GRE SEPTEMBER 2020

PROJECT ID: 9190-20-71

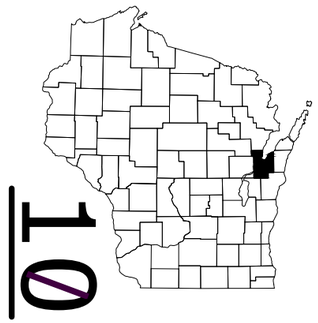
WITH: 9190-23-71

COUNTY: BROWN

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 = 186



N

DESIGN DESIGNATION 9190-20-00

A.A.D.T.	2021	=	8,300
A.A.D.T.	2041	=	11,000
D.H.V.		=	831
D.D.		=	60/40
T.		=	7.2%
DESIGN SPEED		=	45/35 M.P.H
ESALS		=	1,200,000

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

VILLAGE OF PULASKI

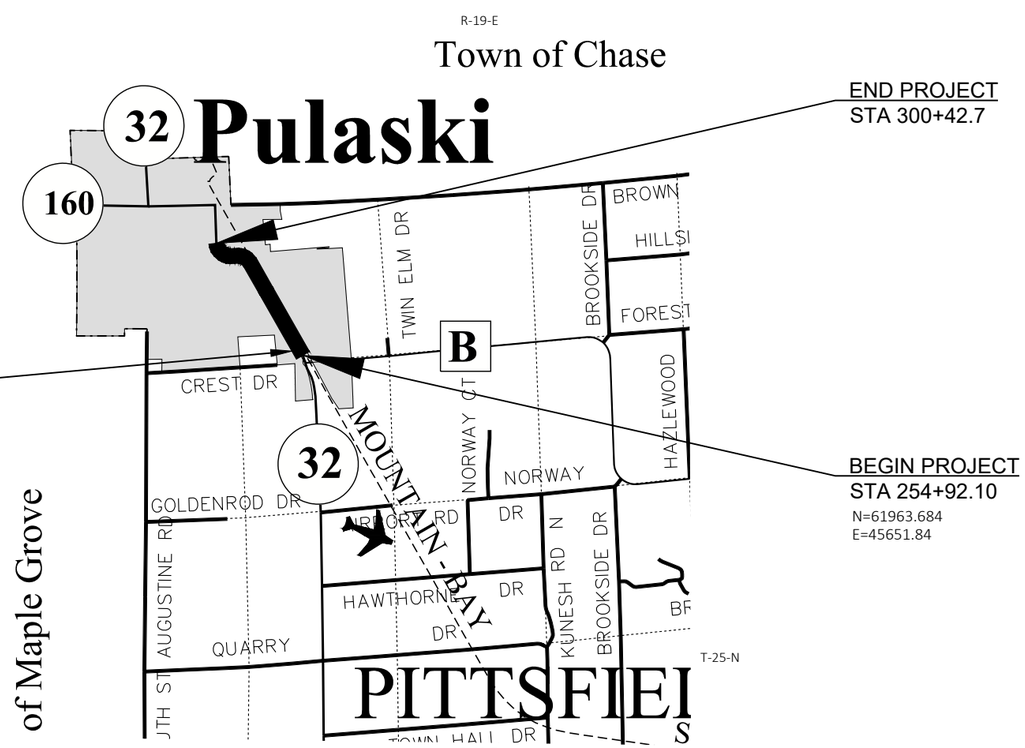
CTH B - EAST GREEN BAY STREET

STH 32

BROWN

STATE PROJECT NUMBER
9190-20-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9190-20-71	WISC 2020416	1



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.94 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BROWN COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1991). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	KELSEY HOLMES
Project Manager	ANDREW FULCER
Regional Examiner	
Regional Supervisor	DANIEL SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: 04/03/2020 (Signature)

E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\010101-TI.DWG PLOT DATE : 6/16/2020 1:47 PM PLOT BY : HOLMES, KELSEY J PLOT NAME :

GENERAL NOTES

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

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

CURB AND GUTTER RADII ARE SHOWN TO THE FRONT FACE OF CURB.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREA BETWEEN THE SUBGRADE SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, AND COVERED WITH EROSION MAT.

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

UTILITIES

NORTHEAST TELEPHONE COMPANY LLC - COMMUNICATION LINE
RICK VINCENT
450 SECURITY BLVD
P.O. BOX 19079
GREEN BAY, WI 54307-9079
O (920) 617-7316, M (920) 660-6644
RICK.VINCENT@NSIGHT.COM

VILLAGE OF PULASKI - DEPT. PUBLIC WORKS - SEWER
JOEL VAN LANNEN
585 E GLENBROOK DR.
PULASKI, WI 54162
(920) 822-8618
PUBDEPT@VILLAGEOFPULASKI.ORG

VILLAGE OF PULASKI - DEPT. PUBLIC WORKS - WATER
JOEL VAN LANNEN
585 E GLENBROOK DR.
PULASKI, WI 54162
(920) 822-8618
PUBDEPT@VILLAGEOFPULASKI.ORG

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
SCOTT GAUGER
2850 S ASHLAND AVE
GREEN BAY, WI 54307
O (920) 617-5151, M (920) 660-0430
SCOTT.GAUGER@WISCONSINPUBLICSERVICE.COM

WE ENERGIES - ELECTRICITY
ZACH DUGA
800 S LYNNDALE DR.
APPLETON, WI 54914
O (920) 380-3458, M (920) 450-9314
ZACHARY.DUGA@WE-ENERGIES.COM

WE ENERGIES - GAS/PETROLEUM
ANDREW ROOYAKKERS
800 S LYNNDALE DR.
APPLETON, WI 54914
O (920) 380-3476, M (920) 858-4857
ANDREW.ROOYAKKERS@WE-ENERGIES.COM

WINDSTREAM KDL, LLC - COMMUNICATION LINE
MARY BETH FISHER
13935 BISHOPS DR.
BROOKFIELD, WI 53005
O (262) 792-7938, M (414) 313-9032
MARY.B.FISHER@WINDSTREAM.COM

DNR AREA LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
JAMES DOPERALSKI
PHONE - (920) 412-0165
EMAIL - JAMES.DOPERALSKI@WISCONSIN.GOV

2

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

2

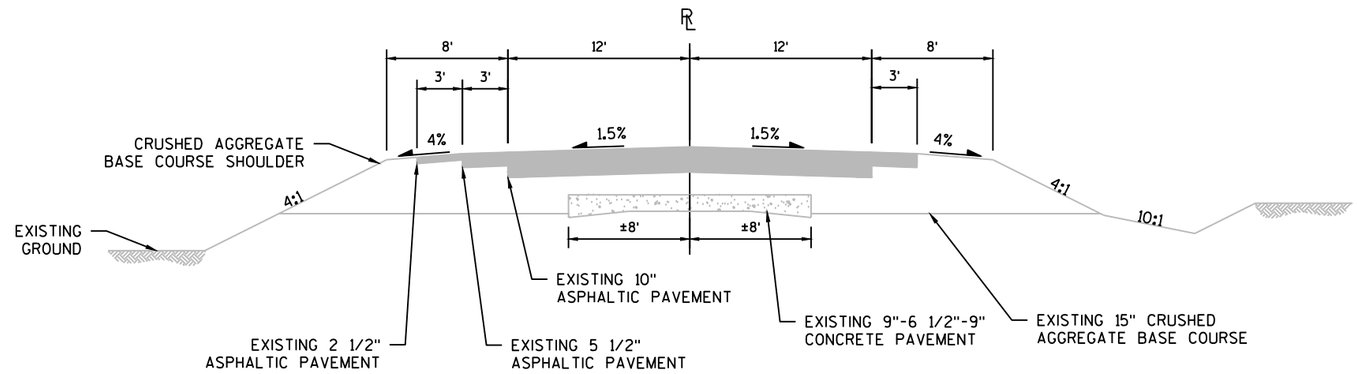


PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201

PLOT DATE : 11/1/2019 8:18 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ############

2

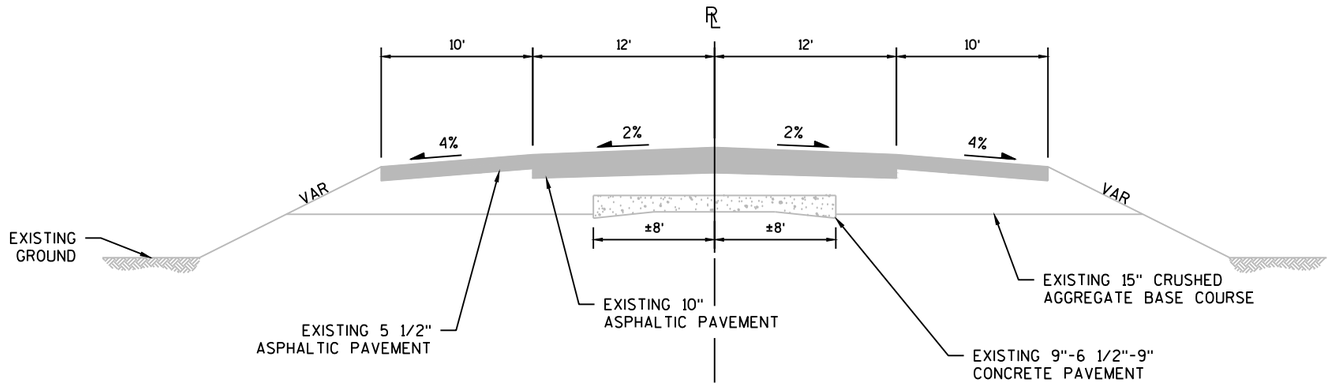


EXISTING TYPICAL SECTION STH 32

STA 254+92.1 TO STA 275+84.7

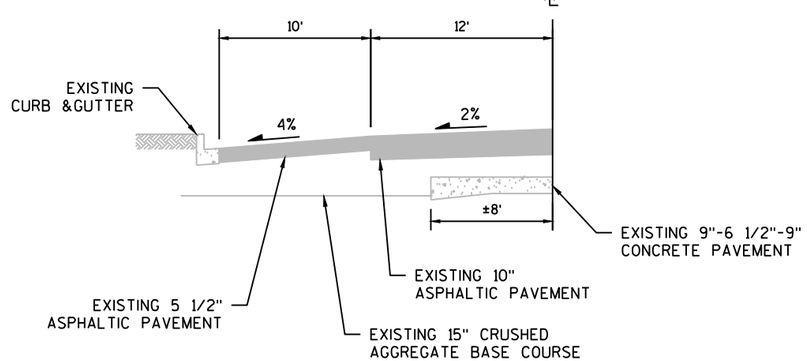
PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 4	E

2



EXISTING TYPICAL SECTION STH 32

STA 275+84.7 TO STA 300+42.7

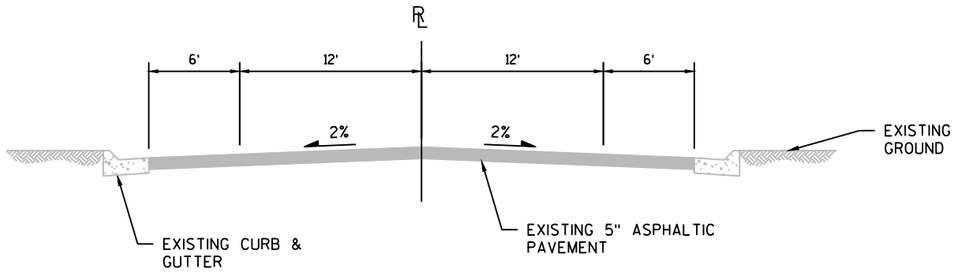


EXISTING TYPICAL SECTION STH 32

STA 294+22.61 TO STA 296+52.83 LT

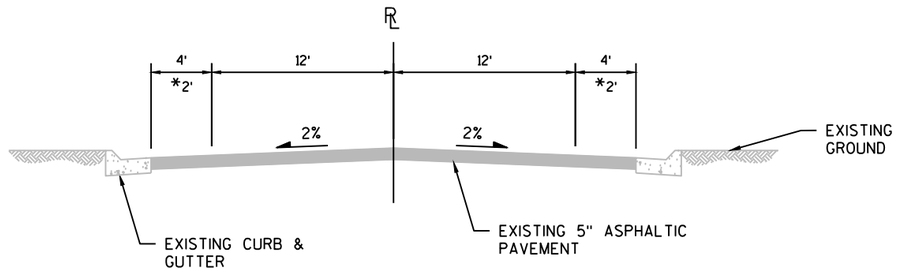
PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 5	E

2



EXISTING TYPICAL SECTION SIDE ROADS

GLENBROOK DR LT
E CEDAR ST LT & RT
KARCZ DR

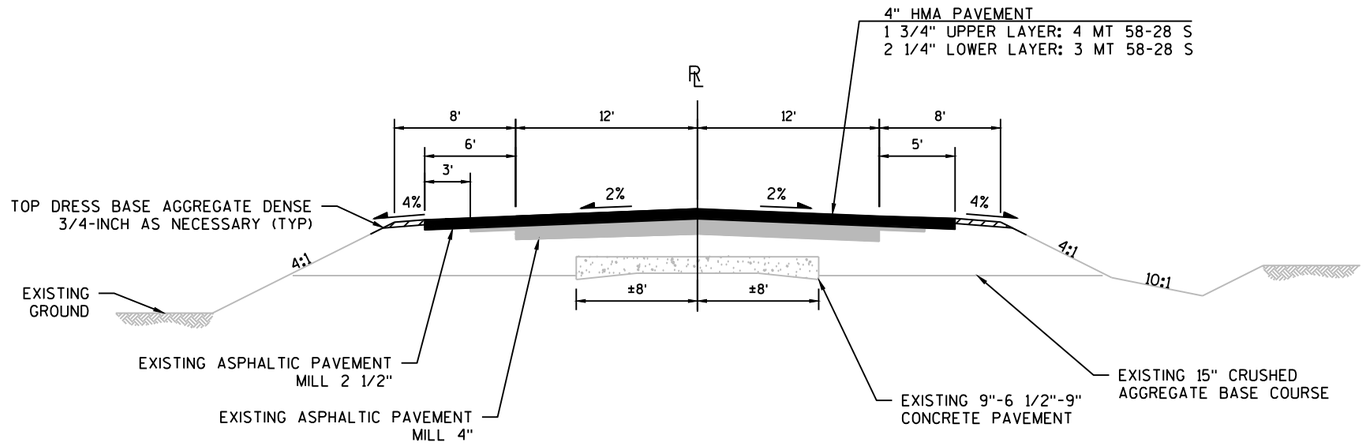


EXISTING TYPICAL SECTION SIDE ROADS

BLUE HERON DR
* GLENBROOK DR RT

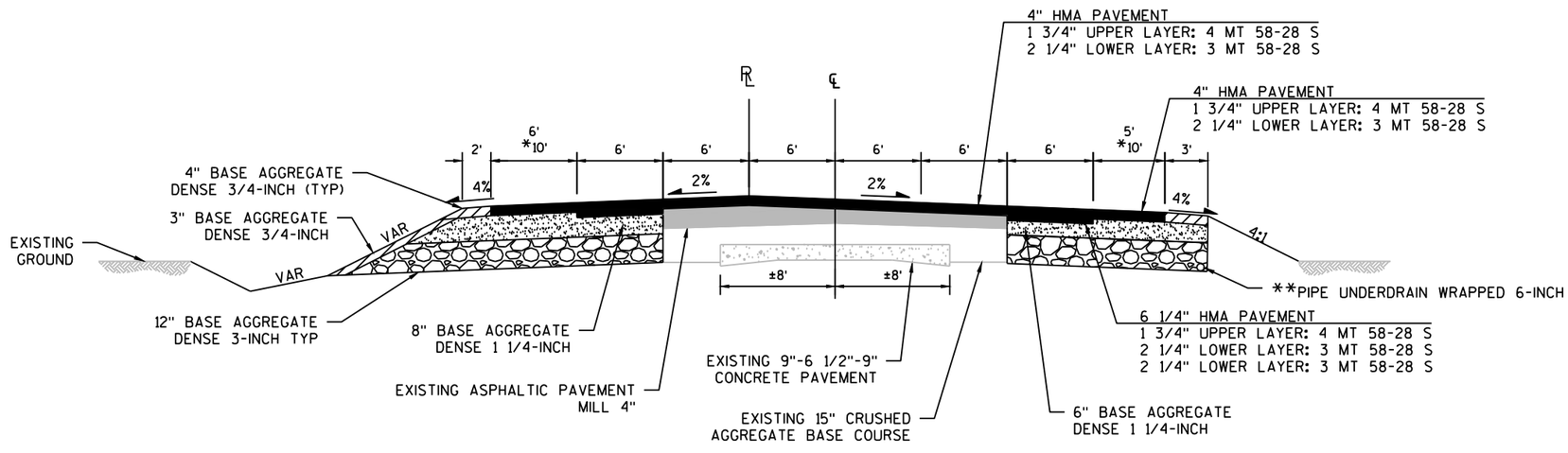
PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 6	E

2



PRPOSED TYPICAL SECTION STH 32

STA 254+92.10 TO STA 259+38.65
STA 259+84.29 TO STA 261+25.25



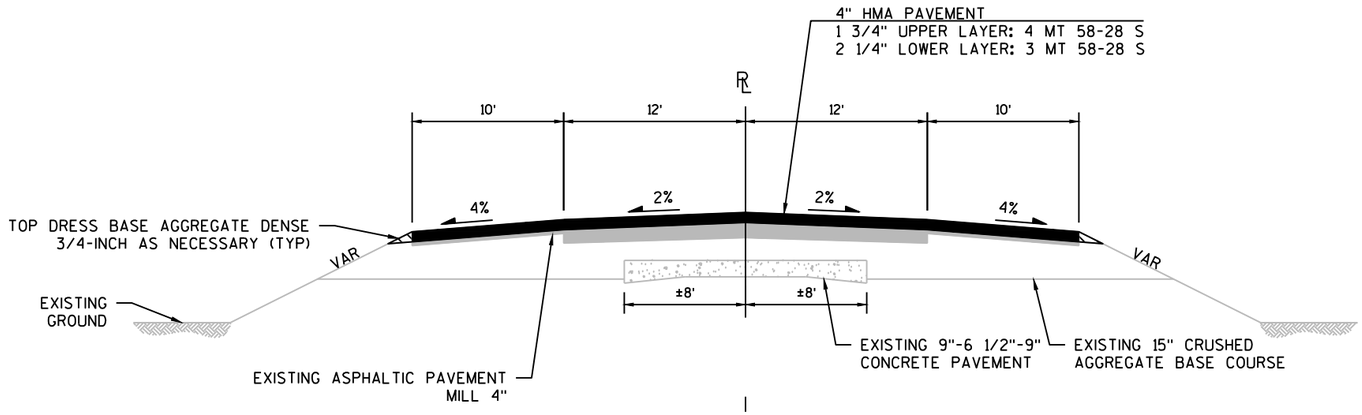
PROPOSED TYPICAL SECTION STH 32

STA 261+25.25 LT TO STA 276+95.64 LT
STA 261+25.25 RT TO STA 276+38.49 RT
* STA 276+95.64 LT TO STA 282+02.44 LT
* STA 276+38.49 RT TO STA 280+72.43 RT

** STA 265+00 RT TO STA 274+87.25 RT

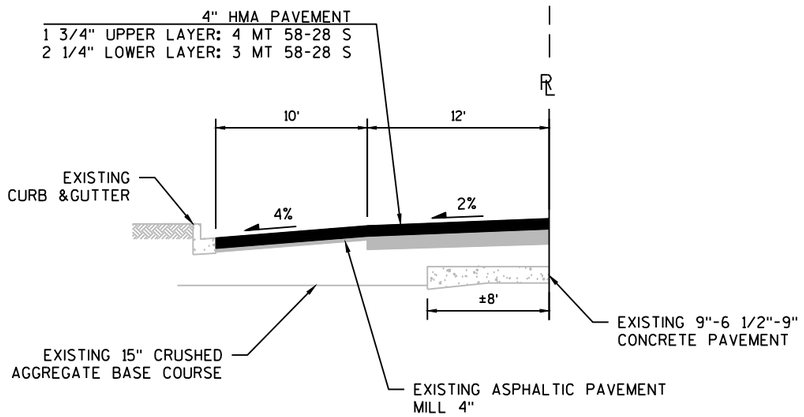
PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 7	E

2



PROPOSED TYPICAL SECTION STH 32

STA 282+02.44 LT TO STA 300+42.7
STA 281+00 RT TO STA 300+42.7

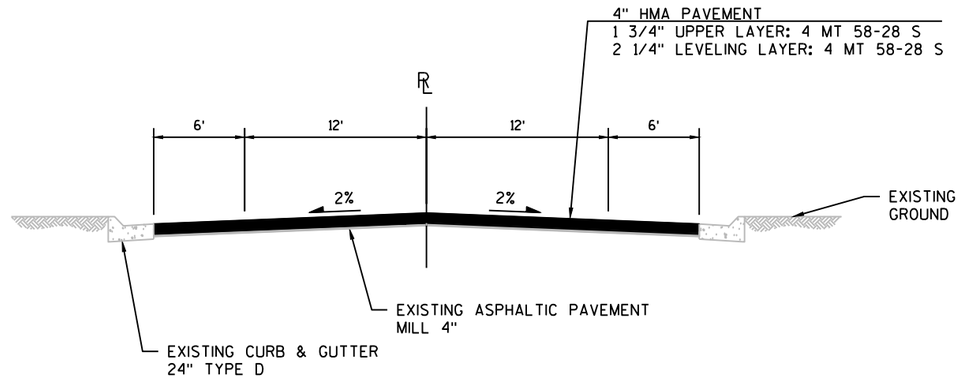


PROPOSED TYPICAL SECTION STH 32

STA 294+22.61 TO STA 296+52.83 LT

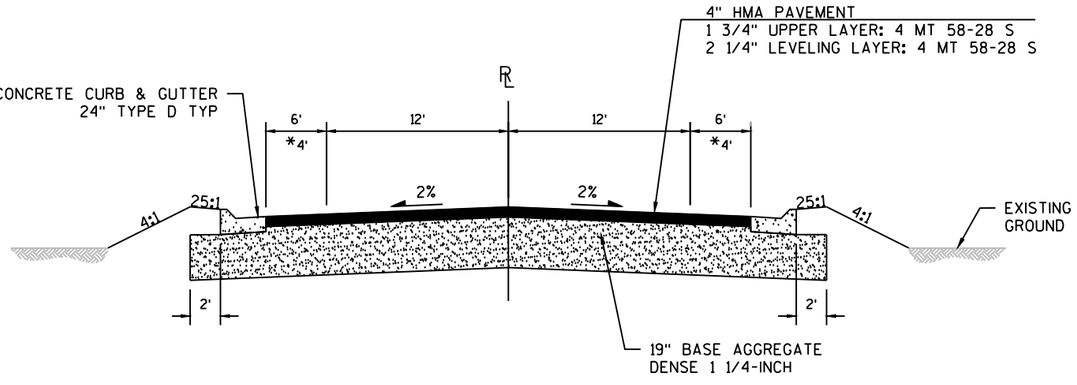
PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 8	E

2



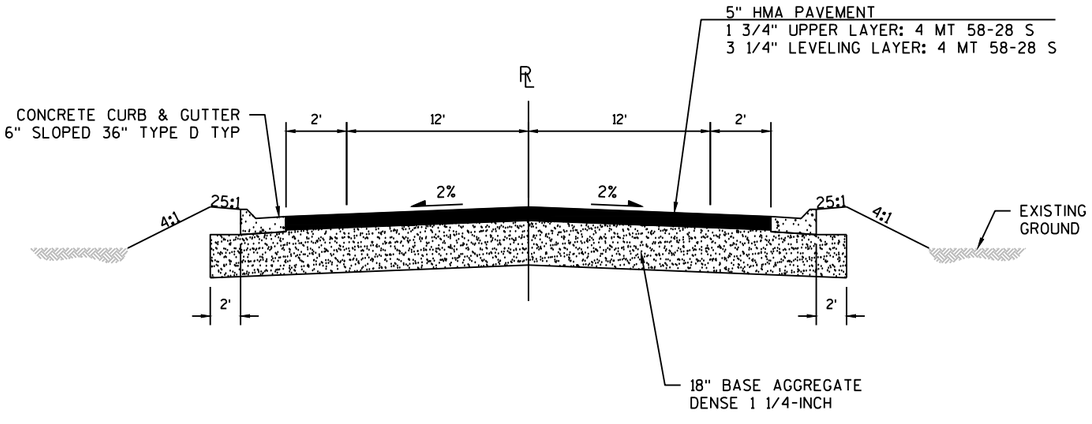
PROPOSED TYPICAL SECTION SIDE ROADS

E CEDAR ST LT & RT
KARCZ DR



PROPOSED TYPICAL SECTION SIDE ROADS

* BLUE HERON DR
GLENBROOK DR LT

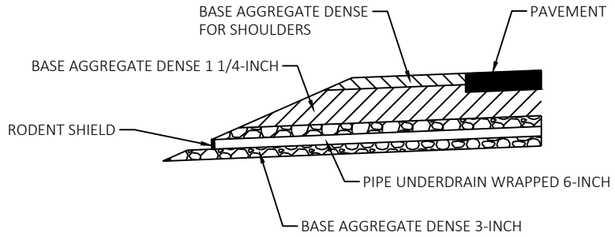


PROPOSED TYPICAL SECTION SIDE ROADS

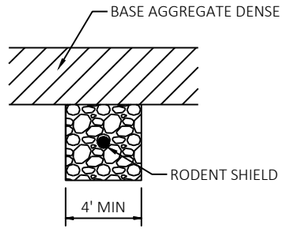
GLENBROOK DR RT

PROJECT NO: 9190-20-71	HWY: 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 9	E

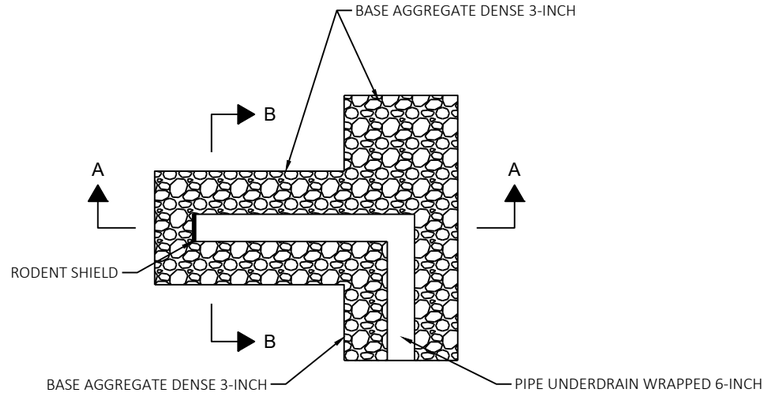
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LAYOUT NAME - 020301-ts
PLOT DATE : 11/1/2019 8:20 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



SECTION A-A



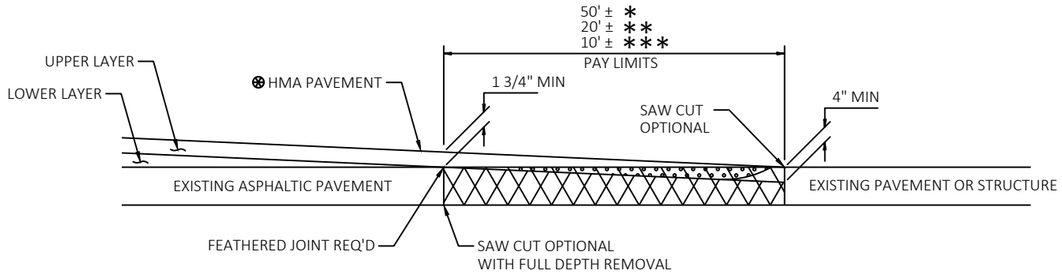
SECTION B-B



DETAIL FOR FRENCH DRAINS WITH UNDERDRAIN

DRAINS ARE TO BE CONSTRUCTED PER PLAN OR AT LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BASE AGGREGATE DENSE 3-INCH.



⊛SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

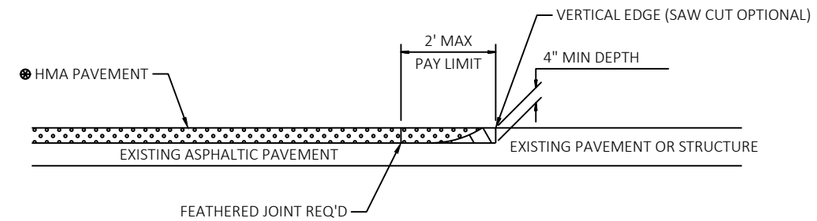
REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)

ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

REMOVING ASPHALTIC SURFACE, BUTT JOINTS (MILLING OPTION)

BUTT JOINT DETAIL FOR NON MILLED ASPHALTIC PAVEMENTS (PROFILE CHANGE)

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES

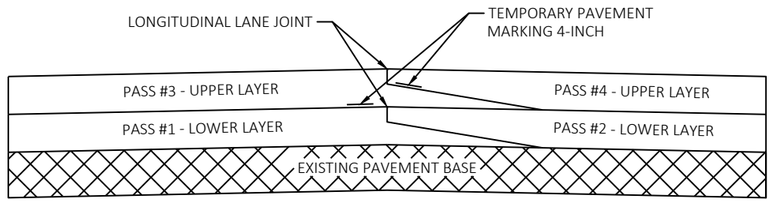


⊛SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

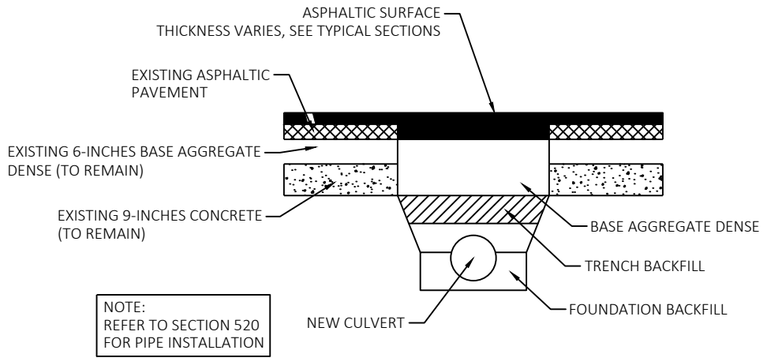
REMOVING ASPHALTIC SURFACE, MILLING

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

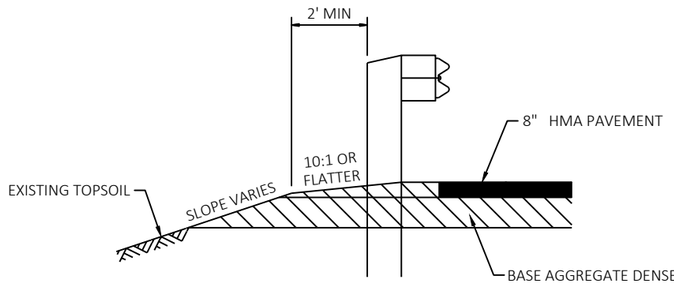
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



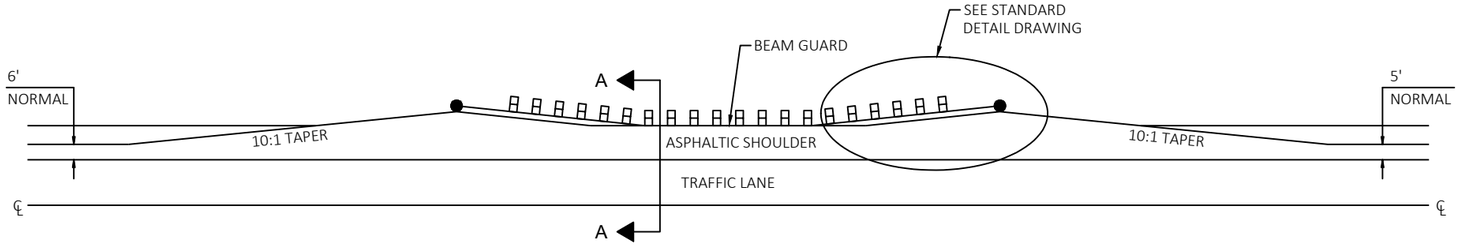
PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



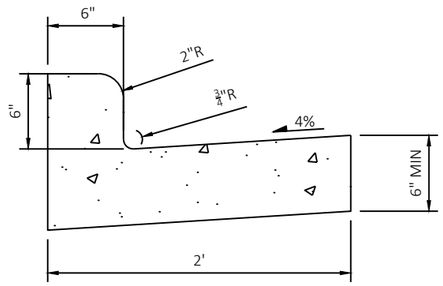
PAVEMENT AT STORM SEWER REPLACEMENTS



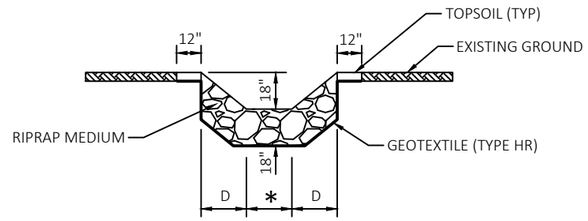
SECTION A-A



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

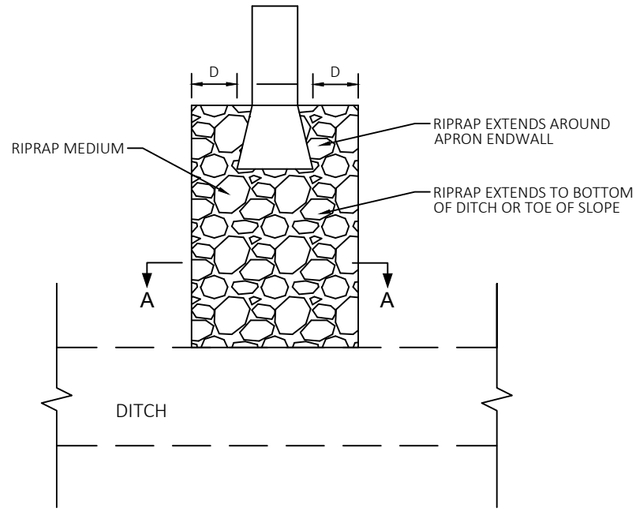


CONCRETE CURB & GUTTER 24-INCH TYPE D



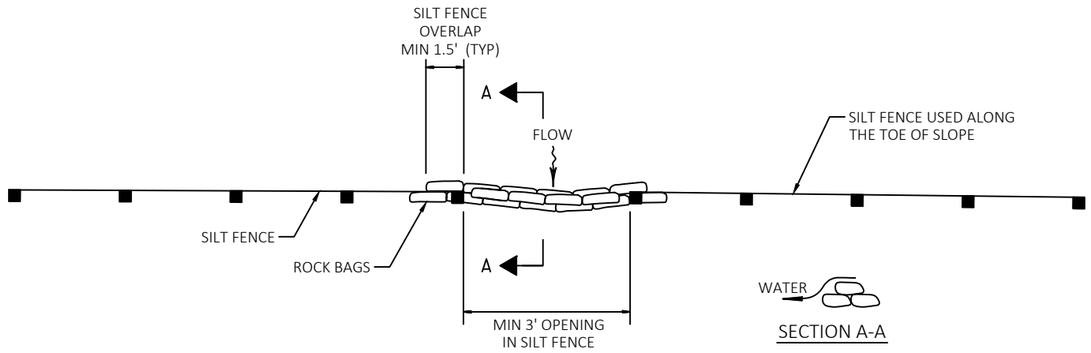
SECTION A-A

* APRON ENDWALL WIDTH
D = PIPE DIAMETER



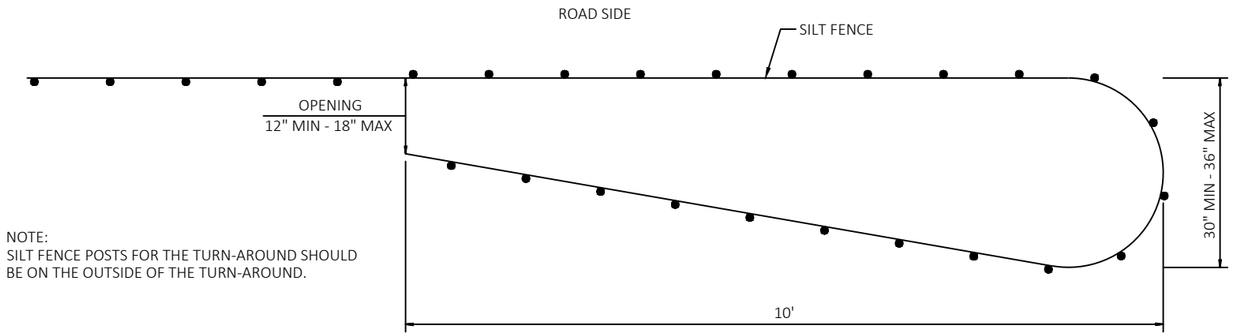
PLAN VIEW

RIPRAP TREATMENT AT STORM SEWER OUTFALLS

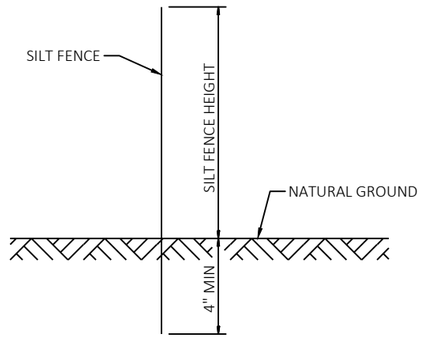


TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL



PLAN VIEW



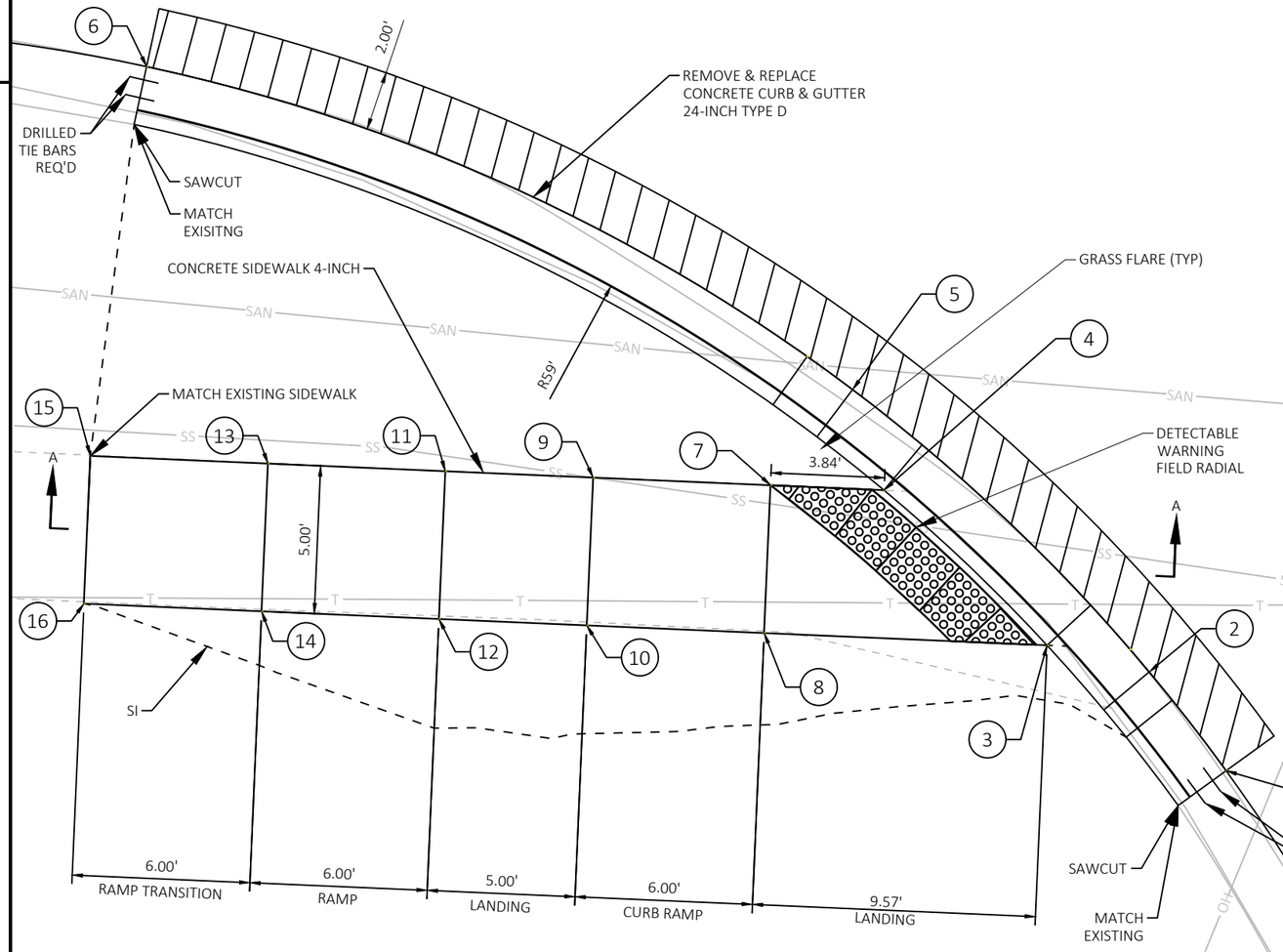
SIDE VIEW

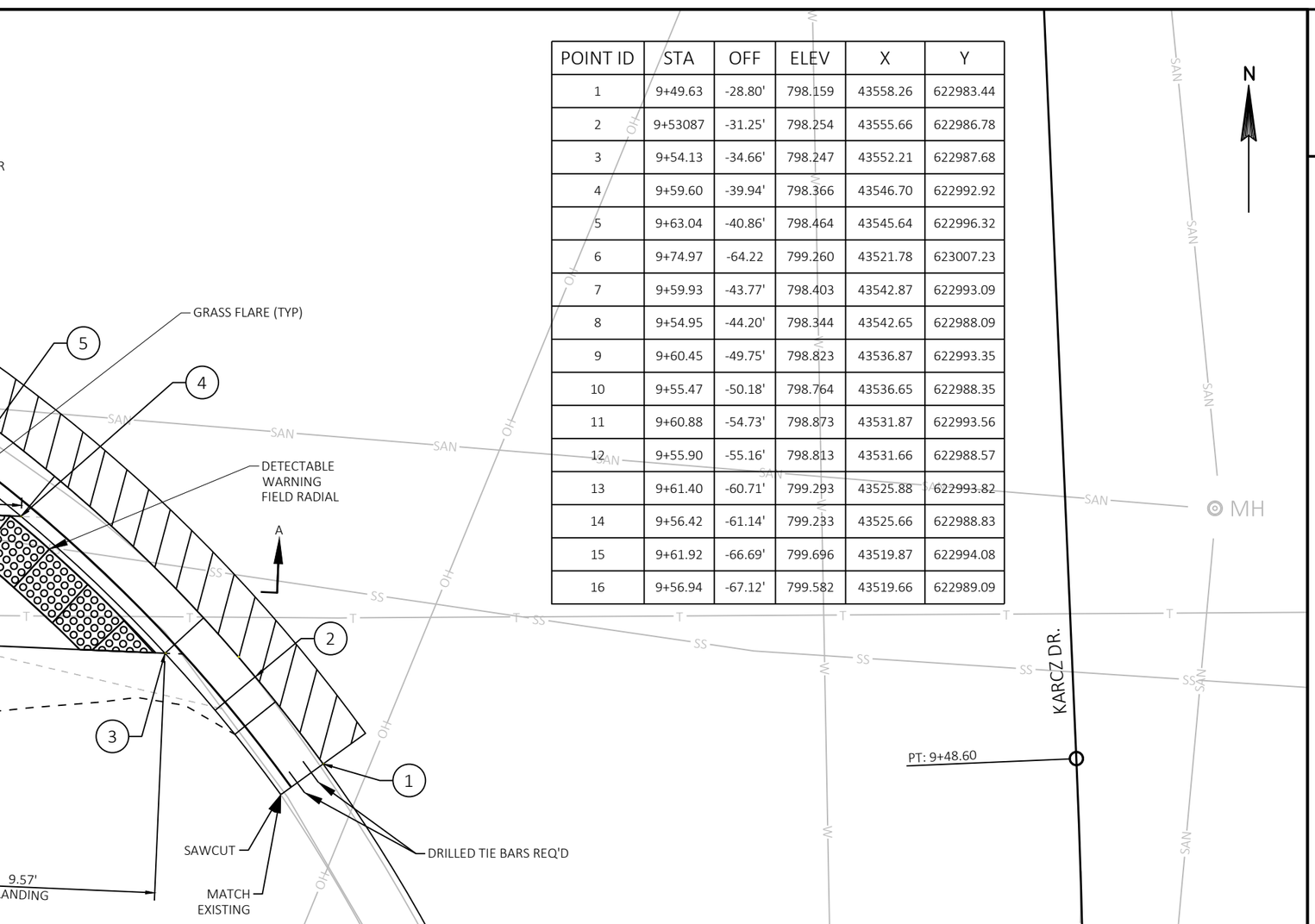
SILT FENCE TURN-AROUND DETAIL

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 13	E

STH 32

POINT ID	STA	OFF	ELEV	X	Y
1	9+49.63	-28.80'	798.159	43558.26	622983.44
2	9+53087	-31.25'	798.254	43555.66	622986.78
3	9+54.13	-34.66'	798.247	43552.21	622987.68
4	9+59.60	-39.94'	798.366	43546.70	622992.92
5	9+63.04	-40.86'	798.464	43545.64	622996.32
6	9+74.97	-64.22	799.260	43521.78	623007.23
7	9+59.93	-43.77'	798.403	43542.87	622993.09
8	9+54.95	-44.20'	798.344	43542.65	622988.09
9	9+60.45	-49.75'	798.823	43536.87	622993.35
10	9+55.47	-50.18'	798.764	43536.65	622988.35
11	9+60.88	-54.73'	798.873	43531.87	622993.56
12	9+55.90	-55.16'	798.813	43531.66	622988.57
13	9+61.40	-60.71'	799.293	43525.88	622993.82
14	9+56.42	-61.14'	799.233	43525.66	622988.83
15	9+61.92	-66.69'	799.696	43519.87	622994.08
16	9+56.94	-67.12'	799.582	43519.66	622989.09





REMOVE AND REPLACE
ASPHALTIC SURFACE

EXISTING R/W

GENERAL NOTES

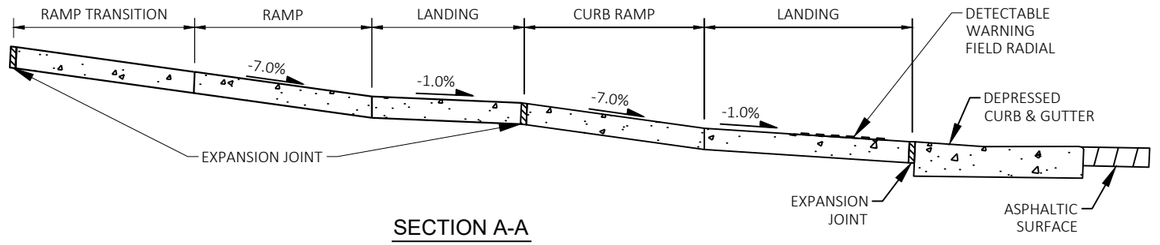
CURB RAMP TYPE 4B1

REFER TO STANDARD DETAIL DRAWING (SDD) 8D5-F "CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS" FOR ADDITIONAL DETAILS.

STATION OFFSETS ARE FROM KARCZ DR. ALIGNMENT.

SLOPES TAKE PRECEDENCE OVER GRADES.

RADIUS MEASURED TO BACK OF CURB. CENTER POINT LOCATION ON PLAN SHEETS.



SECTION A-A

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS CURB RAMP	SHEET 14	E

2

N

266+56.43, -83.63' LT

266+03.77, -24.00' LT

270.00'

BEGIN CROWN POINT REFERENCE LINE (CP)
STA 261+25.25 C/L STH 32 =
STA 0+00 R/L CROWN POINT
Y = 620521.8932
X = 45352.7830

BP: 0+00.00 (CP)

BEGIN RAODWAY WIDENING LT 261+25.25

PI: 1+54.61 (CP)

PI: 2+37.33 (CP)

786.25

786.48

260

1

2

3

4

5

265

12'

12'

12'

270.00'

165.00'

300.00'

PI: 4+87.33 (CP)

259+27.24, 12.00' RT

+97.28

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAILS	SHEET 15	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id-1

PLOT DATE : 11/1/2019 8:33 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

BP: 7+97.94

BLUE HERON DR.

END CONSTRUCTION
STA 8+68.48
MATCH EXISTING
BUTT JOINT REQ'D

266+56.43, -83.63' LT

266+03.77, -24.00' LT

268+25.69, -93.96' LT

269+10.90, -18.00' LT

PI: 2+37.33 (CP)

785.65
786.18
785.89
785.82
786.29
785.88
785.99
786.49
786.07
786.10
786.73
786.25
786.25
786.18
786.67
786.48
786.44
786.63
786.72
786.96

R59'
R69'

77.5032"

18'
12'
12'
12'

2
3
265
4
5
6
7
8
270
9

EP: 10+00.00

PI: 4+87.33 (CP)

STA 267+15.60 C/L STH 32 =
STA 10+00 R/L BLUEHERON DR
Y = 621042.5361
X = 45074.5078

CONCRETE CURB & GUTTER 24-INCH TYPE D
DRILLED TIE BARS REQ'D

266+99.44 MATCH LINE

SIGN

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAILS (BLUE HERON DR)	SHEET 16	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id-2

PLOT DATE : 11/1/2019 8:33 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

SIGN

268+25.69, -93.96' LT

SIGN

SIGN

275+31.63, -82.48' LT

269+10.90, -18.00' LT

274+78.41, -24.00' LT

86.44

786.63

786.72

791.58

791.55

7 8 9 10 11 12 13 14

270 275

BP: 10+00.00

12'

12'

392.00'

130.00'

200.00'

790.88

790.72

791.55 (CP)

790.99

274+05.88, 23.00' RT

R58'

791.31

791.74

274+83.39, 83.49' RT

274+86.94 MATCH LINE

SIGN

PI: 12+01.14

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAILS	SHEET 17	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id-3

PLOT DATE : 11/1/2019 8:33 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

GLENBROOK DR.

BP: 7+79.54

PC: 8+55.06

END CONSTRUCTION
STA 8+79.16
MATCH EXISTING
BUTT JOINT REQ'D

CONCRETE CURB & GUTTER
24-INCH TYPE D
DRILLED TIED BARS REQ'D

275+31.63, -82.48' LT

276+95.64, -88.00' LT

STA 275+96.84 C/L STH 32
STA 10+00 R/L GLENBROOK DR
Y = 621819.7291
X = 44659.1110

END ROADWAY WIDENING LT 282+02.44

277+59.23, -28.00' LT

280+37.43, -28.00' LT

200.00'

165.00'

165.00'

PI: 17+82.40 (CP)

PI: 19+50.07 (CP)

PI: 19+75.07 (CP)

PI: 15+82.40 (CP)

R59'

R57'

R58'

R58'

18'

18.8'

18'

28'

28'

12'

12'

12'

17'

89.3171°

81.7997°

23.22'

18.96'

790.97

790.88

790.72

791.14

791.32

791.35

791.39

791.56

791.72

791.77

791.80

791.95

791.20

791.58

791.55

791.41

792.12

792.23

792.43

792.87

792.20

791.74

791.72

791.68

791.63

791.60

791.50

791.46

791.74

791.74

791.70

791.36

791.31

791.15

791.15

792.11

790.99

BP: 10+00.00

EP: 10+00.00

PC: 10+32.88

275

14

15

16

17

18

280

19

20

21

+07.43

277+40.33, 28.00' RT

276+44.16, 87.92' RT

274+83.39, 83.49' RT

278+63.83 MATCH LINE

STA 275+72.52 C/L STH 32 =
STA 10+00 R/L GLENBROOK DR (EAST)
Y = 621798.2808
X = 44670.5748

END CONSTRUCTION
STA 10+77.34
MATCH EXISTING
BUTT JOINT REQ'D

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D

PT: 12+01.14

GLENBROOK DR.

HWY 32

SIGN

SIGN

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAILS (GLENBROOK DR)	SHEET 18	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id-4

PLOT DATE : 11/1/2019 8:33 AM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

SAWING STORM SEWER STRUCTURE
NOTE: SAW AROUND EXISTING PIPE IN ORDER TO RELAY

(7) STA 276+48, 126.3' LT
EXISTING INLET 2x2-A

(8) STA 276+96, 47.8' LT
EXISTING APRON ENDWALLS FOR CPRC 15-INCH

RELAY PIPE AND APRON ENDWALL

GELNBROOK DR

STH 32

SIGN

FLAG

ANT

MH

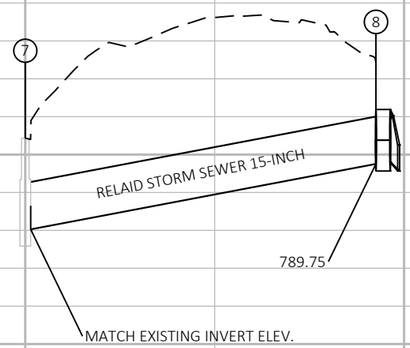
INL

795

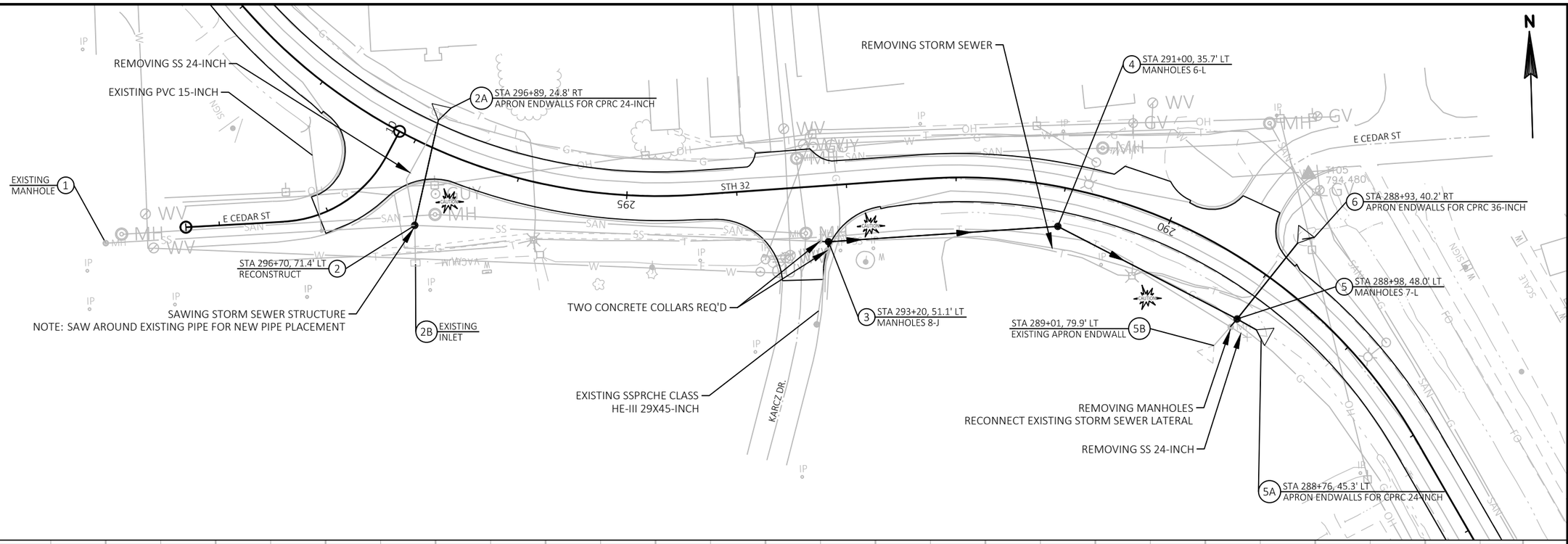
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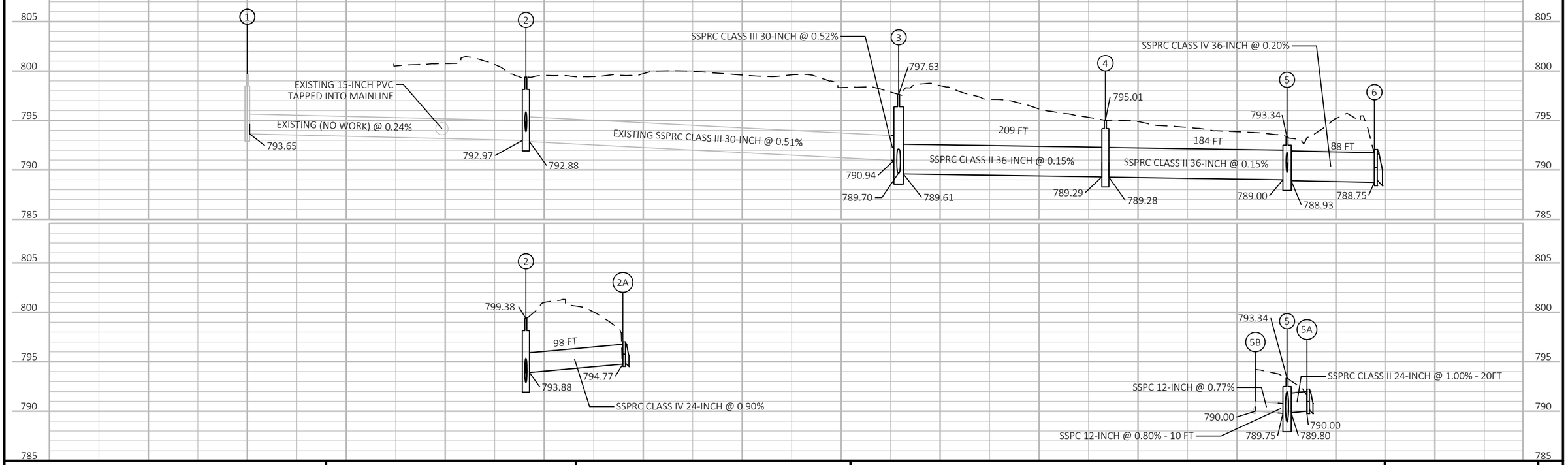
785

780



PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	STORM SEWER	SHEET 19	E





PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	STORM SEWER	SHEET 20	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022502
PLOT DATE : 11/26/2019 3:21 PM
PLOT BY : HOLMES, KELSEY J
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 41

SIGNING NOTES

WHEN AN EXISTING STOP OR YIELD SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP OR YIELD SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

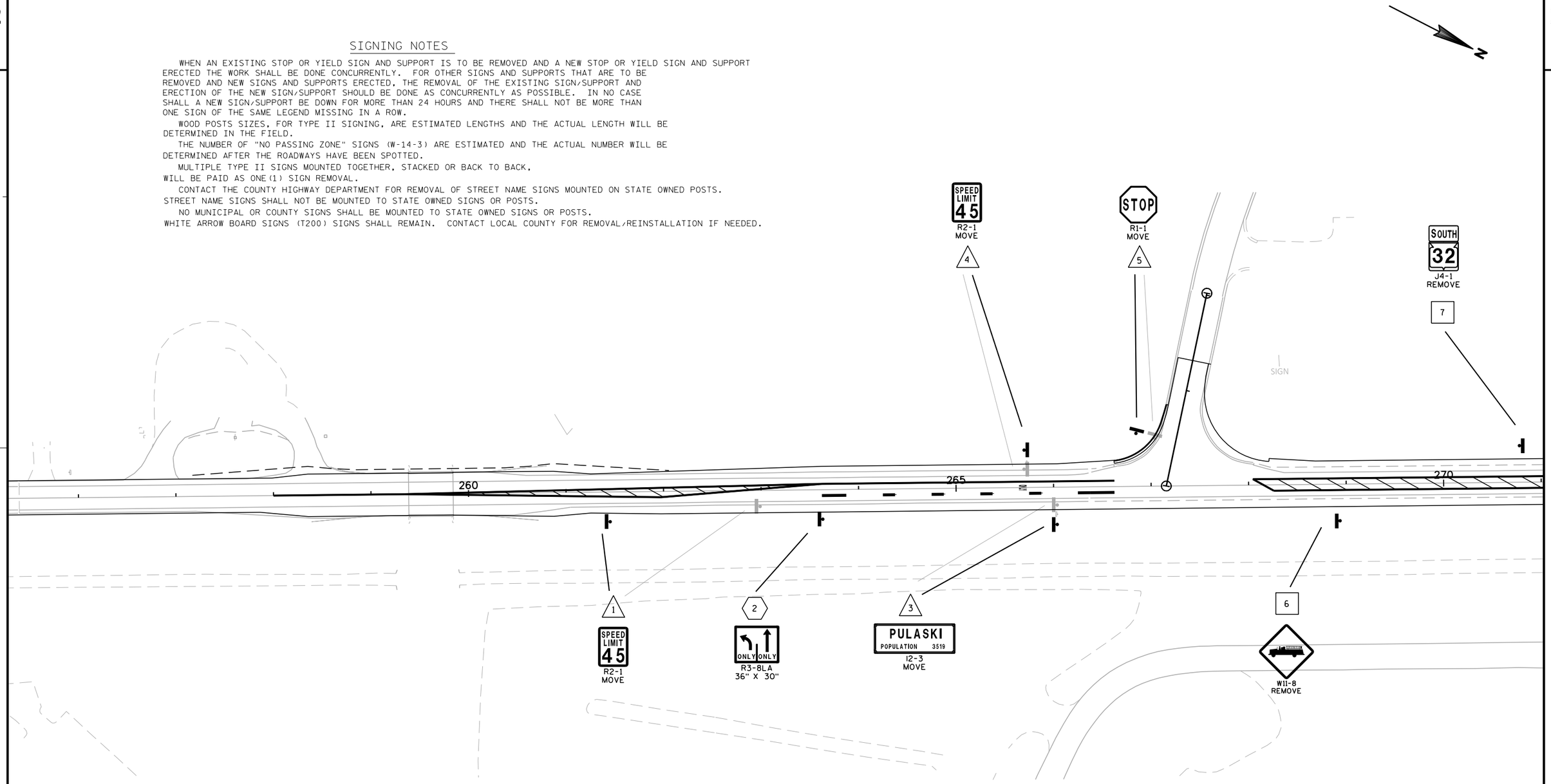
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

MULTIPLE TYPE II SIGNS MOUNTED TOGETHER, STACKED OR BACK TO BACK, WILL BE PAID AS ONE(1) SIGN REMOVAL.

CONTACT THE COUNTY HIGHWAY DEPARTMENT FOR REMOVAL OF STREET NAME SIGNS MOUNTED ON STATE OWNED POSTS. STREET NAME SIGNS SHALL NOT BE MOUNTED TO STATE OWNED SIGNS OR POSTS.

NO MUNICIPAL OR COUNTY SIGNS SHALL BE MOUNTED TO STATE OWNED SIGNS OR POSTS. WHITE ARROW BOARD SIGNS (T200) SIGNS SHALL REMAIN. CONTACT LOCAL COUNTY FOR REMOVAL/REINSTALLATION IF NEEDED.



SIGN-REMOVE EXISTING

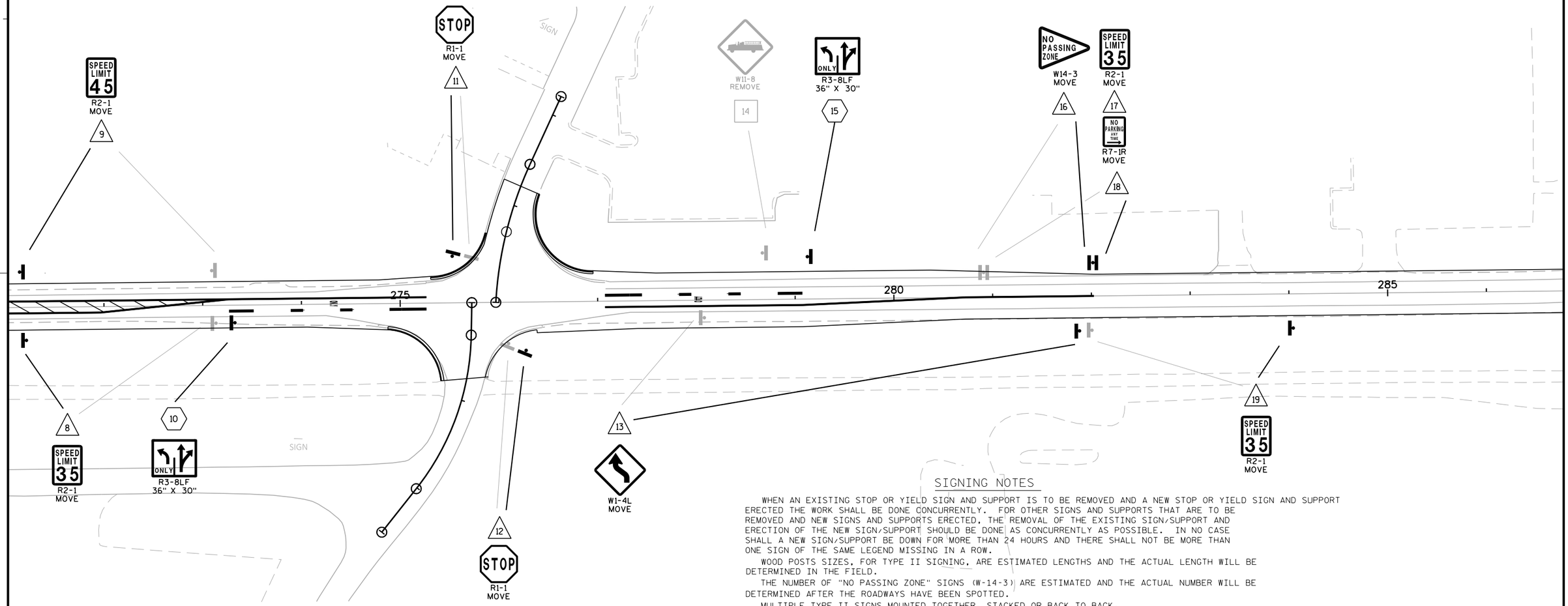
SIGN-PLACE NEW

SIGN-MOVE

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET E

FILE NAME : N:\spo\traffic\SIGNING\Projects\9190-20-71\91902071_signplan.dgn PLOT DATE : 29-JUL-2019 07:53 PLOT BY : dotets PLOT NAME : PLOT SCALE : 100:1 WISDOT/CADDS

2



SIGN-REMOVE EXISTING

SIGN-PLACE NEW

SIGN-MOVE

SIGNING NOTES

WHEN AN EXISTING STOP OR YIELD SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP OR YIELD SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

MULTIPLE TYPE II SIGNS MOUNTED TOGETHER, STACKED OR BACK TO BACK, WILL BE PAID AS ONE(1) SIGN REMOVAL.

CONTACT THE COUNTY HIGHWAY DEPARTMENT FOR REMOVAL OF STREET NAME SIGNS MOUNTED ON STATE OWNED POSTS. STREET NAME SIGNS SHALL NOT BE MOUNTED TO STATE OWNED SIGNS OR POSTS.

NO MUNICIPAL OR COUNTY SIGNS SHALL BE MOUNTED TO STATE OWNED SIGNS OR POSTS. WHITE ARROW BOARD SIGNS (T200) SIGNS SHALL REMAIN. CONTACT LOCAL COUNTY FOR REMOVAL/REINSTALLATION IF NEEDED.

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET	E

2

2

CONTINUE 4-INCH DOUBLE YELLOW
TO START OF PROJECT.

+39.43

+92.37

+97.37

+62.37

+03.90

+27.24

260 261 262 263 264 265 266 267

C E G E E C A F B A

MOUNTAIN-BAY STATE TRAIL

NOTES

REFERENCE SDD 15C8-C,
L = >166' FOR ADDITIONAL DETAILS

PAVEMENT MARKING LEGEND, EPOXY

A	TYPE 2 ARROW, WHITE
B	WORDS, WHITE
C	4-INCH, WHITE
D	4-INCH, YELLOW
E	4-INCH, DOUBLE YELLOW
F	8-INCH, WHITE
G	DIAGONAL, 12-INCH YELLOW (25'C-C)
H	4-INCH MINI SKIPS, WHITE (3' SKIP, 9' GAP)

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 23 E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-pm-1
PLOT DATE : 11/1/2019 8:43 AM
PLOT BY : HOLMES, KELSEY J
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

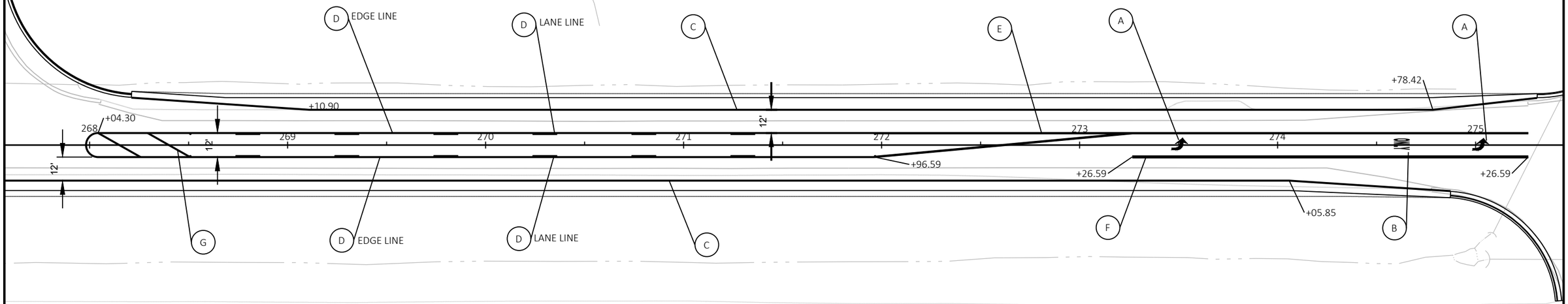
2

BLUE HERON DR.

SIGN

SIGN

SIGN



NOTES

REFERENCE SDD 15C8-C,
L = >166' FOR ADDITIONAL DETAILS

PAVEMENT MARKING LEGEND, EPOXY

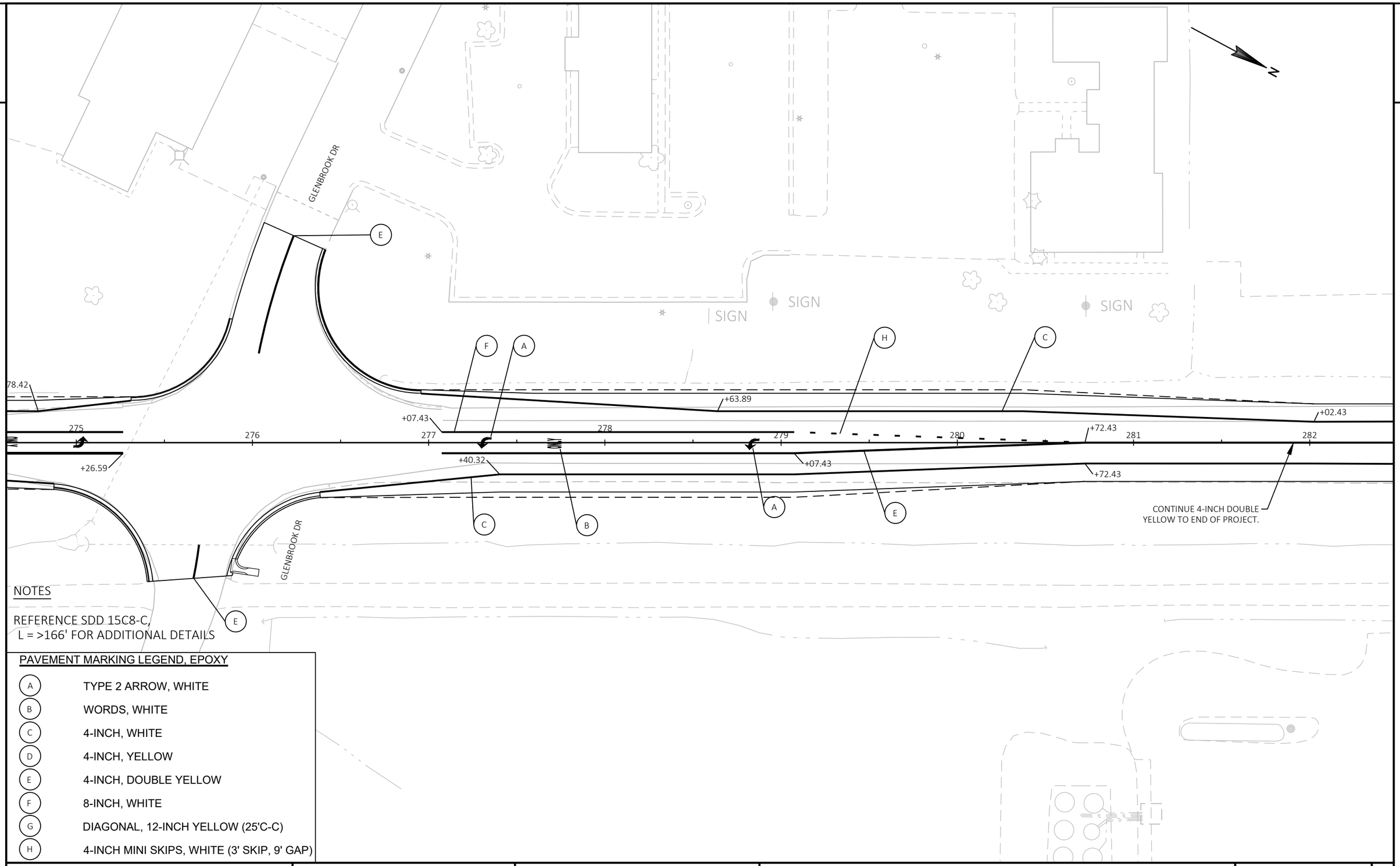
A	TYPE 2 ARROW, WHITE
B	WORDS, WHITE
C	4-INCH, WHITE
D	4-INCH, YELLOW
E	4-INCH, DOUBLE YELLOW
F	8-INCH, WHITE
G	DIAGONAL, 12-INCH YELLOW (25'C-C)
H	4-INCH MINI SKIPS, WHITE (3' SKIP, 9' GAP)

SIGN

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 24	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-pm-2
PLOT DATE : 11/1/2019 8:43 AM
PLOT BY : HOLMES, KELSEY J
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



NOTES

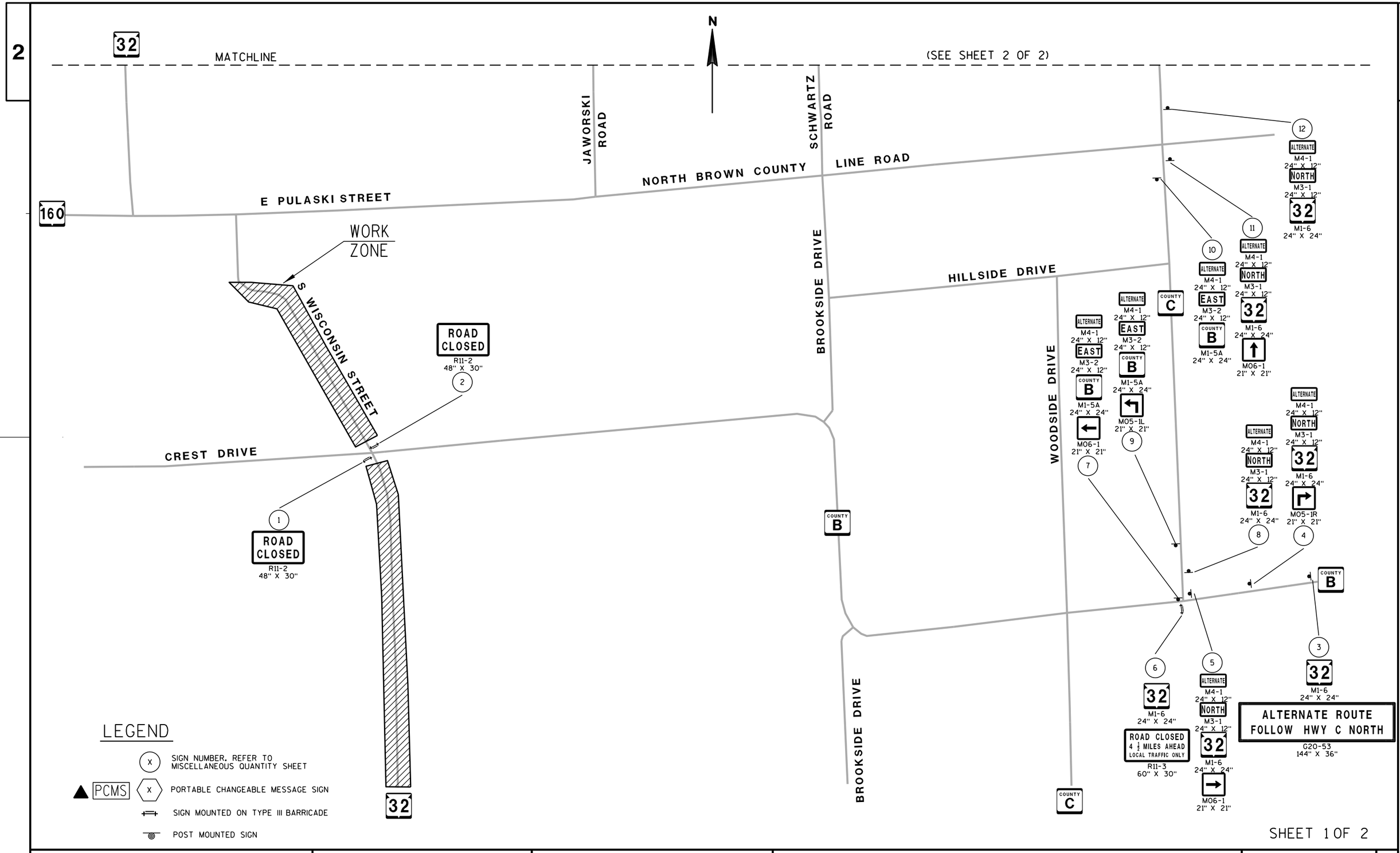
REFERENCE SDD 15C8-C,
L = >166' FOR ADDITIONAL DETAILS

PAVEMENT MARKING LEGEND, EPOXY

A	TYPE 2 ARROW, WHITE
B	WORDS, WHITE
C	4-INCH, WHITE
D	4-INCH, YELLOW
E	4-INCH, DOUBLE YELLOW
F	8-INCH, WHITE
G	DIAGONAL, 12-INCH YELLOW (25'C-C)
H	4-INCH MINI SKIPS, WHITE (3' SKIP, 9' GAP)

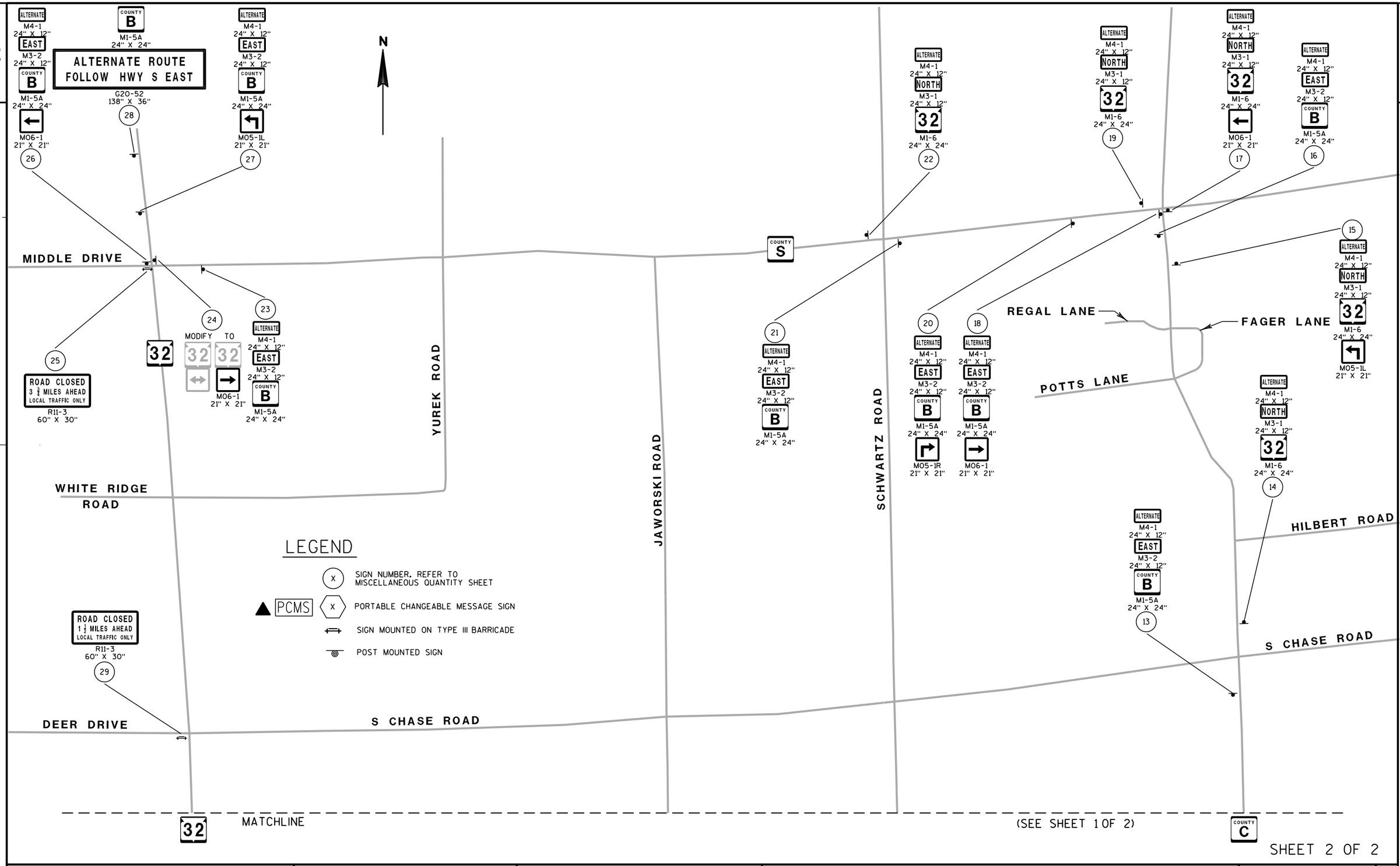
PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 25	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-pm-3
PLOT DATE : 11/1/2019 8:43 AM
PLOT BY : HOLMES, KELSEY J
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



SHEET 1 OF 2

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	ALTERNATE SIGNING DETAIL	SHEET 26	E



2

SHEET 2 OF 2

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	ALTERNATE SIGNING DETAIL	SHEET 27	E

9190-20-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	93.000	93.000
0016	204.0120	Removing Asphaltic Surface Milling	SY	15,063.000	15,063.000
0018	204.0150	Removing Curb & Gutter	LF	747.000	747.000
0020	204.0155	Removing Concrete Sidewalk	SY	18.000	18.000
0022	204.0165	Removing Guardrail	LF	364.000	364.000
0026	204.0210	Removing Manholes	EACH	2.000	2.000
0028	204.0245	Removing Storm Sewer (size) 01. 18-Inch	LF	18.000	18.000
0030	204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	103.000	103.000
0032	204.0245	Removing Storm Sewer (size) 03. 36-Inch	LF	63.000	63.000
0034	204.0245	Removing Storm Sewer (size) 04. 42-Inch	LF	250.000	250.000
0036	204.0245	Removing Storm Sewer (size) 05. 34x53-Inch	LF	114.000	114.000
0038	205.0100	Excavation Common	CY	6,522.000	6,522.000
0044	208.1100	Select Borrow	CY	527.000	527.000
0048	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 9190-20-71	LS	1.000	1.000
0052	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	4.000	4.000
0060	213.0100	Finishing Roadway (project) 01. 9190-20-71	EACH	1.000	1.000
0064	305.0110	Base Aggregate Dense 3/4-Inch	TON	418.000	418.000
0066	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,757.000	3,757.000
0068	305.0130	Base Aggregate Dense 3-Inch	TON	2,270.000	2,270.000
0076	416.0610	Drilled Tie Bars	EACH	15.000	15.000
0078	455.0605	Tack Coat	GAL	2,713.000	2,713.000
0082	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0084	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0086	460.2005	Incentive Density PWL HMA Pavement	DOL	2,281.000	2,281.000
0088	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	4,975.000	4,975.000
0090	460.2010	Incentive Air Voids HMA Pavement	DOL	6,154.000	6,154.000
0092	460.6223	HMA Pavement 3 MT 58-28 S	TON	3,865.000	3,865.000
0094	460.6224	HMA Pavement 4 MT 58-28 S	TON	2,582.000	2,582.000
0098	465.0105	Asphaltic Surface	TON	60.000	60.000
0100	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0102	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	83.000	83.000
0106	465.0315	Asphaltic Flumes	SY	10.000	10.000
0114	502.3200	Protective Surface Treatment	SY	219.000	219.000
0130	509.0351	Preparation Decks Type 1 Special	SY	11.000	11.000
0132	509.0352	Preparation Decks Type 2 Special	SY	5.000	5.000
0134	509.0500	Cleaning Decks	SY	219.000	219.000
0136	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0138	509.2500	Concrete Masonry Overlay Decks	CY	13.000	13.000

9190-20-71

Line	Item	Item Description	Unit	Total	Qty
0140	509.9010.S	Removing Asphaltic Concrete Deck Overlay (structure) 01. B-05-0260	SY	219.000	219.000
0146	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
0148	521.1524	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 24-Inch 6 to 1	EACH	2.000	2.000
0150	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	66.000	66.000
0158	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	136.000	136.000
0160	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0162	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0164	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0174	524.0615	Apron Endwalls for Culvert Pipe Salvaged 15-Inch	EACH	1.000	1.000
0178	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	172.000	172.000
0180	602.0405	Concrete Sidewalk 4-Inch	SF	150.000	150.000
0182	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	8.000	8.000
0184	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	7.500	7.500
0186	606.0200	Riprap Medium	CY	13.000	13.000
0190	608.0115	Relaid Storm Sewer 15-Inch	LF	93.000	93.000
0192	608.0224	Storm Sewer Pipe Reinforced Concrete Class II 24-Inch	LF	20.000	20.000
0194	608.0236	Storm Sewer Pipe Reinforced Concrete Class II 36-Inch	LF	393.000	393.000
0196	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	8.000	8.000
0198	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	98.000	98.000
0200	608.0436	Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	LF	88.000	88.000
0202	608.2329	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	8.000	8.000
0204	608.6012	Storm Sewer Pipe Composite 12-Inch	LF	10.000	10.000
0206	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0208	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0210	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0212	611.0545	Manhole Covers Type L	EACH	2.000	2.000
0214	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0216	611.2007	Manholes 7-FT Diameter	EACH	1.000	1.000
0218	611.2008	Manholes 8-FT Diameter	EACH	1.000	1.000
0220	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	1,000.000	1,000.000
0226	614.2300	MGS Guardrail 3	LF	50.000	50.000
0232	614.2500	MGS Thrie Beam Transition	LF	149.000	149.000

9190-20-71

Line	Item	Item Description	Unit	Total	Qty
0234	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0238	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9190-20-71	EACH	1.000	1.000
0242	619.1000	Mobilization	EACH	0.260	0.260
0244	624.0100	Water	MGAL	78.000	78.000
0246	625.0100	Topsoil	SY	2,525.000	2,525.000
0248	625.0500	Salvaged Topsoil	SY	2,805.000	2,805.000
0250	627.0200	Mulching	SY	5,330.000	5,330.000
0252	628.1504	Silt Fence	LF	1,112.000	1,112.000
0254	628.1520	Silt Fence Maintenance	LF	1,112.000	1,112.000
0256	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0258	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0266	628.7504	Temporary Ditch Checks	LF	175.000	175.000
0268	628.7555	Culvert Pipe Checks	EACH	35.000	35.000
0270	628.7570	Rock Bags	EACH	20.000	20.000
0272	629.0210	Fertilizer Type B	CWT	3.000	3.000
0274	630.0130	Seeding Mixture No. 30	LB	40.000	40.000
0276	630.0140	Seeding Mixture No. 40	LB	56.000	56.000
0278	630.0500	Seed Water	MGAL	119.000	119.000
0280	633.5200	Markers Culvert End	EACH	10.000	10.000
0282	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	14.000	14.000
0284	637.2210	Signs Type II Reflective H	SF	22.500	22.500
0286	638.2102	Moving Signs Type II	EACH	13.000	13.000
0288	638.2602	Removing Signs Type II	EACH	3.000	3.000
0290	638.3000	Removing Small Sign Supports	EACH	15.000	15.000
0292	642.5001	Field Office Type B	EACH	1.000	1.000
0294	643.0300	Traffic Control Drums	DAY	1,170.000	1,170.000
0296	643.0410	Traffic Control Barricades Type II	DAY	14.000	14.000
0298	643.0420	Traffic Control Barricades Type III	DAY	1,312.000	1,312.000
0300	643.0705	Traffic Control Warning Lights Type A	DAY	2,624.000	2,624.000
0304	643.0900	Traffic Control Signs	DAY	4,110.000	4,110.000
0308	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0312	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0314	643.5000	Traffic Control	EACH	0.260	0.260
0318	645.0120	Geotextile Type HR	SY	33.000	33.000
0320	646.1020	Marking Line Epoxy 4-Inch	LF	18,722.000	18,722.000
0324	646.3020	Marking Line Epoxy 8-Inch	LF	700.000	700.000
0326	646.5020	Marking Arrow Epoxy	EACH	6.000	6.000
0328	646.5120	Marking Word Epoxy	EACH	3.000	3.000
0332	646.7120	Marking Diagonal Epoxy 12-Inch	LF	212.000	212.000

9190-20-71

Line	Item	Item Description	Unit	Total	Qty
0340	649.0105	Temporary Marking Line Paint 4-Inch	LF	20,546.000	20,546.000
0346	650.4000	Construction Staking Storm Sewer	EACH	7.000	7.000
0348	650.4500	Construction Staking Subgrade	LF	2,077.000	2,077.000
0350	650.5000	Construction Staking Base	LF	2,077.000	2,077.000
0352	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	677.000	677.000
0354	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0360	650.8000	Construction Staking Resurfacing Reference	LF	4,551.000	4,551.000
0362	650.9000	Construction Staking Curb Ramps	EACH	1.000	1.000
0364	650.9910	Construction Staking Supplemental Control (project) 01. 9190-20-71	LS	1.000	1.000
0368	650.9920	Construction Staking Slope Stakes	LF	2,499.000	2,499.000
0370	690.0150	Sawing Asphalt	LF	4,411.000	4,411.000
0372	690.0250	Sawing Concrete	LF	83.000	83.000
0376	740.0440	Incentive IRI Ride	DOL	8,193.000	8,193.000
0378	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
0380	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,100.000	2,100.000
0384	SPV.0060	Special 01. Sawing Storm Sewer Structure	EACH	2.000	2.000
0386	SPV.0060	Special 02. Reconnect Existing Storm Sewer Lateral	EACH	1.000	1.000
0388	SPV.0060	Special 03. Adjusting Existing Storm Sewer Lateral	EACH	1.000	1.000
0394	SPV.0075	Special 01. Street Sweeping	HRS	5.000	5.000
0396	SPV.0090	Special 01. Concrete Curb and Gutter 24-Inch Type D	LF	505.000	505.000

REMOVING SMALL PIPE CULVERTS

STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
258+12	-	258+61	LT	1	24-INCH CMCP
266+75	-	267+94	LT	1	18-INCH RCCP
			TOTAL 0010	2	

REMOVING CONCRETE ITEMS

STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY
266+62	-	267+17	BLUE HERON DR S CURB	90	-
267+61	-	268+06	BLUE HERON DR N CURB	134	-
274+78	-	275+44	GLENBROOK DR SE CURB	97	-
275+26	-	275+87	GLENBROOK DR SW CURB	86	-
275+85	-	276+44	GLENBROOK NE CURB	87	-
276+40	-	277+07	GLENBROOK DR NW CURB	134	-
288+83	-	289+06	E CEDAR ST RT	26	-
293+11	-	293+20	KARCZ DR. LT	18	-
293+76	-	294+10	KARCZ DR. LT	43	18
296+70	-	296+93	E CEDAR ST LT	32	-
			TOTAL 0010	747	18

REMOVING STORM SEWER ITEMS

STATION	TO	STATION	LOCATION	204.0210 REMOVING MANHOLES EACH	204.0245.01 REMOVING STORM SEWER (SIZE) (01. 18-INCH) LF	204.0245.02 REMOVING STORM SEWER (SIZE) (02. 24-INCH) LF	204.0245.03 REMOVING STORM SEWER (SIZE) (03. 36-INCH) LF	204.0245.04 REMOVING STORM SEWER (SIZE) (04. 42-INCH) LF	204.0245.05 REMOVING STORM SEWER (SIZE) (05. 34X53-INCH) LF
288+78	-	288+98	LT	-	18	-	-	-	-
288+94	-	288+98	LT & RT	1	-	-	63	-	4
288+98	-	293+20	LT	1	-	-	-	250	110
296+70	-	296+88	LT & RT	-	-	103	-	-	-
			TOTAL 0010	2	18	103	63	250	114

NOTE:
HEADWALL TO BE REMOVED WITH STORM SEWER PIPE. REMOVAL OF HEADWALL IS CONSIDERED INCIDENTAL TO REMOVING STORM SEWER

3

REMOVING ASPHALTIC SURFACE ITEMS

STATION	TO	STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
254+92	-	268+21	STH 32	23	4,527
268+21	-	277+07	STH 32	17	2,371
277+07	-	289+91	STH 32	24	5,541
289+91	-	294+17	STH 32	29	2,624
294+17		297+84	STH 32	8	2,271
297+84	-	300+43	STH 32	10	1241
			TOTAL 0010	93	15,063

PREPARE FOUNDATION ITEMS

STATION	TO	STATION	LOCATION	211.0100.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 9190-20-71) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
	-		PROJECT	1	-
254+92	-	257+50	STH 32	-	4
			TOTAL 0010	1	4

3

BASE AGGREGATE DENSE ITEMS

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0130 BASE AGGREGATE DENSE 3-INCH TON
254+92	-	259+39	STH 32	33	-	-
259+84	-	261+25	STH 32	10	-	-
261+25	-	266+62	STH 32	158	519	852
266+62	-	268+21	STH 32	10	1,055	334
268+21	-	274+87	STH 32	196	552	690
274+87	-	276+96	STH 32	11	1,631	394
276+96	-	282+02	STH 32	91	530	690
282+02	-	288+84	STH 32	12	-	-
288+84	-	289+91	STH 32	1	-	-
289+91	-	292+70	STH 32	5	-	-
293+89	-	297+84	STH 32	3	-	-
297+84	-	300+43	STH 32	4	-	-
			TOTAL 0010	418	3,757	2,270

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Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Expanded EBS Backfill (11)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Comment:
			Cut (2)	EBS Excavation (3)			Factor 1.15		Factor 1.42			
Division 1												
	257+10 - 259+38.55	STH 32 MAINLINE-GUARDRAIL SOUTH OF B-05-260	138	0	16	122	0	360	511	-389		
	259+84.29 - 282+02.43	STH 32 MAINLINE-GUARDRAIL NORTH OF B-05-260 & LEFT TURN LANES	5,031	458	488	4,543	527	613	870	3,673		
	288+54.65 - 288+90.38 LT	STH 32-STORM SEWER INLET LT	1	0	0	1	0	5	6	-5		Small quantity of fill needed around pipe end
	288+84 - 289+00 RT	STH 32-STORM SEWER OUTLET RT	0	0	0	0	0	9	13	-13		Small quantity of fill needed around pipe end
	8+65 - 9+80	BLUE HERON DR	340	0	50	290	0	1	2	288		
	8+75 - 9+80	GLENBROOK DR. (WEST)	328	0	67	261	0	0	0	261		
	10+20 - 10+90	GLENBROOK DR. (EAST)	226	0	40	186	0	9	12	174		
Division 1 Subtotal			6,064	458	661	5,403	527	997	1,414	3,989	3,989	
Grand Total			6,064	458	661	5,403	527	997	1,414	3,989	3,989	
Total Common Exc			6,522									

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(3) EBS Excavation to be backfilled with Select Borrow material. EBS material will be wasted offsite.

(4) Salvaged/Unusable Pavement Material

(5) Available Material = Cut - Salvaged/Unusuable Pavement Material - Existing Roadbed Material (to be wasted offsite)

(11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.15. Item number 208.1100

(13) Expanded Fill Factor = 1.42

Expanded Fill = Unexpanded Fill * Fill Factor

(14) The Mass Ordinate = Available Material - Expanded Fill. + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

3

HMA AND ASPHALTIC ITEMS

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	PWL HMA PAVEMENT 3 MT 58-28 S 460.6223 HMA PAVEMENT 3 MT 58-28 S TON	INCENTIVE DENSITY PWL HMA PAVEMENT MAINLINE LANES LOWER LAYER	INCENTIVE AIR VOIDS HMA PAVEMENT MAINLINE & SIDEROADS LOWER LAYER	PWL HMA PAVEMENT 4 MT 58-28 S 460.6224 HMA PAVEMENT 4 MT 58-28 S TON	INCENTIVE DENSITY PWL HMA PAVEMENT MAINLINE LANES UPPER LAYER	INCENTIVE AIR VOIDS HMA PAVEMENT MAINLINE & SIDEROADS UPPER LAYER	460.0105.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUMES SY	REMARKS
254+92	-	259+39	STH 32	234	-	253	162	253	234	117	279	-	-	-	-	46	-	
259+84	-	261+25	STH 32	78	-	95	51	95	88	37	88	-	-	-	-	-	-	
261+25	-	268+21	STH 32	451	126	572	-	572	412	250	412	-	-	-	-	-	-	
268+21	-	276+96	STH 32	591	159	783	-	783	564	343	564	-	-	-	-	-	10	
276+96	-	282+00	STH 32	323	91	404	-	404	291	170	291	-	-	-	-	-	-	
282+00	-	289+91	STH 32	411	-	549	287	549	395	207	410	-	-	19	-	15	-	
289+91	-	294+16	STH 32	267	-	346	154	346	249	111	271	-	-	14	-	22	-	
294+16	-	297+84	STH 32	231	-	315	133	315	227	96	227	-	-	28	-	-	-	
297+84	-	300+43	STH 32	126	-	172	94	172	124	68	124	-	-	-	-	-	-	
	-			-	-	-	-	-	-	-	-	-	-	-	100	-	-	
	-		UNDISTRIBUTED	-	-	-	-	-	-	-	-	1	1	-	-	-	-	4 MT 58-28 S
	-			-	-	-	-	-	-	-	-	1	-	-	-	-	-	3 MT 58-28-S
			TOTAL 0010	2,713	376	3,489	882	3,489	2,582	1,399	2,665	2	1	60	100	83	10	

NOTE:
3 MT 58-28 S LOWER LOWER LAYER PWL DENSITY ACCEPTANCE
3 MT 58-28 S LOWER LAYER DENSITY BY CORES FROM STA 261+25 TO STA 282+00

CULVERT PIPE AND APRON ENDWALL ITEMS

STATION	TO	STATION	LOCATION	521.1524 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1 EACH	521.3124 * CULVERT PIPE CORRUGATED STEEL 24-INCH LF	522.0418 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH
257+68	-	258+48	LT	2	66	-	-
266+68	-	26+16	LT	-	-	136	2
			TOTAL 0010	2	66	136	2

* 0.064-INCH MINIMUM WALL THICKNESS

RIPRAP AND GEOTEXTILE ITEMS

STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
276+04	-	276+26	RT	6	20
288+88	-	288+98	RT	7	13
			TOTAL 0010	13	33

CONCRETE AND SIDEWALK ITEMS

STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	SPV.0090.01 SPECIAL (01. CONCRETE CURB AND GUTTER 24-INCH TYPE D) LF
266+62	-	267+18	LT	-	-	-	-	-	86
267+61	-	268+21	LT	-	-	-	-	-	134
274+87	-	275+43	RT	-	83	-	-	-	-
275+31	-	275+89	LT	-	-	-	-	-	76
275+86	-	276+38	RT	-	63	-	-	-	-
276+40	-	276+96	LT	-	-	-	-	-	114
288+83	-	289+08	RT	3	26	-	-	-	-
293+11	-	293+28	LT	4	-	-	-	-	18
293+74	-	294+13	LT	4	-	150	8	8	44
296+70	-	296+93	LT	4	-	-	-	-	33
			TOTAL 0010	15	172	150	8	7.5	505

STORM SEWER PIPE AND ENDWALL ITEMS

STATION	TO	STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	524.0615 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 15-INCH EACH	608.0115 RELAID STORM SEWER 15-INCH LF	608.0224 STORM SEWER PIPE REINFORCED CONCRETE CLASS II 24-INCH LF	608.0236 STORM SEWER PIPE REINFORCED CONCRETE CLASS II 36-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.0436 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF	608.2329 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH LF	608.6012 STORM SEWER PIPE COMPOSITE 12-INCH LF	SPV.0060.02 SPECIAL (02. RECONNECT EXISTING STORM SEWER LATERAL) EACH	SPV.0060.03 SPECIAL (03. ADJUSTING EXISTING STORM SEWER LATERAL) EACH
276+48	-	276+96	INLET 7 - INTELT 7A	-	-	-	1	93	-	-	-	-	-	-	-	-	-
288+76	-	288+98	INLET 5A - MH 5	-	1	-	-	-	20	-	-	-	-	-	-	-	-
288+98	-	288+93	INLET 5B - MH 5 - OUTLET 6	-	-	1	-	-	-	-	-	-	88	-	10	1	-
288+98	-	293+20	MH 5 - MH4 - MH 3	-	-	-	-	-	-	393	-	-	-	-	-	-	-
293+20	-	293+27	MH 3	2	-	-	-	-	-	-	8	-	-	8	-	-	-
296+70	-	296+89	MH 2 - INLET 2A	-	-	-	-	-	-	-	-	98	-	-	-	-	1
			TOTAL 0010	2	1	1	1	93	20	393	8	98	88	8	10	1	1

STORM SEWER MANHOLE ITEMS

STATION	LOCATION	611.0420 RECONSTRUCTING MANHOLES EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0545 MANHOLE COVERS TYPE L EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	SPV.0060.01 SPECIAL (01. SAWING STORM SEWER STRUCTURE) EACH	REMARKS
276+48	INLET 7	-	1	-	-	-	-	-	1	SAWING STORM SEWER STRUCTURE IS AROUND EXISTING PIPES
288+98	MH 5	-	-	-	1	-	1	-	-	
291+00	MH 4	-	-	-	1	1	-	-	-	
293+20	MH 3	-	-	1	-	-	-	1	-	
296+70	MH 2	1	-	-	-	-	-	-	1	SAWING STORM SEWER STRUCTURE IS AROUND EXISTING PIPES
	TOTAL 0010	1	1	1	2	1	1	1	2	

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PIPE UNDERDRAIN ITEMS

STATION	TO	STATION	LOCATION	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF
265+00	-	274+87	RT	1,000
			TOTAL 0010	1,000

GUARDRAIL ITEMS

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
258+36	-	259+39	LT	81	12.5	37.25	1
258+36	-	259+39	RT	100	12.5	37.25	1
259+84	-	260+87	LT	96	12.5	37.25	1
259+84	-	260+87	RT	87	12.5	37.25	1
			TOTAL 0010	364	50	149	4

NOTE:
REMOVAL OF ANY CONCRETE ANCHORS IS CONSIDERED INCIDENTAL TO REMOVING GUARDRAIL

WATER ITEM

STATION	TO	STATION	LOCATION	624.0100 WATER MGAL
254+92	-	282+02	STH 32	78
			TOTAL 0010	78

MOBILIZATIONS EROSION CONTROL ITEMS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT	4	2
TOTAL 0010	4	2

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EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
257+03	-	259+39	RT	256	256	-	-	-
257+04	-	259+39	LT	-	-	20	5	-
259+84	-	267+28	LT	-	-	80	-	-
259+84	-	275+40	RT	756	756	-	-	-
267+63	-	276+05	LT	-	-	40	5	-
275+88	-	281+05	RT	-	-	-	5	-
276+50	-	282+02	LT	-	-	-	5	-
288+50	-	293+20	LT	-	-	-	5	-
288+84	-	289+00	RT	-	-	-	-	-
293+76	-	294+13	LT	-	-	-	-	-
269+70	-	296+94	LT	-	-	-	-	-
296+81	-	296+96	RT	-	-	-	5	-
			UNDISTRIBUTED	100	100	35	5	20
			TOTAL 0010	1,112	1,112	175	35	20

FINISHING ITEMS

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0500 SEED WATER MGAL
257+03	-	259+39	RT	348	-	348	0.22	6	-	8
257+04	-	259+39	LT	493	-	493	0.31	-	9	11
259+84	-	267+28	LT	1,178	-	1,178	0.74	21	-	26
259+84	-	275+40	RT	505	-	505	0.32	9	-	11
267+63	-	276+05	LT	-	386	386	0.24	-	7	9
275+88	-	281+05	RT	-	171	171	0.11	3	-	4
276+50	-	282+02	LT	-	922	922	0.58	-	17	21
288+50	-	293+20	LT	-	1,104	1,104	0.70	-	20	25
288+84	-	289+00	RT	-	27	27	0.02	1	-	1
293+76	-	294+13	LT	-	56	56	0.04	-	1	1
269+70	-	296+94	LT	-	109	109	0.07	-	2	2
296+81	-	296+96	RT	-	30	30	0.02	-	1	1
			TOTAL 0010	2,525	2,805	5,330	3	40	56	119

3

MARKERS CULVERT END ITEMS

STATION	TO	STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
266+68	-	268+16	LT	2
275+03	-	276+17	RT	3
276+97	-		LT	1
288+70	-		LT	1
288+95	-		RT	1
296+86	-		RT	1
297+86	-		LT	1
			TOTAL 0010	10

PAVEMENT MARKING ITEMS

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH LF
254+92	-	259+39	STH 32	894	894	-	-	-	-	1788
259+39	-	263+60	STH 32	842	1,689	-	-	-	162	3378
263+60	-	266+62	STH 32	606	604	300	2	1	-	1208
266+62	-	267+98	STH 32	136	-	-	-	-	-	-
267+98	-	268+51	STH 32	84	112	-	-	-	50	224
268+51	-	273+27	STH 32	952	1,902	-	-	-	-	3804
273+27	-	275+27	STH 32	366	400	200	2	1	-	800
276+38	-	279+07	STH 32	483	400	200	2	1	-	800
279+07	-	280+72	STH 32	369	330	-	-	-	-	660
280+72	-	288+84	STH 32	1624	1,624	-	-	-	-	3248
288+84	-	292+70	STH 32	663	772	-	-	-	-	1544
292+70	-	296+92	STH 32	422	844	-	-	-	-	1688
294+25	-	296+80	STH 32	64	-	-	-	-	-	-
296+92	-	300+43	STH 32	606	702	-	-	-	-	1404
8+68	-	9+48	BLUE HERON DR.	-	160	-	-	-	-	-
8+79	-	9+49	GLENBROOK DR. WEST	-	140	-	-	-	-	-
10+58	-	10+77	GLENBROOK DR. EAST	-	38	-	-	-	-	-
			TOTAL 0010	18,722		700	6	3	212	20,546

3

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE TYPE H S.F.	638.2102 MOVING SIGNS TYPE II EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1	STH 32, S. OF BLUE HERON DR	R2-1	---	---	1	1	---	1
2	"	R3-8LA	36" X 30"	7.50	---	1	---	---
3	"	I2-3	---	---	1	2	---	2
4	"	R2-1	---	---	1	1	---	1
5	BLUE HERON DR	R1-1	---	---	1	1	---	1
6	STH 32, N. OF BLUE HERON	W11-8	---	---	---	---	1	1
7	"	J4-1	---	---	---	---	1	1
8	STH 32, S. OF GLENBROOK DR	R2-1	---	---	1	1	---	1
9	"	R2-1	---	---	1	1	---	1
10	"	R3-8LF	36" X 30"	7.50	---	1	---	---
11	GLENBROOK DR	R1-1	---	---	1	1	---	1
12	"	R1-1	---	---	1	1	---	1
13	STH 32, N. OF GLENBROOK DR	W1-4L	---	---	1	1	---	1
14	"	W11-8	---	---	---	---	1	1
15	"	R3-8LF	36" X 30"	7.50	---	1	---	---
16	"	W14-3	---	---	1	---	---	1
17	"	R2-1	---	---	1	---	---	---
18	"	R7-1R	---	---	1	---	---	---
19	"	R2-1	---	---	1	1	---	1
	TOTALS			**22.50**	**13.00**	**14**	**3**	**15**

TRAFFIC CONTROL ITEMS

STATION	LOCATION	APPROXIMATE SERVICE PERIOD DAY	643.0300 TRAFFIC CONTROL DRUMS NO. IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II NO. IN SERVICE	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS NO. IN SERVICE	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS NO. IN SERVICE	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
254+92	STH 32	32	-	-	-	-	9	288	18	576	7	224	1	7	SIGN FOR "BRIDGE OUT"
266+43	STH 32	32	-	-	-	-	9	288	18	576	7	224	-	-	SIGN FOR "BRIDGE OUT"
267+16	BLUE HERON DR.	32	20	280	-	-	3	96	6	192	4	128	-	-	
275+73	GLENBROOK DR. (EAST)	32	15	210	-	-	2	64	4	128	3	96	-	-	
275+97	GLENBROOK DR. (WEST)	32	20	280	-	-	2	64	4	128	3	96	-	-	
289+37	E. CEDAR ST (EAST)	32	3	42	-	-	2	64	4	128	3	96	-	-	
293+46	KARZ DR.	32	10	140	-	-	2	64	4	128	3	96	-	-	
293+52	FIRST AVE.	32	-	-	-	-	2	64	4	128	3	96	-	-	
296+62	SIDEWALK LT	14	5	70	1	14	-	-	-	-	1	14	-	-	SIGN "SIDEWALK CLOSED"
297+16	E. CEDAR ST (WEST)	32	3	42	-	-	2	64	4	128	3	96	-	-	
300+43	STH 32	32	-	-	-	-	4	128	8	256	7	224	1	7	
	UNDISTRIBUTED		-	106	-	-	-	-	-	-	-	-		-	
	TOTAL 0010		1,170		14		1,184		2,368		1,390		14		

CONSTRUCTION STAKING ITEMS

STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 9190-20-71) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
254+92	-	300+43	PROJECT	-	-	-	-	-	4,551	-	1	-
257+03	-	261+25	LT & RT	-	-	-	-	-	-	-	-	422
261+25	-	266+62	LT & RT	-	537	537	-	-	-	-	-	537
266+62	-	268+21	LT & RT	-	159	159	220	1	-	-	-	159
268+21	-	274+87	LT & RT	-	666	666	-	-	-	-	-	666
274+87	-	276+96	LT & RT	1	209	209	336	-	-	-	-	209
276+96	-	282+02	LT & RT	-	506	506	-	-	-	-	-	506
288+70	-	288+96	LT	2	-	-	-	-	-	-	-	-
288+83	-	289+08	RT	1	-	-	26	-	-	-	-	-
291+00	-		LT	1	-	-	-	-	-	-	-	-
293+12	-	293+21	LT	1	-	-	18	-	-	-	-	-
293+74	-	294+13	LT	-	-	-	44	-	-	1	-	-
296+70	-	296+95	LT & RT	1	-	-	33	-	-	-	-	-
			TOTAL 0010	7	2,077	2,077	677	1	4,551	1	1	2,499

TRAFFIC CONTROL DETOUR SIGN SUMMARY - ALTERNATE ROUTE

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 32 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 32, AT CTH B, PLACE AT EXIT TO S. LEG OF CTH B RAB INTERSECTION	R 11-2	48"X30"	1	32	32	32	64			
2	STH 32, AT CTH B, PLACE AT EXIT TO N. LEG OF CTH B RAB INTERSECTION	R 11-2	48"X30"	1	32	32	32	64			
3	CTH B, E. OF CTH C, PLACE 1500' E. OF CTH C INTERSECTION	M 1-6	24"X24"	1	32	32					32
	"	G 20-53	144"X36"	1	32	32					
4	CTH B, E. OF CTH C, PLACE 750' E. OF CTH C INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
	"	MO 5-1R	21"X21"	1	32	32					
5	CTH B, E. OF CTH C, PLACE RIGHT OF EXISTING J13-2 E. OF CTH C INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
	"	MO 6-1	21"X21"	1	32	32					RIGHT
6	CTH B, AT CTH C, PLACE ON RIGHT SHOULDER JUST W. OF CTH C INTERSECTION	M 1-6	24"X12"	1	32	32	32	64			32
	"	R 11-3	24"X12"	1	32	32					4 1/2 MILES AHEAD
7	CTH C, AT CTH B, PLACE RIGHT OF EXISTING J13-2 SIGN AT CTH B INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 6-1	21"X21"	1	32	32					LEFT
8	CTH C, N. OF CTH B, PLACE 150' N. OF CTH B INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
9	CTH C, N. OF CTH B, PLACE 750' N. OF CTH B INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-3	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 5-1L	21"X21"	1	32	32					
10	CTH C, S. OF BROWN RD, PLACE 150' S. OF BROWN RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
11	CTH C, S. OF BROWN RD, PLACE 250' S. OF BROWN RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
	"	MO 6-1	21"X21"	1	32	32					AHEAD
12	CTH C, N. OF BROWN RD, PLACE 150' N. OF BROWN RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
13	CTH C, S. OF S CHASE RD, PLACE 150' S. OF S CHASE RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
14	CTH C, N. OF S CHASE RD, PLACE 150' N. OF S CHASE RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
15	CTH C, S. OF CTH S, PLACE 750' S. OF CTH S INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
	"	MO 5-1L	21"X21"	1	32	32					
16	CTH C, S. OF CTH S, PLACE 150' S. OF CTH S INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	PAGE SUBTOTALS			48		1,536	96	192		0	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY - ALTERNATE ROUTE

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 32 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
17	CTH C, AT S CHASE RD, PLACE RIGHT OF EXISTING R1-1 AT S CHASE RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
	"	MO 6-1	21"X21"	1	32	32					LEFT
18	CTH S, W. OF CTH C, PLACE RIGHT OF EXISTING J13-2 AT S CHASE RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 6-1	21"X21"	1	32	32					RIGHT
19	CTH S, W. OF CTH C, PLACE 150' W. OF CTH C INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
20	CTH S, W. OF CTH C, PLACE 750' W. OF CTH C INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 5-1R	21"X21"	1	32	32					
21	CTH S, E. OF SCHWARTZ RD, PLACE 150' E. OF SCHWARTZ RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
22	CTH S, W. OF SCHWARTZ RD, PLACE 150' W. OF SCHWARTZ RD INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-1	24"X12"	1	32	32					
	"	M 1-6	24"X24"	1	32	32					32
23	CTH S, W. OF STH 32, PLACE 150' W. OF STH 32 INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
24	CTH S, AT STH 32, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	32	32					RIGHT
25	STH 32, AT CTH S, PLACE ON RIGHT SHOULDER IN SW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	32	32	32	64			3 3/4 MILES AHEAD
26	STH 32, AT CTH S, PLACE RIGHT OF EXISTING J13-1 SIGN	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 6-1	21"X21"	1	32	32					LEFT
27	STH 32, N. OF CTH S, PLACE 750' N. OF CTH S INTERSECTION	M 4-1	24"X12"	1	32	32					
	"	M 3-2	24"X12"	1	32	32					
	"	M 1-5A	24"X24"	1	32	32					B
	"	MO 5-1L	21"X21"	1	32	32					
28	CTH S, AT STH 32, MODIFY EXISTING J13-1 SIGN AS SHOWN	M 1-5A	24"X24"	1	32	32					B
		G 20-52	138"X36"	1	32	32					FOLLOW HWY S EAST
29	STH 32, S. OF CTH S, COVER EXISTING J4-1 SIGN AS SHOWN	R 11-3	60"X30"	1	32	32			1	1	1 1/2 MILES AHEAD
	PAGE SUBTOTALS			37		1,184	32	64		1	
	ALTERNATE ROUTE TOTALS			**85**		**2,720**	**128**	**256**		**1**	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

SAWING ITEMS

STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
261+25	-	281+00	RT	1,975	-
261+25	-	282+02	LT	2,077	-
288+83	-	289+08	LT & RT	123	38
293+12	-	293+22	LT	42	4
293+74	-	294+10	LT	50	4
296+71	-	296+95	LT & RT	144	37
			TOTAL 0010	4,411	83

SPV 0075.01 STREET SWEEPING

LOCATION	SPV.0075.01 SPECIAL (01. STREET SWEEPING) HRS
PROJECT	5
TOTAL 0010	5

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
9190-20-21		
FEDERAL PROJECT NUMBER	4.01	5

PLAT OF RIGHT OF WAY REQUIRED FOR
VILLAGE OF PULASKI
CTH B - EAST GREEN BAY ST.
STH 32 BROWN COUNTY

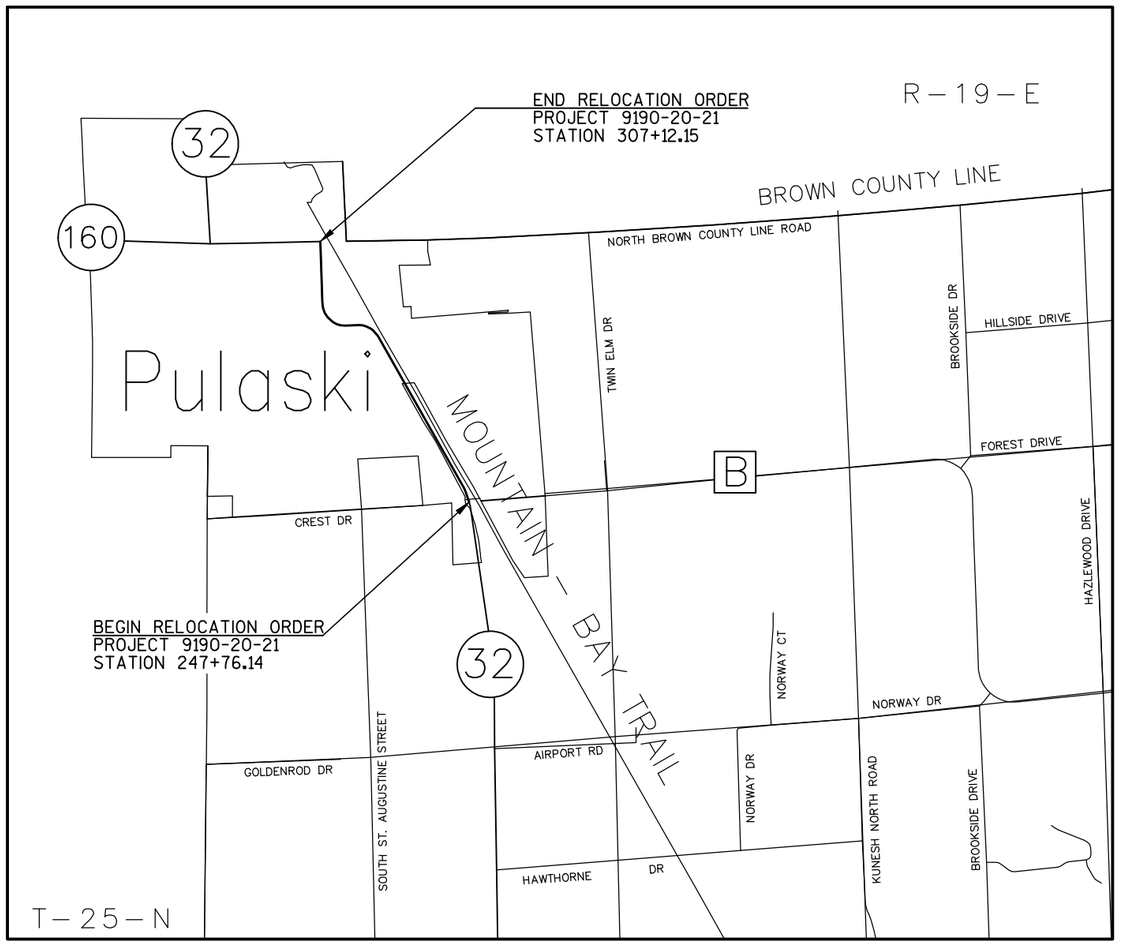
4

CONVENTIONAL ABBREVIATIONS AND SYMBOLS

ACCESS POINT	AP	SECTION CORNER (MATERIAL AS NOTED)	
ACCESS RIGHTS	AR	SET R/W MONUMENT W/CAP (1-¼" OUTSIDE DIA.x18" IRON PIPE 1.13 LBS/FT)	
ACRES	AC		
CHORD BEARING	CH BRG		
CHORD DISTANCE	CH DIS	FOUND TYPE 2 MON.	
DEED	(D)	FOUND 3/4" REBAR	
DOCUMENT	DOC	SET P.K. NAIL	
EAST BOUND	EB		
GAS VALVE	GV	PROPOSED R/W	
INLET	▭ IL	BOUNDARY POINT	PR#000
LENGTH OF CURVE	L		
MANHOLE	⊕ MH	CORPORATE LIMITS	
MONUMENT	MON	EXISTING R/W	
NORTH BOUND	NB	SECTION LINE	
PAGE	PG	QUARTER LINE	
PERMANENT	PERM	SIXTEENTH LINE	
PERMANENT LIMITED EASEMENT	PLE	PROPOSED OR NEW R/W LINE	
PRIVATE DRIVEWAY	PD	PROPOSED EASEMENT LINE	
PROPERTY LINE	PL	CSM, SUBDIVISION, OR PLAT OF SURVEY LINE	
RADIUS	RAD	PARCEL NUMBER	(00)
REFERENCE LINE	℄		
REMAINING	REM	UTILITY NUMBER	(000)
RIGHT OF WAY	R/W		
SECTION	SEC	SIGN NUMBER	◇0-0◇
SECTION LINE	S		
FOUND IRON PIPE	IP ●	PROPERTY LINE	PL
STATION	STA	LOT, TIE AND OTHER MINOR DASHED LINES	
TEMPORARY LIMITED EASEMENT	TLE	ACCESS RESTRICTED (By Previous Project, Control)	
TIE POINT	DBI	ACCESS RESTRICTED (By Acquisition)	
VOLUME	VOL	NO ACCESS (By Statutory Authority)	
ADJOINING LANDS WITH SAME OWNER		LIMITED EASEMENT (Temporary)	
PARALLEL TO LINE	00°	LIMITED EASEMENT (Permanent)	
BUILDING TO BE RAZED			
FEE ACQUISITION	VARIOUS HATCHING		
BEGIN POINT	BP		
END POINT	EP		

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES ELECTRIC	—OH—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON-COMPENSABLE	COMPENSABLE
POWER POLE	○	●
TELEPHONE POLE	Ø	■
TELEPHONE PEDESTAL	⋈	✖
ELECTRIC TOWER	⊠	



LAYOUT
0 1.0 MI.
SCALE

TOTAL NET LENGTH OF CENTERLINE = 1.00 MI.

NOTES:

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPE) AND WILL BE PLACED PRIOR TO COMPLETION OF PROJECT.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BROWN COUNTY, NAD 83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT OF WAY WAS ACQUIRED FROM PROJECT(S): T-0261 (4), CSMs AND PLAT OF SURVEYS

EXISTING ACCESS CONTROL WAS ACQUIRED UNDER PROJECT(S)/DOC.#:)

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

FEE SIMPLE TO ALL THOSE EXISTING LANDS OF THE GRANTOR CURRENTLY USED FOR HIGHWAY PURPOSES, DESIGNATED AS EXISTING RIGHT OF WAY, WHETHER ACQUIRED BY SEPARATE CONVEYANCE OR OTHERWISE, BOUND BY THE TRAVERSE OF THE COURSE TABLE OF NEW RIGHT OF WAY AS SHOWN ON THE SAID TRANSPORTATION PROJECT PLAT.

WISCONSIN
GREGORY T. BELANGER
S-3055
GREEN BAY
WI
LAND SURVEYOR

Gregory T. Belanger

GN

REVISION DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED:
DATE: 9-27-2018 Curt Van
CURT VAN 46

WISDOT/CADDS SHEET 100

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
100	VILLAGE OF PULASKI-DPW	RELEASE OF RIGHTS
101	WE ENERGIES-GAS	RELEASE OF RIGHTS

NE 1/4 - SW 1/4

VILLAGE

SE 1/4 - SW 1/4

OF

PULASKI

59C-7
MAG NAIL
W/WASHER
Y=621857.76
X=46098.83

T 25 N
R 19 E
5

59E-7
MAG NAIL
W/WASHER
Y=619260.23
X=46280.00

T 25 N
R 19 E
5
8

S/L
2603.84'
N03° 59' 23"W
1307.16'

S87° 26' 43"W 903.51'
785.41'
PL
NE-SW
SE-SW

STH 32

262+00
261+00
260+00
259+00
258+00

R/W REFERENCE LINE
COURSE TABLE FOR SHEETS 4.02-4.05

	STATION	NORTHING	EASTING	DIRECTION	DISTANCE
TANGENT DATA					
BP =	247+76.14	619326.767	45976.564		
				N22° 51' 02"W	198.56'
CURVE POINT DATA					
PC =	249+74.70	619509.747	45899.457		
RP =		619140.835	45024.011		
PI =	250+28.26	619559.098	45878.660		
TAN = 53.55'					
LCHORD BEARING/DISTANCE =				N26° 04' 37" W	106.94'
EXTERNAL DISTANCE = 1.508'					
MIDDLE ORDINATE = 1.506'					
RADIUS = 950.000'					
DEG = 06° 01' 52"					
DELTA = 06° 27' 11"					
LENGTH = 1264.655'					
PT =	250+81.70	619605.799	45852.449		
TANGENT DATA					
	250+81.70	619605.799	45852.449		
				N29° 18' 13"W	429.58'
	255+11.28	619980.412	45642.196		
				N28° 07' 26"W	3182.44'
CURVE POINT DATA					
PC =	286+93.72	622787.104	44142.065		
RP =		622561.625	43720.203		
PI =	289+93.38	623051.381	44000.813		
TAN = 299.66'					
LCHORD BEARING/DISTANCE =				N60° 11' 21"W	507.89'
EXTERNAL DISTANCE = 86.110'					
MIDDLE ORDINATE = 72.974'					
RADIUS = 478.339'					
DEG = 11° 58' 41"					
DELTA = 64° 07' 50"					
LENGTH = 535.400'					
PT =	292+29.12	623039.594	43701.387		
TANGENT DATA					
	292+29.12	623039.594	43701.387		
				S87° 44' 44" W	207.42'
	294+36.54	623031.435	43494.129		

POINT	STATION	OFFSET	COORDINATES
TLE "A"			
72	257+64.49	-59.68'	Y=620175.596 X=45470.201
73	257+64.49	-75.17'	Y=620168.296 X=45456.542
75	258+67.25	-59.68'	Y=620266.222 X=45421.762
74	258+67.25	-75.17'	Y=620258.924 X=45408.108
TLE "B"			
71	257+03.34	46.83'	Y=620171.866 X=45592.963
70	257+03.34	37.39'	Y=620167.419 X=45584.642
77	262+05.66	46.85'	Y=620614.889 X=45356.202
76	262+05.66	37.31'	Y=620610.393 X=45347.790

EASEMENT TELECOMMUNICATIONS
MRC TELECOMMUNICATIONS
J.26333 I.13
DOC.#1486873

EASEMENT NONEXCLUSIVE
BROWN COUNTY
DOC.#1943638

TAX ID#VP-P186-1-1

TAX ID#VP-43

TLE "A" FOR DRIVEWAY

TLE "B" FOR SLOPING

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRE(S) OR (S.F.) REQUIRED NEW	EXISTING	TOTAL	T.L.E. AREA
1	E 4 ENTERPRISES, LLC.	TLE	-	-	-	0.036
2	WISCONSIN DEPARTMENT OF NATURAL RESOURCES	TLE	-	-	-	0.109
			-	-	-	-

GN

0 25 50
GRAPHIC SCALE, FEET

REVISION DATE

DATE 9-27-2018

HWY: STH 32

COUNTY: BROWN

STATE R/W PROJECT NUMBER 9190-20-21

CONSTRUCTION PROJECT NUMBER _____

PLAT SHEET NO: 4.02

PS&E SHEET NO: 47

E

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
102	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS

NE 1/4 - SW 1/4

59C-7
MAG NAIL
W/WASHER
Y=621857.76
X=46098.83

T 25 N
5
R 19 E

GN

VILLAGE

OF

PULASKI

TAX ID#VP-1685-1

LOT 2
CSM#6157
VOL.40 PGS. 361-363
DOC.#1755792

102
79
3
78

TLE "C" FOR SLOPING

ACCESS COVENANT
J.21998 I.30
DOC.#1373636

S86° 00' 37"W
1150.51'
34.44'

727.60'
2603.84' S/L
N03° 59' 23"W
1876.24'

268+00
261+00

STH 32

BLUE HERON DRIVE

MH
WV
WV

POINT	STATION	OFFSET	COORDINATES
TLE "C"			
78	267+72.22	-91.21'	Y=621049.475 X=44967.376
79	267+83.92	-59.78'	Y=621074.612 X=44989.577

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRE(S) OR (S.F.) REQUIRED			T.L.E. AREA
			NEW	EXISTING	TOTAL	
3	ANDREW ZENISEK	TLE	-	-	-	0.005
			-	-	-	-

RIGHT-OF-WAY ℄

59E-7
MAG NAIL
W/WASHER
Y=619260.23
X=46280.00

T 2.5 N
5
8
R 1.9 E

REVISION DATE	DATE 9-27-2018	0 10 20 GRAPHIC SCALE, FEET	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-20-21	PLAT SHEET NO: 4.03	
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER _____	PS&E SHEET NO: 48	E

59A-5
MAG NAIL
W/WASHER
Y=624812.787
X=43217.729

T 25 N | 6 | 5 | R 19 E

VILLAGE

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
102	*WE ENERGIES - ELECTRIC*	*RELEASE OF RIGHTS*
103	*NORTHEAST TELEPHONE COMPANY, LLC.*	*RELEASE OF RIGHTS*

POINT	STATION	OFFSET	COORDINATES
TLE "D"			
80	276+96.70	-71.04'	Y=621874.314 X=44549.390
81	277+34.89	-59.68'	Y=621913.351 X=44541.399
TLE "E"			
83	276+50.83	41.92'	Y=621887.109 X=44670.634
82	276+53.14	37.08'	Y=621886.865 X=44665.274
84	277+04.61	41.93'	Y=621934.539 X=44645.287
85	277+04.61	37.07'	Y=621932.251 X=44641.006

ACCESS COVENANT
J.12508 I.31
DOC.#1136408

LOT 1
CSM#4915
VOL.31 PGS. 347-349
DOC. #1443477

TAX ID#VP-41

RIGHT-OF-WAY EASEMENT
NORTHEAST TELEPHONE COMPANY, INC.
J.12700 I.26
DOC.#1141249

SW 1/4 - NW 1/4

OF

TAX ID#VP-43

EASEMENT TELECOMMUNICATIONS
MRC TELECOMMUNICATIONS
J.26333 I.13
DOC.#1486873

EASEMENT NONEXCLUSIVE
BROWN COUNTY
DOC.#1943638

EASEMENT SANITARY SEWER
J.20800 I.56
DOC.#1345934

TLE "D" FOR SLOPING

TLE "E" FOR SLOPING

EAST GLENBROOK DRIVE

PULASKI

RIGHT-OF-WAY ℄

STH 32

S04° 27' 08"E 3084.32'

N11° 34" W 87.92'

217+00

216+00

N28° 07' 59"W 104.37'

SW-NW 1111.02' N87° 23' 58"E 1258.61' NW-SW

59C5
MAG NAIL
W/WASHER
Y=621737.772
X=43457.135

T 25 N | 6 | 5 | R 19 E

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRE(S) OR (S.F.) REQUIRED NEW	EXISTING	TOTAL	T.L.E. AREA
2	*WISCONSIN DEPARTMENT OF NATURAL RESOURCES*	*TLE*	-	-	-	*0.006*
4	*SM, LLC.*	*TLE*	-	-	-	*0.004*

REVISION DATE	DATE 9-27-2018	0 10 20 GRAPHIC SCALE, FEET	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-20-21	PLAT SHEET NO: 4.04
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO: 49 E

SCHEDULE OF LANDS & INTERESTS REQUIRED						
PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRE(S) OR (S.F.) REQUIRED			T.L.E. AREA
			NEW	EXISTING	TOTAL	
5	PULASKI ASSOCIATES, LLC	TLE	-	-	-	0.040
			-	-	-	-

59A-5
MAG NAIL
W/WASHER
Y=624812.787
X=43217.729

T 25 N R 19 E — 6 5

SW 1/4 - NW 1/4

VILLAGE

OF

PULASKI

STH 32

RIGHT-OF-WAY ℄

288+00

3084.32'

1932.81'

N85° 32' 52"E

535.72'

N04° 27' 06"W

1151.51'

LOT 1
CSM#6408
VOL.42 PGS. 311-313
DOC.#1827440
SURV. AFFID.
DOC.#1835148

TAX ID#VP-41-6-2

ACCESS COVENANT
J.12508 I.31
DOC.#1136408

TLE "F" FOR
SLOPING / DRAINAGE

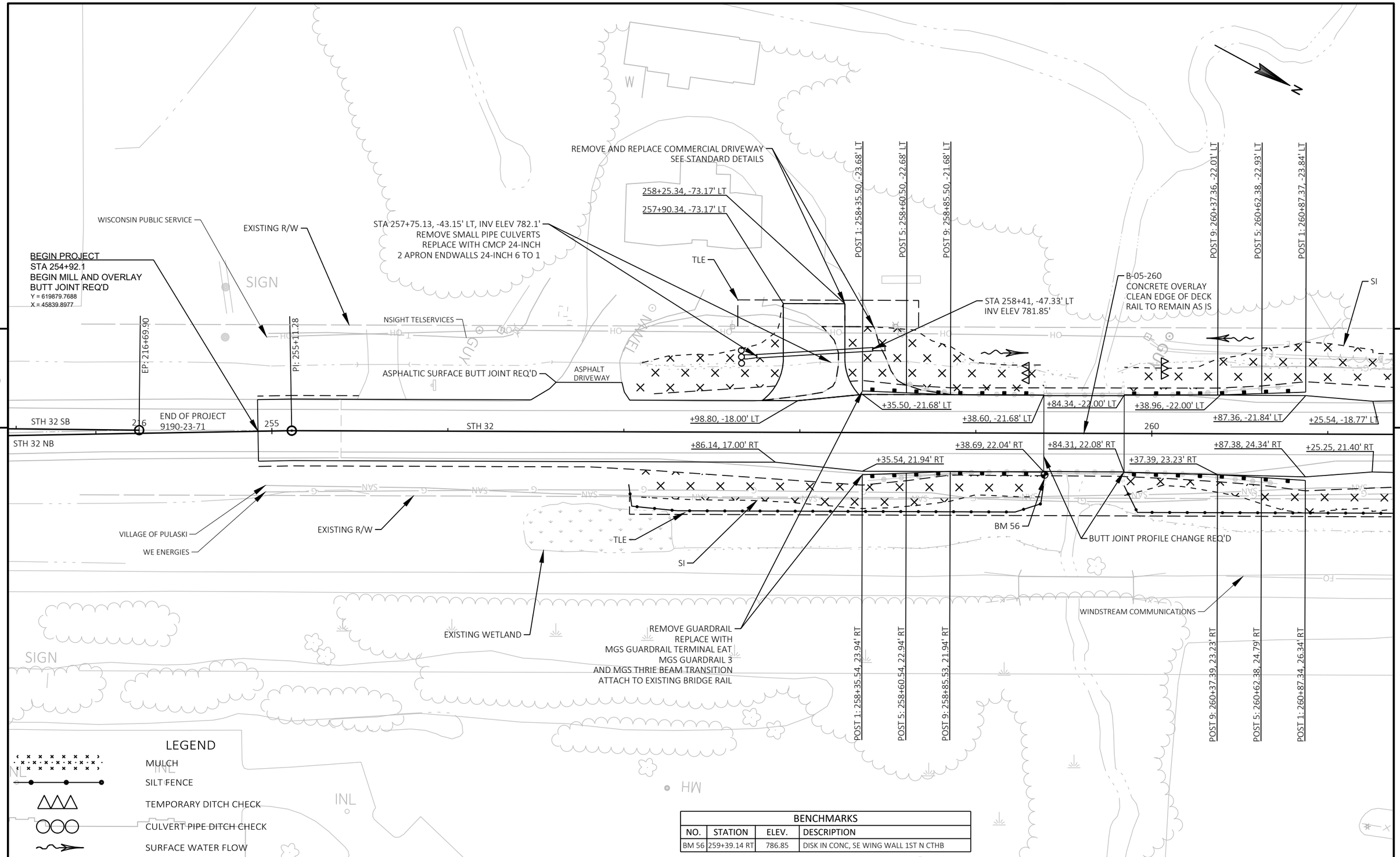
POINT	STATION	OFFSET	COORDINATES
TLE "F"			
87	288+13.51	-69.99'	Y=622837.359 X=44021.400
86	288+13.77	-59.59'	Y=622844.552 X=44028.921
88	289+04.56	-69.97'	Y=622889.377 X=43963.808
90	289+89.71	-59.58'	Y=622936.642 X=43906.548
89	289+89.81	-69.95'	Y=622927.393 X=43901.856

LOT 2
CSM#6408
VOL.42 PGS. 311-313
DOC.#1827440
SURV. AFFID.
DOC.#1835148

59C5
MAG NAIL
W/WASHER
Y=621737.772
X=43457.135

T 25 N R 19 E — 6 5

REVISION DATE	DATE 9-27-2018	0 10 20 GRAPHIC SCALE, FEET	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-20-21	PLAT SHEET NO: 4.05	
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO: 50	E



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM 56	259+39.14 RT	786.85	DISK IN CONC, SE WING WALL 1ST N CTHB

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 51	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050201

PLOT DATE : 11/1/2019 8:48 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

POST 5: 260+62.38, -22.93' LT

POST 1: 260+87.37, -23.84' LT

WISCONSIN PUBLIC SERVICES

EXISTING R/W

STA 263+62.37
BEGIN FULL LEFT TURN LANE
SEE INTERSECTION DETAILS

SI

REMOVE AND REPLACE CURB AND GUTTER
SEE INTERSECTION & CONSTRUCTION DETAILS

STA 9+70.94, 48.99' RT BLUE HERON
INV ELEV 783.590'
REMOVE SMALL PIPE CULVERT
REPLACE WITH CLASS IV 18-INCH RCCP
2 APRON ENDWALLS FOR CULVERT PIPE 18-INCH
2 MARKERS FOR CULVERT END REQ'D

CAUTION

END CONSTRUCTION
STA 8+68.48
MATCH EXISTING
BUTT JOINT REQ'D

BP: 7+97.94

BLUE HERON DR

STA 9+41.15
-83.71' LT
INV ELEV 783.863'

TLE

CAUTION

5

5

87.36, -21.84' LT

+25.54, -18.77' LT

265

87.38, 24.34' RT

+25.25, 21.40' RT

STH 32

EP: 10+00.00

SI

EXISTING R/W

TLE

EXISTING WETLAND

STA 265+00 FRENCH DRAIN
SEE CONSTRUCTION DETAILS

PIPE UNDERDRAIN WRAPPED 6-INCH
SEE CONSTRUCTION DETAILS

VILLAGE OF PULASKI

WE ENERGIES

WINDSTREAM COMMUNICATIONS

POST 5: 260+62.38, 24.79' RT

POST 1: 260+87.34, 26.34' RT

STA 261+25.25
BEGIN ROADWAY WIDENING

LEGEND

MULCH

SILT FENCE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 52	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050202

PLOT DATE : 11/1/2019 8:48 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

BP: 7+97.94

BLUE HERON DR

TLE

CAUTION

EXISTING R/W

SI

NSIGHT TELSERVICES

WE ENERGIES

WISCONSIN PUBLIC SERVICE

INL

SIGN

W

5

270

STH 32

275

EP: 10+00.00

SI

EXISTING R/W

VILLAGE OF PULASKI

PIPE UNDERDRAIN WRAPPED 6-INCH
SEE CONSTRUCTION DETAILS

EXISTING WETLAND

MOUNTAIN-BAY STATE TRAIL

WINDSTREAM COMMUNICATIONS

SIGN

LEGEND

MULCH

SILT FENCE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 53	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050203

PLOT DATE : 11/1/2019 8:48 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

END CONSTRUCTION
STA 8+79.16
MATCH EXISTING
BUTT JOINT REQ'D

BP: 7+79.54

GLENBROOK DR

BM 57

REMOVE AND REPLACE CONCRETE CURB & GUTTER
SEE CONSTRUCTION & INTERSECTION DETAILS

PC: 8+55.06

STA 276+96.12, -47.48' LT
RELAY PIPE AND SALVAGE APRON ENDWALL
1 MARKER CULVERT END
SEE STORM SEWER DETAILS

WISCONSIN PUBLIC SERVICE

SI

TLE

NSIGHT TELSERVICES

SI

WE ENERGIES

EXISTING R/W

5

5

275

BP: 10+00.00

EP: 10+00.00

280

STH 32

PC: 10+32.88

EXIST R/W

2 MARKER CULVERT END

VILLAGE OF PULASKI

MEDIUM RIPRAP

TLE

SI

EXISTING WETLAND

STA 280+68.85 RT
END ROADWAY WIDENING
SEE INTERSECTION DETAILS

END CONSTRUCTION
STA 10+77.34
MATCH EXISTING
BUTT JOINT REQ'D

1 MARKER CULVERT END

WINDSTREAM COMMUNICATIONS

GLENBROOK DR

REMOVE AND REPLACE
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
ASPHALTIC FLUME
SEE CONSTRUCTION &INTERSECTION DETAILS

PT: 12+01.14

MN 38

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM 57	276+56.90 LT	793.42	BTB @ HYD SW32@GLENBROOK
MN 38	275+65.77 RT	790.51	FENO MON SET E/S32 @N/S GLENBROOK

LEGEND

MULCH

SILT FENCE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 54	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050204

PLOT DATE : 11/1/2019 8:49 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

STA 282+02.43 LT
END ROADWAY WIDENING
SEE INTERSECTION DETAILS

EXISTING R/W

ASPHALT DRIVEWAY

ASPHALTIC SURFACE BUTT JOINT REQ'D

ASPHALT DRIVEWAY

NSIGHT TELSERVICES

WE ENERGIES

TLE

PC: 286+93.72

STH 32

285

288+81.82, 75.56' RT

EXISTING R/W

VILLAGE OF PULASKI

EXISTING WETLAND

WINDSTREAM COMMUNICATIONS

W SIGN

SCALE

W W

TANKS

CANOPY

INL

INL

LEGEND

- MULCH
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 55	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050205

PLOT DATE : 11/1/2019 8:49 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WE ENERGIES

EXISTING WETLAND

SI

RE-GRADING OF DITCH LINE REQ'D
1 MARKER CULVERT END

NSIGHT TELSERVICES

TLE

STORM SEWER
REMOVE AND REPLACE
SEE STORM SEWER PLANS SHEETS

EXISTING R/W

STORM SEWER MANHOLE
REMOVE AND REPLACE
2 CONCRETE COLLARS FOR PIPE

REMOVE AND REPLACE
CONCRETE CURB AND GUTTER 24-INCH TYPE D
DRILLED TIE BARS REQ'D

292+67.02, -82.06' LT

R58'

PC: 9+48.60

PC: 8+20.21

KARCZ DR

END CONSTRUCTION
STA 9+15.82
MATCH EXISTING
BUTT JOINT REQ'D

294+24.93, -84.10' LT

R59'

PEDESTRIAN CURB RAMP
REMOVE AND REPLACE
SEE CONSTRUCTION DETAILS

295

BP: 10+00.00

EP: 10+00.00

PC: 294+36.50

R52'

288+81.82, 75.56' RT

290

BP: 10+00.00

STH 32

ASPHALTIC SURFACE BUTT JOINT REQ'D

ASPHALT
DRIVEWAY

PT: 11+47.76

REMOVE AND REPLACE
CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
DRILLED TIE BARS REQ'D

PC: 10+63.20

PT: 292+29.12

VILLAGE OF PULASKI

EXISTING R/W

FIRST AVE.

END CONSTRUCTION
STA 10+34.19
MATCH EXISTING
BUTT JOINT REQ'D

E CEDAR ST

END CONSTRUCTION
STA 10+51.48
MATCH EXISTING
BUTT JOINT REQ'D

EP: 11+94.56

RE-GRADE AROUND OUTLET WALL
RIPRAP
1 MARKER CULVERT END

EXISTING CURVE NOTES:
PI STA = 289+93.38
DELTA = 64°07'50"
D = 11°58'41"
T = 299.66'
L = 535.40'
R = 478.34'
S.E. = 0.06'
MATCH EXISTING

LEGEND

MULCH

SILT FENCE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

REMOVE AND REPLACE
ASPHALTIC SURFACE

N

5

5

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 56	E

5

5

END CONSTRUCTION
STA 8+91.04
MATCH EXISTING
BUTT JOINT REQ'D

VILLAGE OF PULASKI

BP: 7+69.54

E CEDAR ST

PC: 8+59.00

296+50.75, -82.37' LT

REMOVE AND REPLACE
CURB & GUTTER 24-INCH TYPE D
DRILLED TIE BARS REQ'D

R59'

WISDOT

EXIST R/W

1 MARKER CULVERT END

PT: 9+74.02

EP: 10+00.00

STH 32

300

END PROJECT
STA 300+42.7
END MILL AND OVERLAY
MATCH EXISTING
BUTT JOINT REQ'D

EXIST R/W

NSIGHT TELSERVICES

295

WE ENERGIES

STORM SEWER
REMOVE AND REPLACE
ADJUSTING EXISTING STORM SEWER LATERAL
1 MARKER CULVERT END
SEE STORM SEWER PLAN SHEETS

EXISTING CURE NOTES:
PI STA = 299+58.97
DELTA = 92°37'18"
D = 11°28'51"
T = 522.43'
L = 806.76'
R = 499.06'
S.E. = 0.06'
MATCH EXISTING

BM 59

PT: 302+43.30

PC: 294+36.54

LEGEND

MULCH

SILT FENCE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

REMOVE AND REPLACE
ASPHALTIC SURFACE

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM 59	301+26.46 RT	800.58	BTB @ HYD E/S 32 1ST S GREEN BAY ST

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PLAN SHEETS	SHEET 57	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050207

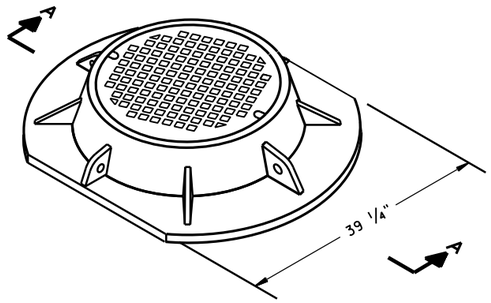
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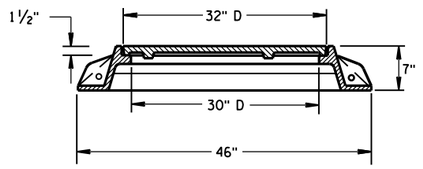
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

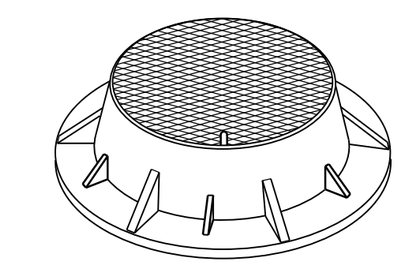
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13C19-02	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	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)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

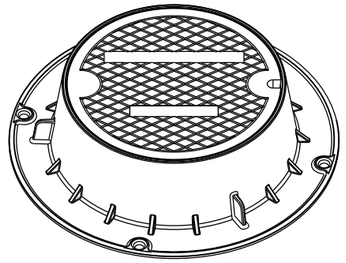
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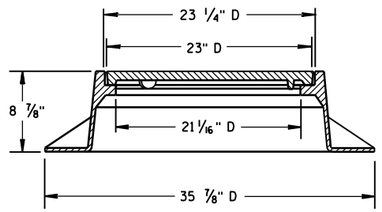


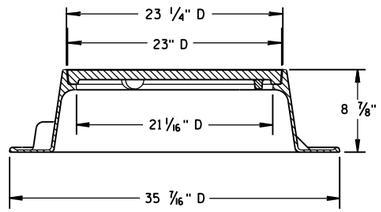


SECTION A-A
TYPE "K"









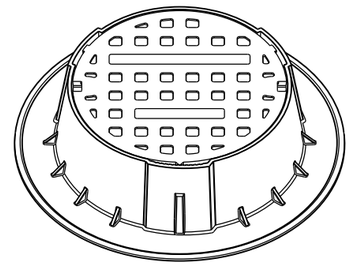
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

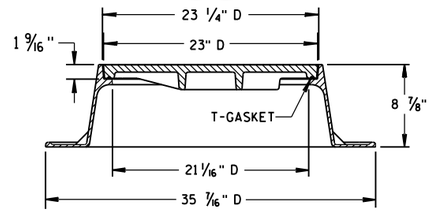
GENERAL NOTES

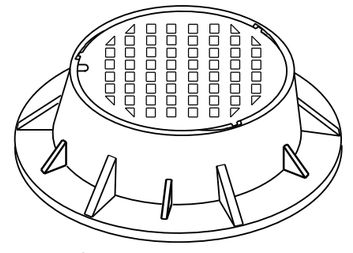
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

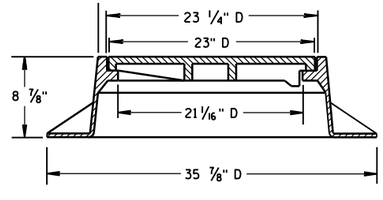
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

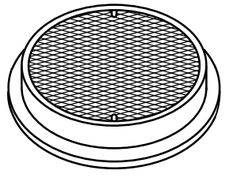


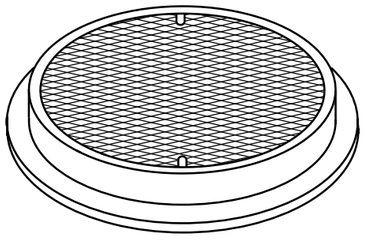


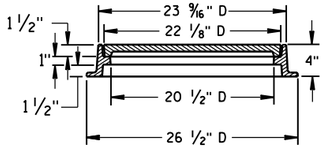




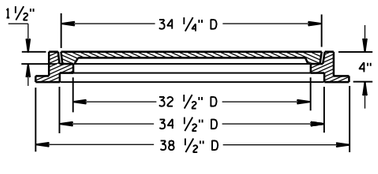
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



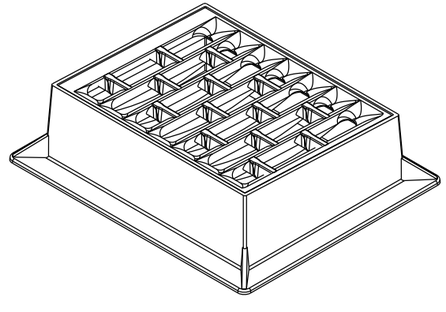


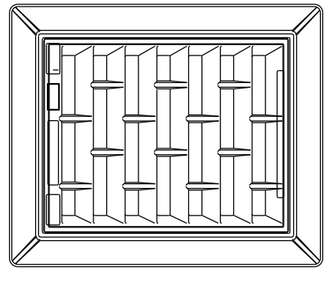


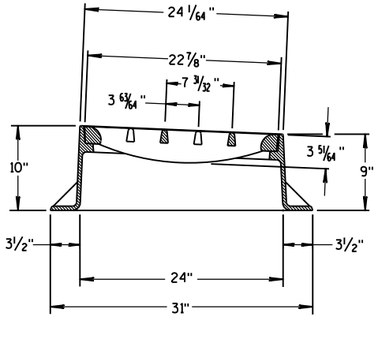
TYPE "L"

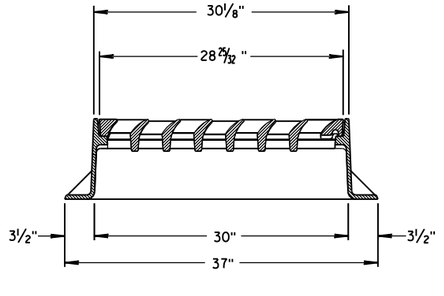


TYPE "M"









INLET COVER TYPE "BW"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

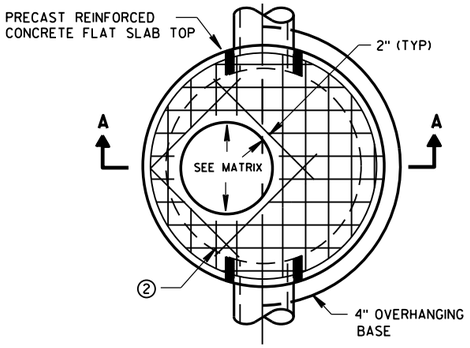
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

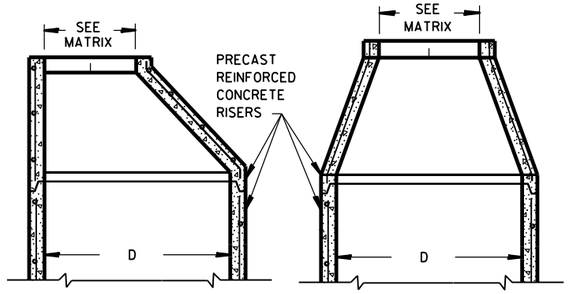
S.D.D. 8 A 5-19d

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

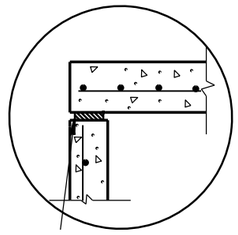


PLAN VIEW CIRCULAR OPENING

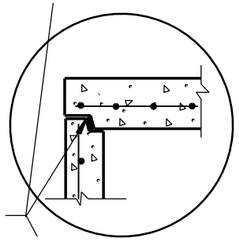


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

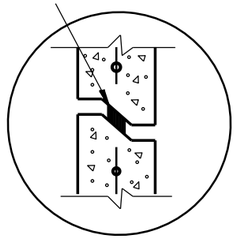


TOP WITH PLAIN END JOINT



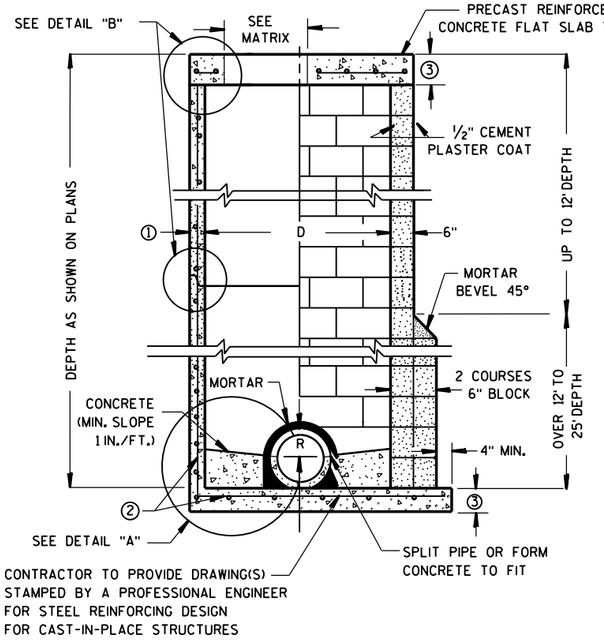
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



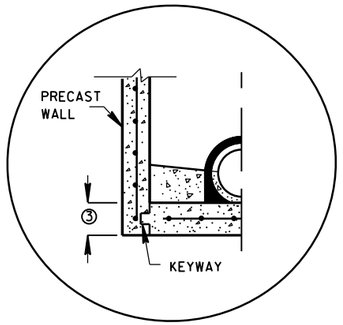
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

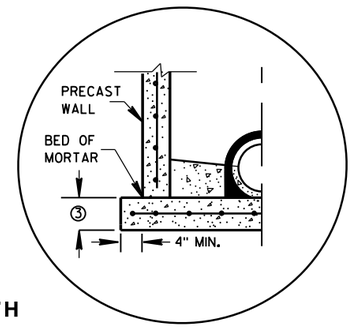


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

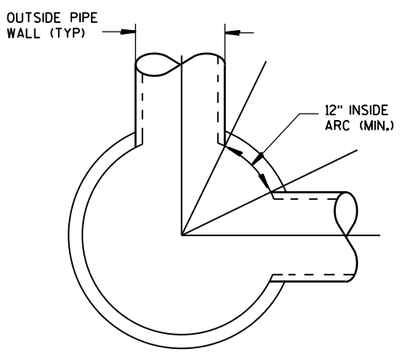


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

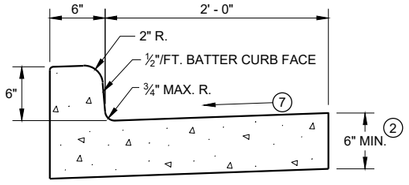
APPROVED

Sept., 2016
DATE

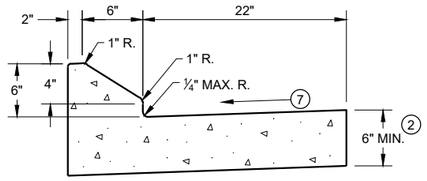
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

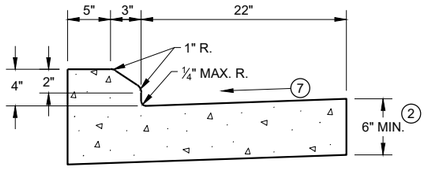
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S.D.D. 8 B 9-2



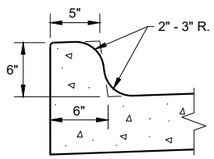
TYPES A[1] & D



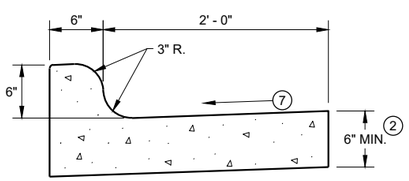
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

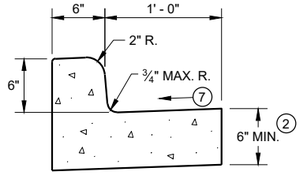


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



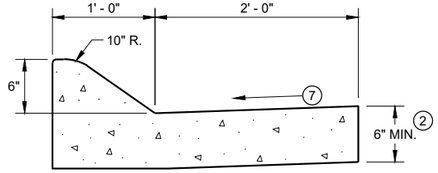
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

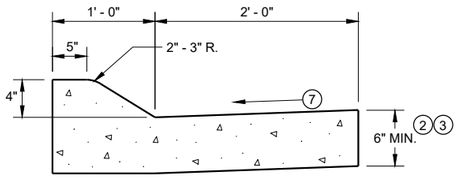


TYPES A[1] & D

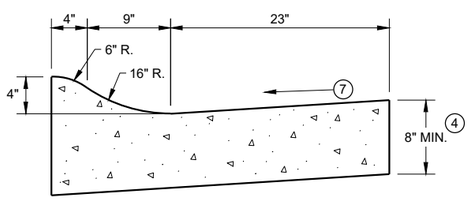
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



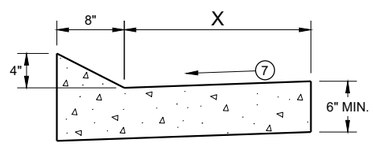
4" SLOPED CURB TYPES A[1] & D



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

CONCRETE CURB AND GUTTER 36"

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

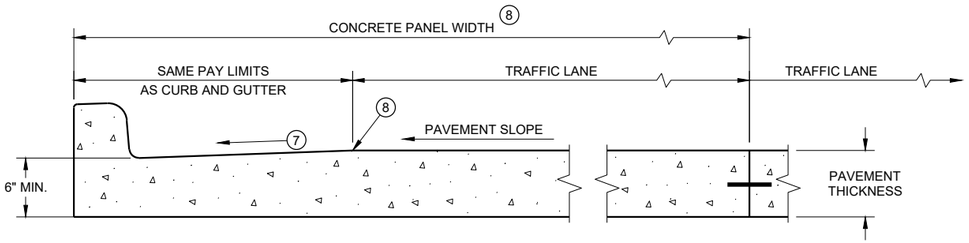


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

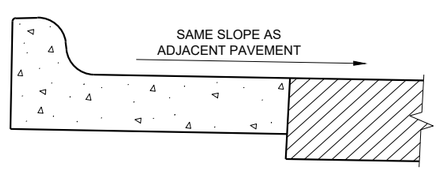
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

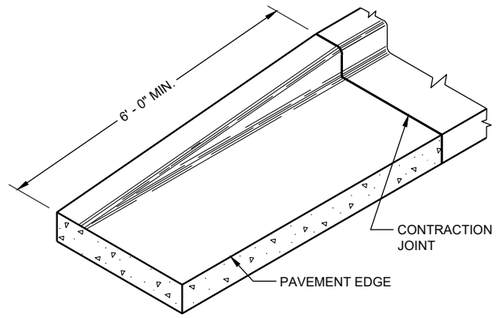
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

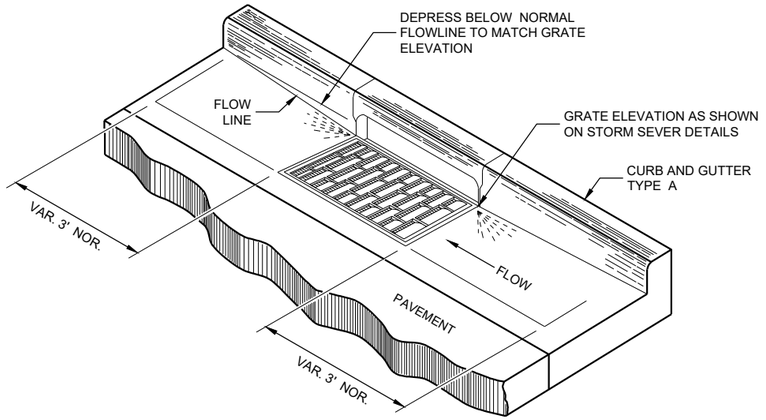
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 21a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

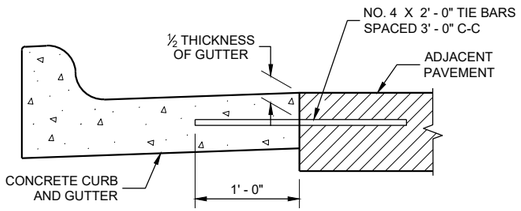
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

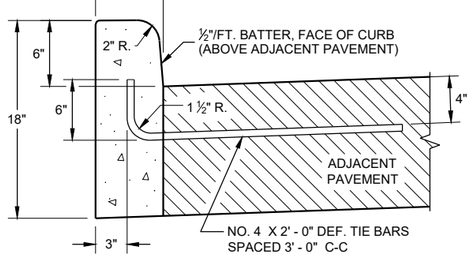
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

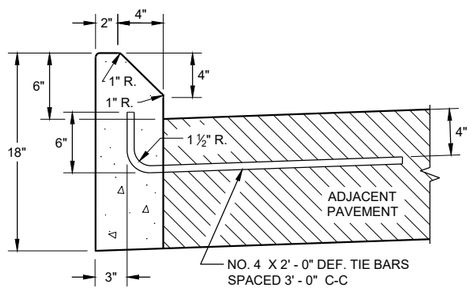
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

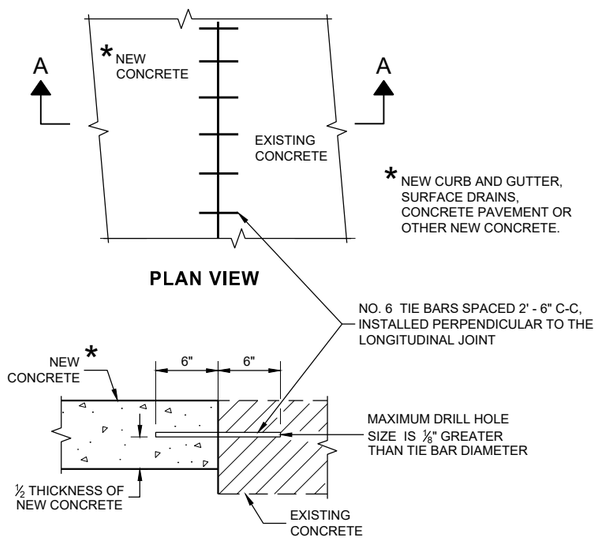


TYPES A (1) & D



TYPES G (1) & J

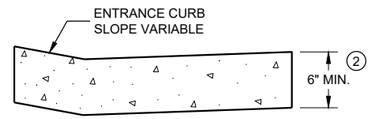
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

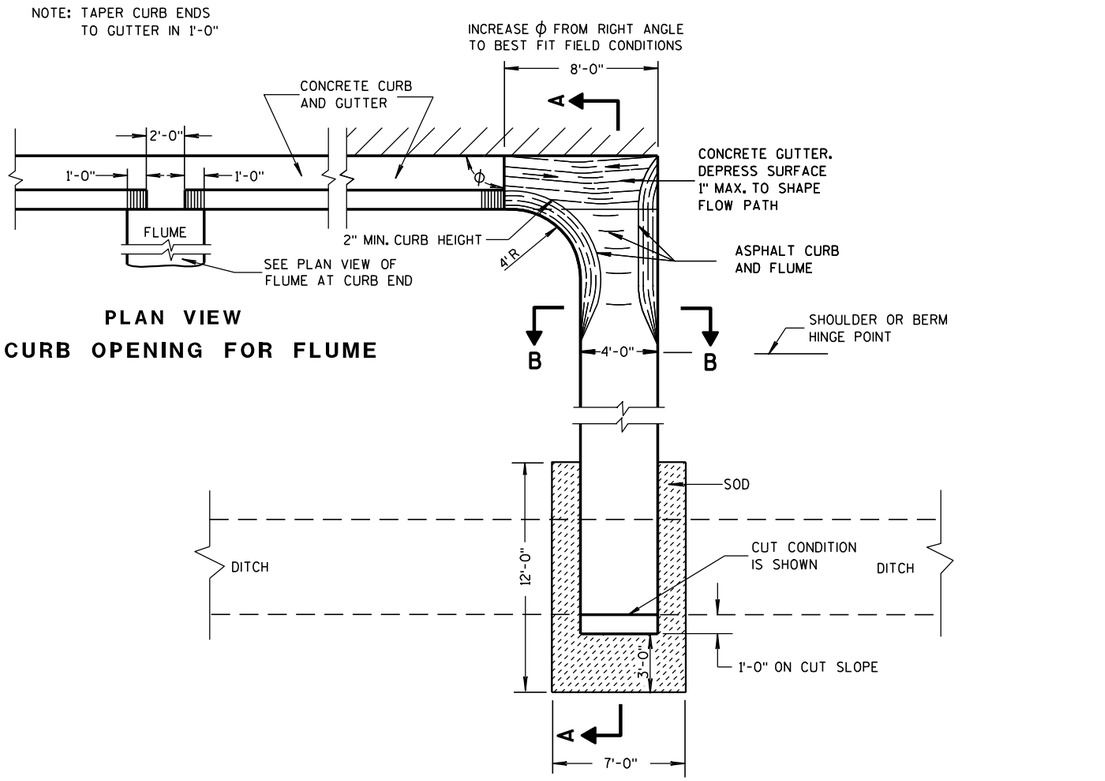
APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

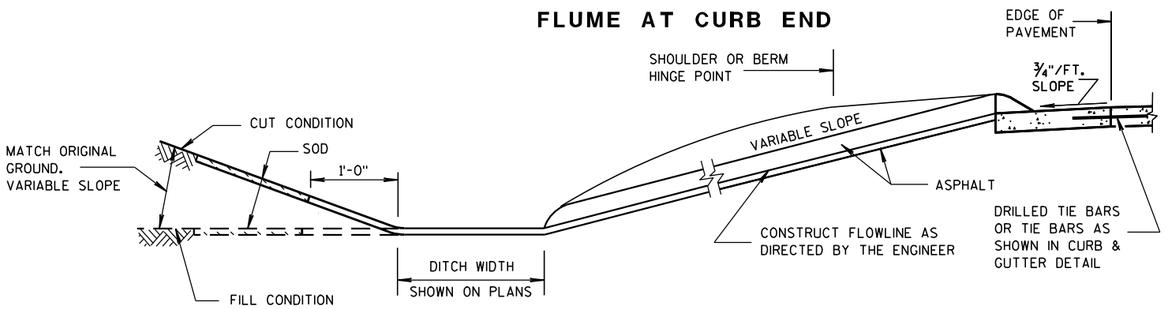
SDD08D01 - 21b
SDD08D01 - 21b

ASPHALTIC FLUME

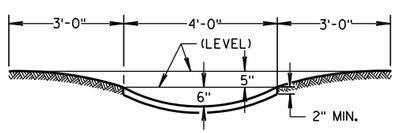


PLAN VIEW
CURB OPENING FOR FLUME

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.

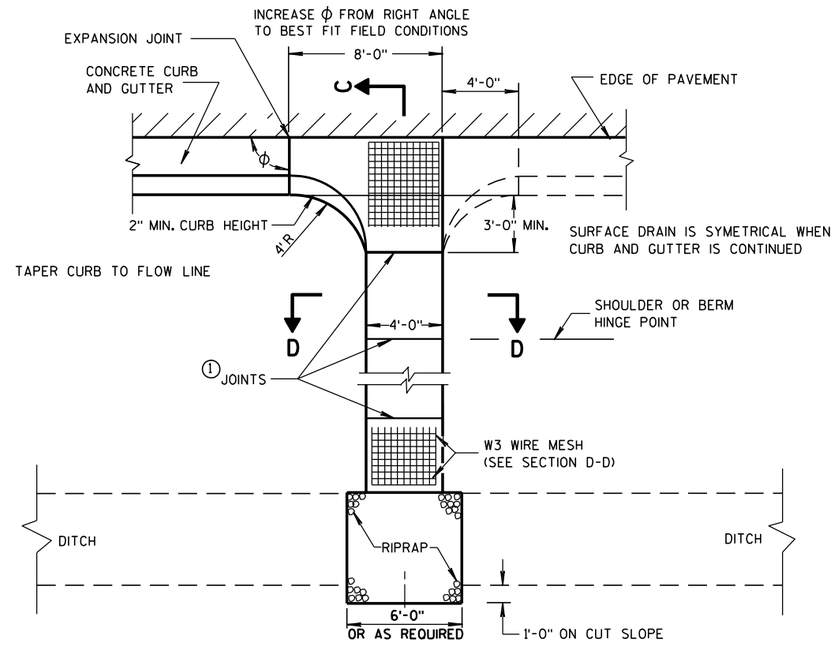
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

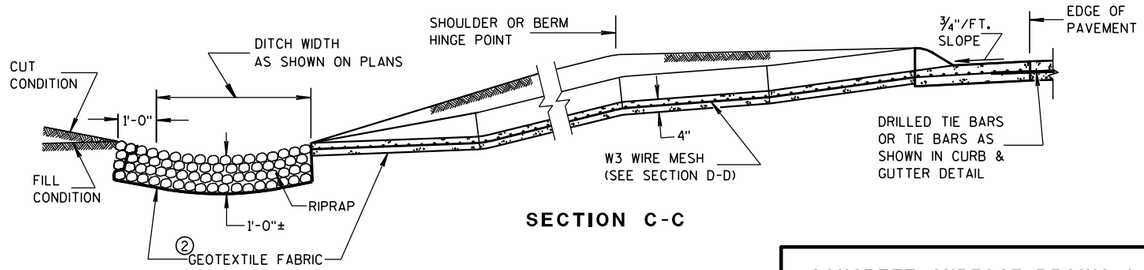
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

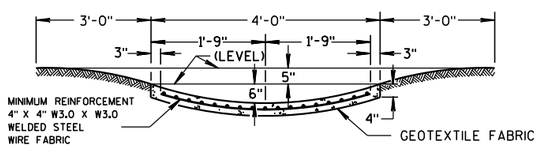
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

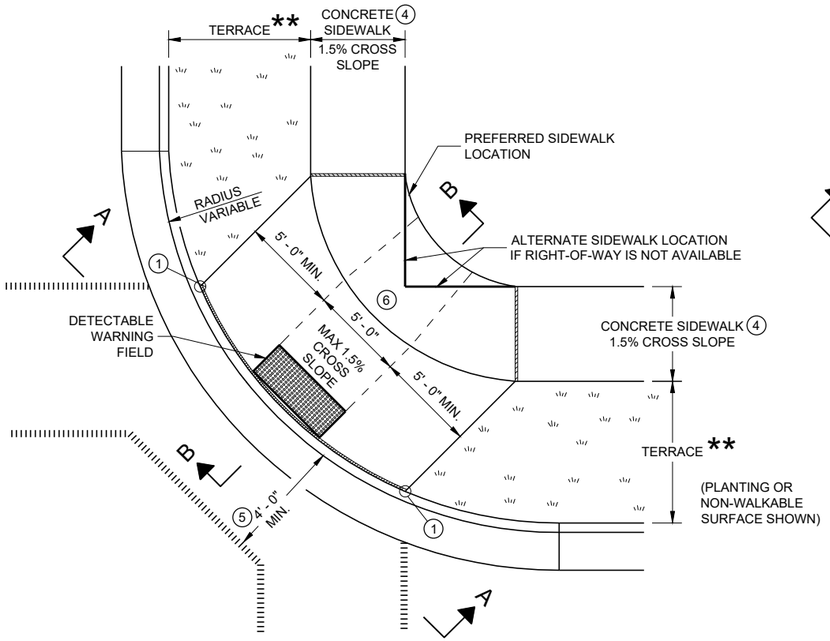
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
63
MENT
FHWA

6

S.D.D. 8 D 4-5

6

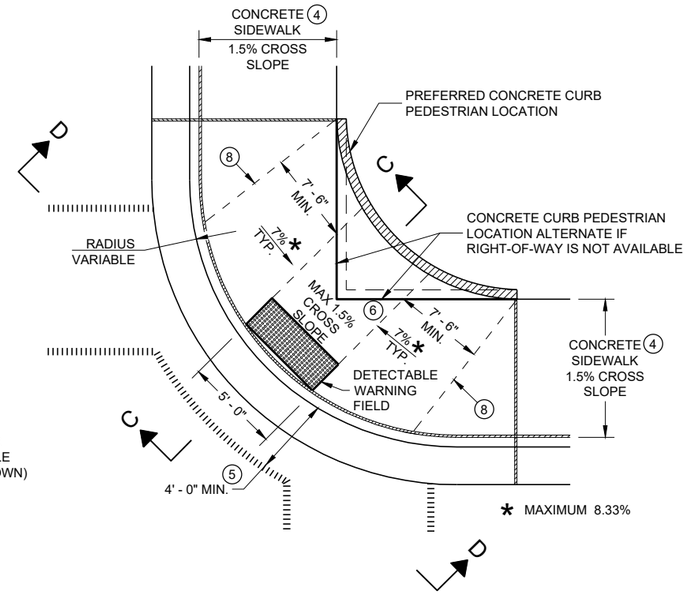
S.D.D. 8 D 4-5



PLAN VIEW

CURB RAMP TYPE 1

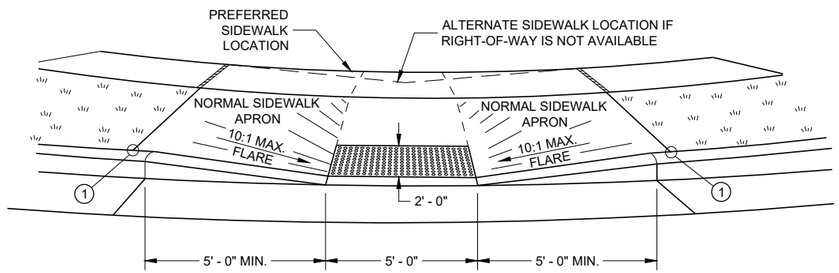
(CENTER OF CORNER RADIUS)



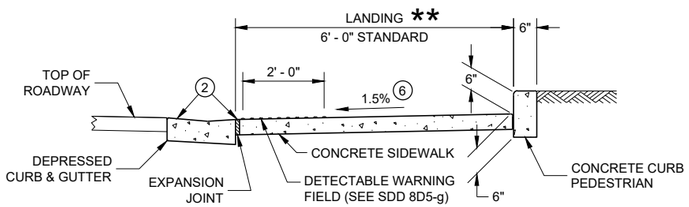
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

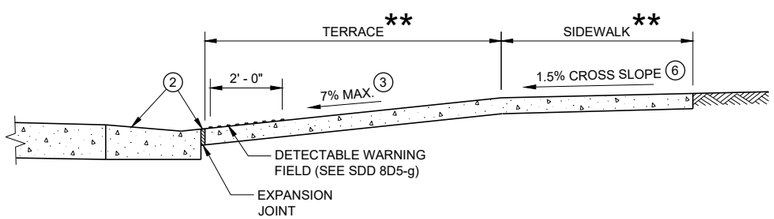


VIEW A - A FOR TYPE 1

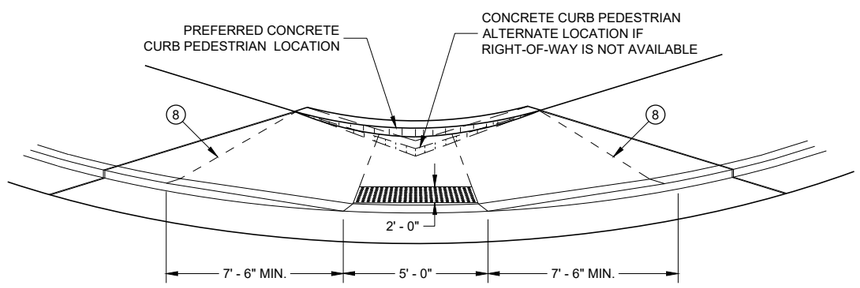


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

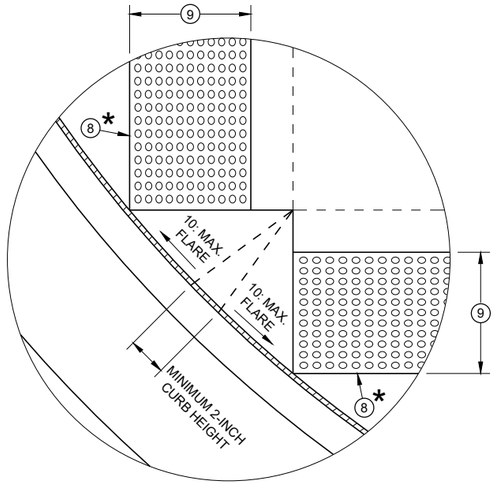
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

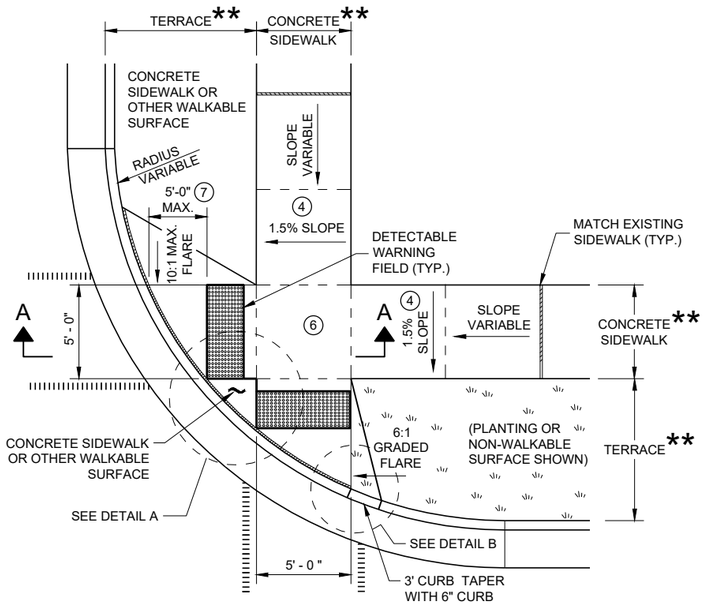
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a



DETAIL A



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

GENERAL NOTES

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

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

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

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

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

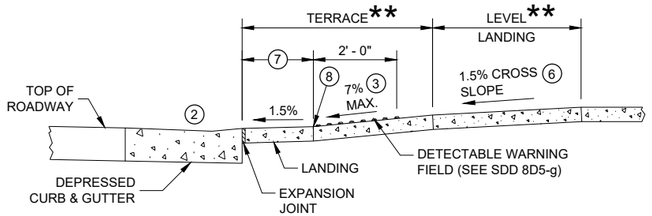
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

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

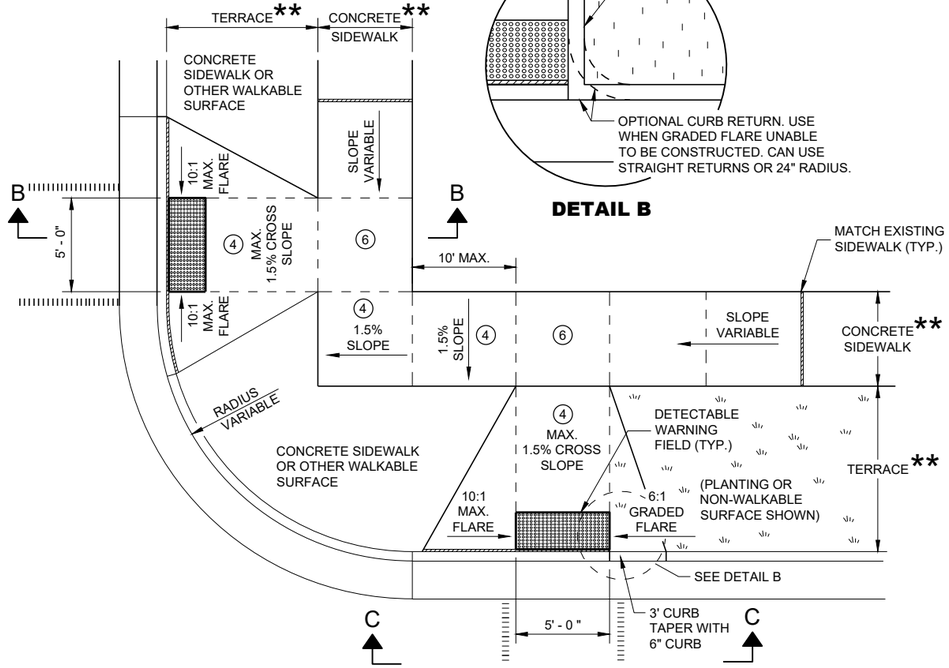
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

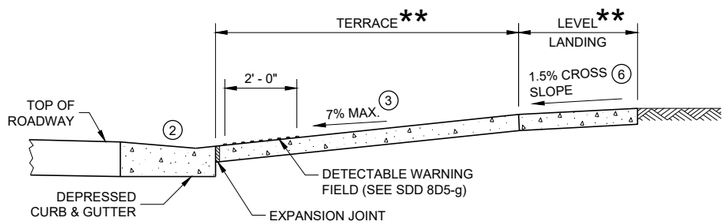
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



DETAIL B

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



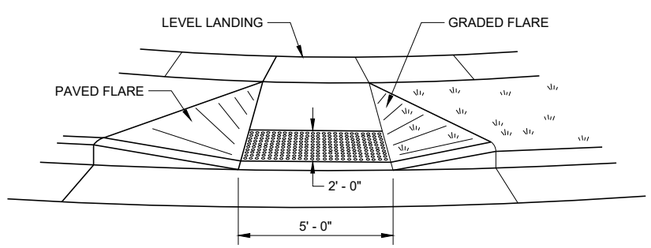
SECTION B - B FOR TYPE 3

LEGEND

½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



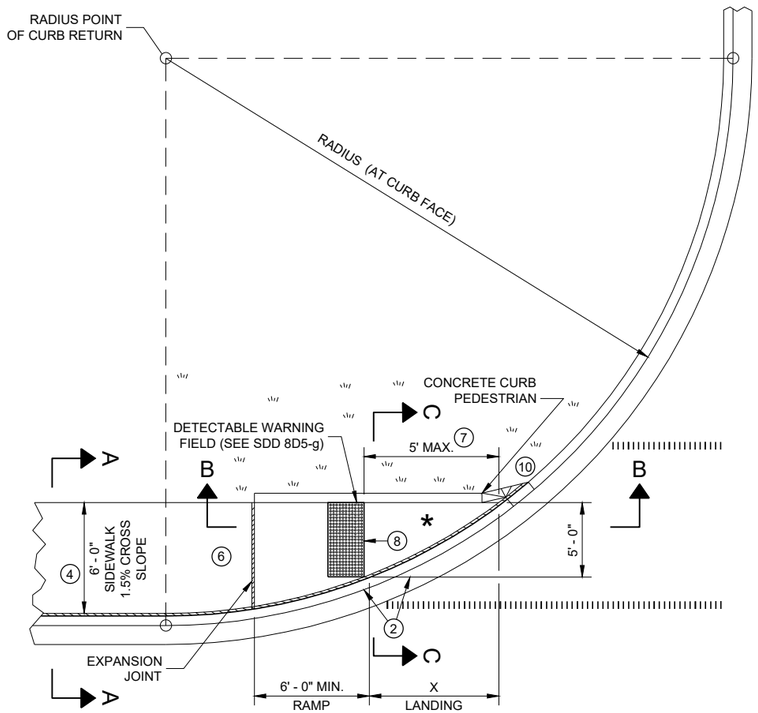
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

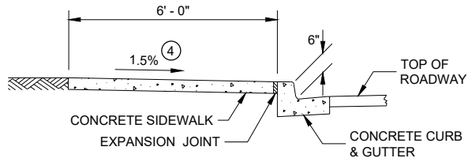


PLAN VIEW

CURB RAMP TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

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

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

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

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

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

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

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

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

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

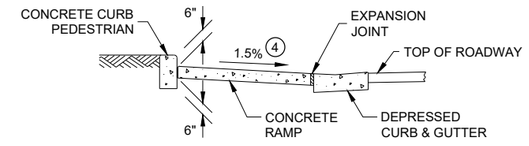
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

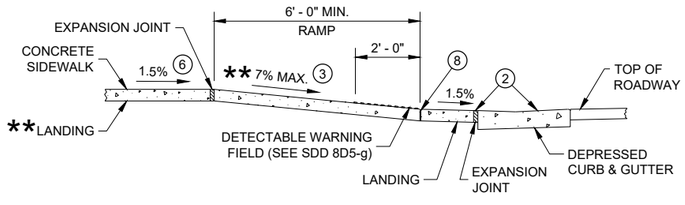
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

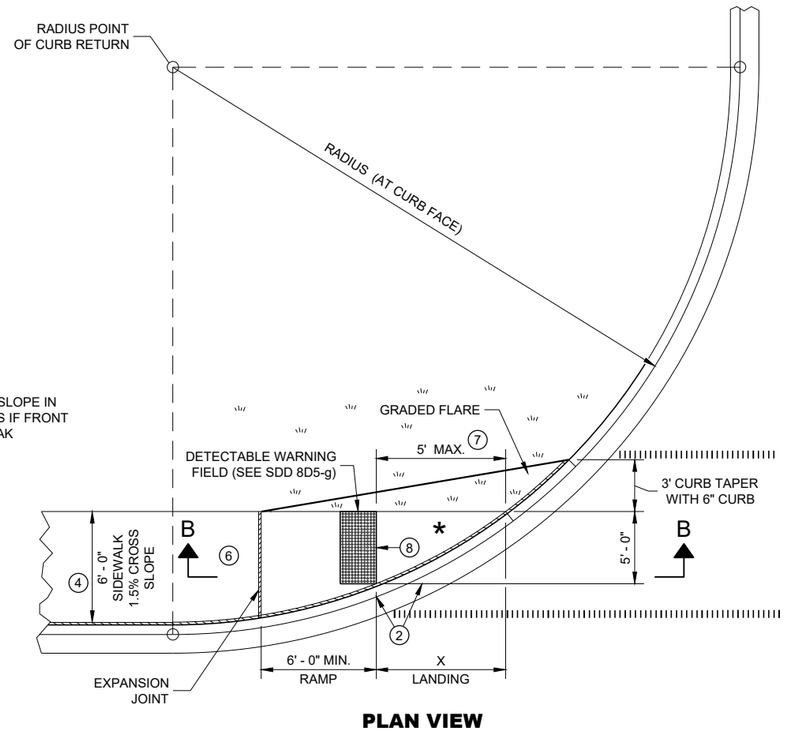


SECTION C - C FOR TYPE 4A



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

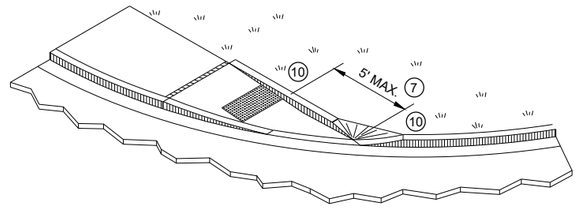
SECTION B - B FOR TYPE 4A AND TYPE 4A1



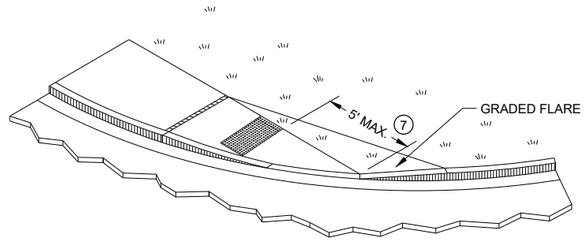
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



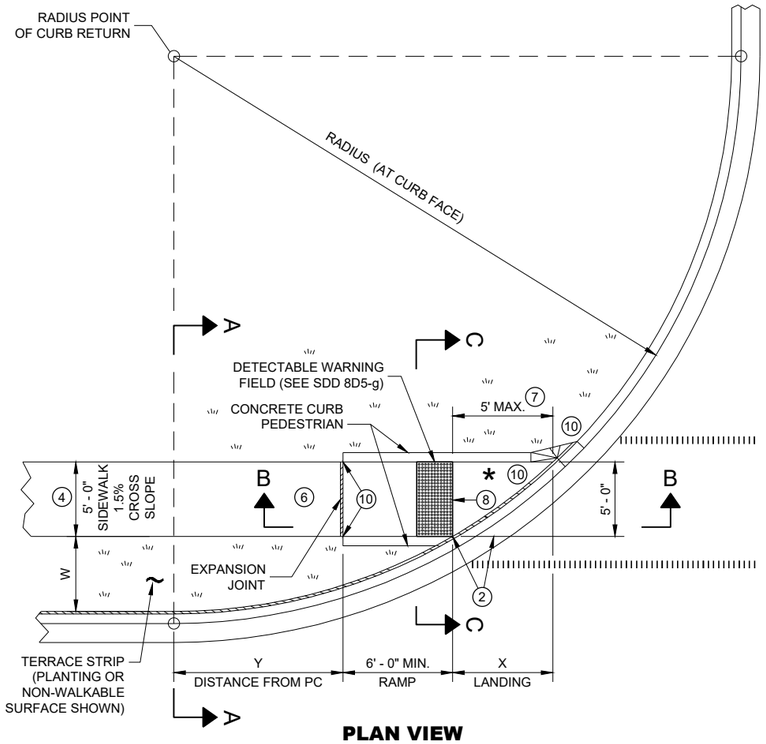
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

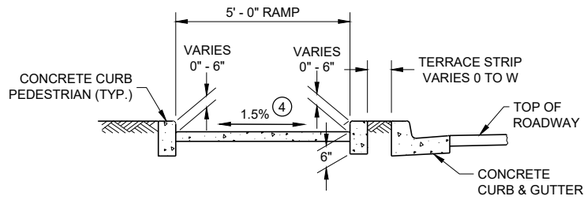


PLAN VIEW

CURB RAMP TYPE 4B

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

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



SECTION C - C FOR TYPE 4B

LEGEND

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

GENERAL NOTES

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

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

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

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

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

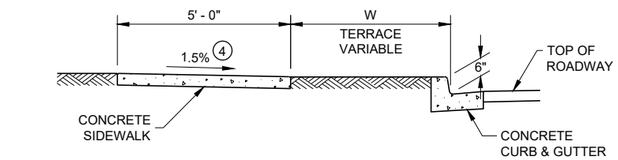
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

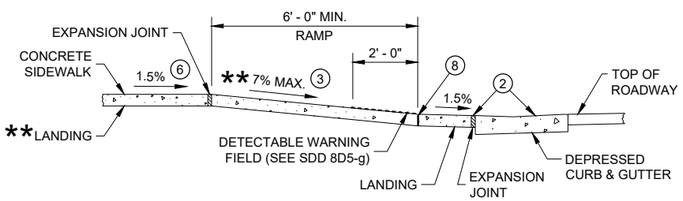
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

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



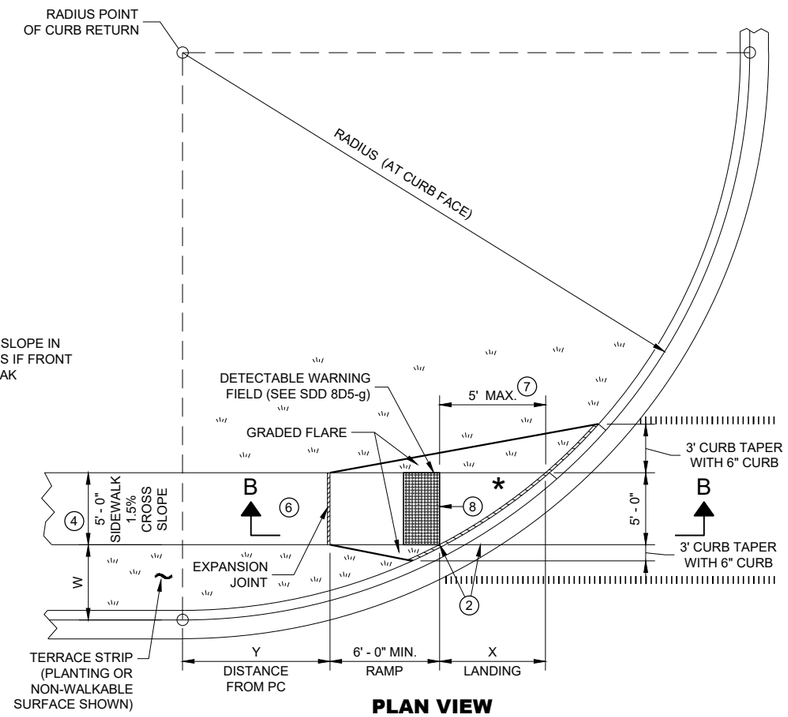
SECTION A - A FOR TYPE 4B



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

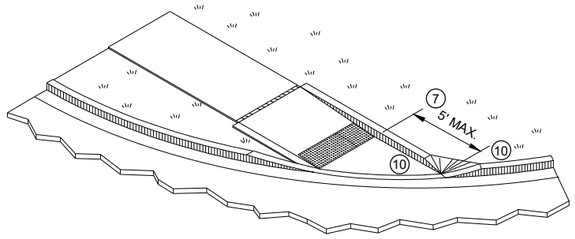
SECTION B - B FOR TYPE 4B AND TYPE 4B1

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

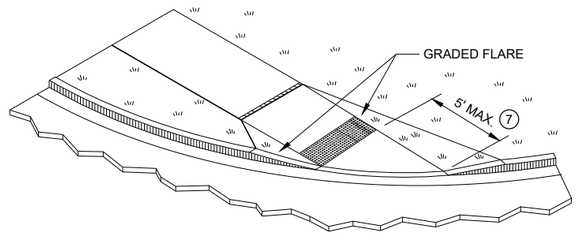


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



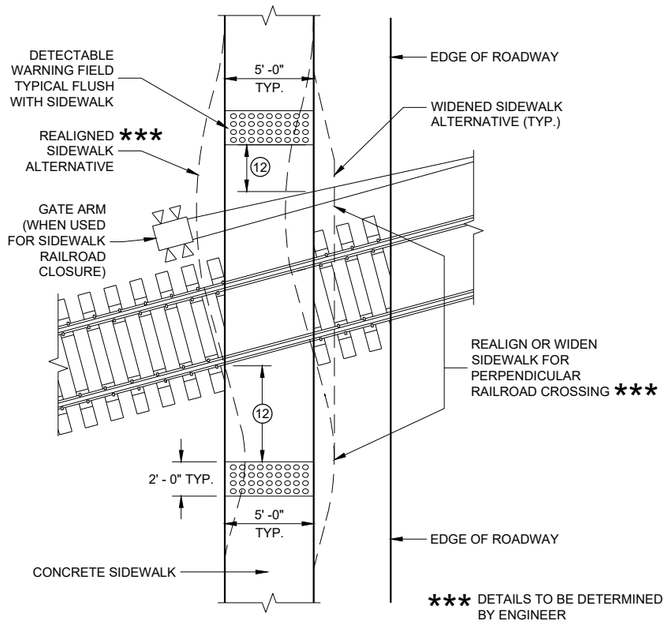
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

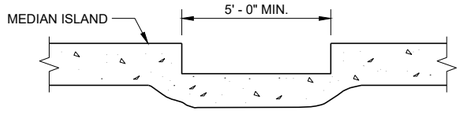
6

SDD 08D05 - 20d

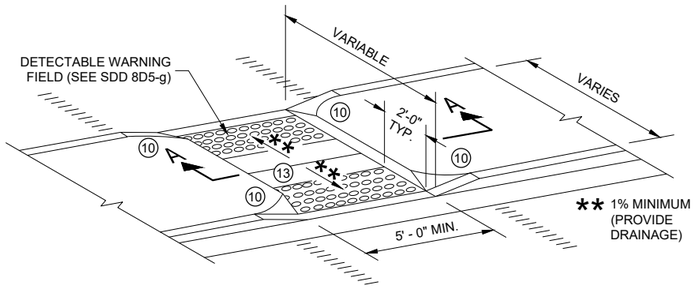


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

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

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

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

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

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

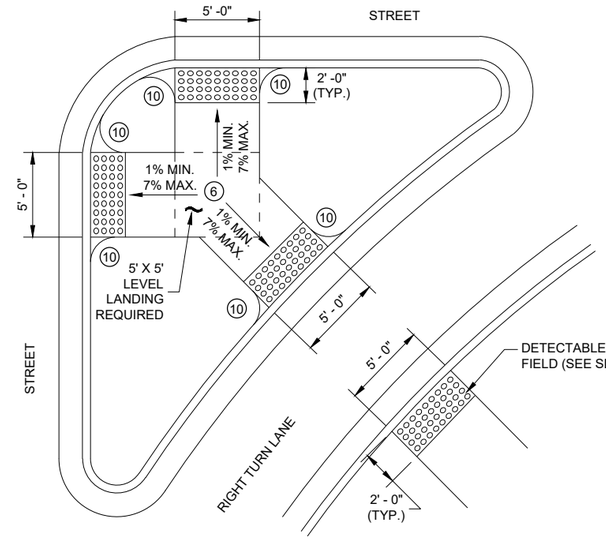
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

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

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

LEGEND

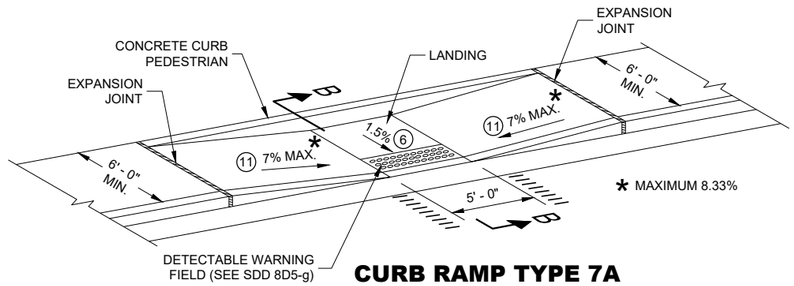
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

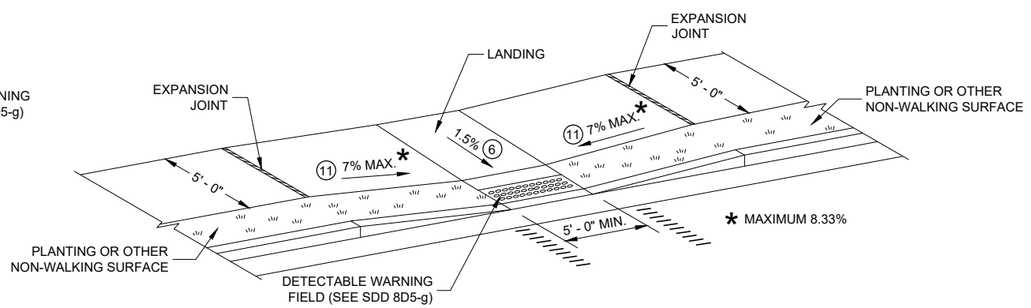
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

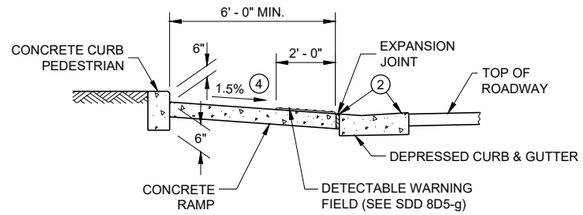
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

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



SECTION B - B FOR TYPE 7A

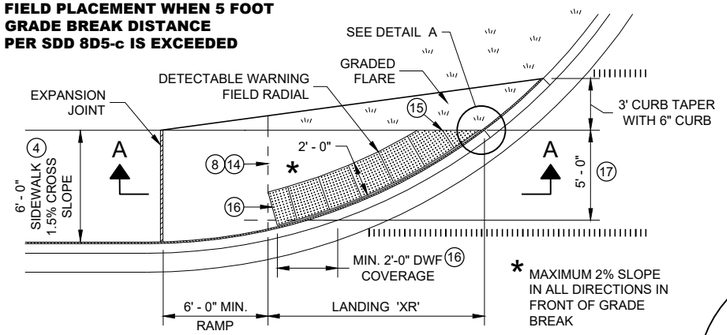
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20e

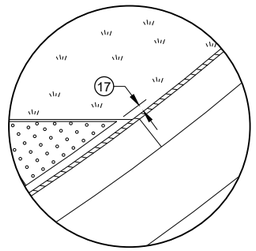
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



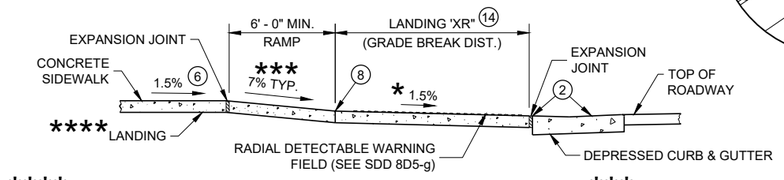
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

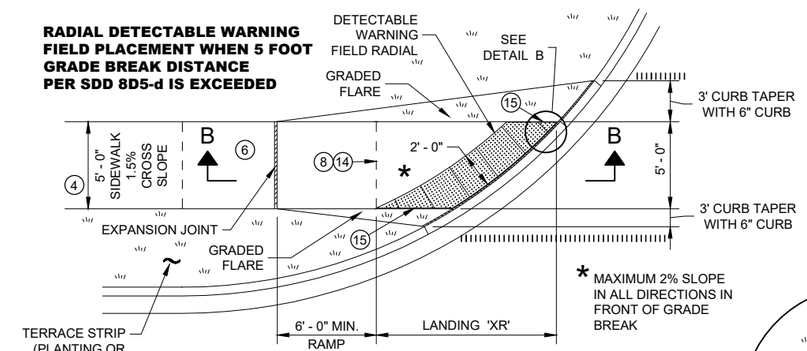


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

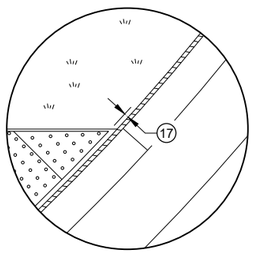
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



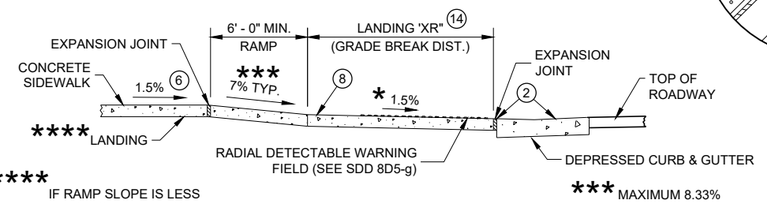
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



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

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

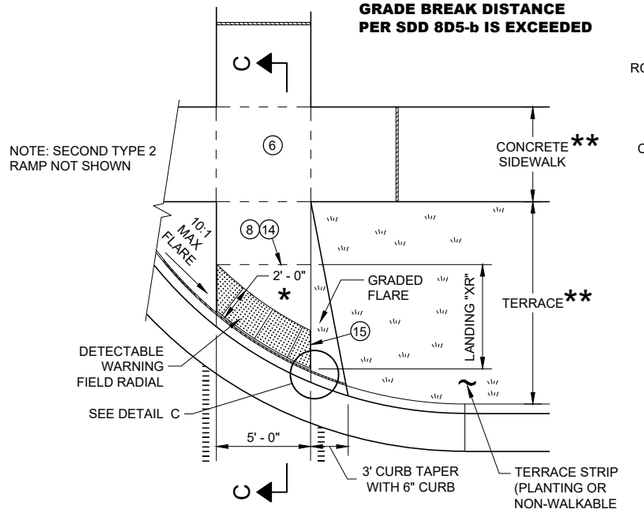
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

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

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

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

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

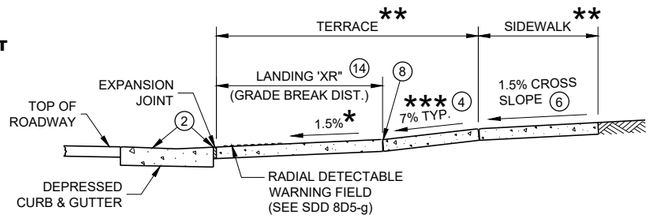


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

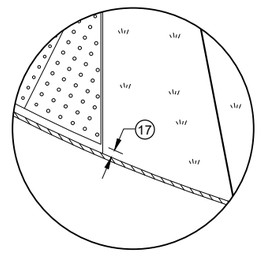


SECTION C - C FOR TYPE 2

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

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

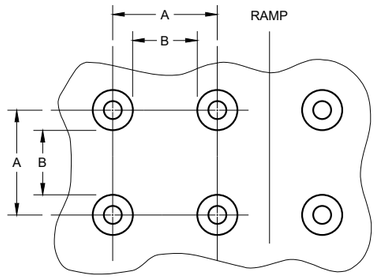
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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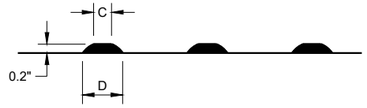
SDD 08D05 - 20f

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

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

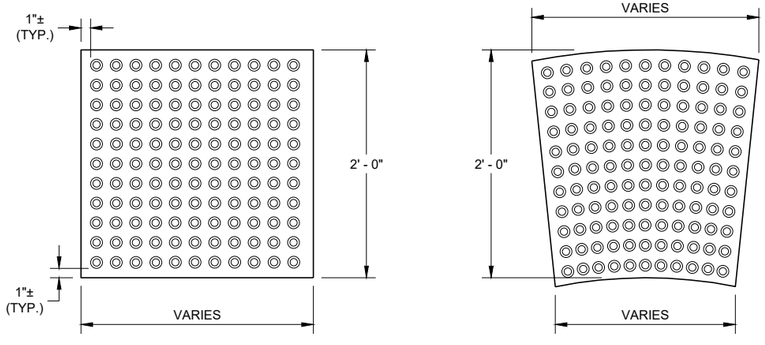


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

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

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

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

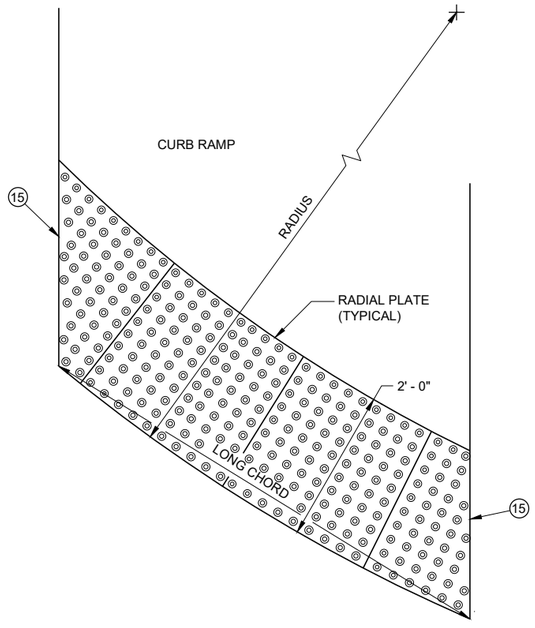
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

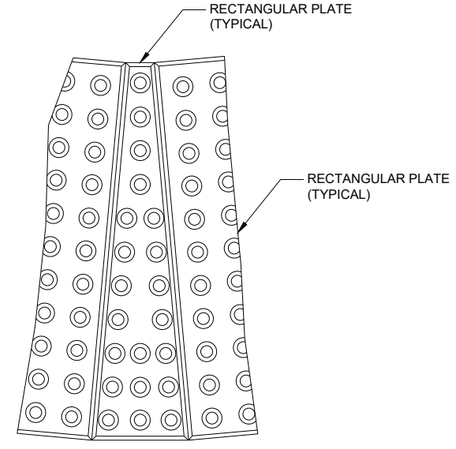
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

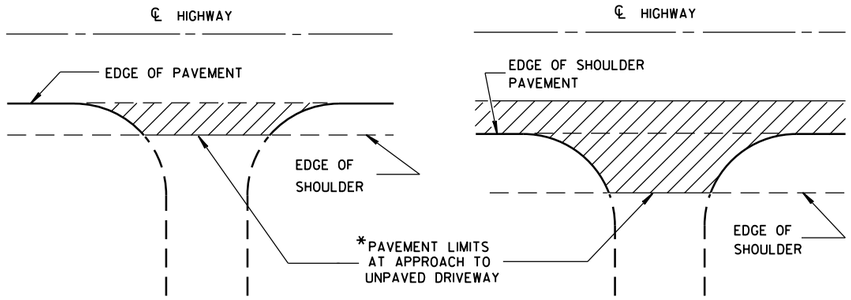
FHWA

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SDD 08D05 - 20g

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SDD 08D05 - 20g

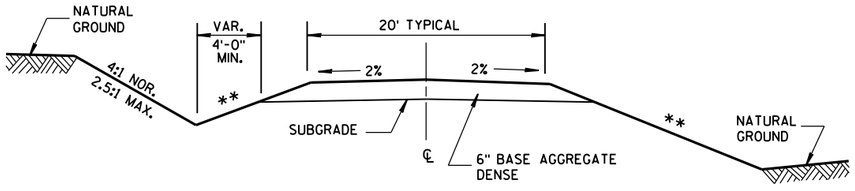


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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

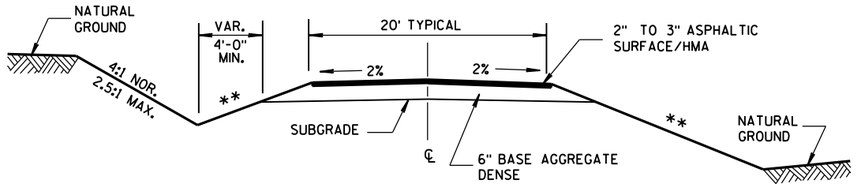


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

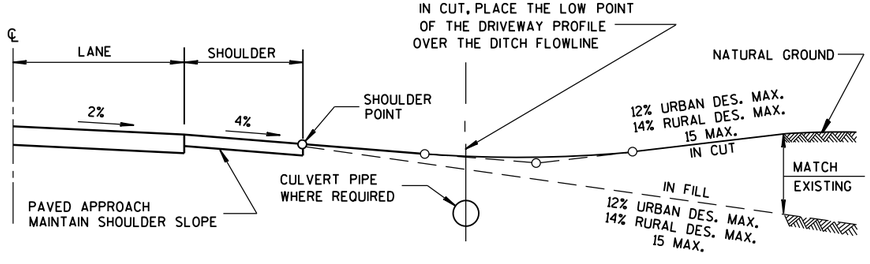
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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

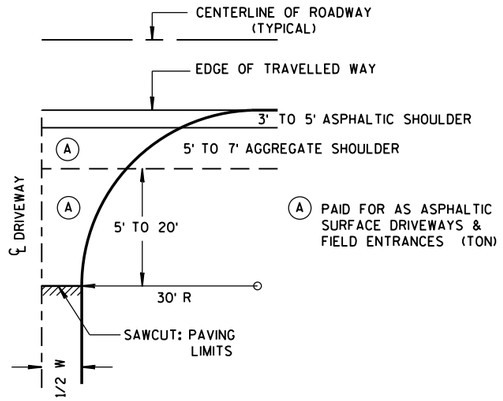
DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

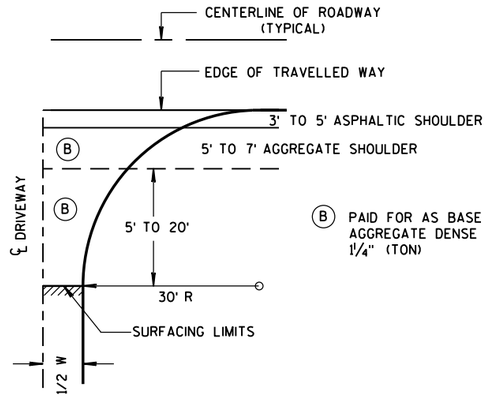
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S.D.D. 8 D 21-1



PLAN VIEW
HALF SECTION

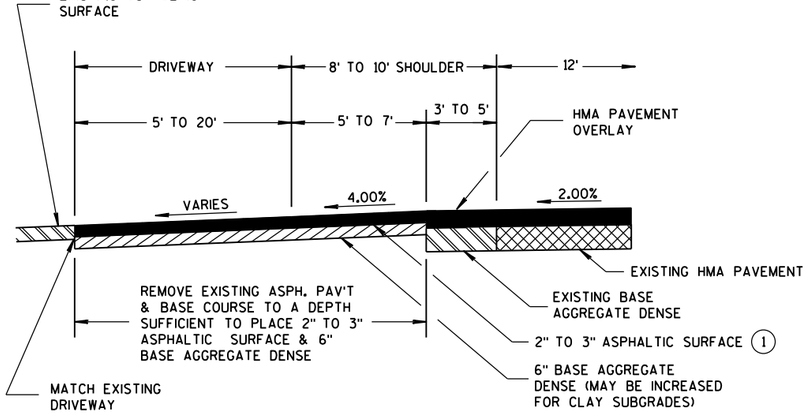
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION

GENERAL NOTES

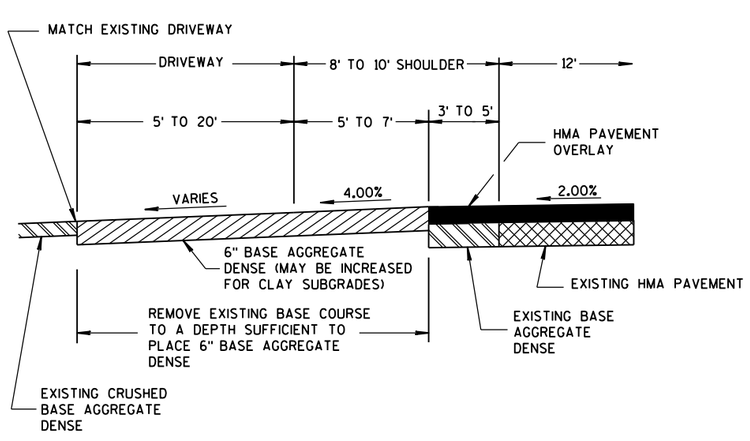
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

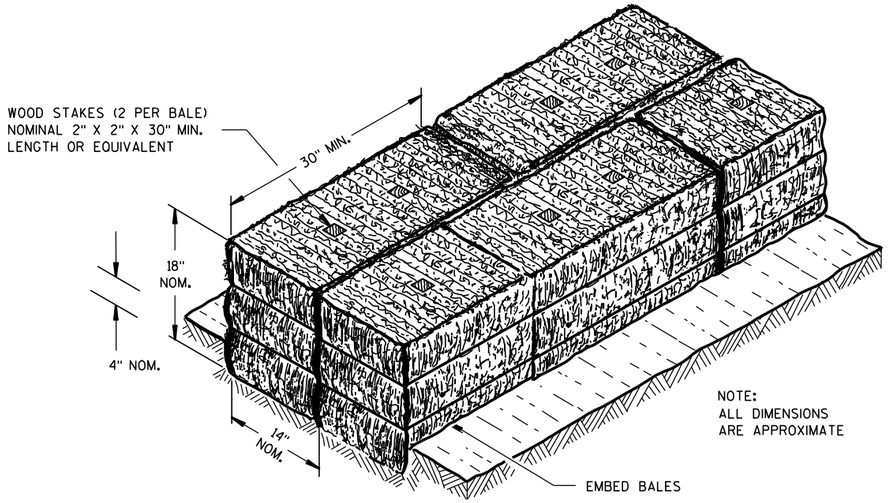
APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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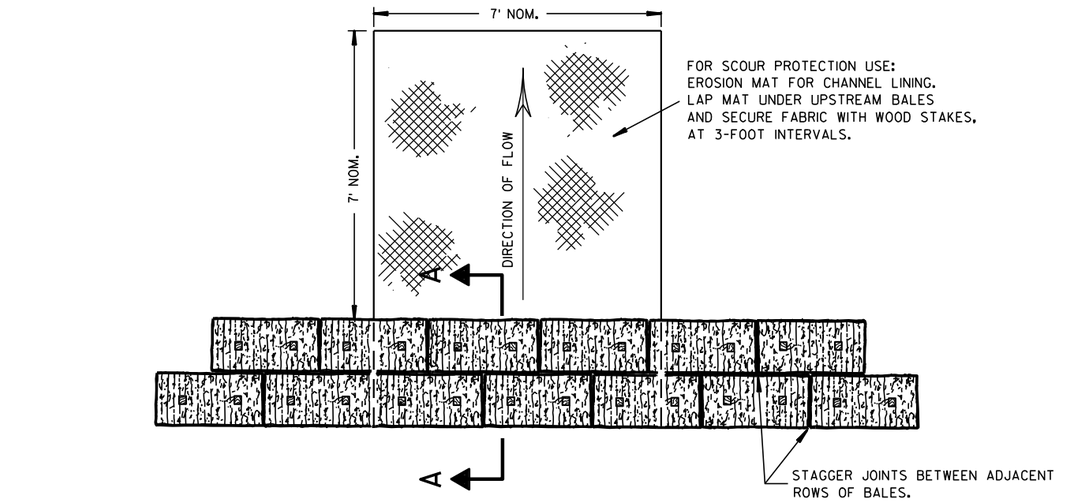
S.D.D. 8 D 22-1

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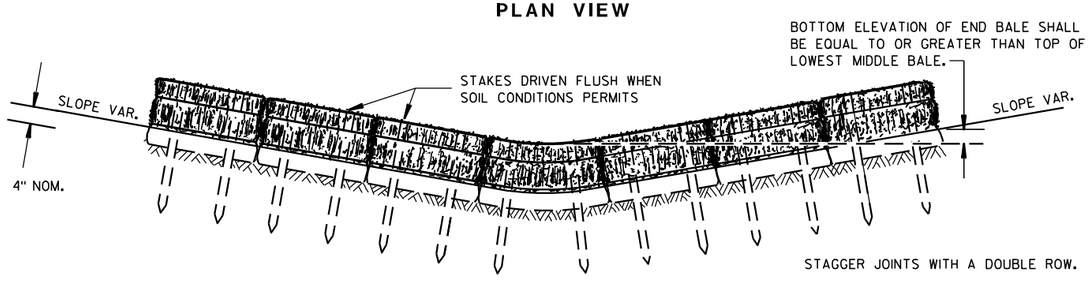
S.D.D. 8 D 22-1



SECTION A-A



PLAN VIEW



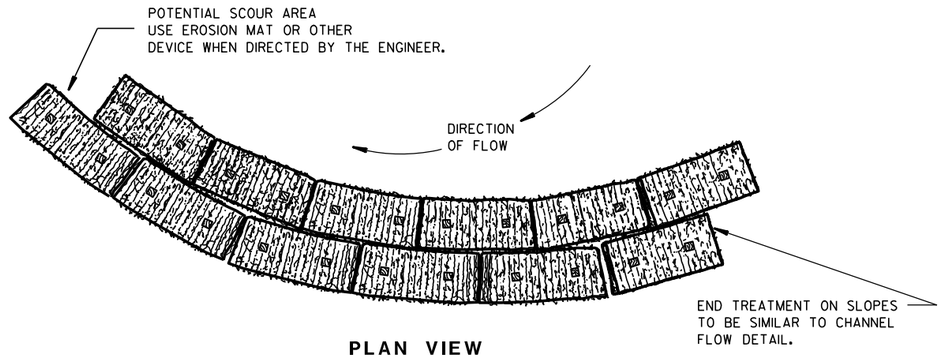
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

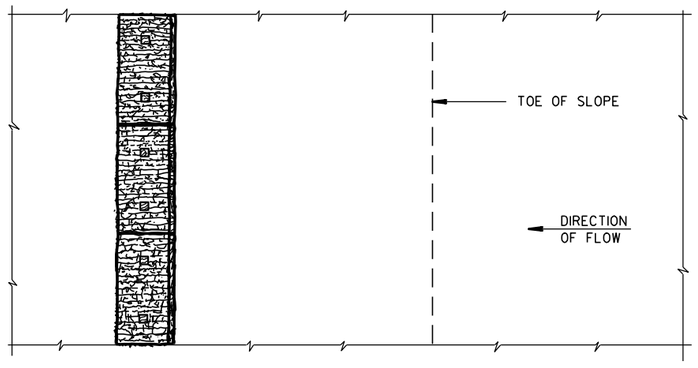
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

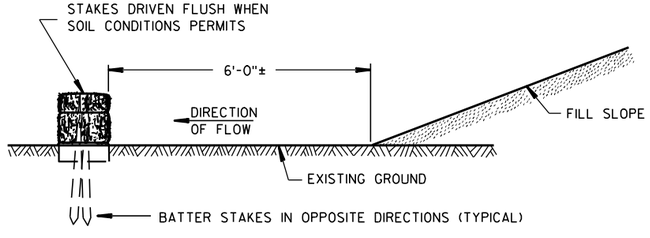


PLAN VIEW

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

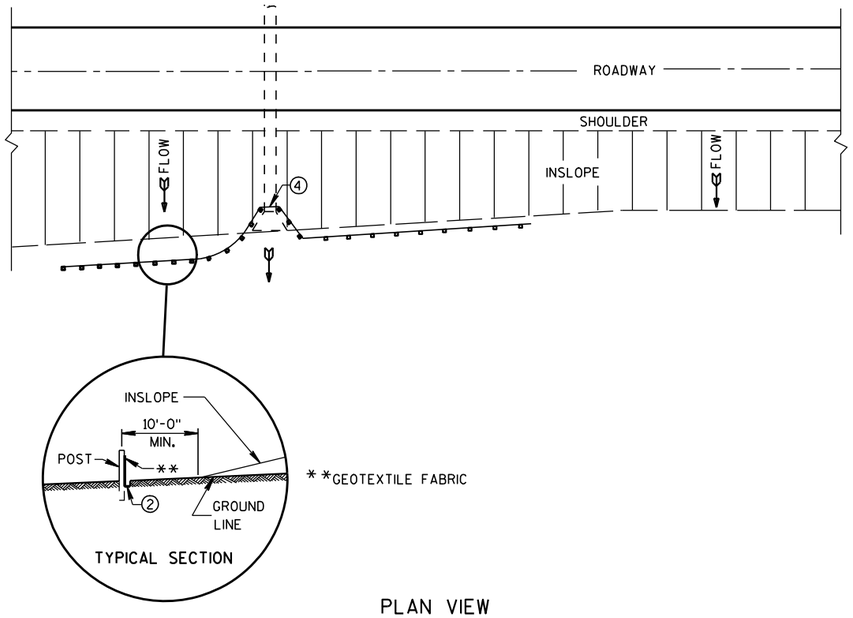
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

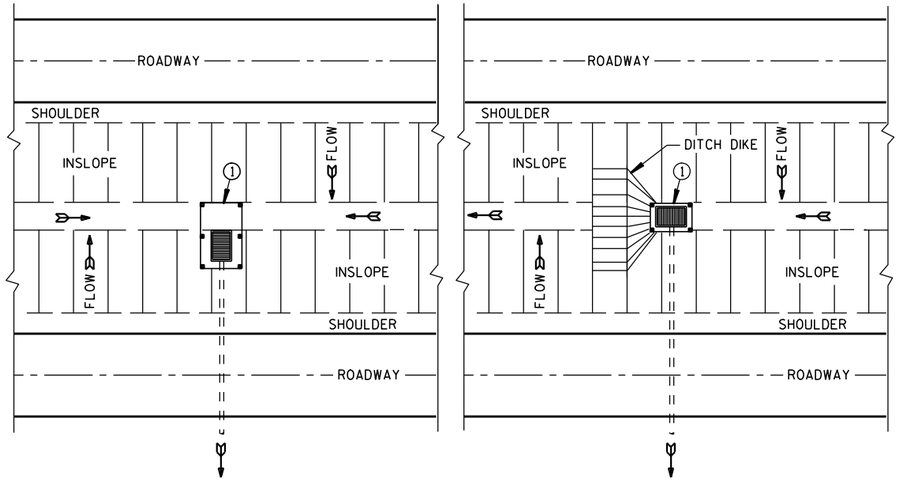
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



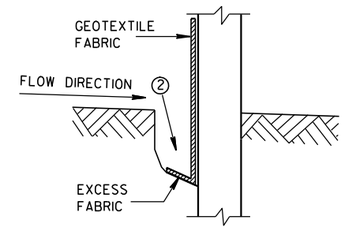
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

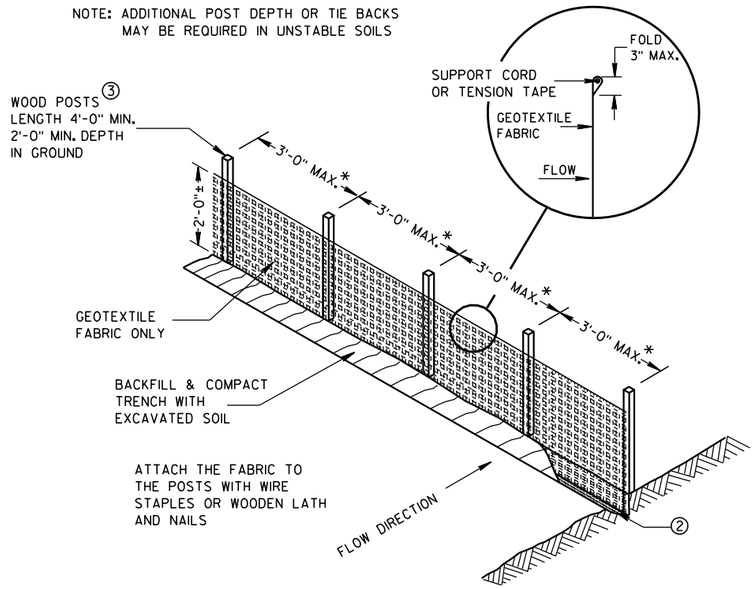
GENERAL NOTES

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

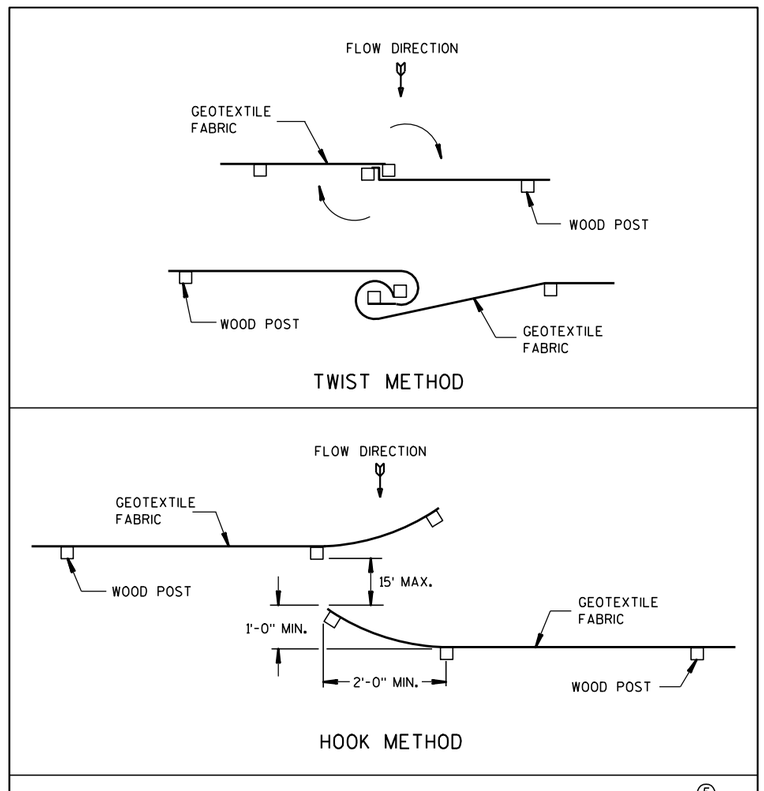
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



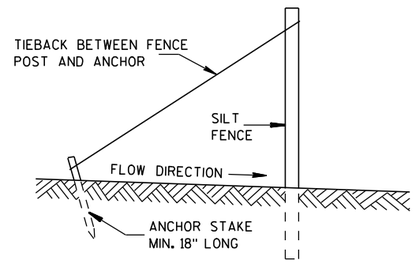
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

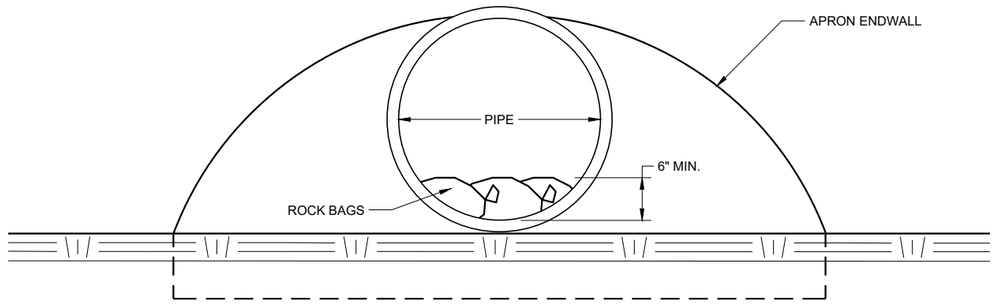
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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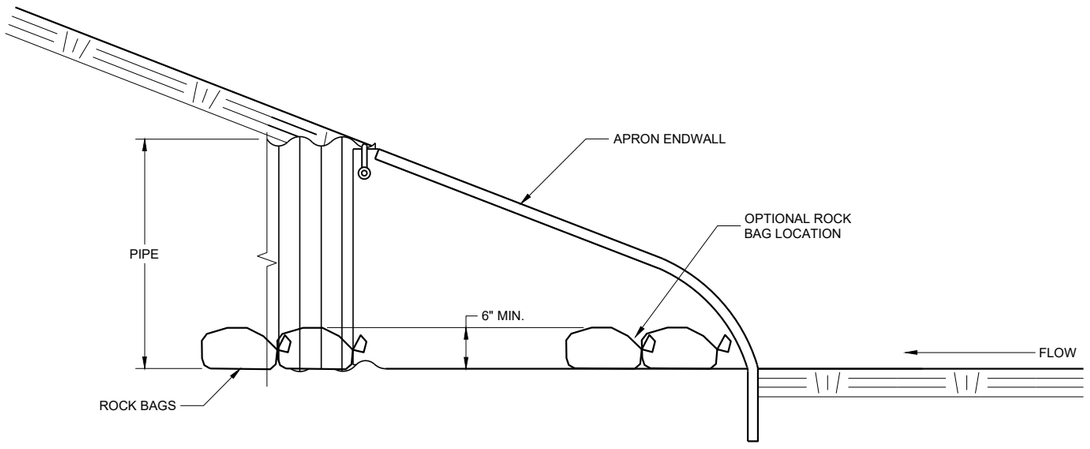
S.D.D. 8 E 9-6

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S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

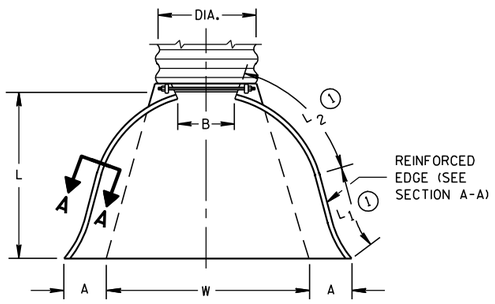
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

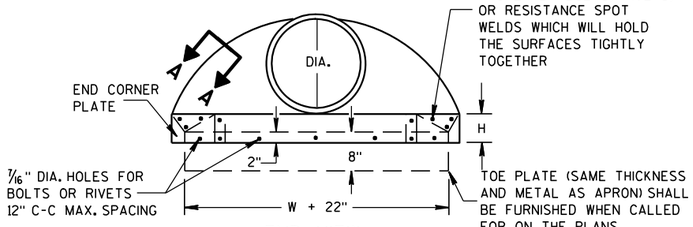
REINFORCED CONCRETE APRON ENDWALLS

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

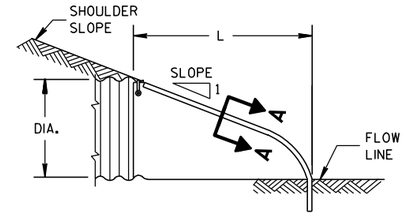
* MINIMUM
** MAXIMUM



PLAN VIEW

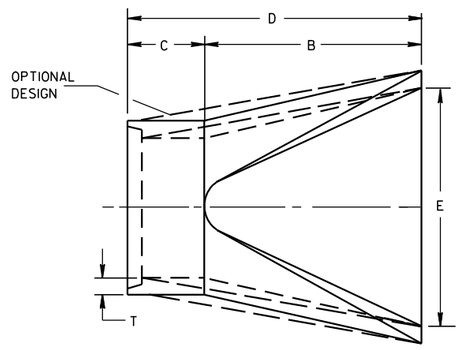


END VIEW

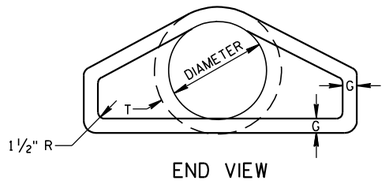


SIDE ELEVATION

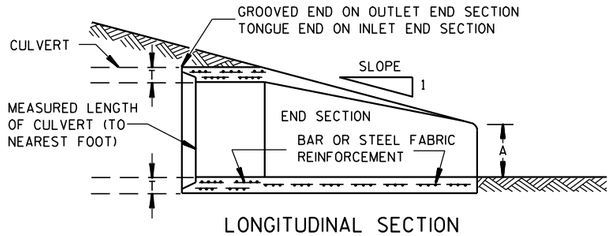
METAL ENDWALLS



PLAN

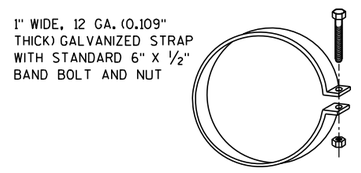


END VIEW



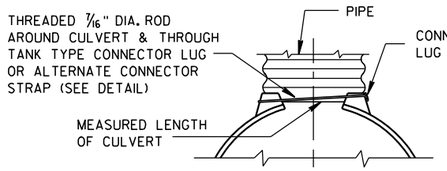
LONGITUDINAL SECTION

CONCRETE ENDWALLS

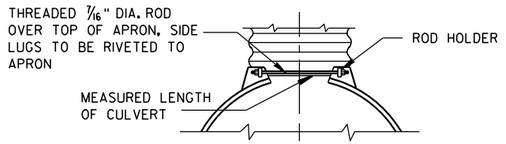


ALTERNATE FOR TYPE 1 CONNECTION

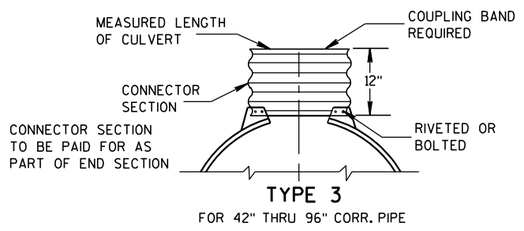
END SECTION CONNECTOR STRAP



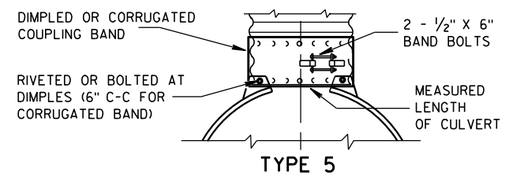
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

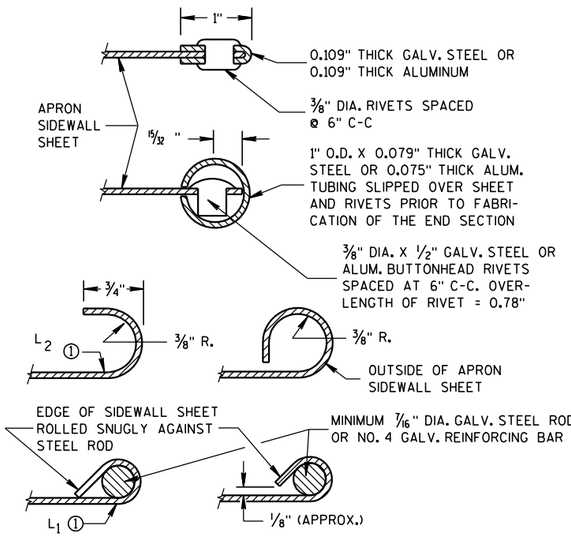
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

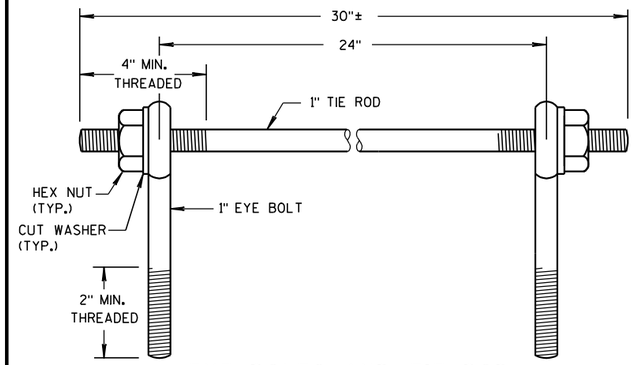
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

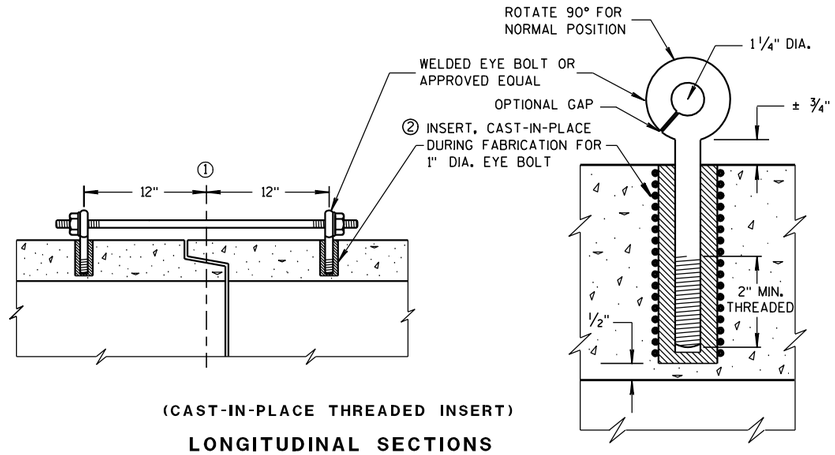
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP NEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

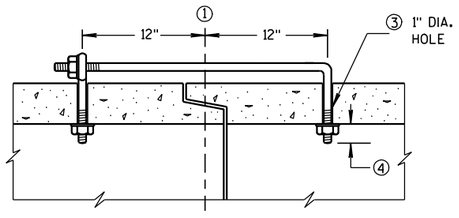
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

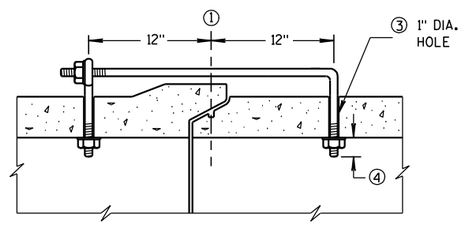
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

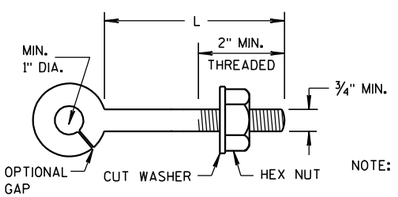


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

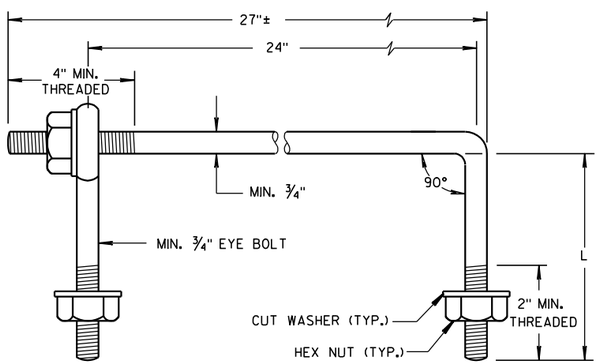
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

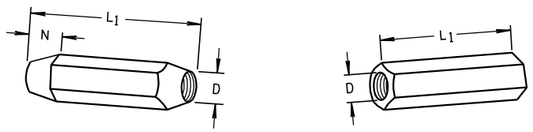
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

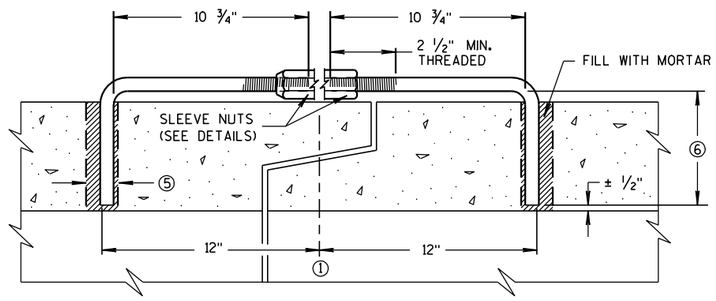
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

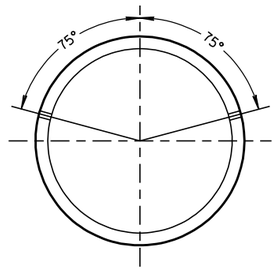
SLEEVE NUTS



LONGITUDINAL SECTION

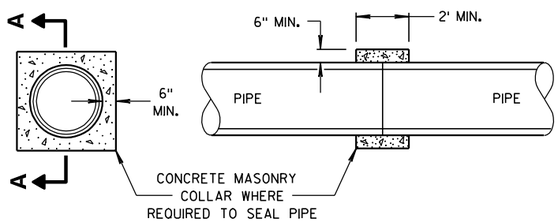
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

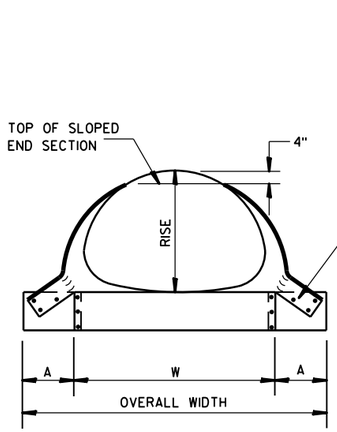
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
77
FHWA

6

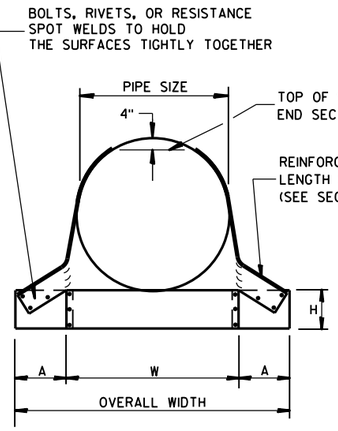
S.D.D. 8 F 4-7

6

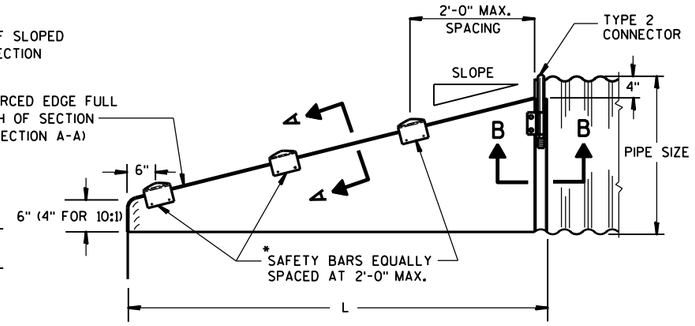
S.D.D. 8 F 4-7



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

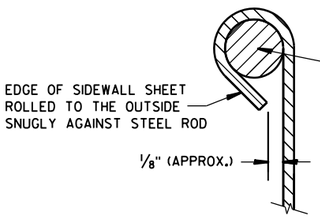
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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

STEEL APRON ENDWALLS FOR CULVERT PIPE
SLOPED SIDE DRAINS

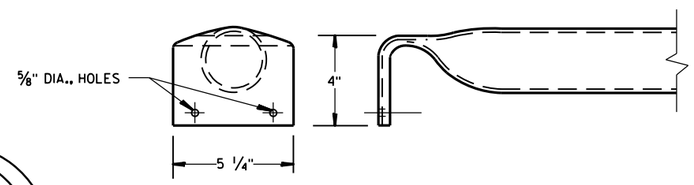
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1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



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

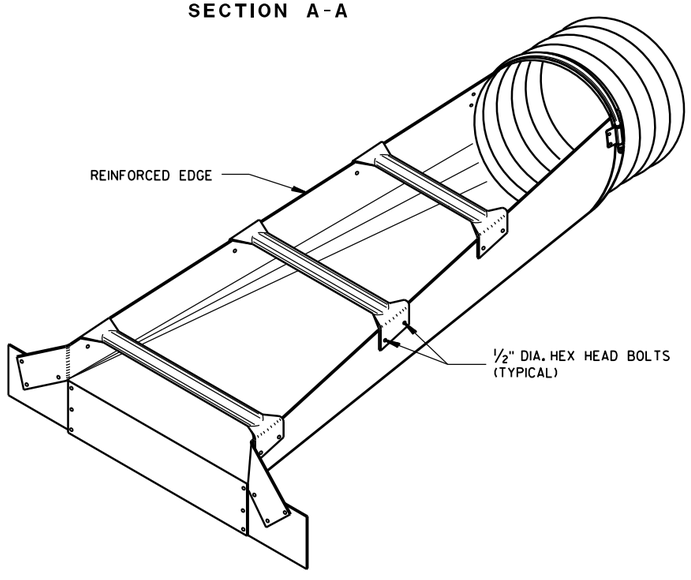


DETAIL OF SAFETY BAR

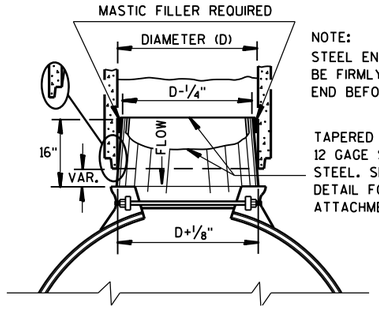
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

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

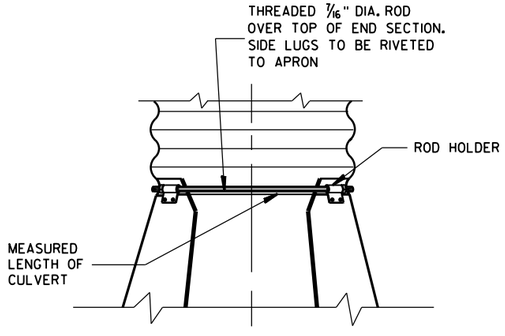
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



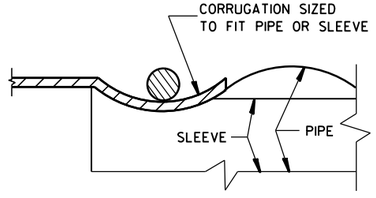
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

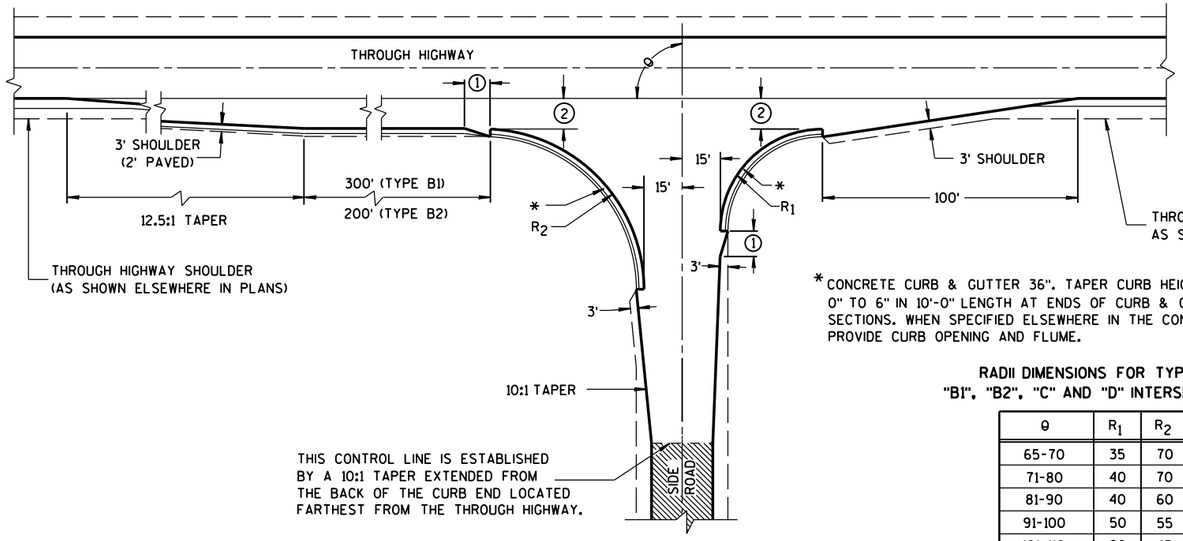
APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 7-5

6

S.D.D. 8 F 7-5

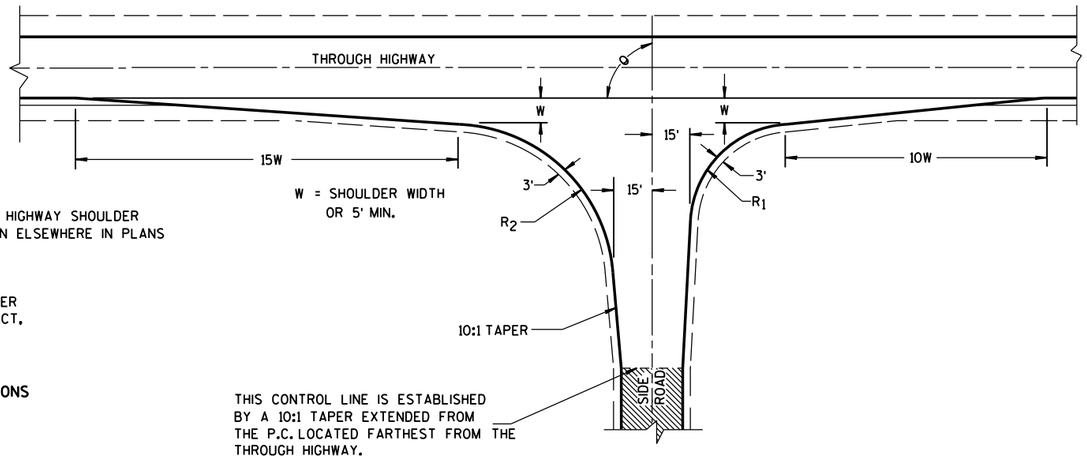


TYPE "B1" AND "B2"

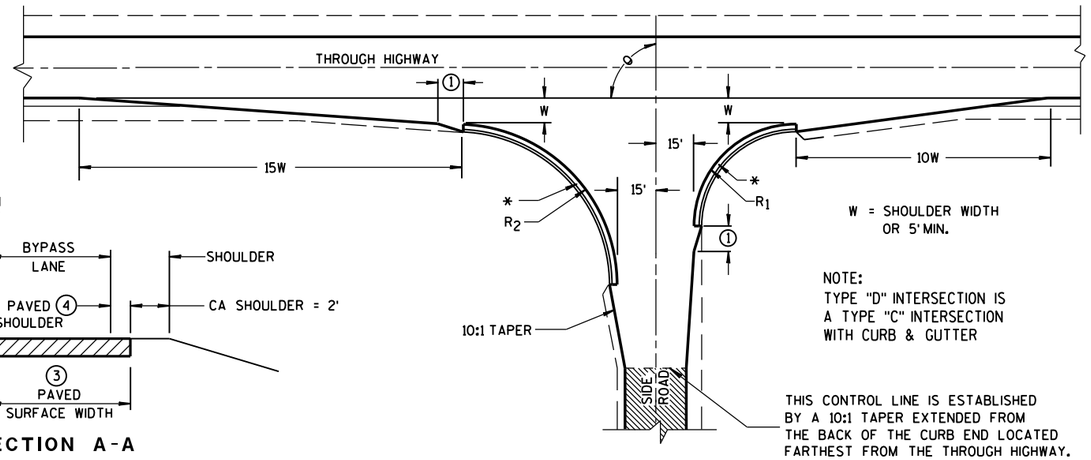
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

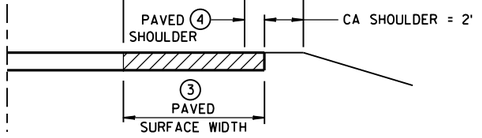
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

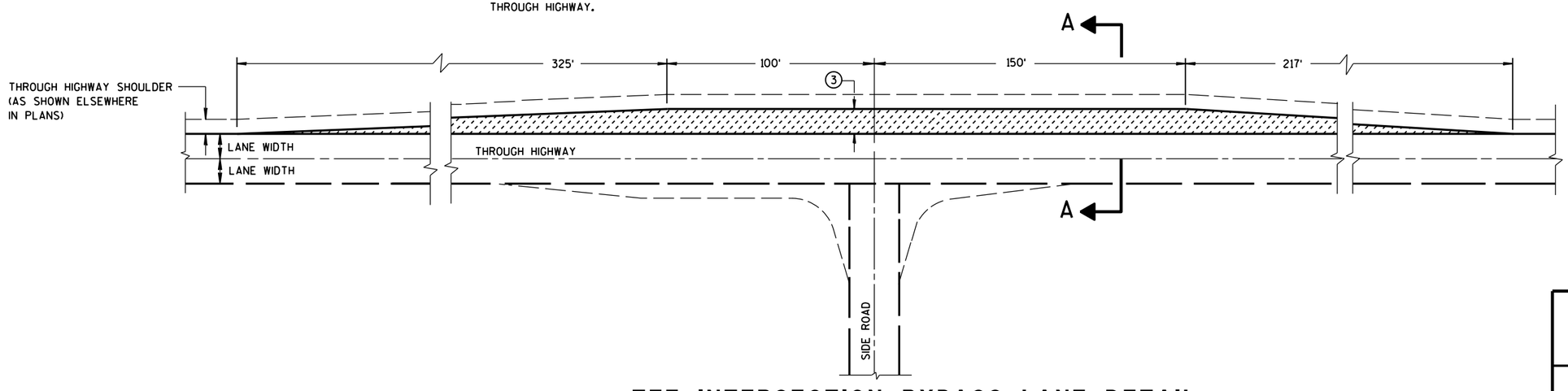
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



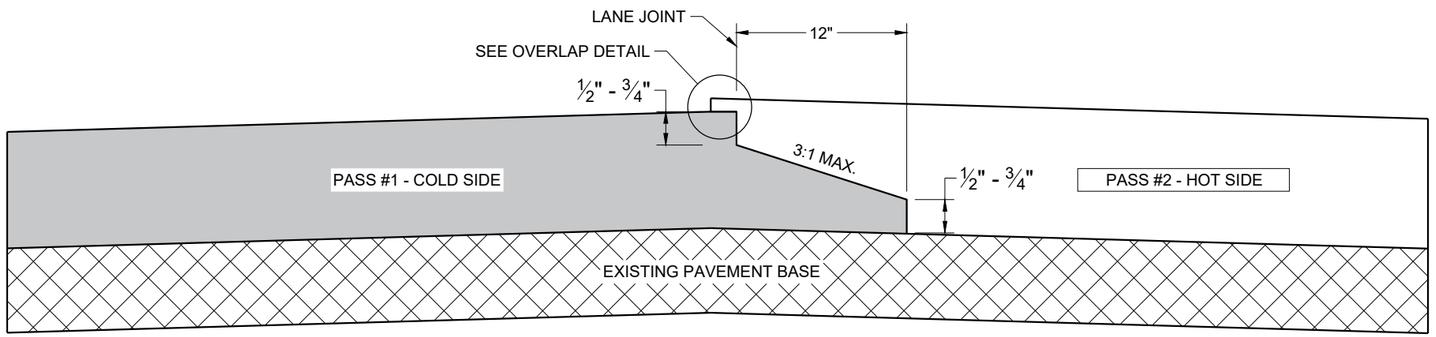
TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

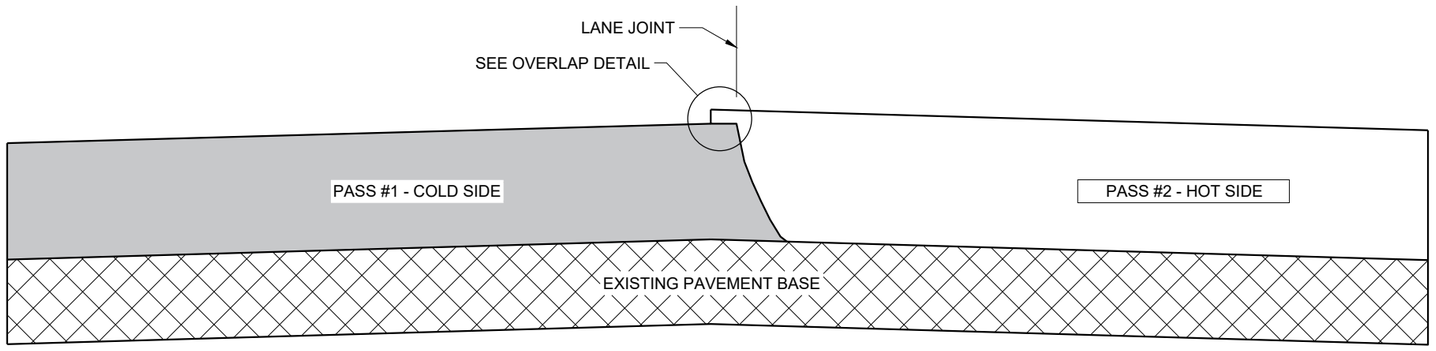
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

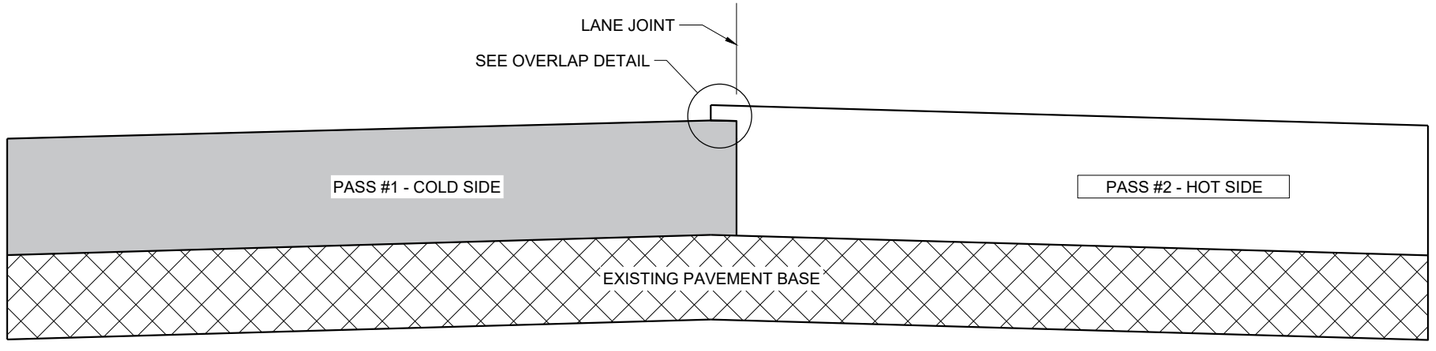
S.D.D. 9 A 1-13a



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
OF MILLED LONGITUDINAL JOINT

GENERAL NOTES

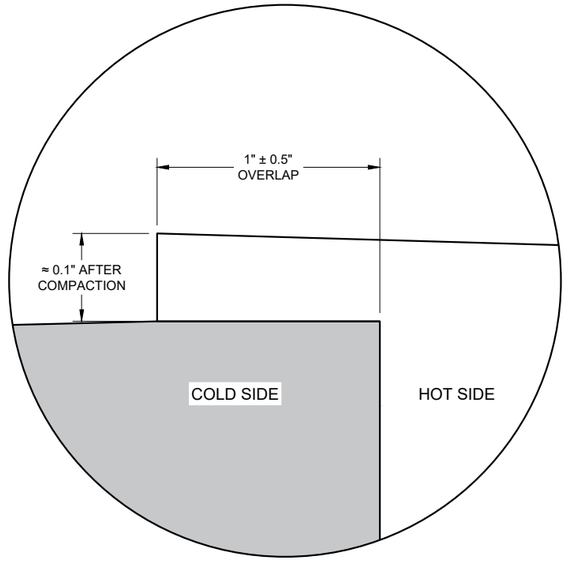
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 02

SDD 13C19 - 02

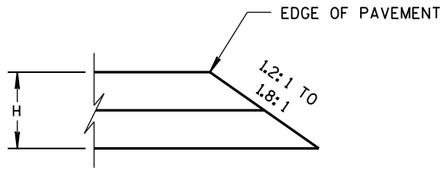
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

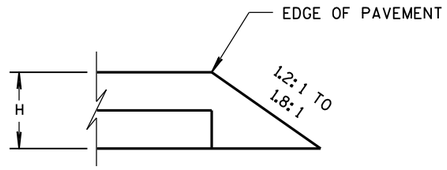
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



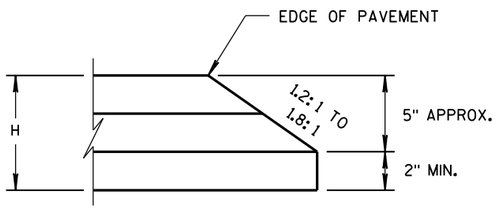
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



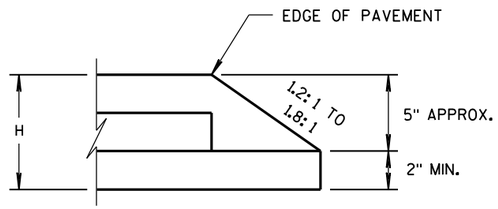
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

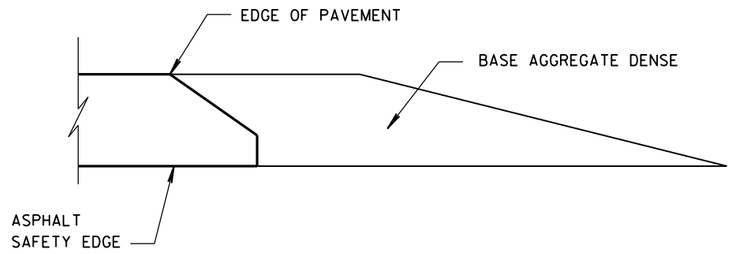
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

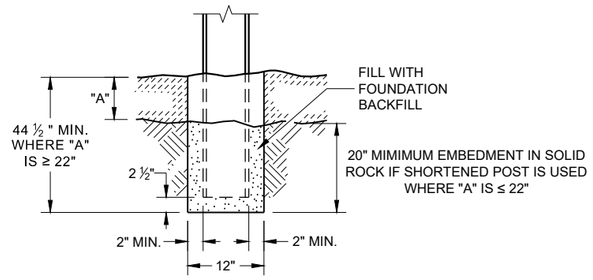
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

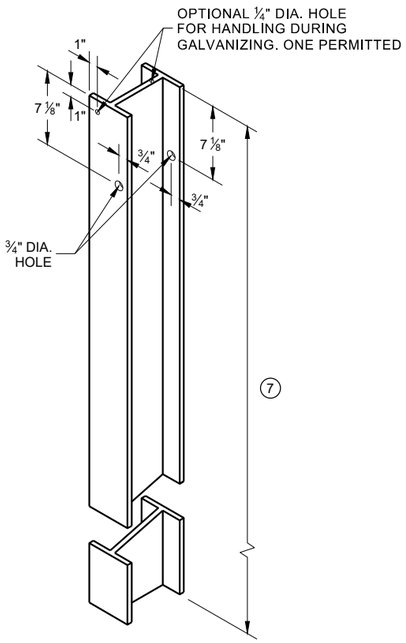
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

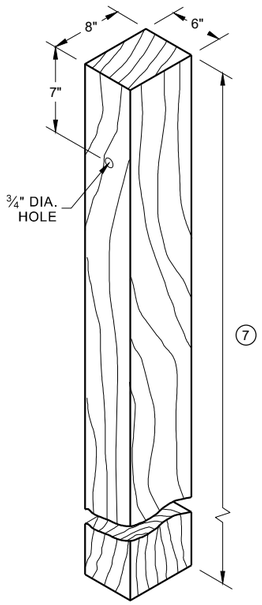
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



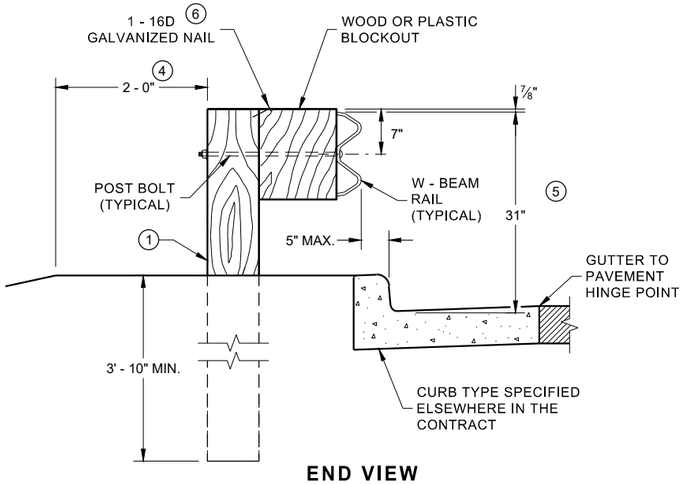
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



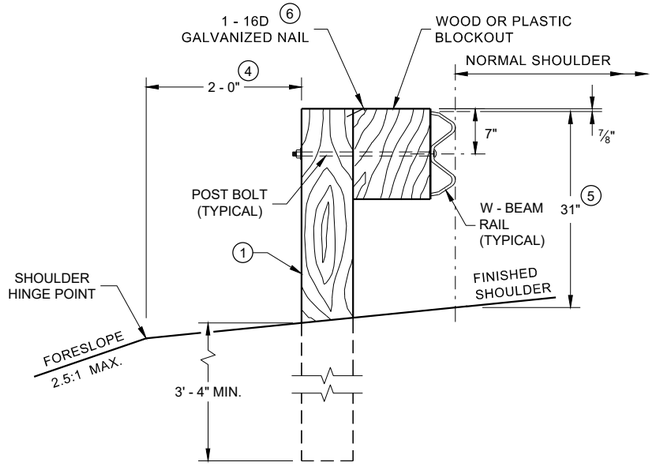
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



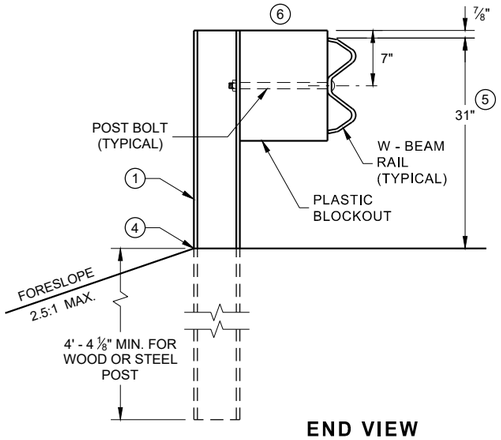
WOOD POST (6" X 8") NOMINAL (1)



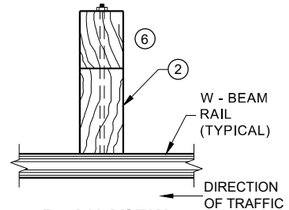
END VIEW
LOCATED ALONG A CURBED ROADWAY



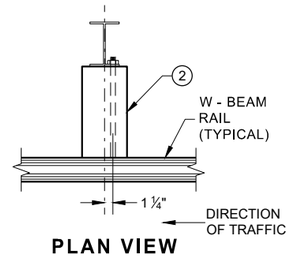
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



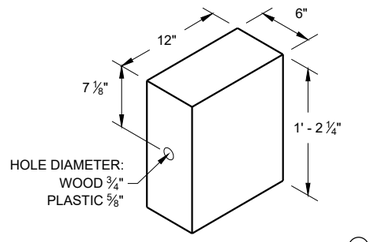
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW WOOD POST, BLOCKOUT & BEAM



PLAN VIEW STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

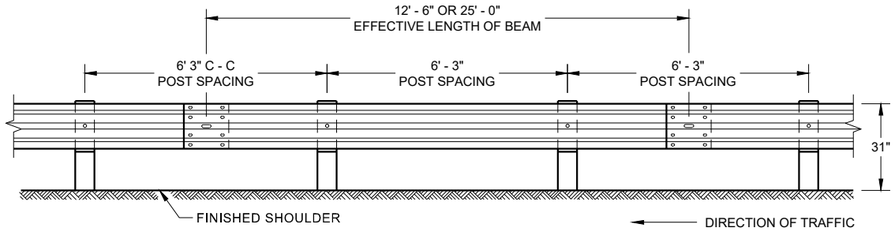
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

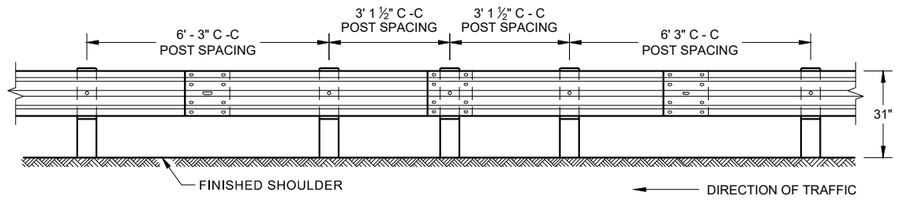
SDD 14B42 - 06a

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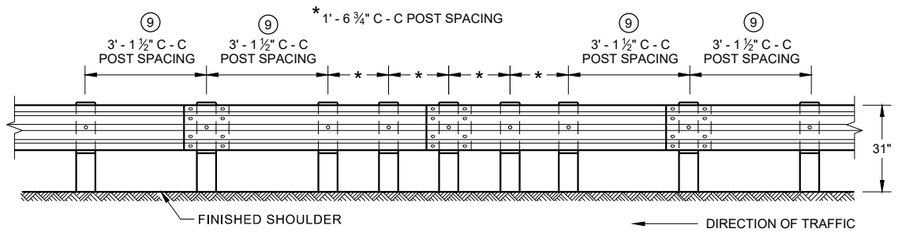
SDD 14B42 - 06a



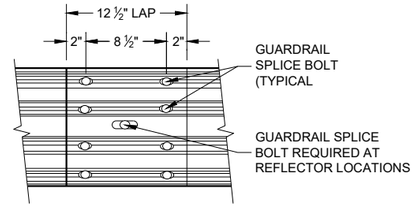
FRONT VIEW
POST SPACING STANDARD INSTALLATION



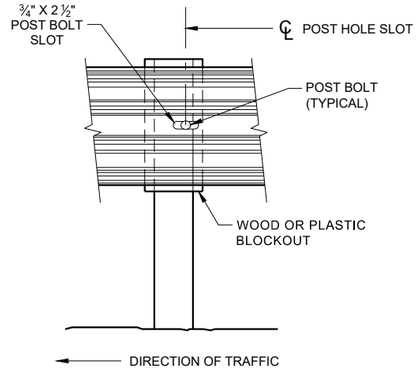
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



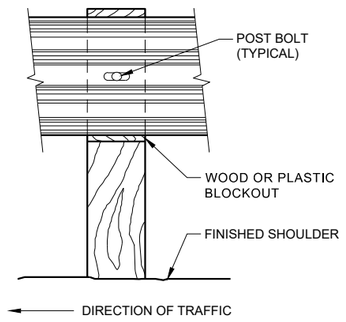
FRONT VIEW
QUARTER POST SPACING (QS)



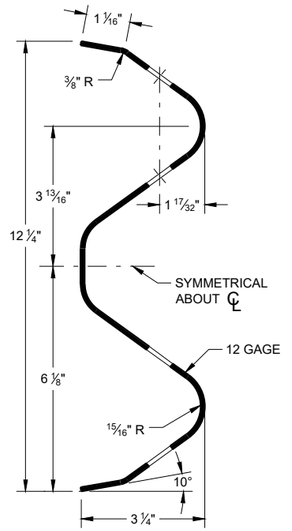
FRONT VIEW
MID-SPAN BEAM SPLICE



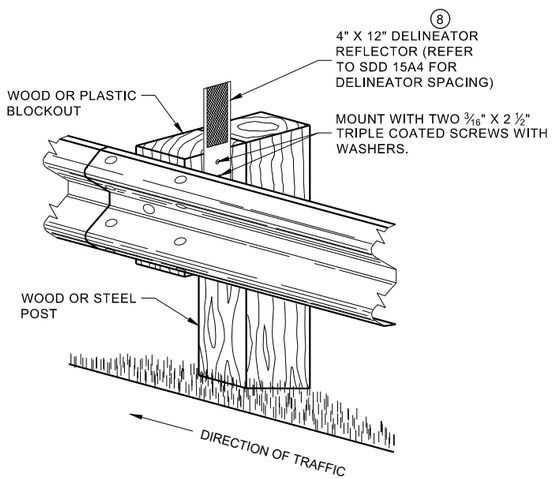
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

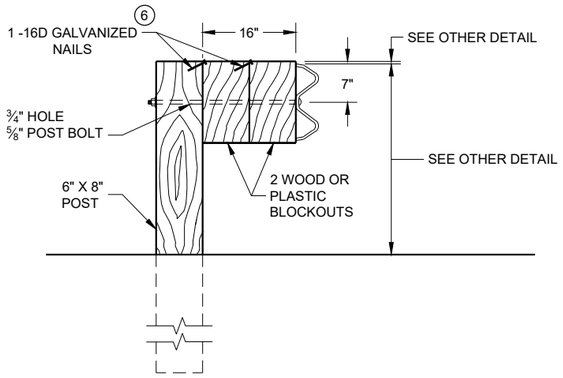
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

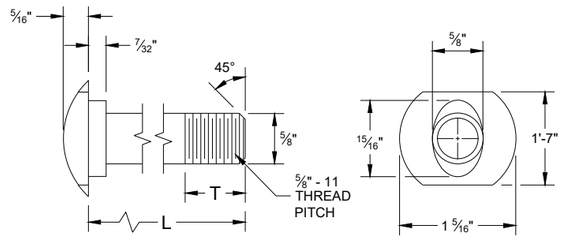


DETAIL FOR 16" BLOCKOUT DEPTH

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

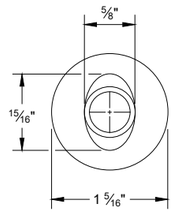
NOTE:

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

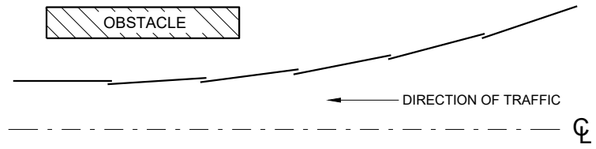


POST BOLT TABLE

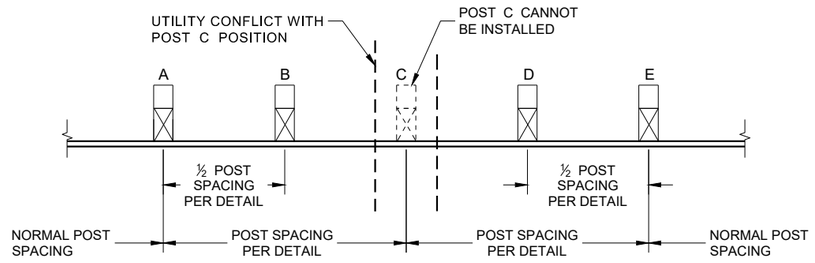
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



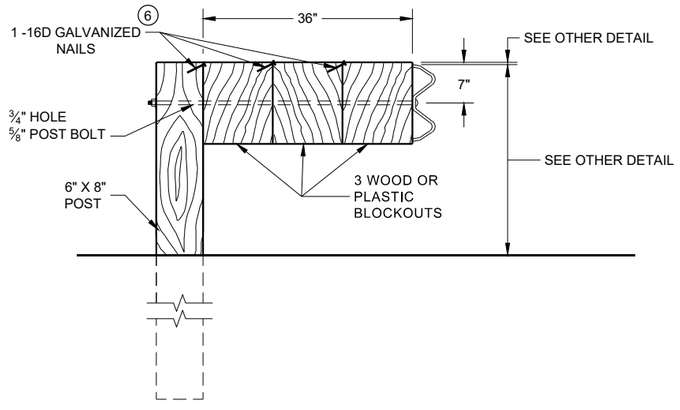
ALTERNATE BOLT HEAD



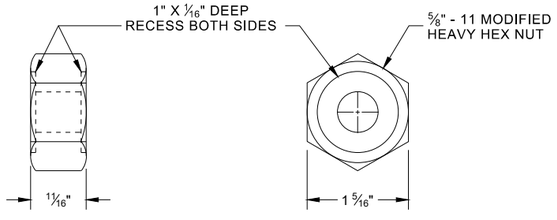
PLAN VIEW
BEAM LAPPING DETAIL



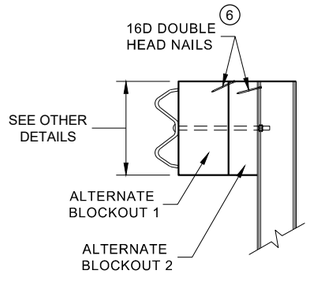
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



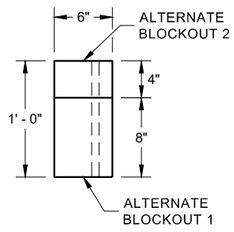
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

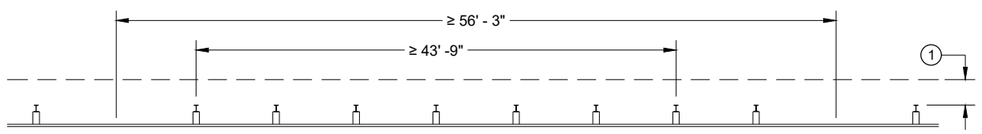
ALTERNATE WOOD BLOCKOUT DETAIL

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

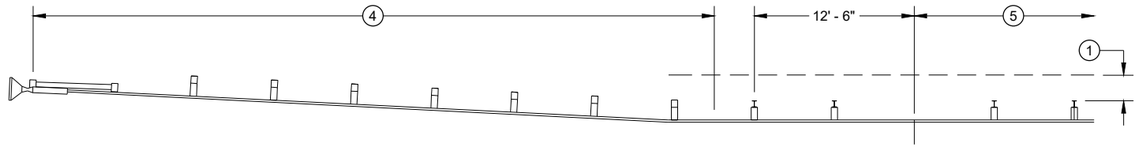
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

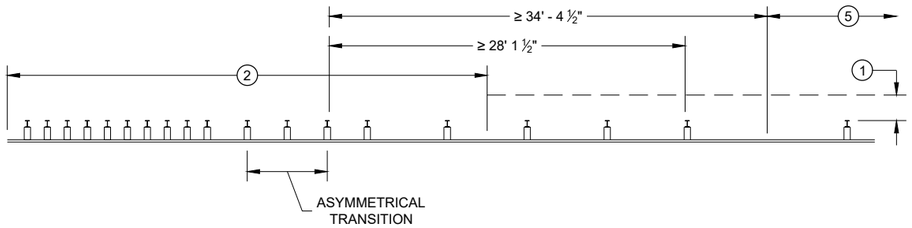
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



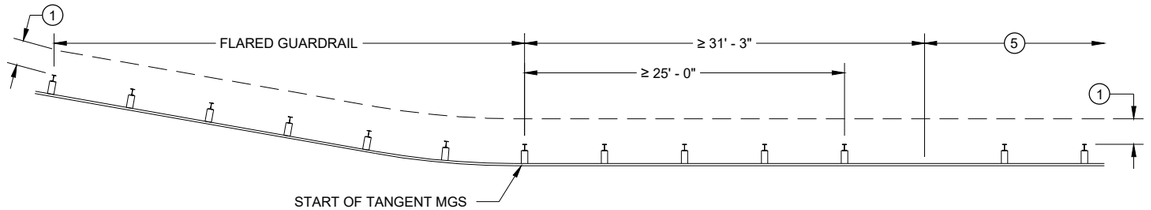
MISSING POST IN NORMAL BEAM GUARD RUN



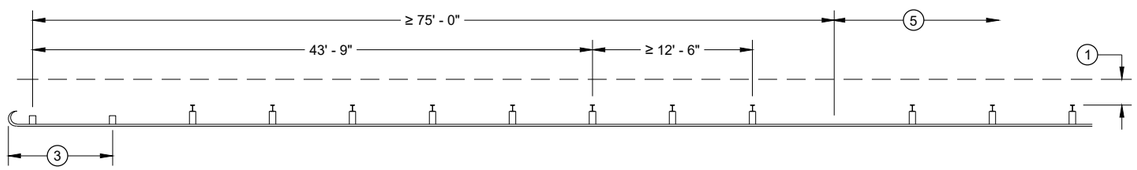
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



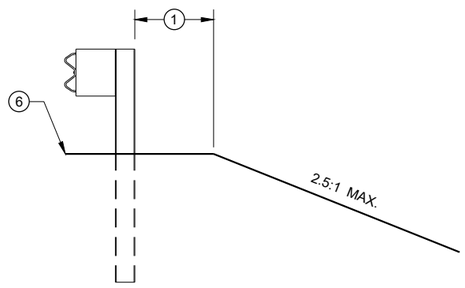
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

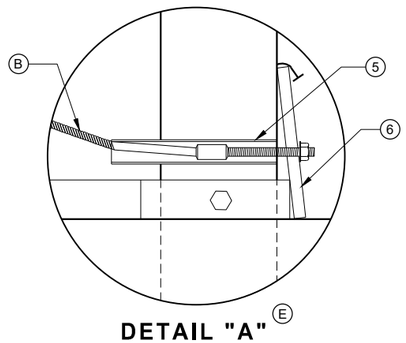
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

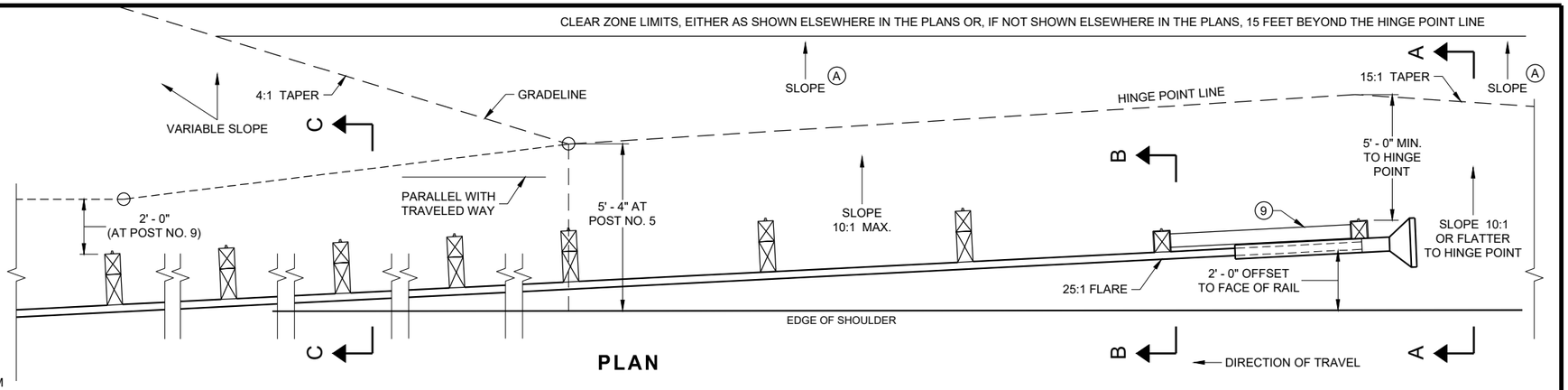
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

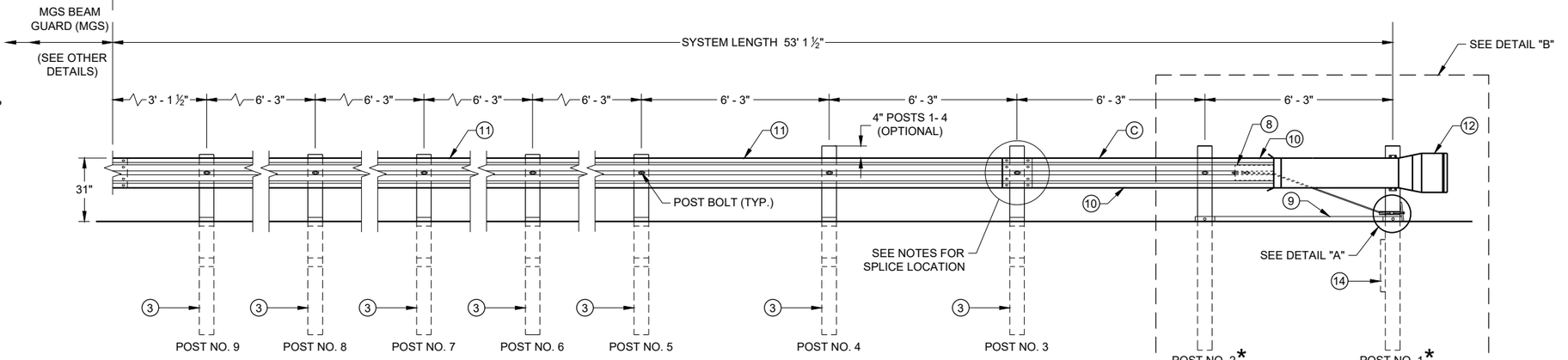
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



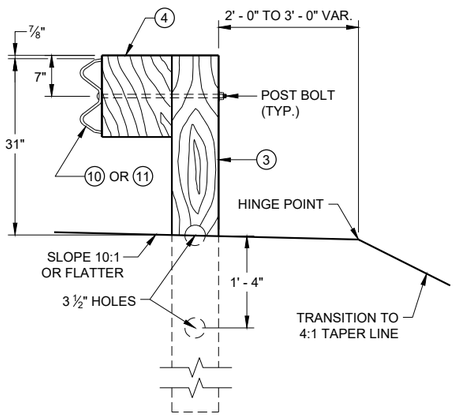
DETAIL "A" (E)



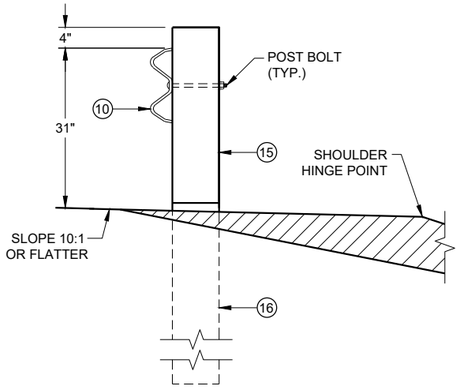
PLAN



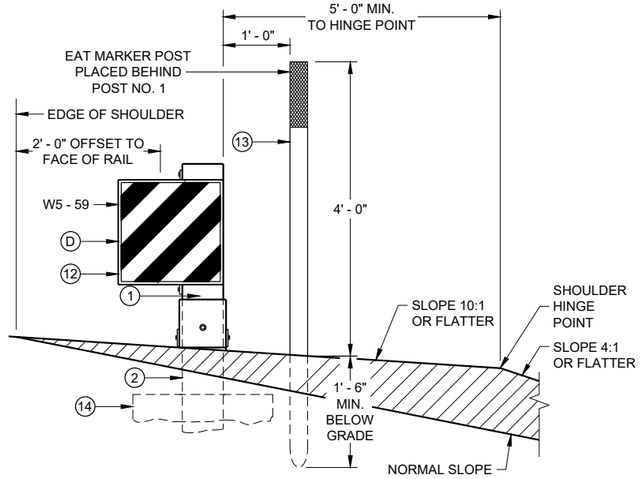
ELEVATION



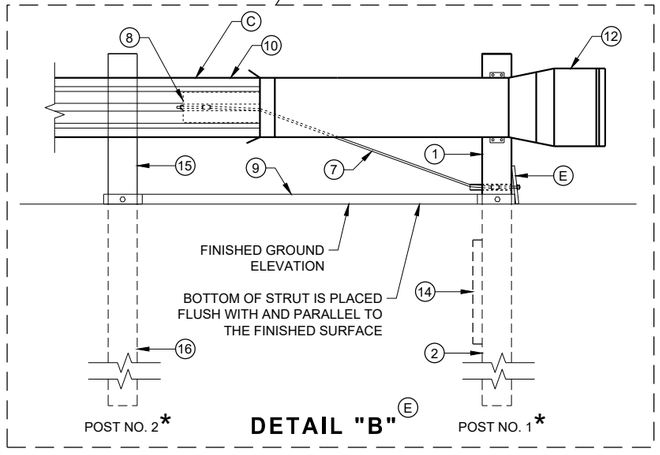
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



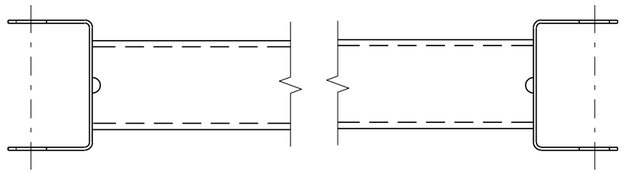
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

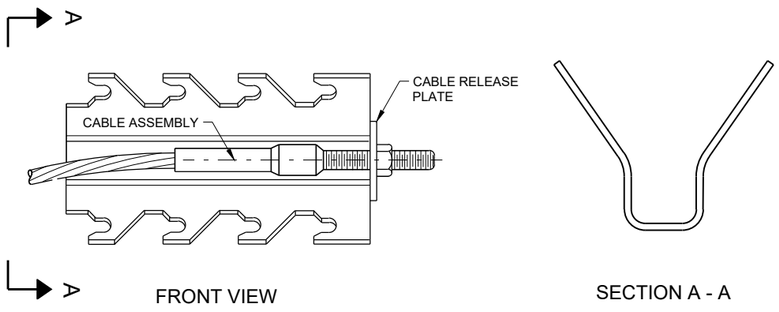
SDD 14B44 - 04a



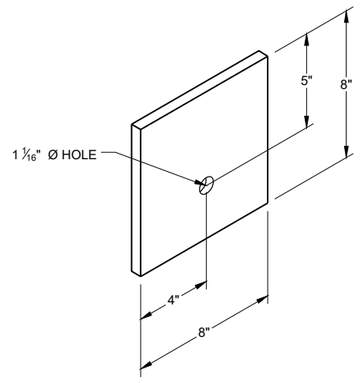
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

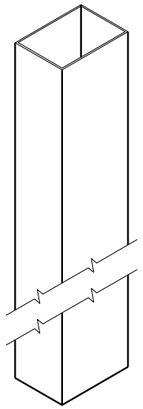
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SDD 14B44 - 04b

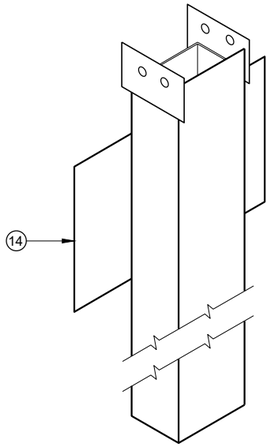
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

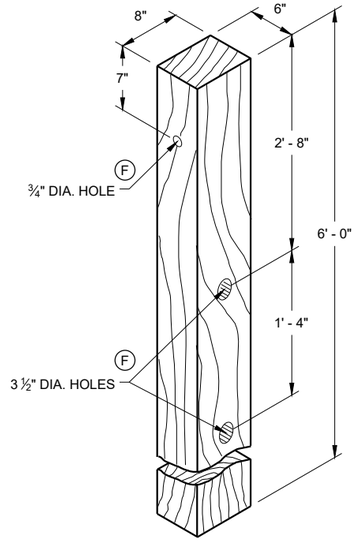
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



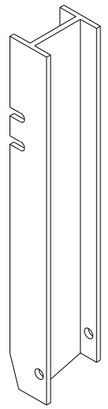
UPPER POST NO. 1 (1) (E)



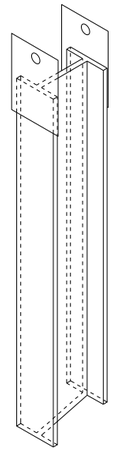
LOWER POST NO. 1 (2) (E)



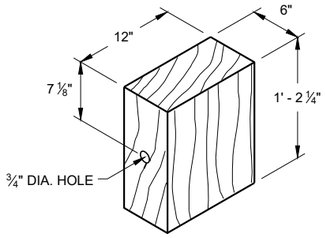
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



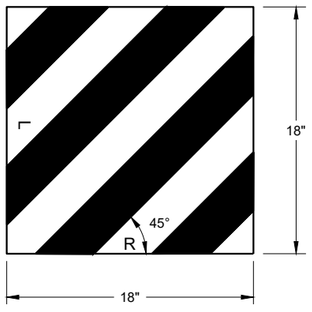
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

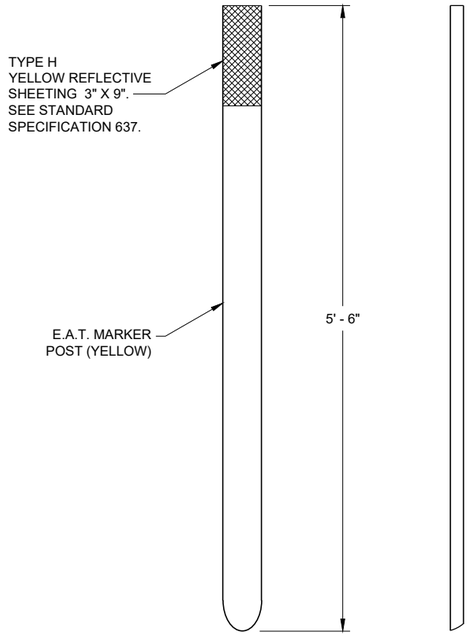


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



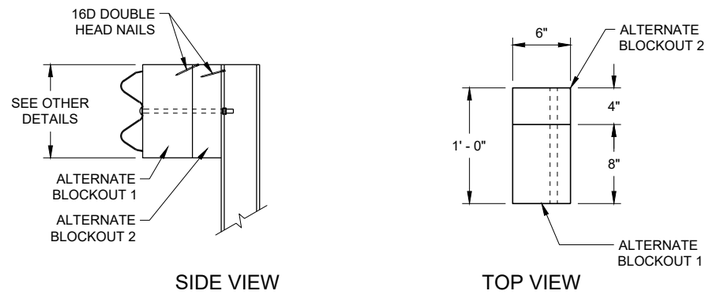
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

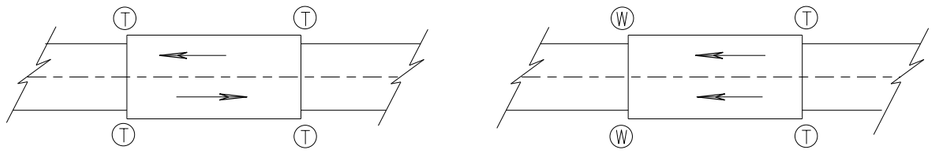
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

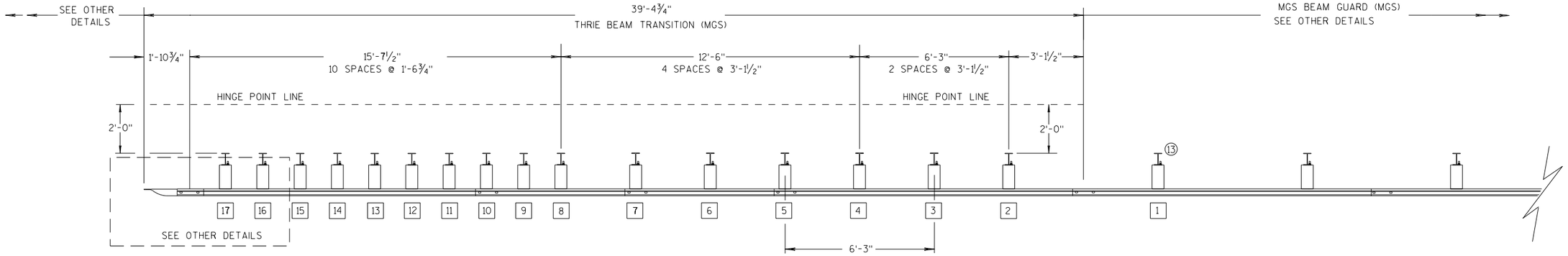
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

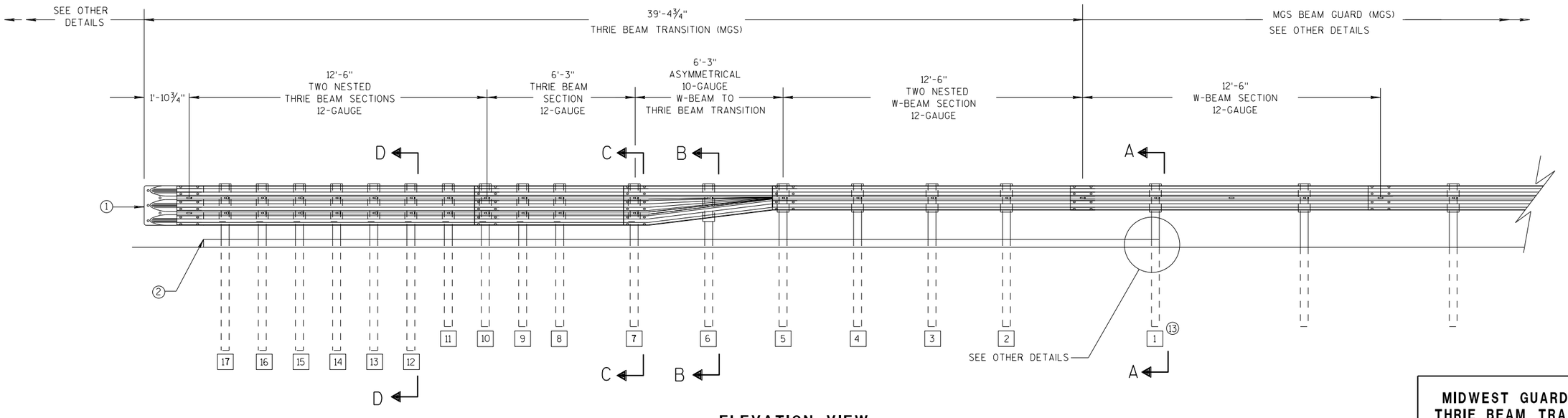
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

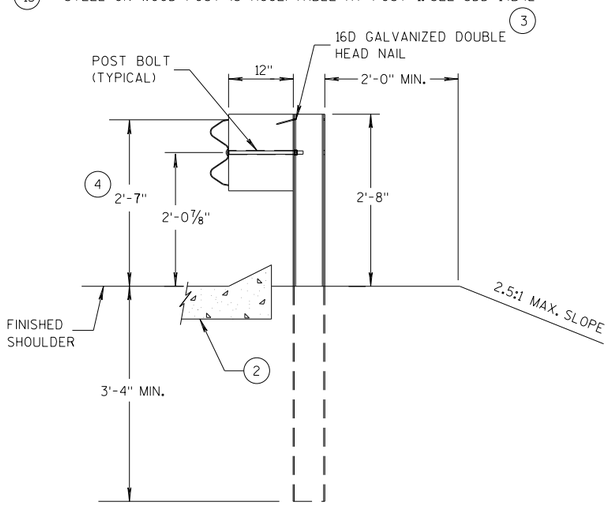
GENERAL NOTES

(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.

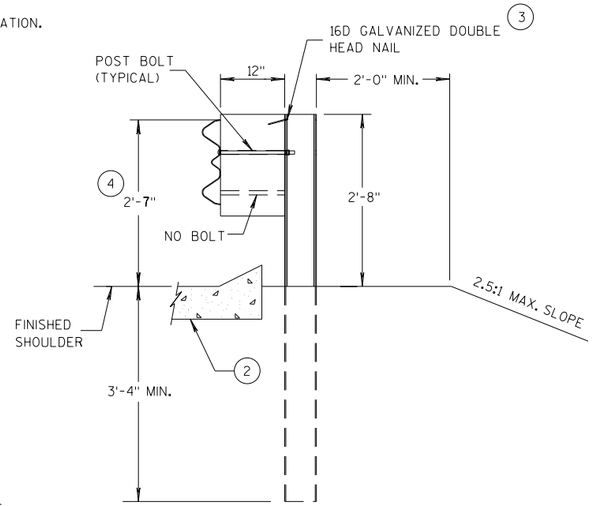
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



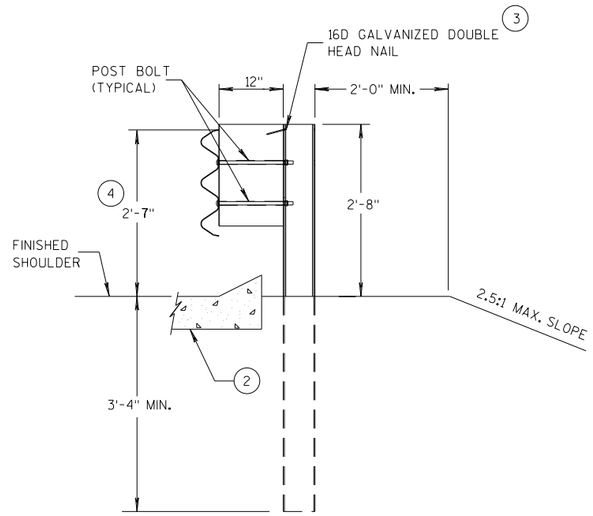
SECTION A-A (13)

POSTS 1-5



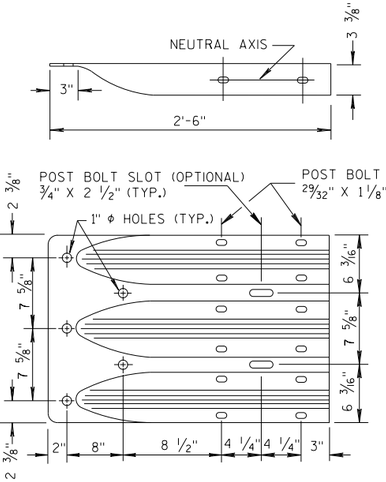
SECTION B-B

POST 6

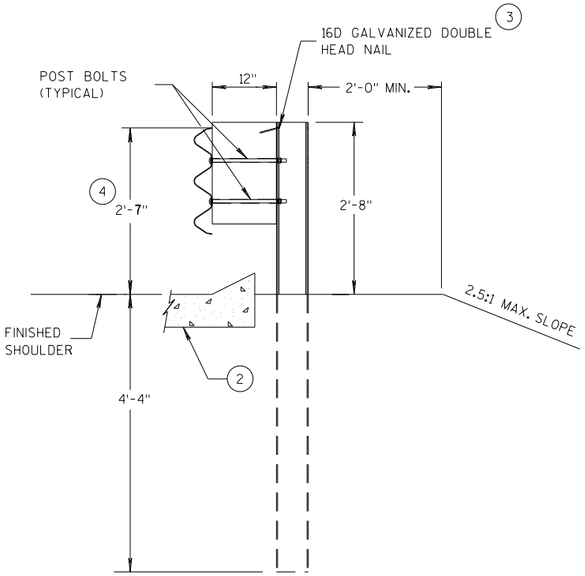


SECTION C-C

POSTS 7-11

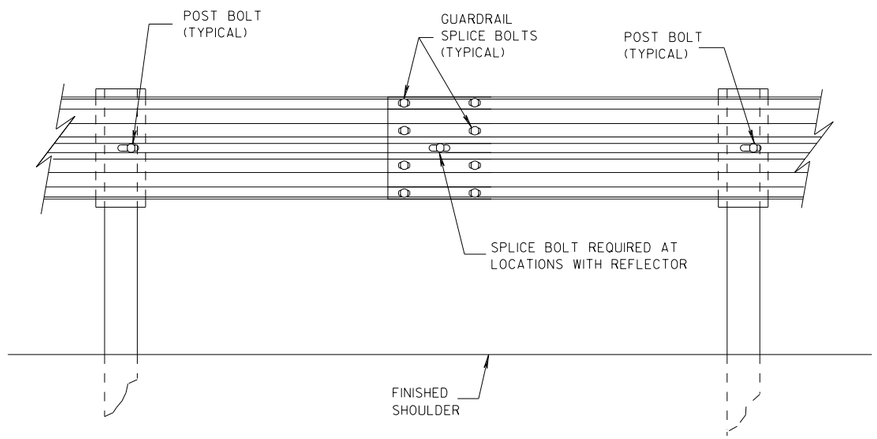


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

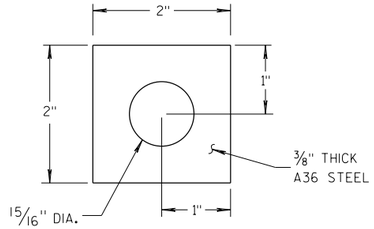
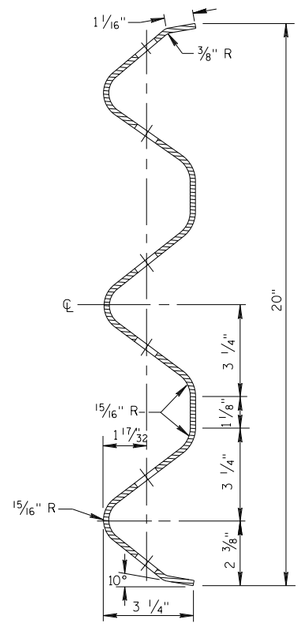


PLATE WASHER DETAIL



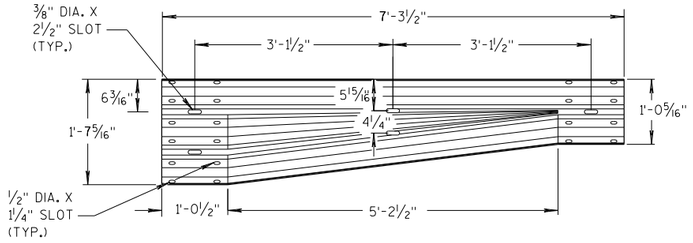
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

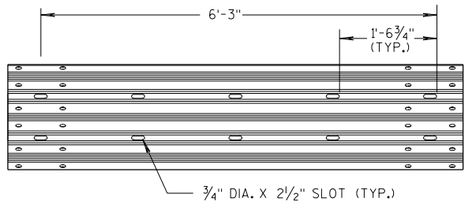
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

6

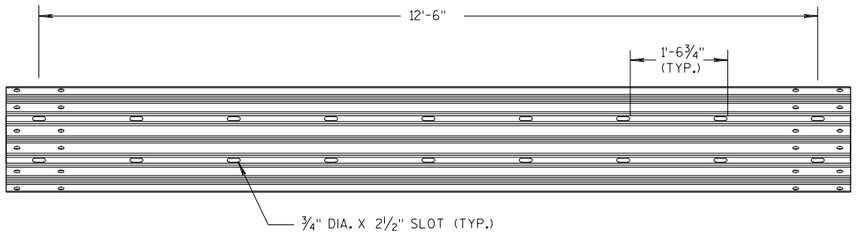
S.D.D. 14 B 45-5b



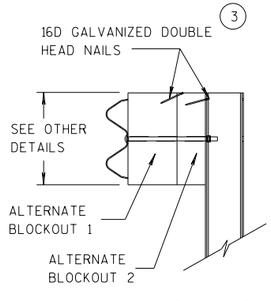
W-BEAM TO THRIE BEAM TRANSITION SECTION



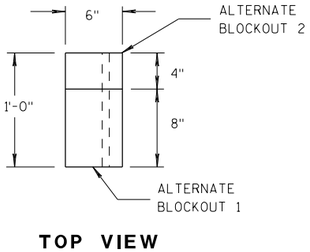
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

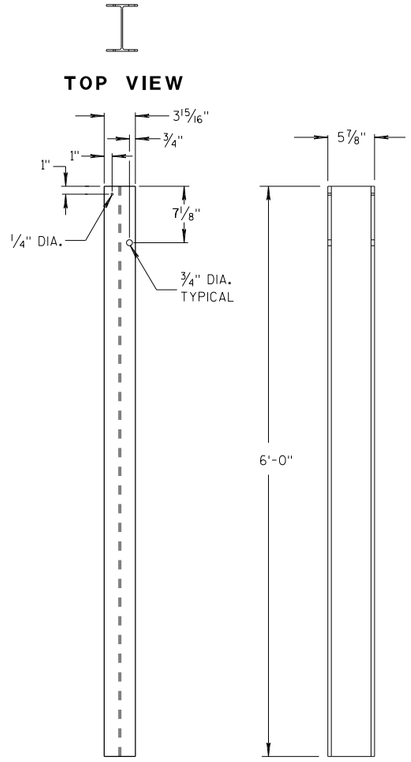


SIDE VIEW



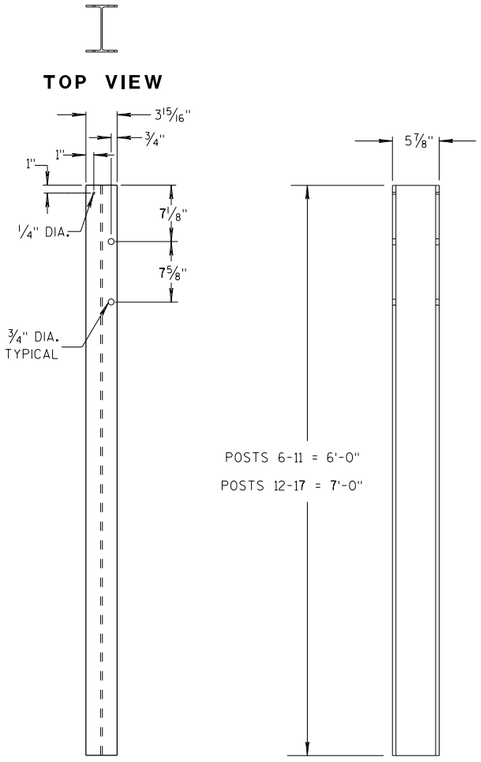
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



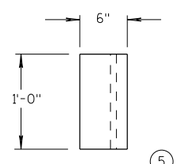
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

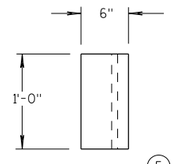


FRONT VIEW SIDE VIEW

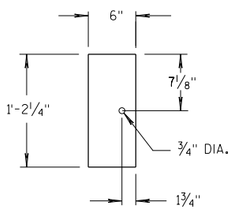
STEEL POSTS 6-17



TOP VIEW (5)

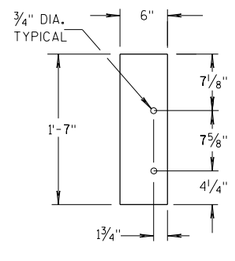


TOP VIEW (5)



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.

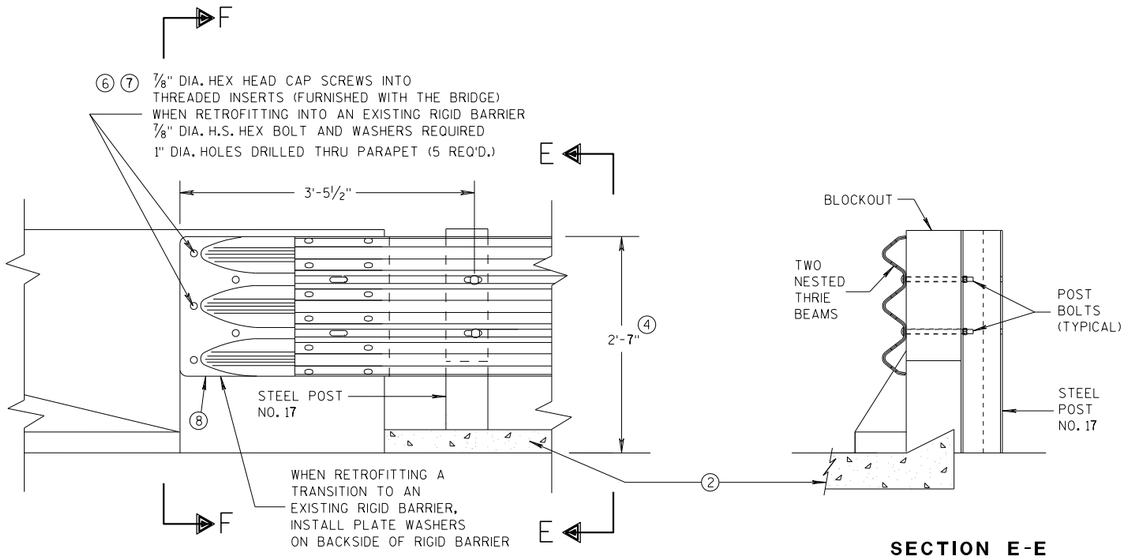
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

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.

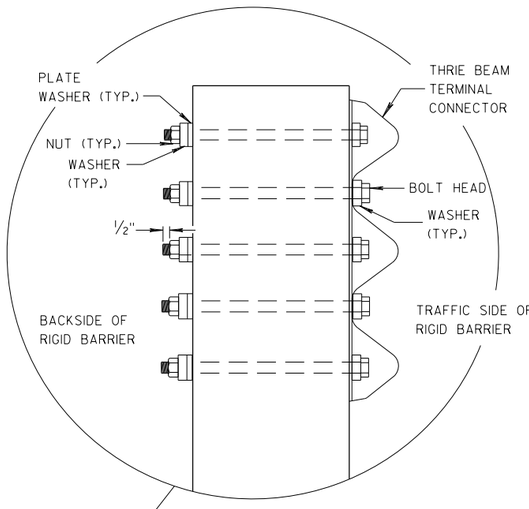
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

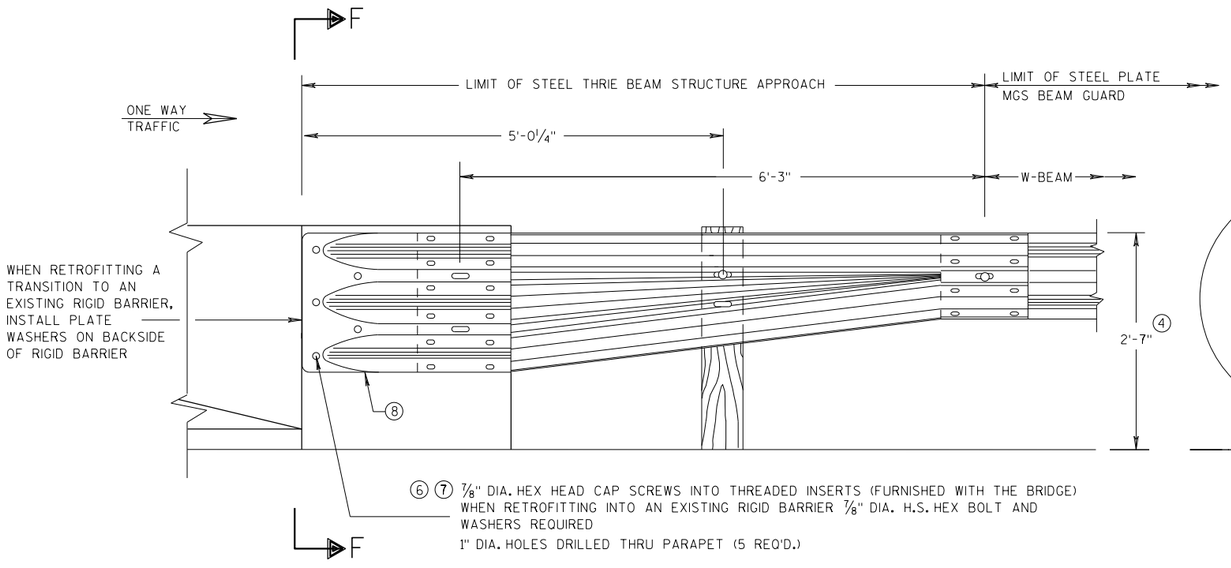
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

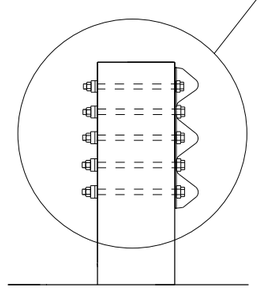
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

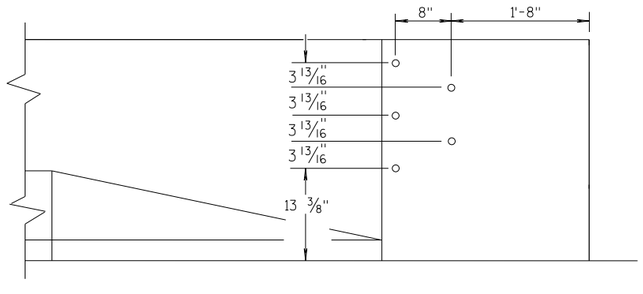




FRONT VIEW



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

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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.

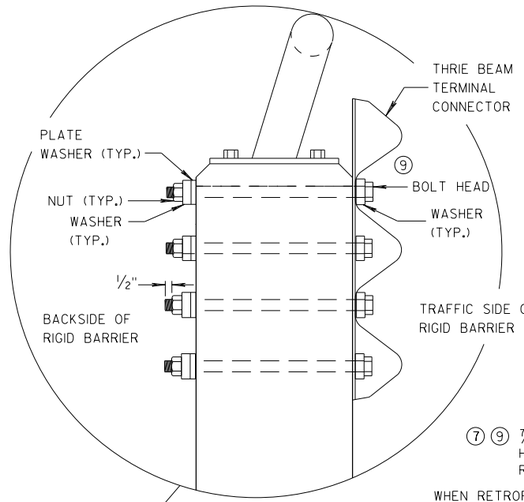
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

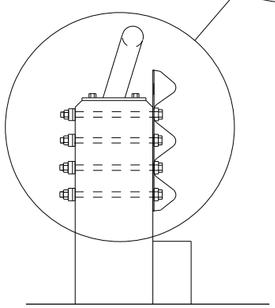
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

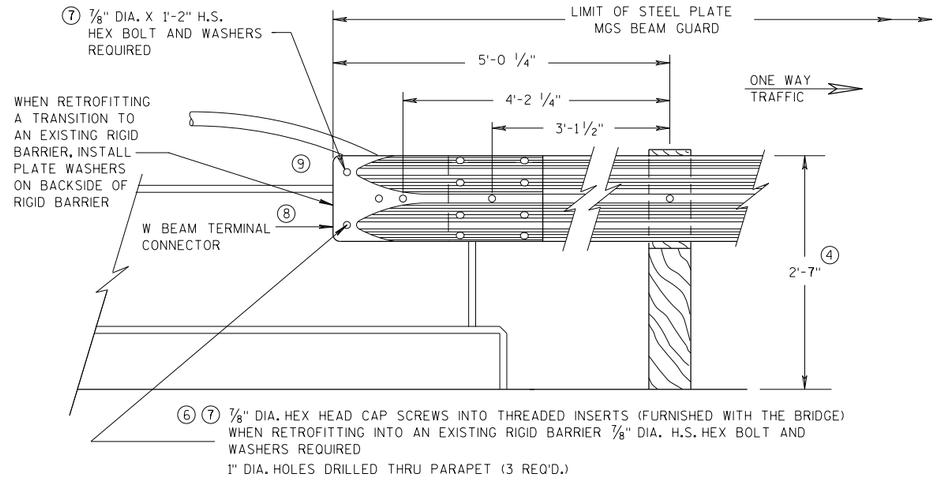
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(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.





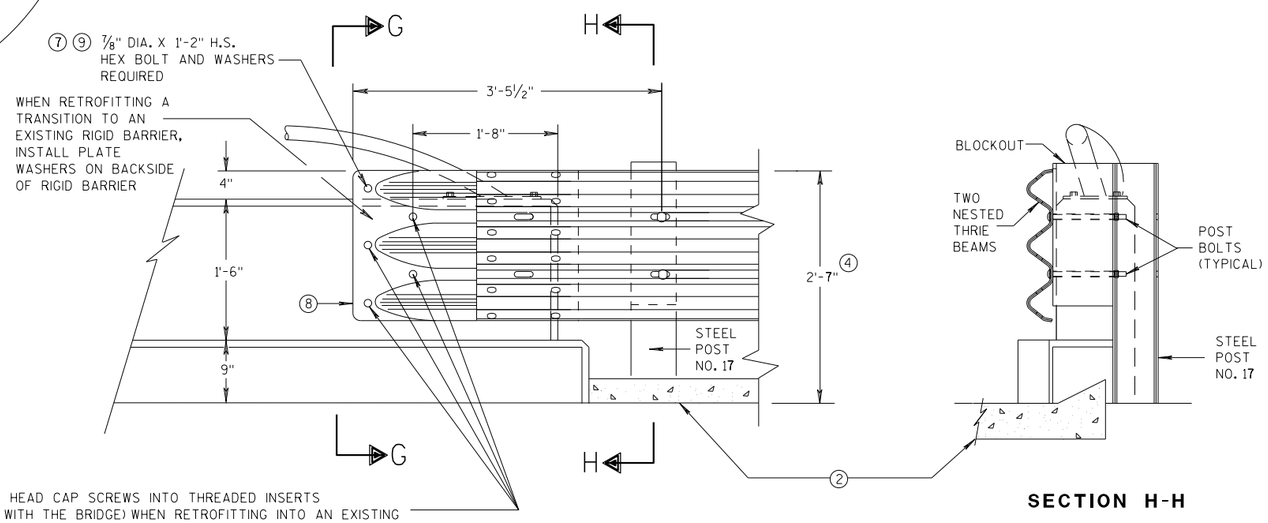
SECTION G-G



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

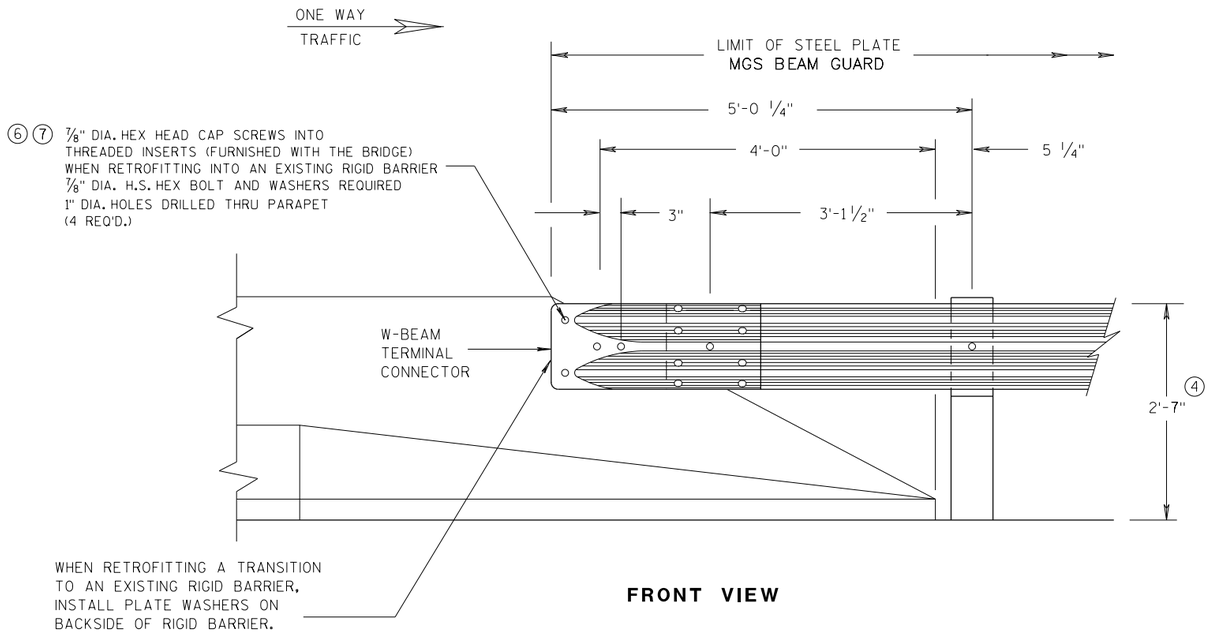
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
NT
FHWA

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

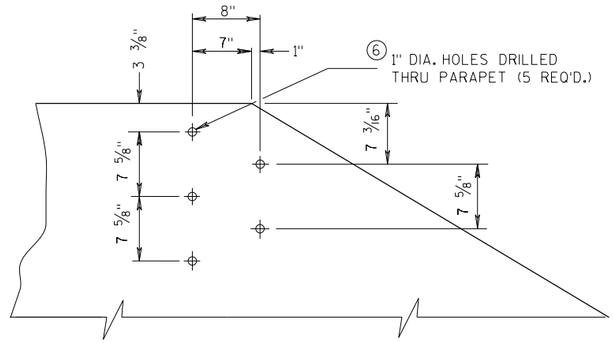
GENERAL NOTES

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

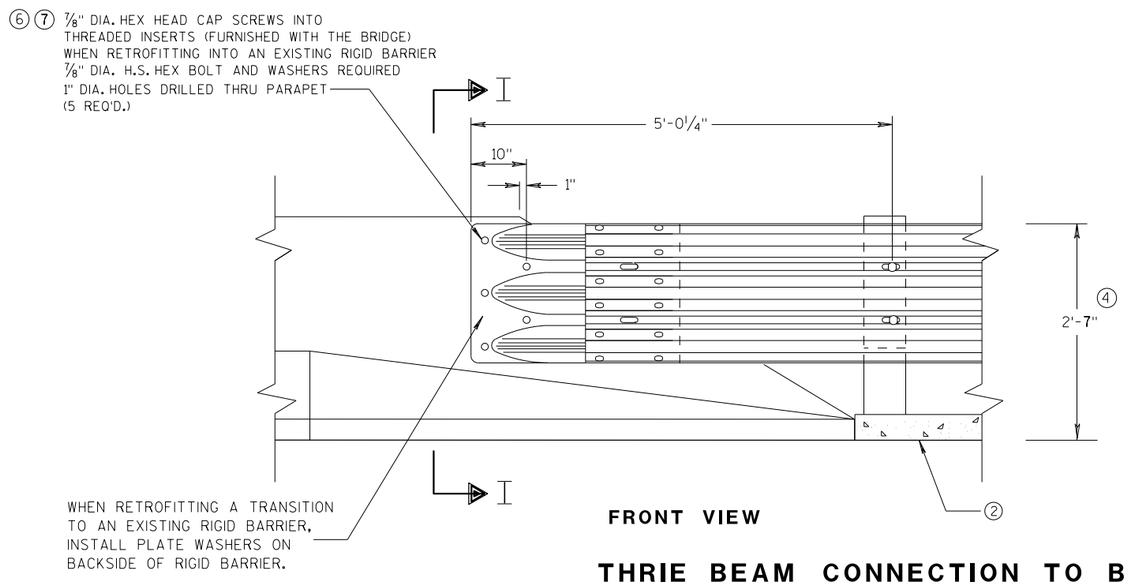
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

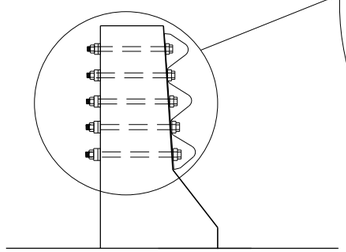
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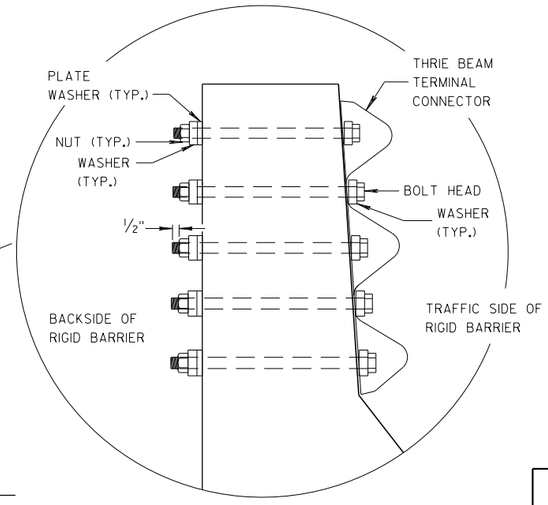
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I

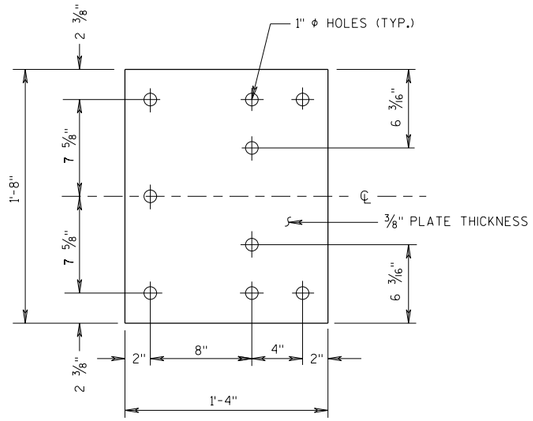


THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

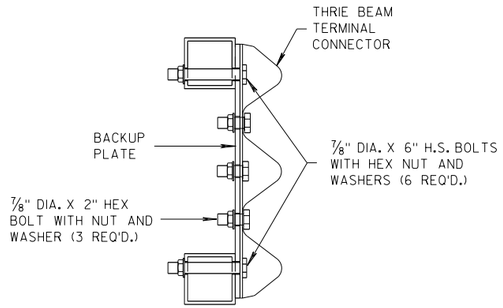
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

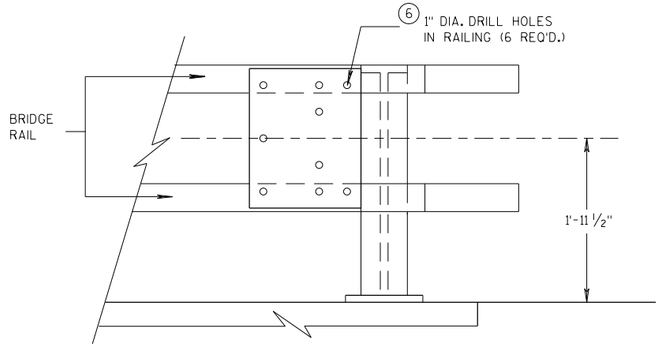
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07/2018 — DATE
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FHWA



BACK-UP PLATE DETAIL



SECTION J-J

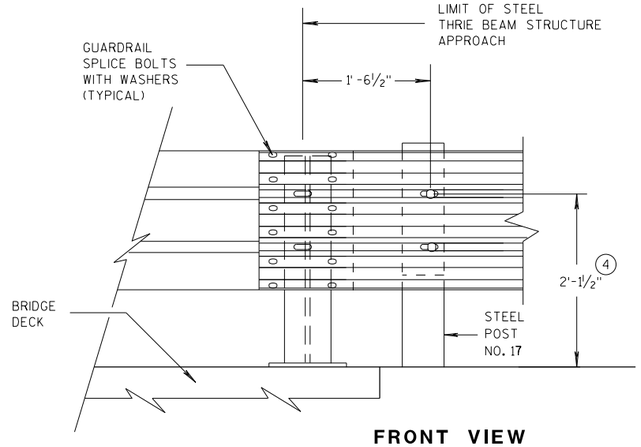


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

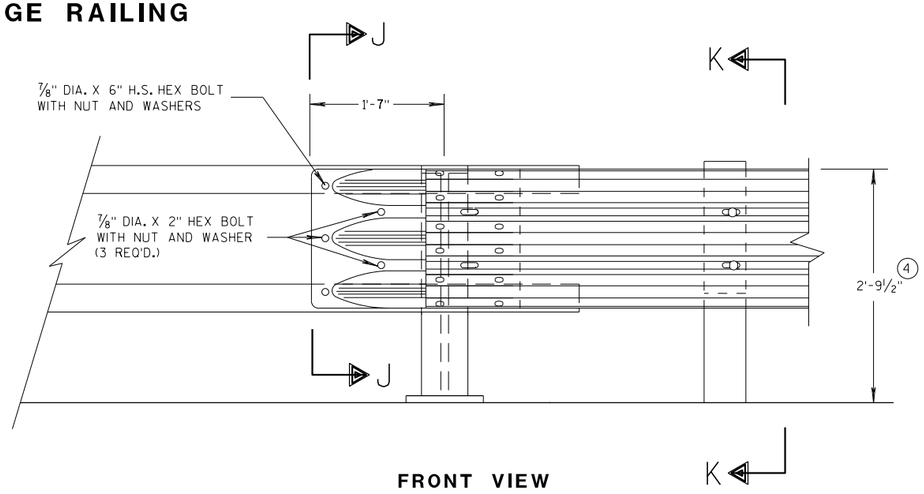
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

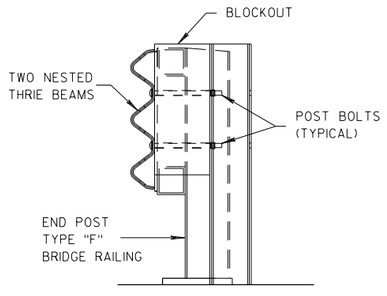


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
FHWA

/S/ Rodney Taylor 95
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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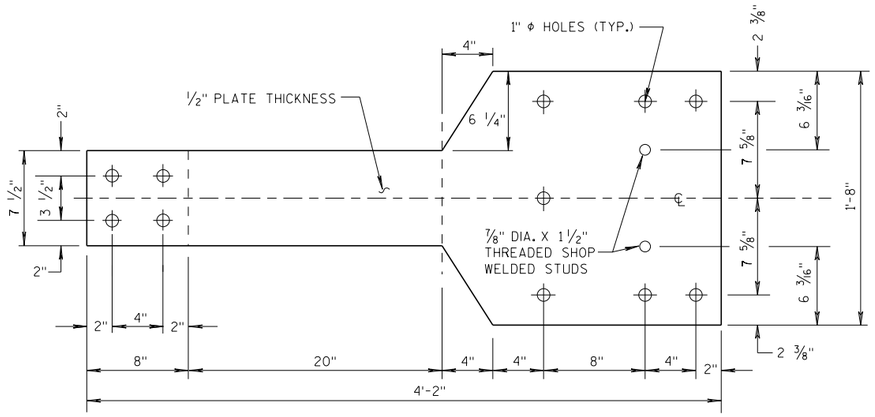
S.D.D. 14 B 45-5g

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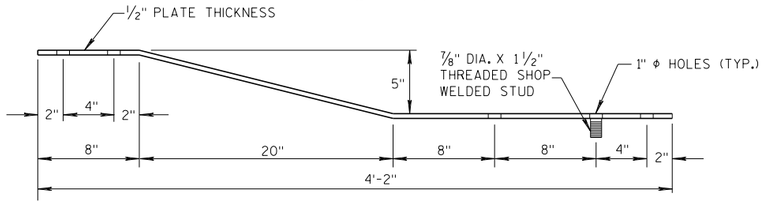
S.D.D. 14 B 45-5g

GENERAL NOTES

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

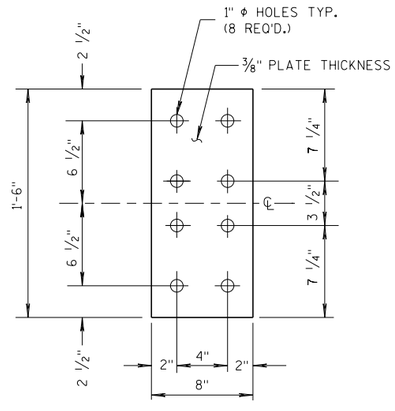


FRONT VIEW



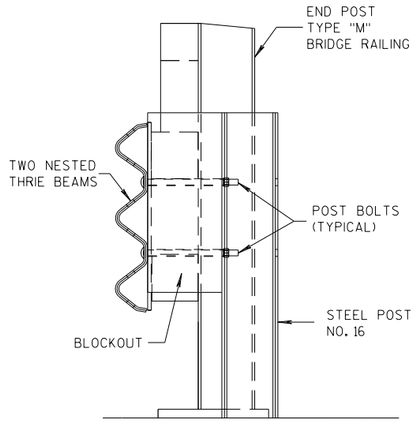
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

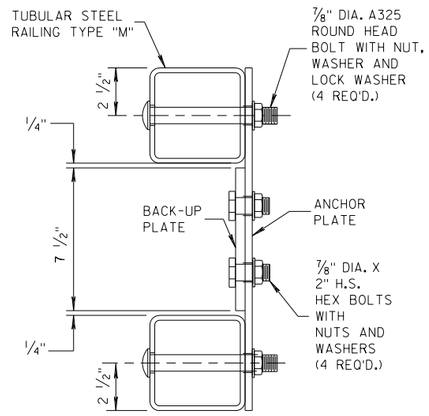


FRONT VIEW

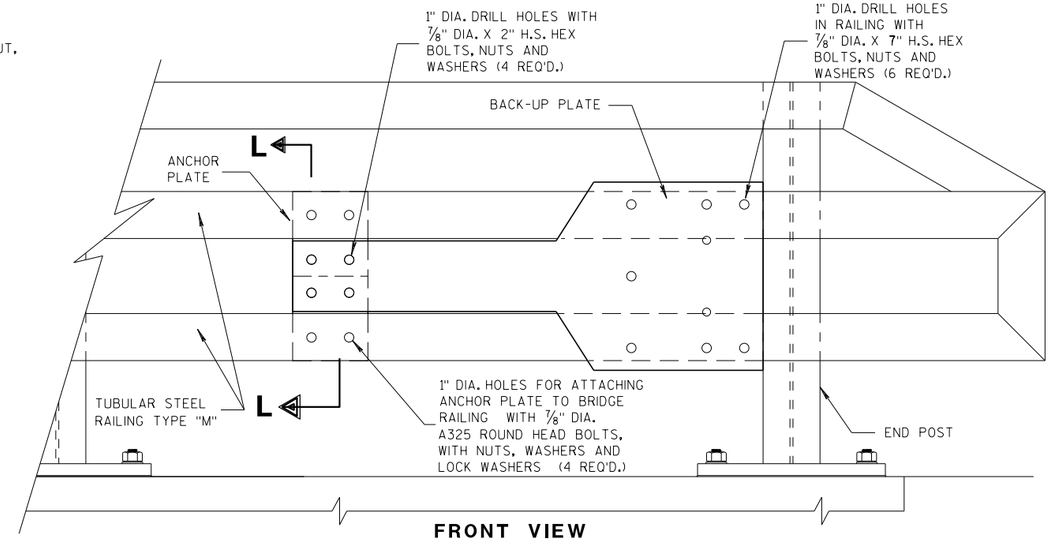
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

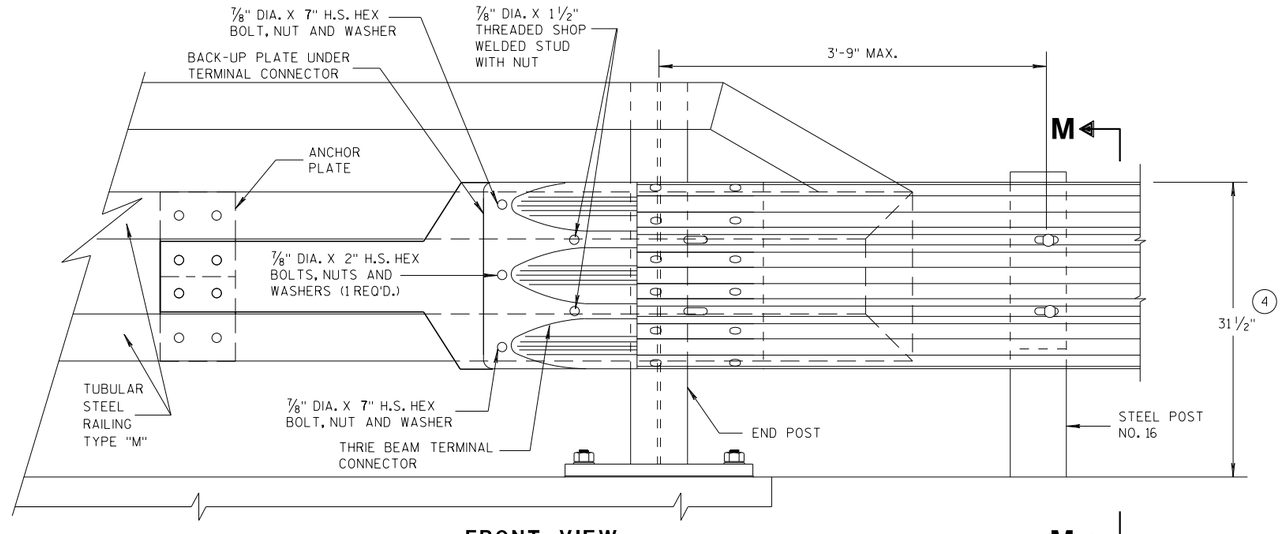


SECTION L-L

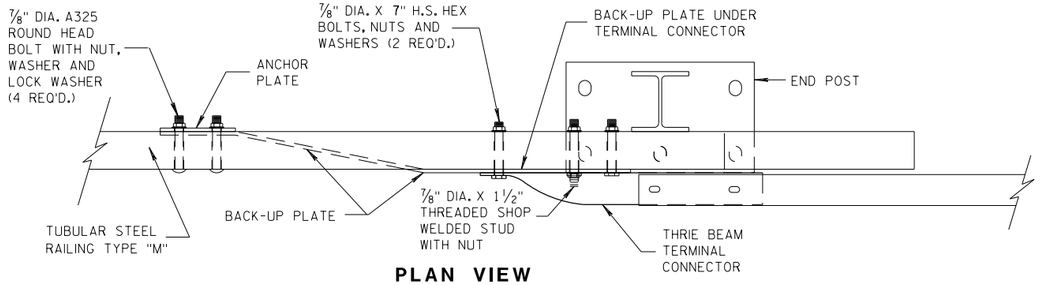


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

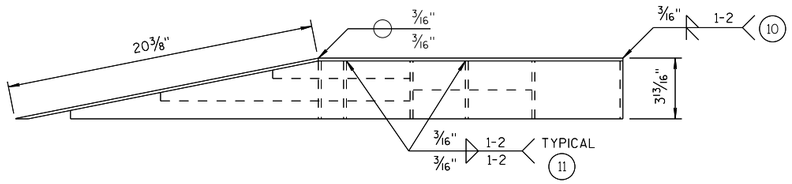
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

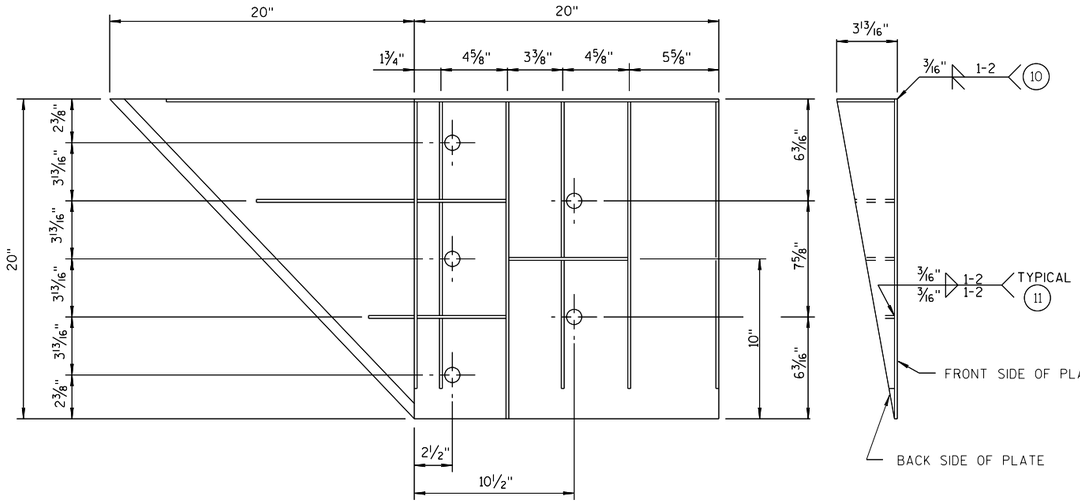
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S.D.D. 14 B 45-5h

6

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

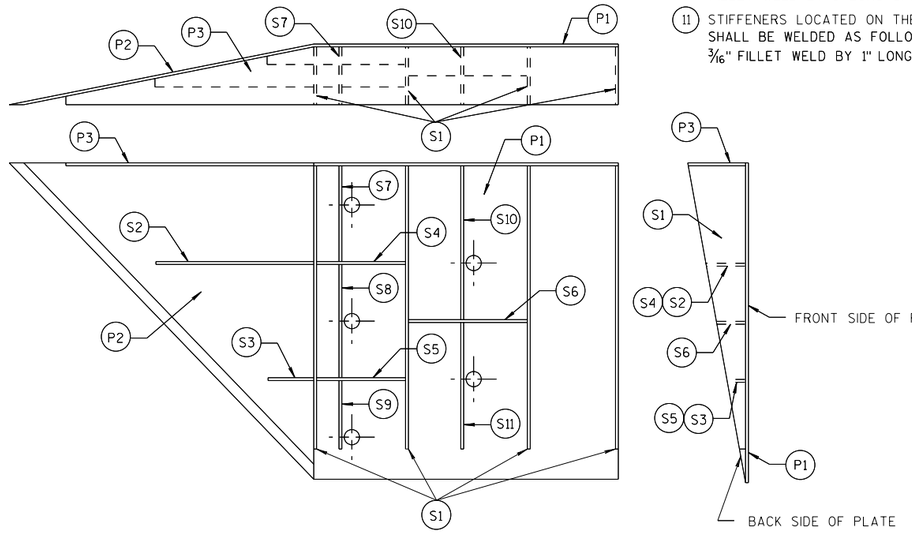


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
DATE
FHWA

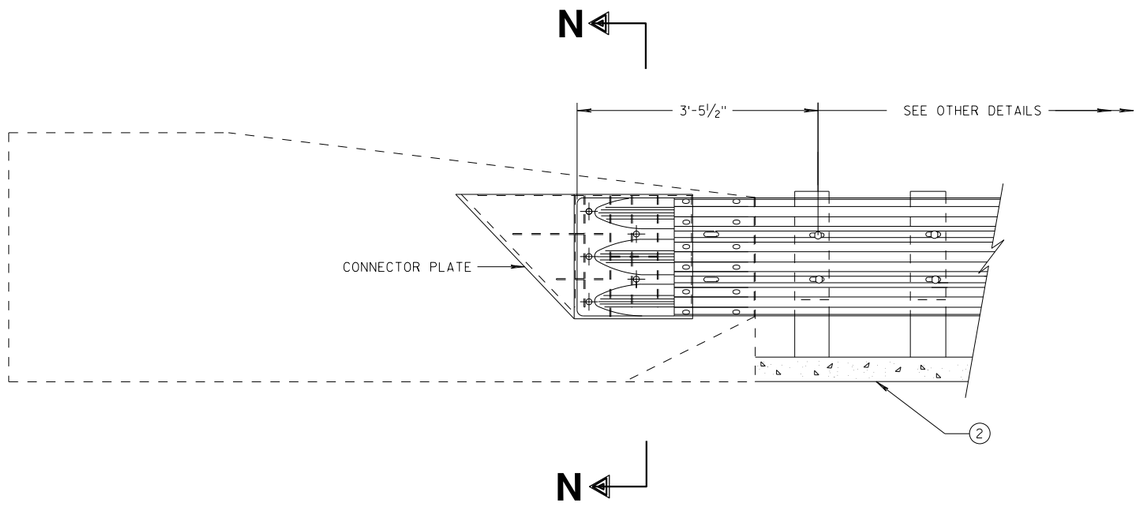
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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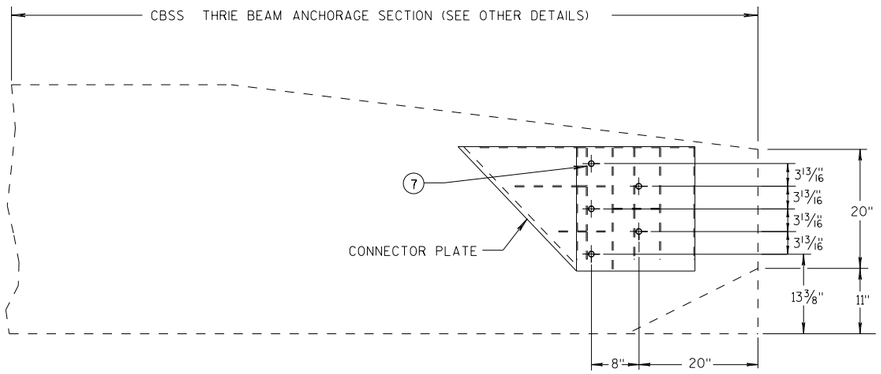
S.D.D. 14 B 45-5i

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



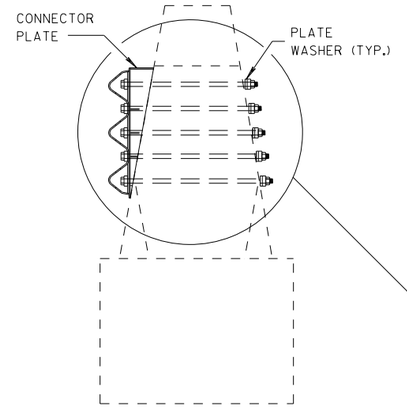
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

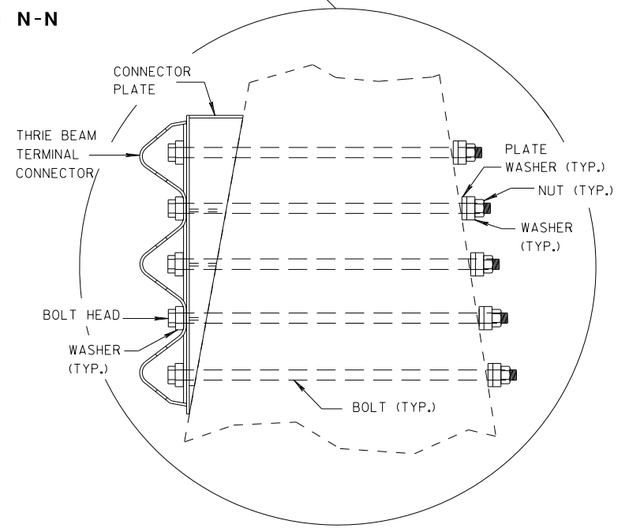
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
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FHWA

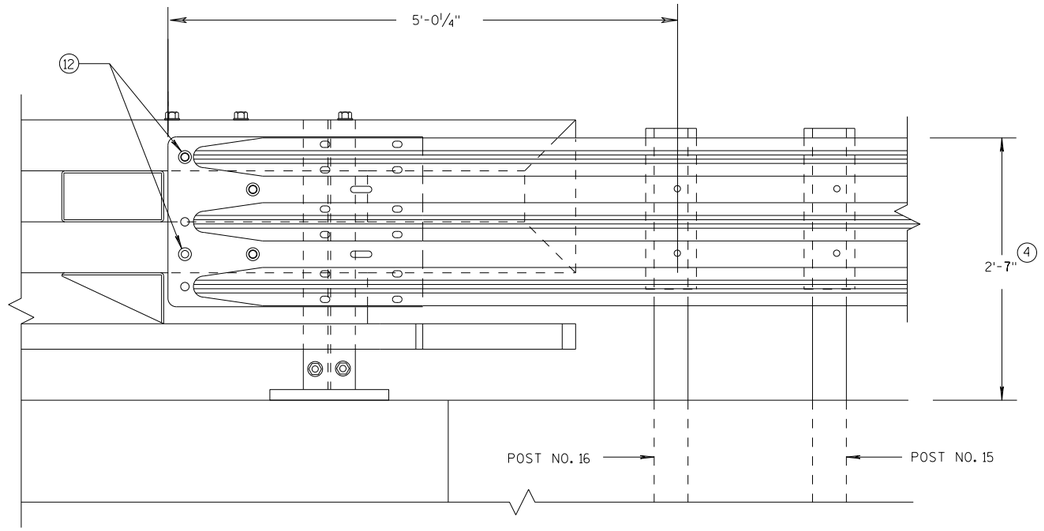
/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

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

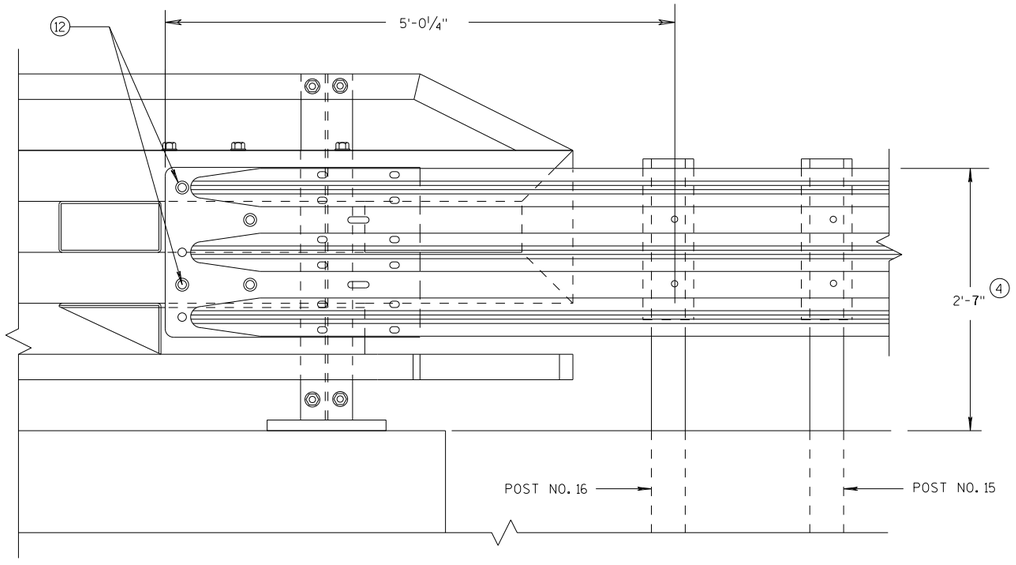
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
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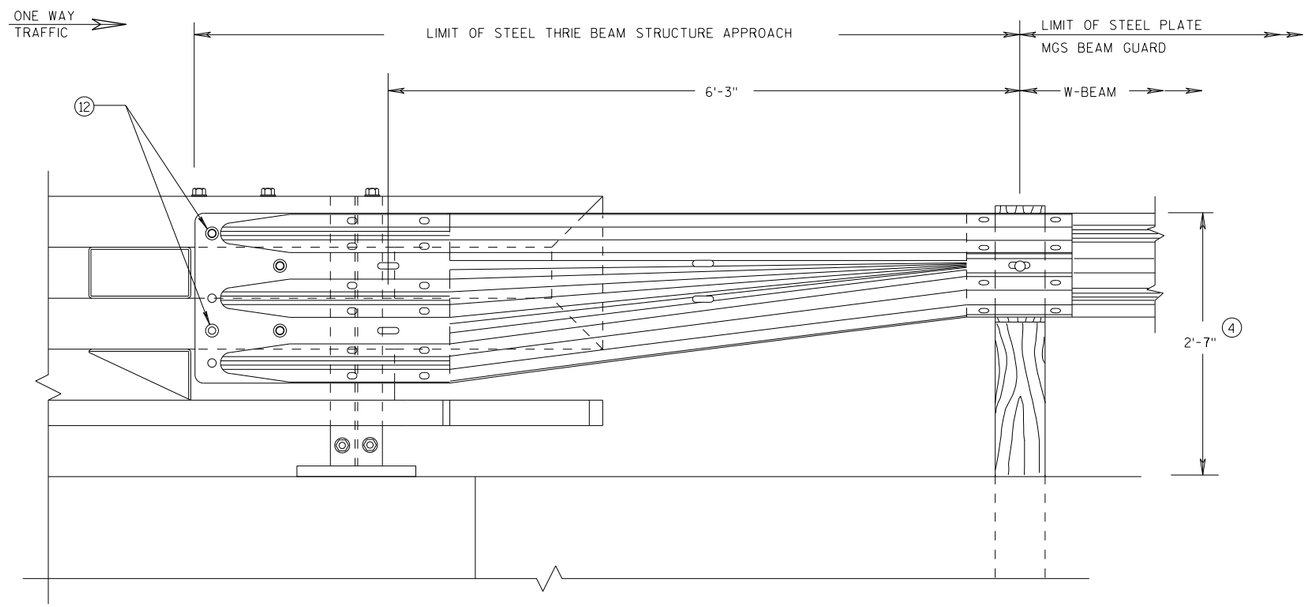
/S/ Rodney Taylor
ROADWAY STANDARDS D 99 NT
UNIT SUPERVIS

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

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



FRONT VIEW

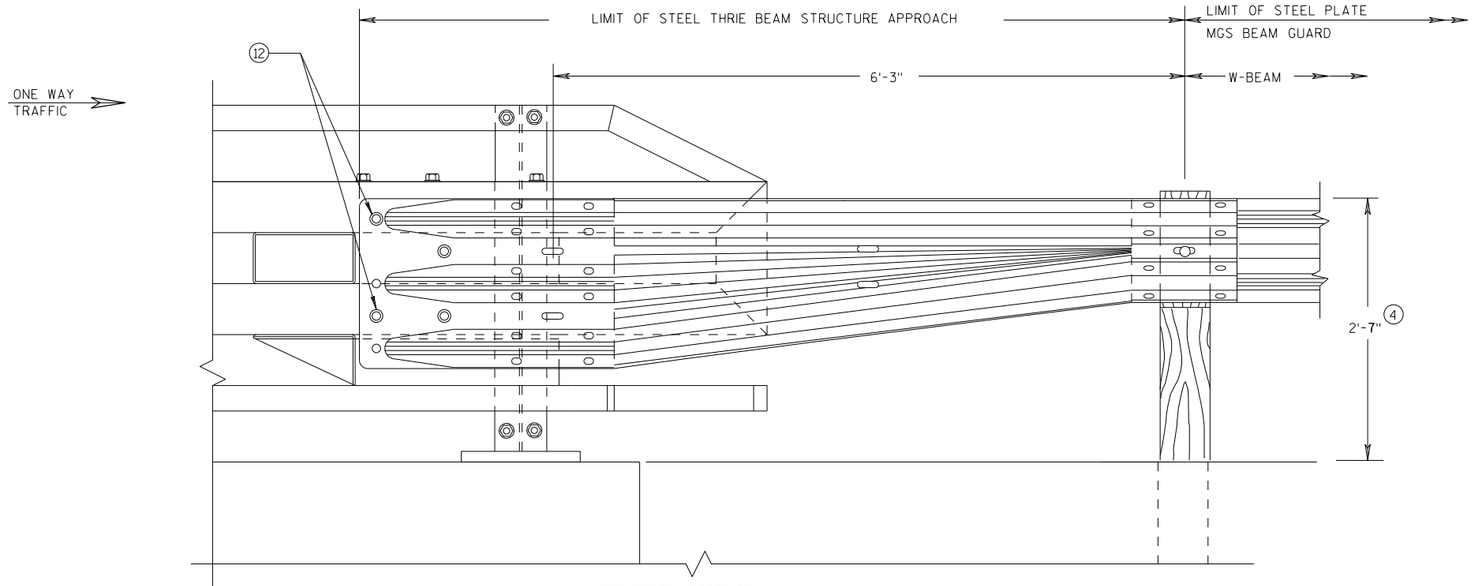
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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APPROVED
7/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS
FHWA

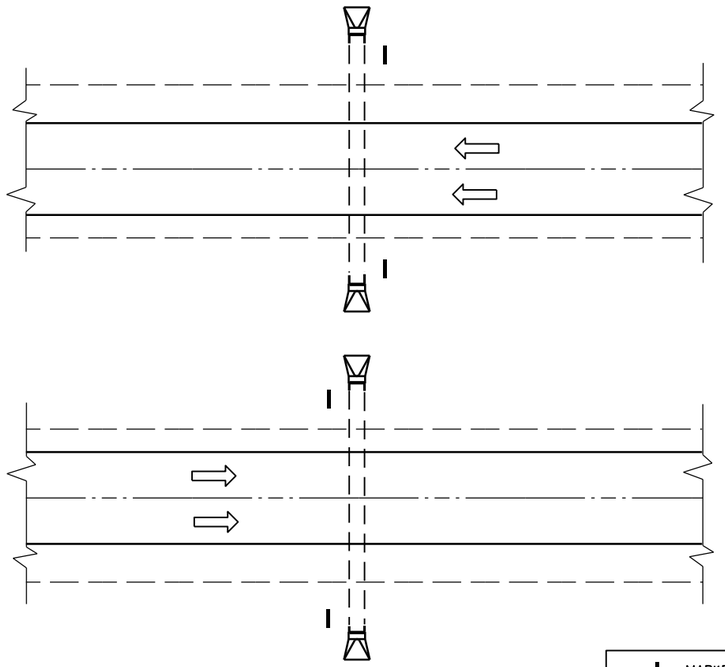
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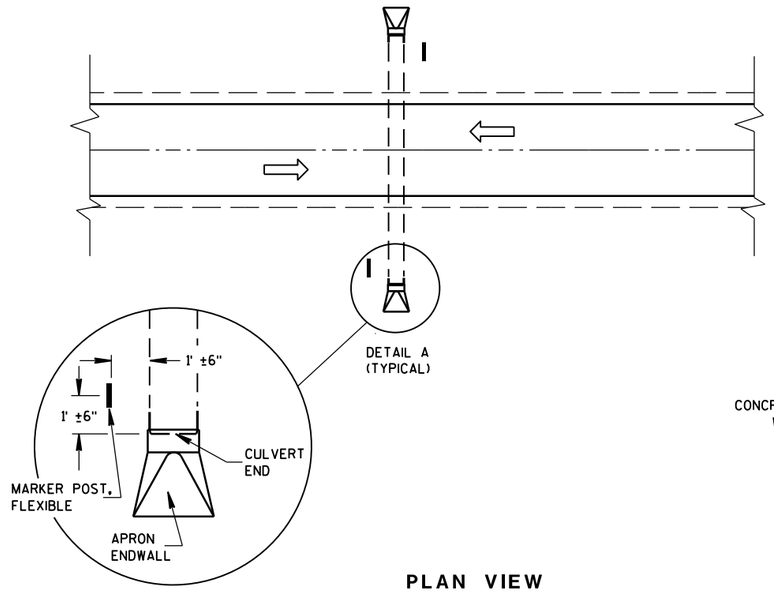
S.D.D. 14 B 45-5L

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



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

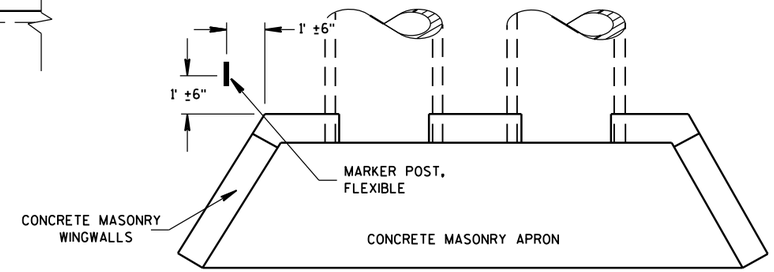
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

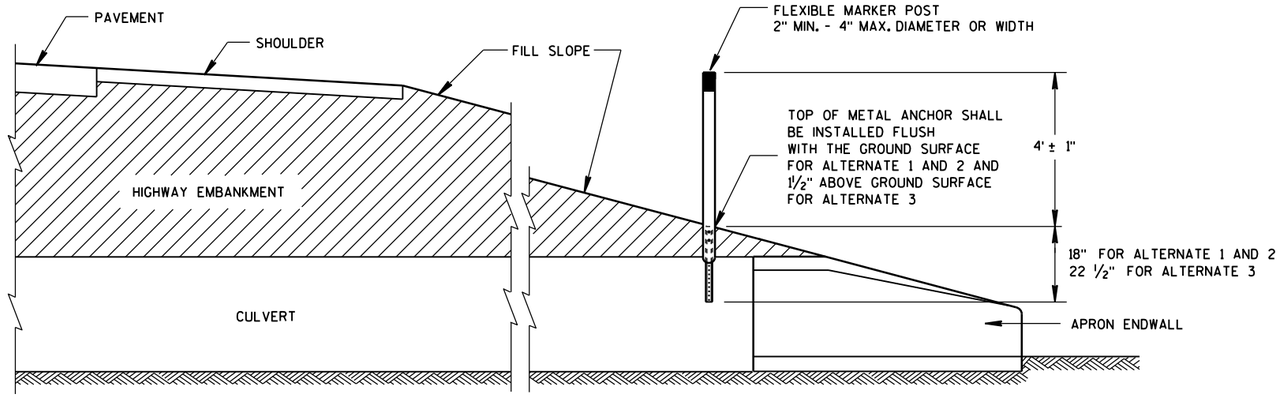
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

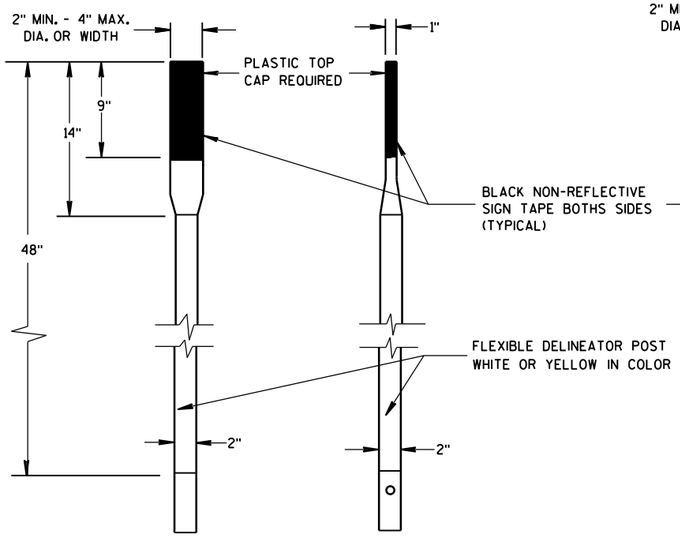
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

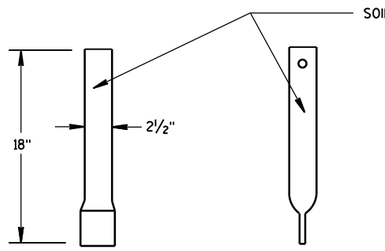
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S.D.D. 15 A 3-2a

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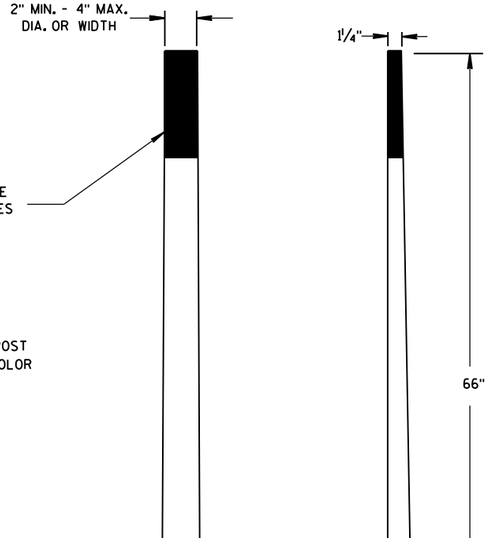
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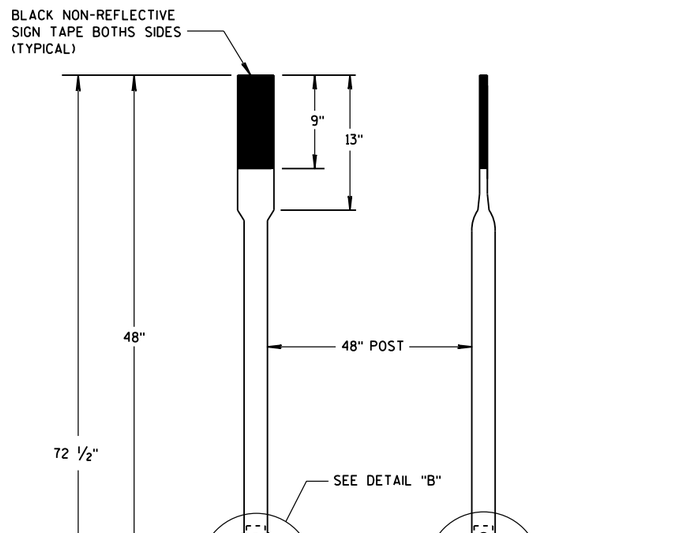
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

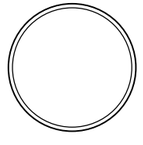
ALTERNATE 2



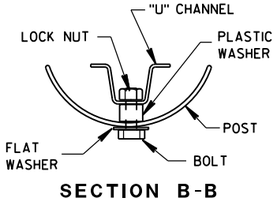
FRONT VIEW SIDE VIEW

ALTERNATE 3

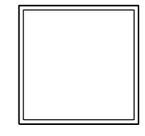
FLEXIBLE MARKER POSTS



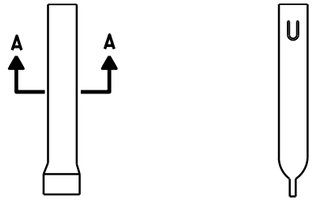
SECTION A-A



SECTION B-B

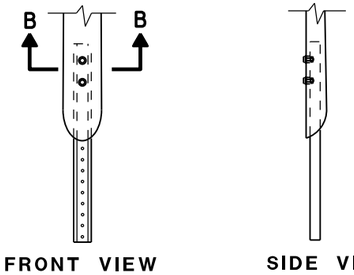


SECTION C-C



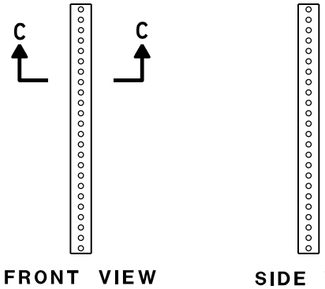
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

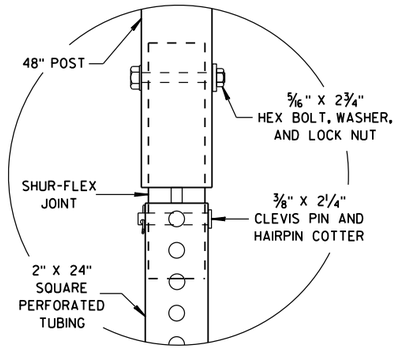
ALTERNATE 2



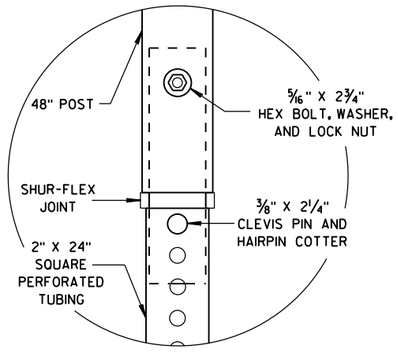
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

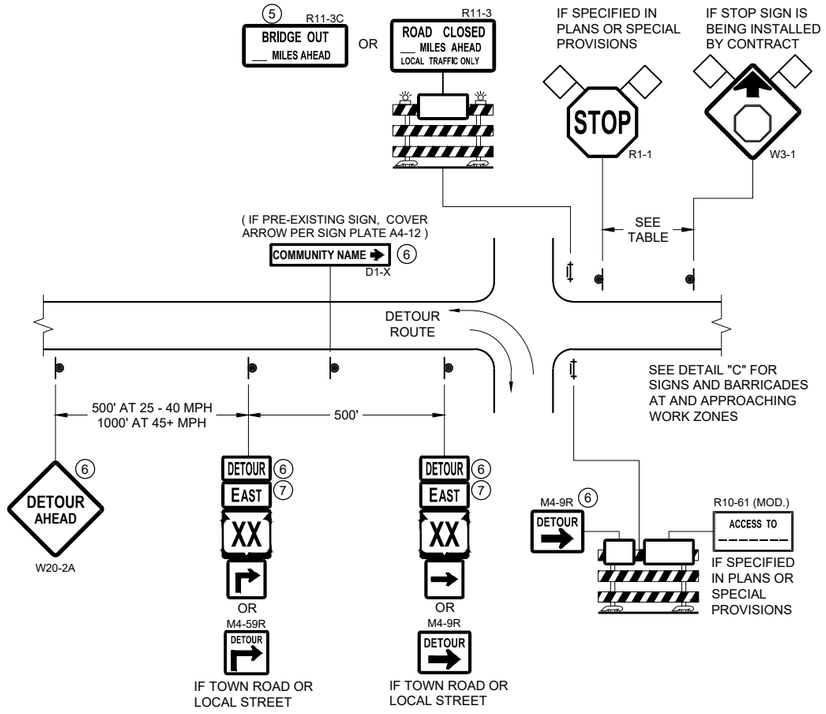
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

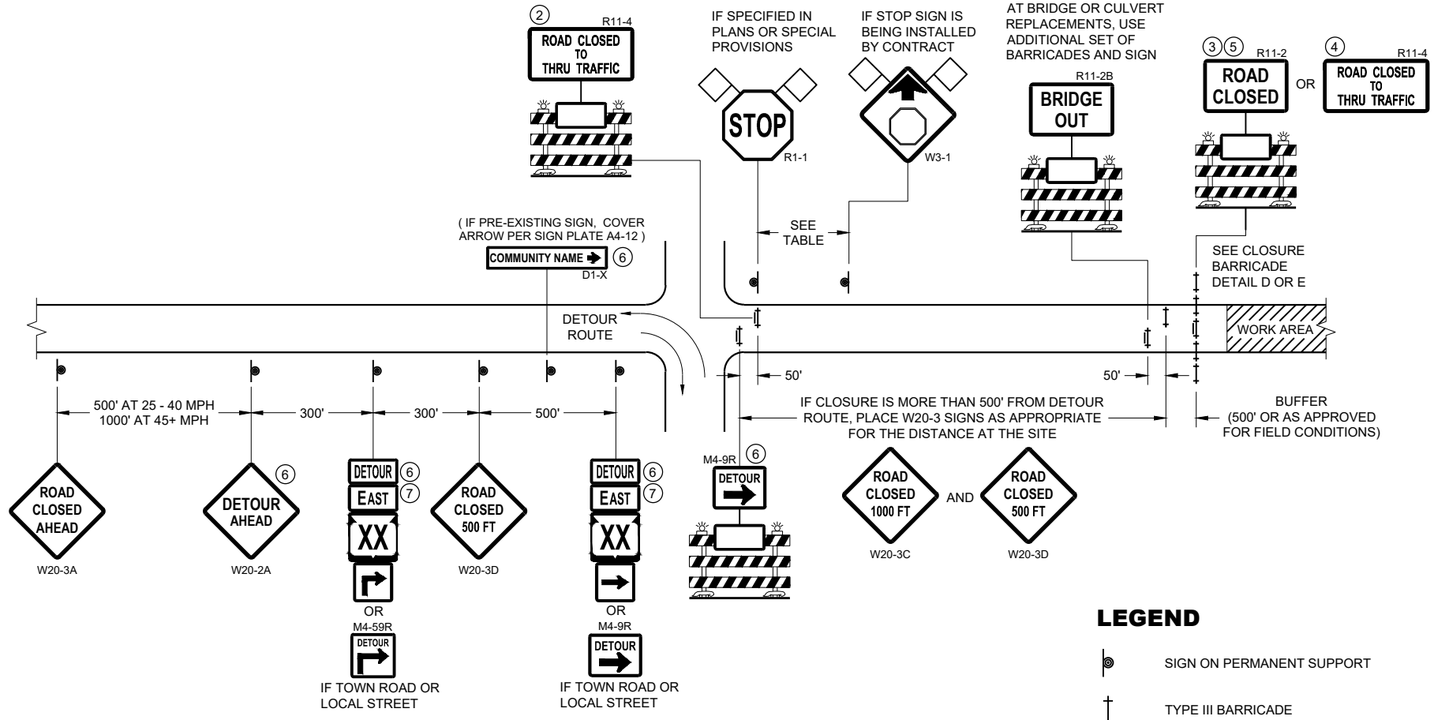
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S.D.D. 15 A 3-2b

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



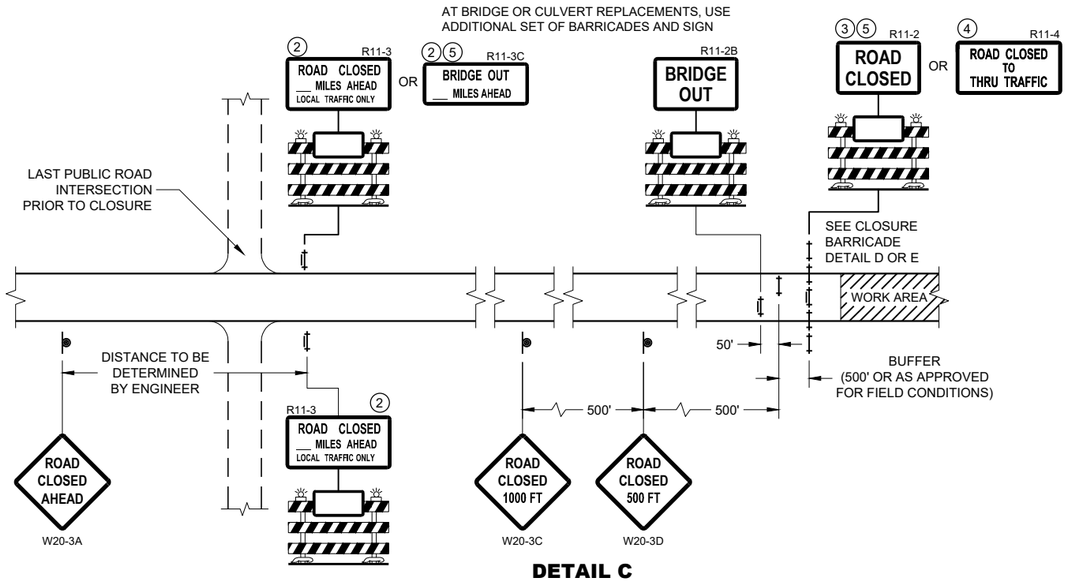


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

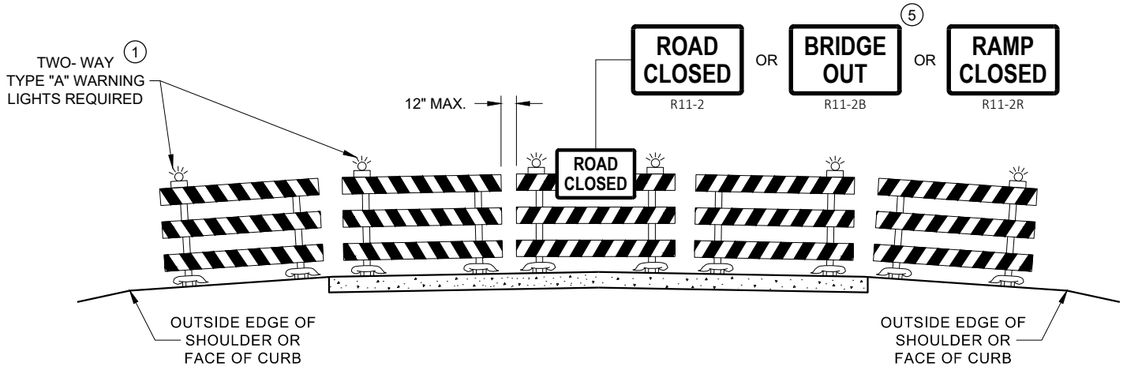
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

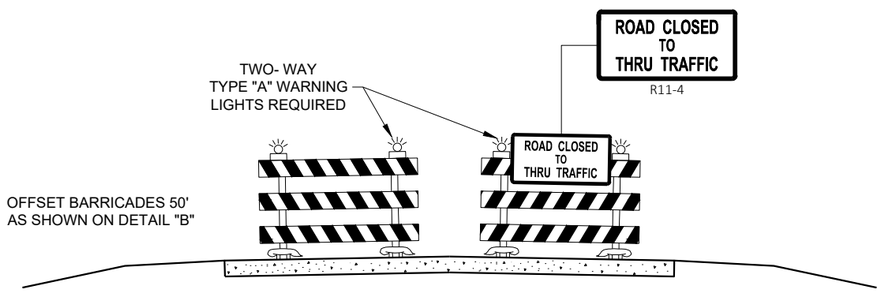
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SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

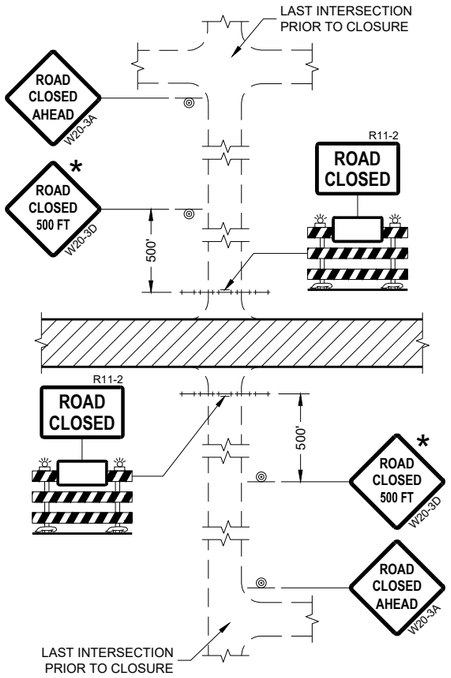
FHWA

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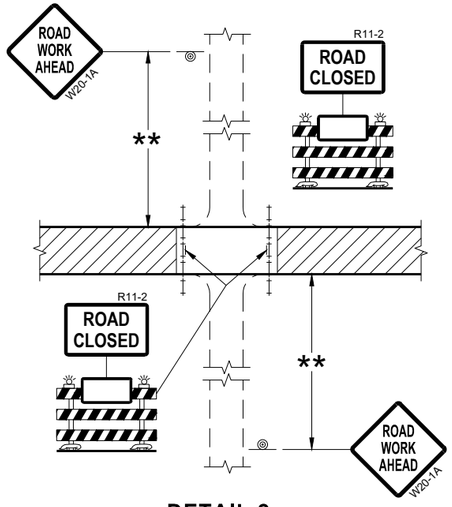
SDD 15C02 - 08b

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SDD 15C02 - 08b



DETAIL 1
(NO ACCESS TO PROJECT)



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

GENERAL NOTES

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

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

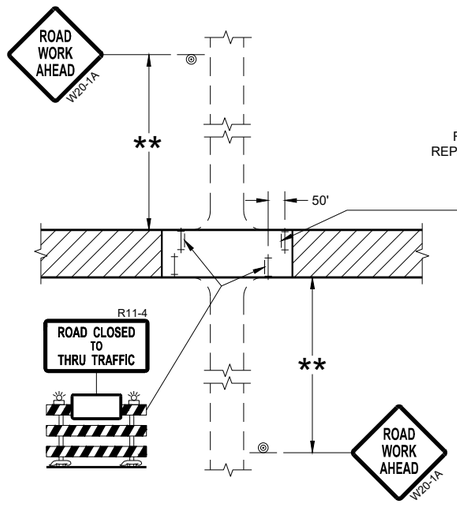
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C03 - 05

SDD 15C03 - 05

GENERAL NOTES

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

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

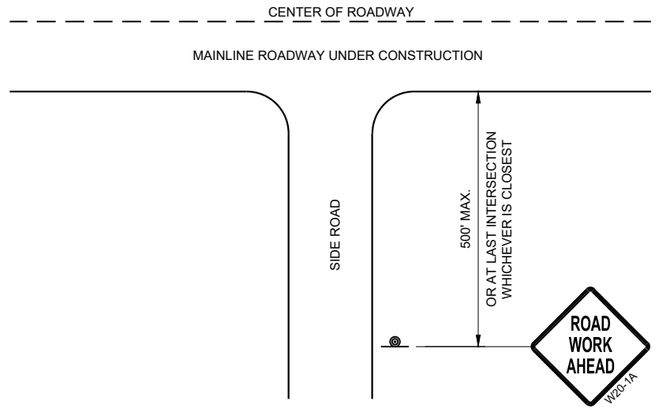
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

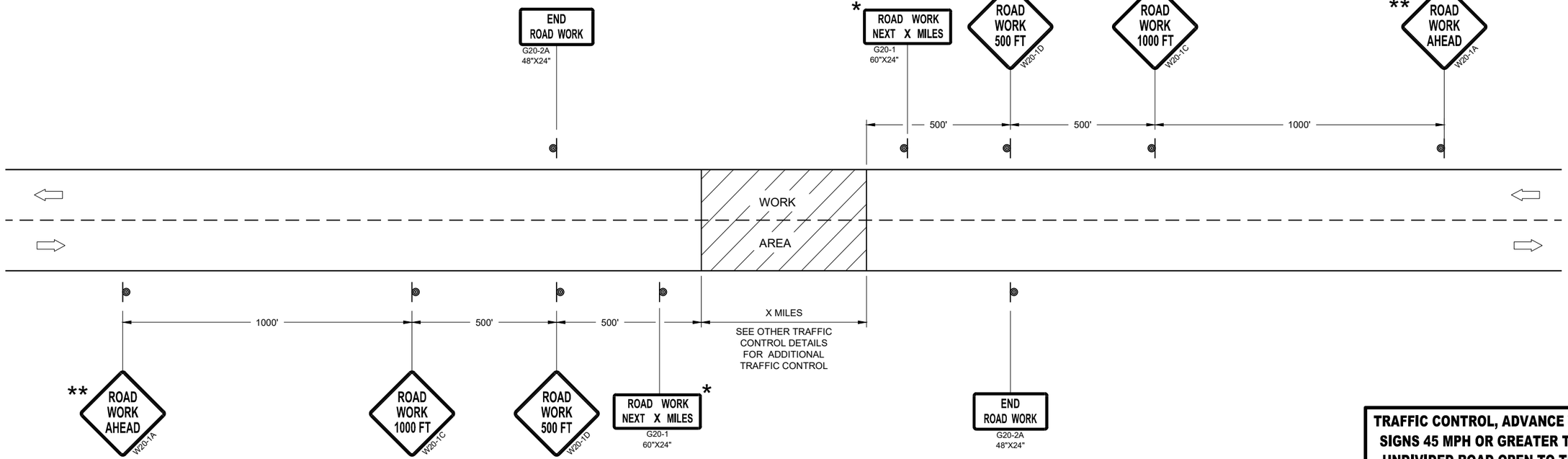
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

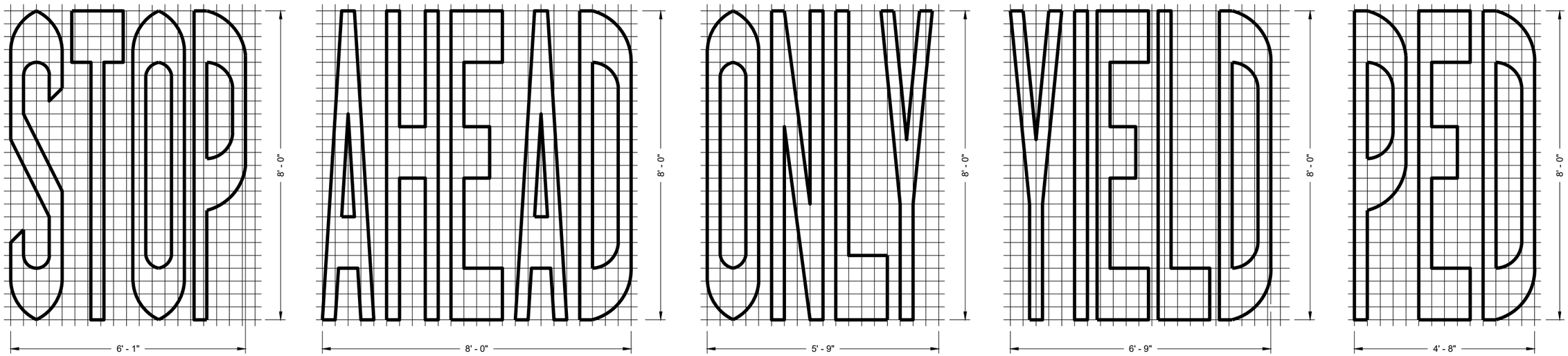
APPROVED
July 2018
DATE

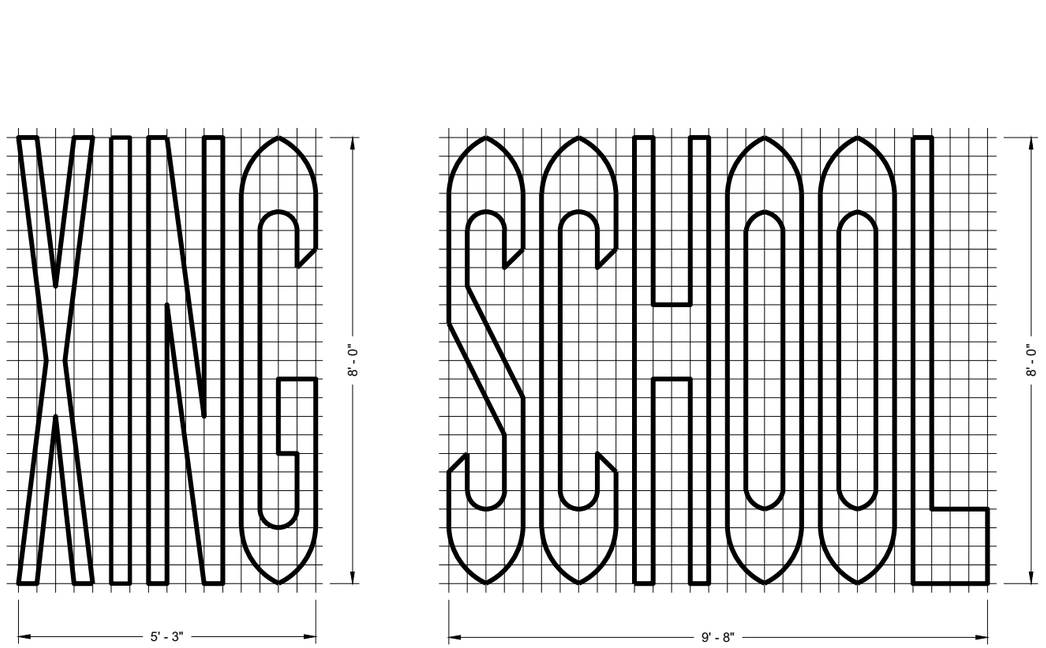
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

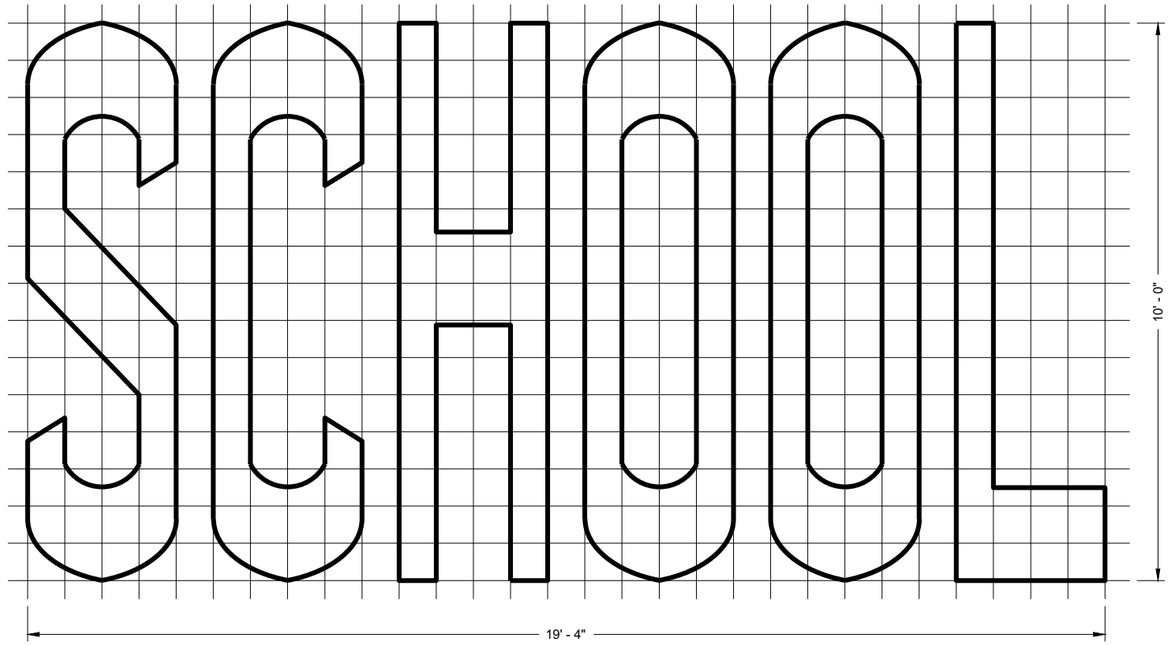
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SDD 15C04 - 05





SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

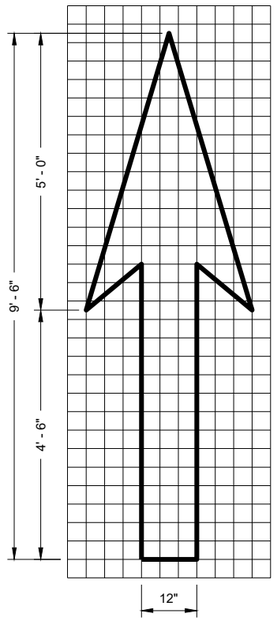
/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

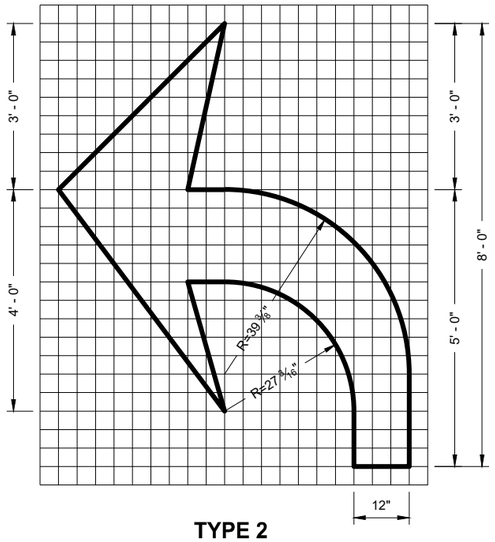
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SDD 15C07 - 15b

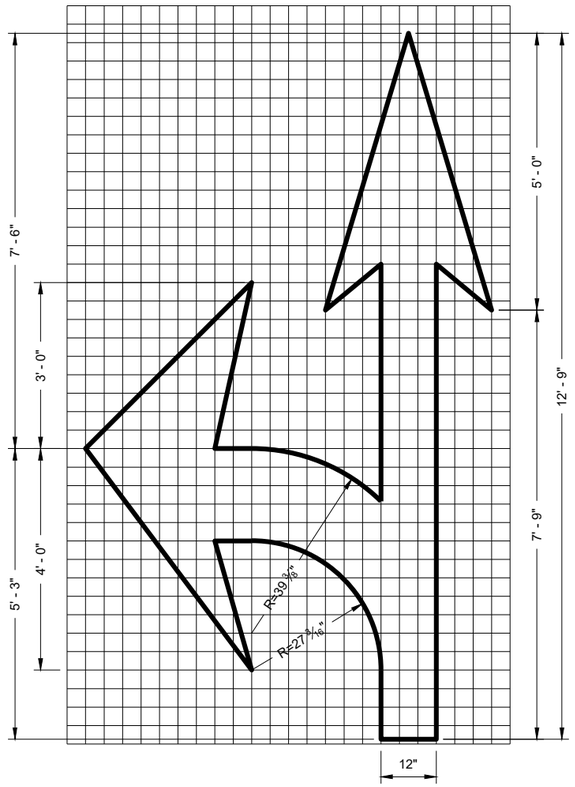
SDD 15C07 - 15b



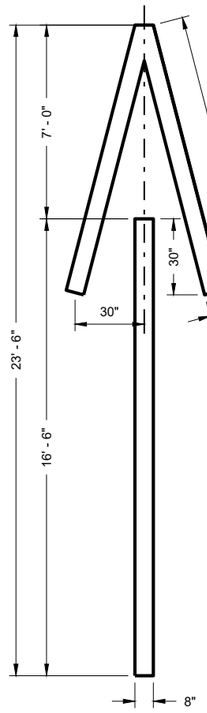
TYPE 1



TYPE 2



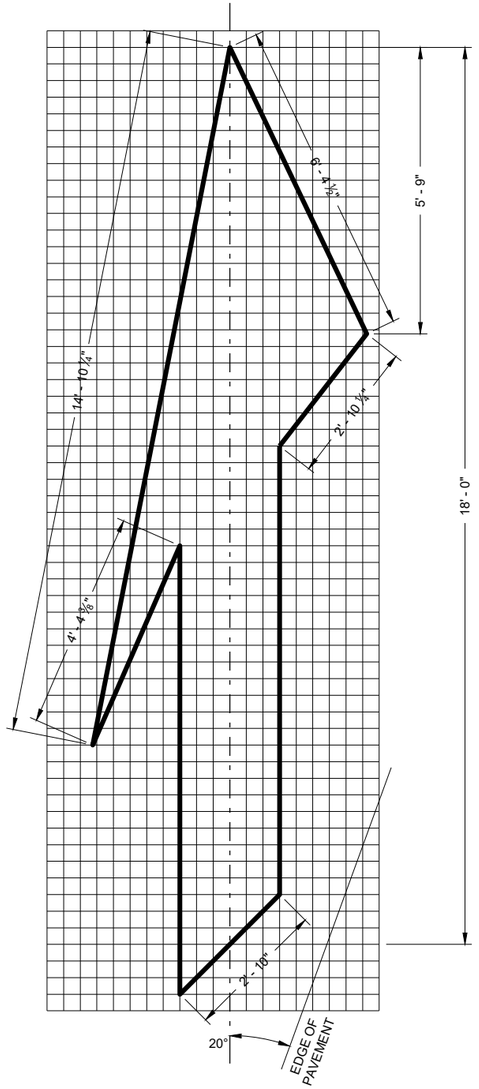
TYPE 3



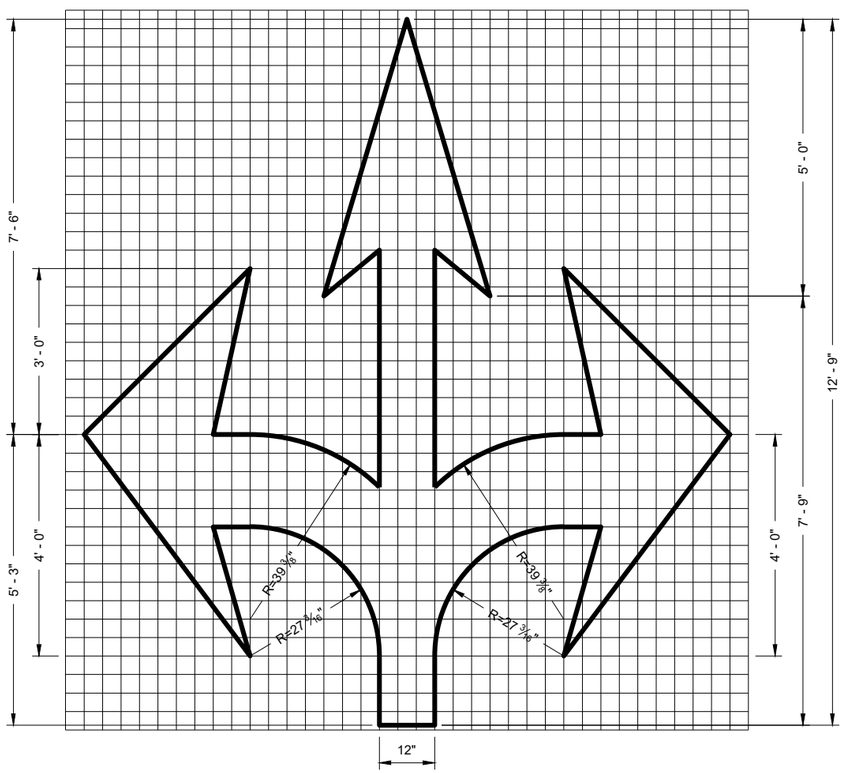
TYPE 4

GENERAL NOTES

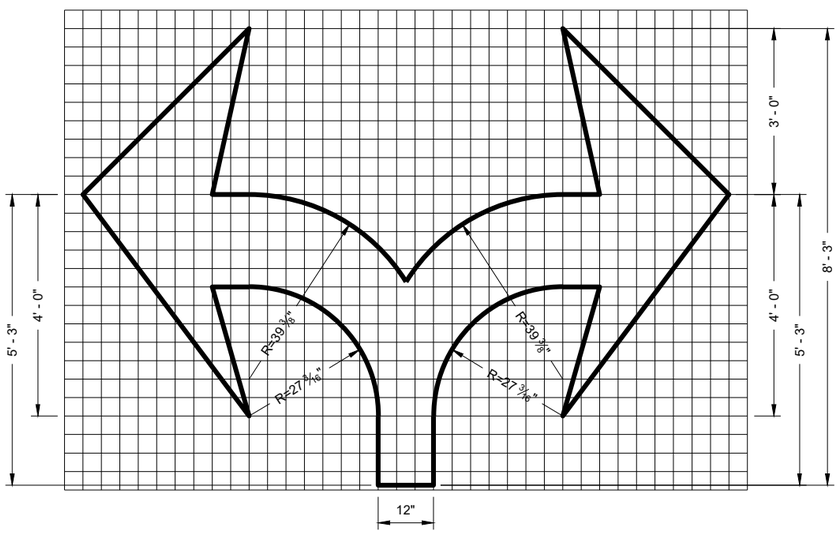
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

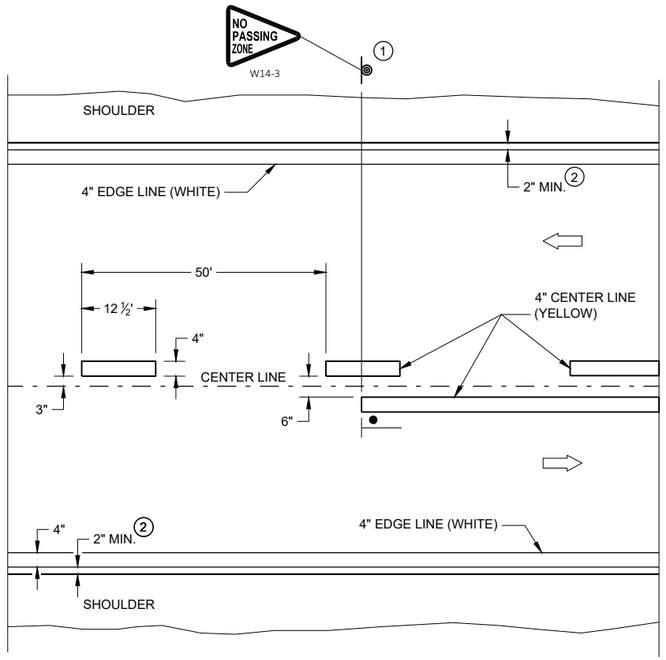
FHWA

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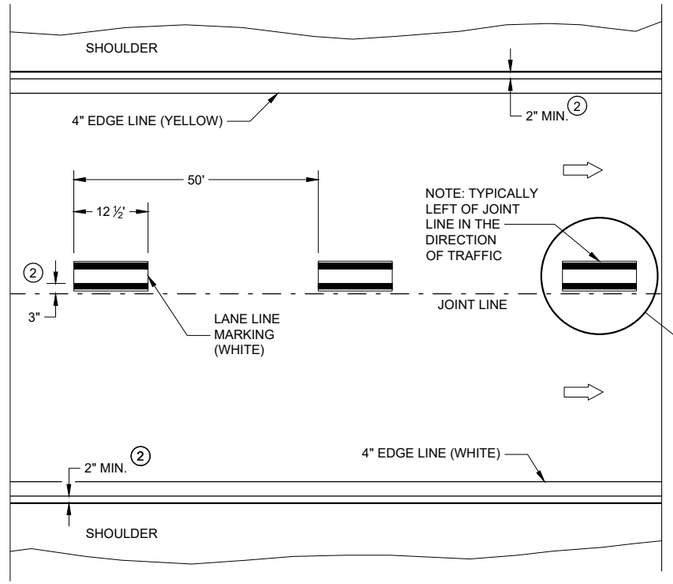
SDD 15C07 - 15c

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SDD 15C07 - 15c

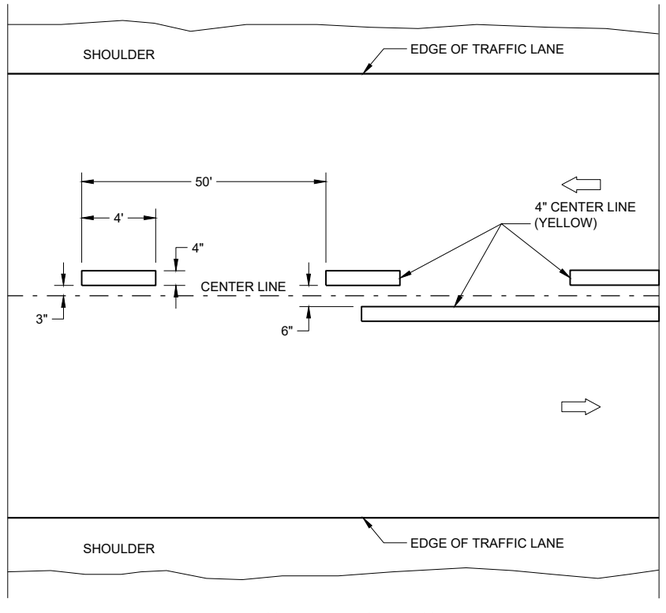


TWO WAY TRAFFIC

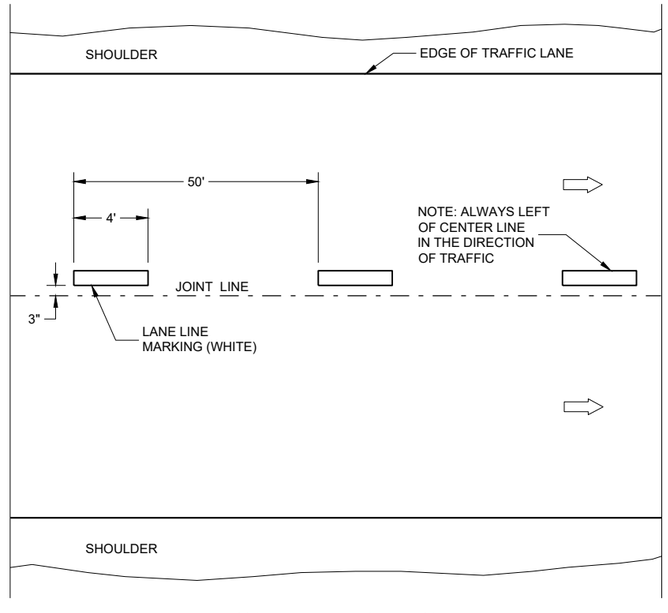


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

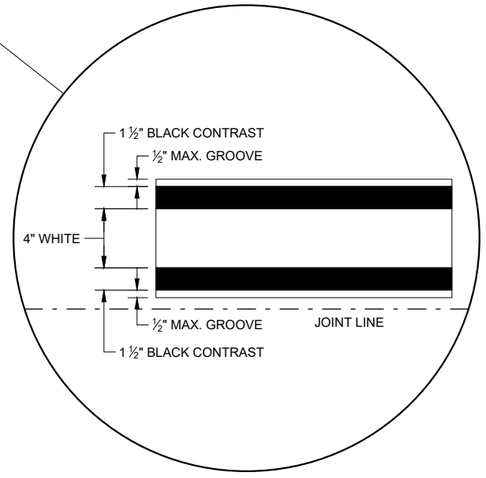
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND M
ENGINEER

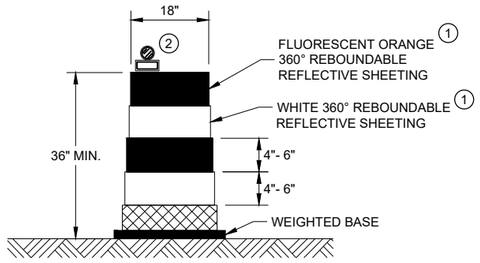
FHWA

SDD 15C08 - 20a

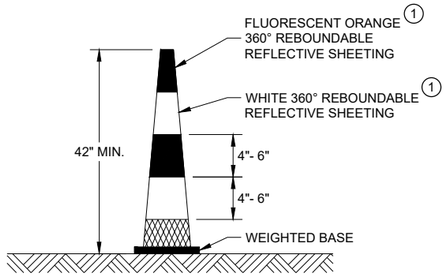
SDD 15C08 - 20a

GENERAL NOTES

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

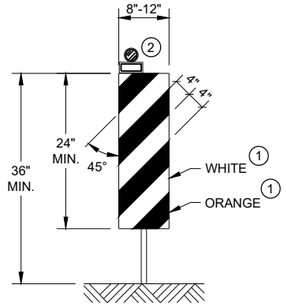


DRUM



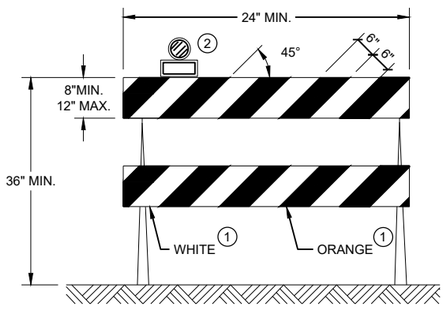
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



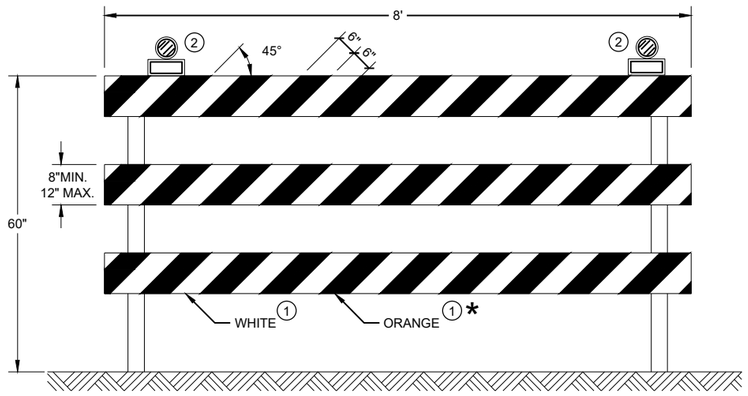
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

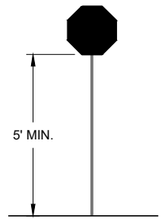
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

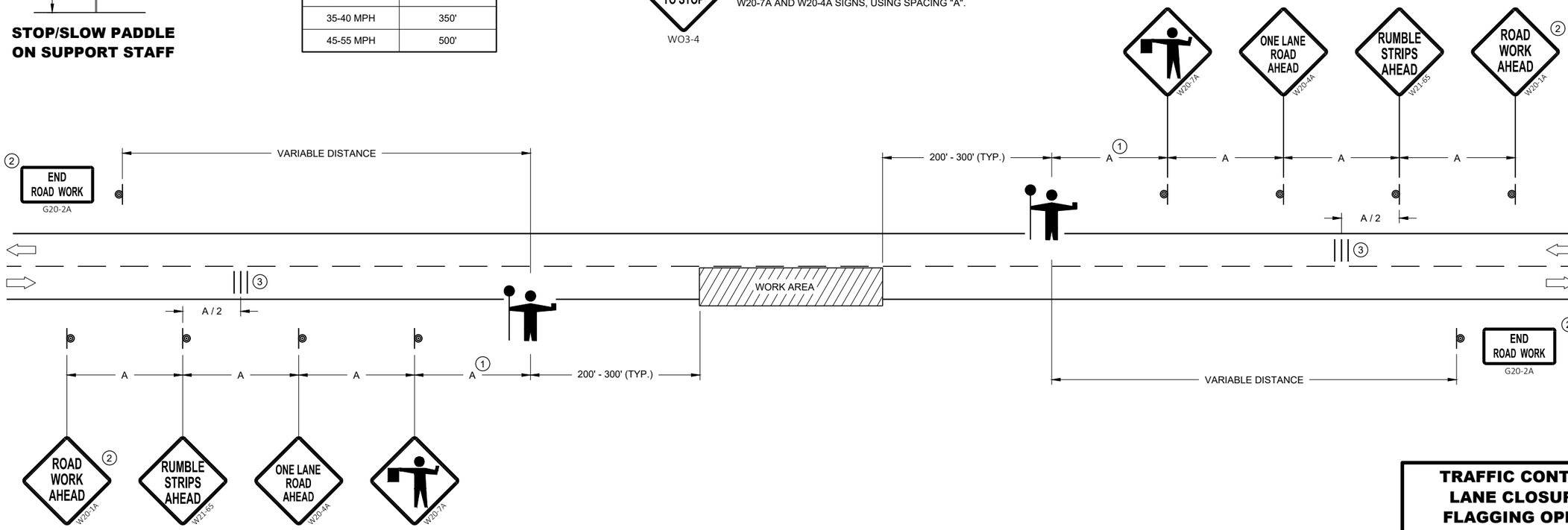
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15C12 - 07

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

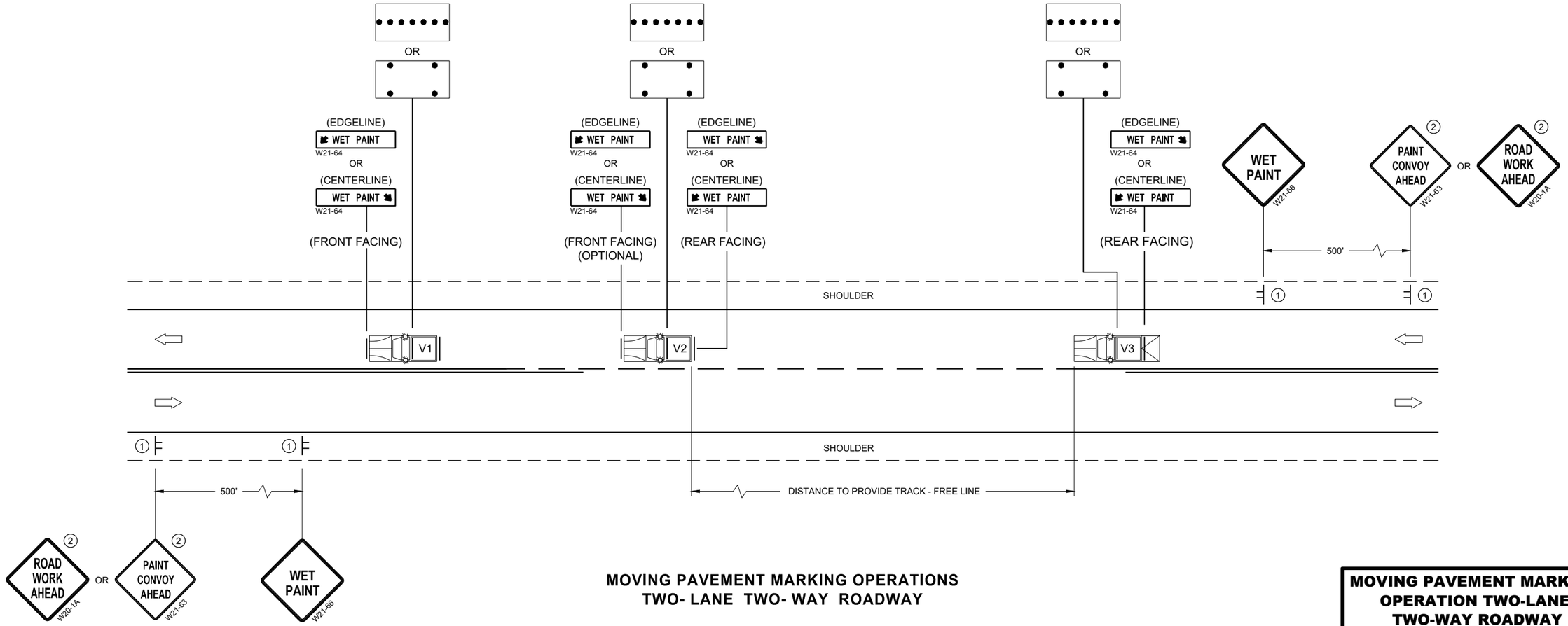
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

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

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

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



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

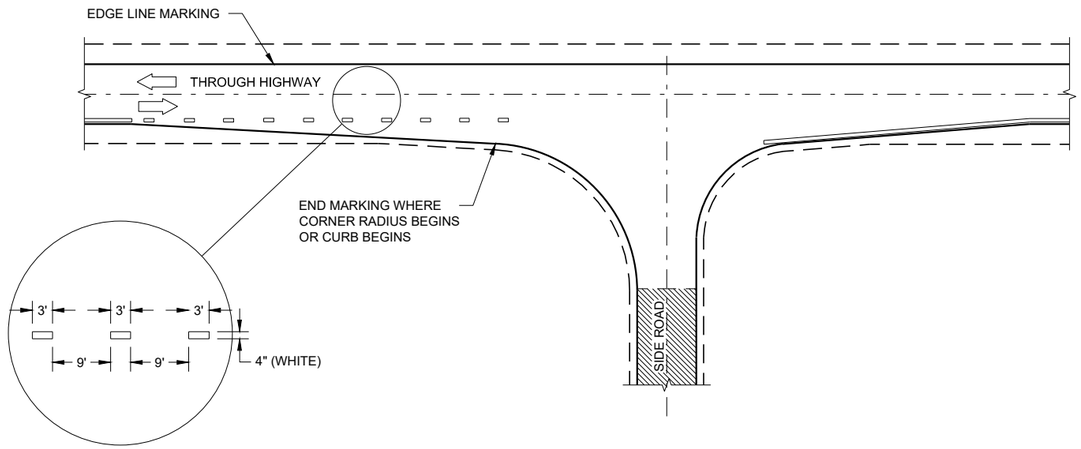
FHWA

6

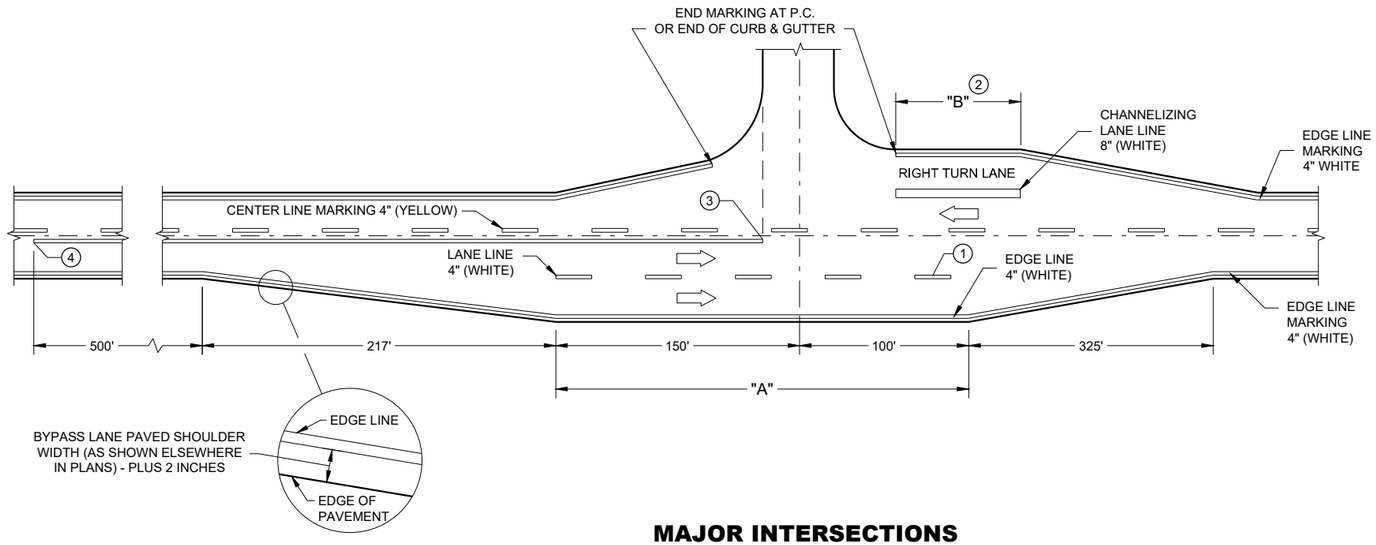
SDD 15C19 - 06a

6

SDD 15C19 - 06a



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

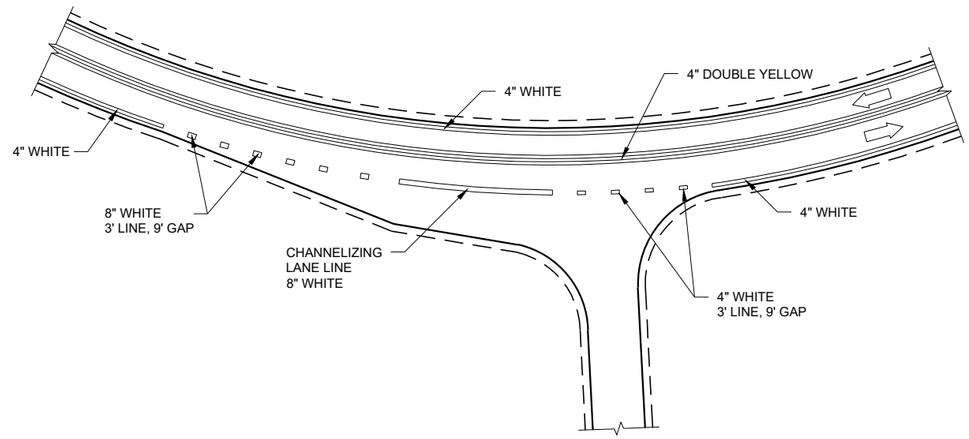
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

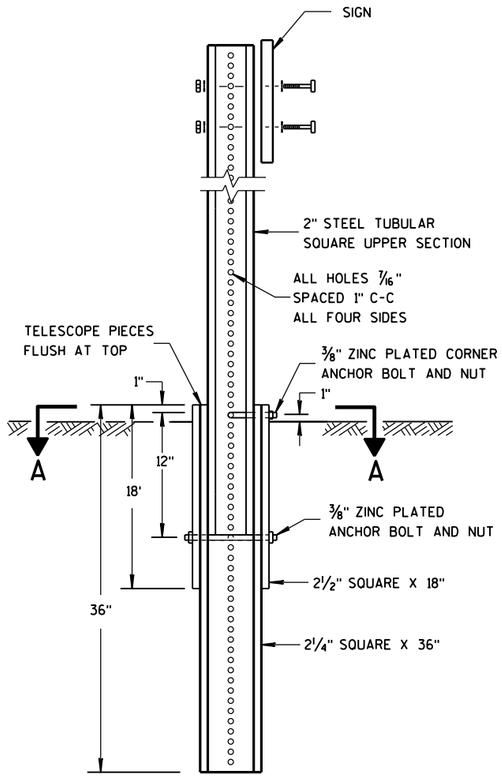
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

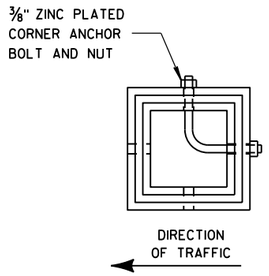
SDD 15C35 - 04a

6

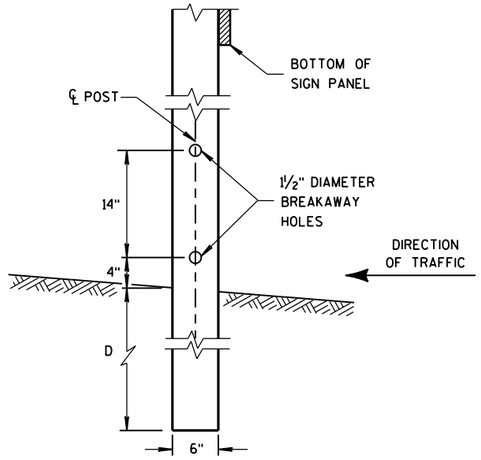
SDD 15C35 - 04a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



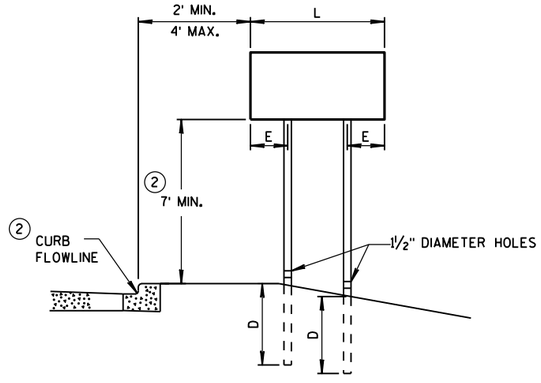
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

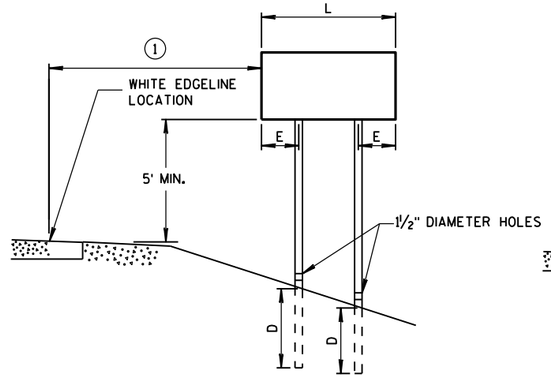
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

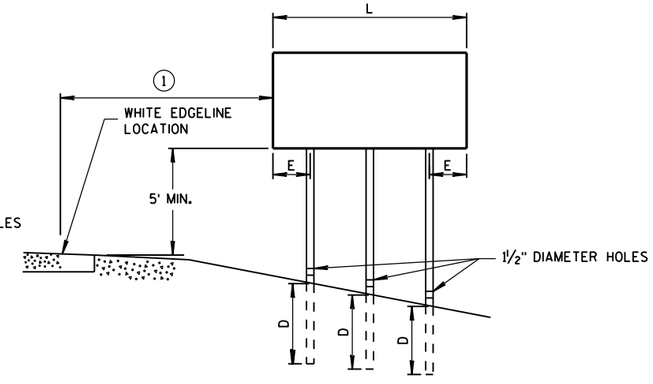
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

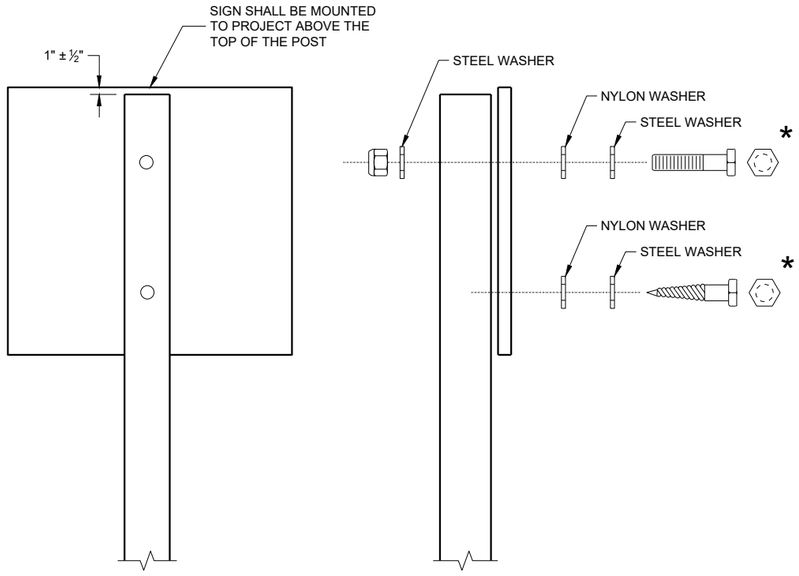
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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

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

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

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

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

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

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

6

6

SDD 15D38 - 02b

SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

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

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

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

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

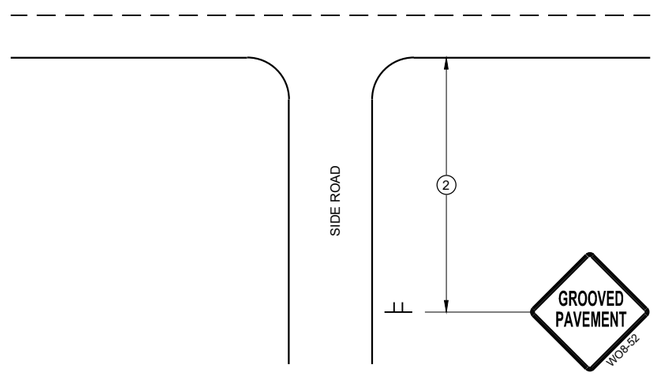
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

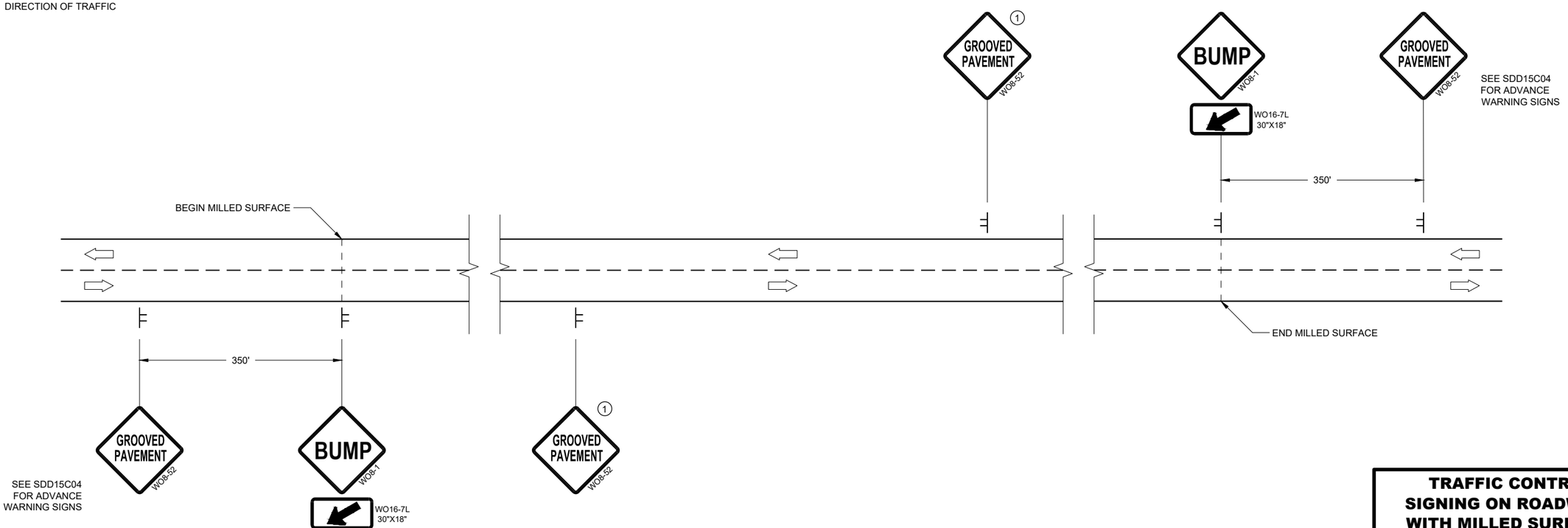
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

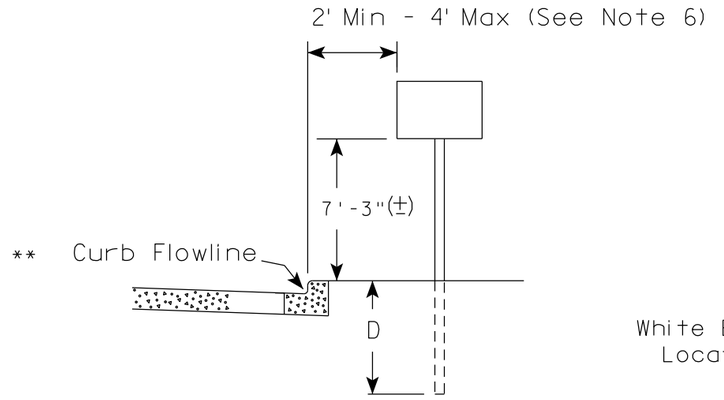
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SDD 15D44 - 02

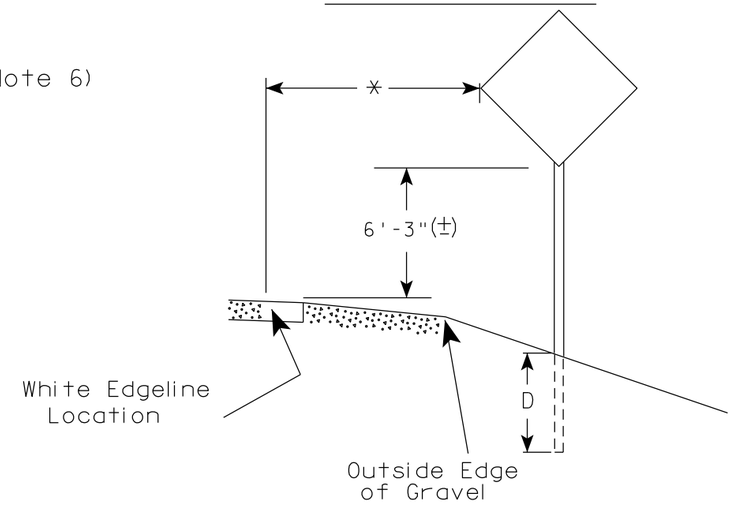
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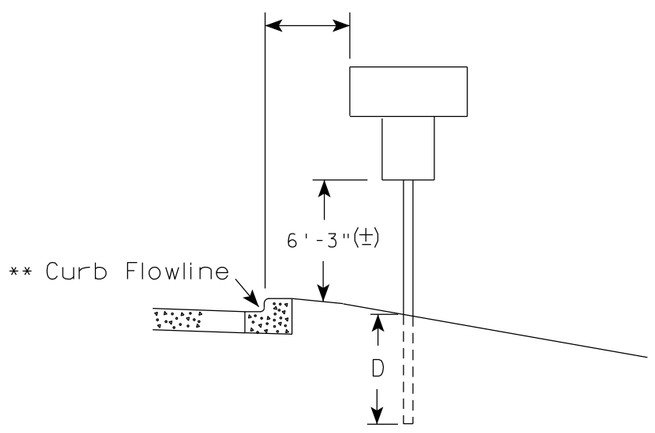
SDD 15D44 - 02

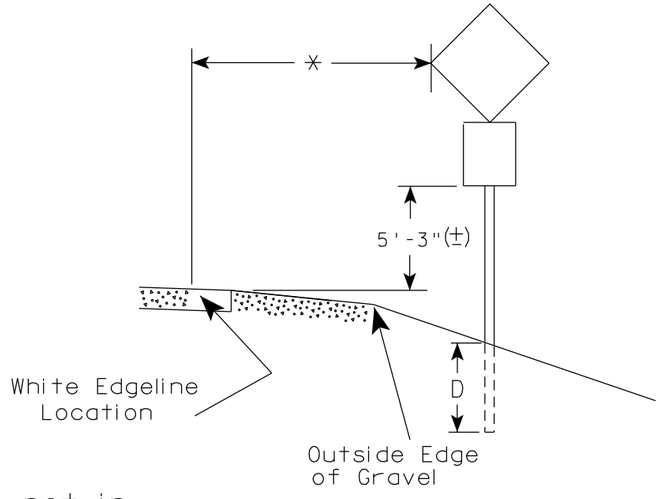
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

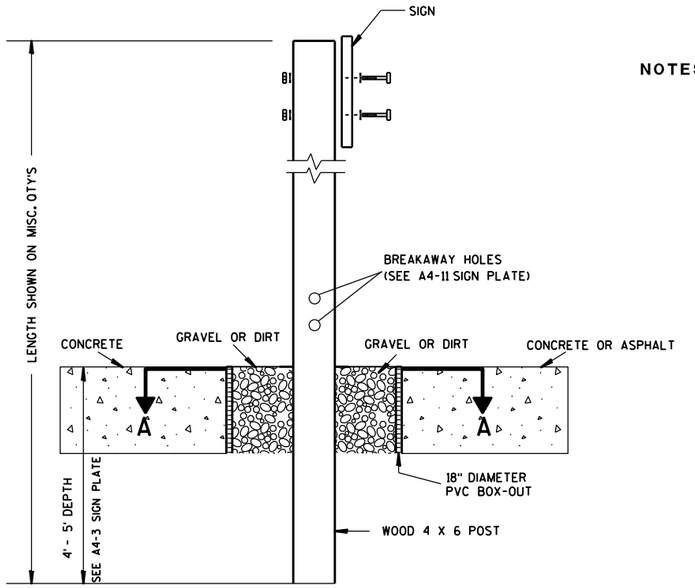
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

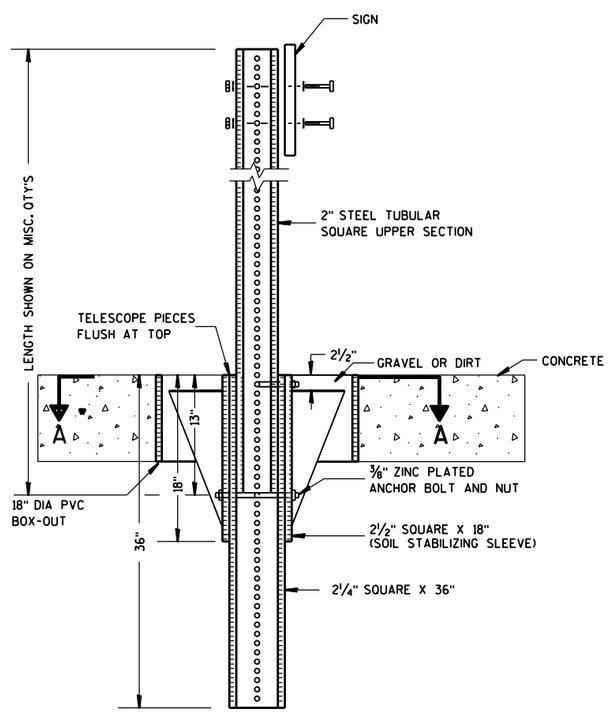
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 117	E



ELEVATION VIEW

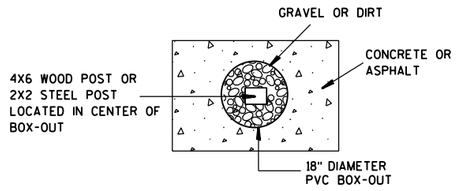
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

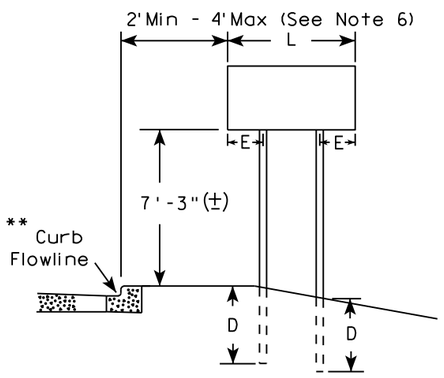
APPROVED Matthew R Rauch
for State Traffic Engineer

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

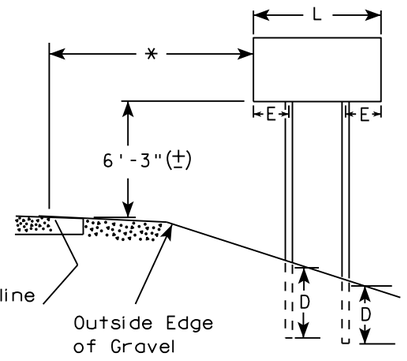
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

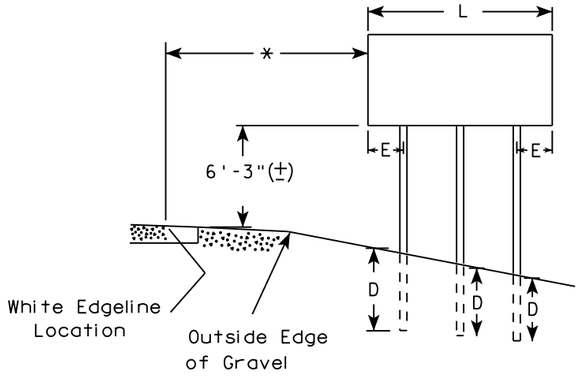
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

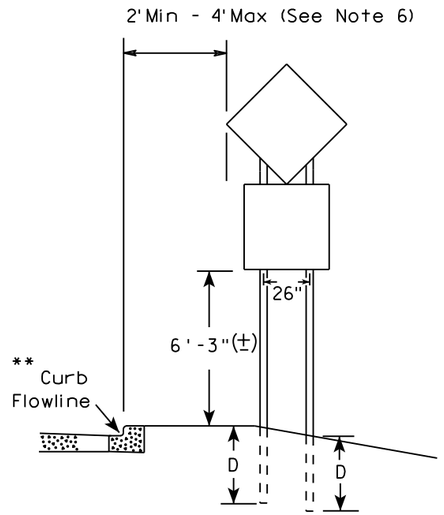
URBAN AREA



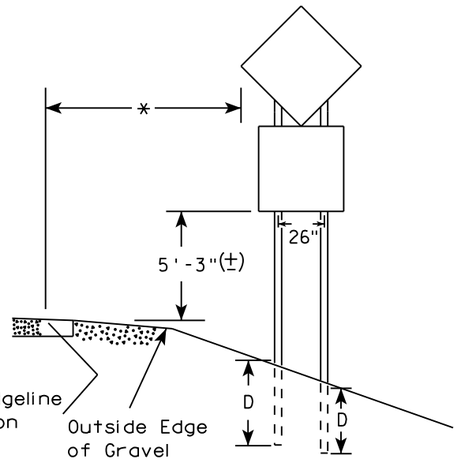
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

POST EMBEDMENT DEPTH

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

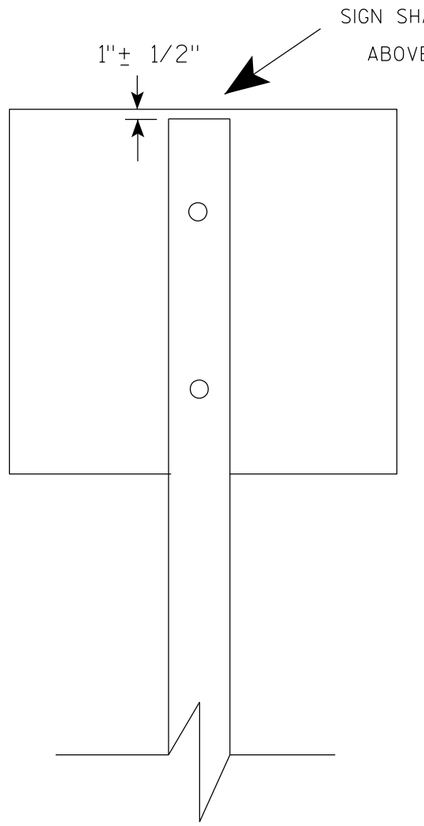
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

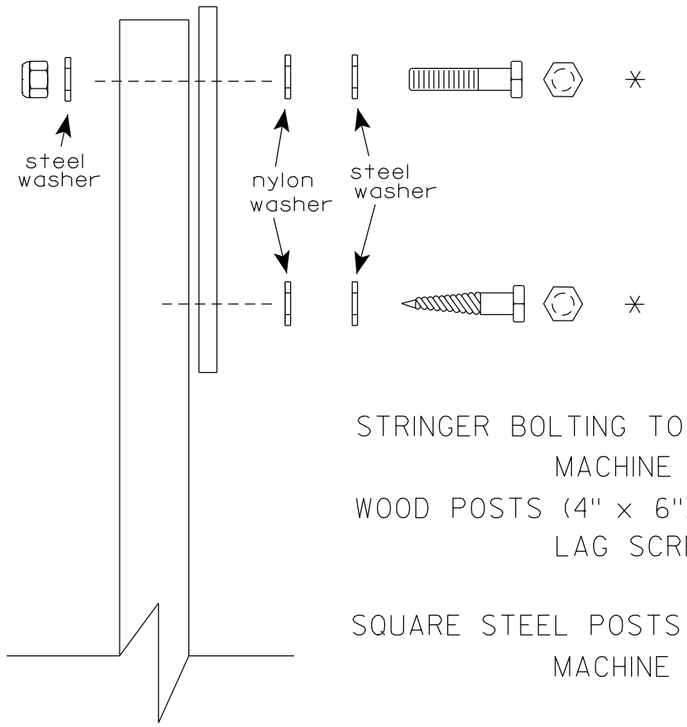
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

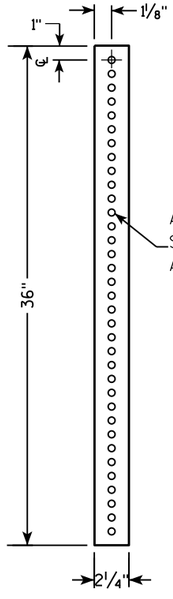
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

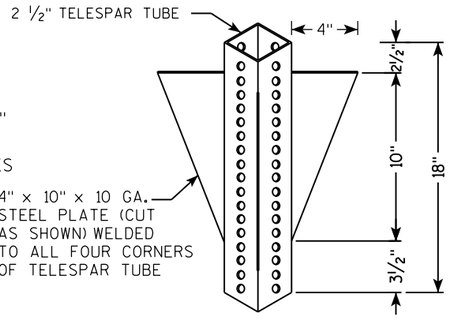
SHEET NO: 120 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

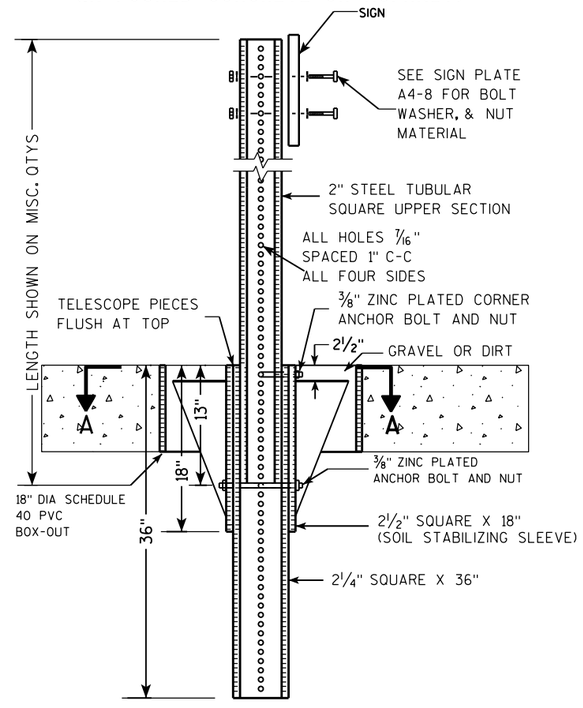
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



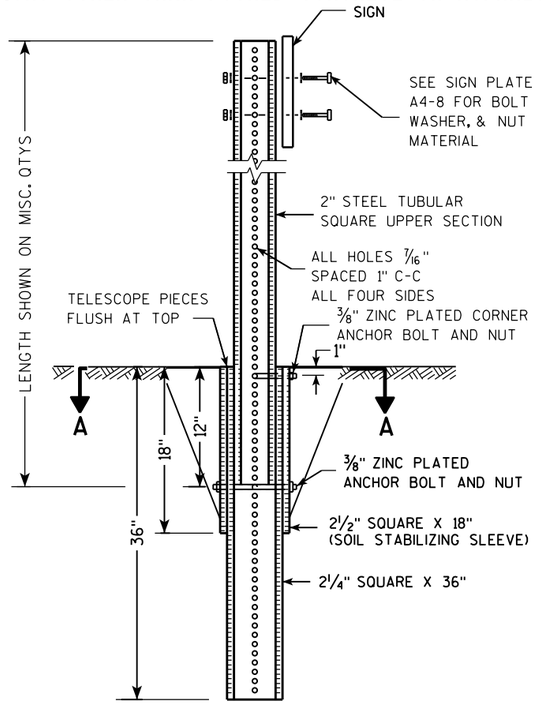
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

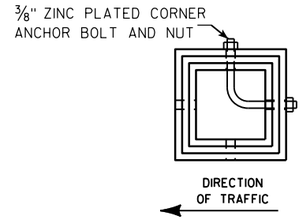


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

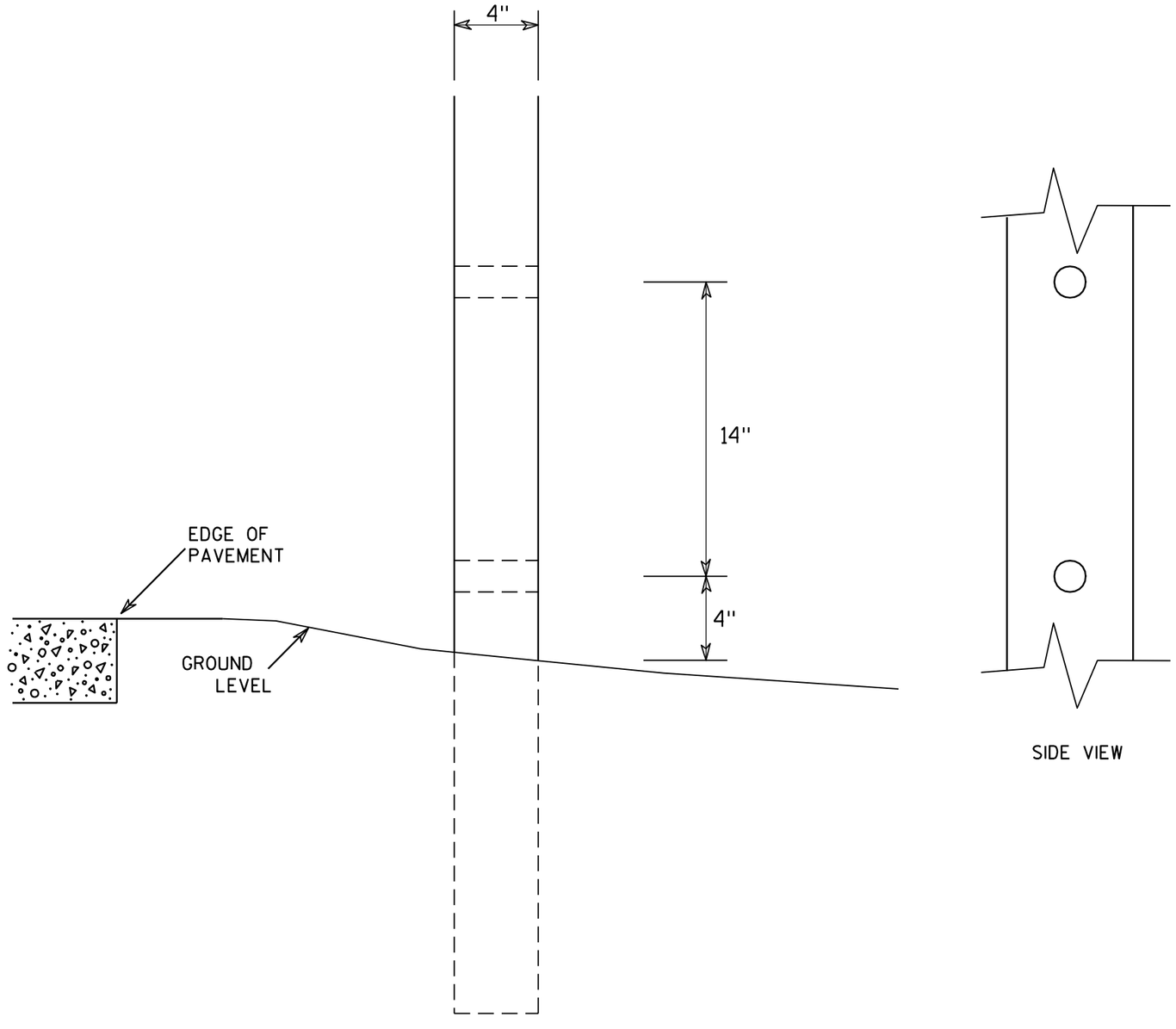
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

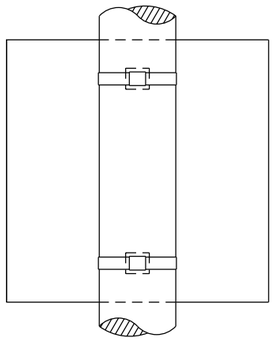
APPROVED Chester J Spang for State Traffic Engineer

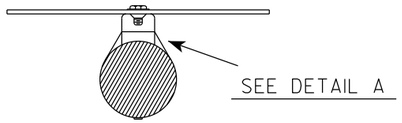
DATE 3/27/97 PLATE NO. A4-11.2

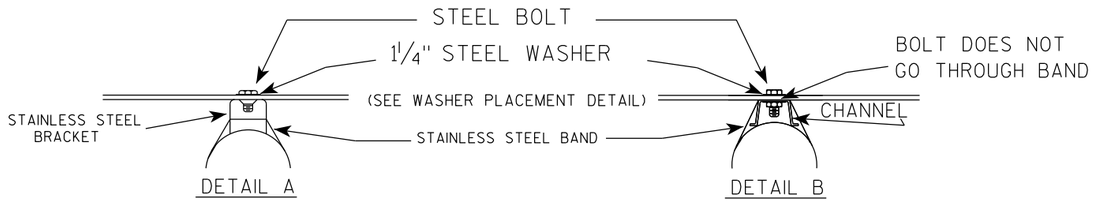
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 122	E

BANDING

SINGLE SIGN



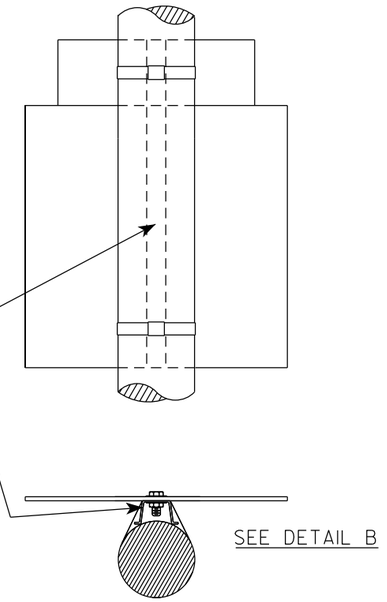




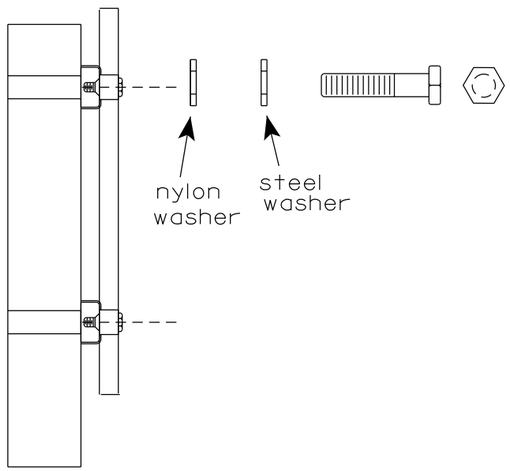
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

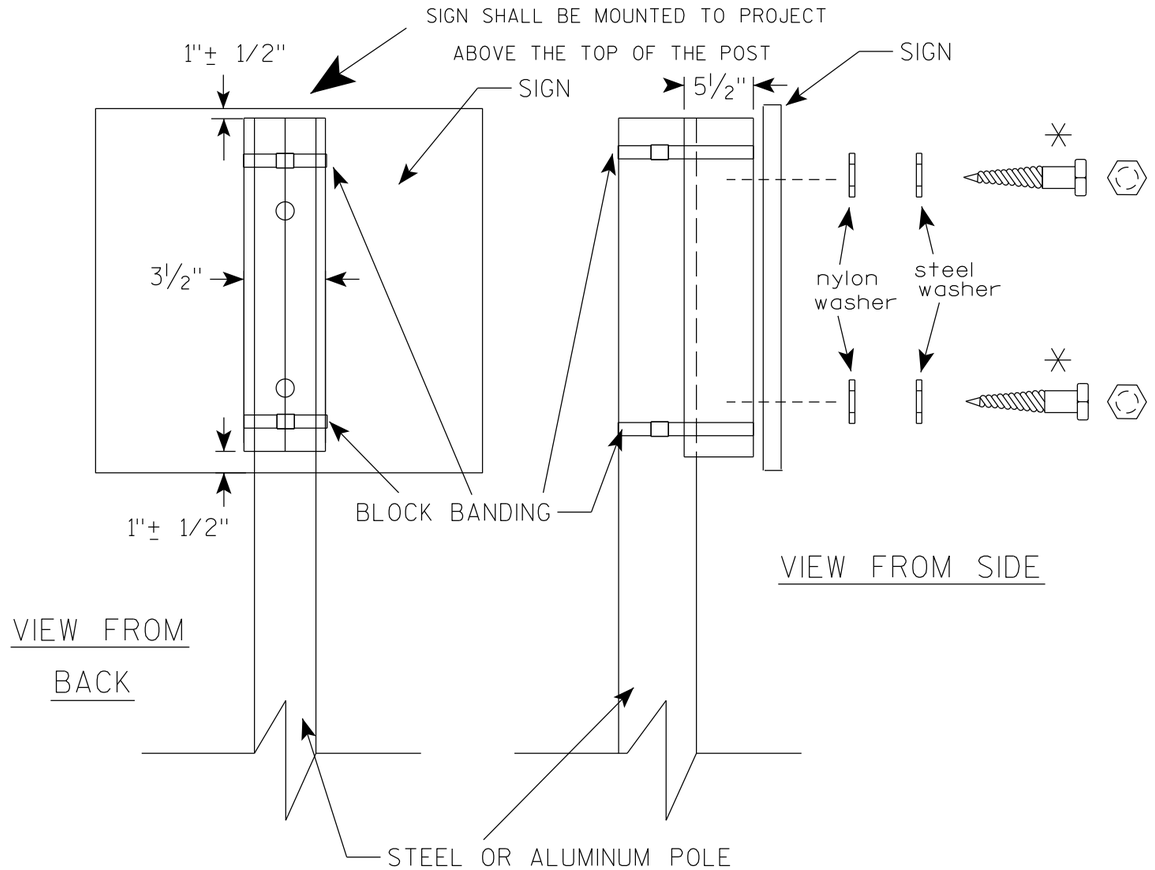
DATE 6/10/19 PLATE NO. A5-9.4

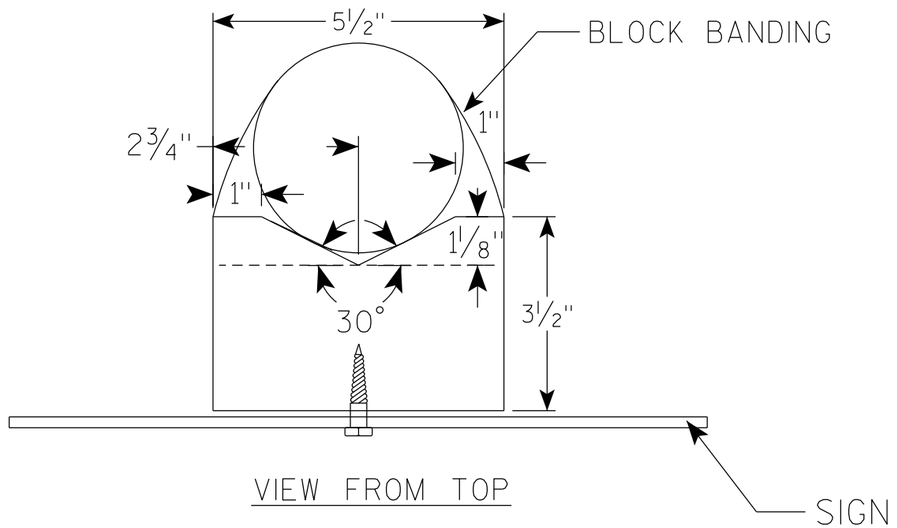
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123	E

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

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

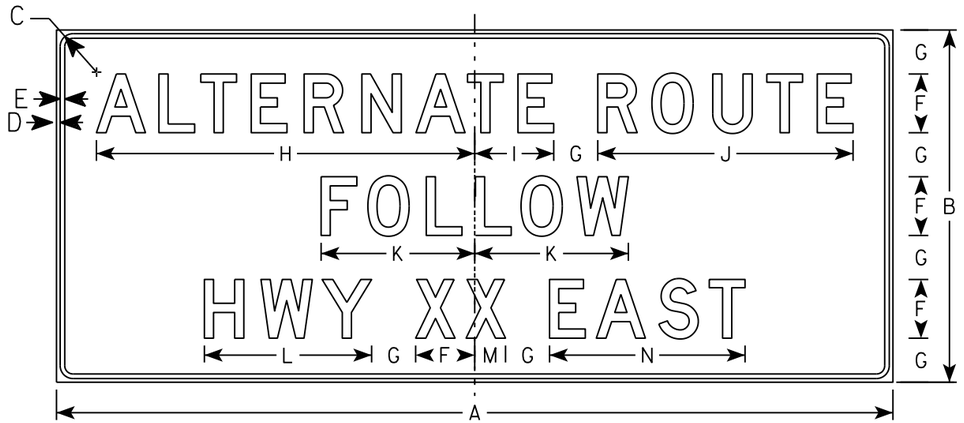
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

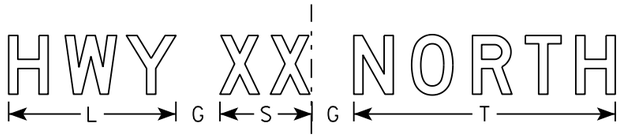
PROJECT NO:				SHEET NO: 124	E



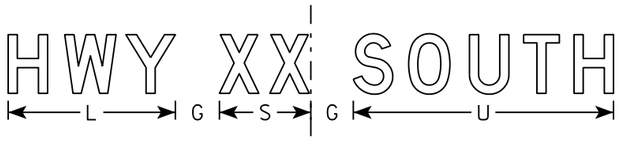
G20-52



G20-52A



G20-53



G20-53A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	114	48	2 1/4	1/2	5/8	8	6	51 1/2	10 3/4	34 3/4	20 7/8	22 3/4	4 1/4	26 5/8	8 3/4	3 1/2		28 1/8	12 1/2	35 5/8	35 1/2						34.5
5																											

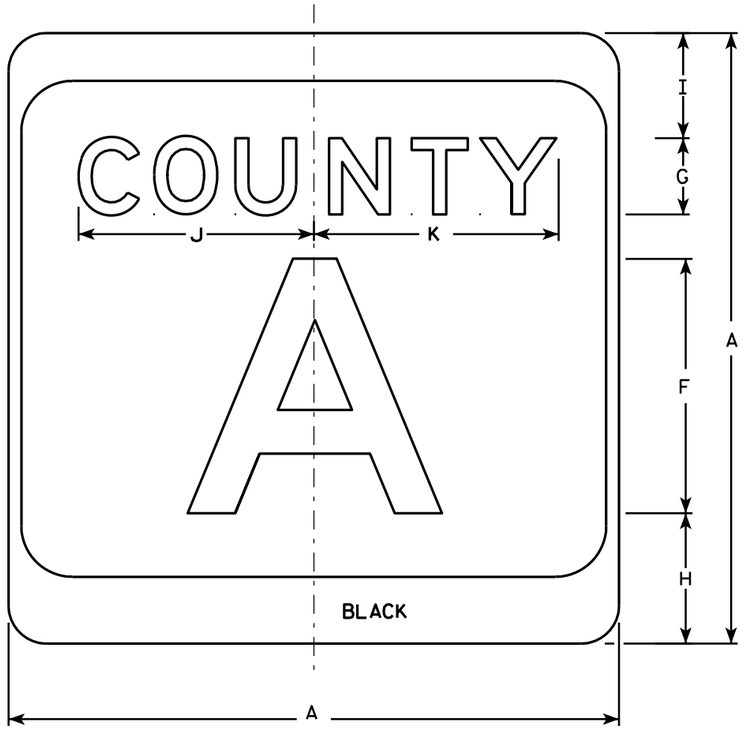
STANDARD SIGN
G20-52 & G20-53

WISCONSIN DEPT OF TRANSPORTATION

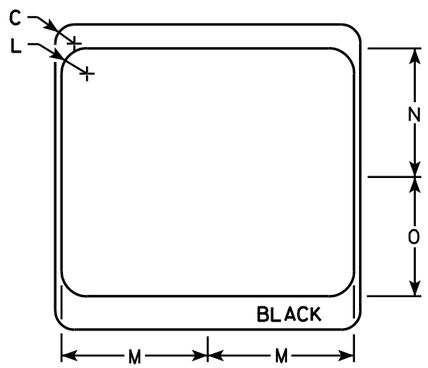
APPROVED Matthew R Rauch
for State Traffic Engineer

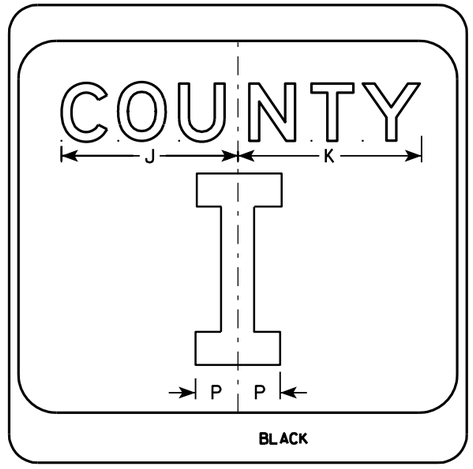
DATE 3/16/18 PLATE NO. G20-52.3

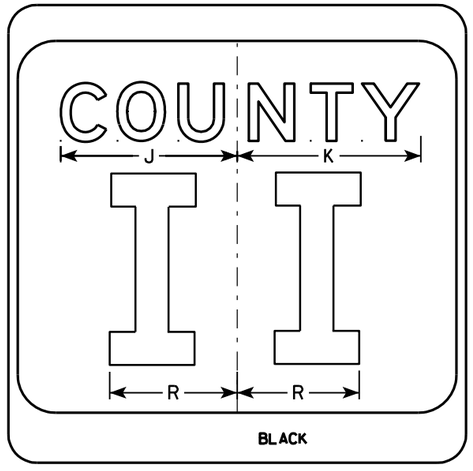
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

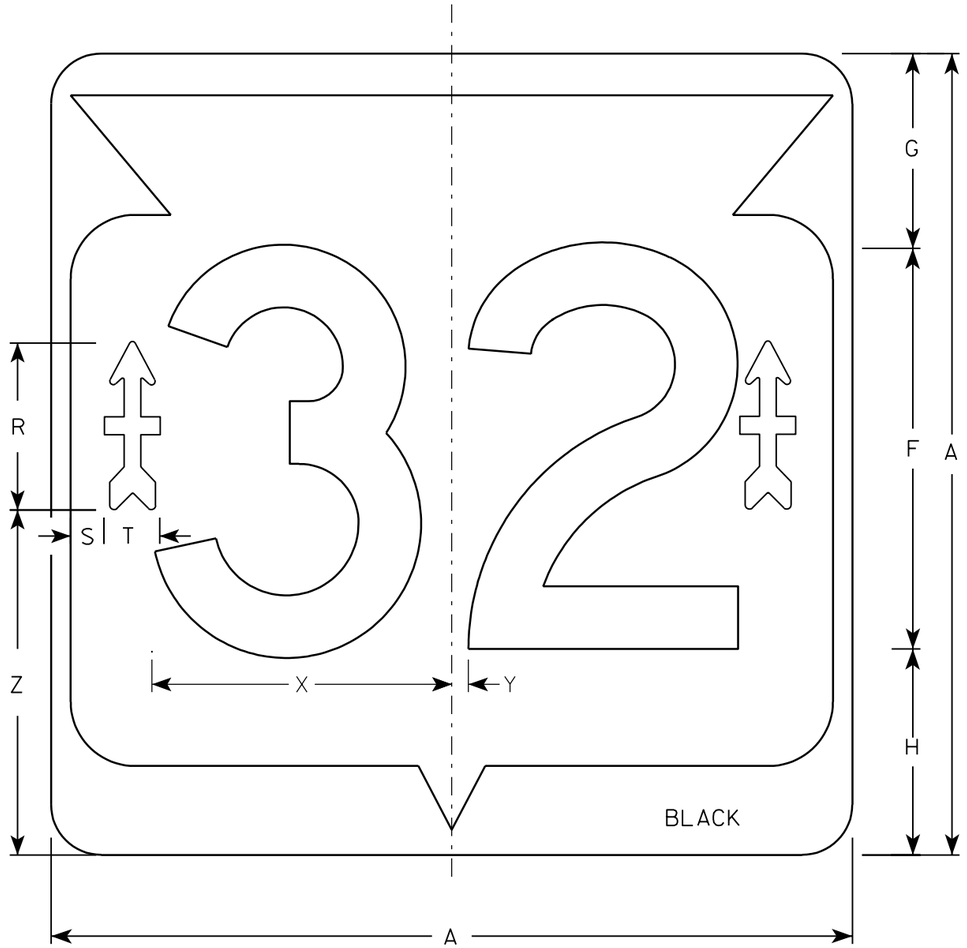
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

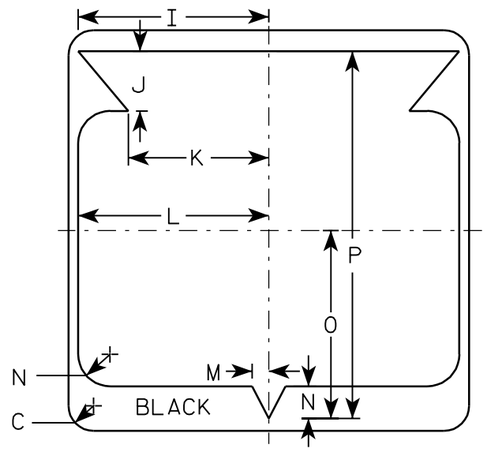
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 126	E



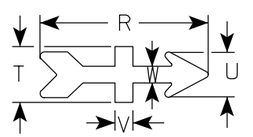
M1-6B

NOTES

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



32nd DIVISION ARROW
ACTUAL SIZE



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 ½			12	5 ½	6 ½	10 ¼	2 ½	8 ⅞	11 ½	1	1 ⅞	11 ¼	21 ⅞		5 ⅛	¾	1 ⅞	1 ½	⅝	⅝	9	½	10 ½	4.0	.36
3	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81
4	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81
5	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81

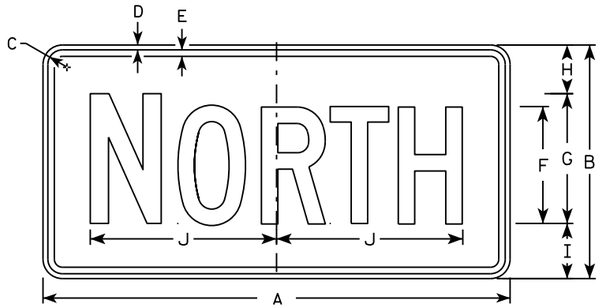
STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

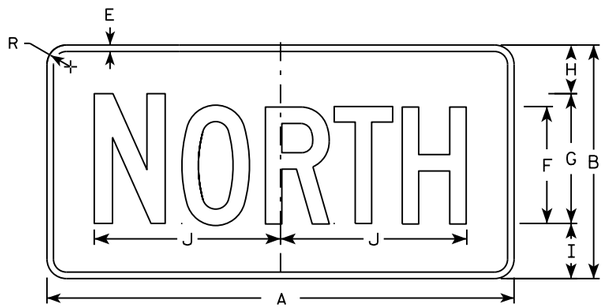
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 12/5/05 PLATE NO. M1-6B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 127 | E



M3-1
MM3-1
MP3-1



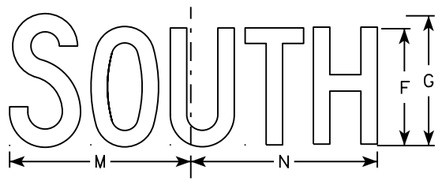
MB3-1
MK3-1
MN3-1



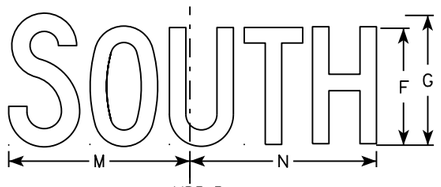
M3-2
MM3-2
MP3-2



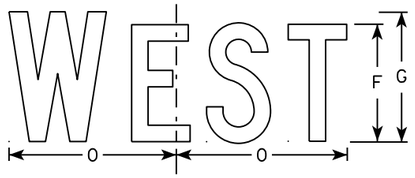
MB3-2
MK3-2
MN3-2



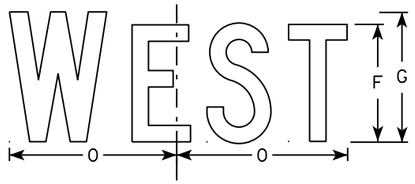
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

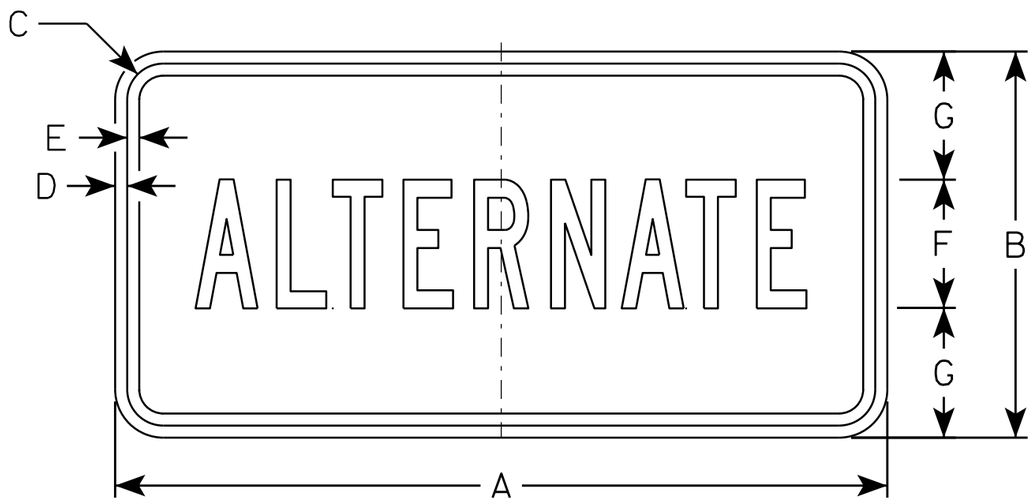
APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

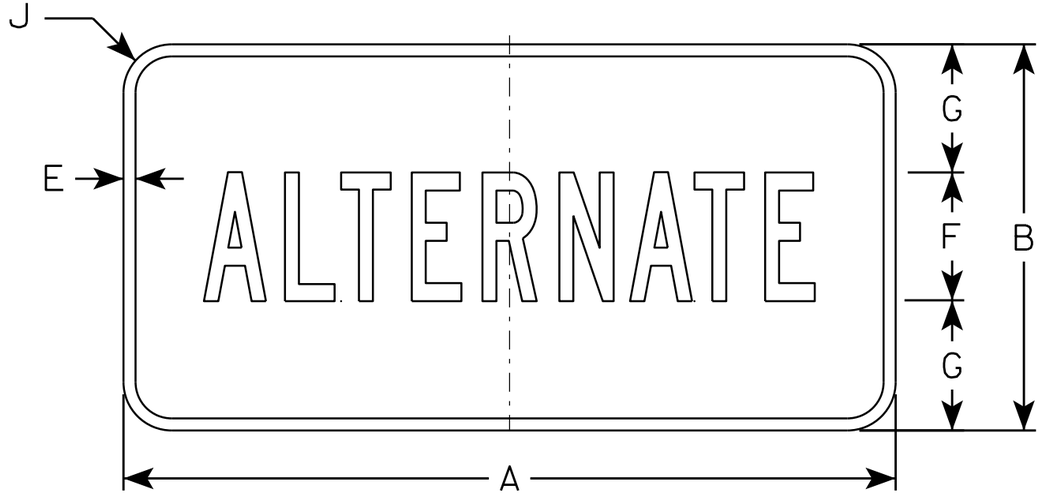
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

7



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN
M4-1

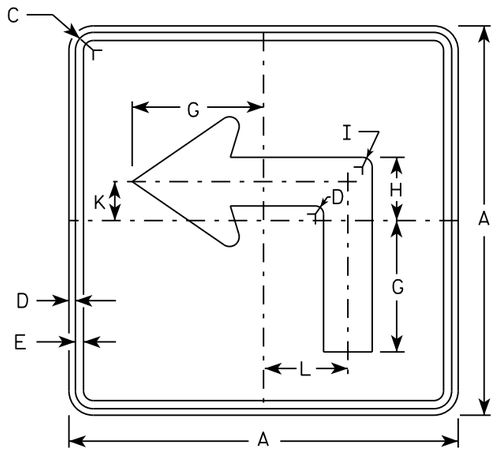
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

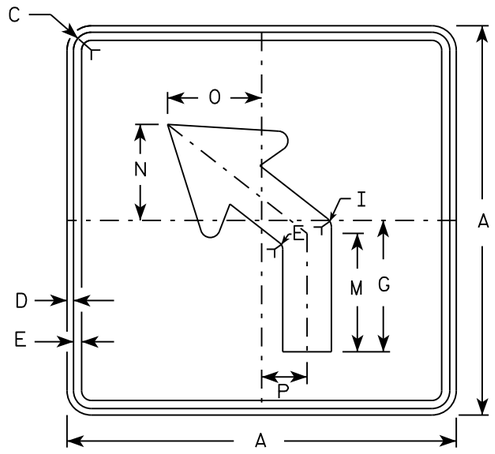
DATE 6/30/14 PLATE 14-1.8

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

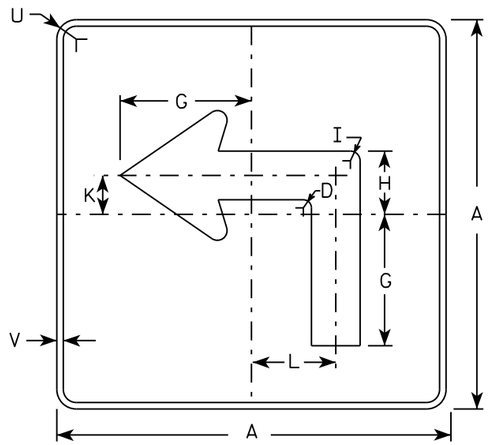
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M41.DGN PLOT DATE : 30-JUN-2014 15:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.708937:1.000000 WISDOT/CADDS SHEET 42



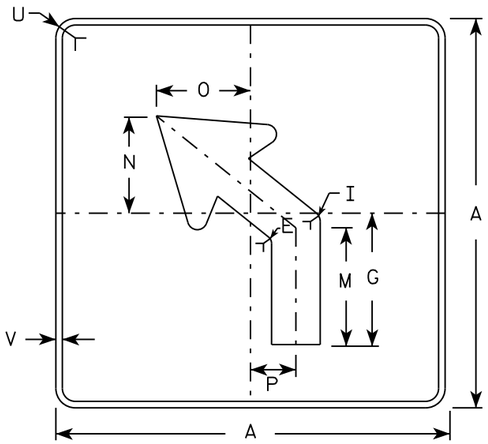
M5-1L
MM5-1L
MO5-1L
MP5-1L



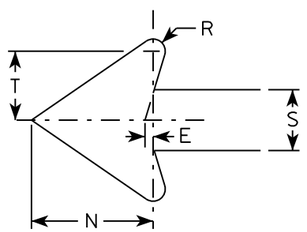
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

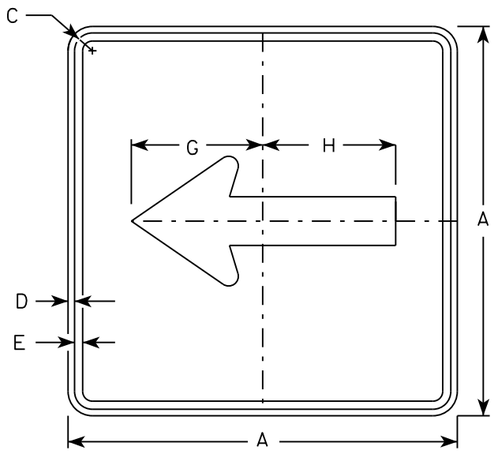
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

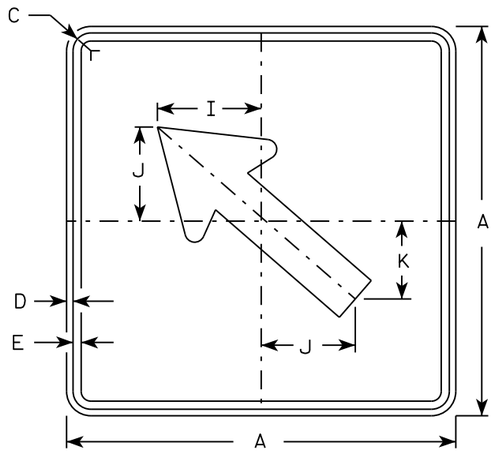
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



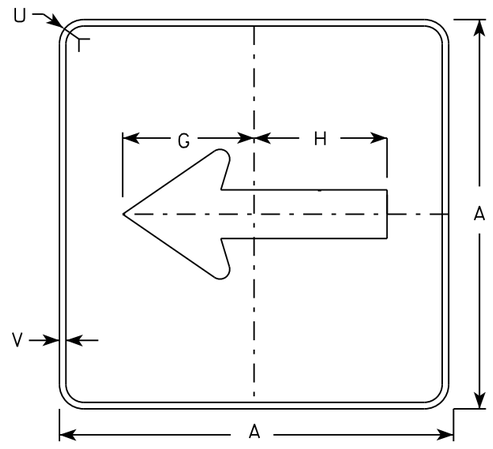
M6-1
MM6-1
MO6-1
MP6-1



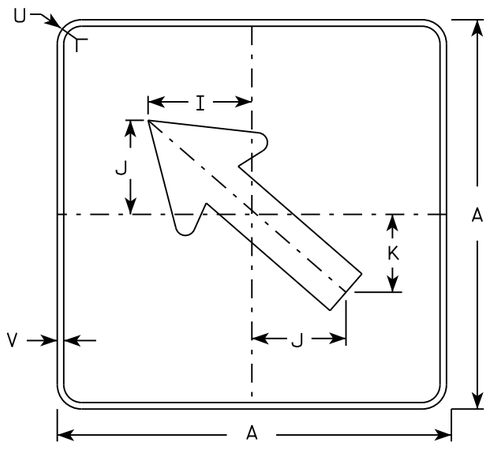
M6-2
MM6-2
MO6-2
MP6-2

NOTES

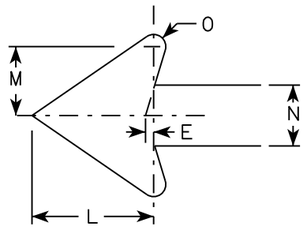
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



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

STANDARD SIGN
M6-1 & M6-2
SERIES

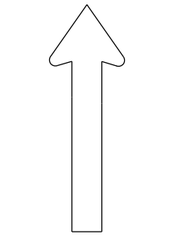
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 131 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

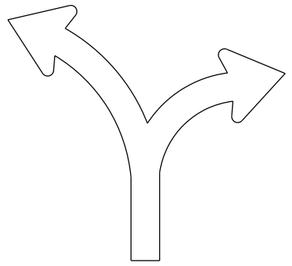
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

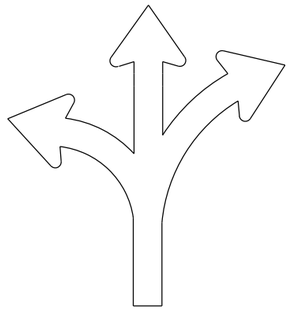


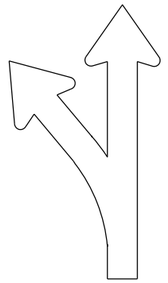
(A)

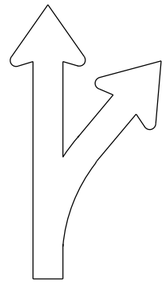


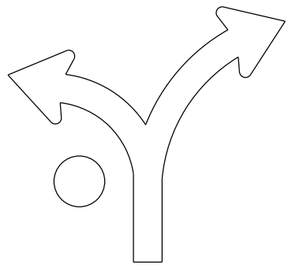
(B)

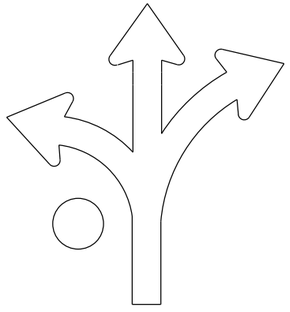

(C)

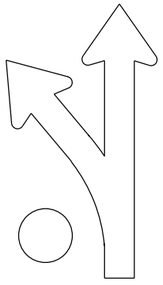

(D)


(E)


(F)

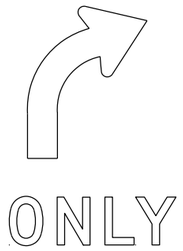

(G)


(H)

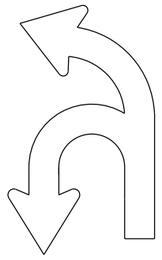

(I)



(L)



(R)


(U)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

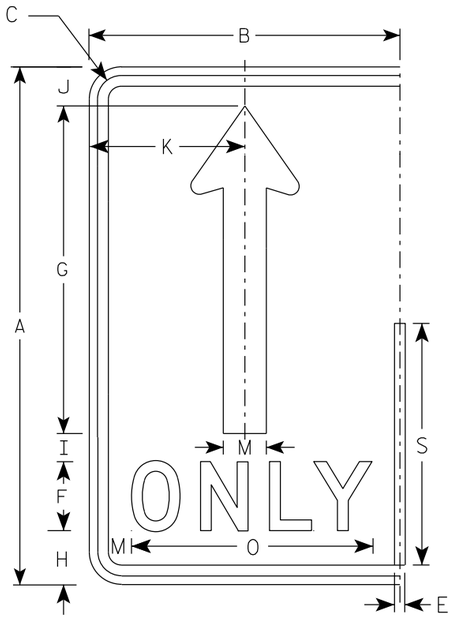
PROJECT NO:

SHEET NO: 132 E

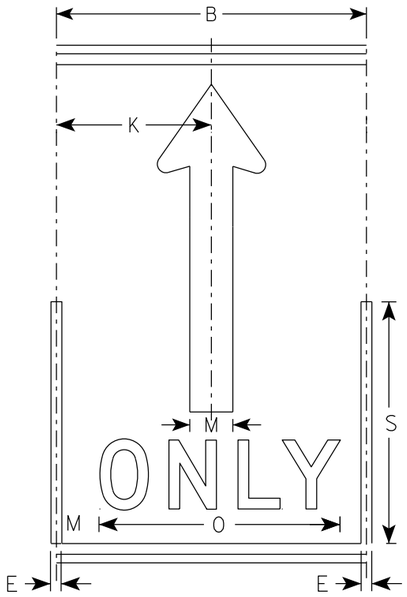
FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn
PLOT DATE : 21-MAY 2019 4:37
PLOT BY : mscj9h
PLOT NAME :
WISDOT/CADDS SHEET 42

NOTES

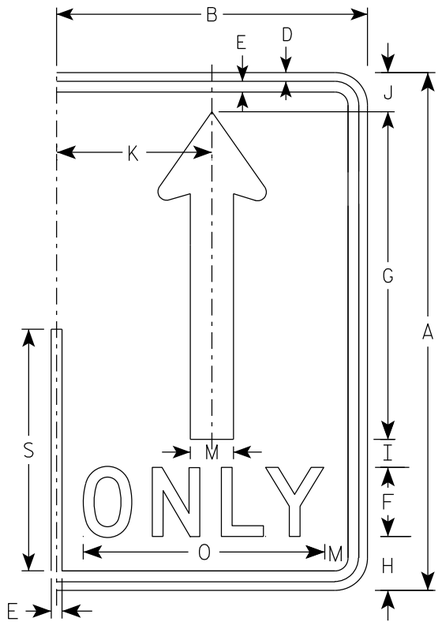
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



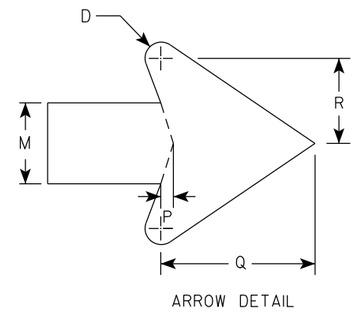
(A)



(A)



(A)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

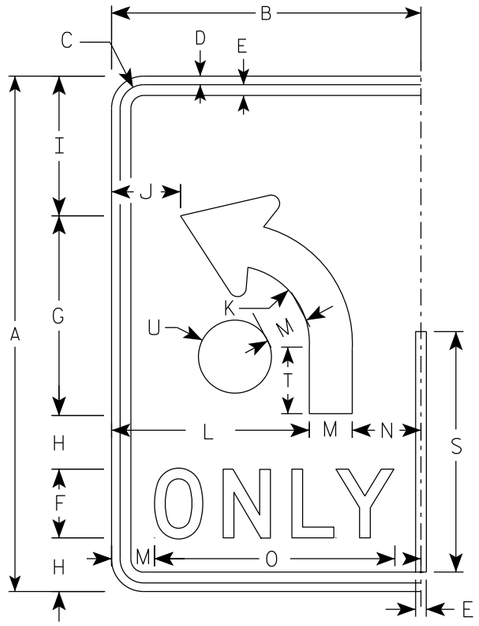
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

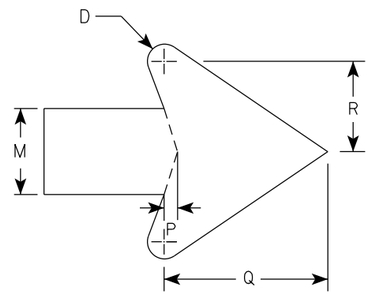
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 133 | E

NOTES

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



(B)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

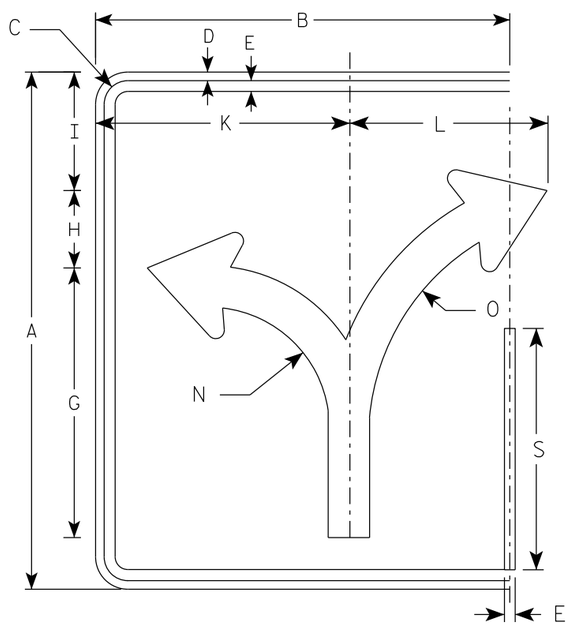
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

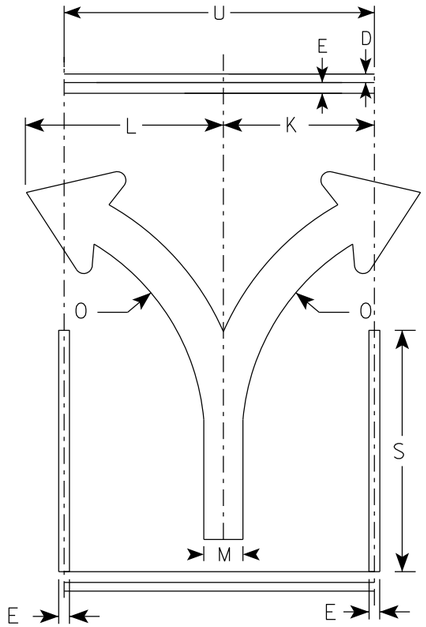
SHEET NO: 134 E

NOTES

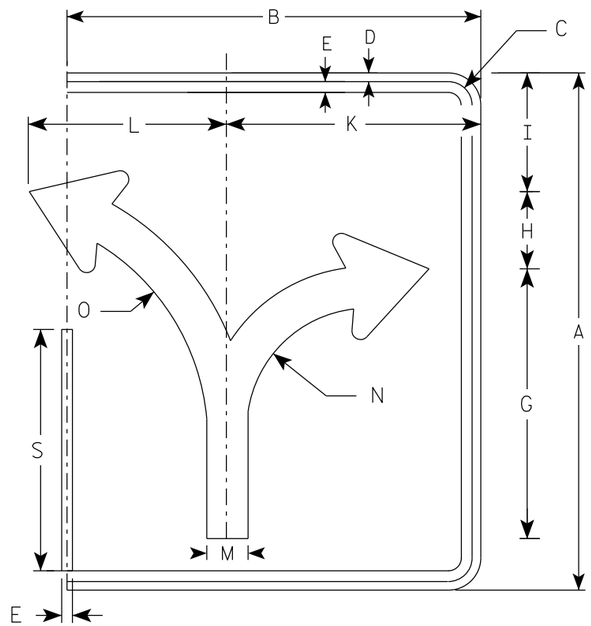
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



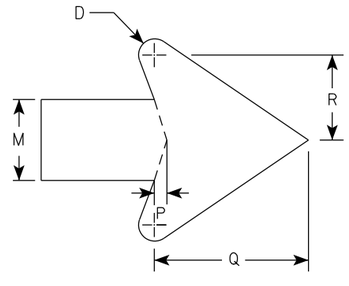
(C)



(C)



(C)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

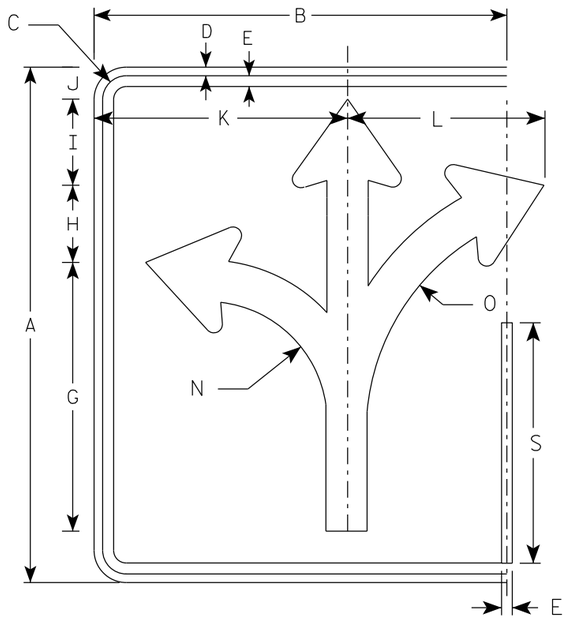
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

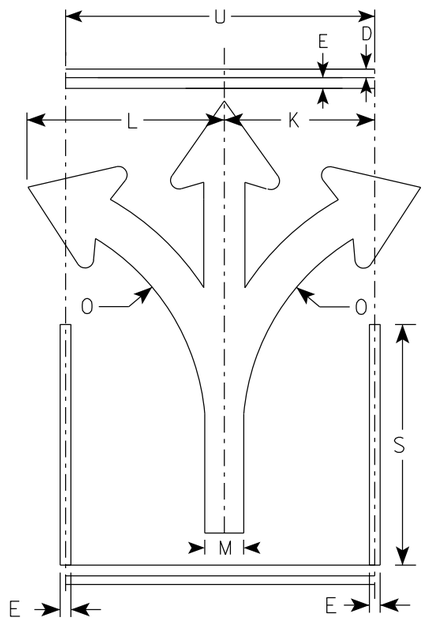
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 135 | E

NOTES

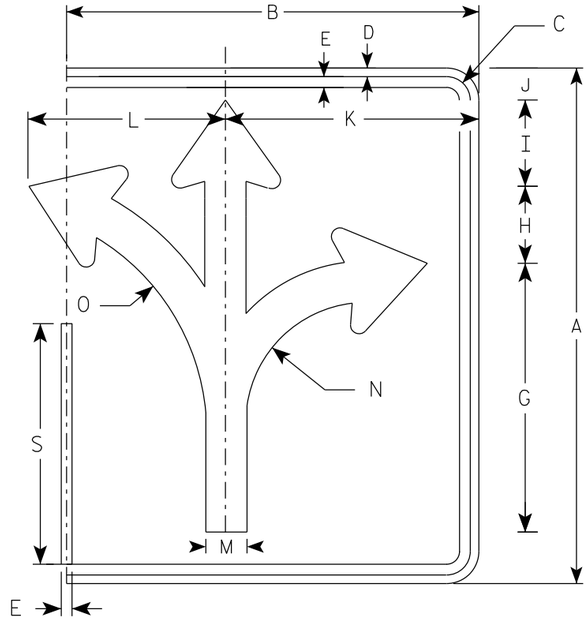
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



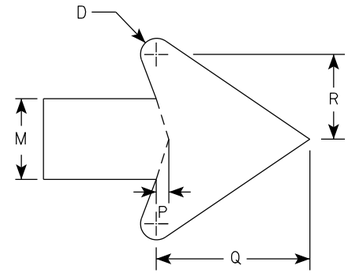
(D)



(D)



(D)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

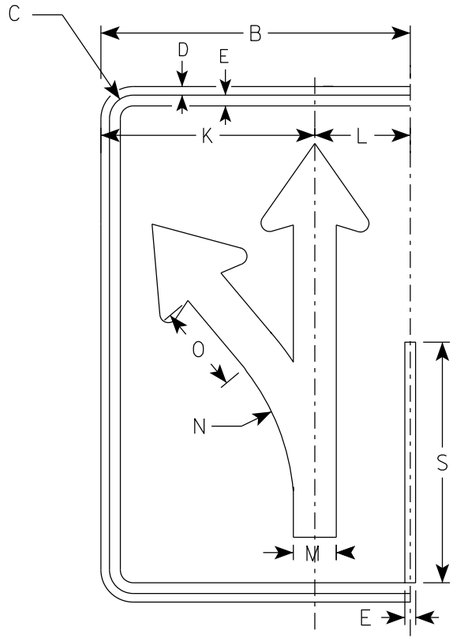
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

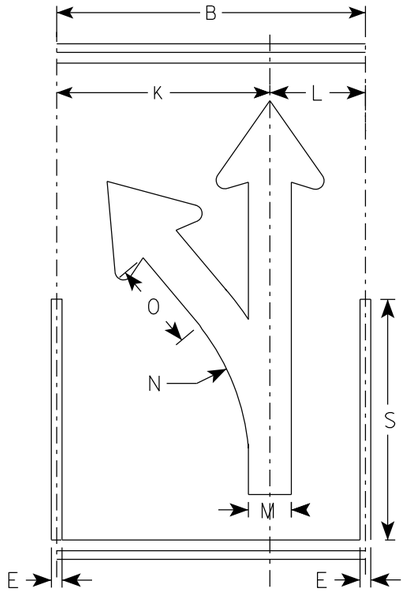
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 136 | E

NOTES

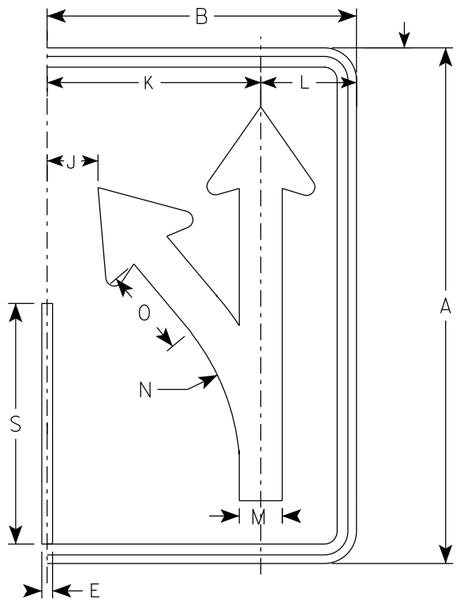
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



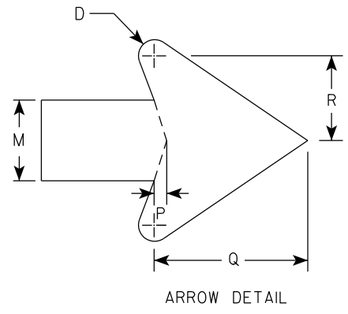
(E)



(E)



(E)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

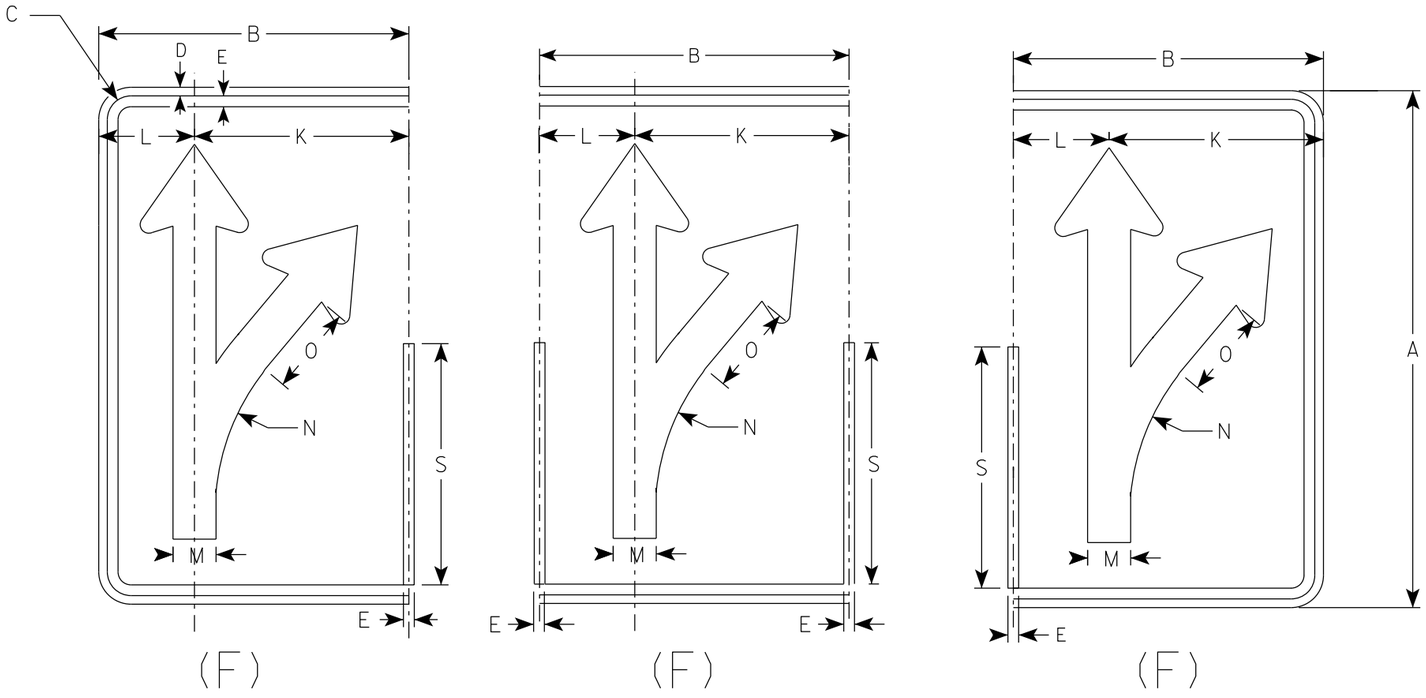
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

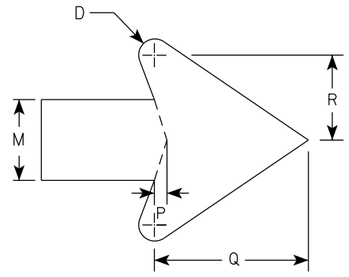
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 137 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(F) (F) (F)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

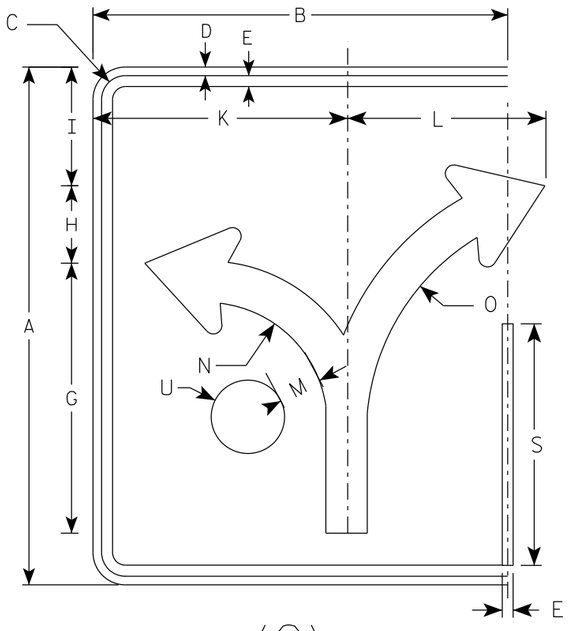
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 138 | E

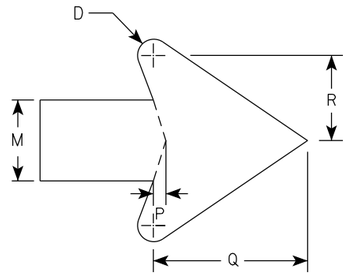
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

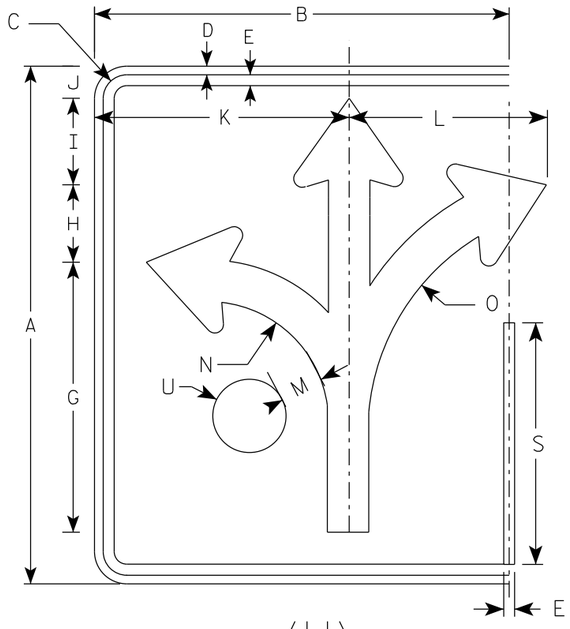
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

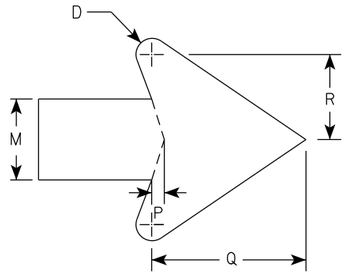
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 139	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

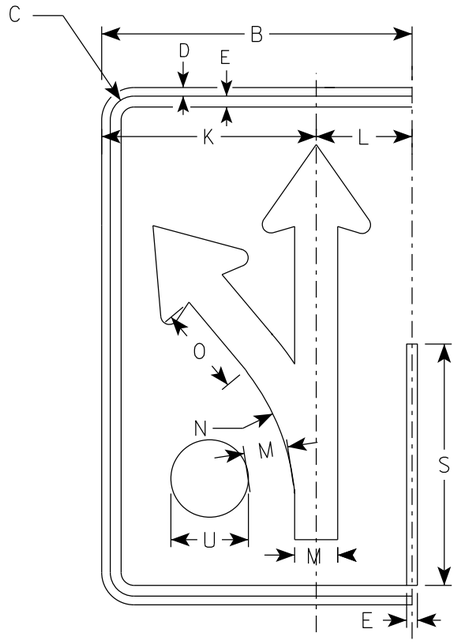
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

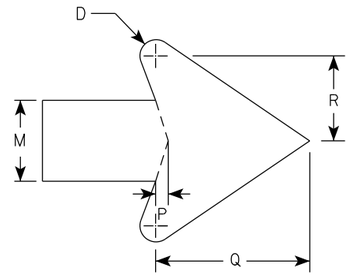
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 140	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

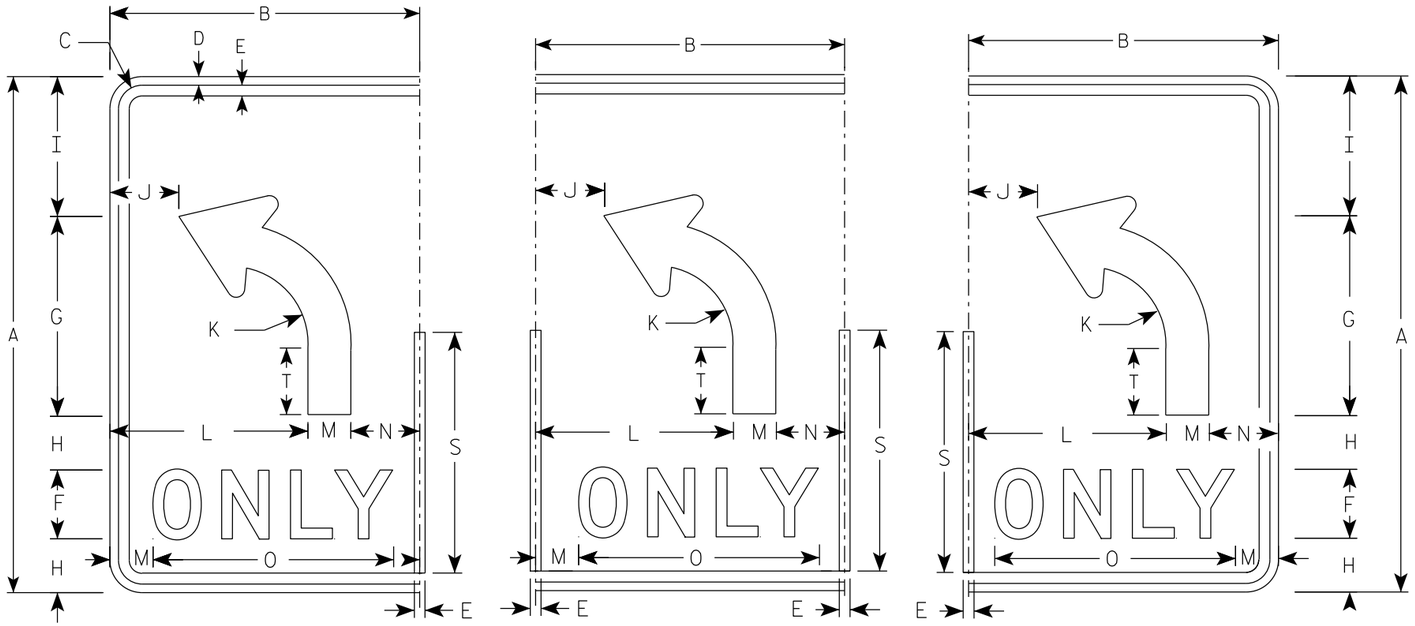
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

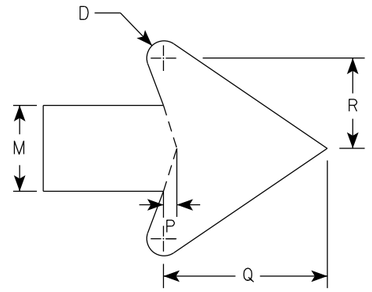
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 141 | E

NOTES

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



(L) (L) (L)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

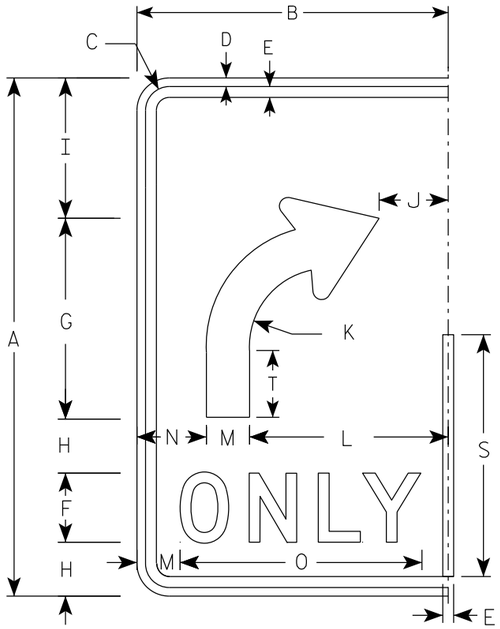
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

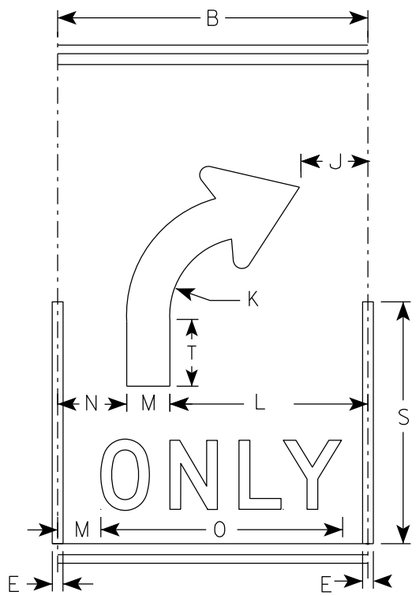
SHEET NO: 142 E

NOTES

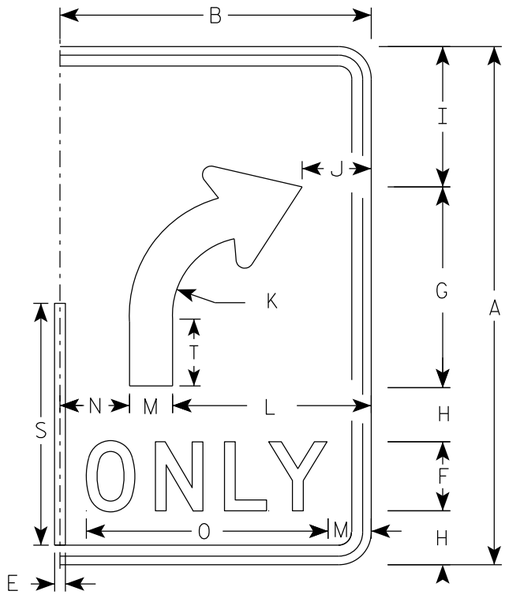
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



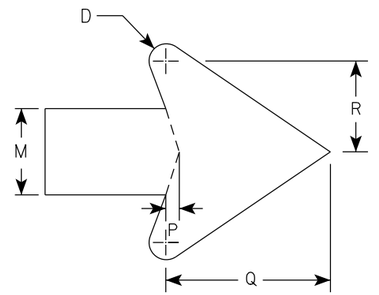
(R)



(R)



(R)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

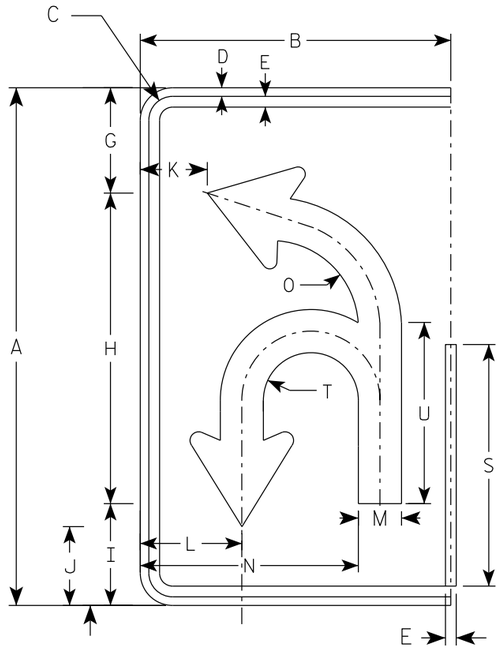
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

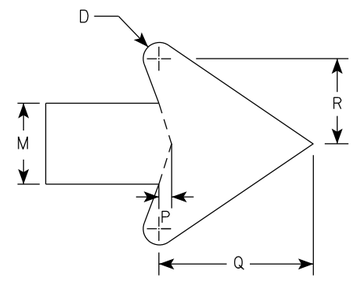
SHEET NO: 143 **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(U)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

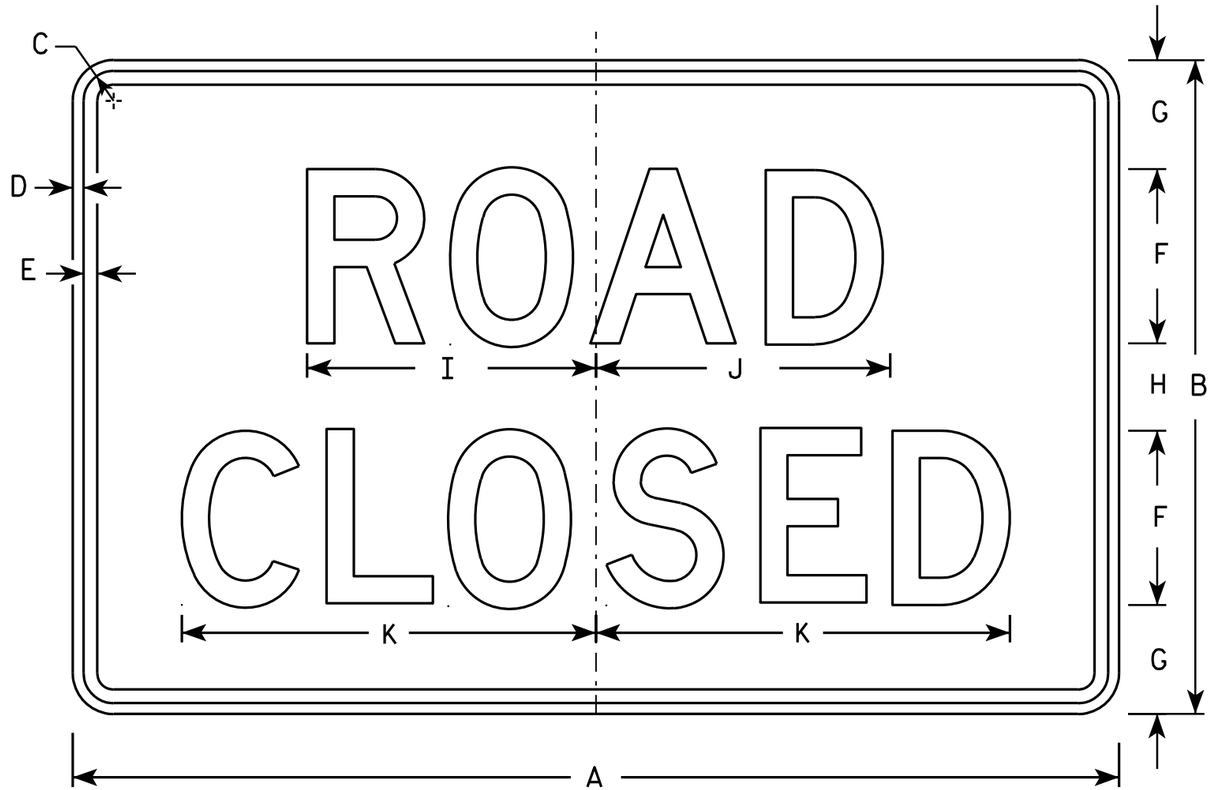
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

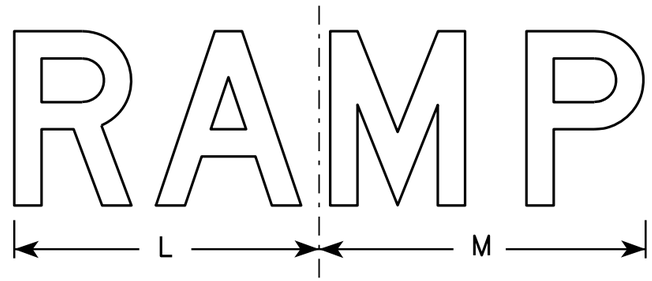
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 144 | E



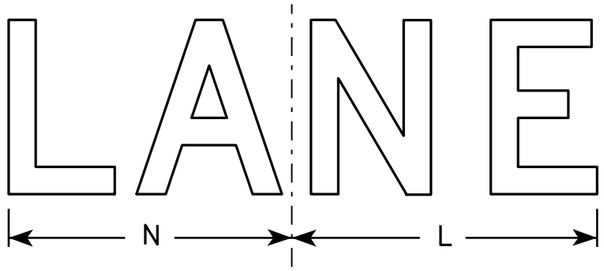
R11-2

NOTES

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



R11-2R



R11-2L

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

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

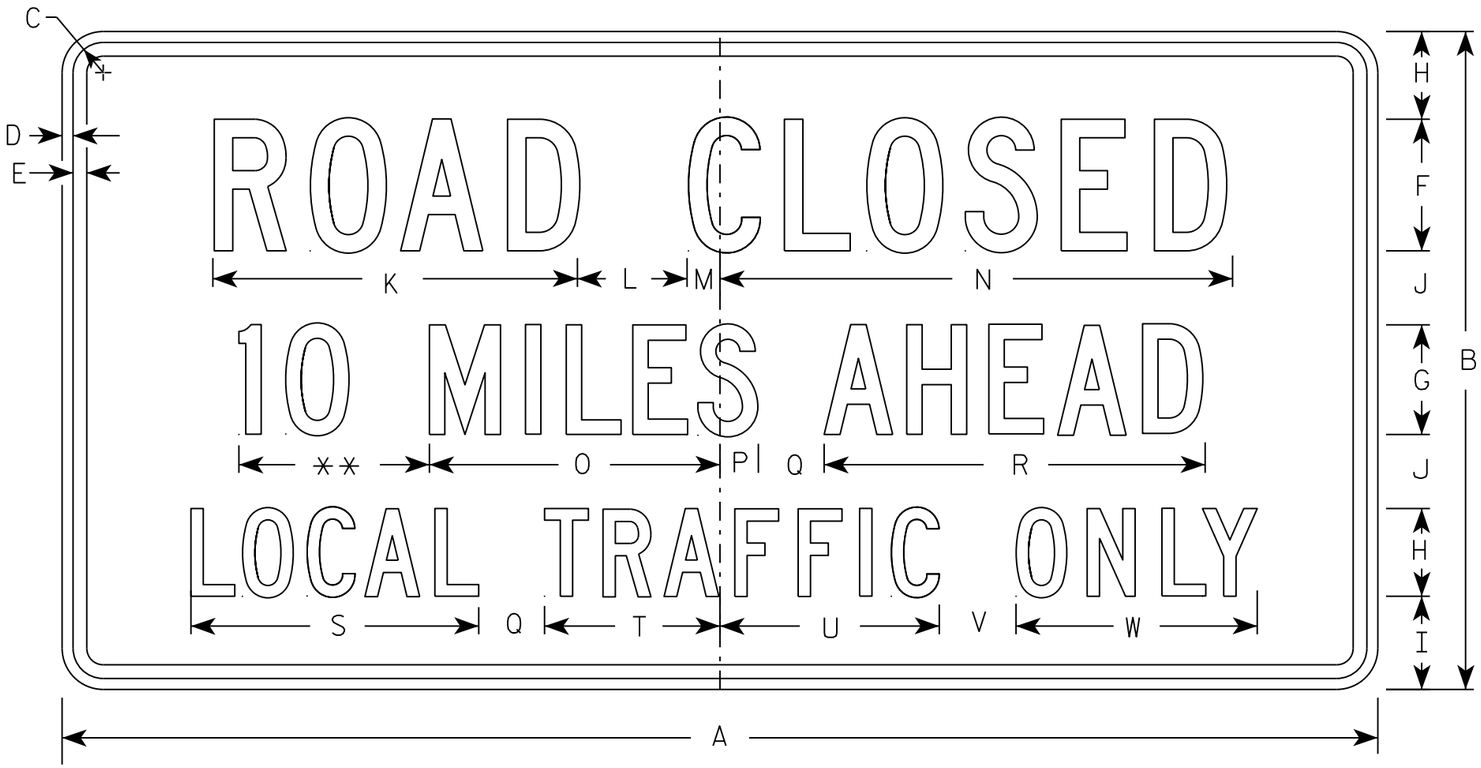
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 145	E

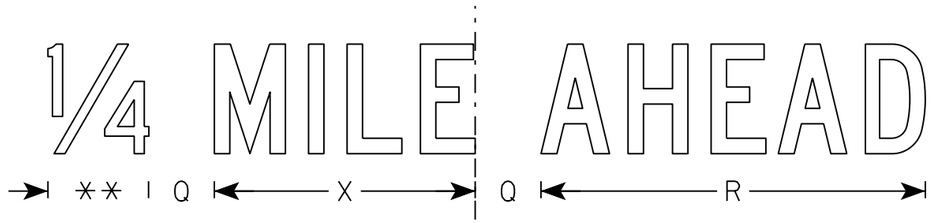
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

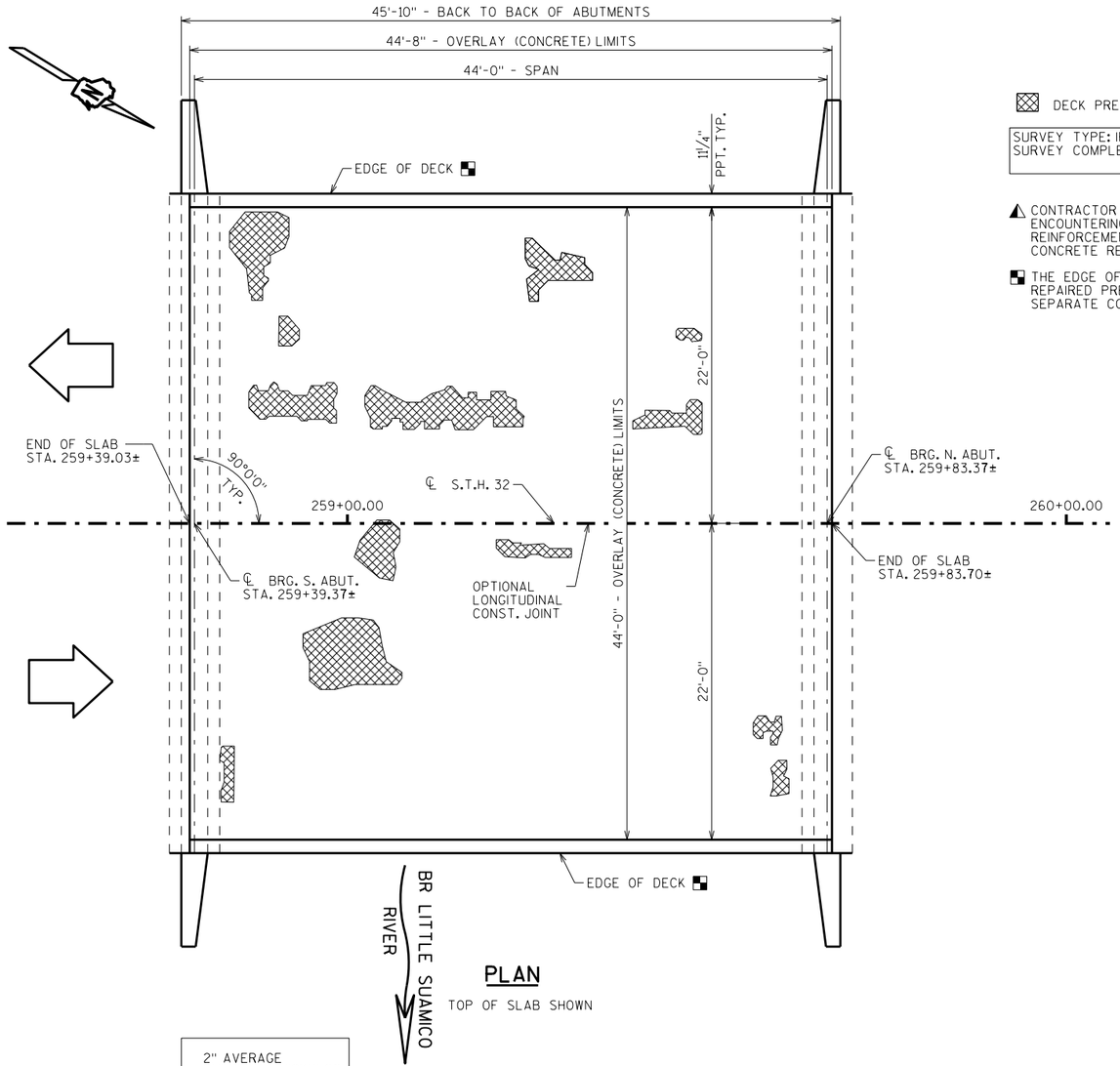
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 146	E

STATE PROJECT NUMBER

9190-20-71



DECK PREPARATION

SURVEY TYPE: IR
SURVEY COMPLETED DATE: 09/07/2016

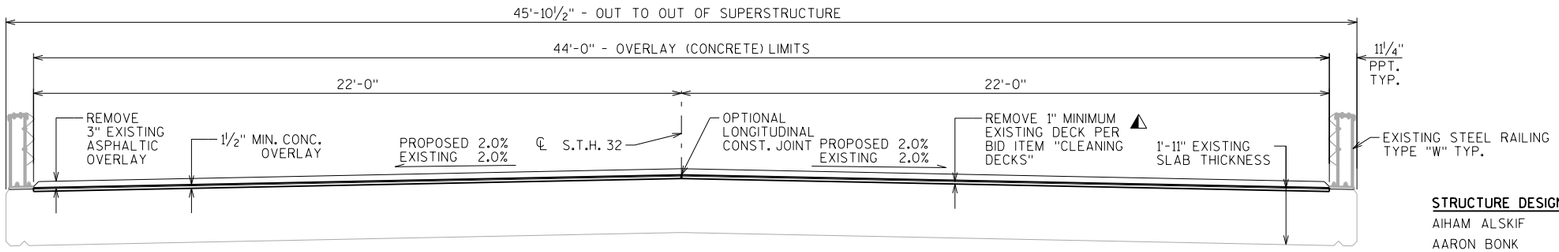
⚠ CONTRACTOR TO AVOID ENCOUNTERING TOP STEEL REINFORCEMENT OF SLAB DURING CONCRETE REMOVAL

THE EDGE OF DECK HAS BEEN REPAIRED PREVIOUSLY UNDER A SEPARATE CONTRACT

PLAN

TOP OF SLAB SHOWN

2" AVERAGE OVERLAY THICKNESS



CROSS SECTION THRU ROADWAY

LOOKING NORTH

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-21
OPERATING RATING: HS-35
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 209(KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & OVERLAY DECK ——— f'c = 4,000 P.S.I.

TRAFFIC VOLUME

S.T.H. 32

ADT = 7800 (2041)
R.D.S. = 45 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP SURFACE OF THE CONCRETE OVERLAY.

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

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY OR JOINT REPAIR AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

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

THE ENTIRE EXISTING ASPHALTIC OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-5-260" AND A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

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

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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	219
509.0301	PREPARATION DECKS TYPE 1	SY	11
509.0302	PREPARATION DECKS TYPE 2	SY	5
509.0500	CLEANING DECKS	SY	219
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	13
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-5-260	SY	219

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED AMB 6/12/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-5-260

STH 32 OVER BR LITTLE SUAMICO RIVER

COUNTY	VILLAGE
BROWN	PULASKI

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	JJS	AA	

CONCRETE OVERLAY

SHEET 1 OF 1

147

STRUCTURE DESIGN CONTACTS:

AIHAM ALSKIF (608) 261-6113
AARON BONK (608) 261-0261

LIST OF DRAWINGS

1. CONCRETE OVERLAY

I.D. 9190-20-00A DATE: JULY. 2019

SCALE = 5.00

8

8

STH 32 MAINLINE-GUARDRAIL SOUTH OF B-05-260

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
257+10	1.46	0	14.81	0	0	0	0	0	0	0
257+50	1.97	0	37.38	3	0	39	3	0	55	-52
257+65	1.87	0	40.83	1	0	22	4	0	86	-82
257+75	1.78	0	54.13	1	0	18	4	0	111	-106
257+87	1.77	0	98.04	1	0	34	5	0	159	-154
257+90	1.64	0	116.26	0	0	12	5	0	176	-170
258+00	1.05	9	112.70	0	2	42	6	2	236	-232
258+25	0.14	9	37.10	1	8	69	6	10	334	-338
258+35	29.31	6	22.27	5	3	11	12	13	350	-351
258+41	40.96	5	21.40	8	1	5	20	14	357	-351
258+50	41.32	3	20.71	14	1	7	33	15	367	-349
258+53	28.10	2	20.40	4	0	2	37	16	370	-348
258+60	13.23	1	36.81	5	0	7	42	16	381	-354
258+65	9.81	0	48.58	2	0	8	45	16	392	-363
258+85	1.49	0	37.94	4	0	32	49	16	437	-405
259+00	0.12	0	21.12	0	0	16	49	16	461	-427
259+37	0.32	0	27.99	0	0	34	50	16	508	-475
259+39	2.85	0	4.33	0	0	1	50	16	510	-476

STH 32 MAINLINE-GUARDRAIL NORTH OF B-05-260 AND LEFT TURN LANES (1 OF 3)

STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
259+84	1.18	0.00	15.87	0.00	0	0	0	0	0	0	0	0
260+00	0.25	0.00	10.42	0.00	0	0	8	0	0	0	11	-11
260+37	0.52	0.00	18.31	0.00	1	0	20	0	1	0	39	-38
260+50	0.57	0.00	28.58	0.00	0	0	11	0	1	0	55	-54
260+62	2.16	0.00	38.03	0.00	1	0	15	0	2	0	76	-74
260+87	5.01	0.00	50.98	0.00	3	0	41	0	5	0	135	-129
261+00	5.31	0.00	52.31	0.00	2	0	25	0	8	0	170	-162
261+50	55.79	3.38	17.26	0.00	57	3	64	0	64	3	261	-200
262+00	53.51	3.38	16.34	0.00	101	6	31	0	165	9	306	-150
262+50	55.83	3.38	17.13	0.00	101	6	31	0	267	16	350	-99
263+00	57.11	3.38	18.54	0.00	105	6	33	0	371	22	396	-47
263+50	59.48	3.38	17.11	0.00	108	6	33	0	479	28	443	8
264+00	56.72	3.38	16.88	0.00	108	6	31	0	587	34	488	64
264+50	54.93	3.38	14.90	0.00	103	6	29	0	690	41	530	120
265+00	55.01	3.38	12.36	0.00	102	6	25	0	792	47	566	179
265+50	55.77	3.38	11.35	0.00	103	6	22	0	895	53	597	245
266+00	53.53	3.38	11.16	0.00	101	6	21	0	996	59	626	310
266+37	53.31	4.35	9.90	12.01	73	5	14	8	1,069	65	647	357
266+40	54.55	4.39	7.07	14.70	6	0	1	1	1,075	65	648	362
266+45	56.10	4.64	5.46	16.34	10	1	1	3	1,085	66	650	369
266+50	56.43	5.12	5.00	16.91	10	1	1	3	1,096	67	651	377
266+55	60.75	5.61	7.60	16.76	11	1	1	3	1,106	68	653	386
266+60	68.99	6.09	5.54	17.04	12	1	1	3	1,118	69	655	395
266+65	63.64	6.47	10.09	17.32	12	1	1	3	1,131	70	657	404
266+70	65.77	6.67	16.09	17.17	12	1	2	3	1,143	71	660	411
266+74	68.86	7.06	10.88	19.49	10	1	2	3	1,153	72	663	417
266+75	69.70	7.16	7.17	22.31	3	0	0	1	1,155	73	663	419
266+80	74.41	7.88	3.96	0.00	13	1	1	2	1,169	74	665	430
266+85	79.67	8.77	3.22	0.00	14	2	1	0	1,183	76	666	441
266+90	86.99	9.94	3.03	0.00	15	2	1	0	1,198	77	667	454
266+95	96.73	8.55	4.07	0.00	17	2	1	0	1,215	79	668	469
267+00	108.64	5.47	3.44	0.00	19	1	1	0	1,234	80	669	485
267+05	125.79	2.40	0.21	0.00	22	1	0	0	1,256	81	669	506
267+10	109.23	1.38	0.00	0.00	22	0	0	0	1,278	81	669	527
267+15	73.71	1.38	0.00	0.00	17	0	0	0	1,295	82	669	544
267+20	44.52	1.38	0.00	0.00	11	0	0	0	1,306	82	669	555
267+25	54.79	1.38	0.00	0.00	9	0	0	0	1,315	82	669	564
267+30	65.70	3.05	0.00	0.00	11	0	0	0	1,326	83	669	574
267+35	75.34	5.53	0.00	0.00	13	1	0	0	1,339	83	669	587
267+40	84.67	8.02	0.00	0.00	15	1	0	0	1,354	85	669	600
267+45	94.63	10.51	0.00	0.00	17	2	0	0	1,371	86	669	615
267+50	105.06	13.00	0.00	0.00	18	2	0	0	1,389	89	669	631
267+55	115.12	15.49	0.00	0.00	20	3	0	0	1,409	91	669	649
267+60	127.28	18.59	0.00	0.00	22	3	0	0	1,432	94	669	668
267+65	144.67	15.42	0.00	0.00	25	3	0	0	1,457	97	669	690

STH 32 MAINLINE-GUARDRAIL NORTH OF B-05-260 AND LEFT TURN LANES (2 OF 3)

STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
267+70	141.27	13.08	0.00	0.00	26	3	0	0	1,484	100	669	714
267+75	123.03	11.27	0.00	0.00	24	2	0	0	1,508	102	669	736
267+80	109.22	9.80	0.00	0.00	22	2	0	0	1,529	104	669	756
267+85	97.28	8.73	0.00	0.00	19	2	0	0	1,549	106	669	773
267+90	82.95	7.92	0.14	0.00	17	2	0	0	1,565	108	669	789
267+95	63.35	7.34	3.15	0.00	14	1	0	0	1,579	109	670	800
268+00	57.22	6.92	9.32	0.00	11	1	1	0	1,590	110	671	808
268+05	54.55	6.55	13.05	10.21	10	1	2	1	1,600	112	674	815
268+10	53.55	5.81	14.75	10.54	10	1	3	2	1,610	113	678	820
268+15	54.54	5.15	15.83	12.17	10	1	3	2	1,620	114	682	825
268+20	55.36	4.48	15.98	13.56	10	1	3	2	1,631	115	686	830
268+25	63.91	4.19	3.47	11.68	11	1	2	2	1,642	115	689	838
268+30	67.24	3.38	3.75	14.82	12	1	1	2	1,654	116	690	848
268+35	68.68	3.38	3.25	14.52	13	1	1	3	1,666	117	690	859
268+40	70.16	3.38	2.69	14.49	13	1	1	3	1,679	117	691	871
268+45	71.81	3.38	2.40	14.31	13	1	0	3	1,692	118	692	882
268+50	73.39	3.38	2.14	14.25	13	1	0	3	1,706	119	693	895
268+55	74.49	3.38	1.98	14.14	14	1	0	3	1,719	119	693	907
268+55	74.54	3.38	1.97	14.13	1	0	0	0	1,720	119	693	908
269+00	67.08	3.38	2.98	13.30	117	6	4	23	1,838	125	699	1,014
269+50	58.28	3.38	2.89	13.27	116	6	5	25	1,954	131	707	1,116
270+00	59.27	3.38	2.46	13.96	109	6	5	25	2,062	137	714	1,211
270+50	60.01	3.38	2.02	13.79	110	6	4	26	2,173	144	720	1,310
271+00	62.10	3.38	0.71	14.62	113	6	3	26	2,286	150	723	1,413
271+50	62.16	3.38	0.84	14.71	115	6	1	27	2,401	156	725	1,520
272+00	70.38	3.38	0.00	15.44	123	6	1	28	2,524	162	726	1,635
272+50	63.70	3.69	0.74	15.01	124	7	1	28	2,648	169	727	1,752
273+00	68.05	4.58	0.00	0.00	122	8	1	14	2,770	177	728	1,865
273+50	58.30	5.49	0.91	0.00	117	9	1	0	2,887	186	729	1,972
274+00	58.23	6.06	0.96	0.00	108	11	2	0	2,995	197	732	2,066
274+50	58.13	6.51	0.65	0.00	108	12	1	0	3,102	208	734	2,160
274+79	55.54	8.72	0.62	0.00	61	8	1	0	3,164	216	735	2,212
274+80	55.68	8.79	0.62	0.00	2	0	0	0	3,166	217	735	2,214
274+85	58.09	9.39	0.78	0.00	11	2	0	0	3,176	218	735	2,223
274+90	58.85	9.77	1.15	0.00	11	2	0	0	3,187	220	735	2,231
274+95	60.51	10.41	1.32	0.00	11	2	0	0	3,198	222	736	2,240
275+00	62.89	11.15	1.61	0.00	11	2	0	0	3,209	224	736	2,249
275+05	66.41	12.06	1.68	0.00	12	2	0	0	3,221	226	737	2,259
275+10	71.19	13.25	1.57	0.00	13	2	0	0	3,234	229	737	2,269
275+15	77.81	14.59	0.91	0.00	14	3	0	0	3,248	231	737	2,280
275+20	86.66	16.34	0.45	0.00	15	3	0	0	3,263	234	738	2,292
275+25	98.98	14.41	0.16	0.00	17	3	0	0	3,280	237	738	2,306
275+30	104.58	13.01	0.02	0.00	19	3	0	0	3,299	239	738	2,322
275+35	99.14	11.60	0.98	0.00	19	2	0	0	3,318	242	738	2,339
275+40	93.19	10.37	0.56	0.00	18	2	0	0	3,336	244	738	2,354

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	EARTHWORK DATA	SHEET: 150	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : DUMS, ALEXANDER T PLOT NAME : _____ PLOT SCALE : 1:1

STH 32 MAINLINE-GUARDRAIL NORTH OF B-05-260 AND LEFT TURN LANES (3 OF 3)

STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
275+45	88.59	9.29	0.33	0.00	17	2	0	0	3,353	245	738	2,369
275+50	85.40	8.44	0.18	0.00	16	2	0	0	3,369	247	738	2,384
275+55	83.04	7.73	0.09	0.00	16	1	0	0	3,384	249	738	2,398
275+60	81.99	8.95	0.06	0.00	15	2	0	0	3,400	250	738	2,411
275+65	82.36	10.46	0.02	0.00	15	2	0	0	3,415	252	738	2,425
275+70	85.02	12.27	0.00	0.00	15	2	0	0	3,430	254	738	2,438
275+75	98.18	9.76	0.00	0.00	17	2	0	0	3,447	256	738	2,453
275+80	106.07	6.27	0.00	0.00	19	1	0	0	3,466	258	738	2,470
275+85	92.19	4.18	0.00	0.00	18	1	0	0	3,485	259	738	2,488
275+90	79.23	4.18	0.00	0.00	16	1	0	0	3,501	259	738	2,503
275+95	66.12	6.95	0.00	0.00	13	1	0	0	3,514	260	738	2,515
276+00	61.33	9.71	0.00	0.00	12	2	0	0	3,526	262	738	2,526
276+05	76.45	12.07	0.00	0.00	13	2	0	0	3,539	264	738	2,536
276+10	92.33	12.93	0.00	0.00	16	2	0	0	3,554	266	738	2,550
276+15	104.79	14.02	1.70	0.00	18	2	0	0	3,572	269	738	2,565
276+20	110.74	15.47	3.21	0.00	20	3	0	0	3,592	271	739	2,582
276+25	117.28	17.29	1.63	0.00	21	3	0	0	3,613	274	740	2,599
276+30	124.15	19.17	1.33	0.00	22	3	0	0	3,636	278	740	2,618
276+35	131.15	21.26	1.12	0.00	24	4	0	0	3,659	282	740	2,637
276+40	134.61	23.65	0.53	0.00	25	4	0	0	3,684	286	741	2,658
276+45	141.67	26.07	0.00	0.00	26	5	0	0	3,710	290	741	2,679
276+50	128.13	22.44	0.00	0.00	25	4	0	0	3,735	295	741	2,699
276+55	116.52	19.57	0.01	0.00	23	4	0	0	3,757	299	741	2,718
276+60	105.60	17.35	0.04	0.00	21	3	0	0	3,778	302	741	2,735
276+65	96.13	15.40	0.06	0.00	19	3	0	0	3,797	305	741	2,751
276+70	86.09	13.57	0.00	0.00	17	3	0	0	3,813	308	741	2,765
276+75	75.78	12.32	0.50	0.00	15	2	0	0	3,828	310	741	2,777
276+77	73.30	11.76	0.61	0.00	7	1	0	0	3,835	311	741	2,783
276+80	71.45	11.28	0.56	0.00	7	1	0	0	3,842	312	741	2,789
276+85	67.87	10.40	0.95	0.00	13	2	0	0	3,855	314	741	2,799
276+90	64.55	9.75	1.65	0.00	12	2	0	0	3,867	316	741	2,809
276+95	62.43	9.27	2.41	0.00	12	2	0	0	3,879	318	742	2,819
276+96	63.95	9.20	4.20	0.00	2	0	0	0	3,881	318	742	2,821
277+00	63.34	8.97	11.52	0.00	9	1	1	0	3,891	320	744	2,827
277+05	81.19	8.84	8.78	17.09	13	2	2	2	3,904	321	747	2,836
277+10	80.39	8.41	9.22	15.95	15	2	2	3	3,919	323	749	2,847
277+15	78.72	8.06	9.79	14.98	15	2	2	3	3,934	325	751	2,858
277+16	78.43	8.07	9.87	14.85	3	0	0	1	3,937	325	752	2,860
277+50	64.70	8.29	12.88	9.09	90	10	14	15	4,027	335	772	2,919
278+00	69.15	9.24	8.24	10.39	124	16	20	18	4,151	351	800	2,999
278+50	69.94	9.24	7.93	11.01	129	17	15	20	4,280	369	821	3,090
279+00	73.80	9.17	7.76	11.08	133	17	15	20	4,413	386	842	3,185
279+50	70.08	9.17	5.38	11.81	133	17	12	21	4,546	403	859	3,284
280+00	68.29	9.17	1.23	13.51	128	17	6	23	4,674	420	868	3,387
280+50	63.90	9.17	0.20	12.67	122	17	1	24	4,796	436	870	3,490
281+00	39.46	9.17	0.00	8.27	96	17	0	19	4,892	453	870	3,569
281+49	37.11	9.17	0.00	0.00	69	17	0	8	4,962	470	870	3,621
281+50	37.08	9.17	0.00	0.00	1	0	0	0	4,963	470	870	3,622
282+00	33.37	9.17	0.00	0.00	65	17	0	0	5,028	487	870	3,671
282+02	32.92	9.17	0.00	0.00	2	1	0	0	5,031	488	870	3,673

BLUE HERON DR.

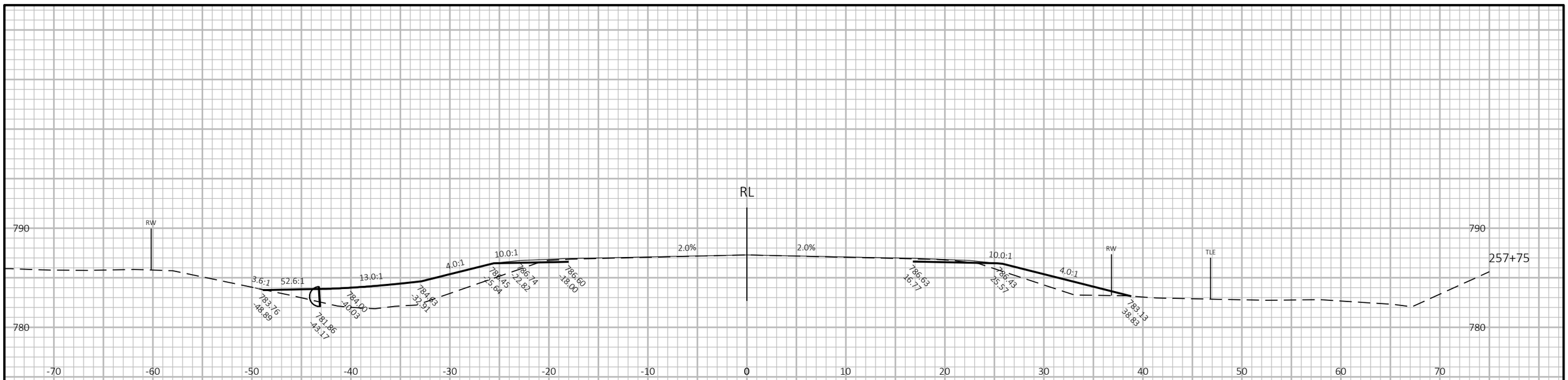
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
08+70	870.00	0.00	84.57	13.52	0.55	0	0	0.00	0	0	0	0
08+75	875.00	5.00	84.41	13.53	0.49	16	3	0.10	16	3	0	13
08+80	880.00	5.00	84.33	13.75	0.38	16	3	0.08	31	5	0	26
08+85	885.00	5.00	84.84	13.54	0.28	16	3	0.06	47	8	0	39
08+90	890.00	5.00	85.84	13.52	0.25	16	3	0.05	63	10	0	52
08+95	895.00	5.00	87.42	13.52	0.25	16	3	0.05	79	13	0	66
09+00	900.00	5.00	90.00	13.52	0.31	16	3	0.05	95	15	1	80
09+05	905.00	5.00	95.25	13.51	0.25	17	3	0.05	112	18	1	94
09+10	910.00	5.00	99.36	13.54	0.29	18	3	0.05	130	20	1	110
09+15	915.00	5.00	105.19	13.69	0.44	19	3	0.07	149	23	1	126
09+20	920.00	5.00	112.50	14.11	0.64	20	3	0.10	169	25	1	143
09+25	925.00	5.00	121.07	14.80	0.85	22	3	0.14	191	28	1	162
09+30	930.00	5.00	122.30	15.58	1.15	23	3	0.18	214	31	1	182
09+35	935.00	5.00	112.88	16.53	0.93	22	3	0.19	235	34	2	200
09+40	940.00	5.00	105.42	15.98	0.08	20	3	0.09	256	37	2	217
09+45	945.00	5.00	98.19	14.89	0.00	19	3	0.01	274	40	2	233
09+50	950.00	5.00	83.53	13.95	0.00	17	3	0.00	291	42	2	247
09+55	955.00	5.00	70.80	11.03	0.00	14	2	0.00	306	44	2	259
09+60	960.00	5.00	58.40	8.96	0.00	12	2	0.00	318	46	2	269
09+65	965.00	5.00	44.76	6.88	0.00	10	1	0.00	327	48	2	278
09+70	970.00	5.00	30.66	4.81	0.00	7	1	0.00	334	49	2	283
09+71	971.00	1.00	28.01	4.39	0.00	1	0	0.00	335	49	2	284
09+75	975.00	4.00	16.97	2.73	0.00	3	1	0.00	339	50	2	287
09+80	980.00	5.00	4.17	0.66	0.00	2	0	0.00	340	50	2	288

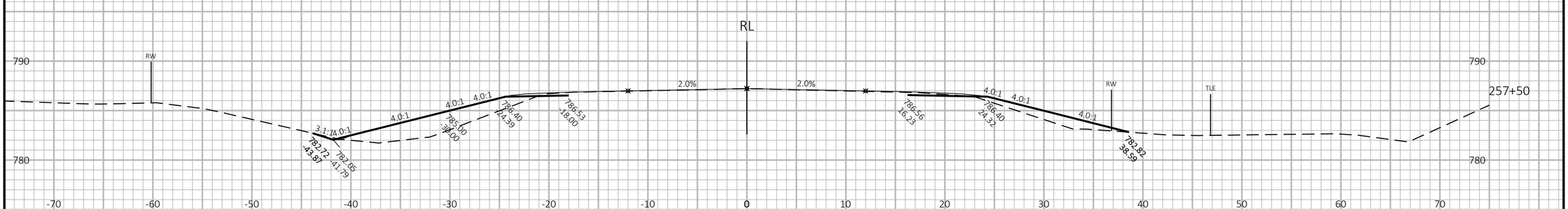
GLENBROOK DR. (WEST)

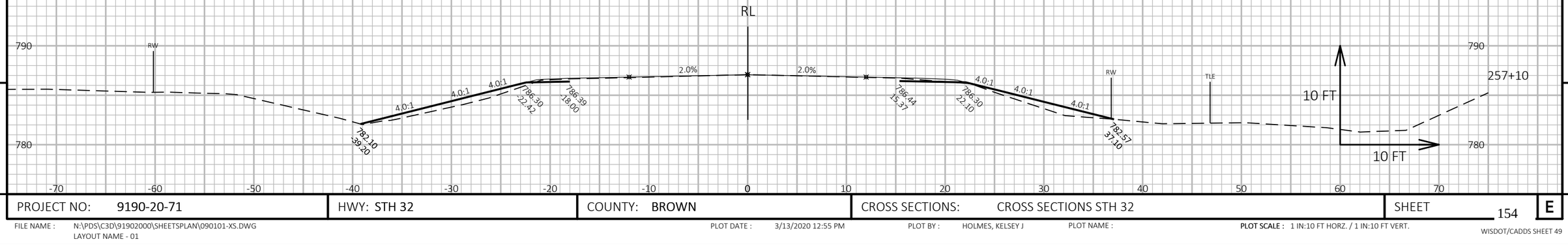
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
08+80	92.60	14.58	0.00	0	0	0	0	0	0	0
08+85	93.75	14.62	0.00	17	3	0	17	3	0	15
08+90	94.78	14.79	0.01	17	3	0	35	5	0	29
08+95	96.81	15.07	0.01	18	3	0	52	8	0	44
09+00	99.40	15.44	0.00	18	3	0	71	11	0	60
09+05	101.50	15.98	0.00	19	3	0	89	14	0	75
09+10	104.35	16.61	0.00	19	3	0	108	17	0	91
09+15	109.13	17.37	0.01	20	3	0	128	20	0	108
09+20	115.54	99.75	0.00	21	11	0	149	31	0	118
09+25	117.48	19.39	0.00	22	11	0	170	42	0	128
09+28	116.72	18.81	0.00	13	2	0	183	44	0	139
09+30	111.98	18.38	0.00	8	1	0	192	45	0	146
09+35	107.26	17.53	0.00	20	3	0	212	49	0	163
09+40	103.39	16.71	0.00	20	3	0	232	52	0	180
09+45	100.78	16.04	0.01	19	3	0	251	55	0	196
09+50	99.84	15.53	0.00	19	3	0	269	58	0	211
09+55	84.65	13.28	0.00	17	3	0	286	61	0	226
09+60	68.62	10.79	0.00	14	2	0	300	63	0	238
09+61	68.60	10.35	0.00	3	0	0	303	63	0	240
09+65	52.62	8.32	0.00	9	1	0	312	65	0	247
09+70	36.72	5.86	0.00	8	1	0	320	66	0	254
09+75	21.24	3.40	0.00	5	1	0	326	67	0	259
09+80	5.89	0.94	0.00	3	0	0	328	67	0	261

GLENBROOK DR. (EAST)

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
10+20	13.84	2.08	0.00	0	0	0	0	0	0	0
10+25	45.51	7.31	0.00	5	1	0	5	1	0	5
10+30	73.62	12.53	0.00	11	2	0	17	3	0	14
10+35	98.15	17.83	0.00	16	3	0	32	6	0	27
10+40	121.05	20.58	0.51	20	4	0	53	9	0	44
10+45	126.06	20.96	14.65	23	4	1	76	13	2	61
10+50	132.22	21.50	21.10	24	4	3	100	17	7	76
10+55	139.15	21.58	9.19	25	4	3	125	21	11	93
10+60	128.98	19.96	0.11	25	4	1	149	25	12	113
10+65	120.80	18.23	0.04	23	4	0	173	28	12	132
10+70	116.31	17.10	0.03	22	3	0	195	31	12	151
10+72	114.50	16.83	0.03	9	1	0	203	33	12	158
10+75	63.65	11.86	0.00	10	2	0	213	34	12	167
10+80	38.16	22.57	0.10	9	3	0	222	38	12	172
10+85	4.09	0.00	0.83	4	2	0	226	40	12	174







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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 154	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 01

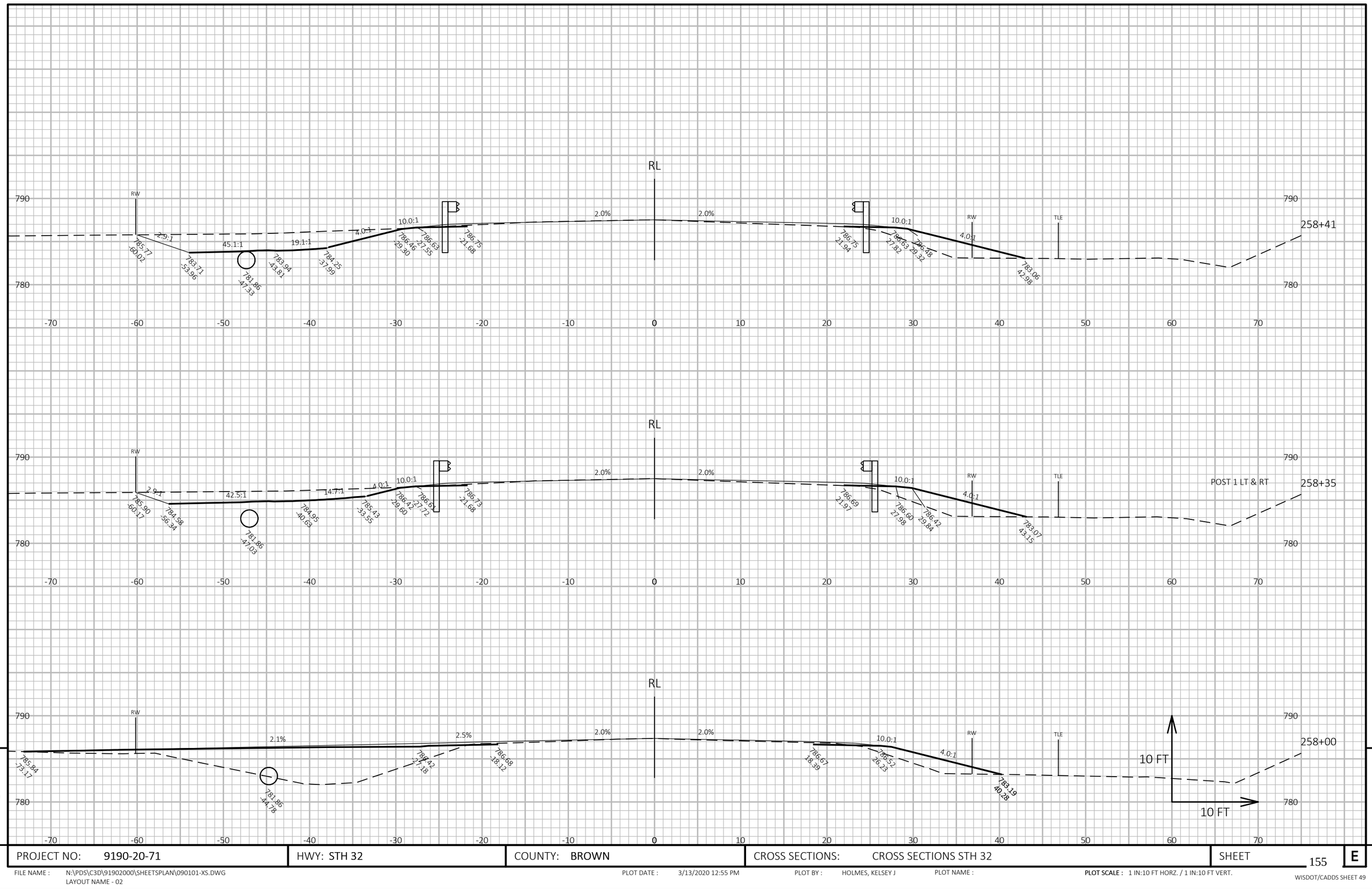
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 155	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 02

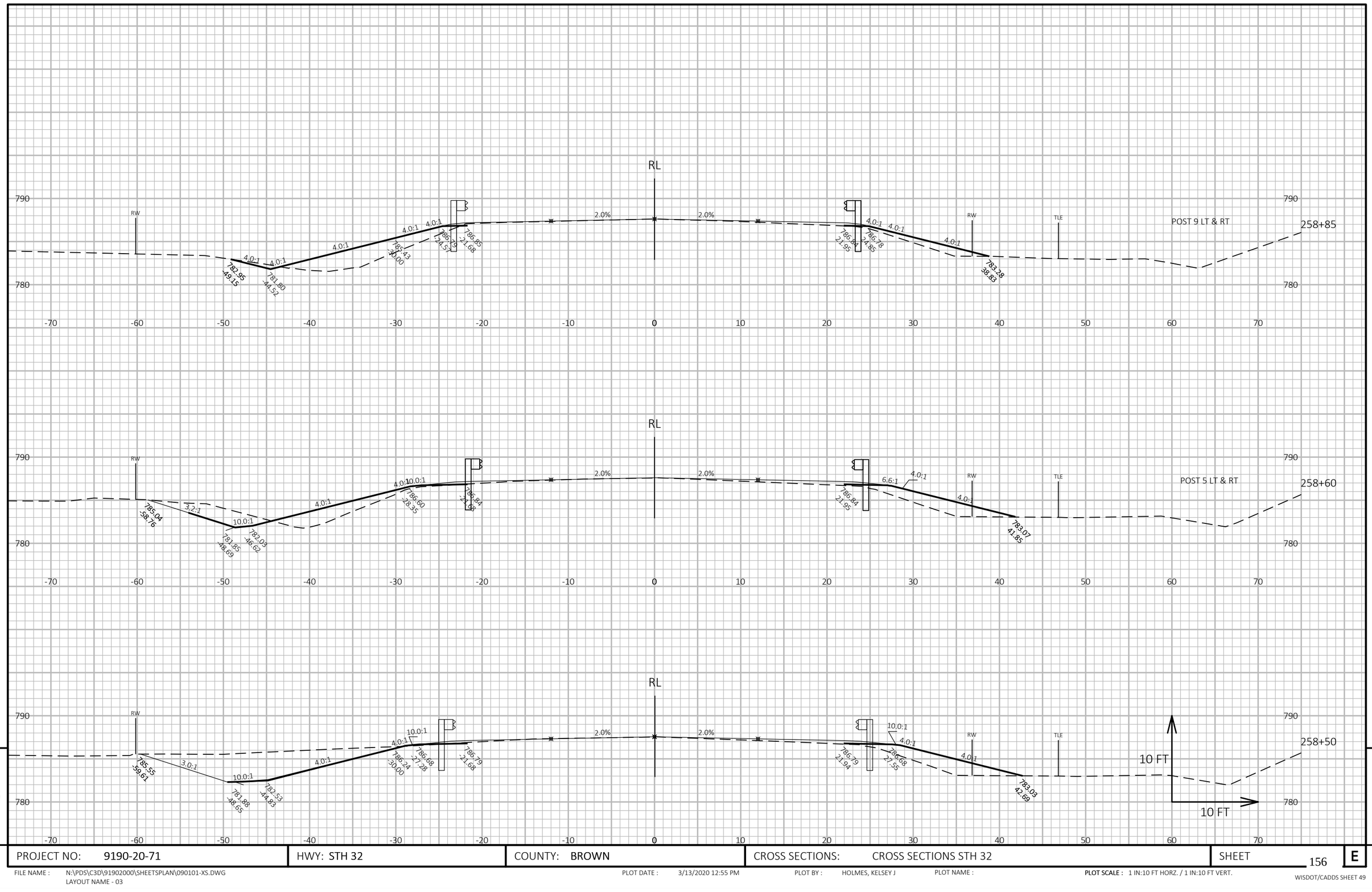
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 156	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 03

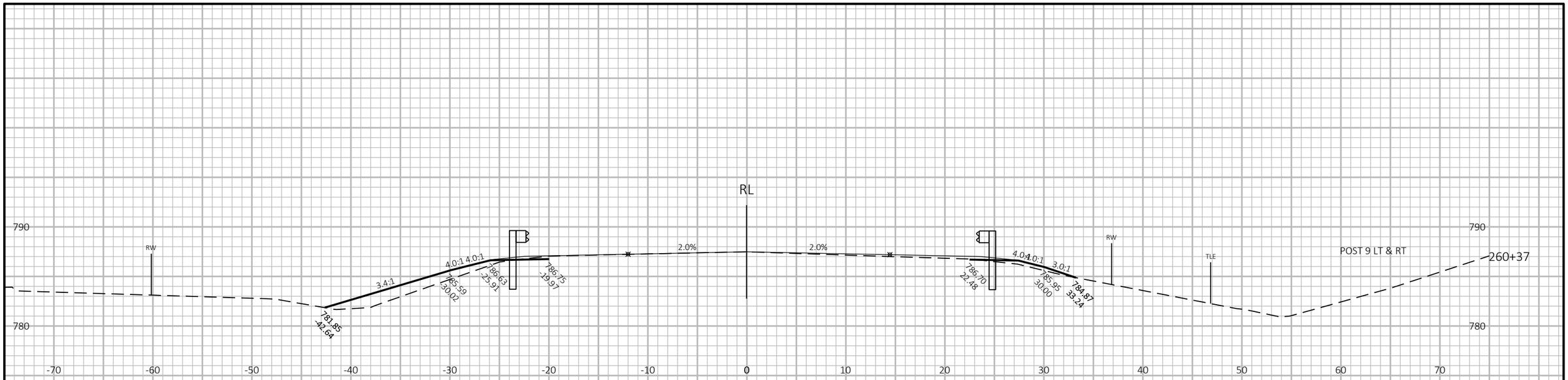
PLOT DATE : 3/13/2020 12:55 PM

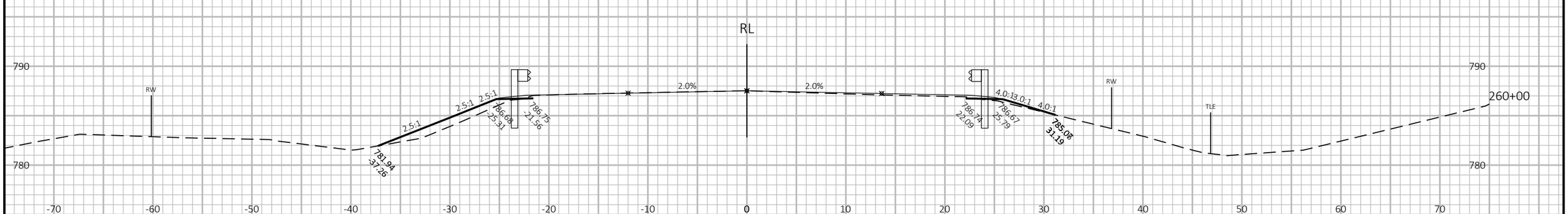
PLOT BY : HOLMES, KELSEY J

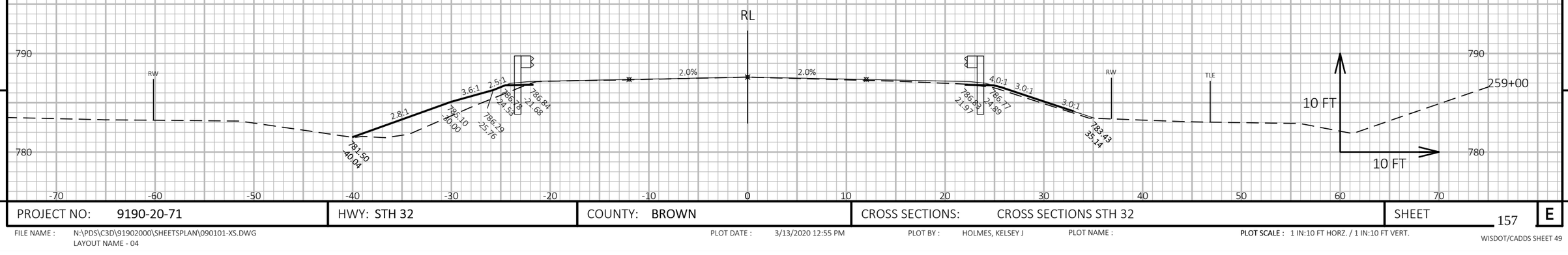
PLOT NAME :

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

WISDOT/CADDS SHEET 49







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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 157	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 04

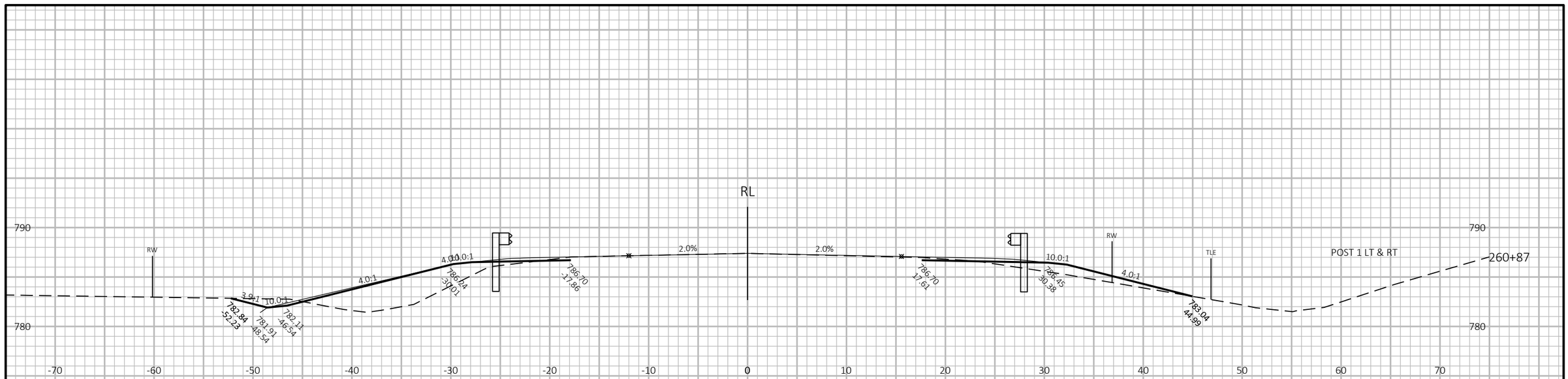
PLOT DATE : 3/13/2020 12:55 PM

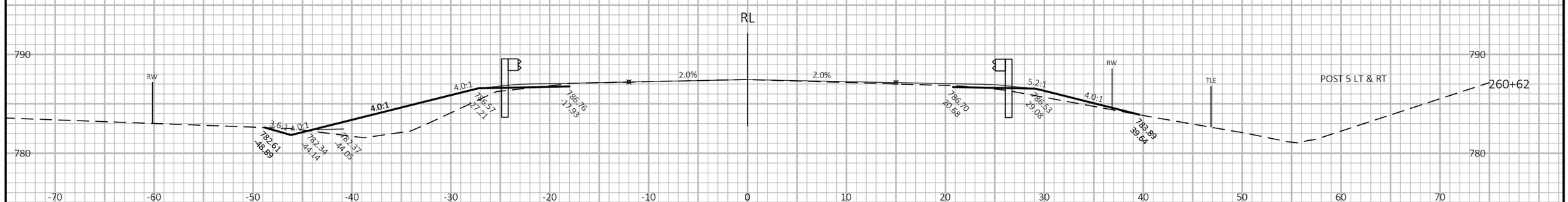
PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49





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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 158	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 05

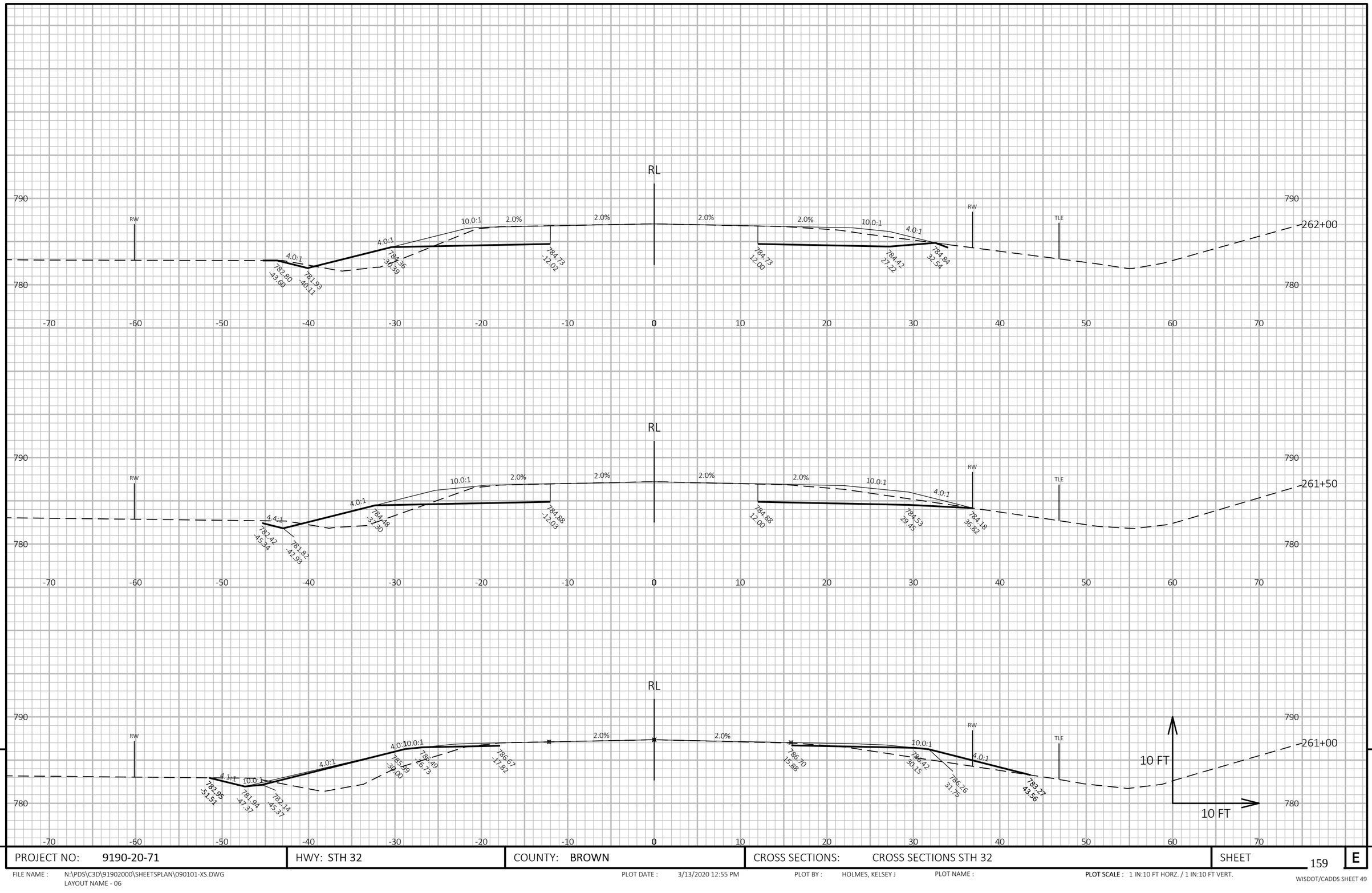
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 159	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 06

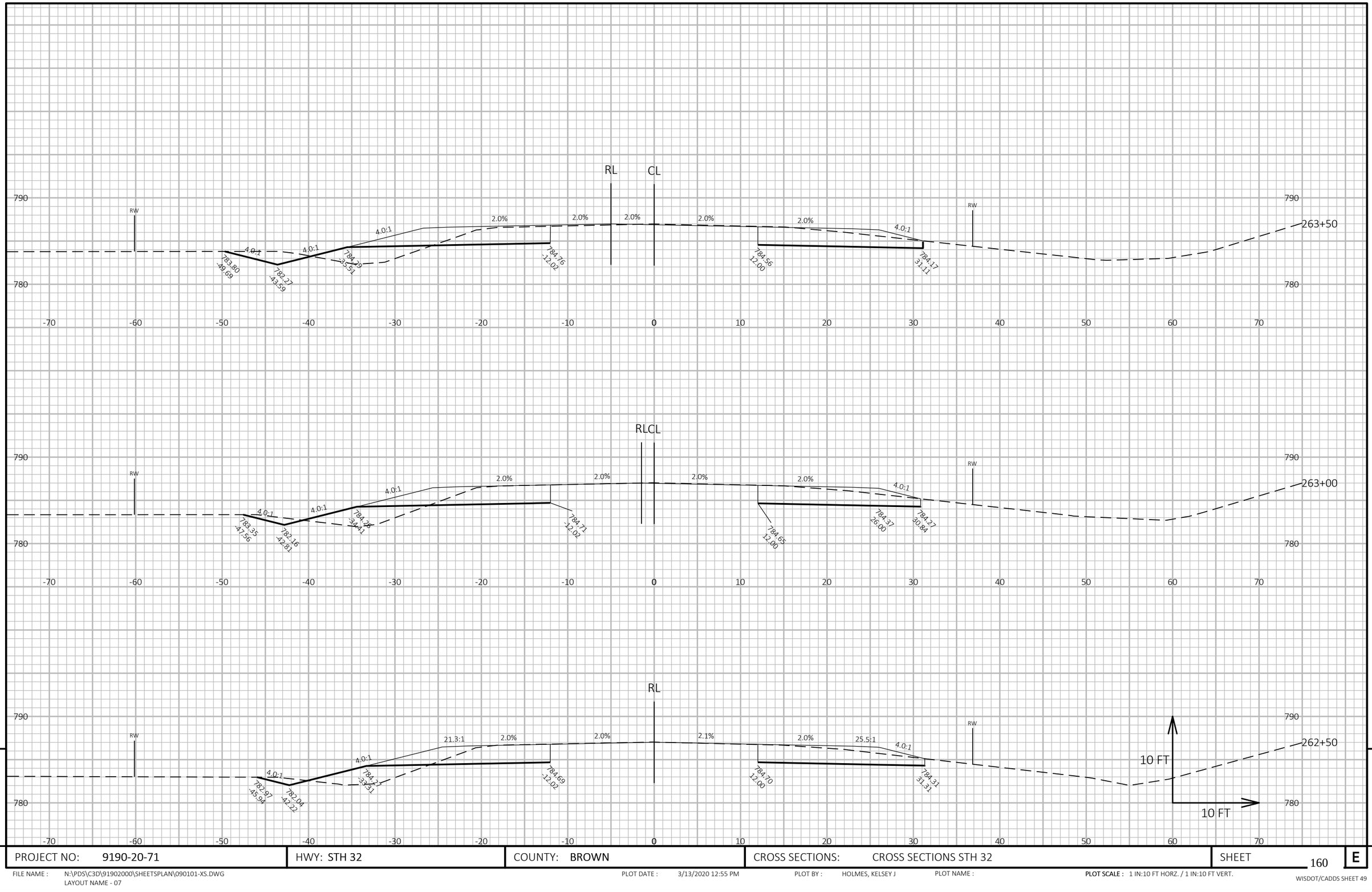
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 160	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 07

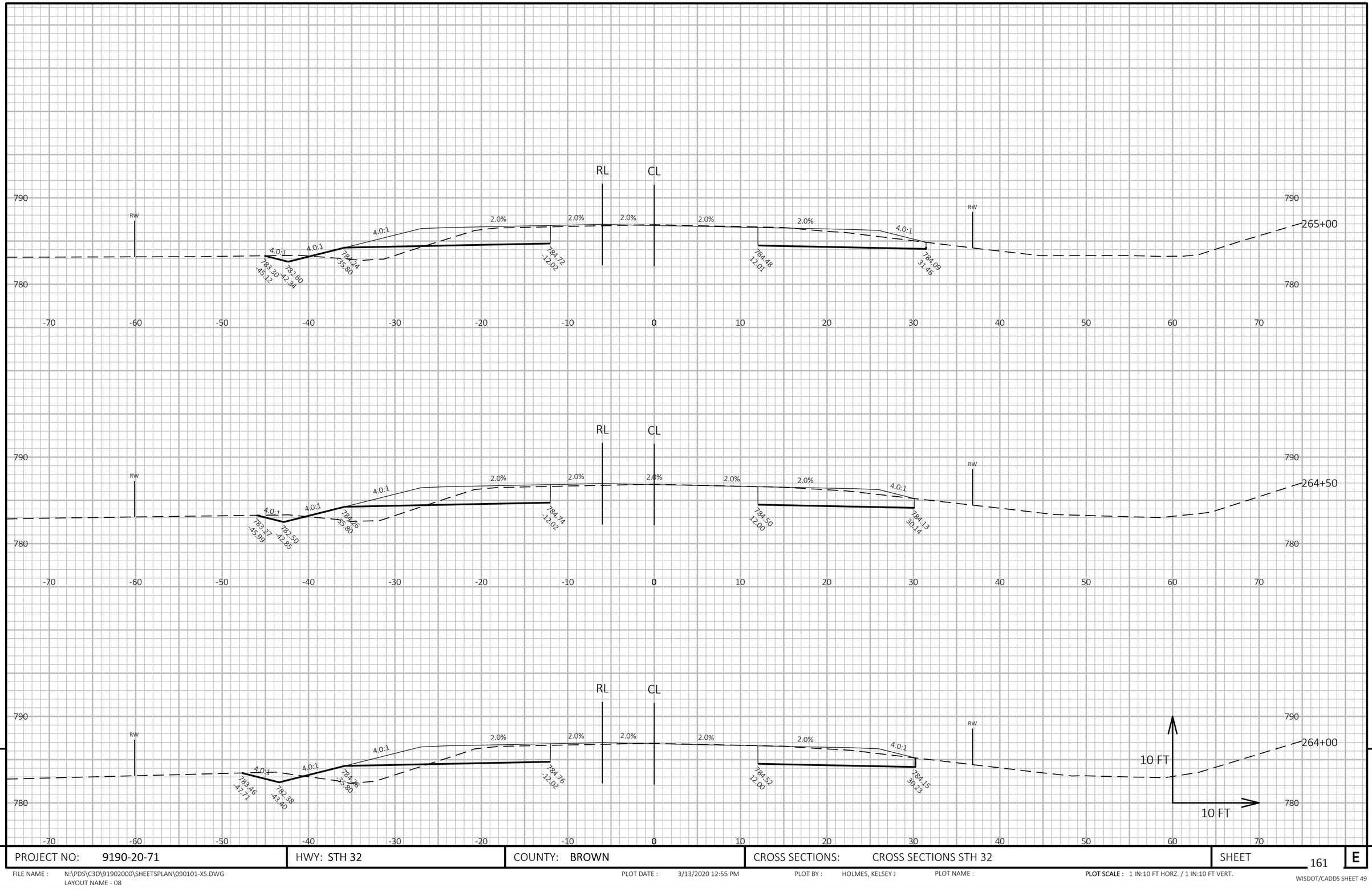
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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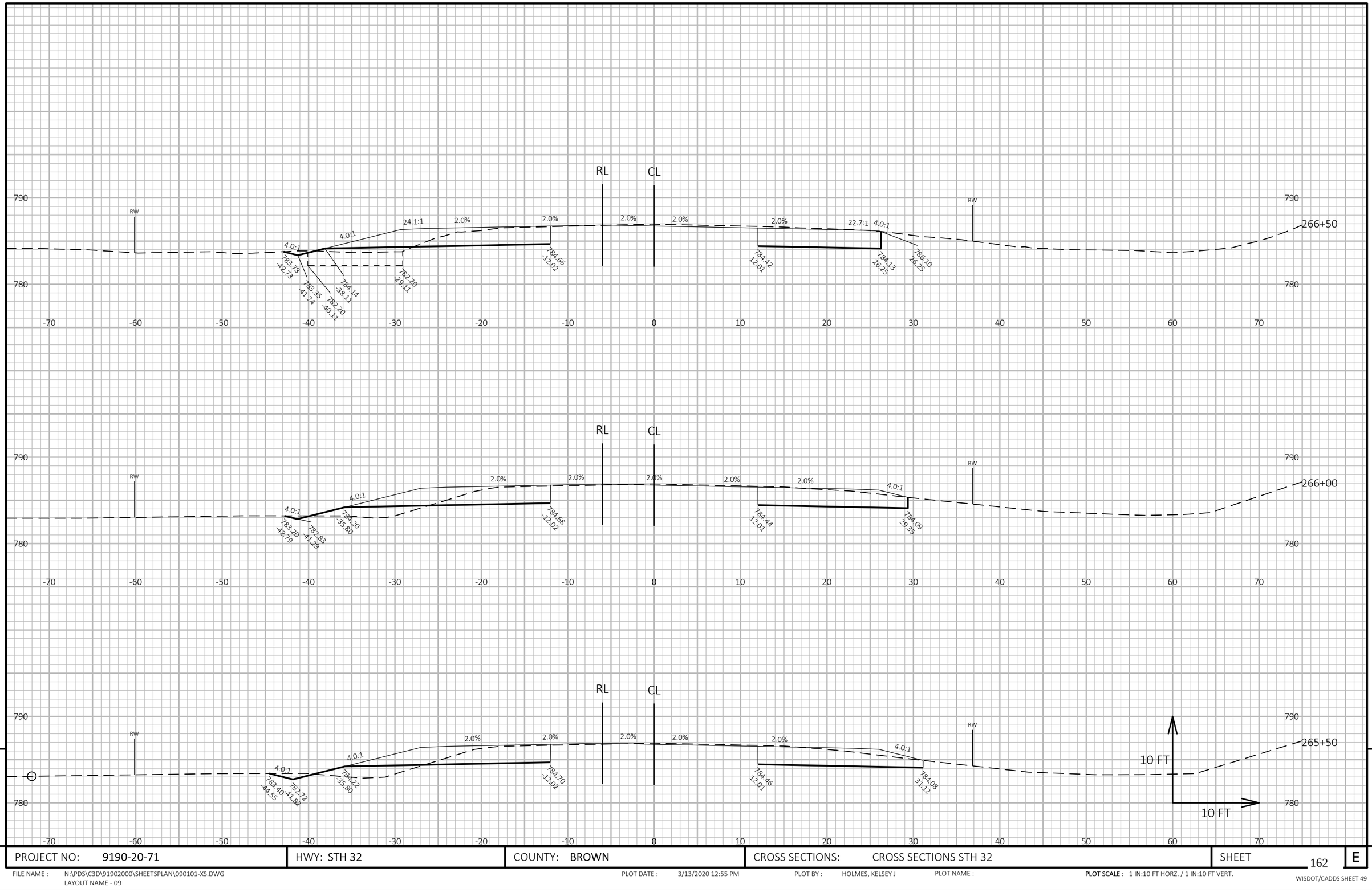
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 161	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 3/13/2020 12:55 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 162	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 09

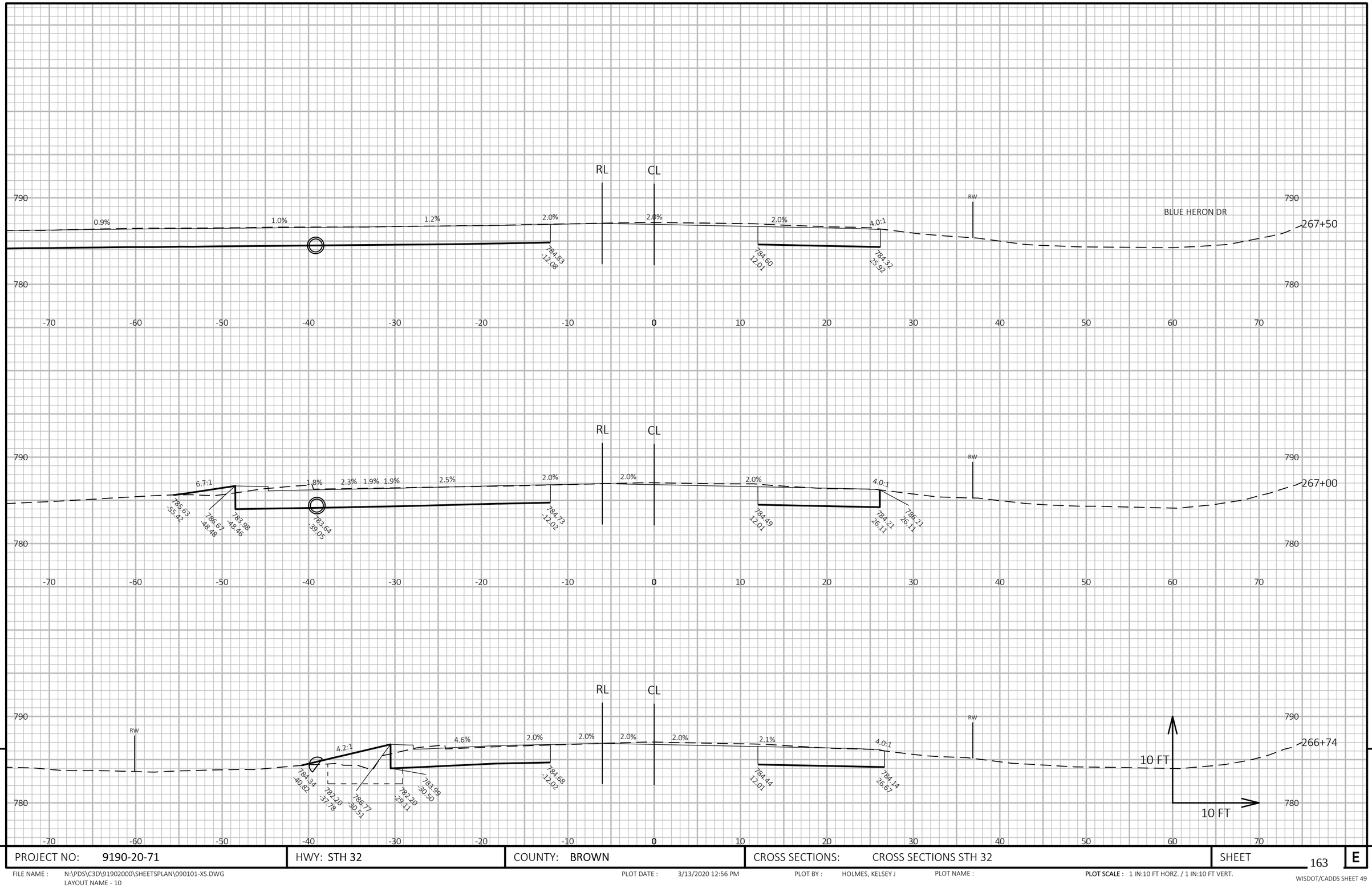
PLOT DATE : 3/13/2020 12:55 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

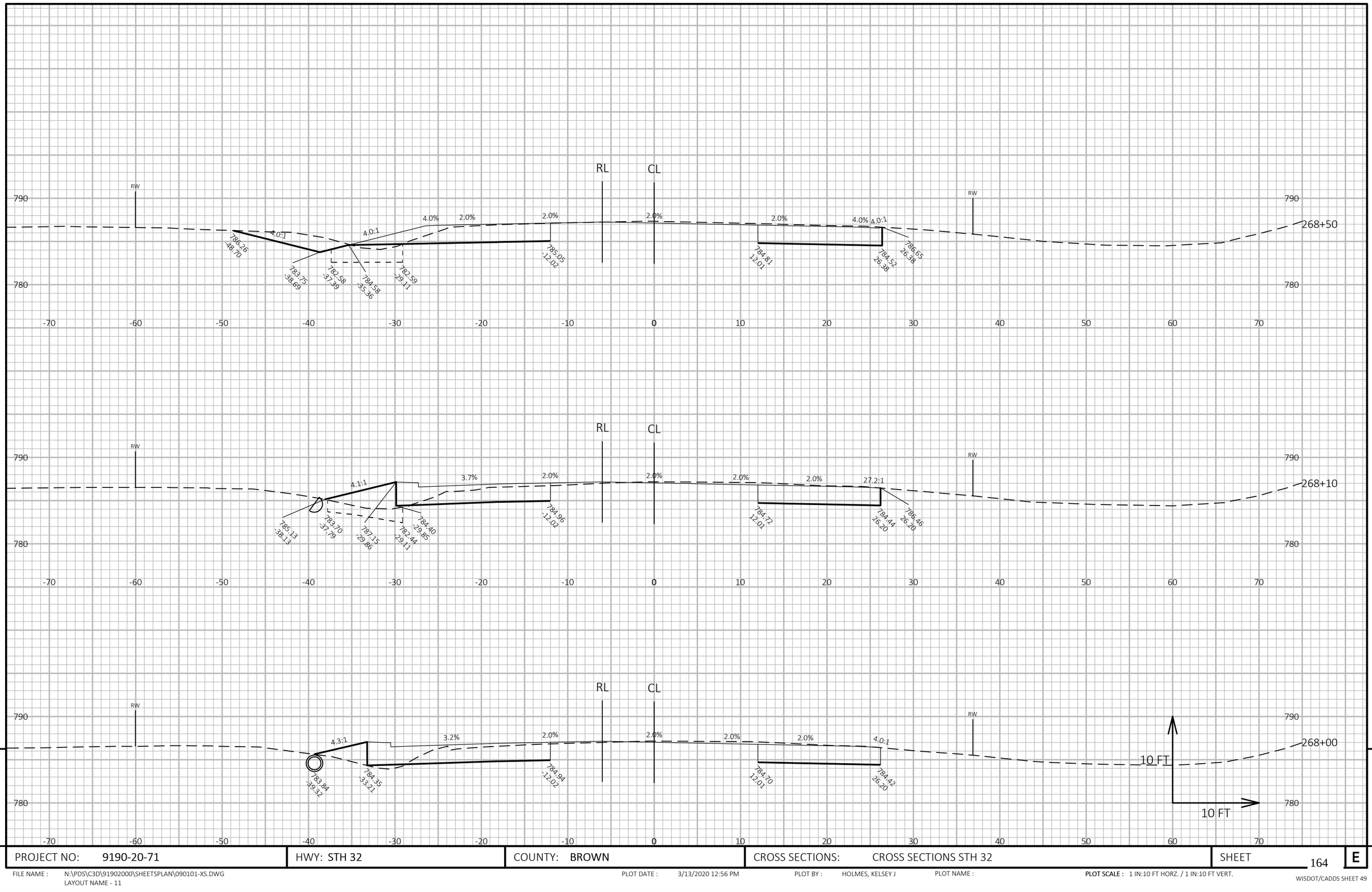
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 163	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 164	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 11

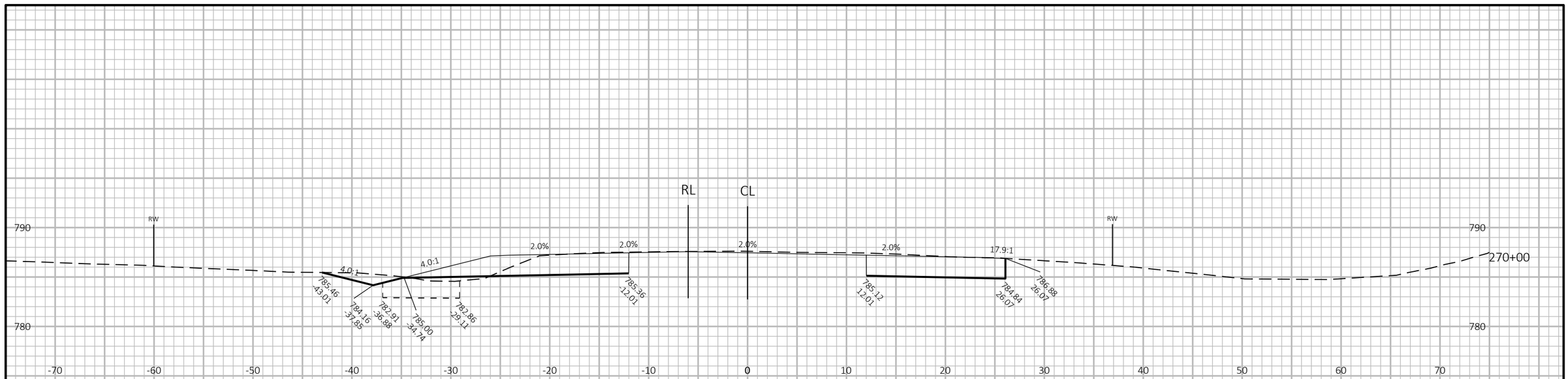
PLOT DATE : 3/13/2020 12:56 PM

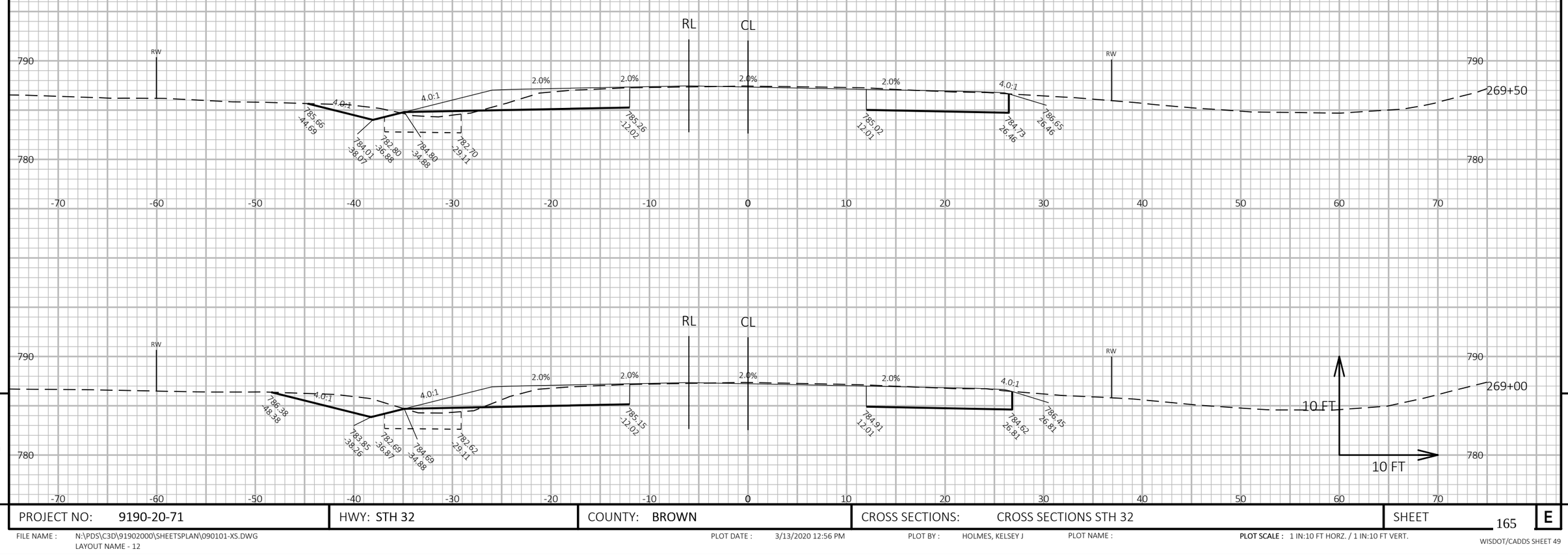
PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49





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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 165	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 12

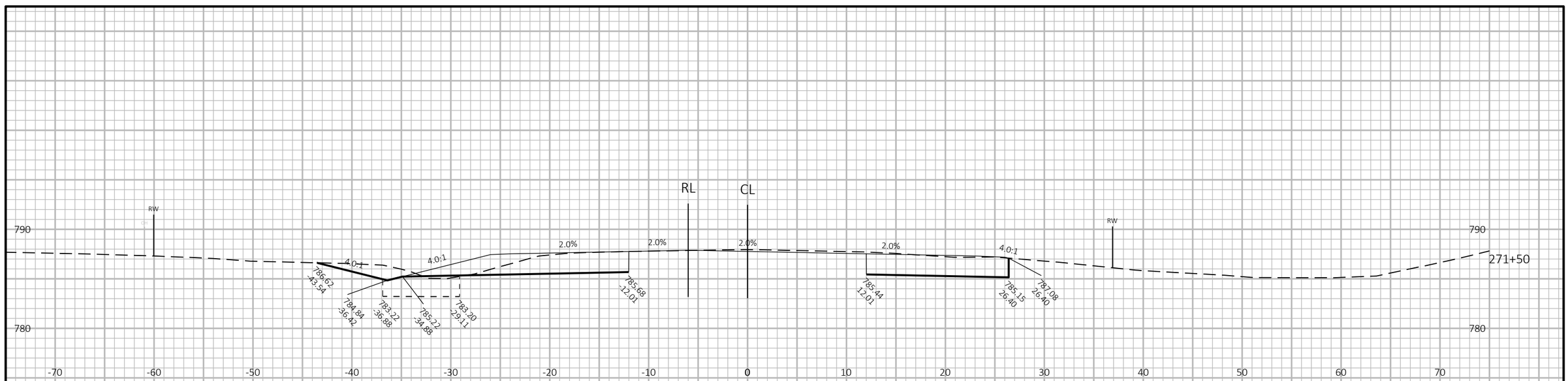
PLOT DATE : 3/13/2020 12:56 PM

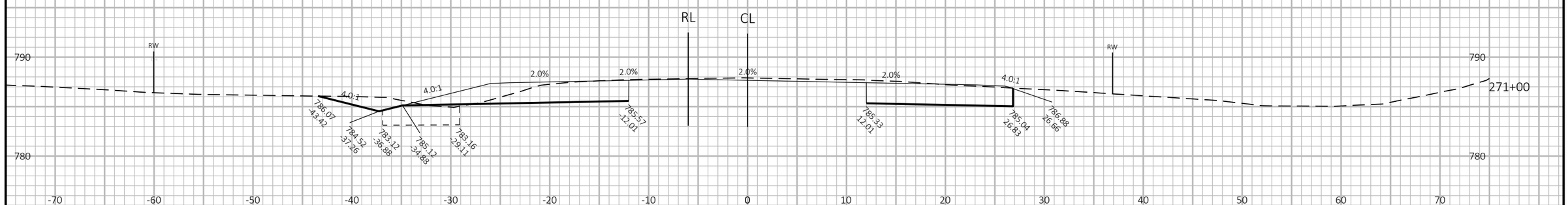
PLOT BY : HOLMES, KELSEY J

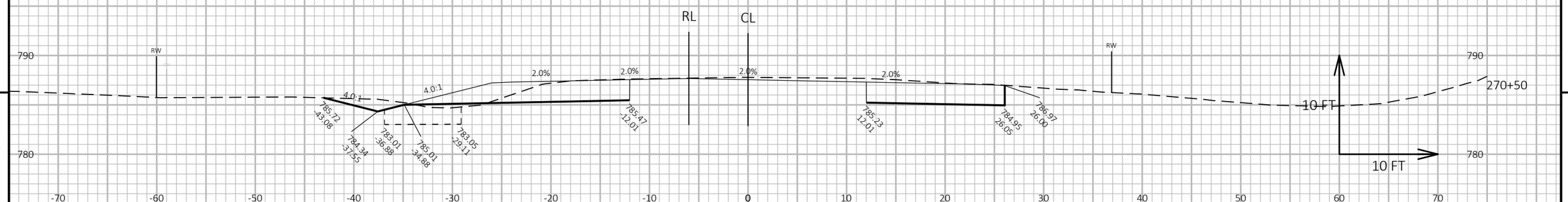
PLOT NAME :

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

WISDOT/CADDS SHEET 49







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9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 166	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 13

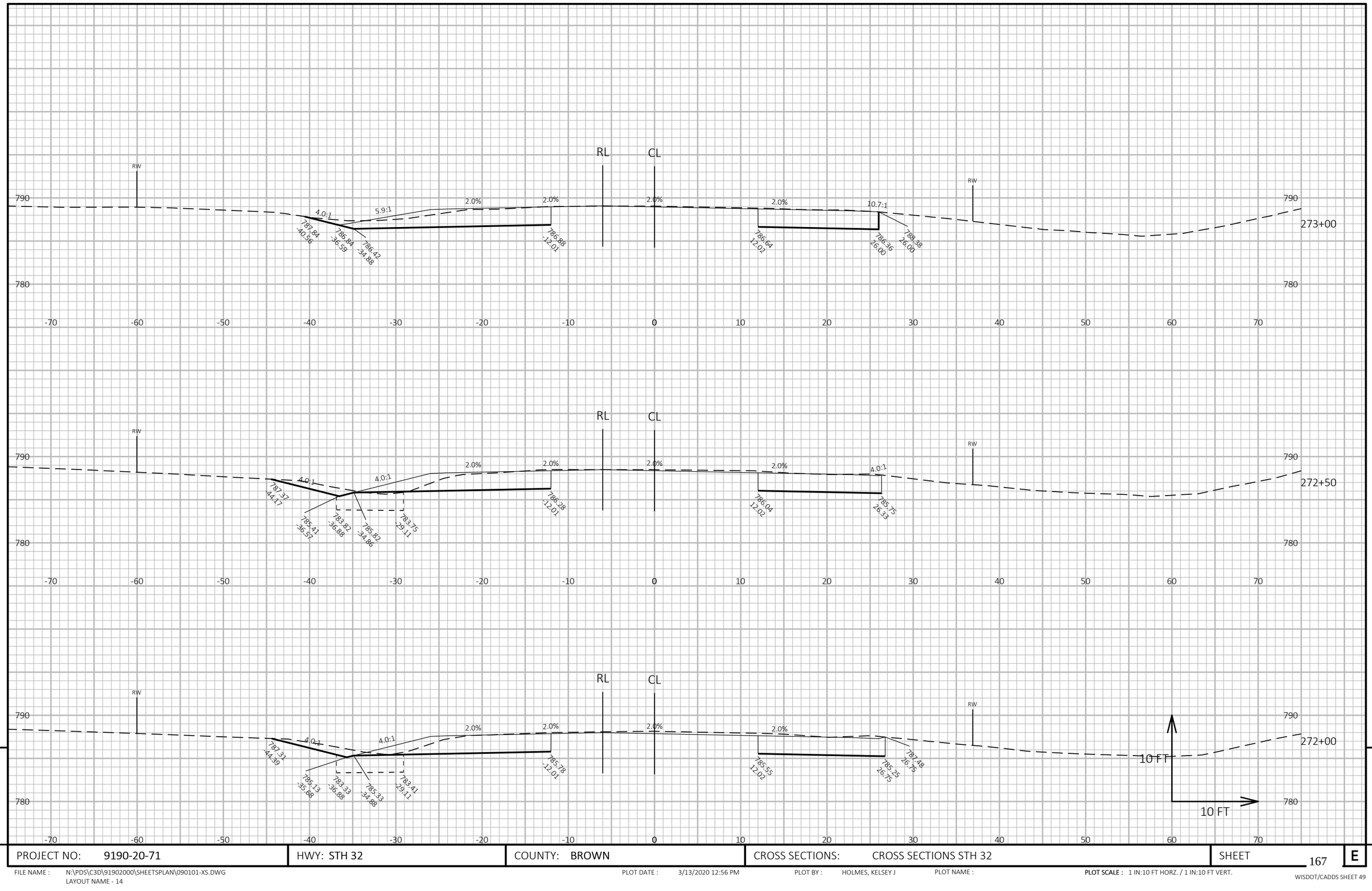
PLOT DATE : 3/13/2020 12:56 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

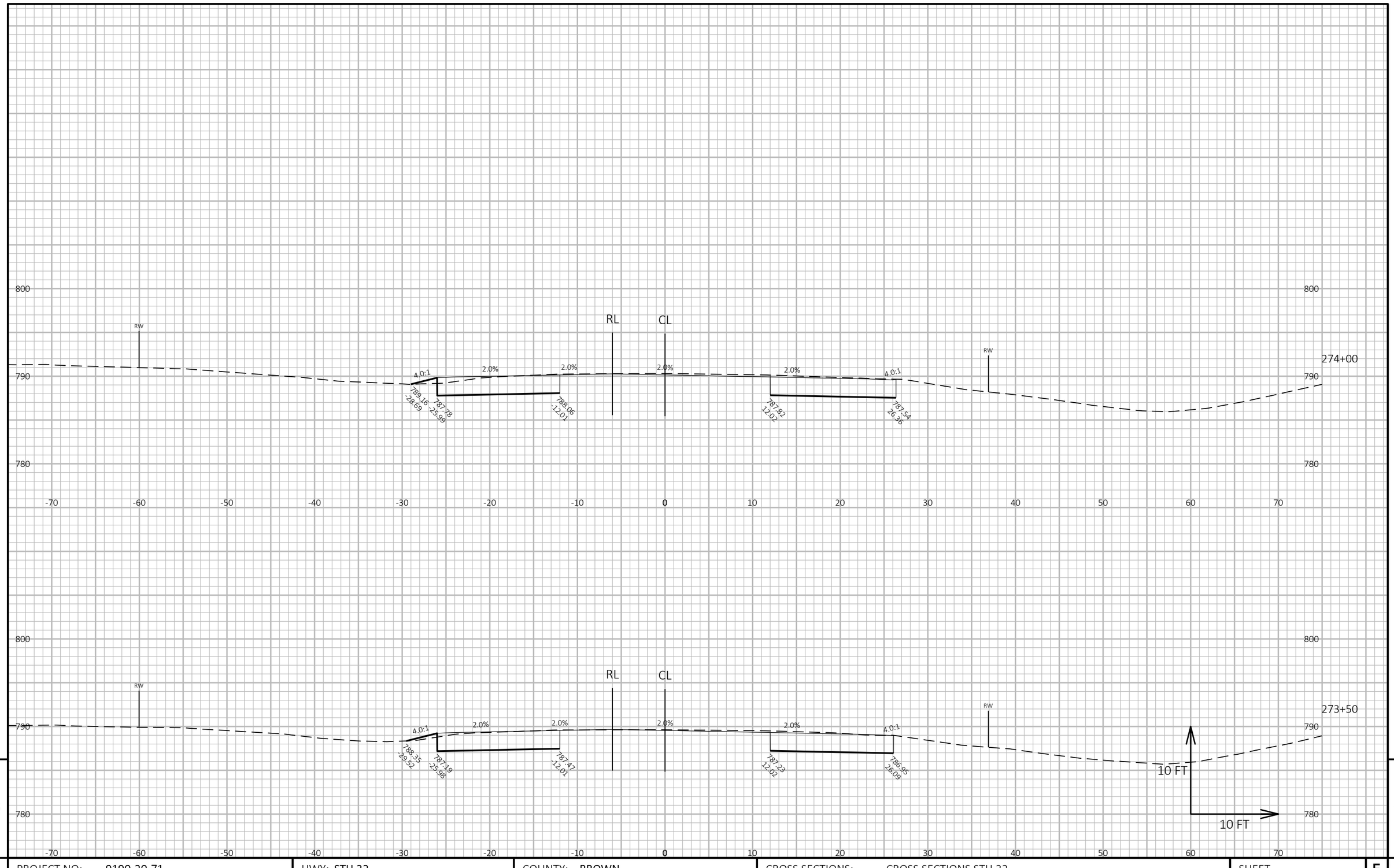
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 167	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 14

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 168	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 15

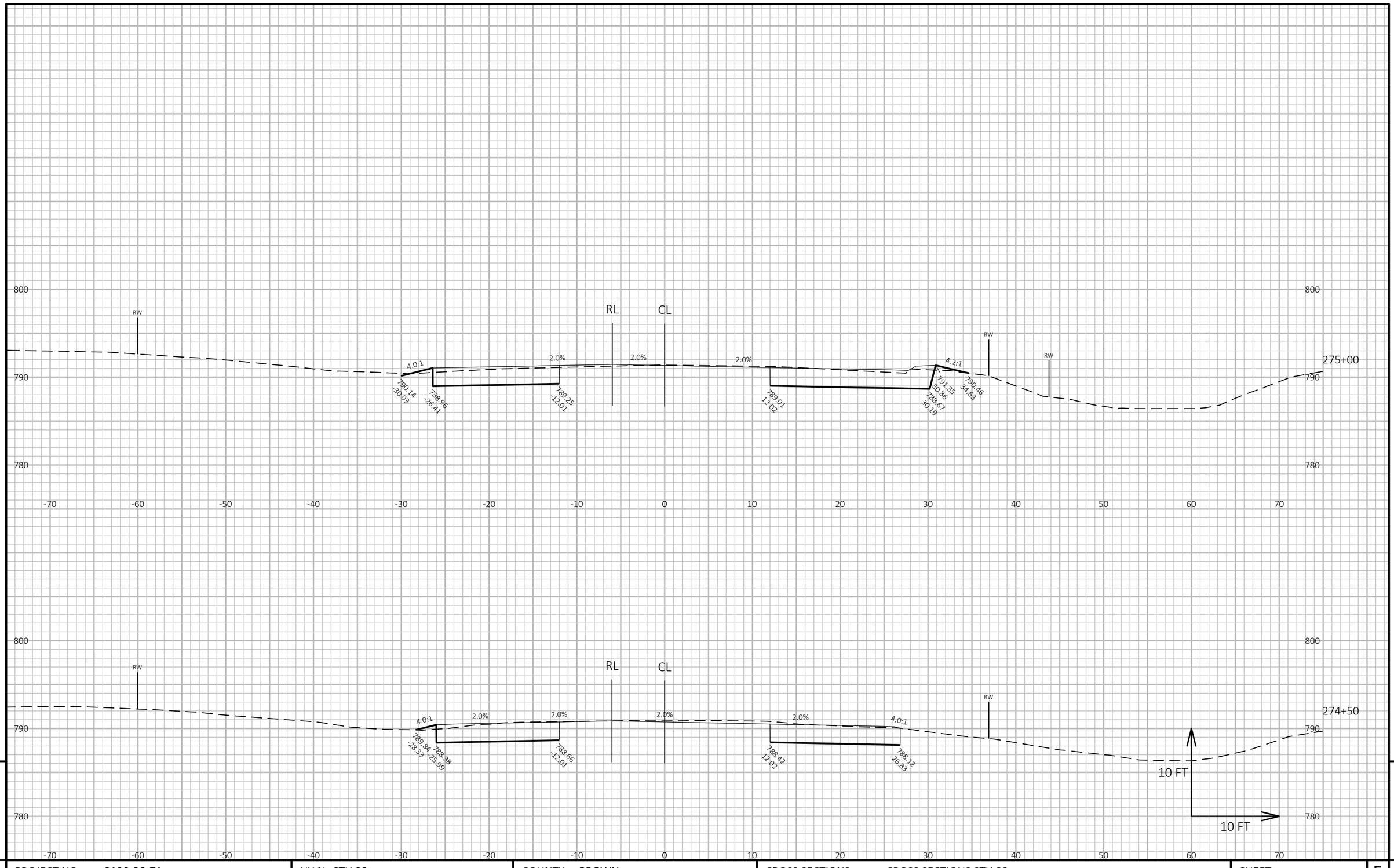
PLOT DATE : 3/13/2020 12:56 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49

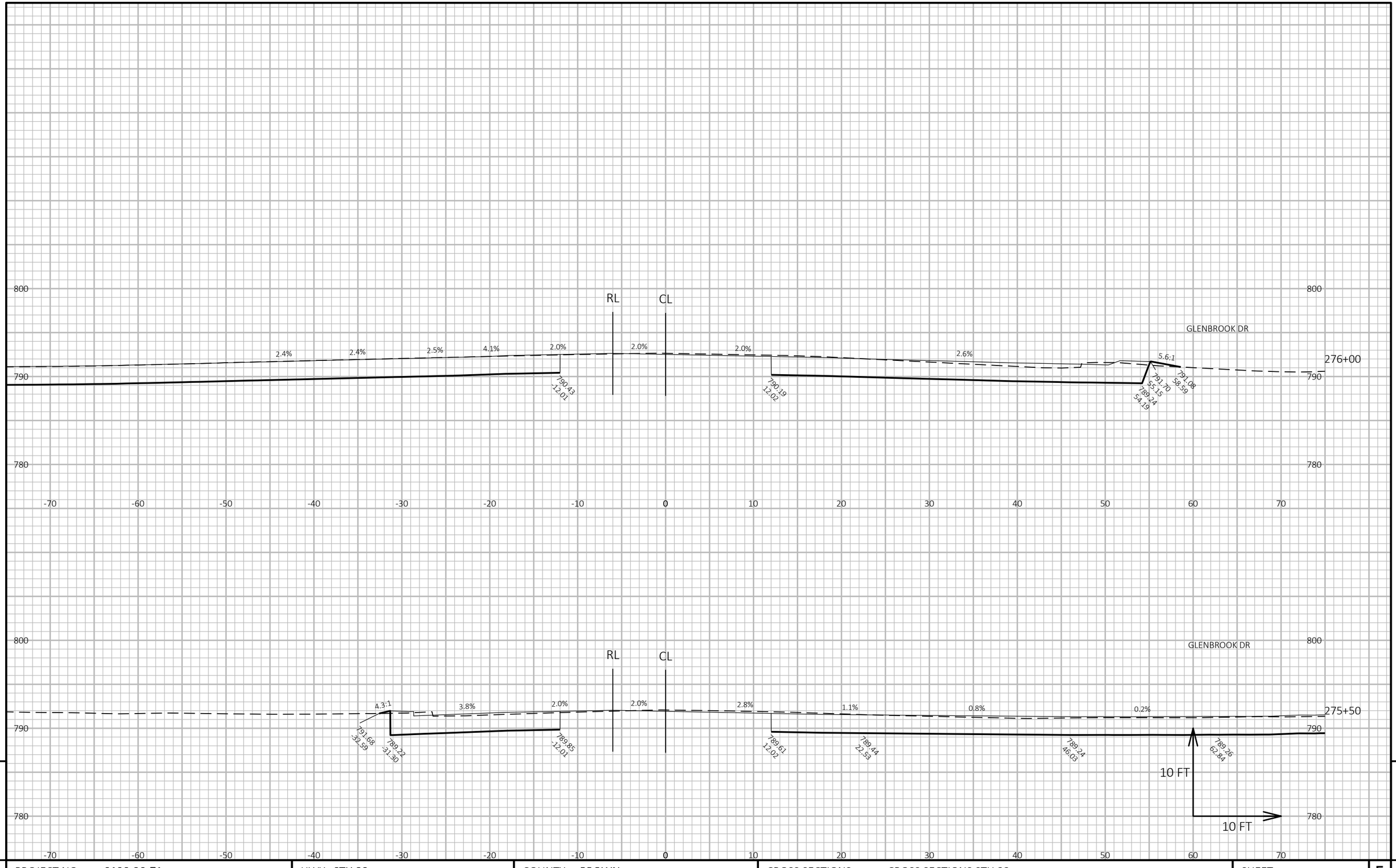


PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 169	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 16

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 170	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 17

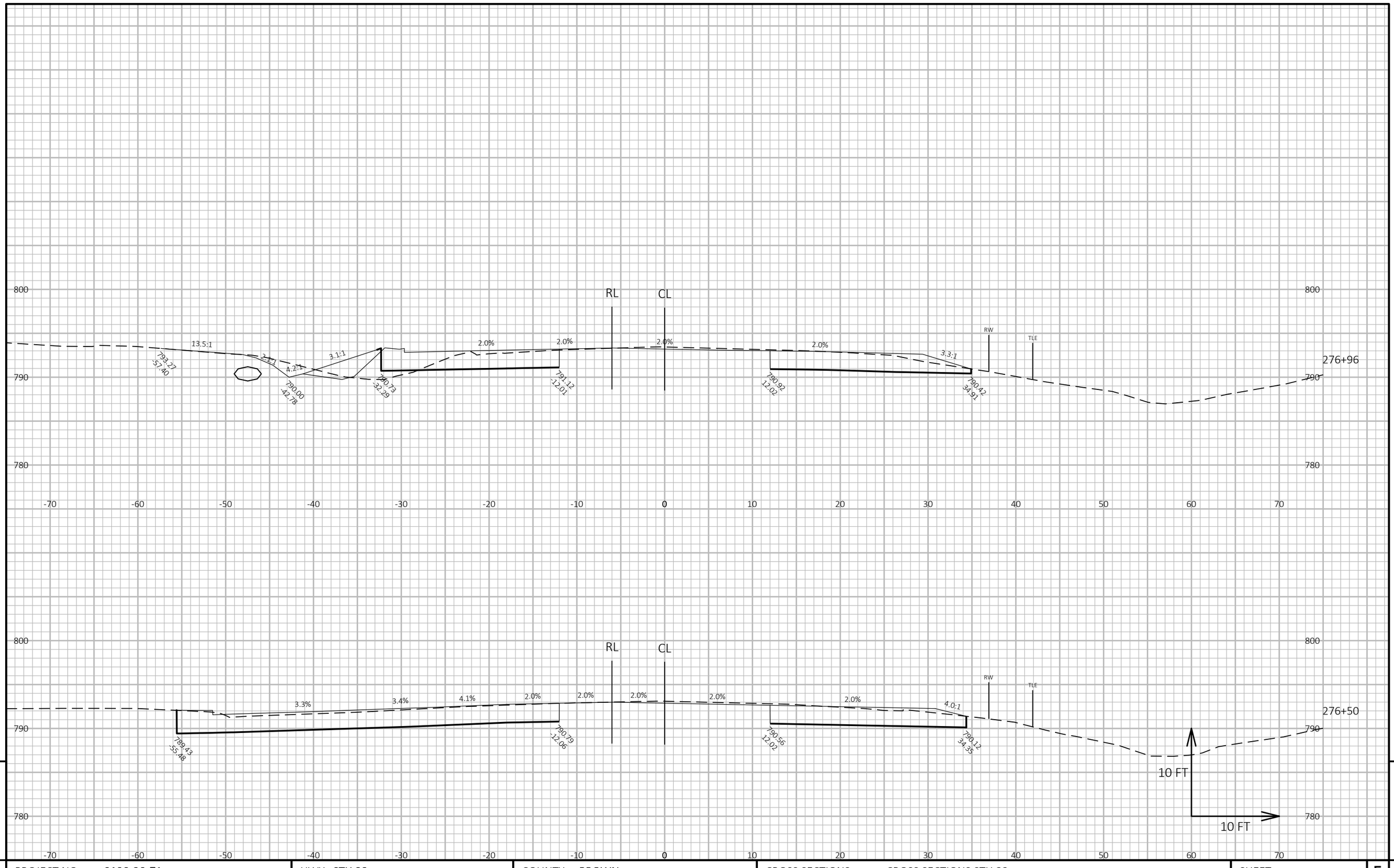
PLOT DATE : 3/13/2020 12:56 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 171	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 18

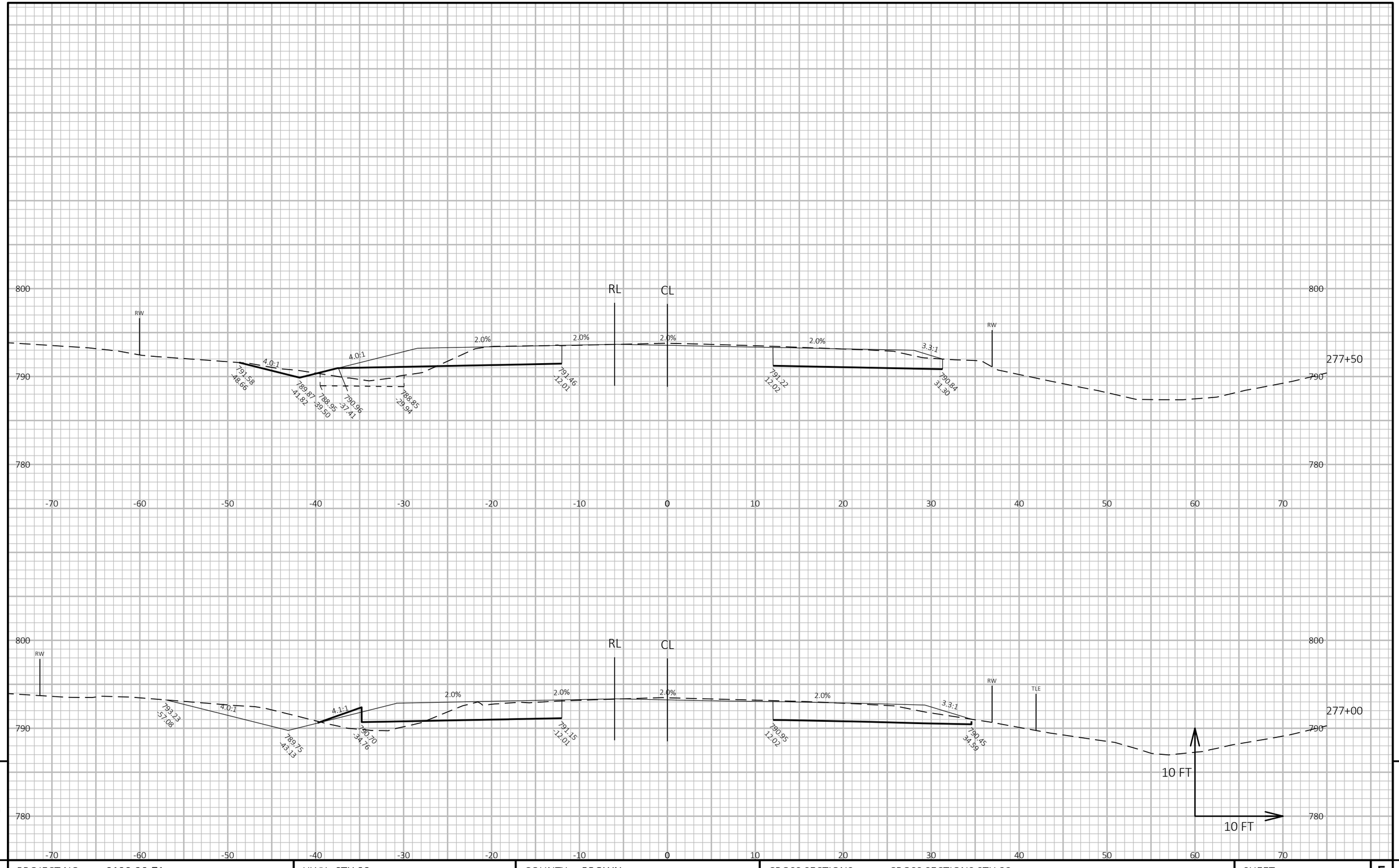
PLOT DATE : 3/13/2020 12:56 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49

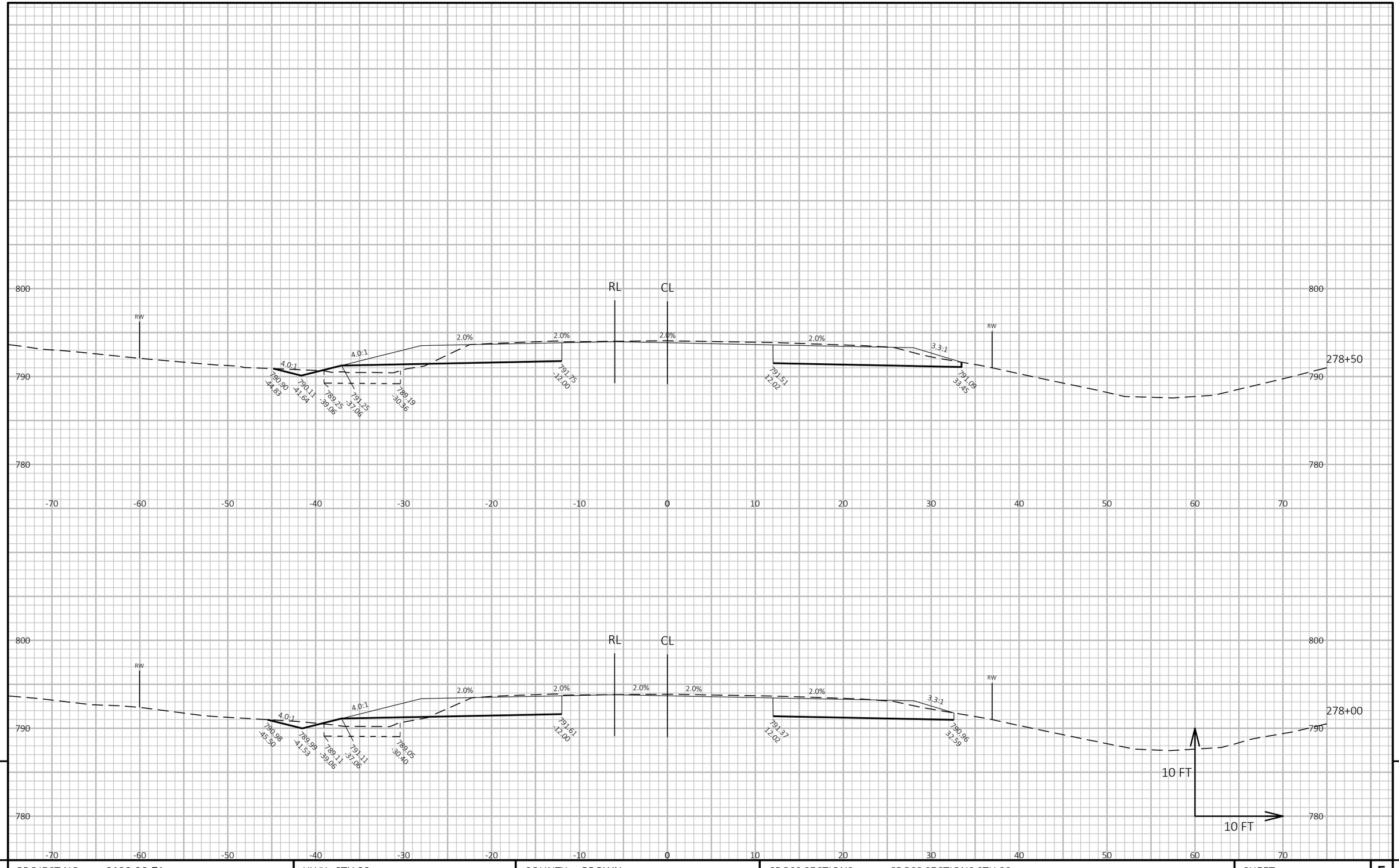


PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 172	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 19

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 173	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 20

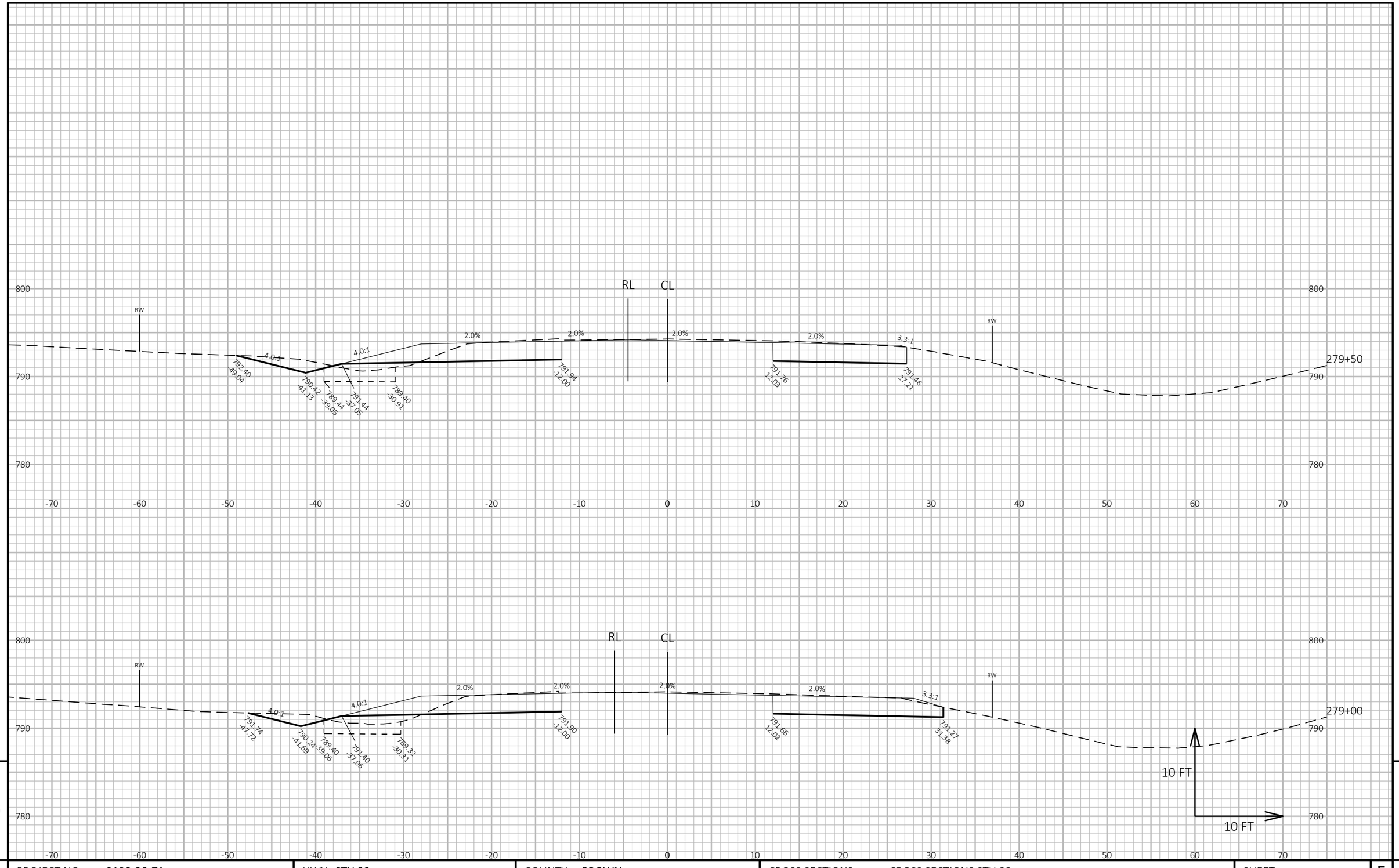
PLOT DATE : 3/13/2020 12:56 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



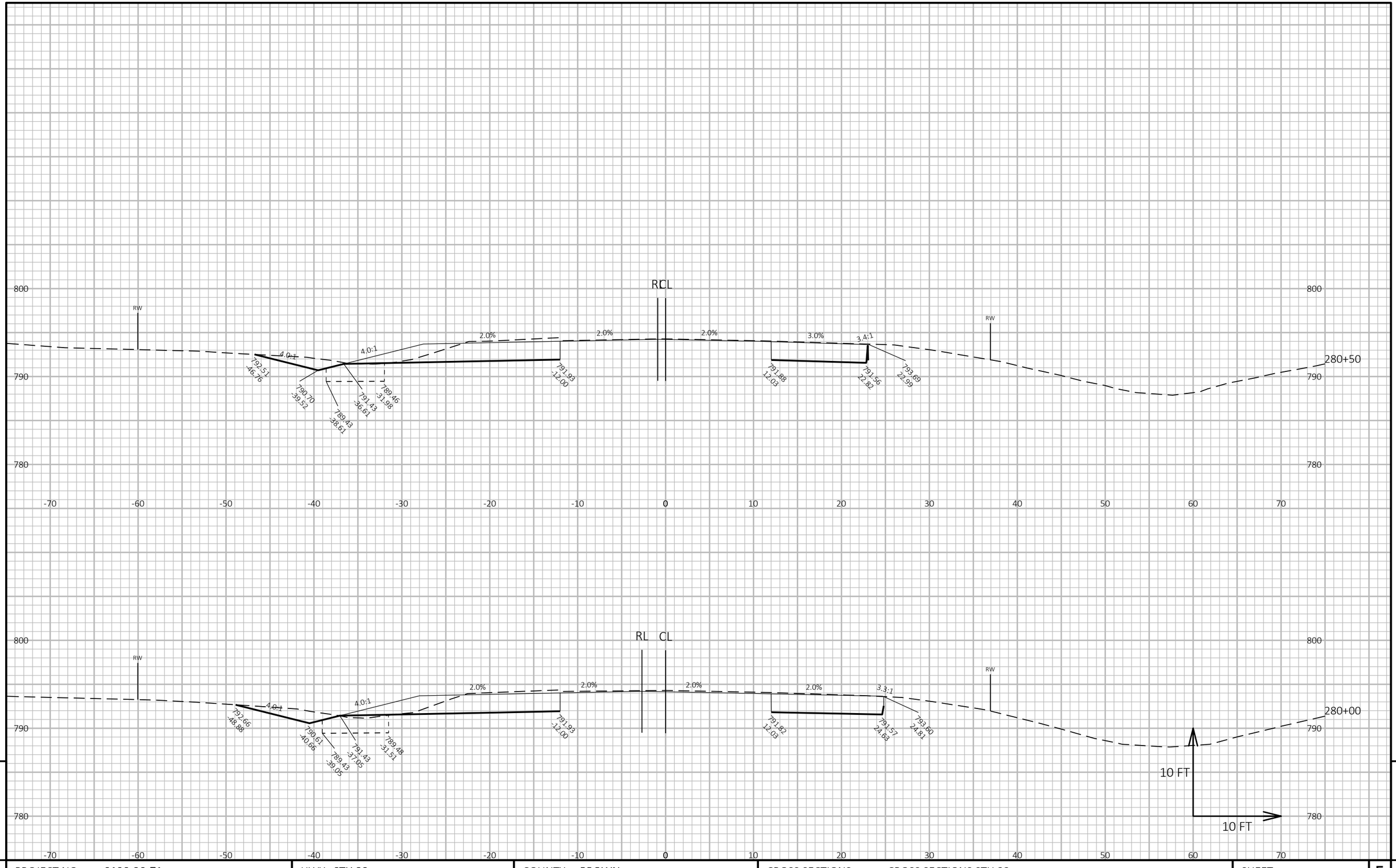
9 9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 174	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 21

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

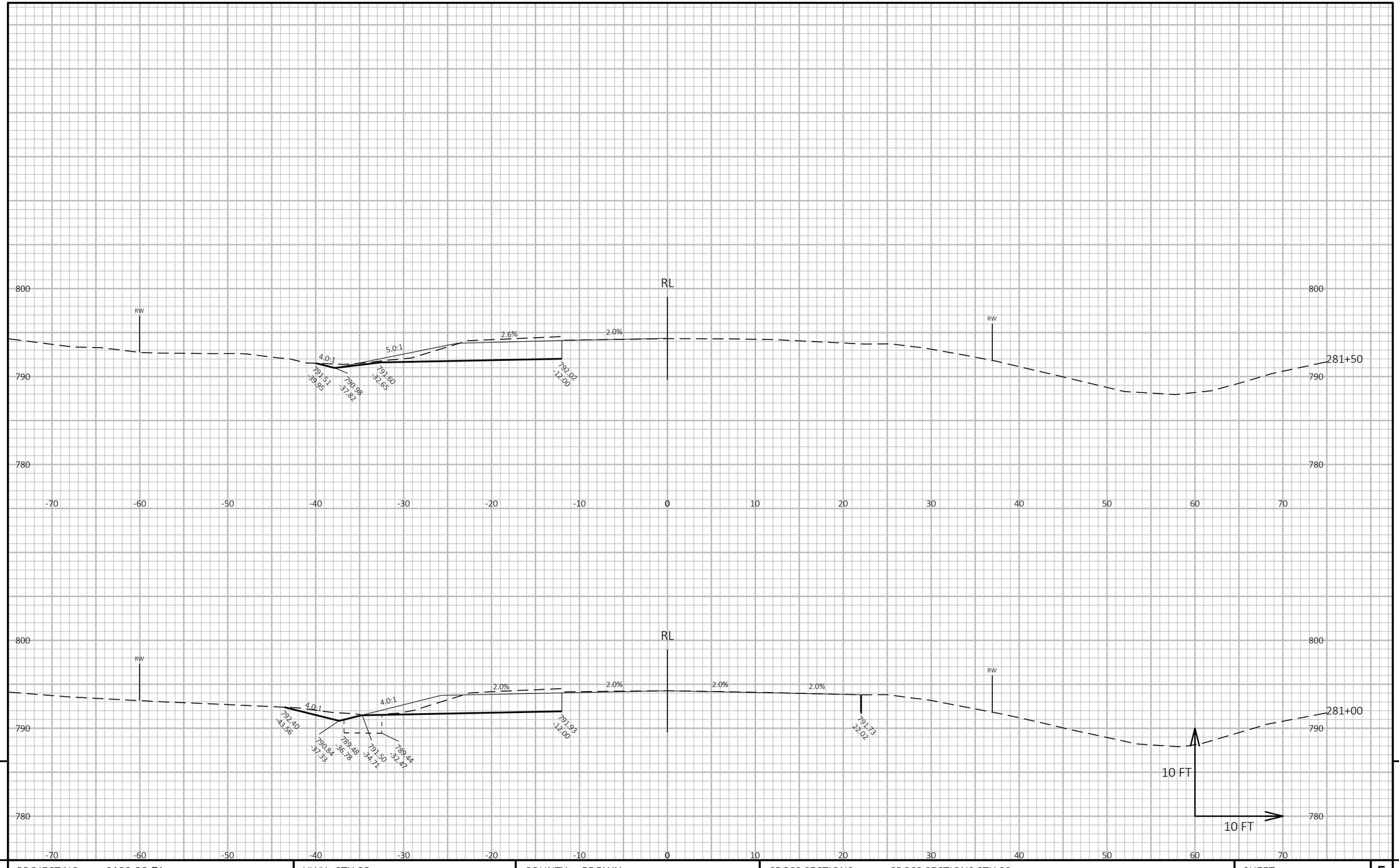
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 175	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 22

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

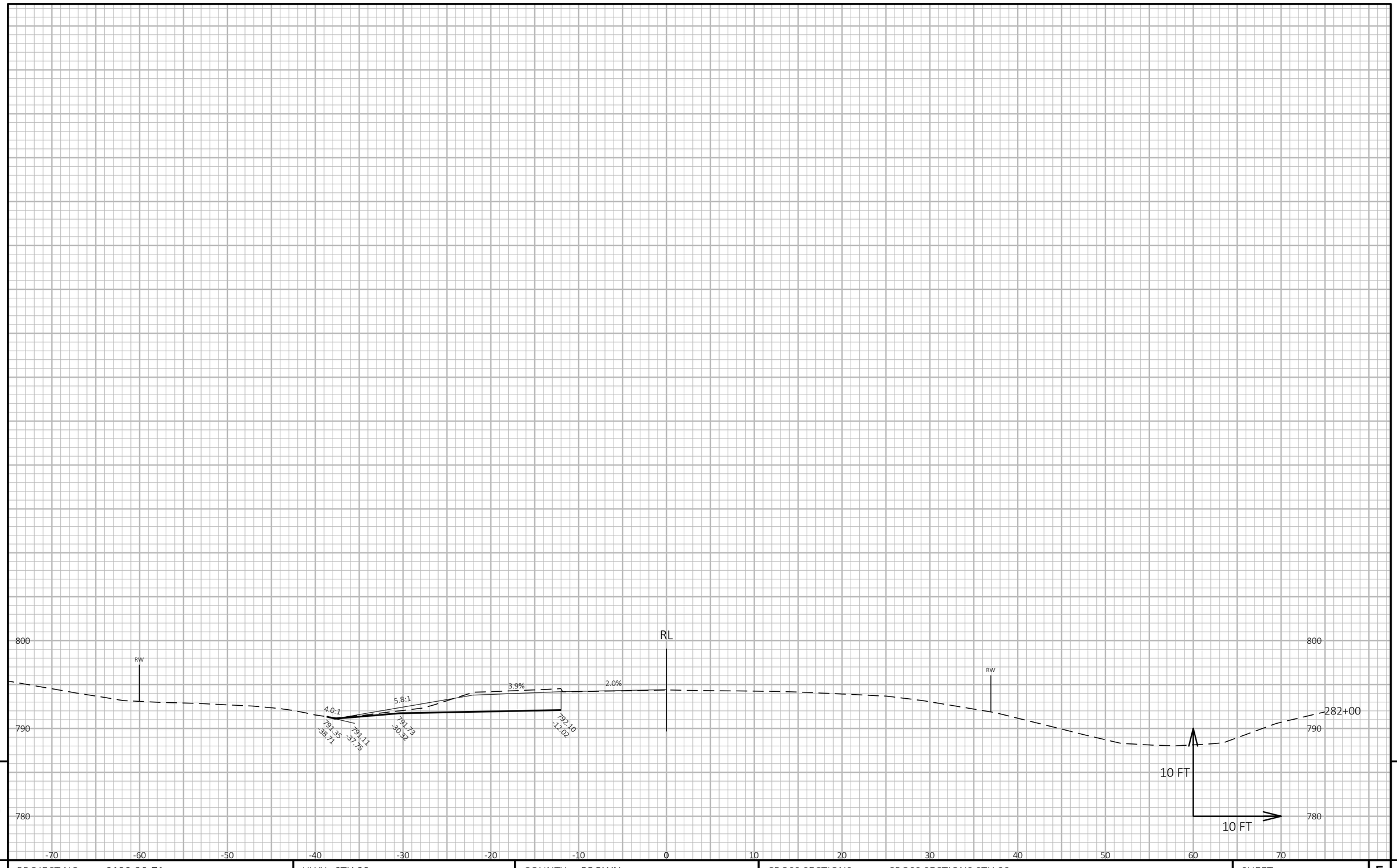
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 176	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 23

PLOT DATE : 3/13/2020 12:56 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 177	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 24

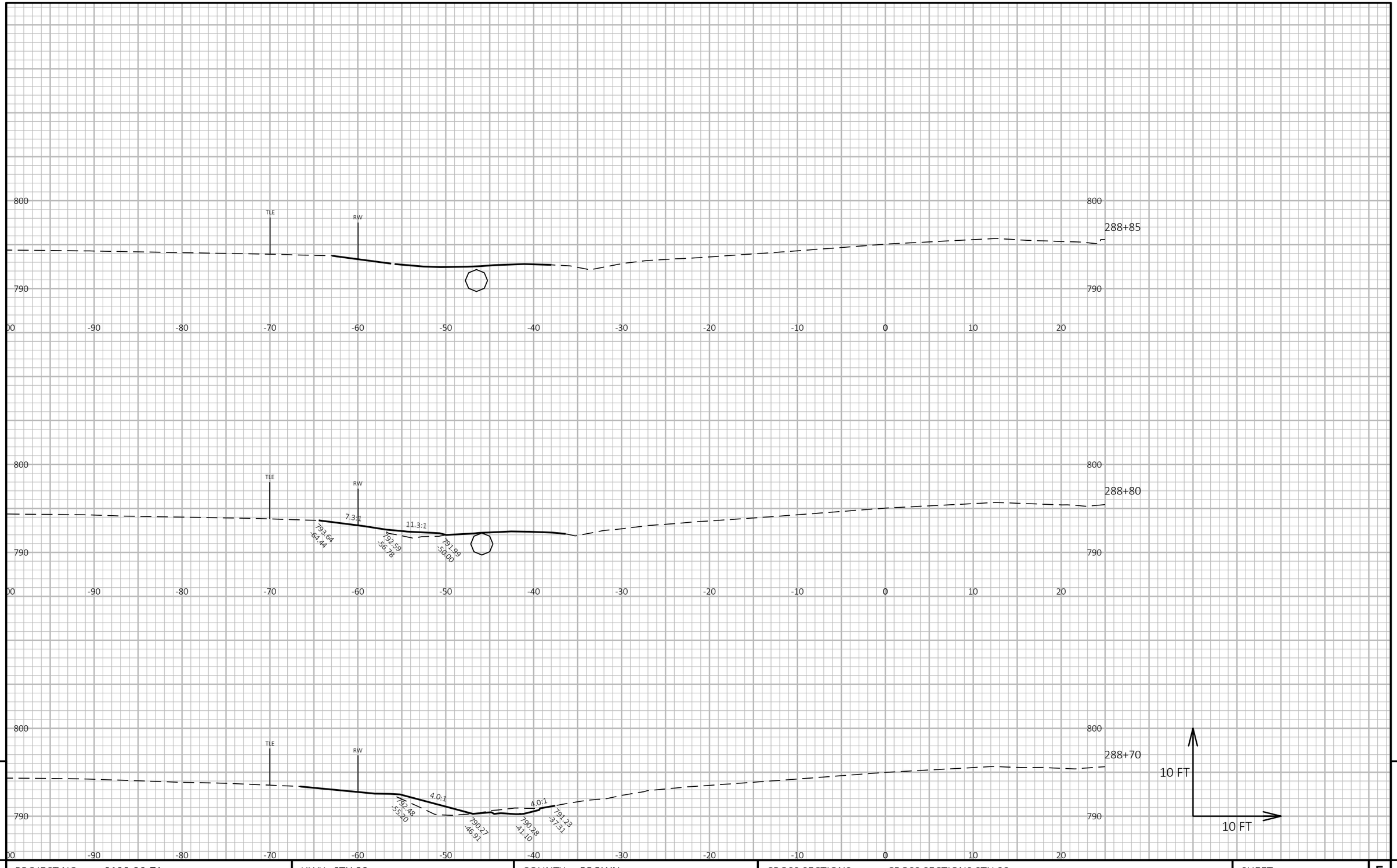
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS STH 32	SHEET 178	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 25

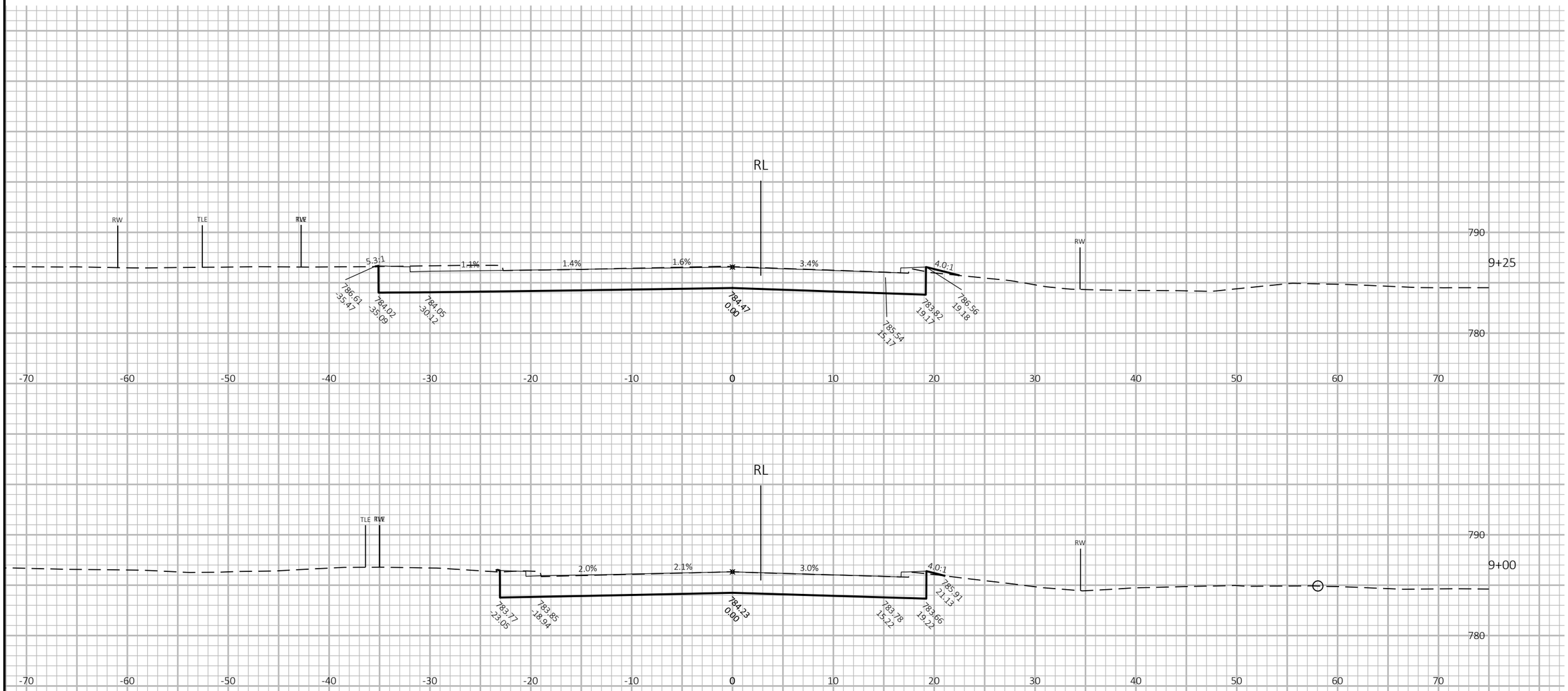
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS BLUE HERON DR.	SHEET 179	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 26BH

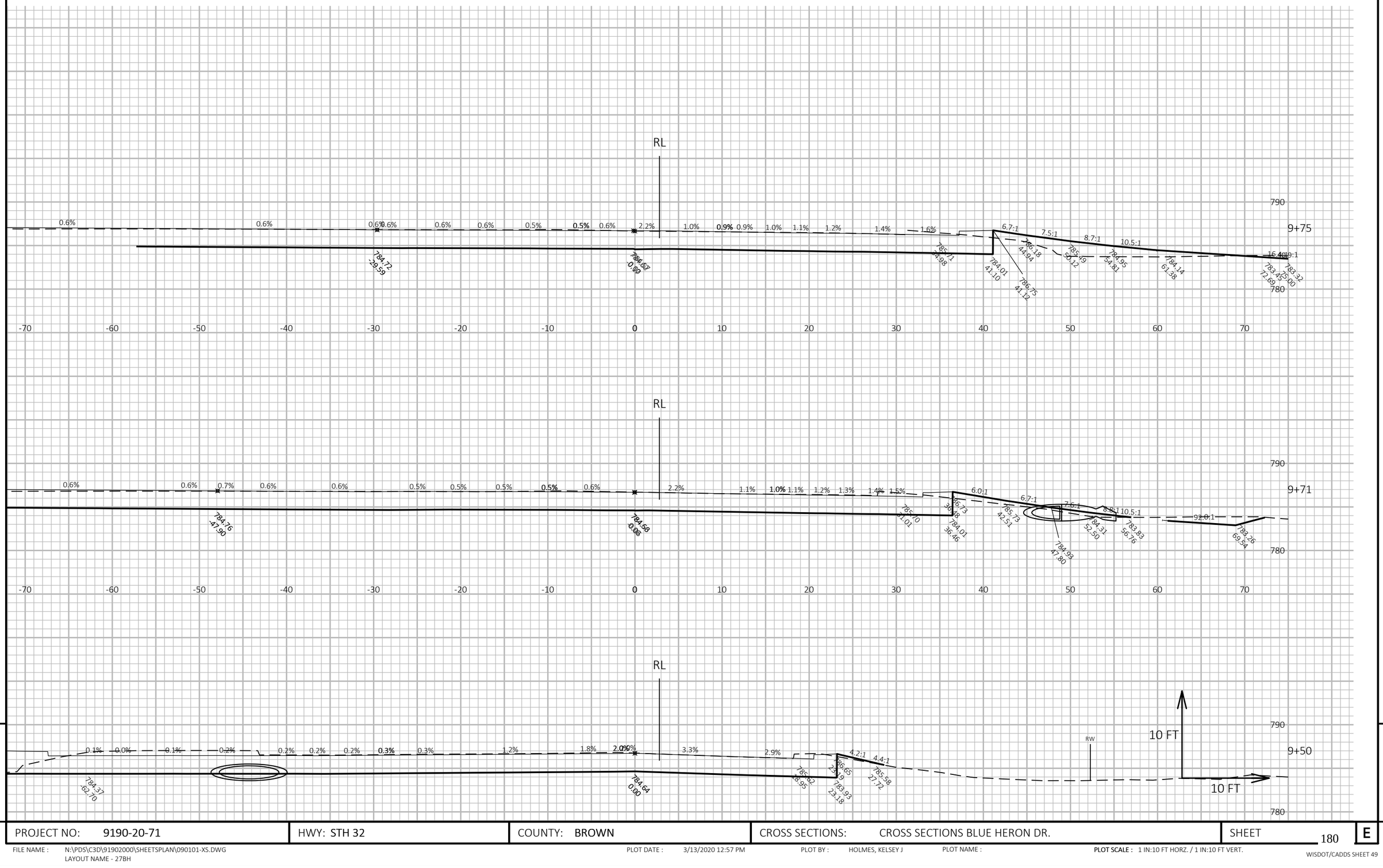
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS BLUE HERON DR.	SHEET 180	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 27BH

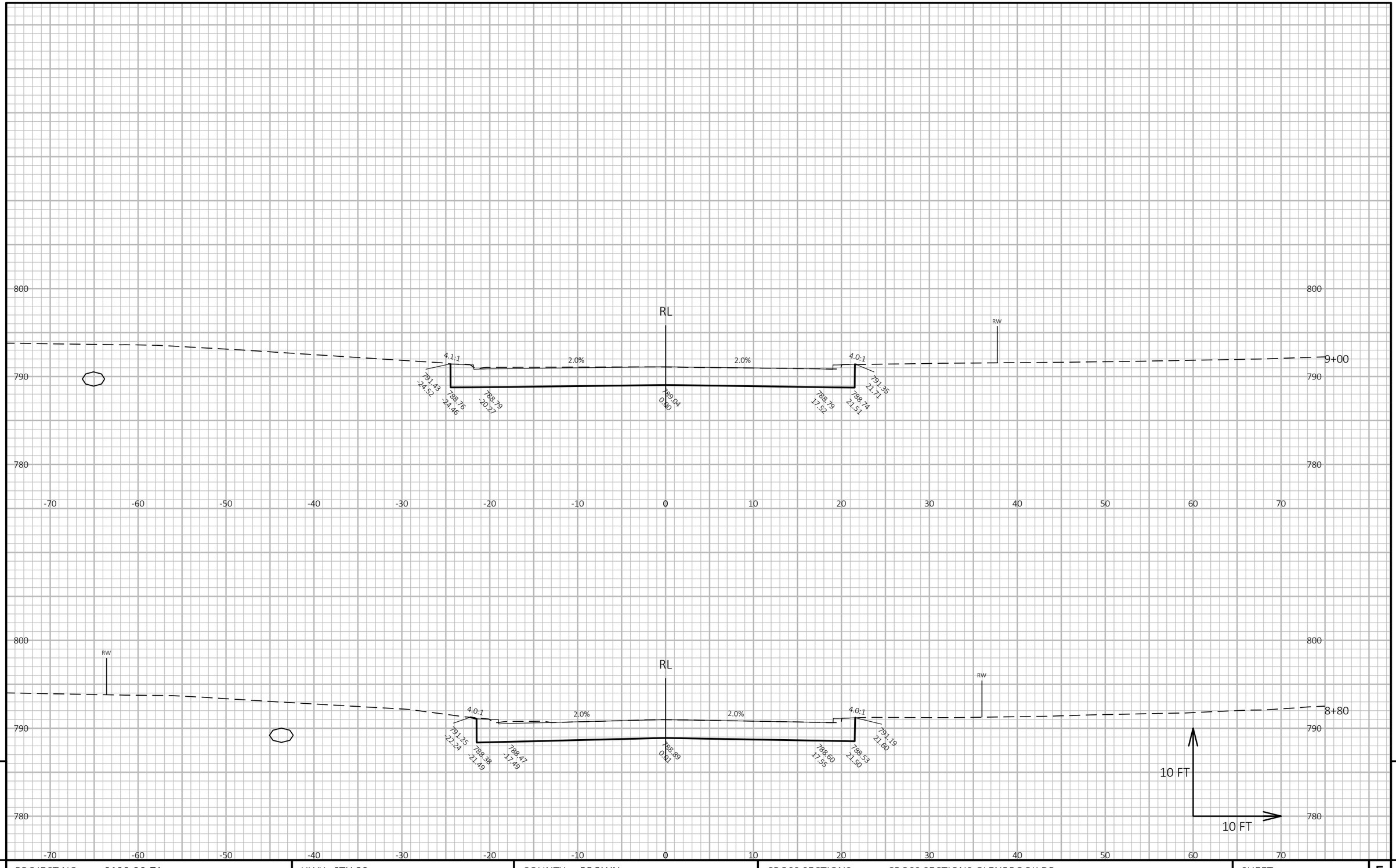
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS GLENBROOK DR.	SHEET 181	E

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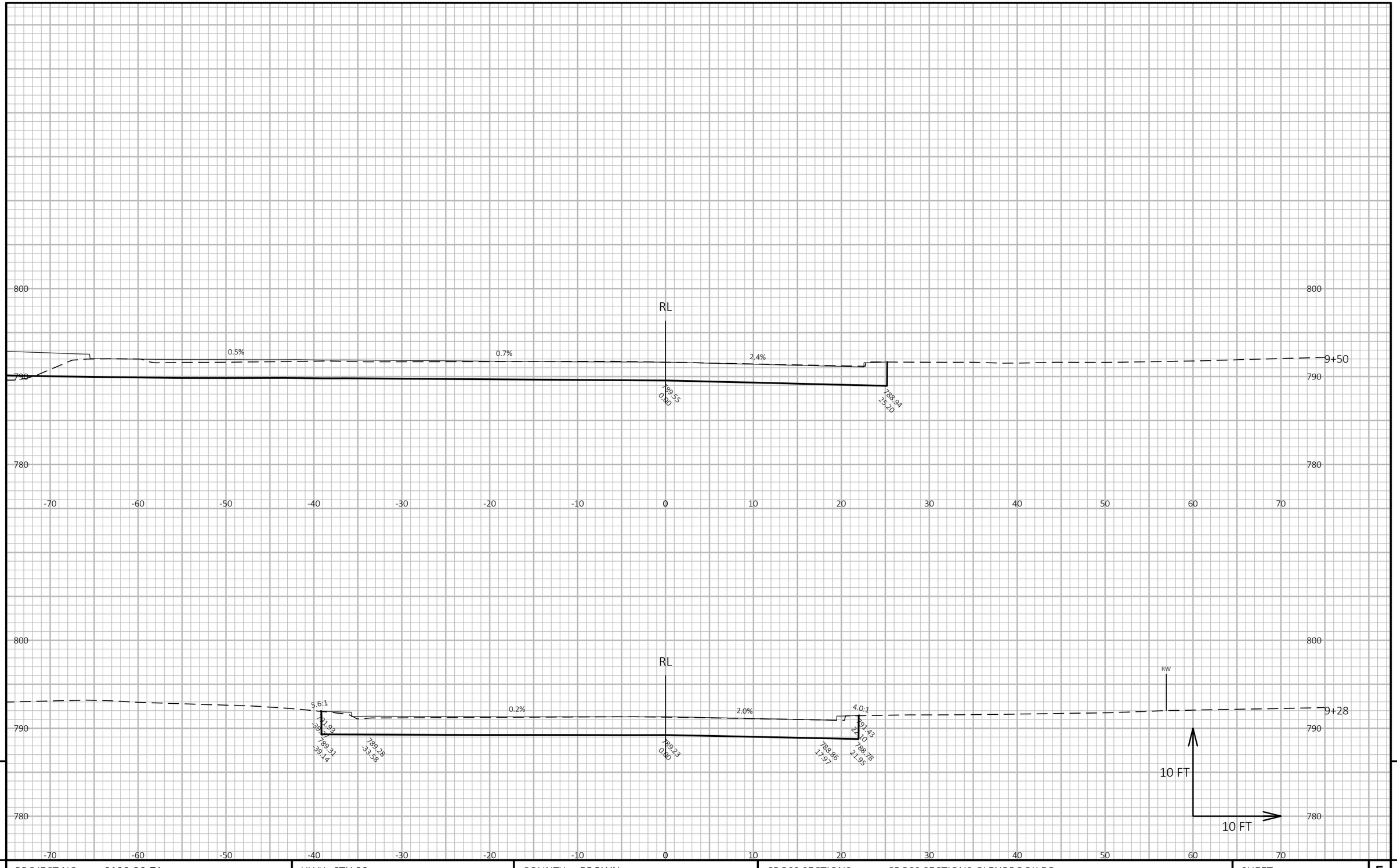
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS GLENBROOK DR.	SHEET 182	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
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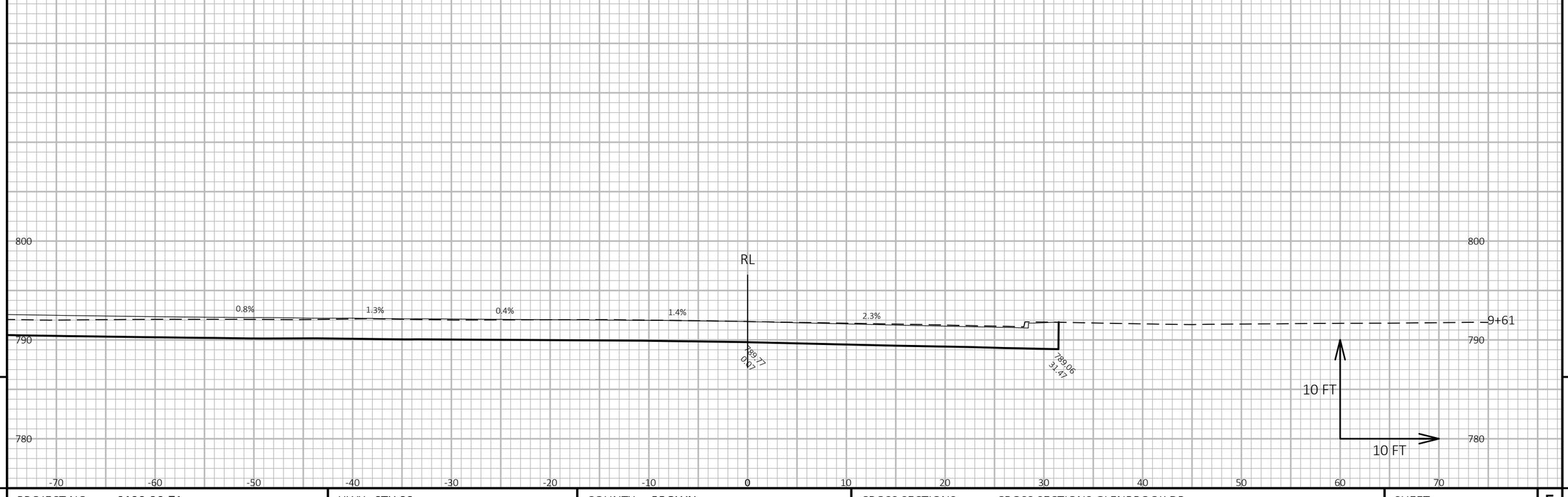
PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

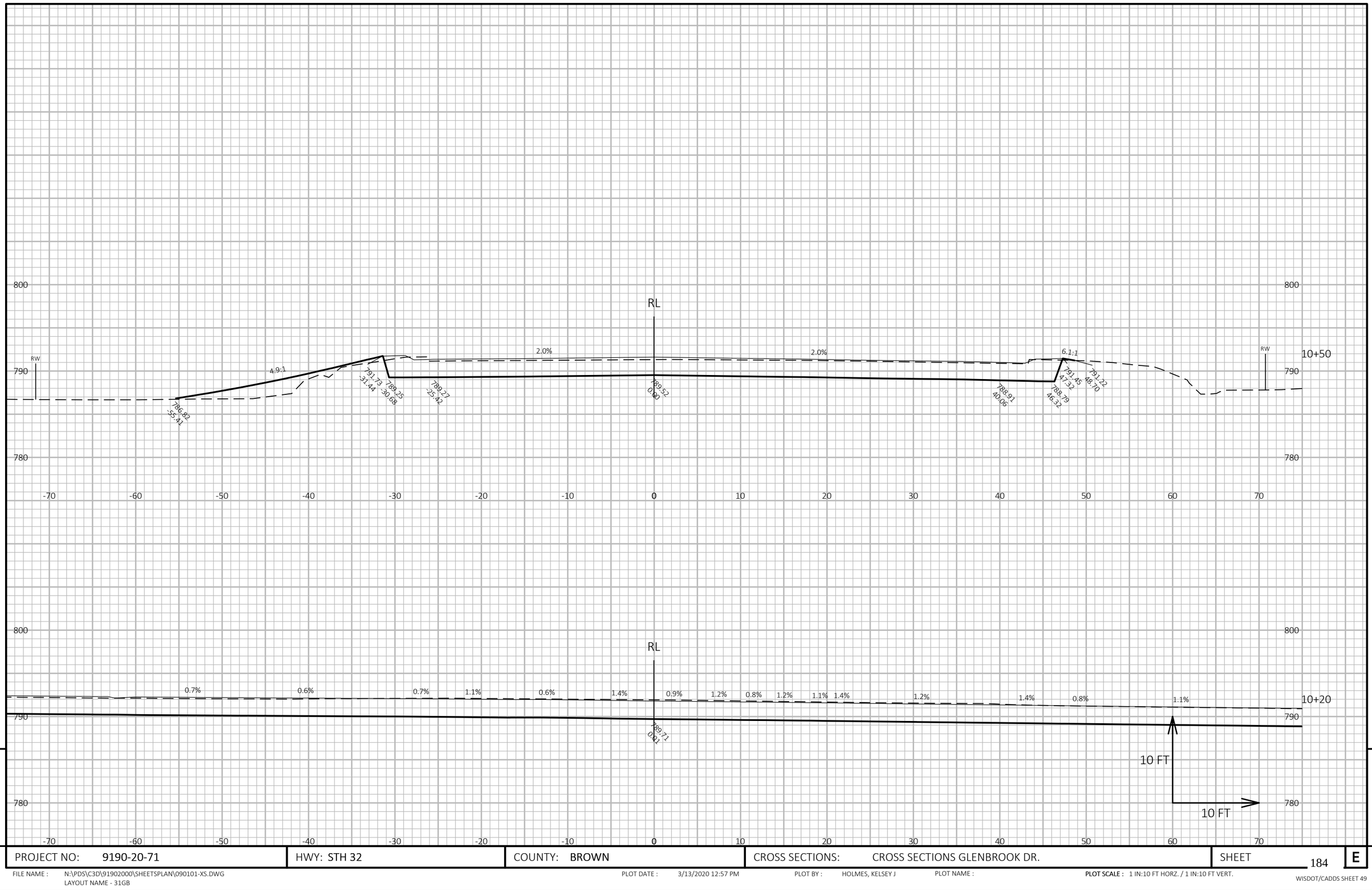
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PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS GLENBROOK DR.	SHEET 183	E

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LAYOUT NAME - 30GB

PLOT DATE : 3/13/2020 12:57 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS GLENBROOK DR.	SHEET 184	E

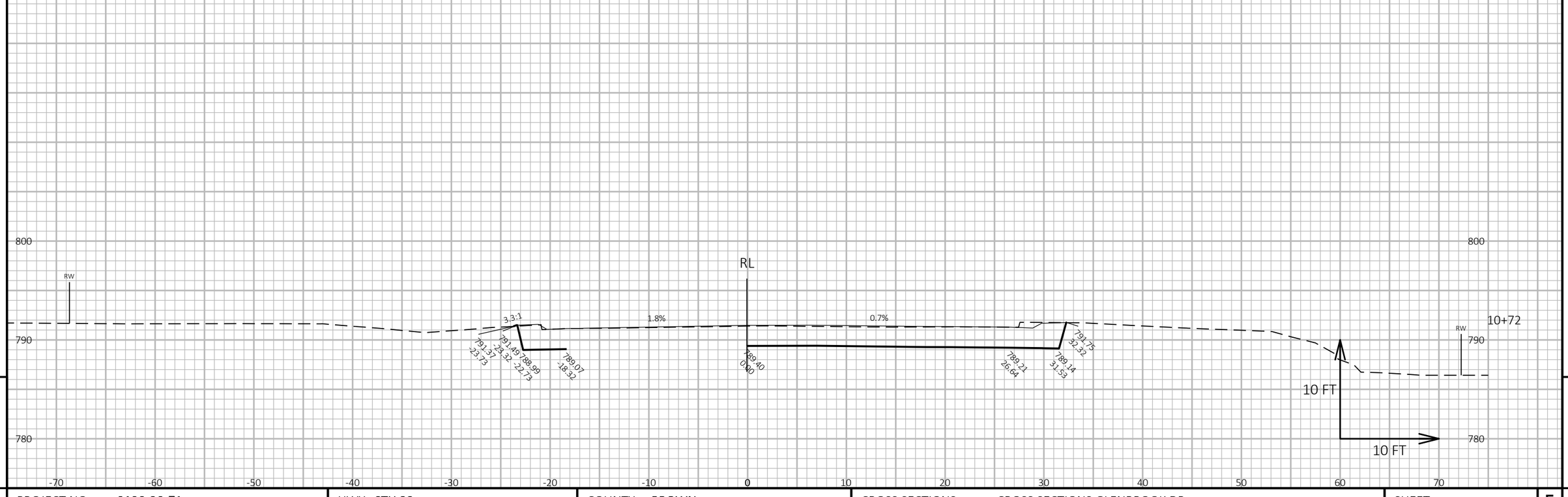
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LAYOUT NAME - 31GB

PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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



9

9

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS GLENBROOK DR.	SHEET 185	E

FILE NAME : N:\PDS\C3D\91902000\SHEETSPLAN\090101-XS.DWG
LAYOUT NAME - 32GB

PLOT DATE : 3/13/2020 12:57 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

GRE

SEPTEMBER 27

PROJECT ID: 9190-23-71

WITH: 9190-20-71

COUNTY: BROWN

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 = 206



DESIGN DESIGNATION 9190-23-00

A.A.D.T.	2021	=	8,300
A.A.D.T.	2041	=	11,000
D.H.V.		=	1152
D.D.		=	60/40
T.		=	7.2%
DESIGN SPEED		=	55 M.P.H
ESALS		=	1,200,000

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

GREEN BAY - PULASKI

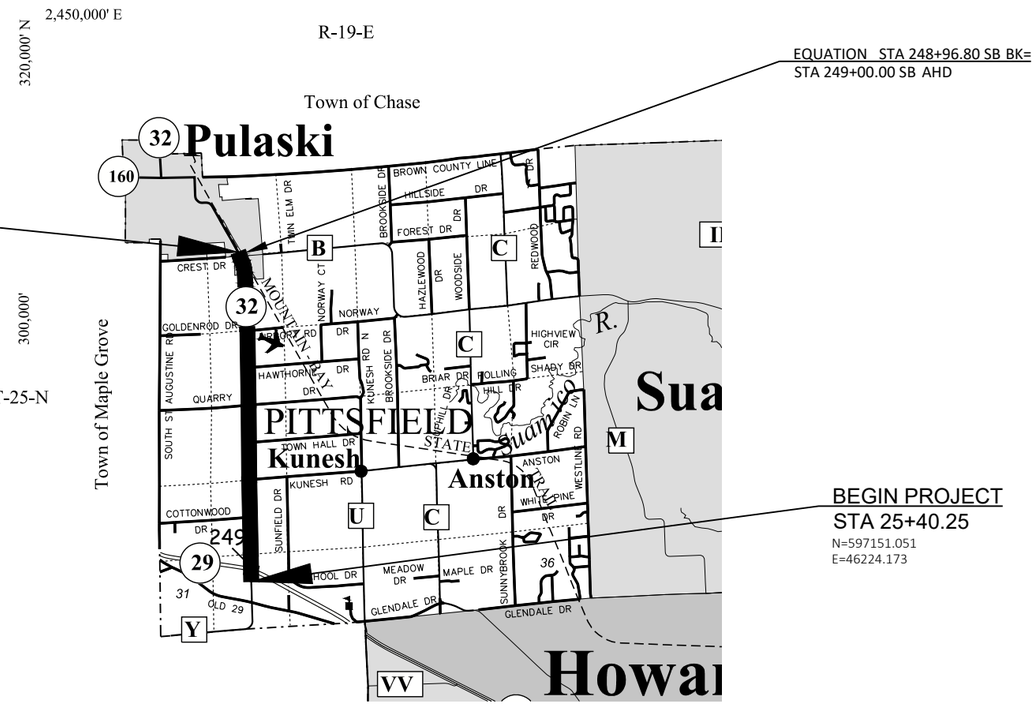
STH 29 - VILLAGE OF PULASKI

STH 32

BROWN

STATE PROJECT NUMBER
9190-23-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9190-23-71	WISC 2020417	1



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 3.99 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BROWN COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1991). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	KELSEY HOLMES
Project Manager	ANDREW FULCER
Regional Examiner	
Regional Supervisor	DANIEL SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: 04/03/2020 (Signature)

E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\010101-TI.DWG PLOT DATE : 6/19/2020 1:49 PM PLOT BY : HOLMES, KELSEY J PLOT NAME :

GENERAL NOTES

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

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

EXISTING DRAINAGE DITCHES AND CULVERT PIPES WILL REMAIN FUNCTIONAL DURING EXCAVATION OPERATIONS.

CURB AND GUTTER RADII ARE SHOWN TO THE FRONT FACE OF CURB.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREA BETWEEN THE SUBGRADE SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, AND MULCHED.

UTILITIES

NORTHEAST TELEPHONE COMPANY LLC - COMMUNICATION LINE
RICK VINCENT
450 SECURITY BLVD
P.O. BOX 19079
GREEN BAY, WI 54307-9079
O (920) 617-7316, M (920) 660-6644
RICK.VINCENT@NSIGHT.COM

VILLAGE OF PULASKI - DEPT. PUBLIC WORKS - SEWER
JOEL VAN LANNEN
585 E GLENBROOK DR.
PULASKI, WI 54162
(920) 822-8618
PUBDEPT@VILLAGEOFPULASKI.ORG

VILLAGE OF PULASKI - DEPT. PUBLIC WORKS - WATER
JOEL VAN LANNEN
585 E GLENBROOK DR.
PULASKI, WI 54162
(920) 822-8618
PUBDEPT@VILLAGEOFPULASKI.ORG

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
SCOTT GAUGER
2850 S ASHLAND AVE
GREEN BAY, WI 54307
O (920) 617-5151, M (920) 660-0430
SCOTT.GAUGER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
JIM EIDEN
2850 S ASHLAND AVE
GREEN BAY, WI 54307
O (920) 617-5231, M (920) 676-8068
JAMES.EIDEN@WISCONSINPUBLICSERVICE.COM

WE ENERGIES - GAS/PETROLEUM
ANDREW ROOYAKKERS
800 S LYNNDALE DR.
APPLETON, WI 54914
O (920) 380-3476, M (920) 858-4857
ANDREW.ROOYAKKERS@WE-ENERGIES.COM

WINDSTREAM KDL, LLC - COMMUNICATION LINE
MARY BETH FISHER
13935 BISHOPS DR.
BROOKFIELD, WI 53005
O (262) 792-7938, M (414) 313-9032
MARY.B.FISHER@WINDSTREAM.COM

DNR AREA LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
JAMES DOPERALSKI
PHONE: 920-412--0165
EMAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

2

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

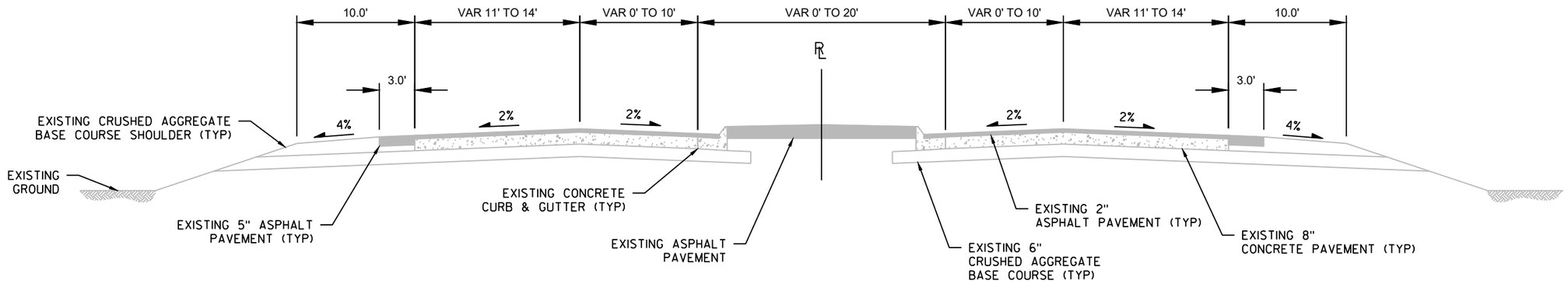
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2

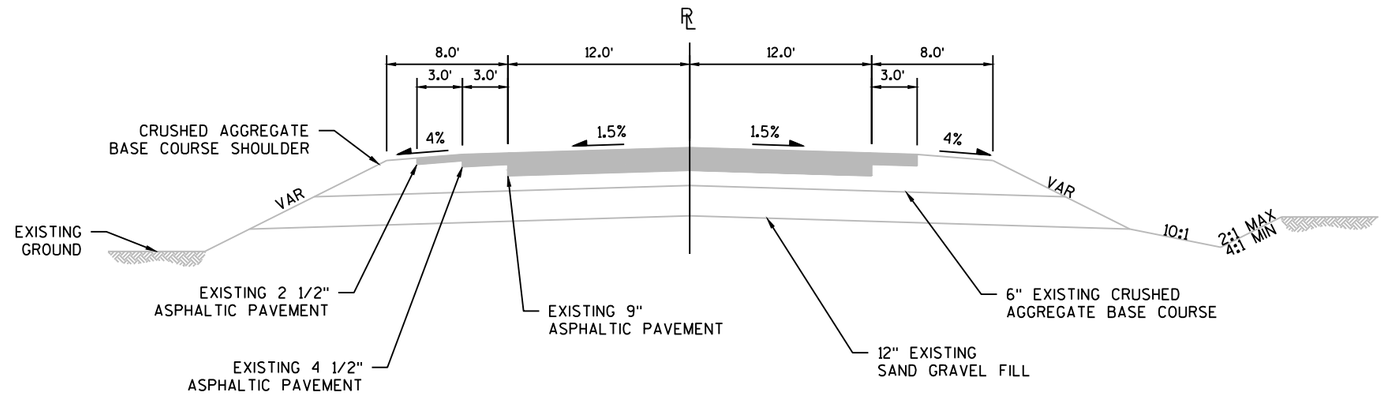
PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PROJECT OVERVIEW	SHEET 3	E

2



EXISTING TYPICAL SECTION STH 32

STA 22+48.97 TO STA 31+84.01

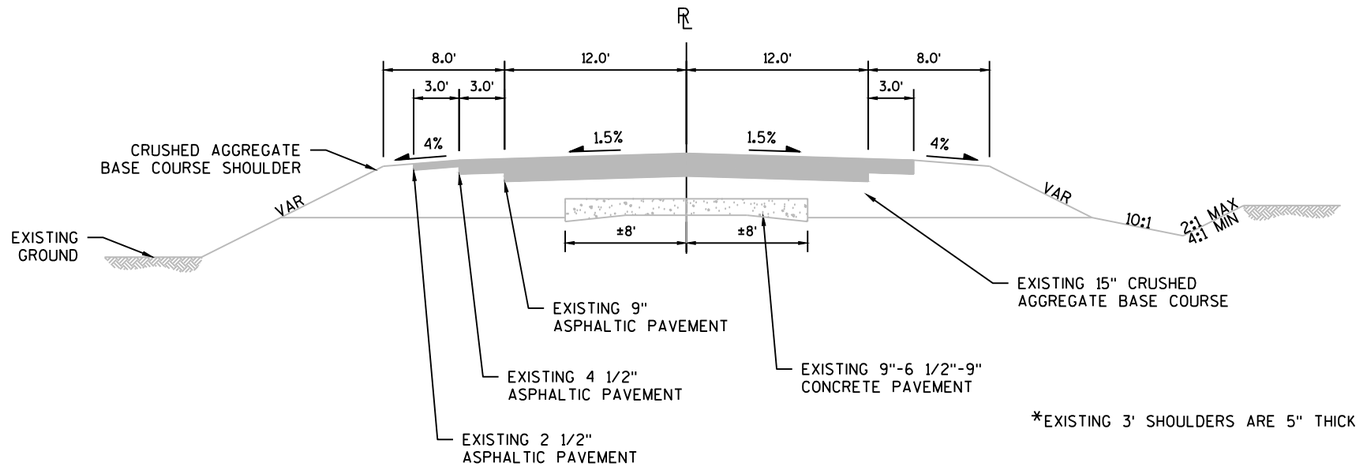


EXISTING TYPICAL SECTION STH 32

STA 43+84.53 TO STA 95+23.46

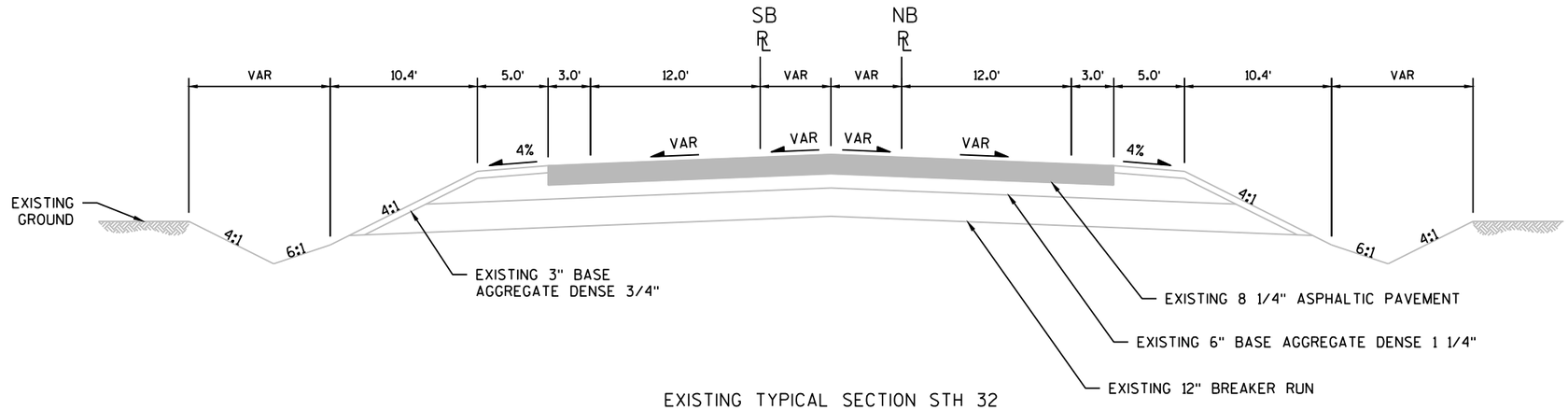
PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 4	E

2



EXISTING TYPICAL SECTION STH 32

STA 95+23.46 TO STA 237+79.9
STA 217+37 TO STA 217+41.53*



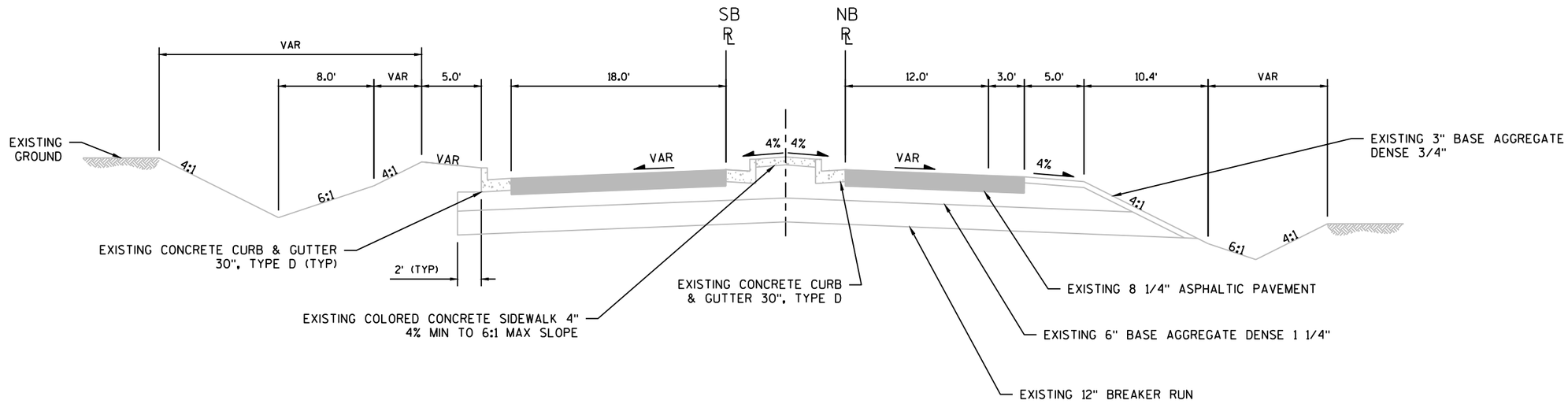
EXISTING TYPICAL SECTION STH 32

STA 237+79.9 TO STA 241+49.9
STA 251+30.1 TO STA 254+92.1

PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 5	E

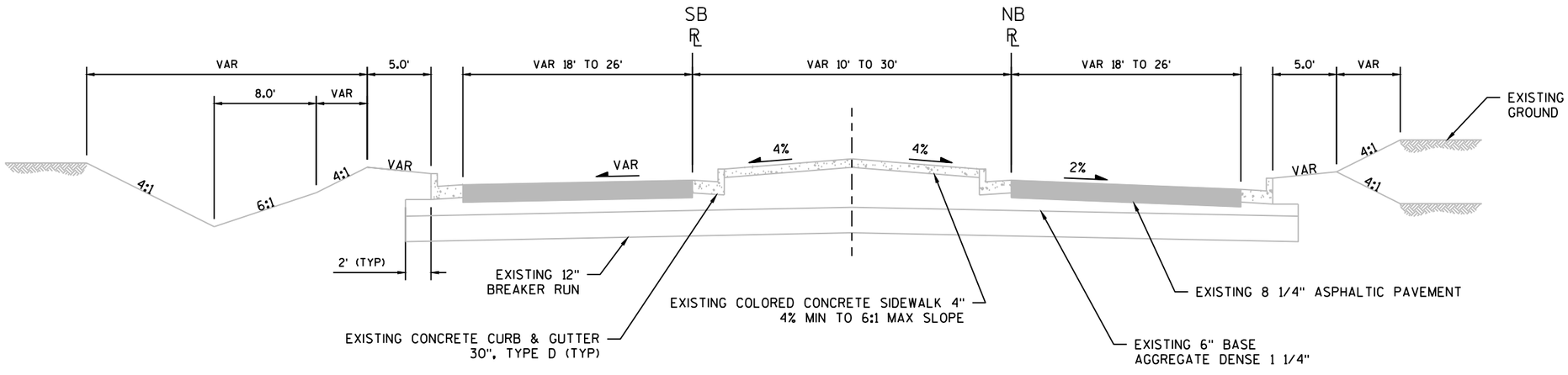
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LAYOUT NAME - 020301-ts
PLOT DATE : 6/19/2020 2:21 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



EXISTING TYPICAL SECTION STH 32

STA 241+49.9 TO STA 244+93.9



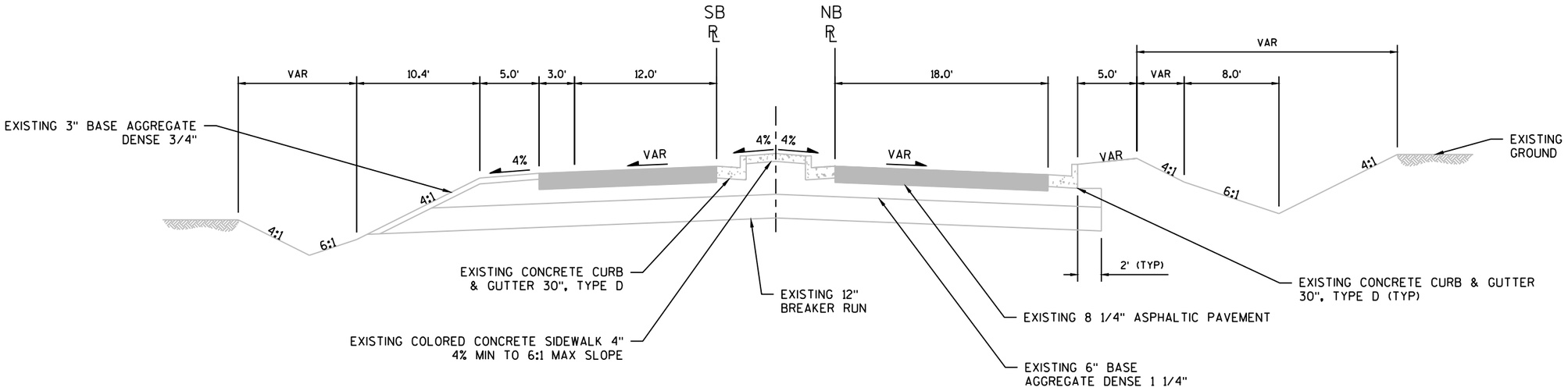
EXISTING TYPICAL SECTION STH 32

STA 244+93.9 TO STA 246+19.34
STA 247+76.14 TO STA 249+05.1

PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 6	E

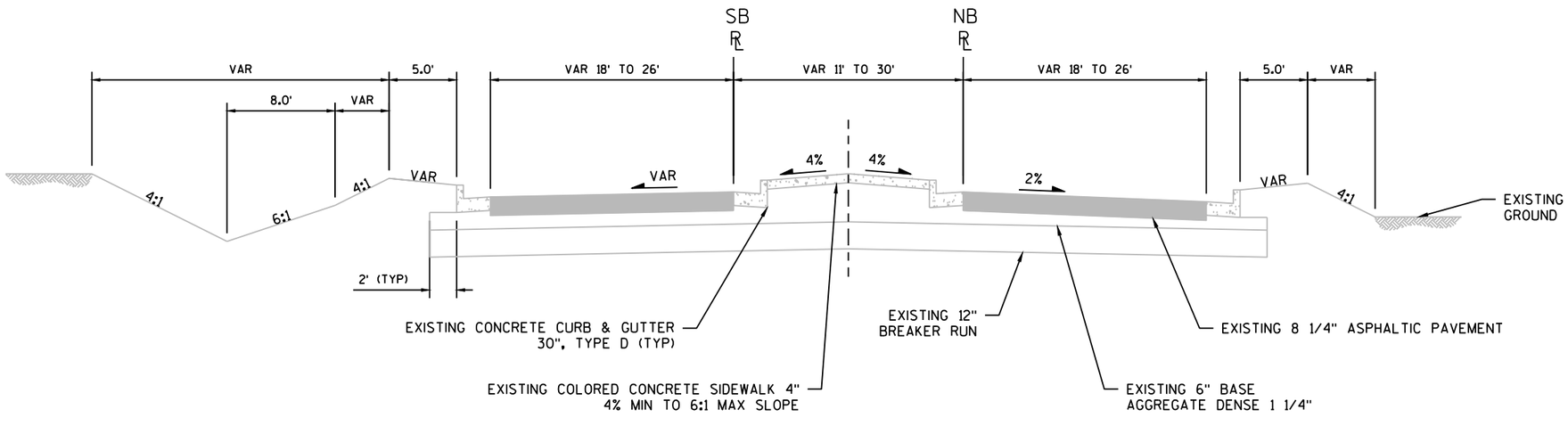
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LAYOUT NAME - 020301-ts
PLOT DATE : 6/19/2020 2:21 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



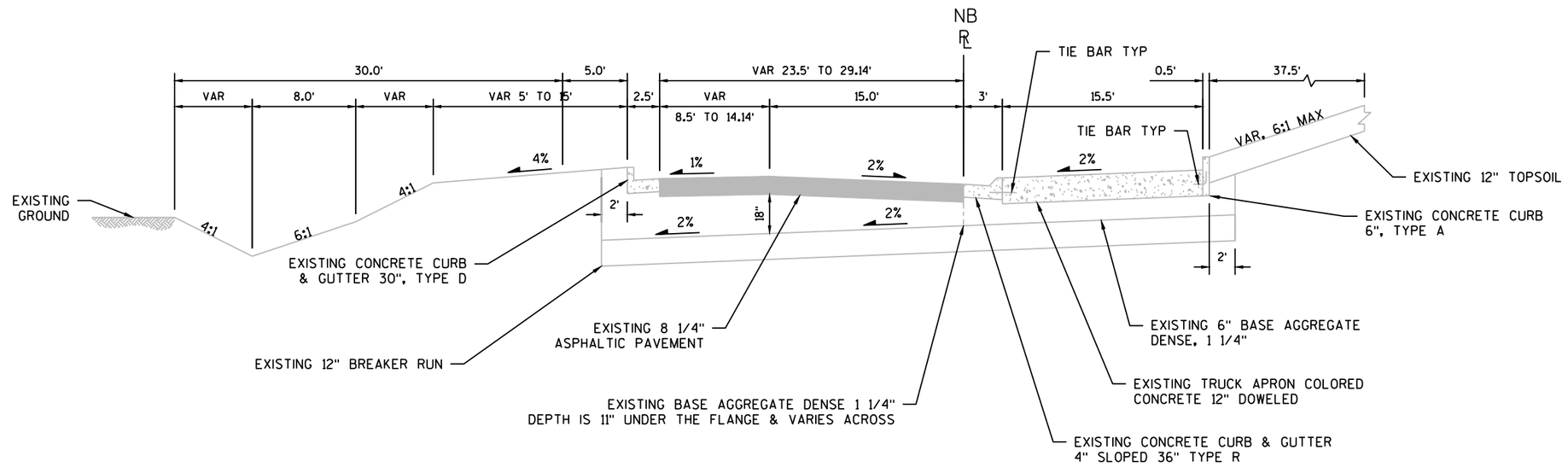
EXISTING TYPICAL SECTION STH 32

STA 249+05.1 TO STA 251+30.1



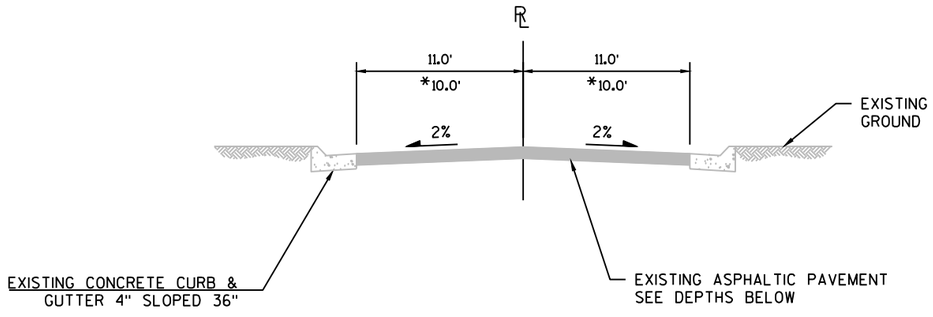
EXISTING TYPICAL SECTION CTH B

STA 104+00 EB TO STA 105+49.79 EB
STA 107+19.1 EB TO STA 109+08 EB



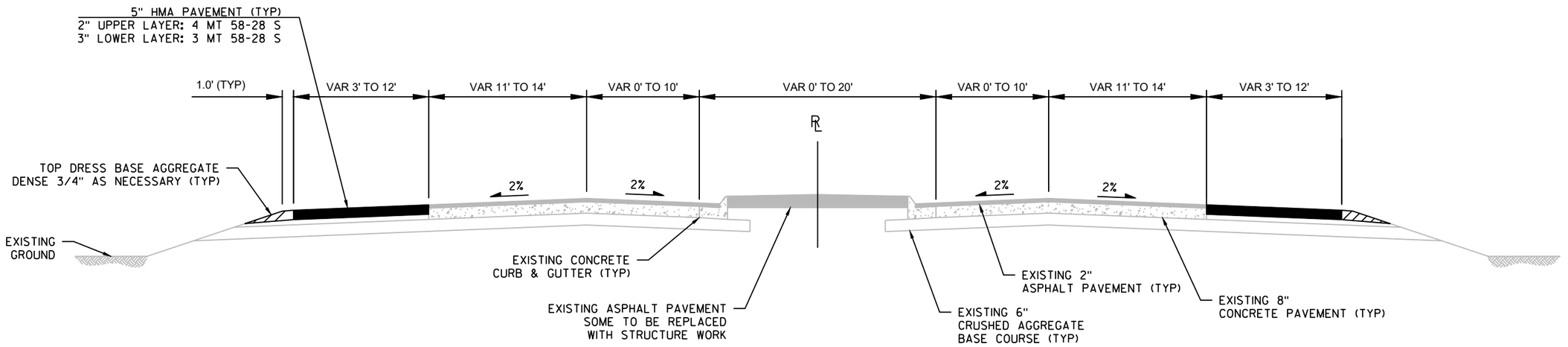
EXISTING TYPICAL SECTION ROUNDABOUT

STA 246+19.34 TO STA 247+76.14



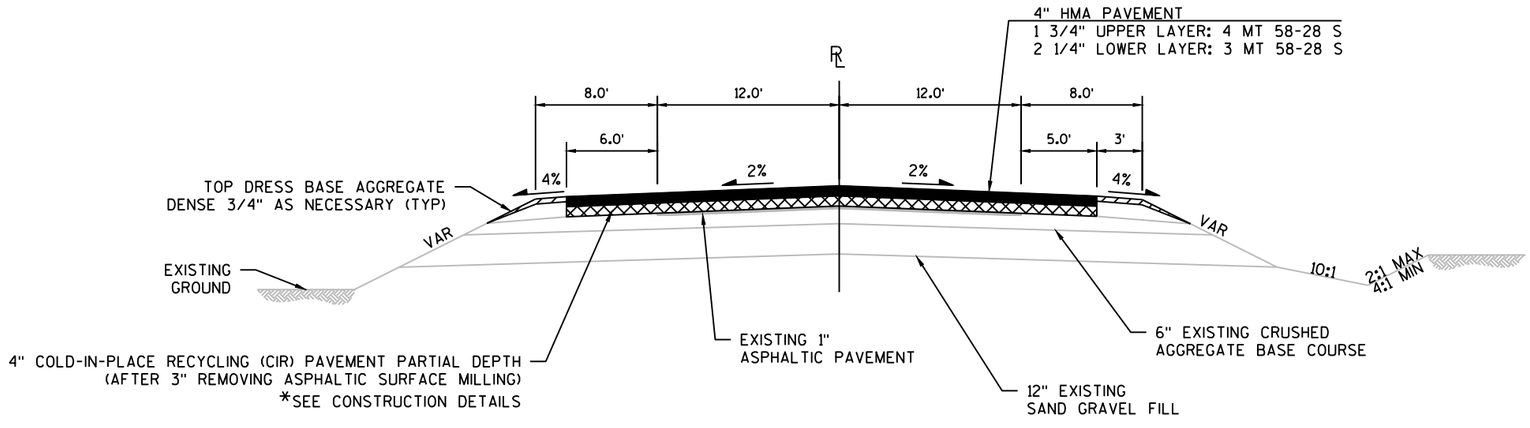
EXISTING TYPICAL SECTION SIDE ROADS

SIDE ROAD	WIDTH	DEPTH (INCHES)
COTTONWOOD DR	*	4.0
KUNESH RD		4.0
TOWN HALL DR		3.5
QUARRY DR		8.0
HAWTHORNE DR	*	4.5
AIRPORT RD	*	5.5



EXISTING TYPICAL SECTION STH 32

STA 22+48.97 TO STA 31+84.01

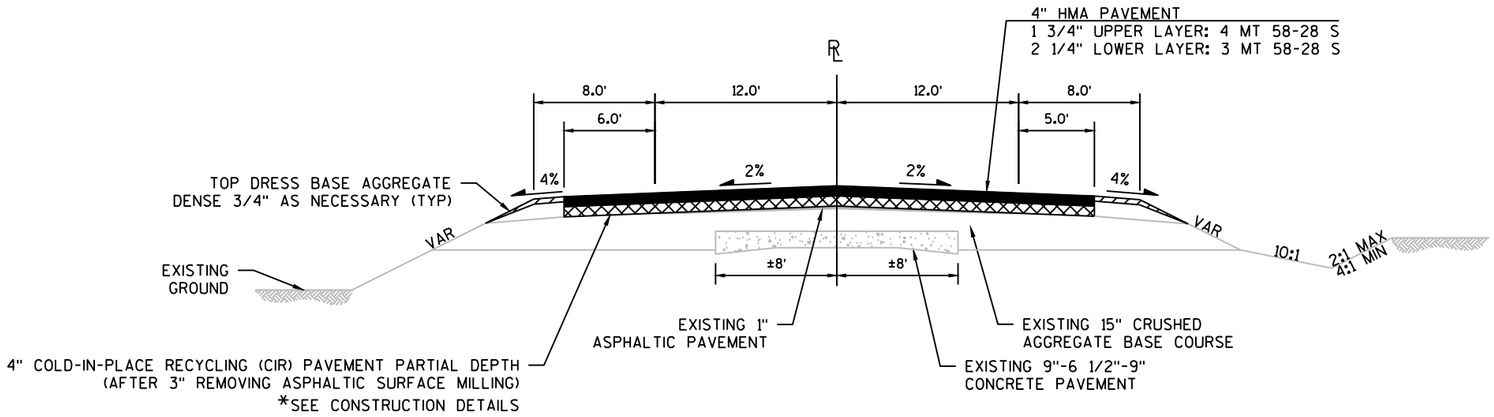


PROPOSED TYPICAL SECTION STH 32

STA 43+84.53 TO STA 95+23.46

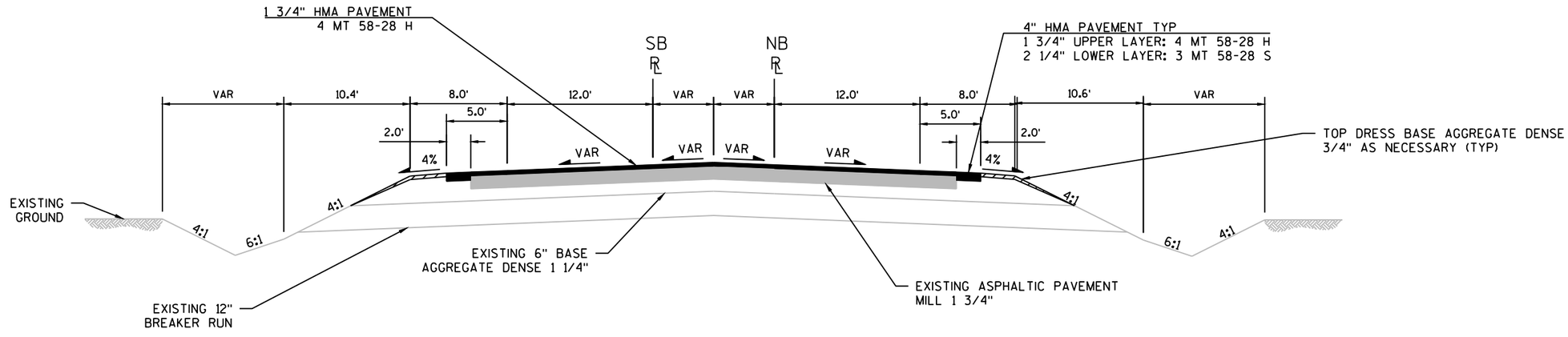
PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 9	E

2



PROPOSED TYPICAL SECTION STH 32

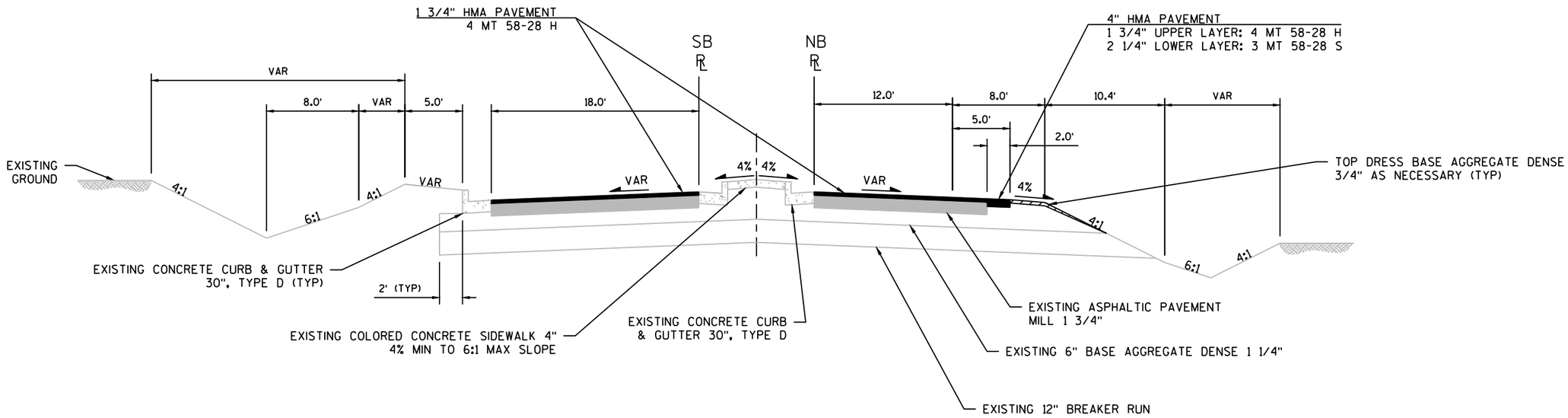
STA 95+23.46 TO STA 237+79.9



PROPOSED TYPICAL SECTION STH 32

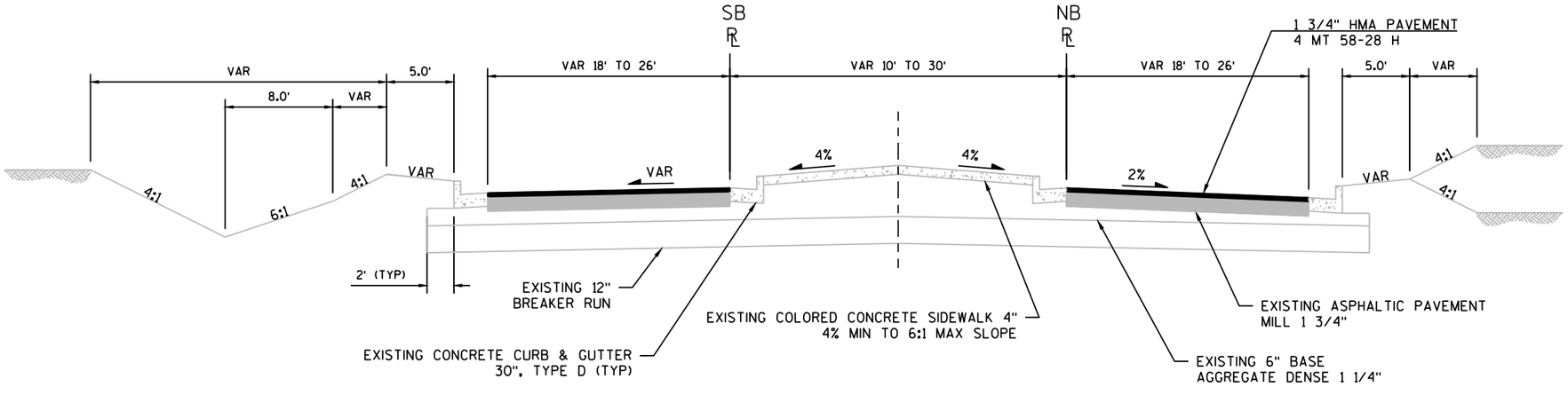
STA 237+79.9 TO STA 241+49.9
STA 251+30.1 TO STA 254+92.1

2



PROPOSED TYPICAL SECTION STH 32

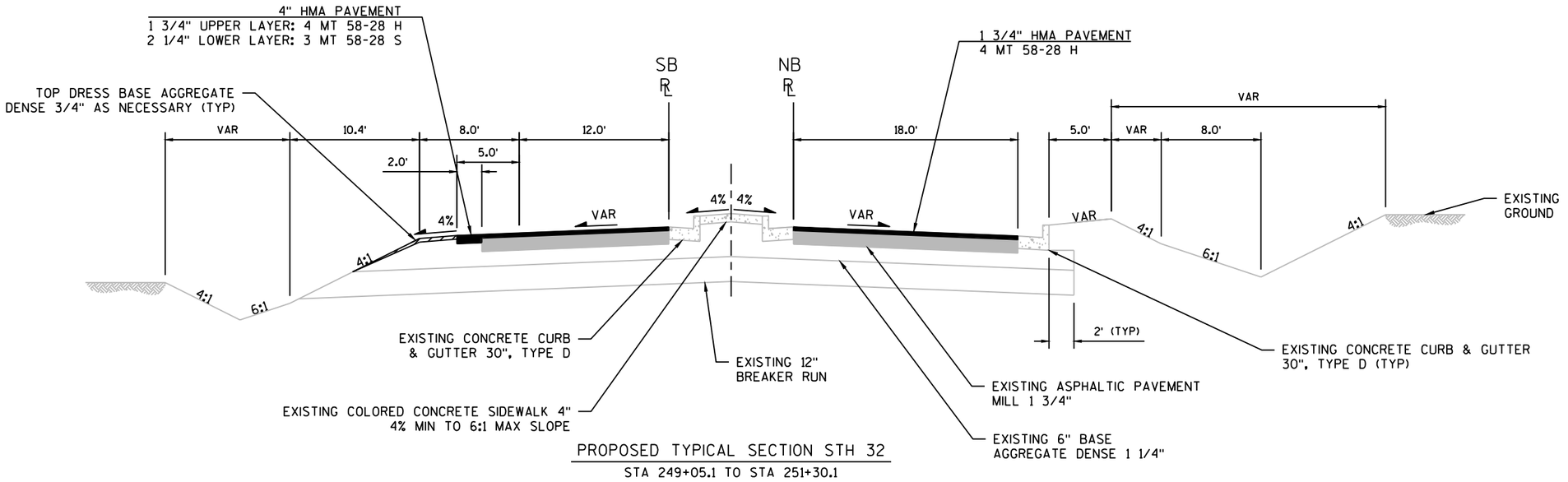
STA 241+49.9 TO STA 244+93.9



PROPOSED TYPICAL SECTION STH 32

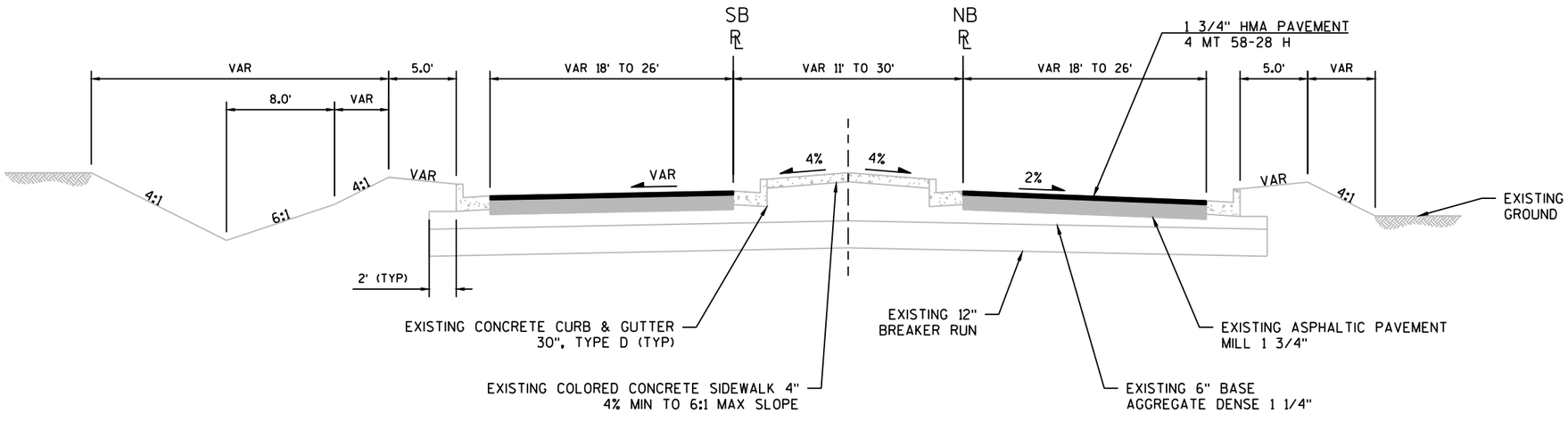
STA 244+93.9 TO STA 246+19.34
STA 247+76.14 TO STA 249+05.1

2



PROPOSED TYPICAL SECTION STH 32

STA 249+05.1 TO STA 251+30.1

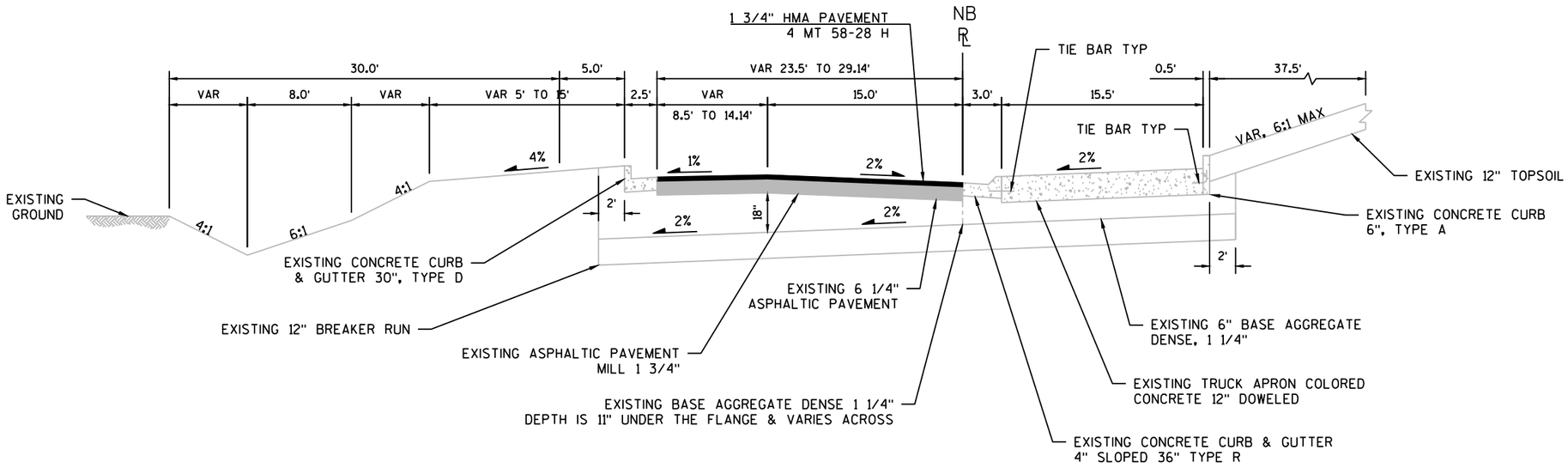


PROPOSED TYPICAL SECTION CTH B

STA 104+00 EB TO STA 105+49.79 EB
STA 107+19.1 EB TO STA 109+08 EB

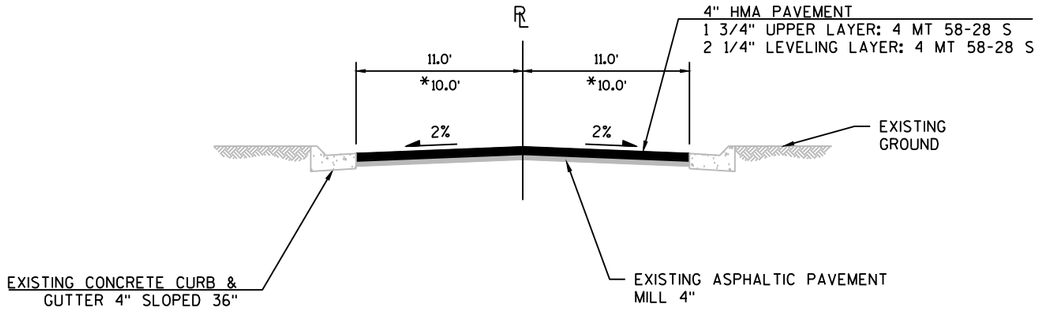
PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 12	E

2



PROPOSED TYPICAL SECTION ROUNDABOUT

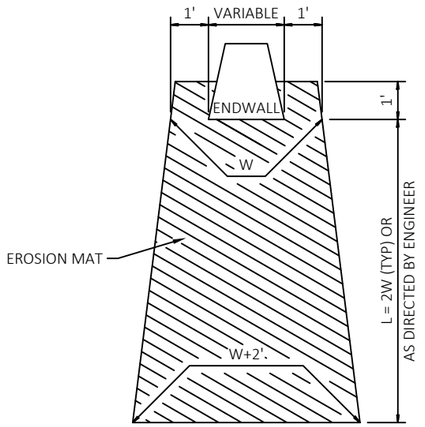
STA 246+19.34 TO STA 247+76.14



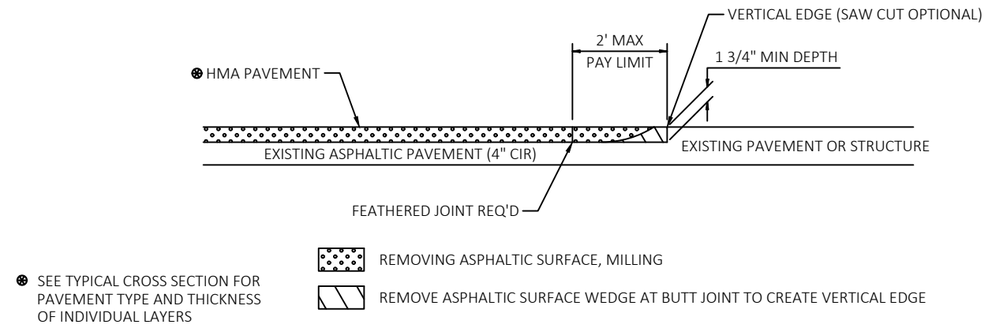
PROPOSED TYPICAL SECTION SIDE ROADS

* COTTONWOOD DR
KUNSEH RD
TOWN HALL DR
QUARRY DR
* HAWTHORNE DR
* AIRPORT DR

PROJECT NO: 9190-23-71	HWY: WIS 32	COUNTY: BROWN	PROPOSED TYPICAL SECTIONS	SHEET 13	E

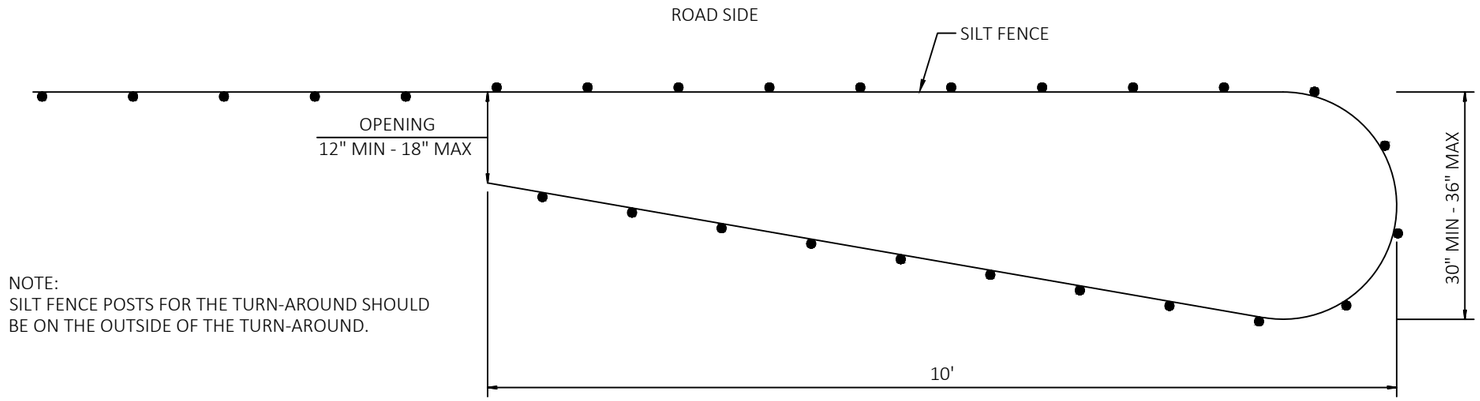


EROSION MAT TREATMENT AT CULVERTS



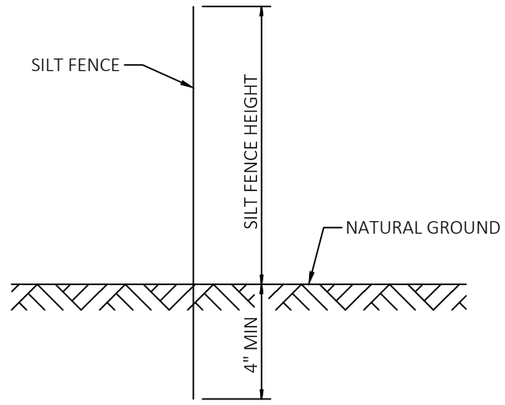
HMA PAVEMENT SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



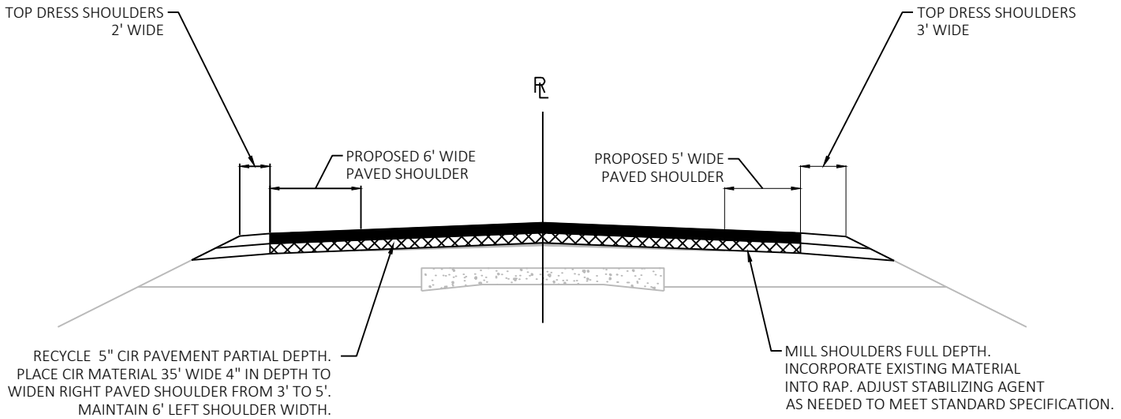
NOTE:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

PLAN VIEW



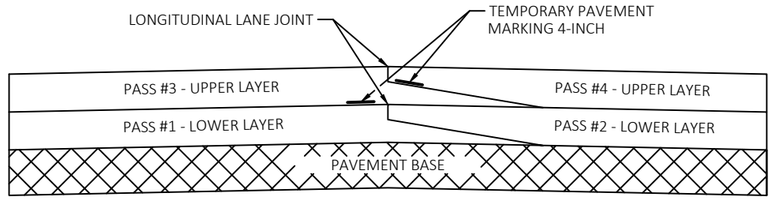
SIDE VIEW

SILT FENCE TURN-AROUND DETAIL

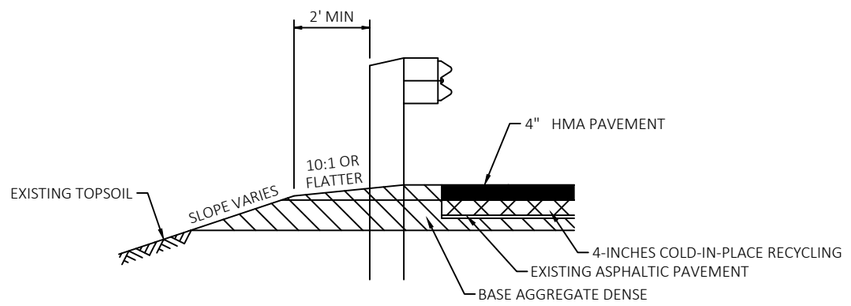


TYPICAL CROSS SECTION FOR STH 32

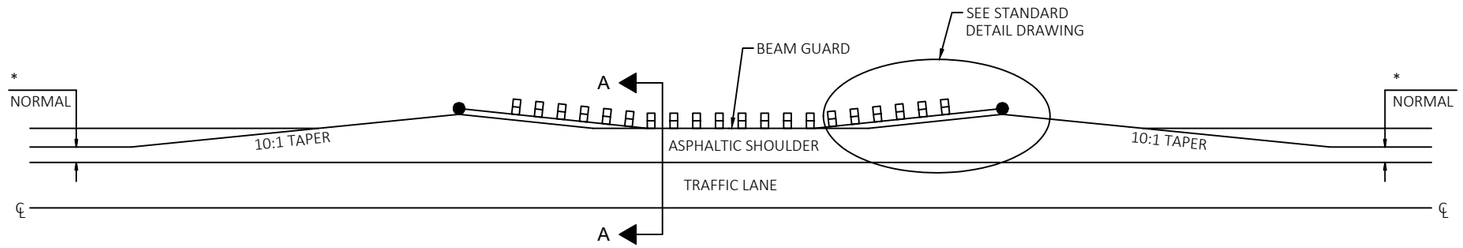
SHOULDER WIDENING DETAIL



PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



SECTION A-A



* 6' ASPHALTIC SHOULDER LT
5' ASPHALTIC SHOULDER RT

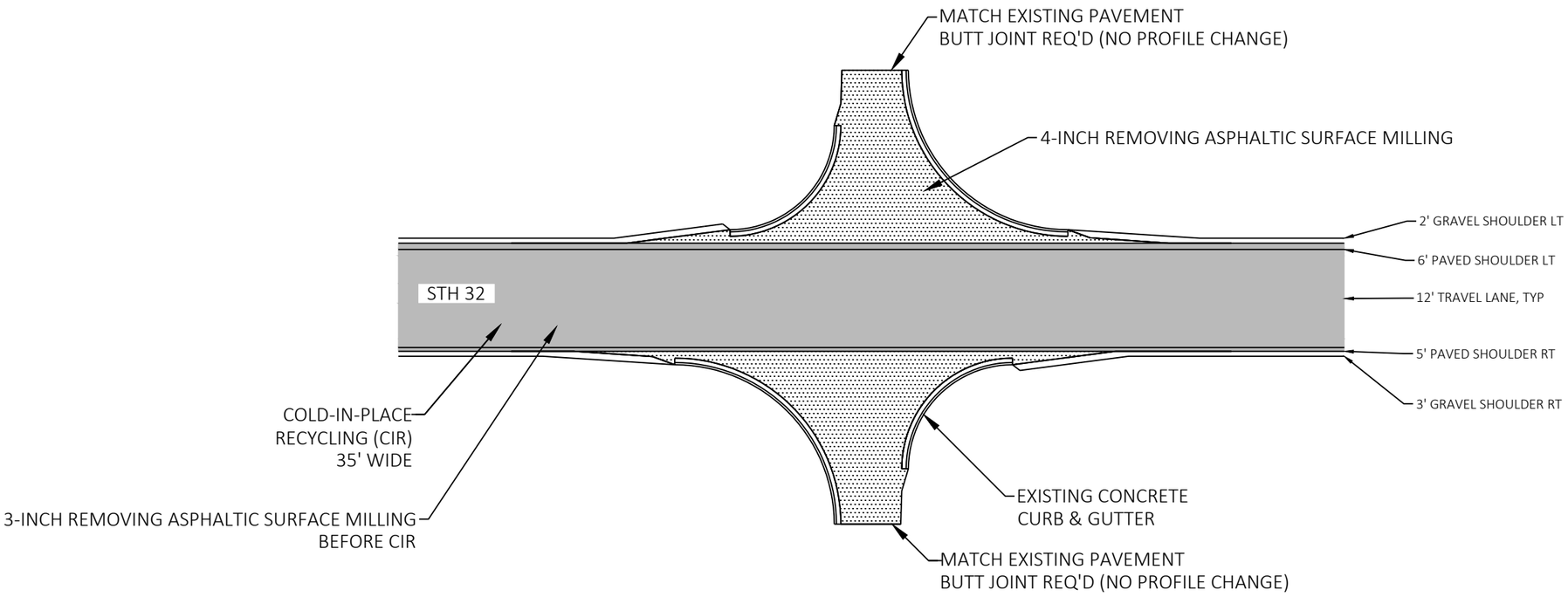
DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN: CONSTRUCTION DETAILS	SHEET 15	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 02

PLOT DATE : 6/19/2020 2:28 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

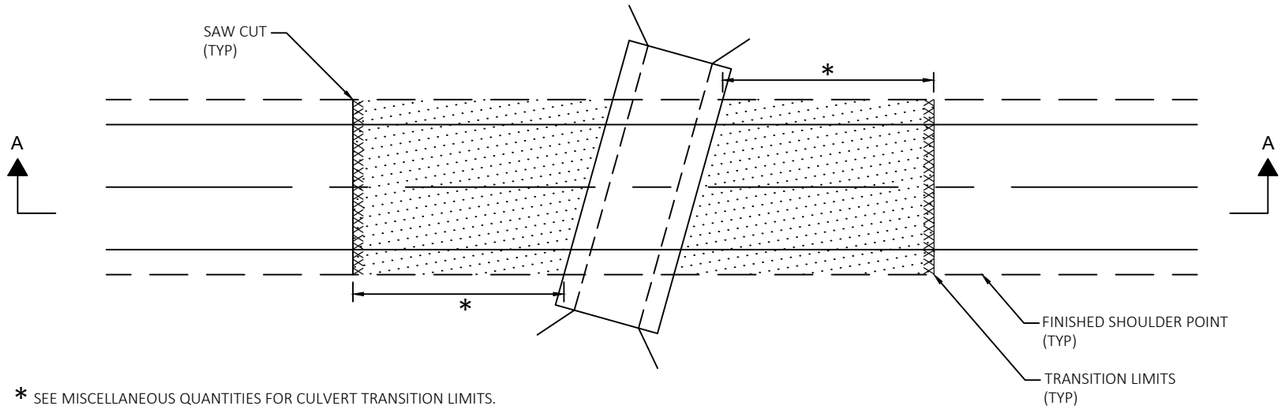
2



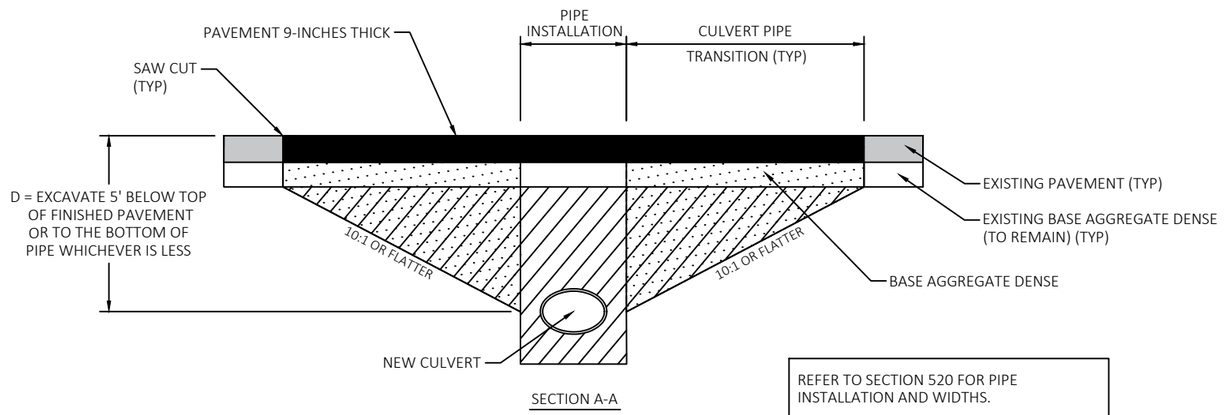
MILLING/CIR LIMITS WITH CURB & GUTTER

COTTONWOOD DR
KUNESH RD
TOWN HALL DR
QUARRY DR
HAWTHORNE DR
AIRPORT DR

2



* SEE MISCELLANEOUS QUANTITIES FOR CULVERT TRANSITION LIMITS.



REFER TO SECTION 520 FOR PIPE INSTALLATION AND WIDTHS.

CONSTRUCT TRANSITION PERPENDICULAR TO CULVERT PIPE.

CULVERT PIPE TRANSITION AREAS WILL BE PAID BY COMMON EXCAVATION & SPV FOUNDATION BACKFILL.

PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.

NEW CULVERT PIPES WITH TRANSITION

2

2

N

SAW CUT JUST OUTSIDE PAVEMENT MARKING

22+49.04, -44.05' LT

BP: 22+00.00

12.0' TYP

STH 32 SB

STH 32 NB

23+81.15, 18.54' RT

22+78.66, 33.98' RT

24+28.66, 30.60' RT

1.0' TYP

B-05-0230

B-05-0229

STH 29 WB

STH 29 EB

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS SHOULDER WIDENING AT INTERCHANGE	SHEET 18	E

2

N

SIGN I

31+03.64, -31.58' LT

30+44.31, -20.93' LT

STH 32 SB

30

SIGN

STH 32 NB

31+83.79, 41.45' RT

IP POST

IP POST

T142
784.950

28+30.00

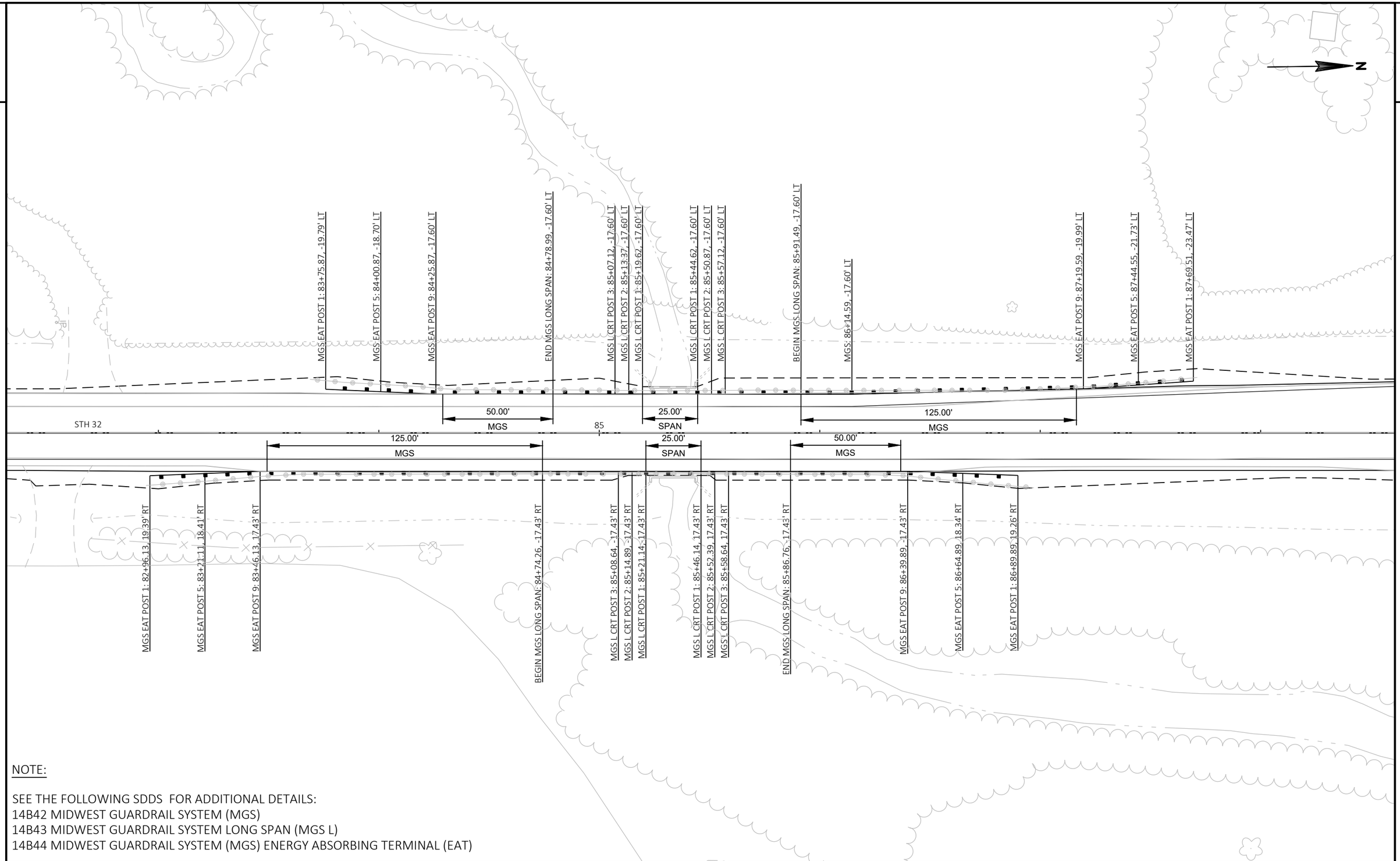
PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS SHOULDER WIDENING AT INTERCHANGE	SHEET 19	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 06

PLOT DATE : 6/19/2020 2:29 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



NOTE:

SEE THE FOLLOWING SDDS FOR ADDITIONAL DETAILS:
14B42 MIDWEST GUARDRAIL SYSTEM (MGS)
14B43 MIDWEST GUARDRAIL SYSTEM LONG SPAN (MGS L)
14B44 MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL (EAT)

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS GUARDRAIL LAYOUT	SHEET 20	E

2

2

N

EXISTING R/W

STA 108+63.78, -44.630 LT
ELEV 778.627'

SAW CUT
MATCH EXISTING

TLE

ASPHALTIC SURFACE SAFETY ISLANDS

STA 109+81.66, -44.586 LT
ELEV 779.306'

EXISTING R/W

BM

STA 109+17.06, -31.348 LT

STA 109+36.90, -31.30 LT

779.227'

778.708'

779.28'

EXISTING R/W

EXISTING R/W

779.26'

8.50'

1.98'

R5'

779.47'

STA 109+82.21, -31.922 LT

779.44'

779.630'

STA 108+49.73, -18.00 LT
ELEV 779.240'

STA 109+93.91, -18.0 LT
ELEV 779.812'

MATCH ROADWAY

REMOVE EXISTING ASPHALTIC SURFACE
REPLACE 4-INCHES ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CONCRETE CURB & GUTTER
36-INCH 4-INCH SLOPED TYPE D
REVERSE SLOPE GUTTER

109

STH 32

110

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
47	108+50.60	779.750	RR SPIKE PPOL# 251920L3 W/S32 @ TAVERN

ASPHALTIC SURFACE

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN: CONSTRUCTION DETAILS	SHEET 21	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 08

PLOT DATE : 6/19/2020 2:29 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

N

CREEKSIDE DR.

MGS EAT POST 1: 210+66.06, -19.96' LT
MGS EAT POST 5: 210+91.06, -18.96' LT
MGS EAT POST 9: 211+16.06, -18.00' LT
END MGS LONG SPAN: 211+56.68, -18.00' LT
MGS L CRT POST 3: 211+84.81, -18.00' LT
MGS L CRT POST 2: 211+91.06, -18.00' LT
MGS L CRT POST 1: 211+97.31, -18.00' LT
MGS L CRT POST 1: 212+22.31, -18.00' LT
MGS L CRT POST 2: 212+28.56, -18.00' LT
MGS L CRT POST 3: 212+34.81, -18.00' LT
BEGIN MGS LONG SPAN: 212+69.18, -18.00' LT
END MGS SHORT RADIUS: 213+02.16, -18.00' LT
END RADIUS: 213+27.07, -20.03' LT

SHORT RADIUS TERMINAL: 213+48.58, -74.87' LT
BEGIN RADIUS: 213+48.47, -46.75' LT
R29.00'
CRT POST: 213+48.29, -44.51' LT
CRT POST: 213+46.87, -38.44' LT
CRT POST: 213+44.19, -32.81' LT
CRT POST: 213+40.37, -27.88' LT
CRT POST: 213+35.58, -23.88' LT
CRT POST: 213+30.04, -21.00' LT

37.50'
MGS
25.00'
SPAN
32.98'
MGS

STH 32
210
215
EP: 10+00.00

75.00'
MGS
25.00'
SPAN
25.00'
MGS

MGS EAT POST 1: 210+22.67, 21.06' RT
MGS EAT POST 5: 210+47.67, 20.17' RT
MGS EAT POST 9: 210+72.67, 19.30' RT
BEGIN MGS LONG SPAN: 211+50.80, 19.30' RT
MGS L CRT POST 3: 211+85.17, -19.30' RT
MGS L CRT POST 2: 211+91.42, -19.30' RT
MGS L CRT POST 1: 211+97.67, 19.30' RT
MGS L CRT POST 1: 212+22.67, -19.30' RT
MGS L CRT POST 2: 212+28.92, -19.30' RT
MGS L CRT POST 3: 212+35.17, 19.30' RT
END MGS LONG SPAN: 212+63.30, -19.30' RT
MGS EAT POST 9: 212+91.42, -19.30' RT
MGS EAT POST 5: 213+16.41, 20.48' RT
MGS EAT POST 1: 213+41.40, 21.61' RT

NOTE:

SEE THE FOLLOWING SDDS FOR ADDITIONAL DETAILS:
14B42 MIDWEST GUARDRAIL SYSTEM (MGS)
14B43 MIDWEST GUARDRAIL SYSTEM LONG SPAN (MGS L)
14B44 MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL (EAT)
14B53 SHORT RADIUS BEAM GUARD AND TERMINAL (MGS)

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAILS GUARDRAIL LAYOUT	SHEET 22	E

2

2

N

86+14.59, -17.60' LT

87+20.04, -20.00' LT

87+65.83, -21.36' LT

87+90.00, -21.59' LT

89+39.51, -25.00' LT

91+89.76, -25.00' LT

93+16.38, -18.00' LT

8" HMA PAVEMENT

1.00'

7.0'

SAWCUT

STH 32

90

BP: 0+00.00

18.0'

KUNESH RD

8" HMA PAVEMENT
1 3/4" UPPER LAYER: 4 MT 58-28 S
2 1/4" LOWER LAYER: 3 MT 58-28 S
4" LOWER LAYER: 3 MT 58-28 S

8" BASE AGGREGATE
DENSE 3/4" AS NECESSARY

EXISTING
GROUND

VAR

VAR

VAR

6.0'

12.0'

RL

4%

2%

2%

PROPOSED CROSS SECTION KUNESH BYPASS LANE
STA 86+14.59 TO STA 93+16.38

MATCH PROPOSED
TYPICAL SECTION
FOR THIS STATION RANGE

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAILS KUNESH RD	SHEET 23	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 01

PLOT DATE : 11/1/2019 10:49 AM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

SIGNING NOTES

WHEN AN EXISTING STOP OR YIELD SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP OR YIELD SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

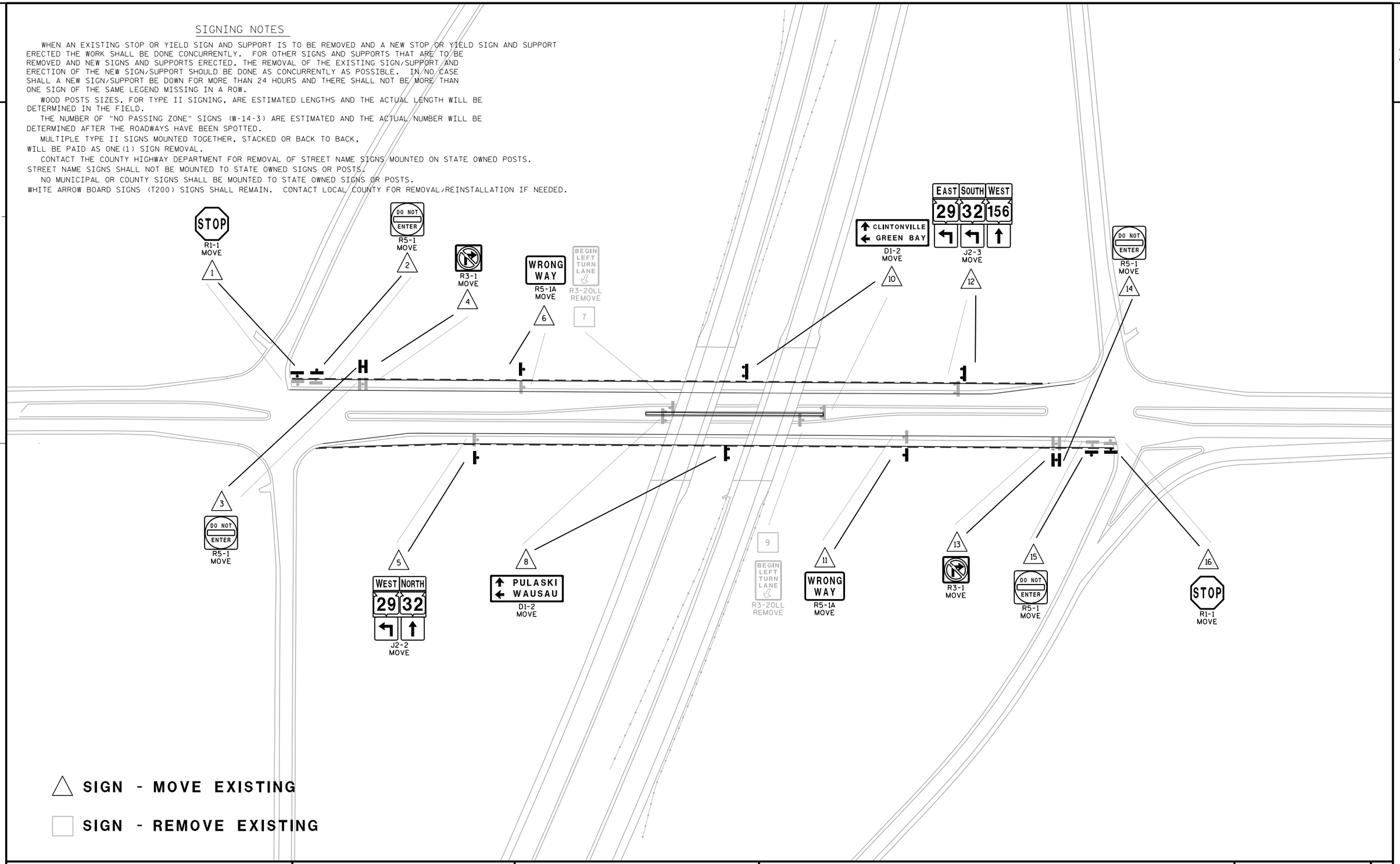
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

MULTIPLE TYPE II SIGNS MOUNTED TOGETHER, STACKED OR BACK TO BACK, WILL BE PAID AS ONE(1) SIGN REMOVAL.

CONTACT THE COUNTY HIGHWAY DEPARTMENT FOR REMOVAL OF STREET NAME SIGNS MOUNTED ON STATE OWNED POSTS. STREET NAME SIGNS SHALL NOT BE MOUNTED TO STATE OWNED SIGNS OR POSTS.

NO MUNICIPAL OR COUNTY SIGNS SHALL BE MOUNTED TO STATE OWNED SIGNS OR POSTS. WHITE ARROW BOARD SIGNS (T200) SIGNS SHALL REMAIN. CONTACT LOCAL COUNTY FOR REMOVAL/REINSTALLATION IF NEEDED.



△ **SIGN - MOVE EXISTING**

□ **SIGN - REMOVE EXISTING**

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET	E

2

2

N

86+14.67, -12.00' LT

89+39.53, -24.00' LT

91+72.46, -24.00' LT

93+76.02, -12.00' LT

89+39.53, -12.00' LT

4-INCH GROOVED WET REF EPOXY, WHITE
12.5' SKIP - 37.5' GAP

91+72.46, -12.00' LT

PID 1

PID 2

STH 32

86 87 88 89 90 91 92 93

BP: 0+00.00

KUNESH RD

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING KUNESH RD	SHEET 25	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 01

PLOT DATE : 4/1/2020 11:17 AM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

2

2

ALL EDGE LINE PAVEMENT MARKING SOUTH OF STA 238+50 GROOVED WET REFLECTIVE EPOXY 4-INCH

ALL EDGE LINE PAVEMENT MARKING NORTH OF STA 238+50 STANDARD EPOXY

238 +50.00

239 SB 239 NB +08.10

240 SB 240 NB

241 SB 241 NB

242 SB 242 NB

243 SB 243 NB

244 SB 244 NB

245 SB 245 NB

STH 32 SB

STH 32 NB

A DOUBLE YELLOW

A DOUBLE YELLOW

A DOUBLE YELLOW

B

C

D

F

SIGN

SIGN

SIGN

POST

POST

FLAG

FLAG

PAVEMENT MARKING LEGEND, EPOXY

- (A) CENTERLINE, 4-INCH, SOLID, YELLOW
- (B) EDGELINE, 4-INCH, YELLOW
- (C) EDGELINE, 4-INCH, WHITE
- (D) DIAGONAL, 12-INCH YELLOW
- (E) DOTTED EXTENSION 18-INCH, WHITE, 2' SEG/2' GAP
- (F) ISLAND NOSE, YELLOW
- (G) CROSSWALK, 6-INCH, WHITE

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 26	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 02

PLOT DATE : 4/1/2020 11:17 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

CREST DR.

BEGIN CONSTRUCTION
STA 104+05.37 EB
MATCH EXISTING
BUTT JOINT REQ'D

END CONSTRUCTION
STA 108+97.36
MATCH EXISTING
BUTT JOINT REQ'D

CTH B

103 EB
104 EB
105 EB
108 EB
109 EB
110 EB

STH 32 SB
249 SB
249 NB
248 SB
248 NB
STH 32 NB
246 SB
246 NB
245 SB
245 NB

SIGN
POST
FLAG

PAVEMENT MARKING LEGEND, EPOXY

- (A) CENTERLINE, 4-INCH, SOLID, YELLOW
- (B) EDGELINE, 4-INCH, YELLOW
- (C) EDGELINE, 4-INCH, WHITE
- (D) DIAGONAL, 12-INCH YELLOW
- (E) DOTTED EXTENSION 18-INCH, WHITE, 2' SEG/2' GAP
- (F) ISLAND NOSE, YELLOW
- (G) CROSSWALK, 6-INCH, WHITE

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 27	E

2

2

CREST DR.

105 EB

ANT.

SIGN

A DOUBLE YELLOW

B

C

D

BEGIN CONSTRUCTION
9190-20-71

248 SB

248 NB

249 SB

249 NB

STH 32 SB

STH 32 NB

250 SB

250 NB

251 SB

251 NB

252 SB

252 NB

253 SB

253 NB

254 SB

254 NB

254+23 SB

255 NB

+20.95

F

A DOUBLE YELLOW

C

END CONSTRUCTION 9190-23-71
STA 254+92.1
MATCH EXISTING
SAW CUT REQ'D

PAVEMENT MARKING LEGEND, EPOXY

- (A) CENTERLINE, 4-INCH, SOLID, YELLOW
- (B) EDGELINE, 4-INCH, YELLOW
- (C) EDGELINE, 4-INCH, WHITE
- (D) DIAGONAL, 12-INCH YELLOW
- (E) DOTTED EXTENSION 18-INCH, WHITE, 2' SEG/2' GAP
- (F) ISLAND NOSE, YELLOW
- (G) CROSSWALK, 6-INCH, WHITE

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET 28	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 04

PLOT DATE : 4/1/2020 11:17 AM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

BP: 22+00.00

100'

R11-2L

LANE CLOSED

TYPE III BARRICADE

INL

STH 32

25

50'

100'

330'

W01-4R

48"x48"

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE
4-INCH EDGE LINE (WHITE ON RIGHT, YELLOW ON LEFT)

W01-6

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

(A) TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

X X REMOVING PAVEMENT MARKING

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL	SHEET 29	E

2

2

N

330'

50'

30

50'

W01-6

TYPE III BARRICADE

R11-2L

LANE CLOSED

TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE
4-INCH EDGE LINE (WHITE ON RIGHT, YELLOW ON LEFT)

W01-4R
48x48

SIGN I

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

X X REMOVING PAVEMENT MARKING

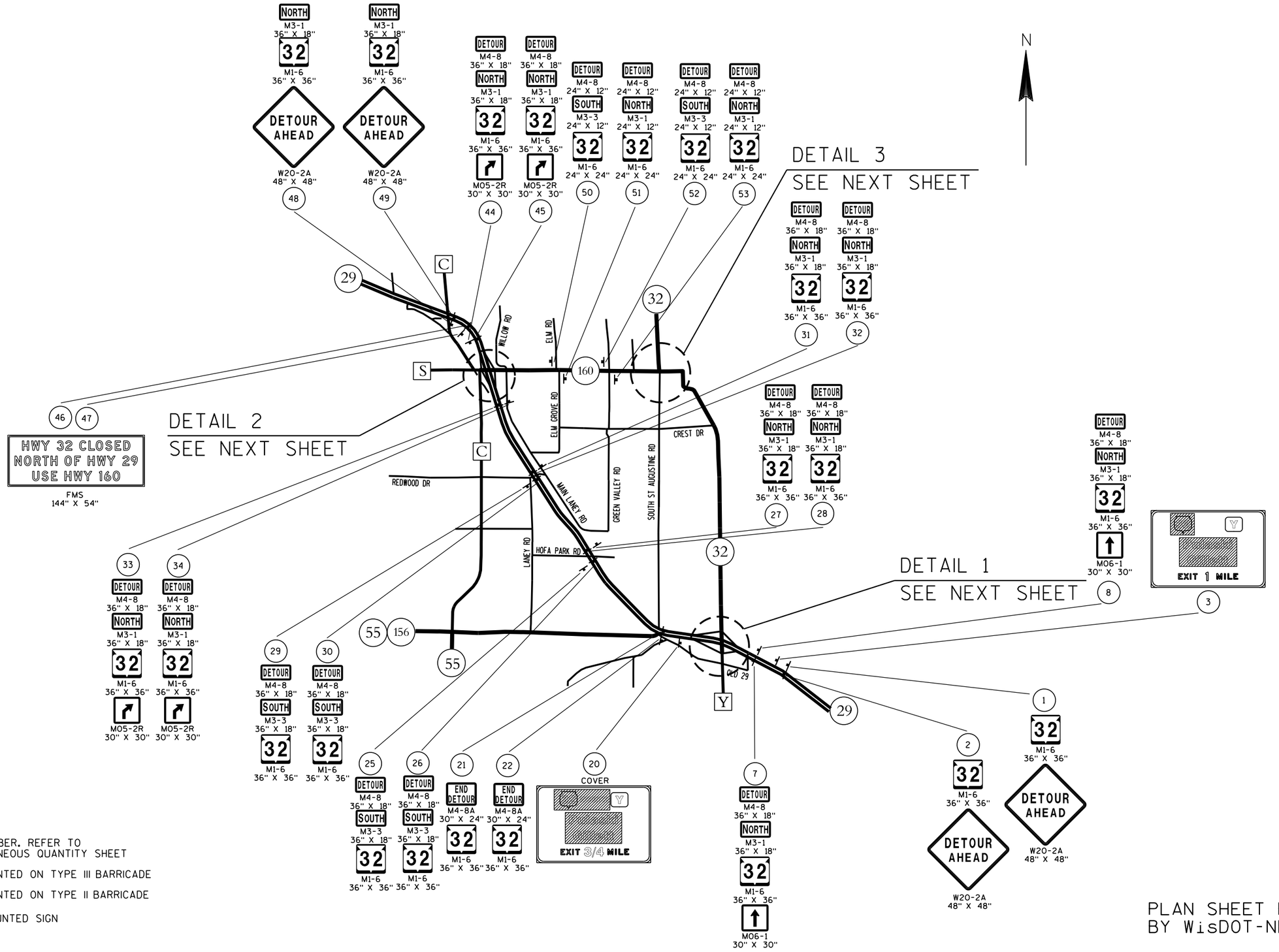
PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL	SHEET 30	E

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LAYOUT NAME - 02

PLOT DATE : 11/1/2019 10:51 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

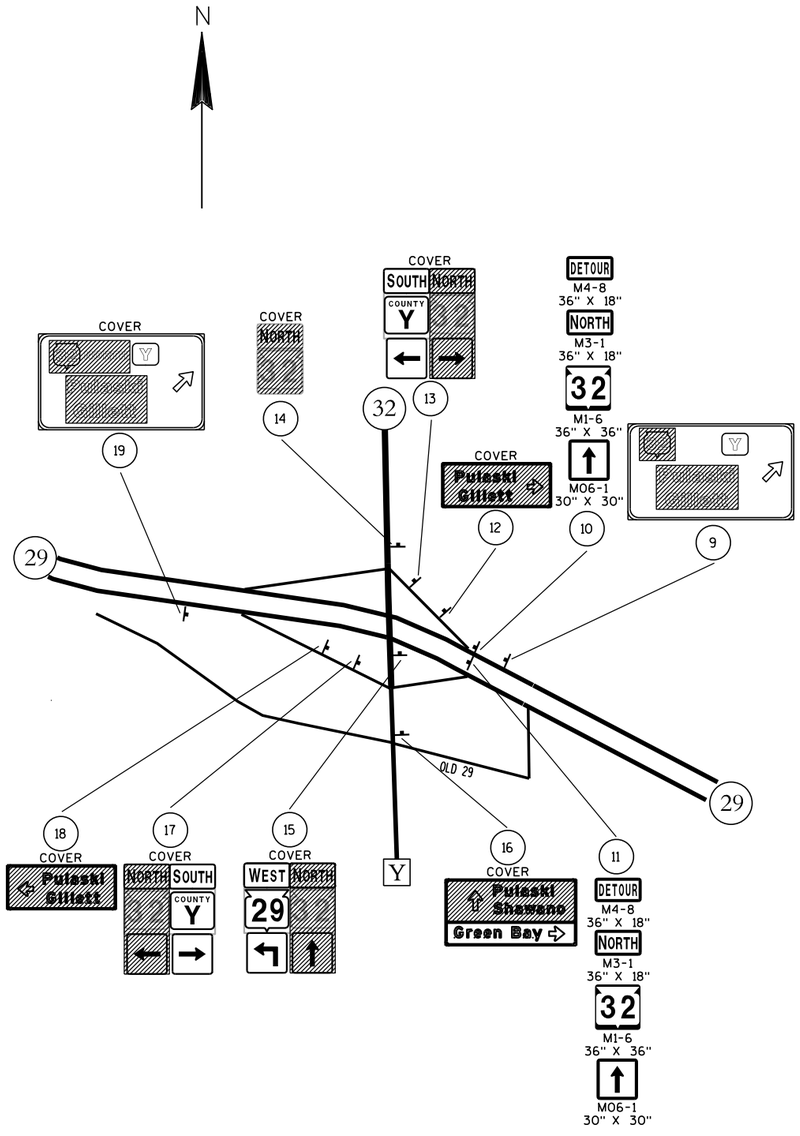


LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- SIGN MOUNTED ON TYPE III BARRICADE
- SIGN MOUNTED ON TYPE II BARRICADE
- POST MOUNTED SIGN

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET 31	E



LEGEND

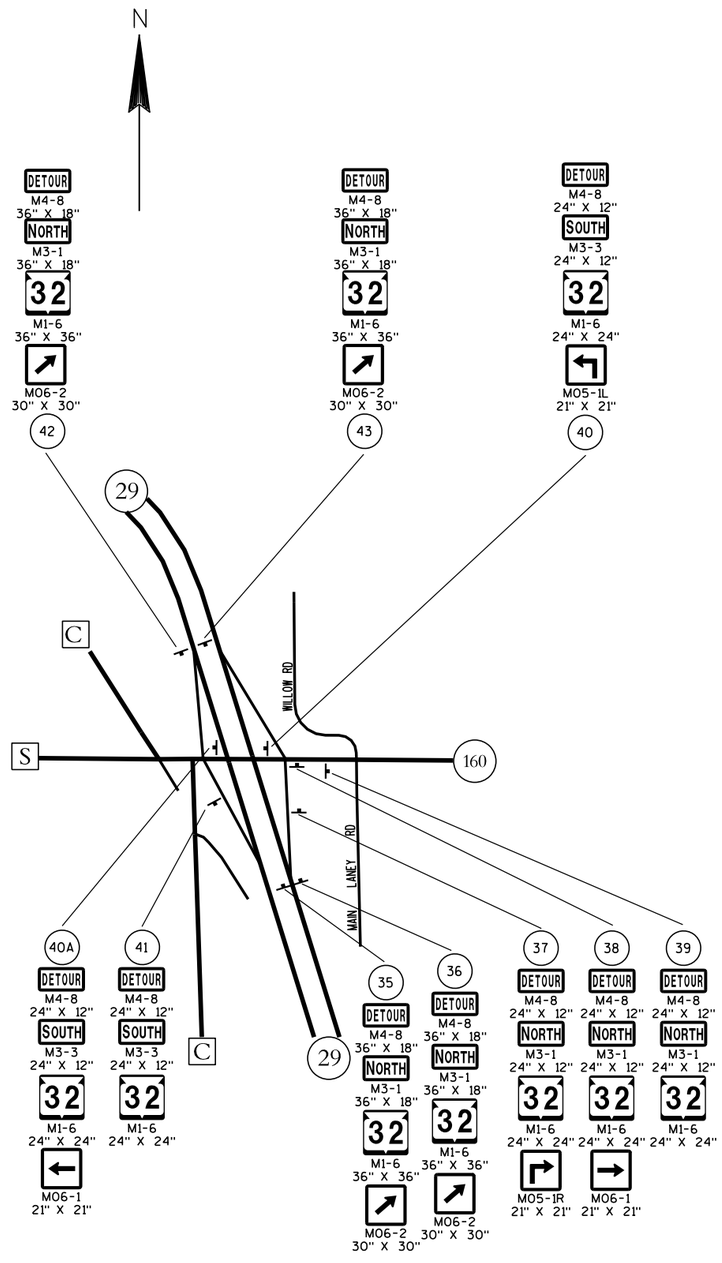
(X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET

SIGN MOUNTED ON TYPE III BARRICADE

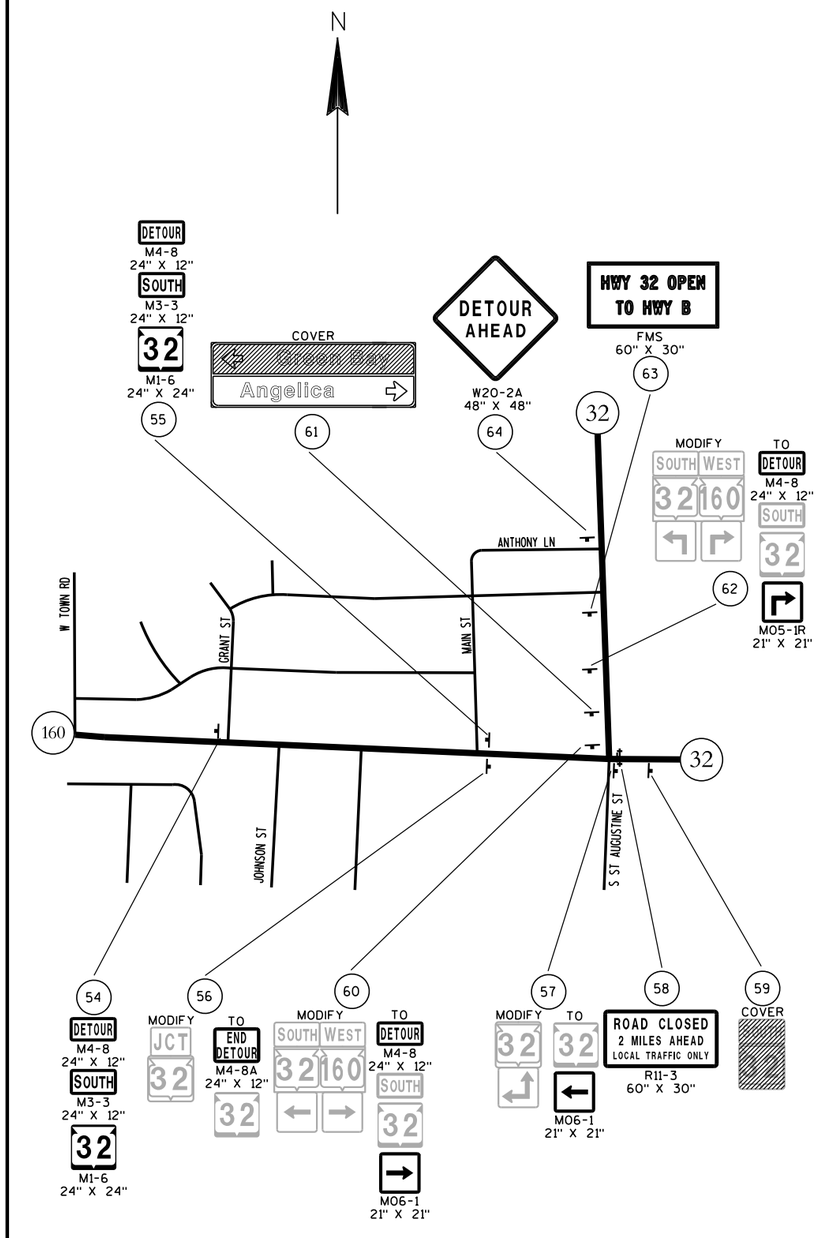
SIGN MOUNTED ON TYPE II BARRICADE

POST MOUNTED SIGN

DETAIL 1



DETAIL 2



DETAIL 3

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET 32	E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32\32-B RAB Resurface\027002_dt.dgn PLOT DATE : 27-FEB-2018 16:56 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 10000:1

WISDOT/CADDS SHEET 42

9190-23-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0004	203.0200	Removing Old Structure (station) 01. STA. 131+71.33	LS	1.000	1.000
0006	203.0200	Removing Old Structure (station) 02. STA. 141+15.25	LS	1.000	1.000
0008	203.0200	Removing Old Structure (station) 03. STA. 199+08	LS	1.000	1.000
0010	203.0200	Removing Old Structure (station) 04. STA 221+25.09	LS	1.000	1.000
0012	203.0200	Removing Old Structure (station) 05. STA 169+21.00	LS	1.000	1.000
0014	204.0115	Removing Asphaltic Surface Butt Joints	SY	147.000	147.000
0016	204.0120	Removing Asphaltic Surface Milling	SY	89,909.000	89,909.000
0018	204.0150	Removing Curb & Gutter	LF	69.000	69.000
0022	204.0165	Removing Guardrail	LF	1,468.000	1,468.000
0024	204.0180	Removing Delineators and Markers	EACH	10.000	10.000
0038	205.0100	Excavation Common	CY	2,675.000	2,675.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-05-229/230	LS	1.000	1.000
0042	206.2000	Excavation for Structures Culverts (structure) 01. C-05-0032	LS	1.000	1.000
0046	210.2500	Backfill Structure Type B	TON	237.000	237.000
0050	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 9190-23-71	LS	1.000	1.000
0052	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	17.000	17.000
0054	211.0601.S	Prepare CIR Foundation for HMA Layer (project) 01. 9190-23-71	EACH	1.000	1.000
0056	211.0700.S	Prepare Foundation for CIR Base Layer (project) 01. 9190-23-71	EACH	1.000	1.000
0058	211.0800.S	Base Repair for CIR Layer	CY	500.000	500.000
0062	213.0100	Finishing Roadway (project) 02. 9190-23-71	EACH	1.000	1.000
0064	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,618.000	1,618.000
0066	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	101.000	101.000
0070	311.0115	Breaker Run	CY	85.000	85.000
0072	312.0115	Select Crushed Material	CY	45.000	45.000
0074	327.1000.S	CIR Asphaltic Base Layer	SY	75,429.000	75,429.000
0076	416.0610	Drilled Tie Bars	EACH	6.000	6.000
0078	455.0605	Tack Coat	GAL	8,819.000	8,819.000
0080	455.0770.S	Asphalt Stabilizing Agent	TON	407.000	407.000
0084	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0086	460.2005	Incentive Density PWL HMA Pavement	DOL	12,552.000	12,552.000
0088	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	15,810.000	15,810.000
0090	460.2010	Incentive Air Voids HMA Pavement	DOL	20,344.000	20,344.000
0092	460.6223	HMA Pavement 3 MT 58-28 S	TON	11,017.000	11,017.000
0094	460.6224	HMA Pavement 4 MT 58-28 S	TON	8,499.000	8,499.000
0096	460.6424	HMA Pavement 4 MT 58-28 H	TON	919.000	919.000

9190-23-71

Line	Item	Item Description	Unit	Total	Qty
0098	465.0105	Asphaltic Surface	TON	1,137.000	1,137.000
0100	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0102	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	90.000	90.000
0104	465.0305	Asphaltic Surface Safety Islands	TON	20.000	20.000
0108	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	27,440.000	27,440.000
0110	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	16,012.000	16,012.000
0112	502.0100	Concrete Masonry Bridges	CY	126.000	126.000
0116	502.3210	Pigmented Surface Sealer	SY	235.000	235.000
0118	502.4205	Adhesive Anchors No. 5 Bar	EACH	84.000	84.000
0120	502.4206	Adhesive Anchors No. 6 Bar	EACH	72.000	72.000
0122	504.0100	Concrete Masonry Culverts	CY	40.000	40.000
0124	504.0900	Concrete Masonry Endwalls	CY	32.000	32.000
0126	505.0400	Bar Steel Reinforcement HS Structures	LB	5,740.000	5,740.000
0128	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	12,715.000	12,715.000
0142	511.1300	Temporary Shoring (location) 01. C-05-0032	SF	264.000	264.000
0144	516.0500	Rubberized Membrane Waterproofing	SY	17.000	17.000
0152	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	112.000	112.000
0154	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	128.000	128.000
0156	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	56.000	56.000
0162	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0164	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0166	522.2319	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	LF	198.000	198.000
0168	522.2329	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	124.000	124.000
0170	522.2334	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	124.000	124.000
0172	522.2429	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	LF	124.000	124.000
0176	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	73.000	73.000
0178	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	69.000	69.000
0188	606.0300	Riprap Heavy	CY	60.000	60.000
0222	614.0010	Barrier System Grading Shaping Finishing	EACH	8.000	8.000
0224	614.0805	Crash Cushions Permanent Low Maintenance	EACH	2.000	2.000
0226	614.2300	MGS Guardrail 3	LF	520.500	520.500
0228	614.2340	MGS Guardrail 3 L	LF	450.000	450.000
0230	614.2350	MGS Guardrail Short Radius	LF	36.600	36.600
0234	614.2610	MGS Guardrail Terminal EAT	EACH	7.000	7.000
0236	614.2630	MGS Guardrail Short Radius Terminal	EACH	1.000	1.000

9190-23-71

Line	Item	Item Description	Unit	Total	Qty
0240	618.0100	Maintenance And Repair of Haul Roads (project) 02. 9190-23-71	EACH	1.000	1.000
0242	619.1000	Mobilization	EACH	0.740	0.740
0244	624.0100	Water	MGAL	15.000	15.000
0248	625.0500	Salvaged Topsoil	SY	425.000	425.000
0252	628.1504	Silt Fence	LF	838.000	838.000
0254	628.1520	Silt Fence Maintenance	LF	838.000	838.000
0256	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0258	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0260	628.2002	Erosion Mat Class I Type A	SY	430.000	430.000
0262	628.7010	Inlet Protection Type B	EACH	10.000	10.000
0264	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0266	628.7504	Temporary Ditch Checks	LF	200.000	200.000
0268	628.7555	Culvert Pipe Checks	EACH	70.000	70.000
0270	628.7570	Rock Bags	EACH	20.000	20.000
0272	629.0210	Fertilizer Type B	CWT	1.000	1.000
0274	630.0130	Seeding Mixture No. 30	LB	8.000	8.000
0278	630.0500	Seed Water	MGAL	10.000	10.000
0280	633.5200	Markers Culvert End	EACH	18.000	18.000
0282	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	15.000	15.000
0286	638.2102	Moving Signs Type II	EACH	13.000	13.000
0288	638.2602	Removing Signs Type II	EACH	4.000	4.000
0290	638.3000	Removing Small Sign Supports	EACH	19.000	19.000
0294	643.0300	Traffic Control Drums	DAY	844.000	844.000
0298	643.0420	Traffic Control Barricades Type III	DAY	1,765.000	1,765.000
0300	643.0705	Traffic Control Warning Lights Type A	DAY	3,510.000	3,510.000
0302	643.0715	Traffic Control Warning Lights Type C	DAY	240.000	240.000
0304	643.0900	Traffic Control Signs	DAY	15,557.000	15,557.000
0306	643.0910	Traffic Control Covering Signs Type I	EACH	4.000	4.000
0308	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000
0310	643.1000	Traffic Control Signs Fixed Message	SF	220.000	220.000
0312	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0314	643.5000	Traffic Control	EACH	0.740	0.740
0316	645.0105	Geotextile Type C	SY	109.000	109.000
0318	645.0120	Geotextile Type HR	SY	122.000	122.000
0320	646.1020	Marking Line Epoxy 4-Inch	LF	14,862.000	14,862.000
0322	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	38,119.000	38,119.000
0330	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	136.000	136.000
0332	646.7120	Marking Diagonal Epoxy 12-Inch	LF	155.000	155.000
0334	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	68.000	68.000

9190-23-71

Line	Item	Item Description	Unit	Total	Qty
0336	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0338	646.9000	Marking Removal Line 4-Inch	LF	644.000	644.000
0340	649.0105	Temporary Marking Line Paint 4-Inch	LF	52,551.000	52,551.000
0342	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	7,216.000	7,216.000
0344	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	2,488.000	2,488.000
0354	650.6000	Construction Staking Pipe Culverts	EACH	14.000	14.000
0356	650.6500	Construction Staking Structure Layout (structure) 01. B-05-229/230	LS	1.000	1.000
0358	650.6500	Construction Staking Structure Layout (structure) 02. C-05-0032	LS	1.000	1.000
0360	650.8000	Construction Staking Resurfacing Reference	LF	22,949.000	22,949.000
0366	650.9910	Construction Staking Supplemental Control (project) 02. 9190-23-71	LS	1.000	1.000
0368	650.9920	Construction Staking Slope Stakes	LF	146.000	146.000
0370	690.0150	Sawing Asphalt	LF	2,666.000	2,666.000
0372	690.0250	Sawing Concrete	LF	262.000	262.000
0374	715.0502	Incentive Strength Concrete Structures	DOL	1,256.000	1,256.000
0376	740.0440	Incentive IRI Ride	DOL	14,872.000	14,872.000
0382	SPV.0035	Special 01. Foundation Backfill	CY	1,111.000	1,111.000
0390	SPV.0060	Special 04. Grading, Shaping and Finishing Culvert Pipes and Apron Endwalls	EACH	16.000	16.000
0392	SPV.0060	Special 05. Grading, Shaping and Finishing Light Bases	EACH	5.000	5.000

3

REMOVING CULVERTS & OLD STRUCTURE ITEMS

CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	203.0200.01 REMOVING OLD STRUCTURE (STATION) (01. STA. 131+71.33) LS	203.0200.02 REMOVING OLD STRUCTURE (STATION) (02. STA. 141+15.25) LS	203.0200.03 REMOVING OLD STRUCTURE (STATION) (03. STA. 199+08) LS	203.0200.04 REMOVING OLD STRUCTURE (STATION) (04. STA. 221+25.09) LS
0010	63+71	STH 29	1	-	-	-	-
0010	65+26	STH 29	1	-	-	-	-
0010	115+85	STH 29	1	-	-	-	-
0010	131+71	STH 29	-	1	-	-	-
0010	141+15	STH 29	-	-	1	-	-
0010	178+53	STH 29	1	-	-	-	-
0010	199+08	STH 29	-	-	-	1	-
0010	221+25	STH 29	-	-	-	-	1
		TOTAL 0010	4	1	1	1	1

REMOVING CURB & GUTTER ITEMS

STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF
63+75 LT	-	63+85 LT	COTTONWOOD DR.	30
115+70 RT	-	115+92 RT	TOWNHALL DR.	39
			TOTAL 0010	69

REMOVING ASPHALTIC SURFACE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
0010	41+53	-	91+00	STH 32	28	20,100
0010	91+00	-	117+00	STH 32	7	10,665
0010	117+00	-	144+00	STH 32	17	11,434
0010	144+00	-	170+00	STH 32	4	10,741
0010	170+00	-	195+00	STH 32	27	10,323
0010	195+00		215+00	STH 32	4	8,045
0010	215+00	-	237+80	STH 32	17	9,165
0010	237+80	-	241+50	STH 32	-	1,590
0010	241+50	-	246+23	STH 32	-	1,867
0010	246+23	-	247+76	STH 32	-	1,462
0010	147+76	-	251+35	STH 32	-	1,468
0010	251+35	-	254+92	STH 32	21	1,685
0010	104+05	-	105+45	CREST DR	12	649
0010	107+16	-	108+97	CTH B	11	715
				TOTAL 0010	147	89,909

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.42			
Division 1											
	63+70.9	STH 32 - CULVERT PIPE TRANSITION CUT	230	134	77	153	0	0	153		
	65+25.29	STH 32 - CULVERT PIPE TRANSITION CUT	164	102	55	109	0	0	109		
	86+15 - 93+16	STH 32 - KUNESH BYPASS LANE	102	0	102	0	0	0	0		
	115+75.30	STH 32 - CULVERT PIPE TRANSITION CUT	167	126	63	104	0	0	104		
	131+68.05	STH 32 - CULVERT PIPE TRANSITION CUT	146	140	55	91	0	0	91		
	141+11.28	STH 32 - CULVERT PIPE TRANSITION CUT	170	151	64	106	0	0	106		
	168+61 - 170+07	STH 32 - BOX CULVERT EXTENSION	32	0	0	32	139	197	-165		
	178+53.03	STH 32 - CULVERT PIPE TRANSITION CUT	122	63	38	84	0	0	84		
	199+08.13	STH 32 - CULVERT PIPE TRANSITION CUT	146	133	55	91	0	0	91		
	221+21.93	STH 32 - CULVERT PIPE TRANSITION CUT	136	117	51	85	0	0	85		
Division 1 Subtotal			1,415	966	560	855	139	197	658	658	
Division 2											
	22+49 - 31+84	STH 32 - SHOULDER WIDENING	294	0	82	212	90	101	111	111	
Division 2 Subtotal			294	0	82	212	90	101	111	111	
Grand Total			1,709	966	642	1,067	229	298	769	769	
Total Common Exc			2,675								

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(3) EBS Excavation to be backfilled with Foundation Backfill material. EBS material can be used as fill for box culvert extension, otherwise to be wasted offsite. See culvert pipes for quantites and additional information.

(4) Salvaged/Unusable Pavement Material

(5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.42

Expanded Fill = Unexpanded Fill * Fill Factor

(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

PREPARE FOUNDATION ITEMS

STATION	TO	STATION	LOCATION	211.0100.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 9190-23-71) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
	-		PROJECT	1	-
237+80	-	244+44	RT	-	8
249+04	-	253+98	LT	-	5
251+40	-	254+92	RT	-	4
			TOTAL 0010	1	17

BASE AGGREGATE DENSE ITEM

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON
22+49	-	31+84	LT & RT	129
43+84	-	63+75	LT & RT	146
63+75	-	65+04	RT	6
65+04	-	68+10	LT & RT	22
68+10	-	68+62	LT	2
69+90	-	89+71	LT & RT	160
89+71	-	90+99	LT	19
90+99	-	108+50	LT & RT	140
108+50	-	109+94	RT	6
109+94	-	115+71	LT & RT	42
115+71	-	117+01	LT	4
117+01	-	141+78	LT & RT	182
143+06	-	167+75	LT & RT	181
167+75	-	169+03	LT	4
169+03	-	193+41	LT & RT	179
193+41	-	194+67	LT	4
194+67	-	235+18	LT & RT	298
235+18	-	236+12	RT	4
236+12	-	237+80	LT & RT	12
237+80	-	241+39	LT & RT	29
241+39	-	244+84	RT	14
249+05	-	251+39	LT	7
251+39	-	252+31	LT & RT	8
252+31	-	253+02	RT	3
253+02	-	254+92	LT & RT	16
			TOTAL 0010	1,618

CONCRETE ITEMS

STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	REMARKS
63+75	-	63+85	COTTONWOOD DR.	3	-	30	
109+10	-	109+44	LT	-	73	-	BAR DRIVEWAY
115+70	-	115+92	TOWNHALL DR.	3	-	39	
			TOTAL 0010	6	73	69	

NOTE:
ADDITONAL CONCRETE ITEMS ELSEWHERE

3

3

COLD IN-PLACE RECYCLING (CIR) ITEMS

STATION	TO	STATION	LOCATION	211.0601.S PREPARE CIR FOUNDATION FOR HMA LAYER (PROJECT) (01. 9190-23-71) EACH	211.0700.S.01 PREPARE FOUNDATION FOR CIR PAVEMENT (PROJECT) (01. 9190-23-71) EACH	211.0800.S.01 BASE REPAIR FOR CIR PAVEMENT CY	327.1000.S.01 CIR ASPHALT BASE LAYER SY	455.0770.S ASPHALT STABILIZING AGENT TON
	-		PROJECT	1	1	500	-	
43+84	-	95+23	STH 32	-	-	-	19,985	108
95+23	-	237+80	STH 32	-	-	-	55,444	299
			TOTAL 0010	1	1	500	75,429	407

HMA , PWL AND ASPHALTIC ITEMS

						HMA PAVEMENT 4 MT 58-28 S & H								
				455.0605	460.6223			460.6224	460.6424			460.0110.S	465.0110	465.0120	465.0305	
STATION	TO	STATION	LOCATION	TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	INCENTIVE DENSITY PWL HMA PAVEMENT MAINLINE LANES LOWER LAYER	INCENTIVE AIR VOIDS HMA PAVEMENT MAINLINE & SIDEROADS LOWER LAYER	HMA PAVEMENT 4 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 H TON	INCENTIVE DENSITY PWL HMA PAVEMENT MAINLINE LANES UPPER LAYER	INCENTIVE AIR VOIDS HMA PAVEMENT MAINLINE, SIDEROADS, & DRIVEWAYS UPPER LAYER	HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH	ASPHALTIC SURFACE PATCHING TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	ASPHALTIC SURFACE SAFETY ISLANDS TON	REMARKS
22+49	-	31+04	STH 32 LT	41	144	-	144	90	-	-	-	-	-	-	-	
22+78	-	31+84	STH 32 RT	41	144	-	144	90	-	-	-	-	-	-	-	
43+84	-	95+23	STH 32	2,206	2,931	1,864	2931	2,272	-	1,343	2,281	-	-	10	-	
95+23	-	237+80	STH 32	5,884	7,737	5,171	7737	6,047	-	3,726	6,120	-	-	73	5	
237+80	-	241+50	STH 32	78	21	-	21	-	151	97	151	-	-	-	-	
241+50	-	244+94	STH 32	194	8	-	8	-	128	90	128	-	-	-	-	
244+94	-	249+05	STH 32	194	-	-	-	-	373	107	373	-	-	-	-	
249+05	-	251+30	STH 32	83	11	-	11	-	105	59	113	-	-	7	-	
251+30	-	254+92	STH 32	97	20	-	20	-	162	95	162	-	-	-	-	
	-		UNDISTRIBUTED	-	-	-	-	-	-	-	-	1	100	-	-	DENSITY TEST STRIP FOR 3 MT 58-28 S MIX OVER CIR
			TOTAL 0010	8,819	11,017	7,035	11,017	8,499	919	5,517	9,327	1	100	90	5	

NOTE:
OTHER HMA PWL VOLUMETRIC AND DENSITY TEST STRIPS ON PROJECT 9190-20-71

RUMBLE STRIP ITEMS

STATION	TO	STATION	LOCATION	465.0425 ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL LF	465.0475 ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL LF
43+84	-	64+33	STH 32	3,152	1,849
64+33		90+40	STH 32	3,849	2,207
90+40	-	116+42	STH 32	3,703	2,002
116+42	-	142+43	STH 32	3,827	2,201
142+43	-	168+44	STH 32	3,788	2,201
168+44	-	194+08	STH 32	3,376	1,964
194+08	-	213+60	STH 32	2,754	1,680
213+60	-	234+68	STH 32	2,991	1,908
			TOTAL 0010	27,440	16,012

WATER

STATION	TO	STATION	LOCATION	624.0100 WATER MGAL
43+84	-	254+92	STH 32	15
			TOTAL 0010	15

DRAINAGE ITEMS

STATION	TO	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	504.0900 CONCRETE MASONRY ENDWALLS CY	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	522.2319 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	522.2329 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH LF	522.2334 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34X53-INCH LF	522.2429 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 29X45-INCH LF	SPV.0035.01 SPECIAL (01. FOUNDATION BACKFILL) CY	REMARKS
63+69 LT	-	63+78 RT	STH 32	171	6	-	128	-	-	-	-	-	-	-	154	2 PIPES, 27.5 FT TRANSITION CUTS
65+26 LT	-	65+24 RT	STH 32	125	-	56	-	-	2	-	-	-	-	-	117	1 PIPE, 24.4 FT TRANSITION CUTS
115+80 LT	-	115+80 RT	STH 32	163	5	-	-	-	-	-	198	-	-	-	145	3 PIPES, 26.7 FT TRANSITION CUTS
131+72 LT	-	131+72 RT	STH 32	147	6	-	-	-	-	-	-	124	-	-	161	2 PIPES, 30 FT TRANSITION CUTS
141+15 LT	-	141+15 RT	STH 32	170	9	-	-	-	-	-	-	-	124	-	174	2 PIPES, 30 FT TRANSITION CUTS
178+53 LT	-	178+53 RT	STH 32	90	-	56	-	-	2	-	-	-	-	-	72	1 PIPE, 20.6 FT TRANSITION CUTS
199+08 LT	-	199+08 RT	STH 32	131	-	-	-	56	-	2	-	-	-	-	153	1 PIPE, 30 FT TRANSITION CUTS
221+25 LT	-	221+25 RT	STH 32	140	6	-	-	-	-	-	-	-	-	124	135	2 PIPES, 28.1 FT TRANSITION CUTS
			TOTAL 0010	1,137	32	112	128	56	4	2	198	124	124	124	1,111	

NOTE:
ALL CUVLERT PIPE TRANSITION CUTS ASPHALTIC SURFACE PATCHING 9-INCHES THICK.

3

GUARDRAIL AND CRASH CUSHION ITEMS

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE EACH	614.2300 MGS GUARDRAIL 3 LF	614.2340 MGS GUARDRAIL 3 L LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2630 MGS GUARDRAIL SHORT RADIUS TERMINAL EACH
26+52	-	28+54	STH 32	-	2	-	-	-	-	-
82+94	-	86+97	RT	403	-	-	-	-	-	-
83+76	-	87+70	LT	400	-	-	-	-	-	-
82+96	-	83+49	RT	-	-	-	-	-	1	-
83+49	-	84+74	RT	-	-	125	-	-	-	-
83+76	-	84+29	LT	-	-	-	-	-	1	-
84+29	-	84+79	LT	-	-	50	-	-	-	-
84+74	-	85+87	RT	-	-	-	112.5	-	-	-
84+79	-	85+92	LT	-	-	-	112.5	-	-	-
85+87	-	86+37	RT	-	-	50	-	-	-	-
85+92	-	87+17	LT	-	-	125	-	-	-	-
86+37	-	86+90	RT	-	-	-	-	-	1	-
87+17	-	87+70	LT	-	-	-	-	-	1	-
210+20	-	213+68	RT	348	-	-	-	-	-	-
210+23	-	210+76	RT	-	-	-	-	-	1	-
210+46	-	213+45	LT	316	-	-	-	-	-	-
210+66	-	211+19	LT	-	-	-	-	-	1	-
210+76	-	211+51	RT	-	-	75	-	-	-	-
211+19	-	211+57	LT	-	-	37.5	-	-	-	-
211+51	-	212+63	RT	-	-	-	112.5	-	-	-
211+57	-	212+69	LT	-	-	-	112.5	-	-	-
212+63	-	212+88	RT	-	-	25	-	-	-	-
212+69	-	213+02	LT	-	-	33	-	-	-	-
212+88	-	213+41	RT	-	-	-	-	-	1	-
213+02	-	213+48	LT	-	-	-	-	37	-	-
213+48	-	213+49	LT	-	-	-	-	-	-	1
			TOTAL 0010	1,468	2	520.5	450	36.6	7	1

NOTE:
REMOVAL OF ANY CONCRETE ANCHORS IS CONSIDERED INCIDENTAL TO REMOVING BEAMGUARD

CRASH CUSHIONS PERMANENT LOW MAINTENANCE

DESIGN SPEED	60 MPH
WIDTH	2 FT 6 IN
CONNECTED TO	3O-INCH CONCRETE BARRIER
CRASH TEST LEVEL	TL-3
TRAFFIC	BIDIRECTIONAL
AREA REQUIREMENT	6 FT X 22 FT
OBJECT MARKING PATTERN	OM-3C

3

BARRIER SYSTEM GRADING SHAPING FINISHING ITEM

STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	EXCAVATION COMMON CY *	BORROW CY *	EROSION MAT CLASS I TYPE A SY *	SALVAGED TOPSOIL SY *	FERTILIZER TYPE B CWT *	SEEDING MIXTURE NO. 30 LB *	CONSTRUCTION STAKING *
82+62	-	85+20	RT	1	19	227	448	448	0.28	8	258
82+77	-	85+20	LT	1	14	87	443	443	0.28	8	243
85+50	-	88+18	RT	1	15	254	534	534	0.34	10	268
85+50	-	88+50	LT	1	16	174	515	515	0.32	9	300
209+27	-	211+98	RT	1	30	91	416	416	0.26	7	271
209+35	-	211+98	LT	1	13	177	502	502	0.32	9	263
212+21	-	213+49	LT	1	18	69	376	376	0.24	7	128
212+21	-	214+58	RT	1	16	79	384	384	0.24	7	237
			TOTAL 0010	8	141	1158	3619	3619	2	65	1968

NOTE:
EXPANDED FILL FACTOR = 1.42
* FOR INFORMATION ONLY

3

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2002 EROSION MAT CLASS I TYPE A SY	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
23+21			LT MEDIAN	-	-	-	1	-	-	-	-
25+90			RT MEDIAN	-	-	-	1	-	-	-	-
25+91			LT MEDIAN	-	-	-	1	-	-	-	-
28+89			RT MEDIAN	-	-	-	1	-	-	-	-
63+69			LT	-	-	-	-	-	-	10	-
65+24			LT	-	-	-	-	-	-	5	-
82+62	-	85+13	RT	-	-	-	-	-	-	-	-
82+77	-	85+20	LT	-	-	-	-	-	-	-	-
83+45	-	85+17	RT	177	177	-	-	-	-	-	-
84+10			RT	-	-	-	-	-	20	-	-
84+17	-	85+23	LT	117	117	-	-	-	-	-	-
84+37			LT	-	-	-	-	-	20	-	-
85+50	-	86+81	LT	141	141	-	-	-	-	-	-
85+50	-	88+18	RT	-	-	-	-	-	-	-	-
85+50	-	88+50	LT	-	-	-	-	-	-	-	-
86+17			RT	-	-	-	-	-	20	-	-
86+43			LT	-	-	-	-	-	20	-	-
115+80			LT	-	-	-	-	-	-	15	-
131+72			LT	-	-	-	-	-	-	10	-
141+15			LT	-	-	-	-	-	-	10	-
168+61	-	169+63	LT	-	-	238	-	-	-	-	-
169+21	-	170+07	RT	-	-	187	-	-	-	-	-
178+53			RT	-	-	-	-	-	-	5	-
199+08			LT	-	-	-	-	-	-	5	-
209+27	-	209+93	RT	71	71	-	-	-	-	-	-
209+34	-	209+91	RT	-	-	-	-	-	-	-	-
209+35	-	211+91	LT	-	-	-	-	-	-	-	-
210+05	-	211+93	RT	-	-	-	-	-	-	-	-
210+69			RT	-	-	-	-	-	20	-	-
21+76			LT	-	-	-	-	-	20	-	-
210+93	-	211+91	RT	100	100	-	-	-	-	-	-
212+26	-	212+87	RT	64	64	-	-	-	-	-	-
212+28	-	213+49	LT	-	-	-	-	-	-	-	-
212+29	-	213+88	RT	-	-	-	-	-	-	-	-
212+88			LT	-	-	-	-	-	20	-	-
213+00			RT	-	-	-	-	-	20	-	-
214+07	-	214+56	RT	-	-	-	-	-	-	-	-
221+25			LT	-	-	-	-	-	-	10	-
241+59			LT MEDIAN	-	-	-	1	-	-	-	-
241+59			RT MEDIAN	-	-	-	1	-	-	-	-
242+75			RT MEDIAN	-	-	-	1	-	-	-	-
243+78			LT MEDIAN	-	-	-	-	1	-	-	-
246+44			RAB CENTER CIRCLE	-	-	-	1	-	-	-	-
248+55			LT	-	-	-	-	1	-	-	-
248+59			RT MEDIAN	-	-	-	-	1	-	-	-
248+61			LT MEDIAN	-	-	-	-	1	-	-	-
248+61			RT	-	-	-	-	1	-	-	-
251+26			LT MEDIAN	-	-	-	1	-	-	-	-
251+26			RT MEDIAN	-	-	-	1	-	-	-	-
105+02			CTH B EB RT	-	-	-	-	1	-	-	-
105+02			CTH B EB RT MEDIAN	-	-	-	-	1	-	-	-
105+05			CTH B EB LT	-	-	-	-	1	-	-	-
105+06			CTH B EB LT MEDIAN	-	-	-	-	1	-	-	-
108+88			CTH B EB RT MEDIAN	-	-	-	-	1	-	-	-
108+89			CTH B EB LT MEDIAN	-	-	-	-	1	-	-	-
		UNDISTRIBUTED		168	168	-	-	-	40	-	20
			TOTAL 0010	838	838	430	10	11	200	70	20

NOTE:
ADDITIONAL EROSION MAT QUANTITY IN FOR INFORMATION ONLY TABLE FOR 614.0010, SPV.0060.04 AND SPV.0060.05

3

EROSION CONTROL MOBILIZATION ITEMS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT	5	3
TOTAL 0010	5	3

DELINEATOR AND MARKER ITEMS

STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.5200 MARKERS CULVERT END EACH
63+72	LT & RT	1	2
65+30	LT & RT	1	2
115+80	LT & RT	1	2
131+72	LT & RT	1	2
141+15	LT & RT	-	2
169+41	LT & RT	2	2
178+53	LT & RT	1	2
199+08	LT & RT	-	2
221+25	LT & RT	3	2
	TOTAL 0010	10	18

FINISHING ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0500 SEED WATER MGAL
168+61	-	169+63	LT	238	0.15	4	5
169+21	-	170+07	RT	187	0.12	3	4
			TOTAL 0010	425	1.00	8	10

NOTE:
ADDITIONAL FINISHING ITEMS QUANTITIES IN FOR INFORMATION ONLY TABLE FOR 614.0010, SPV.0060.04 AND SPV.0060.05

3

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	638.2102 MOVING SIGNS TYPE II EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1	STH 32 @ STH 29 SB OFF RAMP	R1-1	1	1	---	1
2	"	R5-1	1	1	---	1
3	"	R5-1	1	1	---	1
4	"	R3-1	1	---	---	---
5	STH 32, S. OF STH 29 OVERPASS	J2-2	1	1	---	1
6	"	R5-1A	1	1	---	1
7	STH 32 @ STH 29 OVERPASS	R23-20LL	---	---	1	1
8	"	D1-2	1	2	---	2
9	"	R23-20LL	---	---	1	1
10	"	D1-2	1	2	---	2
11	STH 32, N. OF STH 29 OVERPASS	R5-1A	1	1	---	1
12	"	J2-3	1	2	---	2
13	STH 32 @ STH 29 NB OFF RAMP	R3-1	1	---	---	---
14	"	R5-1	1	1	---	1
15	"	R23-20LL	---	---	1	1
16	"	D1-2	1	2	---	2
	STH 32, N. OF AIRPORT DR	R1-1	---	---	1	1
	TOTALS		**13.00**	**15**	**4**	**19**

3

TRAFFIC CONTROL

						*		*				*					
						643.0300		643.0420		643.0705		643.0715		643.0900		643.1050	
STATION	TO	STATION	LOCATION	APPROXIAMTE SERVICE PERIOD	TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		REMARKS
				DAY	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	
22+46	-	31+83	STH 32	10	52	520	4	40	4	40	24	240	6	60	-	-	
38+60	-		STH 32	79	-	-	2	158	4	316	-	-	4	316	1	7	
64+33	-		COTTONWOOD DR.	79	3	42	2	158	4	316	-	-	3	237	-	-	
90+40	-		KUNESH RD.	79	-	-	2	158	4	316	-	-	3	237	-	-	
116+42	-		TOWN HALL DR.	79	3	42	2	158	4	316	-	-	3	237	-	-	
142+42	-		QUARRY DR.	79	-	-	4	316	8	632	-	-	4	316	-	-	MAINTAINING CROSS TRAFFIC
168+44	-		HAWTHRONE DR.	79	10	140	2	158	4	316	-	-	3	237	-	-	
194+08	-		AIRPORT RD.	79	-	-	2	158	4	316	-	-	3	237	-	-	
213+60	-		CREEK SIDE DR.	79	-	-	2	158	4	316	-	-	3	237	-	-	
246+22			STH 32	79	-	-	2	158	4	316	-	-	3	237	-	-	
247+76			STH 32	7	-	-	-	-	-	-	-	-	-	-	1	7	
105+40	-		CREST DR.	1	-	-	5	5	20	20	-	-	3	3	1	7	
107+08	-		CTH B EB	1	-	-	5	5	20	20	-	-	3	3	1	7	
			UNDISTRIBUTED		10	100	-	-	-	-	-	-	-	-	-	-	
			TOTAL 0010			844		1,630		3,240		240		2,357		28	

NOTE:
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 75 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE ON RIGHT 1 1/4 MILE PRIOR TO STH 32 EXIT	M 1-6	36"X36"	1	75	75								32
	"	W 20-2A	48"X48"	1	75	75								
2	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE IN MEDIAN 1 1/4 MILE PRIOR TO STH 32 EXIT	M 1-6	36"X36"	1	75	75								32
	"	W 20-2A	48"X48"	1	75	75								
3	STH 29/32, E. OF STH 32 INTERCHANGE, COVER EXISTING TYPE I SIGN AS SHOWN										1	1		COVER "32-PULASKI-GILLETT"
4	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE ON RIGHT 3/4 MILE PRIOR TO STH 32 EXIT	FMS	132"X54"	1	75	75			49.5					
5	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE IN MEDIAN 3/4 MILE PRIOR TO STH 32 EXIT	FMS	132"X54"	1	75	75			49.5					
6	VACANT													
7	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE IN MEDIAN 1/4 MILE PRIOR TO STH 32 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	MO 6-1	30"X30"	1	75	75								AHEAD
8	STH 29/32, E. OF STH 32 INTERCHANGE, PLACE ON RIGHT 1/4 MILE PRIOR TO STH 32 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	MO 6-1	30"X30"	1	75	75								AHEAD
9	STH 29/32, AT STH 32 INTERCHANGE EXIT, COVER EXISTING TYPE I SIGN AS SHOWN										1	1		COVER "32-PULASKI-GILLETT"
10	STH 29/32, AT STH 32 INTERCHANGE EXIT, PLACE ON RIGHT AT EXIT DIVERGE TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	MO 6-1	30"X30"	1	75	75								AHEAD
11	STH 29/32, AT STH 32 INTERCHANGE EXIT, PLACE IN MEDIAN AT EXIT DIVERGE TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	MO 6-1	30"X30"	1	75	75								AHEAD
12	STH 29 OFF-RAMP TO STH 32, COVER EXITING TYPE II SIGN AS SHOWN										1		1	COVER "PULASKI-GILLETT"
13	STH 29 OFF-RAMP TO STH 32, COVER EXITING TYPE II SIGN AS SHOWN										1		1	COVER "NORTH-32-RT"
14	STH 32, N. OF STH 29 INTERCHANGE, COVER EXISTING TYPE II SIGN AS SHOWN										1		1	COVER "NORTH 32"
15	CTH Y, S. OF STH 29/32 INTERCHANGE, COVER EXISTING TYPE II SIGN AS SHOWN										1		1	COVER "NORTH-32-AHEAD"
16	CTH Y, S. OF STH 29/32 INTERCHANGE, COVER EXISTING TYPE II SIGN AS SHOWN										1		1	COVER "PULASKI-SHAWANO"
17	STH 29 OFF-RAMP TO STH 32, COVER EXITING TYPE II SIGN AS SHOWN										1		1	COVER "NORTH-32-LT"
18	STH 29 OFF-RAMP TO STH 32, COVER EXITING TYPE II SIGN AS SHOWN										1		1	COVER "PULASKI-GILLETT"
19	STH 29, AT STH 32 INTERCHANGE EXIT, COVER EXISTING TYPE I SIGN AS SHOWN										1	1		COVER "32 NORTH-PULASKI-GILLETT"
20	STH 29, W. OF STH 32 INTERCHANGE, COVER EXISTING TYPE I SIGN AS SHOWN										1	1		COVER "32 NORTH-PULASKI-GILLETT"
21	STH 29, W. OF STH 32 INTERCHANGE, PLACE IN MEDIAN 1 MILE PRIOR TO STH 32 EXIT	M 4-8A	30"X24"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
22	STH 29, W. OF STH 32 INTERCHANGE, PLACE ON RIGHT 1 MILE PRIOR TO STH 32 EXIT	M 4-8A	30"X24"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	PAGE SUBTOTALS			26		1,950	0	0	99	0		4	7	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 79 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
25	STH 29, E. OF HOFA PARK RD, PLACE 100' E. OF HOFA PARK RD INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-3	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
26	STH 29, E. OF HOFA PARK RD, PLACE 100' E. OF HOFA PARK RD INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-3	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
27	STH 29, W. OF HOFA PARK RD, PLACE 100' W. OF HOFA PARK RD INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
28	STH 29, W. OF HOFA PARK RD, PLACE 100' W. OF HOFA PARK RD INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
29	STH 29, E. OF REDWOOD DR, PLACE 100' E. OF REDWOOD DR INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-3	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
30	STH 29, E. OF REDWOOD DR, PLACE 100' E. OF REDWOOD DR INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-3	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
31	STH 29, W. OF REDWOOD DR, PLACE 100' W. OF REDWOOD DR INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
32	STH 29, W. OF REDWOOD DR, PLACE 100' W. OF REDWOOD DR INTERSECTION	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
33	STH 29, E. OF STH 160 INTERCHANGE, PLACE IN MEDIAN 1/2 MILE E. OF STH 160 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 5-2R	30"X30"	1	75	75								
34	STH 29, E. OF STH 160 INTERCHANGE, PLACE ON RIGHT 1/2 MILE E. OF STH 160 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 5-2R	30"X30"	1	75	75								
35	STH 29, AT STH 160 EXIT RAMP, PLACE IN MEDIAN AT STH 160 EXIT RAMP TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 6-2	30"X30"	1	75	75								TILT RIGHT
36	STH 29, AT STH 160 EXIT RAMP, PLACE ON RIGHT AT STH 160 EXIT RAMP TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 6-2	30"X30"	1	75	75								TILT RIGHT
	PAGE SUBTOTALS			40		3,000	0	0	0	0		0	0	

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BY WisDOT - NE REGION

3

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 79 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
37	STH 29 OFF-RAMP TO STH 160, PLACE TO RIGHT OF EXISTING D1-3	M 4-8	24"X12"	1	75	75								
	"	M 3-1	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
	"	MO 5-1R	21"X21"	1	75	75								
38	STH 29 OFF-RAMP TO STH 160, PLACE TO RIGHT OF EXISTING D1-3	M 4-8	24"X12"	1	75	75								
	"	M 3-1	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
	"	MO 6-1	21"X21"	1	75	75								RIGHT
39	STH 160, E. OF STH 29, PLACE RIGHT OF EXISTING W6-2 SIGN	M 4-8	24"X12"	1	75	75								
	"	M 3-1	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
40	STH 160, AT STH 29, PLACE RIGHT OF EXISTING J2-2 SIGN	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
	"	MO 5-1L	21"X21"	1	75	75								
40A	STH 160, AT STH 29, PLACE ON BACK OF MEDIAN R4-7 SIGN	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
	"	MO 6-1	21"X21"	1	75	75								LEFT
41	STH 160 ON-RAMP TO STH 29, PLACE 100' S. OF RAMP INTERSECTION	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
42	STH 29, AT STH 160 EXIT RAMP, PLACE ON RIGHT AT STH 160 EXIT RAMP TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 6-2	30"X30"	1	75	75								TILT RIGHT
43	STH 29, AT STH 160 EXIT RAMP, PLACE IN MEDIAN AT STH 160 EXIT RAMP TAPER POINT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 6-2	30"X30"	1	75	75								TILT RIGHT
44	STH 29, W. OF STH 160, PLACE ON RIGHT 1/2 MILE W. OF STH 160 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 5-2R	30"X30"	1	75	75								
45	STH 29, W. OF STH 160, PLACE IN MEDIAN 1/2 MILE W. OF STH 160 EXIT	M 4-8	36"X18"	1	75	75								
	"	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36'	1	75	75								32
	"	MO 5-2R	30"X30"	1	75	75								
46	STH 29, W. OF STH 160, PLACE IN MEDIAN 3/4 MILE W. OF STH 160 EXIT	FMS	144"X54"	1					54					
47	STH 29, W. OF STH 160, PLACE ON RIGHT 3/4 MILE W. OF STH 160 EXIT	FMS	144"X54"	1					54					
48	STH 29, W. OF STH 160, PLACE ON RIGHT 1 MILE W. OF STH 160 EXIT	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	W 20-2A	48"X48"	1	75	75								
	PAGE SUBTOTALS			43		3,075	0	0	108	0		0	0	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 79 DAYS	643.0900 * SIGNS DAYS	643.0420 * BARRICADES TYPE III DAYS	643.0705 * WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
49	STH 29, W. OF STH 160, PLACE IN MEDIAN 1 MILE W. OF STH 160 EXIT	M 3-1	36"X18"	1	75	75								
	"	M 1-6	36"X36"	1	75	75								32
	"	W 20-2A	48"X48"	1	75	75								
50	STH 160, W. OF ELM RD, PLACE 150' W. OF ELM RD	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
51	STH 160, E. OF ELM GROVE RD, PLACE 150' E. OF ELM GROVE RD	M 4-8	24"X12"	1	75	75								
	"	M 3-1	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
52	STH 160, W. OF GREEN VALLEY RD, PLACE 150' W. OF GREEN VALLEY RD	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
53	STH 160, E. OF GREEN VALLEY RD, PLACE 150' E. OF GREEN VALLEY RD	M 4-8	24"X12"	1	75	75								
	"	M 3-1	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
54	STH 160, W. OF GRANT ST, PLACE 150' W. OF GRANT ST	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								32
55	STH 160, W. OF STH 32, MOUNT ON LIGHT POLE	M 4-8	24"X12"	1	75	75								
	"	M 3-3	24"X12"	1	75	75								
	"	M 1-6	24"X24"	1	75	75								
56	STH 160, W. OF STH 32, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X12"	1	75	75								
57	STH 160, AT STH 32 INTERSECTION, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	75	75								LEFT
58	STH 32, E. OF ST. AUGUSTINE ST, PLACE IN PARKING LANE WITHIN ROADWAY	R 11-3	60"X30"	1	75	75	75	150						2 MILES AHEAD
59	STH 32, E. OF ST. AUGUSTINE ST, COVER EXISTING J4-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
60	STH 32, AT STH 160 INTERSECTION, MODIFY EXISTING J3-2 SIGN A SHOWN	M 4-8	24"X12"	1	75	75								
	"	MO 6-1	21"X21"	1	75	75								RIGHT
61	STH 32, N. OF STH 160, COVER EXISTING SIGN AS SHOWN										1		1	COVER "LT-GREEN BAY"
62	STH 32, N. OF STH 160, MODIFY EXISTING J2-2 AS SHOWN	M 4-8	24"X12"	1	75	75								
	"	MO 5-1R	21"X21"	1	75	75								
63	STH 32, N. OF ANTHONY LN, PLACE 50' N. OF ANTHONY LN INTERSECTION	FMS	60"X30"	1	75				12.5					PLACE IN BUMP OUT TERRACE, FOR STAGE 2 ONLY
64	STH 32, N. OF ANTHONY LN, PLACE 1000' N. OF STH 160 INTERSECTION	W 20-2A	48"X48"	1	75	75								
	PAGE SUBTOTALS			30		2,175	75	150	12.5	0		0	2	
	ALTERNATE ROUTE TOTALS			100		3,000	60	120	0	0		0	1	
	PROJECT TOTALS			**239**		**13,200**	**135**	**270**	**220**	**0**		**4**	**10**	

NOTE:
* ADDITONAL QUANTITIES SHOWN ELSEWHERE

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

PAVEMENT MARKING ITEMS

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH LF	646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	646.9000 MARKING REMOVAL LINE 4-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH WHITE LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH YELLOW LF	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF
22+72	-	29+02	STH 32 RT	332	-	-	-	-	-	-	332	-	-	-	630	-
23+15	-	29+02	STH 32 RT	-	-	-	-	-	-	-	-	-	-	-	-	588
24+80	-	30+90	STH 32 LT	-	-	-	-	-	-	-	-	-	-	-	-	610
24+80	-	31+40	STH 32 LT	312	-	-	-	-	-	-	312	-	-	-	660	-
43+85	-	45+81	STH 32	-	246	393	-	-	-	-	-	393	491	246	-	-
45+81	-	63+75	STH 32	-	448	3588	-	-	-	-	-	3588	897	448	-	-
63+75	-	65+04	STH 32	-	32	129	-	-	-	-	-	129	65	32	-	-
65+04	-	89+70	STH 32	-	617	4933	-	-	-	-	-	4933	1,233	617	-	-
89+40	-	91+72	STH 32	-	-	233	-	-	-	-	-	233	-	-	-	-
89+70	-	90+67	STH 32	-	24	97	-	-	-	-	-	97	48	24	-	-
90+67	-	90+99	STH 32	-	40	32	-	-	-	-	-	32	80	40	-	-
90+99	-	99+00	STH 32	-	1001	1602	-	-	-	-	-	1602	2,003	1,001	-	-
99+00	-	115+70	STH 32	-	418	3341	-	-	-	-	-	3341	835	418	-	-
115+70	-	117+01	STH 32	-	33	131	-	-	-	-	-	131	65	33	-	-
117+01	-	141+83	STH 32	-	621	4954	-	-	-	-	-	4954	1,241	621	-	-
141+83	-	143+00	STH 32	-	29	-	-	-	-	-	-	-	59	29	-	-
143+00	-	167+75	STH 32	-	619	4929	-	-	-	-	-	4929	1,238	619	-	-
167+75	-	169+02	STH 32	-	32	127	-	-	-	-	-	127	64	32	-	-
169+02	-	193+41	STH 32	-	610	4878	-	-	-	-	-	4878	1,220	610	-	-
193+41	-	194+67	STH 32	-	32	126	-	-	-	-	-	126	63	32	-	-
194+67	-	213+60	STH 32	-	473	3786	-	-	-	-	-	3786	947	473	-	-
213+60	-	226+39	STH 32	-	320	2558	-	-	-	-	-	2558	640	320	-	-
226+39	-	235+18	STH 32	-	1,099	1758	-	-	-	-	-	1758	2,198	1,099	-	-
235+18	-	237+80	STH 32	-	524	524	-	-	-	-	-	524	1,048	524	-	-
237+80	-	241+51	SOUTH LEG OF RAB	601	1,484	-	-	-	-	1	-	-	-	-	-	-
239+40	-	241+48	SOUTH LEG OF RAB	-	-	-	-	83	-	-	-	-	-	-	-	-
241+48	-	244+94	SOUTH LEG OF RAB	344	692	-	-	-	-	-	-	-	-	-	-	-
244+94	-	246+22	SOUTH LEG OF RAB	-	262	-	-	-	-	-	-	-	-	-	-	-
246+22	-	246+34	SOUTH LEG OF RAB	-	-	-	36	-	-	-	-	-	-	-	-	-
247+61	-	247+85	NORTH LEG OF RAB	-	-	-	38	-	-	-	-	-	-	-	-	-
247+74	-	249+04	NORTH LEG OF RAB	-	255	-	-	-	-	-	-	-	-	-	-	-
249+04	-	251+32	NORTH LEG OF RAB	226	453	-	-	-	-	1	-	-	-	-	-	-
251+32	-	254+21	NORTH LEG OF RAB	583	1,156	-	-	72	-	-	-	-	-	-	-	-
254+21	-	254+92	NORTH LEG OF RAB	142	143	-	-	-	-	-	-	-	-	-	-	-
104+04	-	105+53	WEST LEG OF RAB	-	298	-	-	-	-	1	-	-	-	-	-	-
105+53	-	105+59	WEST LEG OF RAB	-	-	-	31	-	-	-	-	-	-	-	-	-
106+97	-	107+05	EAST LEG OF RAB	-	-	-	30	-	-	-	-	-	-	-	-	-
107+05	-	108+99	EAST LEG OF RAB	-	363	-	-	-	68	1	-	-	-	-	-	-
			TOTAL 0010	14,862		38,119	136	155	68	4	644	52,551		7,216	2,488	

3

CONSTRUCTION STAKING ITEMS

STATION	TO	STATION	LOCATION	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-05-0229/0230) LS	650.6500.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (02. C-05-032) LS	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 9190-23-71) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
	-		PROJECT	-	-	-	22,949	1	-
63+66 LT	-	63+81 RT	STH 32	2	-	-	-	-	-
65+26 LT	-	65+24 RT	STH 32	1	-	-	-	-	-
82+64	-	85+17	LT & RT	-	-	-	-	-	-
85+51	-	88+50	LT & RT	-	-	-	-	-	-
115+75 LT	-	115+85 RT	STH 32	3	-	-	-	-	-
131+68 LT	-	131+75 RT	STH 32	2	-	-	-	-	-
141+11 LT	-	141+19 RT	STH 32	2	-	-	-	-	-
168+61	-	170+07	LT & RT	-	-	-	-	-	-
178+53 LT	-	178+53 RT	STH 32	1	-	-	-	-	146
199+08 LT	-	199+08 RT	STH 32	1	-	-	-	-	-
209+34	-	211+93	LT & RT	-	-	-	-	-	-
212+26	-	214+64	LT & RT	-	-	-	-	-	-
221+22 LT	-	221+29 RT	STH 32	2	-	-	-	-	-
			TOTAL 0010	14	0	0	22,949	1	146
	-		PROJECT	-	1	-	-	-	-
			TOTAL 0020	0	1	0	0	0	0
	-		PROJECT	-	-	1	-	-	-
			TOTAL 0030	0	0	1	0	0	0

SAWING ITEMS

STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
22+49	-	31+04	STH 32 LT	879	-
22+78	-	31+84	STH 32 RT	926	-
63+69	-		STH 32	87	35
65+26	-		STH 32	79	32
108+50	-	109+94	LT	262	-
115+80	-		STH 32	92	35
131+72	-		STH 32	66	32
141+15	-		STH 32	78	32
178+53	-		STH 32	66	32
199+08	-		STH 32	66	32
221+25			STH 32	66	32
			TOTAL 0010	2,666	262

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SPV.0060.04 GRADING, SHAPING AND FINISHING CULVERT PIPES AND APRON ENDWALLS

STATION	TO	STATION	LOCATION	SPV.0060.04 SPECIAL (04. GRADING, SHAPING AND FINISHING CULVERT PIPES AND APRON ENDWALLS) EACH	* BORROW CY	* TOPSOIL SY	* EROSION MAT CLASS I TYPE A SY	* FERTILIZER TYPE B CWT	* SEEDING MIXTURE NO. 30 LB	* SEEDING MIXTURE NO. 40 LB	REMARKS
63+69			LT & RT	2	15	121	121	0.08	2	-	
65+24			LT & RT	2	5	22	22	0.01	1	-	
115+80			LT & RT	2	20	154	154	0.10	3	-	
131+72			LT & RT	2	15	144	144	0.09	1	1	SEED MIX NO. 40 TO BE USED LT
141+15			LT & RT	2	12	188	188	0.12	3	-	
178+53			LT & RT	2	5	22	22	0.01	1	-	
199+08			LT & RT	2	5	38	38	0.02	1	-	
221+25	-		LT & RT	2	15	144	144	0.09	3	-	
			TOTAL 0010	16	92	832	840	1	15	1	

NOTE:
PAYMENT FOR All BORROW, TOPSOIL, EROSION MAT, MULCH, FERTILIZER, AND SEEDING ARE INCIDENTAL TO ITEM NO. SPV.0060.04
* ITEMS AND QUANTITIES ARE SHOWN FOR INFORMATION PURPOSES ONLY

SPV.0060.05 GRADING, SHAPING AND FINISHING LIGHT BASES

STATION	LOCATION	SPV.0060.05 SPECIAL (05. GRADING, SHAPING AND FINISHING LIGHT BASES) EACH	* TOPSOIL CY	* EROSION MAT CLASS I TYPE A SY	* FERTILIZER TYPE B CWT	* SEEDING MIXTURE NO. 30 LB	REMARKS
241+75	STH 32 RT	1	5	5	0.01	0.04	7-INCHES DEEP AT LIGHT BASE
243+05	STH 32 RT	1	9	9	0.01	0.05	9-INCHES DEEP AT LIGHT BASE
249+62	STH 32 LT	1	5	5	0.01	0.02	7-INCHES DEEP AT LIGHT BASE
250+98	STH 32 RT	1	4	4	0.01	0.04	6-INCHES DEEP AT LIGHT BASE
107+92	CTH B LT	1	5	5	0.01	0.25	6 TO 9-INCHES DEEP AT LIGHT BASE
	TOTAL 0010	5	28	28	0.05	0.4	

NOTE:
PAYMENT FOR All BORROW, TOPSOIL, EROSION MAT, MULCH, FERTILIZER, AND SEEDING ARE INCIDENTAL TO ITEM NO. SPV.0060.05
ASSUMING 6:1 SLOPE OF TOPSOIL AROUND LIGHT BASE TO ELIMINATE HAZARD
* ITEMS AND QUANTITIES ARE SHOWN FOR INFORMATION PURPOSES ONLY

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
9190-23-21		
FEDERAL PROJECT NUMBER	4.1	5

PLAT OF RIGHT-OF-WAY REQUIRED FOR

GREEN BAY - PULASKI

STH 29 - VILLAGE OF PULASKI

STH 32 BROWN COUNTY

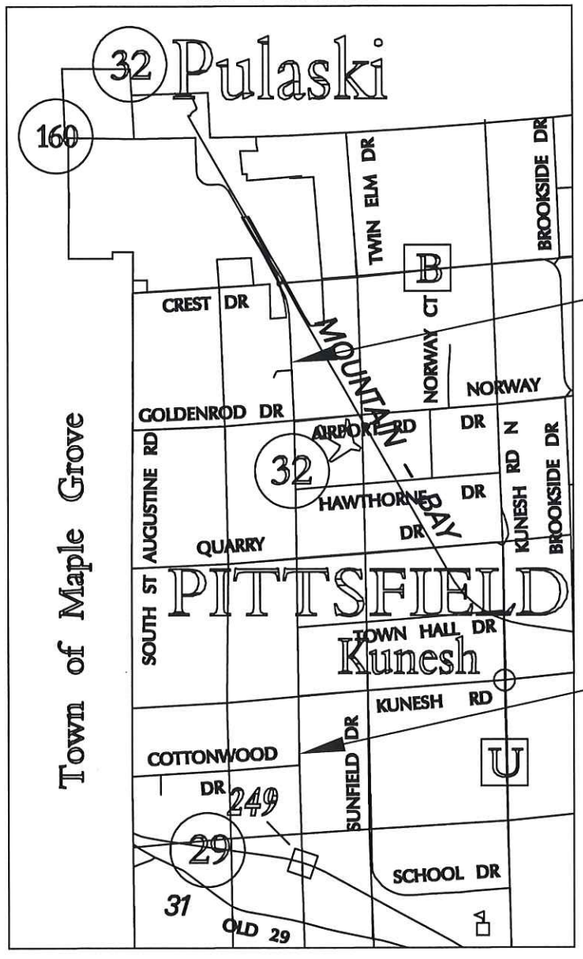
CONSTRUCTION PROJECT NUMBER

CONVENTIONAL ABBREVIATIONS AND SYMBOLS

ACRES	AC	CORPORATE LIMITS	
CHORD BEARING	CH BRG	EXISTING R/W	
CHORD DISTANCE	CH DIS	SECTION LINE	
DEED	(D)	QUARTER LINE	
DOCUMENT	DOC	SIXTEENTH LINE	
EAST BOUND	EB	PROPOSED OR NEW R/W LINE	
GAS VALVE	GV	PROPOSED EASEMENT LINE	
INLET	▫IL	PROPERTY LINE	
MANHOLE	●MH	COMMUNICATION LINE	
MONUMENT	MON	BURIED GAS LINE	
NORTH BOUND	NB	OVERHEAD ELECTRIC LINE	
PAGE	PG	BURIED ELECTRIC LINE	
PRIVATE DRIVEWAY	PD	LOT, TIE AND OTHER MINOR DASHED LINES	
PROPERTY LINE	PL		
RADIUS	RAD	ACCESS RESTRICTED (By Acquisition)	
REFERENCE LINE	℄		
REMAINING	REM	NO ACCESS (By Statutory Authority)	
RIGHT OF WAY	R/W		
SECTION	SEC	ACCESS RESTRICTED (By Previous Project/Control)	
SECTION LINE	℄		
FOUND IRON PIPE	⌀ ●	LIMITED EASEMENT (Temporary)	
STATION	STA		
TIE POINT	DBL	LIMITED EASEMENT (Permanent)	
VOLUME	VOL		
FEE ACQUISITION	VARIOUS PARCELS	PARCEL NUMBER	
ADJOINING LANDS WITH SAME OWNER		UTILITY NUMBER	
BUILDING TO BE RAZED		SECTION CORNER	
PROPOSED R/W BOUNDARY POINT	PRW	SET R/W MONUMENT W/CAP (1"x 24"IRON PIPE, 1.13 LBS/FT)	○
TEMPORARY LIMITED EASEMENT	TLE	SET P.K. NAIL	△
PERMANENT LIMITED EASEMENT	PLE		
HIGHWAY EASEMENT	HE		

	COMPENSABLE	NON-COMPENSABLE
POWER POLE		
TELEPHONE POLE		
SIGN		
TELEPHONE PEDESTAL		

SECTION 8,17,20,29, T25N - R19E
TOWN OF PITTSFIELD



END RELOCATION ORDER
PROJECT 9190-23-21
STATION 232+55.25

BEGIN RELOCATION ORDER
PROJECT 9190-23-21
STATION 22+00.00

LOCATION SKETCH
(NOT TO SCALE)

N

TOTAL NET LENGTH OF CENTERLINE = 3.99 MI.

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, BROWN COUNTY, NAD83 (2007) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPE) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 32 ESTABLISHED UNDER PROJECT T-026(4), 9190-06-21.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

THE REFERENCE LINE SHOWN ON THIS PLAT MAY NOT BE THE SAME AS THE REFERENCE LINE SHOWN ON THE CONSTRUCTION PLAN.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

REVISION	DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

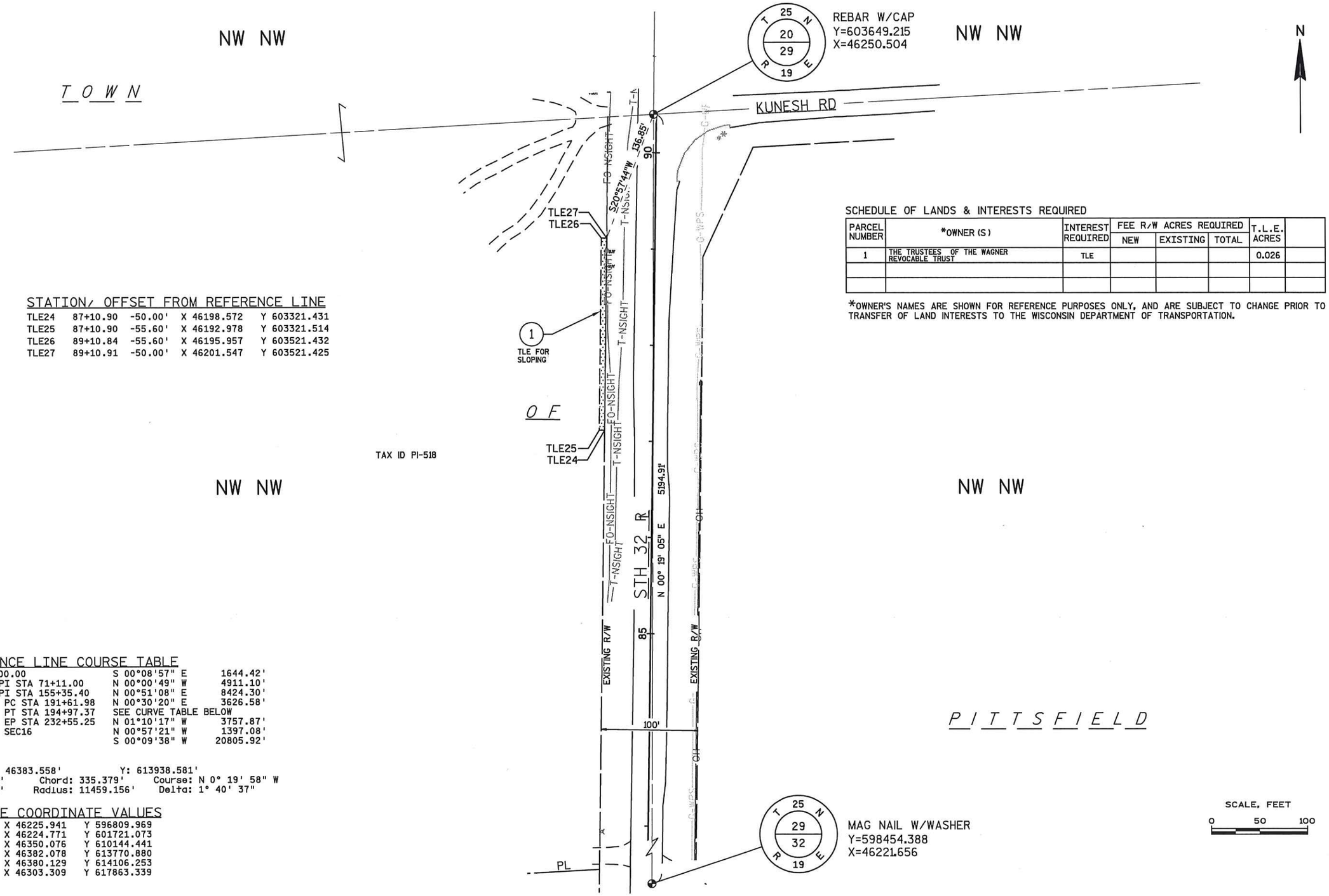
APPROVED FOR THE DEPARTMENT

DATE: 12-19-18 Curt Van Erem
(Signature)

CURT VAN EREM

E

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4

4

STATION, OFFSET FROM REFERENCE LINE

TLE24	87+10.90	-50.00'	X 46198.572	Y 603321.431
TLE25	87+10.90	-55.60'	X 46192.978	Y 603321.514
TLE26	89+10.84	-55.60'	X 46195.957	Y 603521.432
TLE27	89+10.91	-50.00'	X 46201.547	Y 603521.425

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES	
			NEW	EXISTING	TOTAL		
1	THE TRUSTEES OF THE WAGNER REVOCABLE TRUST	TLE				0.026	

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STH 32 REFERENCE LINE COURSE TABLE

SEC21 TO BP STA 22+00.00	S 00°08'57" E	1644.42'
BP STA 22+00.00 TO PI STA 71+11.00	N 00°00'49" W	4911.10'
PI STA 71+11.00 TO PI STA 155+35.40	N 00°51'08" E	8424.30'
PI STA 155+35.40 TO PC STA 191+61.98	N 00°30'20" E	3626.58'
PC STA 191+61.98 TO PT STA 194+97.37	SEE CURVE TABLE BELOW	
PT STA 194+97.37 TO EP STA 232+55.25	N 01°10'17" W	3757.87'
EP STA 232+55.25 TO SEC16	N 00°57'21" W	1397.08'
SEC16 TO SEC21	S 00°09'38" W	20805.92'

CURVE TABLE

PI . . . . . X: 46383.558' Y: 613938.581'
Tangent: 167.707' Chord: 335.379' Course: N 0° 19' 58" W
Arc Length: 335.391' Radius: 11459.156' Delta: 1° 40' 37"

REFERENCE LINE COORDINATE VALUES

BP STA 22+00.00	X 46225.941	Y 596809.969
PI STA 71+11.00	X 46224.771	Y 601721.073
PI STA 155+35.40	X 46350.076	Y 610144.441
PC STA 191+61.98	X 46382.078	Y 613770.880
PT STA 194+97.37	X 46380.129	Y 614106.253
EP STA 232+55.25	X 46303.309	Y 617863.339

REVISION DATE	DATE 12-19-18	SCALE, FEET 0 50 100	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-23-21	PLAT SHEET NO. 4.2
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 56

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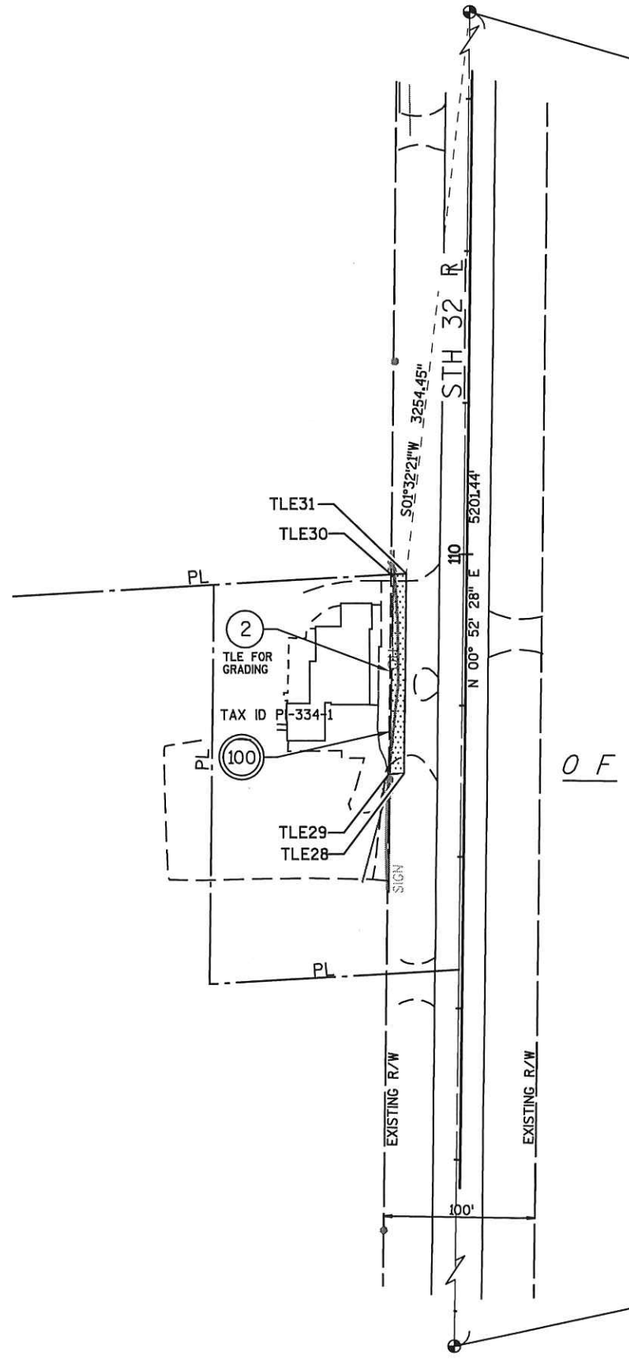
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4

T O W N

STATION/ OFFSET FROM REFERENCE LINE

TLE28	108+54.64	-40.00'	X 46240.458	Y 605464.785
TLE29	108+53.92	-50.00'	X 46230.448	Y 605464.218
TLE30	109+85.92	-50.00'	X 46232.412	Y 605596.203
TLE31	109+86.64	-39.96'	X 46242.459	Y 605596.772



NE SW

O F

NW SE

P I T T S F I E L D

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED			T.L.E. ACRES	
			NEW	EXISTING	TOTAL		
2	JAW HOLDINGS LLC	TLE				0.030	

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER	INTEREST REQUIRED
100	NORTHEAST TEL CO. LLC	RELEASE OF RIGHTS

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STH 32 REFERENCE LINE COURSE TABLE

SEC21 TO BP STA 22+00.00	S 00°08'57" E	1644.42'
BP STA 22+00.00 TO PI STA 71+11.00	N 00°00'49" W	4911.10'
PI STA 71+11.00 TO PI STA 155+35.40	N 00°51'08" E	8424.30'
PI STA 155+35.40 TO PC STA 191+61.98	N 00°30'20" E	3626.58'
PC STA 191+61.98 TO PT STA 194+97.37	SEE CURVE TABLE BELOW	
PT STA 194+97.37 TO EP STA 232+55.25	N 01°10'17" W	3757.87'
EP STA 232+55.25 TO SEC16	N 00°57'21" W	1397.08'
SEC16 TO SEC21	S 00°09'38" W	20805.92'

CURVE TABLE

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Tangent: 167.707' Chord: 335.379' Course: N 0° 19' 58" W
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REFERENCE LINE COORDINATE VALUES

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PC STA 191+61.98	X 46382.078	Y 613770.880
PT STA 194+97.37	X 46380.129	Y 614106.253
EP STA 232+55.25	X 46303.309	Y 617863.339

SCALE, FEET
0 50 100

REVISION DATE	DATE 12-19-18	SCALE, FEET 0 50 100	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-23-21	PLAT SHEET NO. 4.3
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 57

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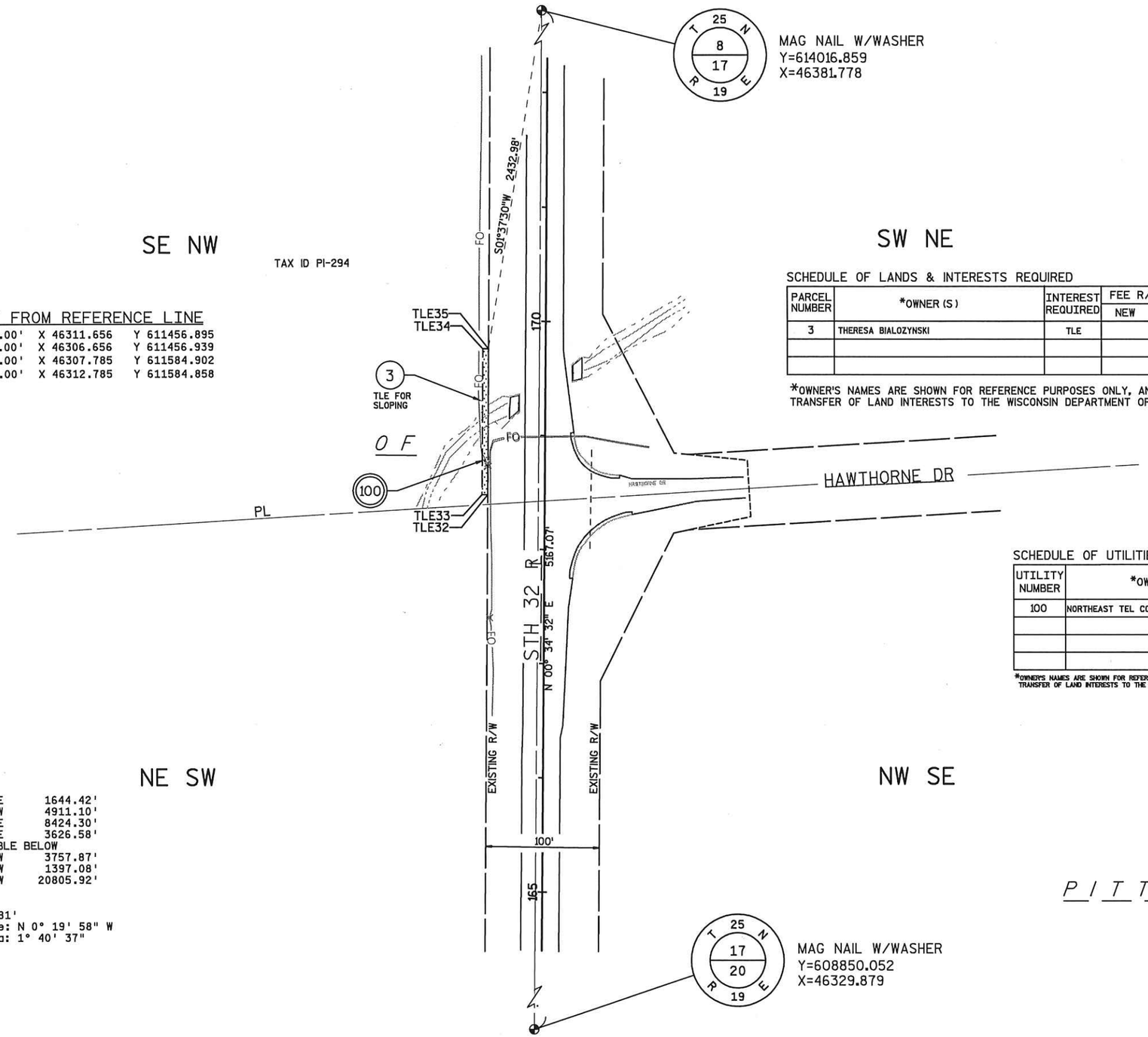
T O W N

SE NW

TAX ID PI-294

STATION/ OFFSET FROM REFERENCE LINE

TLE32	168+47.47	-50.00'	X 46311.656	Y 611456.895
TLE33	168+47.47	-55.00'	X 46306.656	Y 611456.939
TLE34	169+75.44	-55.00'	X 46307.785	Y 611584.902
TLE35	169+75.44	-50.00'	X 46312.785	Y 611584.858



SW NE

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED NEW	EXISTING	TOTAL	T.L.E. ACRES	
3	THERESA BIALOZYNSKI	TLE				0.015	

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SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER	INTEREST REQUIRED
100	NORTHEAST TEL CO. LLC	RELEASE OF RIGHTS

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

NE SW

STH 32 REFERENCE LINE COURSE TABLE

SEC21 TO BP STA 22+00.00	S 00°08'57" E	1644.42'
BP STA 22+00.00 TO PI STA 71+11.00	N 00°00'49" W	4911.10'
PI STA 71+11.00 TO PI STA 155+35.40	N 00°51'08" E	8424.30'
PI STA 155+35.40 TO PC STA 191+61.98	N 00°30'20" E	3626.58'
PC STA 191+61.98 TO PT STA 194+97.37	SEE CURVE TABLE BELOW	
PT STA 194+97.37 TO EP STA 232+55.25	N 01°10'17" W	3757.87'
EP STA 232+55.25 TO SEC16	N 00°57'21" W	1397.08'
SEC16 TO SEC21	S 00°09'38" W	20805.92'

CURVE TABLE

PI . . . . . X: 46383.558' Y: 613938.581'
Tangent: 167.707' Chord: 335.379' Course: N 0° 19' 58" W
Arc Length: 335.391' Radius: 11459.156' Delta: 1° 40' 37"

REFERENCE LINE COORDINATE VALUES

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PI STA 71+11.00	X 46224.771	Y 601721.073
PI STA 155+35.40	X 46350.076	Y 610144.441
PC STA 191+61.98	X 46382.078	Y 613770.880
PT STA 194+97.37	X 46380.129	Y 614106.253
EP STA 232+55.25	X 46303.309	Y 617863.339

NW SE

P I T T S F I E L D

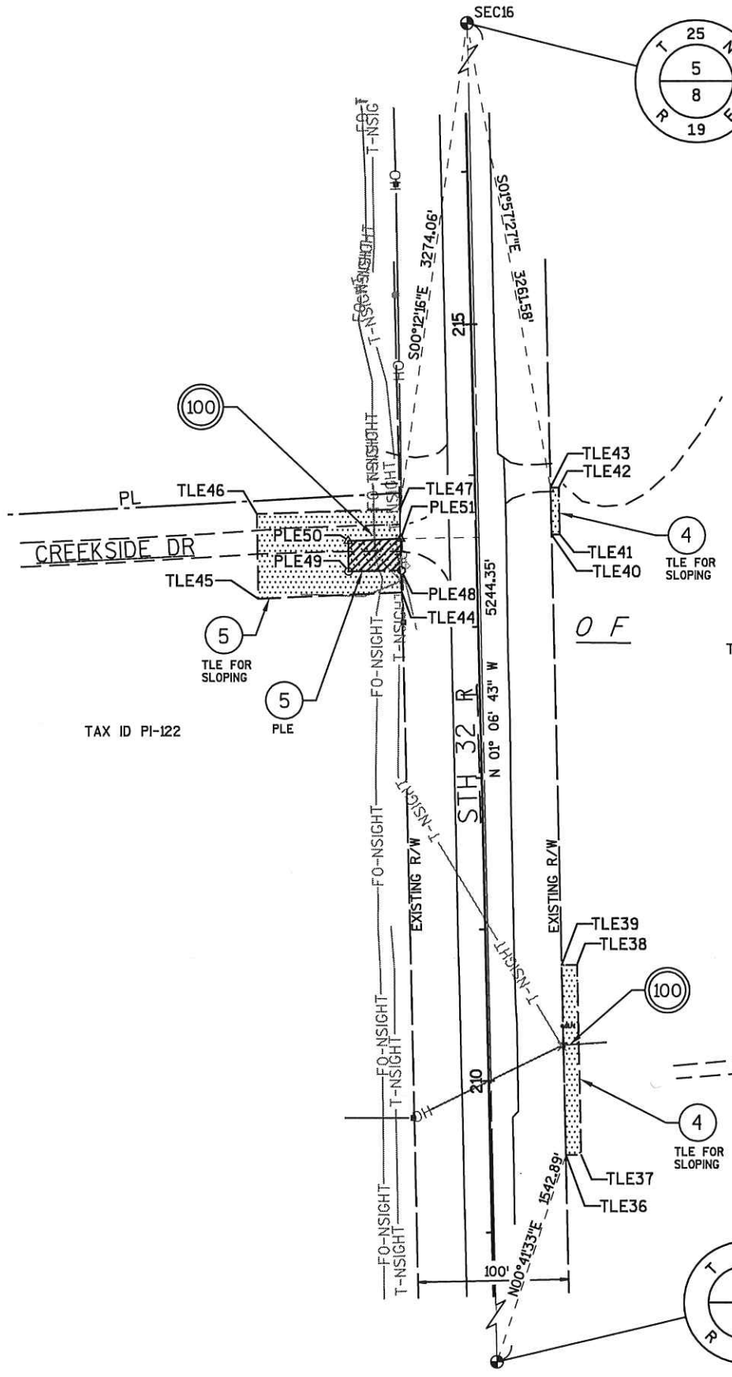
SCALE, FEET
0 50 100

REVISION DATE	DATE 12-19-18	SCALE, FEET 0 50 100	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-23-21	PLAT SHEET NO. 4.4
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 58

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4

TOWN



NE SW

PITTSFIELD

STATION/ OFFSET FROM REFERENCE LINE

TLE44	213+23.70	-50.00'	X 46292.805	Y 615931.175
TLE45	213+21.33	-145.00'	X 46197.873	Y 615926.861
TLE46	213+77.41	-144.60'	X 46197.122	Y 615982.940
TLE47	213+78.73	-50.00'	X 46291.680	Y 615986.190
PLE48	213+38.21	-50.00'	X 46292.508	Y 615945.683
PLE49	213+38.21	-85.00'	X 46257.516	Y 615944.968
PLE50	213+58.34	-84.86'	X 46257.248	Y 615965.096
PLE51	213+59.21	-50.00'	X 46292.079	Y 615966.679

COURSE TABLE
PAR 5 PLE

SEC16 TO DB52	S 01°06'43" E	3293.16'
DB52 TO PLE51	S 88°53'17" W	51.84'
PLE51 TO PLE48	S 01°10'17" E	21.00'
PLE48 TO PLE49	S 88°49'43" W	35.00'
PLE49 TO PLE50	N 00°45'45" W	20.13'
PLE50 TO PLE51	N 87°23'53" E	34.87'

STH 32 REFERENCE LINE COURSE TABLE

SEC21 TO BP STA 22+00.00	S 00°08'57" E	1644.42'
BP STA 22+00.00 TO PI STA 71+11.00	N 00°00'49" W	4911.10'
PI STA 71+11.00 TO PI STA 155+35.40	N 00°51'08" E	8424.30'
PI STA 155+35.40 TO PC STA 191+61.98	N 00°30'20" E	3626.58'
PC STA 191+61.98 TO PT STA 194+97.37	SEE CURVE TABLE BELOW	
PT STA 194+97.37 TO EP STA 232+55.25	N 01°10'17" W	3757.87'
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CURVE TABLE

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Arc Length: 335.391' Radius: 11459.156' Delta: 1° 40' 37"

REFERENCE LINE COORDINATE VALUES

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PI STA 71+11.00	X 46224.771	Y 601721.073
PI STA 155+35.40	X 46350.076	Y 610144.441
PC STA 191+61.98	X 46382.078	Y 613770.880
PT STA 194+97.37	X 46380.129	Y 614106.253
EP STA 232+55.25	X 46303.309	Y 617863.339

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	*OWNER (S)	INTEREST REQUIRED	FEE R/W ACRES REQUIRED NEW	EXISTING	TOTAL	T.L.E. ACRES	P.L.E. ACRES
4	MARY WENGRZYN	TLE				0.033	
5	RANDALL & KATHRYN MEYER	PLE,TLE				0.104	0.017

*OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STATION/ OFFSET FROM REFERENCE LINE

TLE40	213+60.00	50.00'	X 46392.042	Y 615969.507
TLE41	213+59.99	55.37'	X 46397.412	Y 615969.614
TLE42	213+91.04	55.39'	X 46396.796	Y 616000.652
TLE43	213+91.04	50.00'	X 46391.407	Y 616000.545

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	*OWNER	INTEREST REQUIRED
100	NORTHEAST TEL CO. LLC	RELEASE OF RIGHTS

*OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STATION/ OFFSET FROM REFERENCE LINE

TLE36	209+50.04	50.00'	X 46400.423	Y 615559.638
TLE37	209+50.04	60.12'	X 46410.545	Y 615559.839
TLE38	210+75.34	60.20'	X 46408.059	Y 615685.115
TLE39	210+75.34	50.00'	X 46397.861	Y 615684.912

REVISION DATE	DATE 12-19-18	SCALE, FEET 0 50 100	HWY: STH 32	STATE R/W PROJECT NUMBER 9190-23-21	PLAT SHEET NO. 4.5
			COUNTY: BROWN	CONSTRUCTION PROJECT NUMBER	PS&E SHEET NO. 59

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BEGIN PROJECT 9190-23-71
STA 25+40.25

BP: 22+00.00

END OF PROJECT 1058-25-71
SHAWANO COUNTY

STH 29 EB OFF RAMP

STH 29 EB ON RAMP

STH 29 WB ON RAMP

STH 29 WB OFF RAMP

STH 32

B-05-0230

B-05-0229

ENCAPSULATE BRIDGE PIERS
SEE STRUCTURE PLANS

CRASH CUSHION
IDENTIFICATION PLAQUE

CRASH CUSHION
IDENTIFICATION PLAQUE

ATTACH LOW MAINTENANCE
PERMANENT CRASH CUSHIONS TO
BRIDGE PIER PROTECTION STRUCTURE

EXISTING R/W

EXISTING R/W

N

5

5

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 60 E

SIGN

EXISTING R/W

WIT 28

POST

POST

GRAVEL DRIVEWAY

T 25 N
29
32
R 19 E

I SIGN

INL

INL

INL

40

STH 32

BM 42

ASPHALT DRIVEWAY

EXISTING R/W

SIGN

POST

N

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
28	39+16.72, LT	779.34'	WIT, DISK IN CONC
42	42+16.54 RT	781.58	DISK IN CONC, SE COR ABUT

BEGIN MILLING, CIR, AND OVERLAY
STA 43+84.53
BUTT JOINT REQ'D

N

EXISTING R/W

+84.53, -19.93' LT

+17.62, -17.88' LT

GRAVEL DRIVEWAY

STH 32

45

+84.53, 17.00' RT

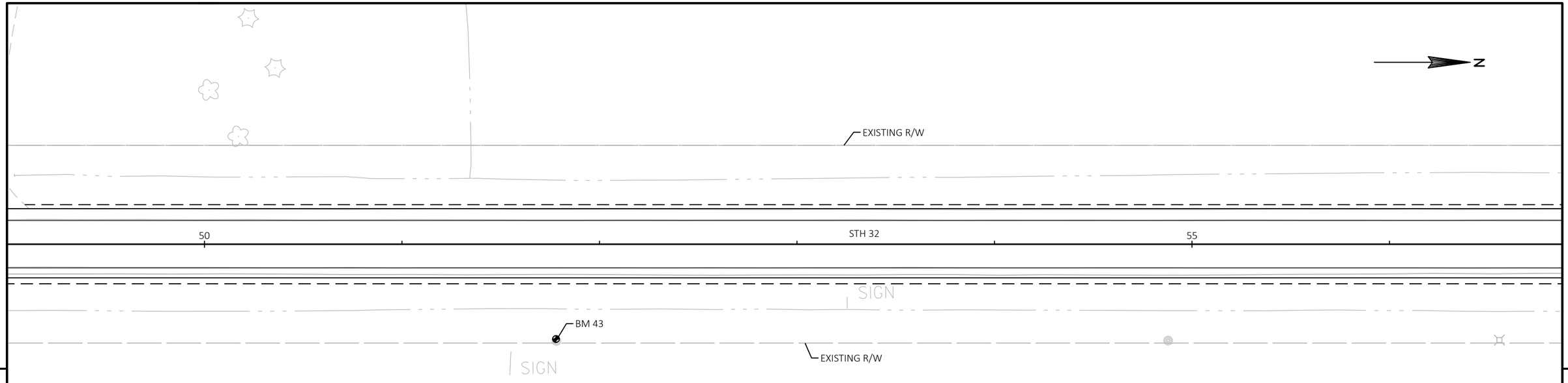
I SIGN

EXISTING R/W

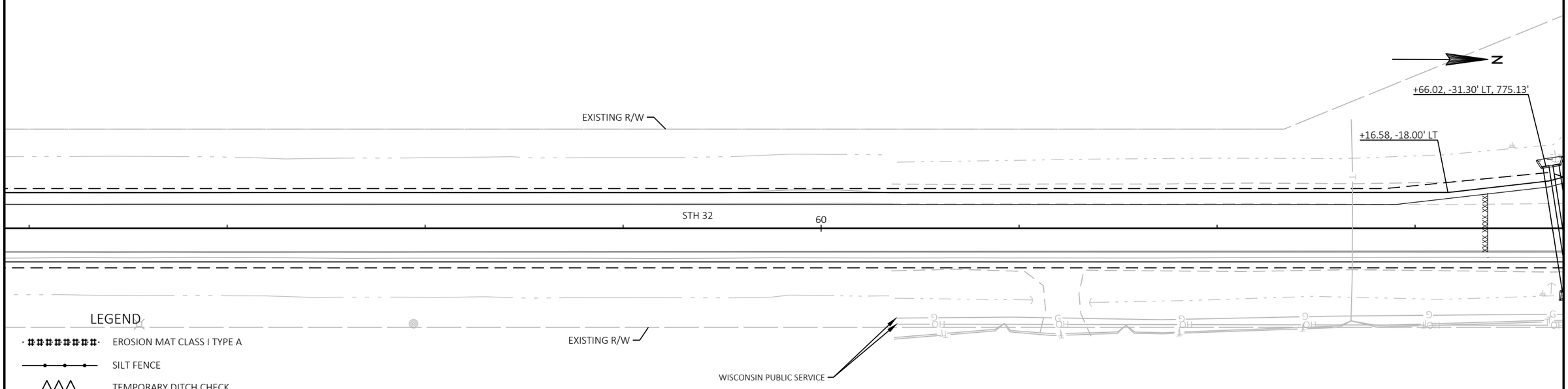
LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 61	E



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
43	81+77.96 RT	782.39	RR SPIKE, W/S PPOL #251923R18



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 62	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:52 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

BEGIN CONSTRUCTION
STA 8+55.67
MATCH EXISTING
BUTT JOINT REQ'D

REMOVE AND REPLACE
CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D
DRILLED TIE BARS REQ'D

STA 63+71.04, -32.05' LT, 775.13'

+66.02, -31.30' LT, 775.13'

6.58, -18.00' LT

COTTONWOOD DR

STA 65+26.08, -27.51' LT, 775.55', 1.7° LHF
REMOVE 24-INCH CPCS
REPLACE WITH 24-INCH RCCP
AND APRON ENDWALLS
2 EA MARKERS CULVERT END

EXISTING R/W

+84.77, -18.00' LT

+56.56, -22.22' LT

65

EP: 10+00.00

70

+55.17, 17.00' RT

+64.64, 22.35' RT

+27.00, 21.46' RT

+45.08, 17.00' RT

ASPHALT
DRIVEWAY

GRAVEL
DRIVEWAY

EXISTING R/W

+80.88, 31.19' RT

STA 63+75.87, 31.93' RT, 774.71', 9° RHF
REMOVE 36-INCH CPCS
REPLACE WITH 2 - 30-INCH RCCP
AND CONCRETE MASONRY ENDWALLS
2 EA MARKERS CULVERT END

BM 21

STA 65+24.47, 28.47' RT, 775.36'

ASPHALTIC SURFACE BUTT JOINT REQ'D

WISCONSIN PUBLIC SERVICE

PI: 71+11.10

.00' LT

GRAVEL
DRIVEWAY

EXISTING R/W

GRAVEL
DRIVEWAY

70

STH 32

75

, 17.00' RT

GRAVEL
DRIVEWAY

GRAVEL
DRIVEWAY

BM 44

EXISTING R/W

REMOVE ASPHALT DRIVEWAY APRON

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
28	64+54.59 RT	776.700'	S/S ROD D228, 8FT S PPOL #2519 29E13
44	74+88.70 RT	780.530'	RR SPIKE, W/S PPOL #251929E16

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 63	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

FIELD ENTRANCE

ASPHALT DRIVEWAY

EXISTING R/W

FIELD ENTRANCE

80

STH 32

FIELD ENTRANCE

EXISTING R/W

WISCONSIN PUBLIC SERVICE

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
45	85+43.64 LT	778.160	NW ABUT CUT X

C-05-031
TO REMAIN AS IS

SI

EXISTING R/W

TLE

WISCONSIN PUBLIC SERVICE

FIELD ENTRANCE

BM 45

85

STH 32

90

BP: 0+00.00

+99.80, 17.00' RT

+60.71, 20.68' RT

SI

EXISTING R/W

KUNESH RD

REMOVE GUARDRAIL
REPLACE WITH
MGS GUARDRAIL TERMINAL EAT
MGS GUARDRAIL 3
AND MGS GUARDRAIL 3 L
SEE CONSTRUCTION DETAILS

END CONSTRUCTION
STA 0+76.14
MATCH EXISTING
BUTT JOINT REQ'D

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 64	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 44

WISCONSIN PUBLIC SERVICE

EXISTING R/W

BM 46

STH 32

95

BP: 0+00.00

+71.94, 17.00' RT

KUNESH RD

EXISTING R/W

END CONSTRUCTION
STA 0+76.14
MATCH EXISTING
BUTT JOINT REQ'D

5

5

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
46	96+52.59 LT	775.550'	RR SPIKE, PPOL #251920L7

EXISTING R/W

FIELD
ENTRANCE

100

STH 32

GRAVEL
DRIVEWAY

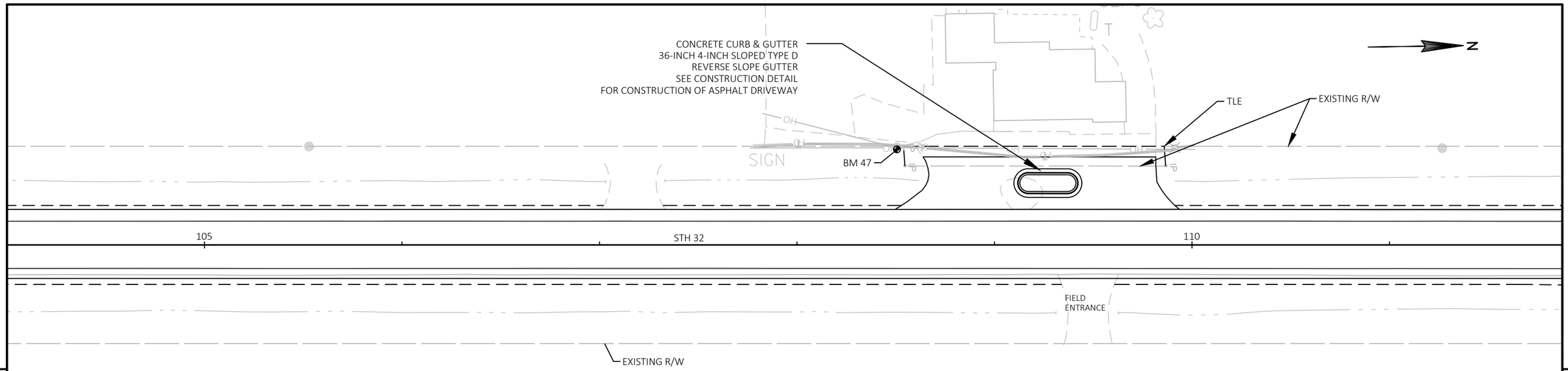
EXISTING R/W

SEPV

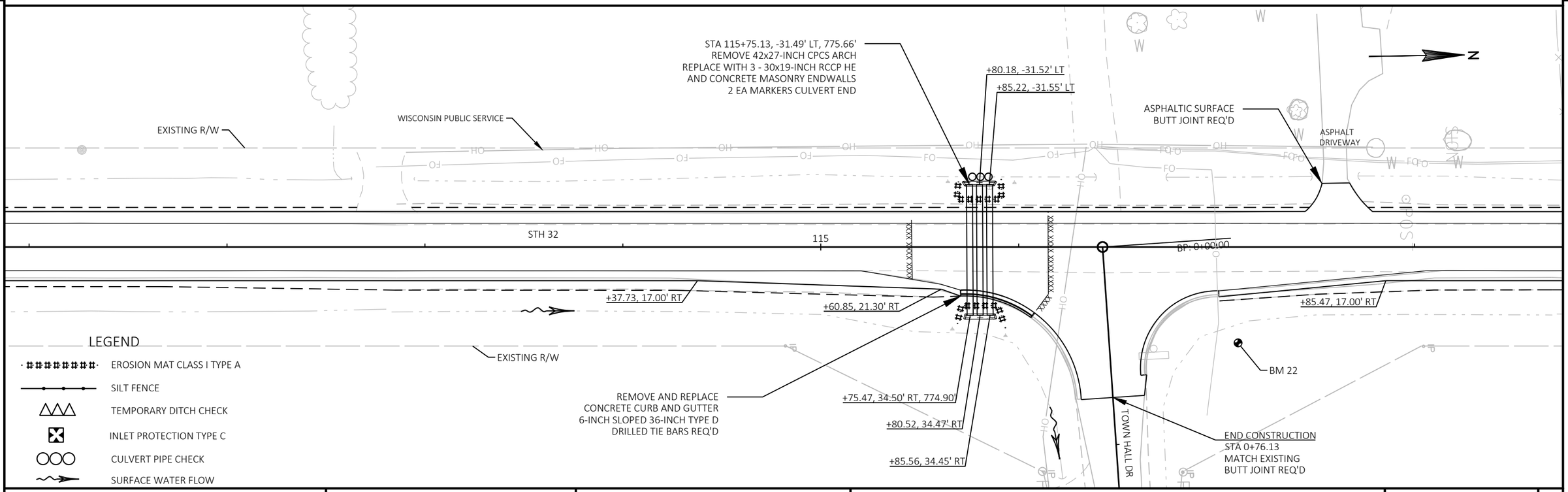
LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 65	E



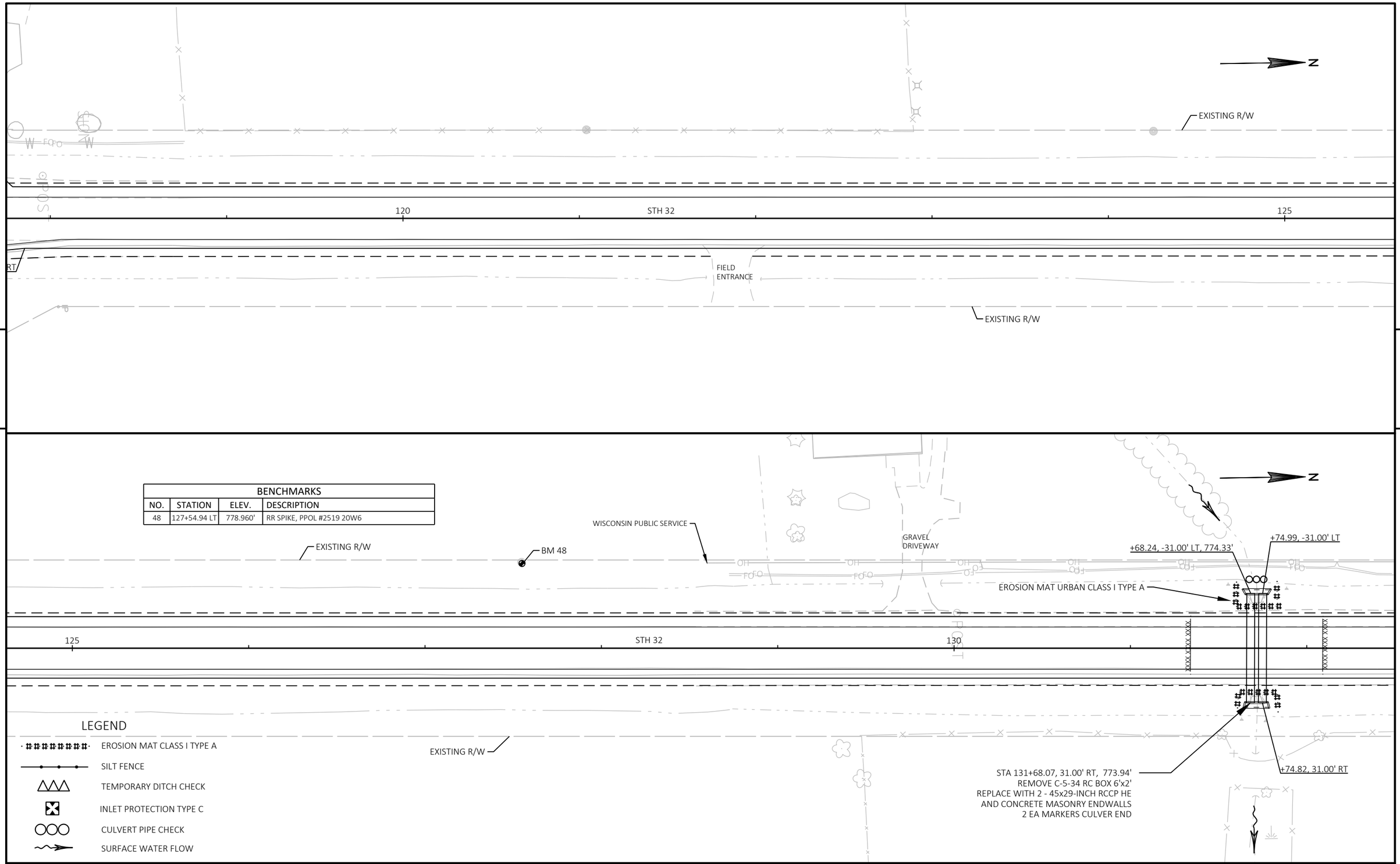
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
47	108+50.60 LT	779.750'	RR SPIKE, PPOL #251920L3
22	117+10.84 RT	777.580'	DISK IN CONC, 5X17



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 66	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

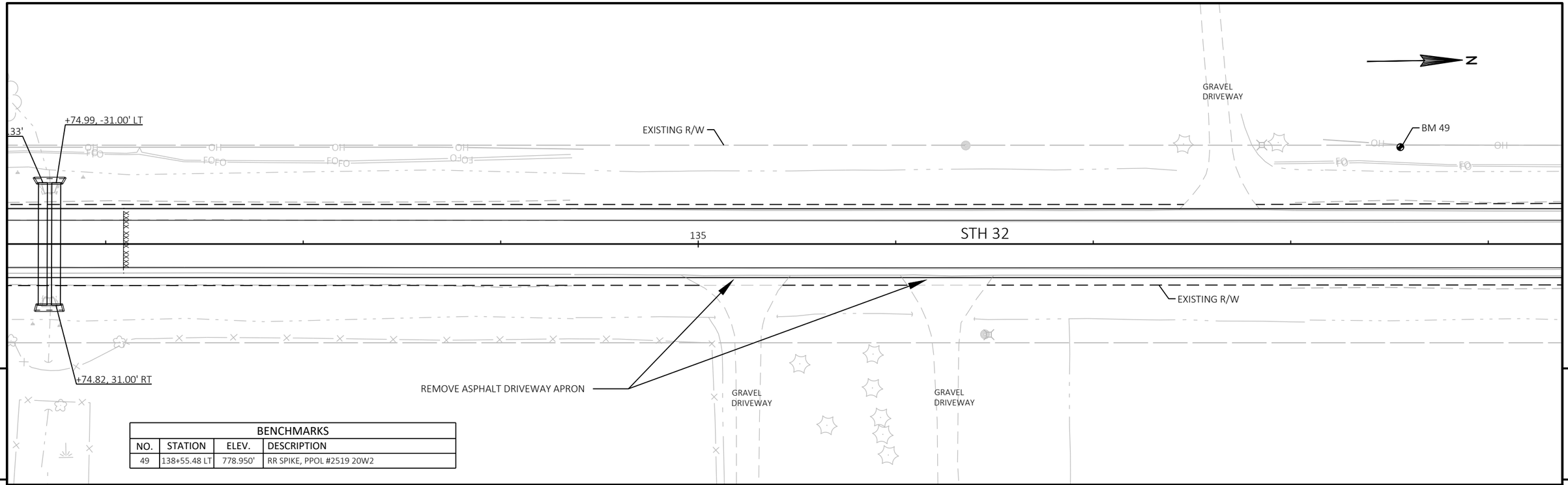
WISDOT/CADDS SHEET 44



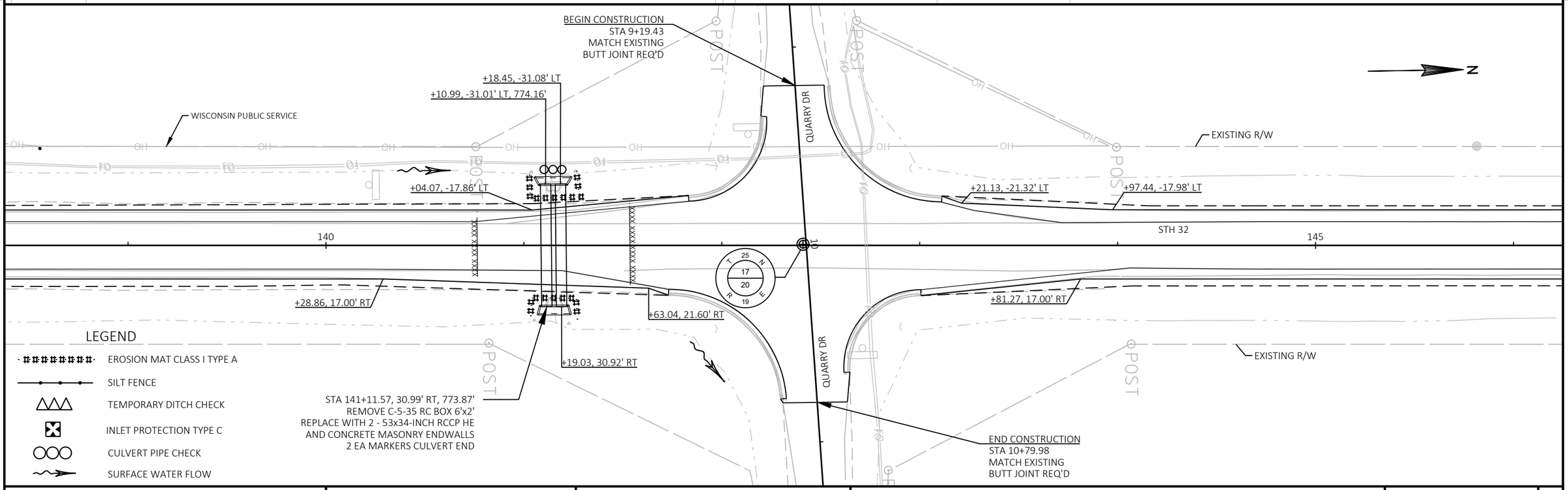
PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 67	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44



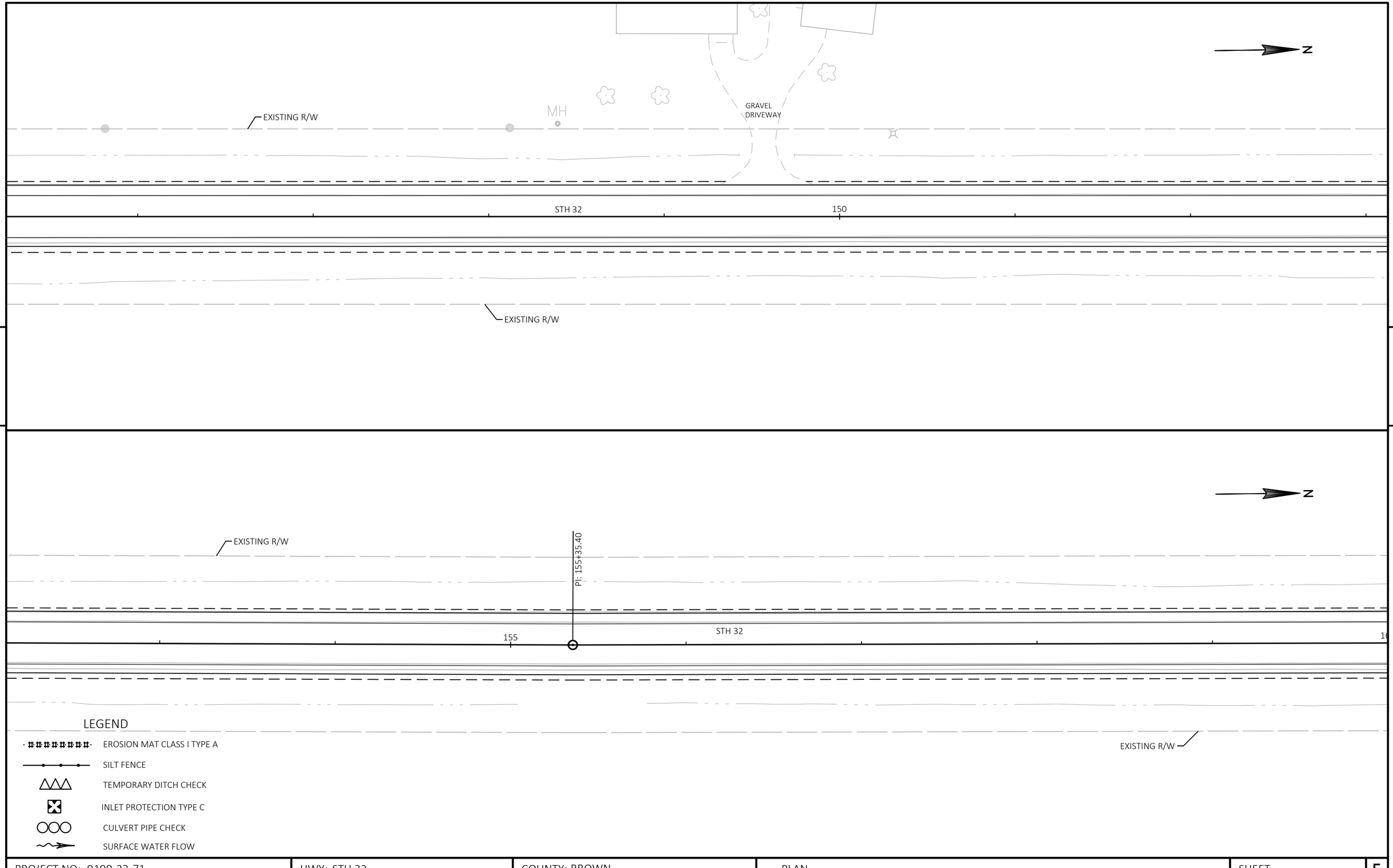
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
49	138+55.48 LT	778.950'	RR SPIKE, PPOL #2519 20W2



LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 68	E



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 69	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

N

EXIST R/W

FO

160 STH 32 165

+45.90, 17.12' RT

EXIST R/W

5

5

C-5-032
EXTEND BOTH SIDES OF BOX CULVERT
SEE STRUCTURE PLANS
2 EA MARKERS CULVERT END

TLE

CAUTION

EXISTING R/W

FO

SI

FLOWLINE

BM 50

170 STH 32

BP: 10+00.00

+82.11, 17.00' RT

+45.90, 17.12' RT

+64.96, 22.17' RT

RIPRAP

FLOWLINE

SI

EXISTING R/W

HAWTHORNE DR

END CONSTRUCTION
STA 11+33.38
MATCH EXISTING
BUTT JOINT REQ'D

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	169+21.15 LT	778.310'	CUT X SW ABUT

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 70	E

STA 178+52.74, -27.43' LT, 777.55'
REMOVE 24-INCH CPCS
REPLACE WITH 24-INCH RCCP
AND APRON ENDWALLS
2 EA MARKERS CULVERT END

N

SIGN

EXISTING R/W

FIELD ENTRANCE

175

STH 32

180

FIELD ENTRANCE

EXISTING R/W

+53.32, 28.57' RT, 777.66'

5

5

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
51	183+07.57 RT	784.49'	RR SPIKE, W/S PPOL #2519-17E2

N

EXISTING R/W

FIELD ENTRANCE

POST

180

STH 32

185

ASPHALT DRIVEWAY

BM 51

ASPHALT DRIVEWAY

REMOVE ASPHALT DRIVEWAY APRON

GRAVEL DRIVEWAY

EXISTING R/W

W@FLAG

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 71	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:53 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

EXISTING R/W

GRAVEL DRIVEWAY

PC: 191+61.98

POST

N

STH 32

190

+35.07, 17.00' RT

+30.99, 21.10' RT

ASPHALT DRIVEWAY

SIGN W

EXISTING R/W

AIRPORT DR

END CONSTRUCTION
STA 11+25.41
MATCH EXISTING
BUTT JOINT REQ'D

5

5

T 25 N
R 8 17 E
19

FIELD ENTRANCE

POST

PT: 194+97.37

WISCONSIN PUBLIC SERVICE

EXISTING R/W

+08.13, -27.60' LT, 778.80'

BP: 10+00.00

195

STH 32

200

+23.25, 17.00' RT

AIRPORT DR

BM 52

EXISTING R/W

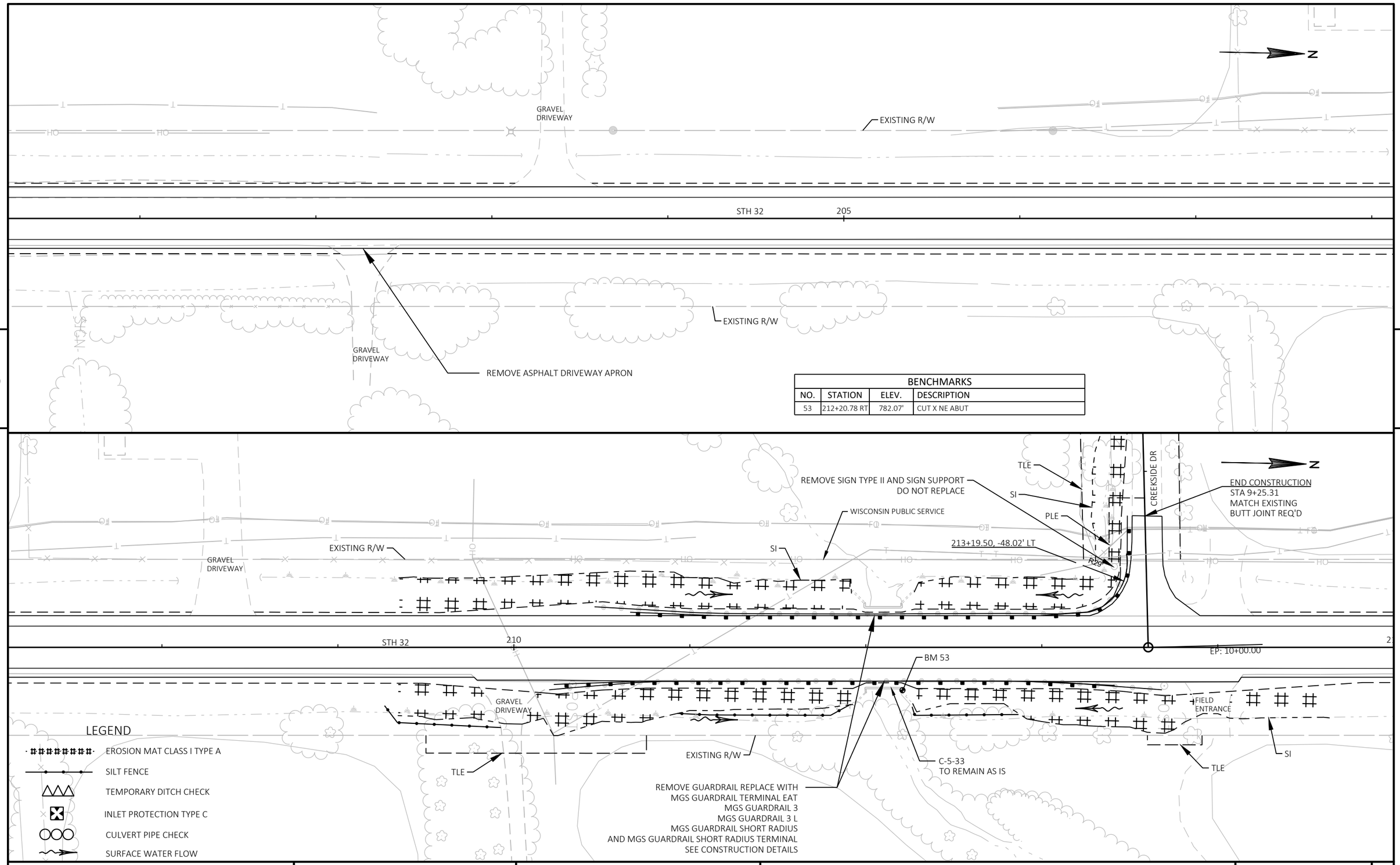
SIGN

STA 199+08.13, 28.40 RT, 778.60'
REMOVE C-5-36 RC BOX 6'x2'
REPLACE WITH 36-INCH RCCP
AND APRON ENDWALLS
2 EA MARKERS CULVERT END

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
52	199+04.42 RT	781.41'	CUT X SE ABUT



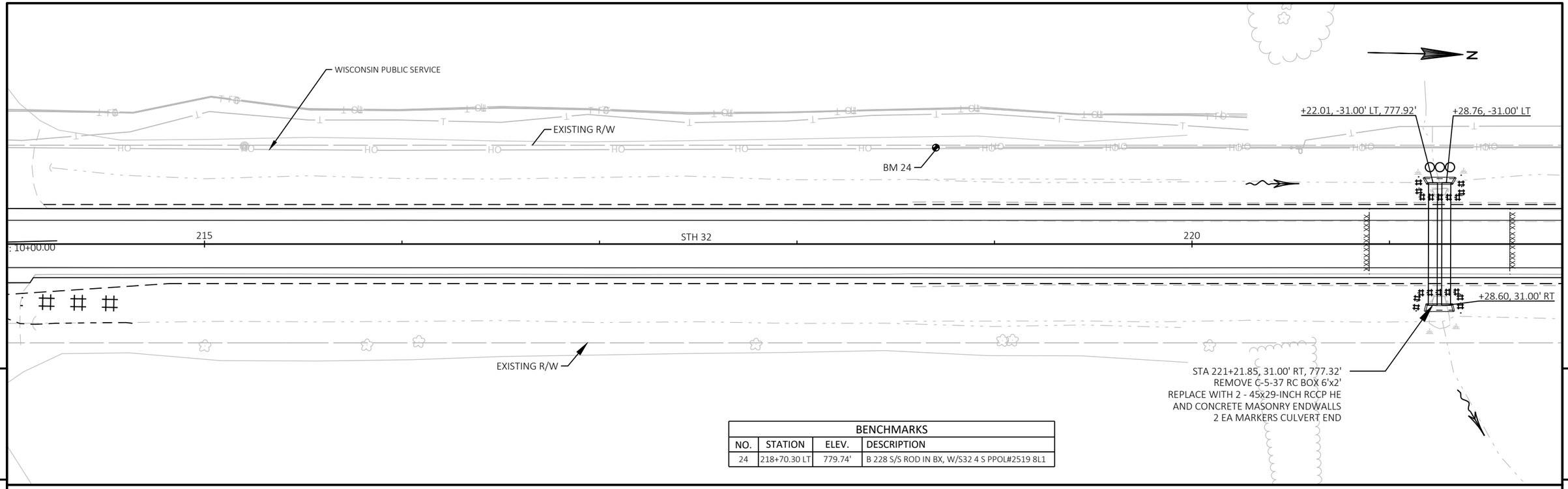
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
53	212+20.78 RT	782.07'	CUT X NE ABUT

LEGEND

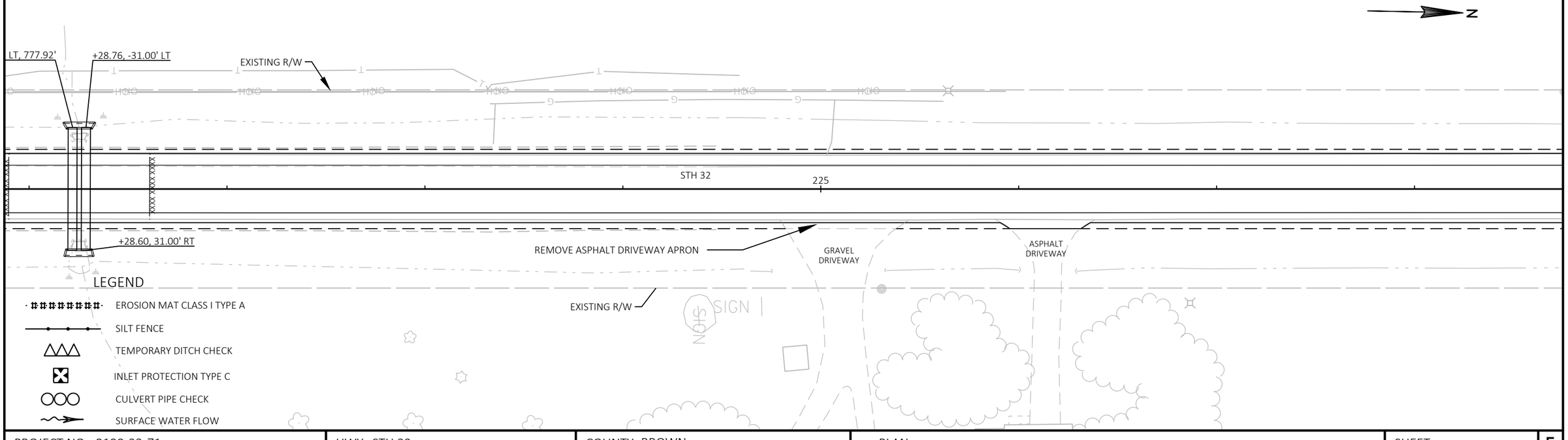
- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 73	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:54 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

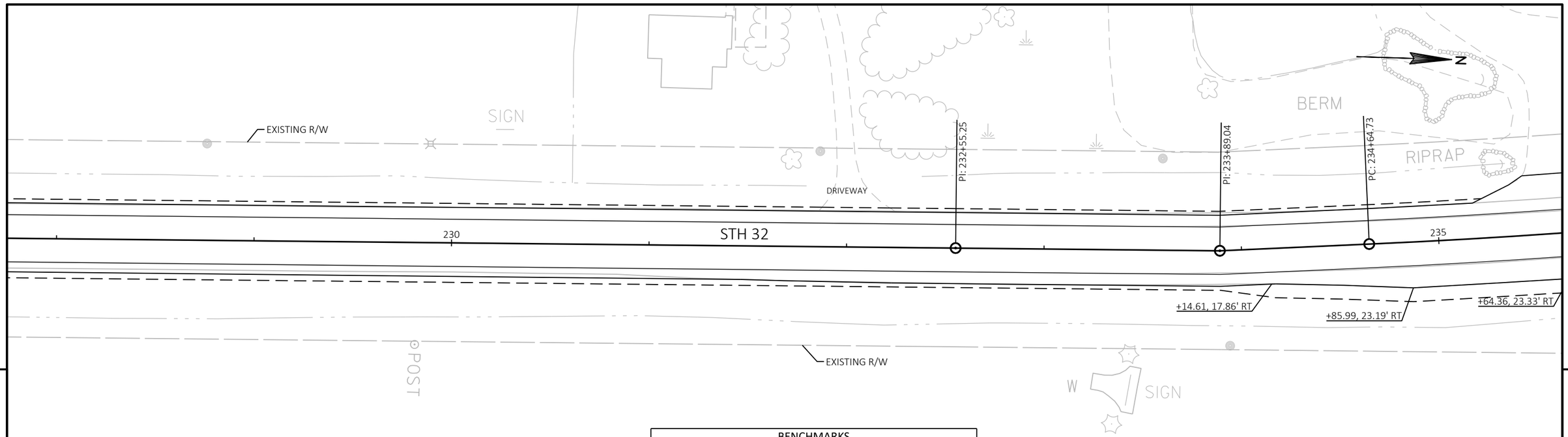


BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
24	218+70.30 LT	779.74'	B 228 S/S ROD IN BX, W/S32 4 S PPOL#2519 8L1

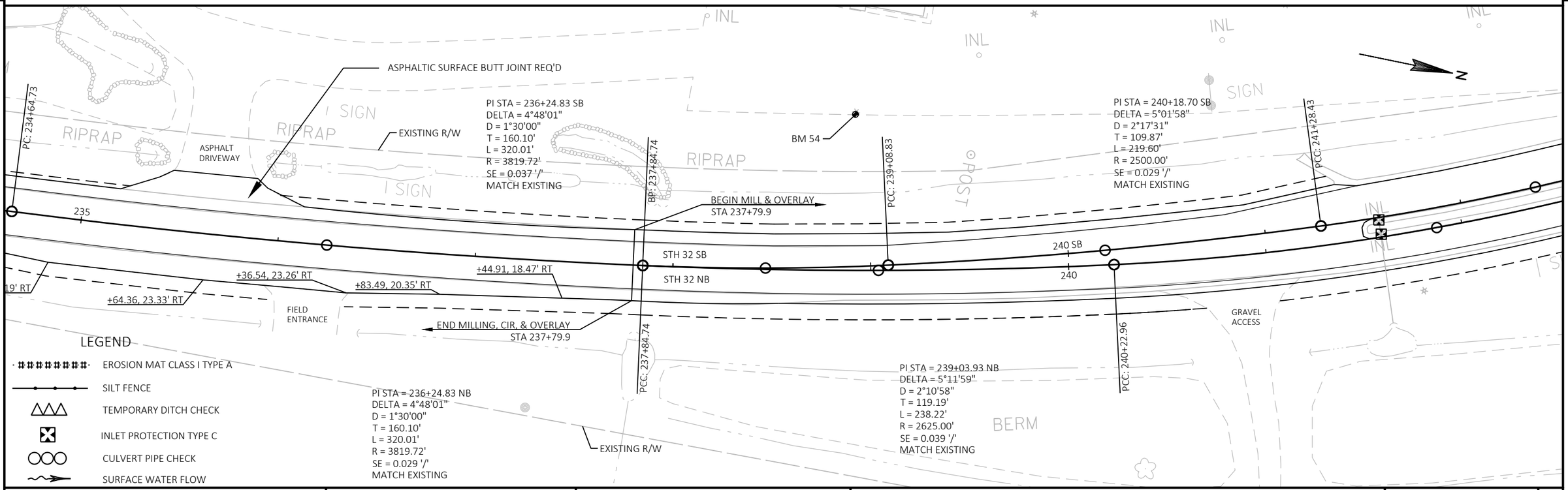


PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 74	E

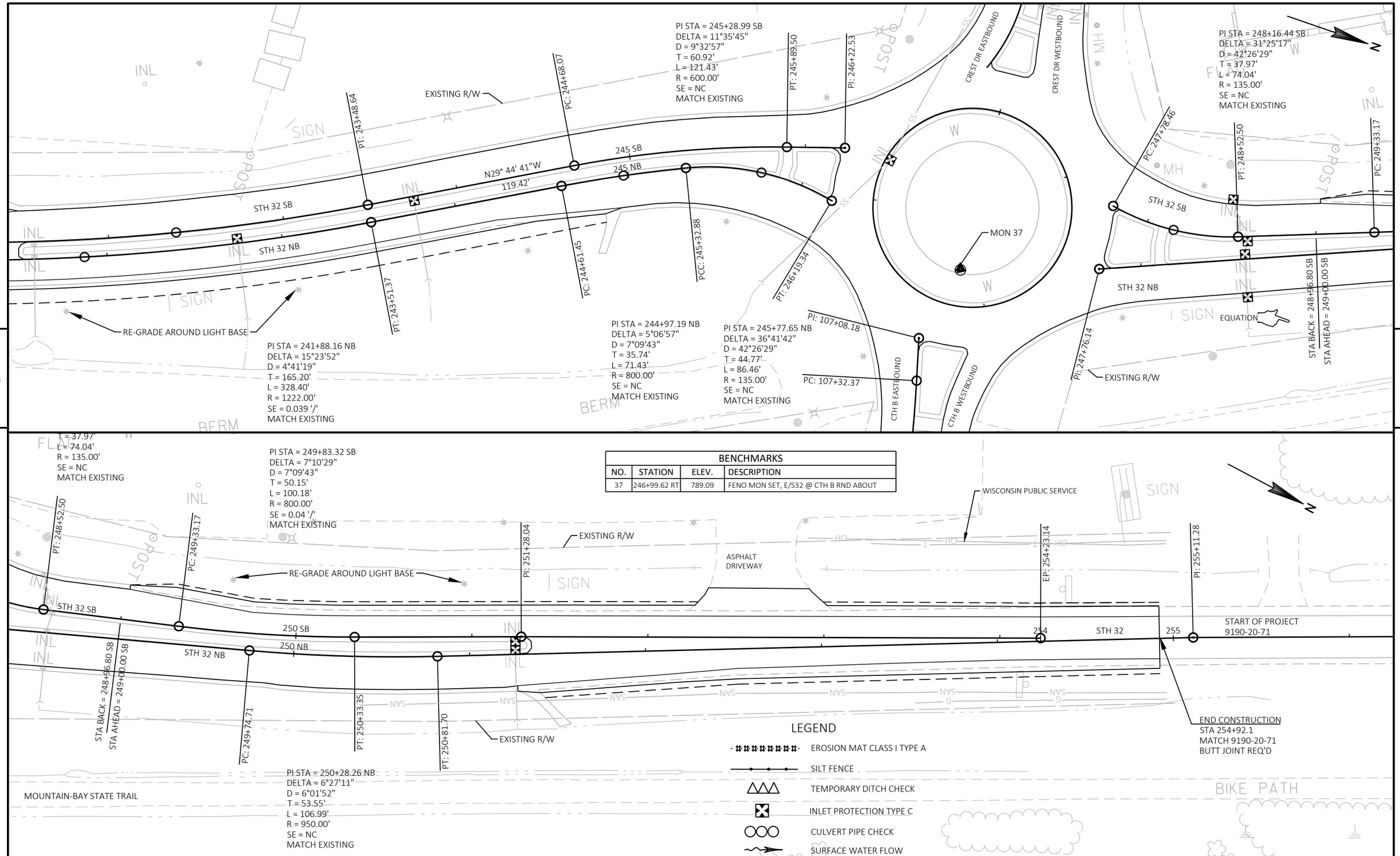
FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:54 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########



BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
54	238+92.03 LT	789.55	CUT X E/S LPOL



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 75	E



5

5

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 76	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG PLOT DATE : 11/1/2019 10:54 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
37	246+99.62 RT	789.09'	FENO MON SET, E/S32 @ CTH B RND ABOUT
55	110+14.52 EB	788.21'	HYD TOP FLANGE 2 SE BOLT

PI STA = 249+83.32 SB
DELTA = 7°10'29"
D = 7°09'43"
T = 50.15'
L = 100.18'
R = 800.00'
SE = 0.04 '/'
MATCH EXISTING

PC: 249+33.17

STA AHEAD = 249+00.00 SB
STA BACK = 248+96.80 SB

PT: 248+52.50

PI STA = 248+16.44 SB
DELTA = 31°25'17"
D = 42°26'29"
T = 37.97'
L = 74.04'
R = 135.00'
SE = NC
MATCH EXISTING

PC: 247+78.46

PI: 247+76.14

EXISTING R/W

END CONSTRUCTION
STA 108+97.36 EB
MATCH EXISTING
BUTT JOINT REQ'D

RE-GRADE AROUND LIGHT BASE

EXISTING R/W

PT: 102+73.14

PC: 103+03.23

PT: 109+34.88

CREST DR

105 EB

MON 37

CTH B WB

CTH B EB

110 EB

PT: 104+36.95

PC: 104+98.97

PI: 107+08.18

PC: 107+32.37

BM 55

MOUNTAIN BAY DR

BEGIN CONSTRUCTION
STA 104+05.37 EB
MATCH EXISTING
BUTT JOINT REQ'D

PI: 246+22.53

PT: 246+19.34

PT: 245+89.50

PI STA = 245+77.65 NB
DELTA = 36°41'42"
D = 42°26'29"
T = 44.77'
L = 86.46'
R = 135.00'
SE = NC
MATCH EXISTING

EXISTING R/W

PCC: 245+32.88

EXISTING R/W

PI STA = 245+28.99 SB
DELTA = 11°35'45"
D = 9°32'57"
T = 60.92'
L = 121.43'
R = 600.00'
SE = NC
MATCH EXISTING

PI STA = 244+97.19 NB
DELTA = 5°06'57"
D = 7°09'43"
T = 35.74'
L = 71.43'
R = 800.00'
SE = NC
MATCH EXISTING

PC: 244+61.45

244+68.07

LEGEND

- EROSION MAT CLASS I TYPE A
- SILT FENCE
- TEMPORARY DITCH CHECK
- INLET PROTECTION TYPE C
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 77	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050218

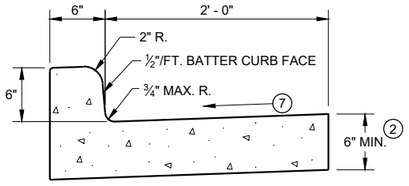
PLOT DATE : 11/1/2019 10:54 AM PLOT BY : HOLMES, KELSEY J PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

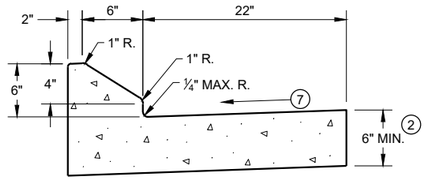
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
12A03-10	NAME PLATE (STRUCTURES)
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-02	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D40-01	TRAFFIC CONTROL, LANE SHIFT, MULTILANE DIVIDED OR ONE WAY ROAD
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

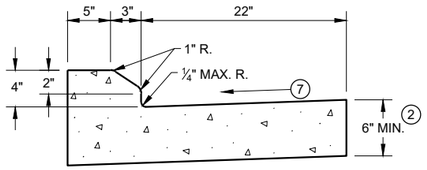
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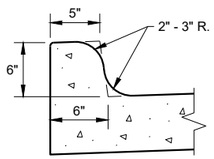
TYPES A (1) & D



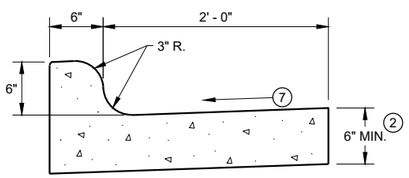
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

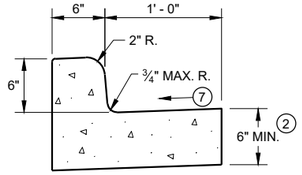


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



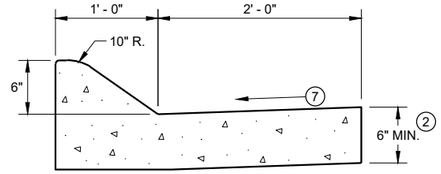
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

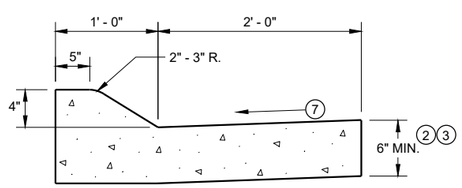


TYPES A (1) & D

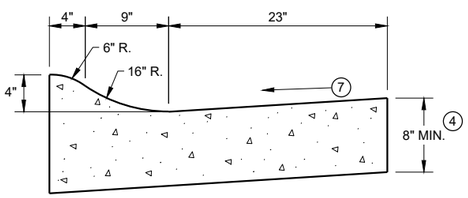
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D



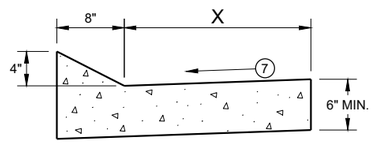
4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB AND GUTTER 36"

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

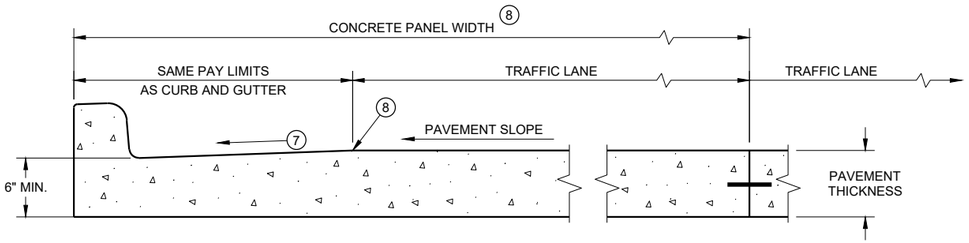


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

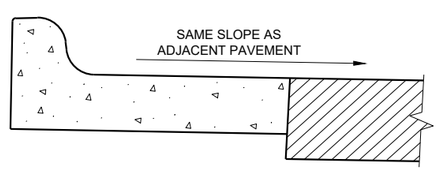
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

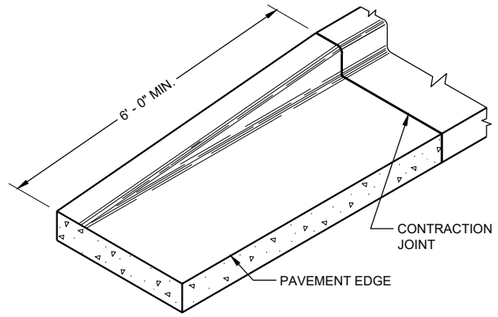
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

CONCRETE CURB AND GUTTER

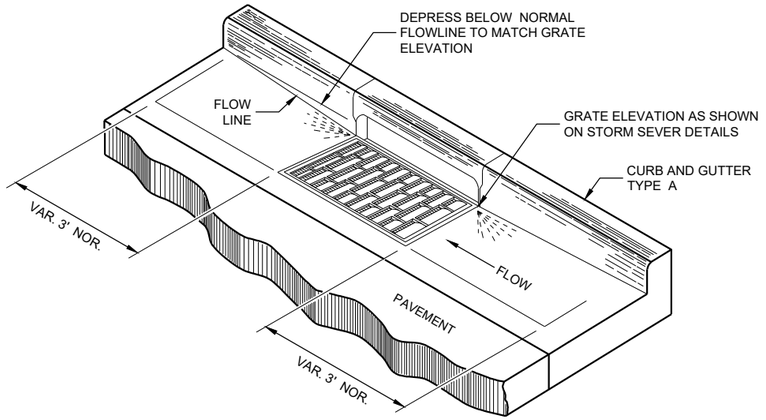
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 21a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

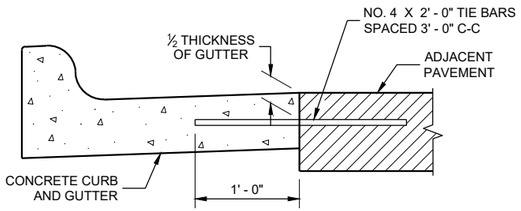
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

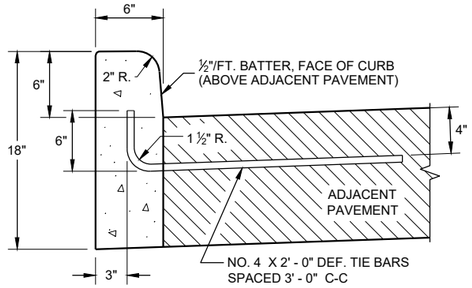
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

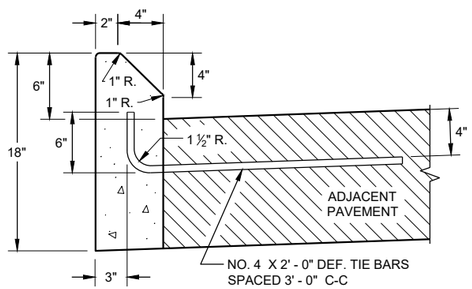
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

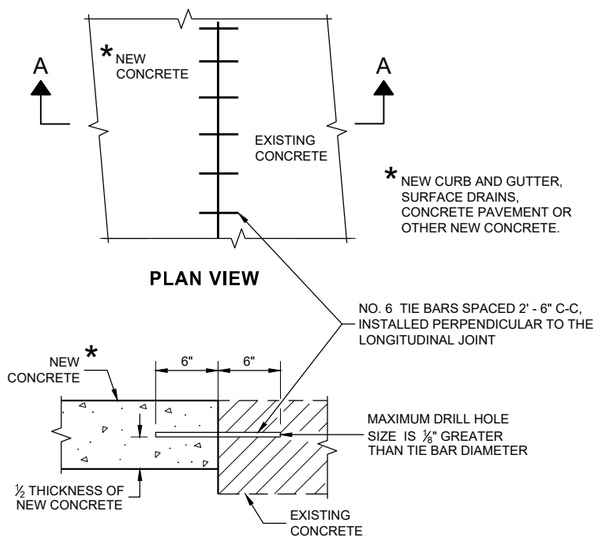


TYPES A (1) & D

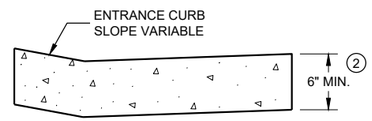


TYPES G (1) & J

CONCRETE CURB



TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

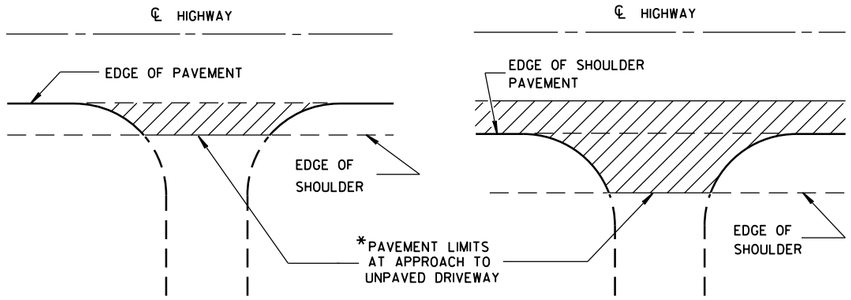
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 21b

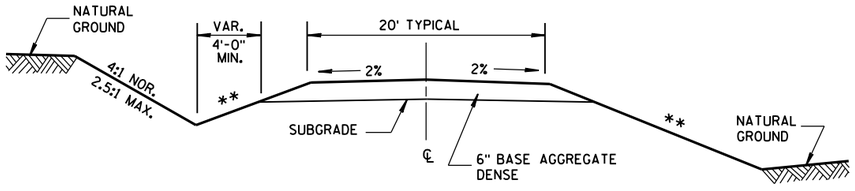


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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

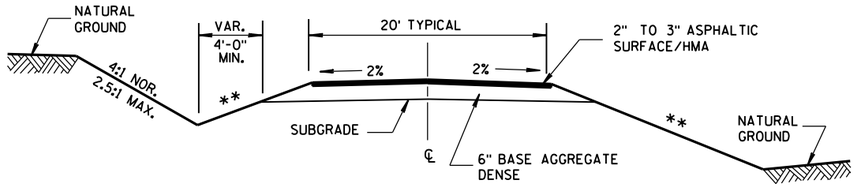


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

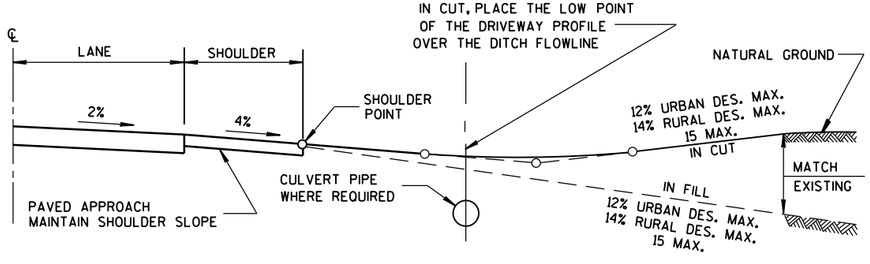
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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

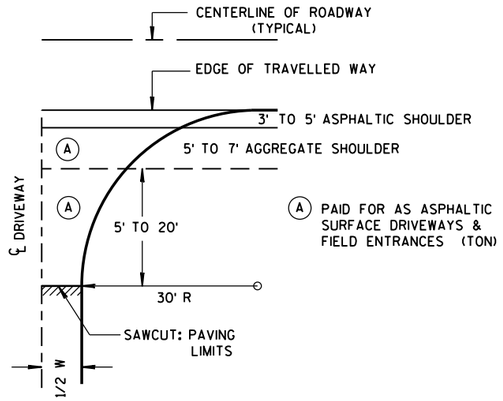
DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

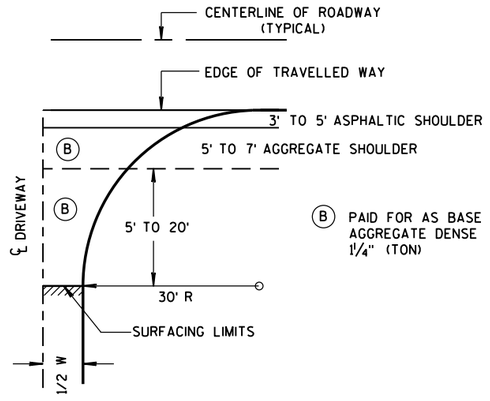
6

S.D.D. 8 D 21-1



W MIN. = 16'
W MAX. = 24'

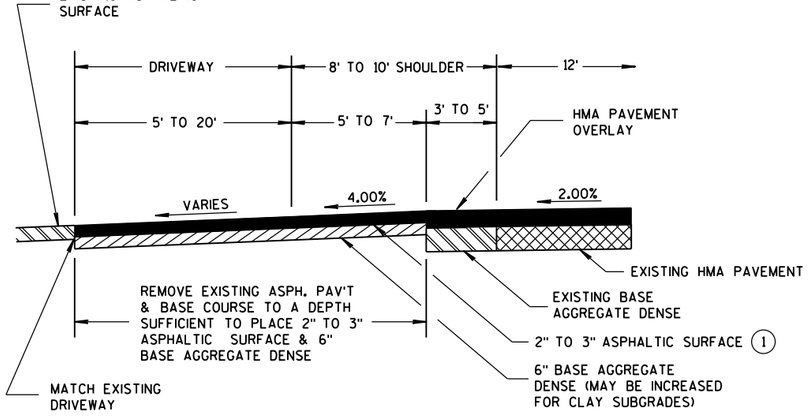
PLAN VIEW
HALF SECTION



PLAN VIEW
HALF SECTION

GENERAL NOTES

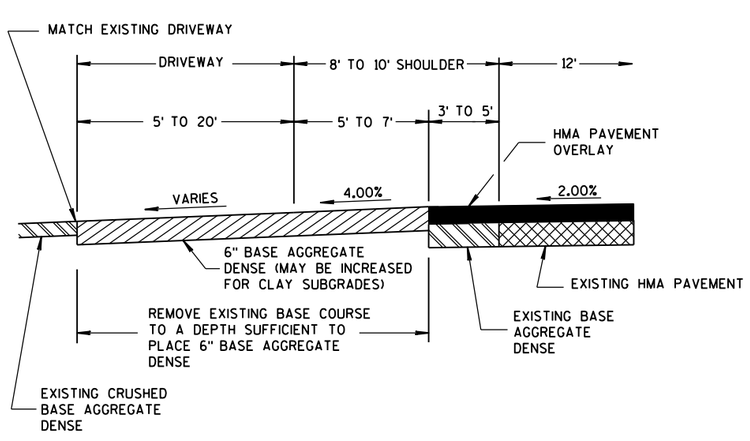
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

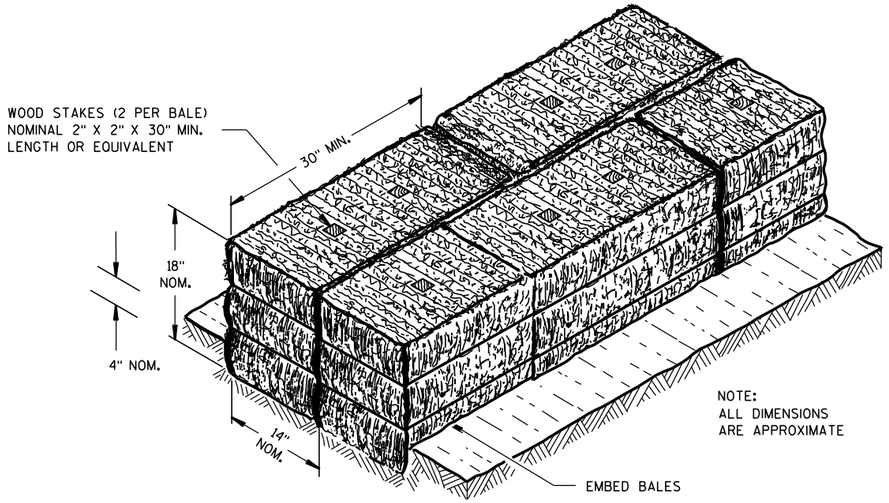
DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

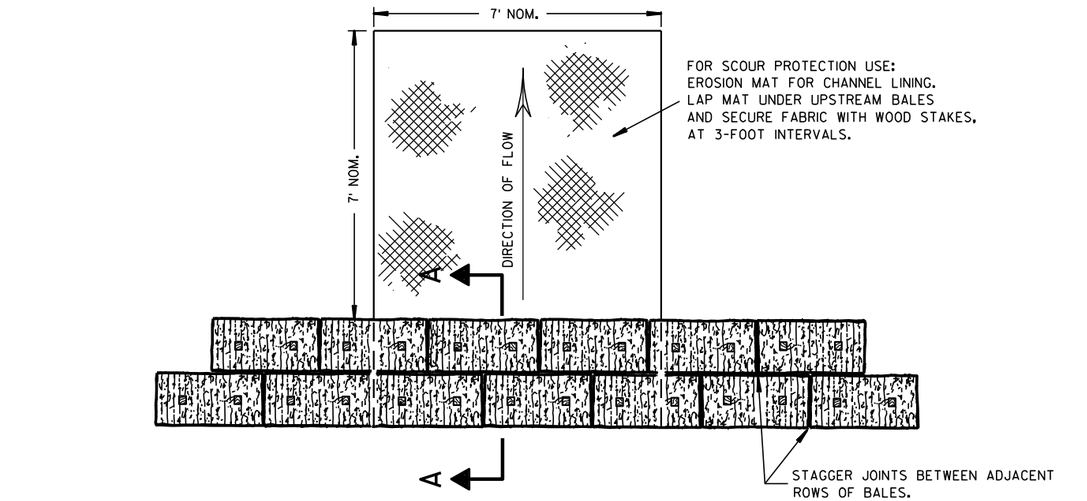
APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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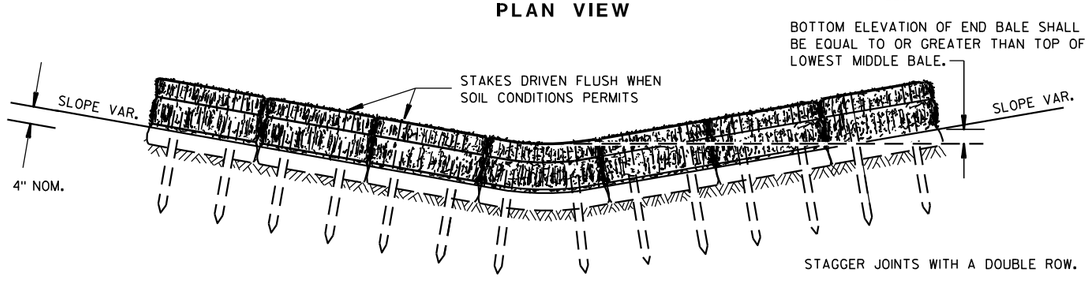
S.D.D. 8 D 22-1



SECTION A-A



PLAN VIEW



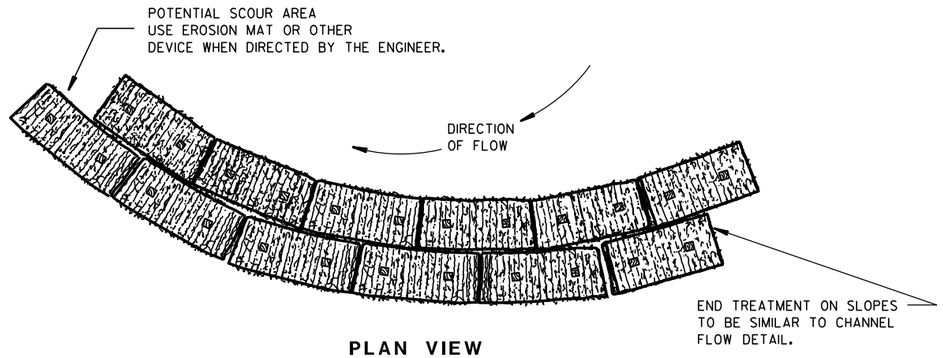
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

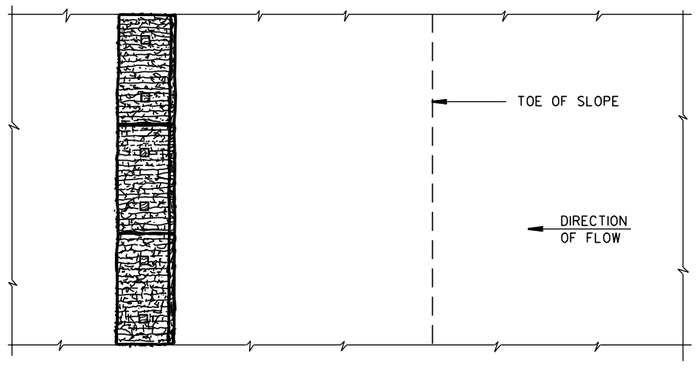
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

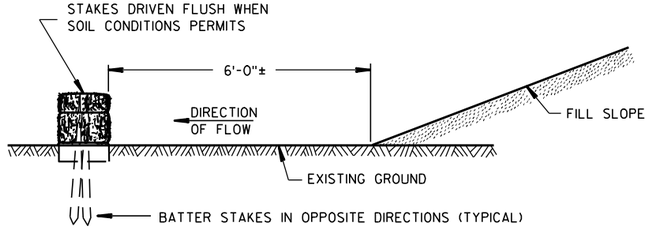


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

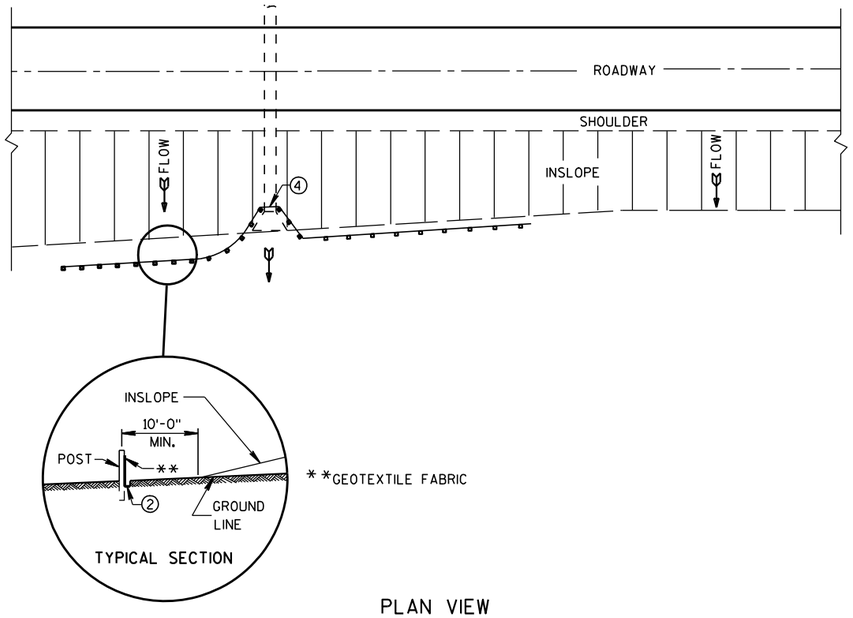
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

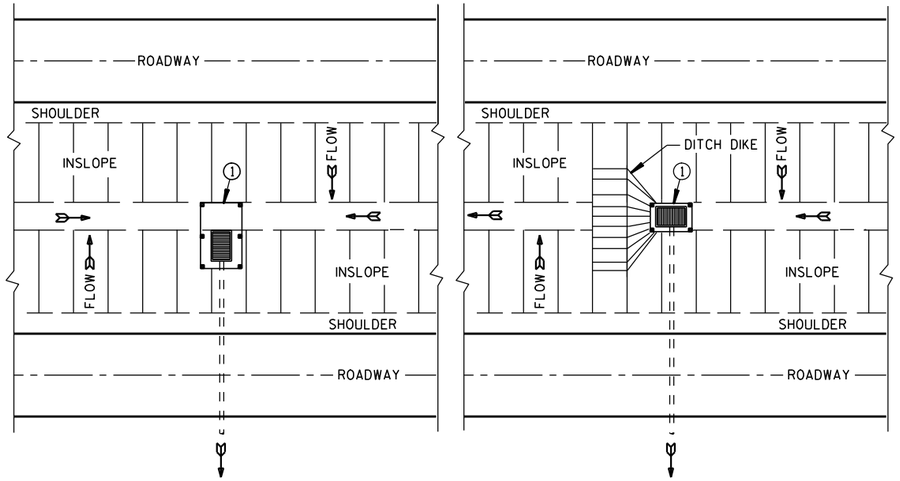
6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



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.

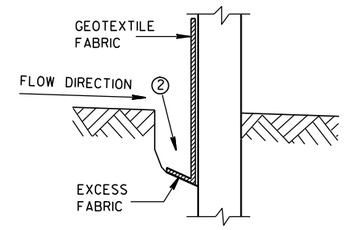
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

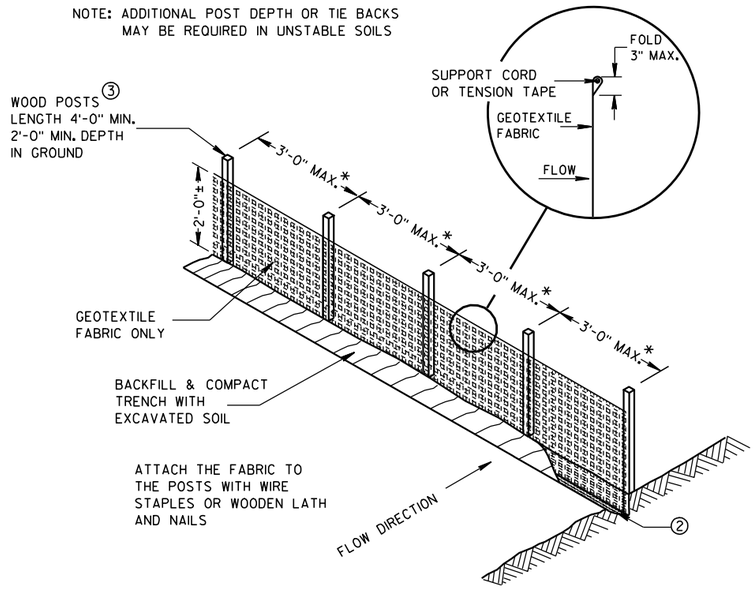
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

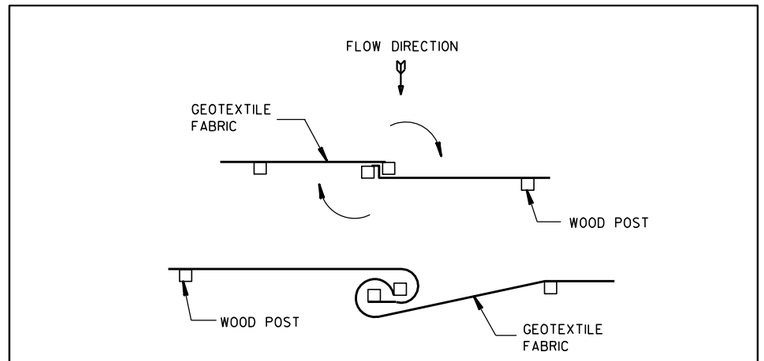
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



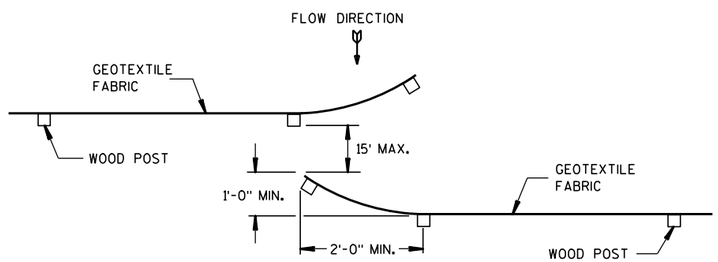
TRENCH DETAIL



SILT FENCE

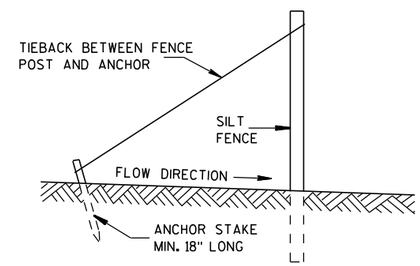


TWIST METHOD



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

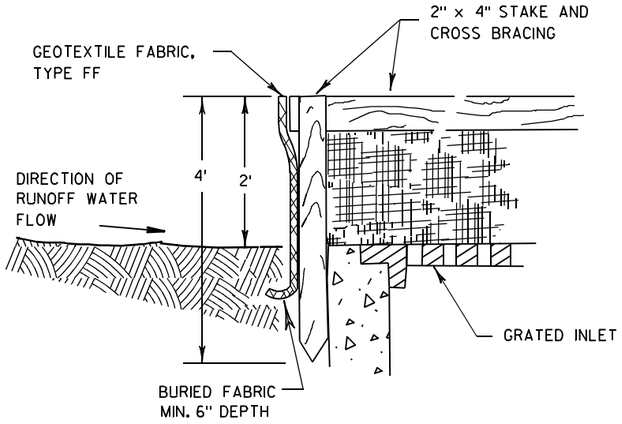
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

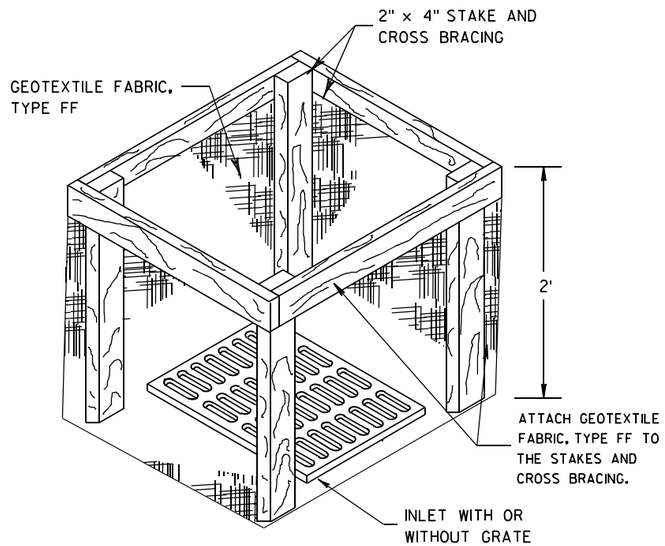
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S.D.D. 8 E 9-6

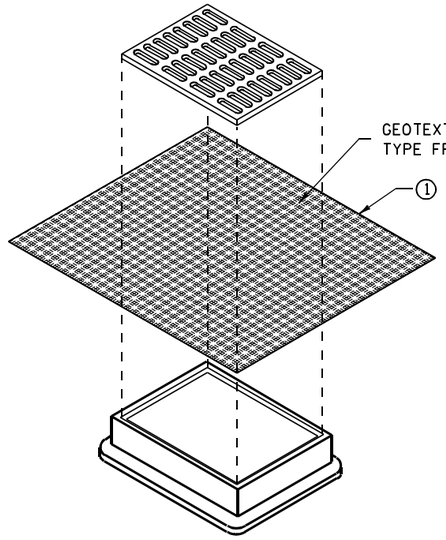
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S.D.D. 8 E 9-6



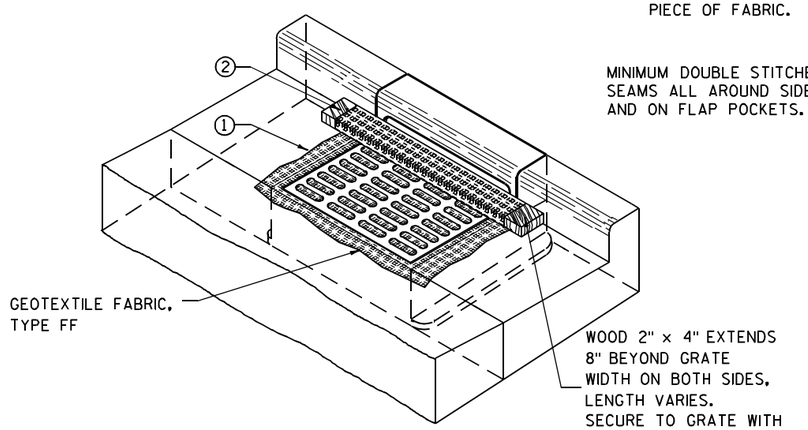


INLET PROTECTION, TYPE A

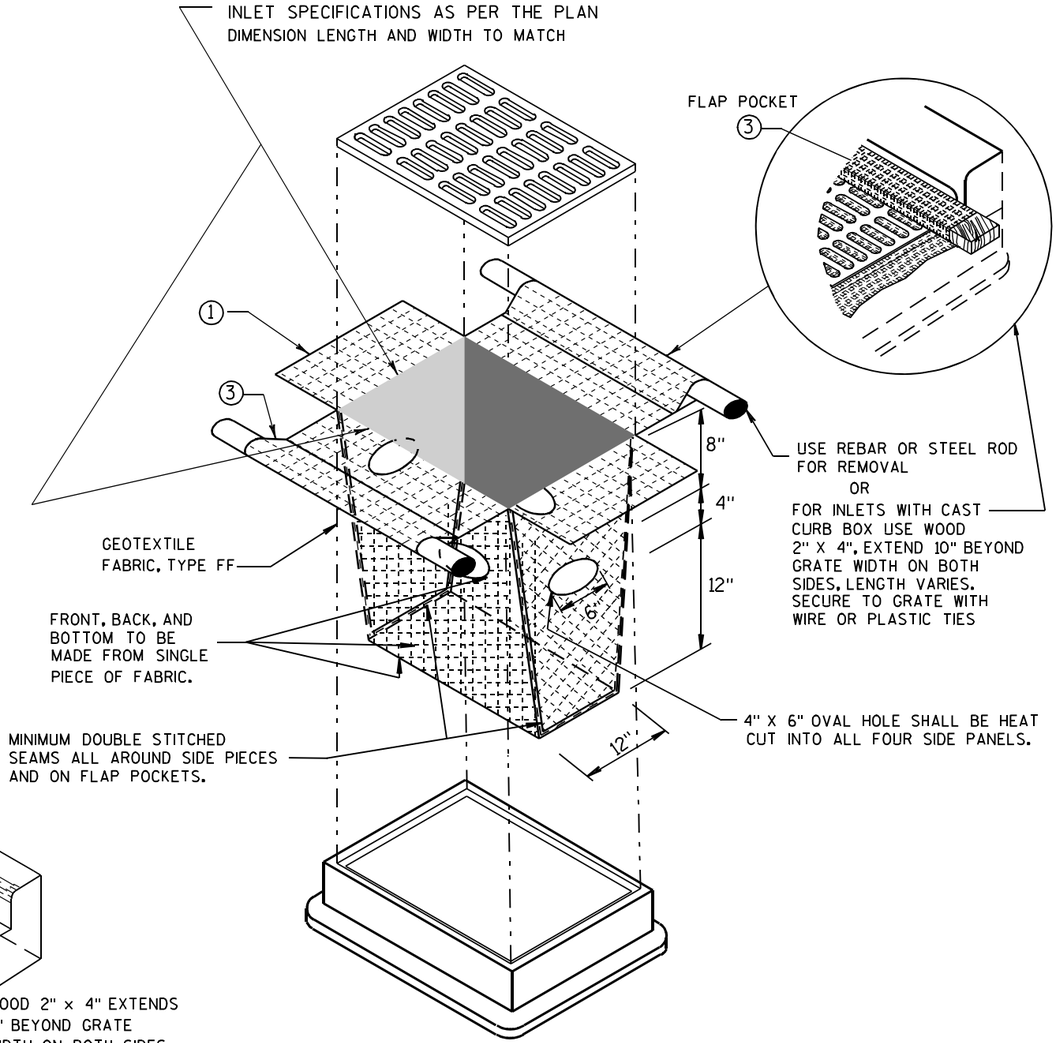


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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

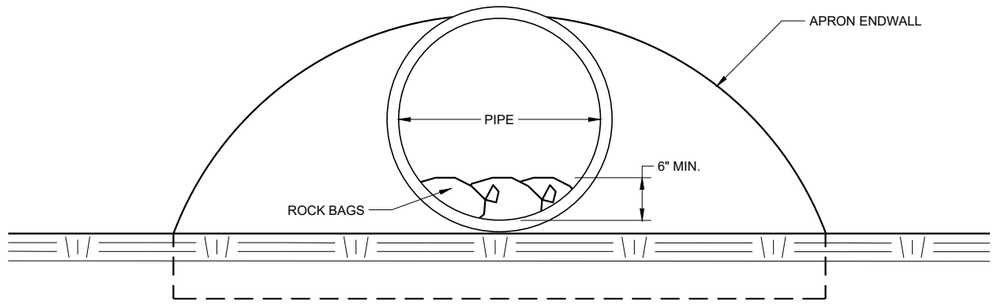
FHWA

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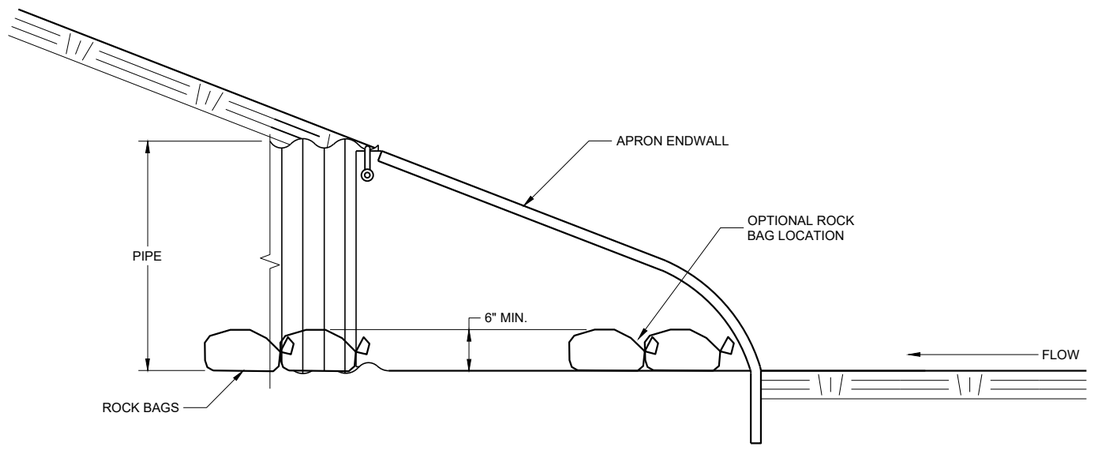
S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

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

6

SDD 08E15 - 01

METAL APRON ENDWALLS

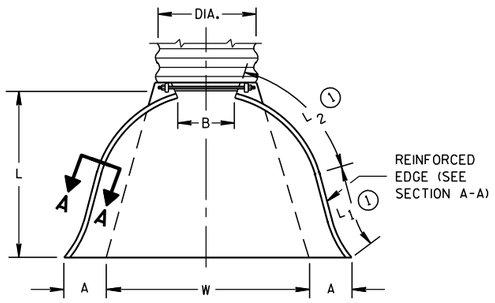
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

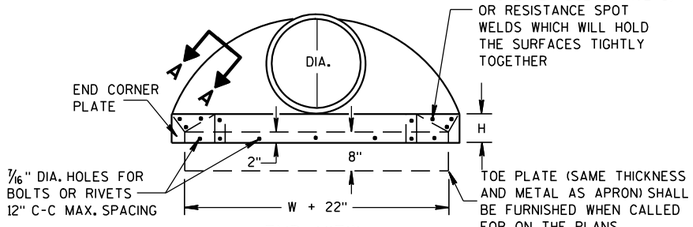
REINFORCED CONCRETE APRON ENDWALLS

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

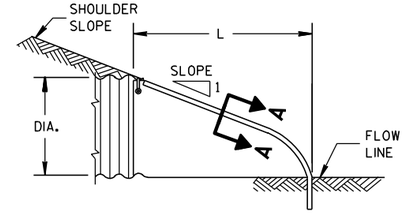
*MINIMUM
**MAXIMUM



PLAN VIEW

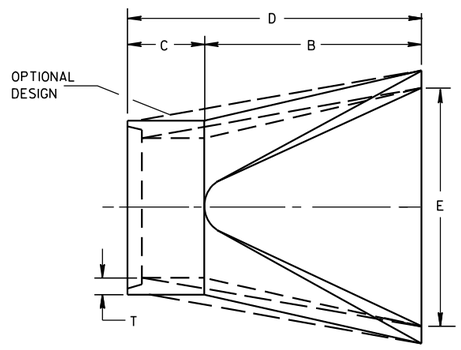


END VIEW

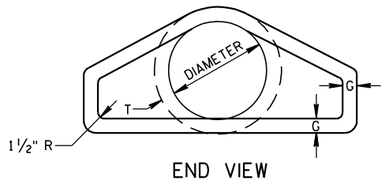


SIDE ELEVATION

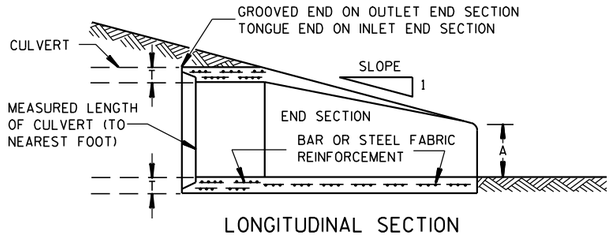
METAL ENDWALLS



PLAN

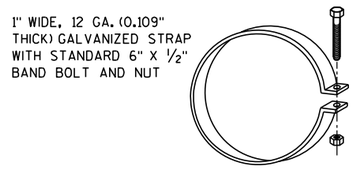


END VIEW



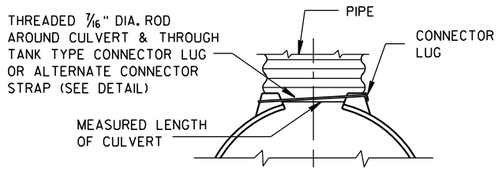
LONGITUDINAL SECTION

CONCRETE ENDWALLS

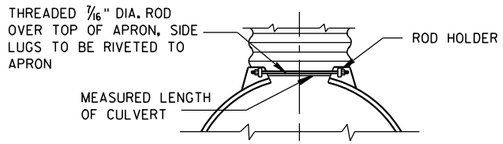


ALTERNATE FOR TYPE 1 CONNECTION

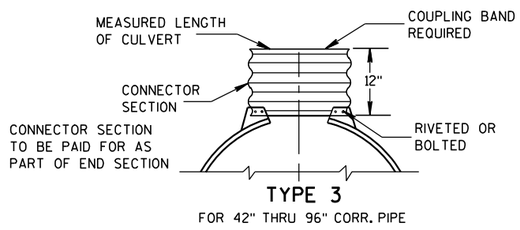
END SECTION CONNECTOR STRAP



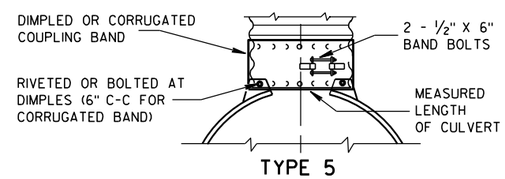
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

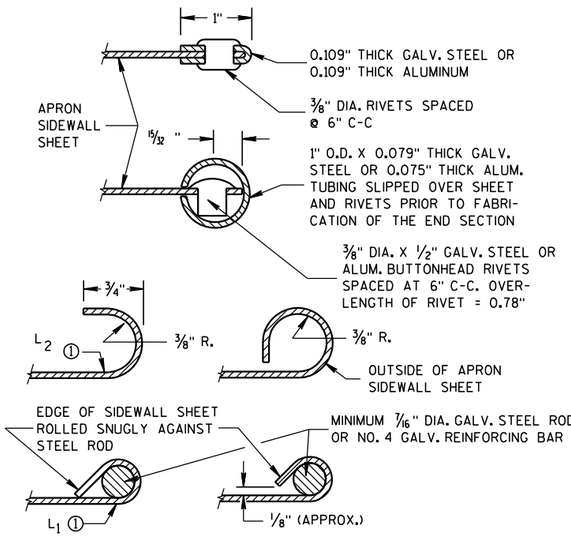
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

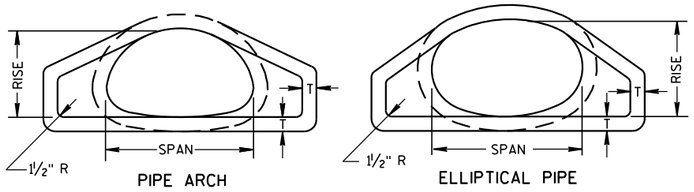
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

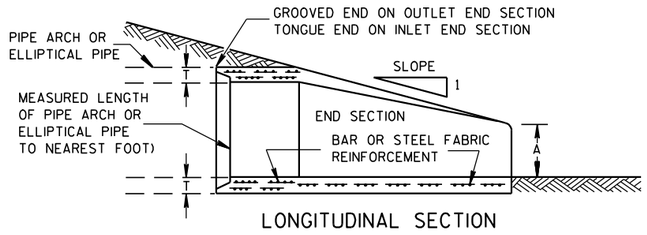
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

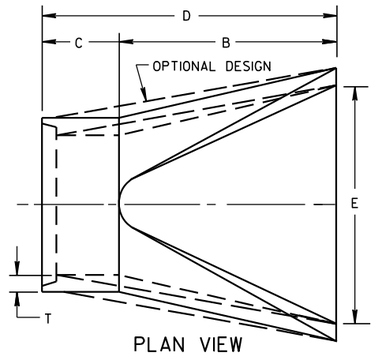
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 87 NEER
FHWA



END VIEW

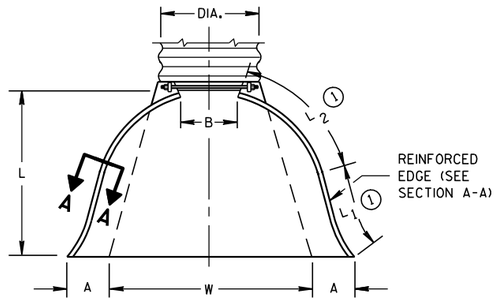


LONGITUDINAL SECTION

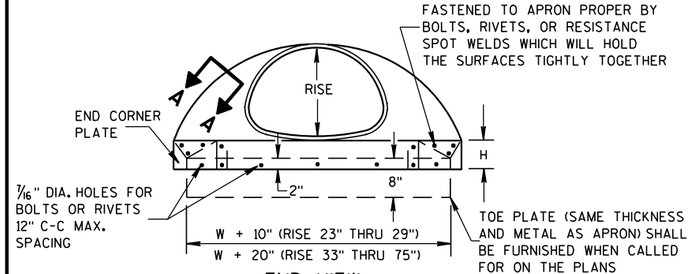


PLAN VIEW

CONCRETE ENDWALLS

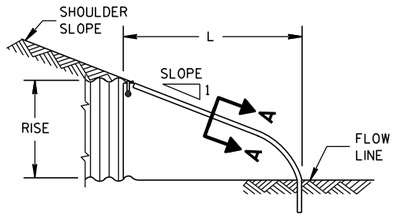


PLAN VIEW



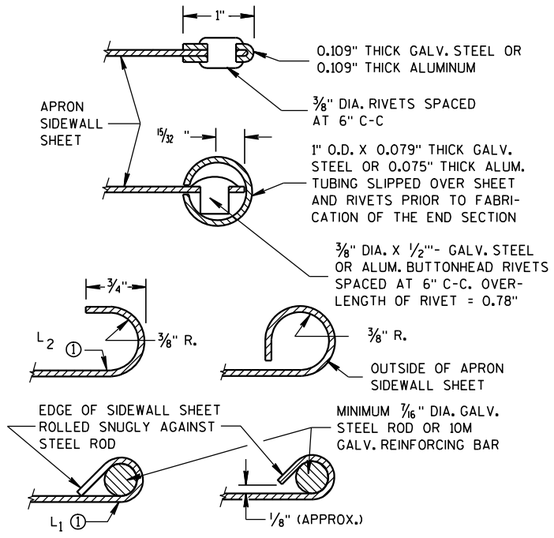
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

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

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

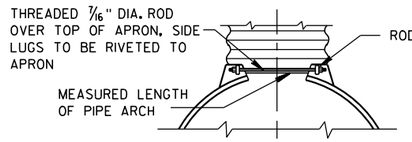
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

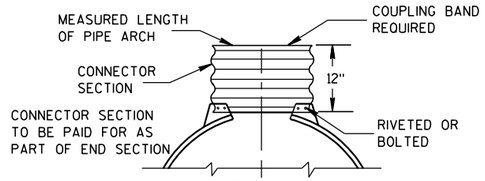
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



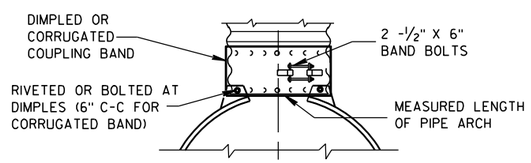
TYPE 2

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



TYPE 3

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



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

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

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

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

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

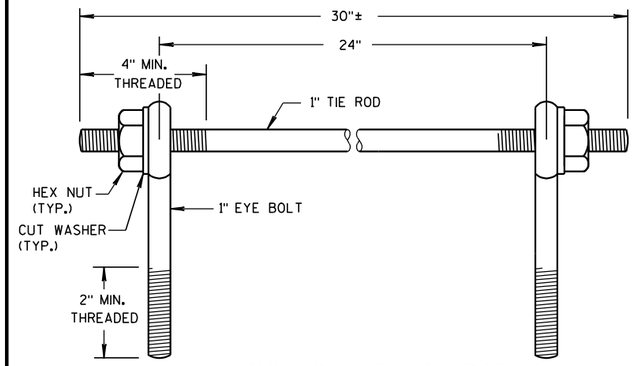
11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

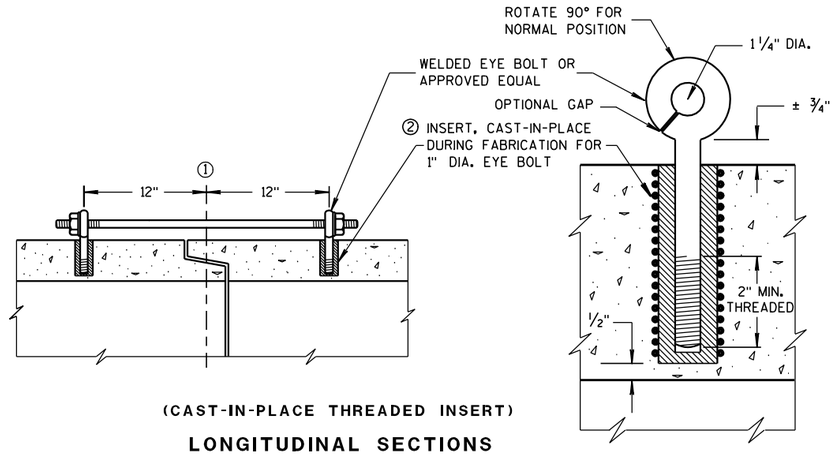
FHWA

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S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

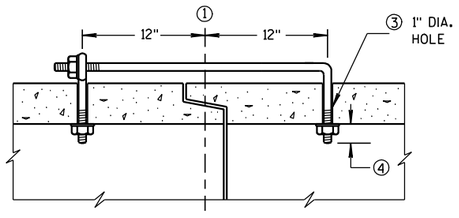
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

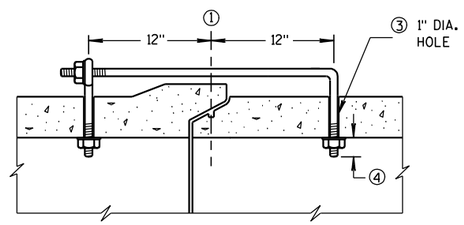
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

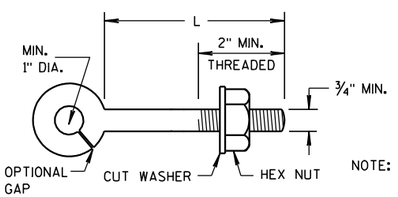


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

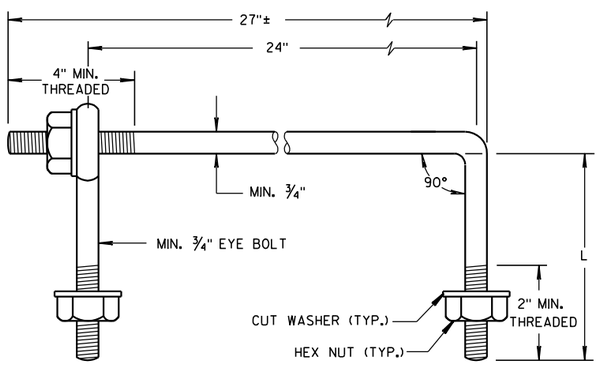
EYE BOLT DIMENSION TABLE

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



EYE BOLT

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



EYE BOLT AND TIE ROD

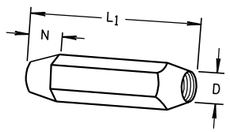
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

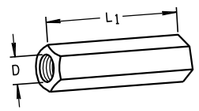
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



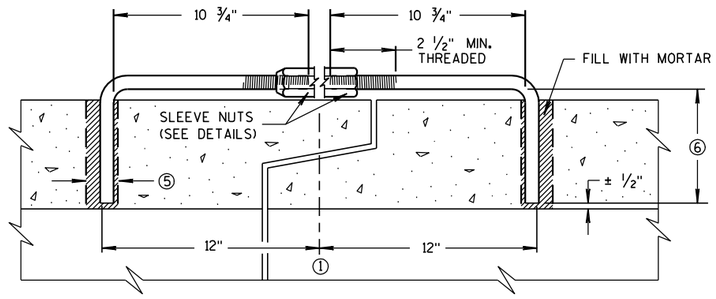
TAPERED



PLAIN

RIGHT AND LEFT THREADS

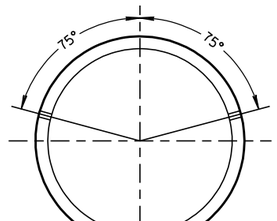
SLEEVE NUTS



LONGITUDINAL SECTION

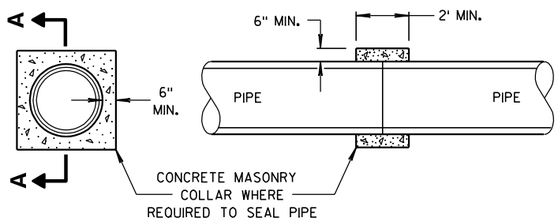
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

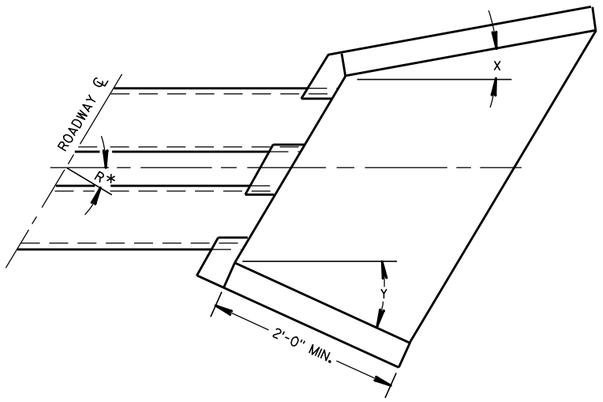
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
89
FHWA

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S.D.D. 8 F 4-7

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S.D.D. 8 F 4-7



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

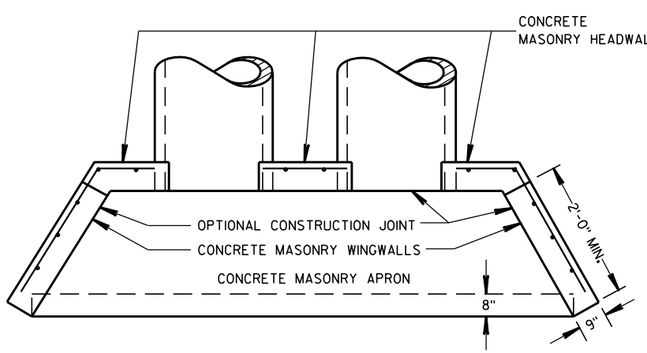
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

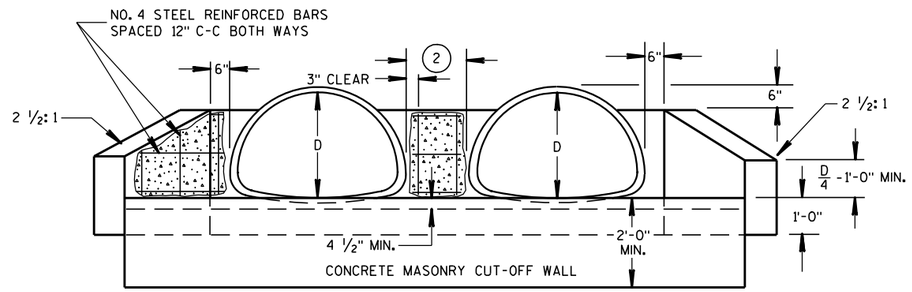
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



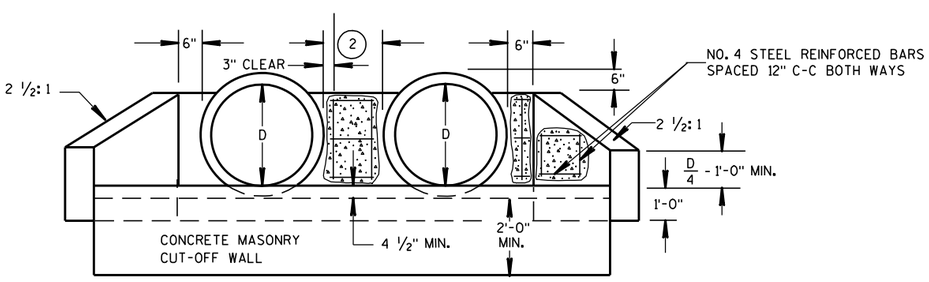
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



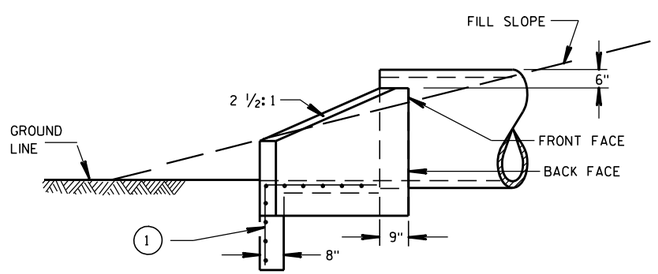
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/14/98 — DATE

/S/ Rory L. Rhinehart — CHIEF ROADWAY DEVELOPMENT ENGINEER

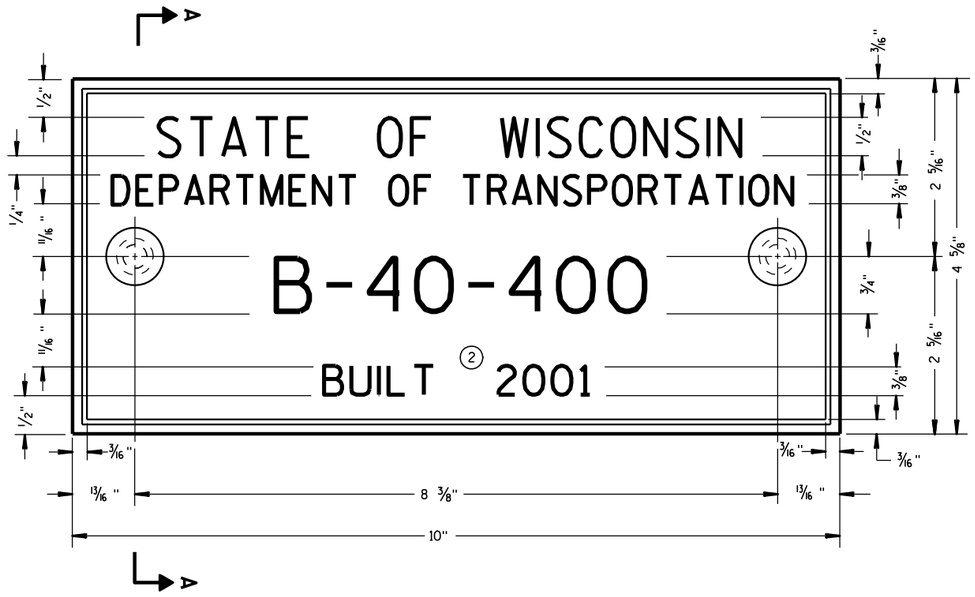
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S.D.D. 8 F 10-1

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S.D.D. 8 F 10-1



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

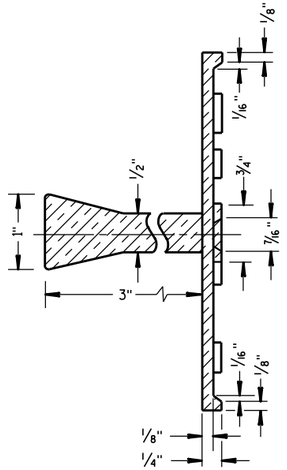
GENERAL NOTES

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

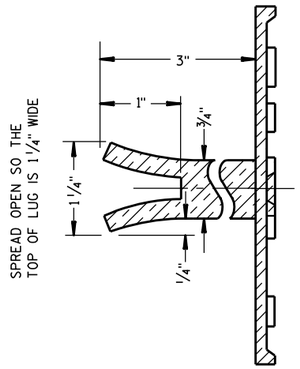
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

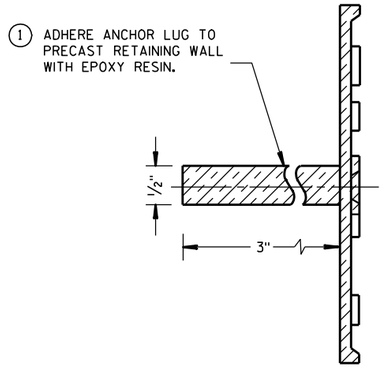
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

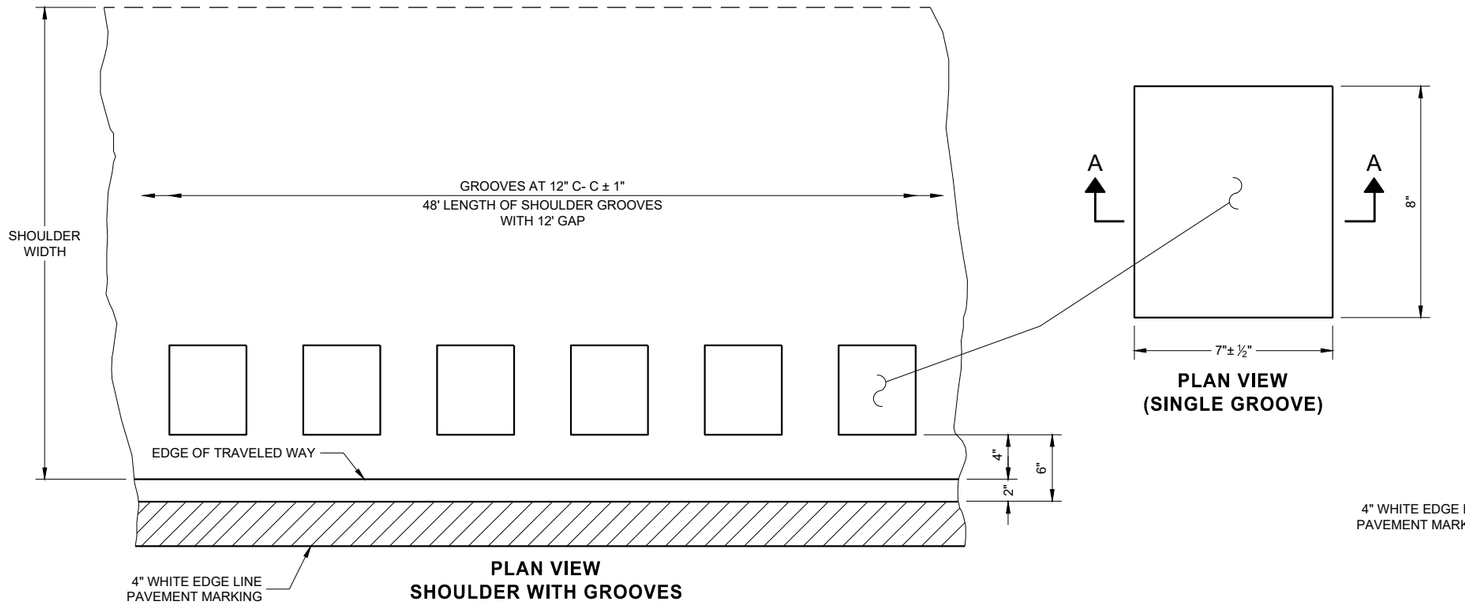
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

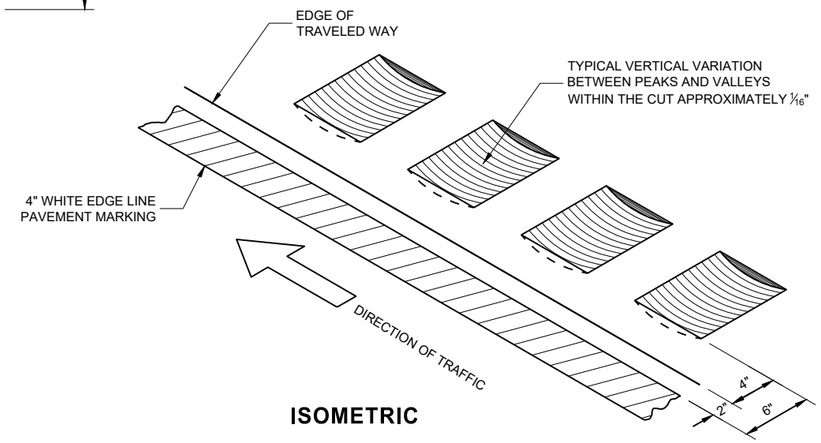
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

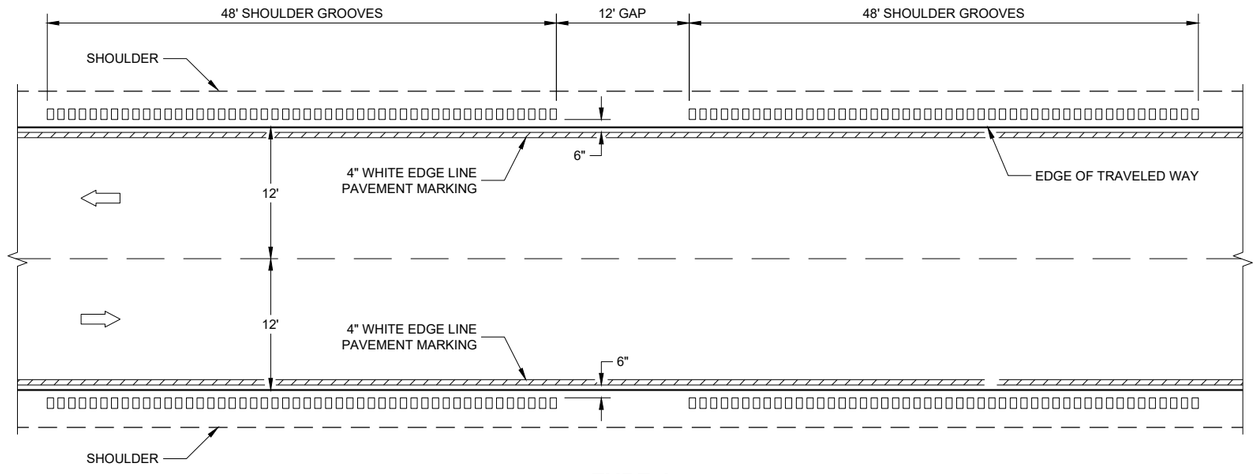
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

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

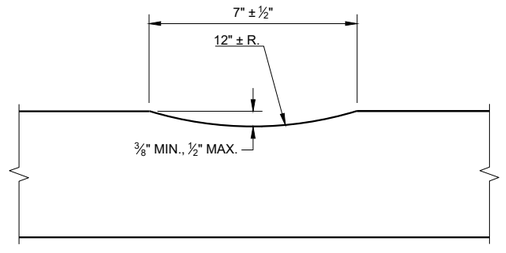


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



TYPE 1
2 - LANE SHOULDER RUMBLE STRIP



SECTION A - A

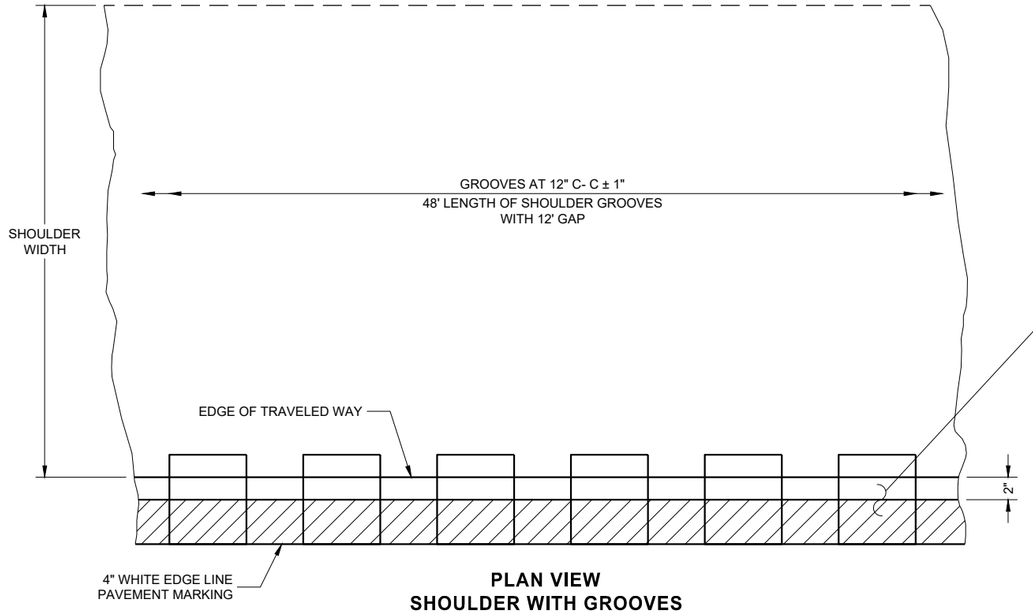
2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

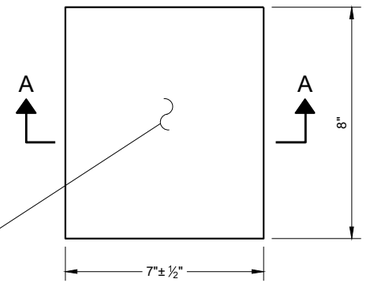
SDD 13A10 - 02a

6

SDD 13A10 - 02a



PLAN VIEW
SHOULDER WITH GROOVES



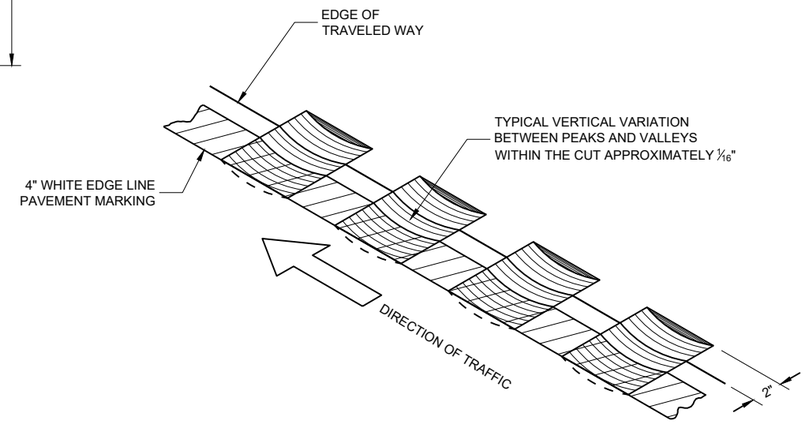
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

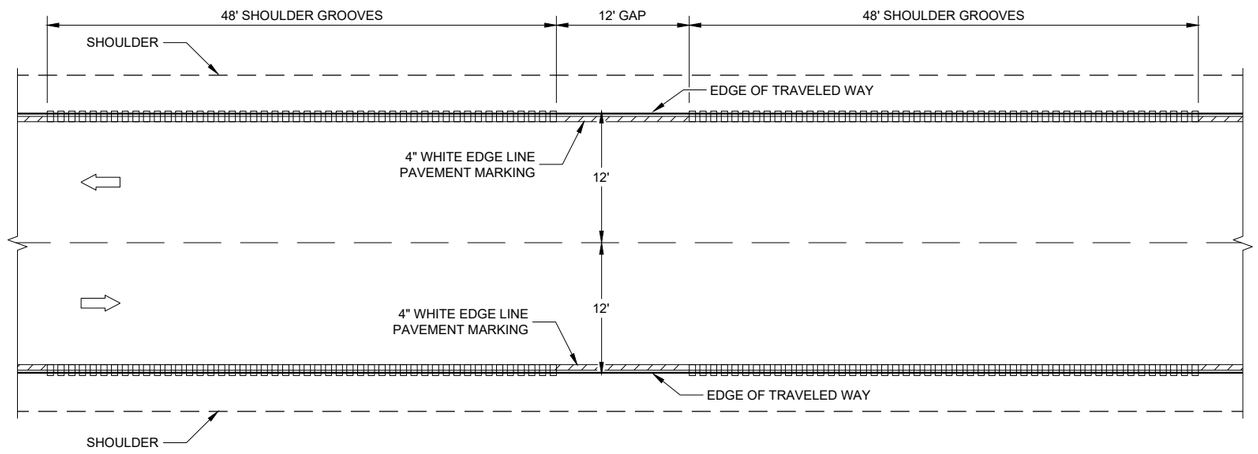
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

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

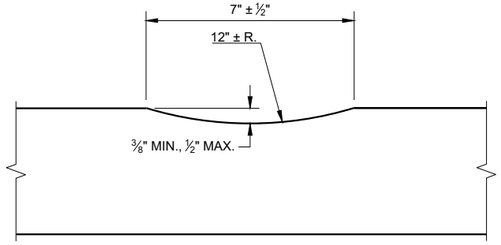


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP



TYPE 2
2 - LANE SHOULDER RUMBLE STRIP



SECTION A - A

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

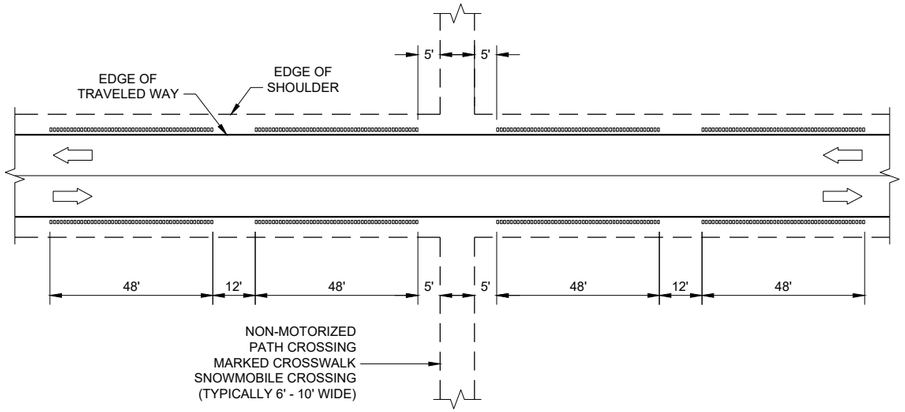
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 13A10 - 02b

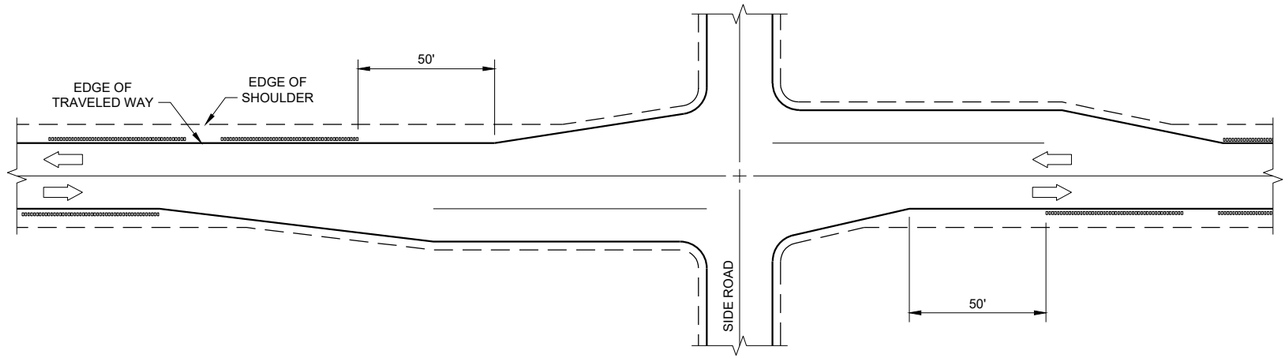
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SDD 13A10 - 02b

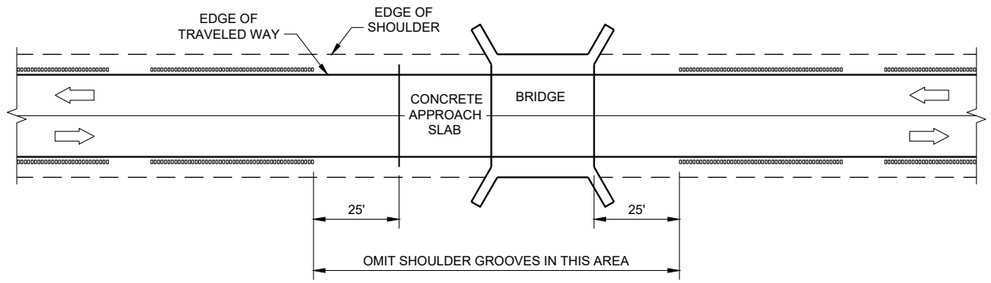
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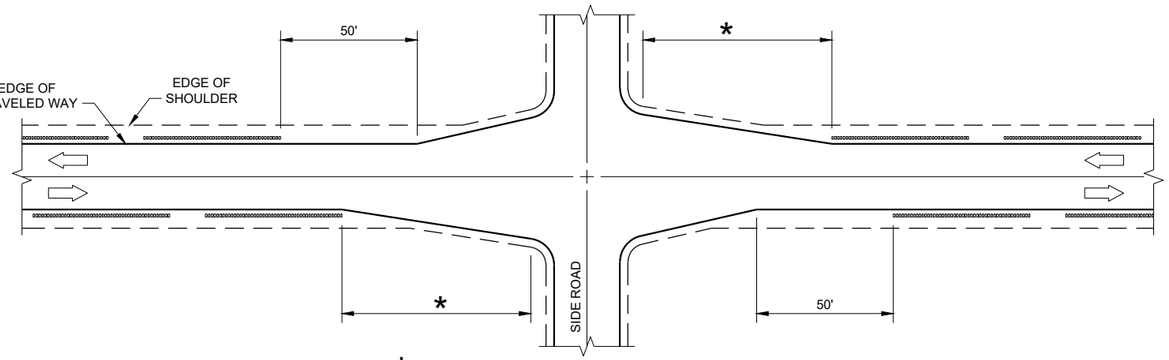
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



SHOULDER GROOVES AT RIGHT TURN LANE

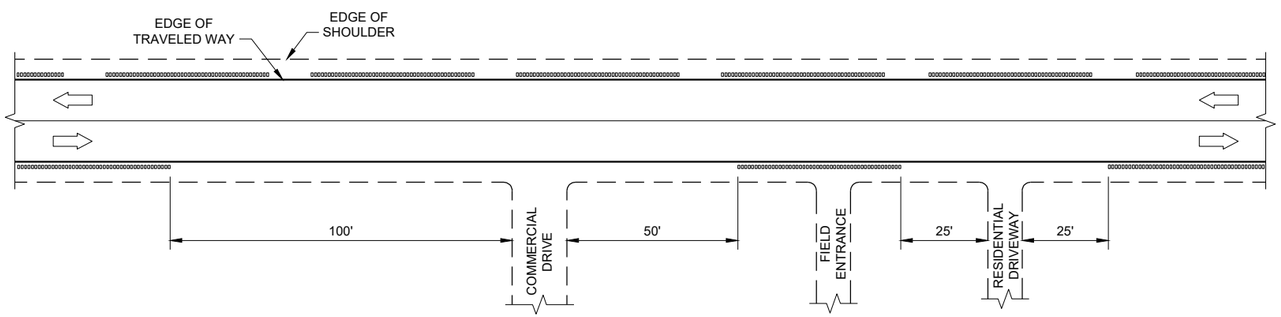


SHOULDER GROOVES AT BRIDGES



* GREATER OF 100' OR APPROACH TAPER LENGTH

SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



SHOULDER GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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

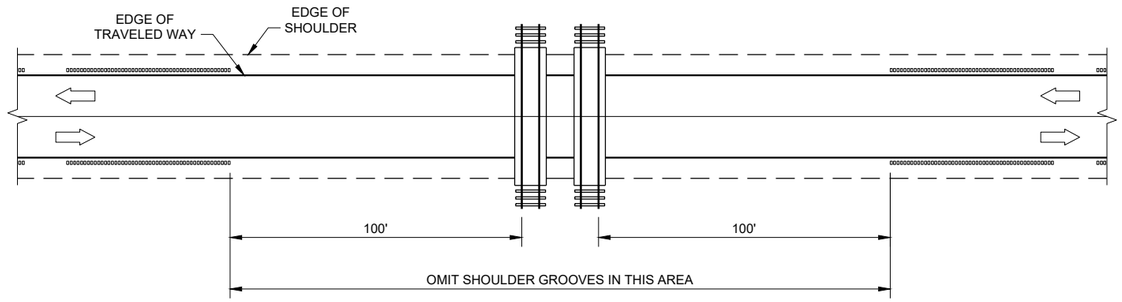
2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

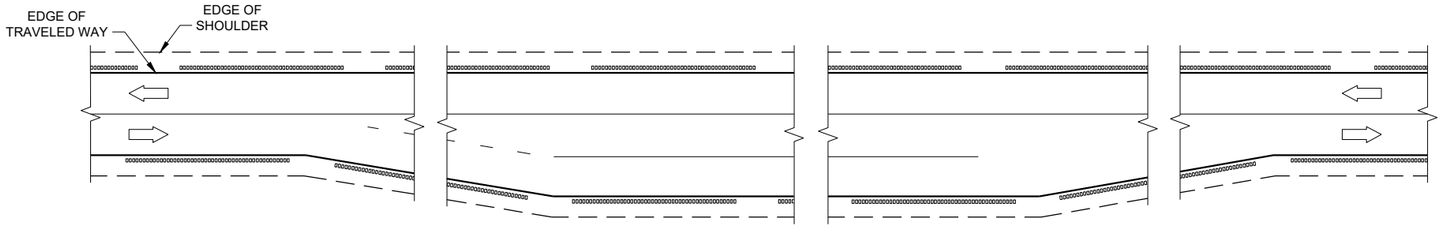
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SDD 13A10 - 02c

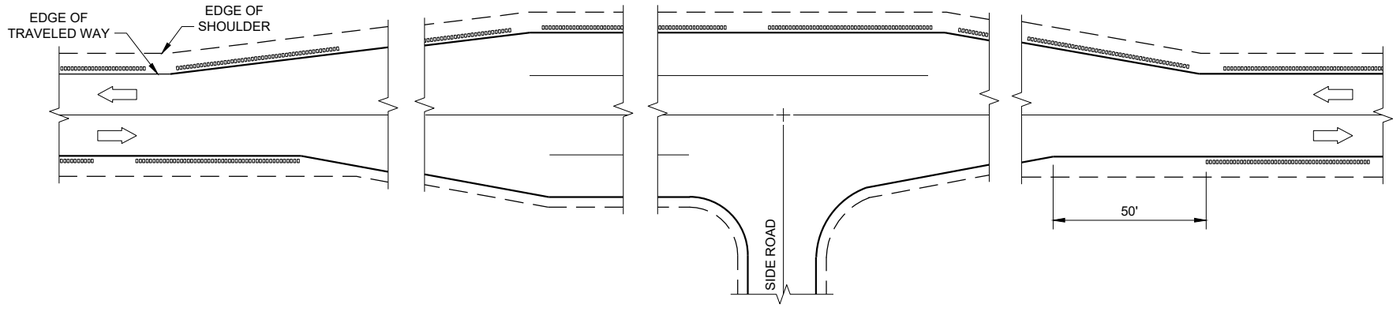
SDD 13A10 - 02c



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

6

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SDD 13A10 - 02d

SDD13A10 - 02d

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

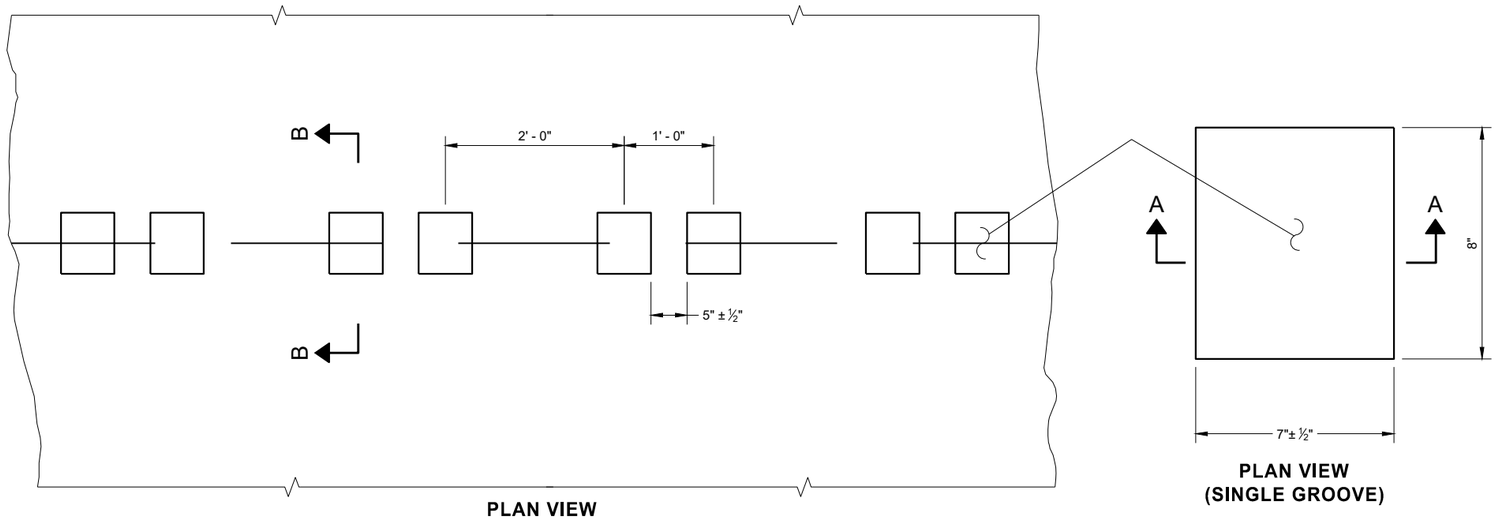
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

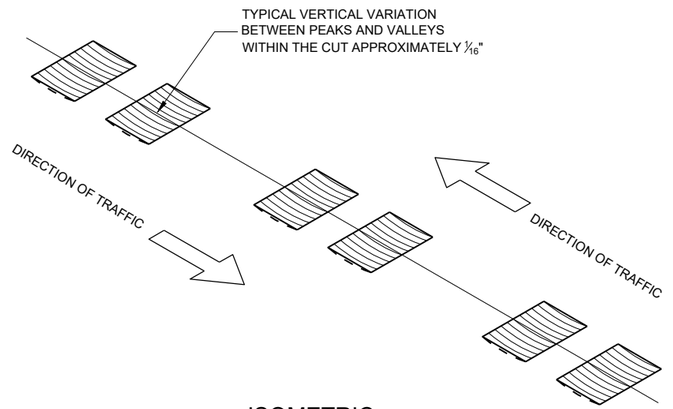
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

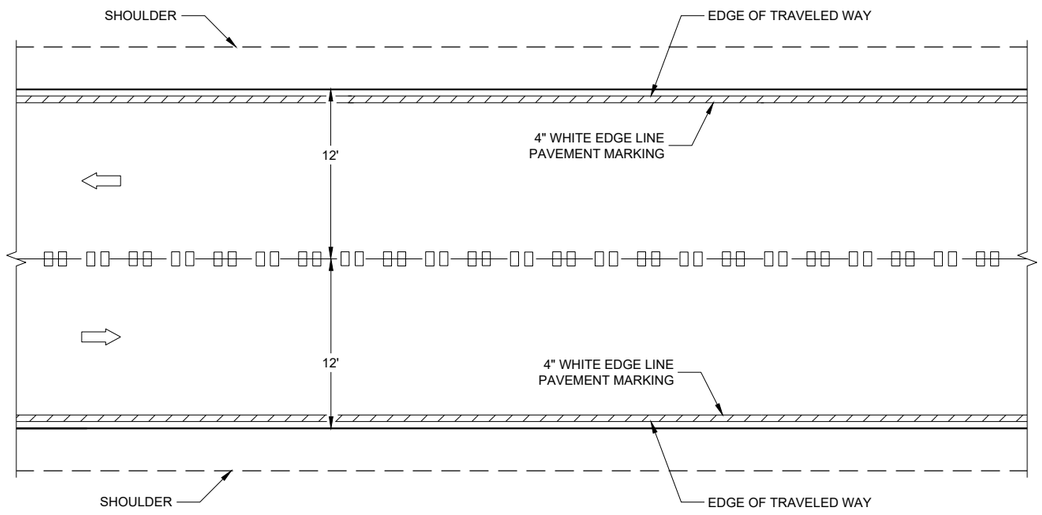
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

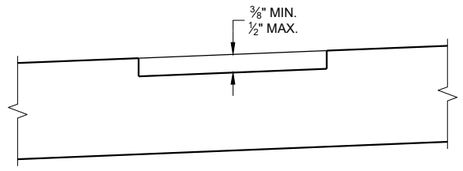
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



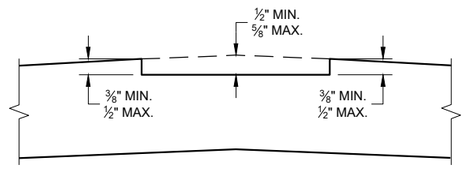
ISOMETRIC



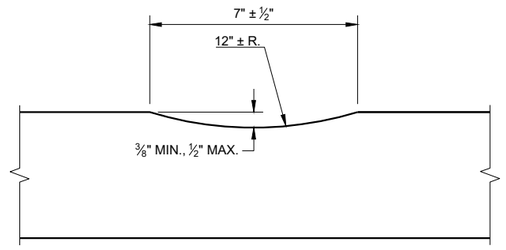
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

6

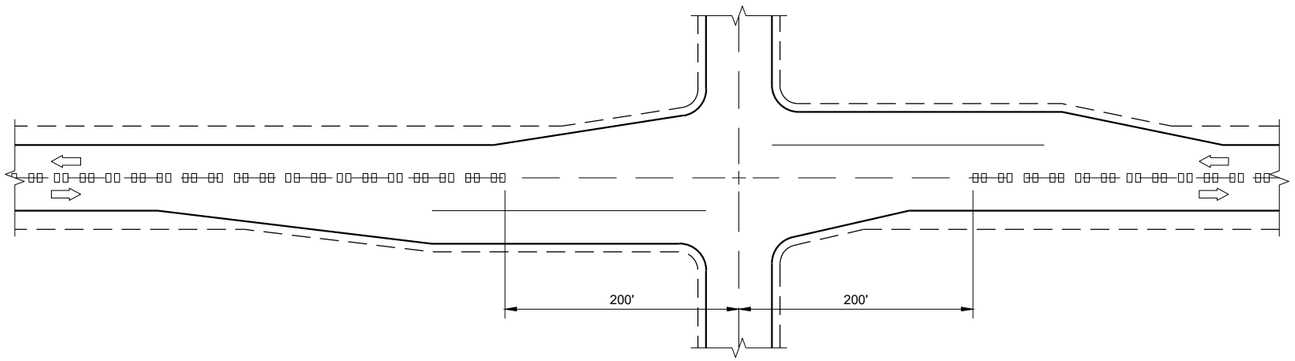
SDD 13A11 - 03a

6

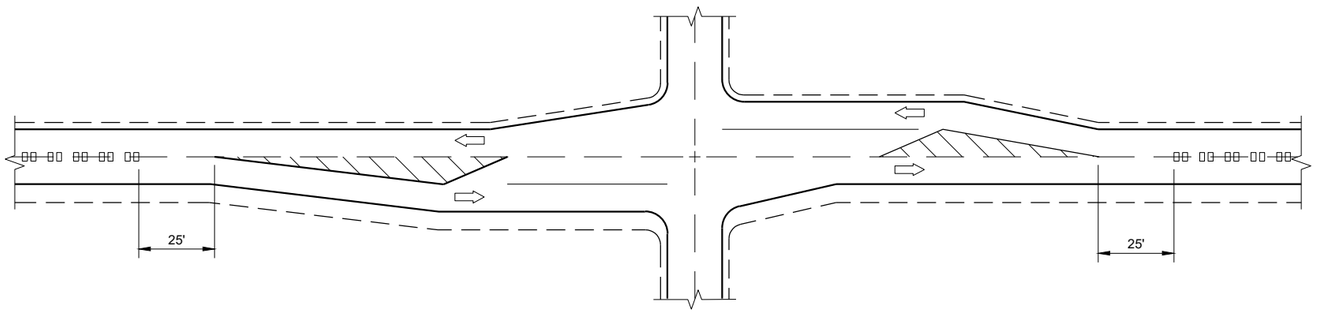
SDD 13A11 - 03a

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

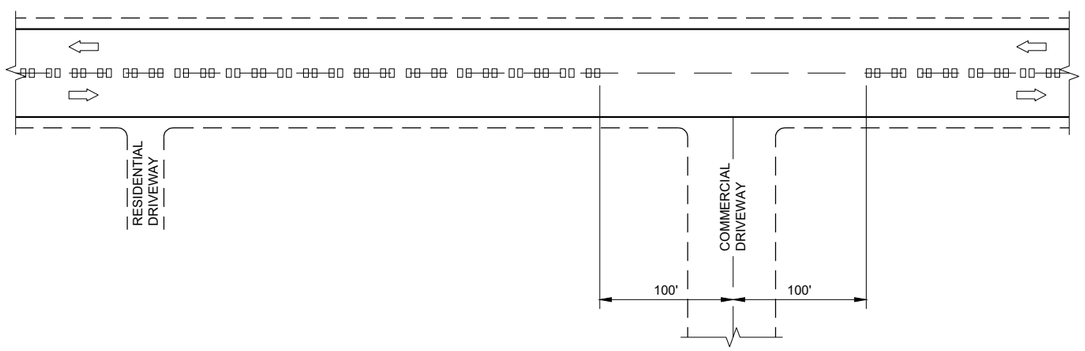
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



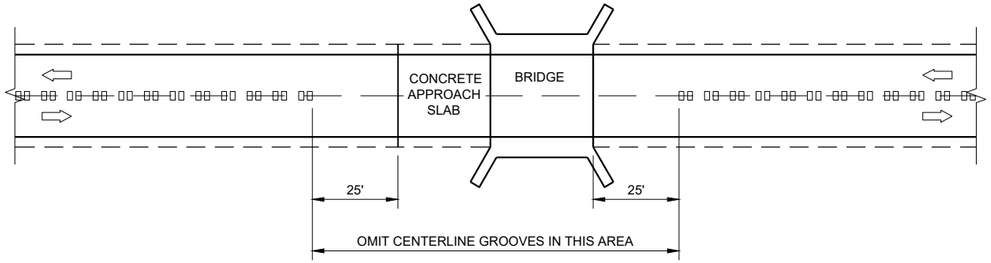
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



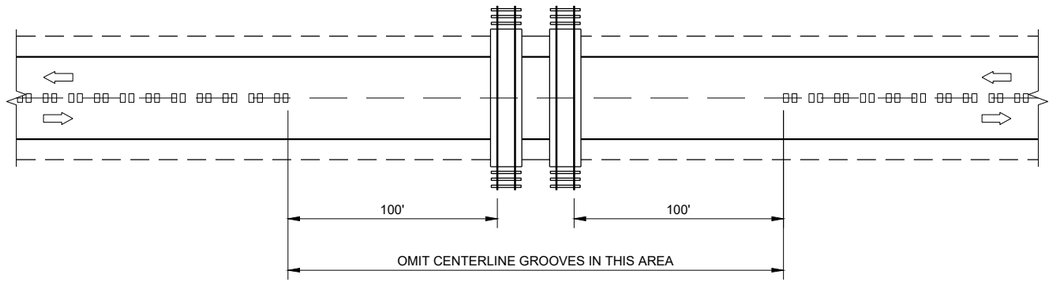
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

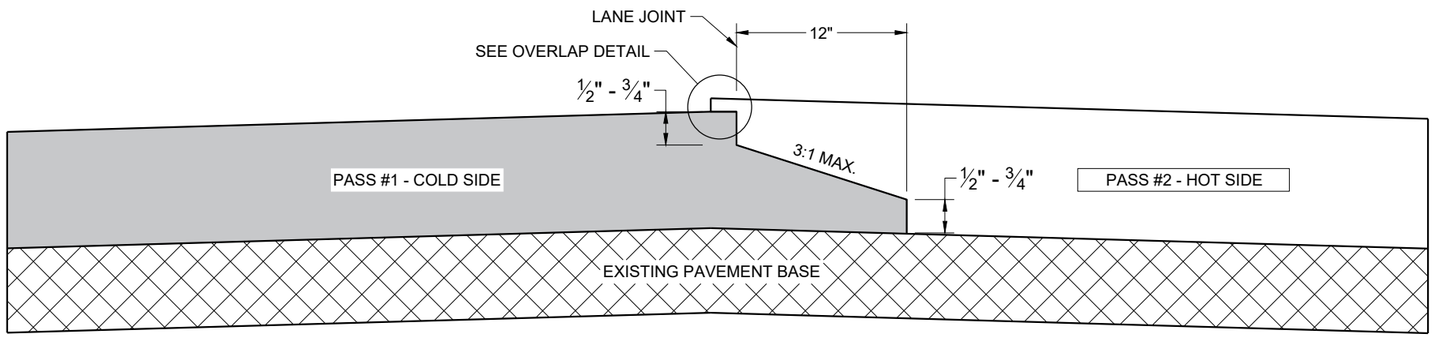
2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

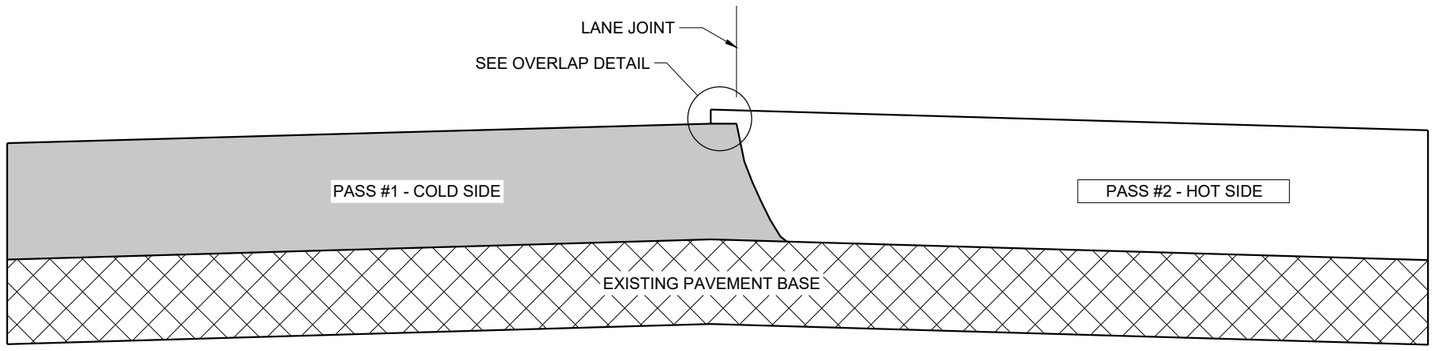
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

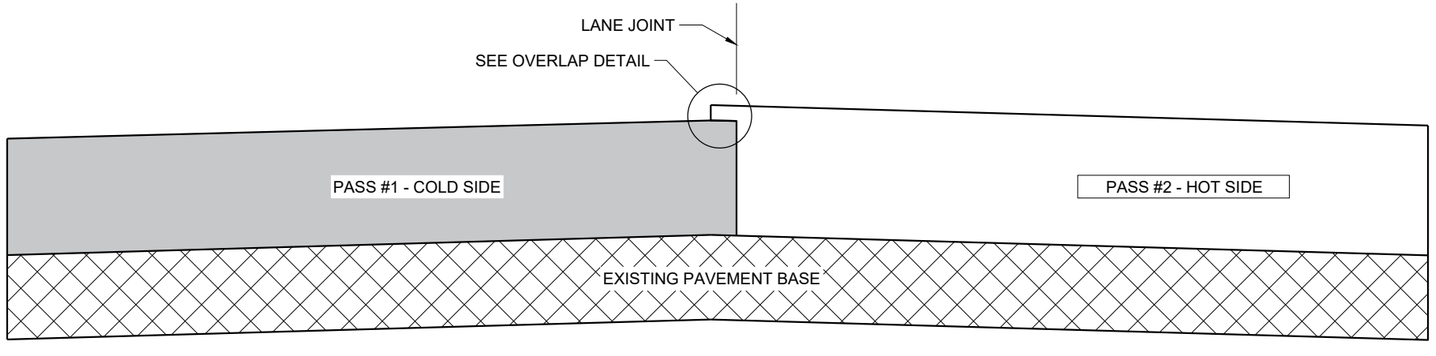
6
SDD 13A11 - 03b



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
OF MILLED LONGITUDINAL JOINT

GENERAL NOTES

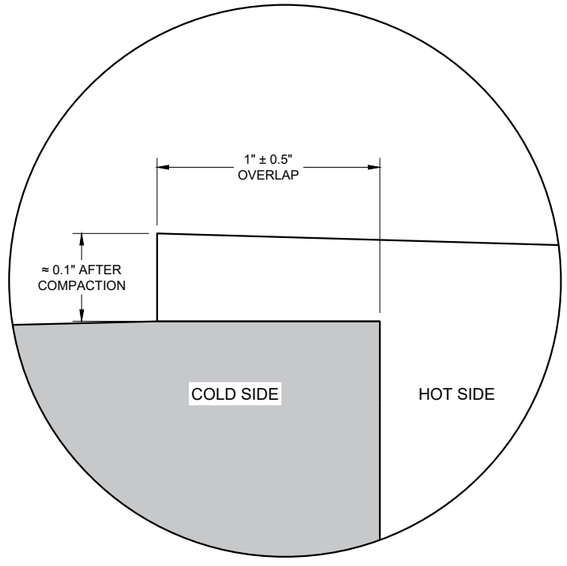
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 02

SDD 13C19 - 02

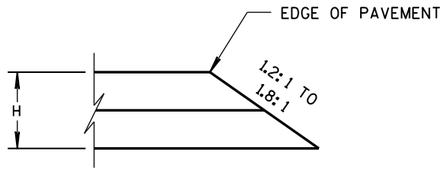
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

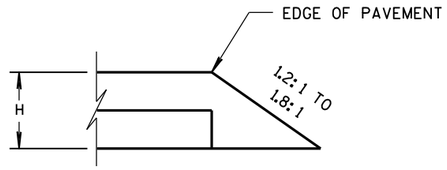
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



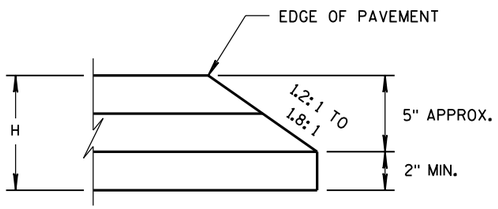
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



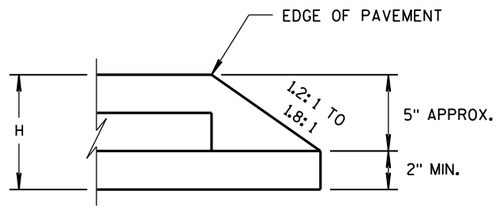
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

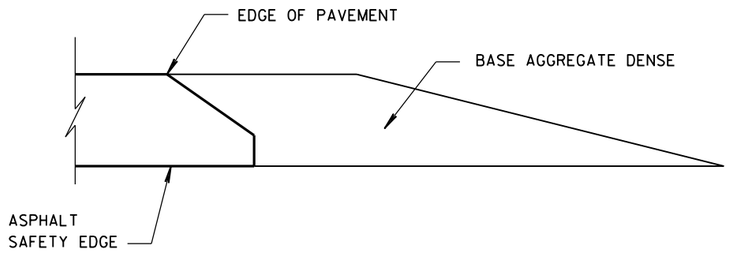
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

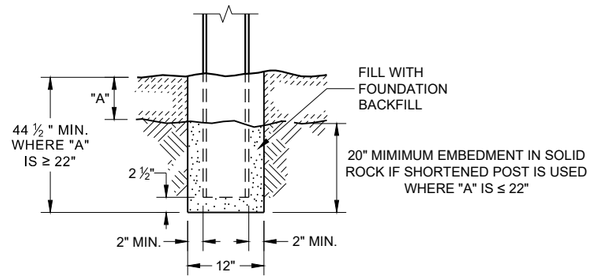
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

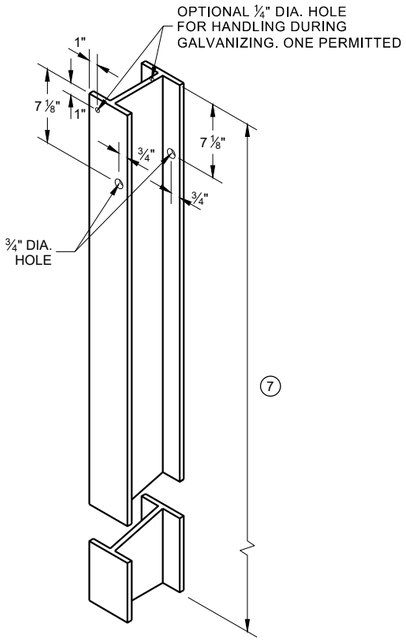
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

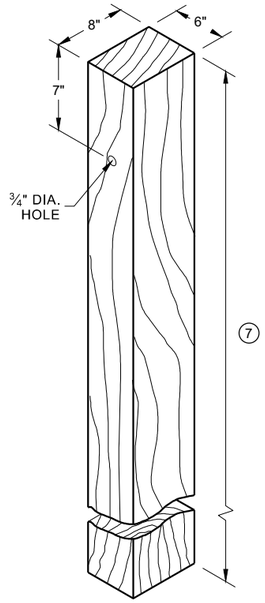
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



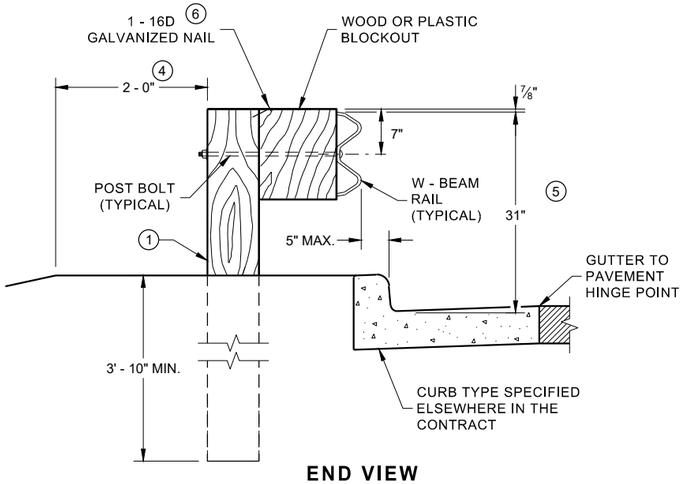
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



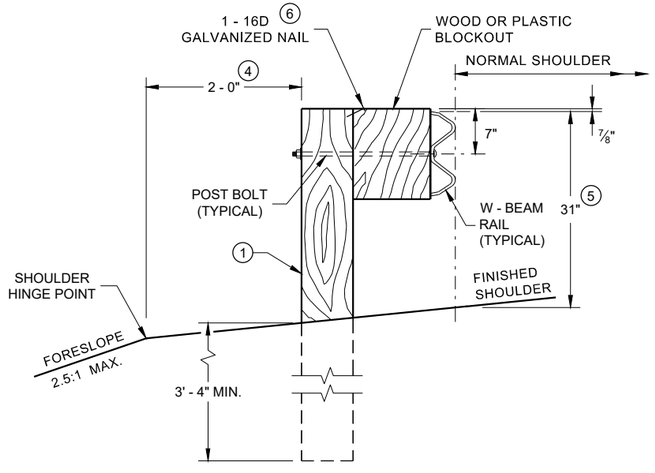
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



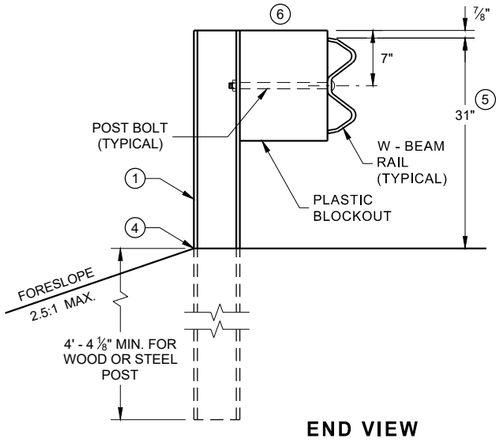
WOOD POST (6" X 8") NOMINAL (1)



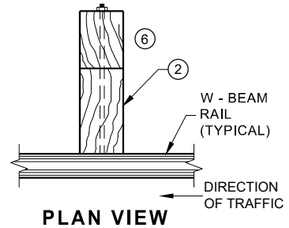
END VIEW
LOCATED ALONG A CURBED ROADWAY



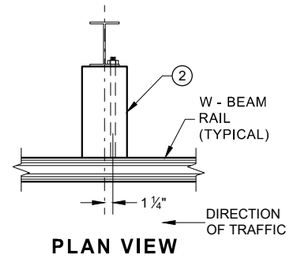
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



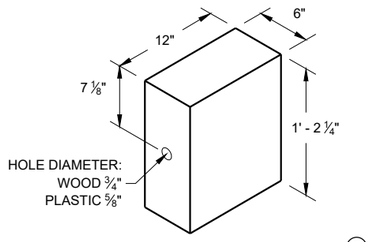
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

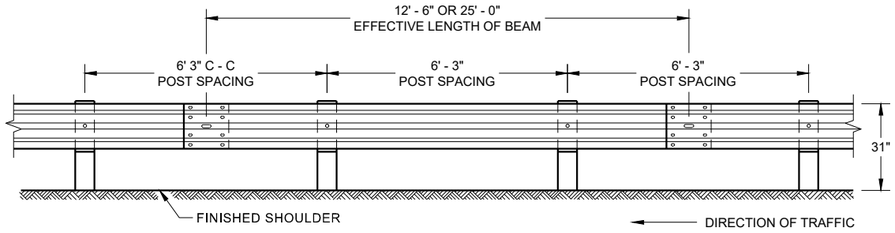
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

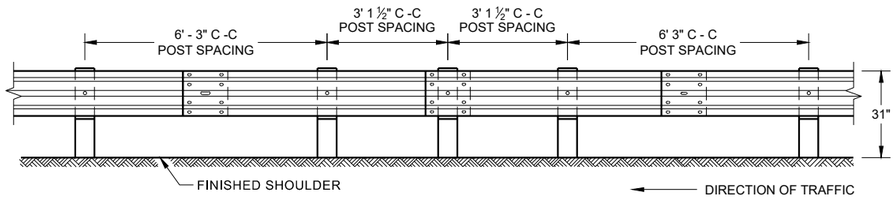
SDD 14B42 - 06a

6

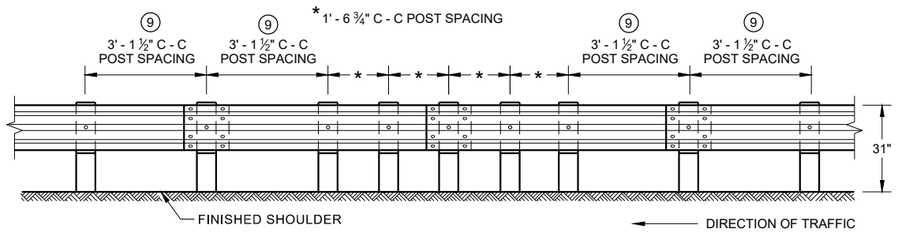
SDD 14B42 - 06a



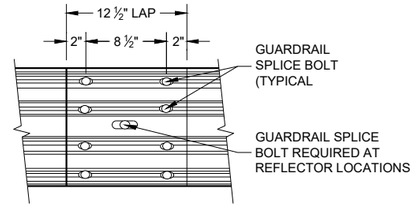
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

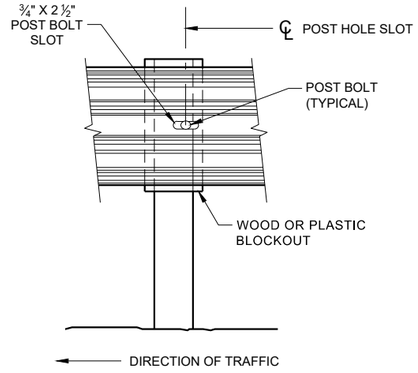
GENERAL NOTES

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

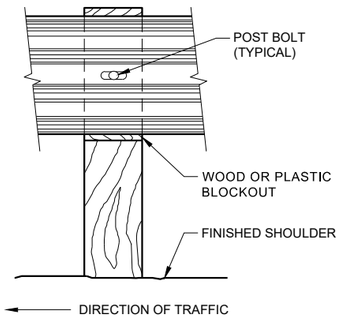
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

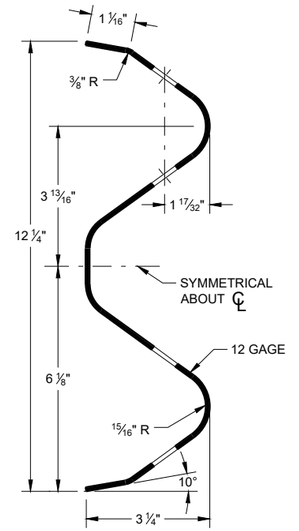
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



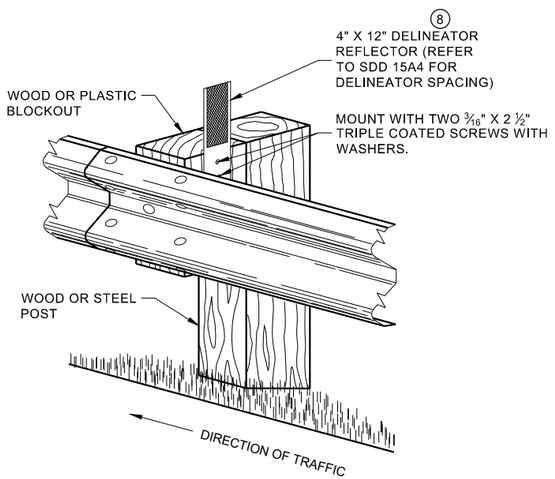
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



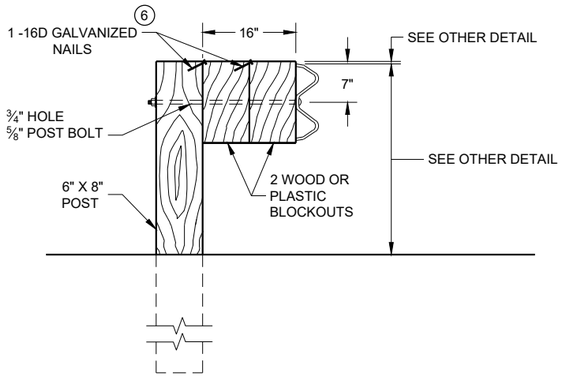
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

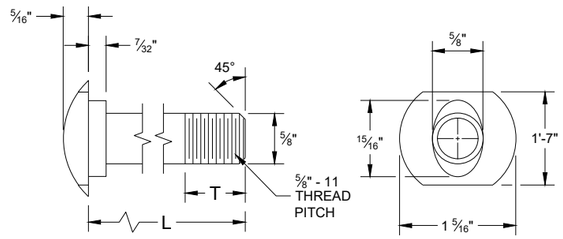


DETAIL FOR 16" BLOCKOUT DEPTH

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

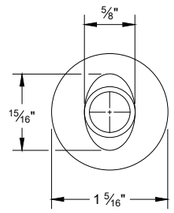
NOTE:

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

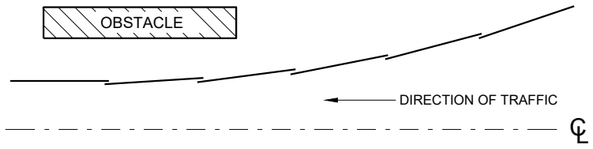


POST BOLT TABLE

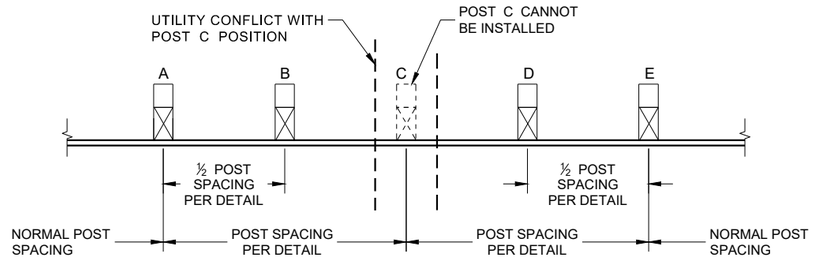
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



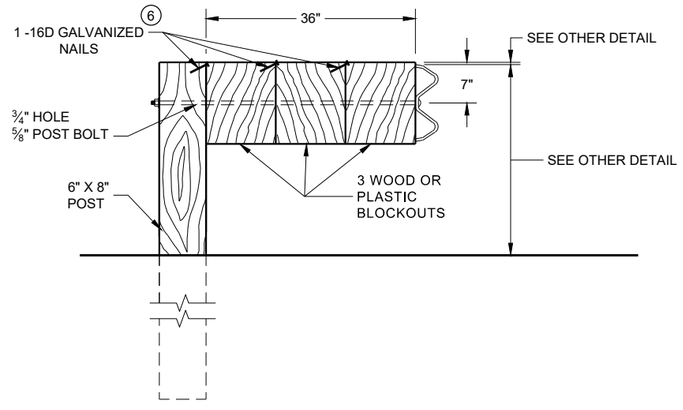
ALTERNATE BOLT HEAD



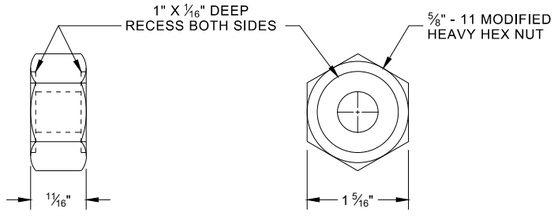
PLAN VIEW
BEAM LAPPING DETAIL



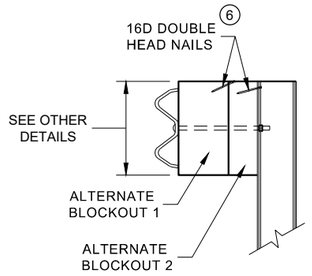
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



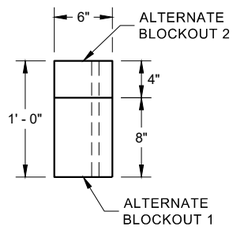
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

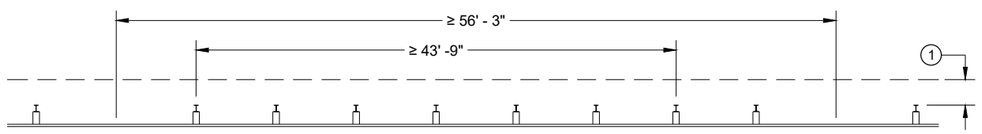
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

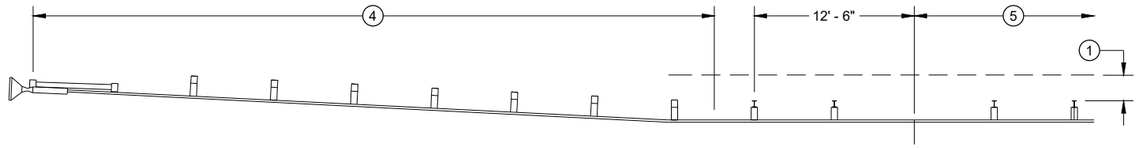
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

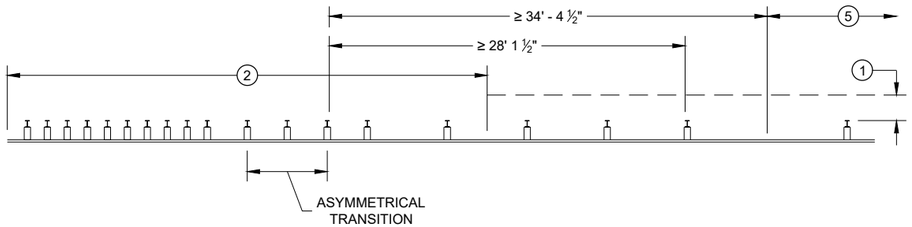
SDD 14B42 - 06c



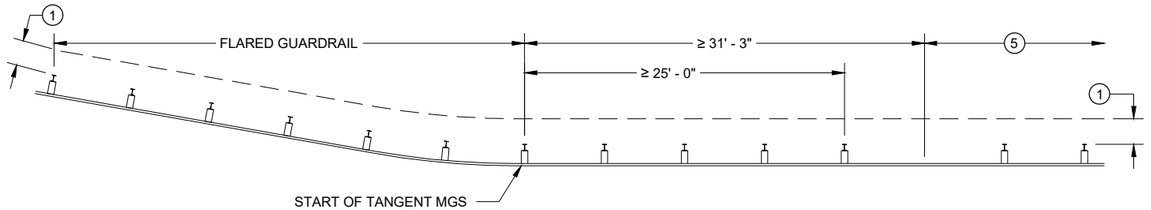
MISSING POST IN NORMAL BEAM GUARD RUN



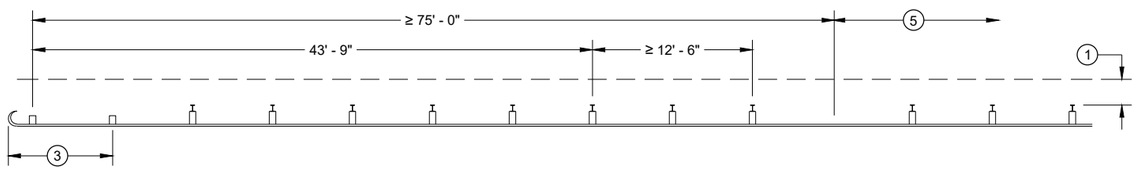
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



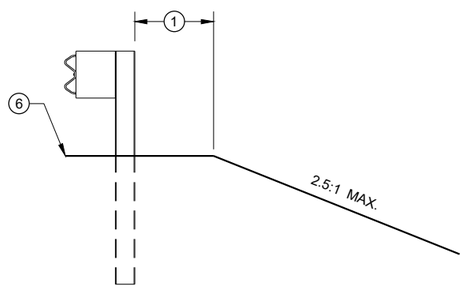
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B42 - 06d

6

SDD 14B42 - 06d

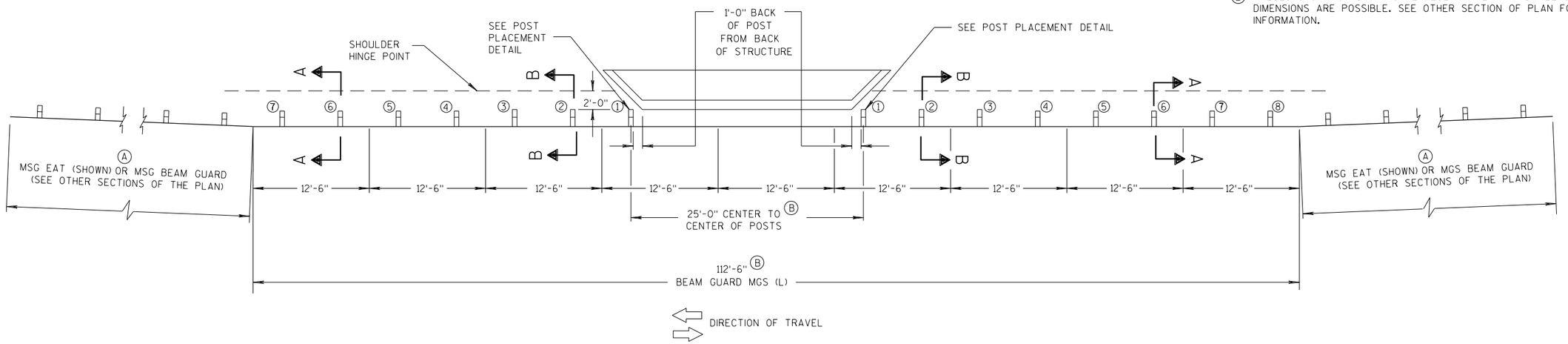
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

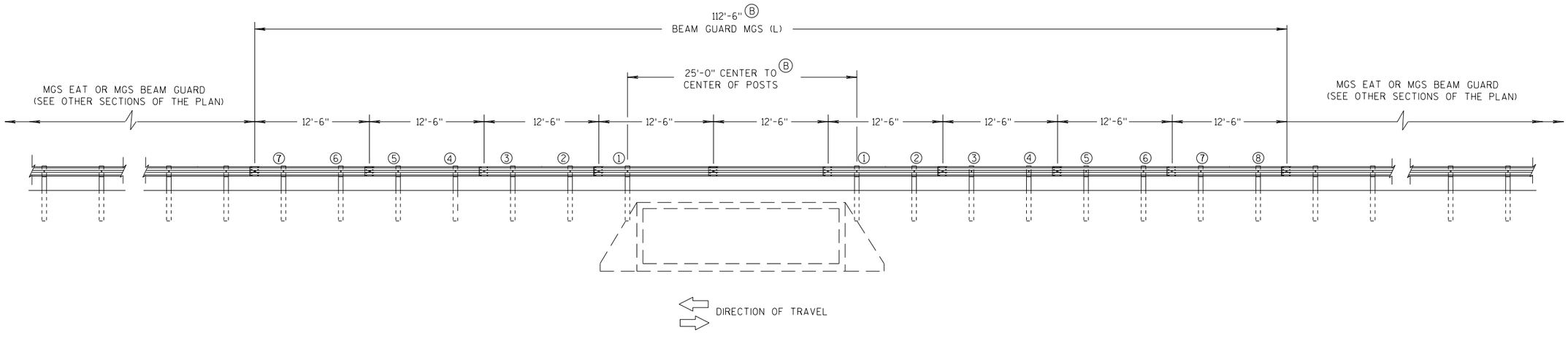
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 43-4a

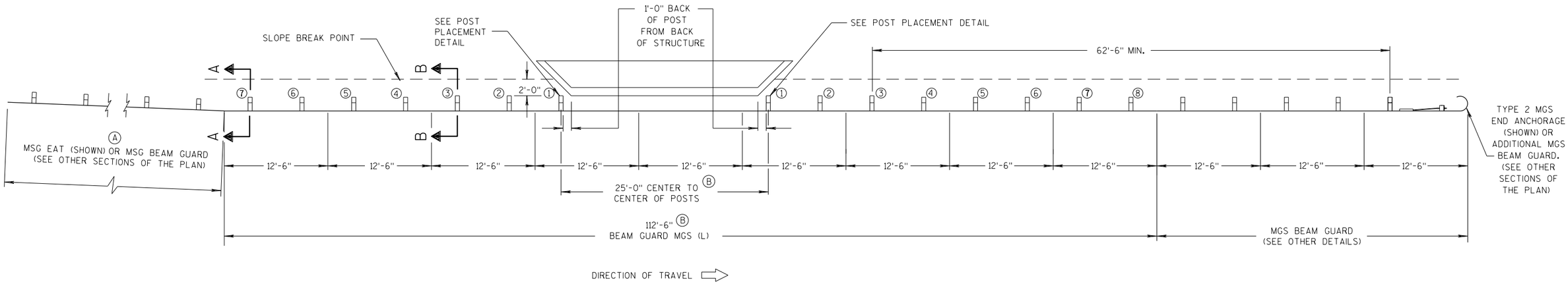
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
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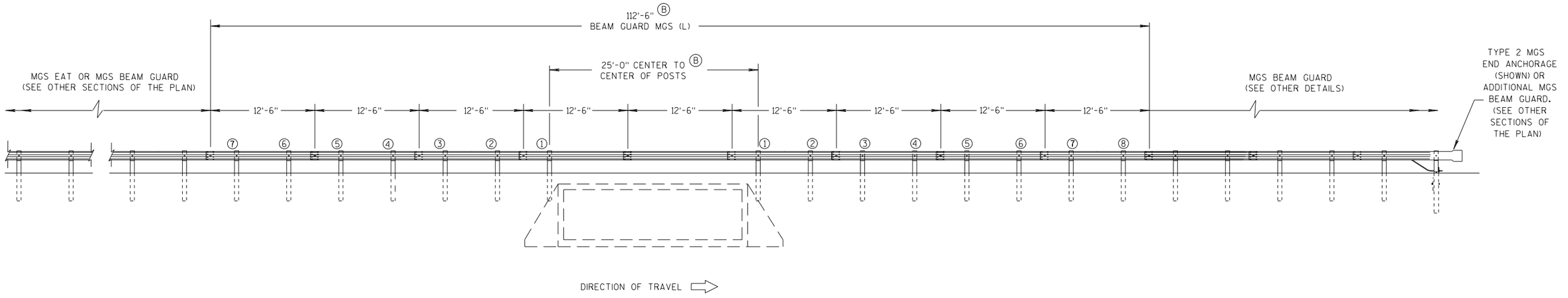
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

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PLAN VIEW



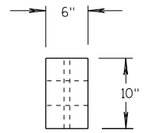
ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

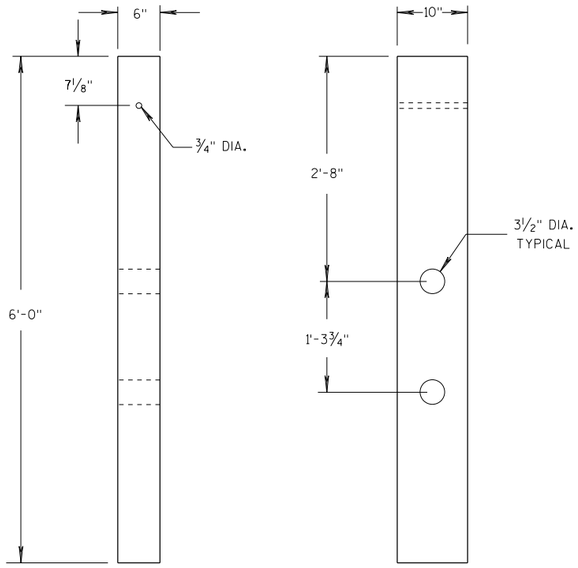
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	105

6

S.D.D. 14 B 43-4b

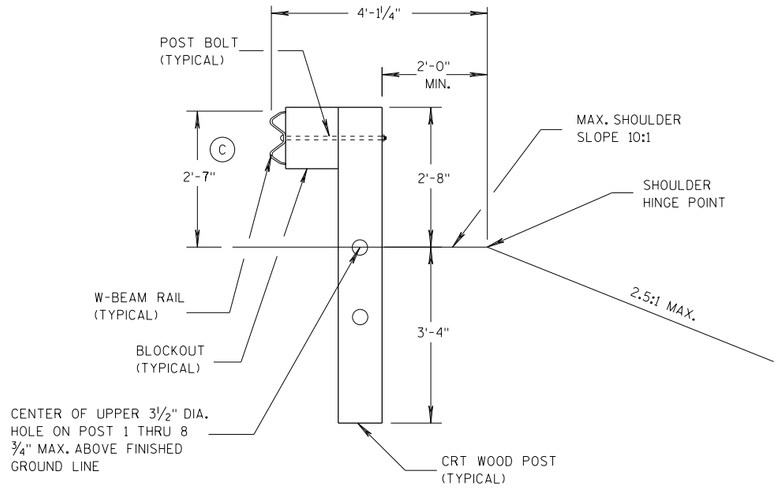


PLAN VIEW



FRONT VIEW SIDE VIEW

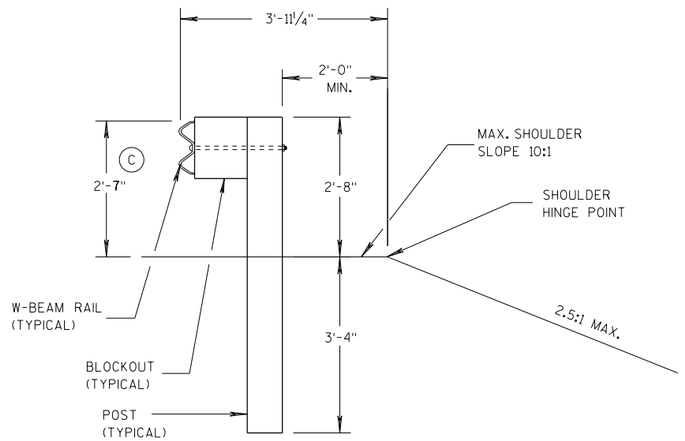
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



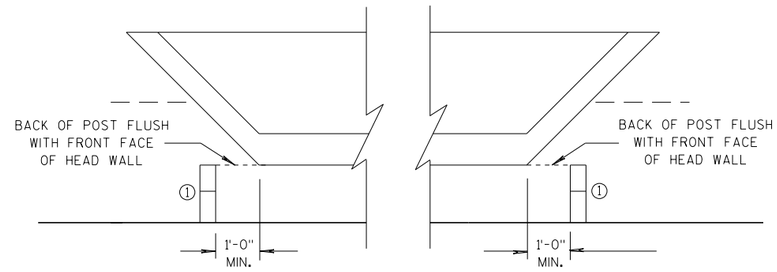
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

106

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

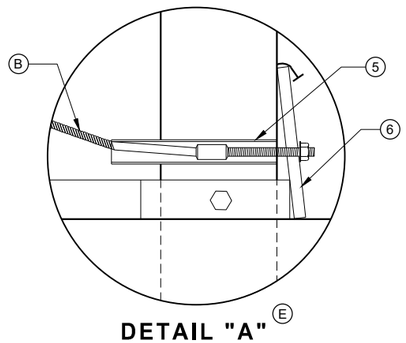
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

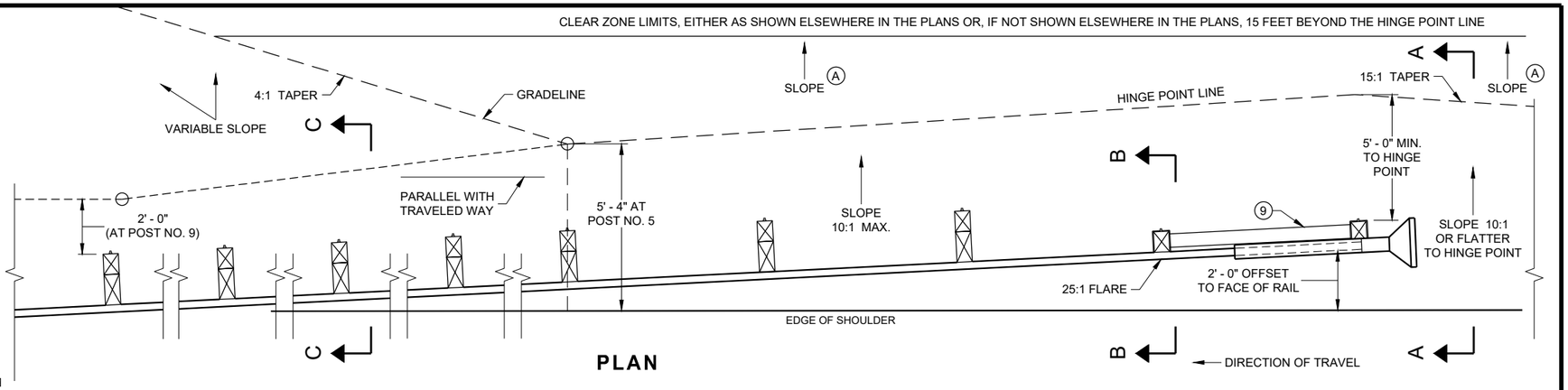
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

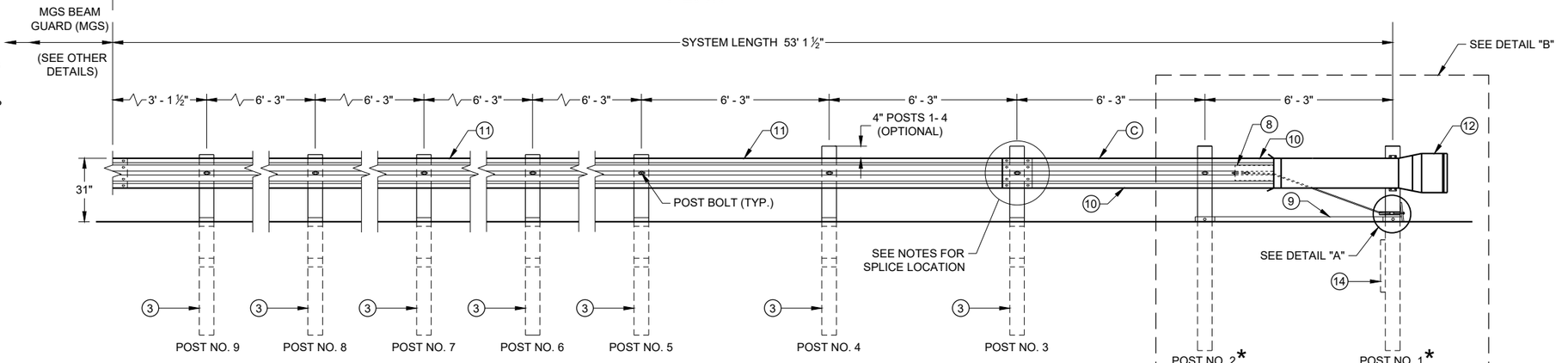
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



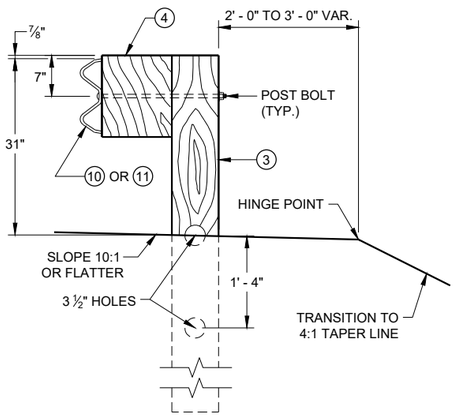
DETAIL "A" (E)



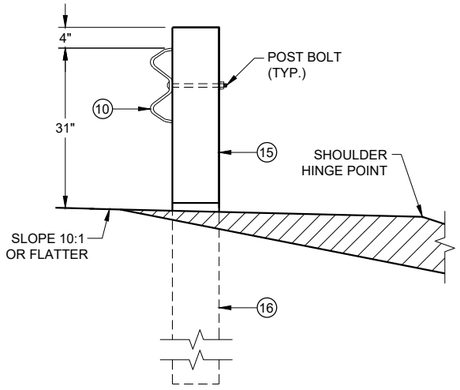
PLAN



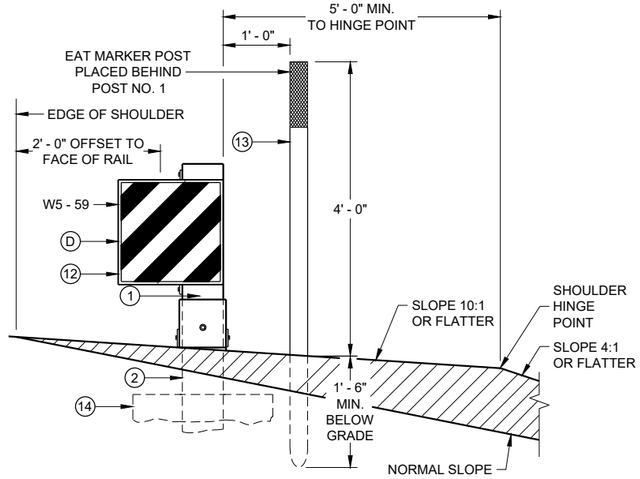
ELEVATION



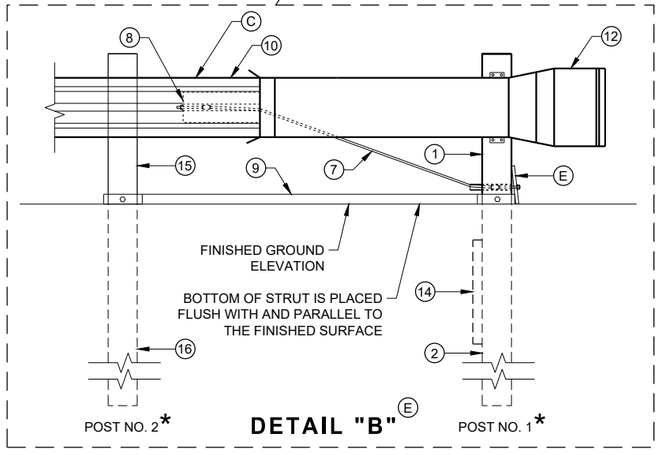
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



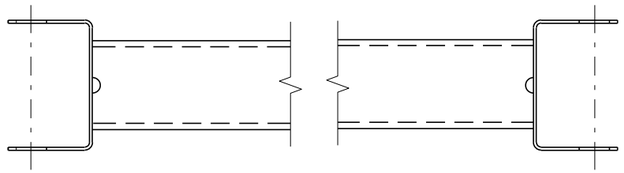
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

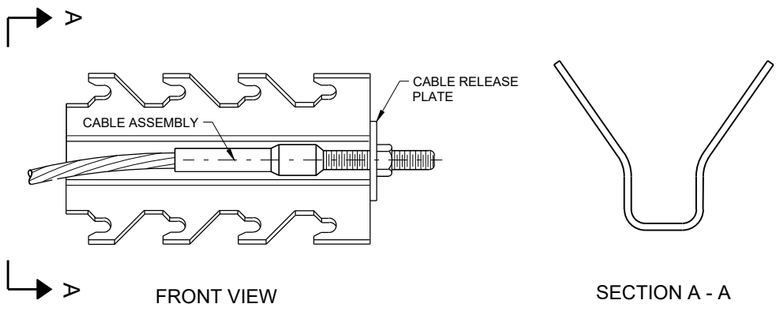
SDD 14B44 - 04a



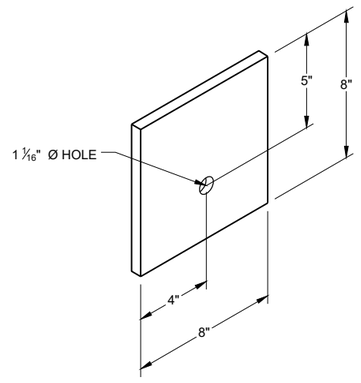
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

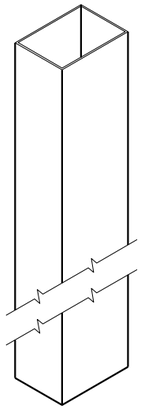
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SDD 14B44 - 04b

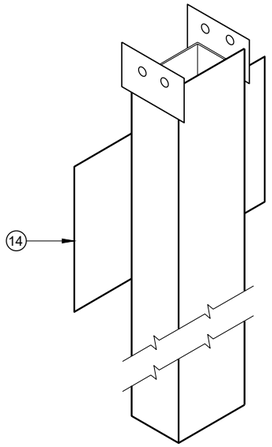
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

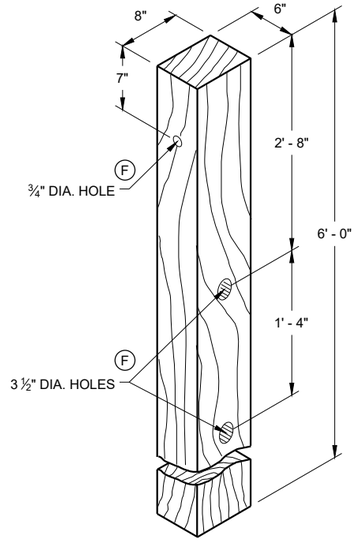
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



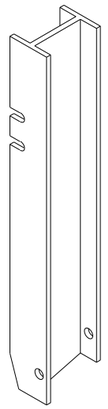
UPPER POST NO. 1 (1) (E)



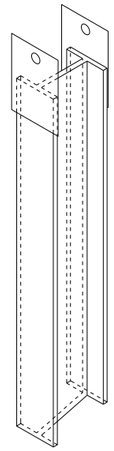
LOWER POST NO. 1 (2) (E)



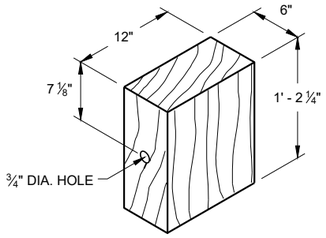
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



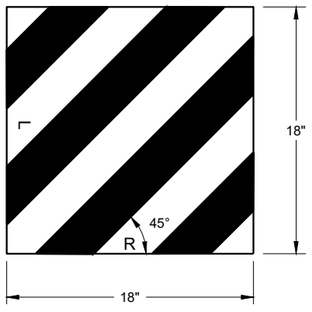
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

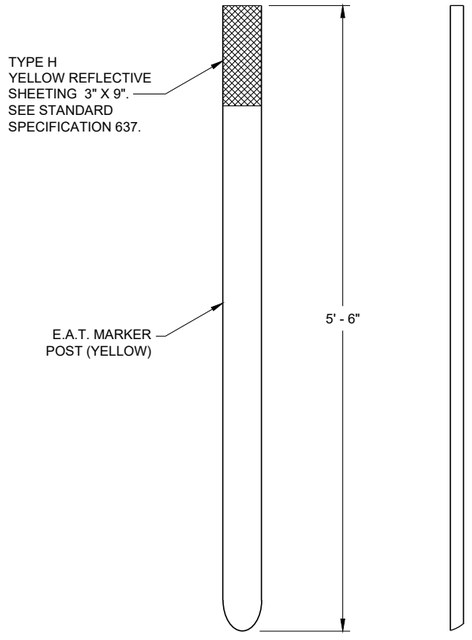


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



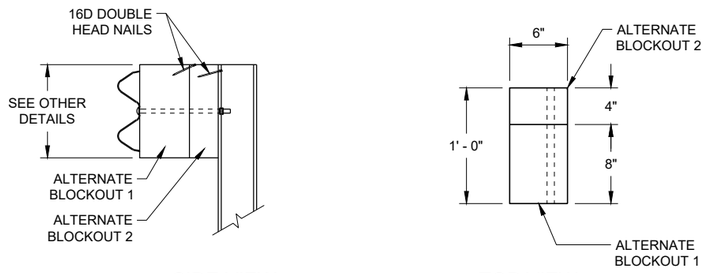
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

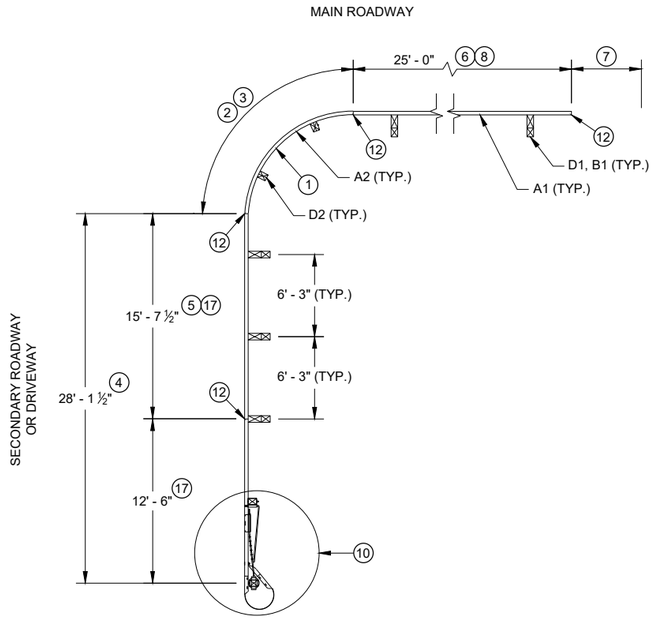
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

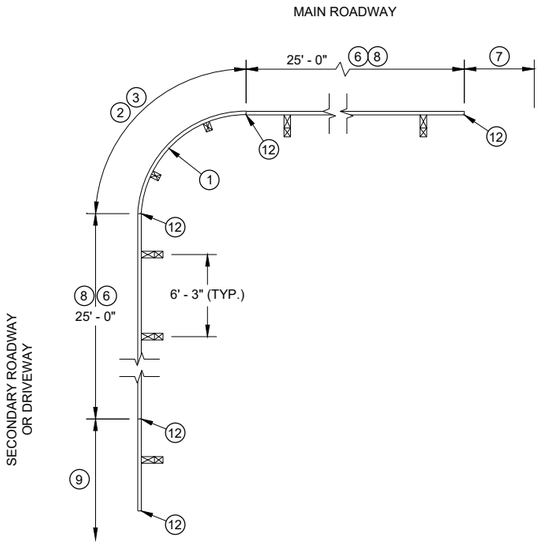
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SDD 14B44 - 04c



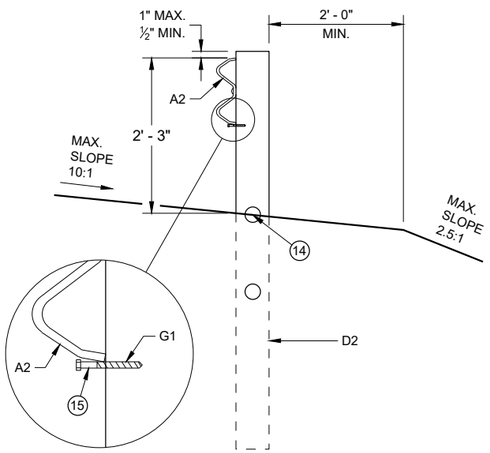
PLAN VIEW

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

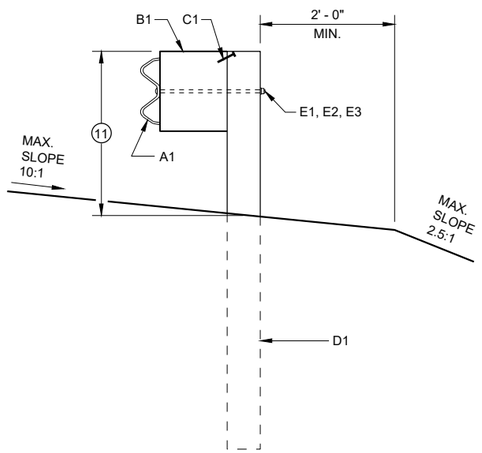


PLAN VIEW

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



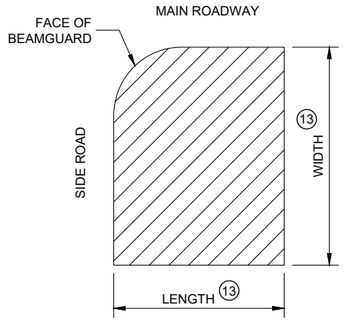
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



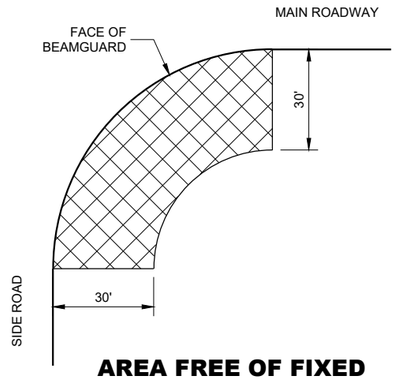
BEAM GUARD POSTS IN HEIGHT TRANSITION

TABLE FOR RADIUS OF 32' AND LESS

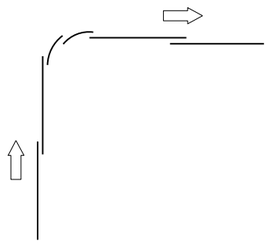
RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30



AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS 16



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

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

GALVANIZE PARTS AFTER FABRICATION.

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

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

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

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

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

DRAWINGS ARE NOT TO SCALE.

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

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

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

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

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

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

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

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

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

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

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

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

(13) SEE TABLE FOR VALUES.

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

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

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

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

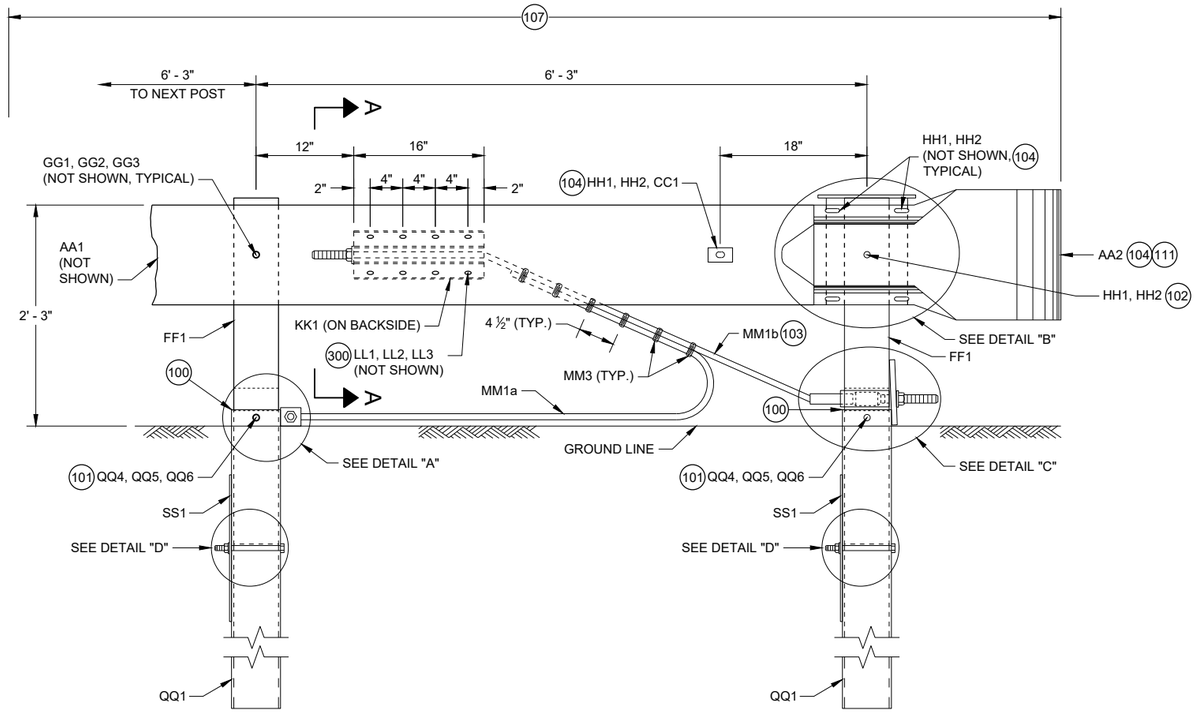
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

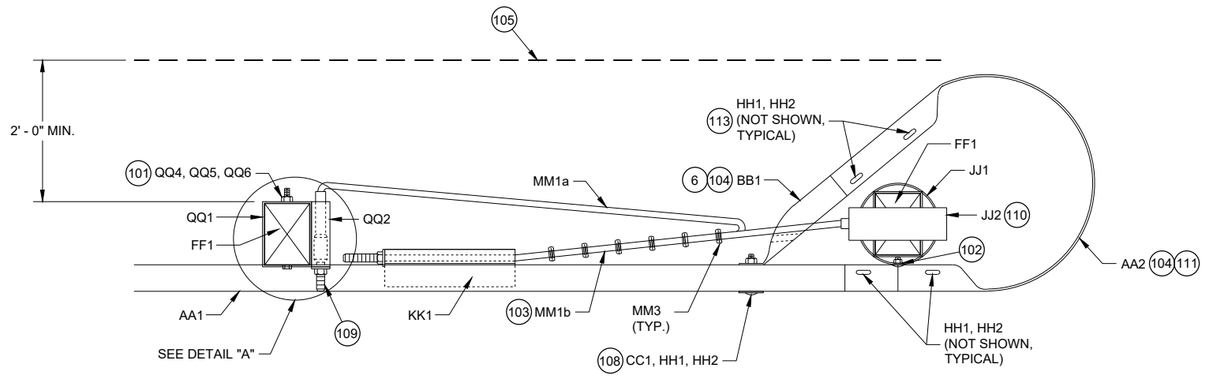
SDD 14B53 - 01a

SDD 14B53 - 01a



PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

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

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

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

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

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

107 PAY LIMIT FOR BEAM GUARD.

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

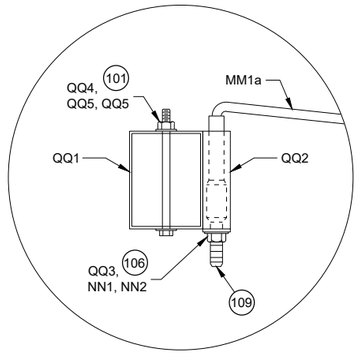
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

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

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

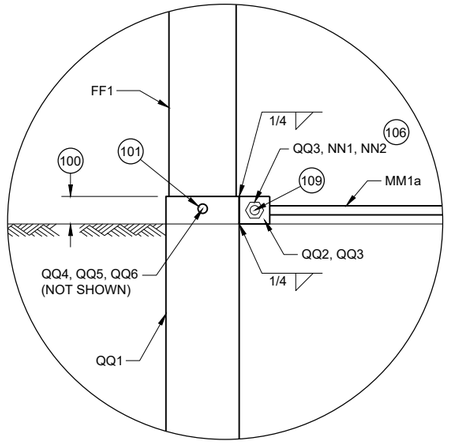
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

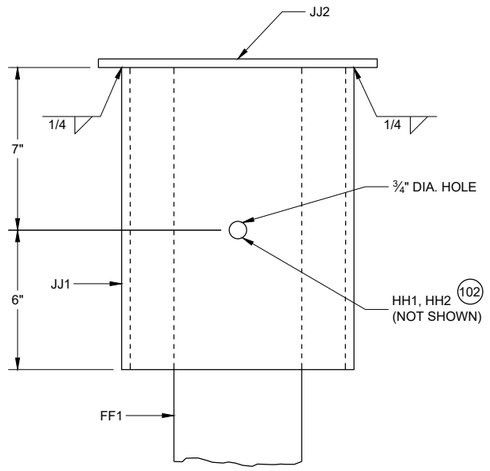
SDD 14B53 - 01b

6

SDD 14B53 - 01b

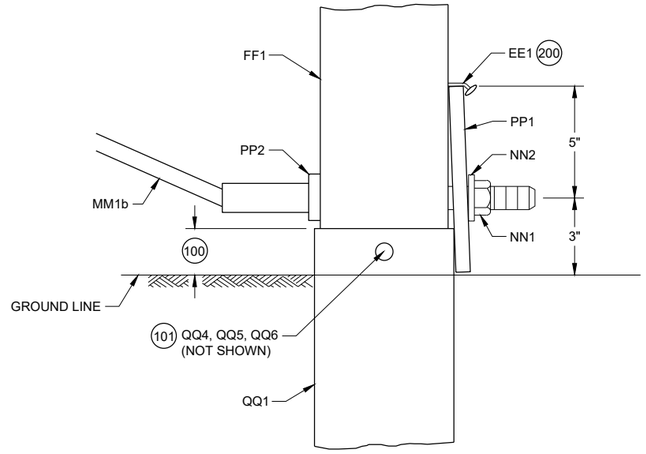
GENERAL NOTES

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



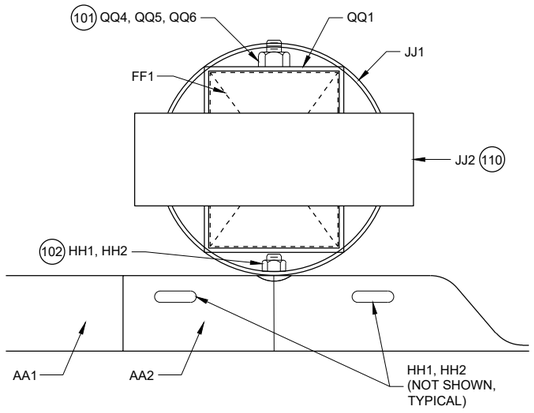
PROFILE VIEW

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



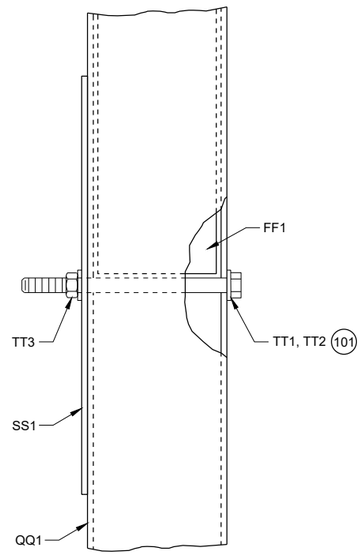
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

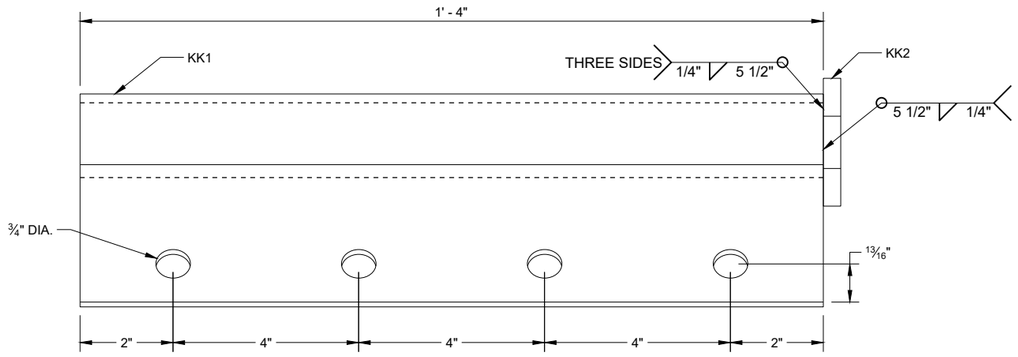
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

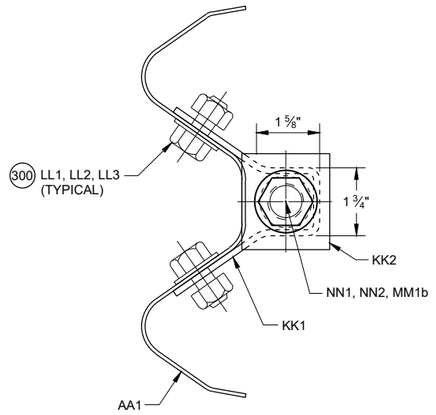
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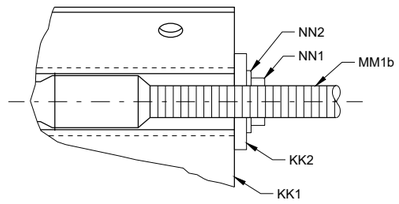
SDD 14B53 - 01c

GENERAL NOTES

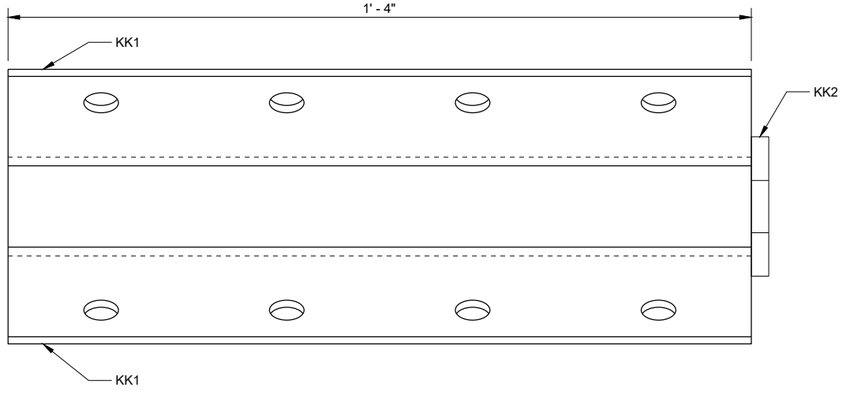
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

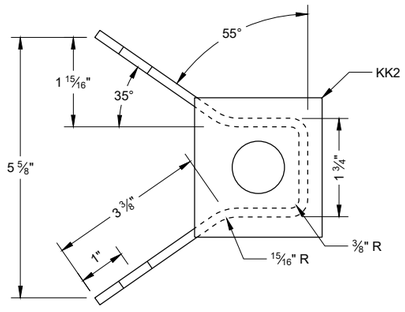




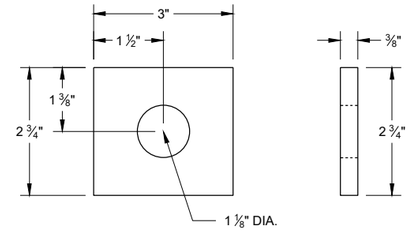


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

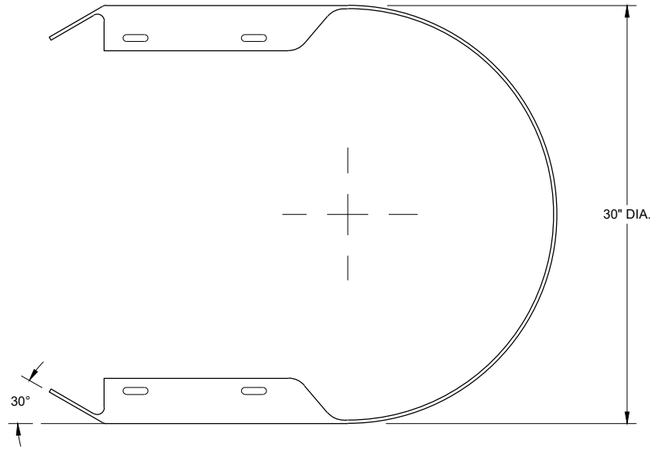
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

6
SDD 14B53 - 01d

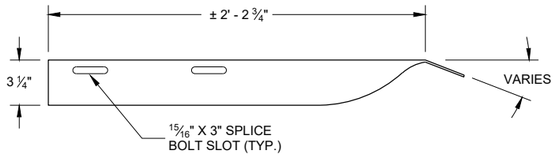
GENERAL NOTES

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

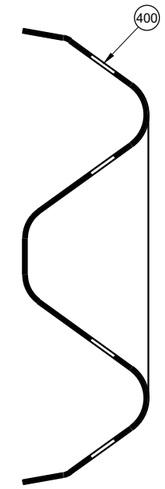
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



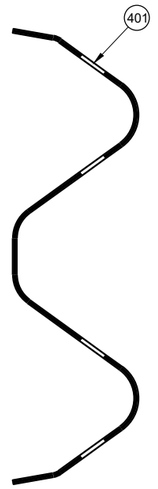
TOP VIEW



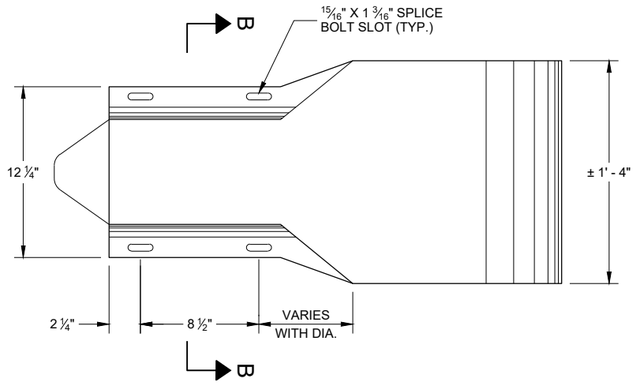
TOP VIEW



SECTION B -B

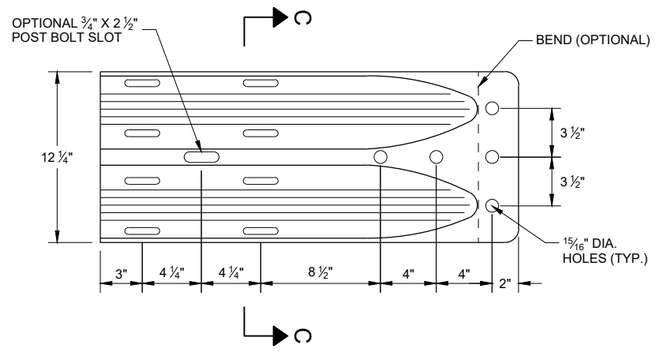


SECTION C -C



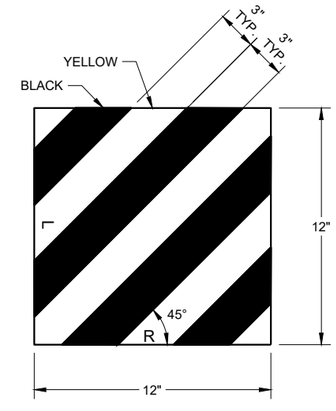
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)



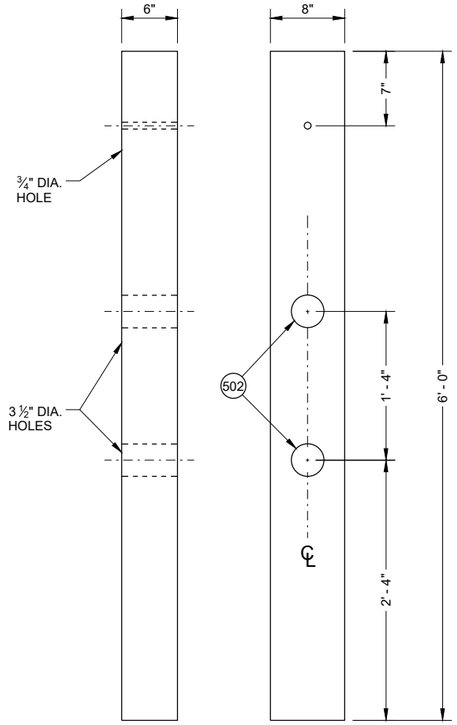
REFLECTIVE SHEETING (UU1, UU2)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

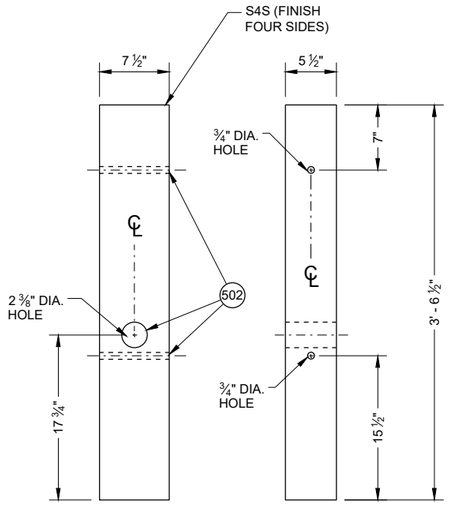
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SDD 14B53 - 01e



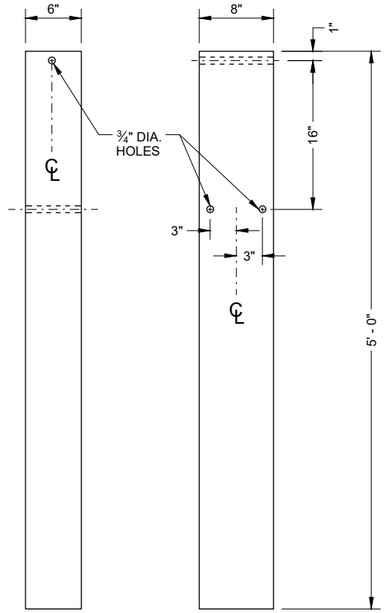
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

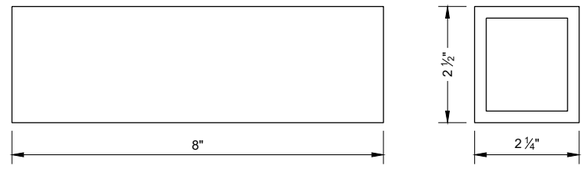
GENERAL NOTES

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

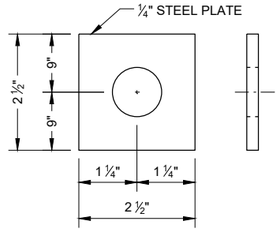
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

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

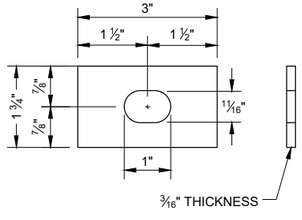
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



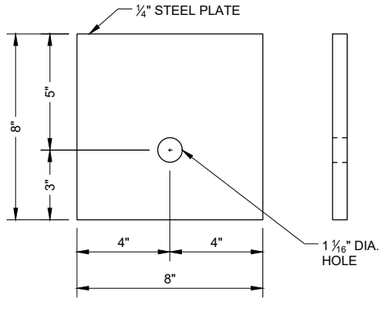
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



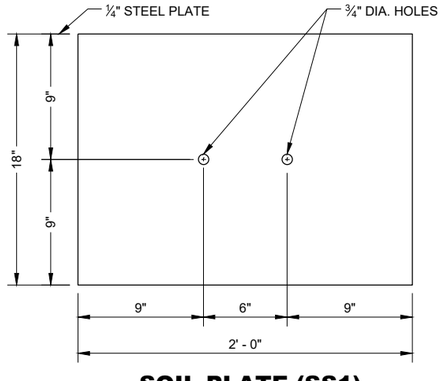
ANCHOR CABLE TUBE END PLATE (QQ3)



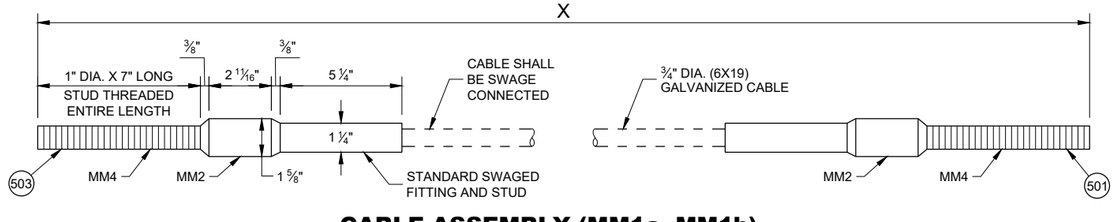
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B53 - 01f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 14B53 - 01g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	

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

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

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

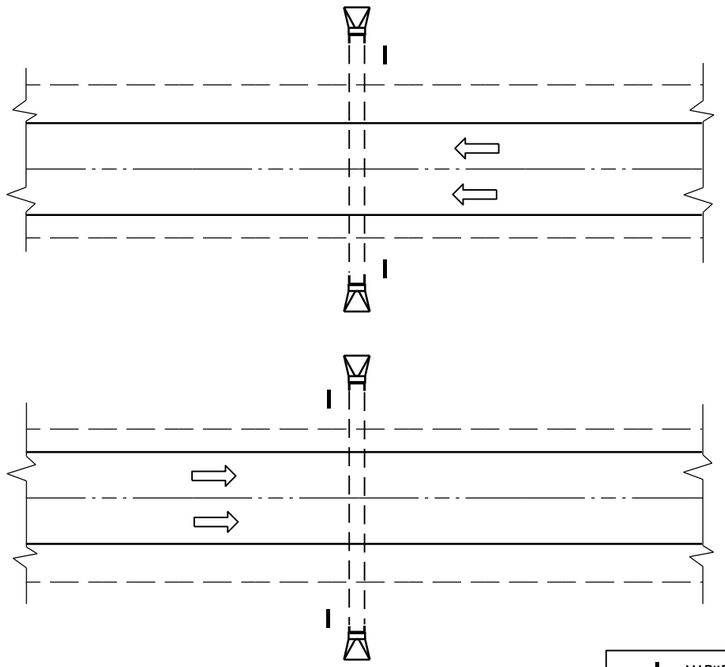
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

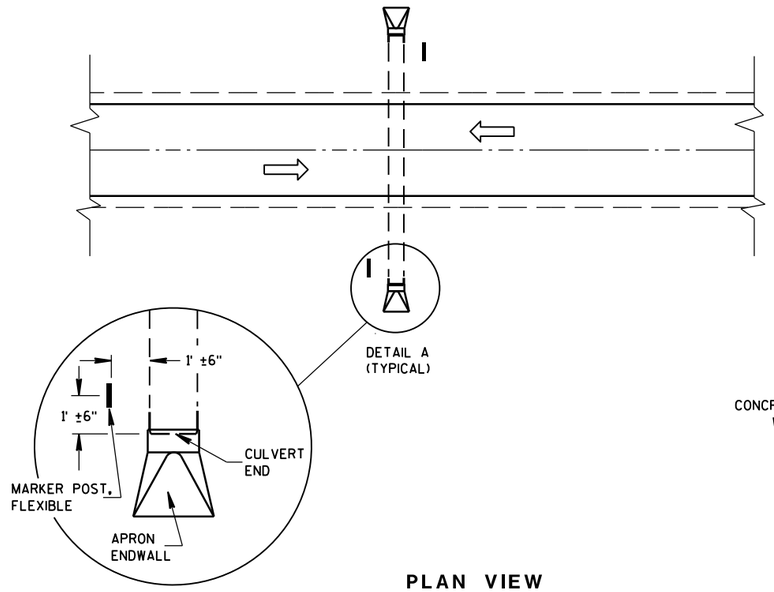
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SDD 14B53 - 01i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

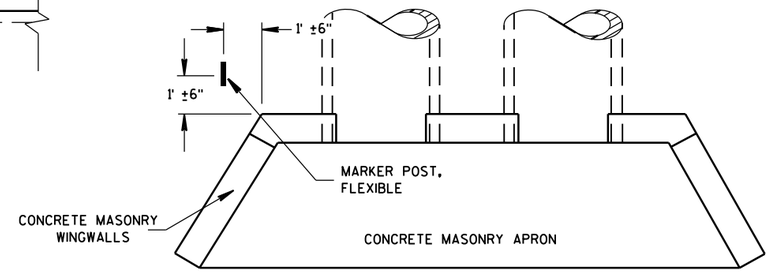
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

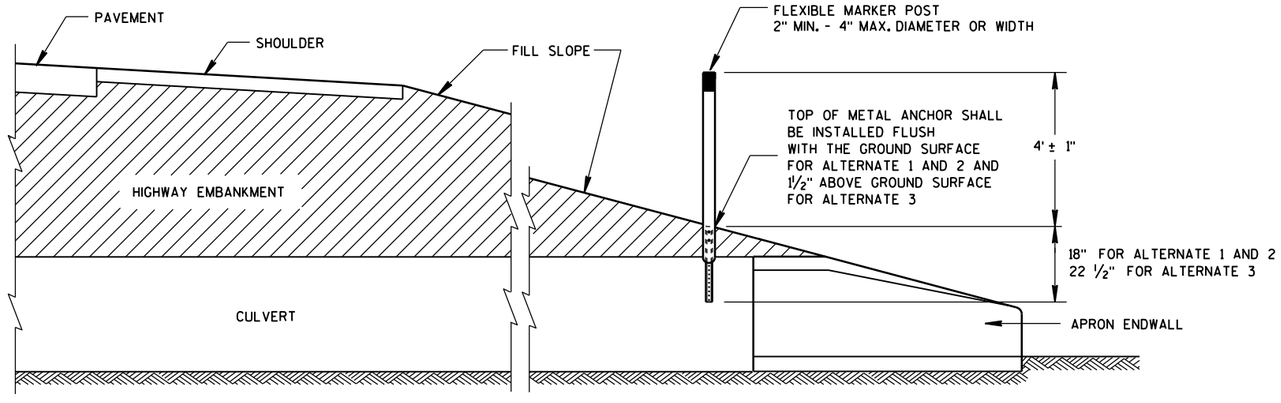
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

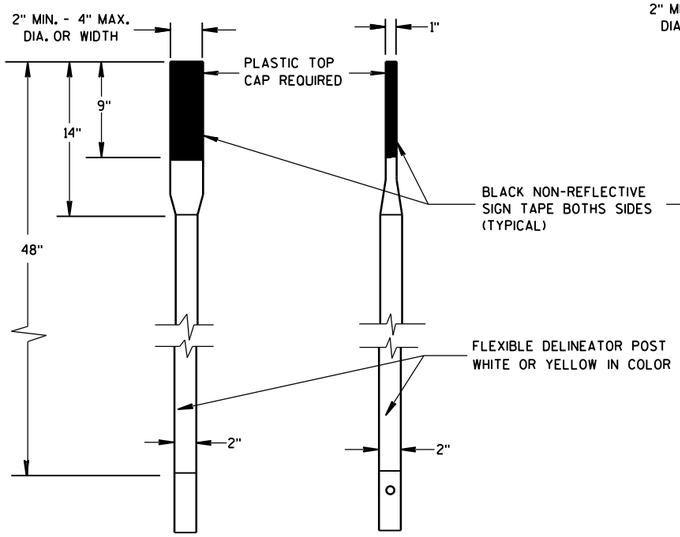
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

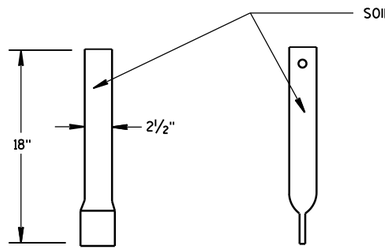
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S.D.D. 15 A 3-2a

6

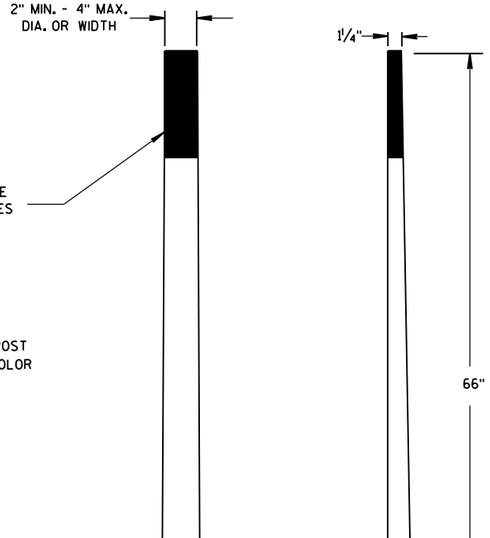
S.D.D. 15 A 3-2a





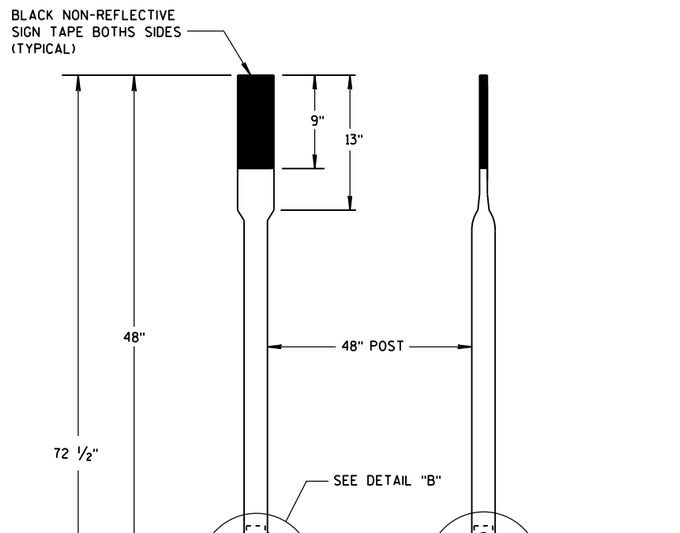
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

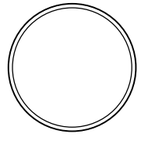
ALTERNATE 2



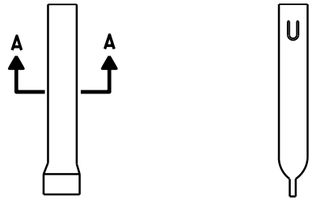
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

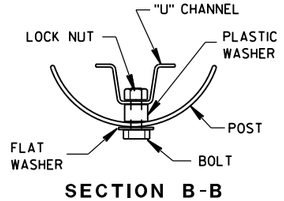


SECTION A-A

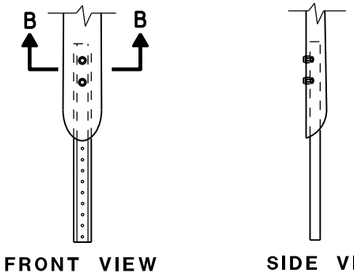


FRONT VIEW SIDE VIEW

ALTERNATE 1

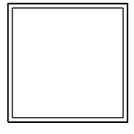


SECTION B-B

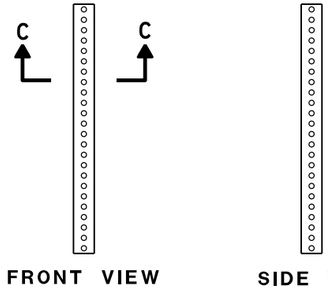


FRONT VIEW SIDE VIEW

ALTERNATE 2



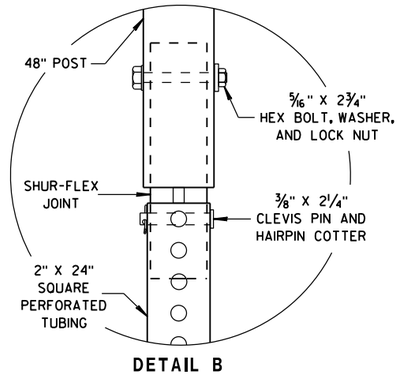
SECTION C-C



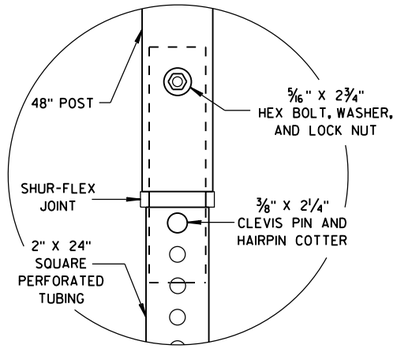
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

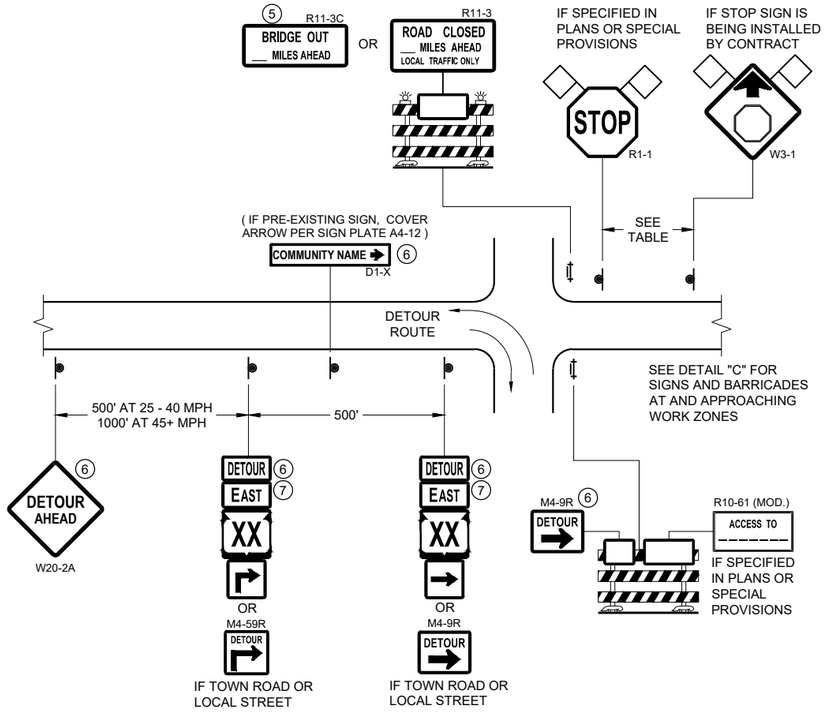
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

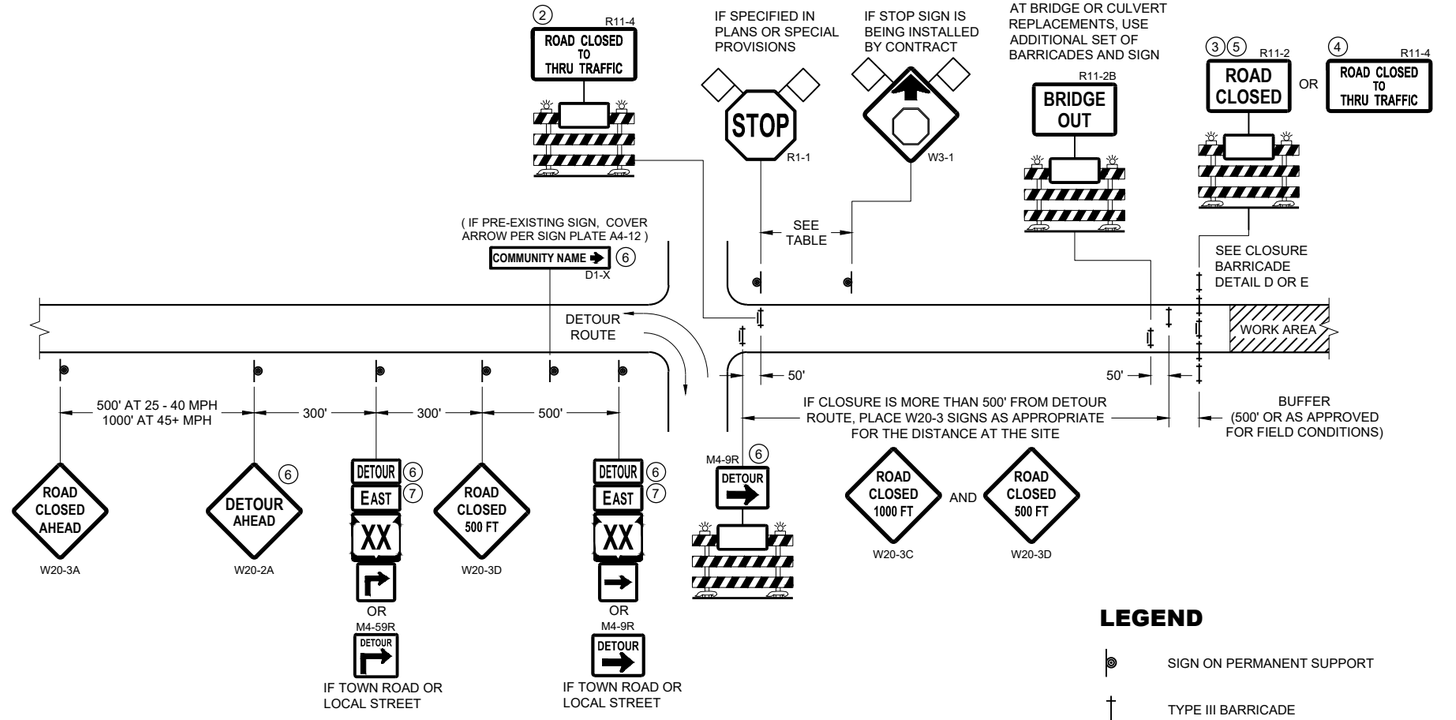
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S.D.D. 15 A 3-2b

6

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



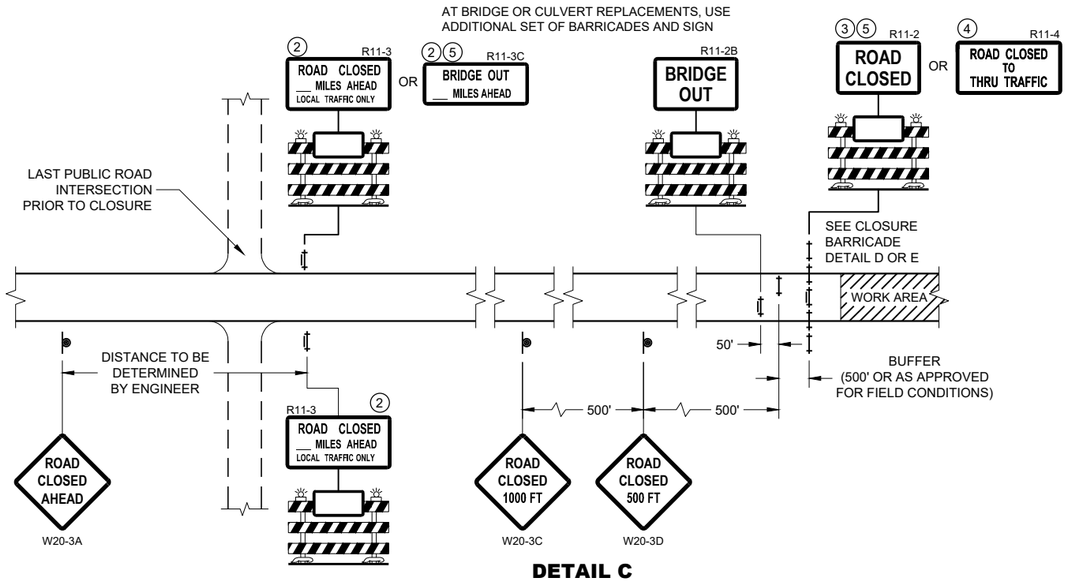


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

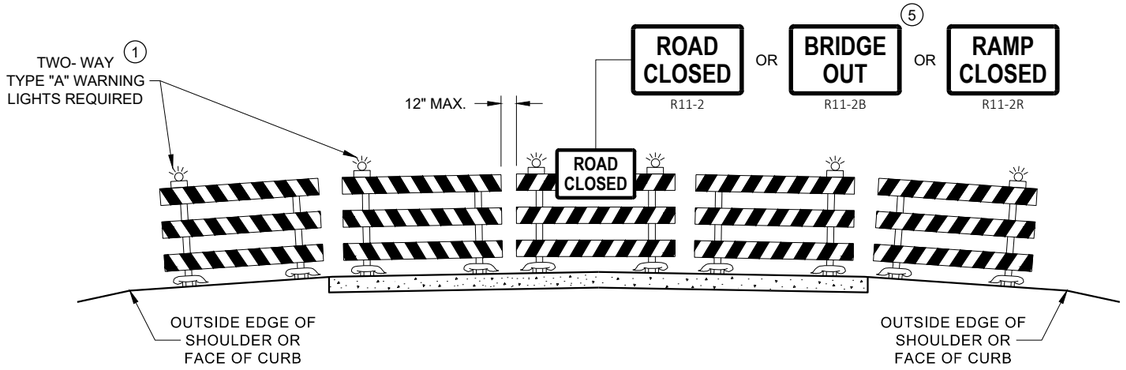
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

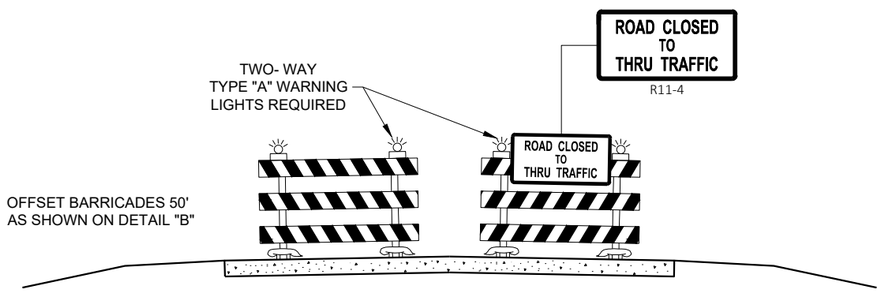
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SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

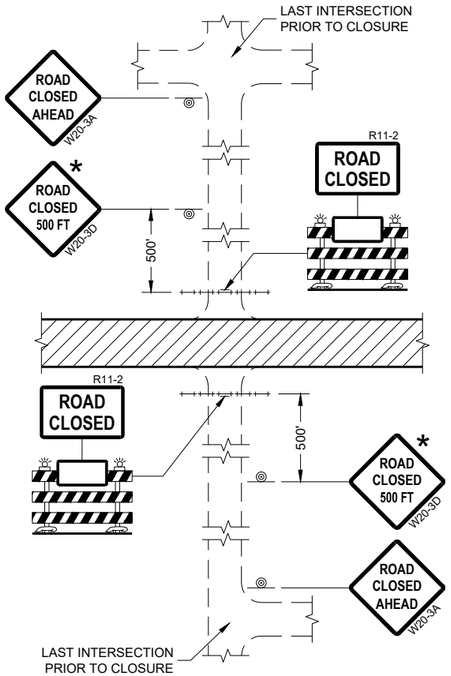
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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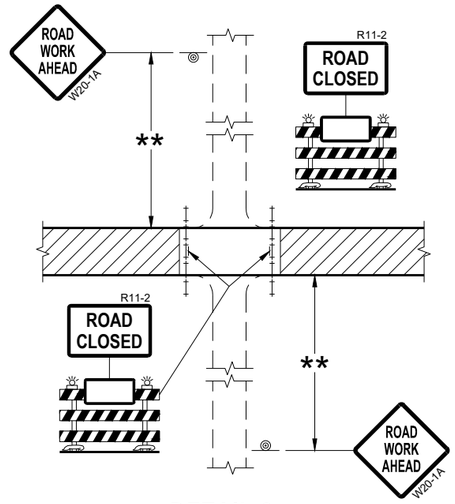
SDD 15C02 - 08b

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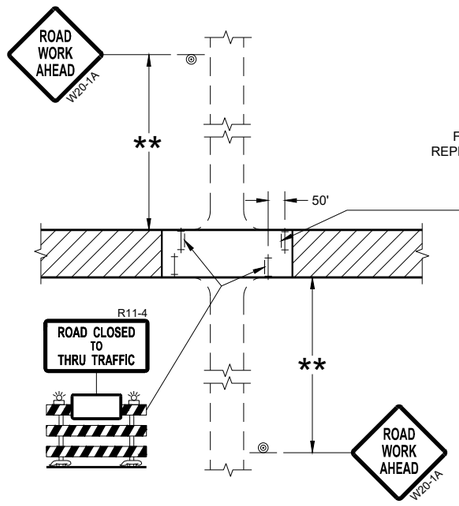
SDD 15C02 - 08b



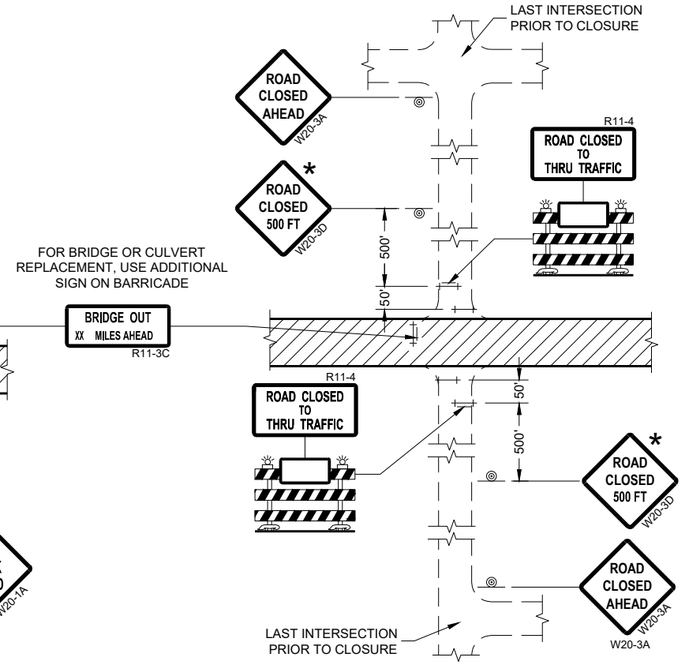
DETAIL 1
(NO ACCESS TO PROJECT)



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



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C03 - 05

GENERAL NOTES

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

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

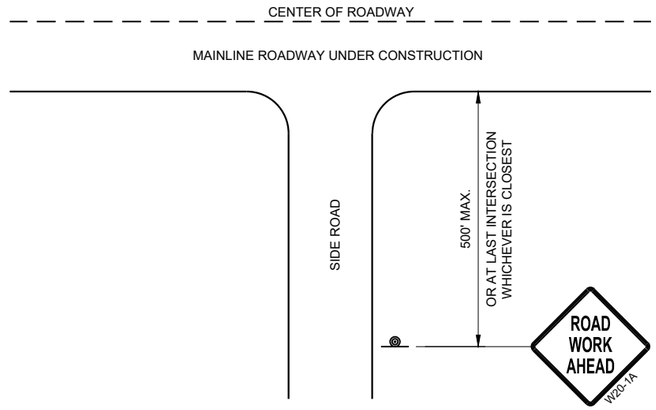
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



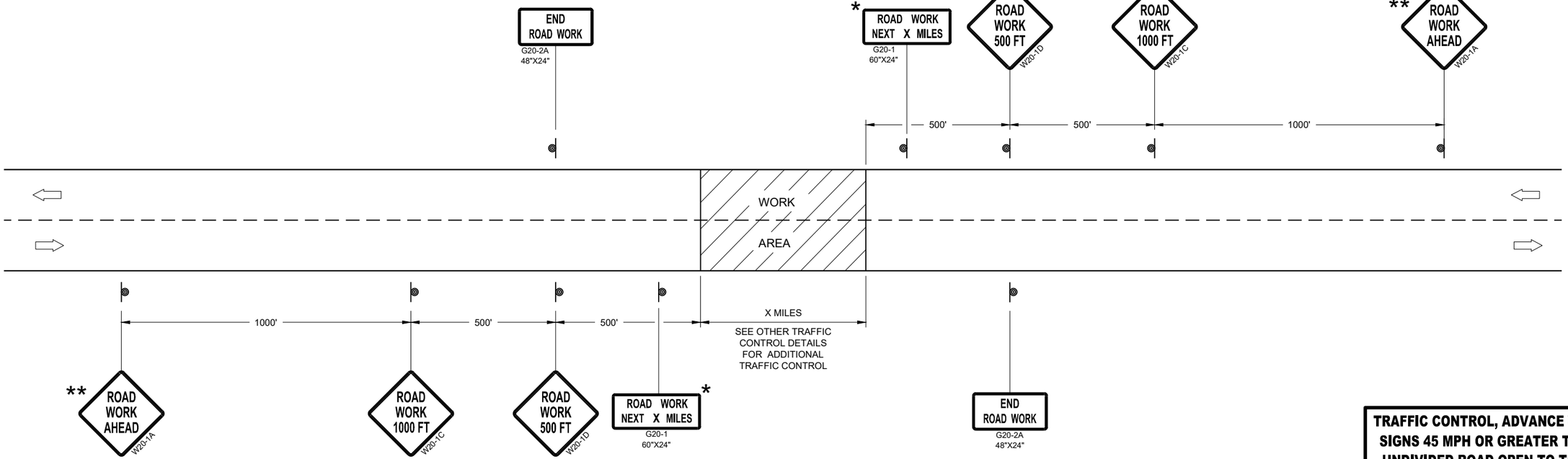
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

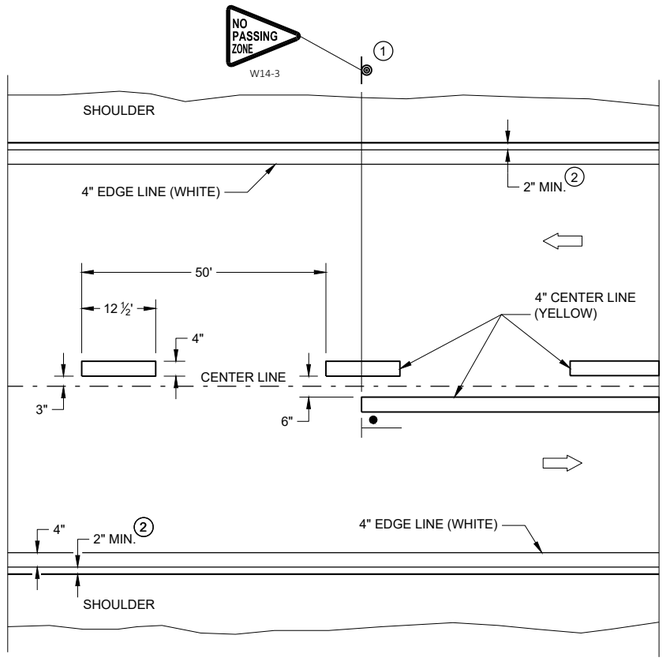
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

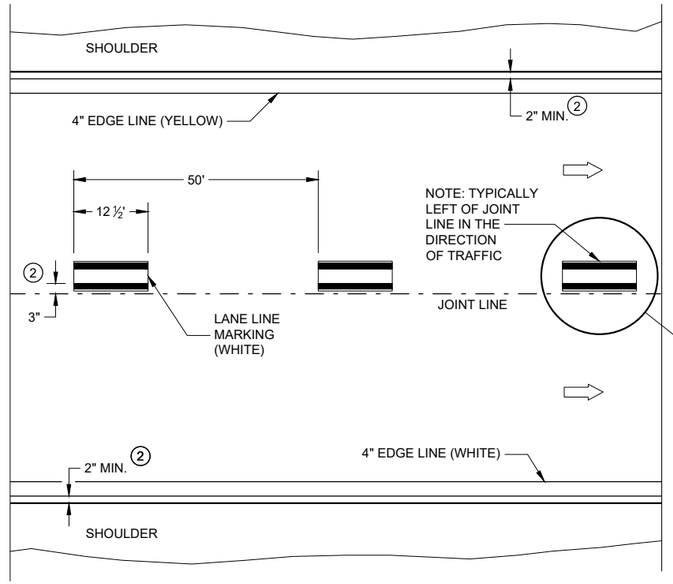
FHWA

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SDD 15C04 - 05

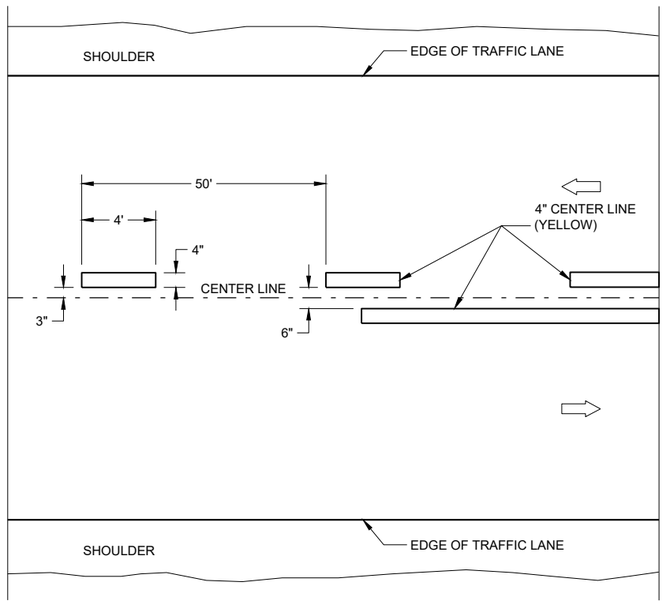


TWO WAY TRAFFIC

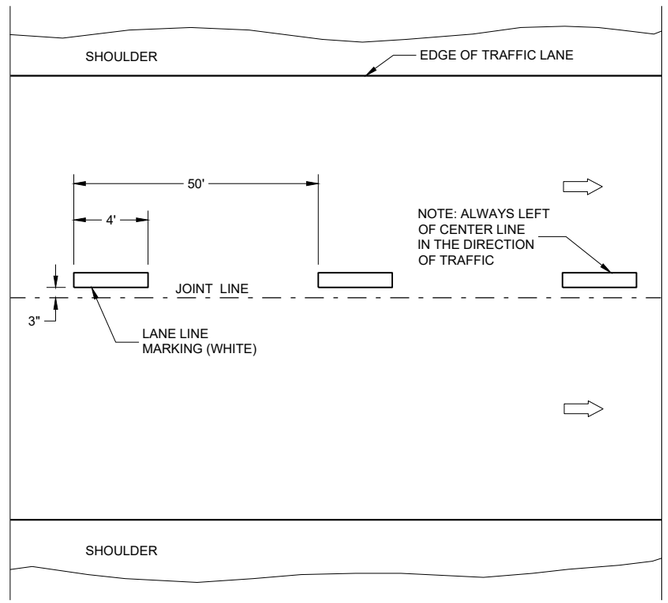


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

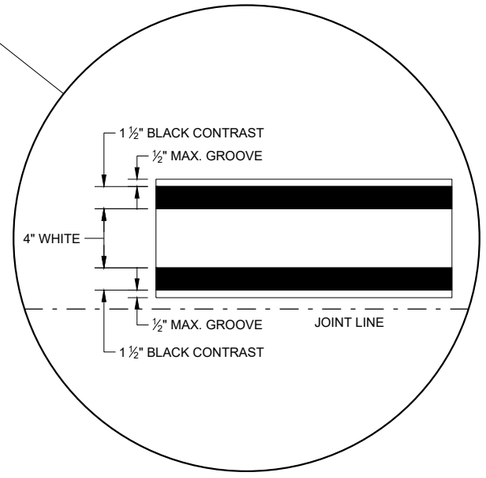
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

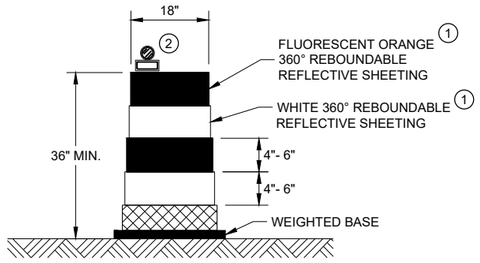
FHWA

SDD 15C08 - 20a

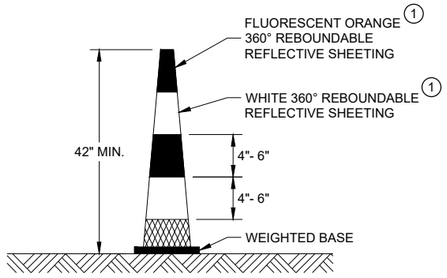
SDD 15C08 - 20a

GENERAL NOTES

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

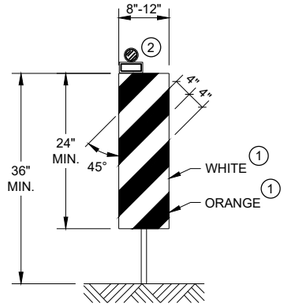


DRUM



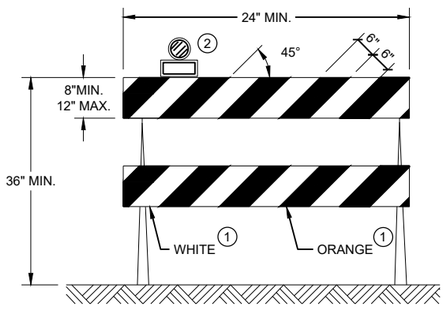
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



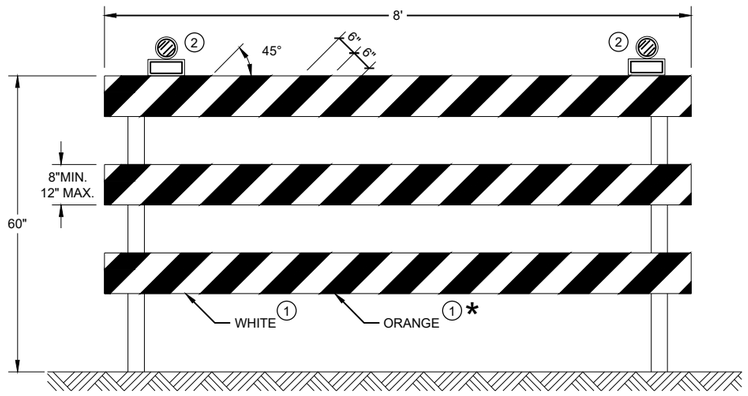
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

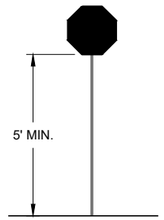
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

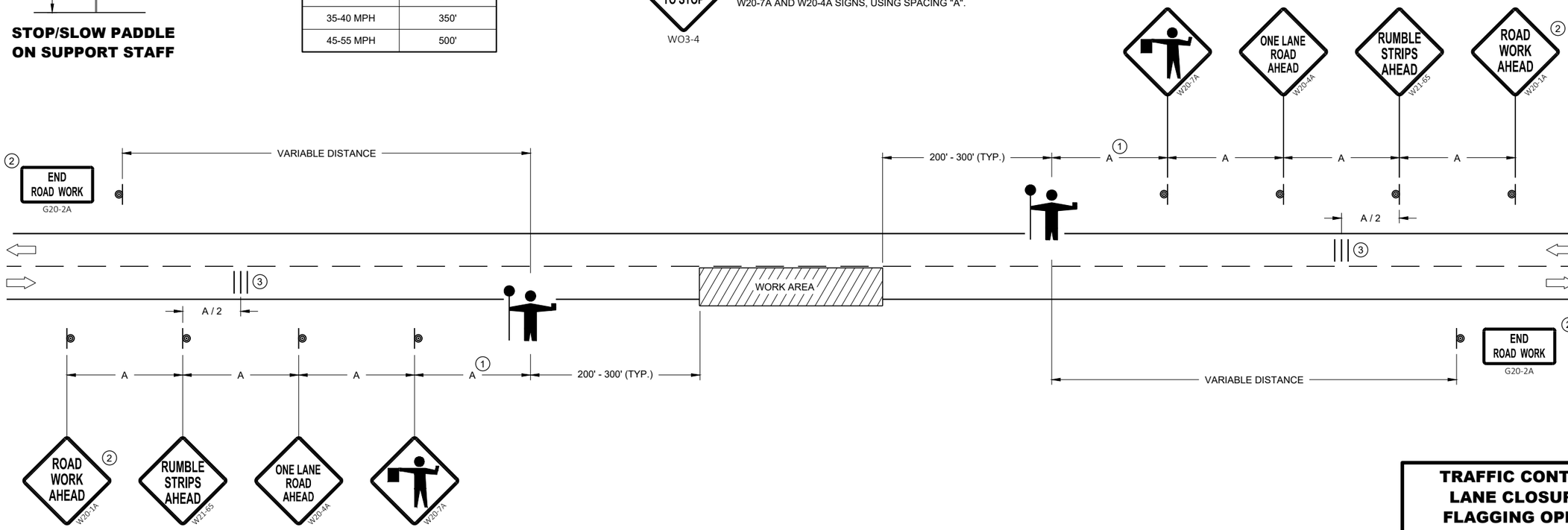
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 07

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

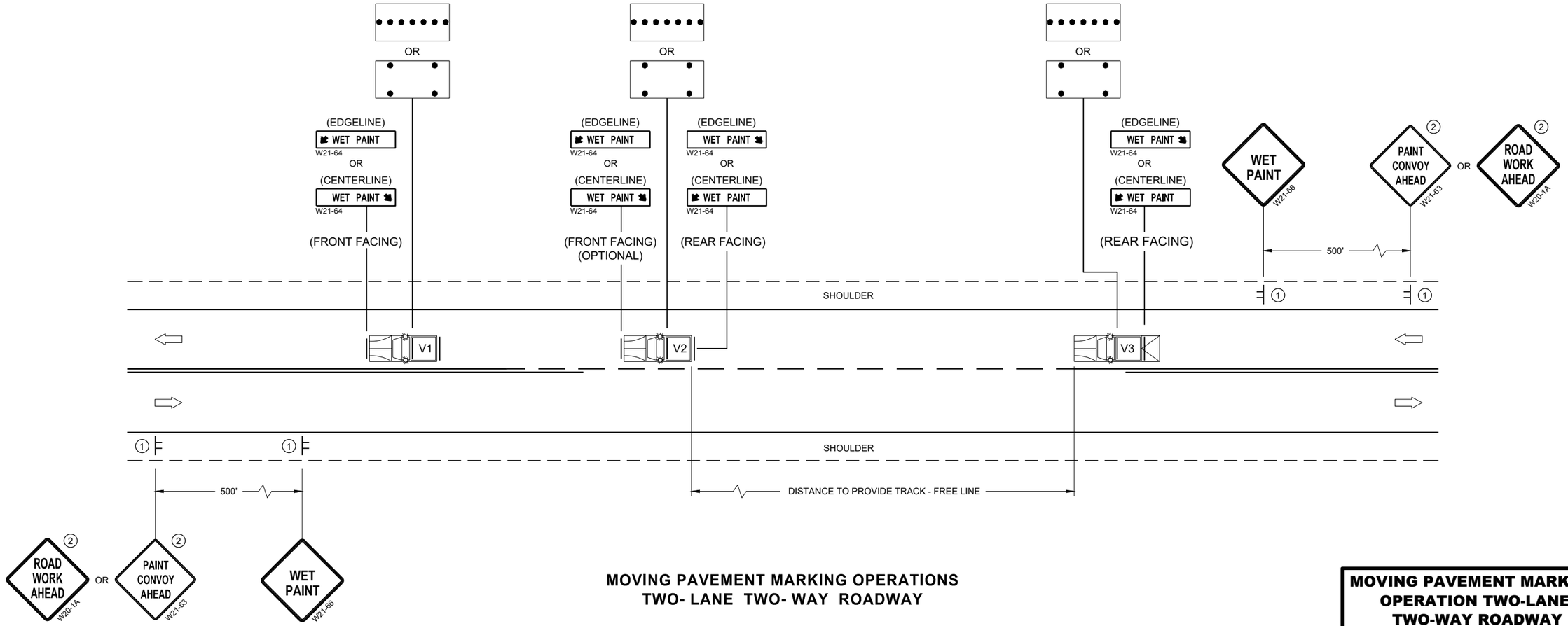
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

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

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

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



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

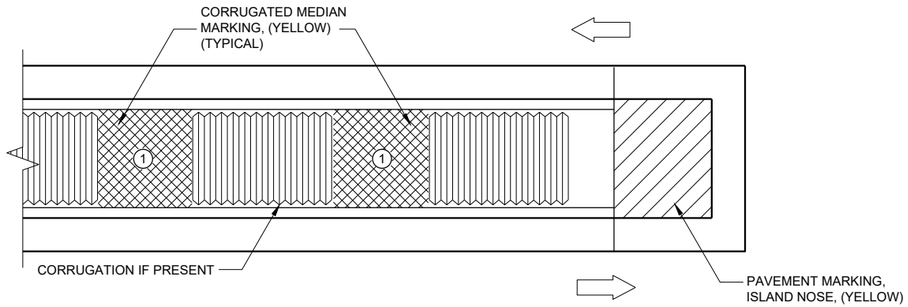
FHWA

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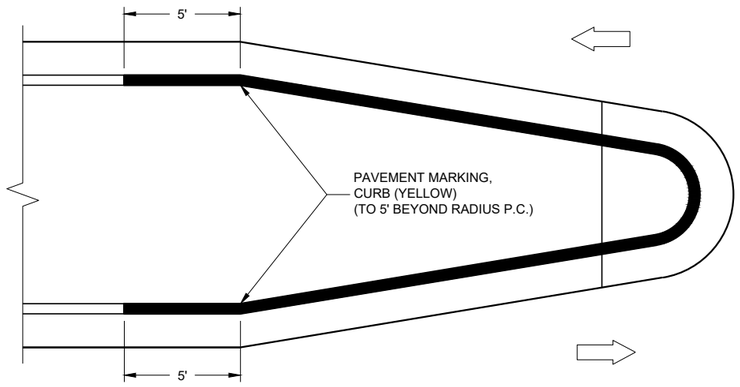
SDD 15C19 - 06a

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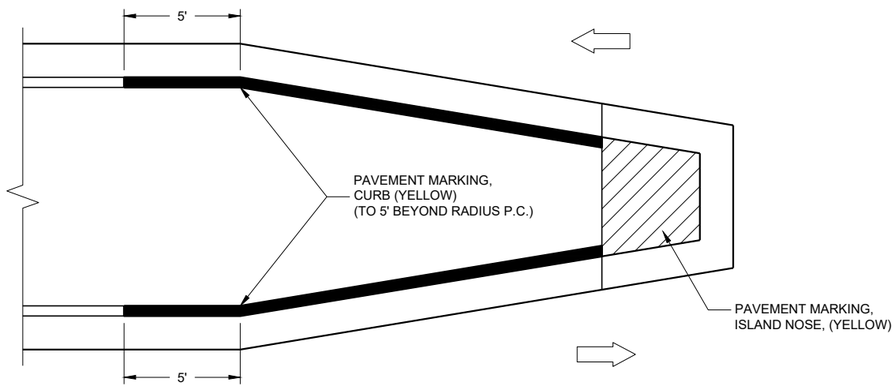
SDD 15C19 - 06a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE

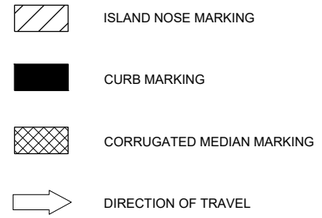


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



PAVEMENT MARKINGS
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER
FHWA

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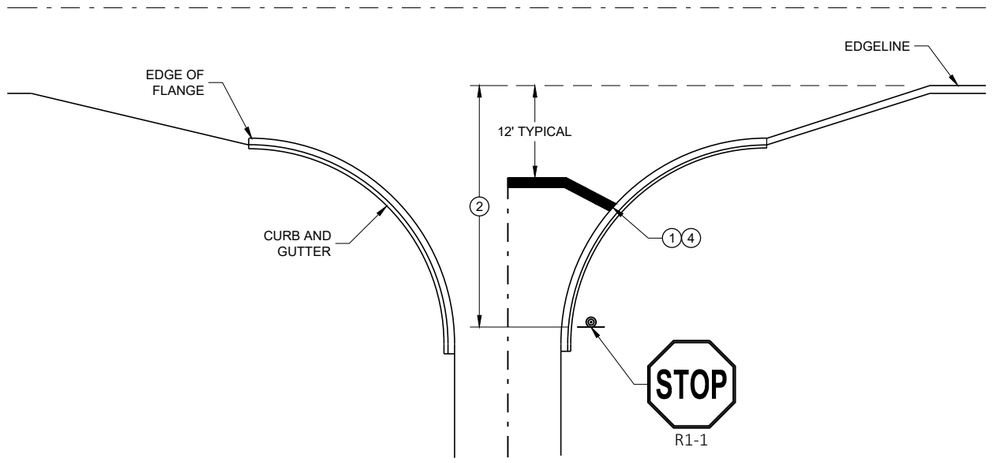
SDD 15C27 - 03b

SDD15C27 - 03b

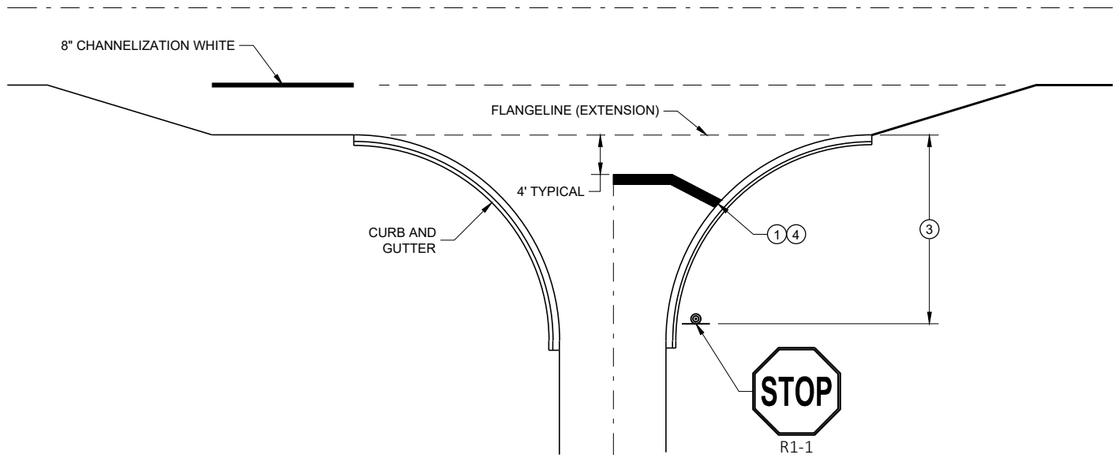
GENERAL NOTES

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

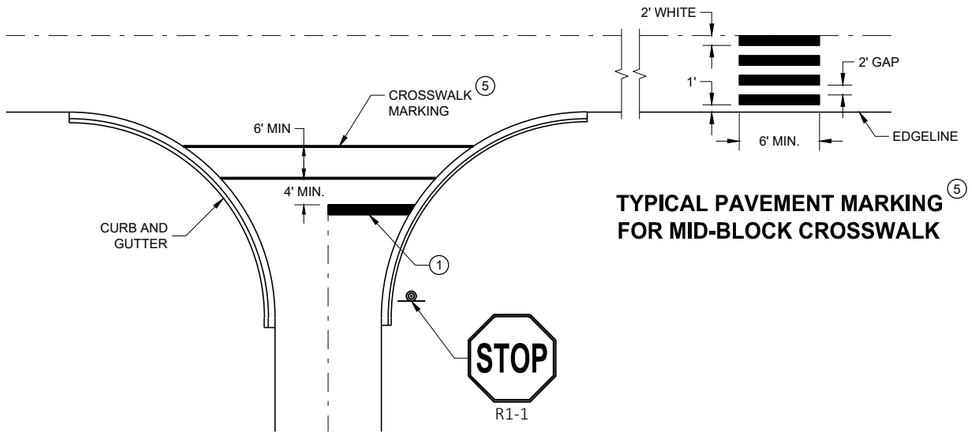
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

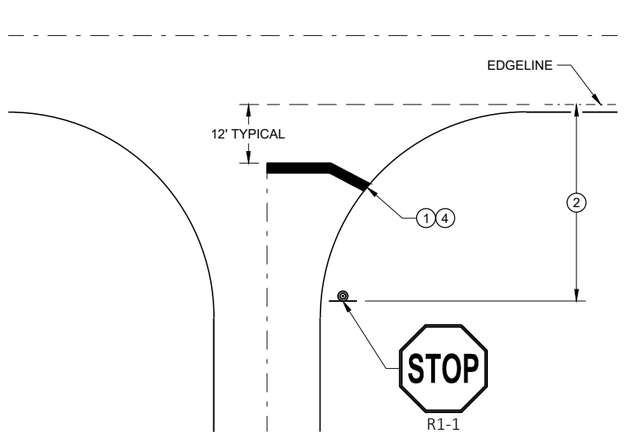


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING 5 FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

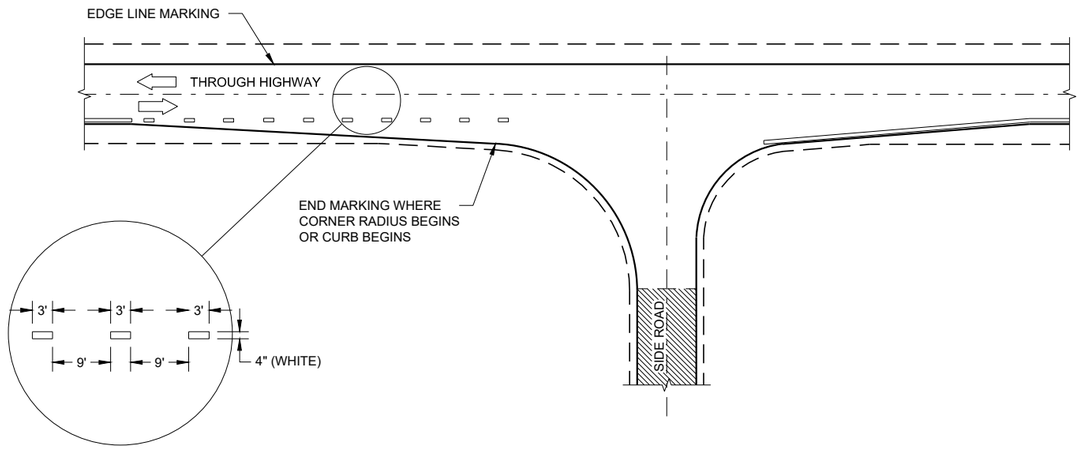
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

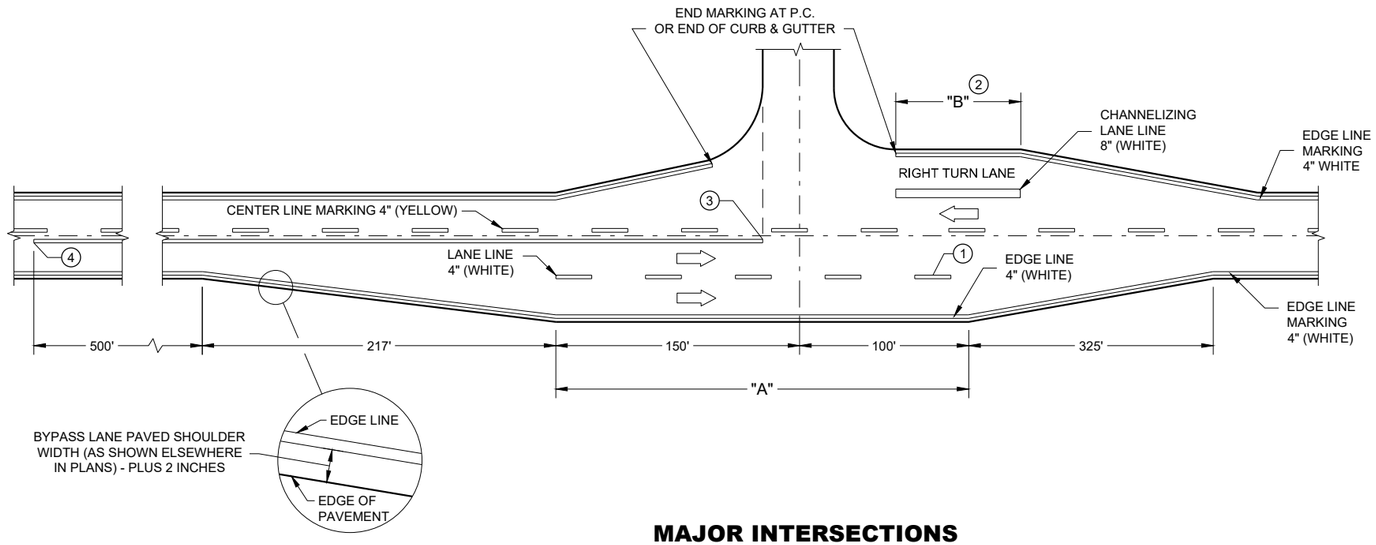
FHWA

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SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

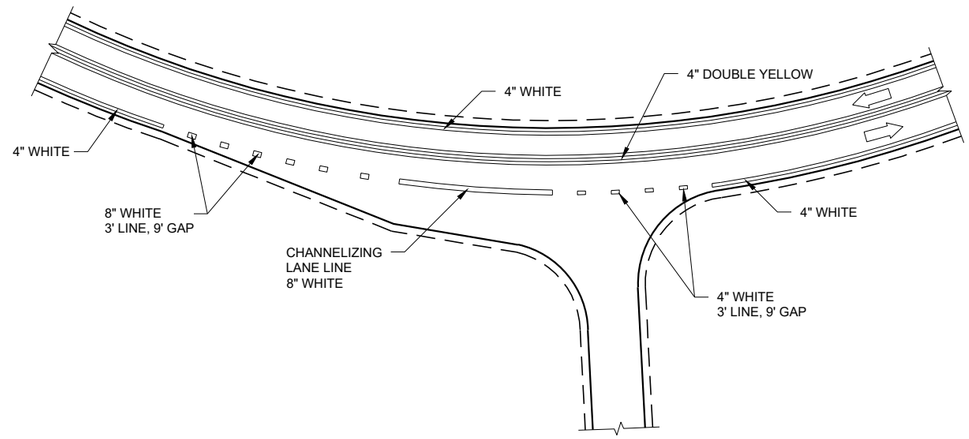
GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

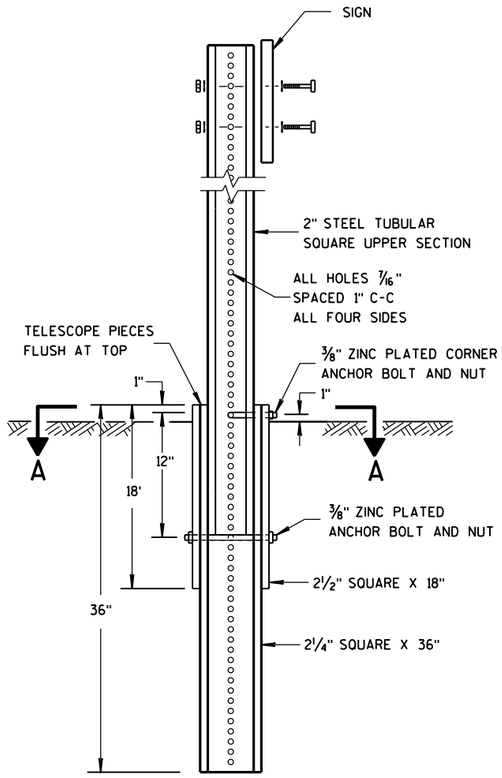
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

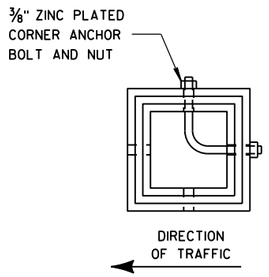
SDD 15C35 - 04a

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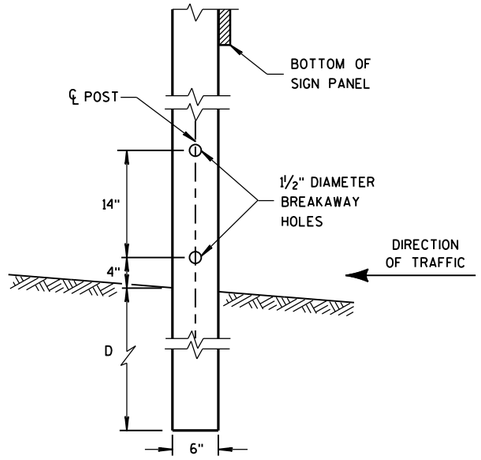
SDD 15C35 - 04a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



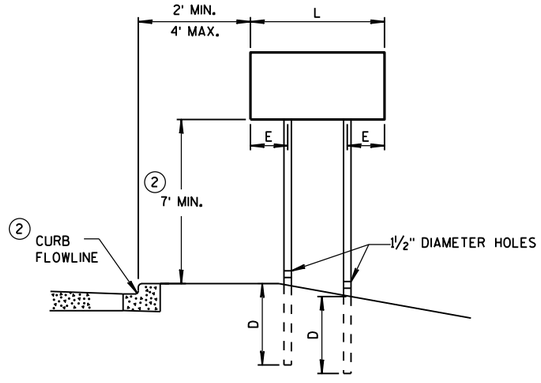
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

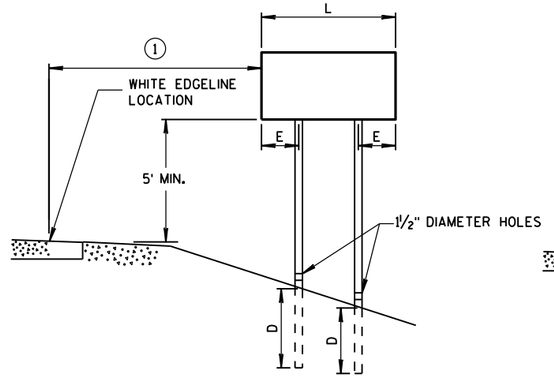
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

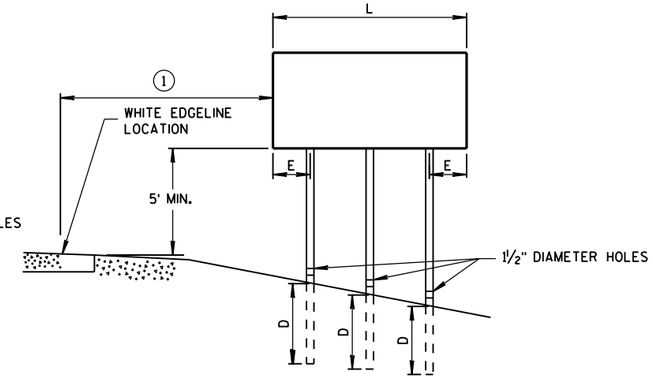
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

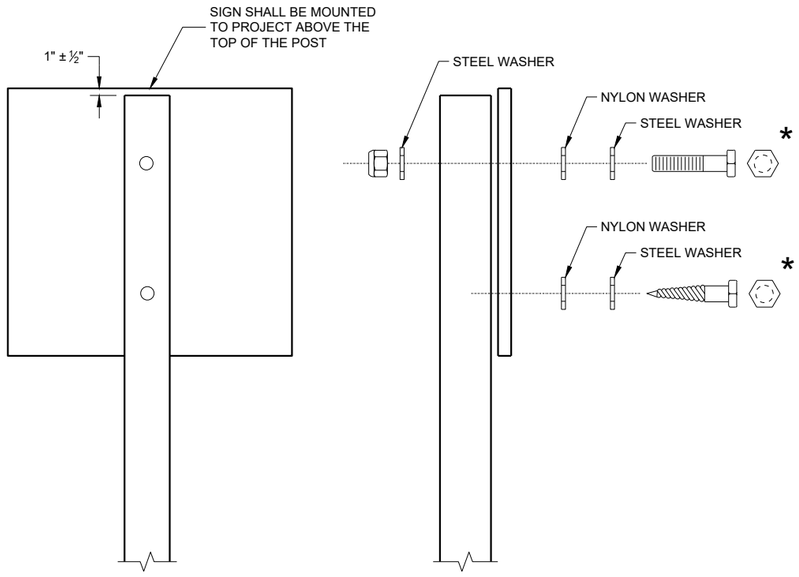
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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

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

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

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

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

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

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

6

6

SDD 15D38 - 02b

SDD 15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"×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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

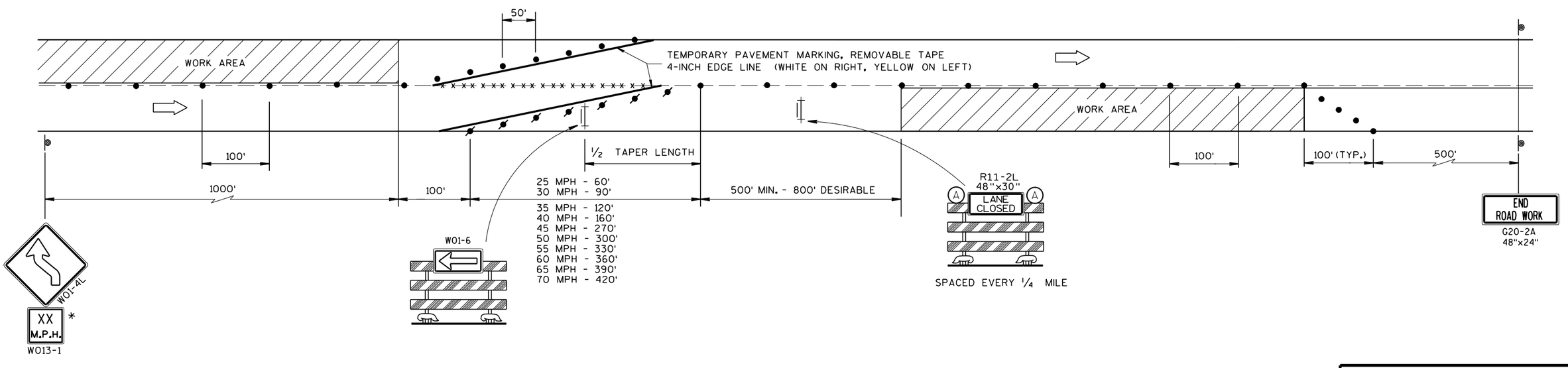
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

LANE SHIFT MULTI-LANE DIVIDED OR ONE WAY ROAD

TRAFFIC CONTROL, LANE SHIFT, MULTI-LANE DIVIDED OR ONE WAY ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew I
WORK ZONE E

FHWA

6

S.D.D. 15 D 40-1

GENERAL NOTES

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

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

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

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

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

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

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

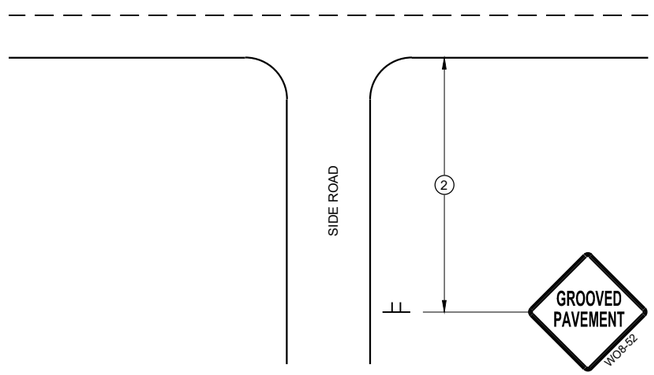
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

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

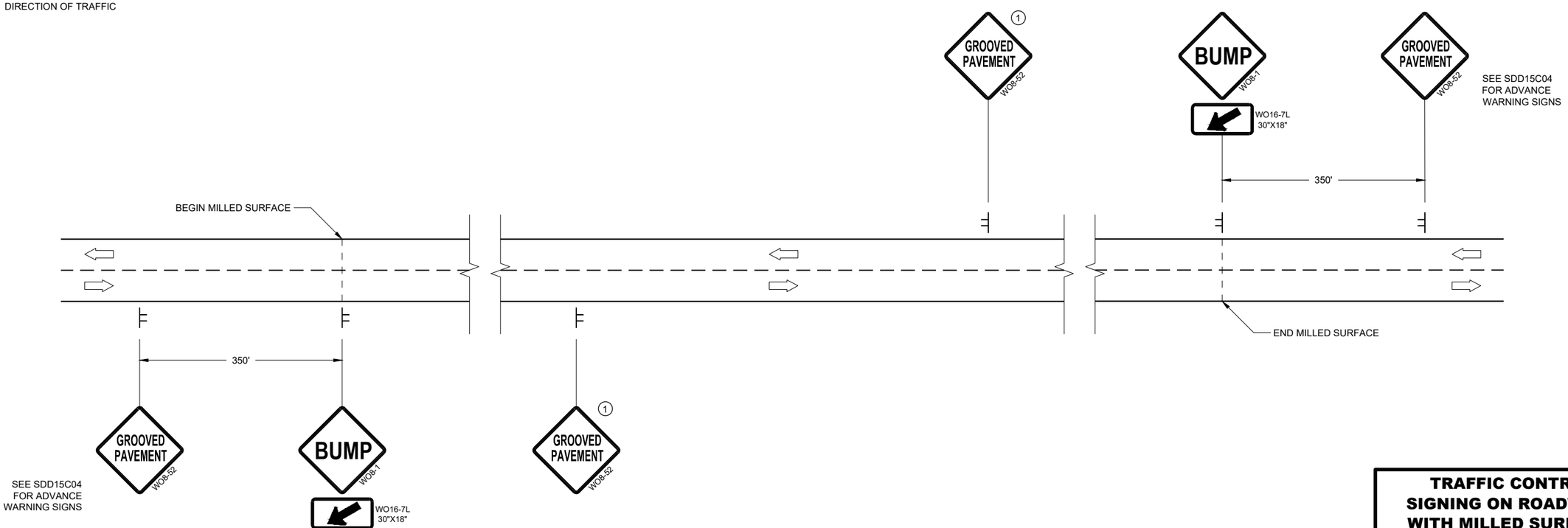
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

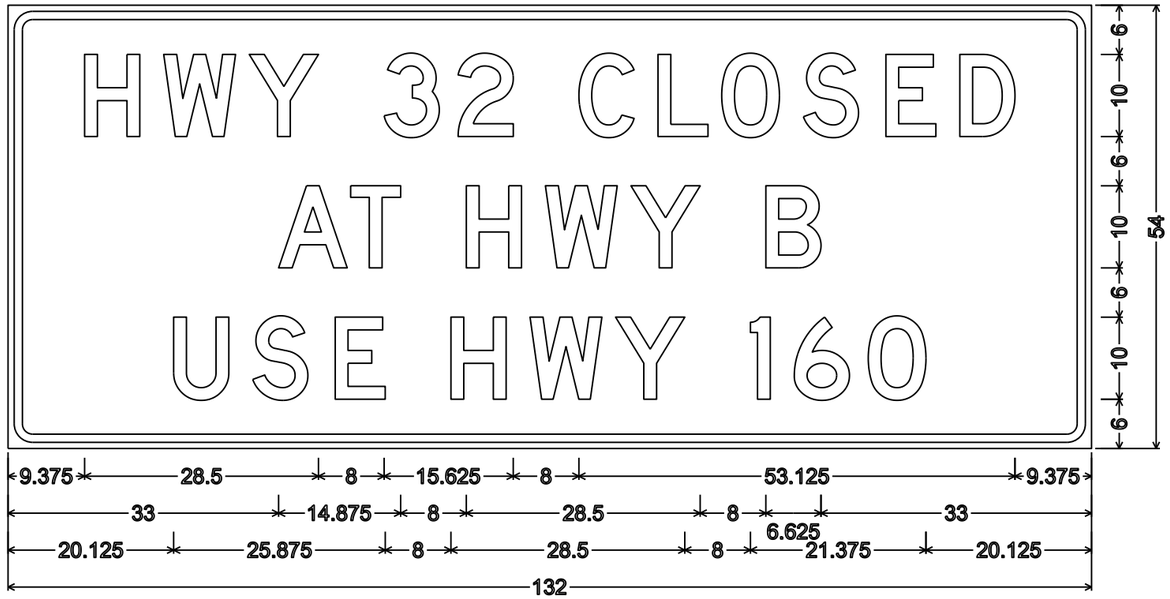
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

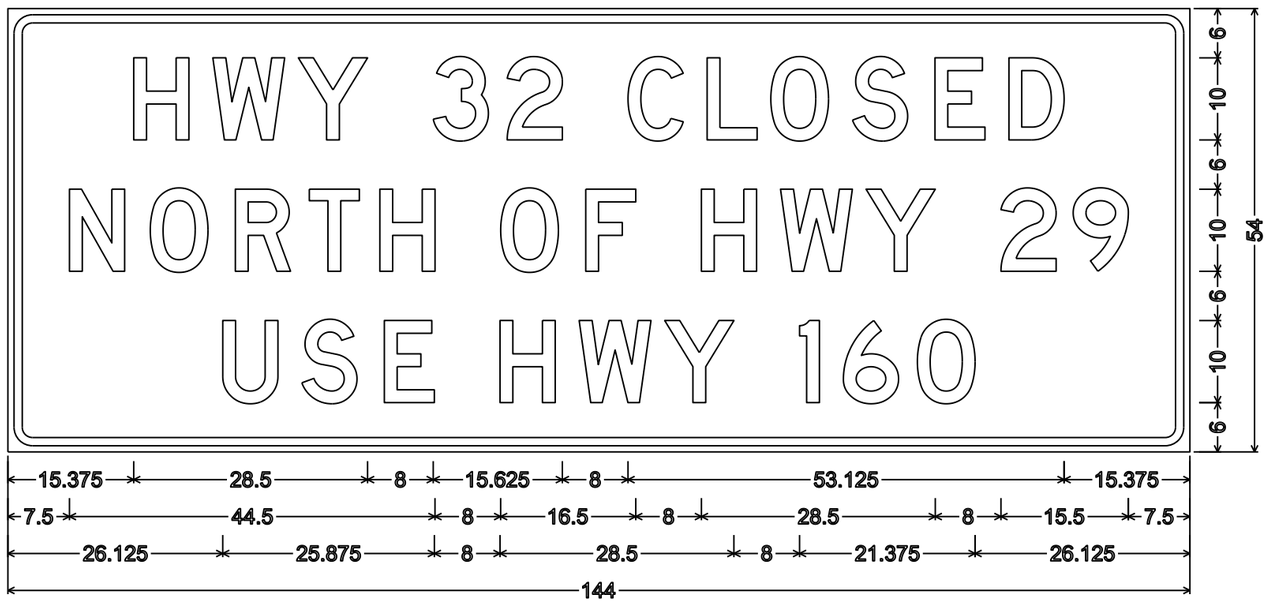
6
SDD 15D44 - 02

NOTES

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



3.000" Radius, 1.000" Border, 0.750" Indent



3.000" Radius, 1.000" Border, 0.750" Indent

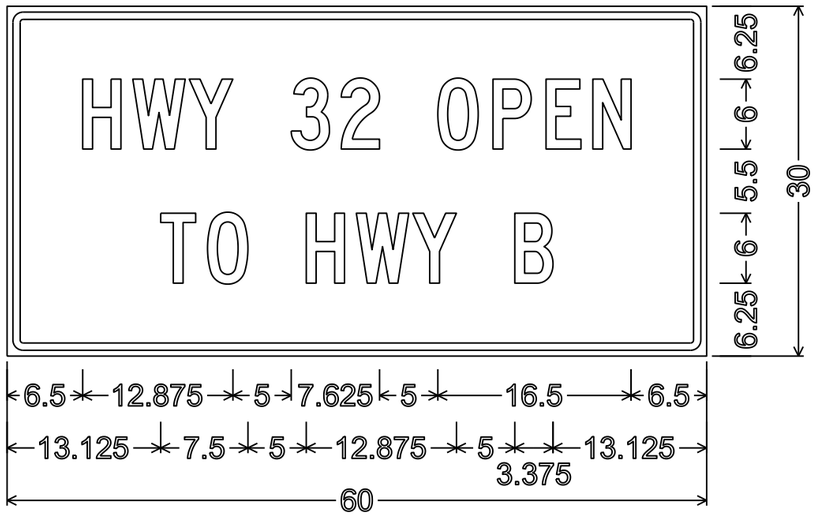
7

7

PROJECT NO: 9190-20-71	HWY: HWY 32	COUNTY: BROWN	TEMPORARY SIGNING	SHEET NO: 136	E

NOTES

1. Fixed Message Type II Signs - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C



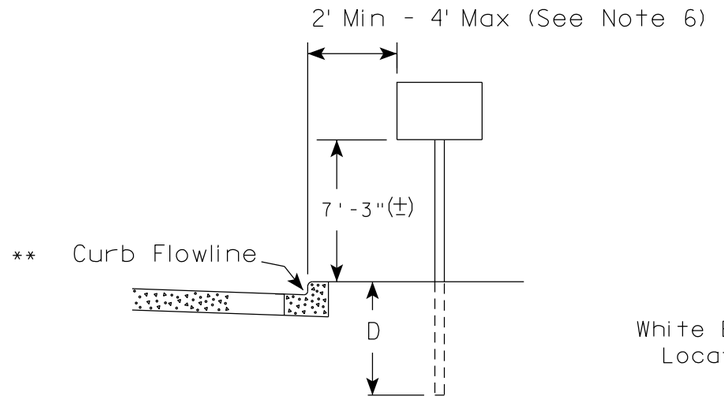
1.375" Radius, 0.625" Border, 0.500" Indent

7

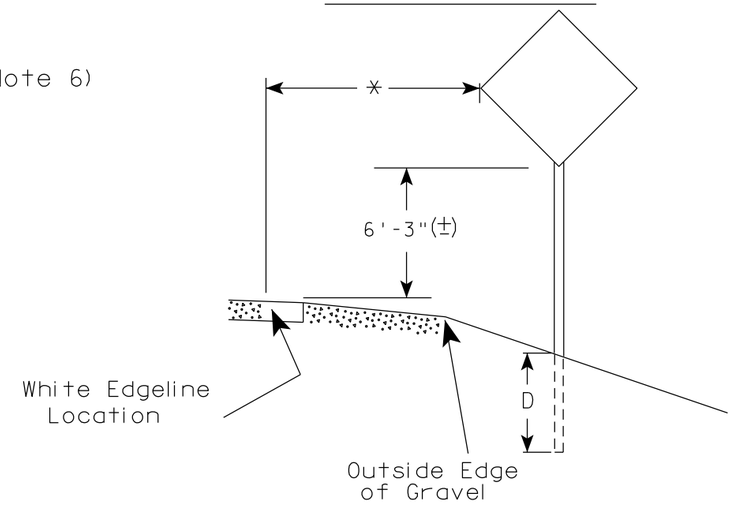
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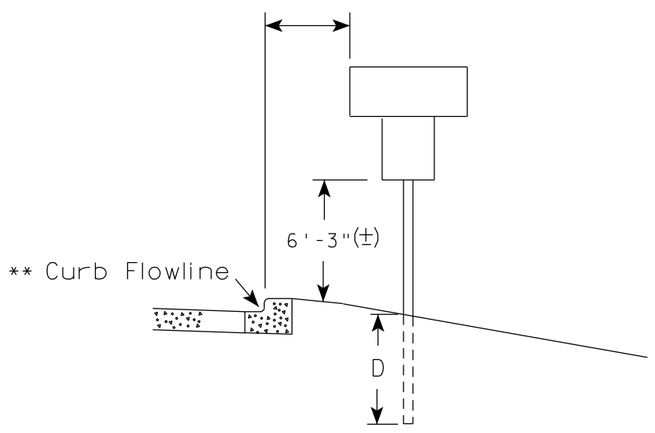
PROJECT NO: 9190-20-71	HWY: STH 32	COUNTY: BROWN	TEMPORARY SIGNING	SHEET NO: 137	E

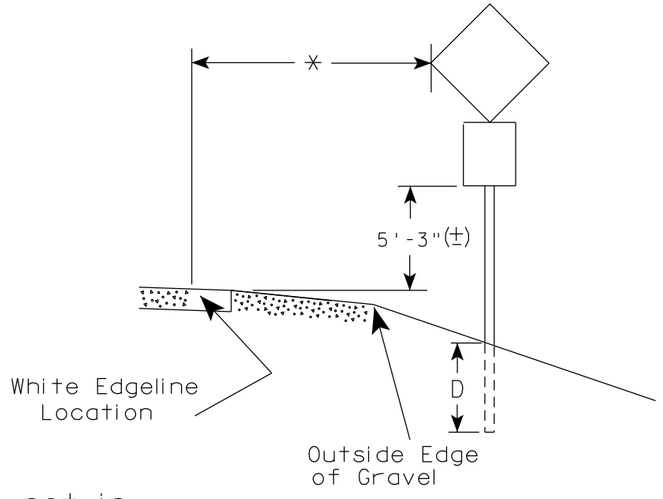
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

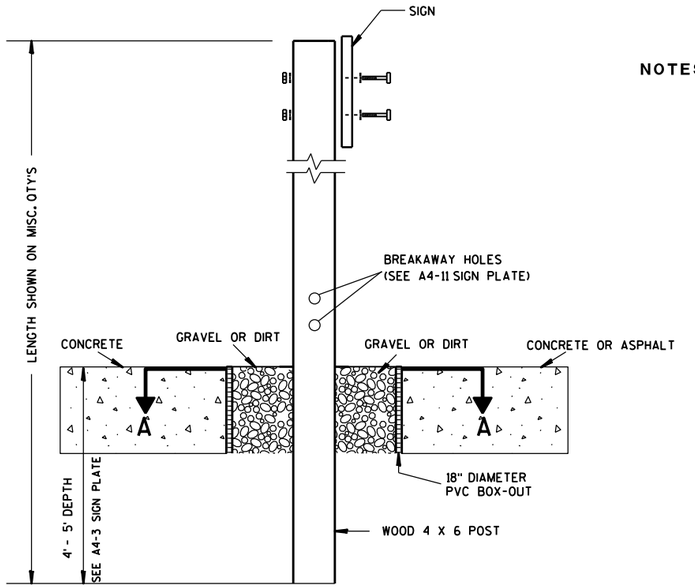
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

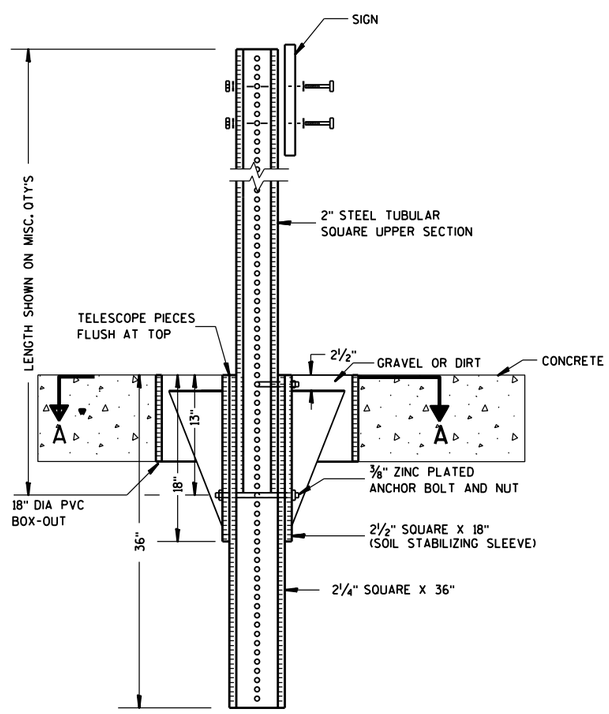
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 138	E



ELEVATION VIEW

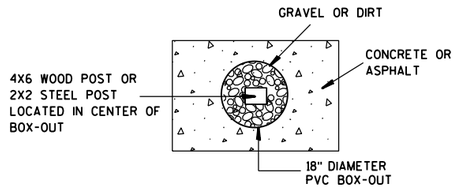
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

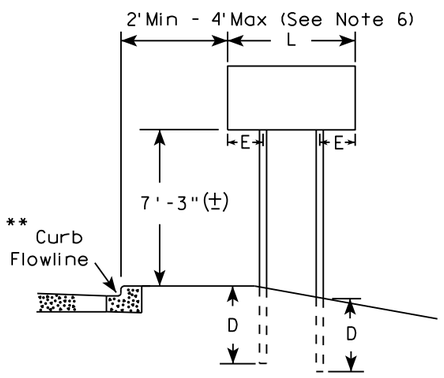
APPROVED Matthew R Rauch
for State Traffic Engineer

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

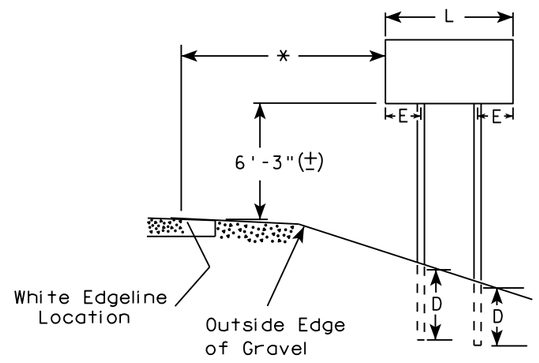
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

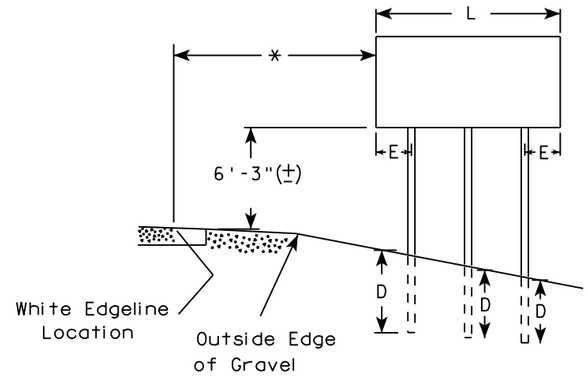
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

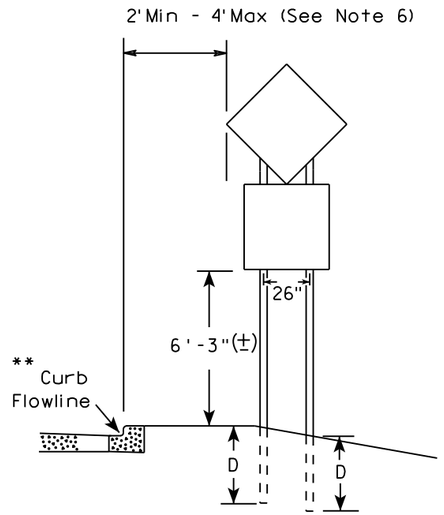
URBAN AREA



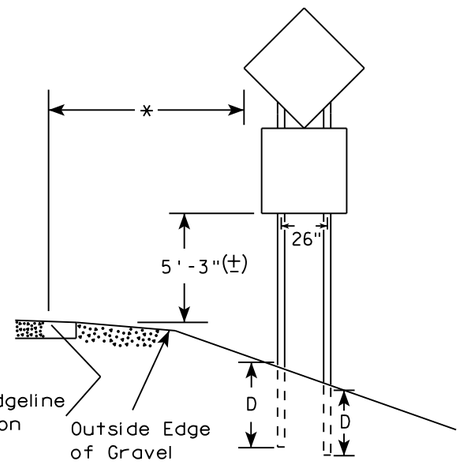
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

POST EMBEDMENT DEPTH

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

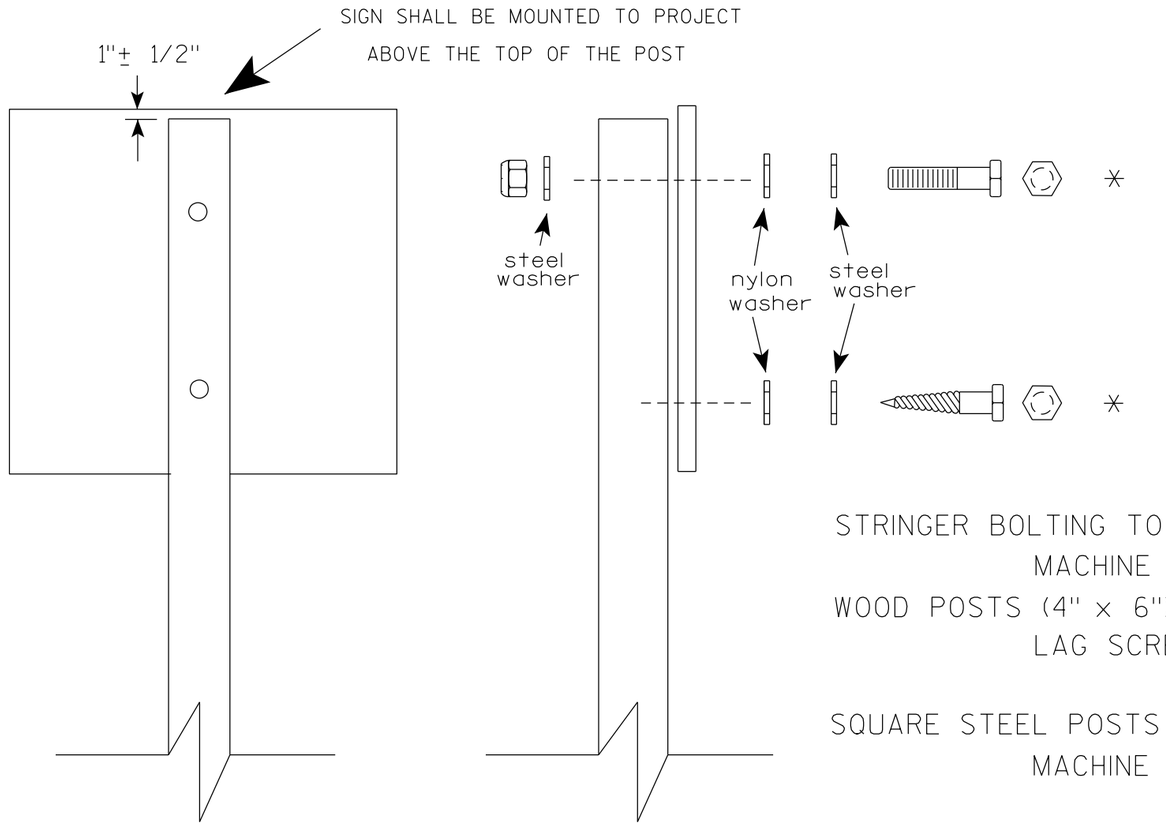
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 140	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

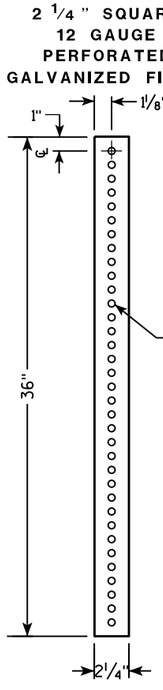
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

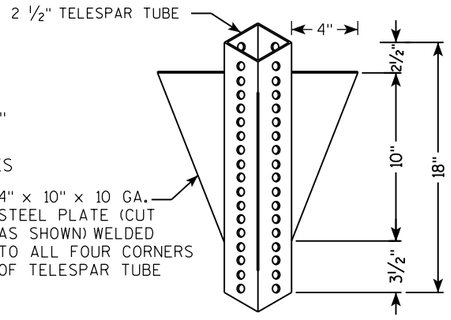
SHEET NO: 141 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

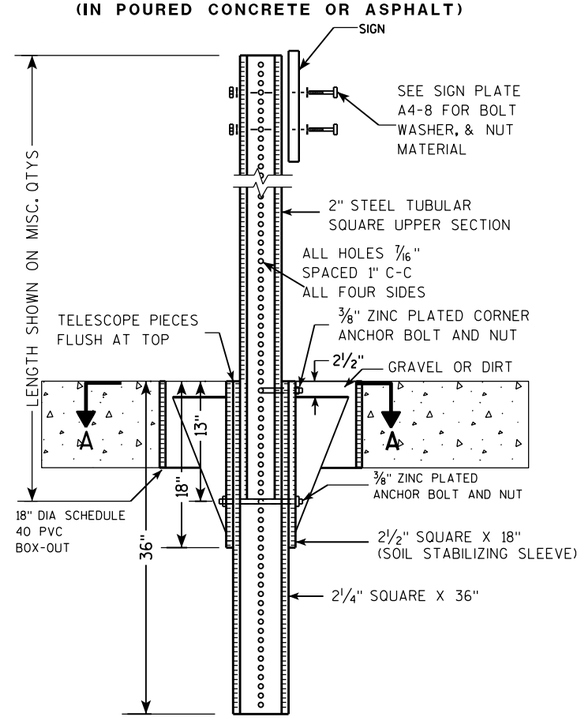
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



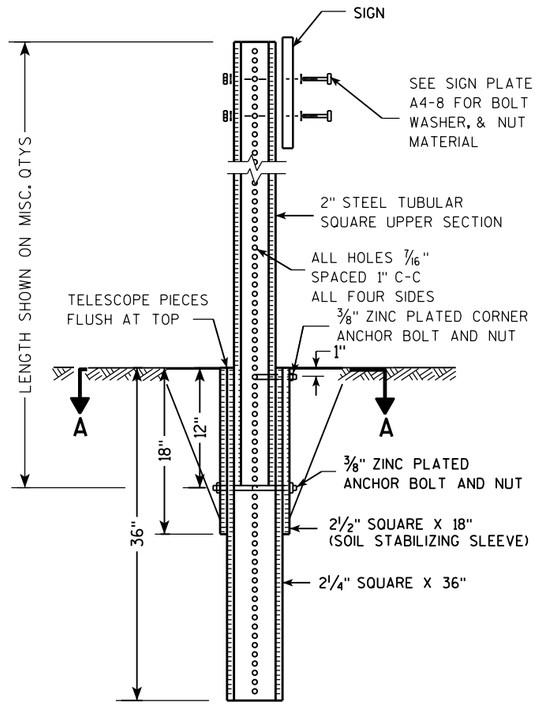
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

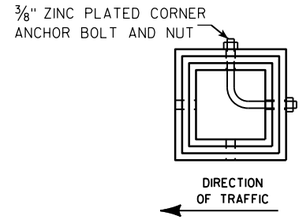


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

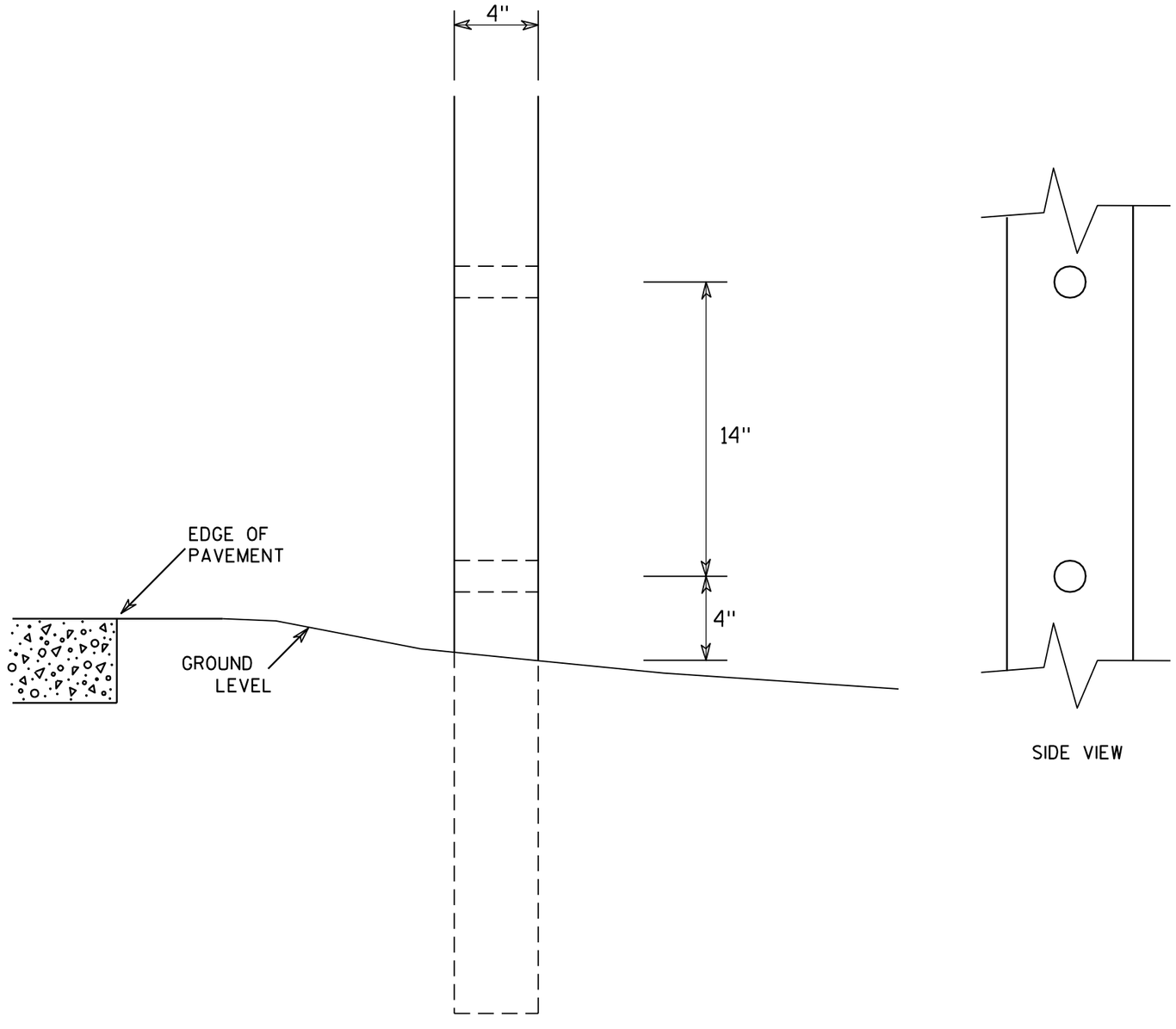
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

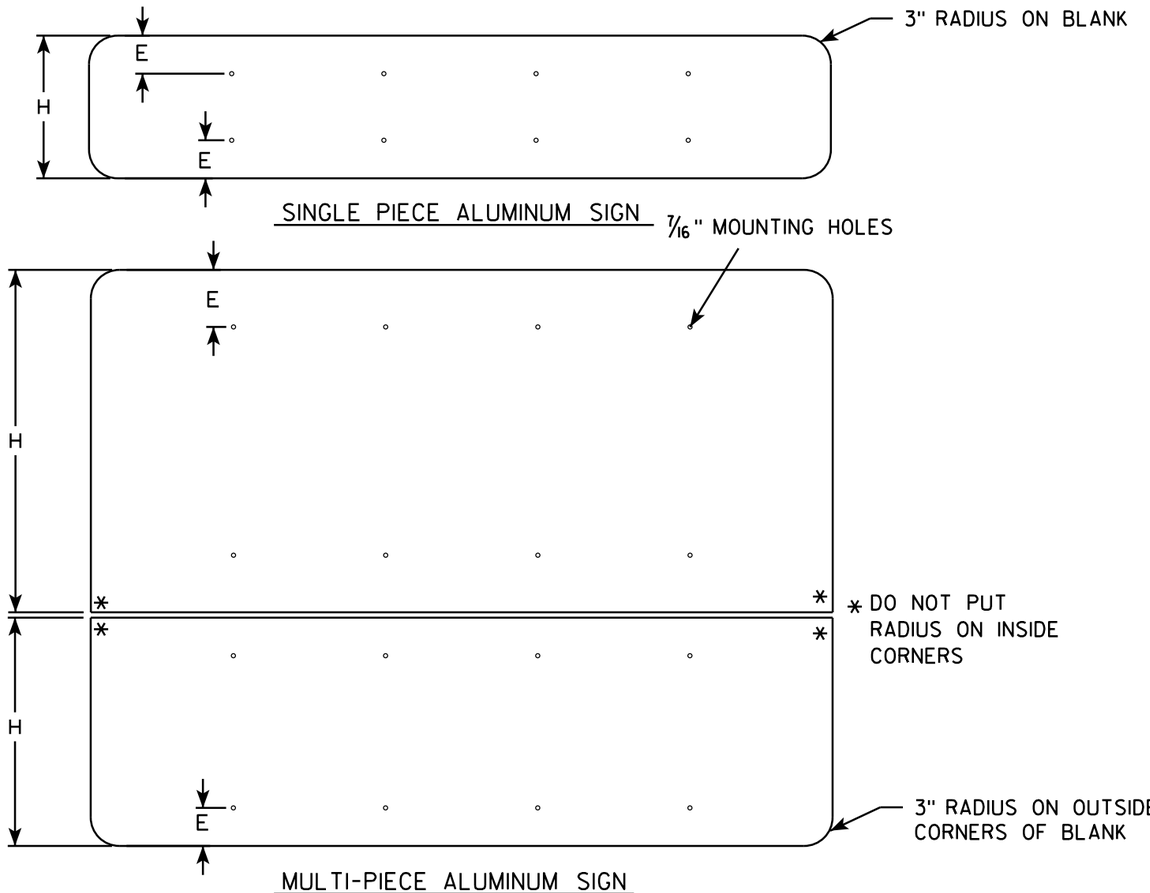
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

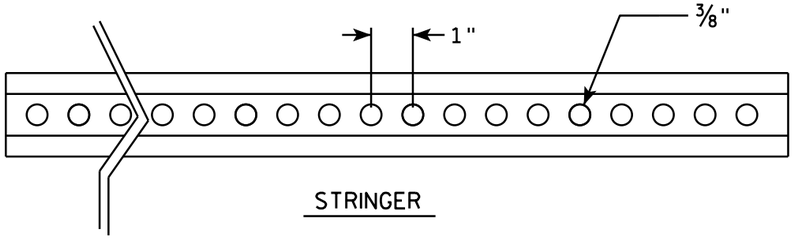
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 143	E



GENERAL NOTES

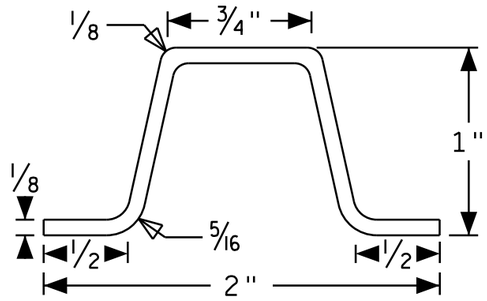
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER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

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

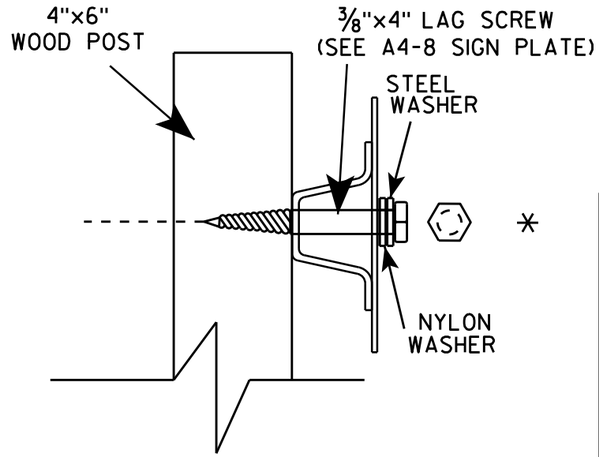


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

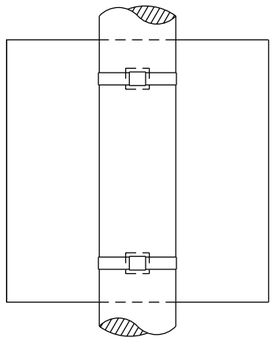
for State Traffic Engineer

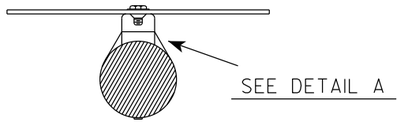
DATE 4/26/16 PLATE NO A4-18.1

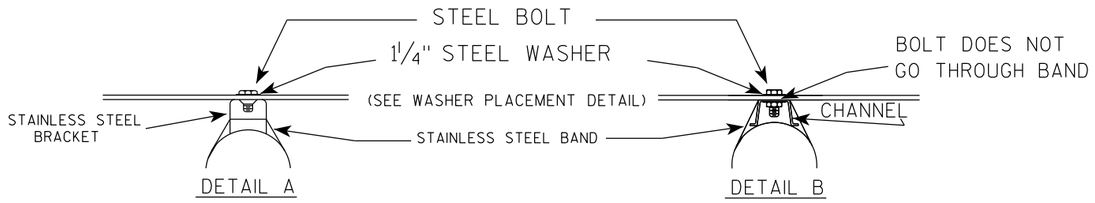
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

BANDING

SINGLE SIGN



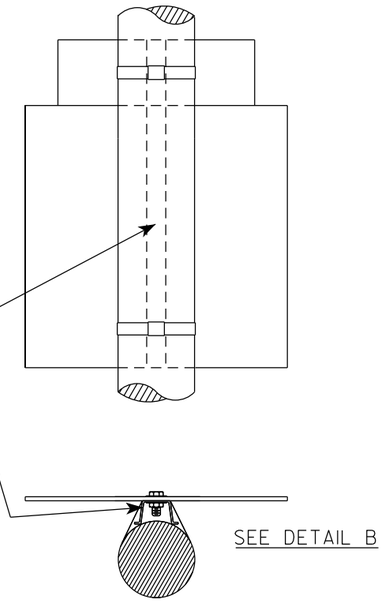




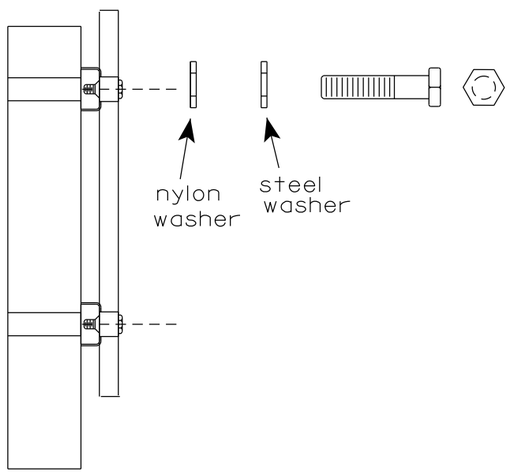
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

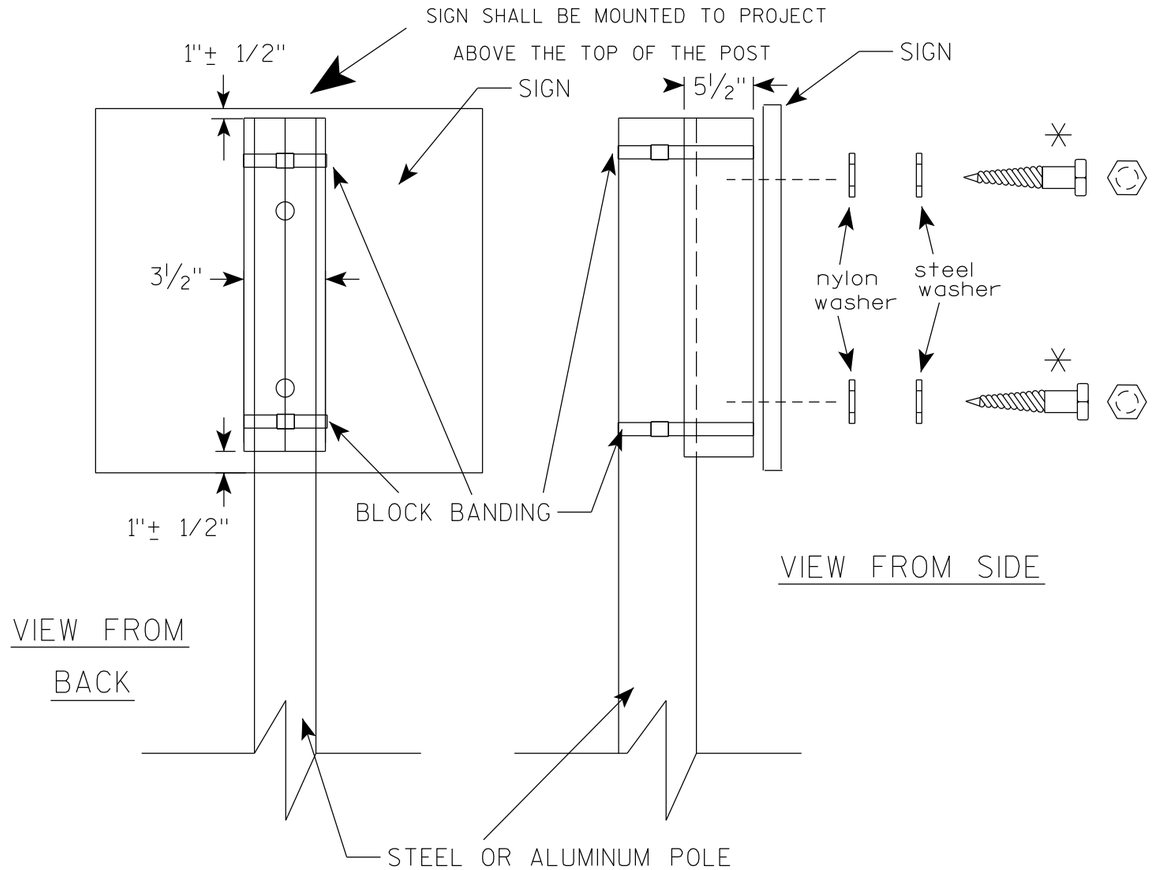
DATE 6/10/19 PLATE NO. A5-9.4

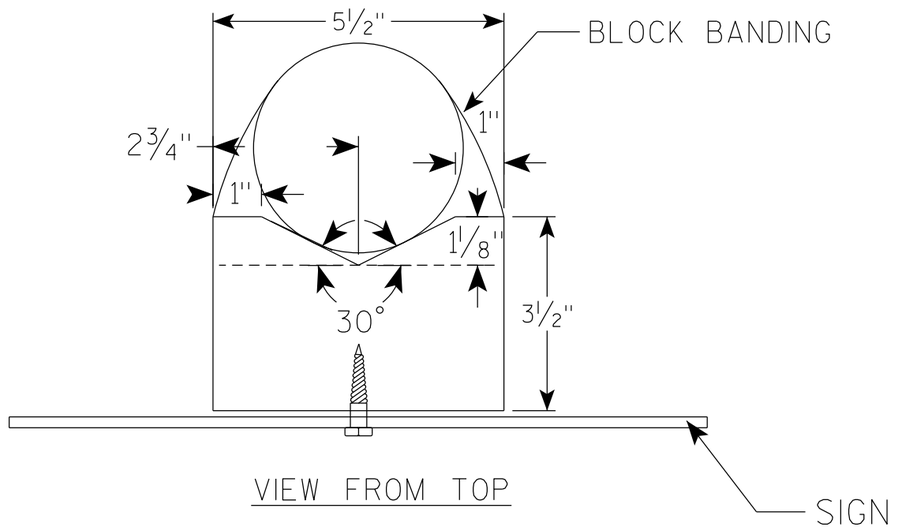
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 145	E

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

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

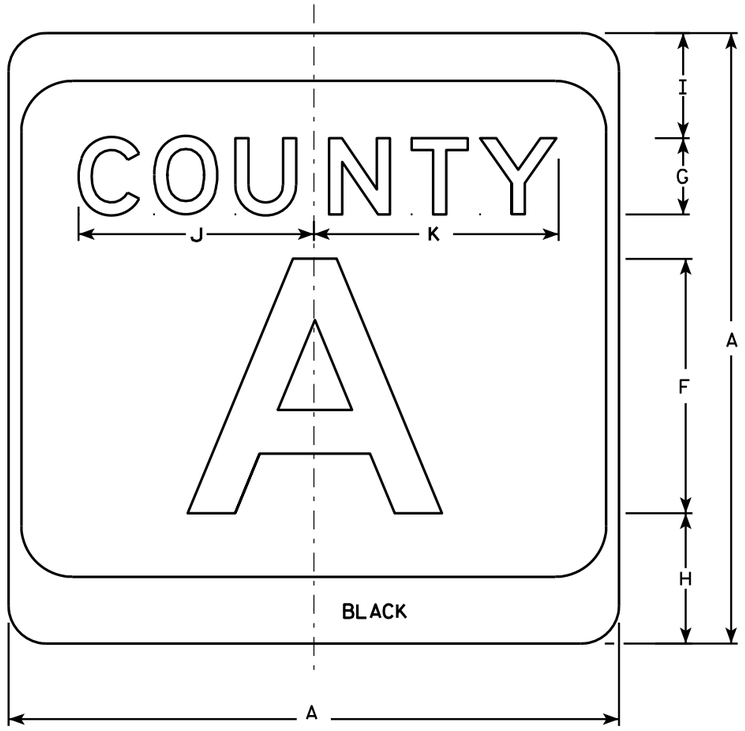
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

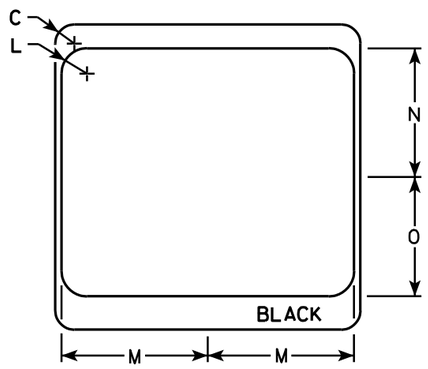
APPROVED Matthew R Rauch
For State Traffic Engineer

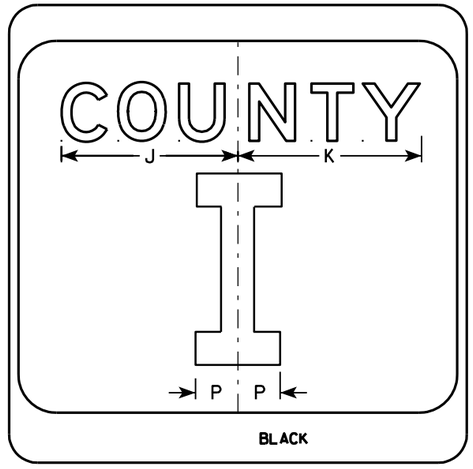
DATE 6/10/19 PLATE NO. A5-10.2

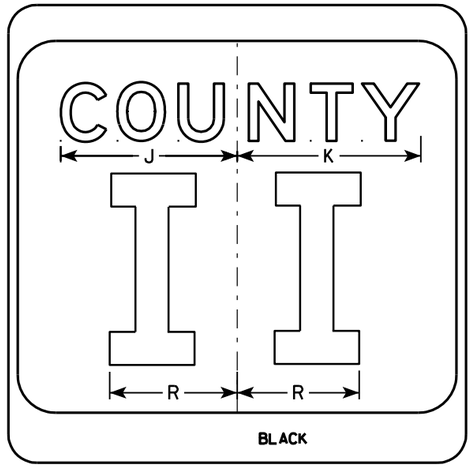
PROJECT NO: | SHEET NO: 146 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

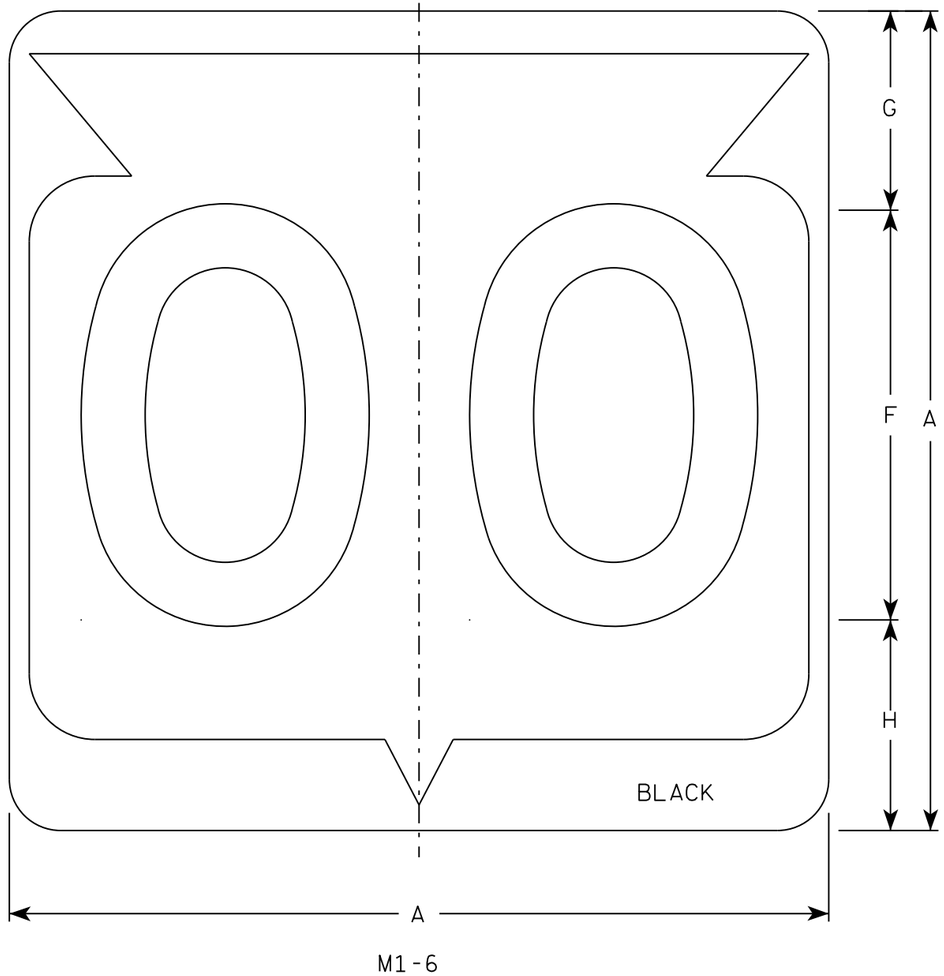
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

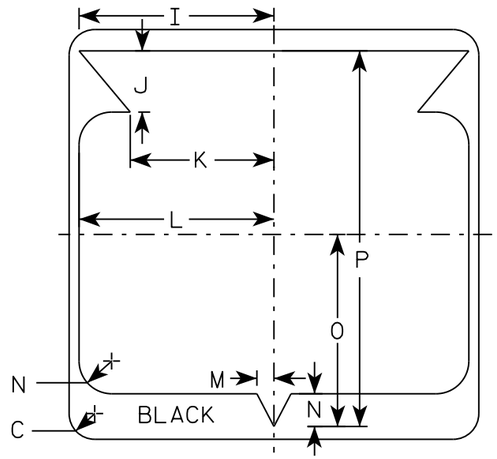
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 147	E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

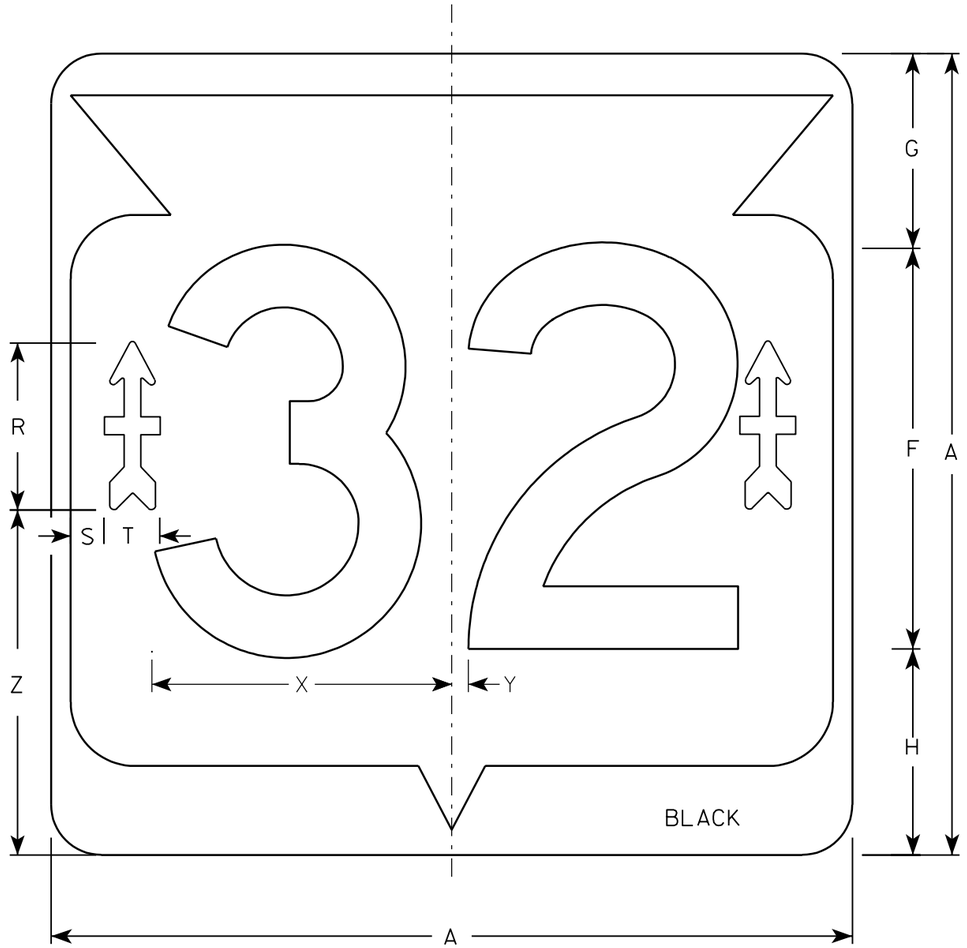
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

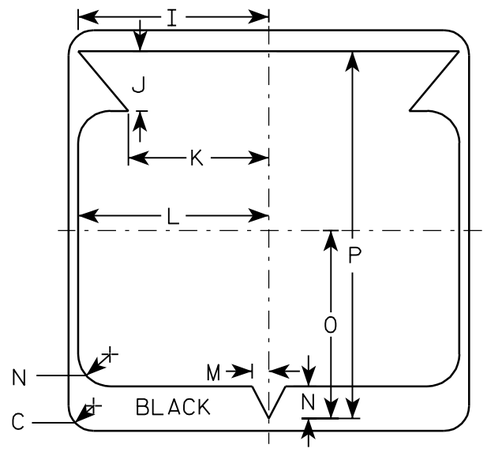
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 148	E



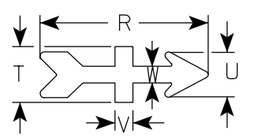
M1-6B

NOTES

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



32nd DIVISION ARROW
ACTUAL SIZE



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m²
1																												
2	24		1 ½			12	5 ½	6 ½	10 ¼	2 ½	8 ⅞	11 ½	1	1 ⅞	11 ¼	21 ⅞		5 ⅛	¾	1 ⅞	1 ½	⅝	⅝	9	½	10 ½	4.0	.36
3	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81
4	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81
5	36		2 ¼			18	8 ¾	9 ¼	15 ⅜	5 ⅜	12 ⅝	17 ⅛	1 ½	2 ⅞	16 ⅞	33		7 ½	1 ½	2 ½	2	⅞	¾	13 ½	¾	15 ½	9.0	.81

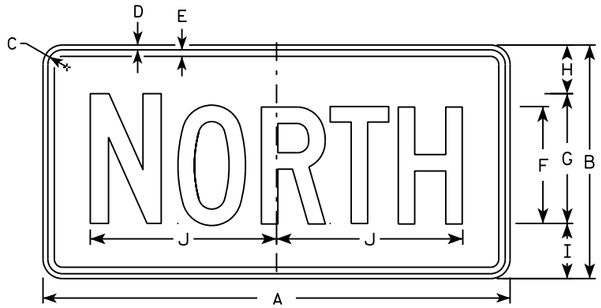
STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

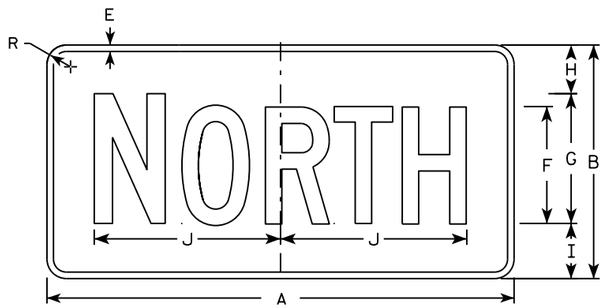
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 12/5/05 PLATE NO. M1-6B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 149 | E



M3-1
MM3-1
MP3-1



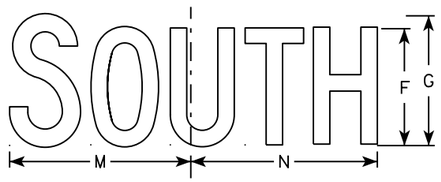
MB3-1
MK3-1
MN3-1



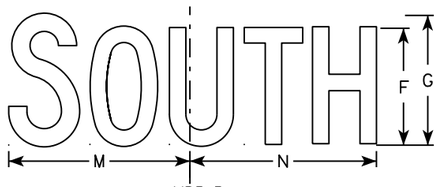
M3-2
MM3-2
MP3-2



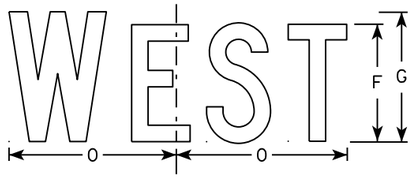
MB3-2
MK3-2
MN3-2



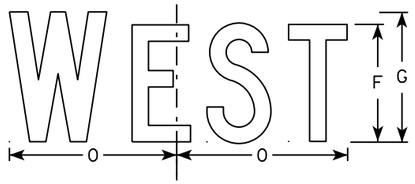
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

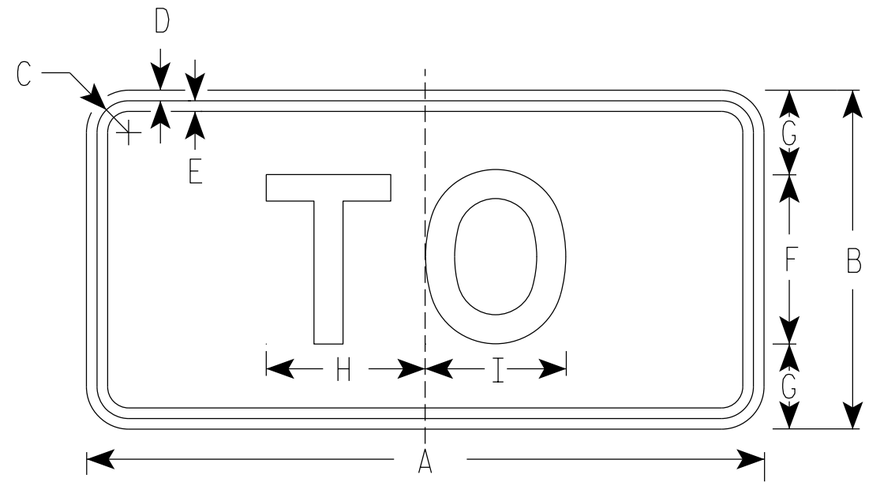
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

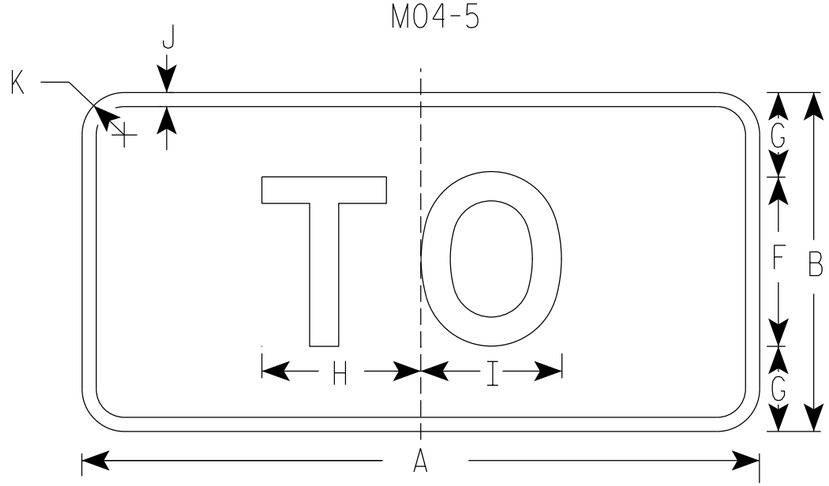
DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

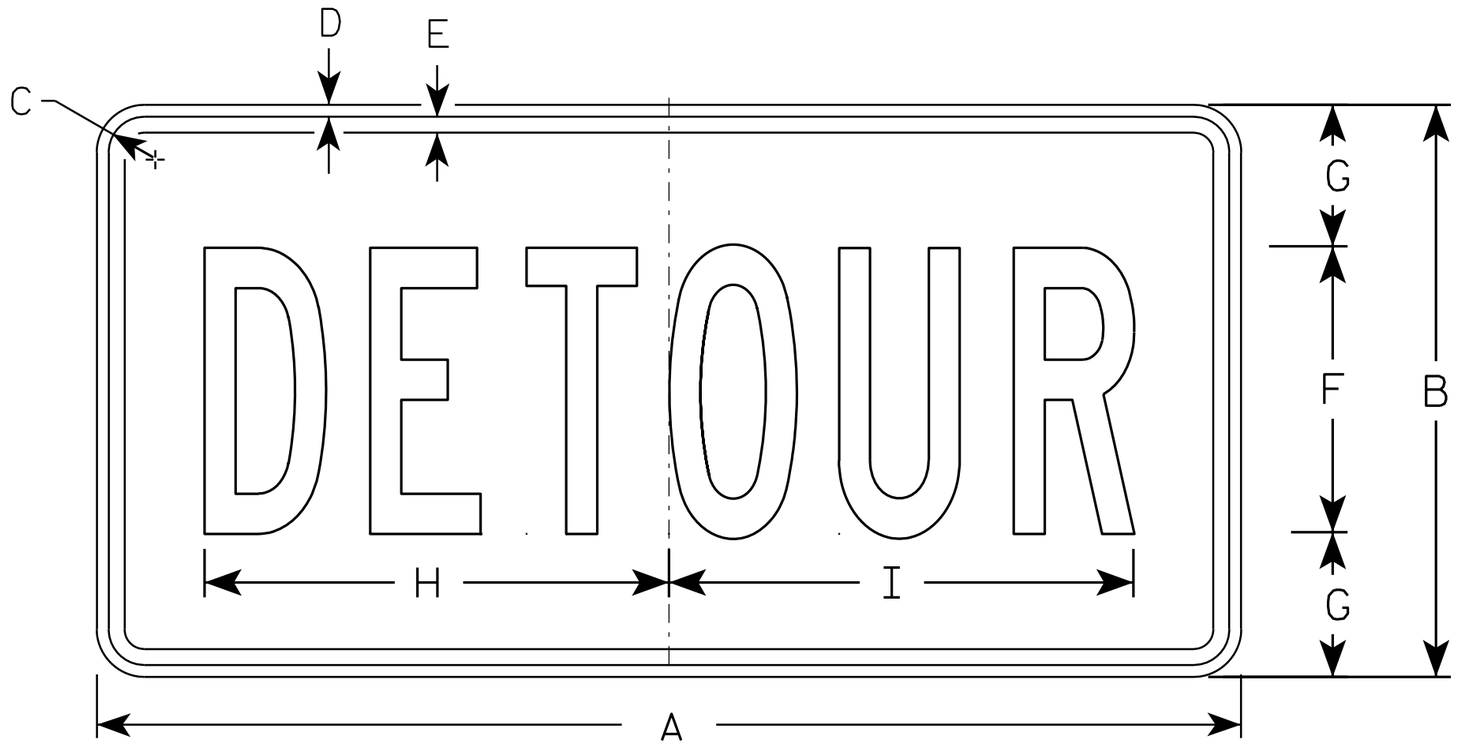
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 151 | E

7



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

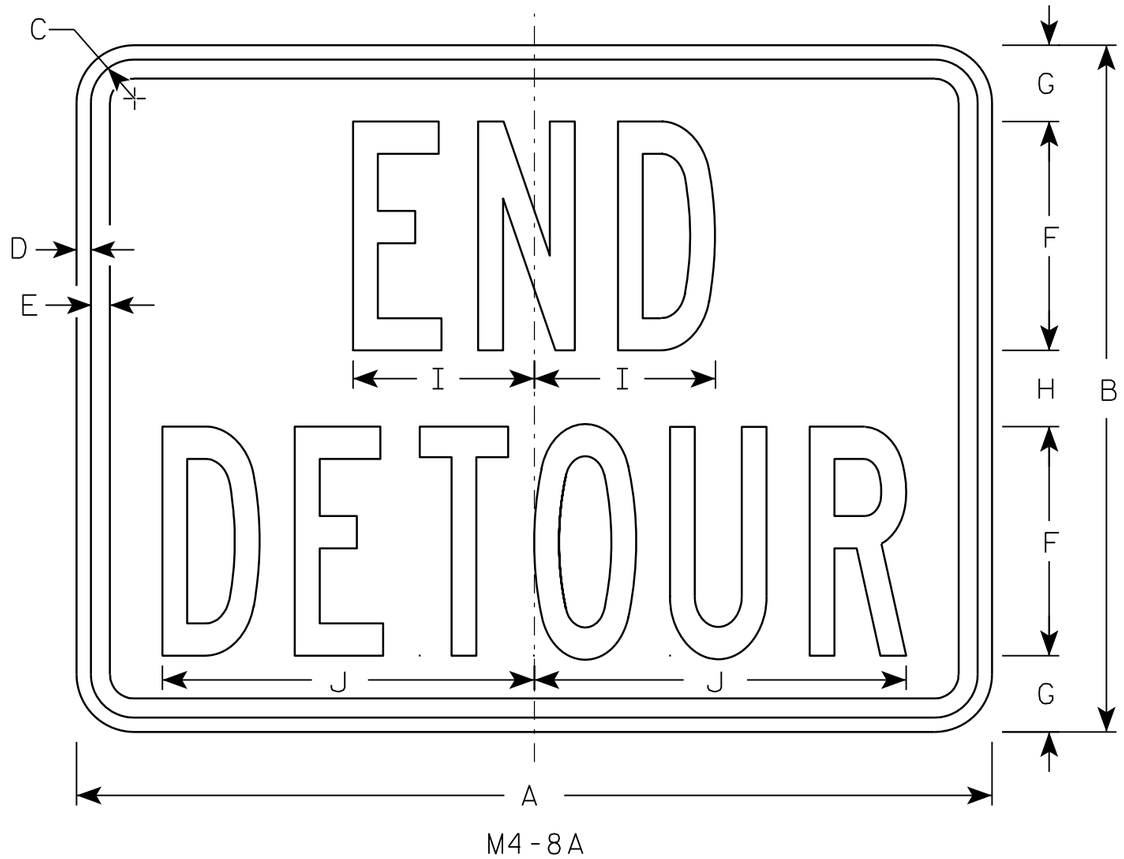
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 152	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

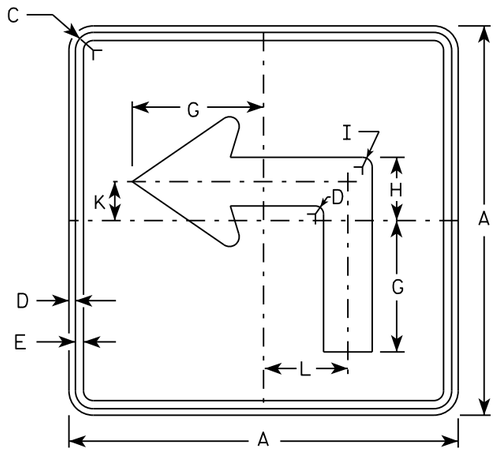
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

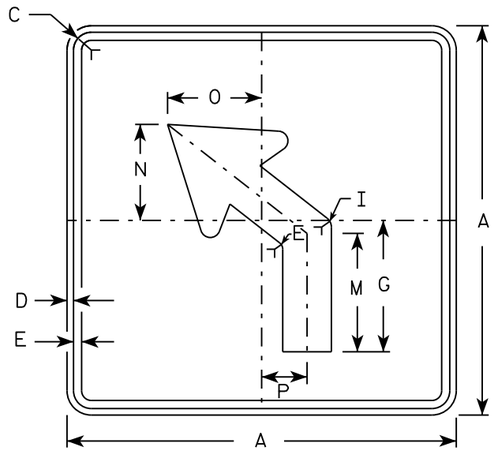
APPROVED Matthew R Rauch
for State Traffic Engineer

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

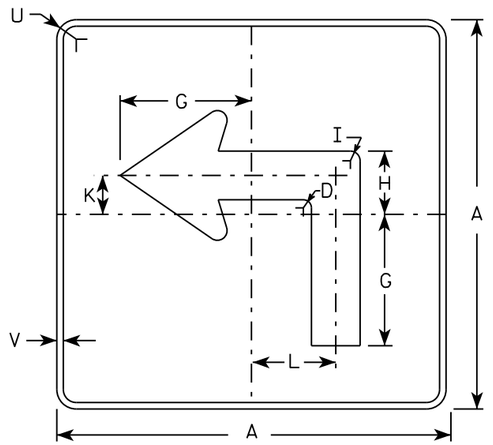
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E



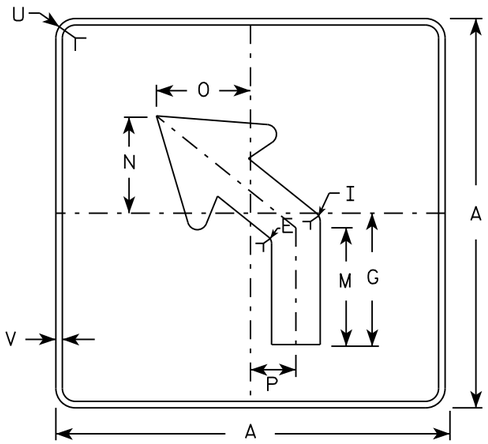
M5-1L
MM5-1L
MO5-1L
MP5-1L



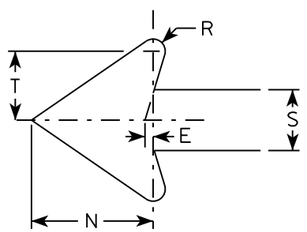
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

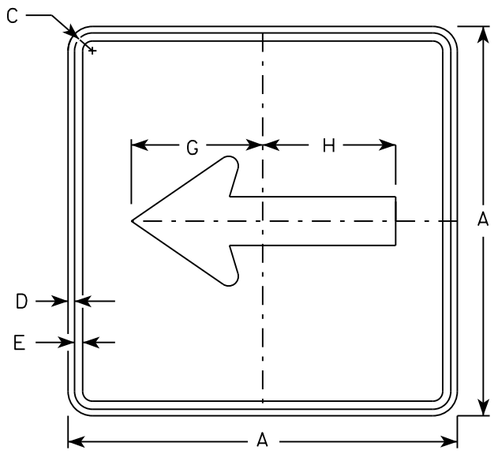
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

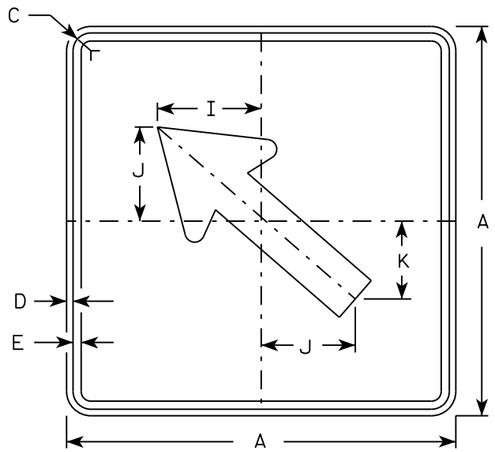
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



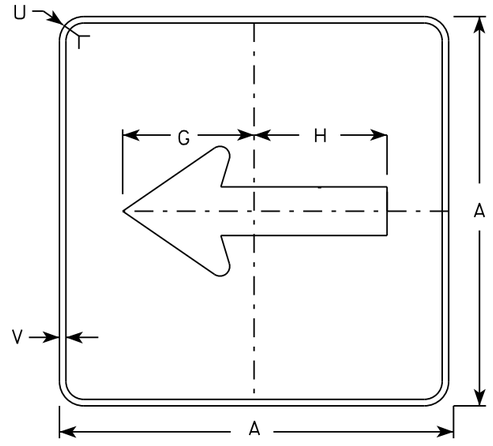
M6-1
MM6-1
MO6-1
MP6-1



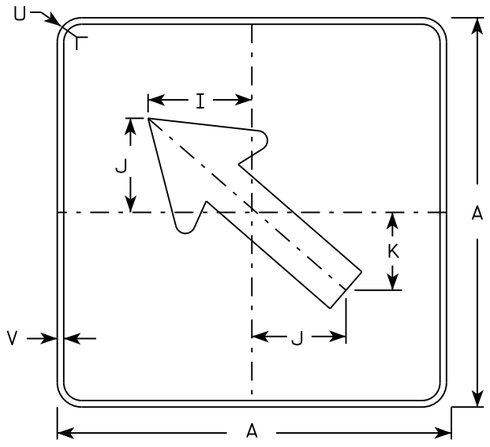
M6-2
MM6-2
MO6-2
MP6-2

NOTES

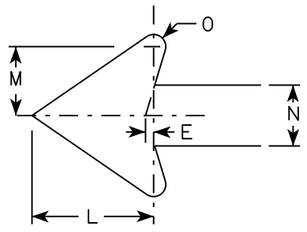
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



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



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



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

STANDARD SIGN
M6-1 & M6-2
SERIES

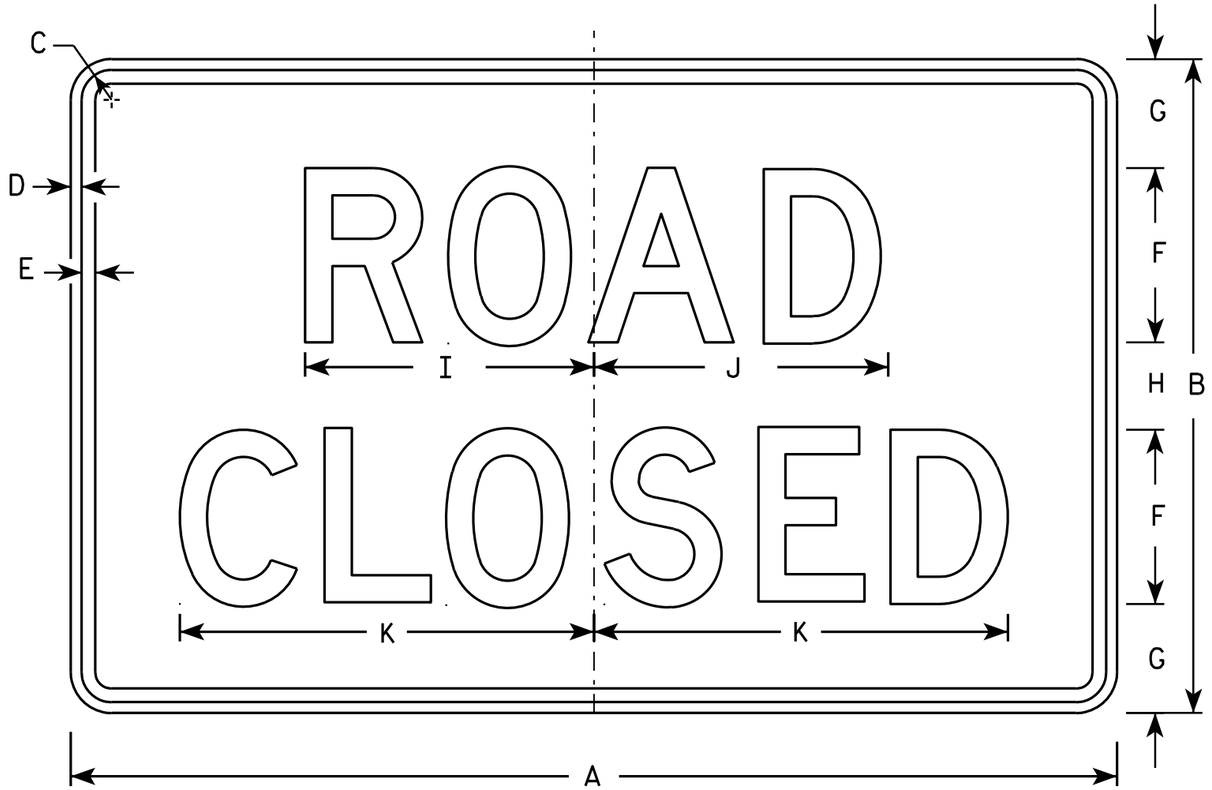
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 155 M6-1.15

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

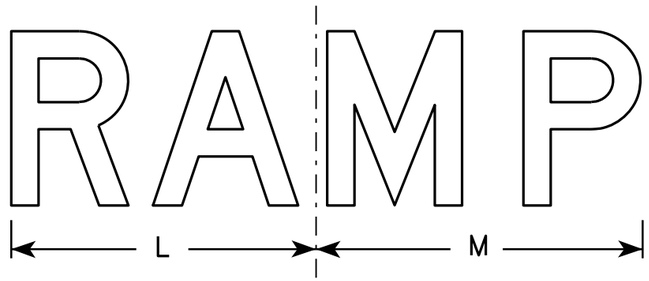
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



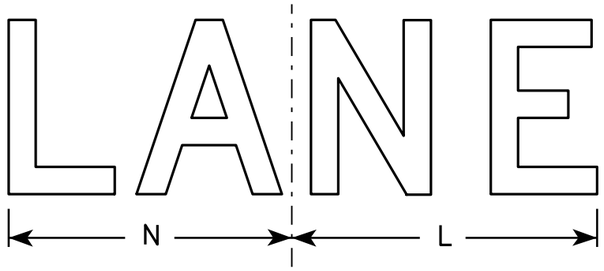
R11-2

NOTES

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



R11-2R



R11-2L

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

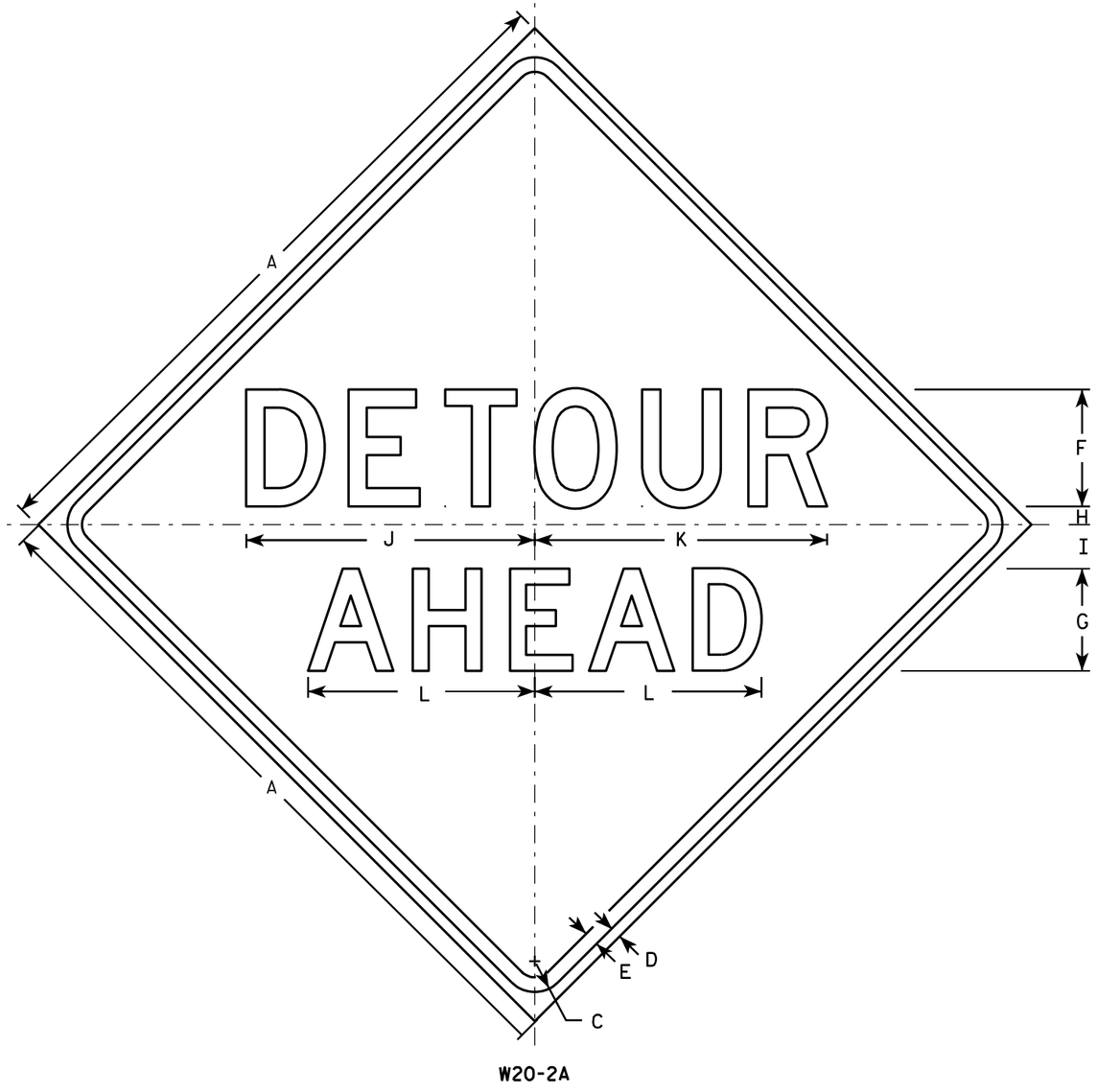
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

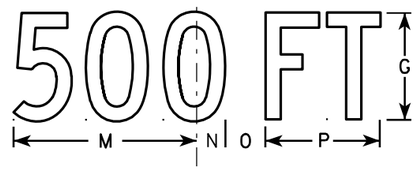
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

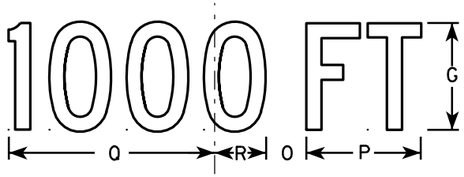
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 156 | E



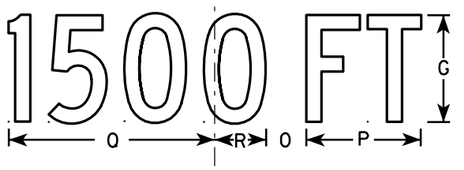
W20-2A



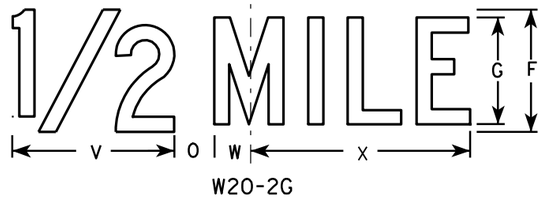
W20-2D



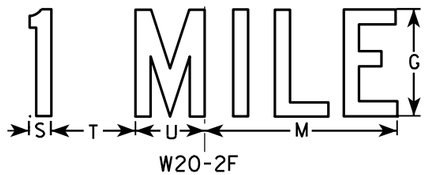
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

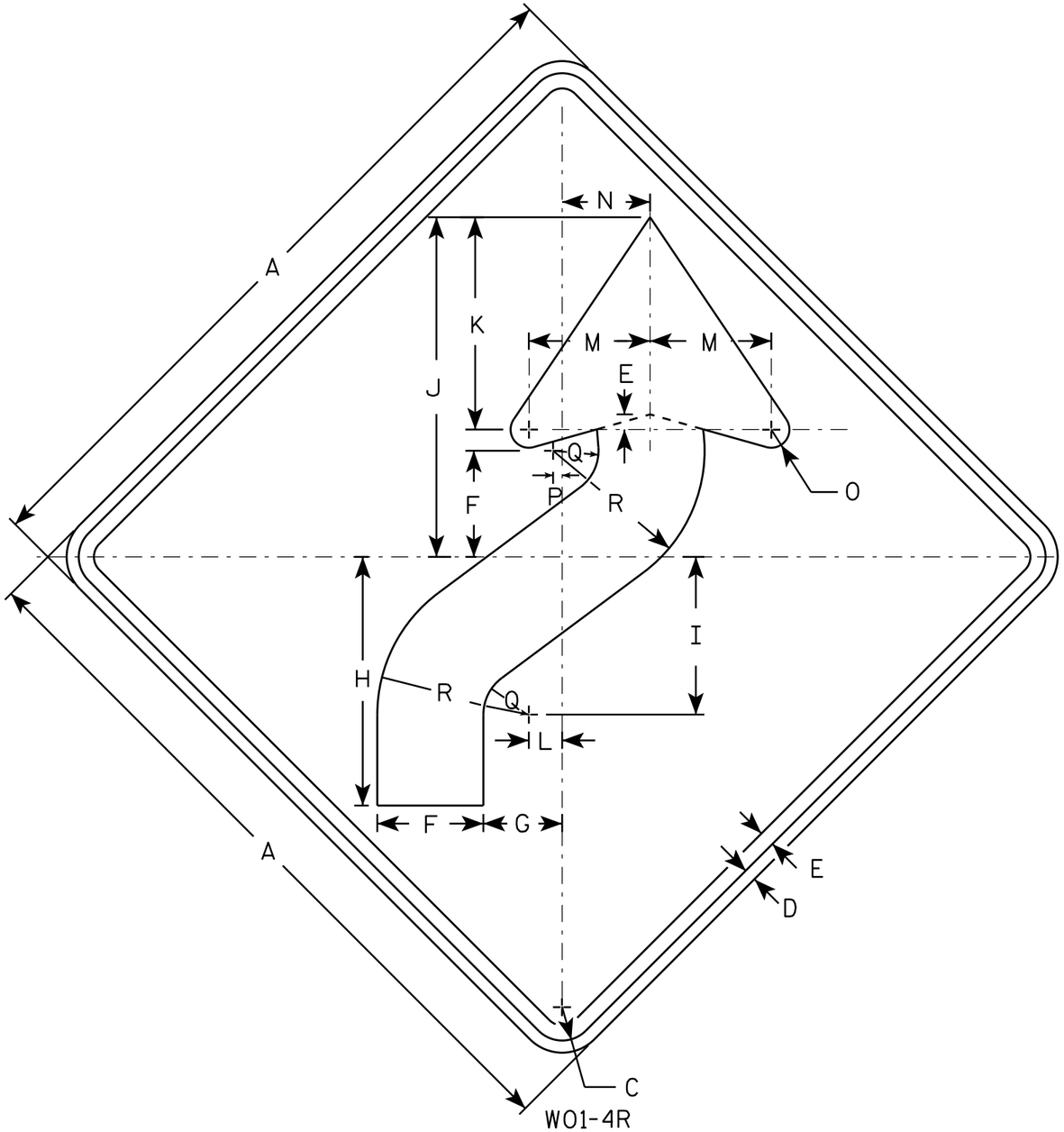
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 157 | E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

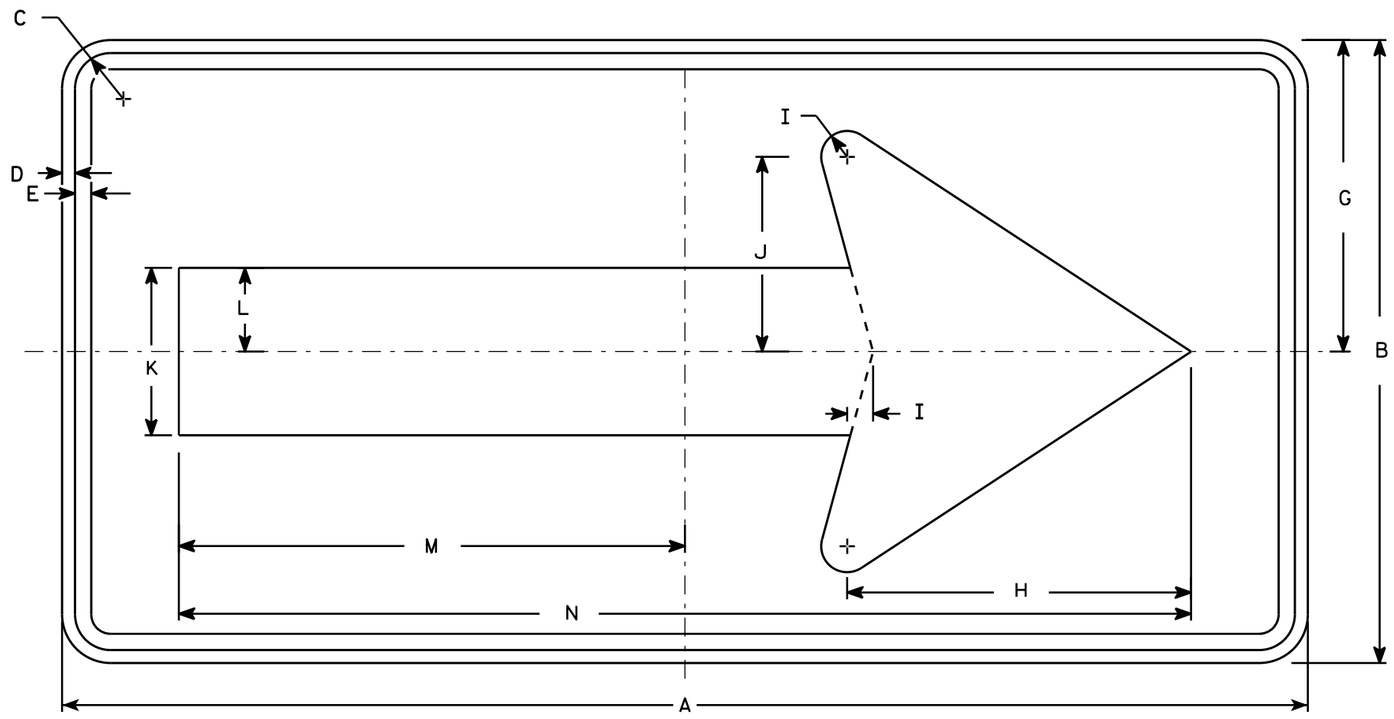
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

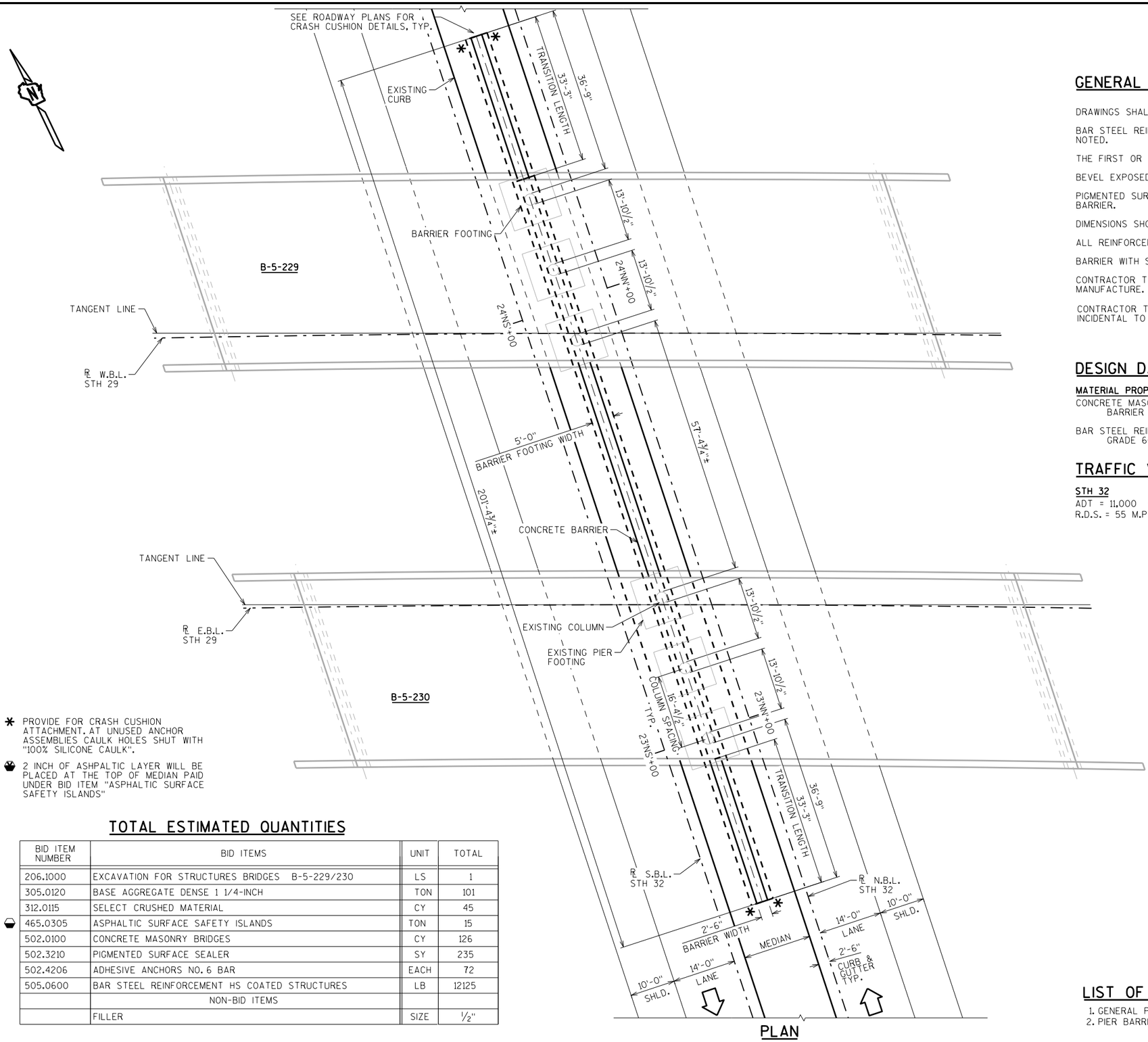
DATE 11/18/13 PLATE NO. W01-6.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

9190-23-71



PLAN

* PROVIDE FOR CRASH CUSHION ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

⬟ 2 INCH OF ASHPALTIC LAYER WILL BE PLACED AT THE TOP OF MEDIAN PAID UNDER BID ITEM "ASPHALTIC SURFACE SAFETY ISLANDS"

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-229/230	LS	1
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	101
312.0115	SELECT CRUSHED MATERIAL	CY	45
⬟ 465.0305	ASPHALTIC SURFACE SAFETY ISLANDS	TON	15
502.0100	CONCRETE MASONRY BRIDGES	CY	126
502.3210	PIGMENTED SURFACE SEALER	SY	235
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	72
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	12125
	NON-BID ITEMS		
	FILLER	SIZE	½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE BOTH FACES AND THE TOP OF THE BARRIER.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL REINFORCEMENT SHALL BE EPOXY-COATED.

BARRIER WITH SPREAD FOOTINGS TO BE SUPPORTED BY UNDERLYING NATIVE SOILS.

CONTRACTOR TO VERIFY ANCHOR ASSEMBLY GEOMETRY WITH SELECTED CRASH CUSHION MANUFACTURE.

CONTRACTOR TO COORDINATE ANCHORAGE FOR CRASH CUSHION WITH ROADWAY PLANS- WORK INCIDENTAL TO "CONCRETE MASONRY BRIDGES" BID ITEM"

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY:
BARRIER & FOOTING ——— f'c = 4,000 P.S.I.

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

TRAFFIC VOLUME

STH 32
ADT = 11,000 (2041)
R.D.S. = 55 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. PIER BARRIER WALL DETAILS

STRUCTURE DESIGN CONTACTS:

AIHAM ALSKIF (608) 261-6113
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED AMB 6/12/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-5-229/230

STH 29 OVER STH 32

COUNTY	TOWN
BROWN	PITTSFIELD

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
AA	JJS	AA	JJS

GENERAL PLAN

SHEET 1 OF 2

160

I.D. 9190-23-00E/F DATE: SEP 2019

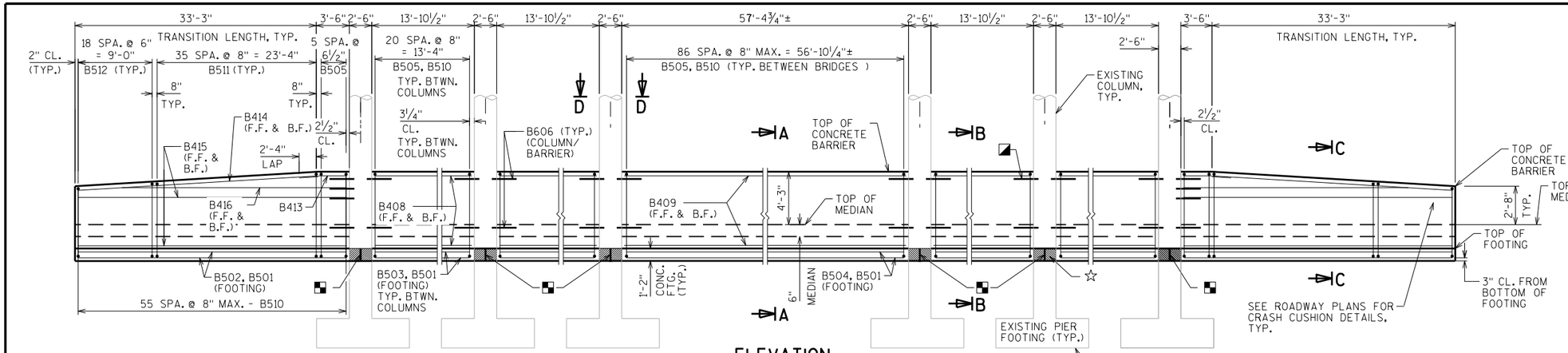
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8

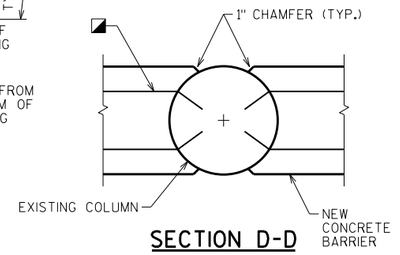
STATE PROJECT NUMBER

9190-23-71



ELEVATION

LOOKING EAST



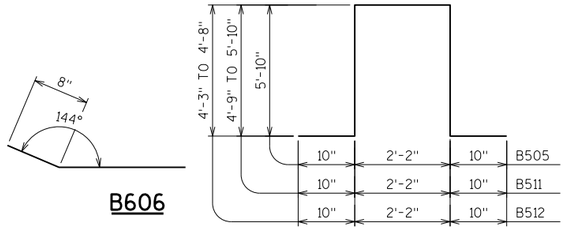
SECTION D-D

LEGEND

- ◪ ADHESIVE ANCHORS TYPE NO. 6 BAR EMBED 8" IN CONCRETE.
- ◩ OPTIONAL CONSTRUCTION JOINTS IN FOOTINGS PLACED ALONG ℄ OF COLUMN. IF USED, LAP LONGITUDINAL REINFORCEMENT 2'-7" IN ADJACENT POUR.
- ☆ PLACE ½" FILLER BETWEEN COLUMN AND CONCRETE FOOTING (TYP.)
- ◭ 12" SELECT CRUSHED MATERIAL MAY BE ELIMINATED IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING MATERIAL IS COMPACTED, GRANULAR MATERIAL.
- ◒ 2 INCH OF ASHPALTIC LAYER WILL BE PLACED AT THE TOP OF MEDIAN PAID UNDER BID ITEM "ASPHALTIC SURFACE SAFETY ISLANDS"

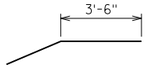
NOTES

BOTH FACES OF BARRIER ARE FLUSH WITH FACE OF EXISTING COLUMNS



B606

B505, B511, B512



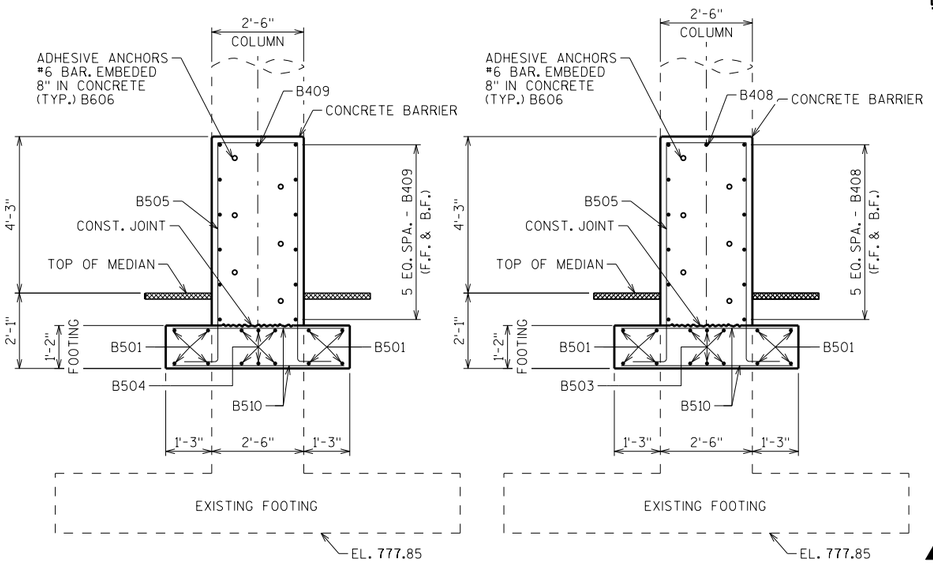
B413

BILL OF BARS

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

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	B501	X	32	52'-3"			FOOTING - HORIZ. - LONGIT. BOT. & TOP LAYER
	B502	X	12	36'-3"			FOOTING - HORIZ. - LONGIT. BOT. & TOP LAYER
	B503	X	24	13'-7"			FOOTING - HORIZ. - LONGIT. BOT. & TOP LAYER
	B504	X	6	57'-1"			FOOTING - HORIZ. - LONGIT. BOT. & TOP LAYER
	B505	X	183	15'-0"	X		BARRIER VERTICAL
	B606	X	72	3'-2"	X		BARRIER/COLUMN HORIZ. - ADHESIVE ANCHORS
◪	B407	X	26	7'-8"			BARRIER HORIZ.
	B408	X	52	13'-7"			BARRIER HORIZ.
	B409	X	26	30'-0"			BARRIER HORIZ.
	B510	X	566	4'-8"			FOOTING - HORIZ. - TRANS. BOT. & TOP LAYER
	B511	X	72	13'-11"	X	◭	BARRIER VERTICAL
	B512	X	38	12'-3"	X	◭	BARRIER VERTICAL
	B413	X	6	6'-0"	X		BARRIER HORIZ.
	B414	X	6	33'-2"			BARRIER HORIZ.
	B415	X	16	36'-5"			BARRIER HORIZ.
	B416	X	4	24'-4"			BARRIER HORIZ.

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

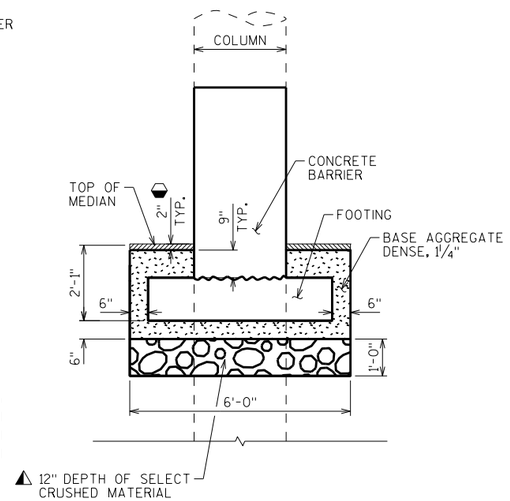


SECTION A-A

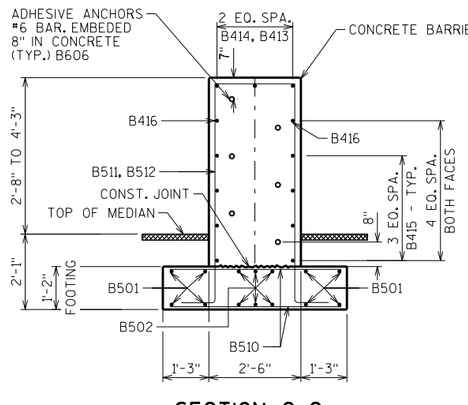
BETWEEN BRIDGES B-5-229 & B-5-230

SECTION B-B

BETWEEM COLUMNS



BEDDING MATERIAL DETAIL



SECTION C-C

TRANSITION REGION

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B511	2 SERIES OF 36	12'-10" TO 15'-0"
B512	2 SERIES OF 19	11'-10" TO 12'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-229/230

DRAWN BY AA | PLANS CK'D. JJS

PIER BARRIER WALL DETAILS

SHEET 2

161

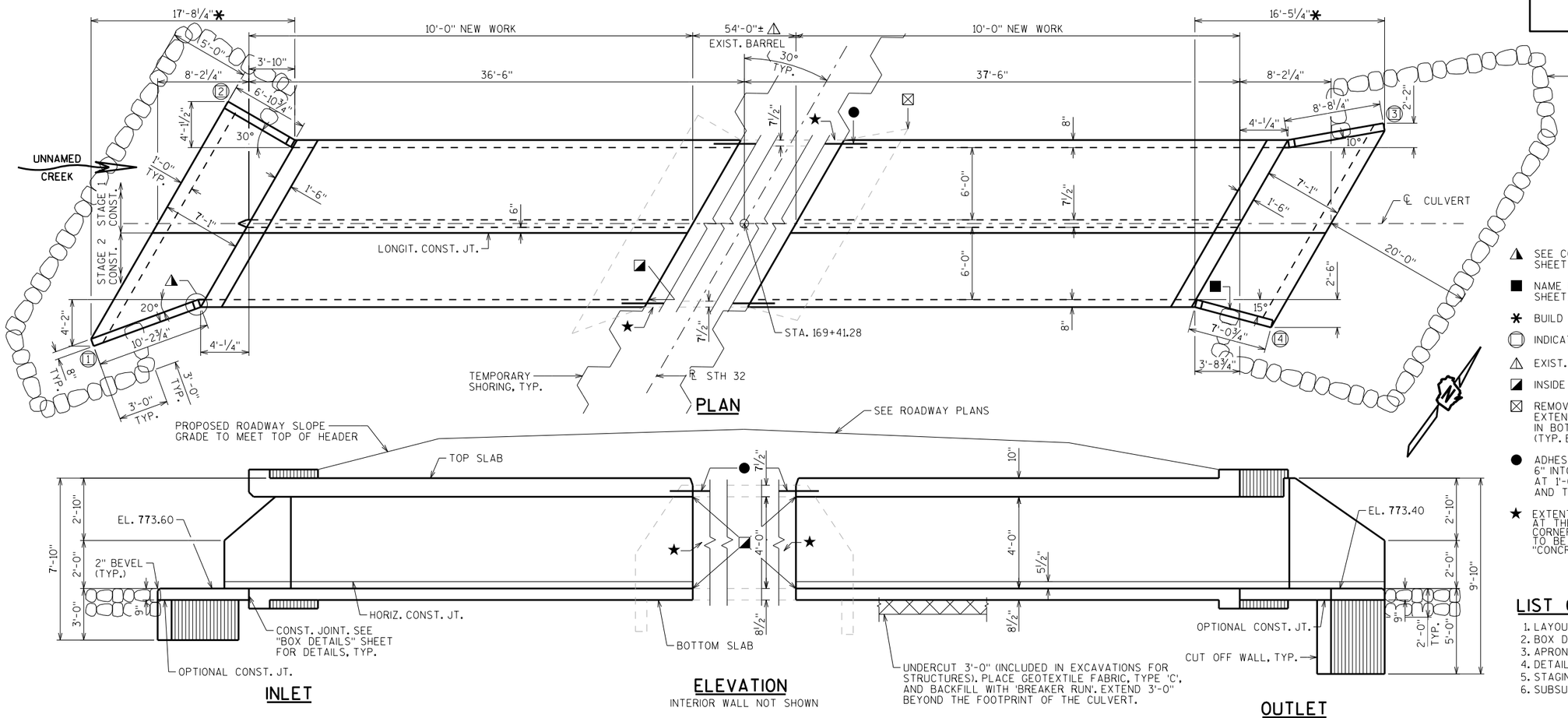
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STATE PROJECT NUMBER

9190-23-71



INLET

ELEVATION

INTERIOR WALL NOT SHOWN

OUTLET

△ SEE CORNER DETAILS ON "DETAILS" SHEET

■ NAME PLATE LOCATION (SEE "DETAILS" SHEET)

* BUILD APRON AND END OF BOX LEVEL

(1) INDICATES WING NUMBER

△ EXIST. BARREL TO REMAIN IN PLACE

◪ INSIDE WALLS TO MATCH EXISTING (TYP.)

☒ REMOVE EXISTING APRON AND WINGS. EXTEND EXISTING BAR STEEL REINFORCEMENT IN BOTTOM SLAB 2'-0" INTO NEW WORK. (TYP. BOTH SIDES)

● ADHESIVE ANCHORS NO. 5 BARS, EMBED 6" INTO SOUND CONCRETE AND SPACE AT 1'-0" CENTERS. (TYP. IN ALL WALLS AND TOP SLAB)

★ EXTENTS OF CONCRETE SURFACE REPAIR AT THE NORTHEAST AND SOUTHWEST CORNERS TO BE DETERMINED BY ENGINEER. TO BE INCLUDED IN THE BID ITEM "CONCRETE MASONRY CULVERTS".

LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON DETAILS
4. DETAILS
5. STAGING DETAILS
6. SUBSURFACE EXPLORATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255(KIPS)

EARTHLOAD:

DESIGNED FOR 1.0 TO 2.0 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY: ——— f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: ——— fy = 60,000 P.S.I.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 300 C.F.S.
$VEL._{100}$ = 9.3 F.P.S.
$HW._{100}$ = EL. 778.2
WATERWAY AREA = 48 SQ. FT.
DRAINAGE AREA = 12.6 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 80 C.F.S.
$VEL._2$ = 3.6 F.P.S.
$HW._2$ = EL. 775.6

TRAFFIC VOLUME

STH 32

ADT = 11,000 (2041)
R.D.S. = 60 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 169+21.00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-5-32	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	237
311.0115	BREAKER RUN	CY	85
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	84
504.0100	CONCRETE MASONRY CULVERTS	CY	40
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	5740
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	590
511.1200	TEMPORARY SHORING C-5-32	SF	264
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	17
606.0300	RIPRAP HEAVY	CY	60
645.0105	GEOTEXTILE TYPE C	SY	109
645.0120	GEOTEXTILE TYPE HR	SY	122
	NON-BID ITEMS		
	FILLER	EACH	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-5-32" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

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 ON THE BOX CULVERT SIDES AND BEHIND APRON WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN THE CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

STRUCTURE DESIGN CONTACTS:

STACIE WEIS (608) 261-6109
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED AMB 6/12/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-5-32

STH 32 OVER UNNAMED CREEK

COUNTY	TOWN
BROWN	PITTSFIELD

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
SEW	BAF	SEW	BAF

LAYOUT

SHEET 1 OF 6

162

I.D. 9190-23-00C DATE: JULY 2019

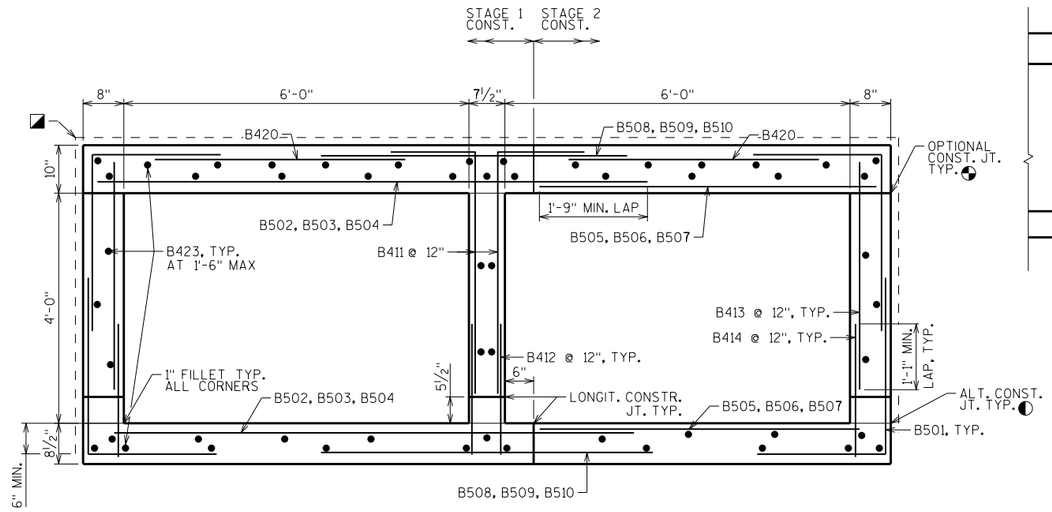
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STATE PROJECT NUMBER

9190-23-71



TYPICAL SECTION THRU BOX

◔ OMIT 1" FILLET IF OPTIONAL CONST. JT. IS USED

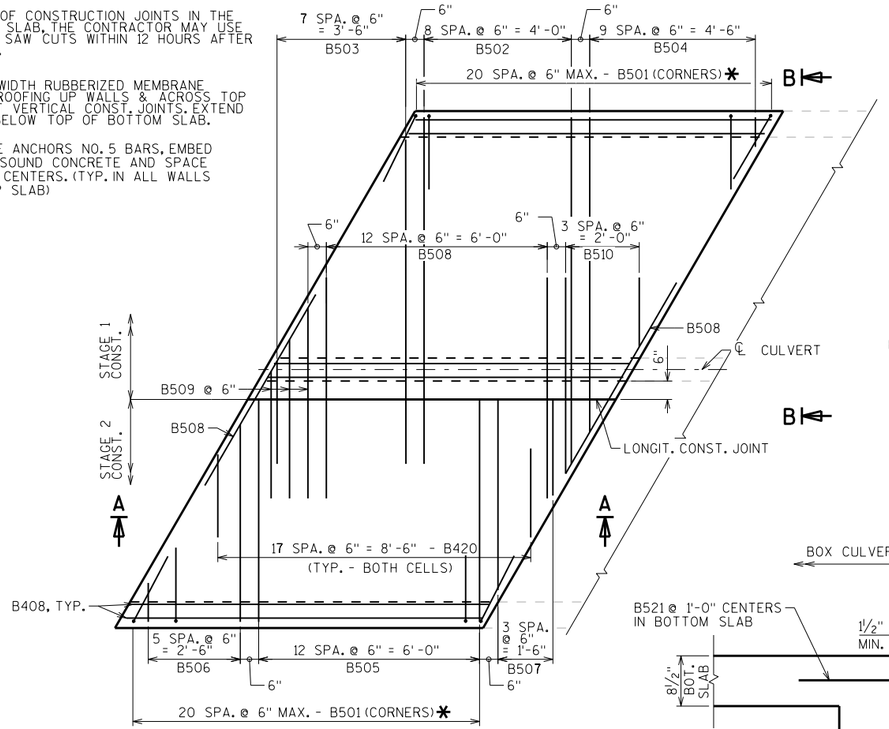
◐ OMIT 1" FILLET IF ALTERNATIVE CONST. JT. IS USED

✱ FLARE CORNER BARS

▲ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

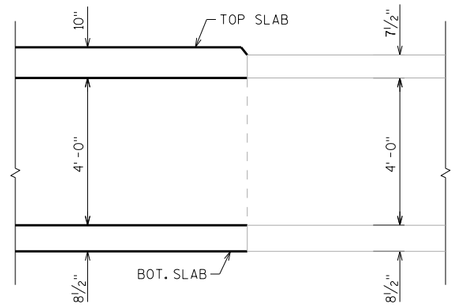
◪ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB AT VERTICAL CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB.

● ADHESIVE ANCHORS NO. 5 BARS, EMBED 6" INTO SOUND CONCRETE AND SPACE AT 1'-0" CENTERS. (TYP. IN ALL WALLS AND TOP SLAB)

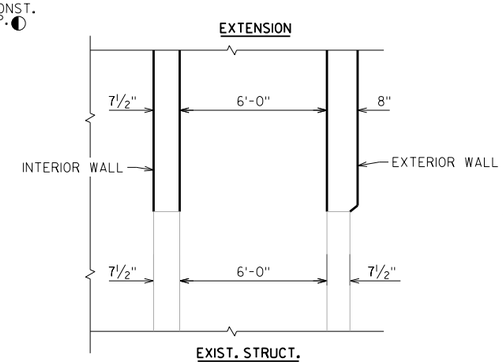


PLAN VIEW OF EXTENSION

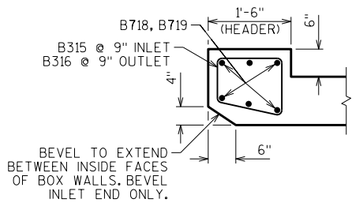
HEADER NOT SHOWN FOR CLARITY
WEST EXTENSION SHOWN,
EAST EXTENSION SIMILAR



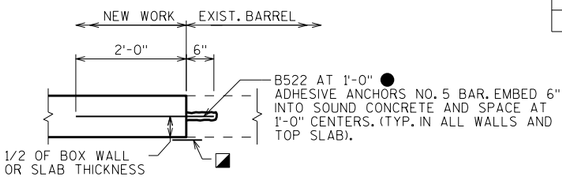
ELEVATION A-A



PLAN B-B

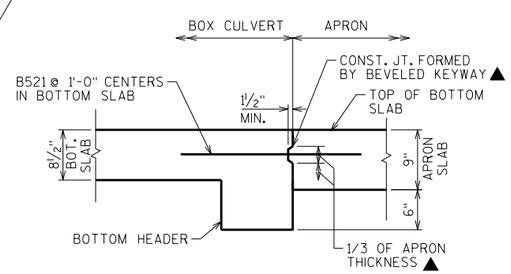


SECTION THRU TOP SLAB HEADER

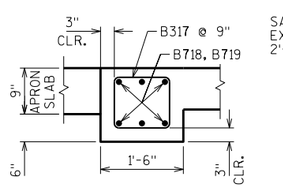


VERTICAL CONSTRUCTION JOINT

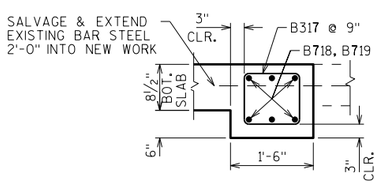
TYP. WALLS AND TOP SLAB



APRON CONNECTION DETAIL



SECTION THRU BOTTOM SLAB HEADER



SECTION THRU BOTTOM SLAB HEADER

(AT EXISTING BOT. SLAB)

BILL OF BARS

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

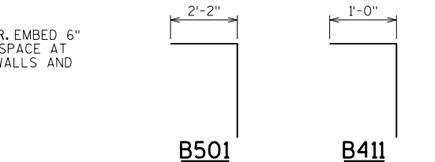
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		168	5'-6"	X		CORNERS
B502		36	9'-5"			TOP & BOT. SLAB - STAGE 1
B503		32	5'-9"		⚠	TOP & BOT. SLAB - STAGE 1
B504		40	4'-8"		⚠	TOP & BOT. SLAB - STAGE 1
B505		52	6'-0"			TOP & BOT. SLAB - STAGE 2
B506		24	3'-2"		⚠	TOP & BOT. SLAB - STAGE 2
B507		16	3'-11"		⚠	TOP & BOT. SLAB - STAGE 2
B508		56	6'-0"			TOP & BOT. SLAB - STAGE 1
B509		12	4'-1"		⚠	TOP & BOT. SLAB - STAGE 1
B510		20	3'-7"		⚠	TOP & BOT. SLAB - STAGE 1
B411		40	4'-11"	X		INTERIOR WALL - VERT.
B412		40	2'-2"			INTERIOR WALL - DOWEL - VERT.
B413		40	4'-1"			EXTERIOR WALL - VERT.
B414		40	2'-2"			EXTERIOR WALL - DOWEL - VERT.
B315		19	3'-10"	X		HEADER INLET - STIRRUP
B316		19	4'-0"	X		HEADER OUTLET - STIRRUP
B317		38	3'-3"	X		HEADER INLET - BOT. - STIRRUP
B718		24	10'-10"			HEADER - STAGE 1
B719		24	6'-10"			HEADER - STAGE 2
B420		72	2'-4"			TOP SLAB - HORIZ.
B521		28	4'-0"			BOX APRON CONNECTION
● B522		84	2'-6"			VERTICAL CONST. JT.
B423		108	9'-7"			TOP & BOT. SLAB & WALLS - LONGIT.

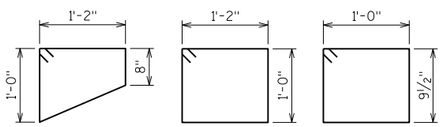
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B503	4 SERIES OF 8	2'-9" TO 8'-9"
B504	4 SERIES OF 10	0'-9" TO 8'-6"
B506	4 SERIES OF 6	1'-0" TO 5'-4"
B507	4 SERIES OF 4	2'-7" TO 5'-2"
B509	4 SERIES OF 3	3'-0" TO 5'-2"
B510	4 SERIES OF 5	1'-10" TO 5'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-5-32

DRAWN BY SEW | PLANS CK'D. BAF

BOX DETAILS

SHEET 2

163

8

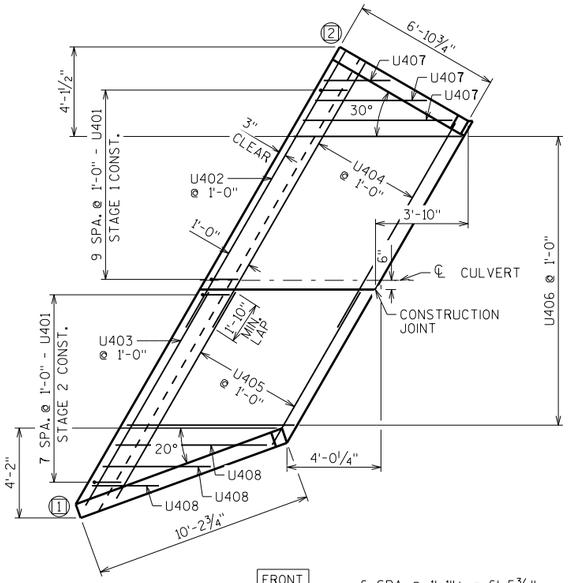
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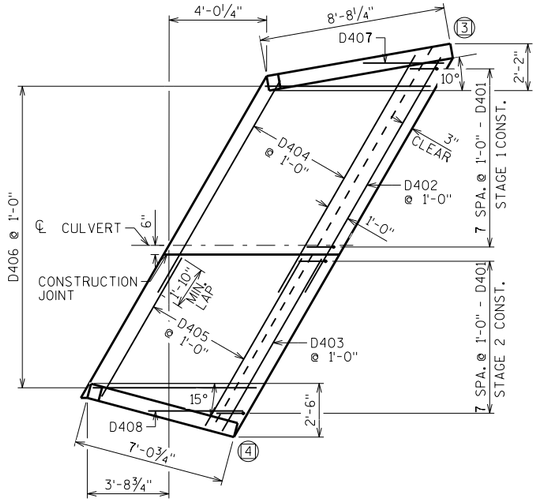
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STATE PROJECT NUMBER

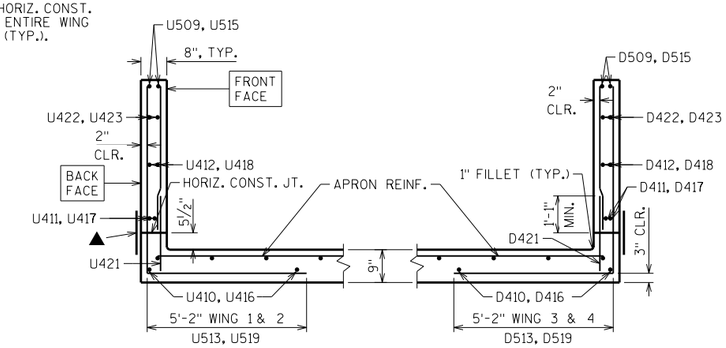
9190-23-71

APRON REINF.



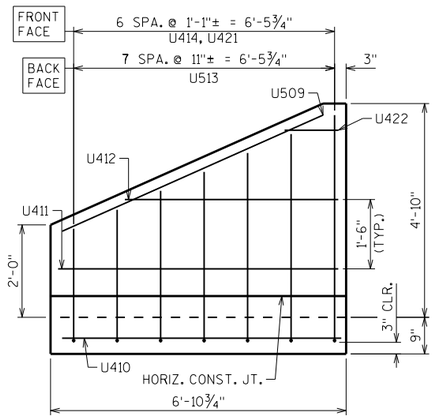


▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING. PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH (TYP.).



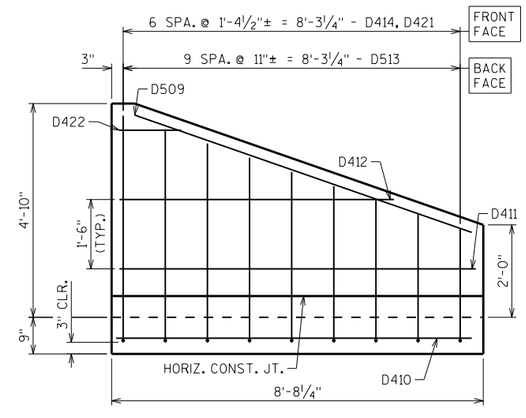
SECTION THRU WINGS

AT RIGHT ANGLES TO WING WALLS



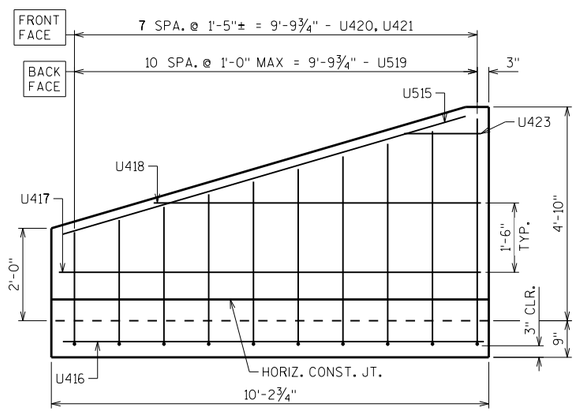
WING 2

(STAGE 1 CONST.)



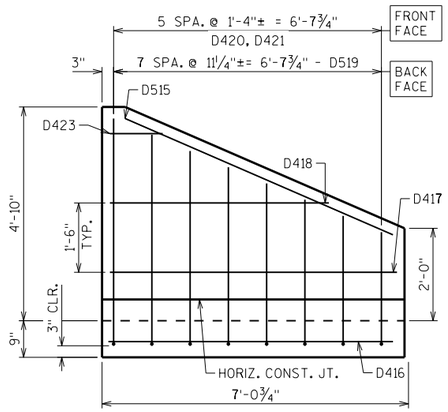
WING 3

(STAGE 1 CONST.)



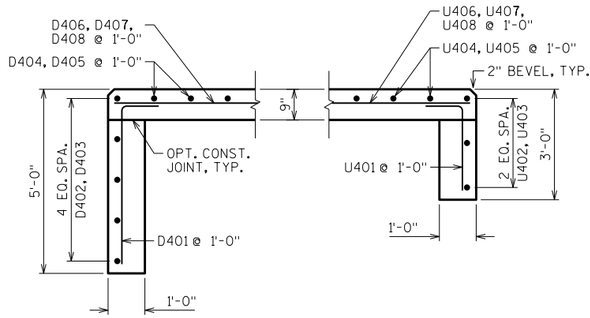
WING 1

(STAGE 2 CONST.)



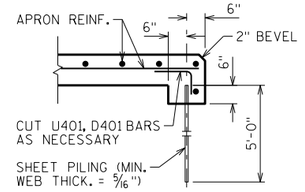
WING 4

(STAGE 2 CONST.)



OUTLET INLET

CUT-OFF WALLS



ALTERNATE CUT-OFF WALLS

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-5-32

DRAWN BY SEW | PLANS CK'D. BAF

APRON DETAILS

SHEET 3

164

8

8

SCALE = 4.00

STATE PROJECT NUMBER

9190-23-71

BILL OF BARS

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

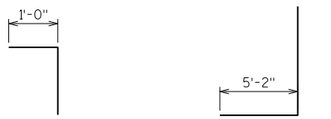
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		18	3'-6"	X		INLET APRON AND CUTOFF WALL
U402		3	15'-0"			INLET APRON AND CUTOFF WALL
U403		3	10'-2"			INLET APRON AND CUTOFF WALL
U404		7	12'-10"		⚠	INLET APRON
U405		7	8'-6"		⚠	INLET APRON
U406		13	7'-9"			INLET APRON
U407		3	5'-2"		⚠	INLET APRON
U408		3	5'-2"		⚠	INLET APRON
U509	X	2	7'-1"			WING 2 - HORIZ. - BOTH FACES
U410		2	6'-5"			WING 2 - HORIZ. - APRON BOT. SLAB
U411	X	2	6'-5"			WING 2 - HORIZ. - BOTH FACES
U412	X	2	5'-1"			WING 2 - HORIZ. - BOTH FACES
U513	X	8	8'-11"	X	⚠	WING 2 - VERT. - BACK FACE
U414	X	7	2'-8"		⚠	WING 2 - VERT. - FRONT FACE
U515	X	2	10'-2"			WING 1 - HORIZ. - BOTH FACES
U416		2	9'-9"			WING 1 - HORIZ. - APRON BOT. SLAB
U417	X	2	9'-9"			WING 1 - HORIZ. - BOTH FACES
U418	X	2	7'-8"			WING 1 - HORIZ. - BOTH FACES
U519	X	11	8'-11"	X	⚠	WING 1 - VERT. - BACK FACE
U420	X	8	2'-8"		⚠	WING 1 - VERT. - FRONT FACE
U421	X	15	2'-0"			WINGS 1 & 2 - DOWELS - FRONT FACE
U422	X	2	1'-10"			WING 2 - HORIZ. - BOTH FACES
U423	X	2	2'-7"			WING 1 - HORIZ. - BOTH FACES
D401		16	5'-6"	X		OUTLET APRON AND CUTOFF WALL
D402		5	12'-3"			OUTLET APRON AND CUTOFF WALL
D403		5	8'-8"			OUTLET APRON AND CUTOFF WALL
D404		7	11'-11"		⚠	OUTLET APRON
D405		7	7'-8"		⚠	OUTLET APRON
D406		13	7'-9"			OUTLET APRON
D407		1	7'-1"			OUTLET APRON
D408		1	6'-9"			OULTET APRON
D509	X	2	8'-9"			WING 3 - HORIZ. - BOTH FACES
D410		2	8'-3"			WING 3 - HORIZ. - APRON BOT. SLAB
D411	X	2	8'-3"			WING 3 - HORIZ. - BOTH FACES
D412	X	2	6'-5"			WING 3 - HORIZ. - BOTH FACES
D513	X	10	8'-11"	X	⚠	WING 3 - VERT. - BACK FACE
D414	X	7	2'-8"		⚠	WING 3 - VERT. - FRONT FACE
D515	X	2	7'-2"			WING 4 - HORIZ. - BOTH FACES
D416		2	6'-7"			WING 4 - HORIZ. - APRON BOT. SLAB
D417	X	2	6'-7"			WING 4 - HORIZ. - BOTH FACES
D418	X	2	5'-2"			WING 4 - HORIZ. - BOTH FACES
D519	X	8	8'-11"	X	⚠	WING 4 - VERT. - BACK FACE
D420	X	6	2'-8"		⚠	WING 4 - VERT. - FRONT FACE
D421	X	13	2'-0"			WINGS 3 & 4 - DOWELS - FRONT FACE
D422	X	2	2'-1"			WING 3 - HORIZ. - BOTH FACES
D423	X	2	1'-9"			WING 4 - HORIZ. - BOTH FACES

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

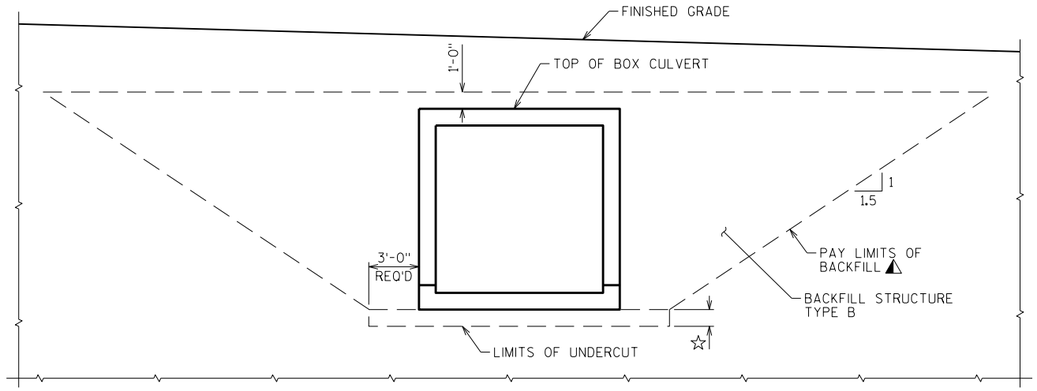
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
U404	1 SERIES OF 7	11'-2" TO 14'-6"
U405	1 SERIES OF 7	6'-9" TO 10'-3"
U407	1 SERIES OF 3	2'-10" TO 7'-6"
U408	1 SERIES OF 3	3'-0" TO 7'-4"
U513	1 SERIES OF 8	7'-6" TO 10'-4"
U414	1 SERIES OF 7	1'-3" TO 4'-0"
U519	1 SERIES OF 11	7'-6" TO 10'-4"
U420	1 SERIES OF 8	1'-3" TO 4'-0"
D404	1 SERIES OF 7	11'-2" TO 12'-8"
D405	1 SERIES OF 7	6'-9" TO 8'-6"
D513	1 SERIES OF 10	7'-6" TO 10'-4"
D414	1 SERIES OF 7	1'-3" TO 4'-0"
D519	1 SERIES OF 8	7'-6" TO 10'-4"
D420	1 SERIES OF 6	1'-3" TO 4'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.



U401, D401 — U513, U519, D513, D519

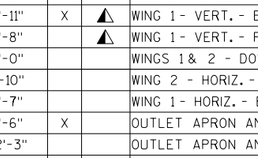


TYPICAL SECTION THRU BOX CULVERT

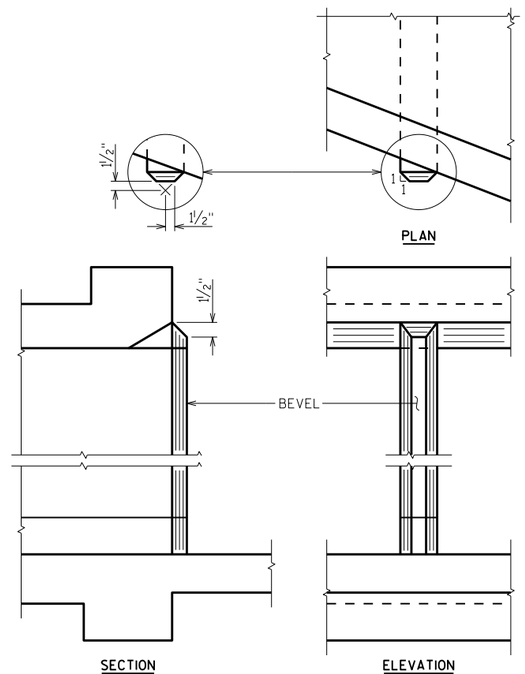
⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 3'-0" (INCLUDED IN EXCAVATIONS FOR STRUCTURES). PLACE GEOTEXTILE FABRIC, TYPE 'C', AND BACKFILL WITH 'BREAKER RUN'. EXTEND 3'-0" BEYOND THE FOOTPRINT OF THE CULVERT.

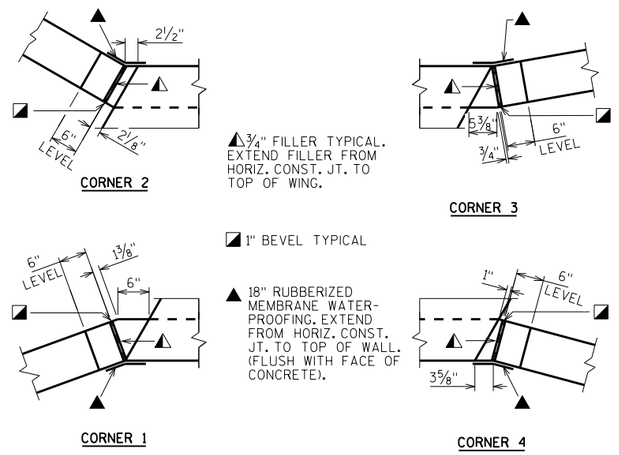
IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.



NAME PLATE LOCATION
WING 4



INLET NOSE DETAILS



CORNER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-5-32

DRAWN BY SEW | PLANS CK'D. BAF

DETAILS

SHEET 4

165

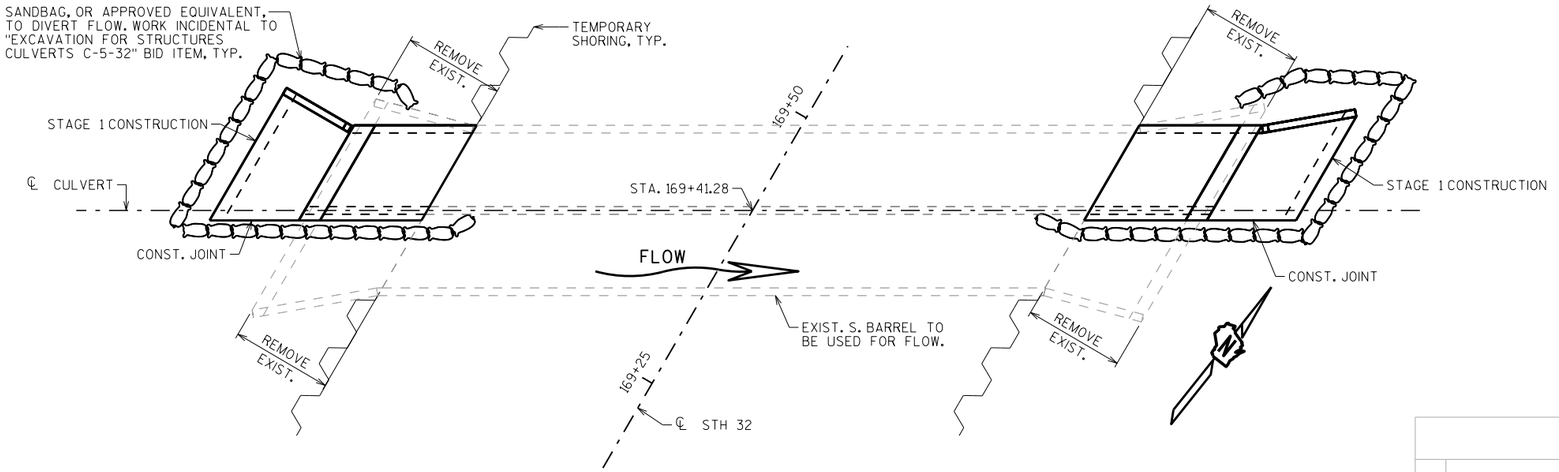
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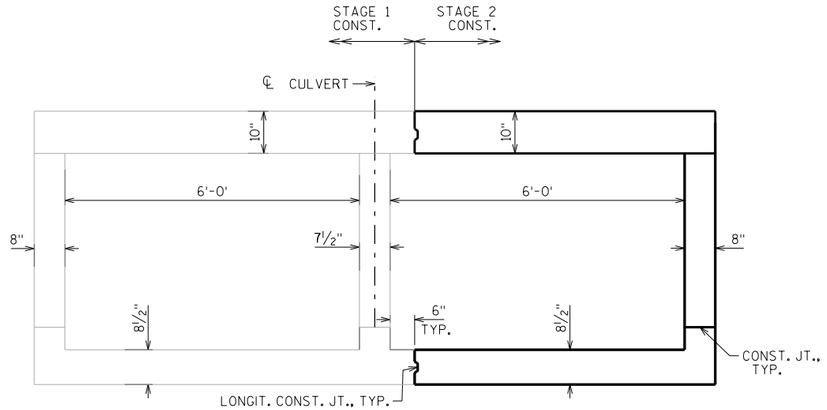
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STATE PROJECT NUMBER

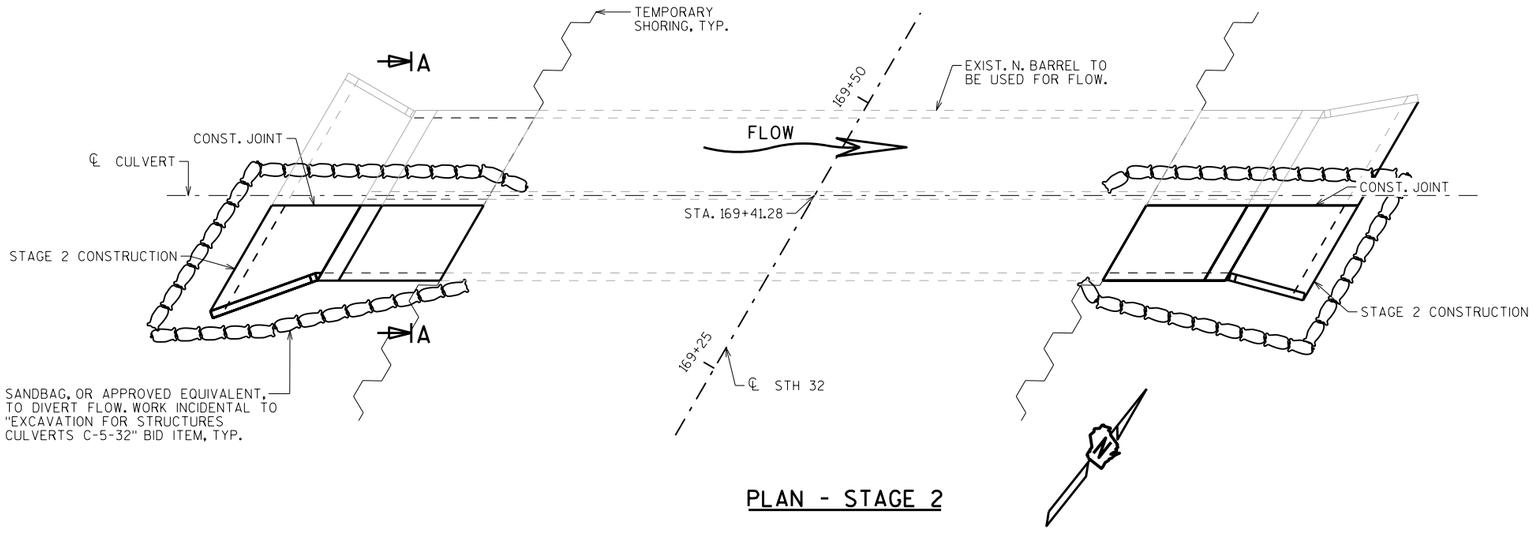
9190-23-71



PLAN - STAGE 1



SECTION A-A



PLAN - STAGE 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-5-32

DRAWN BY SEW | PLANS CK'D. BAF

STAGING DETAILS

SHEET 5

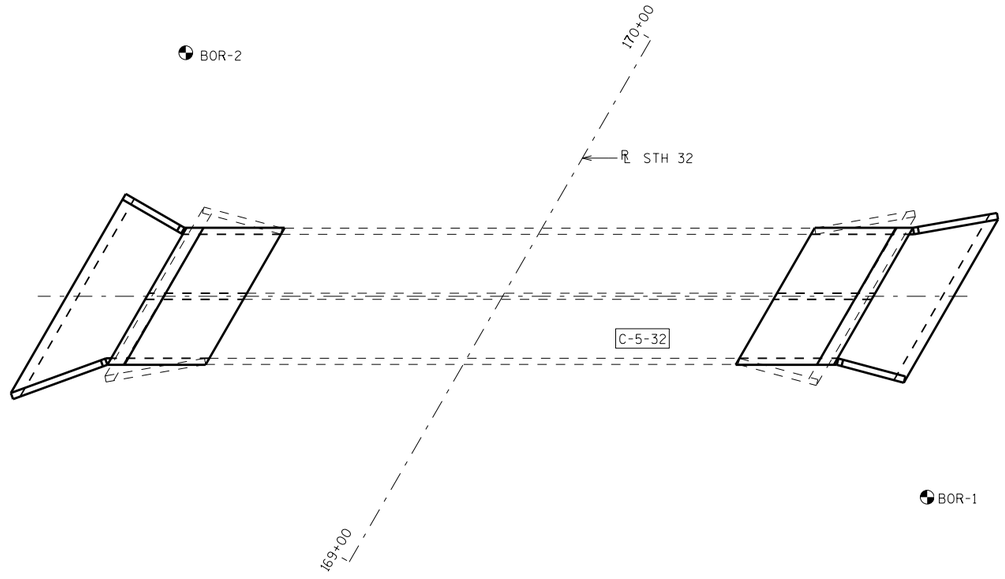
166

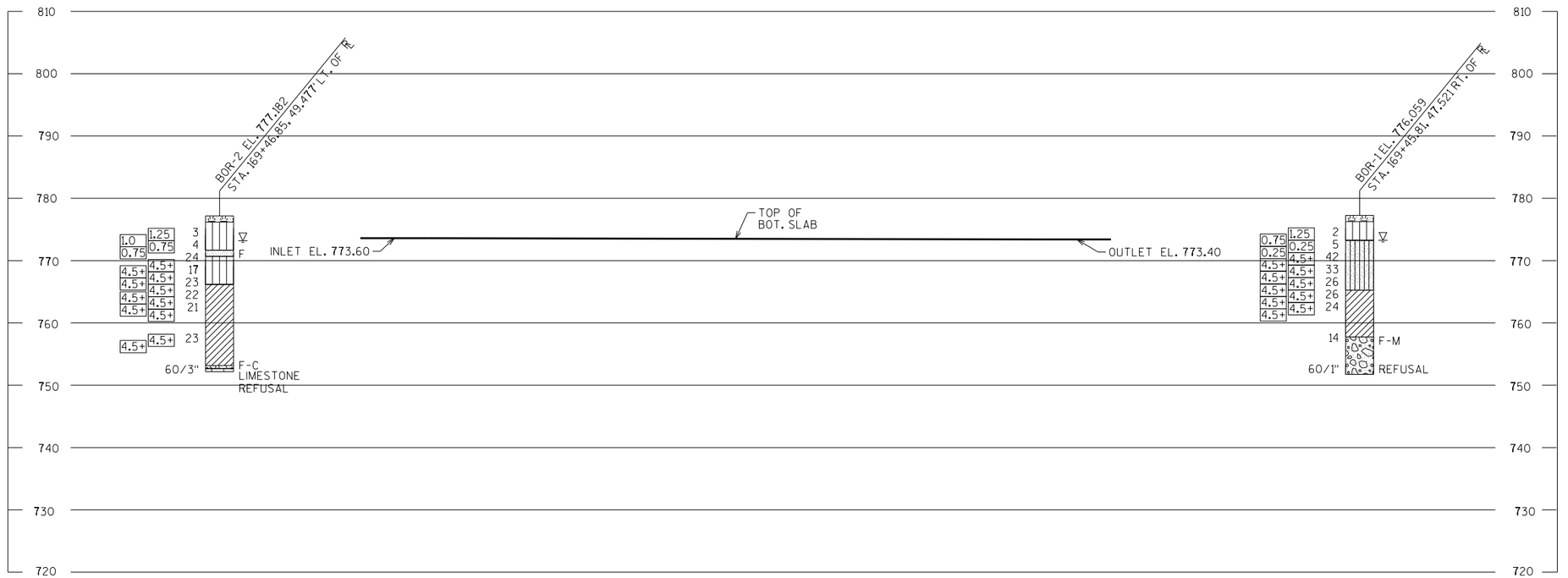
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8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	2/05/2019	611554.371	46410.041
2	2/05/2019	611556.268	46313.056
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





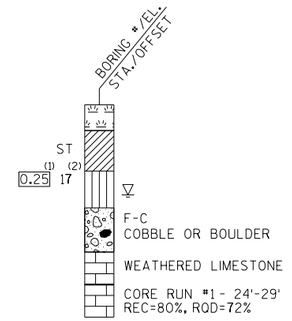
STATE PROJECT NUMBER

9190-23-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-5-32

DRAWN BY TLP/SEW | PLANS CK'D. BAF

SUBSURFACE EXPLORATION

SHEET 6

167

8

8

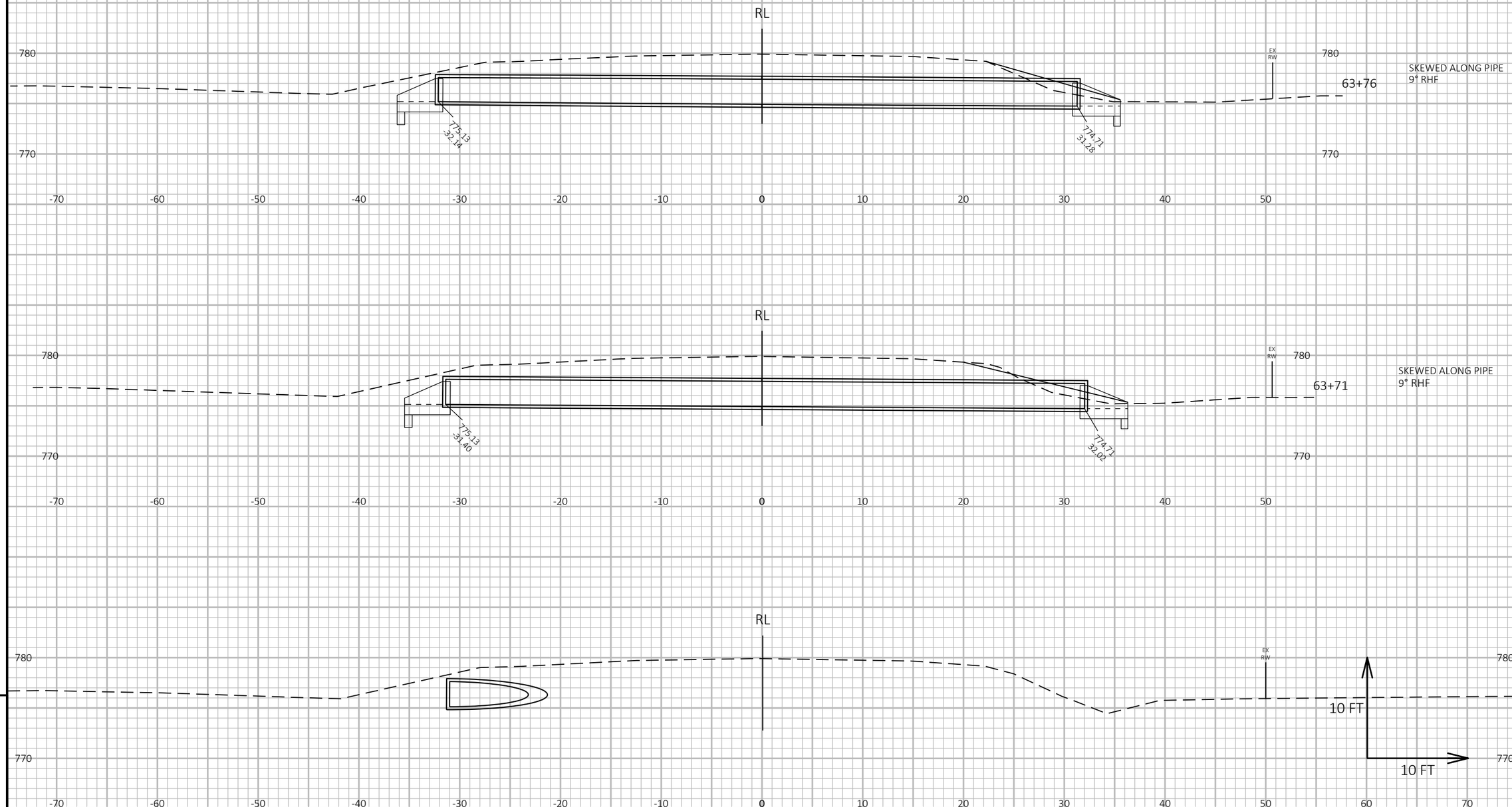
SCALE = 10

BOX CULVERT EXTENSION WEST

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
168+61	2.03	0	0.01	0	0	0	0	0	0	0
168+75	1.97	0	5.12	1	0	1	1	0	2	-1
169+00	6.77	0	14.31	4	0	9	5	0	15	-10
169+03	5.62	0	16.90	1	0	2	6	0	17	-11
169+25	0.00	0	43.38	2	0	25	8	0	52	-44
169+50	4.29	0	5.68	2	0	23	10	0	85	-74
169+63	2.04	0	0.00	2	0	1	12	0	87	-74

BOX CULVERT EXTENSION EAST

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.42	
169+25	1.30	0	2.25	0	0	1	0	0	1	-1
169+50	14.65	0	50.59	7	0	24	7	0	36	-28
169+63	1.99	0	43.30	4	0	23	11	0	68	-56
169+75	4.88	0	25.79	2	0	15	13	0	90	-76
170+00	4.51	0	3.75	4	0	14	17	0	109	-91
170+07	3.32	0	0.00	1	0	0	18	0	110	-91



9

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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 169	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01

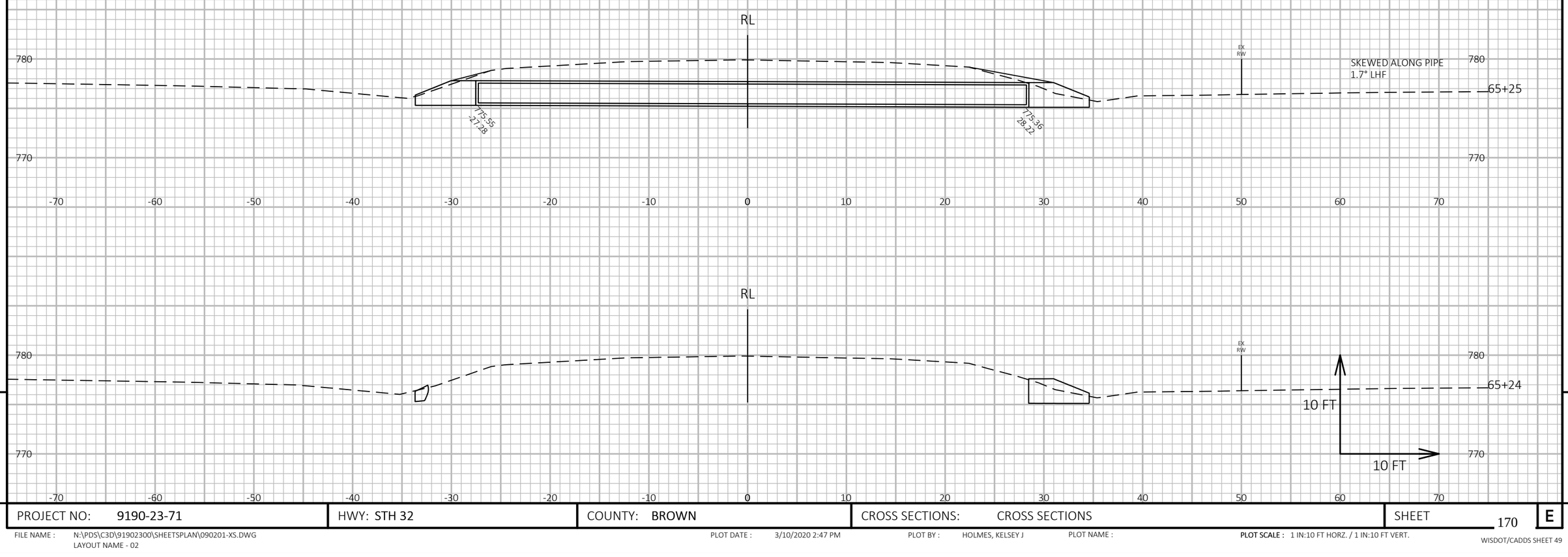
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 170	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02

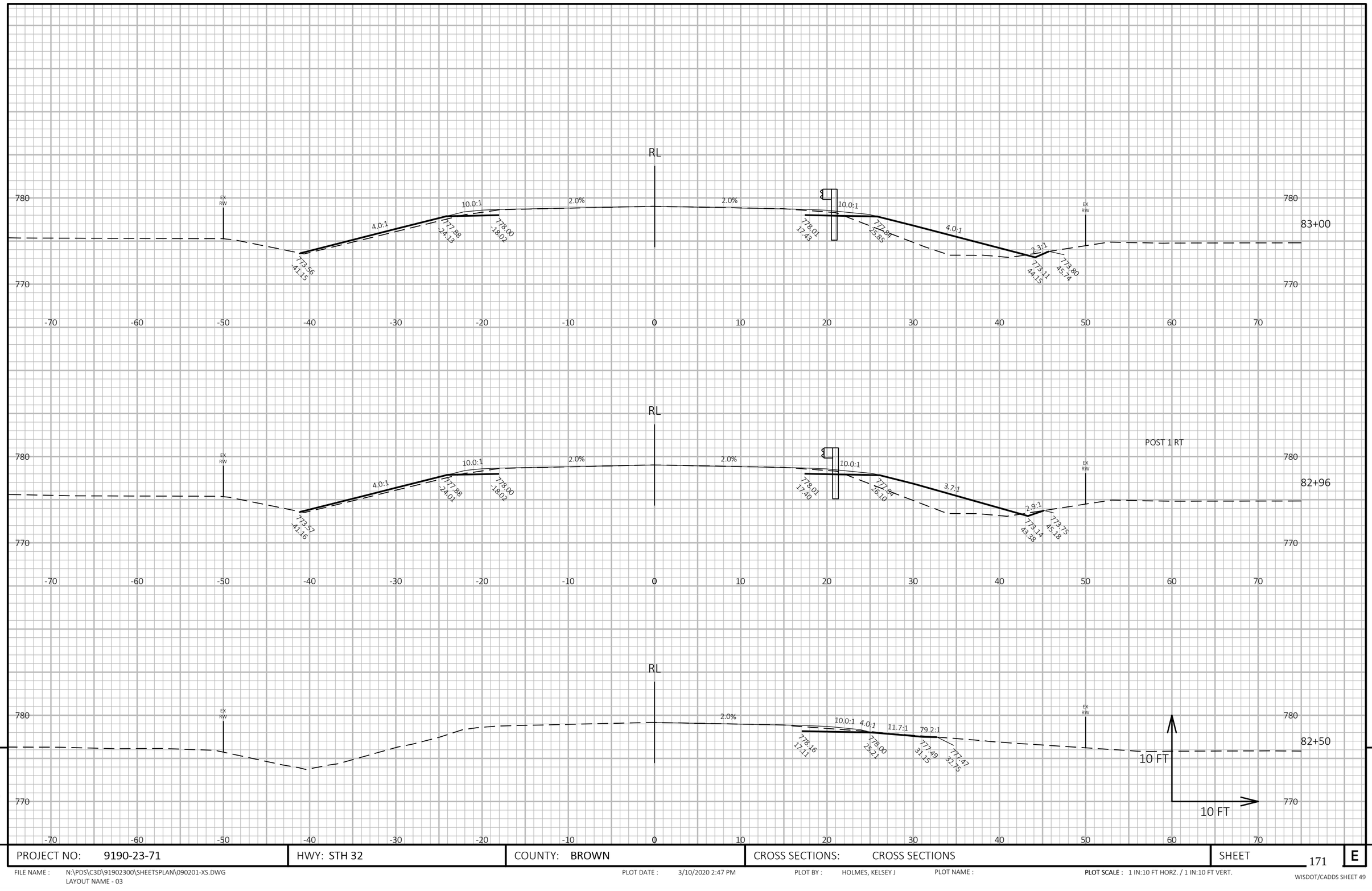
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 171	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03

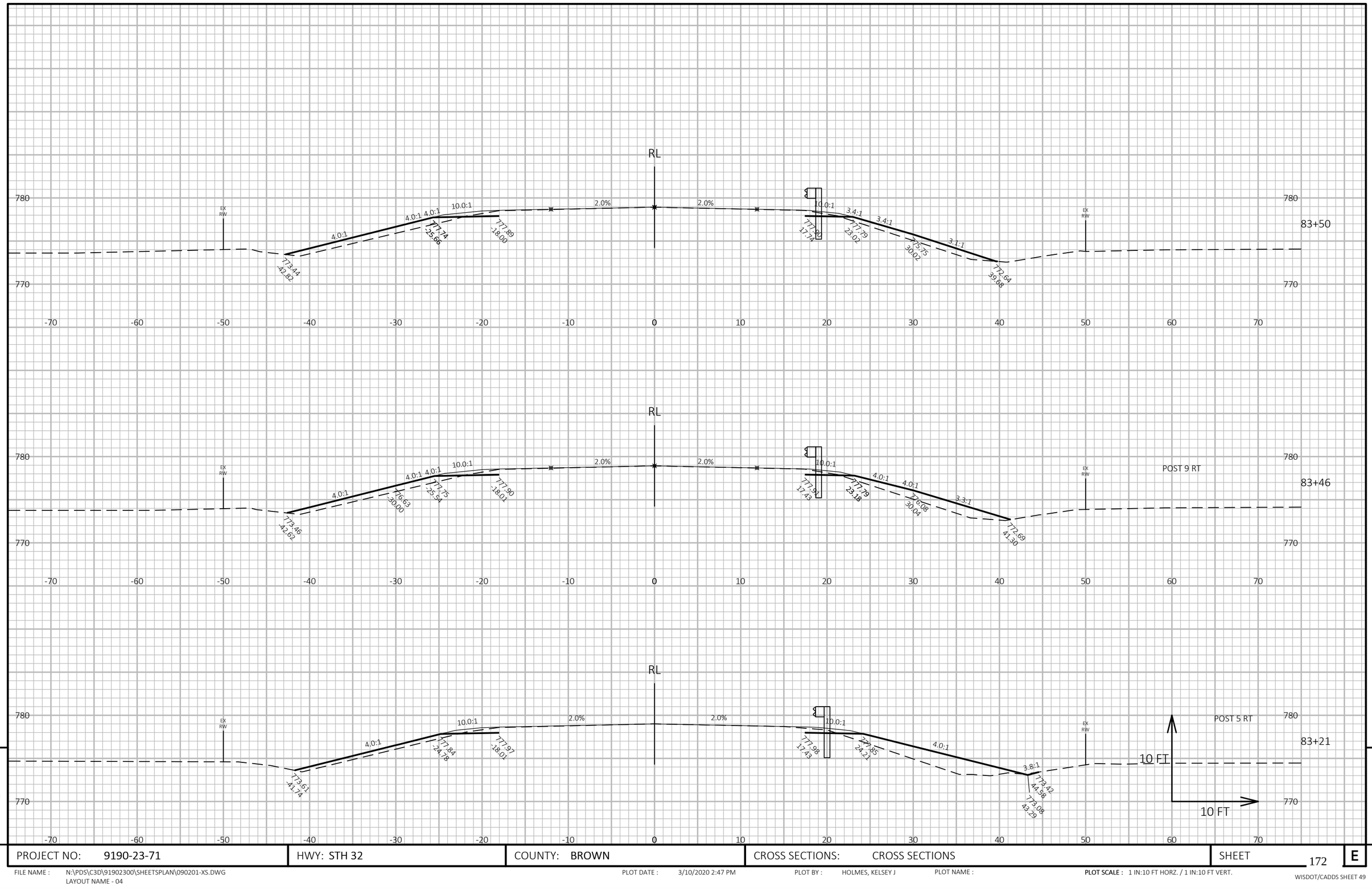
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 172	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04

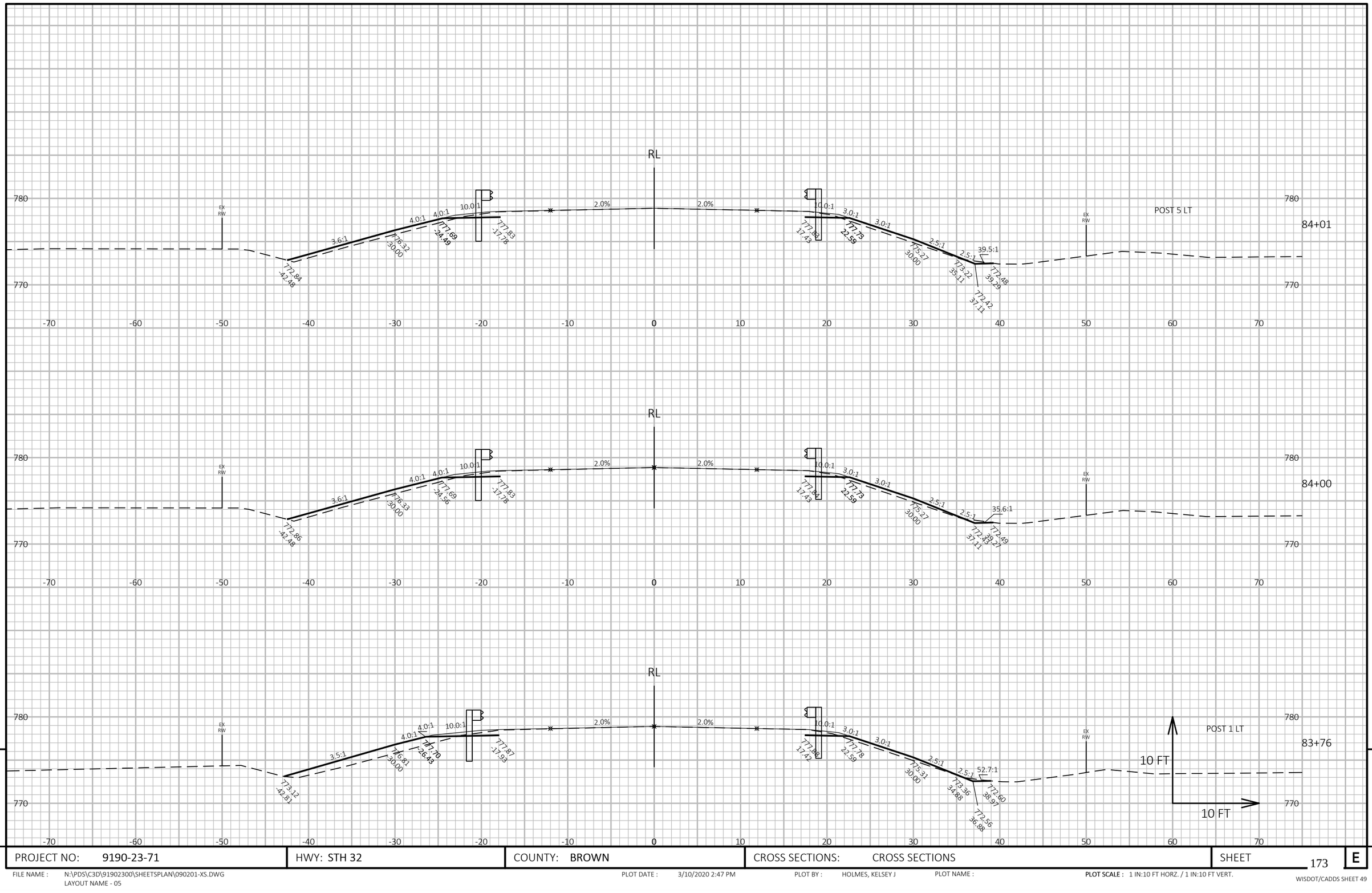
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 173	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05

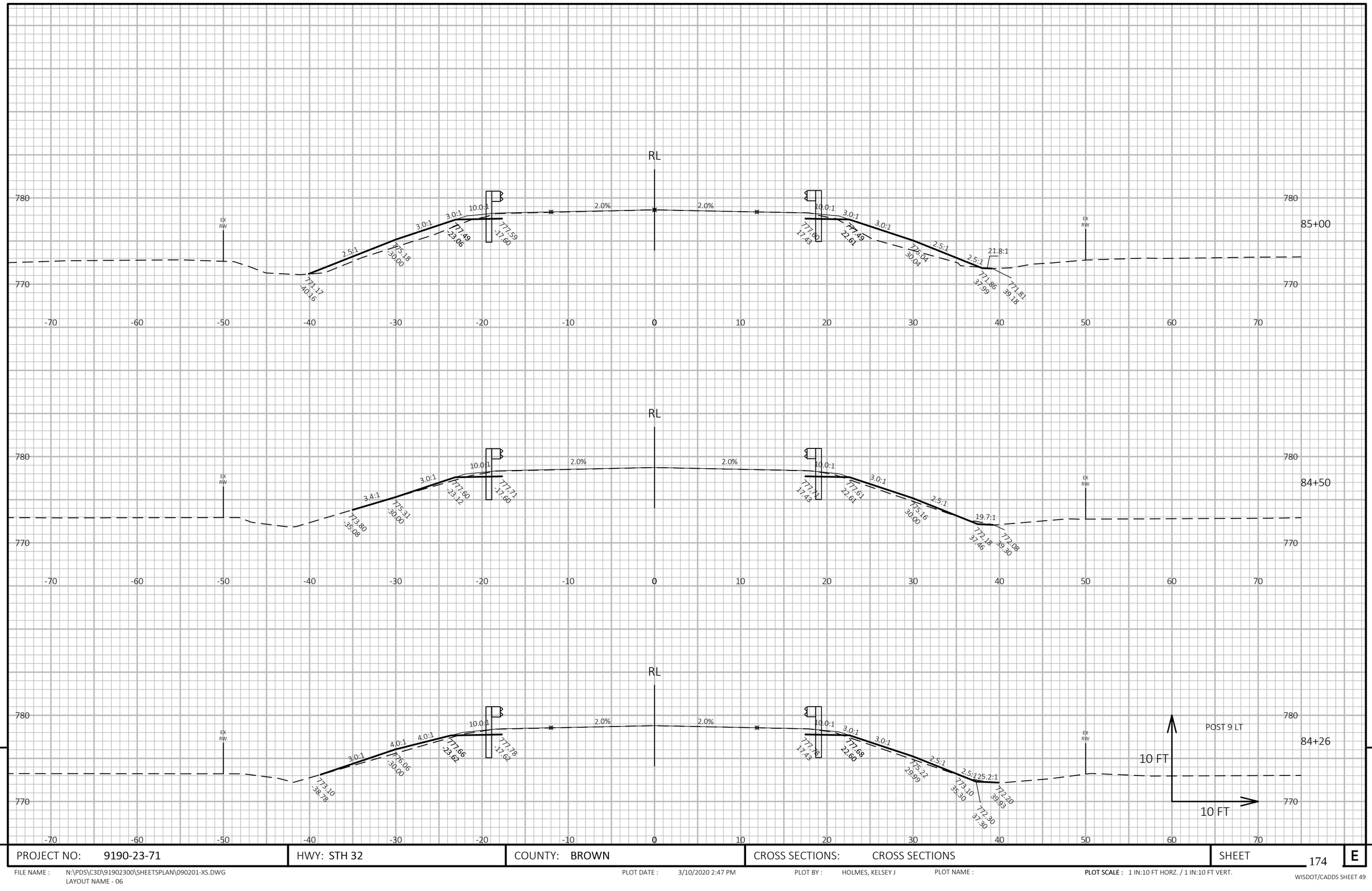
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 174	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06

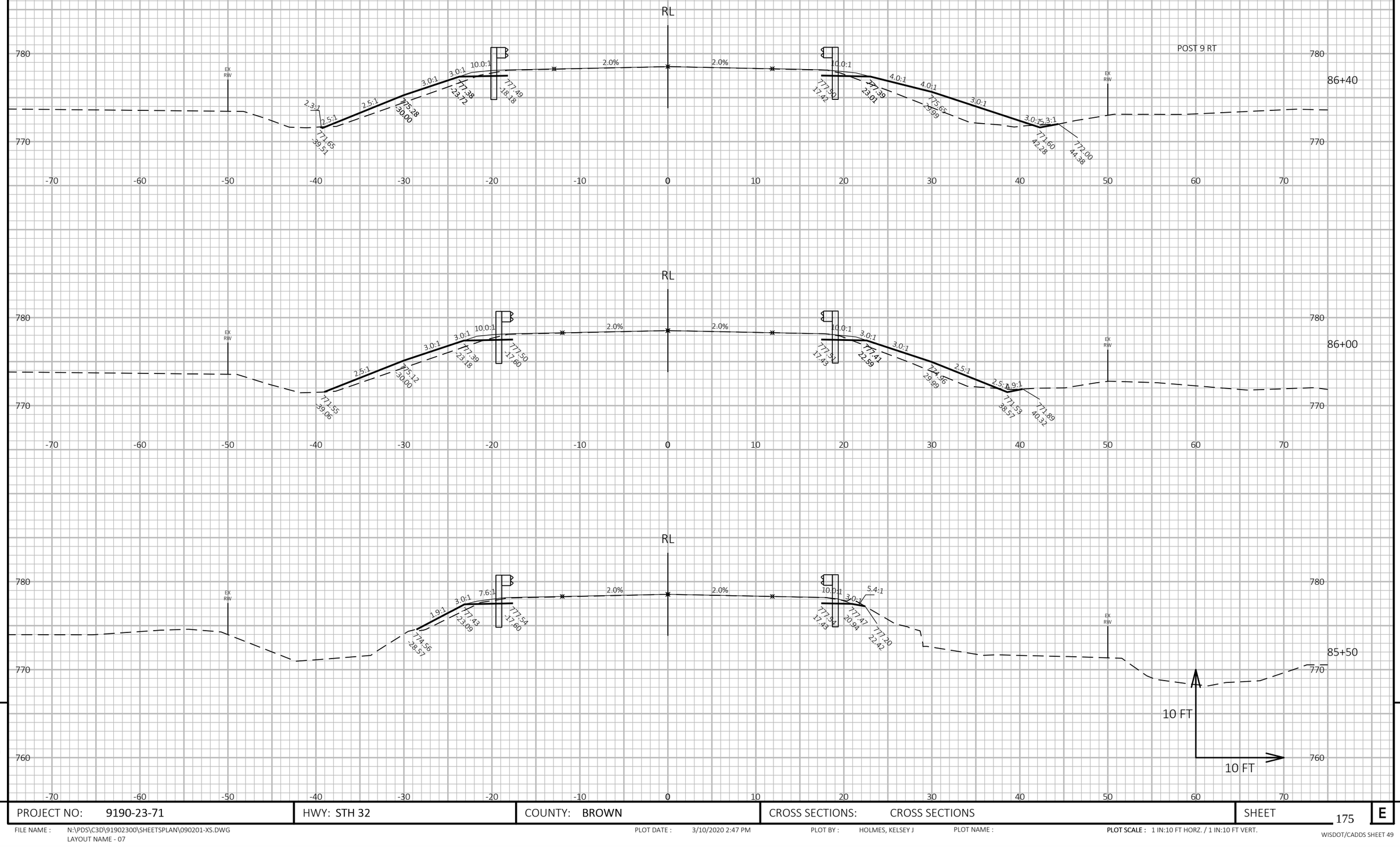
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 175	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 07

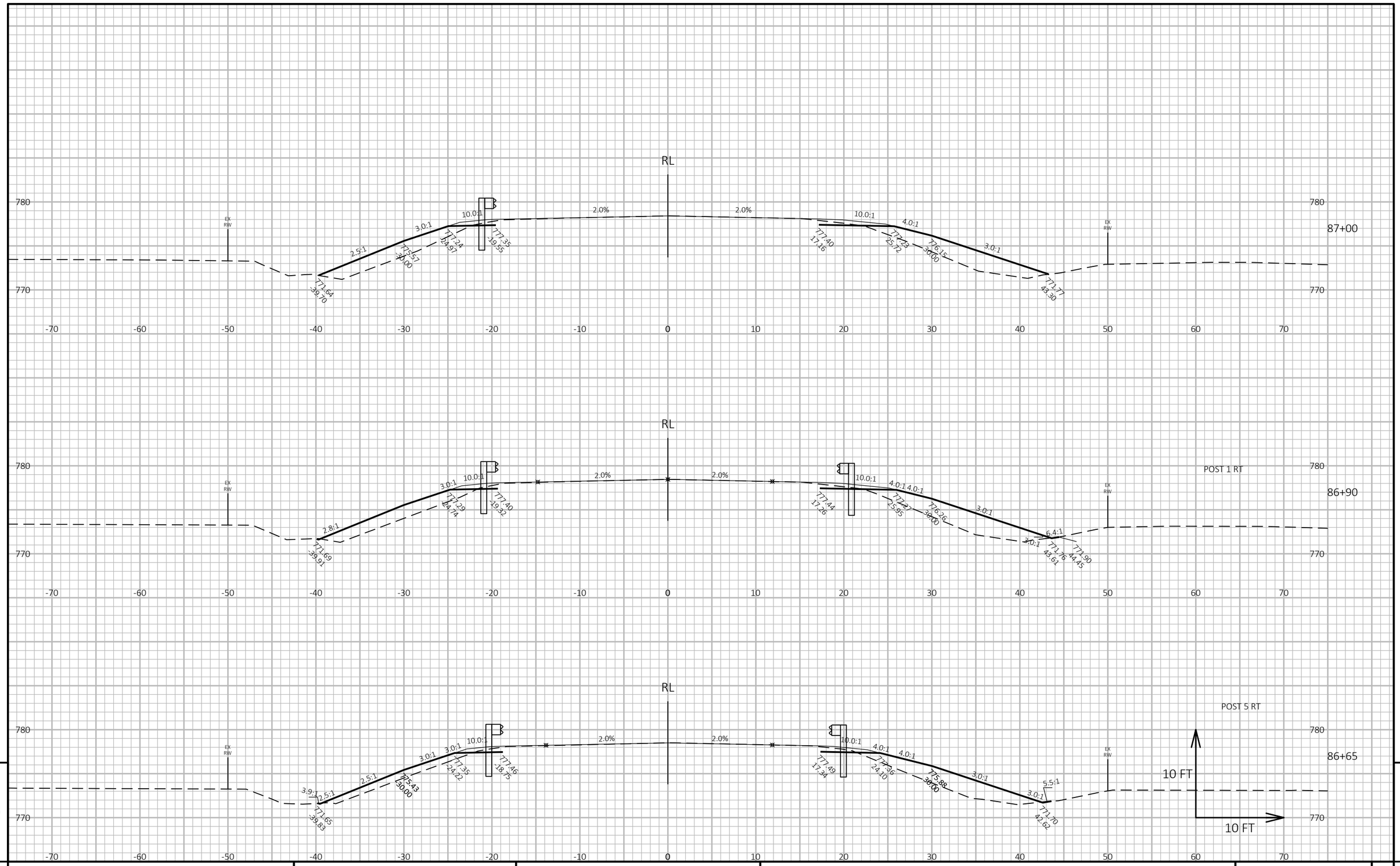
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 176	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 08

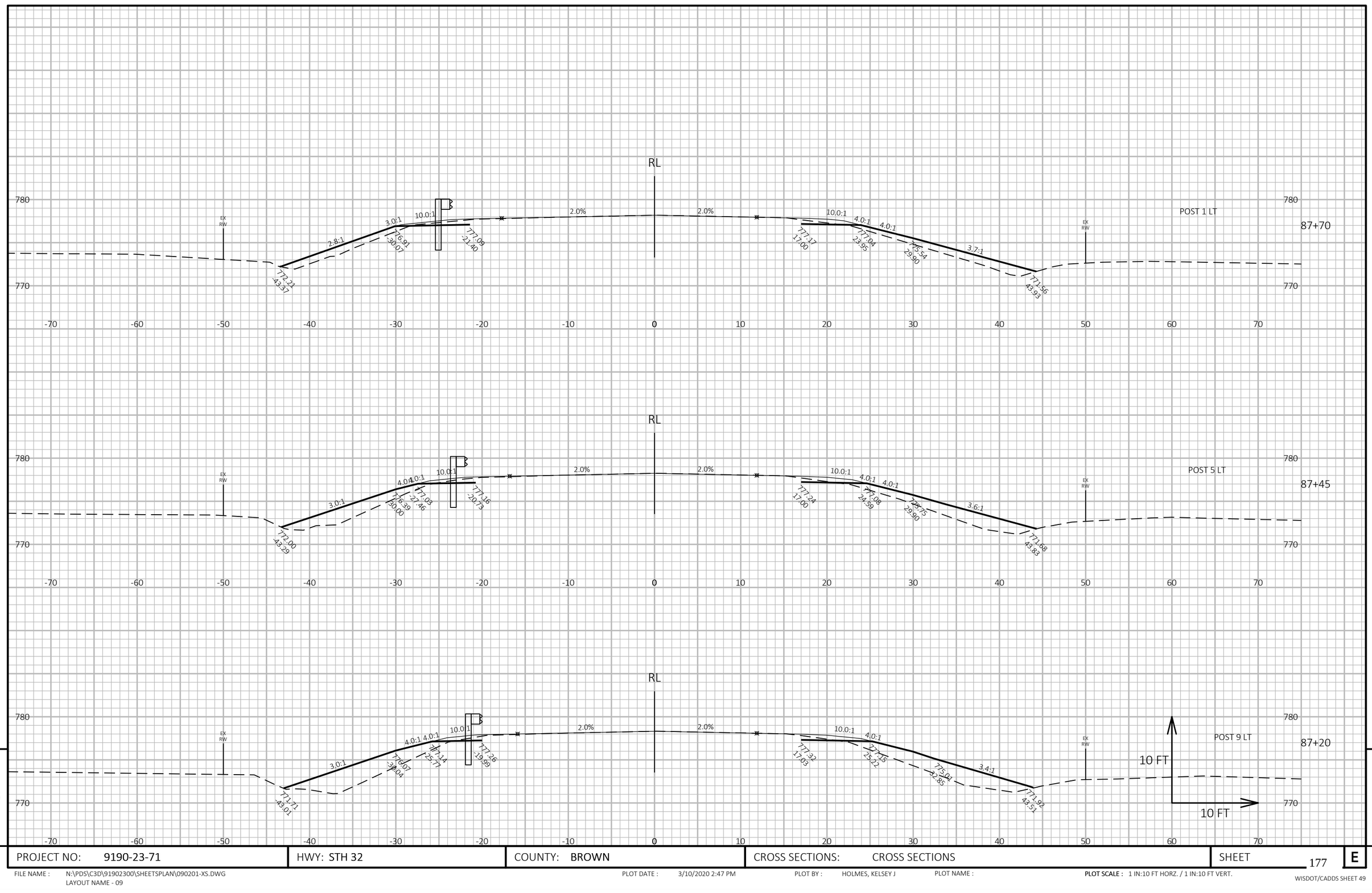
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 177	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 09

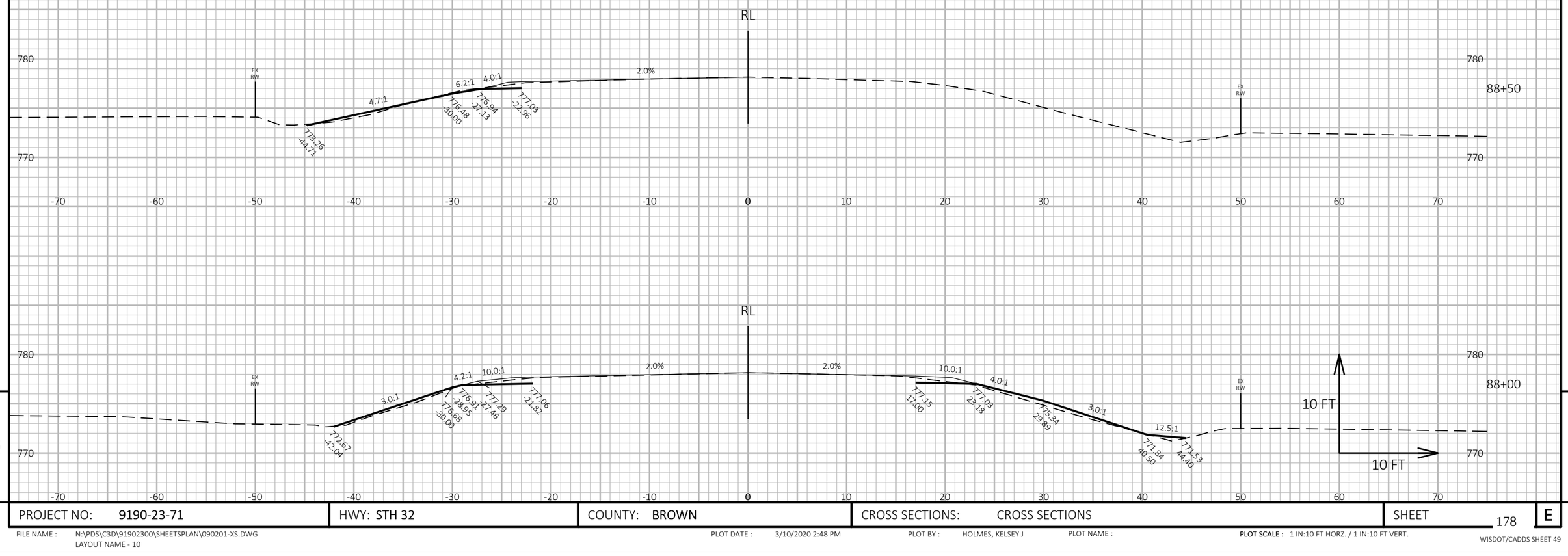
PLOT DATE : 3/10/2020 2:47 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 178	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 10

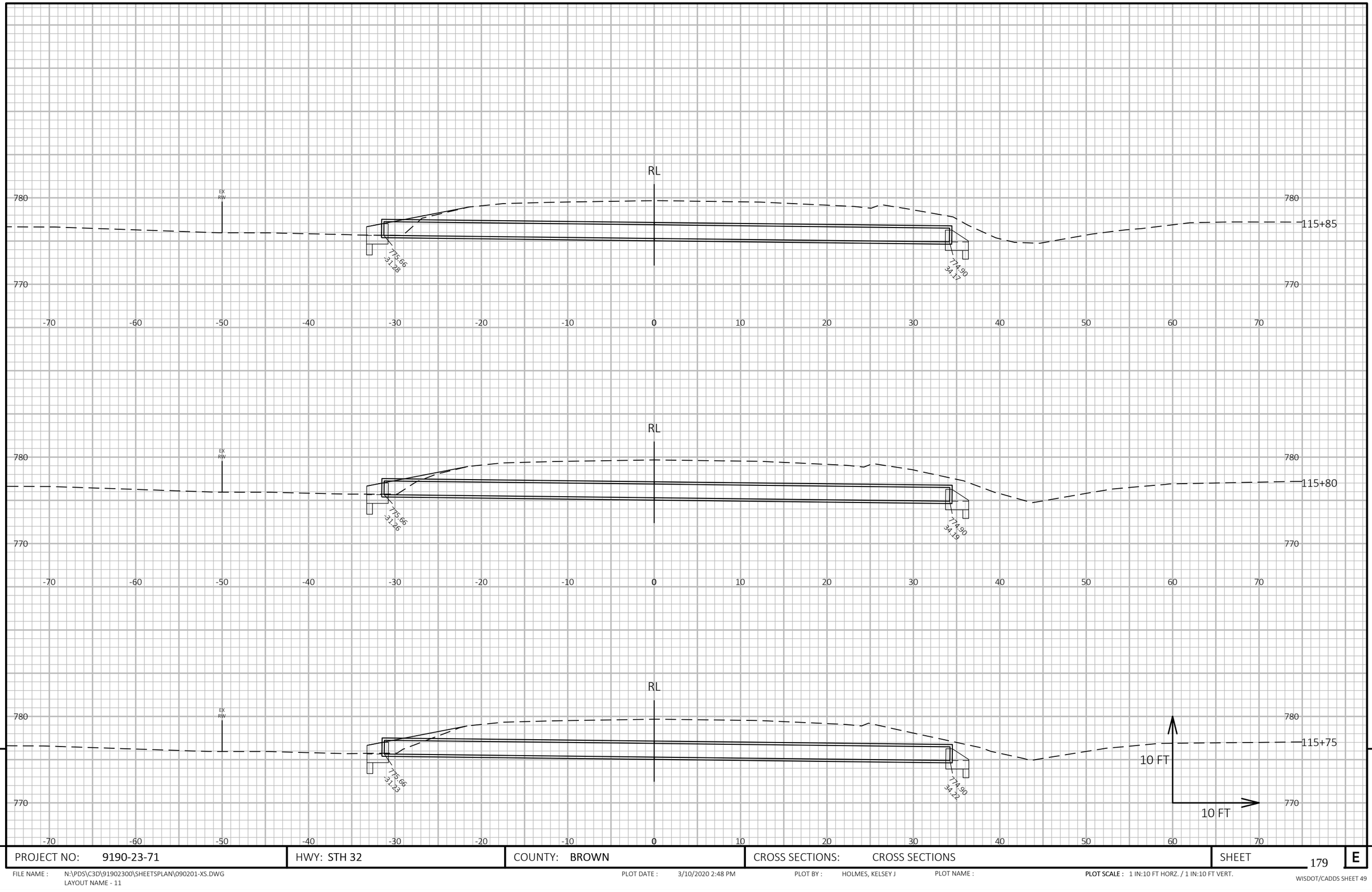
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 179	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 11

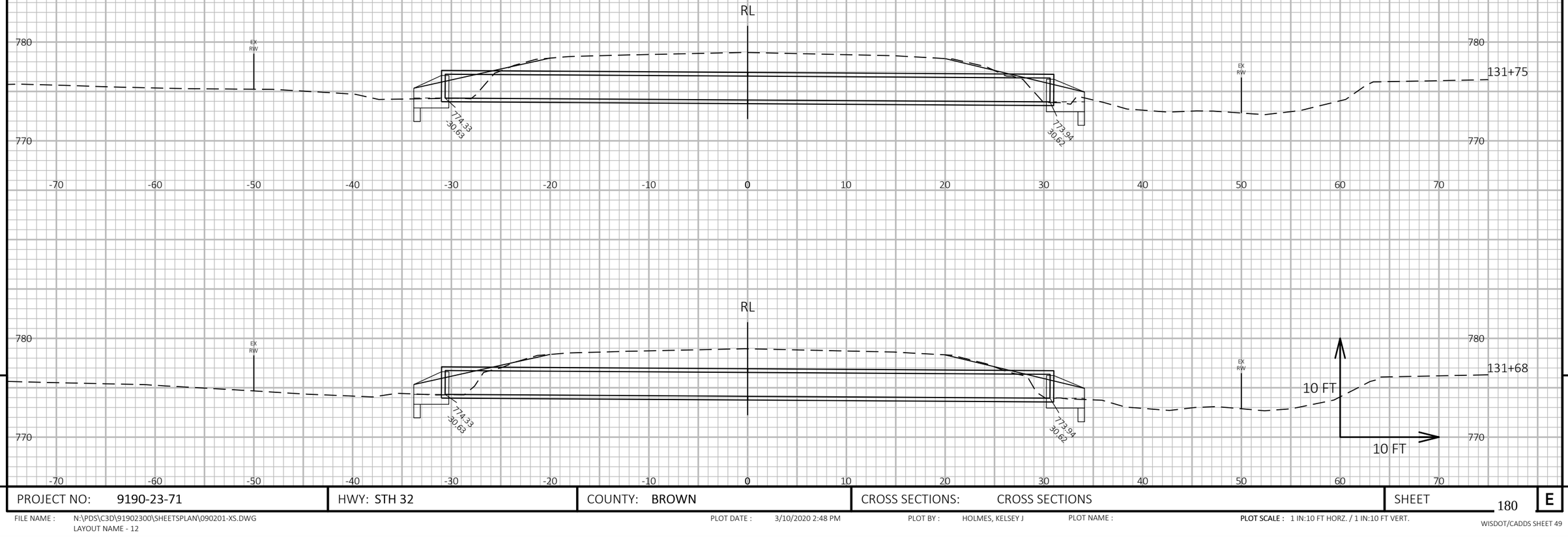
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 180	E

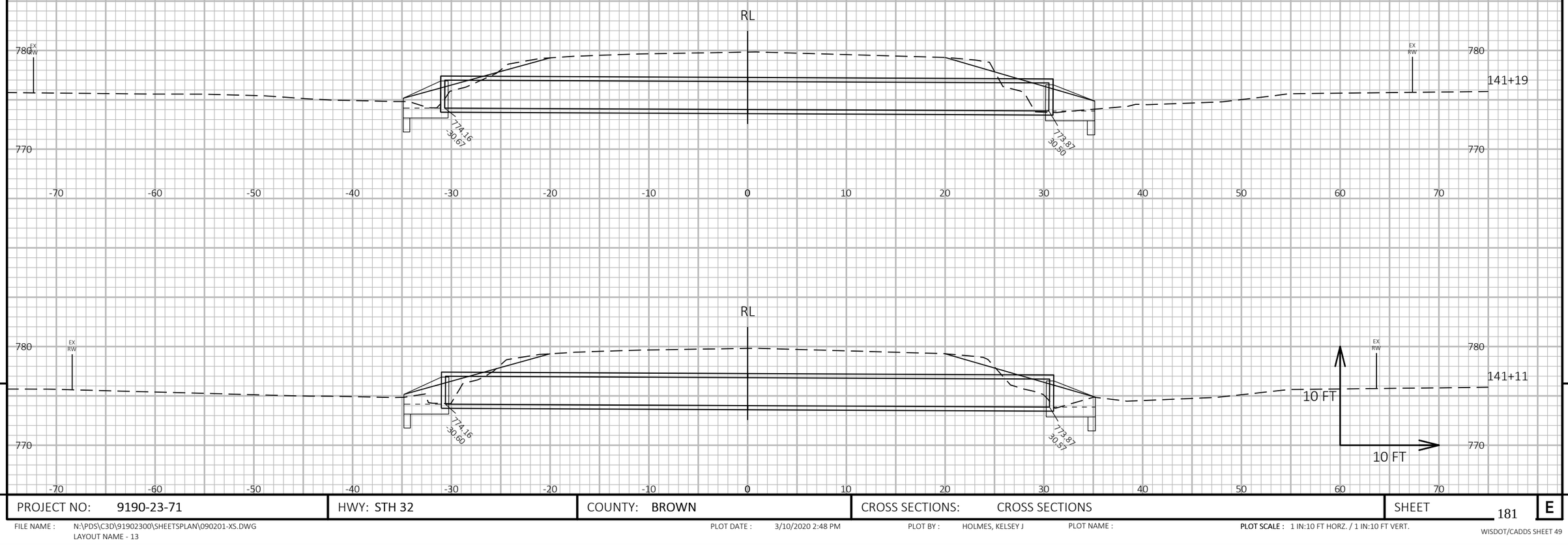
FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 12

PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 181	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 13

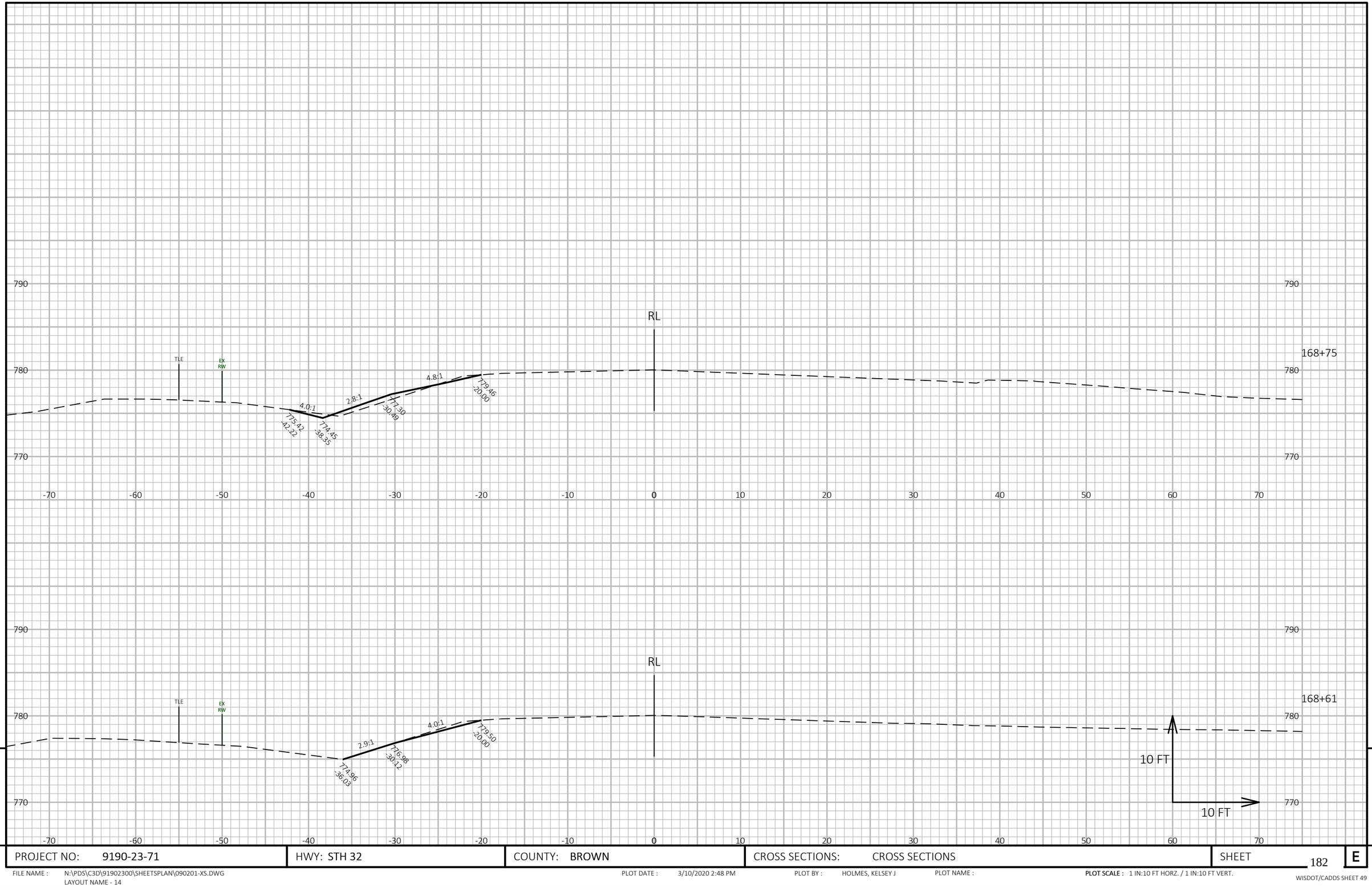
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

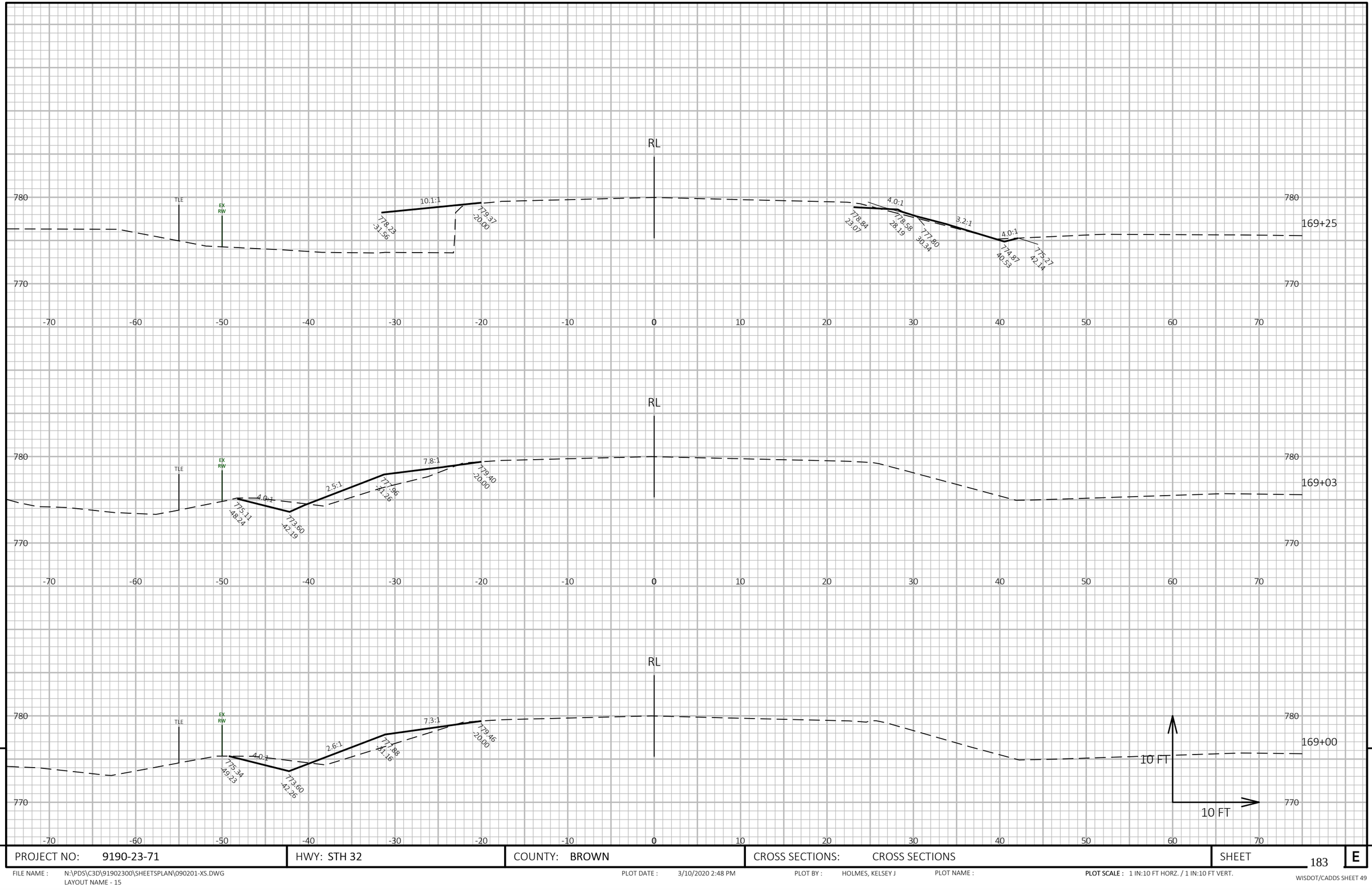
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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 182	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 14

PLOT DATE : 3/10/2020 2:48 PM PLOT BY : HOLMES, KELSEY J PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 183	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 15

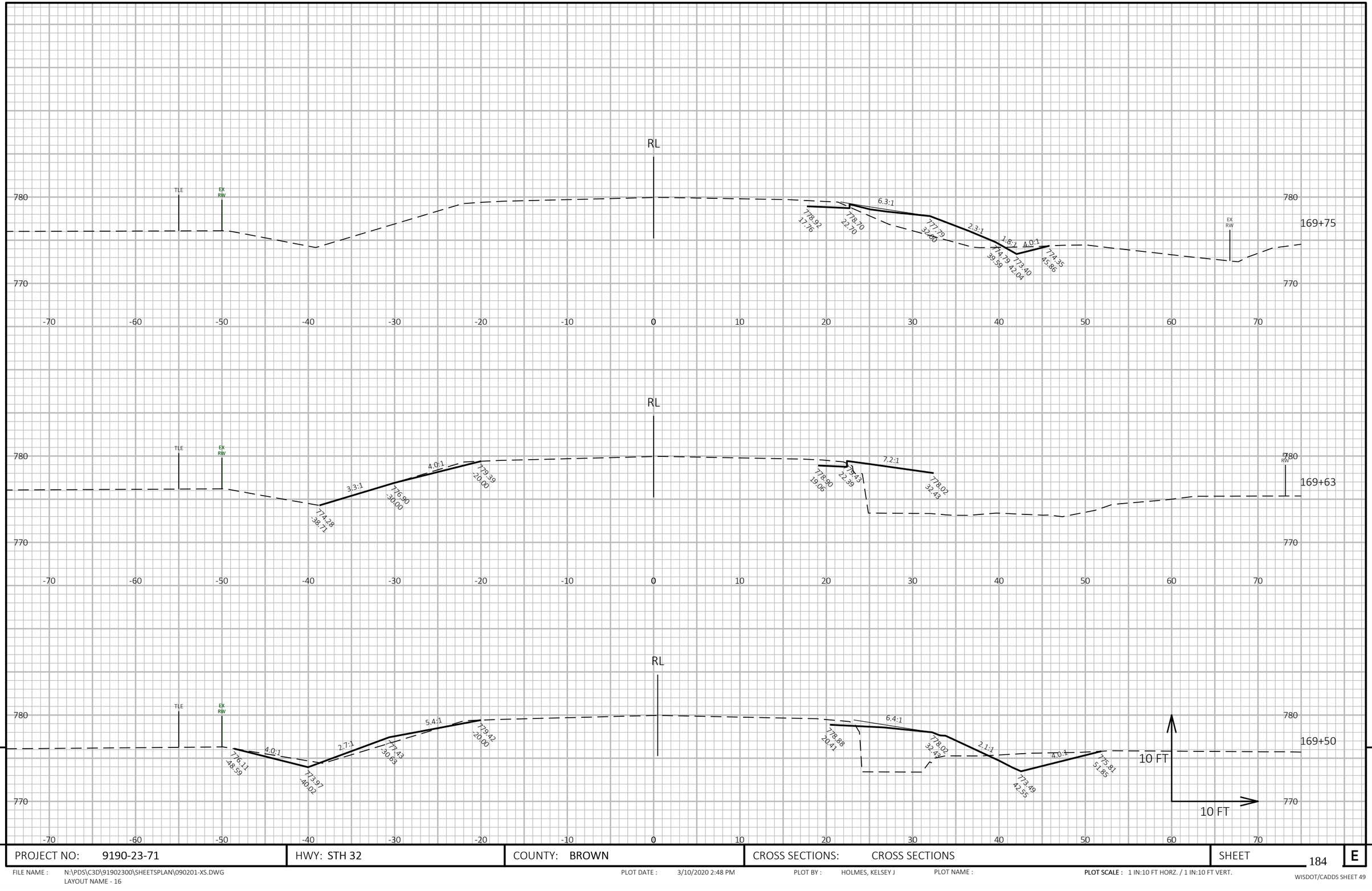
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 184	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 16

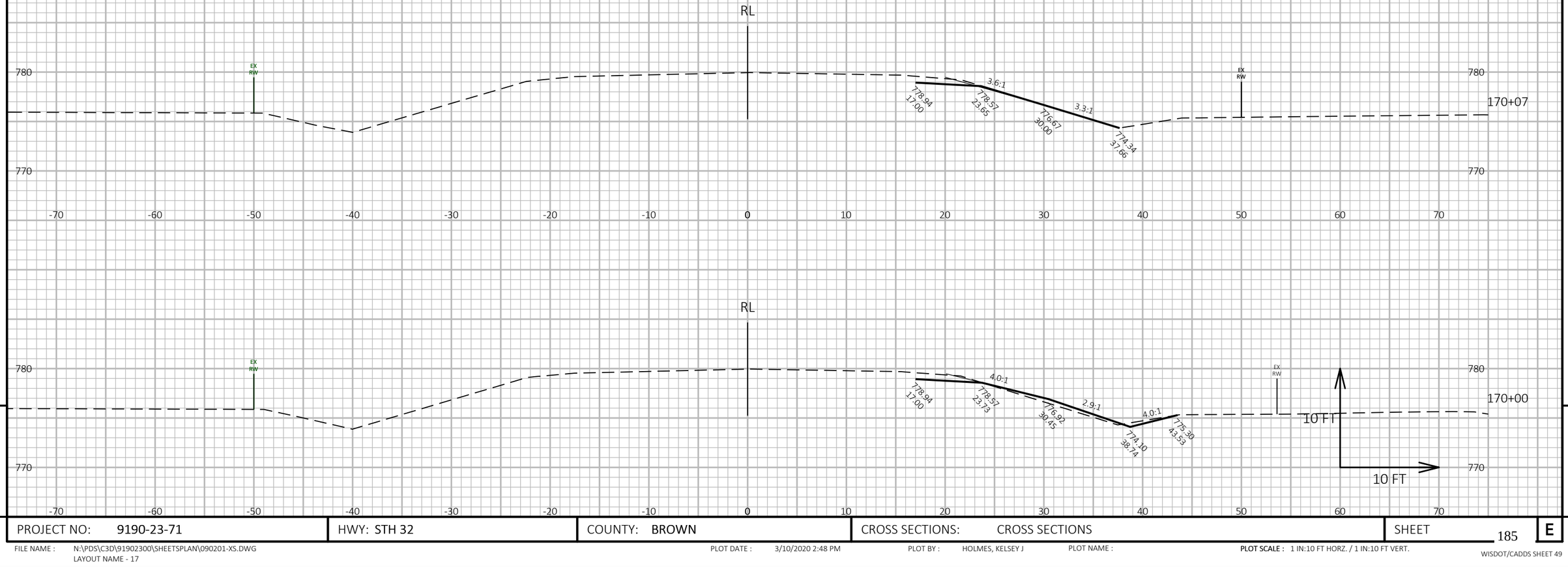
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 185	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 17

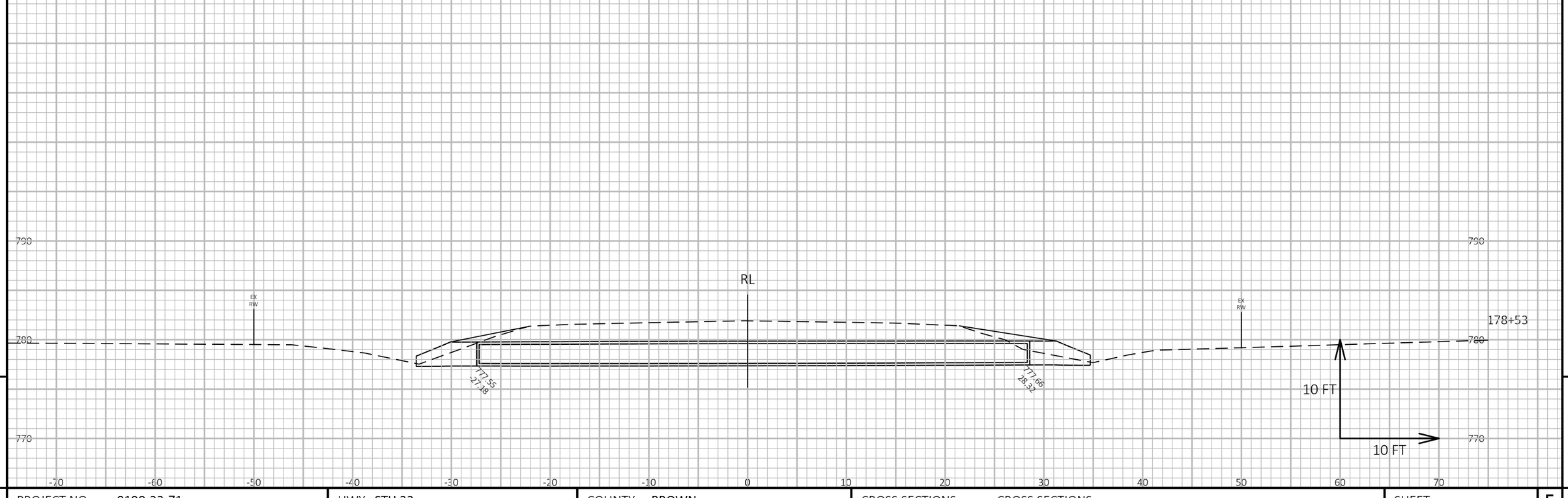
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 186	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 18

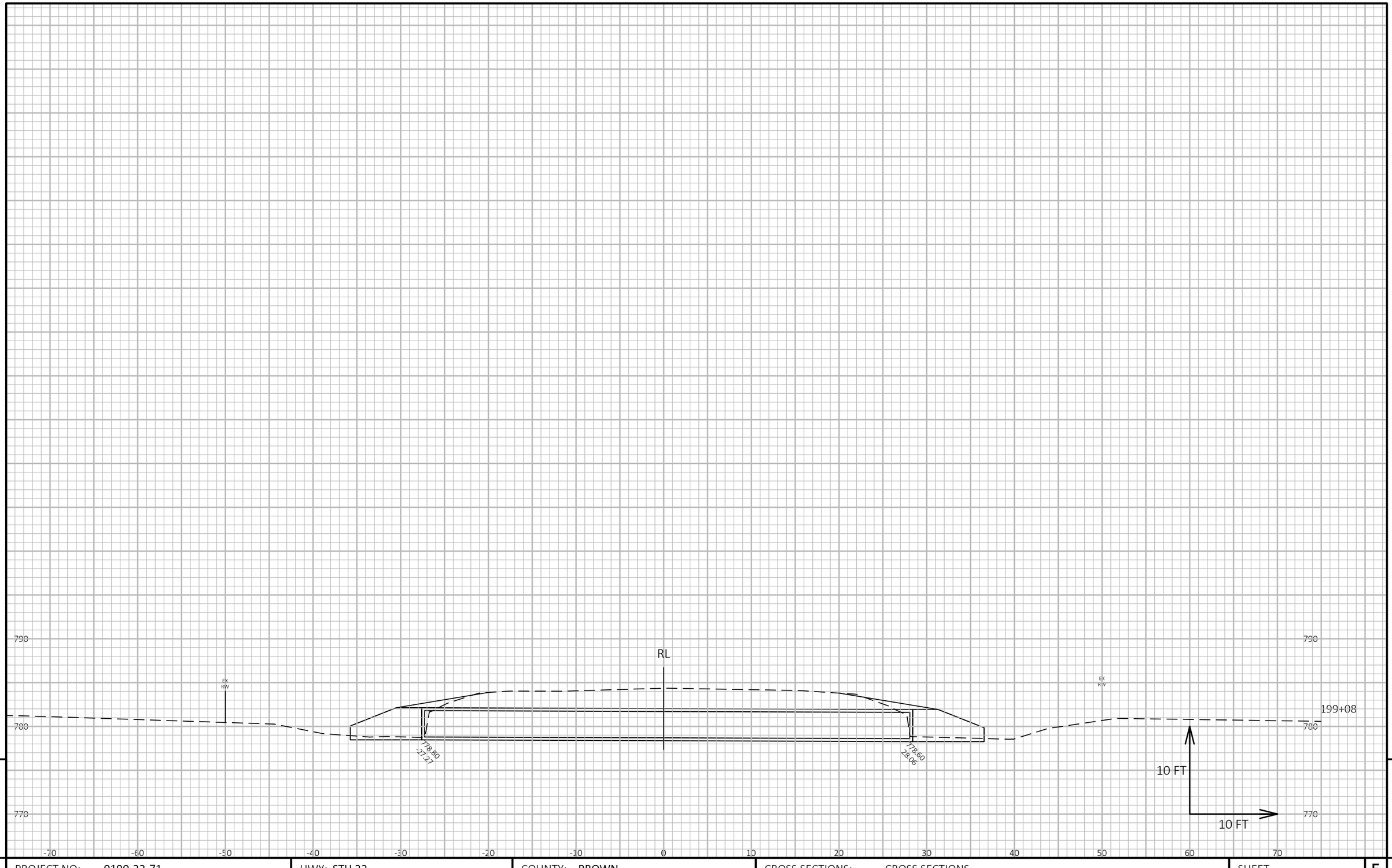
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 187	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 19

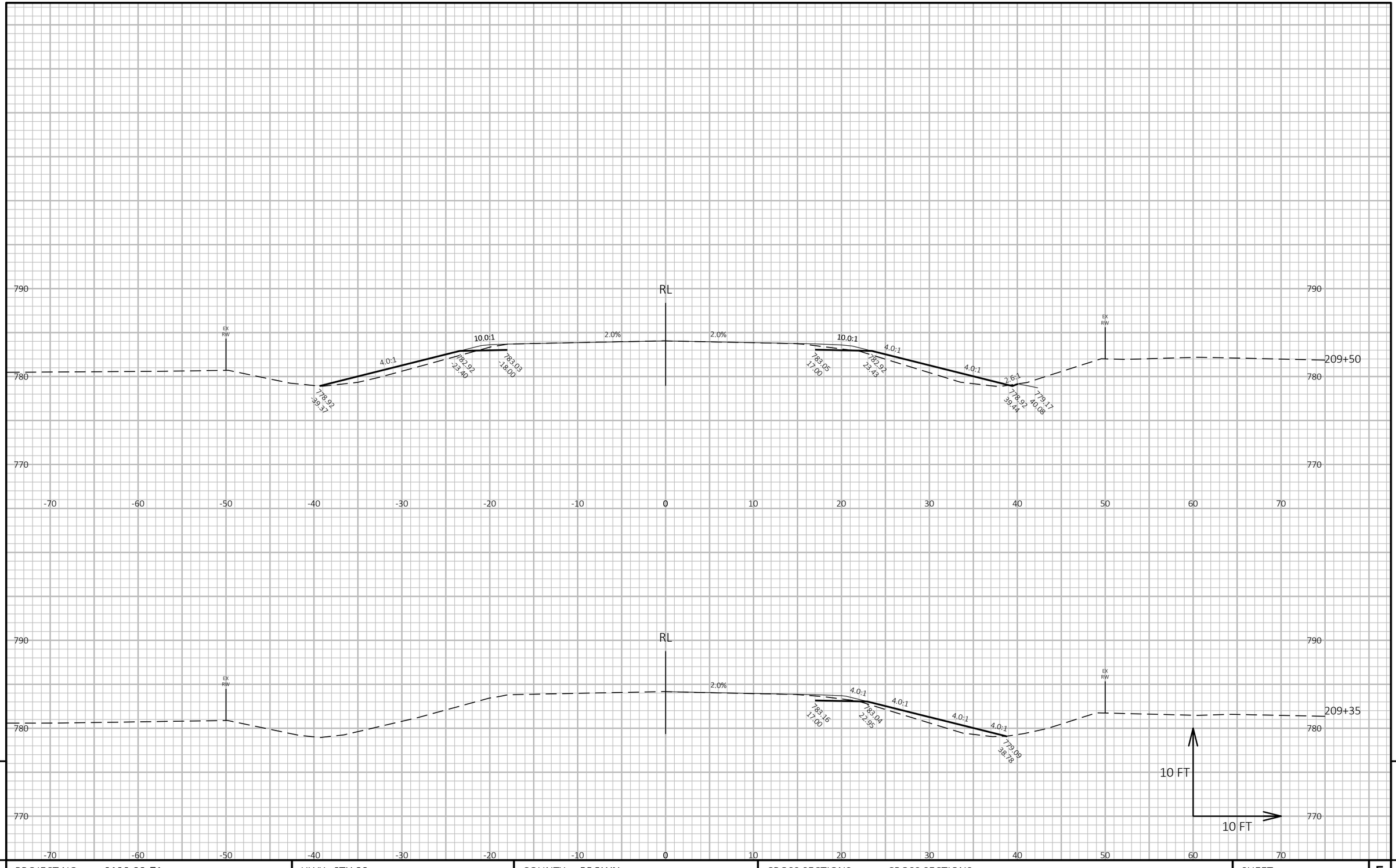
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 188	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 20

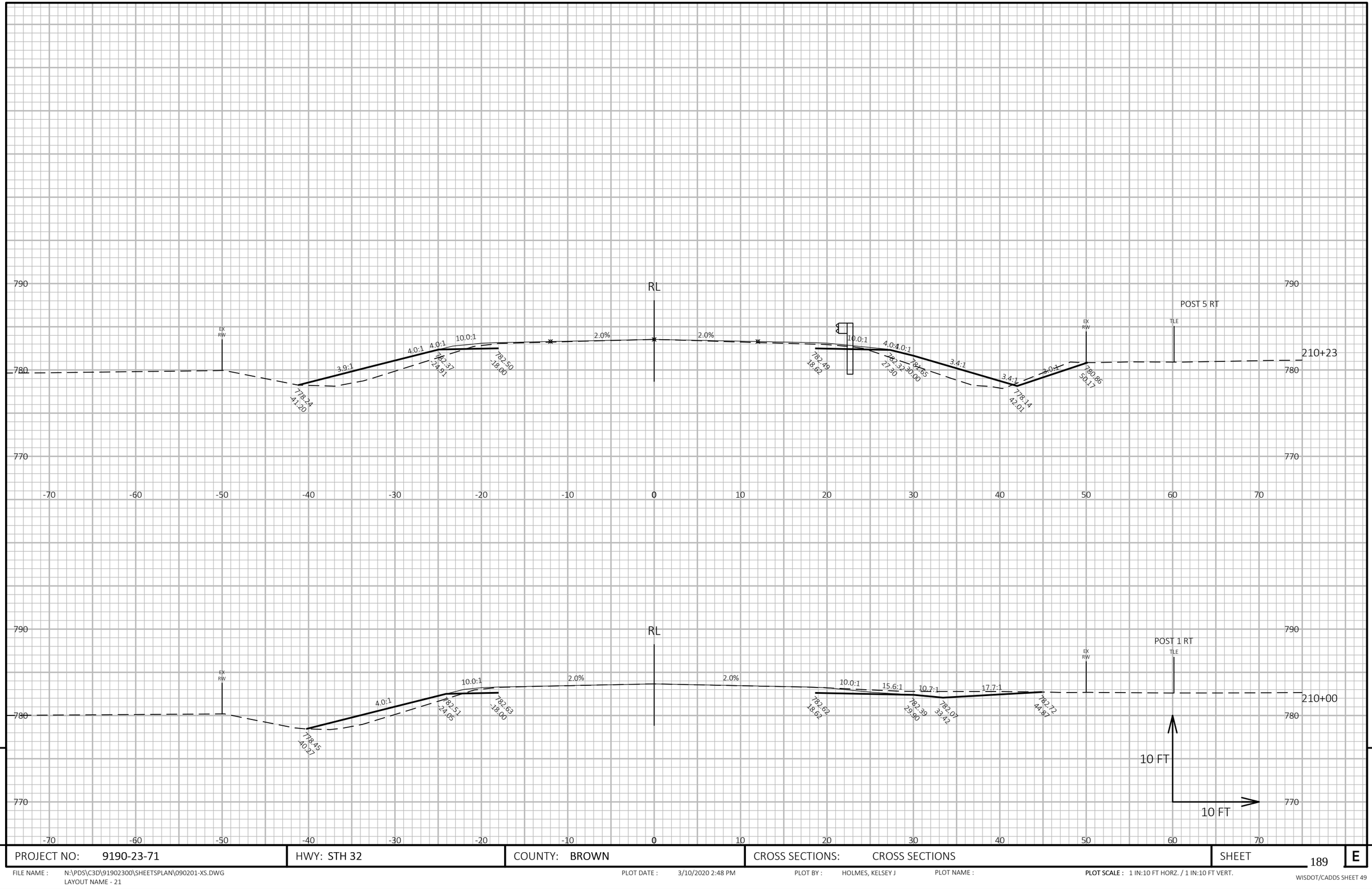
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 189	E

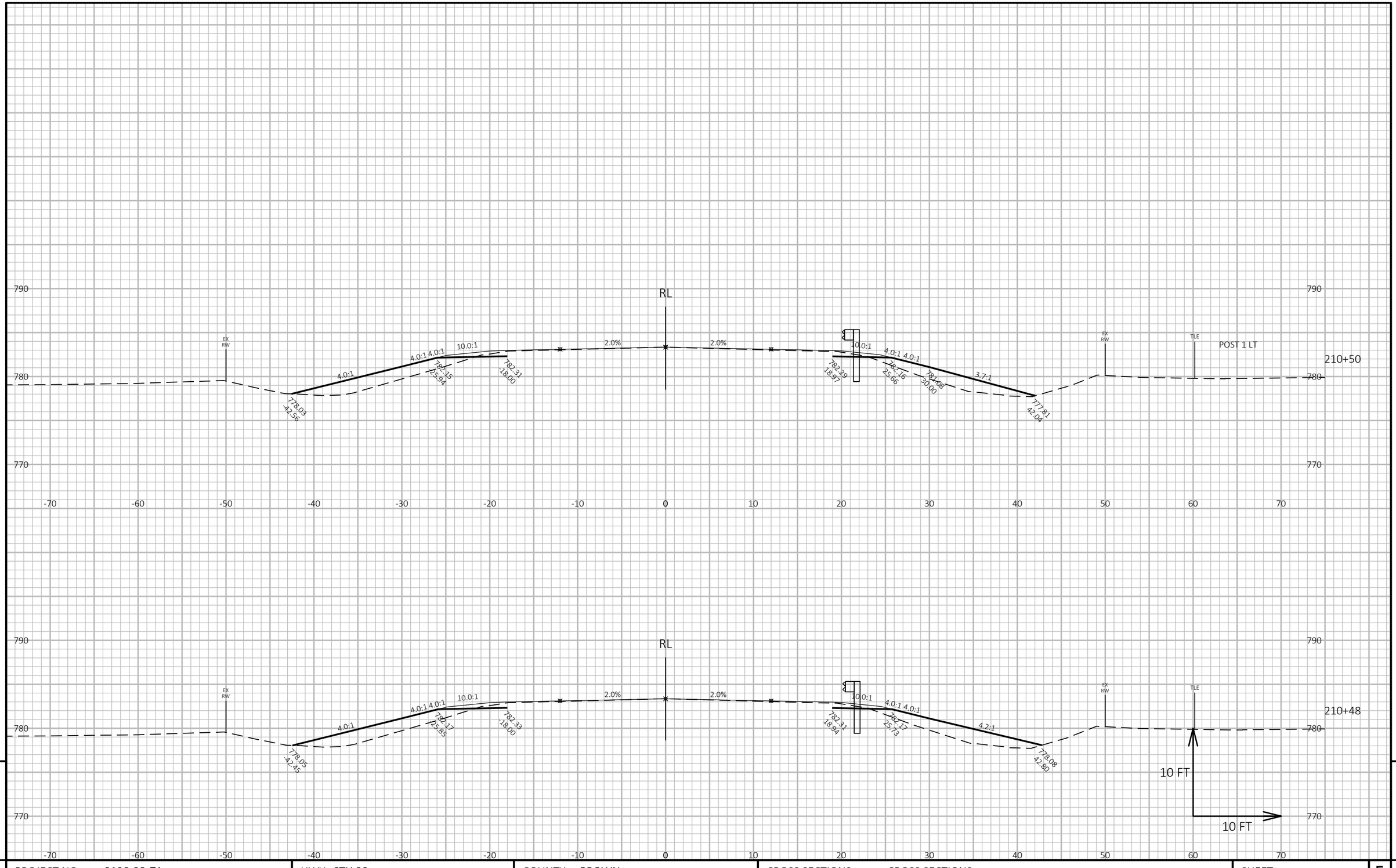
FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 21

PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 190	E

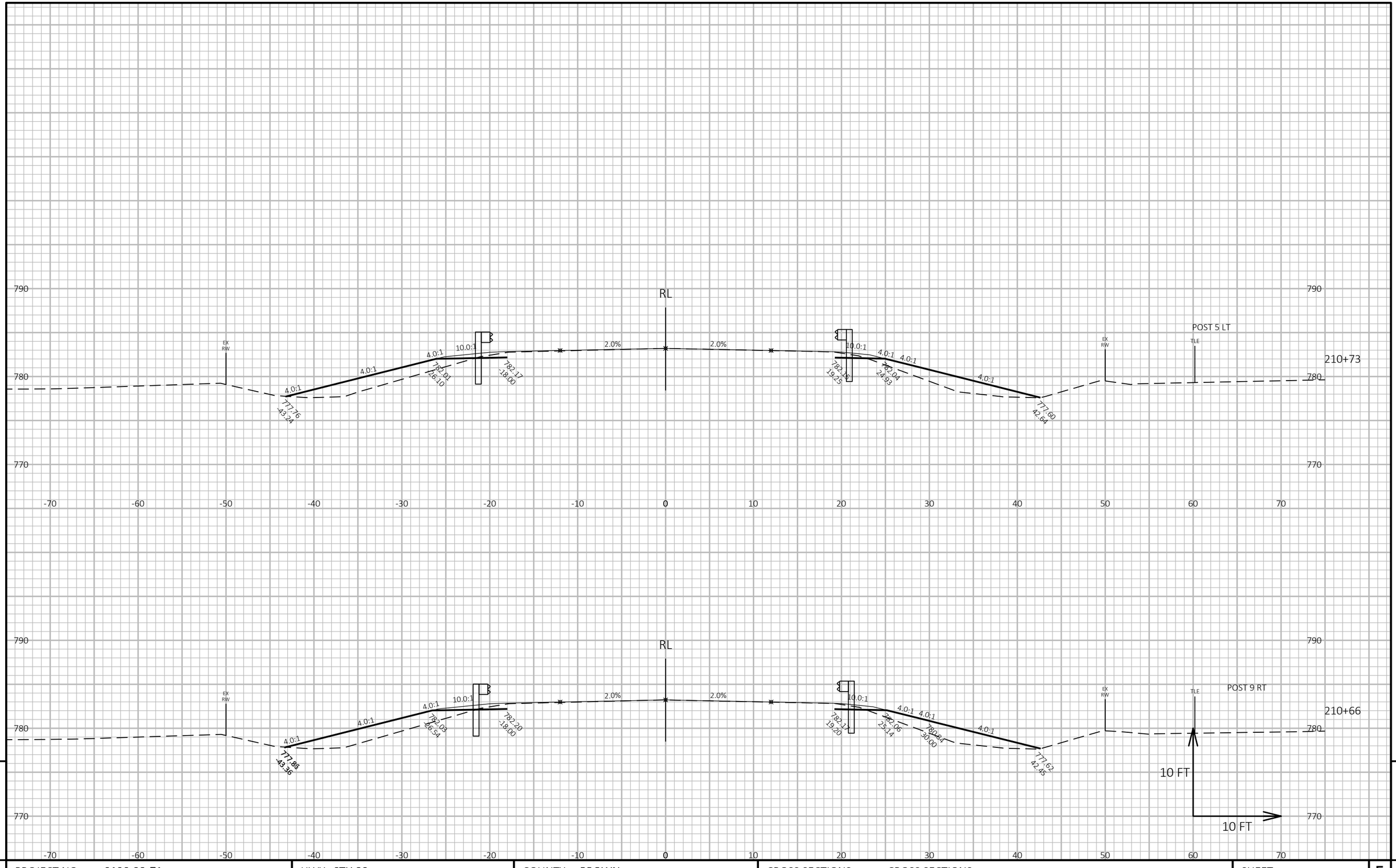
FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 22

PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 191	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 23

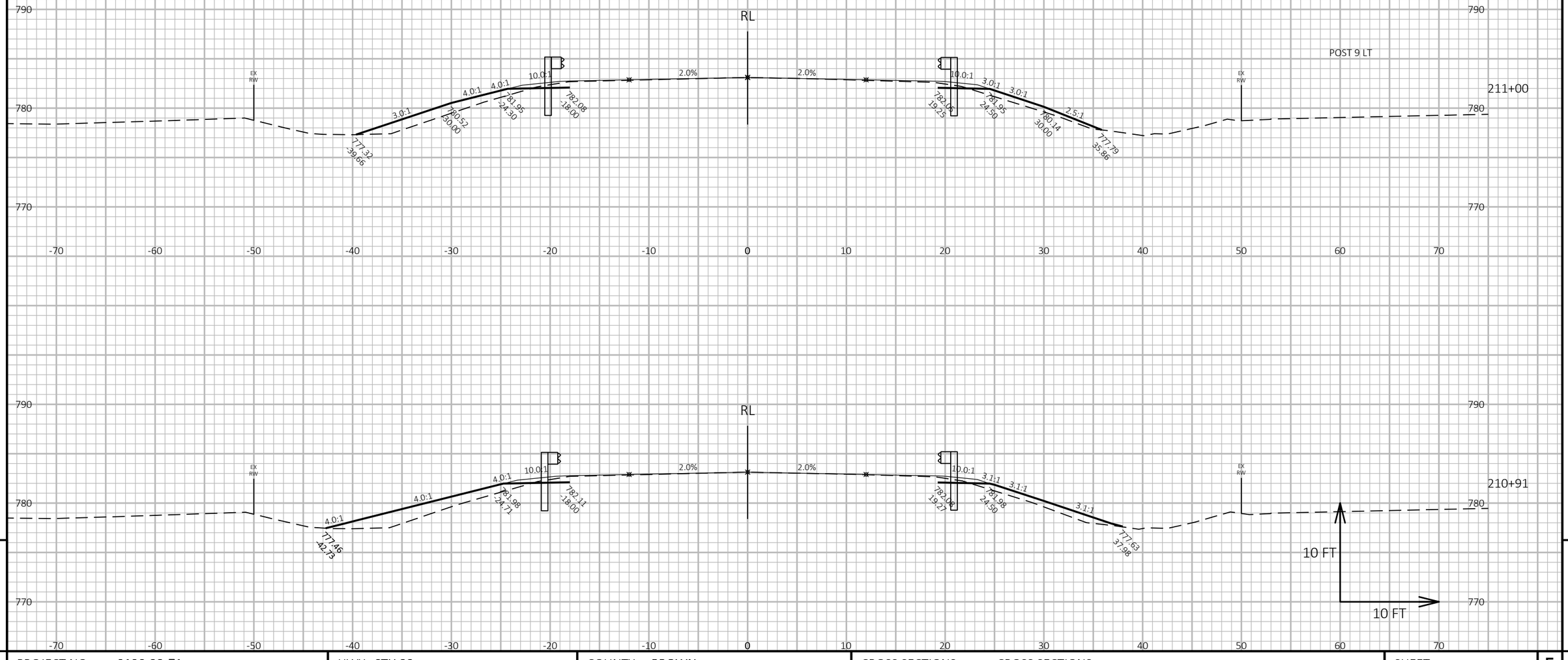
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 192	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 24

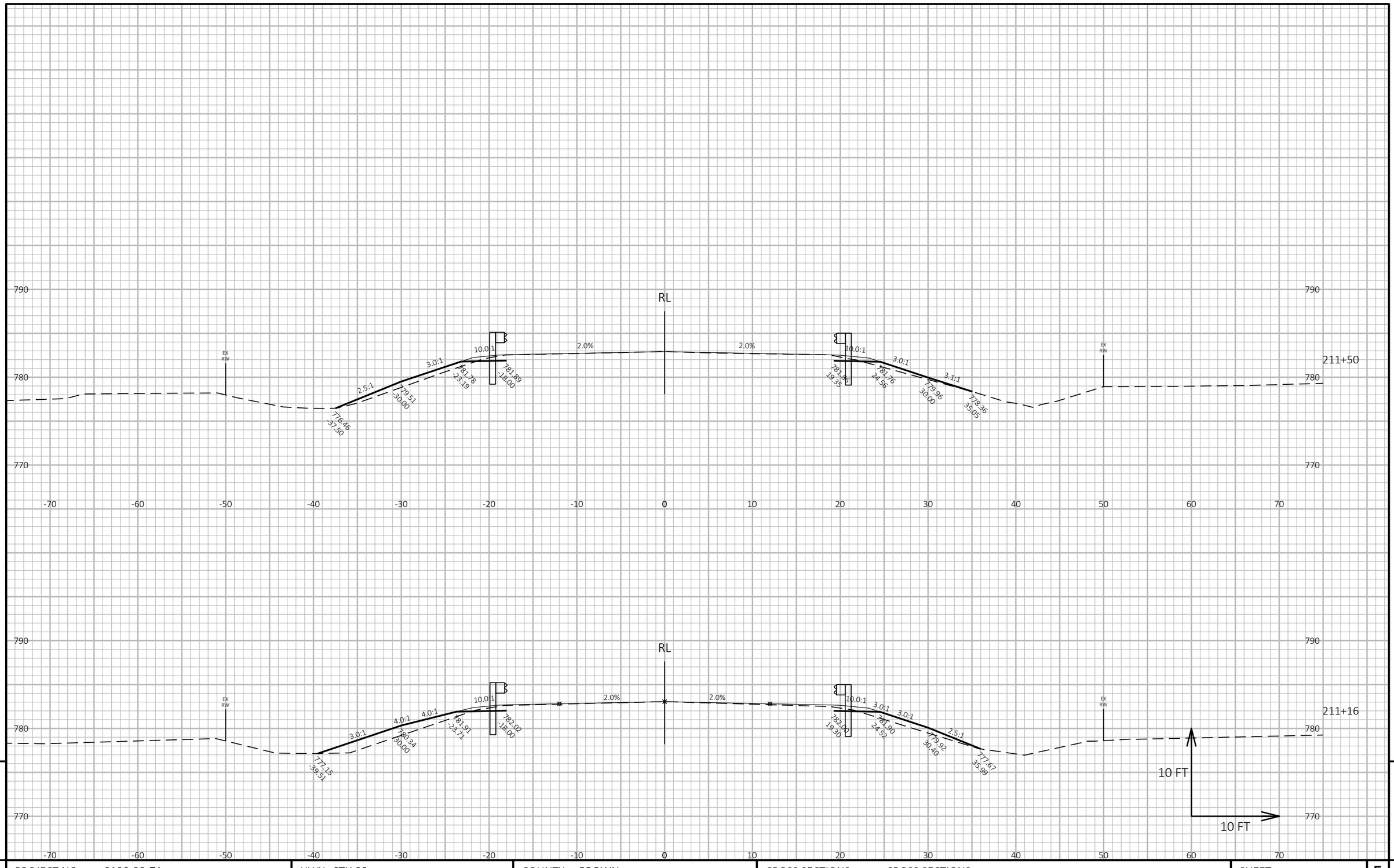
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 193	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 25

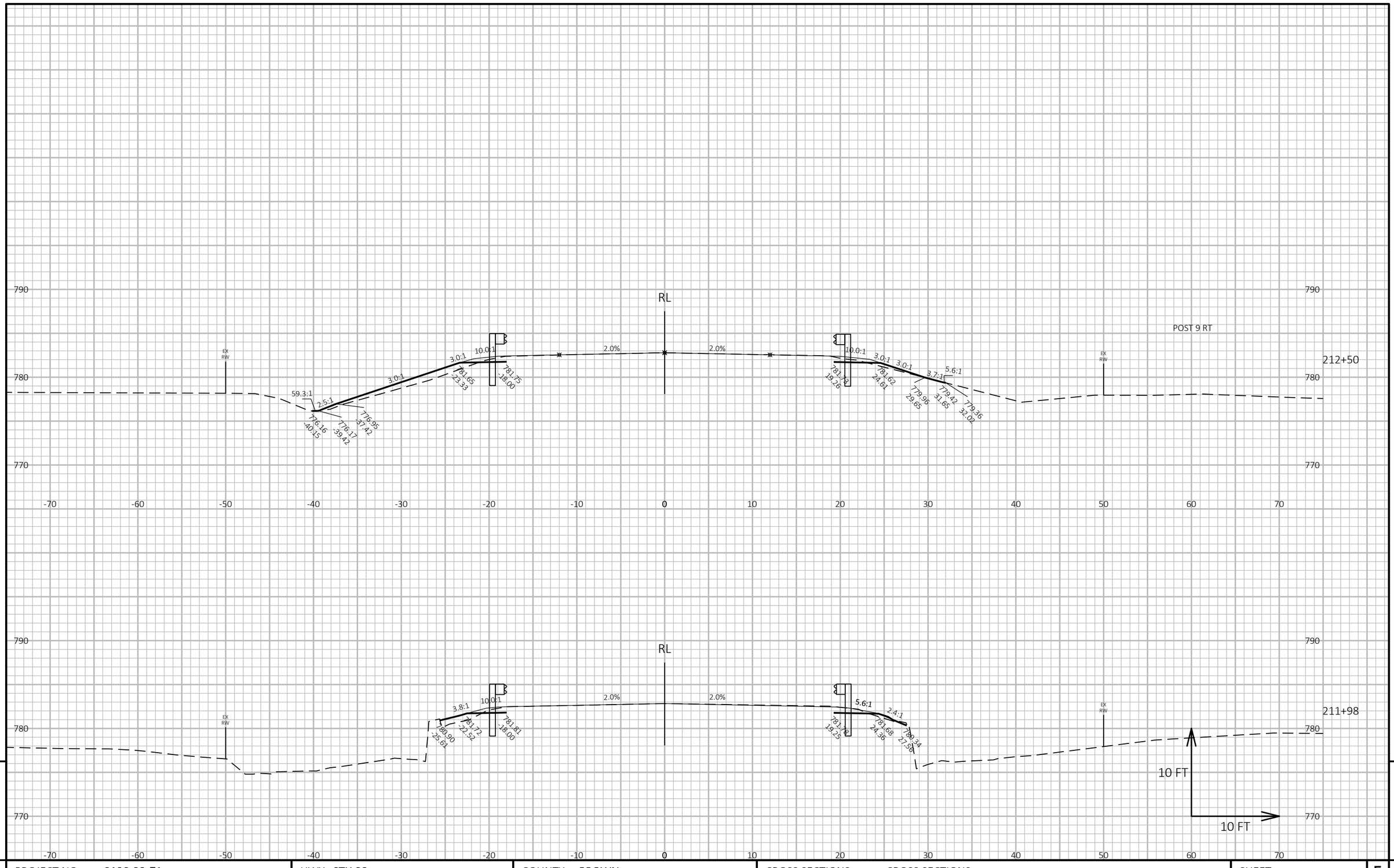
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 194	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 26

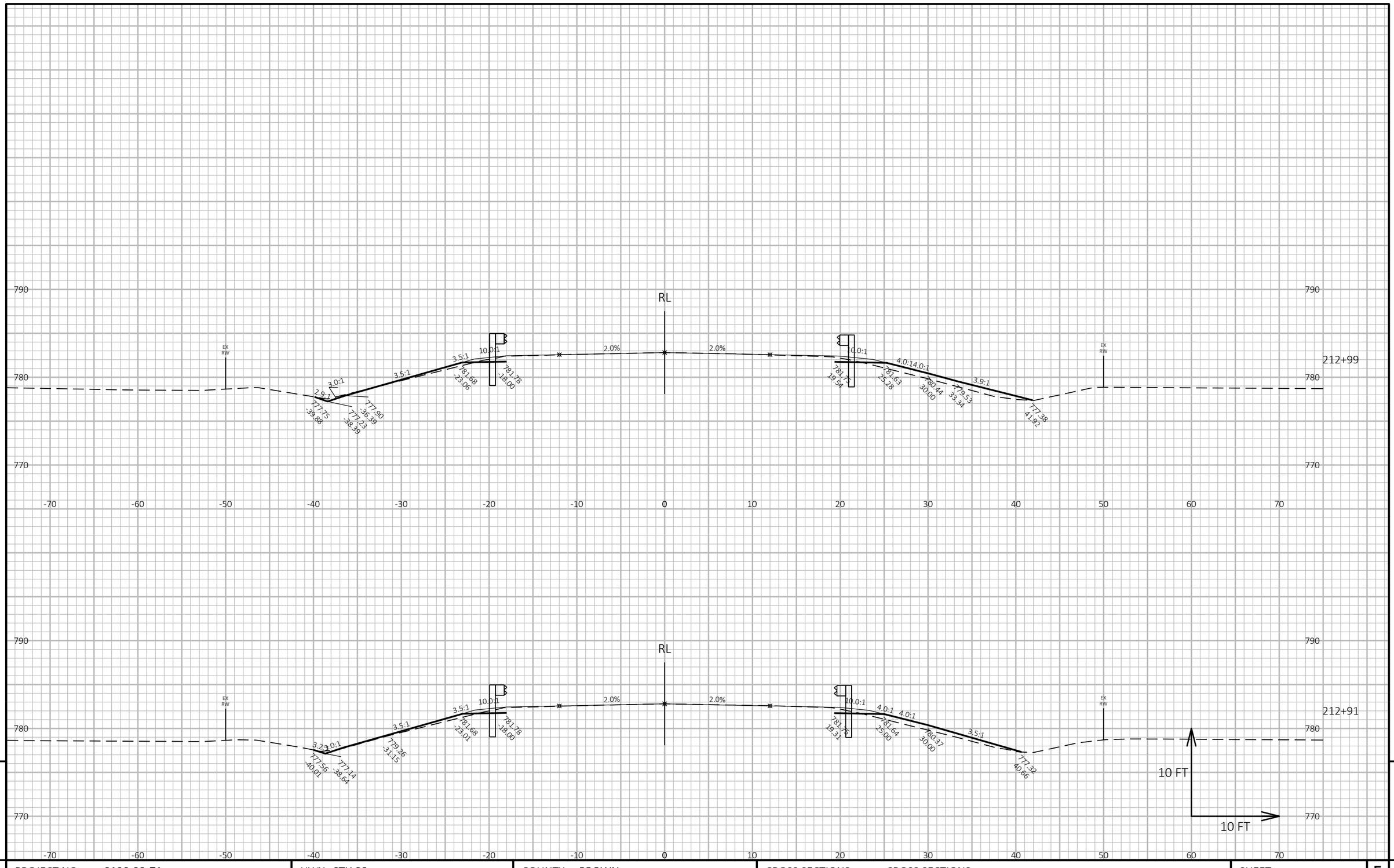
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 195	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 27

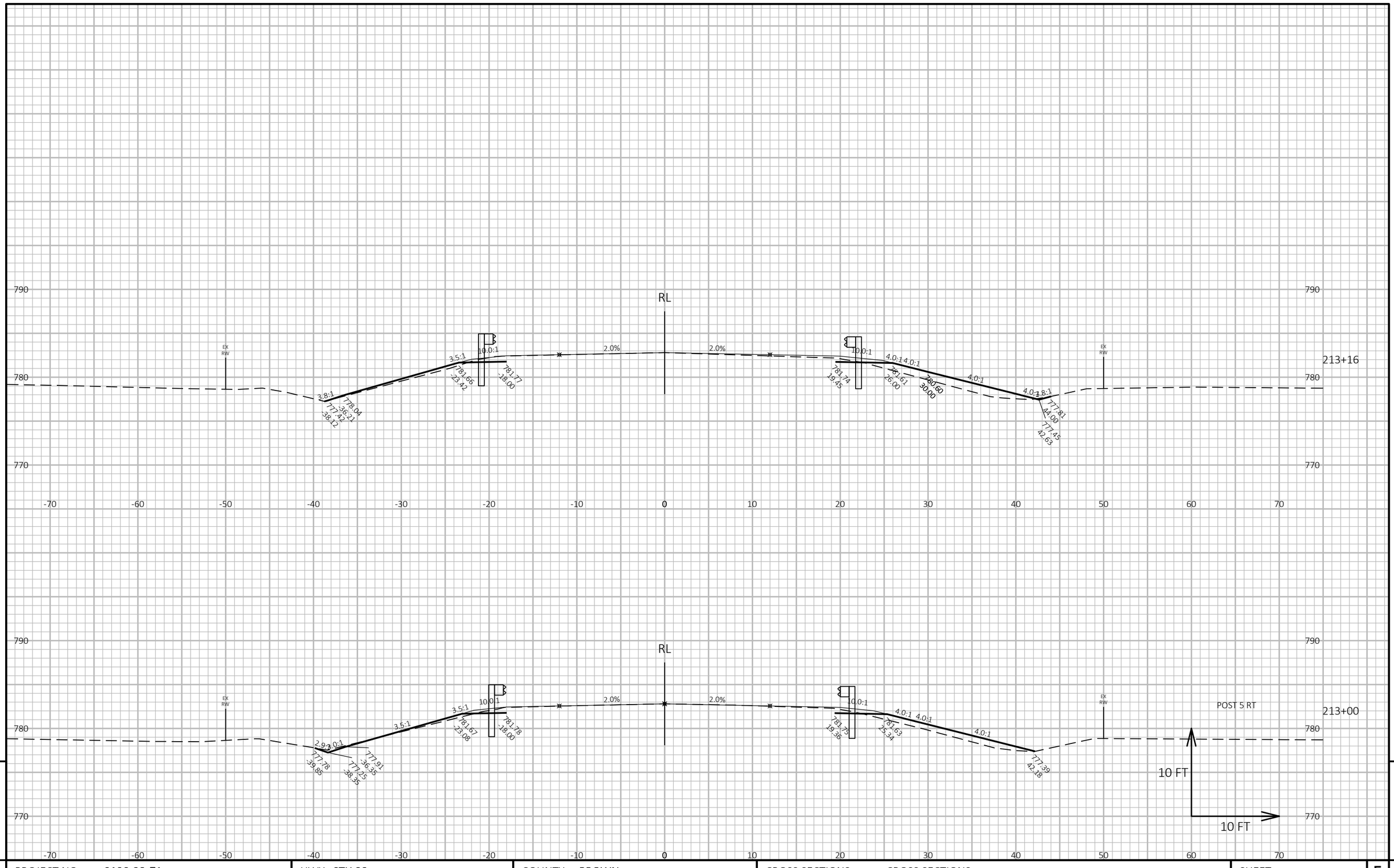
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 196	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 28

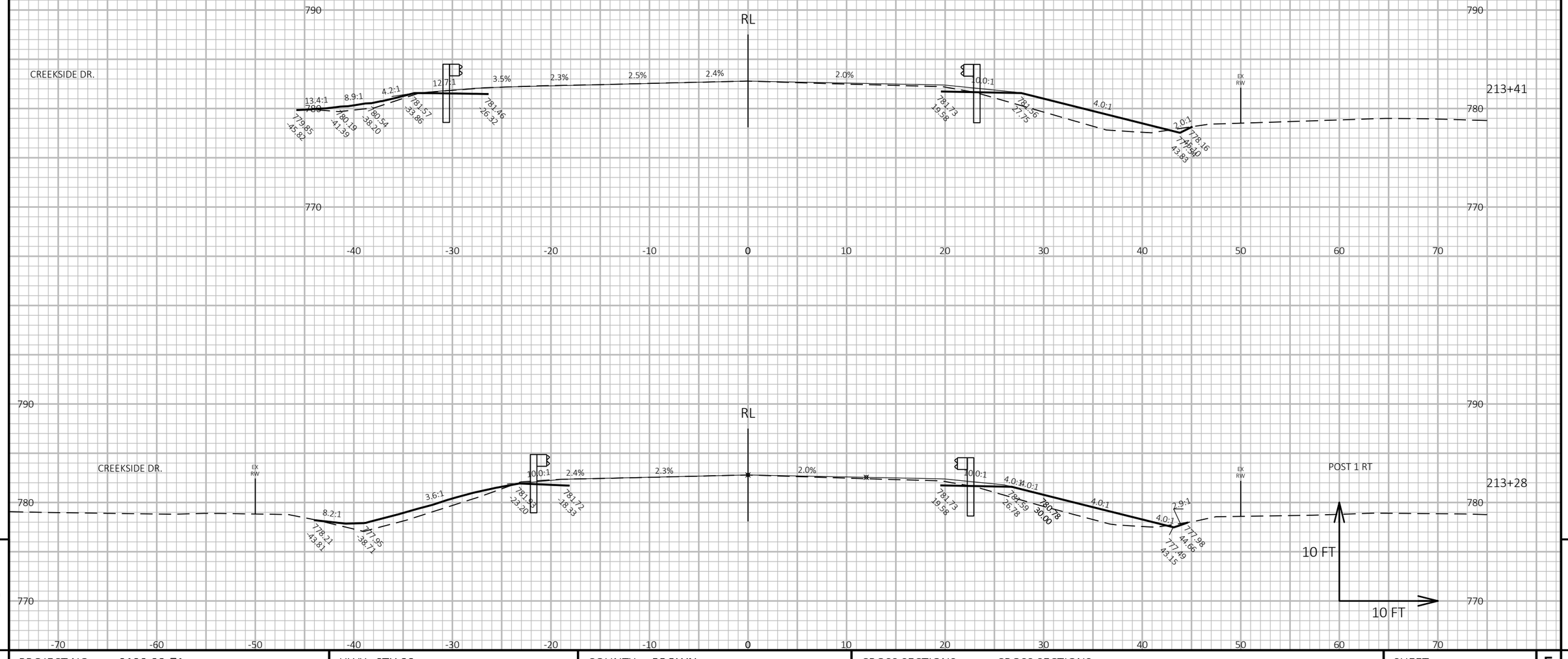
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 197	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 29

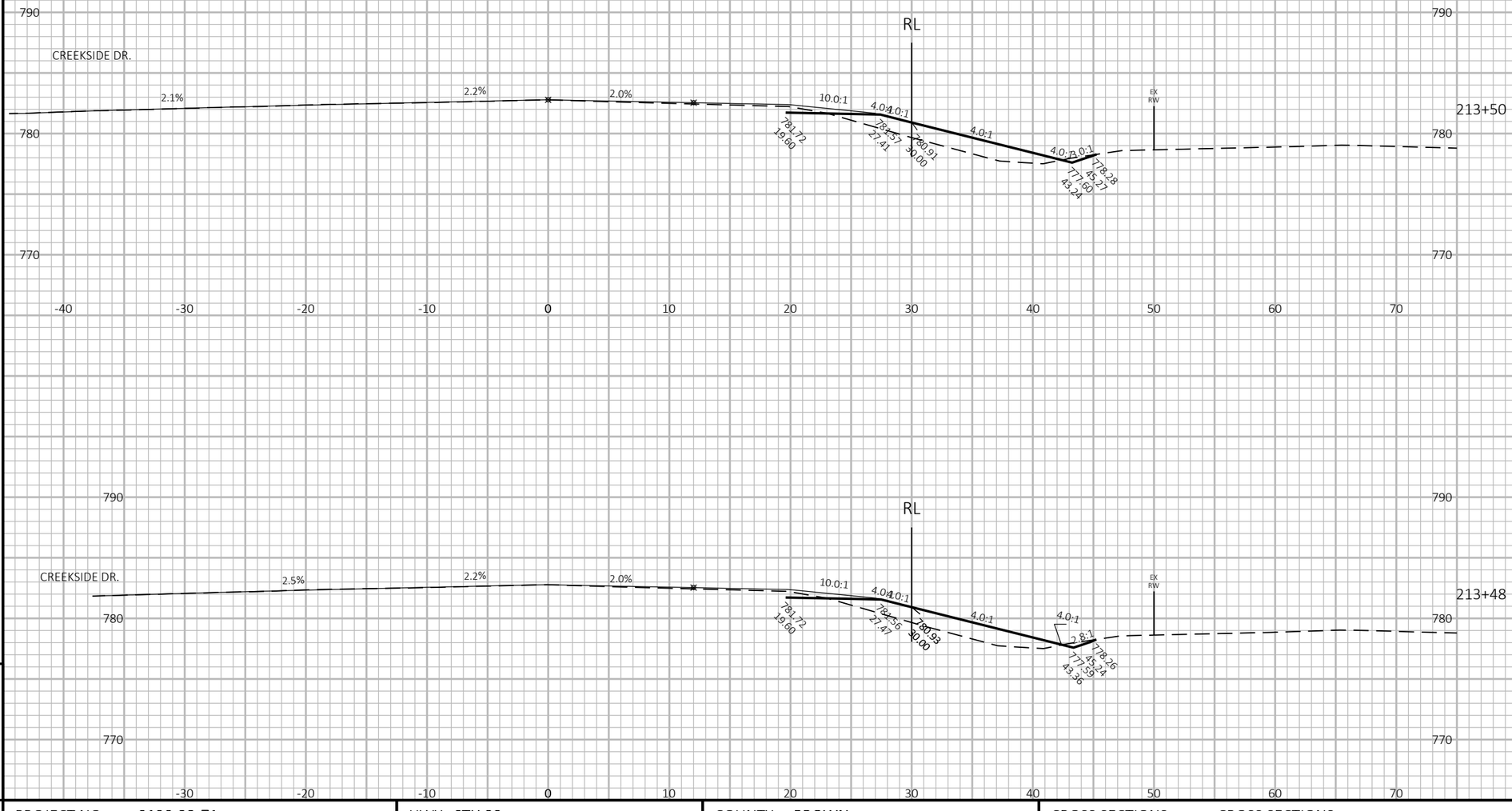
PLOT DATE : 3/10/2020 2:48 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 198	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 30

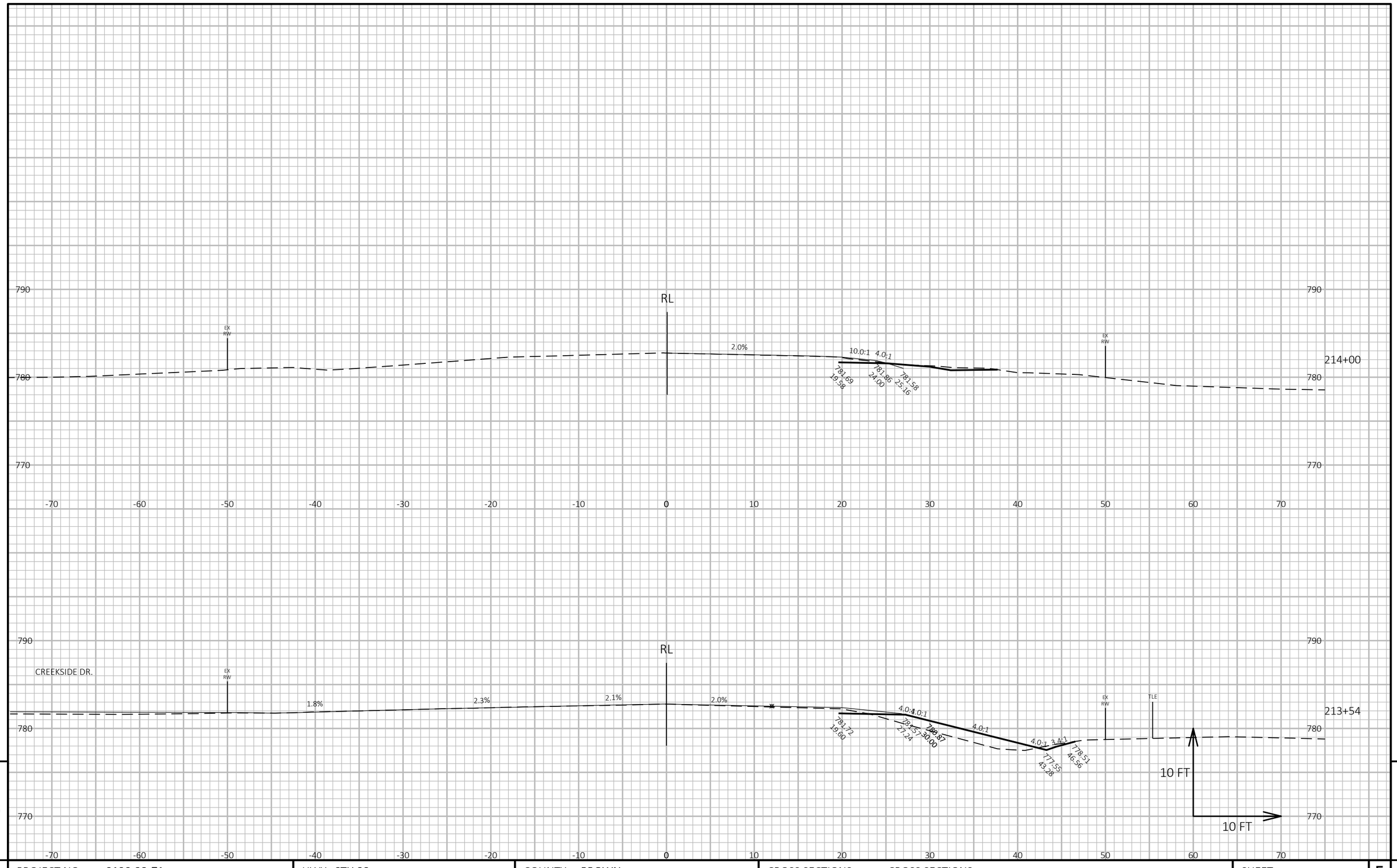
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 199	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 31

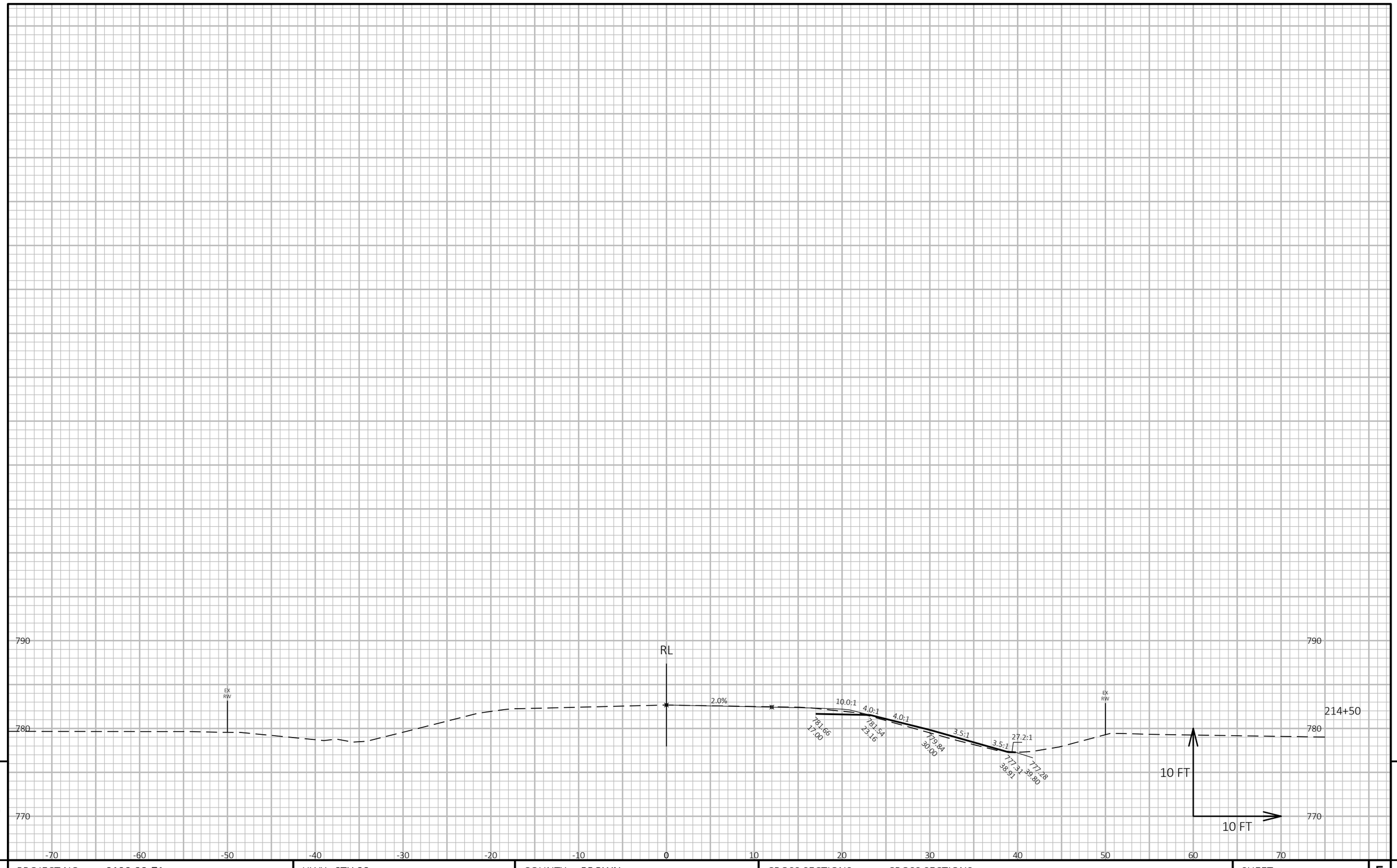
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 200	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 32

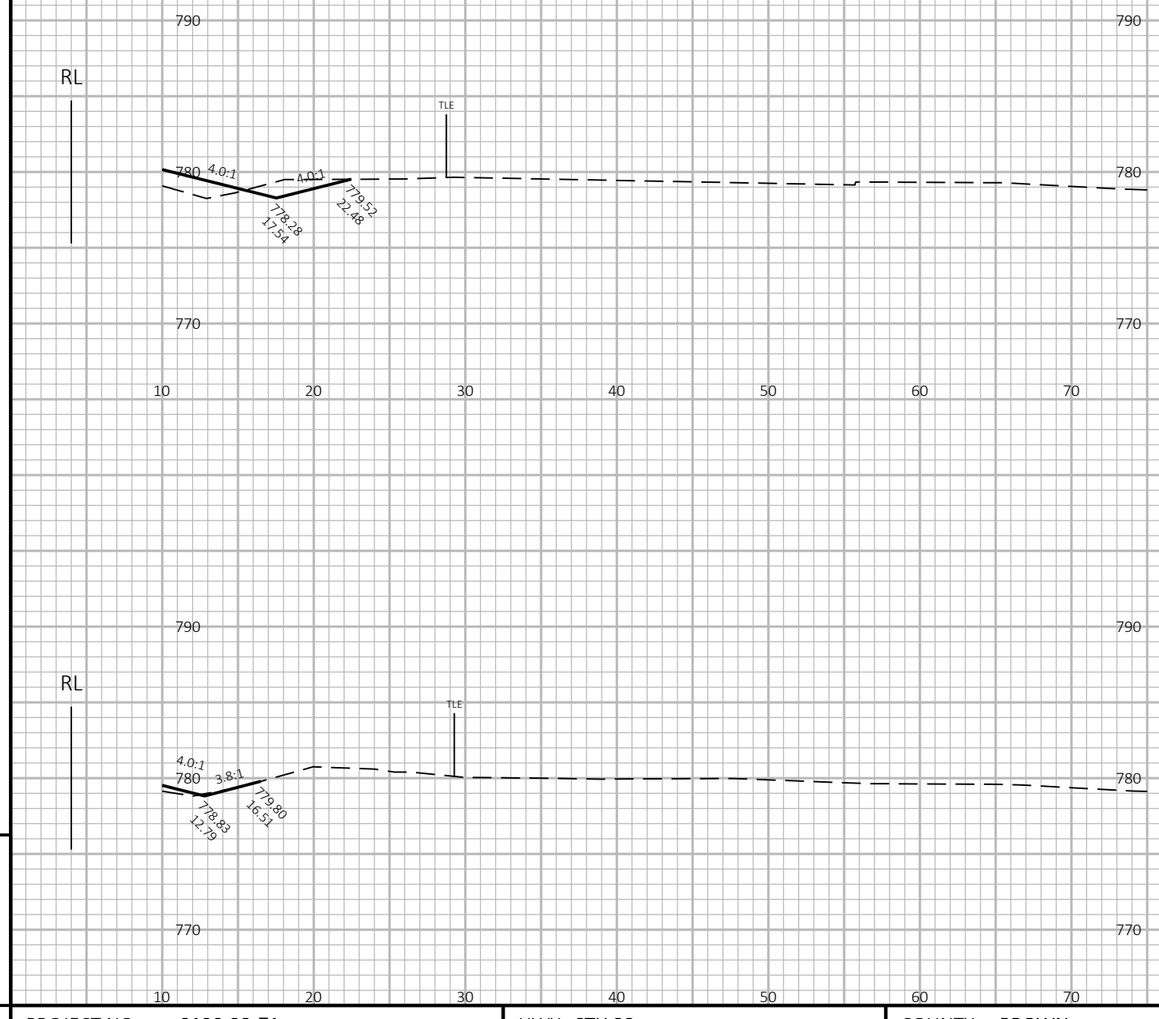
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS CREEKSIDE DR	SHEET 201	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 33

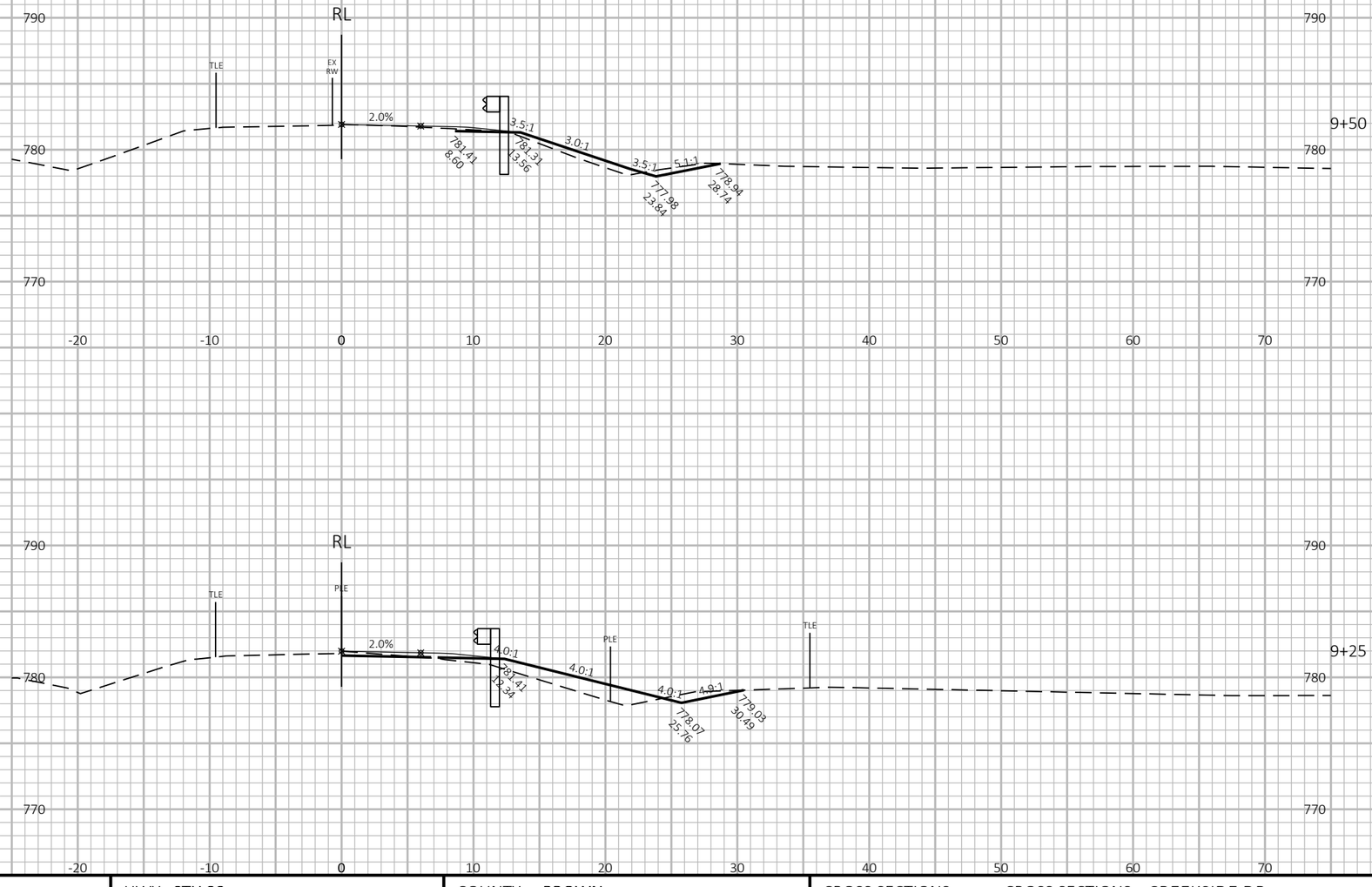
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS CREEKSIDE DR	SHEET 202	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 34

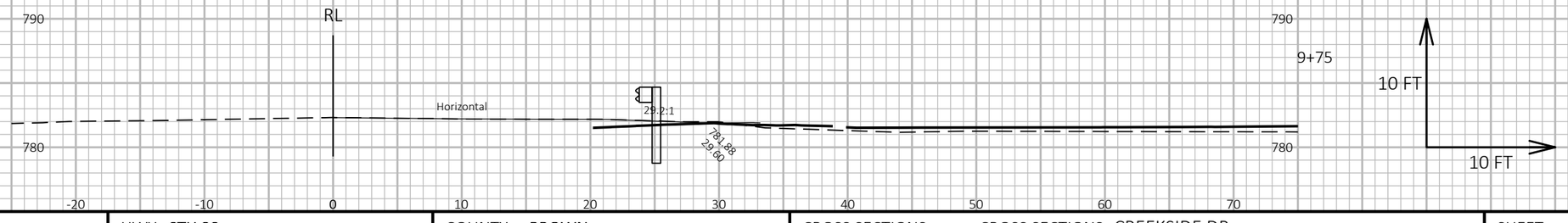
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS CREEKSIDE DR	SHEET 203	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 35

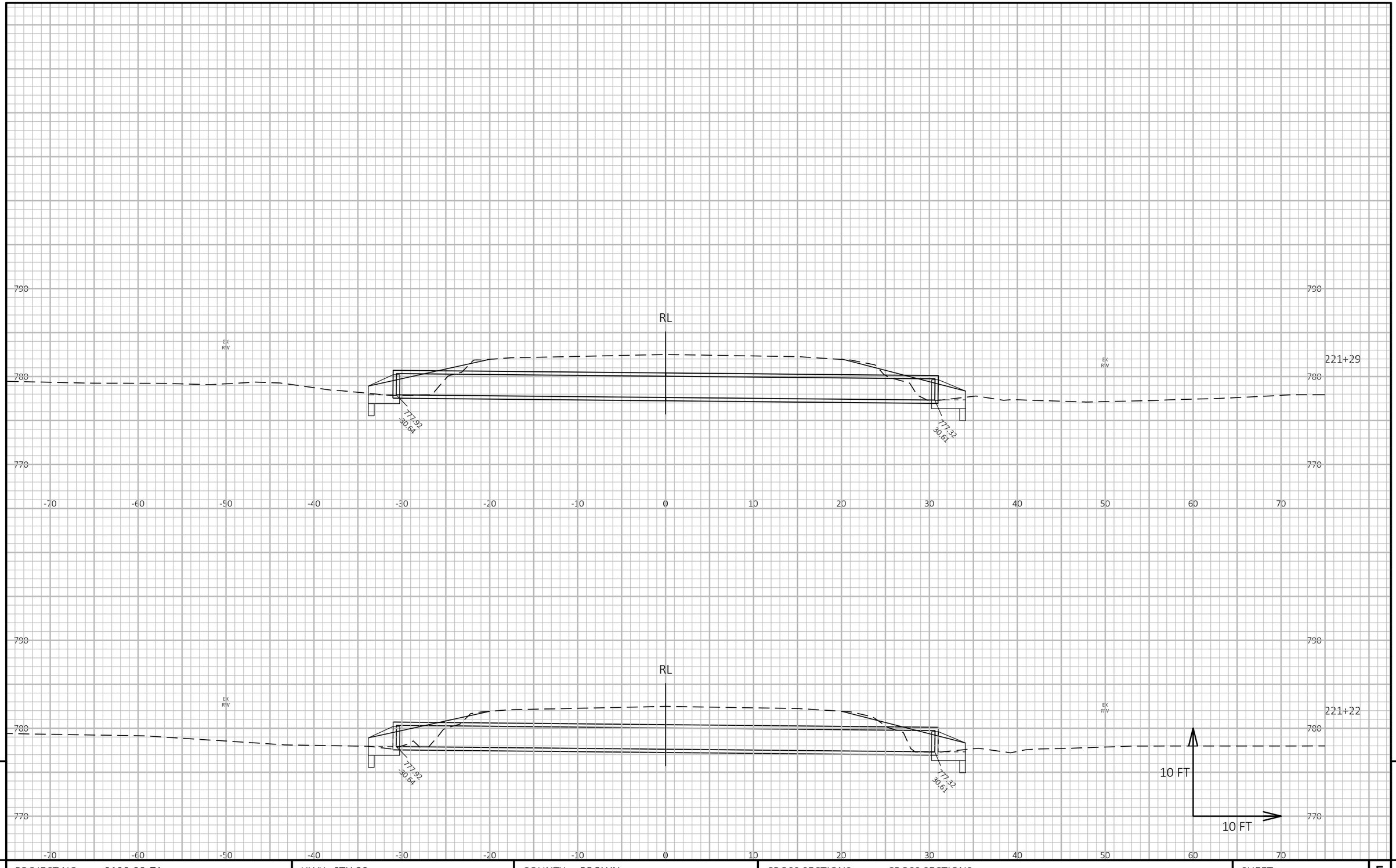
PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 9190-23-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: CROSS SECTIONS	SHEET 204	E

FILE NAME : N:\PDS\C3D\91902300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 36

PLOT DATE : 3/10/2020 2:49 PM

PLOT BY : HOLMES, KELSEY J

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov