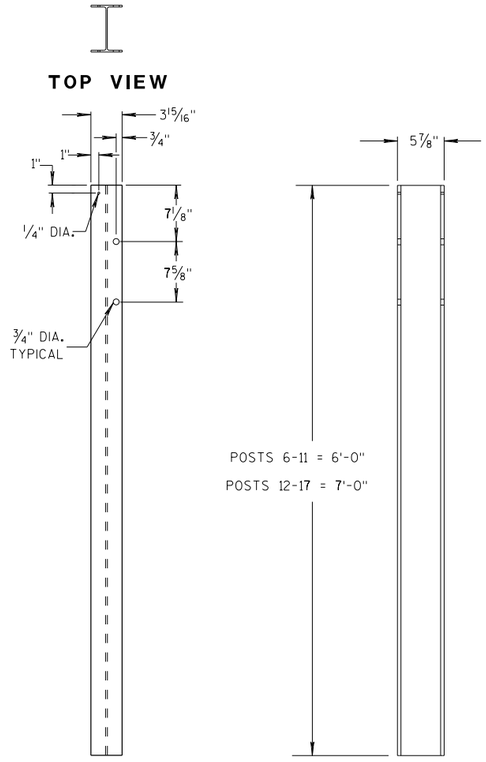
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



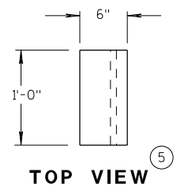
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

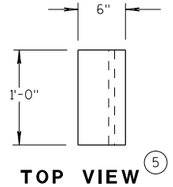


FRONT VIEW SIDE VIEW

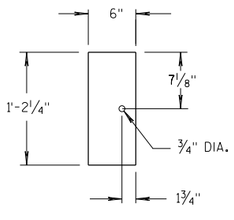
STEEL POSTS 6-17



TOP VIEW (5)

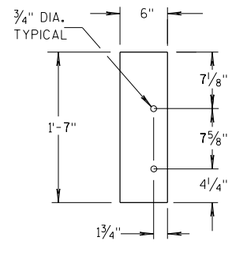


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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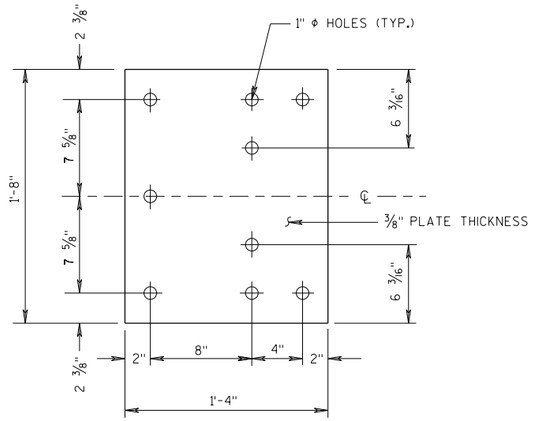
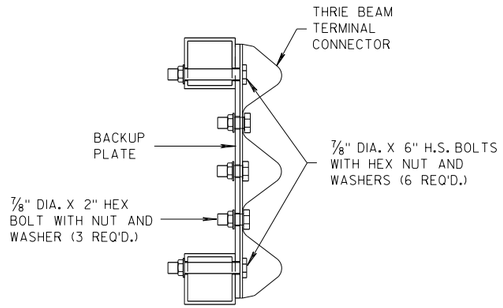
S.D.D. 14 B 45-5c



BACK-UP PLATE DETAIL

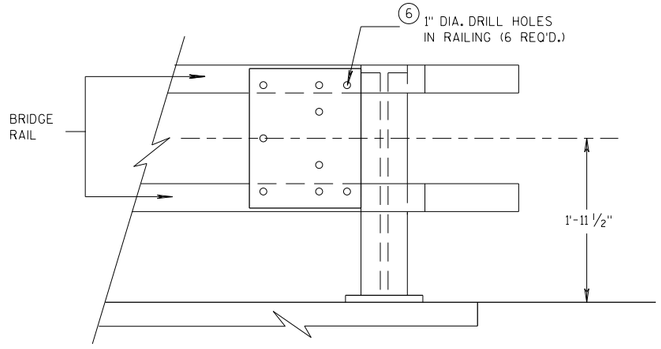


SECTION J-J

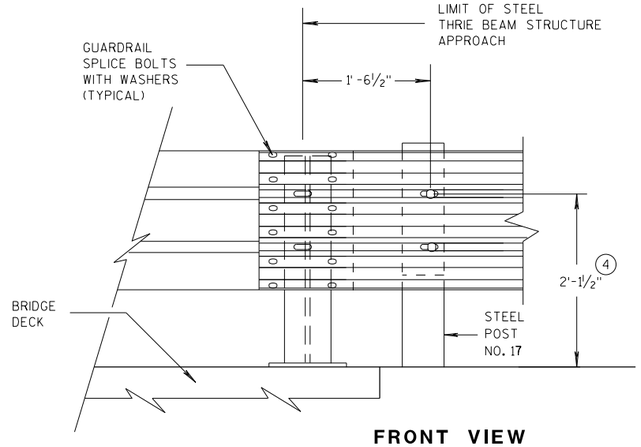
GENERAL NOTES

(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.

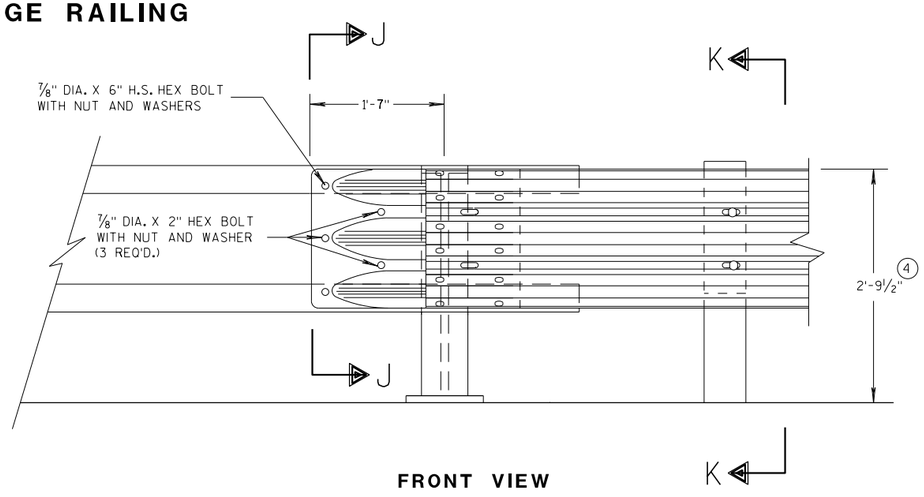


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

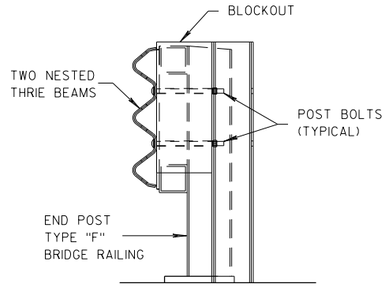


FRONT VIEW

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

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

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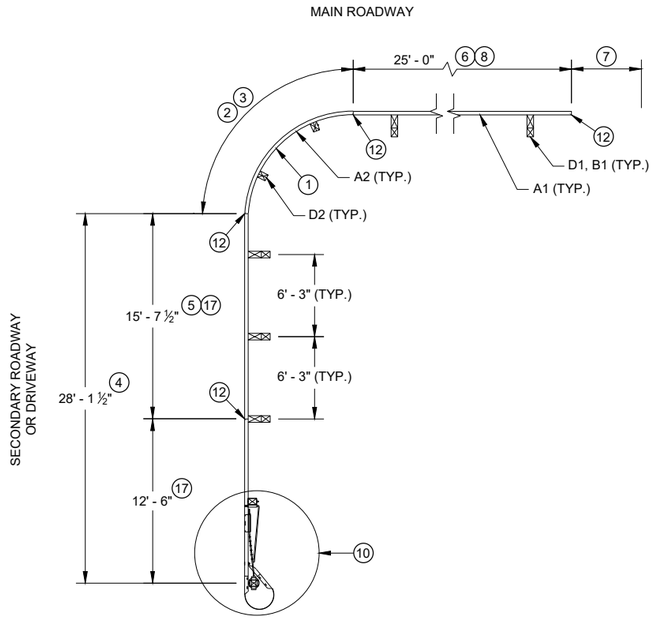
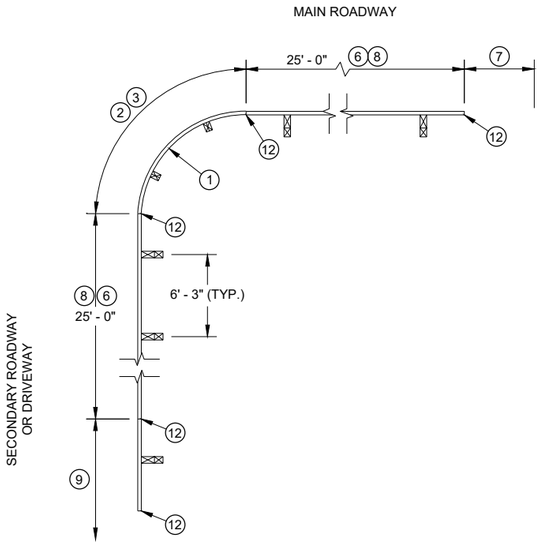
S.D.D. 14 B 45-5g



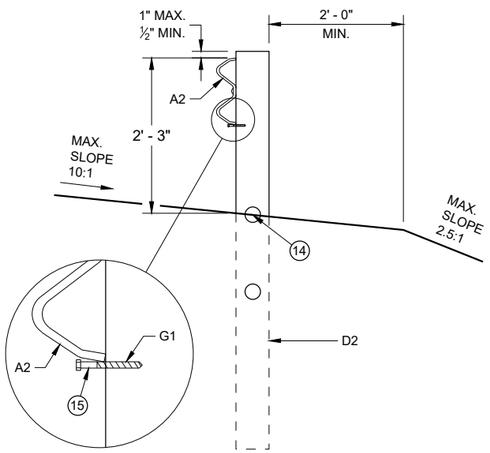
PLAN VIEW

SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY

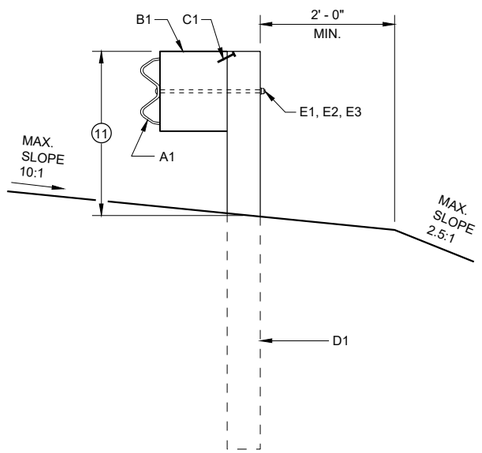


PLAN VIEW

SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY



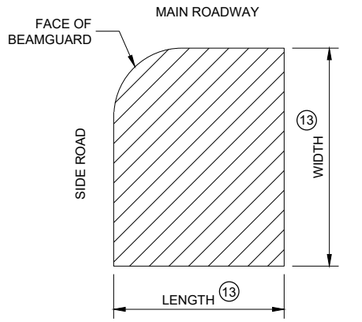
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION

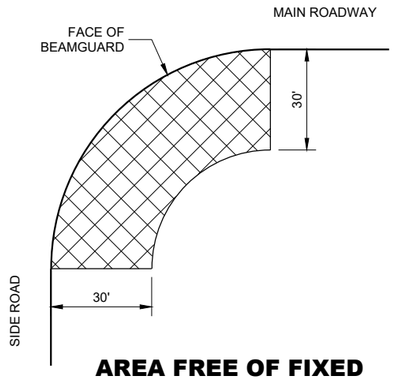
TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30

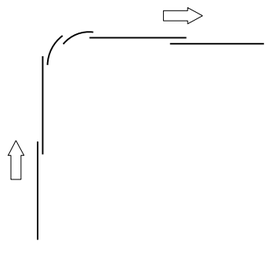


AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS

16



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.

UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT.

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS).

(11) HEIGHT VARIES. SEE NOTE (8) AND (8).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

(15) DRILL POST $^{15}/_{64}$" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

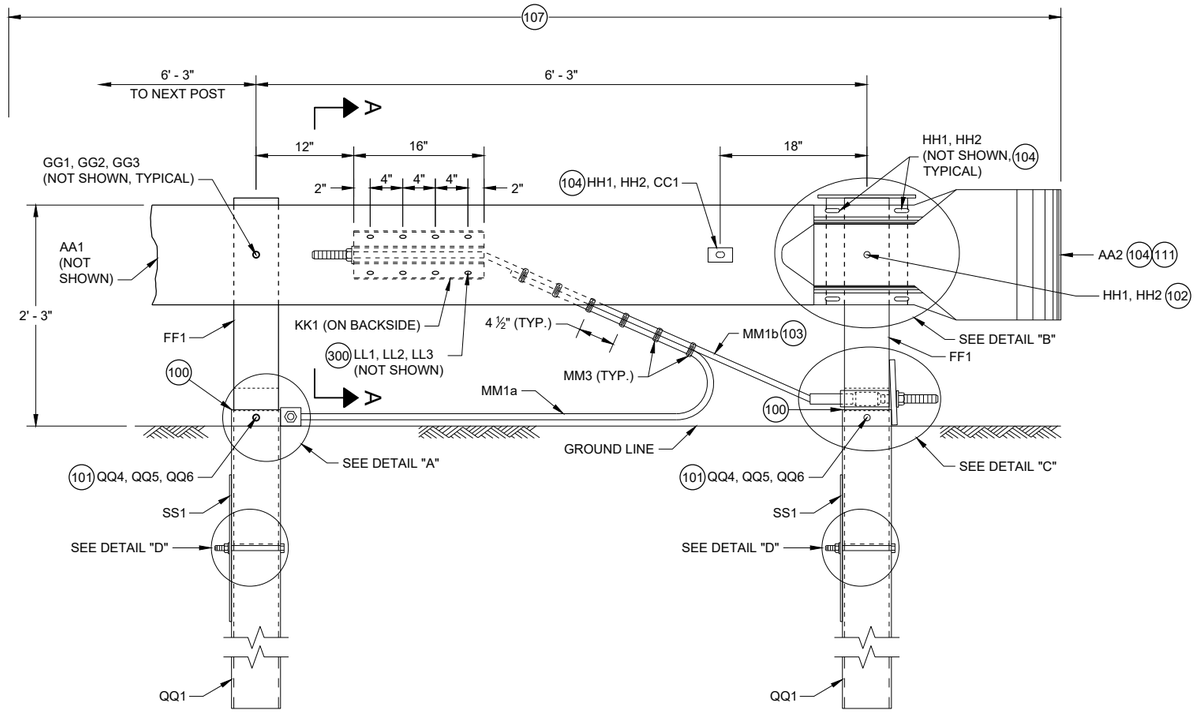
(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

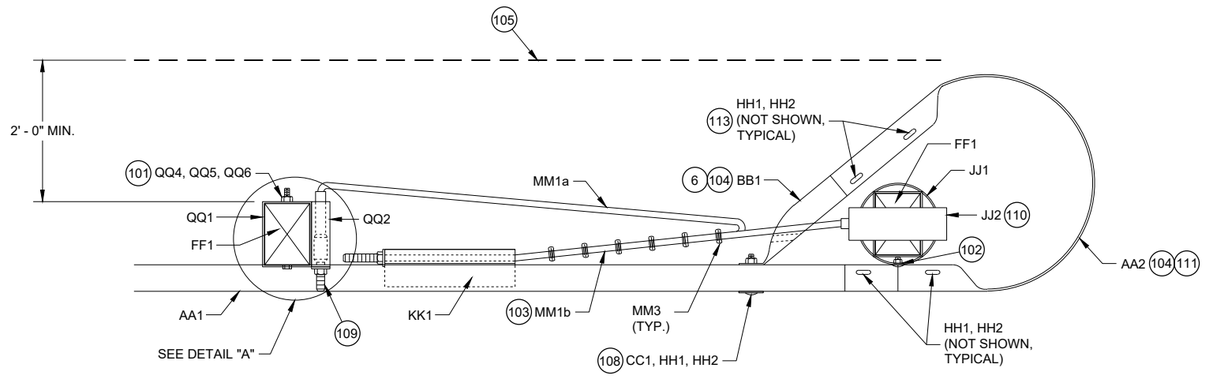
6

SDD 14B53 - 01a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

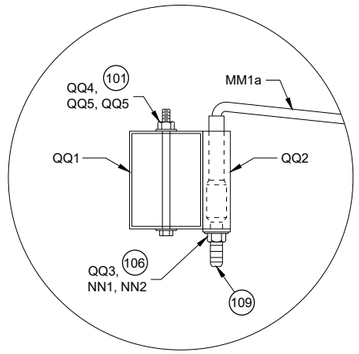
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

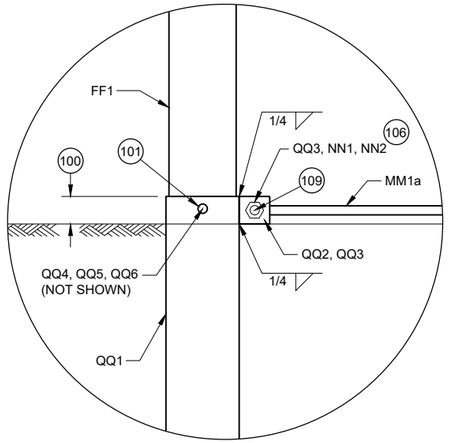
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

6

SDD 14B53 - 01b

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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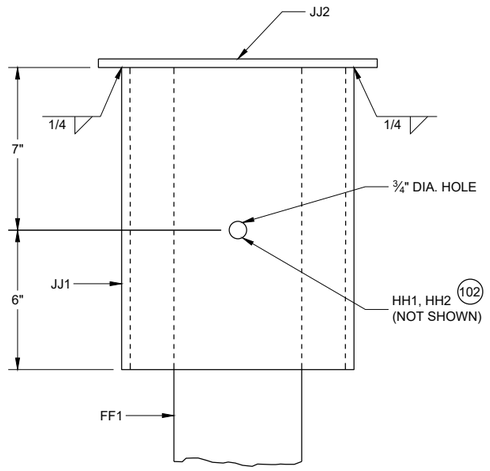
SDD 14B53 - 01b

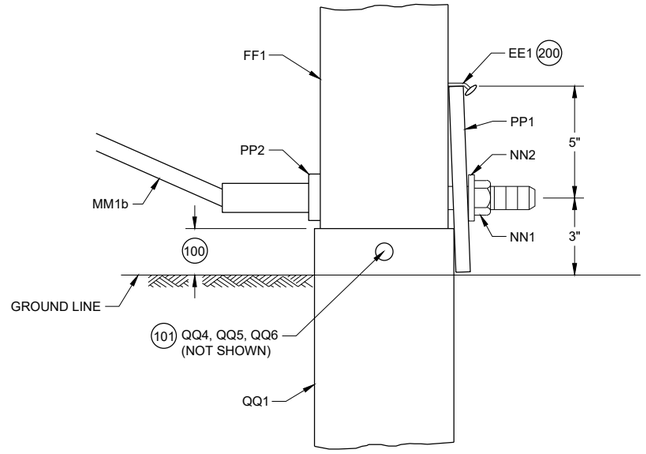
GENERAL NOTES

(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



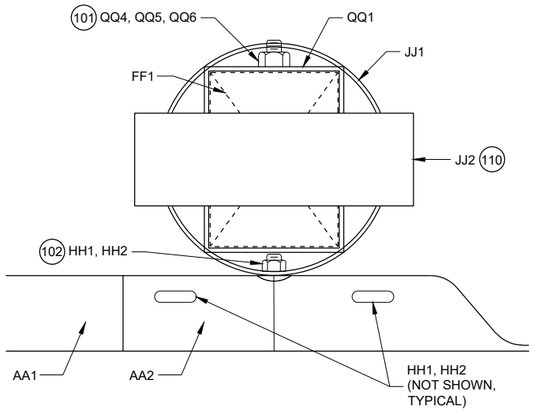
PROFILE VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM END SECTION NOT SHOWN)



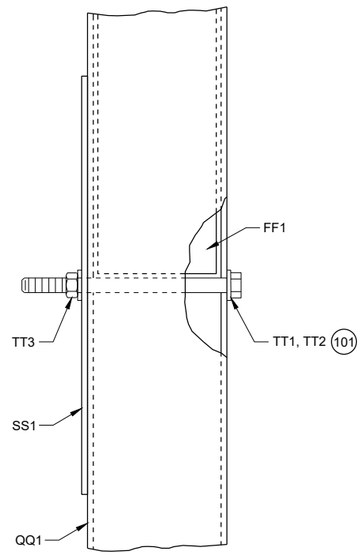
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

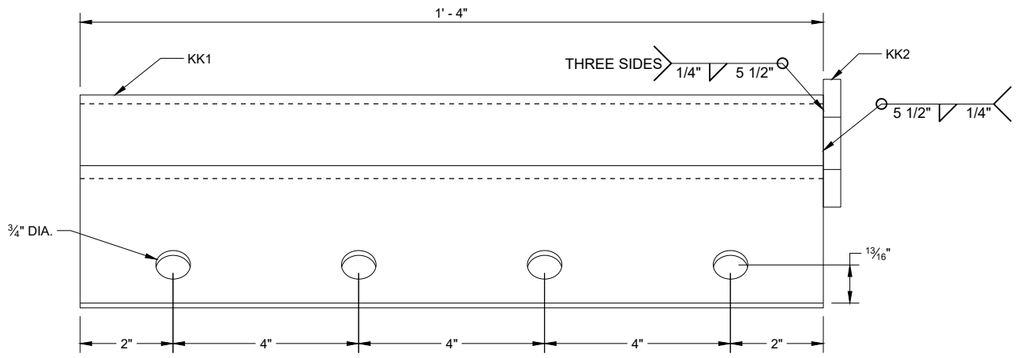
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

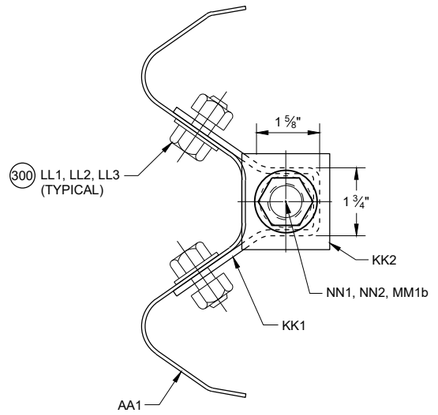
6

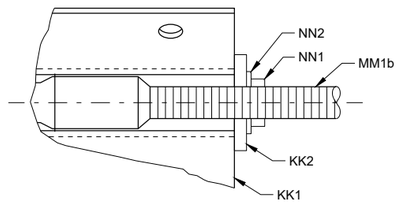
SDD 14B53 - 01c

GENERAL NOTES

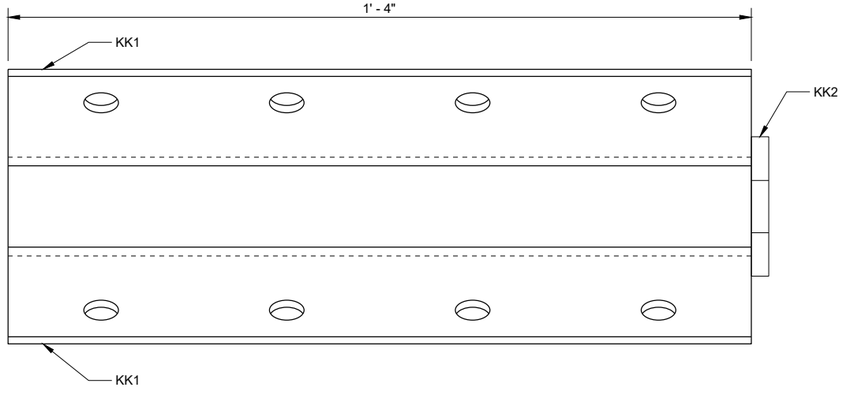
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

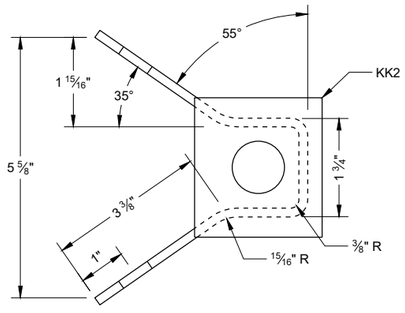




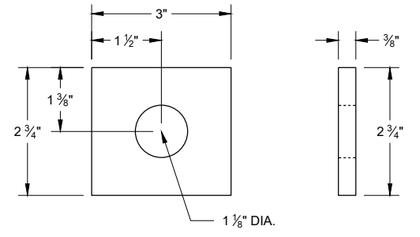


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

6

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SDD 14B53 - 01d

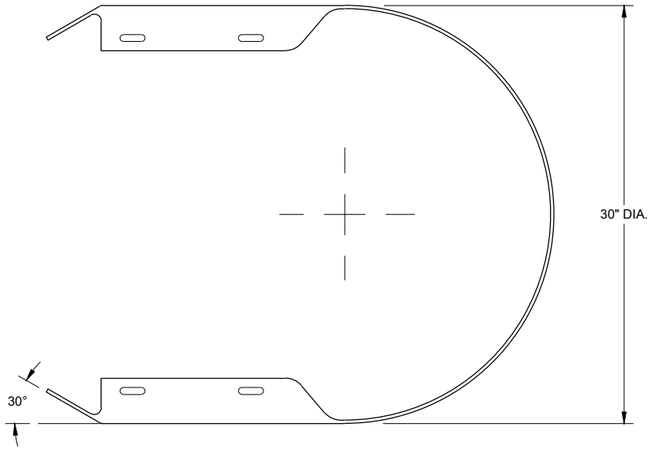
SDD 14B53 - 01d

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

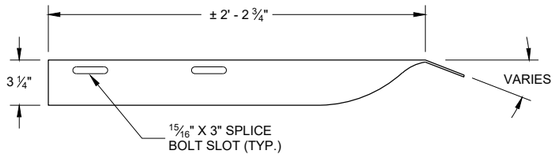
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

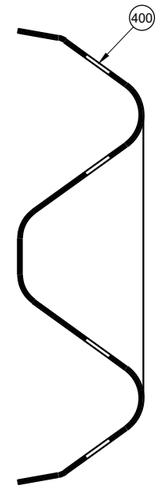
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



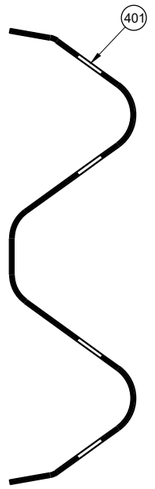
TOP VIEW



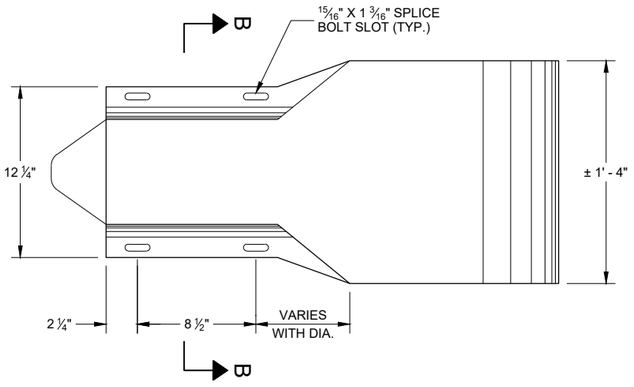
TOP VIEW



SECTION B -B

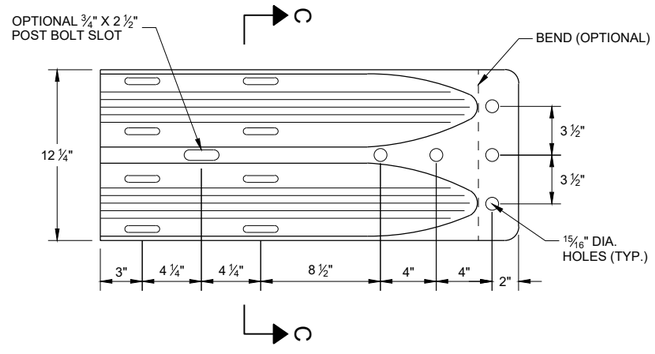


SECTION C -C



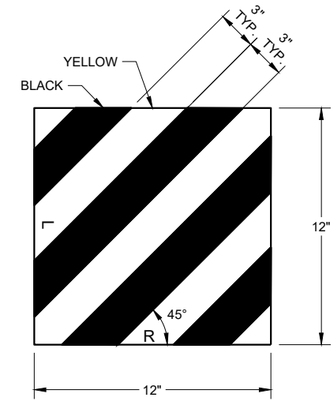
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)



REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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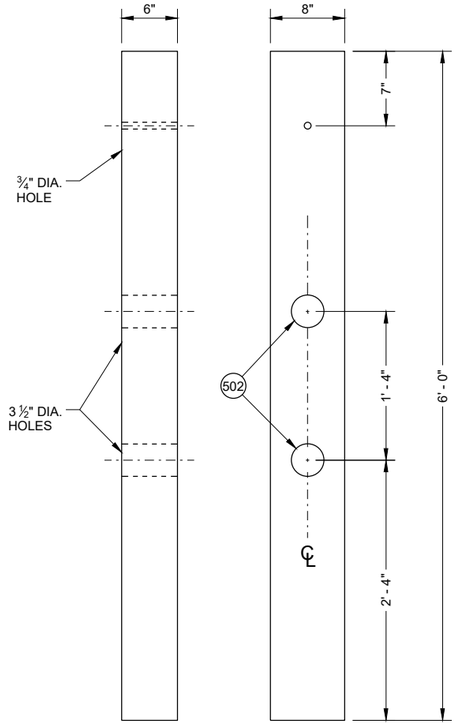
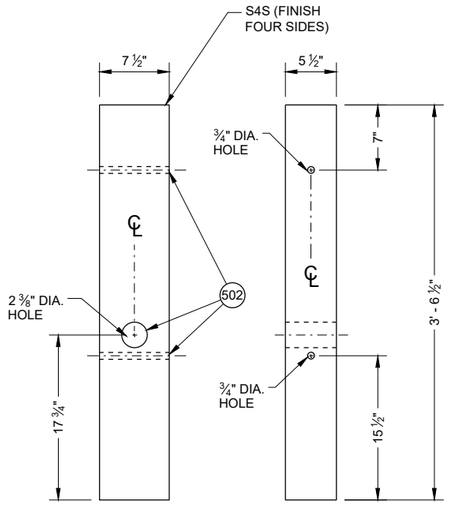
SDD 14B53 - 01e



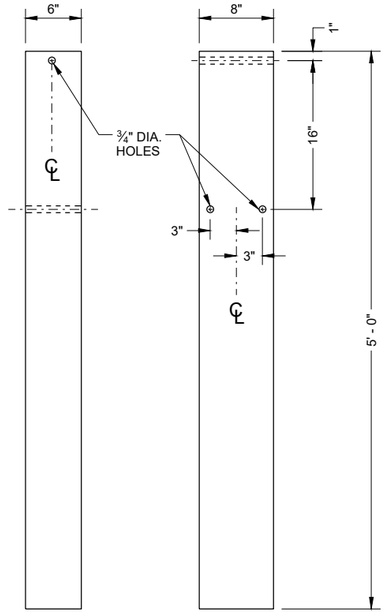
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

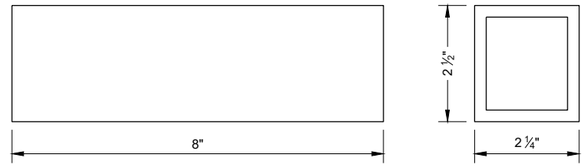
GENERAL NOTES

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

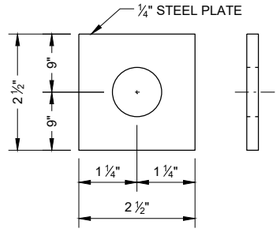
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

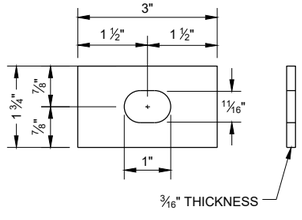
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



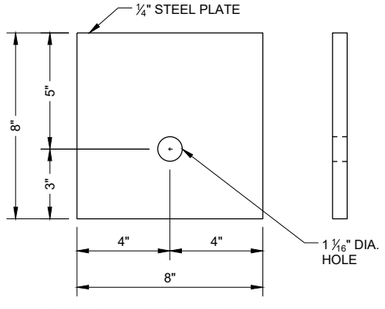
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



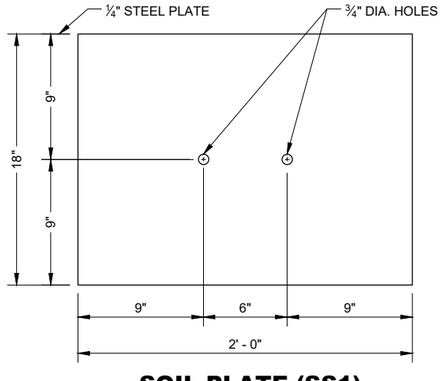
ANCHOR CABLE TUBE END PLATE (QQ3)



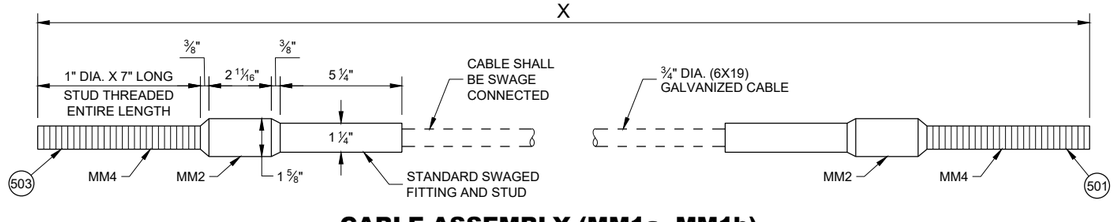
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B53 - 01f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B53 - 01g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	¾"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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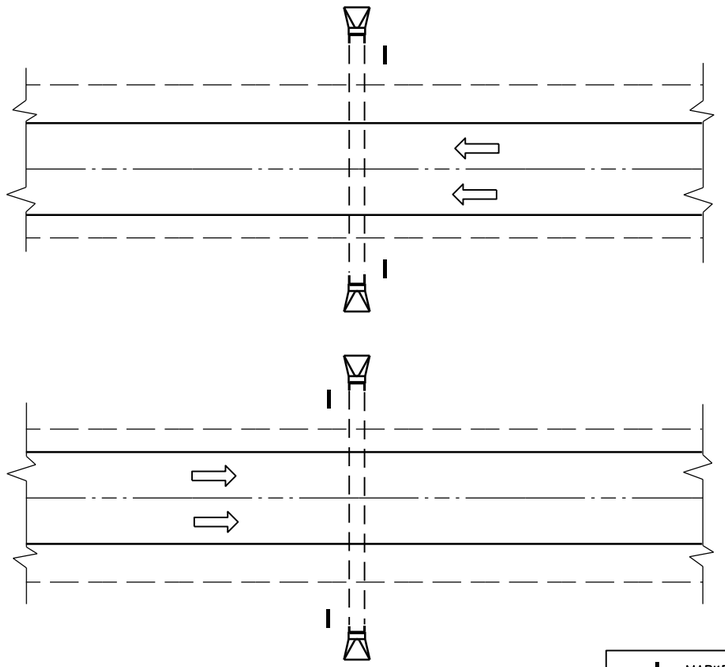
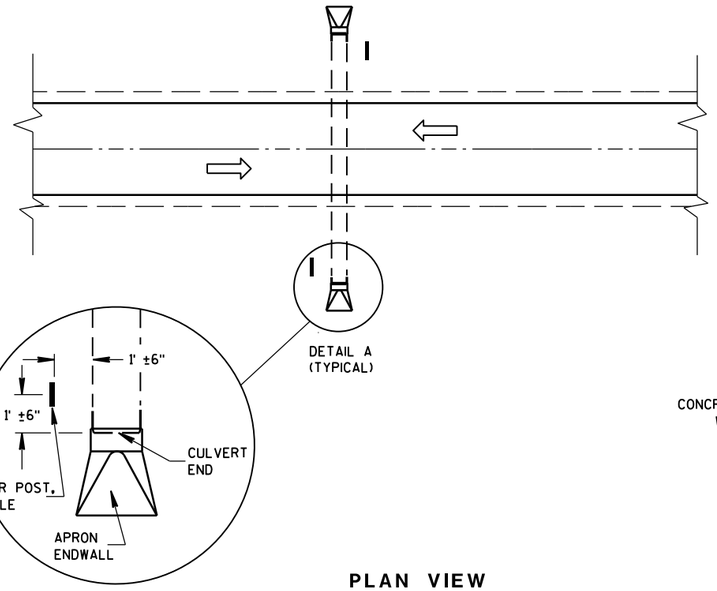
SDD 14B53 - 01i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

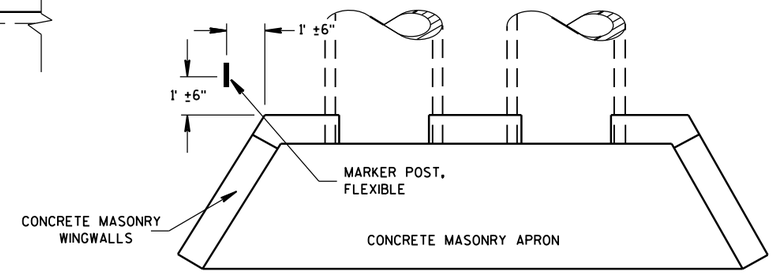
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

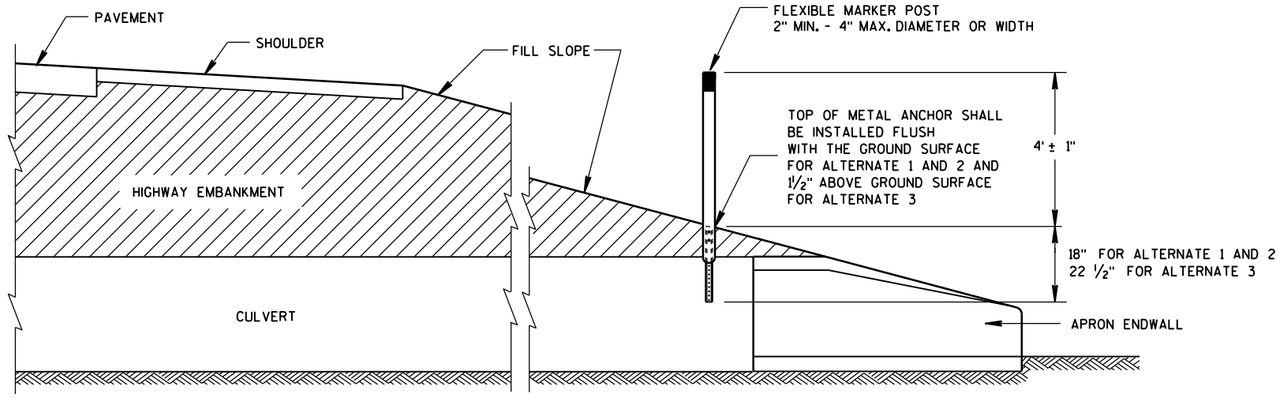
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

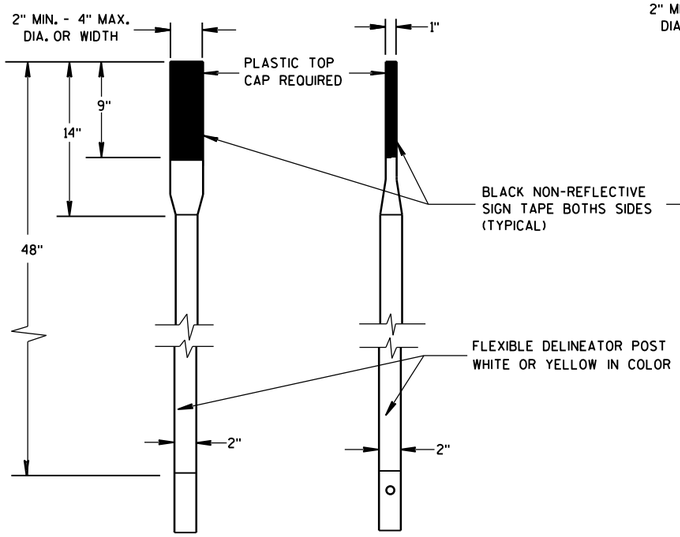
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

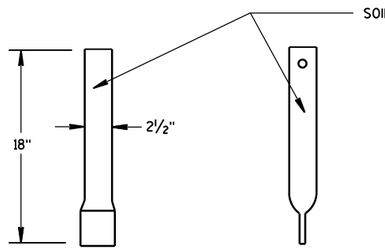
6

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

6

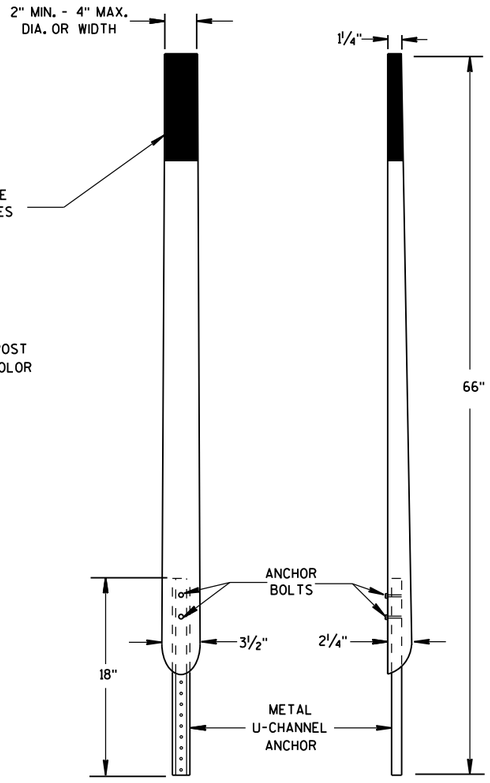
S.D.D. 15 A 3-2a





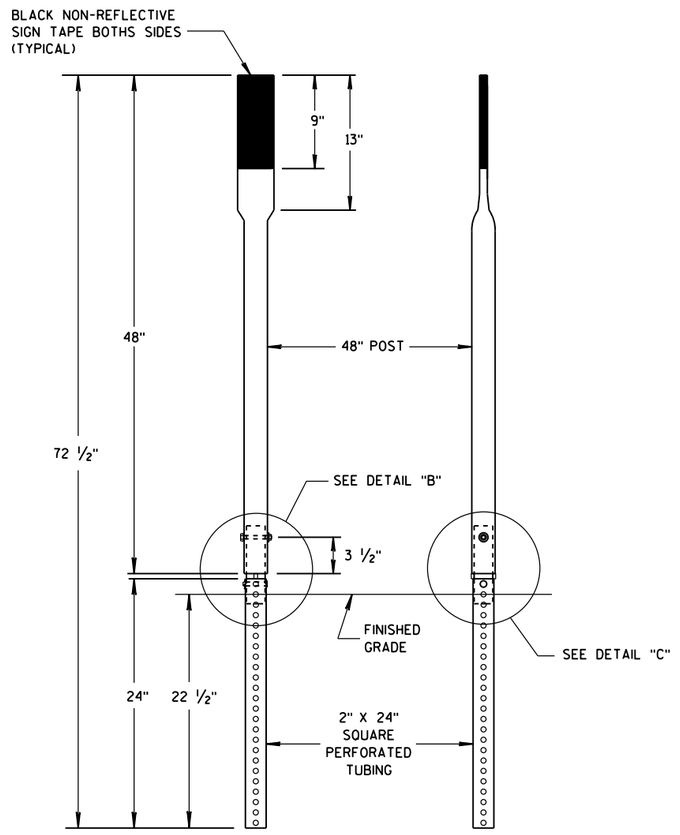
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

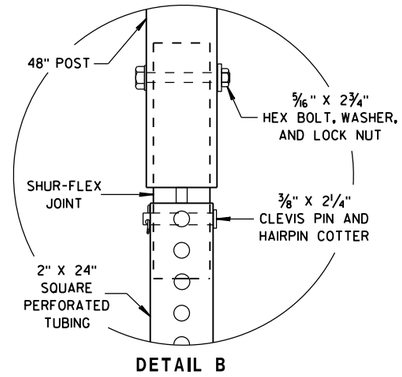
ALTERNATE 2



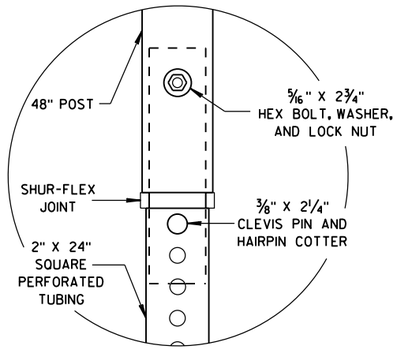
FRONT VIEW SIDE VIEW

ALTERNATE 3

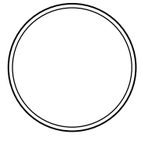
FLEXIBLE MARKER POSTS



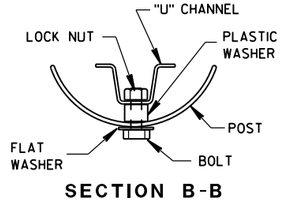
DETAIL B



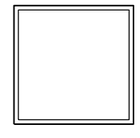
DETAIL C



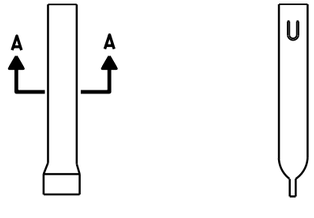
SECTION A-A



SECTION B-B

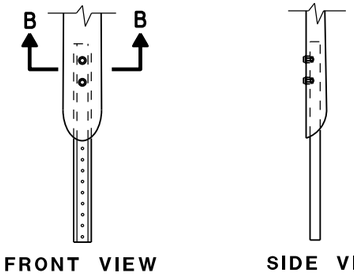


SECTION C-C



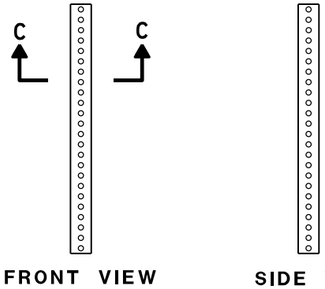
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

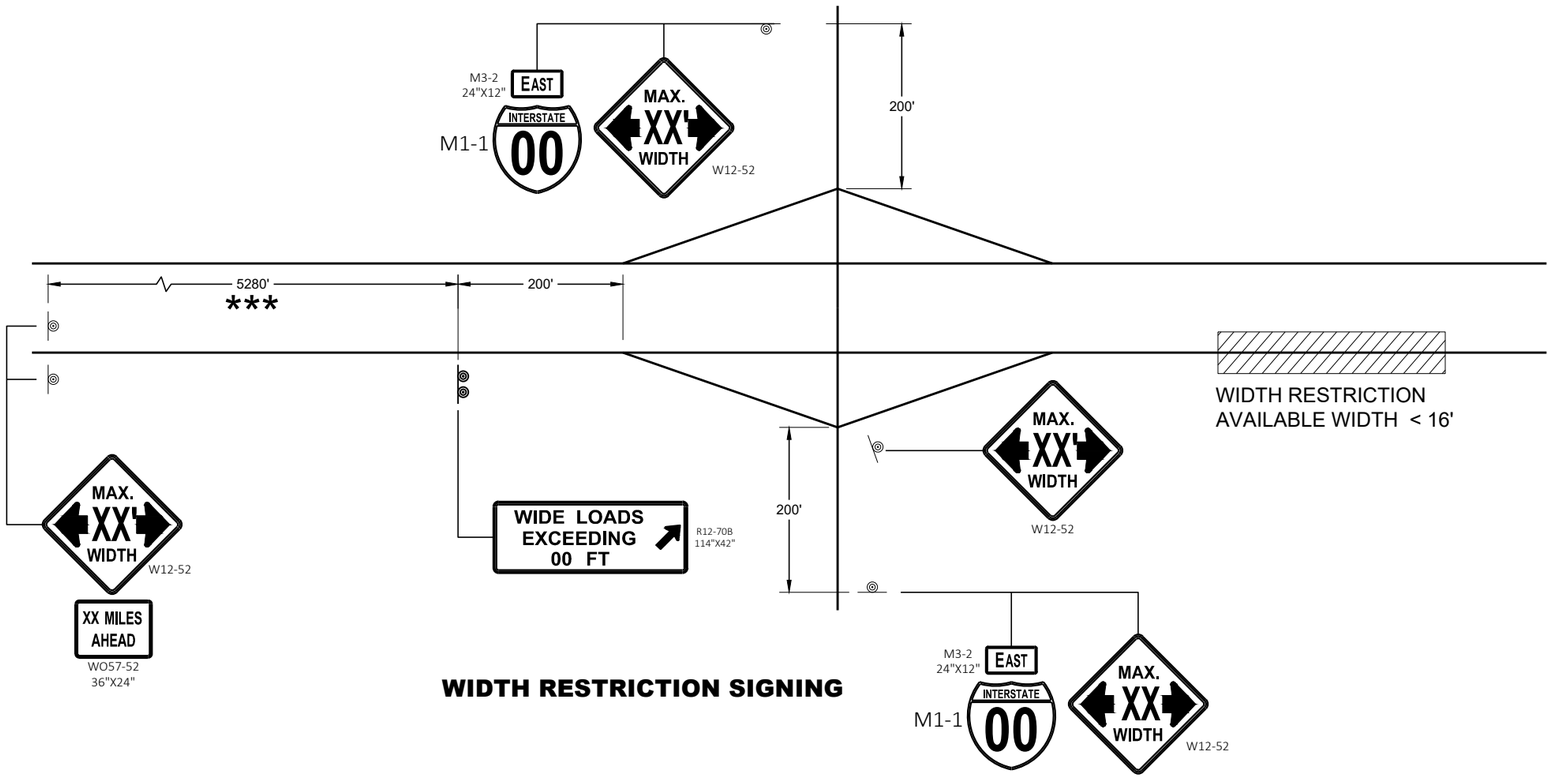
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

6

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



WIDTH RESTRICTION SIGNING

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

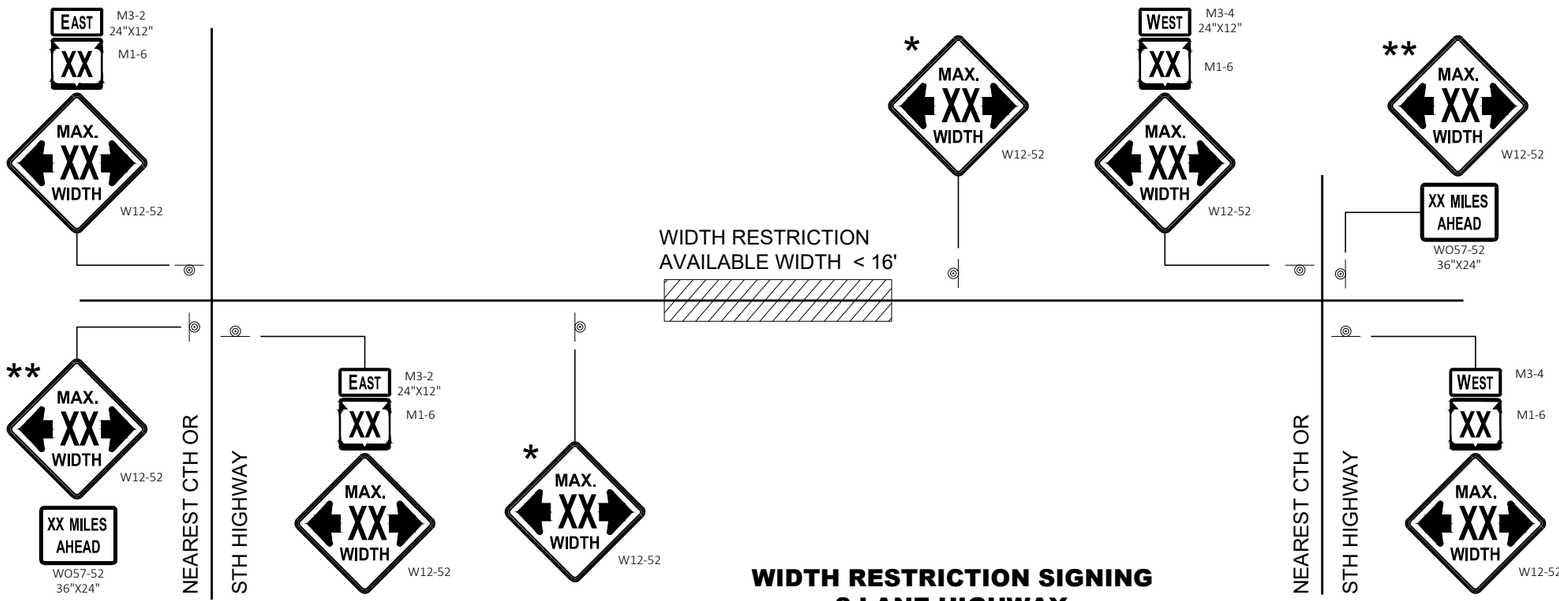
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET BEFORE THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C02 - 08f

SDD 15C02 - 08f

GENERAL NOTES

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

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

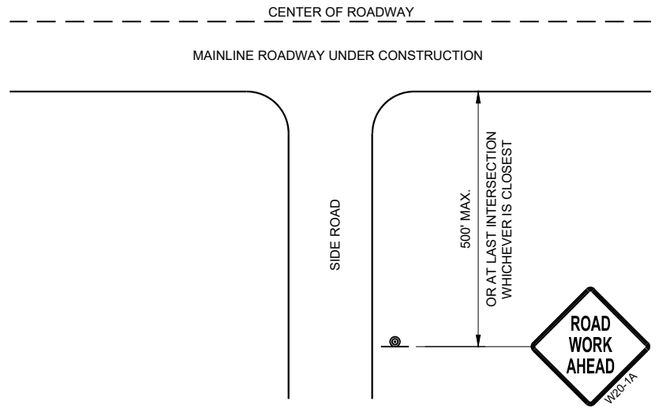
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



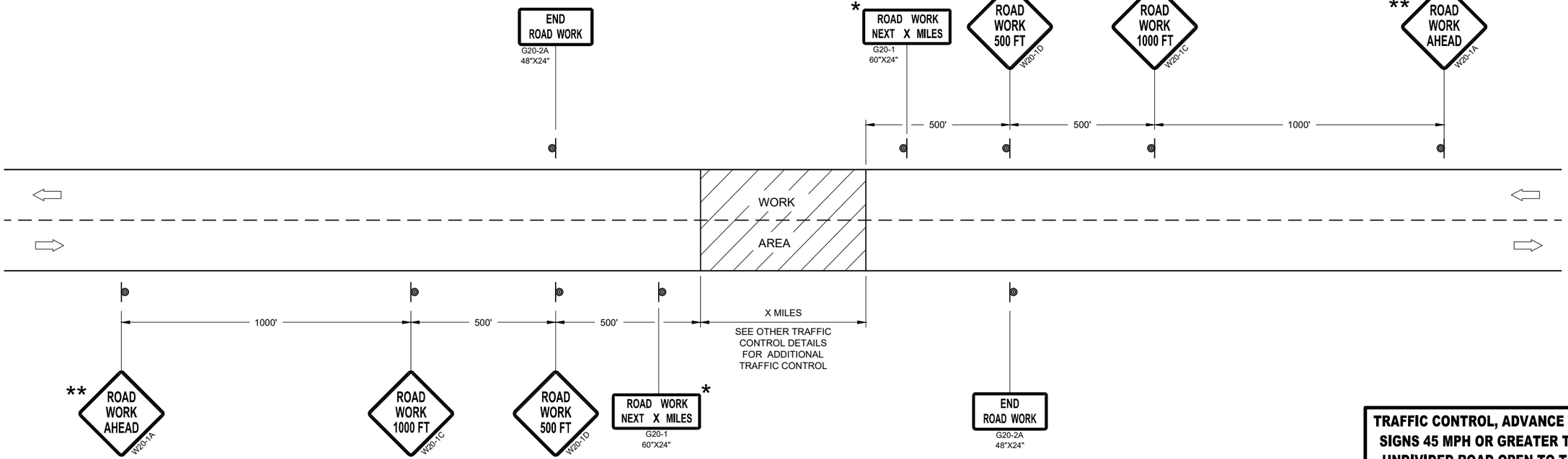
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

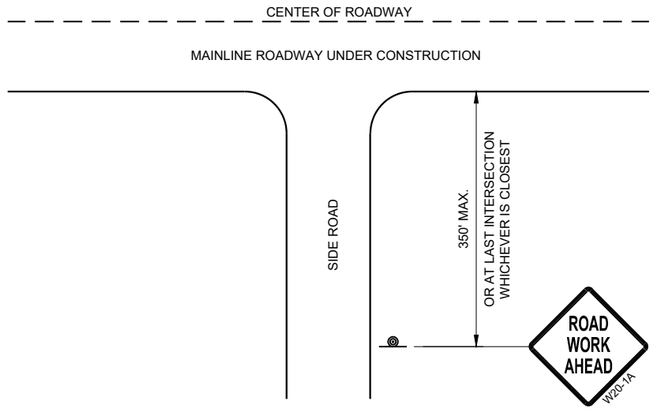
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

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



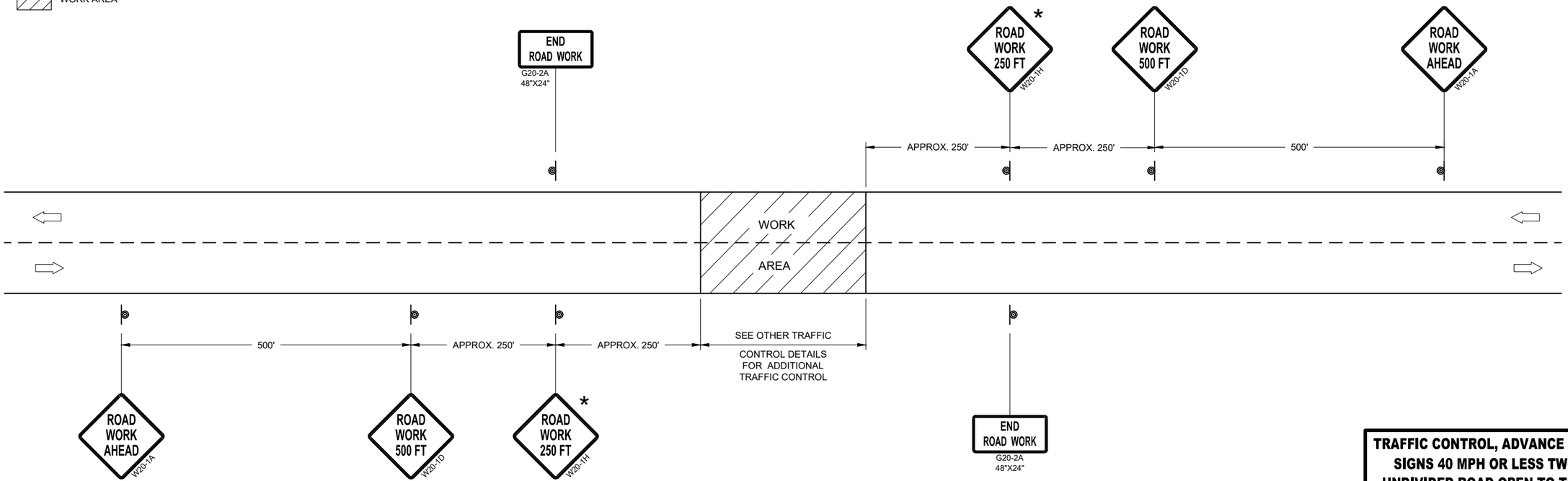
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

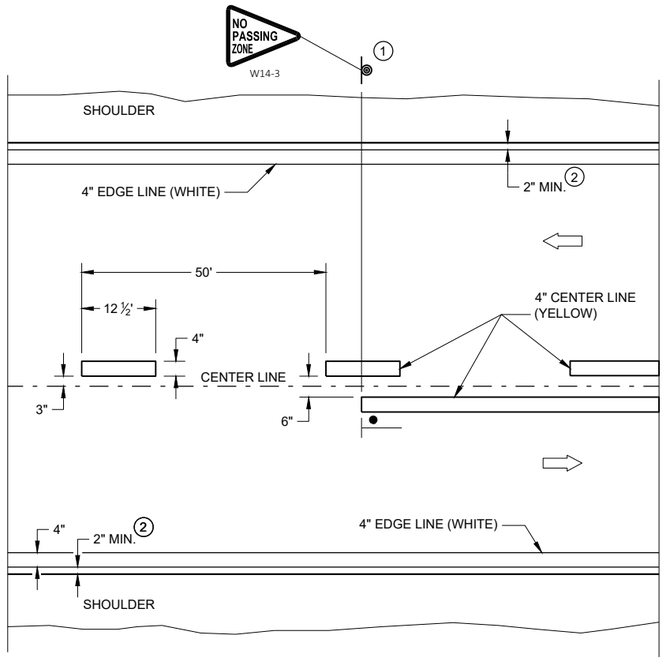
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

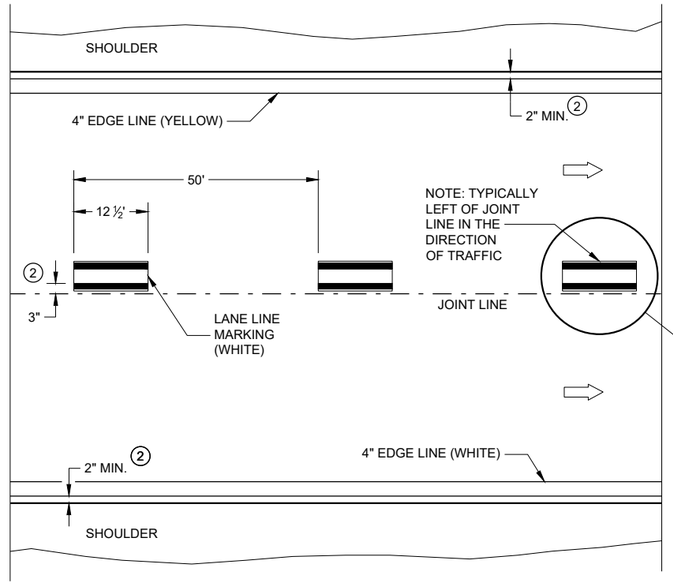
FHWA

6

SDD 15C05 - 05

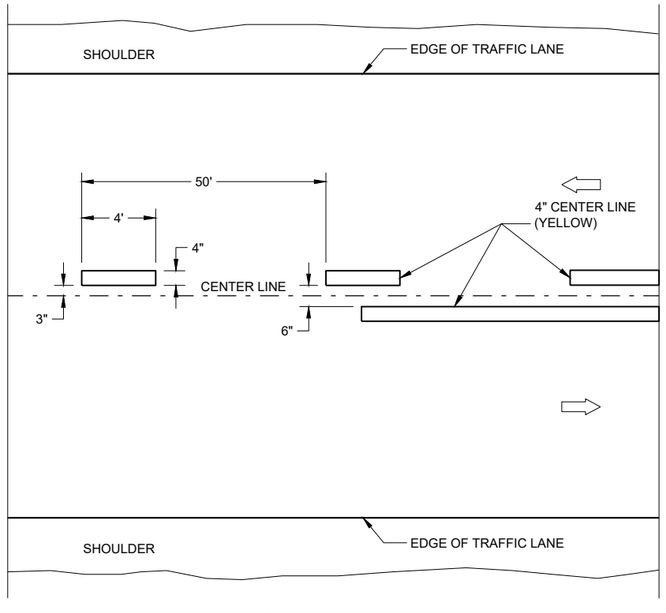


TWO WAY TRAFFIC

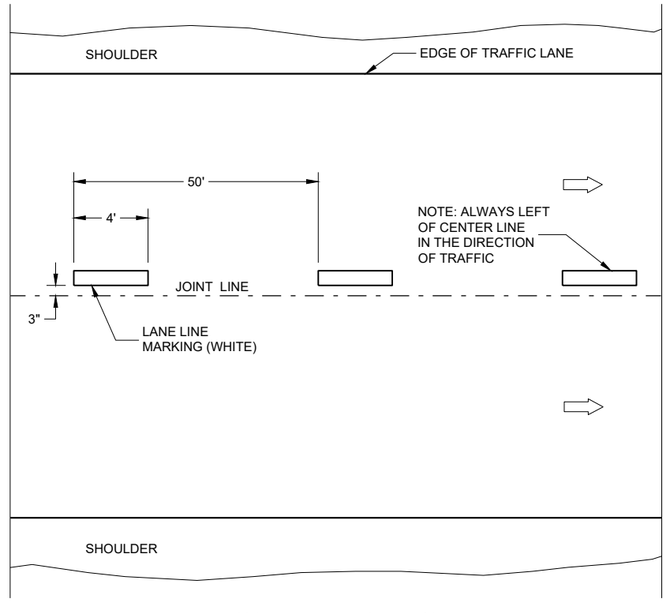


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

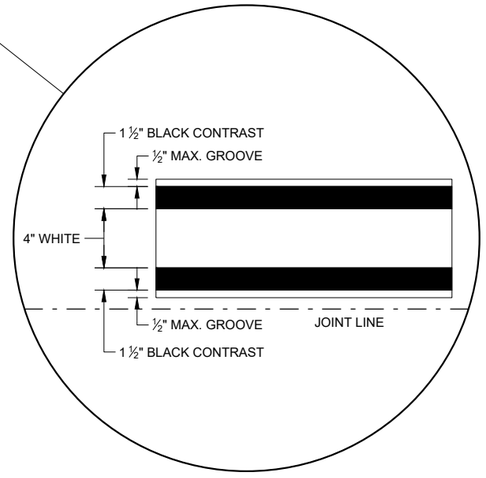
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

FHWA

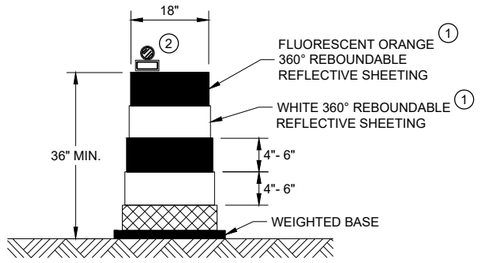
SDD 15C08 - 20a

SDD 15C08 - 20a

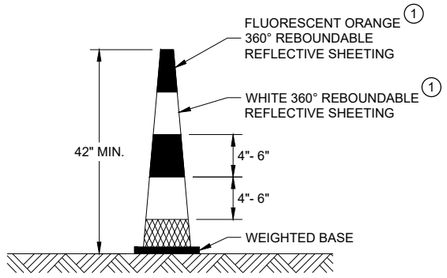
GENERAL NOTES

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

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

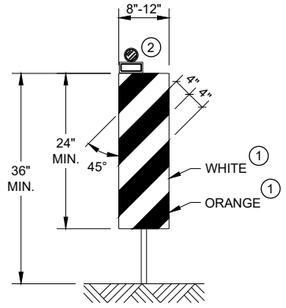


DRUM



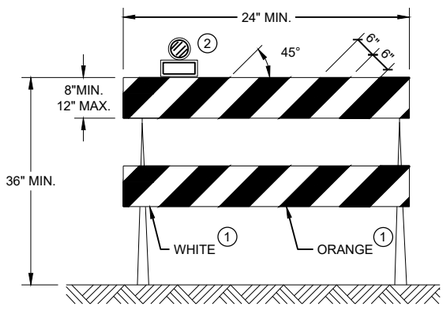
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



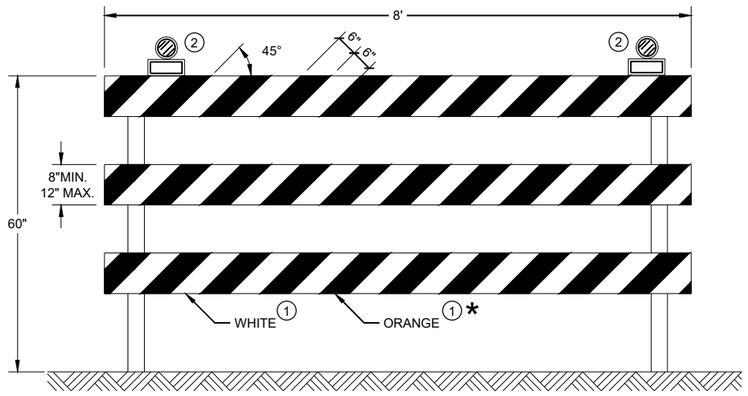
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

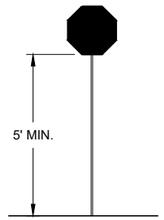
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



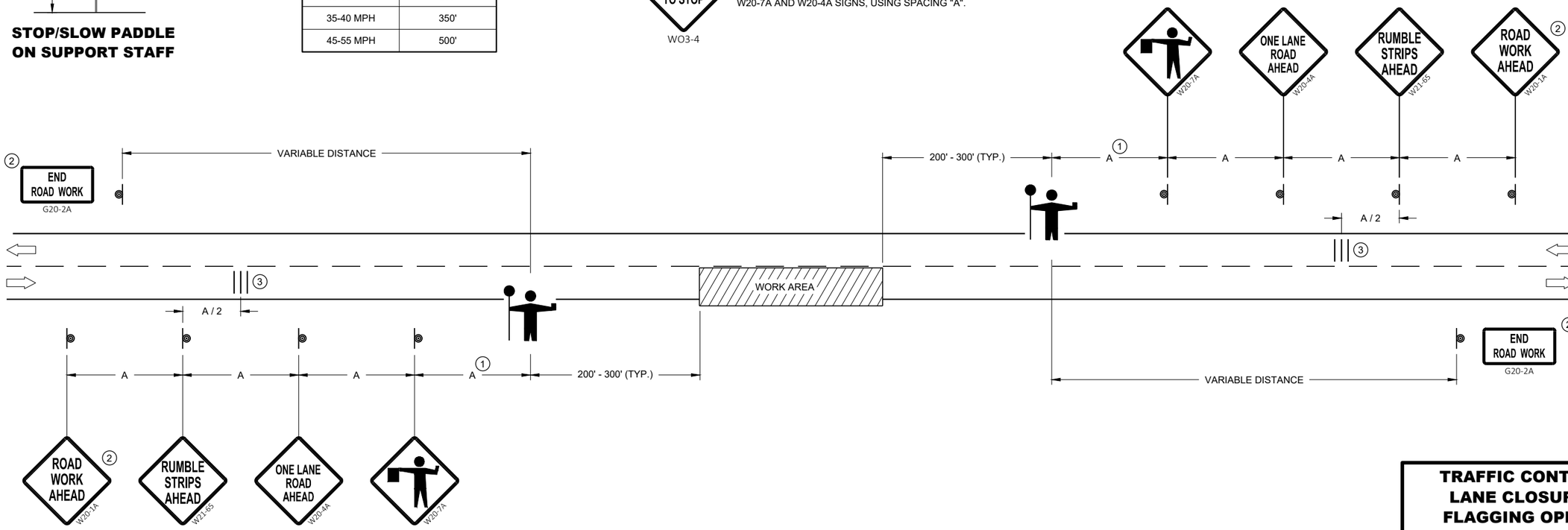
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C12 - 07

6
SDD 15C12 - 07

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

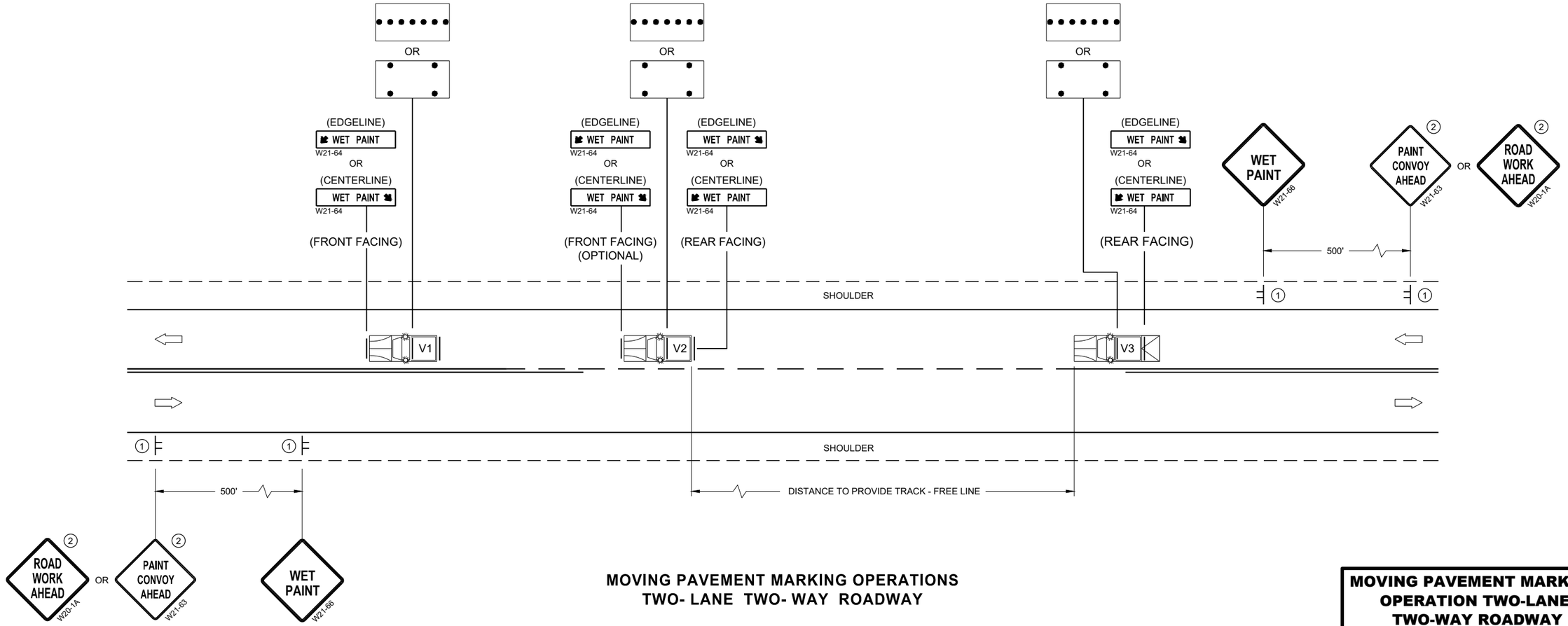
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

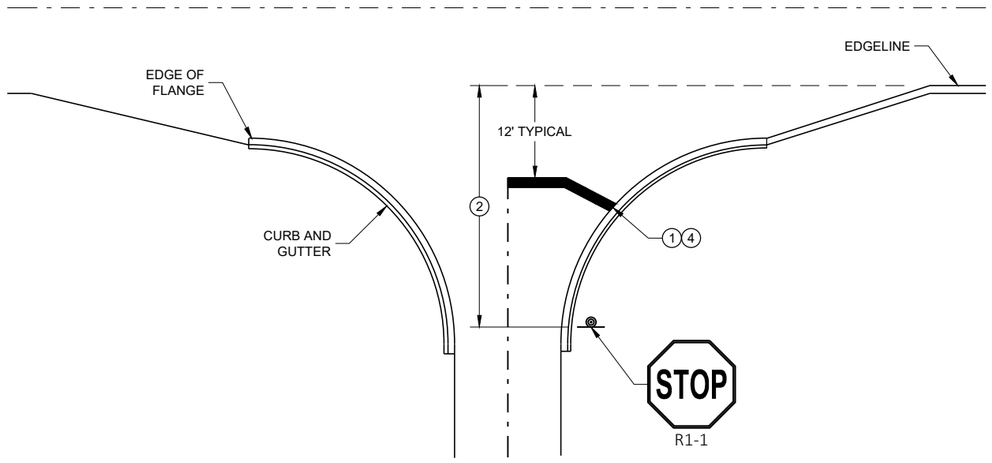
SDD 15C19 - 06a

SDD 15C19 - 06a

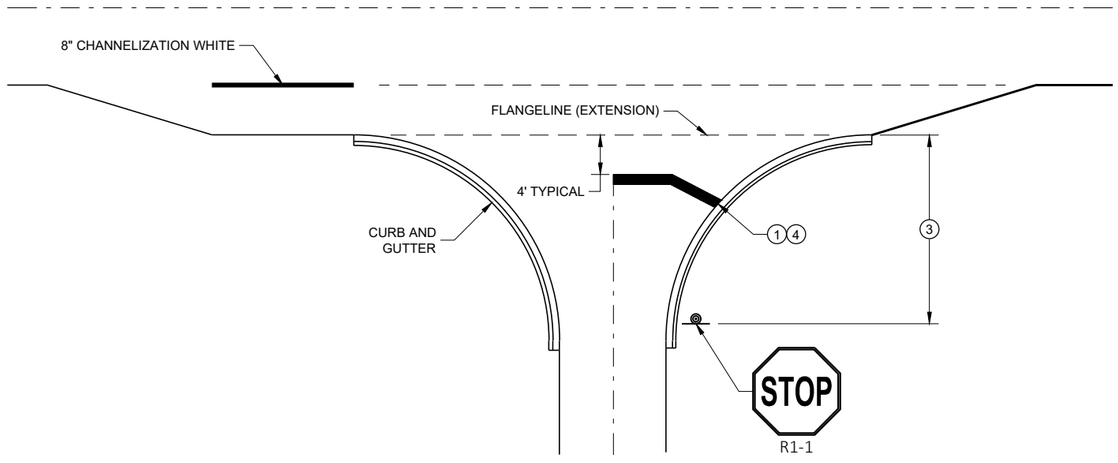
GENERAL NOTES

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

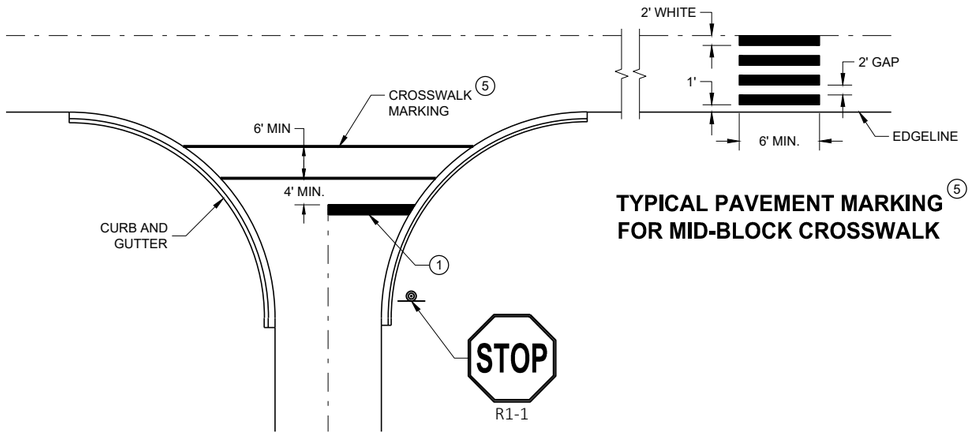
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

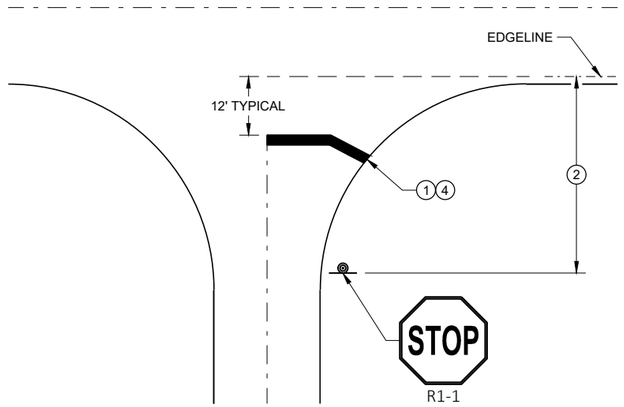


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C33 - 04

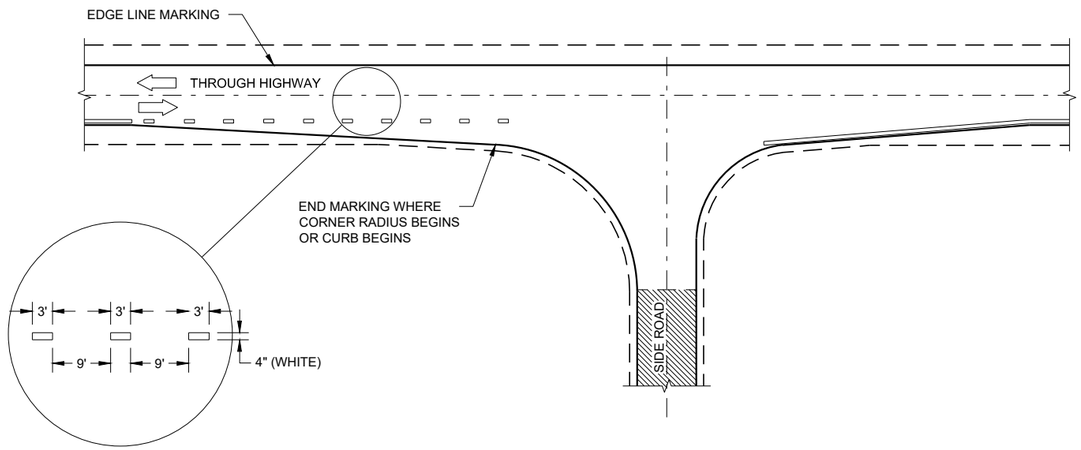
GENERAL NOTES

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

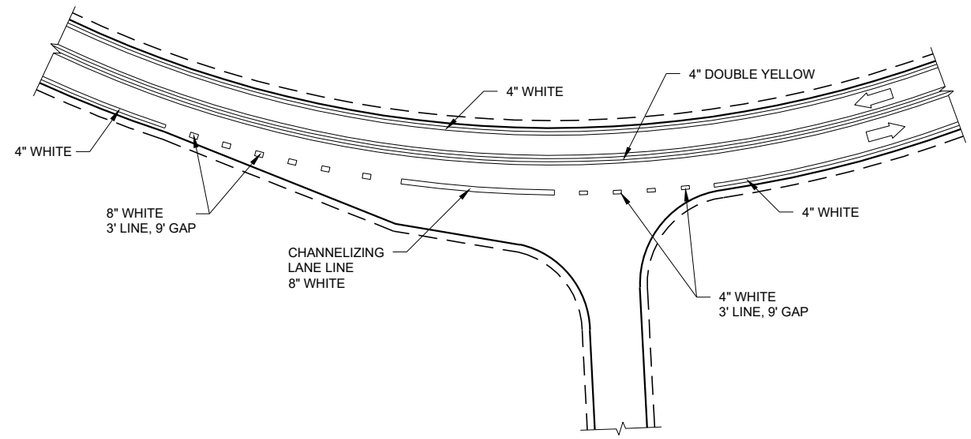
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

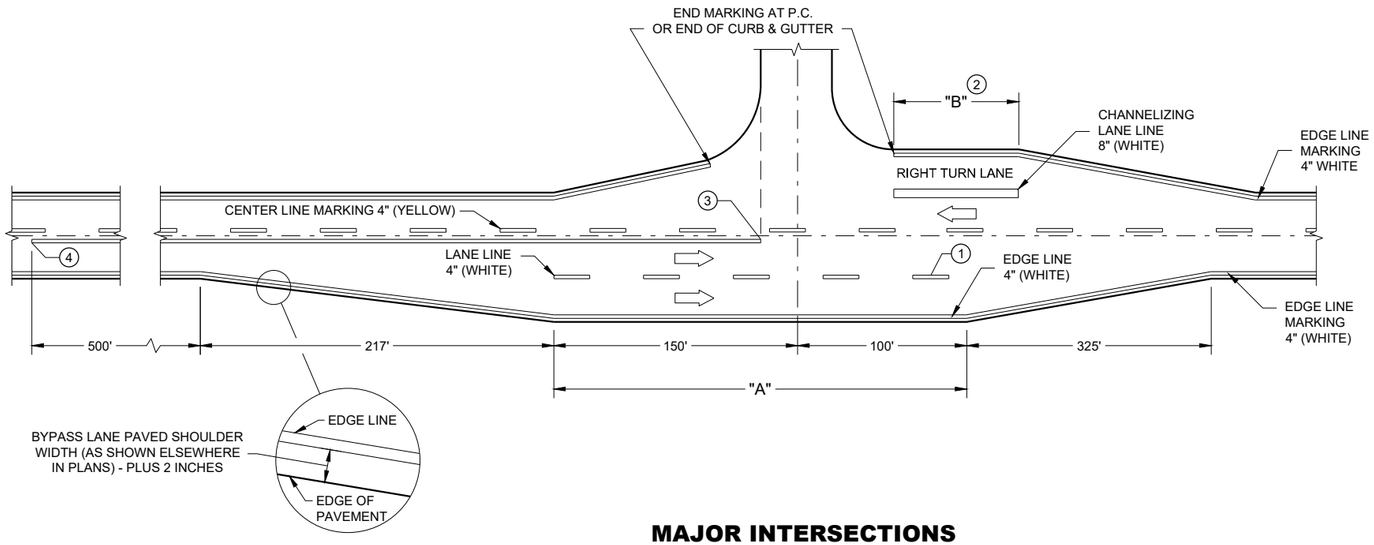
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES

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

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

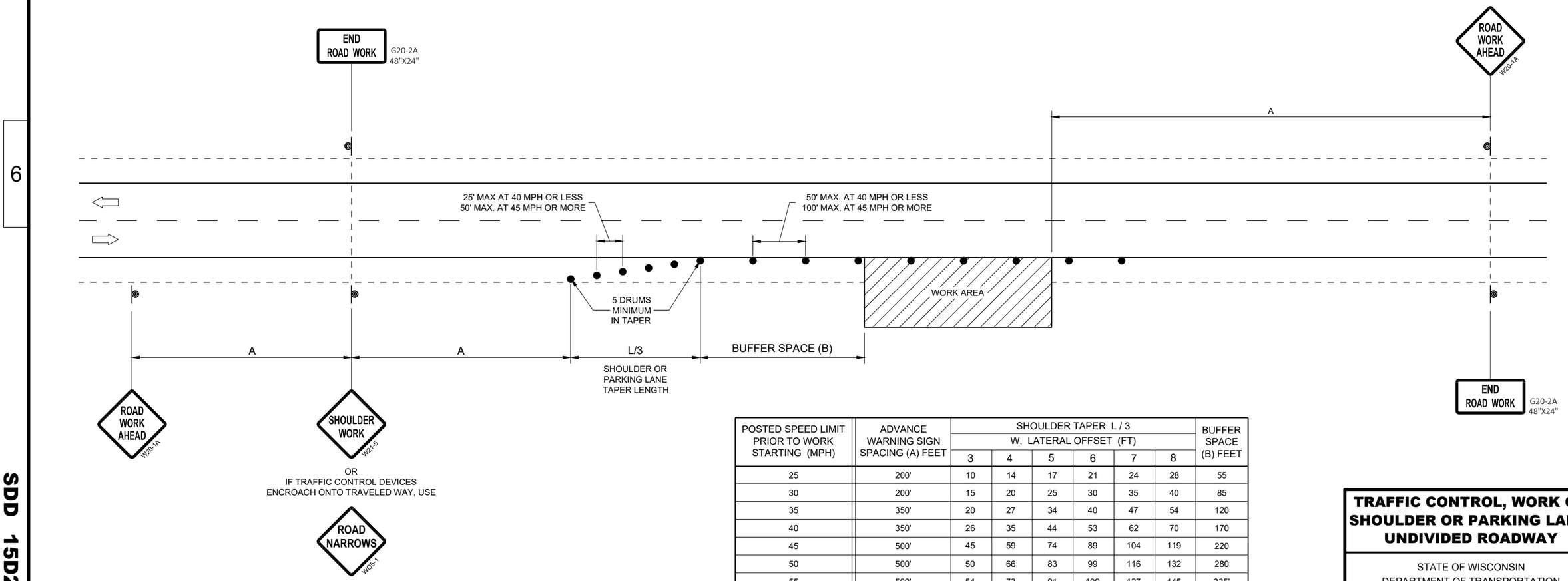
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

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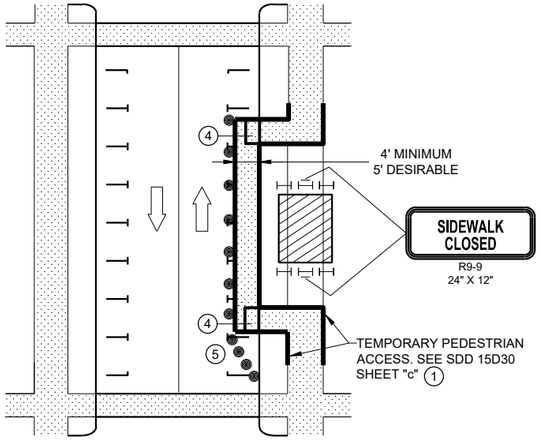
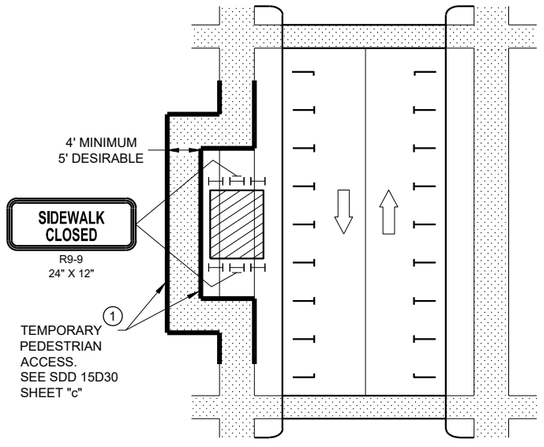
SDD 15D28 - 04

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

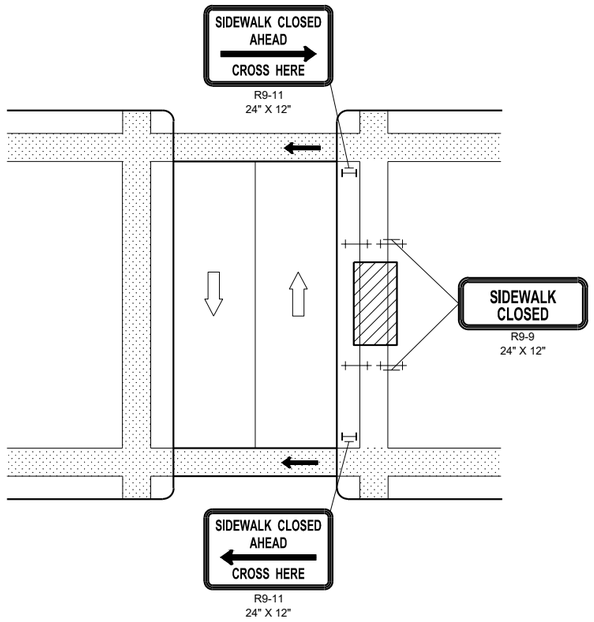


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

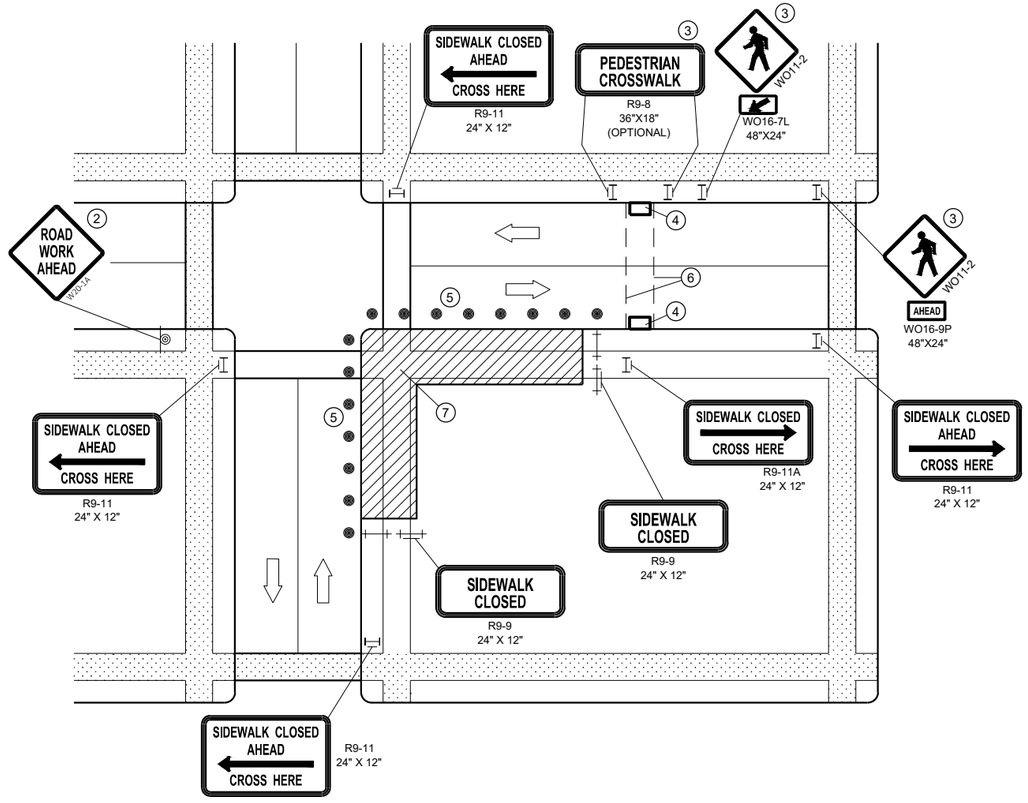
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEK LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

1. IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
2. "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
3. IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
4. TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
5. DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
6. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
7. LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

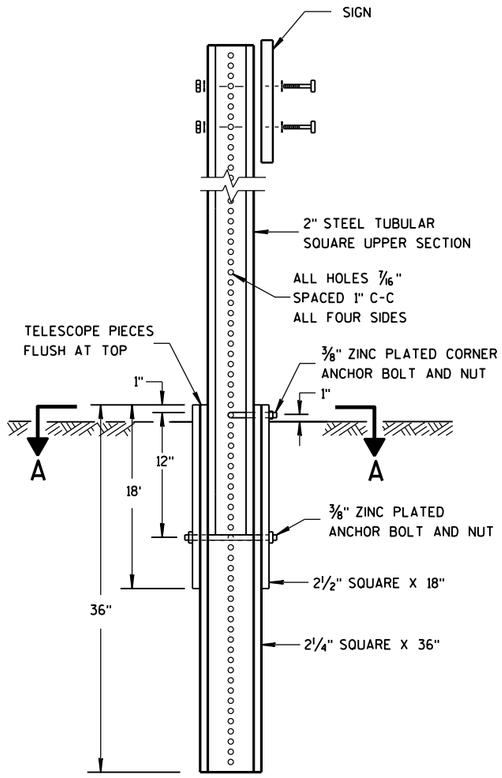
LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

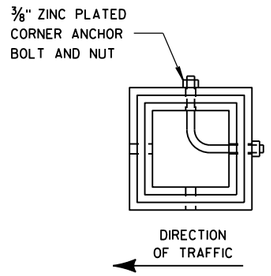
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

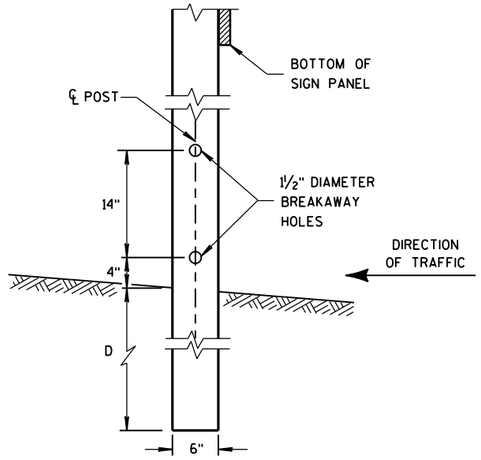
6
SDD15D30 - 06a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



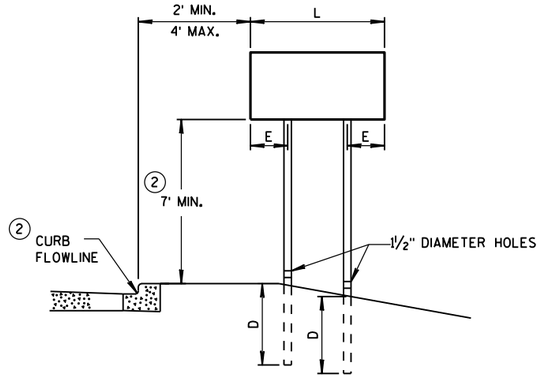
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

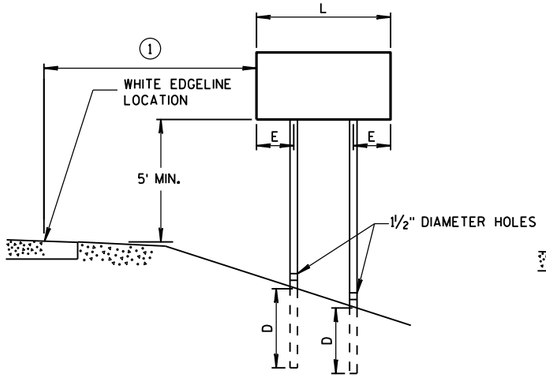
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

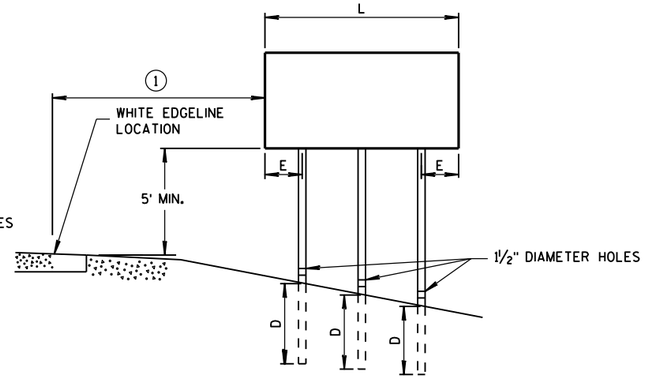
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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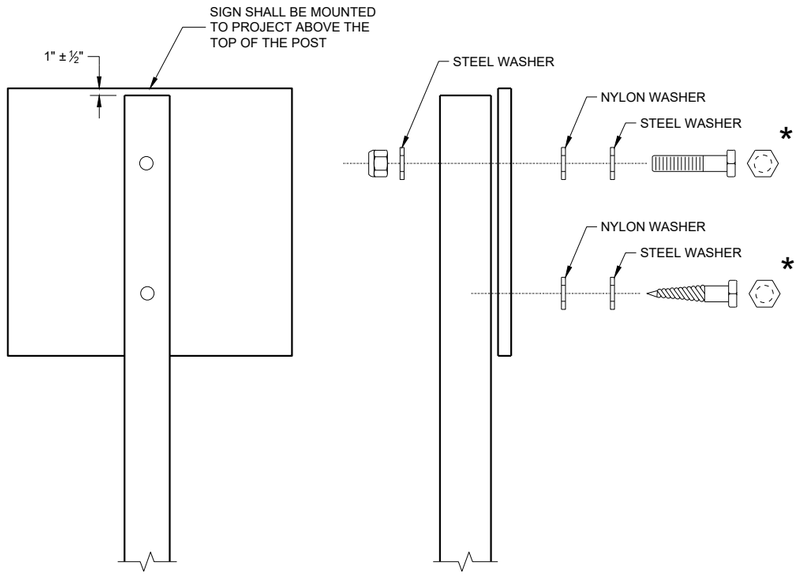
S.D.D. 15 D 38-2a



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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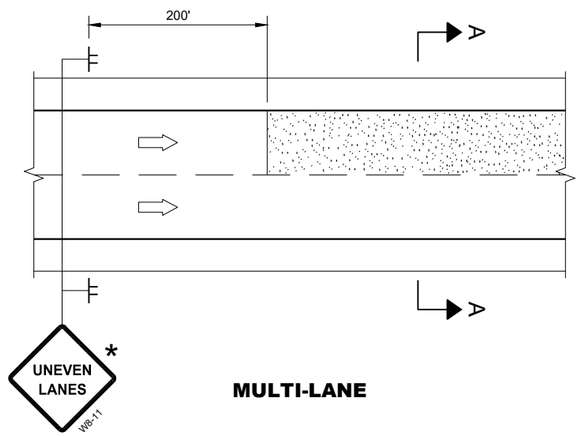
SDD 15D38 - 02b

SDD15D38 - 02b

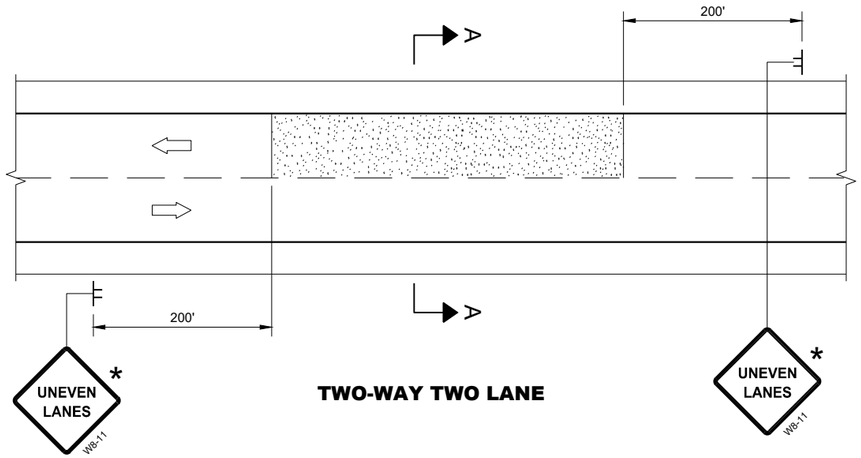
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

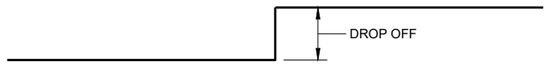
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

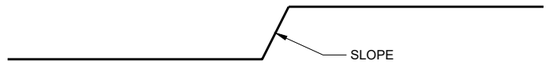
LEGEND

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

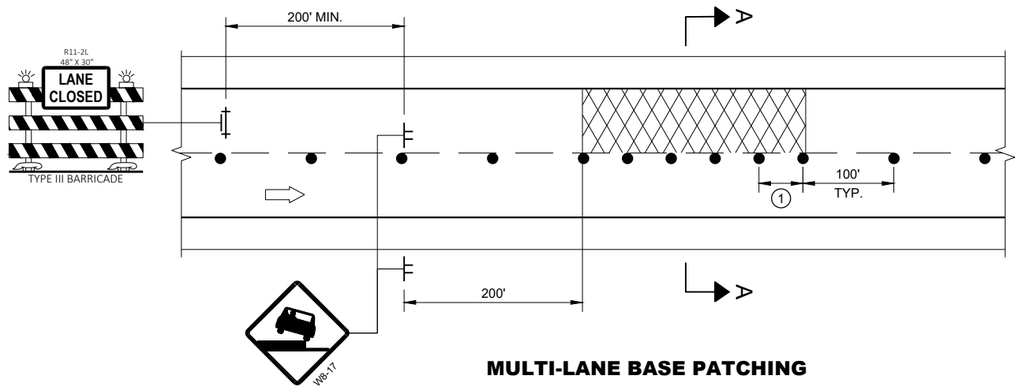


SECTION A - A

OR

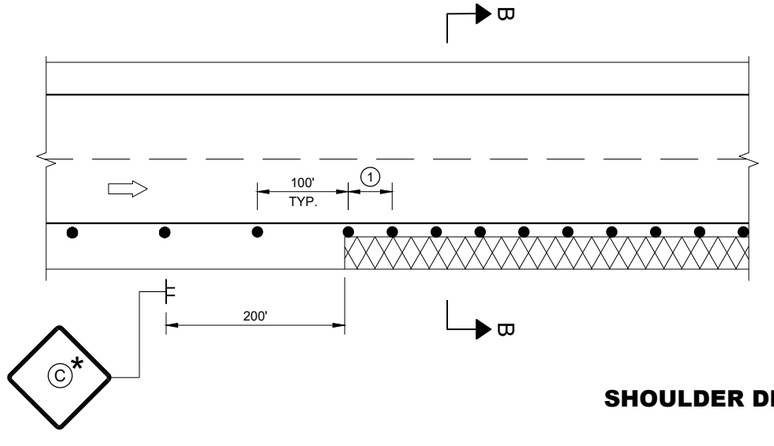


SECTION A - A

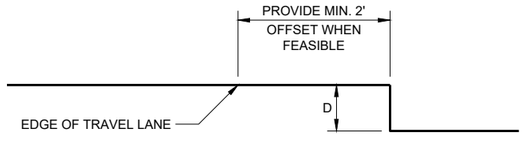


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

6

SDD 15D39 - 02

GENERAL NOTES

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

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

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

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

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

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

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

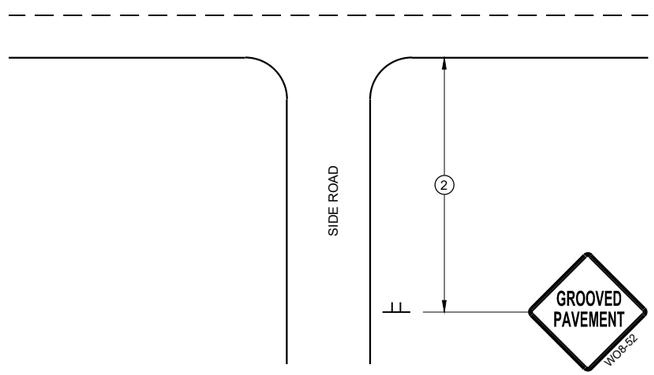
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

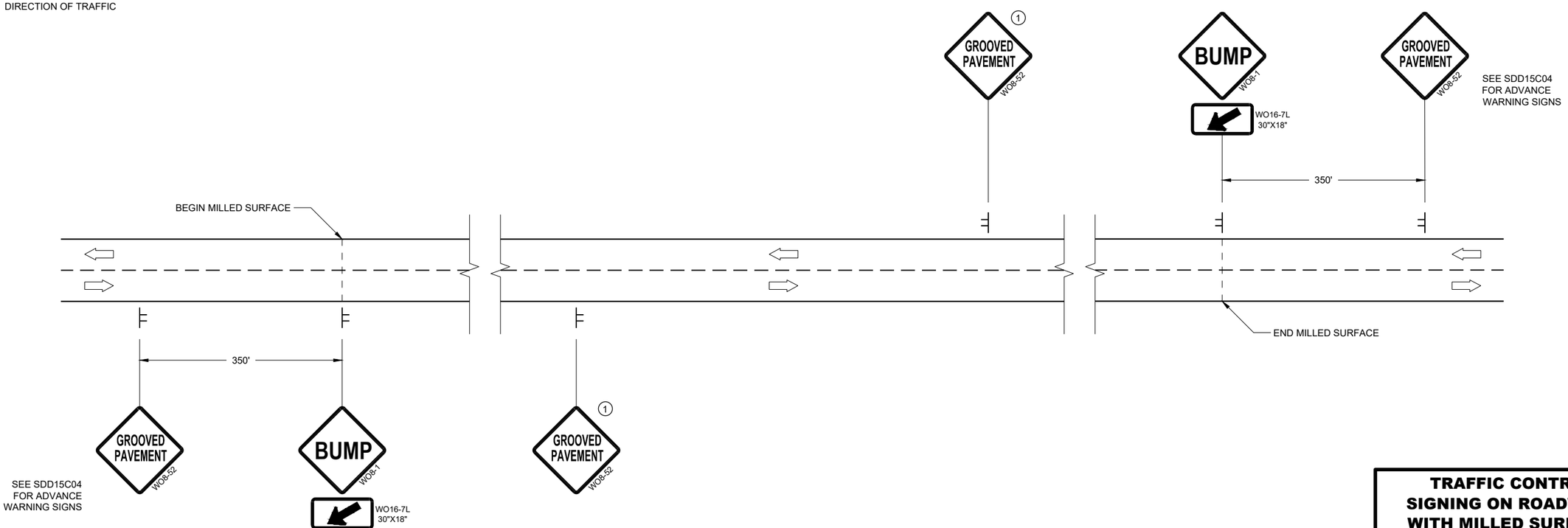
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D44 - 02

GENERAL NOTES

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

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

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

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

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

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

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

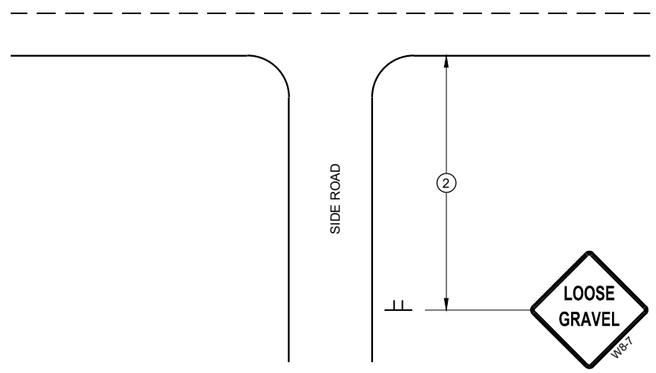
(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

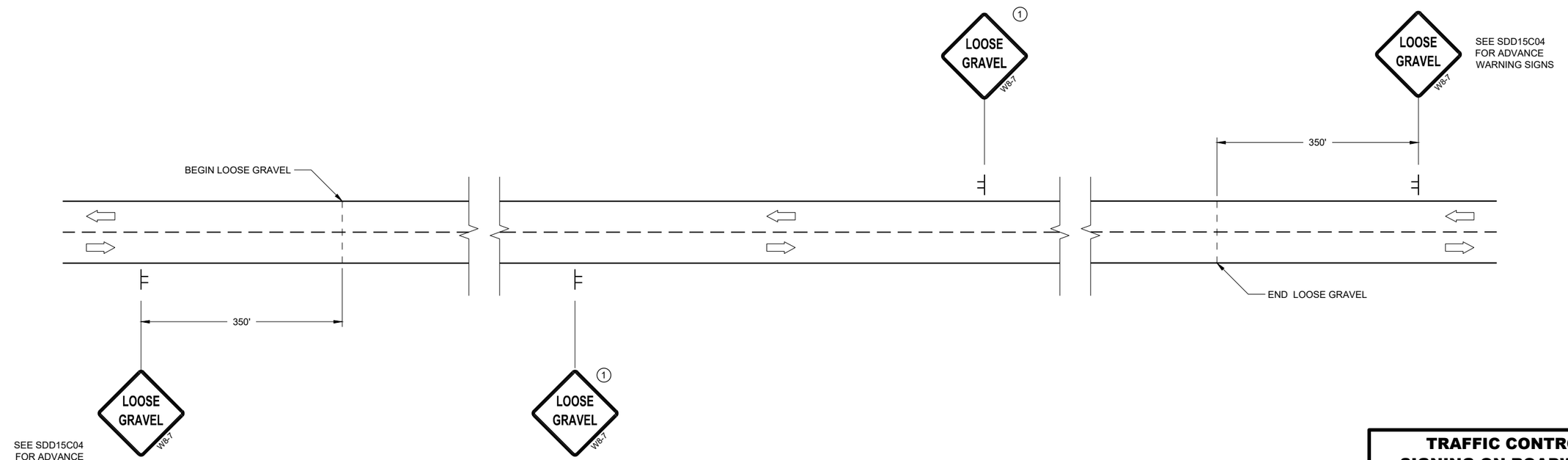
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

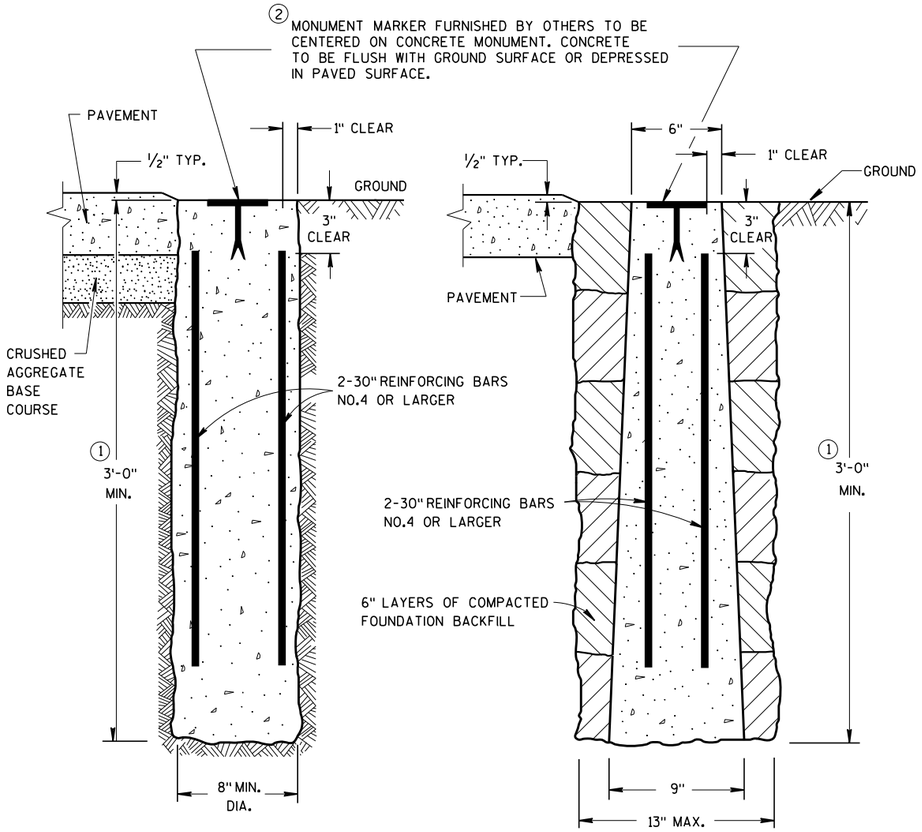
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D45 - 02

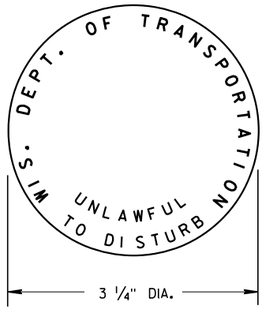


CAST-IN-PLACE

PRECAST

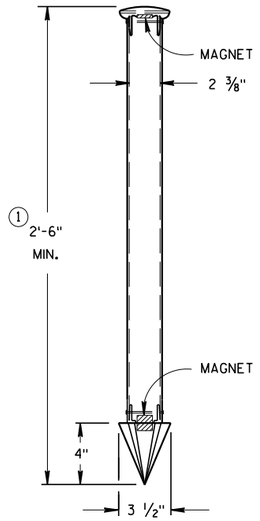
CONCRETE MONUMENTS

TYPE A



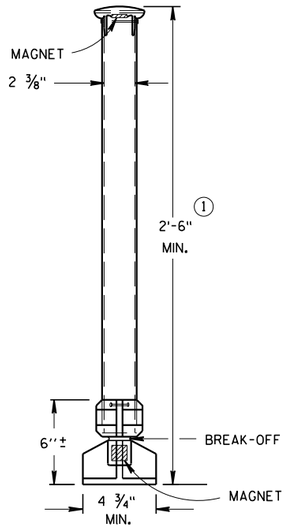
② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C", & "D"



TYPE C

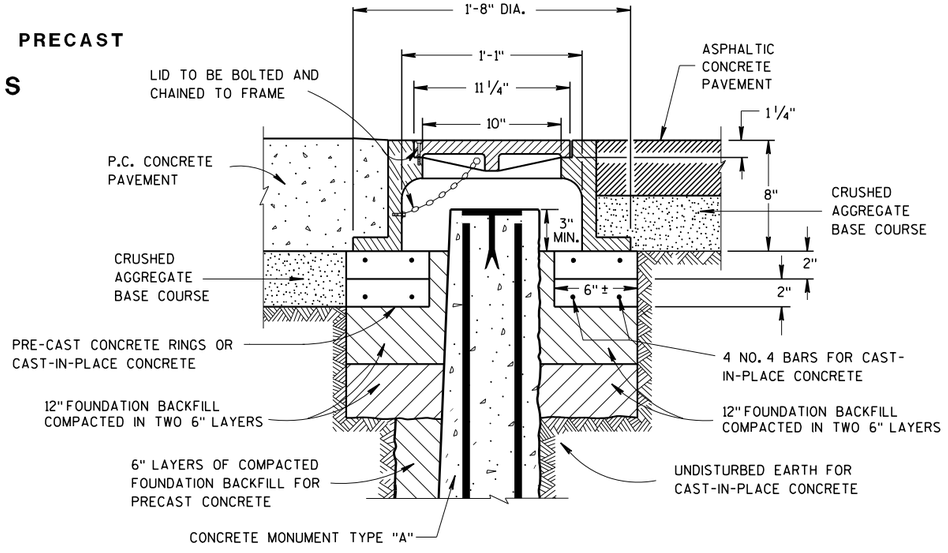
DRIVE-IN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

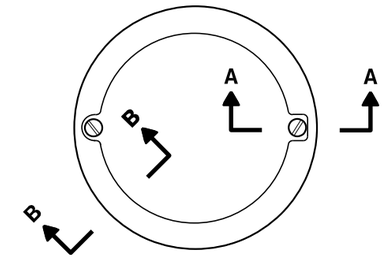
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

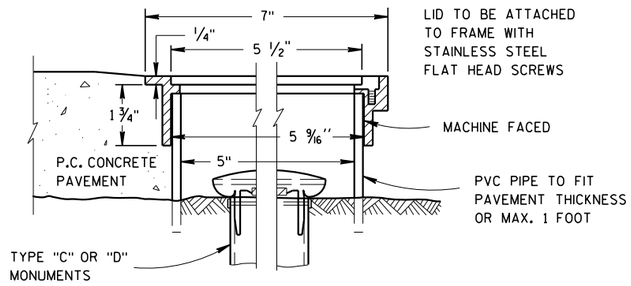
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Raymond A. Kumagai — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

6

S.D.D. 16 A 1-7

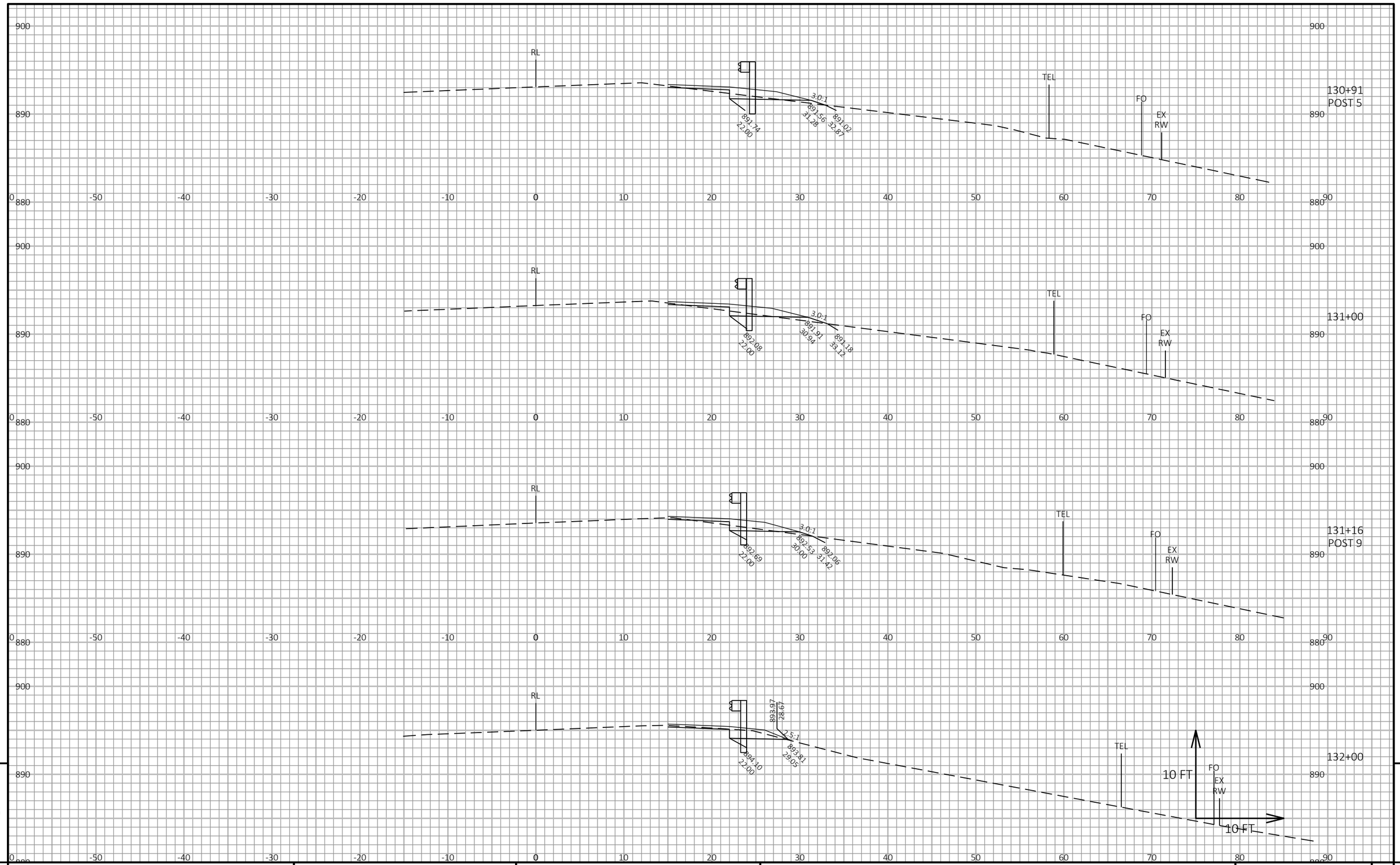
BEGIN ABRUPT RT
MATCH EXISTING

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 108	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 3/19/2019 10:18 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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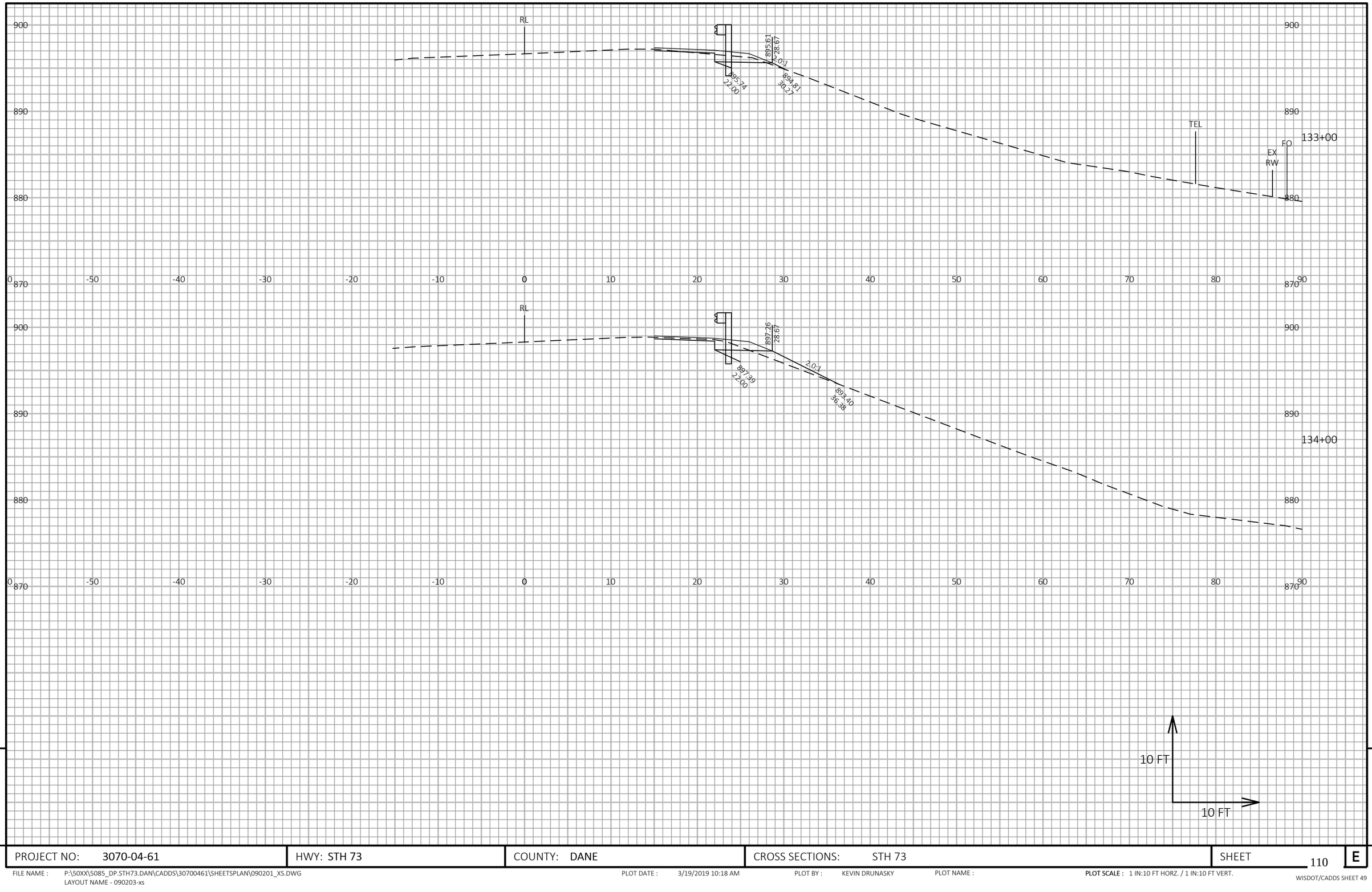
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 109	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 3/19/2019 10:18 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 110	E

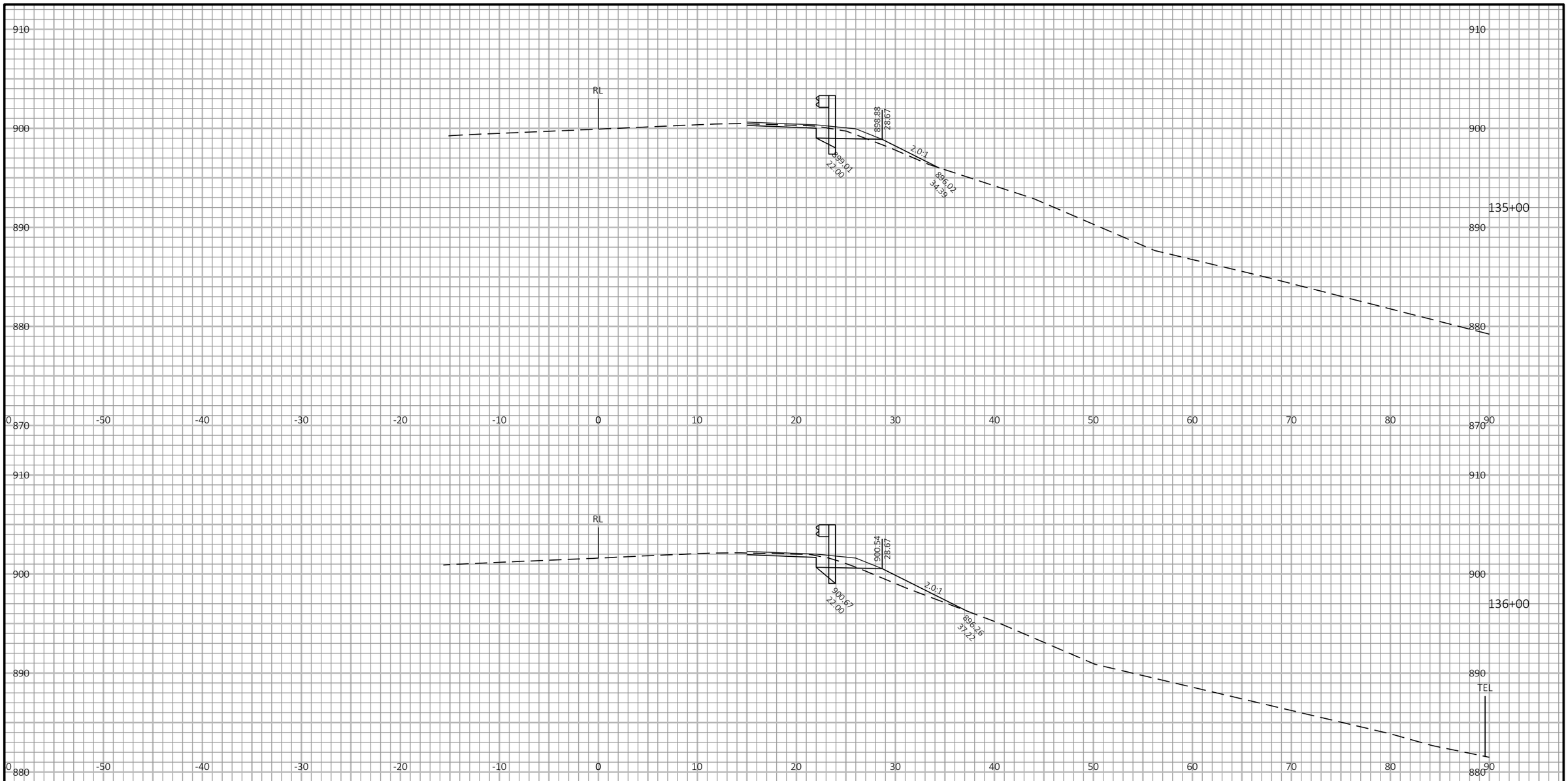
FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 3/19/2019 10:18 AM

PLOT BY : KEVIN DRUNASKY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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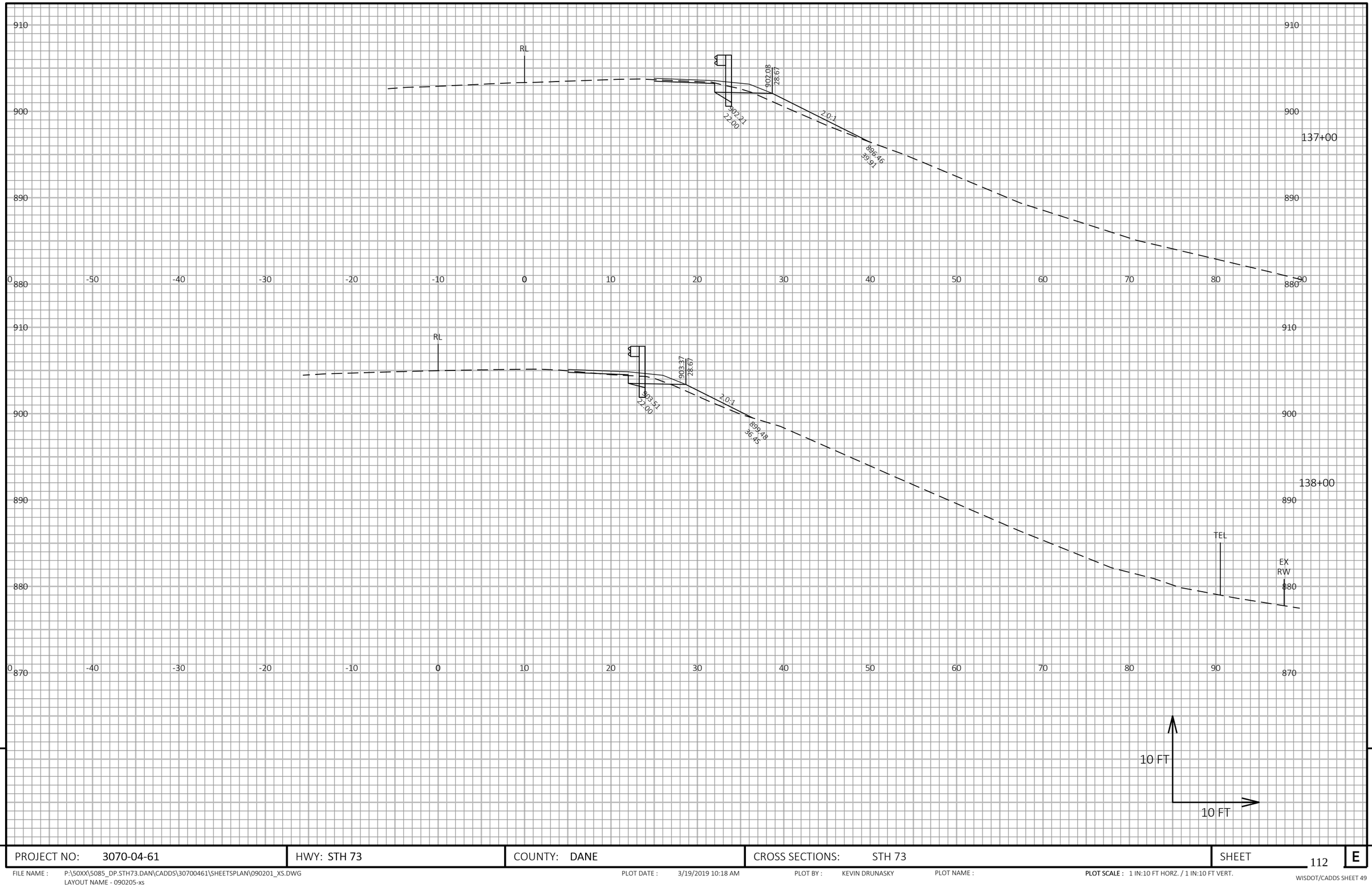
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 111	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090204-xs

PLOT DATE : 3/19/2019 10:18 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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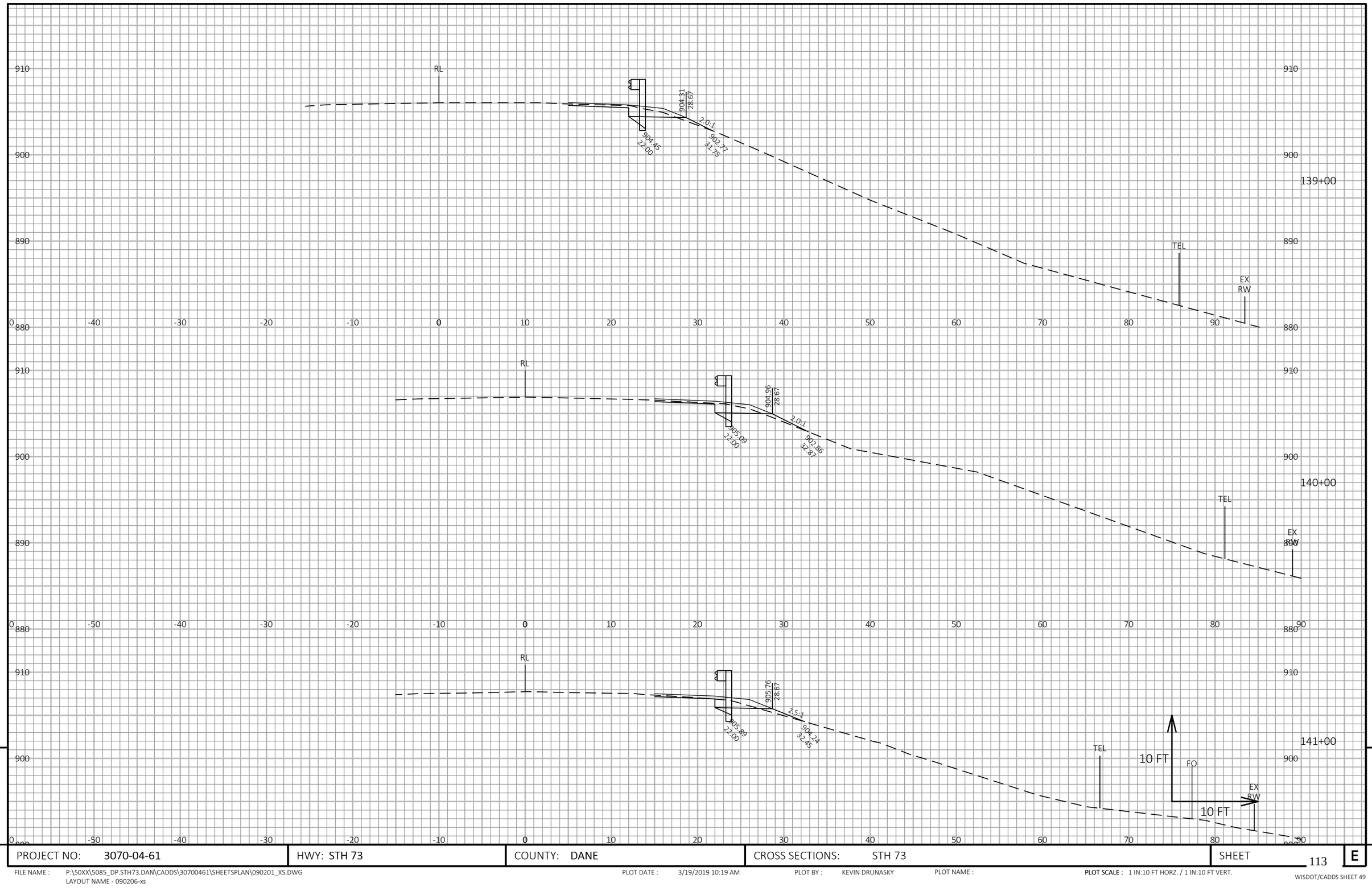
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 112	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090205-xs

PLOT DATE : 3/19/2019 10:18 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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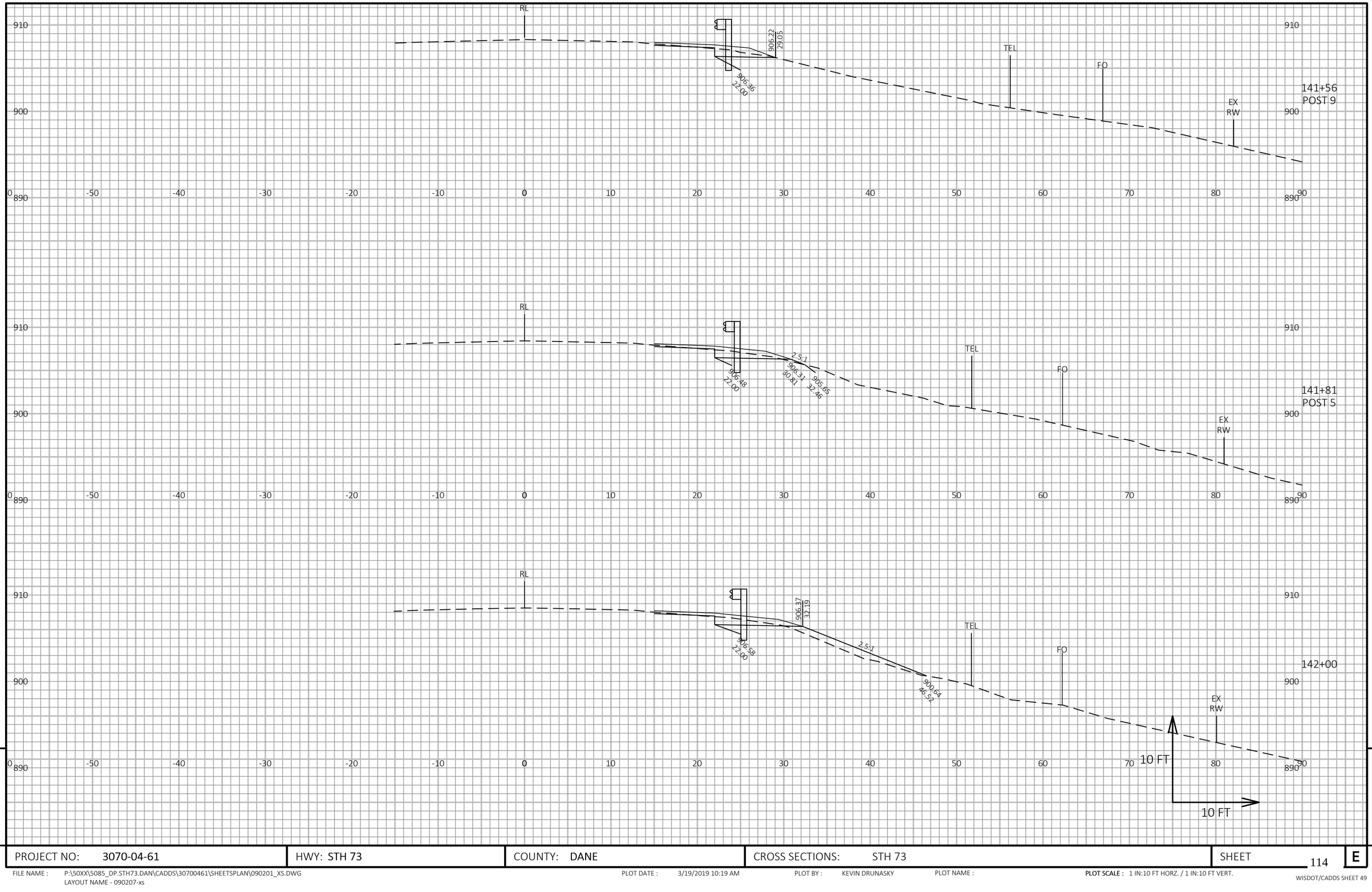
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 113	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 114	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090207-xs

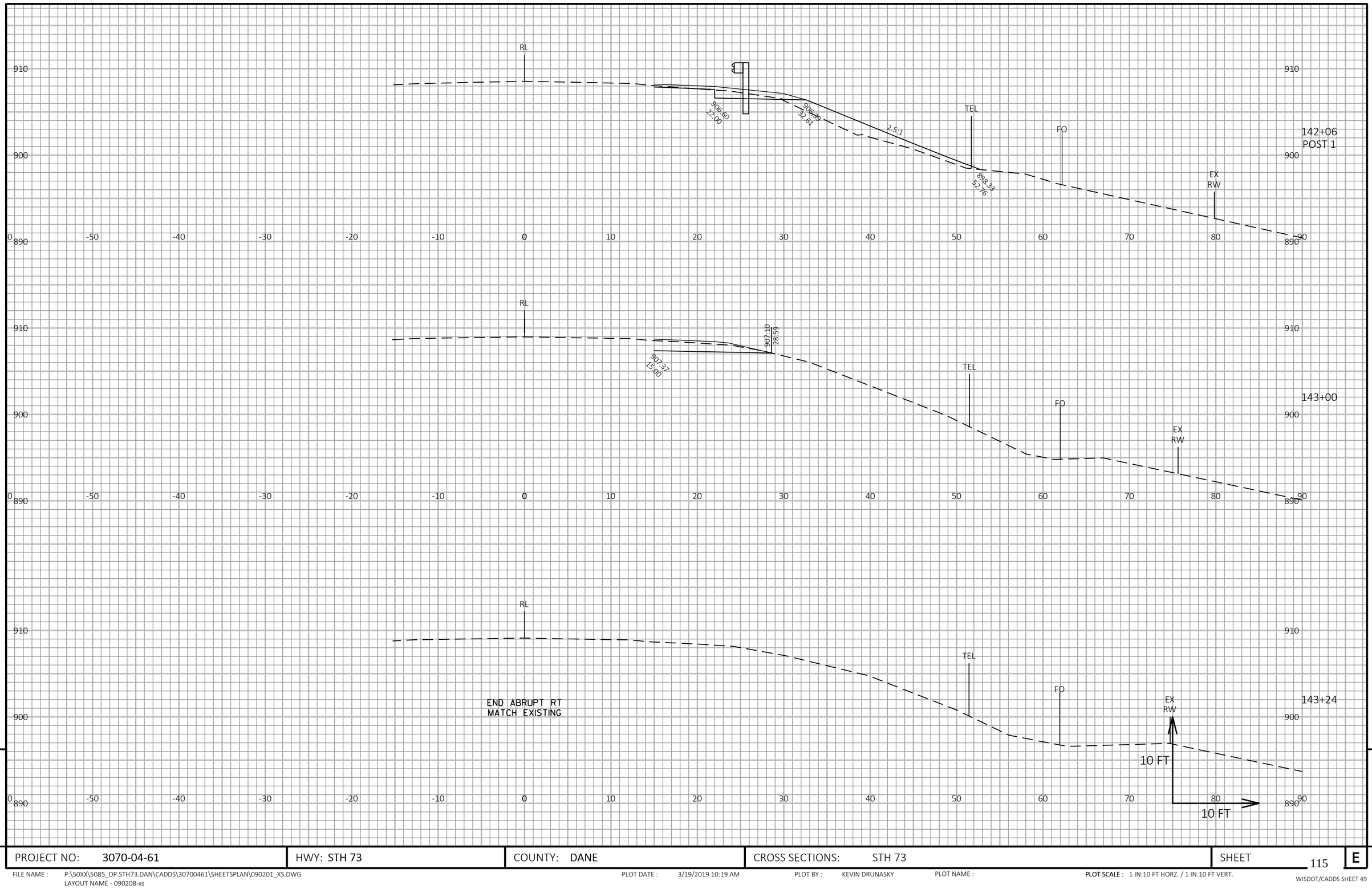
PLOT DATE : 3/19/2019 10:19 AM

PLOT BY : KEVIN DRUNASKY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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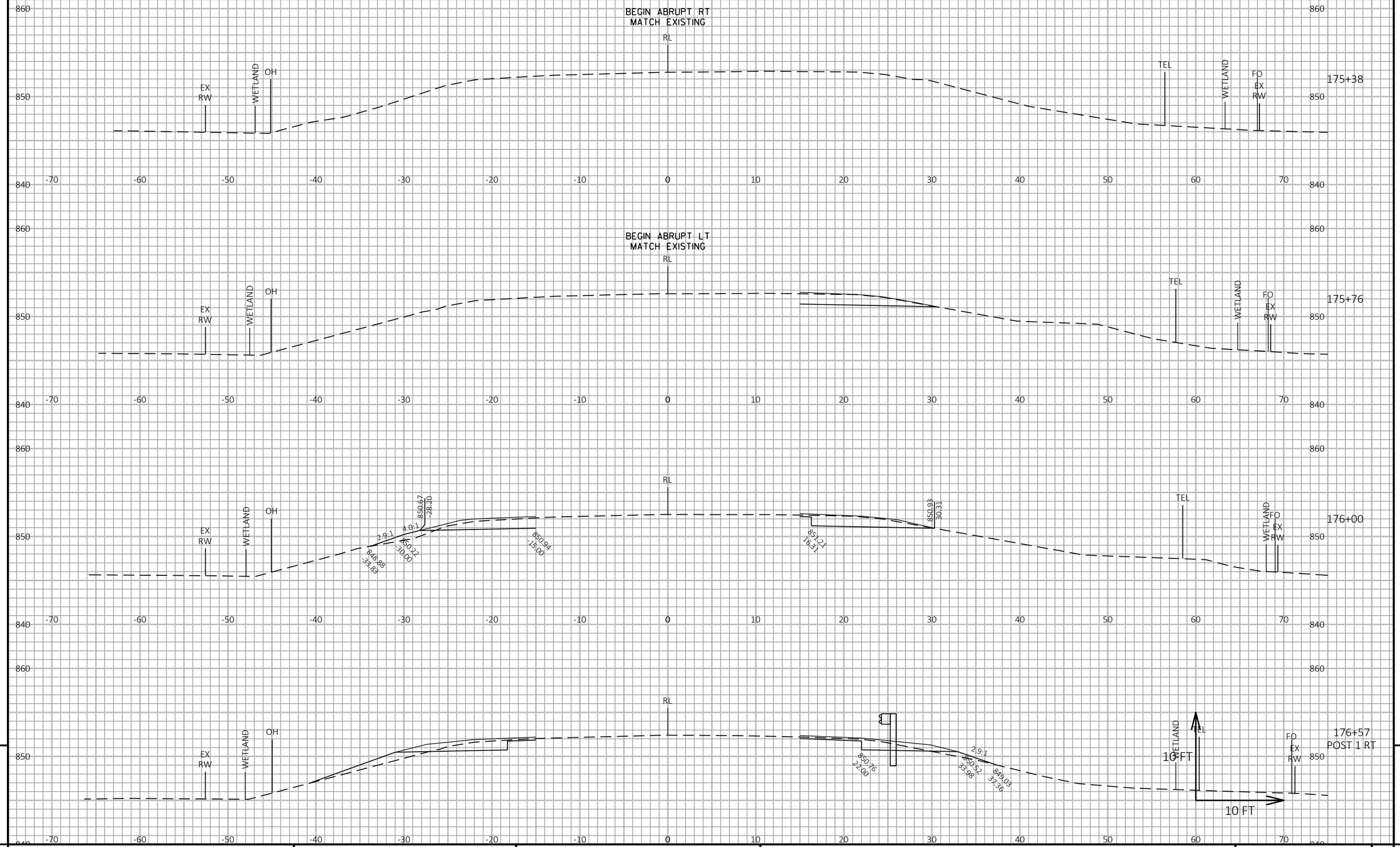
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 115	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090208-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 116	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090209-xs

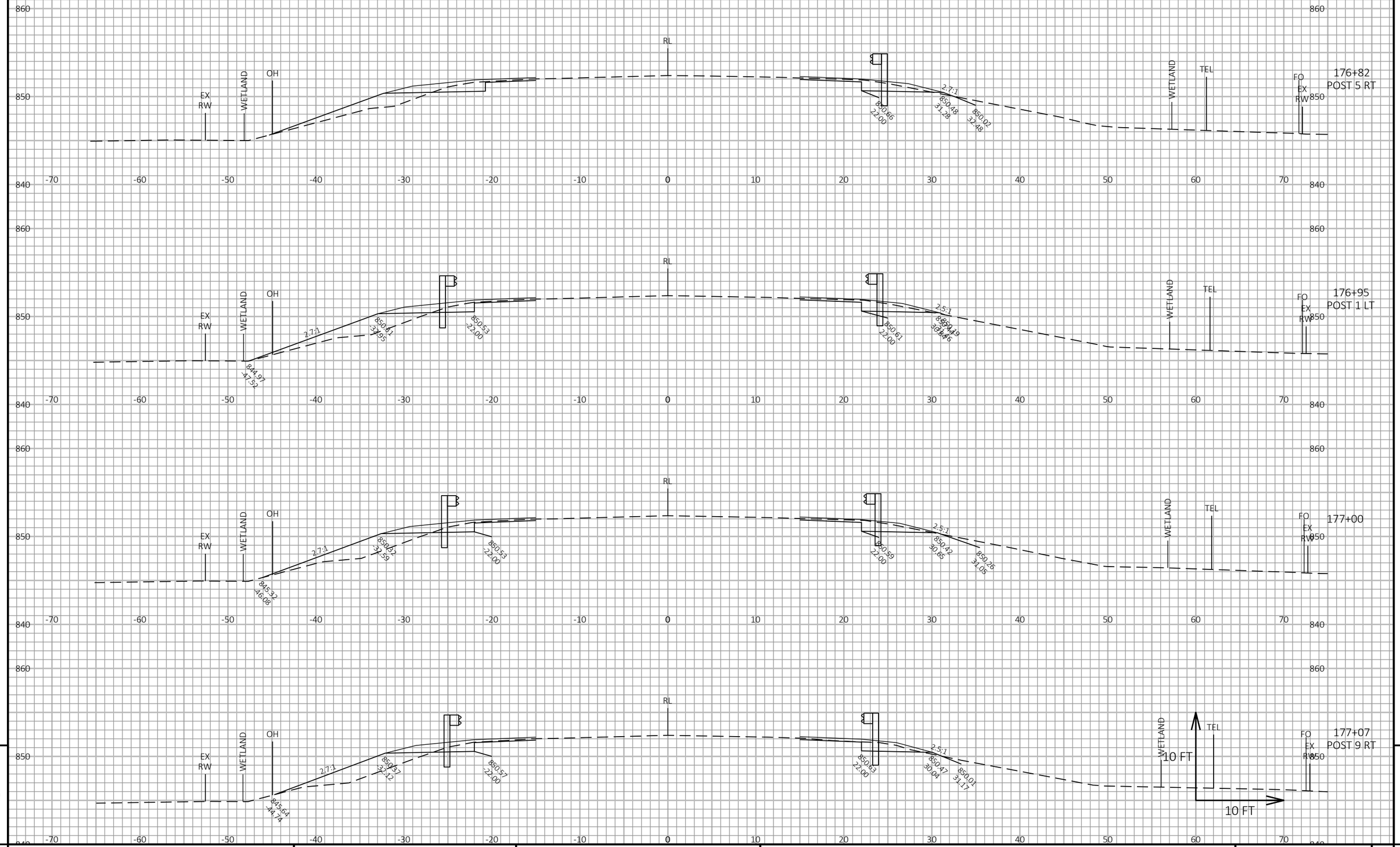
PLOT DATE : 3/19/2019 10:19 AM

PLOT BY : KEVIN DRUNASKY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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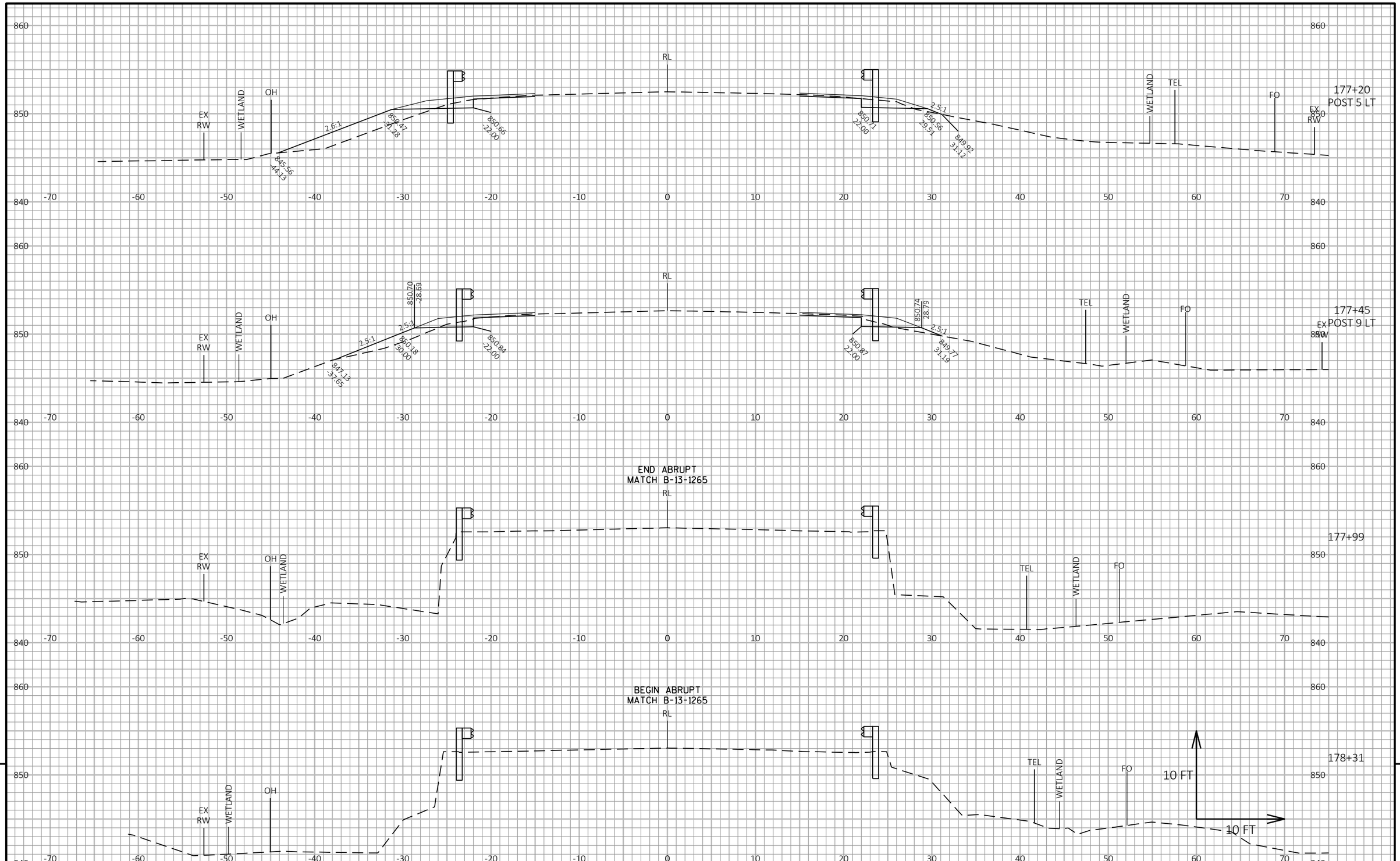
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 117	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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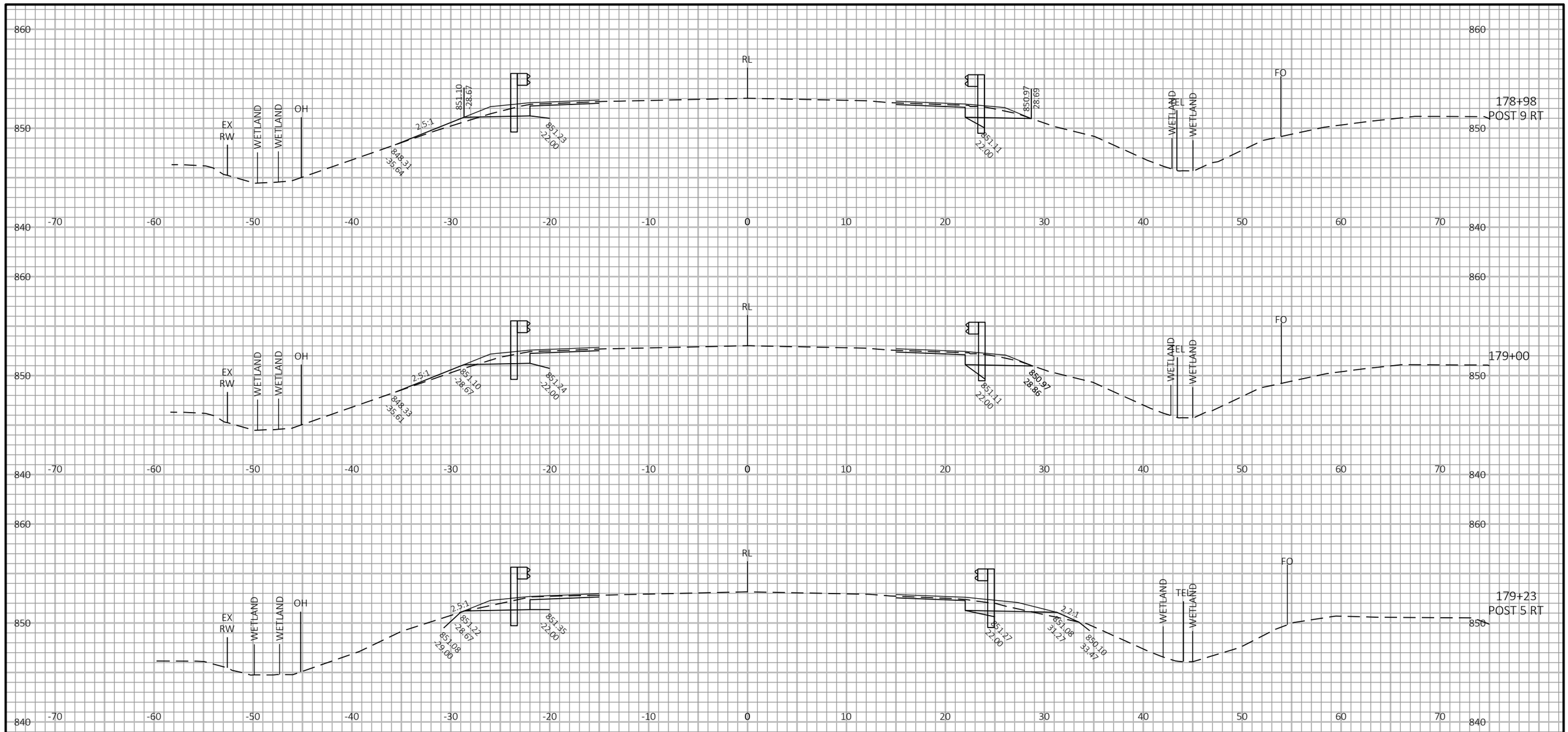
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 118	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 10/30/2019 12:24 PM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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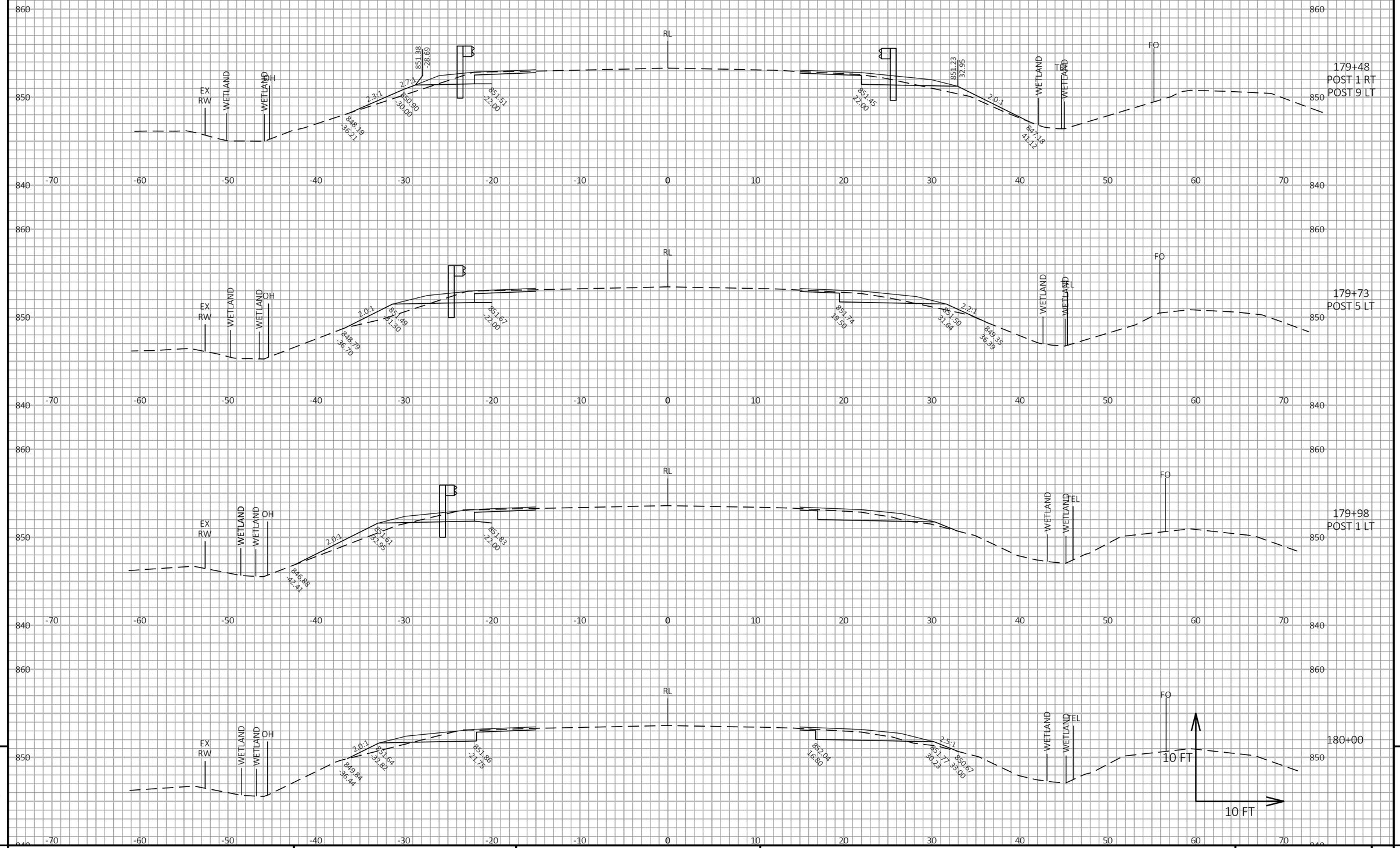
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 119	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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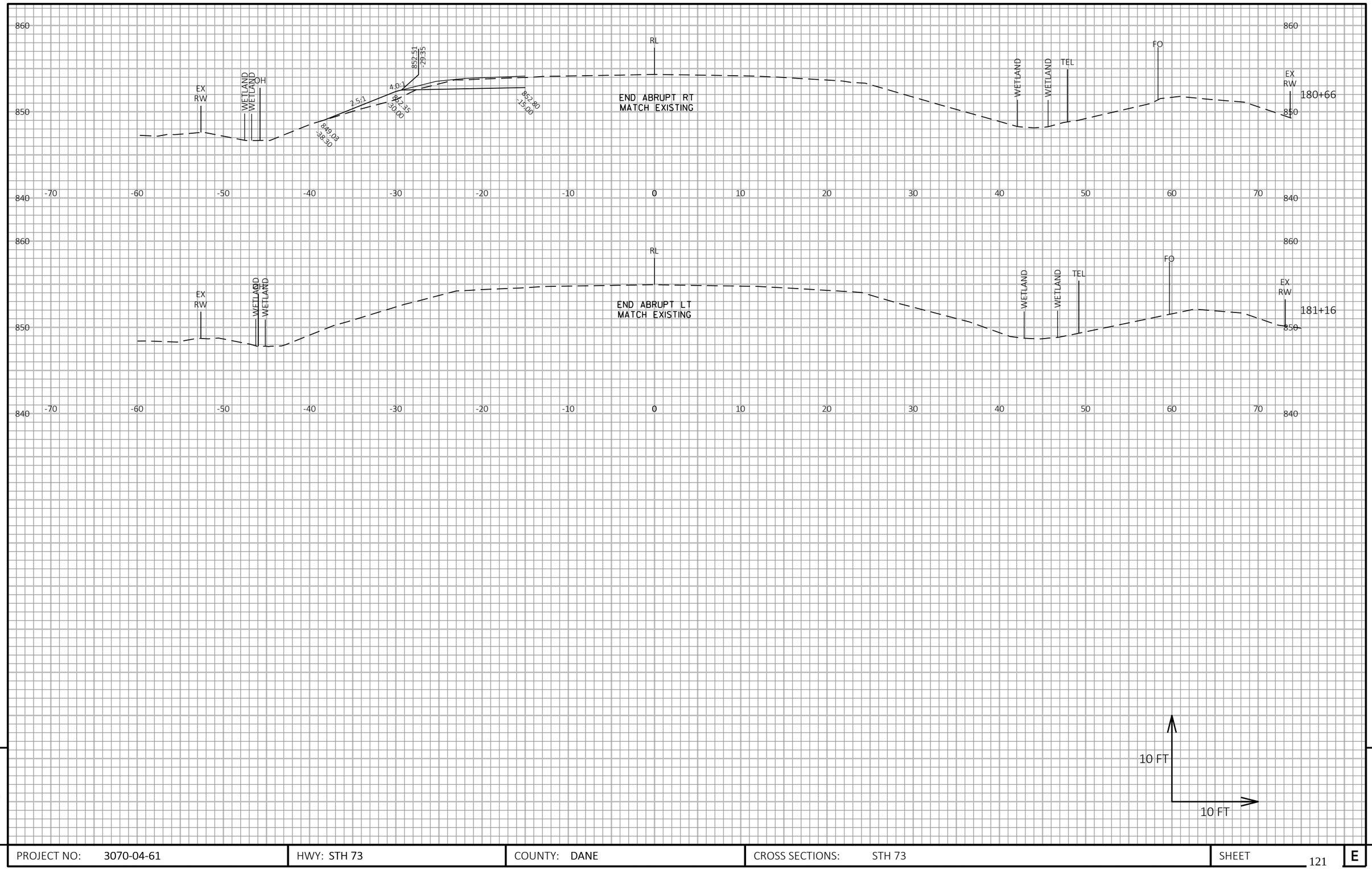
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 120	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090213-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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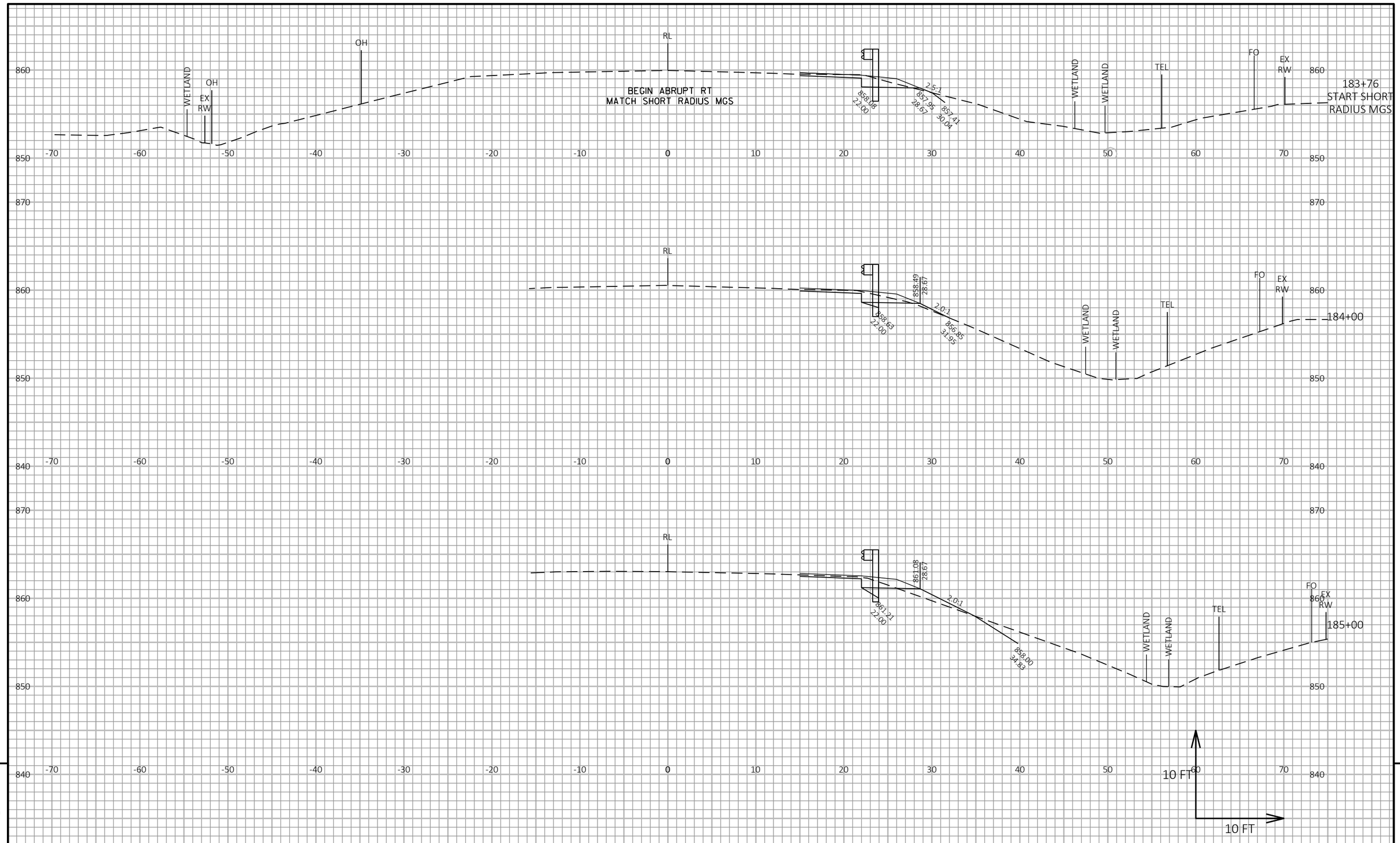
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 121	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090214-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 122	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090215-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

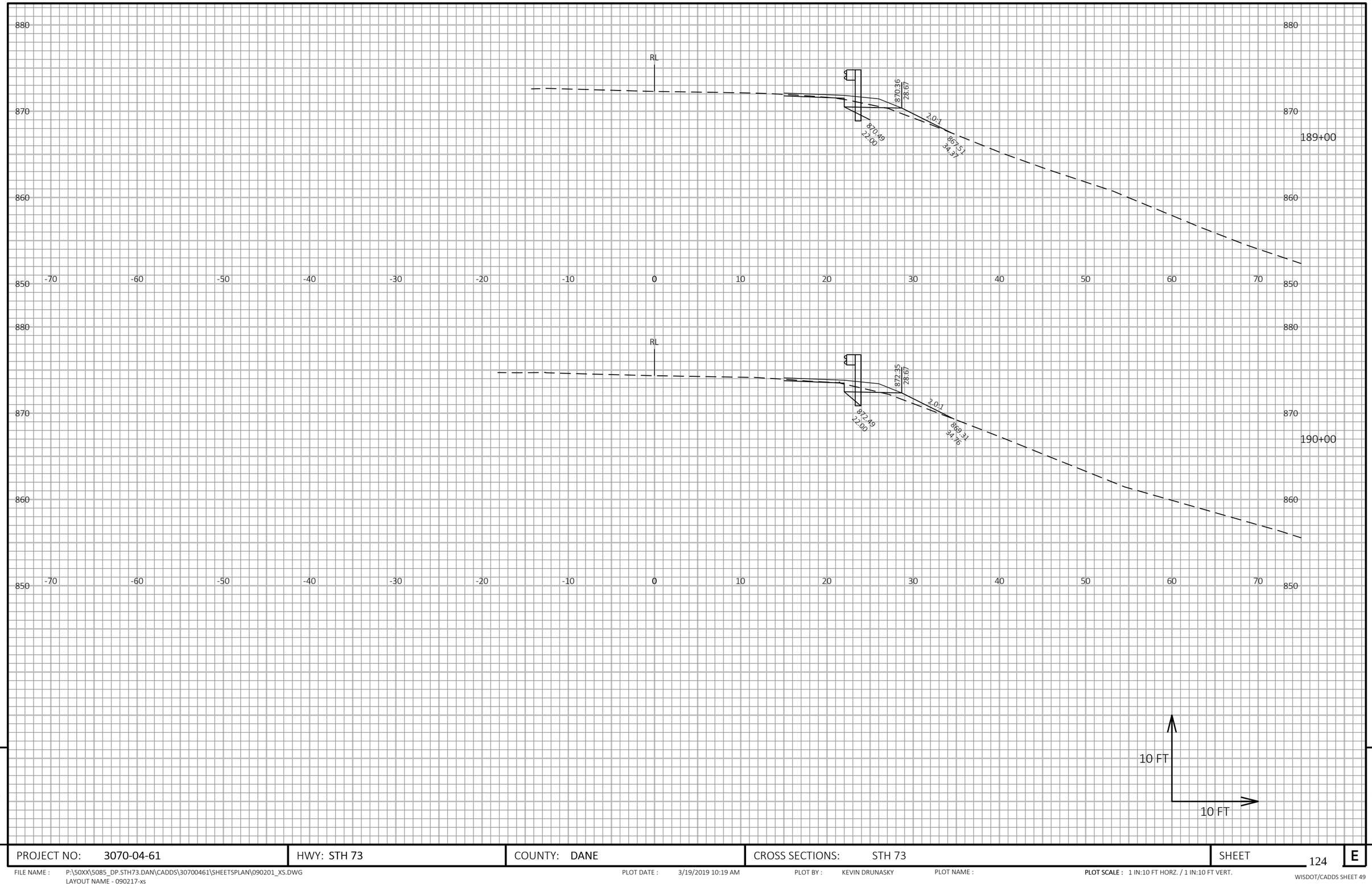
9

PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 123	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090216-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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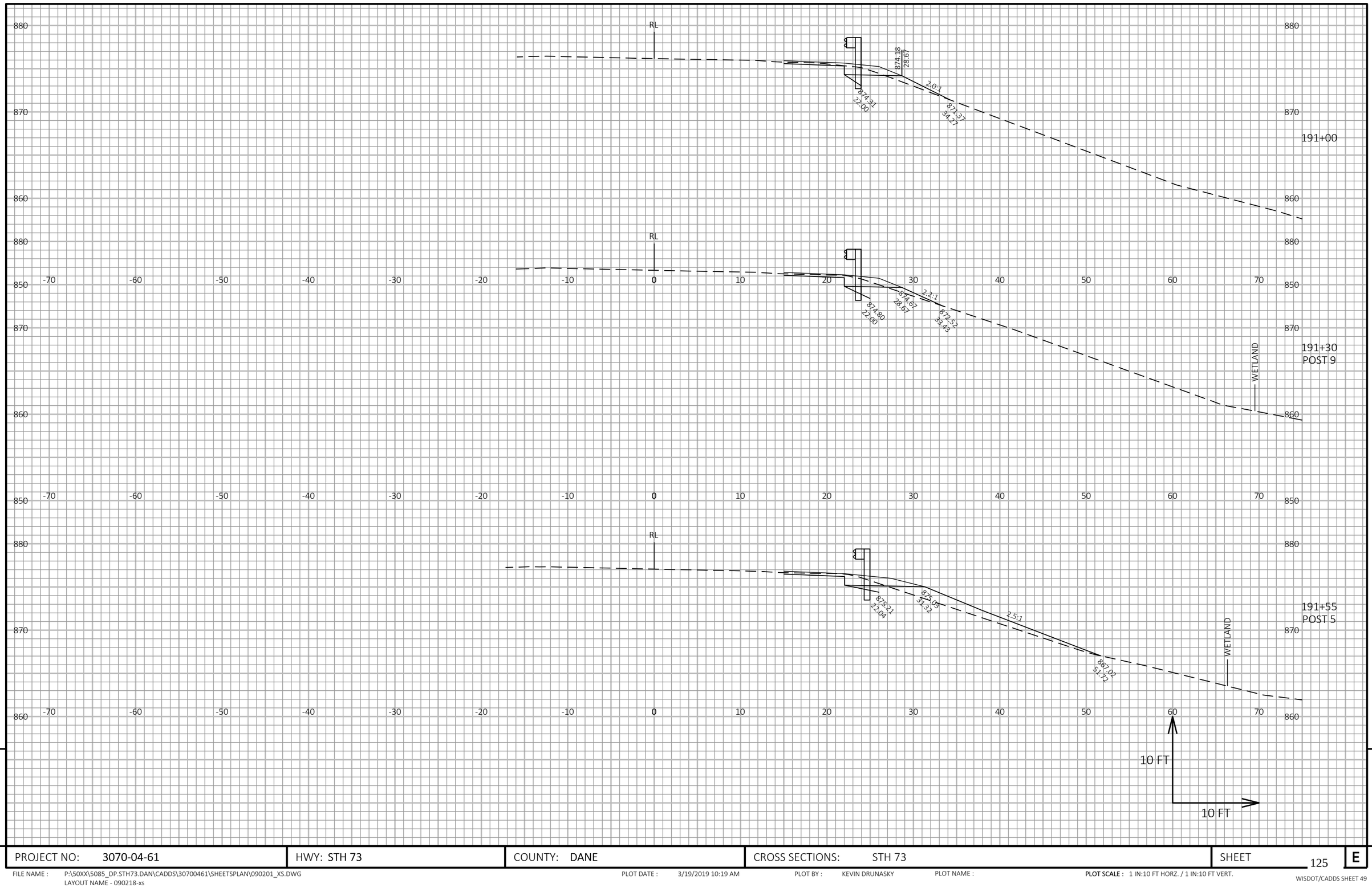
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 124	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090217-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

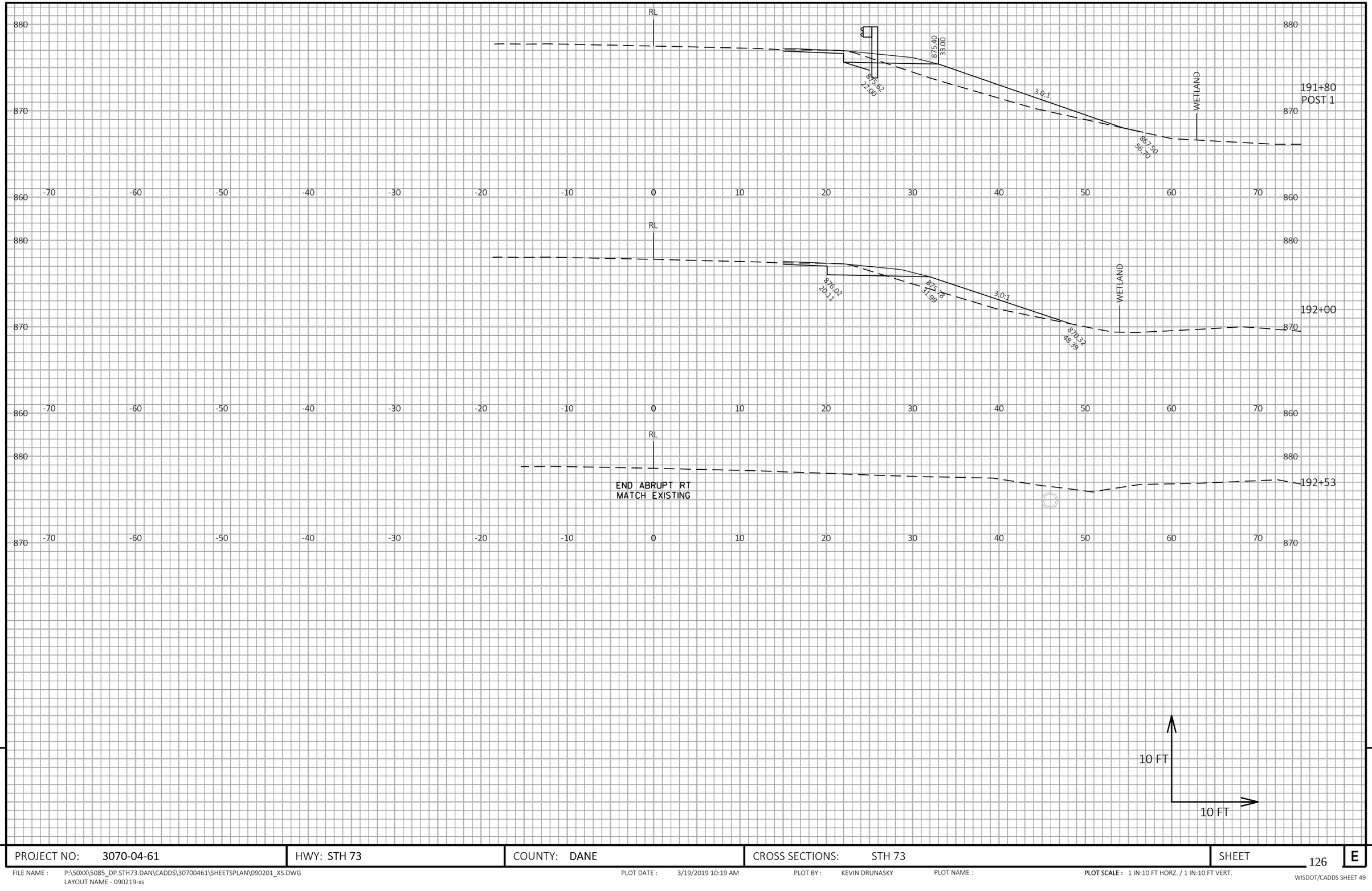


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 125	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 126	E

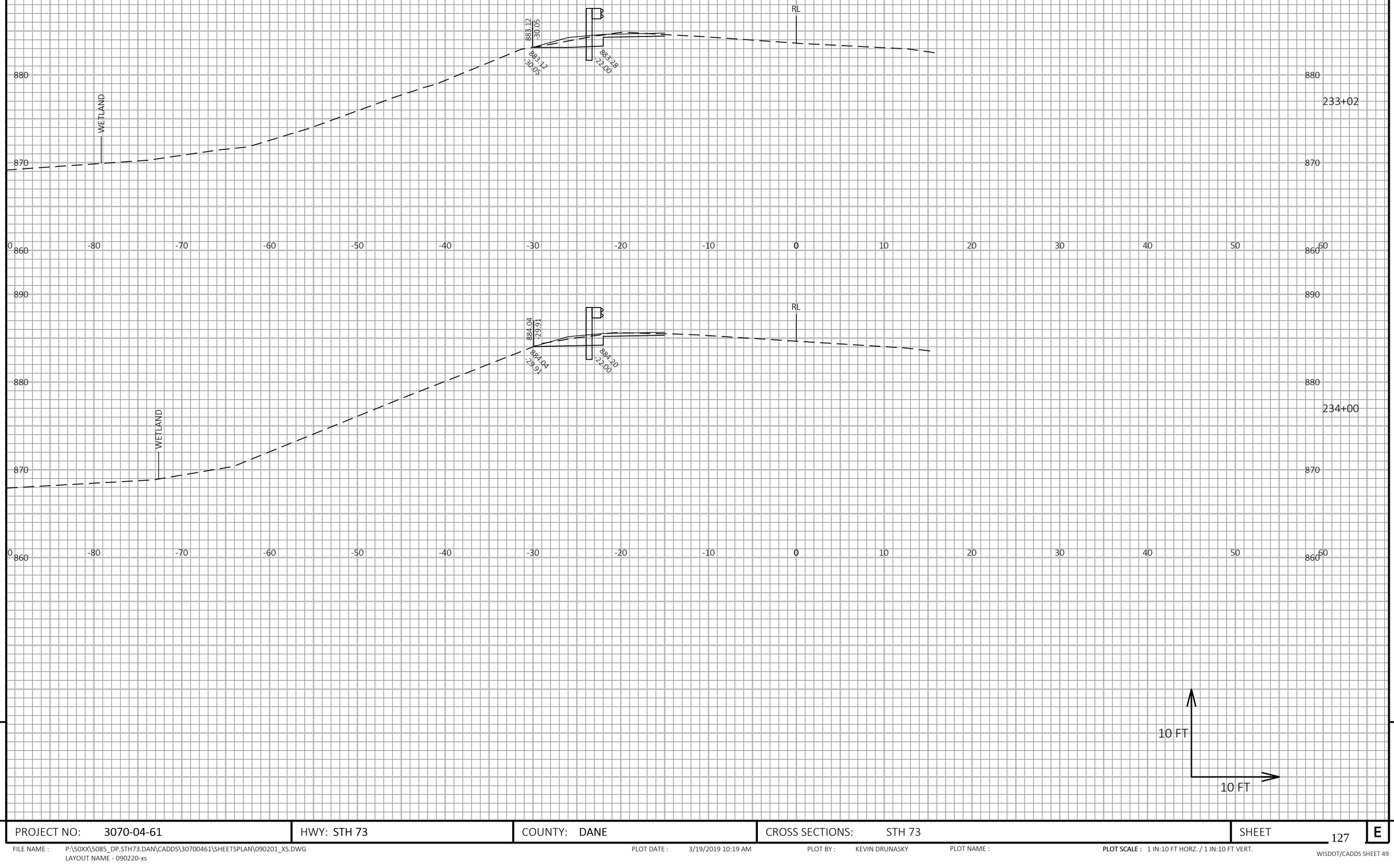
FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090219-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN ABRUPT LT
MATCH SHORT RADIUS MGS



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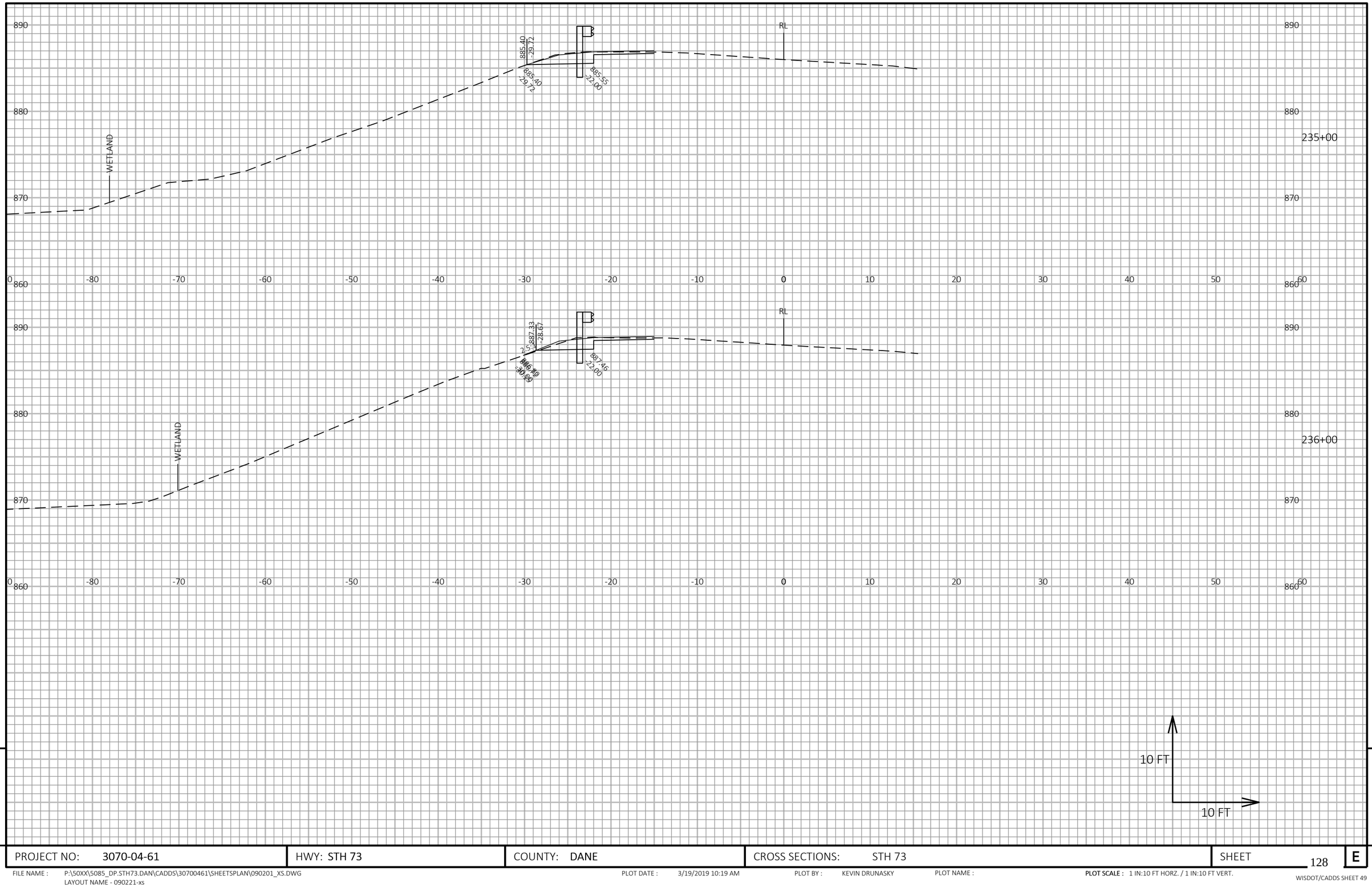
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 127	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090220-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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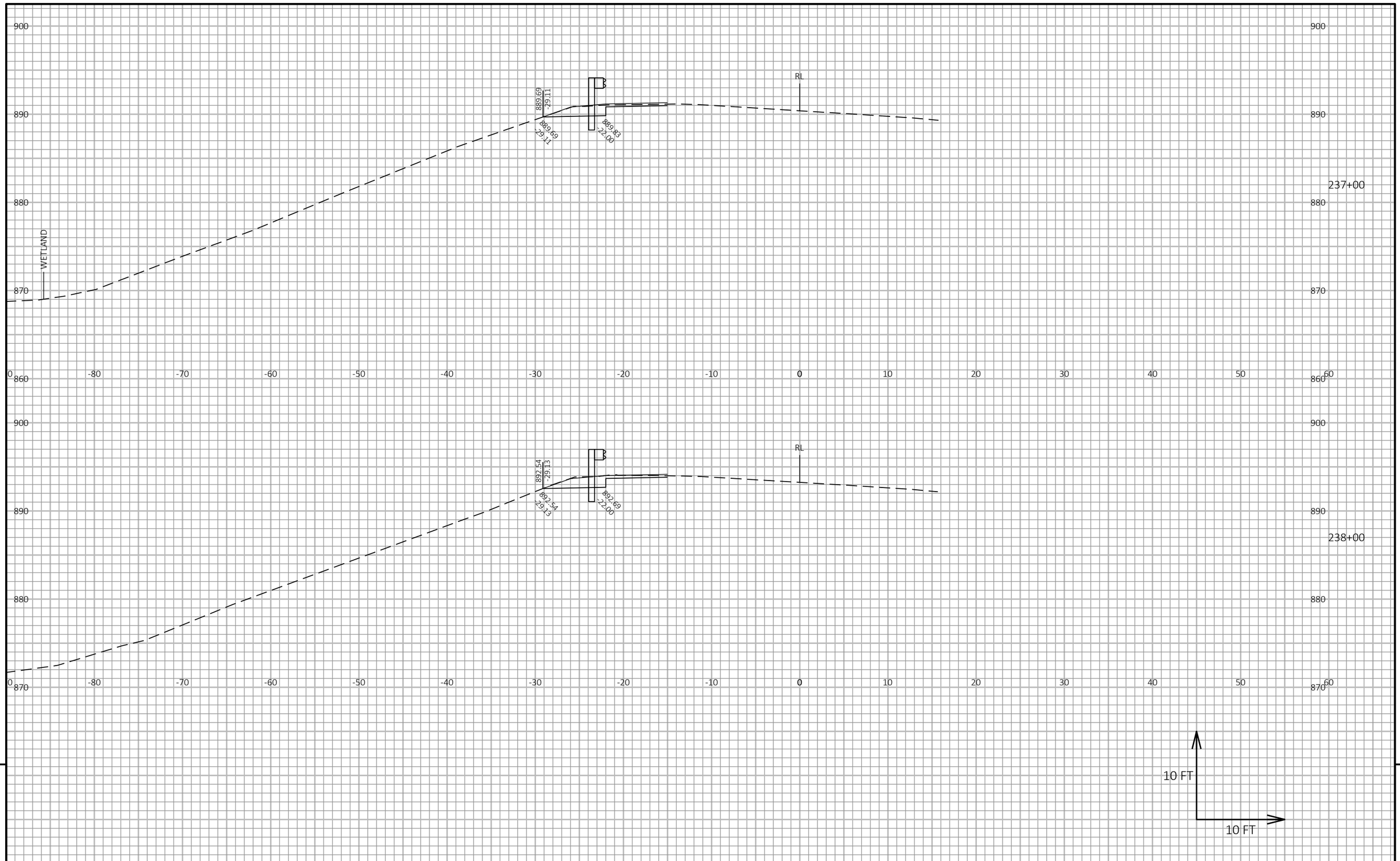
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 128	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090221-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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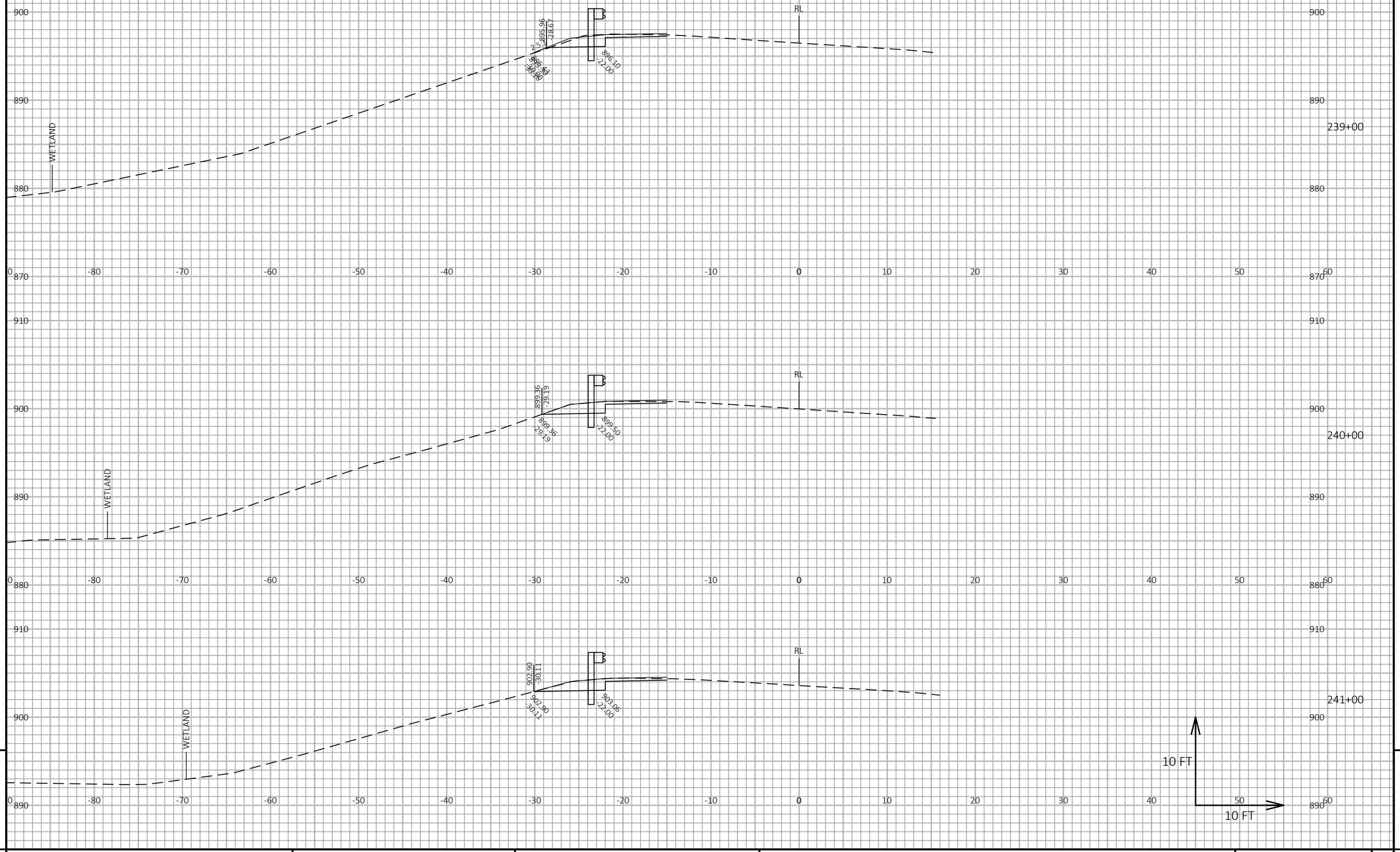
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 129	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090222-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

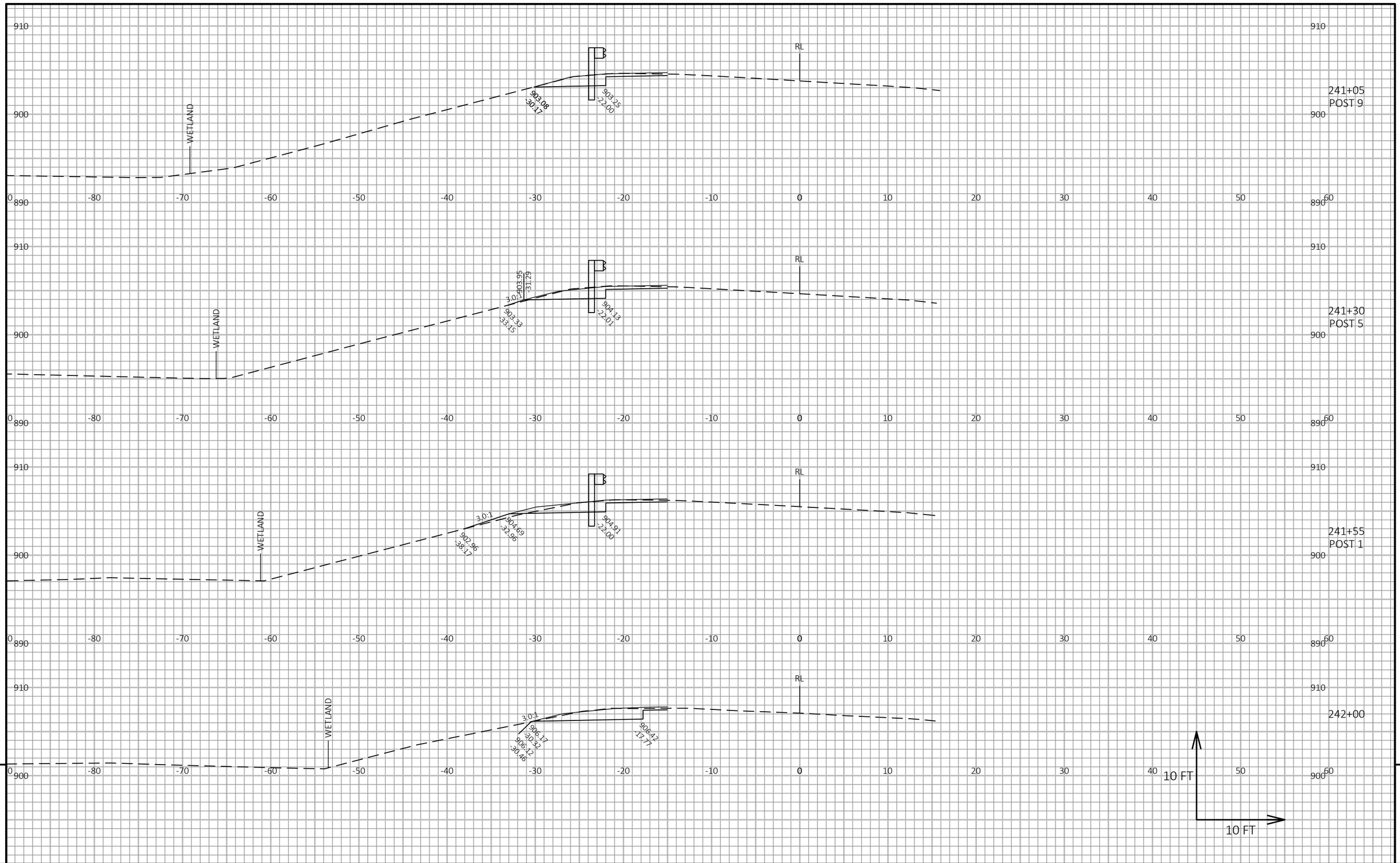


PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 130	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090223-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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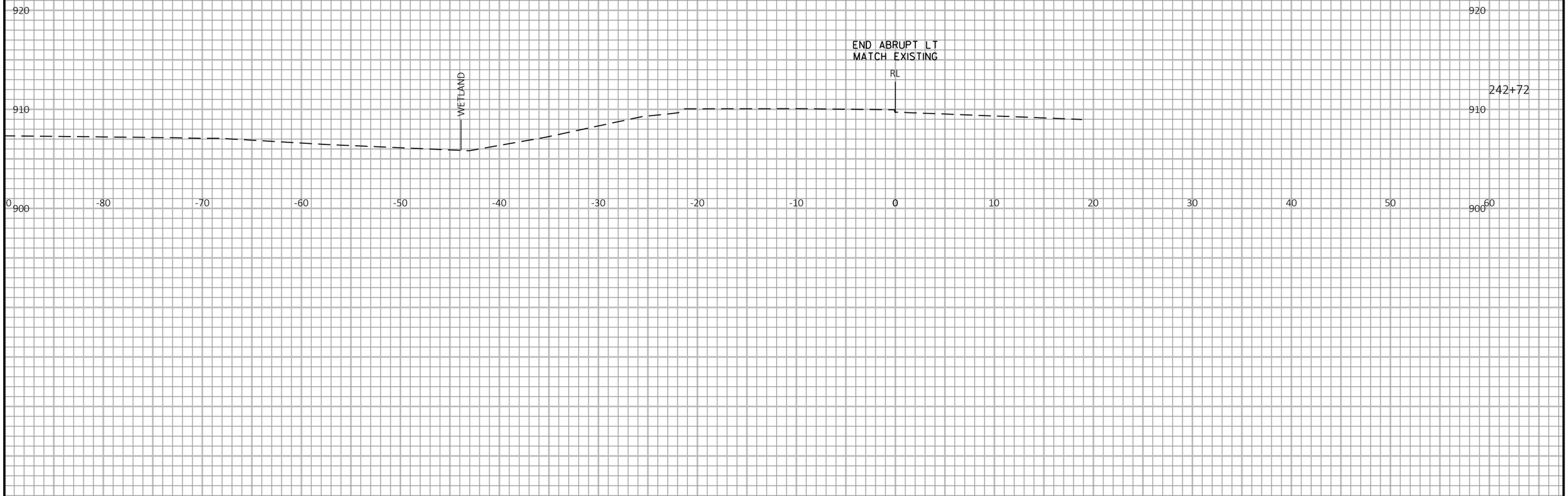
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 131	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090224-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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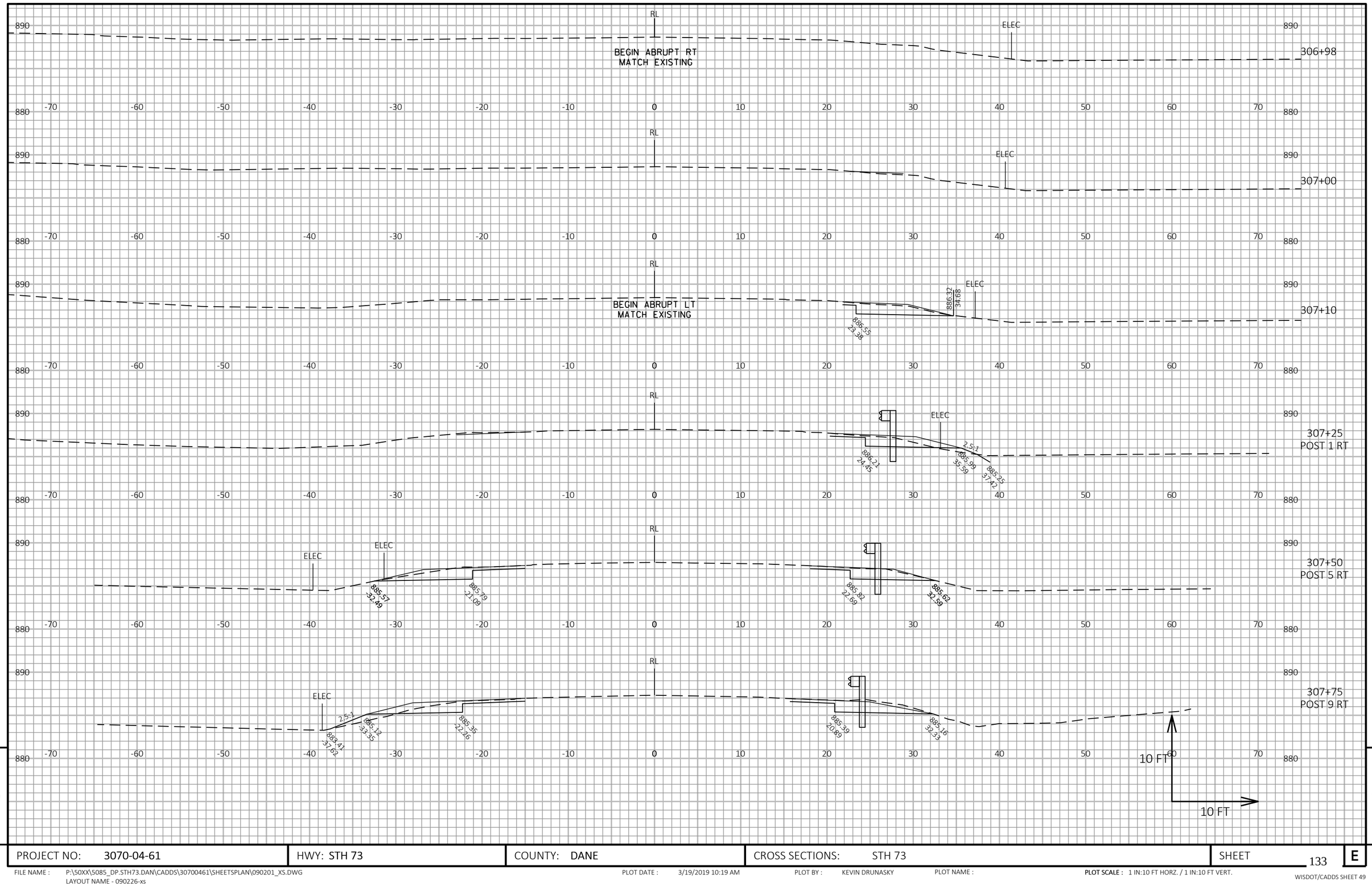
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 132	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090225-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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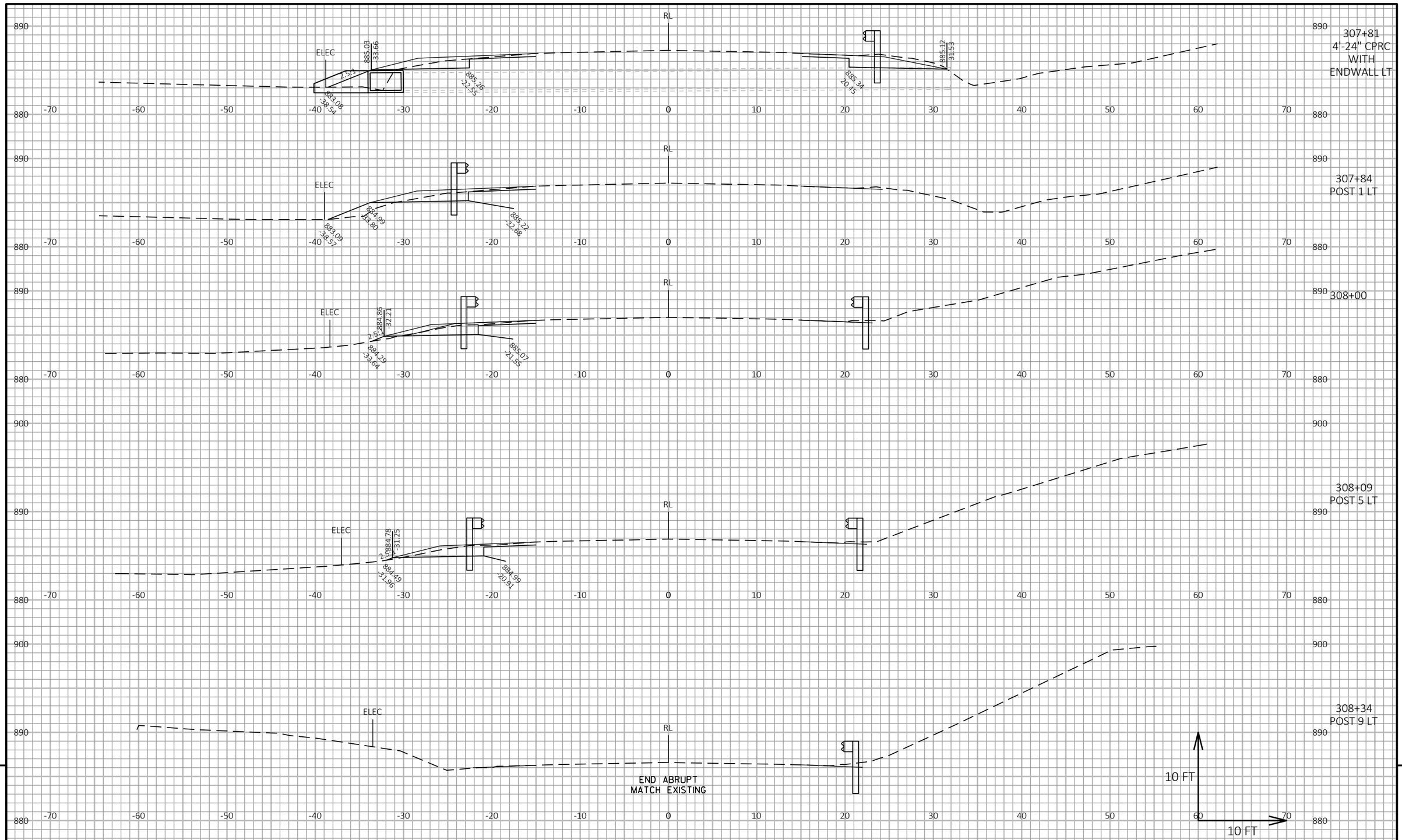
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 133	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090226-xs

PLOT DATE : 3/19/2019 10:19 AM PLOT BY : KEVIN DRUNASKY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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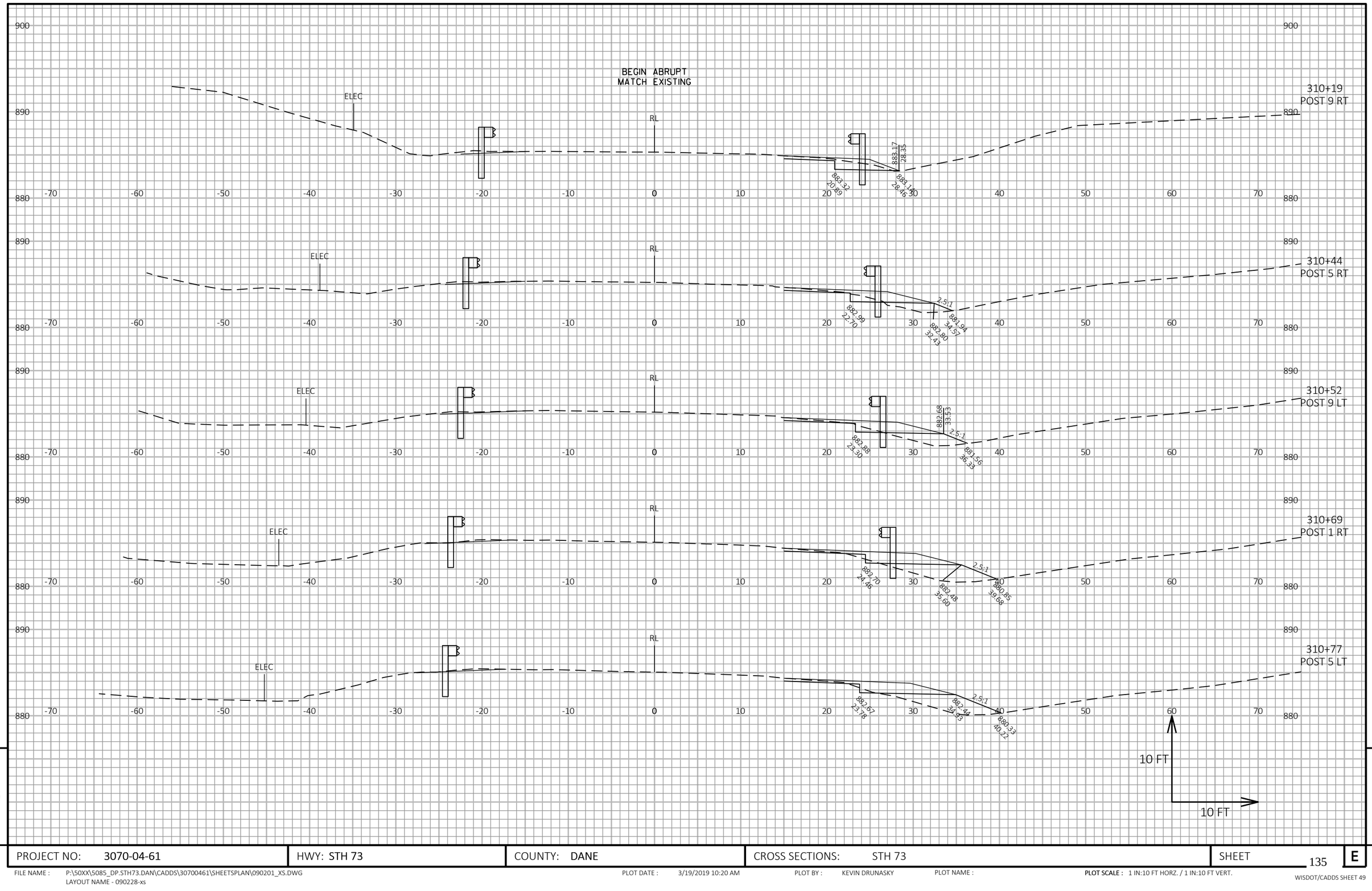
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 134	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090227-xs

PLOT DATE : 3/19/2019 10:20 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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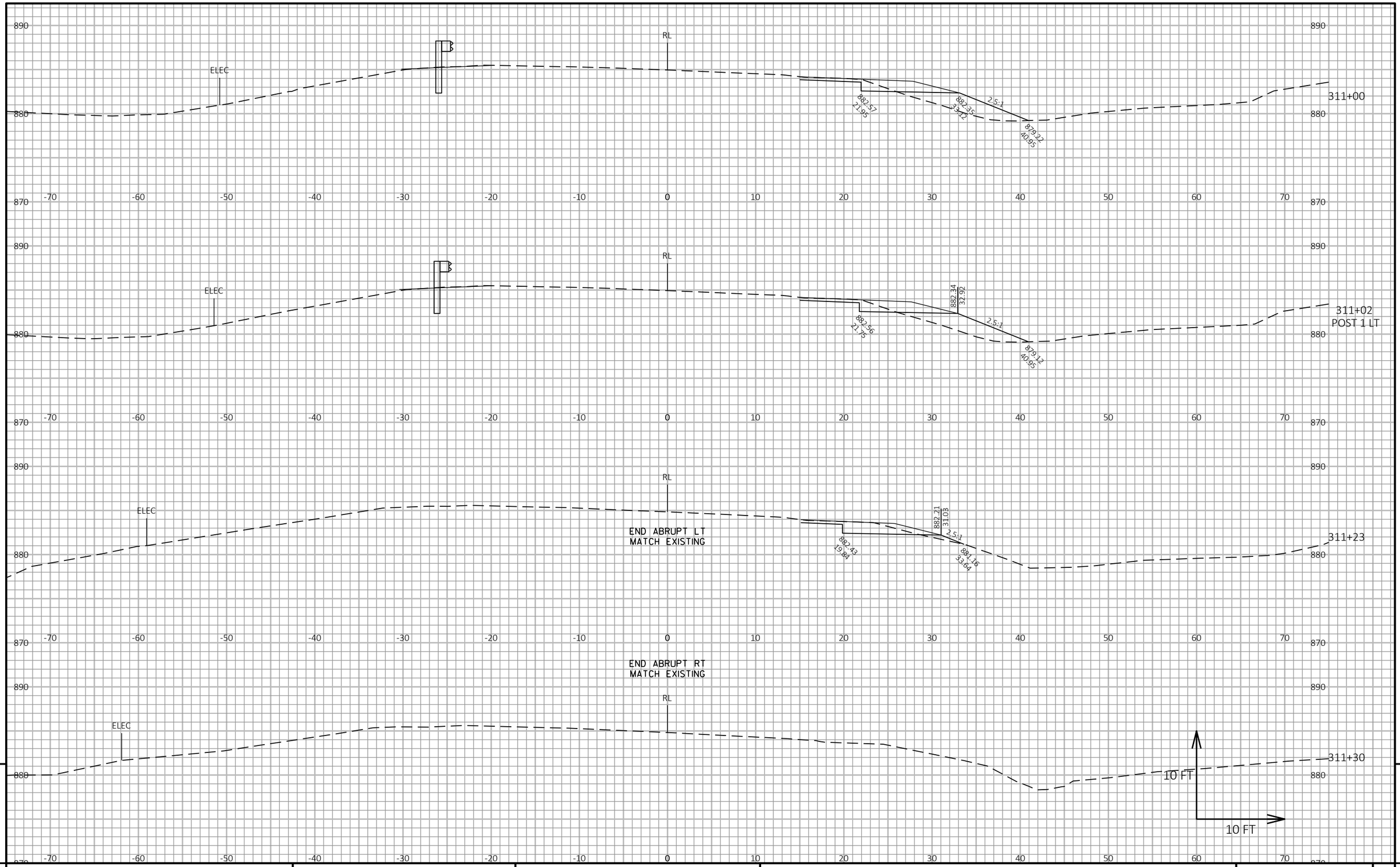
PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 135	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090228-xs

PLOT DATE : 3/19/2019 10:20 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 3070-04-61	HWY: STH 73	COUNTY: DANE	CROSS SECTIONS: STH 73	SHEET 136	E

FILE NAME : P:\50XX\5085_DP.STH73.DAN\CADDS\30700461\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090229-xs

PLOT DATE : 3/19/2019 10:20 AM PLOT BY : KEVIN DRUNASKY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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