RHI

MAY 2019

PROJECT ID: 1580-30-73

COUNTY: PRICE

ORDER OF SHEETS

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

TOTAL SHEETS = 150

33

N

DESIGN DESIGNATION

A.A.D.T.	2019	=	2,300
A.A.D.T.	2039	=	2,750
D.H.V.		=	331
D.D.		=	61/39
T.		=	23.5%
DESIGN SPEED		=	55 MPH/45 MPH
ESALS		=	1,160,000

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

HAWKINS - BRADLEY

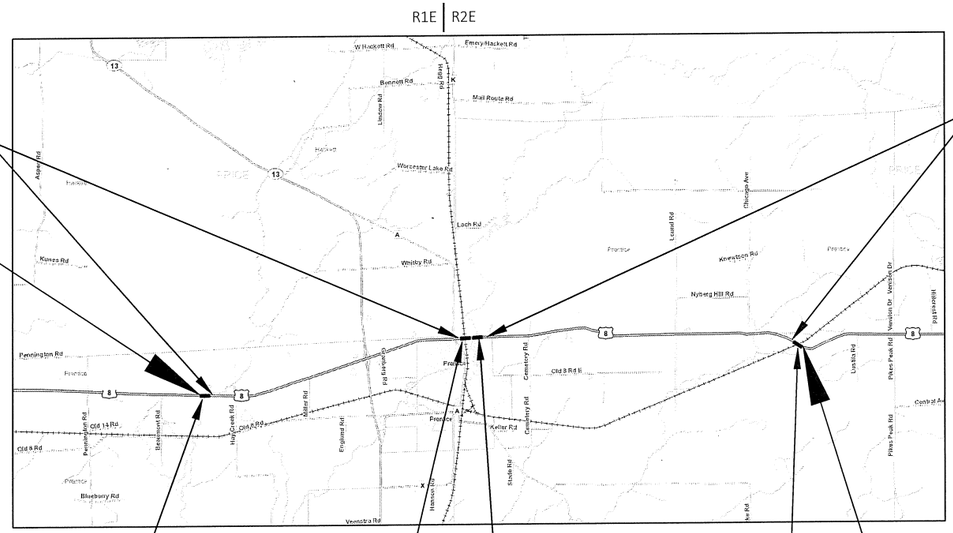
PRICE CO BRIDGES: B-50-32, 33, 48, 275

USH 8

PRICE COUNTY

STATE PROJECT NUMBER
1580-30-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1580-30-73	WISC 2019303	1



NET EXCEPTION TO CL LENGTH
STA 336+70.75 - STA 525+80.00

NET EXCEPTION TO CL LENGTH
STA 542+50.00 - STA 772+14.21

BEGIN PROJECT
STA 336+43.31
Y = 359719.735
X = 780841.385

STRUCTURE B-50-275
STA 336+57.00

STRUCTURE B-50-32
STA 529+31.12 - STA 530+64.57

STRUCTURE B-50-33
STA 538+63.92 - STA 539+72.58

STRUCTURE B-50-48
STA 772+44.00 - STA 774+19.38

END PROJECT
STA 774+50.09

LAYOUT
SCALE 0 — 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.366 MI

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). 2012

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, PRICE COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ORIGINAL PLANS PREPARED BY:
SHORT ELLIOTT HENDRICKSON INC.

WISCONSIN
DANIEL A. PENZKOVER
30248
RICE LAKE
WI
PROFESSIONAL ENGINEER
1/30/19

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/SEH
Designer	SEH
Project Manager	DAN ERVA
Regional Examiner	CHERYL SIMON
Regional Supervisor	ROBIN STAFFORD

APPROVED FOR THE DEPARTMENT
DATE: 1/22/19 (Signature)

E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 1/21/2019 8:09 AM

PLOT BY : ANNIE M. JEROME

PLOT NAME :

GENERAL NOTES

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE, OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING, SEEDING, AND EMATTING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF NORMAL CONSTRUCTION LIMITS

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITIES AND DIGGERS HOTLINE PRIOR TO THE START OF WORK.

ORDER OF TYPICAL SECTIONS AND DETAILS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PERMANENT SIGNING & PAVEMENT MARKING
CONSTRUCTION STAGING
ALIGNMENT DIAGRAM

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA =7.40 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES =2.72 ACRES

WDNR

WENDY HENNIGES
107 SUTLIFF AVE.
RHINELANDER, WI 54501
DESK: (715) 365-8916
EMAIL: WENDY.HENNIGES@WISCONSIN.GOV

UTILITIES

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

WISCONSIN CENTRAL LTD (CN)
JACKIE MACEWICZ
1625 DEPORT STREET
STEVENS POINT, WI 54481
MOBILE: 715-345-2503
E-MAIL:JACKIE.MACEWICS@CN.CA
NOT PART OF DIGGERS HOTLINE, CALL CN BEFORE YOU DIG 734-783-4533
WILL ADD CONTACT INFORMATION FROM RETURNED WORK PLANS

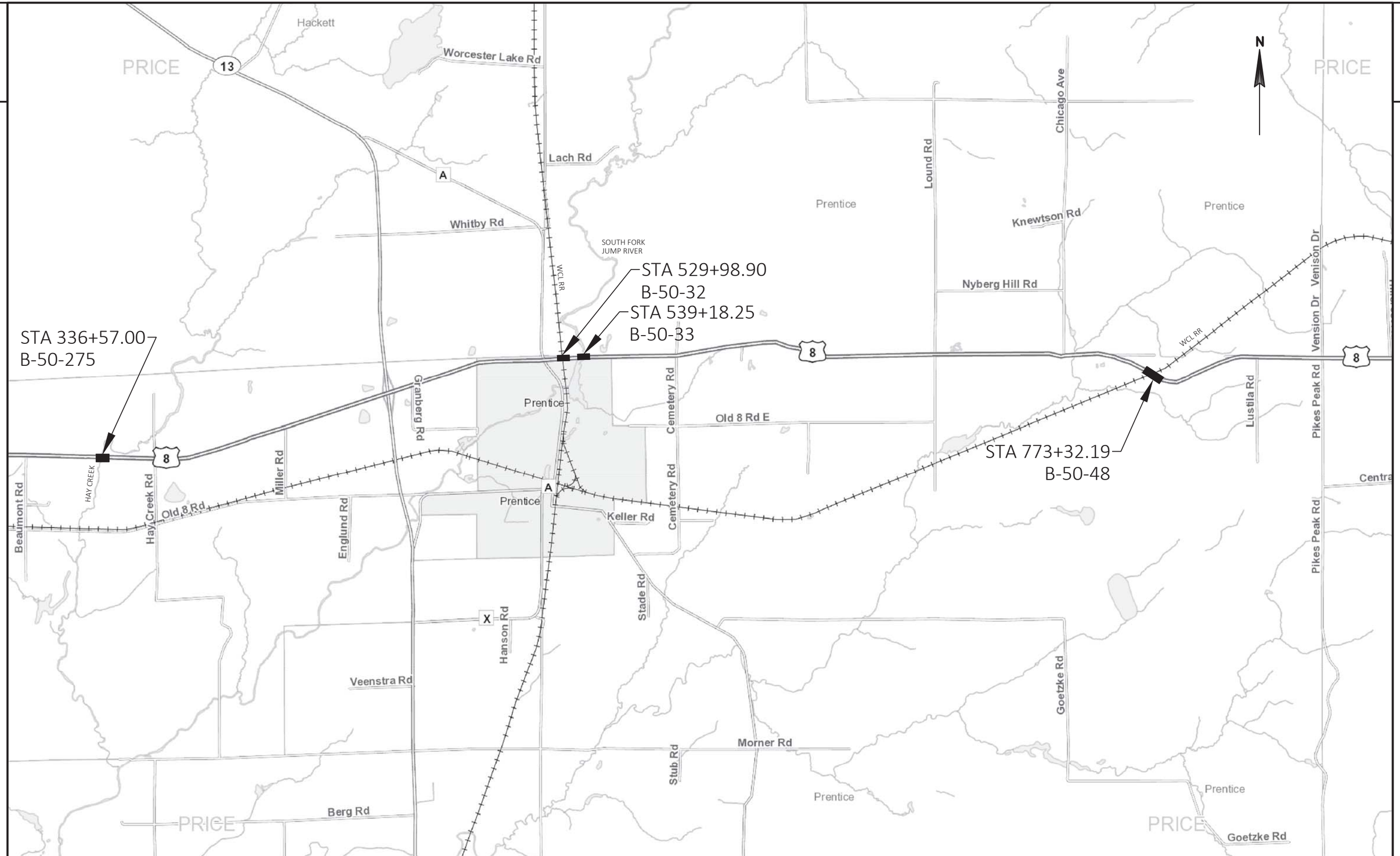
CENTURYTEL OF NORTHERN WISCONSIN, LLC
D/B/A CENTURYLINK
425 ELLINGSTON AVENUE
HAWKINS, WI 54530
ATTN: BRIAN HUHN
715-532-0023
715-563-8294 (MOBILE)
BRIAN.HUHN@CENTURYLINK.COM

PRICE COUNTY TELEPHONE COMPANY
105 N. AVON AVENUE
PO BOX 108
PHILLIPS, WI 54555
ATTN: BRAD KUHNERT
715-339-2151
715-820-3900 (MOBILE)
KUHNERTB@PCTNET.NET

PRICE ELECTRIC COOPERATIVE INC
W6803 SPRINGS DRIVE
PHILLIPS, WI 54555
ATTN: BEN ORYSEN
715-339-2155
715-820-0200 (MOBILE)
BORYSEN@PRICE-ELECTRIC.COM

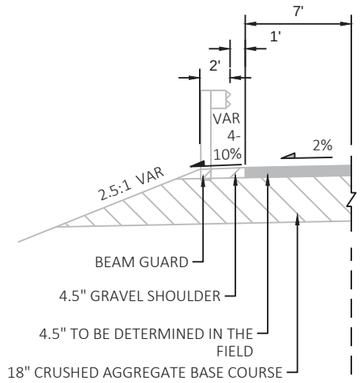
XCEL ENERGY
310 HICKORY HILLS LANE
PHILLIPS, WI 54555
ATTN: ANDY HALOPKA
715-737-1183
715-316-1356 (MOBILE)
ANDREW.A.HALOPKA@XCELENERGY.COM

2

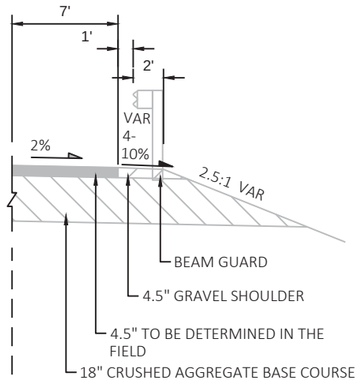


PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PROJECT OVERVIEW	SHEET 3	E

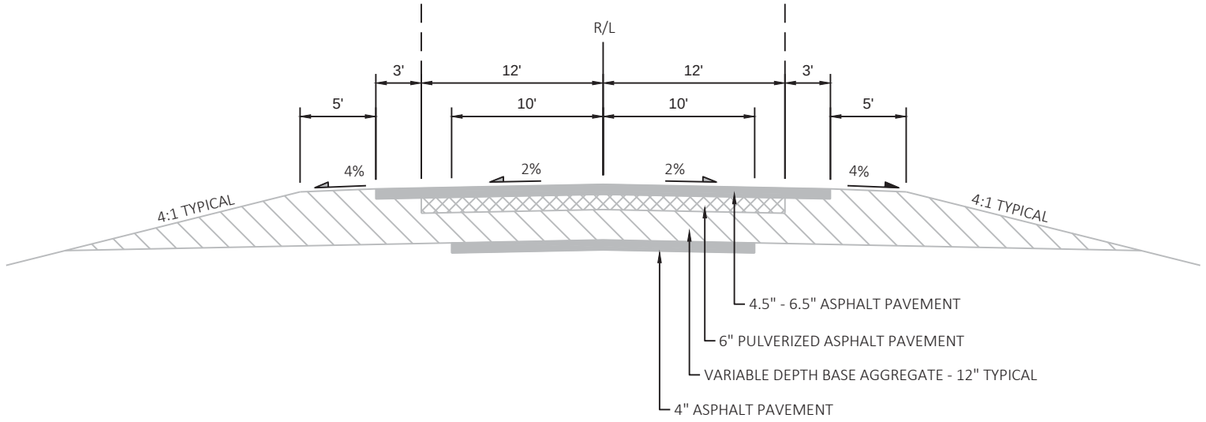
2



TYPICAL EXISTING SECTION
STA 530+81 TO 538+68 LT

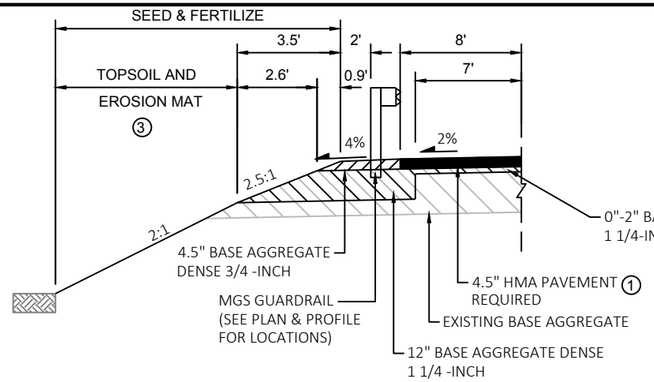


TYPICAL EXISTING SECTION
STA 530+83 TO 538+60 RT

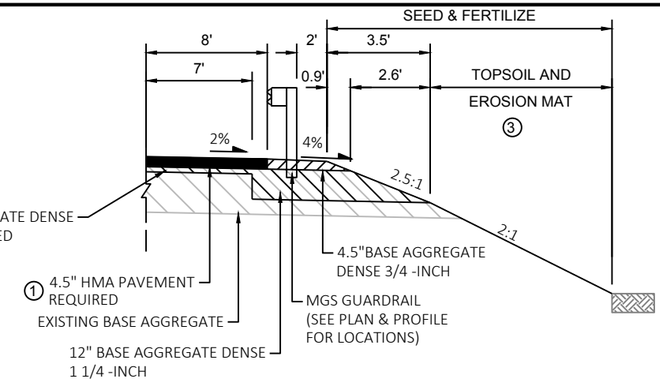


TYPICAL EXISTING SECTION
STA 525+80 TO 542+50

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION
STA 531+00.00 TO STA 538+35.00 LT



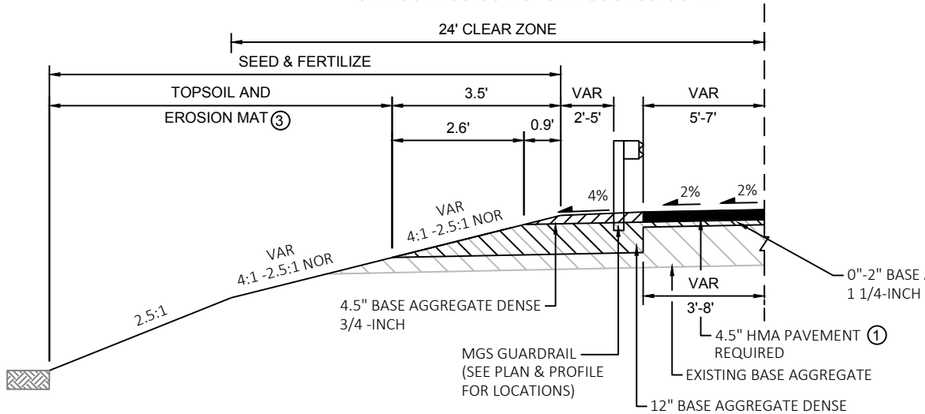
TYPICAL FINISHED SECTION
STA 531+00.00 TO STA 538+35.00 RT

NOTES:

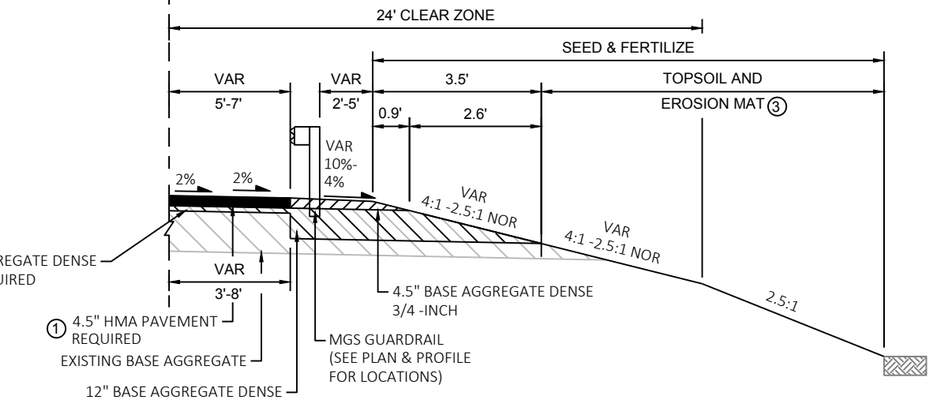
① 4 1/2" HMA PAVEMENT SHALL BE CONSTRUCTED IN TWO LAYERS
THE UPPER LAYER SHALL BE 2.0 INCHES HMA PAVEMENT
4 MT 58-34 S
THE LOWER LAYER SHALL BE 2.5 INCHES HMA PAVEMENT
3 MT 58-28 S.

② MILLING DEPTH VARIES FROM 4.5" TO 6.5".

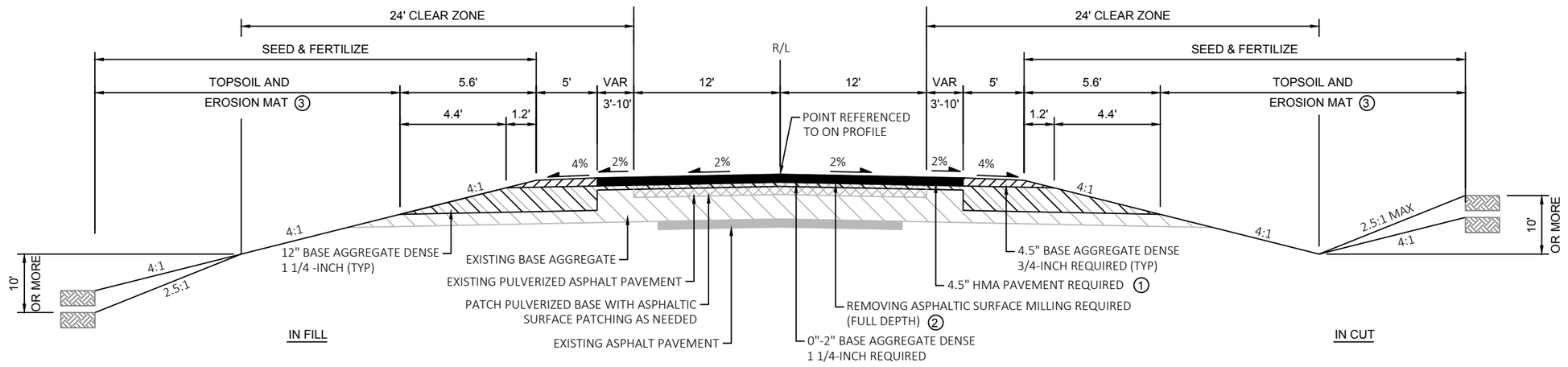
③ SEE EROSION CONTROL PLAN FOR EROSION MAT TYPES AND LOCATIONS.



TYPICAL FINISHED SECTION
STA 528+15.51 TO STA 529+10.00 LT
STA 540+20.00 TO STA 540+96.85 LT



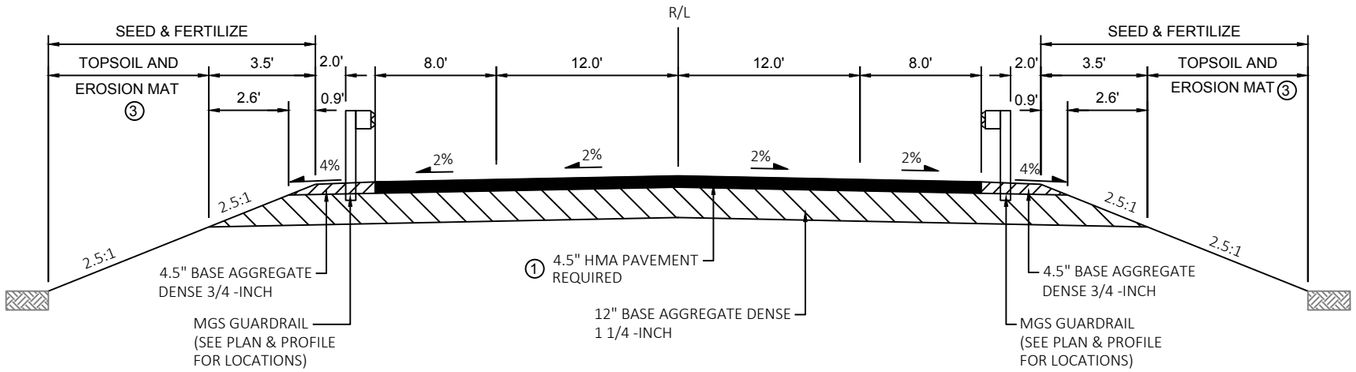
TYPICAL FINISHED SECTION
STA 528+05.48 TO STA 529+10.00 RT
STA 540+10.00 TO STA 540+82.29 RT



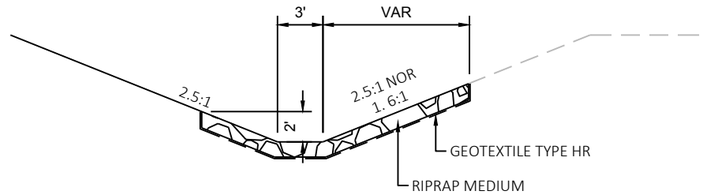
TYPICAL FINISHED SECTION
STA 525+80 TO 542+50

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: TYPICAL SECTIONS	SHEET 5	E

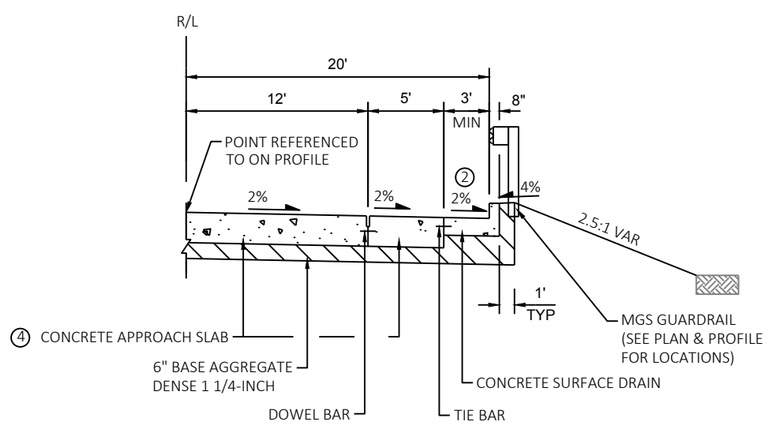
2



TYPICAL FINISHED RECONSTRUCTION SECTION
STA 529+10.00 TO STA 529+31.23
STA 530+64.57 TO STA 531+00.00
STA 538+35.00 TO STA 538+63.92
STA 539+72.58 TO STA 540+20.00 LT
STA 539+72.58 TO STA 540+10.00 RT



STA 540+00.00 TO STA 541+25.00



TYPICAL FINISHED HALF SECTION
AT STRUCTURES
B-50-32 & B-50-33

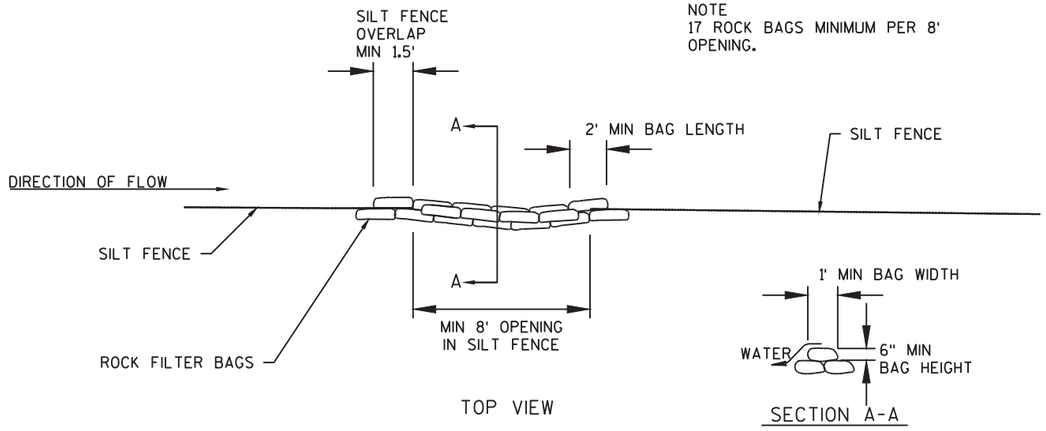
NOTE:

① 4 1/2" HMA PAVEMENT SHALL BE CONSTRUCTED IN TWO LAYERS
THE UPPER LAYER SHALL BE 2.0 INCHES HMA PAVEMENT 4 MT 58-34 S
THE LOWER LAYER SHALL BE 2.5 INCHES HMA PAVEMENT 3 MT 58-28 S.

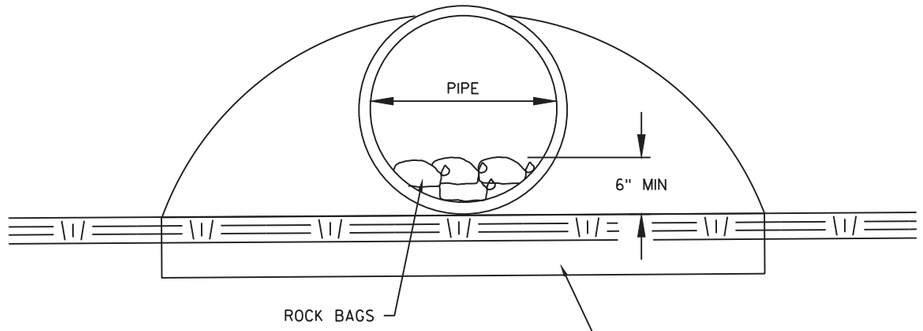
② SLOPE VARIES AT INLET LOCATION SEE SDD.

③ SEE EROSION CONTROL PLAN FOR EROSION MAT TYPES AND LOCATIONS.

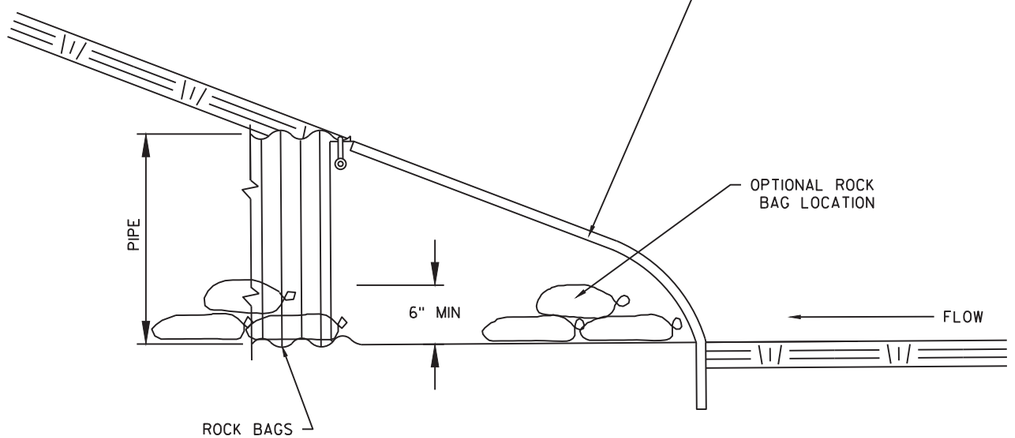
④ SEE PLAN & PROFILES FOR LOCATIONS OF CONCRETE APPROACH SLABS.



ROCK BAGS USED FOR SILT FENCE RELIEF



END VIEW



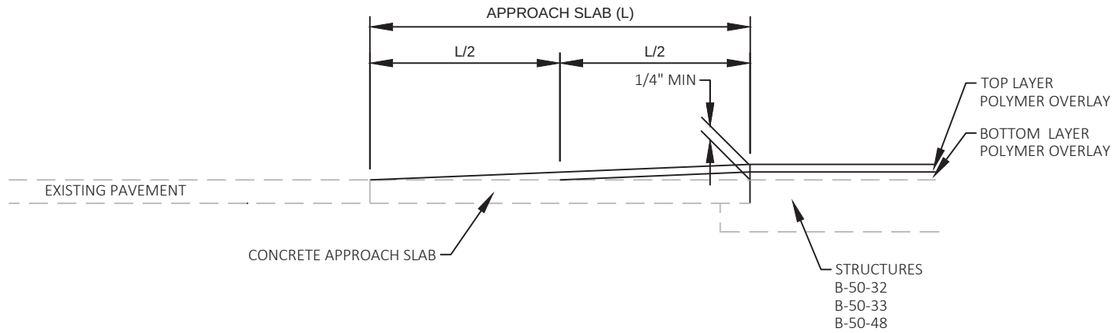
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: CONSTRUCTION DETAILS	SHEET 7	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 01
PLOT DATE : 1/23/2019 11:17 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2



POLYMER OVERLAY TRANSITIONAL AREA DETAIL

NOTE:

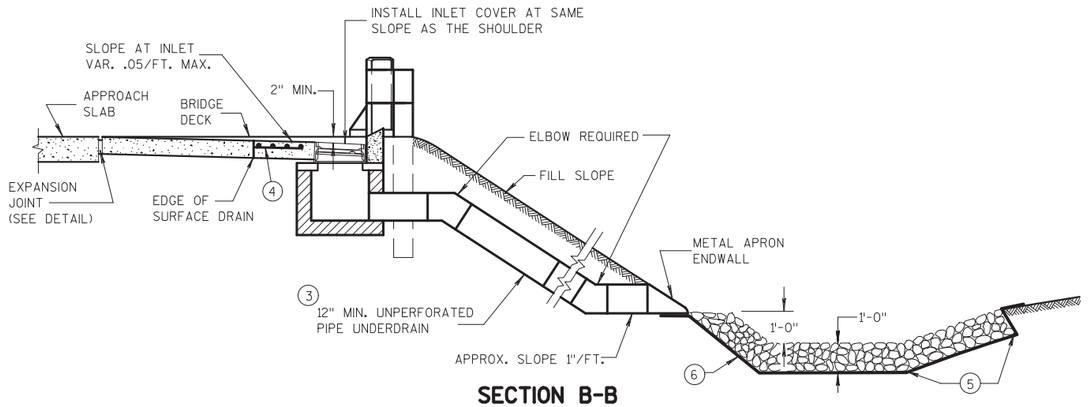
POLYMER OVERLAY TO BE PLACED FULL WIDTH COVERING BRIDGE DECK, CONCRETE APPROACH SLABS AND CONCRETE SURFACE DRAINS TO THE LIMITS OF THE CONCRETE APPROACH SLAB.

MASK OFF EXISTING STRUCTURE JOINT AS DIRECTED BY THE ENGINEER.

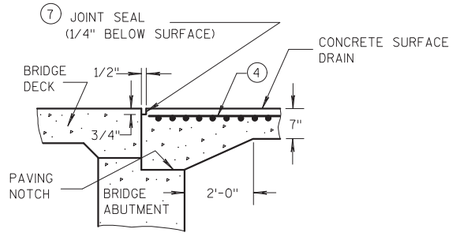
POLYMER TRANSITIONAL AREA INCIDENTAL TO "POLYMER OVERLAY" BID ITEM ON STRUCTURE PLANS.

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: CONSTRUCTION DETAILS	SHEET 8	E

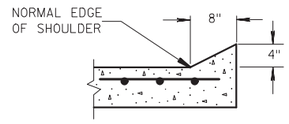
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 02
PLOT DATE : 1/23/2019 11:17 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42



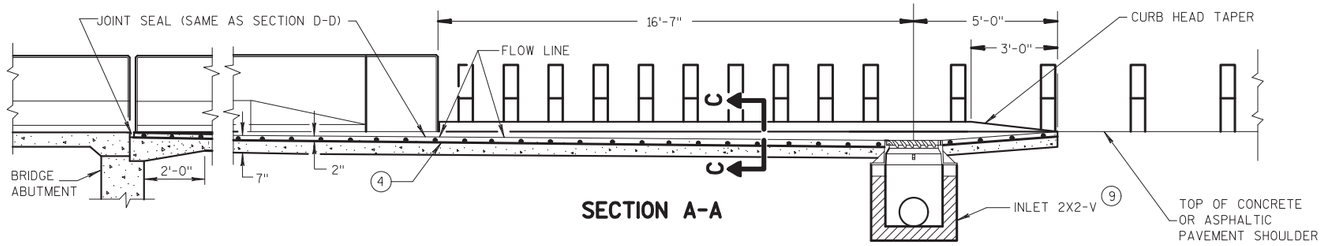
SECTION B-B



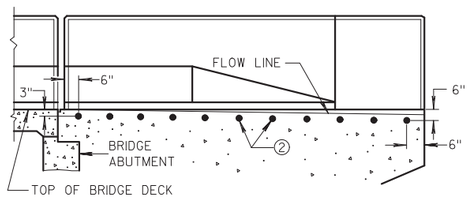
SECTION D-D



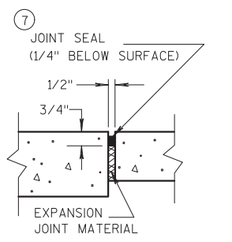
SECTION C-C



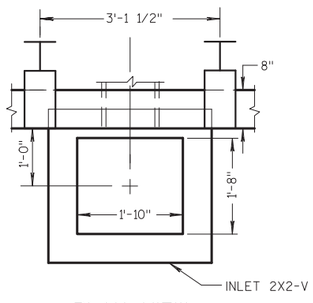
SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



EXPANSION JOINT DETAIL



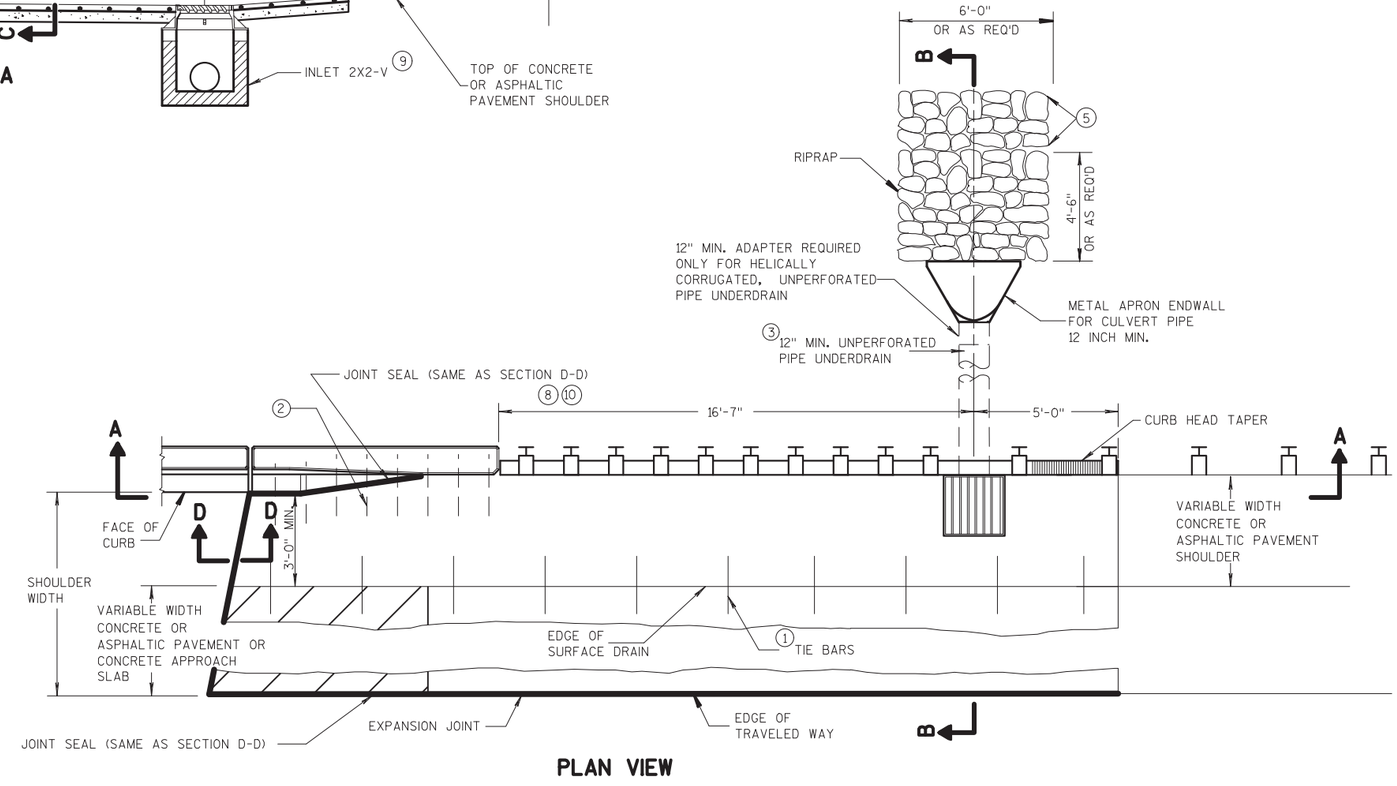
PLAN VIEW

GENERAL NOTES

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

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

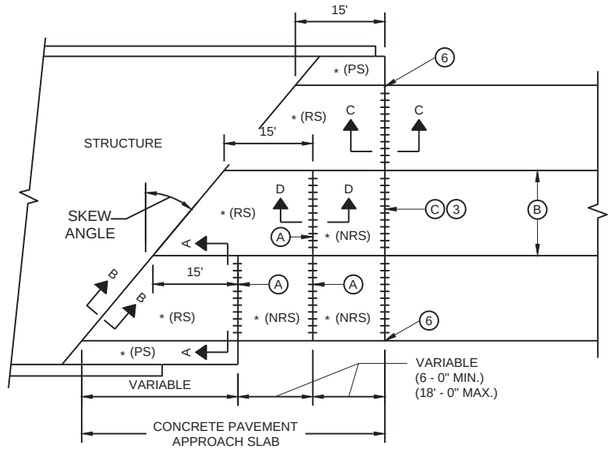
1. NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
2. NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.
4. MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
5. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
6. GEOTEXTILE FABRIC, TYPE 'R' OR TYPE 'HR', DEPENDENT ON RIPRAP TYPE
7. HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
8. THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING IS 3'-1 1/2".
9. SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.
10. SEE CURRENT STANDARD DETAIL DRAWING 14B45 FOR MGS POST SPACING DETAILS.



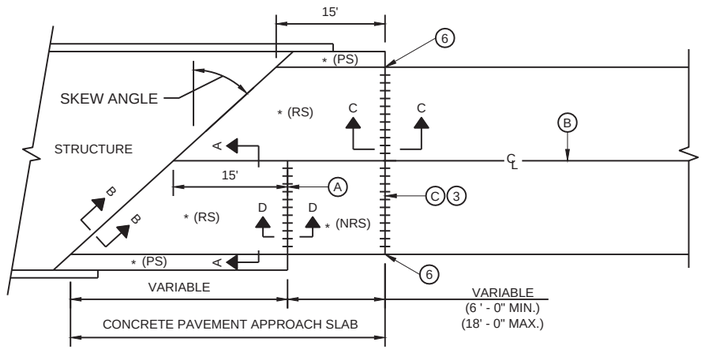
PLAN VIEW

CONCRETE SURFACE DRAIN AT STRUCTURES

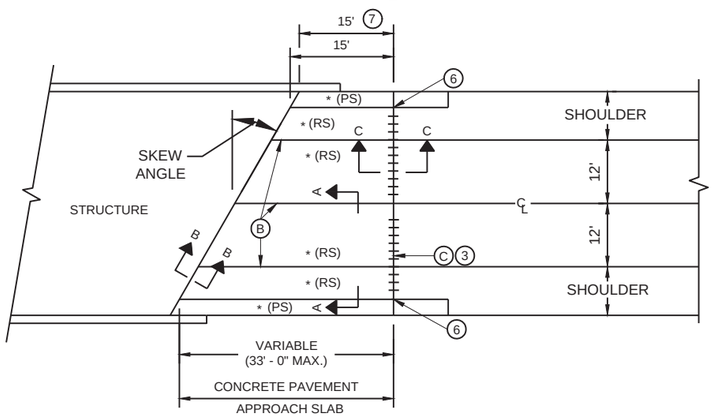
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: CONSTRUCTION DETAILS	SHEET 9	E



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES



SKEWS ›20°
(PAVEMENT WIDTH ‹ 30')



SKEWS ‹ 20°
(PAVEMENT WIDTH ‹ 40')

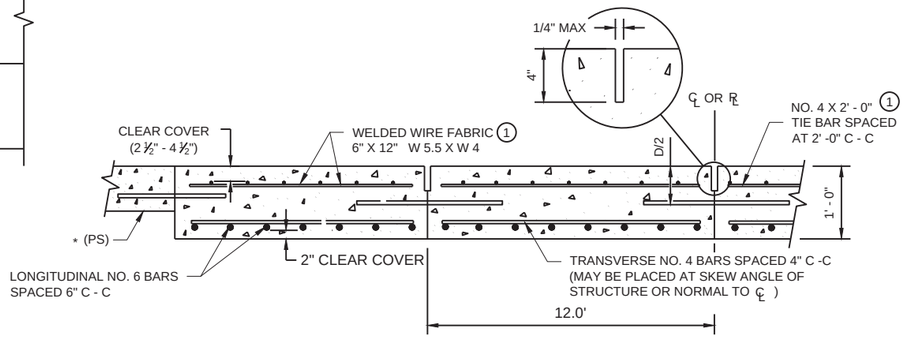
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

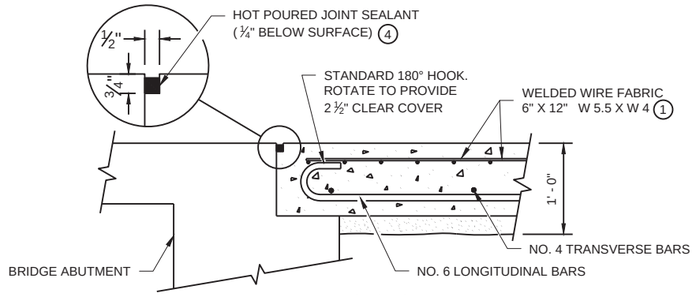
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

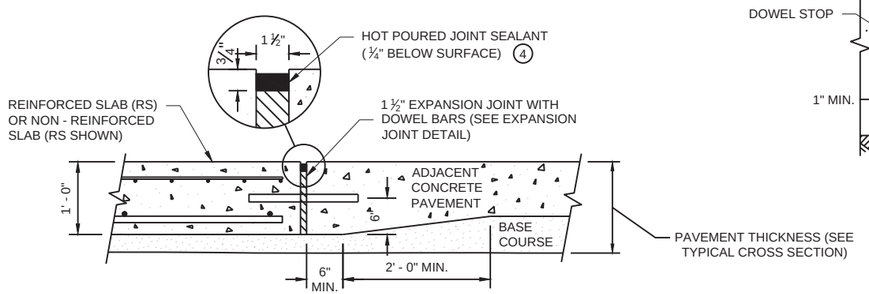
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE APPROACH SLAB

GENERAL NOTES

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

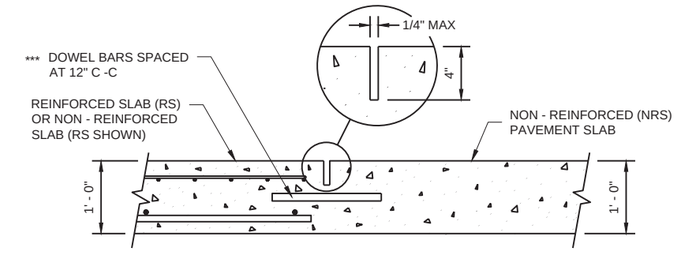
TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
4. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
5. PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
6. EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
7. WHEN NO CONCRETE DRAINAGE SLAB IS REQ'D, 15' IS MEASURED ALONG FACE OF PARAPET WALL AND CONCRETE APPROACH SLAB IS FULL WIDTH.

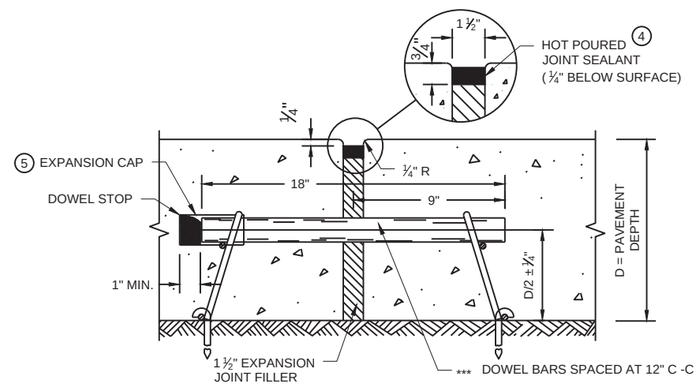
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN: CONSTRUCTION DETAILS	SHEET 10	E

2

2

N

EXISTING RIP RAP WILL BE REPLACED. SEE STRUCTURE DESIGN.

RPE
0.01 AC

RPE
0.01 AC

R/W

50.0'

PERMITTED WETLAND IMPACT

DELINEATED WETLAND BOUNDARY

+ 80.0

+ 25.0

334+00 335+00 336+00 337+00 338+00 339+00 340+00

USH 8

B-50-275

+ 80.0

+ 25.0

DELINEATED WETLAND BOUNDARY

RPE
0.01 AC

RPE
0.01 AC

R/W

EXISTING RIP RAP WILL BE REPLACED. SEE STRUCTURE DESIGN.

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP MEDIUM
- SILT FENCE
- SILT FENCE RELIEF
- SLOPE INTERCEPT
- (A) INLET PROTECTION TYPE (A) OR (B)
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- WETLAND

NOTE: SILT FENCE TO BE PLACED ALONG EDGE OF WETLAND BOUNDARY

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	EROSION CONTROL	SHEET 11	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/23/2019 11:18 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

R/W

BEGIN CONSTRUCTION
STA 525+80

5' ±

525+00 526+00 527+00 528+00 529+00 530+00 531+00 532+00

USH 8

USH 8

B-50-32

WISCONSIN CENTRAL LTD (CN)

DELINEATED
WETLAND
BOUNDARY

6'x6' RIP RAP
MEDIUM PAD AT
OUTLET

A B

+08.0

+00.0

EXISTING CMP TO
REMAIN IN PLACE

6'x6' RIP RAP
MEDIUM PAD AT
OUTLET

R/W

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP MEDIUM
- SILT FENCE
- SILT FENCE RELIEF
- SLOPE INTERCEPT
- (A) INLET PROTECTION TYPE (A) OR (B)
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- WETLAND

R/W

N

DELINEATED
WETLAND
BOUNDARY

5' ±

532+00 533+00 534+00 535+00 536+00 537+00 538+00 539+00

USH 8

SOUTH FORK JUMP RIVER

R/W

2

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	EROSION CONTROL	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 02

PLOT DATE : 1/23/2019 11:18 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

R/W

OH

OH

OH

GUY

SHAPE AS NEEDED
AT CULVERT END

DELINEATED
WETLAND
BOUNDARY

SS
0.01 AC

SS
0.01 AC

6'x6' RIP RAP PAD
AT OUTLET

01.8

A B

00 539+00 540+00 541+00 542+00 543+00 544+00 545+00

B-50-33

A B

USH 8

END CONSTRUCTION
STA 542+50

SOUTH FORK JUMP RIVER

+ 17.5

+ 10.0

AB
0.01 AC

RIP RAP MEDIUM (1.6:1 SLOPE)

PERMITTED
WETLAND IMPACT

7' WIDE RIP RAP MEDIUM

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE C
- RIPRAP MEDIUM
- SILT FENCE
- SILT FENCE RELIEF
- SLOPE INTERCEPT
- (A) INLET PROTECTION TYPE (A) OR (B)
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- WETLAND

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	EROSION CONTROL	SHEET 13	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 03

PLOT DATE : 1/23/2019 11:18 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

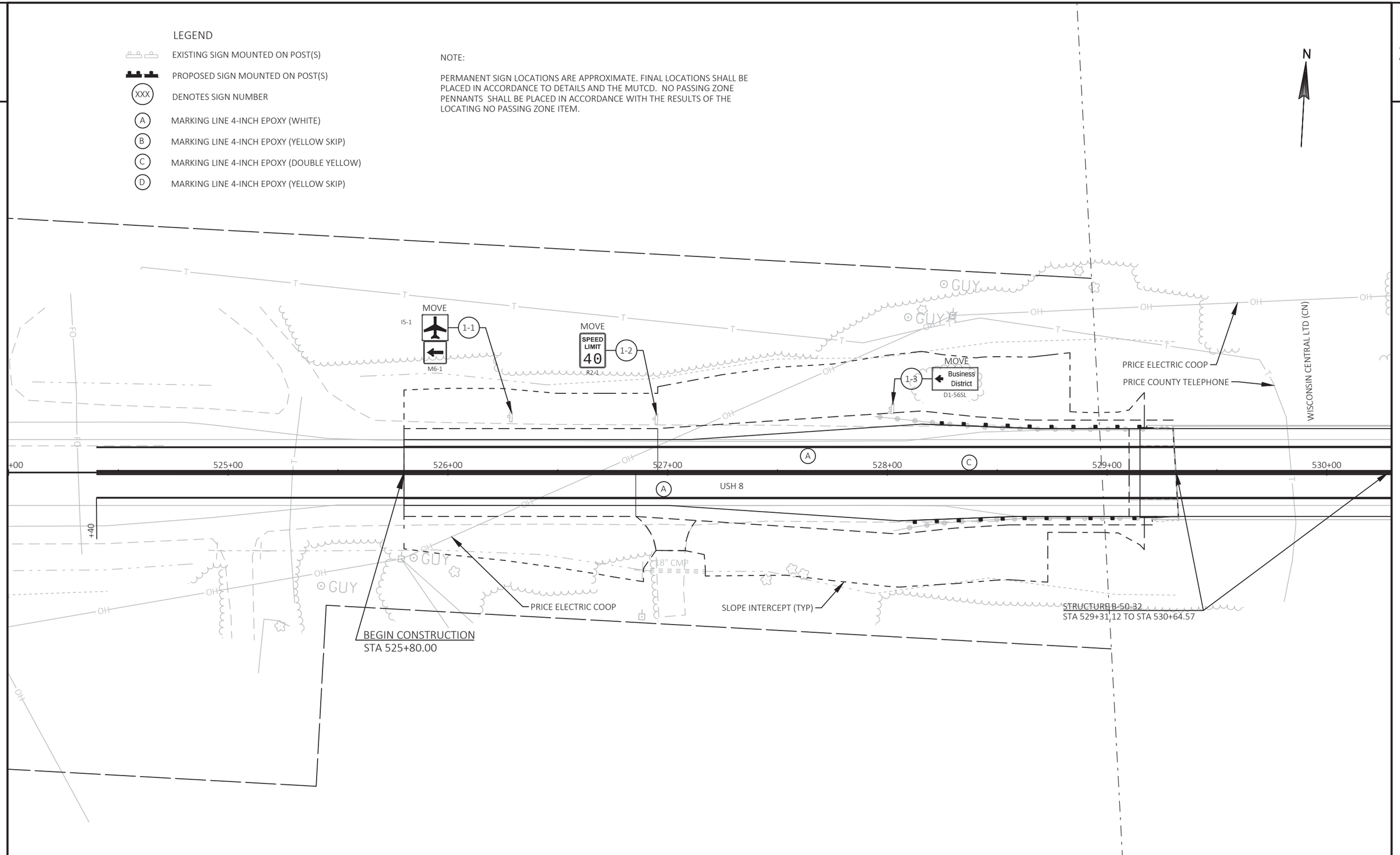
2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (A) MARKING LINE 4-INCH EPOXY (WHITE)
- (B) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)
- (C) MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)
- (D) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 14	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023201 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

XXX DENOTES SIGN NUMBER

A MARKING LINE 4-INCH EPOXY (WHITE)

B MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

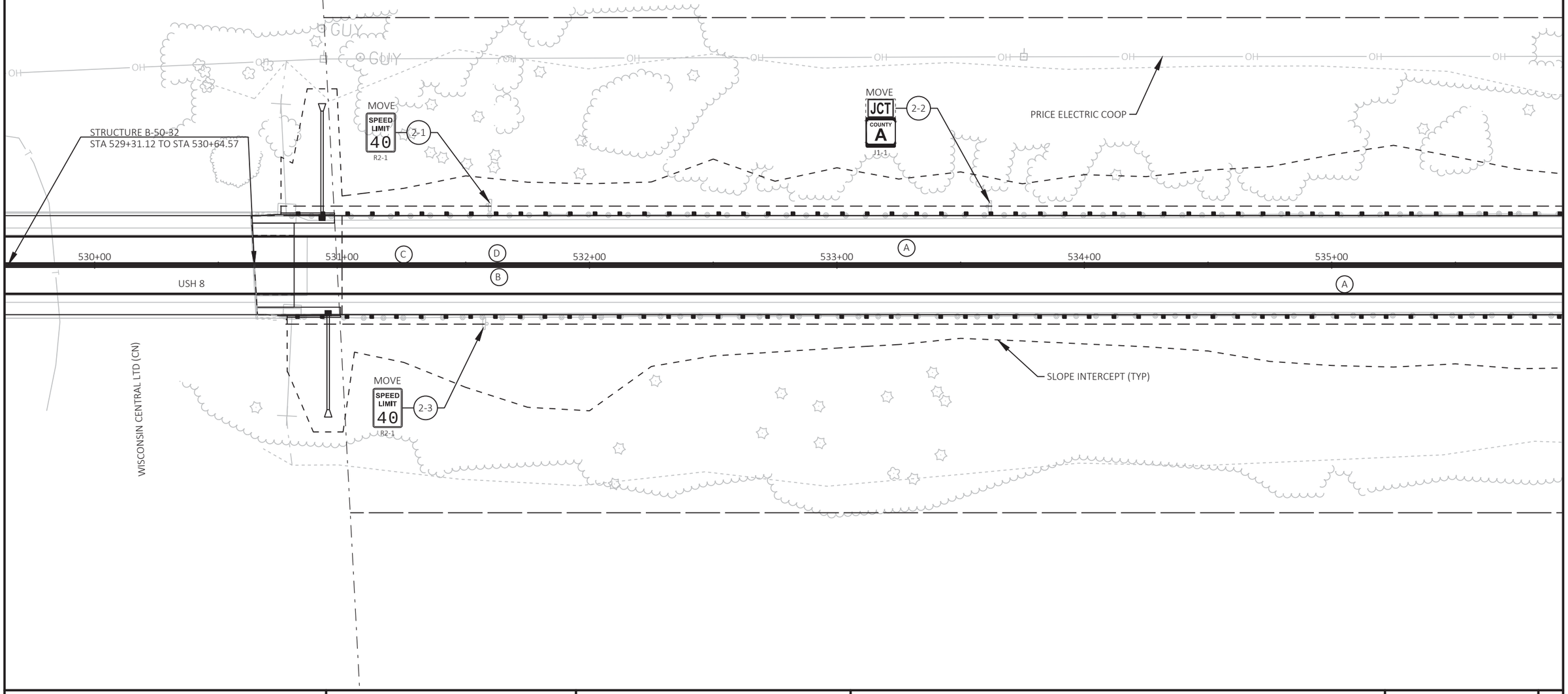
C MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)

D MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.

N



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 15	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023202 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(XXX) DENOTES SIGN NUMBER

(A) MARKING LINE 4-INCH EPOXY (WHITE)

(B) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

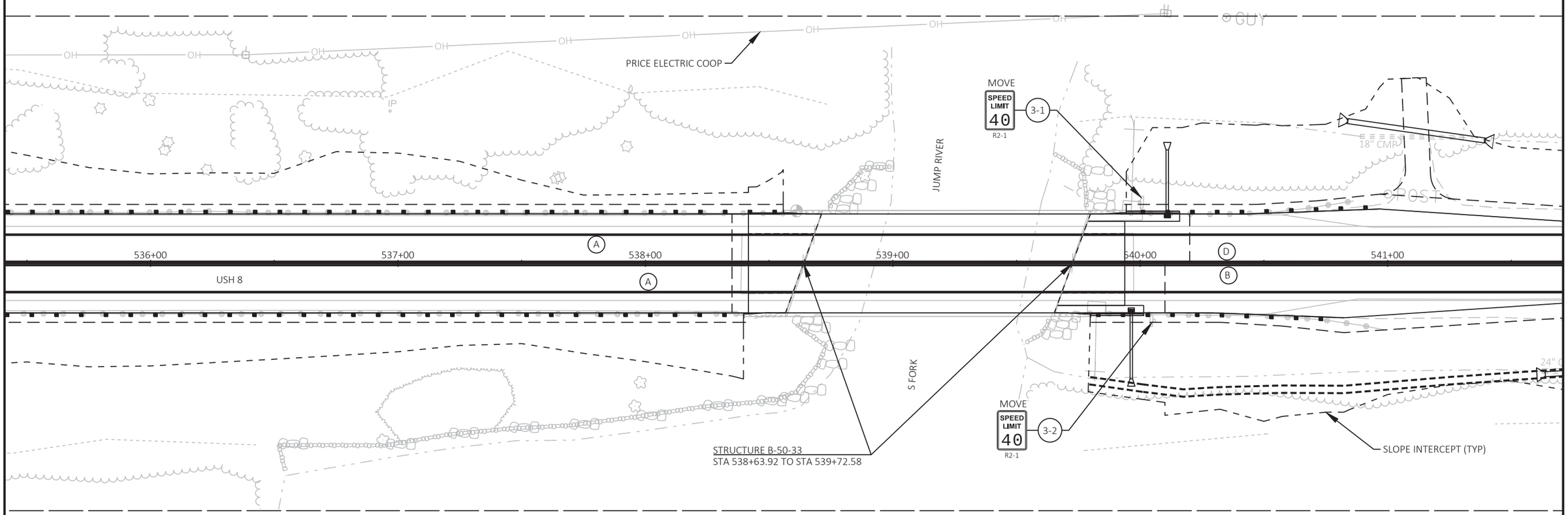
(C) MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)

(D) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.

N



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023203 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

XXX DENOTES SIGN NUMBER

A MARKING LINE 4-INCH EPOXY (WHITE)

B MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

C MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)

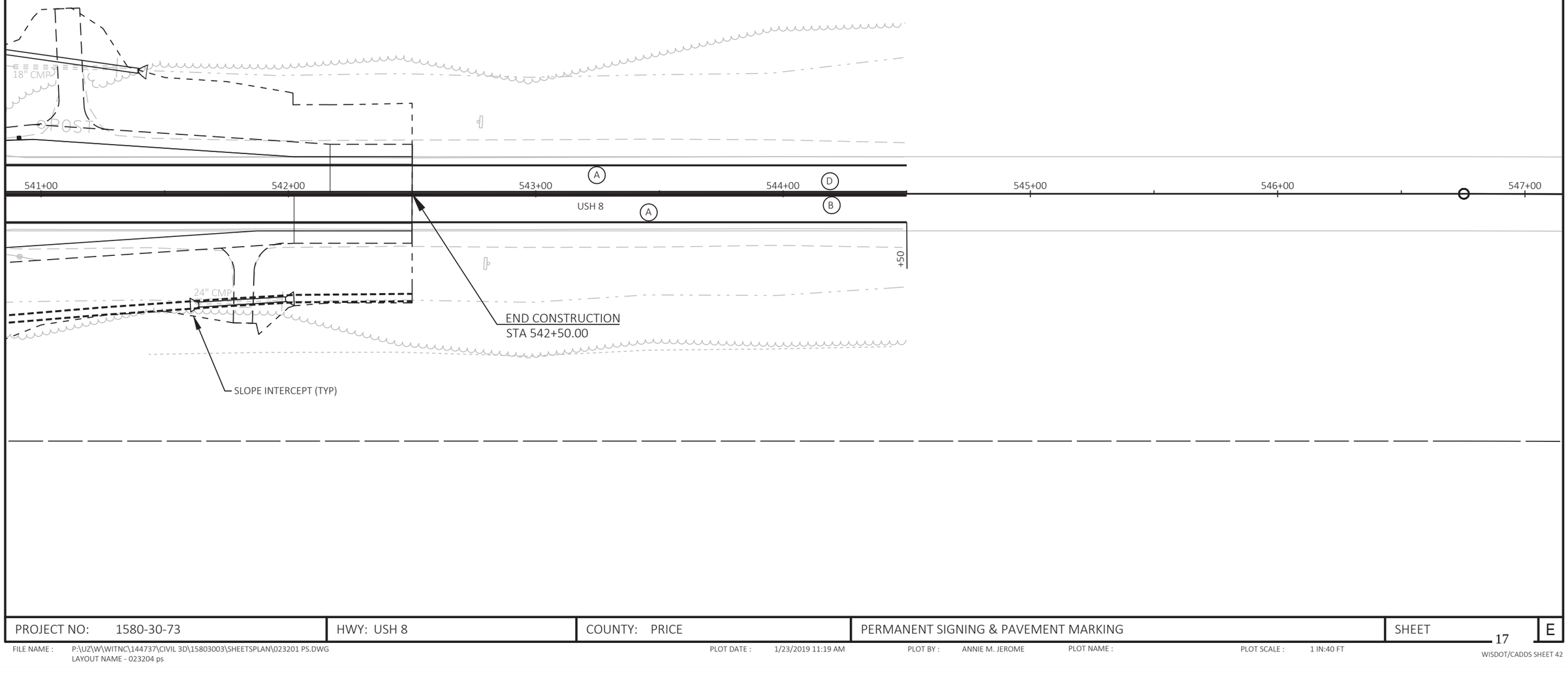
D MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.

N

2



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 17	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023204 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

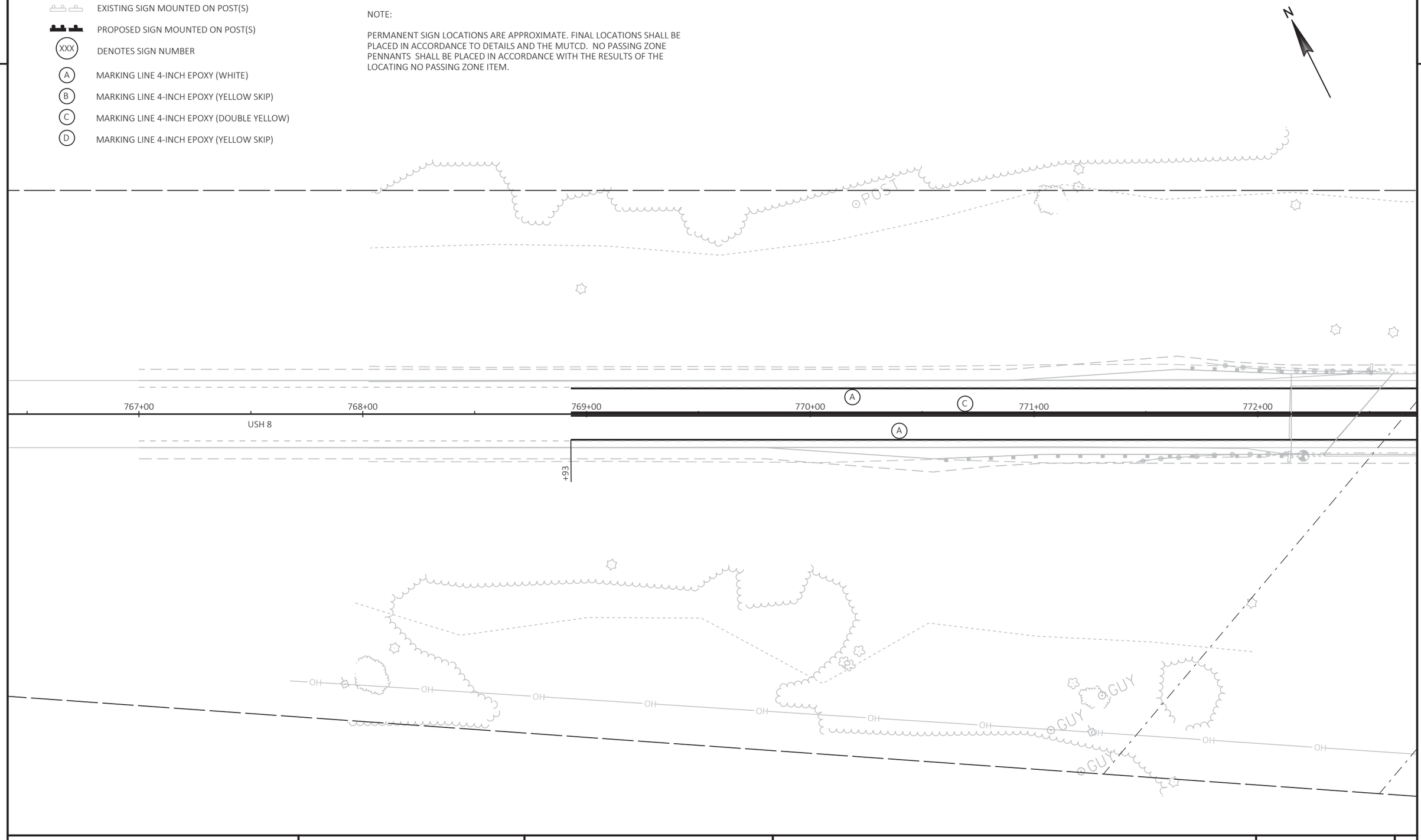
2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (A) MARKING LINE 4-INCH EPOXY (WHITE)
- (B) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)
- (C) MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)
- (D) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 18	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023205 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

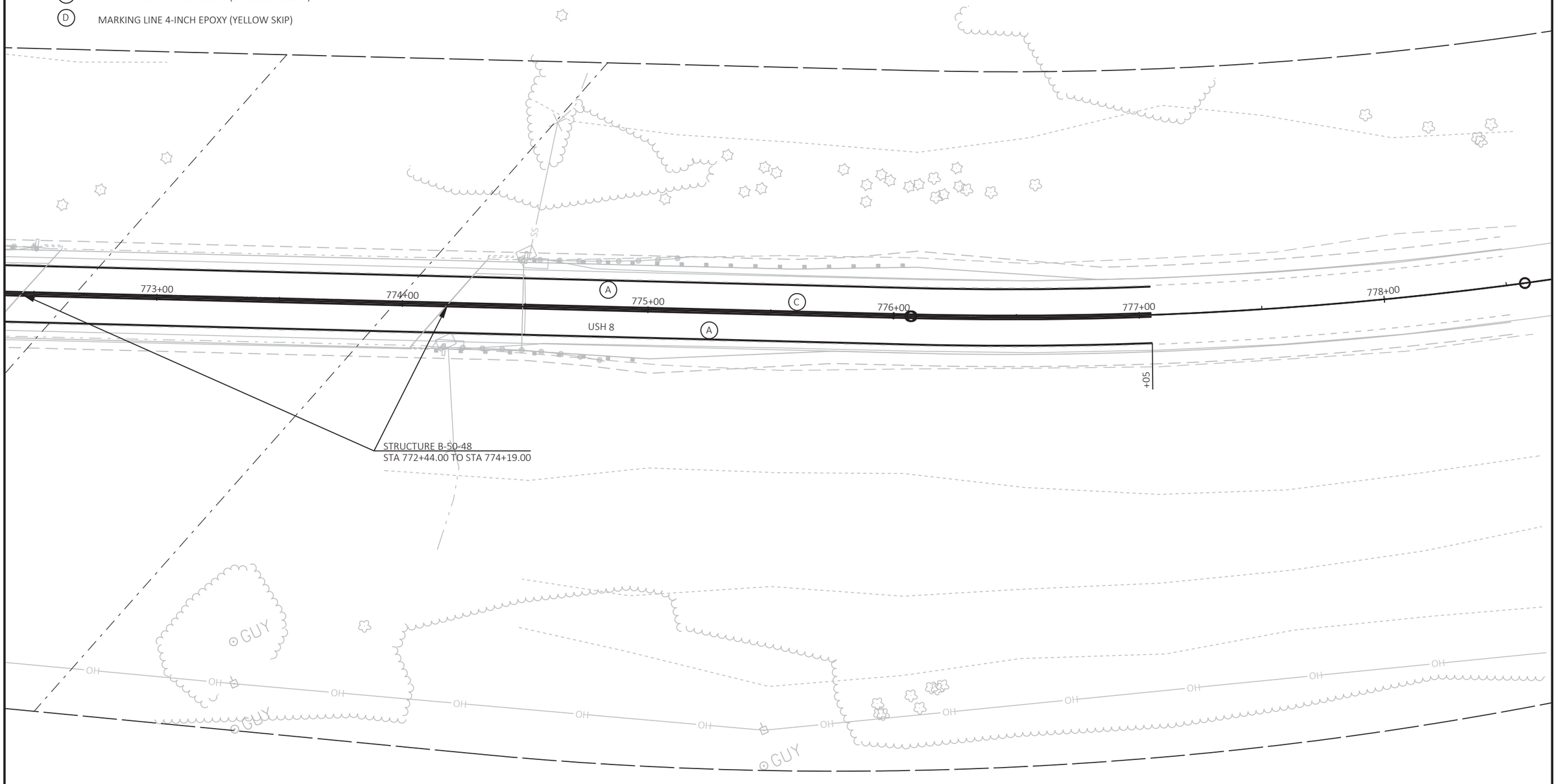
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- (XXX) DENOTES SIGN NUMBER
- (A) MARKING LINE 4-INCH EPOXY (WHITE)
- (B) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)
- (C) MARKING LINE 4-INCH EPOXY (DOUBLE YELLOW)
- (D) MARKING LINE 4-INCH EPOXY (YELLOW SKIP)

NOTE:

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD. NO PASSING ZONE PENNANTS SHALL BE PLACED IN ACCORDANCE WITH THE RESULTS OF THE LOCATING NO PASSING ZONE ITEM.

N

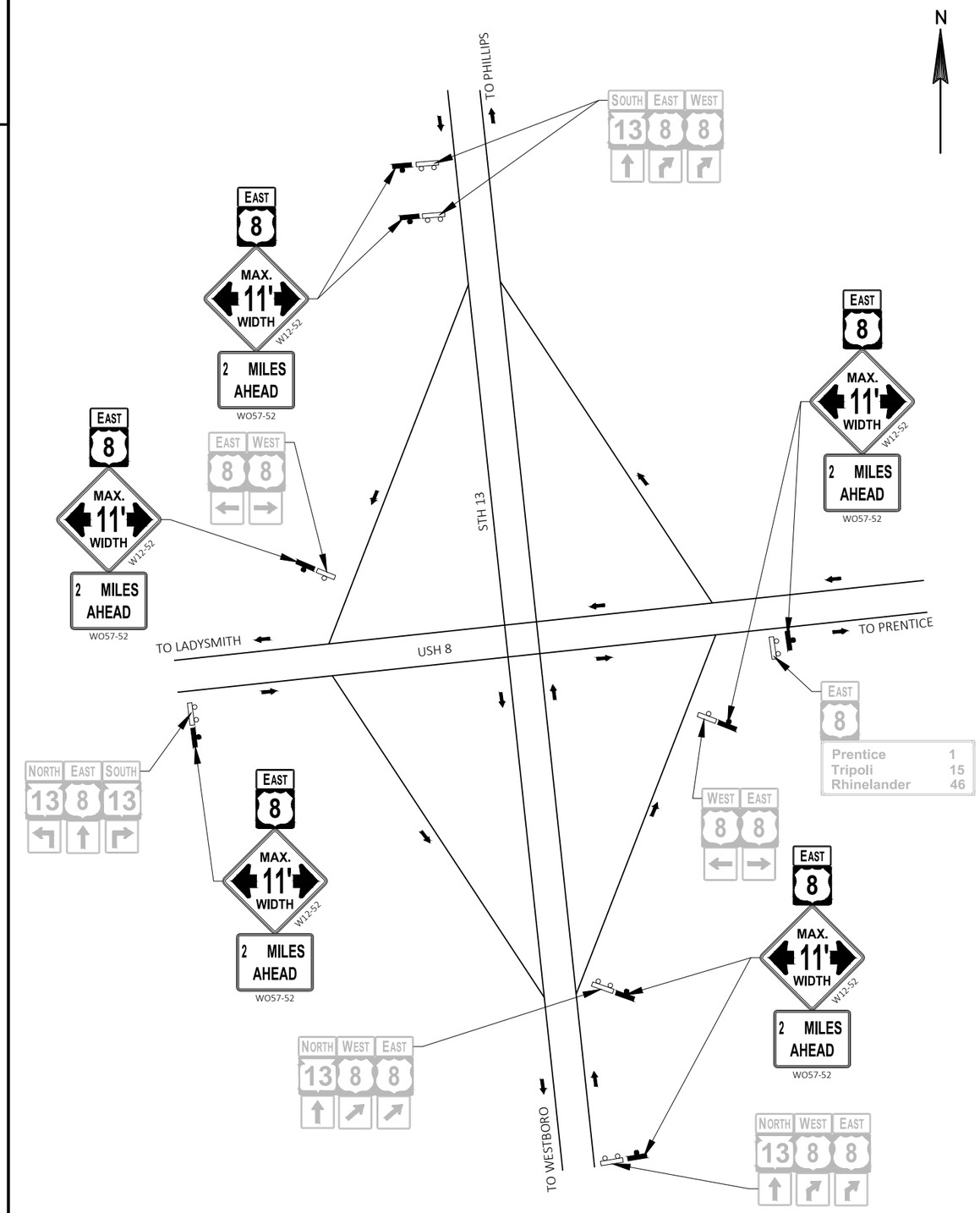


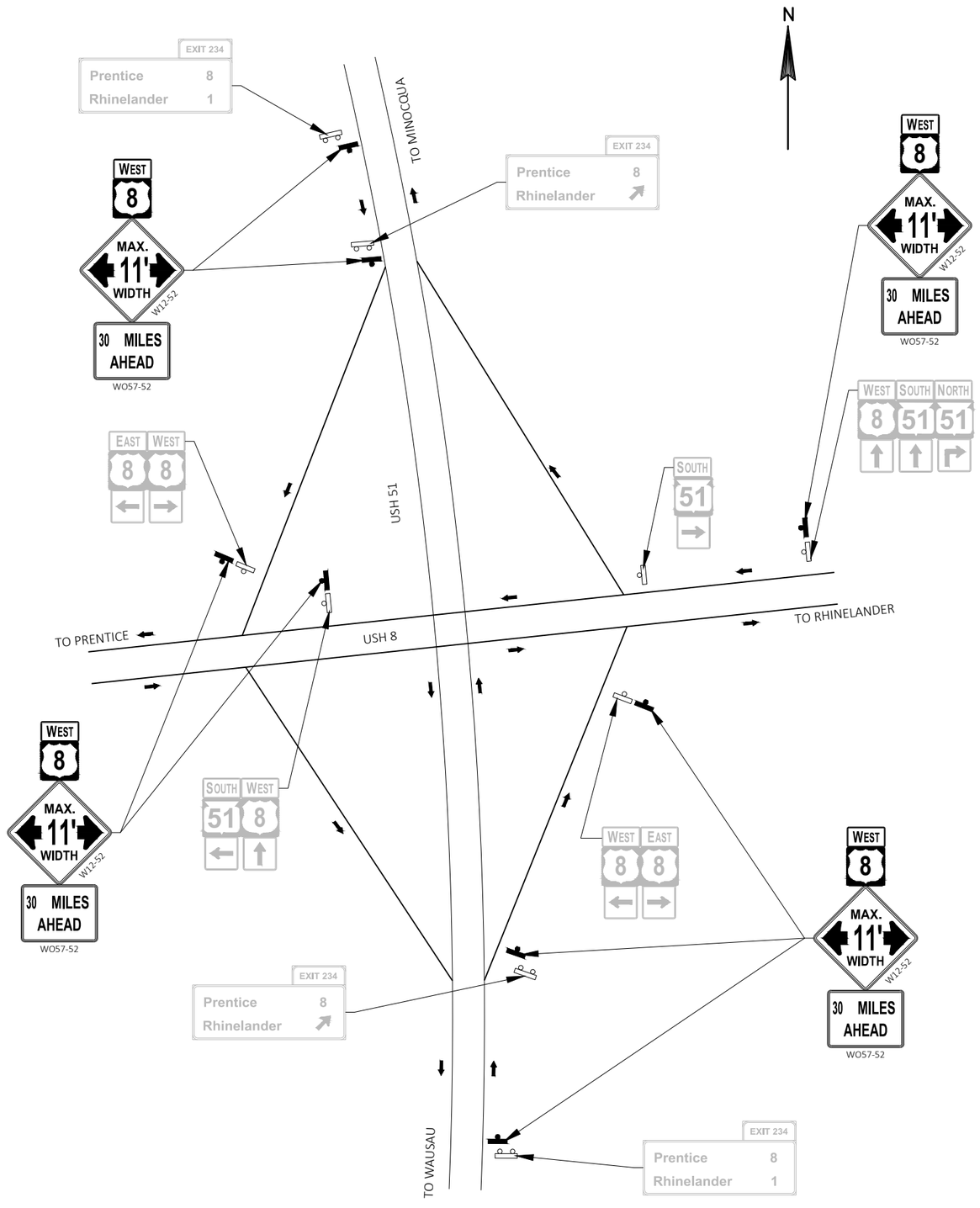
2

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PERMANENT SIGNING & PAVEMENT MARKING	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\023201 PS.DWG
LAYOUT NAME - 023206 ps

PLOT DATE : 1/23/2019 11:19 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:40 FT





PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\025001 TC B-50-32 YR 1 STAGE 1A.DWG
LAYOUT NAME - 01

PLOT DATE : 1/24/2019 7:47 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : ##########

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-32 STAGE 1A:

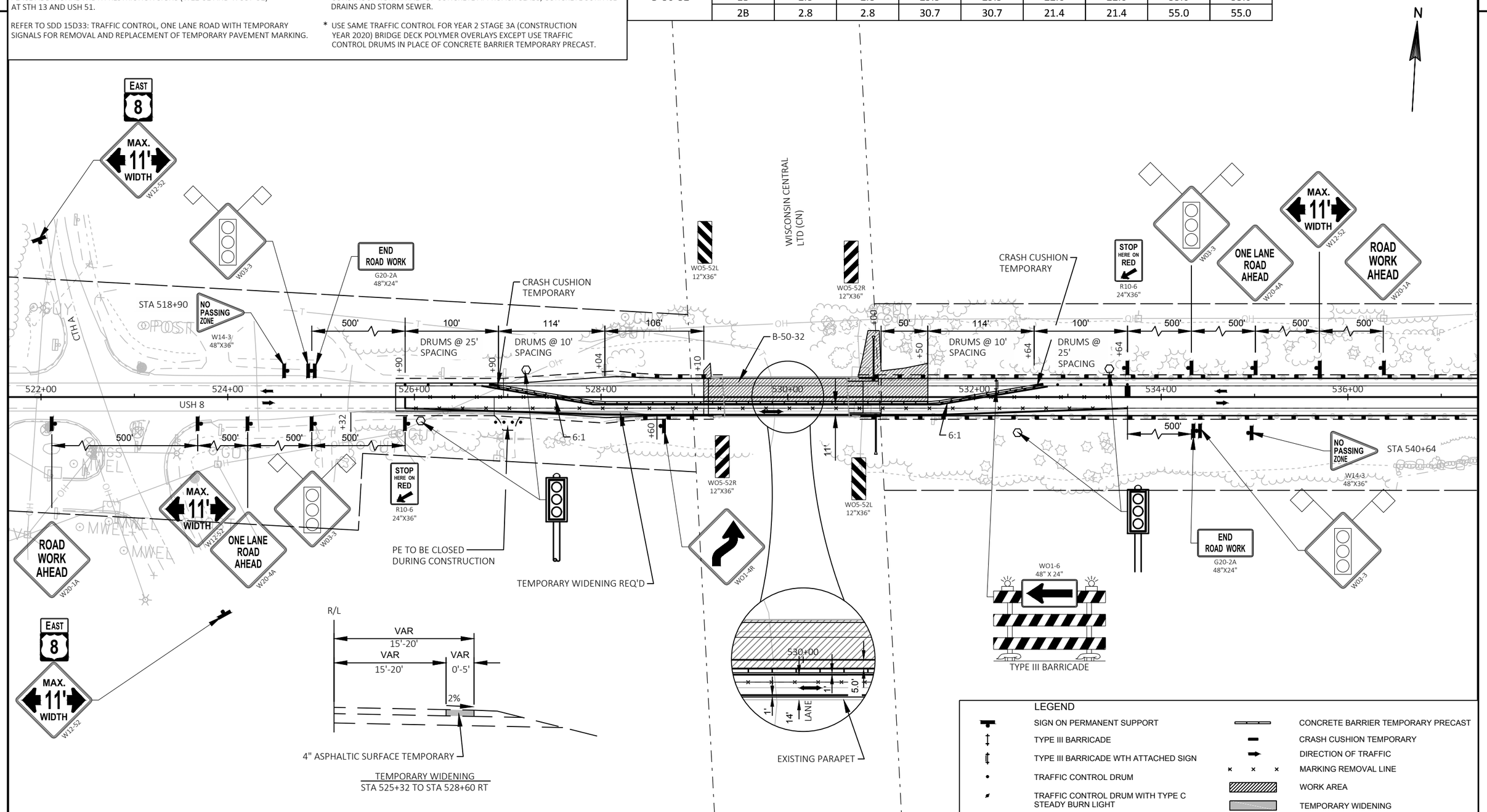
PRIOR TO PLACING TRAFFIC CONTROL ITEMS FOR STAGE 1A, CONSTRUCT TEMPORARY WIDENING BETWEEN STA 525+32 - STA 528+60 RT UTILIZING SDD 15C12: TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS.

UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS SHIFT TRAFFIC TO UTILIZE THE EXISTING EASTBOUND TRAFFIC LANE. REMOVE AND REPLACE NORTH HALF OF STRUCTURE B-50-32 BRIDGE DECK. CONSTRUCT NORTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

* USE SAME TRAFFIC CONTROL FOR YEAR 2 STAGE 3A (CONSTRUCTION YEAR 2020) BRIDGE DECK POLYMER OVERLAYS EXCEPT USE TRAFFIC CONTROL DRUMS IN PLACE OF CONCRETE BARRIER TEMPORARY PRECAST.

SIGNAL TIMING INFORMATION

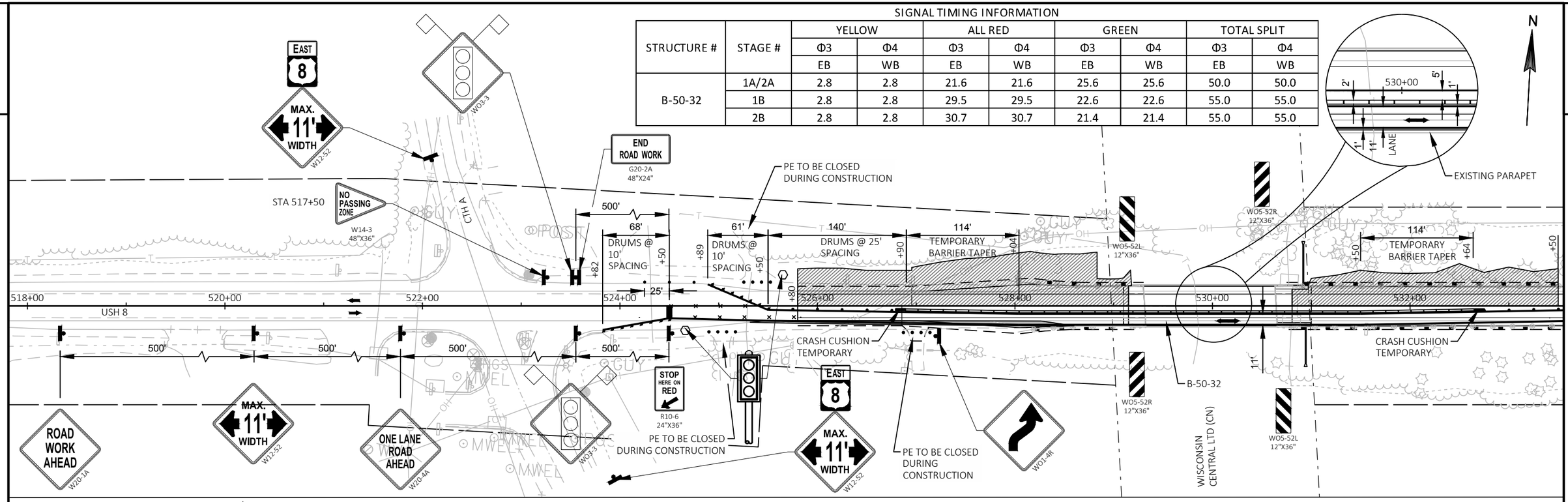
STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-32	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B	2.8	2.8	29.5	29.5	22.6	22.6	55.0	55.0
	2B	2.8	2.8	30.7	30.7	21.4	21.4	55.0	55.0



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 1A*	SHEET 21	E

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-32	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B	2.8	2.8	29.5	29.5	22.6	22.6	55.0	55.0
	2B	2.8	2.8	30.7	30.7	21.4	21.4	55.0	55.0



GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-32 STAGE 1B:

TRAFFIC CONTINUES UTILIZING THE EASTBOUND LANES.

MOVE TEMPORARY TRAFFIC SIGNALS. SHIFT TEMPORARY BARRIER TAPER ONTO THE EASTBOUND TRAFFIC LANE. INSTALL ADDITIONAL TRAFFIC CONTROL ITEMS AS DETAILED IN STAGE 1B AND IN ACCORDANCE WITH SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

REMOVE EXISTING GUARDRAIL LT. MILL WESTBOUND EXISTING PAVEMENT FULL DEPTH.

CONSTRUCT SHOULDER WIDENING AND SLOPE GRADING LT. PLACE BASE AGGREGATE DENSE 1 1/4-INCH, PAVE BOTH LIFTS OF HMA PAVEMENT. PLACE BASE AGGREGATE DENSE 3/4-INCH SHOULDERS. INSTALL MGS GUARDRAIL, INSTALL TURF ESTABLISHMENT AND EROSION CONTROL ITEMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- WORK AREA
- TEMPORARY WIDENING

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 1B	SHEET 22	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\025001 TC B-50-32 YR 1 STAGE 1B.DWG
LAYOUT NAME - TC B-50-32 YEAR 1 STAGE 1B
PLOT DATE : 1/24/2019 8:46 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-32 STAGE 2A:

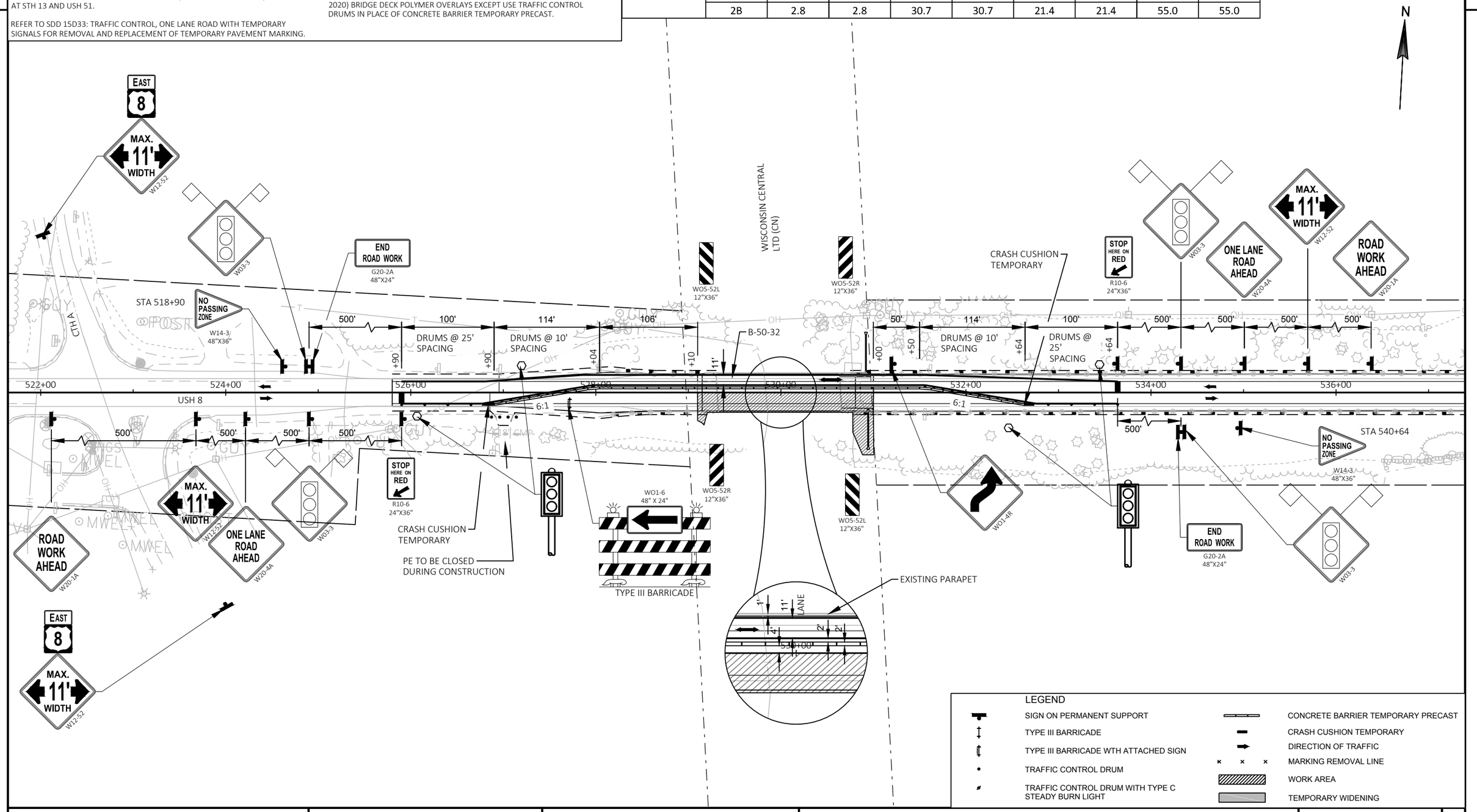
SHIFT TRAFFIC TO UTILIZE THE COMPLETED WESTBOUND LANE.

UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS REMOVE AND REPLACE SOUTH HALF OF STRUCTURE B-50-32 BRIDGE DECK. CONSTRUCT SOUTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

* USE SAME TRAFFIC CONTROL FOR YEAR 2 STAGE 3B (CONSTRUCTION YEAR 2020) BRIDGE DECK POLYMER OVERLAYS EXCEPT USE TRAFFIC CONTROL DRUMS IN PLACE OF CONCRETE BARRIER TEMPORARY PRECAST.

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-32	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B	2.8	2.8	29.5	29.5	22.6	22.6	55.0	55.0
	2B	2.8	2.8	30.7	30.7	21.4	21.4	55.0	55.0



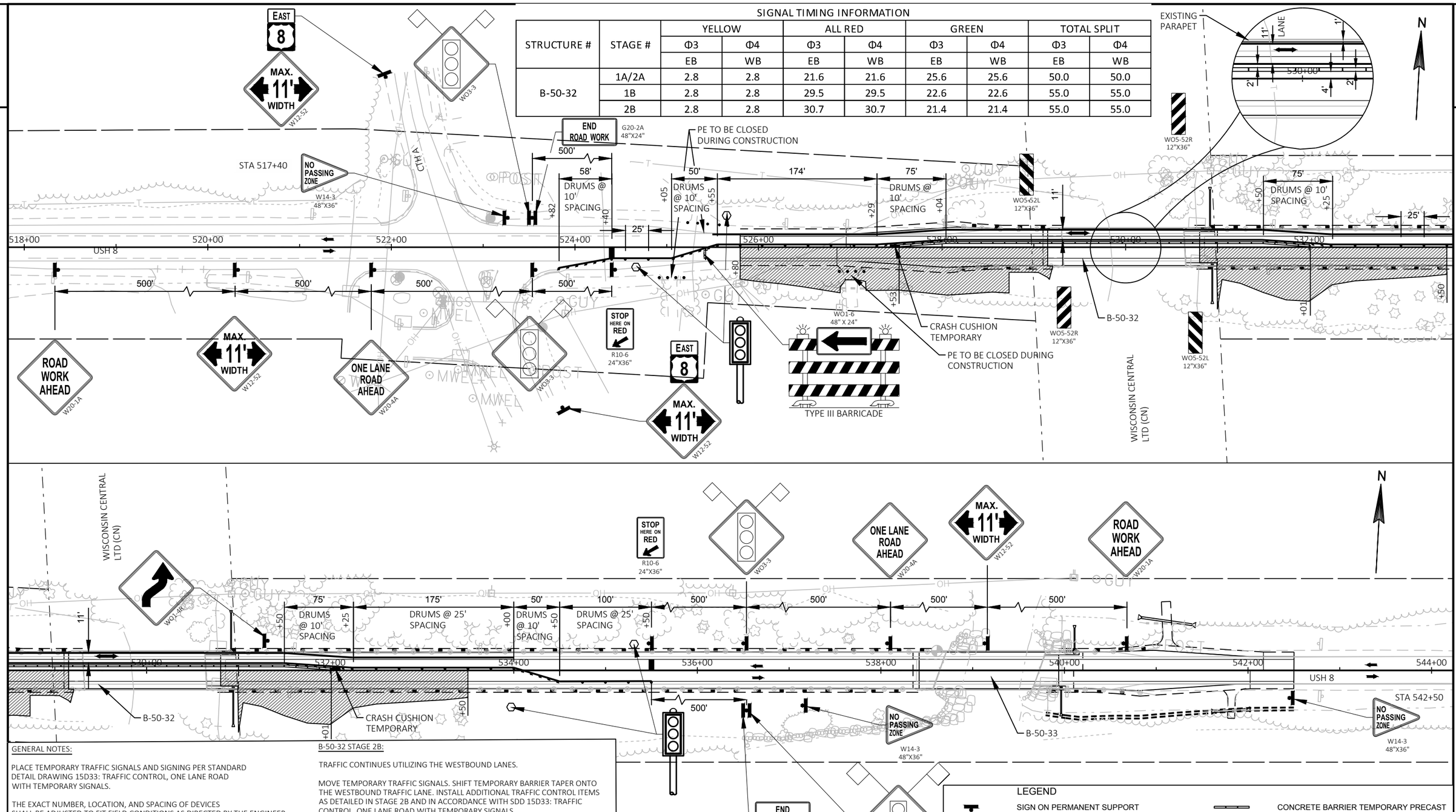
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 2A *	SHEET 23	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\025001 TC B-50-32 YR 1 STAGE 2A.DWG
LAYOUT NAME - TC B-50-32 YEAR 1 STAGE 2A

PLOT DATE : 1/24/2019 8:46 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-32	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B	2.8	2.8	29.5	29.5	22.6	22.6	55.0	55.0
	2B	2.8	2.8	30.7	30.7	21.4	21.4	55.0	55.0



GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-32 STAGE 2B:

TRAFFIC CONTINUES UTILIZING THE WESTBOUND LANES.

MOVE TEMPORARY TRAFFIC SIGNALS. SHIFT TEMPORARY BARRIER TAPER ONTO THE WESTBOUND TRAFFIC LANE. INSTALL ADDITIONAL TRAFFIC CONTROL ITEMS AS DETAILED IN STAGE 2B AND IN ACCORDANCE WITH SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

REMOVE EXISTING GUARDRAIL RT. MILL EASTBOUND EXISTING PAVEMENT FULL DEPTH.

CONSTRUCT SHOULDER WIDENING AND SLOPE GRADING RT. PLACE BASE AGGREGATE DENSE 1 1/4-INCH, PAVE BOTH LIFTS OF HMA PAVEMENT. PLACE BASE AGGREGATE DENSE 3/4-INCH SHOULDERS. INSTALL MGS GUARDRAIL, INSTALL TURF ESTABLISHMENT AND EROSION CONTROL ITEMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- WORK AREA
- TEMPORARY WIDENING

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 2B	SHEET 24	E

2

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-33 STAGE 1A:

PRIOR TO PLACING TRAFFIC CONTROL ITEMS FOR STAGE 1A, CONSTRUCT TEMPORARY WIDENING BETWEEN STA 540+52 - STA 544+00 RT UTILIZING SDD 15C12: TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS.

UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS SHIFT TRAFFIC TO UTILIZE THE EXISTING EASTBOUND TRAFFIC LANE.

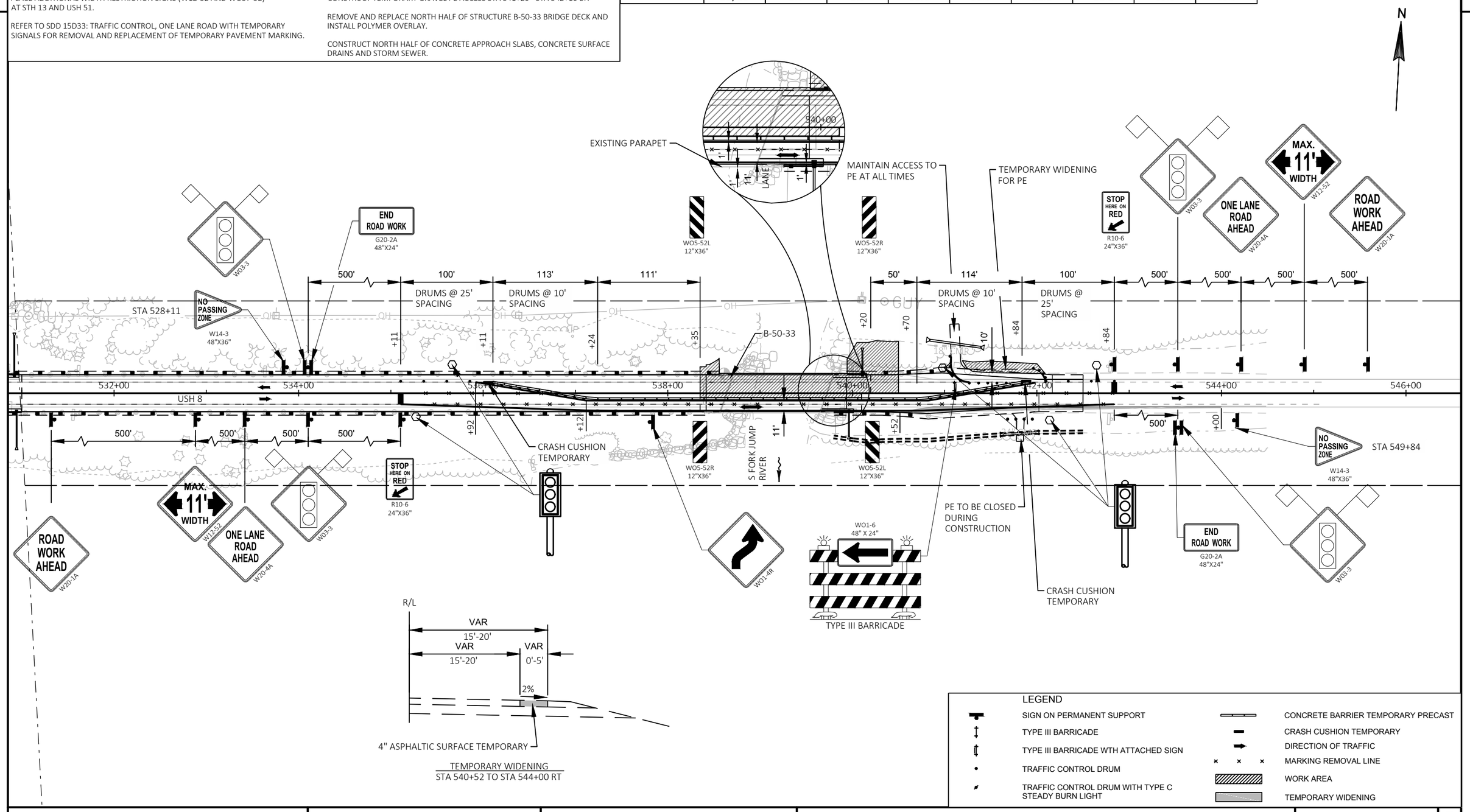
CONSTRUCT TEMPORARY GRAVEL PE ACCESS STA 541+20 - STA 542+10 LT.

REMOVE AND REPLACE NORTH HALF OF STRUCTURE B-50-33 BRIDGE DECK AND INSTALL POLYMER OVERLAY.

CONSTRUCT NORTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

SIGNAL TIMING INFORMATION

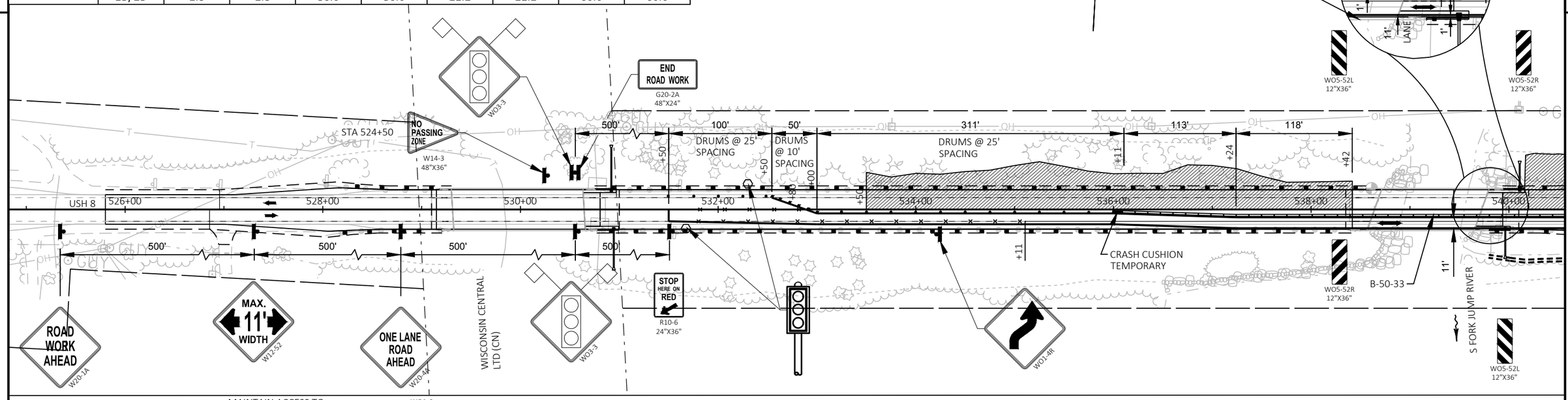
STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-33	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B/2B	2.8	2.8	36.0	36.0	21.2	21.2	60.0	60.0

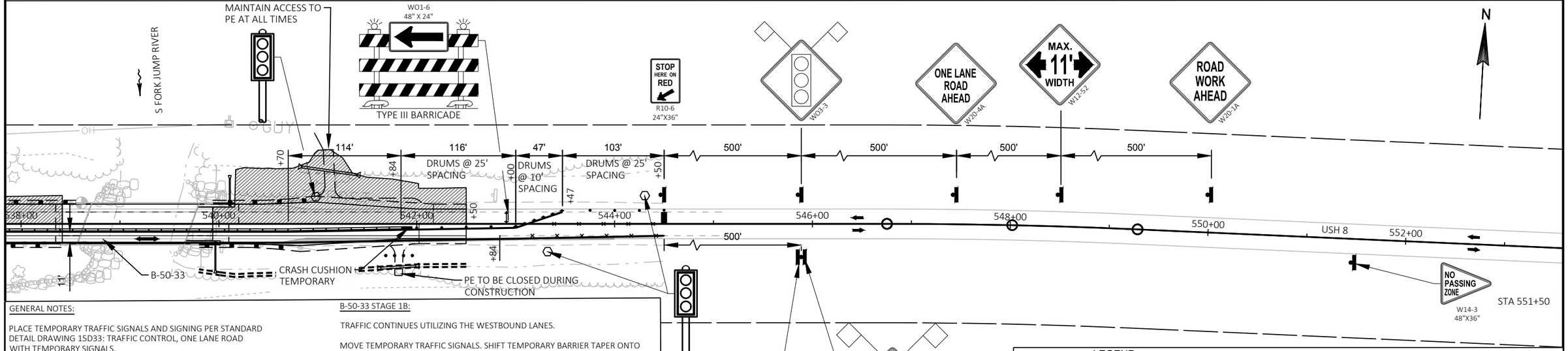


PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 2 - STAGE 1A	SHEET 25	E

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-33	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B/2B	2.8	2.8	36.0	36.0	21.2	21.2	60.0	60.0





GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-33 STAGE 1B:

TRAFFIC CONTINUES UTILIZING THE WESTBOUND LANES.

MOVE TEMPORARY TRAFFIC SIGNALS. SHIFT TEMPORARY BARRIER TAPER ONTO THE WESTBOUND TRAFFIC LANE. INSTALL ADDITIONAL TRAFFIC CONTROL ITEMS AS DETAILED IN STAGE 2B AND IN ACCORDANCE WITH SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

REMOVE EXISTING GUARDRAIL RT. MILL EASTBOUND EXISTING PAVEMENT FULL DEPTH.

CONSTRUCT SHOULDER WIDENING AND SLOPE GRADING RT. PLACE BASE AGGREGATE DENSE 1 1/4-INCH, PAVE BOTH LIFTS OF HMA PAVEMENT. PLACE BASE AGGREGATE DENSE 3/4-INCH SHOULDERS. INSTALL MGS GUARDRAIL, INSTALL TURF ESTABLISHMENT AND EROSION CONTROL ITEMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- WORK AREA
- TEMPORARY WIDENING

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 2 - STAGE 1B	SHEET 26	E

2

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

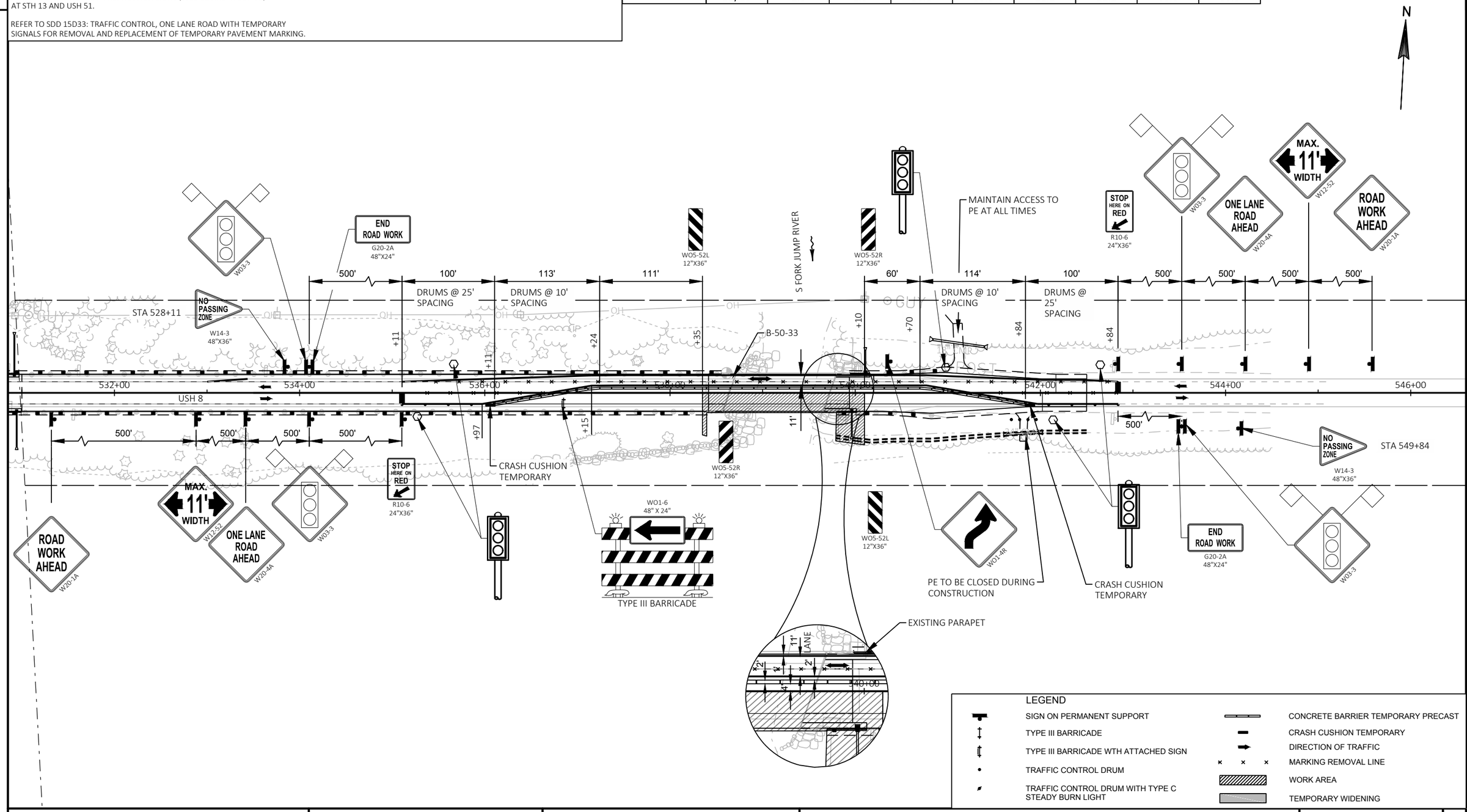
B-50-33 STAGE 2A:

SHIFT TRAFFIC TO UTILIZE THE COMPLETED WESTBOUND LANE.

UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS REMOVE AND REPLACE SOUTH HALF OF STRUCTURE B-50-33 BRIDGE DECK AND INSTALL POLYMER OVERLAY. CONSTRUCT SOUTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-33	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B/2B	2.8	2.8	36.0	36.0	21.2	21.2	60.0	60.0



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 2 - STAGE 2A	SHEET 27	E

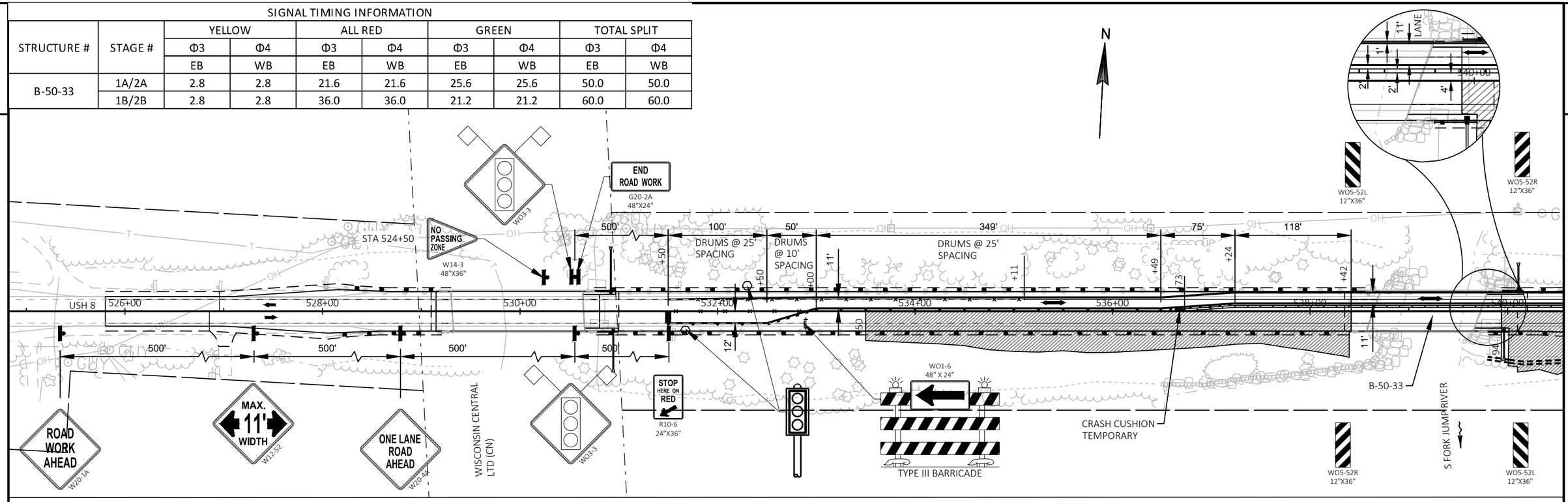
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\025001 TC B-50-33 YR 2 STAGE 2A.DWG
LAYOUT NAME - TC B-33 YEAR 2 STAGE 2A

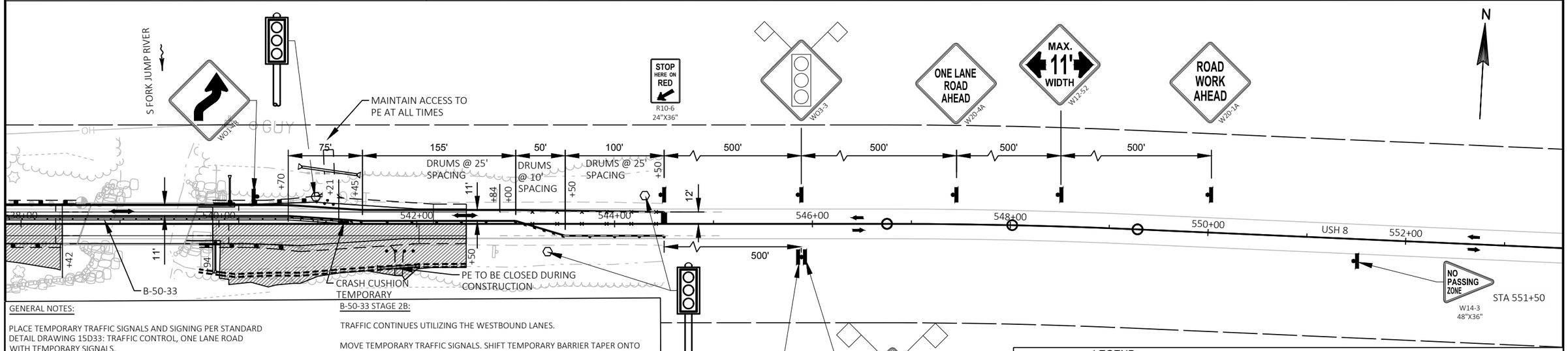
PLOT DATE : 1/24/2019 8:48 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-33	1A/2A	2.8	2.8	21.6	21.6	25.6	25.6	50.0	50.0
	1B/2B	2.8	2.8	36.0	36.0	21.2	21.2	60.0	60.0





GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-33 STAGE 2B:

TRAFFIC CONTINUES UTILIZING THE WESTBOUND LANES.

MOVE TEMPORARY TRAFFIC SIGNALS. SHIFT TEMPORARY BARRIER TAPER ONTO THE WESTBOUND TRAFFIC LANE. INSTALL ADDITIONAL TRAFFIC CONTROL ITEMS AS DETAILED IN STAGE 2B AND IN ACCORDANCE WITH SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

REMOVE EXISTING GUARDRAIL RT. MILL EASTBOUND EXISTING PAVEMENT FULL DEPTH.

CONSTRUCT SHOULDER WIDENING AND SLOPE GRADING RT. PLACE BASE AGGREGATE DENSE 1 1/4-INCH, PAVE BOTH LIFTS OF HMA PAVEMENT. PLACE BASE AGGREGATE DENSE 3/4-INCH SHOULDERS. INSTALL MGS GUARDRAIL, INSTALL TURF ESTABLISHMENT AND EROSION CONTROL ITEMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- WORK AREA
- TEMPORARY WIDENING

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 2 - STAGE 2B	SHEET 28	E

2

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-48 STAGE 1:

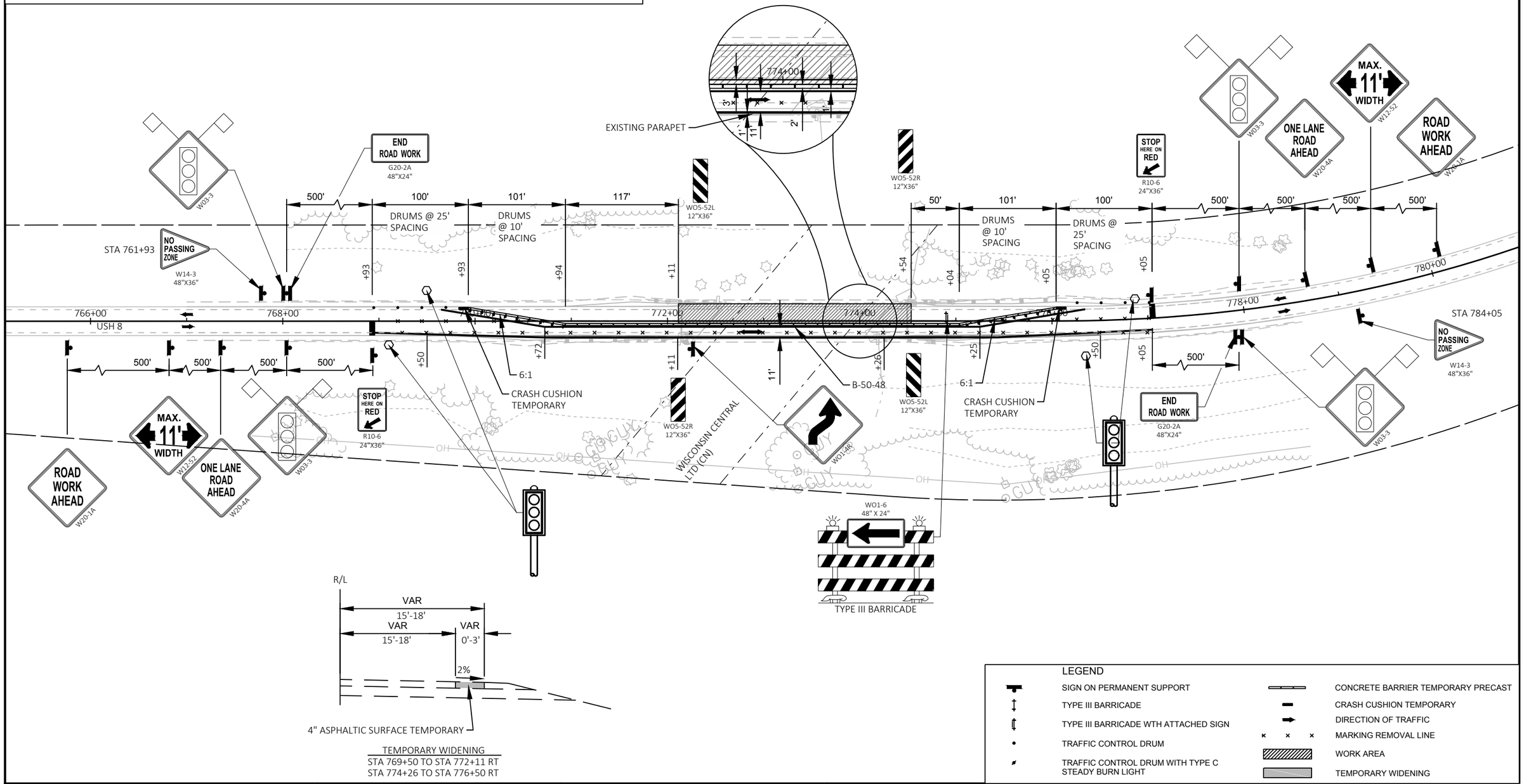
PRIOR TO PLACING TRAFFIC CONTROL ITEMS FOR STAGE 1, CONSTRUCT TEMPORARY WIDENING BETWEEN STA 769+50 - STA 772+11 RT AND STA 774+26 - S TA 776+50 RT UTILIZING SDD 15C12: TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS.

UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS SHIFT TRAFFIC TO UTILIZE THE EXISTING EASTBOUND TRAFFIC LANE. REMOVE AND REPLACE NORTH HALF OF STRUCTURE B-50-48 BRIDGE DECK. CONSTRUCT NORTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

* USE SAME TRAFFIC CONTROL FOR YEAR 2 (CONSTRUCTION YEAR 2020) BRIDGE DECK POLYMER OVERLAYS EXCEPT USE TRAFFIC CONTROL DRUMS IN PLACE OF CONCRETE BARRIER TEMPORARY PRECAST.

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-48	1/2	2.8	2.8	22.6	22.6	24.5	24.5	50.0	50.0



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 1 *	SHEET 29	E

2

GENERAL NOTES:

PLACE TEMPORARY TRAFFIC SIGNALS AND SIGNING PER STANDARD DETAIL DRAWING 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS.

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

PLACE ADDITIONAL WIDTH RESTRICTION SIGNS (W12-52 AND WO57-52) AT STH 13 AND USH 51.

REFER TO SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS FOR REMOVAL AND REPLACEMENT OF TEMPORARY PAVEMENT MARKING.

B-50-48 STAGE 2:

PRIOR TO PLACING TRAFFIC CONTROL ITEMS FOR STAGE 2, CONSTRUCT TEMPORARY WIDENING BETWEEN STA 769+50 - STA 772+42 LT AND STA 774+65 - STA 776+50 LT UTILIZING SDD 15C12: TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS.

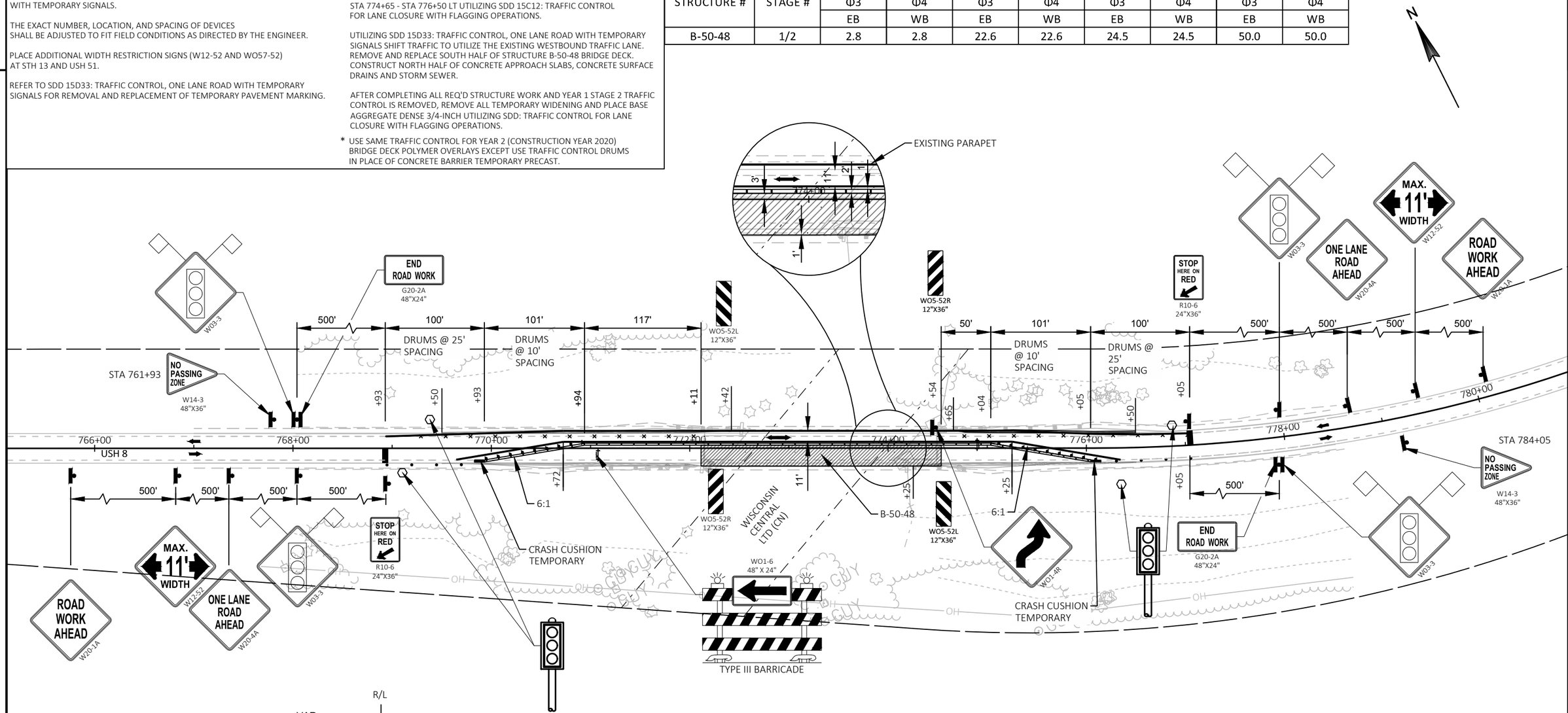
UTILIZING SDD 15D33: TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS SHIFT TRAFFIC TO UTILIZE THE EXISTING WESTBOUND TRAFFIC LANE. REMOVE AND REPLACE SOUTH HALF OF STRUCTURE B-50-48 BRIDGE DECK. CONSTRUCT NORTH HALF OF CONCRETE APPROACH SLABS, CONCRETE SURFACE DRAINS AND STORM SEWER.

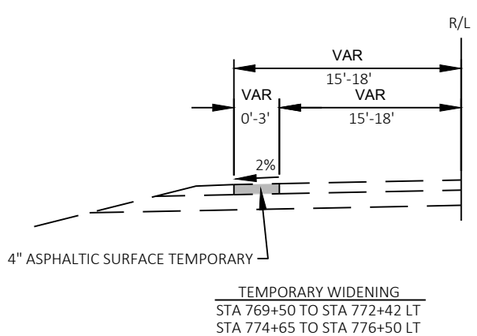
AFTER COMPLETING ALL REQ'D STRUCTURE WORK AND YEAR 1 STAGE 2 TRAFFIC CONTROL IS REMOVED, REMOVE ALL TEMPORARY WIDENING AND PLACE BASE AGGREGATE DENSE 3/4-INCH UTILIZING SDD: TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS.

* USE SAME TRAFFIC CONTROL FOR YEAR 2 (CONSTRUCTION YEAR 2020) BRIDGE DECK POLYMER OVERLAYS EXCEPT USE TRAFFIC CONTROL DRUMS IN PLACE OF CONCRETE BARRIER TEMPORARY PRECAST.

SIGNAL TIMING INFORMATION

STRUCTURE #	STAGE #	YELLOW		ALL RED		GREEN		TOTAL SPLIT	
		Φ3	Φ4	Φ3	Φ4	Φ3	Φ4	Φ3	Φ4
		EB	WB	EB	WB	EB	WB	EB	WB
B-50-48	1/2	2.8	2.8	22.6	22.6	24.5	24.5	50.0	50.0





TEMPORARY WIDENING
STA 769+50 TO STA 772+42 LT
STA 774+65 TO STA 776+50 LT

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSHION TEMPORARY
- DIRECTION OF TRAFFIC
- MARKING REMOVAL LINE
- WORK AREA
- TEMPORARY WIDENING

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	TRAFFIC CONTROL - YEAR 1 - STAGE 2 *	SHEET 30	E

2

2

N

BEGIN PROJECT
STA 336+43.31
Y = 359719.735
X = 780841.385

330+00

335+00

340+00

USH 8

S88° 50' 14"E

POT STA 334+00.00
Y=359724.672
X=780598.120

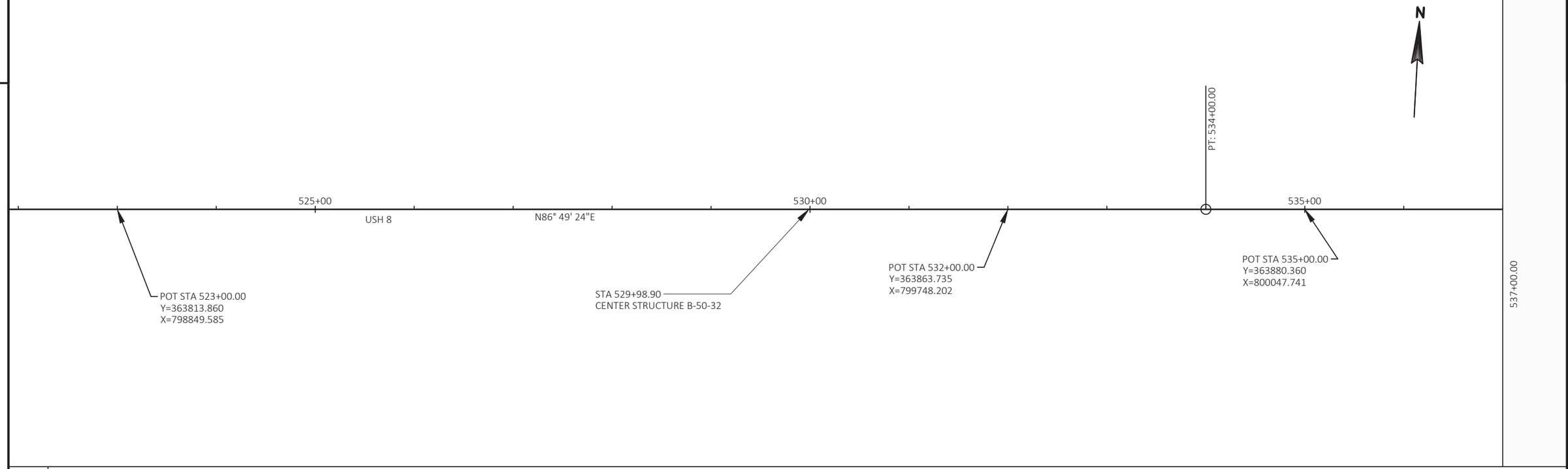
STA 336+57.03
CENTER STRUCTURE B-50-275

POT STA 340+00.00
Y=359712.497
X=781197.997

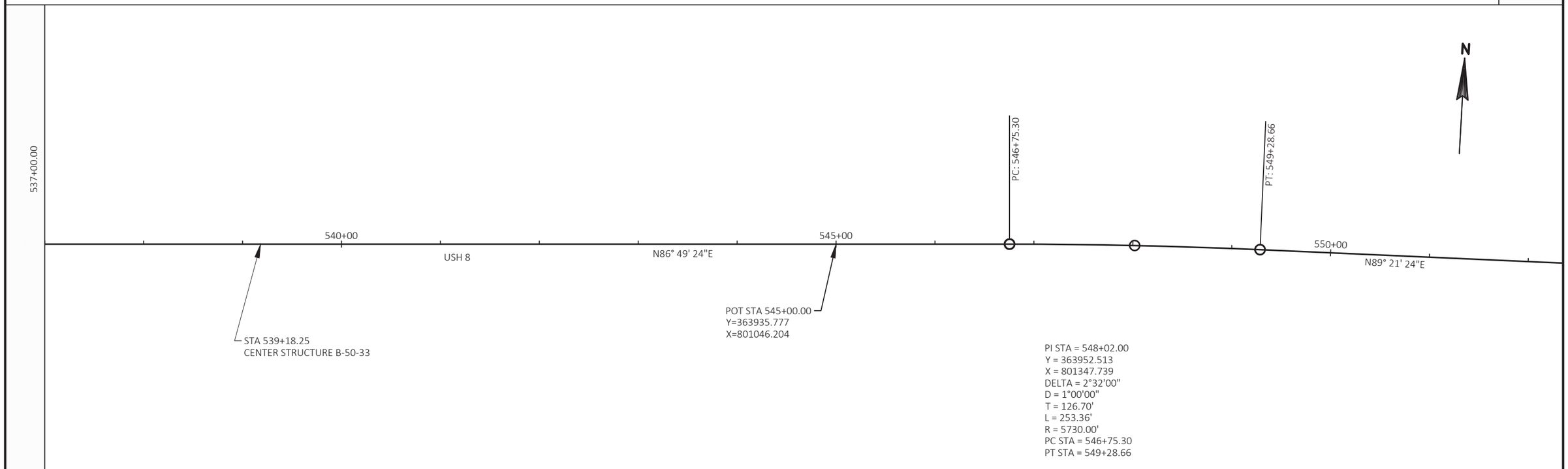
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	ALIGNMENT DIAGRAM	SHEET 31	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\027201 AD.DWG
LAYOUT NAME - 027201

PLOT DATE : 1/23/2019 11:24 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT



2



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	ALIGNMENT DIAGRAM	SHEET 32	E

2

2

N

PC: 749+53.44

750+00

755+00

760+00

S89° 52' 15"E

USH 8

PI STA = 756+25.02
Y = 364148.805
X = 822058.405
DELTA = 26°23'06"
D = 1°59'59"
T = 671.58'
L = 1319.35'
R = 2865.00'
PC STA = 749+53.44
PT STA = 762+72.79

762+00.00

762+00.00

N

PT: 762+72.79

765+00

770+00

775+00

USH 8

S63° 29' 09"E

STA 773+32.19
CENTER STRUCTURE B-50-48

POT STA 769+00.00
Y=363568.996
X=823220.599

END PROJECT
STA 774+50.09

776+00.00

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	ALIGNMENT DIAGRAM	SHEET 33	E

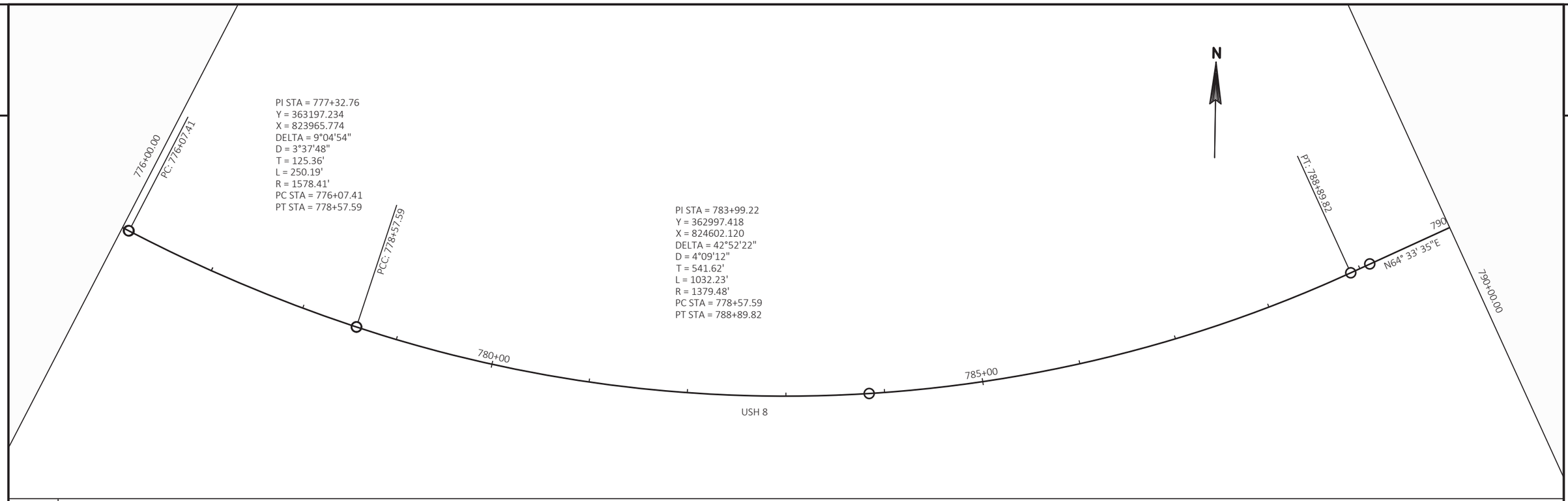
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\027201 AD.DWG
LAYOUT NAME - 027203

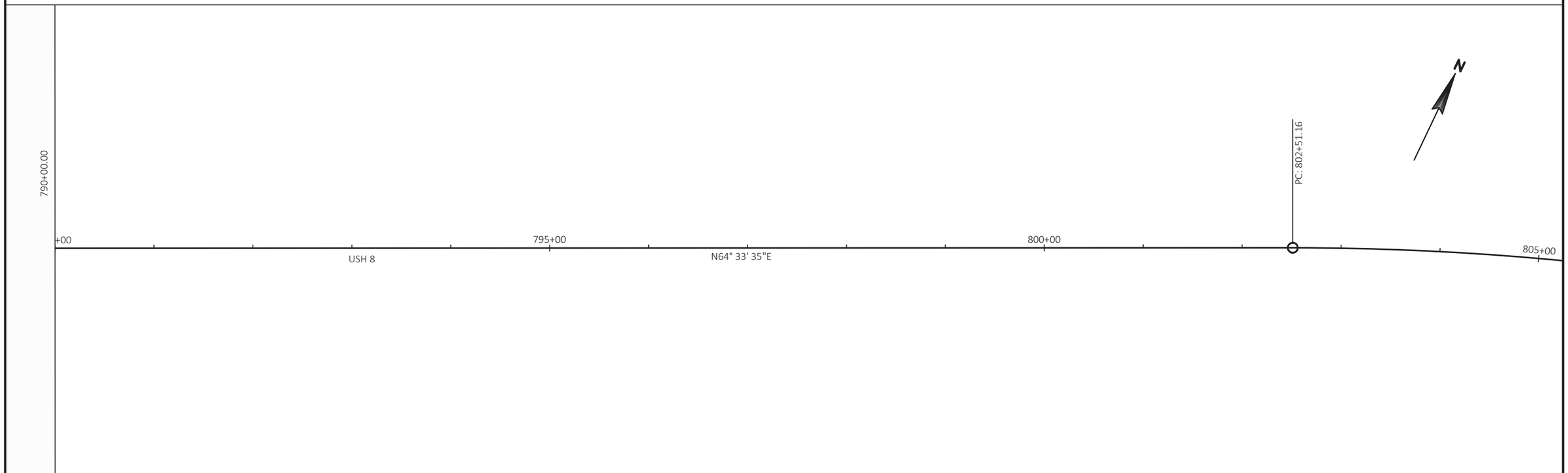
PLOT DATE : 1/23/2019 11:24 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

PI STA = 777+32.76
Y = 363197.234
X = 823965.774
DELTA = 9°04'54"
D = 3°37'48"
T = 125.36'
L = 250.19'
R = 1578.41'
PC STA = 776+07.41
PT STA = 778+57.59

PI STA = 783+99.22
Y = 362997.418
X = 824602.120
DELTA = 42°52'22"
D = 4°09'12"
T = 541.62'
L = 1032.23'
R = 1379.48'
PC STA = 778+57.59
PT STA = 788+89.82





PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	ALIGNMENT DIAGRAM	SHEET 34	E

1580-30-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	12.000	12.000
0004	201.0205	Grubbing	STA	12.000	12.000
0006	203.0100	Removing Small Pipe Culverts	EACH	6.000	6.000
0008	203.0200	Removing Old Structure (station) 01. 529+98.90	LS	1.000	1.000
0010	203.0200	Removing Old Structure (station) 03. 366+57	LS	1.000	1.000
0012	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. B-50-32	LS	1.000	1.000
0014	203.0210.S	Abatement of Asbestos Containing Material (structure) 02. B-50-33	LS	1.000	1.000
0016	203.0225.S	Debris Containment (structure) 01. B-50-32	LS	1.000	1.000
0018	203.0225.S	Debris Containment (structure) 02. B-50-48	LS	1.000	1.000
0020	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 02. 539+18.25	LS	1.000	1.000
0022	204.0100	Removing Pavement	SY	250.000	250.000
0024	204.0110	Removing Asphaltic Surface	SY	330.000	330.000
0026	204.0120	Removing Asphaltic Surface Milling	SY	5,140.000	5,140.000
0028	204.0165	Removing Guardrail	LF	2,040.000	2,040.000
0030	204.0220	Removing Inlets	EACH	4.000	4.000
0032	205.0100	Excavation Common	CY	1,419.000	1,419.000
0034	206.1000	Excavation for Structures Bridges (structure) 01. B-50-32	LS	1.000	1.000
0036	206.1000	Excavation for Structures Bridges (structure) 02. B-50-33	LS	1.000	1.000
0038	206.2000	Excavation for Structures Culverts (structure) 01. B-50-275	LS	1.000	1.000
0040	208.0100	Borrow	CY	460.000	460.000
0042	210.1500	Backfill Structure Type A	TON	145.000	145.000
0044	210.2500	Backfill Structure Type B	TON	365.000	365.000
0046	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1580-30-73	LS	1.000	1.000
0048	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	19.000	19.000
0050	213.0100	Finishing Roadway (project) 01. 1580-30-73	EACH	1.000	1.000
0052	305.0110	Base Aggregate Dense 3/4-Inch	TON	575.000	575.000
0054	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,310.000	2,310.000
0056	311.0110	Breaker Run	TON	31.000	31.000
0058	415.0410	Concrete Pavement Approach Slab	SY	319.000	319.000
0060	416.1010	Concrete Surface Drains	CY	12.500	12.500
0062	455.0605	Tack Coat	GAL	300.000	300.000
0064	460.2000	Incentive Density HMA Pavement	DOL	950.000	950.000
0066	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	1,375.000	1,375.000
0068	460.6223	HMA Pavement 3 MT 58-28 S	TON	820.000	820.000

1580-30-73

Line	Item	Item Description	Unit	Total	Qty
0070	460.6244	HMA Pavement 4 MT 58-34 S	TON	660.000	660.000
0072	465.0125	Asphaltic Surface Temporary	TON	132.000	132.000
0074	502.0100	Concrete Masonry Bridges	CY	413.000	413.000
0076	502.3200	Protective Surface Treatment	SY	1,292.000	1,292.000
0078	502.3210	Pigmented Surface Sealer	SY	467.000	467.000
0080	502.4104	Adhesive Anchors 1/2-inch	EACH	80.000	80.000
0082	502.4207	Adhesive Anchors No. 7 Bar	EACH	111.000	111.000
0084	504.0100	Concrete Masonry Culverts	CY	70.000	70.000
0086	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	97,180.000	97,180.000
0088	506.4000	Steel Diaphragms (structure) 01. B-50-32	EACH	12.000	12.000
0090	506.4000	Steel Diaphragms (structure) 02. B-50-33	EACH	8.000	8.000
0092	509.0301	Preparation Decks Type 1	SY	55.000	55.000
0094	509.0302	Preparation Decks Type 2	SY	25.000	25.000
0096	509.0500	Cleaning Decks	SY	700.000	700.000
0098	509.1500	Concrete Surface Repair	SF	55.000	55.000
0100	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0102	509.2500	Concrete Masonry Overlay Decks	CY	45.000	45.000
0104	509.5100.S	Polymer Overlay	SY	1,775.000	1,775.000
0106	509.9050.S	Cleaning Parapets	LF	400.000	400.000
0108	511.1200	Temporary Shoring (structure) 01. B-50-275	SF	1,000.000	1,000.000
0110	516.0500	Rubberized Membrane Waterproofing	SY	43.000	43.000
0112	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	4.000	4.000
0114	520.3324	Culvert Pipe Class III-A 24-Inch	LF	92.000	92.000
0116	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0118	603.8000	Concrete Barrier Temporary Precast Delivered	LF	1,766.000	1,766.000
0120	603.8125	Concrete Barrier Temporary Precast Installed	LF	4,196.000	4,196.000
0122	603.8505	Anchoring Concrete Barrier on Bridge Decks	LF	245.000	245.000
0124	604.9015.S	Reseal Crushed Aggregate Slope Paving	SY	1,225.000	1,225.000
0126	606.0200	Riprap Medium	CY	102.000	102.000
0128	606.0300	Riprap Heavy	CY	110.000	110.000
0130	611.0654	Inlet Covers Type V	EACH	4.000	4.000
0132	611.3220	Inlets 2x2-FT	EACH	4.000	4.000
0134	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	150.000	150.000
0136	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	70.000	70.000
0138	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	8.000	8.000
0140	614.0905	Crash Cushions Temporary	EACH	20.000	20.000
0142	614.2300	MGS Guardrail 3	LF	1,457.500	1,457.500
0144	614.2500	MGS Thrie Beam Transition	LF	315.200	315.200
0146	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0148	616.0800.S	Fence Track Clearance	LF	600.000	600.000

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Line	Item	Item Description	Unit	Total	Qty
0150	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1580-30-73	EACH	1.000	1.000
0152	619.1000	Mobilization	EACH	1.000	1.000
0154	624.0100	Water	MGAL	50.000	50.000
0156	625.0100	Topsoil	SY	13,800.000	13,800.000
0158	628.1504	Silt Fence	LF	4,660.000	4,660.000
0160	628.1520	Silt Fence Maintenance	LF	4,660.000	4,660.000
0162	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0164	628.1910	Mobilizations Emergency Erosion Control	EACH	10.000	10.000
0166	628.2004	Erosion Mat Class I Type B	SY	4,800.000	4,800.000
0168	628.2008	Erosion Mat Urban Class I Type B	SY	430.000	430.000
0170	628.2027	Erosion Mat Class II Type C	SY	4,850.000	4,850.000
0172	628.7005	Inlet Protection Type A	EACH	8.000	8.000
0174	628.7010	Inlet Protection Type B	EACH	8.000	8.000
0176	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0178	628.7555	Culvert Pipe Checks	EACH	17.000	17.000
0180	628.7570	Rock Bags	EACH	245.000	245.000
0182	629.0210	Fertilizer Type B	CWT	10.000	10.000
0184	630.0120	Seeding Mixture No. 20	LB	450.000	450.000
0186	630.0200	Seeding Temporary	LB	75.000	75.000
0188	638.2102	Moving Signs Type II	EACH	9.000	9.000
0190	638.4000	Moving Small Sign Supports	EACH	9.000	9.000
0192	642.5001	Field Office Type B	EACH	1.000	1.000
0194	643.0300	Traffic Control Drums	DAY	18,480.000	18,480.000
0196	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0198	643.0420	Traffic Control Barricades Type III	DAY	460.000	460.000
0200	643.0705	Traffic Control Warning Lights Type A	DAY	920.000	920.000
0202	643.0715	Traffic Control Warning Lights Type C	DAY	9,300.000	9,300.000
0204	643.0900	Traffic Control Signs	DAY	51,810.000	51,810.000
0206	643.5000	Traffic Control	EACH	1.000	1.000
0208	645.0105	Geotextile Type C	SY	85.000	85.000
0210	645.0120	Geotextile Type HR	SY	606.000	606.000
0212	646.1020	Marking Line Epoxy 4-Inch	LF	17,588.000	17,588.000
0214	646.9000	Marking Removal Line 4-Inch	LF	11,058.000	11,058.000
0216	648.0100	Locating No-Passing Zones	MI	0.320	0.320
0218	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	37,257.000	37,257.000
0220	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	288.000	288.000
0222	650.4000	Construction Staking Storm Sewer	EACH	8.000	8.000
0224	650.4500	Construction Staking Subgrade	LF	2,856.000	2,856.000
0226	650.5000	Construction Staking Base	LF	2,856.000	2,856.000

1580-30-73

Line	Item	Item Description	Unit	Total	Qty
0228	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0230	650.9910	Construction Staking Supplemental Control (project) 01. 1580-30-73	LS	1.000	1.000
0232	650.9920	Construction Staking Slope Stakes	LF	2,856.000	2,856.000
0234	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-50-32	LS	1.000	1.000
0236	661.0100	Temporary Traffic Signals for Bridges (structure) 02. B-50-33	LS	1.000	1.000
0238	661.0100	Temporary Traffic Signals for Bridges (structure) 03. B-50-48	LS	1.000	1.000
0240	690.0150	Sawing Asphalt	LF	216.000	216.000
0242	690.0250	Sawing Concrete	LF	96.000	96.000
0244	715.0502	Incentive Strength Concrete Structures	DOL	2,190.000	2,190.000
0246	801.0117	Railroad Flagging Reimbursement	DOL	7,000.000	7,000.000
0248	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0250	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000

CLEARING & GRUBBING

STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
USH 8				
STAGE 1				
528+00 - 529+00	LT	1	1	
532+00 - 538+00	LT	6	6	
539+00 - 542+00	LT	3	3	
STAGE 1 SUBTOTAL		10	10	
USH 8				
STAGE 2				
526+00 - 528+00	RT	2	2	
540+00 - 542+50	RT	0	0	STAGE 1 STA RANGE
STAGE 2 SUBTOTAL		2	2	
ITEM TOTALS		12	12	

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
USH 8			
STAGE 1			
530+77	LT	1	BRIDGE DRAIN
539+96	LT	1	BRIDGE DRAIN
541+12	51' LT	1	18"X43' CMP
STAGE 1 SUBTOTAL		3	
USH 8			
STAGE 2			
530+80	RT	1	BRIDGE DRAIN
539+82	RT	1	BRIDGE DRAIN
541+82	43' RT	1	24"X36' CMP
STAGE 2 SUBTOTAL		3	
ITEM TOTAL		6	

REMOVING PAVEMENT

STATION	LOCATION	204.0100 SY	REMARKS
USH 8			
STAGE 1			
529+10 - 529+31	LT	27	CONCRETE APPROACH SLAB
530+64 - 530+86	LT	29	CONCRETE APPROACH SLAB
538+40 - 538+64	LT	36	CONCRETE APPROACH SLAB
539+72 - 539+97	LT	31	CONCRETE APPROACH SLAB
STAGE 1 SUBTOTAL		123	
USH 8			
STAGE 2			
529+10 - 529+31	RT	30	CONCRETE APPROACH SLAB
530+64 - 530+86	RT	29	CONCRETE APPROACH SLAB
538+40 - 538+64	RT	32	CONCRETE APPROACH SLAB
539+68 - 539+97	RT	36	CONCRETE APPROACH SLAB
STAGE 2 SUBTOTAL		127	
ITEM TOTAL		250	

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	204.0110 SY	REMARKS
USH 8			
STAGE 2			
525+32 - 528+80	RT	15	TEMPORARY WIDENING
542+52 - 544+00	RT	50	TEMPORARY WIDENING
769+50 - 772+11	RT	75	TEMPORARY WIDENING
770+26- 776+50	RT	70	TEMPORARY WIDENING
769+50 - 776+42	LT	75	TEMPORARY WIDENING
774+65 - 776+50	LT	45	TEMPORARY WIDENING
STAGE 2 SUBTOTAL		330	
ITEM TOTAL		330	

REMOVING ASPHALTIC SURFACE MILLING

STATION	LOCATION	204.0120 SY	REMARKS
USH 8			
STAGE 1			
525+80 - 529+10	LT	555	
528+08 - 529+10	LT	45	TAPER
531+00 - 533+50	LT	530	
533+50 - 538+35	LT	1025	
540+20 - 540+94	LT	35	TAPER
540+20 - 542+50	LT	375	
STAGE 1 SUBTOTAL		2565	
USH 8			
STAGE 2			
525+80 - 529+10	RT	555	
528+26 - 529+10	RT	40	TAPER
531+00 - 533+50	RT	530	
533+50 - 538+35	RT	1025	
540+10 - 540+88	RT	40	TAPER
540+10 - 542+50	RT	385	
STAGE 2 SUBTOTAL		2575	
ITEM TOTAL		5140	

REMOVING GUARDRAIL

STATION	LOCATION	204.0165 LF
USH 8		
STAGE 1		
527+94 - 529+23	LT	130
530+70 - 538+61	LT	791
539+90 - 540+87	LT	98
STAGE 1 SUBTOTAL		1019
USH 8		
STAGE 2		
528+02 - 529+25	RT	124
530+73 - 538+45	RT	773
539+75 - 540+99	RT	124
STAGE 2 SUBTOTAL		1021
ITEM TOTAL		2040

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
USH 8			
STAGE 1			
530+77	LT	1	BRIDGE DRAIN
539+96	LT	1	BRIDGE DRAIN
STAGE 1 SUBTOTAL		2	
USH 8			
STAGE 2			
530+80	RT	1	BRIDGE DRAIN
539+82	RT	1	BRIDGE DRAIN
STAGE 2 SUBTOTAL		2	
ITEM TOTAL		4	

EARTHWORK SUMMARY

DIVISION	STATION	LOCATION	(1) 205.0100 EXCAVATION CUT CY	(1) 205.0100 COMMON EBS CY	(2)(3) SALVAGED/ UNUSABLE MATERIAL CY	(4) AVAILABLE MATERIAL CY	208.0100 BORROW CY	UNEXPANDED FILL CY	(5) EXPANDED FILL CY	(6) MASS ORDINATE CY	WASTE CY	COMMENTS
DIVISION 1 (YEAR-1)												
PROJECT 1580-30-73												
USH 8												
STAGE 1												
	525+80 - 529+31.12	LT	142	0	14	128	72	153	200	0	14	YEAR 1
	529+31.12 - 530+64.57	STRUCTURE B-50-32										
	530+64.57 - 533+50	LT	74	0	23	51	10	46	61	0	23	YEAR 1
	UNDISTRIBUTED	LT		50								
			216	50	37	179	82	199	261	0	37	
STAGE 1 SUBTOTAL			**216**	**50**	**37**	**179**	**82**	**199**	**261**	**0**	**37**	
STAGE 2												
	525+80 - 529+31.12	RT	162	0	31	131	61	148	192	0	31	YEAR 1
	529+31.12 - 530+64.57	STRUCTURE B-50-32										
	530+64.57 - 533+50	RT	68	0	22	46	30	58	76	0	22	YEAR 1
	UNDISTRIBUTED	RT		50								
			230	50	53	177	91	206	268	0	53	
STAGE 2 SUBTOTAL			**230**	**50**	**53**	**177**	**91**	**206**	**268**	**0**	**53**	
DIVISION 1 (YEAR-1) TOTAL			**446**	**100**	**90**	**356**	**173**	**405**	**529**	**0**	**90**	
DIVISION 2 (YEAR 2)												
PROJECT 1580-30-73												
USH 8												
STAGE 1												
	533+50 - 538+63.92	LT	120	0	22	98	0	102	133	-35	22	YEAR 2
	538+63.92 - 539+72.58	STRUCTURE B-50-33										
	539+72.58 - 542+50	LT	325	0	26	299	0	125	161	138	26	YEAR 2
	UNDISTRIBUTED	LT		50								
			445	50	48	397	0	227	294	103	48	
STAGE 1 SUBTOTAL			**445**	**50**	**48**	**397**	**0**	**227**	**294**	**103**	**48**	
STAGE 2												
	533+50 - 538+63.92	RT	109		18	91	0	66	85	6	18	YEAR 2
	538+63.92 - 539+72.58	STRUCTURE B-50-33										
	539+72.58 - 542+50	RT	219		41	178	287	361	471	-6	41	YEAR 2
	UNDISTRIBUTED	RT		50								
			328	50	59	269	287	427	556	0	59	
STAGE 2 SUBTOTAL			**328**	**50**	**59**	**269**	**287**	**427**	**556**	**0**	**59**	
DIVISION 2(YEAR-2) TOTAL			**773**	**100**	**107**	**666**	**287**	**654**	**850**	**103**	**107**	
PROJECT 1580-30-73 TOTAL			1219	200			460					
		Total Common Excavation		**1419**								

(1) EXCAVATION COMMON IS THE SUM OF THE EXCAVATION COMMON AND THE EXCAVATION EBS. ITEM NUMBER 205.0100

(2) SALVAGED/ UNUSABLE PAVEMENT MATERIAL ARE INCLUDED IN THE QUANTITY OF EXCAVATION COMMON.

(3) SALVAGED/ UNUSABLE PAVEMENT MATERIAL. INCLUDES EXISTING PAVEMENT APPROACH SLABS AND TEMPORARY PAVEMENT REMOVALS.

(4) AVAILABLE MATERIAL = EXCAVATION COMMON - UNUSABLE PAVEMENT MATERIAL.

(5) STAGES 1, AND 2 EXPANDED FILL FACTOR = 1.30

(6) THE MASS ORDINATE + OR - QTY FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL AND A MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

THE MASS ORDINATE IS = EXCAVATION COMMON - SALVAGED/UNUSABLE PAVEMENT MATERIAL - EXPANDED FILL.

3

PREPARE FOUNDATION FOR

STATION	LOCATION	211.0100 ASPHALTIC PAVING (PROJECT) LS	REMARKS
USH 8			
STAGE 1 & 2			
PROJECT 1580-30-73	LT & RT	1	PREPARE SURFACE AFTER MILLING OPERATION EACH STAGE
ITEM TOTAL		1	

PREPARE FOUNDATION FOR

STATION	LOCATION	211.0400 ASPHALTIC SHOULDERS STA	COMMENT
USH 8			
STAGE 1			
525+32 - 528+60	RT	4	TEMP WIDENING
540+52 - 544+00	RT	4	TEMP WIDENING
770+25 - 772+11	RT	2	TEMP WIDENING
774+25 - 776+76	RT	3	TEMP WIDENING
STAGE 1 SUBTOTAL		13	
STAGE 2			
769+75 - 772+42	LT	3	TEMP WIDENING
774+65 - 776+75	LT	3	TEMP WIDENING
STAGE 2 SUBTOTAL		6	
ITEM TOTAL		19	

FINISHING ROADWAY (PROJECT)

STATION	LOCATION	213.0100 EACH
USH 8		
1580-30-73	LT & RT	1
ITEM TOTAL		1

BASE AGGREGATE

STATION	LOCATION	305.0110 DENSE 3/4-INCH TON	305.0120 DENSE 1 1/4-INCH TON	COMMENTS
USH 8				
STAGE 1				
525+80 - 529+10	LT		260	
525+80 - 529+31	LT	54		
529+10 - 529+31	LT		25	
530+64 - 531+00	LT		50	
530+64 - 533+50	LT	32		
531+00 - 533+50	LT		140	
533+50 - 538+35	LT		260	
533+50 - 538+64	LT	63		
538+35 - 538+64	LT		40	
539+73 - 540+20	LT		60	
539+73 - 542+50	LT	40		
540+20 - 542+50	LT		190	
DRIVEWAYS				
541+12.3	LT	32		
541+26 - 542+05	LT	12		TEMPORARY DRIVEWAY
UNDISTRIBUTED	LT	22	150	
STAGE 1 SUBTOTAL		255	1175	
USH 8				
STAGE 2				
525+32 - 525+80	RT	4		
525+80 - 529+10	RT		250	
529+10 - 529+31	RT		25	
525+80 - 529+31	RT	56		
530+64 - 531+00	RT		50	
531+00 - 533+50	RT		130	
530+64 - 533+50	RT	32		
533+50 - 538+35	RT		255	
538+35 - 538+64	RT		25	
533+50 - 538+64	RT	62		
539+73 - 540+10	RT		55	
540+10 - 542+50	RT		195	
539+73 - 542+50	RT	43		
542+50 - 544+00	RT	12		
769+50 - 772+11	RT	18		
774+26 - 776+50	RT	16		
769+50 - 772+42	RT	18		
774+65 - 776+50	RT	10		
DRIVEWAYS				
527+01.3	RT	12		
541+81.7	RT	15		
UNDISTRIBUTED	RT	22	150	
STAGE 2 SUBTOTAL		320	1135	
ITEM TOTALS		575	2310	

3

CONCRETE PAVEMENT APPROACH SLAB

STATION	LOCATION	415.0410 SY
USH 8		
STAGE 1		
529+15.00 - 529+31.12	LT	36
530+64.57 - 530+80.60	LT	32
538+41.60 - 538+63.92	LT	60
539+72.58 - 539+93.80	LT	35
STAGE 1 SUBTOTAL		163
STAGE 2		
529+15.00 - 529+31.12	RT	38
530+64.57 - 530+80.60	RT	30
538+41.60 - 538+63.92	RT	42
539+72.58 - 539+93.80	RT	46
STAGE 2 SUBTOTAL		156
ITEM TOTAL		319

ASPHALTIC SURFACE TEMPORARY

STATION	LOCATION	465.0125 TON	COMMENTS
USH 8			
STAGE 1			
525+32 - 528+60	RT	30	TEMP WIDENING
540+52 - 544+00	RT	40	TEMP WIDENING
769+50 - 772+11	RT	18	TEMP WIDENING
774+26 - 776+50	RT	16	TEMP WIDENING
STAGE 1 SUBTOTAL		104	
STAGE 2			
769+50 - 772+42	LT	18	TEMP WIDENING
774+65 - 776+50	LT	10	TEMP WIDENING
STAGE 2 SUBTOTAL		28	
ITEM TOTAL		132	

3

CONCRETE SURFACE DRAINS

STATION	LOCATION	416.1010 CY
USH 8		
STAGE 1		
530+63.30 - 530+96.90	LT	3
539+78.80 - 540+16.00	LT	3.3
STAGE 1 SUBTOTAL		6.3
STAGE 2		
530+65.60 - 530+99.40	RT	3
539+65.30 - 540+01.40	RT	3.2
STAGE 2 SUBTOTAL		6.2
ITEM TOTAL		12.5

INCENTIVE DENSITY HMA PAVEMENT

STATION	LOCATION	460.2000 DOL
USH 8		
1580-30-73	LT & RT	950
ITEM TOTAL		950

CULVERT PIPE

STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	520.3324 CULVERT PIPE CLASS III-A 24-INCH LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	REMARKS
USH 8					
STAGE 1					
541+12	51' LT	2	56	1	FIELD VERIFY LOCATION
STAGE 1 SUBTOTAL		2	56	1	
USH 8					
STAGE 2					
541+82	43' RT	2	36	1	FIELD VERIFY LOCATION
STAGE 2 SUBTOTAL		2	36	1	
ITEM TOTAL		4	92	2	

HMA PAVEMENT ITEMS

STATION	LOCATION	455.0605 TACK COAT GAL	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6244 HMA PAVEMENT 4 MT 58-34 S TON
USH 8					
STAGE 1					
525+80 - 529+15	LT	35		95	75
530+80.6 - 533+50	LT	30		85	70
533+50 - 538+41.6	LT	55		155	125
539+73.8 - 542+50	LT	30		75	60
STAGE 1 SUBTOTAL		150		410	330
USH 8					
STAGE 2					
525+80 - 529+15	RT	35	335	95	75
530+80.6 - 533+50		30	270	85	70
533+50 - 538+41.6		55	492	155	125
539+73.8 - 542+50	RT	30	278	75	60
STAGE 2 SUBTOTAL		150	1375	410	330
ITEM TOTALS		300	1375	820	660

CONCRETE SURFACE DRAINS DROP INLET TYPE

STATION	LOCATION	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2x2-FT EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH EACH	REMARKS
USH 8						
STAGE 1						
530+91.90	19' LT	1	1	1	47	BRIDGE DRAIN
540+10.90	19' LT	1	1	1	30	BRIDGE DRAIN
STAGE 1 SUBTOTAL		2	2	2	77	
USH 8						
STAGE 2						
530+94.40	19' RT	1	1	1	43	BRIDGE DRAIN
539+96.40	19' RT	1	1	1	30	BRIDGE DRAIN
STAGE 2 SUBTOTAL		2	2	2	73	
ITEM TOTALS		4	4	4	150	

CONCRETE BARRIER TEMPORARY PRECAST

STATION	LOCATION	603.8000 DELIVERED LF	603.8125 INSTALLED LF	603.8505 ANCHORING CONCRETE BARRIER ON BRIDGE DECK LF	COMMENTS
USH 8					
STAGE 1A					
526+90 - 532+64	LT & RT	576	576	135	
536+11 - 541+84	LT & RT	576	576	110	
STAGE 1A SUBTOTAL		1152	1152	245	
STAGE 1B					
526+90 - 528+04	LT		115		INCLUDES CRASH CUSHION TEMP
531+50 - 532+64	LT		115		INCLUDES CRASH CUSHION TEMP
536+11 - 537+24	RT		115		
540+70 - 541+84	RT		115		
STAGE 1B SUBTOTAL			460		
STAGE 1					
769+93 - 776+05	LT & RT	614	614		
STAGE 1 SUBTOTAL		614	614		
STAGE 2A					
526+90 - 532+64	LT & RT		576		INCLUDES CRASH CUSHION TEMP
536+11 - 541+84	LT & RT		576		
STAGE 2A SUBTOTAL			1152		
STAGE 2B					
527+53 - 528+04	LT		51		INCLUDES CRASH CUSHION TEMP
531+50 - 532+01	LT		51		INCLUDES CRASH CUSHION TEMP
536+73 - 537+24	LT		51		
540+70 - 541+21	LT		51		
STAGE 2B SUBTOTAL			204		
STAGE 2					
769+93 - 776+05	LT & RT		614		
STAGE 2 SUBTOTAL			614		
ITEM TOTALS		1766	4196	245	

RIPRAP & GEOTEXTILE FABRIC

STATION	LOCATION	606.0200 MEDIUM CY	645.0120 TYPE HR SY
USH 8			
STAGE 1			
530+91.90	LT	2	10
540+10.90	LT	2	10
UNDISTRIBUTED		1	5
STAGE 1 SUBTOTAL		5	25
USH 8			
STAGE 2			
530+94.40	RT	2	10
539+50 - 541+10	RT	75	210
UNDISTRIBUTED		20	55
STAGE 2 SUBTOTAL		97	275
ITEM TOTALS		102	300

CRASH CUSHION TEMPORARY

STATION	LOCATION	614.0905 EACH	BACK WIDTH FT	SIGN PLATE	CRASH TEST LEVEL	TRAFFIC LOCATION
USH 8						
STAGE 1A						
526+90	LT	1	2	WO5-58R	TL-3	RT
532+64	LT	1	2	WO5-58L	TL-3	LT
536+11	LT	1	2	WO5-58R	TL-3	RT
541+84	LT	1	2	WO5-58L	TL-3	LT
STAGE 1A SUBTOTAL		4				
STAGE 1B						
526+90	RT	1	2	WO5-58R	TL-3	RT
532+64	RT	1	2	WO5-58L	TL-3	LT
536+11	RT	1	2	WO5-58R	TL-3	RT
541+84	RT	1	2	WO5-58L	TL-3	LT
STAGE 1B SUBTOTAL		4				
STAGE 1						
769+93	LT	1	2	WO5-58R	TL-3	RT
776+05	LT	1	2	WO5-58L	TL-3	LT
STAGE 1 SUBTOTAL		2				
STAGE 2A						
526+90	RT	1	2	WO5-58L	TL-3	LT
532+64	RT	1	2	WO5-58R	TL-3	RT
536+11	RT	1	2	WO5-58L	TL-3	LT
541+84	RT	1	2	WO5-58R	TL-3	RT
STAGE 2A SUBTOTAL		4				
STAGE 2B						
527+53	LT	1	2	WO5-58L	TL-3	LT
532+01	LT	1	2	WO5-58R	TL-3	RT
536+73	LT	1	2	WO5-58L	TL-3	LT
541+21	LT	1	2	WO5-58R	TL-3	RT
STAGE 2B SUBTOTAL		4				
STAGE 2						
769+93	LT	1	2	WO5-58L	TL-3	LT
776+05	LT	1	2	WO5-58R	TL-3	RT
STAGE 2 SUBTOTAL		2				
ITEM TOTAL		20				

MGS

STATION	LOCATION	614.2300 GUARDRAIL 3 LF	614.2500 THRIE BEAM TRANSITION LF	614.2610 GUARDRAIL TERMINAL EAT EACH
USH 8				
STAGE 1				
528+15.51 - 528+68.59	LT			1
528+68.59 - 528+81.09	LT	12.5		
528+81.09 - 529+20.49	LT		39.4	
530+72.95 - 531+12.23	LT		39.4	
531+12.23 - 538+18.80	LT	707		
538+18.80 - 538+58.20	LT		39.4	
539+91.86 - 540+31.26	LT		39.4	
540+31.26 - 540+43.76	LT	12.5		
540+43.76 - 540+96.85	LT			1
STAGE 1 SUBTOTAL		732	157.6	2
STAGE 2				
528+05.48 - 528+58.56	RT			1
528+58.56 - 528+83.56	RT	25		
528+83.56 - 529+22.67	RT		39.4	
530+75.30 - 531+14.70	RT		39.4	
531+14.70 - 538+02.74	RT	688		
538+02.74 - 538+42.14	RT		39.4	
539+77.31 - 540+16.71	RT		39.4	
540+16.71 - 540+29.21	RT	12.5		
540+29.21 - 540+87.29	RT			1
STAGE 2 SUBTOTAL		725.5	157.6	2
ITEM TOTALS		1457.5	315.2	4

FENCE TRACK CLEARANCE

STATION	LOCATION	616.0800.S LF
USH 8		
B-50-32	LT & RT	300
B-50-48	LT & RT	300
ITEM TOTAL		600

MAINTENANCE AND REPAIR OF HAUL ROADS

STATION	LOCATION	618.0100 EACH
USH 8		
1580-30-73	LT & RT	1
ITEM TOTAL		1

MOBILIZATION

STATION	LOCATION	619.1000 EACH
USH 8		
336+41 - 776+90	LT & RT	1
ITEM TOTAL		1

WATER

STATION	LOCATION	624.0100 MGAL	REMARKS
USH 8			
STAGE 1			
528+50 - 542+50	LT	25	BASE AGGREGATE COMPACTION
STAGE 1 SUBTOTAL		25	
STAGE 2			
528+50 - 542+50	RT	25	BASE AGGREGATE COMPACTION
STAGE 2 SUBTOTAL		25	
ITEM TOTAL		50	

LANDSCAPING & EROSION CONTROL

STATION	LOCATION	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
USH 8															
STRUCTURE B-50-275															
334+00 - 339+00	LT	1770	510	510			1770						1.1	47.8	
334+00 - 339+00	RT	2103	575	575			2103						1.3	56.8	
UNDISTRIBUTED		968	271	271		150	977	0	0	0	0	70	0.6	45.4	25.0
B-50-275 SUBTOTAL		4842	1356	1356	0	150	4850	0	0	0	0	70	3.1	150.0	25.0
USH 8															
STAGE 1															
525+80 - 529+31	LT	1071	395	395	453		0						0.7	28.9	
530+64 - 533+50	LT	1098	372	372	447			2	2				0.7	29.6	
533+50 - 538+64	LT	848	541	541	553								0.5	22.9	
539+73 - 542+50	LT	802	300	300	705			2	2		4		0.5	21.6	
UNDISTRIBUTED	LT	954	402	402	539	0	0			0	1	70	0.6	47.0	25.0
STAGE 1 SUBTOTAL	0	4772	2010	2010	2697	0	0	4	4	0	5	70	3.0	150.0	25.0
STAGE 2															
525+80 - 529+31	RT	951	145	145		220.0					5		0.6	25.7	
530+64 - 533+50	RT	976	335	335	710			2	2	10			0.6	26.4	
533+50 - 538+64	RT	722	522	522	418								0.5	19.5	
539+73 - 542+50	RT	552			552			2	2	20	5		0.3	14.9	
UNDISTRIBUTED	RT	985	292	292	423	60	0			20	2	105	1.5	63.5	25.0
STAGE 2 SUBTOTAL		4187	1294	1294	2103	280	0	4	4	50	12	105	3.5	150.0	25.0
ITEM TOTALS		13800	4660	4660	4800	430	4850	8	8	50	17	245	10	450	75

MOBILIZATION

STATION	LOCATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
USH 8			
STRUCTURE B-50-275			
334+00 - 339+00	LT & RT	2	2
B-50-275 SUBTOTAL		2	2
USH 8			
STAGE 1			
525+80 - 533+50	LT	2	2
533+50 - 542+50	LT	2	2
STAGE 1 SUBTOTAL		4	4
USH 8			
STAGE 2			
525+80 - 533+50	RT	2	2
533+50 - 542+50	RT	2	2
STAGE 2 SUBTOTAL		4	4
ITEM TOTALS		10	10

MOVING SIGNS

	SIGN MESSAGE	638.2102 TYPE II EACH	638.4000 SUPPORTS EACH
1-1	AIRPLANE	1	1
	ARROW	1	
1-2	SPEED LIMIT 40	1	1
1-3	BUSINESS DISTRICT W/ARROW	1	2
2-1	SPEED LIMIT 40	1	1
2-2	JCT CTH A	1	1
2-3	SPEED LIMIT 40	1	1
3-1	SPEED LIMIT 40	1	1
3-2	SPEED LIMIT 40	1	1
ITEM TOTALS		9	9

REMOVE AND STORE SIGNS DURING GRADING ACTIVITIES.
REINSTALL IN ORIGINAL LOCATION.

FIELD OFFICE TYPE B

STATION	LOCATION	642.5001 EACH
USH 8		
336+41 - 776+90	LT & RT	1
ITEM TOTAL		1

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS DAYS	643.5000 PROJECT EACH	643.0310.S TEMPORARY PORTABLE RUMBLE STRIPS LS
USH 8							
B-50-275							
STAGE 1	375				125		1
STAGE 2	375				125		
B-50-275 SUBTOTAL	750				250		1
B-50-32							
STAGE 1A	1360	40	80	880	4640	0.5	
STAGE 1B	1260	30	60	630	3480		
STAGE 2A	1480	40	80	1000	4640		
STAGE 2B	1590	30	60	810	3480		
STAGE 3A	570	10	20	220	1160		
STAGE 3B	570	10	20	220	1160		
B-50-32 SUBTOTAL	6830	160	320	3760	18560	0.5	
B-50-33							
STAGE 1A	2400	50	100	1150	5500		
STAGE 1B	1680	30	60	360	3300		
STAGE 2A	1550	50	100	1150	5500		
STAGE 2B	1290	30	60	360	3300	0.5	
B-50-33 SUBTOTAL	6920	160	320	3020	17600	0.5	
B-50-48							
STAGE 1	1560	60	120	1080	6600		
STAGE 2	1560	60	120	1080	6600		
STAGE 3	430	10	20	180	1100		
STAGE 4	430	10	20	180	1100		
B-50-48 SUBTOTAL	3980	140	280	2520	15400		
ITEM TOTALS	18480	460	920	9300	51810	1	1

3

MARKING LINE EPOXY 4-INCH

STATION	LOCATION	646.0120 (YELLOW) LF	(WHITE) LF	COMMENT
USH 8				
STAGE 2B				
524+40 - 531+34	R/L	1388		DOUBLE YELLOW
524+50 - 535+50	LT & RT		2200	EDGE LINE
531+34 - 535+50	R/L	516		SOLID & SKIPS
531+50 - 542+84	R/L	1420		SOLID & SKIPS
531+50 - 544+50	LT & RT		2600	EDGE LINE
542+84 - 544+50	R/L	40		SKIPS
STAGE 2B SUBTOTAL		3364	4800	
STAGE 2				
768+93 - 777+05	R/L	1624		DOUBLE YELLOW
768+93 - 777+05	LT & RT		1624	EDGE LINE
STAGE 2 SUBTOTAL		1624	1624	
STAGE 3B				
525+90 - 531+34	R/L	1088		DOUBLE YELLOW
525+90 - 533+64	LT & RT		1548	EDGE LINE
531+34 - 533+64	R/L	292		SOLID & SKIPS
STAGE 3B SUBTOTAL		1380	1548	
STAGE 4				
768+93 - 777+05	RT	1624		DOUBLE YELLOW
769+64 - 776+35	LT & RT		1624	EDGE LINE
STAGE 4 SUBTOTAL		1624	1624	
SUBTOTAL		7992	9596	
ITEM TOTAL		17588		

MARKING REMOVAL LINE 4-INCH

STATION	LOCATION	646.9000 LF	COMMENTS
USH 8			
STAGE 1A			
525+90 - 527+50	R/L	320	DOUBLE YELLOW
525+90 - 533+64	RT	774	EDGE LINE
531+94 - 533+64	R/L	220	SOLIDS & SKIPS
535+11 - 536+71	R/L	198	SOLIDS & SKIPS
535+11 - 542+84	RT	773	EDGE LINE
541+24 - 542+84	R/L	198	SOLIDS & SKIPS
STAGE 1A SUBTOTAL		2483	
STAGE 1B			
524+50 - 525+90	R/L	280	DOUBLE YELLOW
524+50 - 525+90	RT	140	EDGE LINE
533+64 - 535+50	R/L	224	SOLIDS & SKIPS
533+64 - 535+50	RT	186	EDGE LINE
531+50 - 532+95	R/L	182	SOLIDS & SKIPS
531+50 - 535+11	RT	361	EDGE LINE
543+05 - 544+50	R/L	38	SKIPS
542+84 - 544+50	RT	166	EDGE LINE
STAGE 1B SUBTOTAL		1577	
STAGE 1			
768+93 - 770+73	R/L	360	DOUBLE YELLOW
768+93 - 777+05	RT	812	EDGE LINE
775+25 - 777+05	R/L	360	DOUBLE YELLOW
STAGE 1 SUBTOTAL		1532	
STAGE 2A			
542+50 - 542+84	LT	34	EDGE LINE
STAGE 2A SUBTOTAL		34	
STAGE 2B			
524+40 - 524+50	R/L	20	DOUBLE YELLOW
542+84 - 544+50	LT	166	EDGE LINE
STAGE 2B SUBTOTAL		186	
STAGE 2			
768+93 - 777+05	LT	812	EDGE LINE
STAGE 2 SUBTOTAL		812	
STAGE 3A			
525+90 - 527+50	R/L	320	DOUBLE YELLOW
525+90 - 533+64	RT	774	EDGE LINE
531+94 - 533+64	R/L	220	SOLIDS & SKIPS
STAGE 3A SUBTOTAL		1314	
STAGE 3B			
525+90 - 533+64	LT	774	EDGE LINE
STAGE 3B SUBTOTAL		774	
STAGE 3			
768+93 - 770+73	R/L	360	DOUBLE YELLOW
768+93 - 777+05	RT	812	EDGE LINE
775+25 - 777+05	R/L	360	DOUBLE YELLOW
STAGE 3 SUBTOTAL		1532	
STAGE 4			
768+93 - 777+05	LT	812	EDGE LINE
STAGE 4 SUBTOTAL		812	
ITEM TOTAL		11056	

LOCATING NO PASSING ZONES

STATION	LOCATION	648.0100 MI
USH 8		
336+41 - 776+90	LT & RT	0.32
ITEM TOTAL		0.32

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH

STATION	LOCATION	649.0150 LF	COMMENT
USH 8			
STAGE 1A			
518+90 - 522+50	R/L	360	YELLOW
525+90 - 533+64	RT	780	WHITE
526+72 - 532+78	LT & RT	610	WHITE
533+64 - 540+64	R/L	700	YELLOW
528+11 - 535+11	R/L	700	YELLOW
535+11 - 542+84	RT	775	WHITE
535+91 - 541+99	LT & RT	610	WHITE
542+84 - 549+84	R/L	1400	YELLOW
STAGE 1A SUBTOTAL		5935	
STAGE 1B			
517+50 - 522+50	R/L	500	YELLOW
523+82 - 535+50	RT	1175	WHITE
524+89 - 534+50	LT & RT	970	WHITE
535+50 - 542+50	R/L	700	YELLOW
524+50 - 531+50	R/L	700	YELLOW
531+50 - 544+50	RT	1305	WHITE
532+24 - 543+48	LT & RT	1100	WHITE
544+50 - 551+50	R/L	1400	YELLOW
STAGE 1B SUBTOTAL		7850	
STAGE 1			
768+93 - 777+05	RT	815	WHITE
769+64 - 776+35	LT & RT	675	WHITE
STAGE 1 SUBTOTAL		1490	
STAGE 2A			
518+90 - 522+50	R/L	360	YELLOW
525+90 - 533+64	LT & RT	1555	WHITE
533+64 - 540+64	R/L	700	YELLOW
528+11 - 535+11	R/L	700	YELLOW
533+50 - 535+11	LT	161	WHITE
535+11 - 542+84	LT & RT	780	WHITE
535+11 - 542+84	LT	774	WHITE
542+84 - 549+84	R/L	1400	YELLOW
STAGE 2A SUBTOTAL		6430	
STAGE 2B			
517+40 - 522+50	R/L	510	YELLOW
523+82 - 535+50	LT & RT	1175	WHITE
525+50 - 534+00	LT	850	WHITE
524+50 - 531+50	R/L	700	YELLOW
531+50 - 544+50	LT	1305	WHITE
531+50 - 544+50	LT & RT	1305	WHITE
544+50 - 551+50	R/L	1400	YELLOW
STAGE 2B SUBTOTAL		7245	
STAGE 2			
768+93 - 777+05	LT	815	WHITE
769+64 - 776+35	LT & RT	675	WHITE
STAGE 2 SUBTOTAL		1490	
STAGE 3A			
518+90 - 522+50	R/L	360	YELLOW
525+90 - 533+64	RT	780	WHITE
526+72 - 532+78	LT & RT	610	WHITE
533+64 - 540+64	R/L	700	YELLOW
STAGE 3A SUBTOTAL		2450	
STAGE 3B			
525+90 - 533+64	LT	780	WHITE
526+72 - 532+78	LT & RT	610	WHITE
STAGE 3B SUBTOTAL		1390	

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (CONT'D)

STATION	LOCATION	649.0150 LF	COMMENT
STAGE 3			
768+93 - 777+05	RT	815	WHITE
769+64 - 776+35	LT & RT	675	WHITE
STAGE 3 SUBTOTAL		1490	
STAGE 4			
768+93 - 777+05	RT	812	WHITE
769+64 - 776+35	LT & RT	675	WHITE
STAGE 4 SUBTOTAL		1487	
ITEM TOTAL		37257	

3

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

STATION	LOCATION	649.0850 LF	COMMENT
USH 8			
STAGE 1A			
525+90	RT	12	WHITE
533+64	LT	12	WHITE
535+11	RT	12	WHITE
542+84	LT	12	WHITE
STAGE 1A SUBTOTAL		48	
STAGE 1B			
524+50	RT	12	WHITE
535+50	LT	12	WHITE
531+50	RT	12	WHITE
544+50	LT	12	WHITE
STAGE 1B SUBTOTAL		48	
STAGE 1			
768+93	RT	12	WHITE
777+05	LT	12	WHITE
STAGE 1 SUBTOTAL		24	
STAGE 2A			
525+90	RT	12	WHITE
533+64	LT	12	WHITE
535+11	RT	12	WHITE
542+84	LT	12	WHITE
STAGE 2A SUBTOTAL		48	
STAGE 2B			
524+40	RT	12	WHITE
535+50	LT	12	WHITE
531+50	RT	12	WHITE
544+50	LT	12	WHITE
STAGE 2B SUBTOTAL		48	
STAGE 2			
768+93	RT	12	WHITE
777+05	LT	12	WHITE
STAGE 2 SUBTOTAL		24	
STAGE 3A			
525+90	RT	12	WHITE
533+64	LT	12	WHITE
STAGE 3A SUBTOTAL		24	
STAGE 3			
768+93	RT	12	WHITE
777+05	LT	12	WHITE
STAGE 3 SUBTOTAL		24	
ITEM TOTAL		288	

CONSTRUCTION STAKING STORM SEWER

STATION	LOCATION	650.4000 EACH	COMMENTS
USH 8			
STAGE 1			
530+91.90	19' LT	2	INC. INLET & AEW
540+10.90	19' LT	2	INC. INLET & AEW
STAGE 1 SUBTOTAL		4	
USH 8			
STAGE 2			
530+94.40	19' RT	2	INC. INLET & AEW
539+96.40	19' RT	2	INC. INLET & AEW
STAGE 2 SUBTOTAL		4	
ITEM TOTAL		8	

CONSTRUCTION STAKING

STATION	LOCATION	650.4500 SUBBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
USH 8				
STAGE 1				
525+80 - 529+31	LT	351	351	351
530+64 - 533+50	LT	286	286	286
533+50 - 538+64	LT	514	514	514
539+73 - 542+50	LT	277	277	277
STAGE 1 SUBTOTAL		1428	1428	1428
STAGE 2				
525+80 - 529+31	RT	351	351	351
530+64 - 533+50	RT	286	286	286
533+50 - 538+64	RT	514	514	514
539+73 - 542+50	RT	277	277	277
STAGE 2 SUBTOTAL		1428	1428	1428
ITEM TOTALS		2856	2856	2856

CONSTRUCTION STAKING

STATION	LOCATION	650.9910 SUPPLEMENTAL CONTROL 1580-30-73 LS
USH 8		
336+41 - 776+90	LT & RT	1
ITEM TOTAL		1

TEMPORARY TRAFFIC SIGNALS FOR BRIDGES

STATION	LOCATION	661.0100 LS	COMMENT
USH 8			
B-50-32	LT & RT	1	YEAR 1 & 2
B-50-33	LT & RT	1	YEAR 2
B-50-48	LT & RT	1	YEAR 1 & 2
ITEM TOTAL		3	

SAWING

STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
USH 8			
STAGE 1			
528+80	LT	15	
529+10 - 529+31	LT	20	22
530+64 - 531+00	LT	15	22
531+00	LT	18	
533+50	LT	15	
538+35	LT	20	
538+35 - 538+64	LT	5	26
539+73 - 540+20	LT	24	26
540+20	LT	20	
542+50	LT	15	
STAGE 1 SUBTOTAL		167	96
STAGE 2			
528+80	RT	15	
533+50	RT	19	
542+50	RT	15	
STAGE 2 SUBTOTAL		49	0
ITEM TOTALS		216	96

RAILROAD FLAGGING REIMBURSEMENT

STATION	LOCATION	618.0100 DOL
USH 8		
1580-30-73	LT & RT	7000
ITEM TOTAL		7000

3

LEGEND

CONCRETE PAVEMENT APPROACH SLAB

N

MGS EAT REQ'D
STA 528+15.51 TO STA 528+68.59 LT
MGS GUARDRAIL 3 REQ'D
STA 528+68.59 TO STA 528+81.09 LT
MGS THRIE BEAM TRANSITION REQ'D
STA 528+81.09 TO STA 529+20.49 LT

PRICE ELECTRIC COOP

PRICE COUNTY TELEPHONE

WISCONSIN CENTRAL LTD (CN)

STA 530+91.90, 62.0' LT
AEW STEEL
INV ELEV 1554.00

DELINEATED WETLAND BOUNDARY (TYP)

STA 530+91.90, 19.0' LT
INL 2X2-FT-V
CASTING ELEV 1572.43
DISCHARGE ELEV 1568.21

CONCRETE SURFACE DRAIN REQ'D

+95.51
20' LT

+10.51
15' LT

+00.48
15' RT

+85.48
20' RT

+15.00

+80.60

+99.39

+96.32

526+00 | 527+00 | 528+00 | 529+00 | 530+00 | 531+00

18" CMP

BEGIN RECONSTRUCT
STA 529+10

STRUCTURE B-50-32
STA 529+31.12 TO STA 530+64.57

END RECONSTRUCT
STA 531+00

CONCRETE SURFACE DRAIN REQ'D

STA 530+94.90, 19.0' RT
INL 2X2-FT-V
CASTING ELEV 1572.40
DISCHARGE ELEV 1568.19

STA 530+94.40, 58.0' RT
AEW STEEL
INV ELEV 1556.00

PRICE ELECTRIC COOP

SLOPE INTERCEPT (TYP)

BEGIN CONSTRUCTION
STA 525+80.00
MATCH EXISTING
SAWCUT RED'Q

CONSTRUCT GRAVEL PE
STA 527+01.34 RT
EXISTING 18" CMP TO
REMAIN IN PLACE

MGS EAT REQ'D
STA 528+05.48 TO STA 528+58.56 RT
MGS GUARDRAIL 3 REQ'D
STA 528+58.56 TO STA 528+83.56 RT
MGS THRIE BEAM TRANSITION REQ'D
STA 528+83.56 TO STA 529+22.67 RT

5

5

1580
1570
1565

STA 525+80.00
EL 1571.48

VPC STA 526+25.00
VPC EL 1572.26

VPI STA 529+40.00
VPI EL 1577.68

1.72%

-0.50%

-1.92%

VCL = 630.00

K = 149.59

SD RT

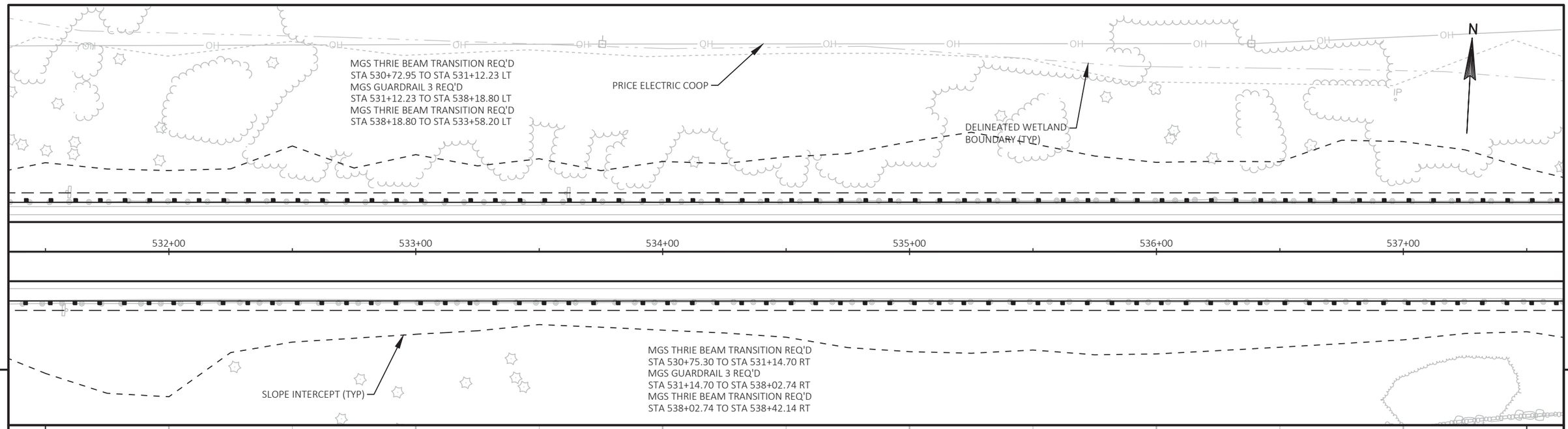
EXISTING 18" CMP
TO REMAIN IN PLACE

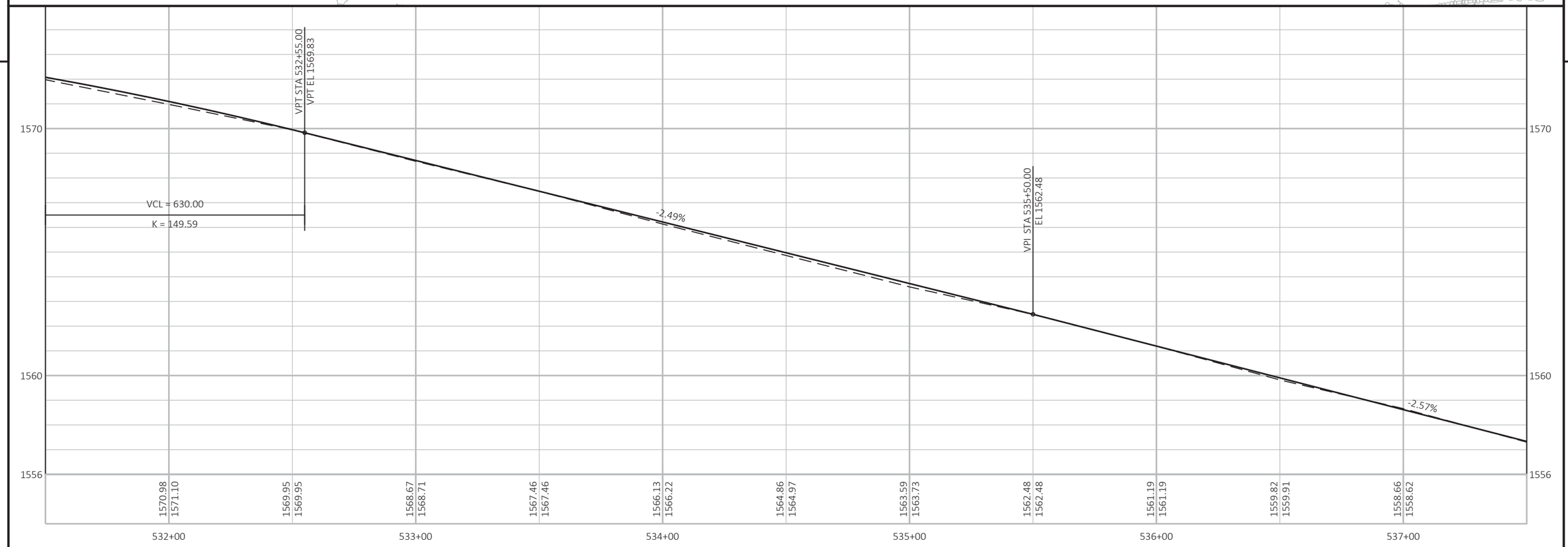
1571.84 | 1571.83
1572.60 | 1572.67
1573.32 | 1573.36
1573.86 | 1573.88
1574.16 | 1574.24
1574.35 | 1574.44
1574.30 | 1574.46
1574.24 | 1574.32
1573.87 | 1574.01
1573.41 | 1573.53
1572.71 | 1572.89

526+00 | 527+00 | 528+00 | 529+00 | 530+00 | 531+00

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN AND PROFILE: USH 8	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\050101 PP.DWG
LAYOUT NAME - 01
PLOT DATE : 1/23/2019 11:26 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN AND PROFILE: USH 8	SHEET 51	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\050101 PP.DWG
LAYOUT NAME - 02
PLOT DATE : 1/23/2019 11:26 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

PRICE ELECTRIC COOP

DELINEATED WETLAND BOUNDARY (TYP)

BEGIN RECONSTRUCT STA 538+35

JUMP RIVER

CONCRETE SURFACE DRAIN REQ'D

STA 540+10.90, 46.0' LT
AEW STEEL
INV ELEV 1539.00

STA 540+10.90, 19.0' LT
INL 2X2-FT-V
CASTING ELEV 1550.05
DISCHARGE ELEV 1545.77

INV ELEV 1539.20

END RECONSTRUCT
STA 540+20 LT
STA 540+10 RT

CONSTRUCT GRAVEL PE
STA 541+12.3 LT
1-24"' CLASS III-A CP REQ'D
2-24" AEW REQ'D
1-REMOVE EXISTING 18" CMP

MGS THRIE BEAM TRANSITION REQ'D
STA 539+91.86 TO STA 540+31.26 LT
MGS GUARDRAIL 3 REQ'D
STA 540+31.26 TO STA 540+43.76 LT
MGS EAT REQ'D
STA 540+43.76 TO STA 540+96.85 LT

PERMITTED WETLAND IMPACT (TYP)

INV ELEV 1539.60

18" CMP

N

+16.85
20' LT

+01.85
15' LT

+87.29
15' RT

+02.29
20' RT

+15.95

+01.39

+41.60

+93.80

537+00 538+00 539+00 540+00 541+00 542+00 543+00

SLOPE INTERCEPT (TYP)

S FORK

STA 539+96.40, 19.0' RT
INL 2X2-FT-V
CASTING ELEV 1550.37
DISCHARGE ELEV 1546.05

24" CMP

INV ELEV 1541.50

INV ELEV 1541.70

CONCRETE SURFACE DRAIN REQ'D

STA 539+96.40, 46.0' RT
AEW STEEL
INV ELEV 1540.64

MGS THRIE BEAM TRANSITION REQ'D
STA 539+77.31 TO STA 540+16.71 RT
MGS GUARDRAIL 3 REQ'D
STA 540+16.71 TO STA 540+29.21 RT
MGS EAT REQ'D
STA 540+29.21 TO STA 540+87.29 RT

CONSTRUCT GRAVEL PE
STA 541+81.7 RT
1-24"' CLASS III-A CP REQ'D
2-24" AEW REQ'D
1- REMOVE EXISTING 24" CMP

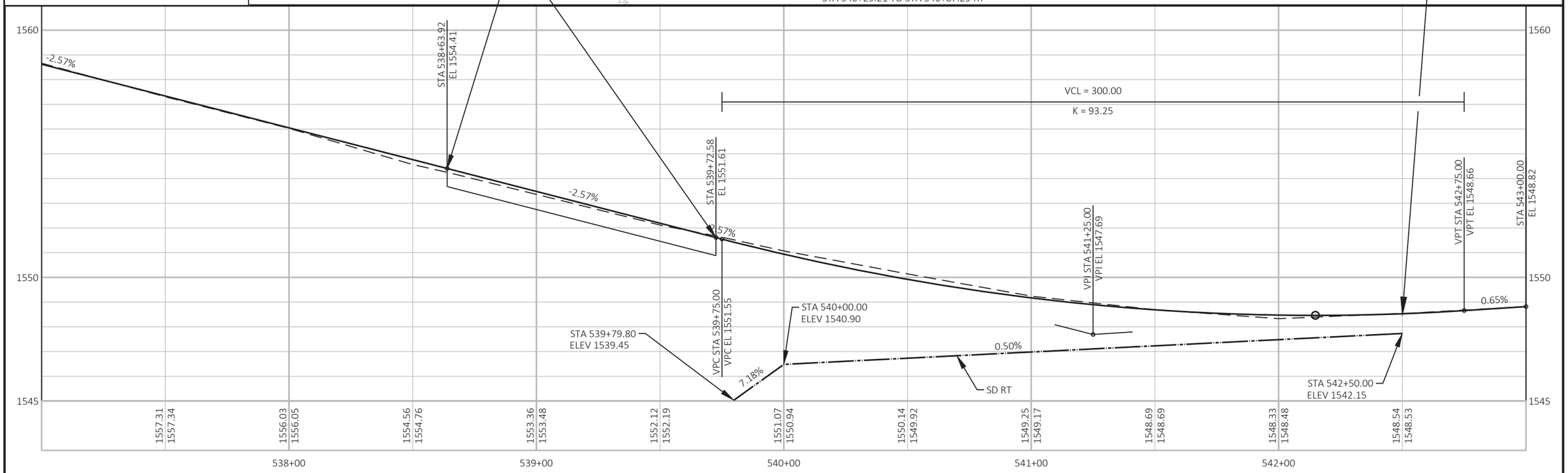
END CONSTRUCTION
STA 542+50.00
MATCH EXISTING
SAWCUT RED'Q

LEGEND

CONCRETE PAVEMENT APPROACH SLAB

STRUCTURE B-50-33
STA 538+63.92 TO STA 539+72.58

5 5



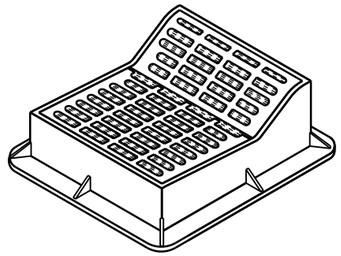
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	PLAN AND PROFILE: USH 8	SHEET	E

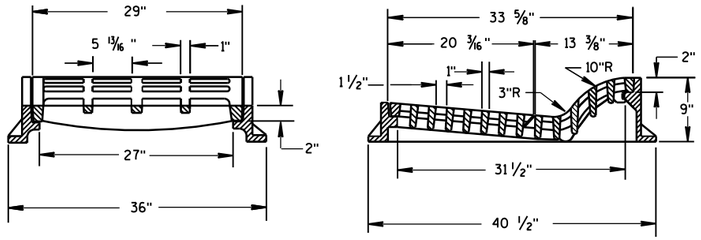
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\050101 PP.DWG
LAYOUT NAME - 03
PLOT DATE : 1/23/2019 11:26 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-07F	ADVANCED WIDTH RESTRICTION SIGNING
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-05	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

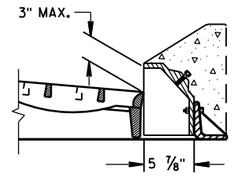
6





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

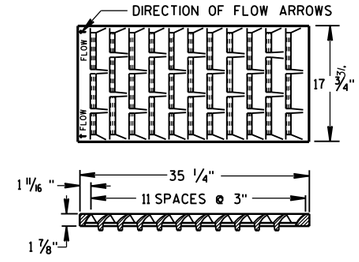
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

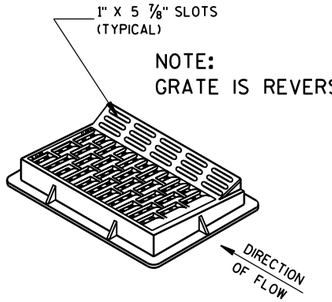
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

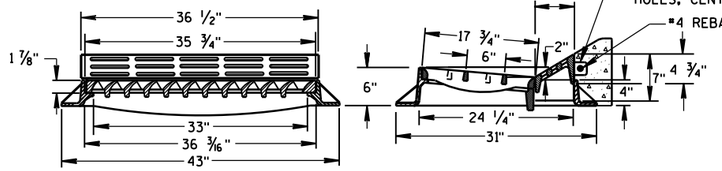
GENERAL NOTES

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

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



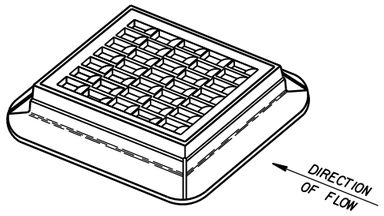


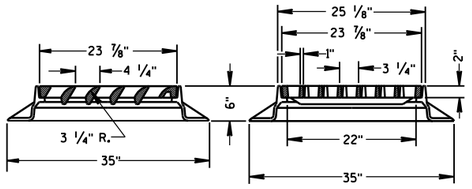


TYPE "HM"

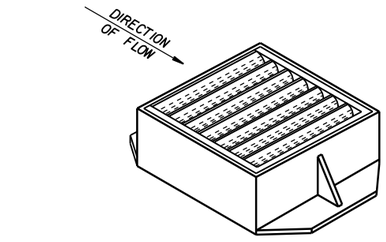
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

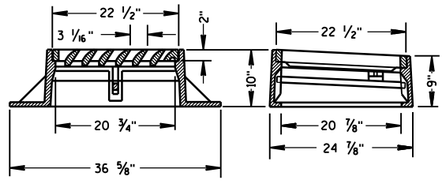
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



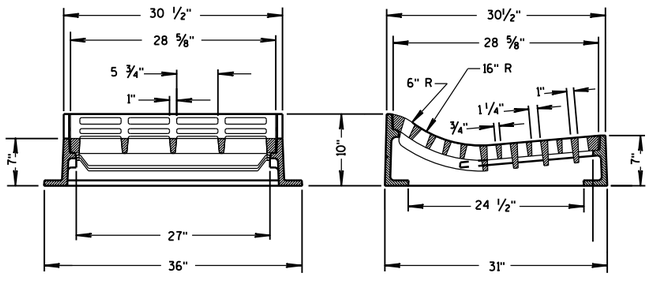


TYPE "S"



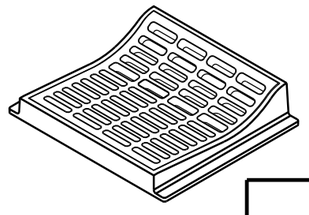


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

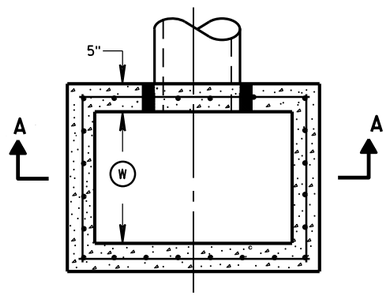
FHWA

6

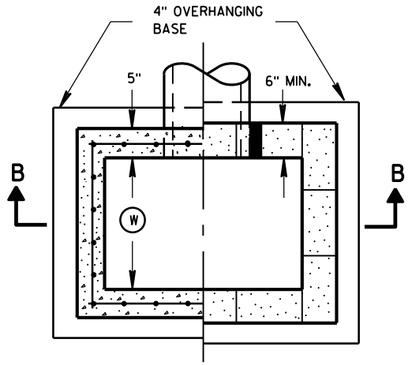
S.D.D. 8 A 5-19c

6

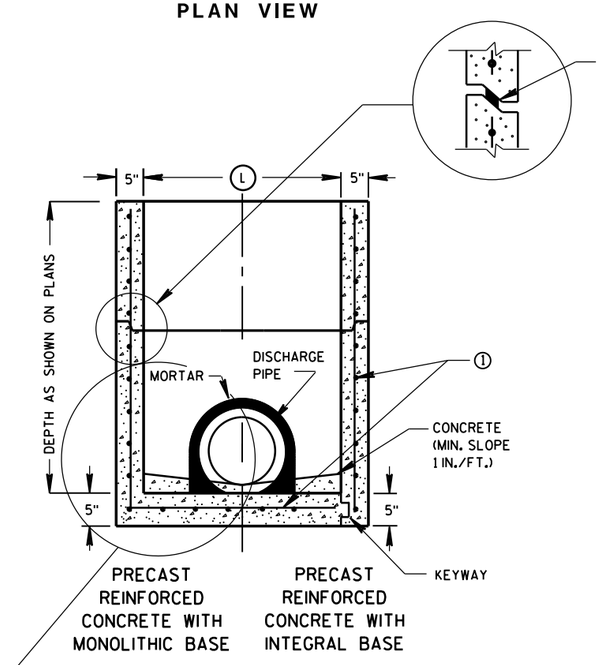
S.D.D. 8 A 5-19c



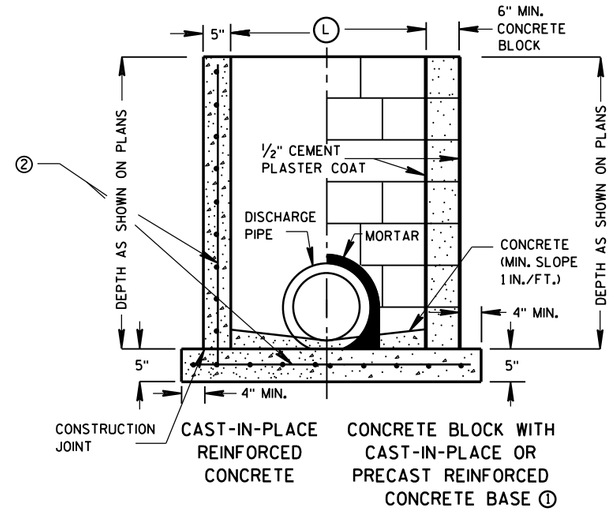
PLAN VIEW



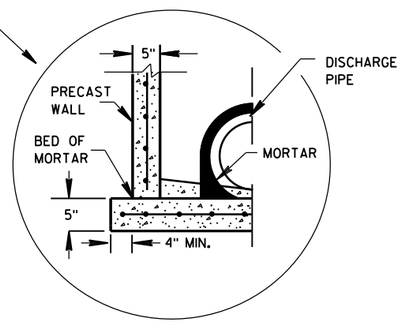
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

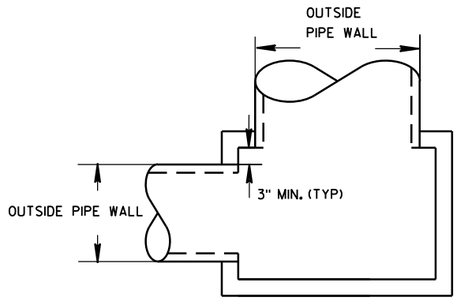
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
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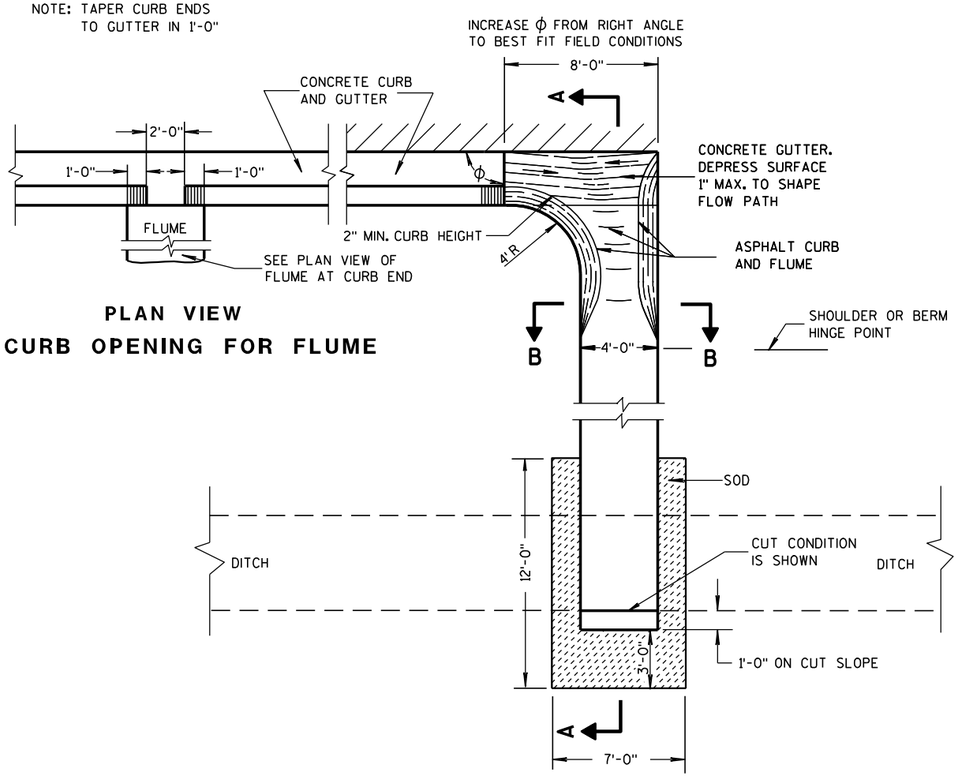
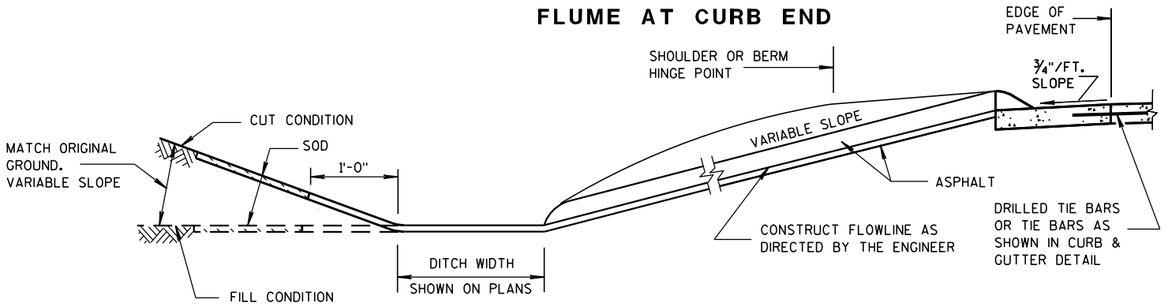
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

ASPHALTIC FLUME

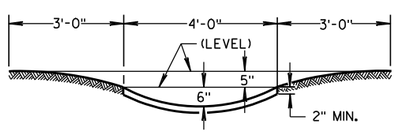


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

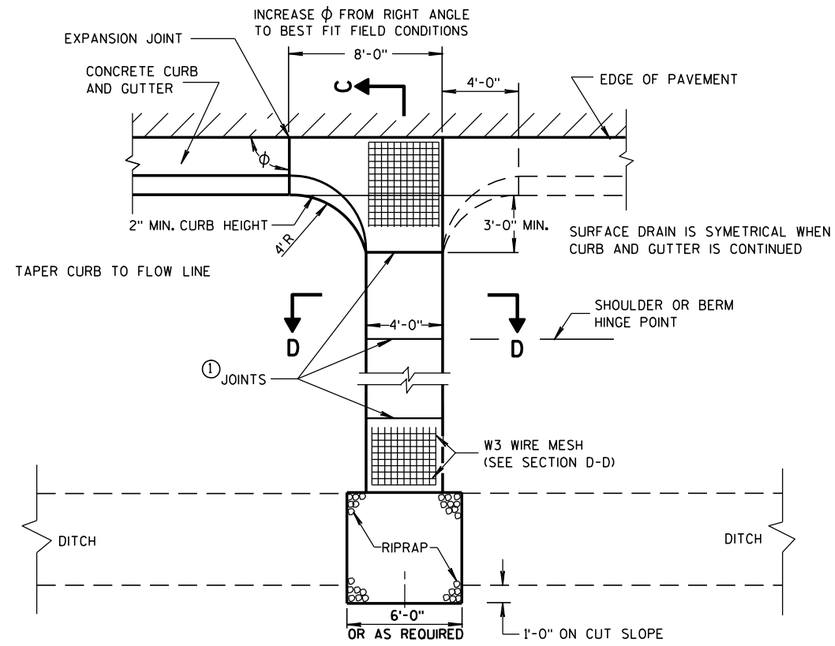
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

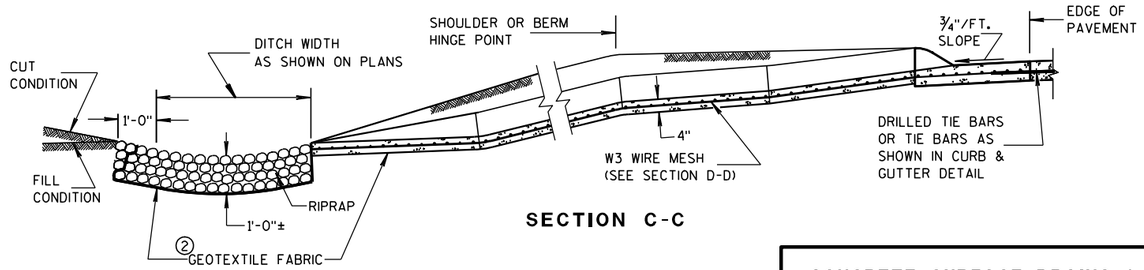
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

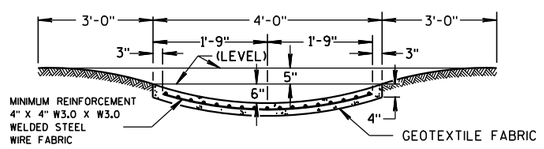
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. ... ROADWAY STANDARDS ENGINEER
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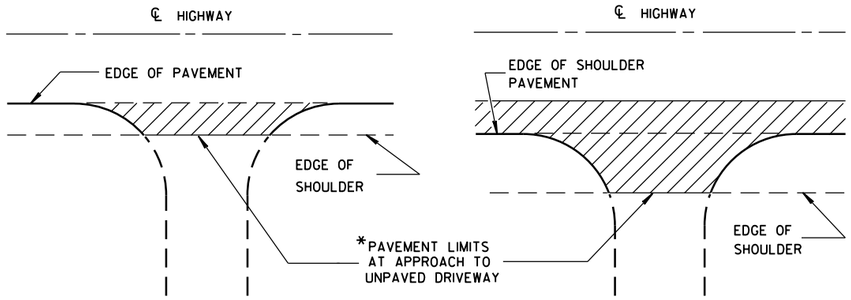
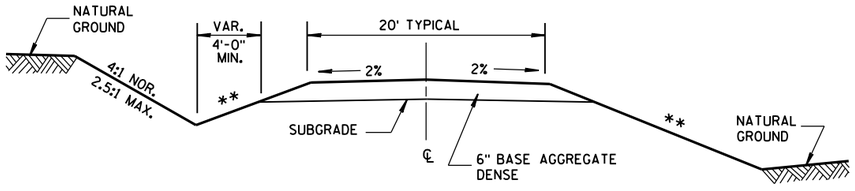


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)

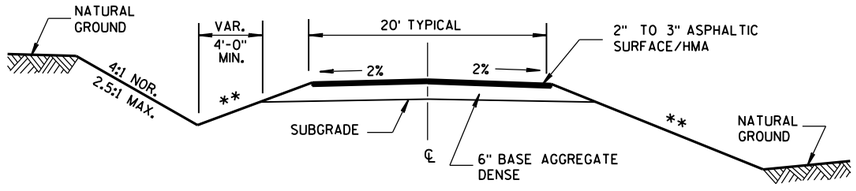


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

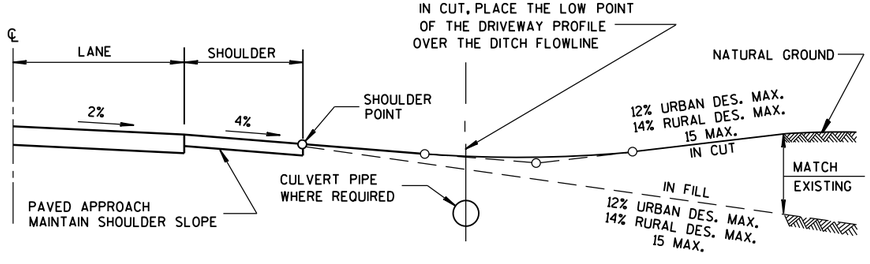
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS UNIT SUPERV — ENT
FHWA

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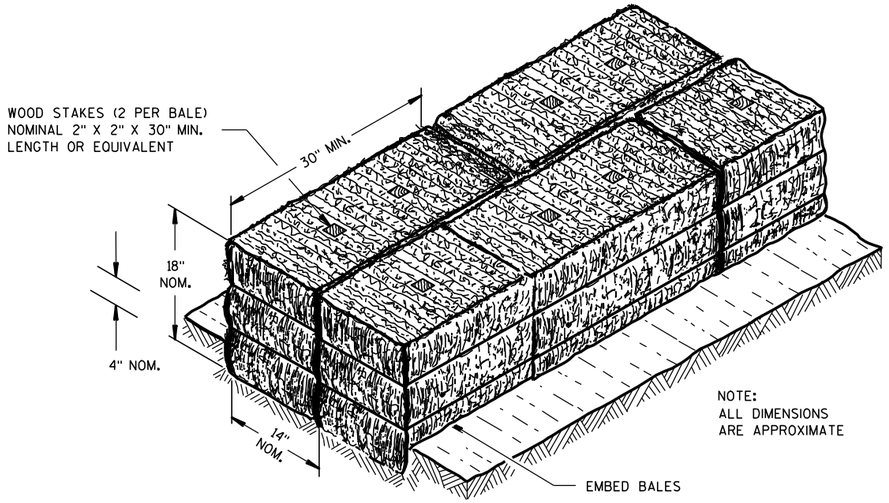
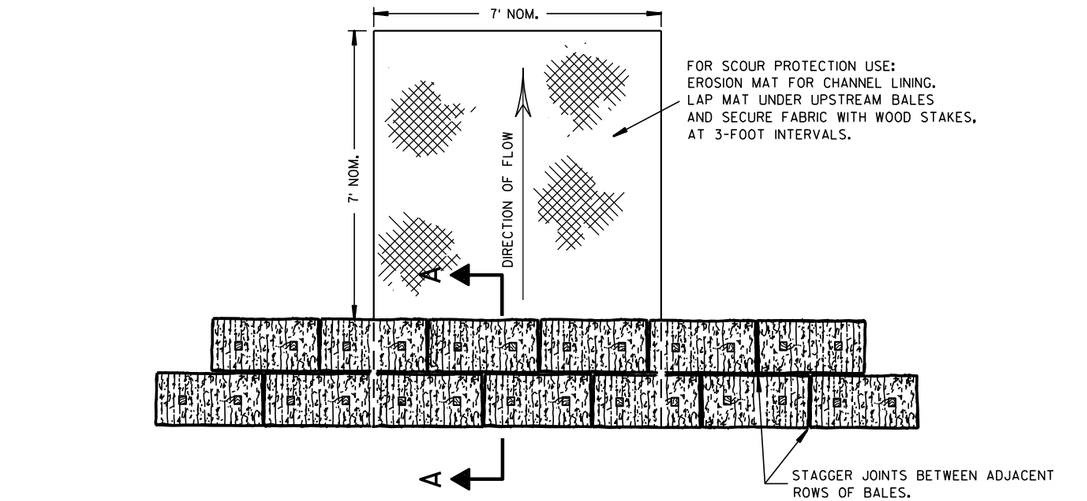
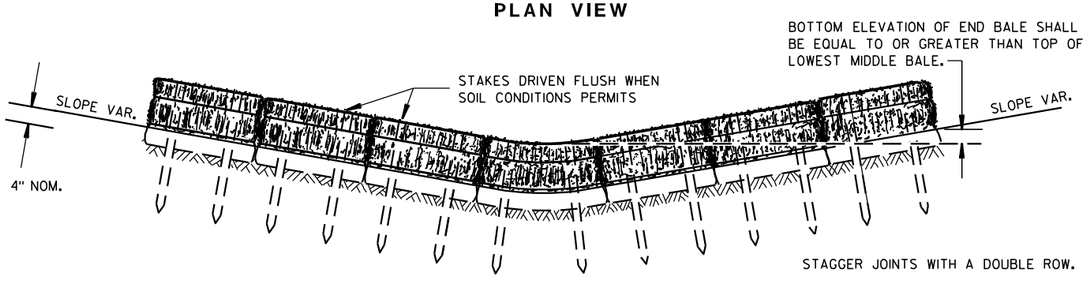
S.D.D. 8 D 21-1



SECTION A-A



PLAN VIEW



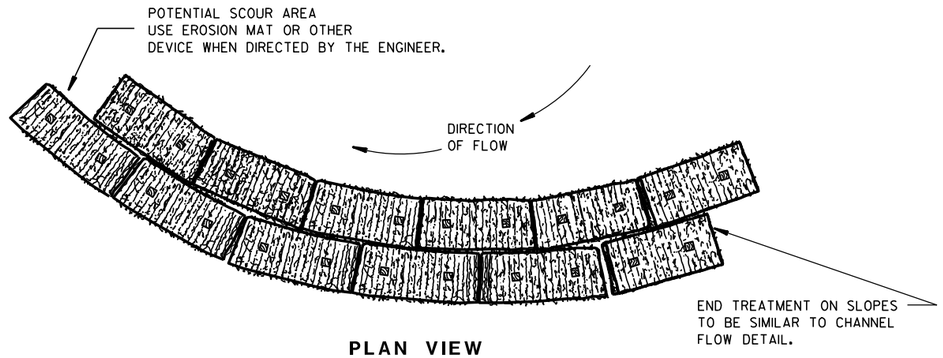
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

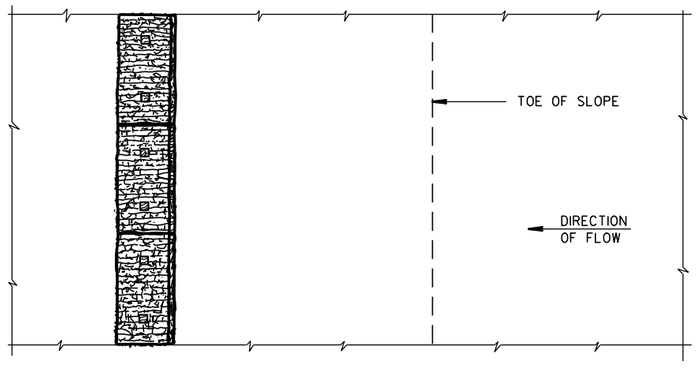
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

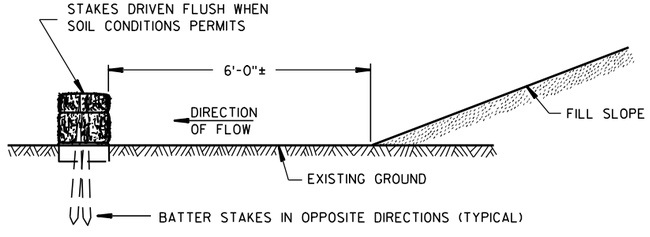


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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S.D.D. 8 E 8-3

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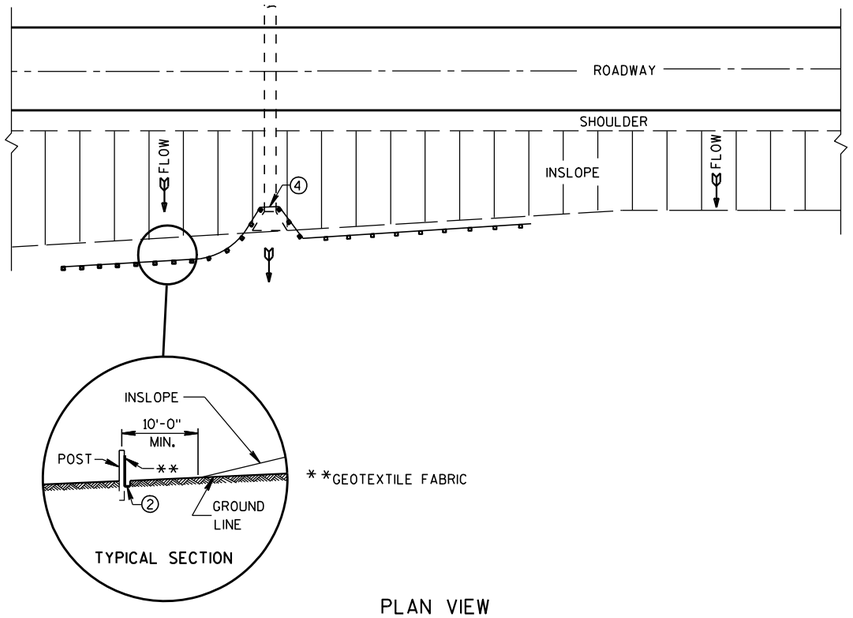
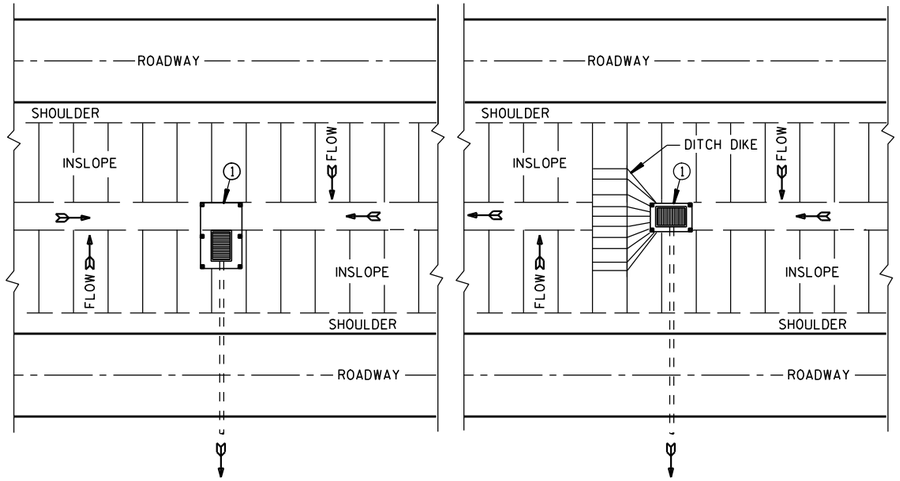
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



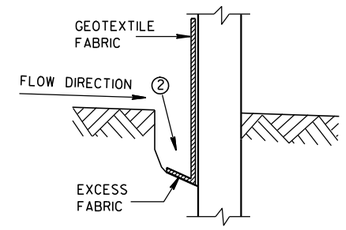
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

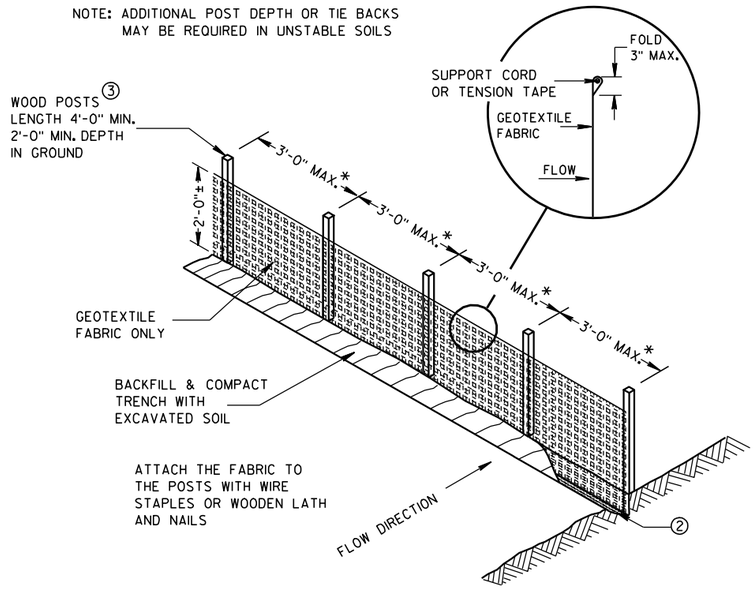
GENERAL NOTES

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

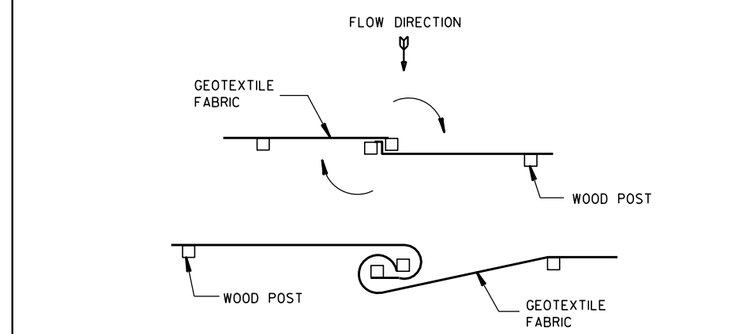
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 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.



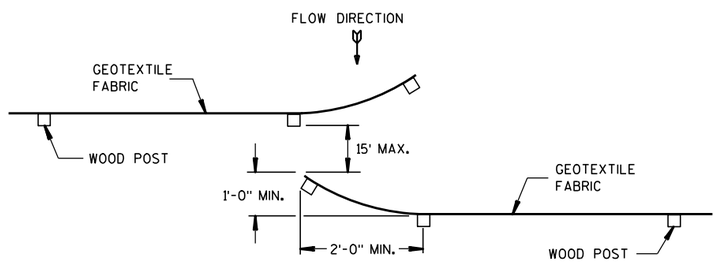
TRENCH DETAIL



SILT FENCE

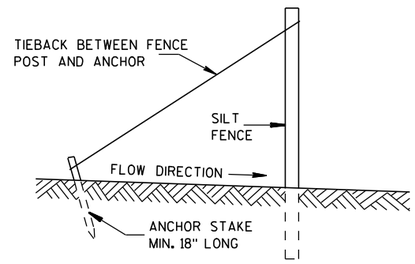


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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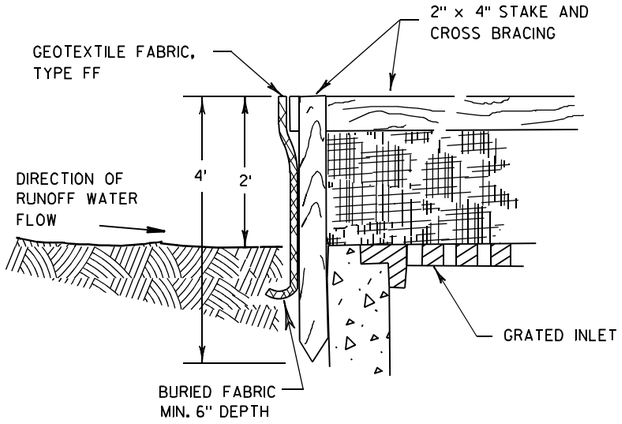
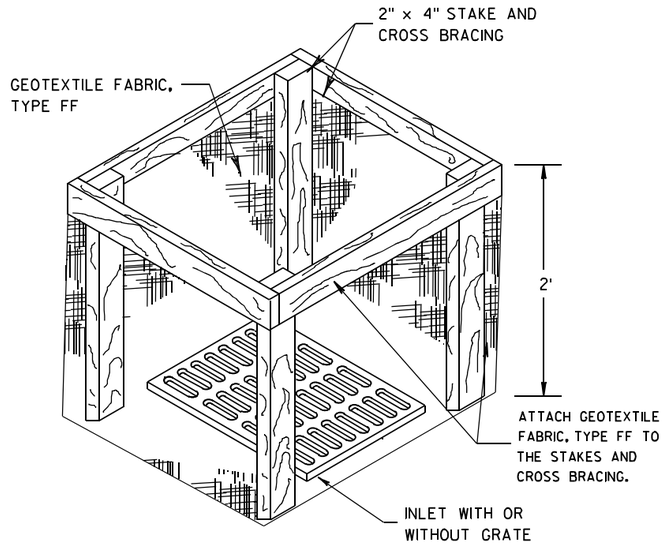
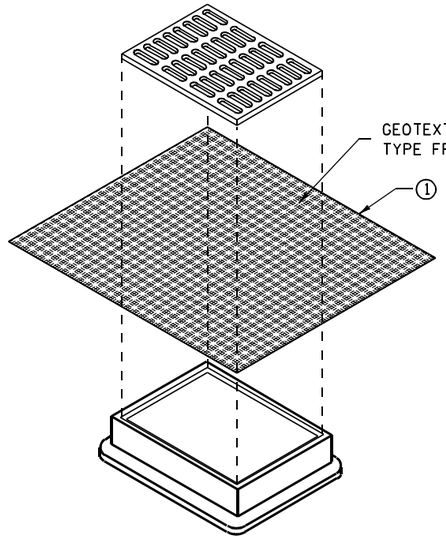
S.D.D. 8 E 9-6



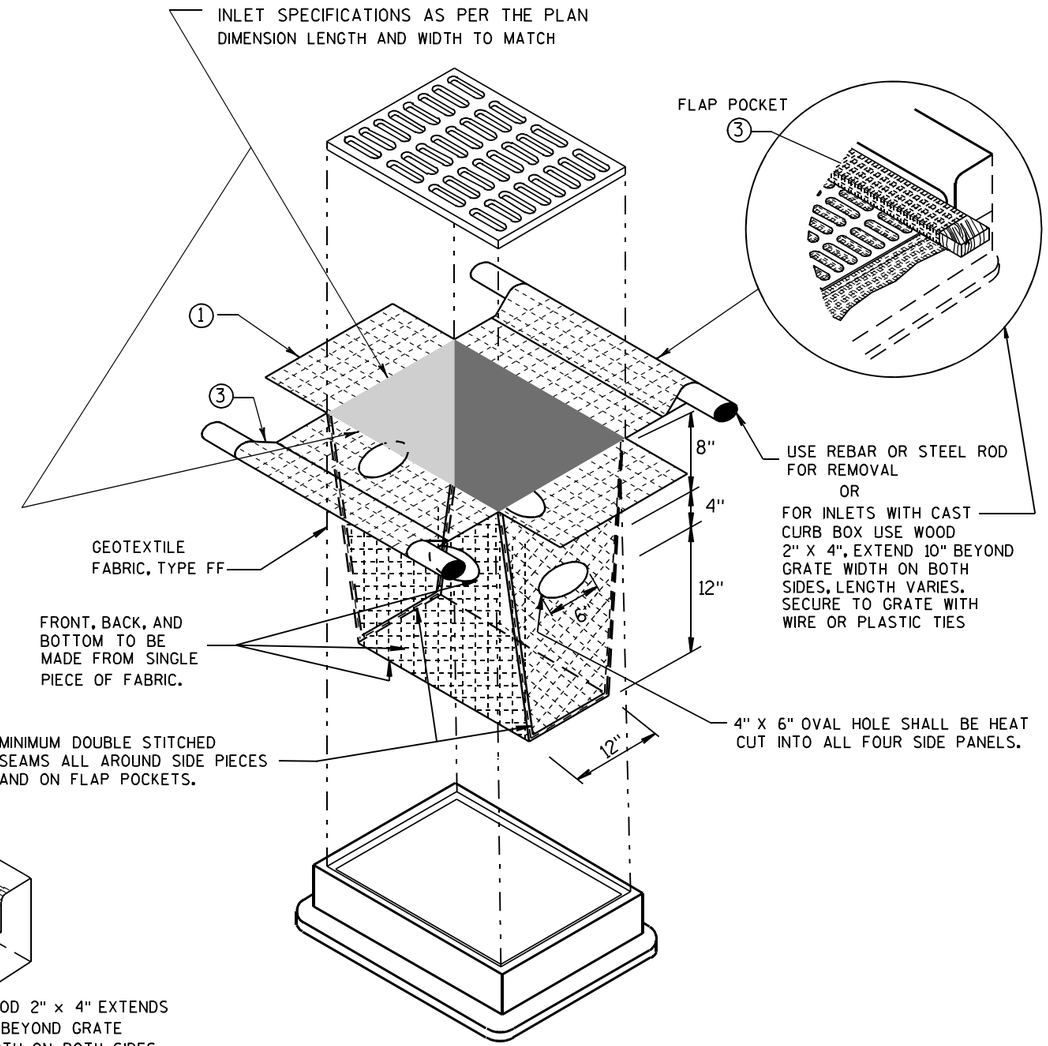


INLET PROTECTION, TYPE A



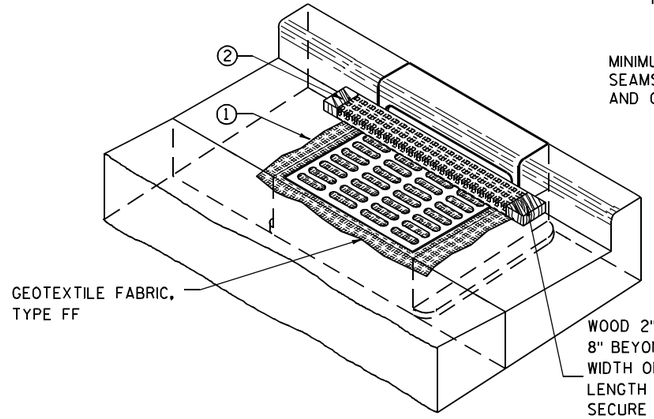
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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S.D.D. 8 E 10-2

METAL APRON ENDWALLS

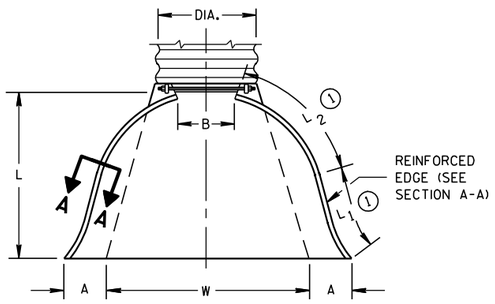
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

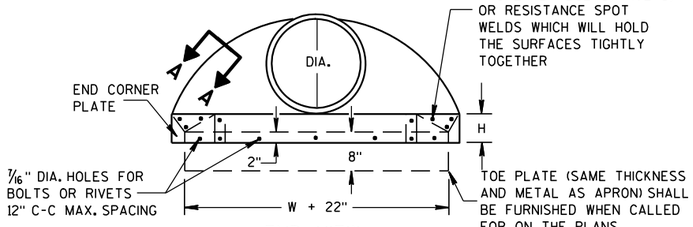
REINFORCED CONCRETE APRON ENDWALLS

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

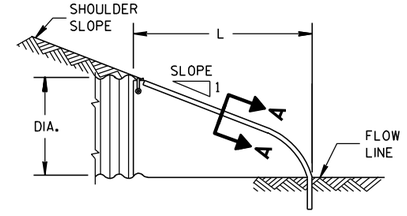
*MINIMUM
**MAXIMUM



PLAN VIEW

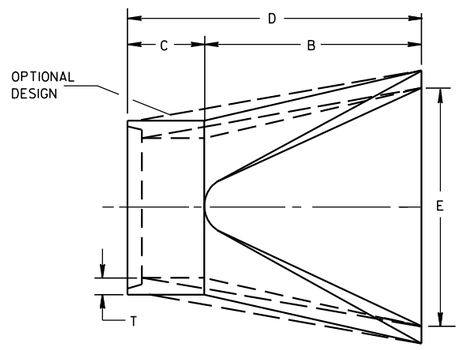


END VIEW

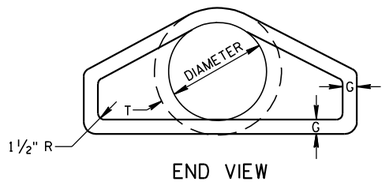


SIDE ELEVATION

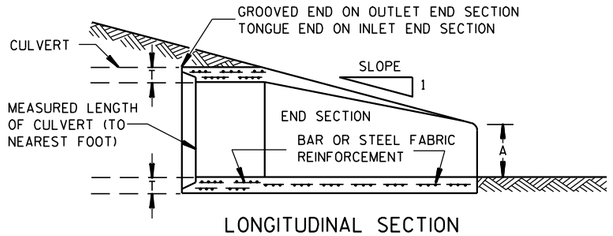
METAL ENDWALLS



PLAN

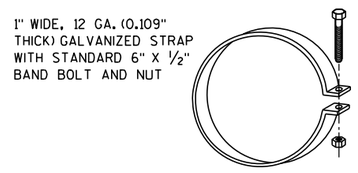


END VIEW



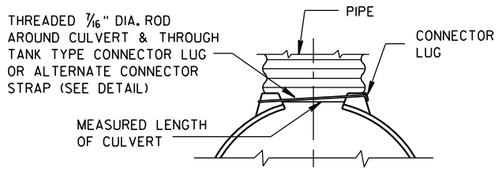
LONGITUDINAL SECTION

CONCRETE ENDWALLS

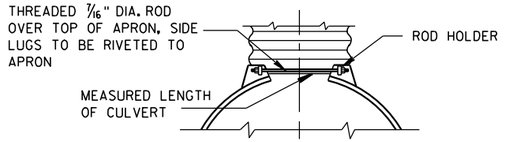


ALTERNATE FOR TYPE 1 CONNECTION

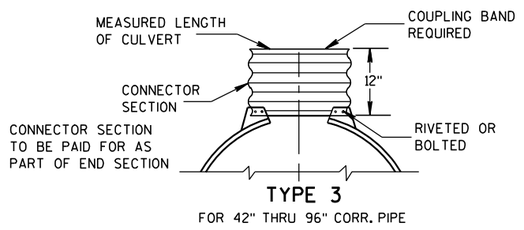
END SECTION CONNECTOR STRAP



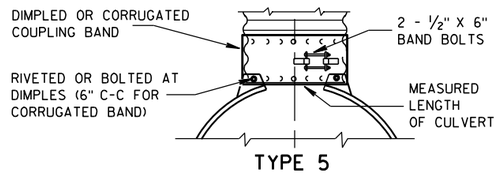
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

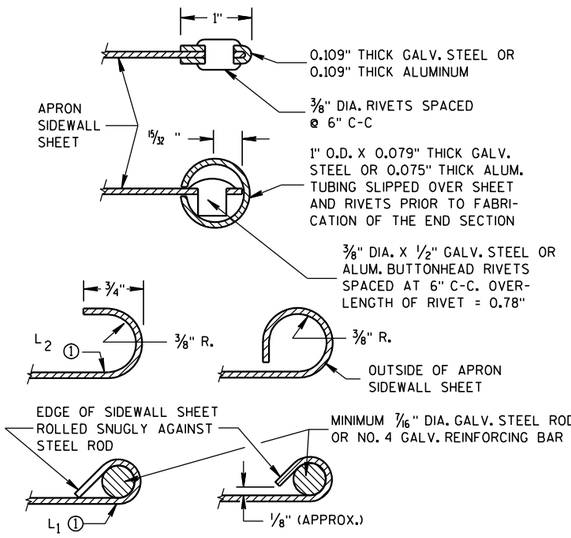
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 F 1-11

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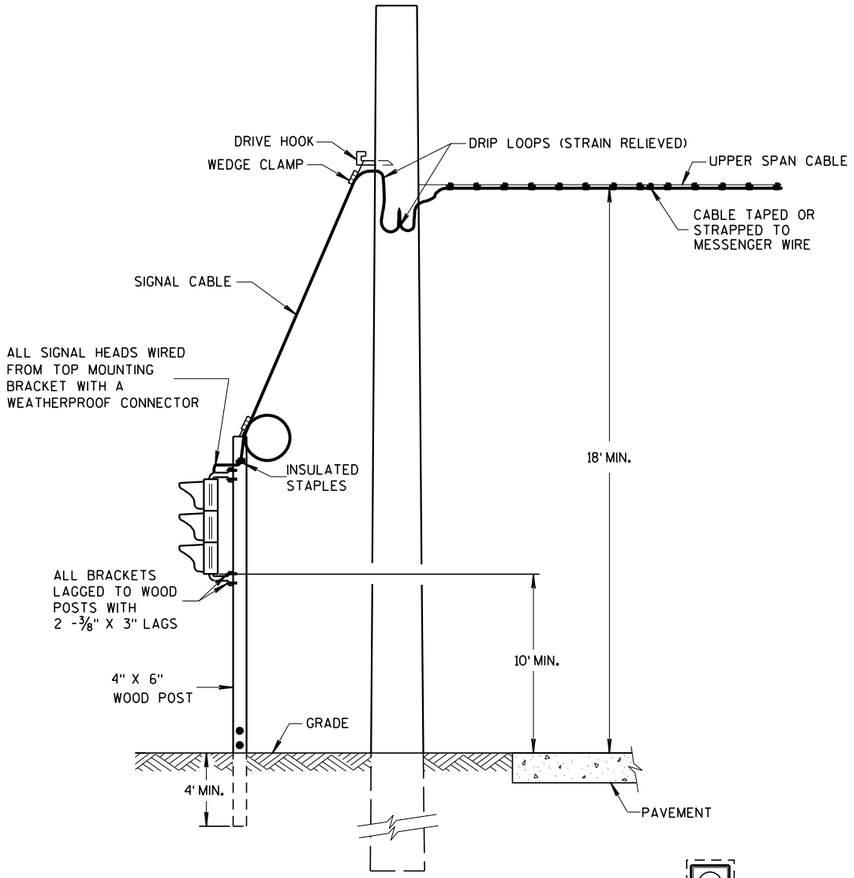
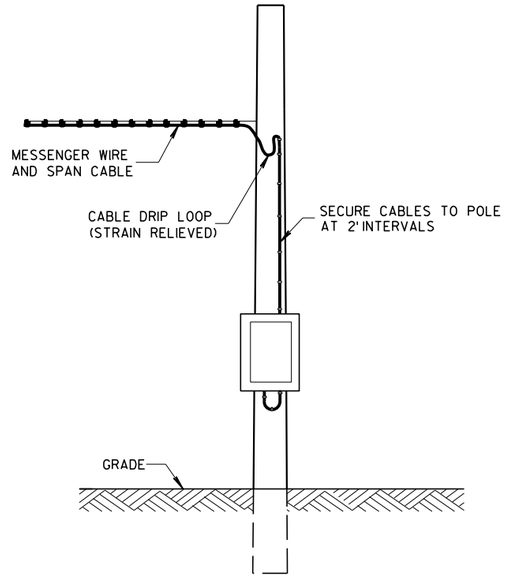
S.D.D. 8 F 1-11



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

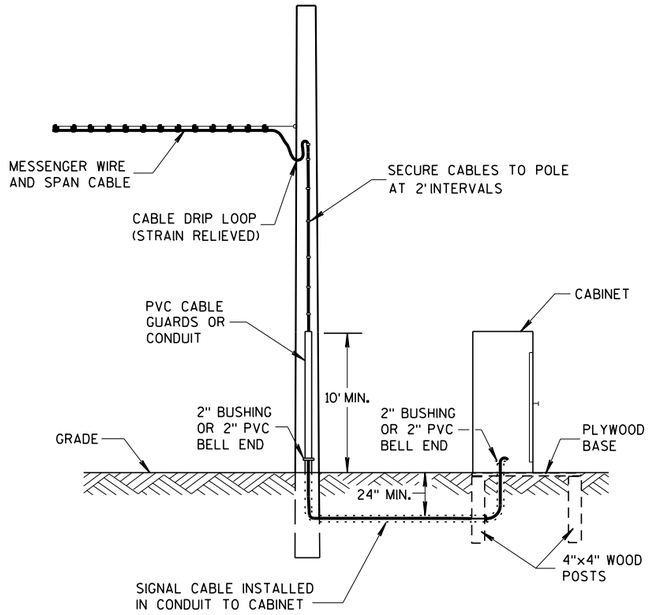
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.

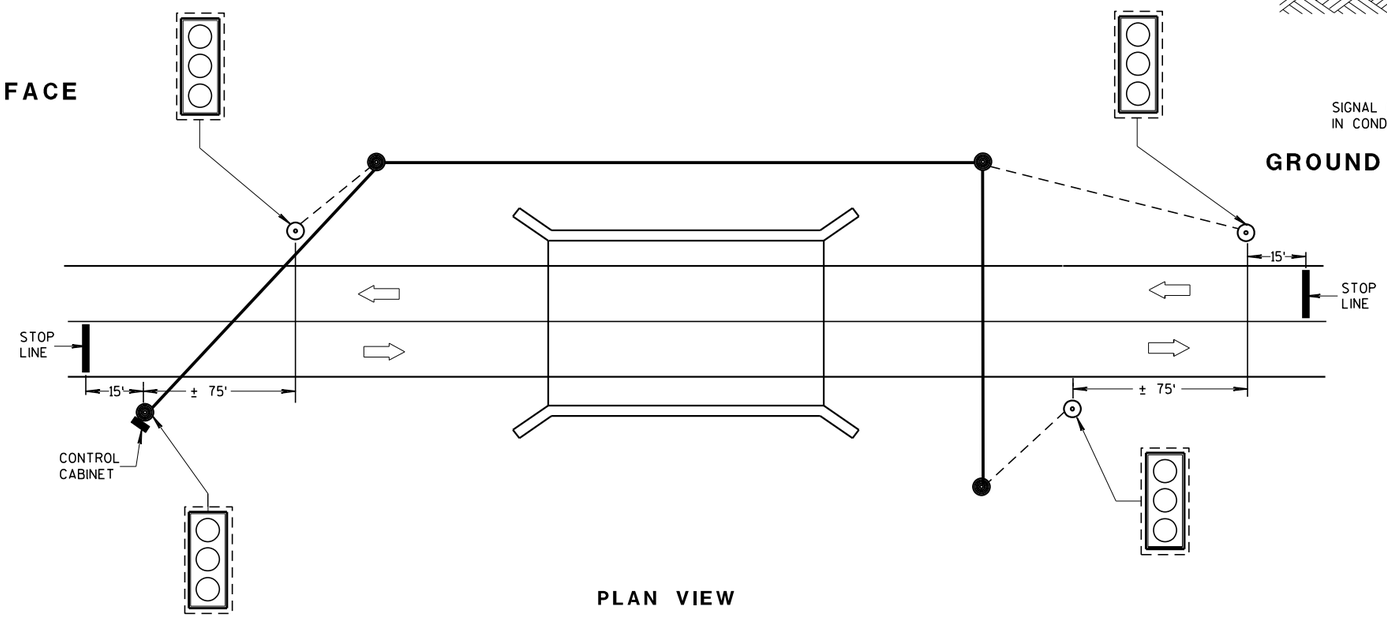
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

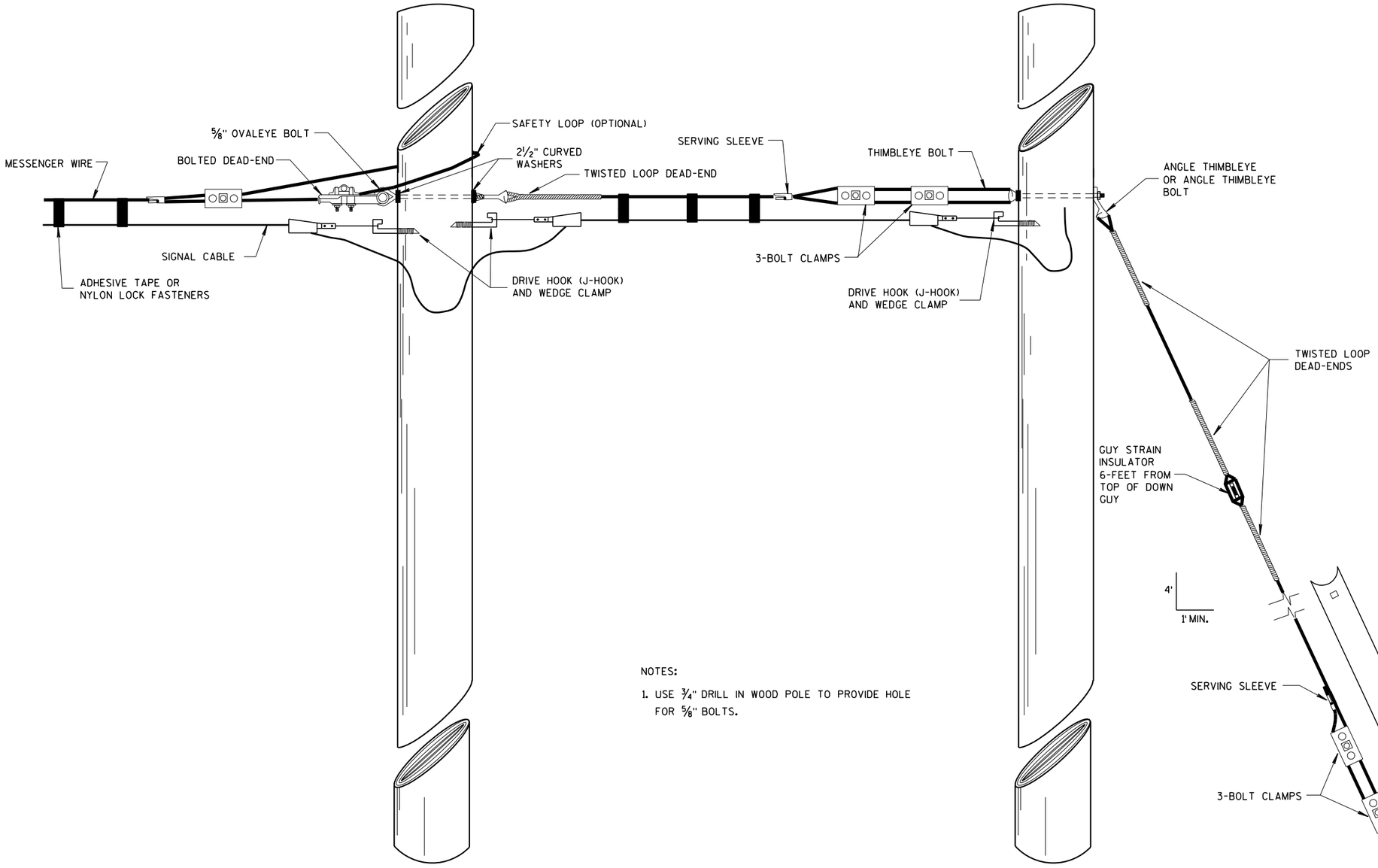
MINIMUM POLE LENGTHS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICA
FHWA

6
S.D.D. 9 G 2-5a



SPAN WIRE POLE

GUY POLE

NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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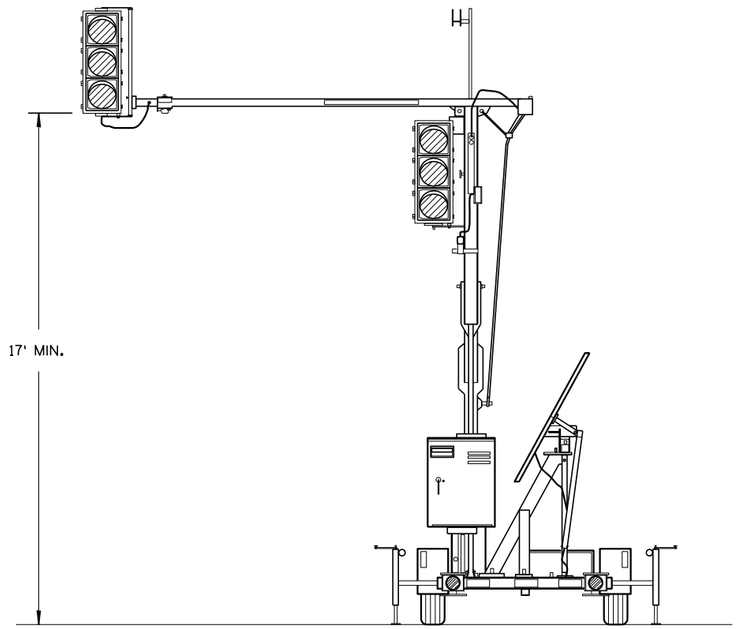
S.D.D. 9 G 2-5b

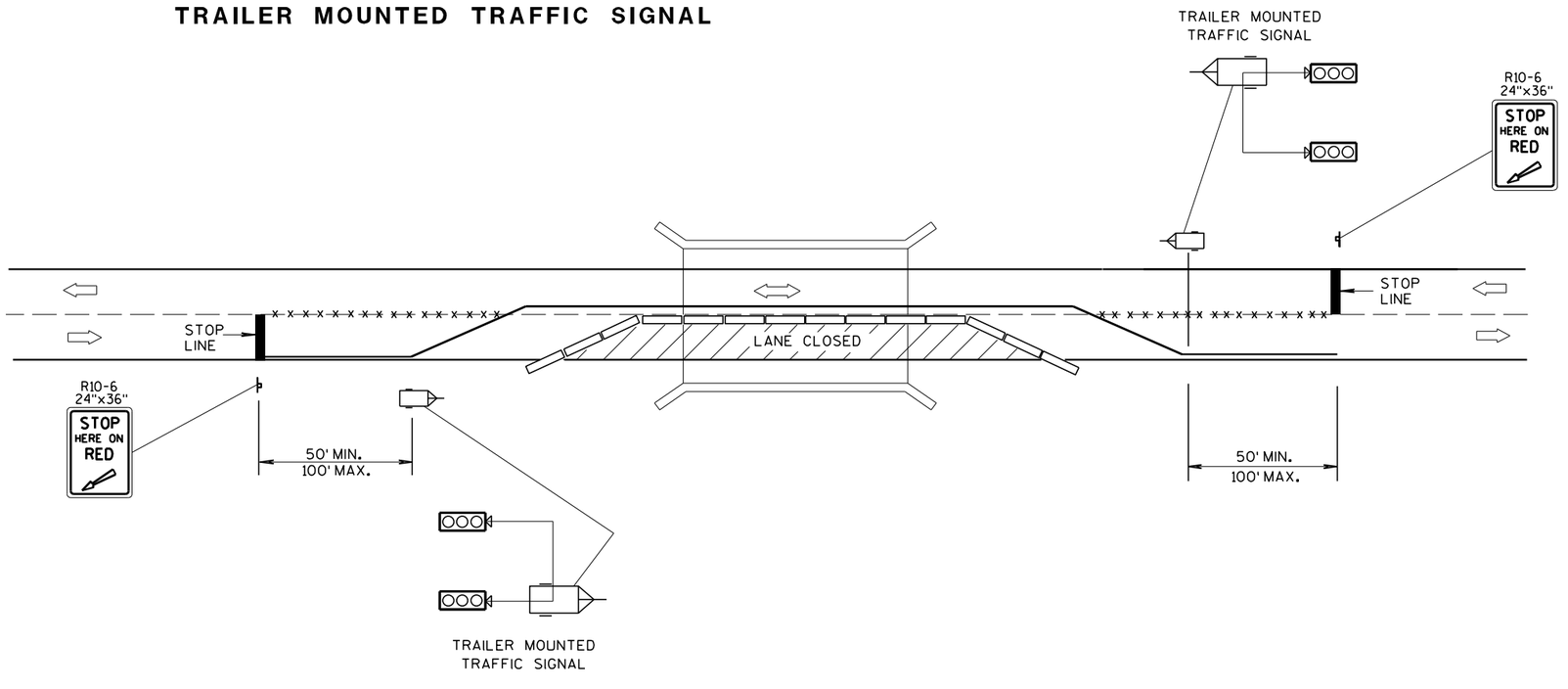


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 G 2-5c

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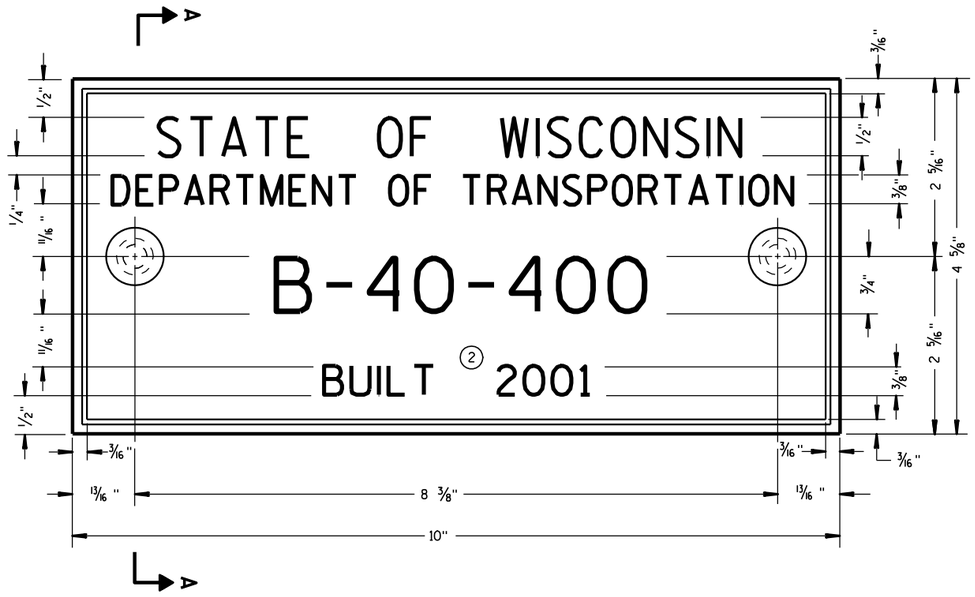
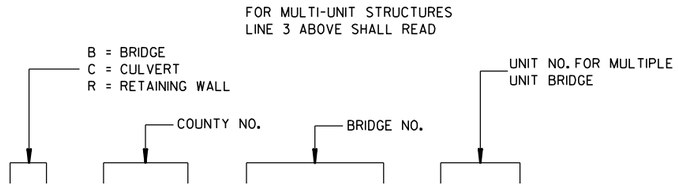
S.D.D. 9 G 2-5c



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

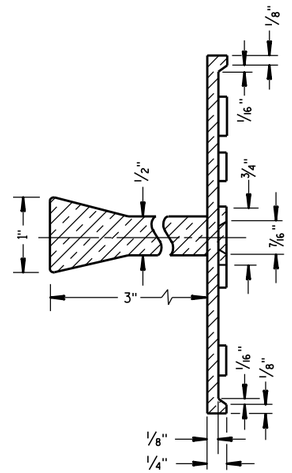
GENERAL NOTES

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

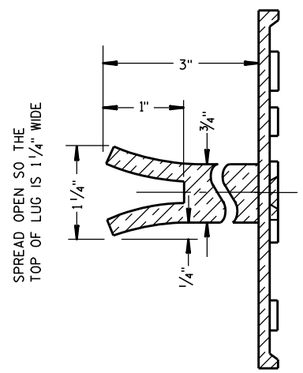
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

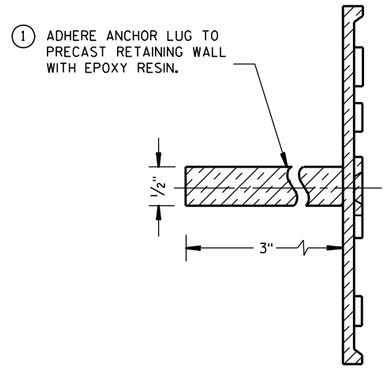
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

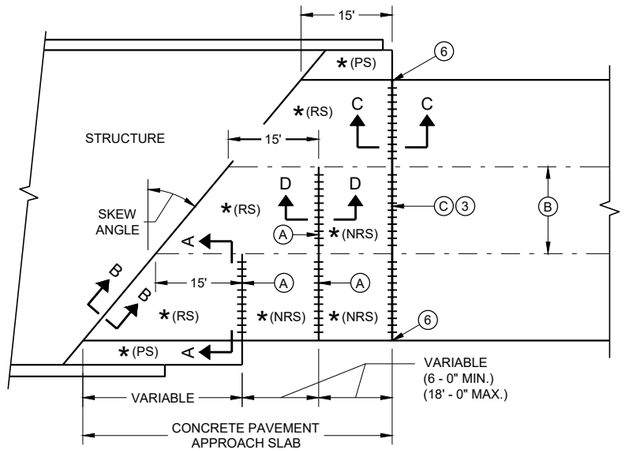
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

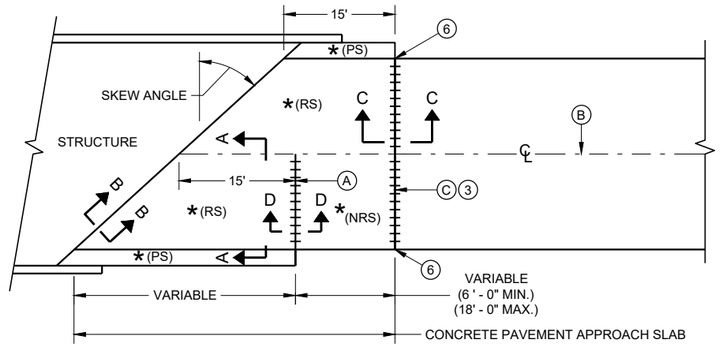
FHWA

6

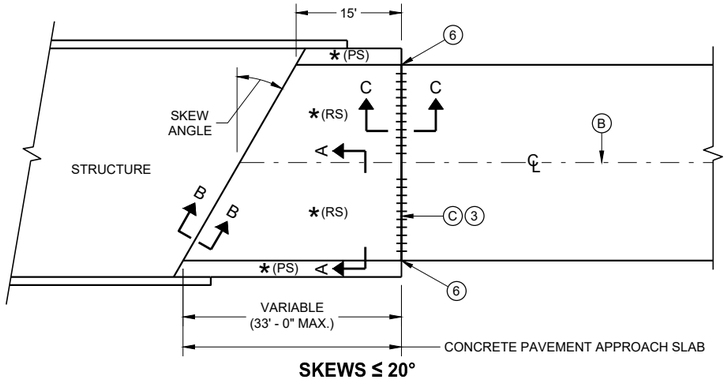
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

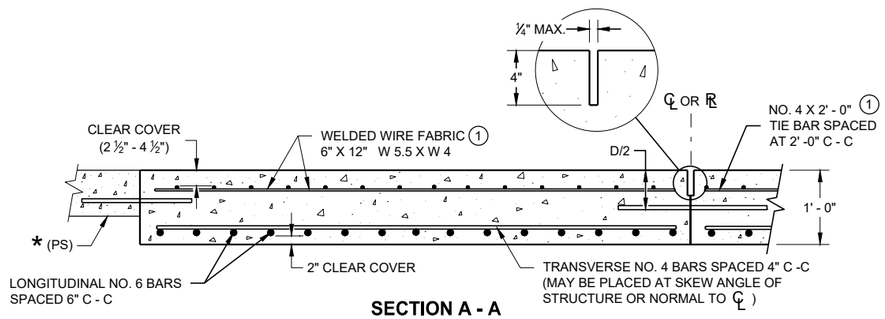
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

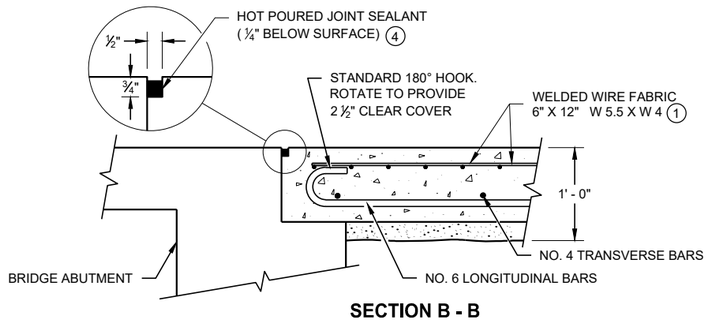
* (PS) = PAVECD CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

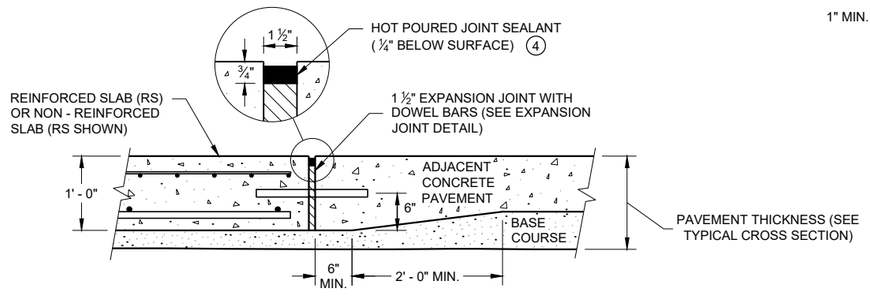
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

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

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

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

(4) USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

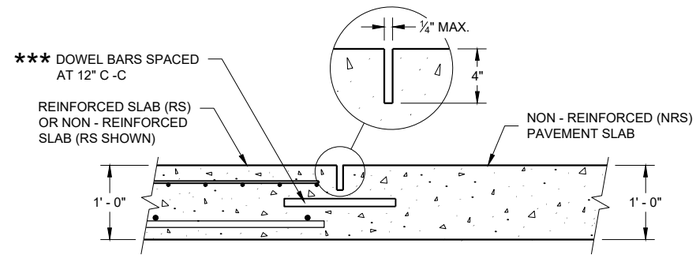
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

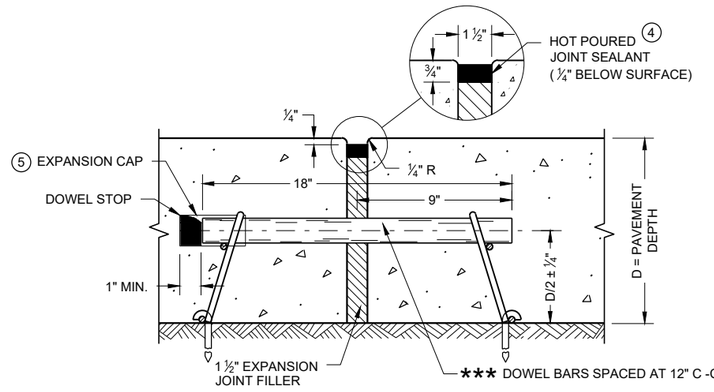
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

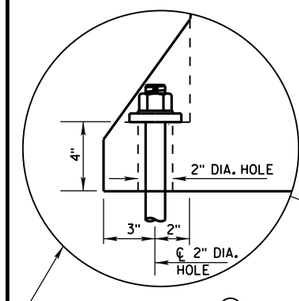
/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

FHWA

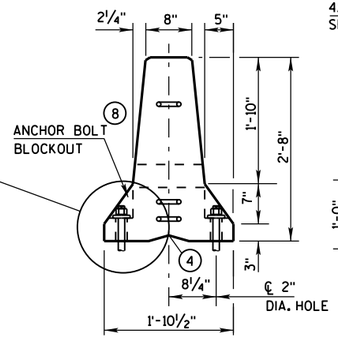
6

SDD 13B02 - 09a

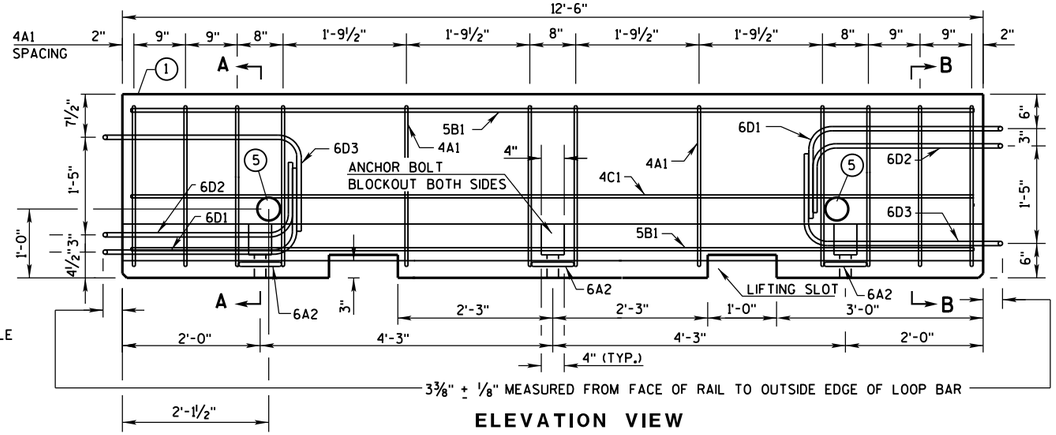
SDD 13B02 - 09a



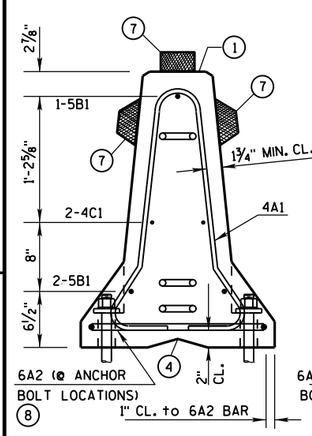
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



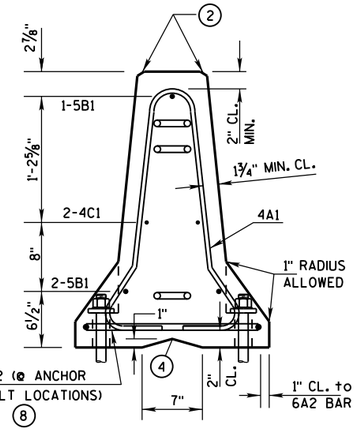
END VIEW



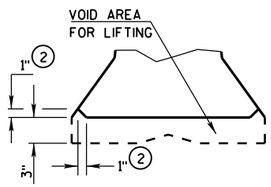
ELEVATION VIEW



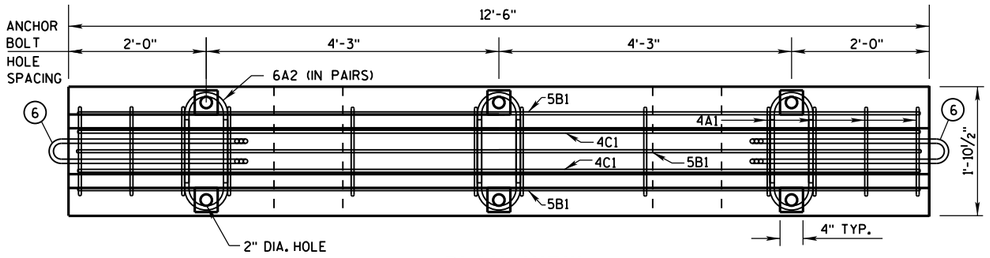
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

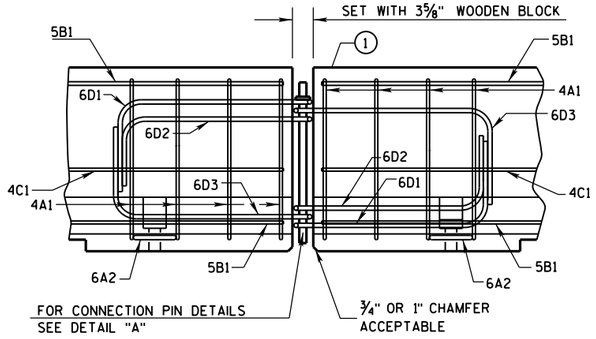


DETAIL "B"
LIFTING SLOT DETAIL

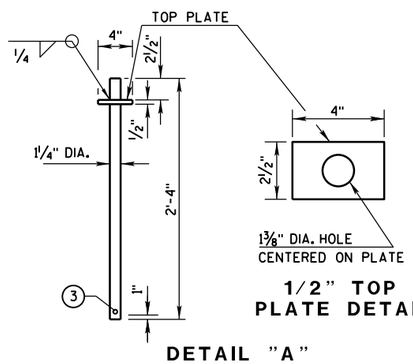


PLAN VIEW

DETAILS OF BARRIER SECTION

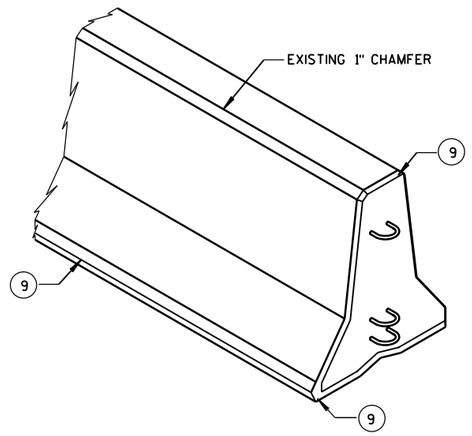


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

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

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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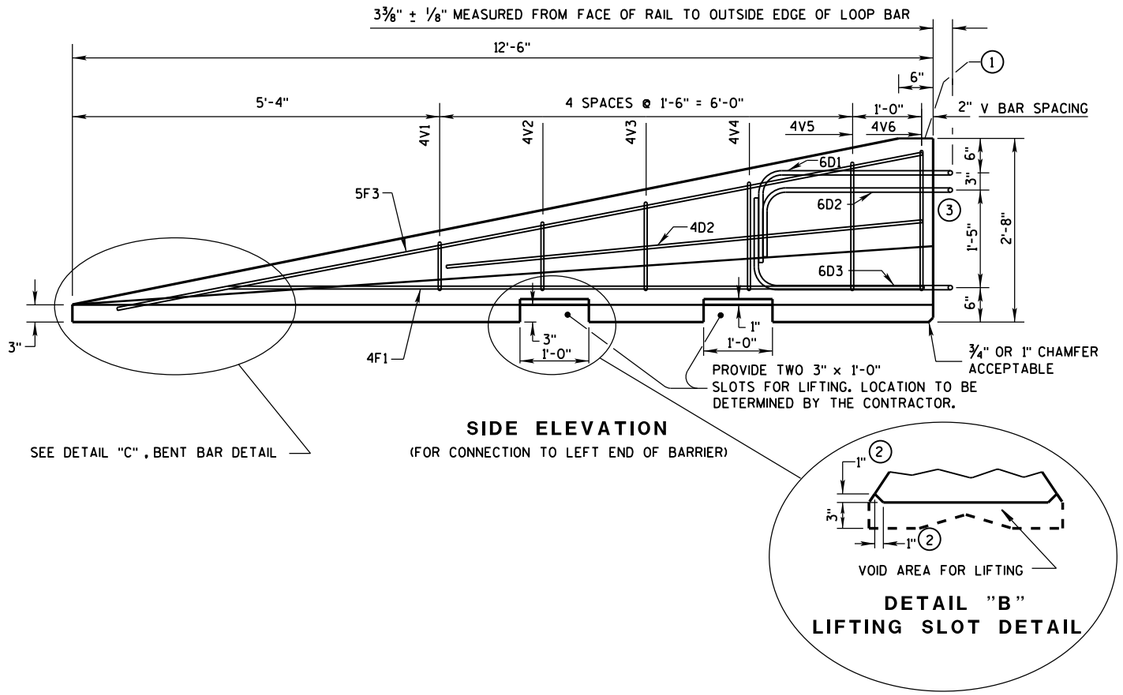
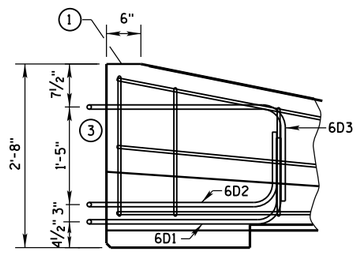
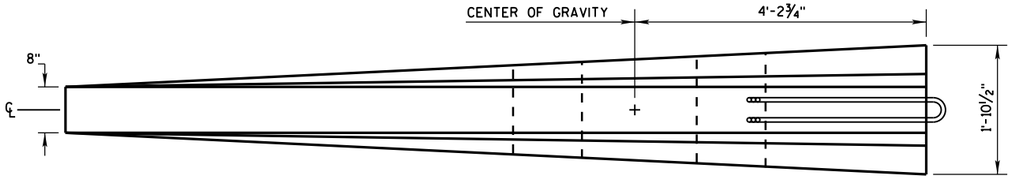
S.D.D. 14 B 7-15a

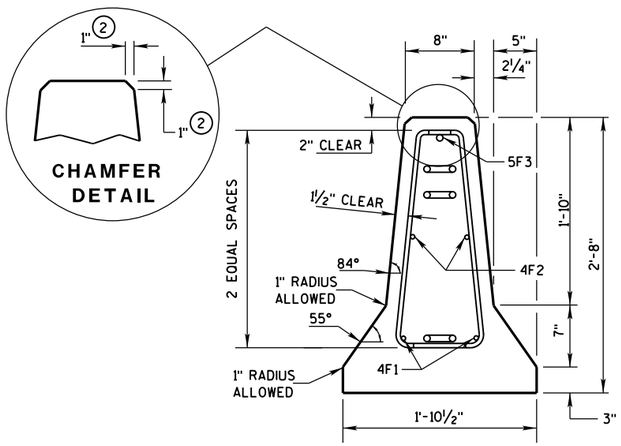


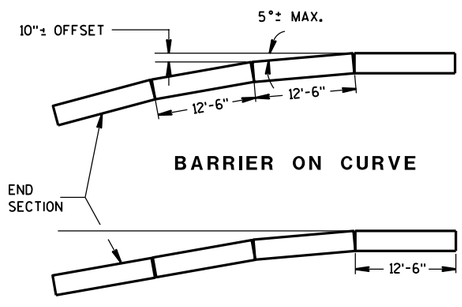


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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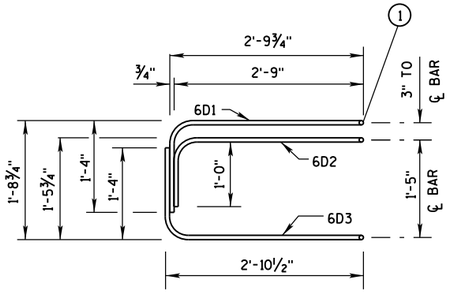
S.D.D. 14 B 7-15b

BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY

DETAIL "C"
BENT BAR DETAIL

BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

GENERAL NOTES

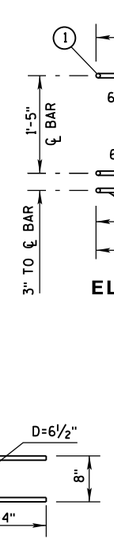
(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

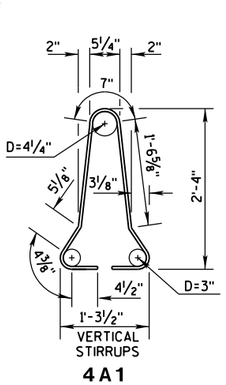
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2

ELEVATION VIEW



4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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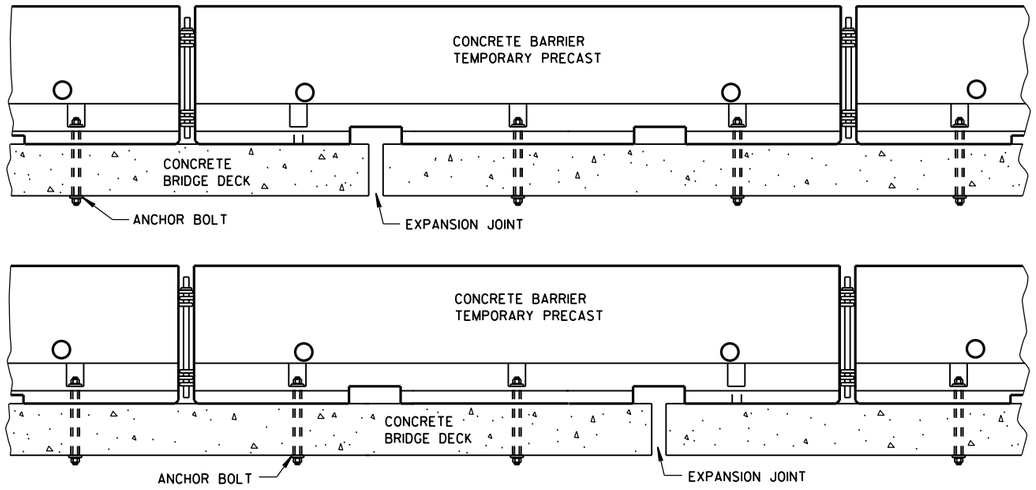
S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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

GENERAL NOTES

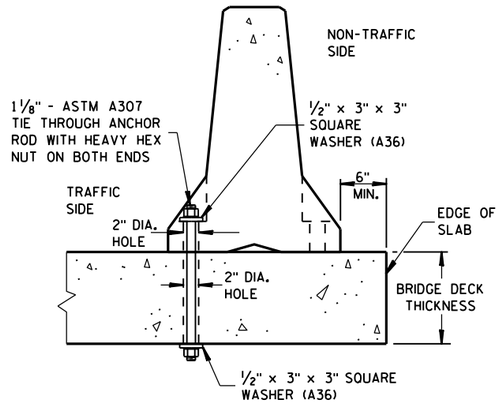
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

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

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

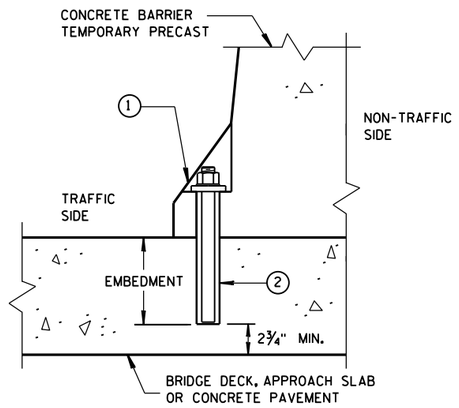
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



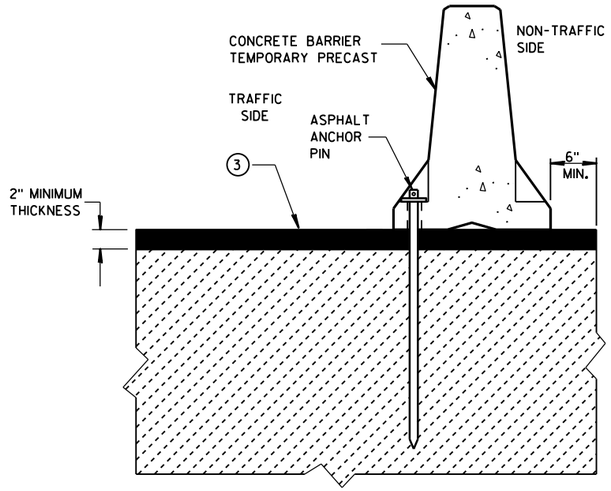
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

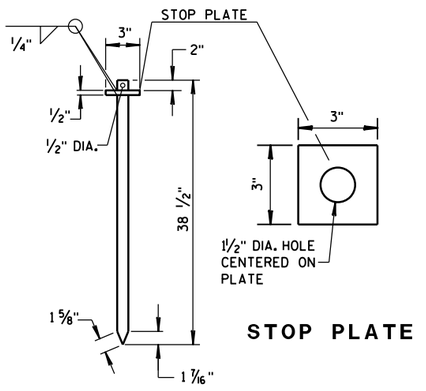


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



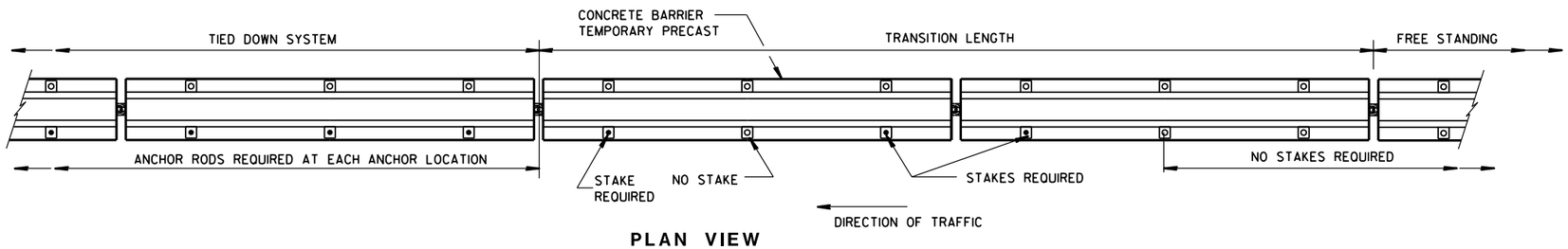
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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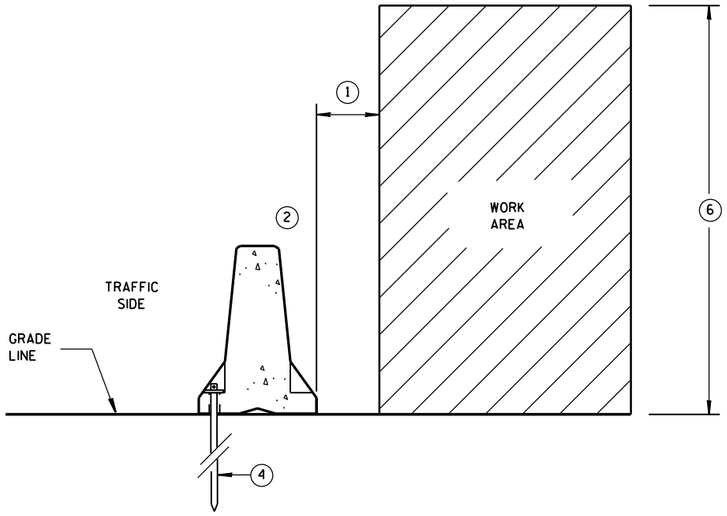
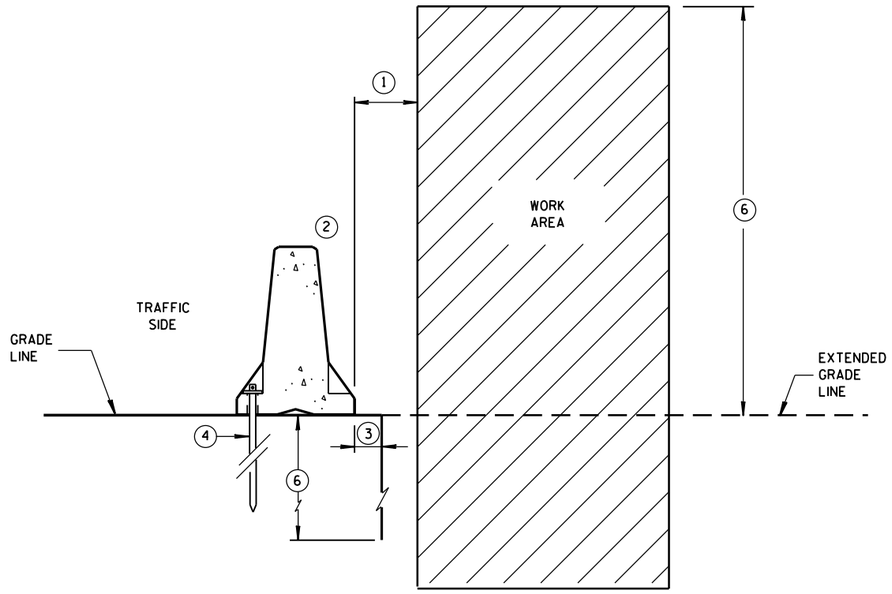
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

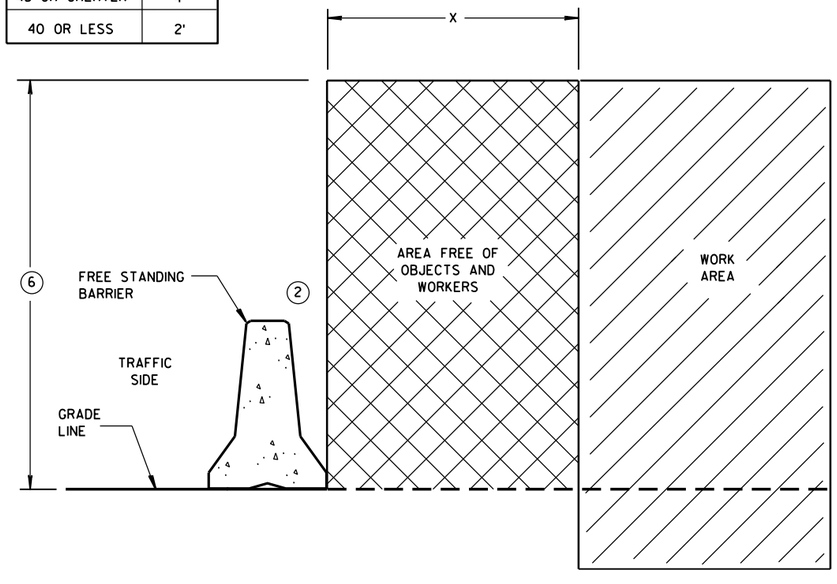


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

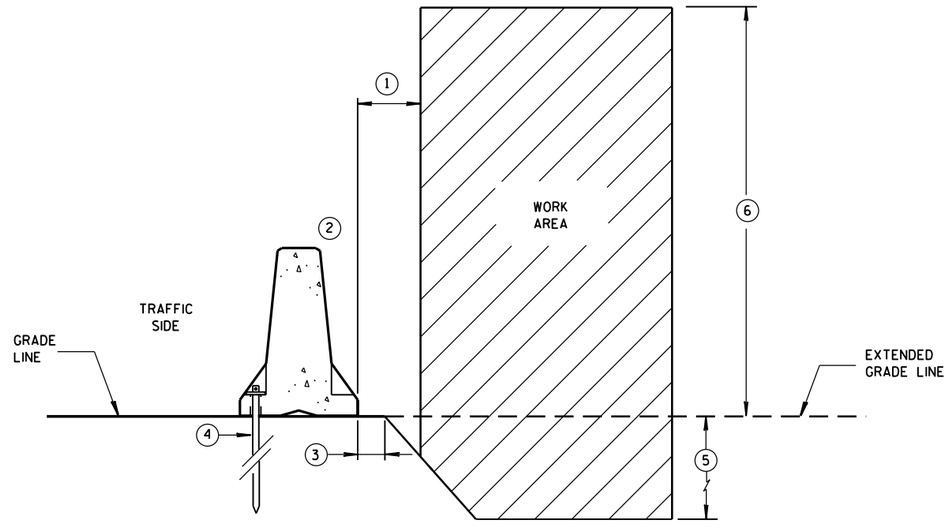
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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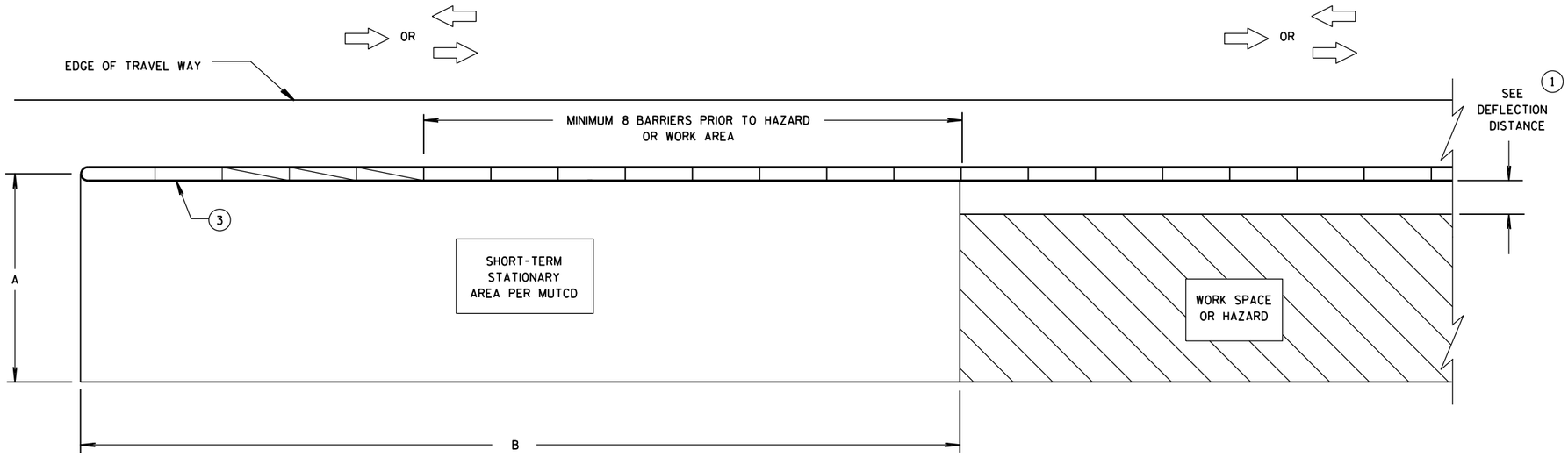
S.D.D. 14 B 7-15e



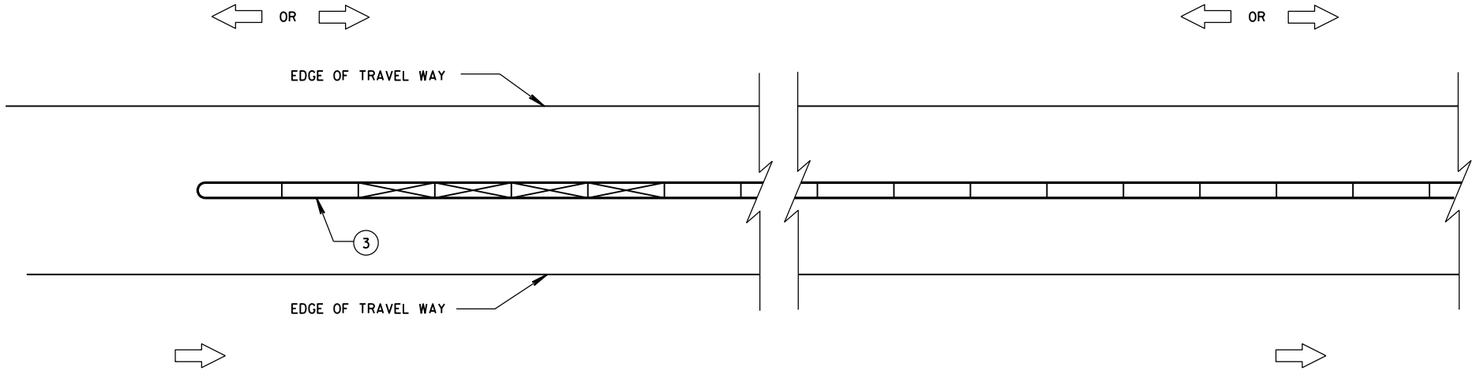
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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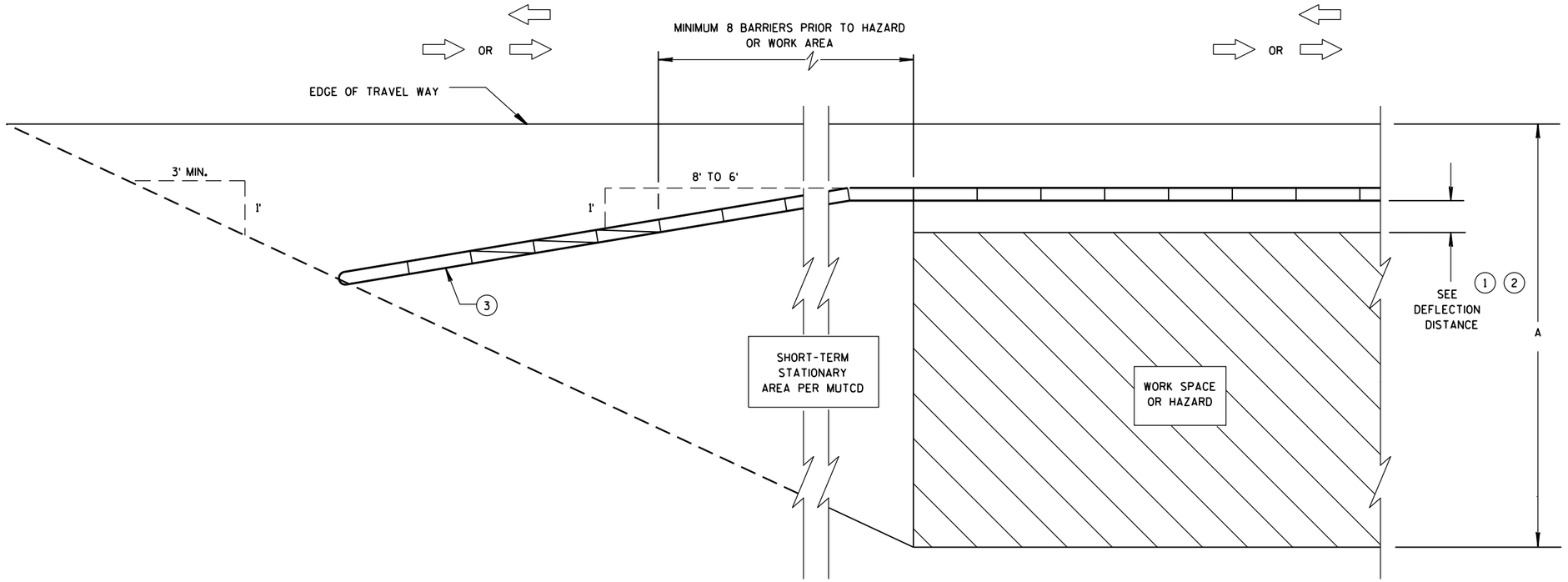
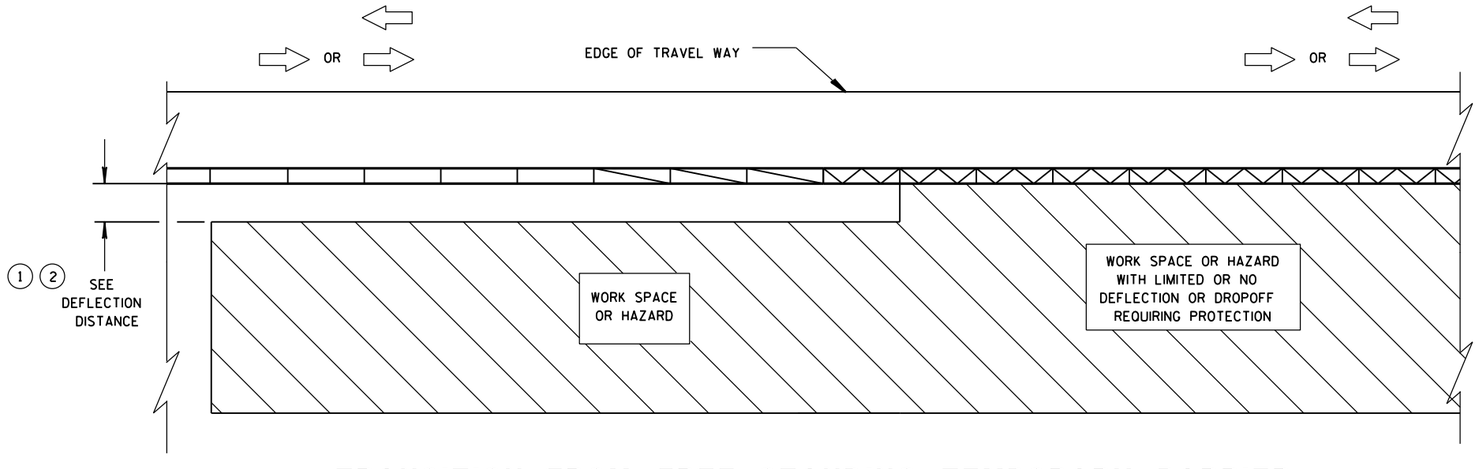
S.D.D. 14 B 8-2a



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

STATE OF WISCONSIN
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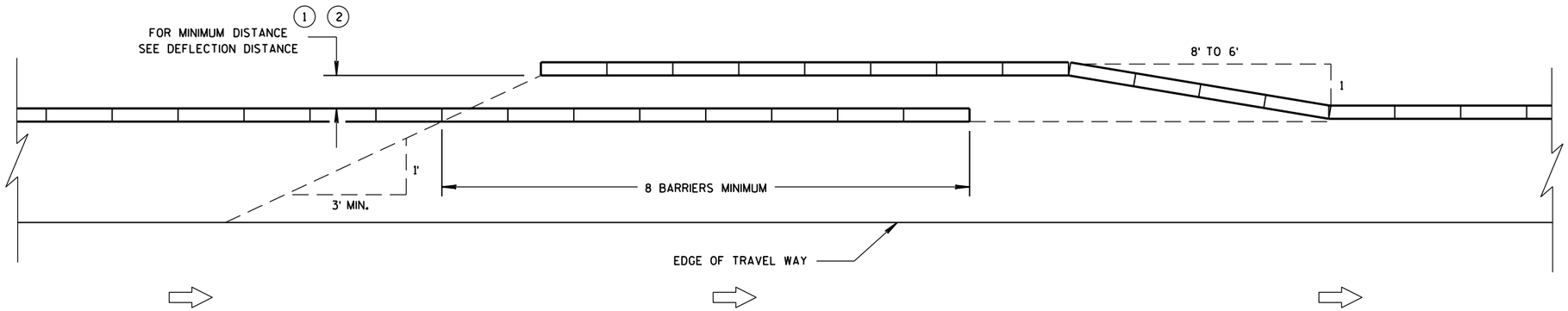
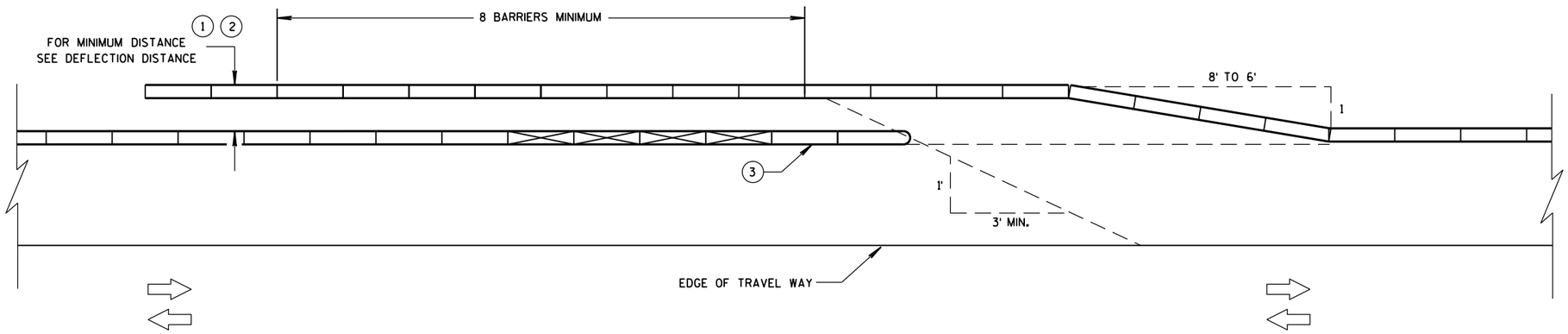
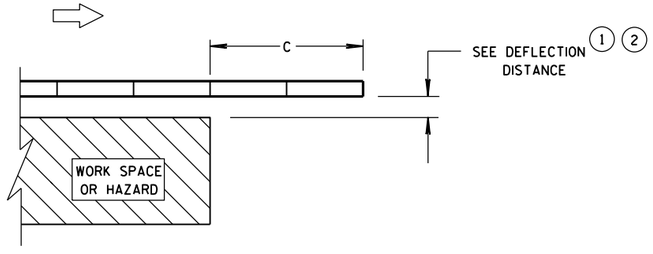


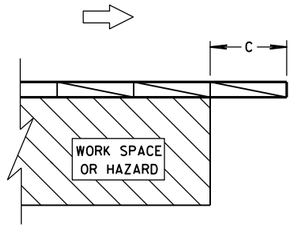
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

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

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

STATE OF WISCONSIN
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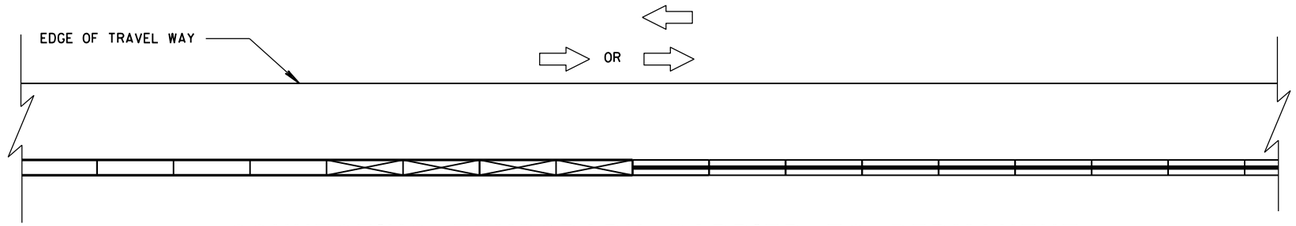
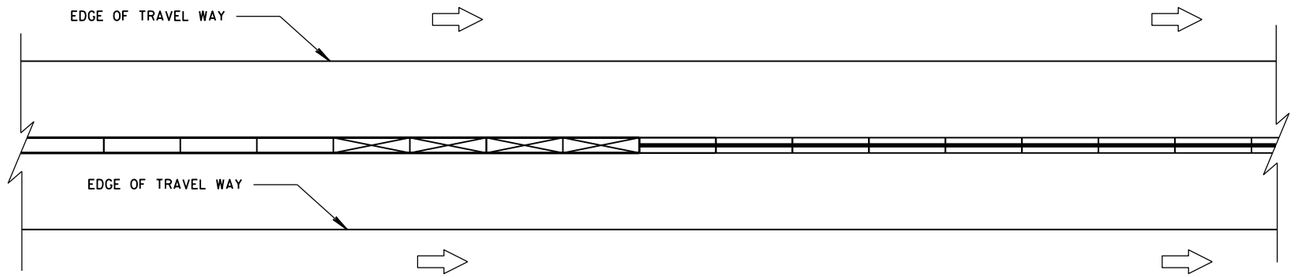


CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

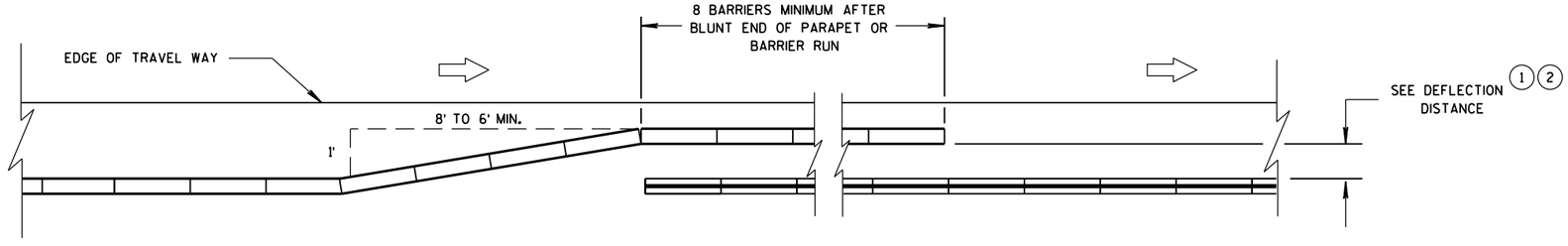
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

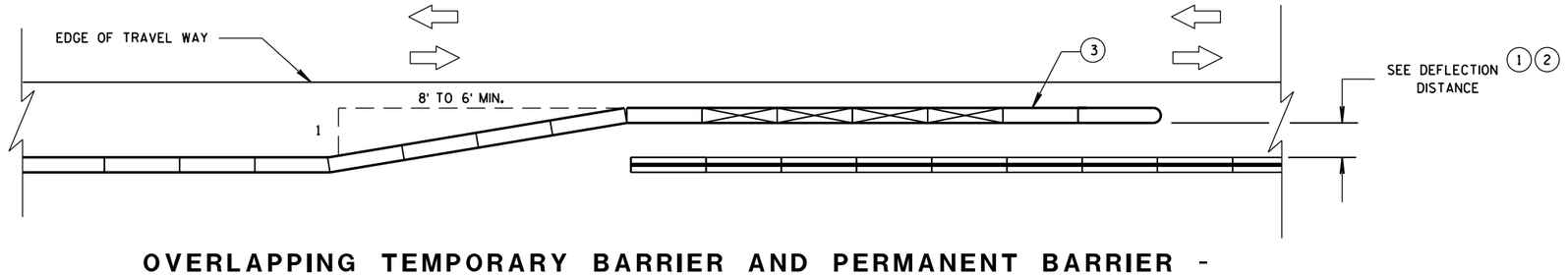
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
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LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

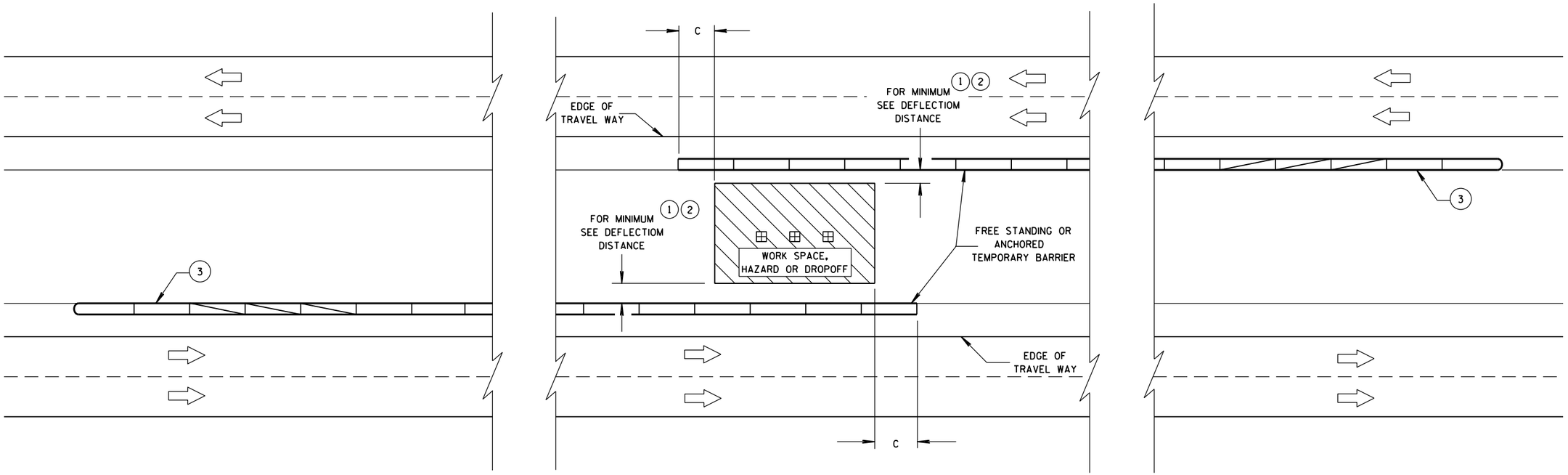
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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(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.

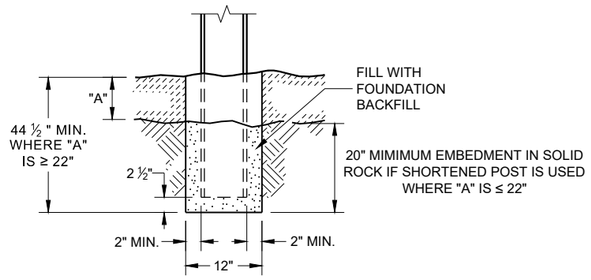
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

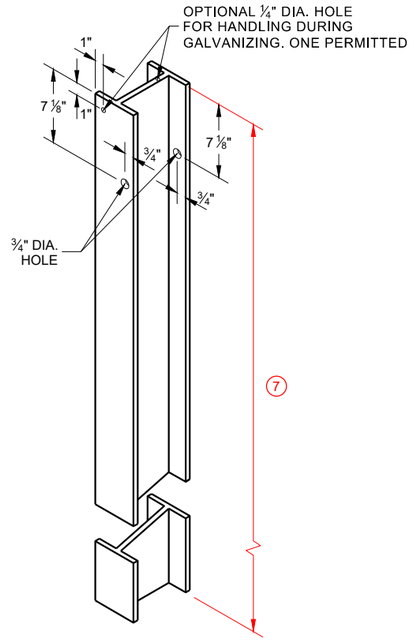
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

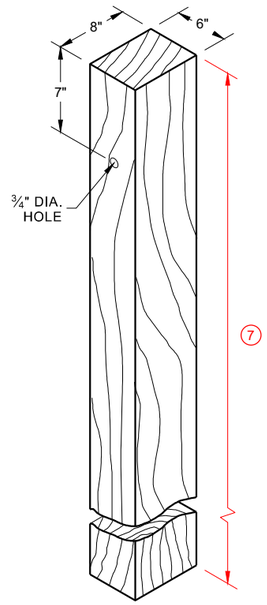
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



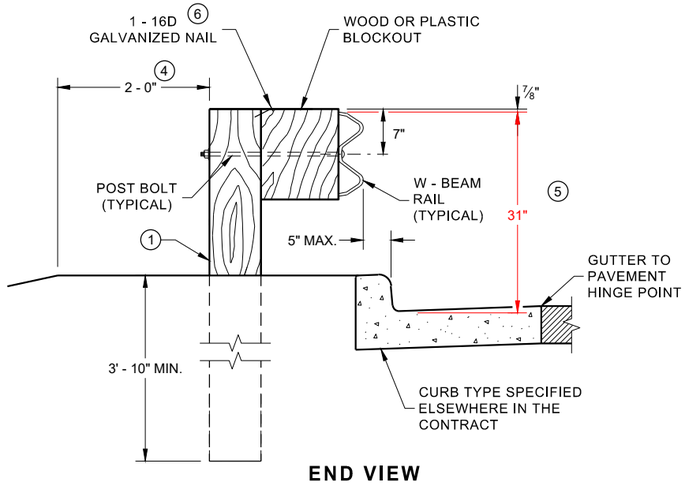
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



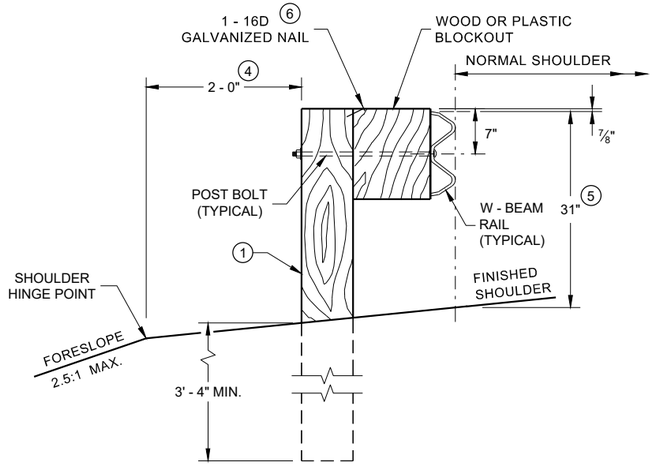
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



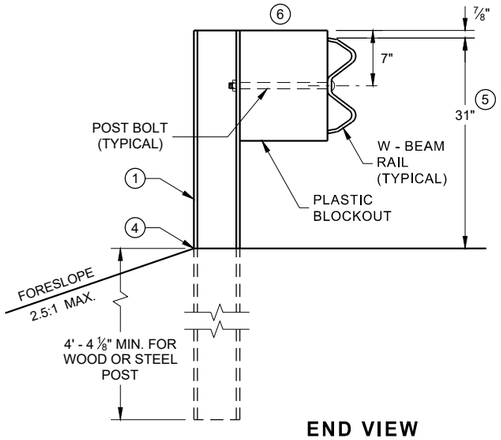
WOOD POST (6" X 8") NOMINAL (1)



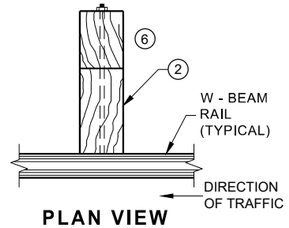
END VIEW
LOCATED ALONG A CURBED ROADWAY



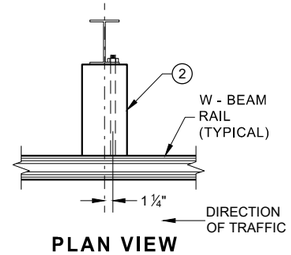
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



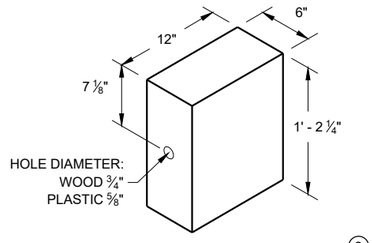
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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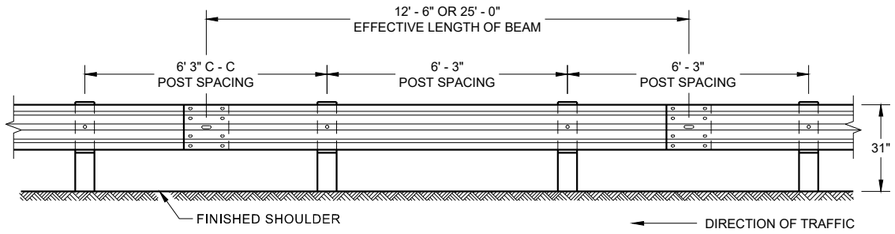
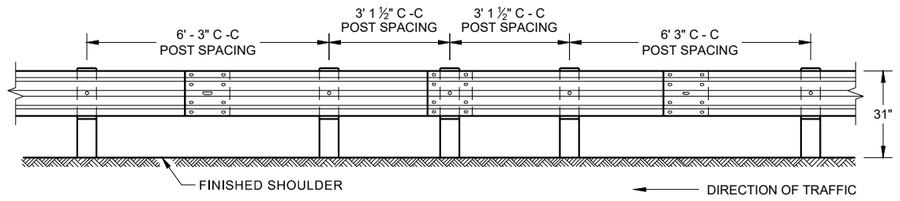
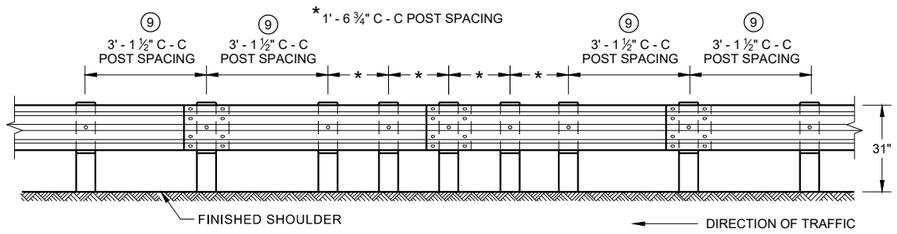


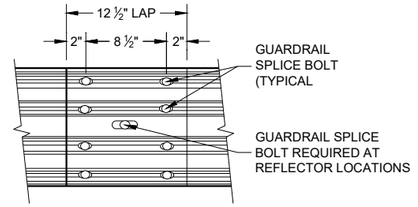
FRONT VIEW
POST SPACING STANDARD INSTALLATION



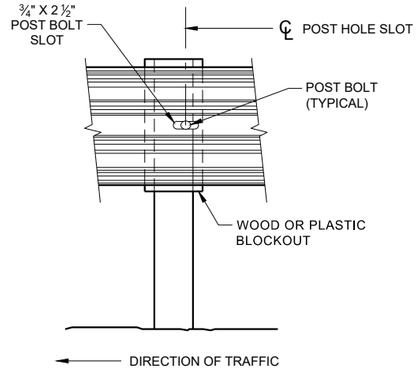
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



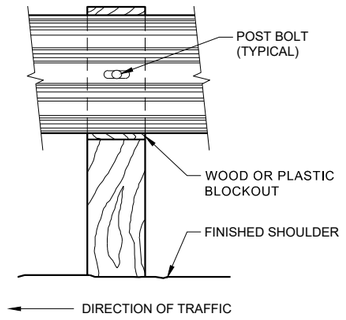
FRONT VIEW
QUARTER POST SPACING (QS)



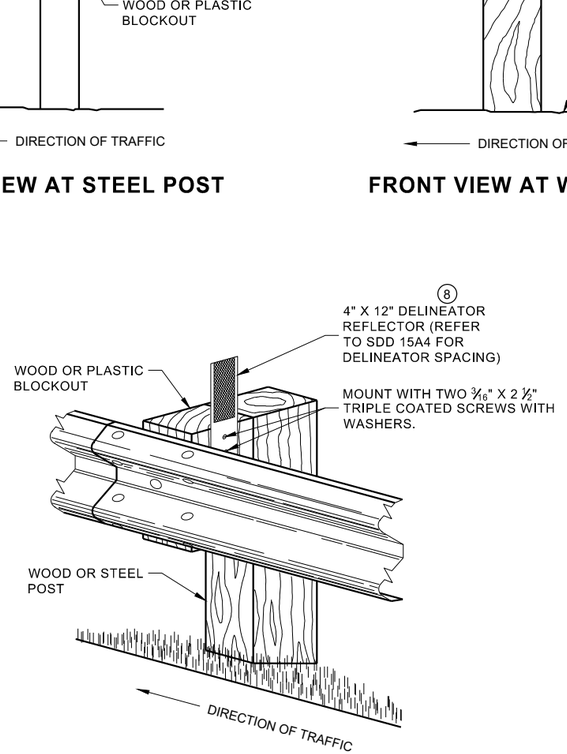
FRONT VIEW
MID-SPAN BEAM SPLICE



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

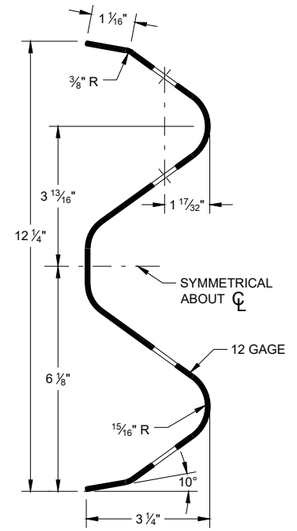
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

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

POST BOLTS ARE A ¾" 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.



SECTION THRU W-BEAM RAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

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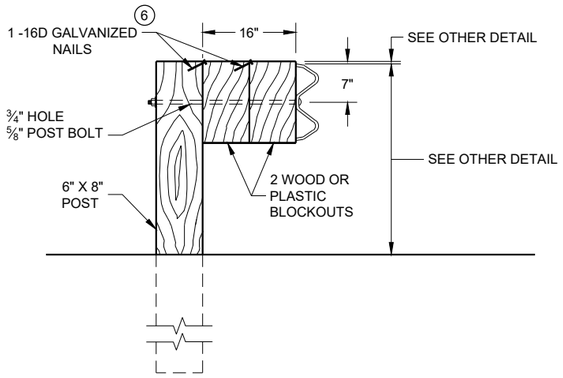
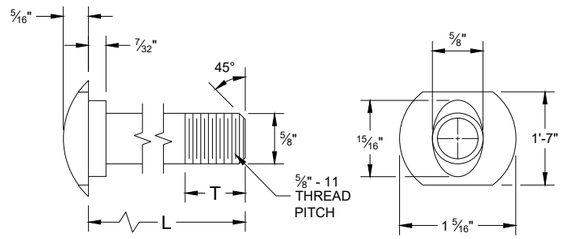


DETAIL FOR 16" BLOCKOUT DEPTH

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.

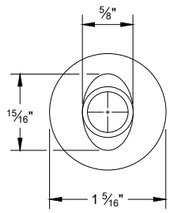
NOTE:

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.

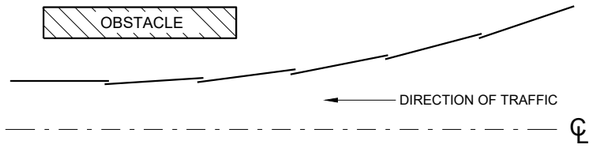


POST BOLT TABLE

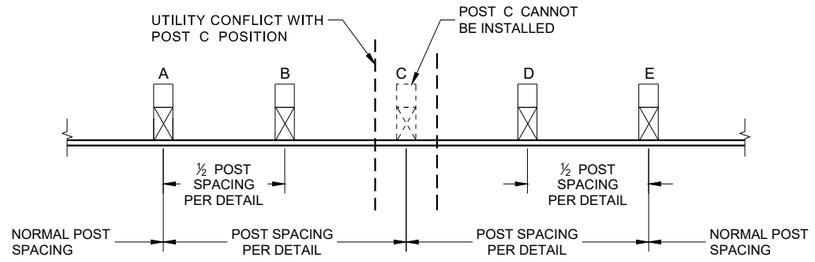
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



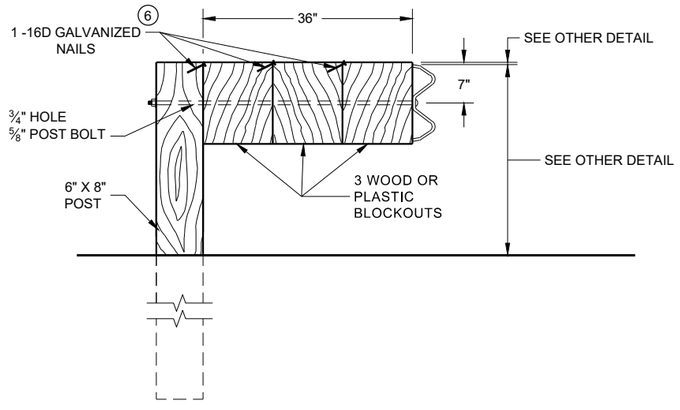
ALTERNATE BOLT HEAD



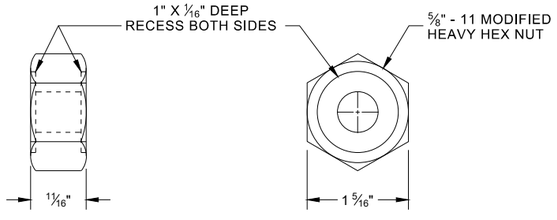
PLAN VIEW
BEAM LAPPING DETAIL



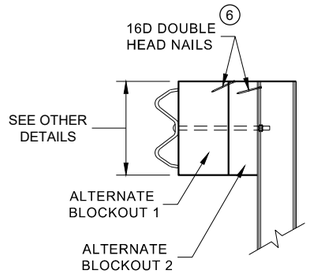
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



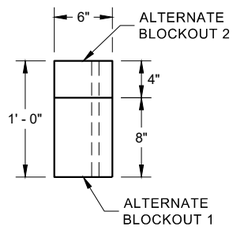
DETAIL FOR 36" BLOCKOUT DEPTH



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

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SDD 14B42 - 06c

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.

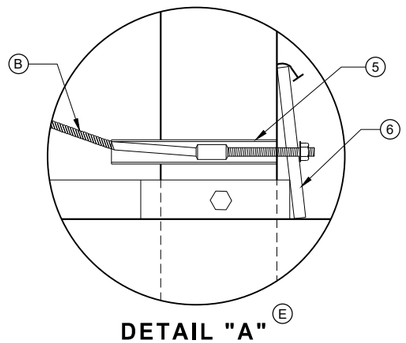
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

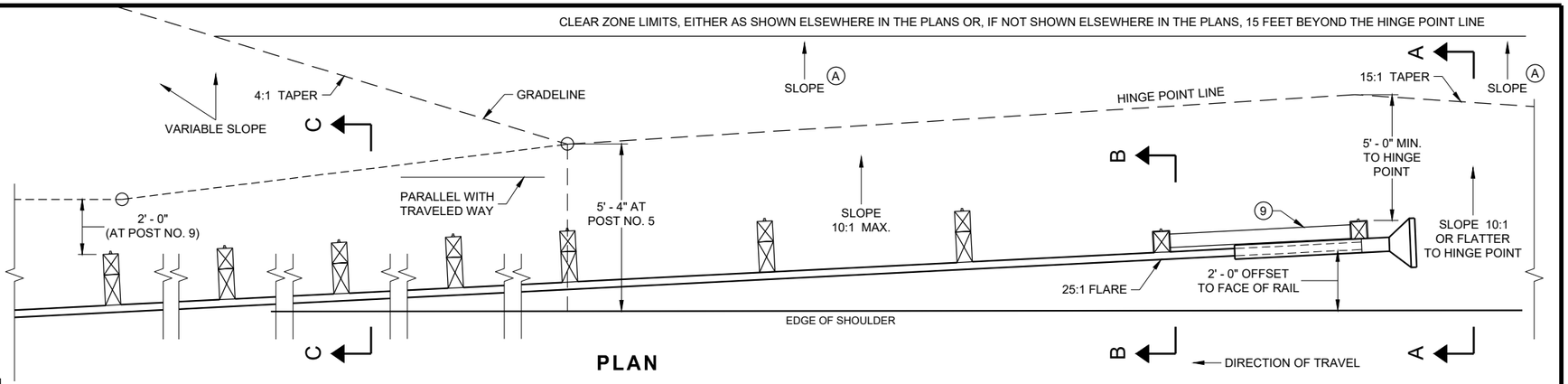
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

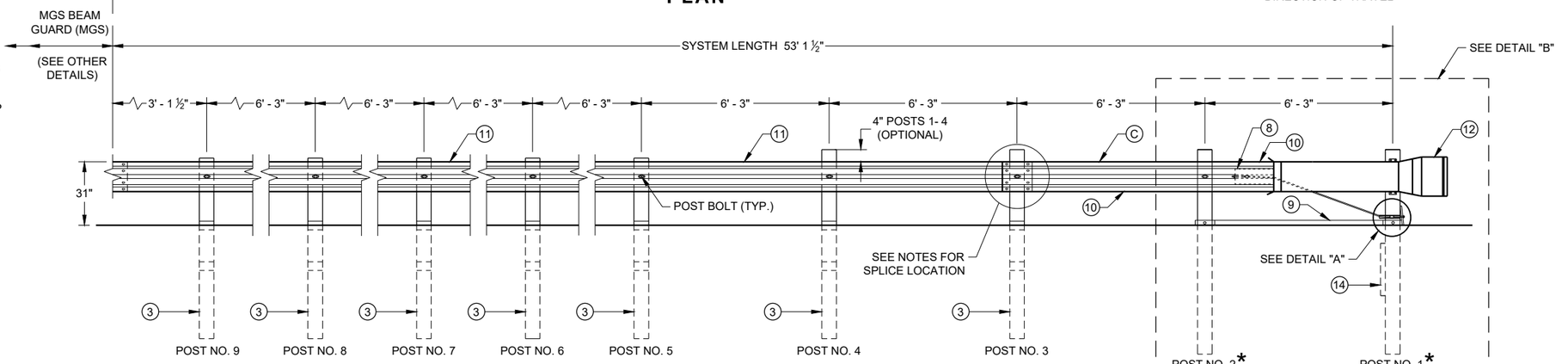
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



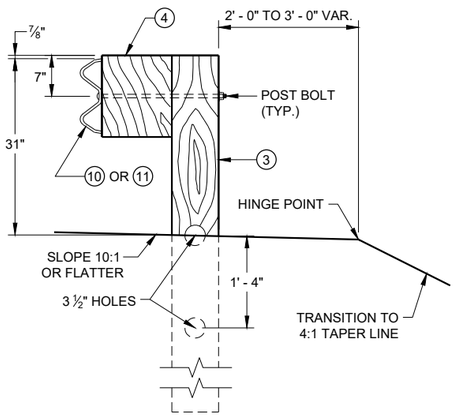
DETAIL "A" (E)



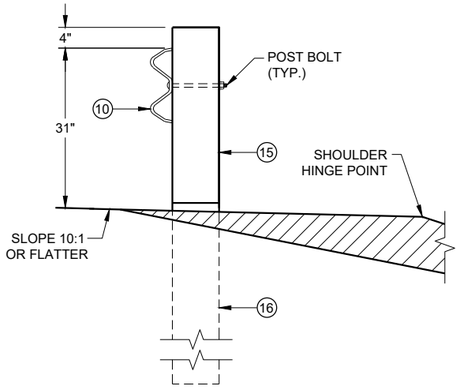
PLAN



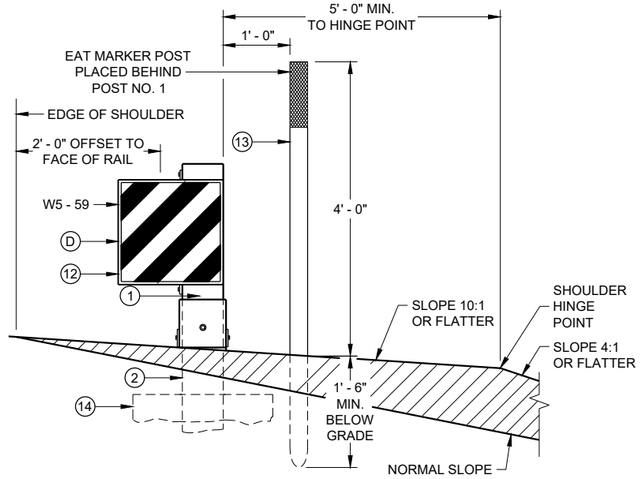
ELEVATION



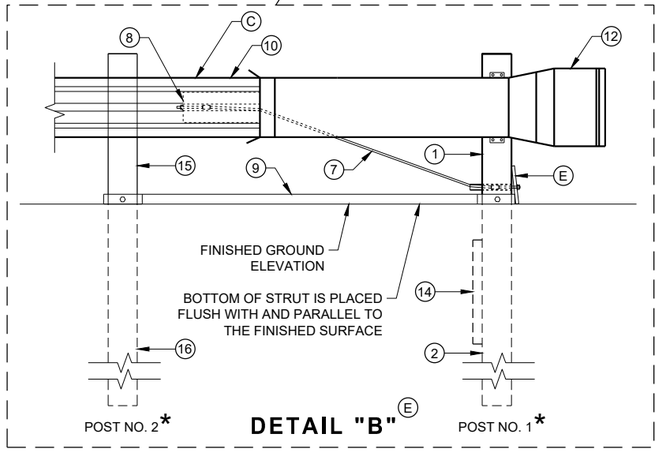
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



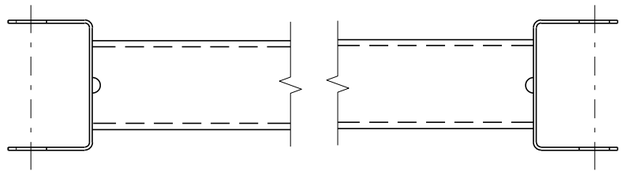
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

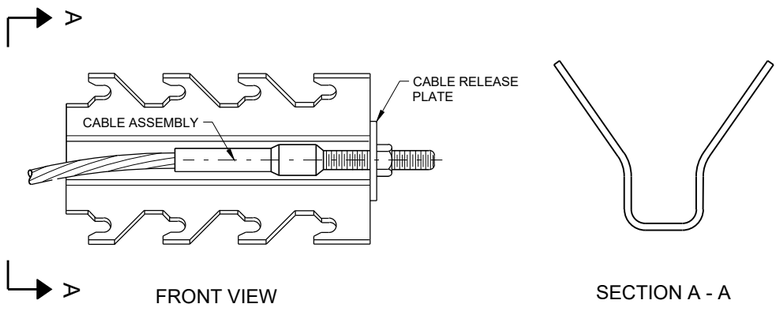
SDD 14B44 - 04a



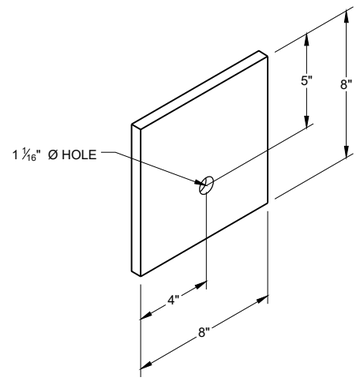
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

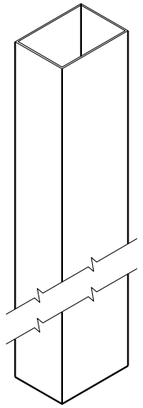
6

SDD 14B45 - 04b

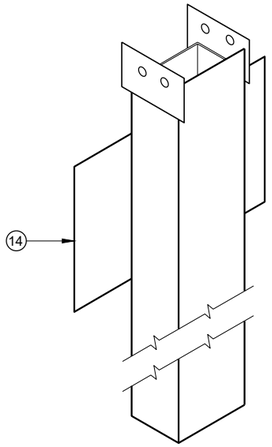
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

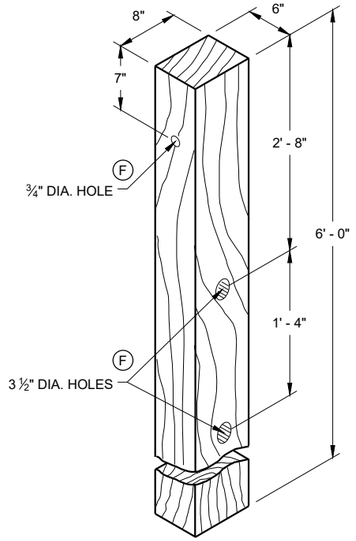
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



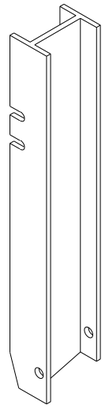
UPPER POST NO. 1 (1) (E)



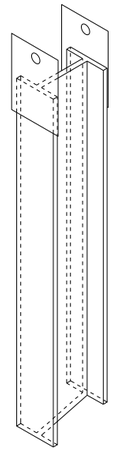
LOWER POST NO. 1 (2) (E)



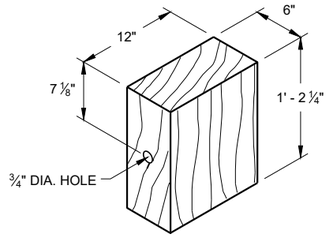
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



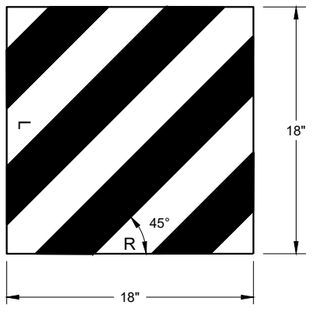
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

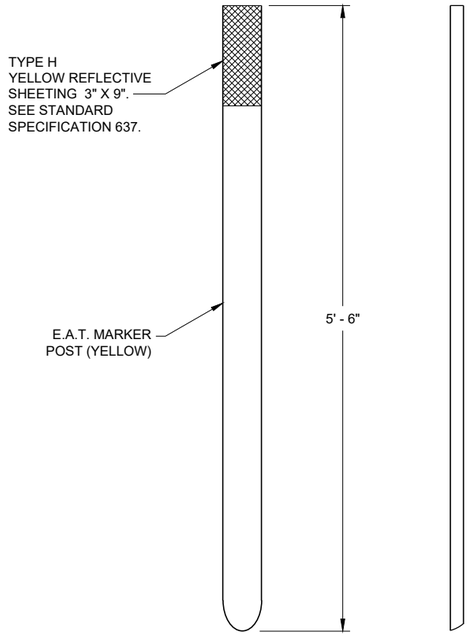


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



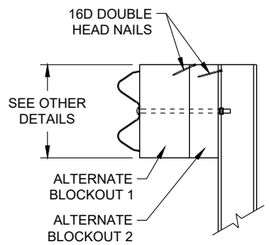
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

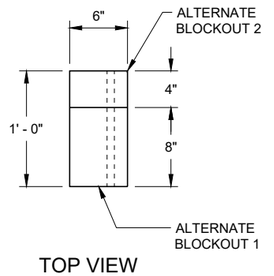


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

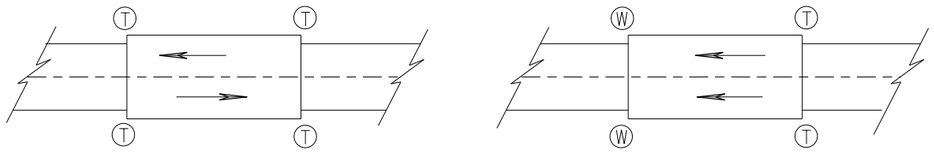
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

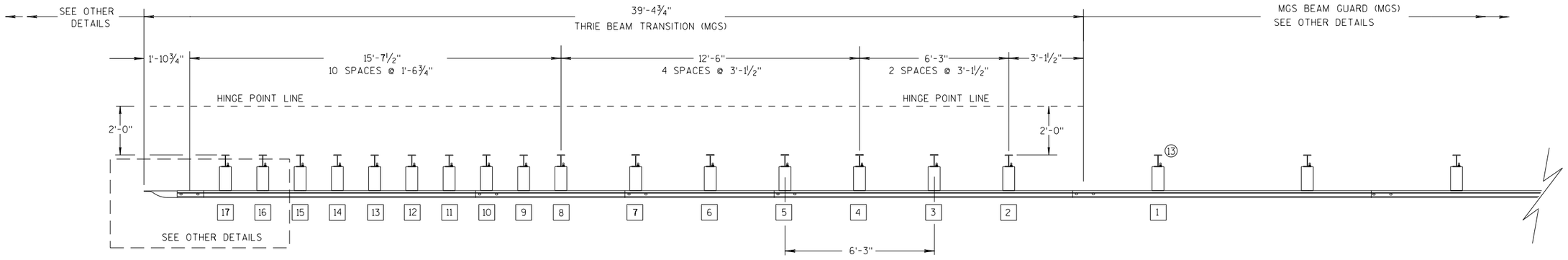
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

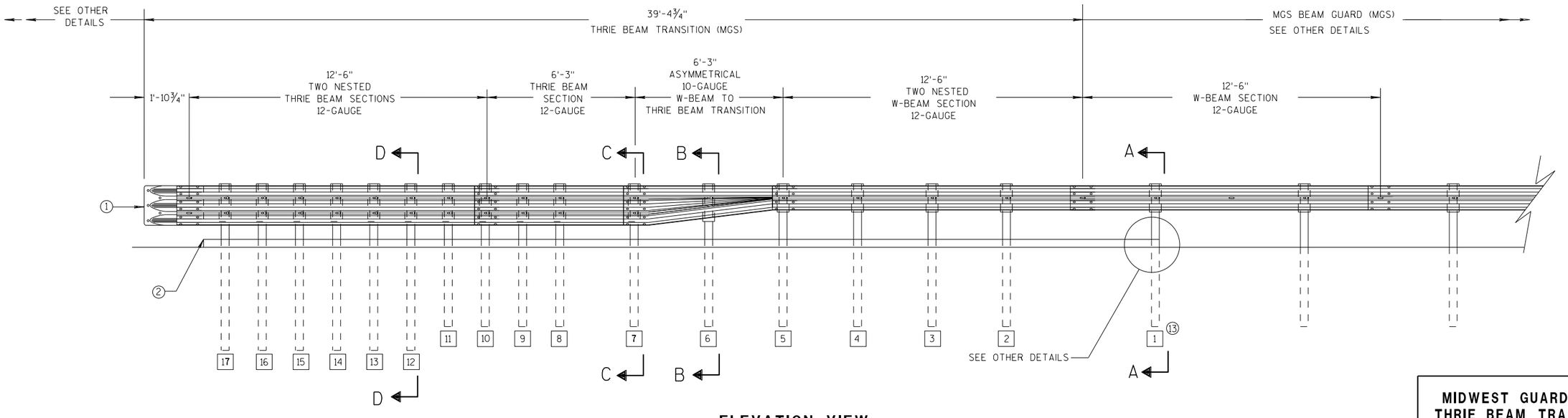
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

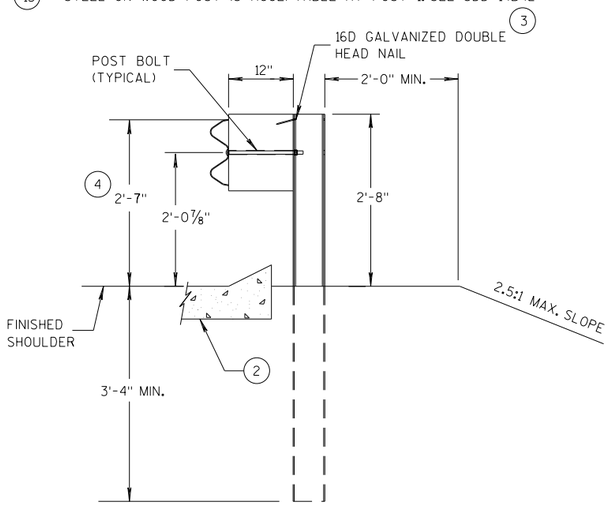
GENERAL NOTES

(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.

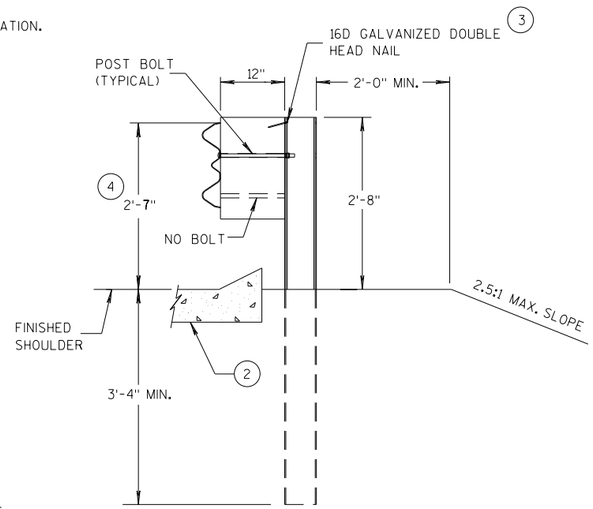
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



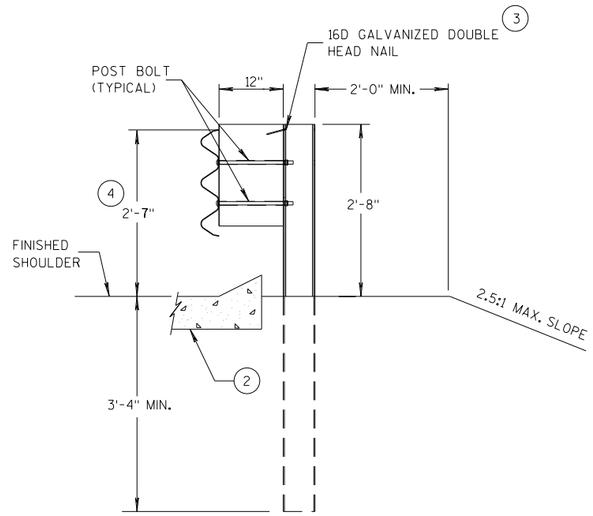
SECTION A-A (13)

POSTS 1-5



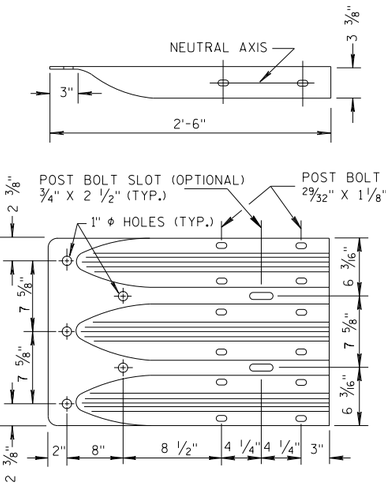
SECTION B-B

POST 6

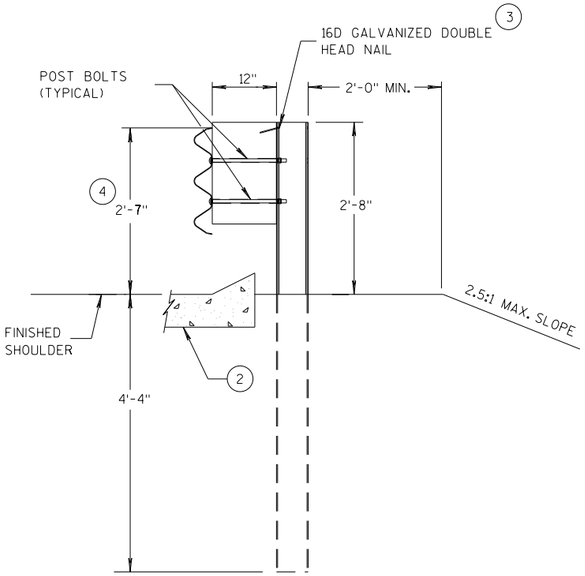


SECTION C-C

POSTS 7-11

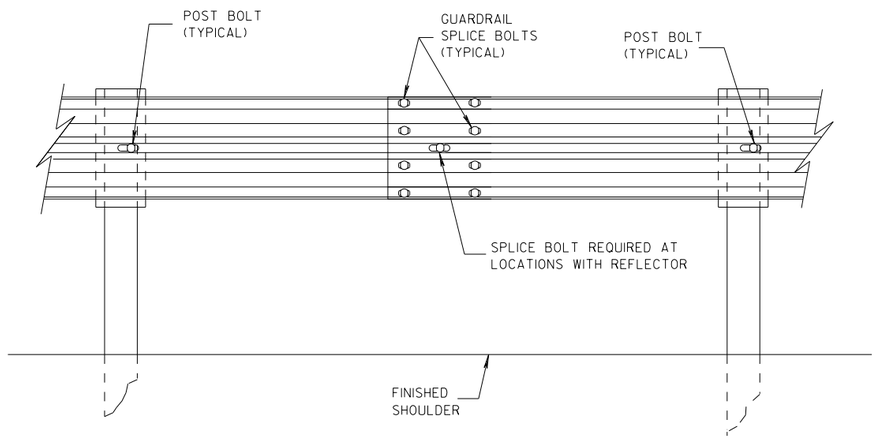


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

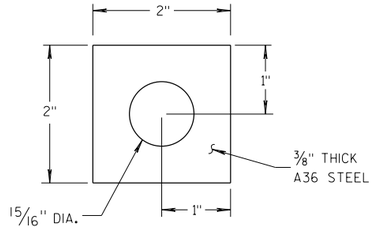
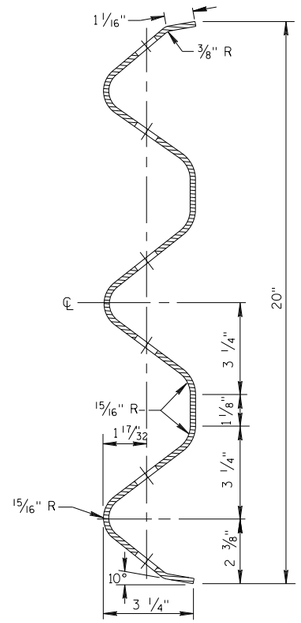


PLATE WASHER DETAIL



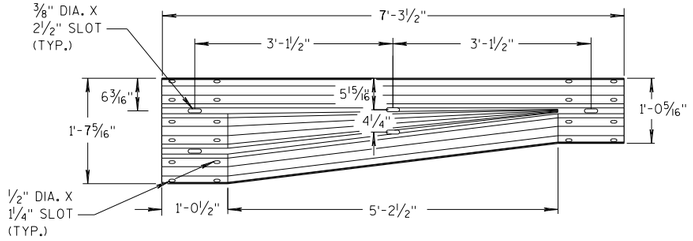
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

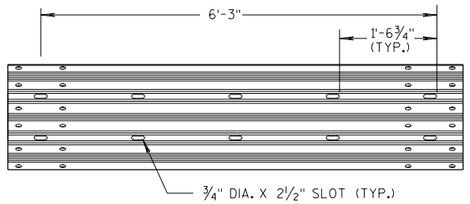
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

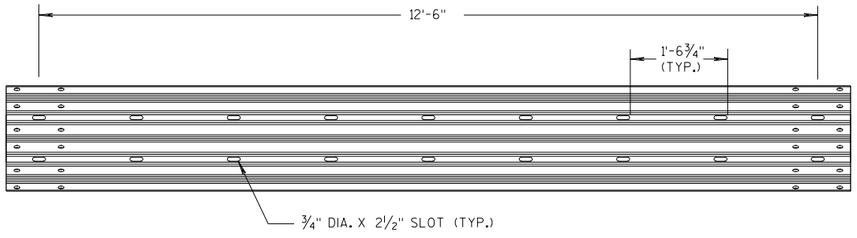
S.D.D. 14 B 45-5b



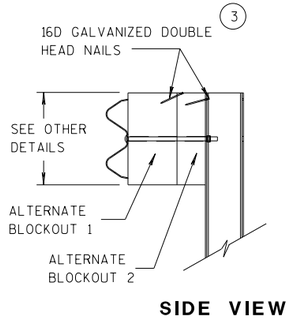
W-BEAM TO THRIE BEAM TRANSITION SECTION



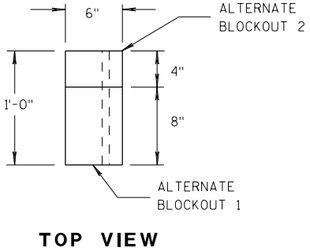
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

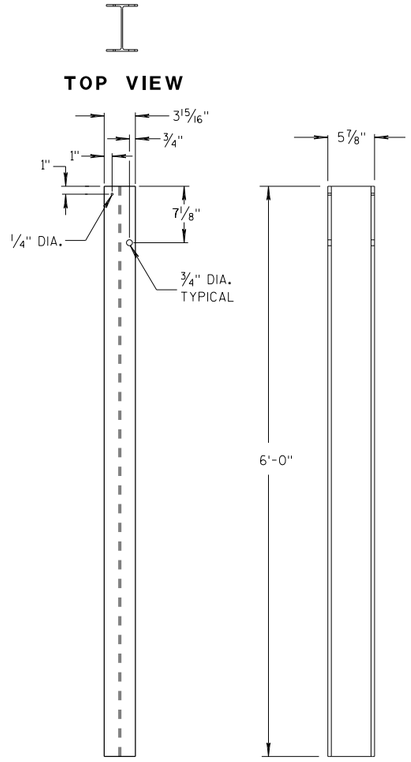


SIDE VIEW



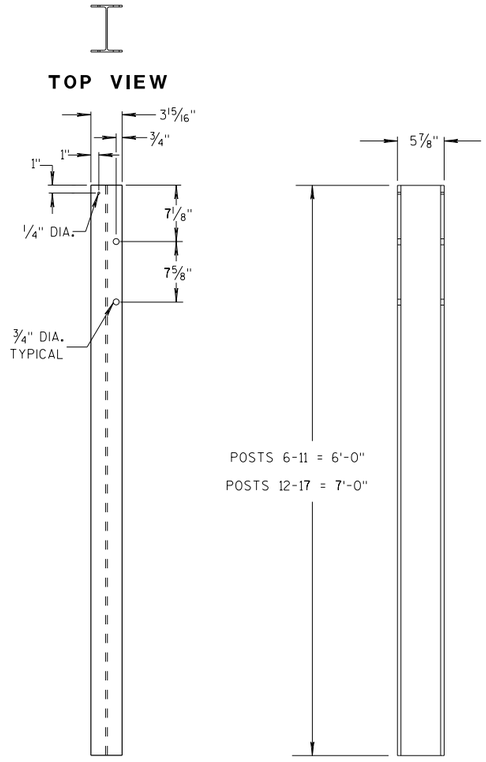
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



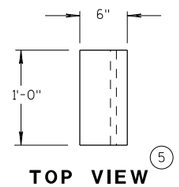
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

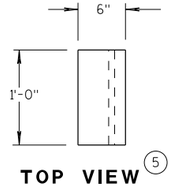


FRONT VIEW SIDE VIEW

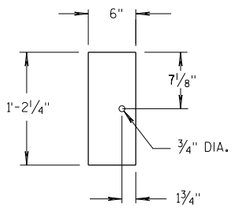
STEEL POSTS 6-17



TOP VIEW (5)

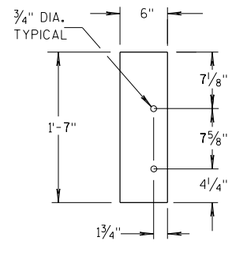


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

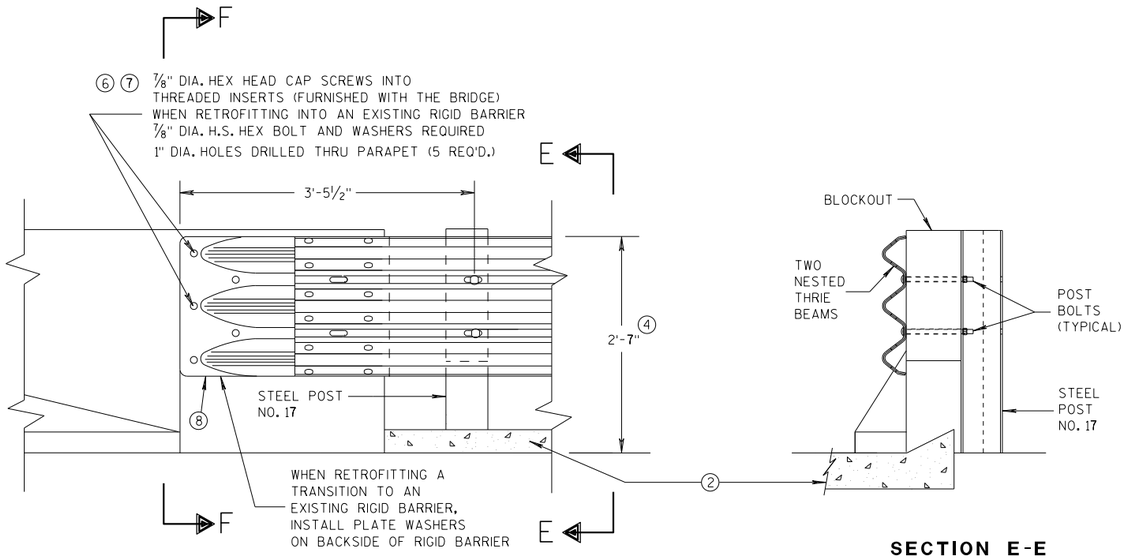
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

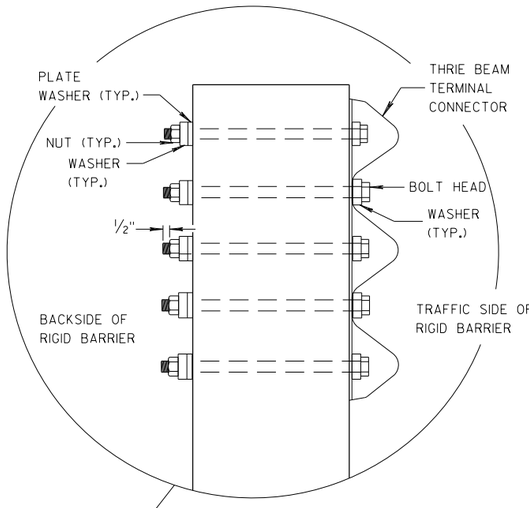
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

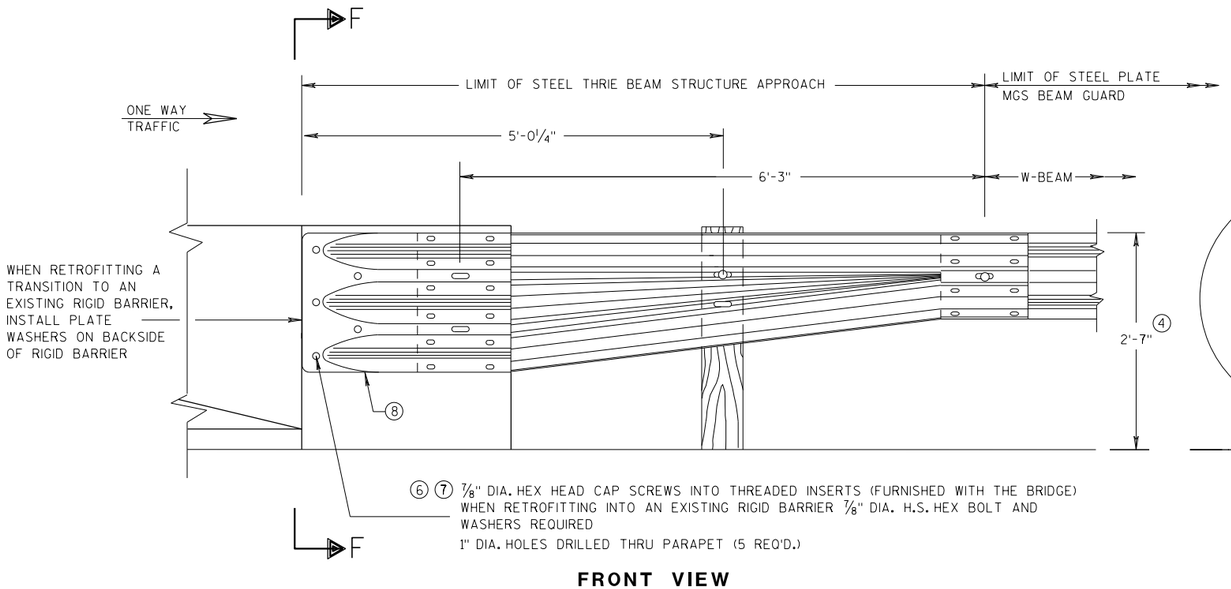
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

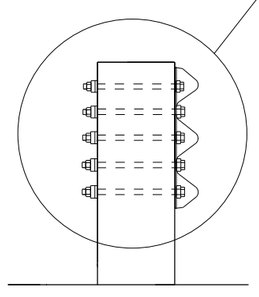
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

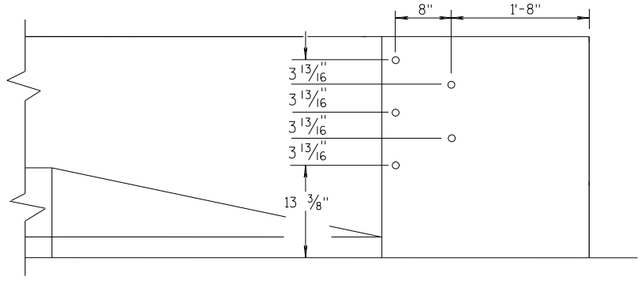




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

6

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

GENERAL NOTES

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

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

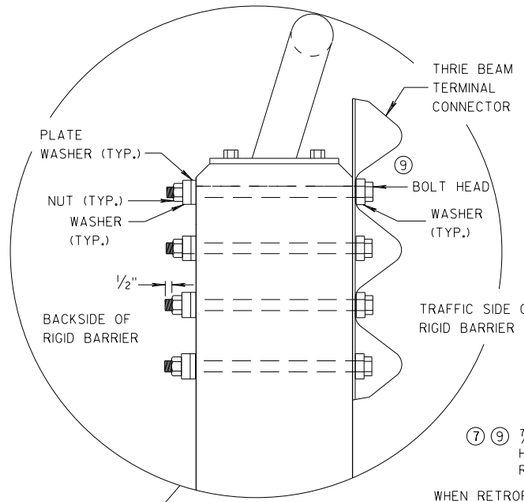
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

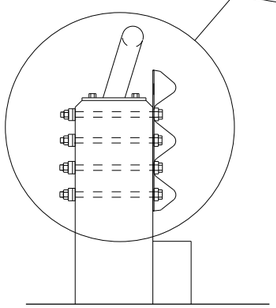
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

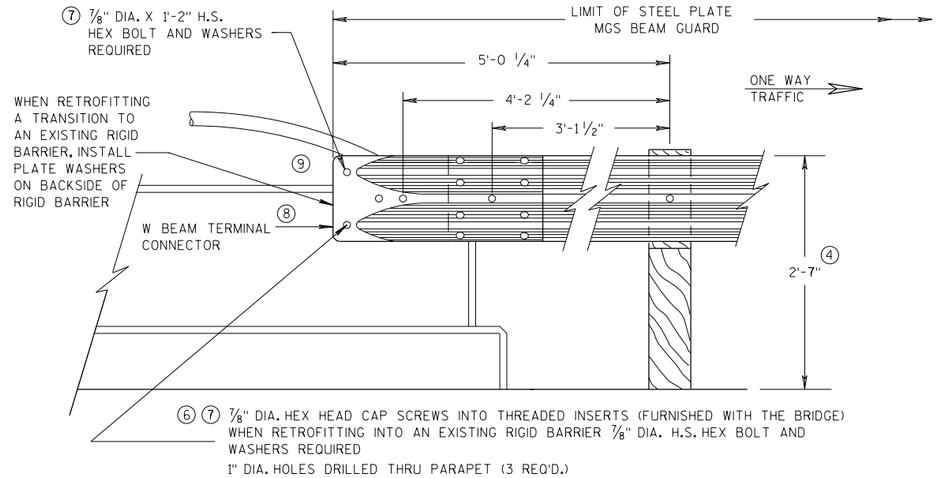
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

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





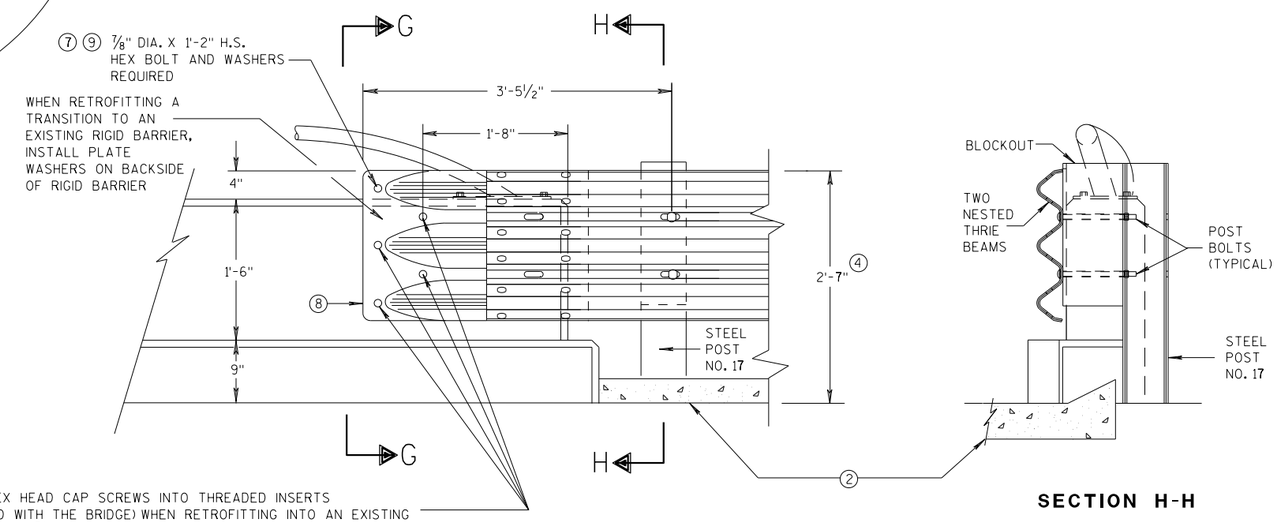
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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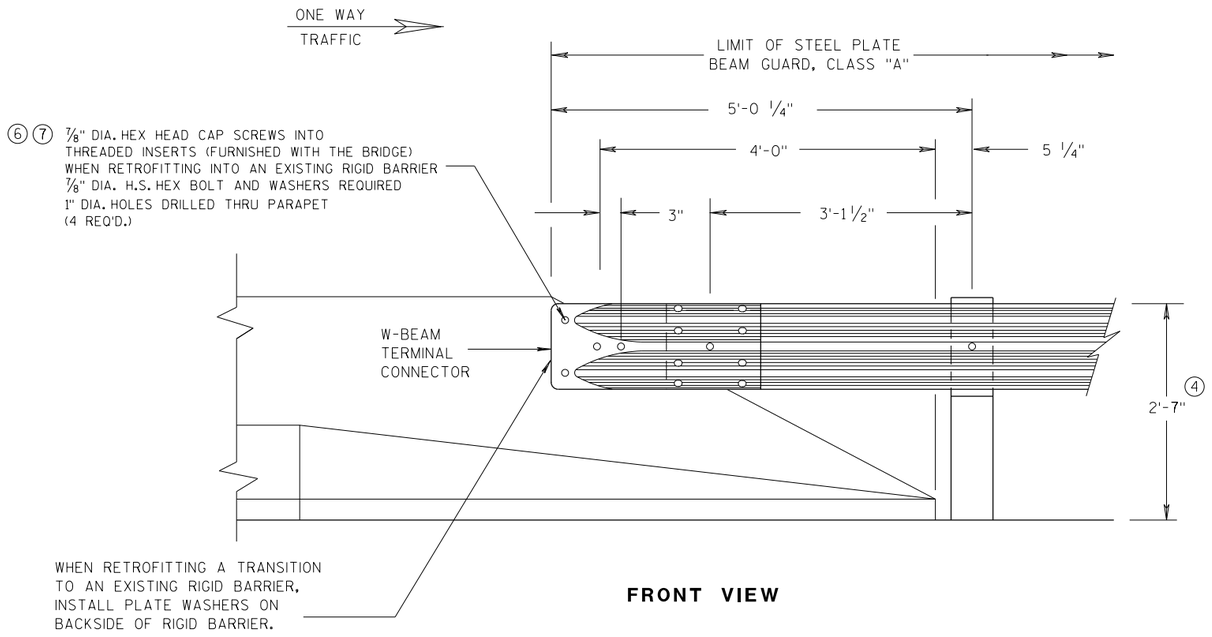
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

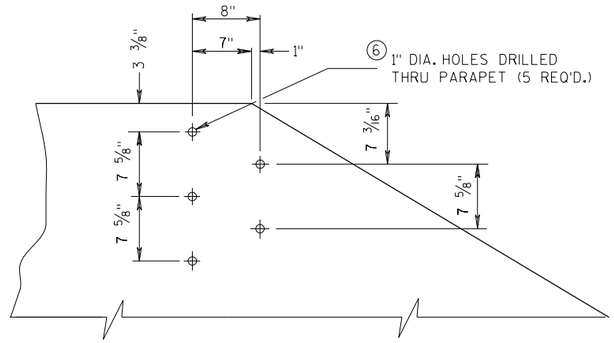
GENERAL NOTES

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

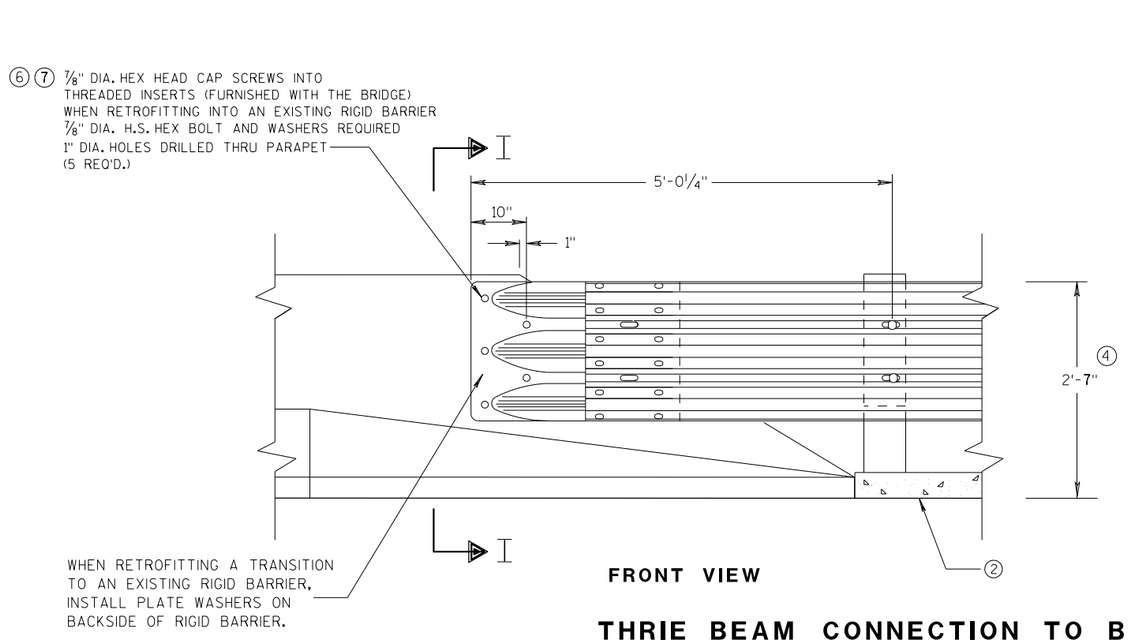
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

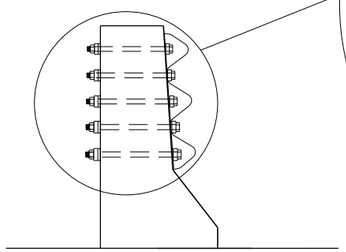
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



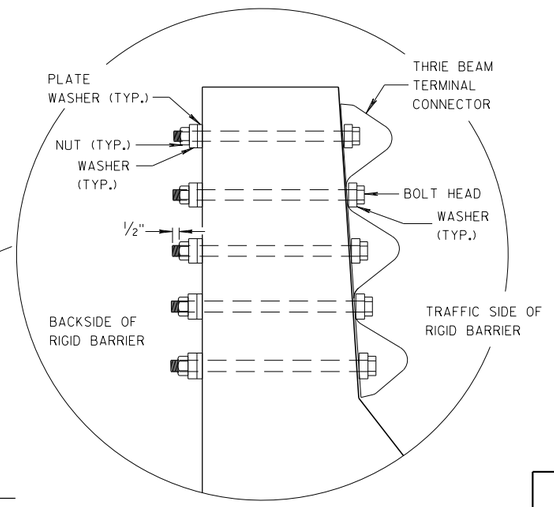
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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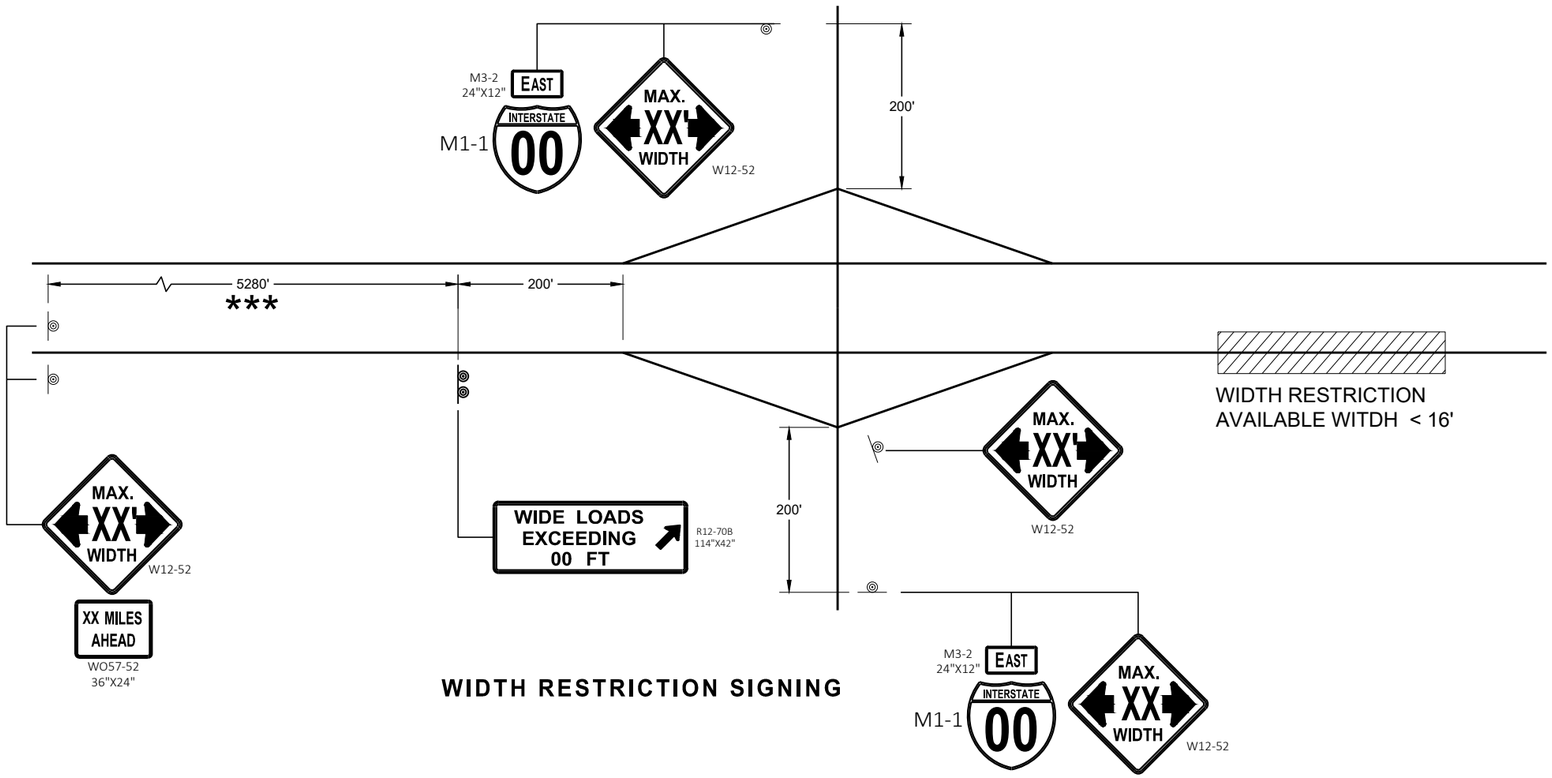


WIDTH RESTRICTION SIGNING

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.

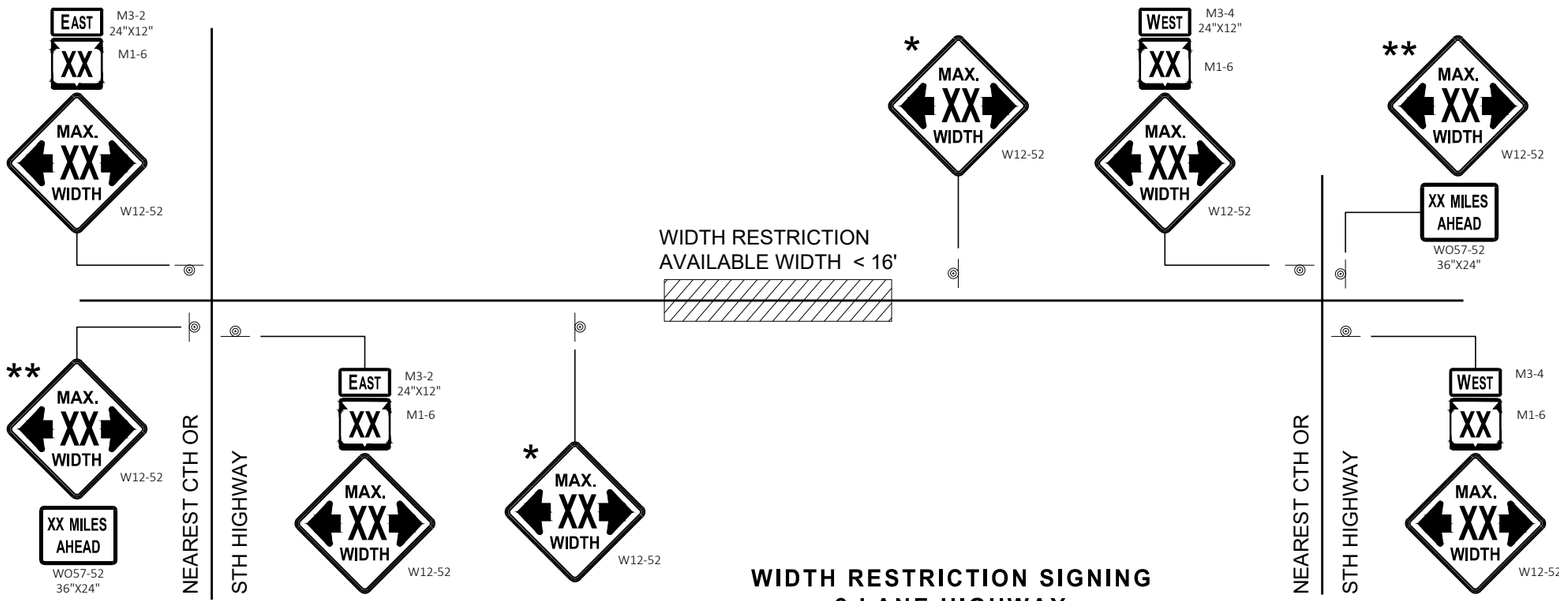
WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* 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
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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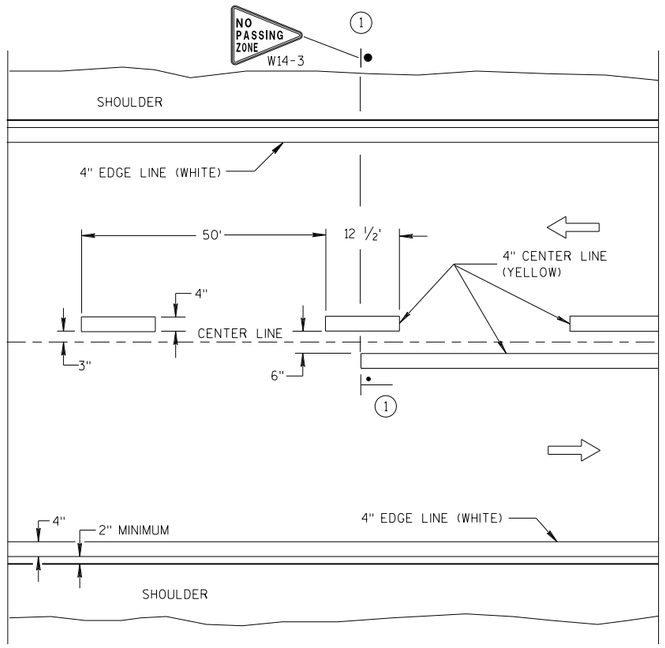
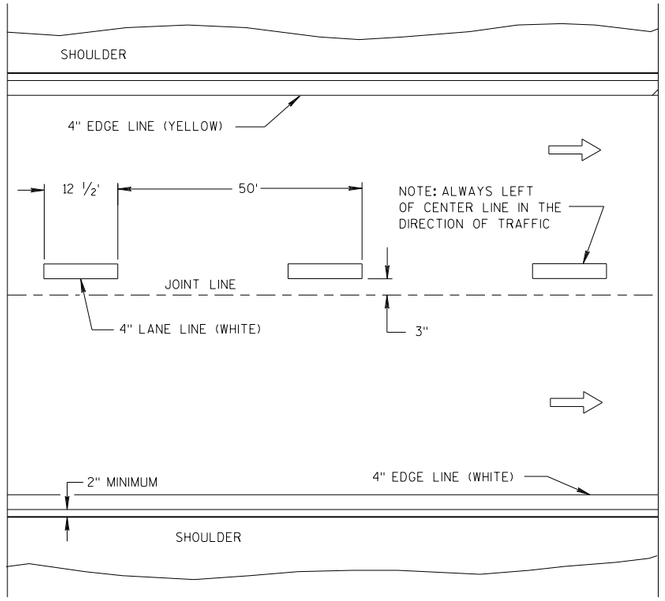
SDD 15C02 - 07f



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

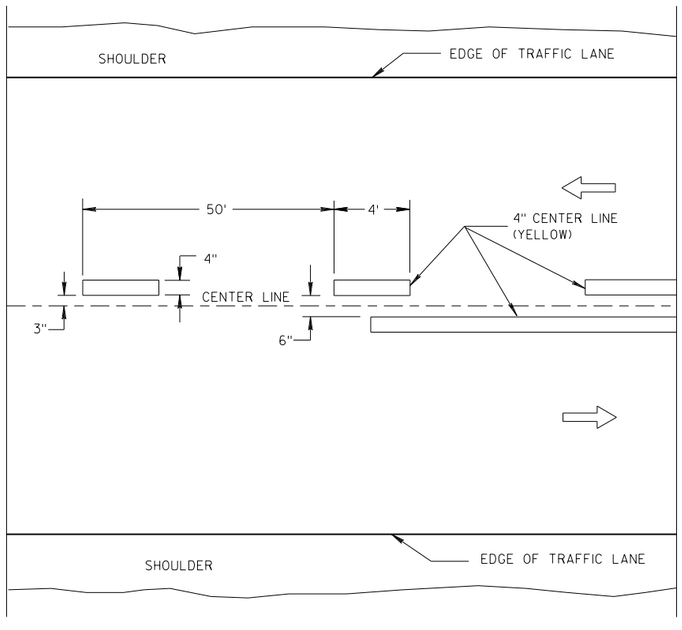
GENERAL NOTES

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

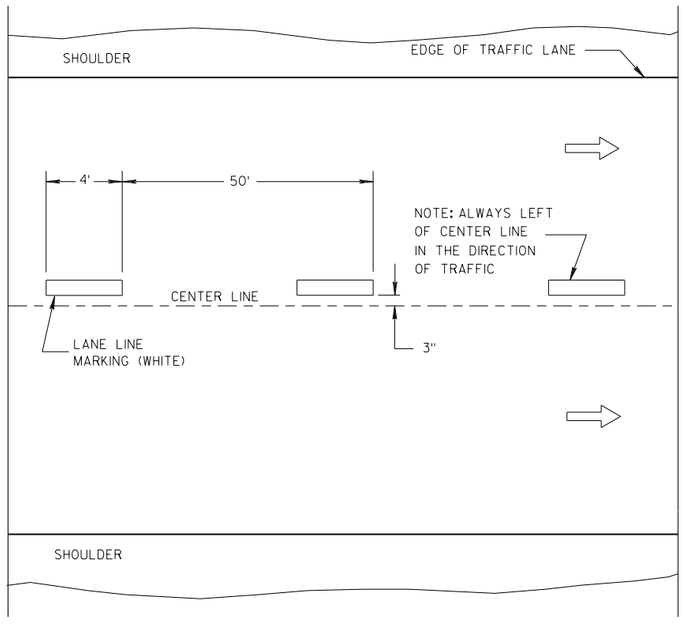
(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LEGEND

"T" MARKING

POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

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S.D.D. 15 C 8-19a

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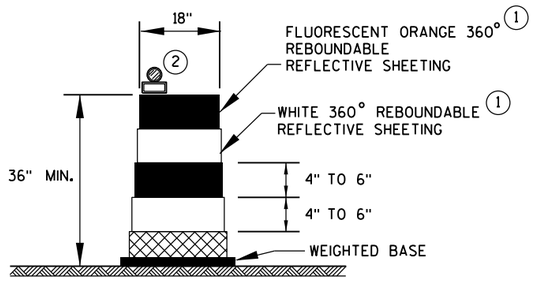
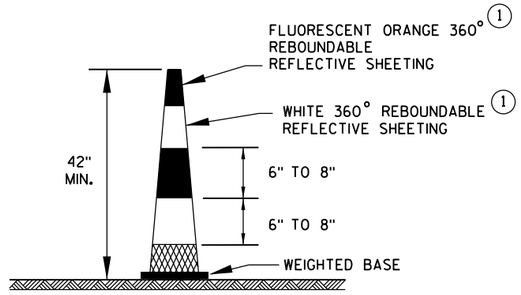
S.D.D. 15 C 8-19a



DRUM

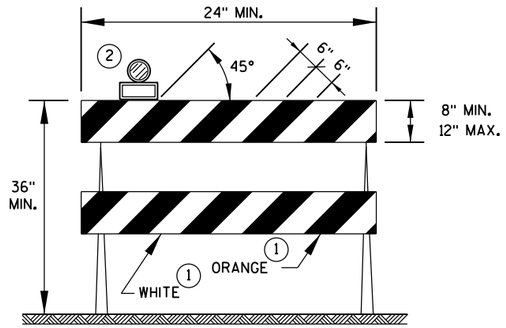


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

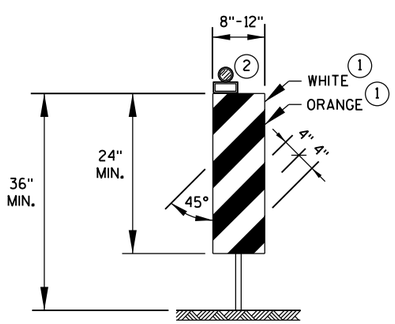
GENERAL NOTES

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



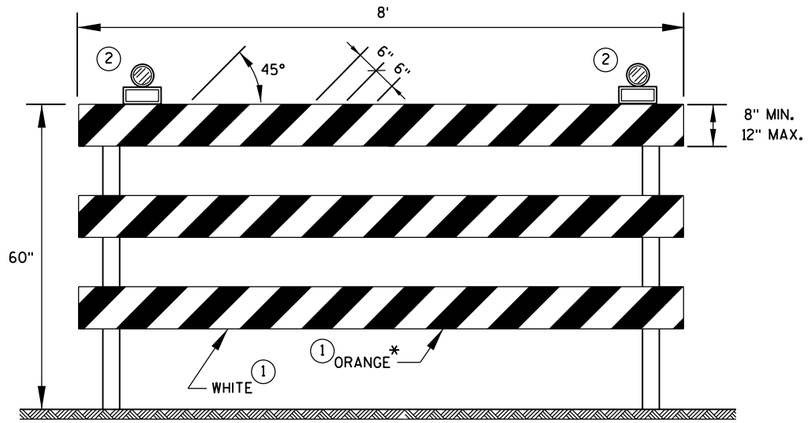
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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 ENG
FHWA	

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S.D.D. 15 C 11-7b

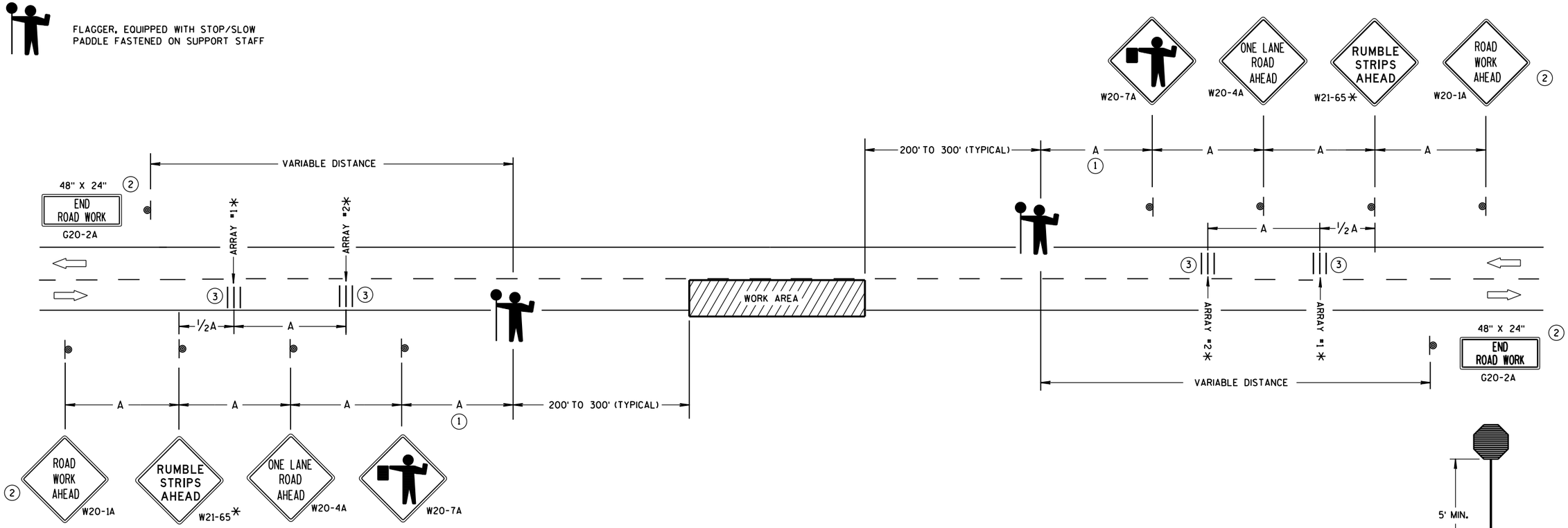
LEGEND

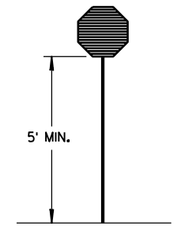
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

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





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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 RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT 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.

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

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

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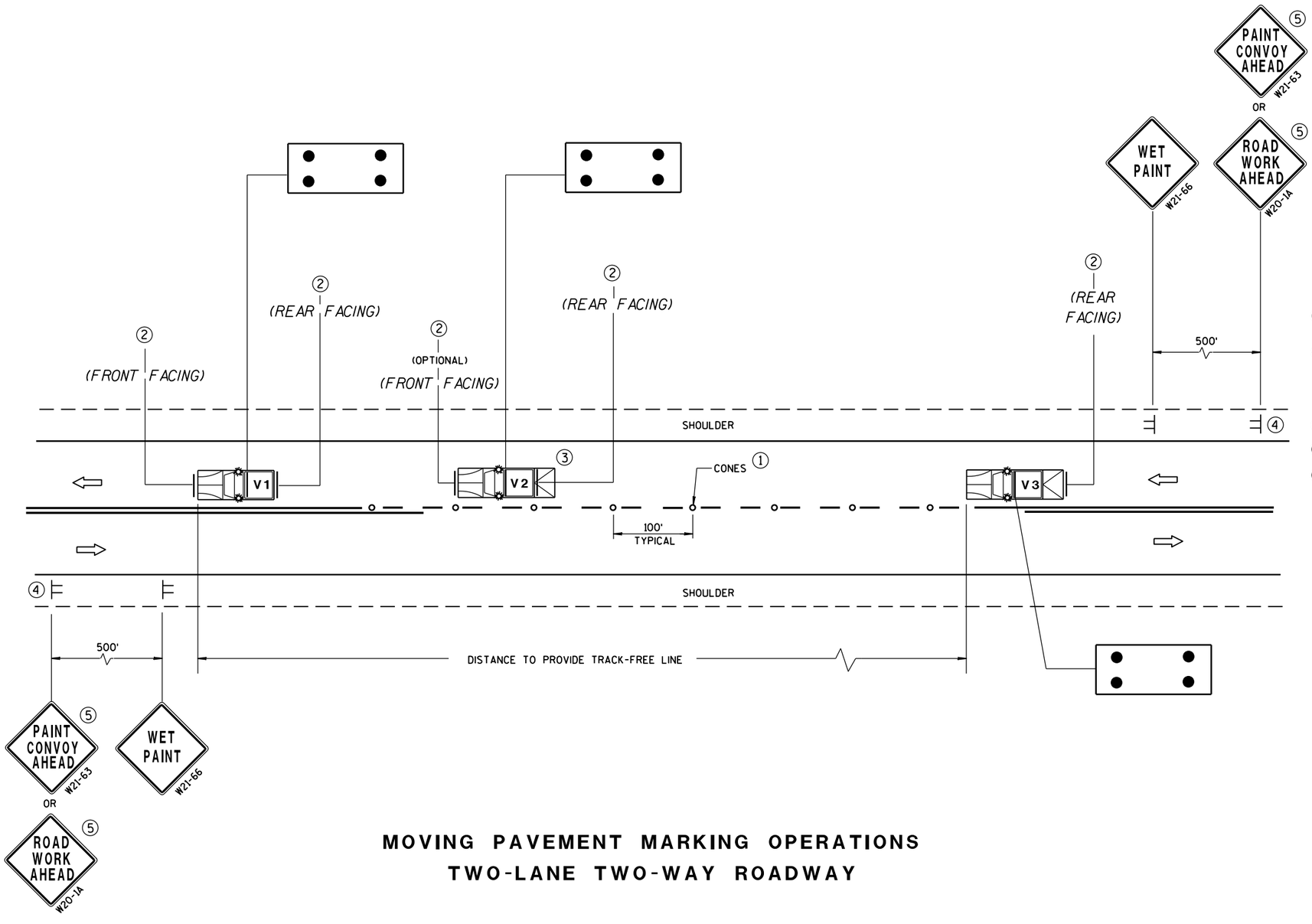
S.D.D. 15 C 12-6



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

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.

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

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

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

LEGEND

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

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	

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S.D.D. 15 C 19-5a

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S.D.D. 15 C 19-5a

GENERAL NOTES

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

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

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

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

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.

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.

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

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

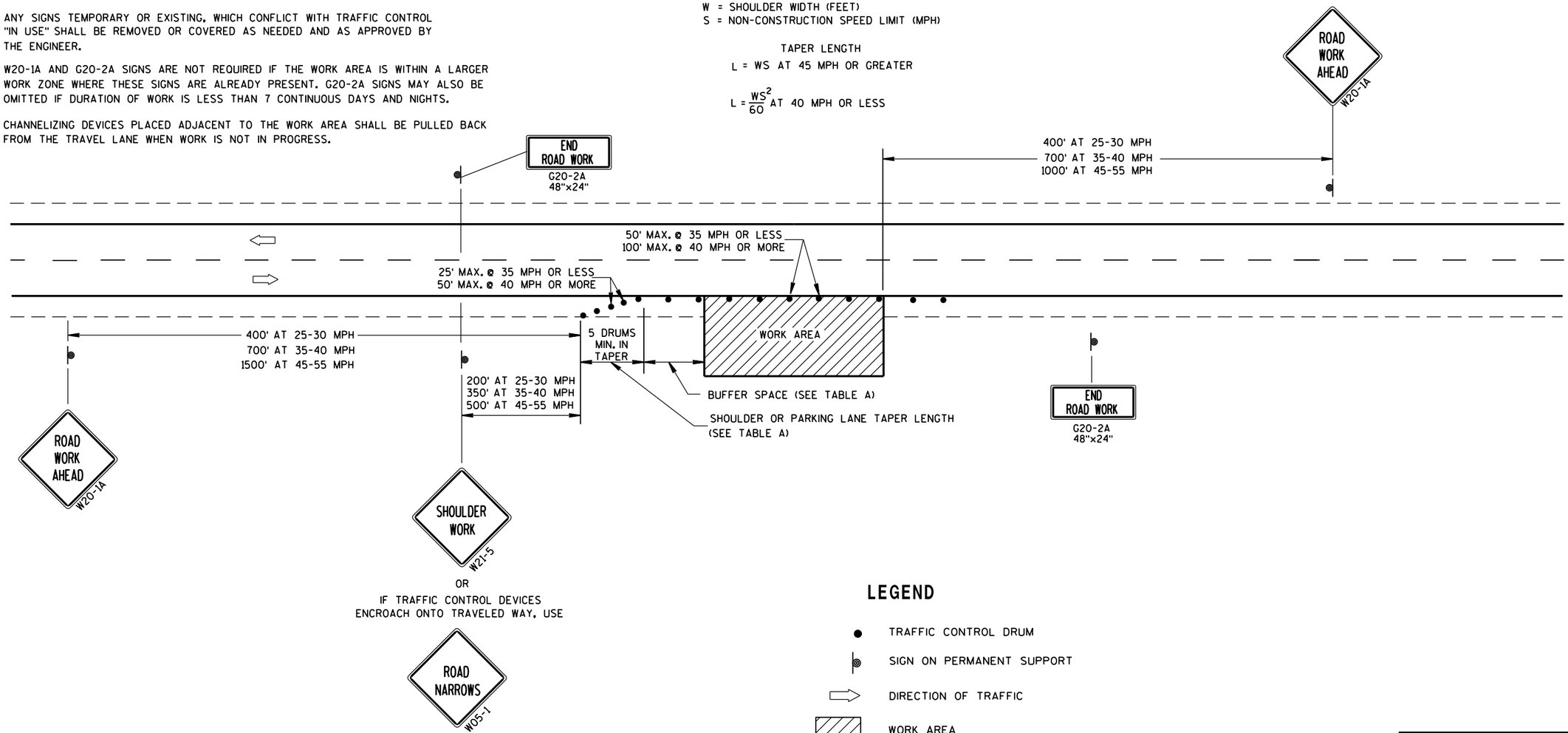
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGII — FIC

FHWA

6

S.D.D. 15 D 28-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY 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.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.
5. 700 FOOT TEMPORARY MARKING DOUBLE YELLOW LINE 4 - INCH. WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.

GENERAL NOTES

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

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

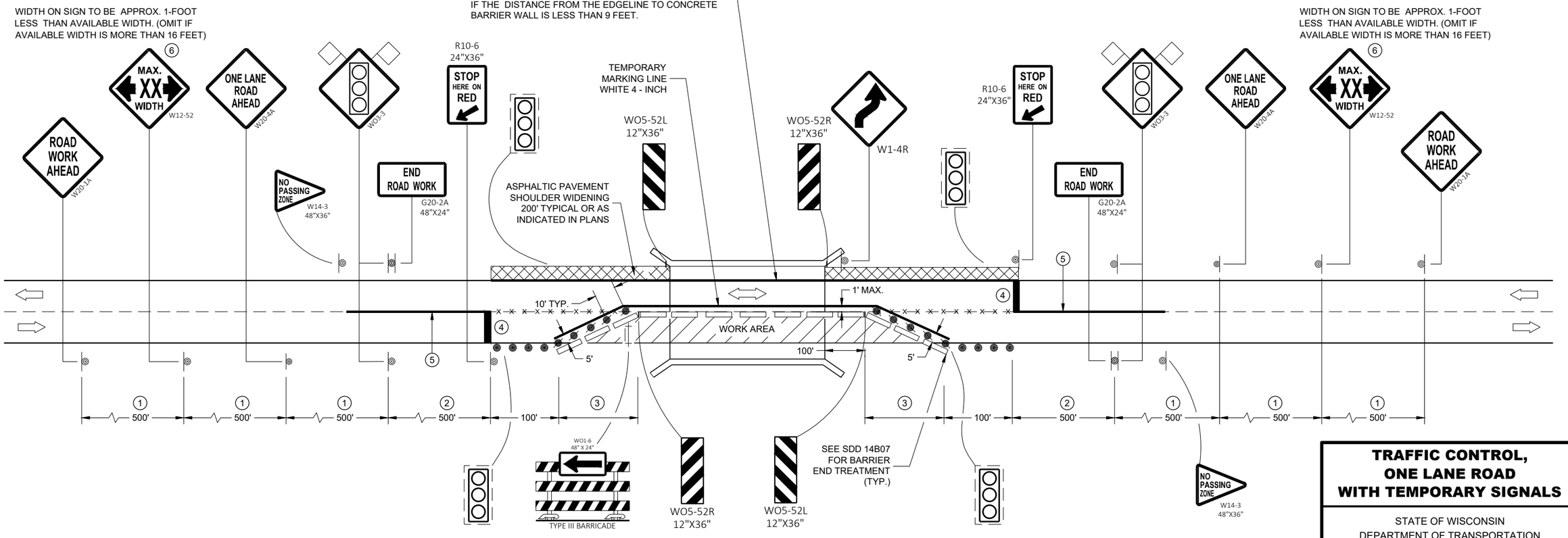
THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

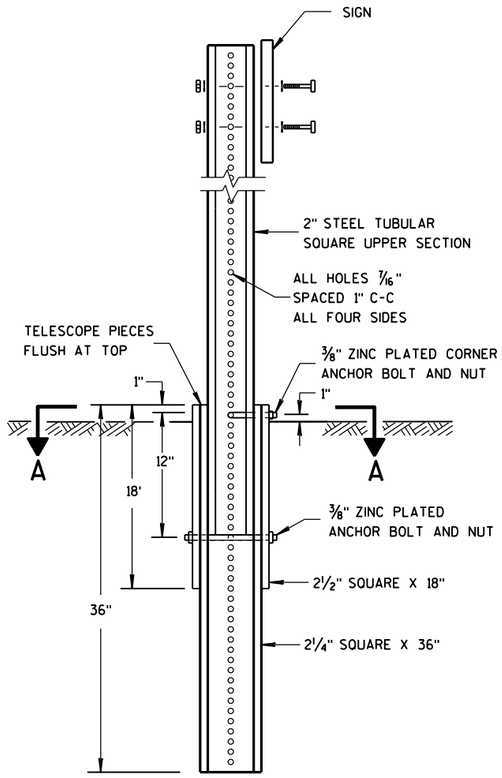
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

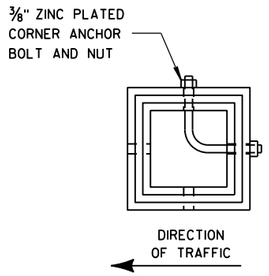
FHWA

SDD 15D33 - 05

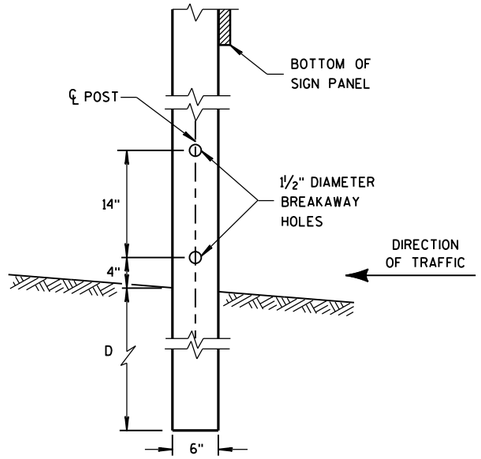
SDD 15D33 - 05



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



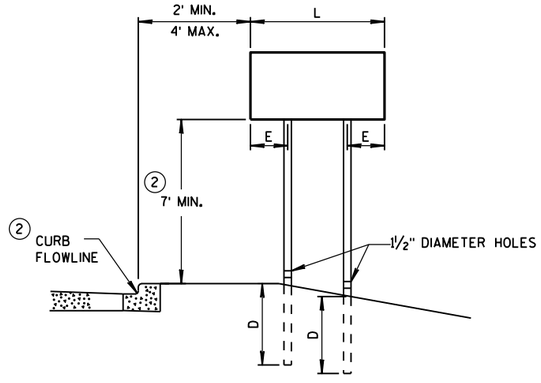
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

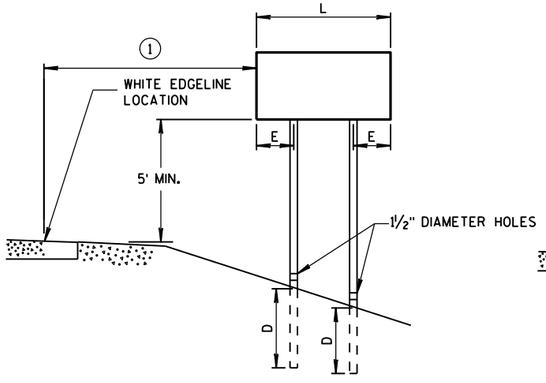
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

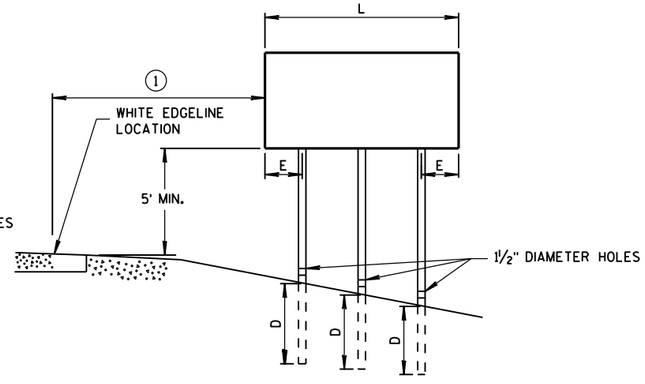
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

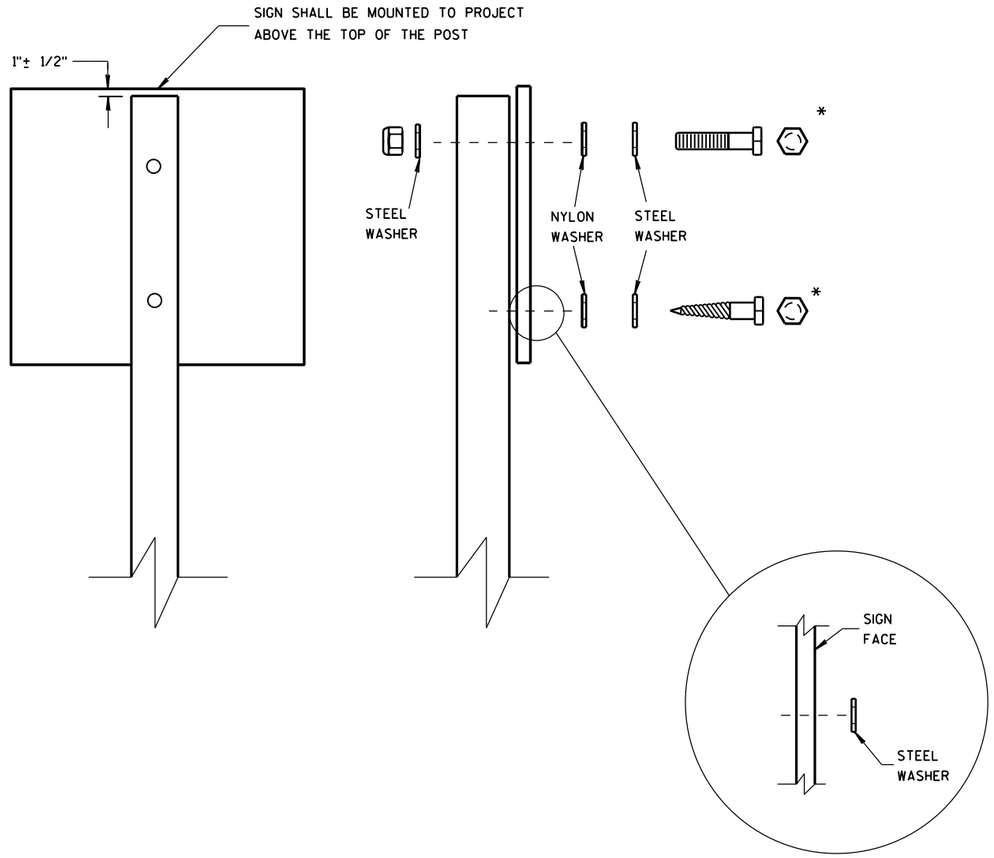
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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 POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

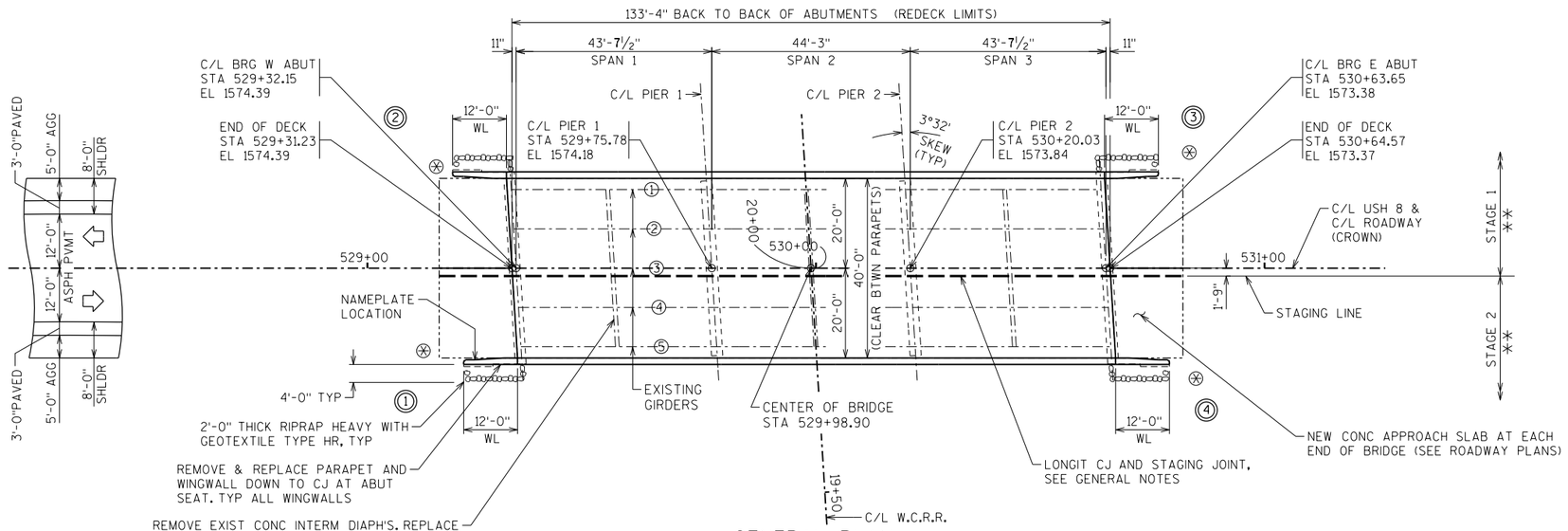
APPROVED

June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

STATE PROJECT NUMBER
1580-30-73



GENERAL PLAN

THREE SPAN - 36" PRESTRESSED GIRDER BRIDGE

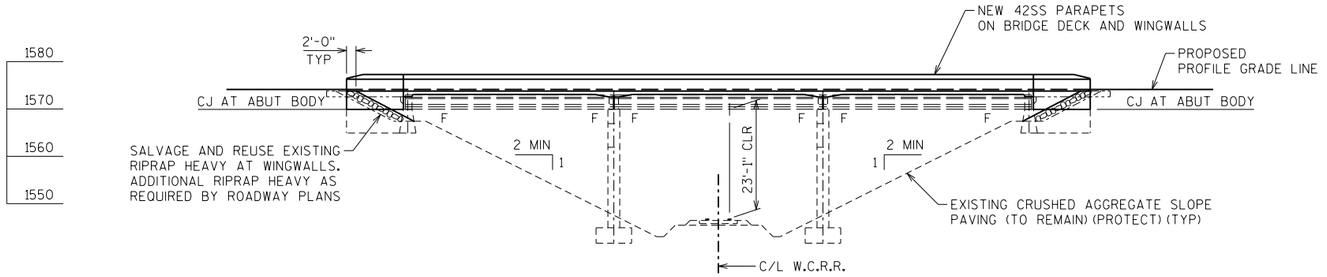
LEGEND

◎ INDICATES WING.

WL WING LENGTH

⊛ LOCATION OF ANCHOR ASSEMBLIES FOR THRIE BEAM.

** SEE SHEET 12 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.



GENERAL ELEVATION

LOOKING DOWN SUBSTRUCTURE UNITS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS20

INVENTORY RATING FACTOR: RF = HS19
OPERATING RATING FACTOR: RF = HS32
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

INVENTORY AND OPERATING RATINGS INCLUDE ¼" POLYMER WEARING SURFACE.

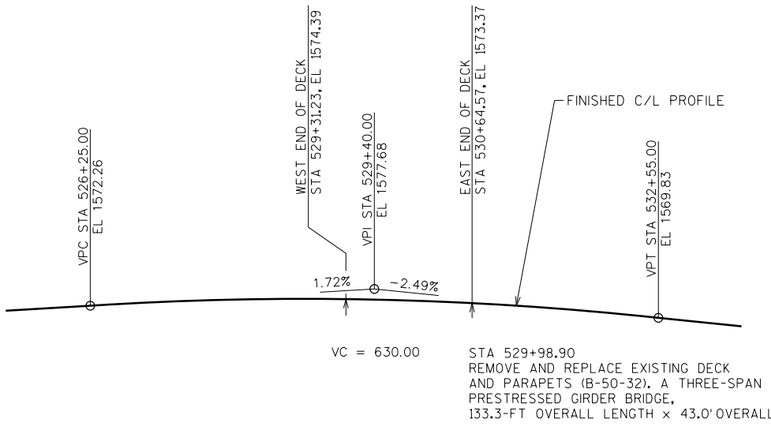
MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE _____ f'c = 4,000 psi
- ALL OTHER _____ f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT
AASHTO GRADE 60 _____ fy = 60,000 psi
ALL BAR STEEL SHALL BE EPOXY COATED

LIST OF DRAWINGS

TRAFFIC DATA

ADT (2019)	=	2300
ADT (2039)	=	2750
DHV	=	331
DD	=	61/39
T	=	23.5 %
DESIGN SPEED	=	55 MPH



PROPOSED PROFILE GRADE LINE

EXISTING ELEVATIONS W.C.R.R.

1/12/2019

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/05/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-50-32

U.S.H. 8 OVER W.C.R.R.

COUNTY	TOWN ~~CITY/VILLAGE~~
PRICE	PRENTICE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
NCK	CJB	DLF	NCK

DECK REPLACEMENT

SHEET 1 OF 12

98

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

8

8

PLOT TIME: 5:53:30 AM
PLOT DATE: 1/12/2019
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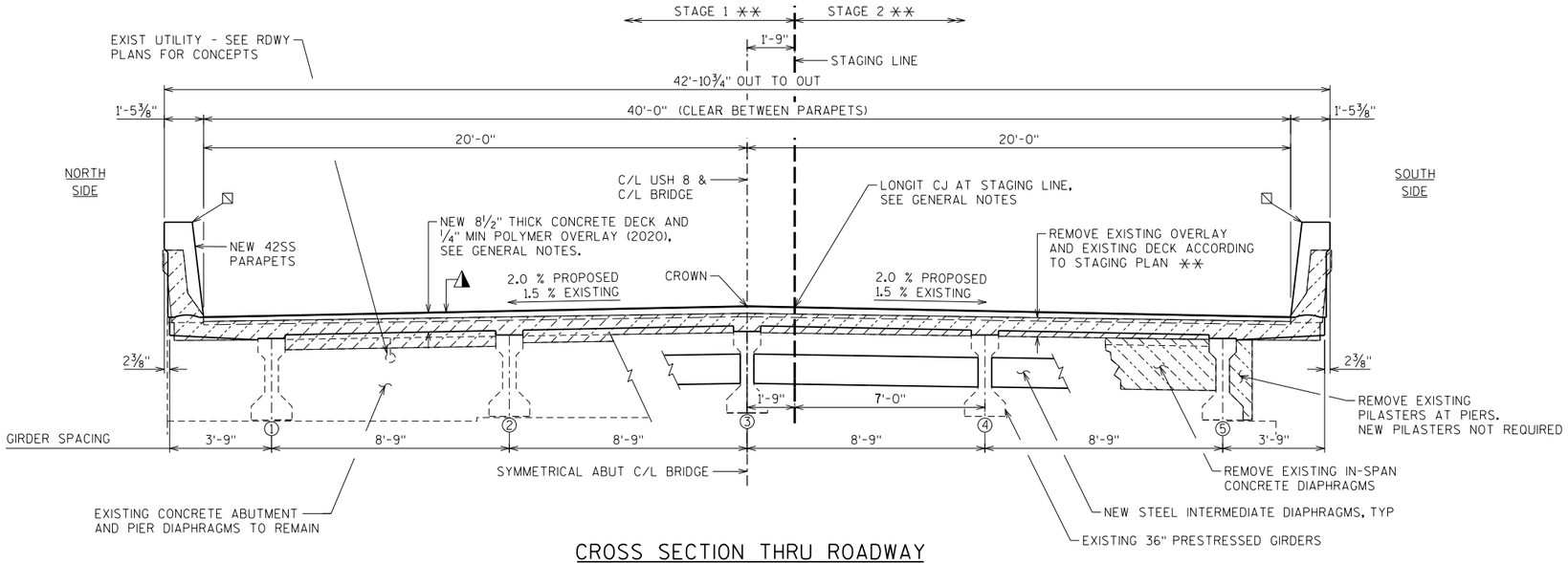
STATE PROJECT NUMBER
1580-30-73



CROSS SECTION THRU ROADWAY
(LOOKING EAST)

LEGEND

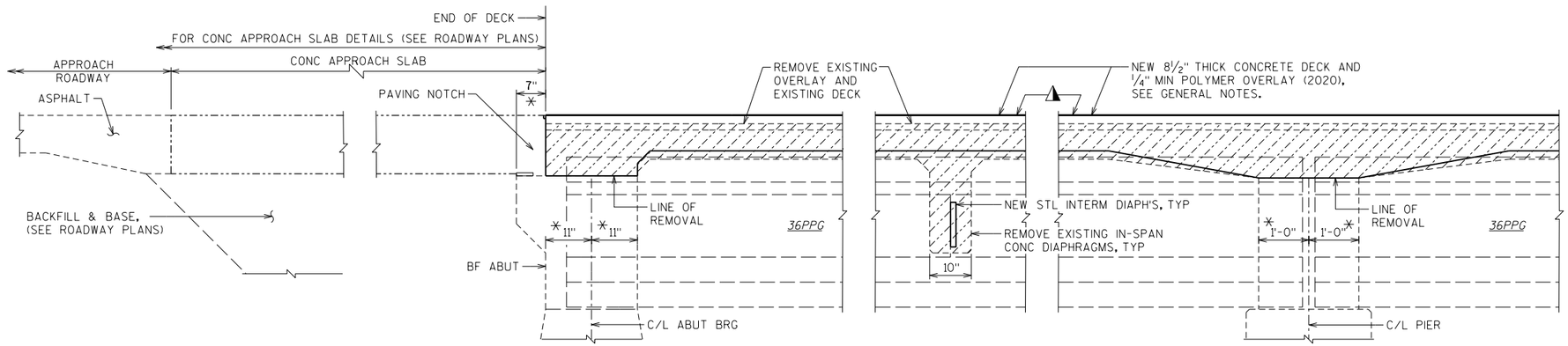
** SEE SHEET 12 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

* DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS

INDICATES REMOVAL

COAT PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEETS 3.

COAT DECK WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEET 2. APPLICATION TO BE APPLIED IN THE 2019 CONSTRUCTION YEAR.



TYPICAL LONGITUDINAL SECTIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

DRAWN BY DLF | PLANS CK'D. NCK

DECK REPLACEMENT CONT.

SHEET 2 OF 12
99

8

8

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PLOT DATE: 1/2/2019
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STATE PROJECT NUMBER
1580-30-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

ALL ELEVATIONS ARE IN FEET.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

ALL APPROACH SLABS DESIGN, PLANS AND QUANTITY ARE ROADWAY PLAN ITEMS. INCLUDING BUT NOT LIMITED TO BACKFILL, BASE MATERIALS, AND FINISHED GRADING TO CONSTRUCT APPROACH SLABS ARE CONSIDERED ROADWAY ITEMS.

LONGITUDINAL CONSTRUCTION JOINT AND STAGING JOINT LOCATION TO BE DETERMINED BY THESE PLANS AND BY THE FIELD ENGINEER. COORDINATE WITH STAGING PLANS.

THE CONTRACTOR SHALL SUPPLY A NEW NAMEPLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAMEPLATE TO SHOW ORIGINAL CONSTRUCTION YEAR. SEE EXISTING NAMEPLATE FOR DATE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAWCUT UNLESS OTHERWISE NOTED.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IIN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

POLYMER OVERLAY APPLICATION TO THE DECK TO BE SUSPENDED ONE YEAR UNTIL 2020 CONSTRUCTION YEAR.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

AT THE ABUTMENTS, THE DECK JOINT IS COMPRISED OF A FILLER AND SEALANT, THERE IS NO STRIP SEAL OR COVER PLATED EXPANSION JOINT.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-BITUMINOUS JOINT SEALER PER SECTION 502.209 (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

APPLY "PIGMENTED SURFACE SEALER" TO THE CONCRETE PARAPETS PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

APPLY "PROTECTIVE SURFACE TREATMENT" TO THE DECK PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE WITH THESE STRUCTURE PLANS THE BRIDGE STAGING.

DECK SURFACE PREPARATION FOR APPLICATION OF THE POLYMER OVERLAY IN THE 2020 CONSTRUCTION YEAR IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES - B-50-32

	BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT STAGE 1	WEST ABUT STAGE 2	EAST ABUT STAGE 1	EAST ABUT STAGE 2	SUPER STAGE 1	SUPER STAGE 2	TOTALS STAGE 1	TOTALS STAGE 2	TOTALS
(1)	203.0200	REMOVING OLD STRUCTURE STA 529+98.90	LS	-	-	-	-	-	-	-	-	1
	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-50-32	LS	-	-	-	-	-	-	-	-	1
	203.0225.S	DEBRIS CONTAINMENT B-50-32	LS	-	-	-	-	-	-	-	-	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-50-32	LS	-	-	-	-	-	-	-	-	1
(8)	210.1500	BACKFILL STRUCTURE TYPE A	TON	16	16	16	16	-	-	32	32	64
(3)	502.0100	CONCRETE MASONRY BRIDGES	CY	3	3	3	3	110	98	116	104	220
(6)	502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	-	321	271	321	271	592
(2)	502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	-	80	80	80	80	160
(4)	502.4207	ADHESIVE ANCHORS NO. 7 BAR	EACH	12	12	12	12	-	-	24	24	48
(3)	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	400	400	400	400	26,360	21,720	27,160	22,520	49,680
	506.4000	STEEL DIAPHRAGMS B-50-32	EACH	-	-	-	-	-	-	6	6	12
(5)	509.1500	CONCRETE SURFACE REPAIR	SF	-	-	-	-	-	-	-	-	15
(7)	509.5100.S	POLYMER OVERLAY	SY	-	-	-	-	321	271	321	271	592
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3	3	3	3	-	-	6	6	12
	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	140	140	135	135	-	-	275	275	550
	606.0300	RIPRAP HEAVY	CY	5	5	5	5	-	-	10	10	20
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	-	2	2	2	2	4
(9)	645.0120	GEOTEXTILE TYPE HR	SY	12	12	12	12	-	-	24	24	48
		NON-BID ITEMS										
		FILLER	SIZE	—	—	—	—	—	—	—	—	1/2" & 3/4"
		NAMEPLATE	EACH	—	—	—	—	—	—	—	—	1

QUANTITIES NOTES

(1) REMOVAL OF DECK, IN-SPAN DIAPHRAGMS, PIER PILASTERS, AND ALL EXISTING PARAPETS INCLUDING ON WINGWALLS. GIRDERS, ABUTMENTS AND PIER DIAPHRAGMS AND SUBSTRUCTURES TO REMAIN. PROTECT ITEMS TO REMAIN DURING REMOVALS. REPLACE ALL INTERMEDIATE CONCRETE DIAPHRAGMS WITH STEEL DIAPHRAGMS.

(2) FURNISH AND APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES, ENDS, AND TOP OF THE CONCRETE PARAPETS.

(3) INCLUDES ITEMS FOR 42SS PARAPETS.

(4) WEIGHT OF ANCHORS INCLUDED IN "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

(5) AS LOCATED BY FIELD ENGINEER, UNDISTRIBUTED AMOUNT.

(6) APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK. APPLICATION DECK PREPARATION PER SPECIFICATION.

(7) TO BE APPLIED TO THE DECK SURFACE IN 2020 CONSTRUCTION YEAR.

(8) A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TON.

(9) NEW GEOTEXTILE FABRIC SHALL REPLACE THE EXISTING GEOTEXTILE FABRIC UNDER THE RIPRAP DISTURBED BY EXCAVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

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NOTES AND QUANTITIES

SHEET 3 OF 12

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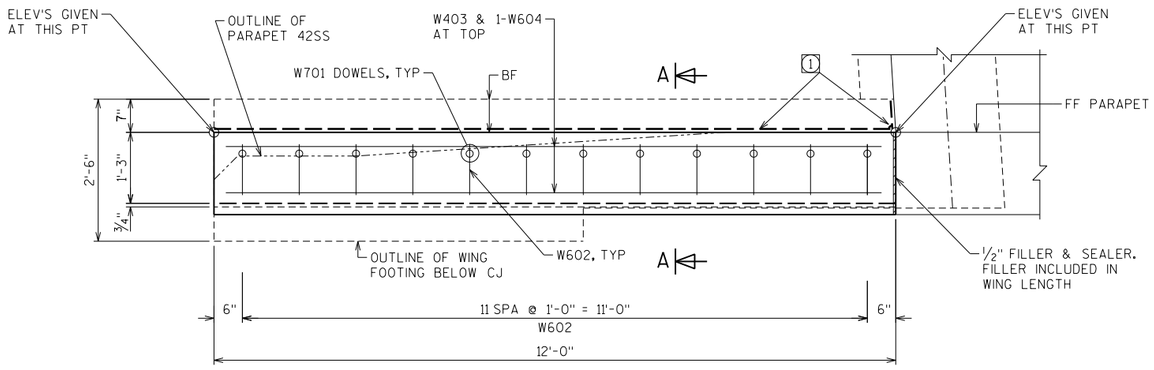
8

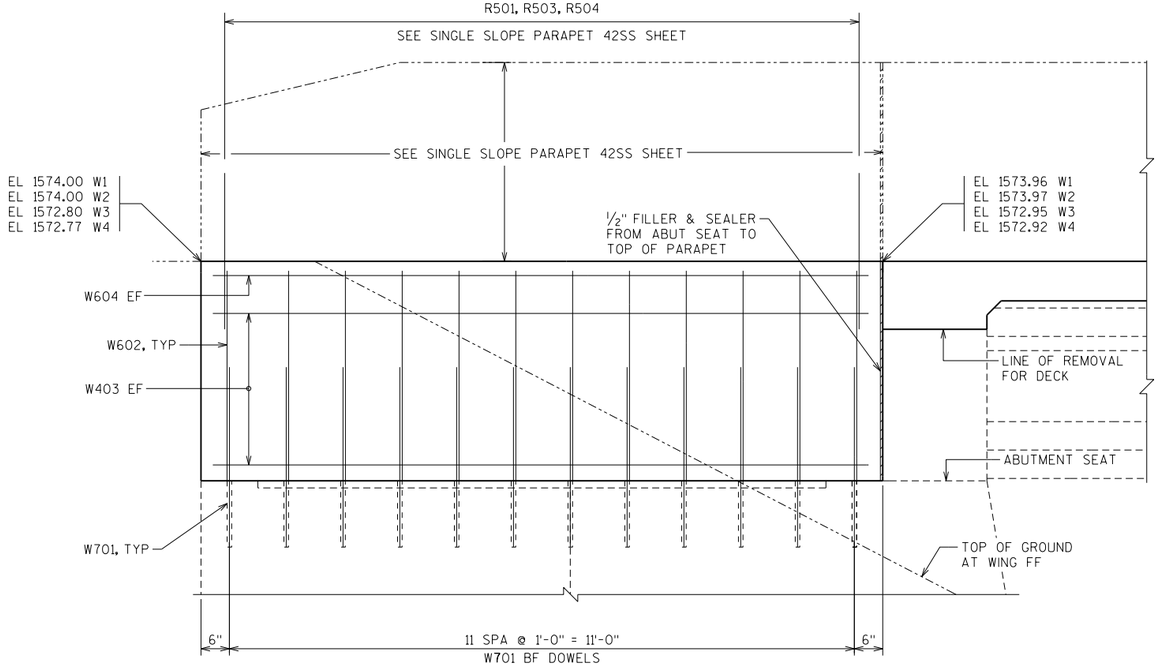
8

STATE PROJECT NUMBER
1580-30-73



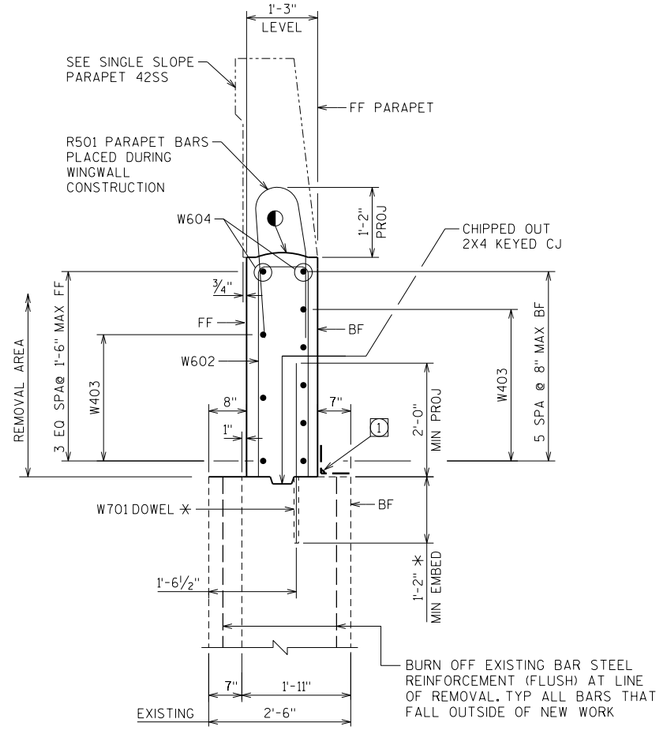
PLAN

(WING 1 SHOWN, WING 2, 3 & 4 SIMILAR)



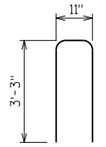
OUTSIDE ELEVATION

(WING 1 SHOWN, WING 2, 3 & 4 SIMILAR)

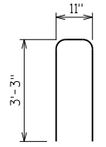


SECTION A-A

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.



W602



E602

BILL OF BARS — WEST ABUT WINGWALLS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
W701	X	12	3 - 2			DOWEL BARS	X	
"	X	12	3 - 2			DOWEL BARS		X
W602	X	12	7 - 2		X	VERTICAL	X	
"	X	12	7 - 2		X	VERTICAL		X
W403	X	16	11 - 7			HORIZONTAL	X	
"	X	16	11 - 7			HORIZONTAL		X
W604	X	4	11 - 7			HORIZONTAL TOP	X	
"	X	4	11 - 7			HORIZONTAL TOP		X

BILL OF BARS — EAST ABUT WINGWALLS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
E701	X	12	3 - 2			DOWEL BARS	X	
"	X	12	3 - 2			DOWEL BARS		X
E602	X	12	7 - 2		X	VERTICAL	X	
"	X	12	7 - 2		X	VERTICAL		X
E403	X	16	11 - 7			HORIZONTAL	X	
"	X	16	11 - 7			HORIZONTAL		X
E604	X	4	11 - 7			HORIZONTAL TOP	X	
"	X	4	11 - 7			HORIZONTAL TOP		X

NOTES

SEE GENERAL NOTES ON SHEET 3.

LEGEND

1 18" INCH RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT REPAIR.

* ADHESIVE ANCHOR NO. 7 BAR, 14" MIN EMBEDMENT.

CONST. JOINT - STRIKE OFF AS SHOWN. SEE SINGLE SLOPE PARAPET 42SS SHEET FOR DETAILS

INDICATES WING.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

W1 = WING 1 (STAGE 2)
W2 = WING 2 (STAGE 1)
W3 = WING 3 (STAGE 1)
W4 = WING 4 (STAGE 2)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

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WINGWALL REPAIRS

SHEET 4 OF 12

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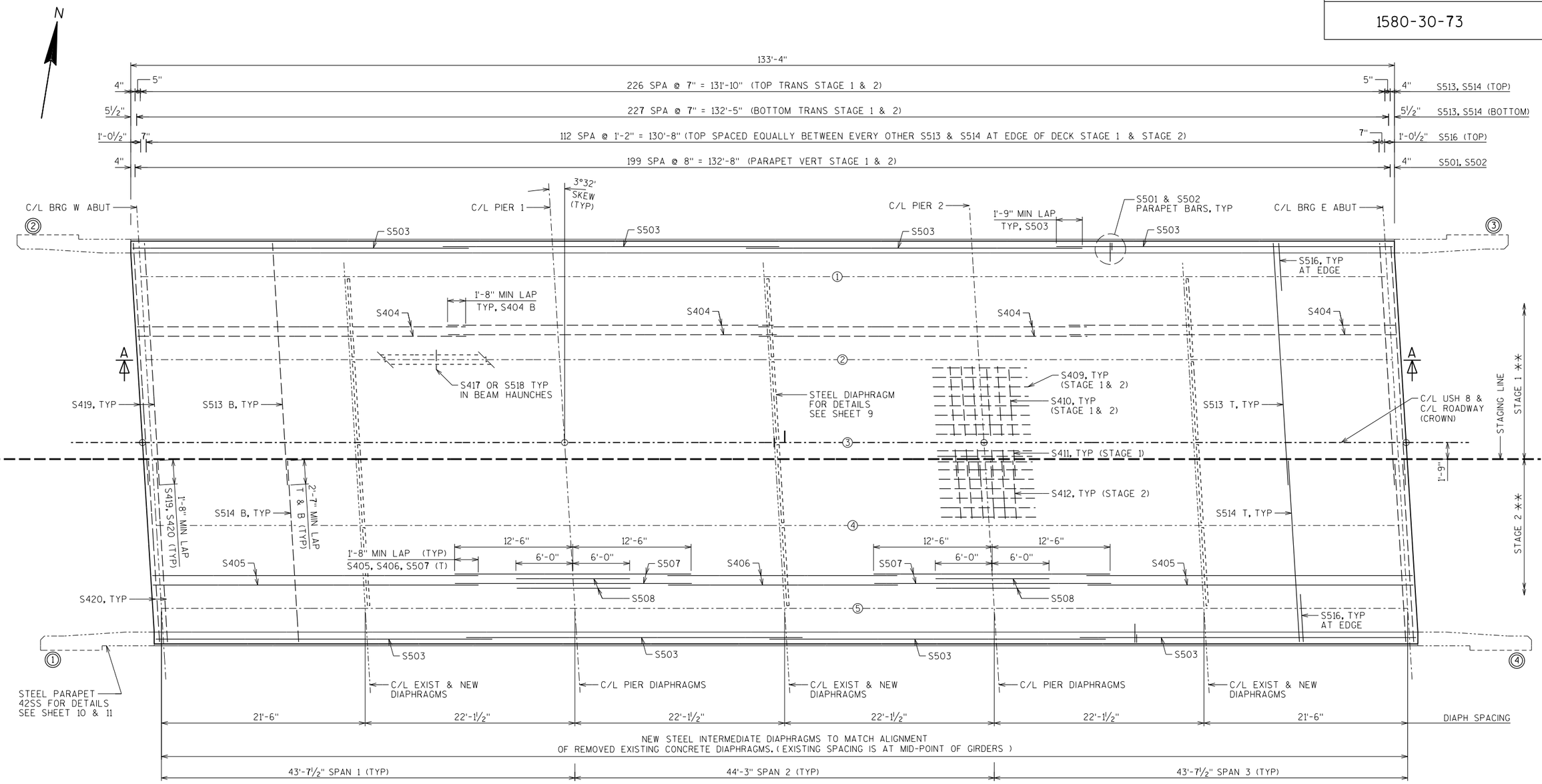
PLOT TIME: 5:53:31 AM
PLOT DATE: 1/2/2019
FILE NAME : S:\UZ\W\Wtnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-32\bridge\b50032di.dgn

STATE PROJECT NUMBER
1580-30-73



PLAN - SHOWING DIAPHRAGM SPACING AND REINFORCEMENT

— — — — — INDICATES BOTTOM BAR STEEL

——————— INDICATES TOP BAR STEEL

NOTE

SEE SHEET 7 FOR HALF SECTION A-A.

LEGEND

** SEE SHEET 12 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

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SUPERSTRUCTURE DETAILS

SHEET 5 OF 12

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PLOT TIME: 5:53:32 AM

PLOT DATE: 1/2/2019

FILE NAME : S:\UZ\W\Witnc\144737\5-final-dsgn\5l-drawings\20-Struct\B-50-32\bridge\b50032g36.dgn

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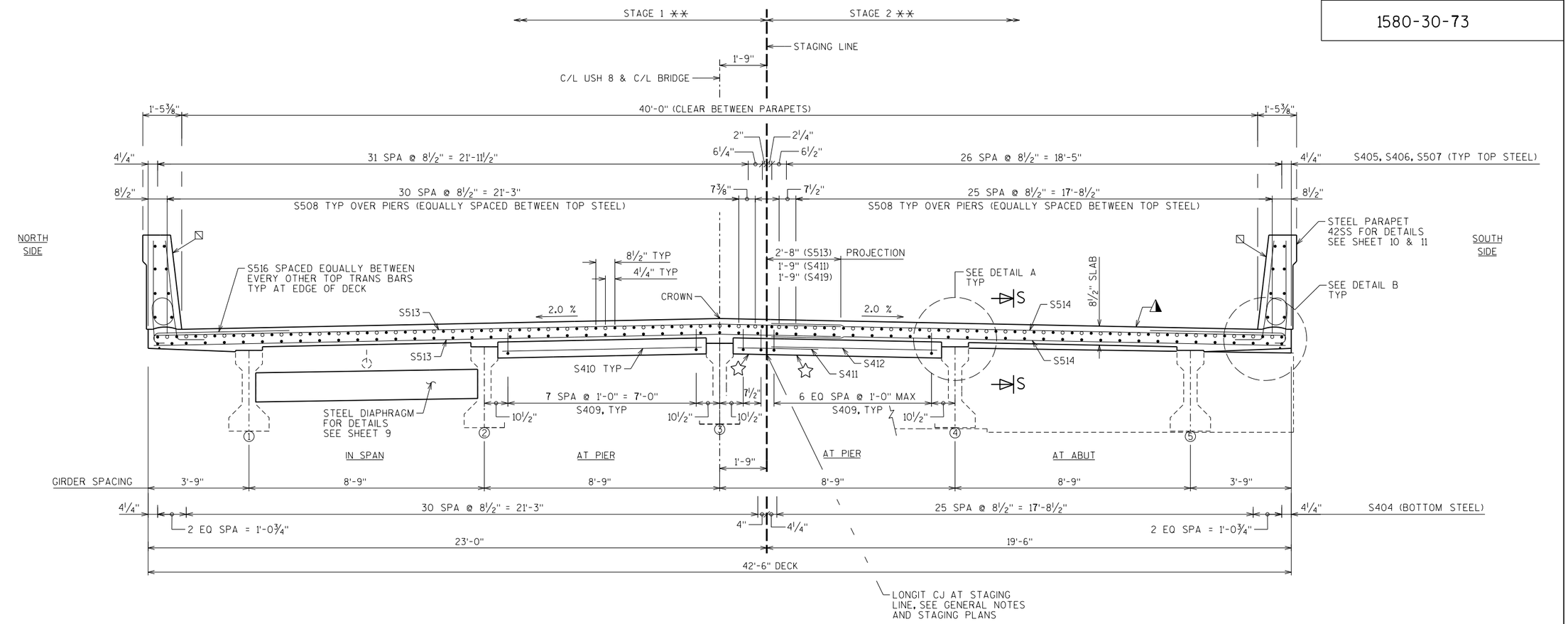
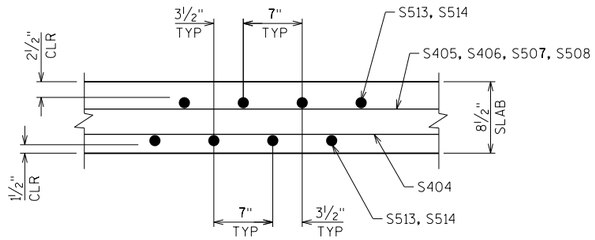


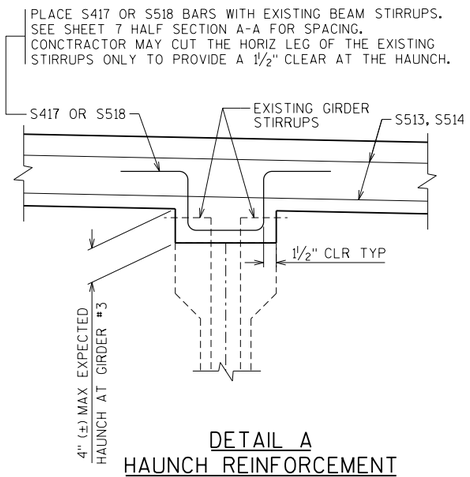
CROSS SECTION THRU ROADWAY

(LOOKING EAST)

☆ CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR FULL LENGTH OF EXISTING DECK FOR STAGE 1 TRAFFIC AND SUPPORT FOR FULL LENGTH OF NEW DECK FOR STAGE 2 TRAFFIC.

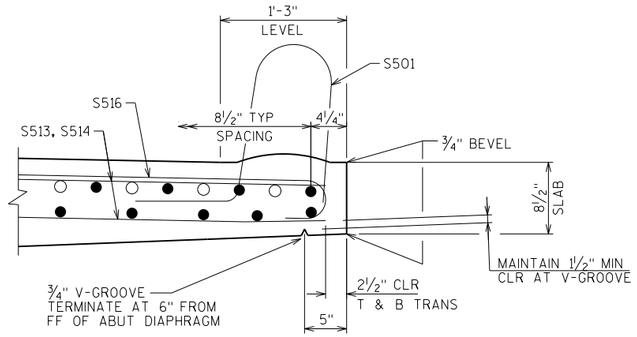


SECTION S-S



DETAIL A
HAUNCH REINFORCEMENT

TYP IN GIRDER HAUNCHS



DETAIL B

PARAPET NOT SHOWN FOR CLARITY

LEGEND

** SEE SHEET 12 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

▨ COAT PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEETS 3.

◭ COAT DECK WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEET 3. APPLICATION TO BE APPLIED IN THE 2019 CONSTRUCTION YEAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

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SUPERSTRUCTURE DETAILS

SHEET 6 OF 12

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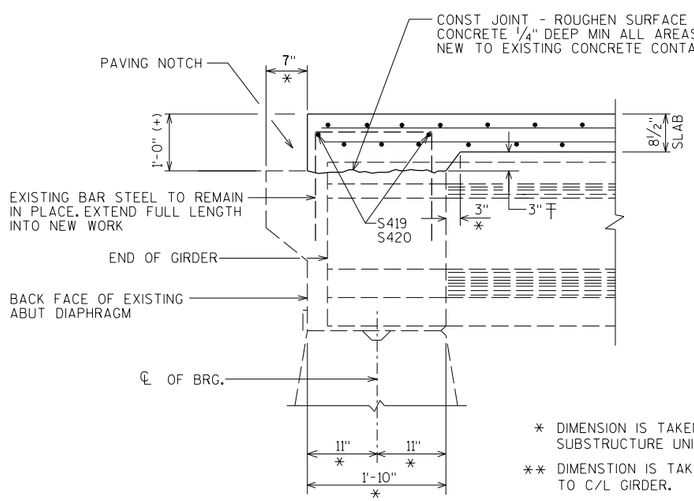
PLOT DATE: 1/2/2019 PLOT TIME: 5:53:32 AM

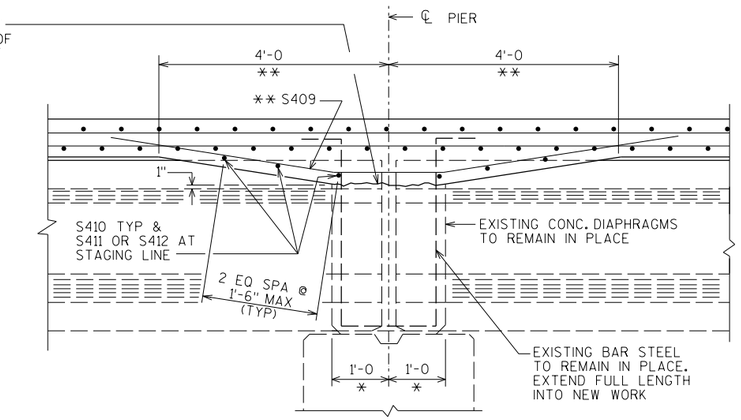
FILE NAME : S:\UZ\KW\Wi1nc\V44737\5-final-dsgn\5i-drawings\20-Struct\B-50-32\bridge\b50032g36.dgn

STATE PROJECT NUMBER
1580-30-73

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.



AT ABUTMENTS



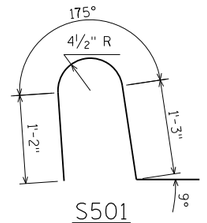
AT PIER DIAPHRAGM

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

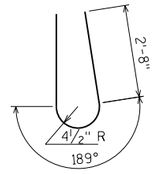
** DIMENSTION IS TAKE PARALLEL TO C/L GIRDER.

∓ MAINTAIN 3" BEVEL HT. DISTANCE FROM BOTTOM OF DECK TO CJ VARIES.

PARTIAL LONGITUDINAL SECTION



S501



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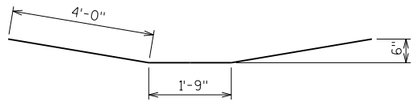

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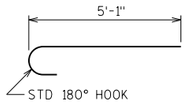

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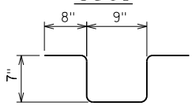

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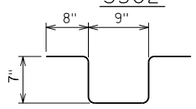
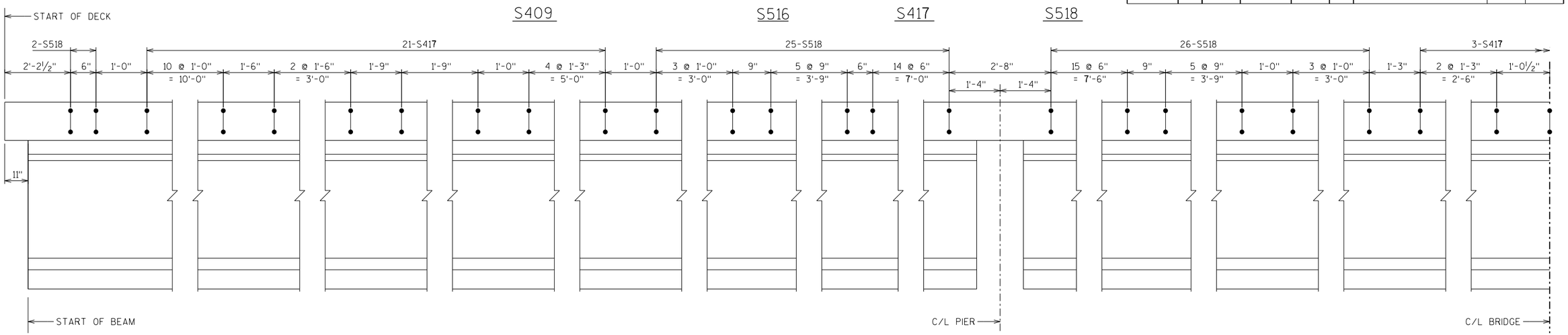


S518



HALF SECTION A-A

USE TO PLACE S417 & S518.
BEAM STIRRUPS, STRANDS AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY.
REINFORCEMENT SYMMETRIC ABOUT CENTER OF BRIDGE.

BILL OF BARS — SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
S501	X	200	4 - 5		X	PARAPET DOWEL	X	
"	X	200	4 - 5		X	PARAPET DOWEL		X
S502	X	200	6 - 8		X	PARAPET VERTICAL	X	
"	X	200	6 - 8		X	PARAPET VERTICAL		X
S503	X	32	35 - 4			PARAPET HORIZONTAL	X	
"	X	32	35 - 4			PARAPET HORIZONTAL		X
S404	X	132	35 - 0			LONGIT B	X	
"	X	112	35 - 0			LONGIT B		X
S405	X	66	32 - 2			LONGIT T	X	
"	X	56	32 - 2			LONGIT T		X
S406	X	33	24 - 3			LONGIT T	X	
"	X	28	24 - 3			LONGIT T		X
S507	X	66	25 - 0			LONGIT T OVER PIERS	X	
"	X	56	25 - 0			LONGIT T OVER PIERS		X
S508	X	64	12 - 0			LONGIT T OVER PIERS	X	
"	X	54	12 - 0			LONGIT T OVER PIERS		X
S409	X	36	9 - 9		X	HAUNCH OVER PIER B	X	
"	X	30	9 - 9		X	HAUNCH OVER PIER B		X
S410	X	24	7 - 4			HAUNCH OVER PIER B	X	
"	X	12	7 - 4			HAUNCH OVER PIER B		X
S411	X	12	3 - 0			HAUNCH OVER PIER B	X	
S412	X	12	6 - 2			HAUNCH OVER PIER B		X
S513	X	457	25 - 6			TRANS T & B	X	
S514	X	457	19 - 3			TRANS T & B		X
Not Used								
S516	X	114	5 - 4		X	TRANS AT EDGE	X	
"	X	114	5 - 4		X	TRANS AT EDGE		X
S417	X	147	2 - 11		X	HAUNCH OVER GIR	X	
"	X	98	2 - 11		X	HAUNCH OVER GIR		X
S518	X	318	2 - 11		X	HAUNCH OVER GIR	X	
"	X	212	2 - 11		X	HAUNCH OVER GIR		X
S419	X	4	24 - 8			OVER ABUT DIAPH	X	
S420	X	4	19 - 4			OVER ABUT DIAPH		X

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

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SUPERSTRUCTURE DETAILS

SHEET 7 OF 12
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PLOT TIME: 5:53:33 AM
PLOT DATE: 1/2/2019
FILE NAME : S:\UZ\WI\Witnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-32\bridge\b50032g36.dgn

STATE PROJECT NUMBER

1580-30-73

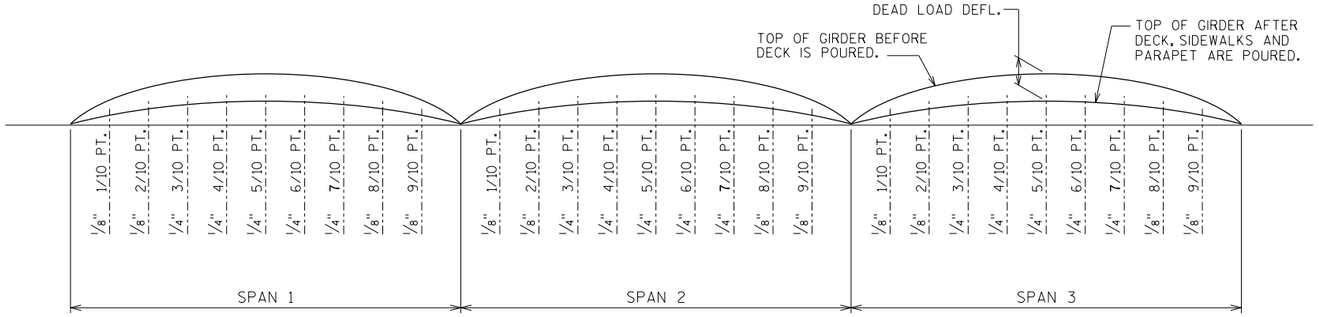
FINAL TOP OF DECK ELEVATIONS

	SPAN 1											SPAN 2										SPAN 3										
	C/L BRG W ABUT	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	C/L PIER 1	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	C/L PIER 2	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	C/L BRG E ABUT
N DECK EDGE (GUTTER)	1573.99	1573.98	1573.96	1573.94	1573.93	1573.91	1573.88	1573.86	1573.84	1573.81	1573.79	1573.76	1573.73	1573.70	1573.67	1573.63	1573.60	1573.56	1573.53	1573.49	1573.45	1573.41	1573.37	1573.32	1573.28	1573.23	1573.19	1573.14	1573.09	1573.04	1572.99
GIRDER 1	1574.04	1574.03	1574.01	1573.99	1573.97	1573.95	1573.93	1573.91	1573.89	1573.86	1573.84	1573.81	1573.78	1573.75	1573.72	1573.68	1573.65	1573.61	1573.58	1573.54	1573.50	1573.46	1573.42	1573.37	1573.33	1573.28	1573.24	1573.19	1573.14	1573.09	1573.04
GIRDER 2	1574.21	1574.20	1574.18	1574.17	1574.15	1574.13	1574.11	1574.08	1574.06	1574.03	1574.01	1573.98	1573.95	1573.92	1573.89	1573.85	1573.82	1573.78	1573.75	1573.71	1573.67	1573.63	1573.59	1573.54	1573.50	1573.45	1573.41	1573.36	1573.31	1573.26	1573.20
GIRDER 3 (PROFILE GRADE)	1574.39	1574.37	1574.36	1574.34	1574.32	1574.30	1574.28	1574.26	1574.23	1574.21	1574.18	1574.15	1574.12	1574.09	1574.06	1574.02	1573.99	1573.95	1573.92	1573.88	1573.84	1573.80	1573.75	1573.71	1573.67	1573.62	1573.57	1573.53	1573.48	1573.43	1573.37
STAGING JOINT	1574.35	1574.34	1574.32	1574.30	1574.28	1574.26	1574.24	1574.22	1574.20	1574.17	1574.14	1574.12	1574.09	1574.05	1574.02	1573.99	1573.95	1573.92	1573.88	1573.84	1573.80	1573.76	1573.72	1573.68	1573.63	1573.59	1573.54	1573.49	1573.44	1573.39	1573.34
GIRDER 4	1574.21	1574.20	1574.18	1574.16	1574.14	1574.12	1574.10	1574.08	1574.05	1574.03	1574.00	1573.97	1573.94	1573.91	1573.88	1573.85	1573.81	1573.77	1573.74	1573.70	1573.66	1573.62	1573.57	1573.53	1573.49	1573.44	1573.39	1573.34	1573.29	1573.24	1573.19
GIRDER 5	1574.03	1574.02	1574.00	1573.98	1573.96	1573.94	1573.92	1573.90	1573.88	1573.85	1573.82	1573.79	1573.76	1573.73	1573.70	1573.67	1573.63	1573.59	1573.56	1573.52	1573.48	1573.44	1573.39	1573.35	1573.31	1573.26	1573.21	1573.16	1573.11	1573.06	1573.01
S DECK EDGE (GUTTER)	1573.98	1573.97	1573.95	1573.93	1573.91	1573.89	1573.87	1573.85	1573.82	1573.80	1573.77	1573.74	1573.71	1573.68	1573.65	1573.62	1573.58	1573.54	1573.51	1573.47	1573.43	1573.39	1573.34	1573.30	1573.25	1573.21	1573.16	1573.11	1573.06	1573.01	1572.96

NOTES

THE CONTRACTOR SHALL VERIFY THE TOP OF BEAM ELEVATIONS BEFORE ESTABLISHING THE BRIDGE DECK AND APPROACH ROADWAY ELEVATIONS.

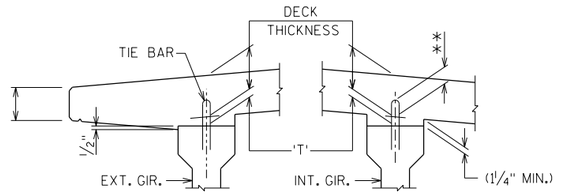
FINAL TOP OF DECK ELEVATIONS DOES NOT INCLUDE THE 1/4" POLYMER OVERLAY.



DEAD LOAD DEFLECTION DIAGRAM

(CONCRETE ONLY DEAD LOAD DEFLECTION)

NOTE: DEFLECTIONS USED FOR COMPUTING GIRDER ELEVATION SHALL BE CALCULATED BY TAKING GIRDER ELEVATION BEFORE & AFTER THE EXISTING DECK IS REMOVED. THE DEFLECTIONS GIVEN ON THIS PLAN SHALL BE USED AS REFERENCE ONLY. FIELD MEASURED DEFLECTION DATA SHALL BE PROPORTIONED TO ACCOUNT FOR THE NEW 8 1/2" DECK THICKNESS VERSUS THE EXISTING DECK THICKNESS. EXISTING DECK THICKNESS SHALL BE VERIFIED.



DECK HAUNCH DETAIL

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 1 3/4" ■ WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

■ BEAMS 1 & 5 THE AVERAGE HAUNCH = 1 1/4"
■ BEAMS 2 & 4 THE AVERAGE HAUNCH = 1 7/8"
BEAM 3 THE AVERAGE HAUNCH = 2 3/8"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

DRAWN BY DLF | PLANS CK'D. NCK

TOP OF DECK ELEVATIONS

SHEET 8 OF 12

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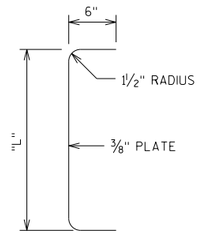
PLOT DATE: 1/2/2019 PLOT TIME: 5:53:33 AM

FILE NAME : S:\UZ\W\Witnc\144737\5-final-dsgn\5l-drawings\20-Struct\B-50-32\bridge\b50032g36.dgn

STATE PROJECT NUMBER
1580-30-73

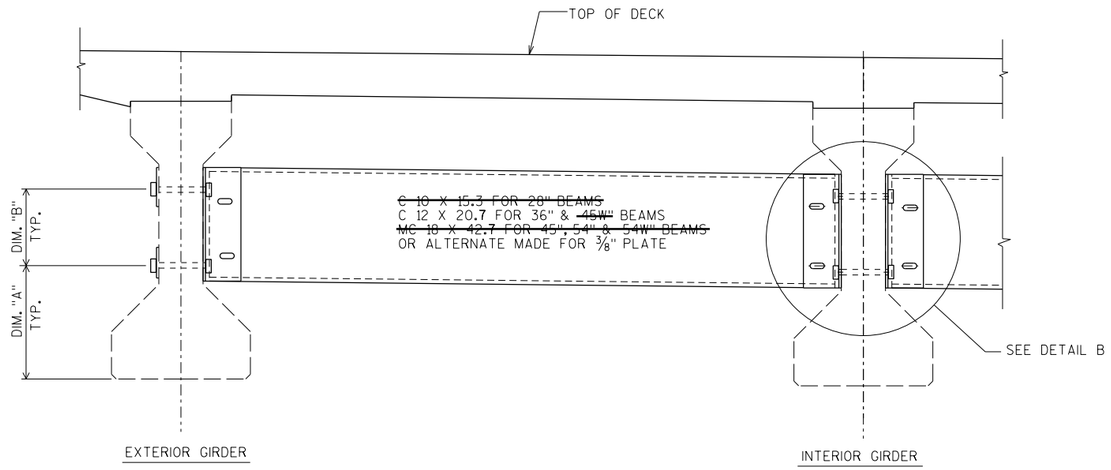
TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
~~28"~~	~~1'-0 7/8"~~	~~5 7/8"~~	~~9 1/2"~~	~~2 1/4"~~
36"	1'-2 7/8"	9 7/8"	1'-1 1/2"	3 1/4"
~~45"~~	~~1'-5 7/8"~~	~~1'-1 7/8"~~	~~1'-5 1/2"~~	~~2 1/4"~~
~~45W"~~	~~1'-9 7/8"~~	~~8 7/8"~~	~~1'-0 1/2"~~	~~2 3/4"~~
~~54"~~	~~1'-7 7/8"~~	~~1'-5 7/8"~~	~~1'-9 1/2"~~	~~4 1/4"~~
~~54W"~~	~~1'-9 7/8"~~	~~1'-5 7/8"~~	~~1'-9 1/2"~~	~~4 1/4"~~



SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

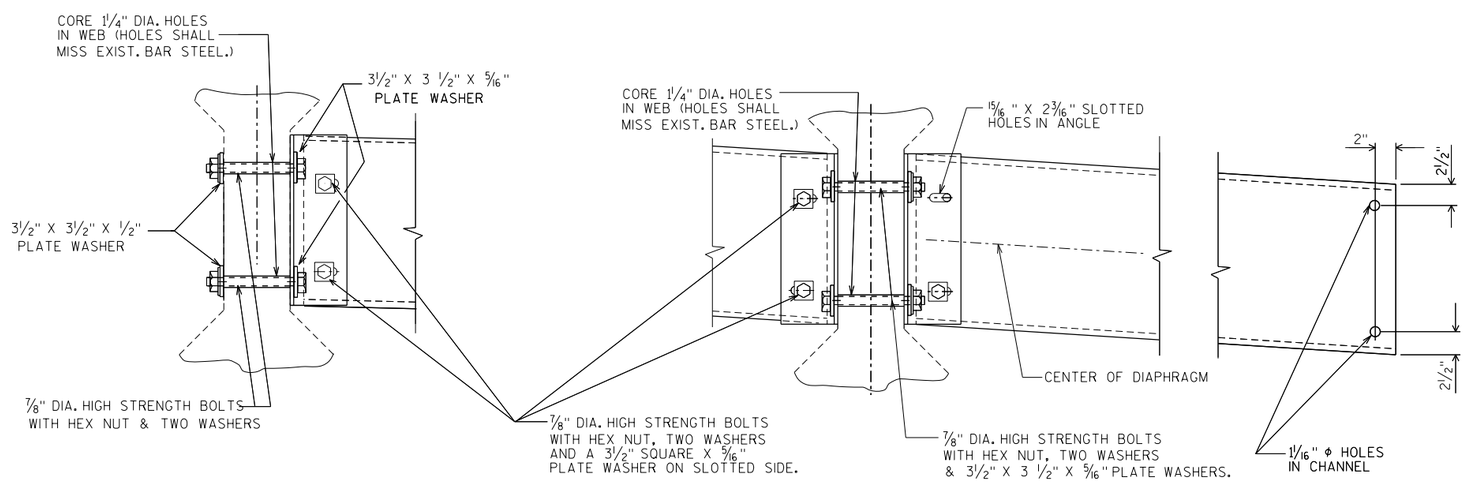
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-50-32", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

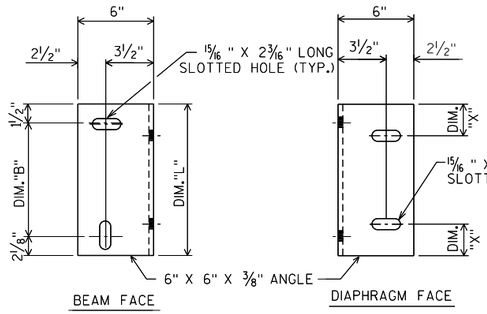
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



(FOR EXTERIOR GIRS. ~~& STAGGERED DIAPHRAGMS~~)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

DRAWN BY DLF | PLANS CK'D. NCK

STEEL DIAPHRAGM

SHEET 9 OF 12

106

GSTDIAMT
1-17

PLOT TIME: 5:53:33 AM
PLOT DATE: 1/12/2019
FILE NAME : S:\UZ\WI\tnc\144737\5-final-dsgn\51-drawings\20-Struct\B-50-32\bridge\b50032gststdiamt.dgn

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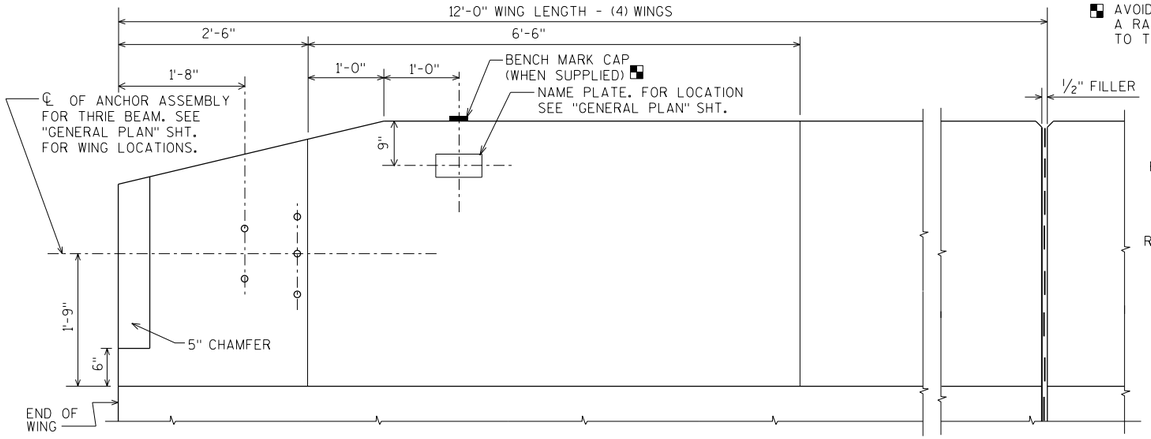
8

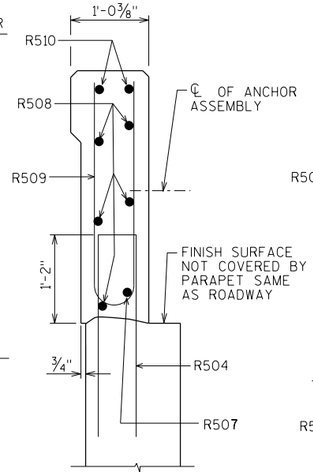
STATE PROJECT NUMBER

1580-30-73

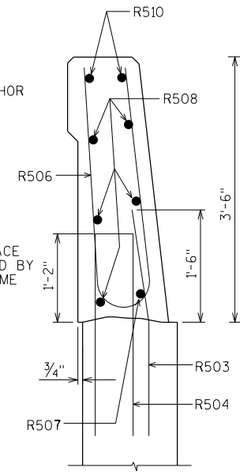


AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.

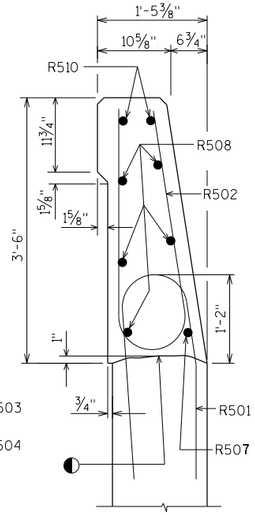
INSIDE ELEVATION



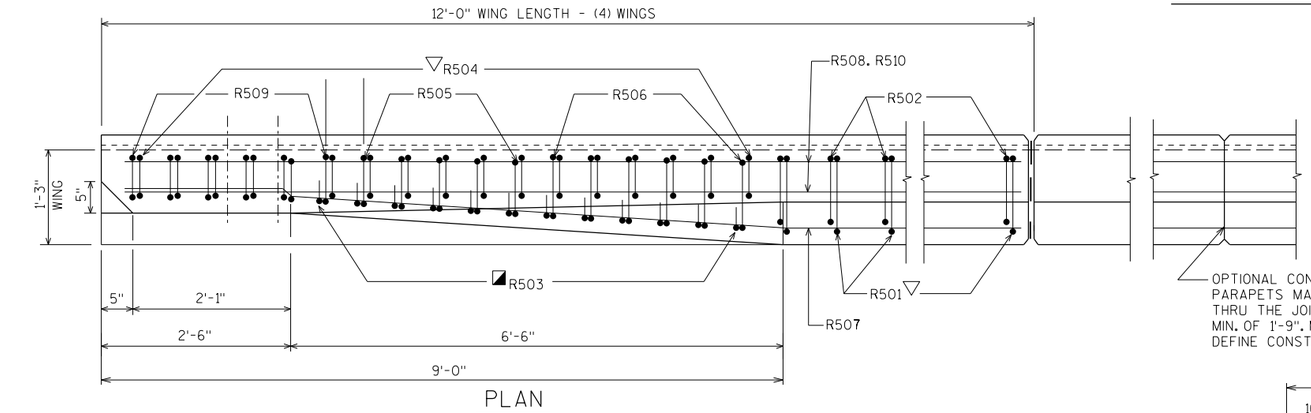
SECTION A



SECTION B

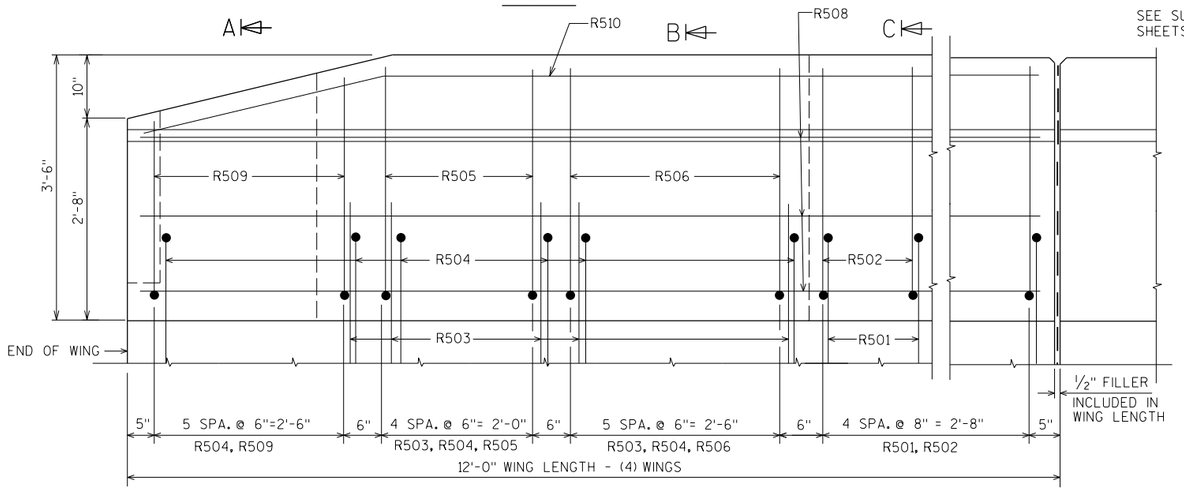


SECTION C



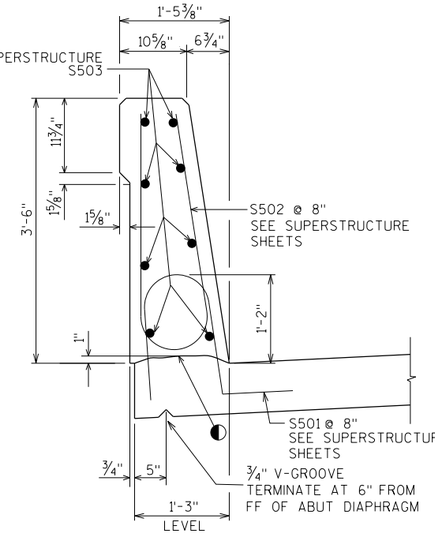
PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



OUTSIDE ELEVATION

(WING 1 SHOWN, WING 2, 3 & 4 SIMILAR)



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

DRAWN BY DLF | PLANS CK'D. NCK

SINGLE SLOPE PARAPET 42SS

SHEET 10 OF 12

107

42SSWIN
1-18

8

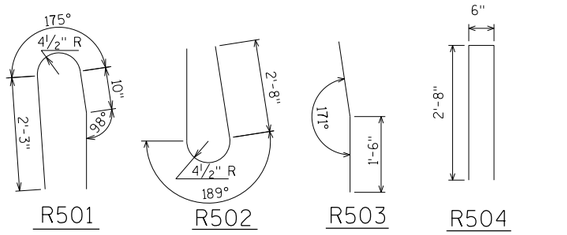
8

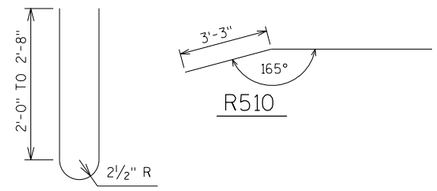
PLOT TIME: 5:53:33 AM

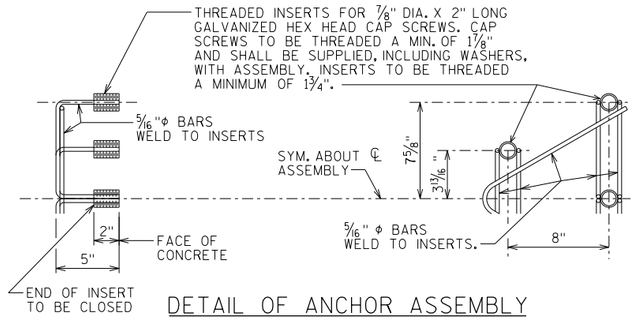
PLOT DATE: 1/2/2019

FILE NAME : S:\UZ\WI\tnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-32\bridge\b50032ss42win.dgn

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.







DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

BILL OF BARS — WEST ABUT PARAPETS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
R501	X	5	5 - 10		X	PARAPET VERTICAL	X	
"	X	5	5 - 10		X	PARAPET VERTICAL		X
R502	X	5	6 - 8		X	PARAPET VERTICAL	X	
"	X	5	6 - 8		X	PARAPET VERTICAL		X
R503	X	12	3 - 0		X	PARAPET VERTICAL	X	
"	X	12	3 - 0		X	PARAPET VERTICAL		X
R504	X	17	5 - 7		X	PARAPET VERTICAL	X	
"	X	17	5 - 7		X	PARAPET VERTICAL		X
R505	X	5	6 - 5		X	PARAPET VERTICAL	X	
"	X	5	6 - 5		X	PARAPET VERTICAL		X
R506	X	6	6 - 6		X	PARAPET VERTICAL	X	
"	X	6	6 - 6		X	PARAPET VERTICAL		X
R507	X	1	11 - 7		X	PARAPET HORIZONTAL	X	
"	X	1	11 - 7		X	PARAPET HORIZONTAL		X
R508	X	5	11 - 7			PARAPET HORIZONTAL	X	
"	X	5	11 - 7			PARAPET HORIZONTAL		X
R509	X	6	5 - 5	◭	X	PARAPET VERTICAL	X	
"	X	6	5 - 5	◭	X	PARAPET VERTICAL		X
R510	X	2	11 - 7		X	PARAPET HORIZONTAL	X	
"	X	2	11 - 7		X	PARAPET HORIZONTAL		X

BILL OF BARS — EAST ABUT PARAPETS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
R501	X	5	5 - 10		X	PARAPET VERTICAL	X	
"	X	5	5 - 10		X	PARAPET VERTICAL		X
R502	X	5	6 - 8		X	PARAPET VERTICAL	X	
"	X	5	6 - 8		X	PARAPET VERTICAL		X
R503	X	12	3 - 0		X	PARAPET VERTICAL	X	
"	X	12	3 - 0		X	PARAPET VERTICAL		X
R504	X	17	5 - 7		X	PARAPET VERTICAL	X	
"	X	17	5 - 7		X	PARAPET VERTICAL		X
R505	X	5	6 - 5		X	PARAPET VERTICAL	X	
"	X	5	6 - 5		X	PARAPET VERTICAL		X
R506	X	6	6 - 6		X	PARAPET VERTICAL	X	
"	X	6	6 - 6		X	PARAPET VERTICAL		X
R507	X	1	11 - 7		X	PARAPET HORIZONTAL	X	
"	X	1	11 - 7		X	PARAPET HORIZONTAL		X
R508	X	5	11 - 7			PARAPET HORIZONTAL	X	
"	X	5	11 - 7			PARAPET HORIZONTAL		X
R509	X	6	5 - 5	◭	X	PARAPET VERTICAL	X	
"	X	6	5 - 5	◭	X	PARAPET VERTICAL		X
R510	X	2	11 - 7		X	PARAPET HORIZONTAL	X	
"	X	2	11 - 7		X	PARAPET HORIZONTAL		X

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

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

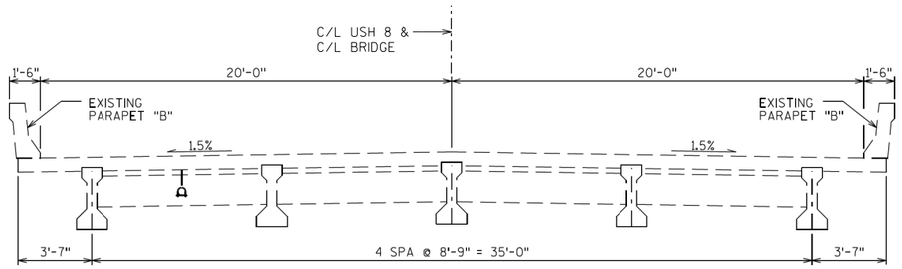
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

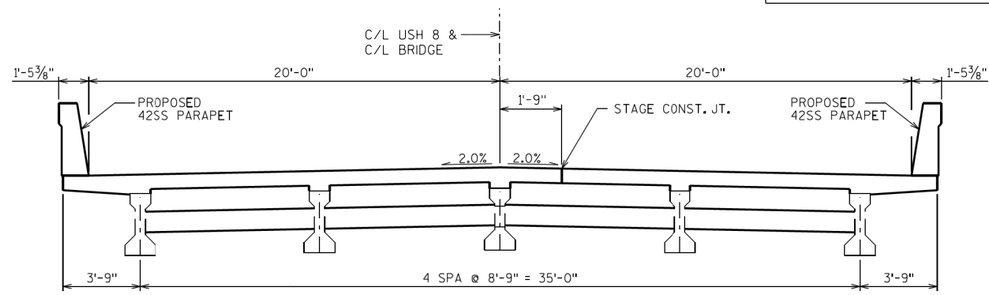
DRAWN BY DLF | PLANS CK'D. NCK

SINGLE SLOPE PARAPET 42SS CONT.

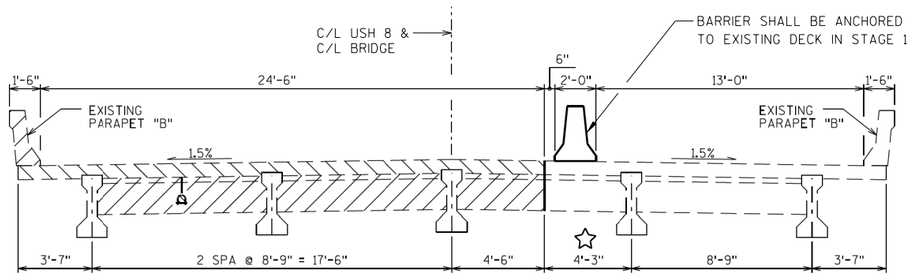
STATE PROJECT NUMBER
1580-30-73



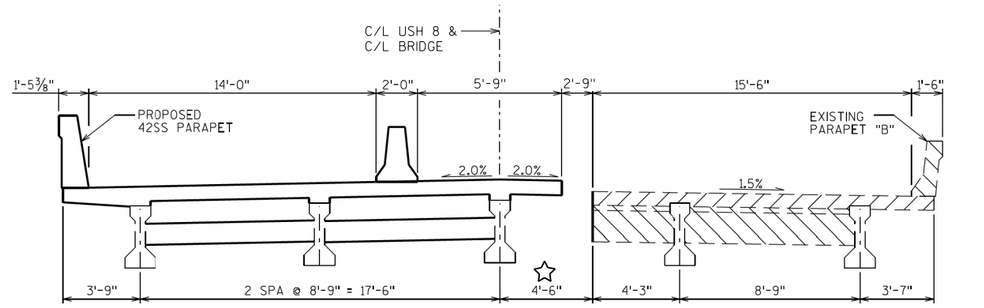
B-50-32 EXISTING X-SECTION



B-50-32 PROPOSED X-SECTION

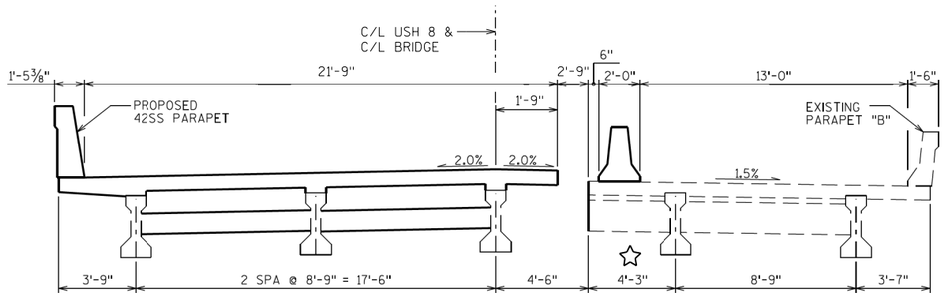


STAGE 1 REMOVAL

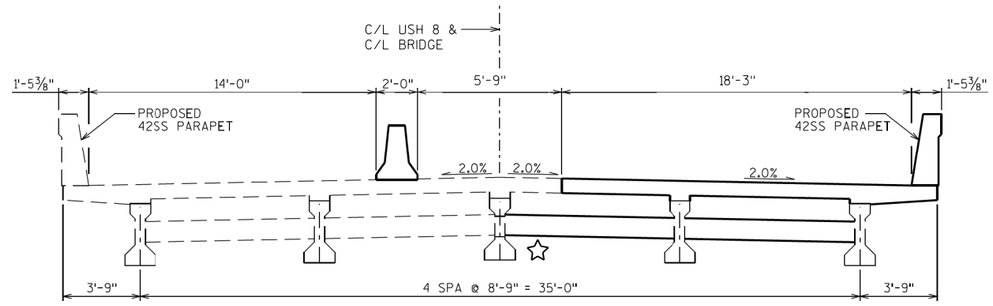


STAGE 2 REMOVAL

REMOVAL AREA



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

☆ CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR FULL LENGTH OF EXISTING DECK STAGE 1 TRAFFIC AND SUPPORT FOR FULL LENGTH OF NEW DECK FOR STAGE 2 TRAFFIC.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-32

DRAWN BY DLF | PLANS CK'D. NCK

BRIDGE STAGING CONCEPT

SHEET 12 OF 12

109

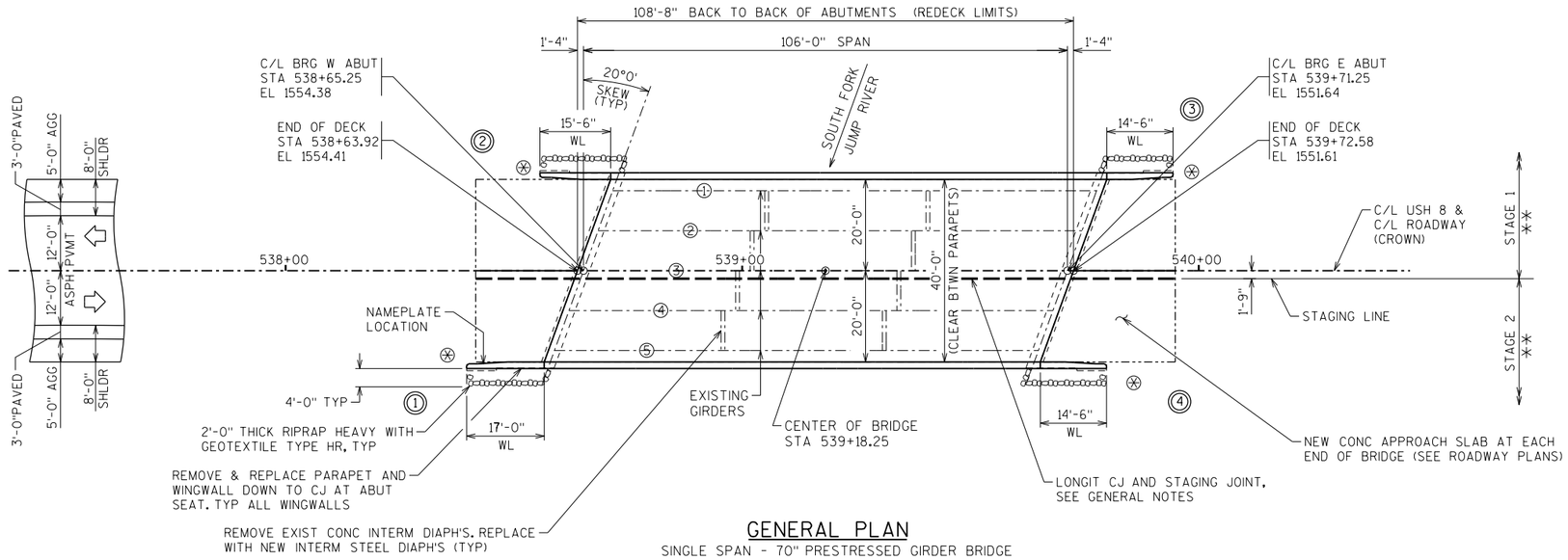
8

8

PLOT DATE: 1/2/2019 PLOT TIME: 5:53:34 AM

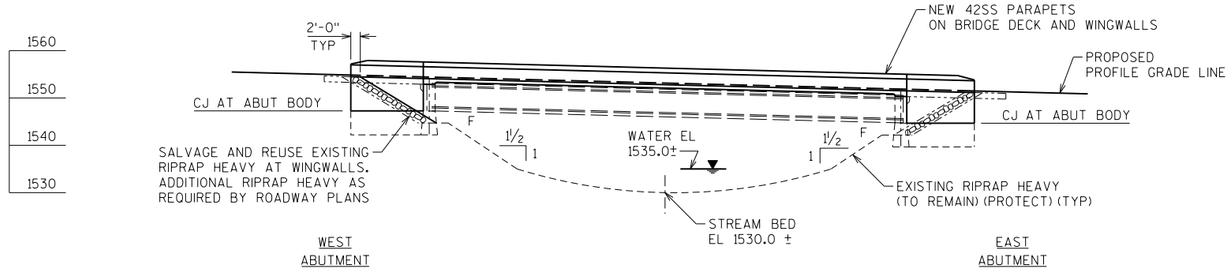
FILE NAME : S:\UZ\W\Wtnc\44737\5-final-dsgn\5l-drawings\20-Struct\B-50-32\bridge\b500320DTstgl.dgn

STATE PROJECT NUMBER
1580-30-73



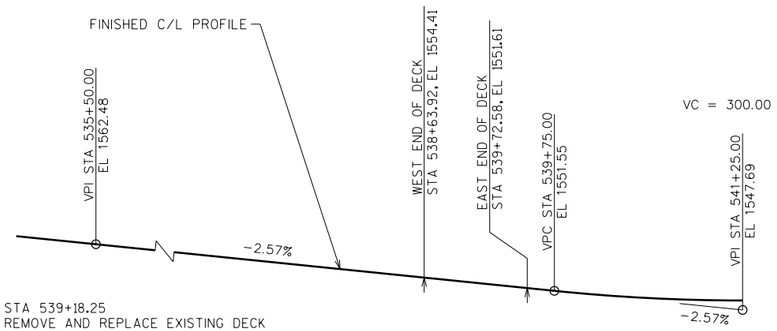
GENERAL PLAN

SINGLE SPAN - 70" PRESTRESSED GIRDER BRIDGE



GENERAL ELEVATION

LOOKING DOWN SUBSTRUCTURE UNITS



PROFILE GRADE LINE

LEGEND

◎ INDICATES WING.

WL WING LENGTH

⊛ LOCATION OF ANCHOR ASSEMBLIES FOR THRIE BEAM.

** SEE SHEET 13 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS20

INVENTORY RATING FACTOR: RF = HS21
OPERATING RATING FACTOR: RF = HS41
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

INVENTORY AND OPERATING RATINGS INCLUDE ¼" POLYMER WEARING SURFACE.

MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE _____ f'c = 4,000 psi
- ALL OTHER _____ f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT
AASHTO GRADE 60 _____ fy = 60,000 psi
ALL BAR STEEL SHALL BE EPOXY COATED

LIST OF DRAWINGS

TRAFFIC DATA

ADT (2019)	=	2300
ADT (2039)	=	2750
DHV	=	331
DD	=	61/39
T	=	23.5 %
DESIGN SPEED	=	55 MPH

12/21/2018

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/05/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-50-33

U.S.H. 8 OVER S. FORK JUMP R.

COUNTY	TOWN ~~/CITY/VILLAGE~~
PRICE	PRENTICE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
NCK	CJB	DLF	NCK

DECK REPLACEMENT

SHEET 1 OF 13

110

8

8

PLOT TIME: 8:55:41 AM
PLOT DATE: 12/21/2018
FILE NAME : S:\UZW\Wtnc\44737\5-final-dsgn\5l-drawings\20-Struct\B-50-33\bridge\b50033gl.dgn

STATE PROJECT NUMBER

1580-30-73

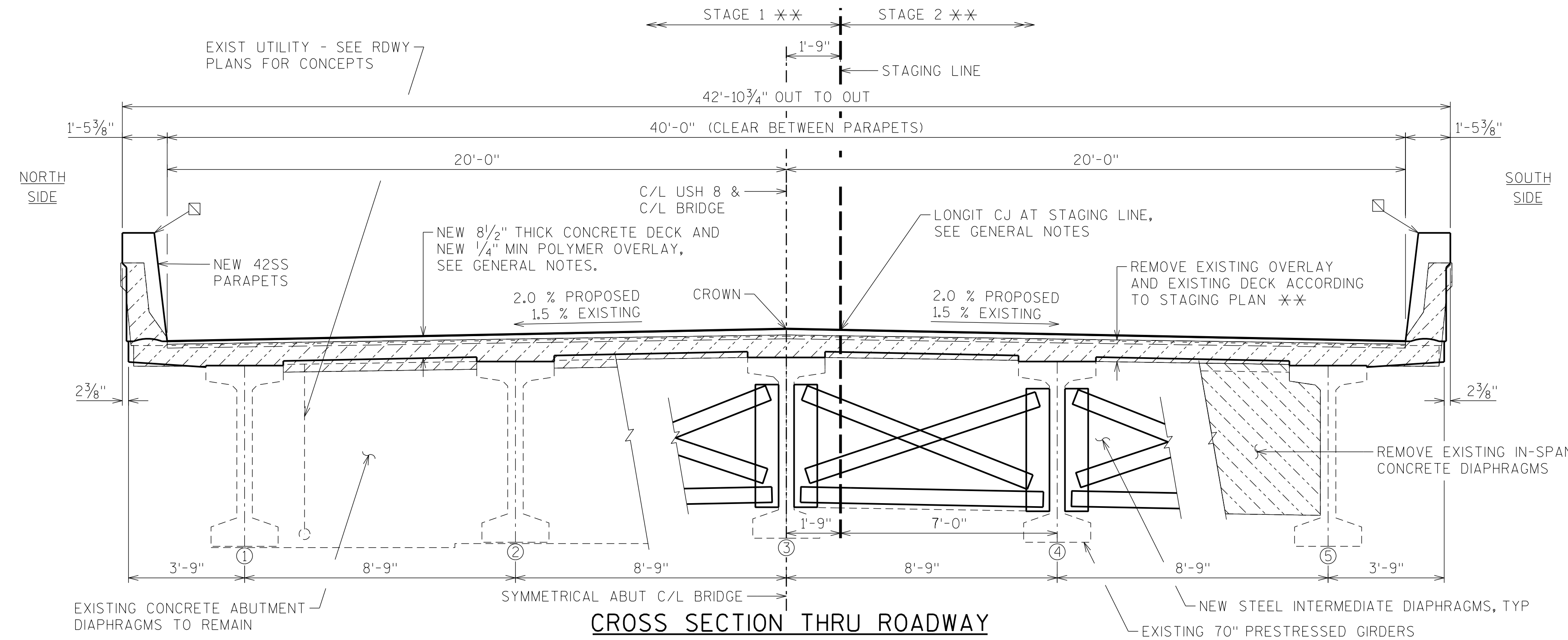
LEGEND

✱✱ SEE SHEET 13 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

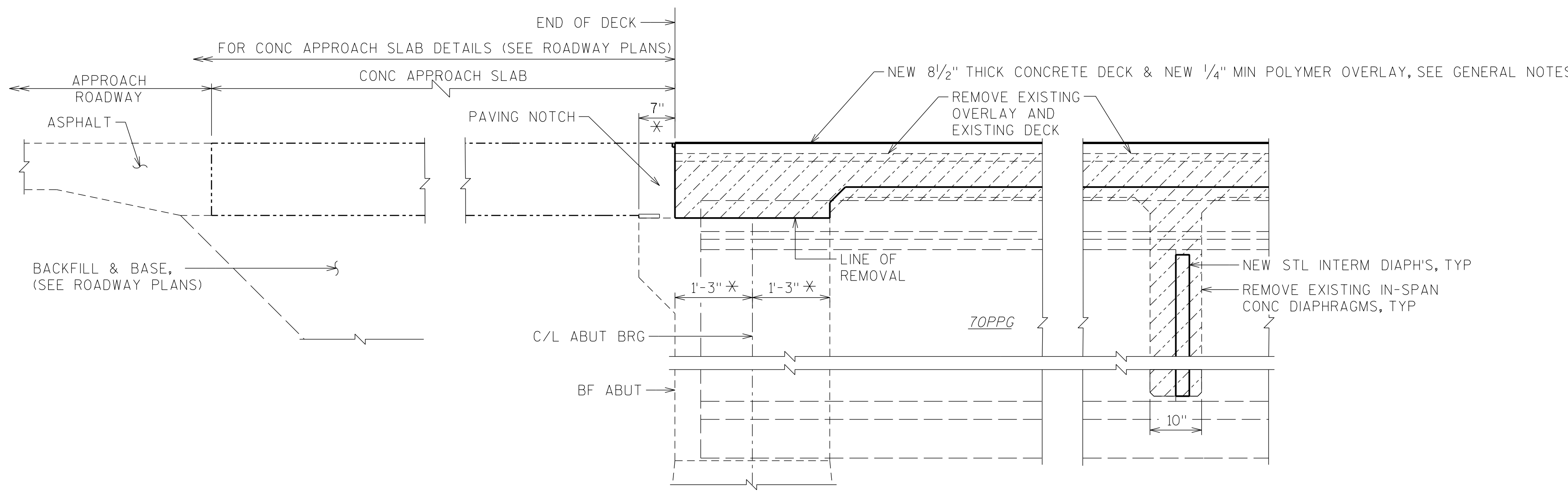
✱ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS

INDICATES REMOVAL

COAT PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS. SEE NOTES ON SHEETS 3.



CROSS SECTION THRU ROADWAY
(LOOKING EAST)



TYPICAL LONGITUDINAL SECTIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

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DECK REPLACEMENT CONT.

SHEET 2 OF 13

8

8

FILE NAME : S:\UZ\W\Witnc\44737\5-final-dsgn\51-drawings\20-Struct\B-50-33\bridge\b50033gl.dgn

PLOT DATE: 12/21/2018

PLOT TIME: 8:55:42 AM

STATE PROJECT NUMBER
1580-30-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

ALL ELEVATIONS ARE IN FEET.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

ALL APPROACH SLABS DESIGN, PLANS AND QUANTITY ARE ROADWAY PLAN ITEMS. INCLUDING BUT NOT LIMITED TO BACKFILL, BASE MATERIALS, AND FINISHED GRADING TO CONSTRUCT APPROACH SLABS ARE CONSIDERED ROADWAY ITEMS.

LONGITUDINAL CONSTRUCTION JOINT AND STAGING JOINT LOCATION TO BE DETERMINED BY THESE PLANS AND BY THE FIELD ENGINEER. COORDINATE WITH STAGING PLANS.

THE CONTRACTOR SHALL SUPPLY A NEW NAMEPLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAMEPLATE TO SHOW ORIGINAL CONSTRUCTION YEAR. SEE EXISTING NAMEPLATE FOR DATE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAWCUT UNLESS OTHERWISE NOTED.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IIN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

AT THE ABUTMENTS, THE DECK JOINT IS COMPRISED OF A FILLER AND SEALANT, THERE IS NO STRIP SEAL OR COVER PLATED EXPANSION JOINT.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.

APPLY "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-BITUMINOUS JOINT SEALER PER SECTION 502.209 (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE WITH THESE STRUCTURE PLANS THE BRIDGE STAGING.

TOTAL ESTIMATED QUANTITIES - B-50-33

	BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT		EAST ABUT		SUPER		TOTALS		TOTALS
				STAGE		STAGE		STAGE		STAGE		
				1	2	1	2	1	2	1	2	
	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-50-33	LS	-	-	-	-	-	-	-	-	1
(1)	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION STA 539+18.25	LS	-	-	-	-	-	-	-	-	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-50-33	LS	-	-	-	-	-	-	-	-	1
(6)	210.1500	BACKFILL STRUCTURE TYPE A	TON	20	23	19	19	-	-	39	42	81
(3)	502.0100	CONCRETE MASONRY BRIDGES	CY	5	5	5	5	92	81	102	91	193
(2)	502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	-	70	70	70	70	140
(4)	502.4207	ADHESIVE ANCHORS NO. 7 BAR	EACH	16	17	15	15	-	-	31	32	63
(3)	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	690	740	700	700	19,620	16,370	21,010	17,810	38,820
	506.4000	STEEL DIAPHRAGMS B-50-33	EACH	-	-	-	-	4	4	4	4	8
(5)	509.1500	CONCRETE SURFACE REPAIR	SF	-	-	-	-	-	-	-	-	10
	509.5100.S	POLYMER OVERLAY	SY	-	-	-	-	263	220	263	220	483
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4	4	4	4	-	-	8	8	16
	606.0300	RIPRAP HEAVY	CY	5	5	5	5	-	-	10	10	20
	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	-	2	2	2	2	4
(7)	645.0120	GEOTEXTILE TYPE HR	SY	12	12	12	12	-	-	24	24	48
		NON-BID ITEMS										
		FILLER	SIZE	—	—	—	—	—	—	—	—	1/2" & 3/4"
		NAMEPLATE	EACH	—	—	—	—	—	—	—	—	1

QUANTITIES NOTES

(1) REMOVAL OF DECK, IN-SPAN DIAPHRAGMS, AND ALL EXISTING PARAPETS INCLUDING ON WINGWALLS. GIRDERS, ABUTMENTS AND SUBSTRUCTURES TO REMAIN. PROTECT ITEMS TO REMAIN DURING REMOVALS. REPLACE ALL INTERMEDIATE CONCRETE DIAPHRAGMS WITH STEEL DIAPHRAGMS.

(2) FURNISH AND APPLY PIGMENTED SURFACE SEALER TO THE INSIDE FACES, ENDS, AND TOP OF THE CONCRETE PARAPETS.

(3) INCLUDES ITEMS FOR 42SS PARAPETS.

(4) WEIGHT OF ANCHORS INCLUDED IN "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

(5) AS LOCATED BY FIELD ENGINEER, UNDISTRIBUTED AMOUNT.

(6) A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TON.

(7) NEW GEOTEXTILE FABRIC SHALL REPLACE THE EXISTING GEOTEXTILE FABRIC UNDER THE RIPRAP DISTRIBUTED BY EXCAVATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

NOTES AND QUANTITIES

SHEET 3 OF 13

112

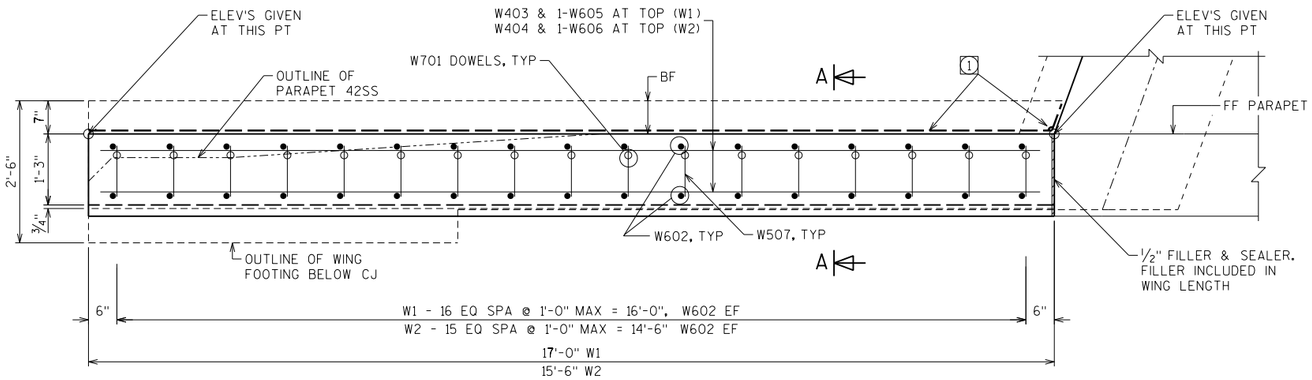
8

8

PLOT DATE: 12/21/2018 PLOT TIME: 8:55:42 AM

FILE NAME : S:\UZ\W\Witnc\44737\5-final-dsgn\5i-drawings\20-Struct\B-50-33\bridge\b50033g2.dgn

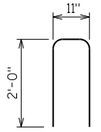
STATE PROJECT NUMBER
1580-30-73



PLAN

(WING 1 SHOWN, WING 2 SIMILAR)

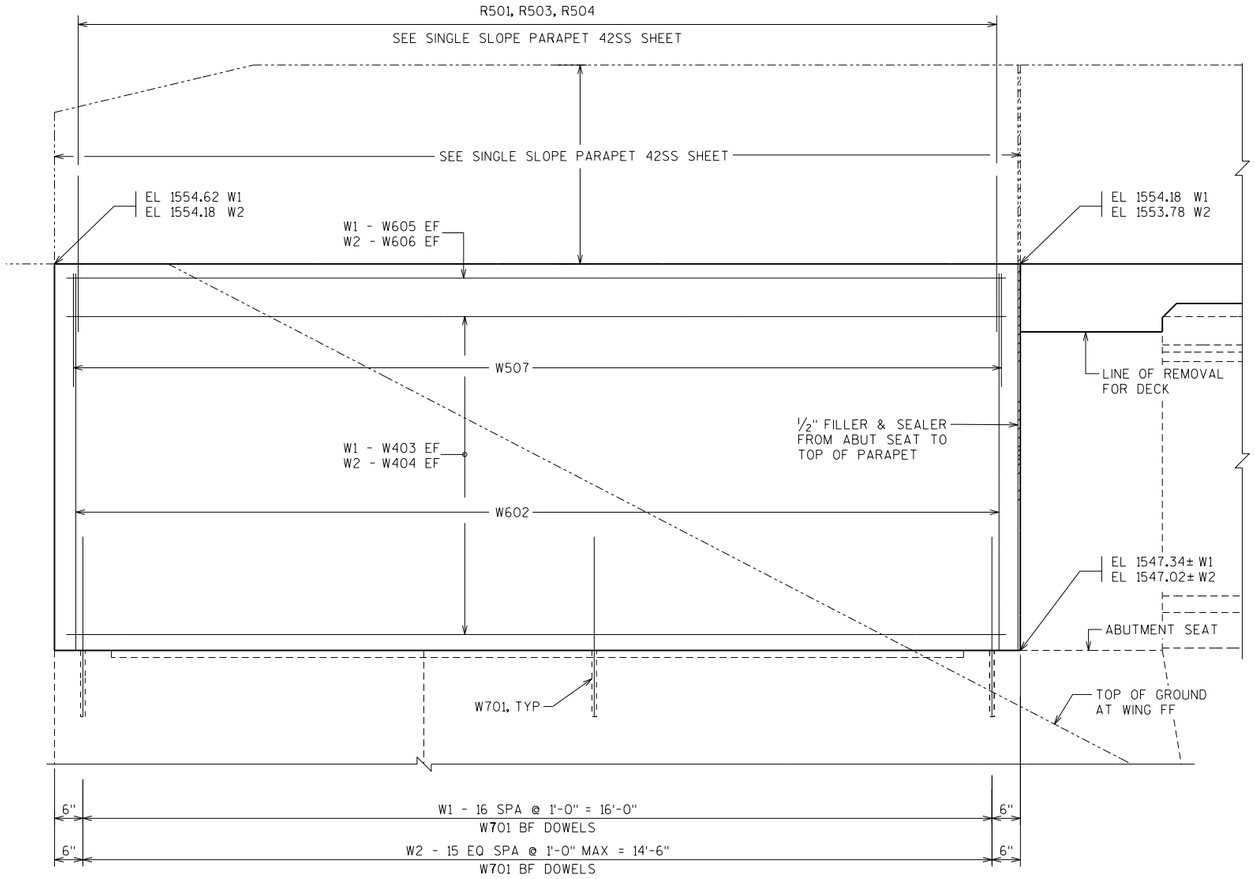
NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.



W507

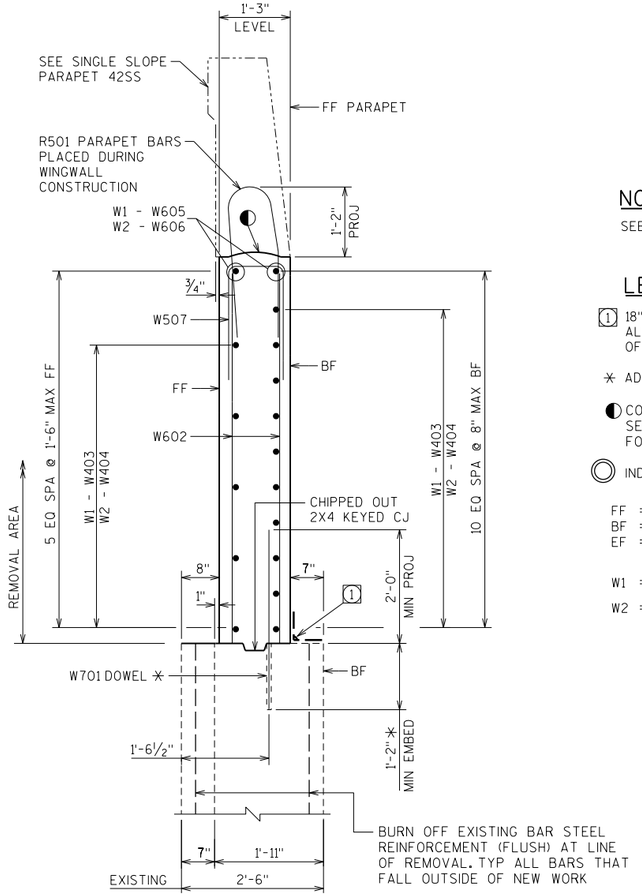
BILL OF BARS — WEST ABUT WINGWALLS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION		STG 1	STG 2
W701	X	16	3 - 2			DOWEL BARS	W2	X	
"	X	17	3 - 2			DOWEL BARS	W1		X
W602	X	32	6 - 6			VERTICAL	W2	X	
"	X	34	6 - 6			VERTICAL	W1		X
W403	X	15	16 - 7			HORIZONTAL	W1		X
W404	X	15	15 - 1			HORIZONTAL	W2	X	
W605	X	2	16 - 7			HORIZONTAL TOP	W1		X
W606	X	2	15 - 1			HORIZONTAL TOP	W2	X	
W507	X	16	4 - 8		X	WING TOP	W2	X	
"	X	17	4 - 8		X	WING TOP	W1		X



OUTSIDE ELEVATION

(WING 1 SHOWN, WING 2 SIMILAR)



SECTION A-A

NOTES

SEE GENERAL NOTES ON SHEET 3.

LEGEND

1 18" INCH RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT REPAIR.

✳ ADHESIVE ANCHOR NO. 7 BAR, 14" MIN EMBEDMENT.

◐ CONST. JOINT - STRIKE OFF AS SHOWN. SEE SINGLE SLOPE PARAPET 42SS SHEET FOR DETAILS

◎ INDICATES WING.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

W1 = WING 1 (STAGE 2)
W2 = WING 2 (STAGE 1)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

WEST ABUTMENT WINGWALL REPAIRS

SHEET 4 OF 13

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PLOT DATE: 12/21/2018

PLOT TIME: 8:55:54 AM

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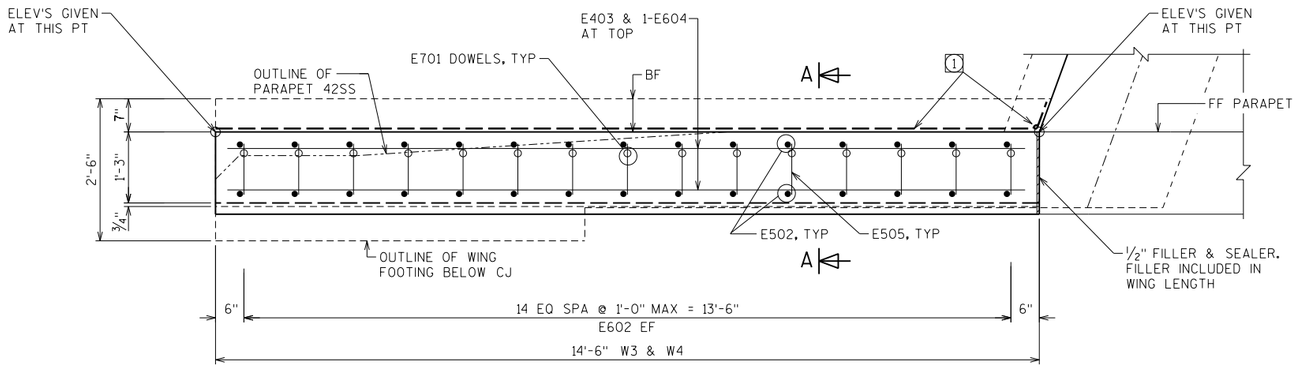
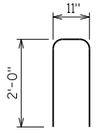
STATE PROJECT NUMBER
1580-30-73



PLAN

(WING 3 SHOWN, WING 4 SIMILAR)

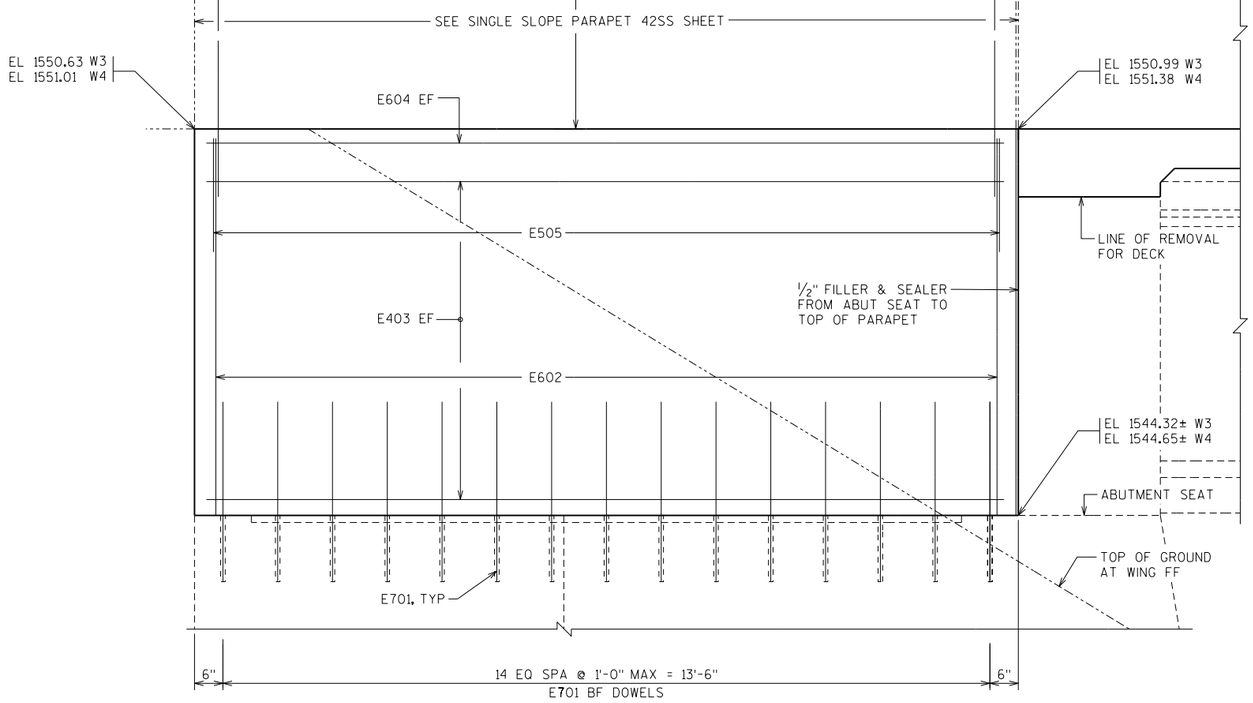
NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.



E505

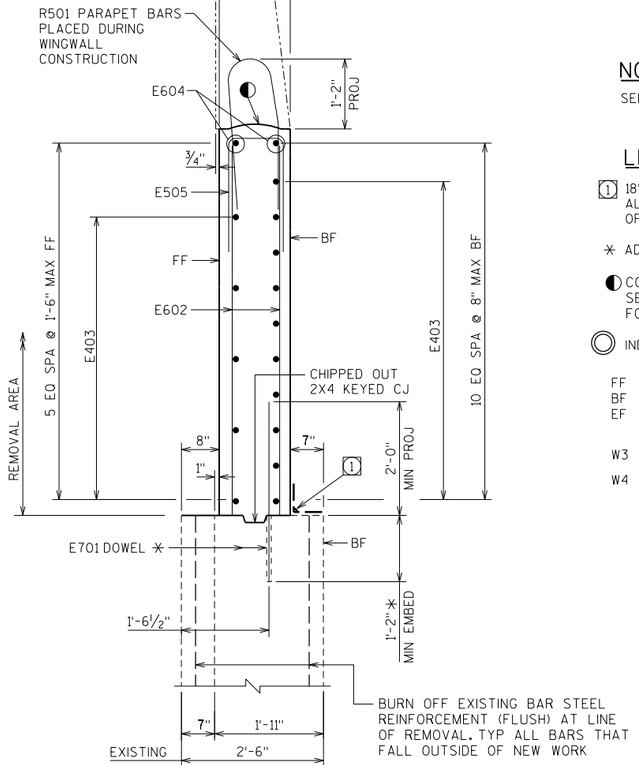
BILL OF BARS — EAST ABUT WINGWALLS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
E701	X	15	3 - 2			DOWEL BARS W3	X	
"	X	15	3 - 2			DOWEL BARS W4		X
E602	X	30	6 - 0			VERTICAL W3	X	
"	X	30	6 - 0			VERTICAL W4		X
E403	X	15	14 - 1			HORIZONTAL W3	X	
"	X	15	14 - 1			HORIZONTAL W4		X
E604	X	2	14 - 1			HORIZONTAL TOP W3	X	
"	X	2	14 - 1			HORIZONTAL TOP W4		X
E505	X	30	4 - 8		X	WING TOP W3	X	
"	X	30	4 - 8		X	WING TOP W4		X



OUTSIDE ELEVATION

(WING 3 SHOWN, WING 4 SIMILAR)



SECTION A-A

NOTES

SEE GENERAL NOTES ON SHEET 3.

LEGEND

[1] 18" INCH RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE OF ABUTMENT REPAIR.

✳ ADHESIVE ANCHOR NO. 7 BAR, 14" MIN EMBEDMENT.

◐ CONST. JOINT - STRIKE OFF AS SHOWN. SEE SINGLE SLOPE PARAPET 42SS SHEET FOR DETAILS

◎ INDICATES WING.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

W3 = WING ③ (STAGE 1)
W4 = WING ④ (STAGE 2)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

EAST ABUTMENT WINGWALL REPAIRS

SHEET 5 OF 13

114

PLOT DATE: 12/21/2018 PLOT TIME: 8:55:54 AM

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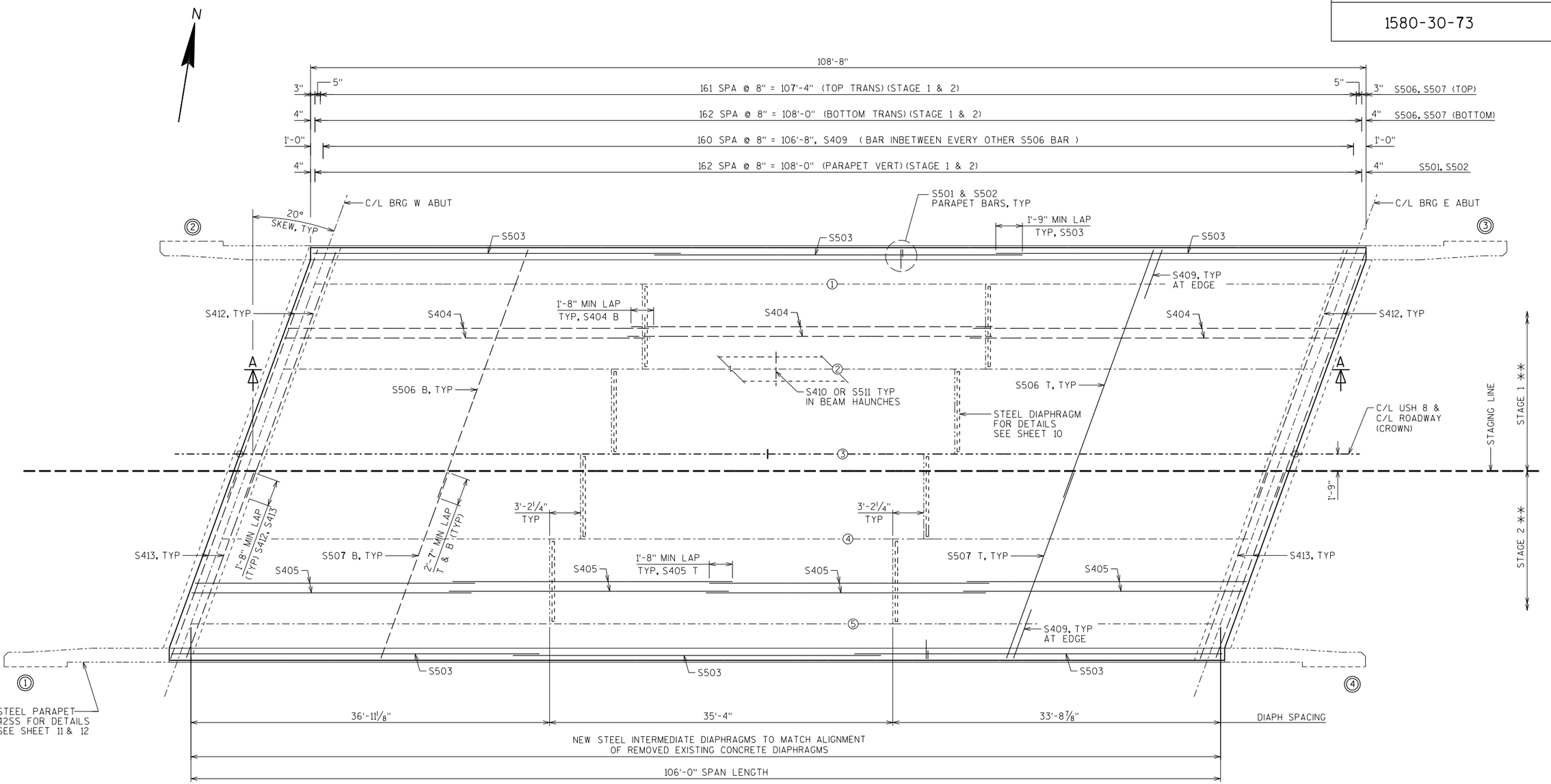
STATE PROJECT NUMBER
1580-30-73



PLAN - SHOWING DIAPHRAGM SPACING AND REINFORCEMENT

— — — — INDICATES BOTTOM BAR STEEL

——————— INDICATES TOP BAR STEEL

NOTE

SEE SHEET 8 FOR SECTION A-A.

LEGEND

** SEE SHEET 13 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

SUPERSTRUCTURE DETAILS

SHEET 6 OF 13

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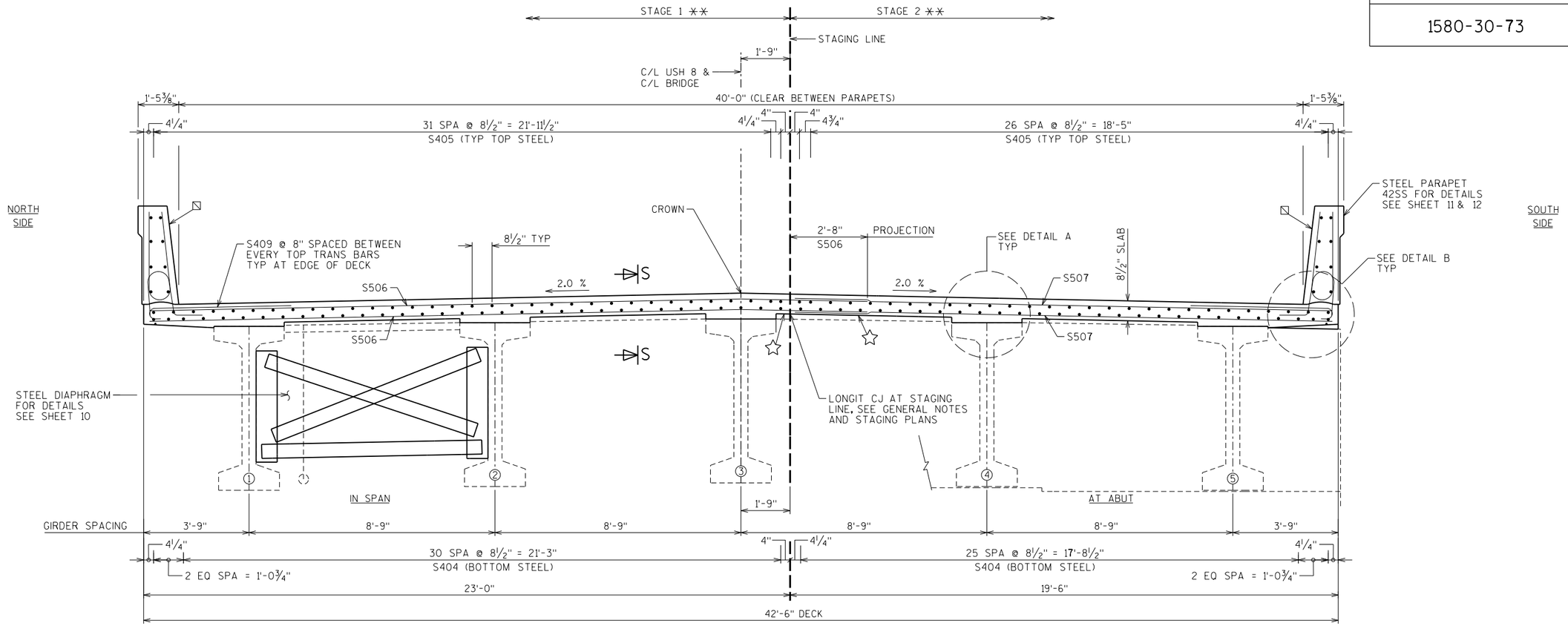
8

8

STATE PROJECT NUMBER

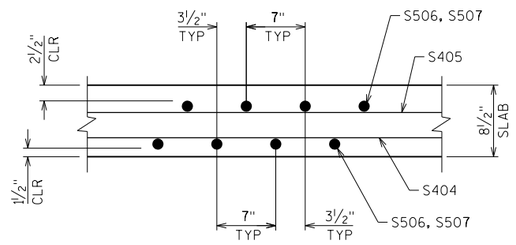
1580-30-73



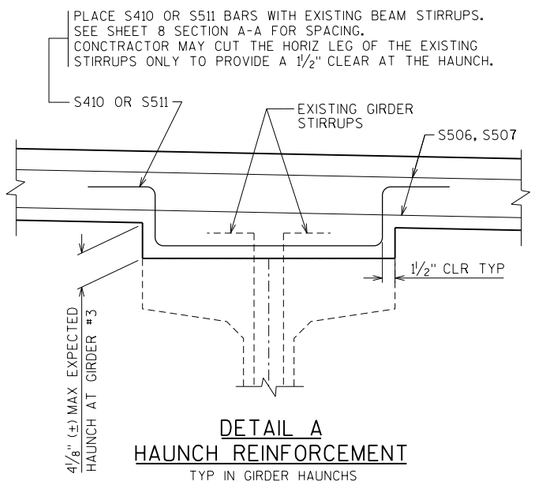
CROSS SECTION THRU ROADWAY

(LOOKING EAST)

☆ CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR FULL LENGTH OF EXISTING DECK FOR STAGE 1 TRAFFIC AND SUPPORT FOR FULL LENGTH OF NEW DECK FOR STAGE 2 TRAFFIC.

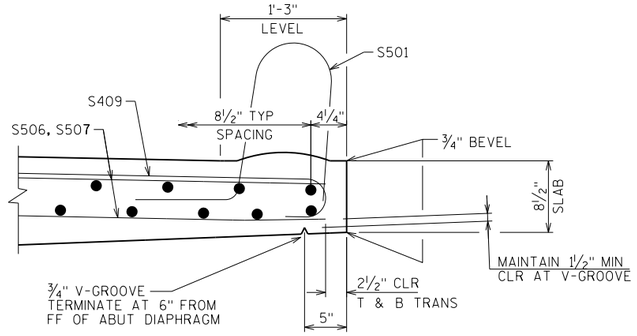


SECTION S-S



DETAIL A
HAUNCH REINFORCEMENT

TYP IN GIRDER HAUNCHS



DETAIL B

PARAPET NOT SHOWN FOR CLARITY

LEGEND

** SEE SHEET 13 & ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

☒ COAT PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS, SEE NOTES ON SHEETS 3.

NO.	DATE	REVISION	BY

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STRUCTURE B-50-33

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SUPERSTRUCTURE DETAILS

SHEET 7 OF 13

116

8

8

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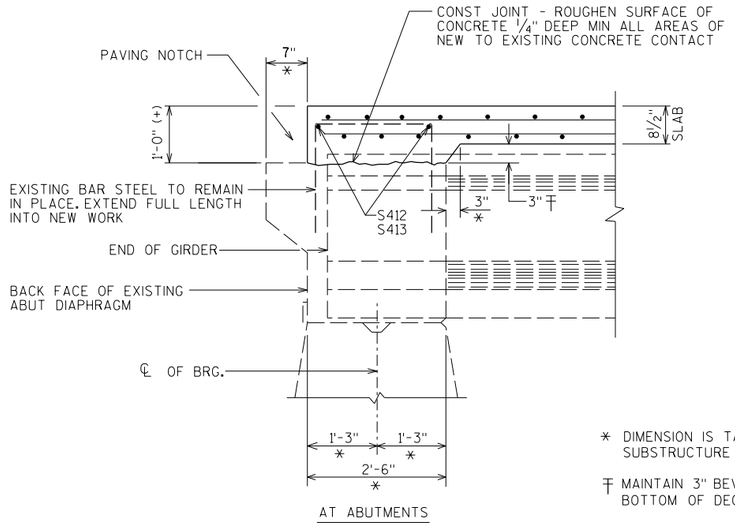
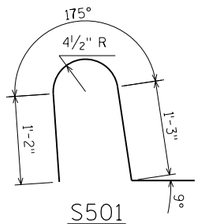


AT ABUTMENTS

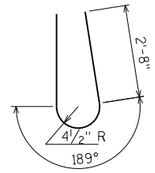
* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

∓ MAINTAIN 3" BEVEL HT. DISTANCE FROM BOTTOM OF DECK TO CJ VARIES.

PARTIAL LONGITUDINAL SECTION



S501



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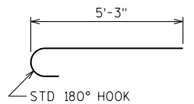
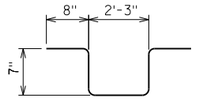
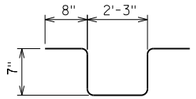


S409



S410

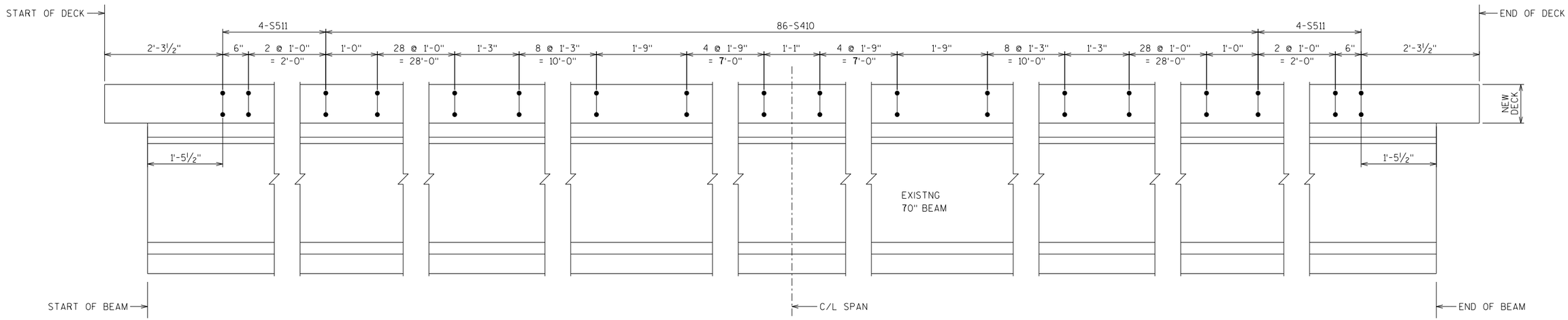


S511

NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS — SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
S501	X	163	4 - 5		X	PARAPET DOWEL	X	
"	X	163	4 - 5		X	PARAPET DOWEL		X
S502	X	163	6 - 8		X	PARAPET VERTICAL	X	
"	X	163	6 - 8		X	PARAPET VERTICAL		X
S503	X	24	37 - 11			PARAPET HORIZONTAL	X	
"	X	24	37 - 11			PARAPET HORIZONTAL		X
S404	X	99	37 - 8			LONGIT B	X	
"	X	84	37 - 8			LONGIT B		X
S405	X	132	28 - 10			LONGIT T	X	
"	X	112	28 - 10			LONGIT T		X
S506	X	327	27 - 1			TRANS T & B	X	
S507	X	327	20 - 7			TRANS T & B		X
Not Used			-					
S409	X	161	5 - 5		X	TRANS AT EDGE	X	
"	X	161	5 - 5		X	TRANS AT EDGE		X
S410	X	258	4 - 5		X	HAUNCH OVER GIR - VERT	X	
"	X	172	4 - 5		X	HAUNCH OVER GIR - VERT		X
S511	X	24	4 - 3		X	HAUNCH OVER GIR - VERT	X	
"	X	16	4 - 3		X	HAUNCH OVER GIR - VERT		X
S412	X	4	27 - 2			OVER ABUT DIAPH	X	
S413	X	4	20 - 3			OVER ABUT DIAPH		X



SECTION A-A

USE TO PLACE S410 & S511.
BEAM STIRRUPS, STRANDS AND DECK REINFORCEMENT NOT SHOWN FOR CLARITY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

SUPERSTRUCTURE DETAILS

SHEET 8 OF 13

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PLOT TIME: 8:55:55 AM
PLOT DATE: 12/21/2018
FILE NAME : S:\UZ\W\Witnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-33\bridge\b50033g36.dgn

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STATE PROJECT NUMBER

1580-30-73

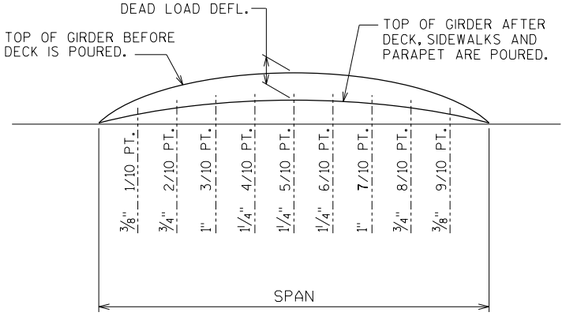
FINAL TOP OF DECK ELEVATIONS

	SPAN 1										
	C/L BRG W ABUT	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	C/L BRG E ABUT
N DECK EDGE (GUTTER)	1553.78	1553.51	1553.24	1552.97	1552.69	1552.42	1552.15	1551.87	1551.60	1551.33	1551.06
GIRDER 1	1553.86	1553.58	1553.31	1553.04	1552.77	1552.49	1552.22	1551.95	1551.68	1551.40	1551.13
GIRDER 2	1554.11	1553.84	1553.57	1553.30	1553.02	1552.75	1552.48	1552.21	1551.93	1551.66	1551.39
GIRDER 3 (PROFILE GRADE)	1554.37	1554.10	1553.83	1553.55	1553.28	1553.01	1552.73	1552.46	1552.19	1551.92	1551.64
STAGING JOINT	1554.35	1554.08	1553.81	1553.53	1553.26	1552.99	1552.72	1552.44	1552.17	1551.90	1551.63
GIRDER 4	1554.28	1554.01	1553.73	1553.46	1553.19	1552.91	1552.64	1552.37	1552.10	1551.82	1551.55
GIRDER 5	1554.18	1553.91	1553.64	1553.37	1553.09	1552.82	1552.55	1552.28	1552.00	1551.73	1551.46
S DECK EDGE (GUTTER)	1554.16	1553.89	1553.61	1553.34	1553.07	1552.79	1552.52	1552.25	1551.98	1551.70	1551.43

NOTES

THE CONTRACTOR SHALL VERIFY THE TOP OF BEAM ELEVATIONS BEFORE ESTABLISHING THE BRIDGE DECK AND APPROACH ROADWAY ELEVATIONS.

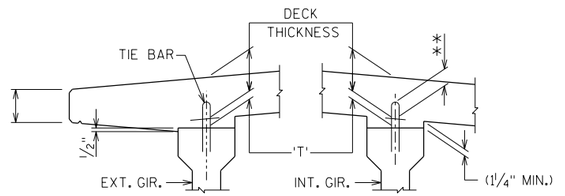
FINAL TOP OF DECK ELEVATIONS DOES NOT INCLUDE THE 1/4" POLYMER OVERLAY.



DEAD LOAD DEFLECTION DIAGRAM

(CONCRETE ONLY DEAD LOAD DEFLECTION)

NOTE: DEFLECTIONS USED FOR COMPUTING GIRDER ELEVATION SHALL BE CALCULATED BY TAKING GIRDER ELEVATION BEFORE & AFTER THE EXISTING DECK IS REMOVED. THE DEFLECTIONS GIVEN ON THIS PLAN SHALL BE USED AS REFERENCE ONLY. FIELD MEASURED DEFLECTION DATA SHALL BE PROPORTIONED TO ACCOUNT FOR THE NEW 8 1/2" DECK THICKNESS VERSUS THE EXISTING DECK THICKNESS. EXISTING DECK THICKNESS SHALL BE VERIFIED.



DECK HAUNCH DETAIL

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2 3/4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

BEAMS 1 & 5 THE AVERAGE HAUNCH = 2 1/4"
BEAMS 2 & 4 THE AVERAGE HAUNCH = 2 3/4"
BEAM 3 THE AVERAGE HAUNCH = 3 1/4"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

DRAWN BY DLF | PLANS CK'D. NCK

TOP OF DECK ELEVATIONS

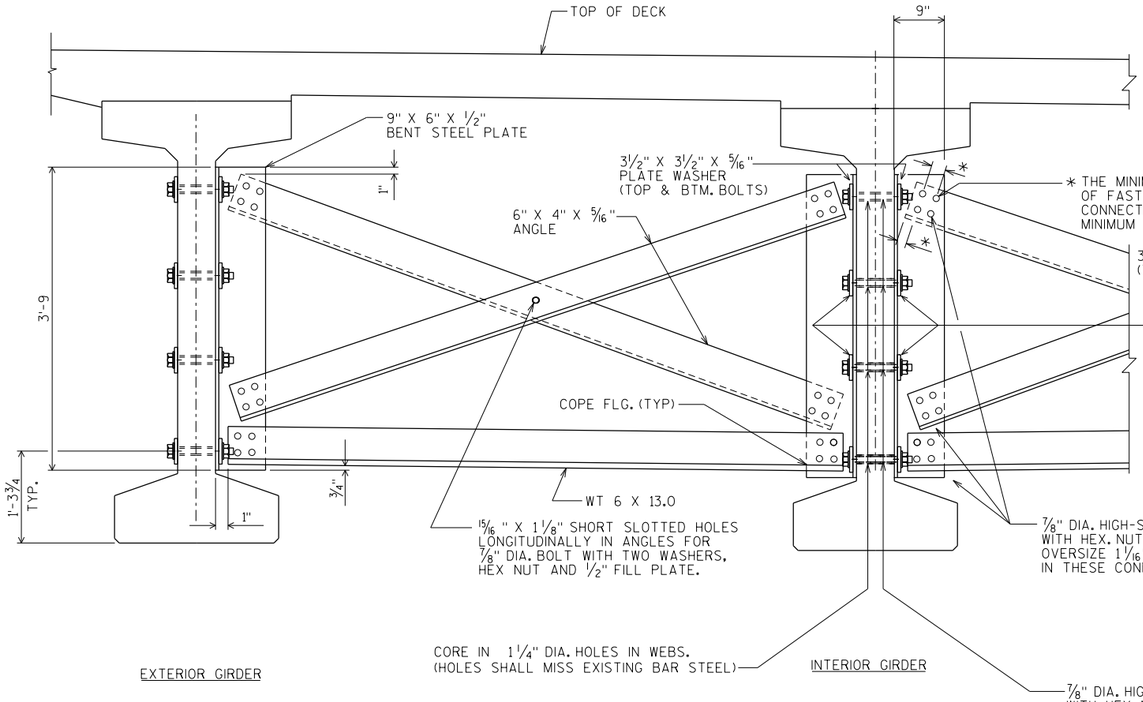
SHEET 9 OF 13

118

8

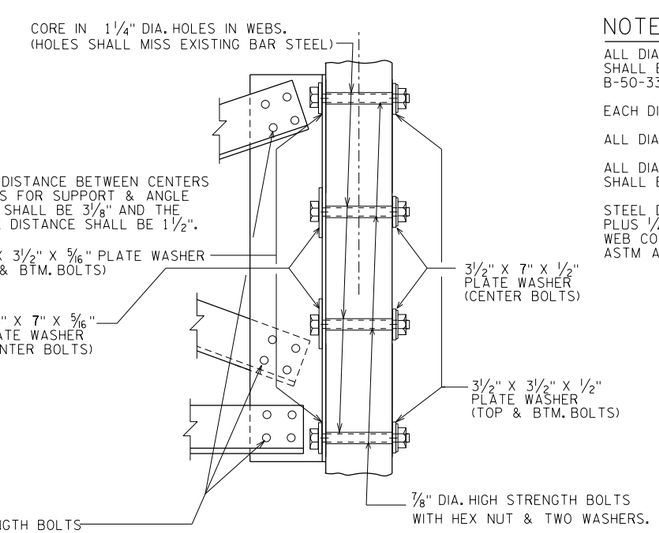
8

STATE PROJECT NUMBER
1580-30-73



PART TRANSVERSE SECTION AT DIAPHRAGM

(70" PRESTRESSED GIRDER)



SECTION AT INTERIOR & EXTERIOR GIRDERS

(FOR STAGGERED DIAPHRAGMS)

NOTES

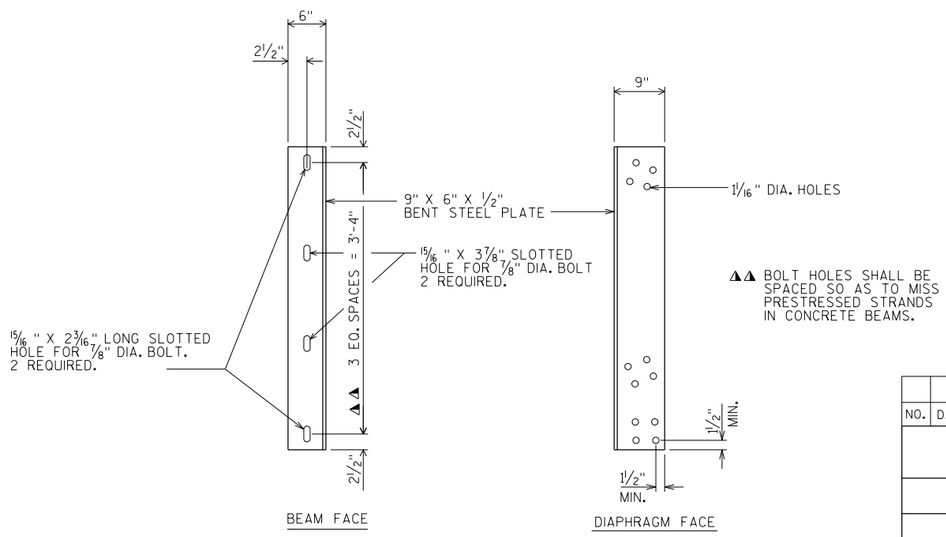
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-50-33", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-50-33

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STEEL DIAPHRAGM

SHEET 10 OF 13

119

7-17
GSTDIA70

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PLOT TIME: 8:55:56 AM

PLOT DATE: 12/21/2018

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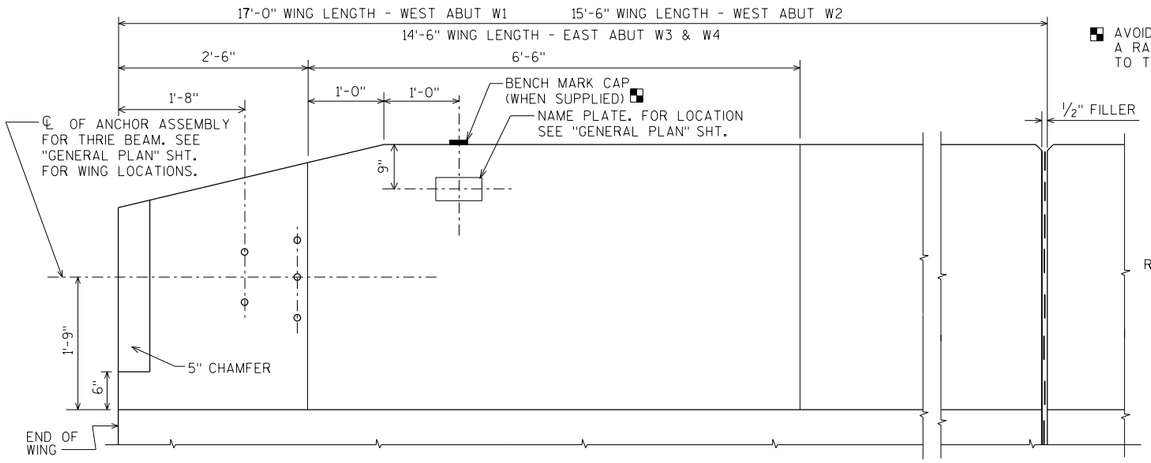
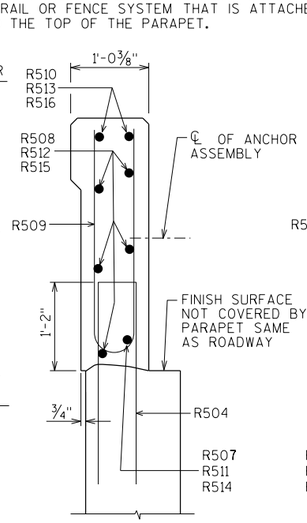
STATE PROJECT NUMBER
1580-30-73

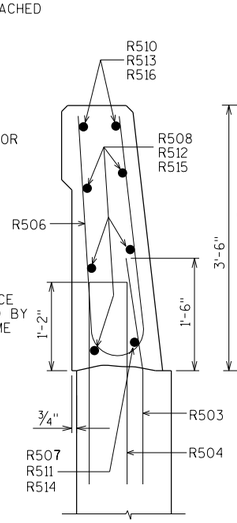


INSIDE ELEVATION

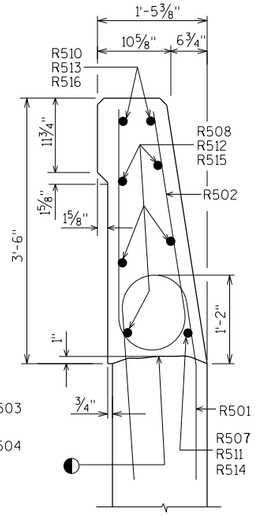
■ AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



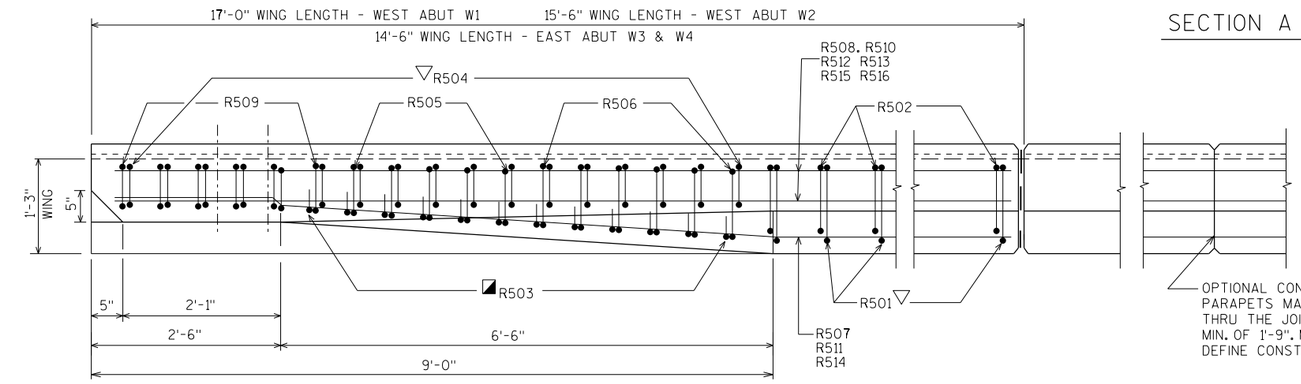
SECTION A



SECTION B

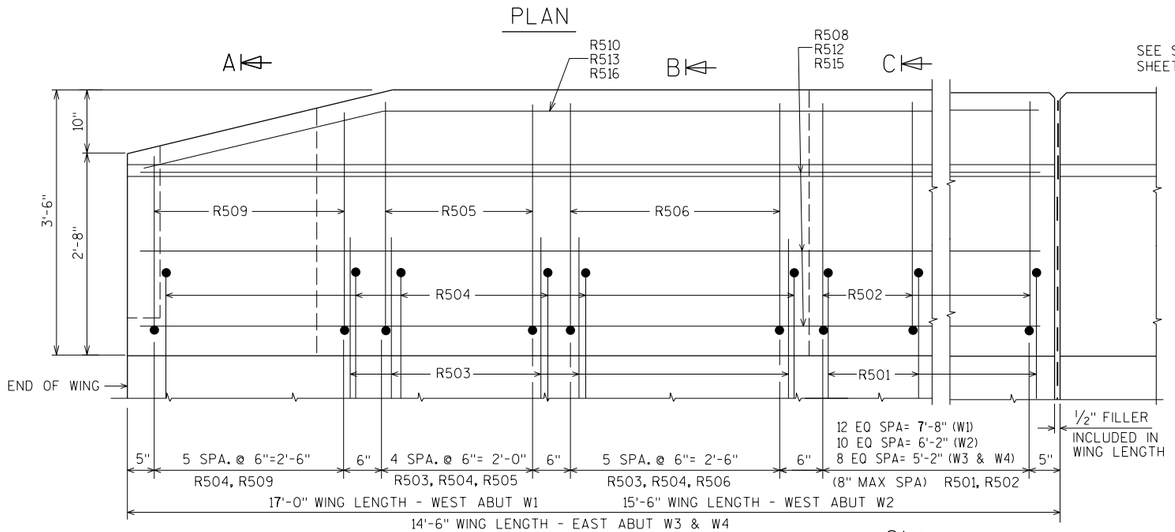


SECTION C



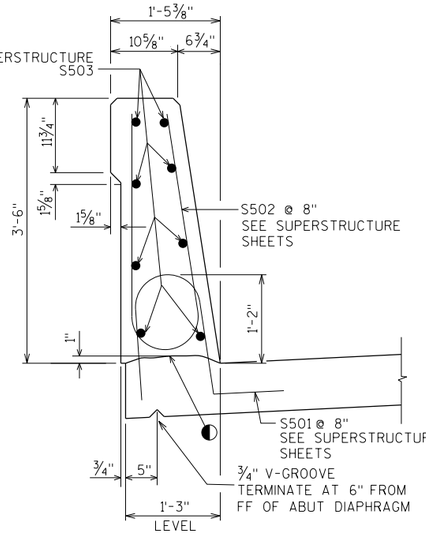
PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



OUTSIDE ELEVATION

(WING 1 SHOWN, WING 2, 3 & 4 SIMILAR)



SECTION THRU PARAPET ON BRIDGE

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

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SINGLE SLOPE PARAPET 42SS

SHEET 11 OF 13

120

42SSWIN
1-18

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PLOT TIME: 8:55:56 AM

PLOT DATE: 12/21/2018

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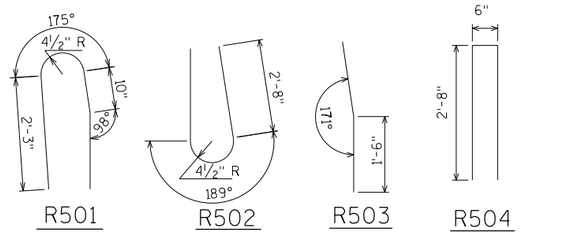
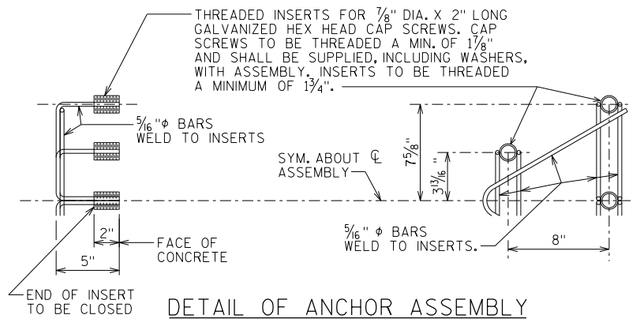
NOTE: DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.





DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

BILL OF BARS — WEST ABUT PARAPETS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
R501	X	11	5 - 10		X	PARAPET VERTICAL W2	X	
"	X	13	5 - 10		X	PARAPET VERTICAL W1		X
R502	X	11	6 - 8		X	PARAPET VERTICAL W2	X	
"	X	13	6 - 8		X	PARAPET VERTICAL W1		X
R503	X	11	3 - 0		X	PARAPET VERTICAL W2	X	
"	X	11	3 - 0		X	PARAPET VERTICAL W1		X
R504	X	17	5 - 7		X	PARAPET VERTICAL W2	X	
"	X	17	5 - 7		X	PARAPET VERTICAL W1		X
R505	X	5	6 - 5		X	PARAPET VERTICAL W2	X	
"	X	5	6 - 5		X	PARAPET VERTICAL W1		X
R506	X	6	6 - 6		X	PARAPET VERTICAL W2	X	
"	X	6	6 - 6		X	PARAPET VERTICAL W1		X
R509	X	6	5 - 5	◭	X	PARAPET VERTICAL W2	X	
"	X	6	5 - 5	◭	X	PARAPET VERTICAL W1		X
R511	X	1	15 - 1		X	PARAPET HORIZONTAL W2	X	
R512	X	5	15 - 1			PARAPET HORIZONTAL W2	X	
R513	X	2	14 - 10		X	PARAPET HORIZONTAL W2	X	
R514	X	1	16 - 7		X	PARAPET HORIZONTAL W1		X
R515	X	5	16 - 7			PARAPET HORIZONTAL W1		X
R516	X	2	16 - 4		X	PARAPET HORIZONTAL W1		X

BARS R507, R508 ARE EAST ABUT PARAPET BARS

BAR R510 IS AN EAST ABUT PARAPET BAR

BILL OF BARS — EAST ABUT PARAPETS

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	STG 1	STG 2
R501	X	9	5 - 10		X	PARAPET VERTICAL W3	X	
"	X	9	5 - 10		X	PARAPET VERTICAL W4		X
R502	X	9	6 - 8		X	PARAPET VERTICAL W3	X	
"	X	9	6 - 8		X	PARAPET VERTICAL W4		X
R503	X	11	3 - 0		X	PARAPET VERTICAL W3	X	
"	X	11	3 - 0		X	PARAPET VERTICAL W4		X
R504	X	17	5 - 7		X	PARAPET VERTICAL W3	X	
"	X	17	5 - 7		X	PARAPET VERTICAL W4		X
R505	X	5	6 - 5		X	PARAPET VERTICAL W3	X	
"	X	5	6 - 5		X	PARAPET VERTICAL W4		X
R506	X	6	6 - 6		X	PARAPET VERTICAL W3	X	
"	X	6	6 - 6		X	PARAPET VERTICAL W4		X
R507	X	1	14 - 1		X	PARAPET HORIZONTAL W3	X	
"	X	1	14 - 1		X	PARAPET HORIZONTAL W4		X
R508	X	5	14 - 1			PARAPET HORIZONTAL W3	X	
"	X	5	14 - 1			PARAPET HORIZONTAL W4		X
R509	X	6	5 - 5	◭	X	PARAPET VERTICAL W3	X	
"	X	6	5 - 5	◭	X	PARAPET VERTICAL W4		X
R510	X	2	13 - 10		X	PARAPET HORIZONTAL W3	X	
"	X	2	13 - 10		X	PARAPET HORIZONTAL W4		X

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

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

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SINGLE SLOPE PARAPET 42SS CONT.

SHEET 12 OF 13

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STATE PROJECT NUMBER
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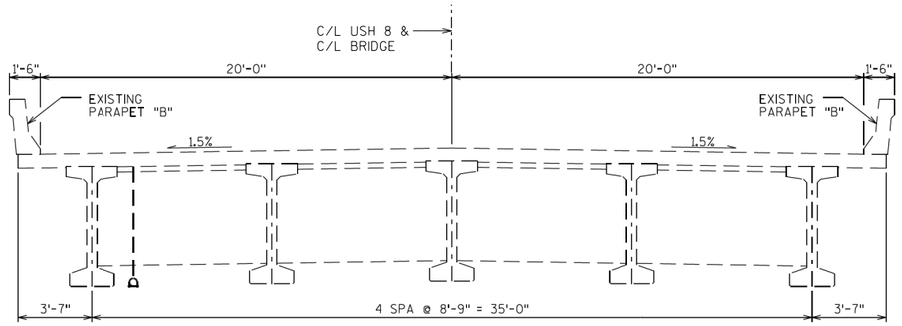
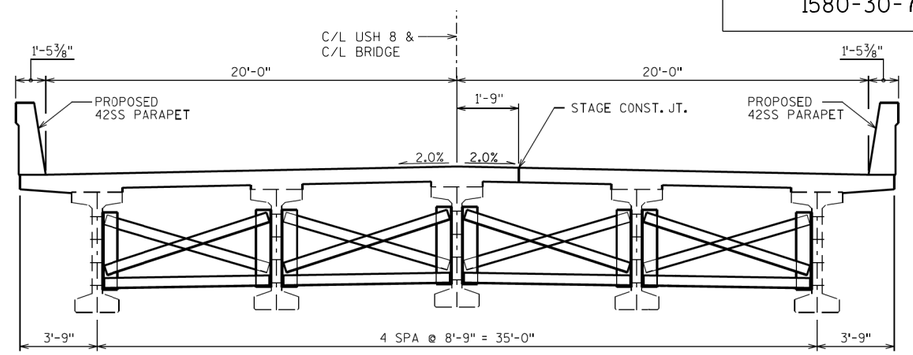
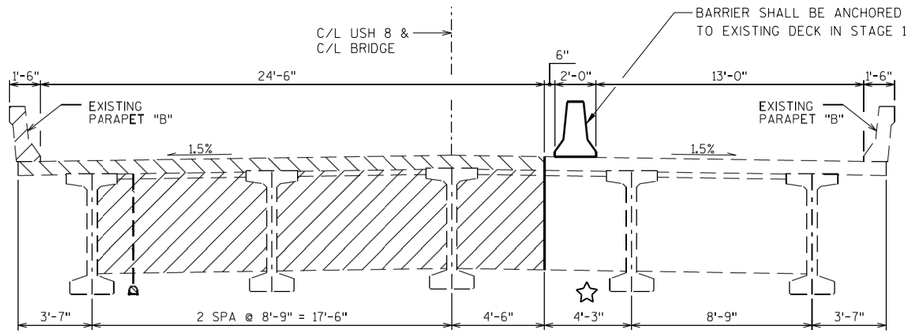


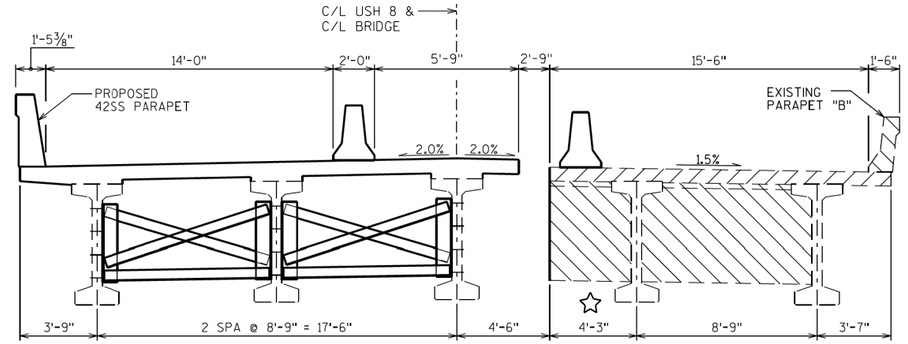
B-50-33 EXISTING X-SECTION



B-50-33 PROPOSED X-SECTION

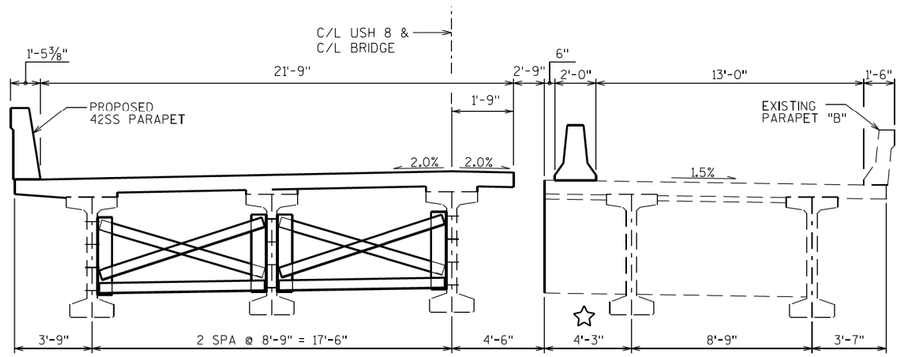


STAGE 1 REMOVAL

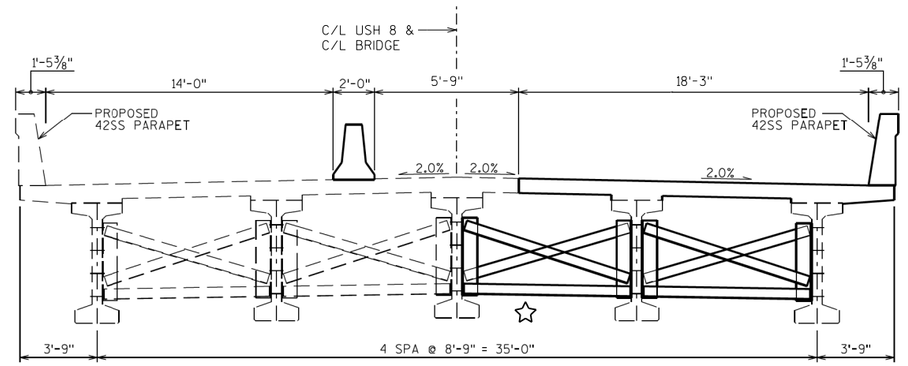


STAGE 2 REMOVAL

REMOVAL AREA



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

☆ CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR FULL LENGTH OF EXISTING DECK STAGE 1 TRAFFIC AND SUPPORT FOR FULL LENGTH OF NEW DECK FOR STAGE 2 TRAFFIC.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-33

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BRIDGE STAGING CONCEPT

SHEET 13 OF 13

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PLOT DATE: 12/21/2018 PLOT TIME: 8:55:56 AM

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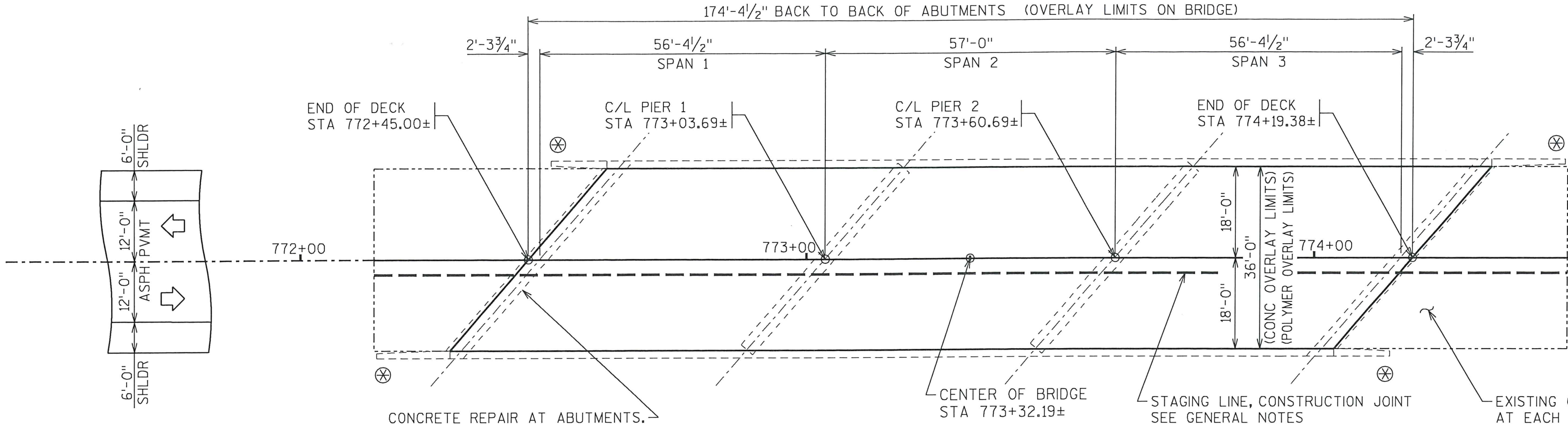


PLAN

THREE SPAN - 36" PRESTRESSED GIRDER BRIDGE

⊛ BEAM GUARD TO REMAIN

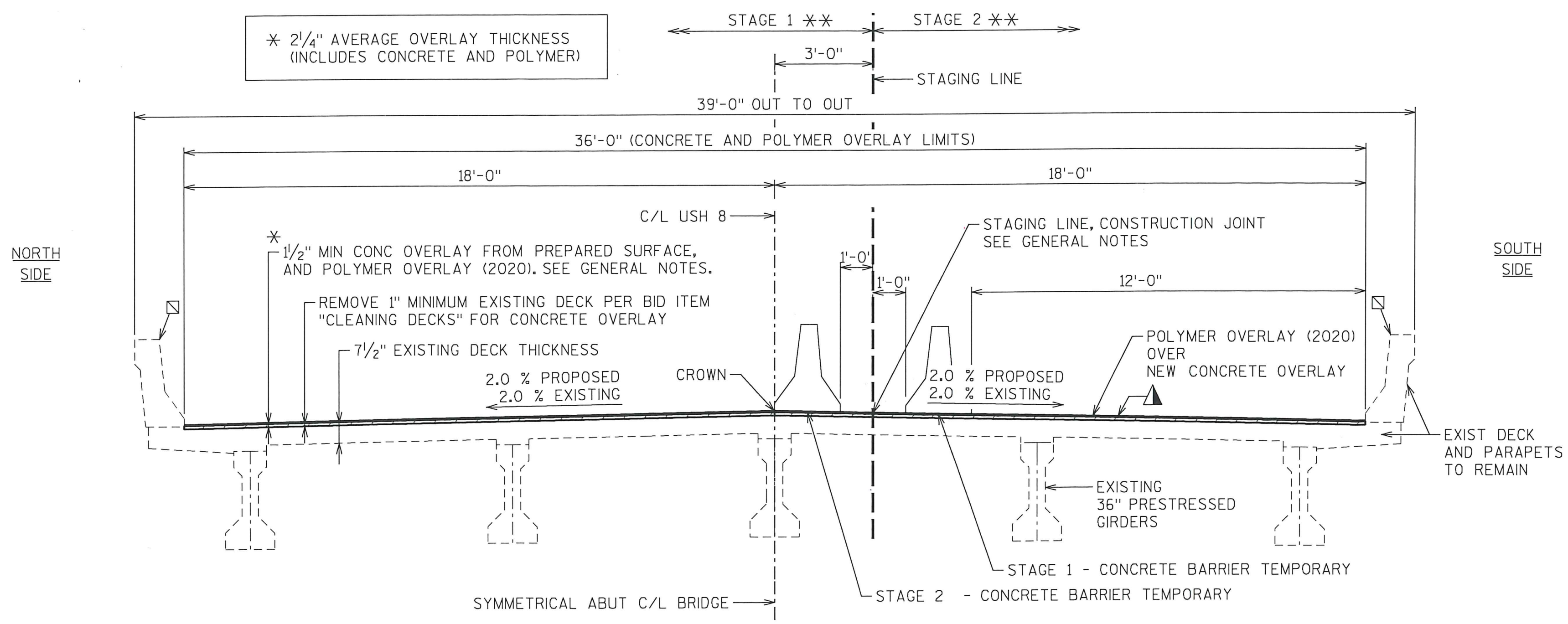
** SEE ROADWAY PLANS FOR TRAFFIC CONTROL STAGING.

INDICATES REMOVAL

COAT EXISTING PARAPET WITH "PIGMENTED SURFACE SEALER" PER THE STANDARD SPECIFICATIONS. SEE NOTES ON SHEETS 2.

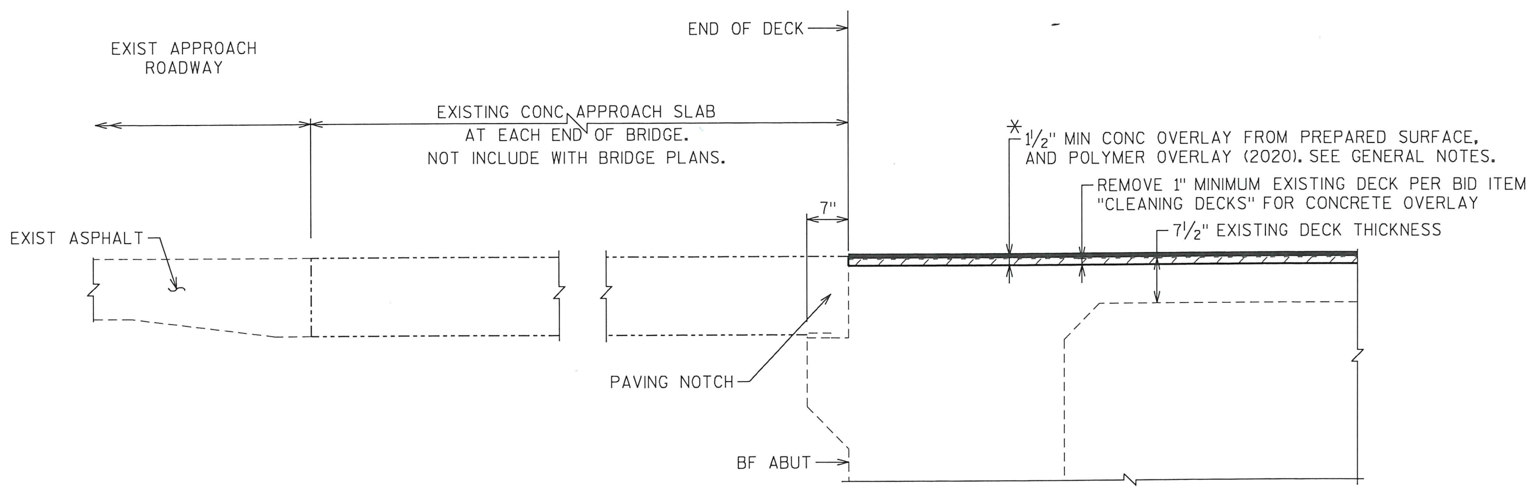
▲ COAT DECK WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS. SEE NOTES ON SHEET 2. APPLICATION TO BE APPLIED IN THE 2019 CONSTRUCTION YEAR.

* 2 1/4" AVERAGE OVERLAY THICKNESS (INCLUDES CONCRETE AND POLYMER)



CROSS SECTION THRU ROADWAY

(LOOKING EAST)



TYPICAL LONGITUDINAL SECTION AT END OF DECK

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS20

INVENTORY RATING FACTOR: RF = HS24
OPERATING RATING FACTOR: RF = HS40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE ______ f'c = 4,000 psi
- OVERLAY ______ f'c = 4,000 psi
- ALL OTHER ______ f'c = 3,500 psi

TRAFFIC DATA

ADT (2019)	=	2300
ADT (2039)	=	2750
DHV	=	331
DD	=	61/39
T	=	23.5 %
DESIGN SPEED	=	55 MPH

LIST OF DRAWINGS

WISCONSIN CHRISTOPHER J. BLUM E-33157 MADISON WI PROFESSIONAL ENGINEER
1-22-19

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/05/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-50-48

U.S.H. 8 OVER WISCONSIN CENTRAL RR

COUNTY PRICE | TOWN/~~CITY/VILLAGE~~ PRENTICE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY NCK | DESIGN CK'D. CJB | DRAWN BY DLF | PLANS CK'D. CJB

DECK OVERLAYS

S 123 OF 2

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STATE PROJECT NUMBER
1580-30-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

ANY EXCAVATION REQUIRED TO COMPLETE THE DECK AND APPROACH SLABS OVERLAY AT THE ABUTMENTS, TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

STAGING LINE LOCATION TO BE DETERMINED BY THESE PLANS AND BY THE FIELD ENGINEER. COORDINATE WITH STAGING PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK AND APPROACH SLABS UNDER THE BID ITEM "CLEANING DECKS". CONTRACTOR TO VERIFY COMPLETENESS OF REMOVALS WITH THE FIELD ENGINEER.

PREPARATION DECKS TYPE 1, PREPARAION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL-DEPTH DECK REPAIR AS DETERMINED, LOCATED, MARKED AND MEASURED BY THE FIELD ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK PREPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

BOTTOM OF THE EXISTING DECK WILL BE INSPECTED FOR AREAS OF FULL-DEPTH DECK REPAIR PRIOR TO DECK PREPARATION OPERATIONS.

BOTTOM OF THE EXISTING DECK IS TO BE INSPECTED FOR AREAS OF DISTRESS AFTER COMPLETION OF THE DECK PREPARTION AND PRIOR TO OVERLAYING THE BRIDGE.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IIN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FILED ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

POLYMER OVERLAY APPLICATION TO THE DECK TO BE SUSPENDED ONE YEAR UNTIL 2020 CONSTRUCTION YEAR.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM CONCRETE OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION PLUS A ¼" MINIMUM POLYMER OVERLAY PLACED ON THE DECK IN THE 2020 CONSTRUCTION YEAR. EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼" (INCLUDES CONCRETE AND POLYMER OVERLAY) OR AS GIVEN ON THE PLANS. IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

CLEAN ALL LOOSE MATERIAL ON THE DECK AFTER CLEANING OPERATIONS USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO PLACEMENT OF THE CONC OVERLAY, PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER.

AT THE ABUTMENTS, THE DECK JOINT IS COMPRISED OF A FILLER AND SEALANT, THERE IS NO STRIP SEAL OR COVER PLATED EXPANSION JOINT.

APPLY "PIGMENTED SURFACE SEALER" TO THE EXISTING CONCRETE PARAPETS PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK AFTER THE CONCRETE OVERLAY HAS BEEN APPLIED PER THE STANDARD SPECIFICATIONS AND AS SHOWN IN THIS PLAN SET.

SEE ROADWAY PLAN FOR LANE STAGING AND TRAFFIC SHIFT. COORDINATE WITH THESE STRUCTURE PLANS THE BRIDGE STAGING.

DECK SURFACE PREPARATION FOR APPLICATION OF THE POLYMER OVERLAY IN THE 2020 CONSTRUCTION YEAR IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES - B-50-48

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	203.0225.S	DEBRIS CONTAINMENT B-50-48	LS	1
(8)	502.3200	PROTECTIVE SURFACE TREATMENT	SY	700
(4)	502.3210	PIGMENTED SURFACE SEALER	SY	167
(3)	509.0301	PREPARATION DECKS TYPE 1	SY	55
(3)	509.0302	PREPARATION DECKS TYPE 2	SY	25
(1)	509.0500	CLEANING DECKS	SY	700
(5)	509.1500	CONCRETE SURFACE REPAIR	SF	10
(6)	509.2000	FULL-DEPTH DECK REPAIR	SY	1
(2)	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	45
(9)	509.5100.S	POLYMER OVERLAY	SY	700
(7)	509.9050.S	CLEANING PARAPETS	LF	400
	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	675
		NON-BID ITEMS		
		FILLER	SIZE	¾"

QUANTITIES NOTES

(1) BASED ON 1" DEEP BY LIMITS OF OVERLAY ON DECK.

(2) CONCRETE FOR:
* PREPARATION DECKS TYPE 1 & 2, *FULL-DEPTH DECK REPAIR. AND OVERLAY.

(3) PERTAINS TO DECK.

(4) APPLY PIGMENTED SEALER TO FRONT FACE, TOP, AND ENDS OF EXISTING PARAPETS. CLEAN THE INSIDE FACE, TOP AND ENDS OF PARAPET PER BID ITEM "CLEANING PARAPETS". APPLICATION PER SPEC. APPLICATION AND QUANTITY ARE CONSIDERED INCIDENTAL TO BRIDGE BID ITEM " PIGMENTED SURFACE SEALER".

(5) ABUTMENT/WING JONT - AS LOCATED BY FIELD ENGINEER.

(6) UNDISTRIBUTED AMOUNT.

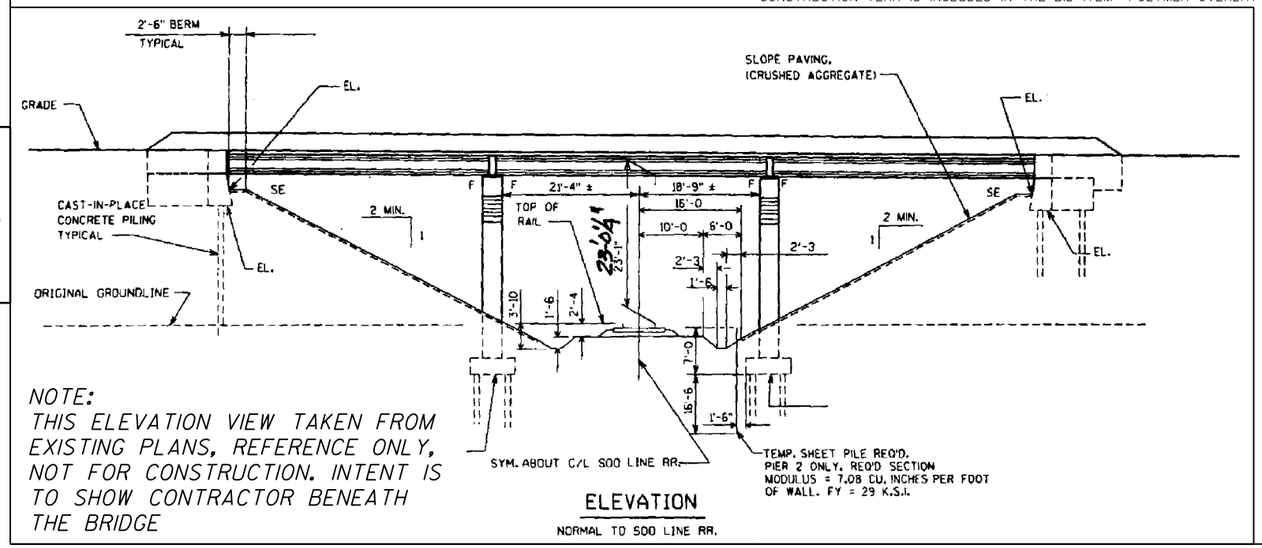
(7) INCLUDES PARAPETS ON WINGWALLS AND DECK.

(8) APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK CONCRETE OVERLAY. APPLICATION AND DECK PREPARATION PER SPECIFICATION.

(9) TO BE APPLIED TO THE DECK SURFACE IN 2020 CONSTRUCTION YEAR.

* THESE QUANTITIES TOTALS ARE AN ESTIMATE AND ARE INCLUDED IN BID ITEM "CONCRETE MASONRY OVERLAY, DECKS".

-PREPARATION DECKS TYPE 1 = 3.3 CY
-PREPARATION DECKS TYPE 2 = 2.6 CY
-FULL-DEPTH DECK REPAIR = 0.4 CY



ELEVATION
NORMAL TO SOO LINE RR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-48

DRAWN BY DLF | PLANS CK'D. CJB

NOTES AND QUANTITIES

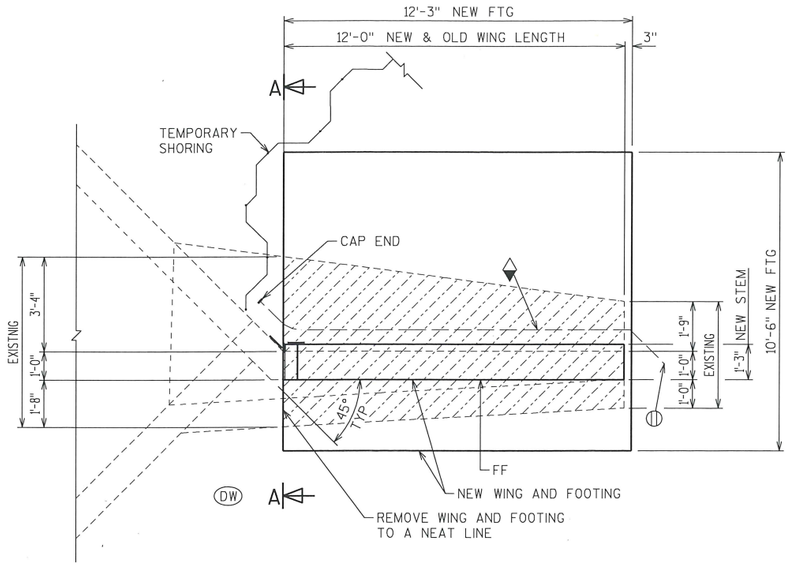
SHEET 2 OF 2

124

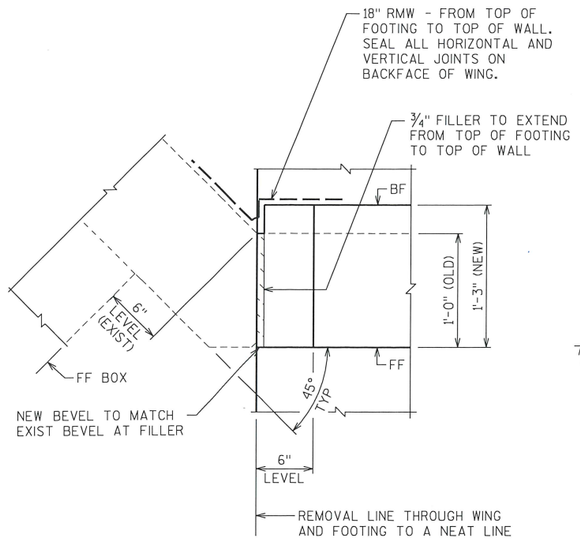
PLOT TIME: 7:37:11 AM
DATE: 12/19/2018
FILE NAME : S:\UZ\W\Wtnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-275\culvert\b50275di.dgn

STATE PROJECT NUMBER

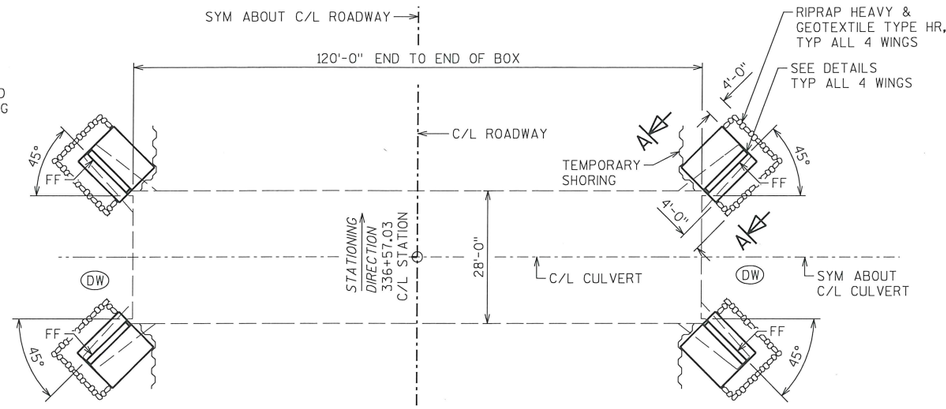
1580-30-73



PLAN

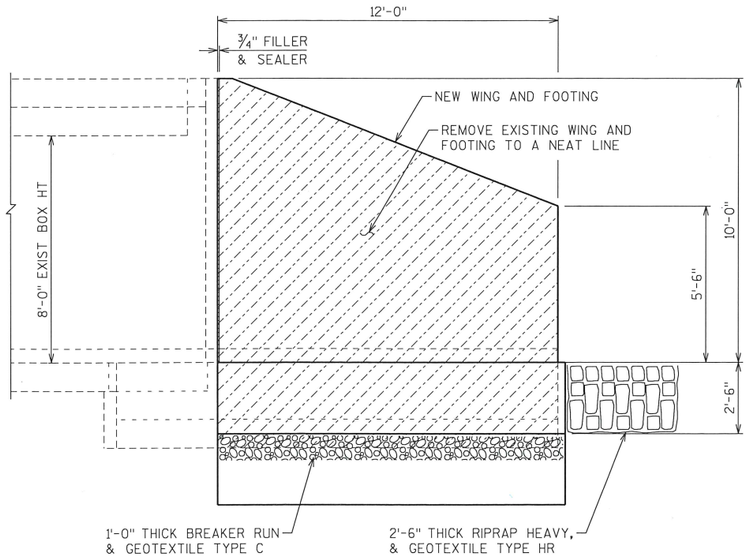


CORNER DETAIL

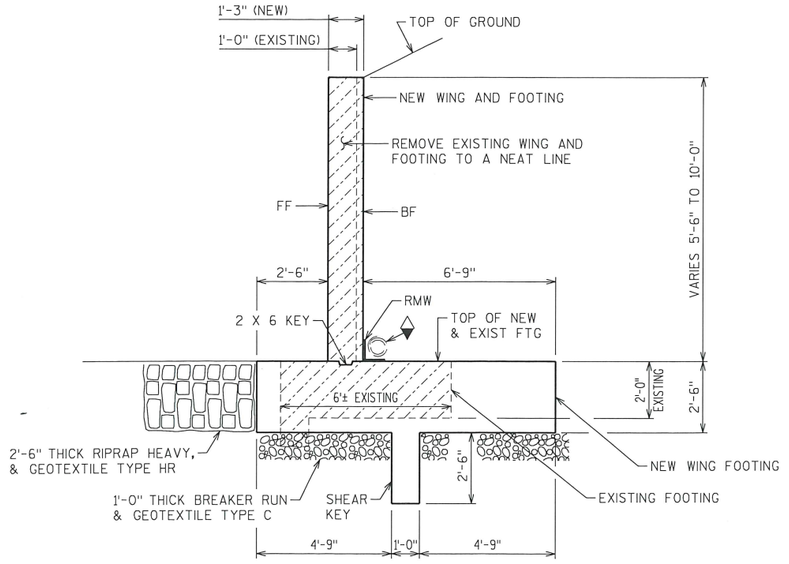


GENERAL CULVERT PLAN

8'-0" X 12'-6" TWIN BOX CULVERT
(WING & FOOTING REPLACEMENT ON ALL 4 CORNERS)



ELEVATION



SECTION A-A

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: H-15 (BASED ON EXISTING PLAN)
INVENTORY RATING FACTOR: RF = 1.0
OPERATING RATING FACTOR: RF = 1.67
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

SOIL ASSUMPTIONS:
SOIL UNIT WEIGHT 120 PCF
FRICTION ANGLE BETWEEN FILL AND WALL 21 DEGREES
ANGLE OF INTERNAL FRICTION (BACKFILL) 30 DEGREES
ANGLE OF INTERNAL FRICTION (FOUNDATION) 34 DEGREES
COHESION 0 PSI

MATERIAL PROPERTIES:

CONCRETE MASONRY _____ f'c = 3,500 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT
AASHTO GRADE 60 _____ fy = 60,000 psi

LIST OF DRAWINGS

TRAFFIC DATA

ADT (2019)	=	2300
ADT (2039)	=	2750
DHV	=	331
DD	=	61/39
T	=	23.5 %
DESIGN SPEED	=	55 MPH

LEGEND

▨ INDICATES REMOVAL

RMW = RUBBERIZED MEMBRANE WATERPROOFING.

(DW) DE-WATERING, SEE GENERAL NOTES

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE
T = TOP
B = BOTTOM
EXIST = EXISTING

◆ PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE. PLACEMENT OF PIPE UNDERDRAIN SHALL BE DETERMINED IN FIELD.

(D) ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN, FOR RODENT SHIELD DETAIL SEE SHEET 2.

WISCONSIN PROFESSIONAL ENGINEER
CHRISTOPHER J. BLUM
E-33157
MADISON
WI
12.19.18

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/05/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-50-275

USH 8 OVER HAY CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
PRICE	PRENTICE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJB	NB	DLF	CJB

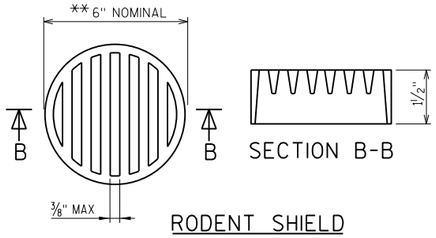
CULVERT WING REPLACEMENT

SHEET 125 OF 3

8

8

PLOT TIME: 7:37:11 AM
PLOT DATE: 12/19/2018
FILE NAME : S:\UZ\WWitnc\144737\5-final-dsgn\5i-drawings\20-Struct\B-50-275\culvert\b50275d2.dgn



RODENT SHIELD

**NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

RODENT SHIELD, PIPE COUPLING, AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

MATCH EXIST DIMENSIONS AND ELEVATIONS EXCEPT AS OTHERWISE SHOWN OR NOTED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND INSPECTION REPORTS. EXISTING BRIDGE PLANS AVAILABLE AT WISDOT.

STATIONING MAY VARY BASED ON EXACT LOCATION OF BRIDGE TO PROPOSED ALIGNMENT.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS.

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES CULVERT B-50-275 SHALL BE THE EXISTING GROUNDLINE.

⚠ THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE B" REQUIRED FOR THE ENTIRE WALL LENGTH. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION WITHIN THE LENGTH OF THE WING UNLESS OTHERWISE NOTED AND SHOWN IN THE "BACKFILL STRUCTURE LIMITS" DETAIL. BACKFILL IS REQUIRED BEHIND ALL WINGWALLS. SALVAGE EXISTING RIPRAP AND REINSTALL AT WINGWALLS. PROVIDE ADDITIONAL RIPRAP SLOPE PROTECTION ITEMS AS REQUIRED BY THE FIELD ENGINEER.

SALVAGE AND REINSTALL NAMEPLATE IF PRESENT ON WINGWALL. IF NEW NAMEPLATE IS REQUIRED, NAMEPLATE SHALL BE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAMEPLATE TO SHOW ORIGINAL CONSTRUCTION YEAR. SEE EXISTING NAMEPLATE FOR DATE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAWCUT UNLESS OTHERWISE NOTED.

THESE STRUCTURE PLANS ARE ONLY THE STRUCTURE REPAIR WORK. ANY ADDITIONAL REMOVAL REQUIRED, OUTSIDE OF THE LIMITS SHOWN IIN THESE PLANS MUST BE COORDINATED WITH THE FIELD ENGINEER. FIELD ENGINEER SHOULD BE CONTACTED FOR APPROVAL OF ADDITIONAL REMOVAL.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.

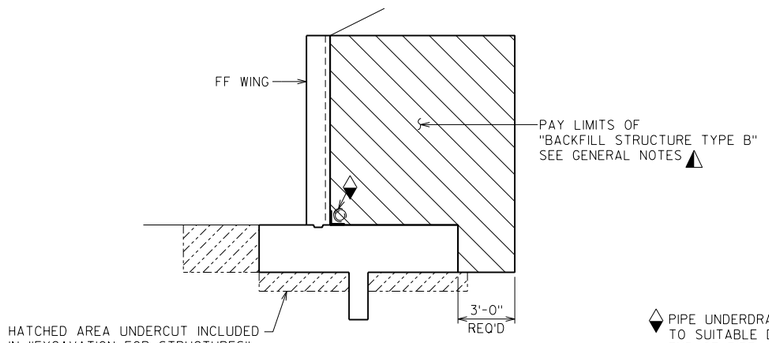
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ¾" FILLER WITH NON-BITUMINOUS JOINT SEALER PER SECTION 502.29 (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).

BEVEL EXPOSED EDGES OF CONCRETE 1" UNLESS OTHERWISE NOTED.

(DW) IF NECESSARY, THE CONTRACTOR SHALL PLACE SAND BAGS OR USE OTHER MEANS TO DE-WATER THE CONSTRUCTION AREAS. THIS COST SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY CULVERTS".

ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

WING DETAILS TYPICAL FOR ALL WINGS.



BACKFILL STRUCTURE LIMITS

A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS

◆ PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE. PLACEMENT OF PIPE UNDERDRAIN SHALL BE DETERMINED IN FIELD.

STATE PROJECT NUMBER
1580-30-73

TOTAL ESTIMATED QUANTITIES - B-50-275

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
(1)	203.0200	REMOVING OLD STRUCTURE STA 336+57.03	LS	1
	206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-50-275	LS	1
(2)	210.2500	BACKFILL STRUCTURE TYPE B	TON	365
(5)	311.0110	BREAKER RUN	TON	31
(3)	502.4104	ADHESIVE ANCHORS 1/2-INCH	EACH	80
	504.0100	CONCRETE MASONRY CULVERTS	CY	70
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	8680
(7)	509.1500	CONCRETE SURFACE REPAIR	SF	20
(4)	511.1200	TEMPORARY SHORING B-50-275	SF	1000
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	15
(6)	606.0300	RIPRAP HEAVY	CY	70
(8)	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70
(5)	645.0105	GEOTEXTILE TYPE C	SY	85
(6)	645.0120	GEOTEXTILE TYPE HR	SY	210
		NON-BID ITEMS		
		FILLER	SIZE	¾"

QUANTITY NOTES

(1) INCLUDES ALL SAW CUTTING AND DISPOSAL OF REMOVED MATERIALS AT ALL FOUR WINGS.

(2) A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS. A FACTOR OF 20% WAS ADDED FOR COMPACTION.

(3) WEIGHT OF ANCHORS INCLUDED IN "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

(4) TEMPORARY SHORING IS BASED ON THE SQUARE FOOT OF EXPOSED PILE SURFACE BETWEEN THE UPPER AND LOWER GRADES.

(5) PLACED BELOW ALL WING FOOTINGS FOR STABILIZATION. A FACTOR OF 1.8 WAS USED TO CONVERT CU YDS TO TONS.

(6) PLACED AT FRONT AND END OF ALL WINGS. ADDITIONAL AMOUNT PROVIDED FOR USE IN STABILIZATION OF SLOPE BEHIND ALL FOUR WINGS.

(7) NORTH END NEAR WING
CELL 1 MIDSPAN
CELL 1 SOUTH END

(8) INCLUDES RODENT SHIELD FOR PIPE UNDERDRAIN PER SDD 8F6-4.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-275

DRAWN BY DLF | PLANS CK'D. CJB

NOTES AND QUANTITIES

8

PLOT DATE: 12/9/2018 PLOT TIME: 7:37:12 AM
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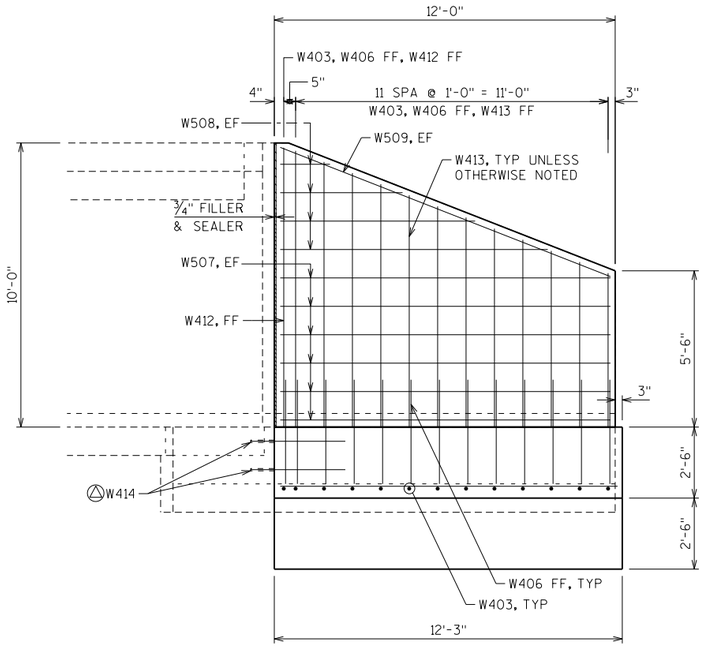
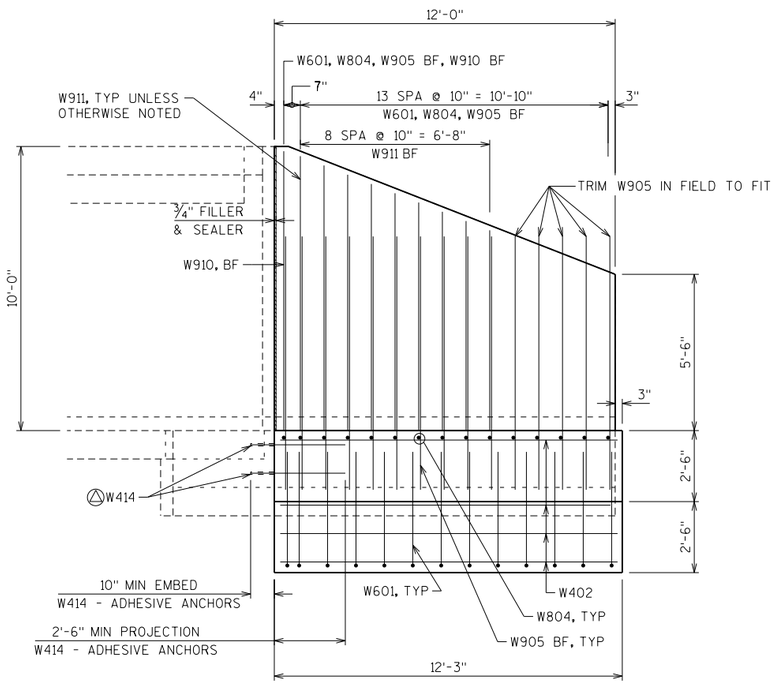
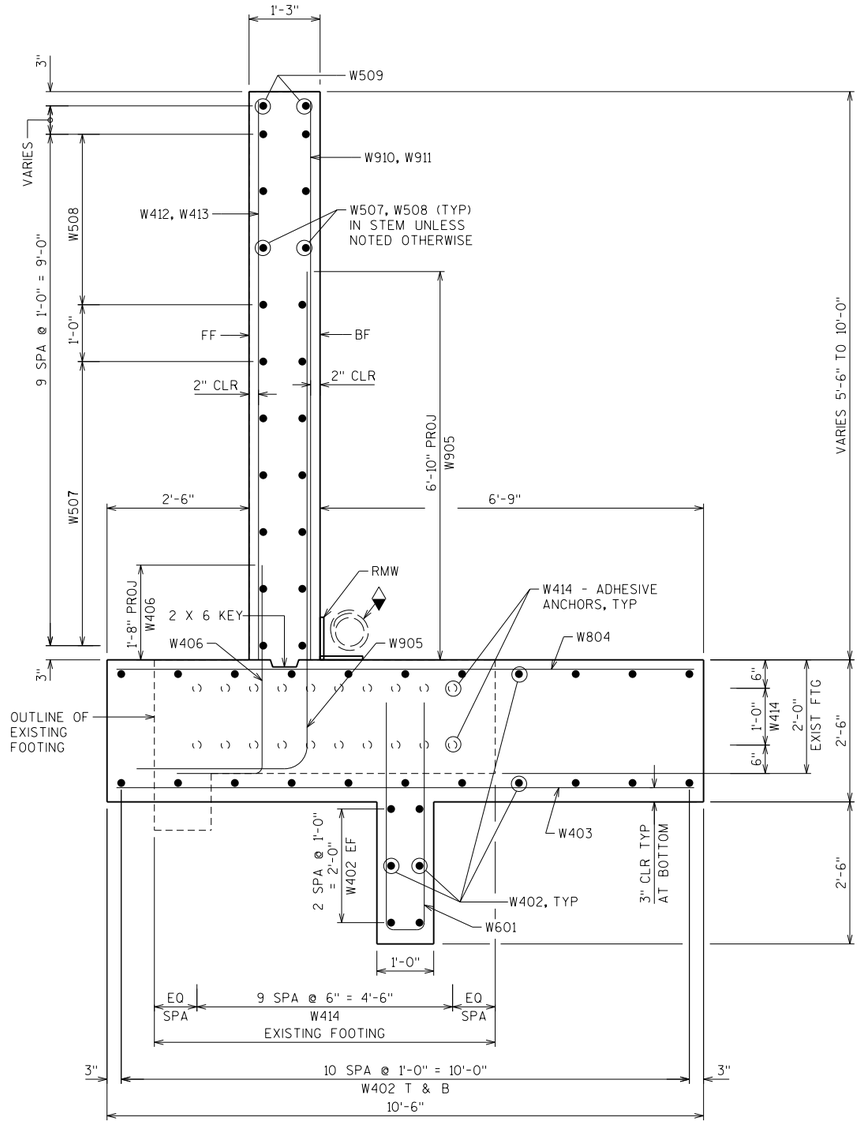


ELEVATION SHOWING FRONT FACE REINFORCEMENT



ELEVATION SHOWING BACK FACE REINFORCEMENT



SECTION A-A SHOWING REINFORCEMENT

△ ADHESIVE ANCHORS ½-INCH, EMBED 10" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS. ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE. WEIGHT OF ANCHORS INCLUDED IN "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

STATE PROJECT NUMBER
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NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

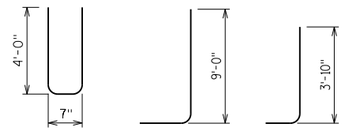
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

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

① TABLE IS FOR (4) IDENTICAL WINGS

BILL OF BARS — ① ALL WINGS

	BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
	W601	X	60	8 - 5		X	SHEAR KEY
	W402	X	112	11 - 11			FTG AND KEY LONGIT
	W403	X	52	10 - 2			FTG TRANS B
	W804	X	60	10 - 2			FTG TRANS T
	W905	X	60	11 - 9		X	FTG DWL BF
	W406	X	52	5 - 3		X	FTG DWL FF
	W507	X	48	11 - 7			STEM HORIZ EF
	W508	X	32	5 - 7	▲		STEM HORIZ EF
	W509	X	8	12 - 5			STEM HORIZ EF TOP
	W910	X	4	9 - 8			STEM VERT BF
	W911	X	36	8 - 4	▲		STEM VERT BF
	W412	X	4	9 - 8			STEM VERT FF
	W413	X	48	7 - 7	▲		STEM VERT FF
△	W414	X	80	3 - 4			ADHESIVE ANCHOR



W601 W905 W406

BAR SERIES TABLE — ① ALL WINGS

BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
W508	8 SERIES OF 4	1'-9" TO 9'-5"		STEM HORIZ EF
W911	4 SERIES OF 9	7'-0" TO 9'-7"		STEM VERT BF
W413	4 SERIES OF 12	5'-5" TO 9'-8"		STEM VERT FF

BUNDLE AND TAG EACH SERIES SEPARATELY

NOTES

SEE GENERAL NOTES ON SHEET 2.

◆ PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE. PLACEMENT OF PIPE UNDERDRAIN SHALL BE DETERMINED IN FIELD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-50-275

DRAWN BY DLF | PLANS CK'D. CJB

WING DETAILS

SHEET 3 OF 3
127

8

USH 8 - STA 525+80 - STA 542+50 - STAGE 1 EXP Fact= 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	VOLUME CUT (CY)	VOLUME FILL (CY)	CUMULATIVE VOLUME CUT (CY)	CUMULATIVE VOLUME FILL (CY)	MASS HAUL (CY)
525+80	19.5	0.0					
526+00	16.1	0.0	13.0	0.0	13	0	13
526+50	12.2	0.0	26.0	0.0	39	0	39
527+00	10.3	2.6	21.0	3.0	60	3	57
527+50	8.8	18.4	18.0	25.0	78	28	50
528+00	9.6	32.3	17.0	61.0	95	89	6
528+05	9.6	32.8	2.0	8.0	97	97	0
528+15	9.5	37.3	4.0	17.0	101	114	-13
528+30	7.2	32.3	5.0	25.0	106	139	-33
528+40	5.7	30.0	2.0	15.0	108	154	-46
528+50	5.2	24.5	2.0	13.0	110	167	-57
528+55	4.7	22.9	1.0	6.0	111	173	-62
528+65	4.1	19.7	2.0	10.0	113	183	-70
529+00	5.9	0.0	6.0	17.0	119	200	-81
529+10	6.0	0.0	2.0	0.0	121	200	-79
529+10	28.1	0.0	0.0	0.0	121	200	-79
529+25	26.2	0.0	15.0	0.0	136	200	-64
529+31	26.2	0.0	6.0	0.0	142	200	-58
B-50-32							
530+64	20.4	0.0					
530+75	20.4	0.0	8.0	0.0	150	200	-50
531+00	25.4	1.1	21.0	1.0	171	201	-30
531+00	4.8	1.1	0.0	0.0	171	201	-30
531+50	4.8	3.5	9.0	6.0	180	207	-27
532+00	4.7	2.4	9.0	7.0	189	214	-25
532+50	4.4	10.2	8.0	15.0	197	229	-32
533+00	5.5	5.4	9.0	19.0	206	248	-42
533+50	4.9	5.6	10.0	13.0	216	261	-45
534+00	5.2	4.3	9.0	12.0	225	273	-48
534+50	4.7	7.2	9.0	14.0	234	287	-53
535+00	4.5	10.9	9.0	22.0	243	309	-66
535+50	4.1	11.9	8.0	27.0	251	336	-85
536+00	4.9	4.3	8.0	20.0	259	356	-97
536+50	5.2	5.6	9.0	12.0	268	368	-100
537+00	5.1	6.4	10.0	14.0	278	382	-104
537+50	6.2	0.5	10.0	8.0	288	390	-102
538+00	5.9	0.2	11.0	1.0	299	391	-92
538+35	6.5	0.0	8.0	0.0	307	391	-84
538+35	29.0	0.0	0.0	0.0	307	391	-84
538+50	26.7	2.3	15.0	1.0	322	392	-70
538+64	26.7	2.3	14.0	2.0	336	394	-58
B-50-33							
539+72	27.8	6.3					
540+00	27.8	6.3	29.0	8.0	365	402	-37
540+10	32.8	4.1	11.0	3.0	376	405	-29
540+20	32.3	1.4	12.0	1.0	388	406	-18
540+20	5.4	1.4	0.0	0.0	388	406	-18
540+32	5.4	45.6	2.0	13.0	390	419	-29
540+47	6.9	27.0	3.0	26.0	393	445	-52
540+50	7.0	24.0	1.0	4.0	394	449	-55
540+57	7.2	26.6	2.0	9.0	396	458	-62
540+72	11.3	34.1	5.0	22.0	401	480	-79
540+82	13.9	41.0	5.0	18.0	406	498	-92
540+97	94.9	0.0	30.0	15.0	436	513	-77
541+00	148.9	0.0	14.0	0.0	450	513	-63
541+12	191.3	0.0	76.0	0.0	526	513	13
541+35	15.5	3.8	88.0	2.0	614	515	99
541+50	10.5	20.1	7.0	9.0	621	524	97
541+82	10.1	8.6	12.0	22.0	633	546	87
542+00	9.6	3.0	7.0	5.0	640	551	89
542+50	13.1	0.0	21.0	4.0	661	555	106

USH 8 - STA 525+80 - STA 542+50 - STAGE 2 EXP Fact= 1.3

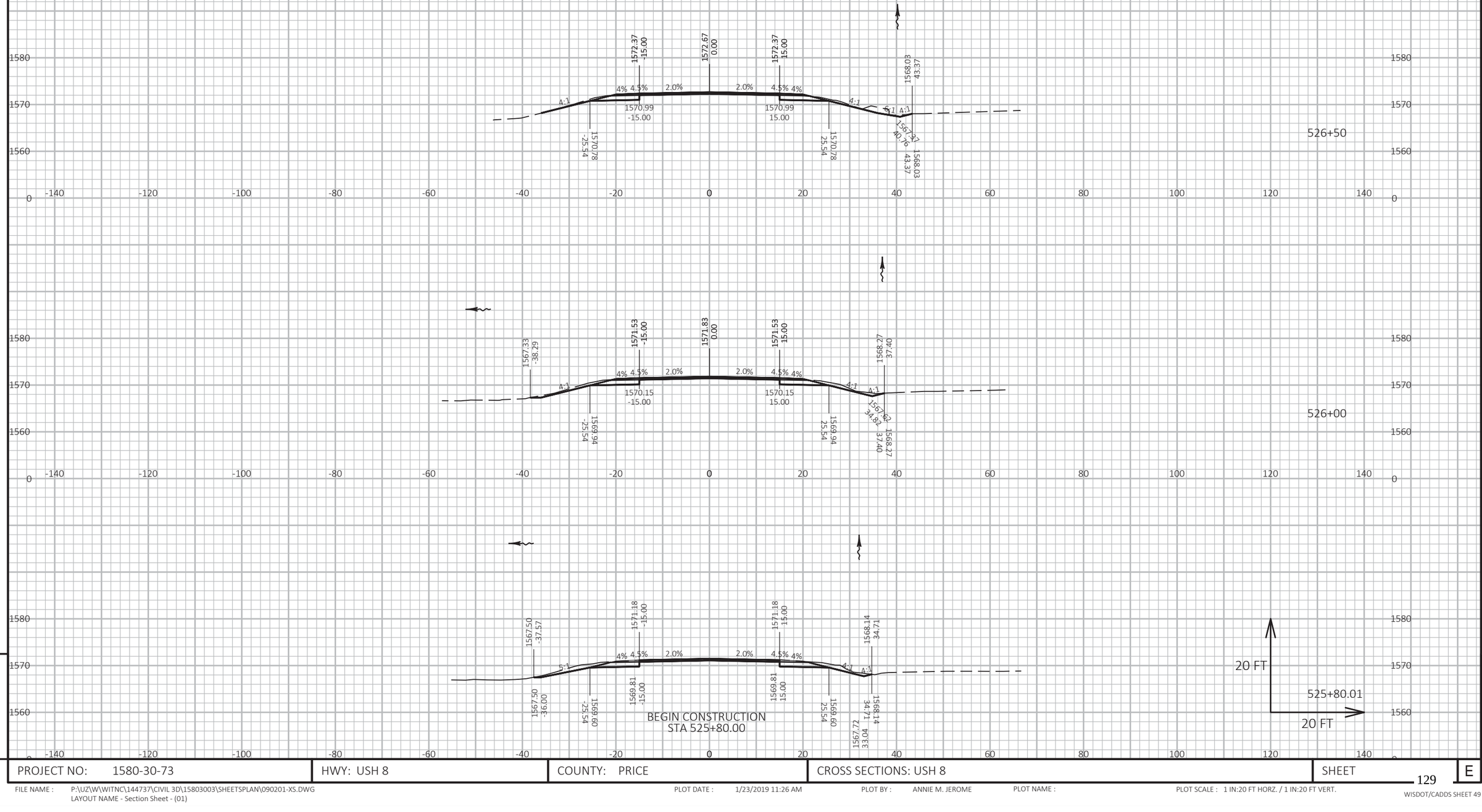
STATION	END AREA CUT (SF)	END AREA FILL (SF)	VOLUME CUT (CY)	VOLUME FILL (CY)	CUMULATIVE VOLUME CUT (CY)	CUMULATIVE VOLUME FILL (CY)	MASS HAUL (CY)
525+80	17.9	0.0					
526+00	17.2	0.0	13.0	0.0	13	0	13
526+50	11.4	0.0	26.0	0.0	39	0	39
527+00	16.3	2.6	26.0	3.0	65	3	62
527+50	10.0	21.1	24.0	29.0	89	32	57
528+00	11.9	35.0	20.0	68.0	109	100	9
528+05	12.3	37.7	2.0	9.0	111	109	2
528+15	12.2	34.9	5.0	17.0	116	126	-10
528+30	11.1	29.5	6.0	23.0	122	149	-27
528+40	9.7	22.7	4.0	13.0	126	162	-36
528+50	7.3	16.1	3.0	9.0	129	171	-42
528+55	5.5	13.2	1.0	4.0	130	175	-45
528+65	4.5	13.2	2.0	6.0	132	181	-49
529+00	6.3	0.0	7.0	11.0	139	192	-53
529+10	6.3	0.0	2.0	0.0	141	192	-51
529+10	29.5	0.0	0.0	0.0	141	192	-51
529+25	26.3	0.0	15.0	0.0	156	192	-36
529+31	26.3	0.0	6.0	0.0	162	192	-30
B-50-32							
530+64	17.9	0.0					
530+75	17.9	0.0	7.0	0.0	169	192	-23
531+00	22.6	4.9	19.0	3.0	188	195	-7
531+00	4.1	7.9	0.0	0.0	188	195	-7
531+50	4.1	7.9	8.0	19.0	196	214	-18
532+00	3.7	12.6	7.0	25.0	203	239	-36
532+50	4.5	3.6	8.0	20.0	211	259	-48
533+00	5.2	1.7	9.0	6.0	220	265	-45
533+50	5.9	0.4	10.0	3.0	230	268	-38
534+00	5.2	1.4	10.0	2.0	240	270	-30
534+50	3.9	2.4	8.0	5.0	248	275	-27
535+00	3.8	8.1	7.0	13.0	255	288	-33
535+50	4.4	4.5	8.0	15.0	263	303	-40
536+00	5.0	4.1	9.0	10.0	272	313	-41
536+50	4.2	3.3	9.0	9.0	281	322	-41
537+00	6.5	2.3	10.0	7.0	291	329	-38
537+50	5.5	1.1	11.0	4.0	302	333	-31
538+00	3.9	4.7	9.0	7.0	311	340	-29
538+35	3.4	7.2	5.0	10.0	316	350	-34
538+35	27.4	7.2	0.0	0.0	316	350	-34
538+50	20.2	0.0	13.0	3.0	329	353	-24
538+64	20.2	0.0	10.0	0.0	339	353	-14
B-50-33							
539+72	27.8	17.4					
540+00	27.8	17.4	29.0	23.0	368	376	-8
540+10	36.1	65.0	12.0	20.0	380	396	-16
540+10	5.3	65.0	0.0	0.0	380	396	-16
540+20	11.0	74.3	3.0	34.0	383	430	-47
540+32	8.9	67.6	4.0	41.0	387	471	-84
540+47	9.1	65.1	5.0	48.0	392	519	-127
540+50	10.0	64.5	1.0	9.0	393	528	-135
540+57	9.9	63.3	3.0	22.0	396	550	-154
540+72	13.0	63.7	6.0	46.0	402	596	-194
540+82	14.9	64.2	5.0	31.0	407	627	-220
540+97	10.9	56.9	7.0	44.0	414	671	-257
541+00	10.8	55.6	1.0	8.0	415	679	-264
541+12	9.8	51.3	5.0	31.0	420	710	-290
541+35	8.9	44.5	8.0	53.0	428	763	-335
541+50	9.4	34.5	5.0	29.0	433	792	-359
541+82	88.2	0.0	58.0	27.0	491	819	-328
542+00	22.0	0.0	37.0	0.0	528	819	-291
542+50	10.0	4.1	30.0	5.0	558	824	-266

9

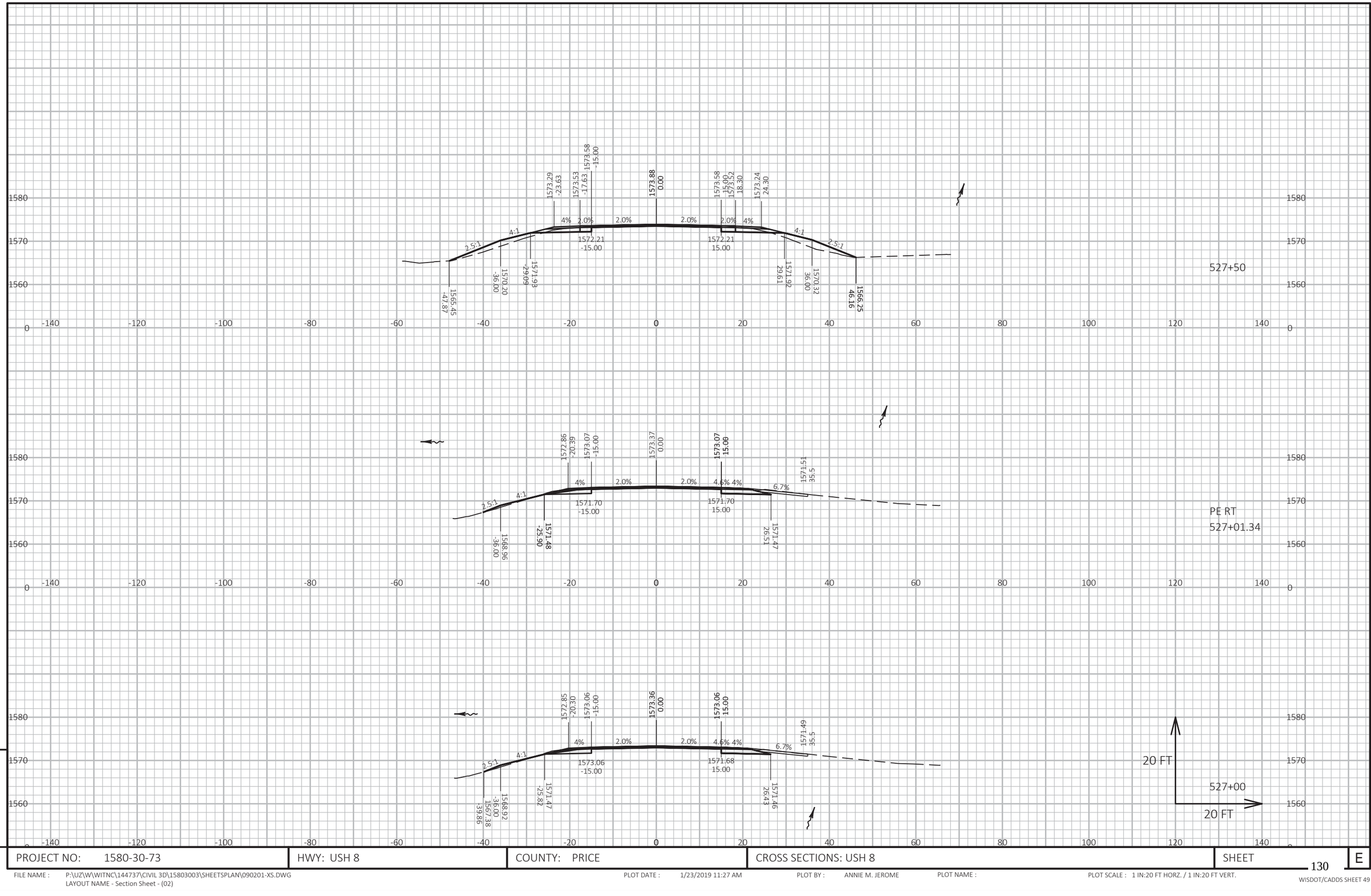
9

PROJECT NO: 1580-30-73 | HWY: USH 8 | COUNTY: PRICE | EARTHWORK DATA: USH 8 | SHEET E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-EW.DWG
LAYOUT NAME - 01
PLOT DATE : 1/23/2019 11:26 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 129	E



9

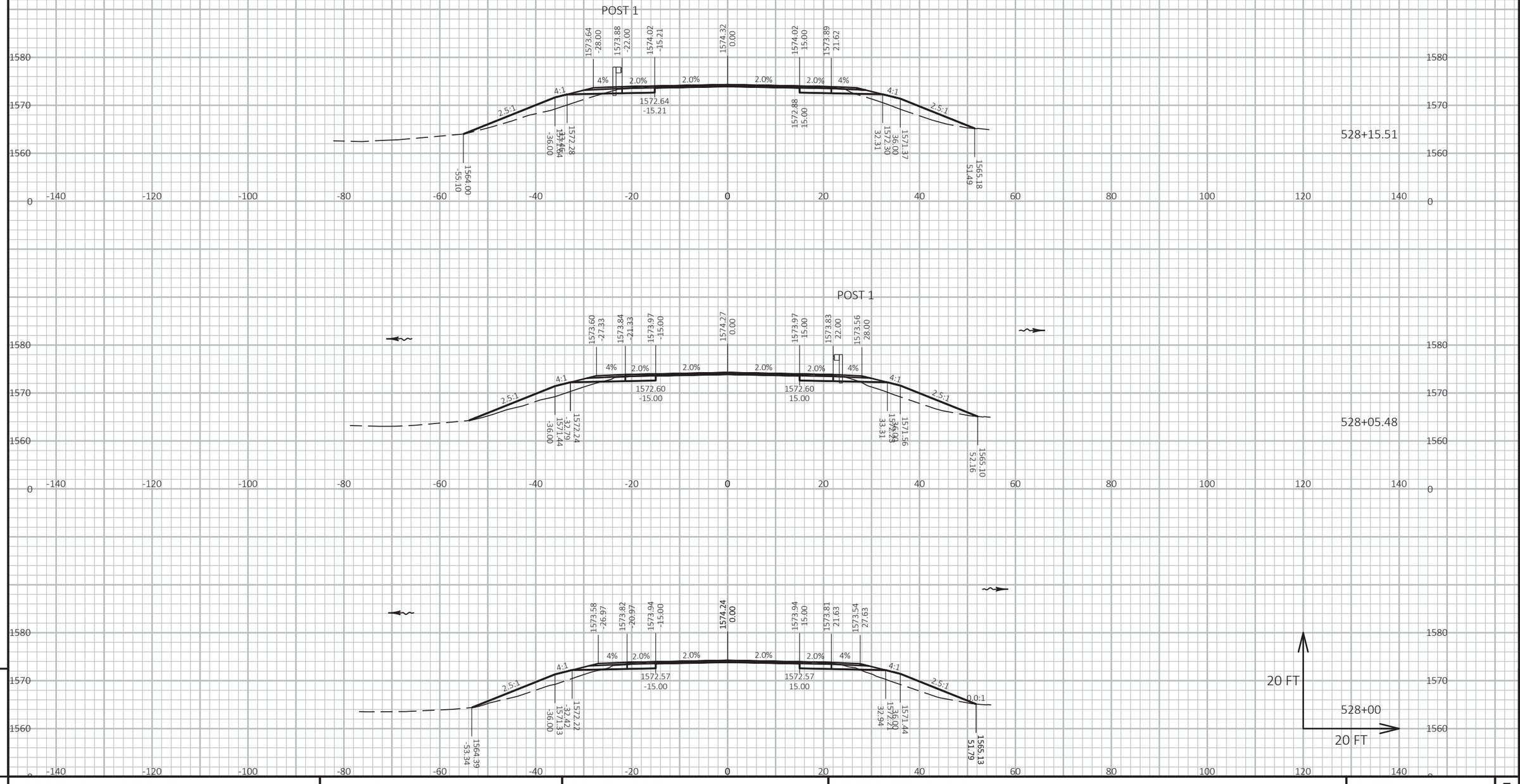
9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 130	E

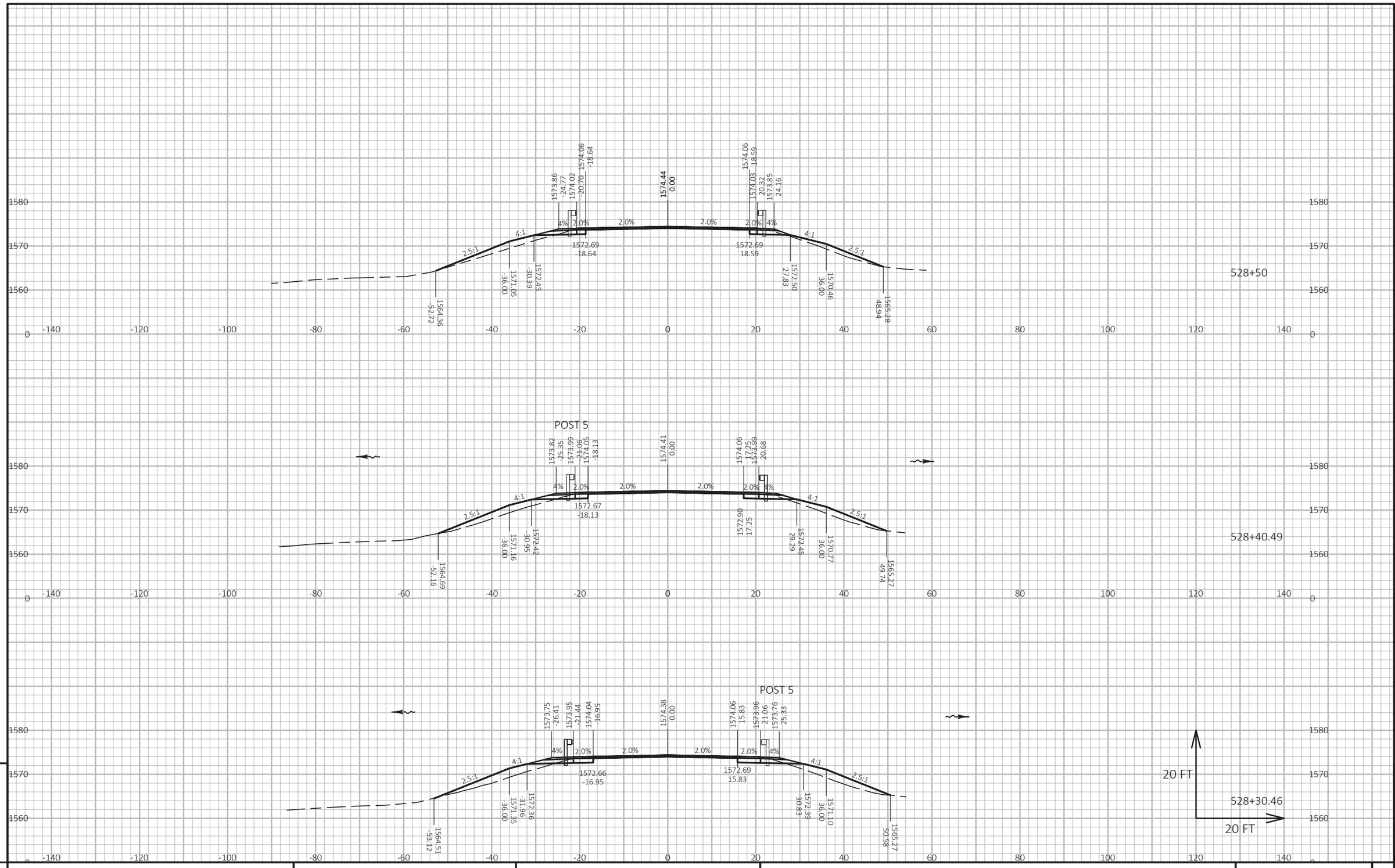
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (02)

PLOT DATE : 1/23/2019 11:27 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

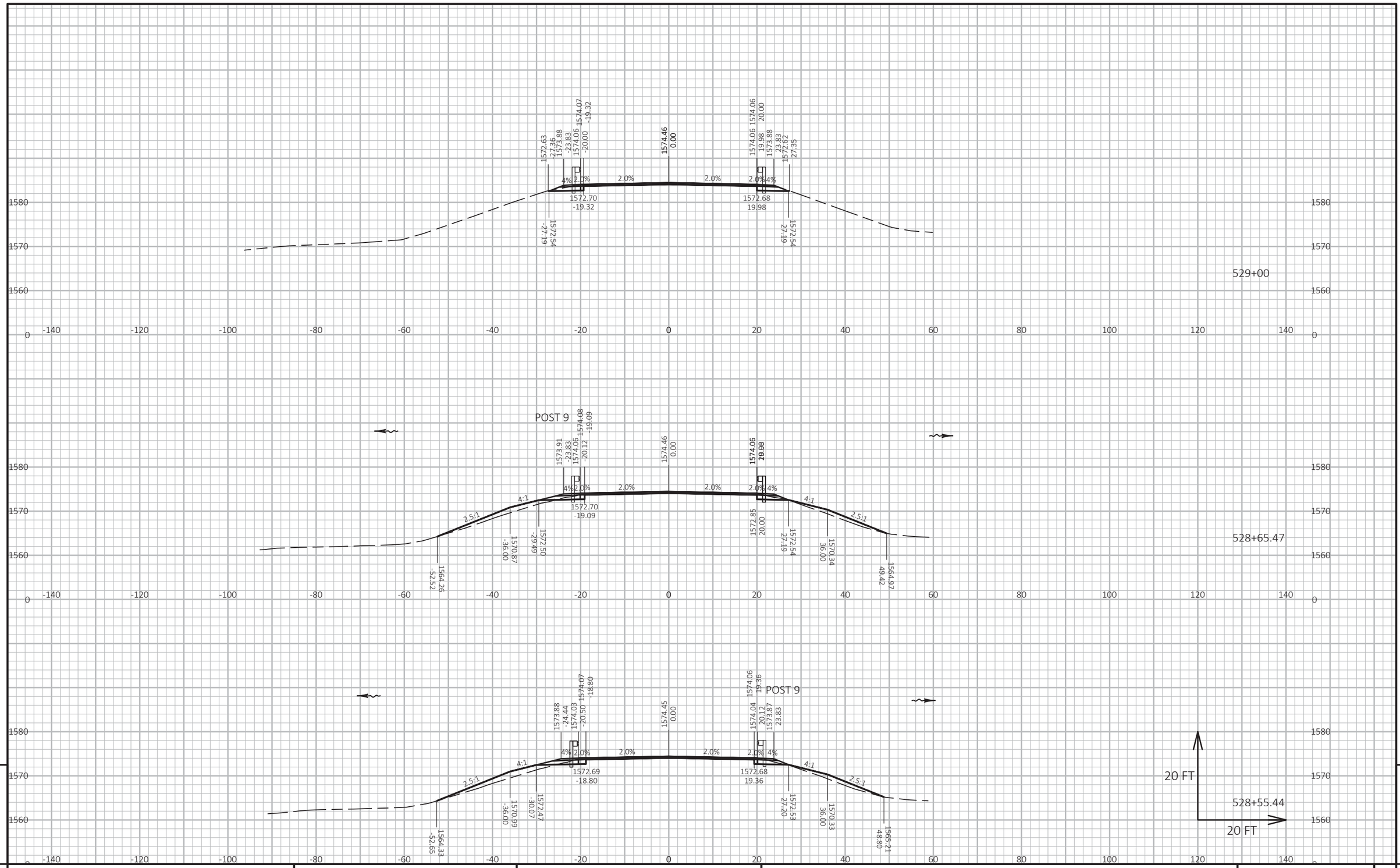
WISDOT/CADDS SHEET 49



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 131	E



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 132	E



9

9

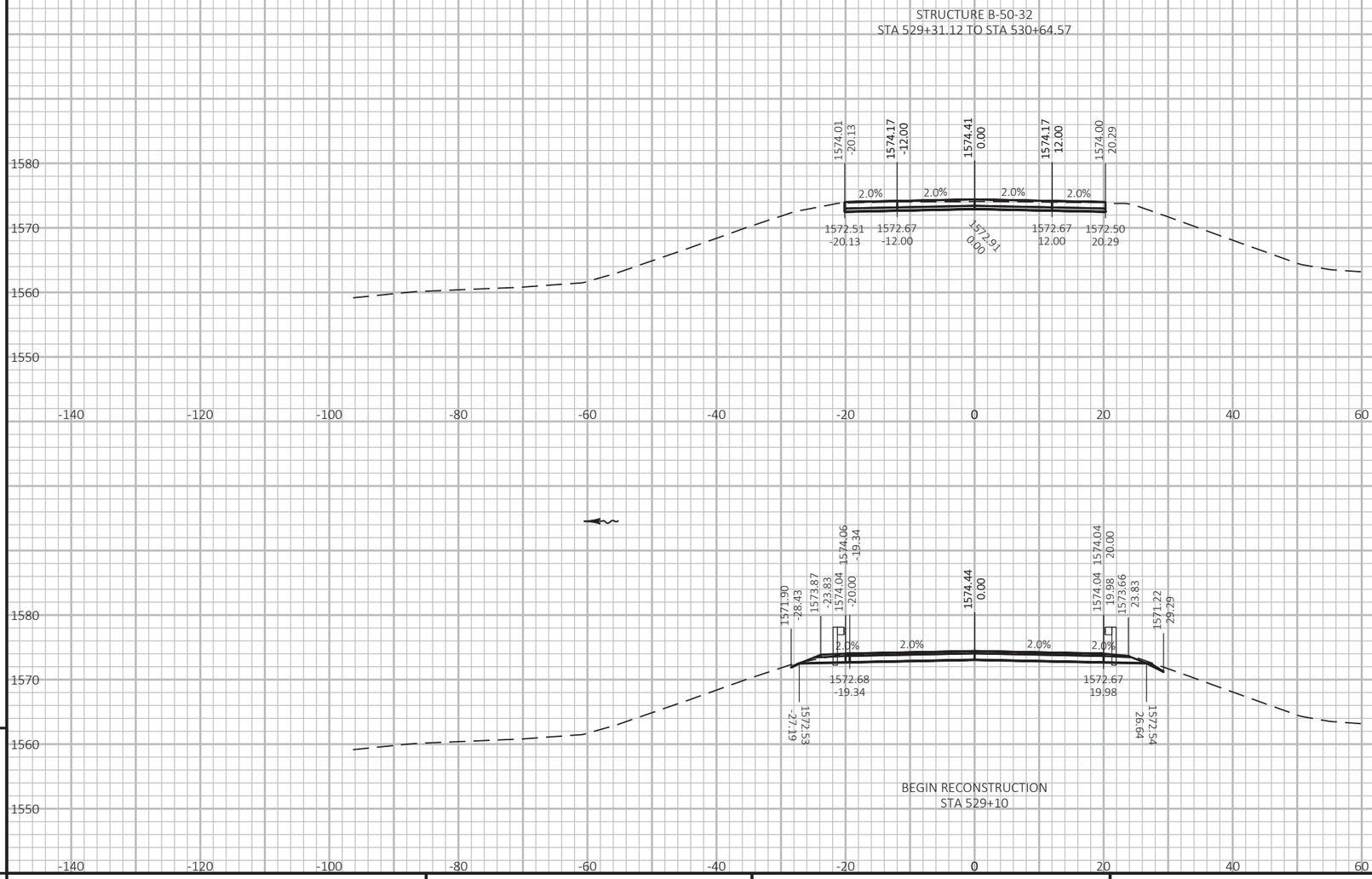
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 133	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (05)

PLOT DATE : 1/23/2019 11:27 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

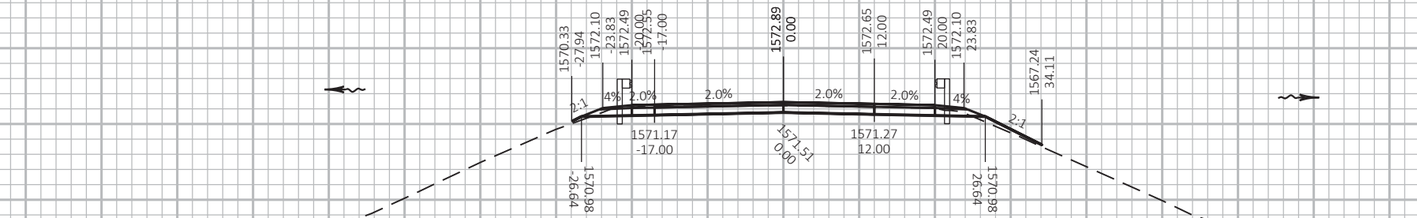
STRUCTURE B-50-32
STA 529+31.12 TO STA 530+64.57



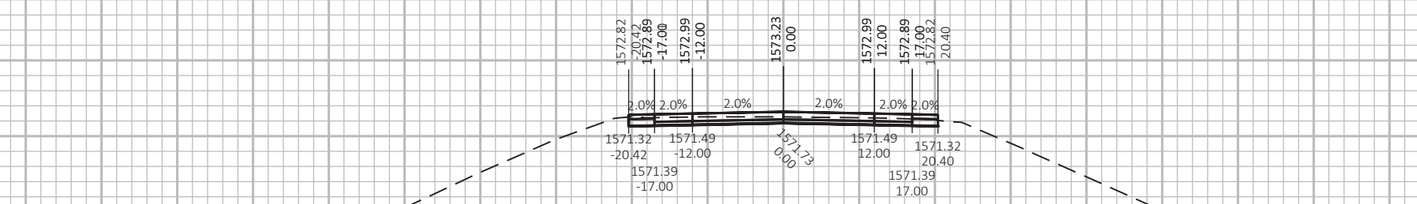
BEGIN RECONSTRUCTION
STA 529+10

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 134	E

END RECONSTRUCTION
STA 531+00



531+00



530+75

20 FT

20 FT

9

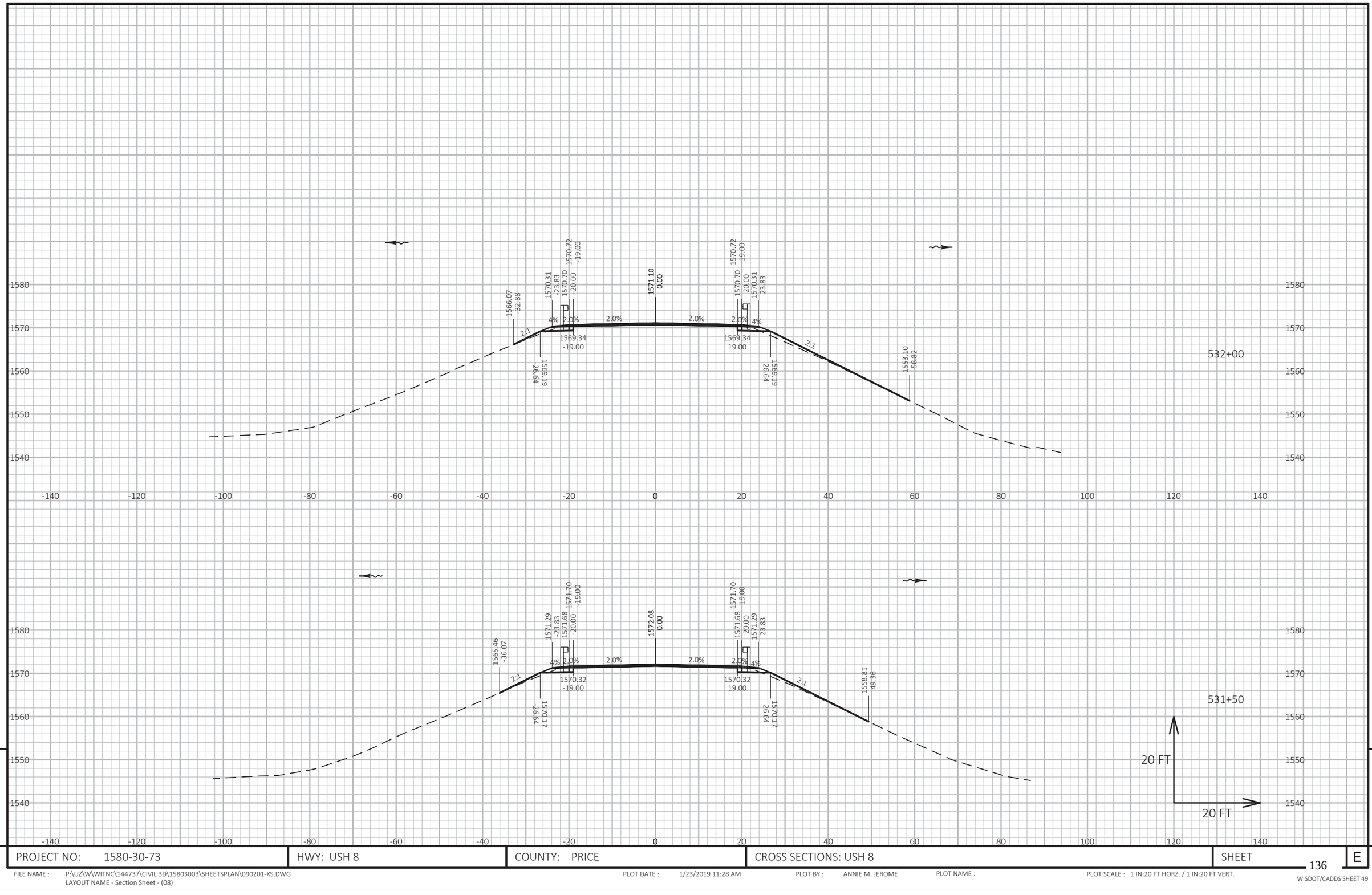
9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 135	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (07)

PLOT DATE : 1/23/2019 11:27 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

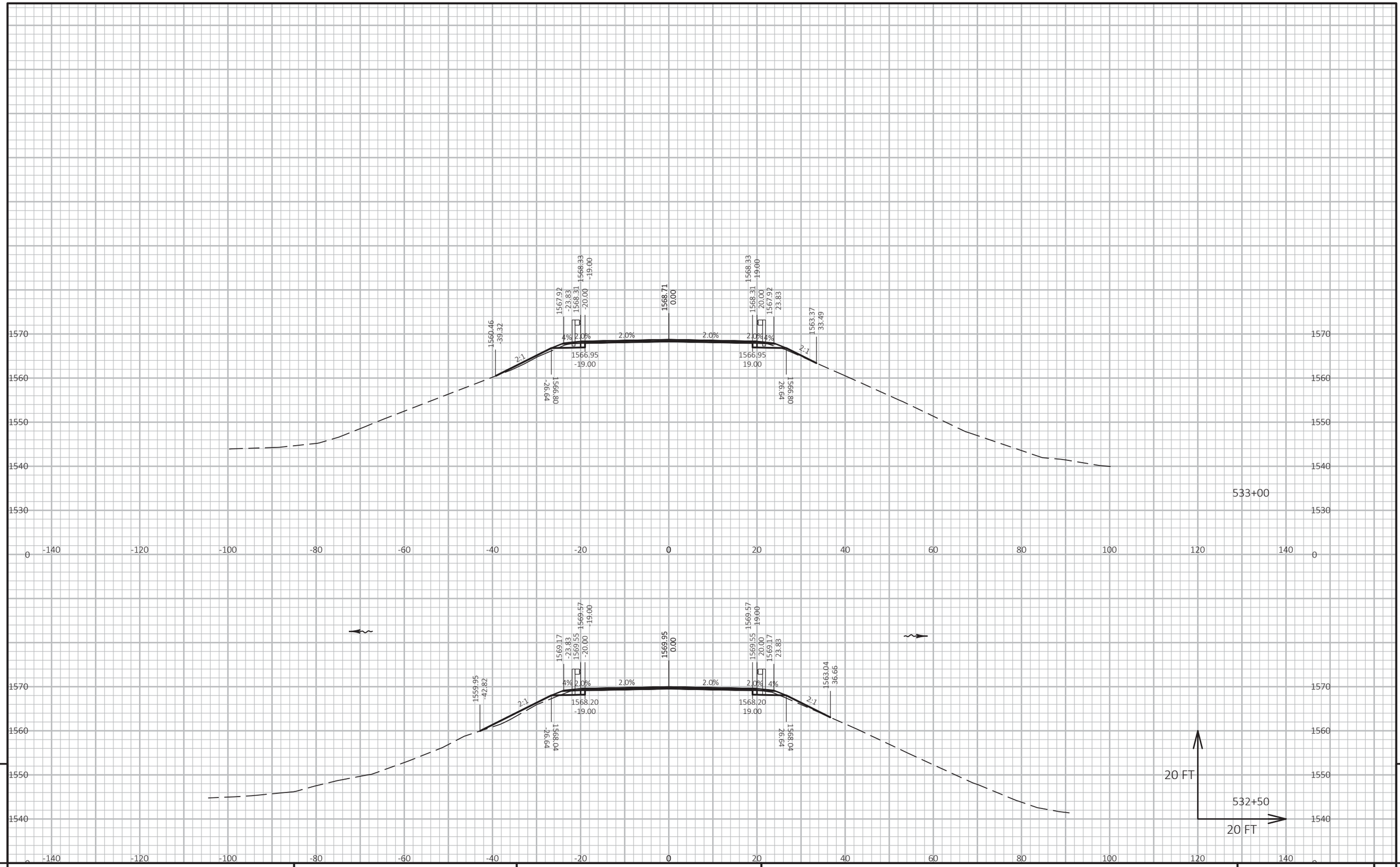


9

9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 136	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (08)
PLOT DATE : 1/23/2019 11:28 AM
PLOT BY : ANNIE M. JEROME
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

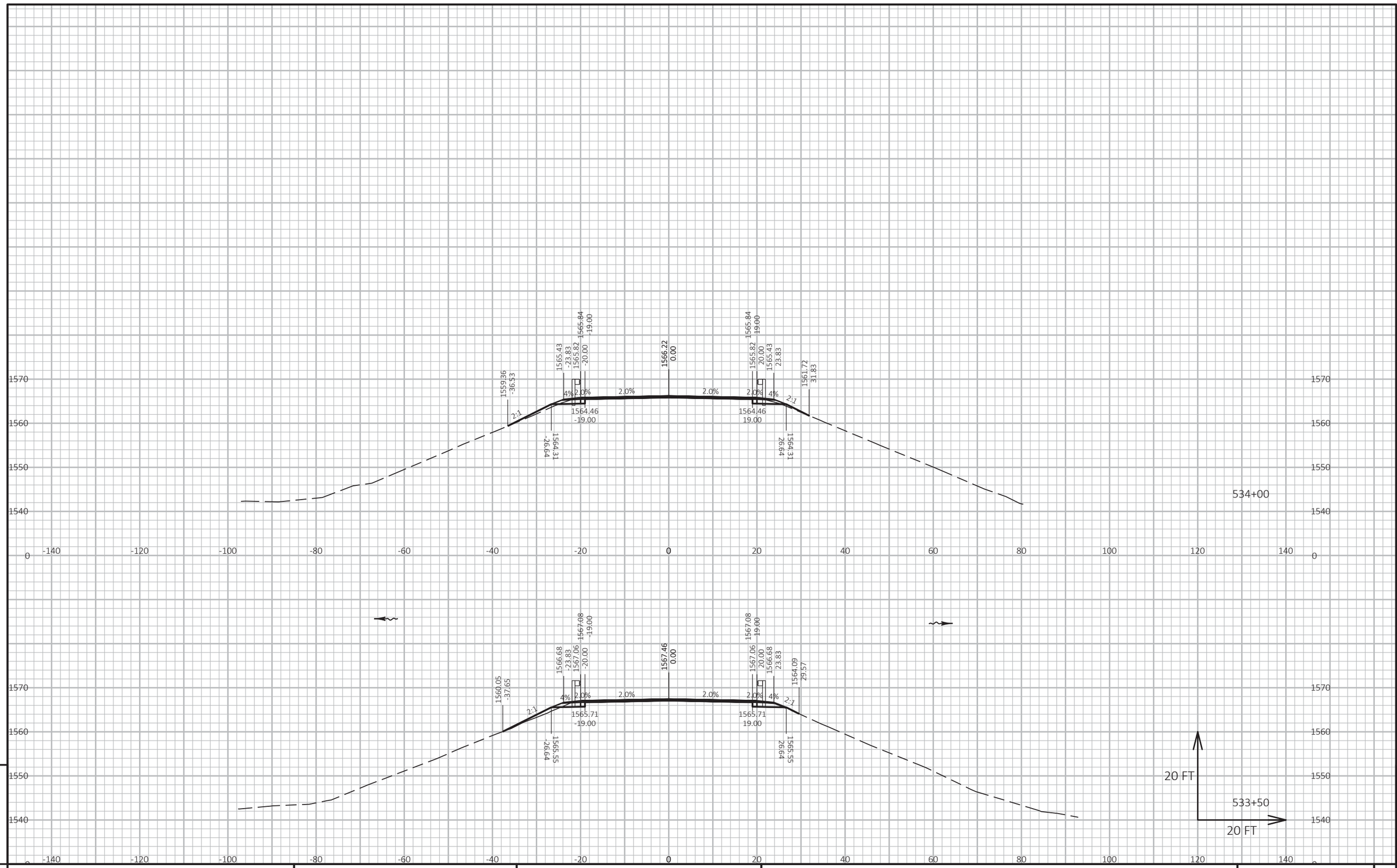
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 137	E

9

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (09)

PLOT DATE : 1/23/2019 11:28 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



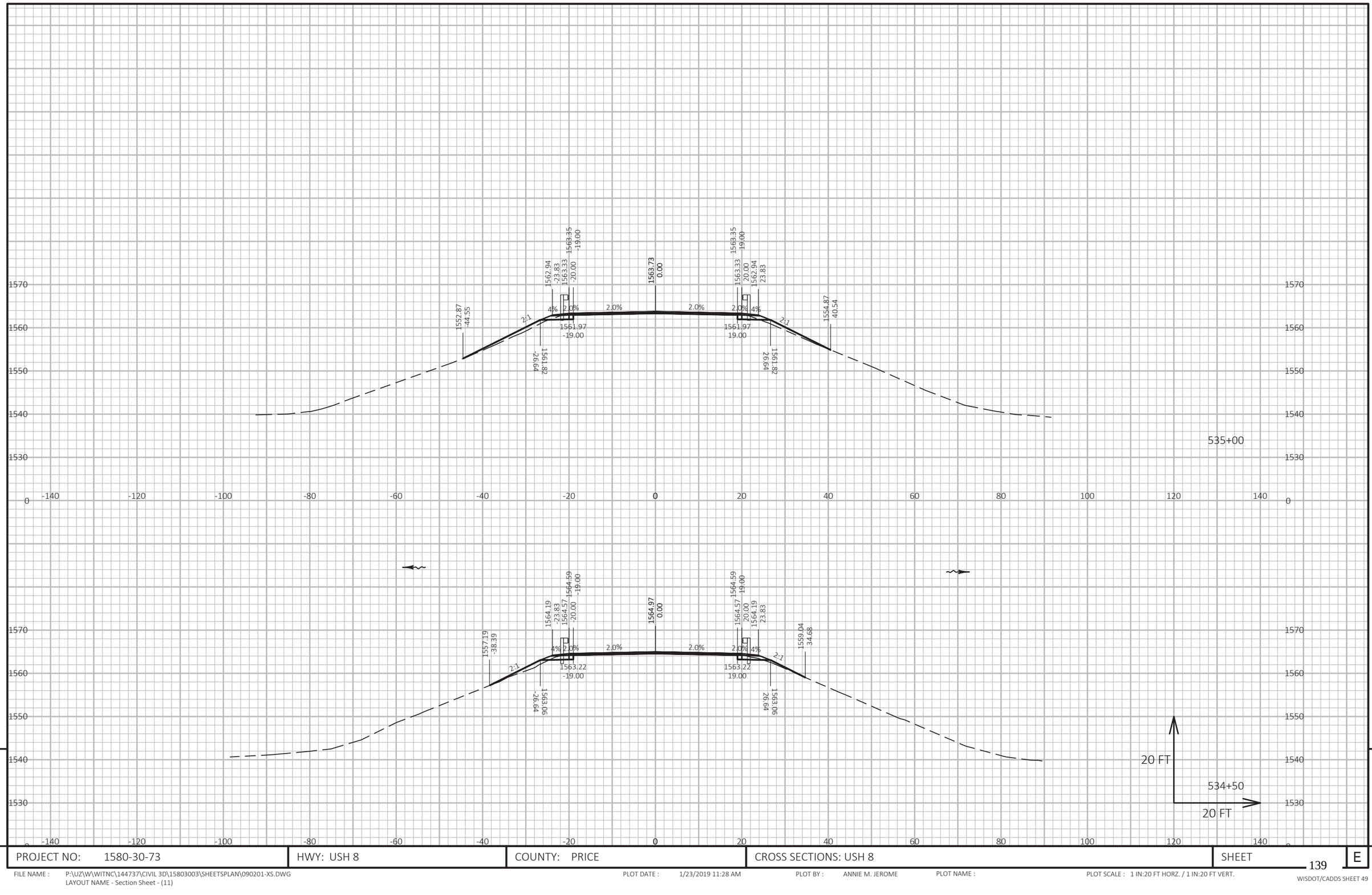
9

9

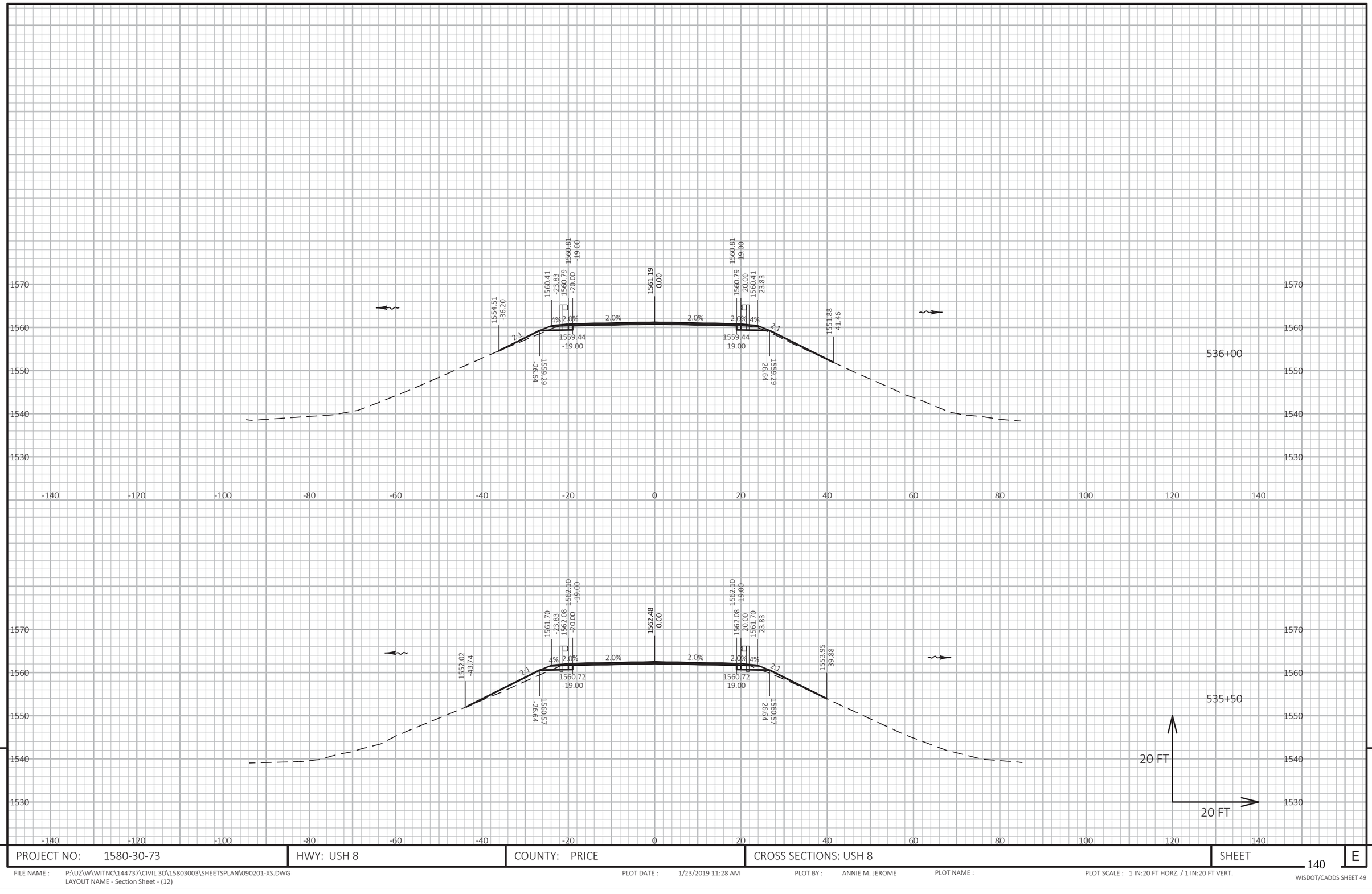
PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 138	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (10)

PLOT DATE : 1/23/2019 11:28 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 139	E



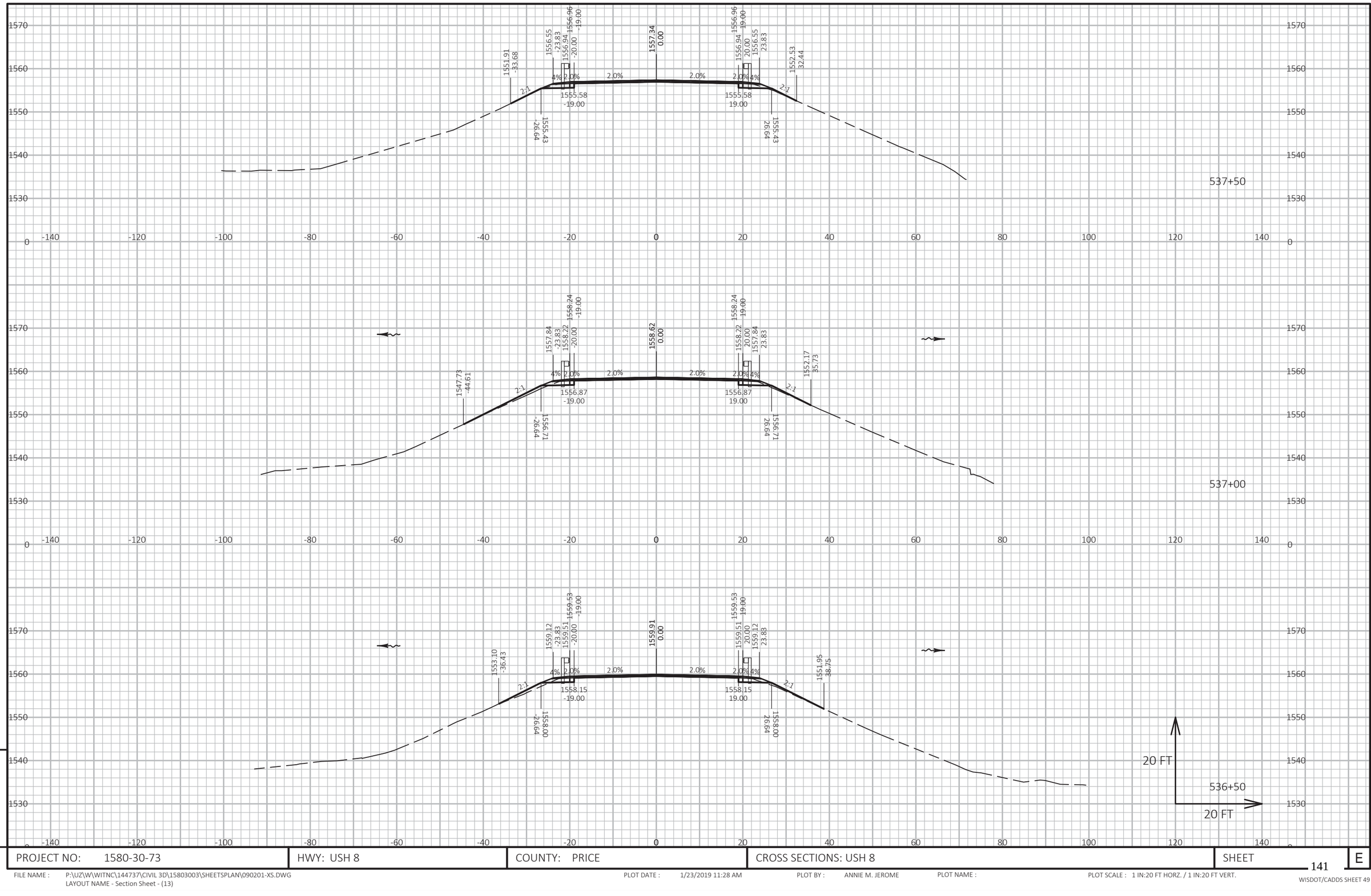
9

9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 140	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (12)

PLOT DATE : 1/23/2019 11:28 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET	E

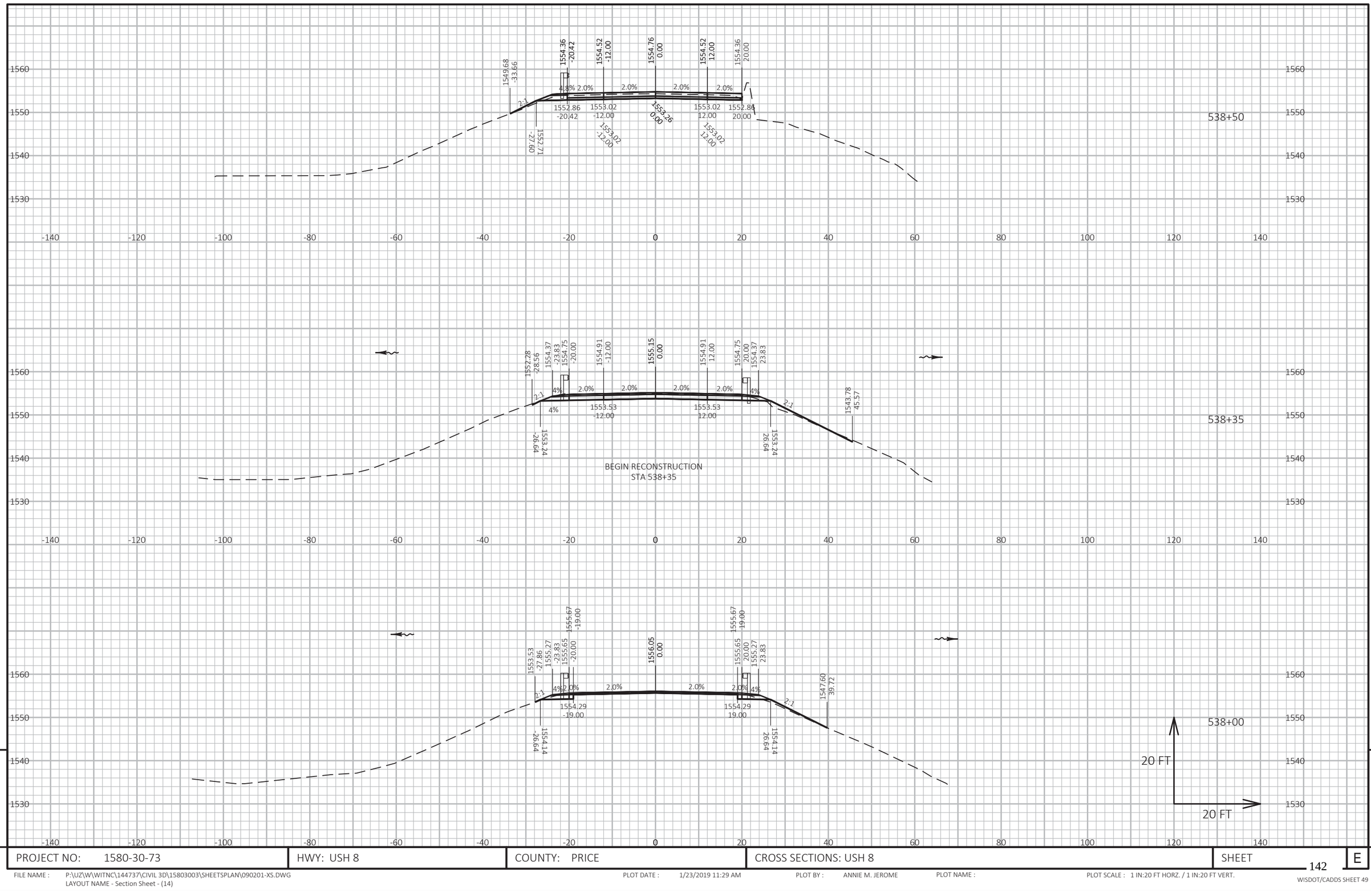
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (13)

PLOT DATE : 1/23/2019 11:28 AM

PLOT BY : ANNIE M. JEROME

PLOT NAME :

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



9

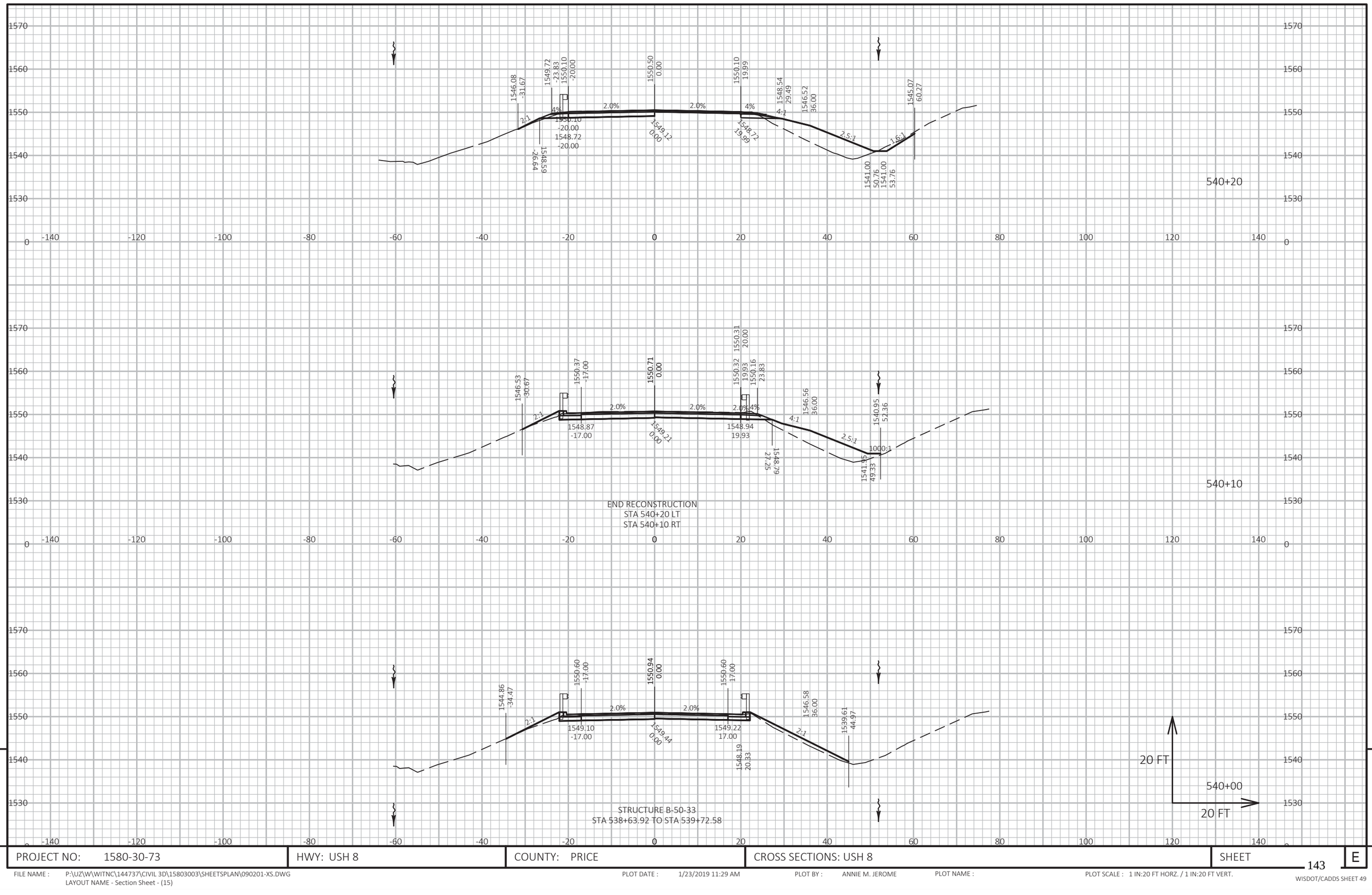
9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 142	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (14)

PLOT DATE : 1/23/2019 11:29 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

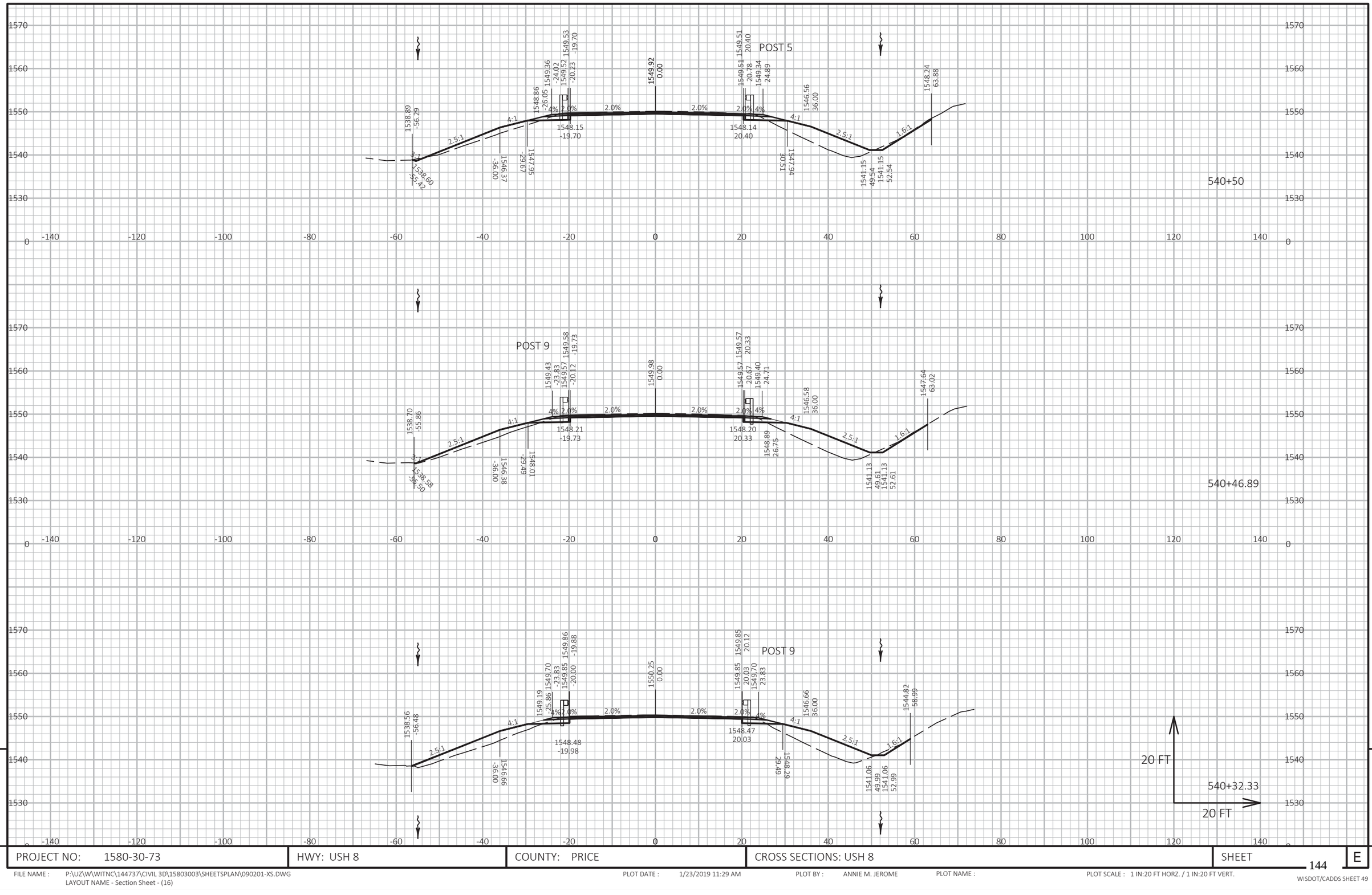
9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 143	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (15)

PLOT DATE : 1/23/2019 11:29 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

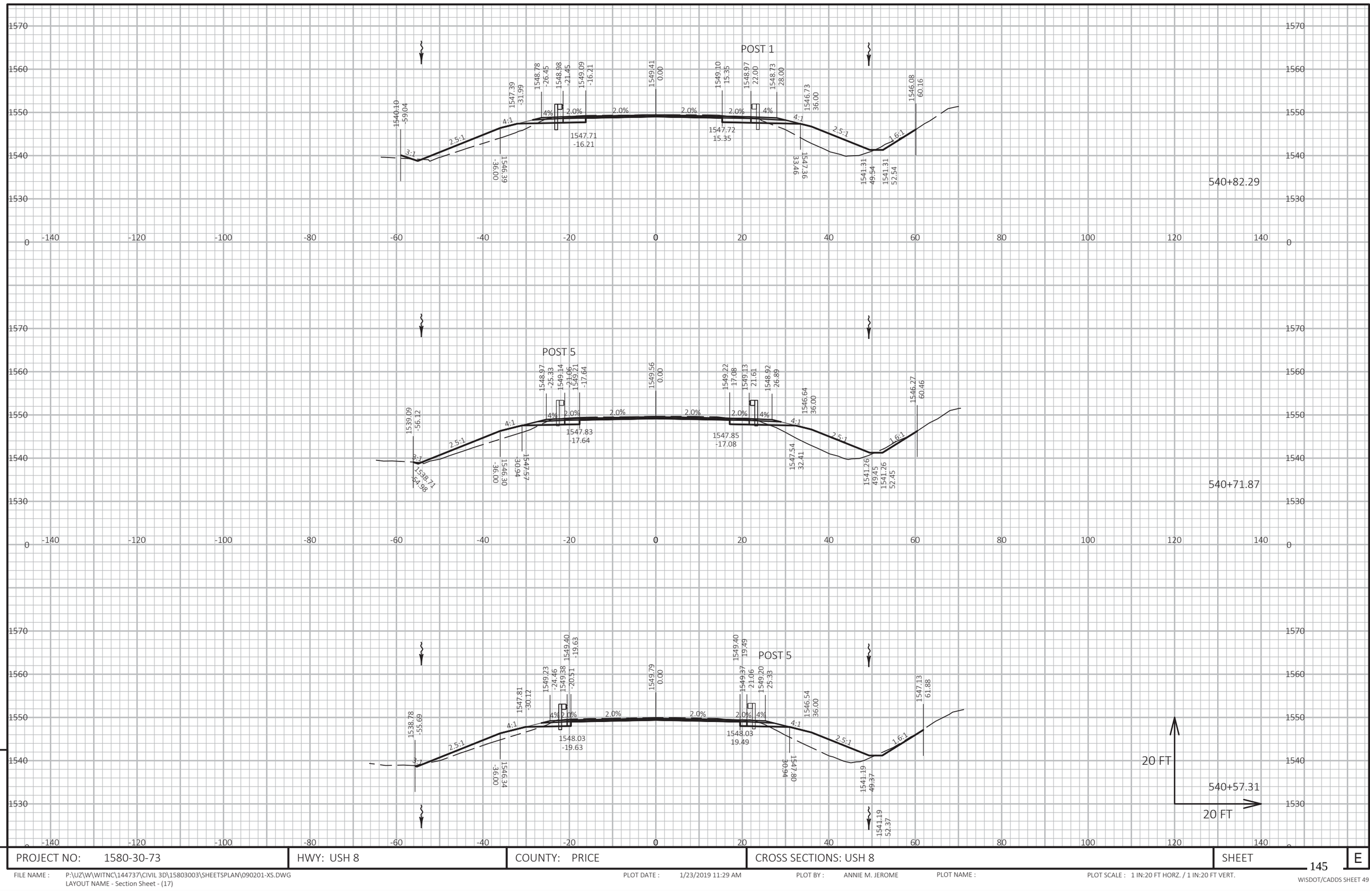
9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 144	E

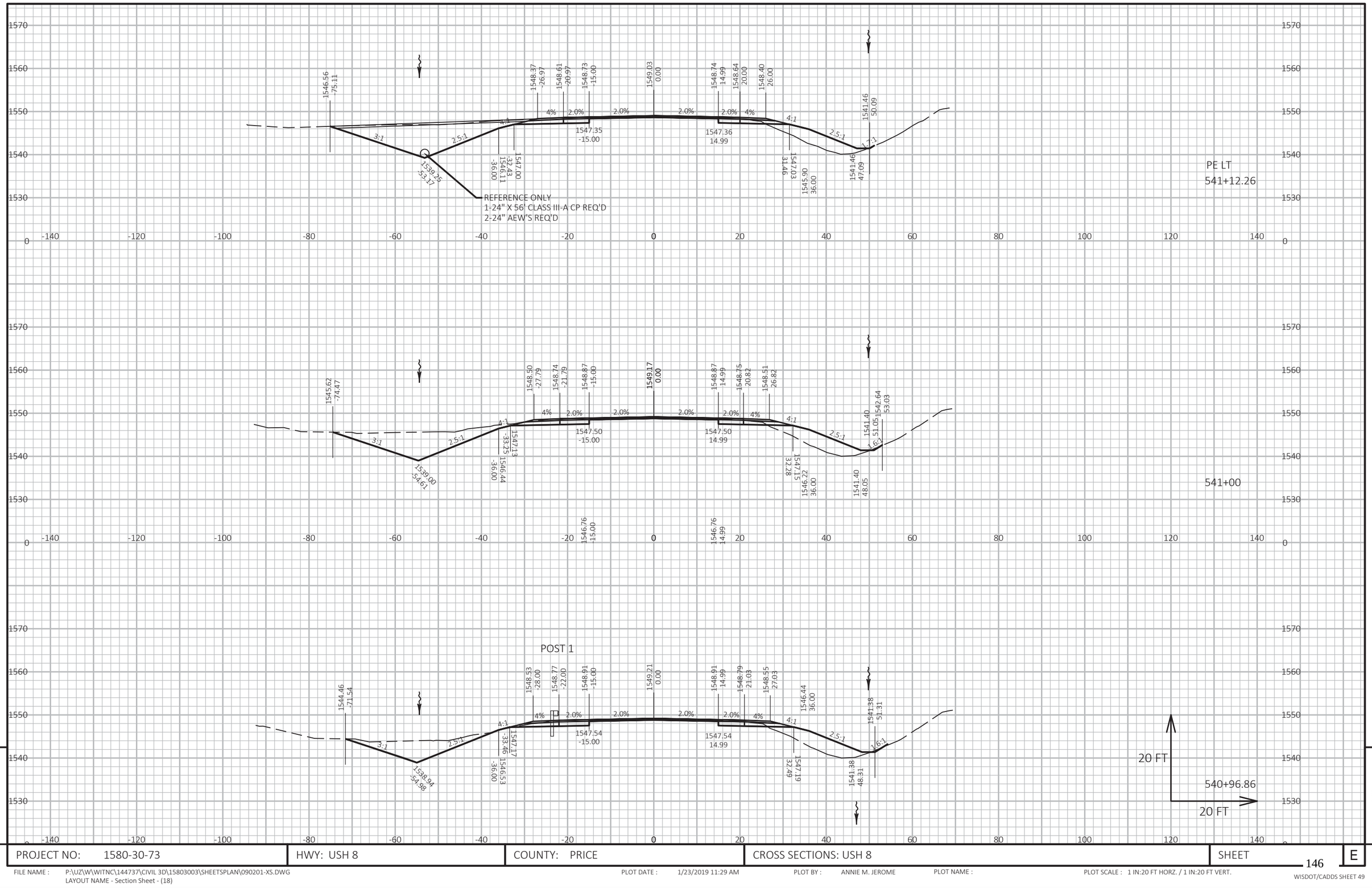
FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (16)

PLOT DATE : 1/23/2019 11:29 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET 145	E

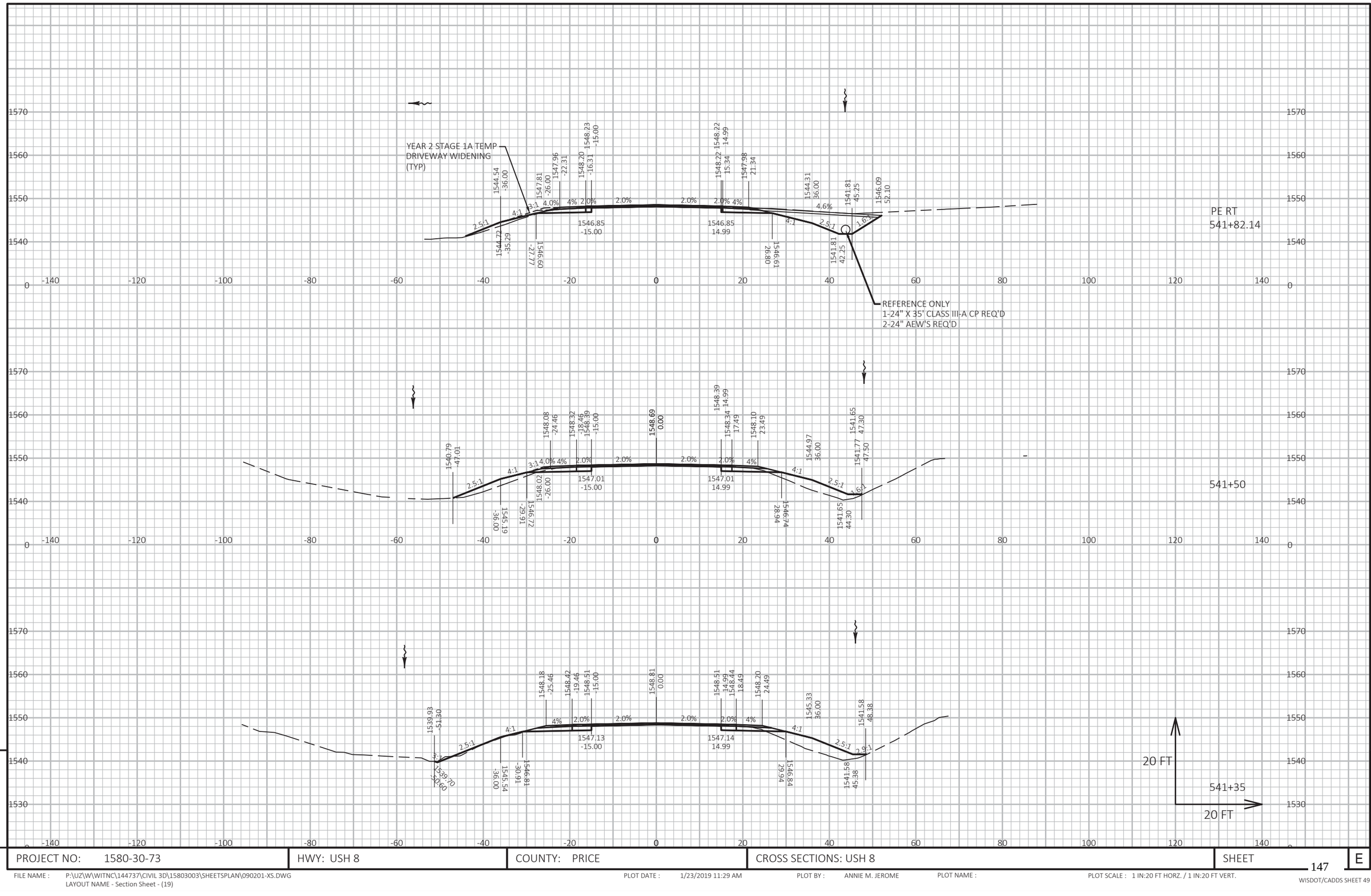


PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (18)

PLOT DATE : 1/23/2019 11:29 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

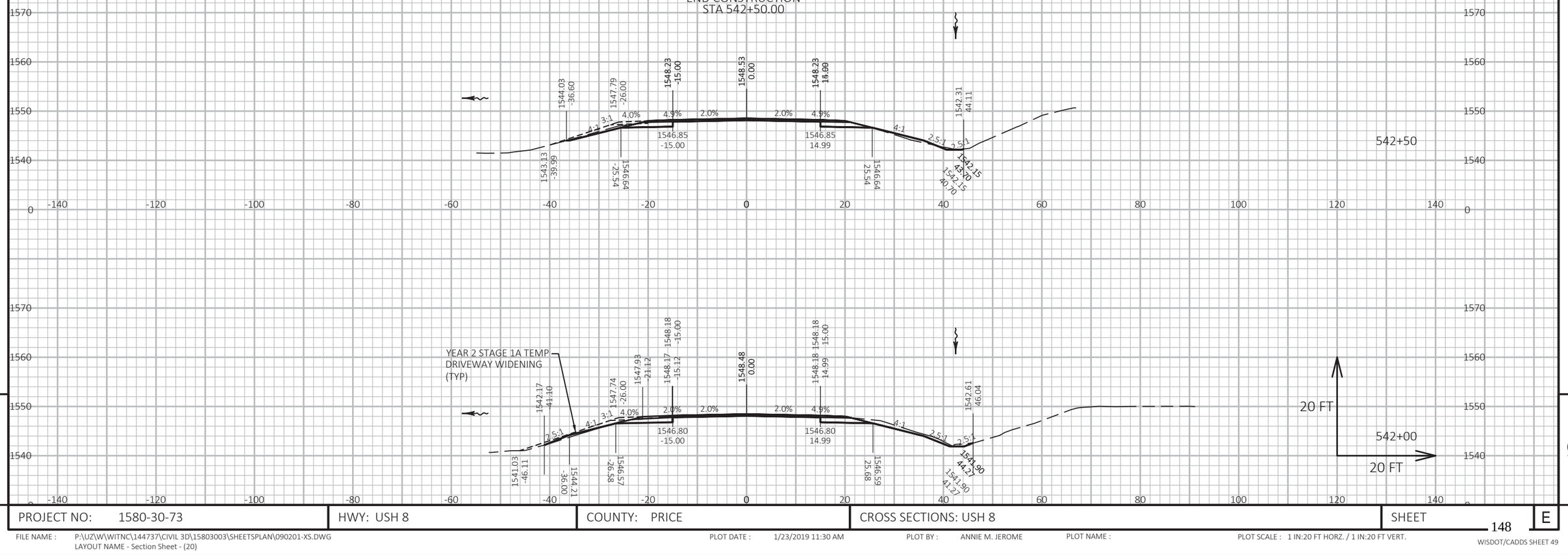


PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET	E

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (19)

PLOT DATE : 1/23/2019 11:29 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

END CONSTRUCTION
STA 542+50.00



9

9

PROJECT NO: 1580-30-73	HWY: USH 8	COUNTY: PRICE	CROSS SECTIONS: USH 8	SHEET	E

148

FILE NAME : P:\UZ\W\WITNC\144737\CIVIL 3D\15803003\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (20)

PLOT DATE : 1/23/2019 11:30 AM PLOT BY : ANNIE M. JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov