GRE

DECEMBER 2016

PROJECT ID: 4190-16-71

WITH: 4190-16-72

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 = 420

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4190-16-71	WISC 2016485	1
4190-16-72	WISC 2016486	1

ASHLAND AVE., DE PERE & ASHWAUBENON

8TH STREET - LOMBARDI AVENUE

STH 32

BROWN COUNTY

STATE PROJECT NUMBER
4190-16-71

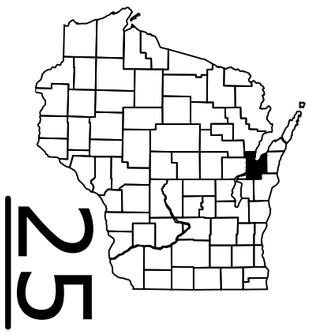
ASHLAND AVE., DE PERE & ASHWAUBENON

8TH STREET - LOMBARDI AVENUE

STH 32

BROWN COUNTY

STATE PROJECT NUMBER
4190-16-72



25

N

DESIGN DESIGNATION

A.A.D.T.	2017	=	20,900
A.A.D.T.	2037	=	24,500
D.H.V.		=	2,279
D.D.		=	59/41
T.		=	10.5%
DESIGN SPEED		=	50 MPH
ESALS		=	4,161,000

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)

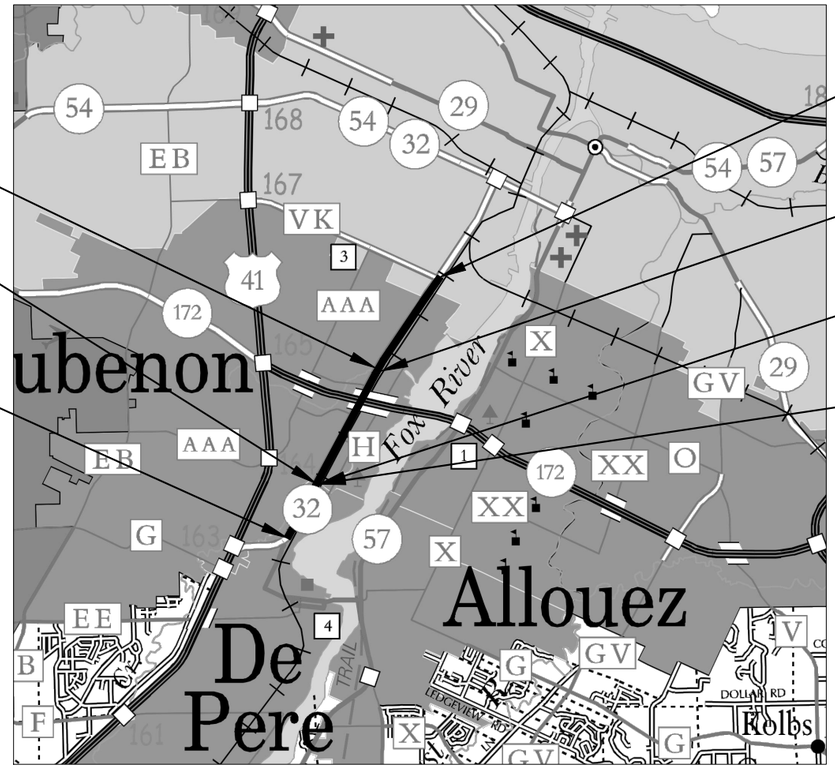
UTILITIES

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

END PROJECT 4190-16-72
STA 129+85.00NB

BEGIN PROJECT 4190-16-72
STA 59+61.01NB
Y = 549,397.502
X = 85,502.685

BEGIN PROJECT 4190-16-71
STA 29+00.00NB
Y = 546,700.397
X = 84,061.333



END PROJECT 4190-16-71
STA 195+80.00

B-5-35
STA 129+50.00NB

EXISTING STRUCTURE B-5-16
PROPOSED STRUCTURE B-5-408
STA 59+61.01SB

EXISTING STRUCTURE B-5-34
PROPOSED STRUCTURE B-5-409
STA 59+61.01NB

LAYOUT
SCALE 0 1 MI

4190-16-71 TOTAL NET LENGTH OF CENTERLINE = 3.16 MI
4190-16-72 TOTAL NET LENGTH OF CENTERLINE = 0.02 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BROWN COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

VERTICAL POSITIONS SHOWN IN THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BROWN COUNTY, NAVD83 (1991).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	A DUMS
Project Manager	A FULCER
Regional Examiner	
Regional Supervisor	D SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: 7/13/2016 Andrew D. Fulcer (Signature)

E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 10/7/2016 12:36 PM

PLOT BY : DUMS, ALEXANDER T PLOT NAME :

WISDOT/CADDS SHEET 10

GENERAL NOTES

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

EXISTING PERMANENT SIGNS ARE TO REMAIN IN PLACE UNLESS SPECIALLY CALLED FOR REMOVAL ON MISCELLANEOUS QUANTITIY TABLE.

ANY MESH MATERIAL THAT IS FOUND IN THE EXISTING CONCRETE PAVEMENT SHALL BE INCIDENTAL TO THE REMOVAL OF THE PAVEMENT ITEM IN THAT SECTION.

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

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS.
REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.
DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

ALL DISTURBED AREAS, NOT OTHERWISE SURFACED, ARE TO BE TOPSOILED, FERTILIZED, SEEDED AND COVERED WITH MULCH OR EROSION MAT, AS SHOWN ON THE PLANS.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND ALL UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST THREE WORKING DAYS PRIOR TO BEGINNING WORK. ALL DIMENSIONS TO FLANGE LINE OF CURB UNLESS OTHERWISE NOTED IN PLANS.

THE LOCATION OF THE CONCRETE REPLACEMENTS AND REPAIRS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL DIMENSIONS TO FLANGE LINE OF CURB UNLESS OTHERWISE NOTED IN PLANS.

DNR AREA LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313-6727
ATTN: JAMES P. DOPERALSKI JR.
PHONE: 920-662-5119
FAX: 920-662-5159
E-MAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

UTILITIES

VILLAGE OF ALLOUEZ WATER DEPT - WATER
1649 S WEBSTER AVENUE
GREEN BAY, WI 54301-2460
ATTN: CRAIG BERNDT
PHONE: 920-448-2800
E-MAIL: CRAIG@VILLAGEOFALLOUEZ.COM

VILLAGE OF ALLOUEZ DEPARMENT OF PUBLIC WORKS - SEWER
1649 S WEBSTER AVENUE
GREEN BAY, WI 54301
ATTN: THOMAS MEIER
PHONE: 920-448-2800

ANR PIPELINE COMPANY - GAS/PETROLEUM
W3925 PIPELINE LANE
EDEN, WI 53019
ATTN: LAWRENCE HUBER
PHONE: 920-477-2240
E-MAIL: LAWRENCE_HUBER@TRANSCANADA.COM

ASHWAUBENON WATER AND SEWER UTILITY - SEWER & WATER
2155 HOLMGREN WAY
GREEN BAY, WI 54304-4605
ATTN: DOUGLAS MARTIN
PHONE: 920-492-2335
E-MAIL: DMARTIN@ASHWAUBENON.COM

ATC MANAGEMENT, INC. - ELECTRICITY
801 O'KEEFE ROAD
P.O. BOX 6113
DE PERE, WI 54115-6113
ATTN: MIKE OLSEN
PHONE: 920-660-2390
E-MAIL: MOLSEN@ATCLLC.COM

AT&T WISCONSIN - COMMUNICATION LINE
205 S JEFFERSON STREET
GREEN BAY, WI 54301
ATTN: KAREN WELLS
PHONE: 920-433-4226
E-MAIL: KW9272@ATT.COM

VILLAGE OF BELLEVUE WATER UTILITY - SEWER
2828 ALLOUEZ AVENUE
GREEN BAY, WI 54311-6644
ATTN: BILL BALKE
PHONE: 920-468-5225

BROWN COUNTY - COMMUNICATION LINE
305 E WALNUT STREET
P.O. BOX 23600
GREEN BAY, WI 54301
ATTN: KEVIN RAYE
PHONE: 920-448-4338

CITY OF DE PERE - SEWER & WATER
925 S 6TH STREET
DE PERE, WI 54115
ATTN: SCOTT THORESEN
PHONE: 920-339-4071
E-MAIL: STHORESEN@MAIL.DE-PERE.ORG

DE PERE WATER DEPARTMENT - WATER
335 S BROADWAY
DE PERE, WI 54115-2526

CITY OF GREEN BAY - SEWER & WATER
100 N JEFFERSON STREET
GREEN BAY, WI 54301
ATTN: ED WIESNER
PHONE: 920-448-3100
E-MAIL: EDWI@CI.GREEN-BAY.WI.US

MIKE PIERNER
GREEN BAY METROPOLITAN SEWERAGE DISTRICT - SEWER
2231 N QUINCY STREET
GREEN BAY, WI 54302-1248
PHONE: 920-438-3033
E-MAIL: MPIERNER@GBMSD.ORG

BRIAN POWELL
GREEN BAY WATER DEPARTMENT - WATER
631 S ADAMS STREET
GREEN BAY, WI 54301
PHONE: 920-448-3480

TREVOR PEEVEY
LEVEL 3 COMMUNICATIONS LLC - COMMUNICATION LINE
1122 CAPITAL OF TEXAS HIGHWAY SOUTH
AUSTIN, TX 78746
PHONE: 512-742-3805
E-MAIL: TREVOR.PEEVEY@LEVEL3.COM

JIM BIRKENHEIER
MCLEOD USA TELCOMMUNICATION SERVICES, INC. - COMMUNICATION LINE
731 N JACKSON STREET
SUITE 410
MILWAUKEE, WI 53202
PHONE: 414-207-2986
E-MAIL: JAMES.BIRKENHEIER@PAETEC.COM

JIM PERZ
SCHNEIDER NATIONAL INC. - COMMUNICATION LINE
3101 S PACKERLAND DRIVE
P.O. BOX 2545
GREEN BAY, WI 54306-2545
PHONE: 920-246-7110

TDS TELECOM - COMMUNICATION LINE
SUITE 218A
10 COLLEGE AVENUE
APPLETON, WI 54911
ATTN: STEVE JAKUBIEC
PHONE: 920-882-4166
E-MAIL: STEVE.JAKUBIEC@TDSTELECOM.COM

TIME WARNER CABLE - COMMUNICATION LINE
3520 DESTINATION DRIVE
APPLETON, WI 54915
ATTN: LARRY PIHLSTROM
PHONE: 920-749-1154
E-MAIL: LARRY.PIHLSTROM@TWCABLE.COM

JIM KOSTUCH
WINDSTREAM KDL INC. - COMMUNICATION LINE
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
PHONE: 262-792-7938
E-MAIL: JAMES.KOSTUCH@WINDSTREAM.COM

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY & GAS/PETROLEUM
700 N ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
ATTN: LORI BUTRY
PHONE: 920-433-1360
E-MAIL: LABUTRY@INTEGRYSGROUP.COM

NE REGION SURVEY CONTACT PERSON

CORMAC MCINNIS
DEPARTMENT OF TRANSPORTATION
NORTHEAST REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
TEL: 920-492-5638
E-MAIL: CORMAC.MCINNIS@DOT.WI.GOV

CANADIAN NATIONAL RAILWAY CONTACTS

RAILROAD FLAGGING AND FACILITY LOCATING CONTACT
MARY ELLEN CARMODY, AUDIT OFFICER, ADMINISTRATION SERVICE CENTER 2800
700 PERSHING STREET
PONTIAC, MI 48340
TEL: 248-452-4705
FAX: 248-452-4972
E-MAIL: MARYELLEN.CARMODY@CN.CA

MAIN RAILROAD CONTACT
JACKIE MACEWICZ, MANAGER PUBLIC WORKS
1625 DEPOT STREET
STEVENS POINT, WI 54481
TEL: 715-345-2503
FAX: 715-345-2534
E-MAIL: JACKIE.MACEWICZ@CN.CA

24 HOUR EMERGENCY RAILROAD
SIGNAL CONTACT: 1-800-616-3432

CALL BEFORE YOU DIG

CANADIAN NATIONAL RAILWAY IS NOT PART OF THE DIGGERS HOTLINE SYSTEM.
CALL MARY ELLEN CARMODY AT 248-452-4705 WHEN DIGGING ON RAILROAD R/W

WWW.CN.CA/EN/DELIVERING-RESPONSIBLY/SAFETY/ERAILSAFE/UTILITY-INSTALLATIONS

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

EMERGENCY CONTACT NUMBERS FOR WISCONSIN POWER AND LIGHT COMPANY

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-862-6261
GAS 24 HOUR EMERGENCY SERVICE: 1-800-862-6263

EMERGENCY CONTACT NUMBERS FOR WISCONSIN PUBLIC SERVICE

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-450-7240
GAS 24 HOUR EMERGENCY SERVICE: 1-800-450-7280

EMERGENCY CONTACT NUMBERS FOR WE ENERGIES

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-662-4797
GAS 24 HOUR EMERGENCY SERVICE: 1-800-261-5325

BEGIN PROJECT 4190-16-71
STA 28+97.11NB

HOLMGREN WAY

PROJECT 4190-16-50/51
REPLACE RAILROAD CROSSING AND SIGNALS

DUTCHMANS CREEK

ASHWAUBENON CREEK

PARKVIEW ROAD

NEW STRUCTURE ID
B-05-0408 (SB)
B-05-0409 (NB)

BAETEN ROAD

HANSEN ROAD

VANDERPERREN WAY

STH 172 EB
STH 172 WB

TENNIS COURT

30NB
40SB
40NB
50SB
50NB
60SB
60NB
70SB
70NB
80SB
80NB
90SB
90NB
ASHLAND AVENUE
STH 32
100SB
100NB
110SB
110NB

FORT HOWARD AVENUE

END PROJECT 4190-16-72
STA 60+78.16

ACCESS CHANGES

WCL
CROSSING 180082D

BEGIN PROJECT 4190-16-72
STA 59+61.01
REPLACE NB AND SB BRIDGE STRUCTURES

S BROADWAY

CITY OF DE PERE

VILLAGE OF ASHWAUBENON

HANSEN ROAD

STH 172 EB
STH 172 WB

S BROADWAY

N

STH 172 EB
STH 172 WB

PILGRIM WAY

DUTCHMANS CREEK

TENNIS COURT

BOX CULVERT ID
B-05-0017 (SB)
B-05-0035 (NB)

WILLARD DRIVE

CORMIER ROAD

MORRIS AVENUE

MIKE MCCARTHY WAY

VILLAGE OF ASHWAUBENON

CITY OF GREEN BAY

110SB
110NB
120SB
120NB
130SB
130NB
140SB
140NB
150SB
150NB
ASHLAND AVENUE
STH 32
160SB
160NB
170SB
170NB
180SB
180NB
190SB
190NB

LOMBARDI AVENUE

PROJECT 4190-16-72
REPLACE 4 WINGWALLS OF
OF BOX CULVERT

CRARY STREET

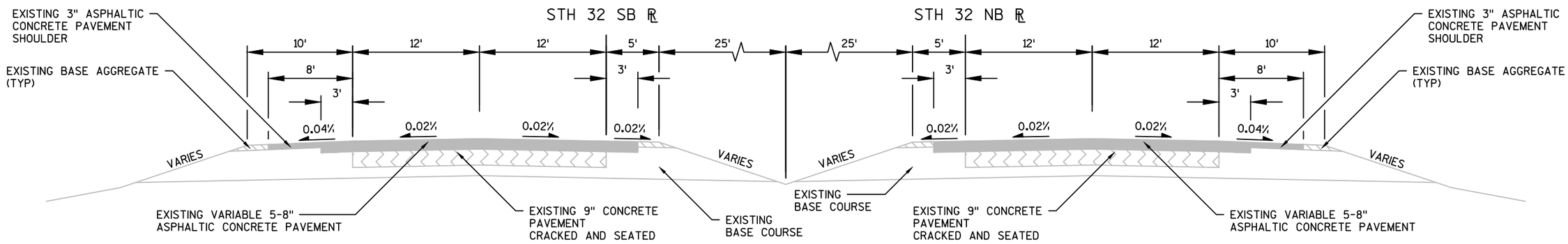
DUTCHMANS CREEK

CORMIER ROAD

MIKE MCCARTHY WAY

END PROJECT 4190-16-71
STA 195+00SB

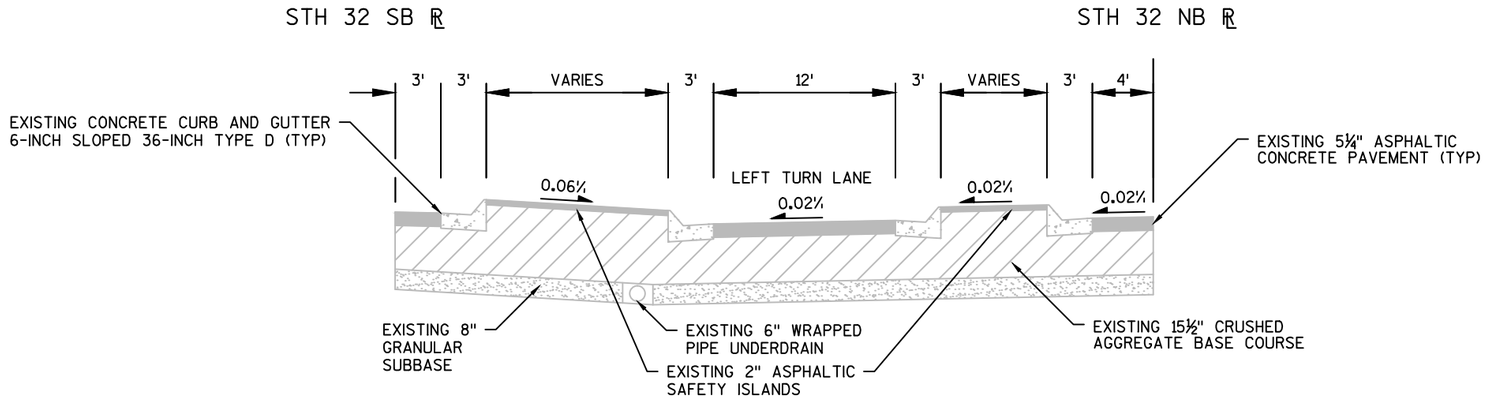
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION STH 32 (ASHLAND AVENUE)

STA 31+00SB TO STA 88+08SB
STA 89+22SB TO STA 121+05SB
STA 121+85SB TO STA 143+05SB
STA 143+92SB TO STA 176+63SB
STA 177+28SB TO STA 193+18SB
STA 194+02SB TO STA 194+98SB

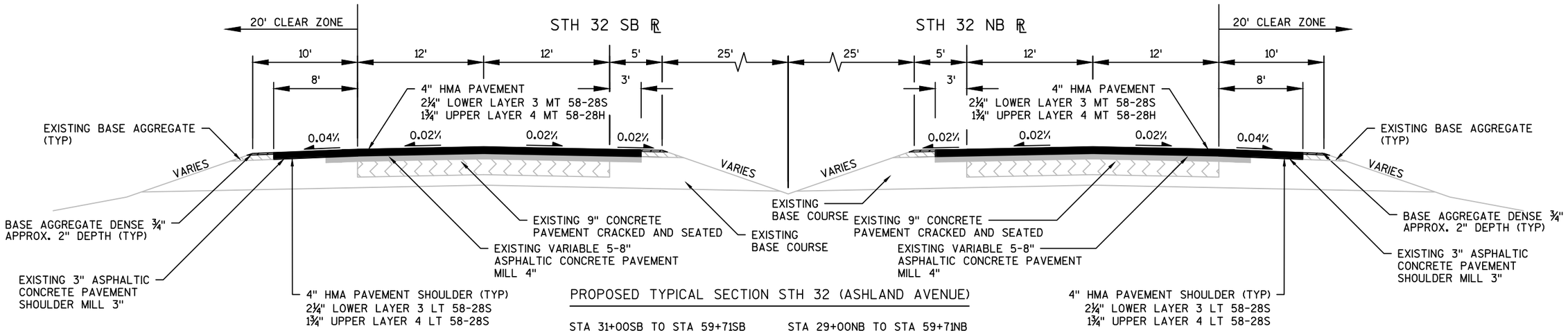
STA 29+00NB TO STA 86+63NB
STA 87+40NB TO STA 119+03NB
STA 120+18NB TO STA 141+69NB
STA 142+47NB TO STA 175+42NB
STA 176+08NB TO STA 191+43NB
STA 192+63NB TO STA 194+98NB



EXISTING TYPICAL SECTION STH 32 SLOTTED LEFT TURN LANE

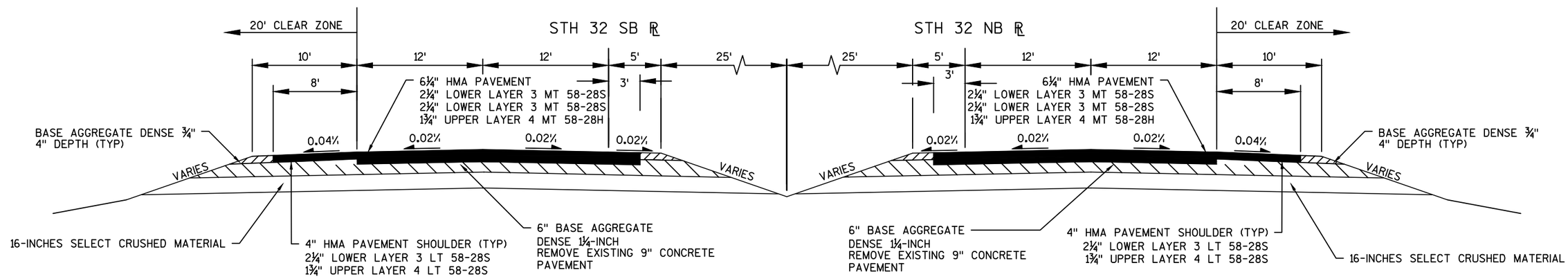
STA 86+63NB TO STA 87+40NB
STA 88+08SB TO STA 89+22SB
STA 119+03NB TO STA 120+18NB
STA 121+05SB TO STA 121+85SB
STA 141+69NB TO STA 142+47NB

STA 143+05SB TO STA 143+92SB
STA 175+42NB TO STA 176+08NB
STA 176+63SB TO STA 177+28SB
STA 191+43NB TO STA 192+63NB
STA 193+18SB TO STA 194+02SB



PROPOSED TYPICAL SECTION STH 32 (ASHLAND AVENUE)

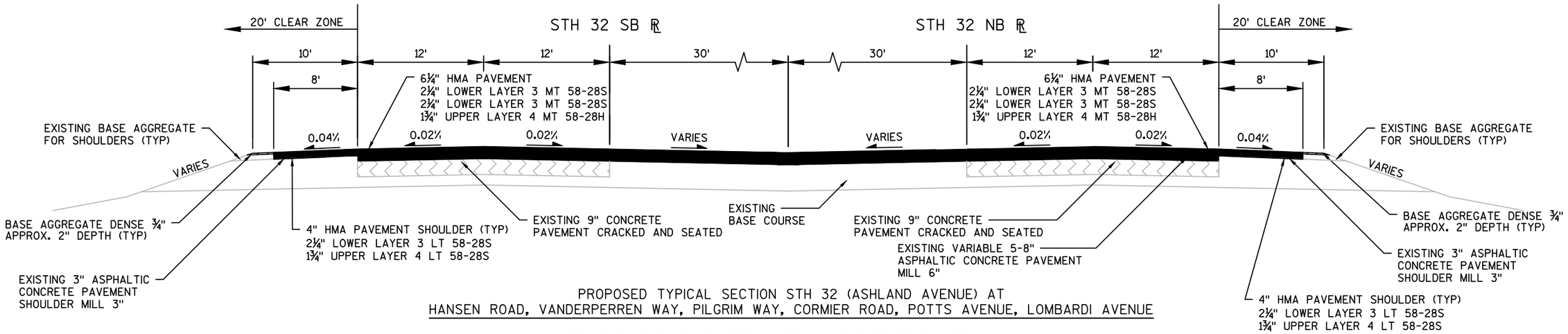
STA 31+00SB TO STA 59+71SB	STA 29+00NB TO STA 59+71NB
STA 60+70SB TO STA 77+25SB	STA 60+70NB TO STA 78+00NB
STA 78+77SB TO STA 86+00SB	STA 79+50NB TO STA 86+00NB
STA 90+00SB TO STA 100+25SB	STA 90+00NB TO STA 100+25NB
STA 104+25SB TO STA 118+50SB	STA 104+25NB TO STA 118+50NB
STA 122+50SB TO STA 141+95SB	STA 122+50NB TO STA 141+00NB
STA 144+50SB TO STA 174+50SB	STA 144+50NB TO STA 174+50NB
STA 178+00SB TO STA 190+75SB	STA 178+00NB TO STA 190+75NB
STA 194+75SB TO STA 195+80SB	STA 194+75NB TO STA 195+00NB



PROPOSED TYPICAL SECTION STH 32 (ASHLAND AVENUE) AT RAILROAD CROSSING

STA 78+00NB TO STA 79+50NB
STA 77+25SB TO STA 78+77SB

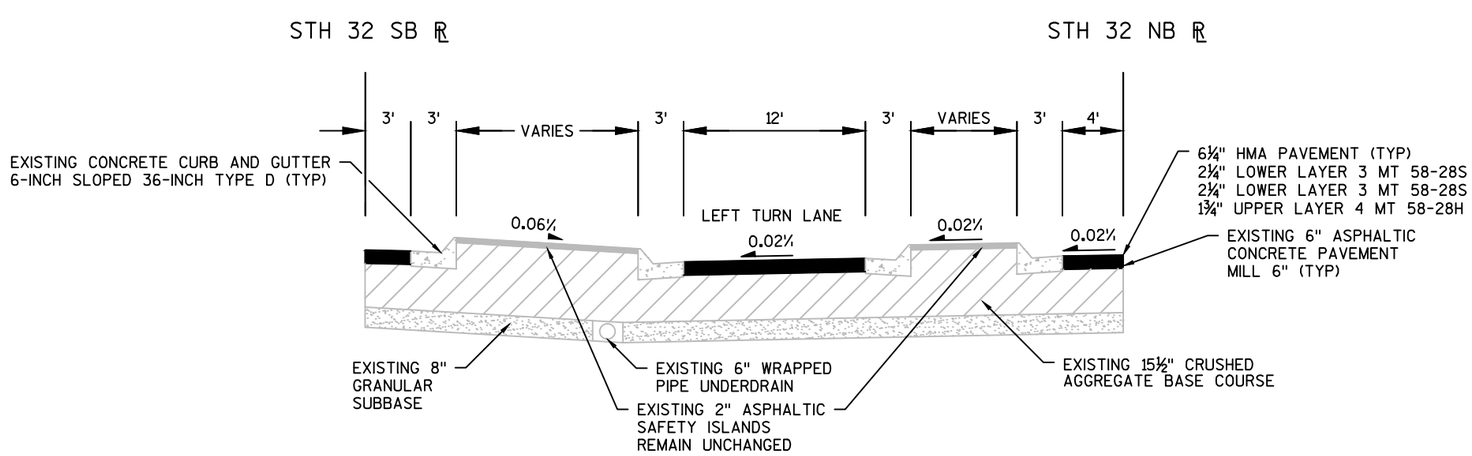
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TYPICAL SECTIONS	SHEET 5 E



PROPOSED TYPICAL SECTION STH 32 (ASHLAND AVENUE) AT
HANSEN ROAD, VANDERPERREN WAY, PILGRIM WAY, CORMIER ROAD, POTTS AVENUE, LOMBARDI AVENUE

STA 86+00SB TO STA 90+00SB
STA 100+25SB TO STA 104+25SB
STA 118+50SB TO STA 122+50SB
STA 141+00SB TO STA 144+50SB
STA 174+50SB TO STA 178+00SB
STA 190+75SB TO STA 194+75SB

STA 86+00NB TO STA 90+00NB
STA 100+25NB TO STA 104+25NB
STA 118+50NB TO STA 122+50NB
STA 141+00NB TO STA 144+50NB
STA 174+50NB TO STA 178+00NB
STA 190+75NB TO STA 194+75NB



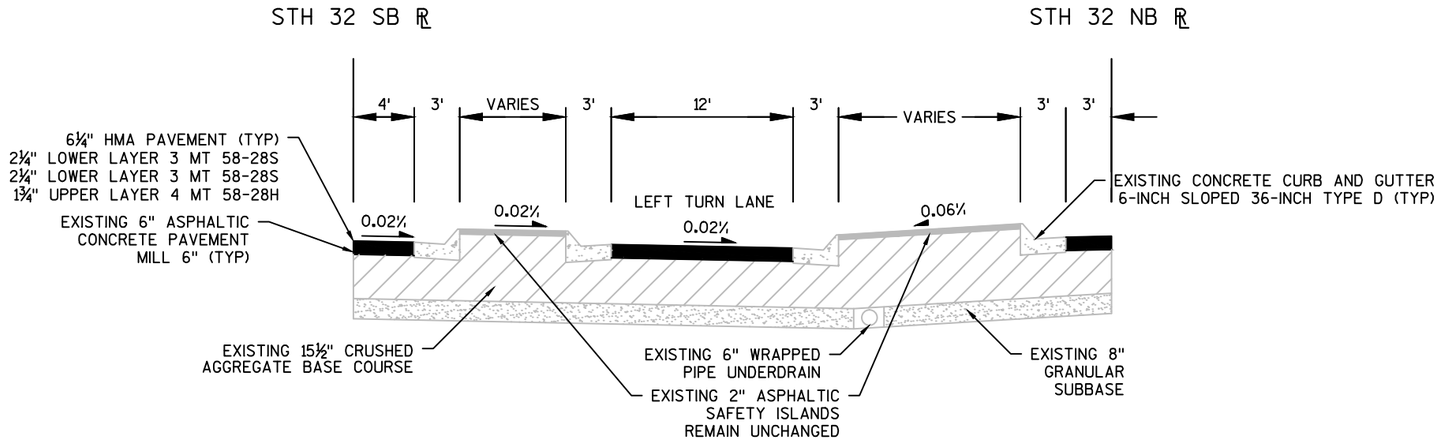
PROPOSED TYPICAL SECTION STH 32 NORTHBOUND SLOTTED LEFT TURN LANE

STA 86+63NB TO STA 87+40NB
STA 119+03NB TO STA 120+18NB
STA 141+69NB TO STA 142+47NB

STA 175+42NB TO STA 176+08NB
STA 191+43NB TO STA 192+63NB

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TYPICAL SECTIONS	SHEET 6	E

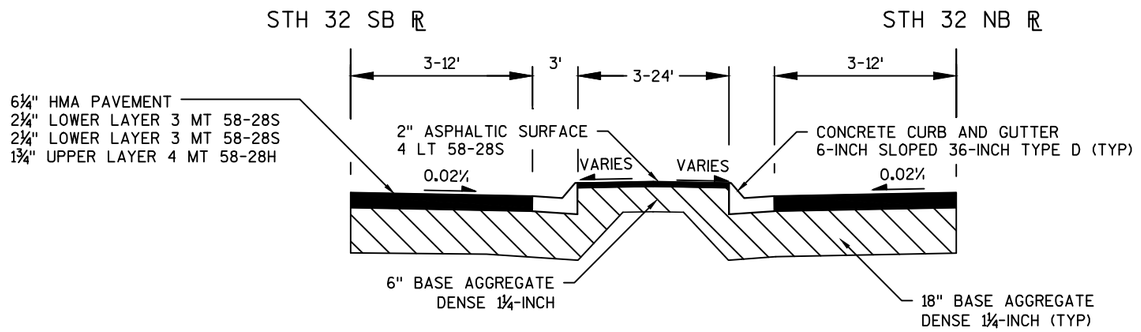
2



PROPOSED TYPICAL SECTION STH 32 SOUTHBOUND SLOTTED LEFT TURN LANE

STA 143+05SB TO STA 143+92SB
STA 176+63SB TO STA 177+28SB
STA 193+18SB TO STA 194+02SB

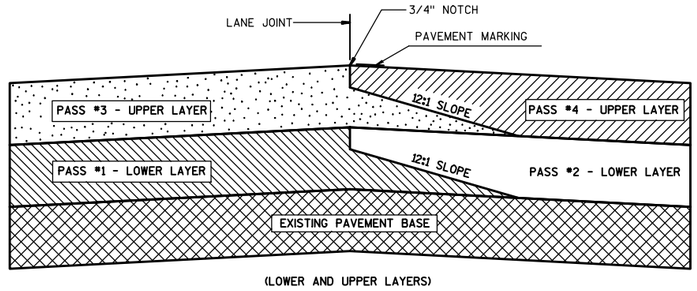
STA 88+08SB TO STA 89+22SB
STA 121+05SB TO STA 121+85SB



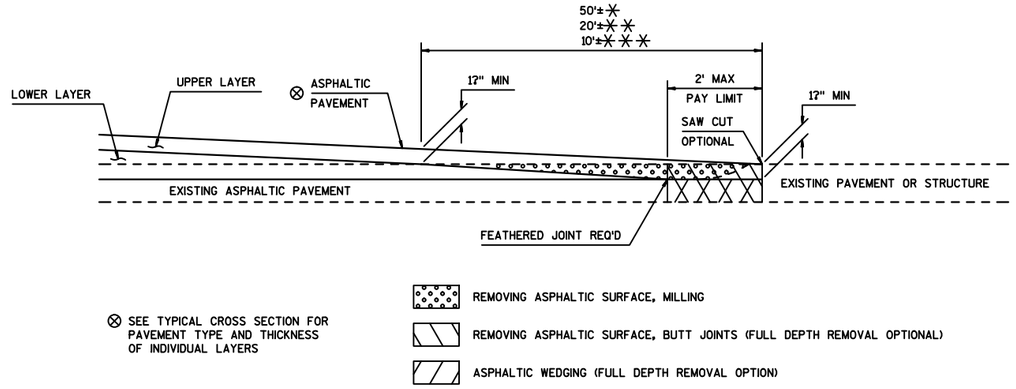
PROPOSED MEDIAN TURN LANE

STA 102+70NB TO STA 108+63NB
STA 102+70SB TO STA 108+63SB

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TYPICAL SECTIONS	SHEET 7	E

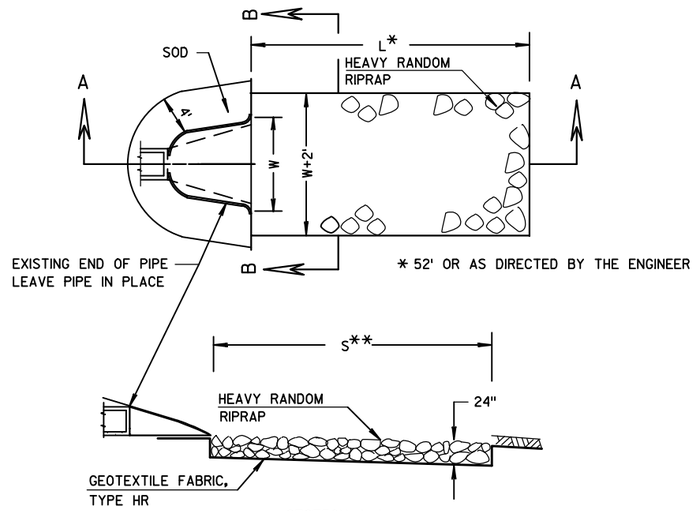


TYPICAL PAVEMENT CROSS SECTIONS OF TAPERED AND NOTCHED LONGITUDINAL JOINTS



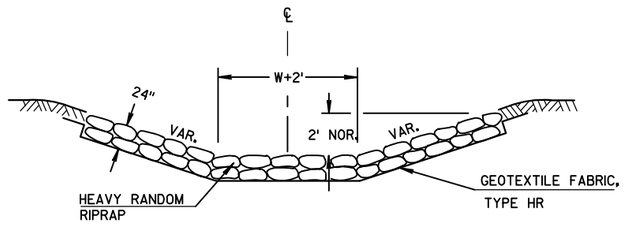
BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES



SECTION A-A

** APPROXIMATE 7% SLOPE; SLOPE VARIES

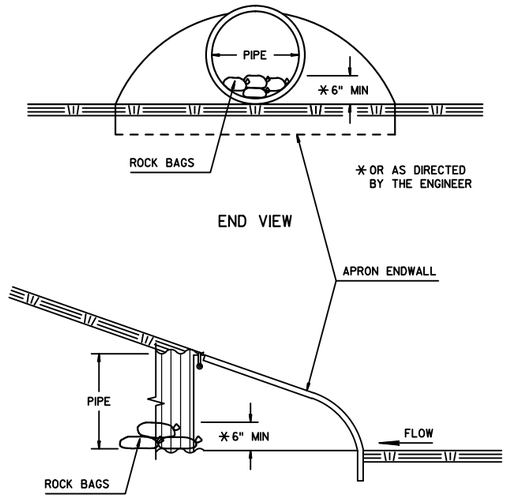


SECTION B-B

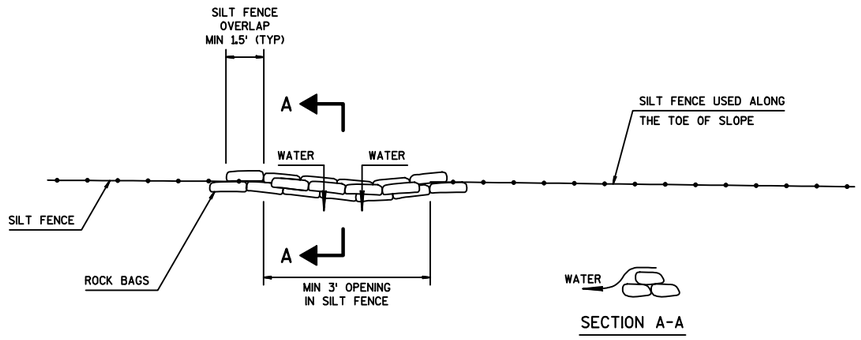
HEAVY RIPRAP AND GEOTEXTILE FABRIC DETAIL AT WEST DITCH CHANNEL ASHWAUBENON CREEK

61+03SB 75'LT TO 61+55SB 75'LT

2



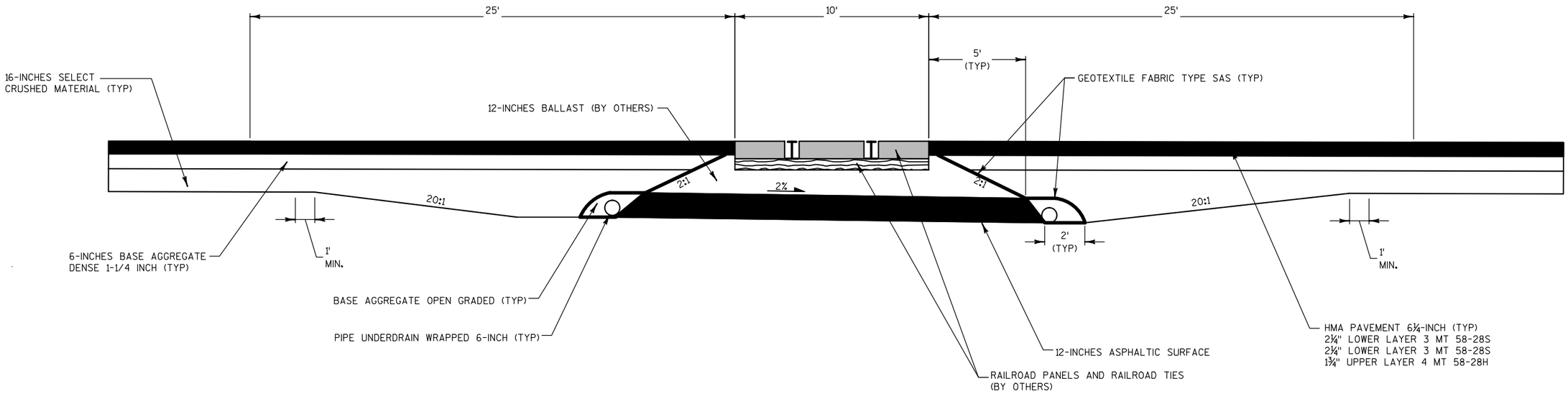
CULVERT PIPE CHECKS



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS

2



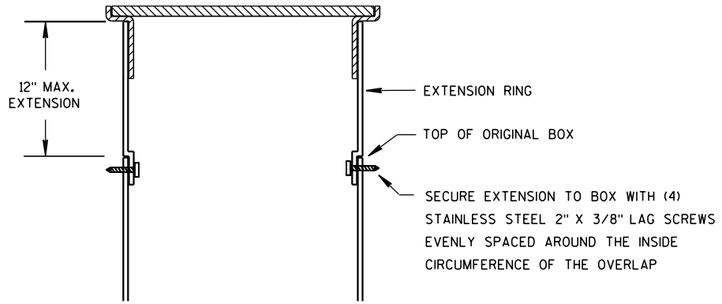
TYPICAL CROSS SECTION - RAILROAD CROSSING DETAIL

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX DIAMETER ** (OUTSIDE)	B	25	25
BOX LENGTH	C	36	42
COVER	D	25 1/2	25 1/2
FRAME	E	27	27
FRAME	F	25 3/4	25 3/4
FRAME	G	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50

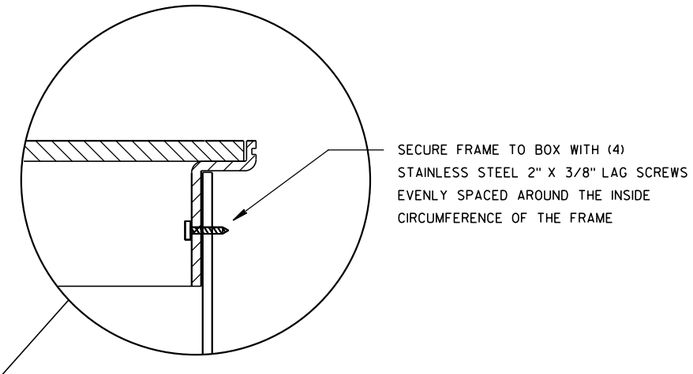
* THE ACTUAL WEIGHT OF THE COVER MAY VARY NOT TO EXCEED 100 LBS.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

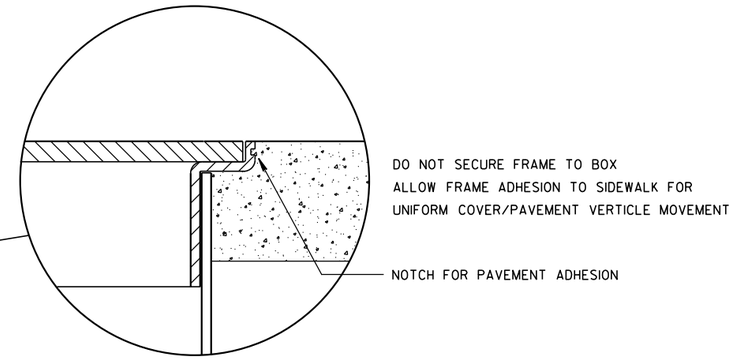


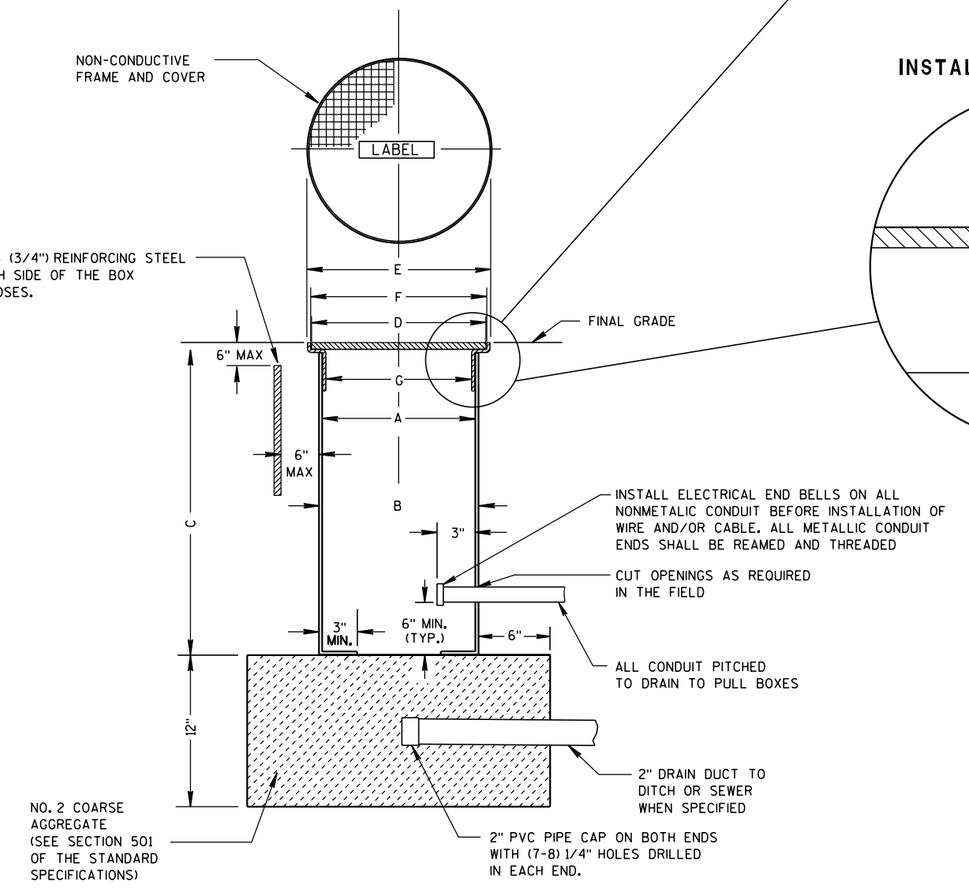
BOX EXTENSION

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK





NON-CONDUCTIVE PULL BOX

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL OR LIGHTING SYSTEMS. "WISDOT COMMUNICATIONS" FOR COMMUNICATIONS SYSTEMS.

2

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
18	102+14.19 NB	36.38 LT	102+14.18 SB	13.27 RT	553087.11	87626.54	606.84
19	102+19.61 NB	28.57 LT	102+19.60 SB	21.08 RT	553087.96	87636.00	606.74
20	102+14.61 NB	20.67 LT	102+14.60 SB	28.98 RT	553079.72	87640.41	606.65

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
21	102+82.34 NB	22.24 LT	553139.39	87672.47	9'
22	107+22.32 NB	40.77 LT	553531.21	87873.50	6'
23	107+18.95 NB	8.19 LT	553512.20	87900.16	5'
24	107+89.66 NB	29.22 LT	553584.08	87916.77	17.5'
25	102+10.93 NB	28.41 LT	553080.34	87631.86	8.5'

2

VANDERPERREN ROAD
CTH HH
FRONTAGE ROAD
106+76.8NB
171.3' LT
106+72.1NB
129.0' LT
CONCRETE CURB AND GUTTER
30-INCH TYPE D
2" ASPHALTIC SURFACE
4 LT 58-28S
STH 32
ASHLAND AVENUE
241'
150' TAPER
102+00SB
103+00SB
103+09.8SB
8.3' LT
104+00SB
105+00SB
106+00SB
107+00SB
108+00SB
109+00SB
DRILLED TIE
BARS
SAW
CUT
DRILLED TIE
BARS
R8.5'
R9'
12'
50' R
R50'
6'
22'
R6'
17.5' R
3'
4'
5'
102+00NB
103+00NB
104+00NB
105+00NB
106+00NB
107+00NB
108+00NB
109+00NB
REMOVE EXISTING
INLET
REMOVE EXISTING CURB AND GUTTER
103+10.0NB
12.4' RT
CONCRETE CURB AND GUTTER
6-INCH SLOPED
36-INCH TYPE D
CONCRETE SLOPE
NOSE TYPE 1
164' R
107.5' R
R5'
6 ¼ " HMA PAVEMENT
2¼" LOWER LAYER 3 MT 58-28S
2¼" LOWER LAYER 3 MT 58-28S
1¾" UPPER LAYER 4 MT 58-28H
CONCRETE SLOPE NOSE TYPE 1
CONCRETE CURB AND GUTTER
6-INCH SLOPED
36-INCH TYPE D
CANADIAN NATIONAL

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	102+80.20 NB	13.91 LT	102+80.19 SB	35.75 RT	553133.42	87678.66	607.40
2	103+01.82 NB	8.58 LT	103+01.80 SB	41.08 RT	553149.59	87693.97	607.52
3	103+37.58 NB	5.95 LT	103+37.57 SB	43.71 RT	553179.41	87713.90	607.63
4	106+77.60 NB	21.61 LT	106+77.59 SB	28.09 RT	553482.86	87868.09	608.00
5	107+25.29 NB	35.55 LT	107+25.28 SB	14.15 RT	553531.21	87879.50	608.23
6	107+22.32 NB	46.77 LT	107+22.31 SB	2.94 RT	553534.16	87868.28	608.58
7	107+00.52 NB	46.67 LT	107+00.51 SB	3.04 RT	553515.16	87857.61	608.46
8	105+53.51 NB	37.93 LT	105+53.49 SB	11.76 RT	553382.98	87792.65	607.98
9	103+09.94 NB	37.69 LT	103+09.93 SB	11.98 RT	553171.02	87672.66	607.45
10	102+79.68 NB	30.42 LT	102+79.67 SB	19.24 RT	553141.12	87664.04	607.30

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
11	107+14.45 NB	8.18 LT	107+14.44 SB	41.52 RT	553508.28	87897.95	608.42
12	107+18.95 NB	3.69 LT	107+18.94 SB	46.01 RT	553509.98	87904.08	608.35
13	108+63.05 NB	3.80 LT	108+63.04 SB	45.92 RT	553635.36	87975.10	608.85
14	108+62.97 NB	47.10 LT	108+62.96 SB	2.62 RT	553656.66	87937.40	608.70
15	107+89.57 NB	46.72 LT	107+89.56 SB	2.99 RT	553592.64	87901.51	608.80
16	107+57.92 NB	28.82 LT	107+57.91 SB	20.89 RT	553556.27	87901.46	608.50
17	107+17.82 NB	12.55 LT	107+17.81 SB	37.15 RT	553513.37	87895.82	608.35

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAIL	SHEET 12	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\020501_PD.DWG
LAYOUT NAME - 020501_PD
PLOT DATE : 4/29/2016 9:31 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

STH 32

ASHLAND AVENUE

PILGRIM WAY

REMOVE EXISTING CURB AND GUTTER

DRILLED TIE BARS

119+00SB

120+00SB

121+00SB

CONCRETE NOSE TYPE 1

R5'

SAW CUT EXISTING ASPHALT ISLAND

ADJUST INLET

36" TYPE D CURB AND GUTTER

SAW CUT ASPHALT FOR CURB AND GUTTER REMOVAL

2" ASPHALTIC SURFACE
4 LT 58-28S

119+00NB

120+00NB

121+00NB

STH 32

ASHLAND AVENUE

PILGRIM WAY

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	119+03.72 NB	25.74 LT	554551.30	88469.61	607.49
2	119+49.53 NB	29.48 LT	554592.98	88488.97	606.79
3	119+89.81 NB	32.85 LT	554629.68	88505.91	606.25
4	120+05.28 NB	39.64 LT	554646.49	88507.64	606.62
5	119+97.41 NB	44.27 LT	554641.93	88499.73	606.90

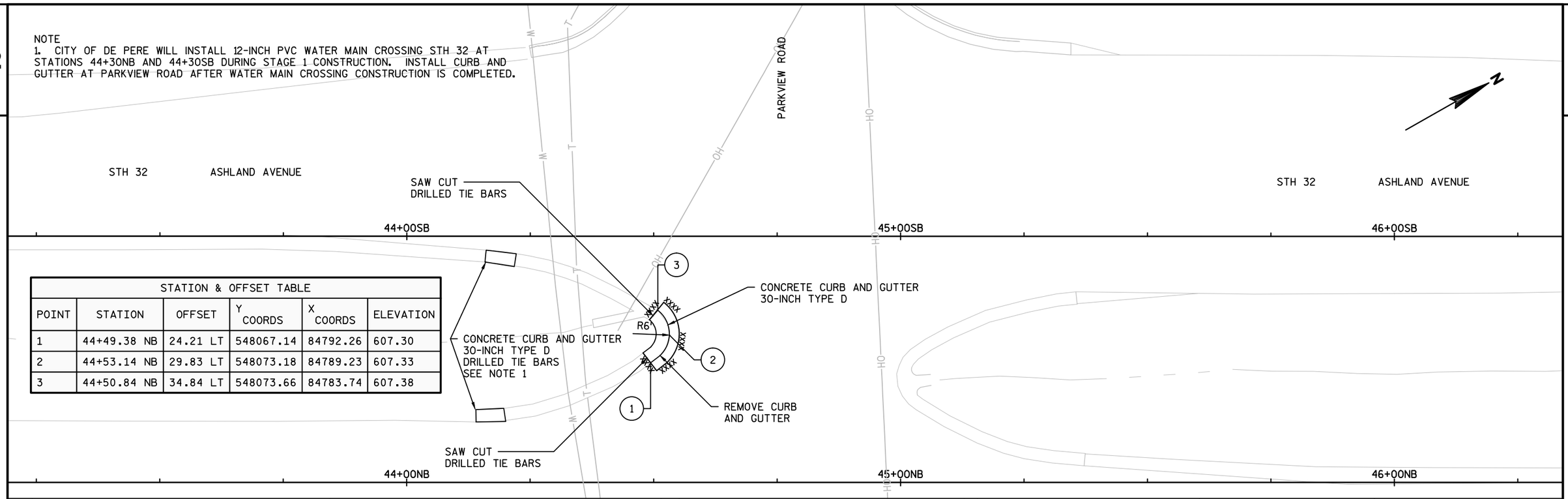
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PILGRIM WAY INTERSECTION DETAILS	SHEET 13	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\020502_PD.DWG
LAYOUT NAME - 020502_PD

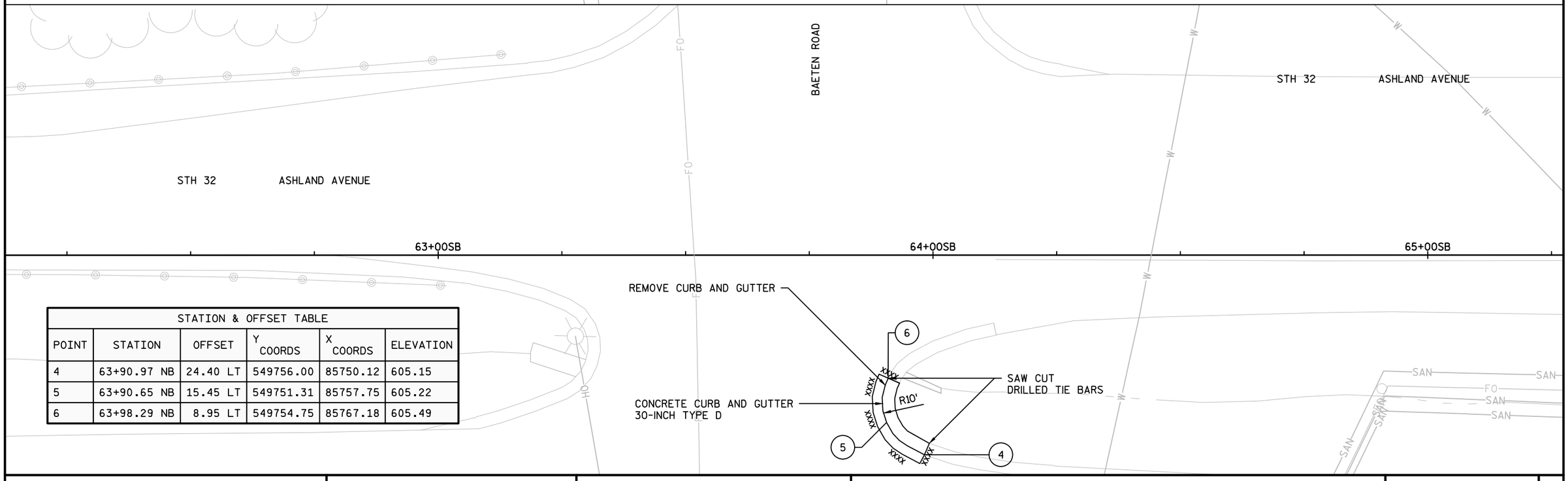
PLOT DATE : 4/29/2016 10:02 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

NOTE
1. CITY OF DE PERE WILL INSTALL 12-INCH PVC WATER MAIN CROSSING STH 32 AT STATIONS 44+30NB AND 44+30SB DURING STAGE 1 CONSTRUCTION. INSTALL CURB AND GUTTER AT PARKVIEW ROAD AFTER WATER MAIN CROSSING CONSTRUCTION IS COMPLETED.



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	44+49.38 NB	24.21 LT	548067.14	84792.26	607.30
2	44+53.14 NB	29.83 LT	548073.18	84789.23	607.33
3	44+50.84 NB	34.84 LT	548073.66	84783.74	607.38



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
4	63+90.97 NB	24.40 LT	549756.00	85750.12	605.15
5	63+90.65 NB	15.45 LT	549751.31	85757.75	605.22
6	63+98.29 NB	8.95 LT	549754.75	85767.18	605.49

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PARKVIEW ROAD/BAETEN ROAD CURB AND GUTTER REPLACEMENT	SHEET 14	E

2

PILGRIM WAY

STH 32 ASHLAND AVENUE

120+00SB 121+00SB 122+00SB 123+00SB

3
2
1
4

DETECTABLE WARNING FIELD

CONCRETE CURB PEDESTRIAN

6" CONCRETE SIDEWALK

CONCRETE CURB PEDESTRIAN

120+00NB 121+00NB 122+00NB 123+00NB

STH 32 ASHLAND AVENUE

POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	121+17.83 NB	29.22 LT	121+17.82 SB	20.63 RT	554739.23	88572.25	605.16
2	121+16.60 NB	45.87 LT	121+16.59 SB	3.98 RT	554746.37	88557.16	605.52
3	121+22.61 NB	45.86 LT	121+22.60 SB	3.99 RT	554751.60	88560.13	605.44
4	121+23.80 NB	29.78 LT	121+23.79 SB	20.07 RT	554744.70	88574.71	605.08

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PILGRIM WAY CROSSWALK DETAILS	SHEET 15	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\021101_ID.DWG
LAYOUT NAME - 021101_ID

PLOT DATE : 5/10/2016 10:50 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

BEGIN TAPER
STA 77+36.16SB

10:1 TAPER

10:1 TAPER

BEGIN TAPER
STA 78+44.48SB

END RAILROAD CROSSING CONSTRUCTION
SEE RAILROAD CROSSING DETAIL
STA 78+77.45SB

604.25
604.49
604.25
604.54
604.56
604.58
604.48
604.50
604.52
604.33
604.57
604.33

77SB+00
78SB+00
79SB+00
80SB+00

BEGIN TAPER
STA 77+52.65SB

10:1 TAPER

10:1 TAPER

BEGIN TAPER
STA 78+77.45SB

BEGIN RAILROAD CROSSING CONSTRUCTION
SEE RAILROAD CROSSING DETAIL
STA 77+25.00SB

STA 78+15NB
27' LT

SMOOTH STEEL PIPE 18-INCH
STA 78+57NB
27' LT

BEGIN TAPER
STA 78+20.78NB

10:1 TAPER

10:1 TAPER

BEGIN TAPER
STA 78+97.48NB

PIPE UNDERDRAIN RAILROAD 6-INCH (TYP)

77NB+00
78NB+00
79NB+00
80NB+00

604.25
604.49
604.25
604.62
604.64
604.66
604.56
604.58
604.60
604.18
604.42
604.18

END RAILROAD CROSSING CONSTRUCTION
SEE RAILROAD CROSSING DETAIL
STA 79+50.00NB

10:1 TAPER

10:1 TAPER

BEGIN TAPER
STA 78+56.85NB

BEGIN RAILROAD CROSSING CONSTRUCTION
SEE RAILROAD CROSSING DETAIL
STA 78+00.00NB

BEGIN TAPER
STA 79+31.43NB

RAILROAD CROSSING NOTES
1. GRADE PIPE UNDERDRAIN TO DRAIN TO MEDIAN DITCH FOR NORTHBOUND LANES AND TO WEST DITCH FOR SOUTHBOUND LANES.

2. FIELD VERIFY GRADE OF RAILROAD CROSSING. GRADE ASPHALT APPROACH TO MATCH GRADE OF RAILROAD CROSSING.

EXISTING R/W

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	RAILROAD CROSSING DETAIL	SHEET 16	E

2

NEW GATE
WORK BY OTHERS

CANTILEVER
WORK BY OTHERS

5.0

4.2

26.30'

24-INCH STOP BAR

8.0

STH 32 ASHLAND AVENUE

77+00SB 78+00SB 79+00SB 80

22.29'

4.3

15.0

GATE & LIGHT STANDARD
WORK BY OTHERS

RAIL

77+00NB 78+00NB 79+00NB 80

15.0

4.3

20.90'

8.0

STH 32 ASHLAND AVENUE

24-INCH STOP BAR

35°R

℄ OF TRACKS

26.12'

CANTILEVER
WORK BY OTHERS

5.0

4.2

FOOTING (TYP)
WORK BY OTHERS

NEW GATE
WORK BY OTHERS

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	RAILROAD CROSSING LAYOUT	SHEET 17	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\021102_ID.DWG
LAYOUT NAME - 021102_ID

PLOT DATE : 5/24/2016 4:20 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

REMOVE SECTION OF TREE
IN EXISTING R/W
WORK BY OTHERS

N

EXISTING R/W

NEW GATE WITH FRONT LIGHTS AND BACK LIGHTS
WORK BY OTHERS

EXISTING R/W

FULL TIMBER CROSSING IN GOOD CONDITION

4' 3"

15.0

18.85'

ASHLAND AVENUE FRONTAGE ROAD

ASHLAND AVENUE FRONTAGE ROAD

19.20'

15.0

℄ OF TRACKS

4' 3"

NEW GATE WITH FRONT LIGHTS AND BACK LIGHTS
WORK BY OTHERS

5.0

STH 32 ASHLAND AVENUE

77+00SB

78+00SB

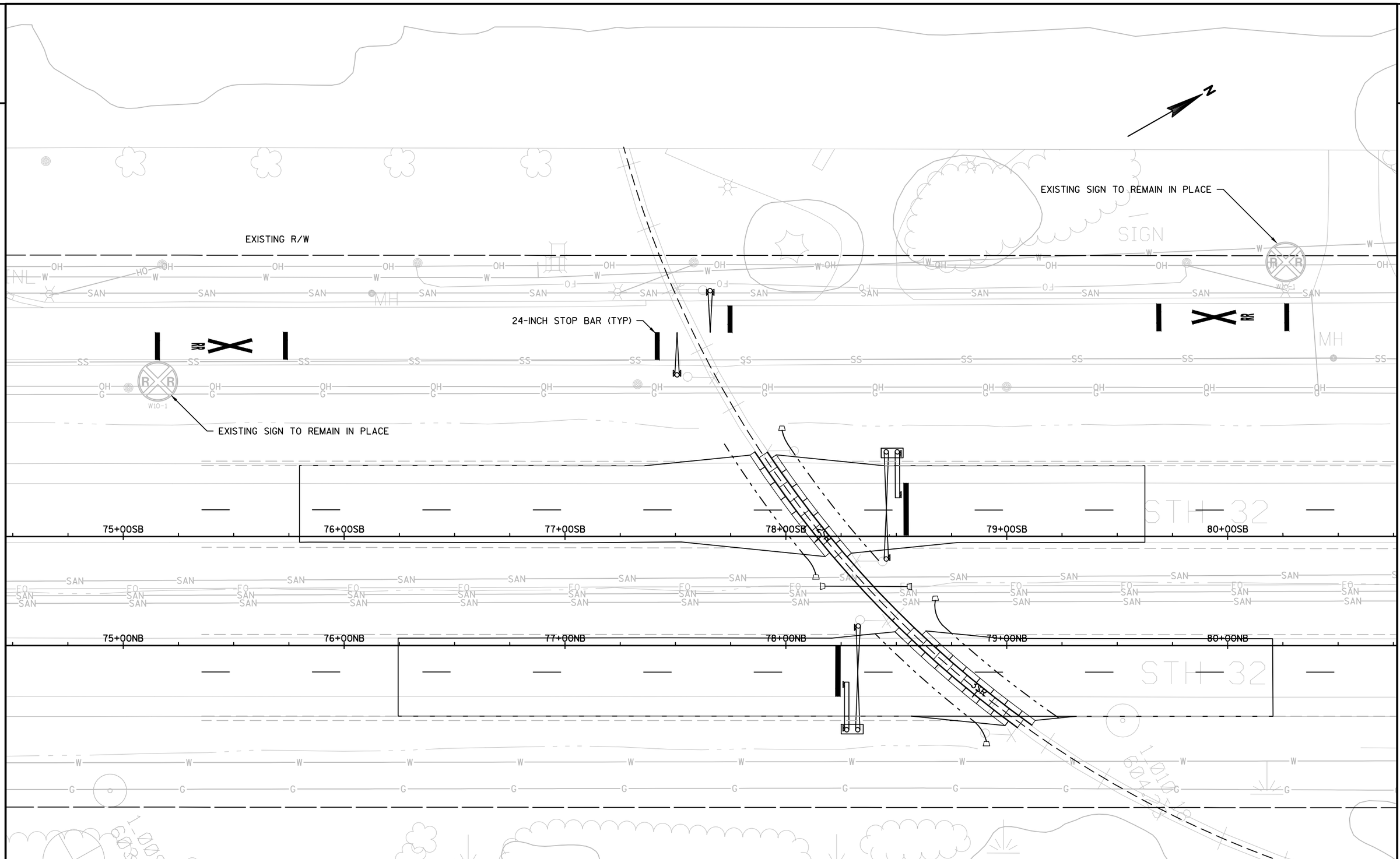
79+00SB

23R

4' 3"

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	ACCESS ROAD RAILROAD CROSSING LAYOUT	SHEET 18	E

2

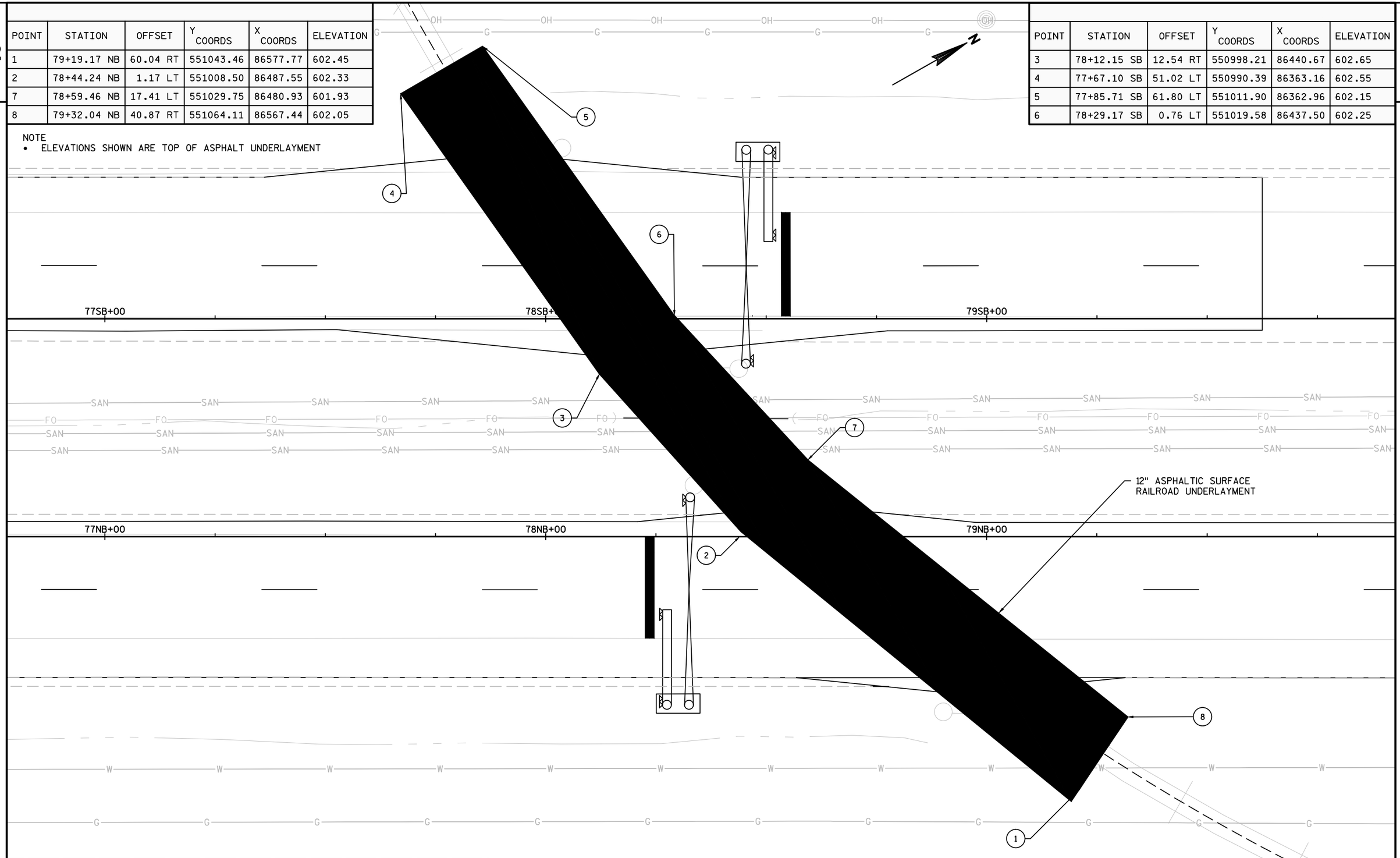


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	ACCESS ROAD RAILROAD CROSSING LAYOUT	SHEET 19	E

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	79+19.17 NB	60.04 RT	551043.46	86577.77	602.45
2	78+44.24 NB	1.17 LT	551008.50	86487.55	602.33
7	78+59.46 NB	17.41 LT	551029.75	86480.93	601.93
8	79+32.04 NB	40.87 RT	551064.11	86567.44	602.05

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
3	78+12.15 SB	12.54 RT	550998.21	86440.67	602.65
4	77+67.10 SB	51.02 LT	550990.39	86363.16	602.55
5	77+85.71 SB	61.80 LT	551011.90	86362.96	602.15
6	78+29.17 SB	0.76 LT	551019.58	86437.50	602.25

NOTE
- ELEVATIONS SHOWN ARE TOP OF ASPHALT UNDERLAYMENT



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	RAILROAD UNDERLAYMENT DETAIL	SHEET 20	E

2

BP: 28+50.23NB

BP: 30+00.00SB

STH 32 SB R/L

32SB 34SB 36SB STH 32 38SB 40SB 42SB

30NB 32NB 34NB 36NB STH 32 38NB 40NB 42NB

BEGIN PROJECT
STA 29+00.00NB

STH 32 NB R/L

CANADIAN NATIONAL

FT HOWARD AVENUE

PARKVIEW ROAD

STH 32 SB R/L

42SB 44SB 46SB 48SB STH 32 50SB 52SB 54SB 56SB

42NB 44NB 46NB 48NB 50NB 52NB 54NB

STH 32

STH 32 NB R/L

CTH H

CANADIAN NATIONAL

CANADIAN NATIONAL

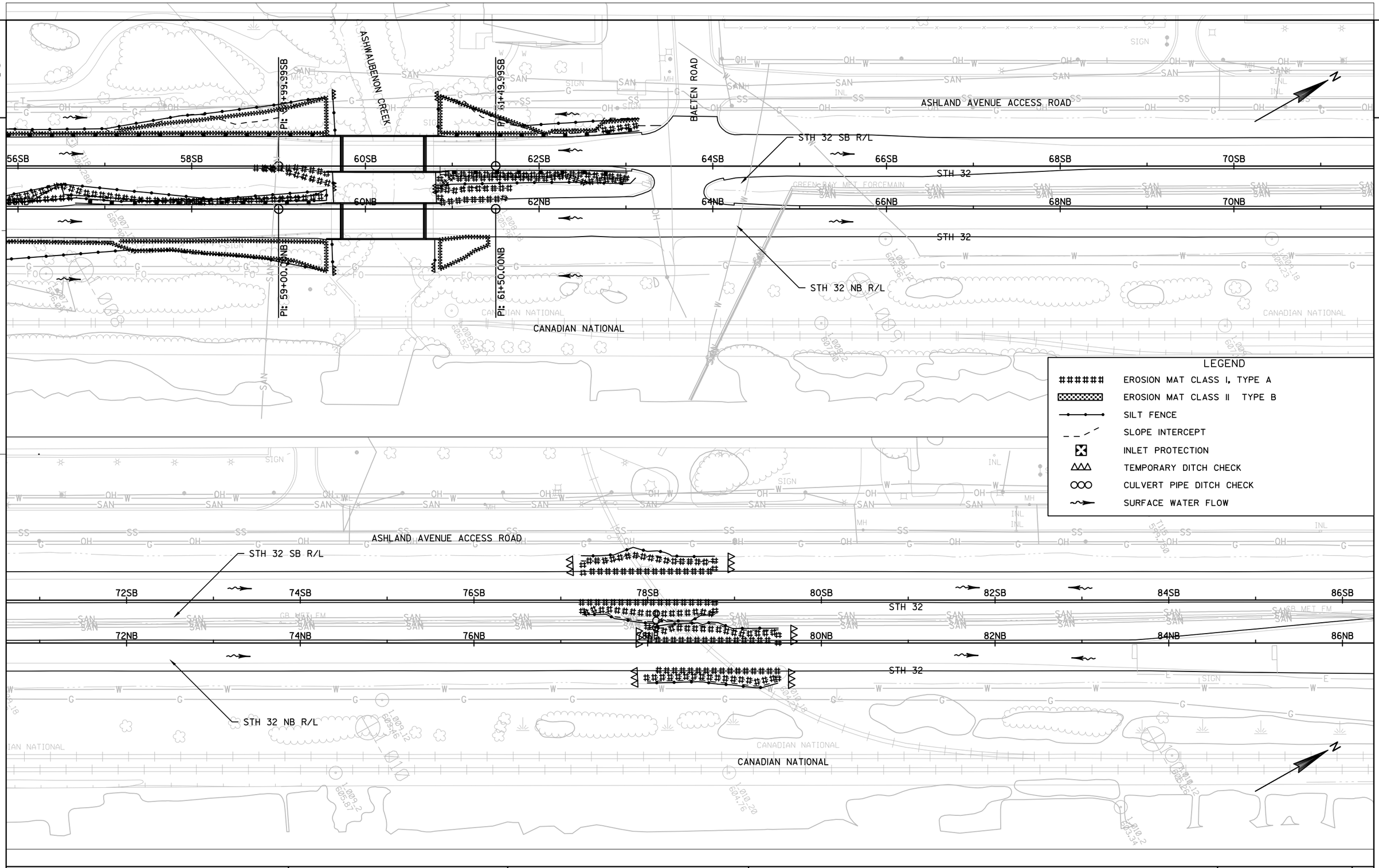
LEGEND

- ###### EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

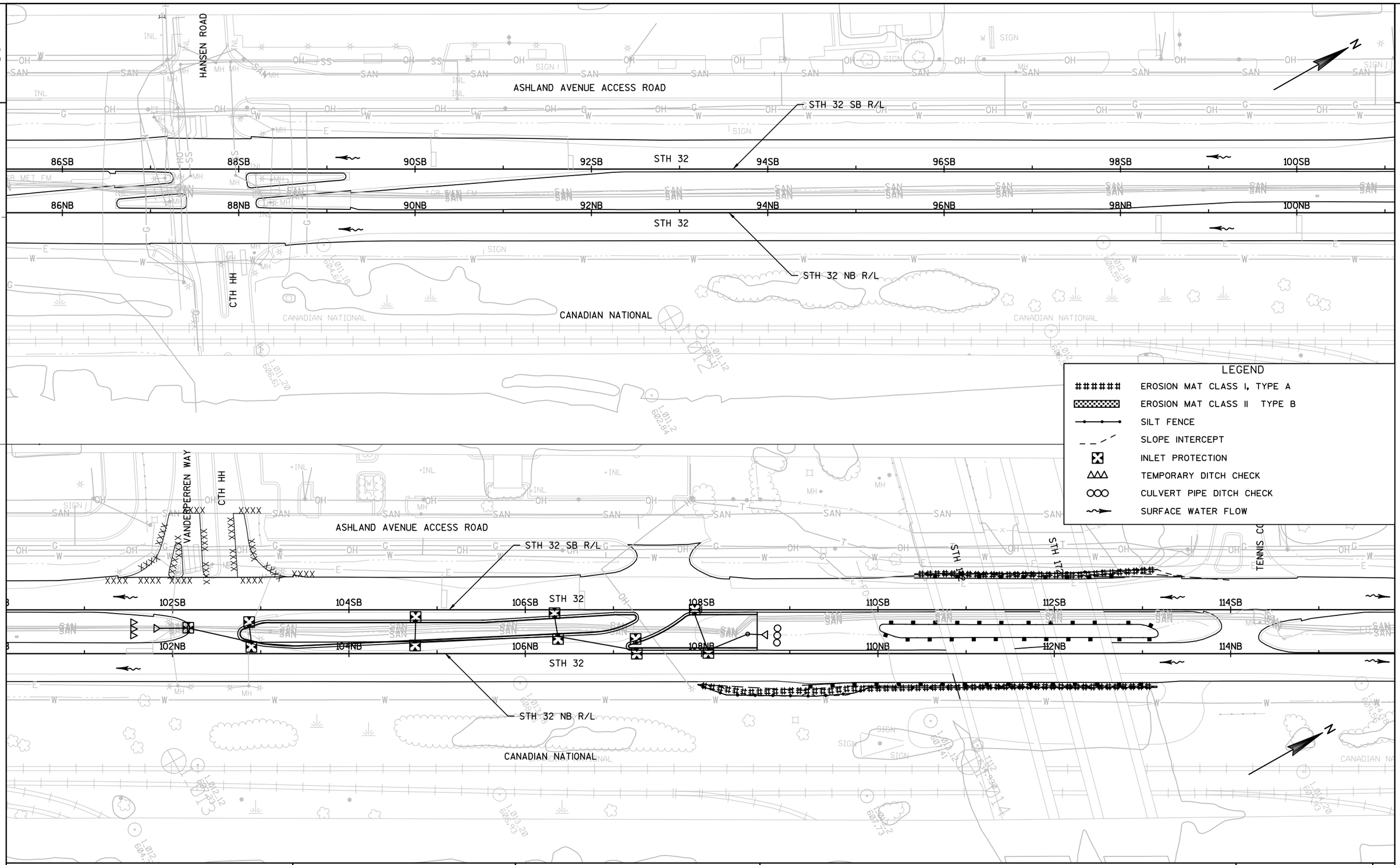
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/7/2016 9:53 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : _____ PLOT SCALE : **********

2



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET 22	E

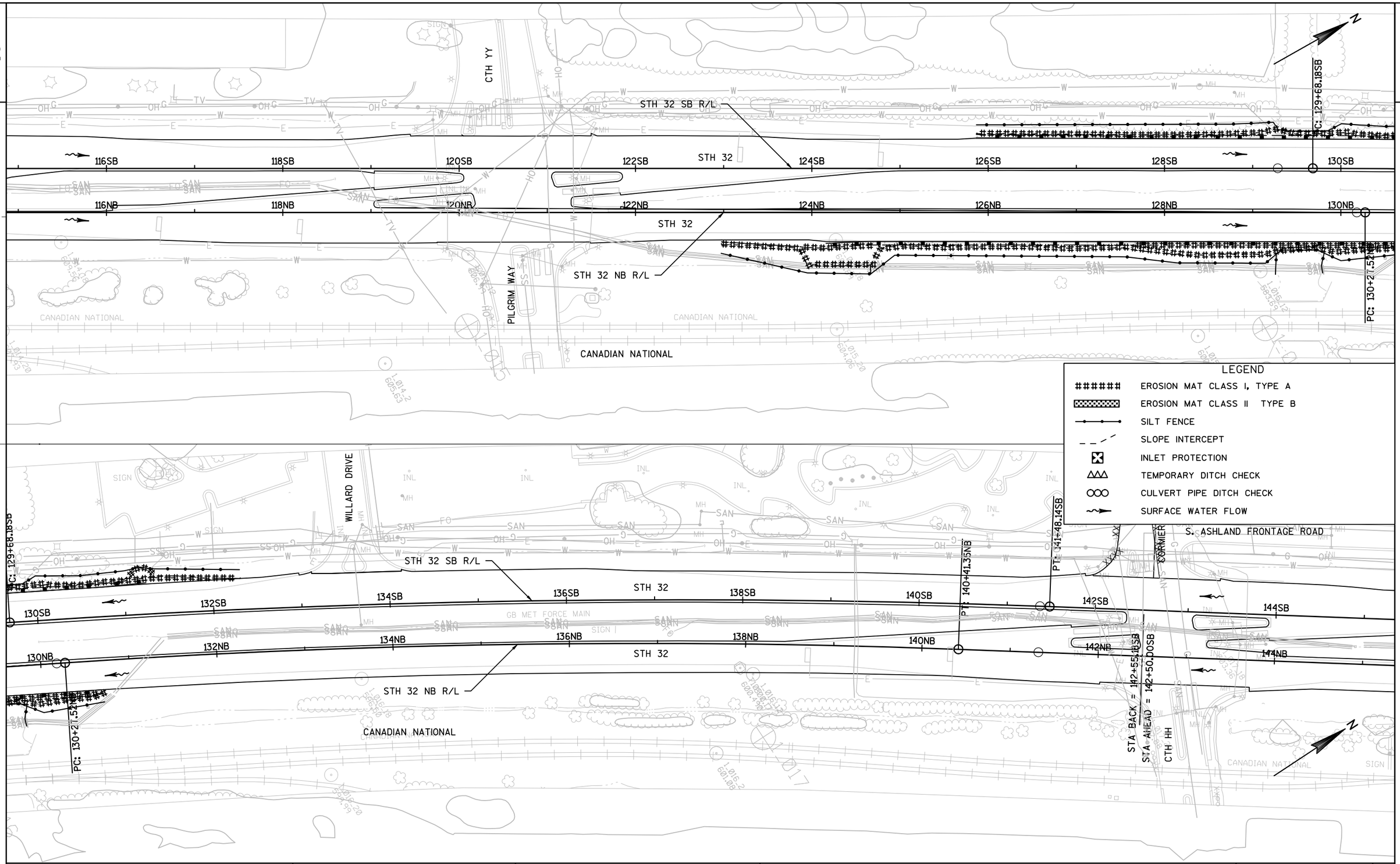


2

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/7/2016 9:53 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



LEGEND

- ###### EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET 24	E

2

S. ASHLAND FRONTAGE ROAD

STH 32 SB R/L

146SB 148SB 150SB 152SB STH 32 154SB 156SB 158SB 160SB

GB MET FORCE MAIN

146NB 148NB 150NB 152NB 154NB 156NB 158NB 160NB

STH 32

STH 32 NB R/L

CANADIAN NATIONAL

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

S. ASHLAND FRONTAGE ROAD

STH 32 SB R/L

160SB 162SB 164SB 166SB STH 32 168SB 170SB 172SB 174SB

GB MET FORCE MAIN

160NB 162NB 164NB 166NB 168NB 170NB 172NB 174NB

STH 32

STH 32 NB R/L

CANADIAN NATIONAL

CANADIAN NATIONAL

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/7/2016 9:54 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********

2

S. ASHLAND FRONTAGE ROAD

POTTS AVENUE

POTTS AVENUE

STH 32 SB R/L

STH 32 NB R/L

STH 32

174SB 176SB 178SB 180SB 182SB 184SB 186SB 188SB

174NB 176NB 178NB 180NB 182NB 184NB 186NB 188NB

CANADIAN NATIONAL

GBMET FORCE MAIN

RIPRAP

INL

SIGN

CTH VK

FILLER CAPS

CANOPY

VACUUM

LOMBARDI AVENUE

END PROJECT
STA 195+80.00

EP: 198+79.02NB

EP: 198+7

186SB 188SB 190SB 192SB 194SB 196SB 198SB

186NB 188NB 190NB 192NB 194NB 196NB 198NB

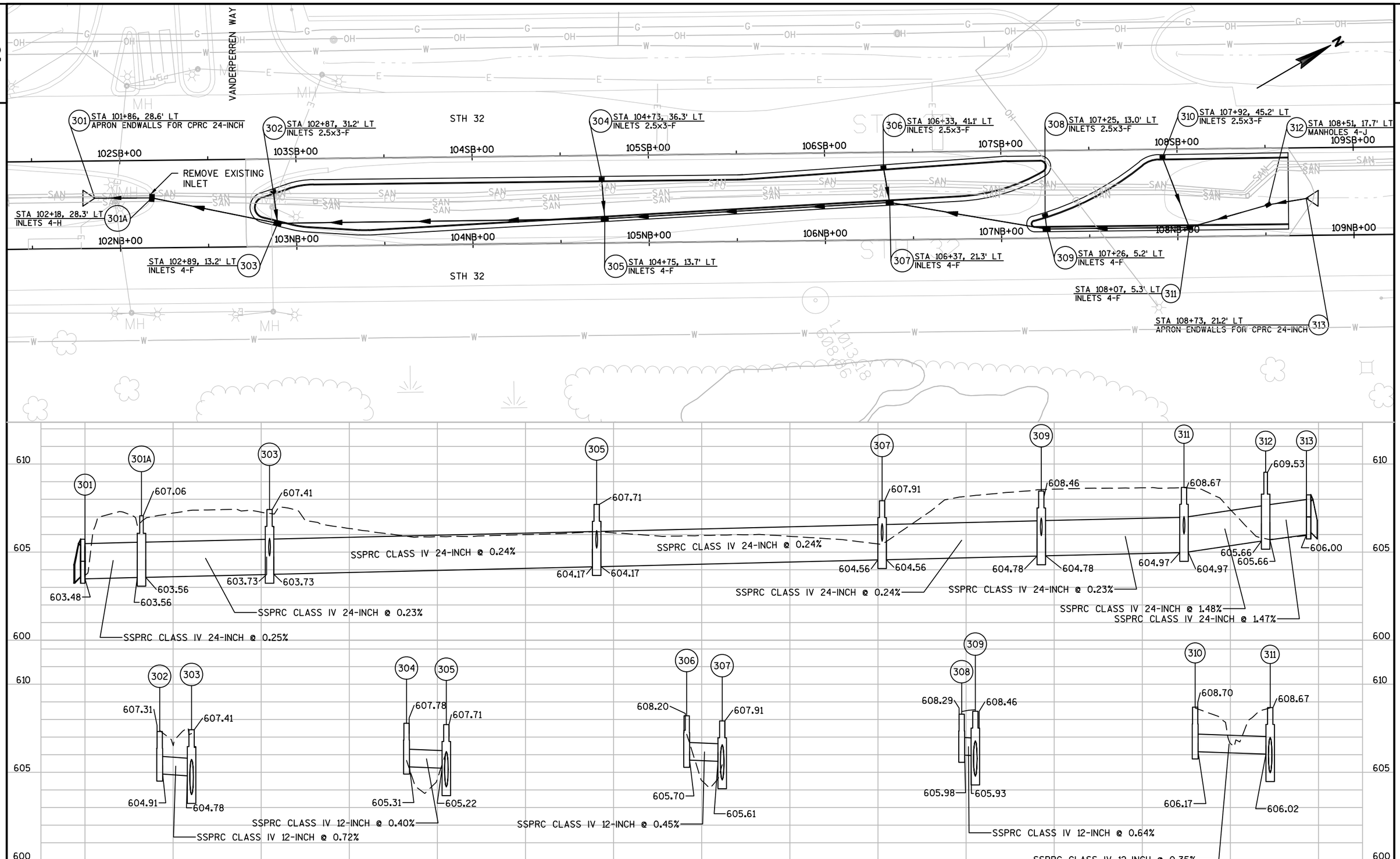
LEGEND

- ###### EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS II TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022001_EC.DWG PLOT DATE : 10/7/2016 9:54 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 42

2



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	STORM SEWER	SHEET 27	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022501_SSV2.DWG
LAYOUT NAME - 022501_ST
PLOT DATE : 4/13/2016 11:00 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 41

STH 32 SB ASHLAND AVENUE

77+00SB 78+00SB 79+00SB

42 LF SMOOTH STEEL PIPE 18-INCH

WCL

SAN FO

77+00NB 78+00NB 79+00NB

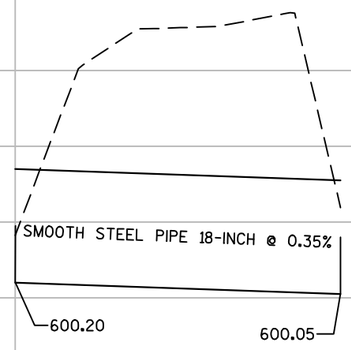
STH 32 NB ASHLAND AVENUE

WCL

605

600

597



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	RAILROAD CROSSING CULVERT PIPE	SHEET 28	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\022502_SS3.DWG
LAYOUT NAME - 022502_ST
PLOT DATE : 5/6/2016 12:38 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 41

2

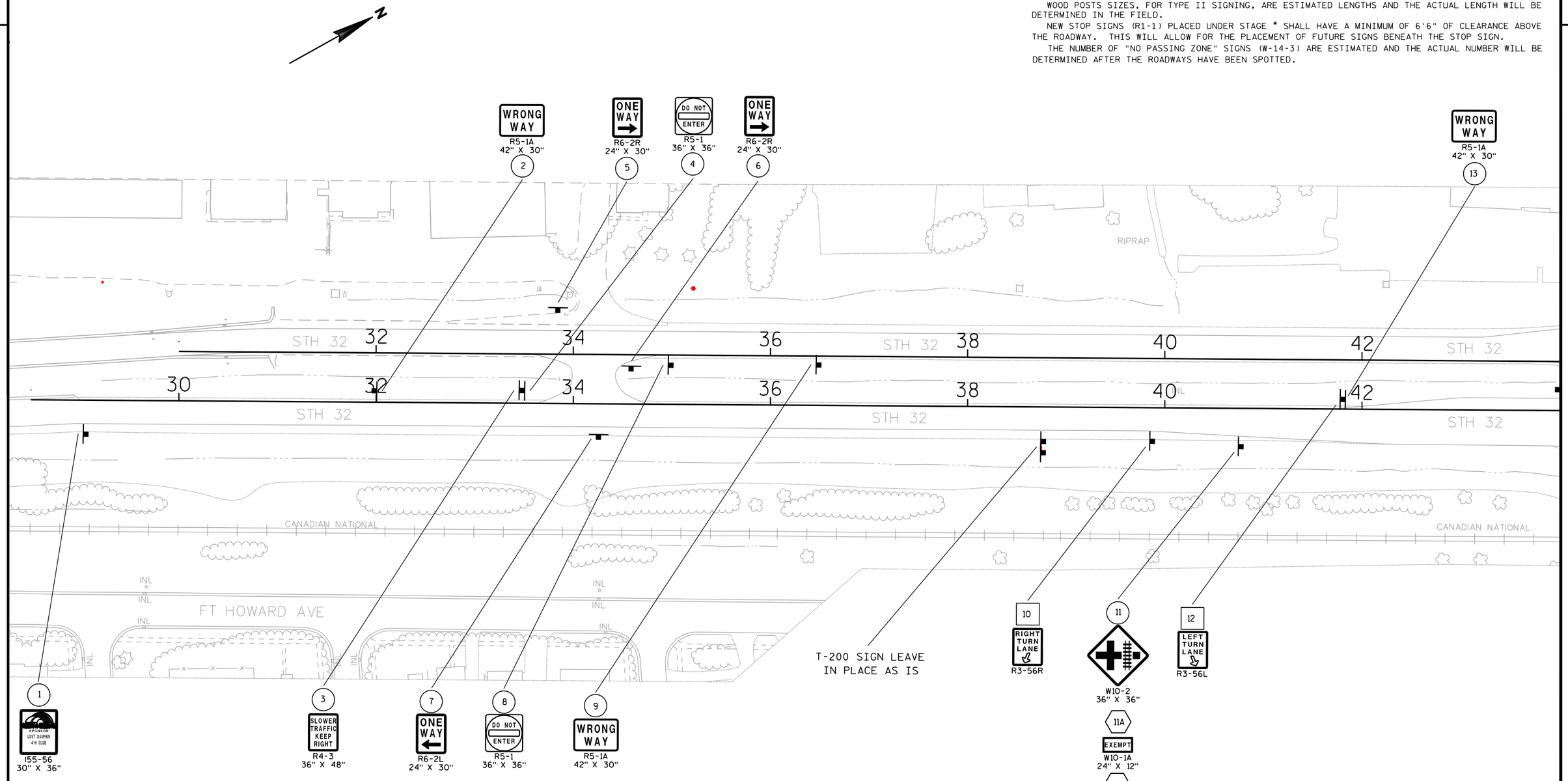
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 29	E

SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.

98PAR PARKVIEW RD

100PAR

102PAR

CTH H

STH 32

CANADIAN NATIONAL

T-200 SIGN LEAVE IN PLACE AS IS

W10-2 36" X 36" (22)
W10-1A 24" X 12" EXEMPT (22A)
W10-9P 30" X 15" NO TRAIN HORN (22B)
(22C)
R6-1R 36" X 12" ONE WAY (22)
R1-1 36" X 36" STOP (23)
R6-3 30" X 24" DIVIDED HIGHWAY (24)
R6-1L 36" X 12" ONE WAY (25)
R5-1 36" X 36" DO NOT ENTER (26)
R3-1 36" X 36" (27)
R4-7 24" X 30" (28)
R5-1 36" X 36" DO NOT ENTER (16)
W10-2 36" X 36" (32)
W10-1A 24" X 12" EXEMPT (32A)
W10-9P 30" X 15" NO TRAIN HORN (32B)
R5-1 36" X 36" DO NOT ENTER (33)
R2-1 36" X 48" SPEED LIMIT 45 (36)

46 48 50 52 54 56 58

(15) R3-1 36" X 36"
(15A) W10-1 36" X 36"
(15B) W10-1A 24" X 12" EXEMPT
(15C) W10-9P 30" X 15" NO TRAIN HORN
(17) R6-1L 36" X 12" ONE WAY
(18) R6-1R 36" X 12" ONE WAY
(19) R1-1 36" X 36" STOP
(20) R6-3 30" X 24" DIVIDED HIGHWAY
(21) R6-2R ONE WAY
(29) R6-2L ONE WAY
(14) R4-7 24" X 30"
(30) R5-1A 42" X 30" WRONG WAY
(31) R2-1 36" X 48" SPEED LIMIT 45
(34) R5-1 36" X 36" DO NOT ENTER
(37) I2-3 84" X 24" Ashwaubenon POPULATION 16,963
REMOVE AND REINSTALL VILLAGE ENGINE BRAKING SIGN
(38) W5-52L 18" X 54"
(39) W5-52R 18" X 54"

○ SIGN-REMOVE AND REPLACE

□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 30	E

2

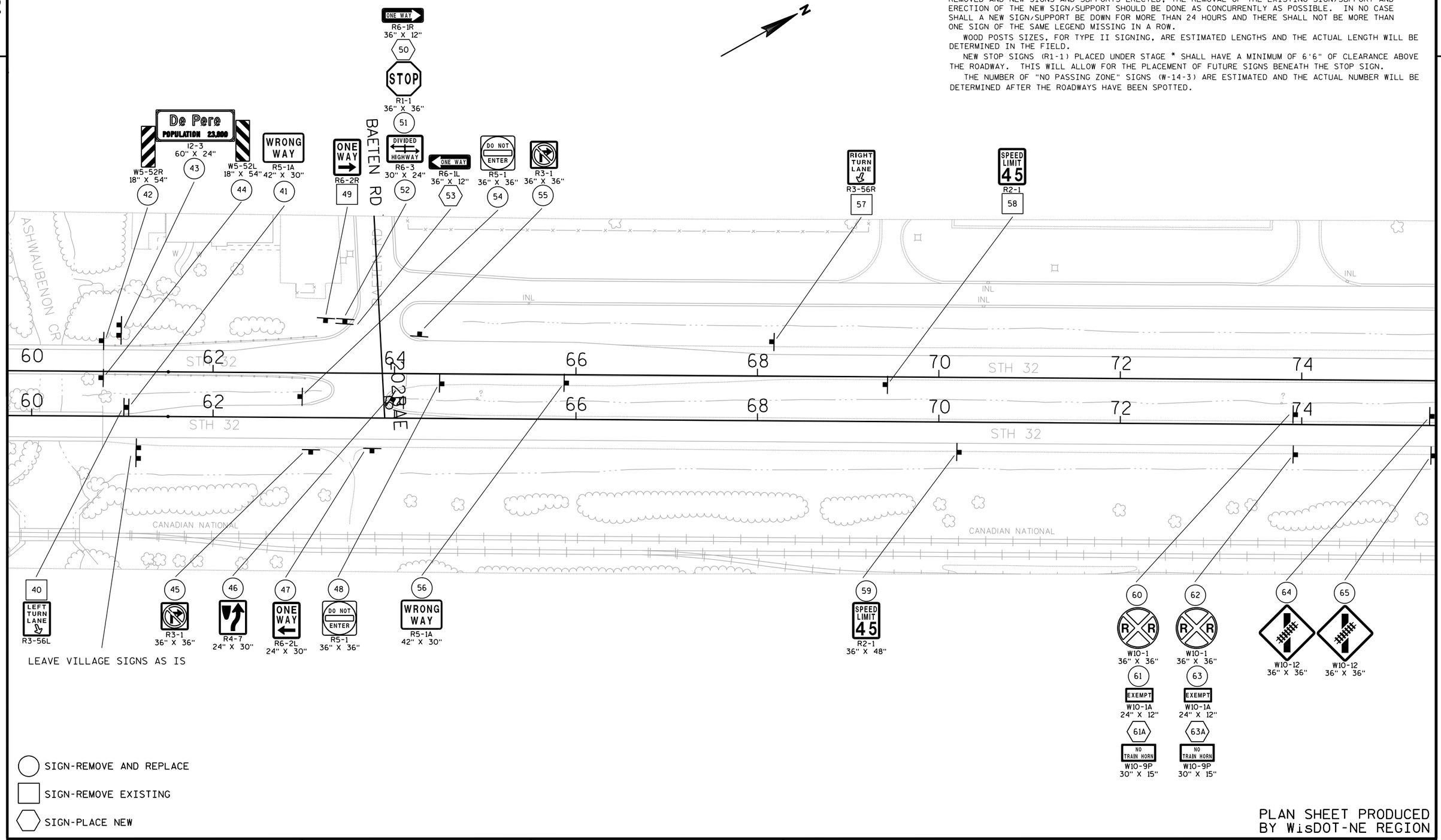
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 31	E

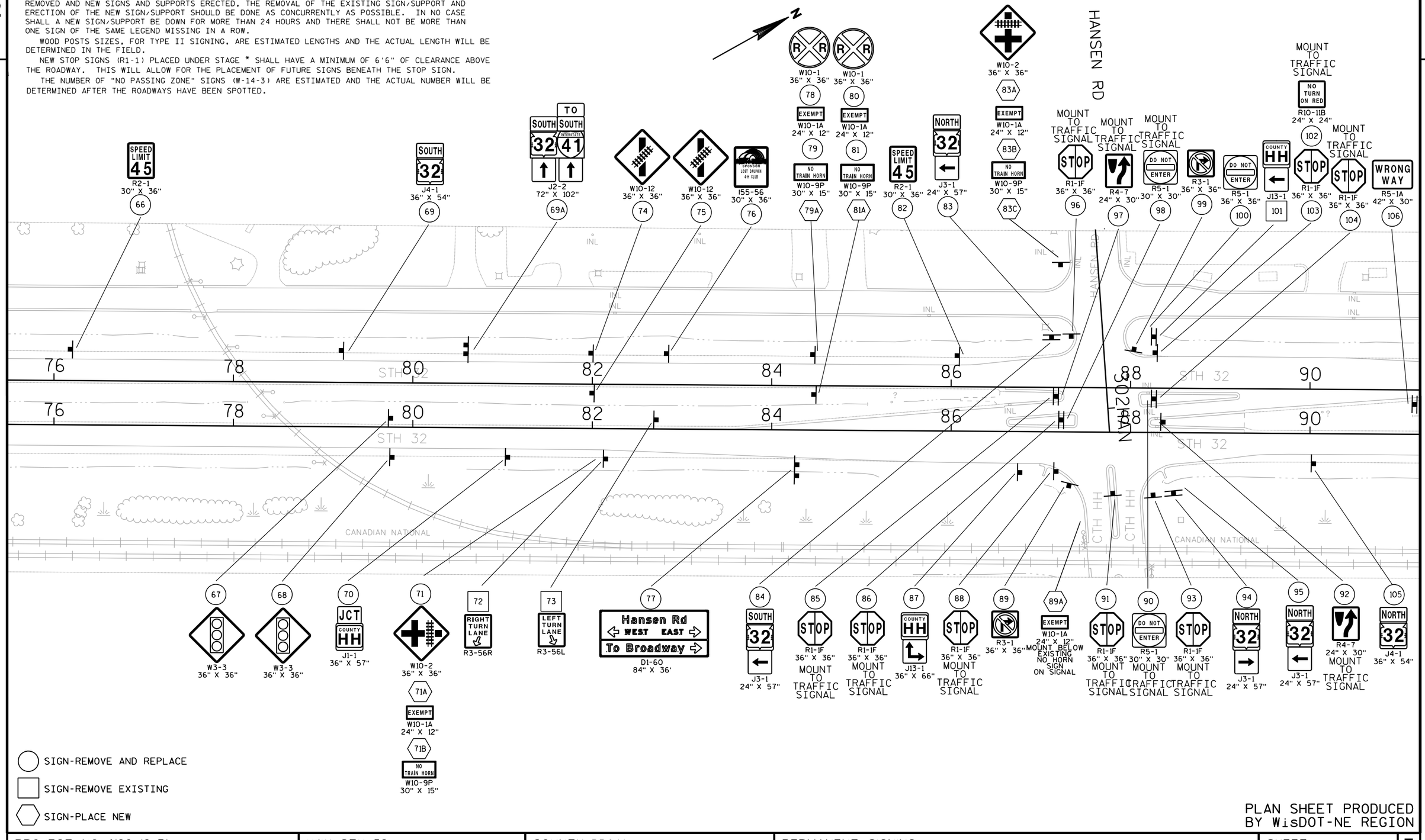
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 32	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\4190-16-71 STH 32 Ashland Ave\023205_ps.dgn PLOT DATE : 20-SEP-2016 15:24 PLOT BY : dotets PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

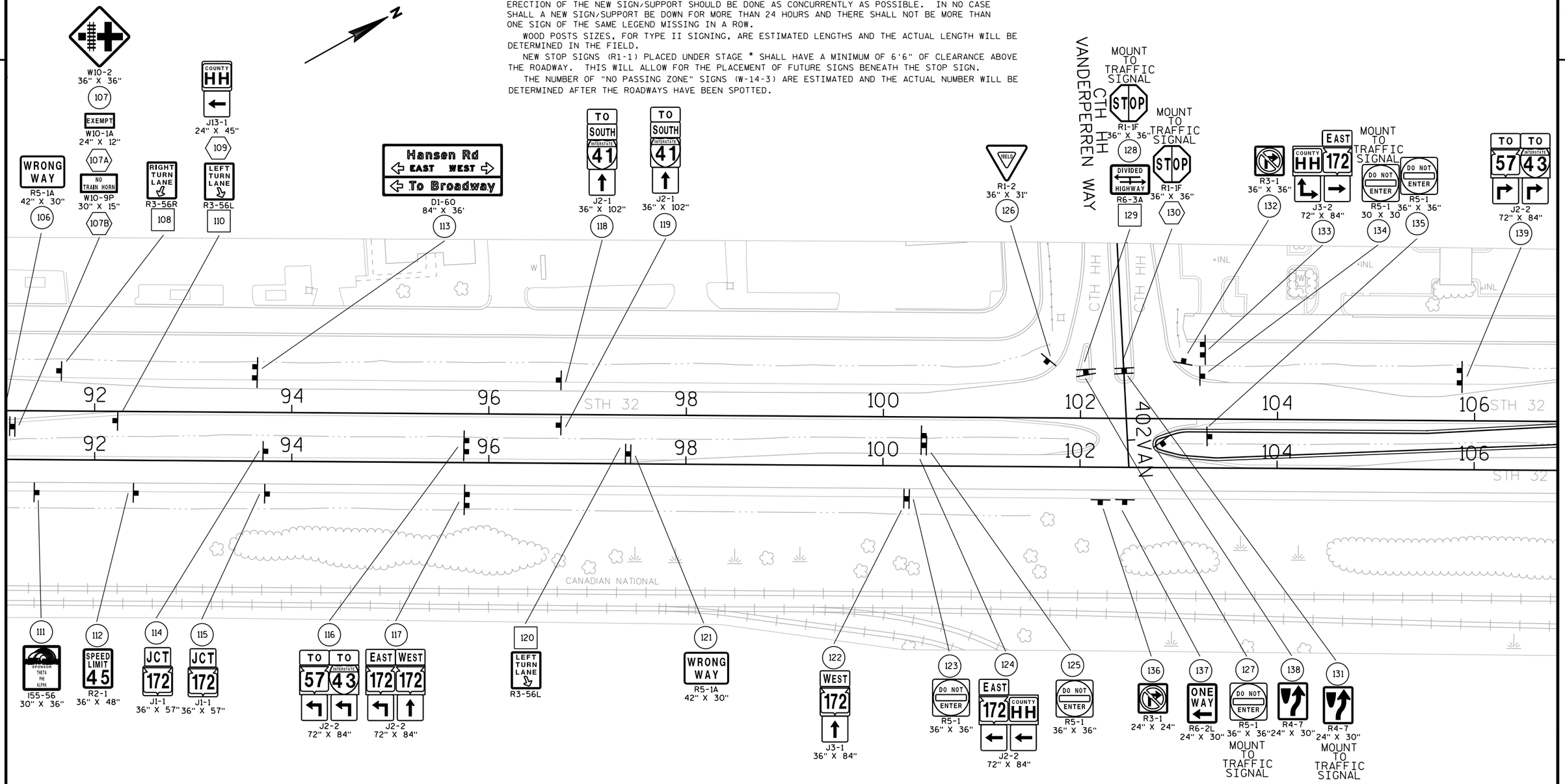
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



SIGN-REMOVE AND REPLACE

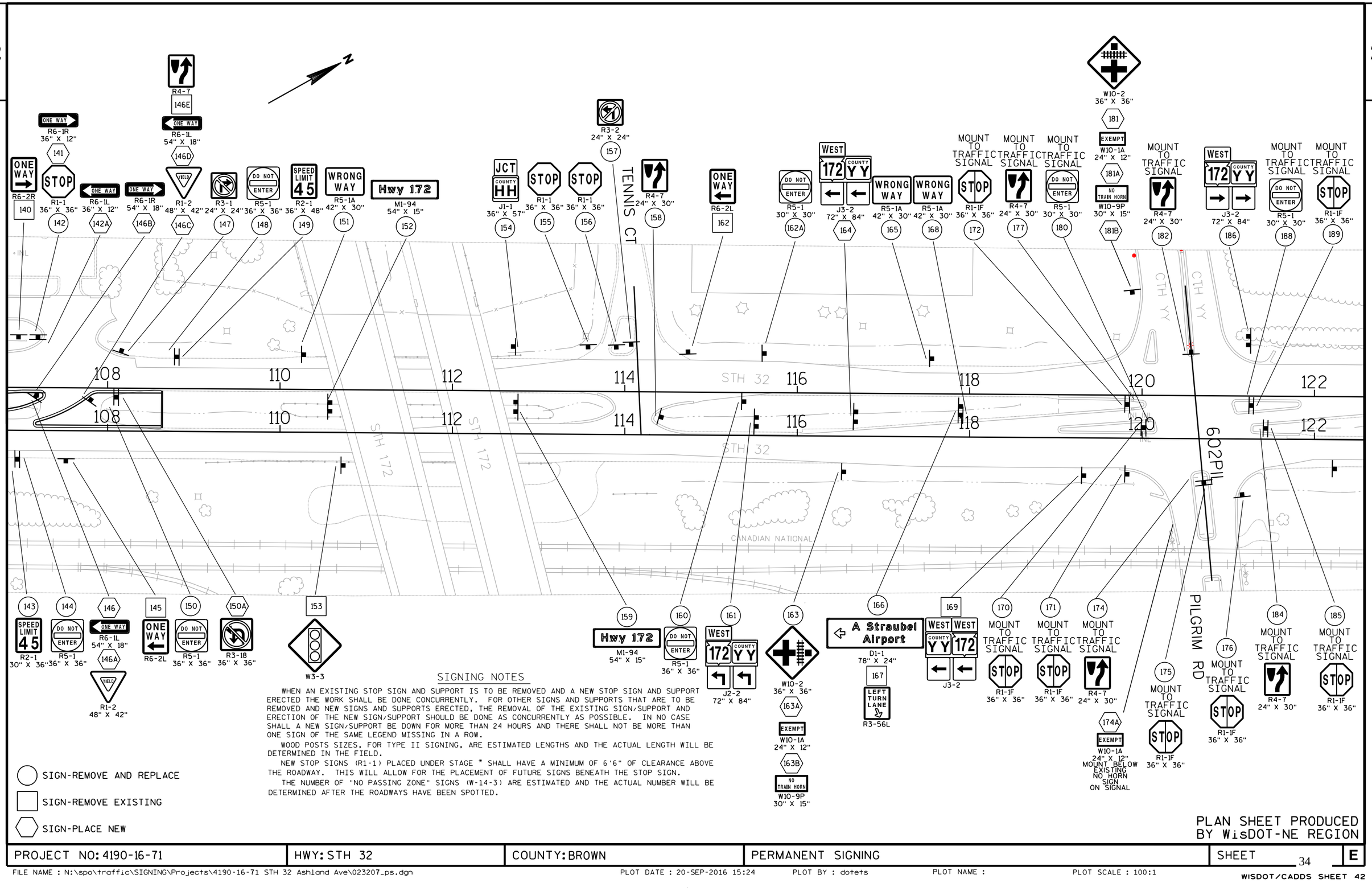
SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 33	E

2



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.

SIGN-REMOVE AND REPLACE

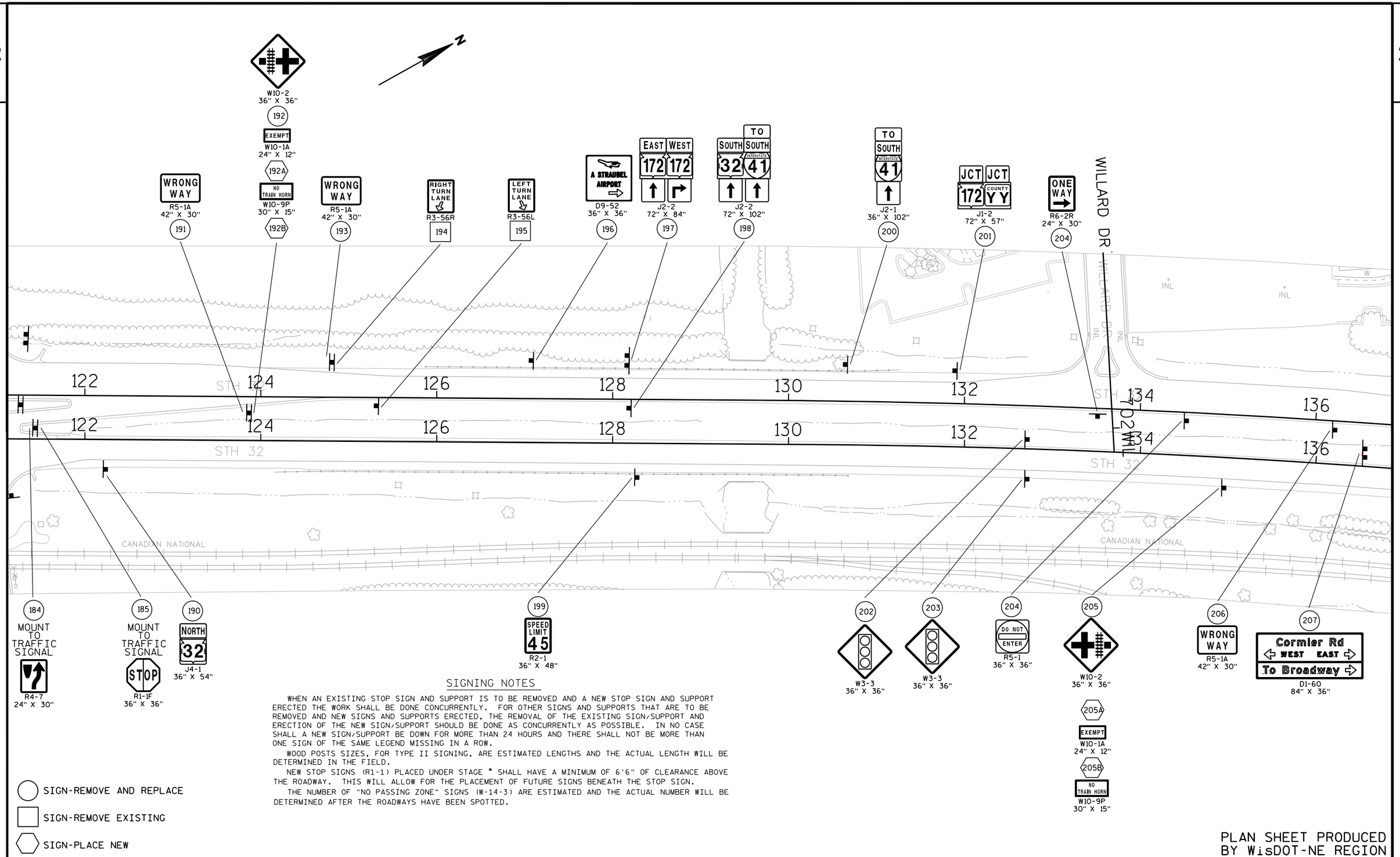
SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 34 E

2



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.

○ SIGN-REMOVE AND REPLACE

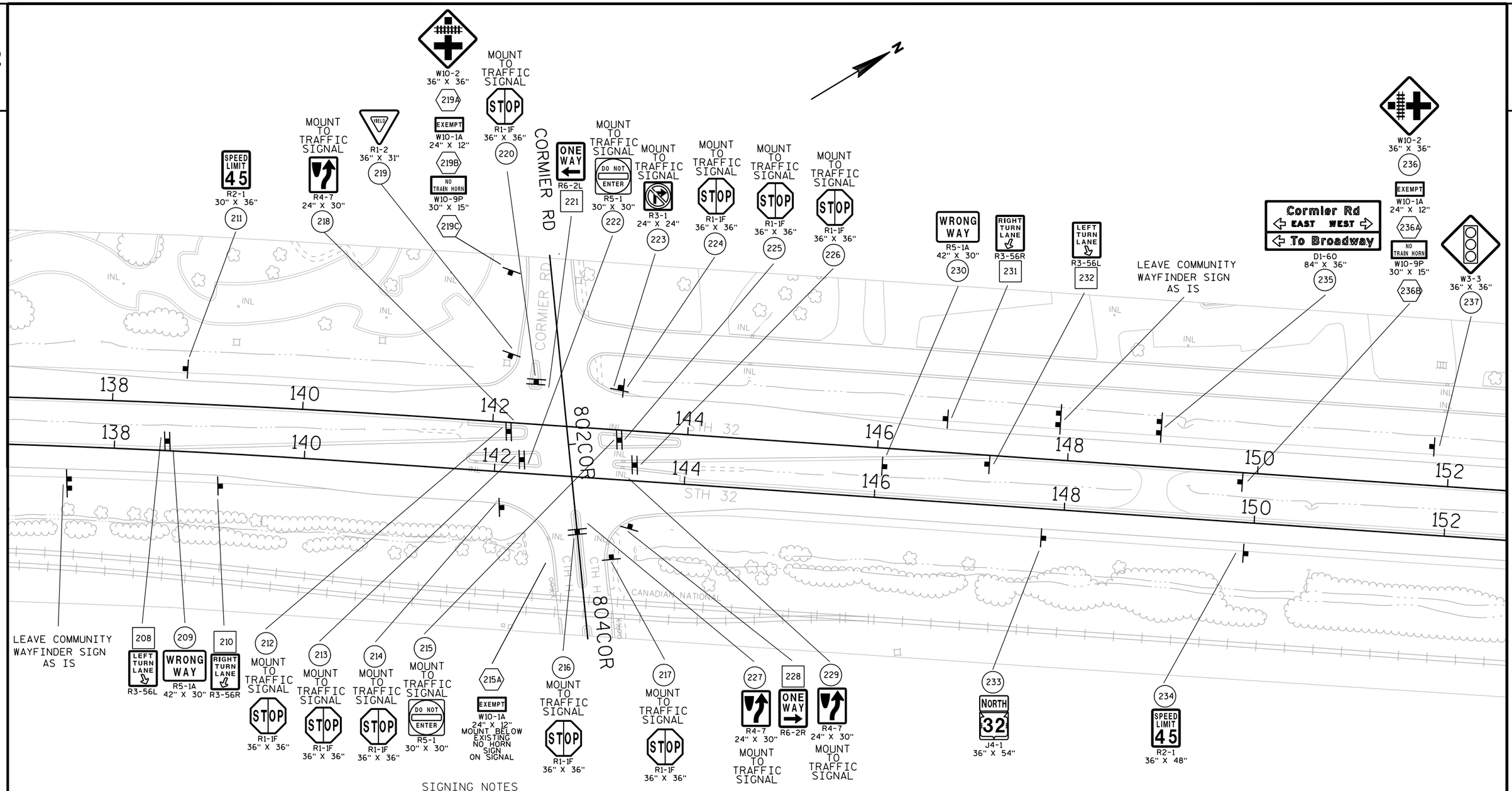
□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 35	E

2



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 36	E

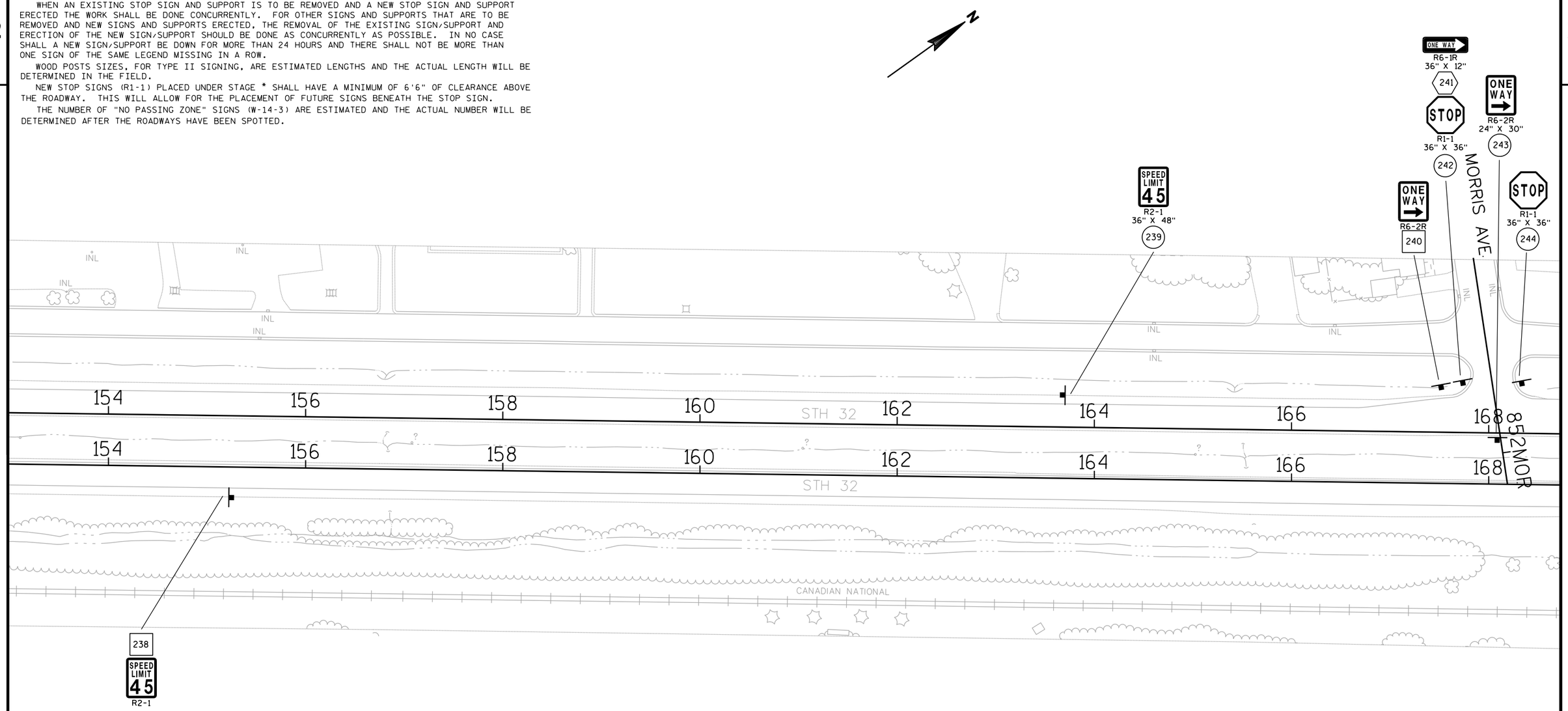
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



SIGN-REMOVE AND REPLACE

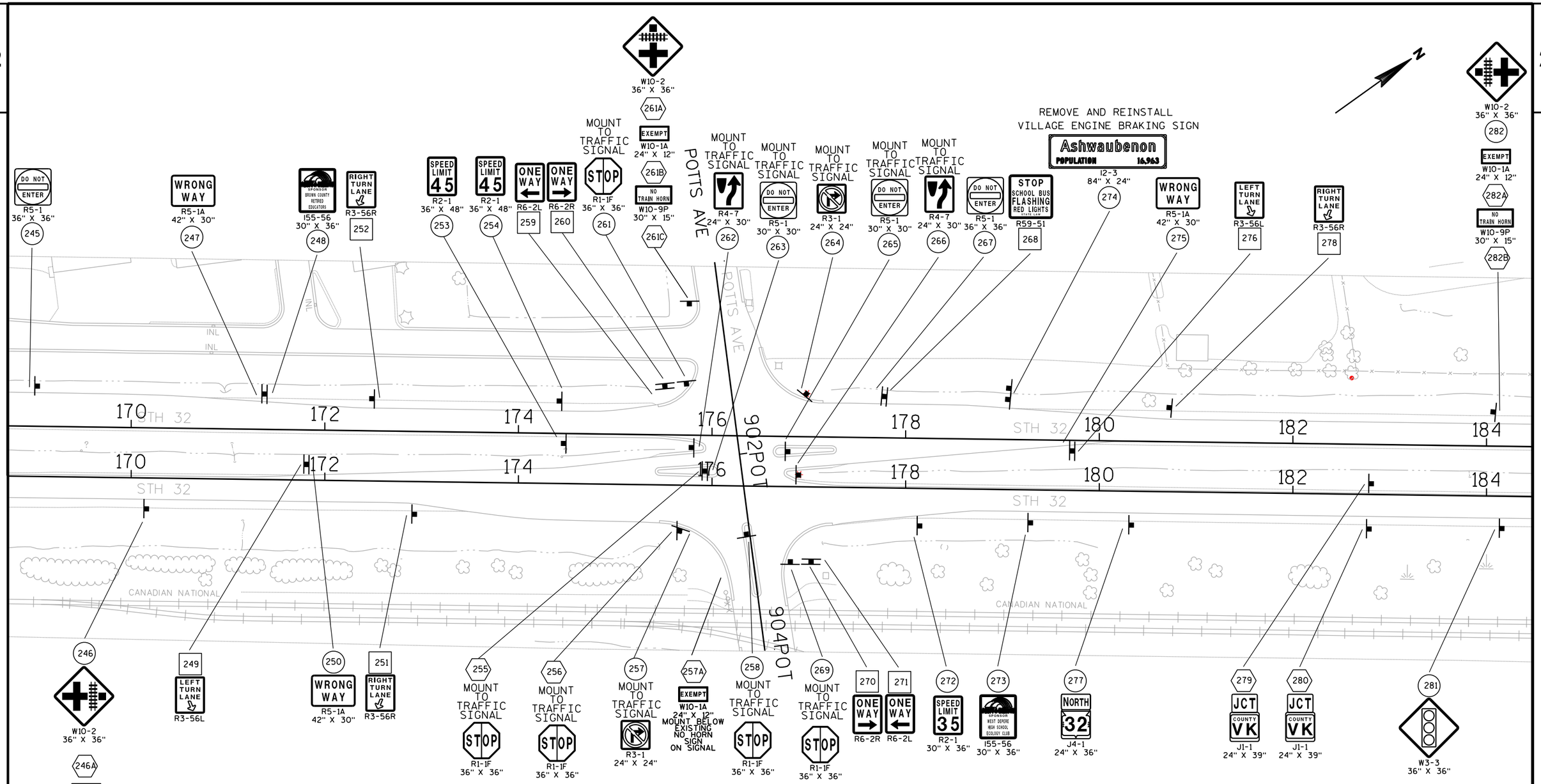
SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 37	E

2



SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.

○ SIGN-REMOVE AND REPLACE

□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 38 E

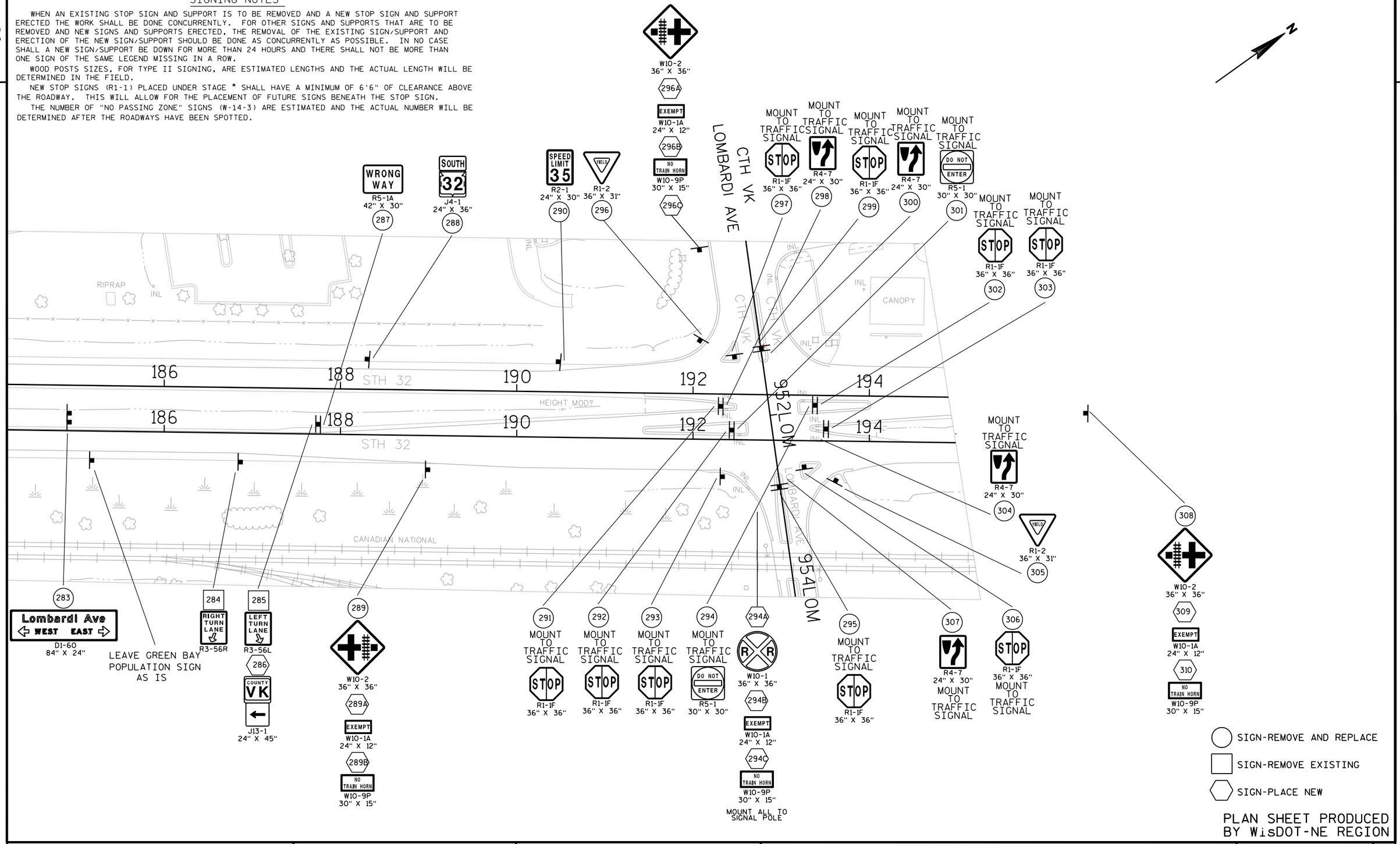
SIGNING NOTES

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP 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.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

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.



PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET 39 E

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CONFIGURATION WITH HEAD NUMBERS			
3-V	5-HL	4-VLFY	5-VL
3, 4, 5 9, 10, 11 14, 18	13, 17	1, 2 6, 7, 8	12, 15 16, 19

LOOP DETECTORS

LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.

NOTE: SIGNAL HEADS 1 & 7 REQUIRE TUNNEL VISORS

12" PB is under asphalt

COMMUNICATIONS PULL BOX APPROX EVERY 400'

2" COMMUNICATIONS CONDUIT FROM S05-0855

PB83

PB12

SB10

REMOVE SIGNAL
REMOVE CONCRETE BASE

STH 32 (Ashland Ave)

35 MPH Posted Speed Limit

CTH VK (Lombardi Ave)

PB13

PB14

SB11

PB15

PB16

SB13

SB12

CB1

PB1

SB1

REMOVE SIGNAL

REMOVE SIGNAL HEADS
LEAVE SIGNAL STANDARD

PB11

PB10

SB9

REMOVE SIGNAL HEAD

SB2

PB2

PB3

SB3

Overlap "A"

Overlap "C"

110' TO NEAR RIGHT SIGNAL

300' TO NEAR RIGHT SIGNAL

125' TO NEAR RIGHT SIGNAL

Asphalt over Concrete

Concrete Asphalt

Asphalt Concrete

Concrete

MILLING LIMITS

190+00SB | 191+00SB | 193+00SB | 194+00SB | 195+00SB

190+00NB | 191+00NB | 192+00NB | 195+00NB | 196+00

LED BLANK OUT SIGN

LED BLANK OUT SIGN
Relocate

REMOVE SIGNAL

SB8

PB9

SB5

PB6

SB6

PB4

PB5

PB7

PB8

SB7

SB4

REMOVE SIGNAL
REMOVE CONCRETE BASE

98+00.0M

99+00.0M

Lombardi Ave

RR Bungalow

INL

FILLER CAPS

CANOPY

MONOTUBE STRUCTURE NUMBERS	
SB4	S-05-0403
SB10	S-05-0404

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT (15')
- SIGNAL POLE, MONOTUBE ARM (40')
- LUMINAIRE
- CONTROL CABINET BASE
- 2" CONDUIT (unless otherwise noted)
- SIGNAL HEAD NUMBER MOUNTING CONFIGURATION (3 R Y G)
- LOOP DETECTOR (in 1 " conduit) (51, 3T, 30', 6')
- LOOP DETECTOR (in 1/4" groove) (31, 3T, 30', 6')
- LUMINAIRE (local municipality maintained)

REVISION				
Rev. No.	ADD MONOTUBES & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
5	Date	By	Date	By
	2-29-16	RJS		JLB
4-29-11	New Cabinet w/Battery Backup System & Add Blank Out Signs			
12-9-02	Add Slotted Left Turn Lanes			
11-15-02	East Approach/Median Improvement and Add Phase 3			
3-2-95	Upgrade Control Cabinet & Change to All Red Flash			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Lombardi Ave
CITY OF GREEN BAY
BROWN COUNTY

SIGNAL NO. 05-0064 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 1-22-1987 — Gerald R. Kurtz, REGION TRAFFIC ENGINEER

APPROVED
Date 12-13-1988 — Harold O. Price, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 40	E

FILE NAME : F:\d3_traffi\S-64,rev5,const.dgn PLOT DATE : 17-MAY-2016 09:50 PLOT BY : dotc5s PLOT NAME : S-64,rev5,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

PUSH BUTTON FOR GREEN LIGHT

Install on SB5 & SB11

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

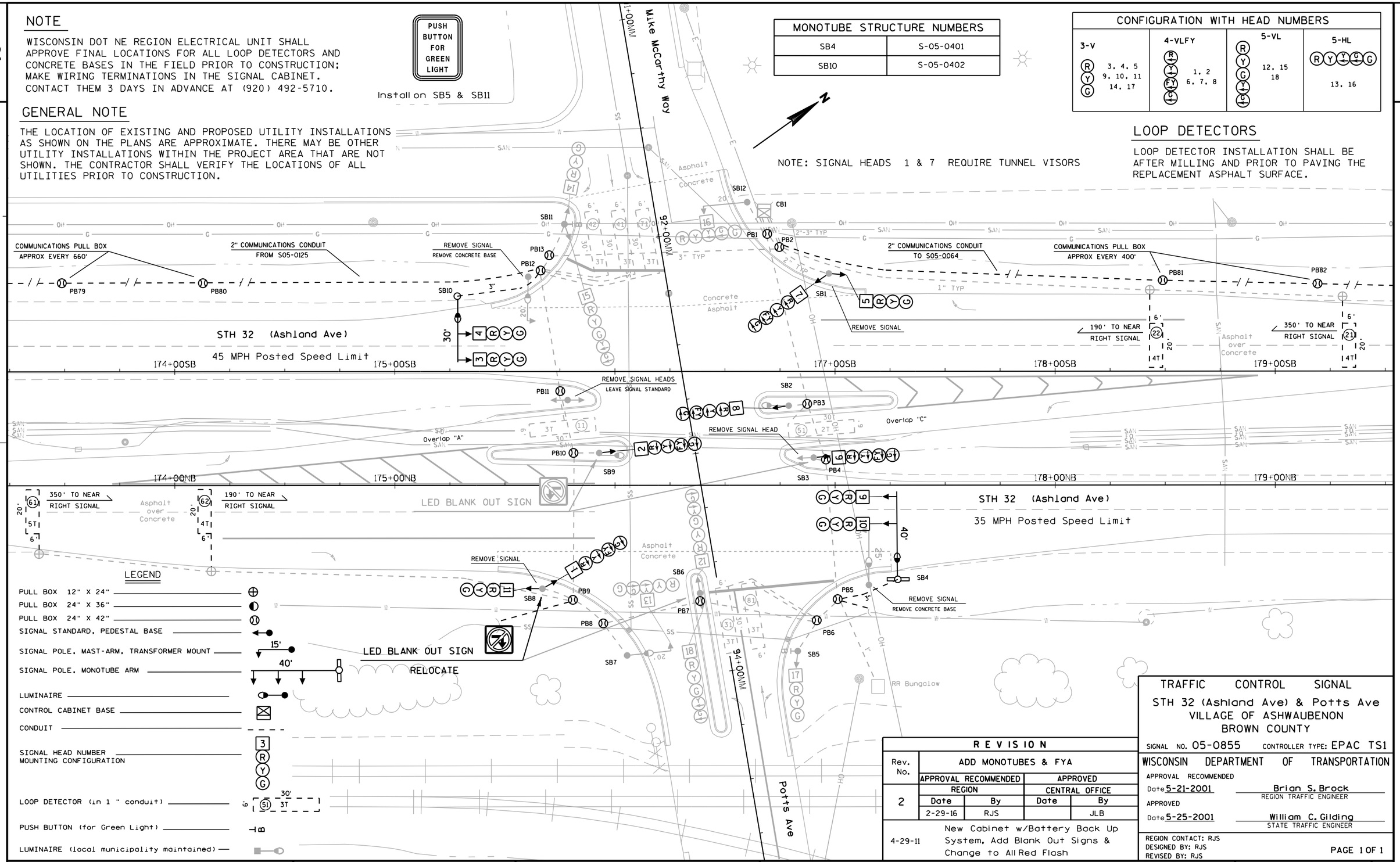
MONOTUBE STRUCTURE NUMBERS	
SB4	S-05-0401
SB10	S-05-0402

CONFIGURATION WITH HEAD NUMBERS			
3-V	4-VLFY	5-VL	5-HL
3, 4, 5 9, 10, 11 14, 17	1, 2 6, 7, 8	12, 15 18	13, 16

NOTE: SIGNAL HEADS 1 & 7 REQUIRE TUNNEL VISORS

LOOP DETECTORS

LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.



LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT — 15'
- SIGNAL POLE, MONOTUBE ARM — 40'
- LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- SIGNAL HEAD NUMBER MOUNTING CONFIGURATION
- LOOP DETECTOR (in 1 " conduit)
- PUSH BUTTON (for Green Light)
- LUMINAIRE (local municipality maintained)

REVISION				
Rev. No.	ADD MONOTUBES & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	Date	By	Date	By
2	2-29-16	RJS		JLB
4-29-11	New Cabinet w/Battery Back Up System, Add Blank Out Signs & Change to All Red Flash			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Potts Ave
VILLAGE OF ASHWAUBENON
BROWN COUNTY

SIGNAL NO. 05-0855 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 5-21-2001 Brian S. Brock
REGION TRAFFIC ENGINEER

APPROVED
Date 5-25-2001 William C. Gilding
STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 41 E

FILE NAME : F:\d3_traffi\S-855,rev2,const.dgn PLOT DATE : 17-MAY-2016 10:15 PLOT BY : dotc5s PLOT NAME : S-855,rev2,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

PUSH BUTTON FOR GREEN LIGHT

Install on SB1

MONOTUBE STRUCTURE NUMBERS	
SB6	S-05-0399
SB13	S-05-0400

CONFIGURATION WITH HEAD NUMBERS				
3-V	4-VLFY	5-VL	5-HL	1-P
3, 4, 5 9, 10, 11 14, 17	1, 2 6, 7, 8	12, 15 18	13, 16	19, 20

START CROSSING Watch For Vehicles
DON'T START Finish Crossing If Started
TIME REMAINING To Finish Crossing
DON'T CROSS
TO CROSS PUSH BUTTON

Install on SB2 & SB7

Install on SB4

Frontage Road

NOTE: SIGNAL HEADS 1 & 7 REQUIRE TUNNEL VISORS

STH 32 (Ashland Ave)

45 MPH Posted Speed Limit

Cormier Road

81+00COR

82+00COR

83+00COR

COMMUNICATIONS PULL BOX APPROX EVERY 525'

2" COMMUNICATIONS CONDUIT FROM S05-0315

COMMUNICATIONS PULL BOX APPROX EVERY 660'

2" COMMUNICATIONS CONDUIT TO S05-0855

PB76 PB77 PB78

REMOVE SIGNAL
REMOVE CONCRETE BASE

REMOVE SIGNAL

REMOVE SIGNAL HEADS
LEAVE SIGNAL STANDARD

REMOVE SIGNAL HEAD

REMOVE PEDESTRIAN SIGNAL & BUTTON

190' TO NEAR RIGHT SIGNAL

350' TO NEAR RIGHT SIGNAL

Overlap "A"

Overlap "C"

Asphalt over Concrete

Concrete

Asphalt

LED BLANK OUT SIGN
Relocate

RR Bungalow

140+00SB 141+00SB 143+00SB 144+00SB 145+00SB 146+00

140+00NB 141+00NB 143+00NB 144+00NB 145+00NB 146+00

LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT (15')
- SIGNAL POLE, MONOTUBE ARM (40')
- PEDESTRIAN SIGNAL
- LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- SIGNAL HEAD NUMBER / MOUNTING CONFIGURATION
- LOOP DETECTOR (in 1" conduit)
- LOOP DETECTOR (in 1/4" groove)
- PUSH BUTTON (for Green Light or Ped Head)

LOOP DETECTORS

ASHLAND AVE LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.

REVISION				
Rev. No.	ADD MONOTUBES & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
8	Date	By	Date	By
	2-29-16	RJS		JLB
4-29-11	New Cabinet w/Battery Backup System & Add Blank Out Signs			
8-16-04	Add Pedestrian Phase 8			
12-9-02	Add Slotted Left Turn Lanes & Phase 3 (Pre-empt Only)			
6-22-01	East Approach/Median Improvement			
2-26-99	Add Roadway Lighting			
3-2-95	Upgrade Control Cabinet & Change to All Red Flash			
2-20-89	Add Phase 7			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Cormier Road
VILLAGE OF ASHWAUBENON
BROWN COUNTY

SIGNAL NO. 05-0125 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 8-1-1968 Dale J. Borell, REGION TRAFFIC ENGINEER

APPROVED
Date 8-14-1968 Wayne N. Volk, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 42 E

FILE NAME : F:\d3_traffi\S-125,rev8,const.dgn PLOT DATE : 19-MAY-2016 09:48 PLOT BY : dotc5s PLOT NAME : S-125,rev8,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

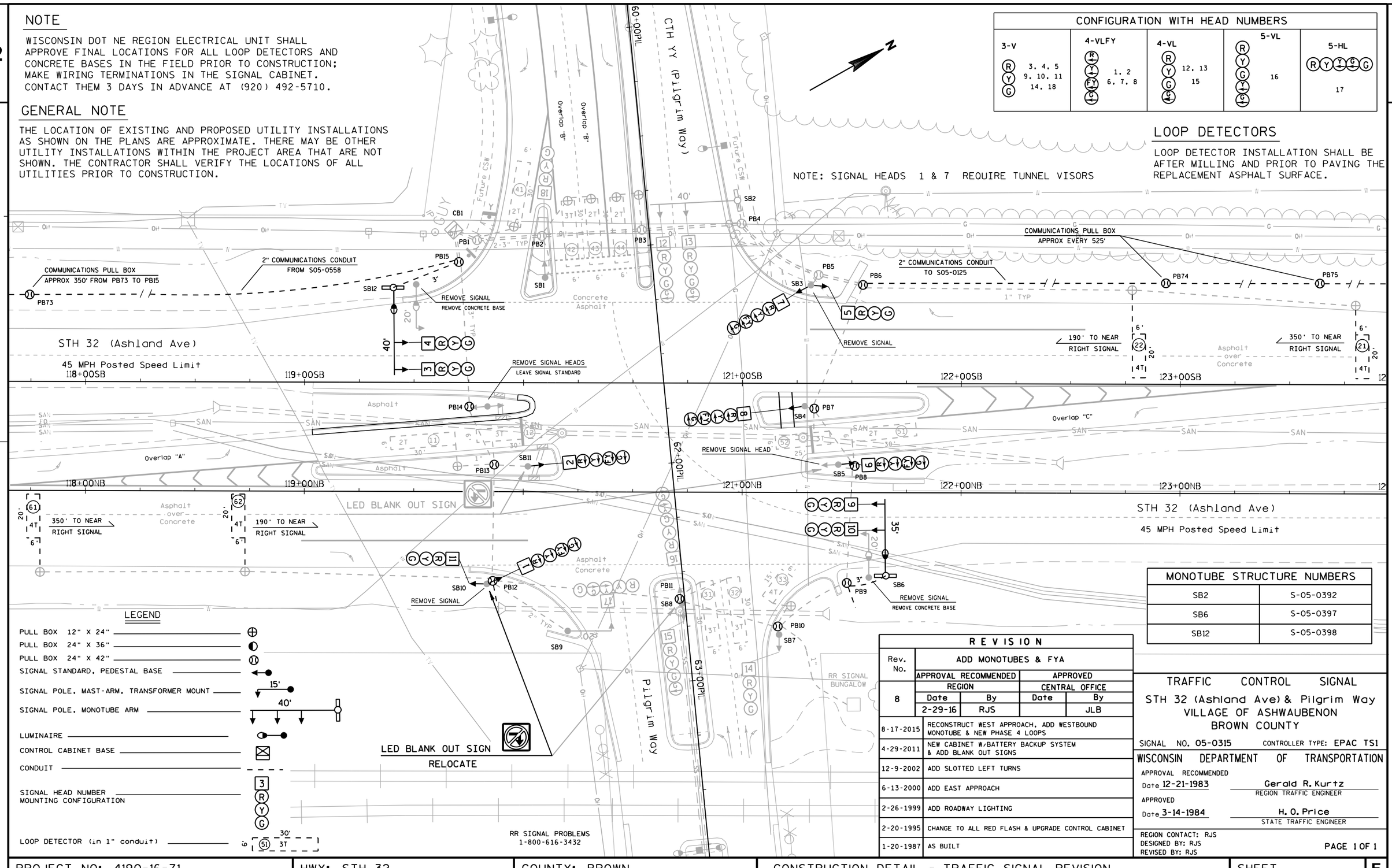
THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CONFIGURATION WITH HEAD NUMBERS				
3-V	4-VLFY	4-VL	5-VL	5-HL
3, 4, 5 9, 10, 11 14, 18	1, 2 6, 7, 8	12, 13 15	16	17

LOOP DETECTORS

LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.

NOTE: SIGNAL HEADS 1 & 7 REQUIRE TUNNEL VISORS



LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT (15')
- SIGNAL POLE, MONOTUBE ARM (40')
- LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- SIGNAL HEAD NUMBER MOUNTING CONFIGURATION
- LOOP DETECTOR (in 1" conduit) (30', 3T)

MONOTUBE STRUCTURE NUMBERS	
SB2	S-05-0392
SB6	S-05-0397
SB12	S-05-0398

REVISION				
Rev. No.	ADD MONOTUBES & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
8	Date	By	Date	By
	2-29-16	RJS		JLB
8-17-2015	RECONSTRUCT WEST APPROACH, ADD WESTBOUND MONOTUBE & NEW PHASE 4 LOOPS			
4-29-2011	NEW CABINET W/BATTERY BACKUP SYSTEM & ADD BLANK OUT SIGNS			
12-9-2002	ADD SLOTTED LEFT TURNS			
6-13-2000	ADD EAST APPROACH			
2-26-1999	ADD ROADWAY LIGHTING			
2-20-1995	CHANGE TO ALL RED FLASH & UPGRADE CONTROL CABINET			
1-20-1987	AS BUILT			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Pilgrim Way
VILLAGE OF ASHWAUBENON
BROWN COUNTY

SIGNAL NO. 05-0315 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 12-21-1983 — Gerald R. Kurtz, REGION TRAFFIC ENGINEER

APPROVED
Date 3-14-1984 — H. O. Price, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 43 E

FILE NAME : F:\d3_traffi\S-315,rev8,const.dgn PLOT DATE : 19-MAY-2016 11:15 PLOT BY : dotc5s PLOT NAME : S-315,rev8,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

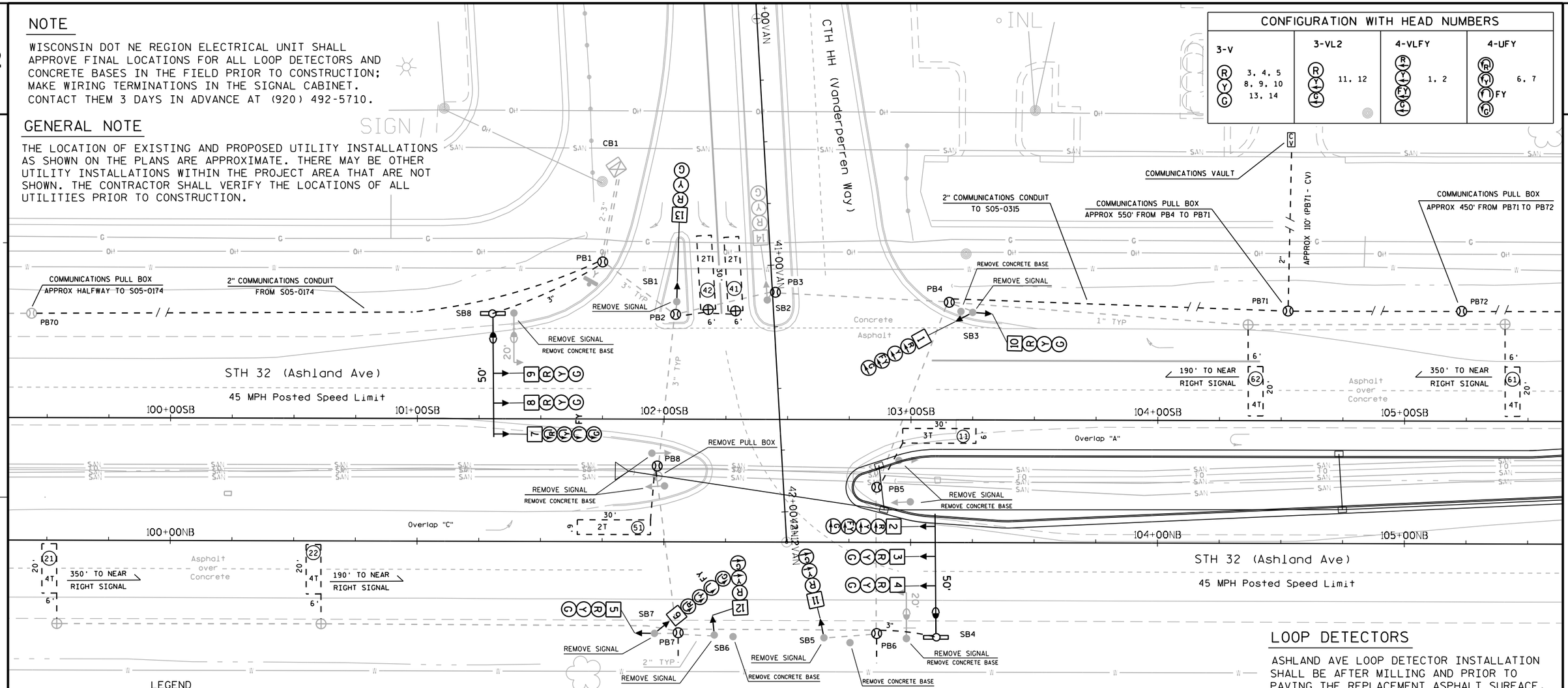
NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

CONFIGURATION WITH HEAD NUMBERS			
3-V	3-VL2	4-VLFY	4-UFY
R Y G — 3, 4, 5, 8, 9, 10, 13, 14	R 1 1 1c — 11, 12	R 1 Y 1 FY 1c — 1, 2	R R Y Y FY G — 6, 7



LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT — 15'
- SIGNAL POLE, MONOTUBE ARM — 40'
- LUMINAIRE
- CONTROL CABINET BASE
- CONDUIT
- SIGNAL HEAD NUMBER / MOUNTING CONFIGURATION (3 R Y G)
- LOOP DETECTOR (in 1" conduit) — 6' × 30' (51) 3T

NOTE: SIGNAL HEADS 1 & 6 REQUIRE TUNNEL VISORS

MONOTUBE STRUCTURE NUMBERS	
SB4	S-05-0395
SB8	S-05-0396

LOOP DETECTORS

ASHLAND AVE LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.

REVISION				
Rev. No.	Add Phase 1, Monotubes & FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
3	Date	By	Date	By
	2-29-16	RJS		JLB
12-1-11	New Cabinet & Controller; Change to All Red Emergency Flash			
9-20-96	Add Phase 5			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Vanderperren Way
VILLAGE OF ASHWAUBENON
BROWN COUNTY

SIGNAL NO. 05-0558 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 7-19-1994 — Gerald R. Kurtz, REGION TRAFFIC ENGINEER

APPROVED
Date 7-26-1994 — R. I. Moe, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

PAGE 1 OF 1

PROJECT NO: 4190-16-71 | HWY: STH 32 | COUNTY: BROWN | CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION | SHEET 44 | E

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION; MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

GENERAL NOTE

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

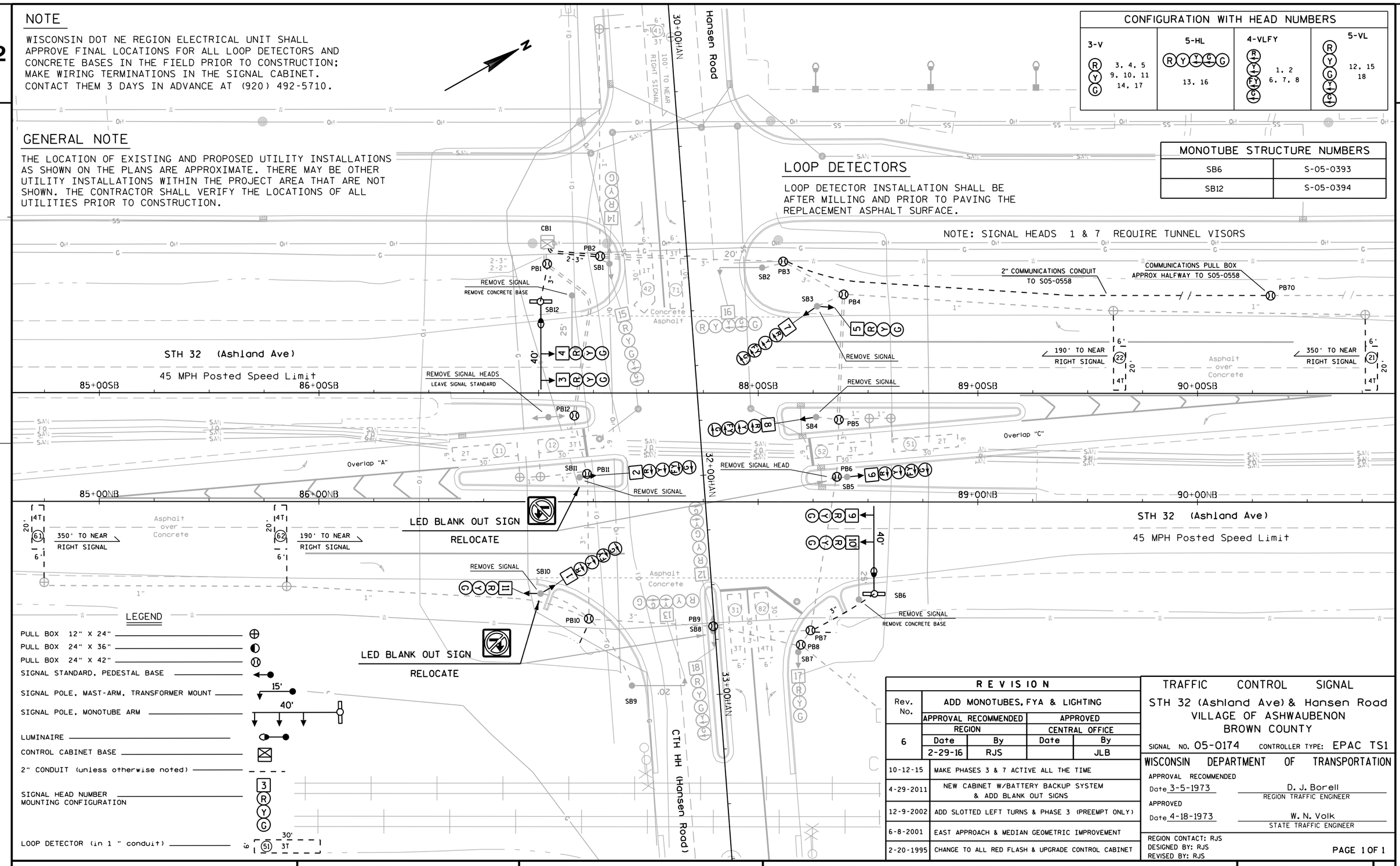
CONFIGURATION WITH HEAD NUMBERS			
3-V	5-HL	4-VLFY	5-VL
3, 4, 5 9, 10, 11 14, 17	13, 16	1, 2 6, 7, 8	12, 15 18

MONOTUBE STRUCTURE NUMBERS	
SB6	S-05-0393
SB12	S-05-0394

LOOP DETECTORS

LOOP DETECTOR INSTALLATION SHALL BE AFTER MILLING AND PRIOR TO PAVING THE REPLACEMENT ASPHALT SURFACE.

NOTE: SIGNAL HEADS 1 & 7 REQUIRE TUNNEL VISORS



LEGEND

- PULL BOX 12" X 24"
- PULL BOX 24" X 36"
- PULL BOX 24" X 42"
- SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL POLE, MAST-ARM, TRANSFORMER MOUNT — 15'
- SIGNAL POLE, MONOTUBE ARM — 40'
- LUMINAIRE
- CONTROL CABINET BASE
- 2" CONDUIT (unless otherwise noted)
- SIGNAL HEAD NUMBER / MOUNTING CONFIGURATION — 3 R Y G
- LOOP DETECTOR (in 1 " conduit) — 30' 3T

REVISION				
Rev. No.	ADD MONOTUBES, FYA & LIGHTING			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	Date	By	Date	By
6	2-29-16	RJS		JLB
10-12-15	MAKE PHASES 3 & 7 ACTIVE ALL THE TIME			
4-29-2011	NEW CABINET W/BATTERY BACKUP SYSTEM & ADD BLANK OUT SIGNS			
12-9-2002	ADD SLOTTED LEFT TURNS & PHASE 3 (PREEMPT ONLY)			
6-8-2001	EAST APPROACH & MEDIAN GEOMETRIC IMPROVEMENT			
2-20-1995	CHANGE TO ALL RED FLASH & UPGRADE CONTROL CABINET			

TRAFFIC CONTROL SIGNAL

STH 32 (Ashland Ave) & Hansen Road
VILLAGE OF ASHWAUBENON
BROWN COUNTY

SIGNAL NO. 05-0174 CONTROLLER TYPE: EPAC TS1

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 3-5-1973 — D. J. Borell, REGION TRAFFIC ENGINEER

APPROVED
Date 4-18-1973 — W. N. Volk, STATE TRAFFIC ENGINEER

REGION CONTACT: RJS
DESIGNED BY: RJS
REVISED BY: RJS

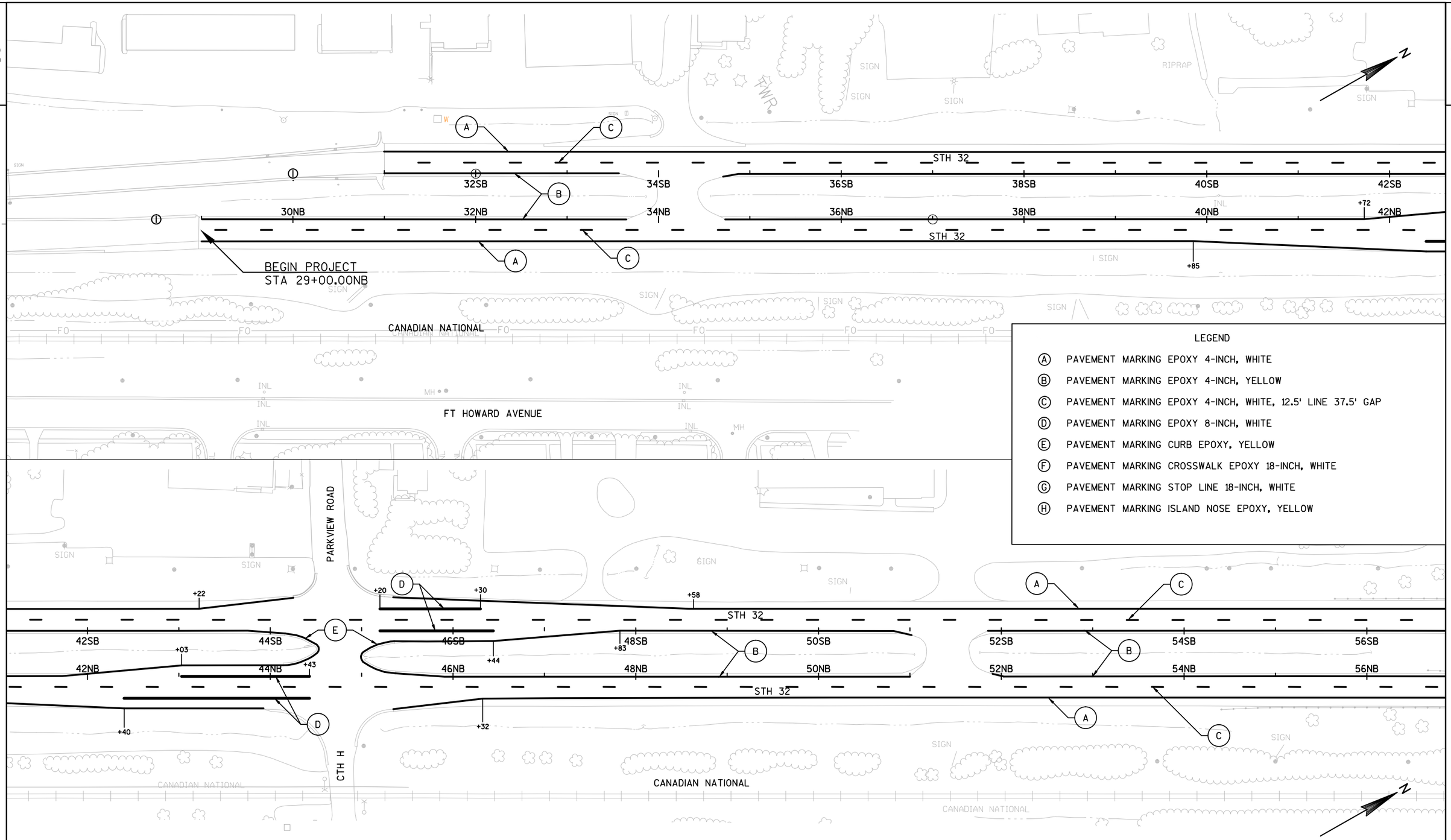
PAGE 1 OF 1

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CONSTRUCTION DETAIL - TRAFFIC SIGNAL REVISION	SHEET 45 E

FILE NAME : F:\d3_traffi\S-174,rev6,const.dgn PLOT DATE : 23-MAY-2016 09:06 PLOT BY : dotc5s PLOT NAME : S-174,rev6,const PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

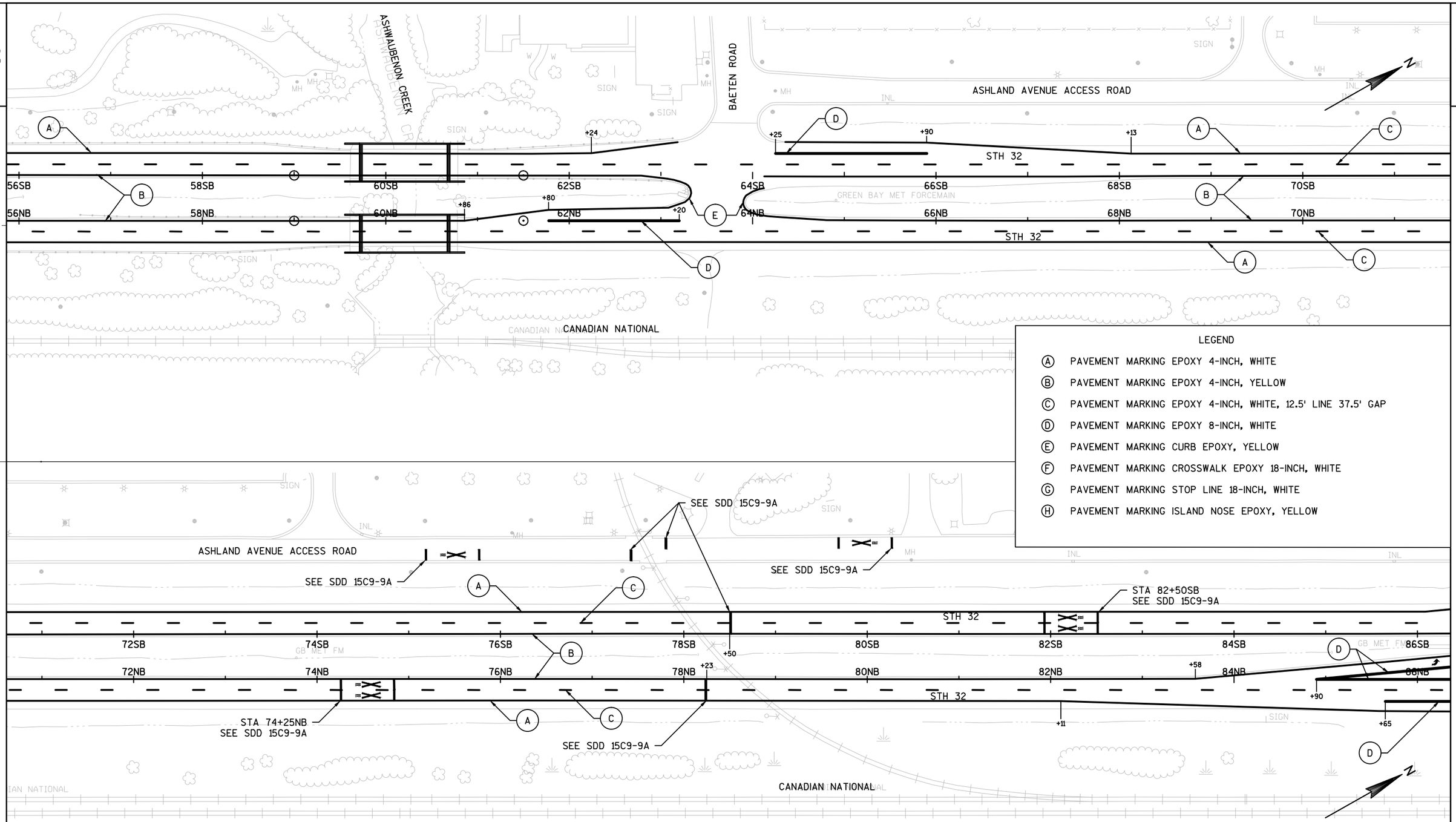
2



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 46	E



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 47	E

2

HANSEN ROAD

ASHLAND AVENUE ACCESS ROAD

STH 32

CTH HH

CANADIAN NATIONAL

SEE SDD 15C9-9A

VANDERPERREN WAY

STH 172

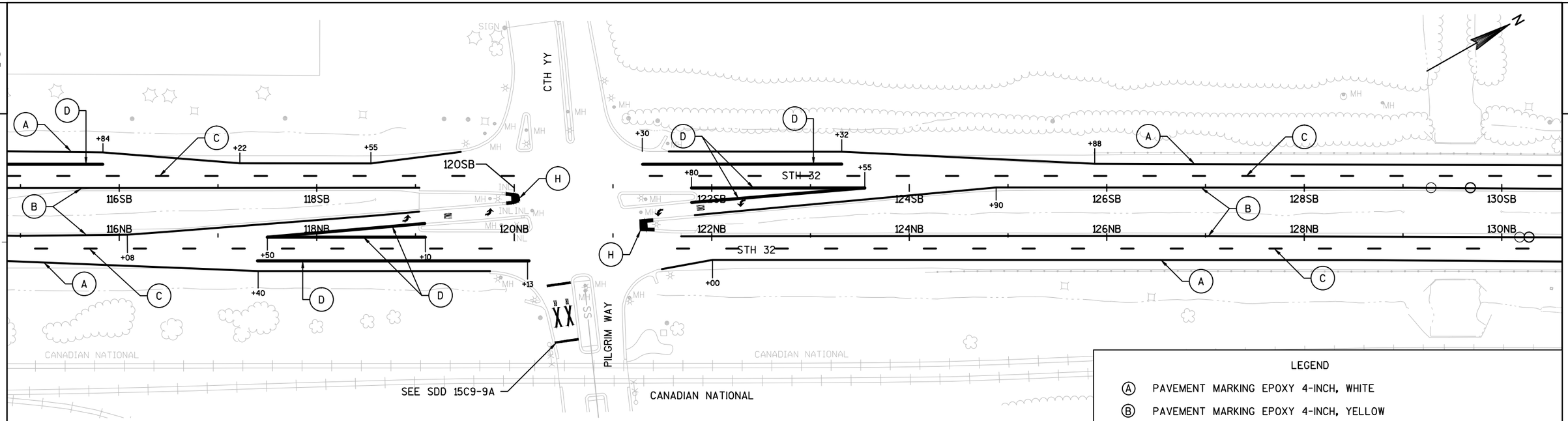
TENNIS C

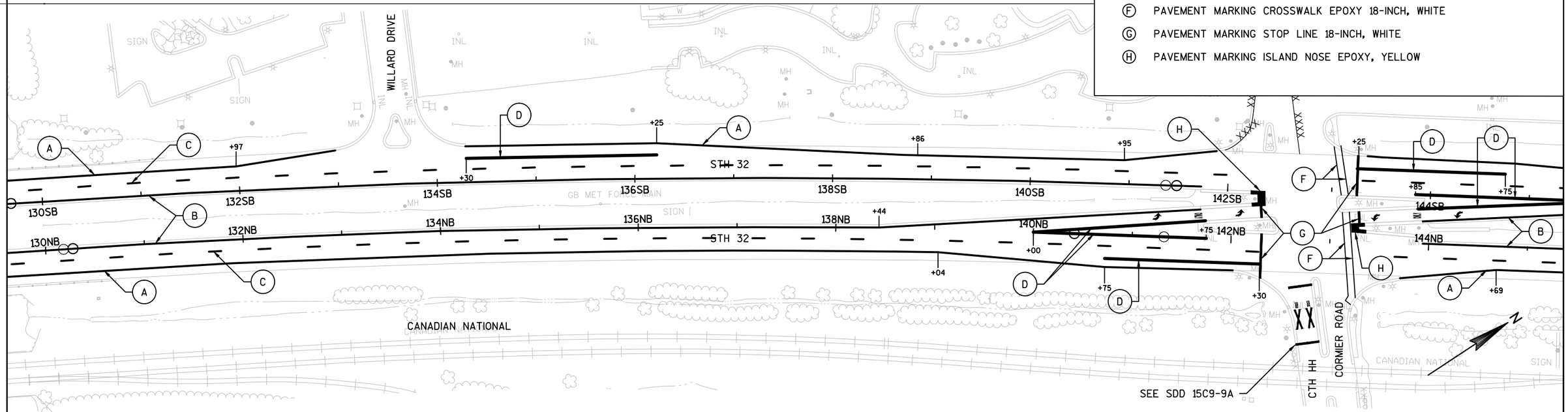
LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 48	E

2

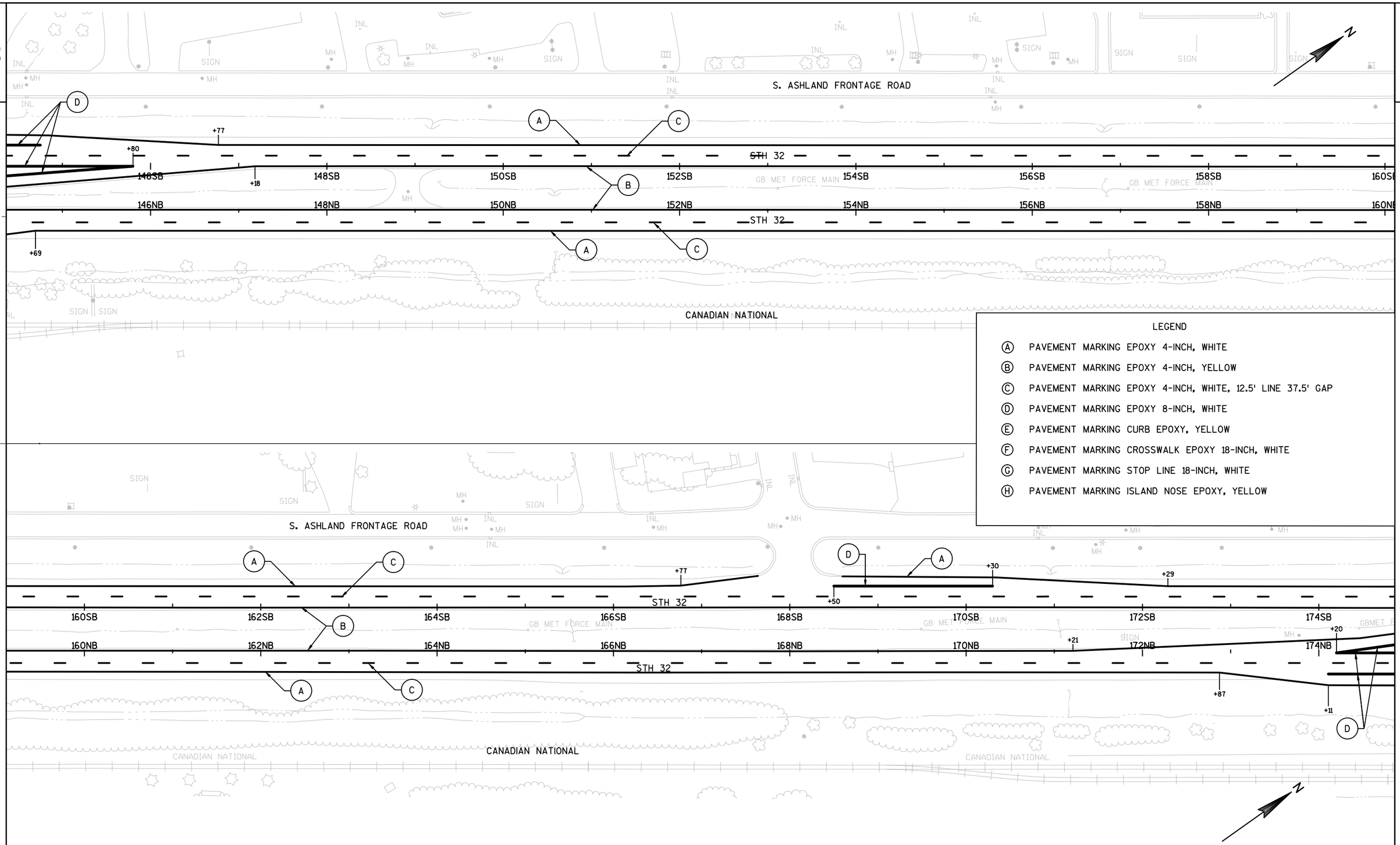




LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

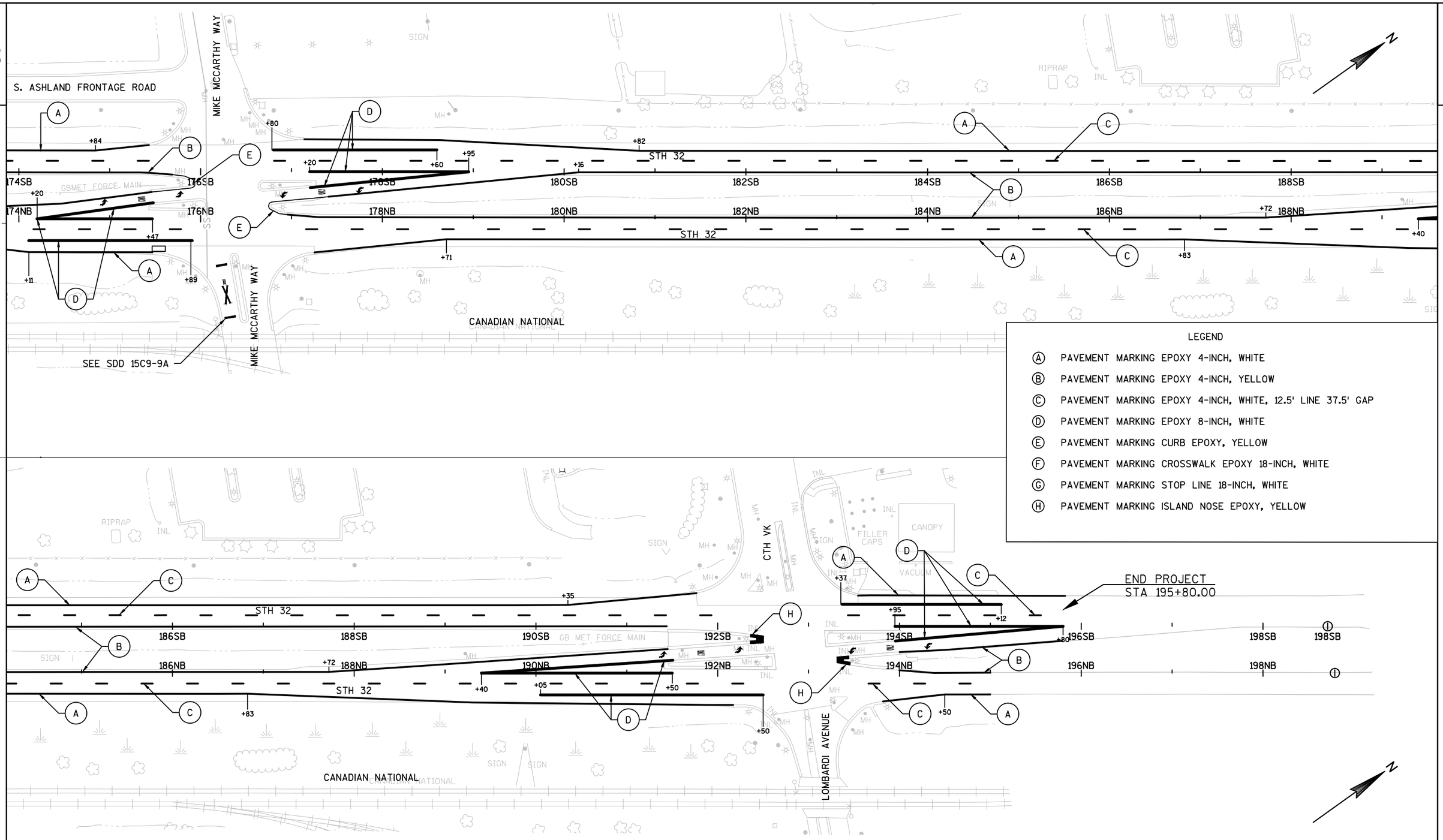
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 49	E



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 50	E



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH, WHITE
- (B) PAVEMENT MARKING EPOXY 4-INCH, YELLOW
- (C) PAVEMENT MARKING EPOXY 4-INCH, WHITE, 12.5' LINE 37.5' GAP
- (D) PAVEMENT MARKING EPOXY 8-INCH, WHITE
- (E) PAVEMENT MARKING CURB EPOXY, YELLOW
- (F) PAVEMENT MARKING CROSSWALK EPOXY 18-INCH, WHITE
- (G) PAVEMENT MARKING STOP LINE 18-INCH, WHITE
- (H) PAVEMENT MARKING ISLAND NOSE EPOXY, YELLOW

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING PLAN	SHEET 51	E

STAGE 1
- LIMITS FROM 29+00NB TO 54+00NB.
- CLOSE STH 32 NB LEG OF RAB AT GLORY ROAD.
- CLOSE PARKVIEW ROAD INTERSECTION AT STH 32.
- CLOSE BAETEN ROAD INTSERSECTION AT STH 32 SOUTH OF BAETEN ROAD.
- HANSEN ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.

STAGE 2
- LIMITS FROM 63+00NB/SB TO 86+00NB/SB AND FROM 178+50NB/SB TO 195+80NB/SB.
- CLOSE STH 32 FROM NORTH SIDE OF PARKVIEW ROAD TO SOUTH SIDE OF HANSEN ROAD.
- PARKVIEW ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- HANSEN ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- CLOSE STH 32 AND LOMBARDI AVENUE INTERSECTION.
- CLOSE STH 32 FROM SOUTH SIDE OF VICTORY BOULEVARD TO NORTH SIDE OF MIKE MCCARTHY WAY.
- CLOSE BAETEN ROAD INTERSECTION. ACCESS SHALL REMAIN OPEN TO ASHLAND FRONTAGE ROAD.

STAGE 3
- LIMITS FROM 144+50NB/SB TO 178+50NB/SB.
- CLOSE STH 32 FROM NORTH SIDE OF PARKVIEW ROAD TO SOUTH SIDE OF HANSEN ROAD.
- PARKVIEW ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- HANSEN ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- CLOSE BAETEN ROAD INTERSECTION AT STH 32 SOUTH OF BAETEN ROAD.
- CLOSE STH 32 AND MIKE MCCARTHY WAY INTERSECTION.
- CLOSE STH 32 FROM SOUTH SIDE OF LOMBARDI AVENUE TO NORTH SIDE OF CORMIER ROAD.
- CLOSE MORRIS AVENUE INTERSECTION AT STH 32. ACCESS SHALL REMAIN OPEN TO THE ASHLAND AVENUE FRONTAGE ROAD.

STAGE 4
- LIMITS FROM 122+50NB/SB TO 144+50NB/SB.
- CLOSE STH 32 FROM NORTH SIDE OF PARKVIEW ROAD TO SOUTH SIDE OF HANSEN ROAD.
- PARKVIEW ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- HANSEN ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- CLOSE BAETEN ROAD INTERSECTION AT STH 32 SOUTH OF BAETEN ROAD.
- CLOSE STH 32 AND CORMIER ROAD INTERSECTION.
- CLOSE STH 32 FROM SOUTH SIDE OF MIKE MCCARTHY WAY TO NORTH SIDE OF PILGRIM WAY.
- CLOSE WILLARD DRIVE INTERSECTION AT STH 32.

STAGE 5
- LIMITS FROM 116+00NB/SB TO 122+50NB/SB.
- CLOSE STH 32 FROM NORTH SIDE OF PARKVIEW ROAD TO SOUTH SIDE OF HANSEN ROAD.
- PARKVIEW ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- HANSEN ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- CLOSE BAETEN ROAD INTERSECTION AT STH 32 SOUTH OF BAETEN ROAD.
- CLOSE STH 32 AND PILGRIM WAY INTERSECTION.
- CLOSE STH 32 FROM SOUTH SIDE OF CORMIER ROAD TO NORTH SIDE OF TENNIS COURT.
- CLOSE WILLARD DRIVE INTERSECTION AT STH 32.
- ACCESS SHALL BE PROVIDED TO TENNIS COURT FOR TRAFFIC TRAVELLING NORTHBOUND ON STH 32.

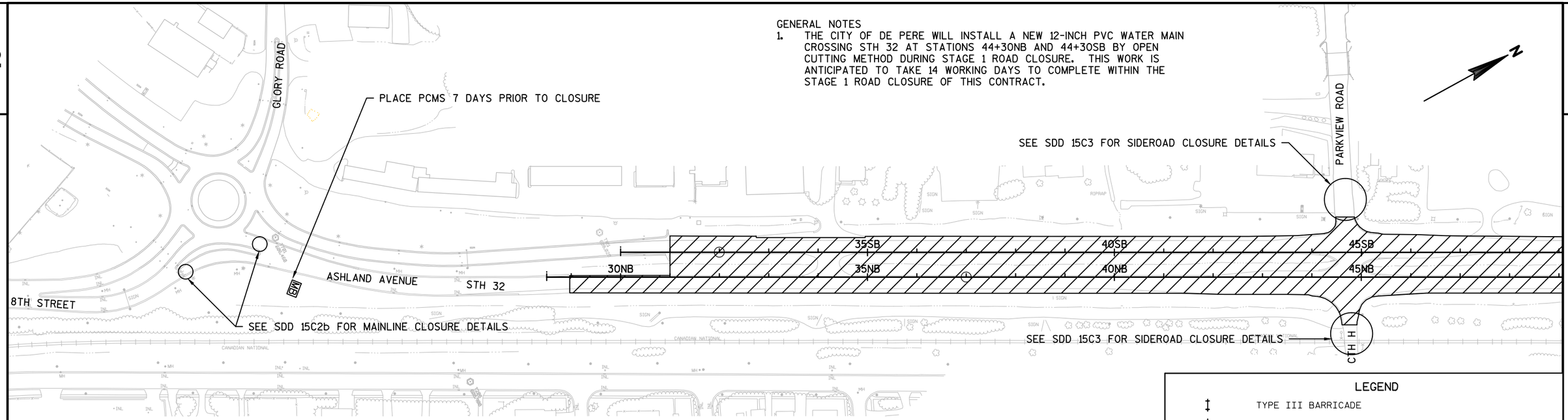
STAGE 6
- LIMITS FROM 86+00NB/SB TO 100+25NB/SB.
- CLOSE STH 32 FROM NORTH SIDE OF PARKVIEW ROAD TO SOUTH SIDE OF HANSEN ROAD.
- PARKVIEW ROAD INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- VANDERPERREN WAY INTERSECTION SHALL REMAIN OPEN TO TRAFFIC.
- CLOSE BAETEN ROAD INTERSECTION AT STH 32. ACCESS SHALL REMAIN OPEN TO THE ASHLAND FRONTAGE ROAD.

STAGE 7
- LIMITS FROM 100+25NB/SB TO 116+00NB/SB.
- CLOSE STH 32 AND VANDERPERREN WAY INTERSECTION.
- CLOSE STH 32 FROM SOUTH SIDE OF PILGRIM WAY TO NORTH SIDE OF HANSEN ROAD.
- CLOSE TENNIS COURT INTERSECTION AT STH 32.

ASHWAUBENON CREEK
PARKVIEW ROAD
BAETEN ROAD
NEW STRUCTURE ID
B-05-0408 (SB)
B-05-0409 (NB)
STAGE 1
STAGE 2
HANSEN ROAD
ASHLAND AVENUE
VANDERPERREN WAY
STH 172 WB
STH 172 EB
TENNIS COURT
30NB
40SB
40NB
50SB
50NB
60SB
60NB
70SB
70NB
80SB
80NB
90SB
90NB
100SB
100NB
110SB
110NB
STAGES 1-6
STAGE 6
STAGE 7
FORT HOWARD AVENUE
S BROADWAY
CITY OF DE PERE
VILLAGE OF ASHWAUBENON
WCL
CROSSING 180082D
STH 32
DUTCHMANS CREEK
PILGRIM WAY
BOX CULVERT ID
B-05-0017 (SB)
B-05-0035 (NB)
WILLARD DRIVE
CORMIER ROAD
MORRIS AVENUE
MIKE MCCARTHY WAY
CITY OF GREEN BAY
LOMBARDI AVENUE
120SB
120NB
130SB
130NB
140SB
140NB
150SB
150NB
160SB
160NB
170SB
170NB
180SB
180NB
190SB
190NB
STAGE 4
STAGE 5
STAGE 3
CRARY STREET
END PROJECT 4190-16-71
STA 195+00SB

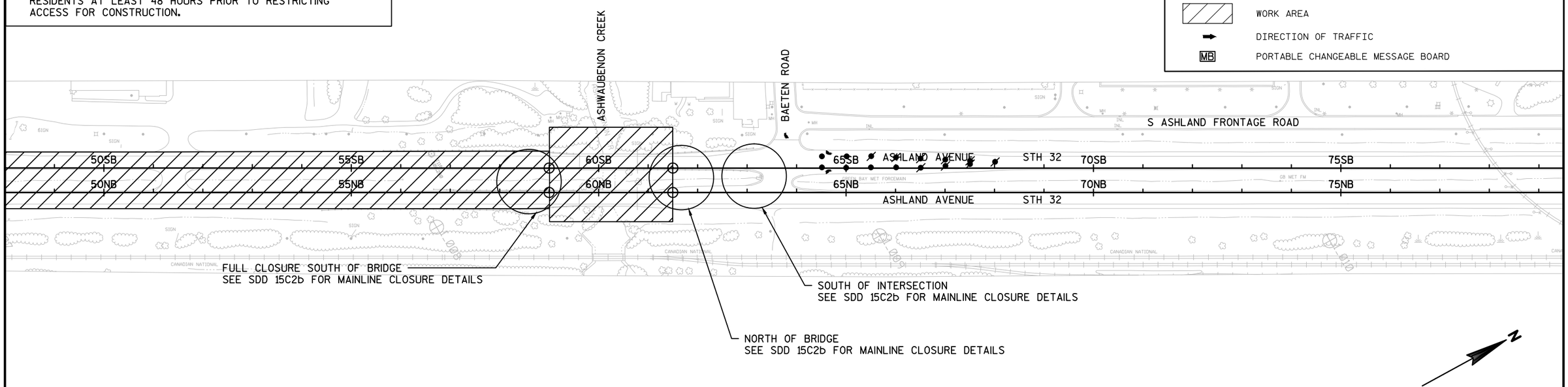
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL OVERVIEW	SHEET 52	E

GENERAL NOTES
1. THE CITY OF DE PERE WILL INSTALL A NEW 12-INCH PVC WATER MAIN CROSSING STH 32 AT STATIONS 44+30NB AND 44+30SB BY OPEN CUTTING METHOD DURING STAGE 1 ROAD CLOSURE. THIS WORK IS ANTICIPATED TO TAKE 14 WORKING DAYS TO COMPLETE WITHIN THE STAGE 1 ROAD CLOSURE OF THIS CONTRACT.

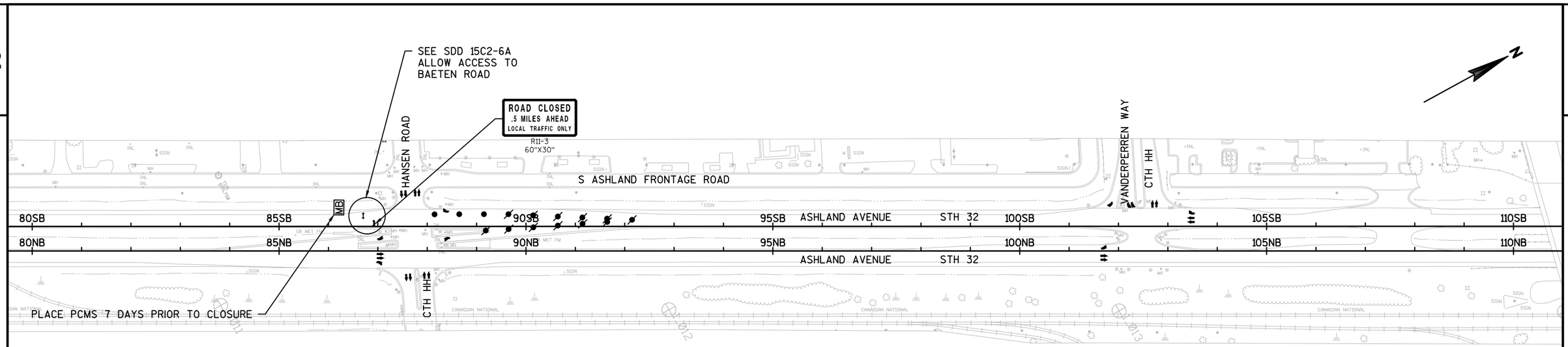


TRAFFIC CONTROL NOTES
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 1	SHEET 53	E

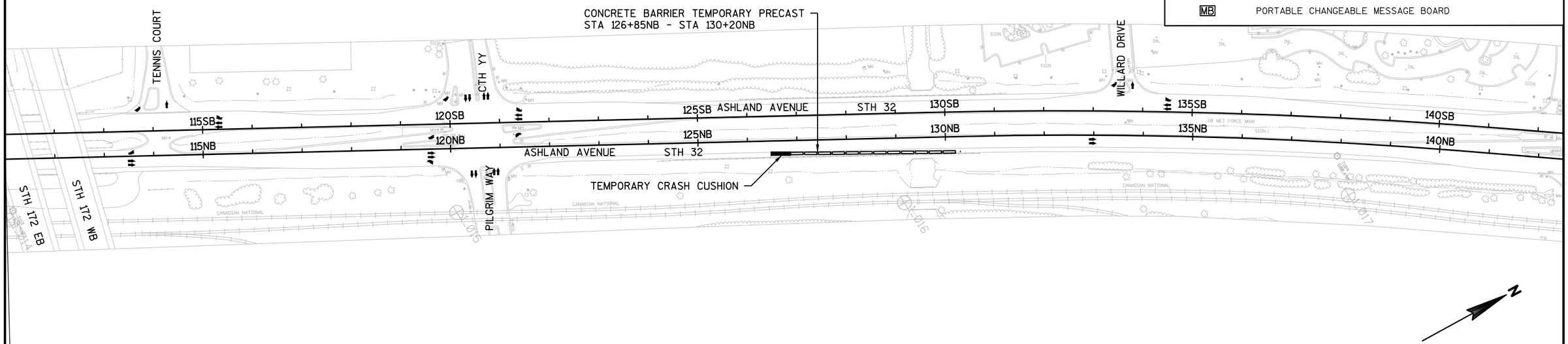


TRAFFIC CONTROL NOTES

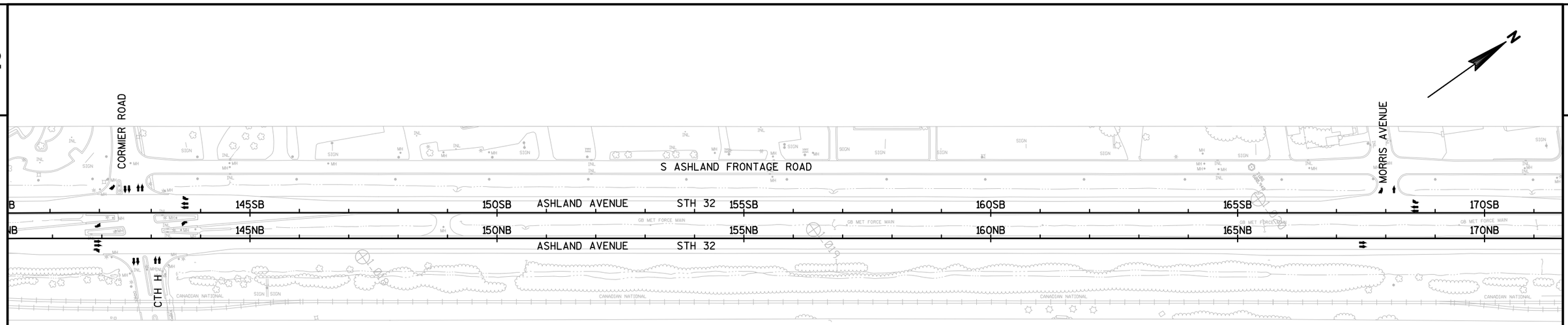
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 1	SHEET 54	E

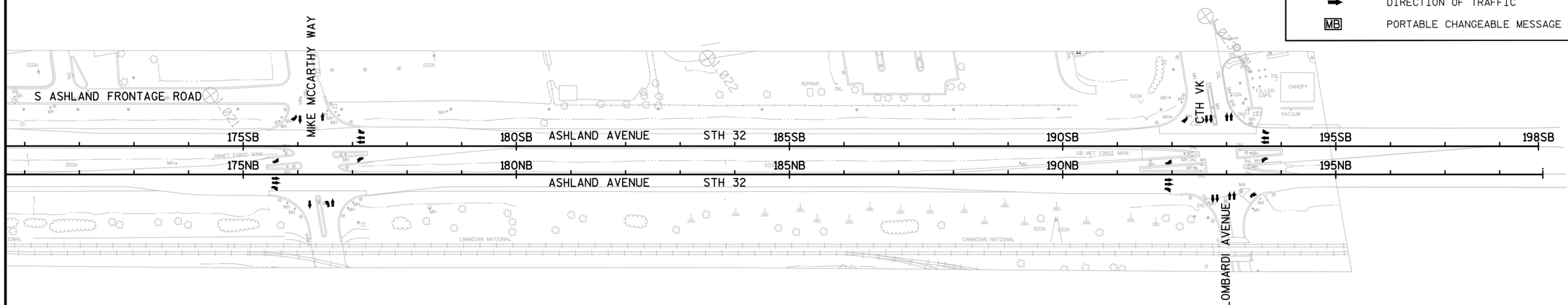


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



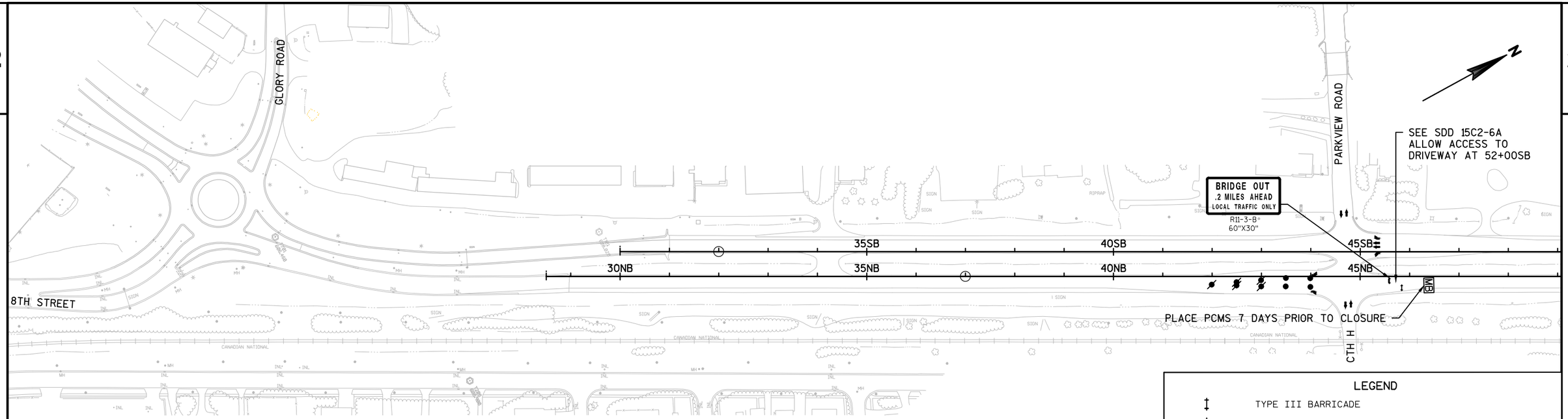
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 1	SHEET 55	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\025001_TC 200SCALE.DWG
LAYOUT NAME - 025003_TC

PLOT DATE : 5/24/2016 9:09 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

2

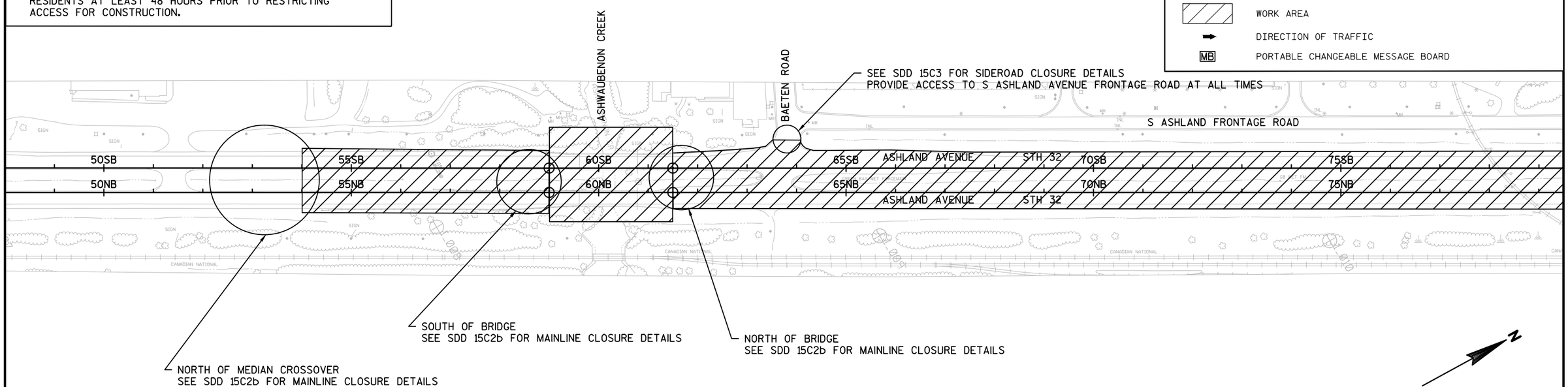


TRAFFIC CONTROL NOTES

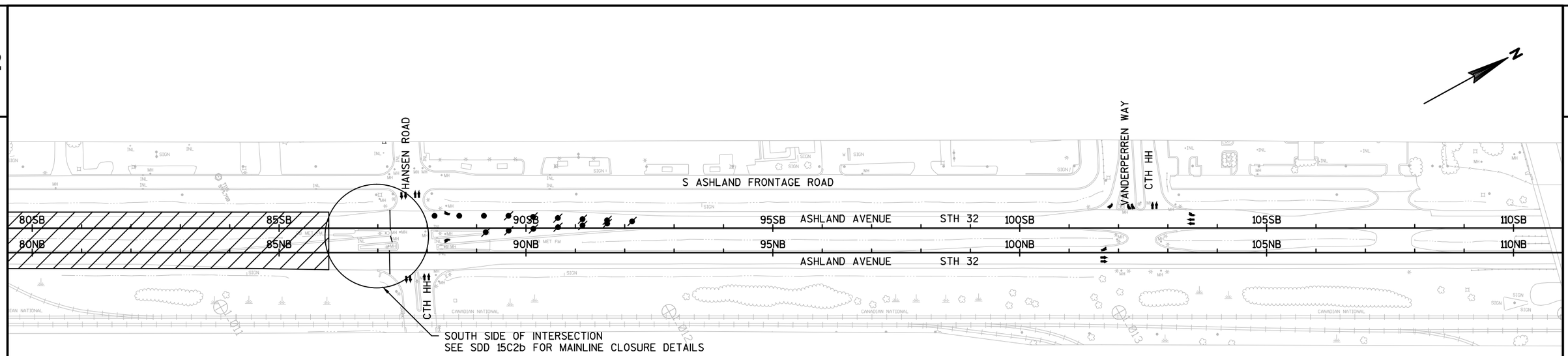
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 2	SHEET 56	E

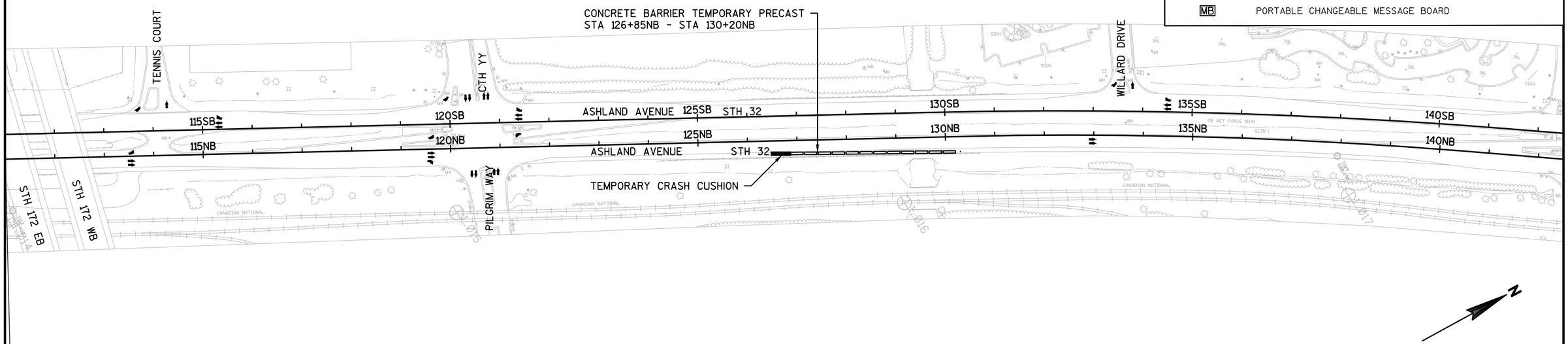


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

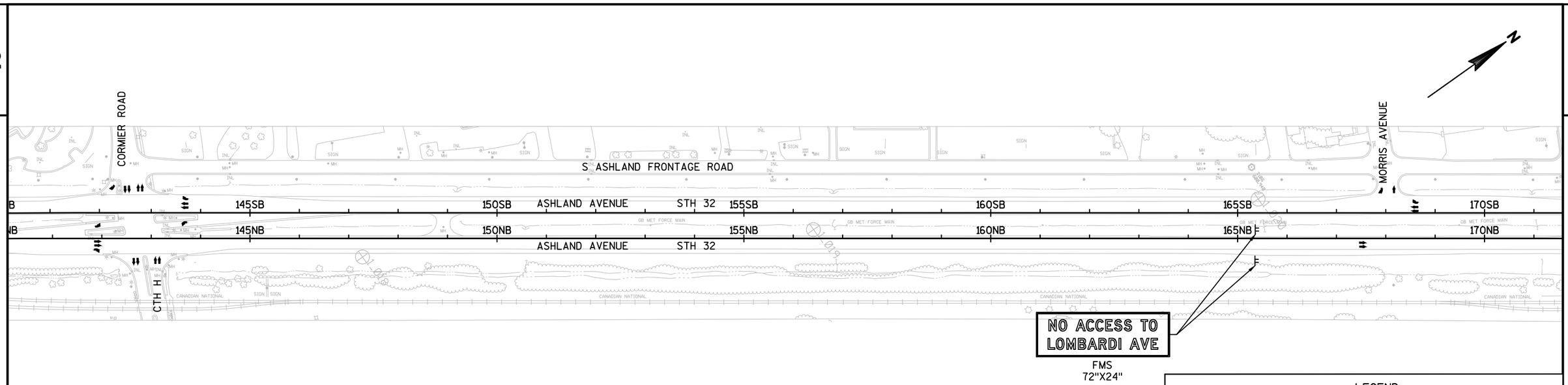
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 2	SHEET 57	E

2

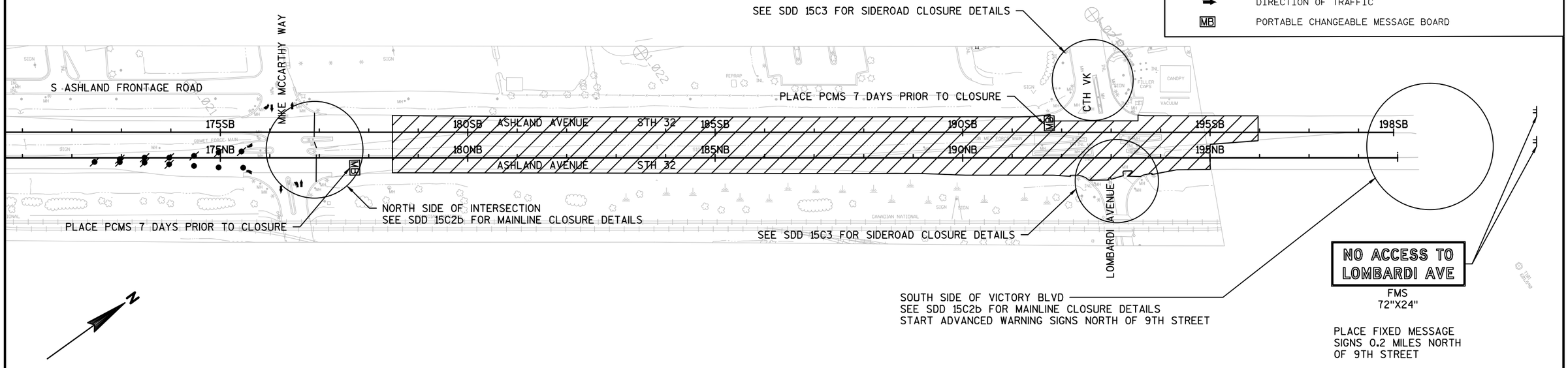


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

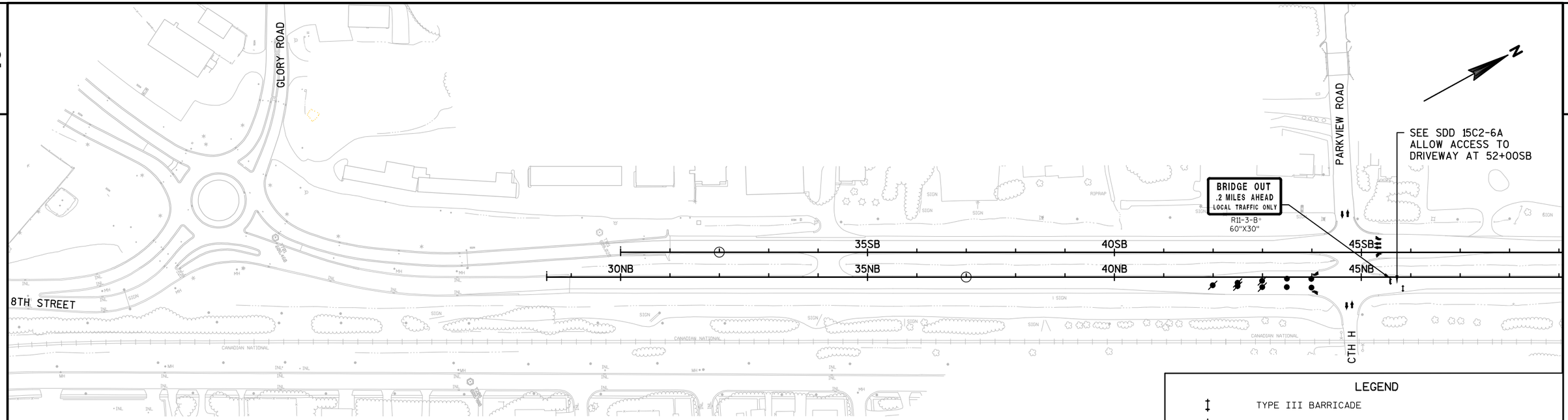
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 2	SHEET 58	E

2

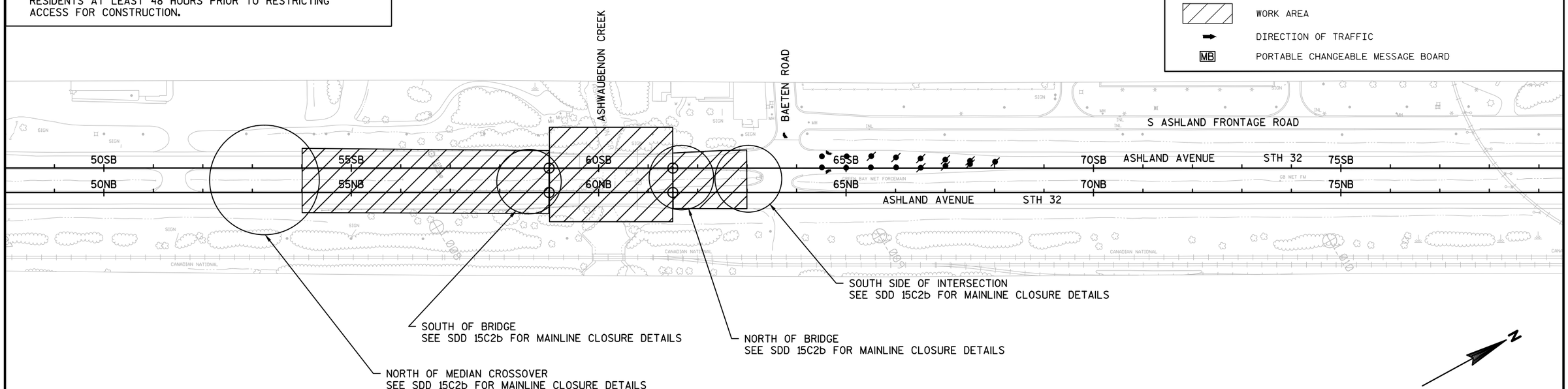


TRAFFIC CONTROL NOTES

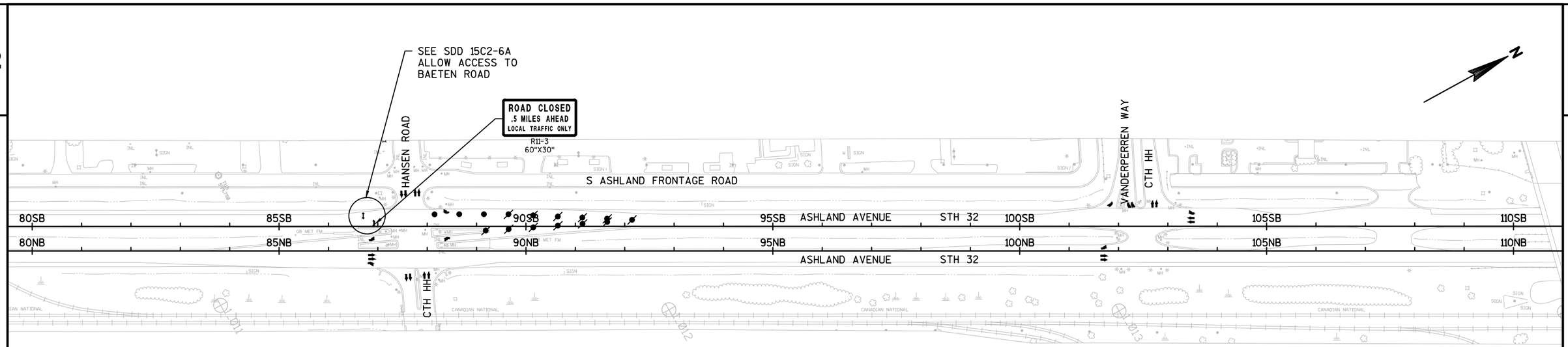
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 3	SHEET 59	E

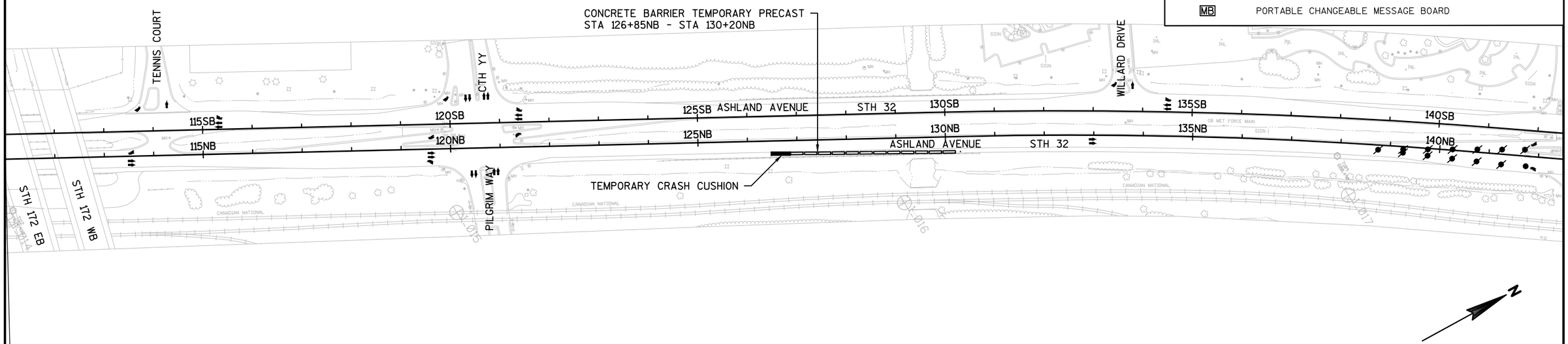


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

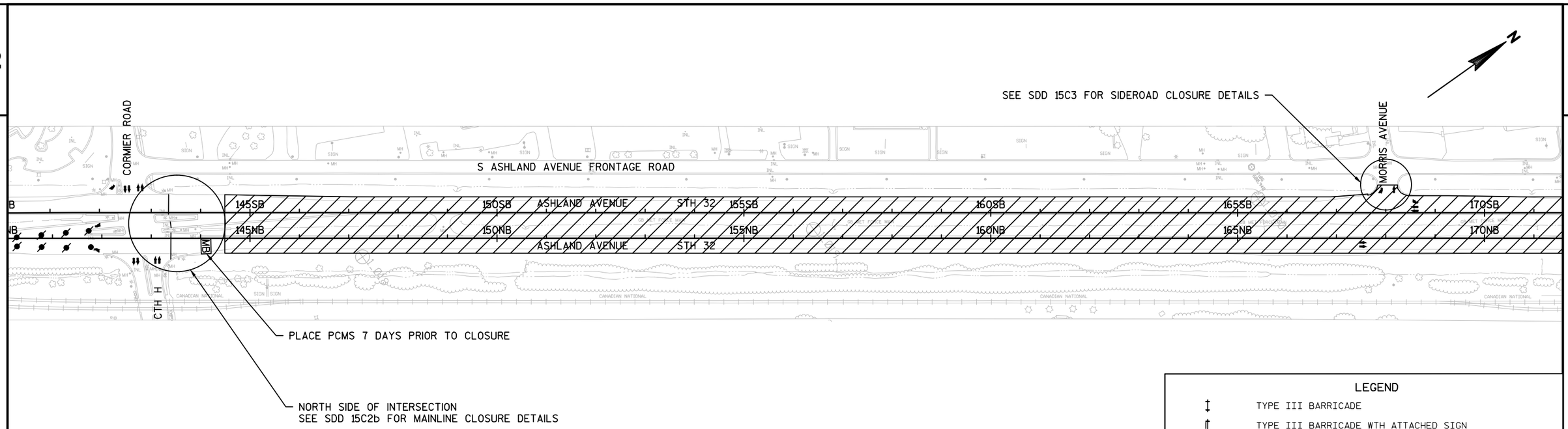
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 3	SHEET 60	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\025001_TC 200SCALE.DWG
LAYOUT NAME - 025008_TC

PLOT DATE : 5/24/2016 9:10 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : **********

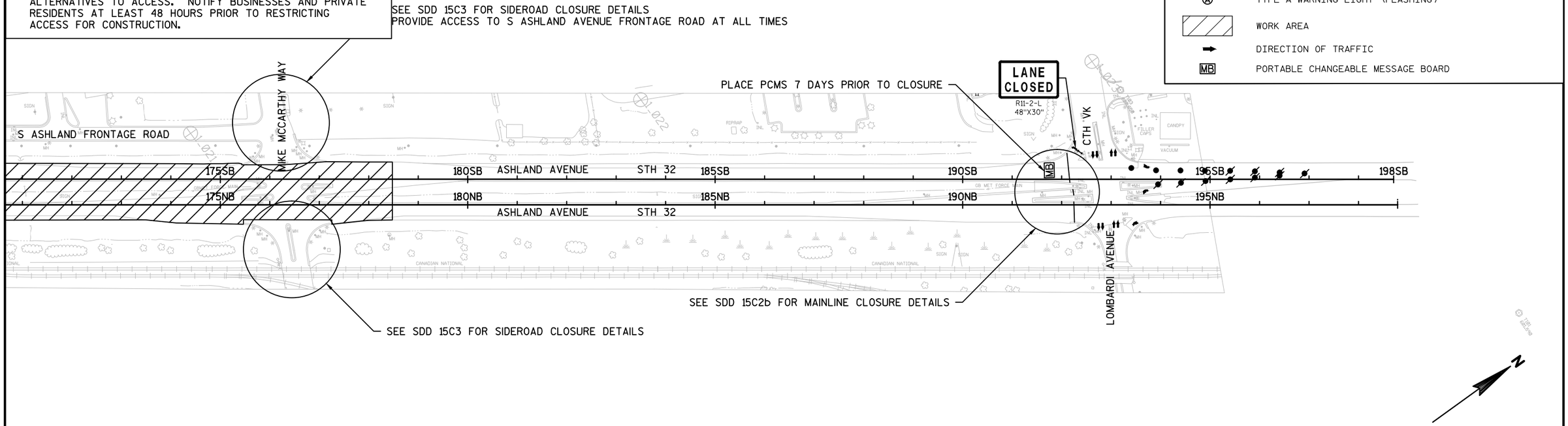


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

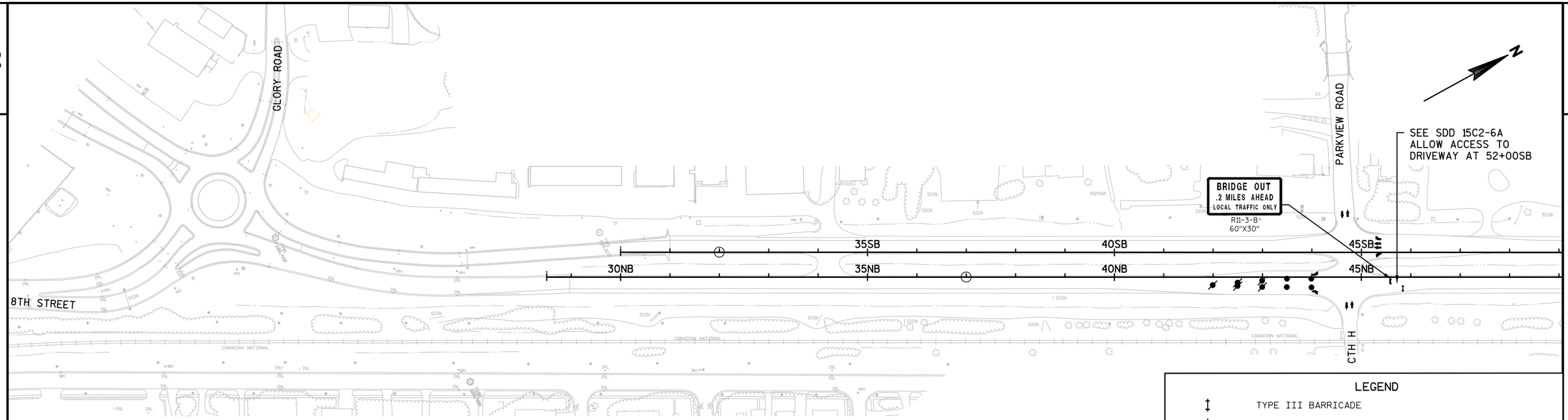
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 3	SHEET 61	E

2

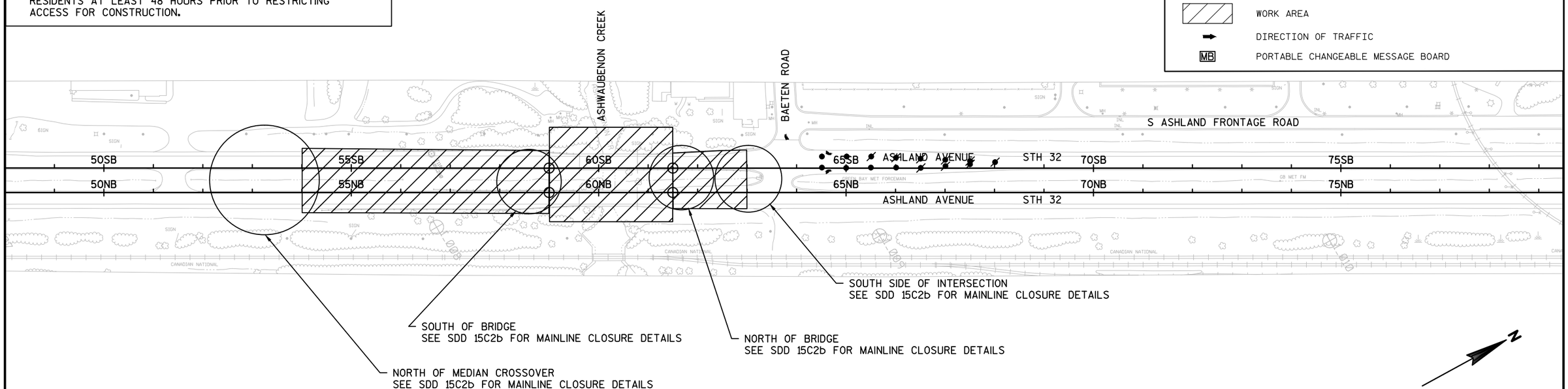


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

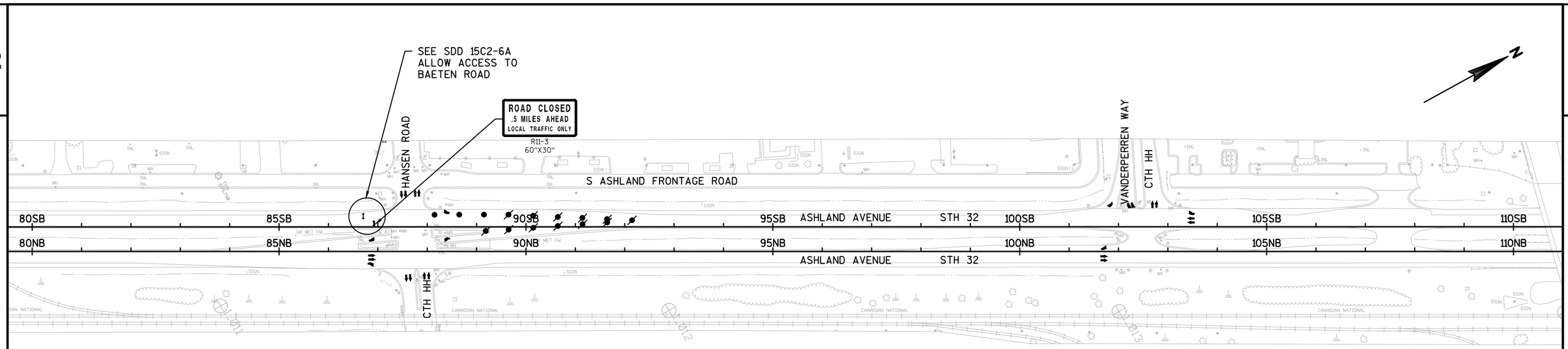
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 4	SHEET 62	E

2

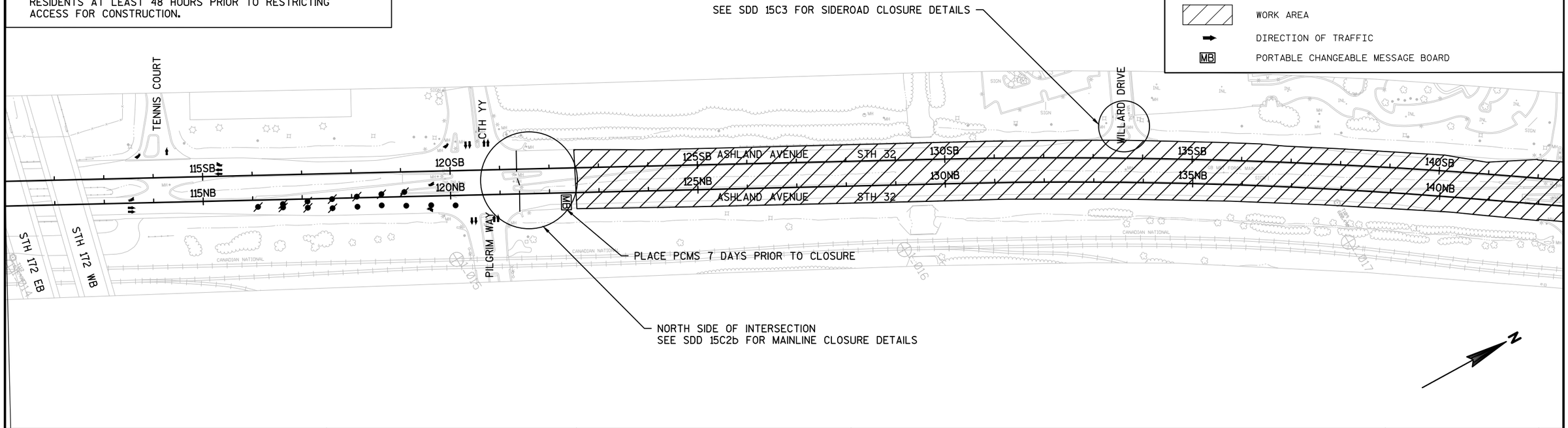


TRAFFIC CONTROL NOTES

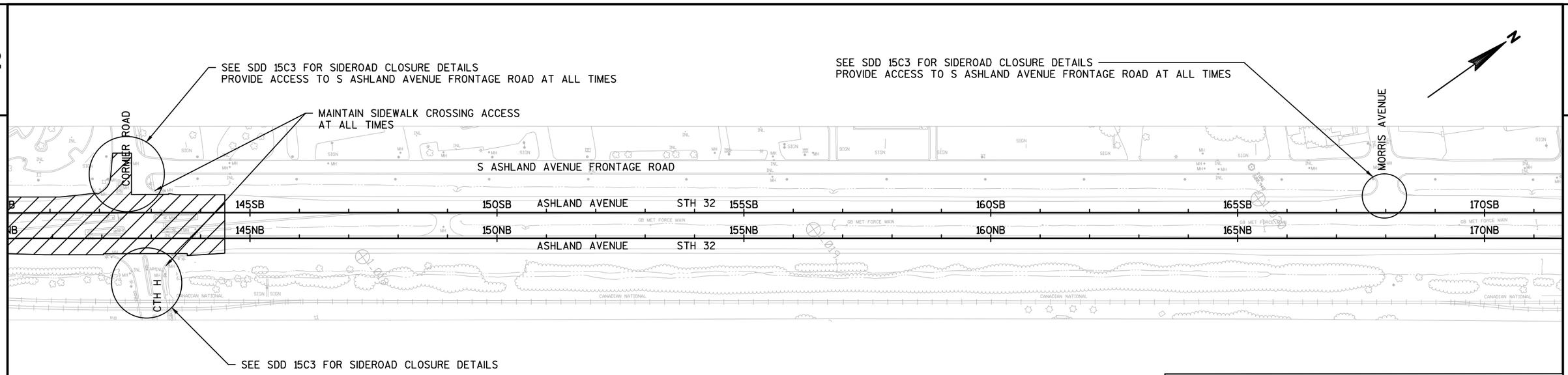
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 4	SHEET 63	E

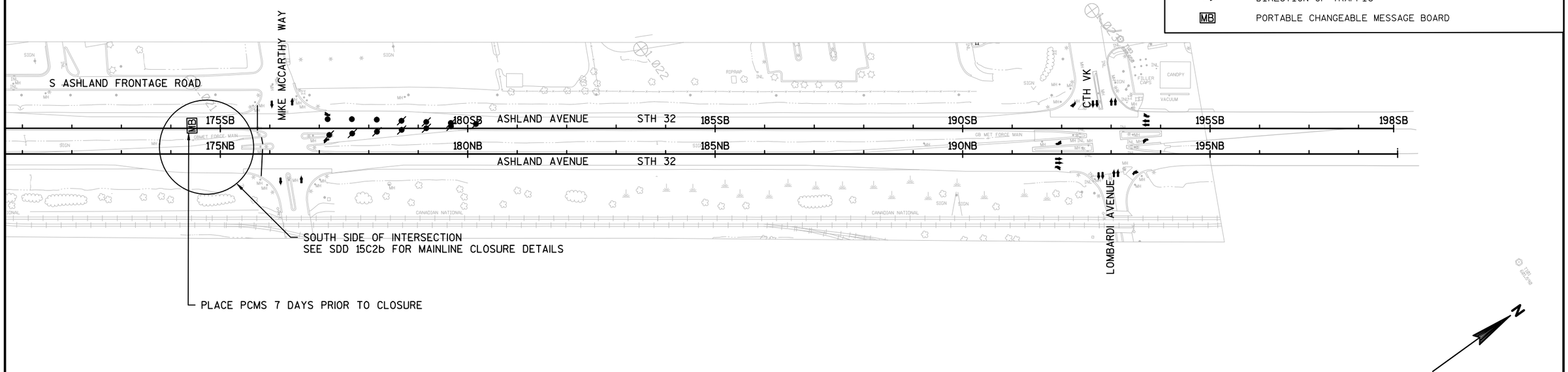


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

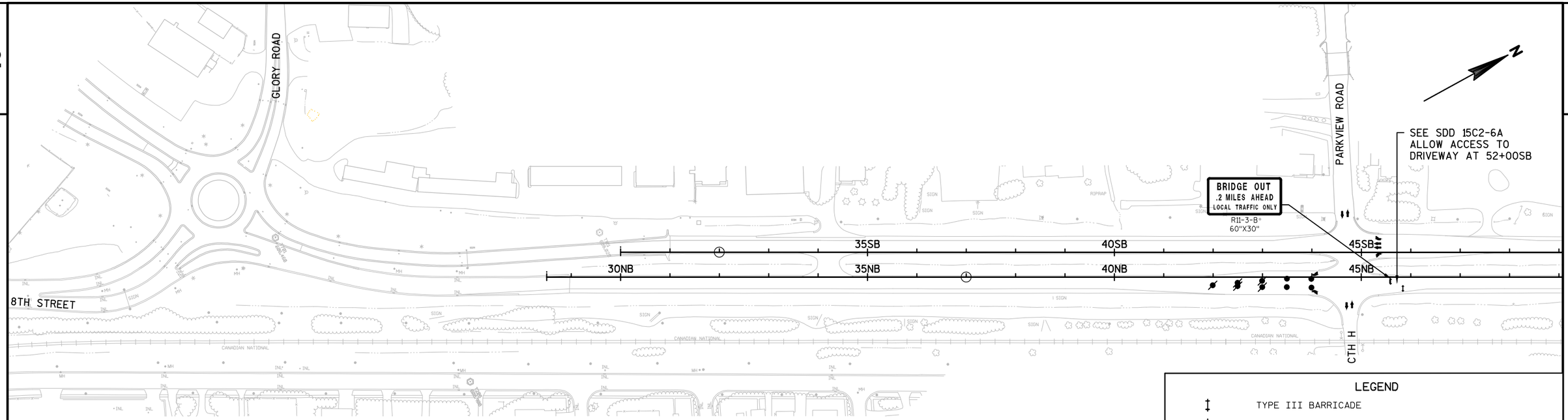
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 4	SHEET 64	E

2

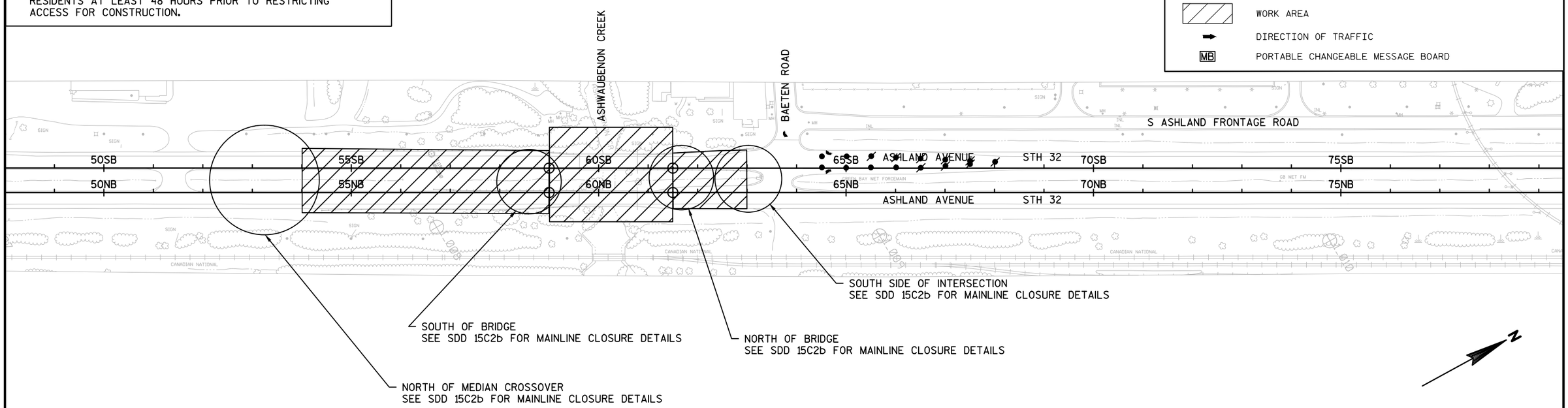


TRAFFIC CONTROL NOTES

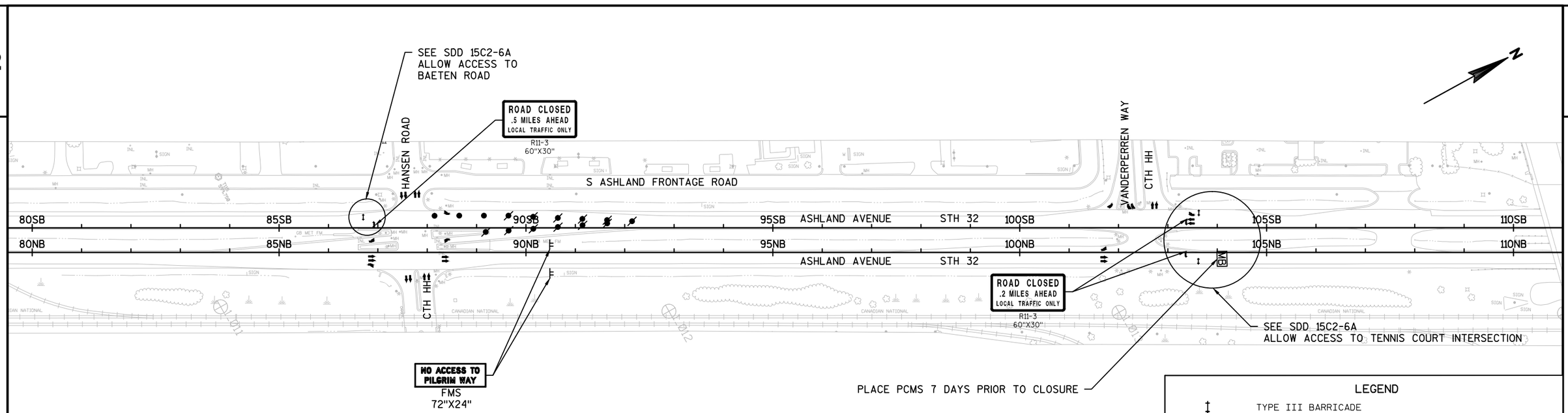
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 5	SHEET 65	E

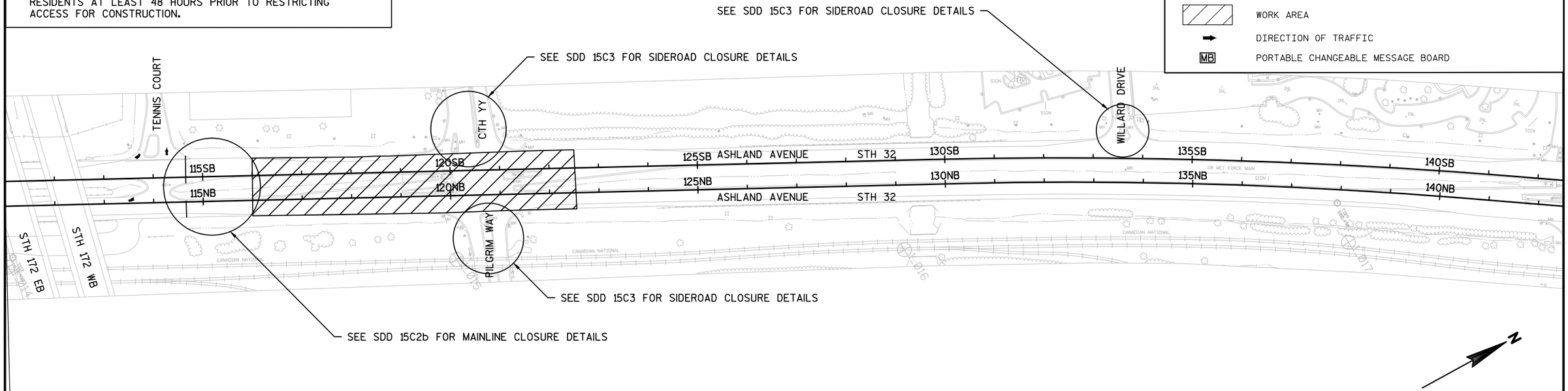


TRAFFIC CONTROL NOTES

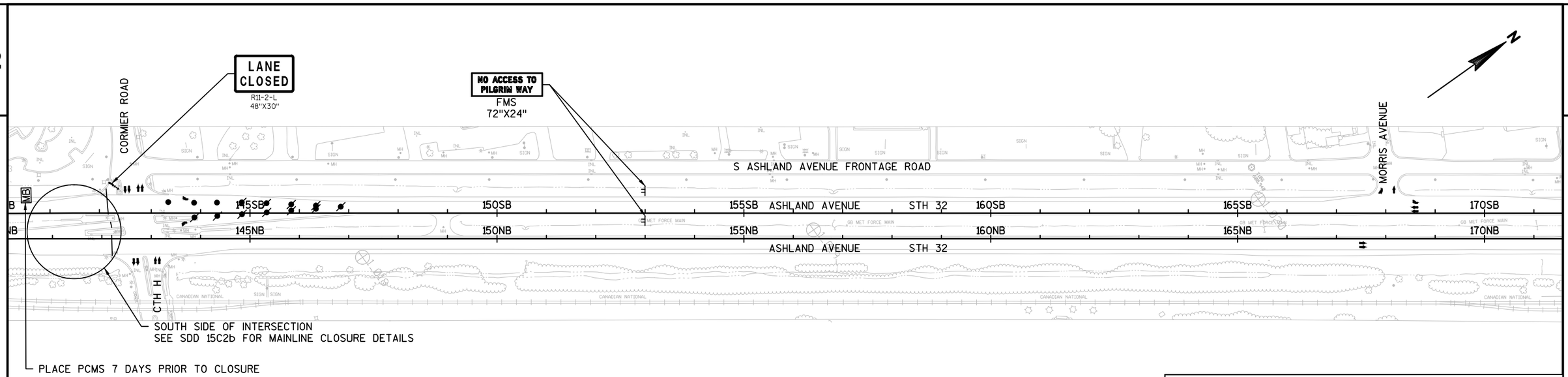
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 5	SHEET 66	E

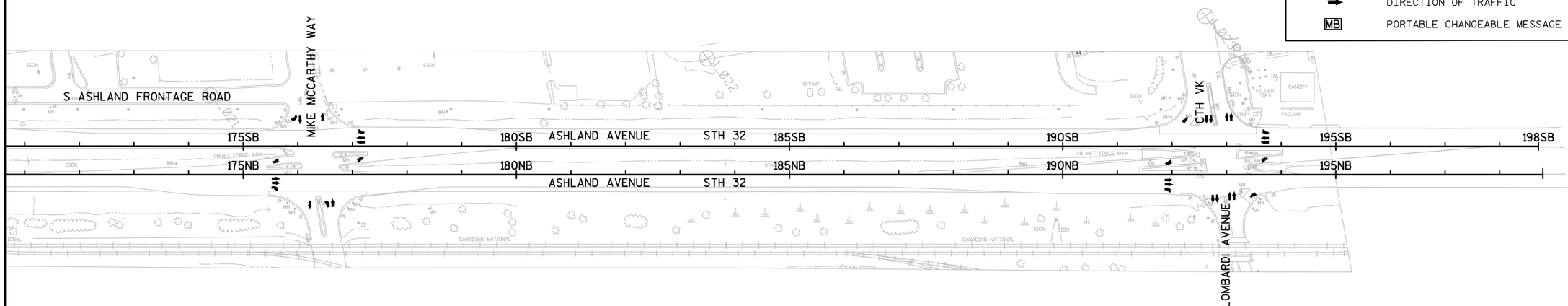


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



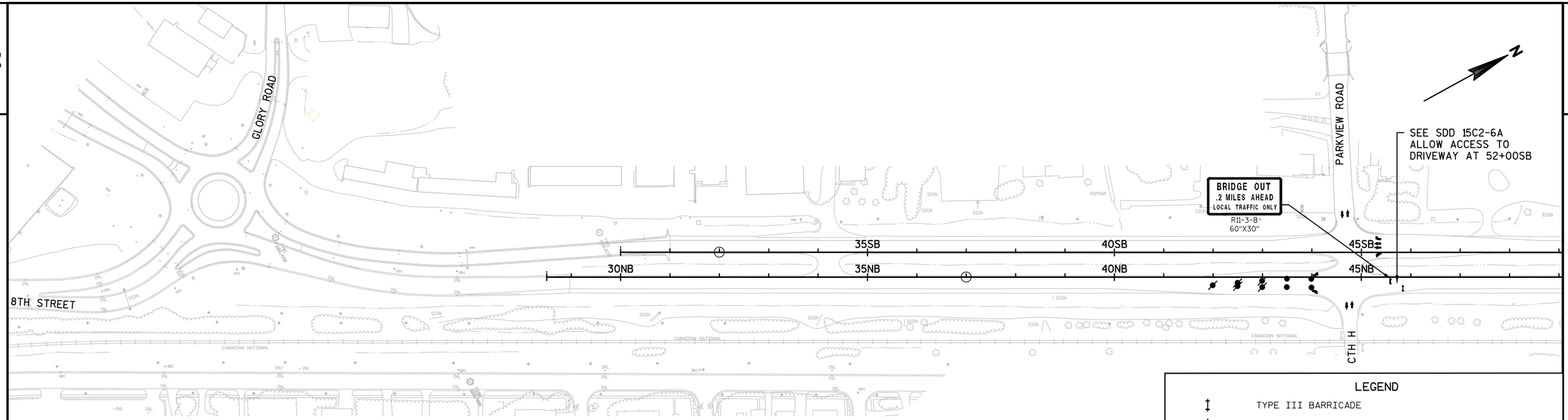
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 5	SHEET 67	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\025001_TC 200SCALE.DWG
LAYOUT NAME - 025015_TC

PLOT DATE : 5/24/2016 9:10 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

2

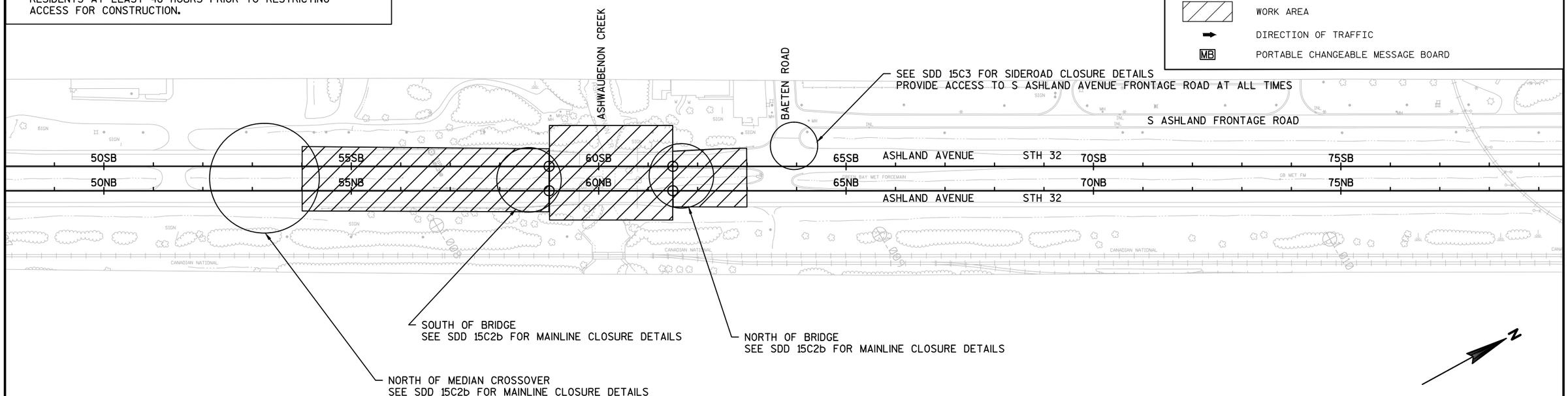


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

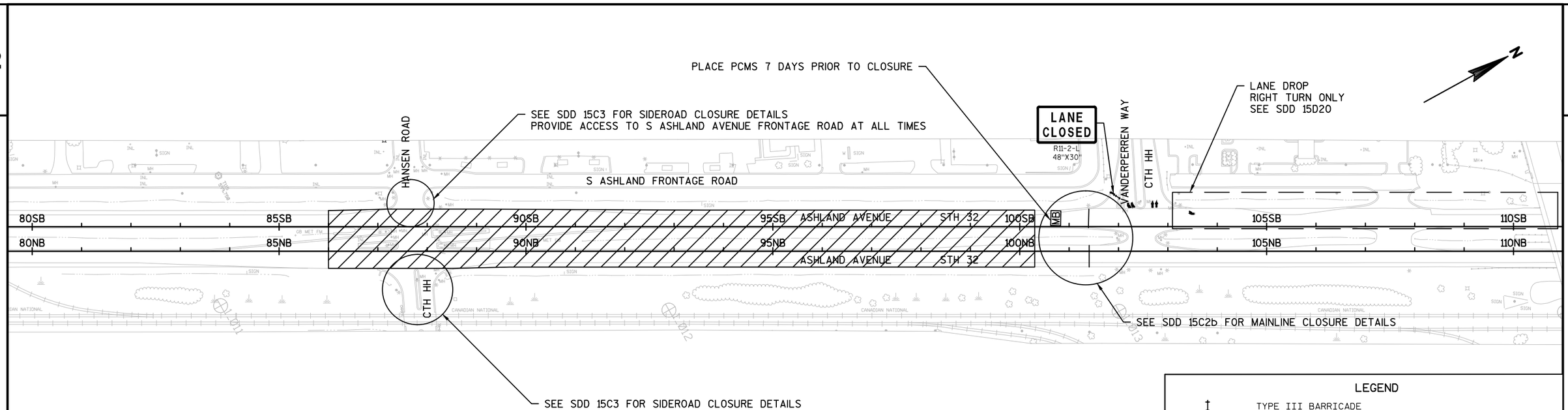
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 6	SHEET 68	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\025001_TC 200SCALE.DWG
LAYOUT NAME - 025016_TC
PLOT DATE : 5/24/2016 9:11 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

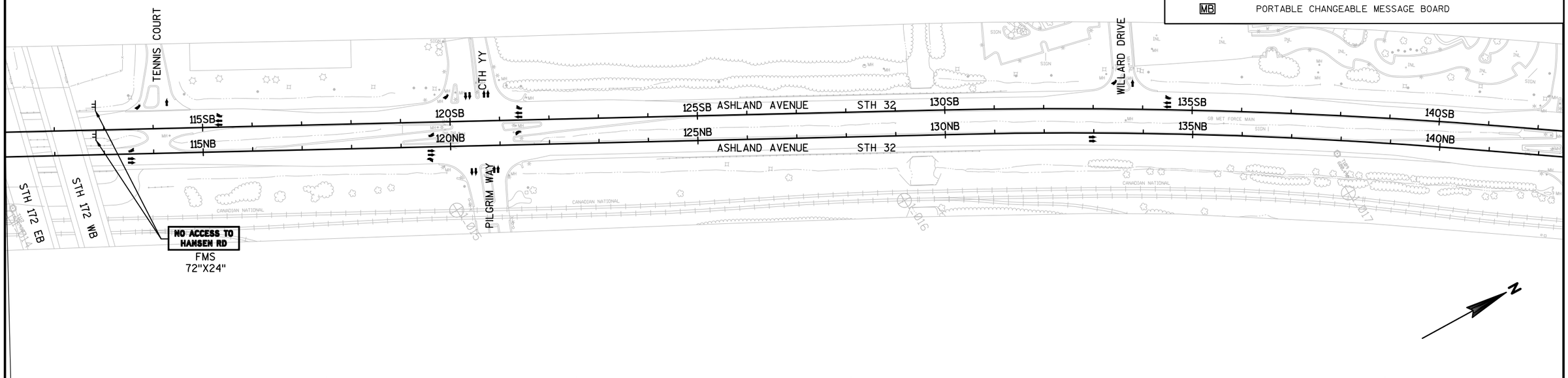


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

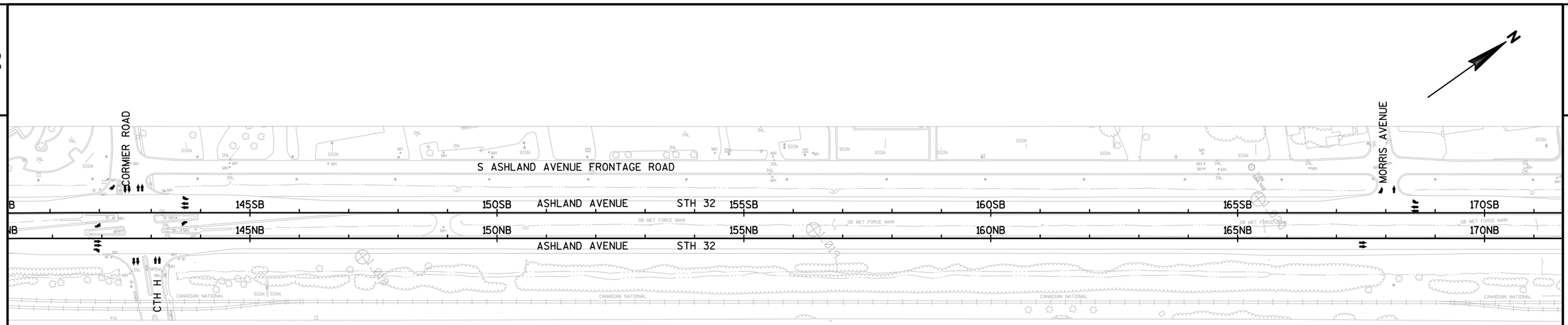


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 6	SHEET 69	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\025001_TC 200SCALE.DWG
LAYOUT NAME - 025017_TC

PLOT DATE : 5/24/2016 9:11 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44

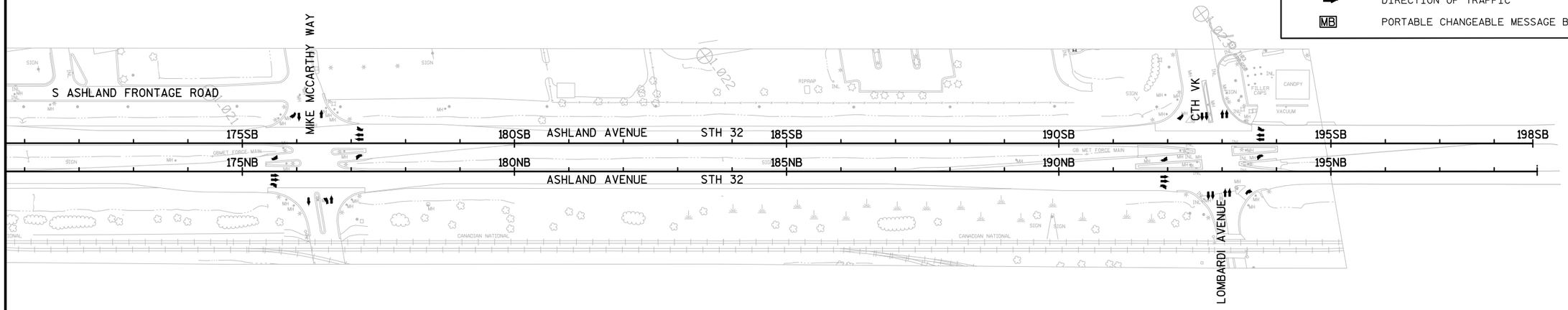


TRAFFIC CONTROL NOTES

1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

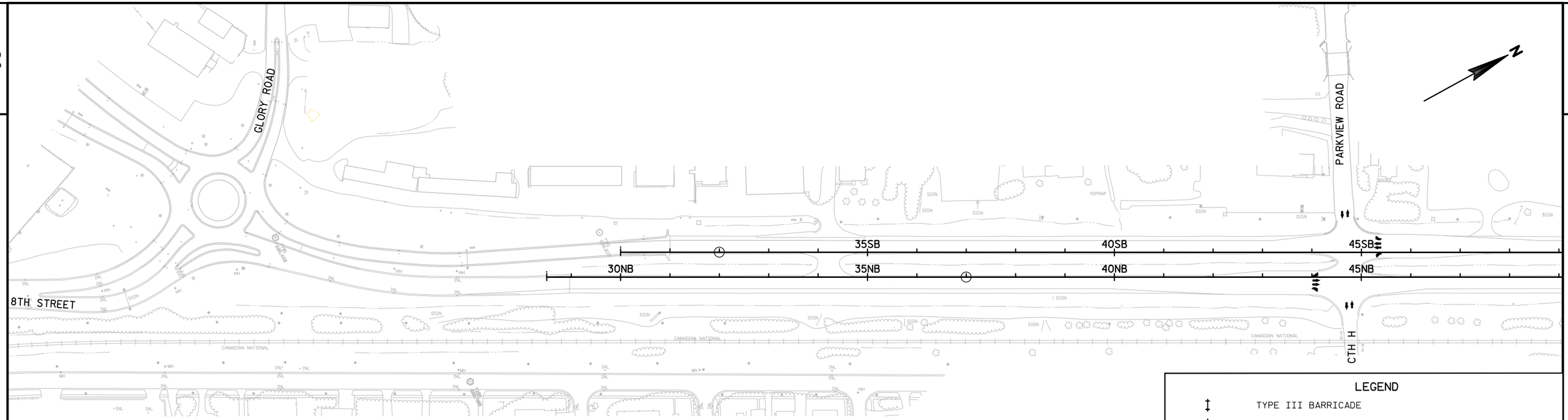
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 6	SHEET 70	E

2

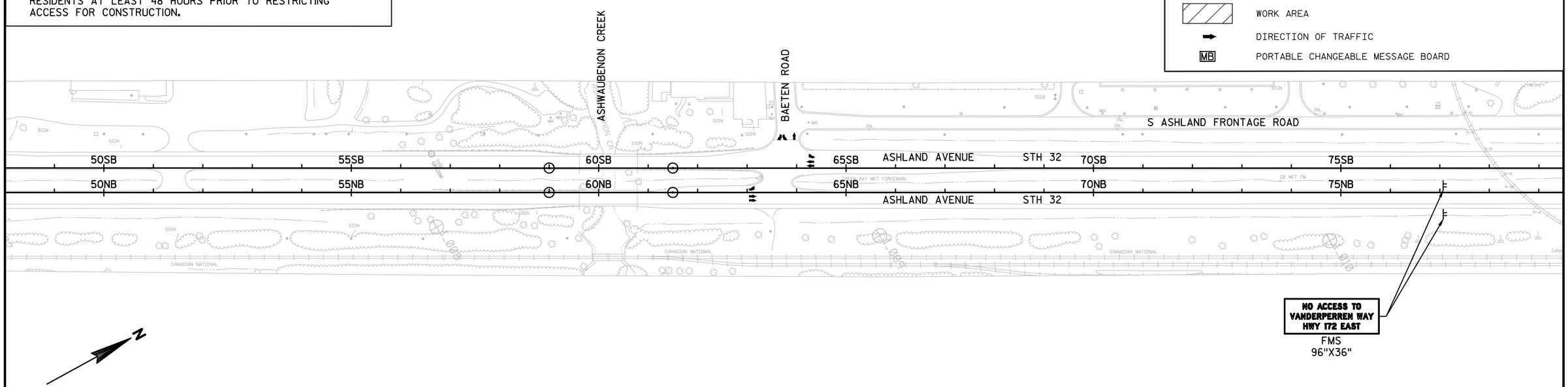


TRAFFIC CONTROL NOTES

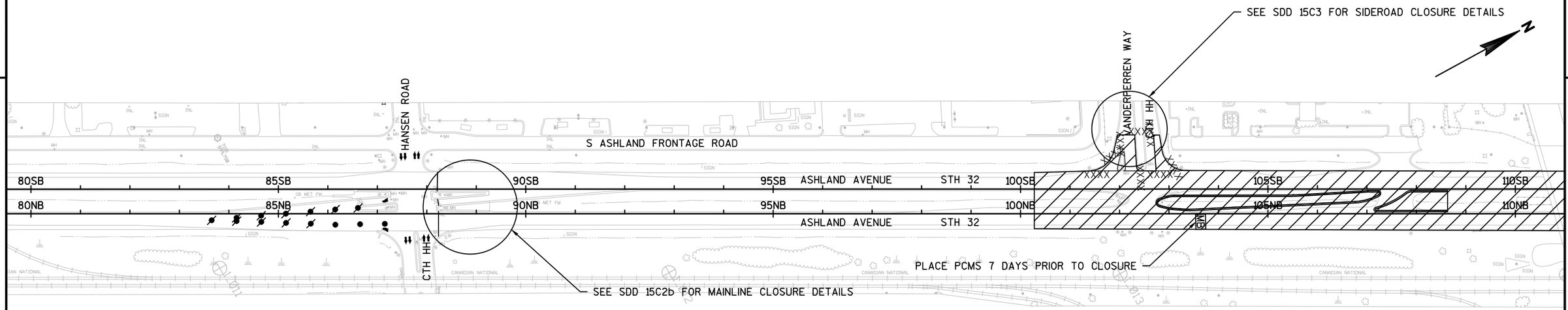
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 7	SHEET 71	E

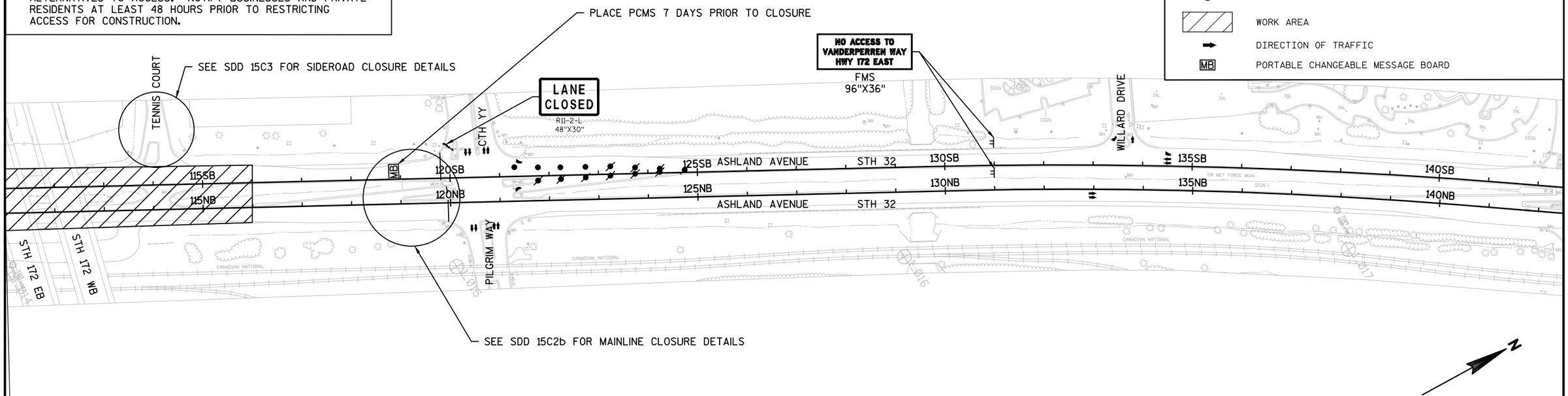


TRAFFIC CONTROL NOTES

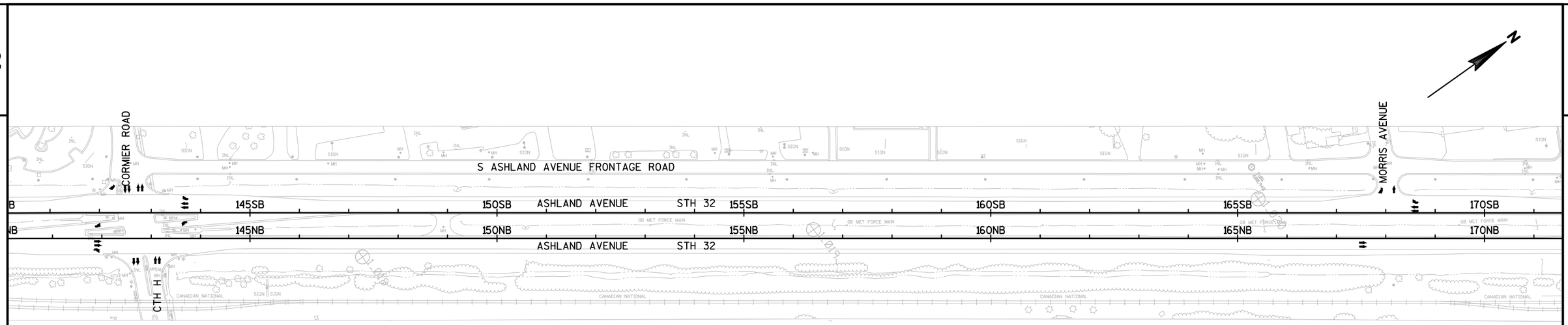
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 7	SHEET 72	E

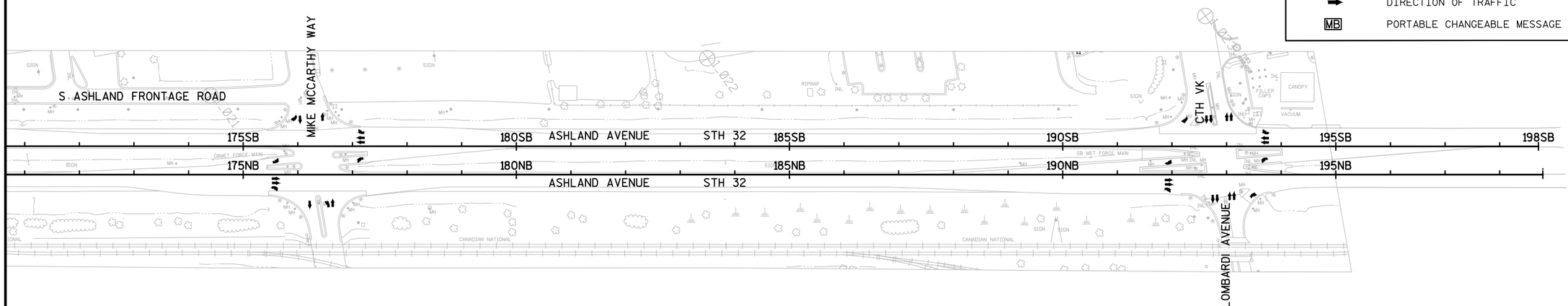


TRAFFIC CONTROL NOTES

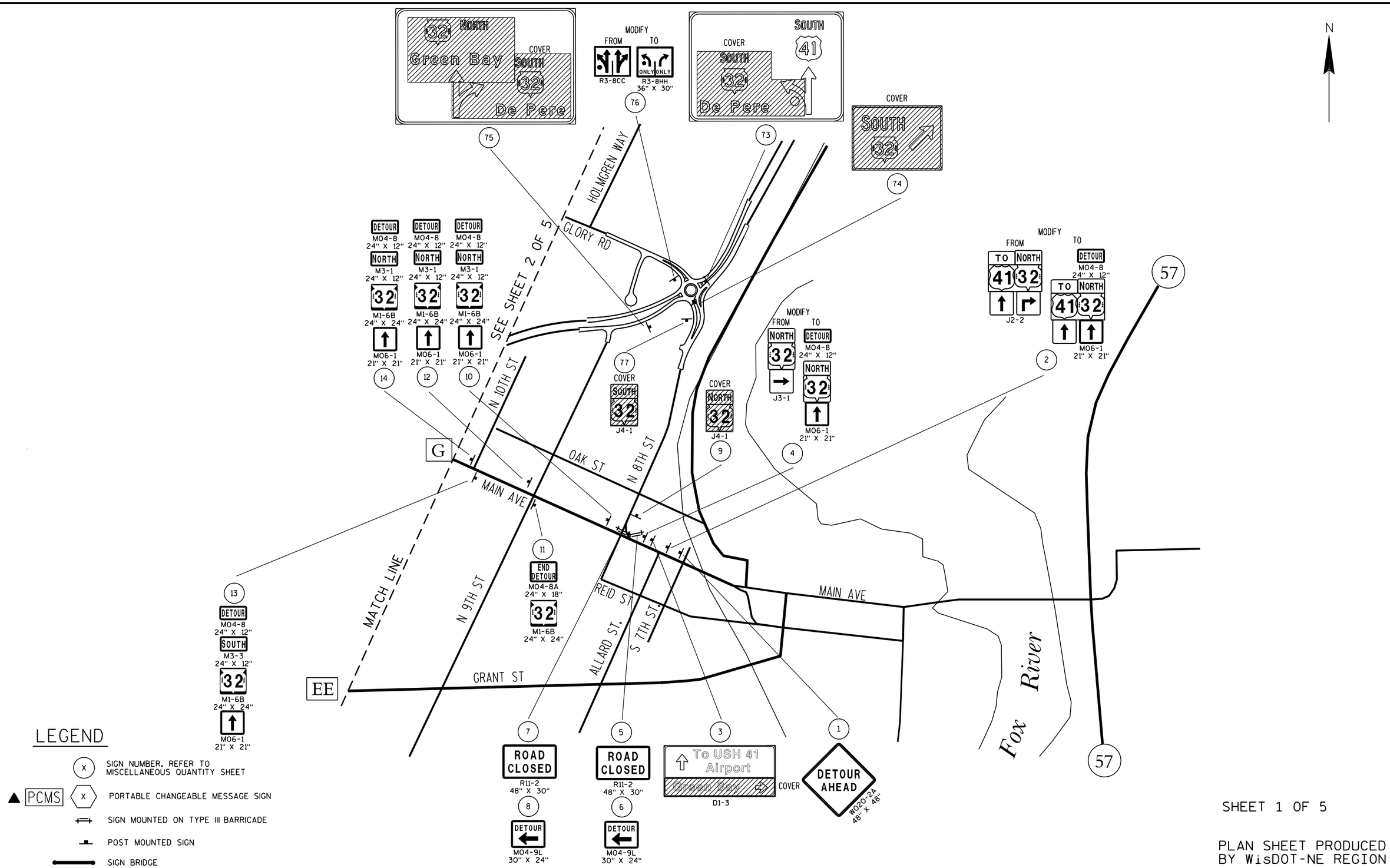
1. REFERENCE SDD 15C4-3 FOR ALL SIDE ROAD AND MAINLINE ADVANCED WARNING.
2. PROVIDE ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES. IF INTERFERENCE BECOMES UNAVOIDABLE DURING CONSTRUCTION OPERATIONS, CONTACT OWNERS TO SEEK ALTERNATIVES TO ACCESS. NOTIFY BUSINESSES AND PRIVATE RESIDENTS AT LEAST 48 HOURS PRIOR TO RESTRICTING ACCESS FOR CONSTRUCTION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- FIXED MESSAGE SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	TRAFFIC CONTROL PLAN - STAGE 7	SHEET 73	E



SHEET 1 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71/72	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET 74	E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32\Ashland - 8th - Lombardi ave\027001_dt.dgn PLOT DATE : 31-MAR-2016 16:49 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

* SIGNS TO BE REMOVED ON AUGUST 1, 2017 OR ONCE THE ASHWAUBENON CREEK STRUCTURE IS COMPLETED, WHICHEVER IS FIRST

NORTH M3-1 36" X 18"
32 M1-6B 36" X 36"
DETOUR AHEAD W020-2A 48" X 48" (16A) (16B) *

DETOUR M04-8 36" X 18"
NORTH M3-1 36" X 18"
32 M1-6B 36" X 36"
M06-1 30" X 30" (16C) (16D) *

ASHLAND AVE CLOSED AHEAD
FOLLOW HWY 32 N DETOUR
FMS 114" X 72" (16E) (16F) *

DETOUR M04-8 24" X 12"
SOUTH M3-3 24" X 12"
32 M1-6B 24" X 24"
M06-2 21" X 21" (44)

DETOUR M04-8 24" X 12"
SOUTH M3-3 24" X 12"
32 M1-6B 24" X 24"
M06-2 21" X 21" (43)

DETOUR M04-8 24" X 12"
SOUTH M3-3 24" X 12"
32 M1-6B 24" X 24"
M05-1L 21" X 21" (42)

CTH G

EXIT 163 A
SOUTH 41
G Main Ave
EXIT ONLY

SOUTH M03-3 36" X 18"
32 M01-56B 36" X 36" (41)

EXIT 163 A
SOUTH 41
G Main Ave ½ MILE
EXIT ONLY

SOUTH M03-3 36" X 18"
32 M01-56B 36" X 36" (40)

SOUTH 41 32 M01-56B 36" X 36" (39)

EXIT 164 A
SOUTH 41
AAA Oneida St Waube La
EXIT ONLY

SOUTH 41 32 M01-56B 36" X 36" (38)

EXIT 164 A
SOUTH 41
AAA Oneida St Waube La ¼ MILE
EXIT ONLY

SEE SHEET 3 OF 5

MATCH LINE

WAUBE LN.

USH 41/STH 32 SB
USH 41/STH 32 NB

ONEIDA ST.

MATCH LINE

SEE SHEET 1 OF 5

MAIN AVE

(16G) (16H) *
DETOUR M04-8 36" X 18"
NORTH M3-1 36" X 18"
32 M1-6B 36" X 36"
M06-1 30" X 30"

(45)
DETOUR M04-8 24" X 12"
SOUTH M3-3 24" X 12"
32 M1-6B 24" X 24"
M06-2 21" X 21"

(46)
DETOUR M04-8 24" X 12"
SOUTH M3-3 24" X 12"
32 M1-6B 24" X 24"
M06-1 21" X 21"

(15)
DETOUR M04-8 24" X 12"
NORTH M3-1 24" X 12"
32 M1-6B 24" X 24"
M06-2 21" X 21"

(15A) *
EXIT 163 B
Ashland Ave CLOSED
C20-60 108" X 24"

(16)
DETOUR M04-8 24" X 12"
NORTH M3-1 24" X 12"
32 M1-6B 24" X 24"
M06-1 21" X 21"

EXIT 164 B | EXIT 164 A
41 NORTH 32 M01-56B 36" X 36" (17)
172 TO 43 A Straubel Airport ½ MILE
AAA Oneida St Waube La
EXIT ONLY

EXIT 164 B | EXIT 164 A
41 NORTH 18 32 M01-56B 36" X 36"
172 TO 43 A Straubel Airport
AAA Oneida St Waube La
EXIT ONLY

LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN
- SIGN BRIDGE

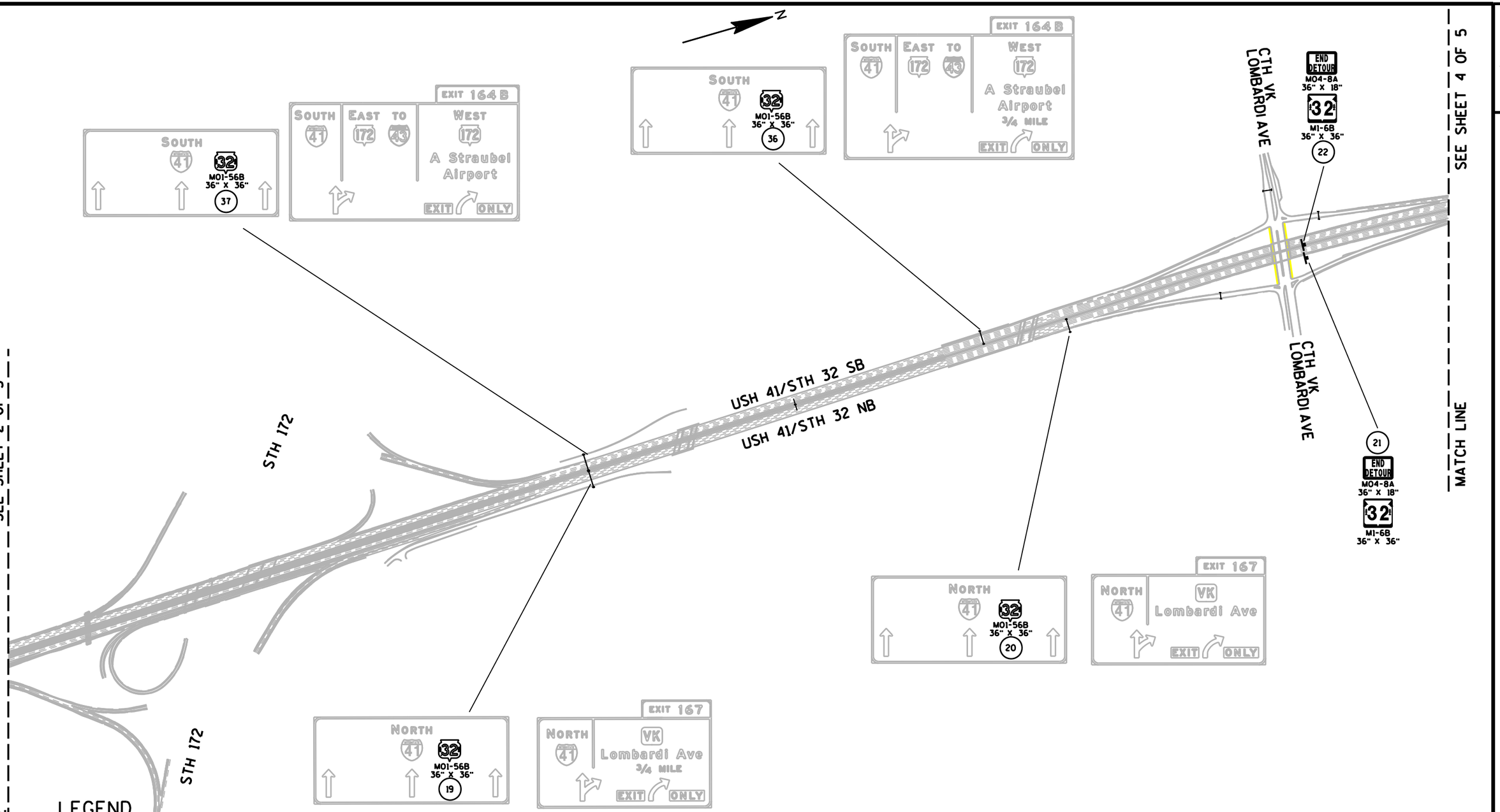
SHEET 2 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71/72	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET 75	E

SEE SHEET 2 OF 5

MATCH LINE



SEE SHEET 4 OF 5

MATCH LINE

LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN
- SIGN BRIDGE

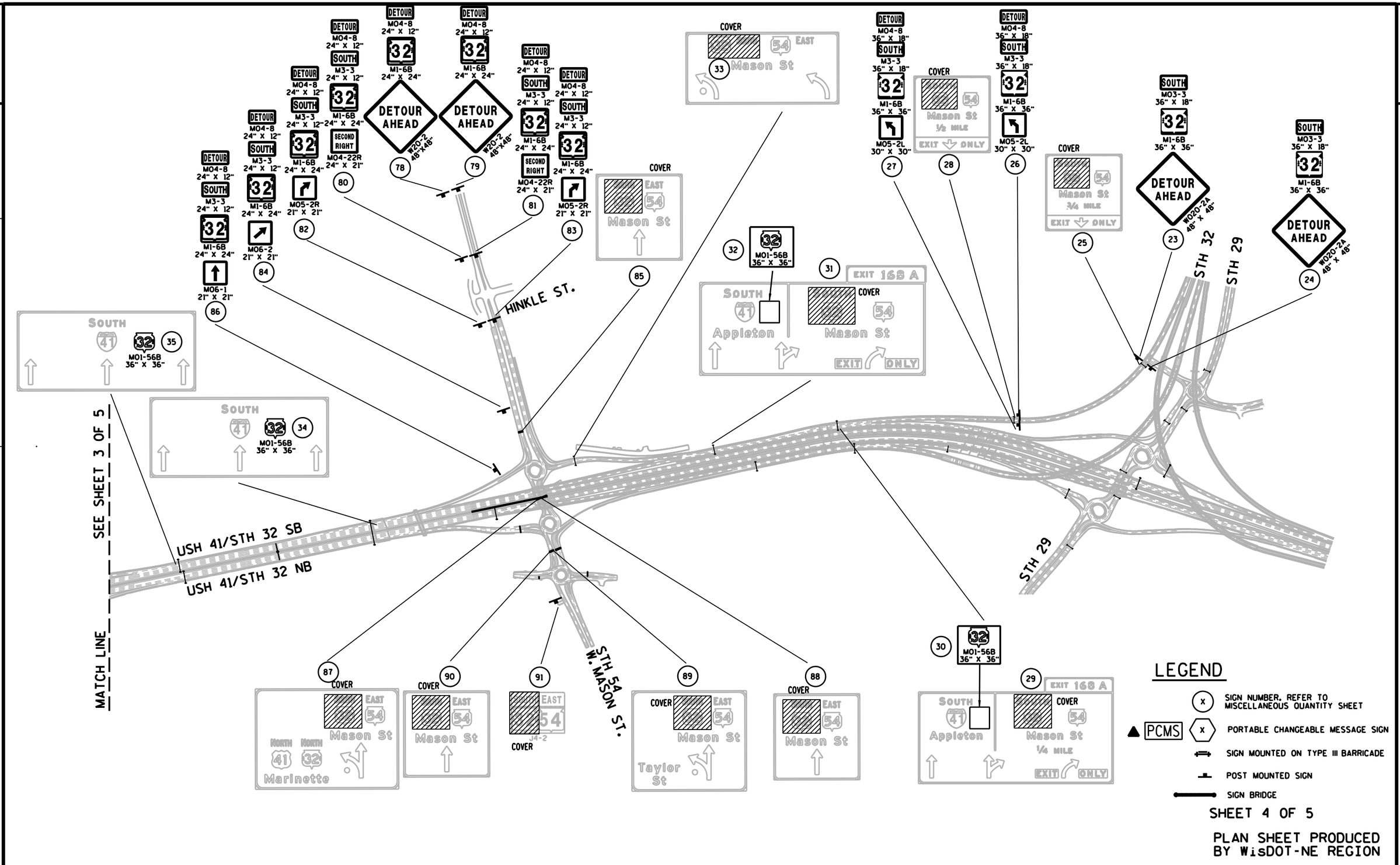
SHEET 3 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71/72	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

2



SHEET 4 OF 5

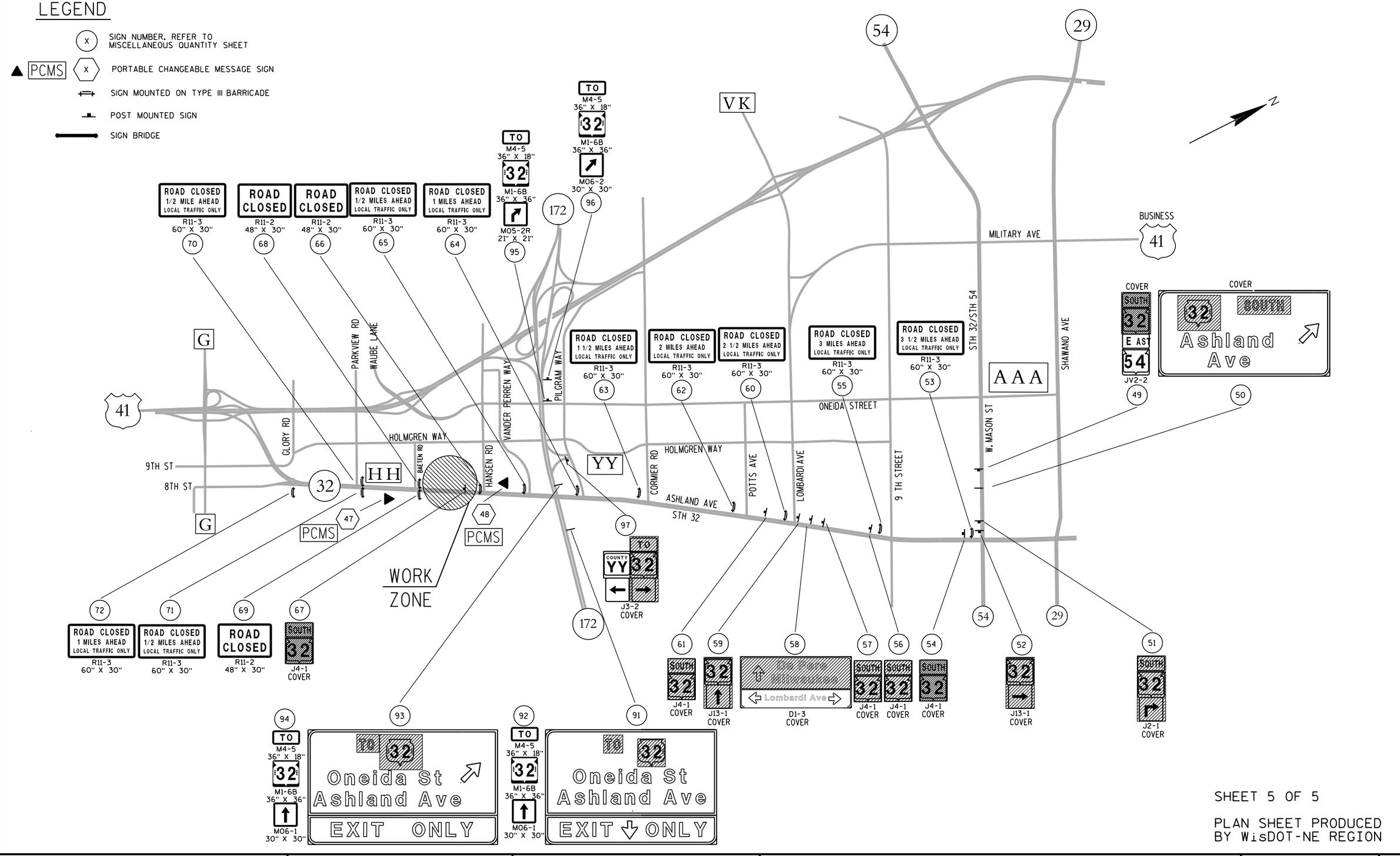
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71/72	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN
- SIGN BRIDGE



SHEET 5 OF 5

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4190-16-71/72	HWY: STH 32	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET 78 E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32\Ashland - 8th - Lombardi ave\027005_dt.dgn PLOT DATE : 31-MAR-2016 16:50 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 3000:1

					4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0010	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000	
0020	203.0200	Removing Old Structure (station) 01. STA 129+53	LS	1.000		1.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. STA 60+25 NB	LS	1.000		1.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. STA 60+25 SB	LS	1.000		1.000
0050	204.0100	Removing Pavement	SY	952.000	952.000	
0060	204.0115	Removing Asphaltic Surface Butt Joints	SY	361.000	361.000	
0070	204.0120	Removing Asphaltic Surface Milling	SY	144,770.000	144,770.000	
0080	204.0150	Removing Curb & Gutter	LF	175.000	175.000	
0090	204.0195	Removing Concrete Bases	EACH	19.000	19.000	
0100	204.0220	Removing Inlets	EACH	1.000	1.000	
0110	205.0100	Excavation Common	CY	2,446.000	2,446.000	
0120	206.1000	Excavation for Structures Bridges (structure) 01. B-5-408	LS	1.000		1.000
0130	206.1000	Excavation for Structures Bridges (structure) 01. B-5-409	LS	1.000		1.000
0140	206.2000	Excavation for Structures Culverts (structure) 01. B-5-35	LS	1.000		1.000
0150	206.5000	Cofferdams (structure) 01. B-5-35	LS	1.000		1.000
0160	208.0100	Borrow	CY	321.000	321.000	
0170	210.1500	Backfill Structure Type A	TON	1,600.000		1,600.000
0180	210.2500	Backfill Structure Type B	TON	820.000		820.000
0190	213.0100	Finishing Roadway (project) 01. 4190-16-71	EACH	1.000	1.000	
0200	305.0110	Base Aggregate Dense 3/4-Inch	TON	892.000	892.000	
0210	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,191.000	3,191.000	
0220	305.0500	Shaping Shoulders	STA	560.000	560.000	
0230	312.0110	Select Crushed Material	TON	1,200.000	1,200.000	
0240	415.0120	Concrete Pavement 12-Inch	SY	108.000	108.000	
0250	415.0410	Concrete Pavement Approach Slab	SY	160.000	160.000	
0260	416.0610	Drilled Tie Bars	EACH	307.000	307.000	
0270	416.0620	Drilled Dowel Bars	EACH	97.000	97.000	
0280	416.1715	Concrete Pavement Repair SHES	SY	42.000	42.000	
0290	416.1725	Concrete Pavement Replacement SHES	SY	910.000	910.000	
0300	440.4410	Incentive IRI Ride	DOL	25,280.000	25,280.000	
0310	455.0605	Tack Coat	GAL	8,068.000	8,068.000	
0320	460.2000	Incentive Density HMA Pavement	DOL	32,620.000	32,620.000	
0330	460.2010	Incentive Air Voids HMA Pavement	DOL	28,170.000	28,170.000	
0340	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	134,041.000	134,041.000	
0350	460.5223	HMA Pavement 3 LT 58-28 S	TON	3,277.000	3,277.000	
0360	460.5224	HMA Pavement 4 LT 58-28 S	TON	2,334.000	2,334.000	
0370	460.6223	HMA Pavement 3 MT 58-28 S	TON	18,995.000	18,995.000	

					4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0380	460.6424	HMA Pavement 4 MT 58-28 H	TON	12,269.000	12,269.000	
0390	465.0105	Asphaltic Surface	TON	510.000	510.000	
0400	465.0110	Asphaltic Surface Patching	TON	200.000	200.000	
0410	502.0100	Concrete Masonry Bridges	CY	594.000		594.000
0420	502.3200	Protective Surface Treatment	SY	896.000		896.000
0430	502.3210	Pigmented Surface Sealer	SY	218.000		218.000
0440	503.0146	Prestressed Girder Type I 45W-Inch	LF	960.000		960.000
0450	504.0100	Concrete Masonry Culverts	CY	48.000		48.000
0460	505.0400	Bar Steel Reinforcement HS Structures	LB	12,250.000		12,250.000
0470	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	74,780.000		74,780.000
0480	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	20.000		20.000
0490	506.4000	Steel Diaphragms (structure) 01. B-5-408	EACH	8.000		8.000
0500	506.4000	Steel Diaphragms (structure) 01. B-5-409	EACH	8.000		8.000
0510	509.1500	Concrete Surface Repair	SF	55.000		55.000
0520	511.1200	Temporary Shoring (structure) 01. B-5-35	SF	980.000		980.000
0530	516.0500	Rubberized Membrane Waterproofing	SY	59.000		59.000
0540	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000	
0550	550.0500	Pile Points	EACH	40.000		40.000
0560	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	4,050.000		4,050.000
0570	601.0150	Concrete Curb Integral Type D	LF	10.000	10.000	
0580	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	68.000	68.000	
0590	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	1,333.000	1,333.000	
0600	601.0600	Concrete Curb Pedestrian	LF	35.000	35.000	
0610	602.0415	Concrete Sidewalk 6-Inch	SF	100.000	100.000	
0620	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000	
0630	603.8000	Concrete Barrier Temporary Precast Delivered	LF	335.000	335.000	
0640	603.8125	Concrete Barrier Temporary Precast Installed	LF	335.000	335.000	
0650	606.0300	Riprap Heavy	CY	1,179.000	70.000	1,109.000
0660	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	112.000	112.000	
0670	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	696.000	696.000	
0680	611.0530	Manhole Covers Type J	EACH	1.000	1.000	
0690	611.0615	Inlet Covers Type F	EACH	10.000	10.000	
0700	611.0624	Inlet Covers Type H	EACH	1.000	1.000	
0710	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000	
0720	611.3004	Inlets 4-FT Diameter	EACH	6.000	6.000	
0730	611.3253	Inlets 2.5x3-FT	EACH	5.000	5.000	
0740	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000	

					4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0750	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	300.000		300.000
0760	614.0010	Barrier System Grading Shaping Finishing	EACH	5.000	5.000	
0770	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	8.000		8.000
0780	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000	
0790	614.0230	Steel Thrie Beam	LF	645.000	645.000	
0800	614.0905	Crash Cushions Temporary	EACH	1.000	1.000	
0810	614.0920	Salvaged Rail	LF	4,153.000	4,153.000	
0820	614.2300	MGS Guardrail 3	LF	2,813.000	2,813.000	
0830	614.2500	MGS Thrie Beam Transition	LF	200.000	200.000	
0840	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000	
0850	614.2620	MGS Guardrail Terminal Type 2	EACH	5.000	5.000	
0860	619.1000	Mobilization	EACH	1.000	1.000	
0870	620.0300	Concrete Median Sloped Nose	SF	150.000	150.000	
0880	624.0100	Water	MGAL	63.000	63.000	
0890	625.0500	Salvaged Topsoil	SY	2,805.000	2,805.000	
0900	628.1104	Erosion Bales	EACH	30.000	30.000	
0910	628.1504	Silt Fence	LF	5,300.000	5,300.000	
0920	628.1520	Silt Fence Maintenance	LF	5,300.000	5,300.000	
0930	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000	
0940	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000	
0950	628.2002	Erosion Mat Class I Type A	SY	1,165.000	1,165.000	
0960	628.2023	Erosion Mat Class II Type B	SY	1,640.000	1,640.000	
0970	628.7015	Inlet Protection Type C	EACH	11.000	11.000	
0980	628.7504	Temporary Ditch Checks	LF	20.000	20.000	
0990	628.7555	Culvert Pipe Checks	EACH	10.000	10.000	
1000	628.7570	Rock Bags	EACH	50.000	50.000	
1010	629.0210	Fertilizer Type B	CWT	1.900	1.900	
1020	630.0140	Seeding Mixture No. 40	LB	50.000	50.000	
1030	630.0200	Seeding Temporary	LB	76.000	76.000	
1040	633.5200	Markers Culvert End	EACH	23.000	23.000	
1050	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	44.000	44.000	
1060	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	70.000	70.000	
1070	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	28.000	28.000	
1080	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	46.000	46.000	
1090	637.2210	Signs Type II Reflective H	SF	1,984.210	1,984.210	
1100	637.2215	Signs Type II Reflective H Folding	SF	298.400	298.400	
1110	637.2230	Signs Type II Reflective F	SF	459.540	459.540	
1120	638.2602	Removing Signs Type II	EACH	232.000	232.000	
1130	638.3000	Removing Small Sign Supports	EACH	186.000	186.000	
1140	642.5201	Field Office Type C	EACH	1.000	1.000	

					4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
1150	643.0100	Traffic Control (project) 01. 4190-16-71	EACH	1.000	1.000	
1160	643.0300	Traffic Control Drums	DAY	4,318.000	4,318.000	
1170	643.0420	Traffic Control Barricades Type III	DAY	17,988.000	17,988.000	
1180	643.0705	Traffic Control Warning Lights Type A	DAY	23,398.000	23,398.000	
1190	643.0715	Traffic Control Warning Lights Type C	DAY	3,042.000	3,042.000	
1200	643.0800	Traffic Control Arrow Boards	DAY	11.000	11.000	
1210	643.0900	Traffic Control Signs	DAY	5,429.000	5,429.000	
1220	643.0910	Traffic Control Covering Signs Type I	EACH	15.000	15.000	
1230	643.0920	Traffic Control Covering Signs Type II	EACH	16.000	16.000	
1240	643.1000	Traffic Control Signs Fixed Message	SF	330.000	330.000	
1250	643.1050	Traffic Control Signs PCMS	DAY	122.000	122.000	
1260	643.2000	Traffic Control Detour (project) 01. 4190-16-71	EACH	1.000	1.000	
1270	643.3000	Traffic Control Detour Signs	DAY	36,406.000	36,406.000	
1280	645.0120	Geotextile Type HR	SY	1,898.000	90.000	1,808.000
1290	645.0140	Geotextile Type SAS	SY	400.000	400.000	
1300	646.0106	Pavement Marking Epoxy 4-Inch	LF	69,675.000	69,675.000	
1310	646.0126	Pavement Marking Epoxy 8-Inch	LF	7,964.000	7,964.000	
1320	647.0110	Pavement Marking Railroad Crossings Epoxy	EACH	13.000	13.000	
1330	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	20.000	20.000	
1340	647.0356	Pavement Marking Words Epoxy	EACH	10.000	10.000	
1350	647.0456	Pavement Marking Curb Epoxy	LF	511.000	511.000	
1360	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	53.000	53.000	
1370	647.0606	Pavement Marking Island Nose Epoxy	EACH	9.000	9.000	
1380	647.0786	Pavement Marking Crosswalk Epoxy 18-Inch	LF	280.000	280.000	
1390	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	594.000	594.000	
1400	650.4000	Construction Staking Storm Sewer	EACH	14.000	14.000	
1410	650.4500	Construction Staking Subgrade	LF	1,700.000	1,700.000	
1420	650.5000	Construction Staking Base	LF	1,700.000	1,700.000	
1430	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,333.000	1,333.000	
1440	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000	
1450	650.6500	Construction Staking Structure Layout (structure) 01. B-5-408	LS	1.000	1.000	
1460	650.6500	Construction Staking Structure Layout (structure) 02. B-5-409	LS	1.000	1.000	
1470	650.6500	Construction Staking Structure Layout (structure) 03. B-5-35	LS	1.000	1.000	
1480	650.8000	Construction Staking Resurfacing Reference	LF	33,080.000	33,080.000	
1490	650.8500	Construction Staking Electrical Installations (project) 01. 4190-16-71	LS	1.000	1.000	
1500	650.9910	Construction Staking Supplemental Control (project) 01. 4190-16-71	LS	1.000	1.000	

					4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
1510	650.9920	Construction Staking Slope Stakes	LF	2,900.000	2,900.000	
1520	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	9,695.000	9,695.000	
1530	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	510.000	510.000	
1540	652.0605	Conduit Special 2-Inch	LF	670.000	670.000	
1550	652.0800	Conduit Loop Detector	LF	1,920.000	1,920.000	
1560	652.0900	Loop Detector Slots	LF	1,515.000	1,515.000	
1570	653.0105	Pull Boxes Steel 12x24-Inch	EACH	4.000	4.000	
1580	653.0905	Removing Pull Boxes	EACH	73.000	73.000	
1590	654.0101	Concrete Bases Type 1	EACH	1.000	1.000	
1600	654.0110	Concrete Bases Type 10	EACH	2.000	2.000	
1610	654.0113	Concrete Bases Type 13	EACH	10.000	10.000	
1620	655.0210	Cable Traffic Signal 3-14 AWG	LF	5,840.000	5,840.000	
1630	655.0230	Cable Traffic Signal 5-14 AWG	LF	8,310.000	8,310.000	
1640	655.0240	Cable Traffic Signal 7-14 AWG	LF	7,350.000	7,350.000	
1650	655.0250	Cable Traffic Signal 9-14 AWG	LF	1,980.000	1,980.000	
1660	655.0260	Cable Traffic Signal 12-14 AWG	LF	5,360.000	5,360.000	
1670	655.0305	Cable Type UF 2-12 AWG Grounded	LF	3,140.000	3,140.000	
1680	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	8,760.000	8,760.000	
1690	655.0610	Electrical Wire Lighting 12 AWG	LF	1,800.000	1,800.000	
1700	655.0700	Loop Detector Lead In Cable	LF	20,260.000	20,260.000	
1710	655.0800	Loop Detector Wire	LF	6,720.000	6,720.000	
1720	657.0100	Pedestal Bases	EACH	18.000	18.000	
1730	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	3.000	3.000	
1740	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	14.000	14.000	
1750	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	1.000	1.000	
1760	657.1350	Install Poles Type 10	EACH	2.000	2.000	
1770	657.1360	Install Poles Type 13	EACH	10.000	10.000	
1780	657.1530	Install Monotube Arms 30-FT	EACH	2.000	2.000	
1790	657.1535	Install Monotube Arms 35-FT	EACH	1.000	1.000	
1800	657.1540	Install Monotube Arms 40-FT	EACH	7.000	7.000	
1810	657.1550	Install Monotube Arms 50-FT	EACH	2.000	2.000	
1820	657.1812	Install Luminaire Arms Steel 12-FT	EACH	12.000	12.000	
1830	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	40.000	40.000	
1840	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	29.000	29.000	
1850	658.0165	Traffic Signal Face 5-12 Inch Horizontal	EACH	2.000	2.000	
1860	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	40.000	40.000	
1870	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	29.000	29.000	
1880	658.0225	Backplates Signal Face 5 Section 12-Inch	EACH	2.000	2.000	
1890	658.0416	Pedestrian Signal Face 16-Inch	EACH	1.000	1.000	
1900	658.0500	Pedestrian Push Buttons	EACH	1.000	1.000	

				4190-16-71	4190-16-72
Line	**Item**	**Item Description**	**Unit**	**Total Qty**	**Qty**
1910	658.0600	Led Modules 12-Inch Red Ball	EACH	42.000	42.000
1920	658.0605	Led Modules 12-Inch Yellow Ball	EACH	40.000	40.000
1930	658.0610	Led Modules 12-Inch Green Ball	EACH	40.000	40.000
1940	658.0615	Led Modules 12-Inch Red Arrow	EACH	29.000	29.000
1950	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	62.000	62.000
1960	658.0625	Led Modules 12-Inch Green Arrow	EACH	33.000	33.000
1970	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	1.000	1.000
1980	658.5069	Signal Mounting Hardware (location) 01. STH 32 and Lombardi Avenue	LS	1.000	1.000
1990	658.5069	Signal Mounting Hardware (location) 02. STH 32 and Potts Avenue	LS	1.000	1.000
2000	658.5069	Signal Mounting Hardware (location) 03. STH 32 and Cormier Road	LS	1.000	1.000
2010	658.5069	Signal Mounting Hardware (location) 04. STH 32 and Pilgrim Way	LS	1.000	1.000
2020	658.5069	Signal Mounting Hardware (location) 05. STH 32 and Vanderperren Way	LS	1.000	1.000
2030	658.5069	Signal Mounting Hardware (location) 06. STH 32 and Hansen Road	LS	1.000	1.000
2040	659.1120	Luminaires Utility LED B	EACH	12.000	12.000
2050	690.0150	Sawing Asphalt	LF	4,067.000	4,067.000
2060	690.0250	Sawing Concrete	LF	915.000	915.000
2070	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
2080	715.0502	Incentive Strength Concrete Structures	DOL	3,564.000	3,564.000
2090	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000
2100	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,100.000	2,100.000
2110	SPV.0060	Special 01. Pull Boxes Non-Conductive 24x42-Inch	EACH	87.000	87.000
2120	SPV.0060	Special 02. Relocate Railroad Blank Out Sign	EACH	6.000	6.000
2130	SPV.0060	Special 03. HMA PWL Test Strips	EACH	2.000	2.000
2140	SPV.0090	Special 01. - Smooth Steel Pipe 18-Inch	LF	42.000	42.000
2150	SPV.0090	Special 02. - Pipe Underdrain Railroad 6-Inch	LF	297.000	297.000
2160	SPV.0105	Special 01. Remove Traffic Signal - Lombardi	LS	1.000	1.000
2170	SPV.0105	Special 02. Remove Traffic Signal - McCarthy	LS	1.000	1.000
2180	SPV.0105	Special 03. Remove Traffic Signal - Cormier	LS	1.000	1.000
2190	SPV.0105	Special 04. Remove Traffic Signal - Pilgrim	LS	1.000	1.000
2200	SPV.0105	Special 05. Remove Traffic Signal Vanderperren	LS	1.000	1.000
2210	SPV.0105	Special 06. Remove Traffic Signal - Hansen	LS	1.000	1.000

REMOVALS

STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERT EACH	204.0100 REMOVING PAVEMENT SY	204.0150 REMOVING CURB & GUTTER LF	614.0920 SALVAGED RAIL LF	204.0220 REMOVING INLETS EACH	REMARKS
CATEGORY 0010									
NORTHBOUND									
44+49 NB	-	44+53 NB	STH 32	--	--	10	--	--	MEDIAN AT PARKVIEW ROAD
54+40 NB	-	59+61 NB	STH 32	--	--	--	521	--	EAST SHOULDER
56+66 NB	-	59+61 NB	STH 32	--	--	--	295	--	WEST SHOULDER
63+90 NB	-	64+00 NB	STH 32	--	--	20	--	--	MEDIAN AT BAETEN ROAD
78+15 NB	-	78+55 NB	STH 32	1	--	--	--	--	MEDIAN UNDER RAILROAD CROSSING, 18" CMP
101+87 NB	-	102+94 NB	STH 32	1	--	--	--	--	MEDIAN, 18" CMP
102+13 NB	-	102+20 NB	STH 32	--	--	20	--	1	MEDIAN AT VANDERPERREN
107+18 NB	-	108+00 NB	STH 32	1	--	--	--	--	MEDIAN, 18" CMP
109+14 NB	-	113+17 NB	STH 32	--	--	--	403	--	EAST SHOULDER
110+01 NB	-	113+18 NB	STH 32	--	--	--	644	--	MEDIAN
119+02 NB	-	120+05 NB	STH 32	--	--	115	--	--	NB LEFT TURN LANE ISLAND
124+16 NB	-	130+69 NB	STH 32	--	--	--	653	--	EAST SHOULDER
SUBTOTAL NORTHBOUND LANES				3	--	165	2,516	1	
SOUTHBOUND									
55+64 SB	-	59+62 SB	STH 32	--	--	--	398	--	WEST SHOULDER
60+78 SB	-	63+14 SB	STH 32	--	--	--	236	--	WEST SHOULDER
60+78 SB	-	63+02 SB	STH 32	--	--	--	224	--	EAST SHOULDER
110+41 SB	-	112+80 SB	STH 32	--	--	--	239	--	WEST SHOULDER
125+86 SB	-	131+26 SB	STH 32	--	--	--	540	--	WEST SHOULDER
SUBTOTAL SOUTHBOUND LANES				--	--	--	1,637		
SIDE ROADS									
40+52 VAN	-	41+25 VAN	VANDERPERREN WAY	--	530	--	--	--	WEST LEG OF INTERSECTION
80+40 COR	-	81+25 COR	CORMIER ROAD	--	380	--	--	--	WEST LEG OF INTERSECTION
175+46 NB	-	175+61 NB	MCCARTHY WAY	--	15	--	--	--	EAST LEG OF INTERSECTION
175+95 NB	-	176+15 NB	MCCARTHY WAY	--	27	10	--	--	EAST LEG OF INTERSECTION
SUBTOTAL SIDE ROADS				--	952	10	--	--	
			TOTAL	**3**	**952**	**175**	**4,153**	**1**	

REMOVALS ASPHALTIC SURFACE BUTT JOINTS

STATION	TO	STATION	LOCATION	204.0115 BUTT JOINTS SY	REMARKS
CATEGORY 0010					
NORTHBOUND					
29+00 NB	-	29+02 NB	STH 32	8	SOUTH PAVING LIMITS
76+25 NB	-	76+25 NB	STH 32	8	RAILROAD APPROACH RECONSTRUCTION LIMITS
80+21 NB	-	80+21 NB	STH 32	8	RAILROAD APPROACH RECONSTRUCTION LIMITS
86+00 NB	-	86+00 NB	STH 32	8	STAGE 2 LIMITS; 4" TO 6" MILLING TRANSITION
100+25 NB	-	100+25 NB	STH 32	12	STAGE 6 LIMITS; 4" TO 6" MILLING TRANSITION
104+25 NB	-	104+25 NB	STH 32	8	STAGE 5 LIMITS; 4" TO 6" MILLING TRANSITION
107+18 NB	-	107+99 NB	STH 32	18	WEST LEG; FRONTAGE ROAD
116+00 NB	-	116+00 NB	STH 32	8	STAGE 7 LIMITS
118+50 NB	-	118+50 NB	STH 32	12	4" TO 6" MILLING TRANSITION
122+50 NB	-	122+50 NB	STH 32	8	STAGE 5 LIMITS; 4" TO 6" MILLING TRANSITION
141+00 NB	-	141+00 NB	STH 32	12	4" TO 6" MILLING TRANSITION
144+50 NB	-	144+50 NB	STH 32	8	STAGE 4 LIMITS; 4" TO 6" MILLING TRANSITION
174+50 NB	-	174+50 NB	STH 32	12	4" TO 6" MILLING TRANSITION
178+50 NB	-	178+50 NB	STH 32	8	STAGE 3 LIMITS; 4" TO 6" MILLING TRANSITION
190+75 NB	-	190+75 NB	STH 32	13	4" TO 6" MILLING TRANSITION
194+98 NB	-	195+00 NB	STH 32	8	STAGE 2 LIMITS; NORTH PAVING LIMITS
SUBTOTAL NORTHBOUND LANES				159	
SOUTHBOUND					
31+00 SB	-	31+02 SB	STH 32	8	SOUTH PAVING LIMITS
75+80 SB	-	75+80 SB	STH 32	8	RAILROAD APPROACH RECONSTRUCTION LIMITS
79+63 SB	-	79+63 SB	STH 32	8	RAILROAD APPROACH RECONSTRUCTION LIMITS
100+25 SB	-	100+25 SB	STH 32	8	STAGE 6 LIMITS; 4" TO 6" MILLING TRANSITION
104+25 SB	-	104+25 SB	STH 32	12	STAGE 5 LIMITS; 4" TO 6" MILLING TRANSITION
116+00 SB	-	116+00 SB	STH 32	8	STAGE 7 LIMITS
118+50 SB	-	118+50 SB	STH 32	8	4" TO 6" MILLING TRANSITION
122+50 SB	-	122+50 SB	STH 32	12	STAGE 5 LIMITS; 4" TO 6" MILLING TRANSITION
141+00 SB	-	141+00 SB	STH 32	8	4" TO 6" MILLING TRANSITION
144+50 SB	-	144+50 SB	STH 32	12	STAGE 4 LIMITS; 4" TO 6" MILLING TRANSITION
174+50 SB	-	174+50 SB	STH 32	8	4" TO 6" MILLING TRANSITION
178+50 SB	-	178+50 SB	STH 32	11	STAGE 3 LIMITS; 4" TO 6" MILLING TRANSITION
190+75 SB	-	190+75 SB	STH 32	8	4" TO 6" MILLING TRANSITION
195+78 SB	-	195+80 SB	STH 32	11	STAGE 2 LIMITS; NORTH PAVING LIMITS
SUBTOTAL SOUTHBOUND LANES				130	

REMOVALS ASPHALTIC SURFACE BUTT JOINTS (CONTINUED)

STATION	TO	STATION	LOCATION	204.0115 BUTT JOINTS SY	REMARKS
CATEGORY 0010					
10+35 PAR	-	10+37 PAR	PARKVIEW ROAD	8	WEST LEG OF INTERSECTION
12+49 PAR	-	12+51 PAR	PARKVIEW ROAD	8	EAST LEG OF INTERSECTION
21+05 BAE	-	21+07 BAE	BAETEN ROAD	8	WEST LEG OF INTERSECTION
51+27 TEN	-	51+29 TEN	TENNIS COURT	29	WEST LEG OF INTERSECTION
71+32 WIL	-	71+34 WIL	WILLARD DRIVE	9	WEST LEG OF INTERSECTION
87+73 MOR	-	87+75 MOR	MORRIS AVENUE	10	WEST LEG OF INTERSECTION
SUBTOTAL SIDE ROADS				72	
			TOTAL	**361**	

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	LOCATION	204.0120 **P** SY	REMARKS
CATEGORY 0010					
NORTHBOUND					
28+97 NB	-	46+00 NB	STH 32	7,791	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 NB	-	59+72 NB	STH 32	5,598	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
60+69 NB	-	76+25 NB	STH 32	6,505	NORTH EDGE OF NEW BRIDGE DECK TO SOUTH RAILROAD CROSSING APPROACH
76+25 NB	-	80+21 NB	STH 32	1,550	RAILROAD CROSSING
80+21 NB	-	86+00 NB	STH 32	2,602	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
86+00 NB	-	90+00 NB	STH 32	2,209	HANSEN ROAD INTERSECTION; MILL 6 INCHES
90+00 NB	-	100+25 NB	STH 32	4,205	HANSEN ROAD TO VANDERPERREN WAY
100+25 NB	-	104+25 NB	STH 32	1,851	VANDERPERREN WAY INTERSECTION; MILL 6 INCHES
104+25 NB	-	118+50 NB	STH 32	6,102	VANDERPERREN WAY TO PILGRIM WAY
118+50 NB	-	122+50 NB	STH 32	2,263	PILGRIM WAY INTERSECTION; MILL 6 INCHES
122+50 NB	-	141+00 NB	STH 32	7,742	PILGRIM WAY TO CORMIER ROAD
141+00 NB	-	144+50 NB	STH 32	1,987	CORMIER ROAD INTERSECTION; MILL 6 INCHES
144+50 NB	-	174+50 NB	STH 32	12,278	CORMIER ROAD TO MIKE MCCARTHY WAY
174+50 NB	-	178+50 NB	STH 32	2,155	MIKE MCCARTHY WAY INTERSECTION; MILL 6 INCHES
178+50 NB	-	190+75 NB	STH 32	5,256	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
190+75 NB	-	195+00 NB	STH 32	2,210	LOMBARDI AVENUE INTERSECTION/END OF PROJECT; MILL 6 INCHES
		SUBTOTAL NORTHBOUND LANES		72,304	
SOUTHBOUND					
28+97 SB	-	46+00 SB	STH 32	6,491	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 SB	-	59+72 SB	STH 32	5,629	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
60+69 SB	-	75+80 SB	STH 32	6,880	NORTH EDGE OF NEW BRIDGE DECK TO SOUTH RAILROAD CROSSING APPROACH
75+80 SB	-	79+63 SB	STH 32	1,517	RAILROAD CROSSING
79+63 SB	-	86+00 SB	STH 32	2,509	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
86+00 SB	-	90+00 SB	STH 32	2,209	HANSEN ROAD INTERSECTION; MILL 6 INCHES
90+00 SB	-	100+25 SB	STH 32	4,368	HANSEN ROAD TO VANDERPERREN WAY
100+25 SB	-	104+25 SB	STH 32	1,851	VANDERPERREN WAY INTERSECTION; MILL 6 INCHES
104+25 SB	-	118+50 SB	STH 32	6,530	VANDERPERREN WAY TO PILGRIM WAY
118+50 SB	-	122+50 SB	STH 32	2,263	PILGRIM WAY INTERSECTION; MILL 6 INCHES
122+50 SB	-	141+00 SB	STH 32	7,962	PILGRIM WAY TO CORMIER ROAD
141+00 SB	-	144+50 SB	STH 32	1,987	CORMIER ROAD INTERSECTION; MILL 6 INCHES
144+50 SB	-	174+50 SB	STH 32	12,452	CORMIER ROAD TO MIKE MCCARTHY WAY
174+50 SB	-	178+50 SB	STH 32	2,155	MIKE MCCARTHY WAY INTERSECTION; MILL 6 INCHES
178+50 SB	-	190+75 SB	STH 32	4,941	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
190+75 SB	-	195+80 SB	STH 32	2,722	LOMBARDI AVENUE INTERSECTION/END OF PROJECT; MILL 6 INCHES
		SUBTOTAL SOUTHBOUND LANES		72,466	
			TOTAL	**144,770**	

Division	From / To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged / Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25			(item #208.0100)	
Division 1												
NB Bridge	53+21 - 61+62	STH 32	0	0	0	0	300	373	-373	0	0	
SB Bridge	55+63 - 63+15	STH 32	0	0	0	0	308	385	-385	0	0	
Outfall Channel W. Ditch	61+03 - 61+55	STH 32	60	0	60	0	100	125	-125	0	0	Remove stone and misc materials
Railroad NB and SB	77+25 - 79+50	STH 32	1,342	0	433	909	0	0	909	26	0	
Division 1 Subtotal			1,402	0	493	909	708	883	26	26	0	
Division 2												
Left Turn Lane	102+71 - 108+60	STH 32	1,044	0	183	861	946	1,182	-321	0	321	
Division 2 Subtotal			1,044	0	183	861	946	1,182	-321	0	321	
Grand Total			2,446	0	676	1,770	1,654	2,065	-295	26	321	
		Total Common Excavation	2,446									

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.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
Depending on selections:

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * 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.

FILE NAME : _____ PLOT DATE : _____ PLOT BY : DUMS, ALEXANDER T PLOT NAME : _____ PLOT SCALE : 1:1

BASE AGGREGATE DENSE

STATION	TO STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	312.0110 SELECT CRUSHED MATERIAL TON	REMARKS
CATEGORY 0010							
NORTHBOUND							
28+97 NB	46+00 NB	STH 32	54	--	34	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 NB	59+25 NB	STH 32	42	--	27	--	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
58+49 NB	59+55 NB	STH 32	1	174	--	--	SHOULDER WIDENING NB SE QUADRANT
59+25 NB	59+55 NB	STH 32	1	26	--	--	SHOULDER WIDENING NB SW QUADRANT
60+85 NB	61+63 NB	STH 32	1	114	--	--	SHOULDER WIDENING NB NW QUADRANT
60+85 NB	61+42 NB	STH 32	1	88	--	--	SHOULDER WIDENING NB NE QUADRANT
61+42 NB	78+00 NB	STH 32	52	--	33	--	NORTH EDGE OF NEW BRIDGE DECK TO SOUTH RAILROAD CROSSING APPROACH
78+00 NB	79+50 NB	STH 32	5	200	3	580	RAILROAD CROSSING
79+50 NB	86+00 NB	STH 32	20	--	13	--	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
90+00 NB	100+25 NB	STH 32	32	--	21	--	HANSEN ROAD TO VANDERPERREN WAY
104+25 NB	118+50 NB	STH 32	45	--	29	--	VANDERPERREN WAY TO PILGRIM WAY
122+50 NB	141+00 NB	STH 32	58	--	37	--	PILGRIM WAY TO CORMIER ROAD
144+50 NB	174+50 NB	STH 32	94	--	60	--	CORMIER ROAD TO MIKE MCCARTHY WAY
178+50 NB	190+75 NB	STH 32	39	--	25	--	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
SUBTOTAL NORTHBOUND LANES			446	602	280	580	
SOUTHBOUND							
28+97 SB	46+00 SB	STH 32	54	--	34	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 SB	58+75 SB	STH 32	40	--	26	--	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
58+63 SB	59+55 SB	STH 32	1	161	--	--	SHOULDER WIDENING SB SW QUADRANT
58+75 SB	59+55 SB	STH 32	2	78	--	--	SHOULDER WIDENING SB SE QUADRANT
60+85 SB	61+83 SB	STH 32	1	168	--	--	SHOULDER WIDENING SB NW QUADRANT
60+85 SB	60+95 SB	STH 32	1	13	--	--	SHOULDER WIDENING SB NE QUADRANT
60+95 SB	77+25 SB	STH 32	51	--	33	--	NORTH EDGE OF NEW BRIDGE DECK TO SOUTH RAILROAD CROSSING APPROACH
77+25 SB	78+77 SB	STH 32	5	200	3	620	RAILROAD CROSSING
78+77 SB	86+00 SB	STH 32	23	--	14	--	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
90+00 SB	100+25 SB	STH 32	32	--	21	--	HANSEN ROAD TO VANDERPERREN WAY
104+25 SB	118+50 SB	STH 32	45	--	29	--	VANDERPERREN WAY TO PILGRIM WAY
122+50 SB	141+00 SB	STH 32	58	--	37	--	PILGRIM WAY TO CORMIER ROAD
144+50 SB	174+50 SB	STH 32	94	--	60	--	CORMIER ROAD TO MIKE MCCARTHY WAY
178+50 SB	190+75 SB	STH 32	39	--	25	--	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
SUBTOTAL SOUTHBOUND LANES			446	620	280	620	
LEFT TURN LANE							
102+68 NB	108+93 NB	STH 32	--	1,969	--	--	LEFT TURN LANE NORTH OF VANDERPERREN WAY
		TOTAL	**892**	**3,191**	**560**	**1,200**	

3

CONCRETE PAVEMENT ITEMS

STATION	TO STATION	LOCATION	415.0120 CONCRETE PAVEMENT 12-INCH SY	415.041 CONCRETE PAVEMENT APPROACH SLAB SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	REMARKS
CATEGORY 0010									
44+49 NB	44+53 NB	STH 32	--	--	15	--	--	--	CURB AND GUTTER AT MEDIAN OF PARKVIEW RD
59+57 NB	59+72 NB	STH 32	27	40	--	--	--	--	NB LANES SOUTH CONCRETE APPROACH SLAB
60+69 NB	60+84 NB	STH 32	27	40	--	--	--	--	NB LANES NORTH CONCRETE APPROACH SLAB
59+57 SB	59+72 SB	STH 32	27	40	--	--	--	--	SB LANES SOUTH CONCRETE APPROACH SLAB
60+69 SB	60+84 SB	STH 32	27	40	--	--	--	--	SB LANES NORTH CONCRETE APPROACH SLAB
63+90 NB	64+00 NB	STH 32	--	--	6	--	--	--	CURB AND GUTTER AT MEDIAN OF BAETEN ROAD
102+13 NB	102+20 NB	STH 32	--	--	6	--	--	--	VANDERPERREN WAY CURB REPLACEMENT
175+46 NB	175+61 NB	STH 32	--	--	6	6	15	--	EAST LEG OF MIKE MCCARTHY WAY INTERSECTION
175+95 NB	176+15 NB	STH 32	--	--	14	20	27	--	EAST LEG OF MIKE MCCARTHY WAY INTERSECTION
40+52 VAN	41+25 VAN	STH 32	--	--	170	43	--	530	WEST LEG OF VANDERPERREN WAY INTERSECTION
80+40 COR	81+25 COR	STH 32	--	--	90	28	--	380	WEST LEG OF CORMIER ROAD INTERSECTION
		TOTAL	**108**	**160**	**307**	**97**	**42**	**910**	

CONCRETE CURB & GUTTER AND SIDEWALK

STATION	TO STATION	601.0150 CONCRETE CURB INTEGRAL TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0415 CONCRETE SIDEWALK 6-INCH SF	602.0505 DETECTABLE WARNING FIELD YELLOW SF	611.8115 ADJUSTING INLET COVERS EACH	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	REMARKS
CATEGORY 0010										
44+15 SB	44+21 SB	--	6	--	--	--	--	--	--	MEDIAN OF PARKVIEW ROAD; WATER MAIN RESTORATION
44+14 NB	44+20 NB	--	6	--	--	--	--	--	--	MEDIAN OF PARKVIEW ROAD; WATER MAIN RESTORATION
44+14 NB	44+20 NB	--	6	--	--	--	--	--	--	EAST SIDE OF PARKVIEW ROAD; WATER MAIN RESTORATION
44+49 NB	44+53 NB	--	10	--	--	--	--	--	--	CURB AND GUTTER IN MEDIAN OF PARKVIEW INTERSECTION
63+90 NB	64+00 NB	--	20	--	--	--	--	--	--	CURB AND GUTTER IN MEDIAN OF BAETEN ROAD
102+13 NB	102+20 NB	--	20	--	--	--	--	--	--	VANDERPERREN WAY CURB REPLACEMENT MEDIAN
102+73 NB	107+28 NB	--	--	915	--	--	--	--	--	SOUTH ISLAND LEFT TURN LANE
107+14 NB	108+63 NB	--	--	303	--	--	--	--	--	NORTH ISLAND LEFT TURN LANE
107+22 SB	107+27 SB	--	--	--	--	--	--	--	40	CONCRETE SLOPE NOSE TYPE 1
107+14 NB	107+19 NB	--	--	--	--	--	--	--	40	CONCRETE SLOPE NOSE TYPE 1
119+04 NB	120+05 NB	--	--	115	--	--	--	1	70	NB LEFT TURN LANE TO PILGRIM WAY; CONCRETE NOSE TYPE 1
121+16 SB	121+23 SB	--	--	--	35	100	20	--	--	N SIDE PILGRIM WAY MEDIAN PED REFUGE
175+95 NB	176+00 NB	10	--	--	--	--	--	1	--	MIKE MCCARTHY WAY EAST LEG OF INTERSECTION
	TOTAL	**10**	**68**	**1,333**	**35**	**100**	**20**	**2**	**150**	

ASPHALTIC MATERIALS

STATION	TO STATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT LOWER LAYER 3 LT 58-28S TON	460.5224 HMA PAVEMENT UPPER LAYER 4 LT 58-28S TON	460.6223 HMA PAVEMENT LOWER LAYER 3 MT 58-28S TON	460.6424 HMA PAVEMENT UPPER LAYER 4 MT 58-28H TON	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINT LF	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
CATEGORY 0010										
NORTHBOUND										
29+00 NB	46+00 NB	411	164	118	896	706	6,800	--	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 NB	59+72 NB	281	185	133	539	430	5,487	--	--	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
60+69 NB	78+00 NB	360	232	167	698	556	6,923	--	--	N EDGE OF BRIDGE DECK TO S RAILROAD CROSSING APPROACH
78+00 NB	79+50 NB	44	36	14	108	42	600	175	--	RAILROAD CROSSING; ASPHALTIC SURFACE UNDER RAILROAD
79+50 NB	86+00 NB	144	52	38	320	252	2,600	--	--	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
86+00 NB	90+00 NB	164	14	10	527	201	1,600	--	--	HANSEN ROAD INTERSECTION; PLACE 6" ASPHALT
90+00 NB	100+25 NB	211	133	96	411	327	4,100	--	--	HANSEN ROAD TO VANDERPERREN WAY
100+25 NB	104+25 NB	137	50	36	403	140	1,600	--	--	VANDERPERREN WAY INTERSECTION; PLACE 6" ASPHALT
104+25 NB	118+50 NB	306	147	106	643	508	5,700	--	--	VANDERPERREN WAY TO PILGRIM WAY
118+50 NB	122+50 NB	168	11	8	543	207	1,600	5	--	PILGRIM WAY INTERSECTION; PLACE 6" ASPHALT
122+50 NB	141+00 NB	388	234	169	767	610	7,400	--	--	PILGRIM WAY TO CORMIER ROAD
141+00 NB	144+50 NB	147	6	4	481	185	1,400	--	--	CORMIER ROAD INTERSECTION; PLACE 6" ASPHALT
144+50 NB	174+50 NB	615	390	281	1,198	955	12,000	--	--	CORMIER ROAD TO MIKE MCCARTHY WAY
174+50 NB	178+50 NB	160	3	2	525	203	1,600	--	--	MIKE MCCARTHY WAY INTERSECTION; PLACE 6" ASPHALT
178+50 NB	190+75 NB	263	122	88	558	441	4,900	--	--	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
190+75 NB	195+00 NB	164	--	--	541	210	1,700	--	--	LOMBARDI AVENUE INTERSECTION/EOP; PLACE 6" ASPHALT
SUBTOTAL NORTHBOUND LANES		3,962	1,780	1,269	9,158	5,976	66,010	180	--	
SOUTHBOUND										
31+00 SB	46+00 SB	325	156	112	684	541	6,000	--	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
46+00 SB	59+72 SB	282	158	114	570	453	5,487	--	--	PARKVIEW ROAD TO SOUTH EDGE OF NEW BRIDGE DECK
60+69 SB	77+25 SB	374	164	118	800	632	6,623	--	--	N EDGE OF BRIDGE DECK TO S RAILROAD CROSSING APPROACH
77+25 SB	78+77 SB	45	37	15	110	43	608	175	--	RAILROAD CROSSING; ASPHALTIC SURFACE UNDER RAILROAD
78+77 SB	86+00 SB	143	95	68	274	218	2,892	--	--	NORTH RAILROAD CROSSING APPROACH TO HANSEN ROAD
86+00 SB	90+00 SB	164	9	7	532	204	1,600	--	--	HANSEN ROAD INTERSECTION; PLACE 6" ASPHALT
90+00 SB	100+25 SB	219	113	82	452	358	4,100	--	--	HANSEN ROAD TO VANDERPERREN WAY
100+25 SB	104+25 SB	137	9	6	444	170	1,600	--	--	VANDERPERREN WAY INTERSECTION; PLACE 6" ASPHALT
104+25 SB	118+50 SB	312	130	93	675	533	5,700	--	--	VANDERPERREN WAY TO PILGRIM WAY
118+50 SB	122+50 SB	168	7	5	547	211	1,600	--	--	PILGRIM WAY INTERSECTION; PLACE 6" ASPHALT
122+50 SB	141+00 SB	413	148	107	918	722	7,400	--	--	PILGRIM WAY TO CORMIER ROAD
141+00 SB	144+50 SB	147	5	4	481	185	1,400	--	--	CORMIER ROAD INTERSECTION; PLACE 6" ASPHALT
144+50 SB	174+50 SB	624	314	226	1,297	1,027	12,000	--	--	CORMIER ROAD TO MIKE MCCARTHY WAY
174+50 SB	178+50 SB	160	8	6	519	199	1,600	--	--	MIKE MCCARTHY WAY INTERSECTION; PLACE 6" ASPHALT
178+50 SB	190+75 SB	248	133	96	506	402	4,900	--	--	MIKE MCCARTHY WAY TO LOMBARDI AVENUE
190+75 SB	195+80 SB	202	10	7	656	252	2,020	--	--	LOMBARDI AVENUE INTERSECTION/EOP; PLACE 6" ASPHALT
SUBTOTAL SOUTHBOUND LANES		3,960	1,497	1,065	9,466	6,149	65,530	175	--	

ASPHALTIC MATERIALS (CONTINUED)

STATION	TO STATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT LOWER LAYER 3 LT 58-28S TON	460.5224 HMA PAVEMENT UPPER LAYER 4 LT 58-28S TON	460.6223 HMA PAVEMENT LOWER LAYER 3 MT 58-28S TON	460.6424 HMA PAVEMENT UPPER LAYER 4 MT 58-28H TON	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINT LF	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
LEFT TURN LANE										
102+68 NB	- 108+93 NB	146	--	--	371	144	2,501	155	--	LEFT TURN LANE NORTH OF VANDERPERREN WAY
UNDISTRIBUTED		--	--	--	--	--	--	--	200	AS NEEDED; LOCATIONS TO BE DETERMINED IN FIELD
TOTAL		**8,068**	**3,277**	**2,334**	**18,995**	**12,269**	**134,041**	**510**	**200**	

STORM SEWER ITEMS

STRUCTURE NUMBER	STATION	OFFSET* FT	522.1024 APRON ENDWALLS FOR CULVERT PIPE RCP 24-INCH EACH	608.0412 STORM SEWER PIPE RCP CLASS IV 12-INCH LF	608.0424 STORM SEWER PIPE RCP CLASS IV 24-INCH LF	611.0530 MANHOLE COVERS TYPE J EACH	611.0615 INLET COVERS TYPE F EACH	611.0624 INLET COVERS TYPE H EACH	611.2004 MAHOLES 4-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3253 INLETS 2.5 X 3-FT EACH	RIM OR FLANGE ELEV	STR DEPTH** FT	FROM STR	TO STR	INLET ELEV	DISCH ELEV
CATEGORY 0010																	
301	101+86NB	28.6' LT	1	--	--	--	--	--	--	--	--	--	--	301	--	603.48	--
301A	102+18NB	28.3' LT	--	--	33	--	--	1	--	1	--	607.06	2.55	301A	301	603.56	603.48
302	102+87NB	31.2' LT	--	18	--	--	1	--	--	--	1	607.31	1.45	302	303	604.91	604.78
303	102+89NB	13.2' LT	--	--	73	--	1	--	--	1	--	607.41	2.73	303	301A	603.73	603.56
304	104+73NB	36.3' LT	--	23	--	--	1	--	--	--	1	607.78	1.52	304	305	605.31	605.22
305	104+75NB	13.7' LT	--	--	186	--	1	--	--	1	--	607.71	2.59	305	303	604.17	603.73
306	106+33NB	41.1' LT	--	20	--	--	1	--	--	--	1	608.20	1.55	306	307	605.70	605.61
307	106+37NB	21.3' LT	--	--	163	--	1	--	--	1	--	607.91	2.40	307	305	604.56	604.17
308	107+25NB	13.0' LT	--	8	--	--	1	--	--	--	1	608.29	1.36	308	309	605.98	605.93
309	107+26NB	5.2' LT	--	--	90	--	1	--	--	1	--	608.46	2.73	309	307	604.78	604.56
310	107+92NB	45.2' LT	--	43	--	--	1	--	--	--	1	608.70	1.58	310	311	606.17	606.02
311	108+07NB	5.3' LT	--	--	81	--	1	--	--	1	--	608.67	2.75	311	309	604.97	604.78
312	108+51NB	17.7' LT	--	--	47	1	--	--	1	--	--	609.53	2.92	312	311	605.66	604.97
313	108+73NB	21.2' LT	1	--	23	--	--	--	--	--	--	--	--	313	312	606.00	605.66
	TOTAL		**2**	**112**	**696**	**1**	**10**	**1**	**1**	**6**	**5**						

REMARKS

* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

** DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6 -INCH ADJUSTMENT RING HEIGHT; HAND POUR STRUCTURE FLOWLINES TO MATCH PIPE INVERTS AFTER STRUCTURE AND PIPE ARE INSTALLED

GUARDRAIL

STATION	TO STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING AND FINISHING EACH	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
CATEGORY 0010										
54+40 NB	- 59+55 NB	STH 32	--	--	--	425	40	1	--	ASHWAUBENON CREEK NB LANES E EDGE OF SHOULDER
56+66 NB	- 59+55 NB	STH 32	--	--	--	200	40	1	--	ASHWAUBENON CREEK NB LANES W EDGE OF SHOULDER
109+14 NB	- 113+16 NB	STH 32	1	--	--	350	--	1	1	STH 172 OVERPASS E EDGE OF SHOULDER
110+02 NB	- 113+18 NB	STH 32	1	2	645	--	--	--	--	STH 172 OVERPASS MEDIAN
124+16 NB	- 130+70 NB	STH 32	1	--	--	600	--	1	1	DUTCHMAN CREEK NB LANES E EDGE OF SHOULDER
55+64 SB	- 59+55 SB	STH 32	--	--	--	300	40	--	1	ASHWAUBENON CREEK SB LANES W EDGE OF SHOULDER
60+86 SB	- 63+02 SB	STH 32	--	--	--	125	40	1	--	ASHWAUBENON CREEK SB LANES E EDGE OF SHOULDER
60+86 SB	- 63+14 SB	STH 32	--	--	--	138	40	1	--	ASHWAUBENON CREEK SB LANES W EDGE OF SHOULDER
110+42 SB	- 112+81 SB	STH 32	1	--	--	188	--	1	1	STH 172 OVERPASS W EDGE OF SHOULDER
125+87 SB	- 131+26 SB	STH 32	1	--	--	488	--	1	1	DUTCHMAN CREEK SB LANES W EDGE OF SHOULDER
		TOTAL	**5**	**2**	**645**	**2,813**	**200**	**8**	**5**	

BARRIER SYSTEM GRADING, SHAPING, AND FINISHING

LOCATION	DESCRIPTION	* EXCAVATION COMMON C.Y.	* BORROW C.Y.	* SALV. TOPSOIL S.Y.	* FERT. TYPE (-) CWT.	* SEEDING L.B.	* MULCHING S.Y.
STA 107+95 - 113+16	NB STH 172 OUTSIDE	0	18	200	0.1	4	200
STA 110+42 - 113+45	SB STH 172 OUTSIDE	0	4	65	0.1	1	65
STA 122+97 - 130+76	NB DUTCHMAN CREEK OUTSIDE	0	103	550	0.4	10	550
STA 125+86 - 132+31	SB DUTCHMAN CREEK OUTSIDE	0	15	155	0.1	3	155
	TOTAL	0	140	970	0.7	18	970

* ITEMS & QUANTITIES LISTED FOR BID INFORMATION ONLY.

EROSION CONTROL

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2002 EROSION MAT CLASS I TYPE A SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS EACH	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
53+20NB	-	59+55NB	E DITCH	620	--	640	640	--	620	--	1	--	--
55+65SB	-	59+60SB	W DITCH	530	--	400	400	--	530	--	1	--	--
55+47NB	-	59+53NB	MEDIAN	150	--	410	410	150	--	--	1	--	--
58+73SB	-	59+59SB	MEDIAN	50	--	100	100	50	--	--	--	--	--
59+60NB	-	59+60NB	S RIVER BANK	--	--	120	120	--	--	--	--	--	--
60+85NB	-	60+85NB	N RIVER BANK	--	--	120	120	--	--	--	--	--	--
60+85NB	-	61+63NB	MEDIAN	100	--	90	90	100	--	--	--	--	--
60+85NB	-	61+40NB	E DITCH	140	--	70	70	--	140	--	--	--	--
60+85SB	-	63+15SB	W DITCH	350	--	240	240	--	350	--	1	--	--
60+85SB	-	63+00SB	MEDIAN	115	--	230	230	115	--	--	1	--	--
77+25NB	-	79+50NB	NB & SB	750	--	620	620	750	--	--	4	5	--
101+50NB	-	108+90NB	MEDIAN	--	--	--	--	--	--	11	1	5	--
107+95NB	-	113+15NB	E DITCH	--	--	530	530	--	--	--	--	--	--
110+40SB	-	113+15SB	W DITCH	--	--	280	280	--	--	--	--	--	--
123+00NB	-	130+70NB	E DITCH	--	--	800	800	--	--	--	--	--	--
125+85SB	-	132+30SB	W DITCH	--	--	650	650	--	--	--	--	--	--
UNDISRIBUTED			PROJECT	--	30	--	--	--	--	--	10	--	50
TOTAL				**2,805**	**30**	**5,300**	**5,300**	**1,165**	**1,640**	**11**	**20**	**10**	**50**

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
UNDISTRIBUTED	1	6	3
TOTAL	**1**	**6**	**3**

WATER

STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
CATEGORY 0010					
29+00	-	195+00	PROJECT	45	COMPACTION
29+00	-	195+00	PROJECT	18	DUST CONTROL
TOTAL				**63**	

LANDSCAPING

STATION	TO	STATION	LOCATION	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
53+20NB	-	59+55NB	STH 32	0.4	11	17	ASHWAUBENON CREEK NB LANES EAST DITCH
55+65SB	-	59+60SB	STH 32	0.3	10	14	ASHWAUBENON CREEK SB LANES WEST DITCH
55+47NB	-	59+53NB	STH 32	0.1	3	4	ASHWAUBENON CREEK NB LANES MEDIAN DITCH
58+73SB	-	59+59SB	STH 32	0.1	1	2	ASHWAUBENON CREEK SB LANES MEDIAN DITCH
60+85NB	-	61+63NB	STH 32	0.1	2	3	ASHWAUBENON CREEK NB LANES MEDIAN DITCH
60+85NB	-	61+40NB	STH 32	0.1	3	3	ASHWAUBENON CREEK NB LANES EAST DITCH
60+85SB	-	63+15SB	STH 32	0.2	6	9	ASHWAUBENON CREEK SB LANES WEST DITCH
60+85SB	-	63+00SB	STH 32	0.1	2	3	ASHWAUBENON CREEK SB LANES MEDIAN DITCH
77+25NB	-	79+50NB	STH 32	0.5	14	20	RAILROAD CROSSING RECONSTRUCTION NB & SB
TOTAL				**1.9**	**50**	**76**	

MARKERS CULVERT END

STATION	OFFSET	LOCATION	633.5200 EACH
CATEGORY 0010			
NORTHBOUND LANES			
40+15NB	57' RT	STH 32	1
48+10NB	54' RT	STH 32	1
150+60NB	44' RT	STH 32	1
150+60NB	19' LT	STH 32	1
156+84NB	17' LT	STH 32	1
156+87NB	42' RT	STH 32	1
165+54NB	13' LT	STH 32	1
165+64NB	43' RT	STH 32	1
171+06NB	17' LT	STH 32	1
171+16NB	41' RT	STH 32	1
183+82NB	45' RT	STH 32	1
183+83NB	19' LT	STH 32	1
SOUTHBOUND LANES			
40+15SB	47' LT	STH 32	1
48+12SB	57' LT	STH 32	1
149+18SB	41' LT	STH 32	1
149+28SB	16' RT	STH 32	1
156+80SB	39' LT	STH 32	1
156+83SB	14' RT	STH 32	1
165+41SB	38' LT	STH 32	1
165+51SB	14' RT	STH 32	1
170+95SB	37' LT	STH 32	1
171+04SB	14' RT	STH 32	1
190+16SB	52' LT	STH 32	1
TOTAL			**23**

DRAINAGE CHANNEL WORK

STATION	TO STATION	OFFSET	LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY	REMARKS
CATEGORY 0010						
61+03 SB	- 61+55 SB	75' LT	STH 32	70	90	W. DITCH DRAINAGE OUTFALL TO ASHWAUBENON CREEK
			TOTAL	**70**	**90**	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

STATION	LOCATION	643.1000 FMS SF	REMARKS
CATEGORY 0010			
165+25 NB	STH 32	24	STAGE 2; EAST AND WEST LANES
N/A SB	STH 32	24	STAGE 2; PLACE 0.2 MILES N OF 9TH STREET; E AND W LANES
90+50 NB	STH 32	24	STAGE 5; EAST AND WEST LANES
153+00 SB	STH 32	24	STAGE 5; EAST AND WEST LANES
112+90 SB	STH 32	24	STAGE 6; EAST AND WEST LANES
77+00 NB	STH 32	48	STAGE 7; EAST AND WEST LANES
131+00 SB	STH 32	48	STAGE 7; EAST AND WEST LANES
TOTAL		**216**	

CONCRETE BARRIER TEMPORARY

STATION	TO STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	REMARKS
CATEGORY 0010					
126+85 NB	- 130+20 NB	STH 32	335	335	WINGWALL CONSTRUCTION
		TOTAL	**335**	**335**	

CRASH CUSHIONS TEMPORARY

STATION	OFFSET	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
CATEGORY 0010									
126+85 NB	30' RT	STH 32	1	4	OM-3R (W05-58R)	TL-3	UNIDIRECTIONAL	L	CONSTRUCTION ACTIVITIES FOR WINGWALL REPLACEMENT
		TOTAL	**1**						

TRAFFIC CONTROL

STATION	TO STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL PCMS DAY	649.0400 TEMP PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	REMARKS
CATEGORY 0010											
STAGE 1											
N/A	- N/A	STH 32	--	60	80	--	--	50	7	--	CLOSE STH 32 NB AT RAB
44+90 NB	- 44+90 NB	PARKVIEW RD	--	160	180	--	--	60	--	--	CLOSE PARKVIEW ROAD FROM EAST AND WEST
58+50 NB	- 58+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50 NB	- 61+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+50 NB	- 63+50 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES S OF BAETEN RD
64+50 SB	- 68+00 SB	STH 32	150	--	--	90	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
87+00 SB	- 87+00 SB	STH 32	--	20	30	--	--	10	7	--	SOFT CLOSURE SB LANES S OF HANSEN ROAD
88+00 SB	- 92+10 SB	STH 32	150	--	--	120	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
		SUBTOTAL STAGE 1	300	720	830	210	0	240	14	0	
STAGE 2											
42+00 NB	- 44+00 NB	STH 32	135	--	--	75	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
45+50 NB	- 45+50 NB	STH 32	--	30	45	--	--	15	7	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00 NB	- 52+00 NB	STH 32	--	240	270	--	--	120	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50 NB	- 58+50 NB	STH 32	--	240	270	--	--	30	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50 NB	- 61+50 NB	STH 32	--	240	270	--	--	30	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+90 NB	- 63+90 NB	BAETEN RD	--	150	165	--	--	45	--	--	CLOSE BAETEN ROAD FROM WEST
86+10 NB	- 86+10 NB	STH 32	--	270	315	--	--	135	--	--	HARD CLOSURE NB AND SB LANES S OF HANSEN RD
88+00 SB	- 92+10 SB	STH 32	225	--	--	180	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
172+50 NB	- 175+50 NB	STH 32	195	--	--	150	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
176+95 NB	- 176+95 NB	STH 32	--	270	315	--	--	135	7	--	HARD CLOSURE NB AND SB LANES N OF MCCARTHY WAY
193+00 NB	- 193+00 NB	LOMBARDI AVE	--	300	360	--	--	120	--	--	CLOSE LOMBARDI AVENUE FROM EAST AND WEST
N/A	- N/A	STH 32	--	240	270	--	--	120	--	--	HARD CLOSURE NB AND SB LANES S OF VICTORY BLVD
		SUBTOTAL STAGE 2	555	1,980	2,280	405	0	750	14	0	

TRAFFIC CONTROL (CONTINUED)

STATION	TO STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL PCMS DAY	649.0400 TEMP PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	REMARKS
STAGE 3											
42+00	NB - 44+00 NB	STH 32	135	--	--	75	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
45+50	NB - 45+50 NB	STH 32	--	30	45	--	--	15	--	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00	NB - 52+00 NB	STH 32	--	240	270	--	--	120	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50	NB - 58+50 NB	STH 32	--	240	270	--	--	30	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50	NB - 61+50 NB	STH 32	--	240	270	--	--	30	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+50	NB - 63+50 NB	STH 32	--	240	270	--	--	120	--	--	HARD CLOSURE NB AND SB LANES S OF BAETEN RD
64+50	SB - 68+00 SB	STH 32	225	--	--	135	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
87+00	SB - 87+00 SB	STH 32	--	30	45	--	--	15	--	--	SOFT CLOSURE SB LANES S OF HANSEN ROAD
88+00	SB - 92+10 SB	STH 32	225	--	--	180	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
138+80	SB - 141+80 SB	STH 32	195	--	--	180	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
143+25	NB - 143+25 NB	STH 32	--	270	315	--	--	135	7	--	HARD CLOSURE NB AND SB LANES N OF CORMIER ROAD
168+00	SB - 168+00 SB	MORRIS AVE	--	120	135	--	--	45	--	--	CLOSE MORRIS AVENUE FROM WEST
176+25	NB - 176+25 NB	MCCARTHY WAY	--	330	360	--	--	90	--	--	CLOSE MIKE MCCARTHY WAY FROM EAST AND WEST
192+10	NB - 192+10 NB	STH 32	--	300	360	--	--	150	7	--	HARD CLOSURE NB AND SB LANES S OF LOMBARDI AVENUE
193+50	SB - 197+00 SB	STH 32	210	--	--	150	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
		SUBTOTAL STAGE 3	990	2,040	2,340	720	0	750	14	0	
STAGE 4											
42+00	NB - 44+00 NB	STH 32	90	--	--	50	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
45+50	NB - 45+50 NB	STH 32	--	20	30	--	--	10	--	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00	NB - 52+00 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50	NB - 58+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50	NB - 61+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+50	NB - 63+50 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES S OF BAETEN RD
64+50	SB - 68+00 SB	STH 32	150	--	--	90	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
87+00	SB - 87+00 SB	STH 32	--	20	30	--	--	10	--	--	SOFT CLOSURE SB LANES S OF HANSEN ROAD
88+00	SB - 92+10 SB	STH 32	150	--	--	120	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
116+00	NB - 120+00 NB	STH 32	170	--	--	120	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
121+25	NB - 121+25 NB	STH 32	--	180	210	--	--	90	7	--	HARD CLOSURE NB AND SB LANES N OF PILGRIM WAY
133+50	SB - 133+50 SB	WILLARD AVE	--	80	90	--	--	30	--	--	CLOSE WILLARD AVENUE FROM WEST
142+50	NB - 142+50 NB	CORMIER RD	--	260	280	--	--	60	--	--	CLOSE CORMIER ROAD FROM EAST AND WEST
168+00	SB - 168+00 SB	MORRIS AVE	--	80	90	--	--	30	--	--	CLOSE MORRIS AVENUE FROM WEST
175+80	NB - 175+80 NB	STH 32	--	180	210	--	--	90	7	--	HARD CLOSURE NB AND SB LANES S OF MCCARTHY WAY
177+00	SB - 180+00 SB	STH 32	130	--	--	100	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
		SUBTOTAL STAGE 4	690	1,460	1,660	480	0	520	14	0	

TRAFFIC CONTROL (CONTINUED)

STATION	TO STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL PCMS DAY	649.0400 TEMP PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	REMARKS
STAGE 5											
42+00 NB	44+00 NB	STH 32	90	--	--	50	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
45+50 NB	45+50 NB	STH 32	--	20	30	--	--	10	--	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00 NB	52+00 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50 NB	58+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50 NB	61+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+50 NB	63+50 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES S OF BAETEN RD
64+50 SB	68+00 SB	STH 32	150	--	--	90	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
87+00 SB	87+00 SB	STH 32	--	20	30	--	--	10	--	--	SOFT CLOSURE SB LANES S OF HANSEN ROAD
88+00 SB	92+00 SB	STH 32	150	--	--	120	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
103+50 NB	103+50 NB	STH 32	--	20	30	--	--	10	7	--	SOFT CLOSURE NB LANES N OF VANDERPERREN WAY
114+70 NB	114+70 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES N OF TENNIS COURT
120+50 NB	120+50 NB	PILGRIM WAY	--	260	300	--	--	120	--	--	CLOSE PILGRIM WAY FROM EAST AND WEST
133+50 SB	133+50 SB	WILLARD AVE	--	80	90	--	--	30	--	--	CLOSE WILLARD AVENUE FROM WEST
142+20 NB	142+20 NB	STH 32	--	200	240	--	--	100	7	--	HARD CLOSURE NB AND SB LANES S OR CORMIER ROAD
143+25 NB	146+75 NB	STH 32	140	--	--	110	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
		SUBTOTAL STAGE 5	530	1,400	1,620	370	0	560	14	0	
STAGE 6											
42+00 NB	44+00 NB	STH 32	90	--	--	50	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
45+50 NB	45+50 NB	STH 32	--	20	30	--	--	10	--	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00 NB	52+00 NB	STH 32	--	160	180	--	--	80	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50 NB	58+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50 NB	61+50 NB	STH 32	--	160	180	--	--	20	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+90 NB	63+90 NB	BAETEN RD	--	100	110	--	--	30	--	--	CLOSE BAETEN ROAD FROM WEST
87+75 NB	87+75 NB	HANSEN RD	--	200	220	--	--	60	7	--	CLOSE HANSEN ROAD FROM EAST AND WEST
101+30 NB	101+30 NB	STH 32	--	180	210	--	--	90	7	--	HARD CLOSURE NB AND SB LANES S OF VANDERPERREN
103+00 SB	110+00 SB	STH 32	210	10	--	110	10	90	--	540	LANE DROP FOR SB MEDIAN LANE; FORCE RIGHT TURN
		SUBTOTAL STAGE 6	300	990	1,110	160	10	400	14	540	

TRAFFIC CONTROL (CONTINUED)

STATION	TO STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL PCMS DAY	649.0400 TEMP PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	REMARKS
STAGE 7											
83+75 NB	87+25 NB	STH 32	280	--	--	220	--	--	--	--	FORCE NB THROUGH LANES LEFT OR RIGHT
88+20 NB	88+20 NB	STH 32	--	360	420	--	--	180	--	--	HARD CLOSURE NB AND SB LANES N OF HANSEN ROAD
102+50 NB	102+50 NB	VANDERPERREN	--	220	260	--	--	120	7	--	CLOSE VANDERPERREN WAY FROM WEST
114+00 SB	114+00 SB	TENNIS CT	--	180	200	--	--	60	--	--	CLOSE TENNIS COURT FROM WEST
119+90 NB	119+90 NB	STH 32	--	400	480	--	--	200	7	--	HARD CLOSURE NB AND SB LANES S OF PILGRIM WAY
121+25 SB	124+75 SB	STH 32	280	--	--	200	--	--	--	--	FORCE SB THROUGH LANES LEFT OR RIGHT
		SUBTOTAL STAGE 7	560	1,160	1,360	420	0	560	14	0	
BRIDGE CLOSURE PRIOR TO RESURFACING PROJECT BEGINNING											
45+50 NB	45+50 NB	STH 32	--	110	165	--	--	55	--	--	SOFT CLOSURE NB LANES N OF PARKVIEW ROAD
52+00 NB	52+00 NB	STH 32	--	880	990	--	--	440	--	--	HARD CLOSURE NB AND SB LANES N OF DRIVEWAY
58+50 NB	58+50 NB	STH 32	--	880	990	--	--	110	--	--	HARD CLOSURE NB AND SB LANES S OF BRIDGES
61+50 NB	61+50 NB	STH 32	--	880	990	--	--	110	--	--	HARD CLOSURE NB AND SB LANES N OF BRIDGES
63+50 NB	63+50 NB	STH 32	--	880	990	--	--	440	--	--	HARD CLOSURE NB AND SB LANES S OF BAETEN RD
		SUBTOTAL BRIDGE CLOSURE	--	3,630	4,125	--	--	1,155	--	--	
		SUBTOTAL ALL STAGES	3,925	13,380	15,325	2,765	10	4,935	98	540	
UNDISRIBUTED QUANTITY			393	1,338	1,533	277	1	494	10	54	10% OF SUBTOTAL
		TOTAL	**4,318**	**14,718**	**16,858**	**3,042**	**11**	**5,429**	**108**	**594**	

PAVEMENT MARKING

STATION TO STATION	LOCATION	646.0106 PAVEMENT MARKING 4-INCH EPOXY WHITE LF	646.0106 PAVEMENT MARKING 4-INCH EPOXY YELLOW LF	646.0126 PAVEMENT MARKING 8-INCH EPOXY WHITE LF	647.0110 RAILROAD CROSSINGS EPOXY EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0356 PAVEMENT MARKING WORDS EPOXY "ONLY" EACH	REMARKS
CATEGORY 0010								
NORTHBOUND LANES								
29+00NB - 44+10NB	LANE LINE AND EDGELINES	1,890	1,510	--	--	--	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
43+03NB - 44+43NB	PARKVIEW ROAD TURN LANE	--	--	140	--	--	--	NB LEFT TURN CHANNELIZATION
42+40NB - 44+43NB	PARKVIEW ROAD TURN LANE	--	--	203	--	--	--	NB RIGHT TURN CHANNELIZATION
45+25NB - 64+00NB	LANE LINE AND EDGELINES	2,375	1,880	--	--	--	--	PARKVIEW ROAD TO BAETEN ROAD
61+80NB - 63+20NB	BAETEN ROAD TURN LANE	--	--	140	--	--	--	NB CHANNELIZATION AND MEDIAN CURB AND GUTTER
64+00NB - 87+18NB	LANE LINE AND EDGELINES	2,900	2,320	--	--	--	--	BAETEN ROAD TO HANSEN ROAD
74+25NB - 78+25NB	STH 32 NB	--	--	--	2	--	--	RAILROAD CROSSING PAVEMENT MARKINGS
84+90NB - 86+70NB	HANSEN ROAD TURN LANE	--	--	360	--	--	--	NB GORE AREA LEFT TURN CHANNELIZATION
85+65NB - 87+18NB	HANSEN ROAD TURN LANE	--	--	153	--	--	--	NB RIGHT TURN CHANNELIZATION
87+20NB - 87+25NB	HANSEN ROAD TURN LANE	--	--	--	2	2	1	NB TURN LANE, NOSE, AND STOP BARS; RAILROAD XING
88+50NB - 101+95NB	LANE LINE AND EDGELINES	1,685	1,345	--	--	--	--	HANSEN ROAD TO VANDERPERREN WAY
99+36NB - 101+95NB	VANDERPERREN WAY TURN LANE	--	--	259	--	--	--	NB CHANNELIZATION AND MEDIAN CURB AND GUTTER
105+00NB - 107+20NB	LEFT TURN LANE	65	--	440	--	--	--	NEW LEFT TURN LANE GORE
101+95NB - 114+00NB	LANE LINE AND EDGELINES	1,505	1,205	--	--	--	--	VANDERPERREN WAY TO TENNIS COURT
112+70NB - 113+70NB	TENNIS COURT TURN LANE	--	--	100	--	--	--	NB LEFT TURN CHANNELIZATION
114+00NB - 120+13NB	LANE LINE AND EDGELINES	765	610	--	--	--	--	TENNIS COURT TO PILGRIM WAY
117+40NB - 120+13NB	PILGRIM WAY TURN LANE	--	--	273	--	--	--	NB RIGHT TURN CHANNELIZATION
117+50NB - 119+10NB	PILGRIM WAY TURN LANE	--	--	320	--	--	--	NB GORE AREA LEFT TURN CHANNELIZATION
120+00NB - 120+05NB	PILGRIM WAY TURN LANE	--	--	--	2	2	1	NB TURN LANE, NOSE, AND STOP BARS; RAILROAD XING
121+50NB - 142+30NB	LANE LINE AND EDGELINES	2,600	2,080	--	--	--	--	PILGRIM WAY TO CORMIER ROAD
140+00NB - 141+75NB	CORMIER ROAD TURN LANE	--	--	350	--	--	--	NB GORE AREA LEFT TURN CHANNELIZATION
140+75NB - 142+30NB	CORMIER ROAD TURN LANE	--	--	155	--	--	--	NB RIGHT TURN CHANNELIZATION
142+30NB - 142+35NB	CORMIER ROAD TURN LANE	--	--	--	2	2	1	NB TURN LANE, NOSE, AND STOP BARS; RAILROAD XING
143+70NB - 175+89NB	LANE LINE AND EDGELINES	4,025	3,220	--	--	--	--	CORMIER ROAD TO MIKE MCCARTHY WAY
174+20NB - 175+47NB	MIKE MCCARTHY WAY TURN LANE	--	--	255	--	--	--	NB GORE AREA LEFT TURN CHANNELIZATION
174+11NB - 175+89NB	MIKE MCCARTHY WAY TURN LANE	--	--	178	--	--	--	NB RIGHT TURN CHANNELIZATION
175+90NB - 175+95NB	MIKE MCCARTHY WAY TURN LANE	--	--	--	1	2	1	NB TURN LANE, NOSE, AND STOP BARS; RAILROAD XING
177+25NB - 195+00NB	LANE LINE AND EDGELINES	2,150	1,700	--	--	--	--	MIKE MCCARTHY WAY TO END OF PROJECT
189+40NB - 191+50NB	LOMBARDI AVENUE TURN LANE	--	--	420	--	--	--	NB GORE AREA LEFT TURN CHANNELIZATION
190+05NB - 192+50NB	LOMBARDI AVENUE TURN LANE	--	--	245	--	--	--	NB RIGHT TURN CHANNELIZATION
192+45NB - 192+50NB	LOMBARDI AVENUE TURN LANE	--	--	--	--	2	1	NB TURN LANE, NOSE, AND STOP BARS
	SUBTOTALS	19,960	15,870	3,991	9	10	5	

PAVEMENT MARKING

STATION TO STATION	LOCATION	646.0106 PAVEMENT MARKING 4-INCH EPOXY WHITE LF	646.0106 PAVEMENT MARKING 4-INCH EPOXY YELLOW LF	646.0126 PAVEMENT MARKING 8-INCH EPOXY WHITE LF	647.0110 RAILROAD CROSSINGS EPOXY EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0356 PAVEMENT MARKING WORDS EPOXY "ONLY" EACH	REMARKS
CATEGORY 0010								
SOUTHBOUND LANES								
31+00SB - 44+10SB	LANE LINE AND EDGELINES	1,640	1,310	--	--	--	--	BEGINNING OF PROJECT TO PARKVIEW ROAD
45+20SB - 46+44SB	PARKVIEW ROAD TURN LANE	--	--	124	--	--	--	SB LEFT TURN CHANNELIZATION
45+20SB - 46+30SB	PARKVIEW ROAD TURN LANE	--	--	110	--	--	--	SB RIGHT TURN CHANNELIZATION
45+25SB - 64+00SB	LANE LINE AND EDGELINES	2,375	1,880	--	--	--	--	PARKVIEW ROAD TO BAETEN ROAD
64+00SB - 87+18SB	LANE LINE AND EDGELINES	2,900	2,320	--	--	--	--	BAETEN ROAD TO HANSEN ROAD
64+25SB - 65+90SB	BAETEN ROAD TURN LANE	--	--	165	--	--	--	SB RIGHT TURN CHANNELIZATION
78+50SB - 82+50SB	STH 32 SB	--	--	--	4	--	--	SB AND FRONTAGE ROAD RAILROAD CROSSINGS
88+50SB - 101+95SB	LANE LINE AND EDGELINES	1,685	1,345	--	--	--	--	HANSEN ROAD TO VANDERPERREN WAY
88+20SB - 88+25SB	HANSEN ROAD TURN LANE	--	--	--	--	2	1	SB TURN LANE, NOSE, AND STOP BARS
88+23SB - 90+40SB	HANSEN ROAD TURN LANE	--	--	217	--	--	--	SB RIGHT TURN CHANNELIZATION
89+15SB - 90+85SB	HANSEN ROAD TURN LANE	--	--	340	--	--	--	SB GORE AREA LEFT TURN CHANNELIZATION
103+10SB - 113+50SB	LANE LINE AND EDGELINES	1,150	950	--	--	--	--	VANDERPERREN WAY TO TENNIS COURT
103+10SB - 105+50SB	LEFT TURN LANE	--	--	240	--	--	--	NEW LEFT TURN LANE SB
103+10SB - 104+37SB	VANDERPERREN WAY TURN LANE	--	--	127	--	--	--	SB RIGHT TURN CHANNELIZATION
114+76SB - 119+00SB	LANE LINE AND EDGELINES	530	425	--	--	--	--	TENNIS COURT TO PILGRIM WAY
114+76SB - 115+84SB	TENNIS COURT TURN LANE	--	--	108	--	--	--	SB RIGHT TURN CHANNELIZATION
121+50SB - 141+80SB	LANE LINE AND EDGELINES	2,400	2,030	--	--	--	--	PILGRIM WAY TO CORMIER ROAD
121+25SB - 121+30SB	PILGRIM WAY TURN LANE	--	--	--	--	2	1	SB TURN LANE, NOSE, AND STOP BARS
121+30SB - 123+32SB	PILGRIM WAY TURN LANE	--	--	202	--	--	--	SB RIGHT TURN CHANNELIZATION
121+80SB - 123+55SB	PILGRIM WAY TURN LANE	--	--	350	--	--	--	SB GORE AREA LEFT TURN CHANNELIZATION
134+30SB - 136+25SB	WILLARD DRIVE TURN LANE	--	--	195	--	--	--	SB RIGHT TURN CHANNELIZATION
143+25SB - 175+50SB	LANE LINE AND EDGELINES	3,930	3,225	--	--	--	--	CORMIER ROAD TO MIKE MCCARTHY WAY
143+22SB - 143+27SB	CORMIER ROAD TURN LANE	--	--	--	--	2	1	SB TURN LANE, NOSE, AND STOP BARS
143+25SB - 144+75SB	CORMIER ROAD TURN LANE	--	--	150	--	--	--	SB RIGHT TURN CHANNELIZATION
143+85SB - 145+80SB	CORMIER ROAD TURN LANE	--	--	390	--	--	--	SB GORE AREA LEFT TURN CHANNELIZATION
168+50SB - 170+30SB	MORRIS ROAD TURN LANE	--	--	180	--	--	--	SB RIGHT TURN CHANNELIZATION
176+80SB - 195+80SB	LANE LINE AND EDGELINES	2,100	1,650	--	--	--	--	MIKE MCCARTHY WAY TO END OF PROJECT
176+75SB - 176+80SB	MIKE MCCARTHY WAY TURN LANE	--	--	--	--	2	1	SB TURN LANE, NOSE, AND STOP BARS
176+80SB - 178+60SB	MIKE MCCARTHY WAY TURN LANE	--	--	180	--	--	--	SB RIGHT TURN CHANNELIZATION
177+20SB - 178+95SB	MIKE MCCARTHY WAY TURN LANE	--	--	350	--	--	--	SB GORE AREA LEFT TURN CHANNELIZATION
193+32SB - 193+37SB	LOMBARDI AVENUE TURN LANE	--	--	--	--	2	1	SB TURN LANE, NOSE, AND STOP BARS
193+37SB - 195+12SB	LOMBARDI AVENUE TURN LANE	--	--	175	--	--	--	SB RIGHT TURN CHANNELIZATION
193+95SB - 195+80SB	LOMBARDI AVENUE TURN LANE	--	--	370	--	--	--	SB GORE AREA LEFT TURN CHANNELIZATION
	SUBTOTALS	18,710	15,135	3,973	4	10	5	
	4-INCH WHITE AND YELLOW TOTALS	38,670	31,005					
	TOTAL	**69,675**		**7,964**	**13**	**20**	**10**	

PAVEMENT MARKING

STATION TO STATION	LOCATION	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	647.0786 PAVEMENT MARKING CROSSWALK EPOXY 18-INCH LF	REMARKS
CATEGORY 0010						
NORTHBOUND LANES						
44+10NB - 44+50NB	PARKVIEW ROAD INTERSECTION	180	--	--	--	PARKVIEW ROAD MEDIAN OPENING CURB AND GUTTER
61+90NB - 63+20NB	BAETEN ROAD TURN LANE	136	--	--	--	NB CHANNELIZATION AND MEDIAN CURB AND GUTTER
87+20NB - 87+25NB	HANSEN ROAD TURN LANE	--	--	1	--	NB TURN LANE, NOSE, AND STOP BARS
99+45NB - 101+95NB	VANDERPERREN WAY TURN LANE	95	--	--	--	NB CHANNELIZATION AND MEDIAN CURB AND GUTTER
104+75NB - 107+20NB	LEFT TURN LANE	--	--	1	--	NEW LEFT TURN LANE GORE
113+40NB - 114+90NB	TENNIS COURT INTERSECTION	110	--	--	--	TENNIS COURT MEDIAN OPENING CURB AND GUTTER
120+00NB - 120+05NB	PILGRIM WAY TURN LANE	--	--	1	--	NB TURN LANE, NOSE, AND STOP BARS
142+30NB - 142+35NB	CORMIER ROAD TURN LANE	--	--	1	--	NB TURN LANE, NOSE, AND STOP BARS
143+10NB - 143+20NB	CORMIER ROAD CROSSWALK	--	--	--	280	NORTH SIDE OF INTERSECTION CROSSWALK
175+90NB - 175+95NB	MIKE MCCARTHY WAY TURN LANE	90	--	--	--	NB TURN LANE, NOSE, AND STOP BARS
192+45NB - 192+50NB	LOMBARDI AVENUE TURN LANE	--	--	1	--	NB TURN LANE, NOSE, AND STOP BARS
SOUTHBOUND LANES						
88+20SB - 88+25SB	HANSEN ROAD TURN LANE	--	--	1	--	SB TURN LANE, NOSE, AND STOP BARS
121+25SB - 121+30SB	PILGRIM WAY TURN LANE	--	--	1	--	SB TURN LANE, NOSE, AND STOP BARS
143+22SB - 143+25SB	CORMIER ROAD TURN LANE	--	53	1	--	SB TURN LANE, NOSE, AND STOP BARS
176+75SB - 176+80SB	MIKE MCCARTHY WAY TURN LANE	80	--	--	--	SB TURN LANE, NOSE, AND STOP BARS
193+32SB - 193+37SB	LOMBARDI AVENUE TURN LANE	--	--	1	--	SB TURN LANE, NOSE, AND STOP BARS
TOTAL		**511**	**53**	**9**	**280**	

CONSTRUCTION STAKING

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 LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT LS	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORY 0010										
PROJECT	14	1,700	1,700	1,333	1	3	33,080	1	1	2,900
	14	**1,700**	**1,700**	**1,333**	**1**	**3**	**33,080**	**1**	**1**	**2,900**

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	STH 32, N. OF RAB	I55-56	30" X 36"	7.50	---	---	---	1	---	---	1	1	LOST DAUPHIN 4-H CLUB
2	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
3	"	R4-3	36" X 48"	12.00	---	---	---	1	---	---	1	1	
4	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #3, PART OF REMOVAL FOR SIGN #3
5	"	R6-2R	24" X 30"	5.00	---	---	1	---	---	---	1	1	
6	"	R6-2R	24" X 30"	5.00	---	---	1	---	---	---	1	1	
7	"	R6-2L	24" X 30"	5.00	---	---	1	---	---	---	1	1	
8	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
9	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
10	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
11	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
11A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #11
11B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #11A
12	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
13	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	---	---	PART OF REMOVAL FOR SIGN #12
14	STH 32, AT PARKVIEW RD/CTH H INTERSECTION	R4-7	24" X 30"	5.00	---	---	1	---	---	---	1	1	
15	"	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
15A		W10-1	36" X 36"	---	---	7.07	---	---	---	1	1	1	
15B		W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #15A
15C		W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #15B
16	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
17	CTH H	R6-1L	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #18
18	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #19
19	"	R1-1	36" X 36"	7.46	---	---	---	---	1	---	1	1	
20	"	R6-3	30" X 24"	5.00	---	---	---	---	---	---	---	---	MOUNT BELOW SIGN #19, PART OF REMOVAL FOR SIGN #19
21	"	R6-2R	---	---	---	---	---	---	---	---	1	1	
22	PARKVIEW RD	R6-1R	36" X 12"	3.00	---	---	---	---	---	---			MOUNT ABOVE SIGN #23
22A	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
22B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #22A
22C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #22B
23	"	R1-1	36" X 36"	7.46	---	---	---	---	---	---	1	1	
24	"	R6-3	30" X 24"	5.00	---	---	---	---	---	---	---	---	MOUNT BELOW SIGN #23, PART OF REMOVAL FOR SIGN #23
25	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #22
26	STH 32, AT PARKVIEW RD/CTH H INTERSECTION	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
27	"	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
28	"	R4-7	24" X 30"	5.00	---	---	1	---	---	---	1	1	
29	CTH H	R6-2L	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #21
30	STH 32, N. OF PARKVIEW RD/CTH H	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
31	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
32	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
32A		W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #32
32B		W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #32A
33	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
34	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
35	VACANT	---	---	---	---	---	---	---	---	---	---	---	
36	STH 32, S. OF BAETEN RD	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
37	"	I2-3	84" X 24"	14.00	---	---	2	---	---	---	1	2	ASHWAUBENON POP. 16,963, SEE SIGN DETAIL SHEET
38	"	W5-52L	18" X 54"	---	---	6.75	1	---	---	---	1	1	
	PAGE SUBTOTALS			226.42	0.00	61.34	12	9	3	4	29	30	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
39	STH 32, S. OF BAETEN RD	W5-52R	18" X 54"	---	---	6.75	1	---	---	---	1	1	
40	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
41	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	---	---	PART OF REMOVAL FOR SIGN #40
42	"	W5-52R	18" X 54"	---	---	6.75	1	---	---	---	1	1	
43	"	I2-3	60" X 24"	10.00	---	---	2	---	---	---	1	2	DEPERE POP. 23,800, SEE SIGN DETAIL SHEET
44	"	W5-52L	18" X 54"	---	---	6.75	1	---	---	---	1	1	
45		R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
46	STH 32, INTERSECTION OF BAETEN RD	R4-7	24" X 30"	5.00	---	---	1	---	---	---	1	1	
47	"	R6-2L	24" X 30"	5.00	---	---	1	---	---	---	1	1	
48	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
49	BAETEN RD	R6-2R	---	---	---	---	---	---	---	---	1	1	
50	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #51
51	"	R1-1	36" X 36"	7.46	---	---	---	---	1	---	1	1	
52	"	R6-3	30" X 24"	5.00	---	---	---	---	---	---	---	---	MOUNT BELOW SIGN #51, PART OF REMOVAL FOR SIGN #51
53	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #50
54	STH 32, INTERSECTION OF BAETEN RD	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
55	"	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
56	STH 32, N. OF BAETEN RD	R5-1A	42" X 30"	8.75	---	---	---	1	---	---	1	1	
57	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
58	"	R2-1	---	---	---	---	---	---	---	---	1	1	
59	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
60	"	W10-1	36" X 36"	---	---	7.07	---	---	---	1	1	1	
61	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #60, PART OF REMOVAL FOR SIGN #60
61A	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #61
62	"	W10-1	36" X 36"	---	---	7.07	---	---	---	1	1	1	
63	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #62, PART OF REMOVAL FOR SIGN #62
63A	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #63
64	"	W10-12	36" X 36"	---	---	9.00	---	1	---	---	1	1	
65	"	W10-12	36" X 36"	---	---	9.00	---	1	---	---	1	1	
66	"	R2-1	30" X 36"	7.50	---	---	---	1	---	---	1	1	45 MPH
67	STH 32, S. OF HANSEN RD	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
68	"	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
69	"	J4-1	36" X 54"	13.50	---	---	---	---	1	---	1	1	SOUTH STH 32
69A	"	J2-2	72" X 102"	51.00	---	---	---	---	---	2	1	1	TO SOUTH I-41, SOUTH STH 32, SEE PLAN SHEET
70	"	J1-1	36" X 57"	14.25	---	---	---	---	1	---	1	1	JCT CTH HH
71	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
71A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #71
71B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #71A
72	"	R3-56R	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #71
73	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
74	"	W10-12	36" X 36"	---	---	9.00	---	1	---	---	1	1	
75	"	W10-12	36" X 36"	---	---	9.00	---	1	---	---	1	1	
76	"	I55-56	30" X 36"	7.50	---	---	---	1	---	---	1	1	LOST DAUPHIN 4-H CLUB
77	"	D1-60	84" X 36"	21.00	---	---	---	2	---	---	1	2	SEE SIGN DETAIL SHEET
	PAGE SUBTOTALS			218.71	0.00	112.78	8	15	4	5	33	35	

3

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
78	STH 32, S. OF HANSEN RD	W10-1	36" X 36"	---	---	7.07	---	---	---	1	1	1	
79	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #78, PART OF REMOVAL FOR SIGN #78
79A	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #79
80	"	W10-1	36" X 36"	---	---	7.07	---	---	1	---	1	1	
81	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #80, PART OF REMOVAL FOR SIGN #80
81A	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #81
82	"	R2-1	30" X 36"	7.50	---	---	---	1	---	---	1	1	45 MPH
83	HANSEN RD	J3-1	24" X 57"	9.50	---	---	---	---	1	---	---	1	NORTH STH 32, SEE PLAN SHEET, PART OF REMOVAL FOR SIGN #84
83A	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
83B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #83A
83C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #83B
84	"	J3-1	24" X 57"	9.50	---	---	---	---	---	---	1	1	MOUNT ON BACK OF SIGN #83, SOUTH STH 32, SEE PLAN SHEET
85	STH 32, AT HANSEN RD INTERSECTION	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #97
86	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #98
87	"	J13-1	36" X 66"	16.50	---	---	---	---	1	---	1	1	CTH HH, SEE PLAN SHEET
88	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
89	"	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
90	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
91	CTH HH	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
92	STH 32, AT HANSEN RD INTERSECTION	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
93	CTH HH	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
94	"	J3-1	24" X 57"	9.50	---	---	---	---	1	---	1	1	NORTH STH 32, SEE PLAN SHEET
95	"	J3-1	24" X 57"	9.50	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #94, PART OF REMOVAL FOR SIGN #94
96	HANSEN RD	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
97	STH 32, AT HANSEN RD INTERSECTION	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
98	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
99	"	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
100	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
101	"	J13-1	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #100
102	"	R10-11B	24" X 24"	4.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
103	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #102
104	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #90
105	STH 32, N. OF HANSEN RD	J4-1	36" X 54"	13.50	---	---	---	---	1	---	1	1	NORTH STH 32, SEE PLAN SHEET
106	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #107, PART OF REMOVAL FOR SIGN #107
107	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
107A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #107
107B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #107A
108	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
109	"	J13-1	24" X 45"	7.50	---	---	---	1	---	---	---	---	CTH HH, SEE PLAN SHEET
110	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
111	"	I55-56	30" X 36"	7.50	---	---	---	1	---	---	1	1	THETA PHI ALPHA
112	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
113	"	D1-60	84" X 36"	21.00	---	---	---	2	---	---	1	2	SEE SIGN DETAIL SHEET
114	"	J1-1	36" X 57"	14.25	---	---	---	---	1	---	1	1	JCT STH 172
115	"	J1-1	36" X 57"	14.25	---	---	---	---	1	---	1	1	JCT STH 172
	PAGE SUBTOTALS			214.25	59.68	52.66	0	8	8	3	27	20	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
116	STH 32, S. OF CTH HH/VANDERPERREN WAY	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	TO STH 57, TO I-43, SEE PLAN SHEET
117	"	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	EAST STH 172, WEST STH 172, SEE PLAN SHEET
118	"	J2-1	36" X 108"	27.00	---	---	---	---	---	1	1	1	TO SOUTH I-41, SEE PLAN SHEET
119	"	J2-1	36" X 108"	27.00	---	---	---	---	---	1	1	1	TO SOUTH I-41, SEE PLAN SHEET
120	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
121	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	---	---	PART OF REMOVAL FOR SIGN #120
122	"	J3-1	36" X 84"	21.00	---	---	---	---	1	---	1	1	WEST STH 172, SEE PLAN SHEET
123	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #122, PART OF REMOVAL FOR SIGN #122
124	"	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	WEST CTH HH, EAST STH 172, SEE PLAN SHEET
125	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #124, PART OF REMOVAL FOR SIGN #124
126	CTH HH/VANDERPERREN WAY	R1-2	36" X 31"	3.88	---	---	1	---	---	---	1	1	
127	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
128	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #127
129	"	R6-3A	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #127
130	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL
131	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	
132	STH 32, INTERSECTION OF CTH HH	R3-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
133	"	J3-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	CTH HH, STH 172, SEE PLAN SHEET
134	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
135	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
136	"	R3-1	24" X 24"	4.00	---	---	1	---	---	---	1	1	
137	"	R6-2L	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO EXISTING CANDY CANE STRIPED GATE
138	"	R4-7	24" X 30"	5.00	---	---	1	---	---	---	1	1	
139	STH 32, N. OF CTH HH/VANDERPERREN WAY	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	TO STH 57, TO I-43, SEE PLAN SHEET
140	"	R6-2R	---	---	---	---	---	---	---	---	1	---	
141	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #142
142	"	R1-1	36" X 36"	7.46	---	---	---	1	---	---	1	1	
142A	"	R6-1L	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #141
143	"	R2-1	30" X 36"	7.50	---	---	---	1	---	---	1	1	
144	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #143, PART OF REMOVAL FOR SIGN #143
145	"	R6-2L	---	---	---	---	---	---	---	---	1	1	
146	"	R6-1L	54" X 18"	6.75	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #146A
146A	"	R1-2	48" X 42"	7.00	---	---	---	---	1	---	---	---	
146B	"	R6-1R	54" X 18"	6.75	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #146
146C	"	R1-2	48" X 42"	7.00	---	---	---	---	1	---	---	---	
146D	"	R6-1L	54" X 18"	6.75	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #146C
146E	"	R4-7	---	---	---	---	---	---	---	---	1	1	
147	"	R3-1	24" X 24"	4.00	---	---	1	---	---	---	1	1	
148	"	R5-1	36" X 36"	9.00	---	---	---	---	---	---	1	---	MOUNT ON BACK OF SIGN #149
149	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	---	1	45 MPH, PART OF REMOVAL FOR SIGN #148
150	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
	PAGE SUBTOTALS			466.09	14.92	0.00	5	5	4	12	26	21	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
150A	STH 32, N. OF CTH HH/VANDERPERREN WAY	R3-18	36" X 36"	9.00	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #150
151	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
152	"	M1-94	54" X 15"	5.63	---	---	2	---	---	---	1	1	HWY 172, SEE SIGN DETAIL SHEET
153	"	W3-3	---	---	---	---	---	---	---	---	1	1	
154	STH 32, S. OF CTH YY	J1-1	36" X 57"	14.25	---	---	---	---	1	---	1	1	JCT CTH HH
155	TENNIS COURT	R1-1	30" X 30"	5.18	---	---	1	---	---	---	1	1	
156	TENNIS COURT	R1-1	30" X 30"	5.18	---	---	1	---	---	---	1	1	
157	"	R3-2	24" X 24"	4.00	---	---	1	---	---	---	1	1	
158	STH 32, S. OF CTH YY	R4-7	24" X 30"	5.00	---	---	1	---	---	---	1	1	
159	"	M1-94	54" X 15"	5.63	---	---	2	---	---	---	1	1	HWY 172, SEE SIGN DETAIL SHEET
160	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
161	"	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	WEST CTH YY, WEST STH 172, SEE PLAN SHEET
162	"	R6-2L	---	---	---	---	---	---	---	---	1	1	
162A	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
163	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
163A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #163
163B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #163A
164	"	J3-2	72" X 84"	42.00	---	---	---	---	---	2	---	---	WEST CTH YY, WEST STH 172, SEE PLAN SHEET
165	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
166	"	D1-1	78" X 24"	13.00	---	---	---	2	---	---	1	2	A STRAUBEL AIRPORT, SEE SIGN DETAIL SHEET
167	"	R3-56L	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #166
168	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #166, PART OF REMOVAL FOR SIGN #166
169	"	J3-2	---	---	---	---	---	---	---	---	1	1	
170	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
171	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
172	"	R1-1F	30" X 30"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
173	CTH YY	R1-2	36" X 31"	3.88	---	---	---	1	---	---	1	1	
174	PILGRIM RD	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
174A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW EXISTING "NO TRAIN HORN" SIGN ON SIGNAL POLE
175	"	R1-1F	30" X 30"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #174
176	"	R1-1F	30" X 30"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
177	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #172
178	VACANT	---	---	---	---	---	---	---	---	---	---	---	
179	VACANT	---	---	---	---	---	---	---	---	---	---	---	
180	STH 32, INTERSECTION OF CTH YY	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #170
181	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
181A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #181
181B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #181A
182	CTH YY	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #181
183	VACANT	---	---	---	---	---	---	---	---	---	---	---	
184	STH 32, INTERSECTION OF CTH YY	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
185	"	R1-1F	30" X 30"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #184
186	"	J3-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	WEST CTH YY, WEST STH 172, SEE PLAN SHEET
187	VACANT	---	---	---	---	---	---	---	---	---	---	---	
188	STH 32, INTERSECTION OF CTH YY	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
189	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #188
190	STH 32, N. OF CTH YY	J4-1	36" X 54"	13.50	---	---	---	---	1	---	1	1	NORTH STH 32
191	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #192, PART OF REMOVAL FOR SIGN #192
192	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
192A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #192
192B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #192A
193	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
194	"	R3-56R	---	---	---	---	---	---	---	---	1	---	
195	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
196	"	D9-52	36" X 36"	9.00	---	---	---	1	---	---	1	1	A STRAUBEL AIRPORT, SEE SIGN DETAIL SHEET
	PAGE SUBTOTALS			313.49	52.22	44.39	11	6	2	9	32	25	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
197	STH 32, N. OF CTH YY	J2-2	72" X 84"	42.00	---	---	---	---	---	2	1	1	EAST STH 172, WEST STH 172, SEE PLAN SHEET
198	"	J2-2	72" X 102"	51.00	---	---	---	---	---	2	1	1	SOUTH STH 32, SEE PLAN SHEET
199	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
200	"	W3-3	36" X 36"	---	---	9.00	---	---	---	---	1	1	
201	"	J1-2	72" X 57"	28.50	---	---	---	---	---	---	1	1	JCT STH 172, JCT CTH YY
202	"	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
203	"	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
204	"	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
205	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
205A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #205
205B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #205A
206	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
207	"	D1-60	84" X 36"	21.00	---	---	---	2	---	---	1	2	SEE SIGN DETAIL SHEET
208	"	R3-56L		---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #209
209	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
210	"	R3-56R		---	---	---	---	---	---	---	1	---	
211	"	R2-1	30" X 36"	7.50	---	---	---	1	---	---	1	1	45 MPH
212	STH 32, INTERSECTION OF CTH H/CORMIER RD	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
213	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
214	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
215	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
215A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW EXISTING "NO TRAIN HORN" SIGN ON SIGNAL POLE
216	CTH H	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
217	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
218	STH 32, INTERSECTION OF CTH H/CORMIER RD	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #212
219	CORMIER RD	R1-2	36" X 31"	3.88	---	---	---	1	---	---	1	1	
219A	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
219B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #219A
219C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #219B
220	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
221	"	R6-2L		---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #220
222	STH 32, INTERSECTION OF CTH H/CORMIER RD	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #213
223	"	R3-1	24" X 24"	4.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
224	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #223
225	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #215
226	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
227	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #216
228	CTH H	R6-2R		---	---	---	---	---	---	---	1	1	
229	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #226
230	STH 32, N. OF CTH H/CORMIER RD	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	---	---	
231	"	R3-56R		---	---	---	---	---	---	---	1	---	
232	"	R3-56L		---	---	---	---	---	---	---	1	---	
233	"	J4-1	36" X 54"	13.50	---	---	---	---	1	---	1	1	NORTH STH 32
234	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
235	"	D1-60	84" X 36"	21.00	---	---	---	2	---	---	1	2	SEE SIGN DETAIL SHEET
236	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
236A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #236
236B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #236A
237	"	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
	PAGE SUBTOTALS			279.13	67.14	80.39	3	10	3	7	33	22	

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
238	STH 32, N. OF CTH H/CORMIER RD	R2-1	---	---	---	---	---	---	---	---	---	---	
239	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
240	MORRIS AVE	R6-2R	---	---	---	---	---	---	---	---	1	1	
241	"	R6-1R	36" X 12"	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE SIGN #242
242	"	R1-1	30" X 30"	5.18	---	---	---	1	---	---	1	1	
243	"	R6-2R	24" X 30"	5.00	---	---	1	---	---	---	1	1	
244	"	R1-1	30" X 30"	5.18	---	---	1	---	---	---	1	1	
245	STH 32, N. OF MORRIS AVE	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
246	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
246A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #246
246B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #246A
247	"	R5-1A	42" X 30"	8.75	---	---		---	---	---	---	---	MOUNT ON BACK OF SIGN #248, PART OF REMOVAL FOR SIGN #248
248	"	I55-56	30" X 36"	7.50	---	---		1	---	---	1	1	BROWN COUNTY RETIRED EDUCATORS
249	"	R3-56L	---	---	---	---	---	---	---	---	1	---	
250	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	---	1	PART OF REMOVAL FOR SIGN #249
251	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
252	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
253	STH 32, S. OF POTTS AVE	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
254	"	R2-1	36" X 48"	12.00	---	---	---	---	1	---	1	1	45 MPH
255	STH 32, INTERSECTION OF POTTS AVE	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
256	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL
257	"	R3-1	24" X 24"	4.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
257A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW EXISTING "NO TRAIN HORN" SIGN ON SIGNAL POLE
258	POTTS AVE	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
259	"	R6-2L	---	---	---	---	---	---	---	---	1	1	
260	"	R6-2R	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #259
261	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
261A	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
261B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #261A
261C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #261B
262	STH 32, INTERSECTION OF POTTS AVE	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
263	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
264	"	R3-1	24" X 24"	4.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
265	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
266	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
267	STH 32, N. OF POTTS AVE	R5-1	36" X 36"	9.00	---	---	---	1	---	---	1	1	
268	"	R59-51	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #267
269	POTTS AVE	R1-1F	30" X 30"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
270	"	R6-2R	---	---	---	---	---	---	---	---	1	1	
271	"	R6-2L	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #270
272	STH 32, N. OF POTTS AVE	R2-1	30" X 36"	7.50	---	---	---	1	---	---	1	---	35 MPH, REMOVE FROM SIGNAL AND PLACE ON OWN POST
273	"	I55-56	30" X 36"	7.50	---	---	---	1	---	---	1	1	WEST DEPERE HIGH SCHOOL ECOLOGY CLUB
274	"	I2-3	84" X 24"	14.00	---	---	---	2	---	---	1	2	ASHWAUBENON POP. 16.963, SEE SIGN DETAIL SHEET
275	"	R5-1A	42" X 30"	8.75	---	---	1	---	---	---	1	1	
276	"	R3-56L	---	---	---	---	---	---	---	---	---	---	PART OF REMOVAL FOR SIGN #275
277	"	J4-1	24" X 36"	6.00	---	---	---	1	---	---	1	1	NORTH STH 32
278	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
	PAGE SUBTOTALS			171.61	37.30	30.26	4	9	3	2	32	22	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

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.	637.2215 SIGNS TYPE II FOLDING REFLECTIVE TYPE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE TYPE F S.F.	634.0612 POSTS WOOD 4x6x12 EACH	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
279	STH 32, S. OF CTH VK/LOMBARDI AVE	J1-1	24" X 39"	6.50	---	---	---	1	---	---	---	---	JCT CTH VK
280	"	J1-1	24" X 39"	6.50	---	---	---	1	---	---	---	---	JCT CTH VK
281	"	W3-3	36" X 36"	---	---	9.00	---	1	---	---	1	1	
282	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
282A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #282
282B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #282A
283	"	D1-60	84" X 24"	14.00	---	---	---	2	---	---	1	2	SEE SIGN DETAIL SHEET
284	"	R3-56R	---	---	---	---	---	---	---	---	1	1	
285	"	R3-56L	---	---	---	---	---	---	---	---	1	1	
286	"	J13-1	24" X 45"	7.50	---	---	---	---	1	---	---	---	CTH VK, SEE PLAN SHEET
287	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	---	---	---	MOUNT ON BACK OF SIGN #286, PART OF REMOVAL FOR SIGN #285
288	"	J4-1	24" X 36"	6.00	---	---	---	1	---	---	1	1	SOUTH STH 32
289	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
289A	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #289
289B	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #289A
290	"	R2-1	24" X 30"	5.00	---	---	1		---	---	1	1	35 MPH
291	STH 32, INTERSECTION OF CTH VK/LOMBARDI AVE	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
292	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
293	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
294	"	R5-1	30" X 30"	6.25	---	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
294A	"	W10-1	36" X 36"	---	---	7.07	---	---	---	---	---	---	MOUNT TO SIGNAL POLE
294B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #294A
294C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #294B
295	LOMBARDI AVE	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
296	CTH VK/LOMBARDI AVE	R1-2	36" X 31"	3.88	---	---	---	1	---	---	1	---	
296A	"	W10-2	36" X 36"	---	---	9.00	---	---	---	1	---	---	
296B	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #296A
296C	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #296B
297	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
298	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #291
299	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
300	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #299
301	STH 32, INTERSECTION OF CTH VK/LOMBARDI AVE	R5-1	30" X 30"	6.25	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #292
302	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #294
303	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
304	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #303
305	LOMBARDI AVE	R1-2	36" X 31"	3.88	---	---	---	1	---	---	1	1	
306	"	R1-1F	36" X 36"	---	7.46	---	---	---	---	---	1	---	MOUNT TO TRAFFIC SIGNAL
307	"	R4-7	24" X 30"	5.00	---	---	---	---	---	---	---	---	MOUNT TO TRAFFIC SIGNAL, PART OF REMOVAL FOR SIGN #295
308	STH 32, N. OF CTH VK	W10-2	36" X 36"	---	---	9.00	---	---	---	1	1	1	
309	"	W10-1A	24" X 12"	---	---	2.00	---	---	---	---	---	---	MOUNT BELOW SIGN #308
310	"	W10-9P	30" X 15"	---	---	3.13	---	---	---	---	---	---	MOUNT BELOW SIGN #309
	PAGE SUBTOTALS			94.51	67.14	77.72	1	8	1	4	20	11	
	PROJECT TOTALS			**1984.21**	**298.40**	**459.54**	**44**	**70**	**28**	**46**	**232**	**186**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 218 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGNS SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NUMBER OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	300' E OF SIGN # 2	WO 20-2-A	48"x48"	1	218	218								
2	MODIFY J2-2 (TO-41-AH; N-32-AH RT)	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	EXISTING											
	"	M 1-6-B	EXISTING											32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
3	D1-3 (AH-TO US 41/AIRPORT; GREEN BAY-RT)										1		1	GREEN BAY - RIGHT
4	MODIFY J3-1 (N-32-RT)	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	EXISTING											
	"	M 1-6-B	EXISTING											32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
5	RT SHOULDER OF RT TURN LANE @ 8TH ST & MAIN ST INTERSECTION	R 11-3	60"x48"	1	218	218	218	436						1 MILE
6	BELOW SIGN # 5	MO 4-9-L	30"x24"	1	218	218								
7	RT SHOULDER OF THRU LANE @ 8TH ST & MAIN ST INTERSECTION	R 11-3	60"x48"	1	218	218	218	436						1 MILE
8	BELOW SIGN # 7	MO 4-9-L	30"x24"	1	218	218								
9	J4-1 (N-32) ON NORTH 8TH ST										1		1	NORTH 32
10	100' W OF 8TH ST INTERSECTION ON MAIN ST (WB)	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
11	100' E OF 9TH ST INTERSECTION ON MAIN ST (EB)	MO 4-8-A	24"x18"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
12	100' W OF 9TH ST INTERSECTION ON MAIN ST (WB)	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
13	100' E OF 10TH ST INTERSECTION ON MAIN ST (EB)	MO 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
14	100' W OF 10TH ST INTERSECTION ON MAIN ST (WB)	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-1	21"x21"	1	218	218								AHEAD
15	100' E OF SIGN BRIDGE # S-05-224 ON MAIN ST (WB)	MO 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6B	24"x24"	1	218	218								32
	"	MO 6-2	21"x21"	1	218	218								RIGHT
15A	PLACE ON EXISTING "ASHLAND AVE" EXIT GORE TYPE I SIGN	G 20-60	108"x24"	1	188	188								
16	200' N OF MAIN ST INTERSECTION ON 41 (NB) ON RAMP	MO 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	PAGE SUBTOTALS			35		7,600	436	872	0	0		0	2	

3

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 218 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGNS SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NUMBER OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
	"	MO 6-1	21"x21"	1	218	218								AHEAD
16A	2640' S. OF ASHLAND AVE EXIT ON I-41 (NB)	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x18"	1	188	188								
	"	WO 20-2A	36"x36"	1	188	188								
16B	2640' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x18"	1	188	188								
	"	WO 20-2A	36"x36"	1	188	188								
16C	1320' S. OF ASHLAND AVE EXIT ON I-41 (NB)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16D	1320' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16E	700' S. OF ASHLAND AVE EXIT ON I-41 (NB)	FMS	114"x72"	1					57					SEE FMS DETAIL SHEET
16F	700' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	FMS	114"x72"	1					57					SEE FMS DETAIL SHEET
16G	100' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16H	100' S. OF ASHLAND AVE EXIT ON I-41 (NB)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
17	TYPE 1 @ SIGN BRIDGE # S-05-158 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								BELOW "NORTH"
18	TYPE 1 @ SIGN BRIDGE # S-05-160 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								BELOW "NORTH"
19	TYPE 1 @ SIGN BRIDGE # S-05-168 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
20	TYPE 1 @ SIGN BRIDGE # S-05-172 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
21	LT OF SIS SIGN (FOOD & LODGING) ON HWY 41 (NB)	MO 4-8-A	30"x24"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
22	ACROSS FROM SIGN # 21 (MEDIAN SIDE)	MO 4-8-A	30"x24"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
23	RT LEG OF SIGN BRIDGE # S-05-174 (EAST TO SOUTH RAMP @ HWY 29)	MO 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	WO 20-2-A	48"x48"	1	218	218								
24	LT LEG OF SIGN BRIDGE # S-05-174 (EAST TO SOUTH RAMP @ HWY 29)	MO 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	WO 20-2-A	48"x48"	1	218	218								
25	TYPE 1 @ S-05-174 (S-32/54; MASON ST; 3/4 MILE; EXIT-DOWN ARROW-ONLY)										1	1		SOUTH 32
	PAGE SUBTOTALS			39		7,406	0	0	114	0		1	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 218 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGNS SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NUMBER OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
26	RT LEG OF SIGN BRIDGE # S-05-177 (EAST TO SOUTH RAMP @ HWY 29)	MO 4-8	36"x18"	1	218	218								
	"	M 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	MO 5-2-L	30"x30"	1	218	218								
27	LT LEG OF SIGN BRIDGE # S-05-177 (EAST TO SOUTH RAMP @ HWY 29)	MO 4-8	36"x18"	1	218	218								
	"	M 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	MO 5-2-L	30"x30"	1	218	218								
28	TYPE 1 @ S-05-177 (S-32/54; MASON ST; 1/2 MILE; EXIT-DOWN ARROW-ONLY)										1	1		SOUTH 32
29	TYPE 1 @ S-05-182 (S-32/54; MASON ST; EXIT 1/4 MILE, RIGHT TURN-ONLY)										1	1		SOUTH 32
30	TYPE 1 @ SIGN BRIDGE # S-05-182 ON 29-41 CD ROAD (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
31	TYPE 1 @ S-05-180 (S-32/54; MASON ST; EXIT-RIGHT TURN-ONLY)										1	1		SOUTH 32
32	TYPE 1 @ SIGN BRIDGE # S-05-180 ON 29-41 CD ROAD (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
33	TYPE 1 @ S-05-239 (S-32/54-E, MASON ST, DOT-LT ARROW/LT ARROW; 54-W, MASON ST, RIGHT ARROW ONLY)										1	1		SOUTH 32
34	TYPE 1 @ SIGN BRIDGE # S-05-171 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
35	TYPE 1 @ SIGN BRIDGE # S-05-175 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
36	TYPE 1 @ SIGN BRIDGE # S-05-170 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
37	TYPE 1 @ SIGN BRIDGE # S-05-168 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
38	TYPE 1 @ SIGN BRIDGE # S-05-165 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
39	TYPE 1 @ SIGN BRIDGE # S-05-162 ON HWY 41 (SB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
40	TYPE 1 @ SIGN BRIDGE # S-05-159 ON HWY 41 (SB)	MO 3-3	36"x18"	1	218	218								RIGHT OF "G"
	"	MO 1-56-B	36"x36"											"
41	TYPE 1 @ SIGN BRIDGE # S-05-157 ON HWY 41 (SB)	MO 3-3	36"x18"	1	218	218								RIGHT OF "G"
	"	MO 1-56-B	36"x36"											"
42	ACROSS FROM W-3-2 (YIELD AHEAD) ON SB HWY 41 TO CTY G (EXIT RAMP)	MO 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 5-1-L	21"x21"	1	218	218								
43	LT LEG OF SIGN BRIDGE # S-05-221	MO 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-2	21"x21"	1	218	218								LEFT
44	ABOVE D1-3 (LT-41-SOUTH; 41-NORTH, G/MAIN AVE-TILT RT) WEST ROUND-A-BOUT, EAST SPLITTER ISLAND	MO 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	MO 6-2	21"x21"	1	218	218								RIGHT
	PAGE SUBTOTALS			30		6,540	0	0	0	0		4	0	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 218 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGNS SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NUMBER OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	300' E OF SIGN # 2	W0 20-2-A	48"x48"	1	218	218								
2	MODIFY J2-2 (TO-41-AH; N-32-AH RT)	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	EXISTING											
	"	M 1-6-B	EXISTING											32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
3	D1-3 (AH-TO US 41/AIRPORT; GREEN BAY-RT)										1		1	GREEN BAY - RIGHT
4	MODIFY J3-1 (N-32-RT)	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	EXISTING											
	"	M 1-6-B	EXISTING											32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
5	RT SHOULDER OF RT TURN LANE @ 8TH ST & MAIN ST INTERSECTION	R 11-3	60"x48"	1	218	218	218	436						1 MILE
6	BELOW SIGN # 5	M0 4-9-L	30"x24"	1	218	218								
7	RT SHOULDER OF THRU LANE @ 8TH ST & MAIN ST INTERSECTION	R 11-3	60"x48"	1	218	218	218	436						1 MILE
8	BELOW SIGN # 7	M0 4-9-L	30"x24"	1	218	218								
9	J4-1 (N-32) ON NORTH 8TH ST										1		1	NORTH 32
10	100' W OF 8TH ST INTERSECTION ON MAIN ST (WB)	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
11	100' E OF 9TH ST INTERSECTION ON MAIN ST (EB)	M0 4-8-A	24"x18"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
12	100' W OF 9TH ST INTERSECTION ON MAIN ST (WB)	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
13	100' E OF 10TH ST INTERSECTION ON MAIN ST (EB)	M0 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
14	100' W OF 10TH ST INTERSECTION ON MAIN ST (WB)	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	"	M0 6-1	21"x21"	1	218	218								AHEAD
15	100' E OF SIGN BRIDGE # S-05-224 ON MAIN ST (WB)	M0 4-8	24"x12"	1	218	218								
	"	M 3-3	24"x12"	1	218	218								
	"	M 1-6B	24"x24"	1	218	218								32
	"	M0 6-2	21"x21"	1	218	218								RIGHT
15A	PLACE ON EXISTING "ASHLAND AVE" EXIT GORE TYPE I SIGN	G 20-60	108"x24"	1	188	188								
16	200' N OF MAIN ST INTERSECTION ON 41 (NB) ON RAMP	M0 4-8	24"x12"	1	218	218								
	"	M 3-1	24"x12"	1	218	218								
	"	M 1-6-B	24"x24"	1	218	218								32
	PAGE SUBTOTALS			35		7,600	436	872	0	0		0	2	

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 218 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGNS SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NUMBER OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
	"	MO 6-1	21"x21"	1	218	218								AHEAD
16A	2640' S. OF ASHLAND AVE EXIT ON I-41 (NB)	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x18"	1	188	188								
	"	WO 20-2A	36"x36"	1	188	188								
16B	2640' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x18"	1	188	188								
	"	WO 20-2A	36"x36"	1	188	188								
16C	1320' S. OF ASHLAND AVE EXIT ON I-41 (NB)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16D	1320' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16E	700' S. OF ASHLAND AVE EXIT ON I-41 (NB)	FMS	114"x72"	1					57					SEE FMS DETAIL SHEET
16F	700' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	FMS	114"x72"	1					57					SEE FMS DETAIL SHEET
16G	100' S. OF ASHLAND AVE EXIT ON I-41 (NB) (MEDIAN)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
16H	100' S. OF ASHLAND AVE EXIT ON I-41 (NB)	MO 4-8	36"x18"	1	188	188								
	"	M 3-1	36"x18"	1	188	188								
	"	M 1-6B	36"x36"	1	188	188								
	"	MO 6-1	30"x30"	1	188	188								
17	TYPE 1 @ SIGN BRIDGE # S-05-158 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								BELOW "NORTH"
18	TYPE 1 @ SIGN BRIDGE # S-05-160 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								BELOW "NORTH"
19	TYPE 1 @ SIGN BRIDGE # S-05-168 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
20	TYPE 1 @ SIGN BRIDGE # S-05-172 ON HWY 41 (NB)	MO 1-56-B	36"x36"	1	218	218								RIGHT OF "41"
21	LT OF SIS SIGN (FOOD & LODGING) ON HWY 41 (NB)	MO 4-8-A	30"x24"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
22	ACROSS FROM SIGN # 21 (MEDIAN SIDE)	MO 4-8-A	30"x24"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
23	RT LEG OF SIGN BRIDGE # S-05-174 (EAST TO SOUTH RAMP @ HWY 29)	MO 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	WO 20-2-A	48"x48"	1	218	218								
24	LT LEG OF SIGN BRIDGE # S-05-174 (EAST TO SOUTH RAMP @ HWY 29)	MO 3-3	36"x18"	1	218	218								
	"	M 1-6-B	36"x36"	1	218	218								32
	"	WO 20-2-A	48"x48"	1	218	218								
25	TYPE 1 @ S-05-174 (S-32/54; MASON ST; 3/4 MILE; EXIT-DOWN ARROW-ONLY)										1	1		SOUTH 32
	PAGE SUBTOTALS			39		7,406	0	0	114	0		1	0	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

Conduit Rigid Nonmetallic Schedule 40

Location			
STH 32 & Lombardi Ave (S05-0064)		652.0225	652.0235
		2-Inch	3-Inch
FROM	TO	LF	LF
PB4	SB4		40
PB4	Drain	10	
PB9	Drain	20	
PB12	SB10		40
PB12	PB83	400	
	TOTALS	430	80

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & Lombardi Ave (S05-0064)	17
TOTALS	17

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & Lombardi Ave (S05-0064)	16
TOTALS	16

Concrete Bases

	654.0110	654.0113
	Type 10	Type 13
LOCATION	EACH	EACH
STH 32 & Lombardi Ave (S05-0064)	1	1
TOTALS	1	1

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & Lombardi Ave (S05-0064)	2
TOTAL	2

Loop Detectors

LOCATION	LOOP NO.	# OF TURNS	652.0800 Conduit LF	652.0900 Slots LF	655.0700 Lead In Cable LF	655.0800 Wire LF
STH 32 & Lombardi Ave (S05-0064)	11				350	
	12				280	
	21				340	
	22				150	
	31				260	
	41				100	
	42				100	
	51				120	
	52				130	
	61	4	60	60	620	250
	62				440	
	71				100	
	72				100	
	81				250	
	82				250	
		TOTALS	60	60	3,590	250

TRAFFIC SIGNALS

		657.0425				
	657.0100	Traffic Signal	657.1350	657.1360	657.1530	657.1540
	Pedestal Bases	Standard Aluminum 15-FT	Install Poles Type 10	Install Poles Type 13	Install Monotube Arms 30-FT	Install Monotube Arms 40-FT
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Lombardi Ave (S05-0064)	2	2	1	1	1	1
TOTALS	2	2	1	1	1	1

TRAFFIC SIGNALS

	658.0110	658.0115	658.0165	658.0600	658.0605	658.0610
	Traffic Signal Face 3-12 Inch Vertical	Traffic Signal Face 4-12 Inch Vertical	Traffic Signal Face 5-12 Inch Horizontal	LED Modules 12-Inch Red Ball	LED Modules 12-Inch Yellow Ball	LED Modules 12-Inch Green Ball
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Lombardi Ave (S05-0064)	6	5	2	8	8	8
TOTALS	6	5	2	8	8	8

TRAFFIC SIGNALS

	658.0615	658.0620	658.0625	658.5069	SPV.0060.02	SPV.0105.01
	LED Modules 12-Inch Red Arrow	LED Modules 12-Inch Yellow Arrow	LED Modules 12-Inch Green Arrow	Signal Mounting Hardware (STH 32 & Lombardi Ave)	Relocate RR Blank Out Sign	Remove Traffic Signal
LOCATION	EACH	EACH	EACH	LS	EACH	LS
STH 32 & Lombardi Ave (S05-0064)	5	12	7	1	1	1
TOTALS	5	12	7	1	1	1

TRAFFIC SIGNAL CABLE

STH 32 & Lombardi Ave (S05-0064)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230	655.0240	658.0215	658.0220	658.0225
							Base to Head	Base to Head	Backplates	Backplates	Backplates
	3-14	5-14	7-14	9-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face	Signal Face
	AWG	AWG	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section	5 Section
									12-Inch	12-Inch	12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH	EACH
SB1					50	5	20		1		
						7		20		1	
SB2			130			8		20		1	
SB3			170			6		20		1	
SB3	170					Blank Out Sign	15				
SB4		270				9	60		1		
						10	50		1		
SB5		310				18					
SB6					350	12					
						19					
SB6	350					Blank Out Sign	15				
SB7			370			13		40			1
RR Bungalow				550		RR Preempt					
SB8					460	1		20		1	
						11	20		1		
SB8	460					Blank Out Sign	15				
SB9			390			2		20		1	
SB9	390					Blank Out Sign	15				
SB10		300				3	70		1		
						4	60		1		
SB11		180				14					
SB12					140	15					
						16					
SB13			50			17		40			1
Sub Total	1,370	1,060	1,110	550	1,000		340	180	6	5	2
TOTALS	1,370	1,400	1,290	550	1,000				6	5	2

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG		
LOCATION		655.0515
STH 32 & Lombardi Ave (S05-0064)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
CB1	SB1	50
SB1	SB2	120
SB2	SB3	90
SB3	SB4	150
SB4	SB5	150
SB5	SB6	170
SB6	SB7	110
SB7	SB8	100
SB8	SB9	110
SB9	SB10	200
SB10	SB11	170
SB11	SB12	110
SB12	CB1	150
SB13	CB1	50
	TOTAL	1,730

Lighting Summary		
	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & Lombardi Ave (S05-0064)	2	2
TOTALS	2	2

Signal Lighting Cable		
		655.0305
LOCATION		Type UF
STH 32 & Lombardi Ave (S05-0064)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB4	270
CB1	SB10	300
	TOTAL	570

Electrical Wire Lighting 12 AWG		
LOCATION		
STH 32 & Lombardi Ave (S05-0064)		
120 Volt System		655.0610
FROM	TO	LF
SB4	Luminaire	150
SB10	Luminaire	150
	TOTAL	300

Conduit Rigid Nonmetallic Schedule 40

Location		652.0225	652.0235	652.0605
STH 32 & McCarthy Way (S05-0855)		2-Inch	3-Inch	2-Inch
				Special
FROM	TO	LF	LF	LF
PB2	PB81	400		
PB81	PB82	400		
PB82	PB83	400		
PB5	SB4		30	
PB5	Drain	20		
PB9	Drain	40		
PB12	SB10		40	
PB12	PB80	660		
PB80	PB79	580		80
	TOTALS	2,500	70	80

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & McCarthy Way (S05-0855)	17
TOTALS	17

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & McCarthy Way (S05-0855)	13
TOTALS	13

Concrete Bases

	654.0110	654.0113
	Type 10	Type 13
LOCATION	EACH	EACH
STH 32 & McCarthy Way (S05-0855)	1	1
TOTALS	1	1

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & McCarthy Way (S05-0855)	2
TOTAL	2

Loop Detectors

LOCATION	LOOP NO.	# OF TURNS	652.0800 Conduit LF	652.0900 Slots LF	655.0700 Lead In Cable LF	655.0800 Wire LF
STH 32 & McCarthy Way (S05-0855)	11				230	
	21	4	60	60	420	250
	22	4	70	70	260	270
	31				220	
	41				170	
	42				170	
	51				120	
	61	5	60	60	690	290
	62	4	70	70	530	270
	71				170	
	81				220	
		TOTALS	260	260	3,200	1,080

TRAFFIC SIGNALS

		657.0425				
	657.0100	Traffic	657.1350	657.1360	657.1530	657.1540
		Signal				
	Pedestal	Standard	Install	Install	Install	Install
	Bases	Aluminum	Poles	Poles	Monotube	Monotube
		15-FT	Type 10	Type 13	Arms 30-FT	Arms 40-FT
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & McCarthy Way (S05-0855)	2	2	1	1	1	1
TOTALS	2	2	1	1	1	1

TRAFFIC SIGNALS

658.0110	658.0115		658.0600	658.0605	658.0610
Traffic	Traffic				
Signal	Signal		LED Modules	LED Modules	LED Modules
Face	Face		12-Inch	12-Inch	12-Inch
3-12 Inch	4-12 Inch		Red Ball	Yellow Ball	Green Ball
Vertical	Vertical				
LOCATION EACH	EACH		EACH	EACH	EACH
STH 32 & McCarthy Way (S05-0855) 6	5		6	6	6
TOTALS 6	5		6	6	6

TRAFFIC SIGNALS

658.0615	658.0620	658.0625	658.5069	SPV.0060.02	SPV.0105.01
			Signal		Remove
LED Modules	LED Modules	LED Modules	Mounting	Relocate	Traffic
12-Inch	12-Inch	12-Inch	Hardware	RR Blank Out Sign	Signal
Red Arrow	Yellow Arrow	Green Arrow	(STH 32 & Potts Ave)		
LOCATION EACH	EACH	EACH	LS	EACH	LS
STH 32 & McCarthy Way (S05-0855) 5	10	5	1	1	1
TOTALS 5	10	5	1	1	1

TRAFFIC SIGNAL CABLE

STH 32 & McCarthy Way (S05-0855)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230	655.0240	658.0215	658.0220
							Base to Head	Base to Head	Backplates	Backplates
	3-14	5-14	7-14	9-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
									12-Inch	12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH
SB1					70	5	20		1	
						7		20		1
SB2			140			8		20		1
SB3			180			6		20		1
SB3	180					Blank Out Sign	15			
SB4		280				9	70		1	
						10	60		1	
RR Bungalow				280		RR Preempt				
SB5		310				17				
SB5		310				Push Button				
SB6					320	12				
						18				
SB6	320					Blank Out Sign	15			
SB7			400			13				
SB8					390	1		20		1
						11	20		1	
SB8	390					Blank Out Sign	15			
SB9			320			2		20		1
SB9	320					Blank Out Sign	15			
SB10		230				3	60		1	
						4	50		1	
SB11					190	14				
						15				
SB11		190				Push Button				
SB12			60			16				
Sub Total	1,210	1,320	1,100	280	970		340	100	6	5
TOTALS	1,210	1,660	1,200	280	970				6	5

Signal Indication

		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG		
LOCATION		655.0515
STH 32 & McCarthy Way (S05-0855)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
CB1	SB1	70
SB1	SB2	180
SB2	SB3	100
SB3	SB4	150
SB4	SB5	110
SB5	SB6	110
SB6	SB7	120
SB7	SB8	100
SB8	SB9	140
SB9	SB10	190
SB10	SB11	120
SB11	SB12	210
SB12	CB1	60
	TOTAL	1,660

Lighting Summary		
	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & McCarthy Way (S05-0855)	2	2
TOTALS	2	2

Signal Lighting Cable		
		655.0305
LOCATION		Type UF
STH 32 & McCarthy Way (S05-0855)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB4	280
CB1	SB10	230
	TOTAL	510

Electrical Wire Lighting 12 AWG		
LOCATION		
STH 32 & McCarthy Way (S05-0855)		
120 Volt System		655.0610
FROM	TO	LF
SB4	Luminaire	150
SB10	Luminaire	150
	TOTAL	300

3

Conduit Rigid Nonmetallic Schedule 40

Location			
STH 32 & Cormier Road (S05-0125)		652.0225	652.0235
		2-Inch	3-Inch
FROM	TO	LF	LF
PB3	PB4		40
PB3	PB4		40
PB4	PB77	660	
PB77	PB78	660	
PB78	PB79	660	
PB7	SB6		20
PB7	PB8		20
PB8	Drain	20	
PB8	SB7	5	
PB10	Drain	20	
PB14	SB13		30
PB14	PB76	525	
	TOTALS	2,550	150

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & Cormier Road (S05-0125)	17
TOTALS	17

Pull Boxes, Steel

	653.0105
	12x24-Inch
LOCATION	EACH
STH 32 & Cormier Road (S05-0125)	2
TOTALS	2

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & Cormier Road (S05-0125)	14
TOTALS	14

3

Concrete Bases

	654.0101	654.0113
	Type 1	Type 13
LOCATION	EACH	EACH
STH 32 & Cormier Road (S05-0125)	1	2
TOTALS	1	2

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & Cormier Road (S05-0125)	2
TOTAL	2

Loop Detectors

			652.0800	652.0900	655.0700	655.0800
			Conduit	Slots	Lead In	Wire
	LOOP	# OF			Cable	
LOCATION	NO.	TURNS	LF	LF	LF	LF
STH 32 & Cormier Road (S05-0125)	11				170	
	12				150	
	21	4	60	60	510	250
	22	4	70	70	350	270
	41				110	
	42	2	85		80	180
	51				230	
	52				220	
	61	4	60	60	540	250
	62	4	70	70	380	270
	71	2	95		80	200
	81				330	
	82				380	
	83				360	
		TOTALS	440	260	3,890	1,420

TRAFFIC SIGNALS

		657.0425	657.0430				
						658.0110	658.0115
	657.0100	Traffic	Traffic	657.1360	657.1540	Traffic	Traffic
		Signal	Signal			Signal	Signal
	Pedestal	Standard	Standard	Install	Install	Face	Face
	Bases	Aluminum	Aluminum	Poles	Monotube	3-12 Inch	4-12 Inch
		15-FT	10-FT	Type 13	Arms 40-FT	Vertical	Vertical
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Cormier Road (S05-0125)	3	2	1	2	2	7	5
TOTALS	3	2	1	2	2	7	5

TRAFFIC SIGNALS

	658.0416	658.0500	658.0600	658.0605	658.0610	658.0615
	Pedestrian	Pedestrian				
	Signal	Push	LED Modules	LED Modules	LED Modules	LED Modules
	Face	Button	12-Inch	12-Inch	12-Inch	12-Inch
	16-Inch		Red Ball	Yellow Ball	Green Ball	Red Arrow
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Cormier Road (S05-0125)	1	1	7	7	7	5
TOTALS	1	1	7	7	7	5

TRAFFIC SIGNALS

	658.0620	658.0625	658.0635	658.5069	SPV.0060.02	SPV.0105.01
			LED Modules	Signal		Remove
	LED Modules	LED Modules	Pedestrian	Mounting	Relocate	Traffic
	12-Inch	12-Inch	Countdown Timer	Hardware	RR Blank Out Sign	Signal
	Yellow Arrow	Green Arrow	16-Inch	(STH 32 & Cormier Road)		
LOCATION	EACH	EACH	EACH	LS	EACH	LS
STH 32 & Cormier Road (S05-0125)	10	5	1	1	1	1
TOTALS	10	5	1	1	1	1

TRAFFIC SIGNAL CABLE

STH 32 & Cormier Road (S05-0125)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230 Base to Head	655.0240 Base to Head	658.0215 Backplates	658.0220 Backplates
	3-14	5-14	7-14	9-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
									12-Inch	12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH
SB1					90	14	20		1	
						15				
SB2			150			16				
SB2		150				20				
SB3					200	5	20		1	
						7		20		1
SB4			290			8		20		1
SB4		290				Push Button				
SB5			320			6		20		1
SB5	320					Blank Out Sign	15			
SB6		400				9	70		1	
						10	60		1	
SB7		410				19	15			
SB8		440				17				
SB9					350	12				
						18				
SB9	350					Blank Out Sign	15			
SB10			300			13				
RR Bungalow				400		RR Preempt				
SB11					240	1		20		1
						11	20		1	
SB11	240					Blank Out Sign	15			
SB12			160			2		20		1
SB12	160					Blank Out Sign	15			
SB13		80				3	70		1	
						4	60		1	
Sub Total	1,070	1,770	1,220	400	880		395	100	7	5
TOTALS	1,070	2,165	1,320	400	880				7	5

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG		
LOCATION		655.0515
STH 32 & Cormier Road (S05-0125)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
CB1	SB1	90
SB1	SB2	120
SB2	SB3	80
SB3	SB4	120
SB4	SB5	100
SB5	SB6	130
SB6	SB7	80
SB7	SB8	60
SB8	SB9	120
SB9	SB10	100
SB10	SB11	120
SB11	SB12	110
SB12	SB13	170
SB13	CB1	80
	TOTAL	1,480

Lighting Summary		
	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & Cormier Road (S05-0125)	2	2
TOTALS	2	2

Signal Lighting Cable		
		655.0305
LOCATION		Type UF
STH 32 & Cormier Road (S05-0125)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB6	400
CB1	SB13	80
	TOTAL	480

Electrical Wire Lighting 12 AWG		
LOCATION		
STH 32 & Cormier Road (S05-0125)		
120 Volt System		655.0610
FROM	TO	LF
SB6	Luminaire	150
SB13	Luminaire	150
	TOTAL	300

Conduit Rigid Nonmetallic Schedule 40

Location		652.0225	652.0235	652.0605
STH 32 & Pilgrim Way (S05-0315)		2-Inch	3-Inch	2-Inch
				Special
FROM	TO	LF	LF	LF
PB6	PB74	525		
PB74	PB75	525		
PB75	PB76	405		120
PB9	SB6		20	
PB9	Drain	10		
PB12	Drain	10		
PB15	SB12		30	
PB15	PB73	350		
	TOTALS	1,825	50	120

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & Pilgrim Way (S05-0315)	13
TOTALS	13

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & Pilgrim Way (S05-0315)	10
TOTALS	10

Concrete Bases

	654.0113
	Type 13
LOCATION	EACH
STH 32 & Pilgrim Way (S05-0315)	2
TOTALS	2

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & Pilgrim Way (S05-0315)	2
TOTAL	2

Loop Detectors

LOCATION	LOOP NO.	# OF TURNS	652.0800 Conduit LF	652.0900 Slots LF	655.0700 Lead In Cable LF	655.0800 Wire LF
STH 32 & Pilgrim Way (S05-0315)	11				160	
	12				140	
	21	4	60	60	550	250
	22	4	70	70	390	270
	31				270	
	32				270	
	33				340	
	51				310	
	52				280	
	61	4	60	60	530	250
	62	4	70	70	370	270
		TOTALS	260	260	3,610	1,040

TRAFFIC SIGNALS

		657.0425				
						658.0110
	657.0100	Traffic	657.1360	657.1535	657.1540	Traffic
		Signal				Signal
	Pedestal	Standard	Install	Install	Install	Face
	Bases	Aluminum	Poles	Monotube	Monotube	3-12 Inch
		15-FT	Type 13	Arms 35-FT	Arms 40-FT	Vertical
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Pilgrim Way (S05-0315)	2	2	2	1	1	6
TOTALS	2	2	2	1	1	6

TRAFFIC SIGNALS

	658.0115	658.0600	658.0605	658.0610	658.0615
	Traffic				
	Signal	LED Modules	LED Modules	LED Modules	LED Modules
	Face	12-Inch	12-Inch	12-Inch	12-Inch
	4-12 Inch	Red Ball	Yellow Ball	Green Ball	Red Arrow
	Vertical				
LOCATION	EACH	EACH	EACH	EACH	EACH
STH 32 & Pilgrim Way (S05-0315)	5	6	6	6	5
TOTALS	5	6	6	6	5

TRAFFIC SIGNALS

	658.0620	658.0625	658.5069	SPV.0060.02	SPV.0105.01
			Signal		Remove
	LED Modules	LED Modules	Mounting	Relocate	Traffic
	12-Inch	12-Inch	Hardware	RR Blank Out Sign	Signal
	Yellow Arrow	Green Arrow	(STH 32 & Pilgrim Way)		
LOCATION	EACH	EACH	LS	EACH	LS
STH 32 & Pilgrim Way (S05-0315)	10	5	1	1	1
TOTALS	10	5	1	1	1

TRAFFIC SIGNAL CABLE

STH 32 & Pilgrim Way (S05-0315)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230 Base to Head	655.0240 Base to Head	658.0215 Backplates	658.0220 Backplates
	3-14 AWG	5-14 AWG	7-14 AWG	9-14 AWG	12-14 AWG	HEAD NO.	5-14 AWG	7-14 AWG	Signal Face 3 Section 12-Inch	Signal Face 4 Section 12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH
SB3					Use Existing	5	20		1	
						7		20		1
SB4			360			8		20		1
SB5			400			6		20		1
SB5	400					Blank Out Sign	15			
SB6		470				9	60		1	
						10	50		1	
RR Bungalow				380		RR Preempt				
SB7		380				14				
SB8					320	15				
						16				
SB8	320					Blank Out Sign	15			
SB9			260			17				
SB10					220	1		20		1
						11	20		1	
SB10	220					Blank Out Sign	15			
SB11			170			2		20		1
SB11	170					Blank Out Sign	15			
SB12		70				3	70		1	
						4	60		1	
Sub Total	1,110	920	1,190	380	540		340	100	6	5
TOTALS	1,110	1,260	1,290	380	540				6	5

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG

LOCATION		655.0515
STH 32 & Pilgrim Way (S05-0315)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
SB3	SB4	150
SB4	SB5	90
SB5	SB6	120
SB6	SB7	100
SB7	SB8	90
SB8	SB9	170
SB9	SB10	70
SB10	SB11	100
SB11	SB12	190
SB12	CB1	70
	TOTAL	1,150

Lighting Summary

	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & Pilgrim Way (S05-0315)	2	2
TOTALS	2	2

Signal Lighting Cable

		655.0305
LOCATION		Type UF
STH 32 & Pilgrim Way (S05-0315)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB6	470
CB1	SB12	70
	TOTAL	540

Electrical Wire Lighting 12 AWG

LOCATION		
STH 32 & Pilgrim Way (S05-0315)		
120 Volt System		655.0610
FROM	TO	LF
SB6	Luminaire	150
SB12	Luminaire	150
	TOTAL	300

Conduit Rigid Nonmetallic Schedule 40

Location		652.0225	652.0235	652.0605
STH 32 & Vanderperren Way (S05-0558)		2-Inch	3-Inch	2-Inch
				Special
FROM	TO	LF	LF	LF
PB4	PB71	450		100
PB71	Communications Vault	110		
PB71	PB72	220		230
PB72	PB73	210		140
PB6	SB4		30	
PB6	Drain	10		
PB7	Drain	10		
PB7	PB8		10	
PB1	PB70	680		
	TOTALS	1,690	40	470

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & Vanderperren Way (S05-0558)	10
TOTALS	10

Pull Boxes, Steel

	653.0105
	12x24-Inch
LOCATION	EACH
STH 32 & Vanderperren Way (S05-0558)	2
TOTALS	2

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & Vanderperren Way (S05-0558)	8
TOTALS	8

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & Vanderperren Way (S05-0558)	9
TOTAL	9

Concrete Bases

	654.0113
	Type 13
LOCATION	EACH
STH 32 & Vanderperren Way (S05-0558)	2
TOTALS	2

Loop Detectors

LOCATION	LOOP NO.	# OF TURNS	652.0800 Conduit LF	652.0900 Slots LF	655.0700 Lead In Cable LF	655.0800 Wire LF
STH 32 & Vanderperren Way (S05-0558)	11	3	95	75	290	270
	21	4	60	60	570	250
	22	4	60	60	410	250
	41	2	100		100	200
	42	2	90		100	180
	51	2	95	80	160	200
	61	4	70	70	550	270
	62	4	70	70	390	270
		TOTALS	640	415	2,570	1,890

TRAFFIC SIGNALS

	657.0100	657.0420	657.0425	657.1360	657.1550	658.0110
		Traffic	Traffic			Traffic
		Signal	Signal			Signal
	Pedestal	Standard	Standard	Install	Install	Face
	Bases	Aluminum	Aluminum	Poles	Monotube	3-12 Inch
		13-FT	15-FT	Type 13	Arms 50-FT	Vertical
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
STH 32 & Vanderperren Way (S05-0558)	5	3	2	2	2	9
TOTALS	5	3	2	2	2	9

TRAFFIC SIGNALS

	658.0115	658.0600	658.0605	658.0610	658.0615
	Traffic				
	Signal	LED Modules	LED Modules	LED Modules	LED Modules
	Face	12-Inch	12-Inch	12-Inch	12-Inch
	4-12 Inch	Red Ball	Yellow Ball	Green Ball	Red Arrow
	Vertical				
LOCATION	EACH	EACH	EACH	EACH	EACH
STH 32 & Vanderperren Way (S05-0558)	4	9	7	7	4
TOTALS	4	9	7	7	4

TRAFFIC SIGNALS

	658.0620	658.0625	658.5069	SPV.0105.01
			Signal	Remove
	LED Modules	LED Modules	Mounting	Traffic
	12-Inch	12-Inch	Hardware	Signal
	Yellow Arrow	Green Arrow	(STH 32 & Vanderperren Way)	
LOCATION	EACH	EACH	LS	LS
STH 32 & Vanderperren Way (S05-0558)	10	6	1	1
TOTALS	10	6	1	1

TRAFFIC SIGNAL CABLE

STH 32 & Vanderperren Way (S05-0558)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230 Base to Head	655.0240 Base to Head	658.0215 Backplates	658.0220 Backplates
	3-14	5-14	7-14	9-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
									12-Inch	12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH
SB1		120				13	15		1	
SB2		170				14				
SB3					260	1		20		1
						10	20		1	
SB4					440	2		80		1
						3	70		1	
						4	60		1	
SB5			430			11		15	1	
SB6			290			12		15	1	
SB7					280	5	20		1	
						6		20		1
SB8					120	7		80		1
						8	70		1	
						9	60		1	
Sub Total	0	290	720	0	1,100		315	230	9	4
TOTALS	0	605	950	0	1,100				9	4

Signal Indication — **Conductor Color**

Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG		
LOCATION		655.0515
STH 32 & Vanderperren Way (S05-0558)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
CB1	SB1	120
SB1	SB2	80
SB2	SB3	120
SB3	SB4	230
SB4	SB5	80
SB5	SB6	160
SB6	SB7	60
SB7	SB8	290
SB8	CB1	120
	TOTAL	1,260

Lighting Summary		
	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & Vanderperren Way (S05-0558)	2	2
TOTALS	2	2

Signal Lighting Cable		
		655.0305
LOCATION		Type UF
STH 32 & Vanderperren Way (S05-0558)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB4	440
CB1	SB8	120
	TOTAL	560

Electrical Wire Lighting 12 AWG		
LOCATION		
STH 32 & Vanderperren Way (S05-0558)		
120 Volt System		655.0610
FROM	TO	LF
SB4	Luminaire	150
SB8	Luminaire	150
	TOTAL	300

3

Conduit Rigid Nonmetallic Schedule 40

Location			
STH 32 & Hansen Road (S05-0174)		652.0225	652.0235
		2-Inch	3-Inch
FROM	TO	LF	LF
CB1	PB2		30
CB1	PB2		30
PB3	PB70	680	
PB7	SB6		40
PB7	Drain	10	
PB10	Drain	10	
PB1	SB12		20
	TOTALS	700	120

Pull Boxes, Non-Conductive

	SPV.0060.01
	24x42-Inch
LOCATION	EACH
STH 32 & Hansen Road (S05-0174)	13
TOTALS	13

Removing Pull Boxes

	653.0905
LOCATION	EACH
STH 32 & Hansen Road (S05-0174)	12
TOTALS	12

3

Concrete Bases

	654.0113
	Type 13
LOCATION	EACH
STH 32 & Hansen Road (S05-0174)	2
TOTALS	2

Removing Concrete Bases

	204.0195
LOCATION	EACH
STH 32 & Hansen Road (S05-0174)	2
TOTAL	2

Loop Detectors

			652.0800	652.0900	655.0700	655.0800
			Conduit	Slots	Lead In Cable	Wire
LOCATION	LOOP NO.	# OF TURNS	LF	LF	LF	LF
STH 32 & Hansen Road (S05-0174)	11				170	
	12				160	
	21	4	60	60	500	250
	22	4	70	70	340	270
	31				270	
	41				150	
	42				50	
	51				240	
	52				230	
	61	4	60	60	540	250
	62	4	70	70	380	270
	71				50	
	82				320	
		TOTALS	260	260	3,400	1,040

TRAFFIC SIGNALS

		657.0425			
					658.0110
	657.0100	Traffic	657.1360	657.1540	Traffic
		Signal			Signal
	Pedestal	Standard	Install	Install	Face
	Bases	Aluminum	Poles	Monotube	3-12 Inch
		15-FT	Type 13	Arms 40-FT	Vertical
LOCATION	EACH	EACH	EACH	EACH	EACH
STH 32 & Hansen Road (S05-0174)	4	4	2	2	6
TOTALS	4	4	2	2	6

TRAFFIC SIGNALS

	658.0115	658.0600	658.0605	658.0610	658.0615
	Traffic				
	Signal	LED Modules	LED Modules	LED Modules	LED Modules
	Face	12-Inch	12-Inch	12-Inch	12-Inch
	4-12 Inch	Red Ball	Yellow Ball	Green Ball	Red Arrow
	Vertical				
LOCATION	EACH	EACH	EACH	EACH	EACH
STH 32 & Hansen Road (S05-0174)	5	6	6	6	5
TOTALS	5	6	6	6	5

TRAFFIC SIGNALS

	658.0620	658.0625	658.5069	SPV.0060.02	SPV.0105.01
			Signal		Remove
	LED Modules	LED Modules	Mounting	Relocate	Traffic
	12-Inch	12-Inch	Hardware	RR Blank Out Sign	Signal
	Yellow Arrow	Green Arrow	(STH 32 & Hansen Road)		
LOCATION	EACH	EACH	LS	EACH	LS
STH 32 & Hansen Road (S05-0174)	10	5	1	2	1
TOTALS	10	5	1	2	1

TRAFFIC SIGNAL CABLE

STH 32 & Hansen Road (S05-0174)	655.0210	655.0230	655.0240	655.0250	655.0260		655.0230	655.0240	658.0215	658.0220
							Base to Head	Base to Head	Backplates	Backplates
	3-14	5-14	7-14	9-14	12-14	HEAD	5-14	7-14	Signal Face	Signal Face
	AWG	AWG	AWG	AWG	AWG	NO.	AWG	AWG	3 Section	4 Section
									12-Inch	12-Inch
From CB1 to	LF	LF	LF	LF	LF		LF	LF	EACH	EACH
SB1					70	14				
						15				
SB2			160			16				
SB3					200	5	20		1	
						7		20		1
SB4			270			8		20		1
SB5			310			6		20		1
SB5	310					Blank Out Sign	15			
SB6		420				9	70		1	
						10	60		1	
RR Bungalow				370		RR Preempt				
SB7		380				17				
SB8					330	12				
						18				
SB8	330					Blank Out Sign	15			
SB9			290			13				
SB10					270	1		20		1
						11	20		1	
SB10	270					Blank Out Sign	15			
SB11			170			2		20		1
SB11	170					Blank Out Sign	15			
SB12		60				3	70		1	
						4	60		1	
Sub Total	1,080	860	1,200	370	870		360	100	6	5
TOTALS	1,080	1,220	1,300	370	870				6	5

Signal Indication		Conductor Color
Red	=	Red
Yellow	=	Orange
Green	=	Green
Red Arrow	=	Red w/Black Tracer
Yellow Arrow	=	Black w/White
Yellow Flashing Arrow	=	White w/Black
Green Arrow	=	Blue w/Black

PEDS

Walk	=	Green
Don't Walk	=	Red
Button	=	Black & Orange

RR Blank Out Signs

Neutral	=	White
Sign	=	Red

NOTE: If there is a back to back 3 section or 5 section, then use solid colored conductors for NB & EB, and tracer conductors for SB & WB.

NOTE: Lead-In Cable shall be pulled in separately from other cables/wires and enter the Control Cabinet in a separate conduit if provided.

Electrical Wire Traffic Signals 10 AWG		
LOCATION		655.0515
STH 32 & Hansen Road (S05-0174)		
		(Equipment Grounding Conductor)
		(Green)
		LF
FROM	TO	
CB1	SB1	70
SB1	SB2	140
SB2	SB3	90
SB3	SB4	120
SB4	SB5	90
SB5	SB6	160
SB6	SB7	100
SB7	SB8	90
SB8	SB9	140
SB9	SB10	90
SB10	SB11	140
SB11	SB12	190
SB12	CB1	60
	TOTAL	1,480

Lighting Summary		
	657.1812	659.1120
	Install	Luminaires
	Luminaire	Utility
	Arms	LED-B
	Steel 12-FT	
LOCATION	EACH	EACH
STH 32 & Hansen Road (S05-0174)	2	2
TOTALS	2	2

Signal Lighting Cable		
		655.0305
LOCATION		Type UF
STH 32 & Hansen Road (S05-0174)		2-12 AWG
		Grounded
FROM	TO	LF
CB1	SB6	420
CB1	SB12	60
	TOTAL	480

Electrical Wire Lighting 12 AWG		
LOCATION		
STH 32 & Hansen Road (S05-0174)		
120 Volt System		655.0610
FROM	TO	LF
SB6	Luminaire	150
SB12	Luminaire	150
	TOTAL	300

SAWING

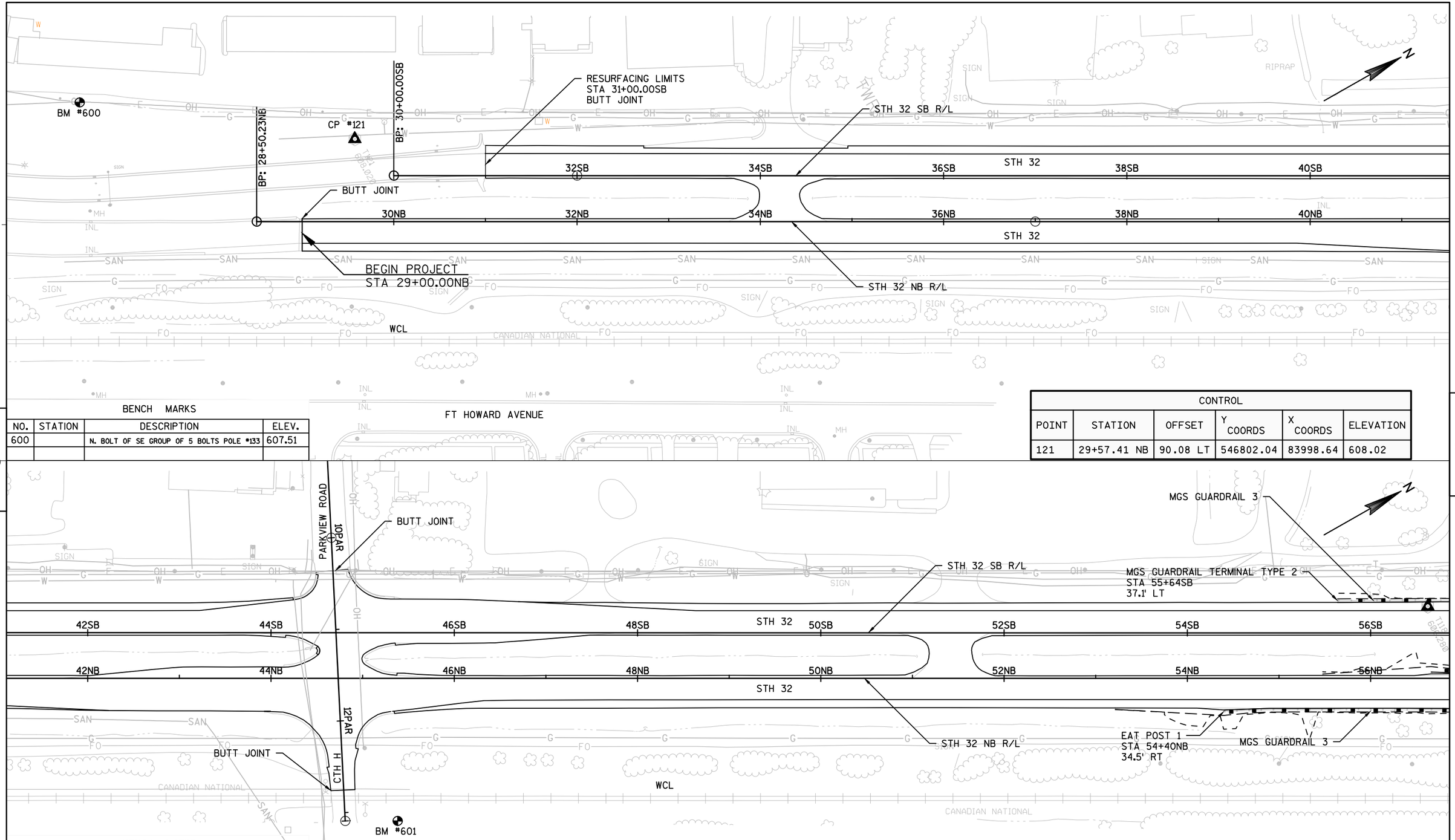
STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
CATEGORY 0010						
NORTHBOUND LANES						
29+00NB	-	29+00NB	STH 32	35	--	NB SOUTH PAVING LIMITS
44+49NB	-	44+53NB	STH 32	20	5	CURB AND GUTTER REMOVAL AT PARKVIEW MEDIAN
58+49NB	-	59+60NB	STH 32	120	--	SAW CUT FOR SHOULDER WIDENING EAST SIDE
59+25NB	-	59+60NB	STH 32	40	--	SAW CUT FOR SHOULDER WIDENING WEST SIDE
60+80NB	-	61+41NB	STH 32	70	--	SAW CUT FOR SHOULDER WIDENING EAST SIDE
60+80NB	-	61+63NB	STH 32	90	--	SAW CUT FOR SHOULDER WIDENING WEST SIDE
63+90NB	-	64+00NB	STH 32	25	5	CURB AND GUTTER REMOVAL AT BAETEN ROAD MEDIAN
76+25NB	-	76+25NB	STH 32	35	--	NB SOUTH RAILROAD CROSSING APPROACH
80+21NB	-	80+21NB	STH 32	35	--	NB NORTH RAILROAD CROSSING APPROACH
86+00NB	-	86+00NB	STH 32	50	--	6" PAVING LIMITS S OF HANSEN ROAD
90+00NB	-	90+00NB	STH 32	35	--	6" PAVING LIMITS N OF HANSEN ROAD
100+25NB	-	100+25NB	STH 32	50	--	6" PAVING LIMITS S OF VANDERPERREN WAY
102+13NB	-	102+20NB	STH 32	--	5	CURB AND GUTTER REMOVAL AT VANDERPERREN
102+75NB	-	108+95NB	STH 32	620	--	NB LANE FOR LEFT TURN LANE
102+75NB	-	102+75NB	STH 32	50	--	LEFT TURN LANE SOUTH LIMITS
104+25NB	-	104+25NB	STH 32	35		6" PAVING LIMITS N OF VANDERPERREN WAY
116+00NB	-	116+00NB	STH 32	35	--	STAGE 5 LIMITS N OF TENNIS COURT
118+50NB	-	118+50NB	STH 32	55		6" PAVING LIMITS S OF PILGRIM WAY
119+02NB	-	120+05NB	STH 32	230	--	PILGRIM WAY CURB REPLACEMENT NB LEFT TURN LANE
121+17NB	-	121+24NB	STH 32	45	10	MEDIAN CURB & GUTTER AND ISLAND FOR PED XING
122+50NB	-	122+50NB	STH 32	35	--	6" PAVING LIMITS N OF PILGRIM WAY
141+00NB	-	141+00NB	STH 32	55		6" PAVING LIMITS S OF CORMIER ROAD
144+50NB	-	144+50NB	STH 32	35	--	6" PAVING LIMITS N OF CORMIER ROAD
174+50NB	-	174+50NB	STH 32	55		6" PAVING LIMITS S OF MIKE MCCARTHY WAY
175+46NB	-	175+61NB	STH 32	--	50	EAST LEG OF MIKE MCCARTHY WAY INTERSECTION
175+95NB	-	176+15NB	STH 32	--	70	EAST LEG OF MIKE MCCARTHY WAY INTERSECTION
178+50NB	-	178+50NB	STH 32	35	--	6" PAVING LIMITS N OF MIKE MCCARTHY WAY
190+75NB	-	190+75NB	STH 32	57		6" PAVING LIMITS S OF LOMBARDI AVENUE
195+00NB	-	195+00NB	STH 32	35	--	NB NORTH PAVING LIMITS
SUBTOTAL NORTHBOUND LANES				1,982	145	

SAWING (CONTINUED)

STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
CATEGORY 0010						
SOUTHBOUND LANES						
31+00SB	-	31+00SB	STH 32	35	--	SB SOUTH PAVING LIMITS
58+63SB	-	59+60SB	STH 32	105	--	SAW CUT FOR SHOULDER WIDENING WEST SIDE
58+75SB	-	59+60SB	STH 32	90	--	SAW CUT FOR SHOULDER WIDENING EAST SIDE
60+80SB	-	60+96SB	STH 32	20	--	SAW CUT FOR SHOULDER WIDENING EAST SIDE
60+80SB	-	61+83SB	STH 32	110	--	SAW CUT FOR SHOULDER WIDENING WEST SIDE
75+80SB	-	75+80SB	STH 32	35	--	SB SOUTH RAILROAD CROSSING APPROACH
79+63SB	-	79+63SB	STH 32	35	--	SB NORTH RAILROAD CROSSING APPROACH
86+00SB	-	86+00SB	STH 32	35	--	6" PAVING LIMITS S OF HANSEN ROAD
90+00SB	-	90+00SB	STH 32	55		6" PAVING LIMITS N OF HANSEN ROAD
100+25SB	-	100+25SB	STH 32	35	--	6" PAVING LIMITS S OF VANDERPERREN WAY
104+25SB	-	104+25SB	STH 32	55		6" PAVING LIMITS N OF VANDERPERREN WAY
102+75SB	-	108+95SB	STH 32	620	--	SB LANE FOR LEFT TURN LANE
106+60SB	-	108+10SB	STH 32	150	--	ACCESS DRIVE TO FRONTAGE ROAD
116+00SB	-	116+00SB	STH 32	35	--	STAGE 5 LIMITS N OF TENNIS COURT
118+50SB	-	118+50SB	STH 32	35		6" PAVING LIMITS S OF PILGRIM WAY
122+50SB	-	122+50SB	STH 32	50	--	6" PAVING LIMITS N OF PILGRIM WAY
141+00SB	-	141+00SB	STH 32	35		6" PAVING LIMITS S OF CORMIER ROAD
144+50SB	-	144+50SB	STH 32	50	--	6" PAVING LIMITS N OF CORMIER ROAD
174+50SB	-	174+50SB	STH 32	35		6" PAVING LIMITS S OF MIKE MCCARTHY WAY
178+50SB	-	178+50SB	STH 32	50	--	6" PAVING LIMITS N OF MIKE MCCARTHY WAY
190+75SB	-	190+75SB	STH 32	35		6" PAVING LIMITS S OF LOMBARDI AVENUE
195+80SB	-	195+80SB	STH 32	50	--	SB NORTH PAVING LIMITS
SUBTOTAL SOUTHBOUND LANES				1,755	0	
SIDE ROADS						
10+35 PAR	-	10+35 PAR	PARKVIEW ROAD	35	--	WEST LEG OF INTERSECTION PAVING LIMITS
12+75PAR	-	12+75PAR	PARKVIEW ROAD	30	--	EAST LEG OF PAVING LIMITS TO W. TIMBER
21+05 BAE	-	21+05 BAE	BAETEN ROAD	50	--	WEST LEG OF INTERSECTION PAVING LIMITS
51+27 TEN	-	51+27 TEN	TENNIS COURT	130	--	WEST LEG OF INTERSECTION PAVING LIMITS
70+89 WIL	-	70+89 WIL	WILLARD DRIVE	40	--	WEST LEG OF INTERSECTION PAVING LIMITS
87+73 MOR	-	87+73 MOR	MORRIS AVENUE	45	--	WEST LEG OF INTERSECTION PAVING LIMITS
40+52 VAN	-	41+25 VAN	VANDERPERREN ROAD	--	410	WEST LEG OF INTERSECTION
80+40 COR	-	81+25 COR	CORMIER ROAD	--	360	WEST LEG OF INTERSECTION
SUBTOTAL SIDE ROADS				330	770	
TOTAL				**4,067**	**915**	

RAILROAD CROSSING WORK

STATION AND O/S	STATION AND O/S	LOCATION	645.0140 GEOTEXTILE FABRIC TYPE SAS SY	SPV.0090.01 SMOOTH BORE STEEL 18-INCH LF	SPV.0090.02 PIPE UNDERDRAIN RAILROAD 6-INCH LF	REMARKS
CATEGORY 0010						
78+40.00 NB 5' LT	78+90.00 NB 43' RT	STH 32	--	--	70	DRAIN TO MEDIAN DITCH
78+67.00 NB 20' L	79+24.00 NB 33' RT	STH 32	--	--	80	DRAIN TO MEDIAN DITCH
77+72.00 SB 42' L	78+13.00 SB 17' RT	STH 32	--	--	72	DRAIN TO WEST DITCH
77+98.00 SB 48' L	78+42.00 SB 11' RT	STH 32	--	--	75	DRAIN TO WEST DITCH
78+40.00 NB 5' LT	79+35.00 NB 35' RT	STH 32	200	--	--	WRAP PIPE UNDERDRAIN; SEE CROSSING DETAIL
77+60.00 SB 36' L	78+55.00 SB 8' RT	STH 32	200	--	--	WRAP PIPE UNDERDRAIN; SEE CROSSING DETAIL
78+15.00 NB 27' L	78+57.00 NB 27' LT	STH 32	--	42	--	CULVERT UNDER RAILROAD CROSSING
		TOTAL	**400**	**42**	**297**	



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
600		N. BOLT OF SE GROUP OF 5 BOLTS POLE #133	607.51

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
601	45+38NB	SW BOLT W/ CHISELED X ON W LEG OF BP SIGN	612.09

CONTROL

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
121	29+57.41 NB	90.08 LT	546802.04	83998.64	608.02

PROJECT NO: 4190-16-71 | HWY: STH 32 | COUNTY: BROWN | PLAN | SHEET 142 | E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:22 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

STATION 59+55 SB
REMOVE STRUCTURE B-5-16
EXISTING 3-SPAN CONCRETE T-GIRDER STRUCTURE
117' OVERALL LENGTH
32' OVERALL WIDTH

STATION 59+71.75 SB
STRUCTURE B-5-408 REQUIRED
SINGLE SPAN 45W" PRESTRESSED GIRDERS
40' CLEAR ROADWAY

MGS GUARDRAIL 3
CP #118

EAT POST 1
STA 56+66NB 6.9' LT

MGS GUARDRAIL 3

STATION 59+71.75 NB
STRUCTURE B-5-409 REQUIRED
SINGLE SPAN 45W" PRESTRESSED GIRDERS
40' CLEAR ROADWAY

STATION 59+55 NB
REMOVE STRUCTURE B-5-34
EXISTING 3-SPAN CONCRETE T-GIRDER STRUCTURE
117' OVERALL LENGTH
32' OVERALL WIDTH

REMOVE STONE AND MISC MATERIALS
GRADE CHANNEL
GEOTEXTILE FABRIC TYPE HR AND HEAVY RIPRAP
SEE CONSTRUCTION DETAILS

EAT POST 1
STA 63+14SB
41.0' LT

MGS GUARDRAIL 3

EAT POST 1
STA 63+02SB
7.8' RT

APPROACH SLAB WORK
SEE SDD 13 B 2-8A CONCRETE BRIDGE APPROACH

ASHWAUBENON CREEK

BAETEN ROAD

PI: 59+99.99SE

PI: 61+49.99SB

PI: 59+00.00NB

PI: 61+50.00NB

WCL

BM #602

BUTT JOINT

ASHLAND AVENUE ACCESS ROAD

STH 32 SB R/L

STH 32 NB R/L

STH 32

56SB 58SB 60SB 62SB 64SB 66SB 68SB 70SB

56NB 58NB 60NB 62NB 64NB 66NB 68NB 70NB

GREEN BAY MET FORCEMAIN

CANADIAN NATIONAL

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
602	64+29SB	BURY BOLT ON HYDRANT	605.21

CONTROL					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
118	56+62.28 SB	28.85 LT	549148.81	85343.70	606.28

BM #603

CP #115

ASHLAND AVENUE ACCESS ROAD

STH 32 SB R/L

STH 32 NB R/L

RAILROAD CROSSING RECONSTRUCTION LIMITS
78+00NB TO 79+50NB, 77+25SB TO 78+77SB
SEE RAILROAD CROSSING PLAN DETAILS

72SB 74SB 76SB 78SB 80SB 82SB 84SB 86SB

72NB 74NB 76NB 78NB 80NB 82NB 84NB 86NB

STH 32

WCL CANADIAN NATIONAL

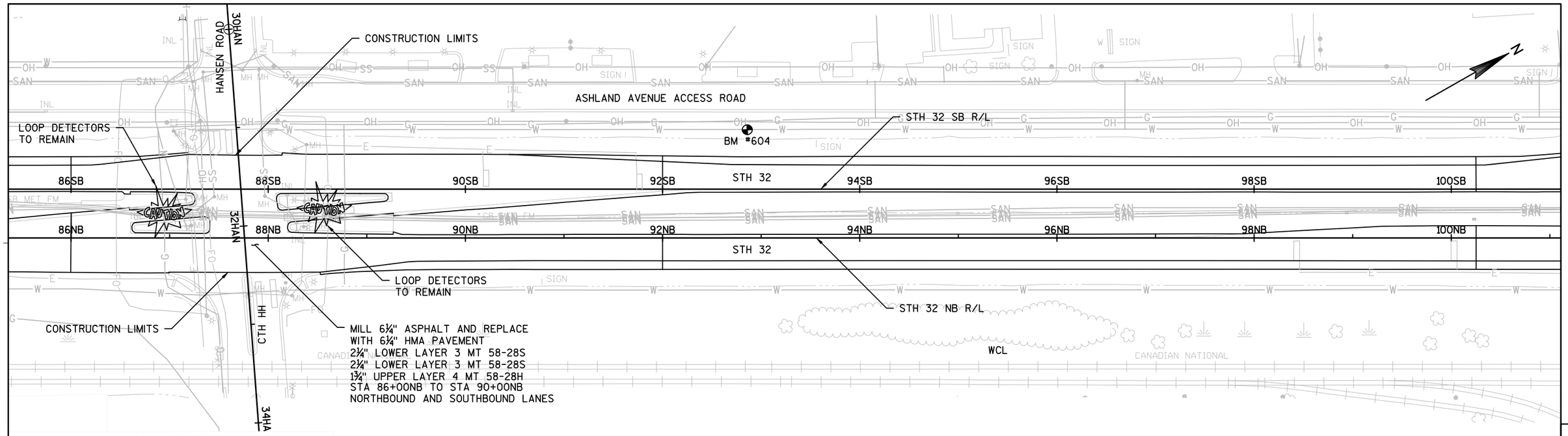
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
603	84+24SB	BURY BOLT ON HYDRANT	603.12

CONTROL					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
115	83+77.32 SB	103.54 LT	551547.07	86618.58	599.75

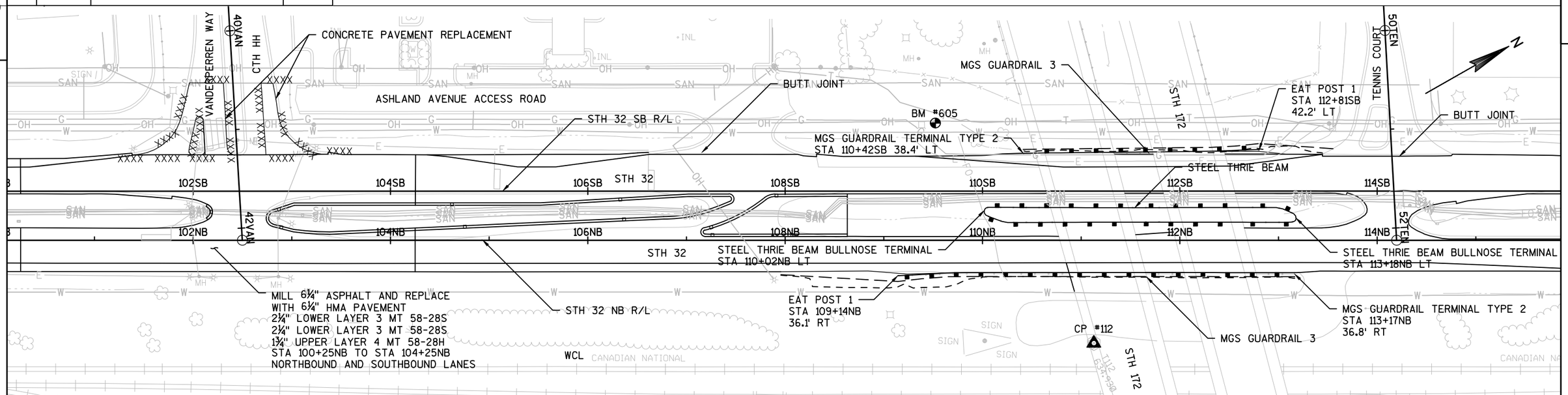
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:22 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
604	92+87SB	BURY BOLT ON HYDRANT	604.90



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
605	109+50SB	N. BOLT OF SE GROUP OF 2 BOLTS POLE *110	608.45

CONTROL					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
112	111+12.77 NB	104.19 RT	553799.26	88192.26	634.93

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:23 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********

RESURFACING LIMITS

CTH YY

70PIL

MILL 6¼" ASPHALT AND REPLACE
WITH 6¼" HMA PAVEMENT
2¼" LOWER LAYER 3 MT 58-28S
2¼" LOWER LAYER 3 MT 58-28S
1¾" UPPER LAYER 4 MT 58-28H
STA 118+50NB TO STA 122+50NB
NORTHBOUND AND SOUTHBOUND LANES

MGS GUARDRAIL 3

STH 32 SB R/L

MGS GUARDRAIL TERMINAL TYPE 2
STA 125+87SB 38.4' LT

LOOP DETECTORS
TO REMAIN

PC: 129+68.18SB

116SB 118SB 120SB 122SB 124SB STH 32 126SB 128SB 130SB

116NB 118NB 120NB 122NB 124NB 126NB 128NB 130NB

72PIL

LOOP DETECTORS
TO REMAIN

STH 32

BM #607

STH 32 NB R/L

EAT POST 1
STA 124+16NB
35.0' RT

MGS GUARDRAIL 3

RESURFACING LIMITS

PILGRIM WAY

CANADIAN NATIONAL

CANADIAN NATIONAL

PC: 130+27.52NB

WCL

64PIL

REPLACE WINGWALLS ON STRUCTURE B-05-0035
SEE STRUCTURE PLANS FOR B-05-0035

BM #606

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
606	120+35NB	RR SPIKE W. FACE OF P POLE 34 QQ6	606.07
607	129+32NB	CHISELED SQUARE SE CORNER OF BOX B-5-35	592.18

PC: 129+68.18SB

EAT POST 1
STA 131+26SB
36.6' LT

WILLARD DRIVE

70WIL

BUTT JOINT

BM #608

PI STA = 135+58.69
Y = 556002.663
X = 89265.279
DELTA = 5°59'37"
D = 0°30'29"
T = 590.52'
L = 1179.96'
R = 11279.90'
PC STA = 129+68.18
PT STA = 141+48.14
S.E. = 0.02'/'

CONCRETE PAVEMENT RELACEMENT

RESURFACING LIMITS

STH 32 SB R/L

PT: 141+48.14SB

PT: 140+41.35NB

BM #609

XXXX

S. ASHLAND FRONTAGE ROAD

CORMIER ROAD

80COR

130SB 132SB 134SB 136SB STH 32 138SB 140SB 142SB 144SB

72WIL

130NB 132NB 134NB 136NB 138NB 140NB 142NB 144NB

EP: 72+17.98WIL

STH 32

CP #109

LOOP DETECTORS
TO REMAIN

LOOP DETECTORS
TO REMAIN

STH 32 NB R/L

PI STA = 135+34.89
Y = 555957.280
X = 89297.013
DELTA = 5°58'53"
D = 0°35'24"
T = 507.37'
L = 1013.83'
R = 9711.61'
PC STA = 130+27.52
PT STA = 140+41.35
S.E. = 0.02'/'

MILL 6¼" ASPHALT AND REPLACE
WITH 6¼" HMA PAVEMENT
2¼" LOWER LAYER 3 MT 58-28S
2¼" LOWER LAYER 3 MT 58-28S
1¾" UPPER LAYER 4 MT 58-28H
STA 141+00NB TO STA 144+50NB
NORTHBOUND AND SOUTHBOUND LANES

RESURFACING
LIMITS

WCL

PC: 130+27.52NB

MGS GUARDRAIL TERMINAL TYPE 2
STA 130+70NB
37.0' RT

STA BACK = 142+55.18SB
STA AHEAD = 142+50.00SB

CTH HH

EQUATION

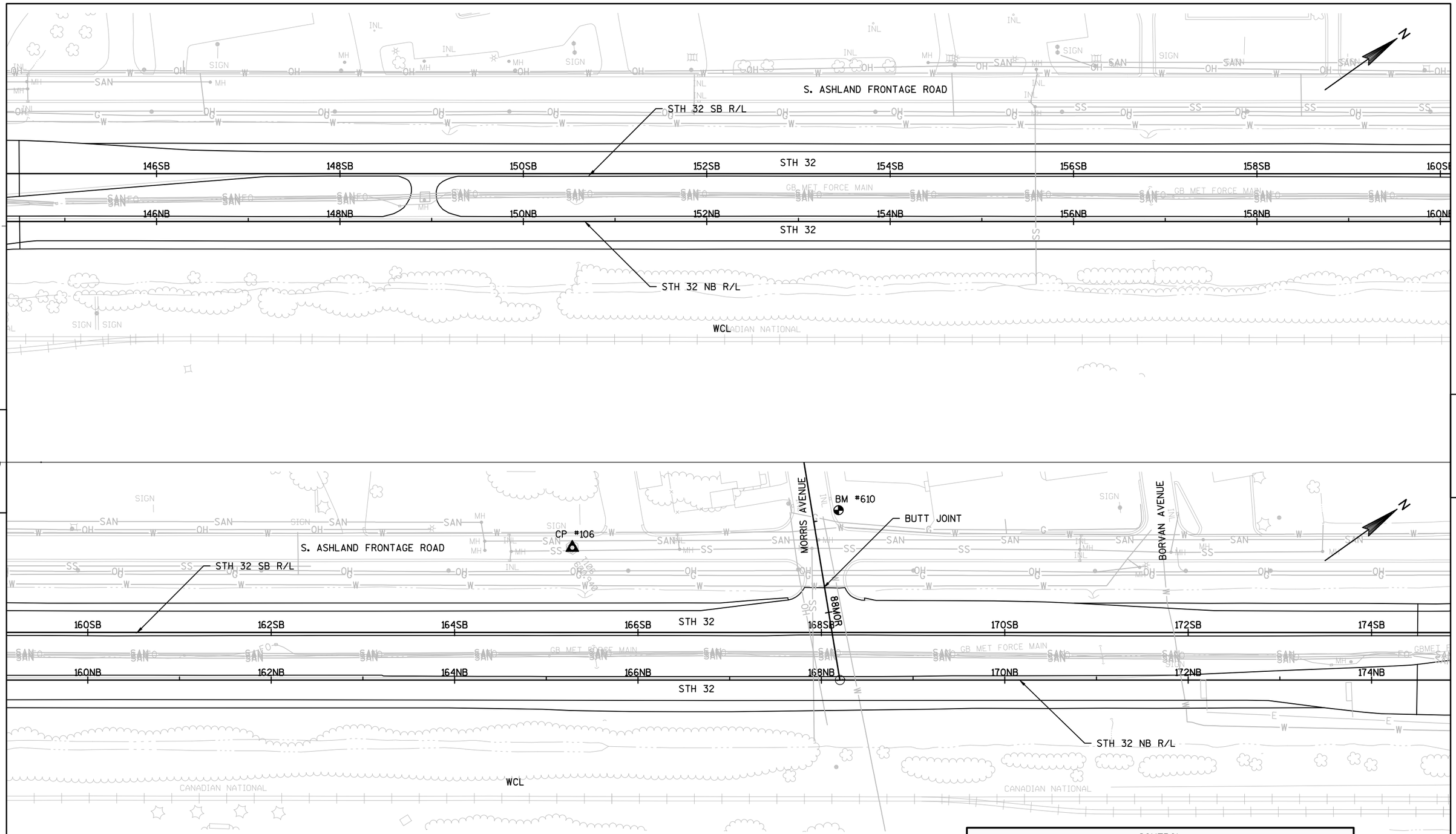
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
608	134+10SB	N. BOLT OF SE GROUP OF 2 BOLTS POLE #104	598.43
609	142+76SB	BURY BOLT ON HYDRANT	605.49

CONTROL					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
109	137+94.01 NB	27.26 RT	556151.75	89473.37	600.49

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:23 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********

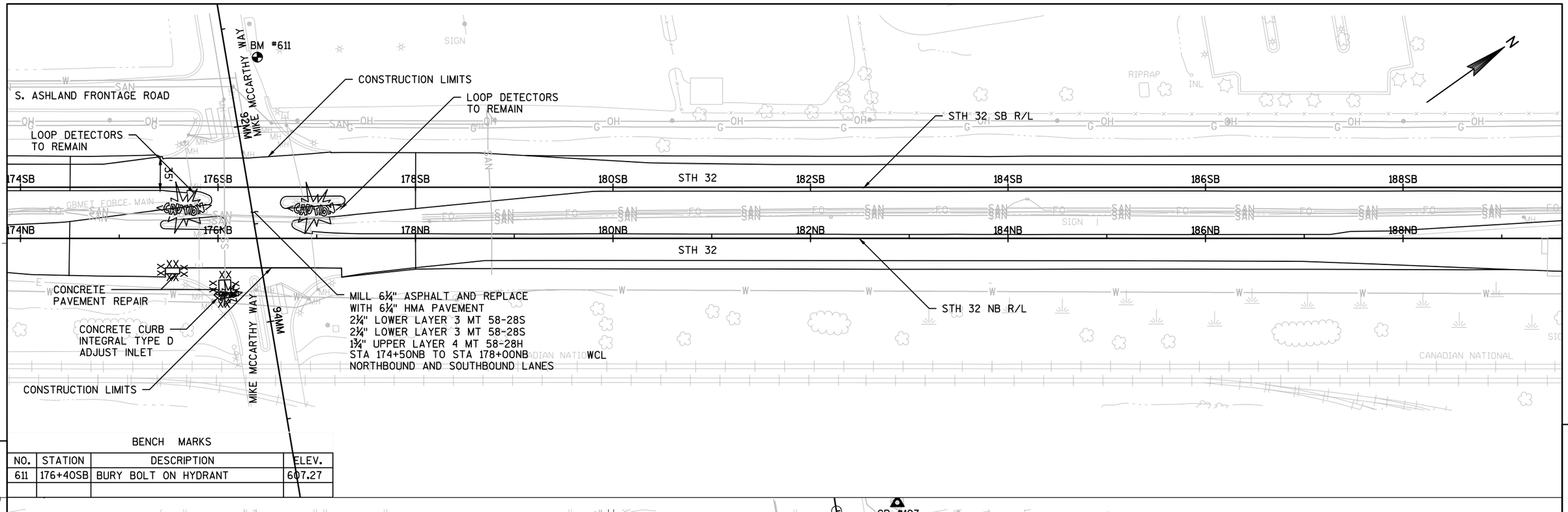


BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
610	168+18SB	BURY BOLT ON HYDRANT	603.42

CONTROL					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
106	165+28.28 SB	92.47 LT	558477.31	90920.67	600.94

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:23 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********



5

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
611	176+40SB	BURY BOLT ON HYDRANT	607.27

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
612	193+74NB	NW BOLT ON HYDRANT AT 728 LOMBARDI AVE	603.87
613	195+75SB	S. BOLT OF NE GROUP OF 3 BOLTS POLE *88	604.47

CONTROL

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
103	193+18.93 SB	180.61 LT	560798.79	92471.87	600.65

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET 147	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\050101_PL.DWG PLOT DATE : 10/11/2016 7:23 AM PLOT BY : DUMS, ALEXANDER T PLOT NAME : ---------- PLOT SCALE : **********

WISDOT/CADDS SHEET 42

Standard Detail Drawing List

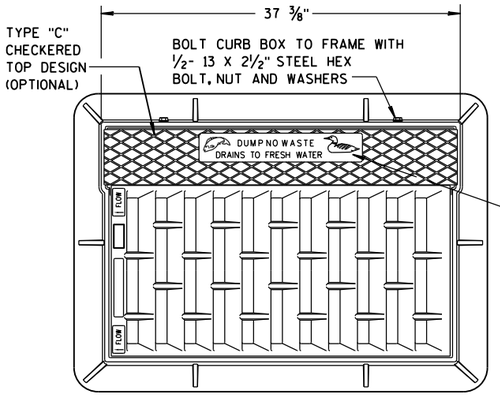
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C11-08	CONCRETE BASE TYPE 10
09C12-07A	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-07B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-07D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-07E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F09-04	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
09F10-04	LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-13A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

6

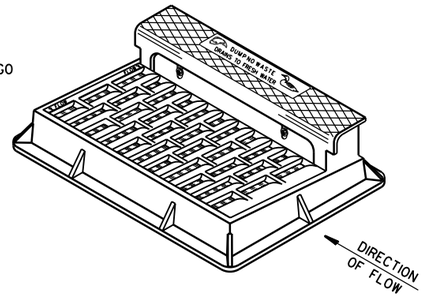
Standard Detail Drawing List

14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-12A	PAVEMENT MARKING SYMBOLS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C09-09A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C18-03	MEDIAN ISLAND MARKING
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

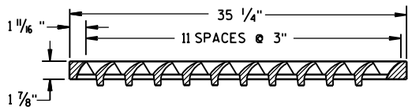
6

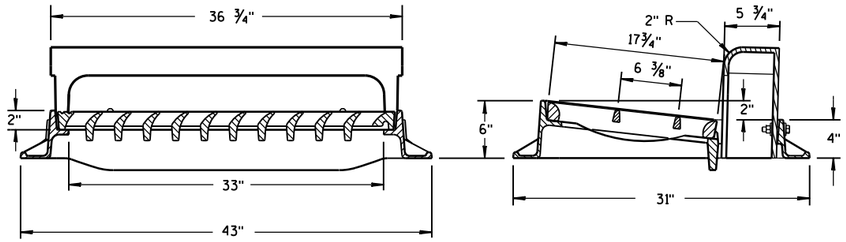


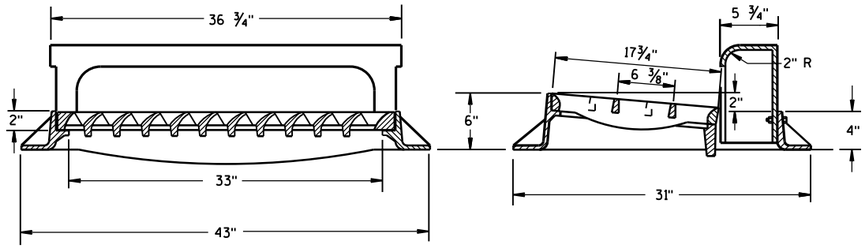
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

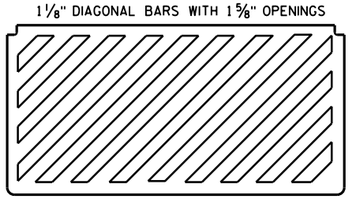






TYPE "H"

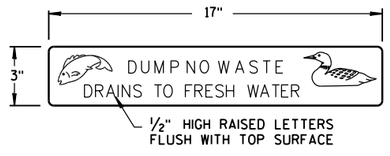
NOTE: EITHER CASTING IS ACCEPTABLE



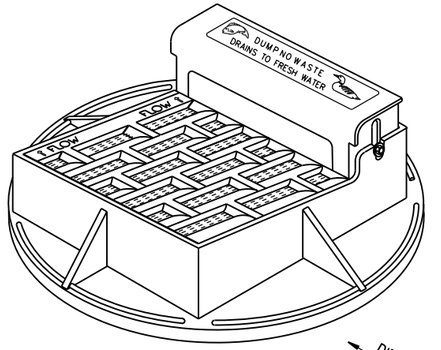
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

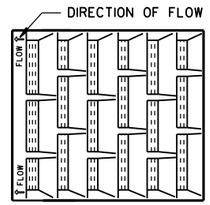
NOTE:
GRATE IS REVERSIBLE.

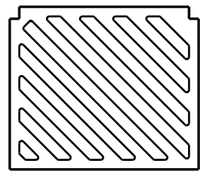
GENERAL NOTES

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

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

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

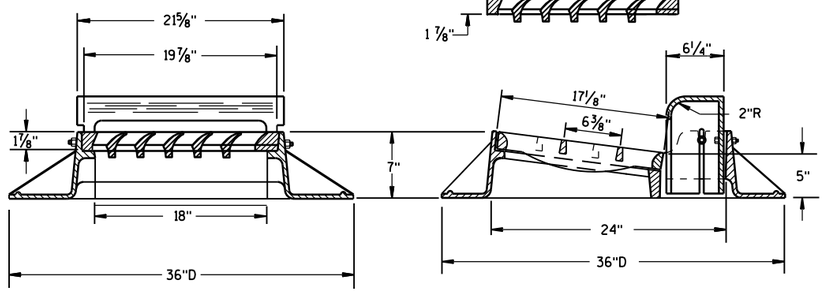




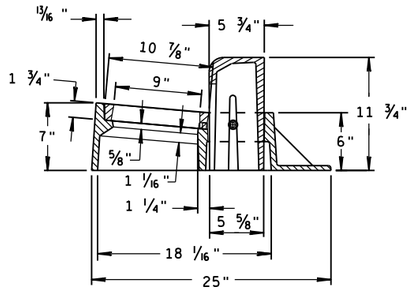
SPECIAL GRATE FOR TYPE "A" COVER

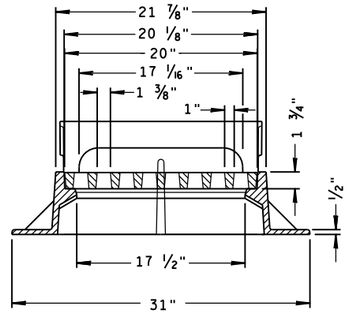
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

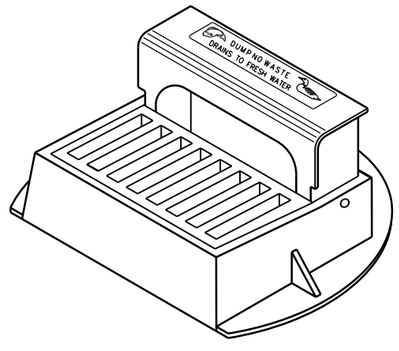


TYPE "A"





TYPE "Z"



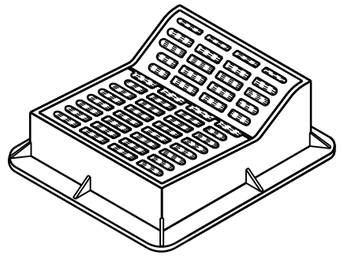
INLET COVERS
TYPE A, H, A-S, H-S & Z

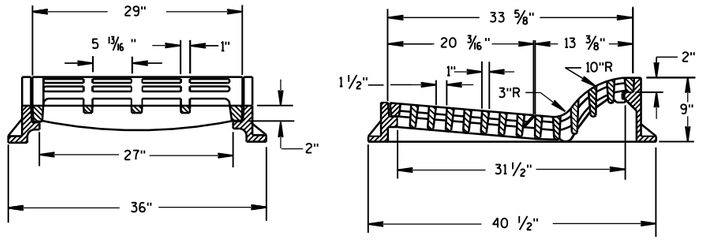
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

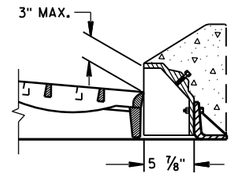
S.D.D. 8 A 5-19a





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

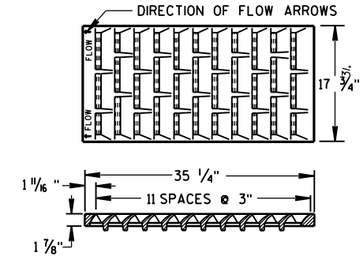
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

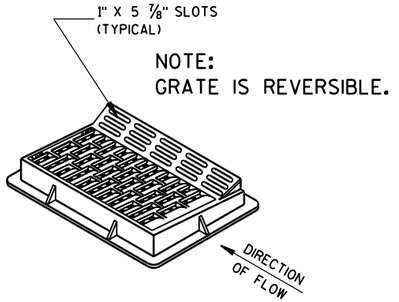
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

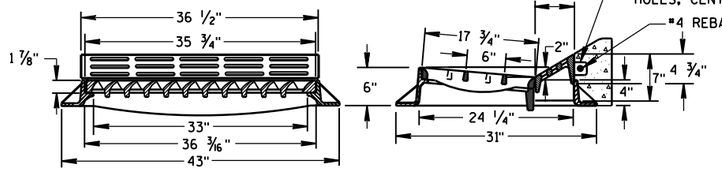
GENERAL NOTES

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

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



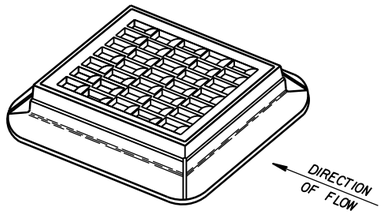


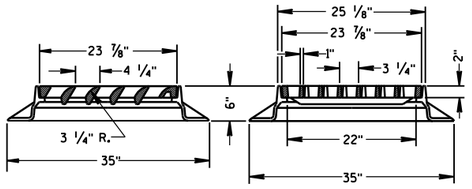


TYPE "HM"

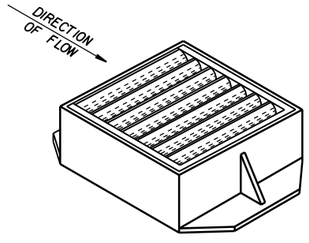
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

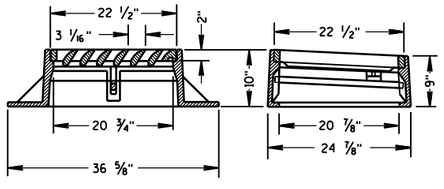
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



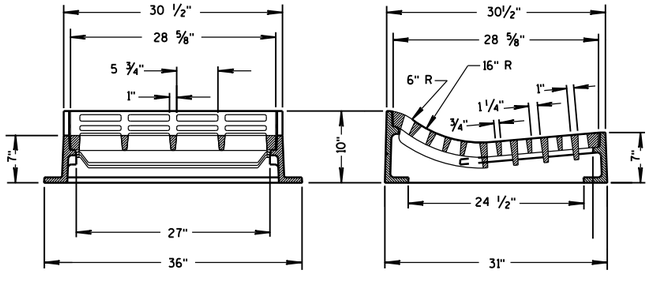


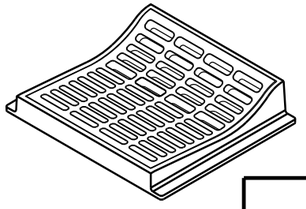
TYPE "S"





TYPE "V"





TYPE "T"

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

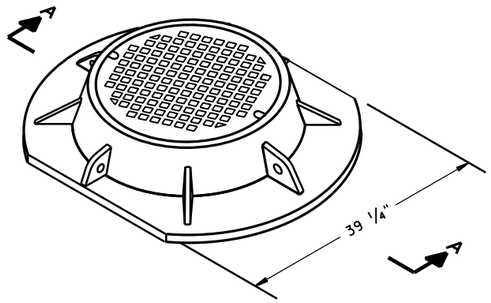
FHWA

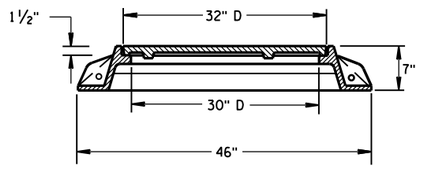
6

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

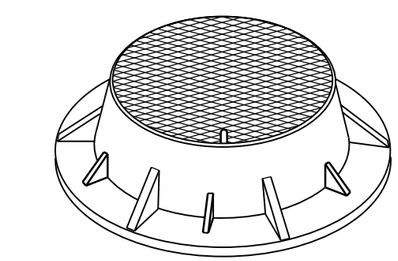
6

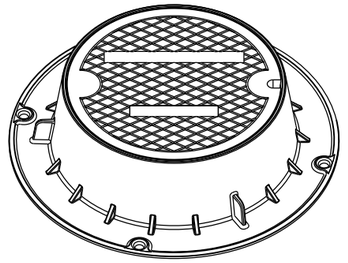
S.D.D. 8 A 5-19c

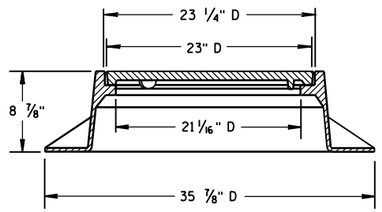


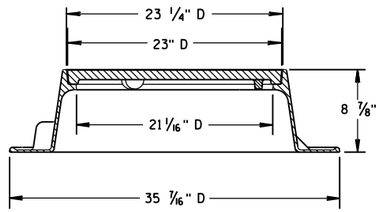


SECTION A-A
TYPE "K"









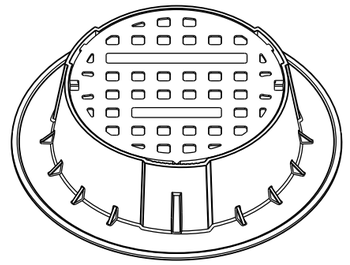
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

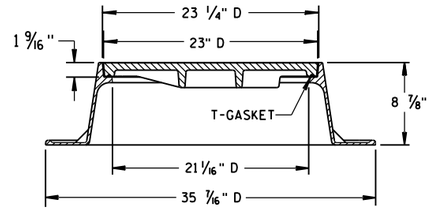
GENERAL NOTES

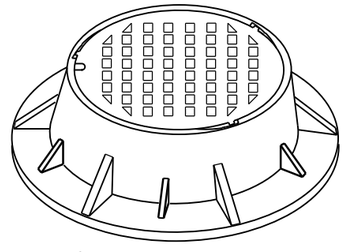
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

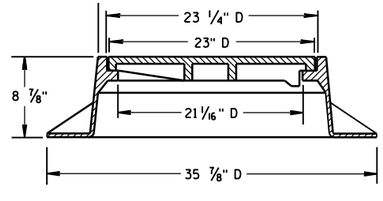
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

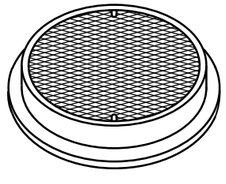


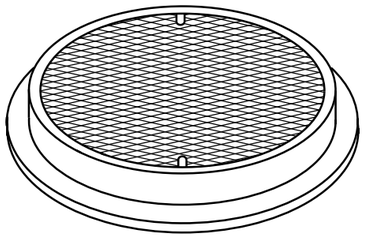


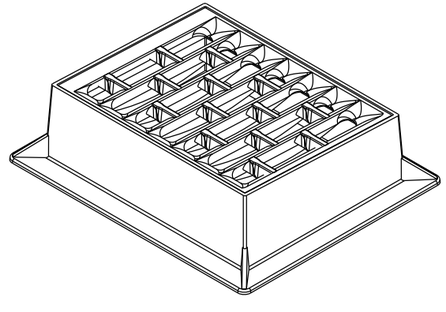


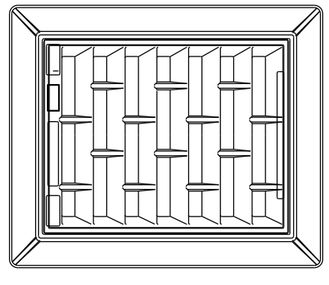


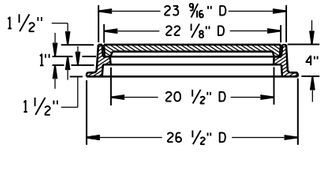
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



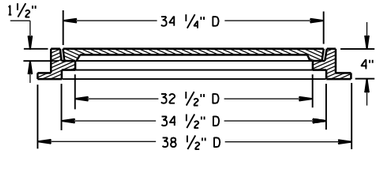




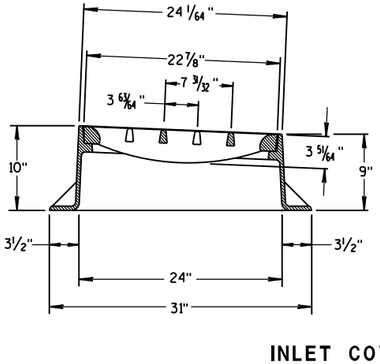


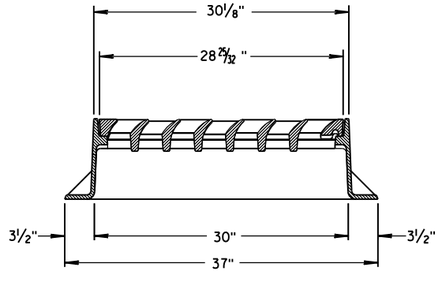


TYPE "L"



TYPE "M"





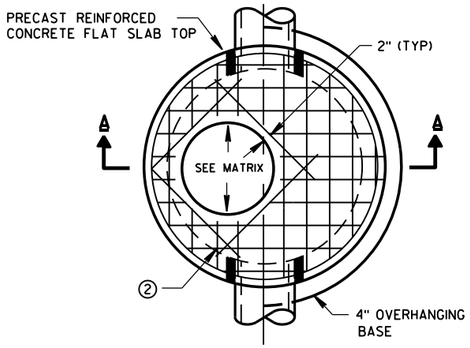
INLET COVER TYPE "BW"

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

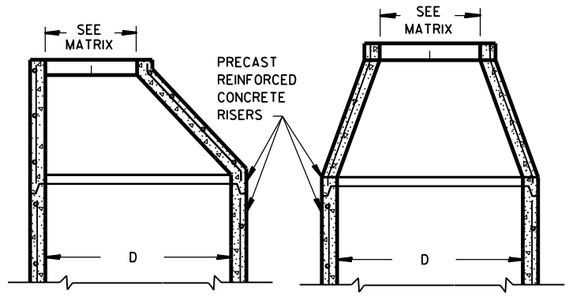
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 A 5-19d

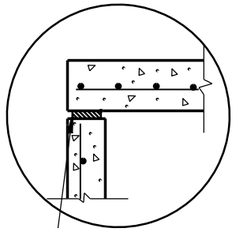


PLAN VIEW CIRCULAR OPENING

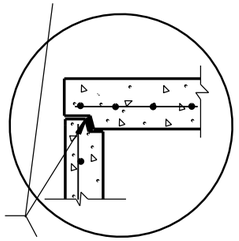


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

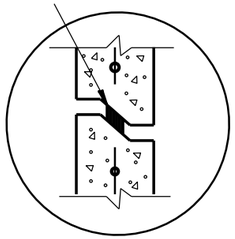


TOP WITH PLAIN END JOINT



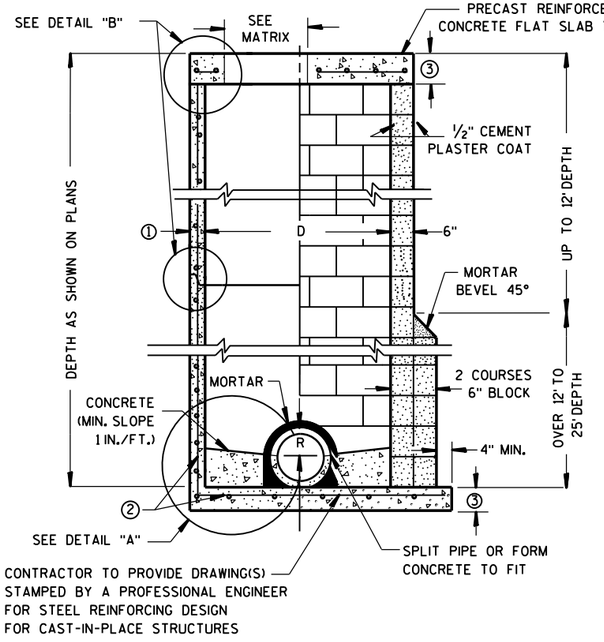
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



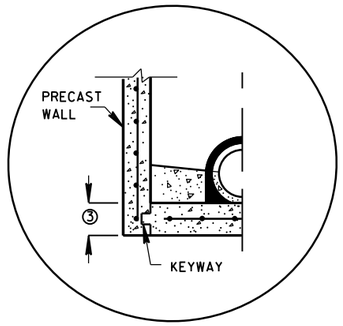
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

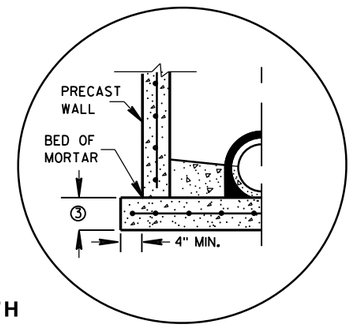


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

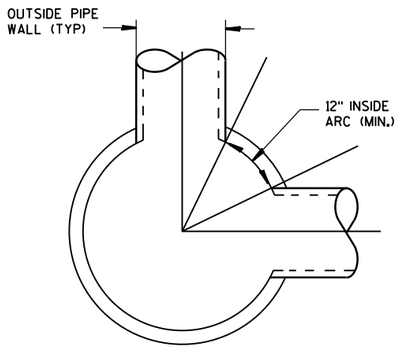


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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 GRANULAR 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. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

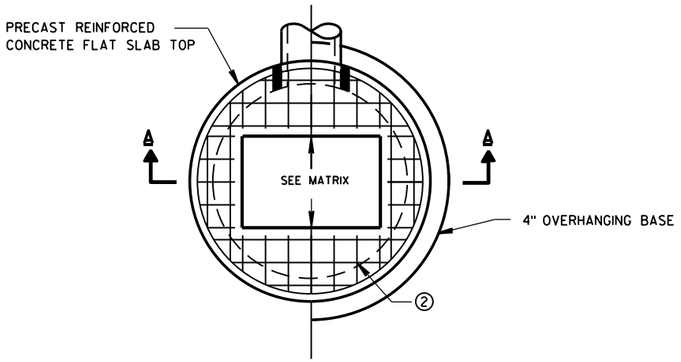
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

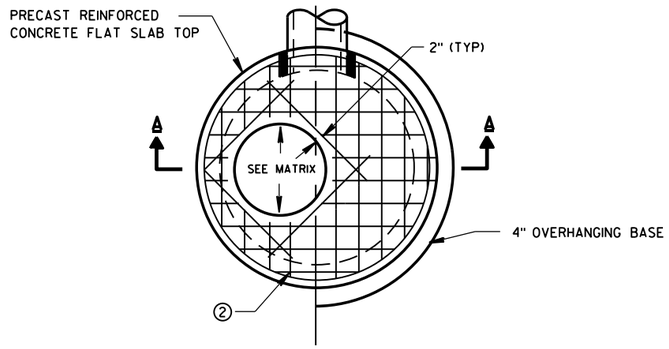
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

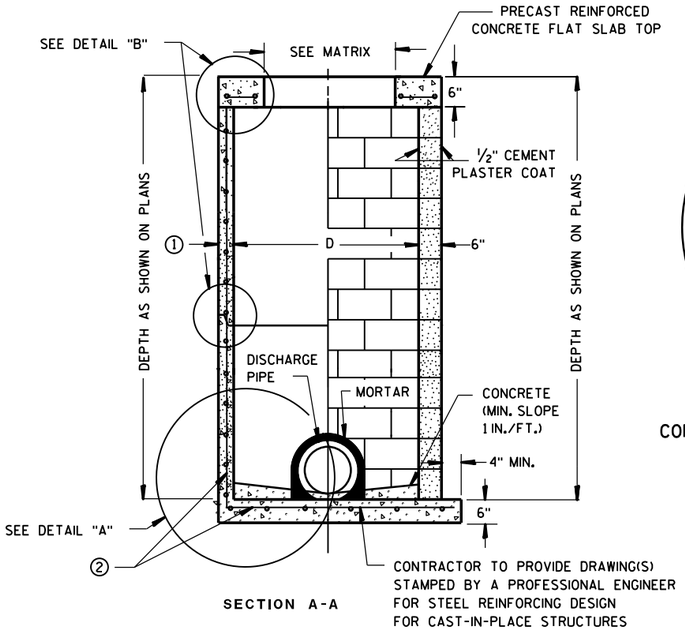
6
S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

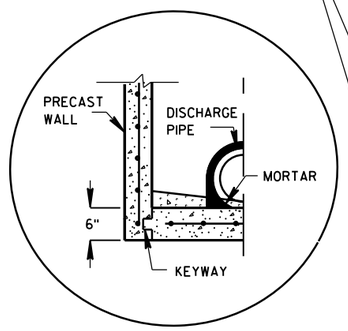


SECTION A-A

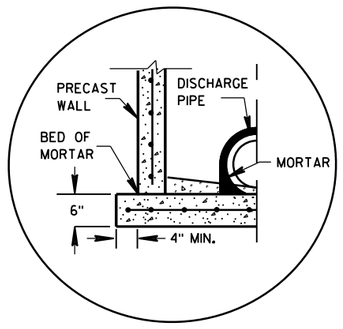
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

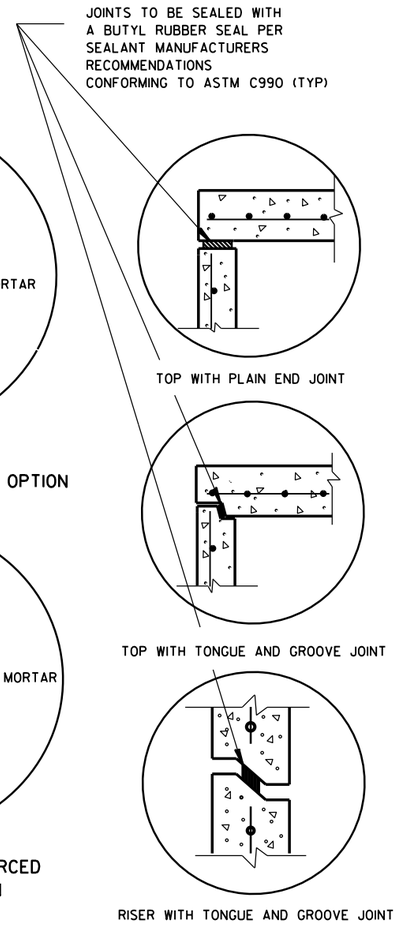


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

ALL 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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.

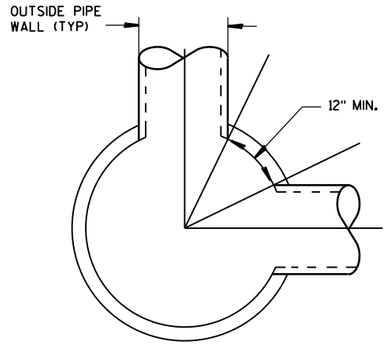
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

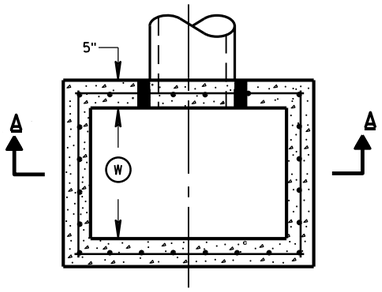
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

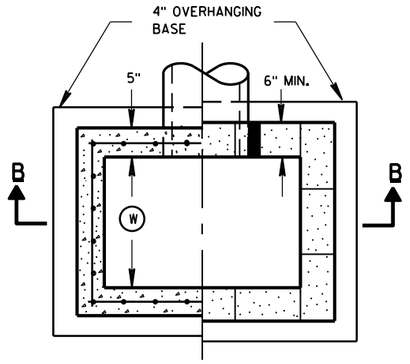
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

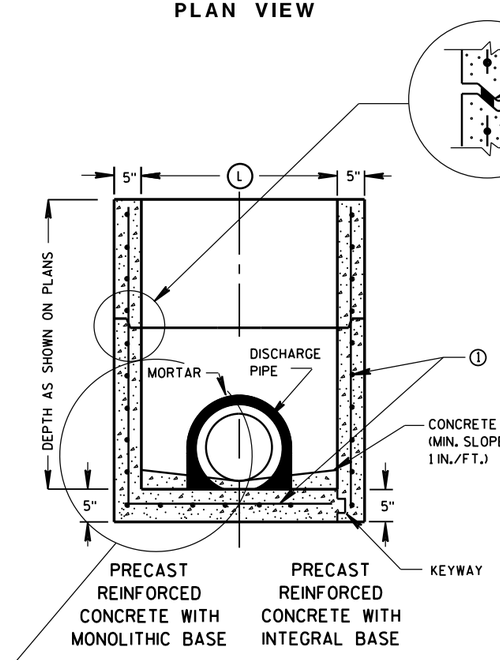
S.D.D. 8 C 6-1



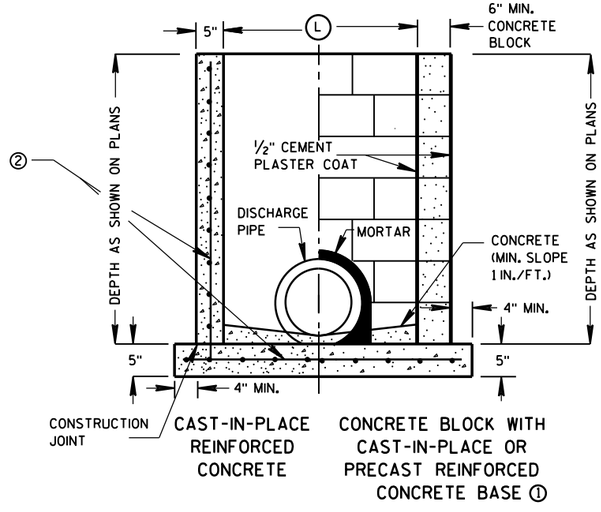
PLAN VIEW



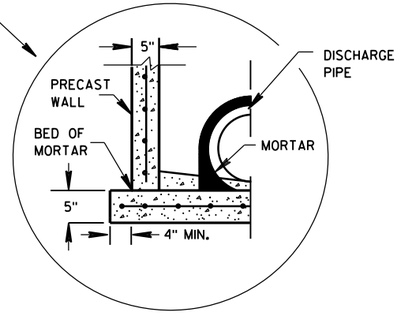
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

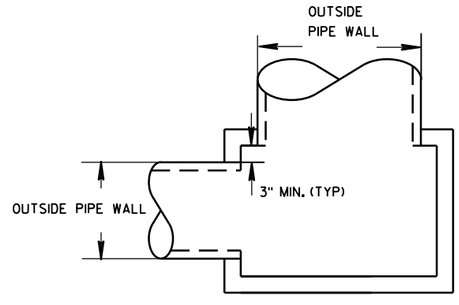
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



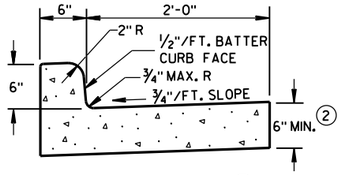
DETAIL "A"

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

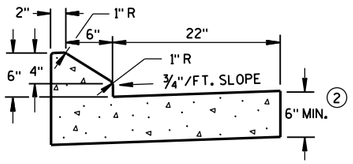
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

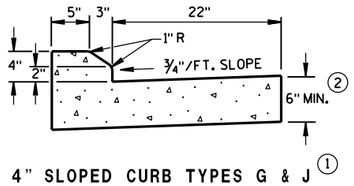
6
S.D.D. 8 C 7-1



TYPES A & D ①

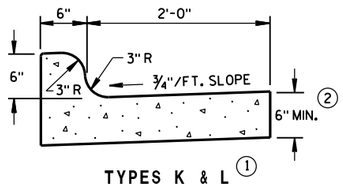


6" SLOPED CURB TYPES G & J ①

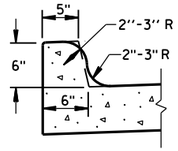


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

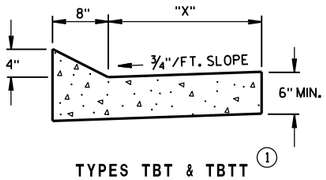


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

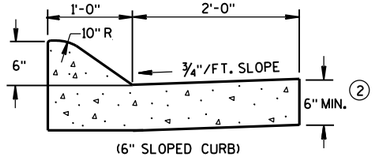
CONCRETE CURB & GUTTER 30"



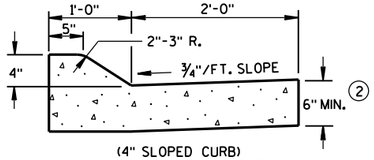
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

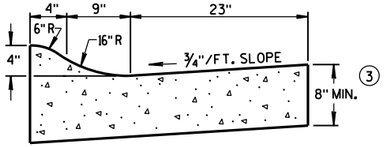


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

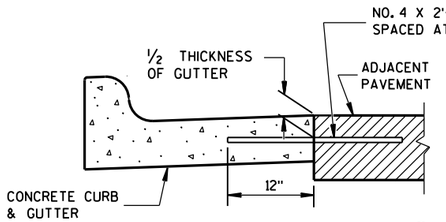
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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.

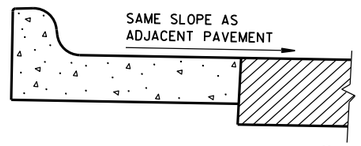
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

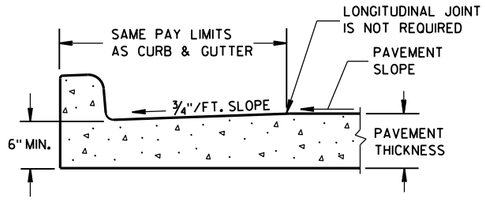
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



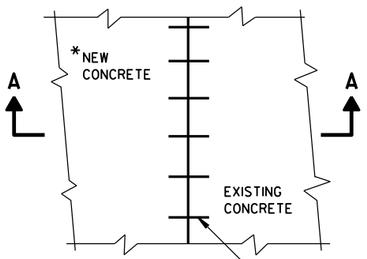
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

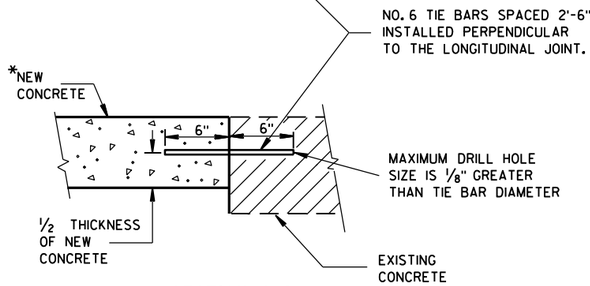


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



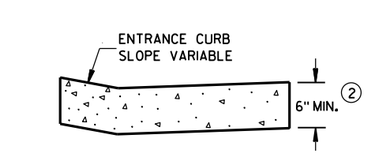
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

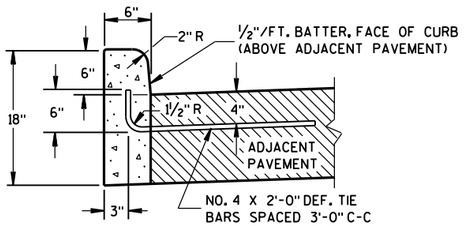


SECTION A-A

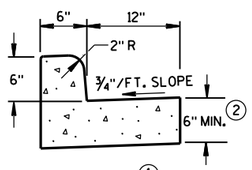
TIE BARS DRILLED
INTO EXISTING PAVEMENT



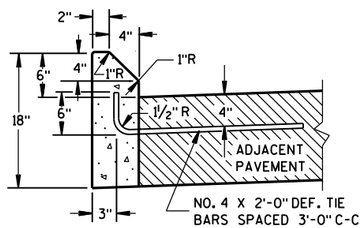
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



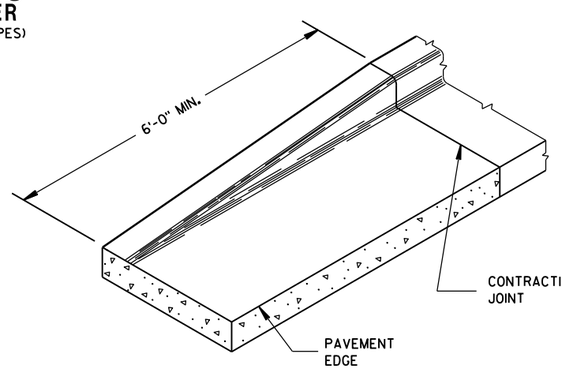
① TYPES A & D



① TYPES A & D
CONCRETE CURB & GUTTER 18"



① TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

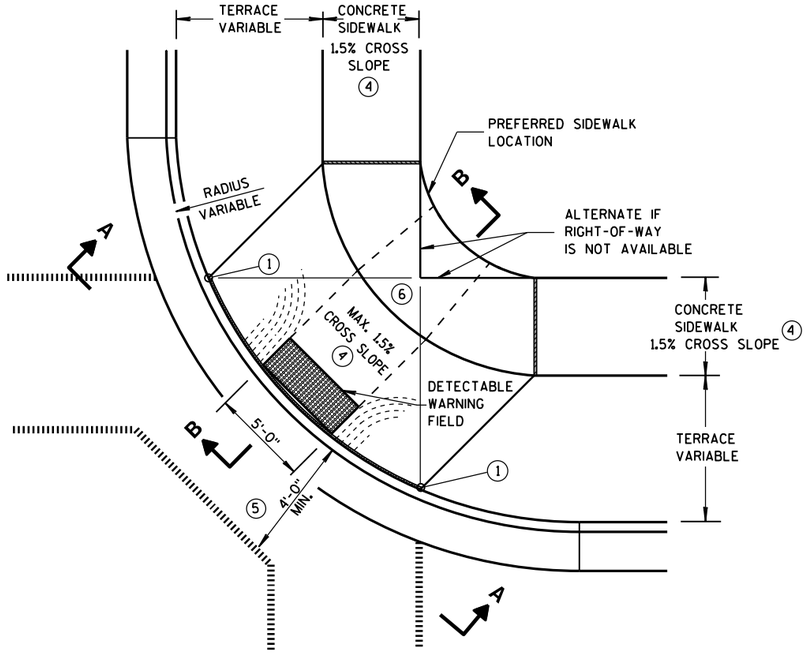
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

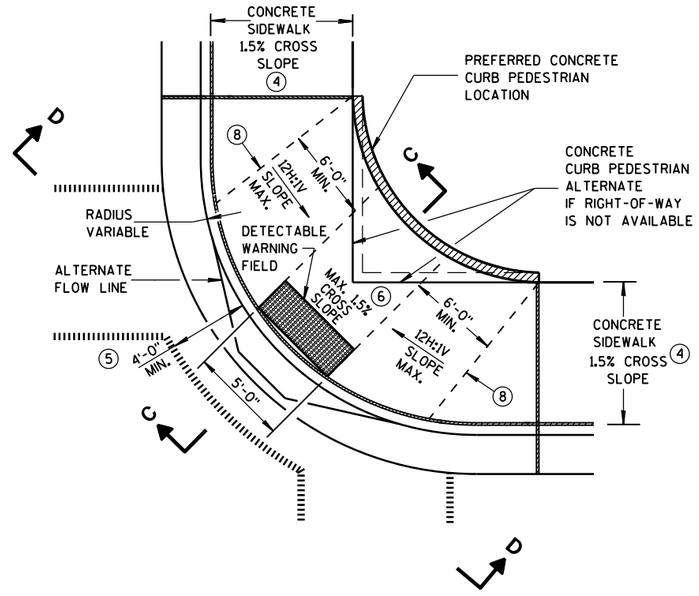
S.D.D. 8 D 1-18



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

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

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

DETECTABLE WARNING FIELD 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 LINEAL 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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

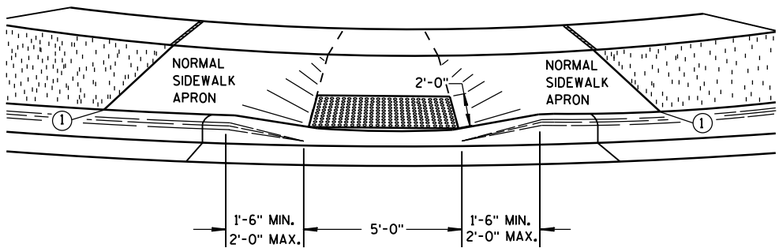
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(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.

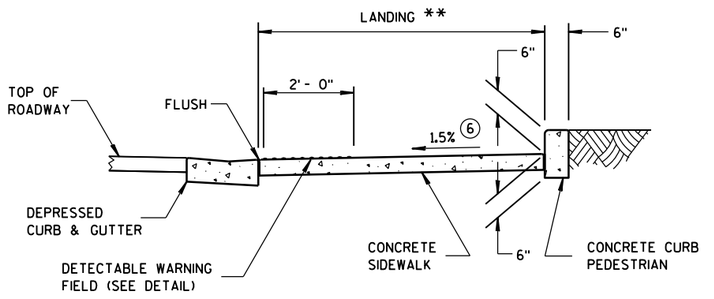
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

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



VIEW A-A

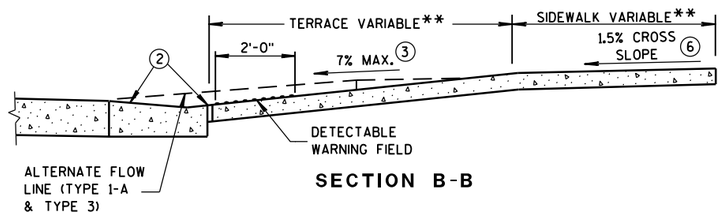
** WIDTH SHOWN ELSEWHERE IN THE PLANS



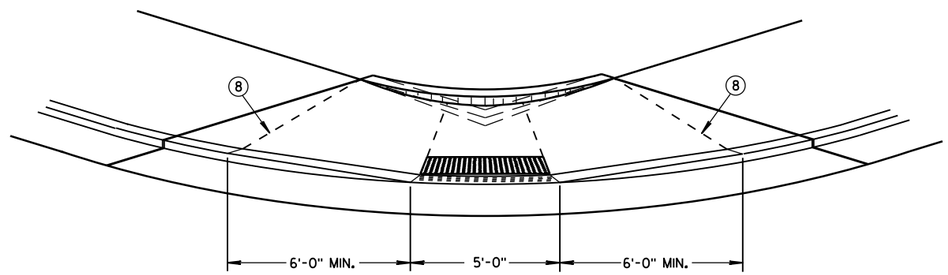
SECTION C-C

LEGEND

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



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

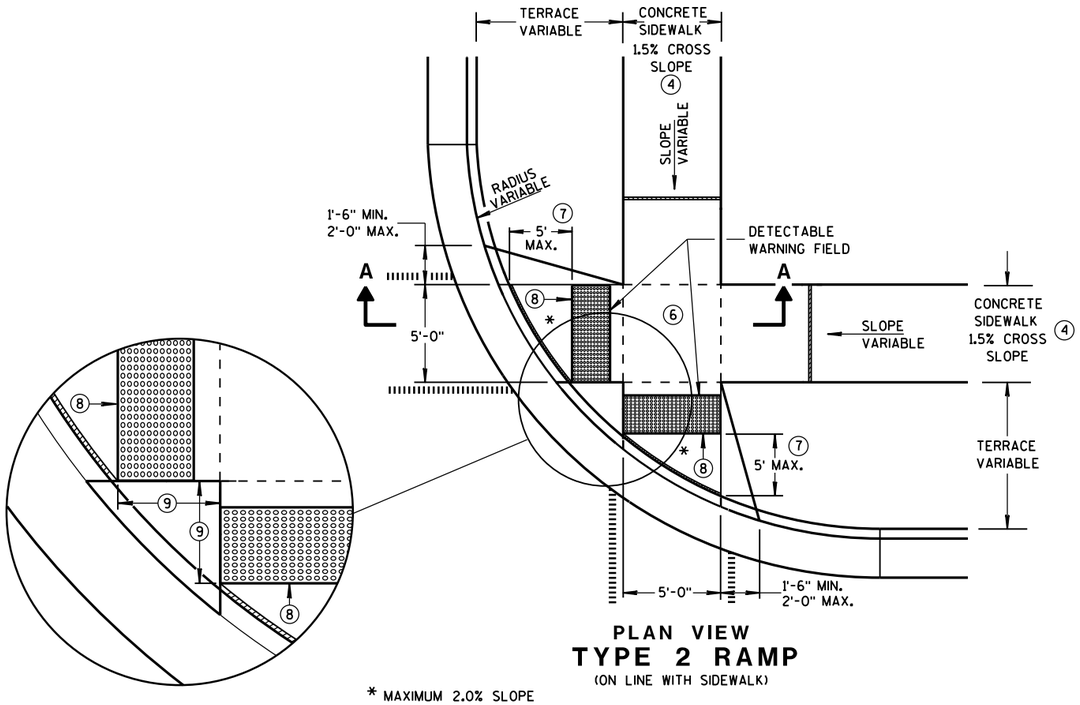
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-16a

6

S.D.D. 8 D 5-16a

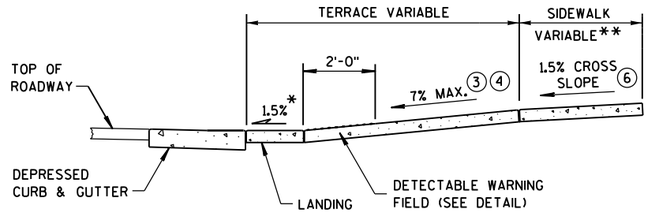


PLAN VIEW

TYPE 2 RAMP

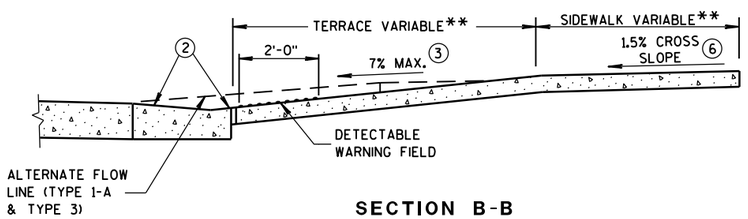
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

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 DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (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 X 5 FEET (MINIMUM 4 FEET X 4 FEET).

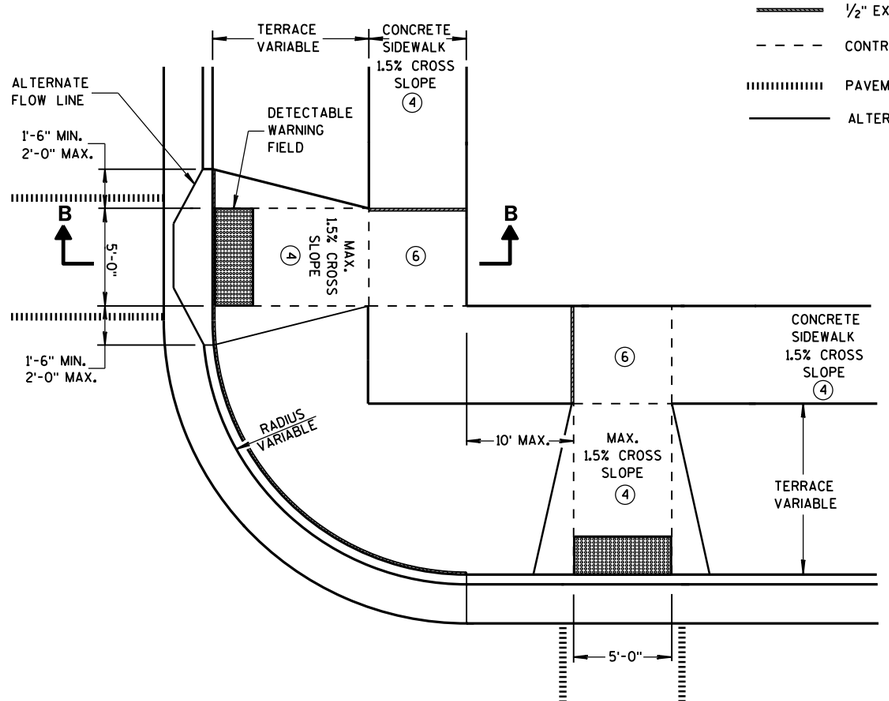
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

(9) WHEN THIS 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. 2" MINIMUM CURB HEIGHT.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

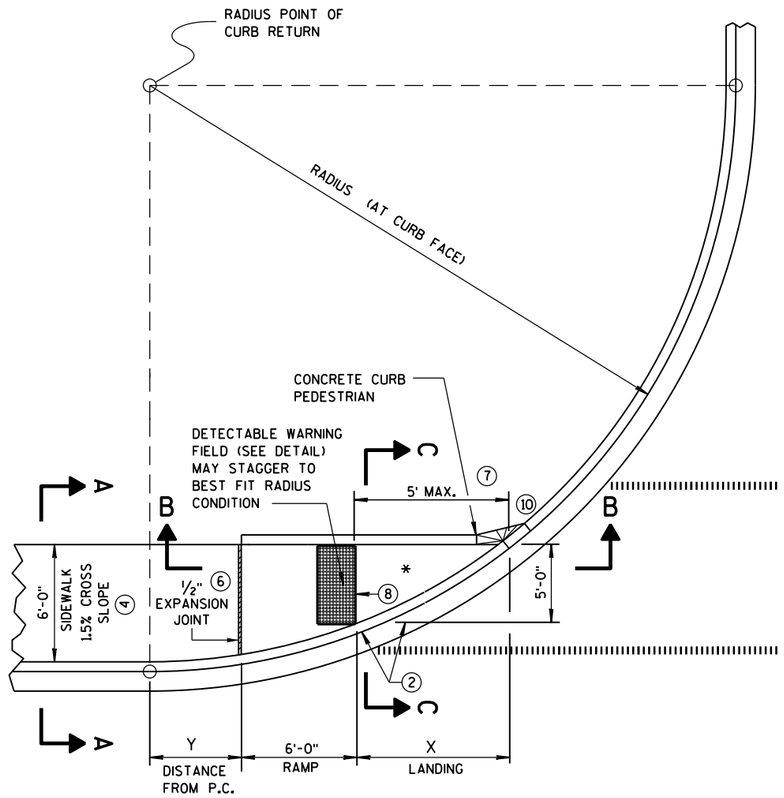
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

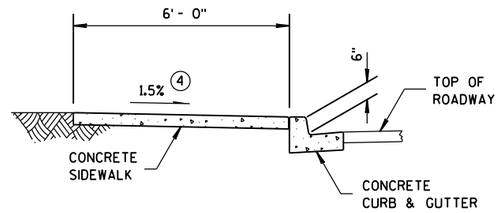
S.D.D. 8 D 5-16b



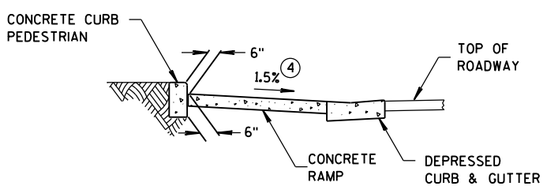
CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

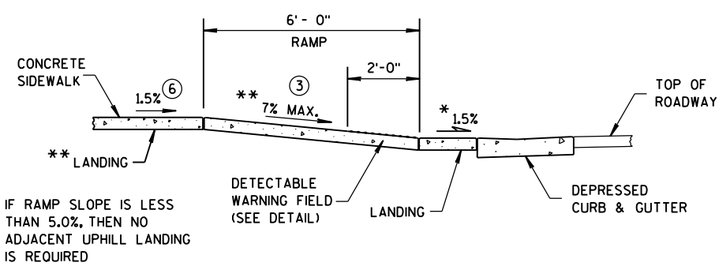
INTERMEDIATE RADII CAN BE INTERPOLATED



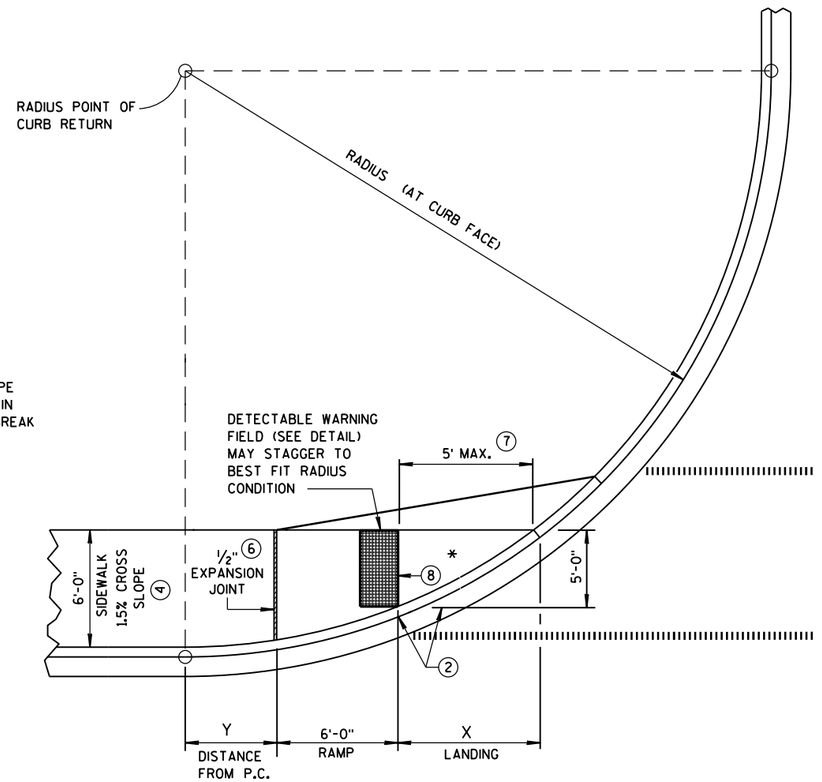
SECTION A-A FOR TYPE 4A



SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



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

CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

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

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 DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

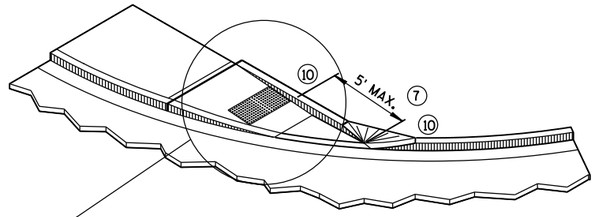
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

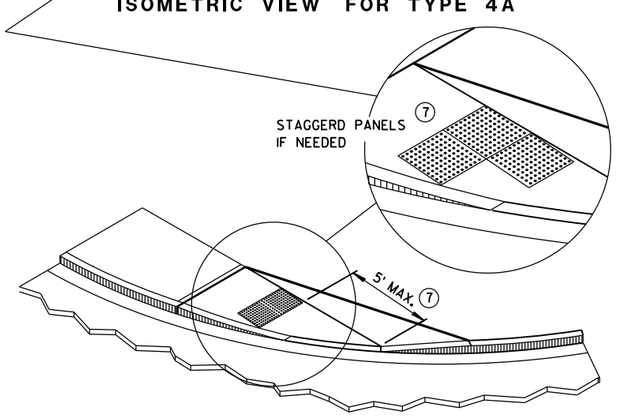
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

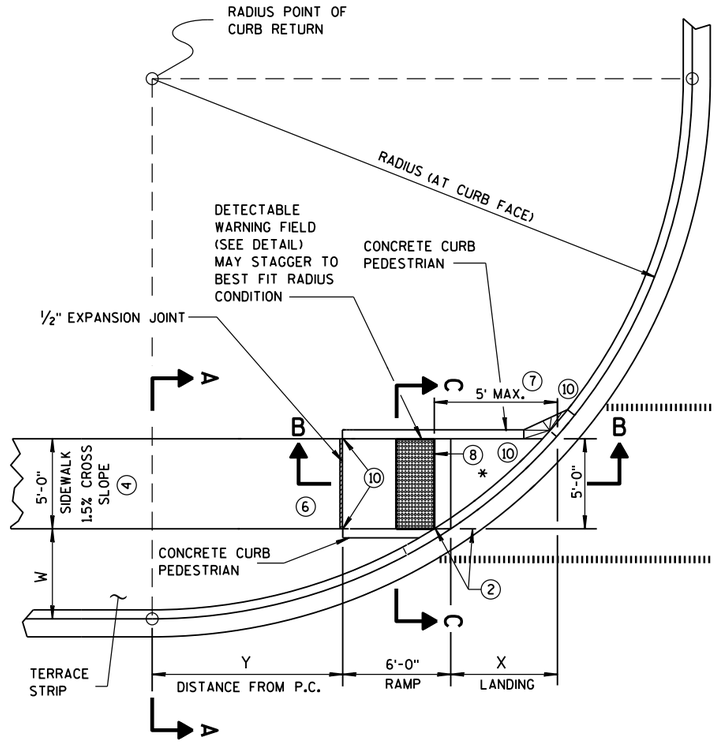
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

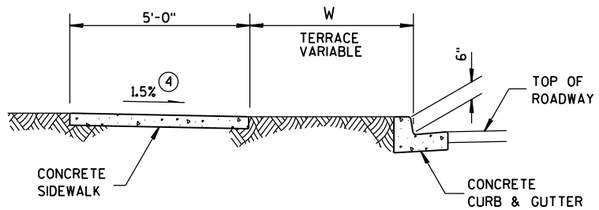
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

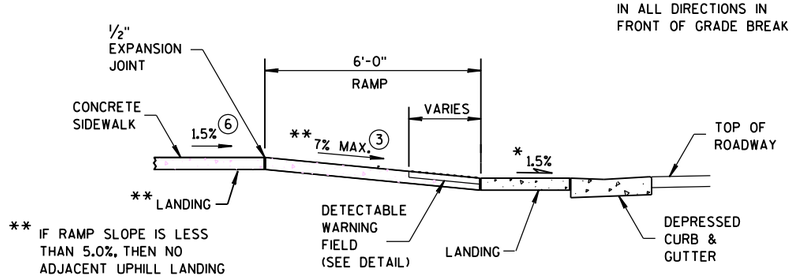
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



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

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

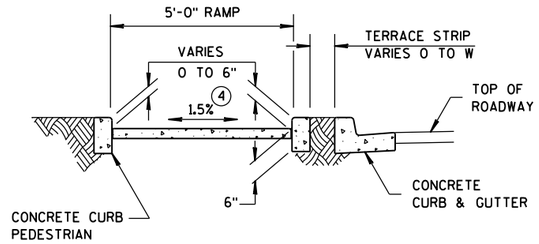
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

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

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 DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

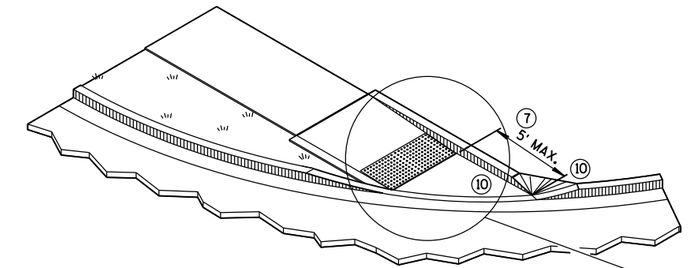
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

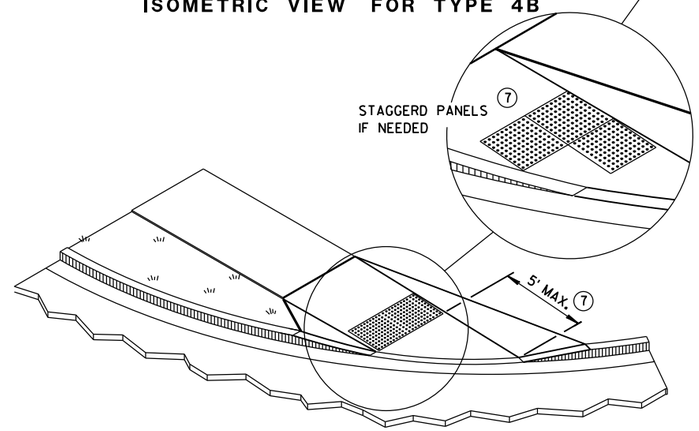
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

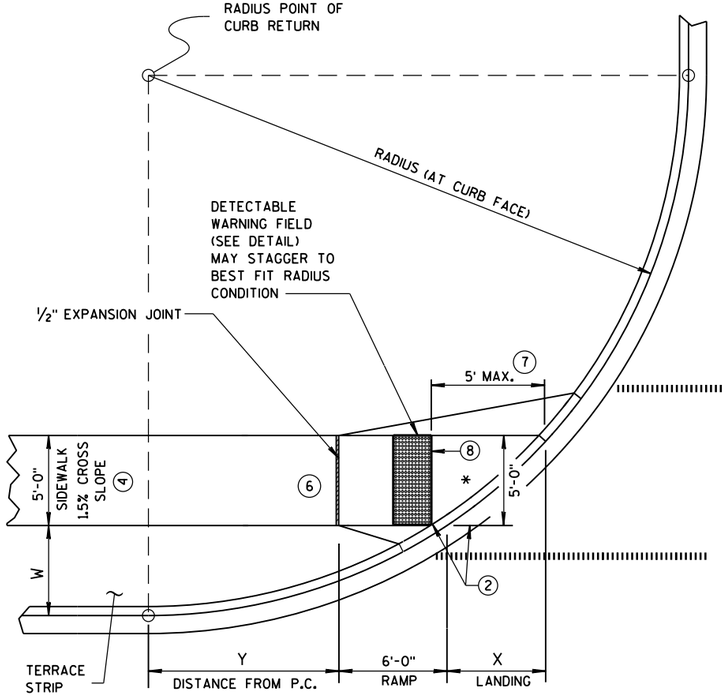
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

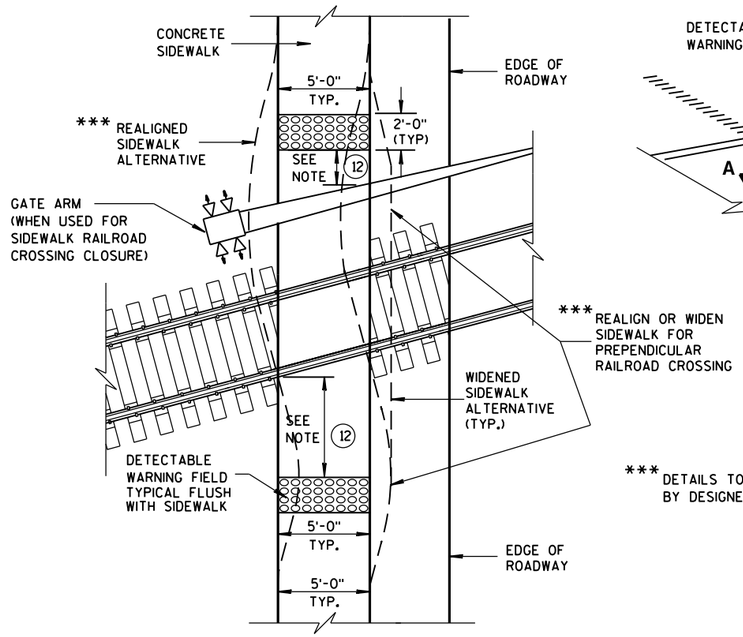
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-16d

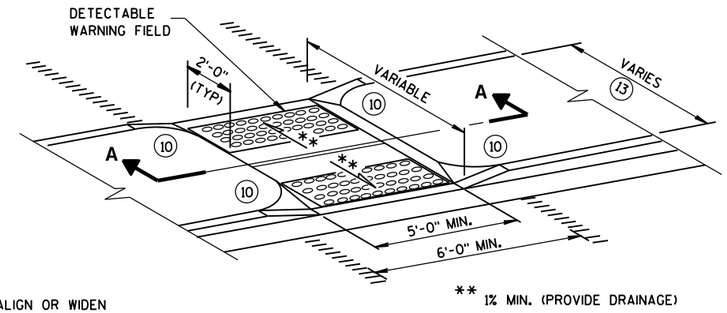
6

S.D.D. 8 D 5-16d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

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 DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (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.

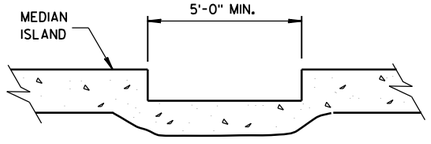
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(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.

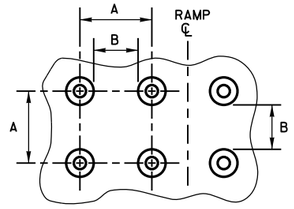
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



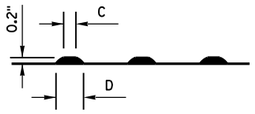
SECTION A-A

	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.

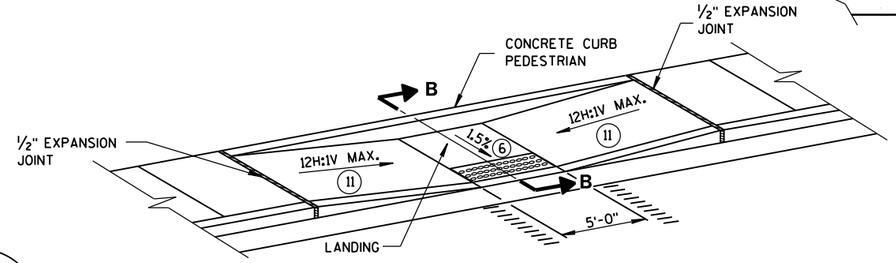


PLAN VIEW

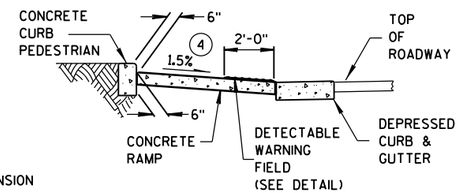


ELEVATION VIEW

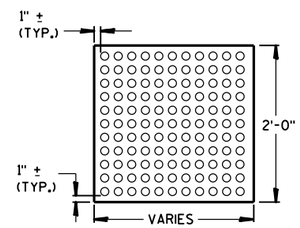
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



MID-BLOCK CROSSING
TYPE 7A



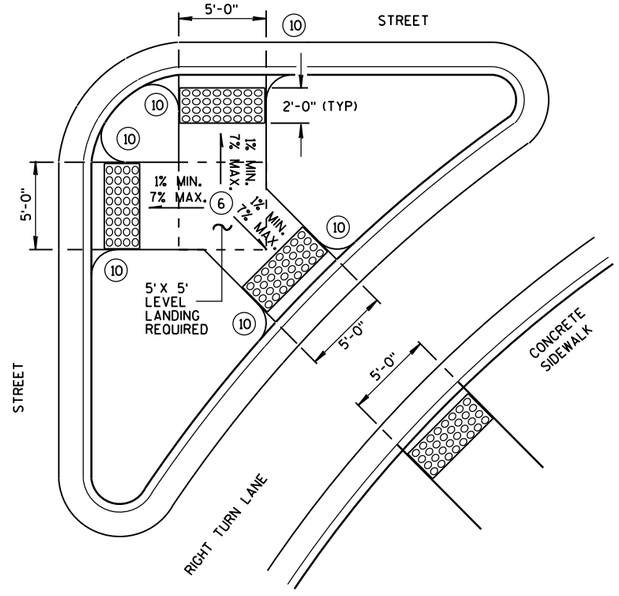
SECTION B-B



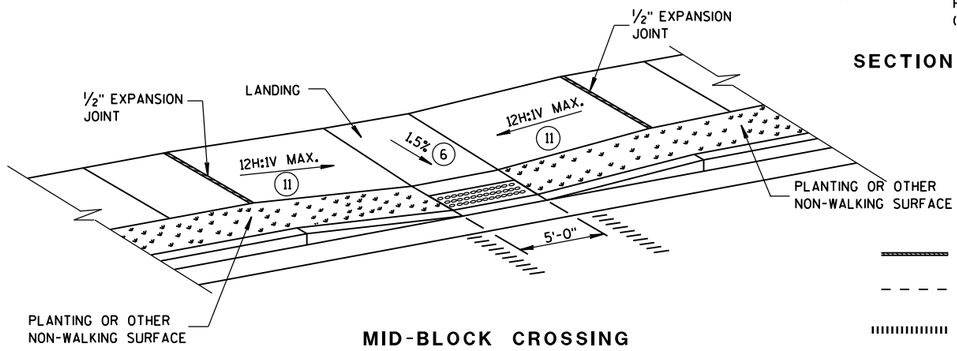
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

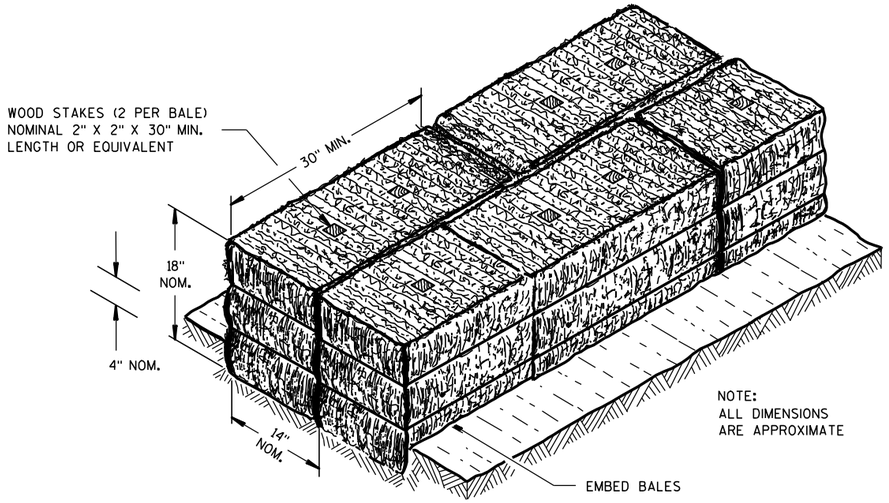
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

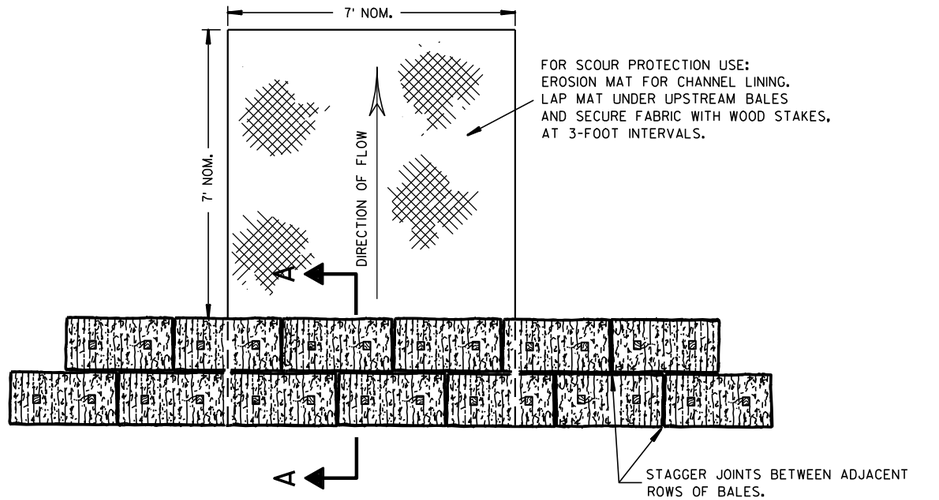
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

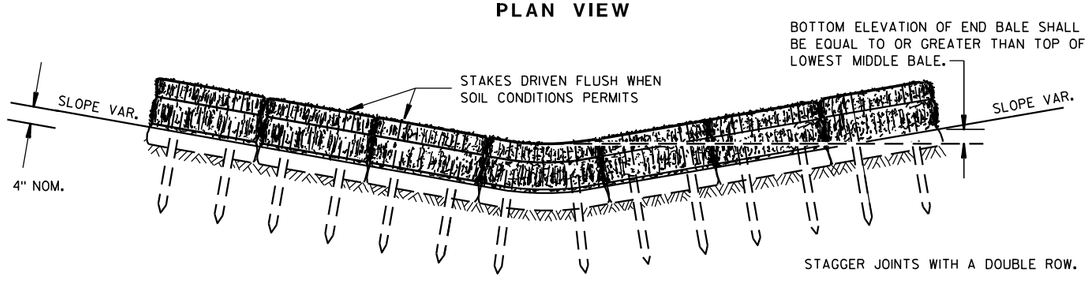
S.D.D. 8 D 5-16e



SECTION A-A



PLAN VIEW



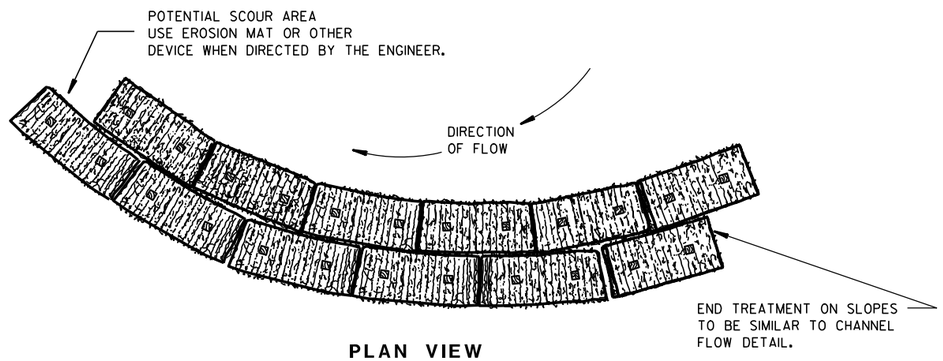
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

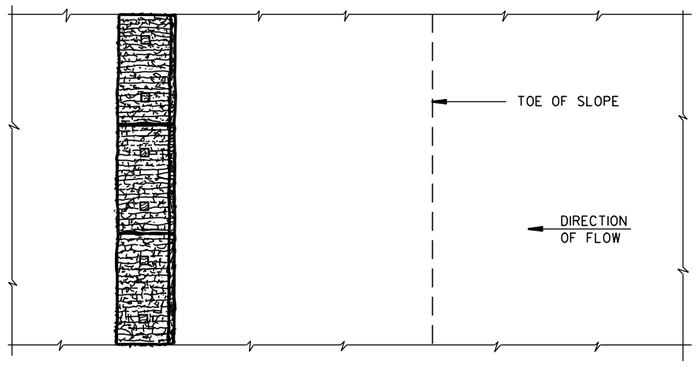
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

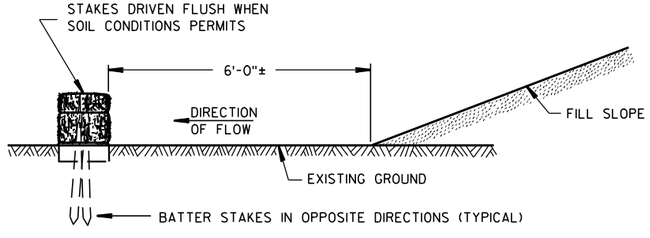


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

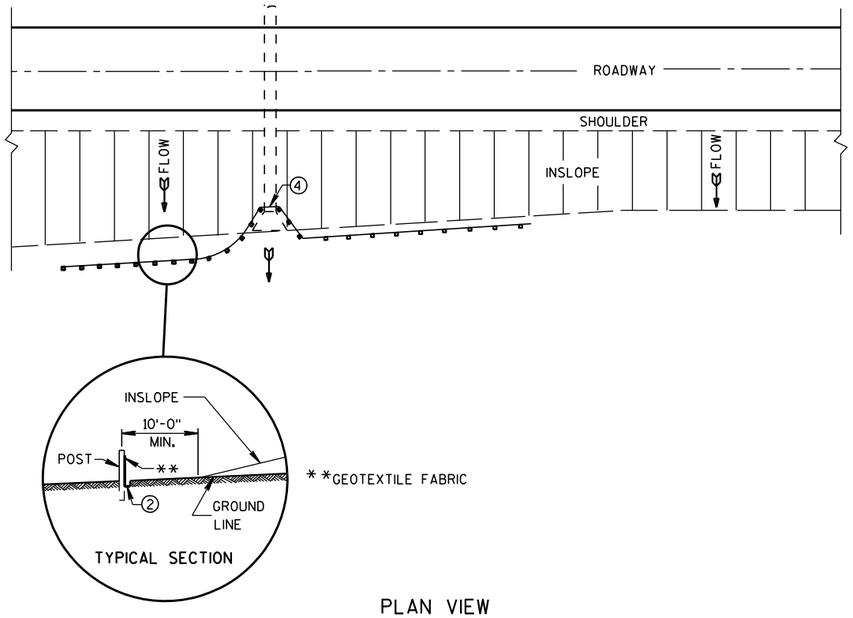
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

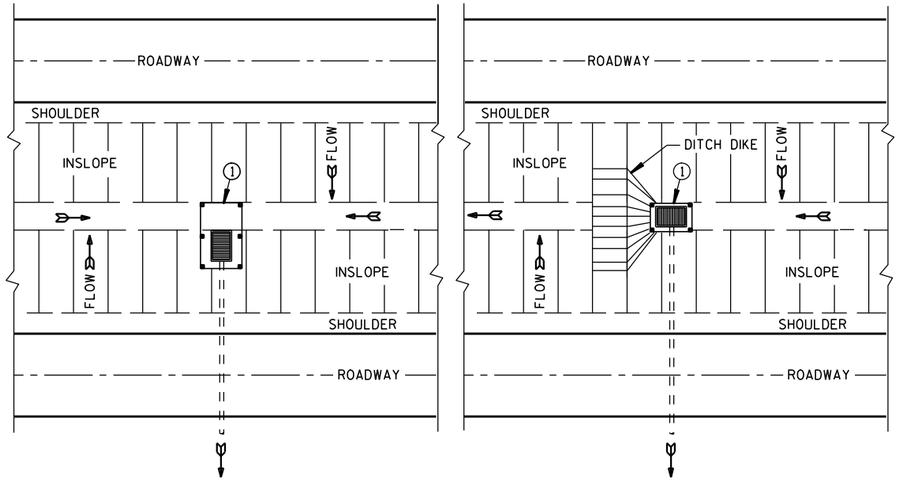
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



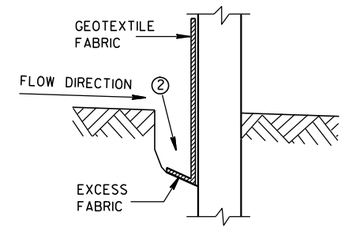
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

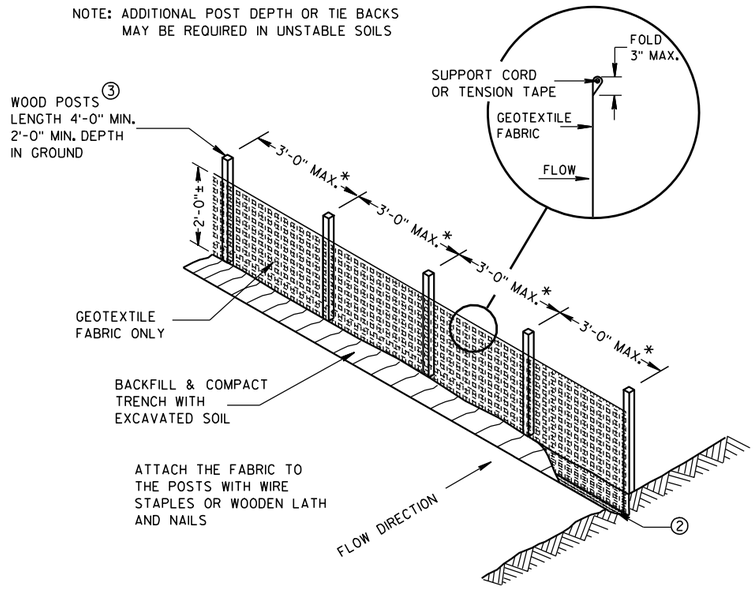
GENERAL NOTES

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

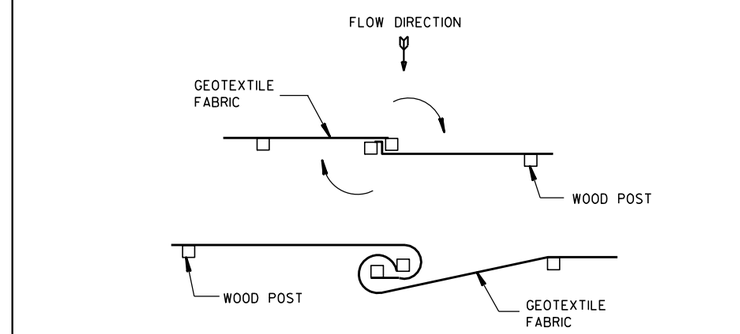
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



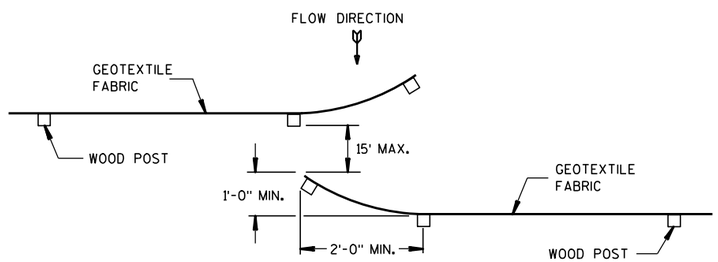
TRENCH DETAIL



SILT FENCE

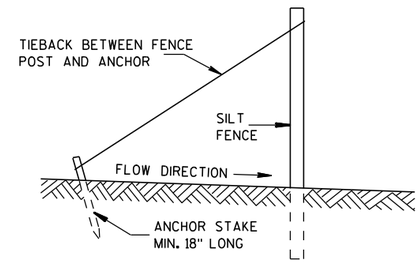


TWIST METHOD



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

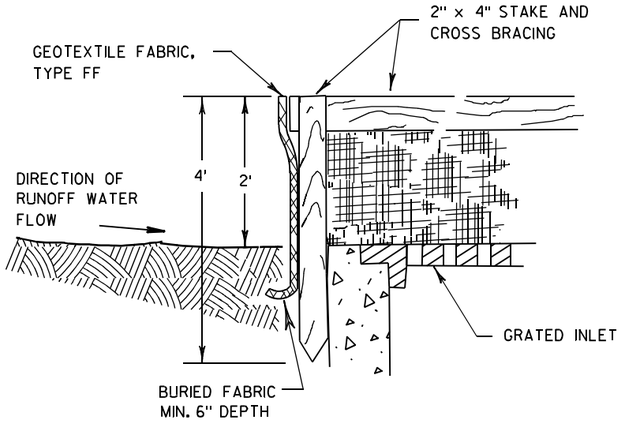
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

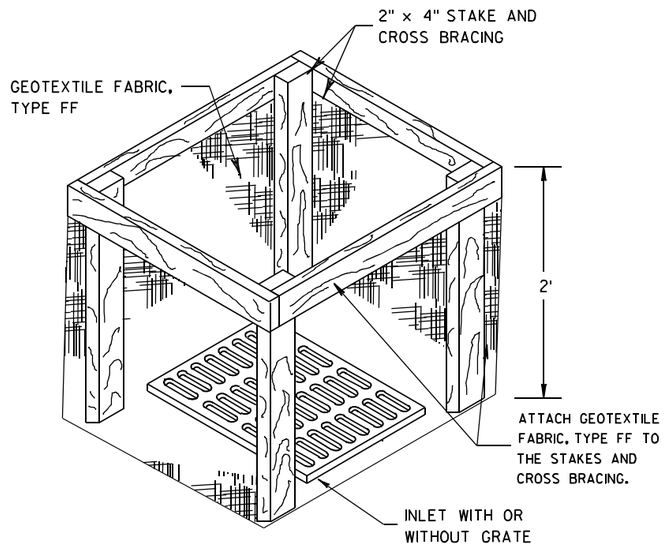
6

S.D.D. 8 E 9-6

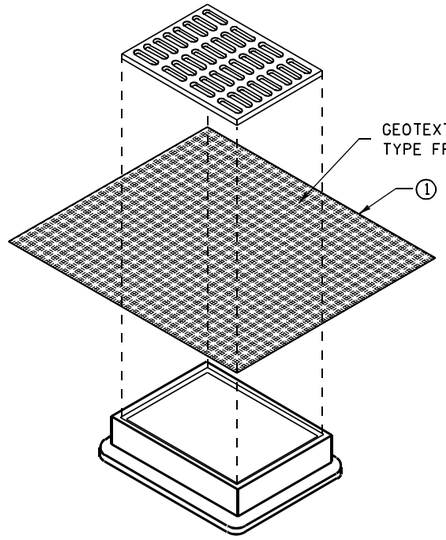
6

S.D.D. 8 E 9-6



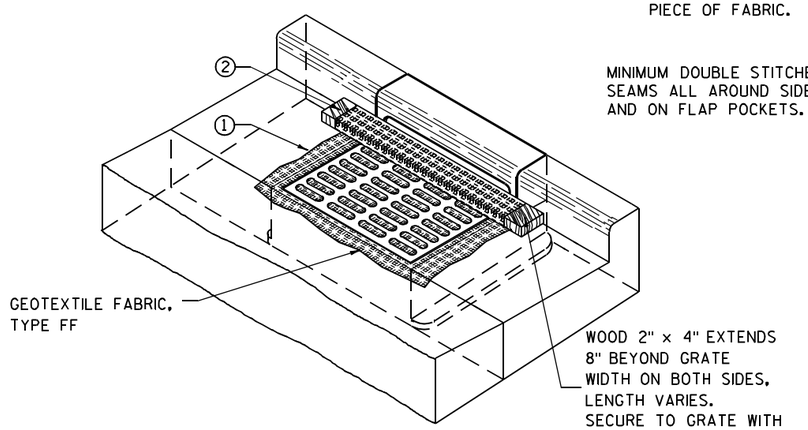


INLET PROTECTION, TYPE A

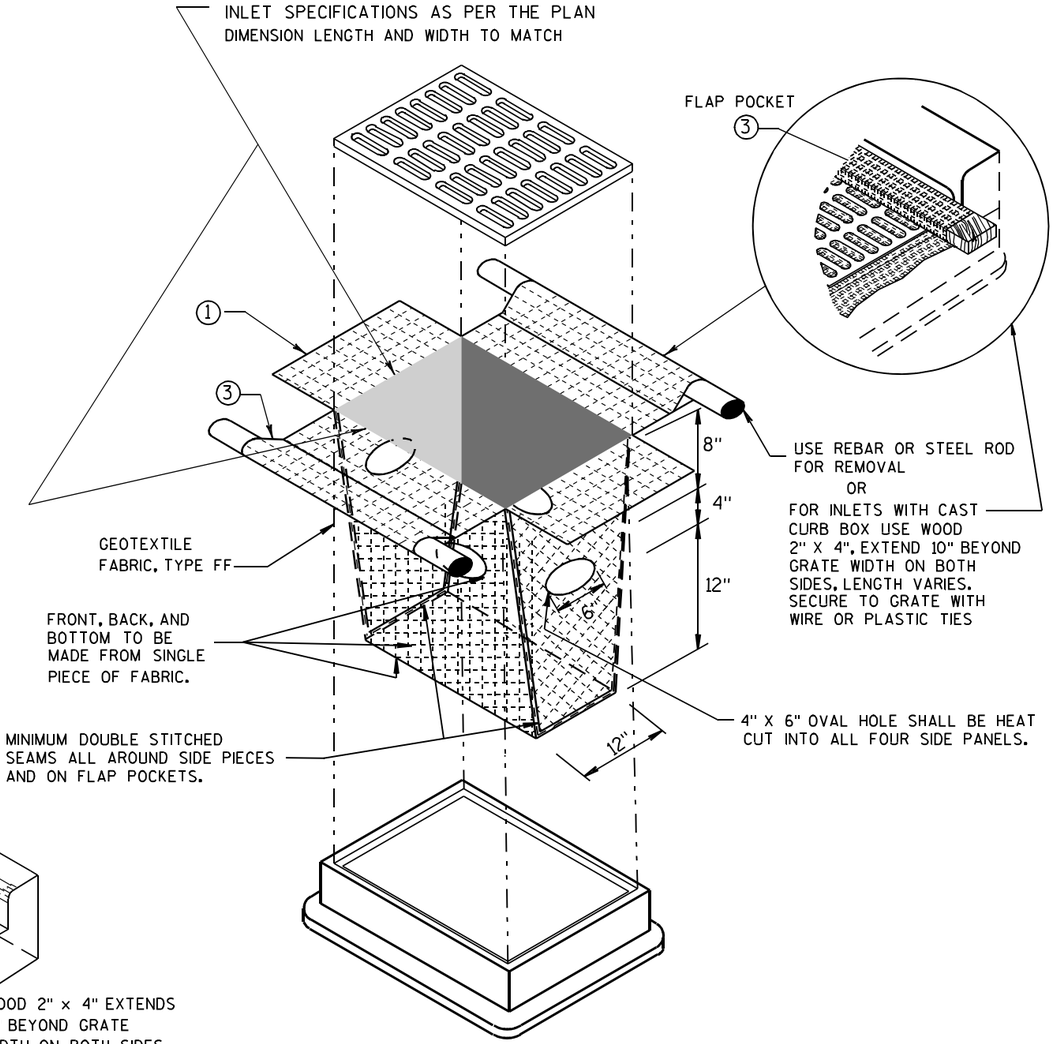


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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

METAL APRON ENDWALLS

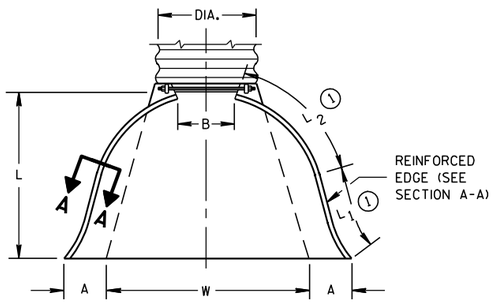
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

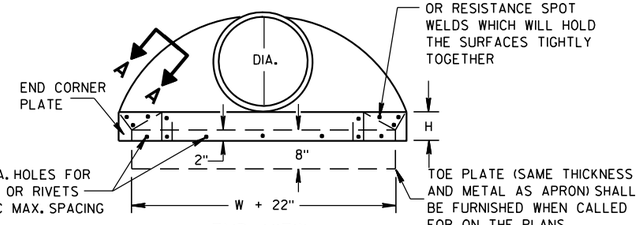
REINFORCED CONCRETE APRON ENDWALLS

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

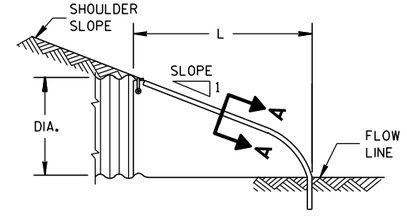
* MINIMUM
** MAXIMUM



PLAN VIEW

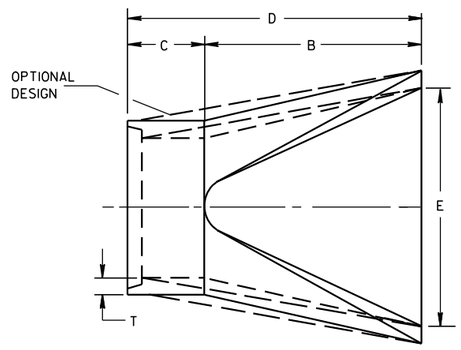


END VIEW

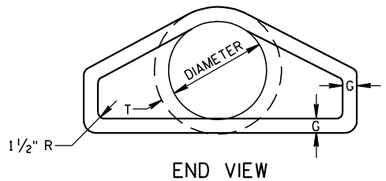


SIDE ELEVATION

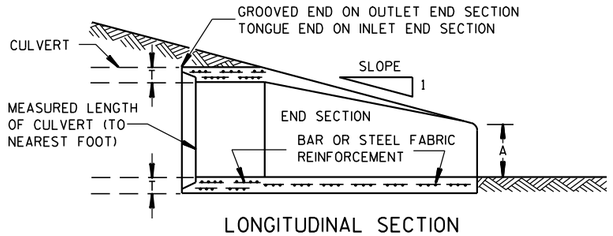
METAL ENDWALLS



PLAN

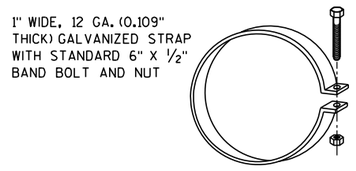


END VIEW



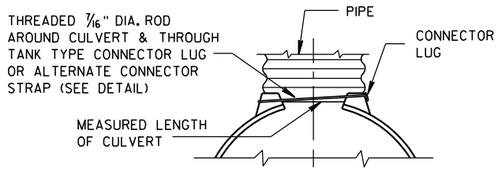
LONGITUDINAL SECTION

CONCRETE ENDWALLS

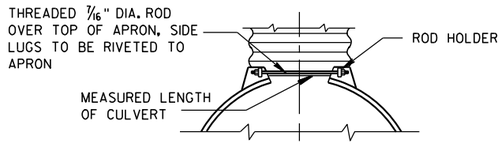


ALTERNATE FOR TYPE 1 CONNECTION

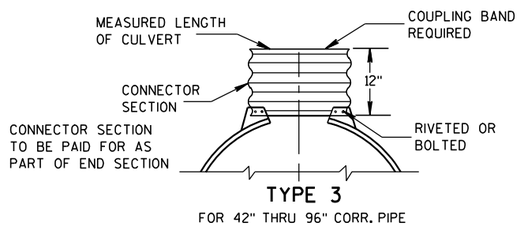
END SECTION CONNECTOR STRAP



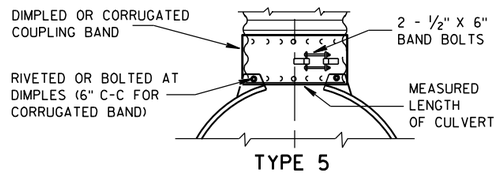
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

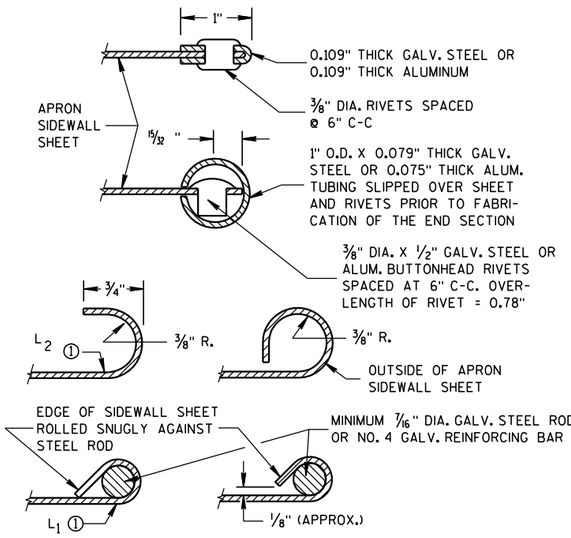
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

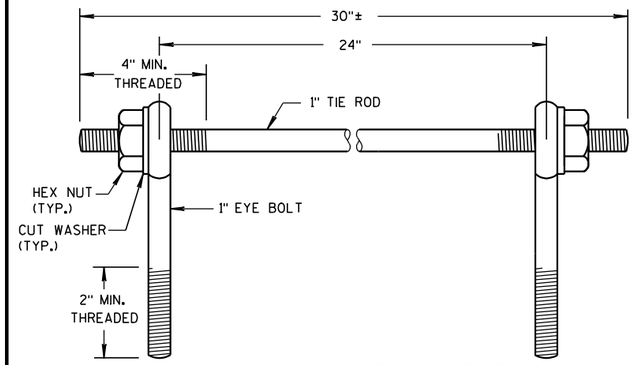
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

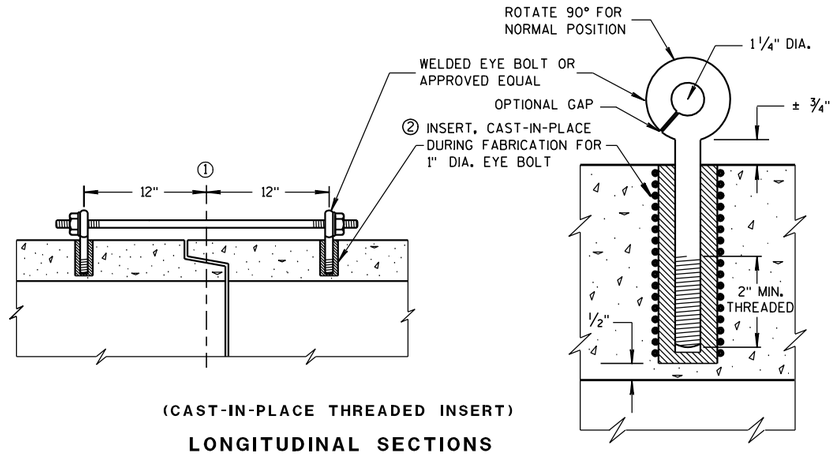
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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.

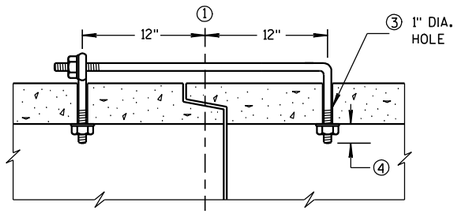
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

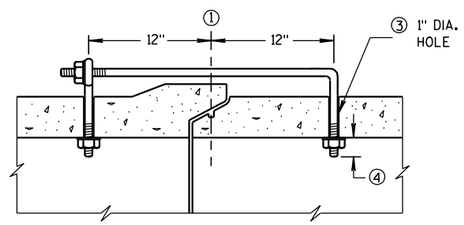
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

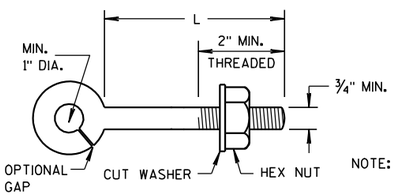


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

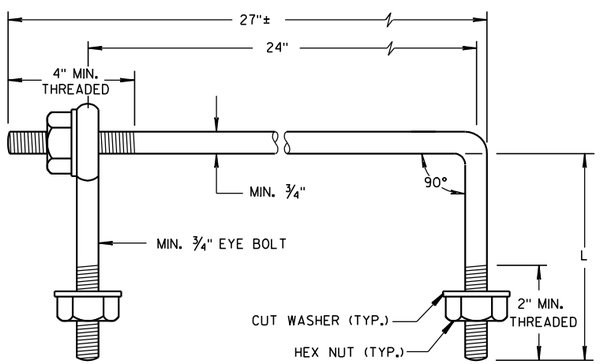
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

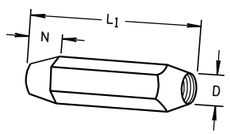
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

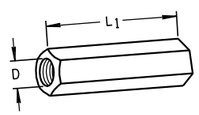
ADJUSTABLE TIE ROD TABLE

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



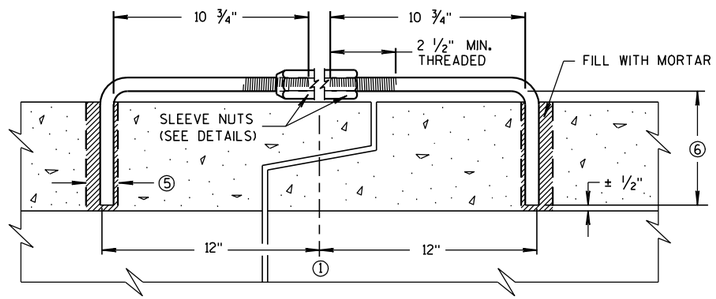
TAPERED



PLAIN

RIGHT AND LEFT THREADS

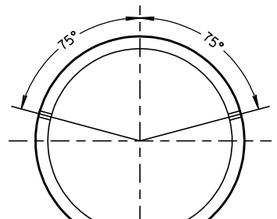
SLEEVE NUTS



LONGITUDINAL SECTION

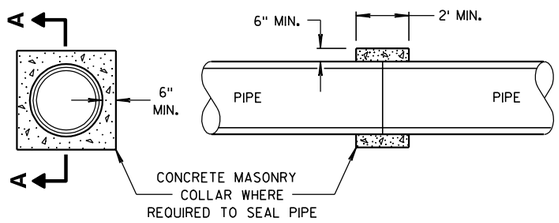
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

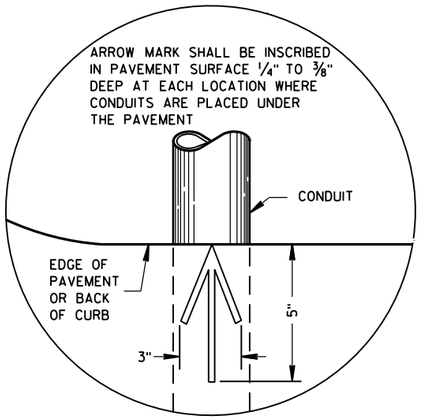
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

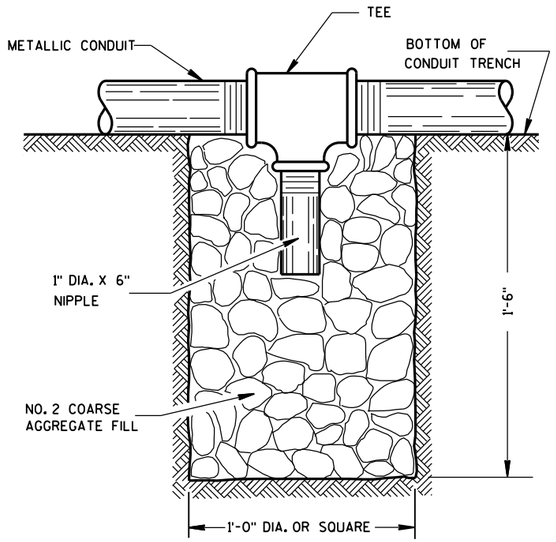
6

S.D.D. 8 F 4-7



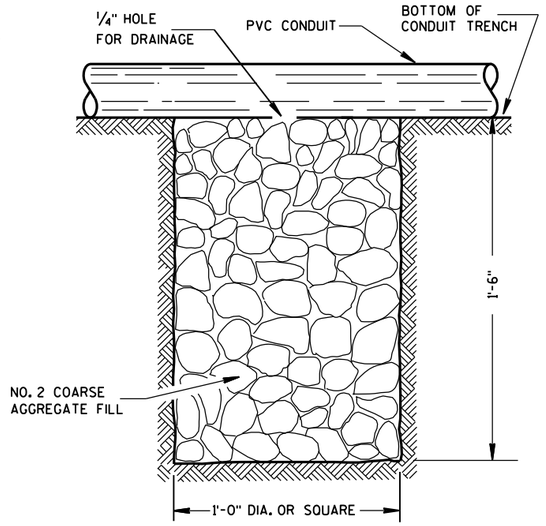
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

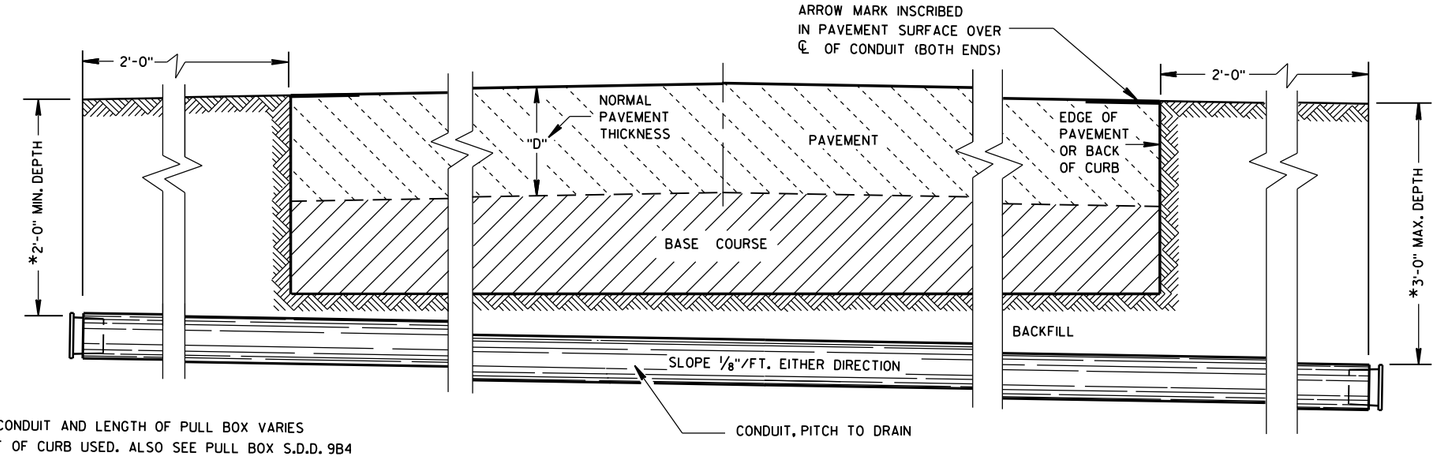
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

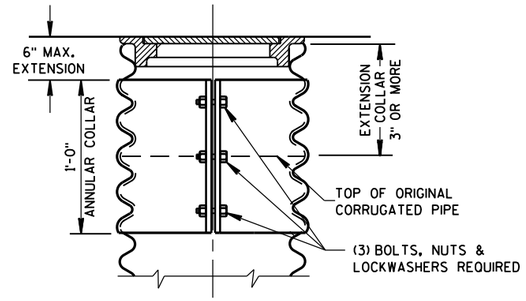
S.D.D. 9 B 2-9

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

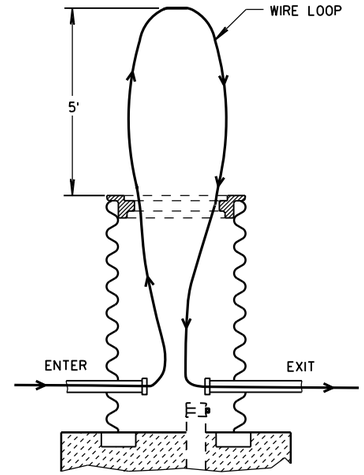
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

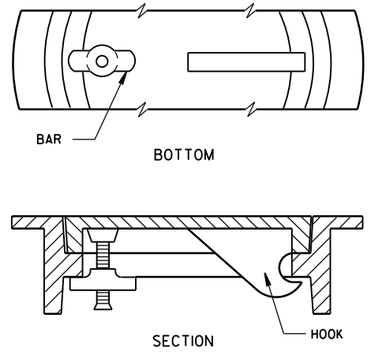
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

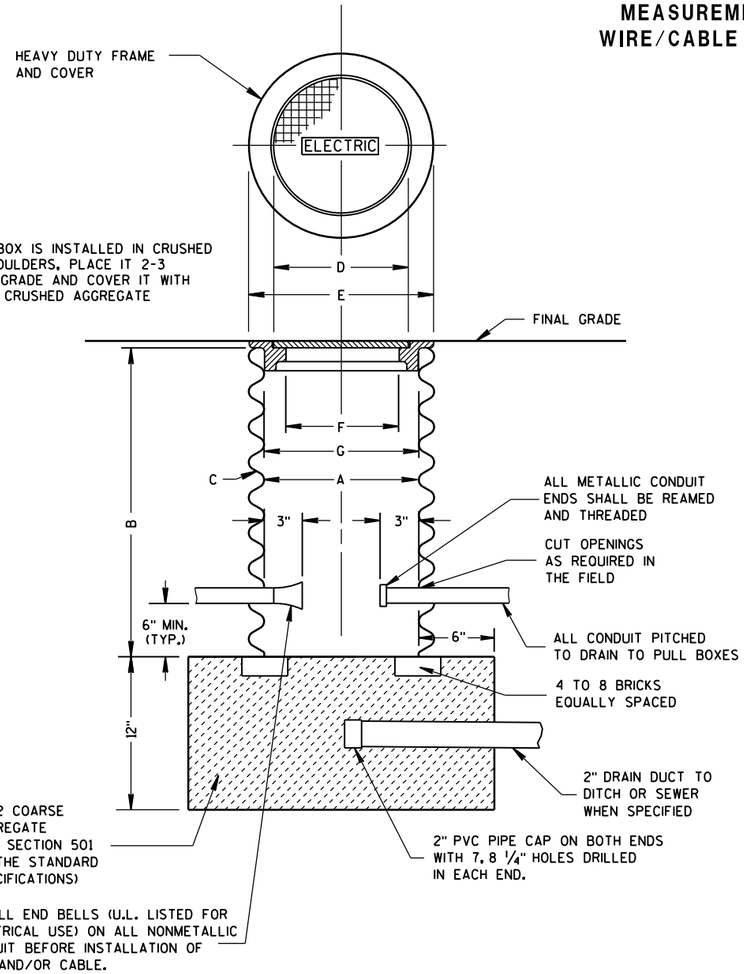


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



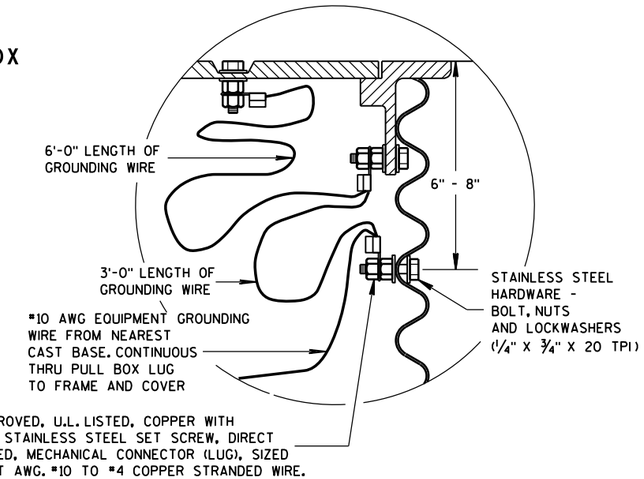
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

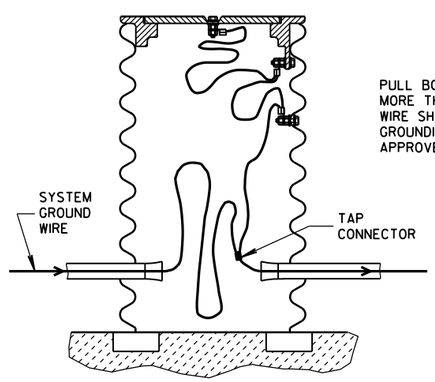


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

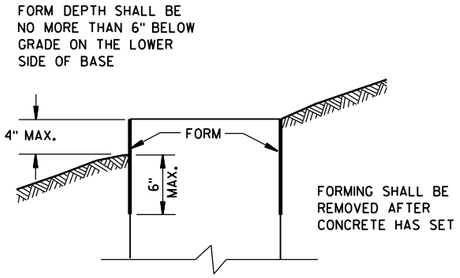
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

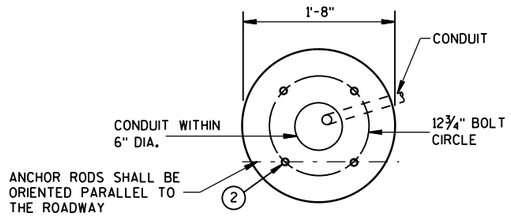
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

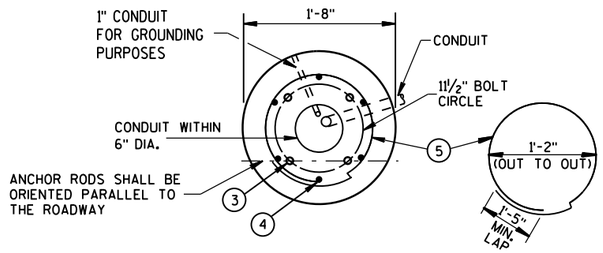
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

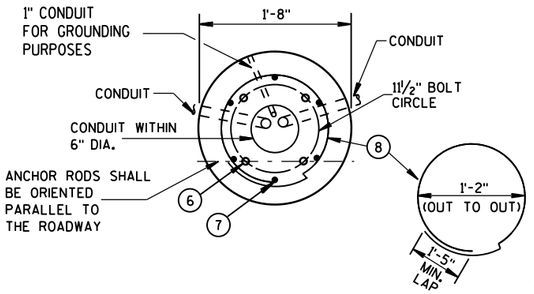
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

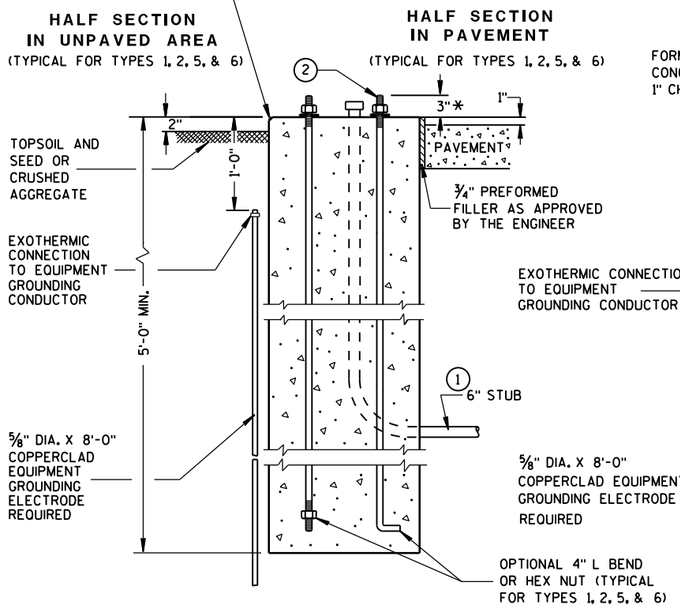






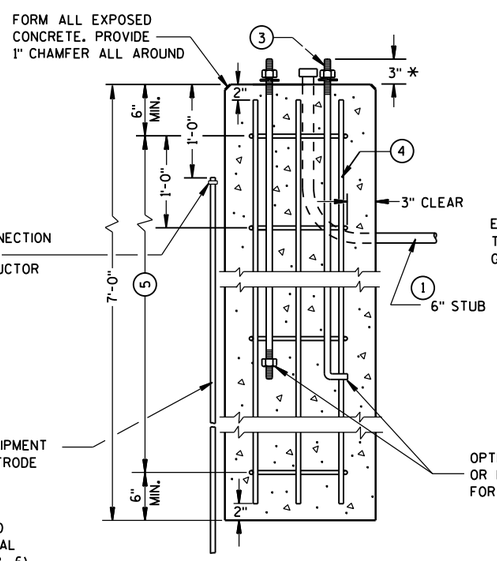
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

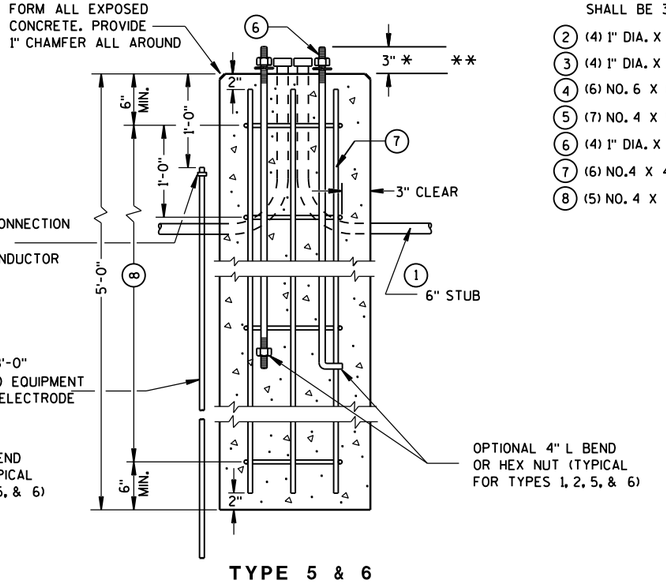


HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

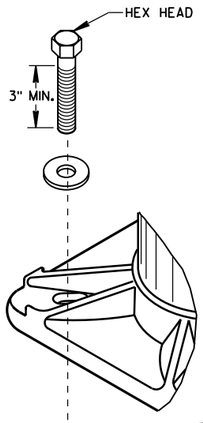
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

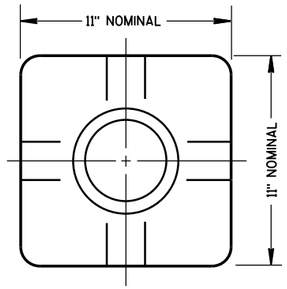
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

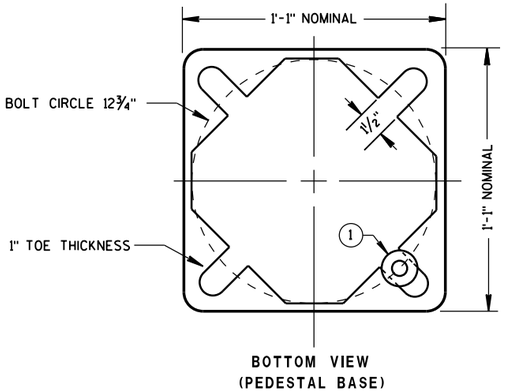
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

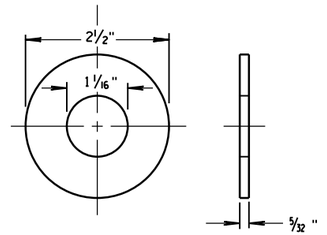




TOP VIEW
(PEDESTAL BASE)

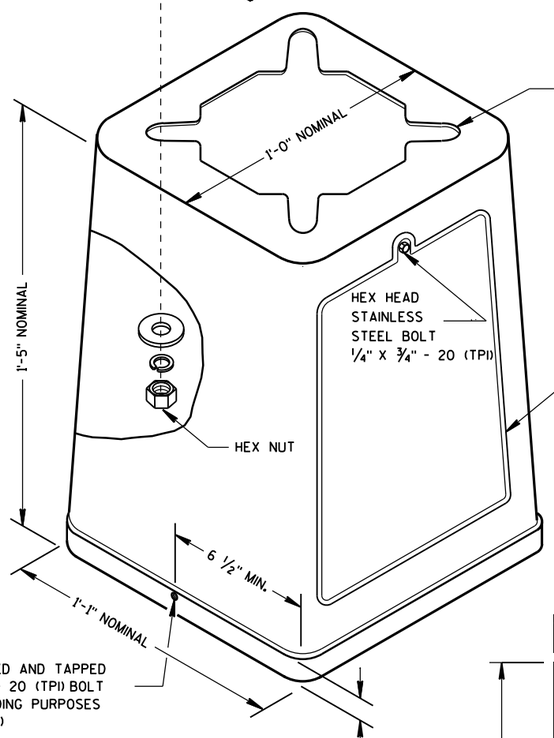


BOTTOM VIEW
(PEDESTAL BASE)

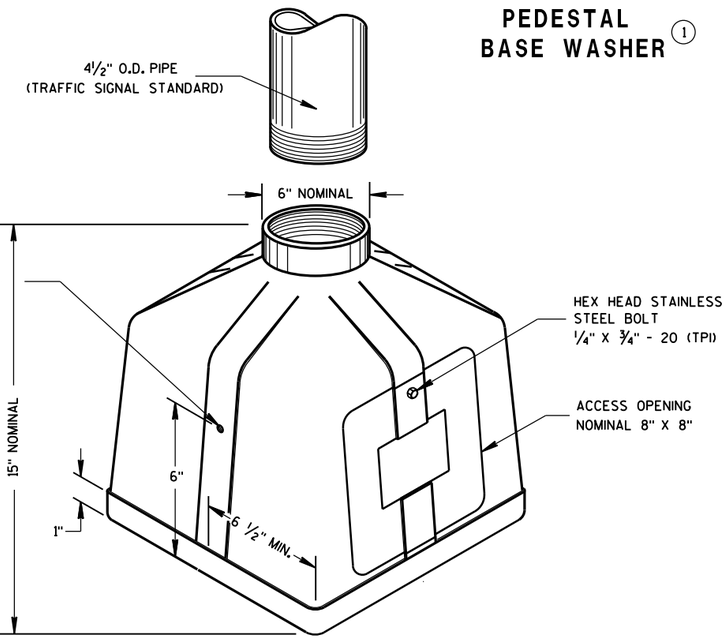


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

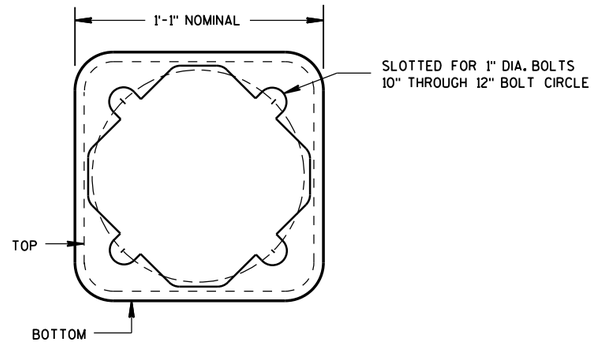


ISOMETRIC VIEW

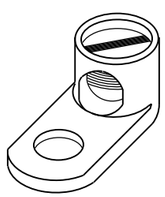


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

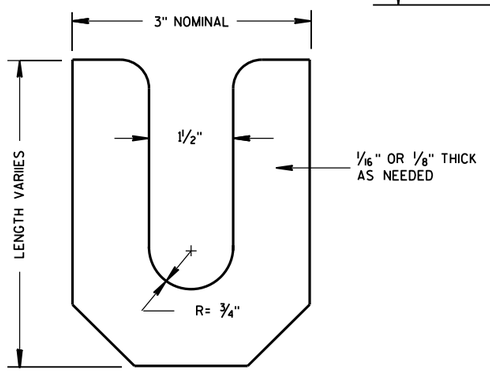


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 3-4

6

S.D.D. 9 C 3-4

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

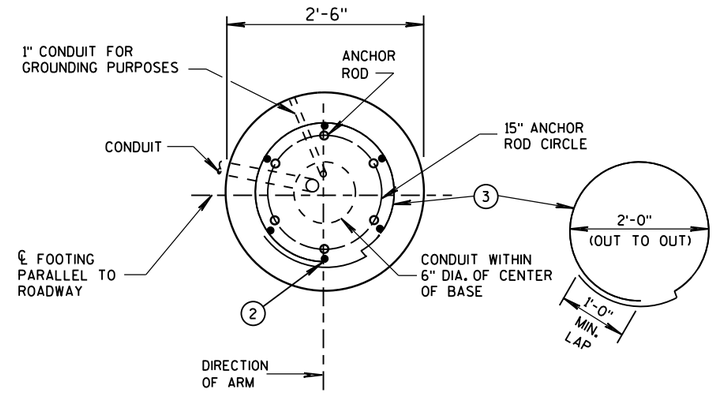
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

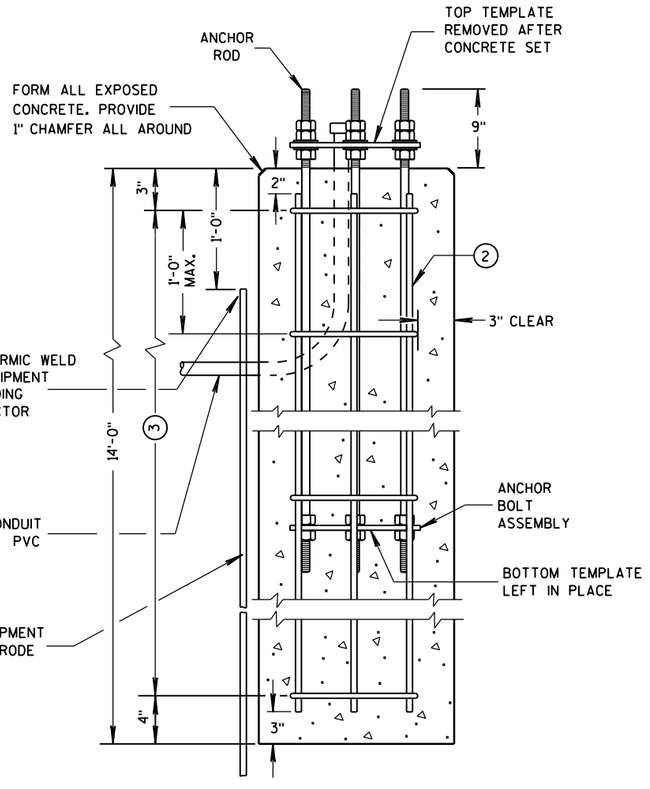
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" MAX. C-C.

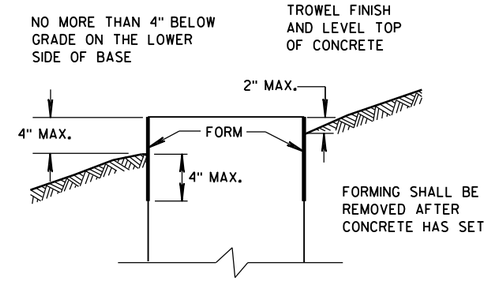
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



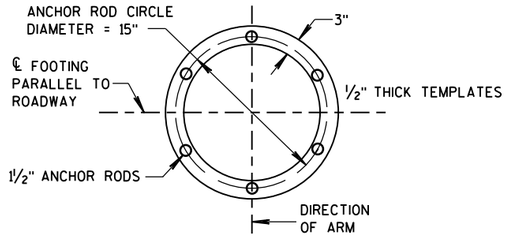


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

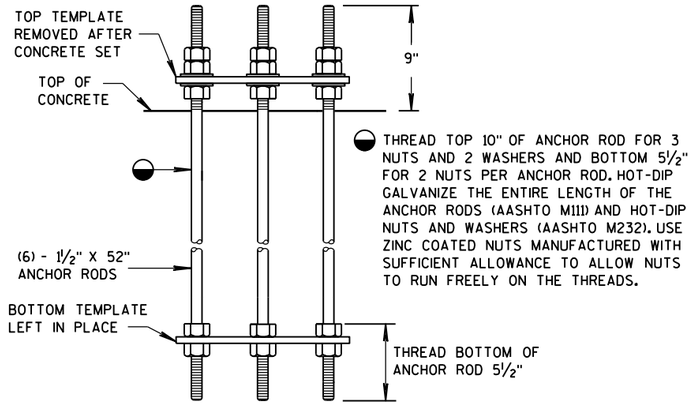
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

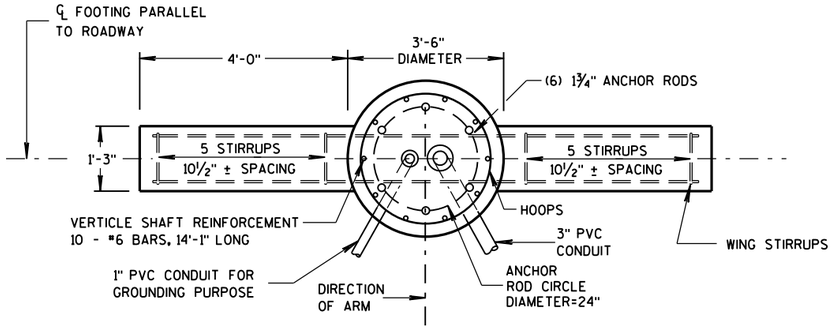
CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

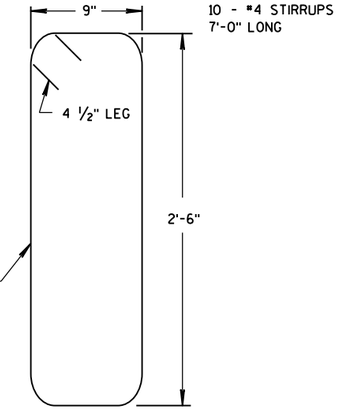
APPROVED
Sept., 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

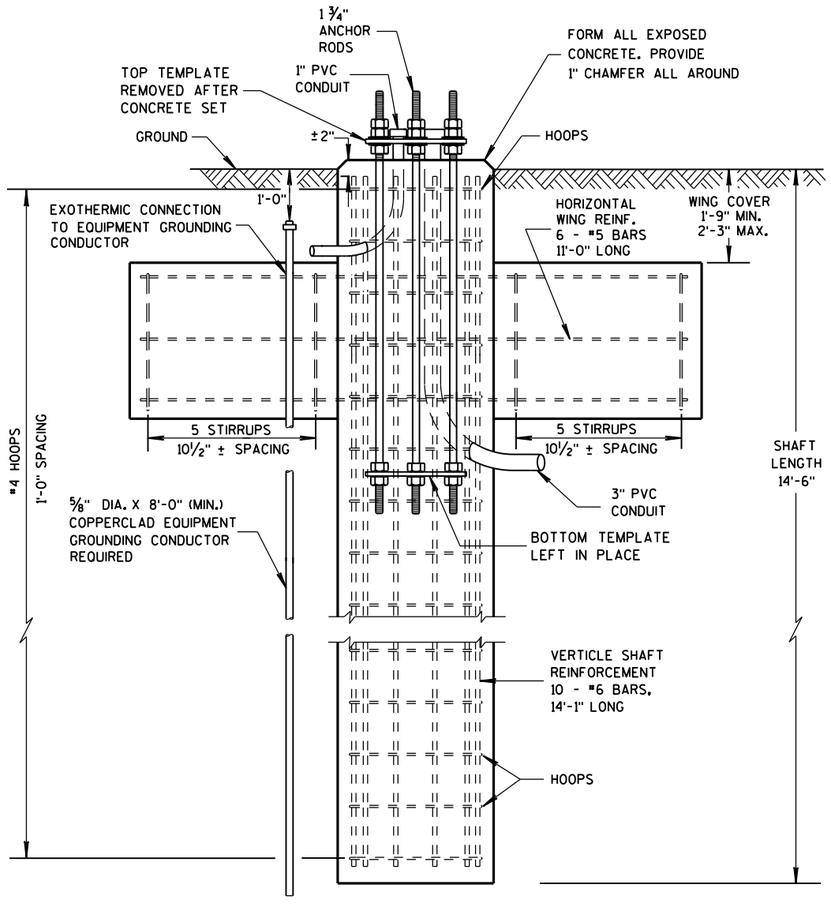
S.D.D. 9 C 11-8



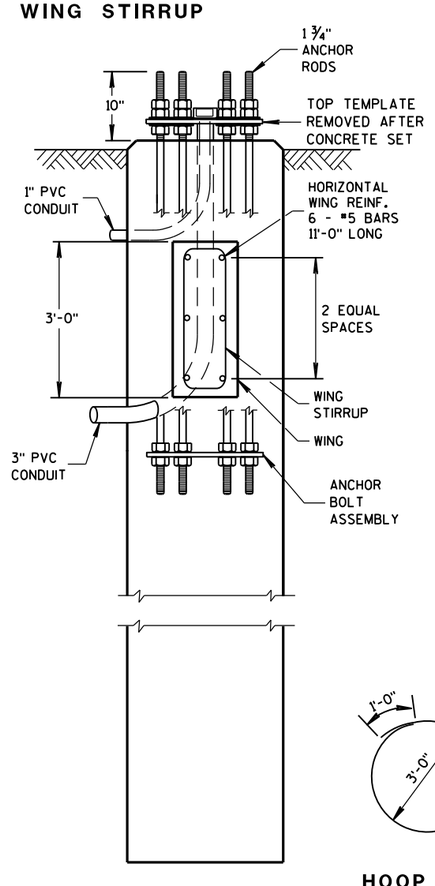
PLAN VIEW



WING STIRRUP

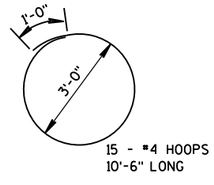


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

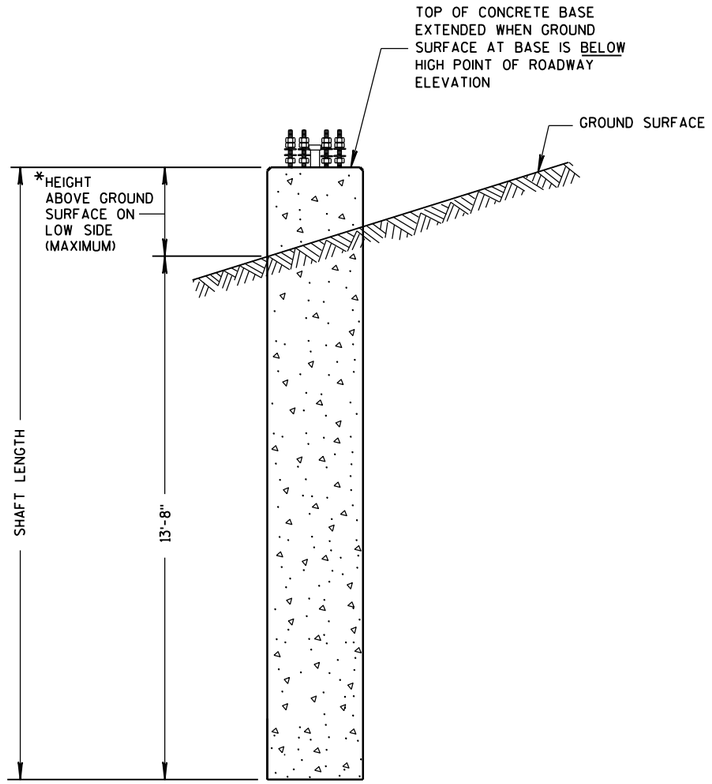
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 C 12-7a

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

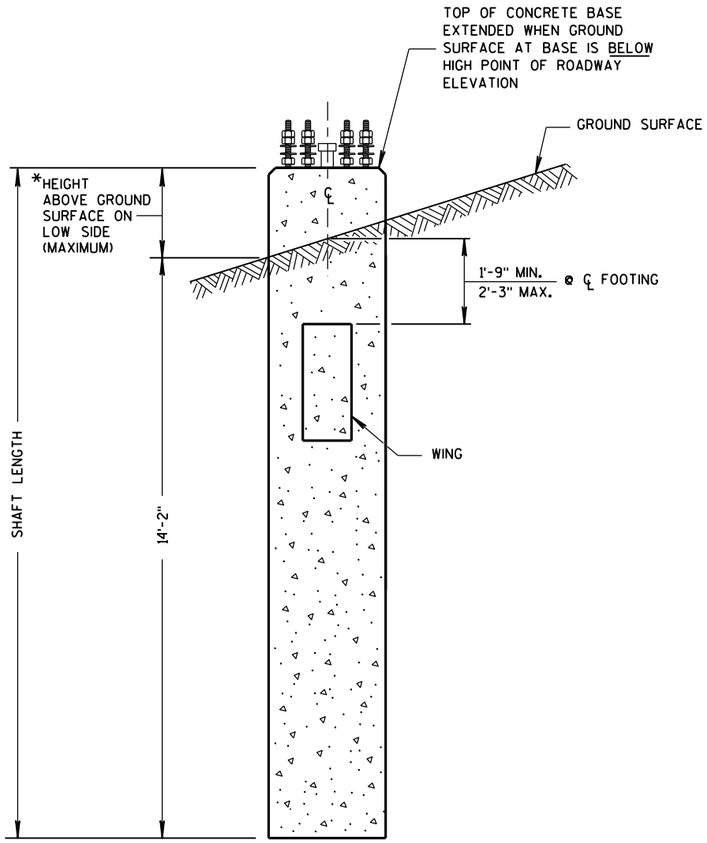
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

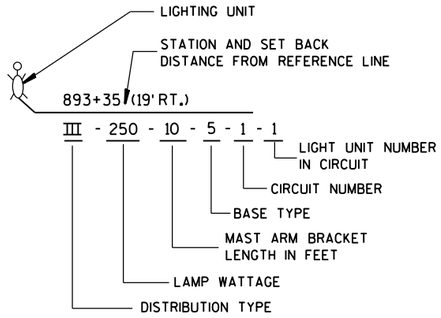
APPROVED
11-26-2013 DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

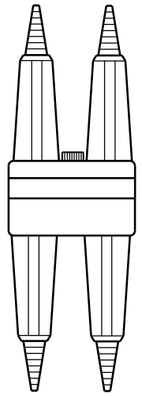
S.D.D. 9 C 13-2

6

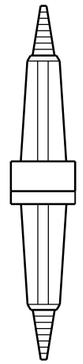
S.D.D. 9 C 13-2



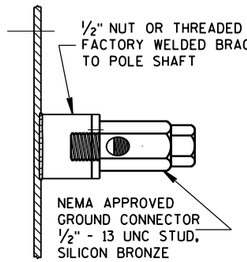
LIGHTING UNIT CODE
(TYPICAL)

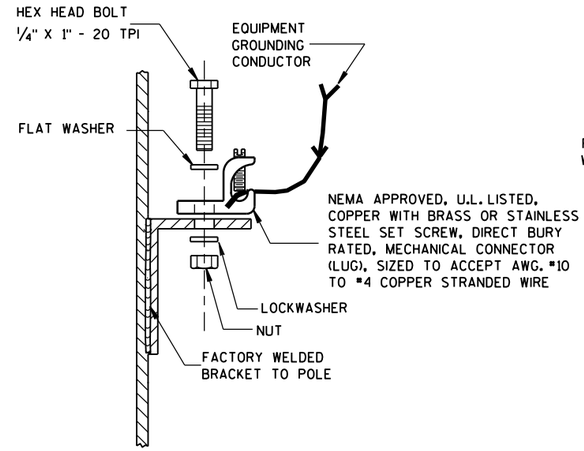


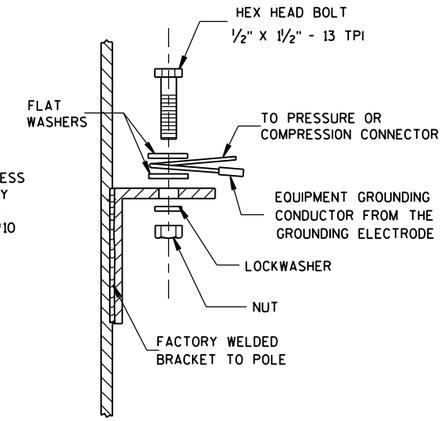
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



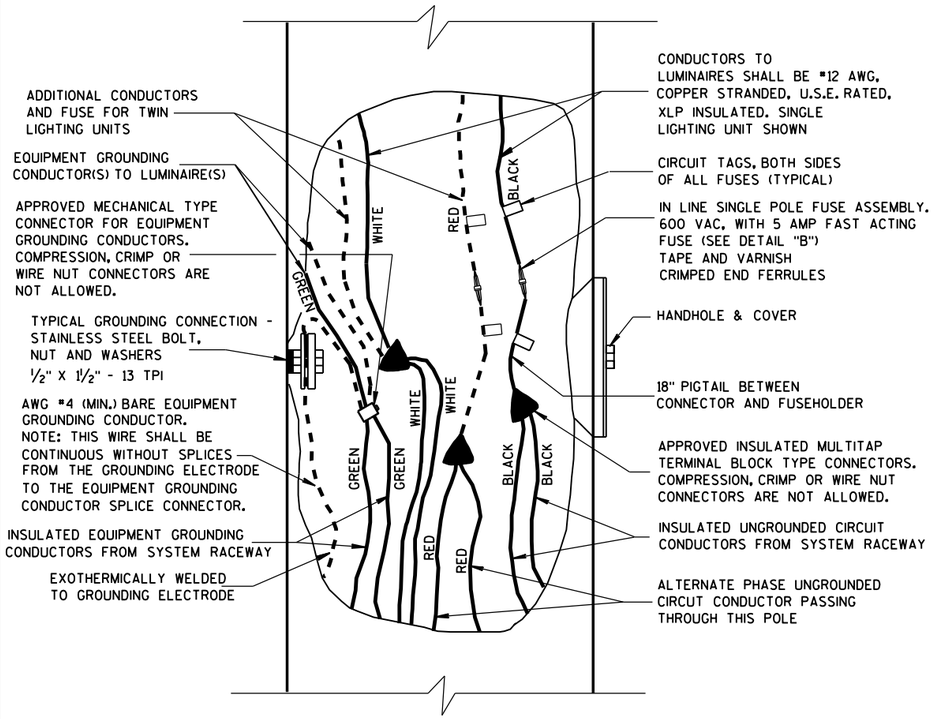
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



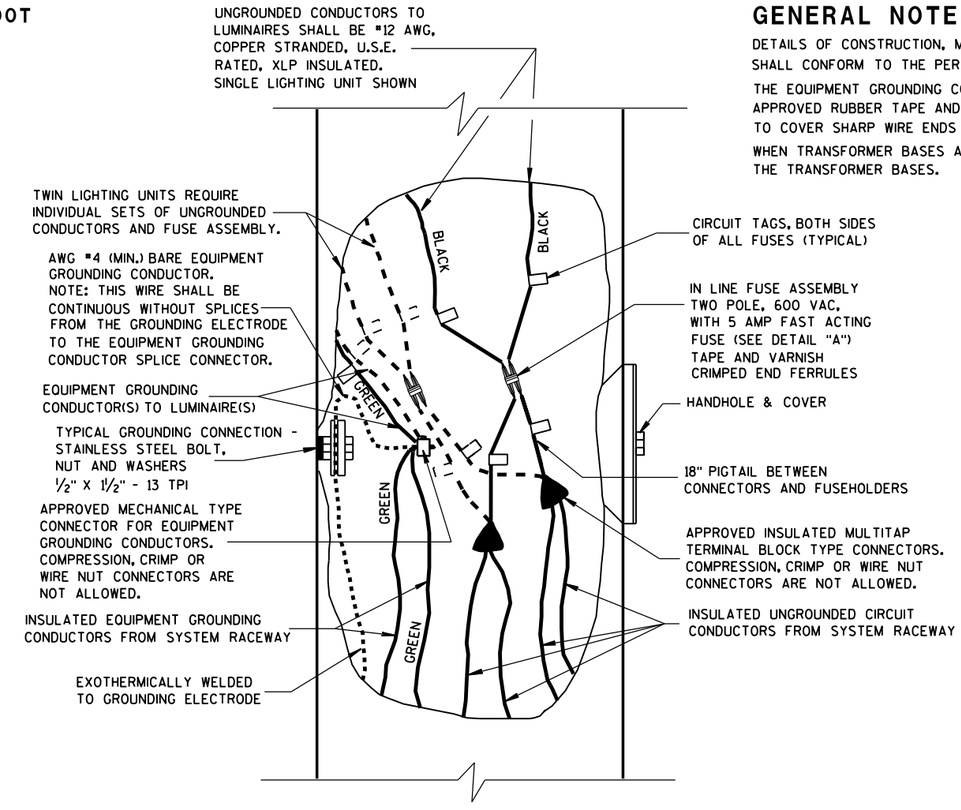




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

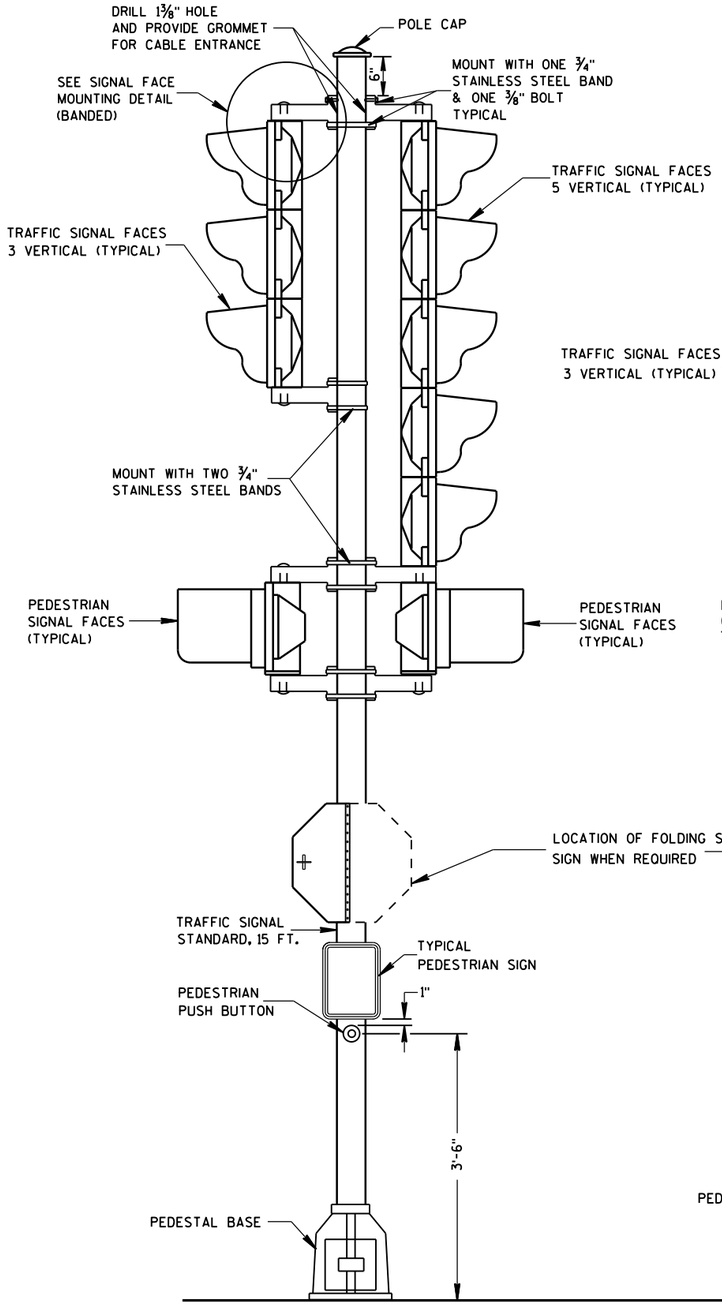
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

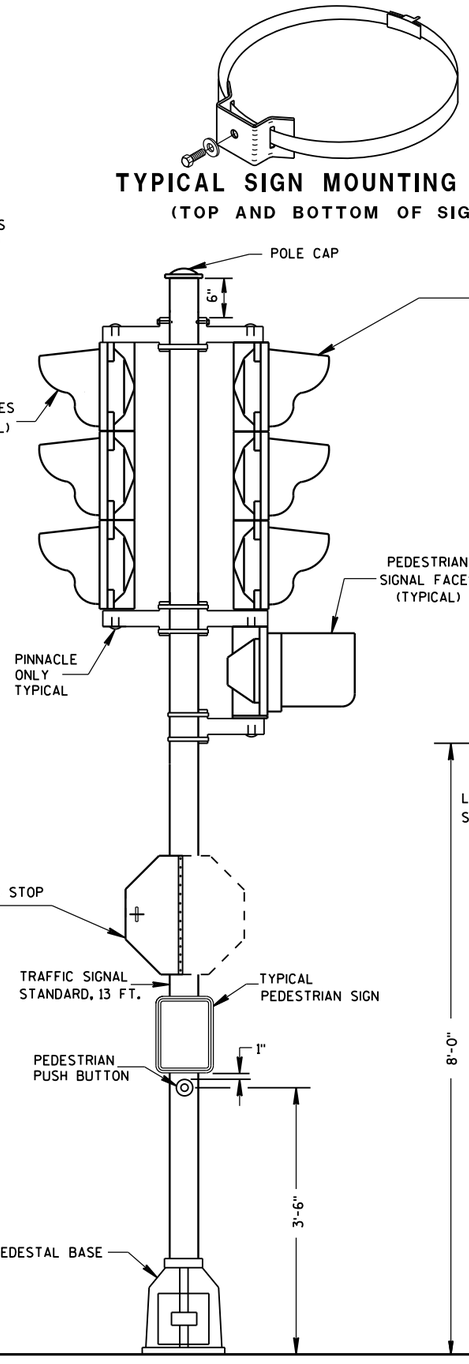
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 E 3-5

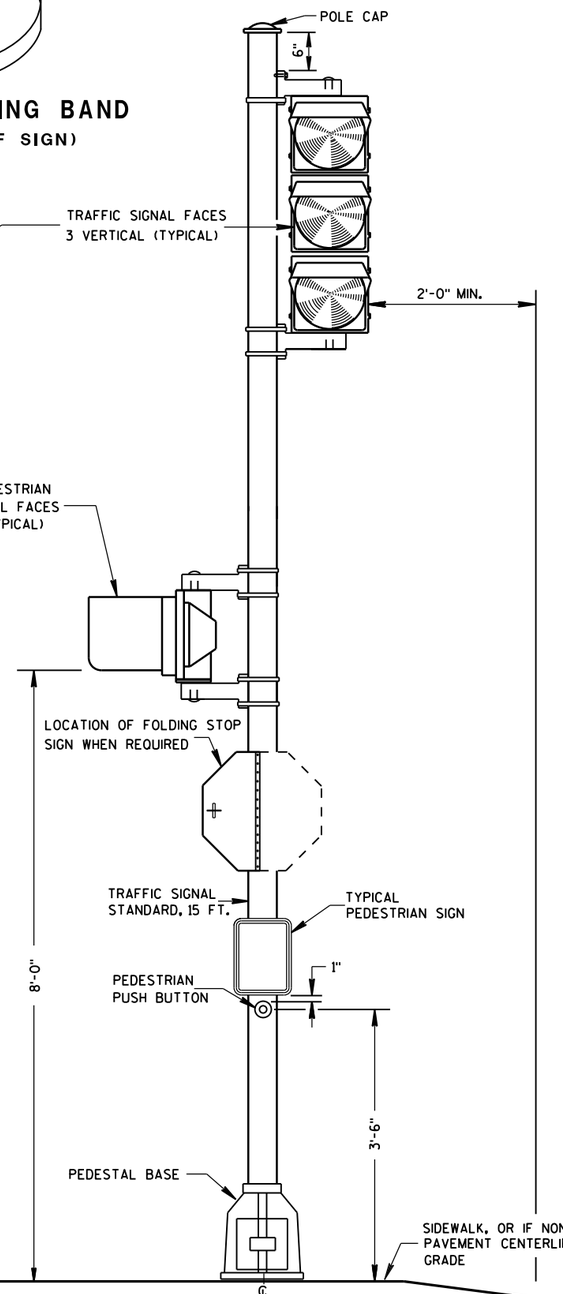


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

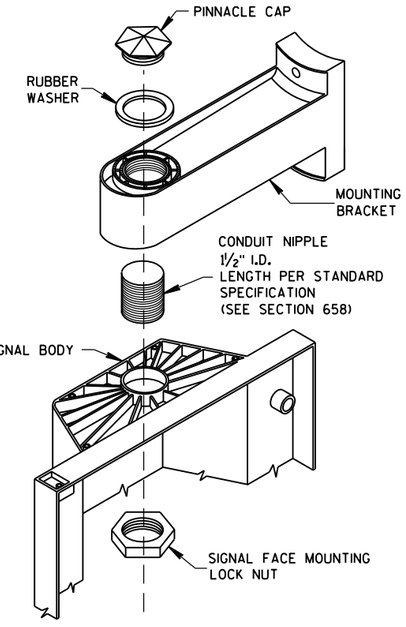
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

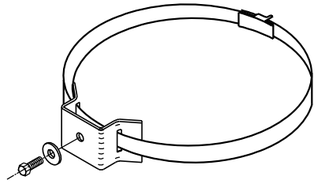
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

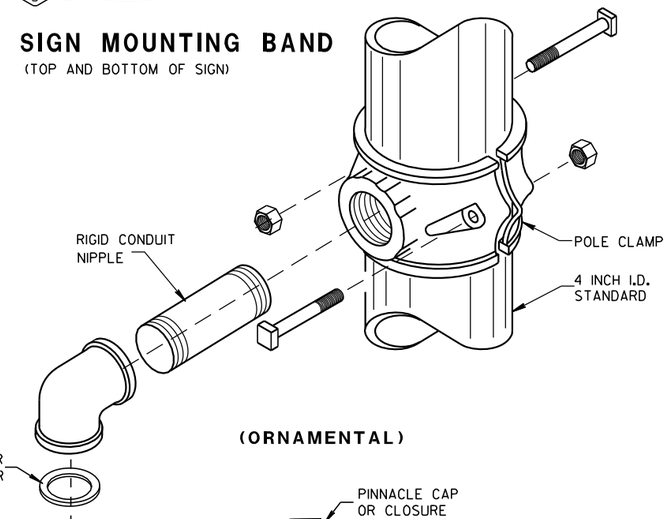
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

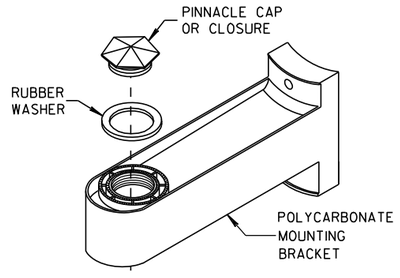
S.D.D. 9 E 6-5



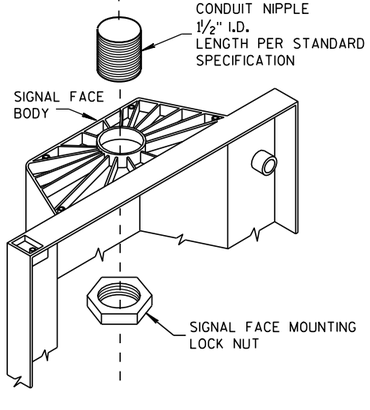
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



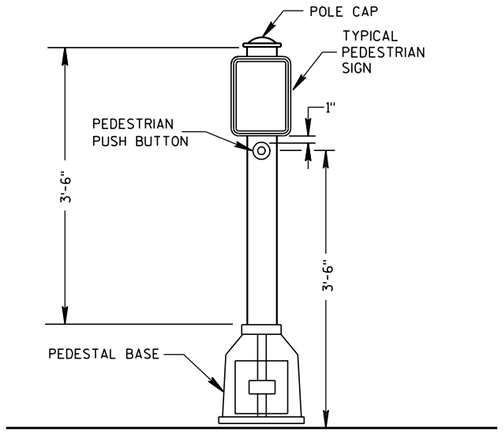
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

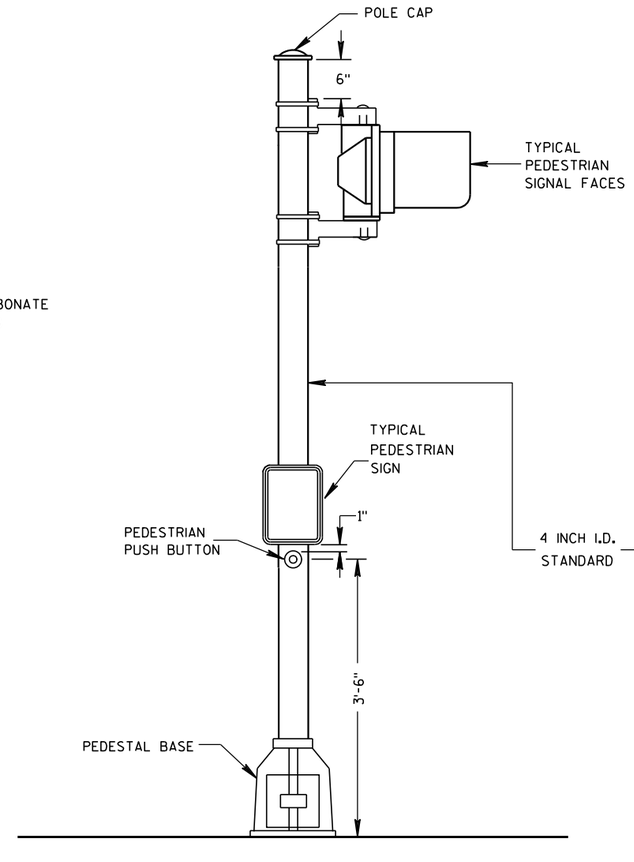
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

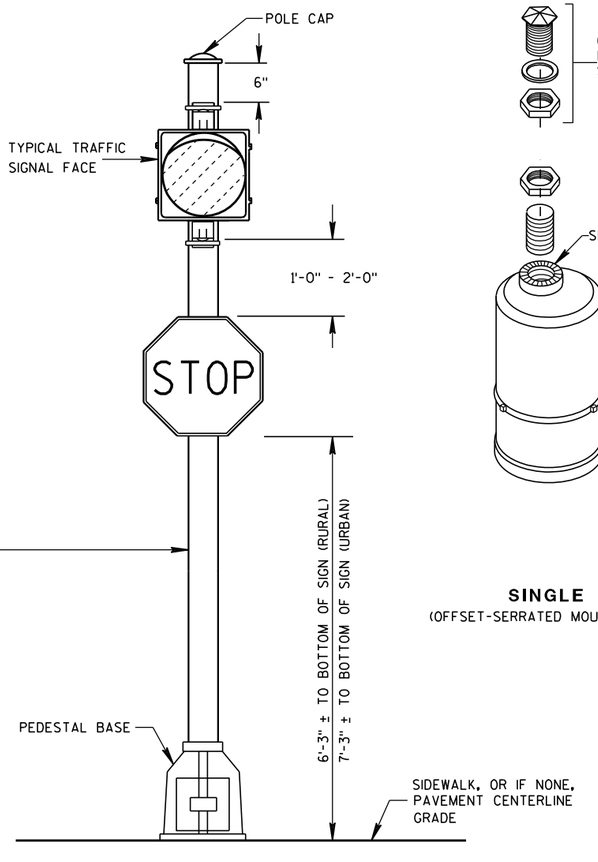
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

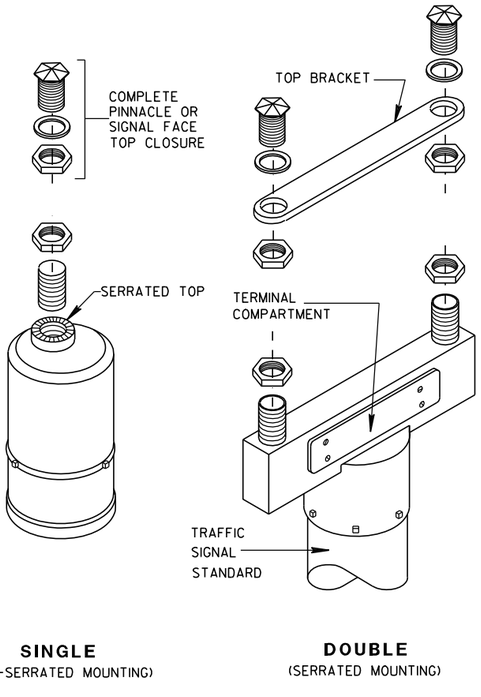
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10 — DATE

/S/ John Corbin — STATE ELECTRICAL ENGI

176

HWYS

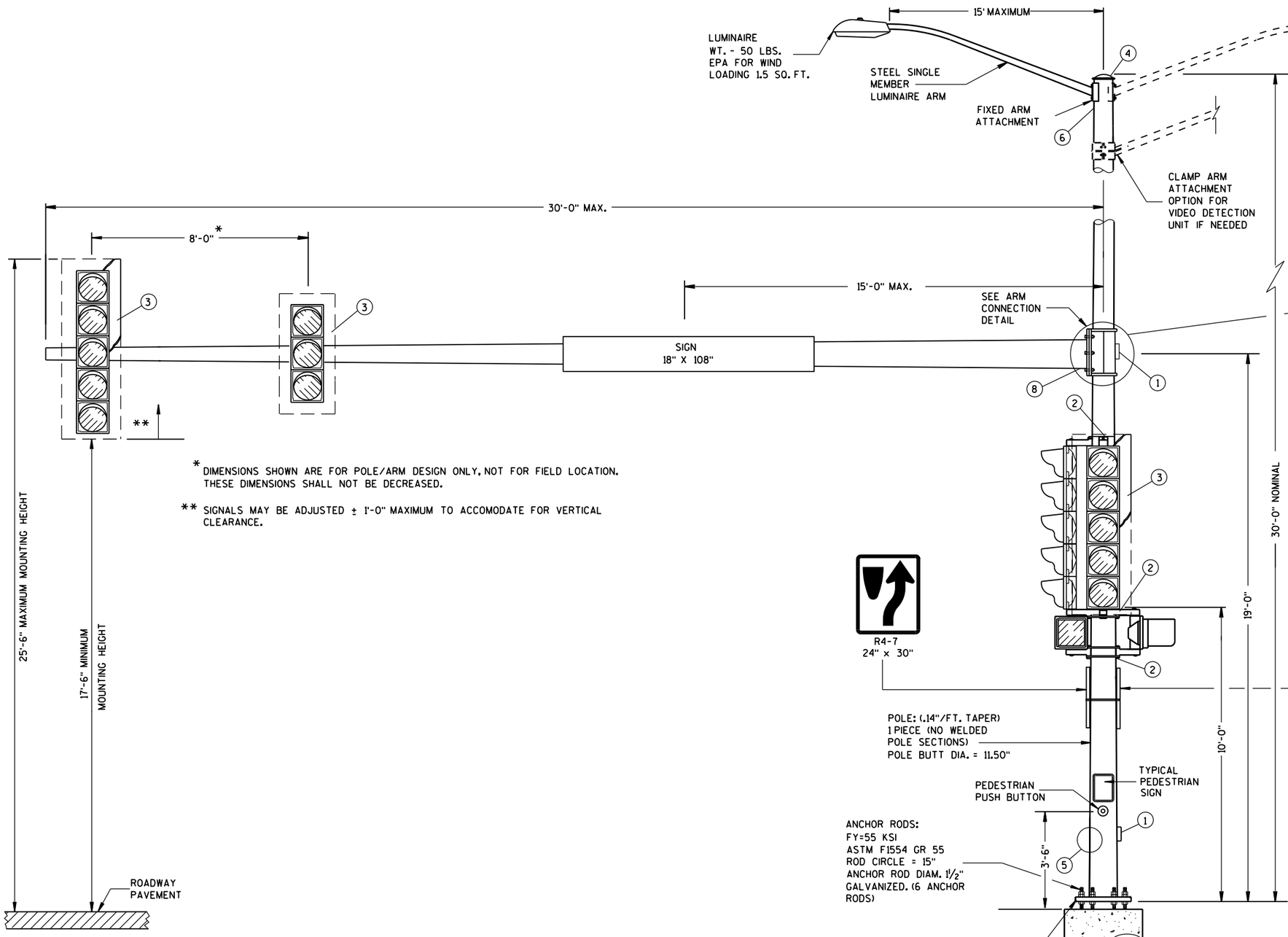
FHWA

6

S.D.D. 9 E 7-5

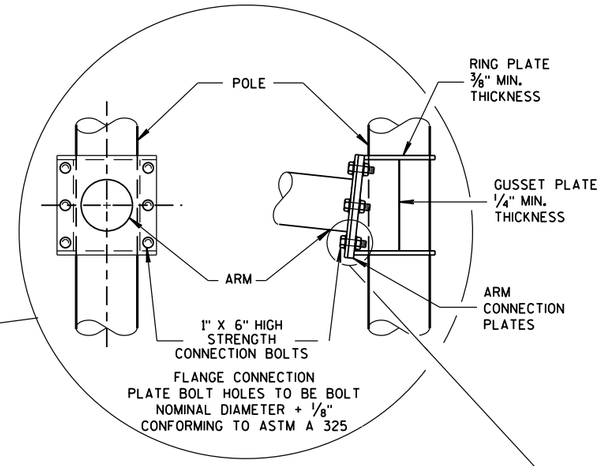
6

S.D.D. 9 E 7-5

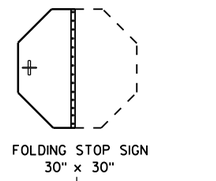


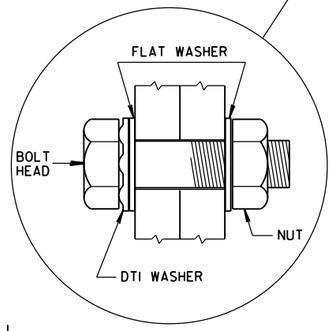
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

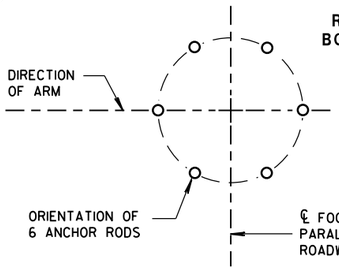


6 BOLT ARM CONNECTION DETAIL





RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

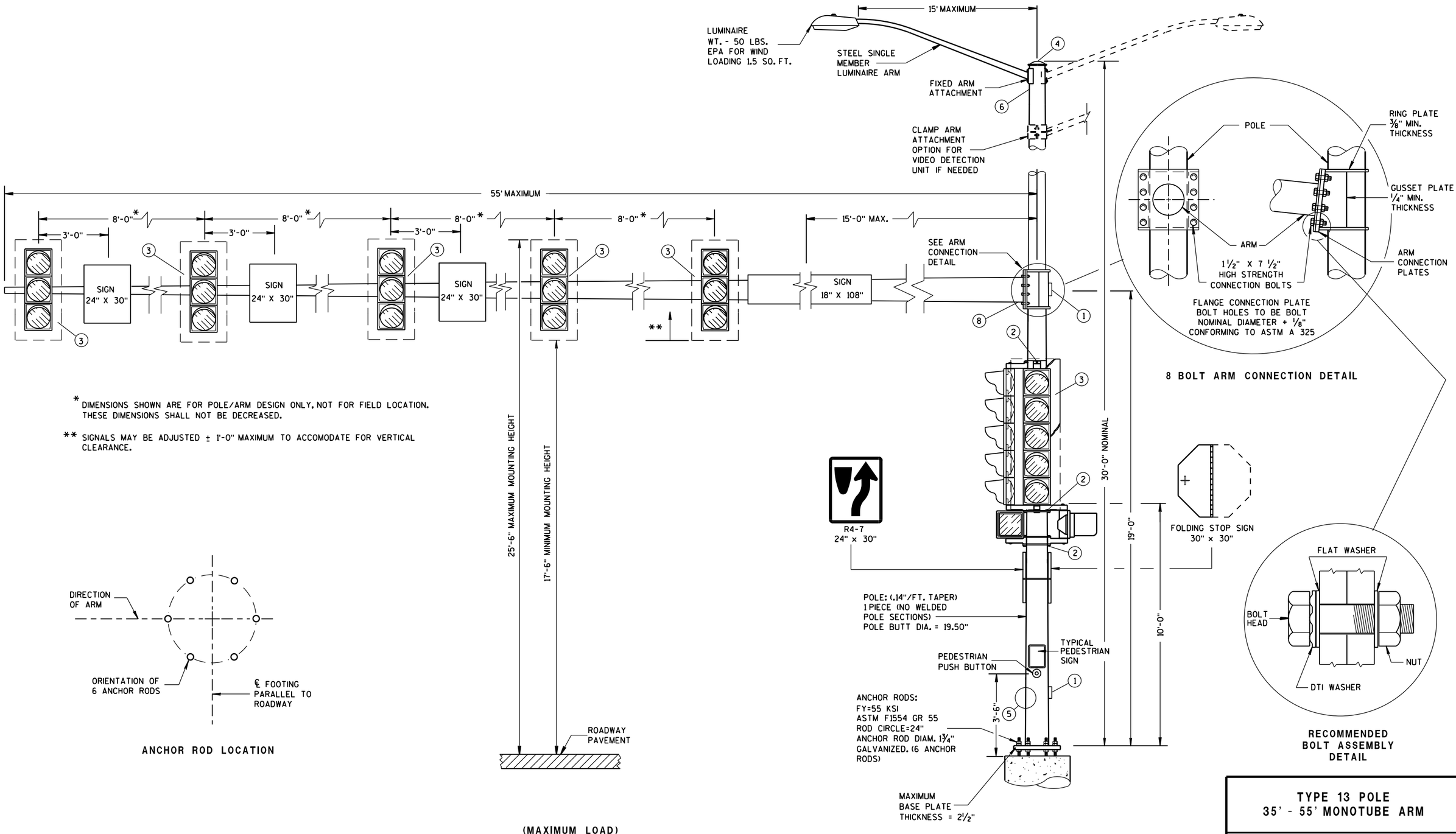
TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-7b



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED
BOLT ASSEMBLY
DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June. 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

6
S.D.D. 9 E 8-7d

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

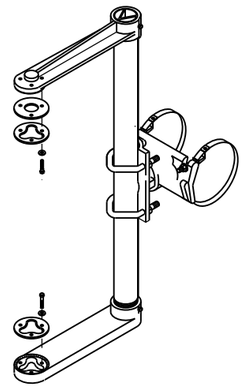
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

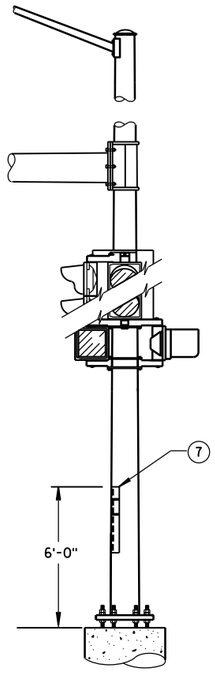
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

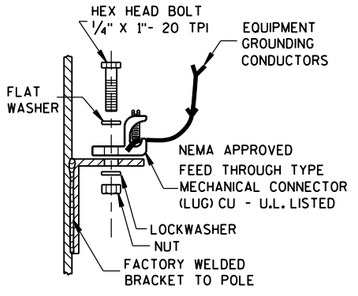


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

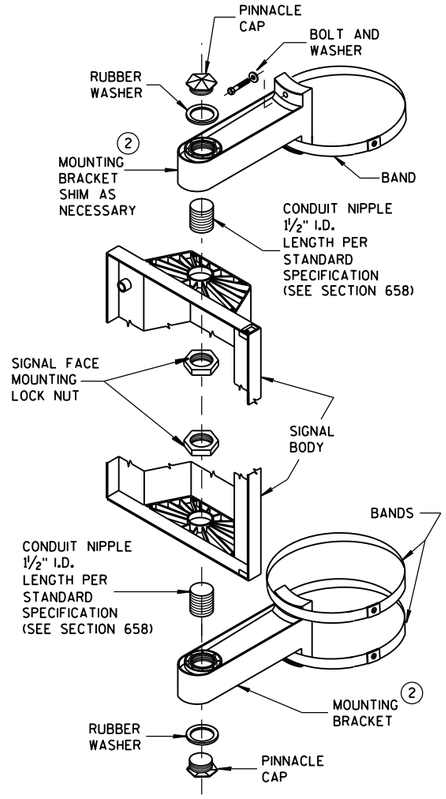


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

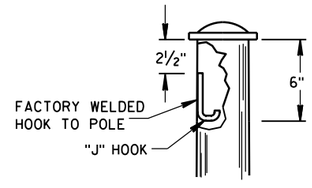


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

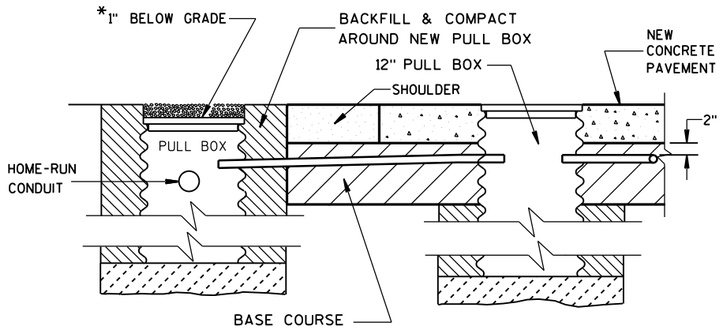
GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-7e



SECTION A-A

NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

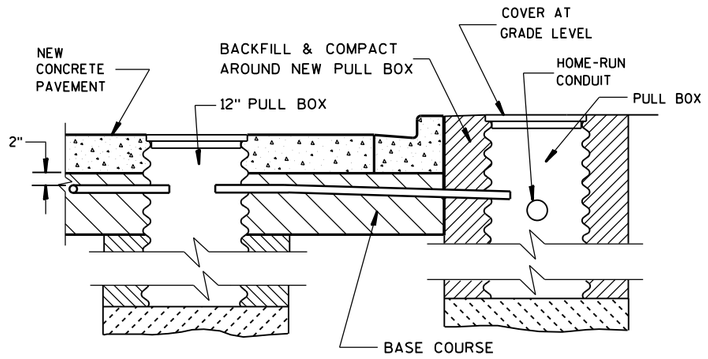
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT, CONDULET AND PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE NEW CONCRETE PAVEMENT IS PLACED.

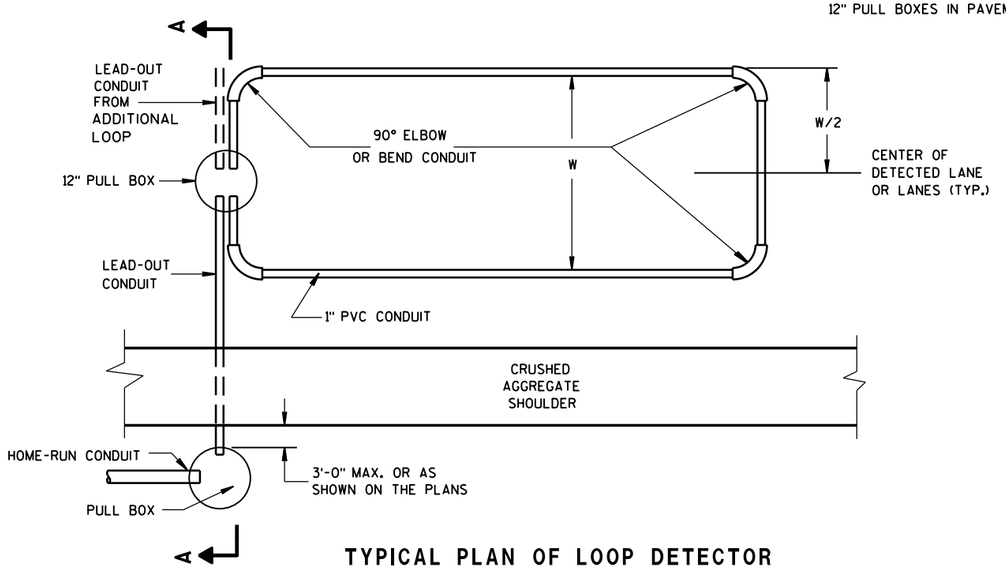
12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



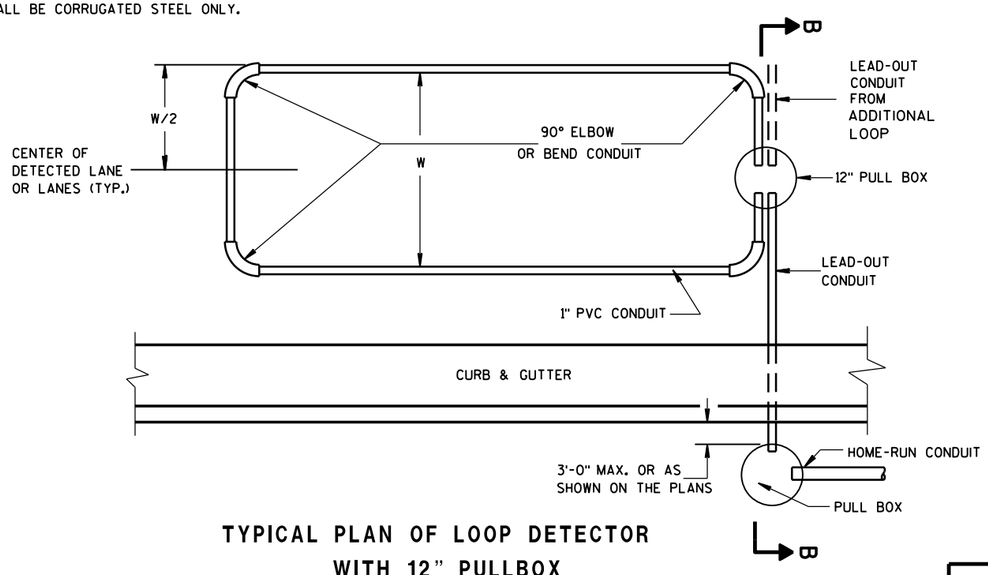
SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

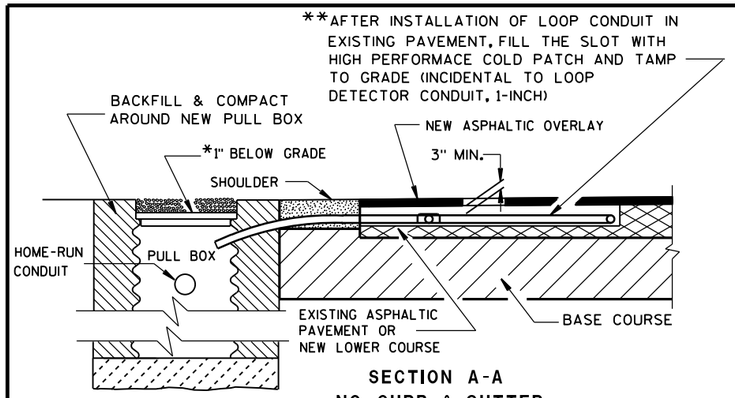
Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 F 9-4

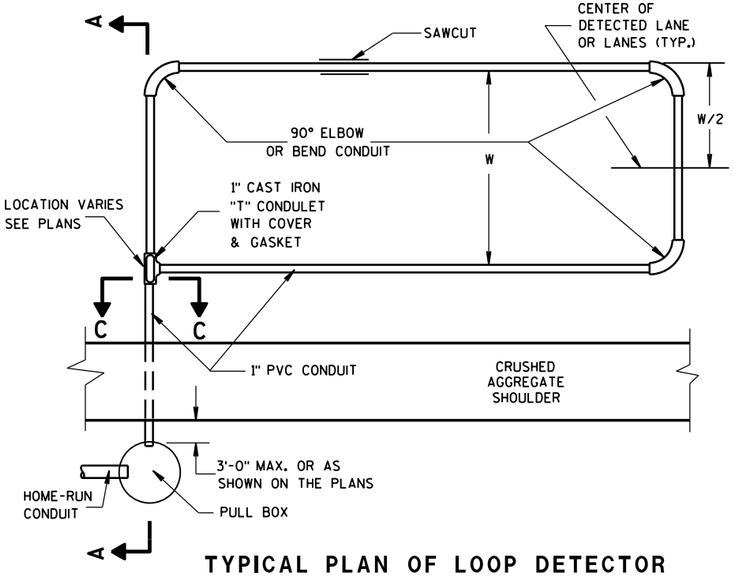


SECTION A-A

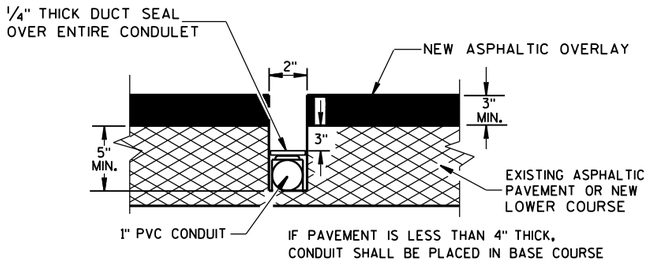
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW

SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY ½ INCH. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

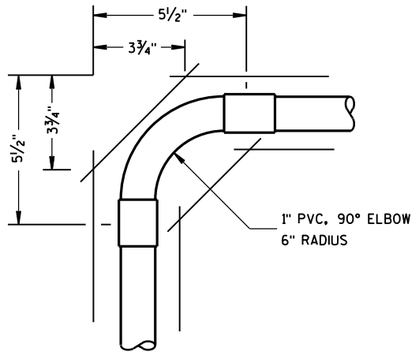
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

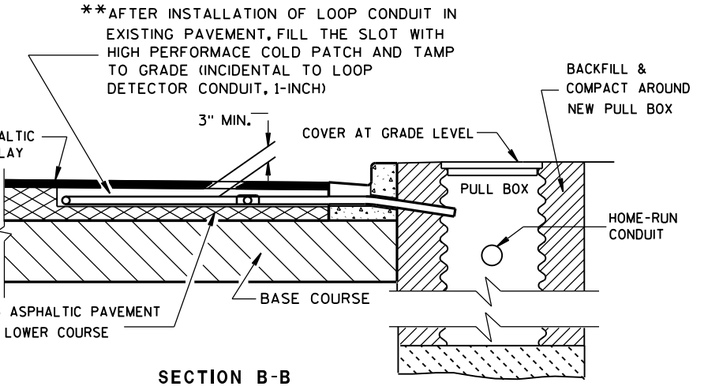
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



TOP VIEW

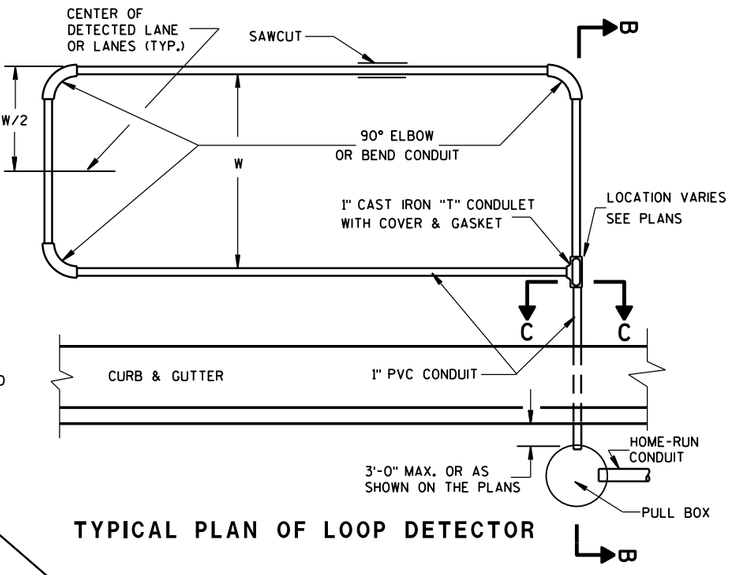
CORNER SAW SLOT DETAIL



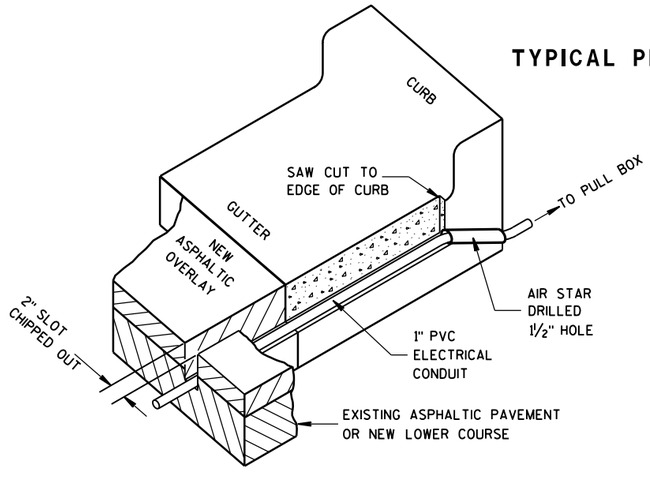
SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR



ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

LOOP DETECTOR INSTALLED IN EXISTING OR NEW ASPHALTIC PAVEMENT WITH NEW ASPHALTIC OVERLAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

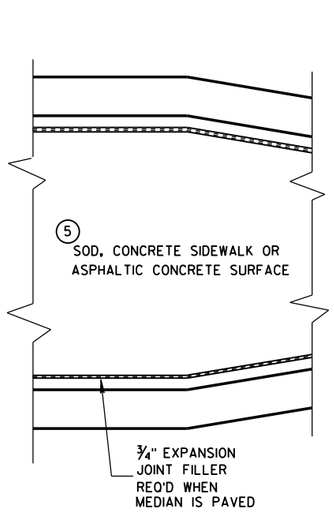
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

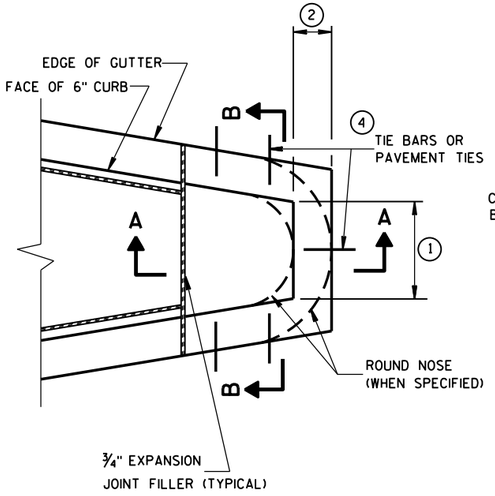
6

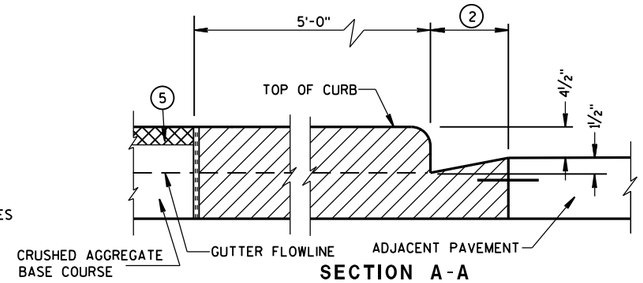
S.D.D. 9 F 10-4

6

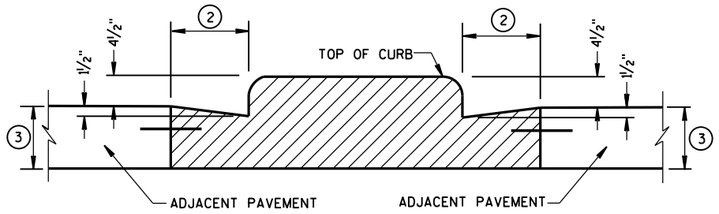
S.D.D. 9 F 10-4







SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

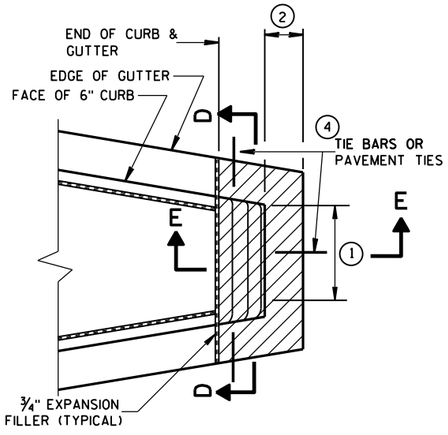
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

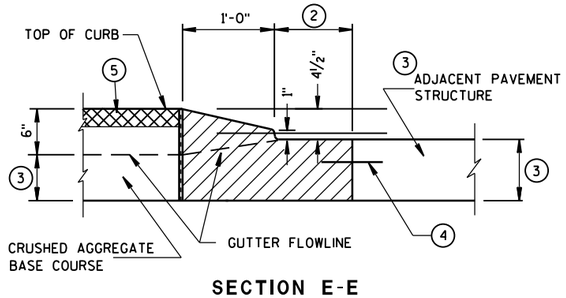
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

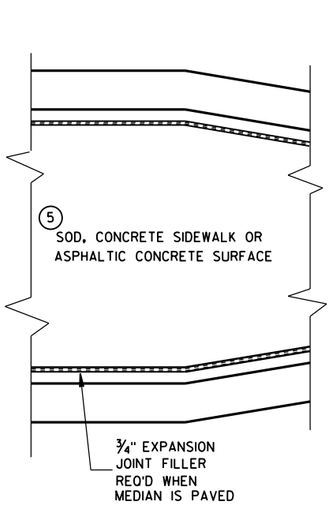
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

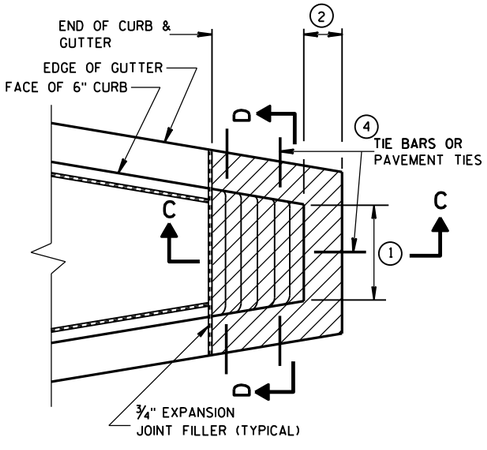


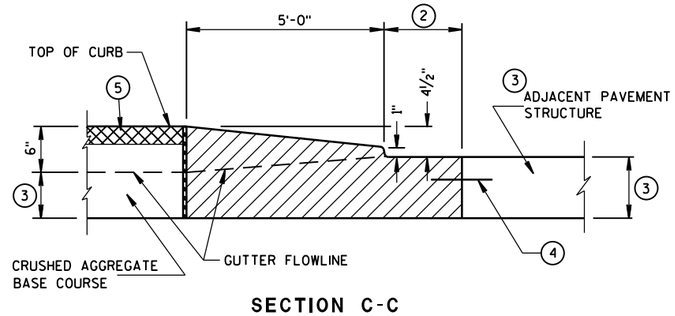


SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

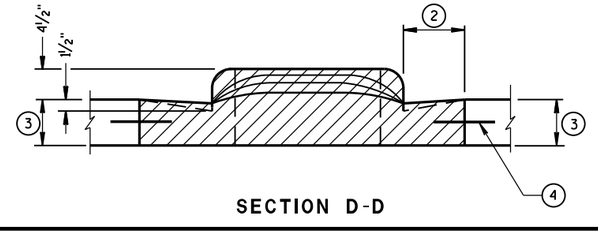






SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

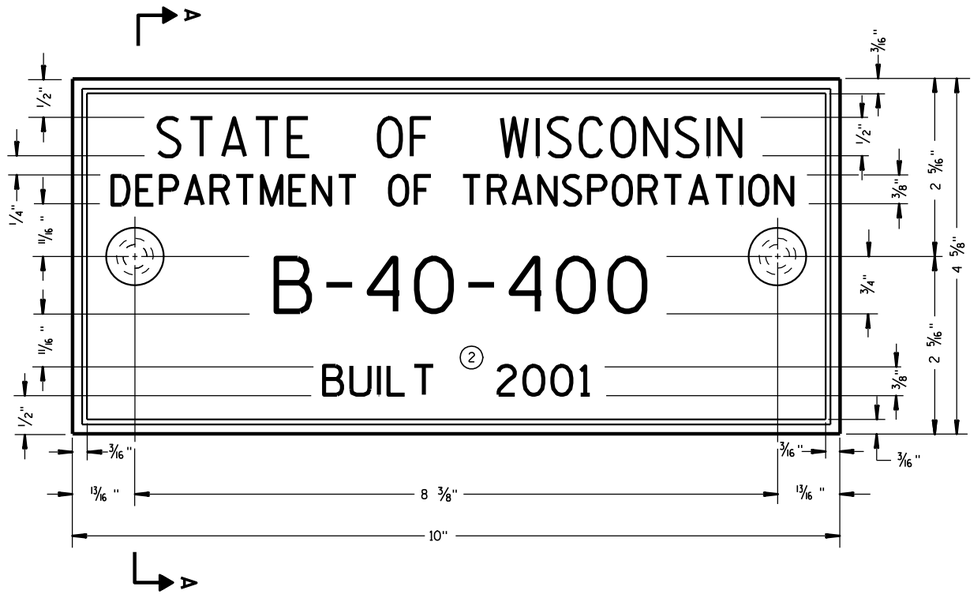
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

6

S.D.D. 11 B 2-2

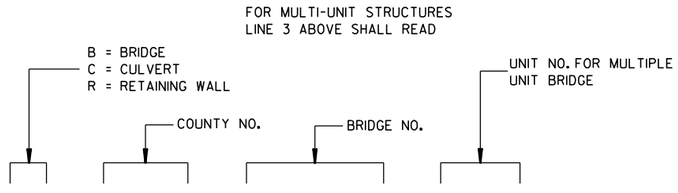
6

S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

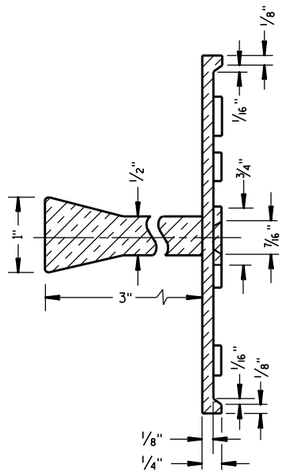
GENERAL NOTES

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

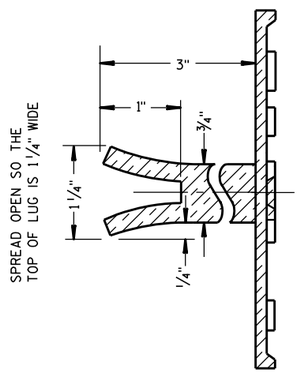
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

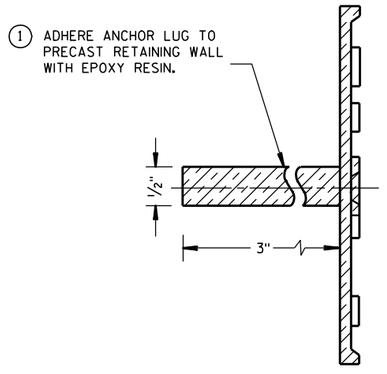
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

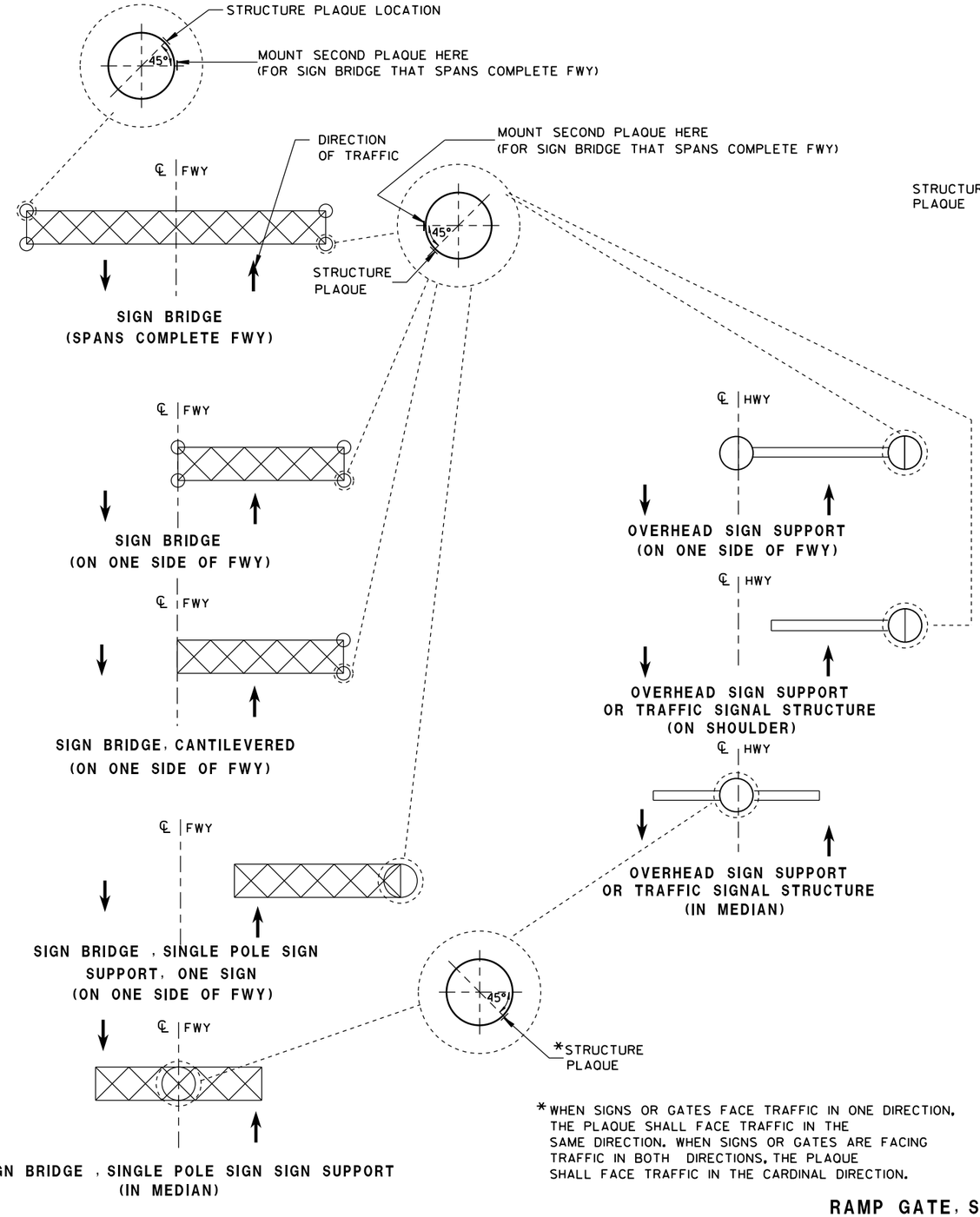
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

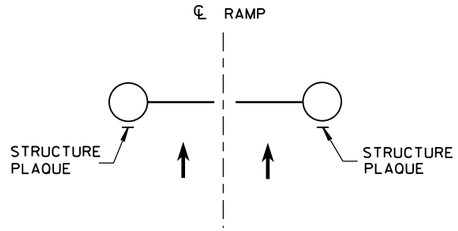
6

S.D.D. 12 A 3-10

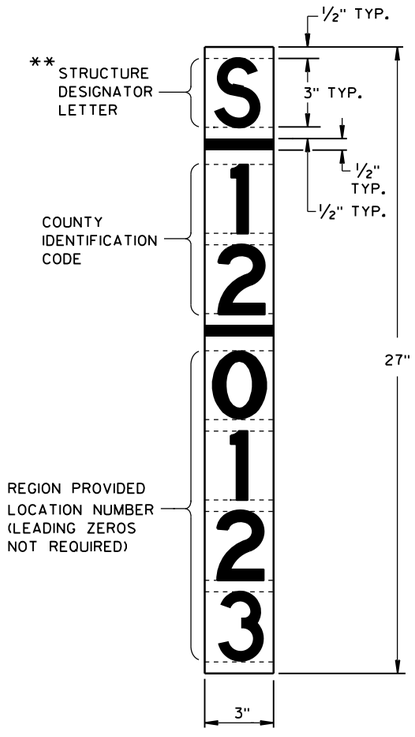


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

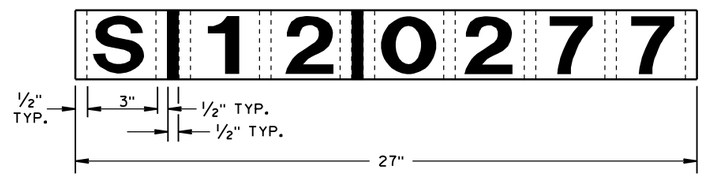
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

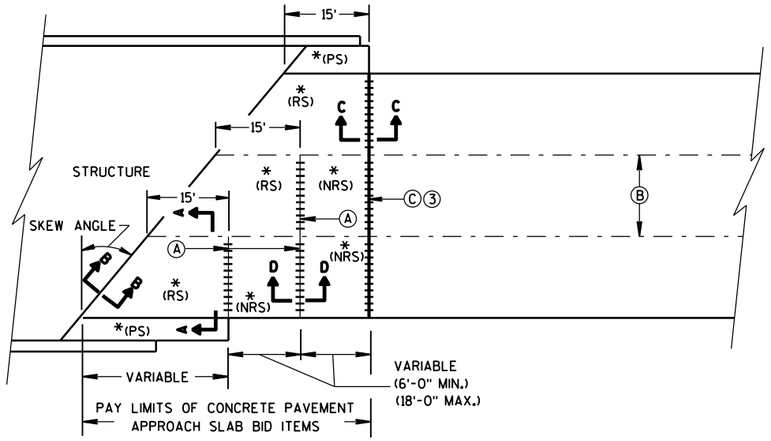
STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

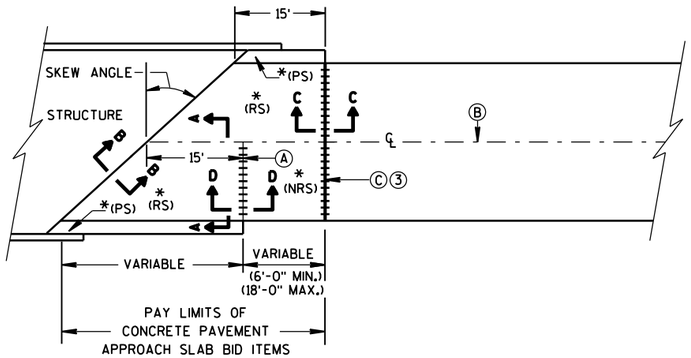
APPROVED
12/4/2012 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

6

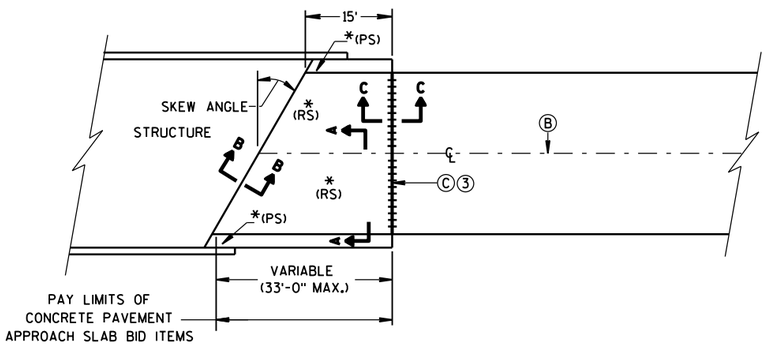
S.D.D. 12 A 4-3



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



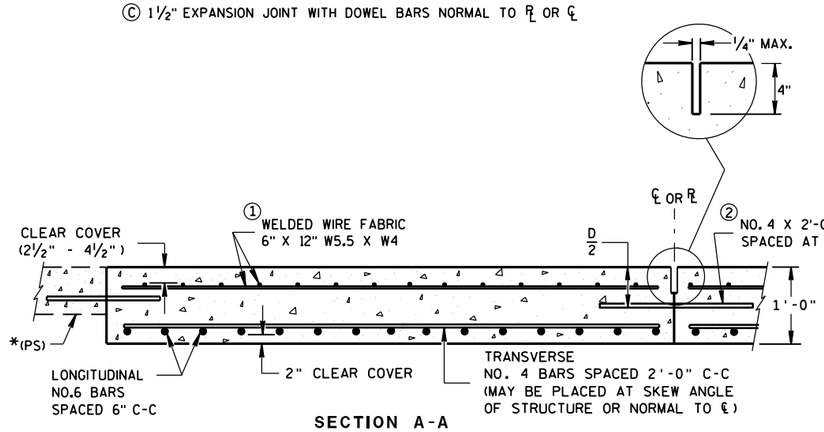
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

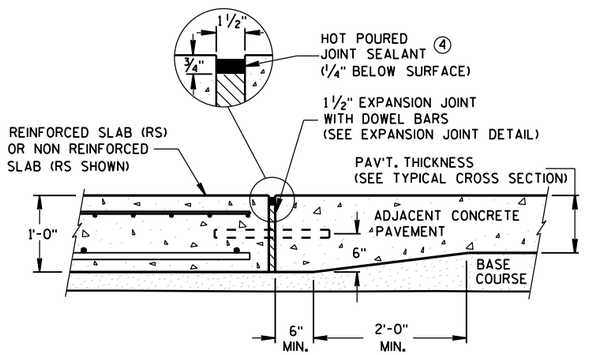
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

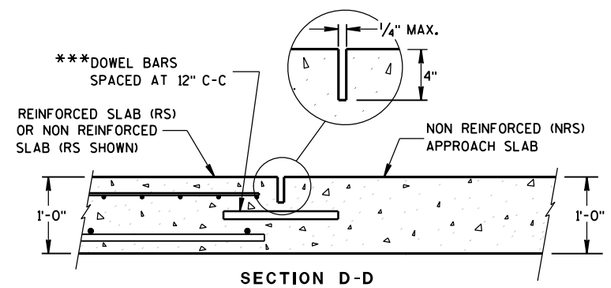
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

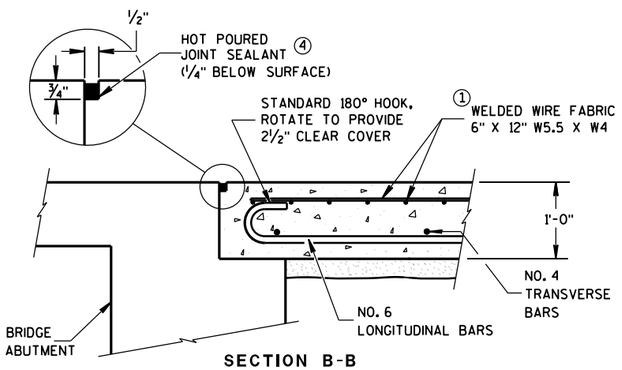
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

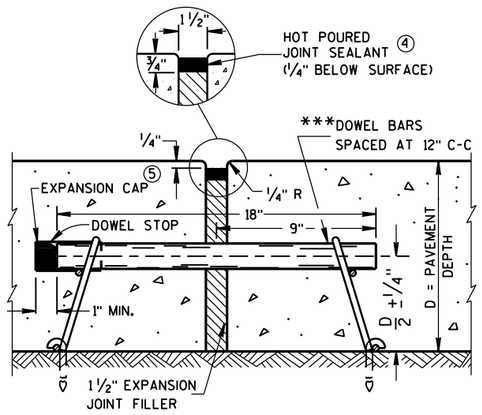
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



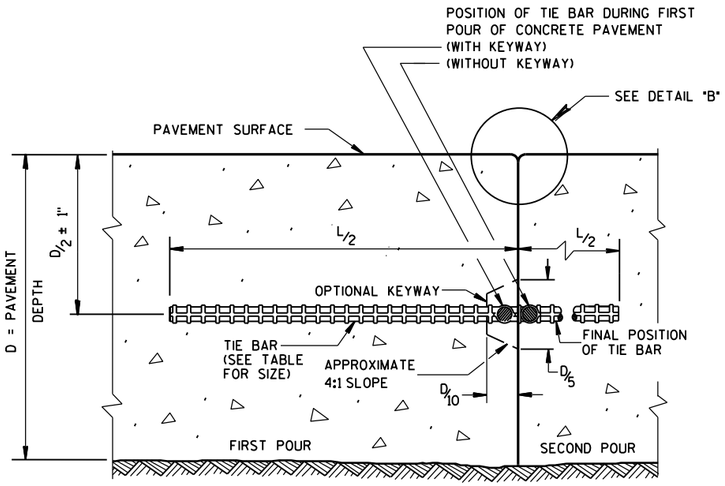
EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

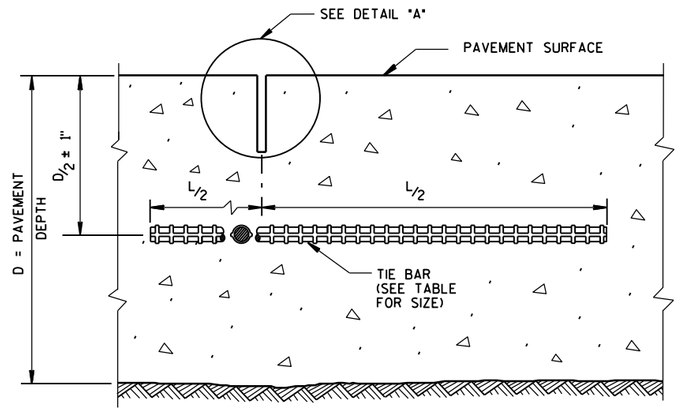
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPE
FHWA

6
S.D.D. 13 B 2-8a



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

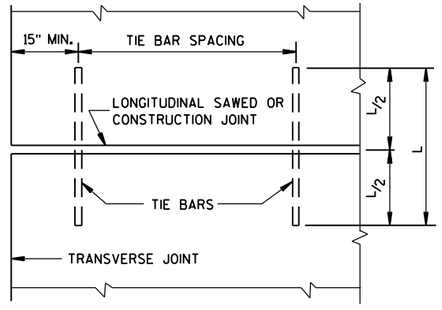
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 C 1-18

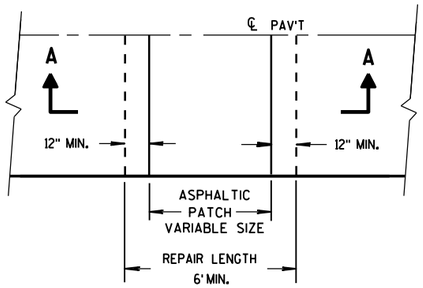
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

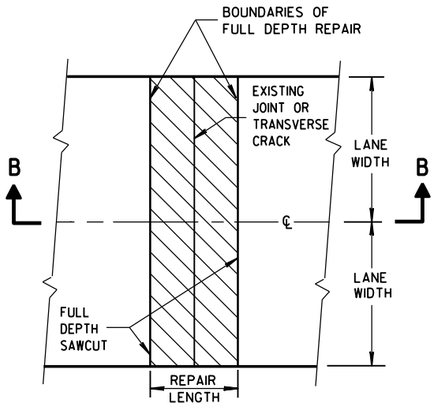
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

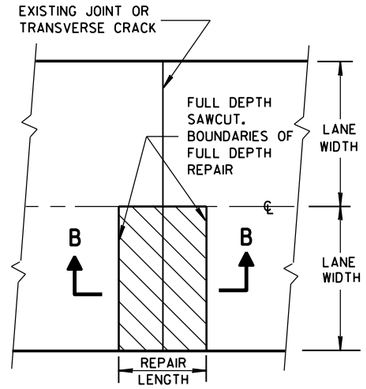
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

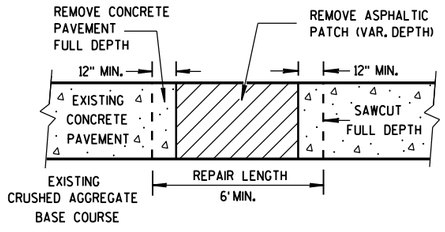


PLAN VIEW
(DOUBLE LANE REPAIR)



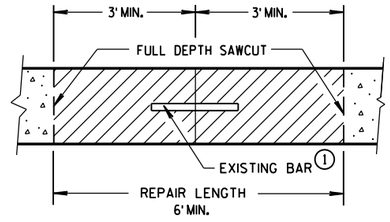
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



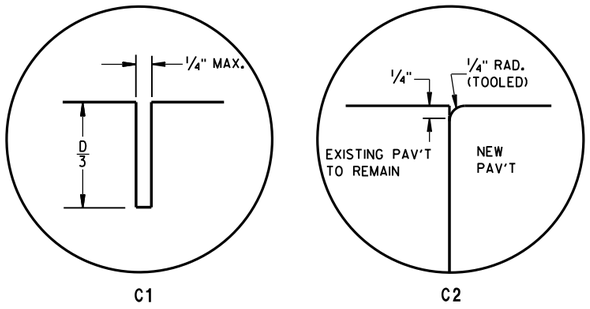
SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 13 C 9-13a



C1 C2

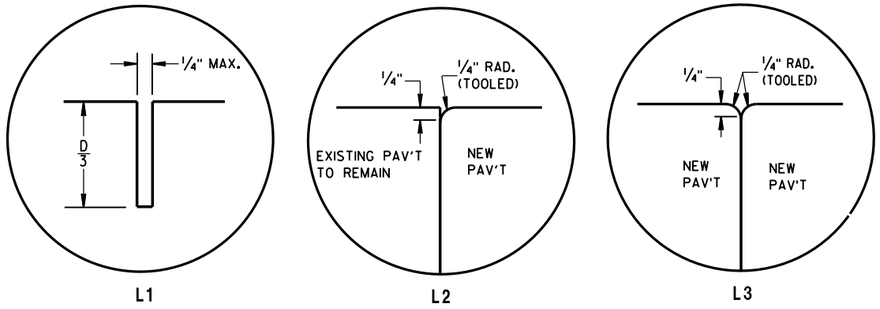
TRANSVERSE JOINTS

TIE BAR TABLE

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

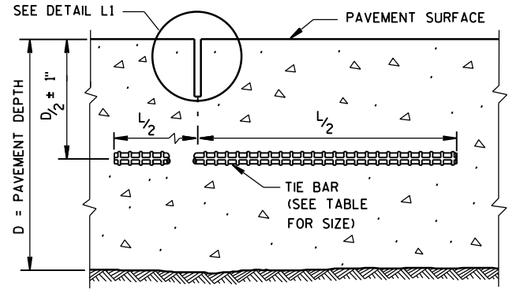
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

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

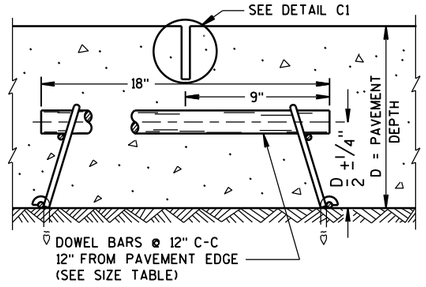
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

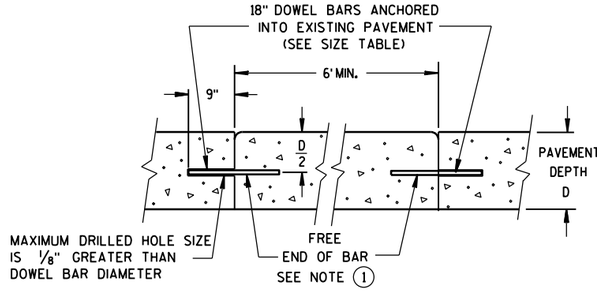
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

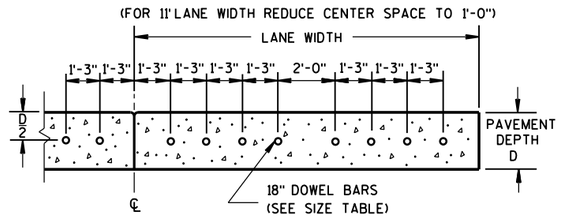


SECTION F-F

CONTRACTION JOINT



SECTION D-D

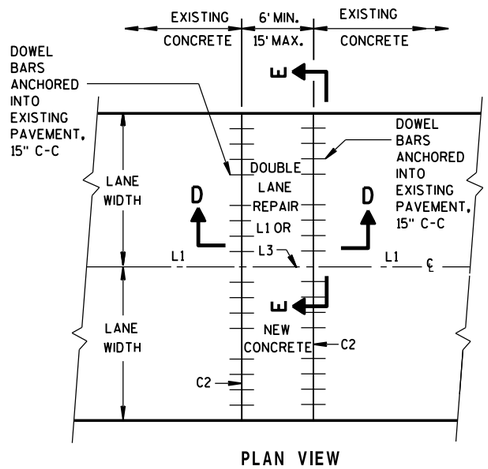


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

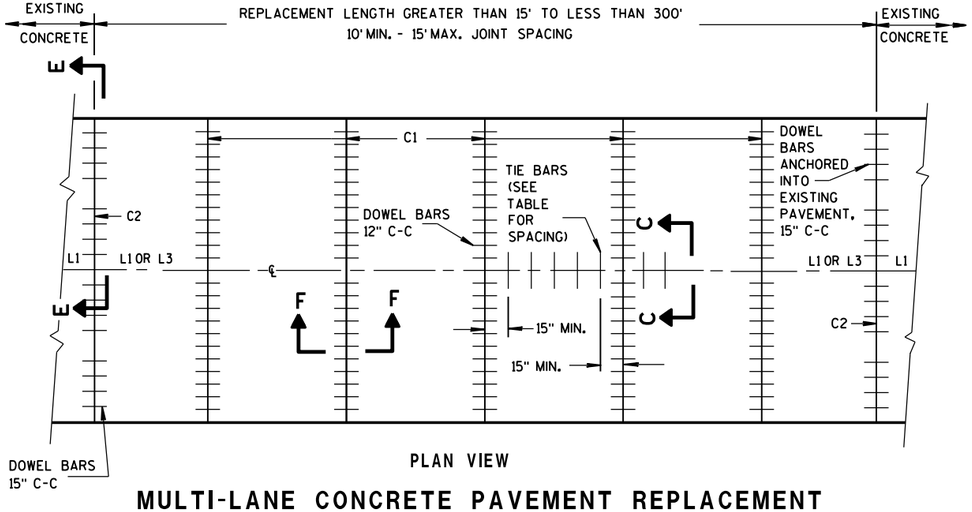
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	12'
7",7 ½"	1"	14'
8",8 ½"	1 ¼"	15'
9",9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

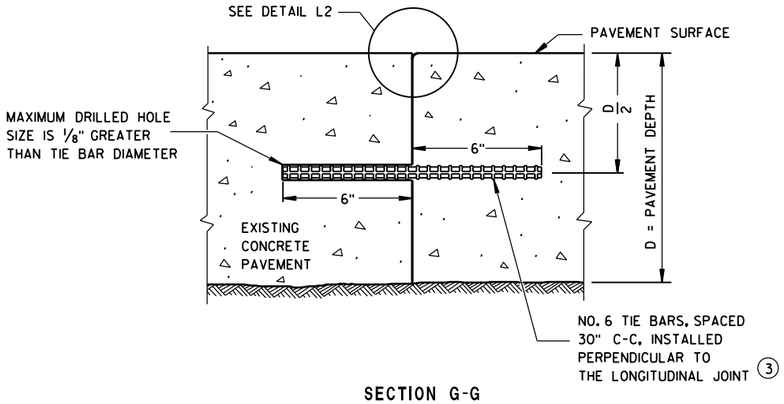
MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 9-13b



SECTION G-G

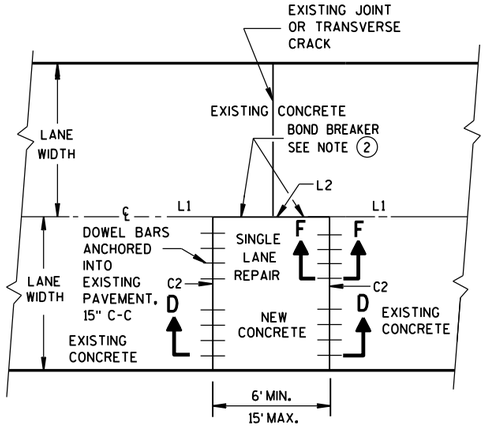
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

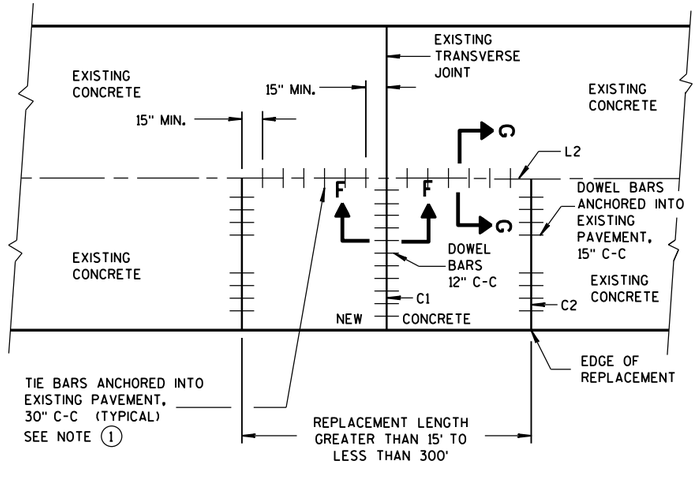
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

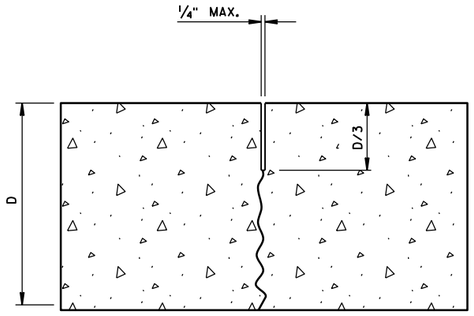
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

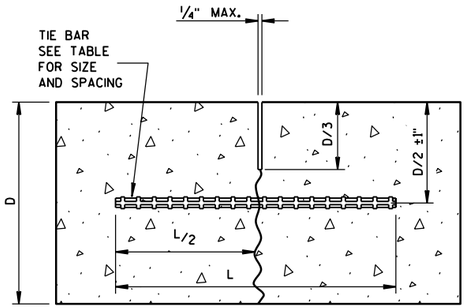
APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 C 9-13c



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

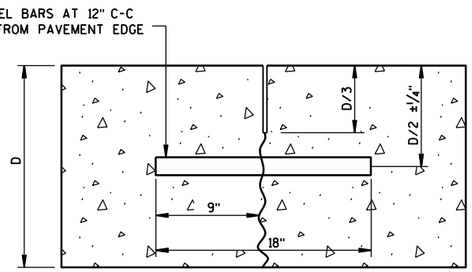
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

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

GENERAL NOTES

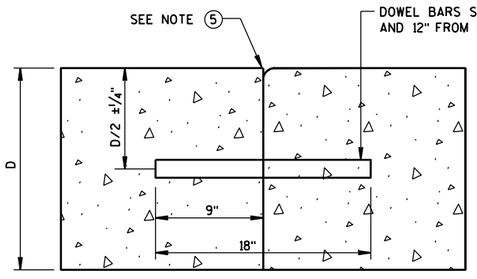
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



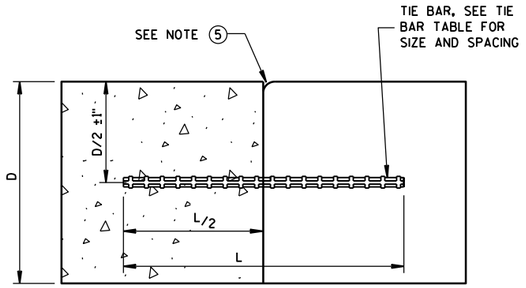
DOWELED-TRANSVERSE

CONTRACTION JOINTS

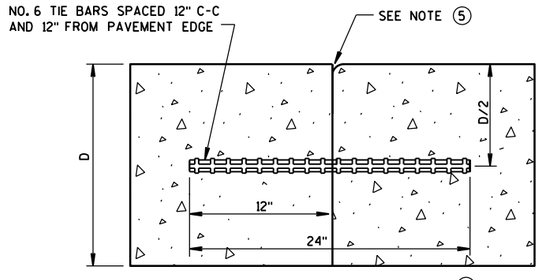
SEE NOTE (2)



DOWELED TRANSVERSE (3)

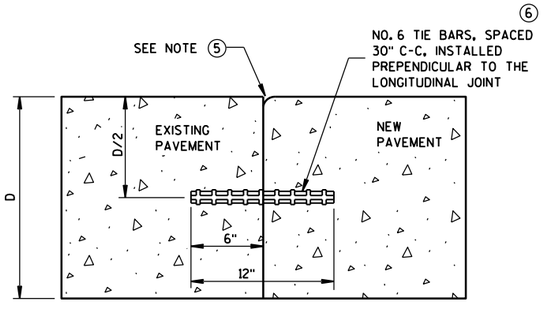


TIED LONGITUDINAL



TIED TRANSVERSE (3)

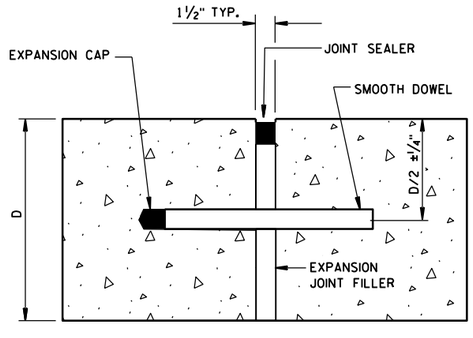
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

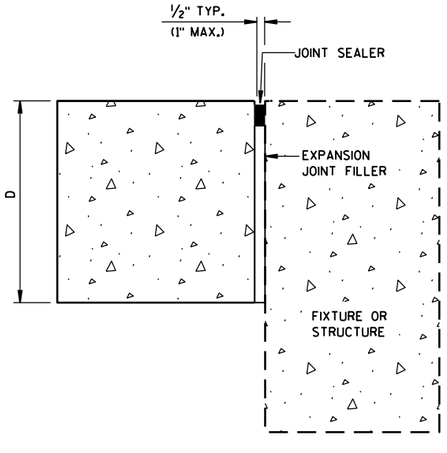
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

6

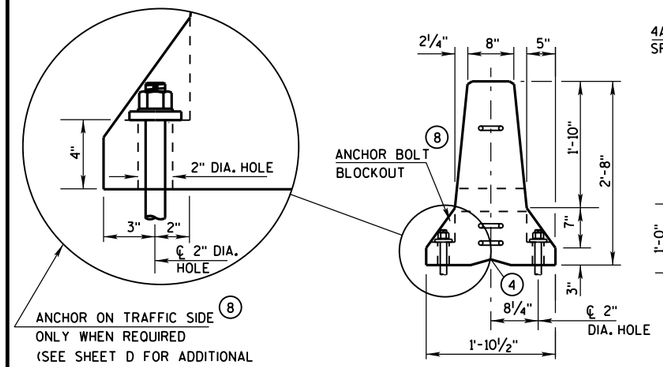
6

S.D.D. 13 C 18-3c

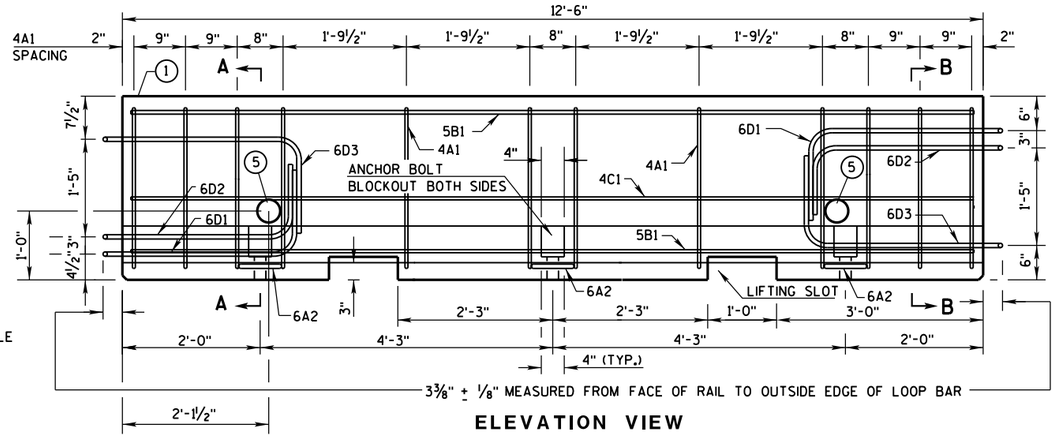
S.D.D. 13 C 18-3c

CONCRETE PAVEMENT
JOINT TYPES

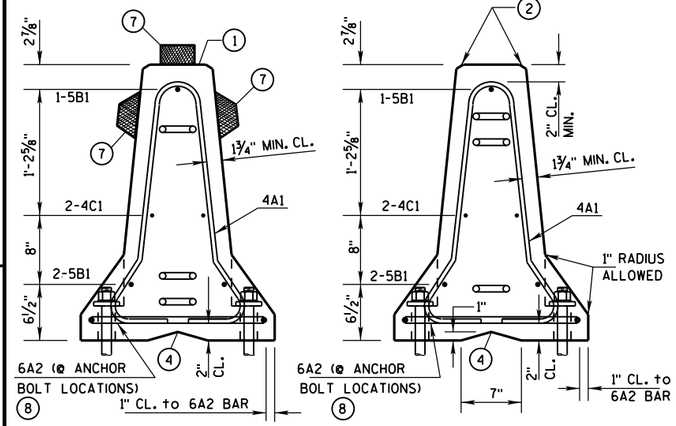
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



END VIEW

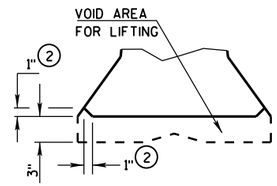


ELEVATION VIEW

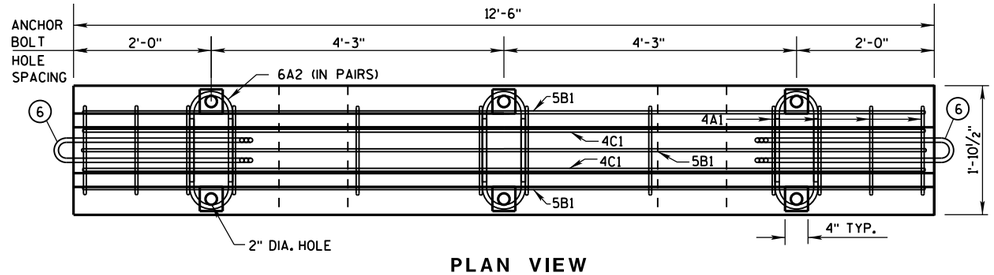


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

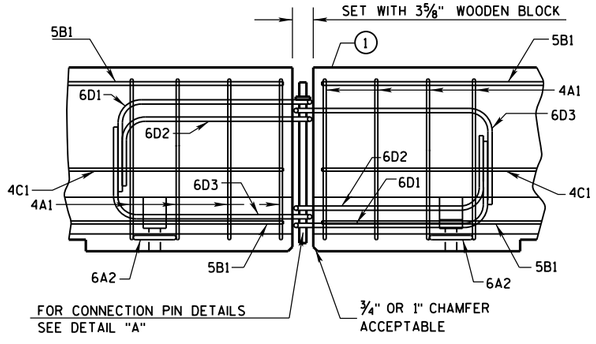


DETAIL "B"
LIFTING SLOT DETAIL

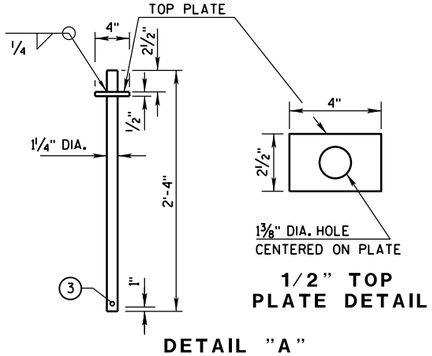


PLAN VIEW

DETAILS OF BARRIER SECTION

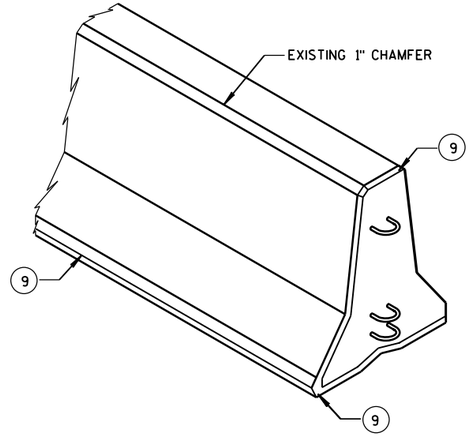


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

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

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

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

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

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

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

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

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

(2) 1" CHAMFER TO PREVENT SPALLING.

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

(4) "V" NOTCH IS OPTIONAL.

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

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

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

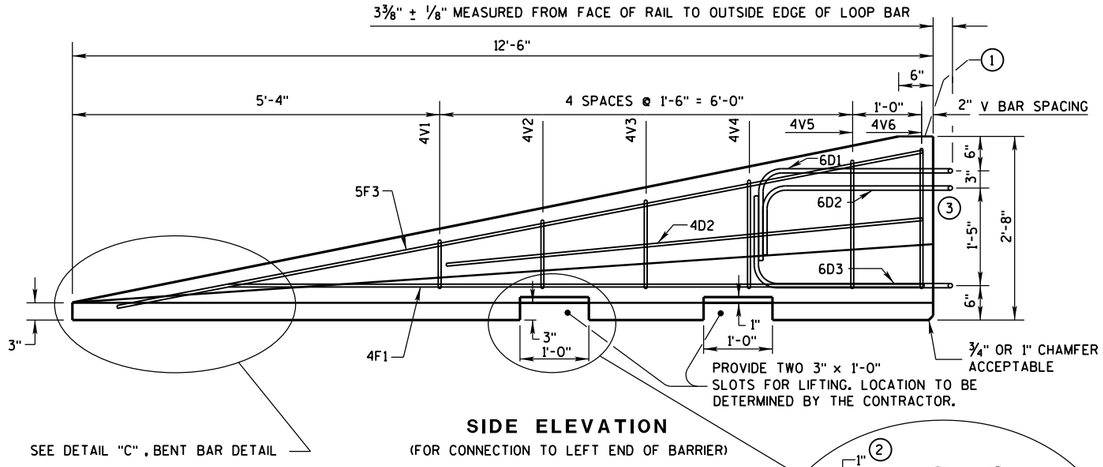
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

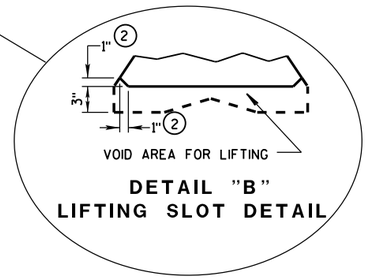
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

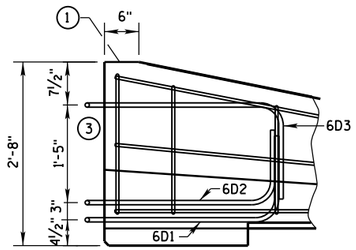
6
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



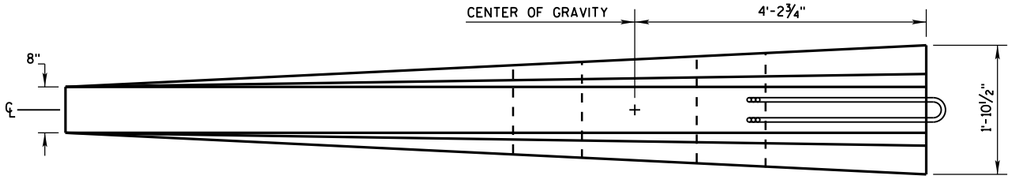
DETAIL "B"
LIFTING SLOT DETAIL



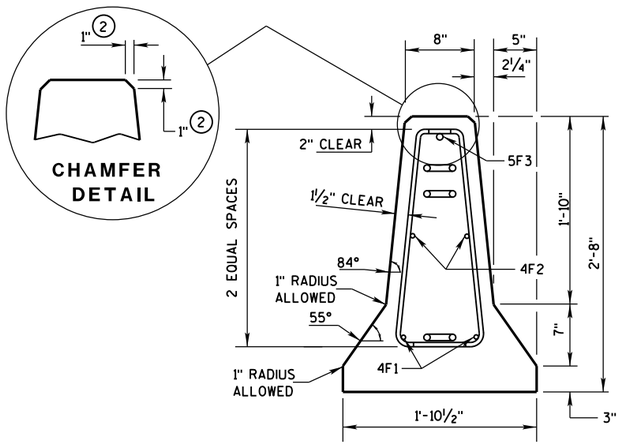
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

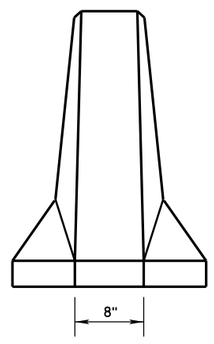
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



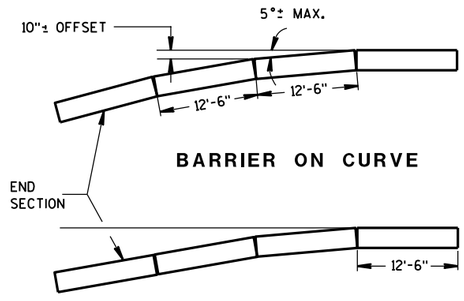
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

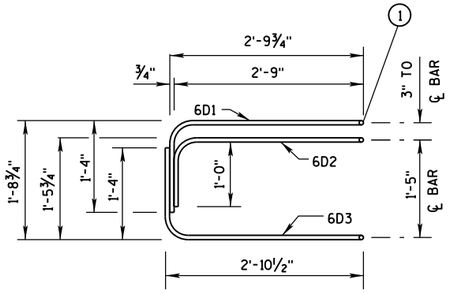
6

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

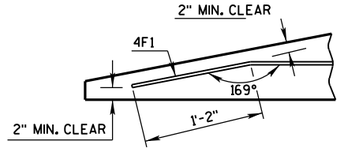
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

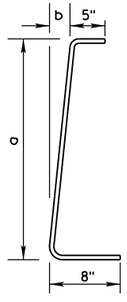
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



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

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

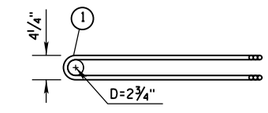
GENERAL NOTES

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

BARRIER SECTION BILL OF MATERIALS

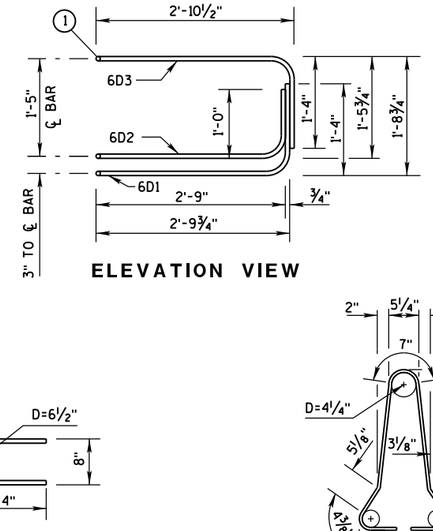
(PER 12'-6" BARRIER SECTION)

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

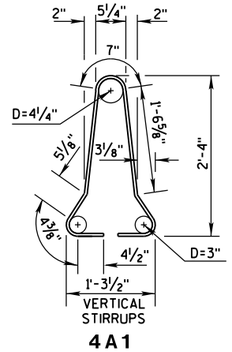


PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)

6A2



ELEVATION VIEW



4A1

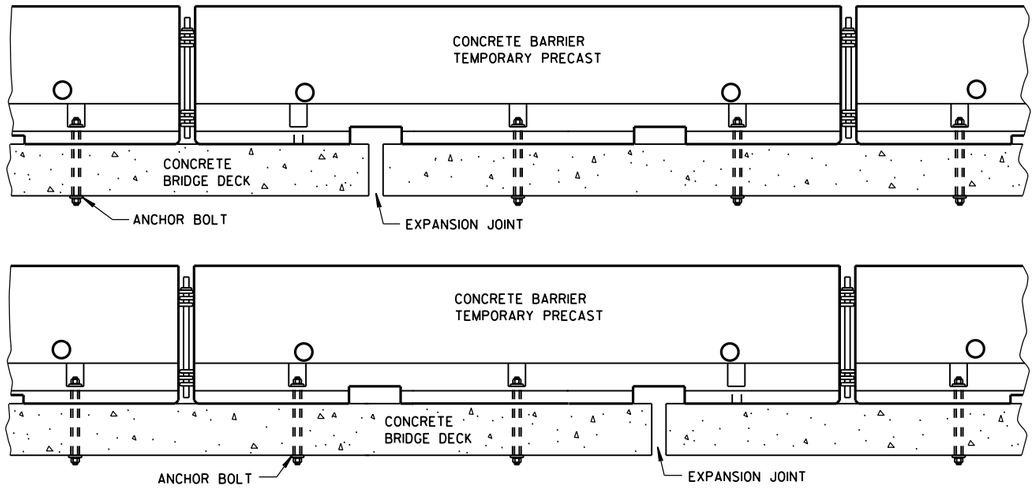
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

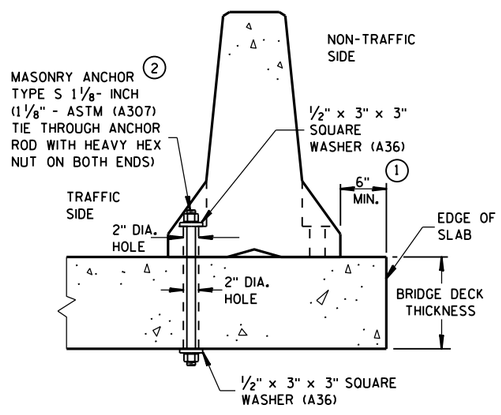
6

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



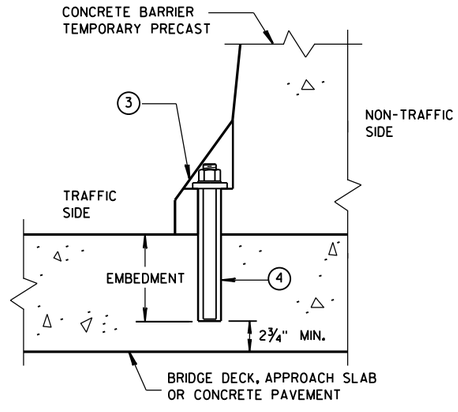
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

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



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT ②

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

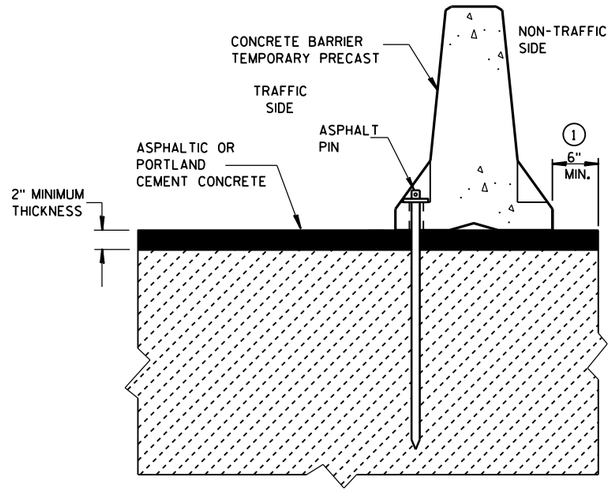
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

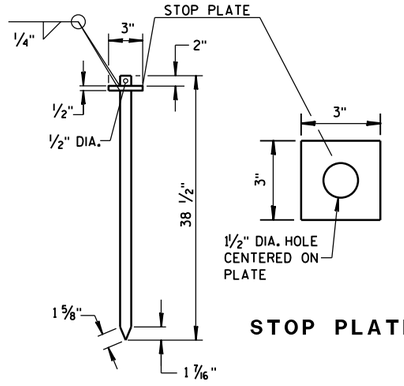
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

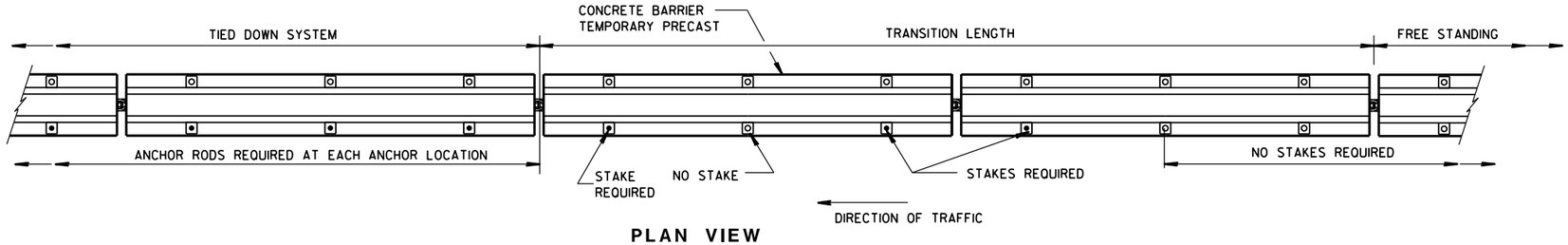
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

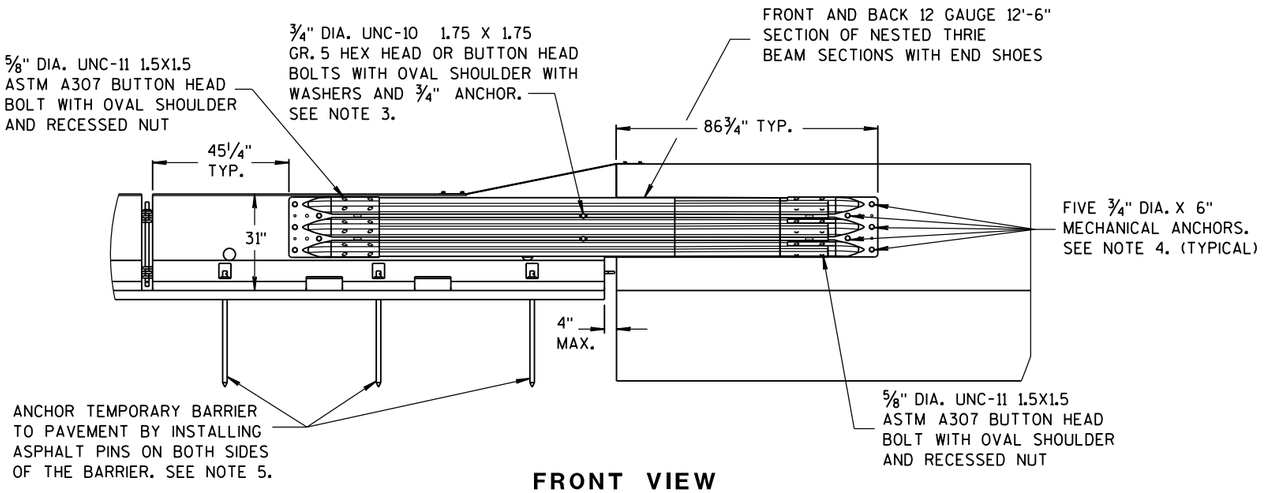
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

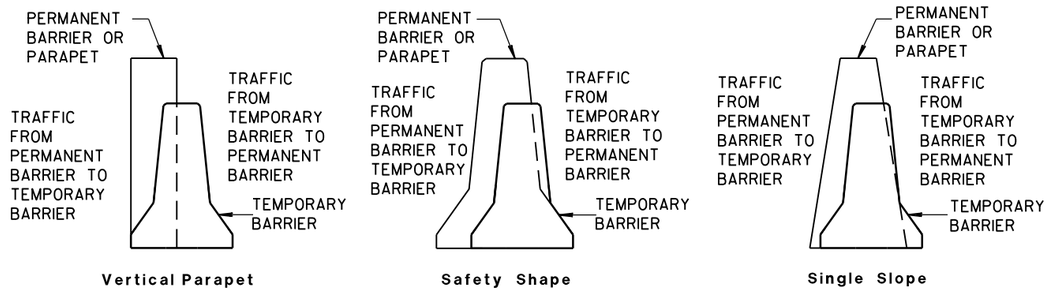
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



FRONT VIEW



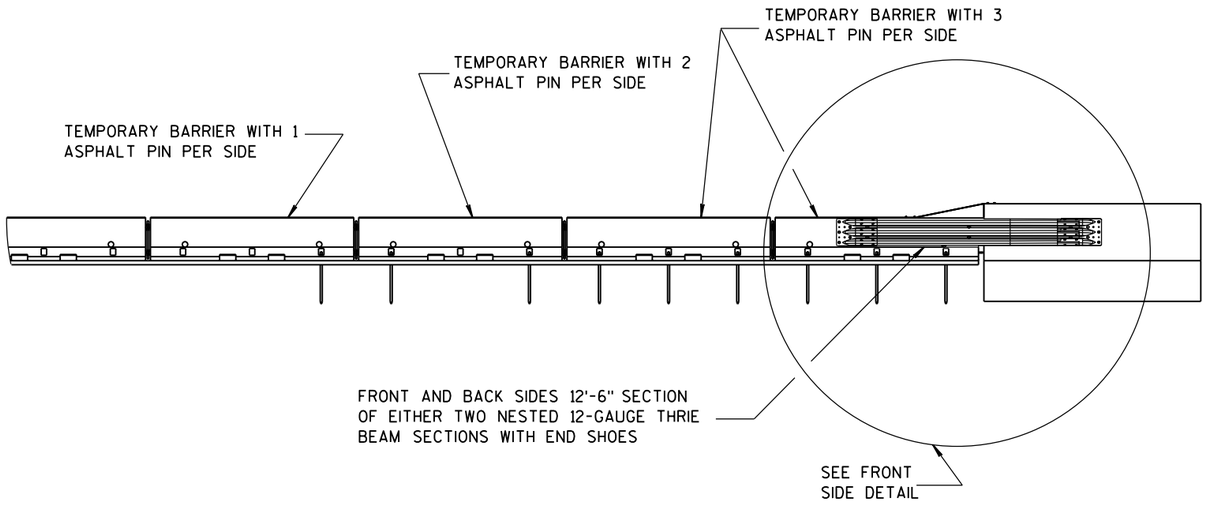
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

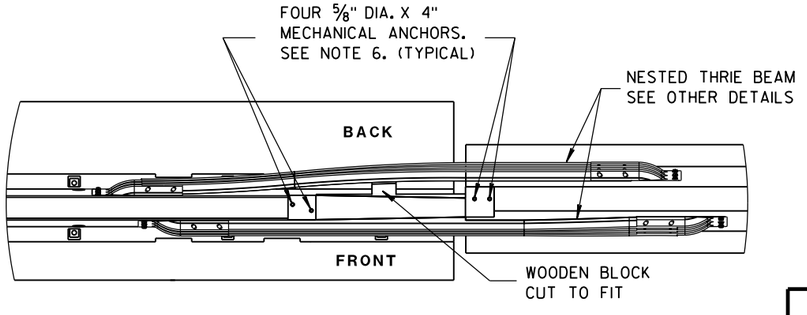
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

BACK VIEW



FRONT VIEW



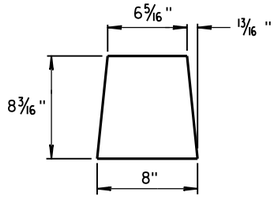
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

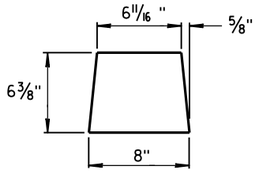
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

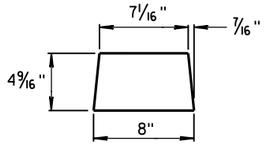
6
S.D.D. 14 B 7-14e



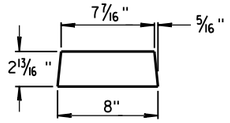
GUSSET 1



GUSSET 2

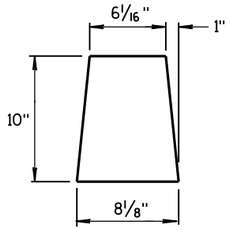


GUSSET 3

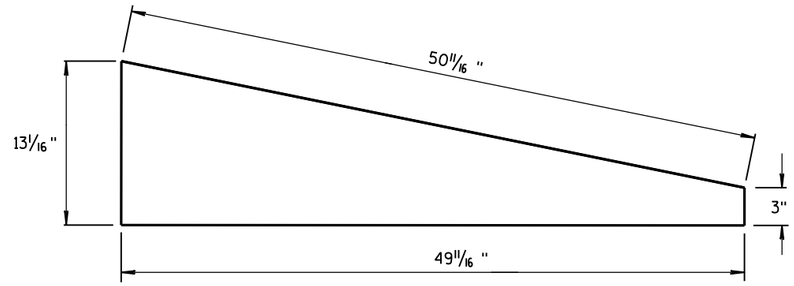


GUSSET 4

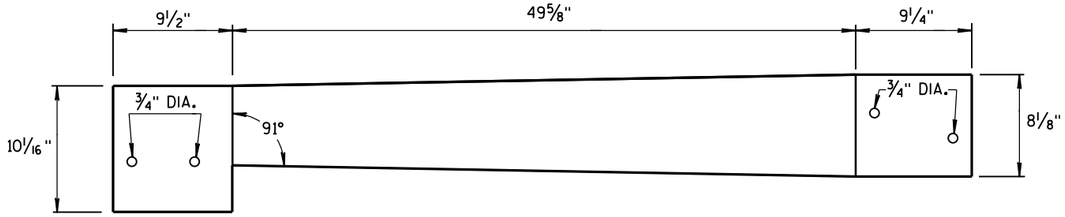
GUSSETS

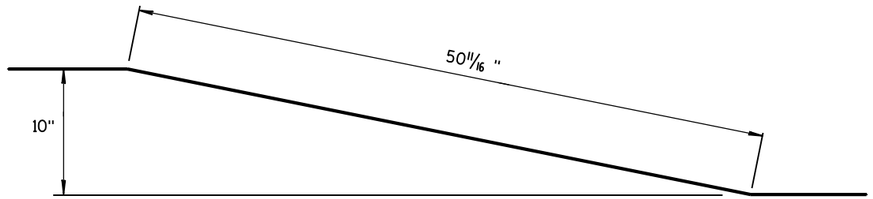


END PLATE



SIDE PLATE

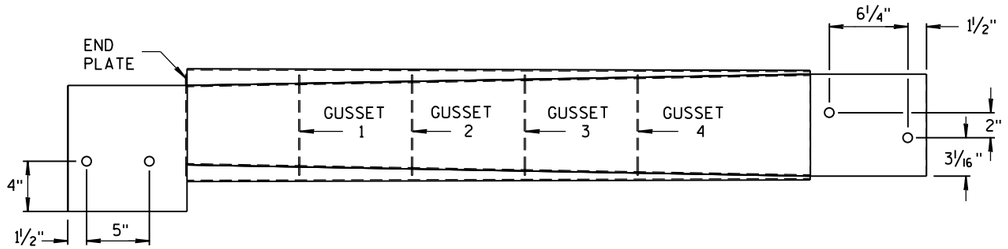


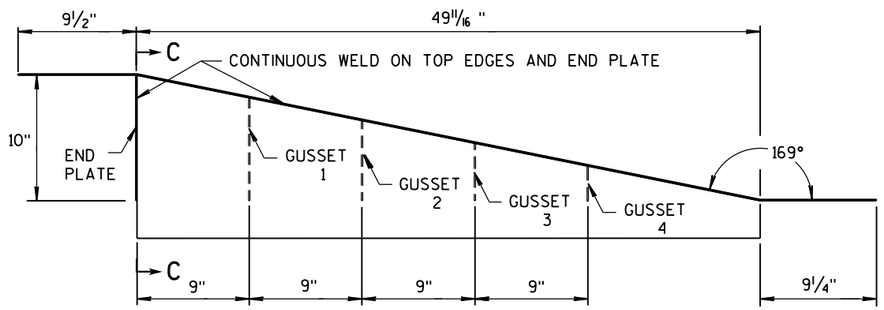


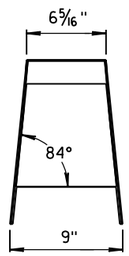
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

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







SECTION C-C

NOTES

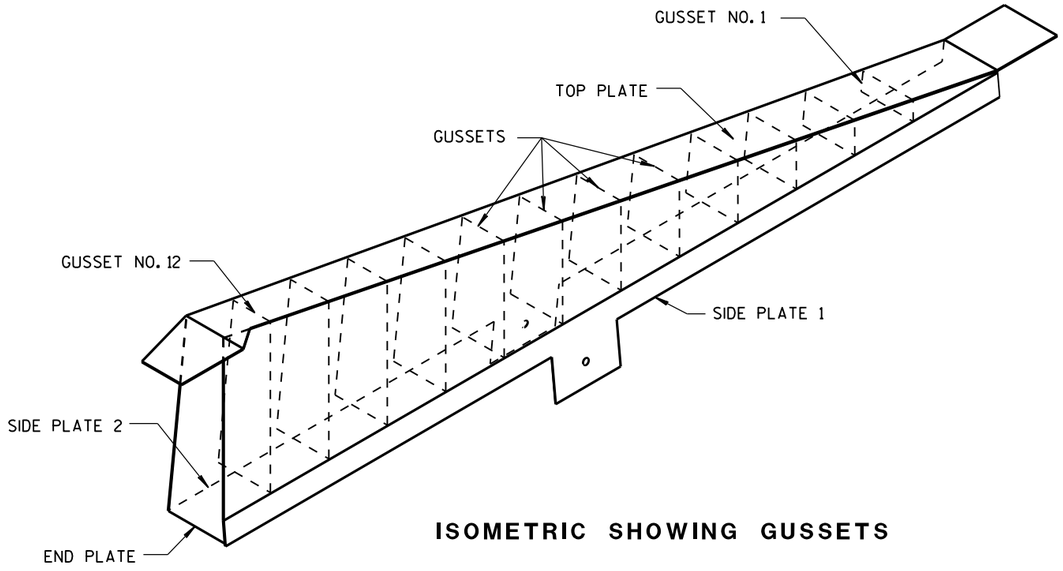
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

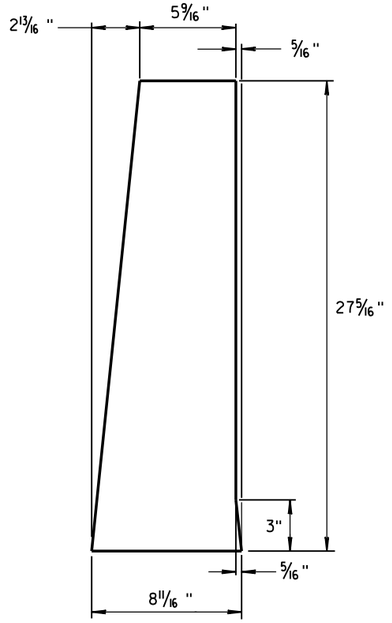
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14f

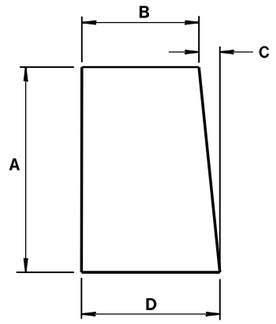


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



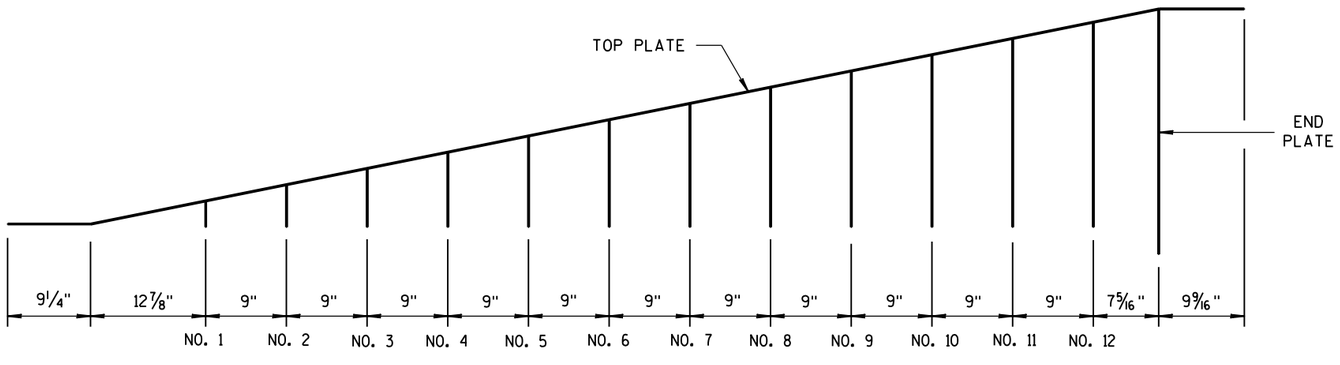
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

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

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

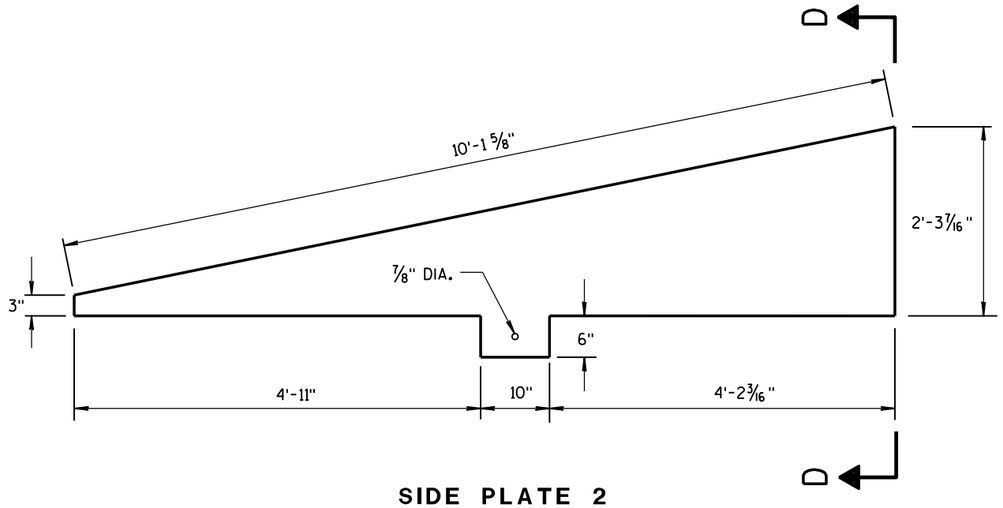
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

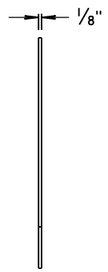
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

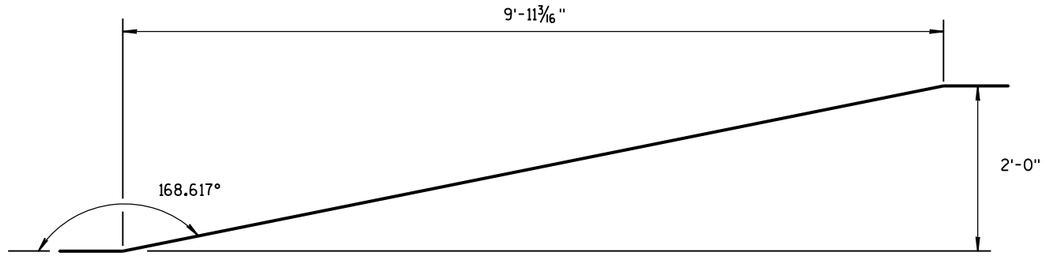
S.D.D. 14 B 7-14g



SIDE PLATE 2

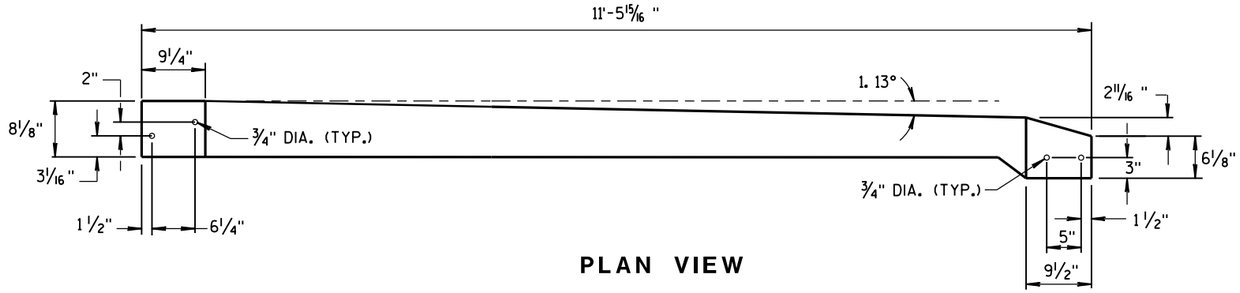


END VIEW



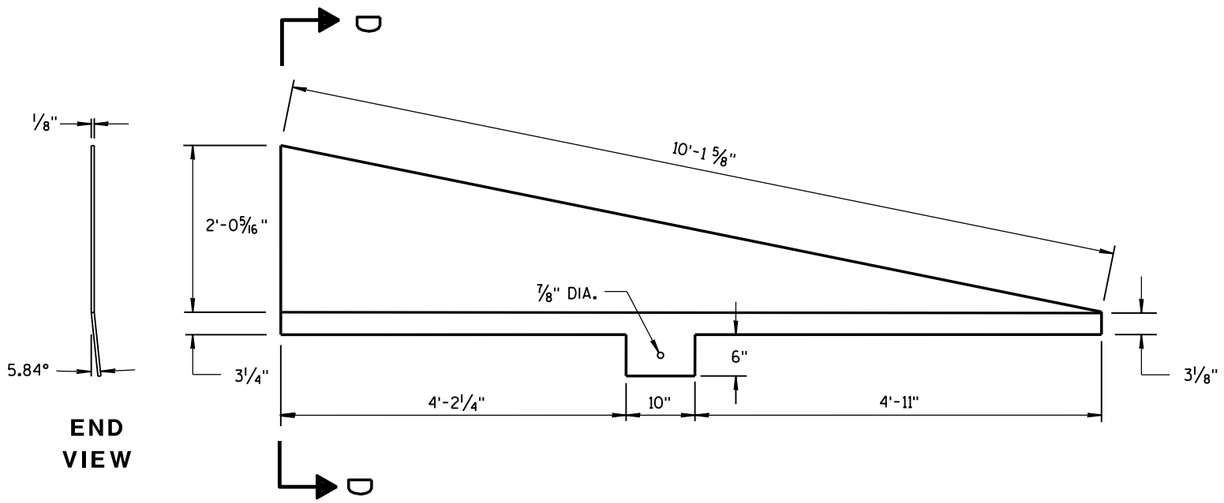
SIDE VIEW

TOP PLATE



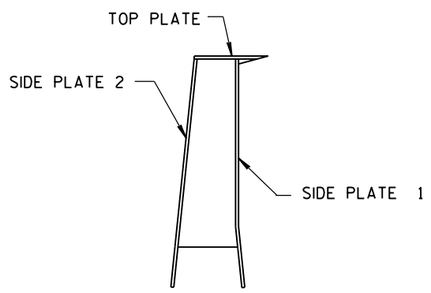
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

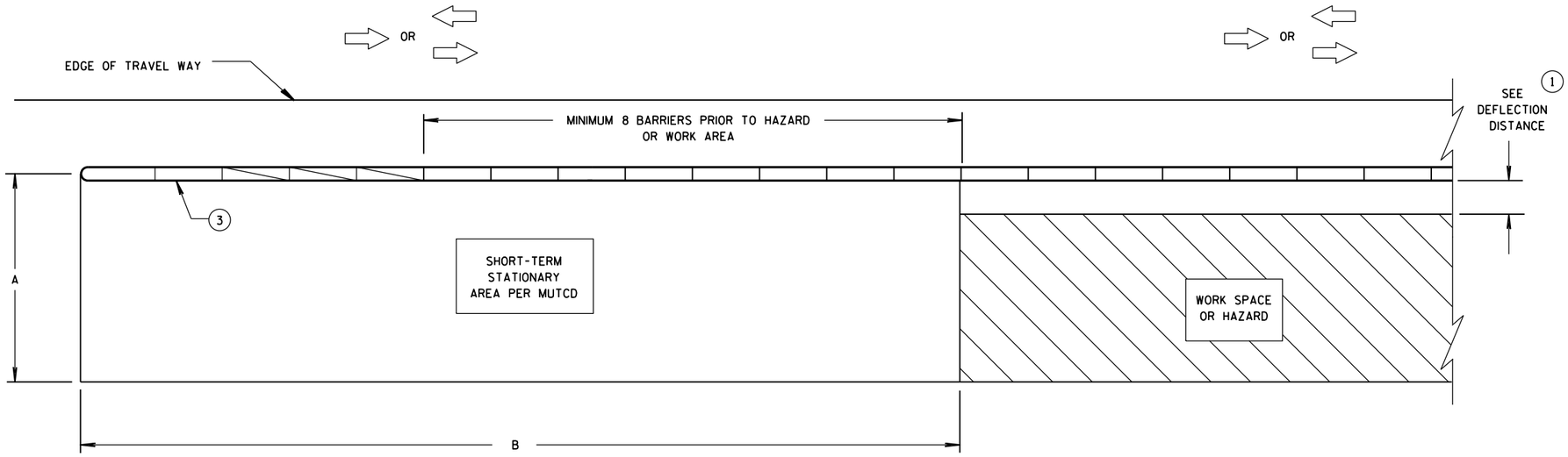
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



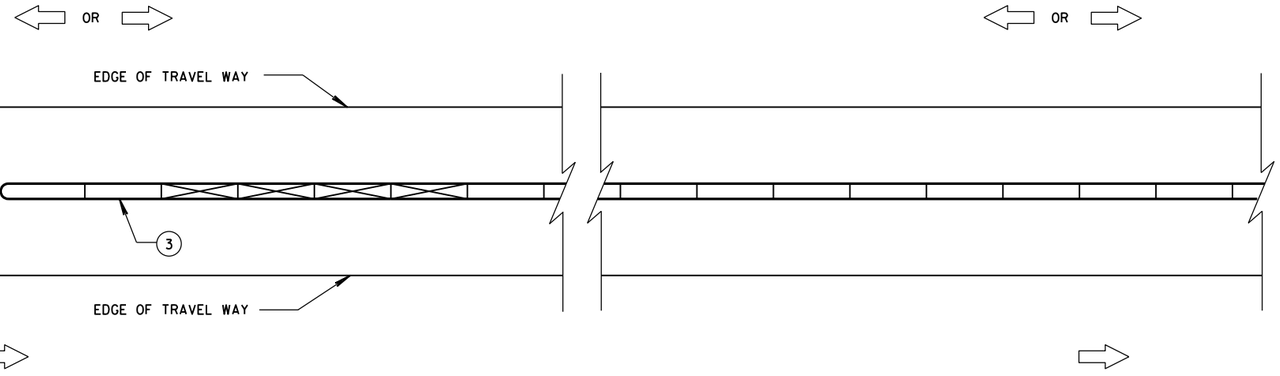
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

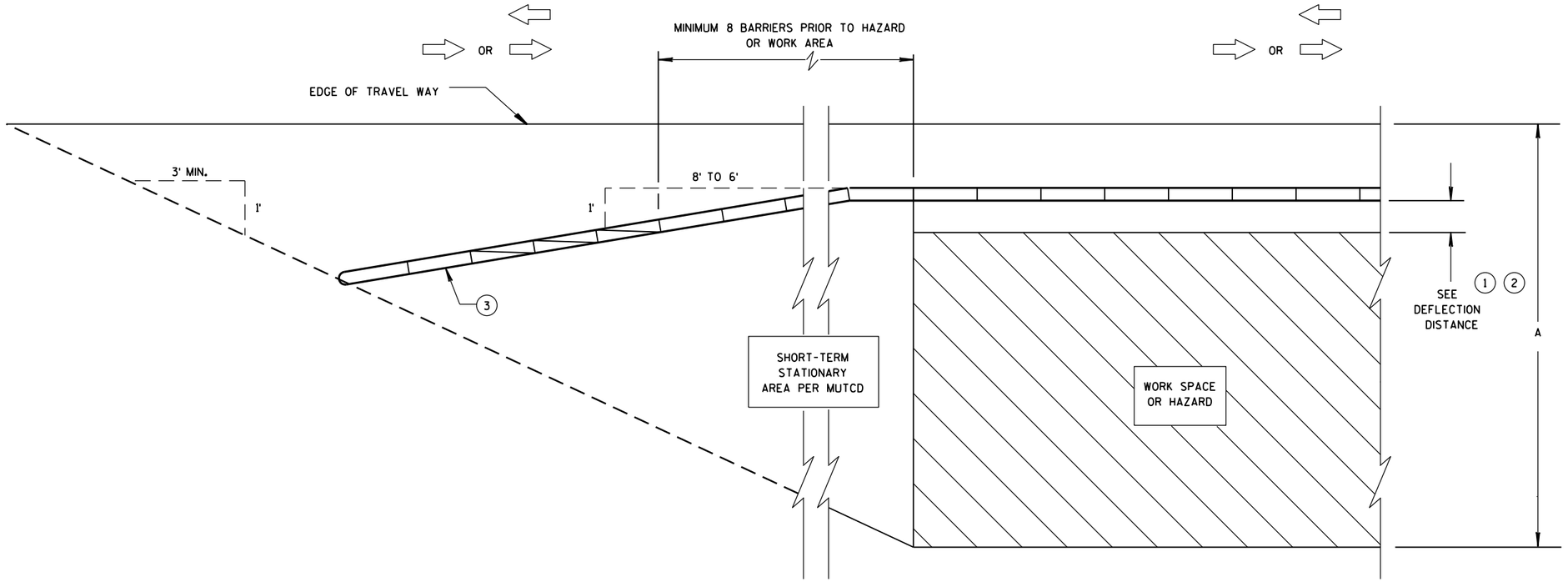
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

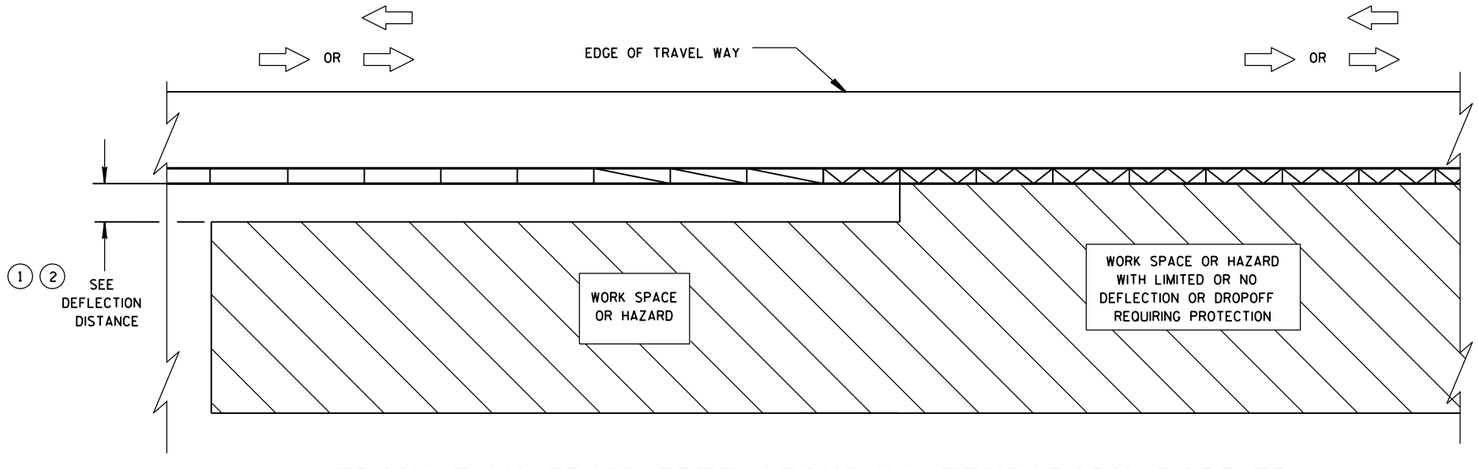
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

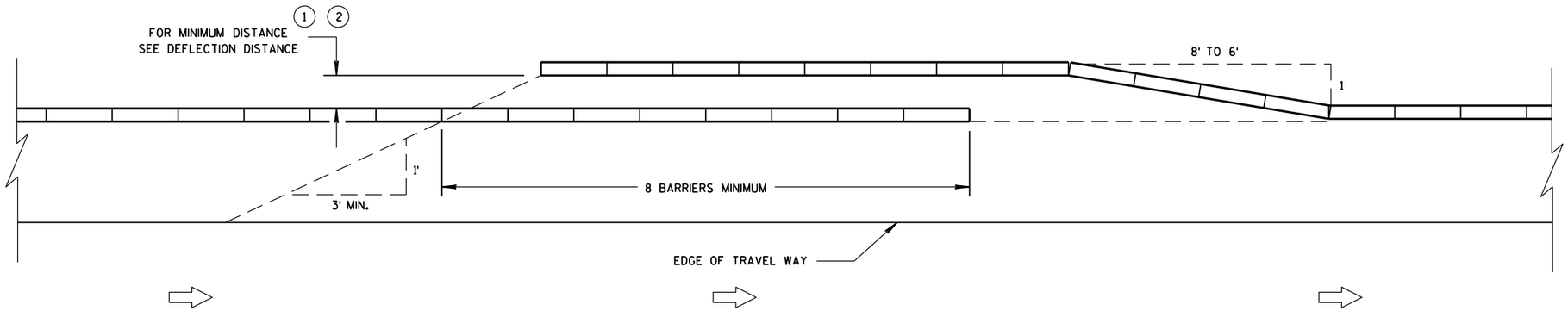
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

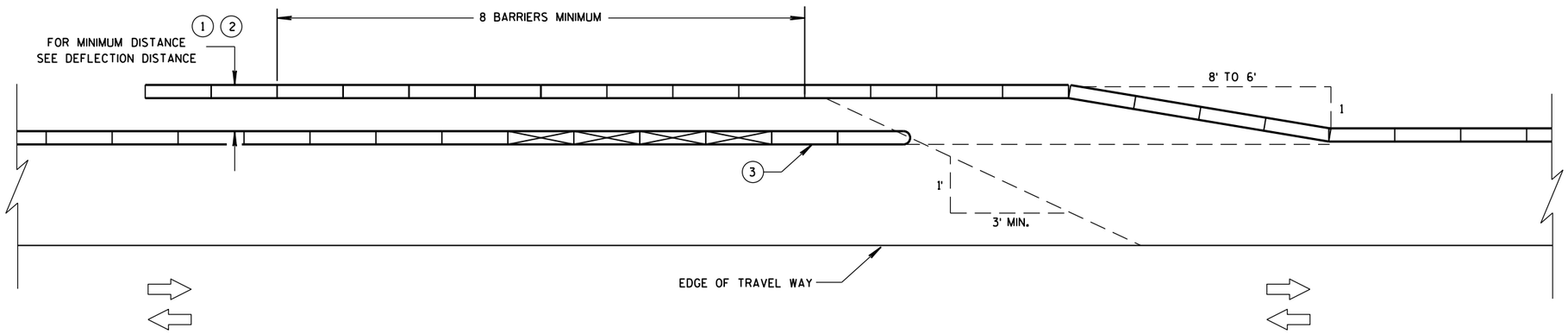
S.D.D. 14 B 8-2b

6

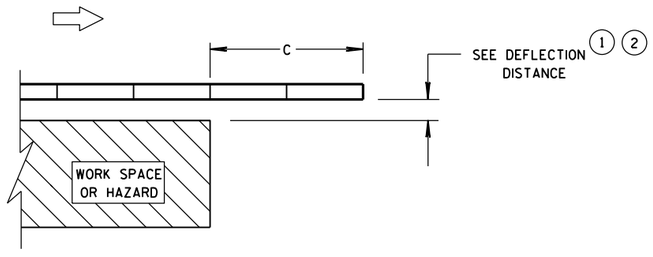
S.D.D. 14 B 8-2b



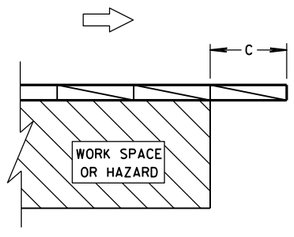
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

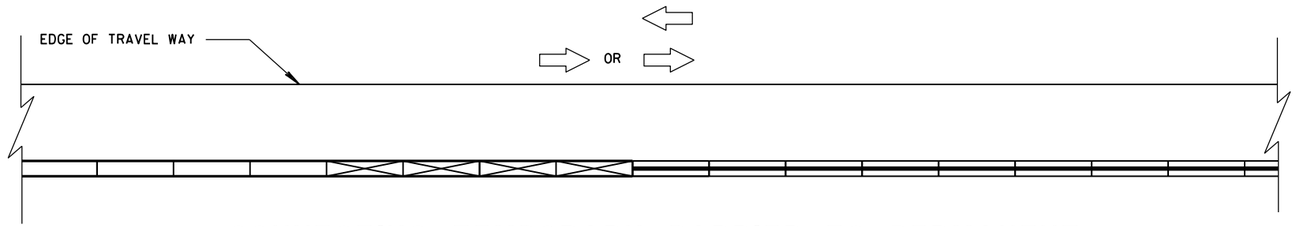
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

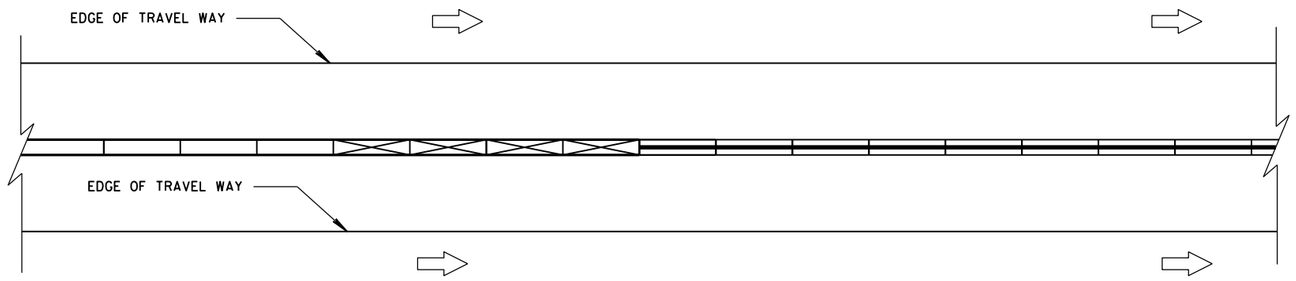
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



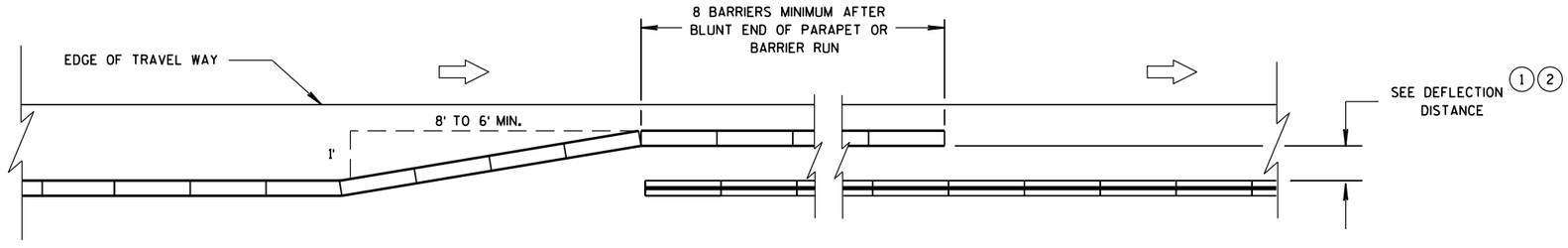
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



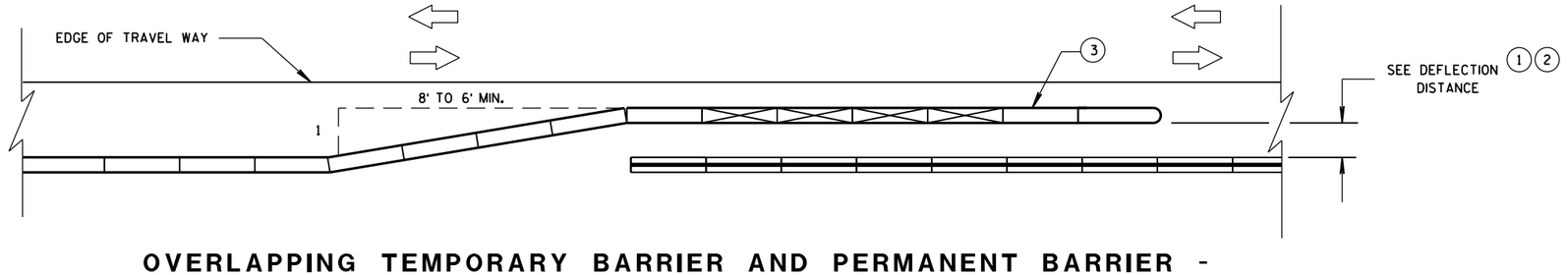
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

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



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

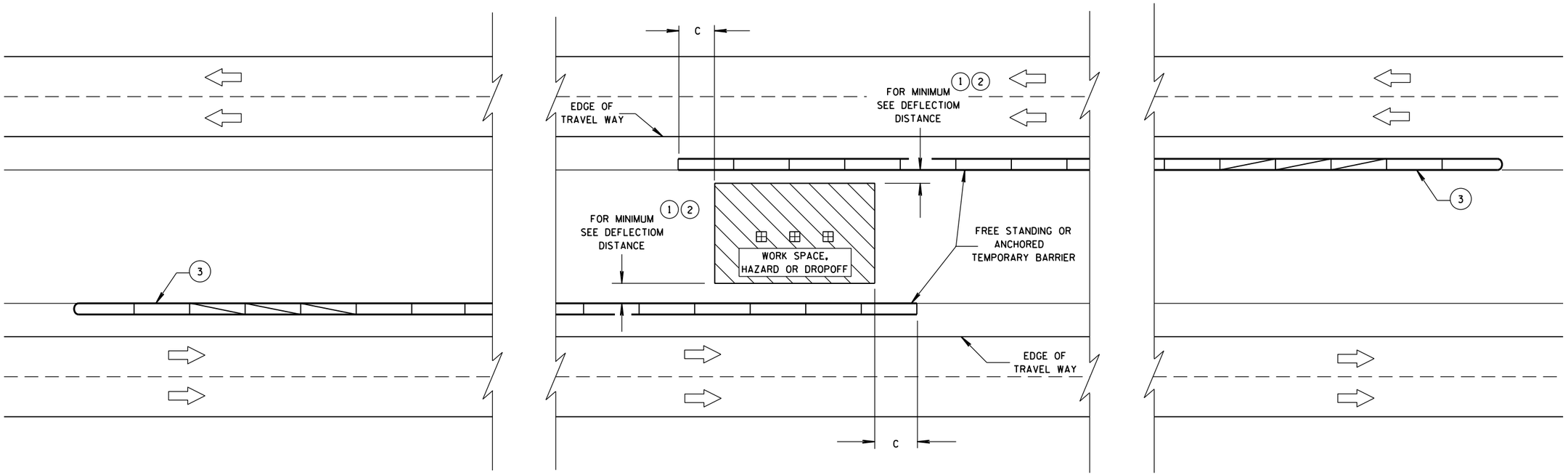
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



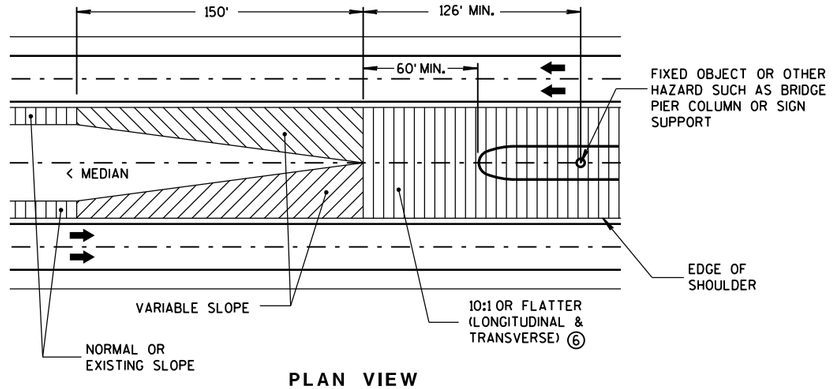
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

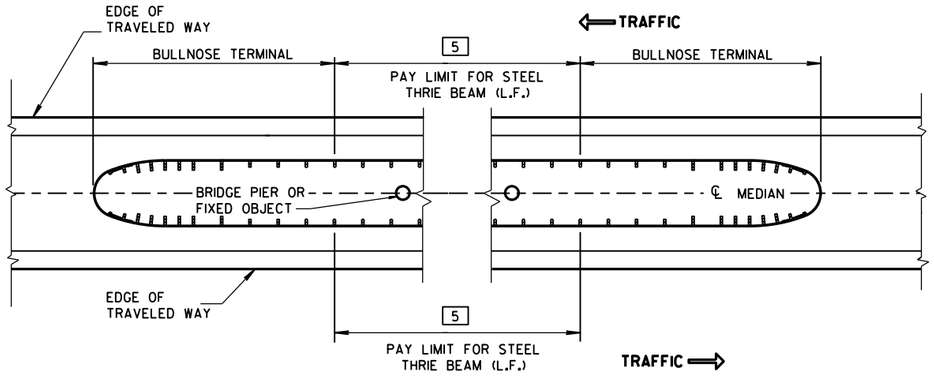
6

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

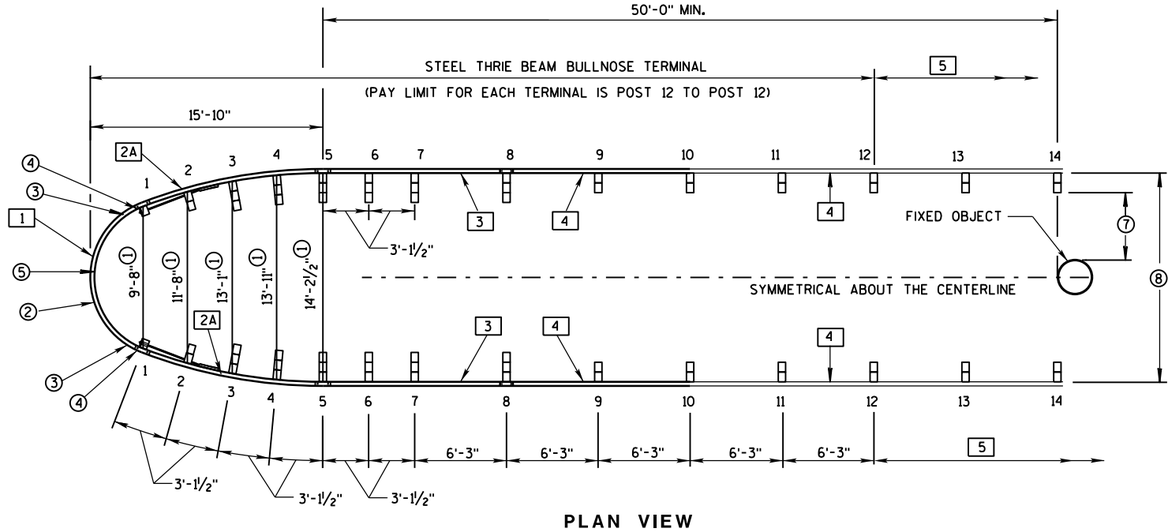


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

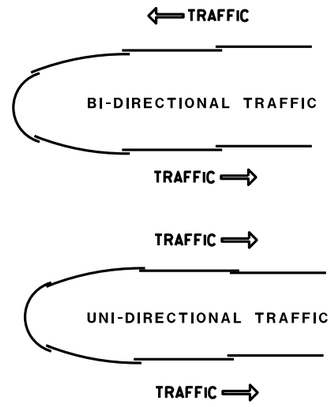


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

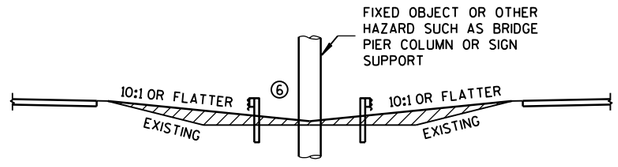
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

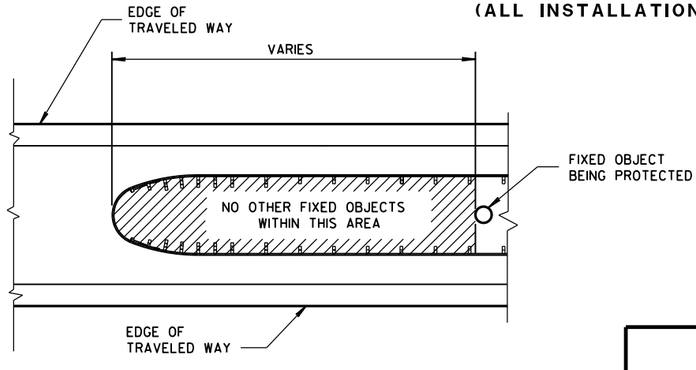
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

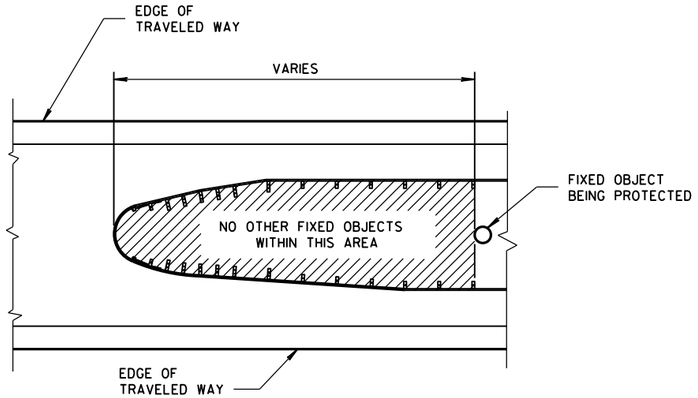


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

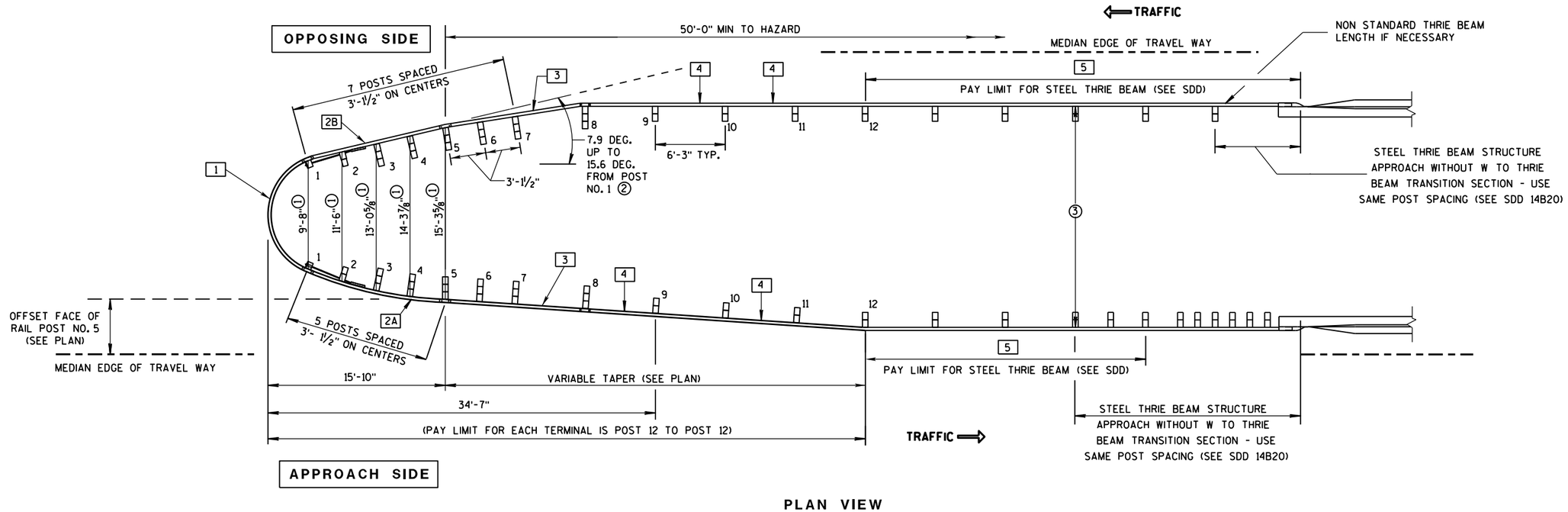
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

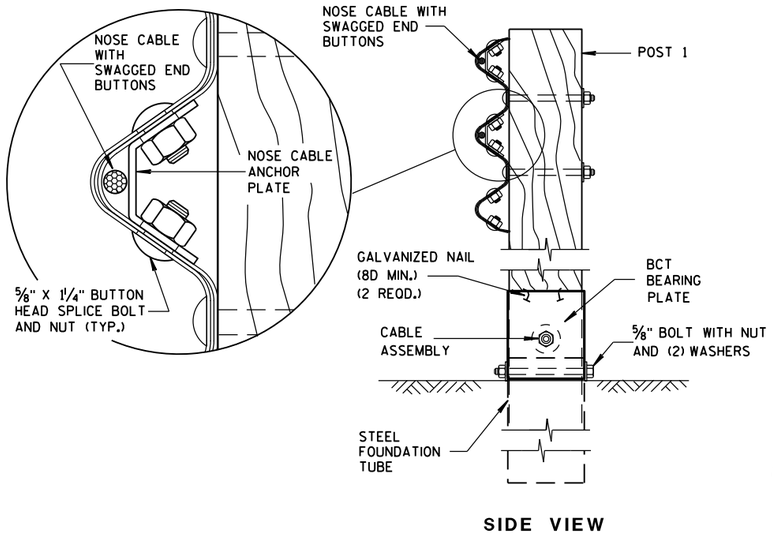
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

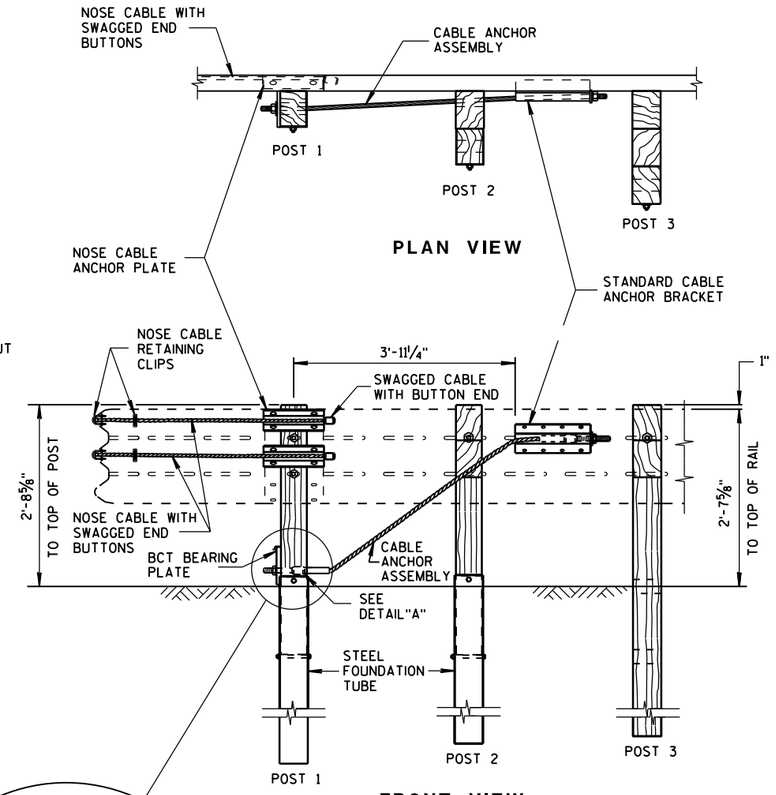
6

S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



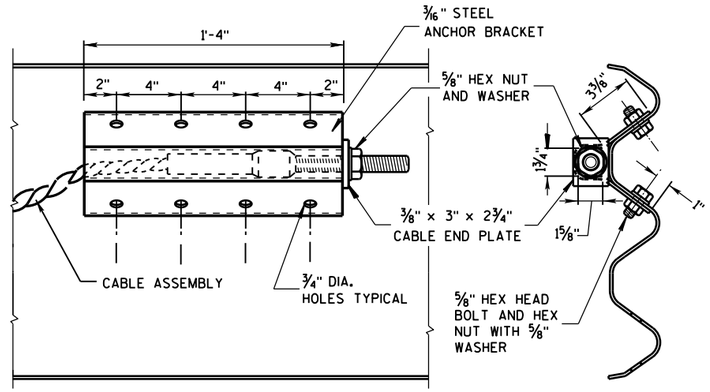
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

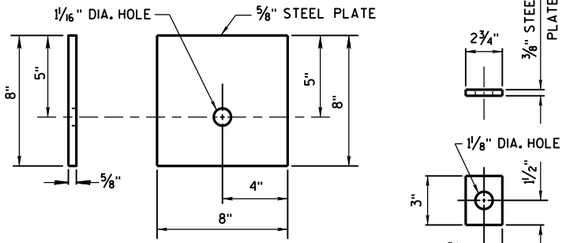
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



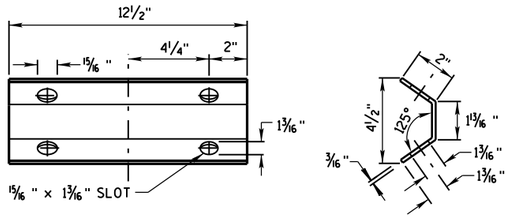
FRONT VIEW END VIEW

DETAILS OF CABLE ANCHOR BRACKET



BCT BEARING PLATE

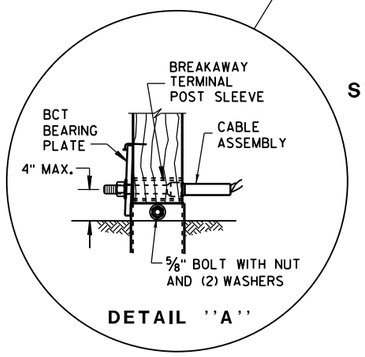
CABLE END PLATE



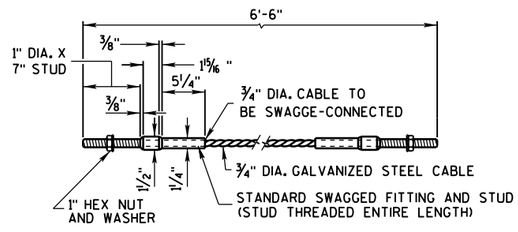
ELEVATION VIEW END VIEW

NOSE CABLE ANCHOR PLATE

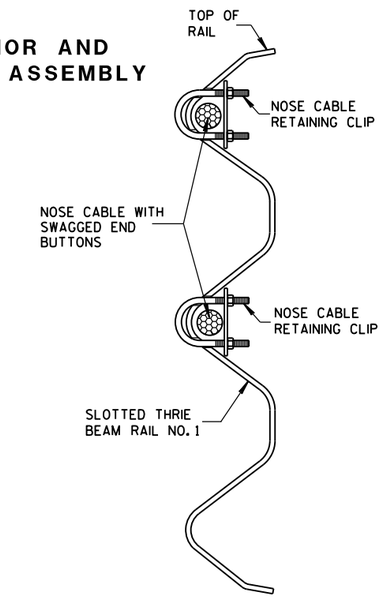
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



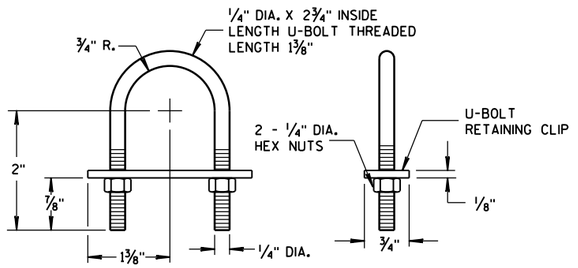
DETAIL ''A''



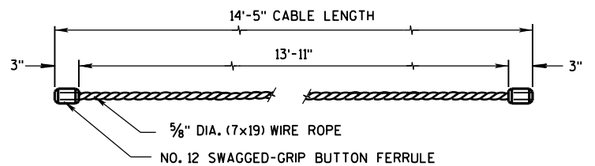
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

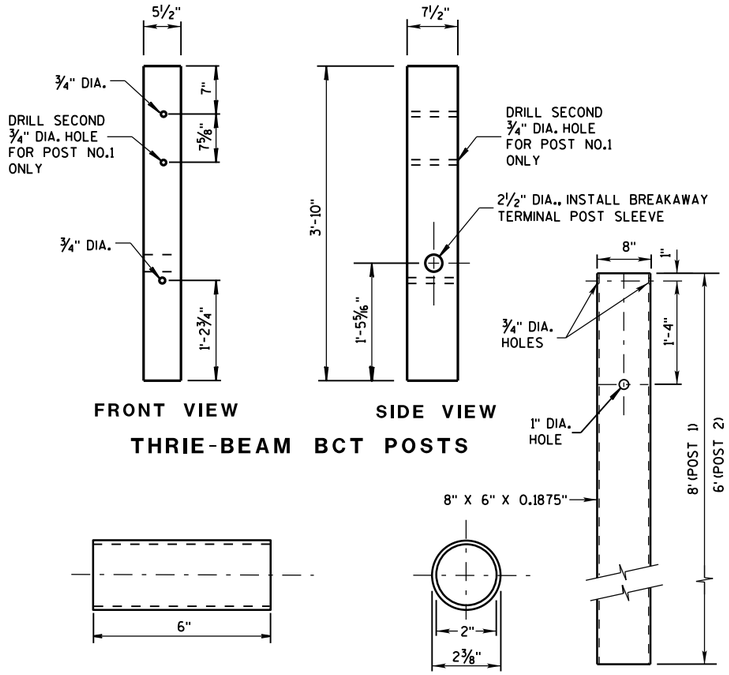
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 26-3c

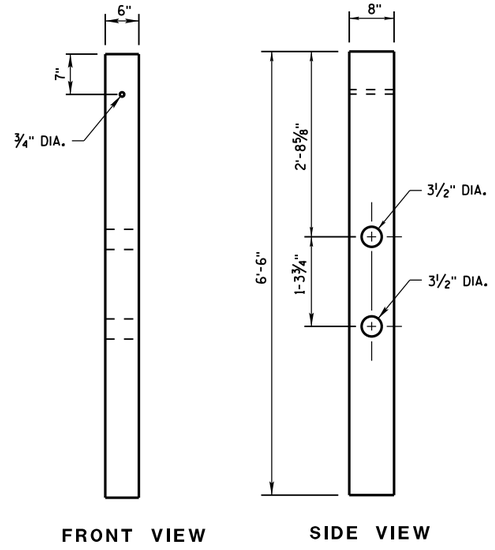


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

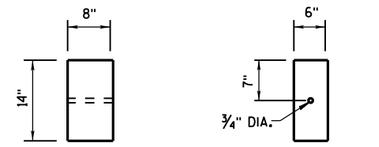


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

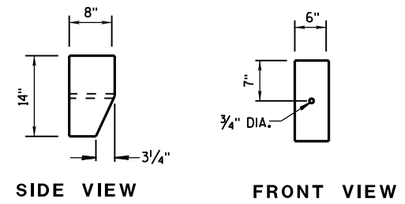
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



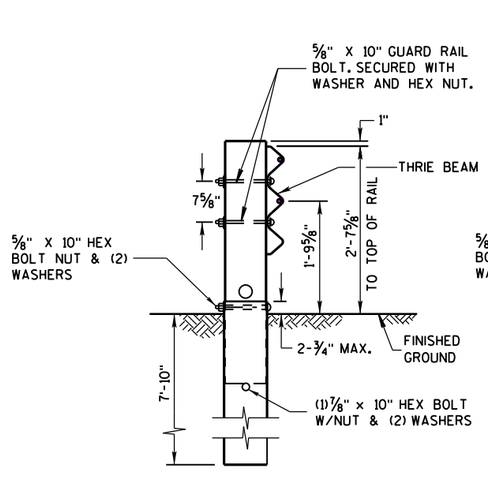
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



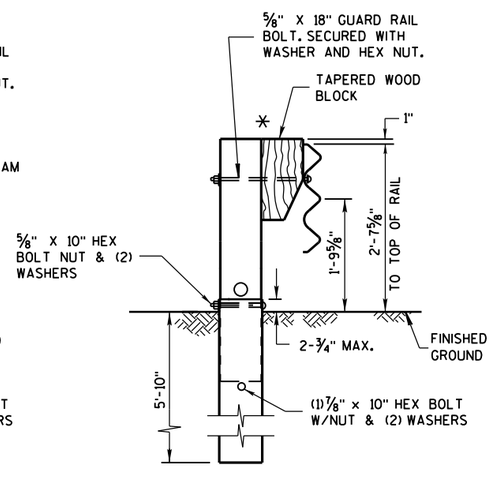
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



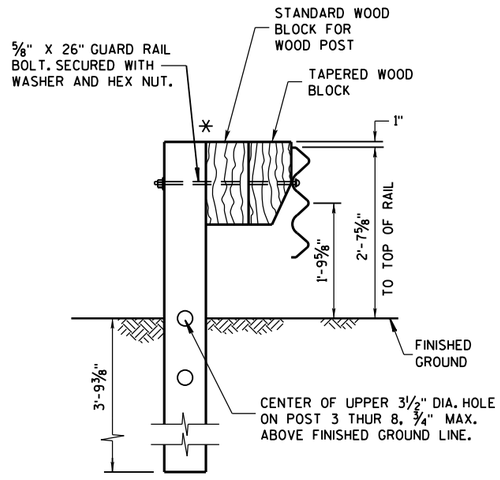
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



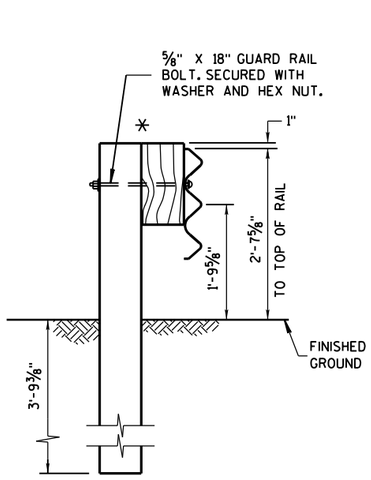
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12
(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

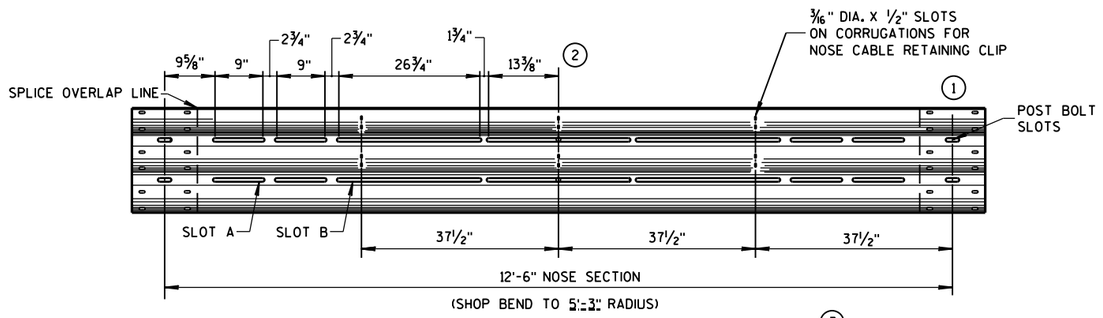
* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

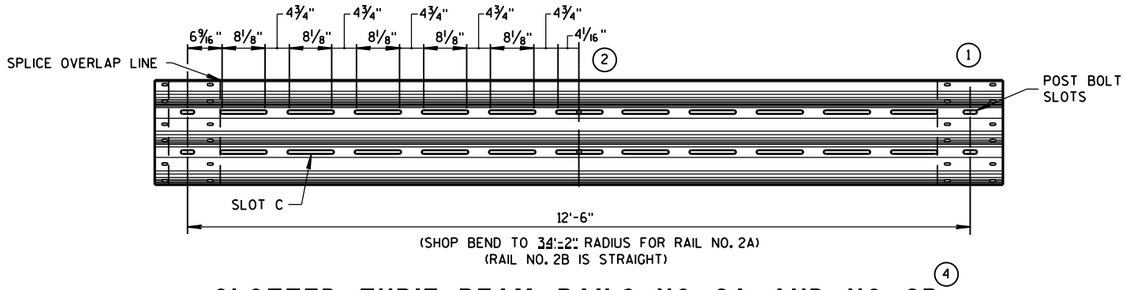
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

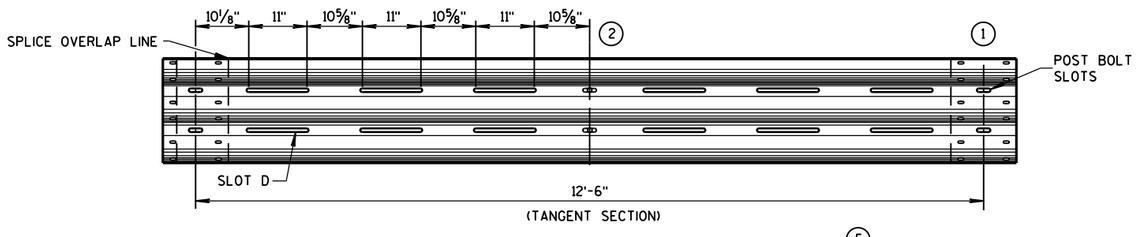
S.D.D. 14 B 26-3d



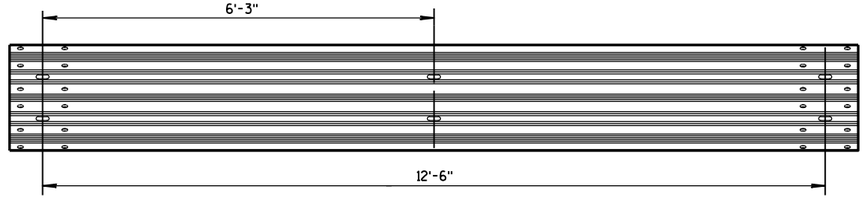
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

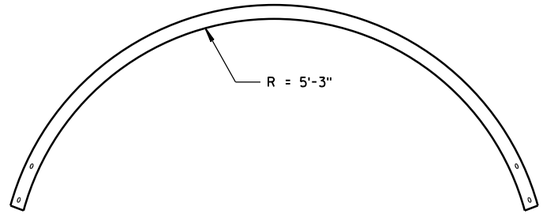
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

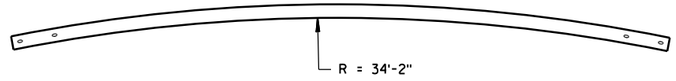
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



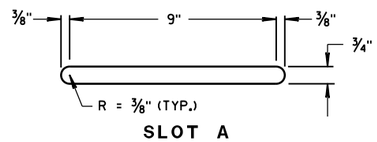
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

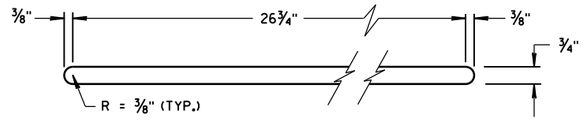


PLAN VIEW

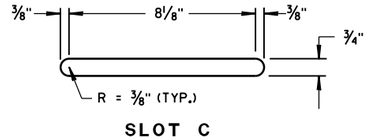
SLOTTED THRIE BEAM RAIL NO. 2A



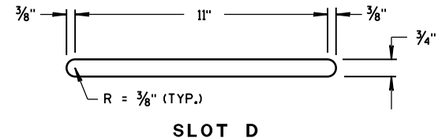
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

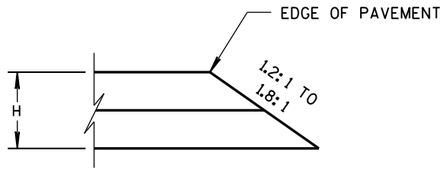
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

NT

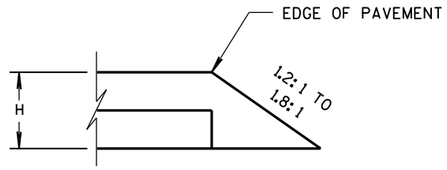
6

S.D.D. 14 B 26-3e



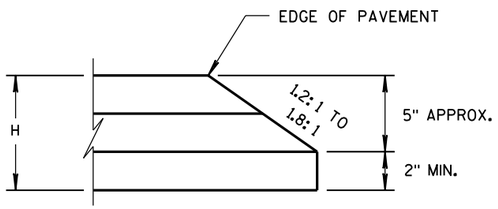
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



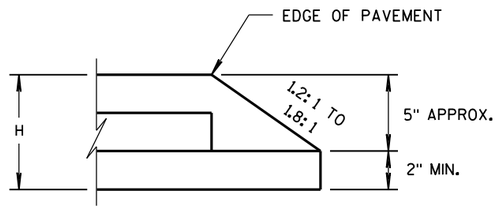
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

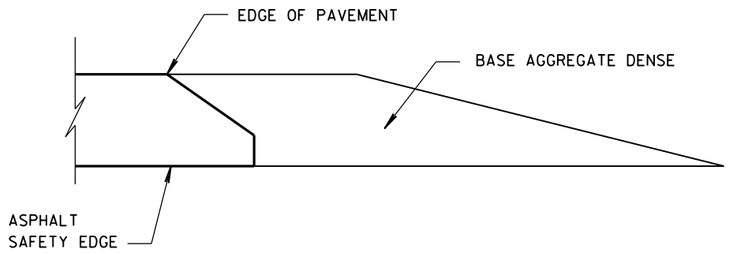
FOR H GREATER THAN 5"



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

GENERAL NOTES

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.

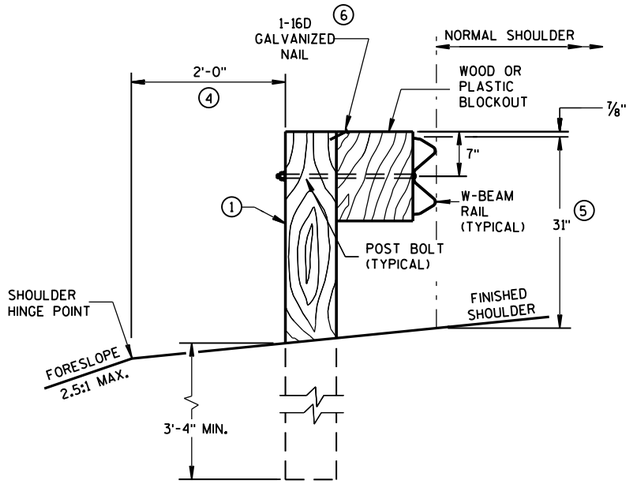
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

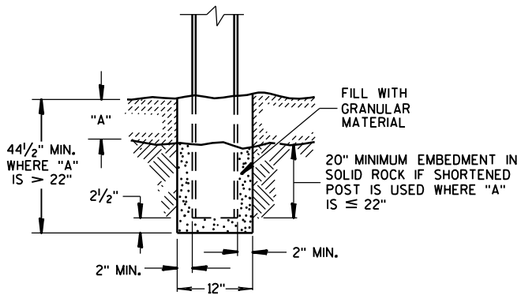
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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.



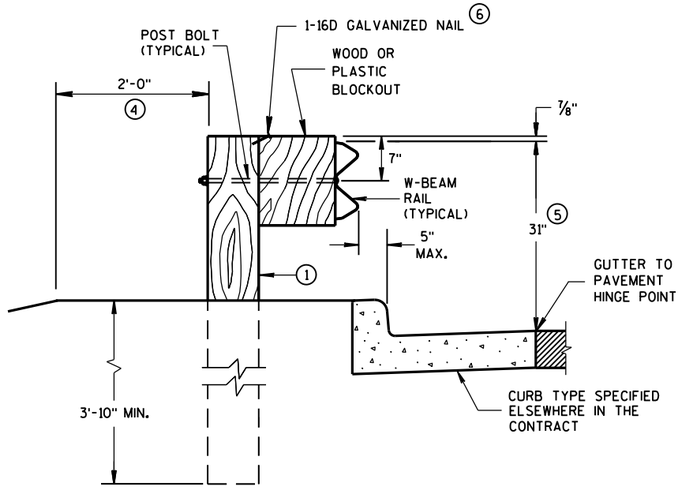
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



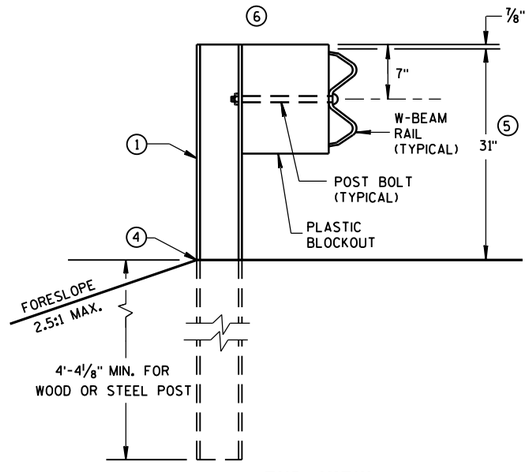
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



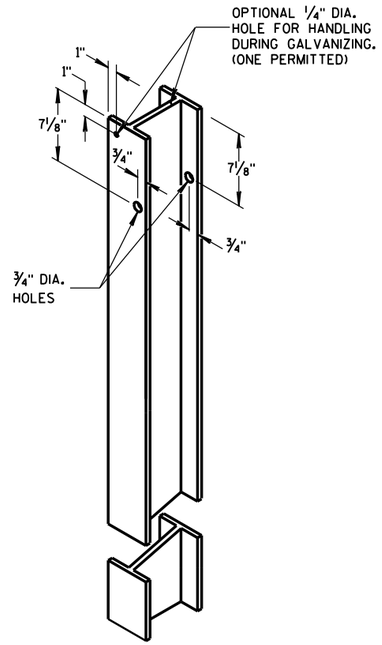
END VIEW

LOCATED ALONG A CURBED ROADWAY

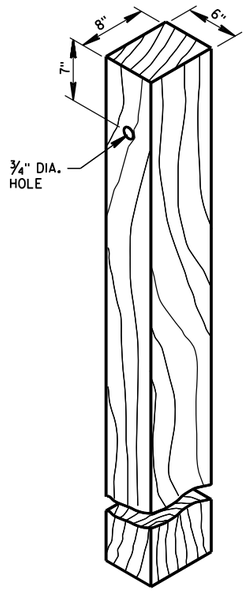


END VIEW

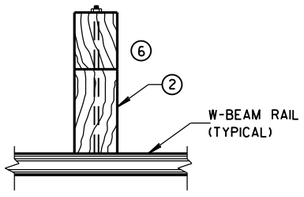
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



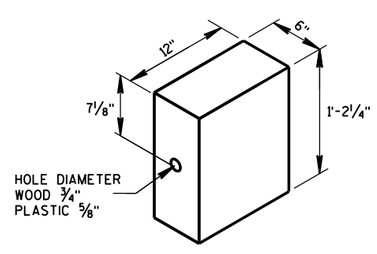
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



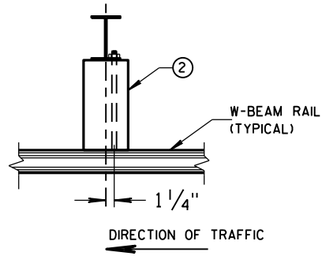
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

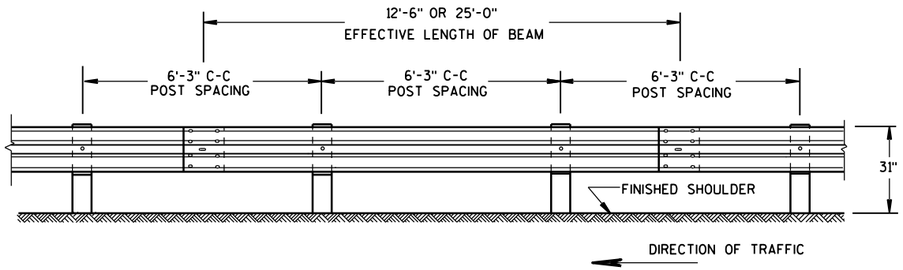


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

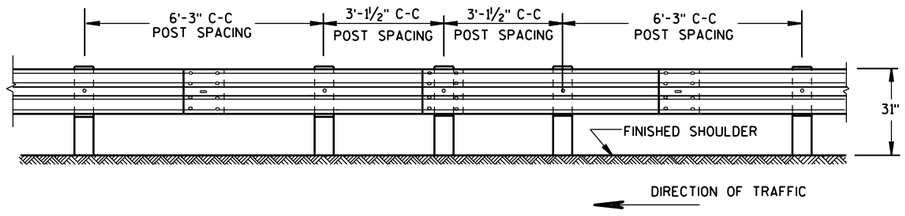
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



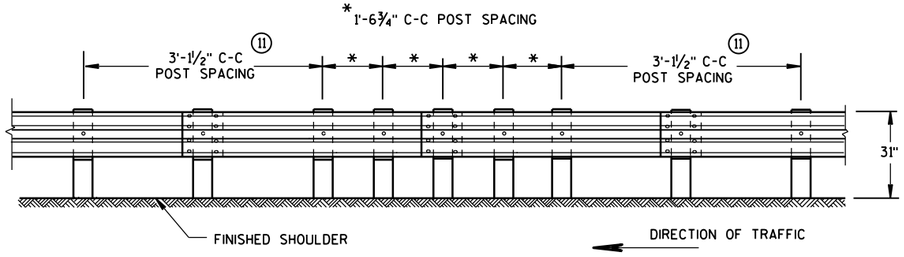
FRONT VIEW

POST SPACING STANDARD INSTALLATION



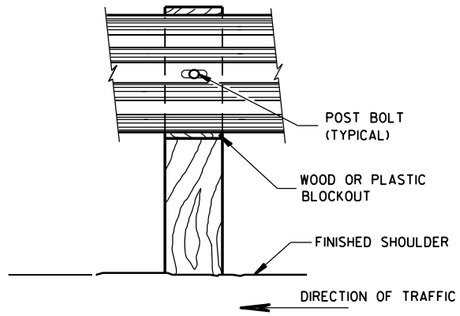
FRONT VIEW

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

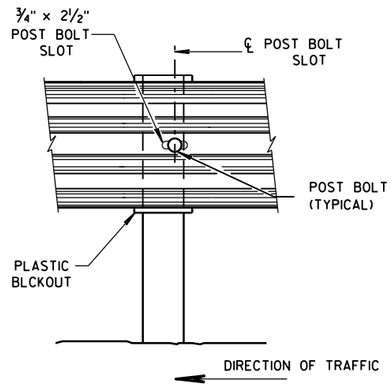


FRONT VIEW

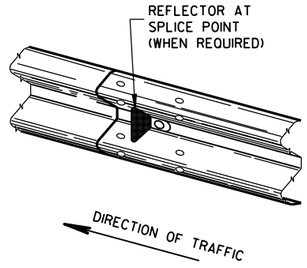
QUARTER POST SPACING (QS)

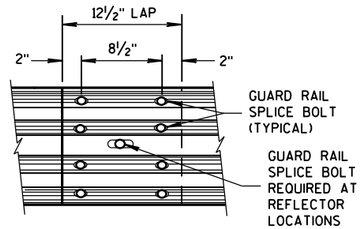


FRONT VIEW AT WOOD POST



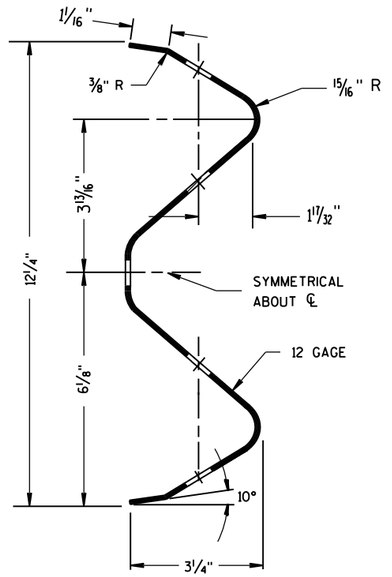
FRONT VIEW AT STEEL POST



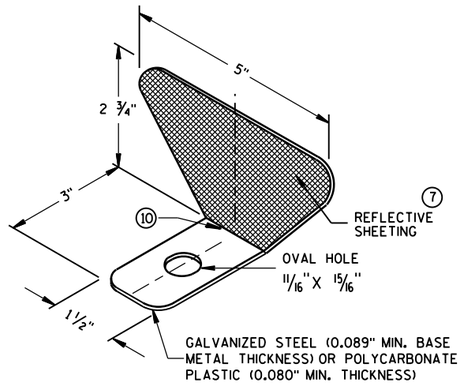


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

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

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 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.

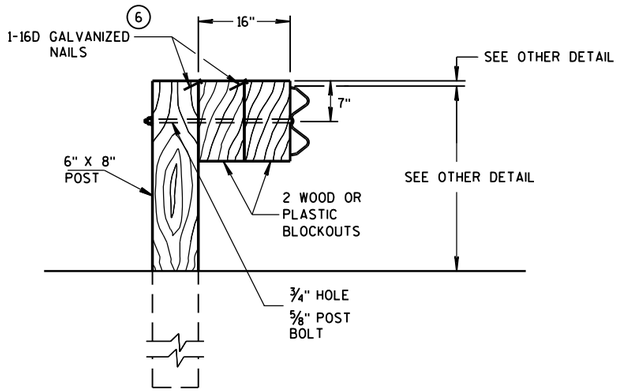
REFLECTOR SPACING ⑧

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 ⑩	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

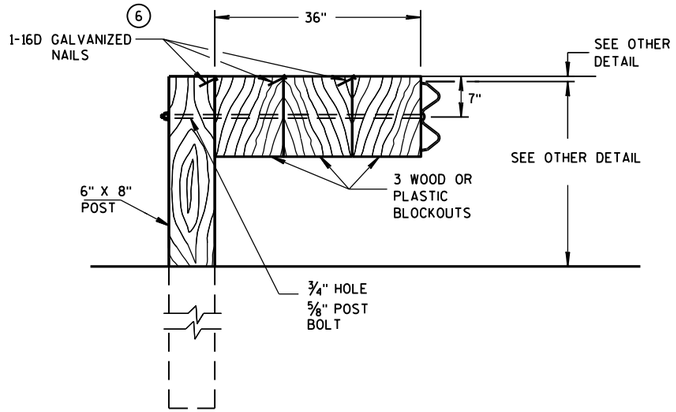
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 42-3b



DETAIL FOR 16" BLOCKOUT DEPTH

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

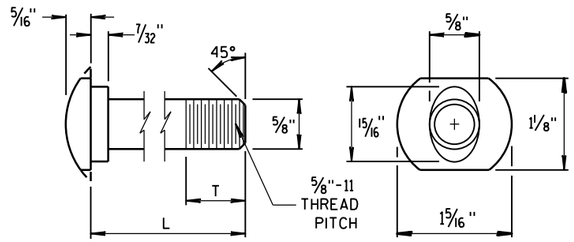


DETAIL FOR 36" BLOCKOUT DEPTH

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

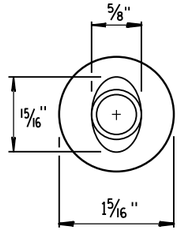
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

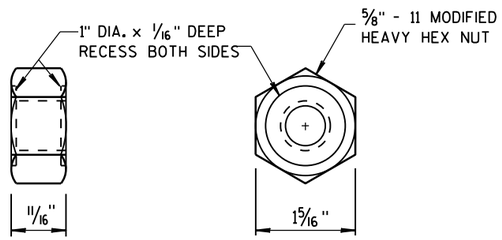


POST BOLT TABLE

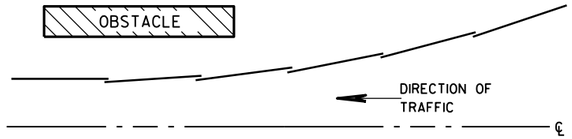
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

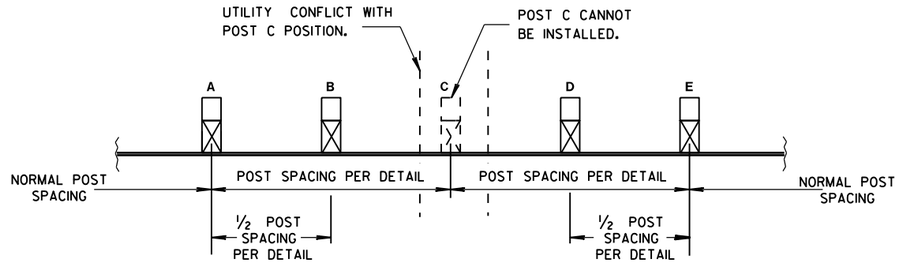


POST BOLT AND RECESS NUT

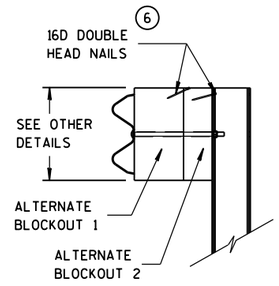


PLAN VIEW

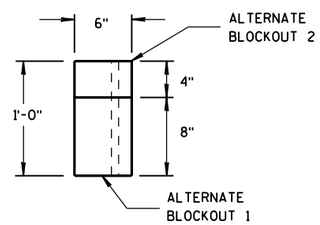
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

6

S.D.D. 14 B 42-3c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

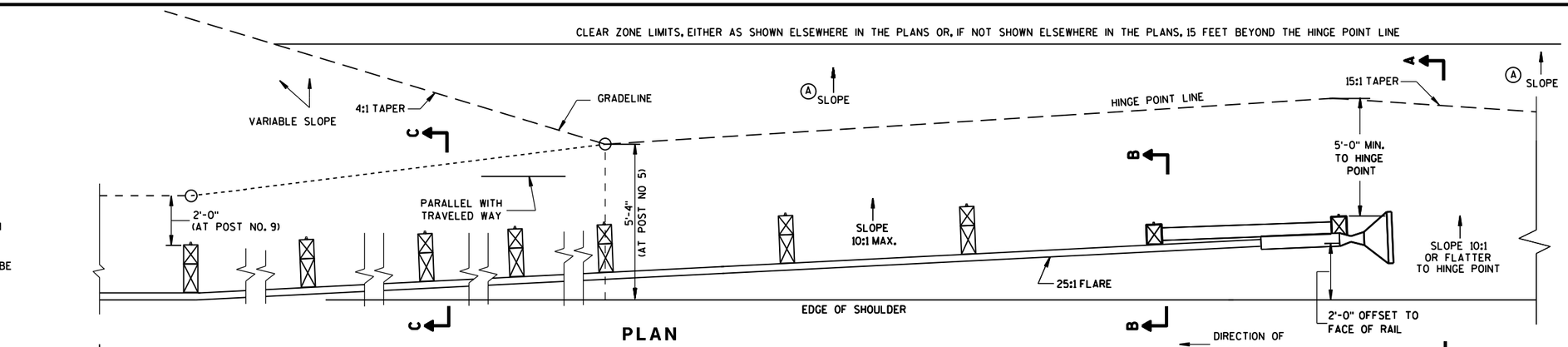
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

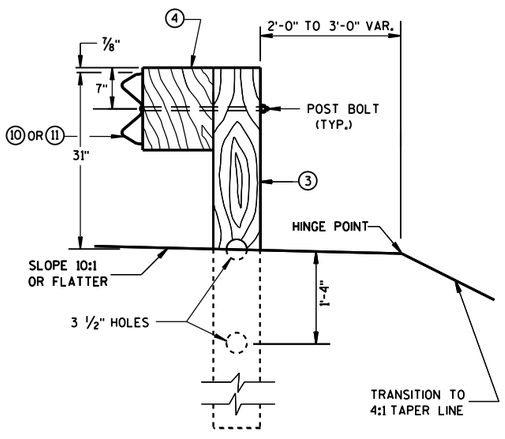
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

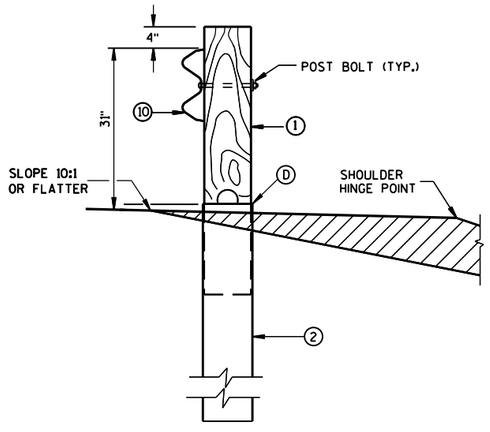
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



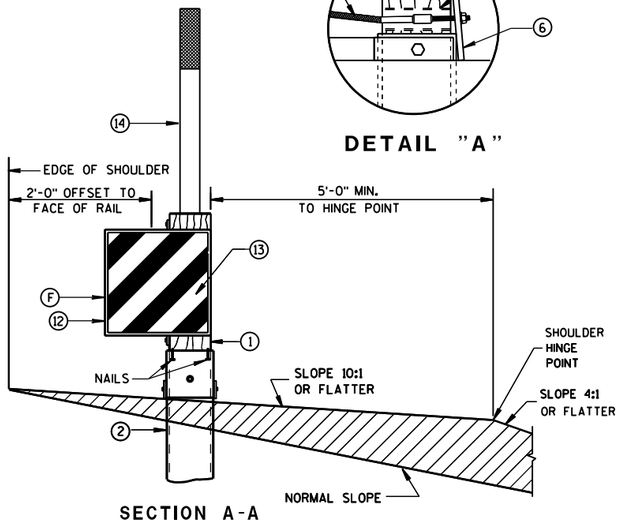
ELEVATION



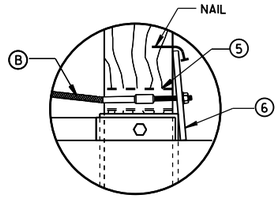
SECTION C-C
TYPICAL AT POST NOS. 3-9



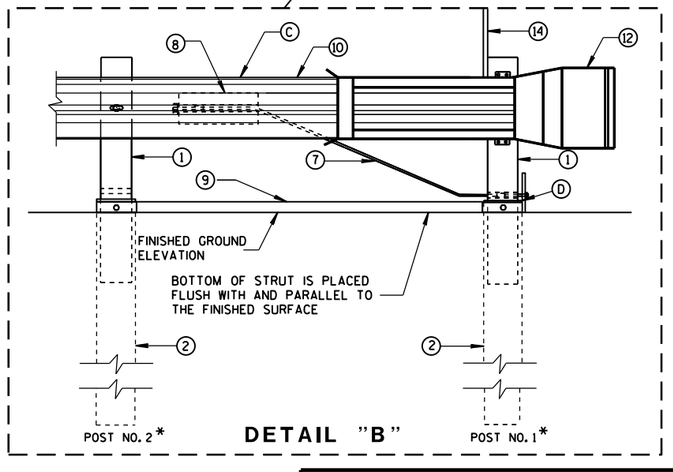
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



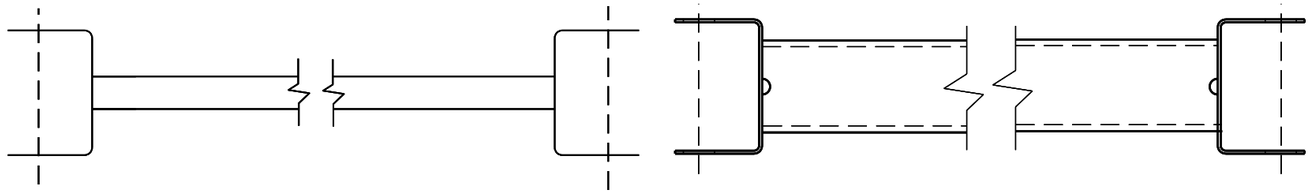
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

S.D.D. 14 B 44-2a

S.D.D. 14 B 44-2a

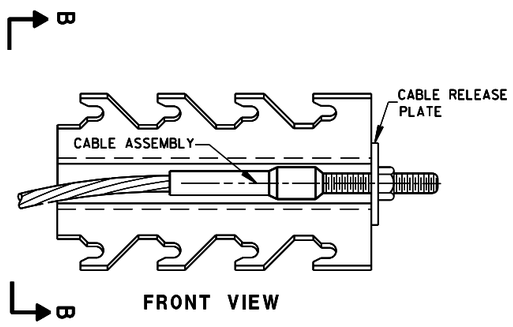


⑨ Ⓗ

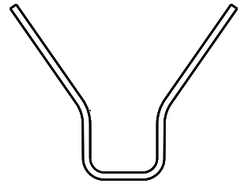
GENERIC GROUND STRUT

BILL OF MATERIALS

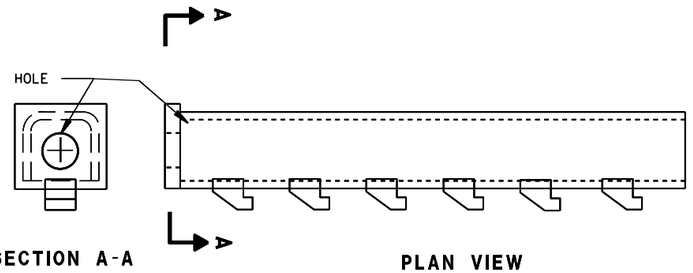
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



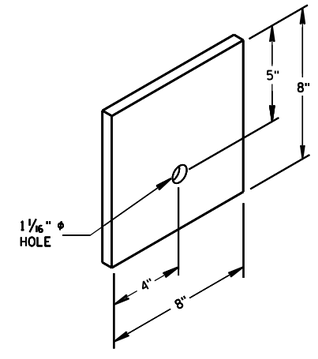
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX ⑧ Ⓗ



BEARING PLATE ⑥

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

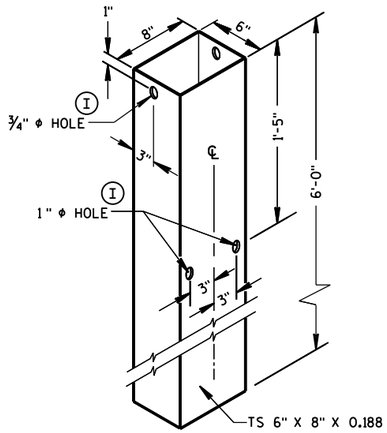
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

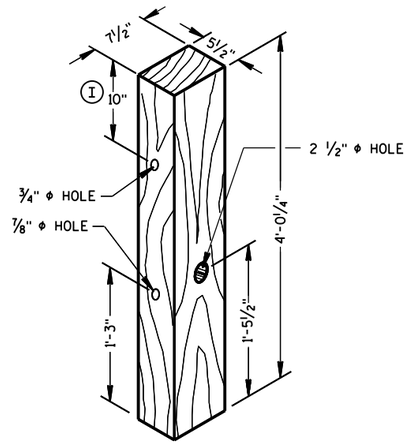
S.D.D. 14 B 44-2b

6

S.D.D. 14 B 44-2b

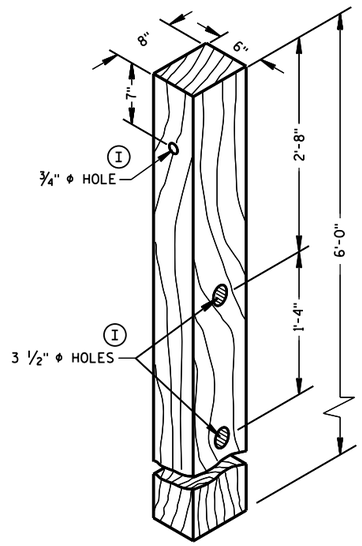


FOUNDATION TUBE (2)



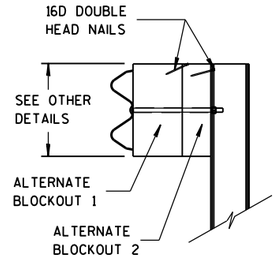
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

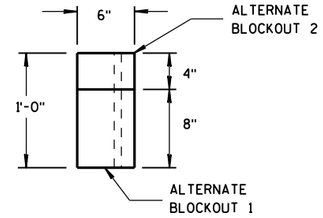


POSTS NUMBER 3-9

WOOD CRT POST (3)

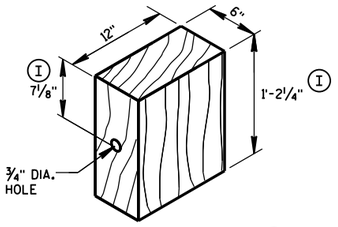


SIDE VIEW



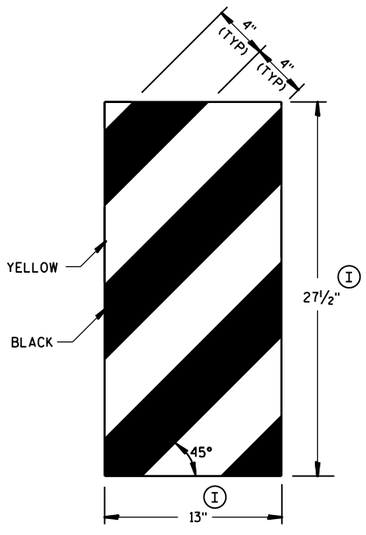
TOP VIEW

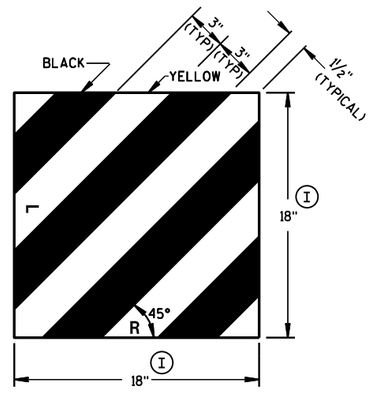
ALTERNATE WOOD BLOCKOUT DETAIL



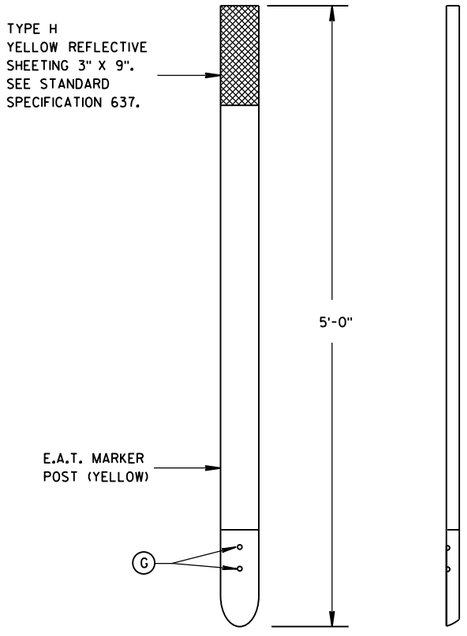
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





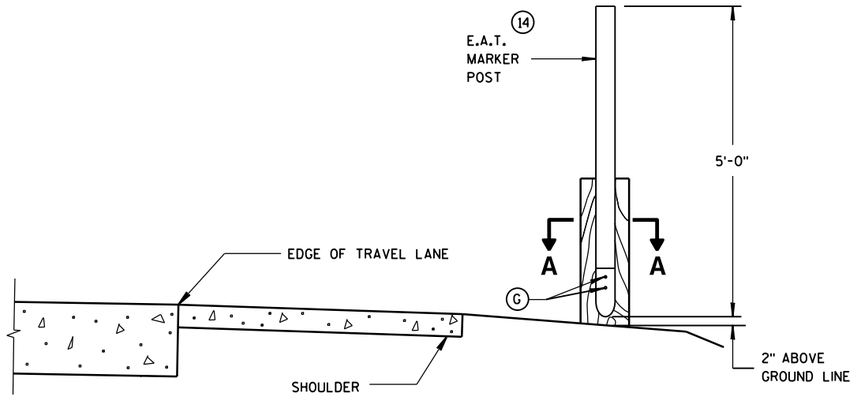
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

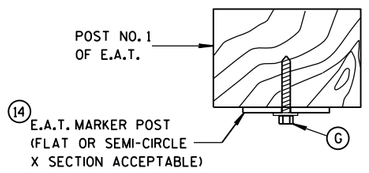
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

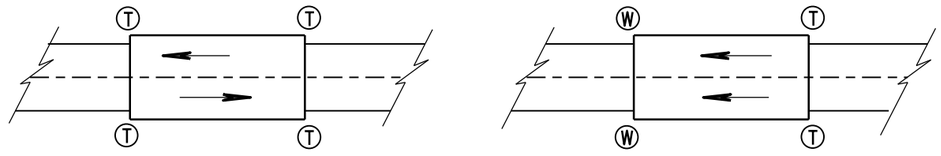
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

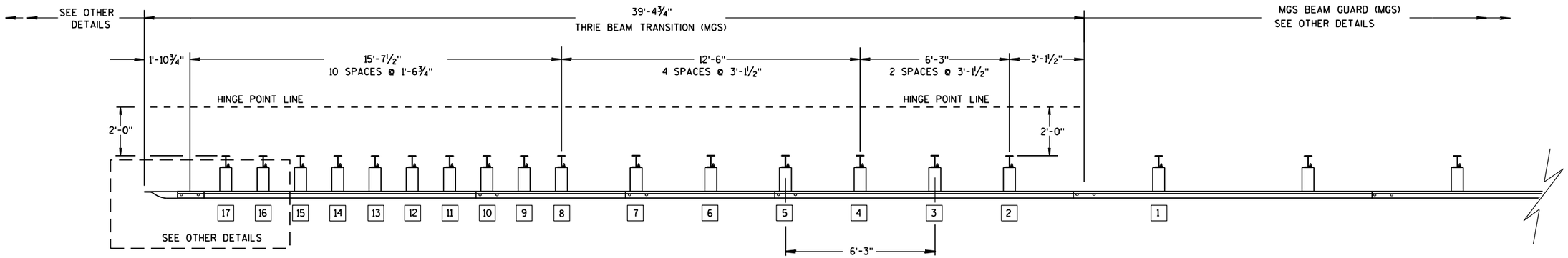
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

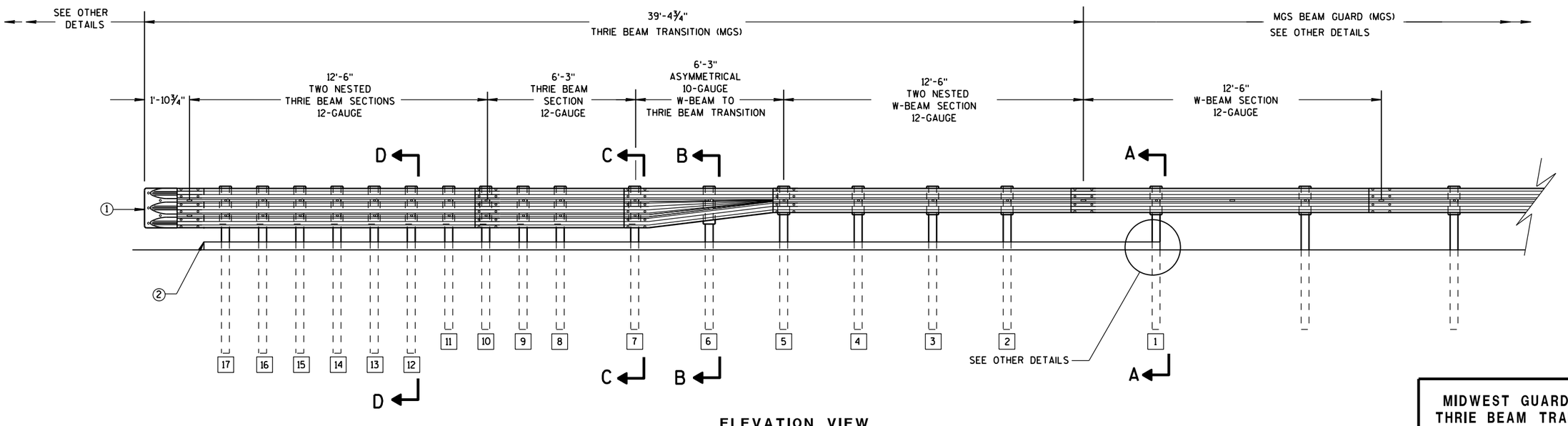
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4a

6

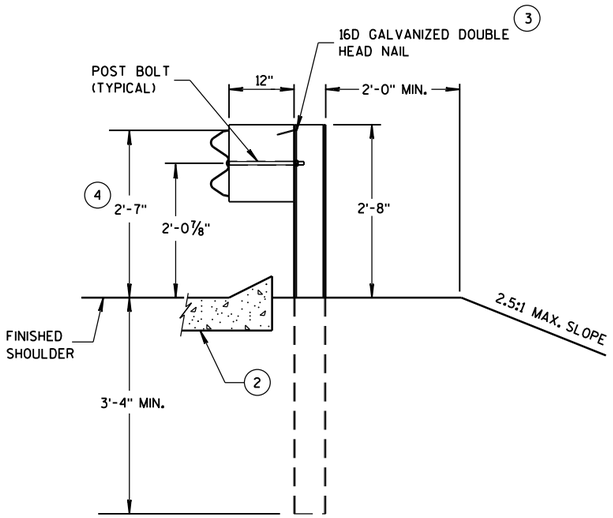
S.D.D. 14 B 45-4a

GENERAL NOTES

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

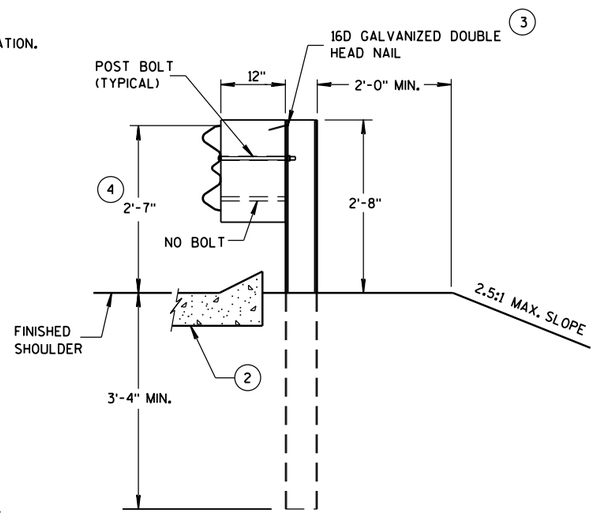
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



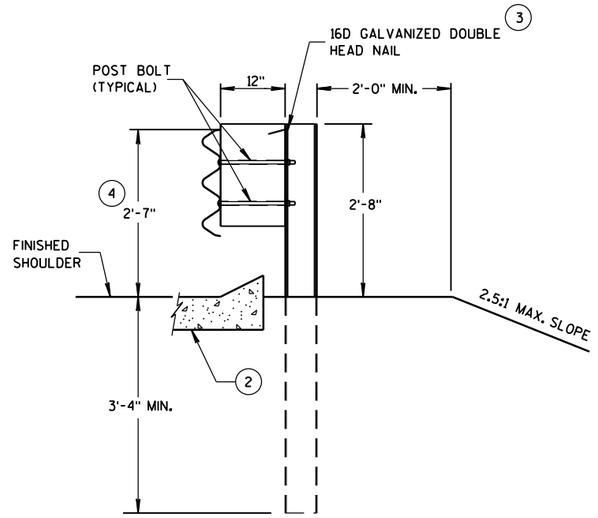
SECTION A-A

POSTS 1-5



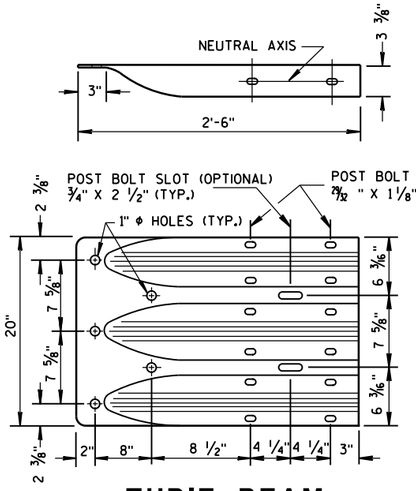
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

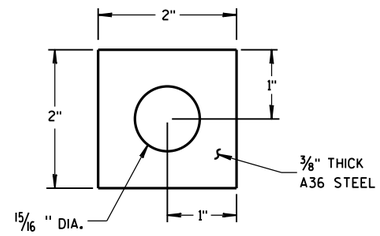
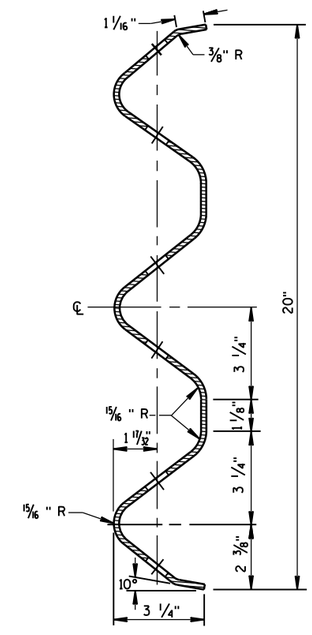
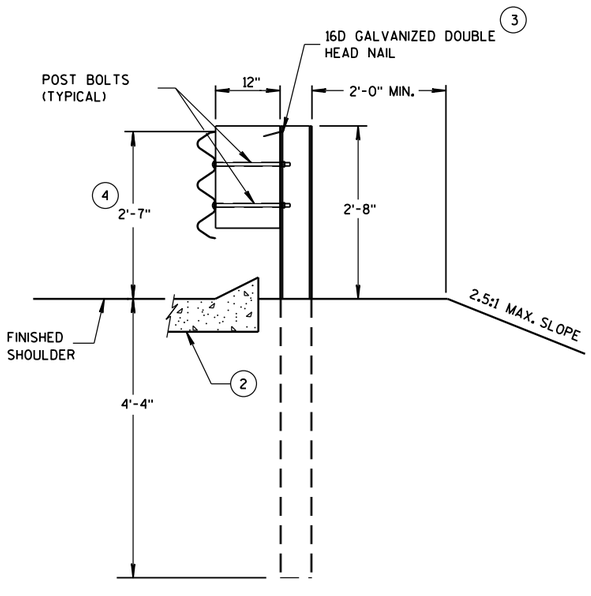


PLATE WASHER DETAIL

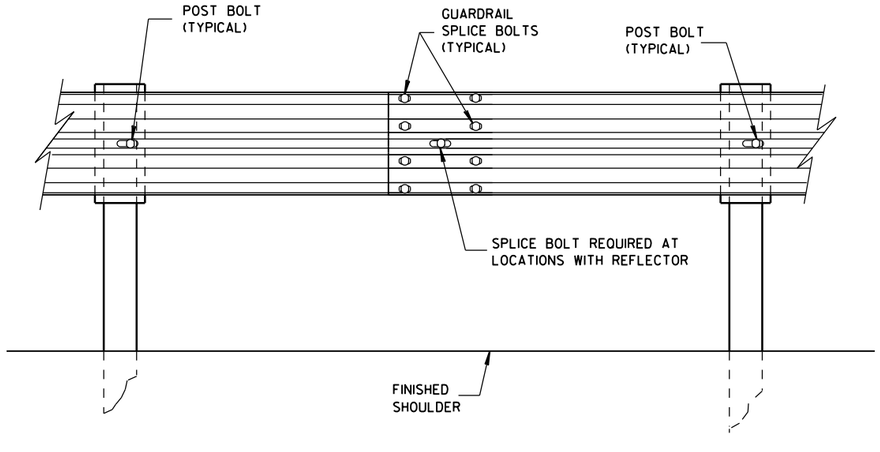


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



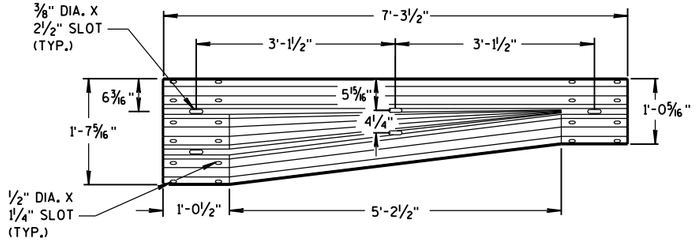
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

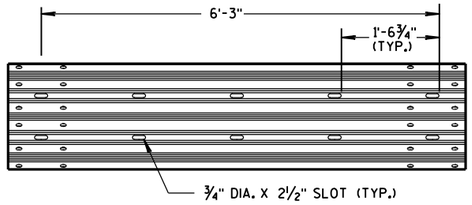
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

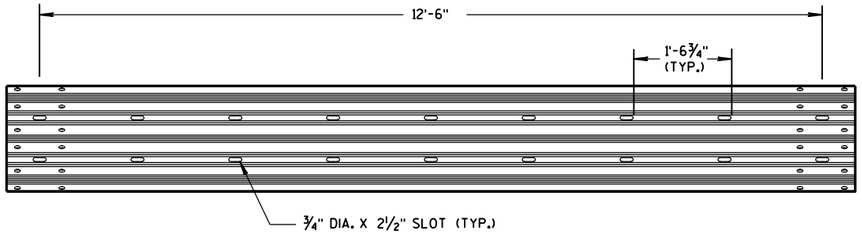
S.D.D. 14 B 45-4b



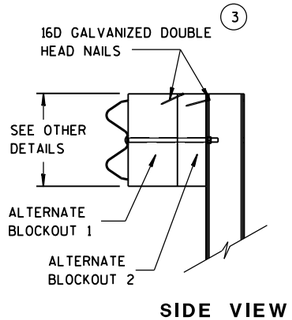
W-BEAM TO THRIE BEAM TRANSITION SECTION



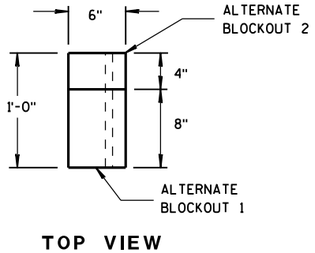
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

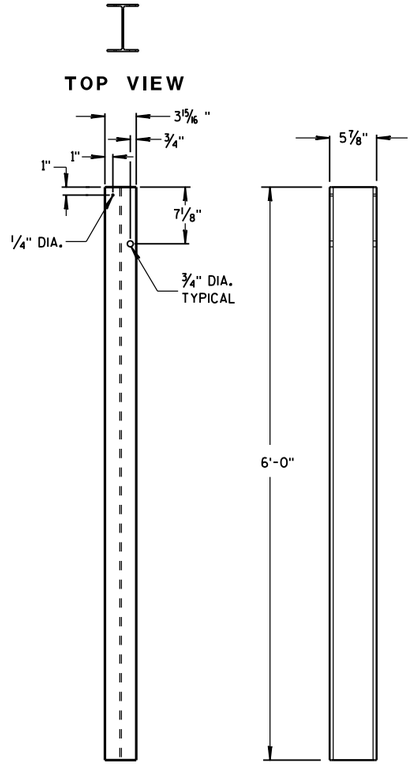


SIDE VIEW

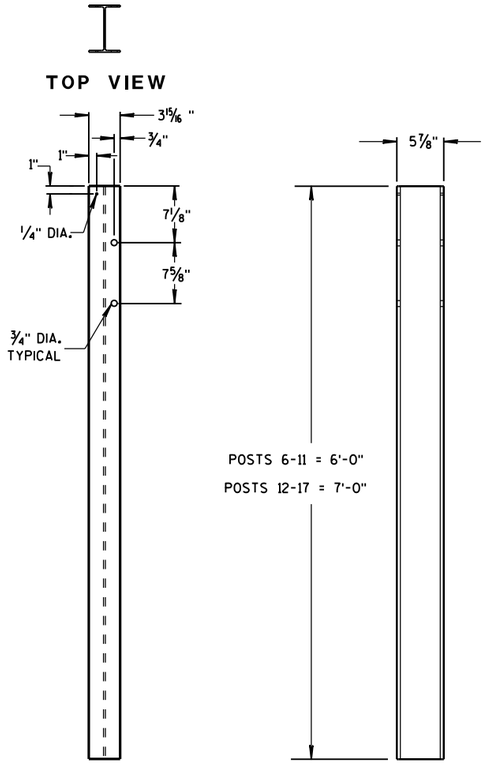


TOP VIEW

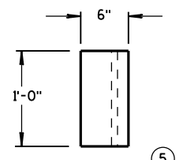
ALTERNATE WOOD BLOCKOUT DETAIL



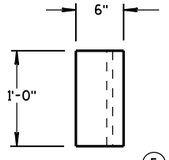
STEEL POSTS 1-5



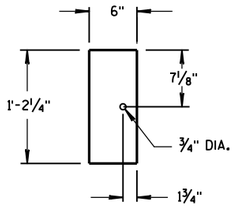
STEEL POSTS 6-17



TOP VIEW (5)

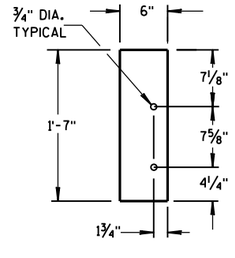


TOP VIEW (5)



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.

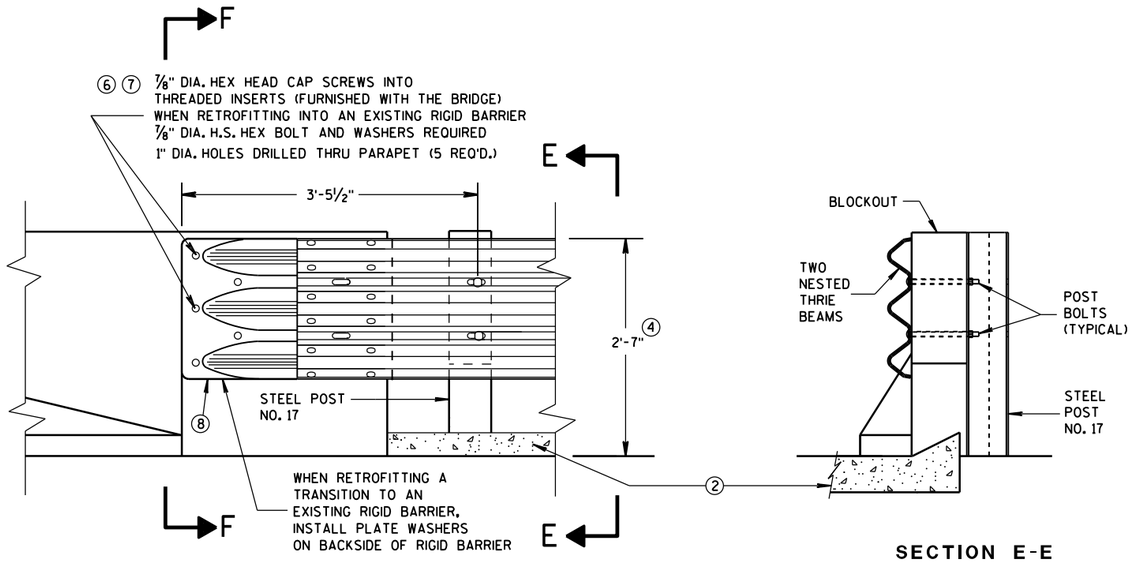
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c



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.

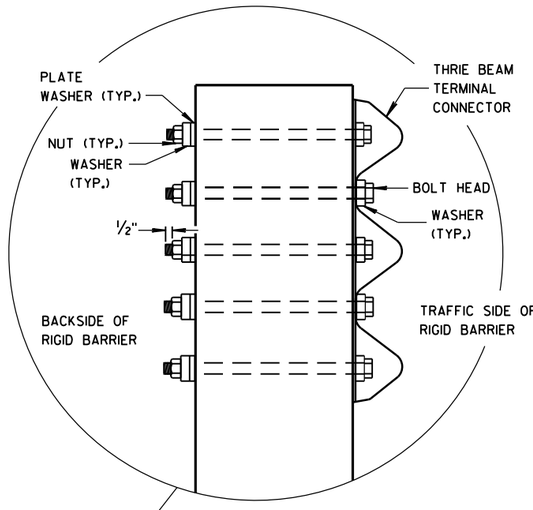
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

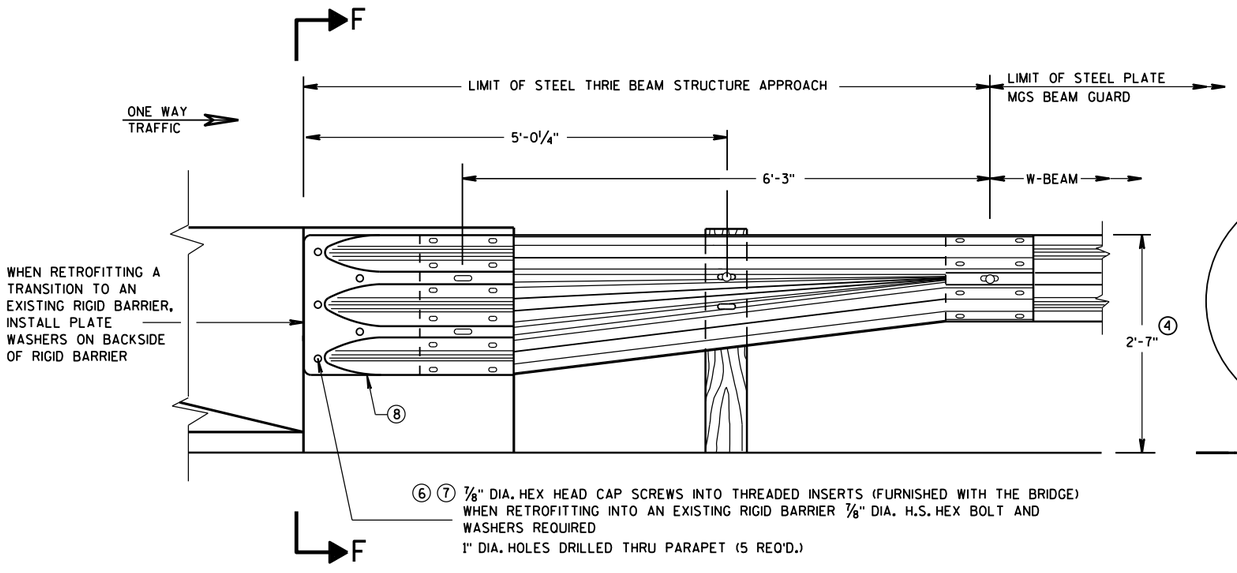
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

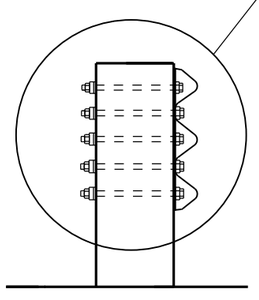
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

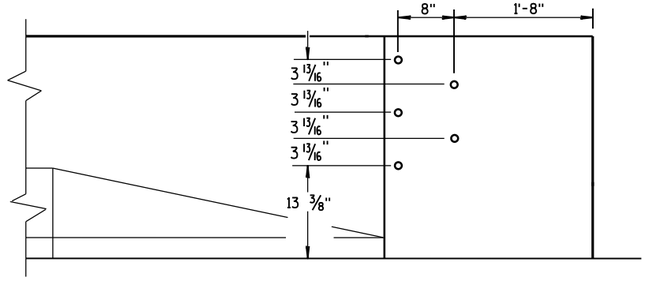




FRONT VIEW



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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
NT

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

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.

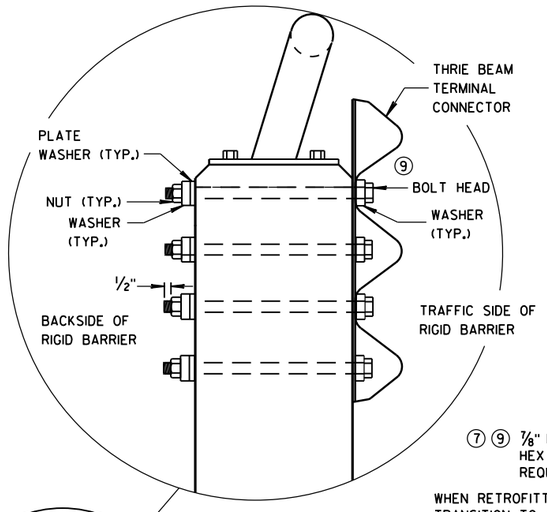
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

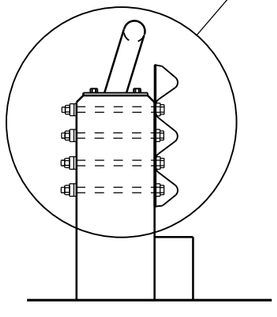
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

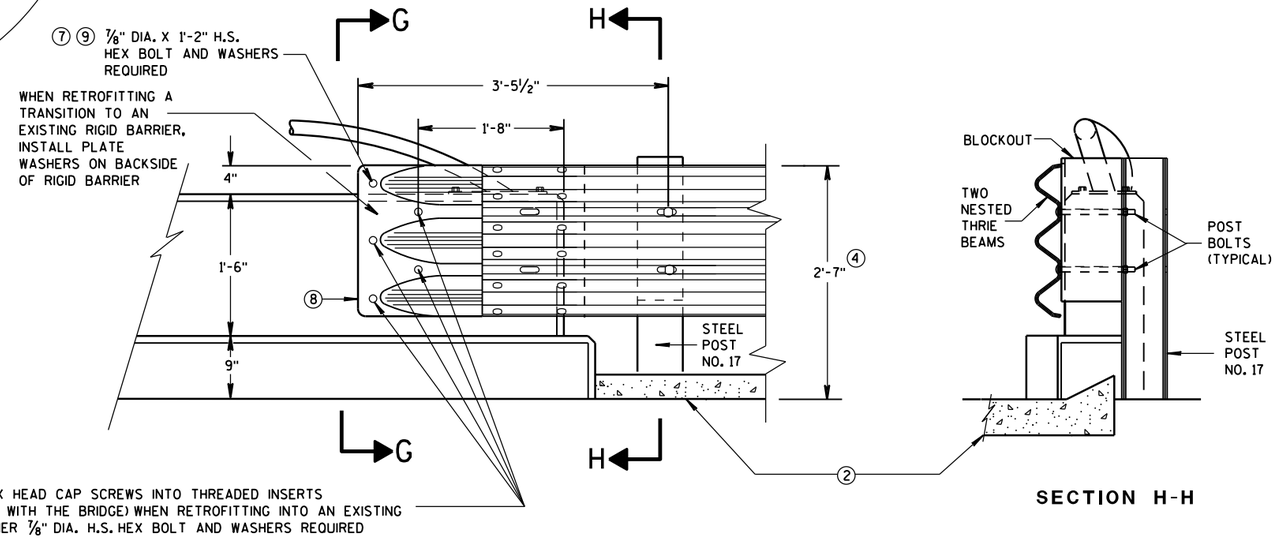
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(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.





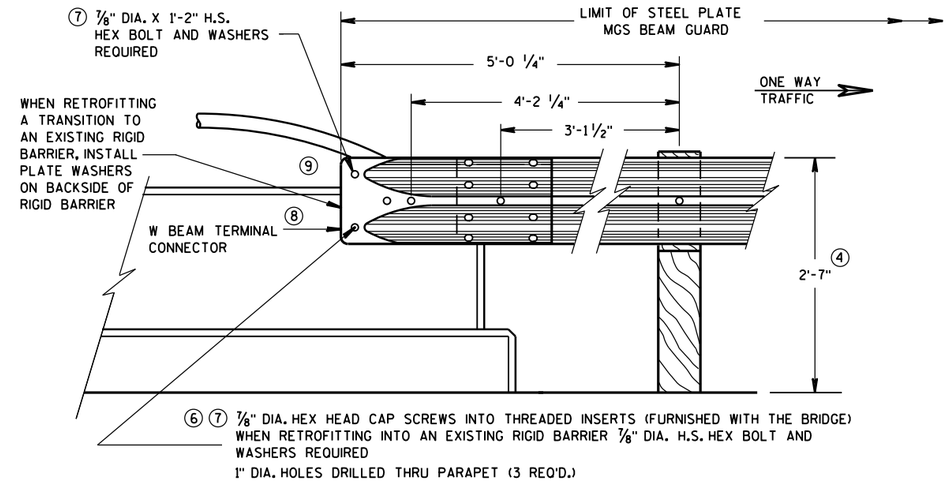
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

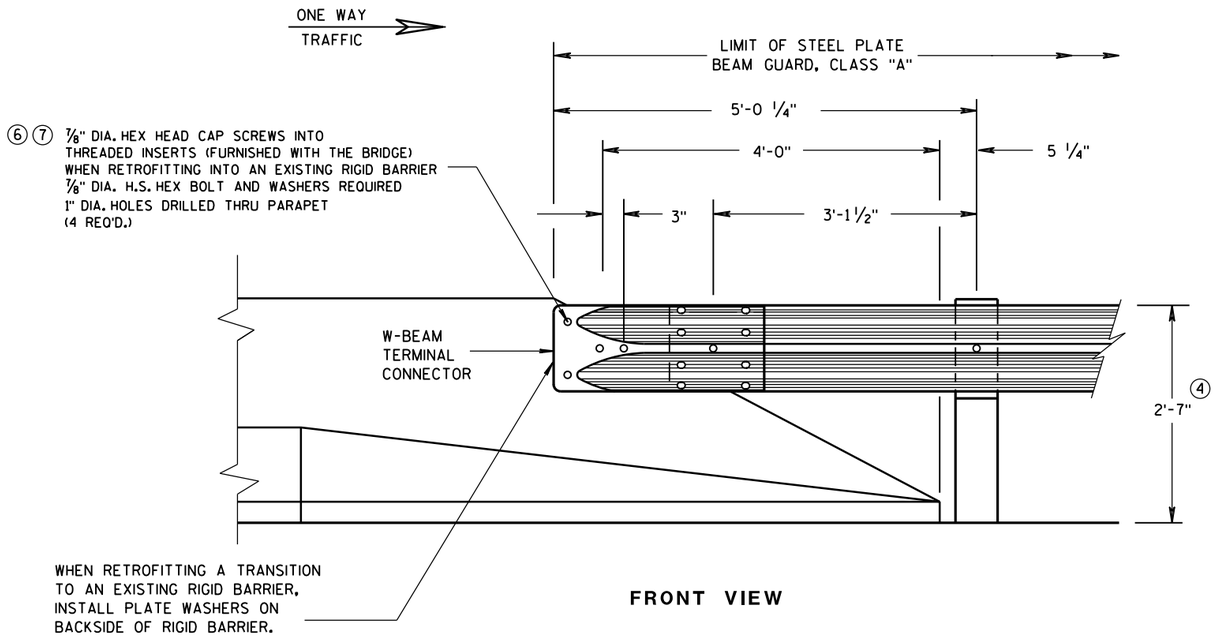
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 45-4e

6

S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

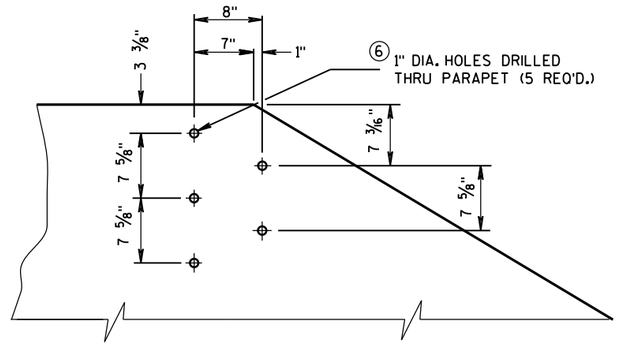
GENERAL NOTES

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

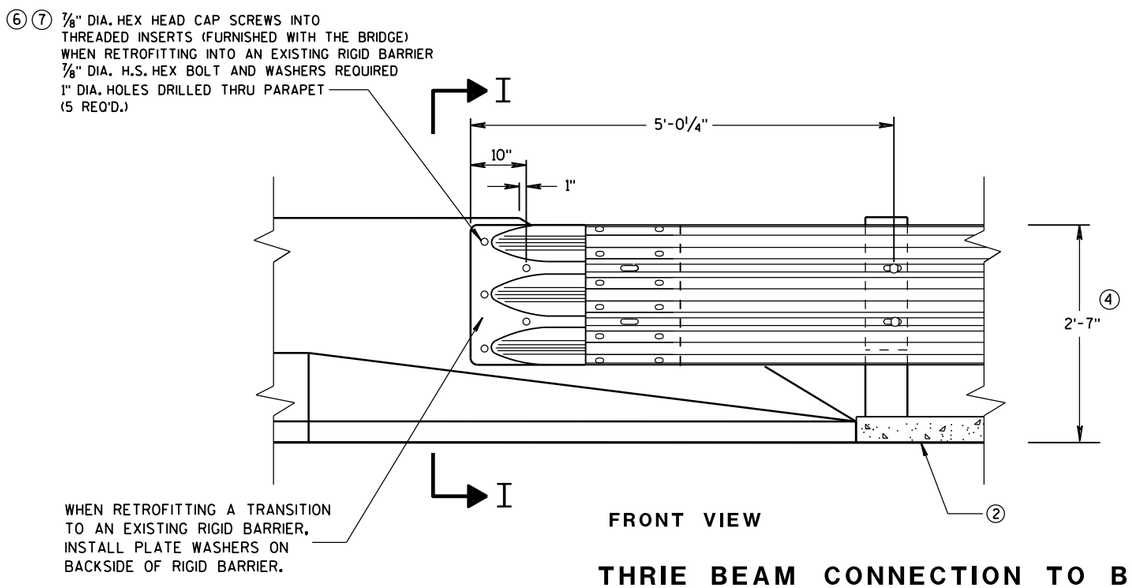
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

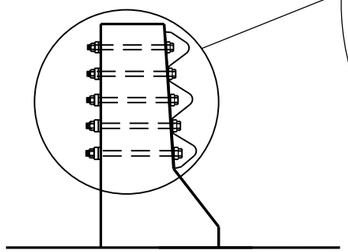
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



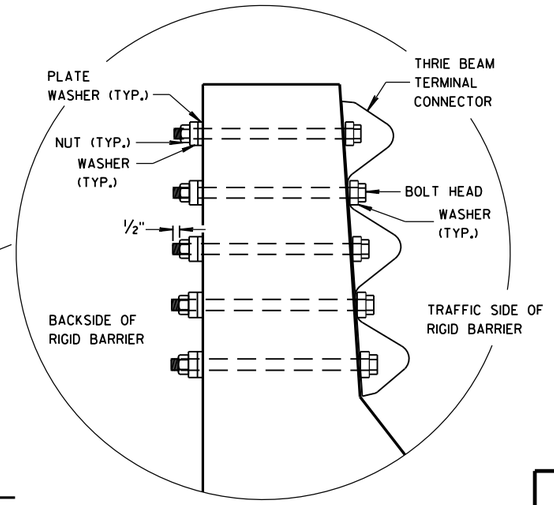
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

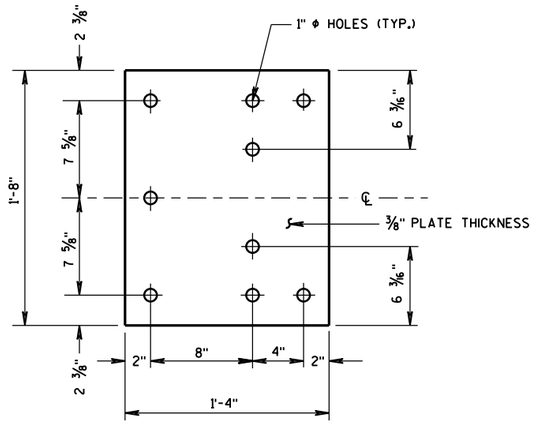
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

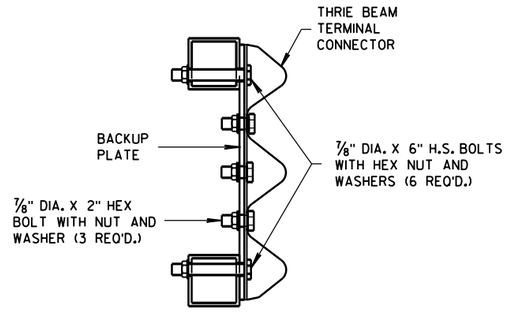
S.D.D. 14 B 45-4f

6

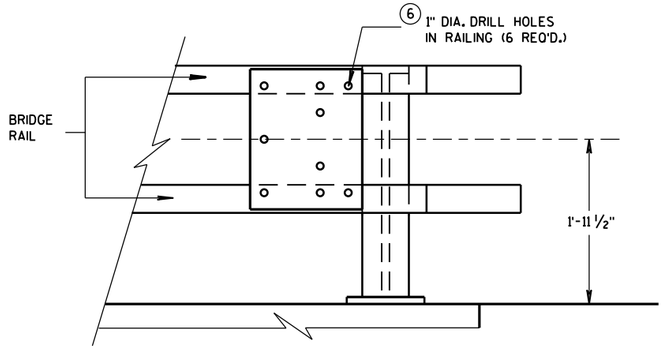
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

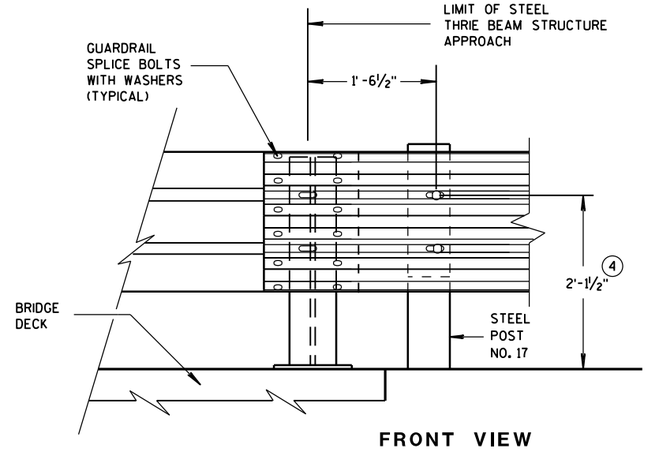


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

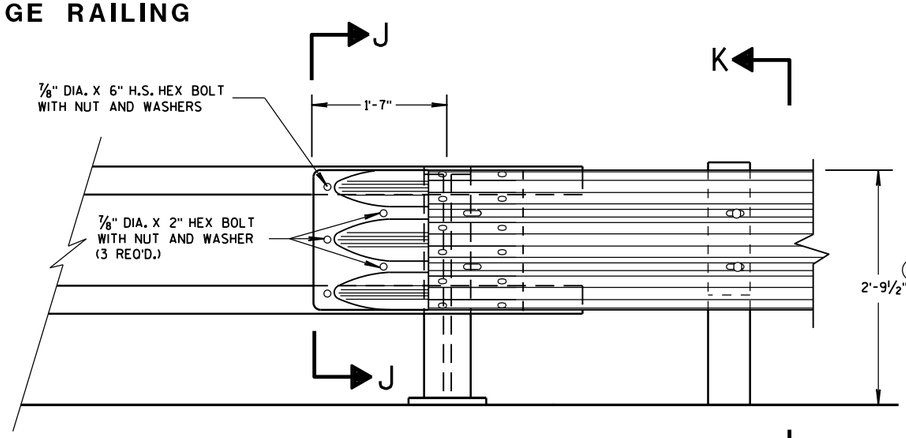
4 TOLERANCE FOR TOP OF BEAM IS ± 1".

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

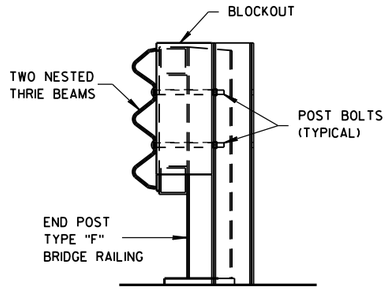


FRONT VIEW

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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

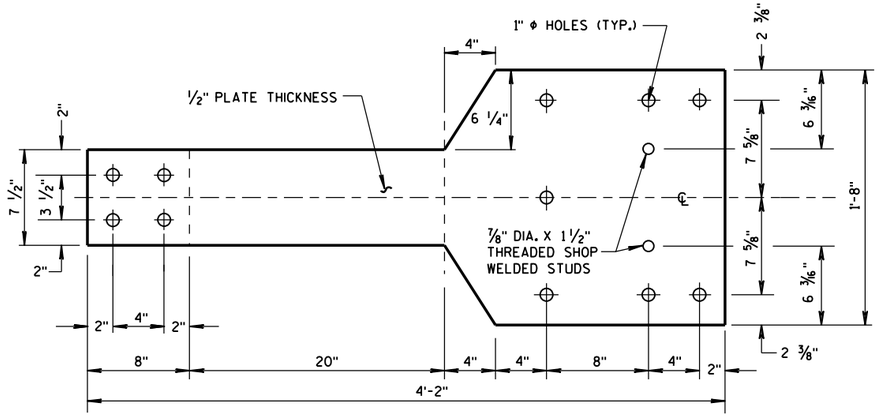
S.D.D. 14 B 45-4g

6

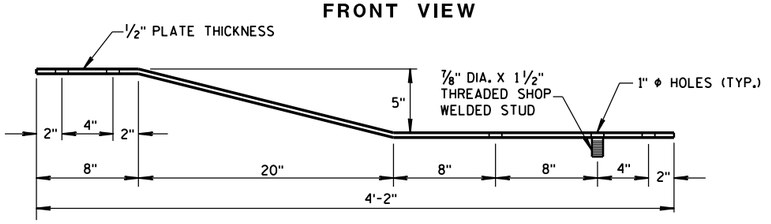
S.D.D. 14 B 45-4g

GENERAL NOTES

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

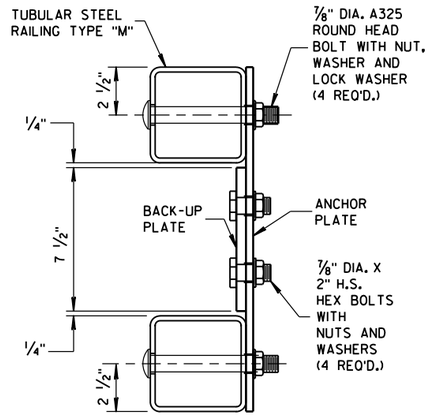


FRONT VIEW

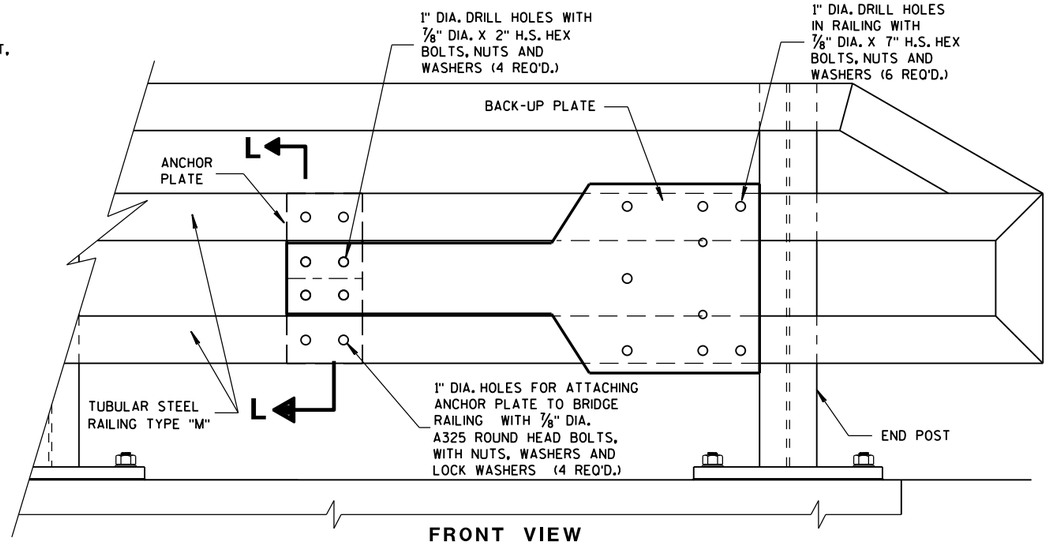


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

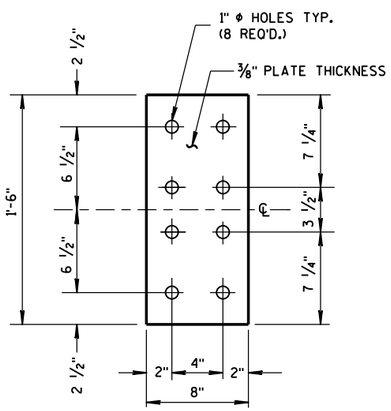


SECTION L-L



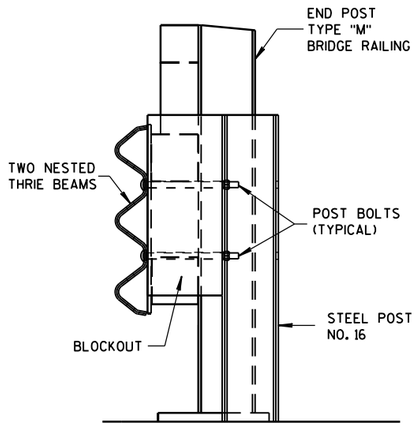
FRONT VIEW

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

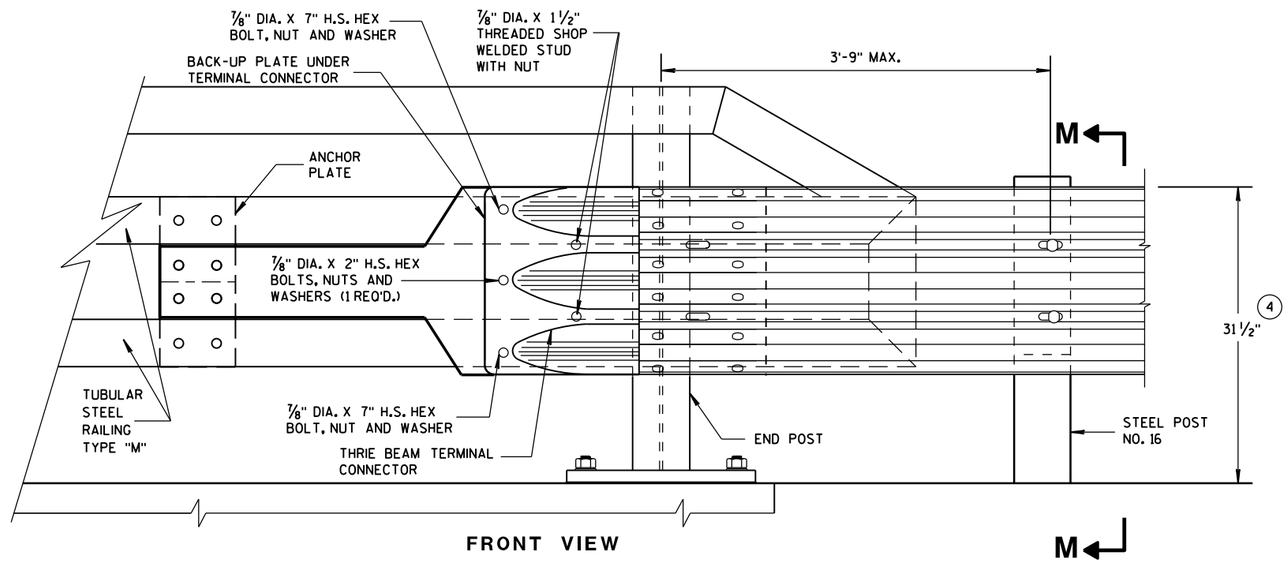


FRONT VIEW

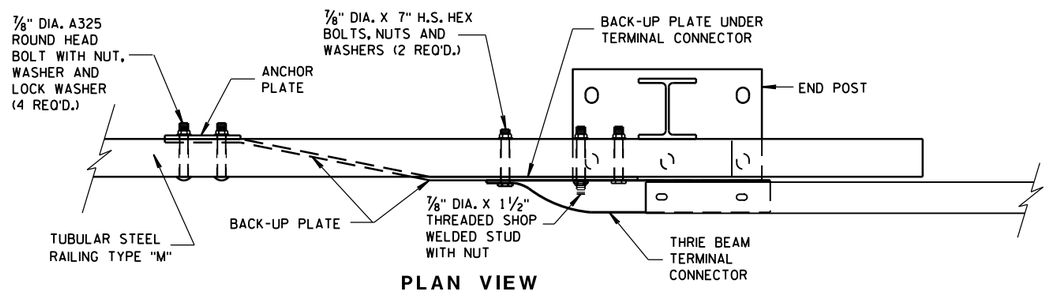
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-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	
June, 2015	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

S.D.D. 14 B 45-4h

6

S.D.D. 14 B 45-4h

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.

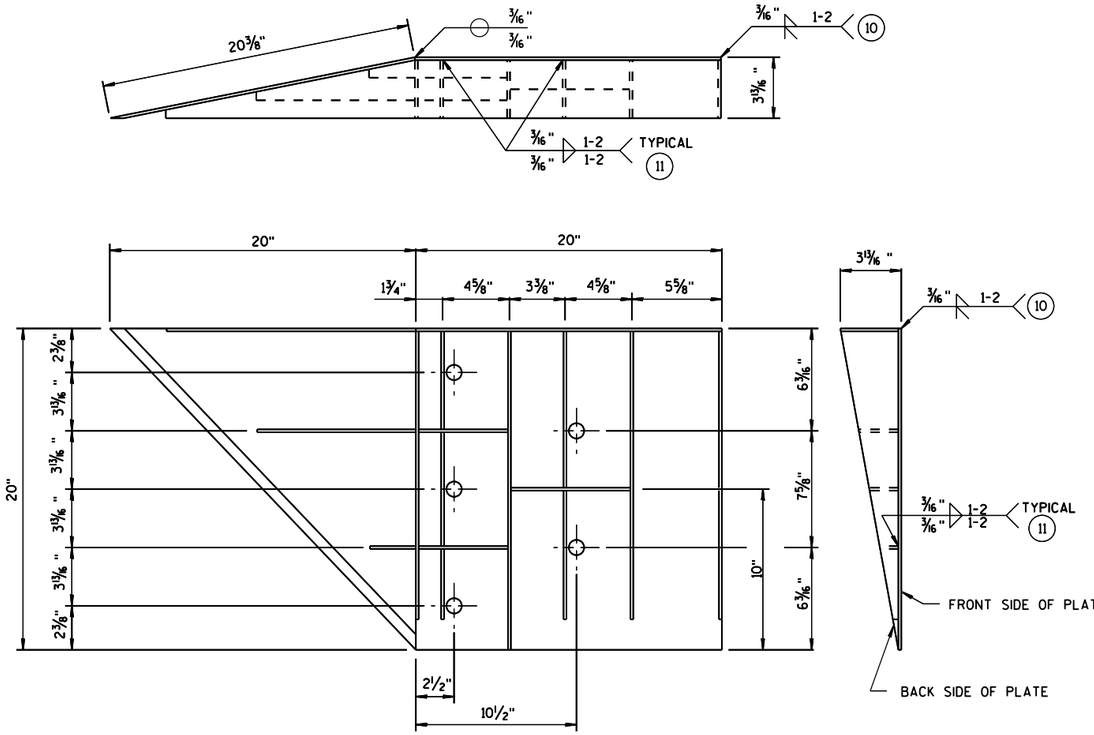
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

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".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

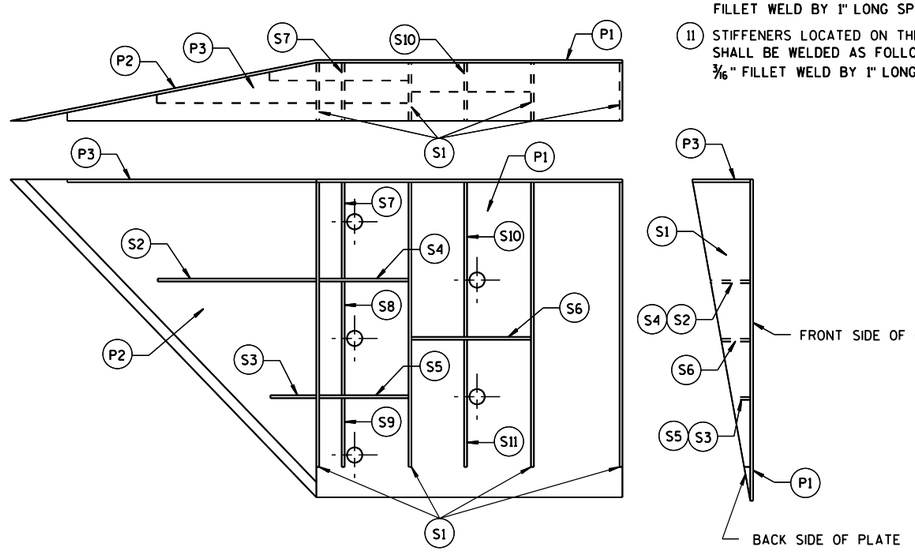


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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 3/8" 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 1/32"	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

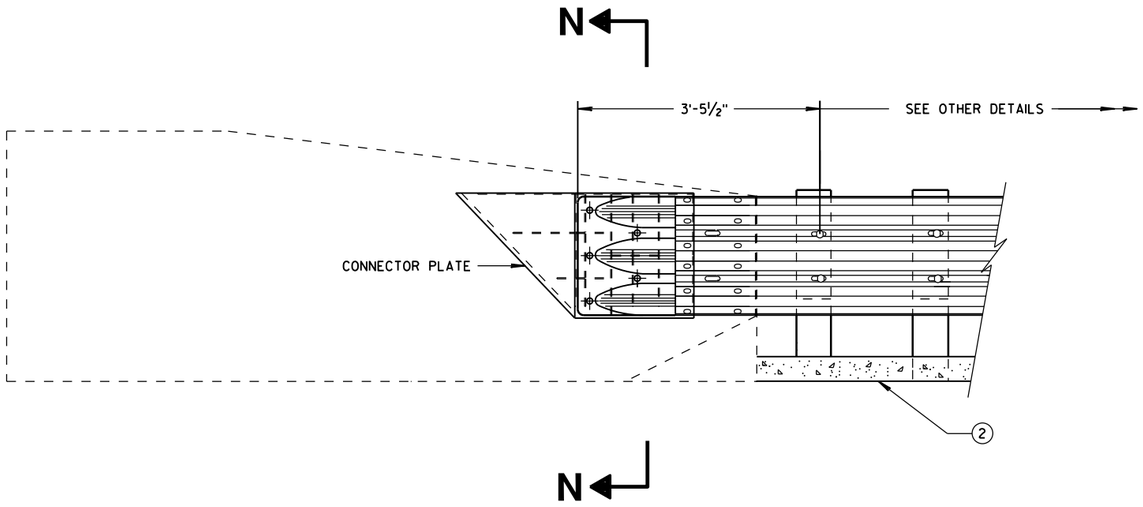
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

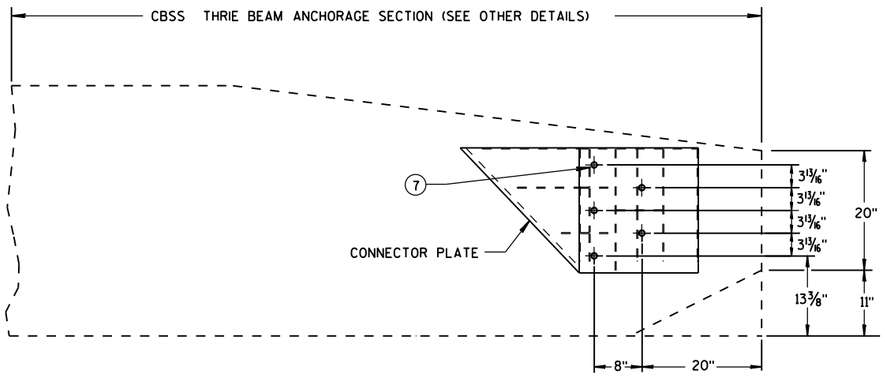
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



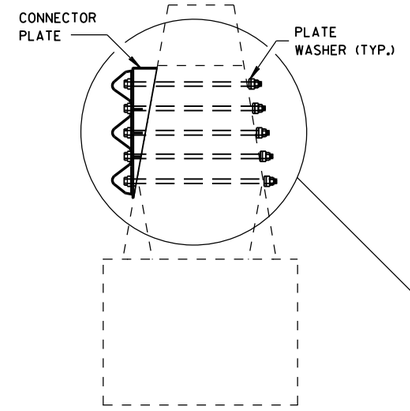
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

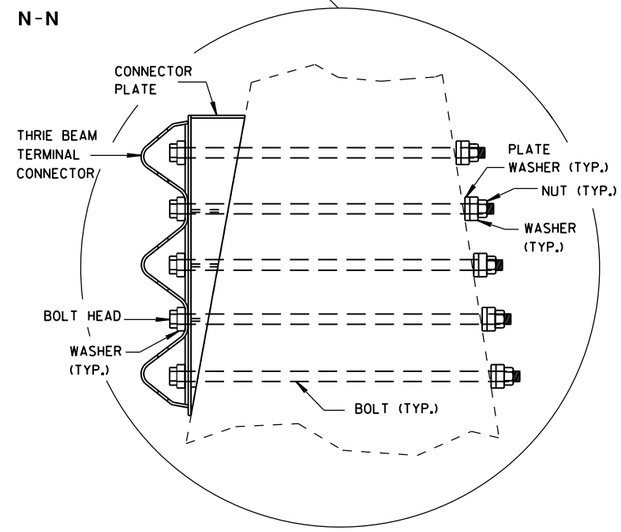
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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 5/8" 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

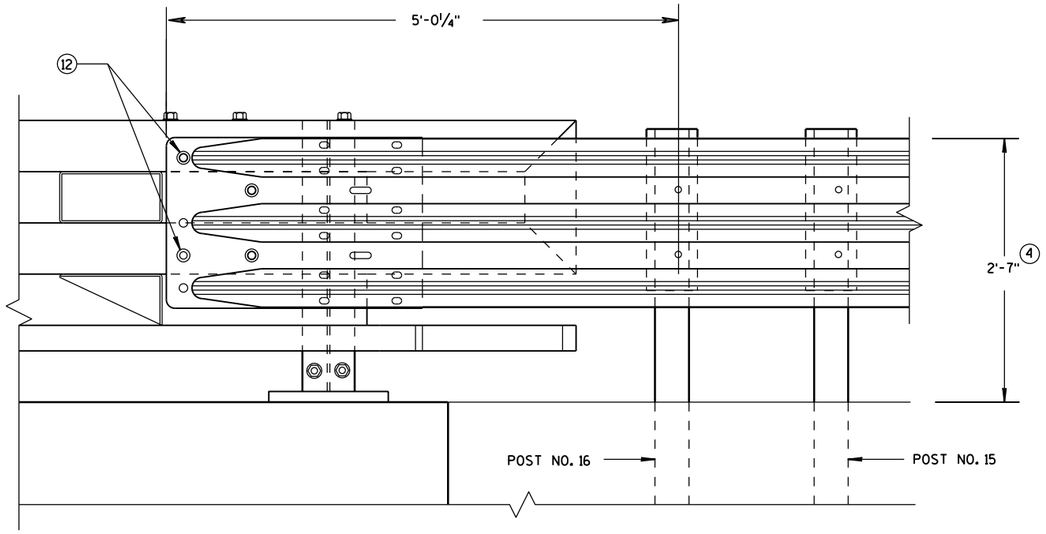
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 45-4j

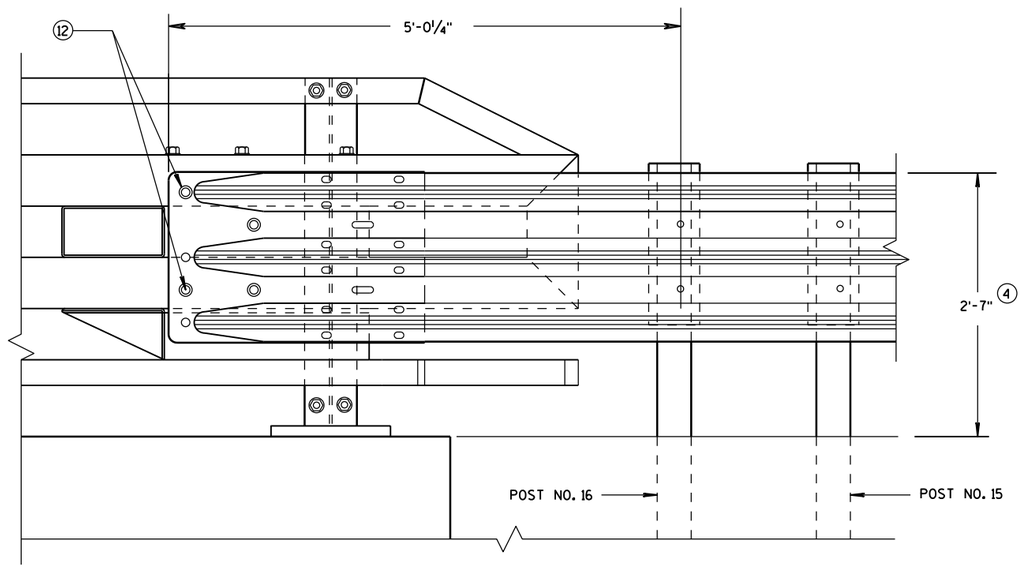
6

S.D.D. 14 B 45-4j



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 ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 226 NT
ENGINEER

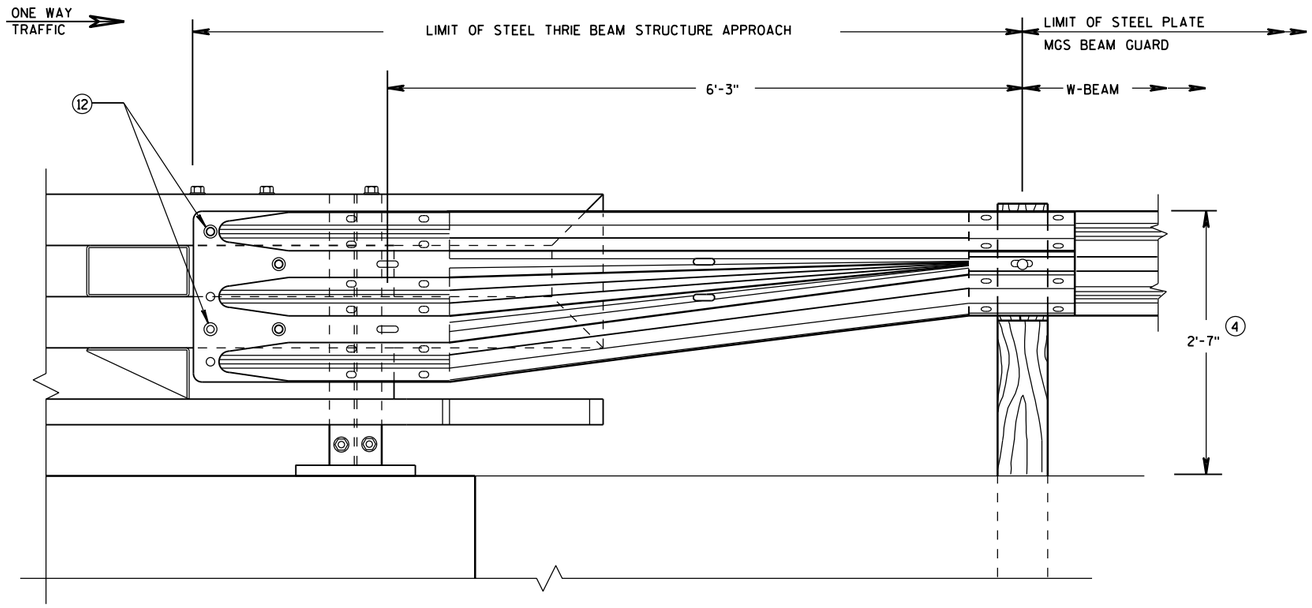
FHWA

6

S.D.D. 14 B 45-4k

6

S.D.D. 14 B 45-4k



FRONT VIEW

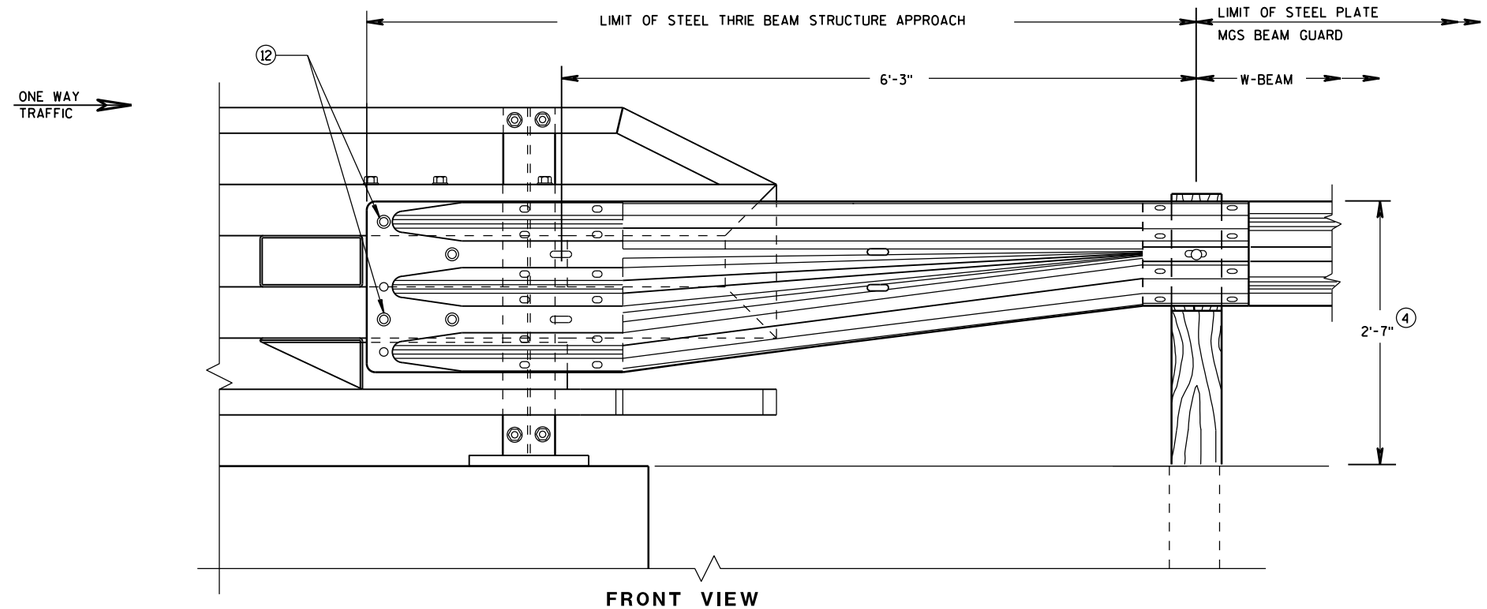
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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 ½-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
DEPARTMENT OF TRANSPORTATION

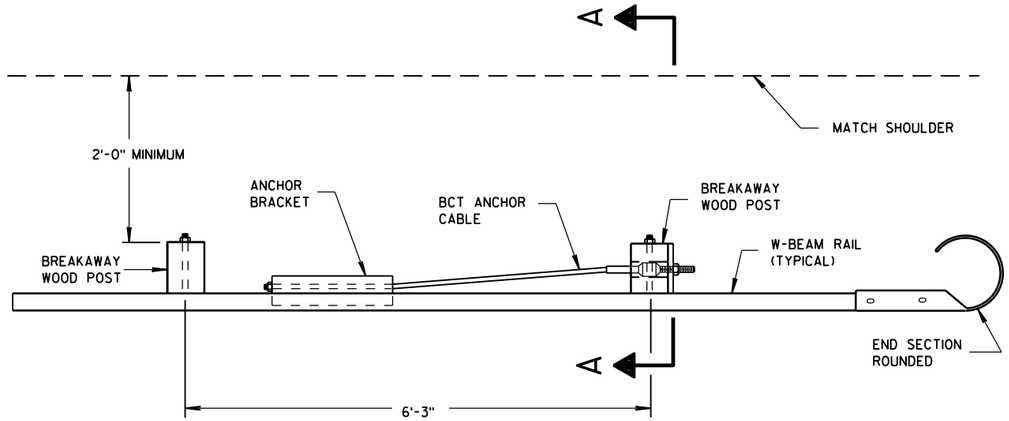
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
D 227 NT
FHWA

6

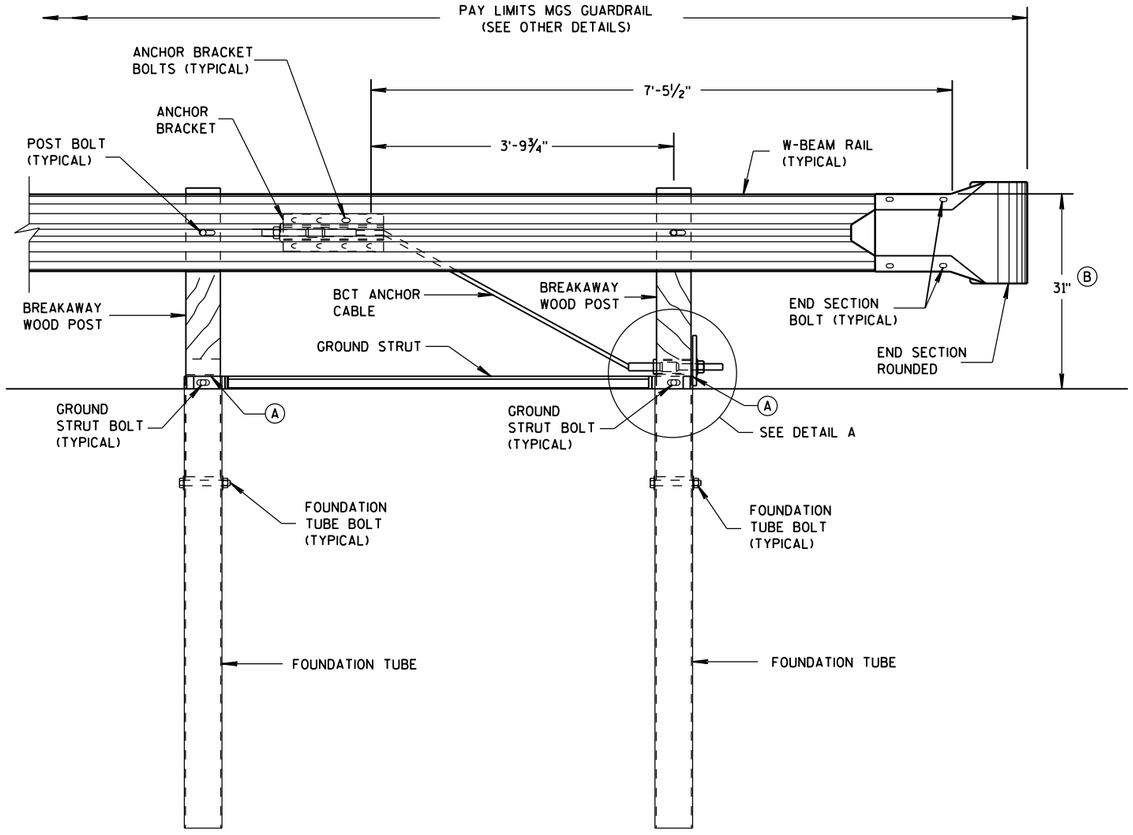
S.D.D. 14 B 45-4L

6

S.D.D. 14 B 45-4L

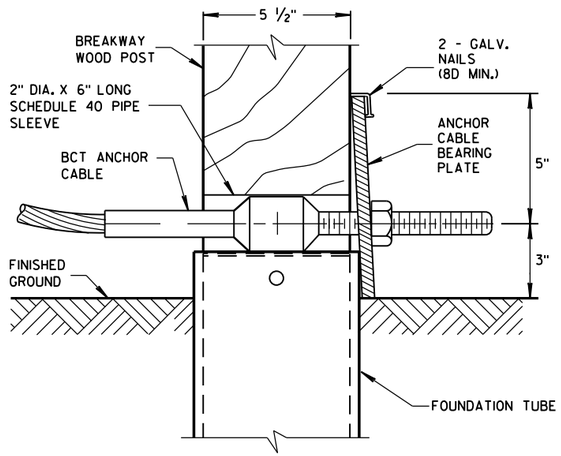


PLAN VIEW



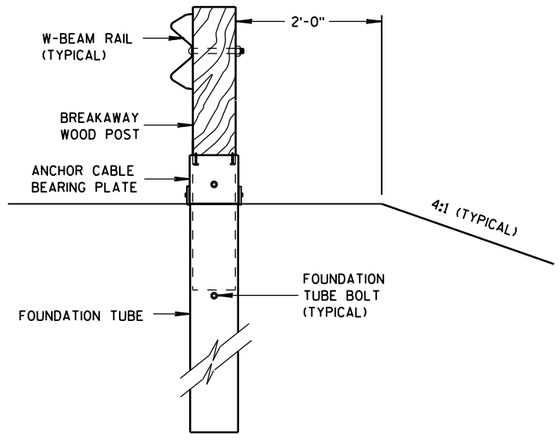
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

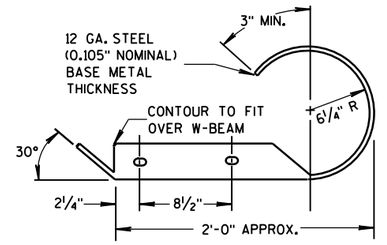
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

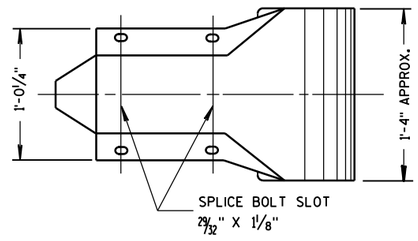
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



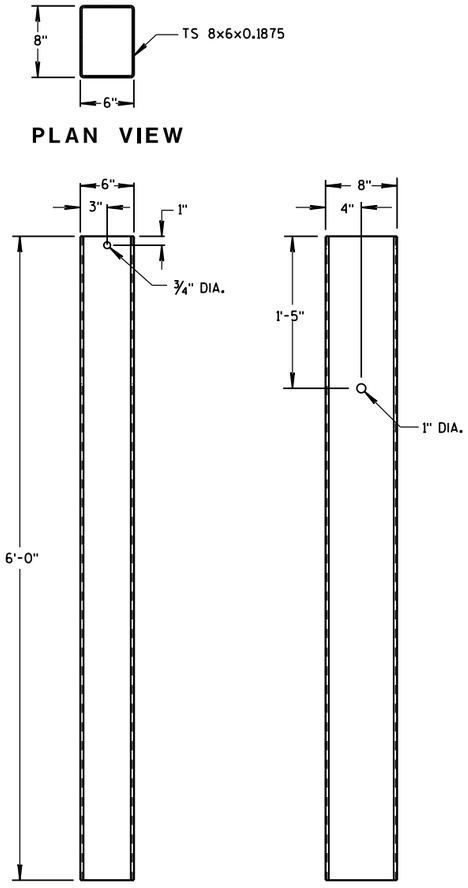
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

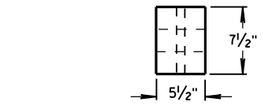
6
S.D.D. 14 B 47-2a



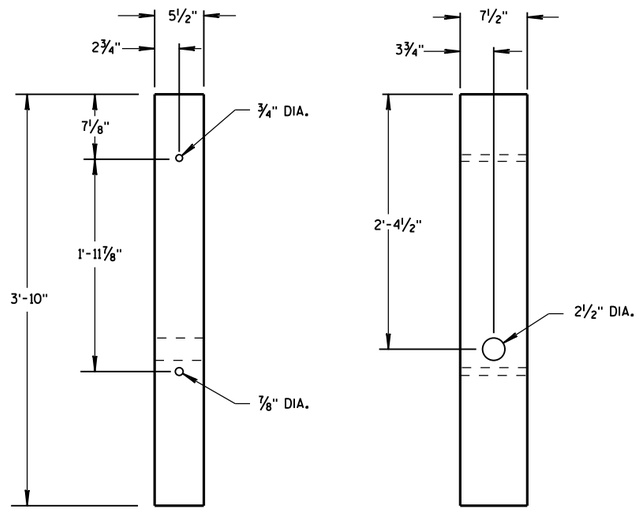
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



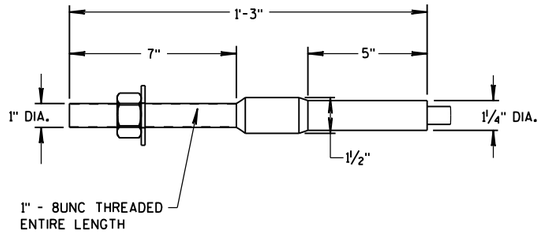
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

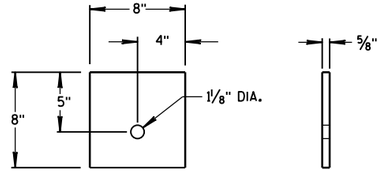
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

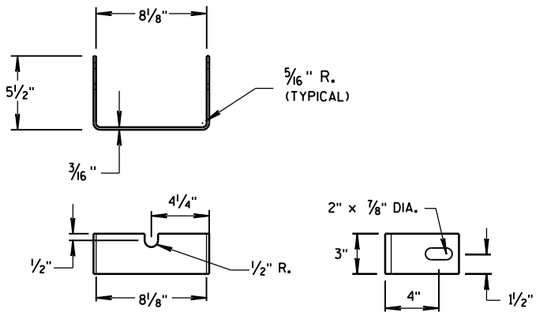
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

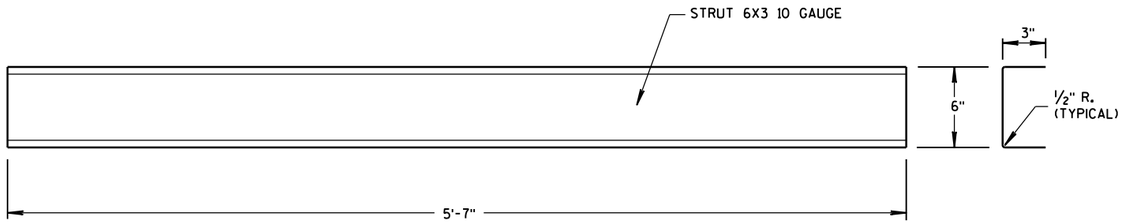
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

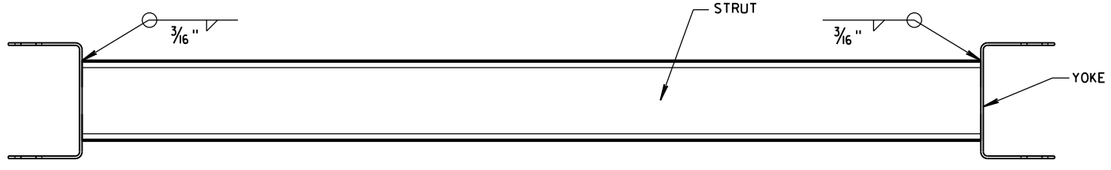
S.D.D. 14 B 47-2b



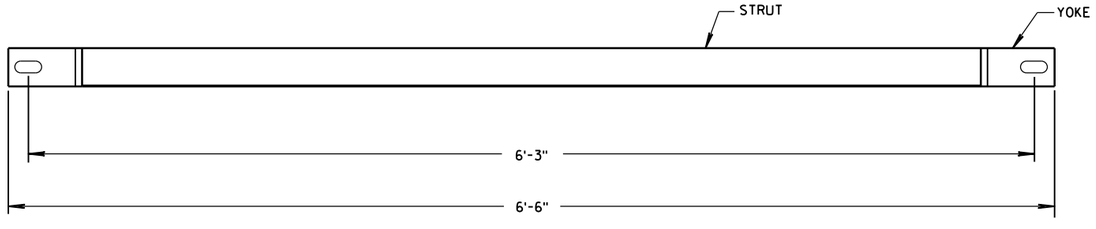
YOKE DETAIL



STRUT DETAIL

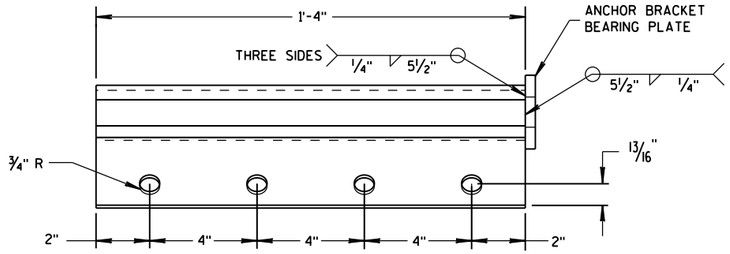


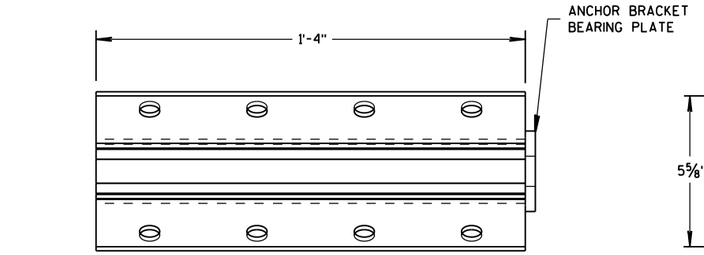
PLAN VIEW

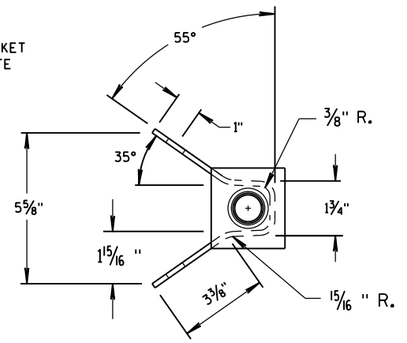


FRONT VIEW

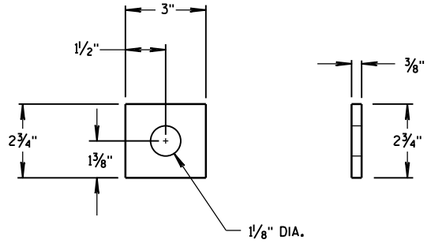
GROUND STRUT DETAIL







ANCHOR BRACKET



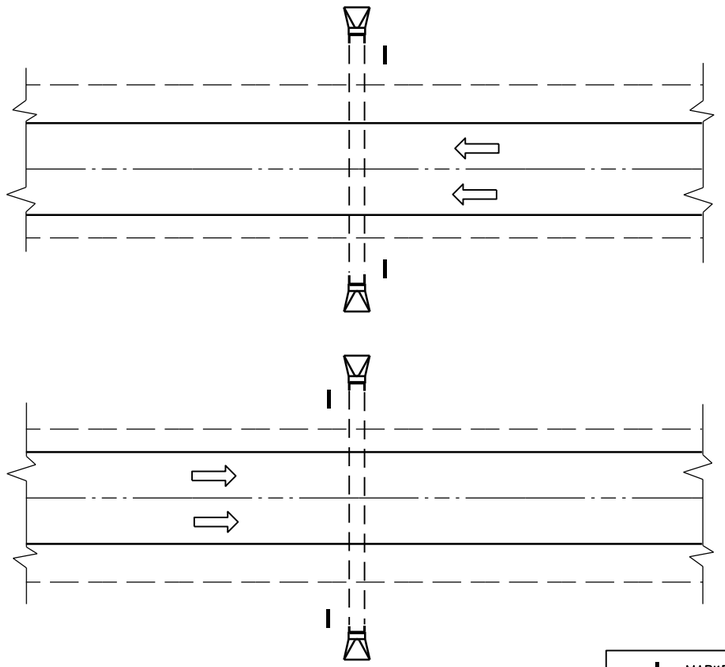
ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

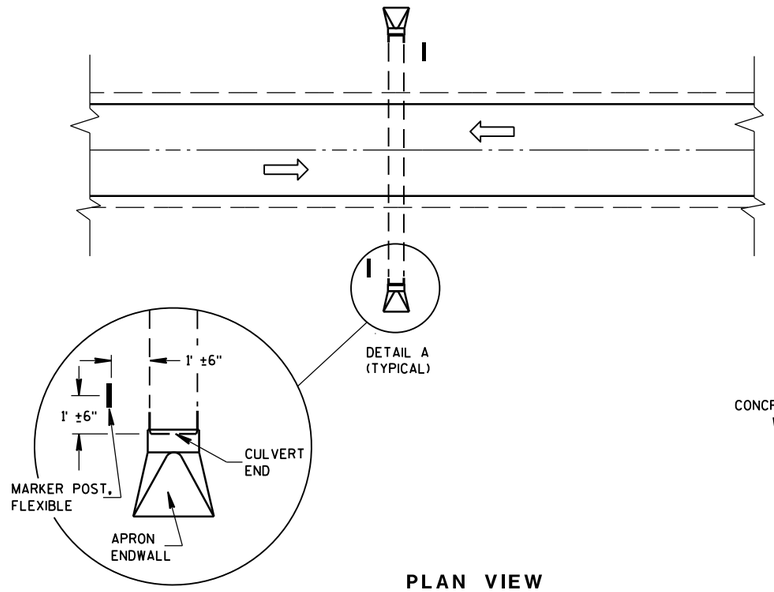
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 47-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

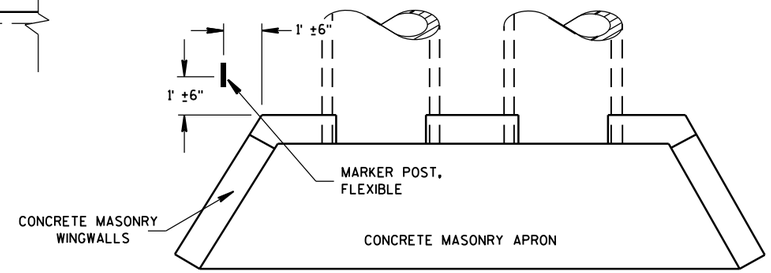
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

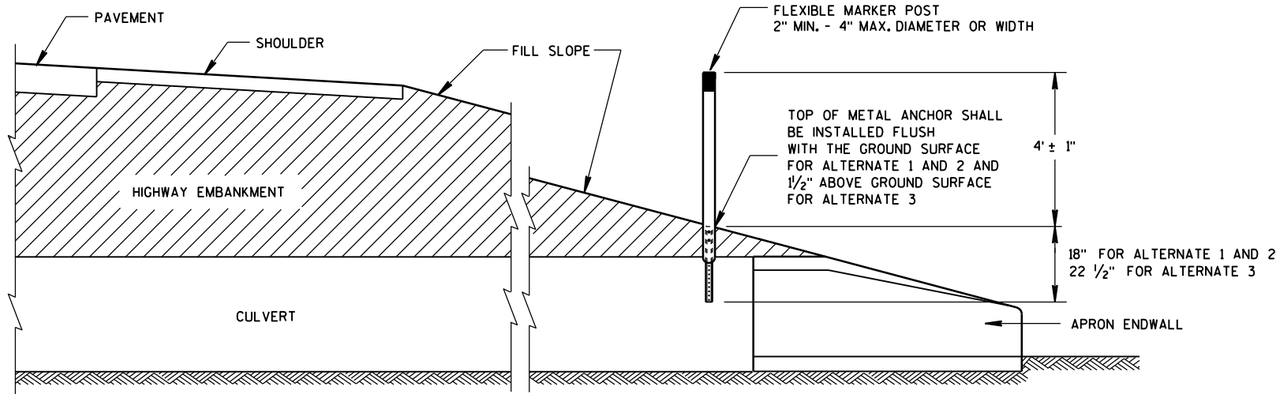
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

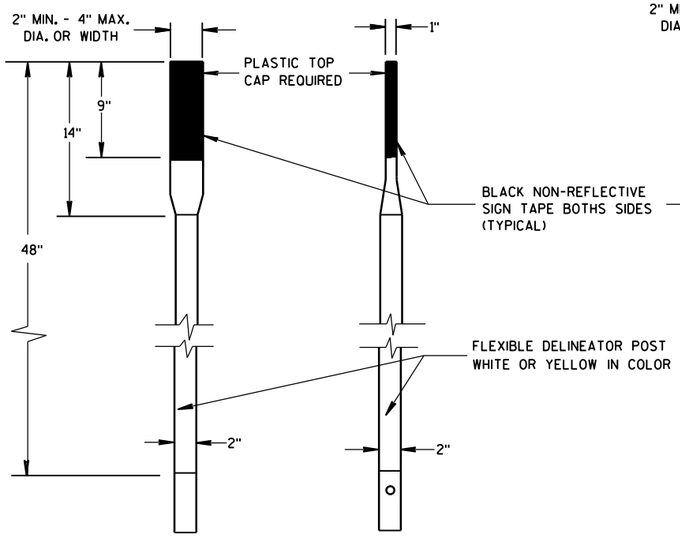
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

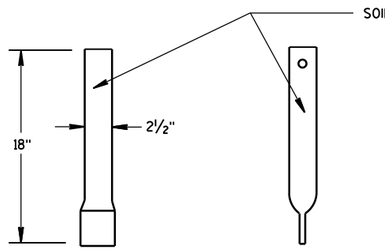
6

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

6

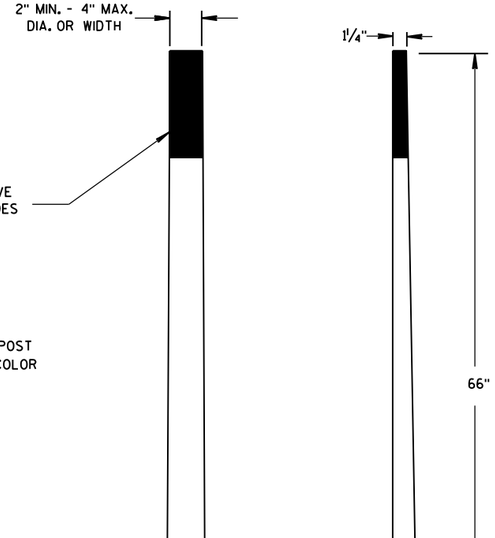
S.D.D. 15 A 3-2a





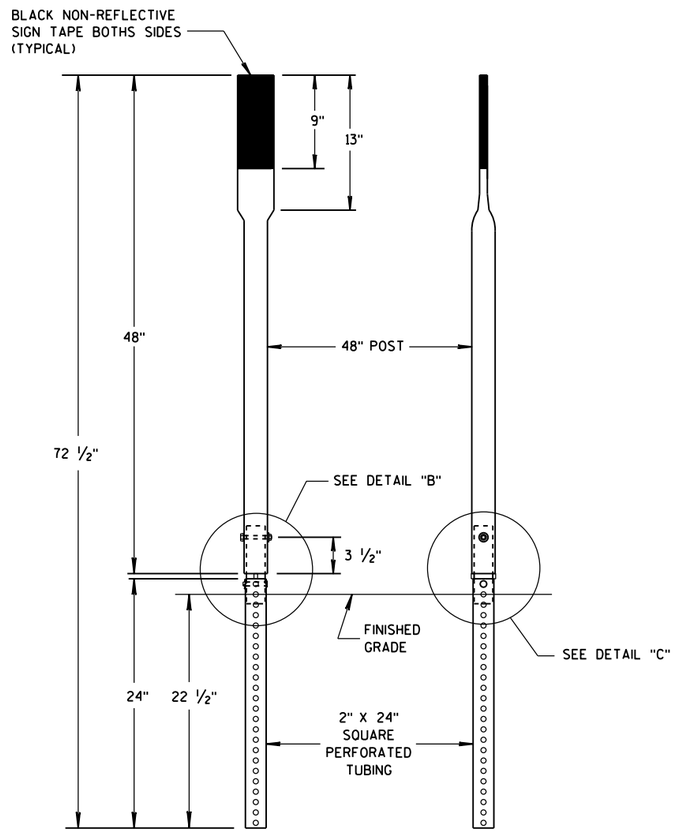
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

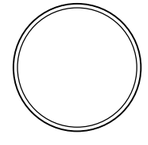
ALTERNATE 2



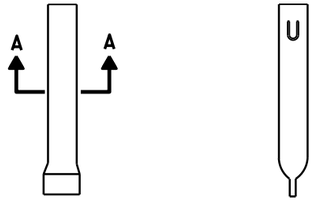
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

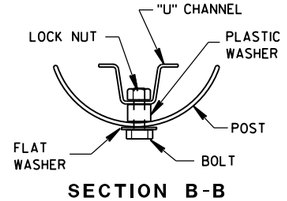


SECTION A-A

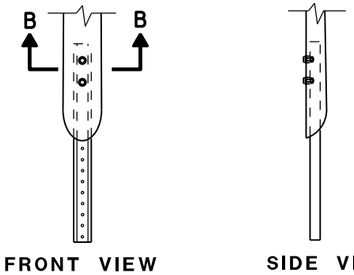


FRONT VIEW SIDE VIEW

ALTERNATE 1

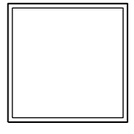


SECTION B-B

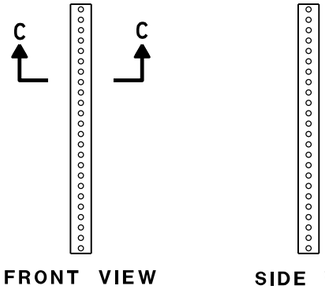


FRONT VIEW SIDE VIEW

ALTERNATE 2



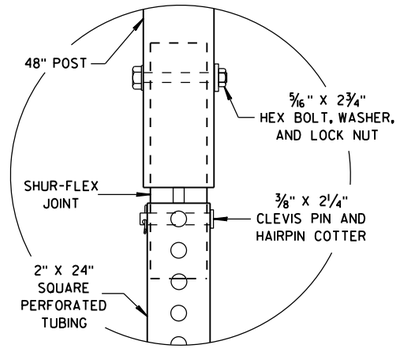
SECTION C-C



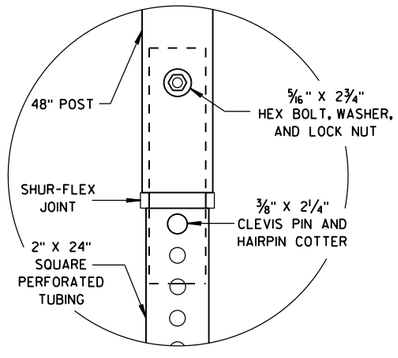
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

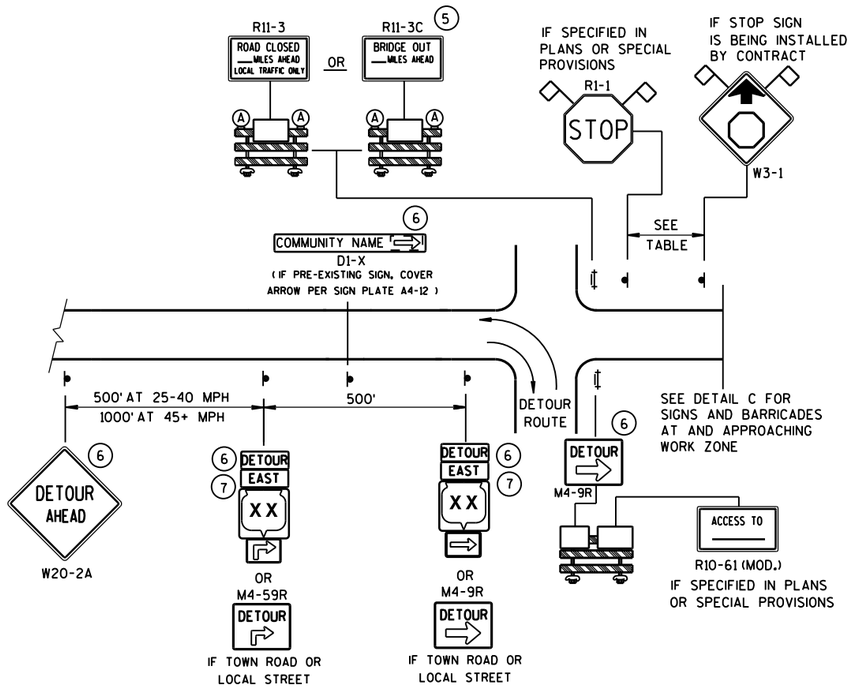
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

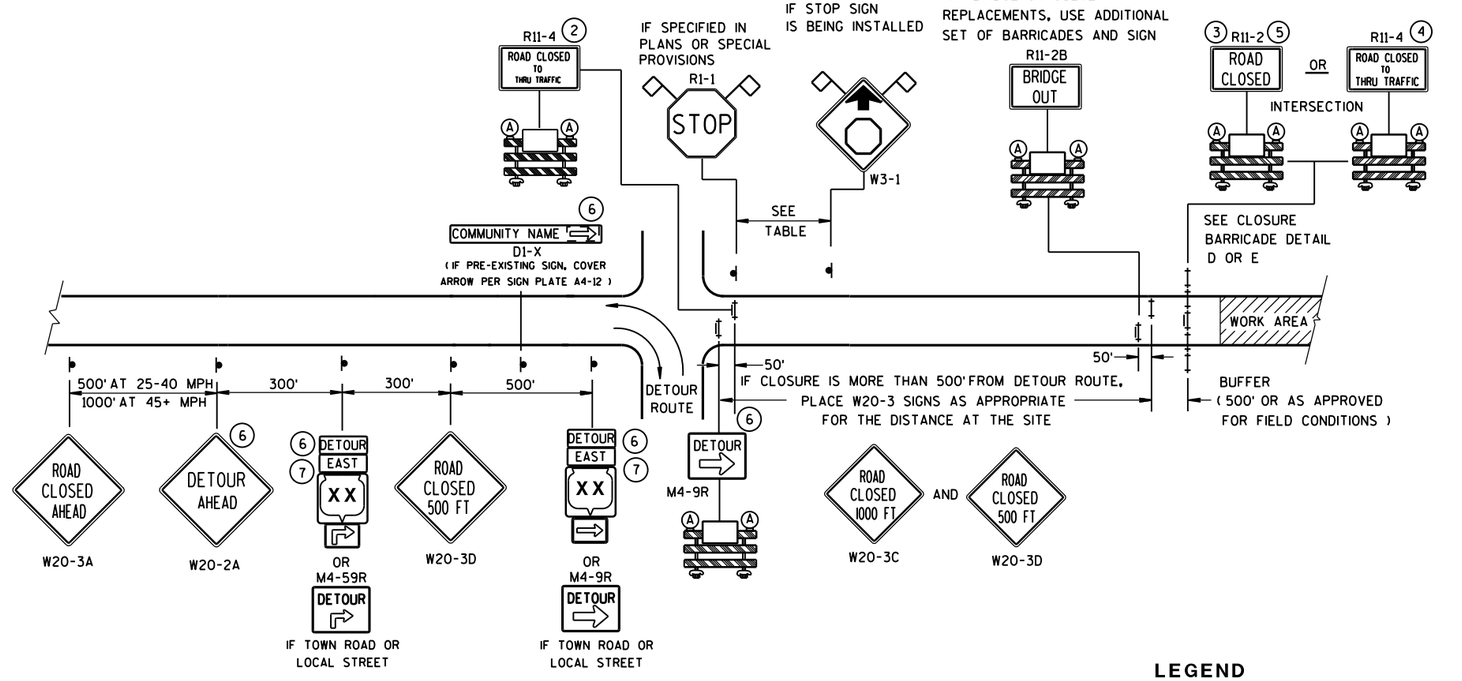
6

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



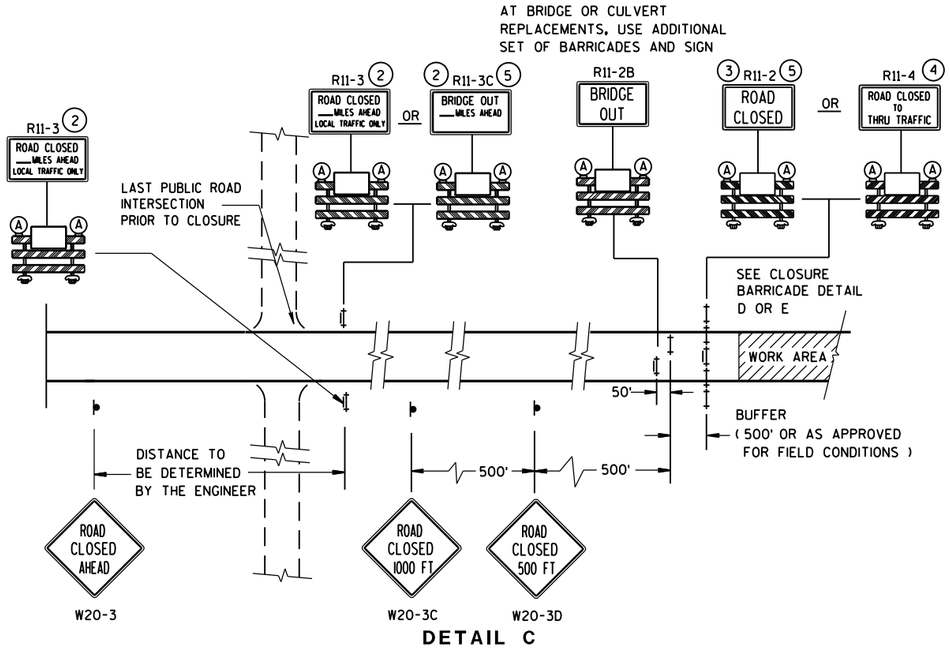
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

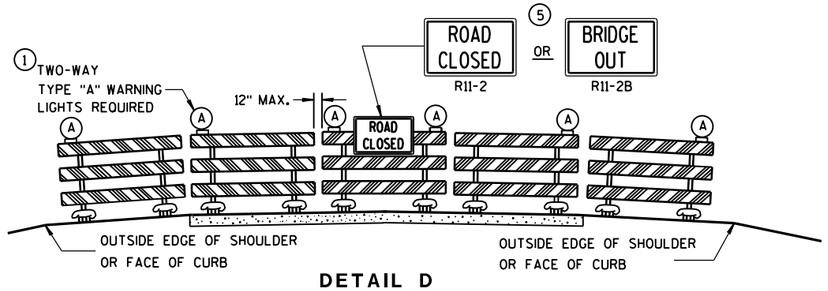
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

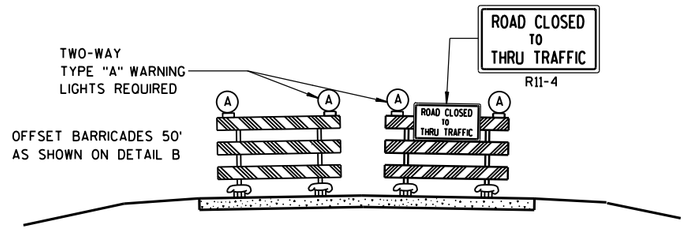
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI
FHWA — FIC

6

S.D.D. 15 C 2-6b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

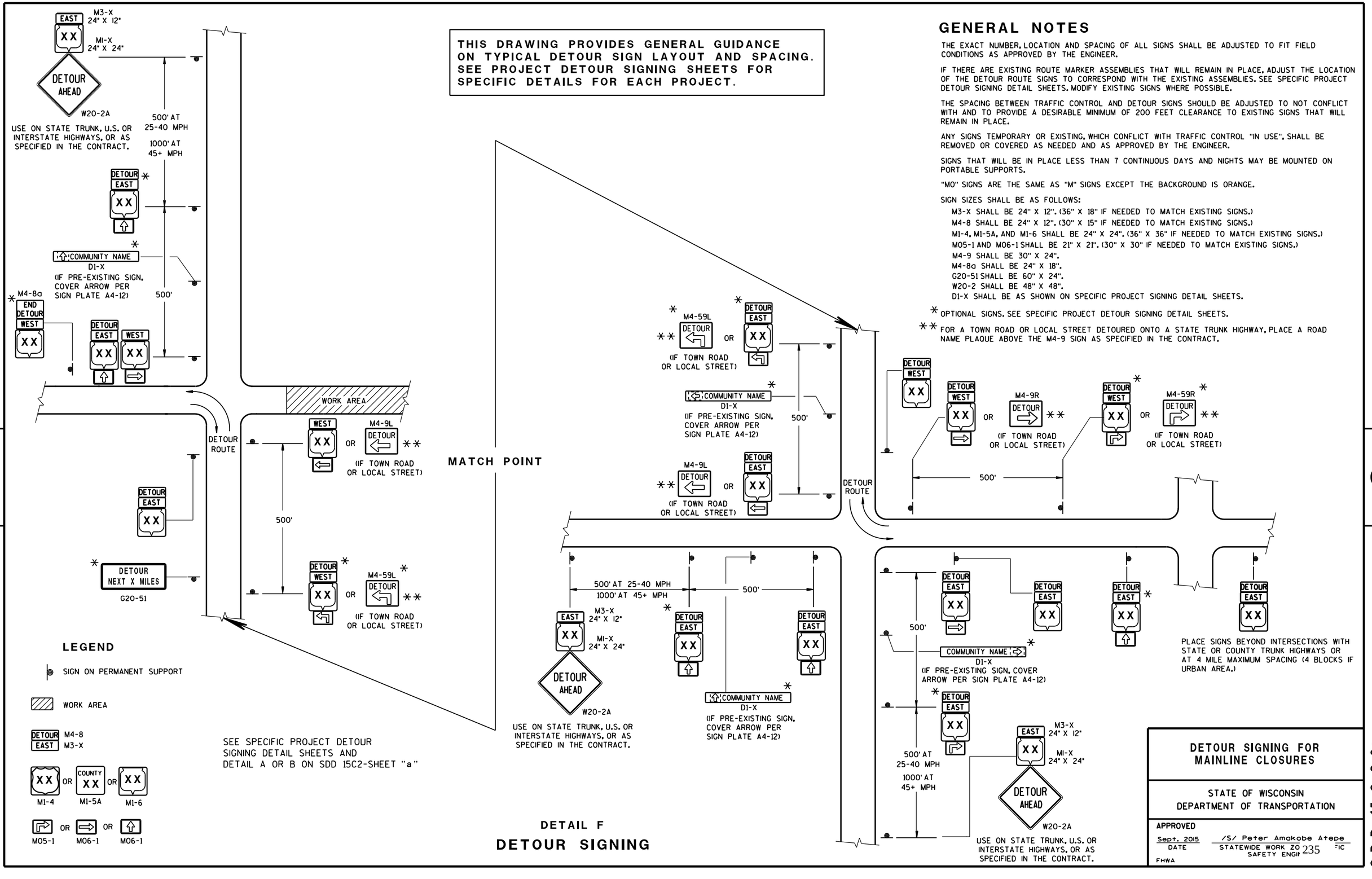
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" 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.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

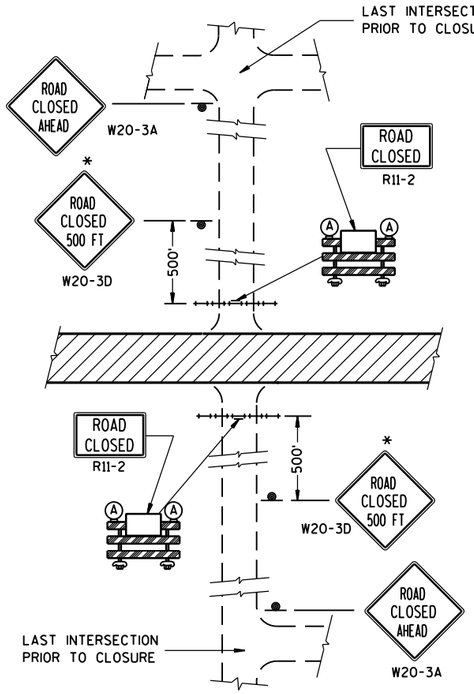
Sept. 2015 — DATE

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

FHWA

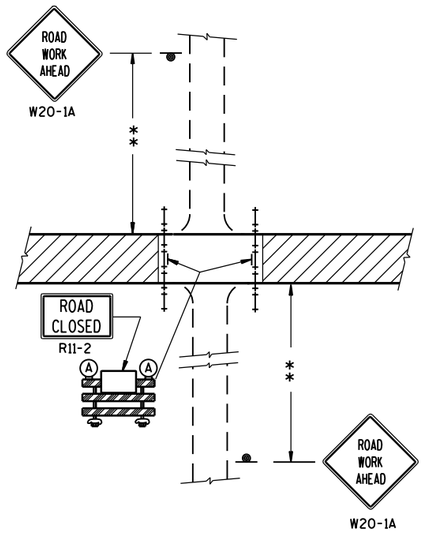
S.D.D. 15 C 2-6c

6



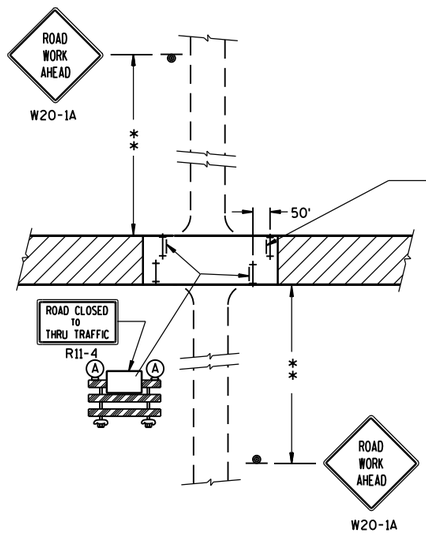
DETAIL 1

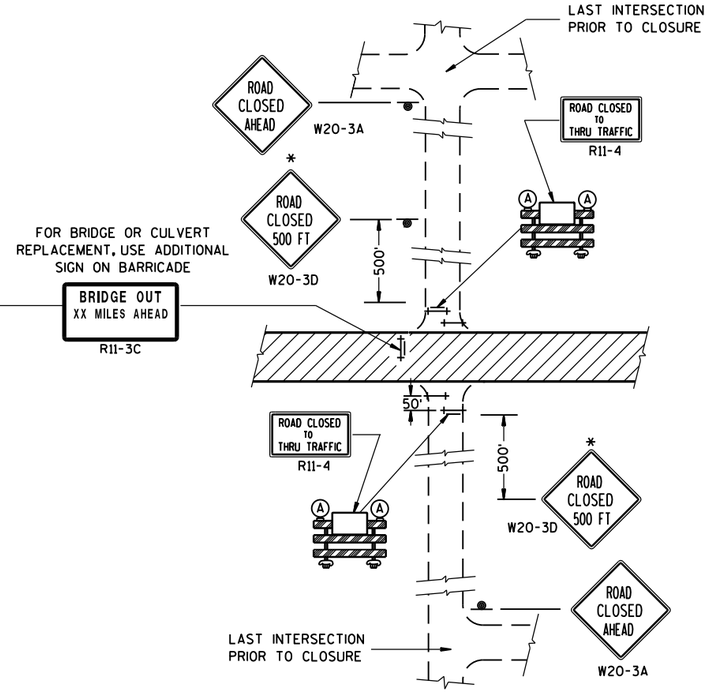
(NO ACCESS TO PROJECT)



DETAIL 2

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





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).

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 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 RE-ESTABLISHED.

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 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 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... FIC
FHWA

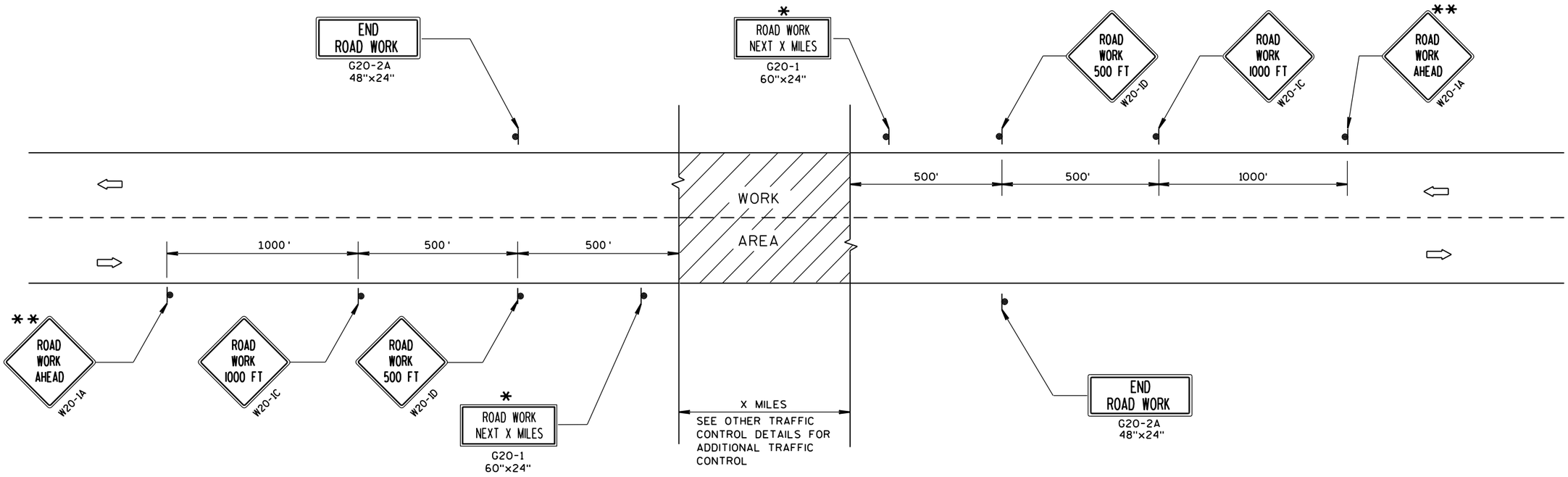
6

S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



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.

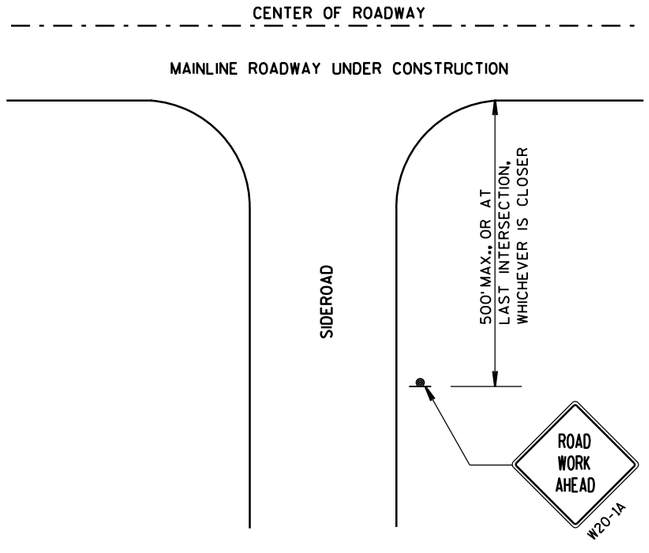
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

S.D.D. 15 C 4-3

6

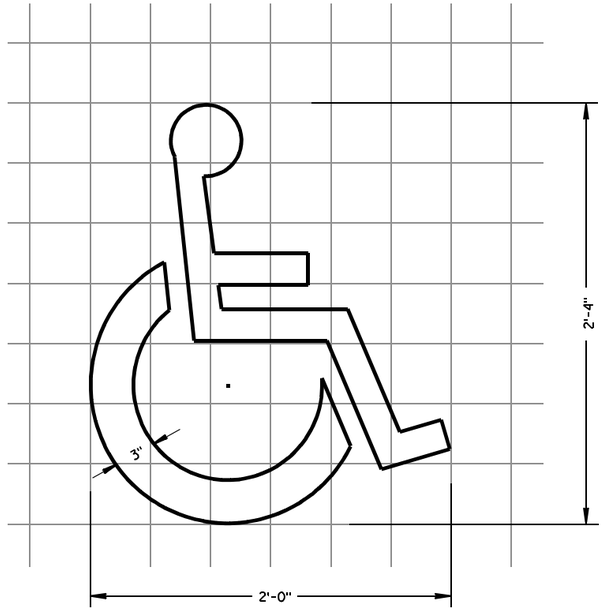
S.D.D. 15 C 4-3

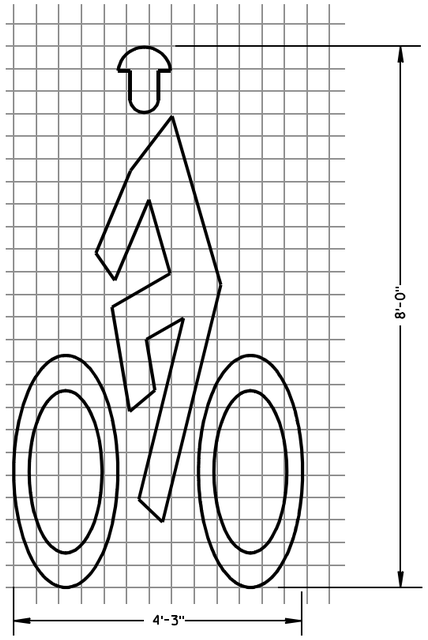
GENERAL NOTES

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.

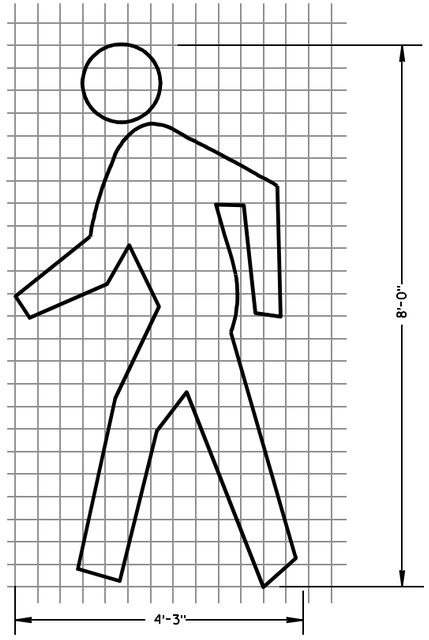
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

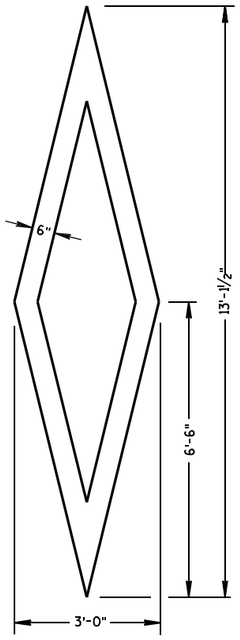




BIKE CROSSING SYMBOL



PEDESTRIAN SYMBOL



PREFERENTIAL LANE SYMBOL

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 DATE

/S/ Thomas N Nathan STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12a

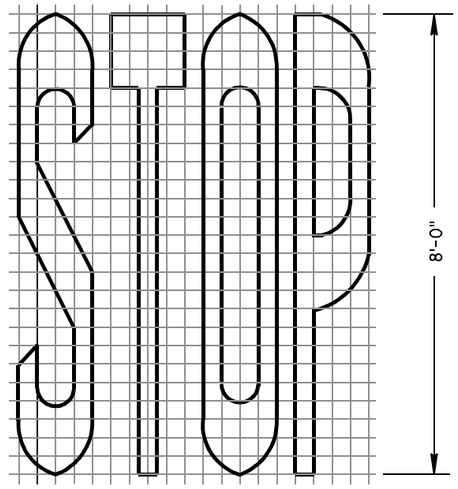
6

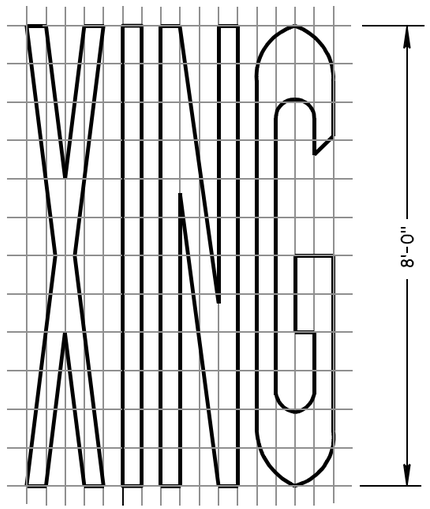
S.D.D. 15 C 7-12a

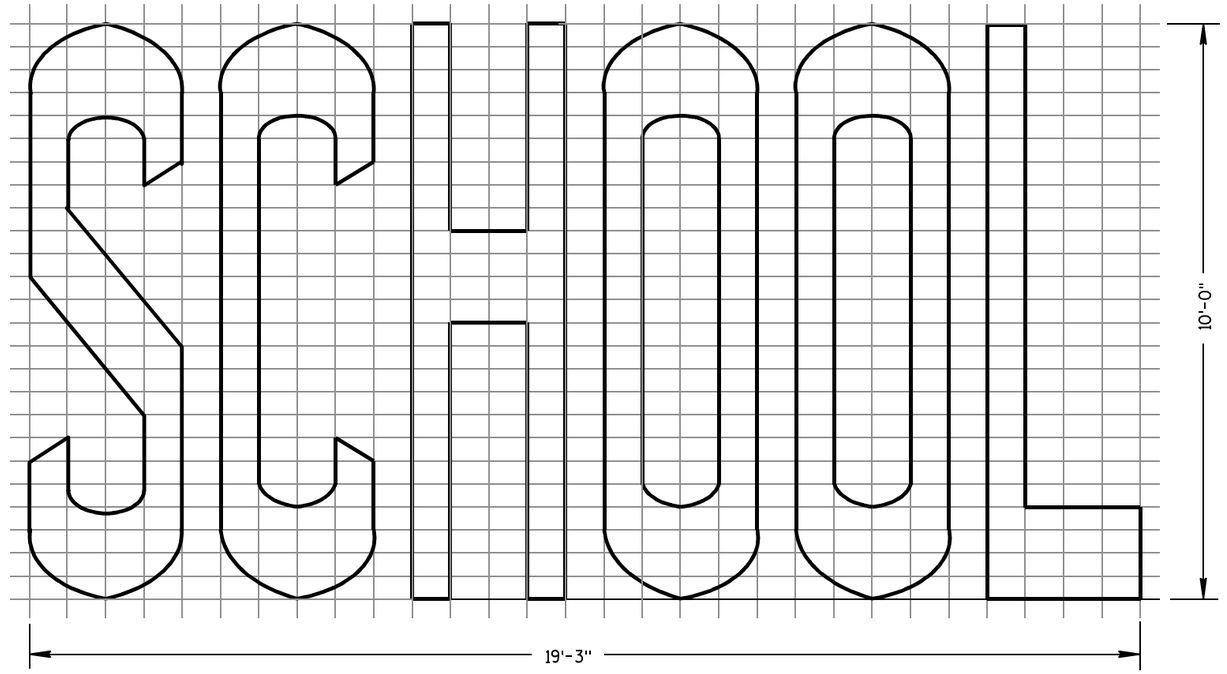
GENERAL NOTES

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.

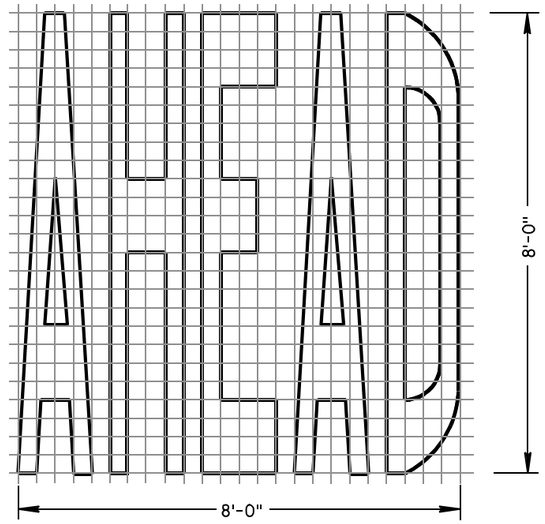
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

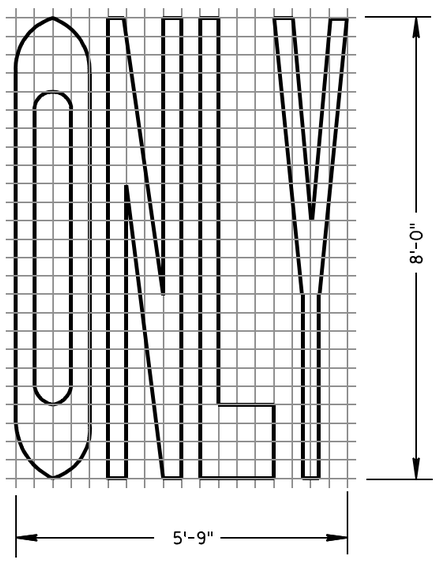


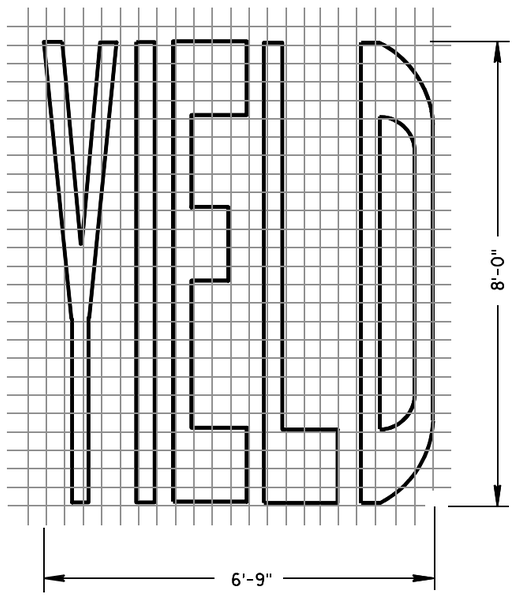


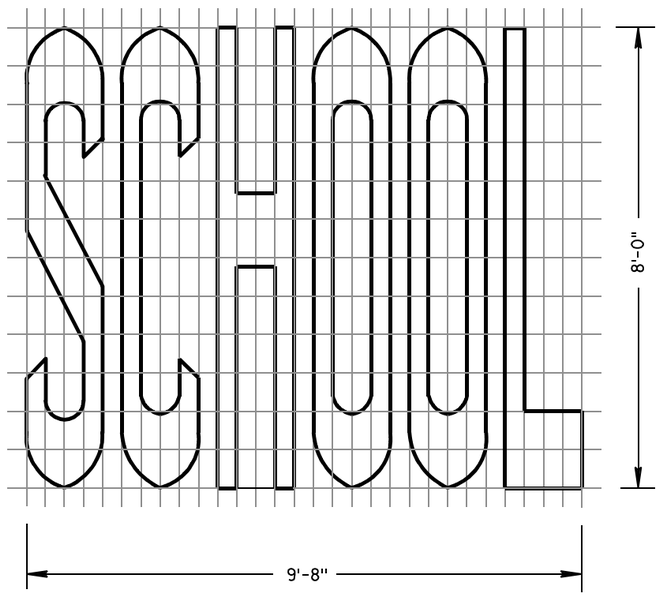


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12b

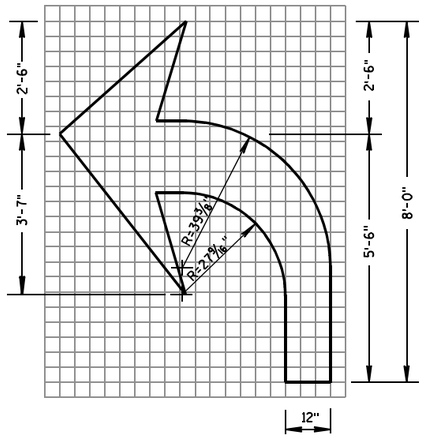
6

S.D.D. 15 C 7-12b

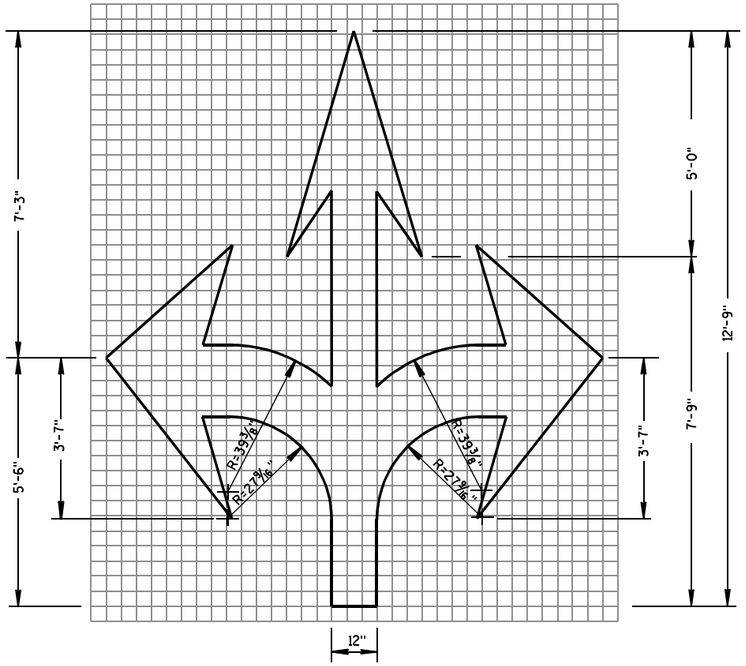
GENERAL NOTES

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.

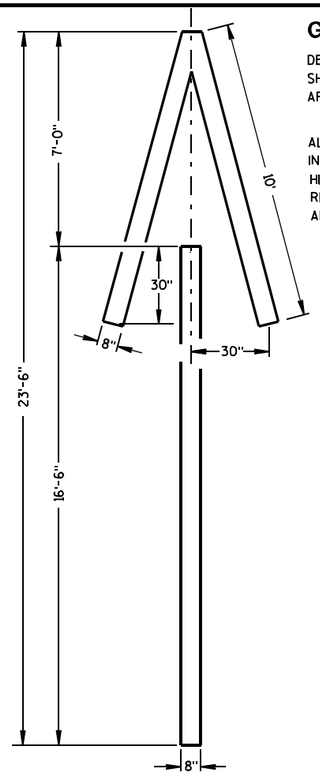
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



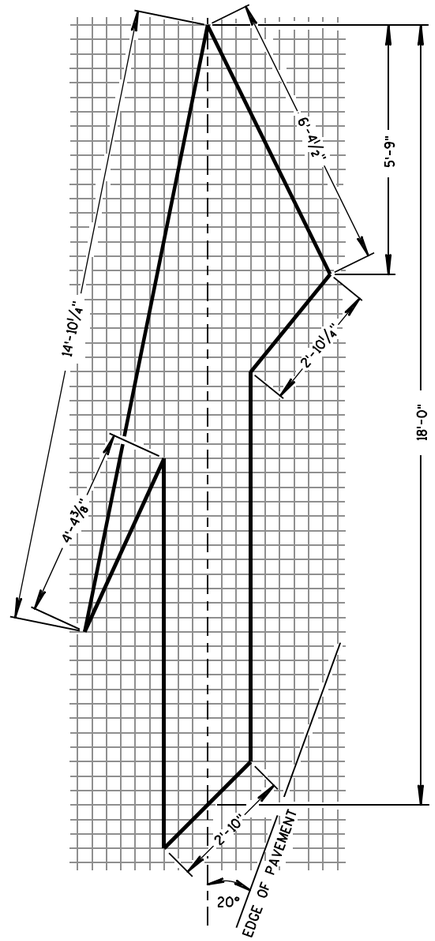
TYPE 2



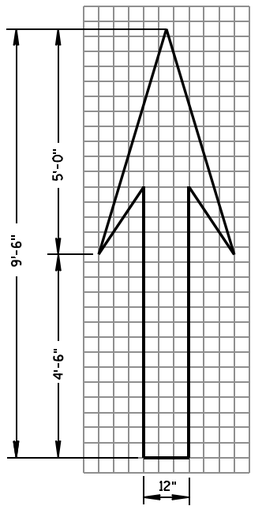
TYPE 6



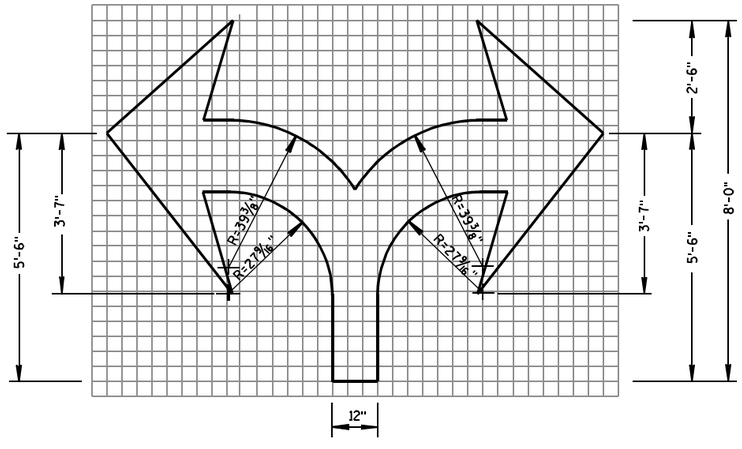
TYPE 4



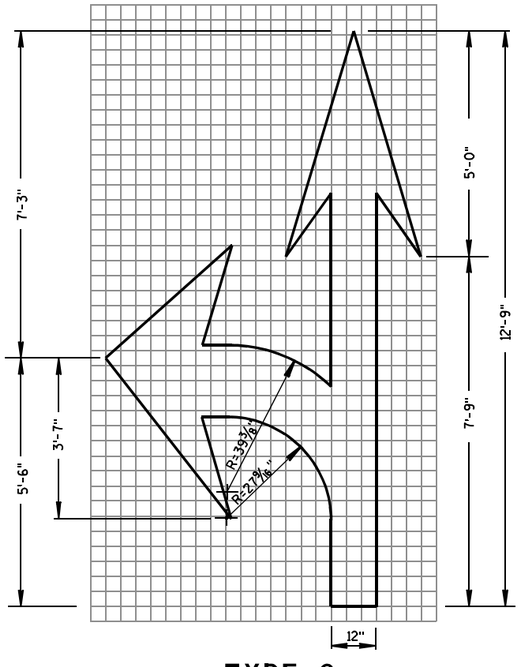
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nathehm — STATE TRAFFIC ENGINEER

FHWA

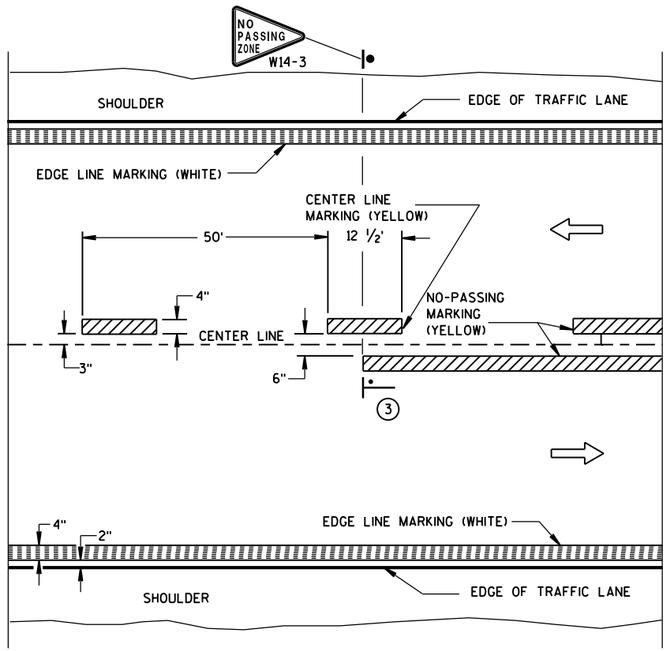
240

6

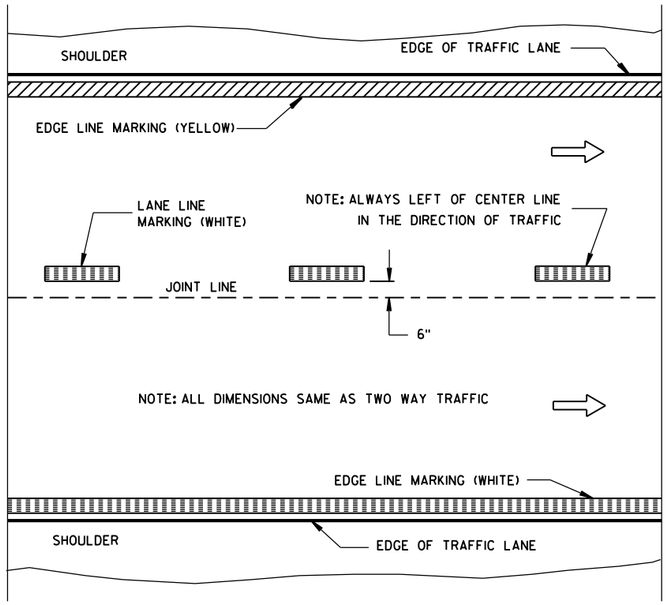
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

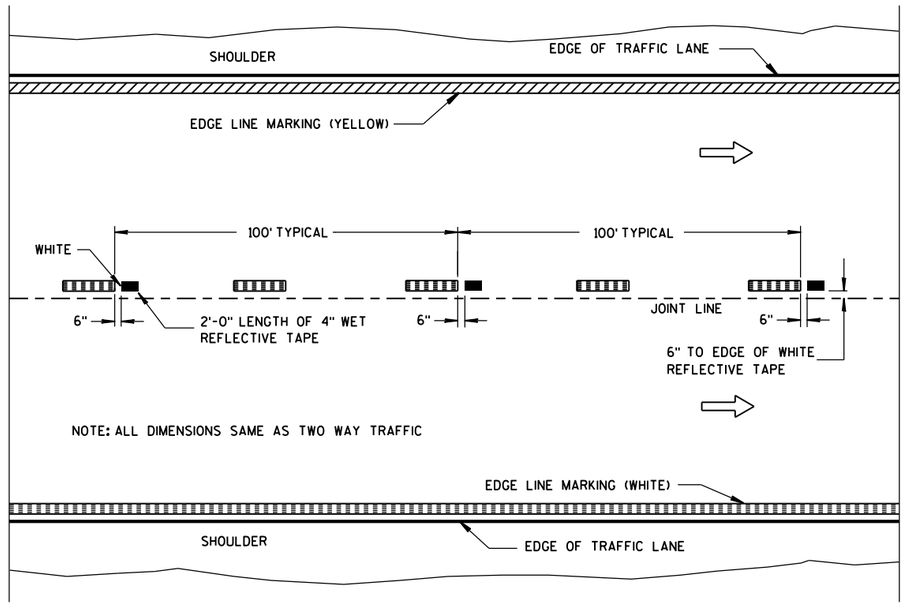
GENERAL NOTES

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

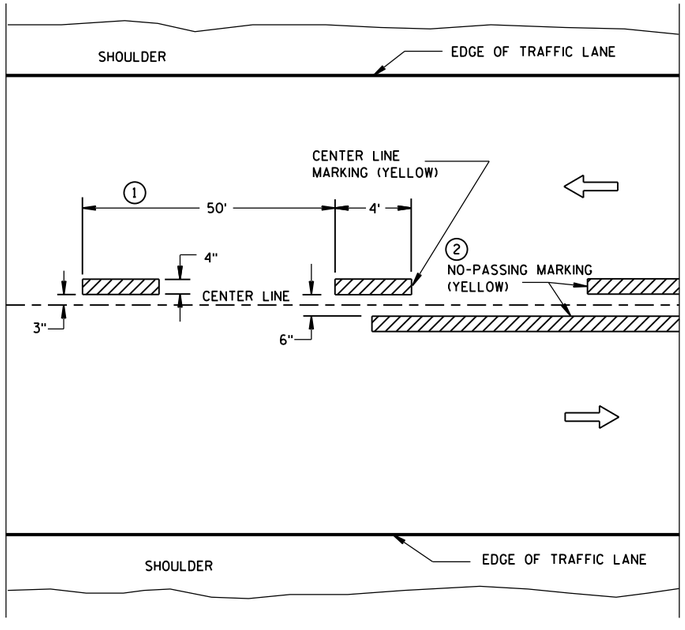
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

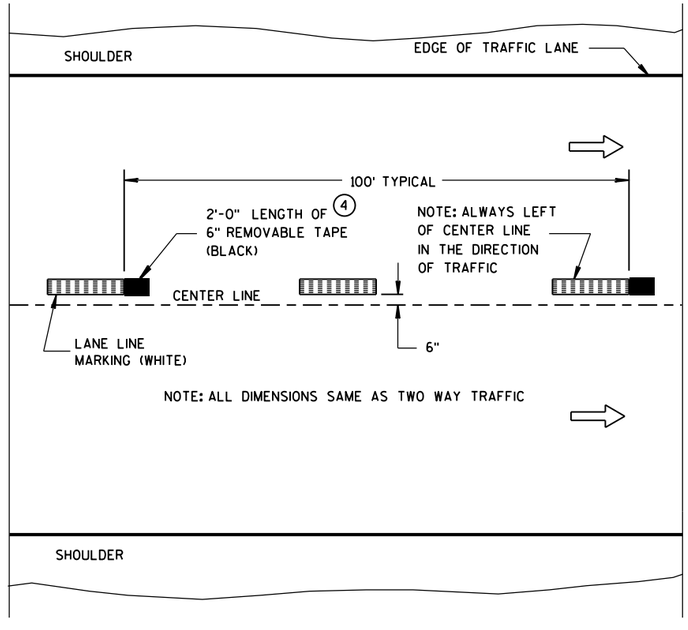
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

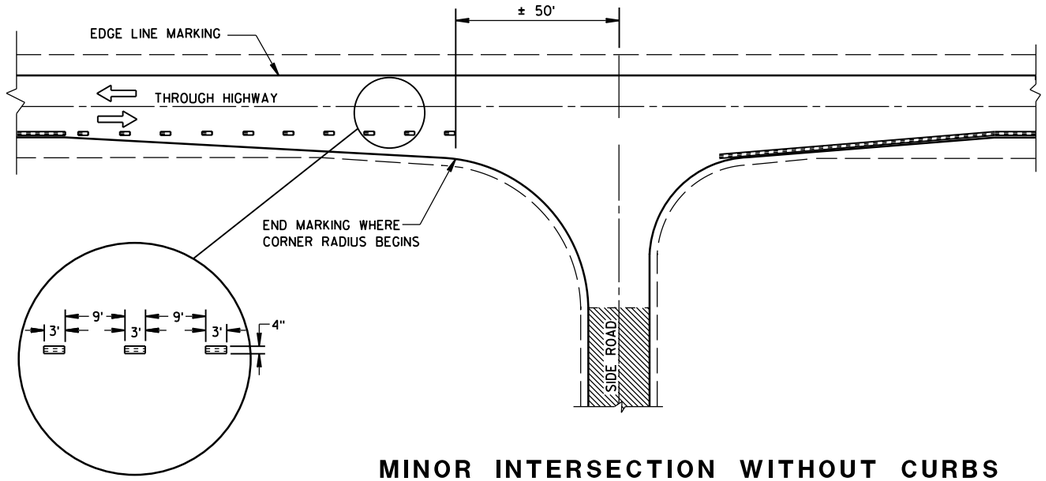
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

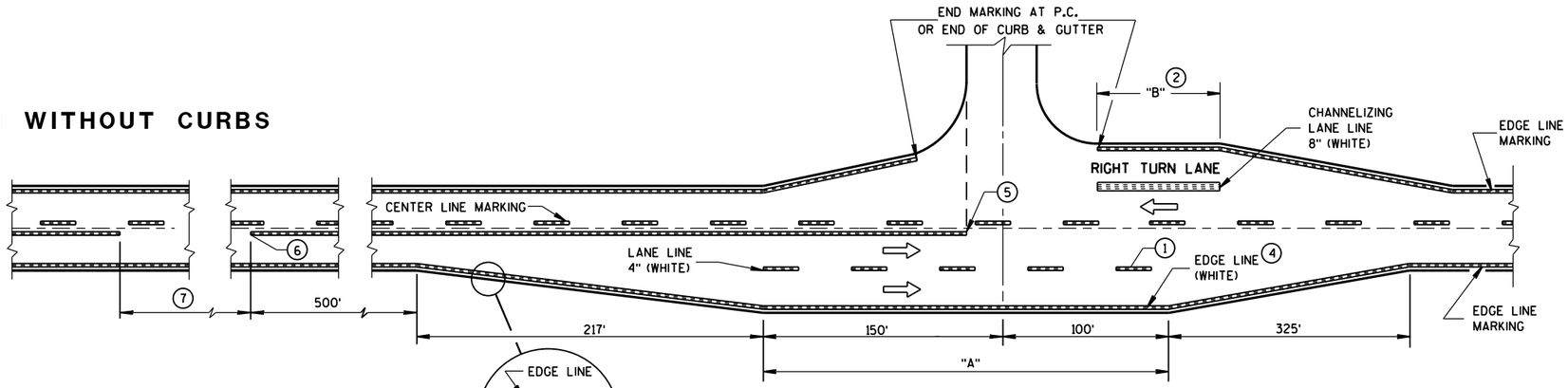
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

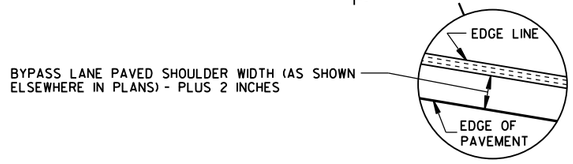
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

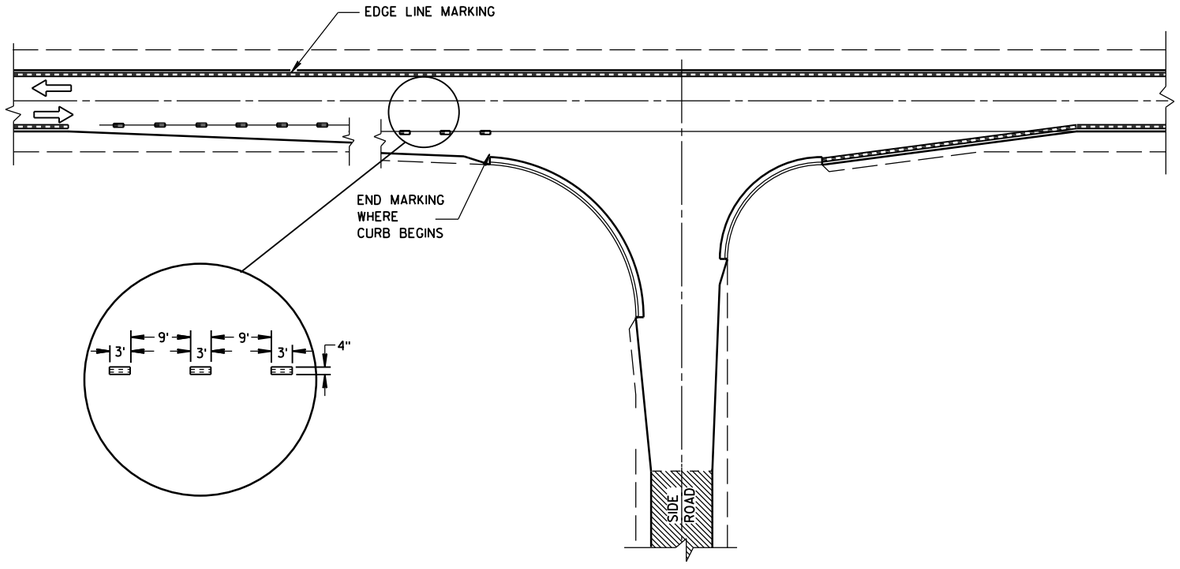
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





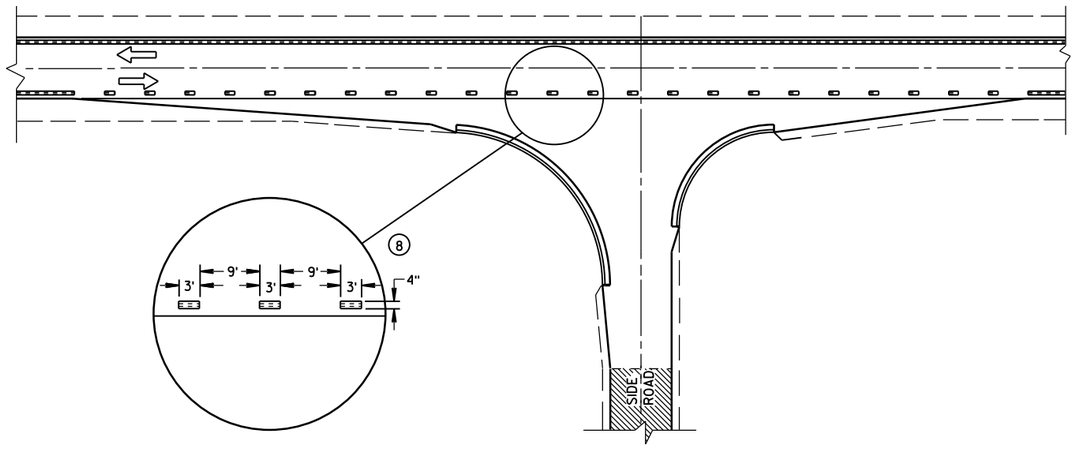
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

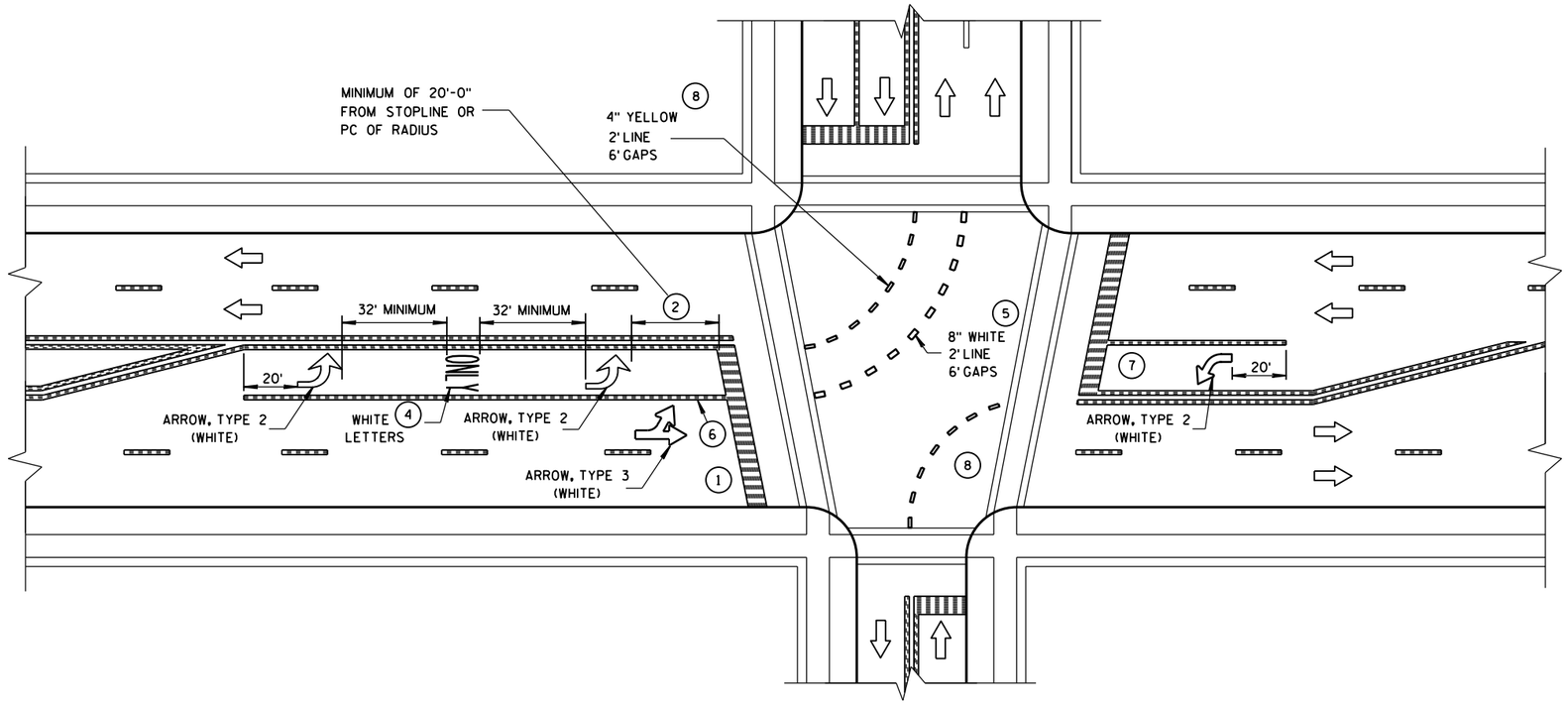
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 242

6

S.D.D. 15 C 8-16b

6

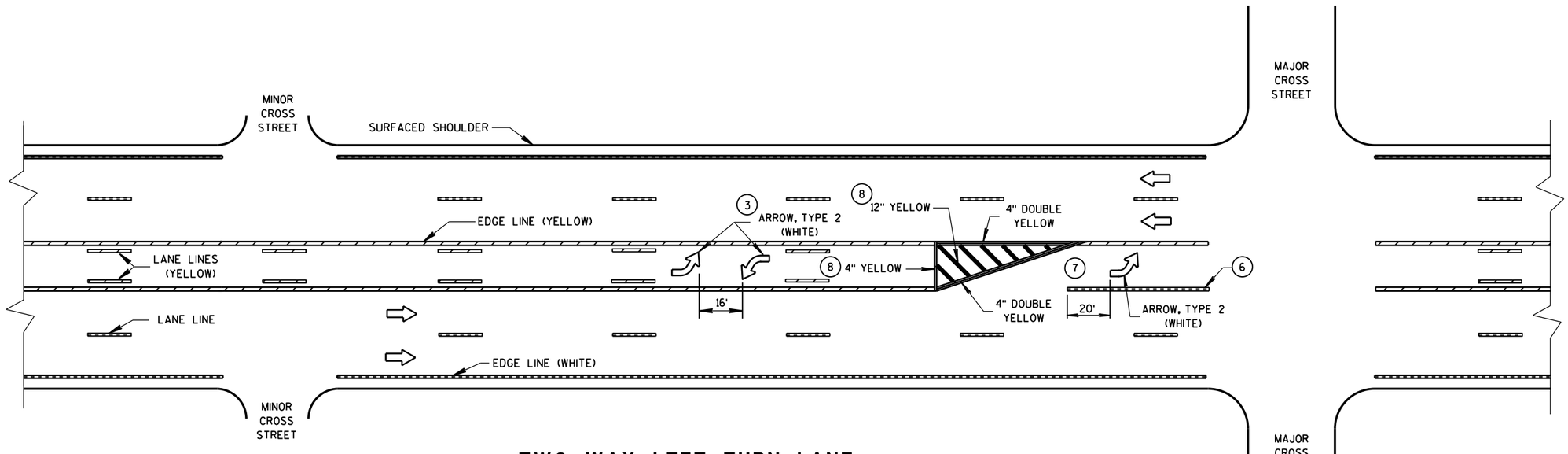
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



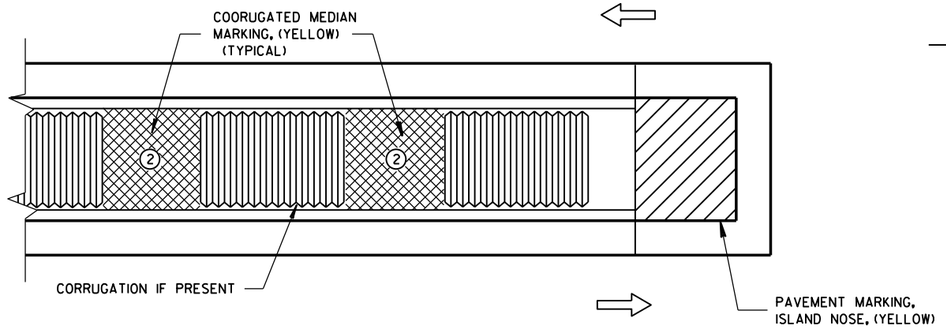
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

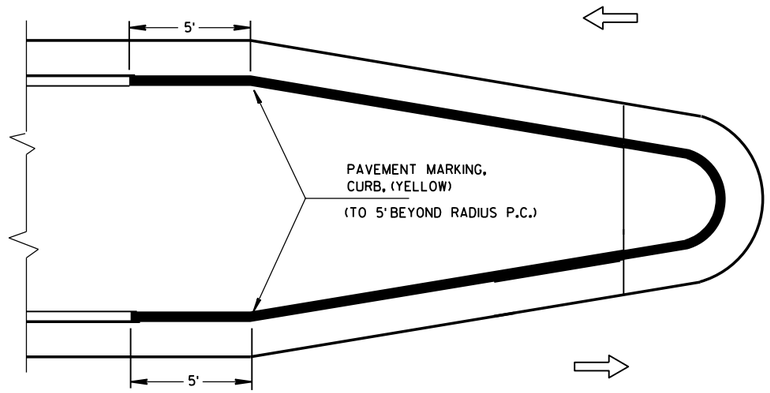
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

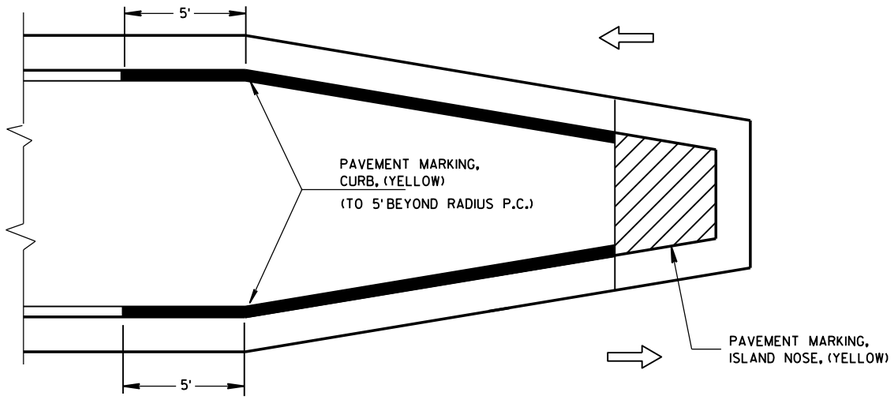
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

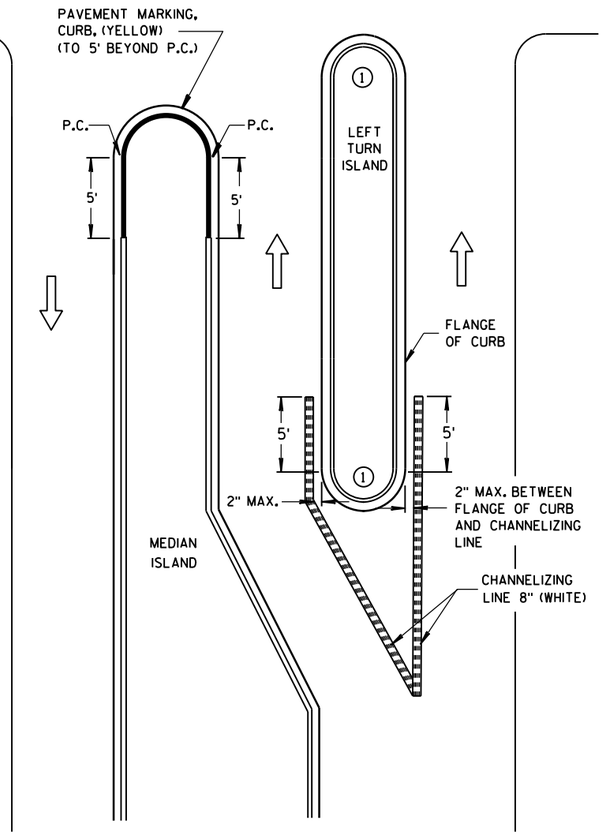


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

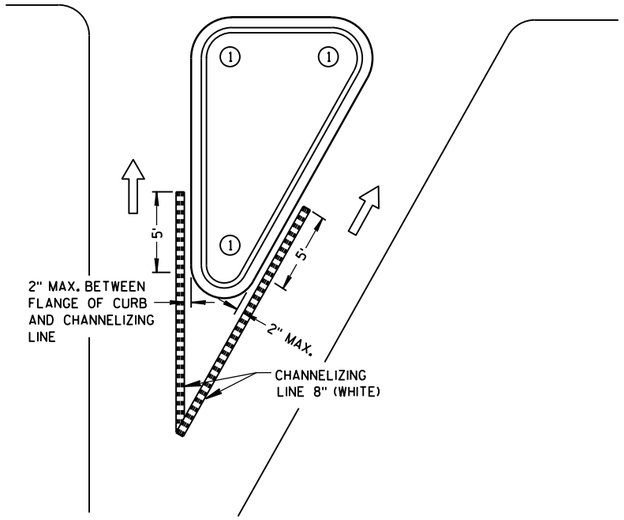


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. 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 AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

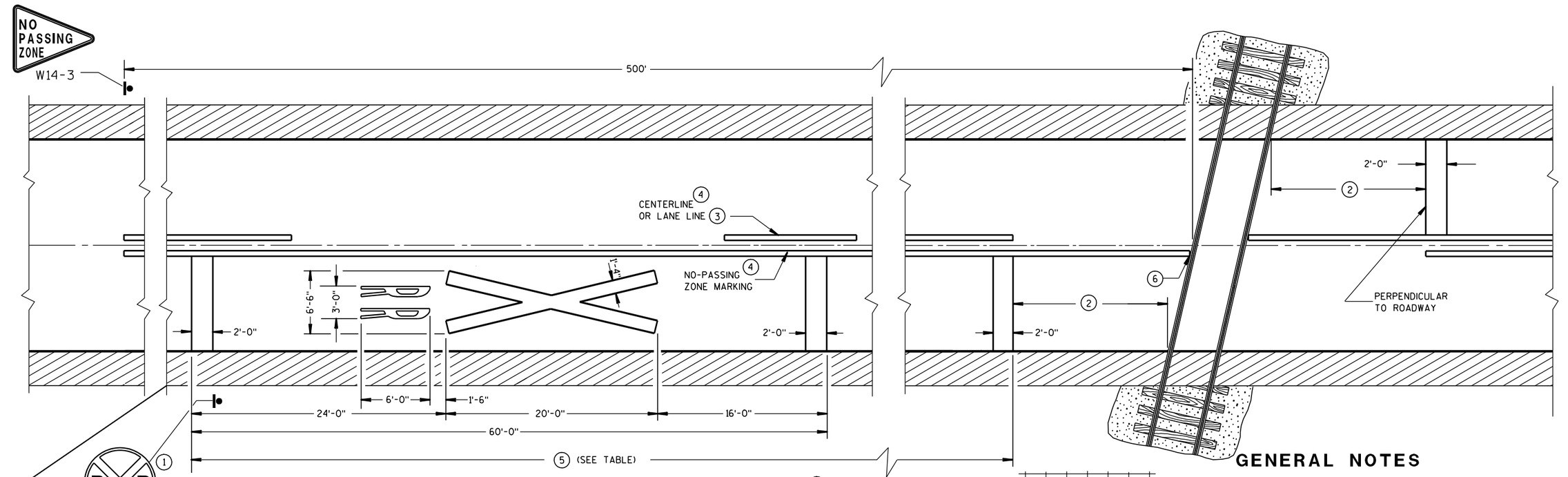
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

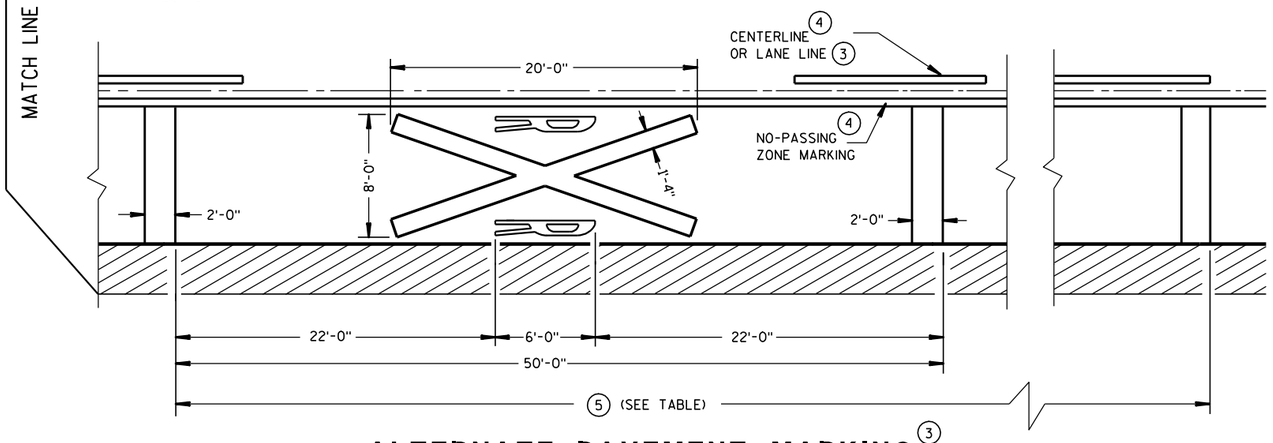
S.D.D. 15 C 8-16f

6

S.D.D. 15 C 8-16f



PREFERRED PAVEMENT MARKING 3

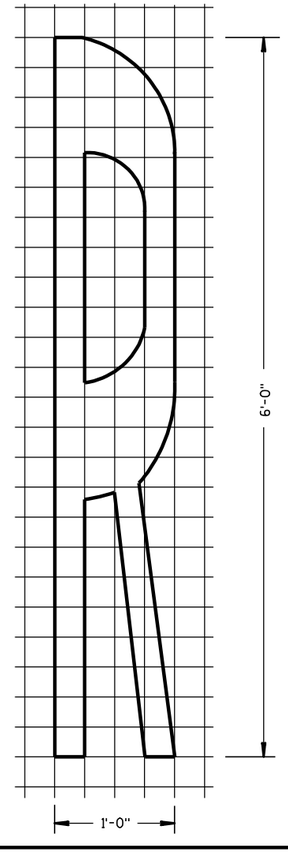


ALTERNATE PAVEMENT MARKING 3

5

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



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.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
2. MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
3. REFLECTIVE WHITE.
4. REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
5. TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1-9-2012
DATE

/S/ Thomas N. [illegible]
STATE TRAFFIC ENGINEER

245

DESIGN

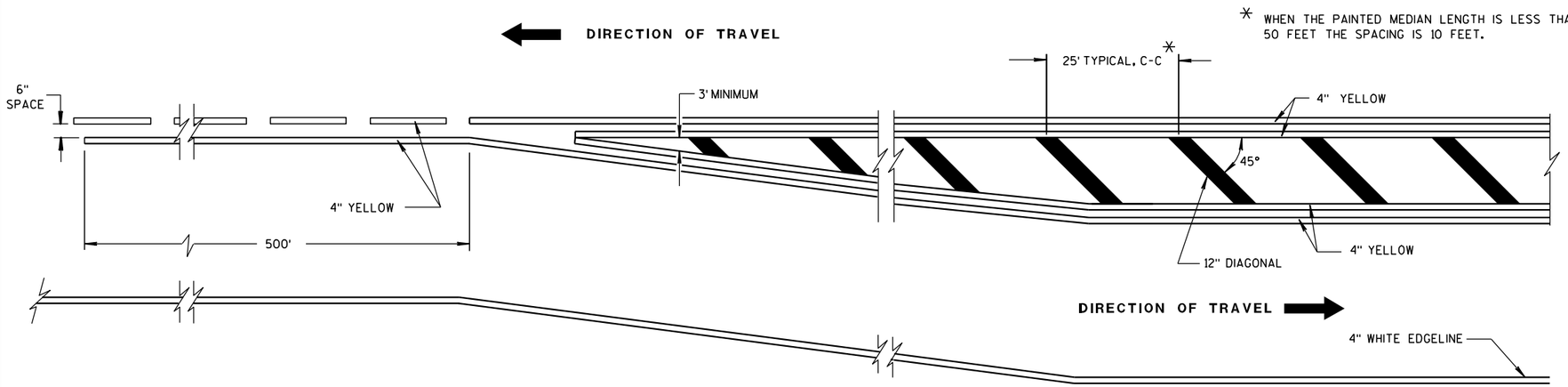
FHWA

6

S.D.D. 15 C 9-9a

6

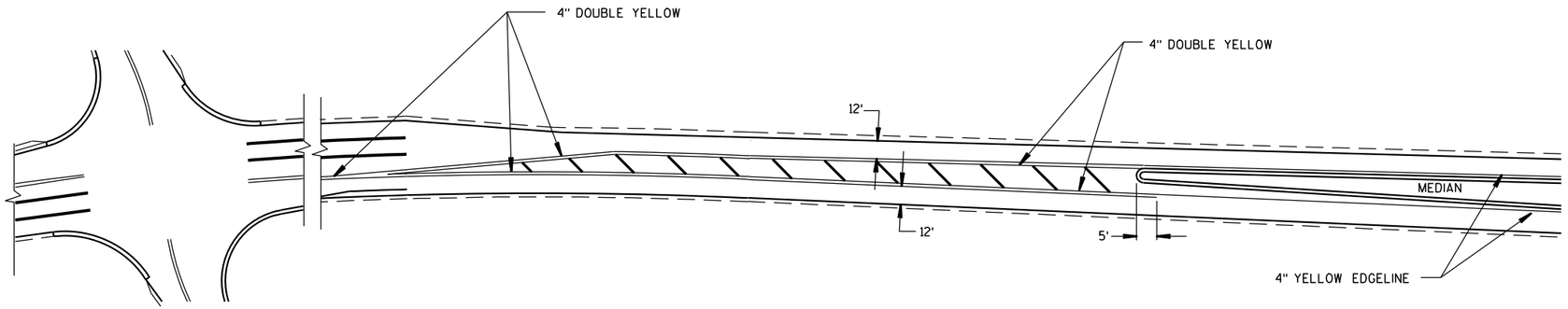
S.D.D. 15 C 9-9a



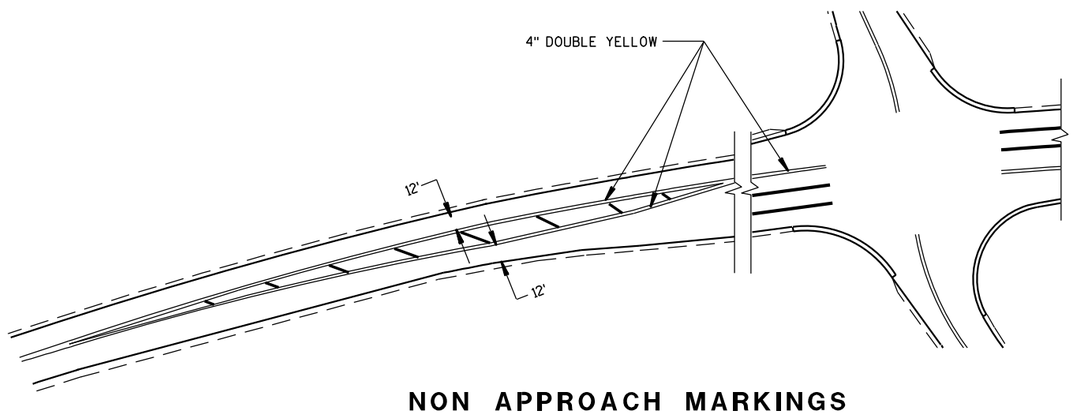
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

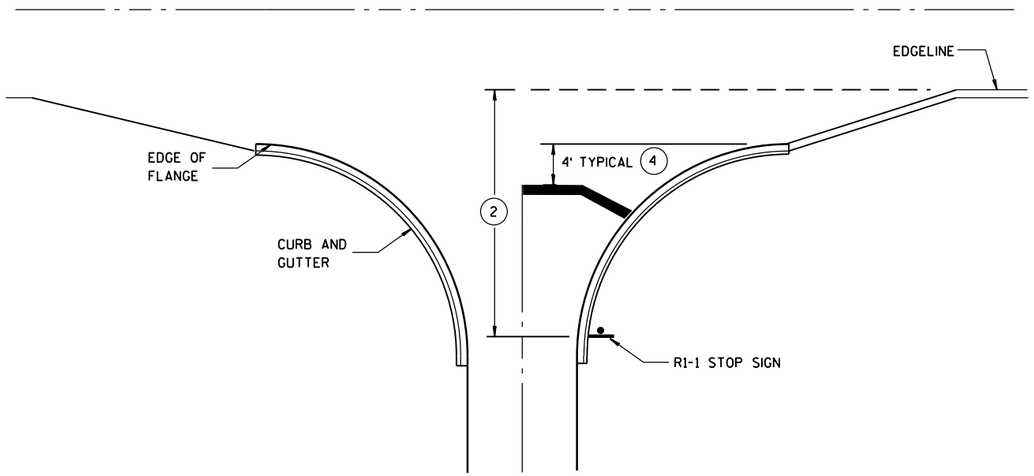
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER 246 IGN
FHWA	

6

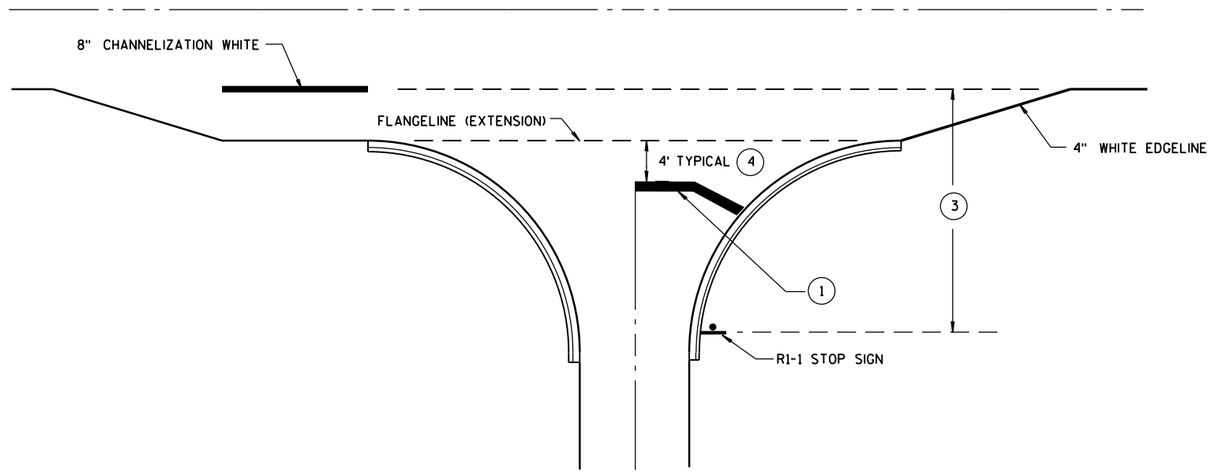
S.D.D. 15 C 18-3

6

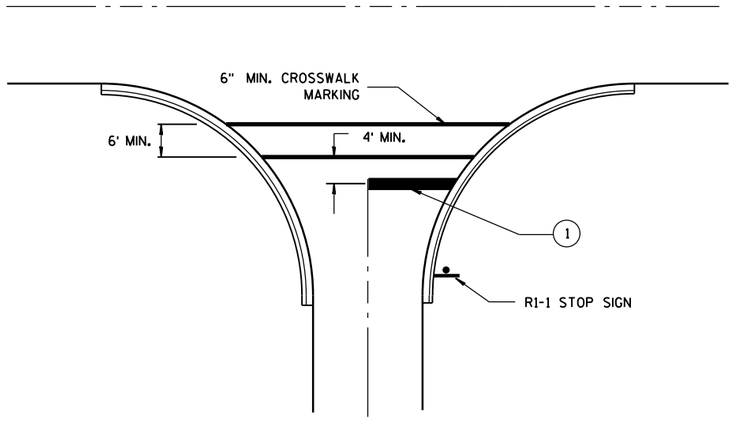
S.D.D. 15 C 18-3



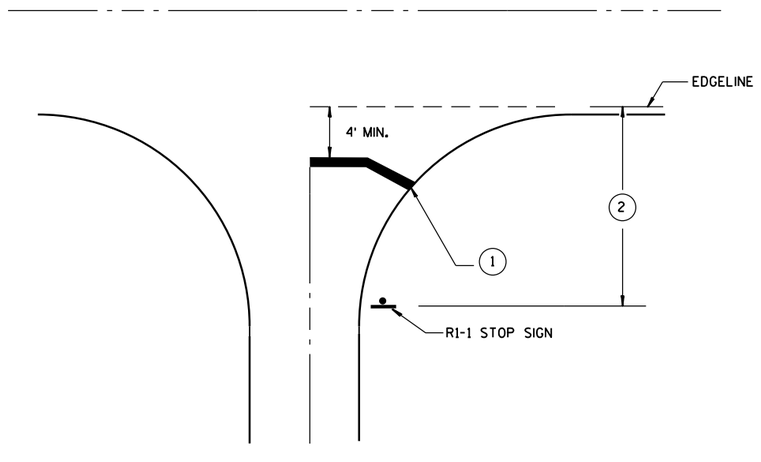
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

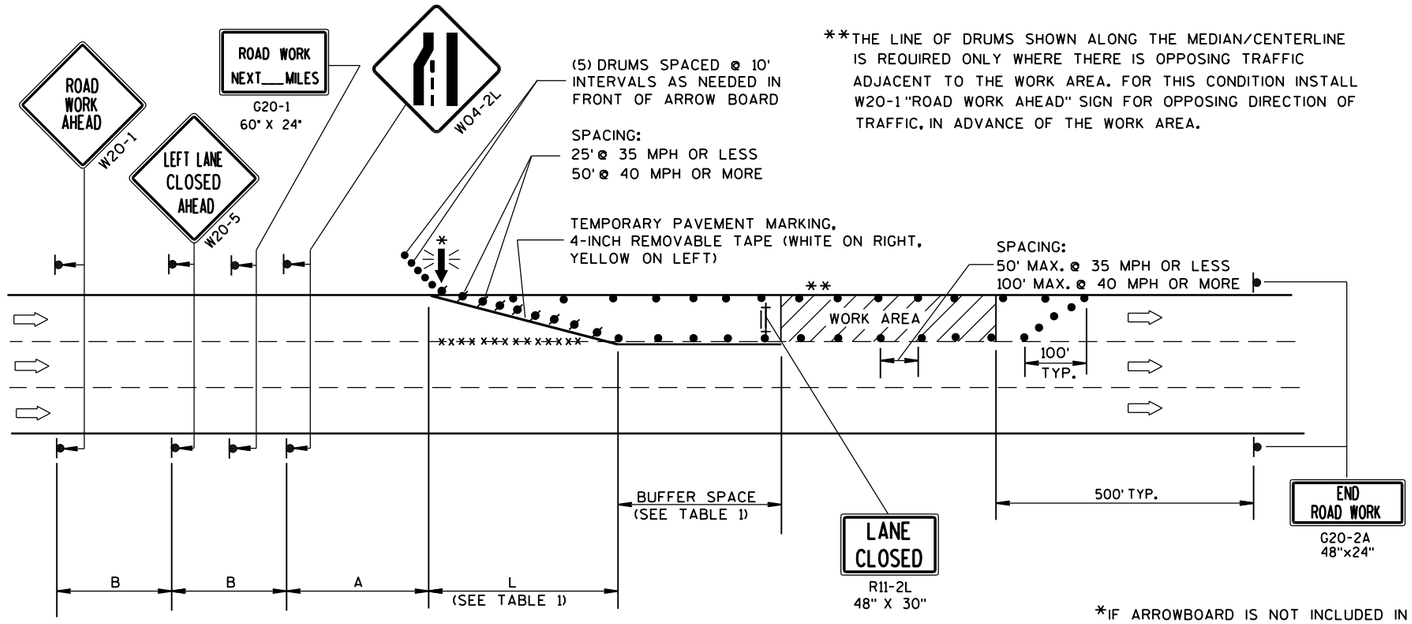
4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

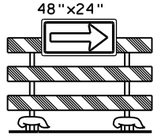


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE 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.

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 20-3

LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

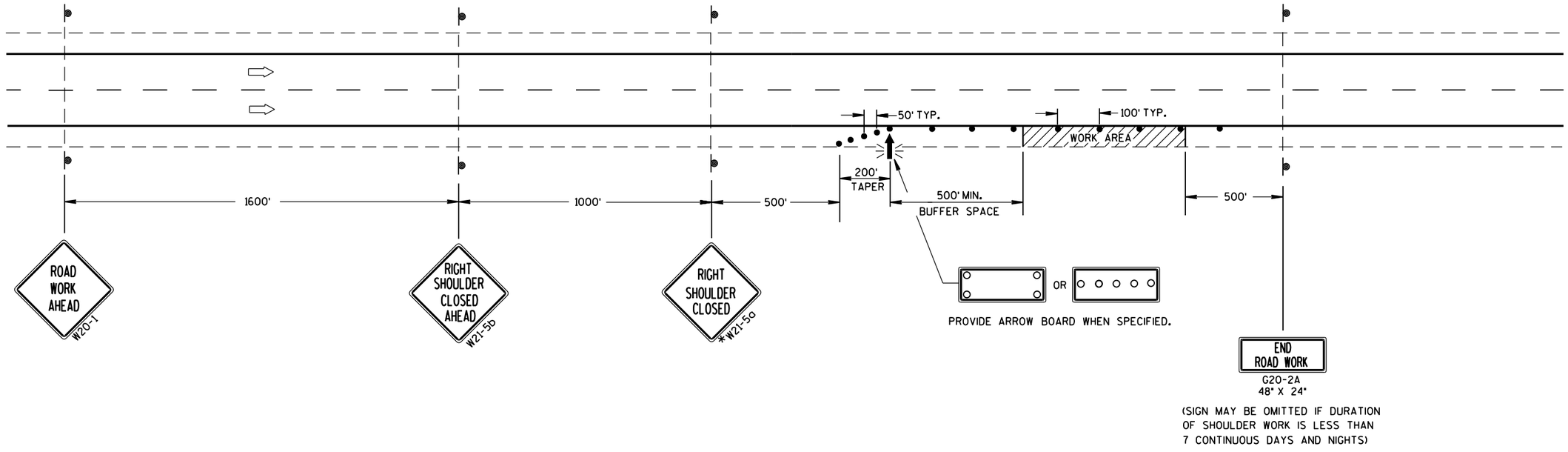
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

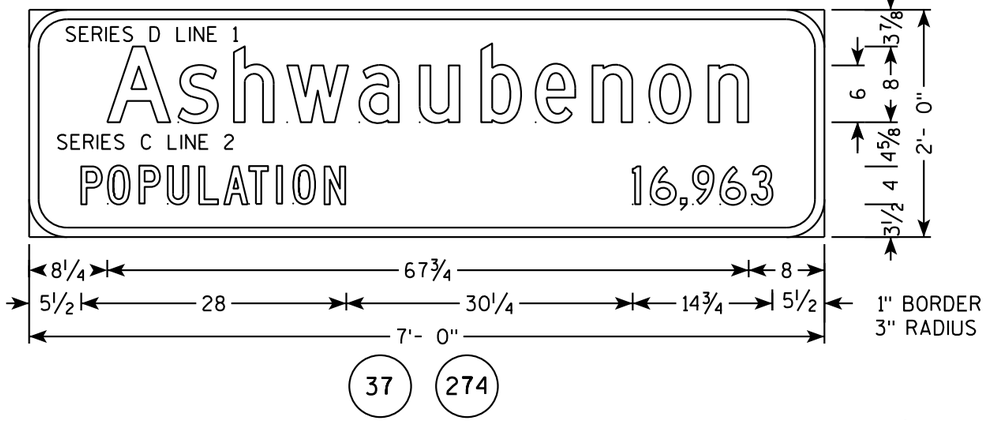
8/2013 — DATE

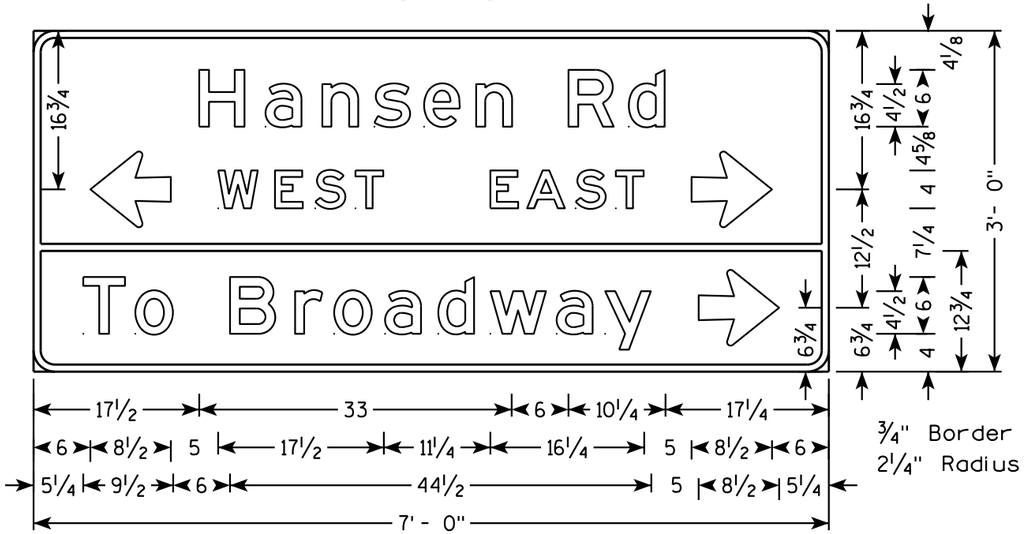
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

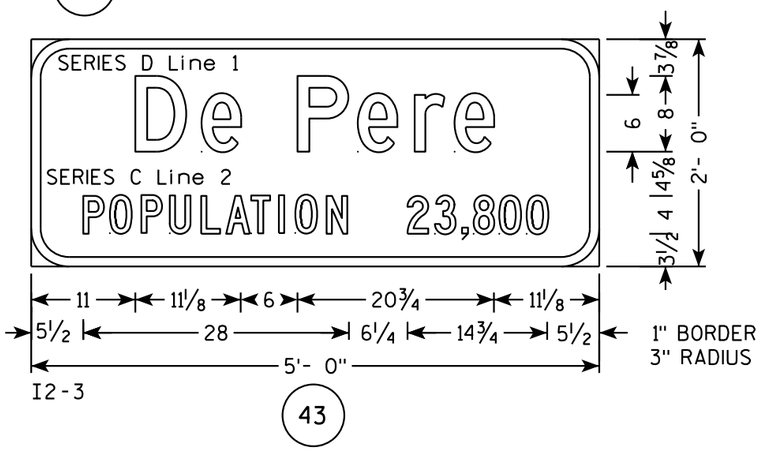
FHWA

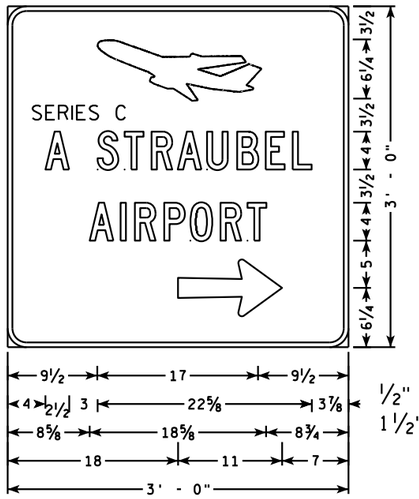
6

S.D.D. 15 D 27-2



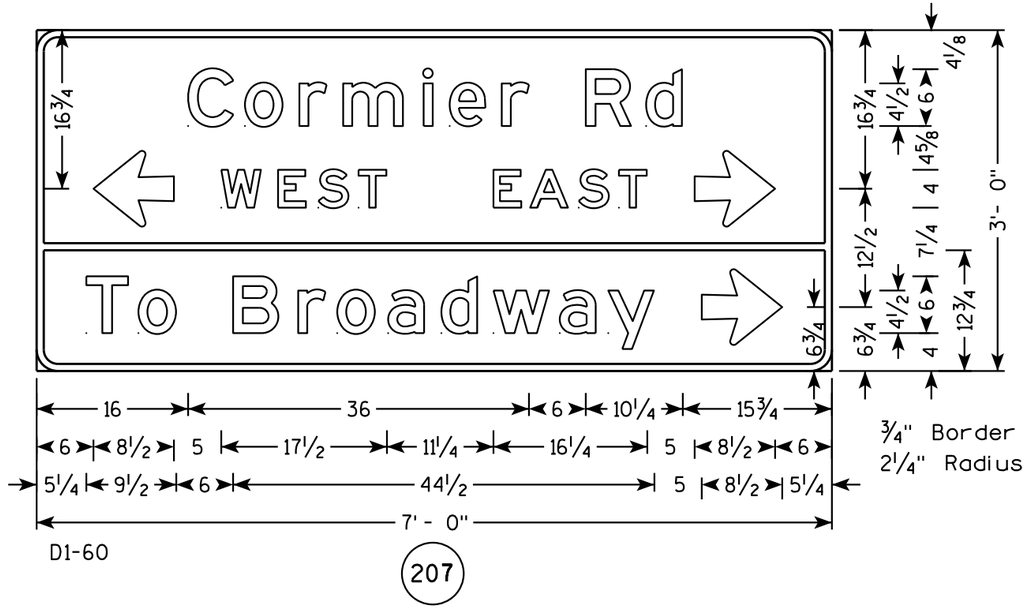






NOTES

1. All Sign Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E except as Shown



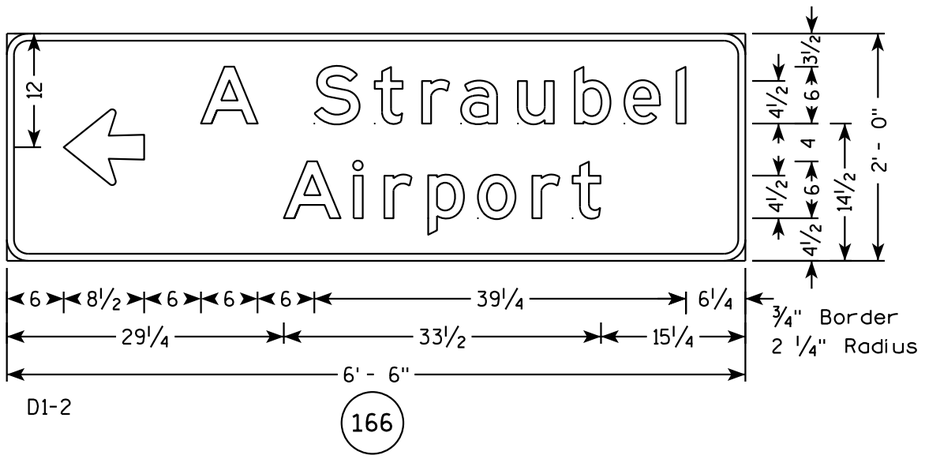
7

7

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	PERMANENT SIGNING	SHEET NO: 250	E

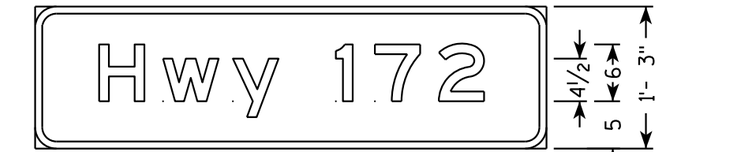
NOTES

1. All SignsType II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E



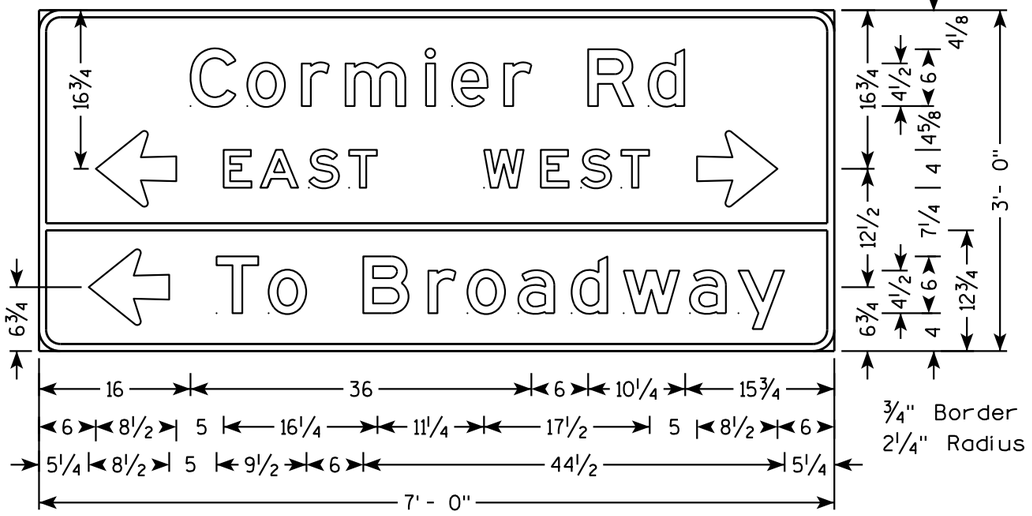
D1-2

166



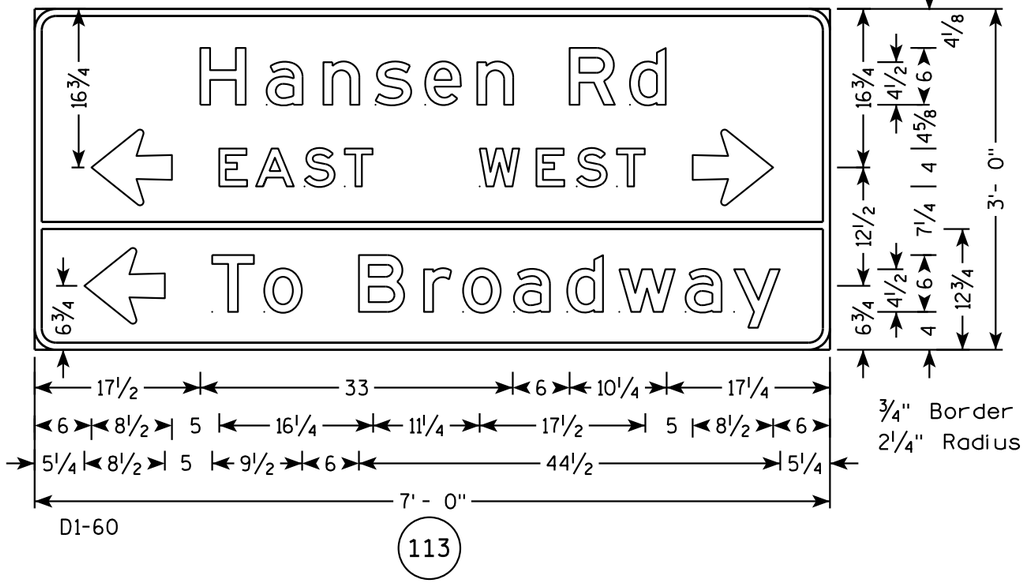
M1-94

152 159



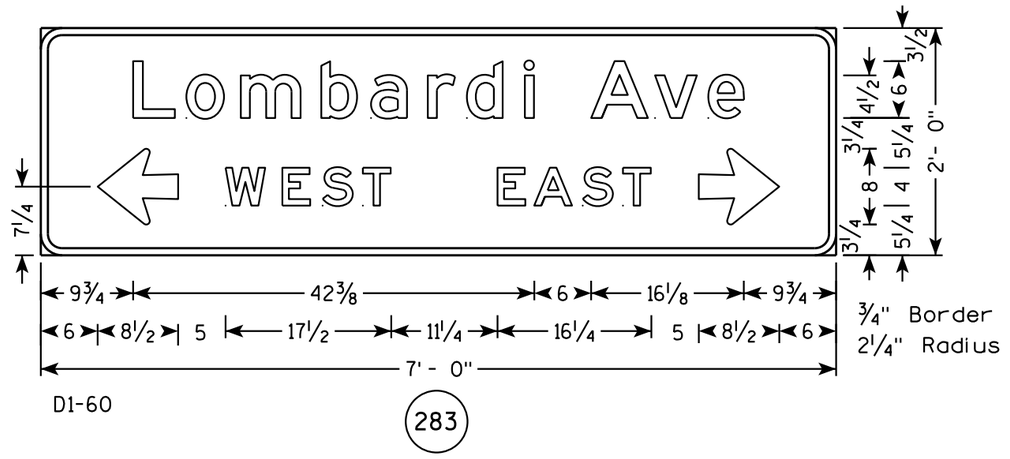
D1-60

235



D1-60

113

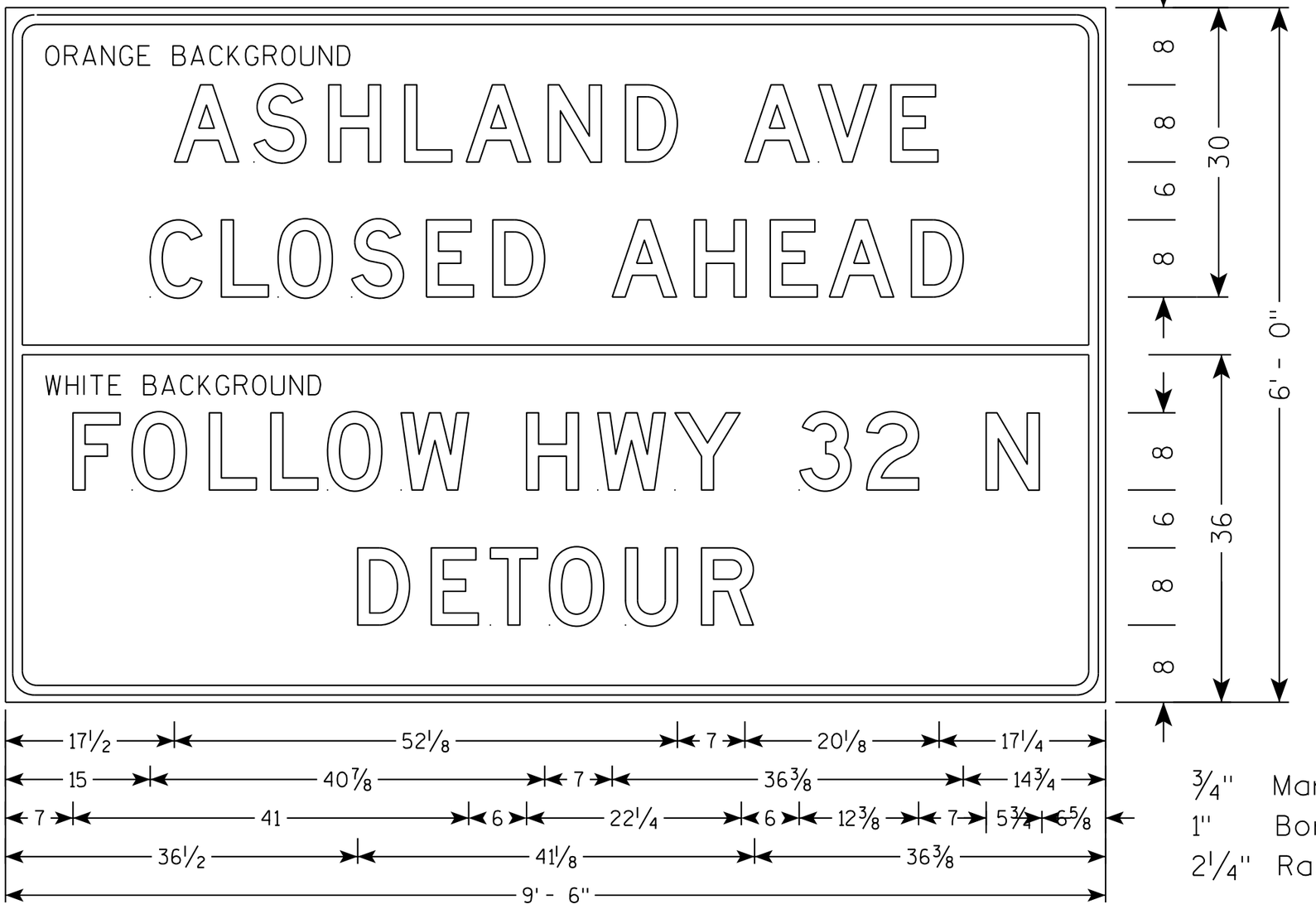


D1-60

283

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - As Shown
   Message - Black
3. Message Series - D



3/4" Margin
1" Border
2 1/4" Radius

7

7

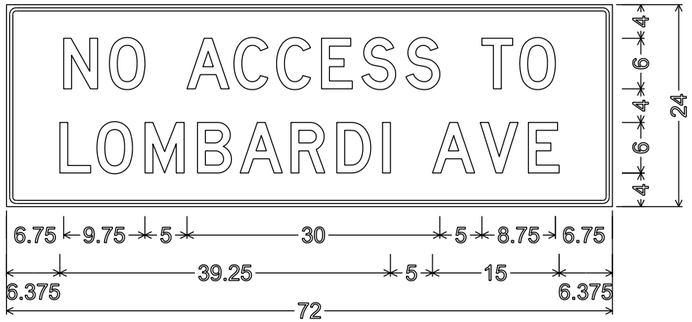
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	FIXED MESSAGE SIGN DETAIL	SHEET NO: E

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32\Ashland - 8th - Lombardi ave\3055A514.DGN PLOT DATE : 31-MAR-2016 16:49 PLOT BY : dotjlf PLOT NAME : PLOT SCALE : 13:1

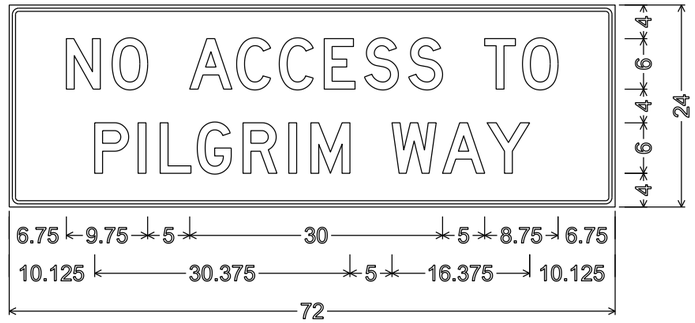
WISDOT/CADDS SHEET 42

NOTES

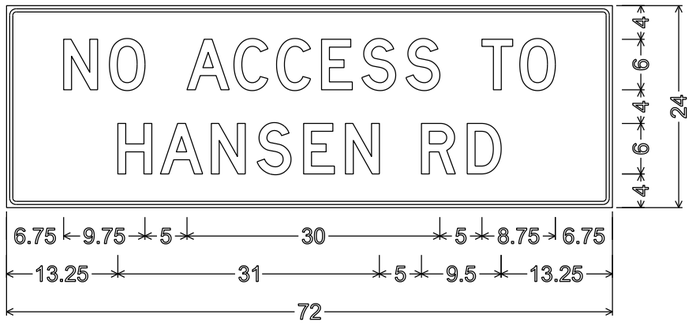
1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message -Black
3. Message Series - D



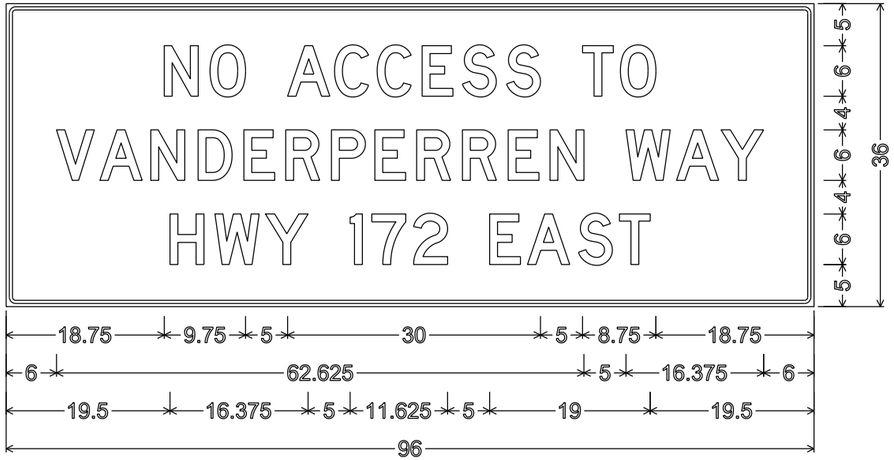
1.125" Radius, 0.375" Border, 0.375" Indent,



1.125" Radius, 0.375" Border, 0.375" Indent,



1.125" Radius, 0.375" Border, 0.375" Indent,



1.125" Radius, 0.375" Border, 0.375" Indent,

7

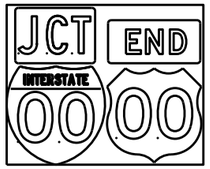
7

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	FIXED MESSAGE SIGN DETAILS	SHEET NO: 253	E

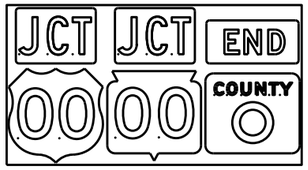
TYPICAL ASSEMBLIES



J1-1



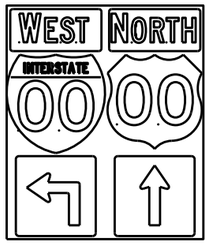
J1-2



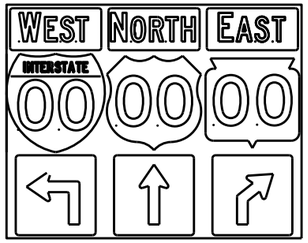
J1-3



J2-1



J2-2

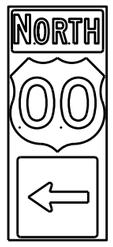


J2-3

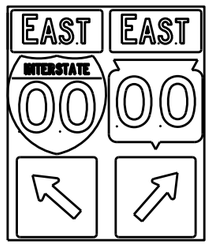


JV

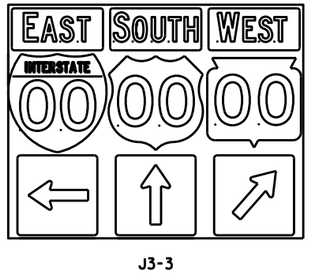
(Typical Vertical J-Assembly
See Note 10 and 11)



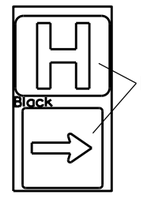
J3-1



J3-2



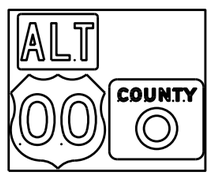
J3-3



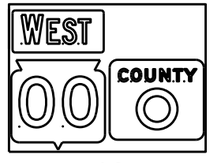
JH-1



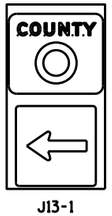
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

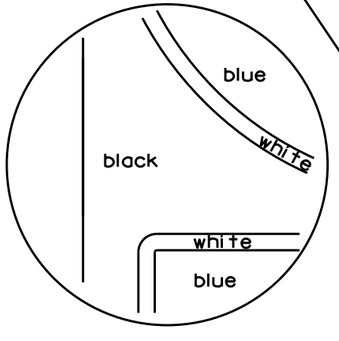


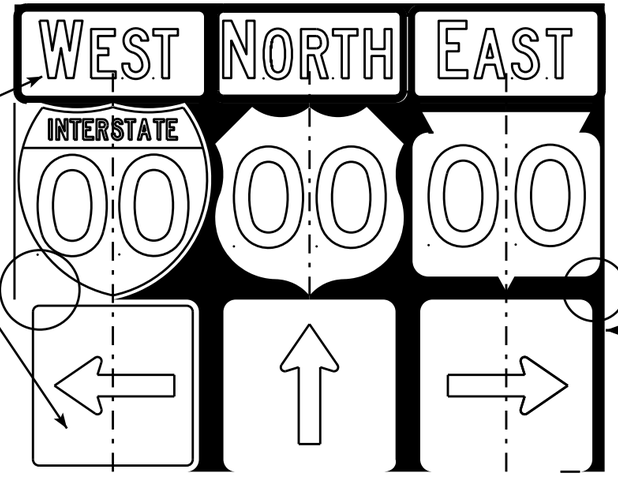
J23-1

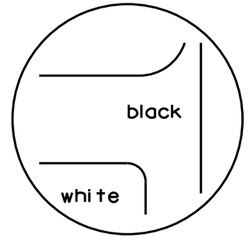


J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

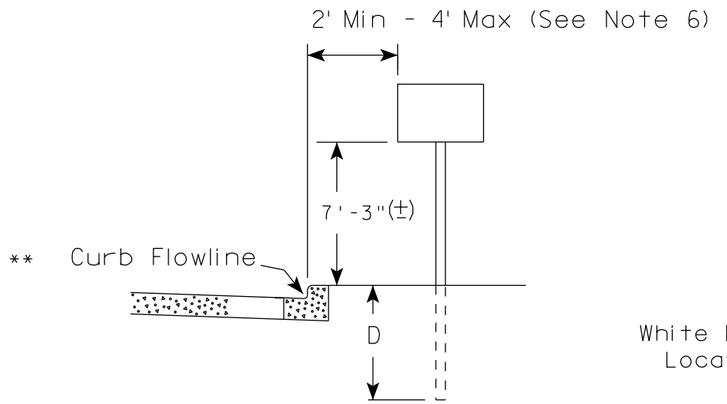
DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

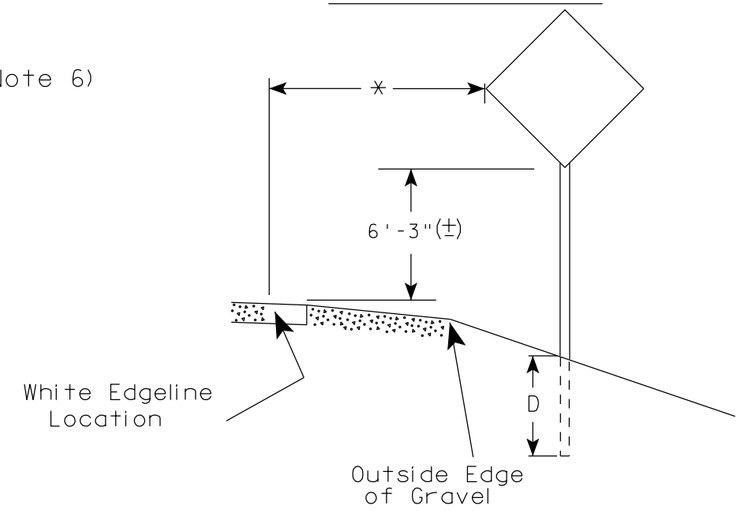
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

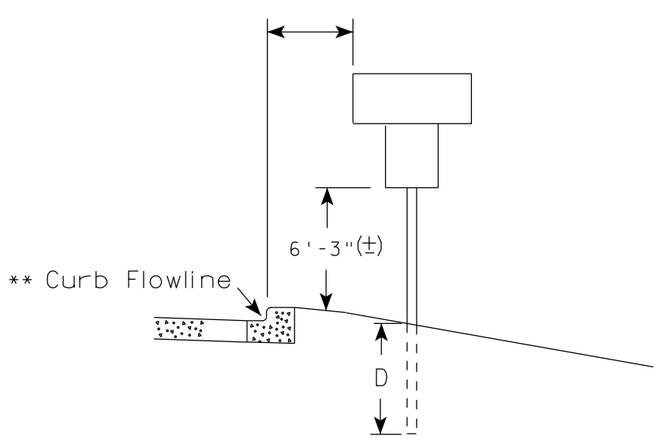
WISDOT/CADDS SHEET 42

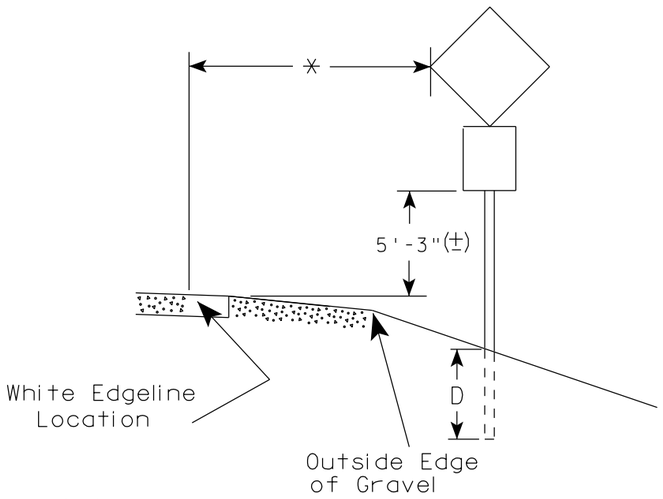
URBAN AREA



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 barrier wall, see A4-10 sign plate.
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 J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

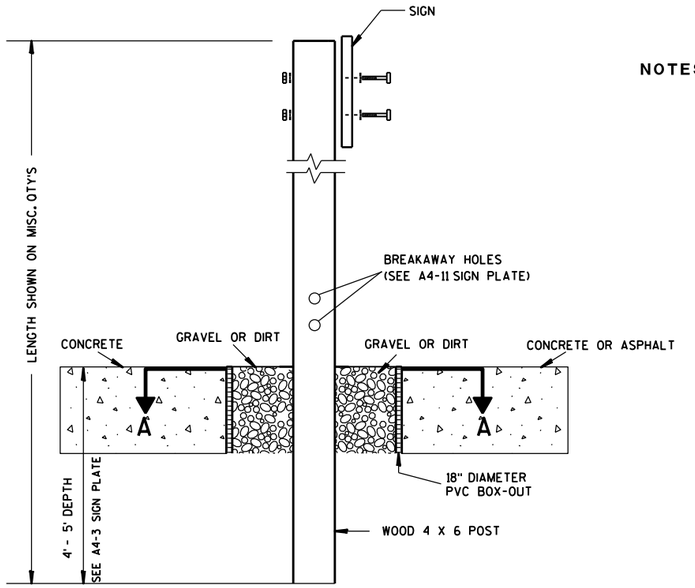
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

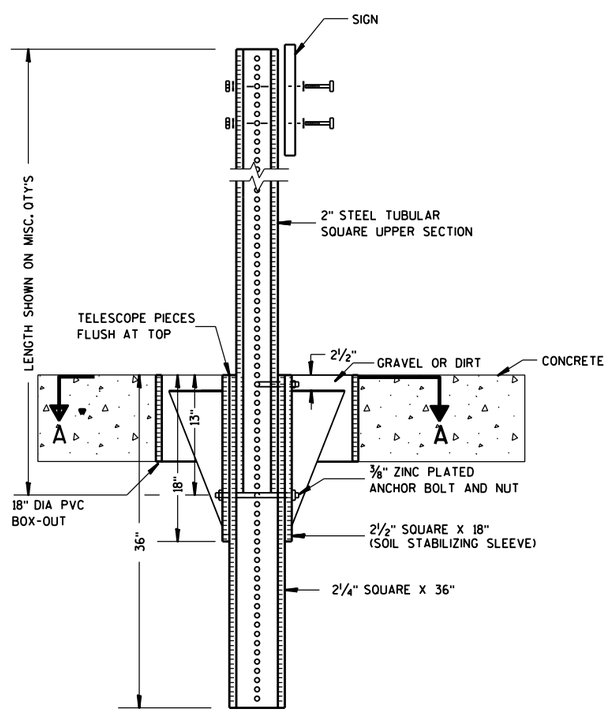
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 23-JUL-2015 15:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

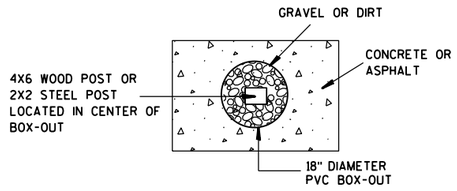
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

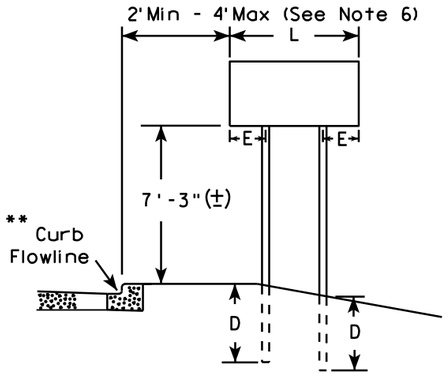
APPROVED Matthew R Rauch
for State Traffic Engineer

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

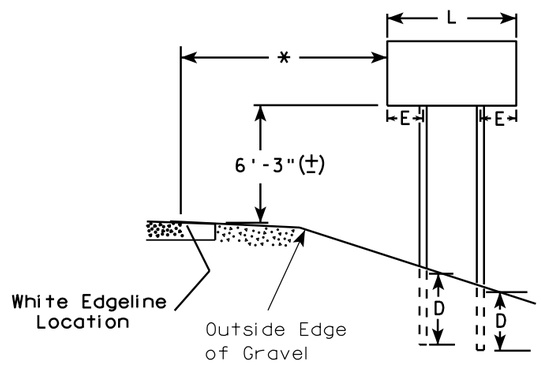
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

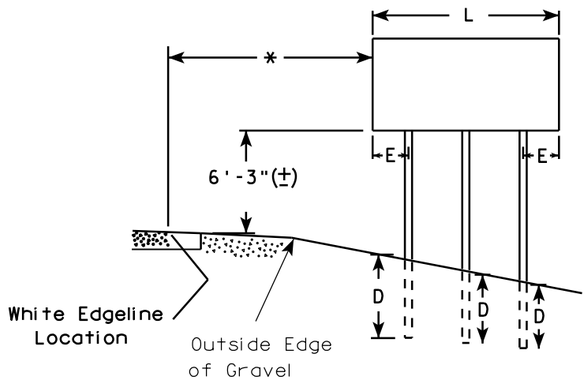
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

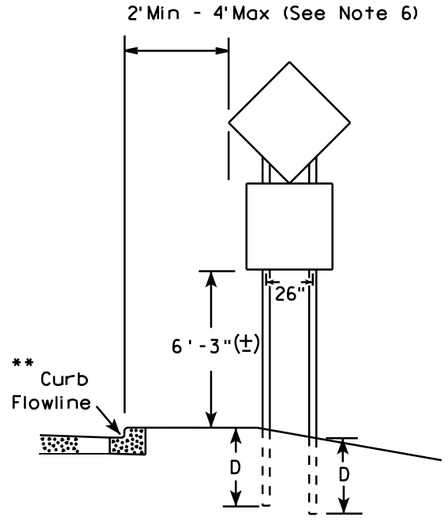
URBAN AREA



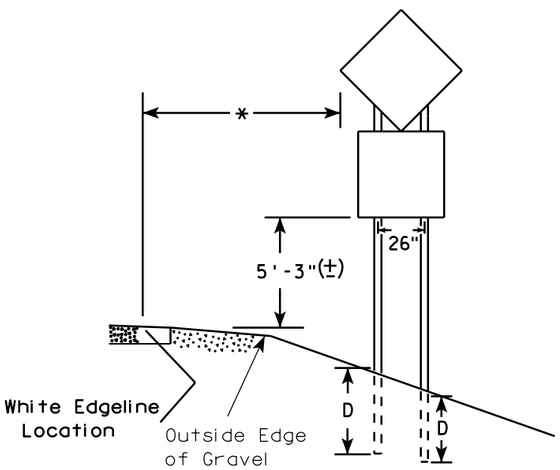
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

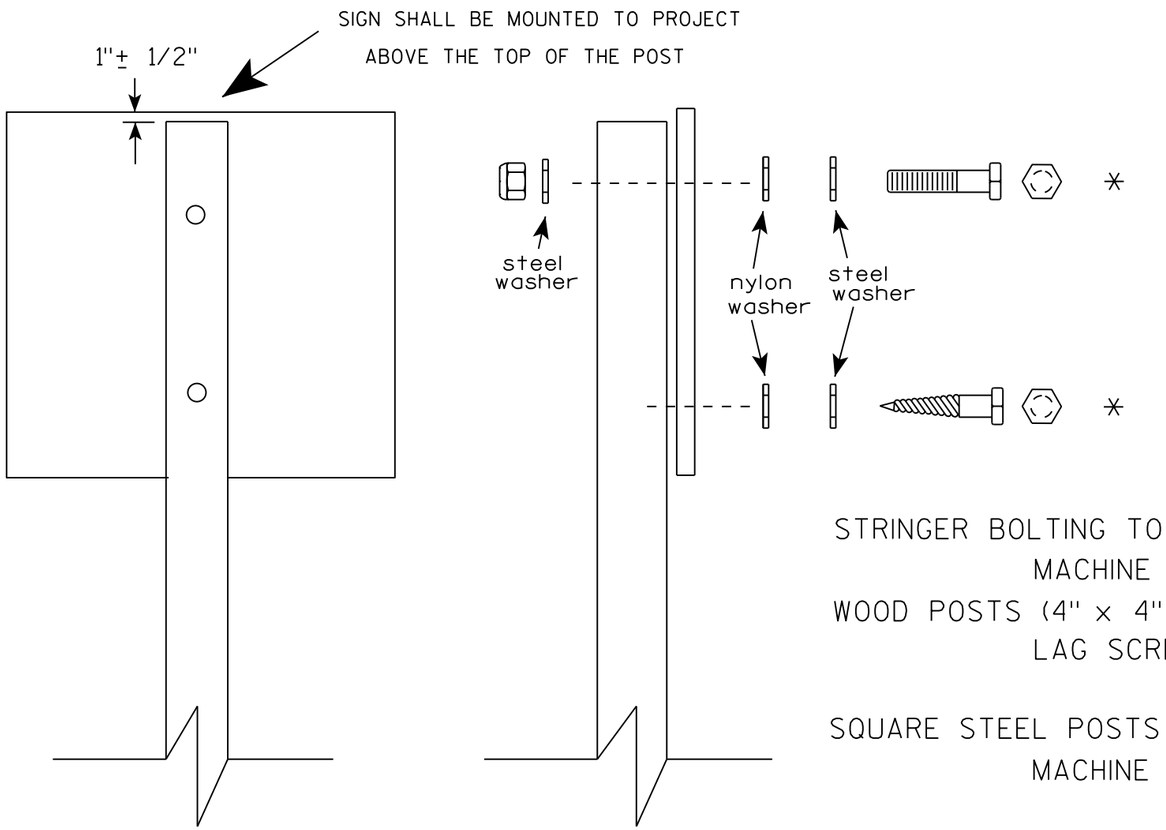
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 257 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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 4" or 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 8/11/16 PLATE NO. A4-8.8

7

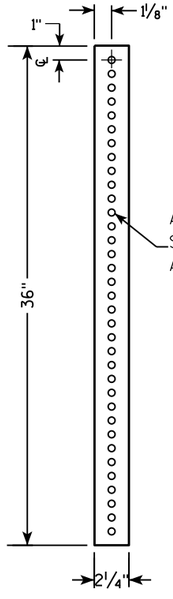
PROJECT NO:

SHEET NO: E

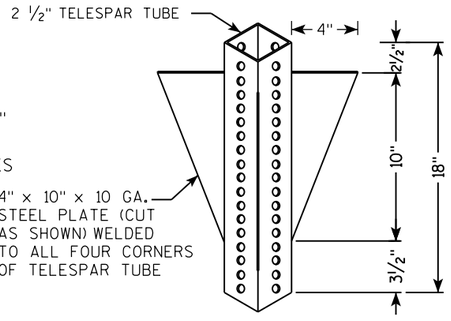
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

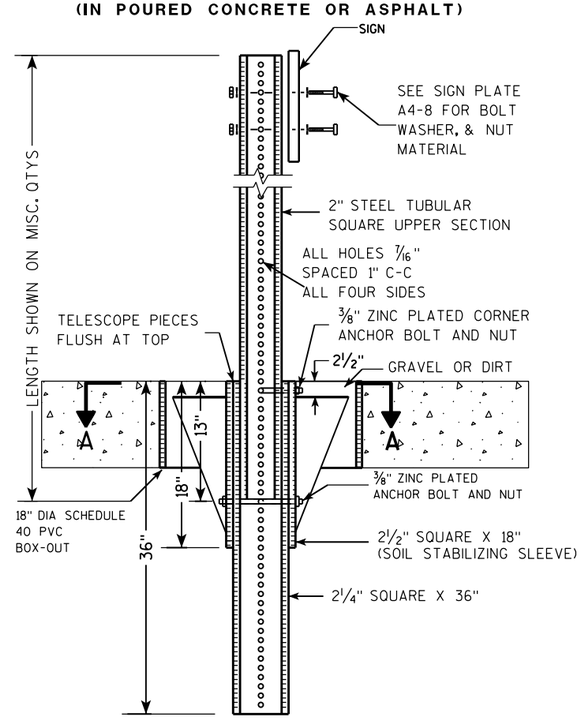
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



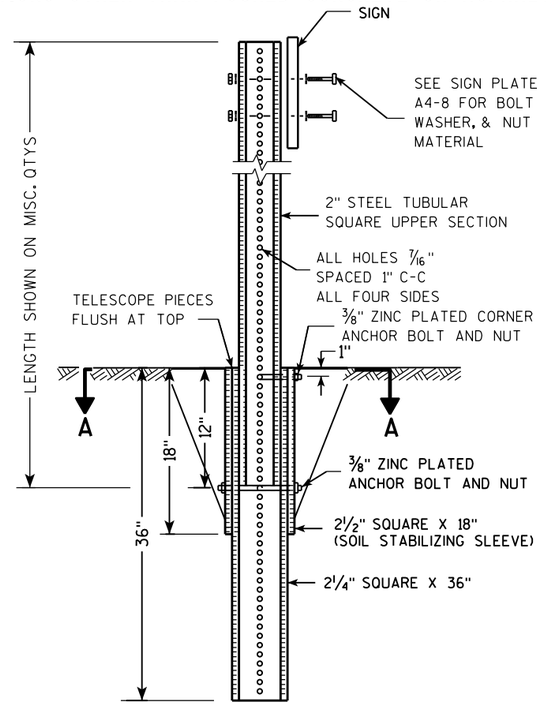
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

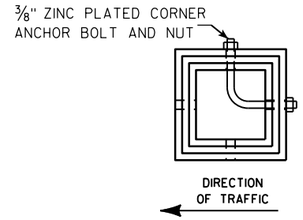


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

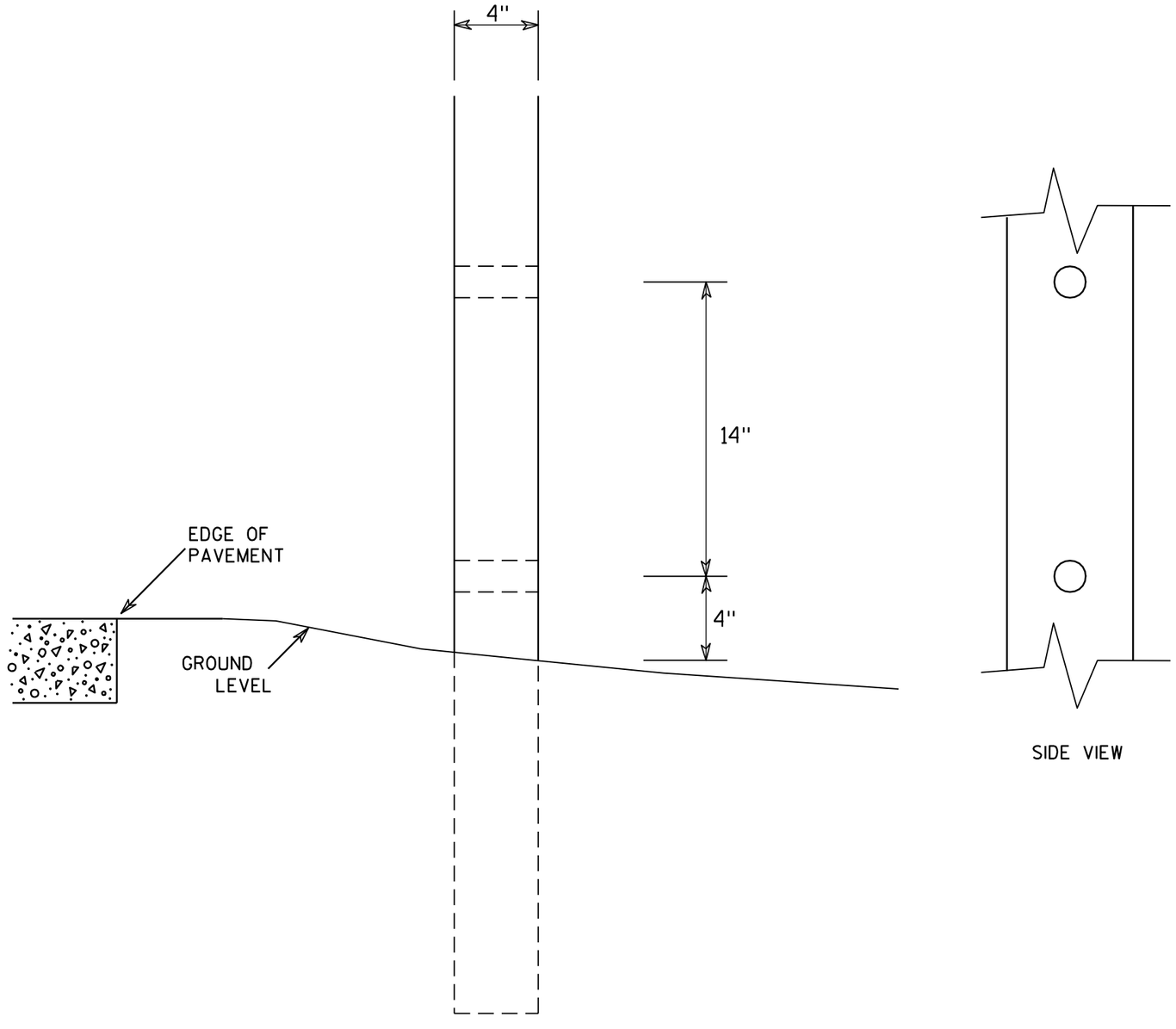
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 259 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

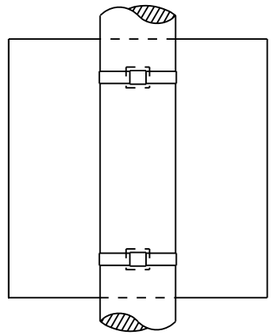
APPROVED Chester J Spang for State Traffic Engineer

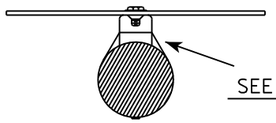
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 260	E

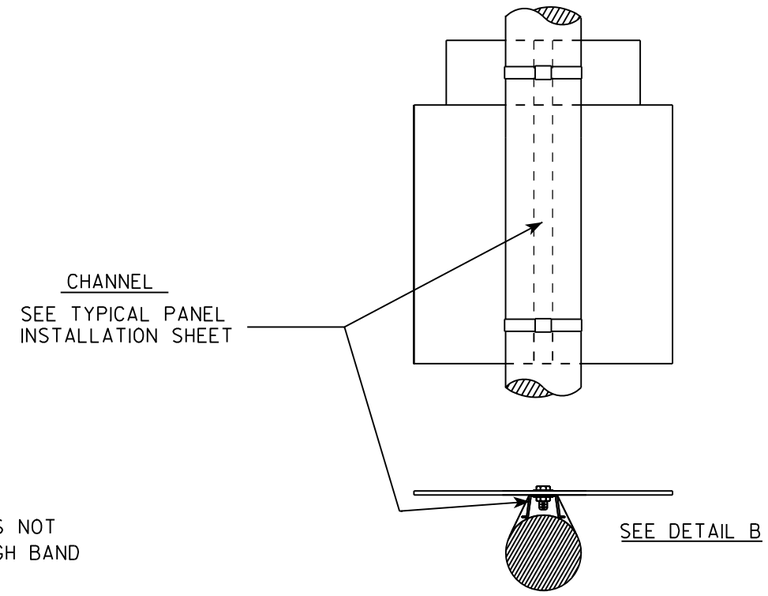
BANDING

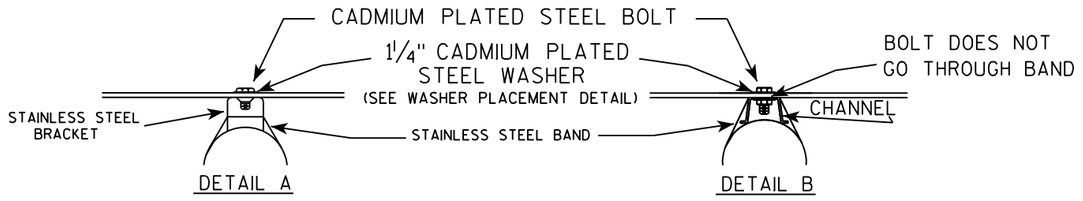
SINGLE SIGN



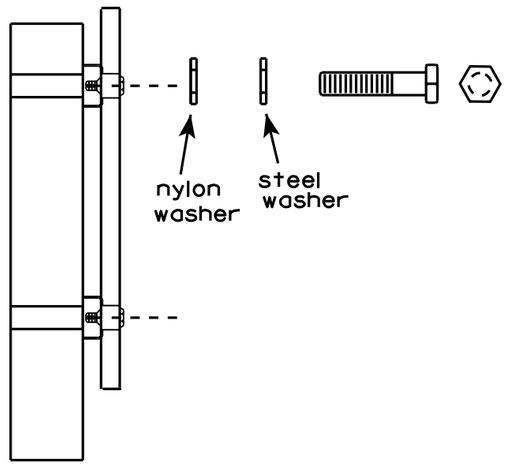


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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.

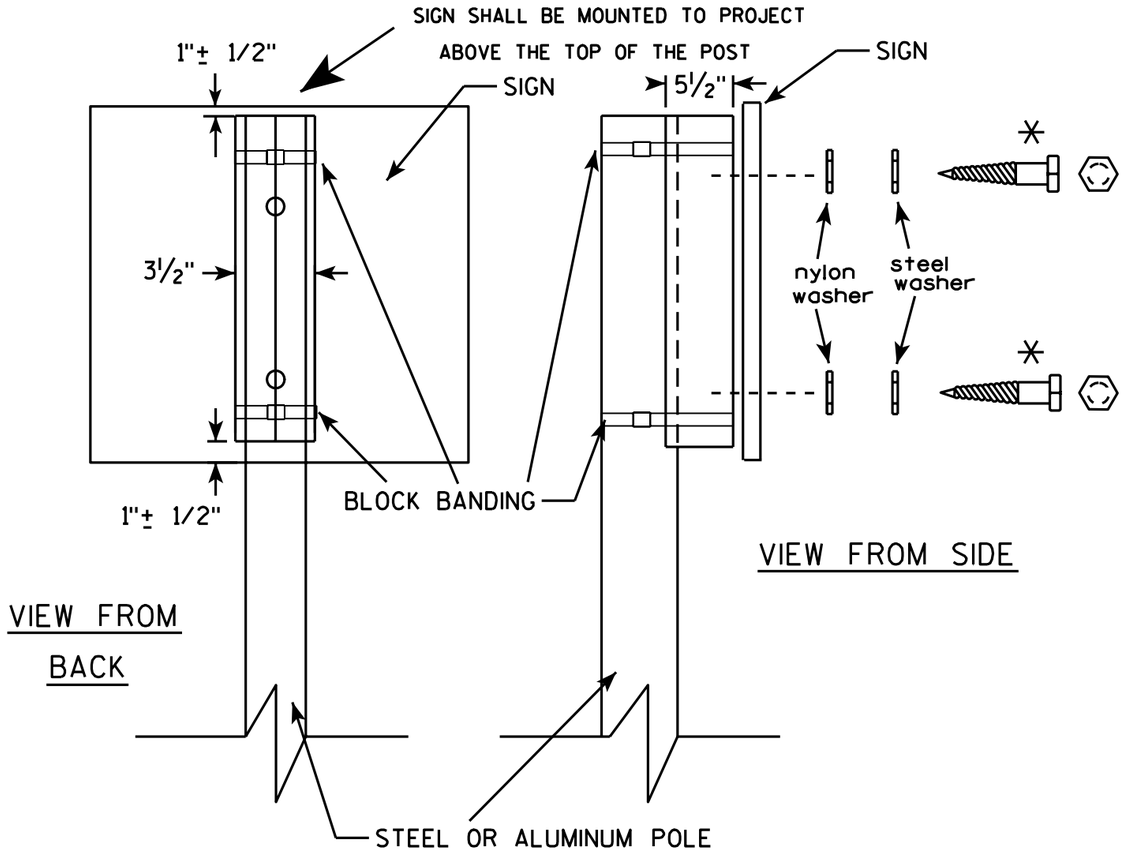
STANDARD SIGN
SIGN BANDING DETAILS

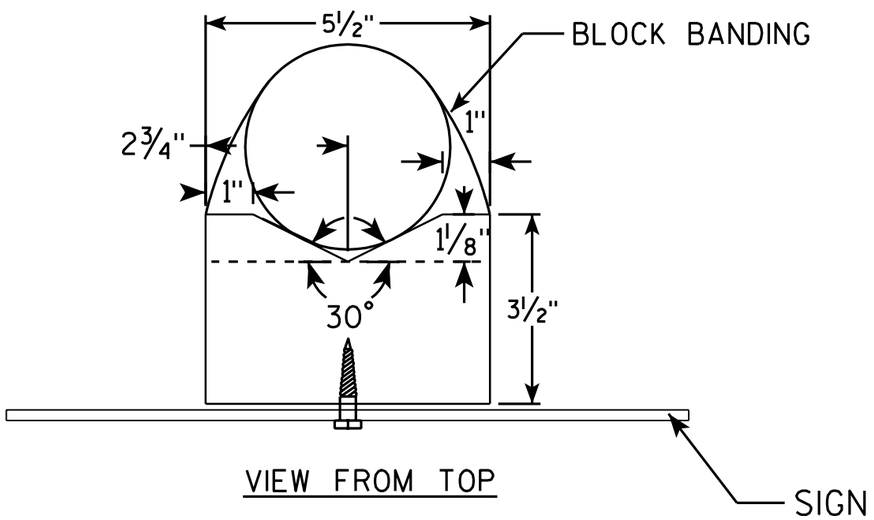
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 261	E





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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 262 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

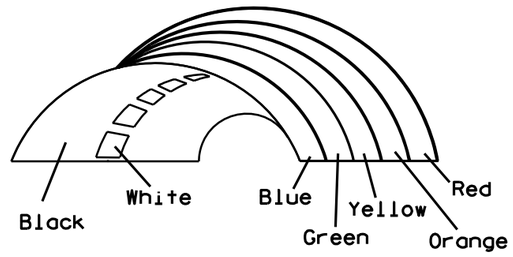
WISDOT/CADDS SHEET 42



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 - (See Note 5)
3. Message Series - (See Note 6)
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. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

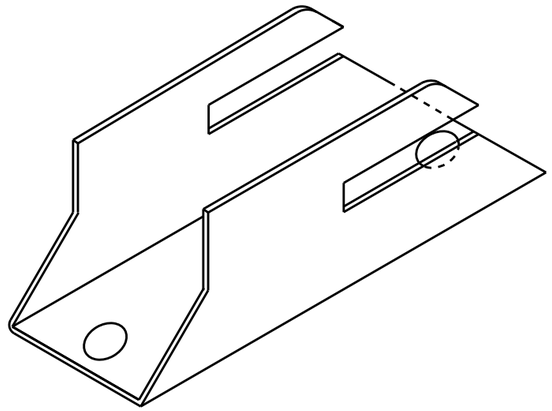
DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 263

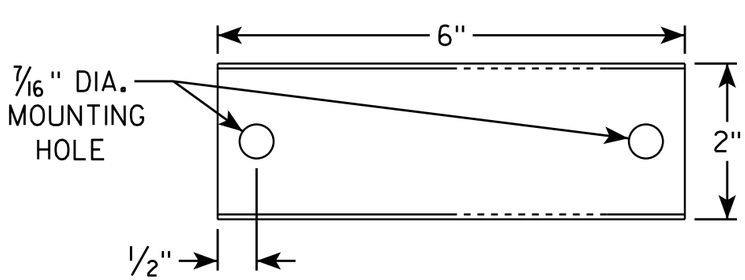
NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

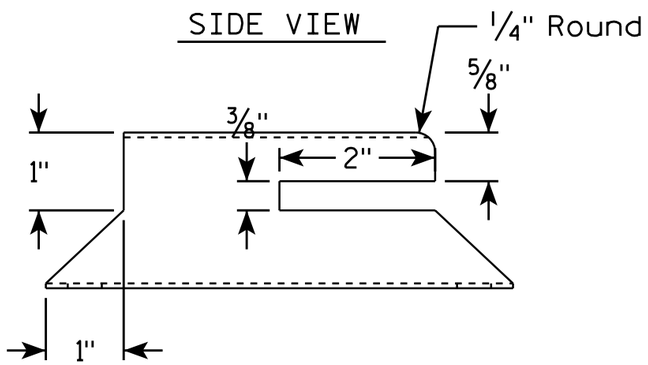
ISOMETRIC VIEW



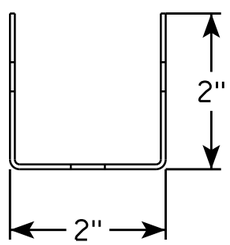
TOP VIEW



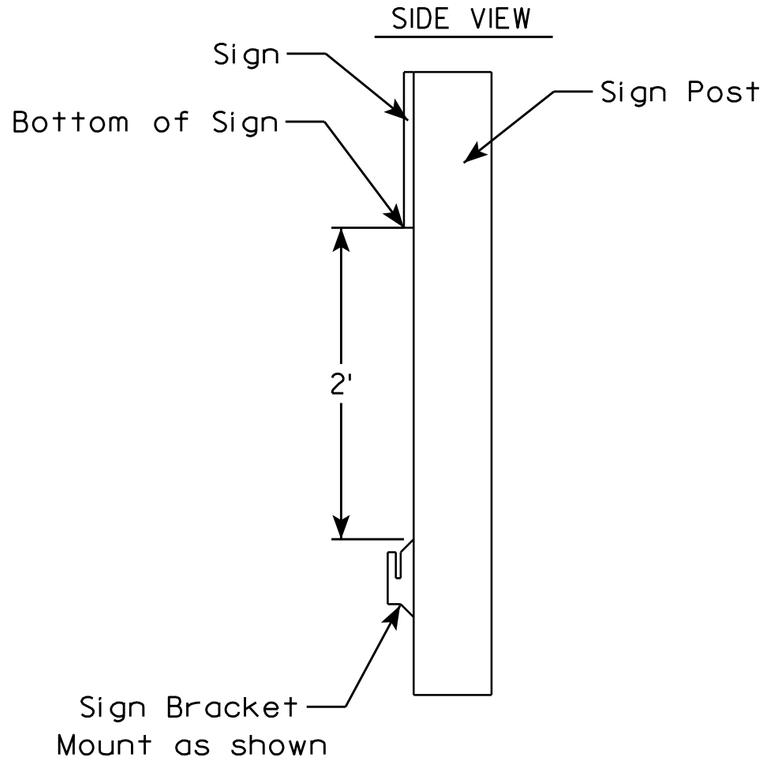
SIDE VIEW



END VIEW



SIDE VIEW



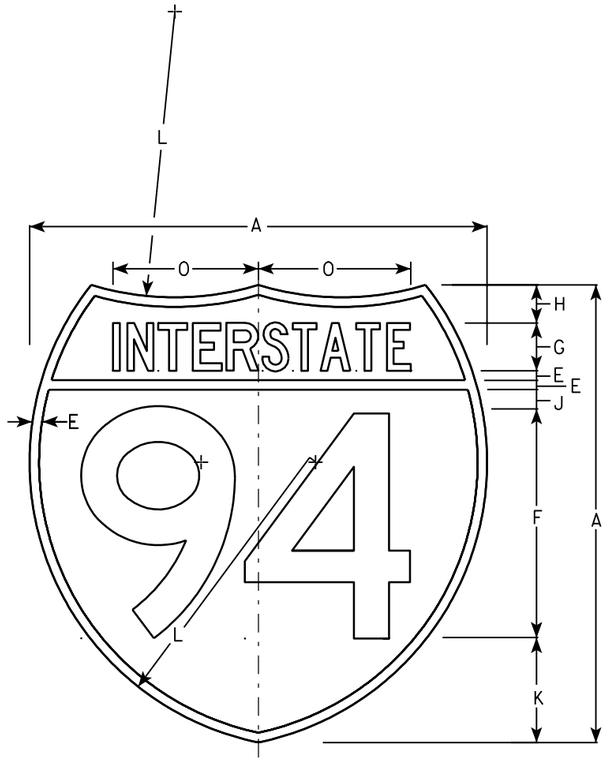
ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

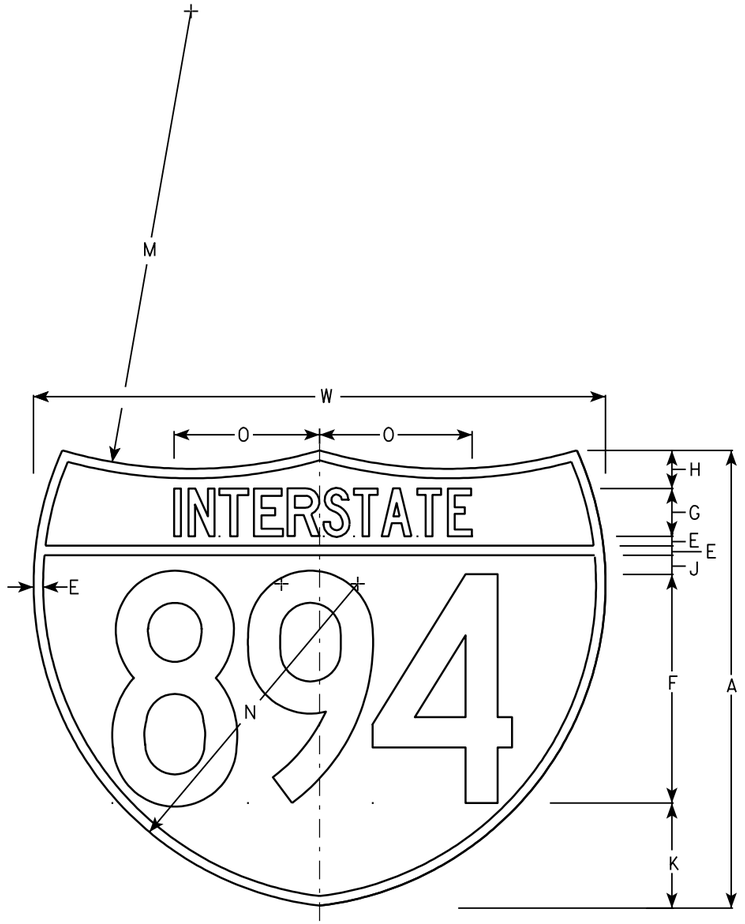
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/16 PLATE I55-56B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

7

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

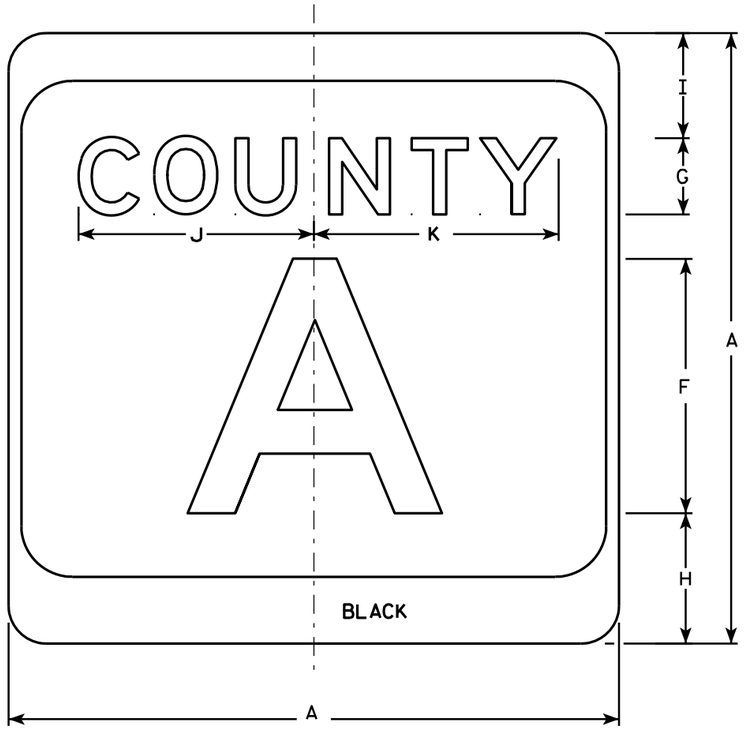
INTERSTATE ROUTE MARKER M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

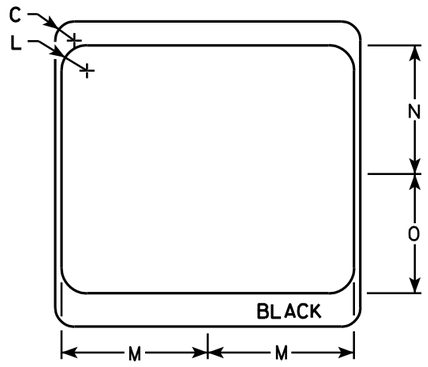
APPROVED Matthew R Rauch
for State Traffic Engineer

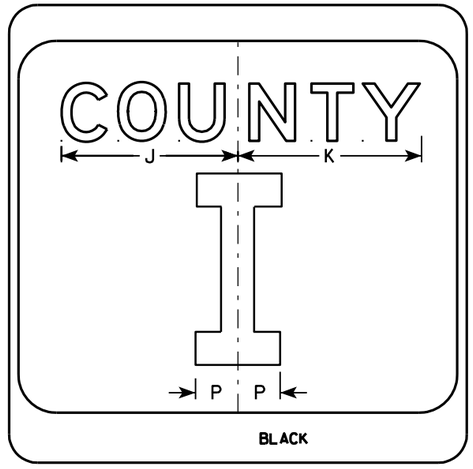
DATE 08/23/05 PLATE NO. M1-1.8

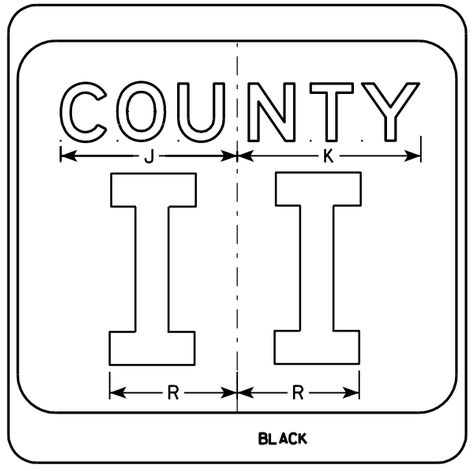
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 265	E



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

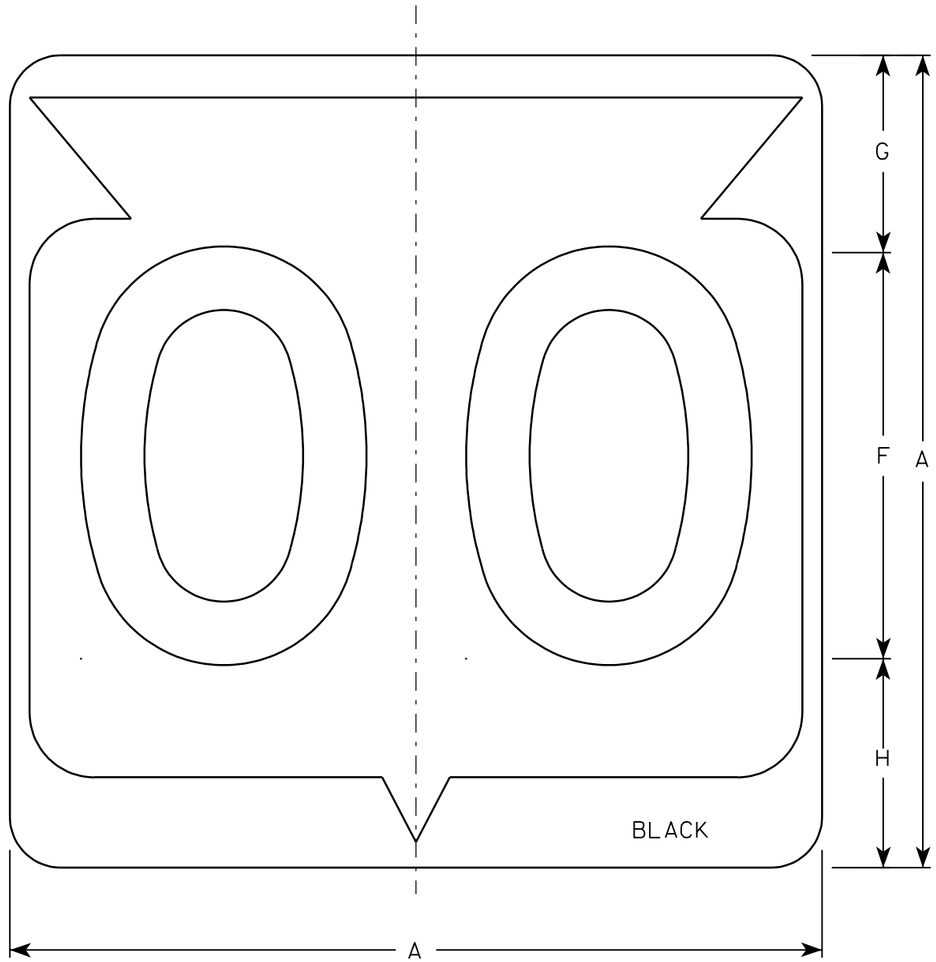
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

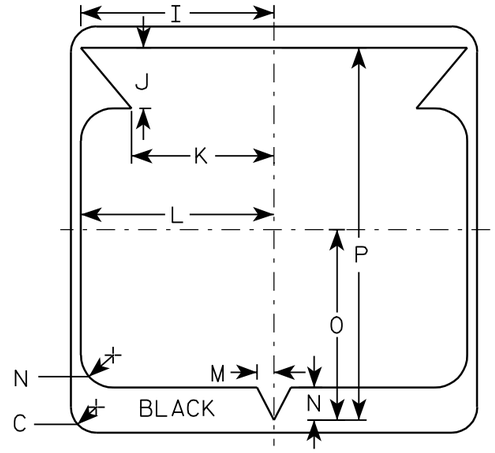
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 266 | E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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 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	.36
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	.81
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	.81
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	.81

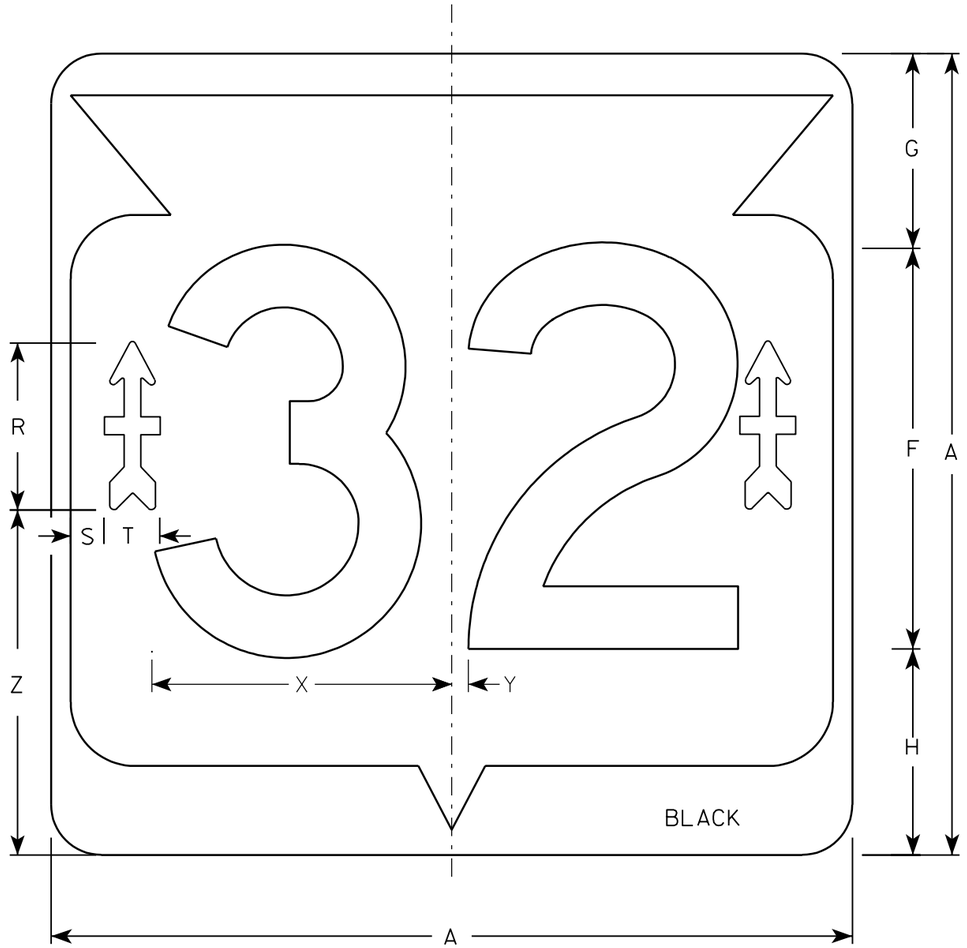
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

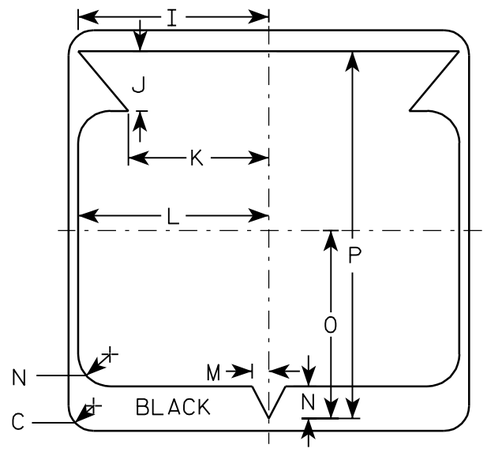
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 267	E



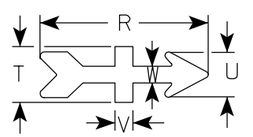
M1-6B

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 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		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0	.36
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81

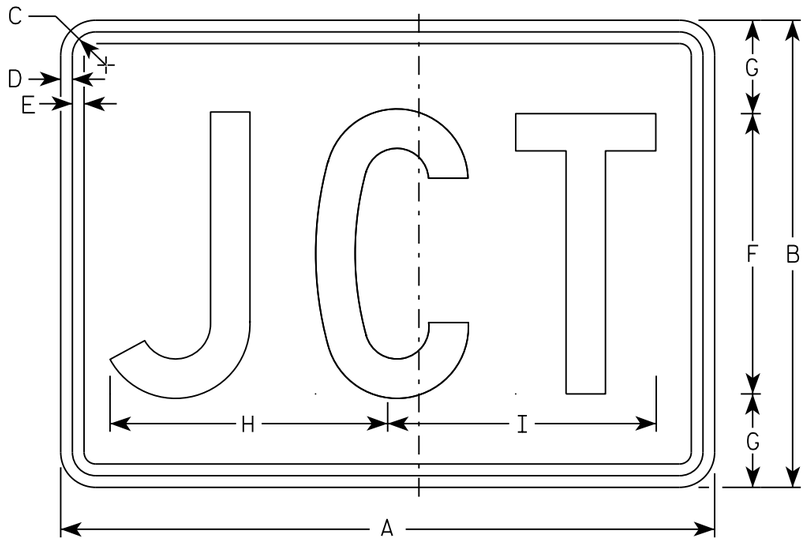
STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

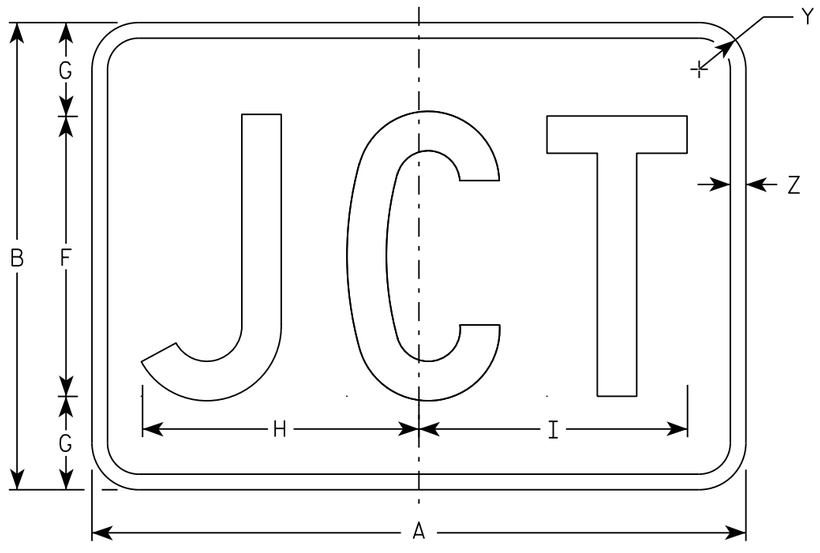
APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 268	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is 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. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

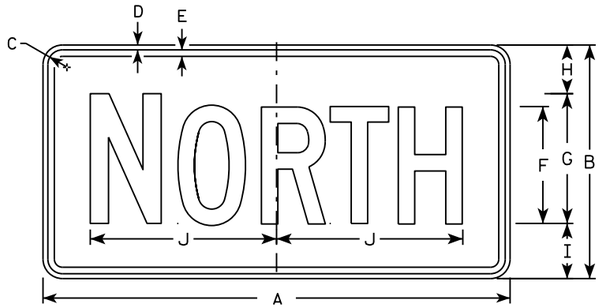
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

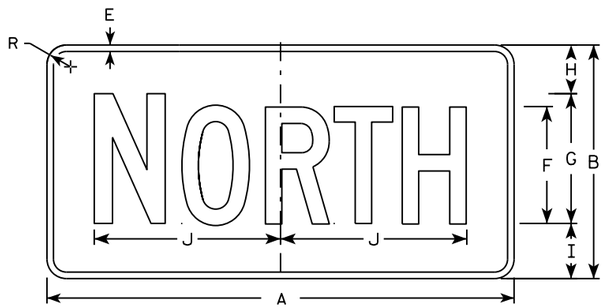
DATE 10/15/15 PLATE 269 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M3-1
MM3-1
MP3-1



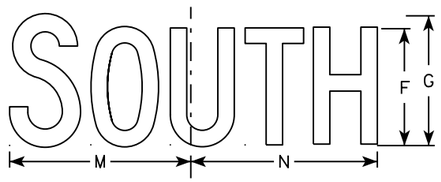
MB3-1
MK3-1
MN3-1



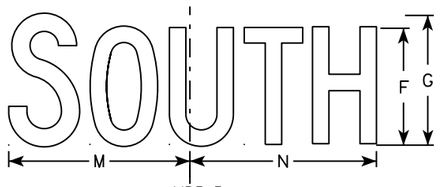
M3-2
MM3-2
MP3-2



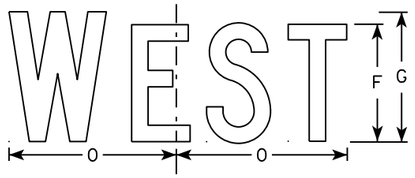
MB3-2
MK3-2
MN3-2



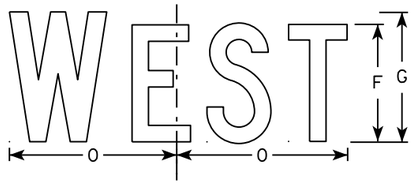
M3-3
MM3-3
MP3-3



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

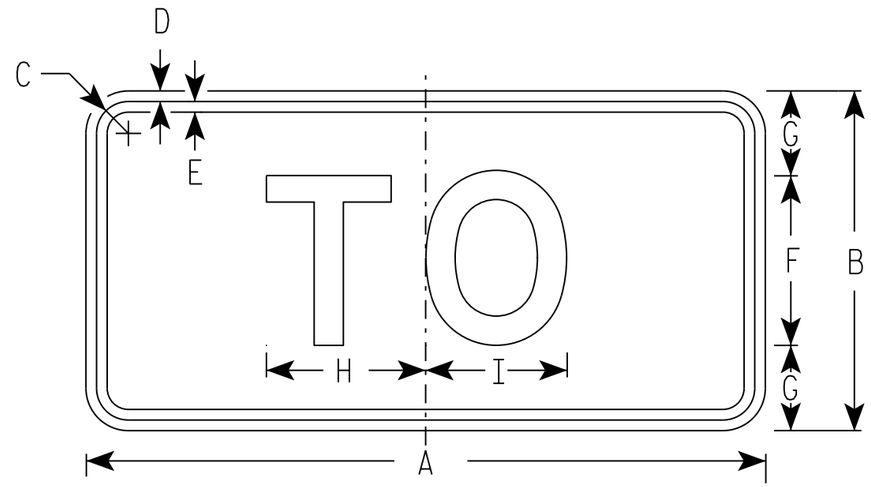
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

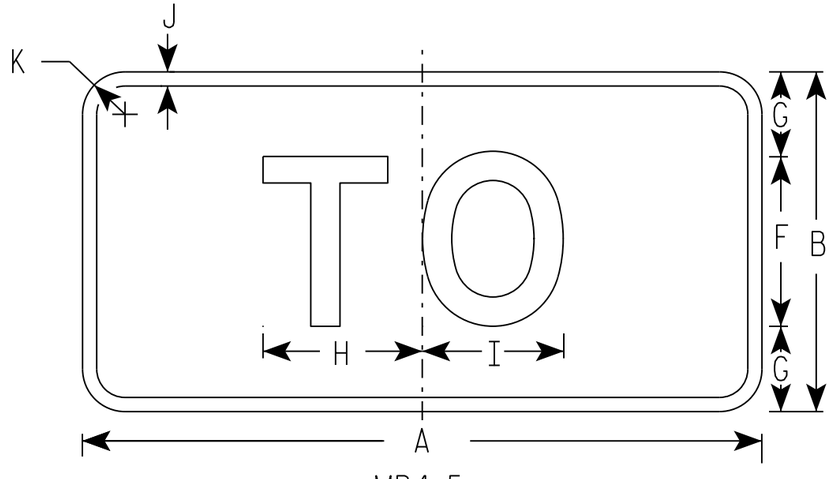
DATE 10/15/15 PLATE NO M3-1.14

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



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
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

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

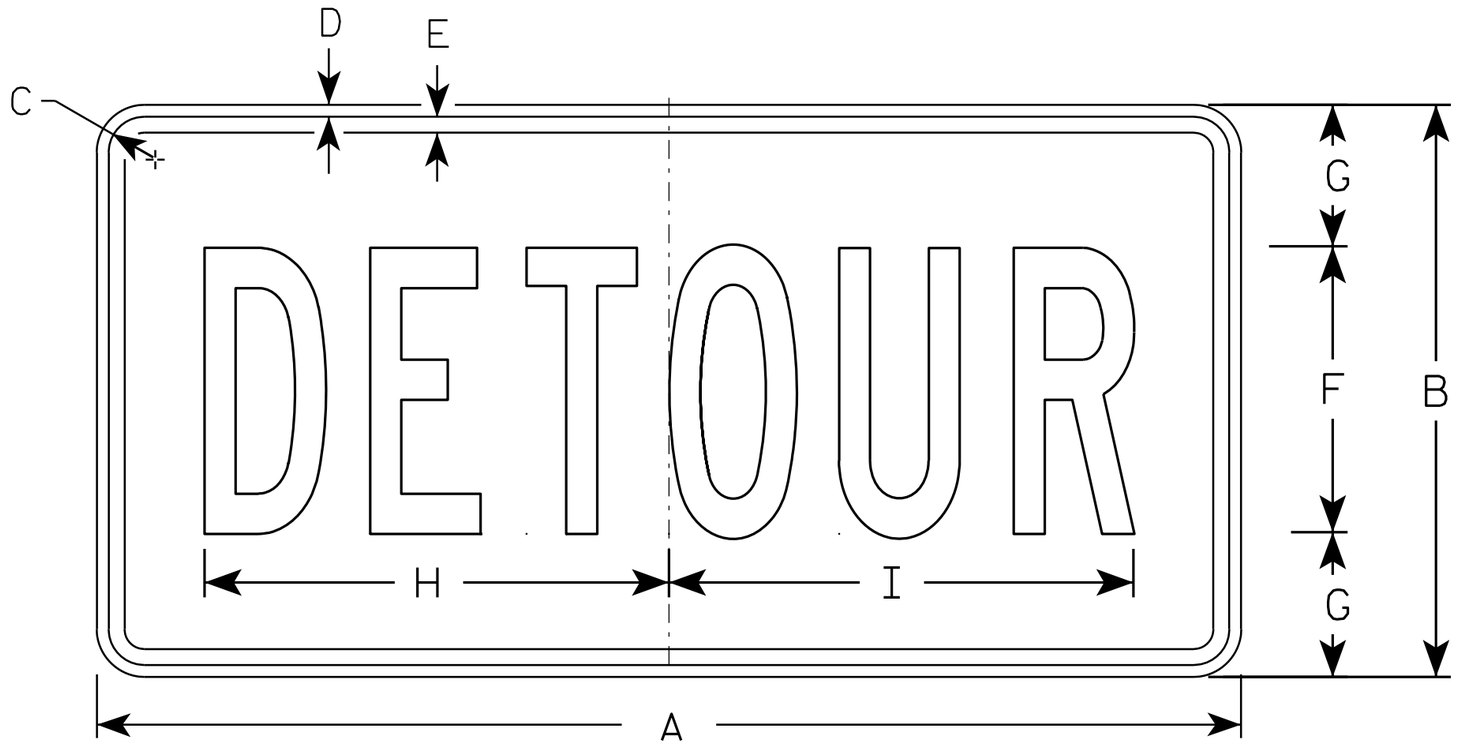
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 271 M4-5.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



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																											

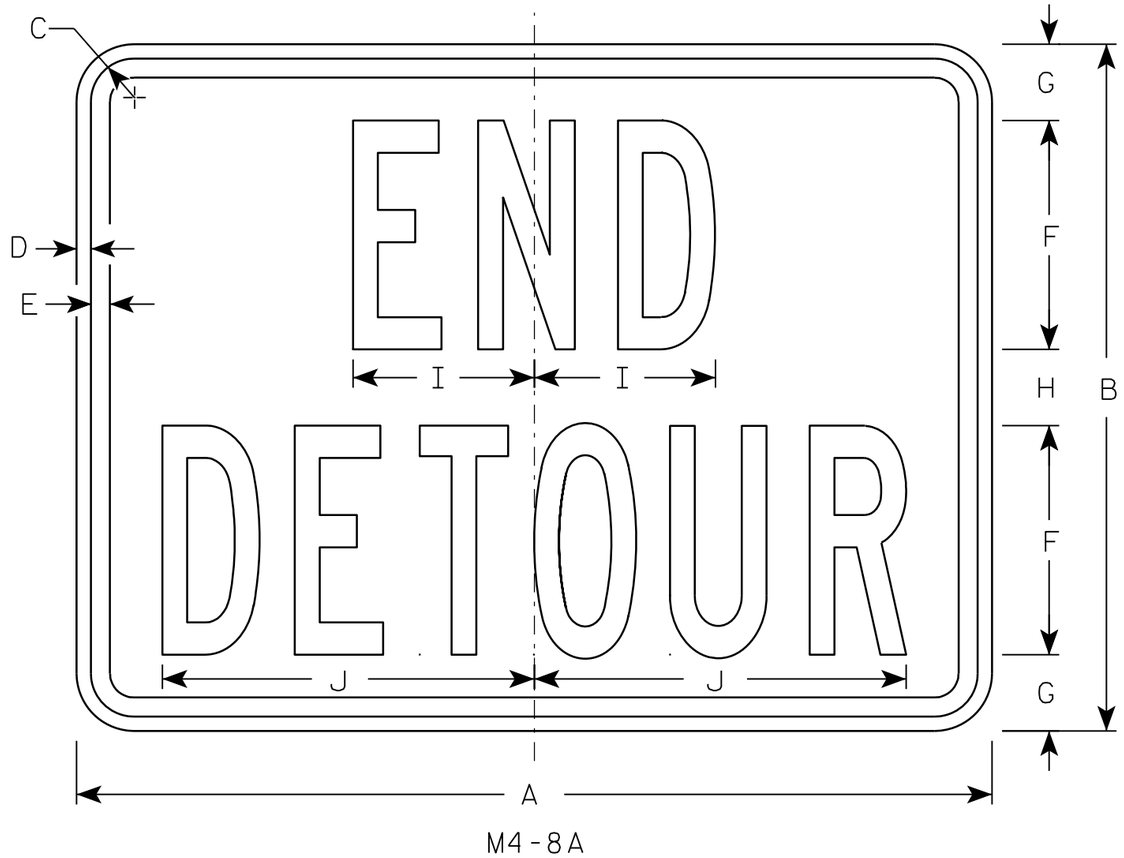
STANDARD SIGN
M4-8

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: 272	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																											

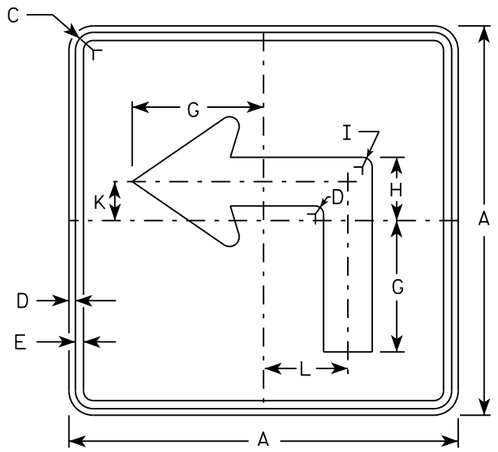
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

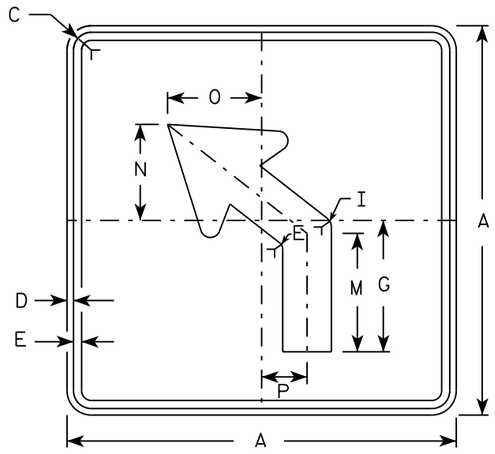
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

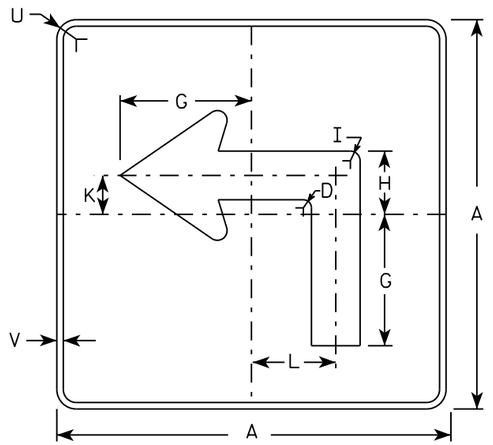
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 273	E



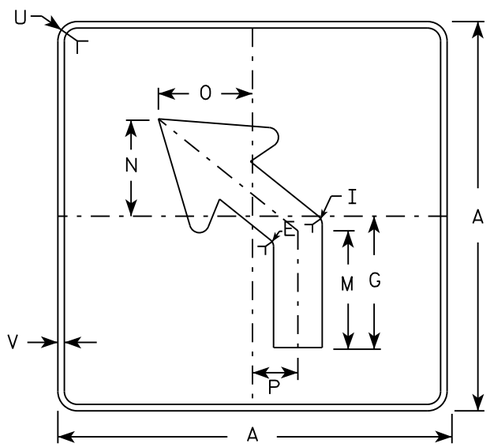
M5-1L
MM5-1L
MO5-1L
MP5-1L



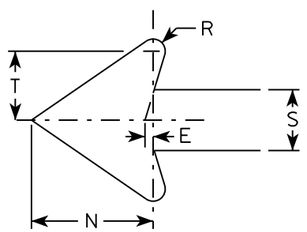
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

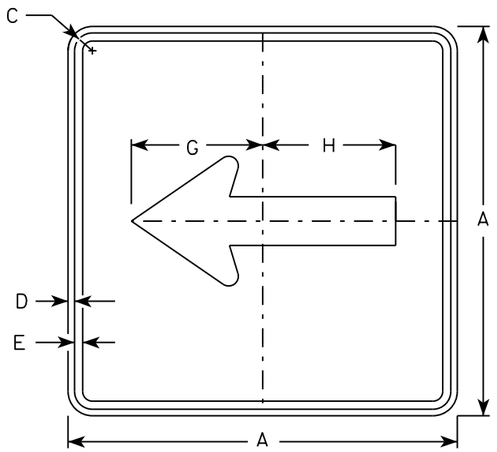
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

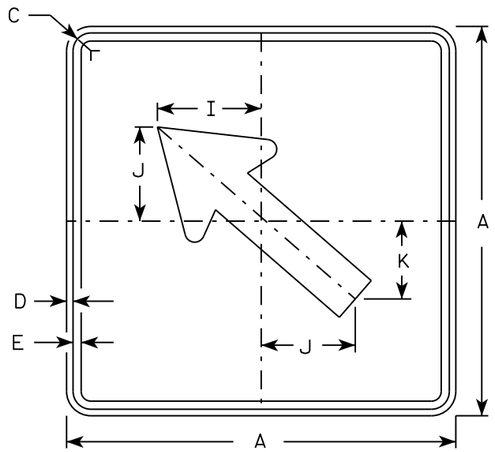
DATE 10/15/15 PLATE NO. M5-1.13

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



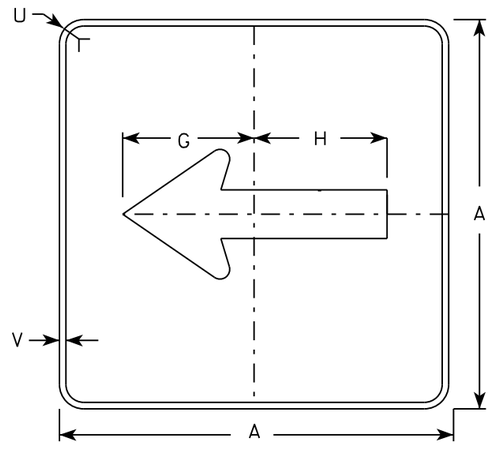
M6-1
MM6-1
MO6-1
MP6-1



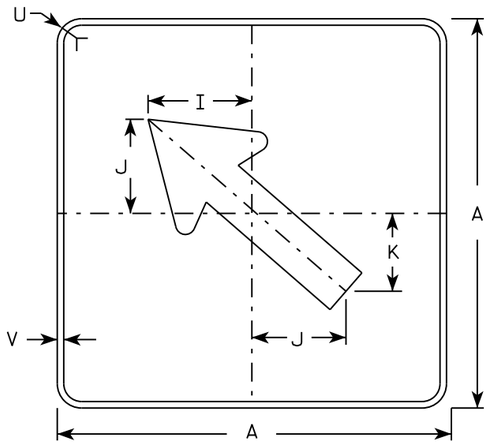
M6-2
MM6-2
MO6-2
MP6-2

NOTES

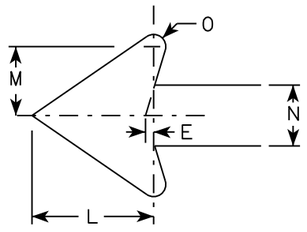
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

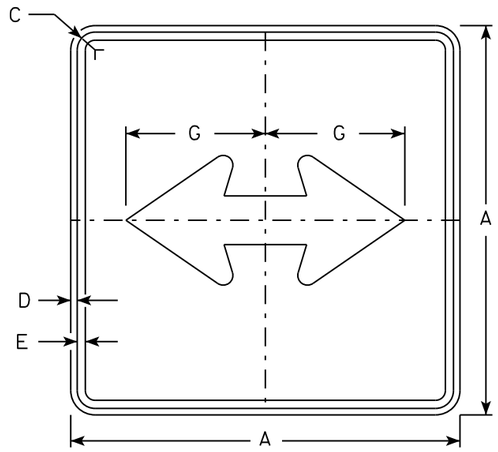
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

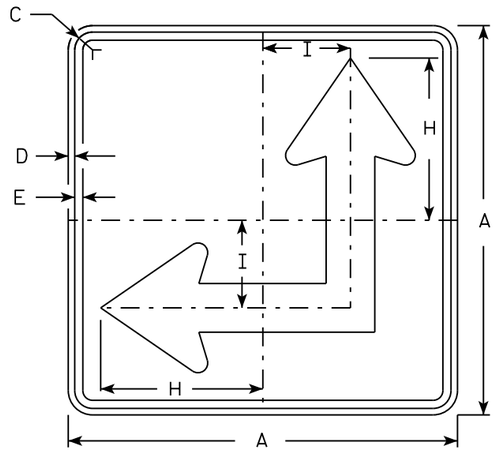
DATE 10/15/15 PLATI 275 M6-1.15

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



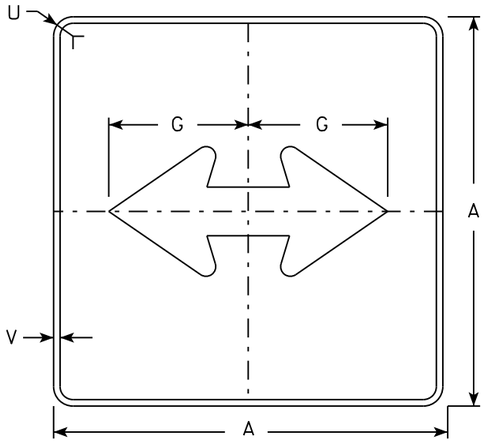
M6-4
MM6-4
MO6-4
MP6-4



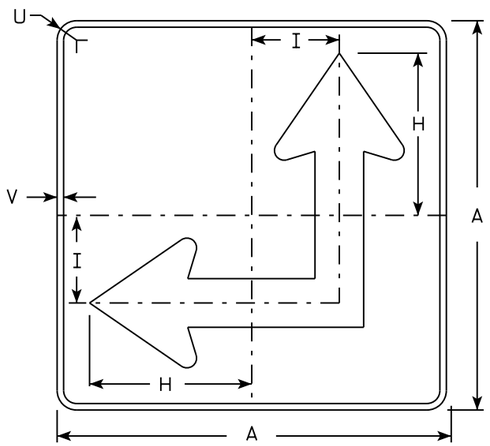
M6-6
MM6-6
MO6-6
MP6-6

NOTES

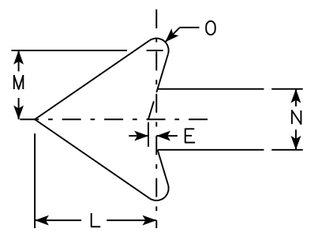
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

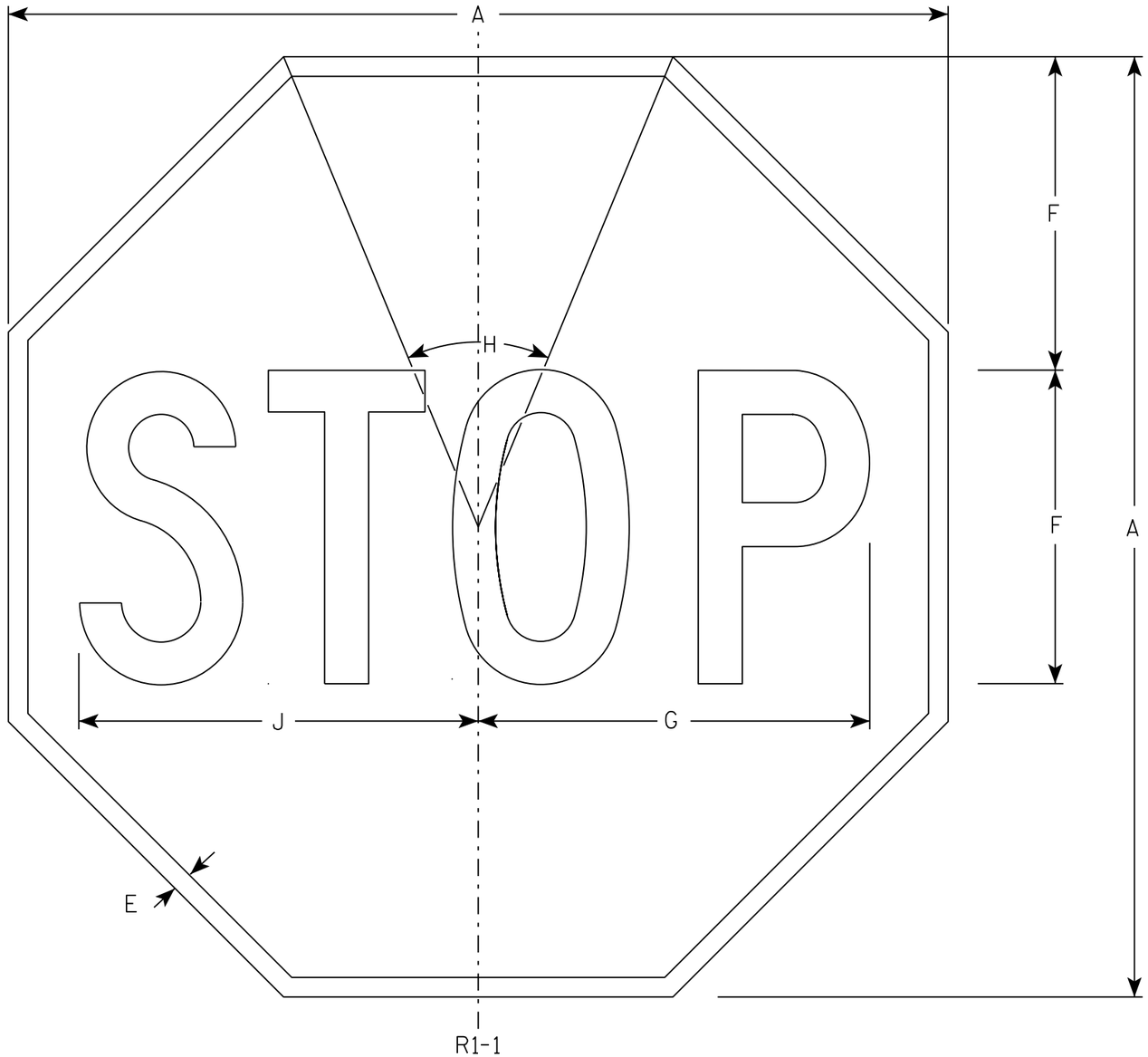
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 276 M6-4.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

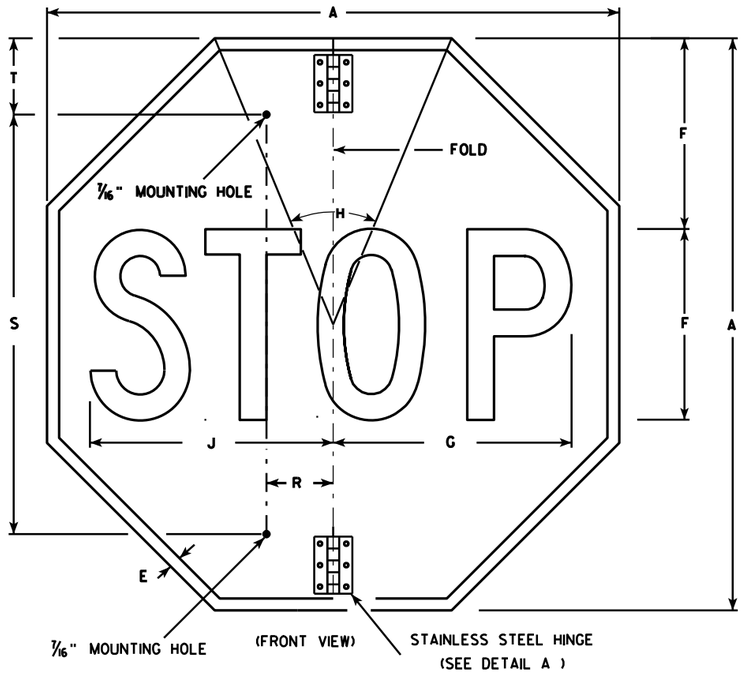
WISCONSIN DEPT OF TRANSPORTATION

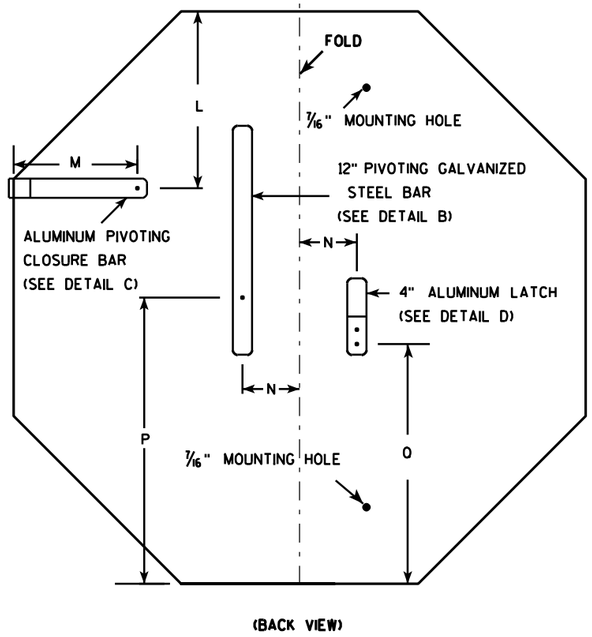
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE 277 R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

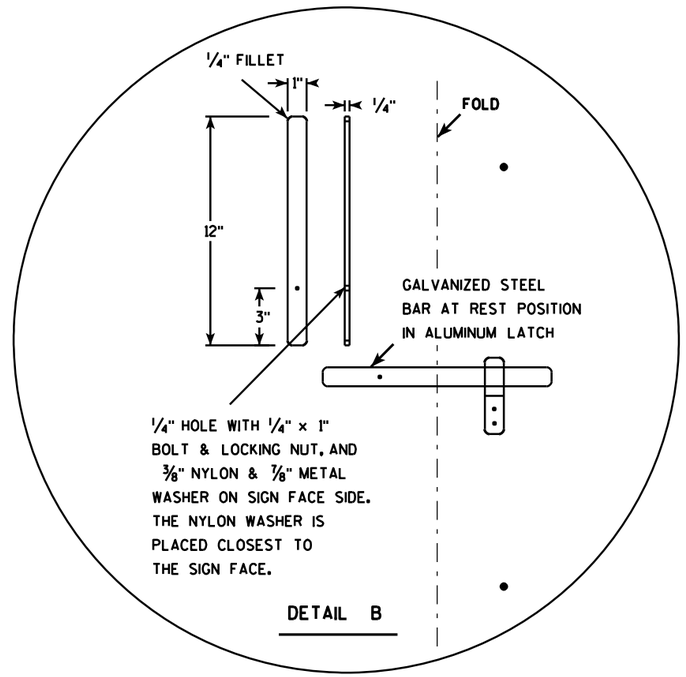
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R11.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.378143:1.000000

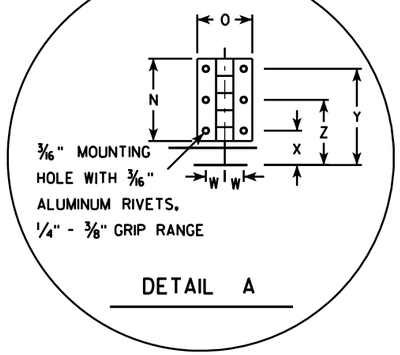


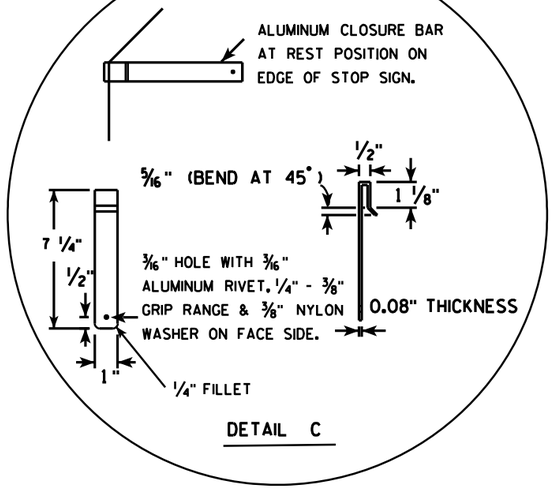


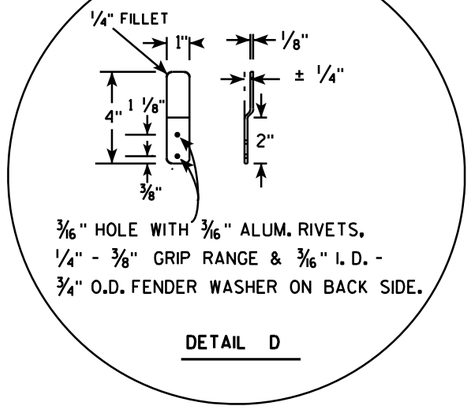
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









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																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

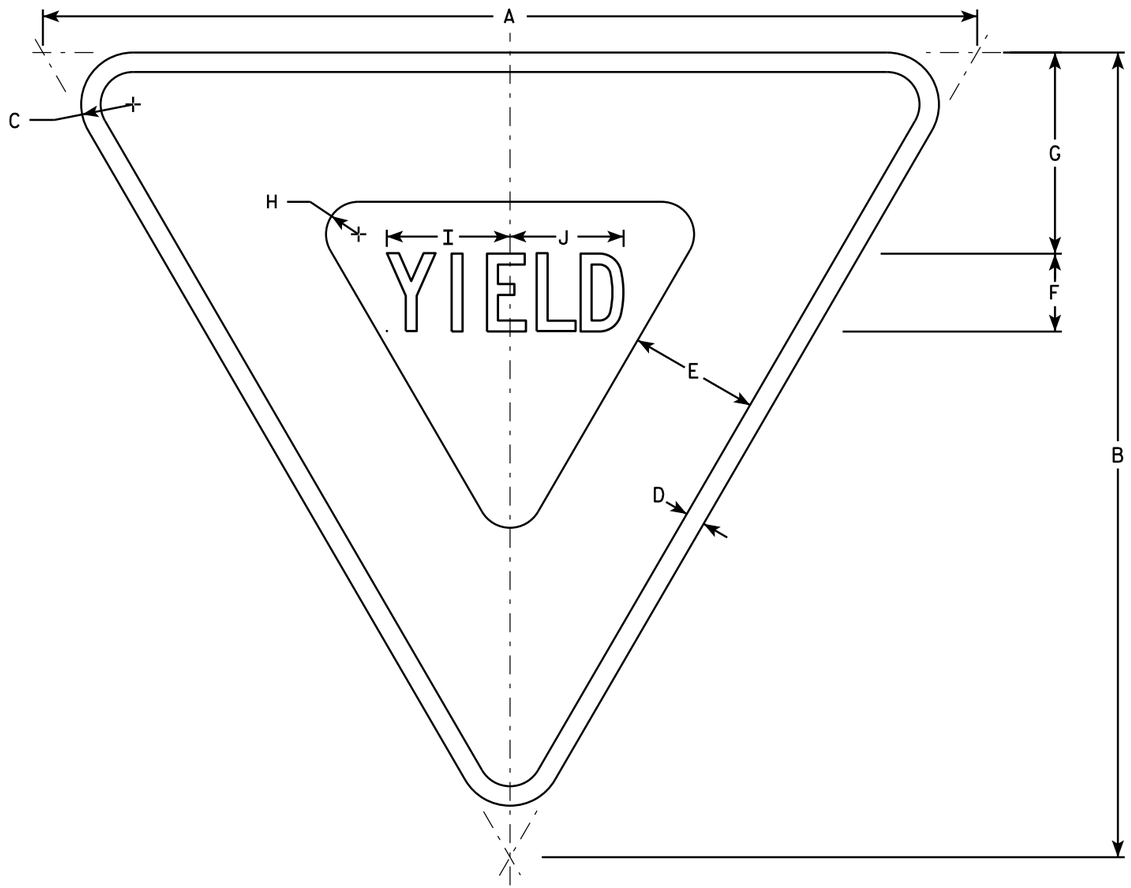
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 278 | E



R1-2

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 - 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. The border strip and word message are reflectorized red.

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

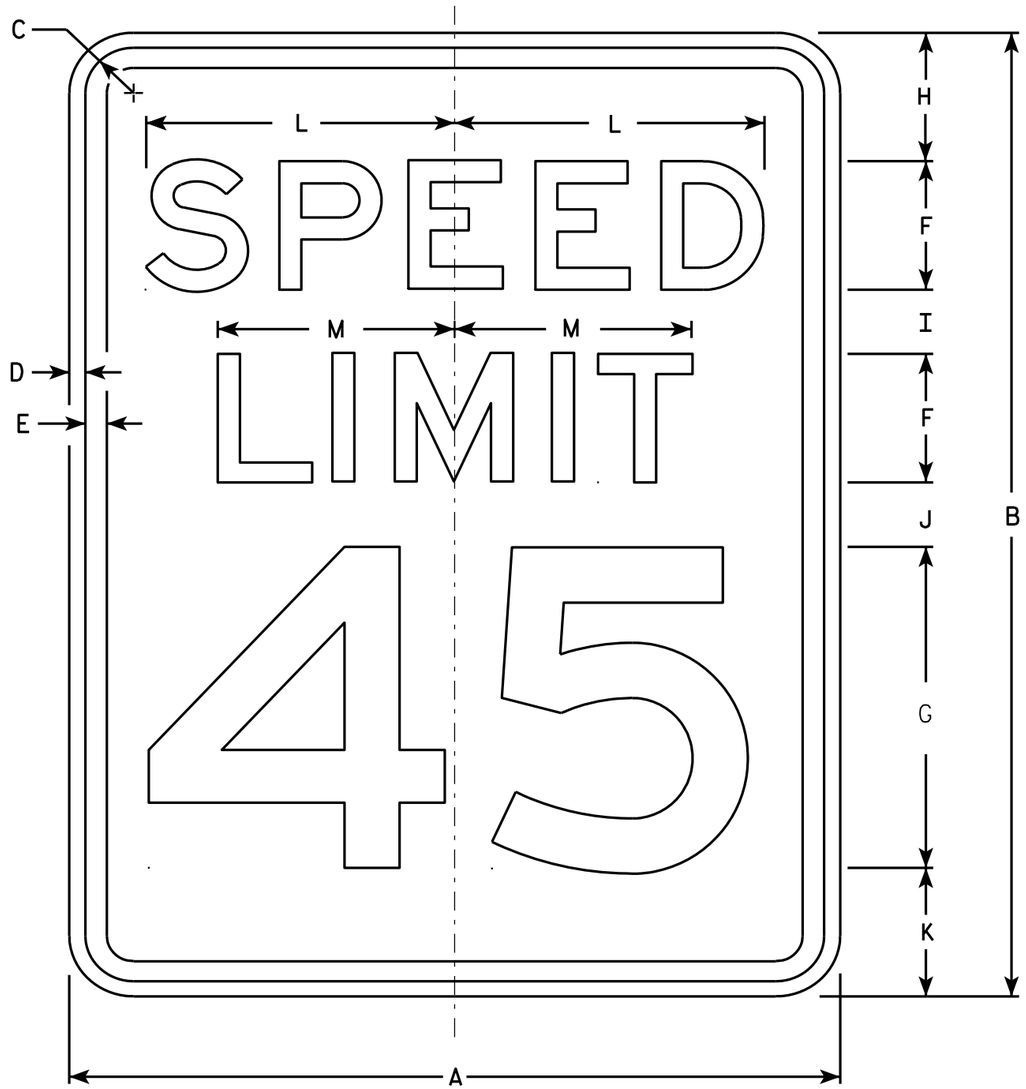
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000

WISDOT/CADDS SHEET 42



R2-1

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 - 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. Substitute appropriate numerals and optically 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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

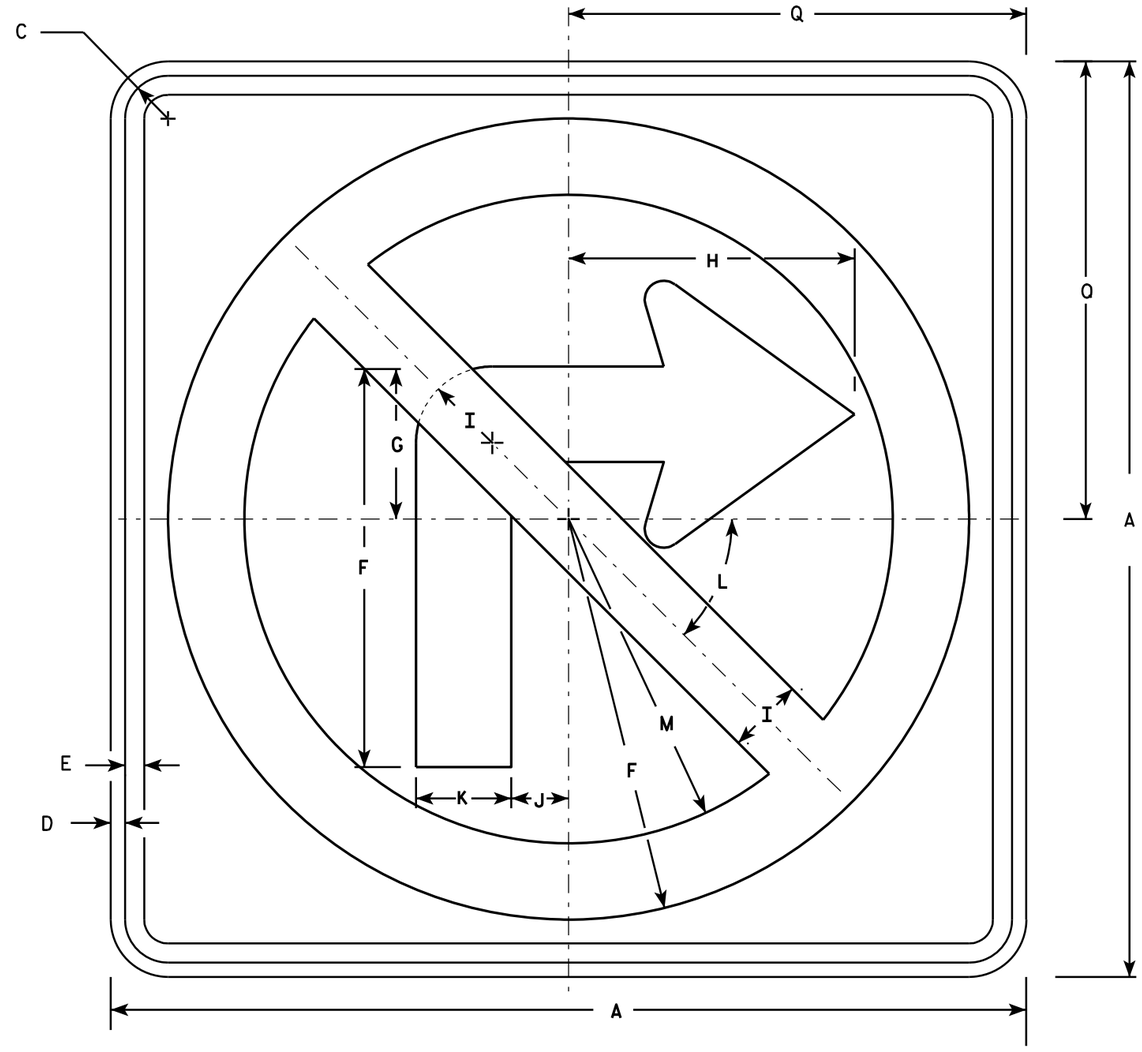
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

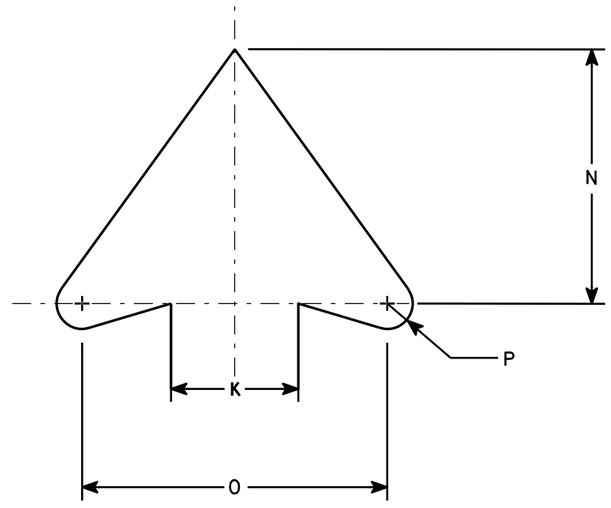
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 280 | E



R3-1

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

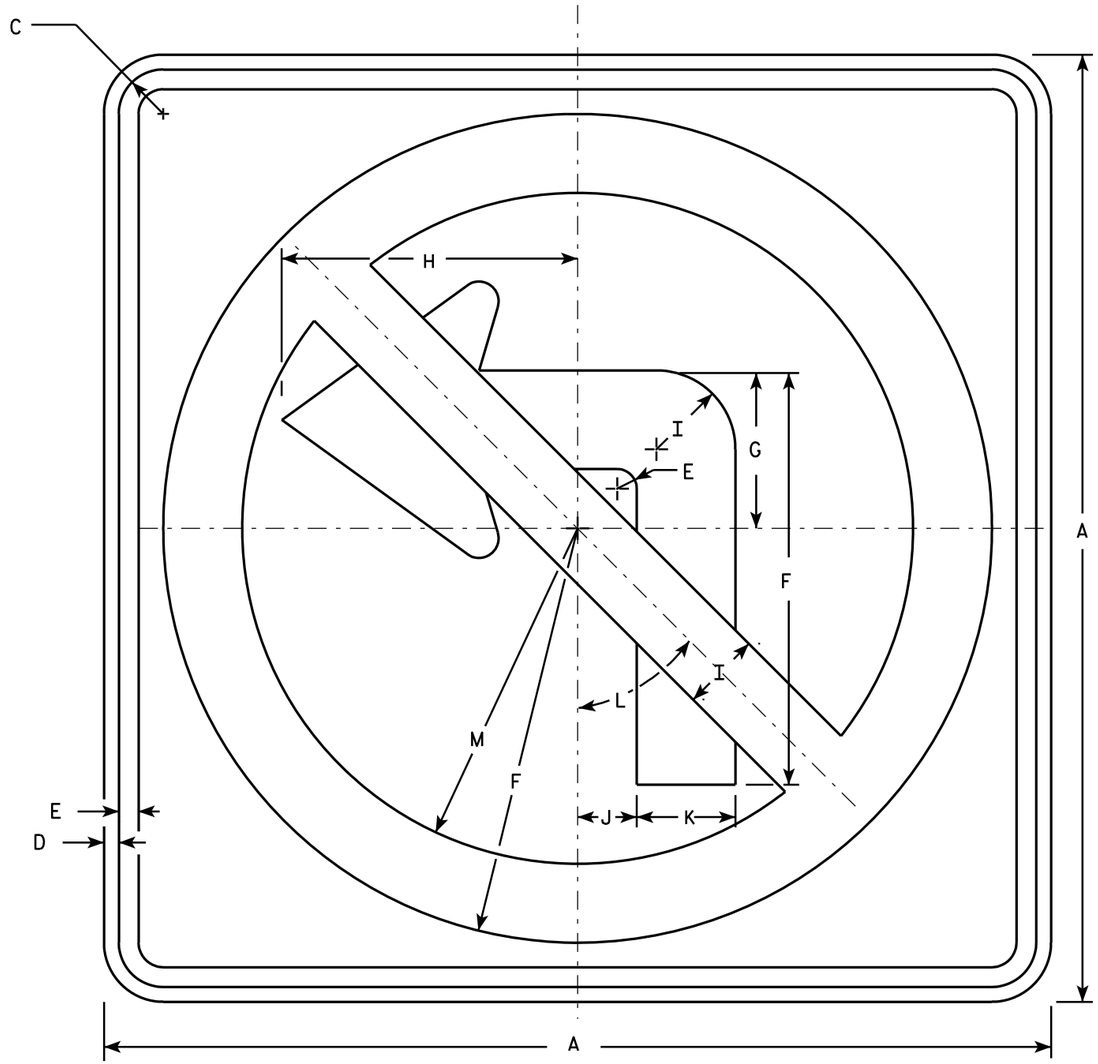
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

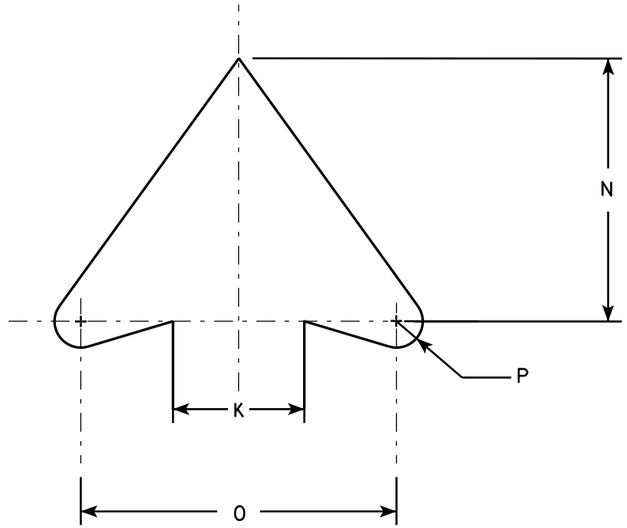
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 281	E



R3-2

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

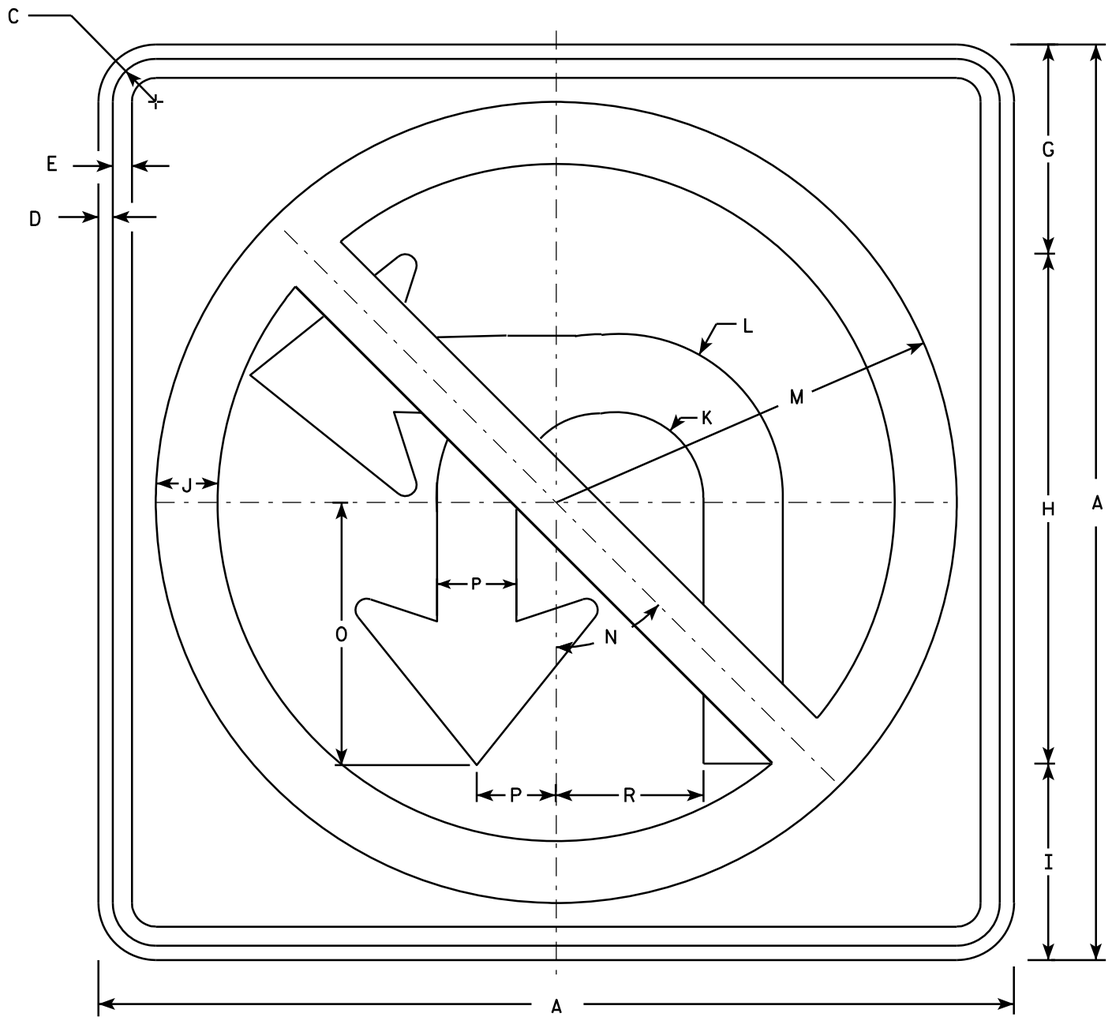
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 282	E



R3-18

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 - 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

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	24		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

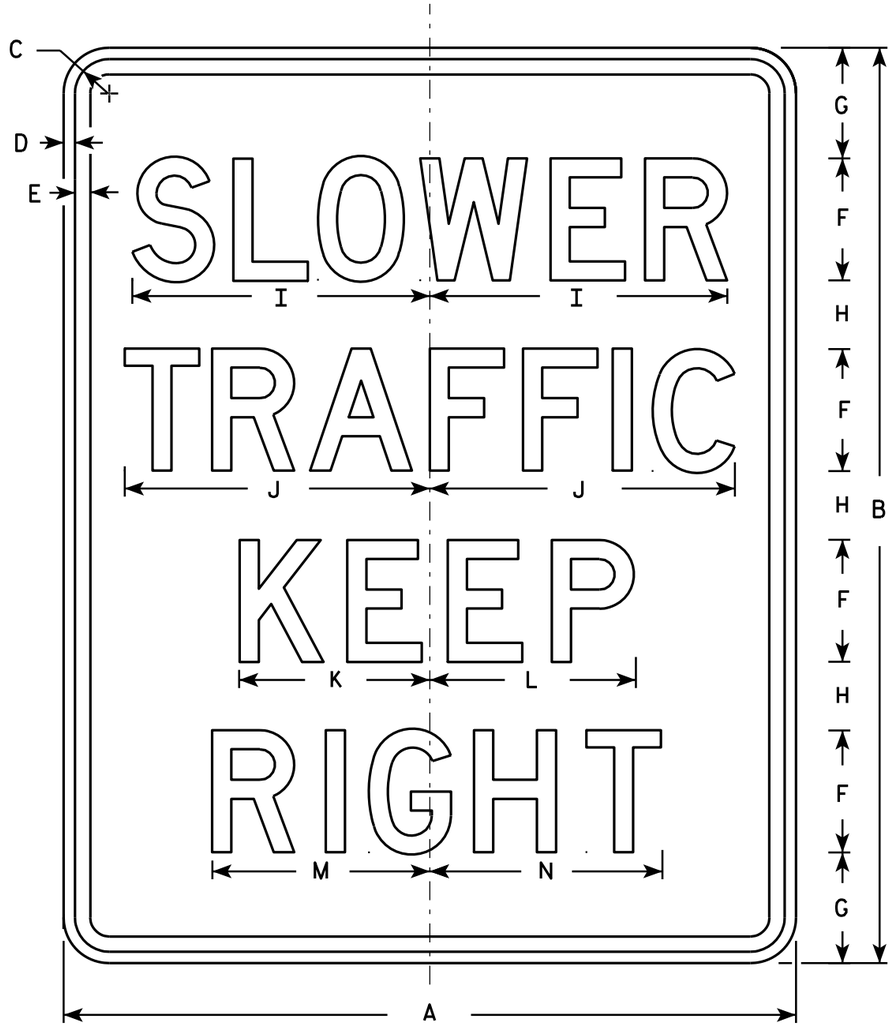
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 283	E



R4-3

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.

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	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

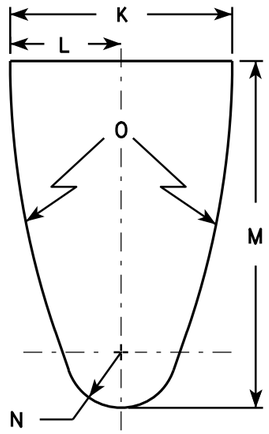
SHEET NO: 284 E

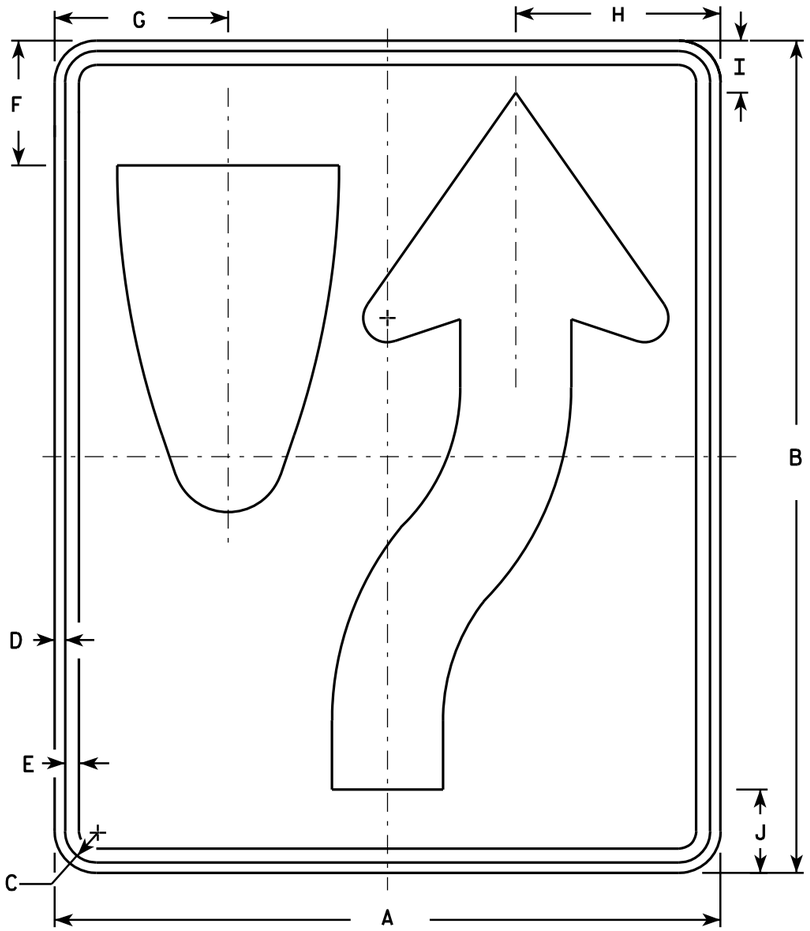
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

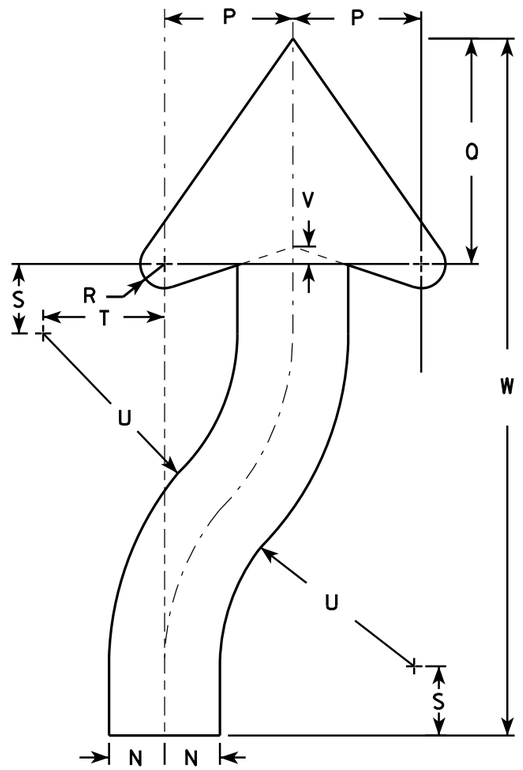




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

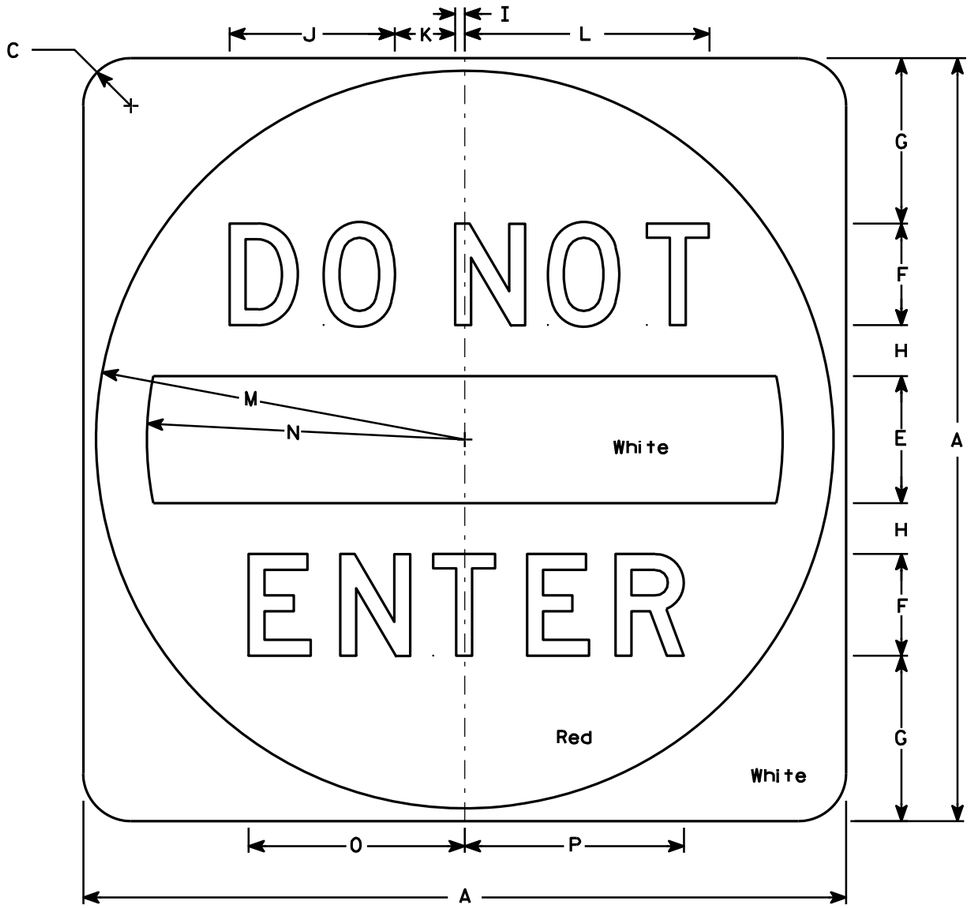
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 285	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

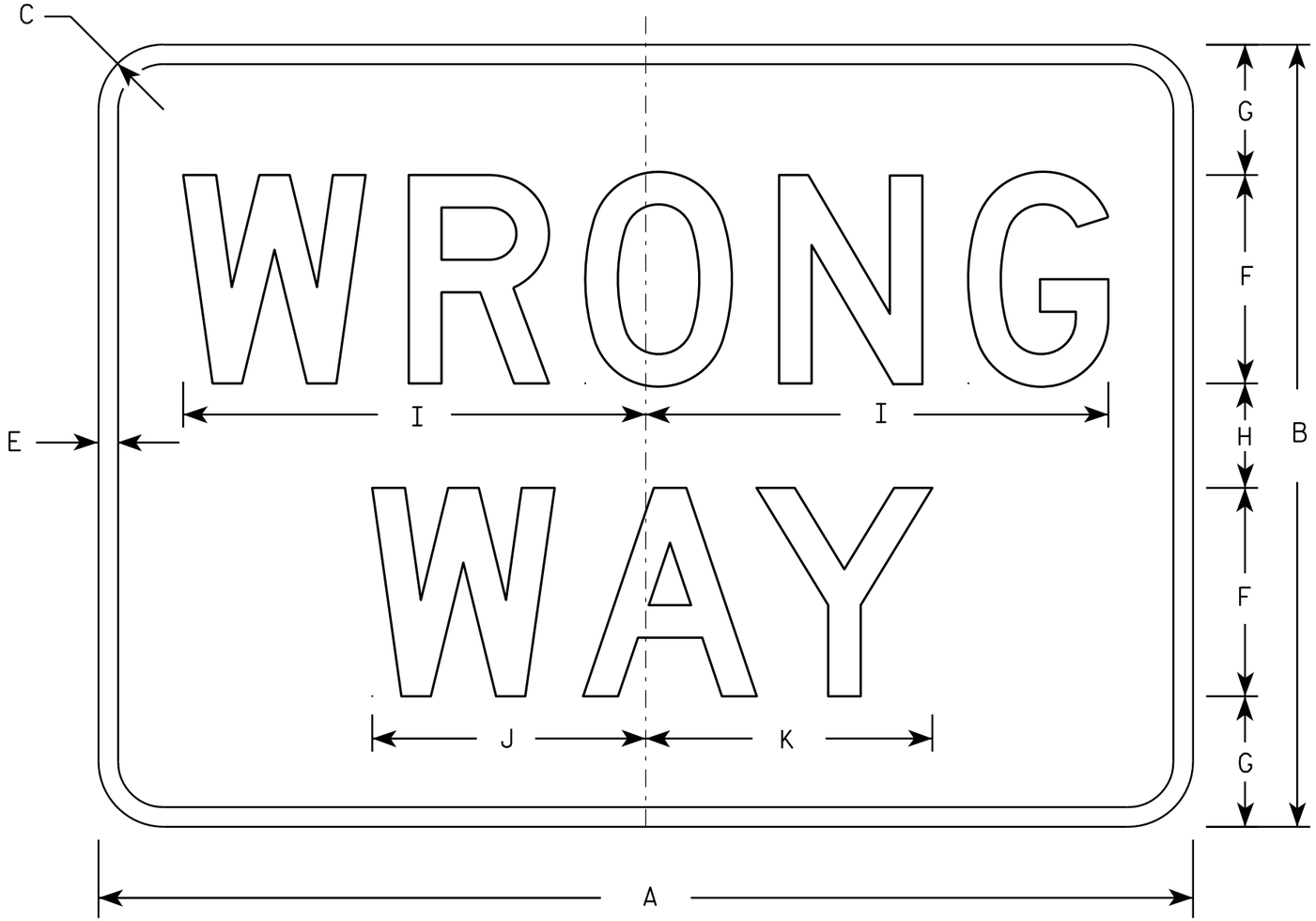
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 286 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
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.

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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

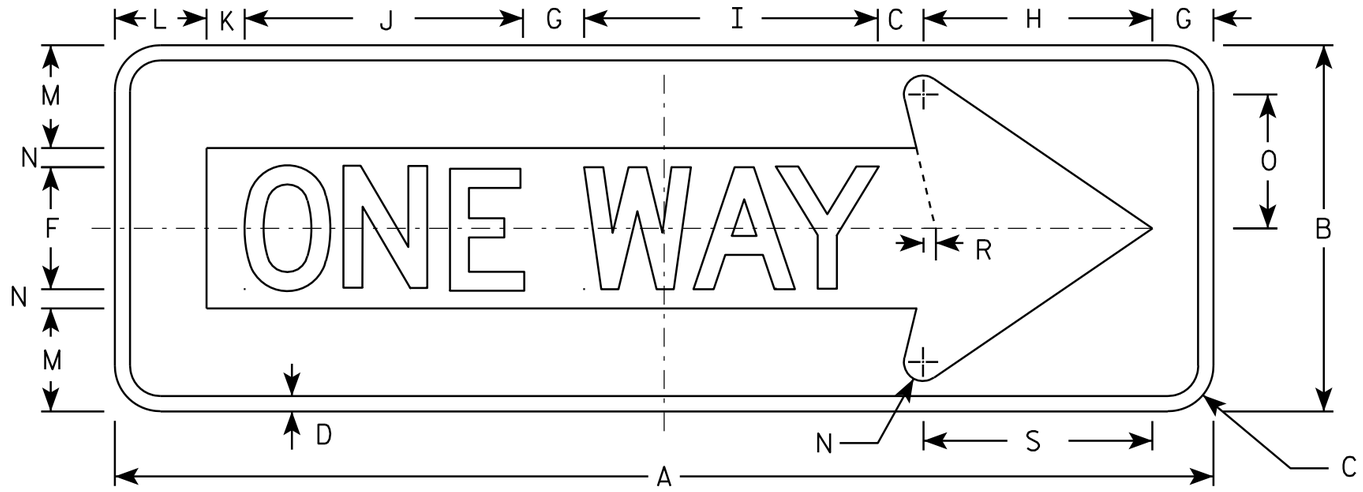
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

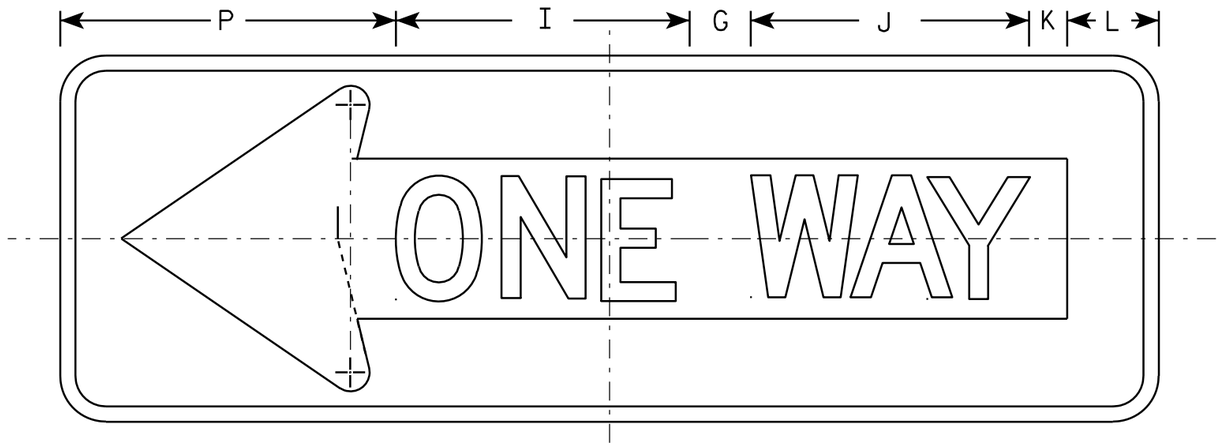
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 287 | E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
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.



R6-1L

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	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

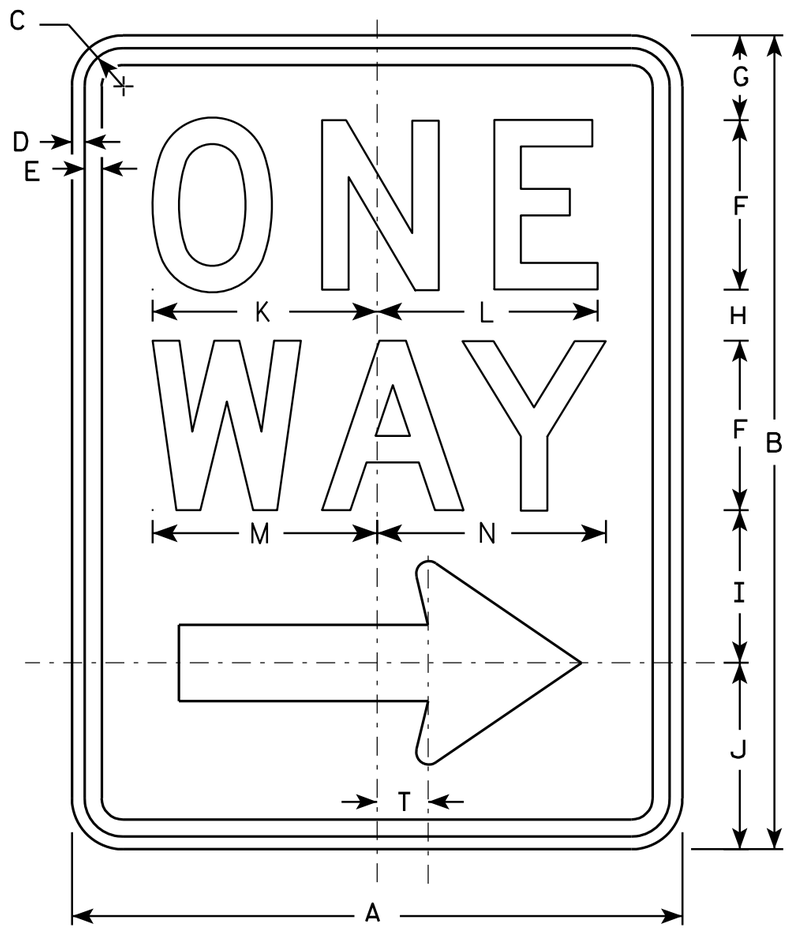
DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO: 288 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

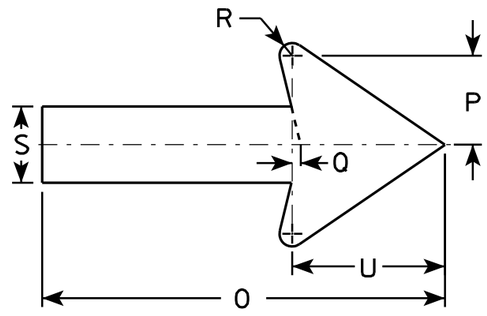
WISDOT/CADDS SHEET 42



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

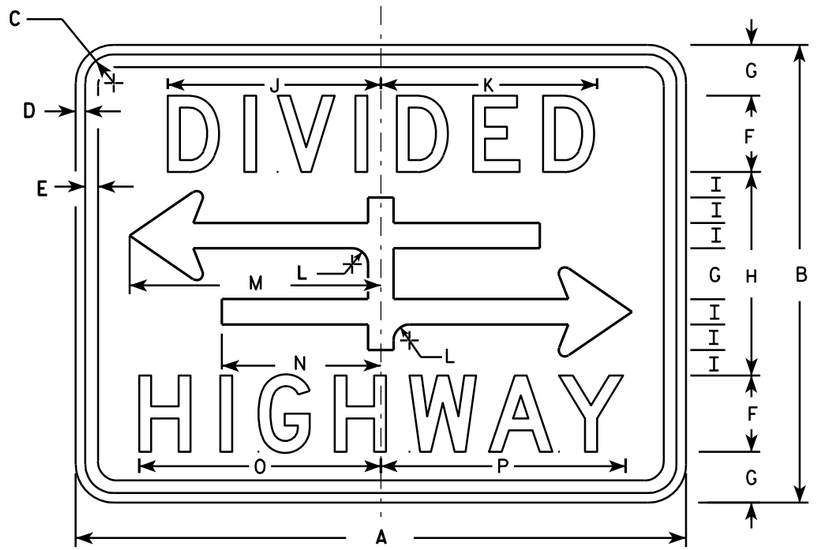
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

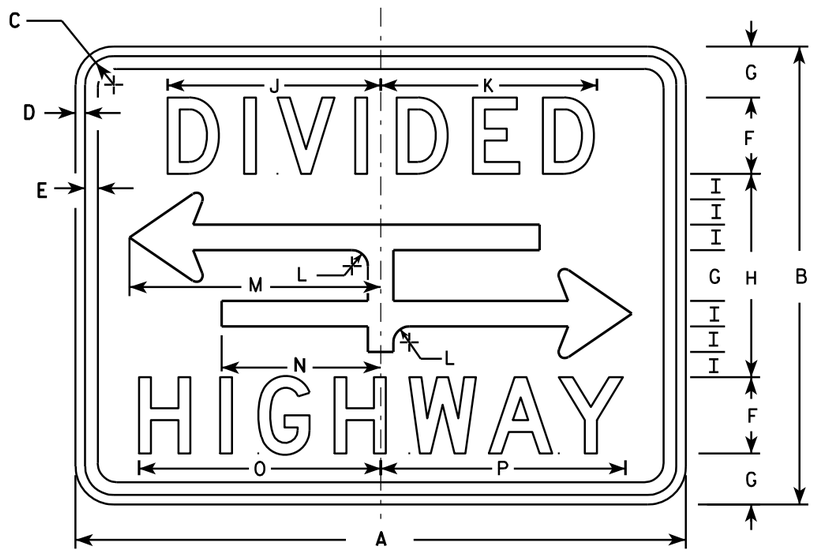
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 289	E



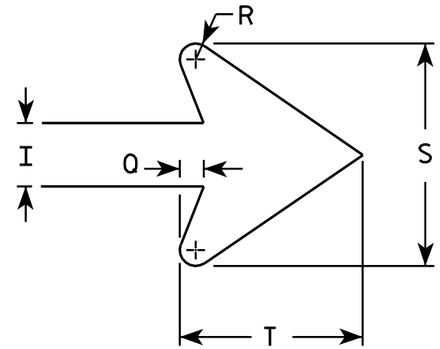
R6-3

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.



R6-3A



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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

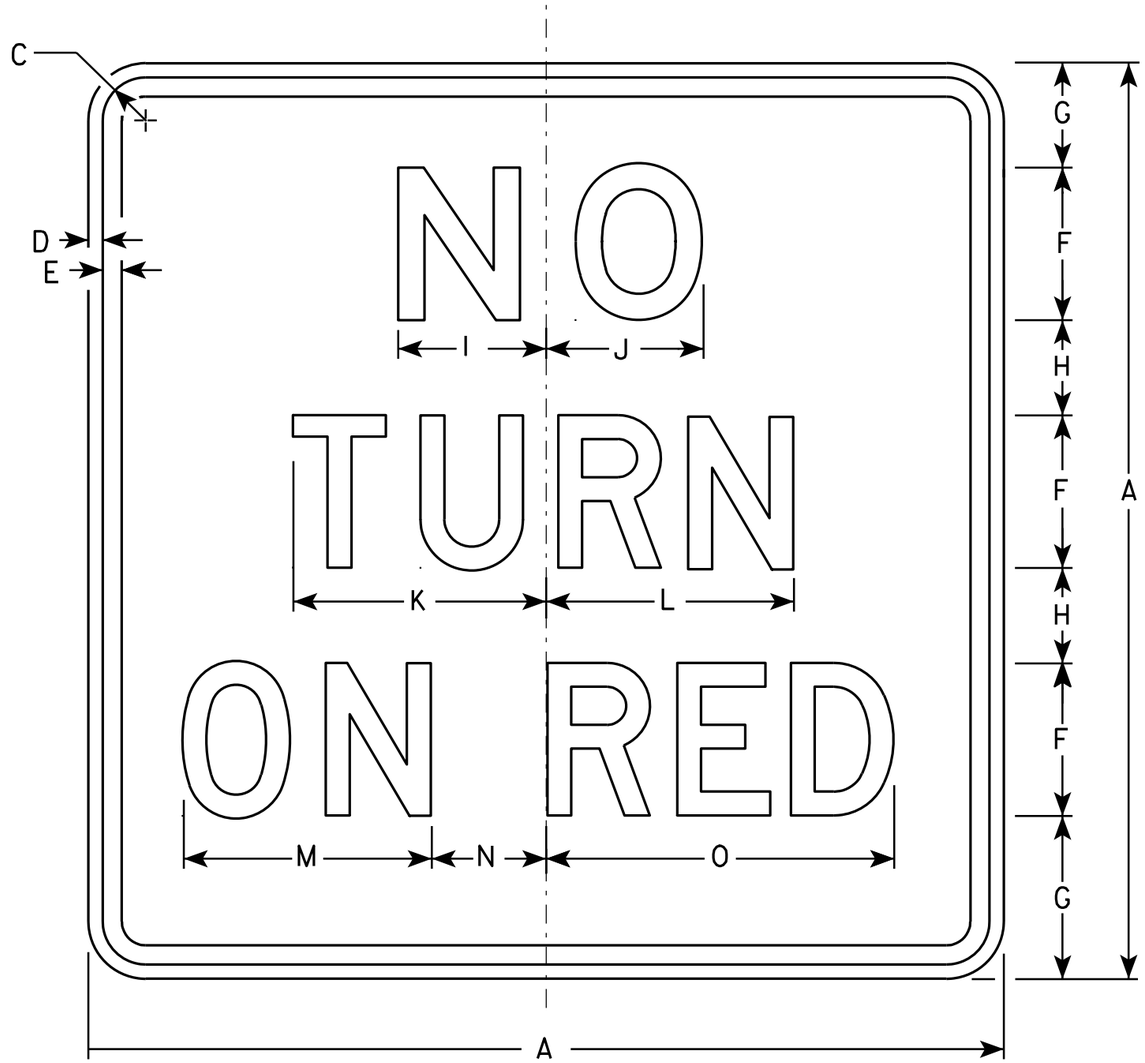
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 290 E



R10-11B

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 - 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 E.
   Lines 2 and 3 are Series D.

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	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

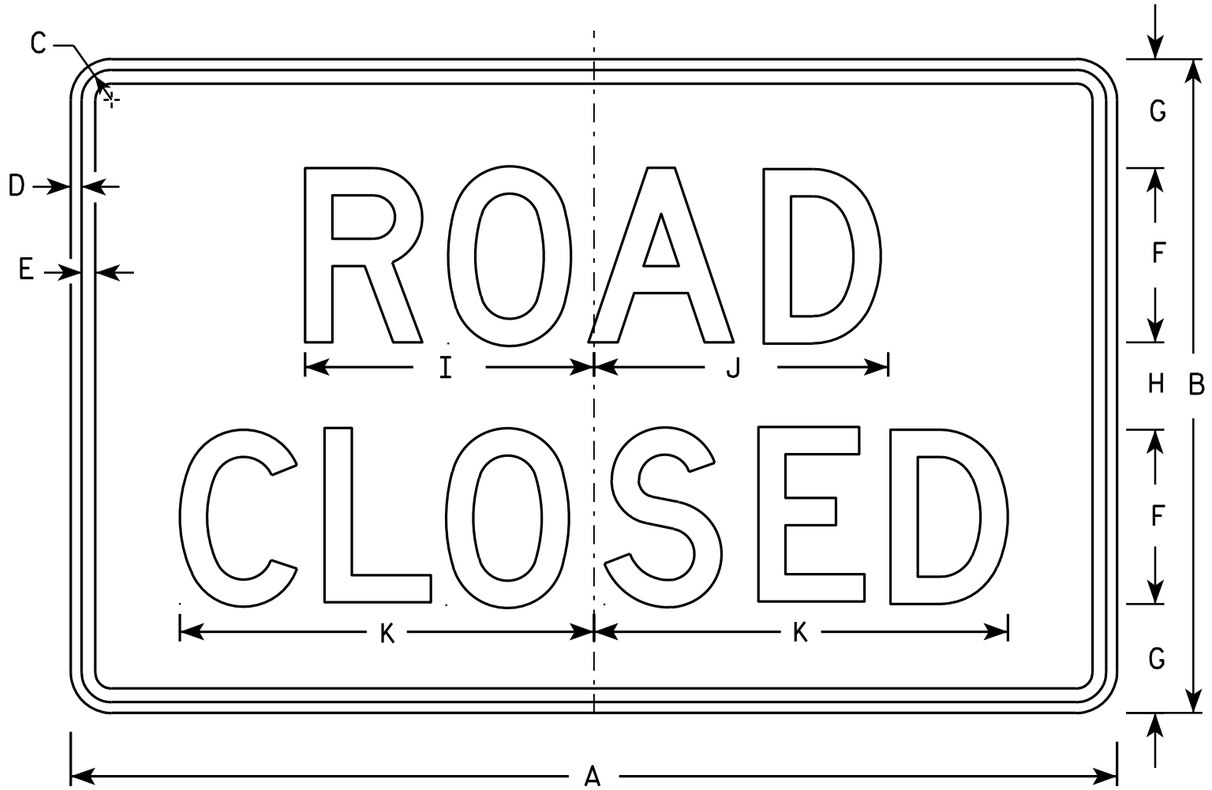
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

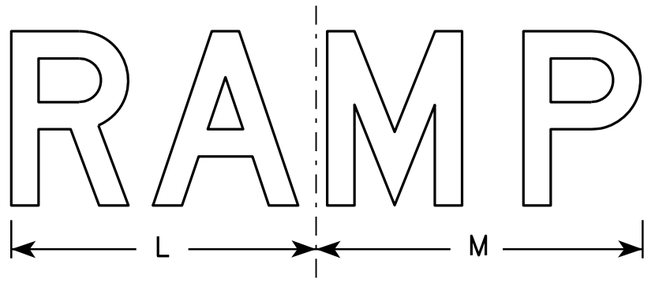
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 291 | E



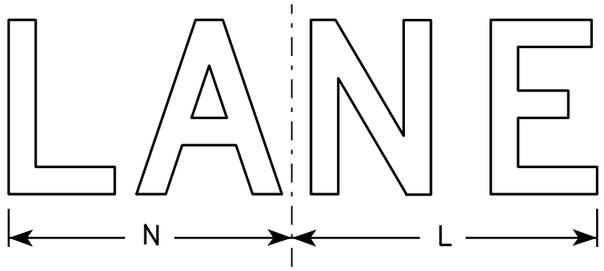
R11-2

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

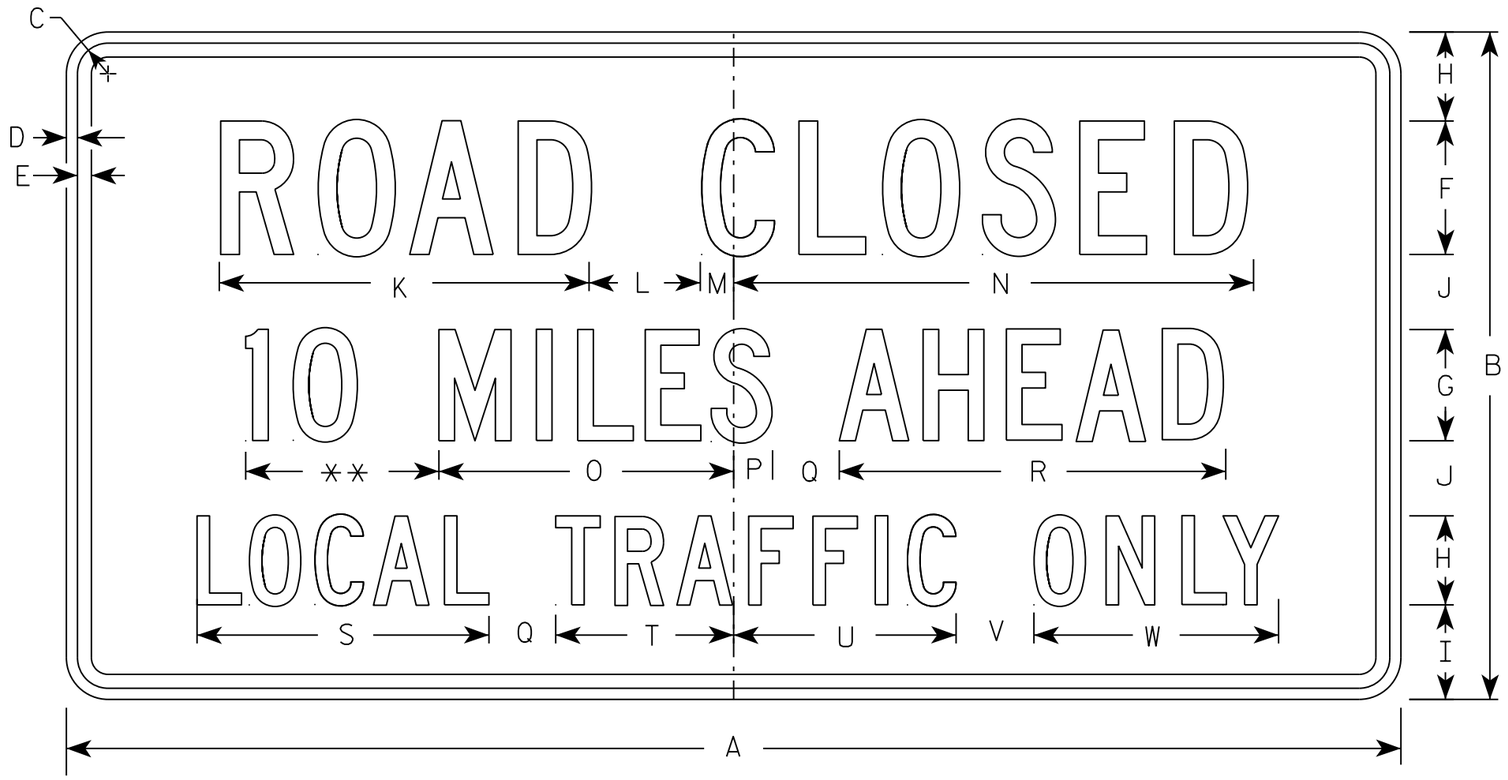
STANDARD SIGN
R11-2

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: 292 | E



R11-3

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.

** 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				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				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				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

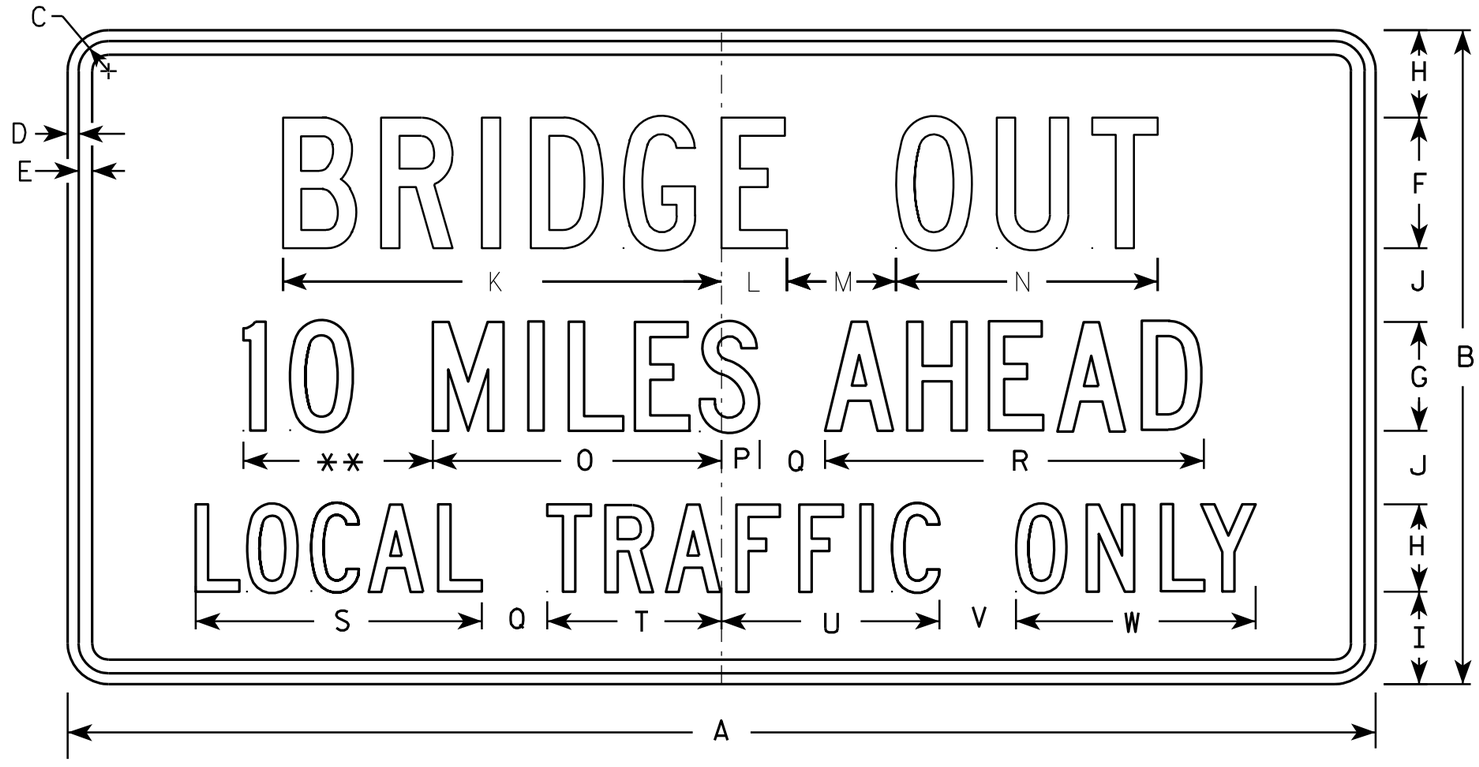
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3.7

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R113.DGN PLOT DATE : 28-JUL-2016 16:25 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 6.810445:1.000000



R11-3B

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 - 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 and optically adjust spacing to achieve proper balance.

** 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	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

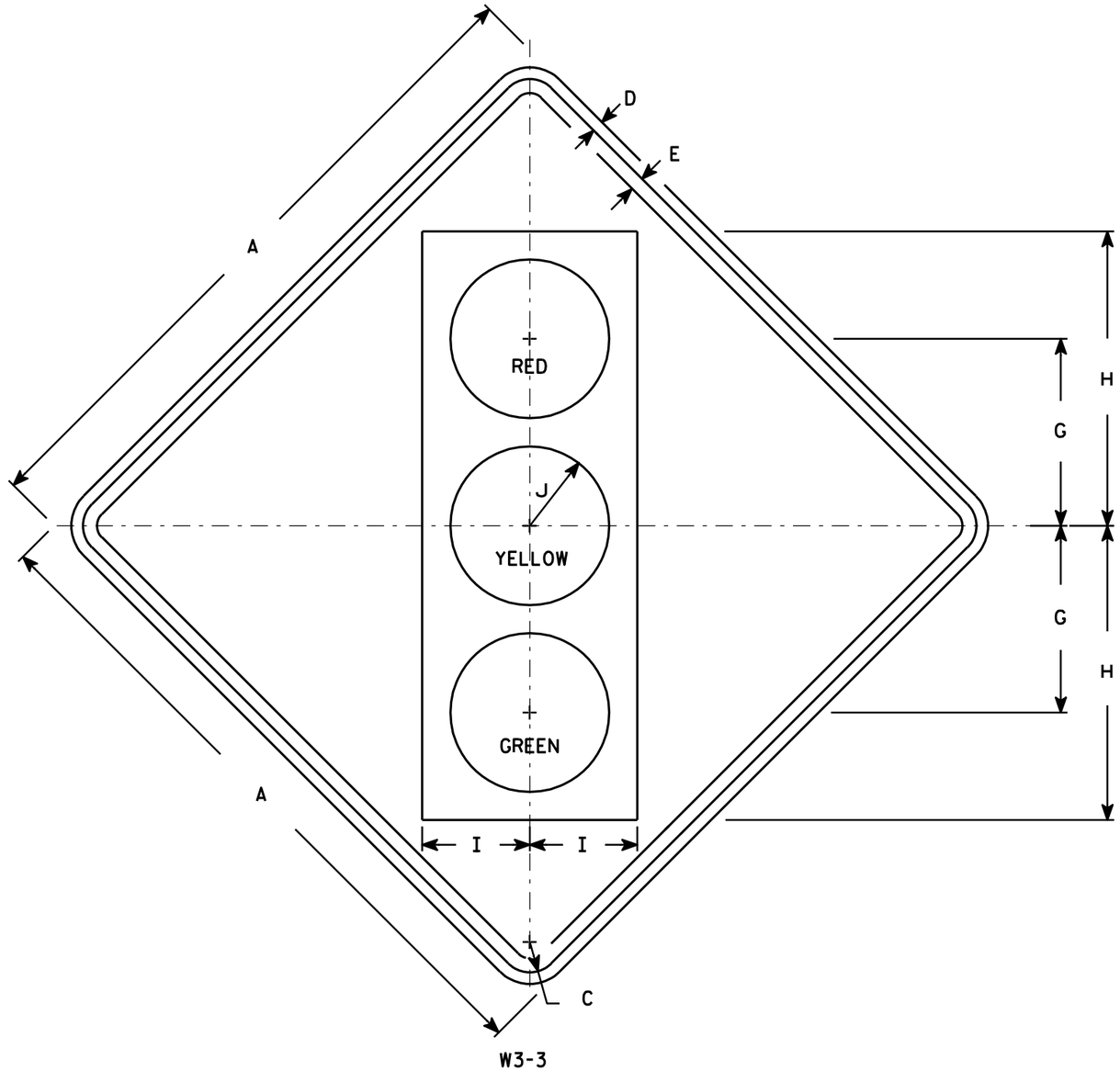
STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 294 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

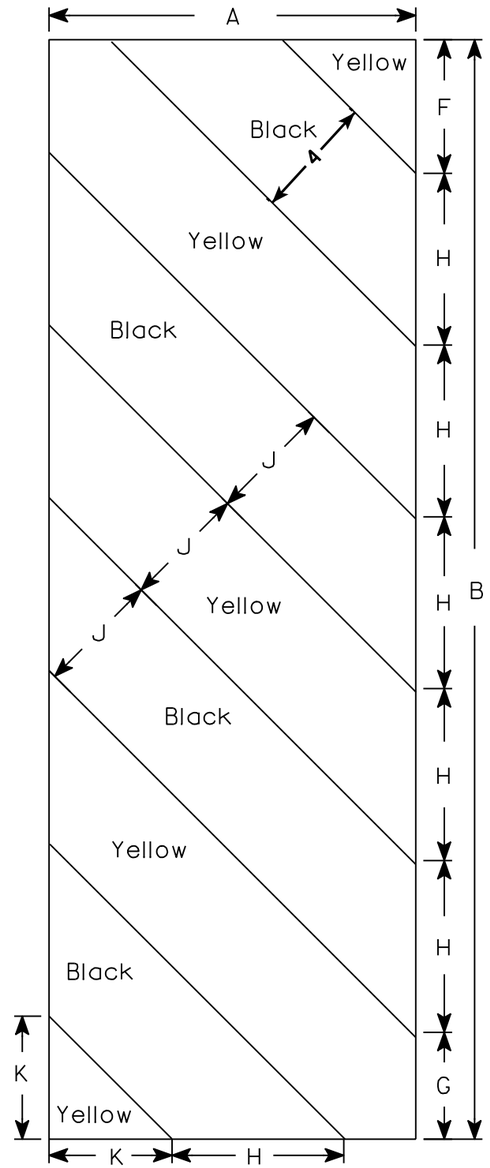
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

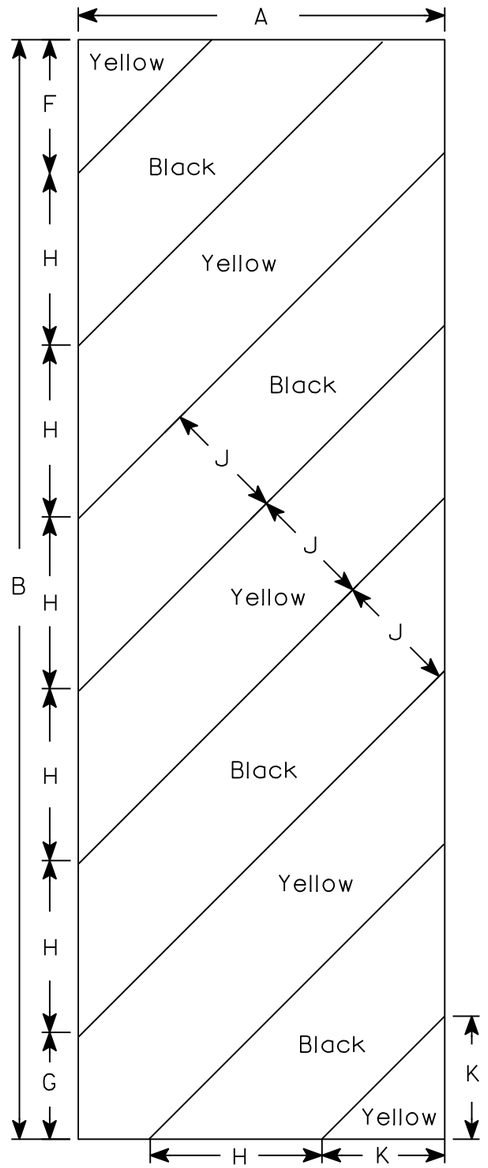
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 295 | E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

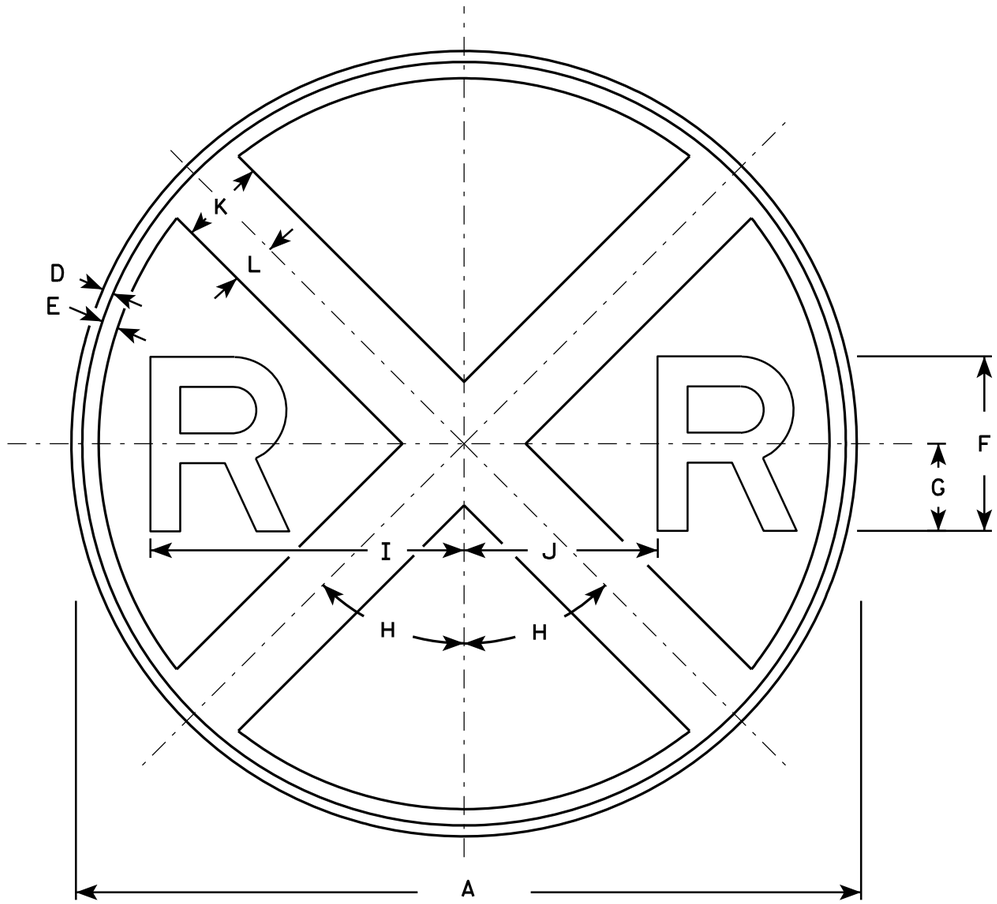
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 296	E



W10-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E

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	30			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

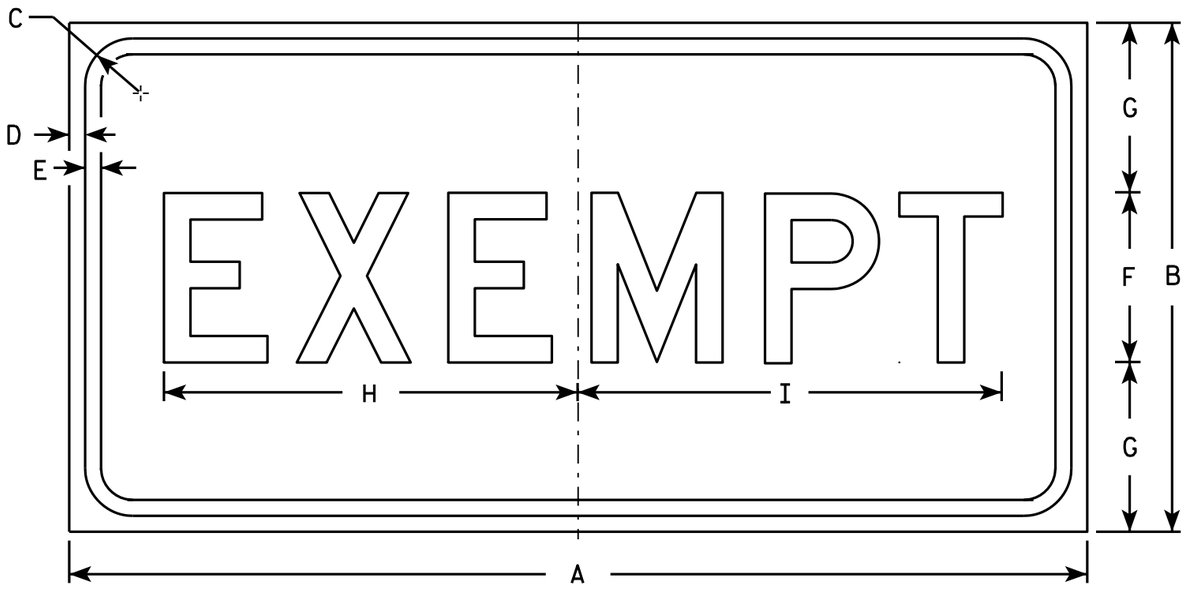
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 297	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 5
   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. Background - R15-3 is White Type H Reflective
   W10-1A is Yellow.



R15-3
and
W10-1A

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	24	12	1 1/8	3/8	3/8	4	4	9 3/4	10																		2
2M	24	12	1 1/8	3/8	3/8	4	4	9 3/4	10																		2
3																											
4																											
5																											

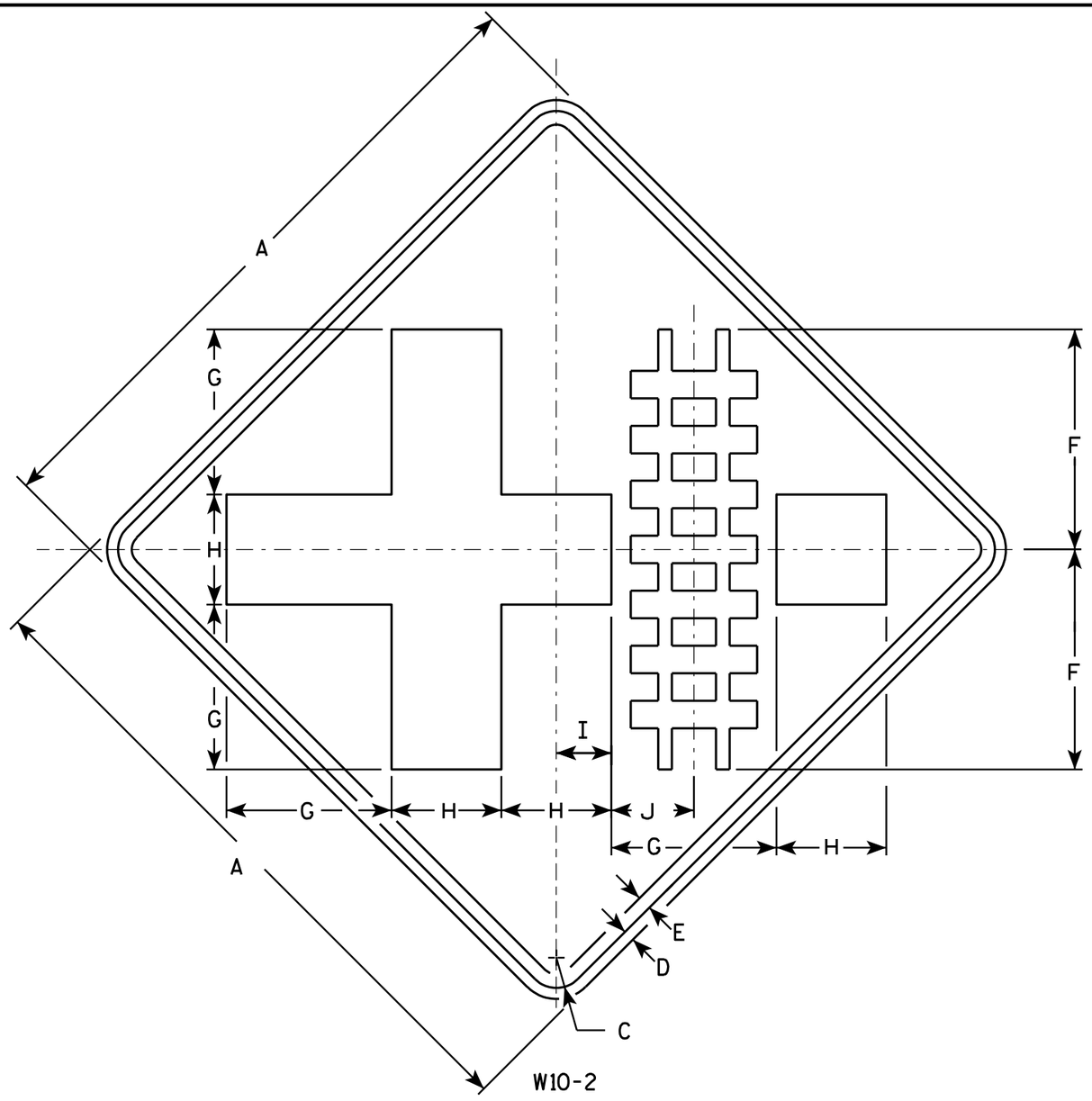
STANDARD SIGN
R15-3 & W10-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

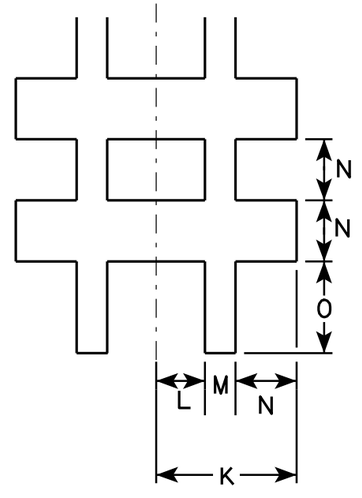
DATE 3/13/13 PLATE NO. R15-3.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 298	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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	30		1 3/8	1/2	5/8	10	7 1/2	5	2 1/2	3 3/4	2 7/8	1	5/8	1 1/4	1 7/8												6.25
2S	36		1 5/8	5/8	3/4	12	9	6	3	4 1/2	3 3/8	1 1/8	3/4	1 1/2	2 1/4												9.0
2M	36		1 5/8	5/8	3/4	12	9	6	3	4 1/2	3 3/8	1 1/8	3/4	1 1/2	2 1/4												9.0
3	36		1 5/8	5/8	3/4	12	9	6	3	4 1/2	3 3/8	1 1/8	3/4	1 1/2	2 1/4												9.0
4	48		2 1/4	3/4	1	16	12	8	4	6	4 1/2	1 1/2	1	2	3												16.0
5																											

STANDARD SIGN
W10-2

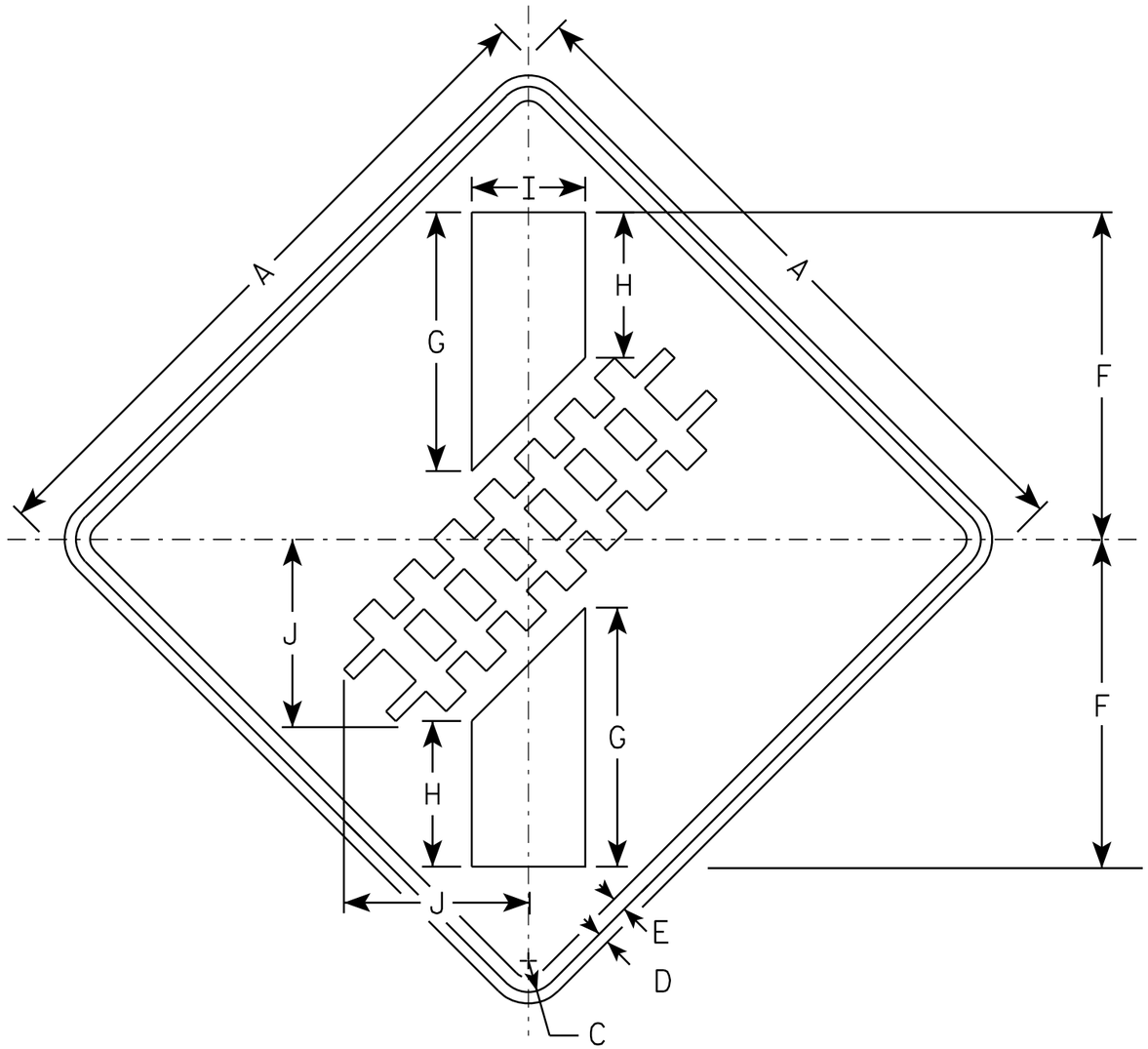
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-2.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 299 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W102.DGN PLOT DATE : 13-MAR-2013 11:13 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.202372:1.000000

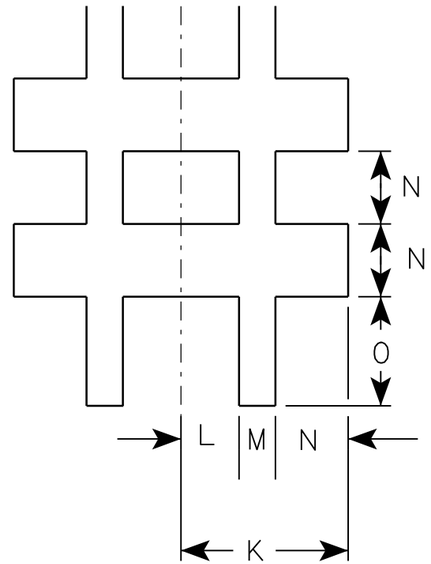


W10-12

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. W10-12L same as W10-12R except symbol is reversed.

BLOW UP OF 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	36		1 3/8	1/2	5/8	17 3/8	13 3/4	7 3/4	6	9 7/8	3 1/2	1 1/4	3/4	1 1/2	2 1/4												9
2M	36		1 3/8	1/2	5/8	17 3/8	13 3/4	7 3/4	6	9 7/8	3 1/2	1 1/4	3/4	1 1/2	2 1/4												9
3	48		2 1/4	3/4	1	23 1/8	18 1/4	10 1/4	8	13 1/4	4 1/2	1 1/2	1	2	3												16
4	48		2 1/4	3/4	1	23 1/8	18 1/4	10 1/4	8	13 1/4	4 1/2	1 1/2	1	2	3												16
5	48		2 1/4	3/4	1	23 1/8	18 1/4	10 1/4	8	13 1/4	4 1/2	1 1/2	1	2	3												16

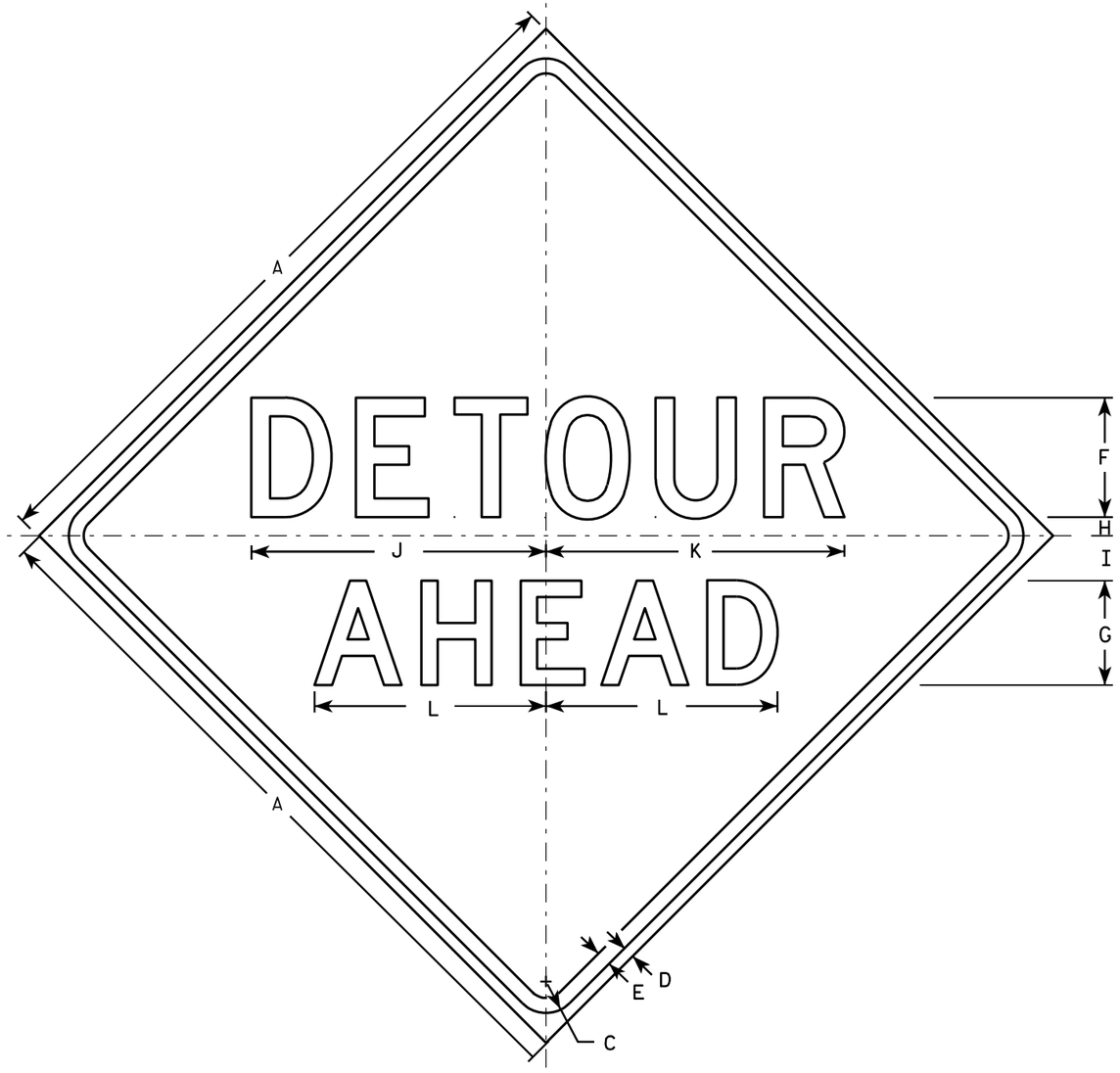
STANDARD SIGN
W10-12

WISCONSIN DEPT OF TRANSPORTATION

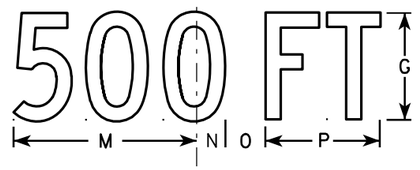
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-12.4

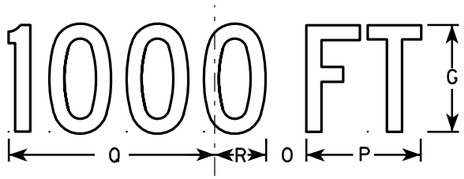
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 300	E



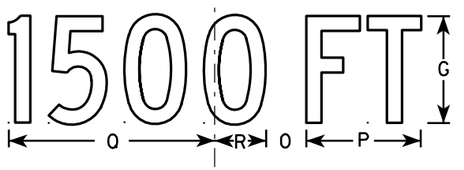
W20-2A



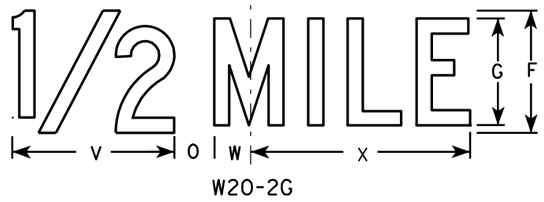
W20-2D



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

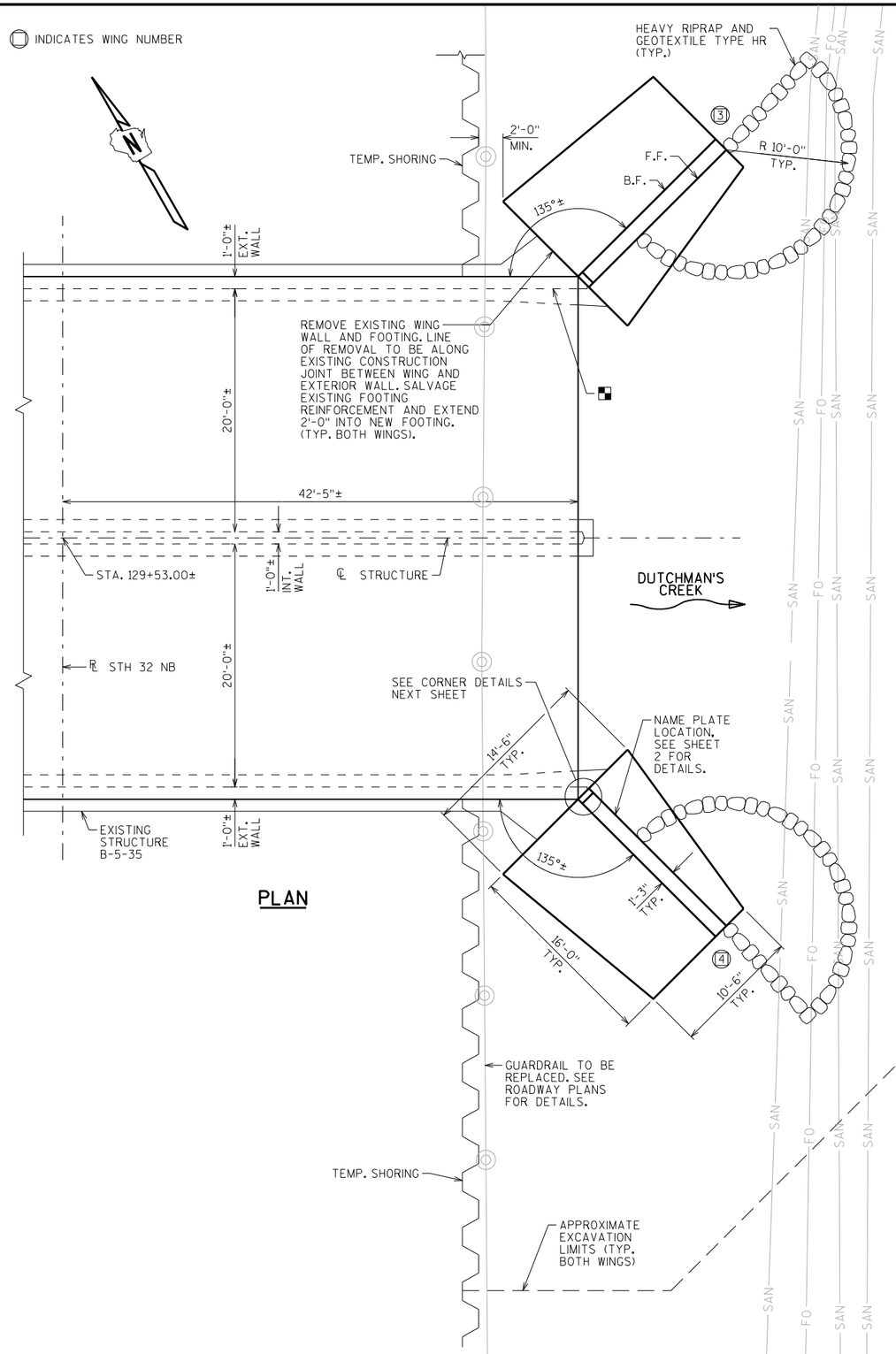
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

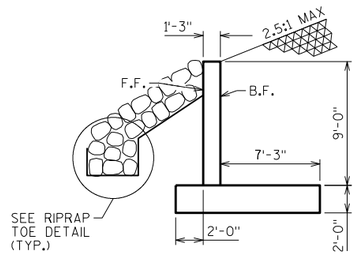
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 301	E

STATE PROJECT NUMBER

4190-16-72

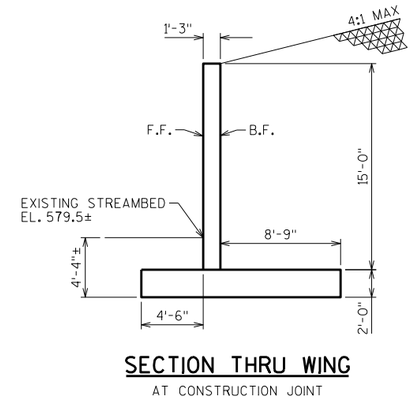


PLAN



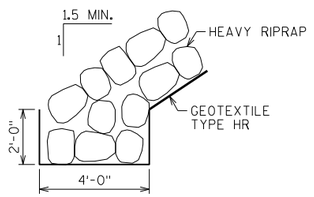
SECTION THRU WING

AT LOW END



SECTION THRU WING

AT CONSTRUCTION JOINT



RIPRAP TOE DETAIL

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY, GRADE A-FA ——— f'_c = 3500 P.S.I.

HIGH STRENGTH BAR STEEL REINFORCEMENT — f_y = 60000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" SHALL BE THE EXISTING GROUNDLINE.

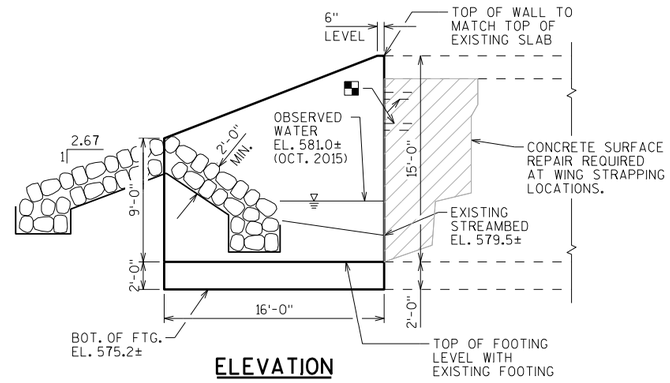
ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE FILLED WITH "STRUCTURE BACKFILL" TO THE TOP OF THE WING WITHIN THE LENGTH OF THE WING WALL.

DEFINE ALL CONCRETE REMOVAL WITH A 1" DEEP SAW CUT.

CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1956.

■ REMOVE EXISTING WING STRAPPING CHANNELS. BURN OFF STRAPPING ANCHORS FLUSH WITH CONCRETE AND COAT EXPOSED ENDS WITH EPOXY. WORK AND MATERIALS INCIDENTAL TO "REMOVING OLD STRUCTURE". TYP. BOTH WINGS.

AREAS OF "CONCRETE SURFACE REPAIR" TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



ELEVATION

SHOWING F.F. OF WING 3. WING 4 SIMILAR

LIST OF DRAWINGS

1. LAYOUT
2. DETAILS
3. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS:

MICAH BROOKS (608) 266-5080

LAURA SHADEWALD (608) 267-9592

TOTAL ESTIMATED QUANTITIES

BID ITEMS

203.0200	REMOVING OLD STRUCTURE STA. 129+53	1	LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-5-35	1	LS
206.5000	COFFERDAMS B-5-35	1	LS
210.2500	BACKFILL STRUCTURE TYPE B	820	TON
504.0100	CONCRETE MASONRY CULVERTS	48	CY
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	1130	LB
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	3340	LB
509.1500	CONCRETE SURFACE REPAIR	55	SF
511.1200	TEMPORARY SHORING B-5-35	980	SF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	11	SY
606.0300	RIPRAP HEAVY	29	CY
645.0120	GEOTEXTILE TYPE HR	48	SY

NON-BID ITEMS

FILLER	3/4"	SIZE

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 10/13/16

CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-5-35

STH 32 NB OVER DUTCHMAN'S CREEK

COUNTY: BROWN — TOWN/CITY/VILLAGE: ASHWAUBENON

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY MWB | DESIGN CK'D. DFD | DRAWN BY MWB | PLANS CK'D. DFD

LAYOUT

SHEET 1 OF 3

302

8

8

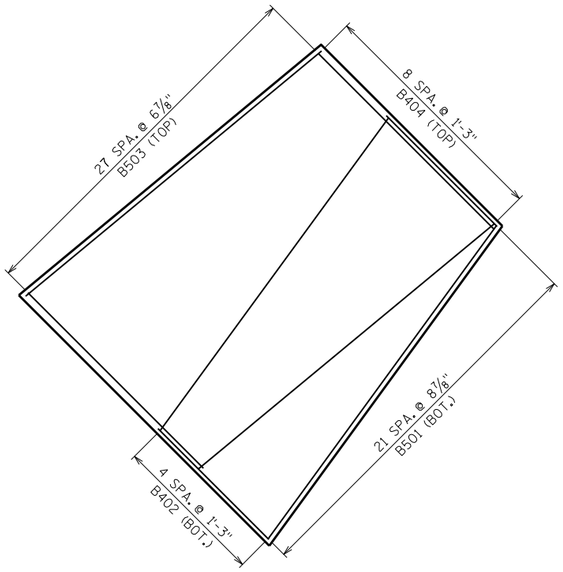
SCALE = 5.333

I.D. 4190-16-00D

DATE: OCT. 2016

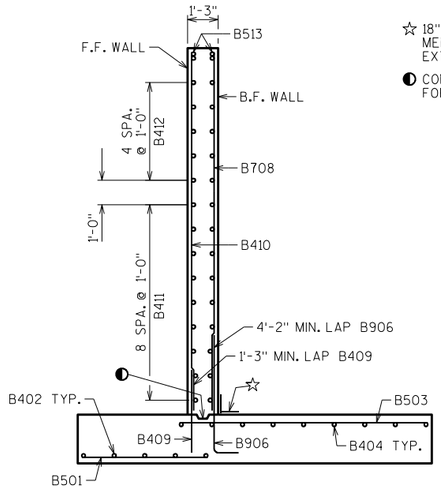
STATE PROJECT NUMBER

4190-16-72



WING 3 PLAN

STEM NOT SHOWN FOR CLARITY

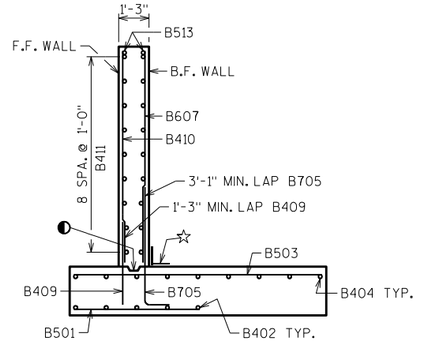


☆ 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FULL LENGTH OF WING.

◐ CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 6"

SECTION THRU WING

AT CONSTRUCTION JOINT



SECTION THRU WING

AT LOW END

BILL OF BARS

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

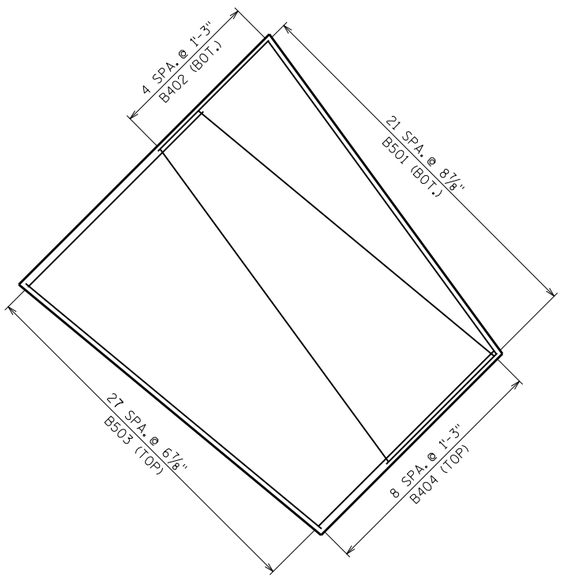
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		44	5'-4"			FOOTING TOE - BOT. - TRANS.
B402		10	15'-10"			FOOTING TOE - BOT. - LONGIT.
B503		56	10'-0"			FOOTING HEEL - TOP - TRANS.
B404		18	15'-9"			FOOTING HEEL - TOP - LONGIT.
B705	X	22	7'-0"	X	◭	FOOTING & STEM - B.F. - VERT.
B906	X	34	9'-0"	X	◭	FOOTING & STEM - B.F. - VERT.
B607	X	22	8'-11"			STEM - B.F. - VERT.
B708	X	34	11'-4"			STEM - B.F. - VERT.
B409	X	34	3'-0"			FOOTING & STEM - F.F. - VERT.
B410	X	34	11'-10"		◭	STEM - F.F. - VERT.
B411	X	36	15'-8"			STEM - F.F. & B.F. - HORIZ.
B412	X	20	8'-0"		◭	STEM - F.F. & B.F. - HORIZ.
B513	X	4	16'-9"			STEM - TOP - 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.

BAR SERIES TABLE

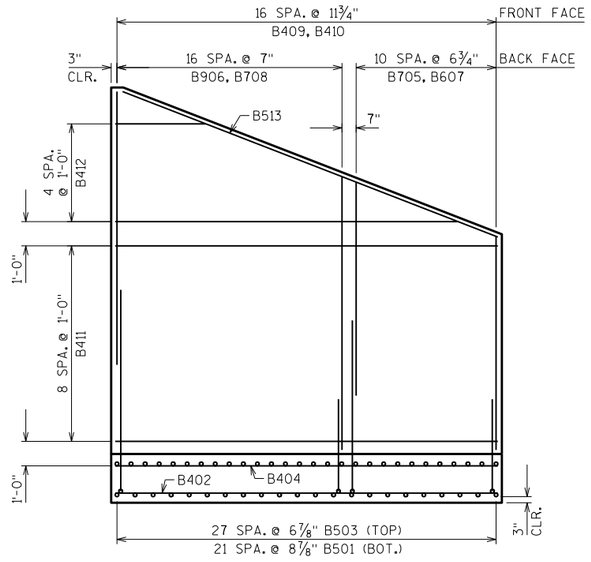
MARK	NO. REQD.	LENGTH
B705	2 SERIES OF 11	5'-10" TO 8'-1"
B906	2 SERIES OF 17	7'-3" TO 10'-9"
B410	2 SERIES OF 17	8'-10" TO 14'-10"
B412	4 SERIES OF 5	2'-10" TO 13'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.



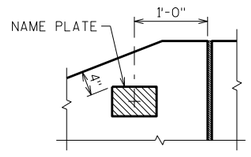
WING 4 PLAN

STEM NOT SHOWN FOR CLARITY

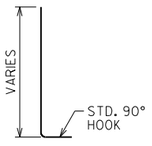


ELEVATION

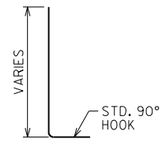
SHOWING SOUTH WING, NORTH WING SIMILAR



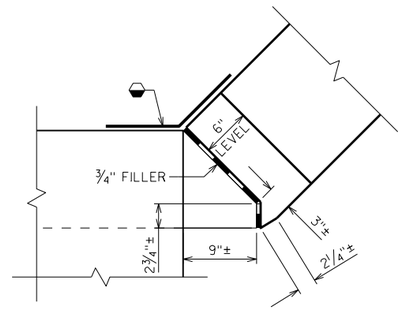
NAME PLATE LOCATION WING 4



B705



B906



CORNER DETAIL

TYP. BOTH CORNERS

◓ 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FULL HEIGHT OF WING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-35

DRAWN BY MWB | PLANS CK'D. DFD

DETAILS

SHEET 2

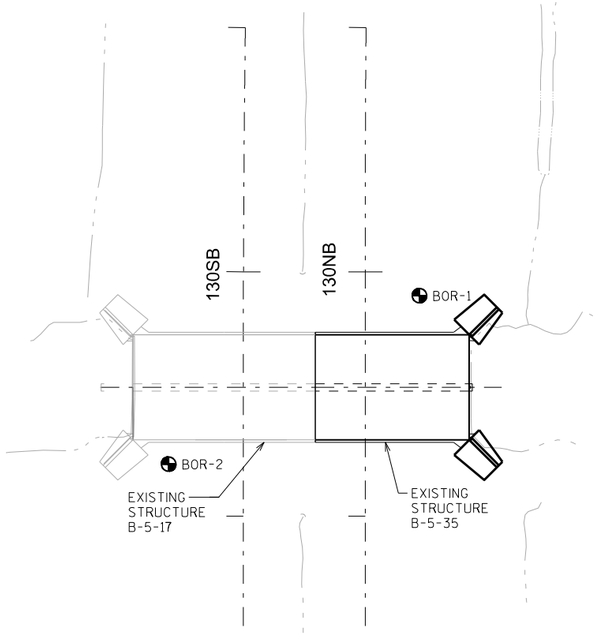
303

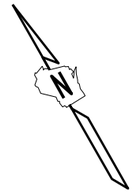
SCALE = 3

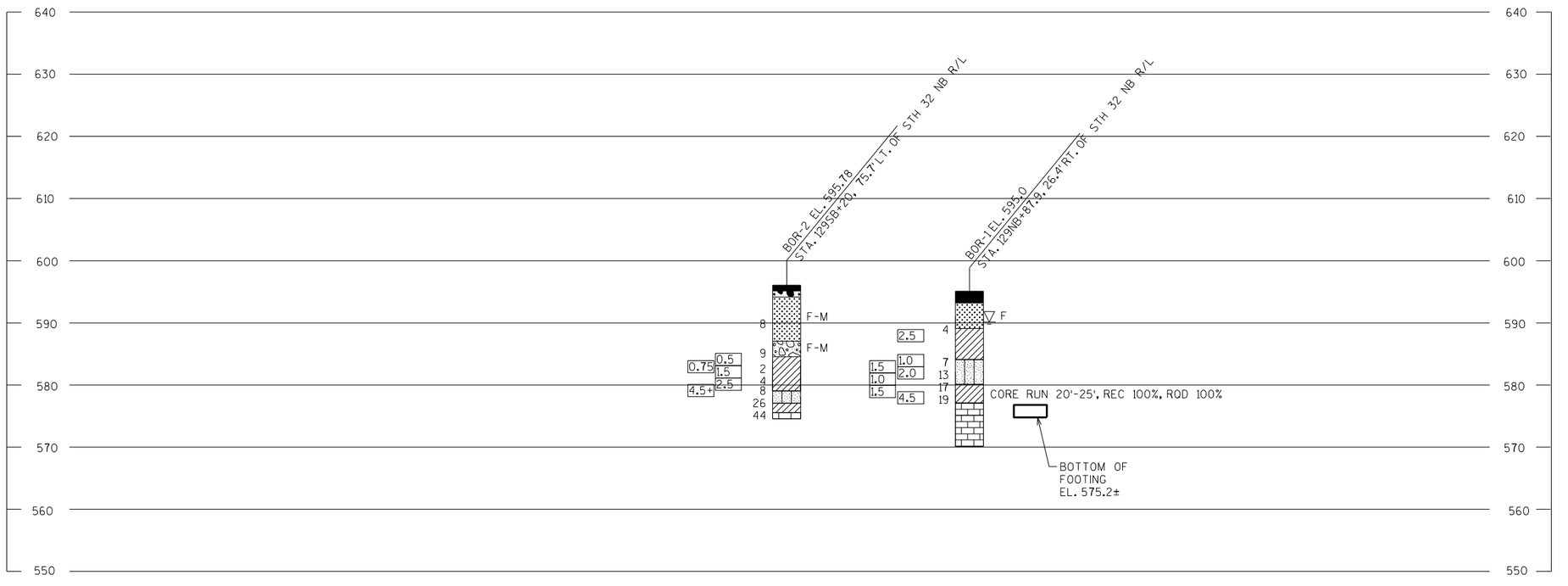
8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	12/09/2015	555472.66	89047.448
2	12/10/2015	555463.354	88924.137
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) BROWN COUNTY			







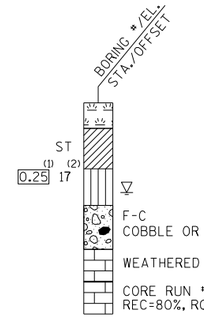
STATE PROJECT NUMBER

4190-16-72

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 B-5-35

DRAWN BY TLP/MWB | PLANS CK'D. DFD

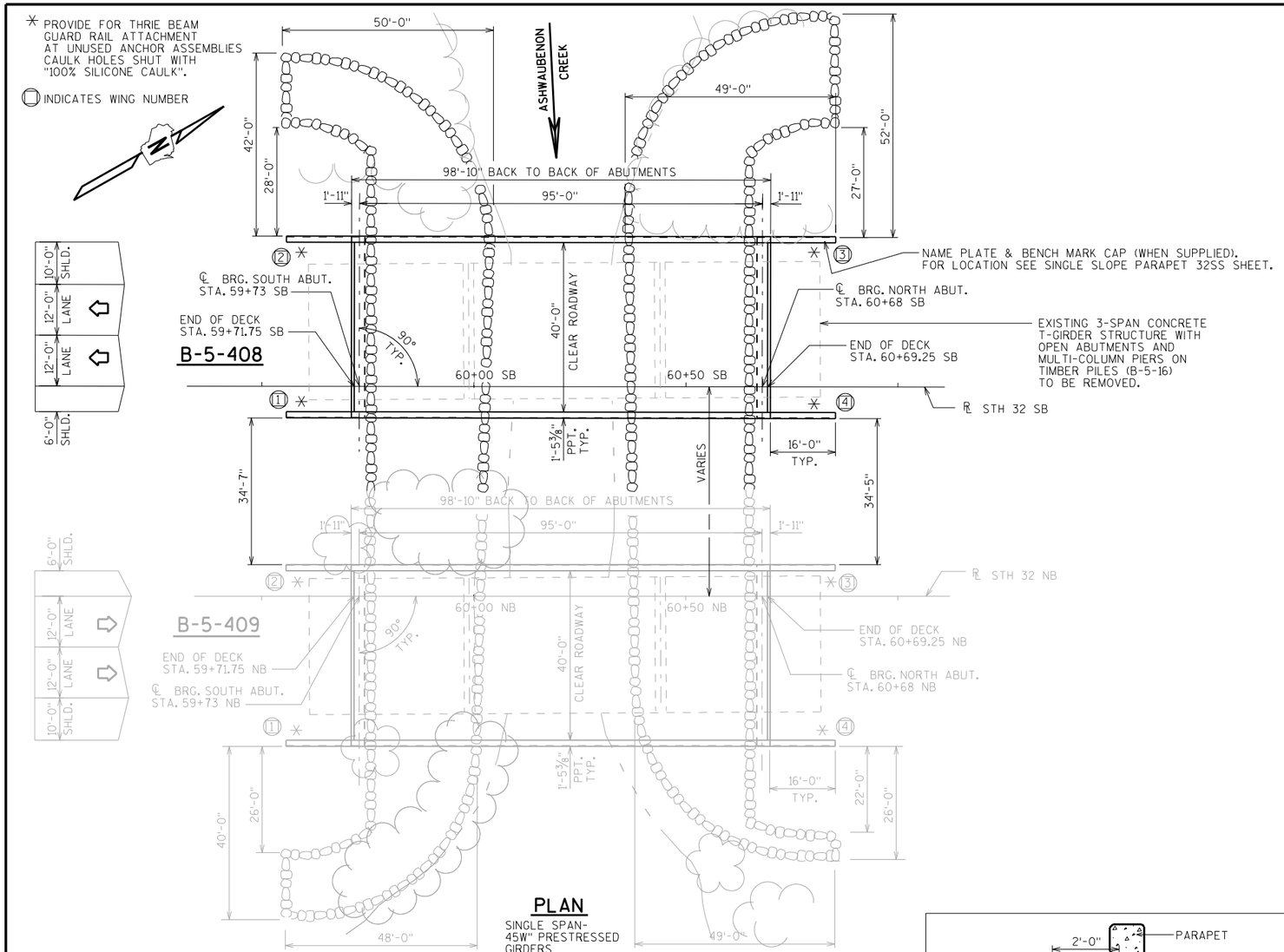
SUBSURFACE EXPLORATION

SHEET 3

304

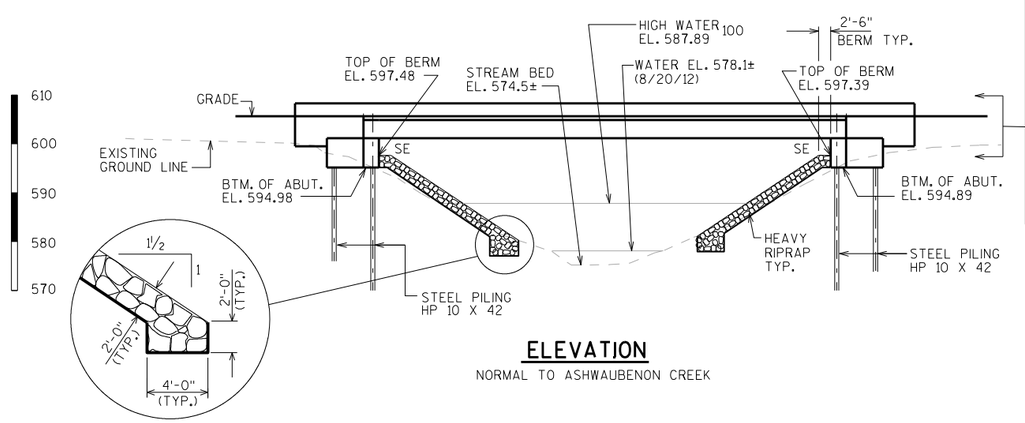
SCALE = 30

STATE PROJECT NUMBER
4190-16-72



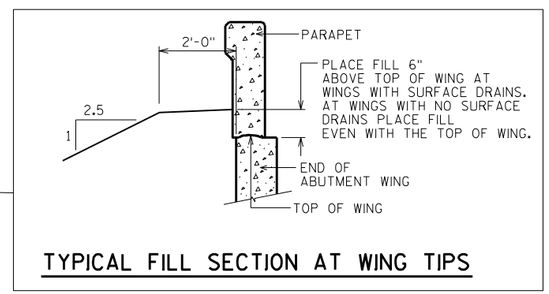
PLAN

SINGLE SPAN-
45W" PRESTRESSED
GIRDERS



ELEVATION

NORMAL TO ASHWAUBENON CREEK



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.19
OPERATING RATING FACTOR: RF=1.57
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY DECK — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.

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

45W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FEET LONG. PILE POINTS REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} =2900 C.F.S.
VEL. =7.0 F.P.S.
HW_{100} = EL. 587.88
WATERWAY AREA= 413 SQ. FT.
DRAINAGE AREA= 28.65 SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 =831 C.F.S.
$HW._2$ = EL. 582.12

TRAFFIC VOLUME

STH 32 SB
A.D.T.=23600 (2036)
R.D.S.=50 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. 45W" PRESTRESSED GIRDER DETAILS 1
9. 45W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGM
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. SINGLE SLOPE PARAPET 32SS

STRUCTURE DESIGN CONTACT:
TIM BOROWSKI (608) 266-4547
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — 8/5/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-5-408

STH 32 SB/ASHLAND AVE. OVER ASHWAUBENON CREEK

COUNTY	~~TOWN/CITY~~ VILLAGE
BROWN	ASHWAUBENON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TAB	DFD	WWR	TAB

GENERAL PLAN

SHEET 1 OF 13

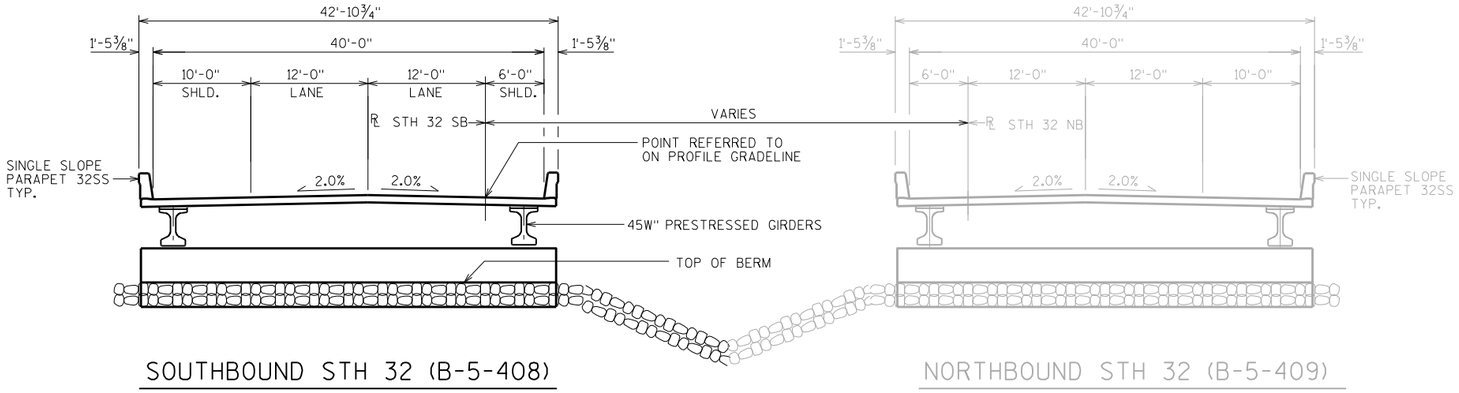
305

I.D. 4190-16-00A

DATE: NOV. 2015

SCALE =

STATE PROJECT NUMBER
4190-16-72



SOUTHBOUND STH 32 (B-5-408)

NORTHBOUND STH 32 (B-5-409)

CROSS SECTIONS THRU STH 32 SB/NB

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.

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOPS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.

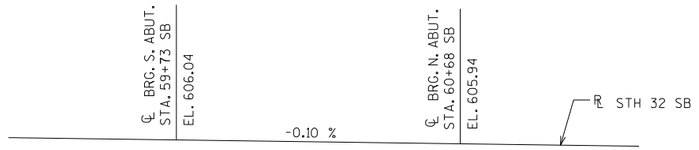
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "45W PRESTRESSED GIRDER DETAILS 2" SHEET.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 60+25 SB	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-408	LS	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	400	400	800
502.0100	CONCRETE MASONRY BRIDGES	CY	183	57	57	297
502.3200	PROTECTIVE SURFACE TREATMENT	SY	448	———	———	448
502.3210	PIGMENTED SURFACE SEALER	SY	83	13	13	109
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	480	———	———	480
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	2780	2780	5560
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	29,920	2900	2900	35,720
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	10	———	———	10
506.4000	STEEL DIAPHRAGMS B-5-408	EACH	8	———	———	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	12	12	24
550.0500	PILE POINTS	EACH	———	10	10	20
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	1000	1000	2000
606.0300	RIPRAP HEAVY	CY	———	275	325	600
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	75	75	150
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	2	4
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	———	450	520	970
	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	½" & ¾"



PROFILE GRADE LINE STH 32 SB (B-5-408)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

CROSS SECTION & QUANTITIES

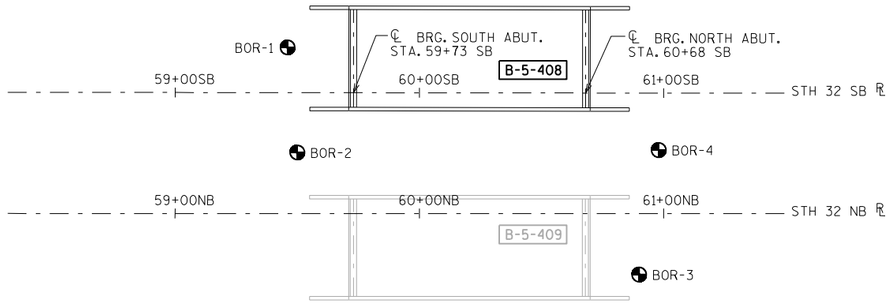
SHEET 2

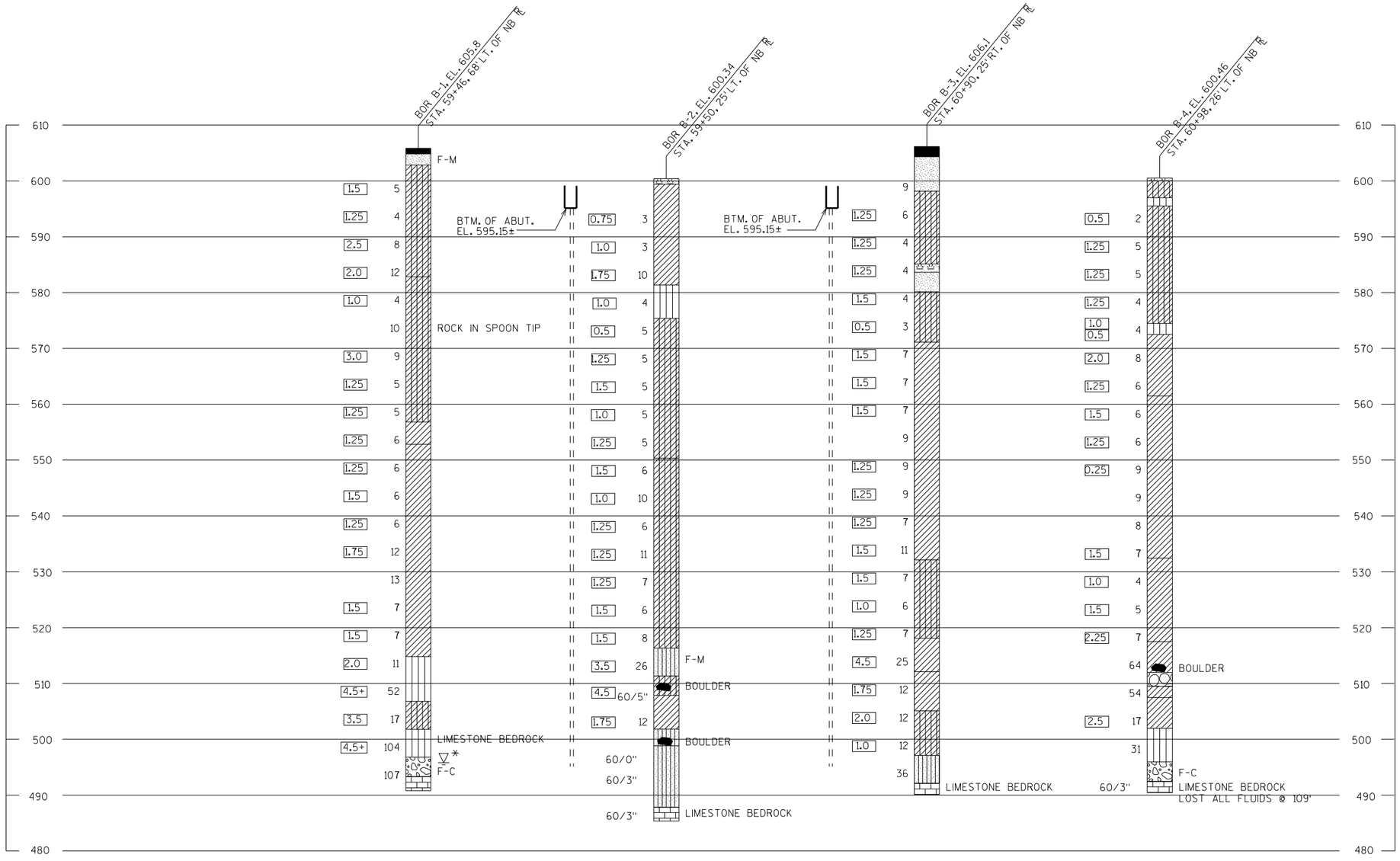
306

SCALE =

STH 32 OVER ASHWAUBENON CREEK
ASHLAND AVE., DEPERE & ASHWAUBENON

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1	549390.069	85481.274
2	2	549373.859	85527.494
3	3	549470.64	85642.883
4	4	549505.869	85602.398
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) BROWN COUNTY			





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

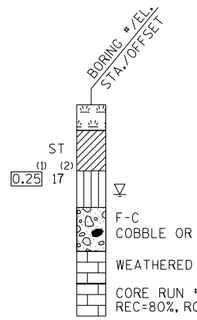
STATE PROJECT NUMBER

4190-16-72

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 B-5-408

DRAWN BY PR/WWR | PLANS CK'D. TAB

SUBSURFACE EXPLORATION

SHEET 3

307

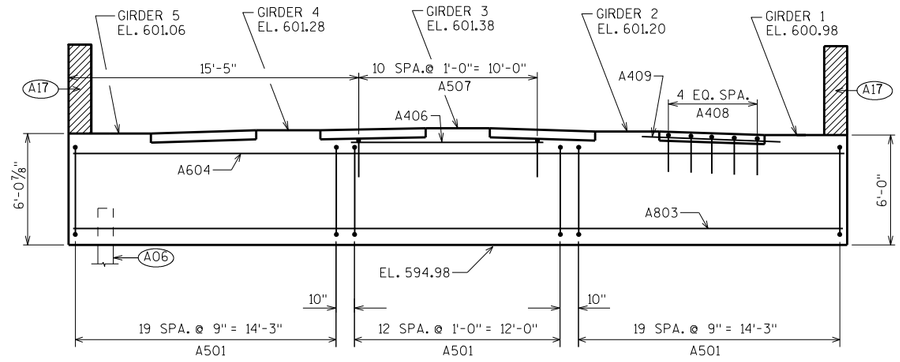
SCALE =

8

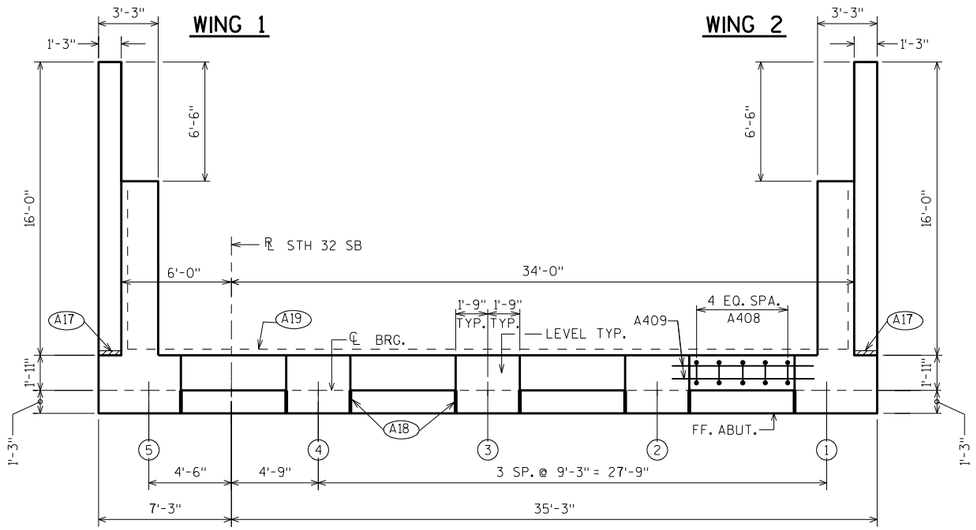
8

STATE PROJECT NUMBER

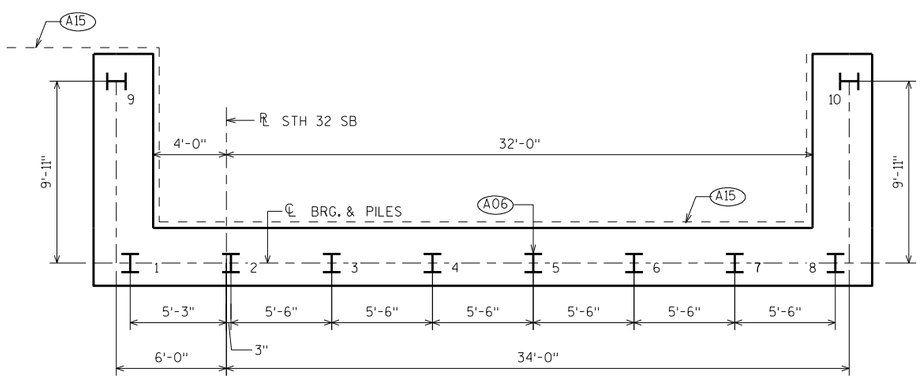
4190-16-72



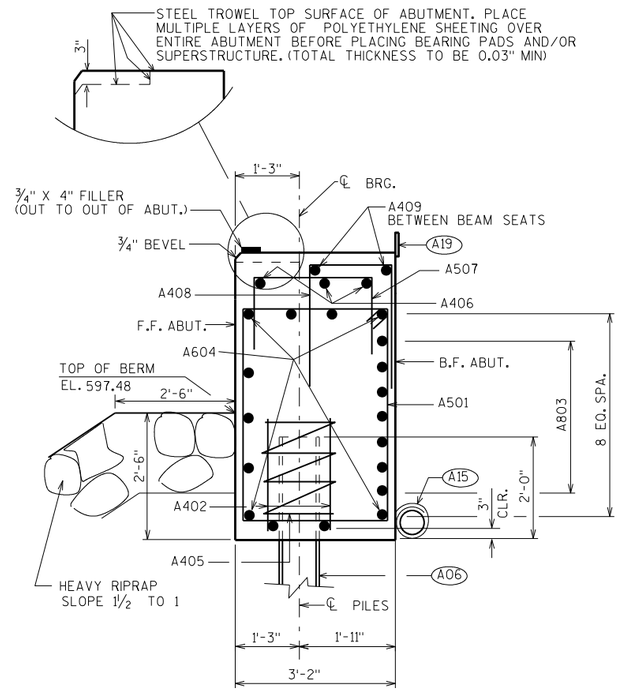
ELEVATION LOOKING SOUTH



PLAN



PILE PLAN



SECTION THRU BODY

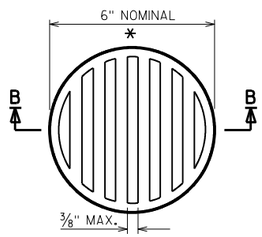
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING. ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

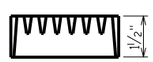
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.





SECTION B-B

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

SOUTH ABUTMENT

SHEET 4

308

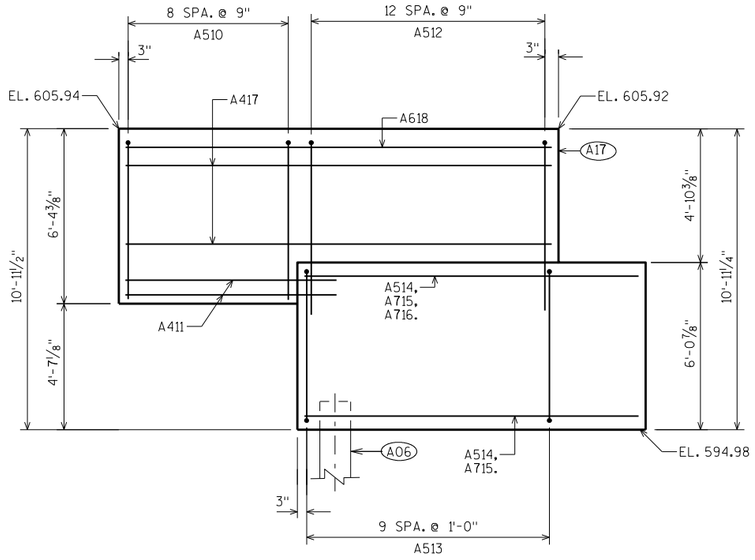
SCALE =

8

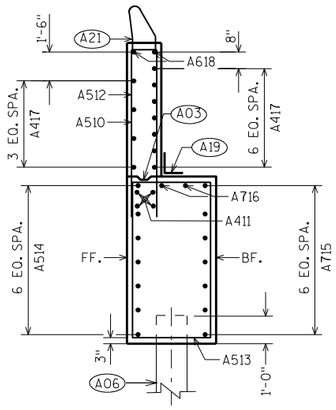
8

STATE PROJECT NUMBER

4190-16-72



WING 1 ELEVATION



WING 1 SECTION

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

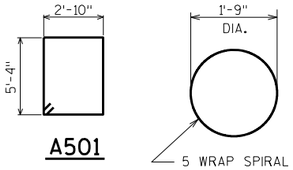
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHT.

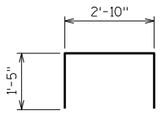
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		53	17'-0"	X		BODY-STIRRUPS
A402		16	2'-3"			PILES- 2 PER BODY PILE
A803		7	42'-2"			BODY-HORIZONTAL
A604		11	42'-2"			BODY-HORIZONTAL
A405		8	28'-0"	X		PILES-1 PER BODY PILE
A406		3	10'-6"			BODY-HORIZ. OVER GIR. 3
A507		11	5'-5"	X		BODY-TOP OVER GIR. 3
A408		20	3'-11"	X		BODY-VERT. BTWN. BEAM SEATS
A409		8	7'-9"			BODY-HORZ. BTWN. BEAM SEATS
A510	X	9	12'-8"	X		WING 1-VERTICAL
A411	X	4	7'-9"			WING 1-HORIZONTAL
A512	X	13	14'-1"	X		WING 1-VERTICAL
A513	X	10	17'-10"	X		WING 1-STIRRUP
A514	X	7	12'-4"			WING 1-HORIZONTAL
A715	X	7	12'-4"			WING 1-HORIZONTAL
A716	X	2	12'-4"			WING 1-HORIZONTAL
A417	X	11	15'-8"			WING 1-HORIZONTAL
A618	X	2	15'-8"			WING 1-HORIZONTAL TOP
A519	X	9	12'-8"	X		WING 2-VERTICAL
A420	X	4	7'-9"			WING 2-HORIZONTAL
A521	X	13	14'-1"	X		WING 2-VERTICAL
A522	X	10	17'-8"	X		WING 2-STIRRUP
A523	X	7	12'-4"			WING 2-HORIZONTAL
A724	X	7	12'-4"			WING 2-HORIZONTAL
A725	X	2	12'-4"			WING 2-HORIZONTAL
A426	X	11	15'-8"			WING 2-HORIZONTAL
A627	X	2	15'-8"			WING 2-HORIZONTAL TOP

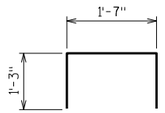


A501

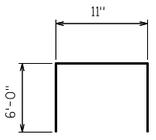
A405



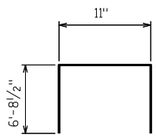
A507



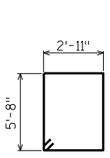
A408



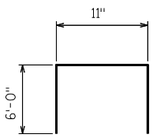
A510



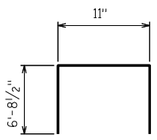
A512



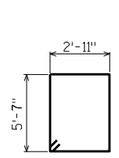
A513



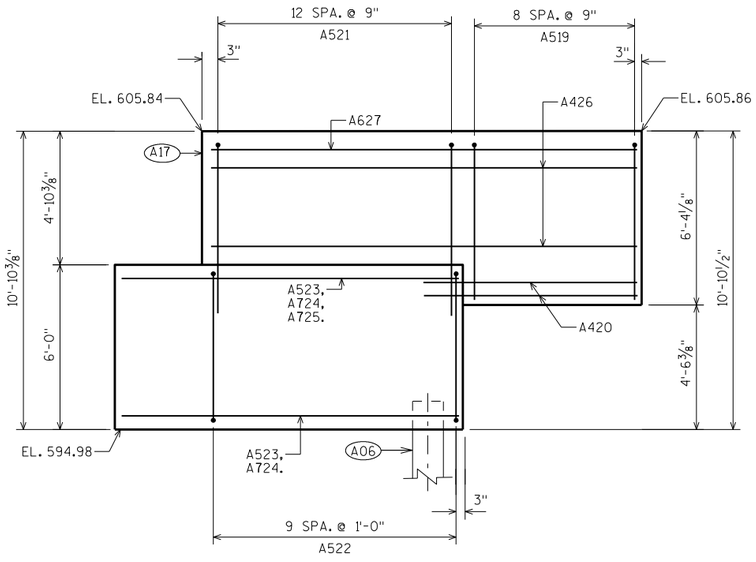
A519



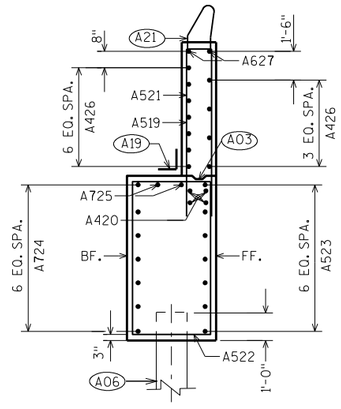
A521



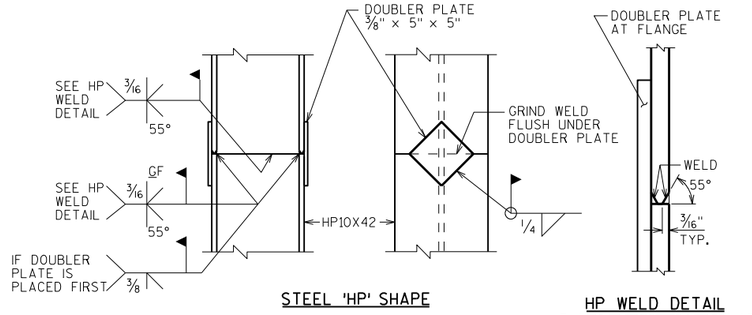
A522



WING 2 ELEVATION



WING 2 SECTION



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

SOUTH ABUTMENT DETAILS

SHEET 5

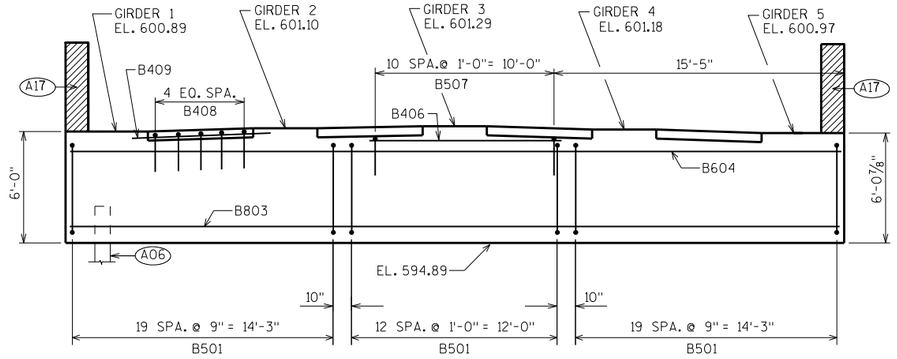
309

8

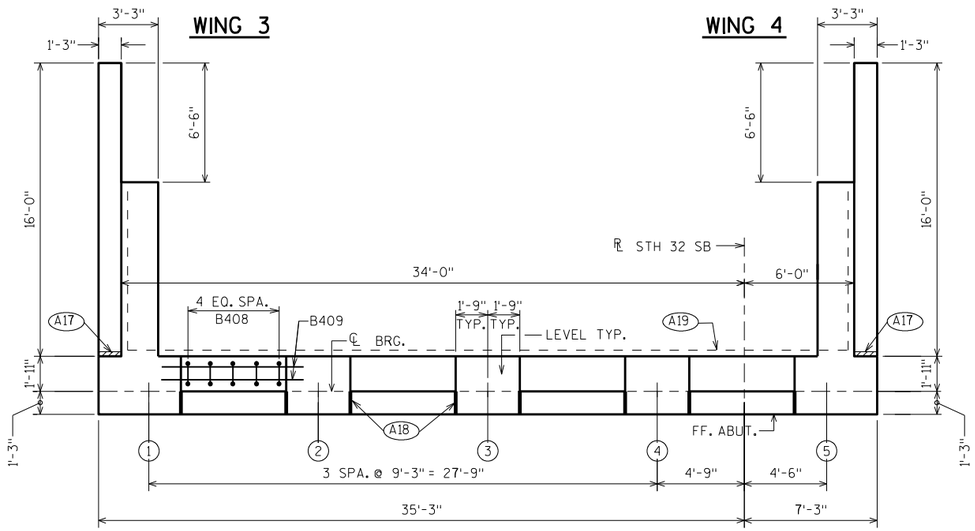
8

SCALE =

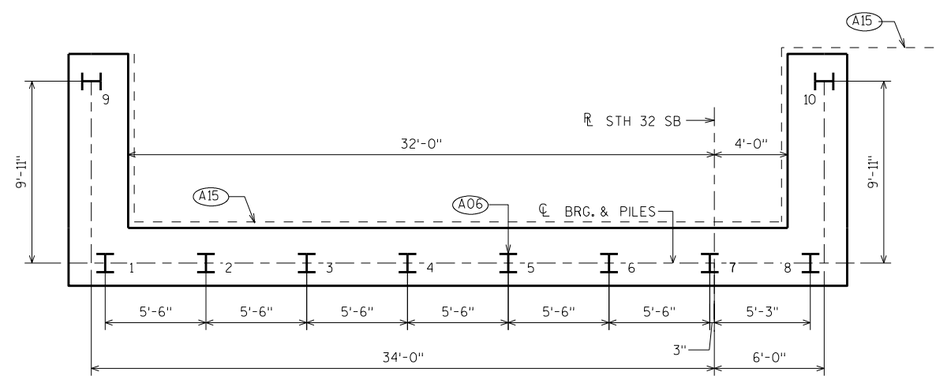
STATE PROJECT NUMBER
4190-16-72



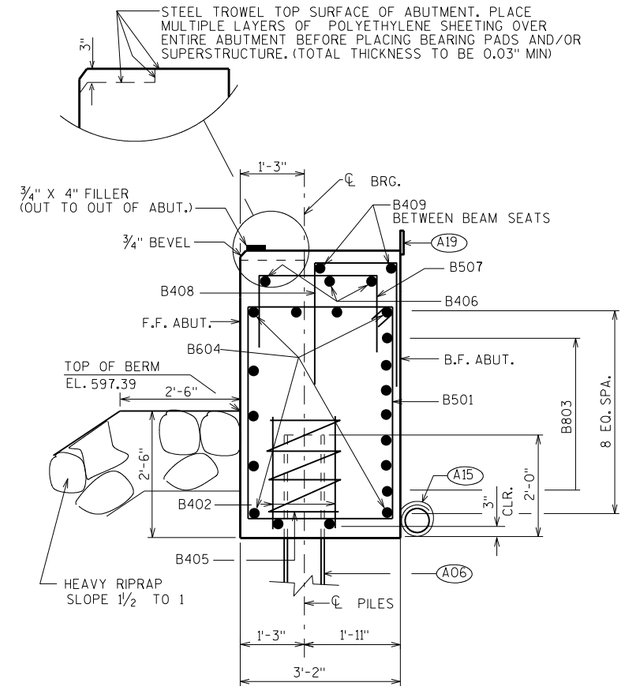
ELEVATION LOOKING NORTH



PLAN



PILE PLAN



SECTION THRU BODY

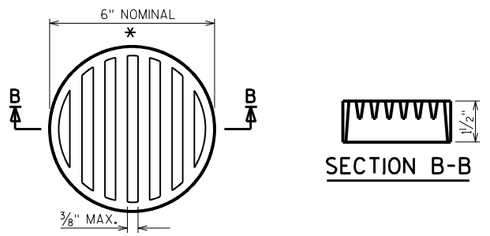
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING. ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



SECTION B-B

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

NORTH ABUTMENT

SHEET 6

310

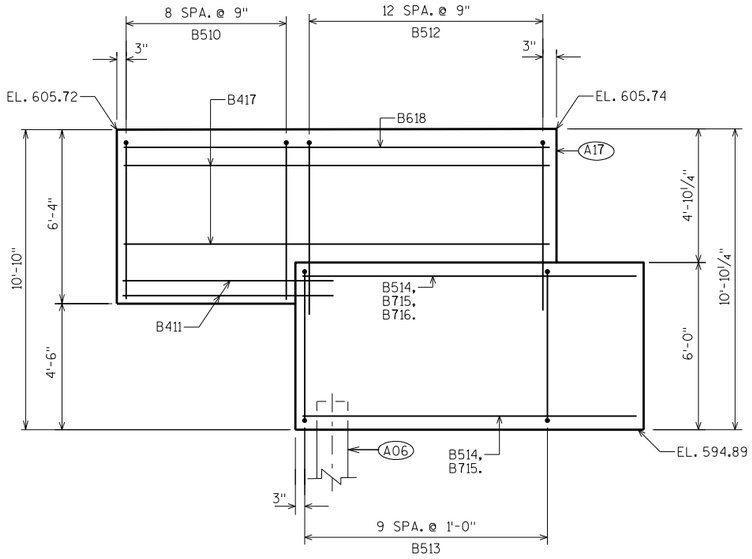
8

8

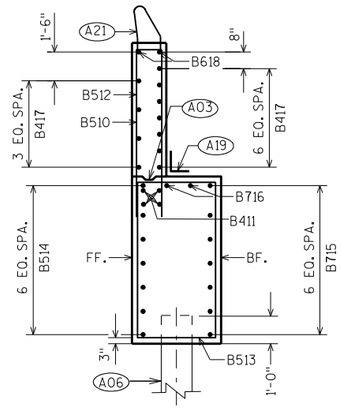
SCALE =

STATE PROJECT NUMBER

4190-16-72



WING 3 ELEVATION



WING 3 SECTION

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 × 42 STEEL PILING, ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

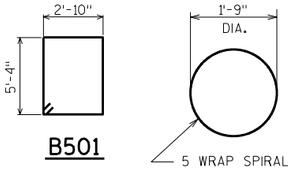
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHT.

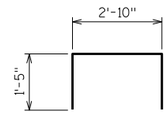
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		53	17'-0"	X		BODY-STIRRUPS
B402		16	2'-3"			PILES-2 PER BODY PILE
B803		7	42'-2"			BODY-HORIZONTAL
B604		11	42'-2"			BODY-HORIZONTAL
B405		8	28'-0"	X		PILES-1 PER BODY PILE
B406		3	10'-6"			BODY-HORZ. OVER GIR. 3
B507		11	5'-5"	X		BODY-TOP OVER GIR. 3
B408		20	3'-11"	X		BODY-VERT. BETWEEN BEAM SEATS
B409		8	7'-9"			BODY-HORZ. BETWEEN BEAM SEATS
B510	X	9	12'-8"	X		WING 3-VERTICAL
B411	X	4	7'-9"			WING 3-HORIZONTAL
B512	X	13	14'-1"	X		WING 3-VERTICAL
B513	X	10	17'-8"	X		WING 3-STIRRUP
B514	X	7	12'-4"			WING 3-HORIZONTAL
B715	X	7	12'-4"			WING 3-HORIZONTAL
B716	X	2	12'-4"			WING 3-HORIZONTAL
B417	X	11	15'-8"			WING 3-HORIZONTAL
B618	X	2	15'-8"			WING 3-HORIZONTAL TOP
B519	X	9	12'-8"	X		WING 4-VERTICAL
B420	X	4	7'-9"			WING 4-HORIZONTAL
B521	X	13	14'-1"	X		WING 4-VERTICAL
B522	X	10	17'-10"	X		WING 4-STIRRUP
B523	X	7	12'-4"			WING 4-HORIZONTAL
B724	X	7	12'-4"			WING 4-HORIZONTAL
B725	X	2	12'-4"			WING 4-HORIZONTAL
B426	X	11	15'-8"			WING 4-HORIZONTAL
B627	X	2	15'-8"			WING 4-HORIZONTAL TOP

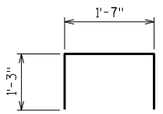


B501

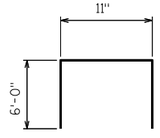
B405



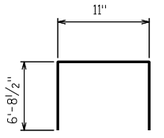
B507



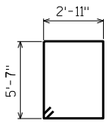
B408



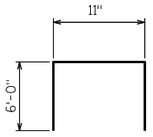
B510



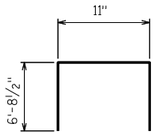
B512



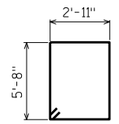
B513



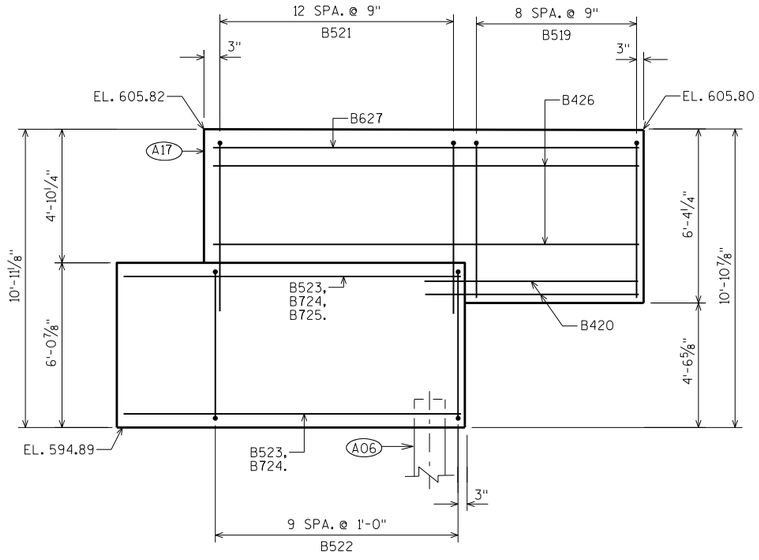
B519



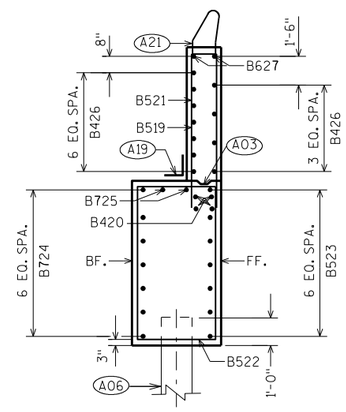
B521



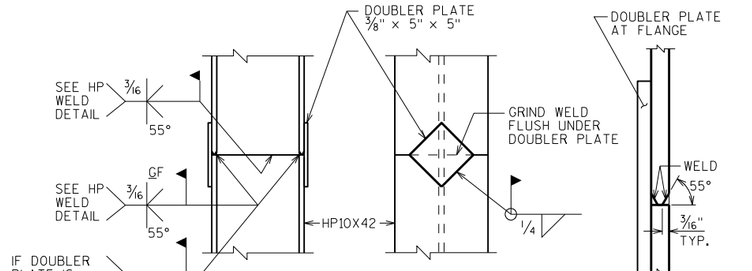
B522



WING 4 ELEVATION



WING 4 SECTION



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

NORTH ABUTMENT DETAILS

SHEET 7

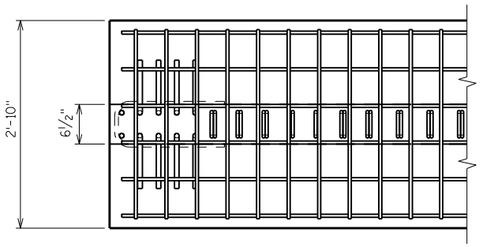
311

8

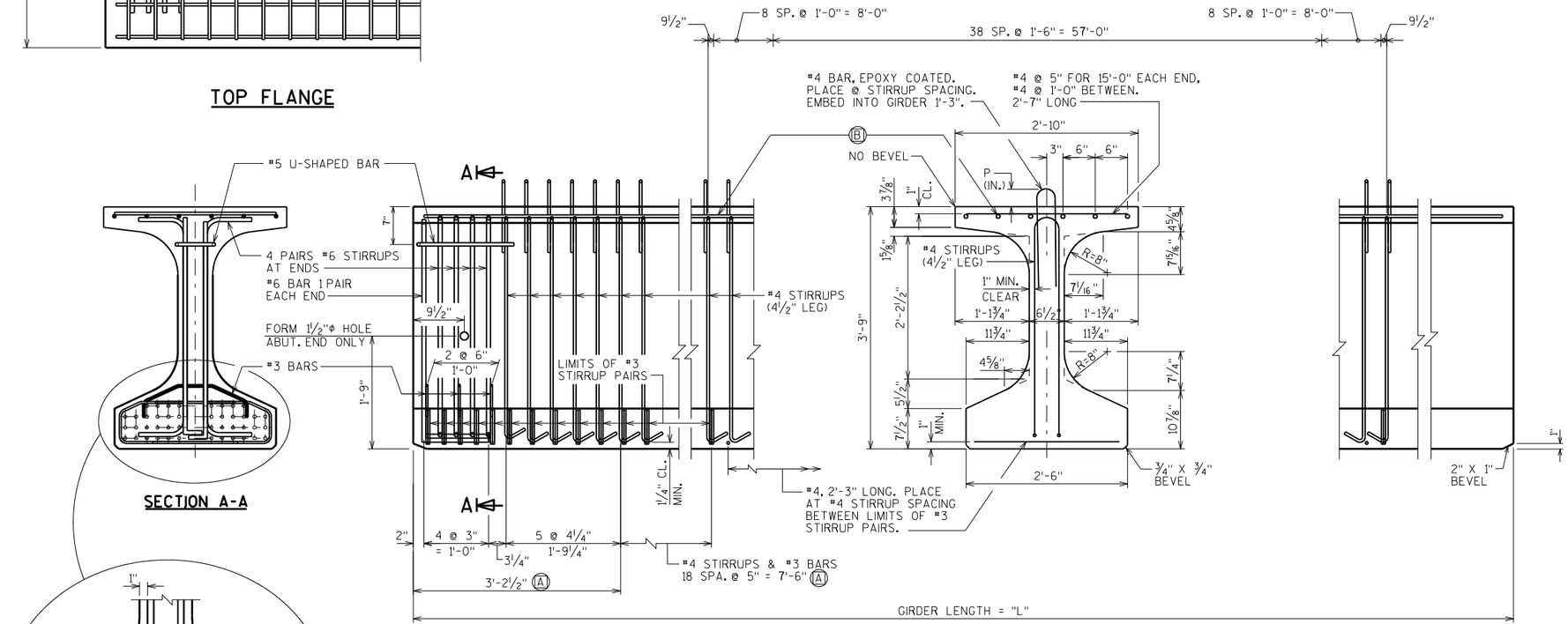
8

SCALE =

STATE PROJECT NUMBER
4190-16-72



TOP FLANGE

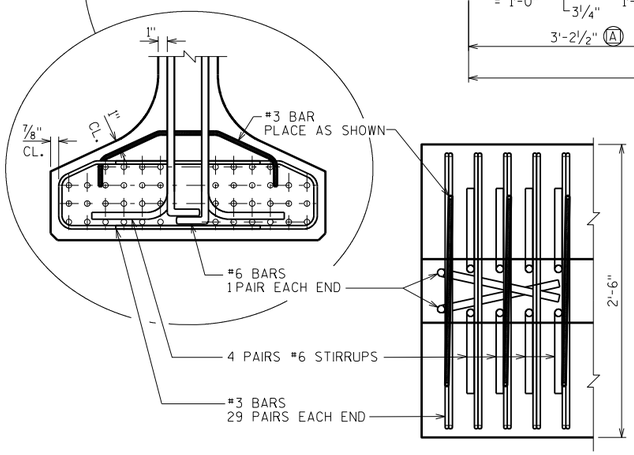


SECTION A-A

SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF THE GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

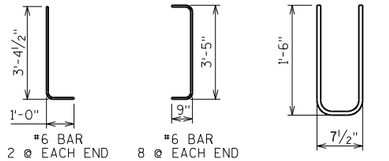
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

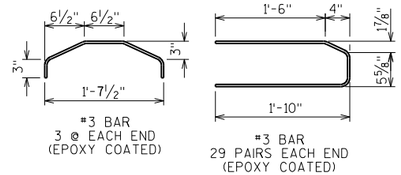
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.)
1	ALL	96.00	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8000	7.75	7	7.75	0.60	36	6400	40.0	13.75	16.75	5.0		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

45W" PRESTRESSED GIRDER DETAILS 1

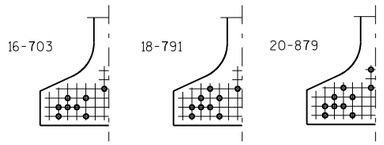
SHEET 8

312

SCALE =

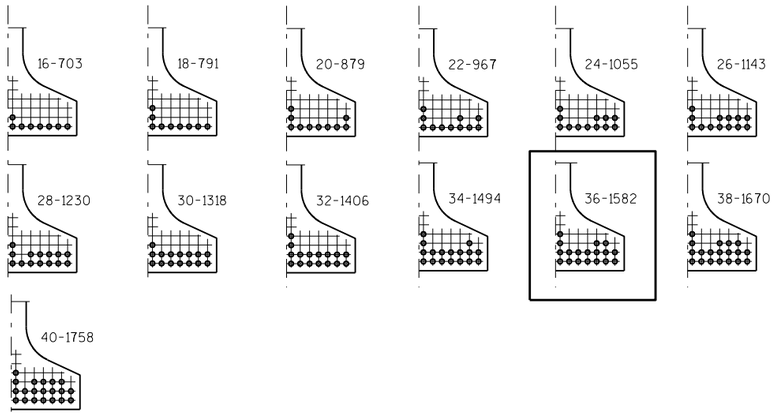
STATE PROJECT NUMBER

4190-16-72



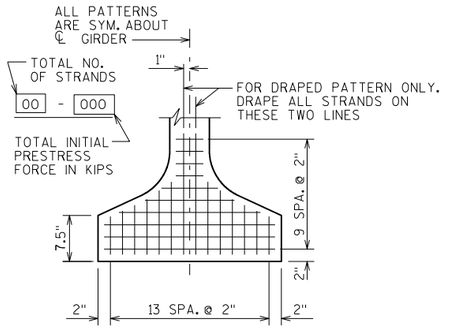
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

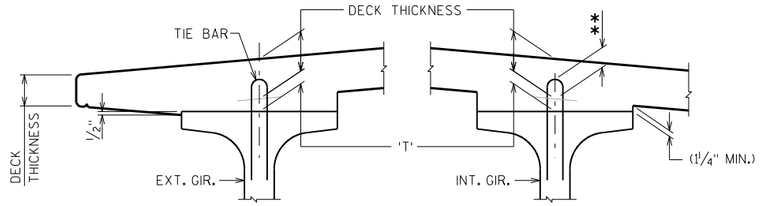


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

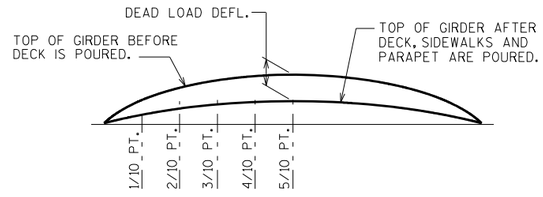
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

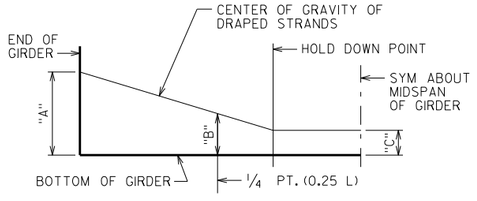
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

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



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.)*
1	3.79

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

45W" PRESTRESSED GIRDER DETAILS 2

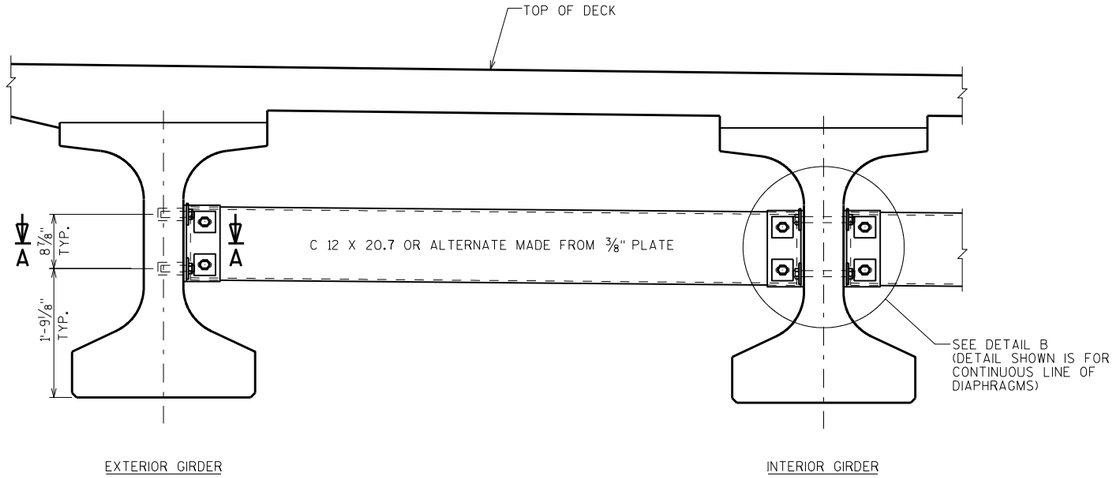
SHEET 9

313

WED MAR 18 13:30:27 2015 S:\45W

SCALE =

STATE PROJECT NUMBER
4190-16-72



PART TRANSVERSE SECTION AT DIAPHRAGM

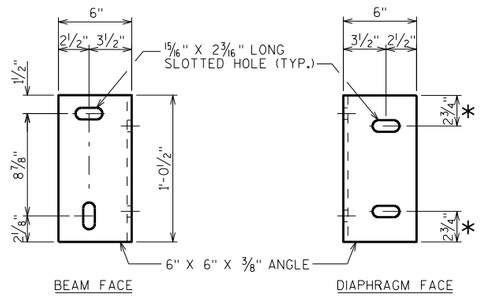
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-5-408", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

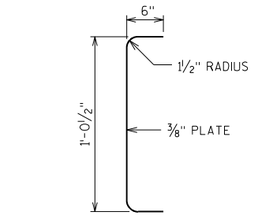
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

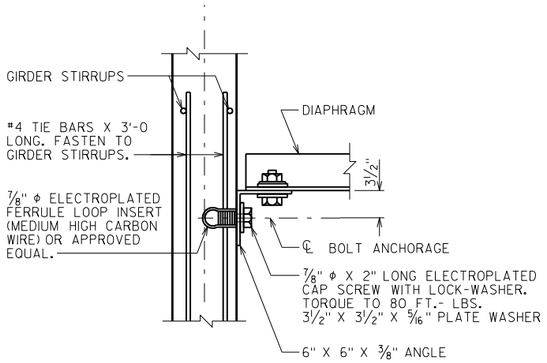


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

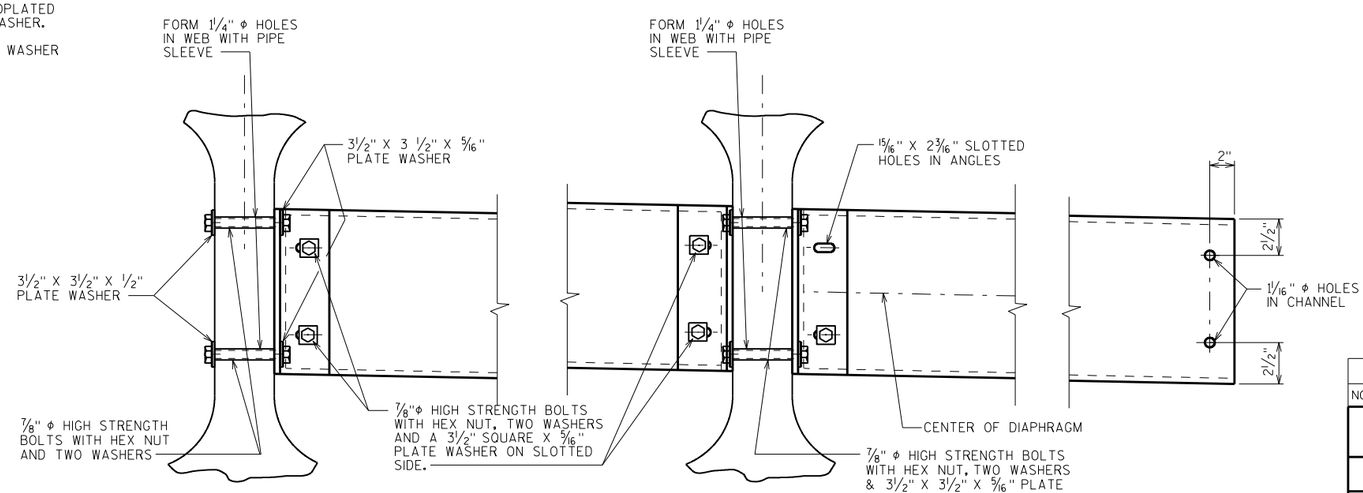


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

STEEL DIAPHRAGM

SHEET 10

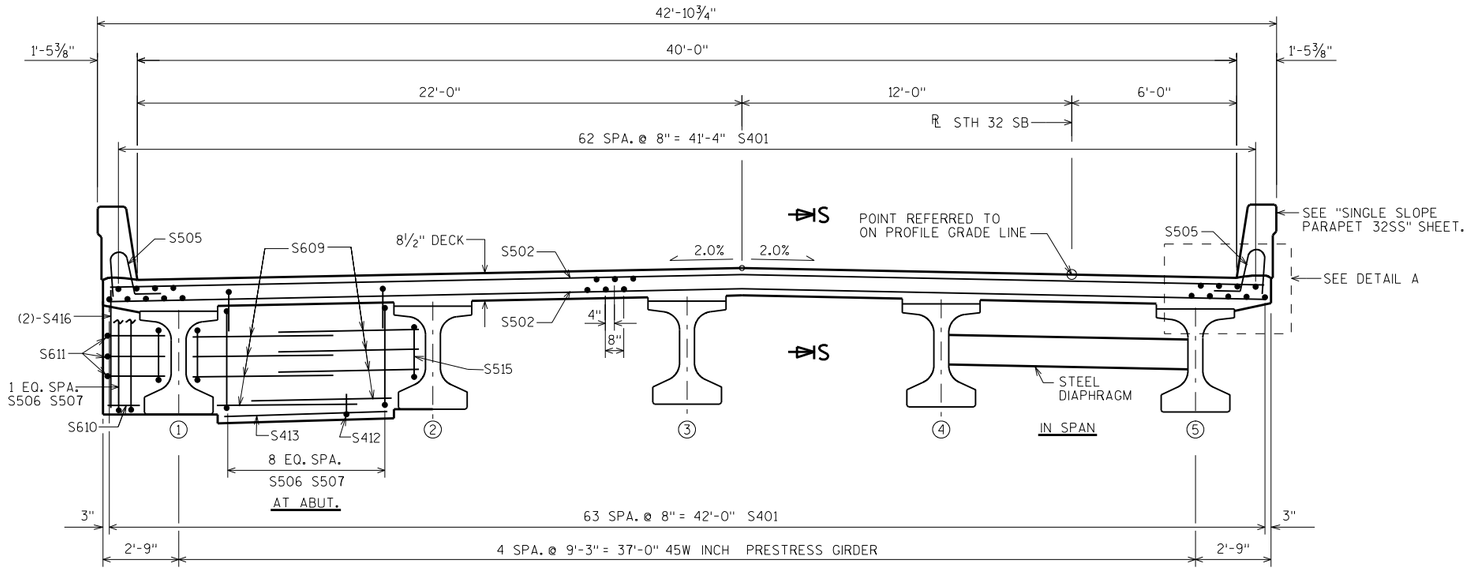
314

WED MAR 18 13:30:28 2015 SSTDIA

SCALE =

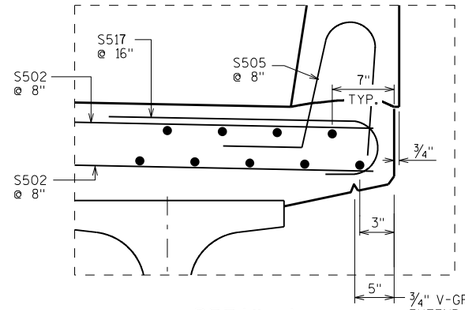
STATE PROJECT NUMBER

4190-16-72



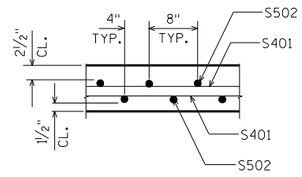
CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

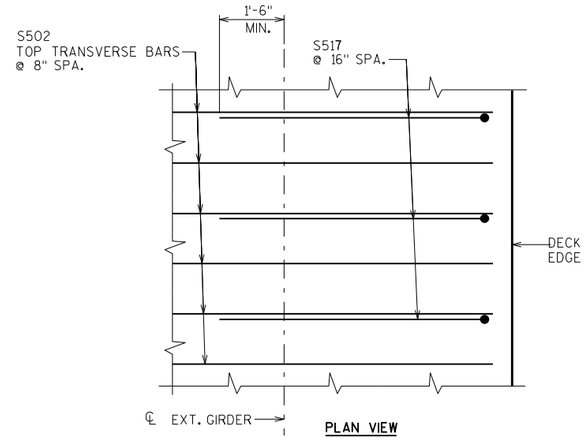


DETAIL A

¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

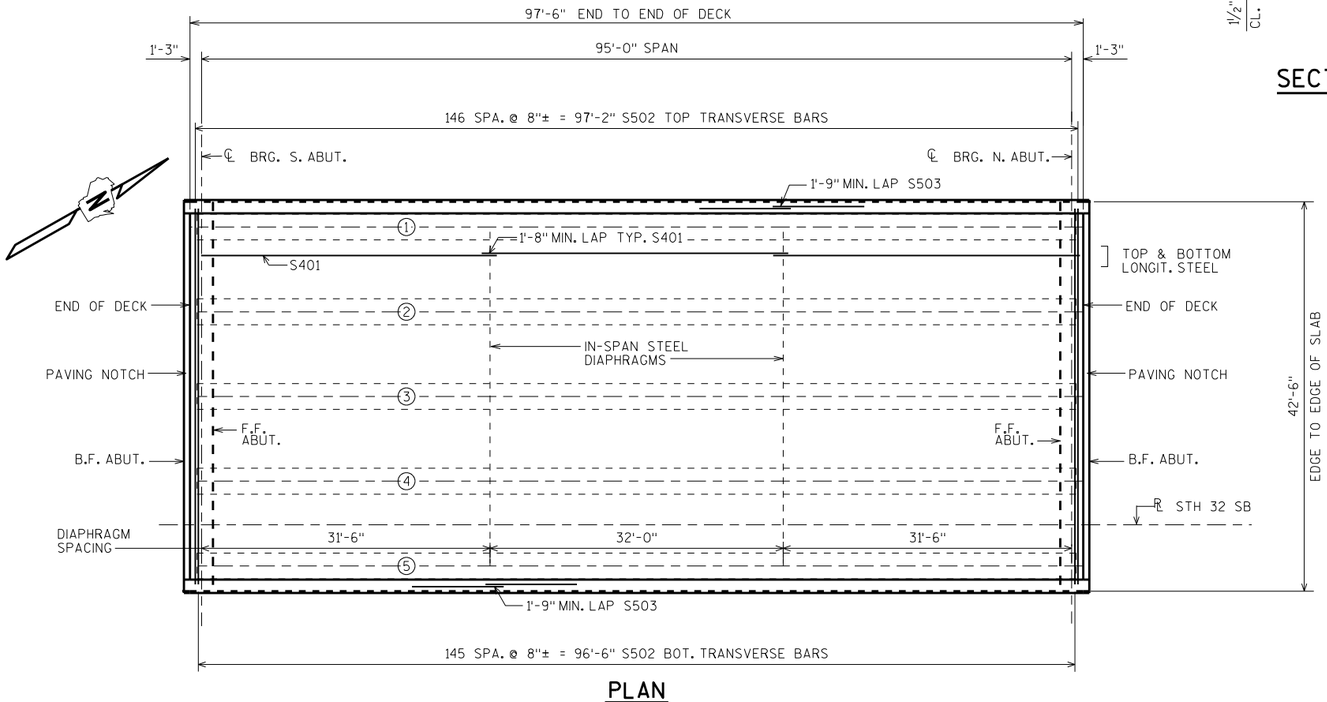


SECTION S-S



ADDITIONAL TOP DECK OVERHANG STEEL

TYP. AT BOTH SIDES OF DECK



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

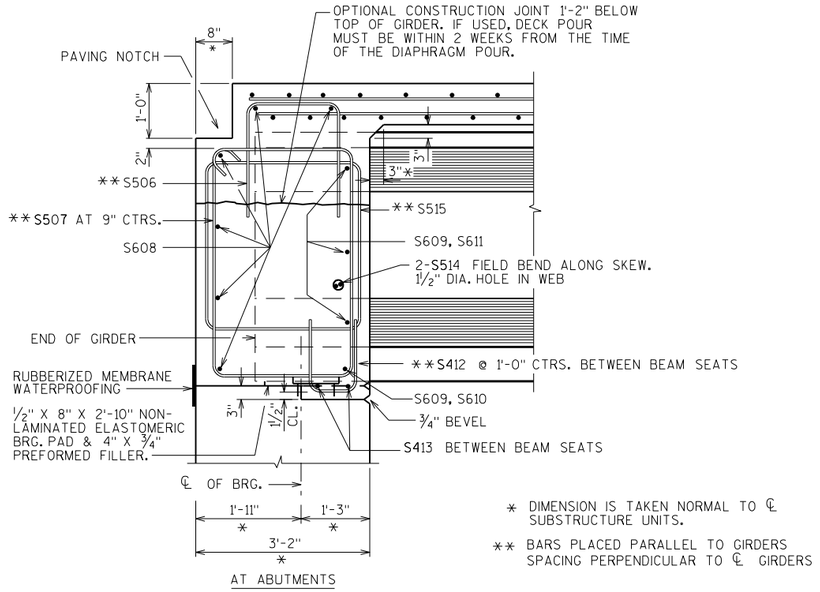
SUPERSTRUCTURE | SHEET 11

315

SCALE =

STATE PROJECT NUMBER

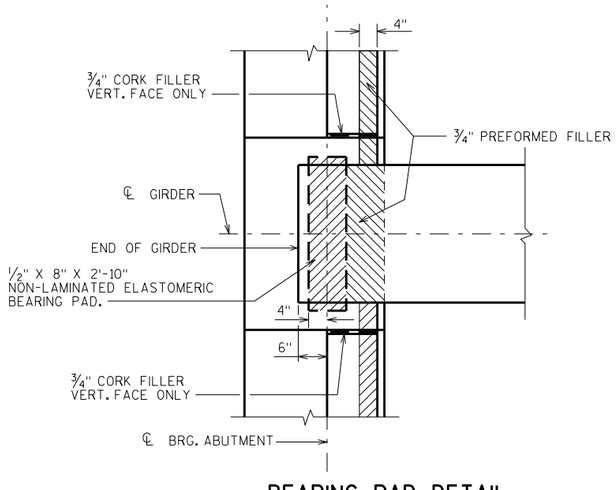
4190-16-72



* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

PART LONGIT. SECTION

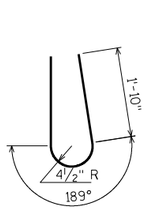


BEARING PAD DETAIL

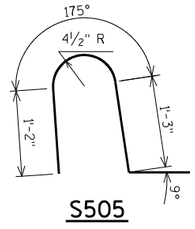
BILL OF BARS

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

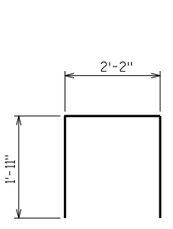
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	381	33'-6"			DECK-LONGITUDINAL TOP & BOTTOM
S502	X	293	42'-2"			DECK-TRANSVERSE TOP AND BOTTOM
S503	X	36	34'-0"			PARAPET 32SS-HORIZ.
S504	X	298	5'-0"	X		PARAPET 32SS-VERT.
S505	X	294	4'-5"	X		PARAPET 32SS-VERT.
S506	X	80	5'-9"	X		ABUT. DIAPHRAGM
S507	X	80	13'-2"	X		ABUT. DIAPHRAGM
S608	X	24	22'-7"			ABUT. DIAPHRAGM
S609	X	64	5'-3"			ABUT. DIAPHRAGM
S610	X	4	1'-2"			ABUT. DIAPHRAGM
S611	X	12	6'-9"	X		ABUT. DIAPHRAGM
S412	X	56	3'-3"	X		ABUT. DIAPHRAGM
S413	X	16	5'-5"			ABUT. DIAPHRAGM
S514	X	20	6'-0"			ABUT. DIAPHRAGM
S515	X	20	10'-8"	X		ABUT. DIAPHRAGM
S416	X	8	4'-3"			ABUT. DIAPHRAGM
S517	X	148	4'-8"	X		DECK EDGE-TRANSVERSE
S518	X	4	5'-10"	X		PARAPET 32SS VERT. @ PAVING BLOCK



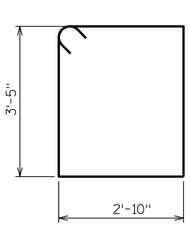
S504



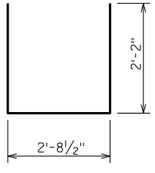
S505



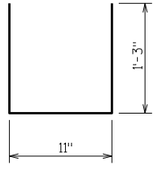
S506



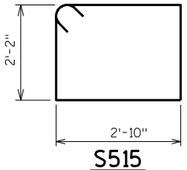
S507



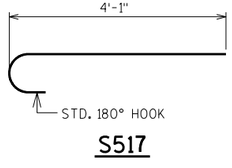
S611



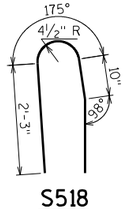
S412



S515



S517



S518

TOP OF DECK ELEVATIONS

	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
EOD	605.84	605.83	605.82	605.81	605.80	605.79	605.78	605.77	605.76	605.75	605.74
GIR. 1	605.87	605.86	605.85	605.84	605.83	605.82	605.81	605.80	605.79	605.78	605.77
GIR. 2	606.05	606.04	606.03	606.02	606.01	606.01	606.00	605.99	605.98	605.97	605.96
GIR. 3	606.24	606.23	606.22	606.21	606.20	606.19	606.18	606.17	606.16	606.15	606.14
GIR. 4	606.13	606.12	606.11	606.10	606.09	606.09	606.08	606.07	606.06	606.05	606.04
GIR. 5	605.95	605.94	605.93	605.92	605.91	605.90	605.89	605.88	605.87	605.86	605.85
EOD	605.92	605.91	605.90	605.89	605.88	605.87	605.86	605.85	605.84	605.83	605.82

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

SUPERSTRUCTURE DETAILS

SHEET 12

316

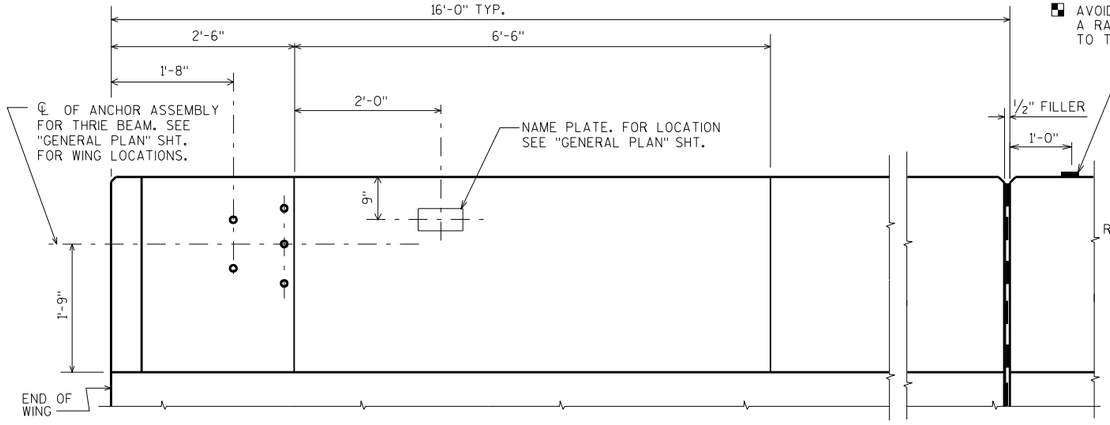
8

8

SCALE =

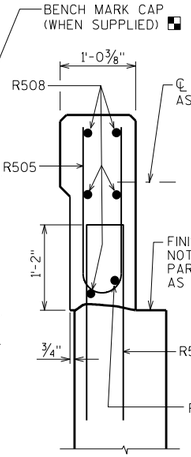
STATE PROJECT NUMBER

4190-16-72

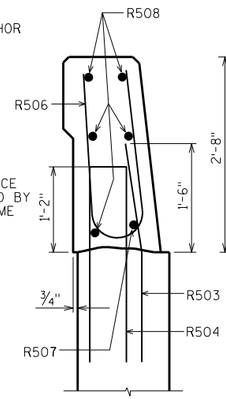


INSIDE ELEVATION

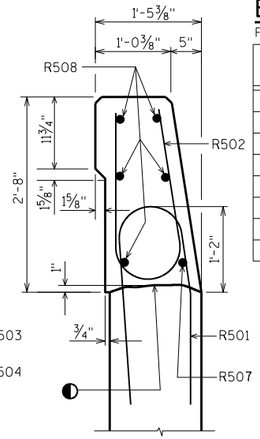
AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A



SECTION B

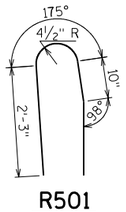


SECTION C

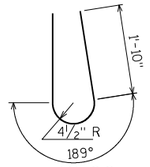
BILL OF BARS

FOR ABUTMENT PARAPETS

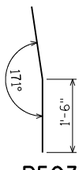
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	24	24	5-10	X		PARAPET VERT.
R502	X	24	24	5-0	X		PARAPET VERT.
R503	X	24	24	3-0	X		PARAPET VERT.
R504	X	34	34	5-7	X		PARAPET VERT.
R505	X	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	2	2	15-7	X		PARAPET HORIZ.
R508	X	10	10	15-7			PARAPET HORIZ.



R501



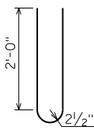
R502



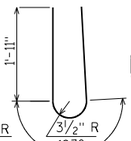
R503



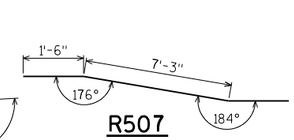
R504



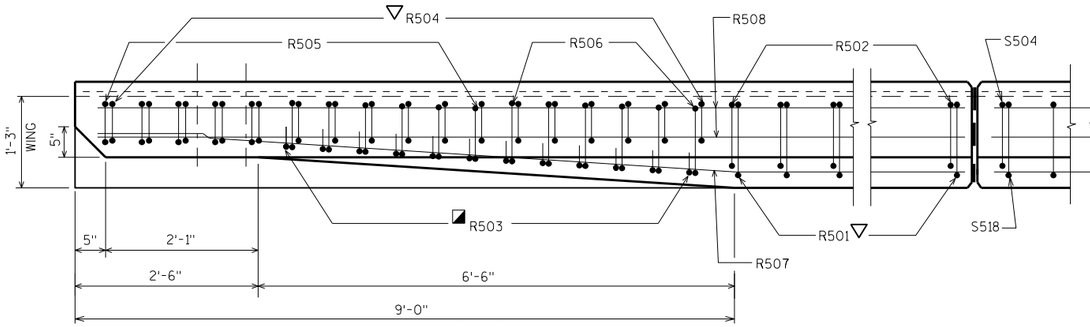
R505



R506

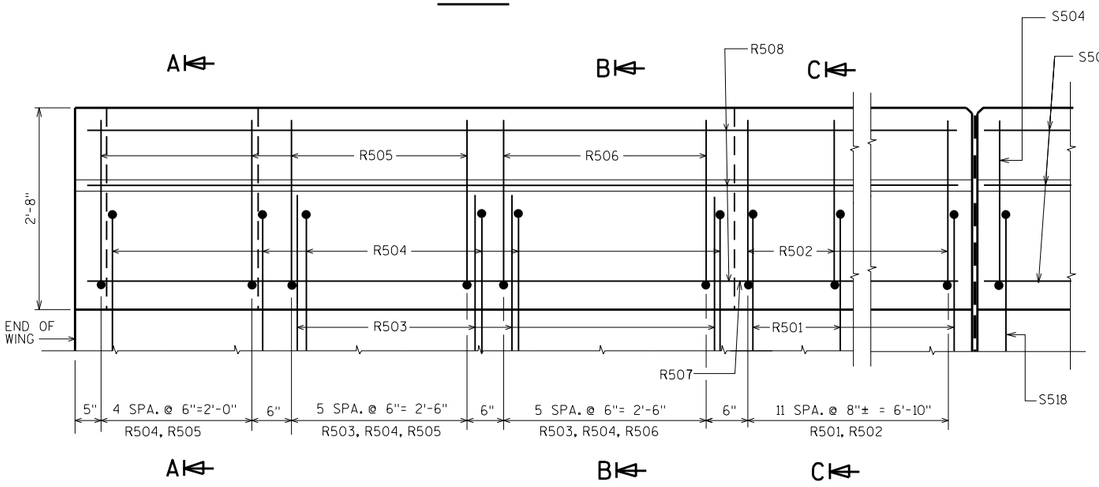


R507

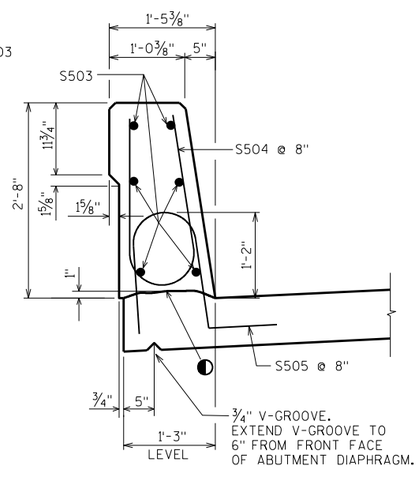


PLAN

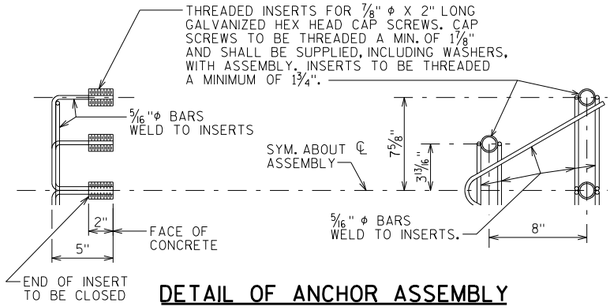
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-408

DRAWN BY WWR | PLANS CK'D. TAB

SINGLE SLOPE PARAPET 32SS

SHEET 13

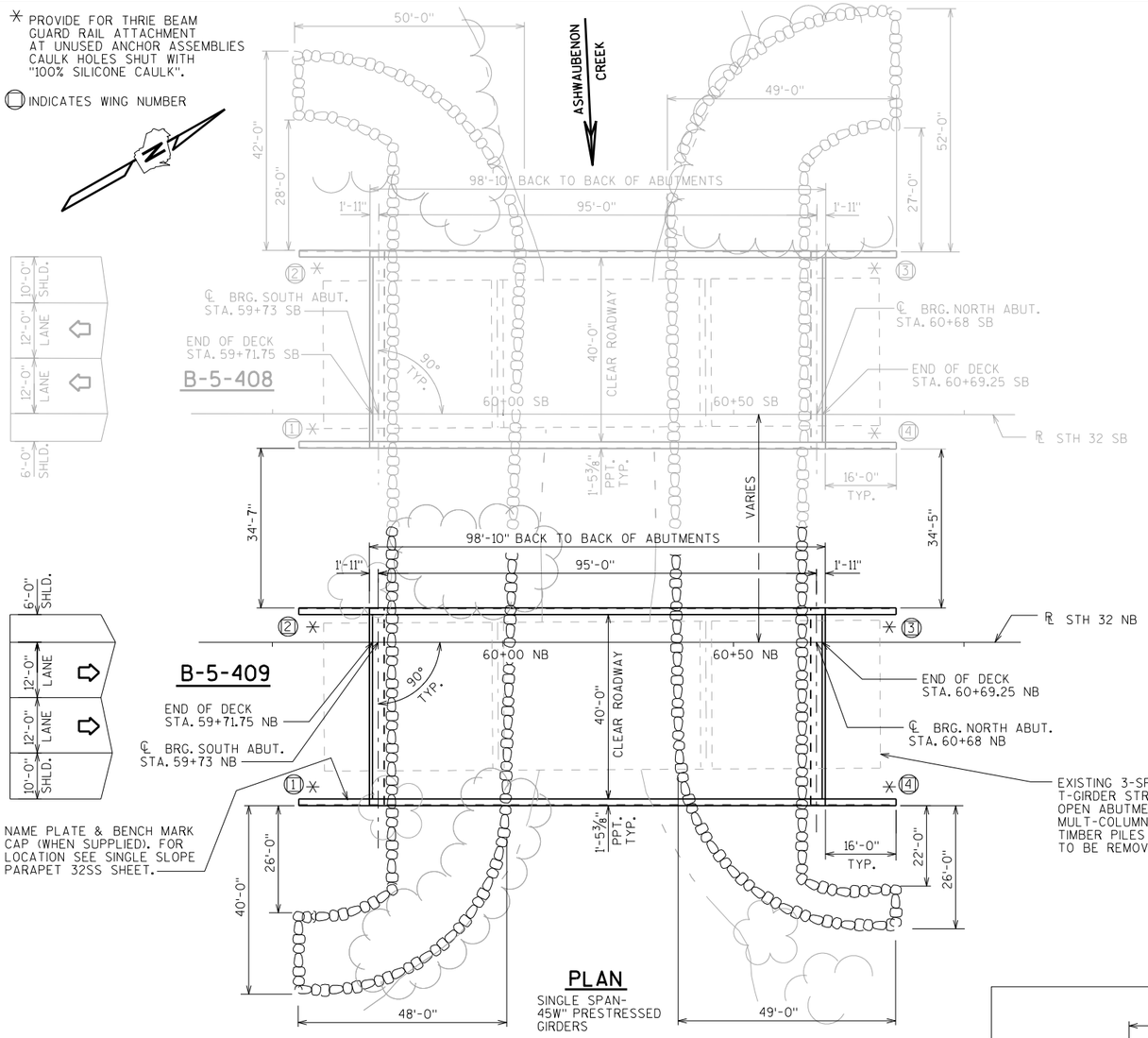
317

SCALE = 1

8

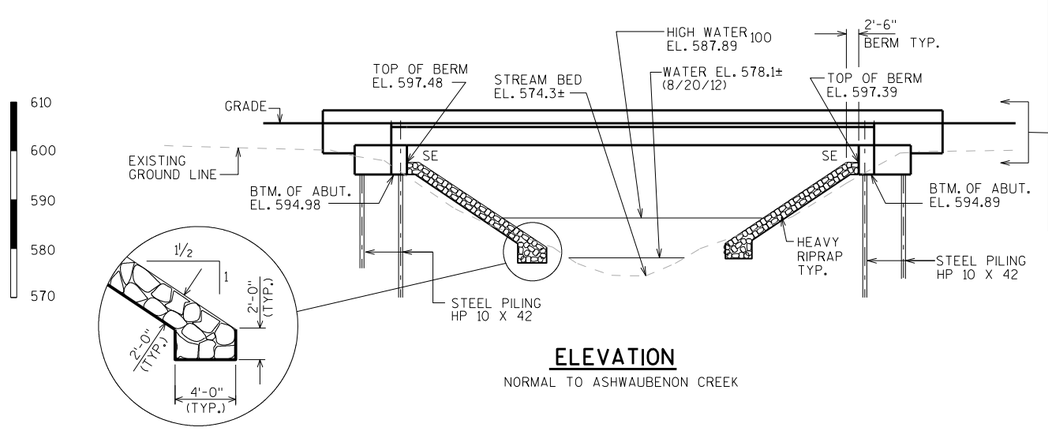
8

STATE PROJECT NUMBER
4190-16-72



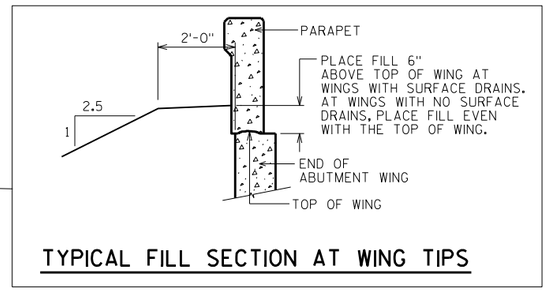
PLAN

SINGLE SPAN-
45W" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO ASHWAUBENON CREEK



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.19
OPERATING RATING FACTOR: RF=1.57
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY DECK — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
45W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FEET LONG AT THE SOUTH ABUTMENT AND 105 FEET LONG AT THE NORTH ABUTMENT. PILE POINTS REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} =2900 C.F.S.
VEL. =7.7 F.P.S.
HW_{100}= EL. 587.88
WATERWAY AREA= 379 SQ. FT.
DRAINAGE AREA= 28.65 SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 =831 C.F.S.
$HW._2$= EL. 582.12

TRAFFIC VOLUME

STH 32 NB
A.D.T.=23600 (2036)
R.D.S.=50 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. 45W" PRESTRESSED GIRDER DETAILS 1
9. 45W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGM
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. SINGLE SLOPE PARAPET 32SS

STRUCTURE DESIGN CONTACT:
TIM BOROWSKI (608) 266-4547
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/5/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-5-409

STH 32 NB/ASHLAND AVE. OVER ASHWAUBENON CREEK

COUNTY	TOWN/CITY/VILLAGE
BROWN	ASHWAUBENON

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TAB	DFD	WWR	TAB

GENERAL PLAN

SHEET 1 OF 13

318

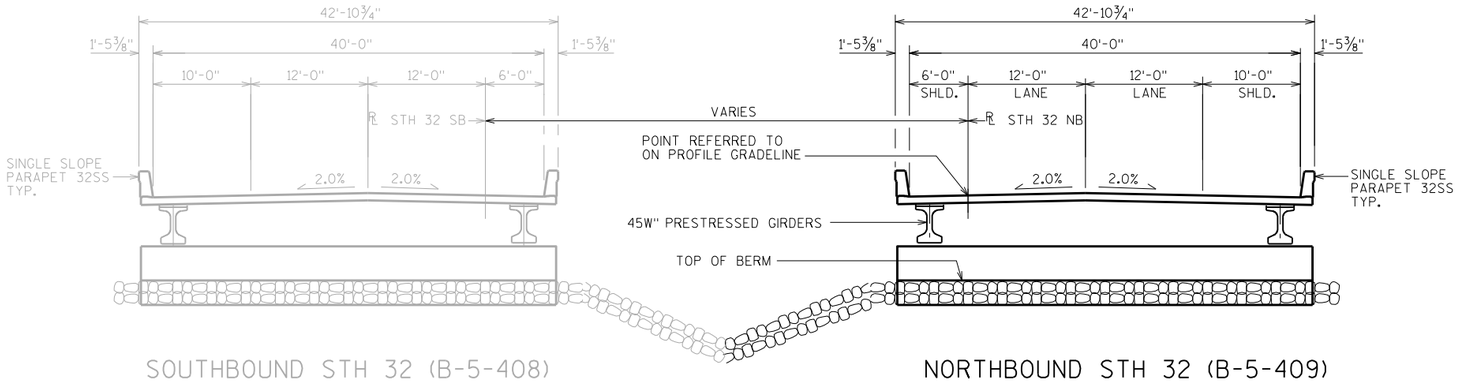
I.D. 4190-16-00B

DATE: NOV. 2015

SCALE =

STATE PROJECT NUMBER

4190-16-72



SOUTHBOUND STH 32 (B-5-408)

NORTHBOUND STH 32 (B-5-409)

CROSS SECTIONS THRU STH 32 SB/NB

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.

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

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOPS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.

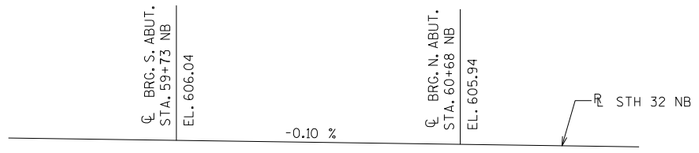
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "45W PRESTRESSED GIRDER DETAILS 2" SHEET.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 60+25 NB	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-5-409	LS	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	400	400	800
502.0100	CONCRETE MASONRY BRIDGES	CY	183	57	57	297
502.3200	PROTECTIVE SURFACE TREATMENT	SY	448	———	———	448
502.3210	PIGMENTED SURFACE SEALER	SY	83	13	13	109
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	480	———	———	480
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	2780	2780	5560
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	29,920	2900	2900	35,720
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	10	———	———	10
506.4000	STEEL DIAPHRAGMS B-5-409	EACH	8	———	———	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	12	12	24
550.0500	PILE POINTS	EACH	———	10	10	20
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	1000	1050	2050
606.0300	RIPRAP HEAVY	CY	———	255	225	480
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	75	75	150
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	2	4
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	———	430	360	790
	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	½" & ¾"



PROFILE GRADE LINE STH 32 NB (B-5-409)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

CROSS SECTION & QUANTITIES

SHEET 2

319

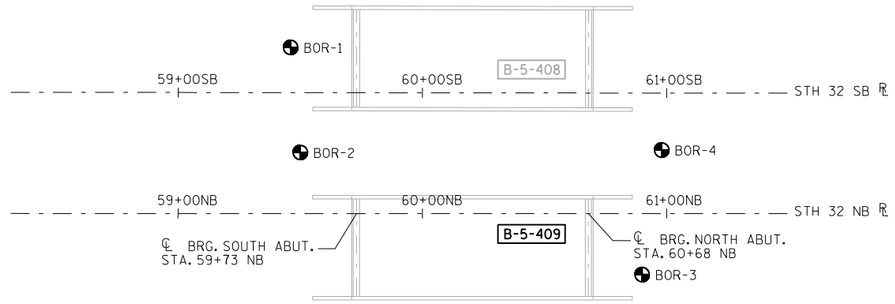
8

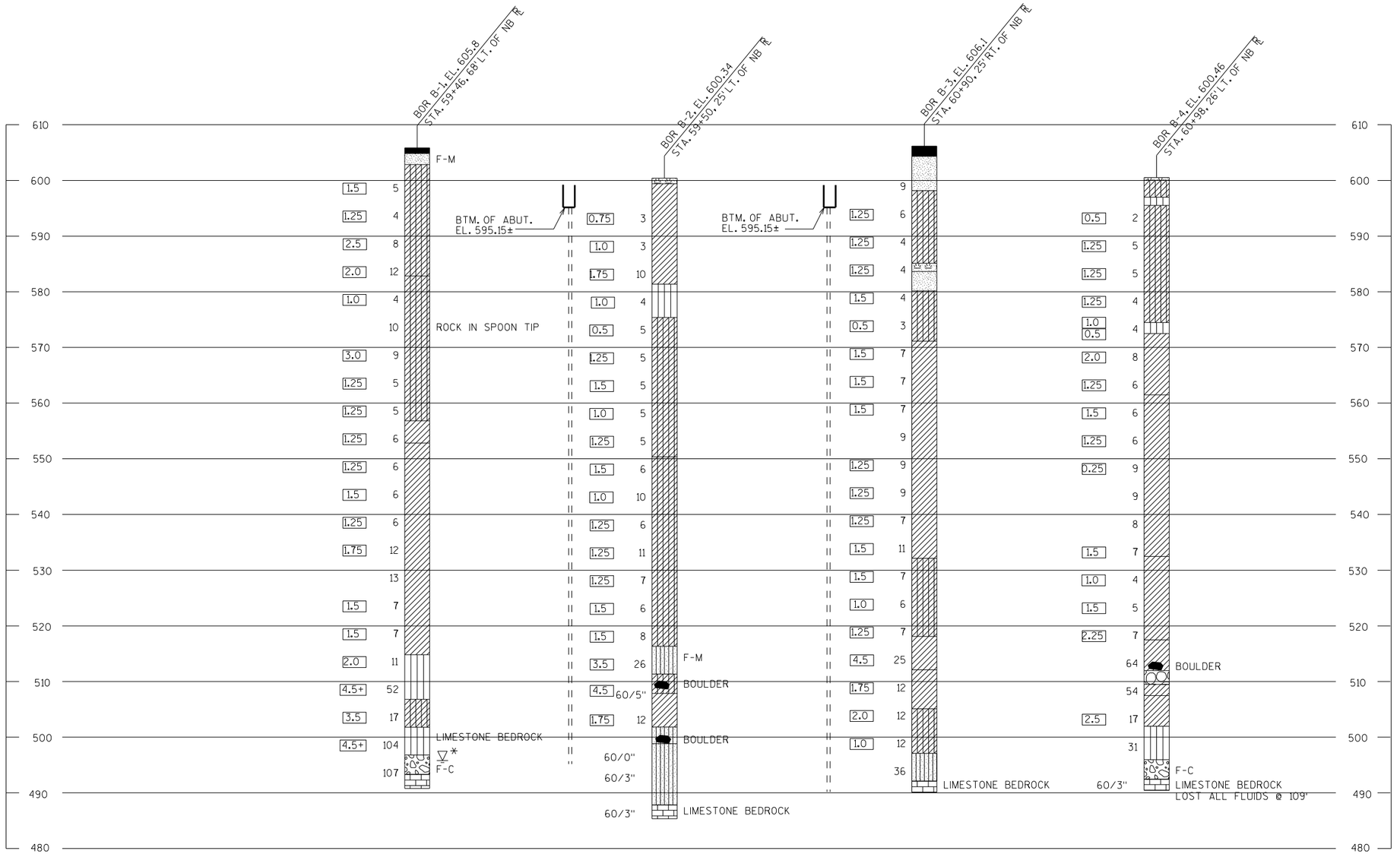
8

SCALE =

STH 32 OVER ASHWAUBENON CREEK
ASHLAND AVE., DEPERE & ASHWAUBENON

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1	549390.069	85481.274
2	2	549373.859	85527.494
3	3	549470.64	85642.883
4	4	549505.869	85602.398
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) BROWN COUNTY			





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

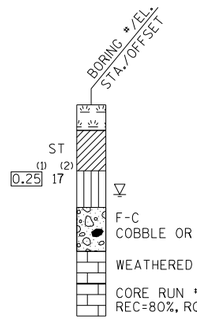
STATE PROJECT NUMBER

4190-16-72

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 B-5-409

DRAWN BY PR/WWR | PLANS CK'D. TAB

SUBSURFACE EXPLORATION

SHEET 3

320

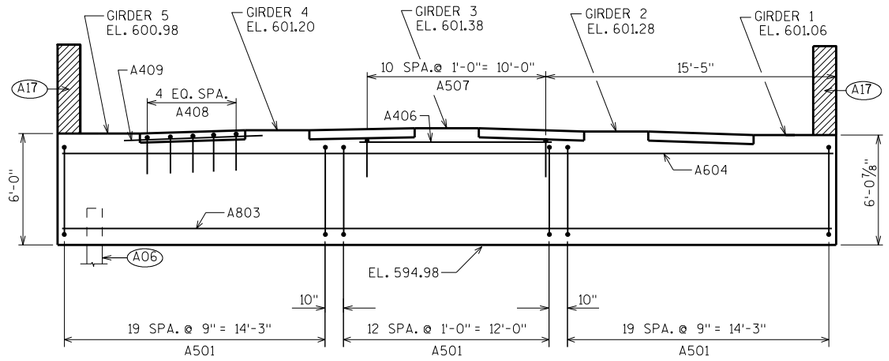
SCALE =

8

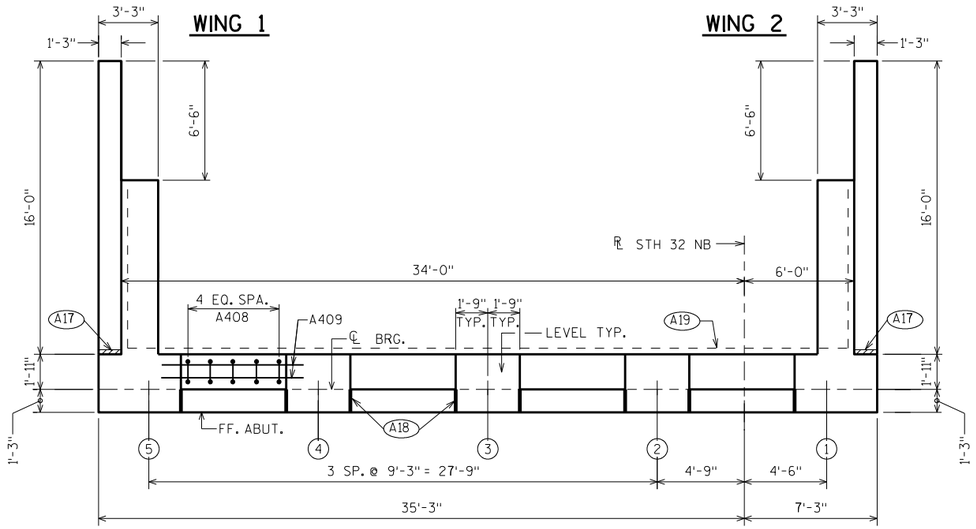
8

STATE PROJECT NUMBER

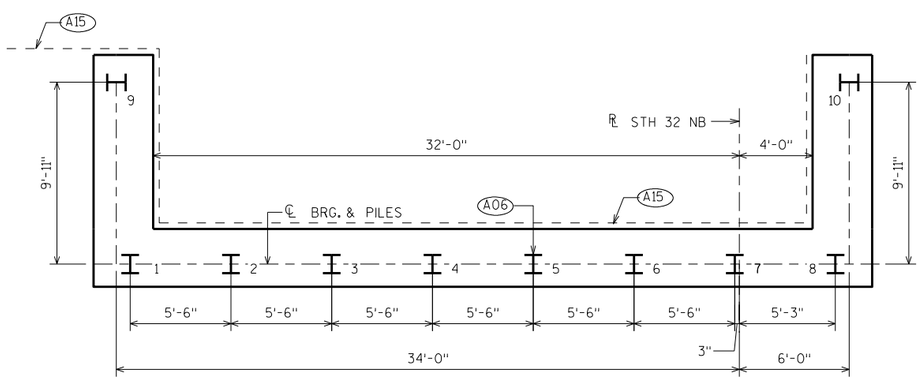
4190-16-72



ELEVATION LOOKING SOUTH

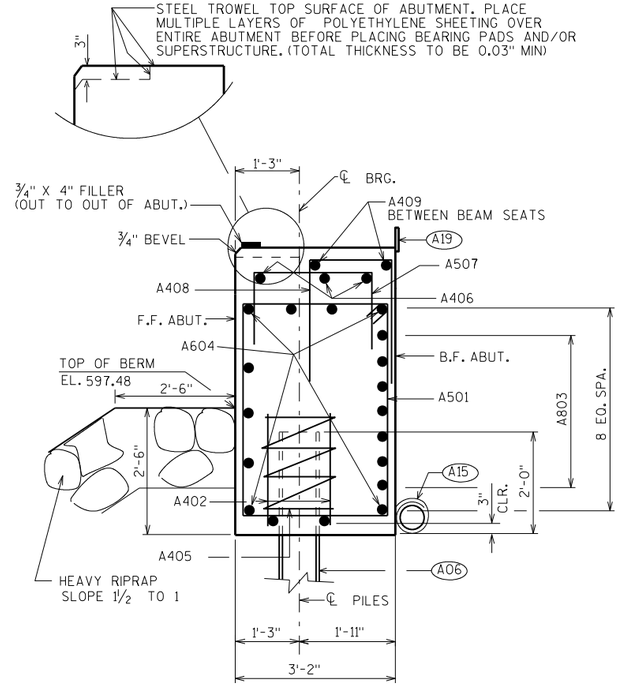


PLAN



PILE PLAN





SECTION THRU BODY

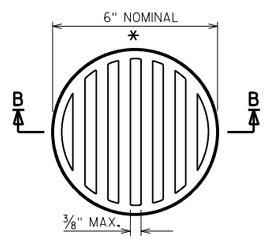
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING. ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

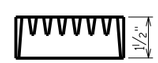
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.





SECTION B-B

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

SOUTH ABUTMENT

SHEET 4

321

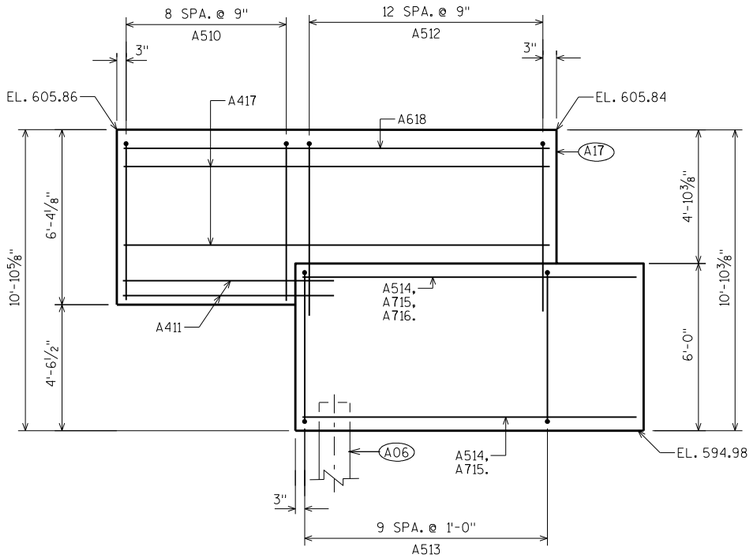
8

8

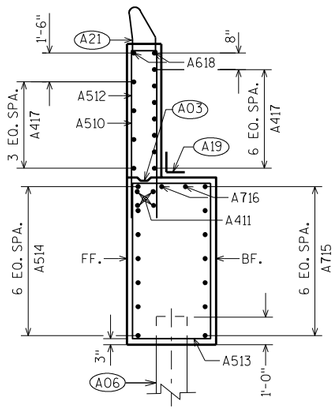
SCALE =

STATE PROJECT NUMBER

4190-16-72



WING 1 ELEVATION



WING 1 SECTION

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 × 42 STEEL PILING, ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

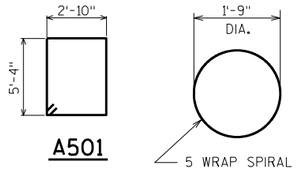
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHT.

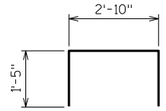
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		53	17'-0"	X		BODY-STIRRUPS
A402		16	2'-3"			PILES-2 PER BODY PILE
A803		7	42'-2"			BODY-HORIZONTAL
A604		11	42'-2"			BODY-HORIZONTAL
A405		8	28'-0"	X		PILES-1 PER BODY PILE
A406		3	10'-6"			BODY-HORZ. OVER GIR. 3
A507		11	5'-5"	X		BODY-TOP OVER GIR. 3
A408		20	3'-11"	X		BODY-VERT. BETWEEN BEAM SEATS
A409		8	7'-9"			BODY-HORZ. BETWEEN BEAM SEATS
A510	X	9	12'-8"	X		WING 1-VERTICAL
A411	X	4	7'-9"			WING 1-HORIZONTAL
A512	X	13	14'-1"	X		WING 1-VERTICAL
A513	X	10	17'-8"	X		WING 1-STIRRUP
A514	X	7	12'-4"			WING 1-HORIZONTAL
A715	X	7	12'-4"			WING 1-HORIZONTAL
A716	X	2	12'-4"			WING 1-HORIZONTAL
A417	X	11	15'-8"			WING 1-HORIZONTAL
A618	X	2	15'-8"			WING 1-HORIZONTAL TOP
A519	X	9	12'-8"	X		WING 2-VERTICAL
A420	X	4	7'-9"			WING 2-HORIZONTAL
A521	X	13	14'-1"	X		WING 2-VERTICAL
A522	X	10	17'-10"	X		WING 2-STIRRUP
A523	X	7	12'-4"			WING 2-HORIZONTAL
A724	X	7	12'-4"			WING 2-HORIZONTAL
A725	X	2	12'-4"			WING 2-HORIZONTAL
A426	X	11	15'-8"			WING 2-HORIZONTAL
A627	X	2	15'-8"			WING 2-HORIZONTAL TOP

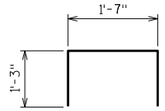


A501

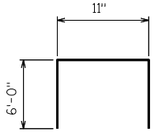
A405



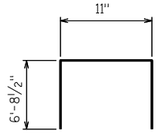
A507



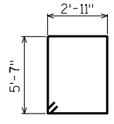
A408



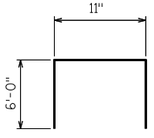
A510



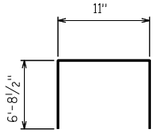
A512



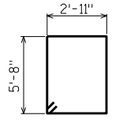
A513



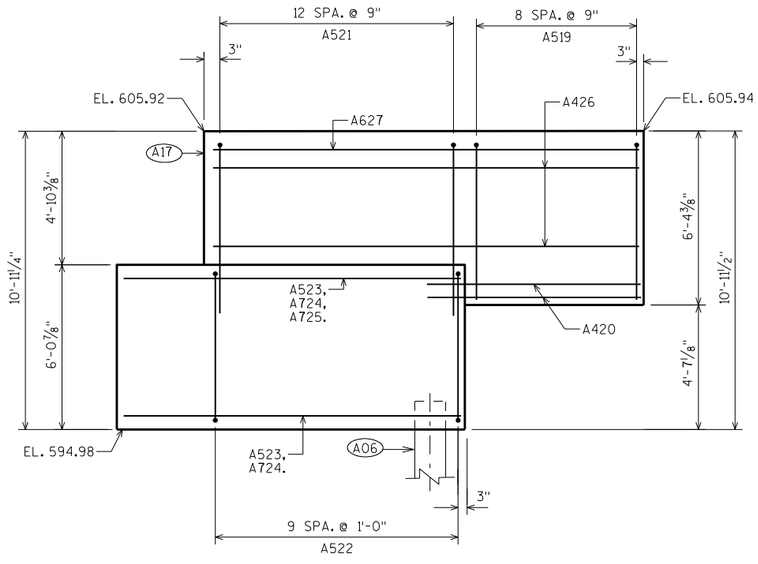
A519



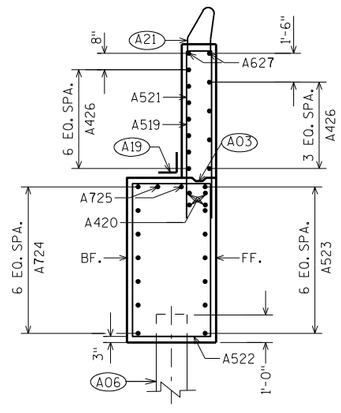
A521



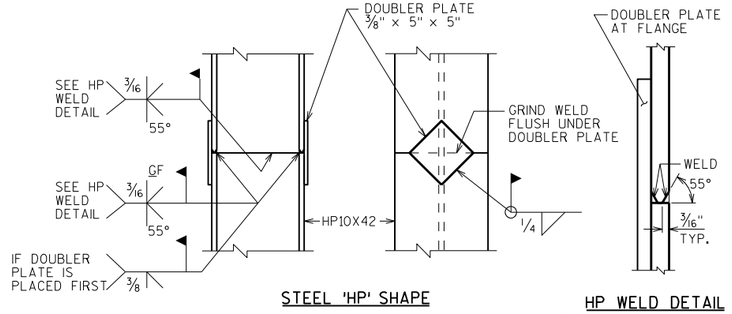
A522



WING 2 ELEVATION



WING 2 SECTION



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

SOUTH ABUTMENT DETAILS

SHEET 5

322

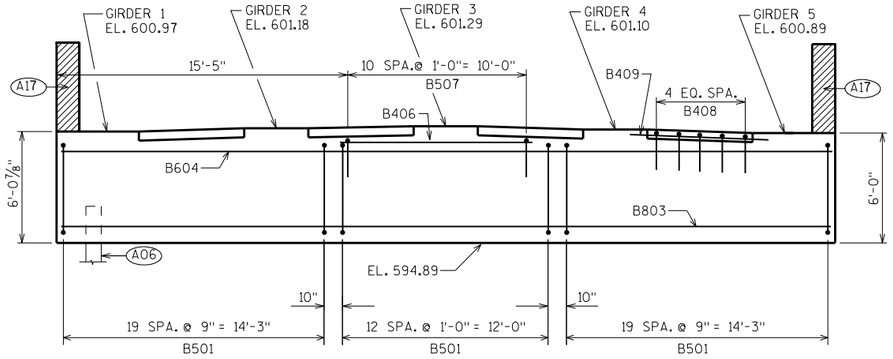
8

8

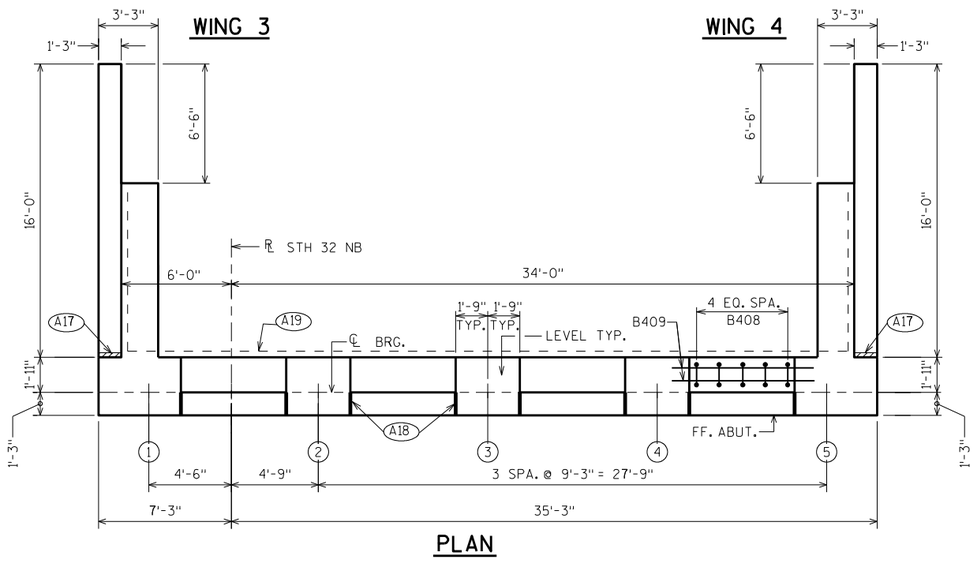
SCALE =

STATE PROJECT NUMBER

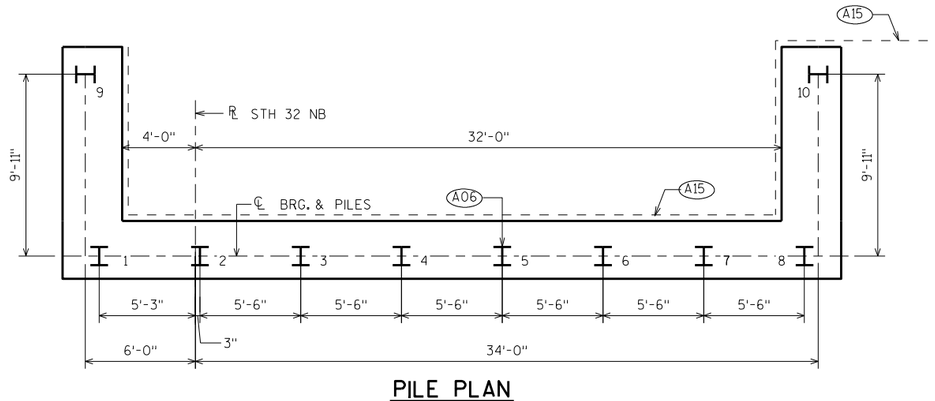
4190-16-72



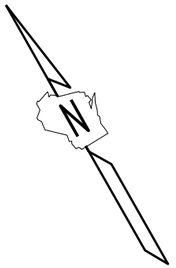
ELEVATION LOOKING NORTH

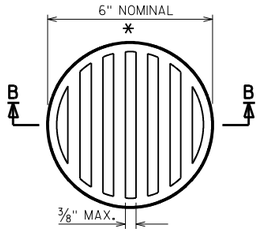


PLAN

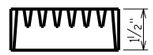


PILE PLAN





RODENT SHIELD DETAIL

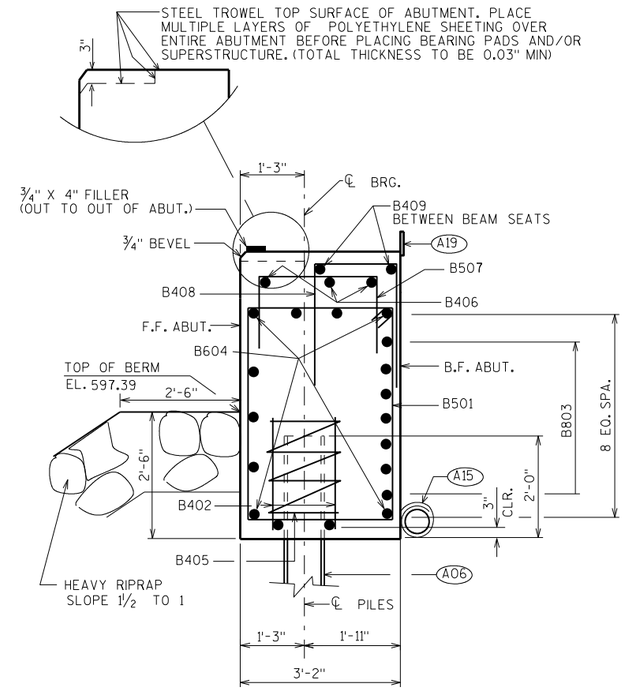


SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



SECTION THRU BODY

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 105 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

NORTH ABUTMENT

SHEET 6

323

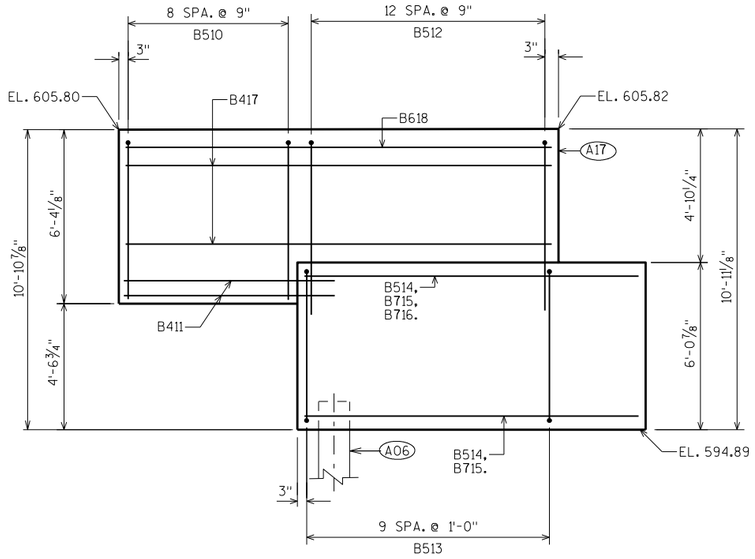
SCALE =

8

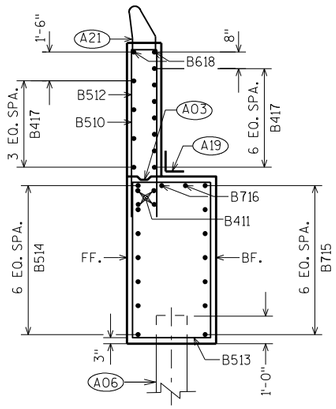
8

STATE PROJECT NUMBER

4190-16-72



WING 3 ELEVATION



WING 3 SECTION

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 105 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. PILE POINTS REQ'D.

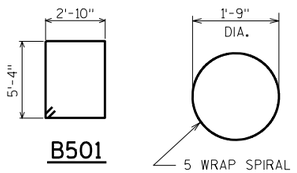
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHT.

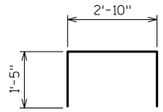
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		53	17'-0"	X		BODY-STIRRUPS
B402		16	2'-3"			PILES-2 PER BODY PILE
B803		7	42'-2"			BODY-HORIZONTAL
B604		11	42'-2"			BODY-HORIZONTAL
B405		8	28'-0"	X		PILES-1 PER BODY PILE
B406		3	10'-6"			BODY-HORZ. OVER GIR. 3
B507		11	5'-5"	X		BODY-TOP OVER GIR. 3
B408		20	3'-11"	X		BODY-VERT. BETWEEN BEAM SEATS
B409		8	7'-9"			BODY-HORZ. BETWEEN BEAM SEATS
B510	X	9	12'-8"	X		WING 3-VERTICAL
B411	X	4	7'-9"			WING 3-HORIZONTAL
B512	X	13	14'-1"	X		WING 3-VERTICAL
B513	X	10	17'-10"	X		WING 3-STIRRUP
B514	X	7	12'-4"			WING 3-HORIZONTAL
B715	X	7	12'-4"			WING 3-HORIZONTAL
B716	X	2	12'-4"			WING 3-HORIZONTAL
B417	X	11	15'-8"			WING 3-HORIZONTAL
B618	X	2	15'-8"			WING 3-HORIZONTAL TOP
B519	X	9	12'-8"	X		WING 4-VERTICAL
B420	X	4	7'-9"			WING 4-HORIZONTAL
B521	X	13	14'-1"	X		WING 4-VERTICAL
B522	X	10	17'-8"	X		WING 4-STIRRUP
B523	X	7	12'-4"			WING 4-HORIZONTAL
B724	X	7	12'-4"			WING 4-HORIZONTAL
B725	X	2	12'-4"			WING 4-HORIZONTAL
B426	X	11	15'-8"			WING 4-HORIZONTAL
B627	X	2	15'-8"			WING 4-HORIZONTAL TOP

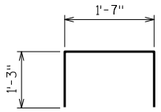


B501

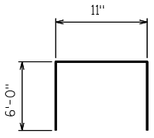
B405



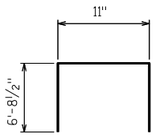
B507



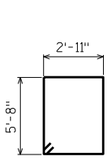
B408



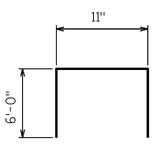
B510



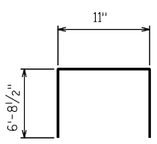
B512



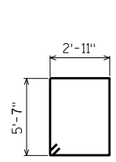
B513



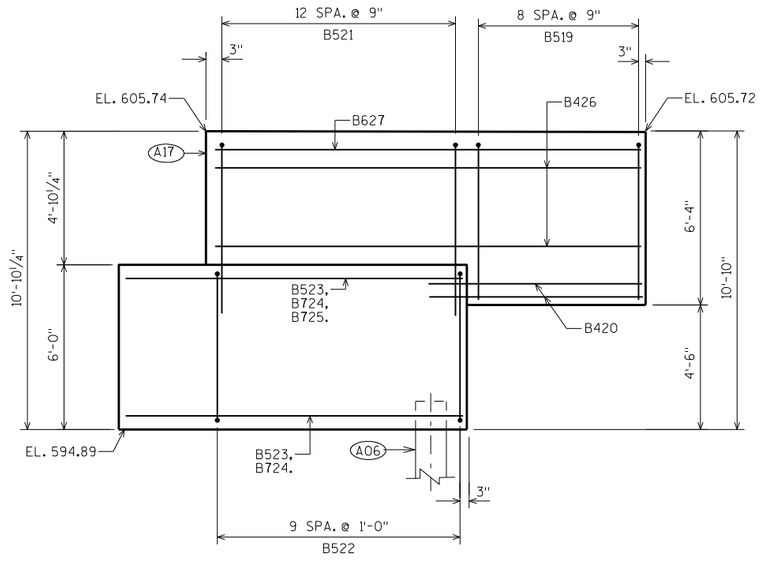
B519



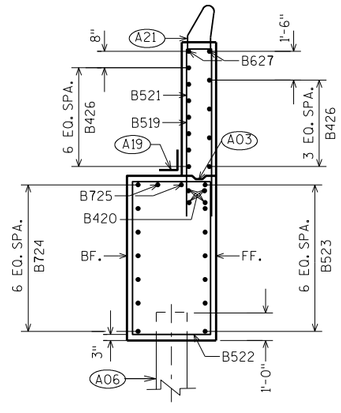
B521



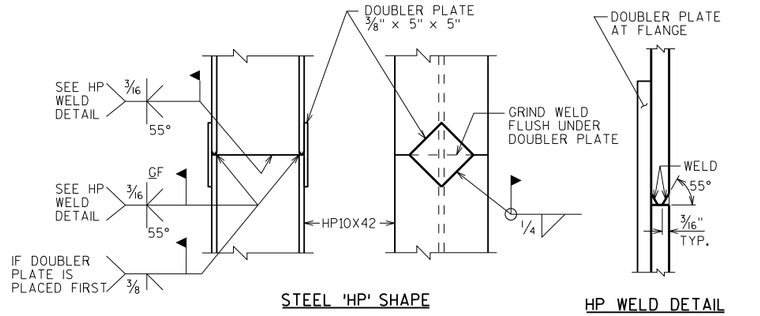
B522



WING 4 ELEVATION



WING 4 SECTION



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

NORTH ABUTMENT DETAILS

SHEET 7

324

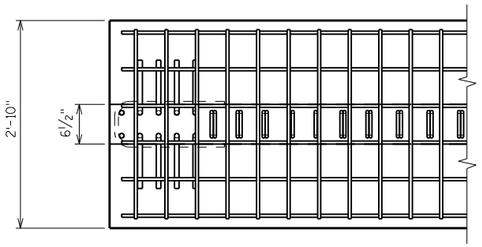
8

8

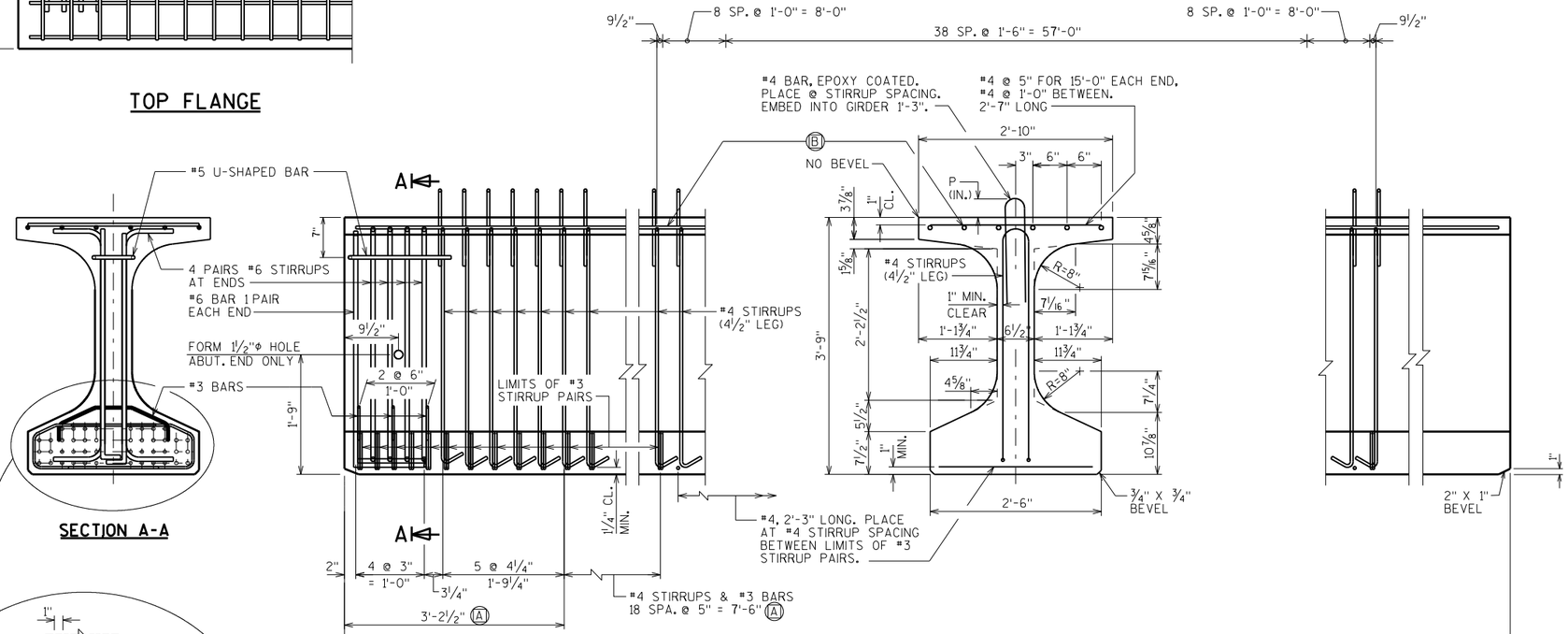
SCALE =

STATE PROJECT NUMBER

4190-16-72



TOP FLANGE

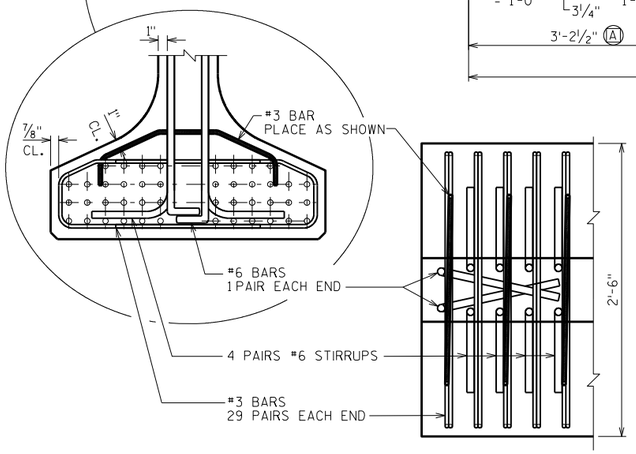


SECTION A-A

SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF THE GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO APPLICATION OF THE SEALER.

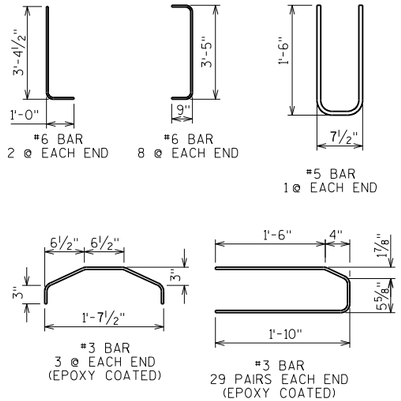
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.6" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.)
1	ALL	96.00	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8000	7.75	7	7.75	0.60	36	6400	40.0	13.75	16.75	5.0		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

45W" PRESTRESSED GIRDER DETAILS 1

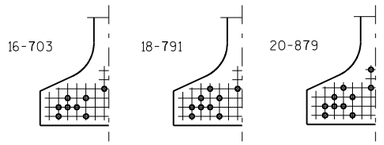
SHEET 8

325

SCALE =

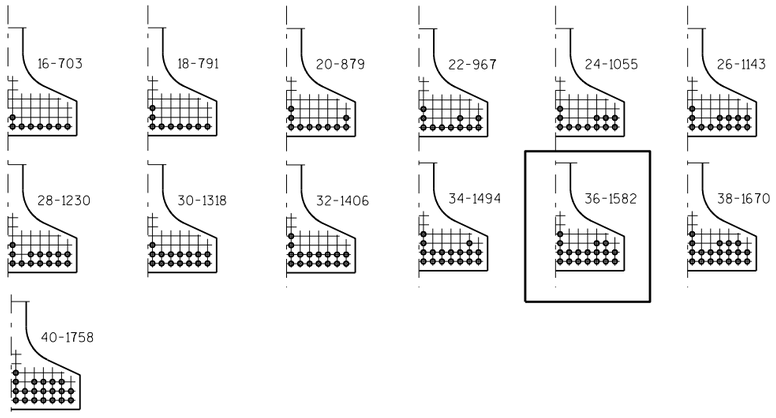
STATE PROJECT NUMBER

4190-16-72



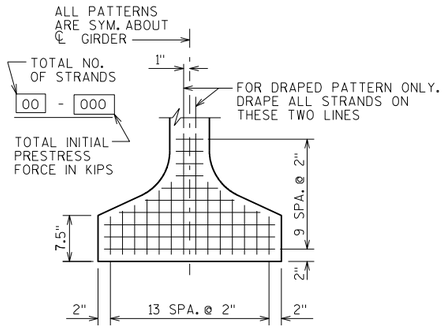
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

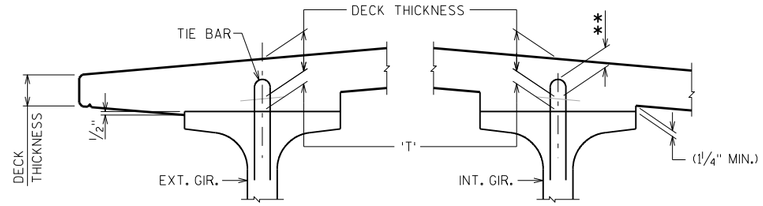


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

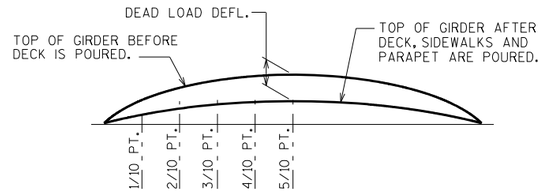
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

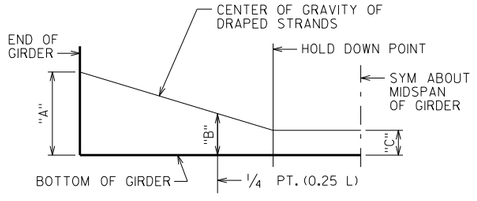
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

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



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.)*
1	3.79

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T'. USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

45W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

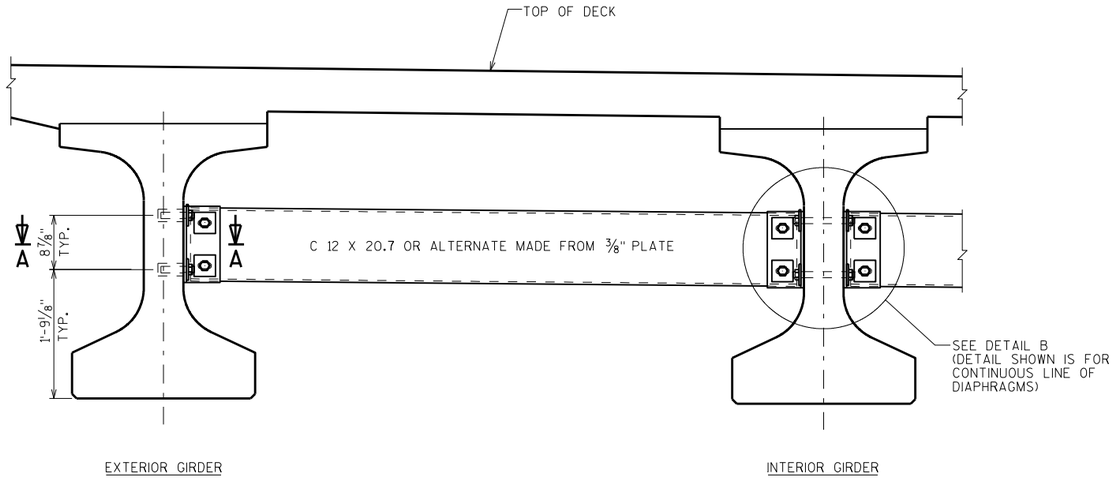
326

8

8

SCALE =

STATE PROJECT NUMBER
4190-16-72



PART TRANSVERSE SECTION AT DIAPHRAGM

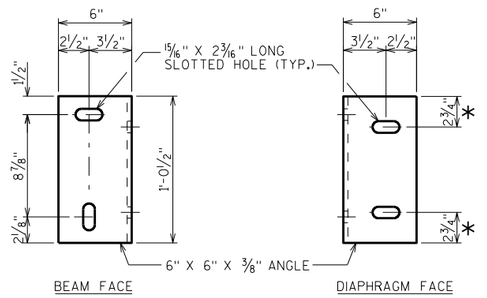
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-5-409", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

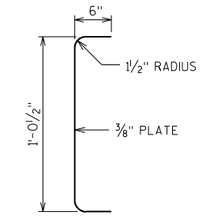
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

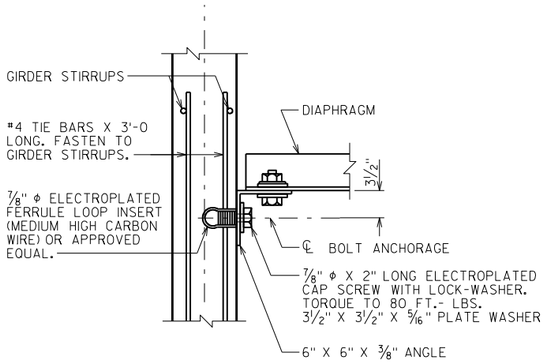


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

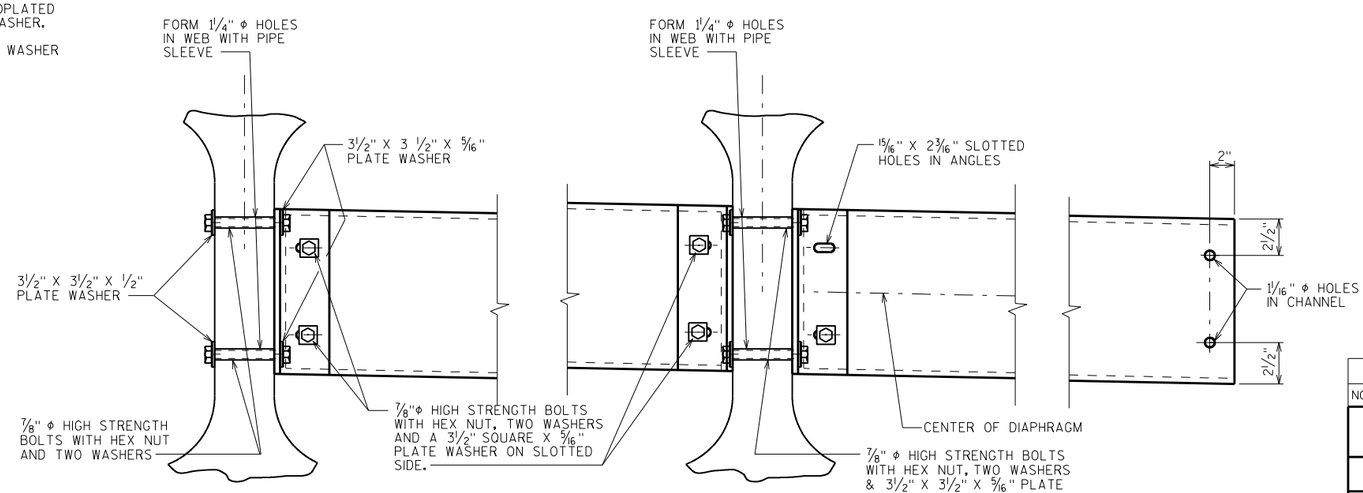


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

STEEL DIAPHRAGM

SHEET 10

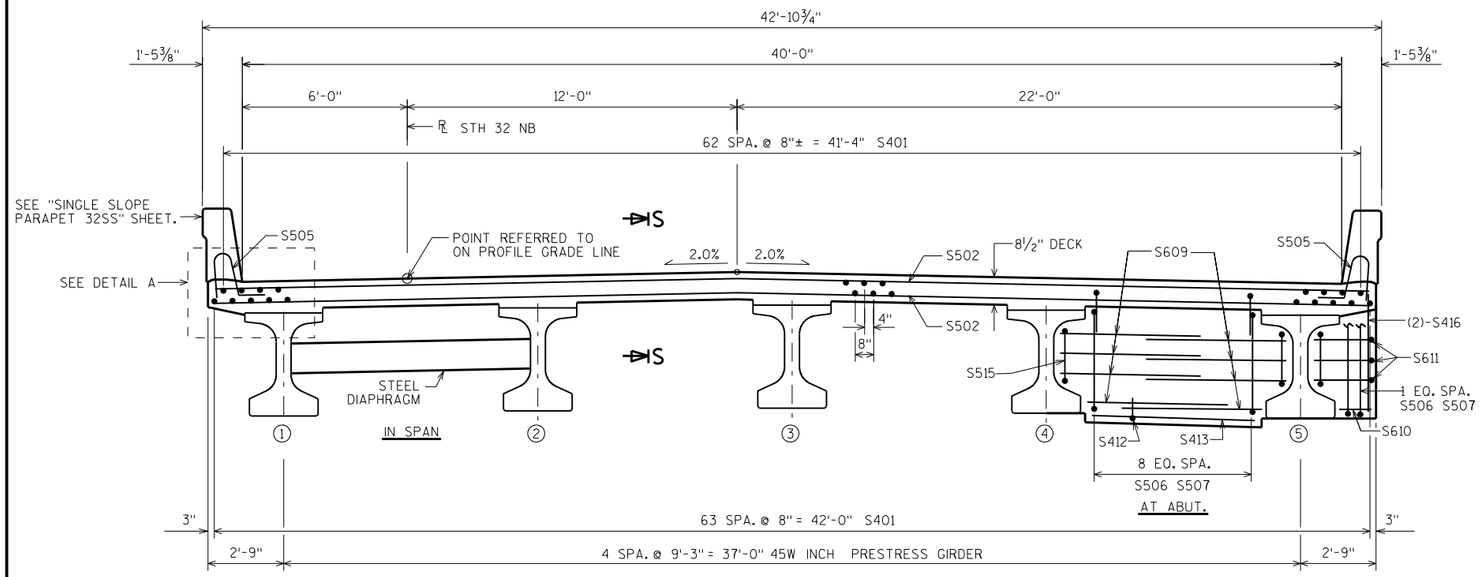
327

WED MAR 18 13:30:28 2015 SSTDIA

SCALE =

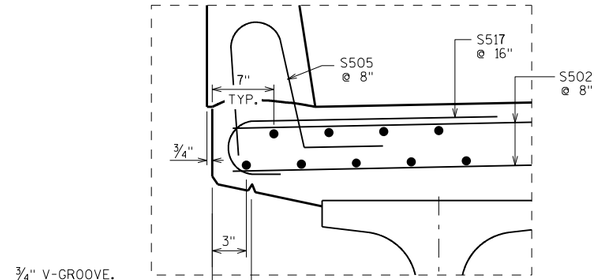
STATE PROJECT NUMBER

4190-16-72



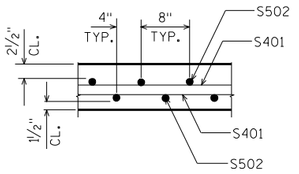
CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

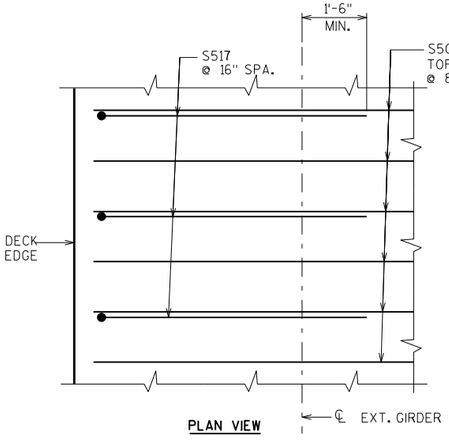


¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

DETAIL A



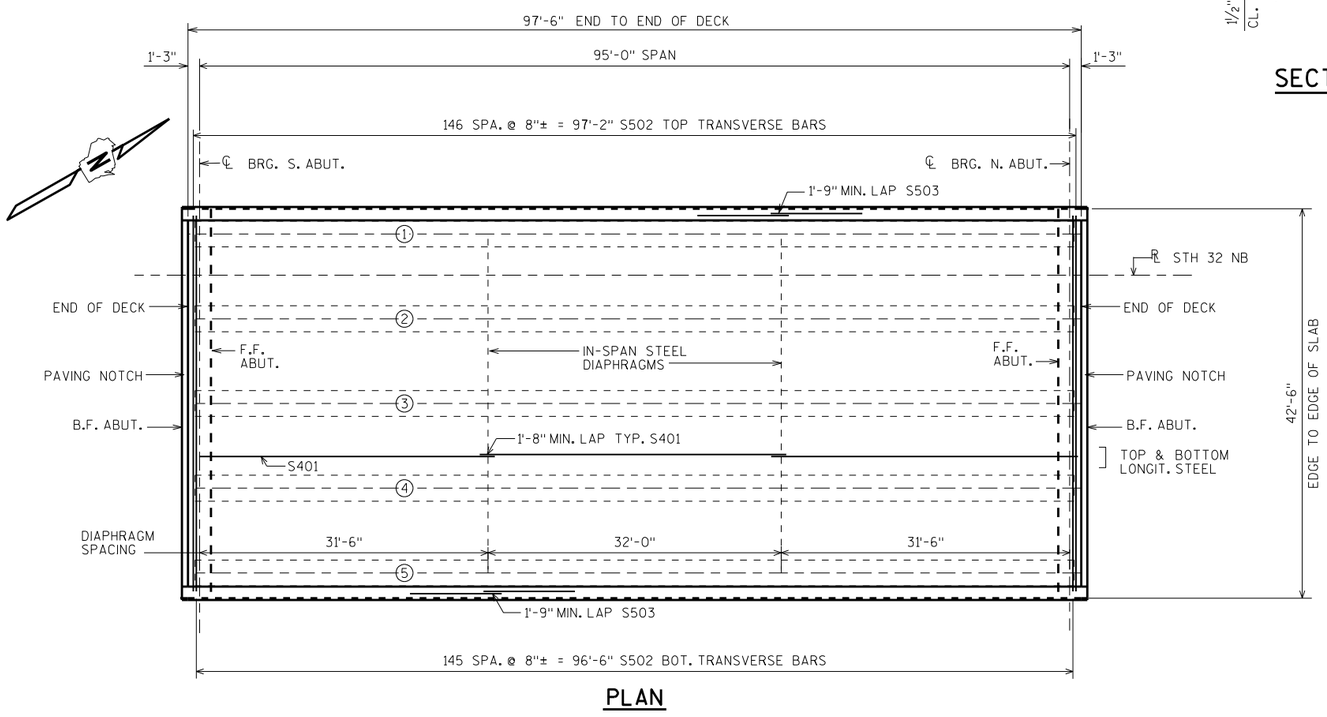
SECTION S-S



PLAN VIEW

ADDITIONAL TOP DECK OVERHANG STEEL

TYP. AT BOTH SIDES OF DECK



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

SUPERSTRUCTURE

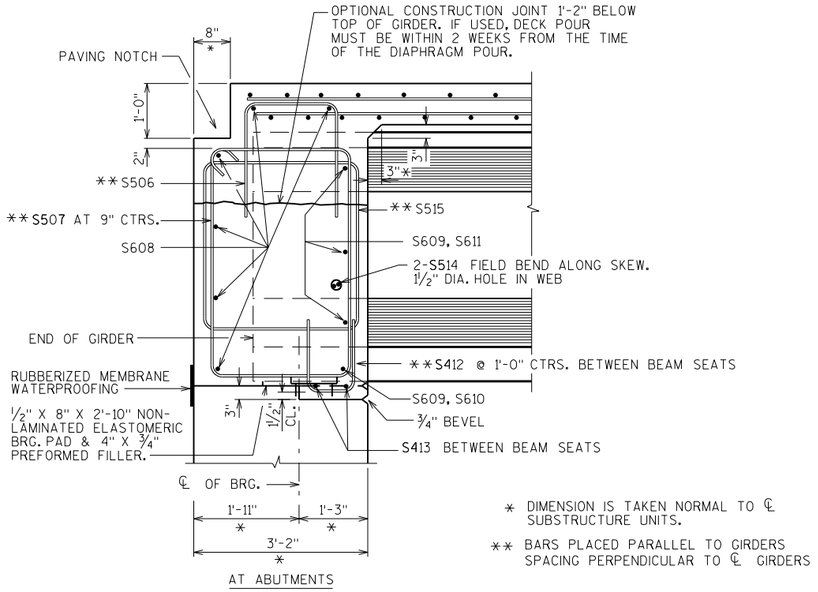
SHEET 11

328

SCALE =

STATE PROJECT NUMBER

4190-16-72

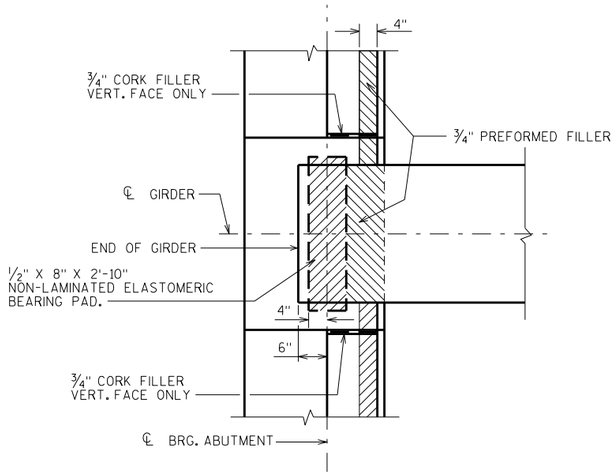


AT ABUTMENTS

PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

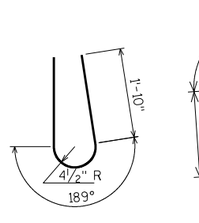


BEARING PAD DETAIL

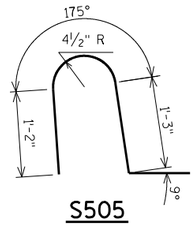
BILL OF BARS

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

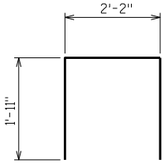
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	381	33'-6"			DECK-LONGITUDINAL TOP & BOTTOM
S502	X	293	42'-2"			DECK-TRANSVERSE TOP AND BOTTOM
S503	X	36	34'-0"			PARAPET 32SS-HORIZ.
S504	X	298	5'-0"	X		PARAPET 32SS-VERT.
S505	X	294	4'-5"	X		PARAPET 32SS-VERT.
S506	X	80	5'-9"	X		ABUT. DIAPHRAGM
S507	X	80	13'-2"	X		ABUT. DIAPHRAGM
S608	X	24	22'-7"			ABUT. DIAPHRAGM
S609	X	64	5'-3"			ABUT. DIAPHRAGM
S610	X	4	1'-2"			ABUT. DIAPHRAGM
S611	X	12	6'-9"	X		ABUT. DIAPHRAGM
S412	X	56	3'-3"	X		ABUT. DIAPHRAGM
S413	X	16	5'-5"			ABUT. DIAPHRAGM
S514	X	20	6'-0"			ABUT. DIAPHRAGM
S515	X	20	10'-8"	X		ABUT. DIAPHRAGM
S416	X	8	4'-3"			ABUT. DIAPHRAGM
S517	X	148	4'-8"	X		DECK EDGE-TRANSVERSE
S518	X	4	5'-10"	X		PARAPET 32SS VERT. @ PAVING BLOCK



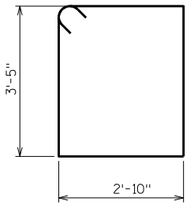
S504



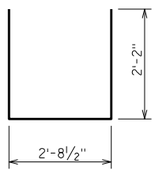
S505



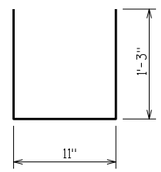
S506



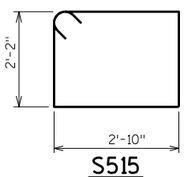
S507



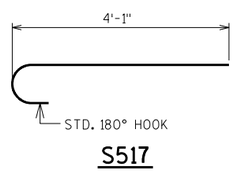
S611



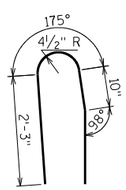
S412



S515



S517



S518

TOP OF DECK ELEVATIONS

	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
EOD	605.92	605.91	605.90	605.89	605.88	605.87	605.86	605.85	605.84	605.83	605.82
GIR. 1	605.95	605.94	605.93	605.92	605.91	605.90	605.89	605.88	605.87	605.86	605.85
GIR. 2	606.13	606.13	606.12	606.11	606.10	606.09	606.08	606.07	606.06	606.05	606.04
GIR. 3	606.24	606.23	606.22	606.21	606.20	606.19	606.18	606.17	606.16	606.15	606.14
GIR. 4	606.05	606.05	606.04	606.03	606.02	606.01	606.00	605.99	605.98	605.97	605.96
GIR. 5	605.87	605.86	605.85	605.84	605.83	605.82	605.81	605.80	605.79	605.78	605.77
EOD	605.84	605.83	605.82	605.81	605.80	605.79	605.78	605.77	605.76	605.75	605.74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

SUPERSTRUCTURE DETAILS

SHEET 12

329

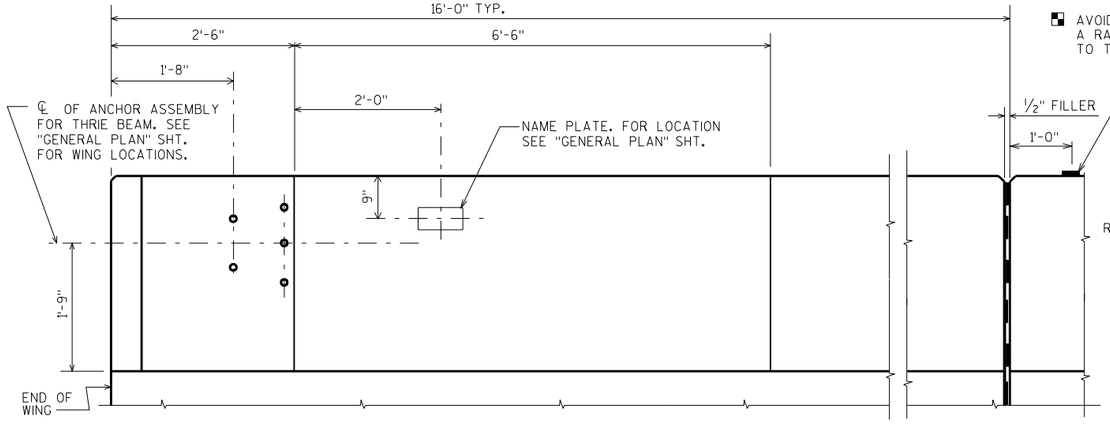
8

8

SCALE =

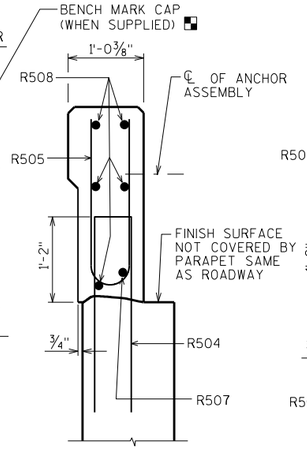
STATE PROJECT NUMBER

4190-16-72

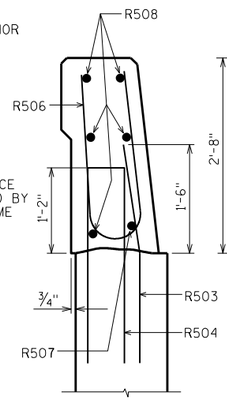


INSIDE ELEVATION

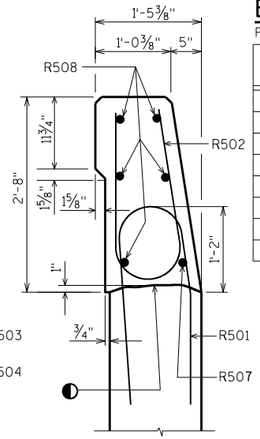
■ AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A



SECTION B

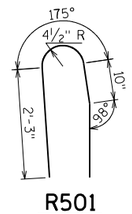


SECTION C

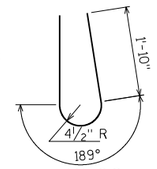
BILL OF BARS

FOR ABUTMENT PARAPETS

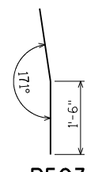
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	24	24	5-10	X		PARAPET VERT.
R502	X	24	24	5-0	X		PARAPET VERT.
R503	X	24	24	3-0	X		PARAPET VERT.
R504	X	34	34	5-7	X		PARAPET VERT.
R505	X	22	22	4-9	X		PARAPET VERT.
R506	X	12	12	4-10	X		PARAPET VERT.
R507	X	2	2	15-7	X		PARAPET HORIZ.
R508	X	10	10	15-7			PARAPET HORIZ.



R501



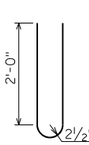
R502



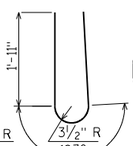
R503



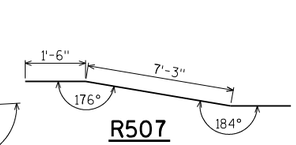
R504



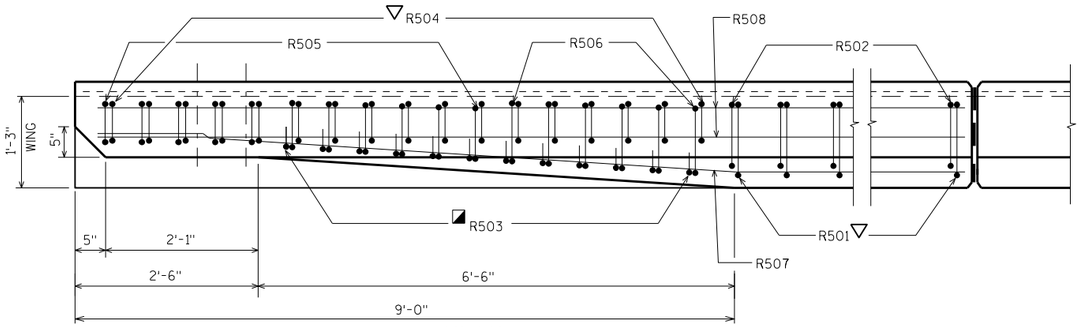
R505



R506

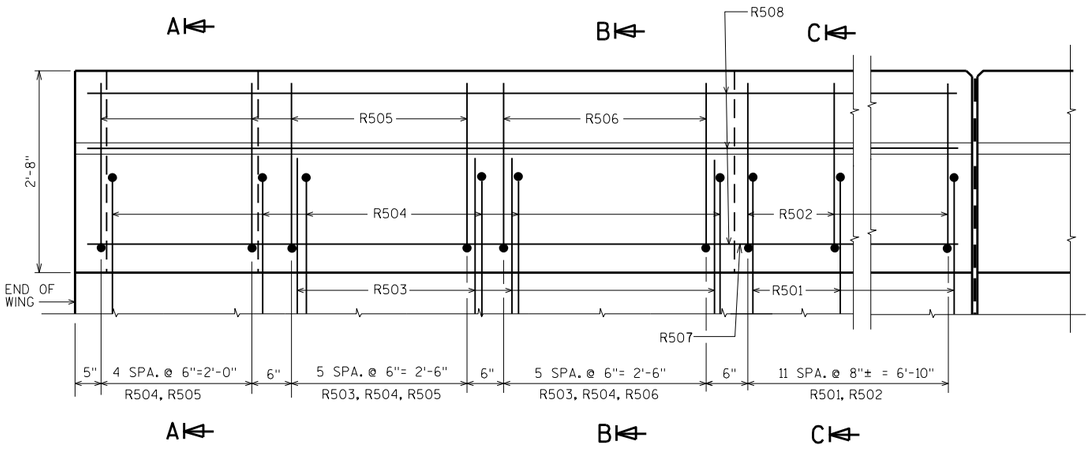


R507

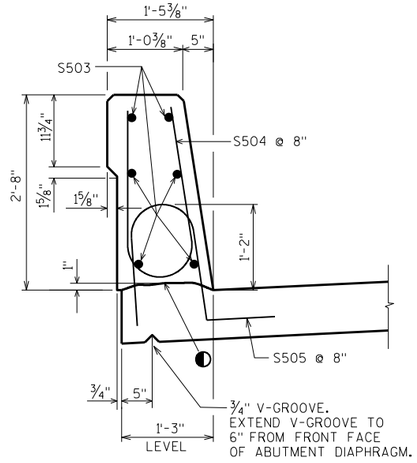


PLAN

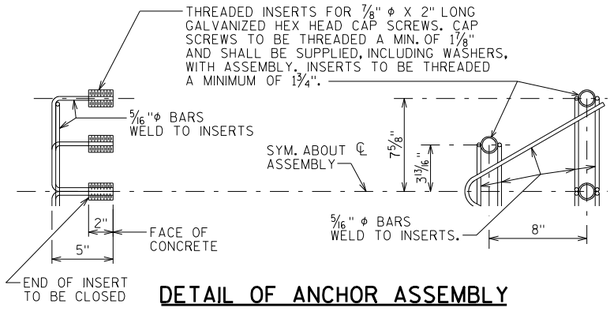
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-5-409

DRAWN BY WWR | PLANS CK'D. TAB

SINGLE SLOPE PARAPET 32SS

SHEET 13

330

SCALE = 1

8

8

NB Ashwaubenon Creek Bridge

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 1.25	
53+21.13	0.00	0	0.00	0	0	0	0	0	0	0.00
53+25	0.00	0	0.01	0	0	0	0	0	0	0.00
53+50	0.00	0	0.00	0	0	0	0	0	0	0.00
53+75	0.00	0	0.05	0	0	0	0	0	0	-0.03
54+00	0.00	0	1.56	0	0	1	0	0	1	-0.96
54+25	0.00	0	0.09	0	0	1	0	0	2	-1.92
54+39.68	0.00	0	3.38	0	0	1	0	0	3	-3.10
54+50	0.00	0	2.60	0	0	1	0	0	5	-4.53
54+65	0.00	0	0.11	0	0	1	0	0	5	-5.47
54+75	0.00	0	0.08	0	0	0	0	0	6	-5.52
54+90	0.00	0	0.03	0	0	0	0	0	6	-5.55
55+00	0.00	0	0.09	0	0	0	0	0	6	-5.58
55+25	0.00	0	0.44	0	0	0	0	0	6	-5.88
55+47.62	0.00	0	0.00	0	0	0	0	0	6	-5.88
55+50	0.00	0	0.00	0	0	0	0	0	6	-6.14
55+75	0.00	0	0.00	0	0	0	0	0	6	-6.14
56+00	0.00	0	0.01	0	0	0	0	0	6	-6.14
56+25	0.00	0	0.00	0	0	0	0	0	6	-6.14
56+50	0.00	0	0.00	0	0	0	0	0	6	-6.14
56+66.06	0.00	0	0.42	0	0	0	0	0	6	-6.14
56+75	0.00	0	0.00	0	0	0	0	0	6	-6.14
57+00	0.00	0	0.17	0	0	0	0	0	6	-6.24
57+25	0.00	0	2.51	0	0	1	0	0	8	-7.79
57+50	0.00	0	5.39	0	0	4	0	0	12	-12.29
57+75	0.00	0	6.09	0	0	5	0	0	19	-18.56
58+00	0.00	0	8.74	0	0	6	0	0	27	-26.54
58+25	0.00	0	10.39	0	0	9	0	0	38	-37.79
58+50	0.00	0	10.15	0	0	10	0	0	50	-50.29
58+75	0.00	0	19.48	0	0	14	0	0	68	-67.79
59+00	0.00	0	39.86	0	0	27	0	0	102	-101.54
59+25	0.00	0	68.29	0	0	50	0	0	164	-164.04
59+50	0.00	0	106.29	0	0	81	0	0	265	-265.29
59+55	0.00	0	123.79	0	0	22	0	0	293	-292.43
60+85.92	0.00	0	100.95	0	0	0	0	0	293	-292.43
61+00	0.00	0	48.18	0	0	39	0	0	341	-341.04
61+25	0.00	0	3.56	0	0	24	0	0	371	-370.99
61+50	0.00	0	0.00	0	0	2	0	0	373	-373.05
61+62	0.00	0	0.00	0	0	0	0	0	373	-373.05

SB Ashwaubenon Creek Bridge

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 1.25	
55+63.73	0.00	0	0.00	0	0	0	0	0	0	0.00
55+75	0.00	0	0.00	0	0	0	0	0	0	0.00
56+00	0.00	0	0.00	0	0	0	0	0	0	0.00
56+25	0.00	0	0.01	0	0	0	0	0	0	-0.01
56+50	0.00	0	0.01	0	0	0	0	0	0	-0.02
56+75	0.00	0	0.02	0	0	0	0	0	0	-0.04
57+00	0.00	0	0.14	0	0	0	0	0	0	-0.13
57+25	0.00	0	0.57	0	0	0	0	0	1	-0.55
57+50	0.00	0	1.44	0	0	1	0	0	2	-1.71
57+75	0.00	0	4.28	0	0	3	0	0	5	-5.03
58+00	0.00	0	7.02	0	0	5	0	0	12	-11.57
58+25	0.00	0	5.90	0	0	6	0	0	19	-19.04
58+50	0.00	0	3.67	0	0	4	0	0	25	-24.58
58+75	0.00	0	6.76	0	0	5	0	0	31	-30.61
59+00	0.00	0	12.32	0	0	9	0	0	42	-41.66
59+25	0.00	0	35.92	0	0	22	0	0	70	-69.57
59+50	0.00	0	98.03	0	0	62	0	0	147	-147.08
59+75	0.00	0	0.00	0	0	45	0	0	204	-203.81
60+00	0.00	0	0.00	0	0	0	0	0	204	-203.81
60+25	0.00	0	0.00	0	0	0	0	0	204	-203.81
60+50	0.00	0	0.00	0	0	0	0	0	204	-203.81
60+75	0.00	0	0.00	0	0	0	0	0	204	-203.81
61+00	0.00	0	75.38	0	0	35	0	0	247	-247.44
61+25	0.00	0	34.86	0	0	51	0	0	311	-311.24
61+50	0.00	0	17.49	0	0	24	0	0	342	-341.54
61+75	0.00	0	6.87	0	0	11	0	0	356	-355.63
62+00	0.00	0	3.03	0	0	5	0	0	361	-361.36
62+25	0.00	0	0.80	0	0	2	0	0	364	-363.58
62+50	0.00	0	1.90	0	0	1	0	0	365	-365.14
62+75	0.00	0	8.06	0	0	5	0	0	371	-370.90
63+00	0.00	0	7.98	0	0	7	0	0	380	-380.19
63+15.37	0.00	0	5.28	0	0	4	0	0	385	-384.90

Railroad Crossing NB and SB

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 1.25	
77+25	110.00	52.00	0.00	0	0	0	0	0	0	0.00
77+35	110.00	52.00	0.00	41	19	0	41	19	0	21.48
77+50	110.00	52.00	19.85	61	29	0	102	48	0	53.70
77+75	113.00	52.00	23.81	103	48	0	205	96	0	108.80
78+00	222.00	52.00	10.39	155	48	0	360	144	0	215.74
78+04	220.80	52.00	10.22	36	9	0	397	153	0	243.53
78+10	221.83	52.00	8.86	49	12	0	446	165	0	281.16
78+25	245.29	52.00	0.00	126	28	0	572	193	0	379.13
78+50	249.78	52.00	0.00	229	48	0	801	241	0	560.18
78+73	226.27	52.00	25.89	204	45	0	1,005	285	0	719.75
78+75	112.70	52.00	1.57	12	4	0	1,017	289	0	727.76
78+81	112.07	52.00	2.20	23	11	0	1,040	299	0	740.06
79+00	115.44	52.00	23.56	82	38	0	1,122	337	0	784.66
79+25	121.58	52.00	22.28	110	48	0	1,231	385	0	846.25
79+50	116.99	52.00	0.00	110	48	0	1,342	433	0	908.54

Left Turn Lane

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 1.25	
102+71	0.00	5	0.00	0	0	0	0	0	0	0.00
102+75	91.33	5	0.00	6	1	0	6	1	0	5.45
103+00	59.28	5	30.07	70	5	14	76	5	17	53.14
103+25	46.66	5	55.47	49	5	40	125	10	67	48.05
103+50	42.65	5	58.15	41	5	53	166	15	133	19.01
103+75	40.16	5	59.64	38	5	55	205	19	201	-15.45
104+00	40.05	5	59.05	37	5	55	242	24	270	-51.63
104+25	40.18	5	58.53	37	5	54	279	28	338	-87.17
104+50	40.75	5	57.37	37	5	54	316	33	405	-121.40
104+75	41.20	5	56.45	38	5	53	354	38	471	-153.96
105+00	41.79	5	55.66	38	5	52	393	42	535	-185.05
105+25	43.88	5	53.03	40	5	50	432	47	598	-212.92
105+50	47.38	5	48.62	42	5	47	475	52	657	-234.13
105+75	49.62	5	47.60	45	5	45	519	56	713	-249.53
106+00	49.46	5	48.36	46	5	44	565	61	768	-263.83
106+25	49.41	5	48.73	46	5	45	611	65	825	-278.87
106+50	49.37	5	47.85	46	5	45	657	70	880	-293.66
106+75	49.60	5	42.63	46	5	42	703	75	933	-304.83
107+00	50.45	5	27.26	46	5	32	749	79	973	-303.59
107+25	95.10	25	0.13	67	23	13	816	103	989	-275.21
107+50	73.85	25	0.40	78	23	0	895	126	989	-220.44
107+75	43.62	25	5.97	54	23	3	949	149	993	-192.89
108+00	28.33	25	33.90	33	23	18	982	172	1,016	-205.79
108+25	28.40	5	64.52	26	5	46	1,009	177	1,073	-241.11
108+50	27.05	5	69.54	26	5	62	1,034	181	1,151	-297.65
108+60	27.17	5	67.52	10	2	25	1,044	183	1,182	-321.19



103+00



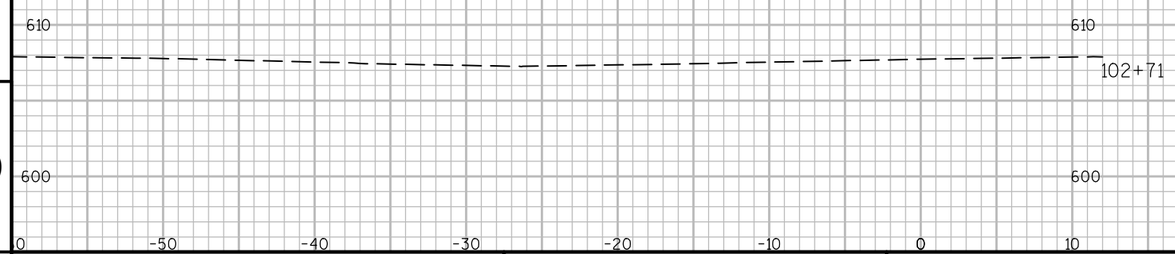
103+75



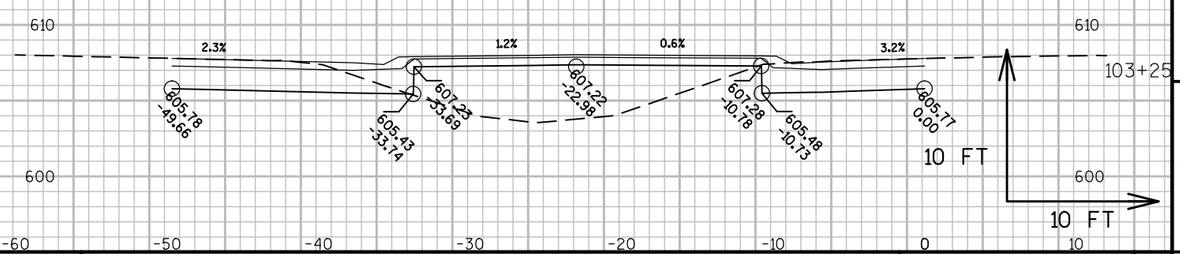
102+75



103+50



102+71



103+25

9

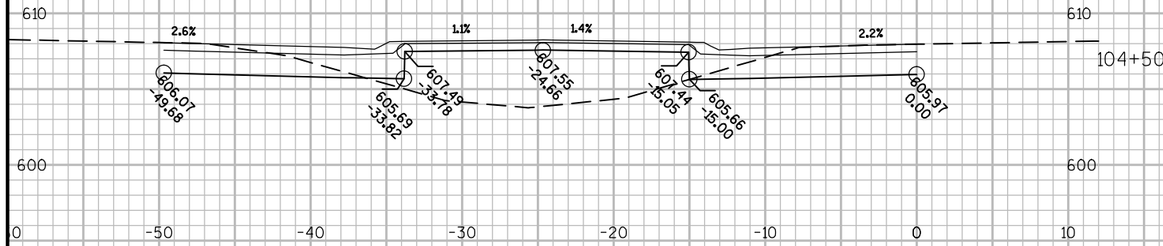
9

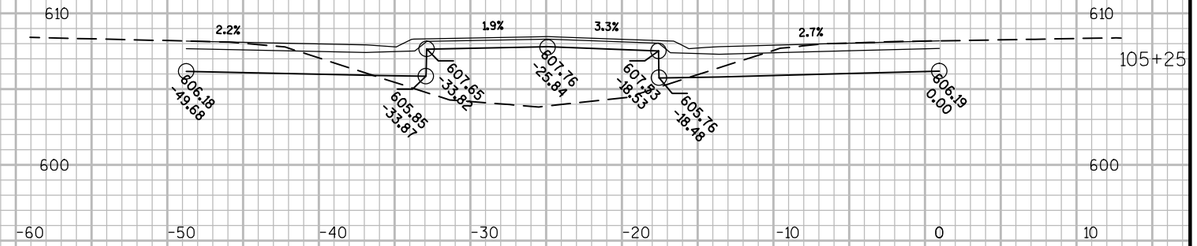
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: VANDERPERREN WAY LEFT TURN LANE	SHEET 335	E

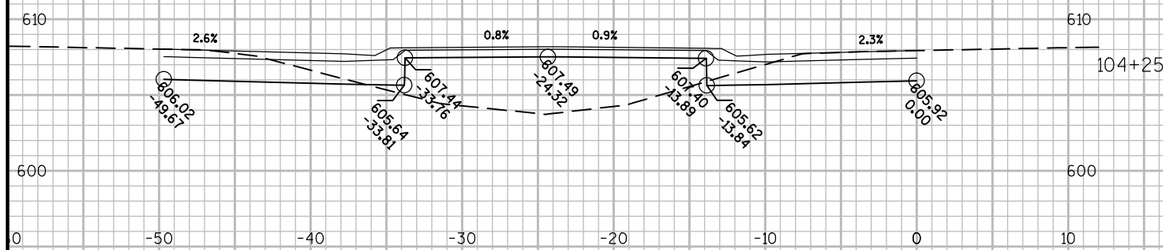
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 090101

PLOT DATE : 9/24/2015 4:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

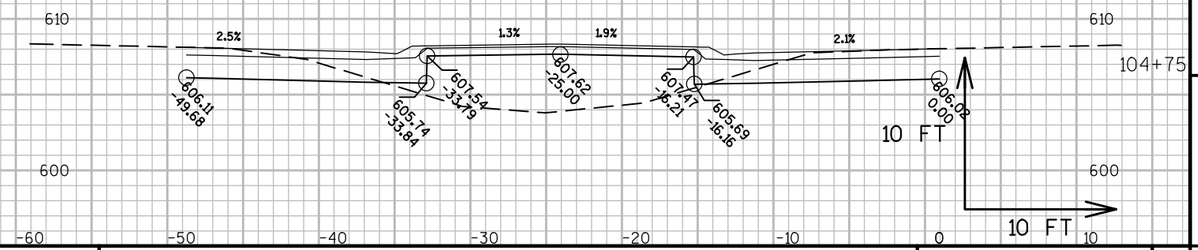












9

9

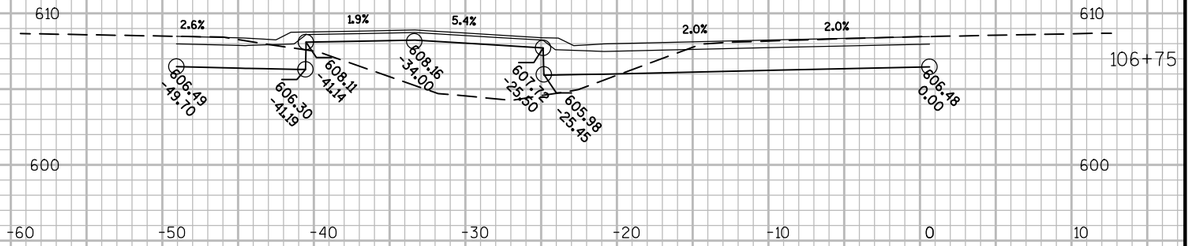
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: VANDERPERREN WAY LEFT TURN LANE	SHEET 336	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 090102

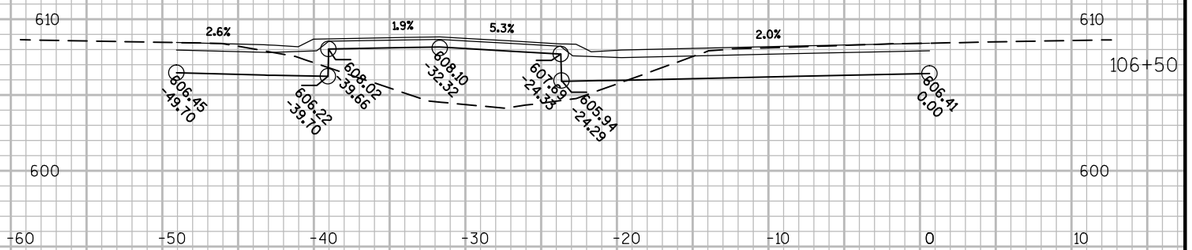
PLOT DATE : 9/24/2015 4:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

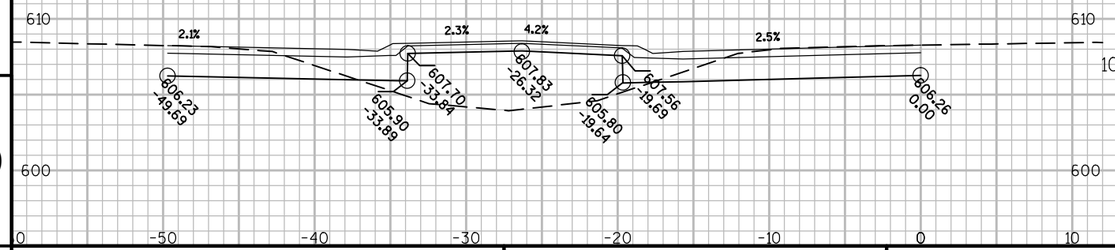
WISDOT/CADDS SHEET 49













9

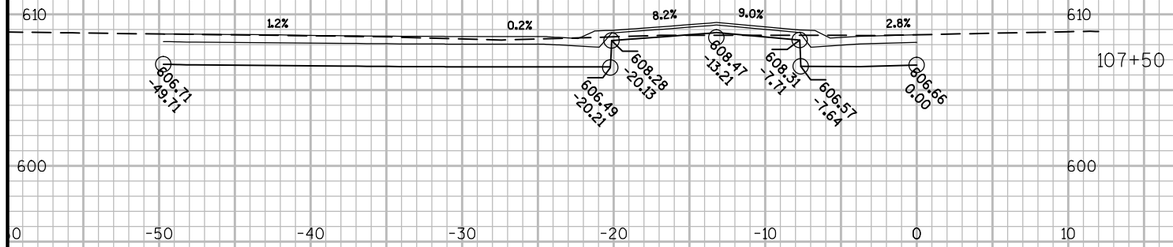
9

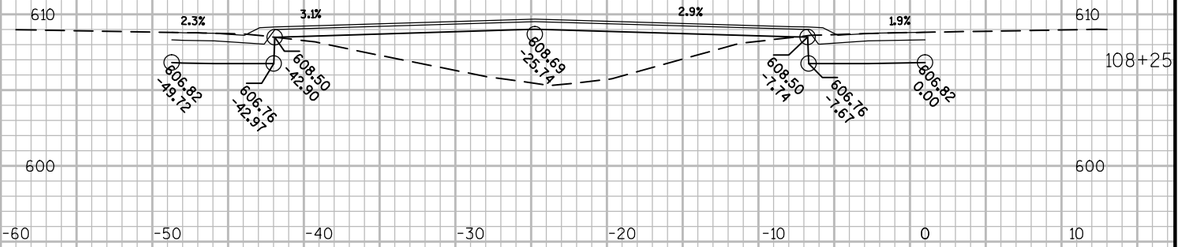
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: VANDERPERREN WAY LEFT TURN LANE	SHEET 337	E

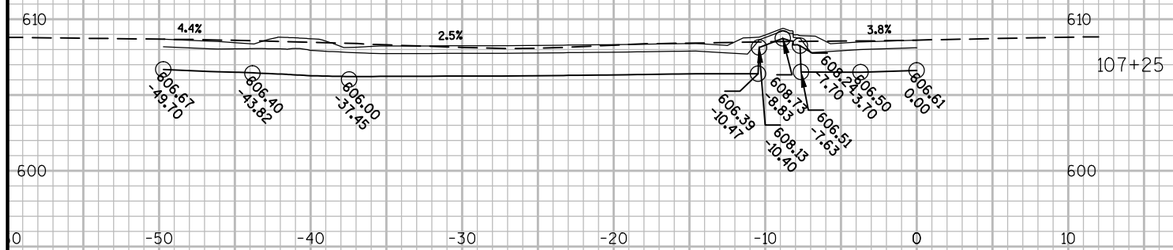
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 090103

PLOT DATE : 9/24/2015 4:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

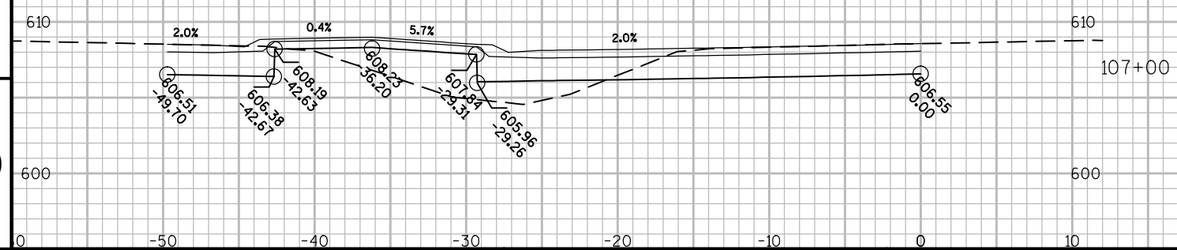
WISDOT/CADDS SHEET 49

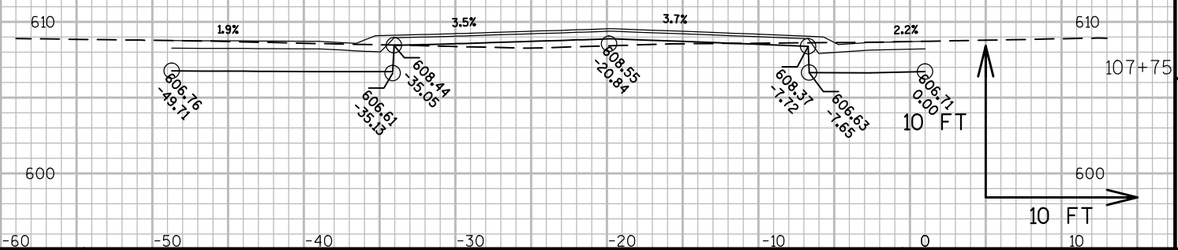










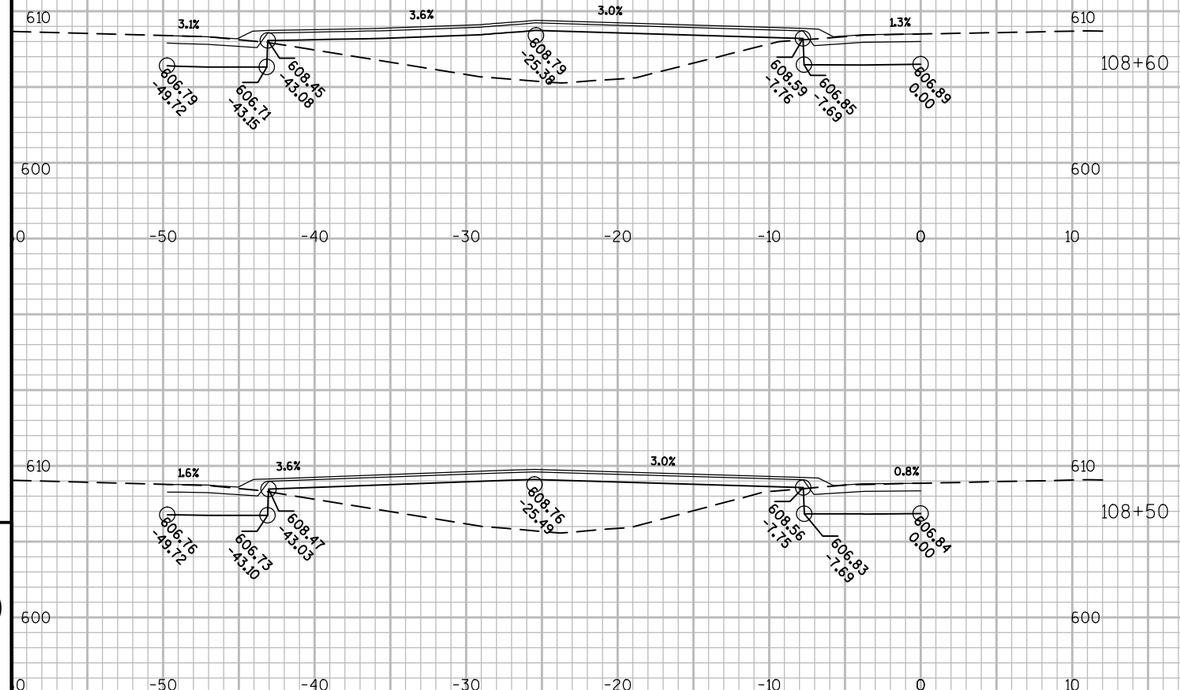


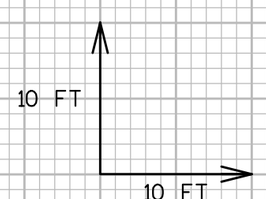
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: VANDERPERREN WAY LEFT TURN LANE	SHEET 338	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090101_XS.DWG
LAYOUT NAME - 090104
PLOT DATE : 9/24/2015 4:19 PM
PLOT BY : DUMS, ALEXANDER T
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

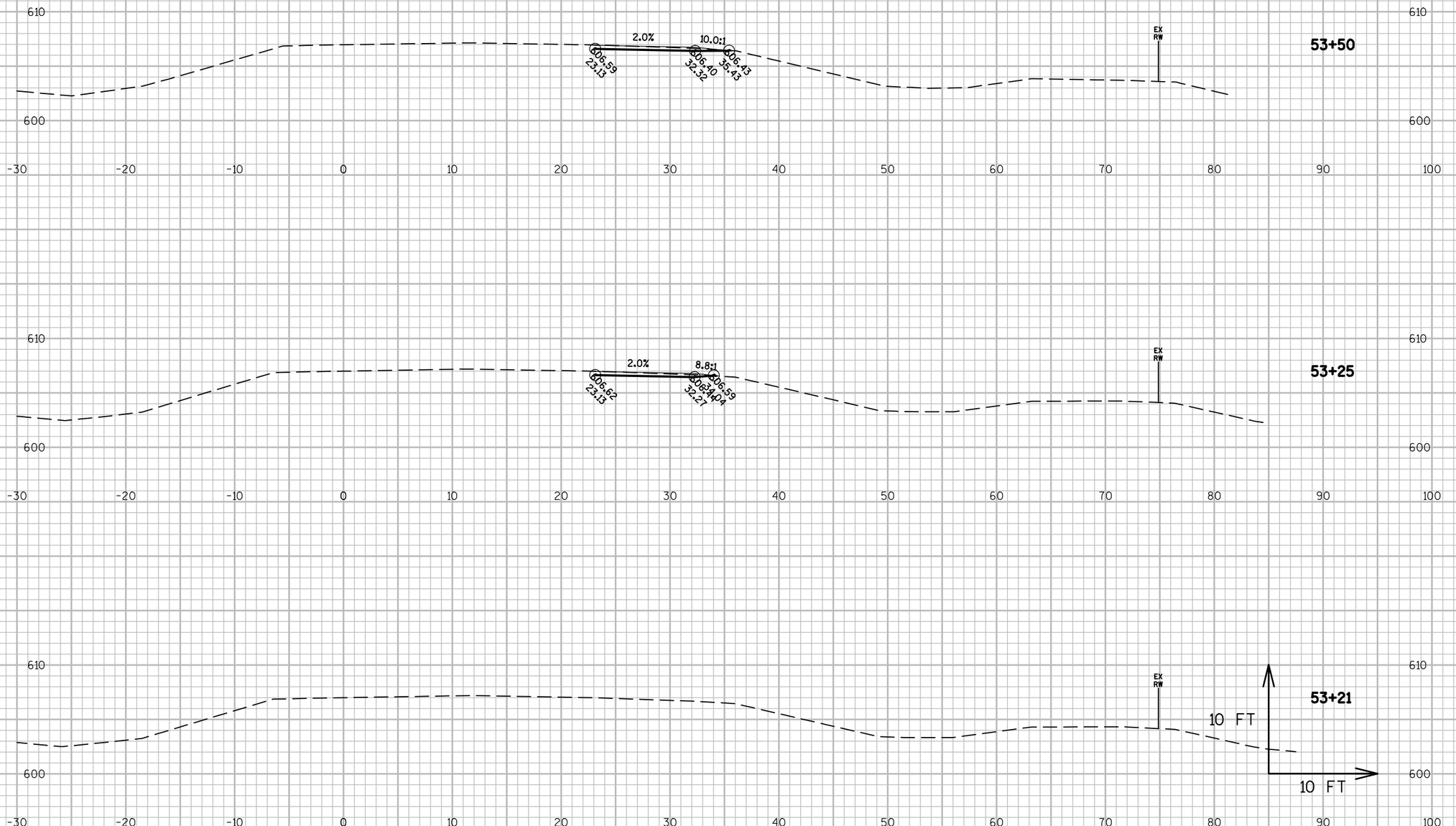




9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: VANDERPERREN WAY LEFT TURN LANE	SHEET 339	E



9

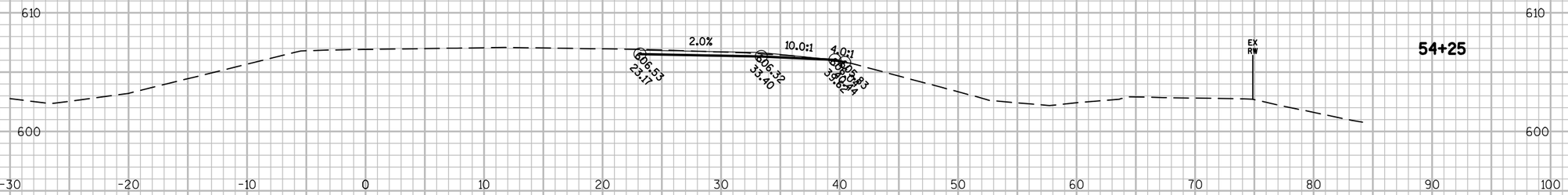
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 340	E

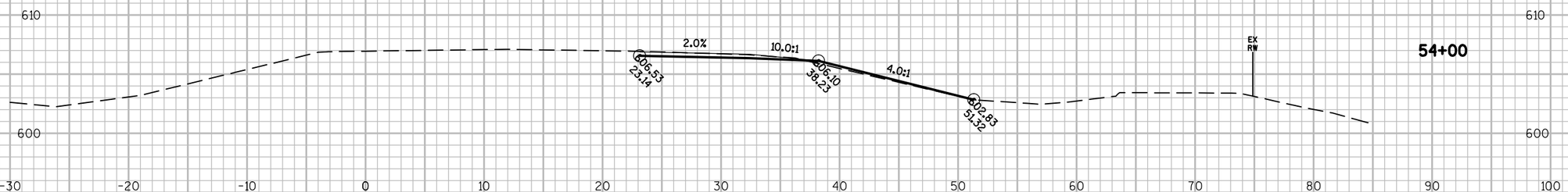
9

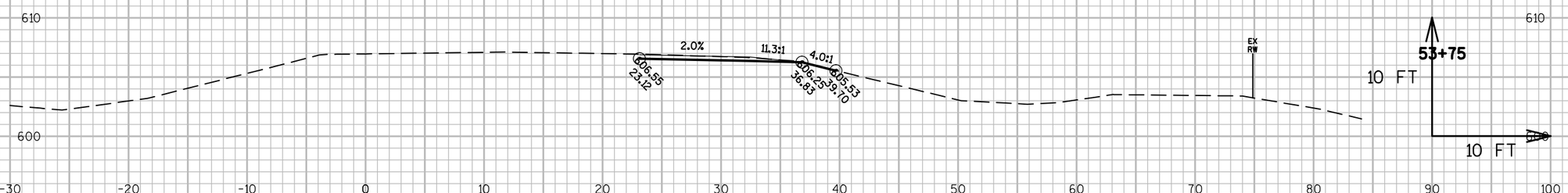
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090106_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49







9

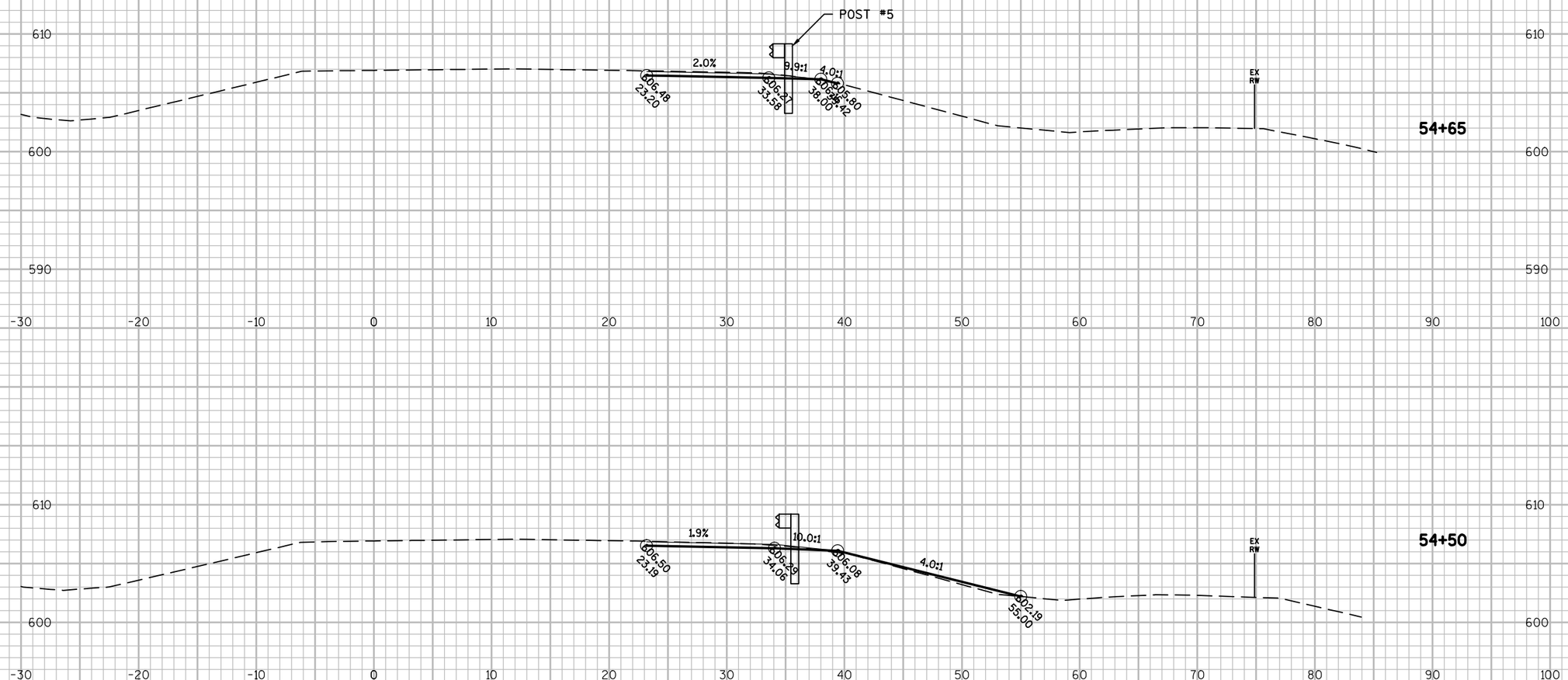
9

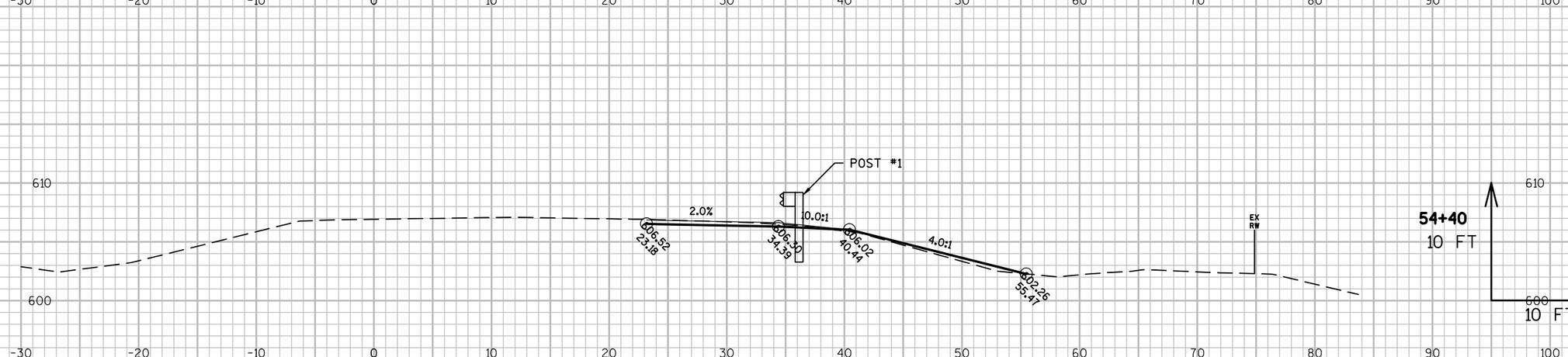
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 341	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090107_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49





9

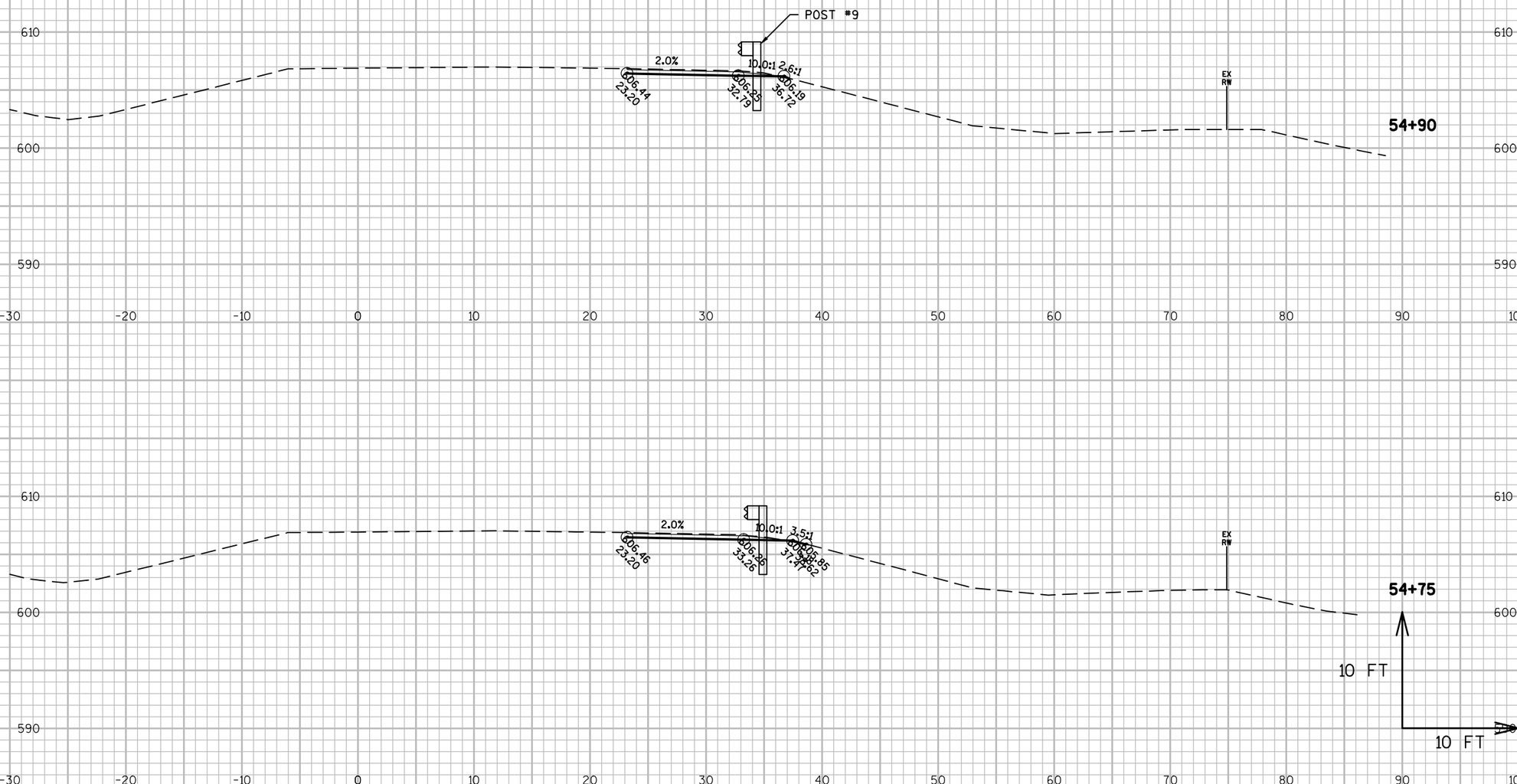
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 342 E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090108_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

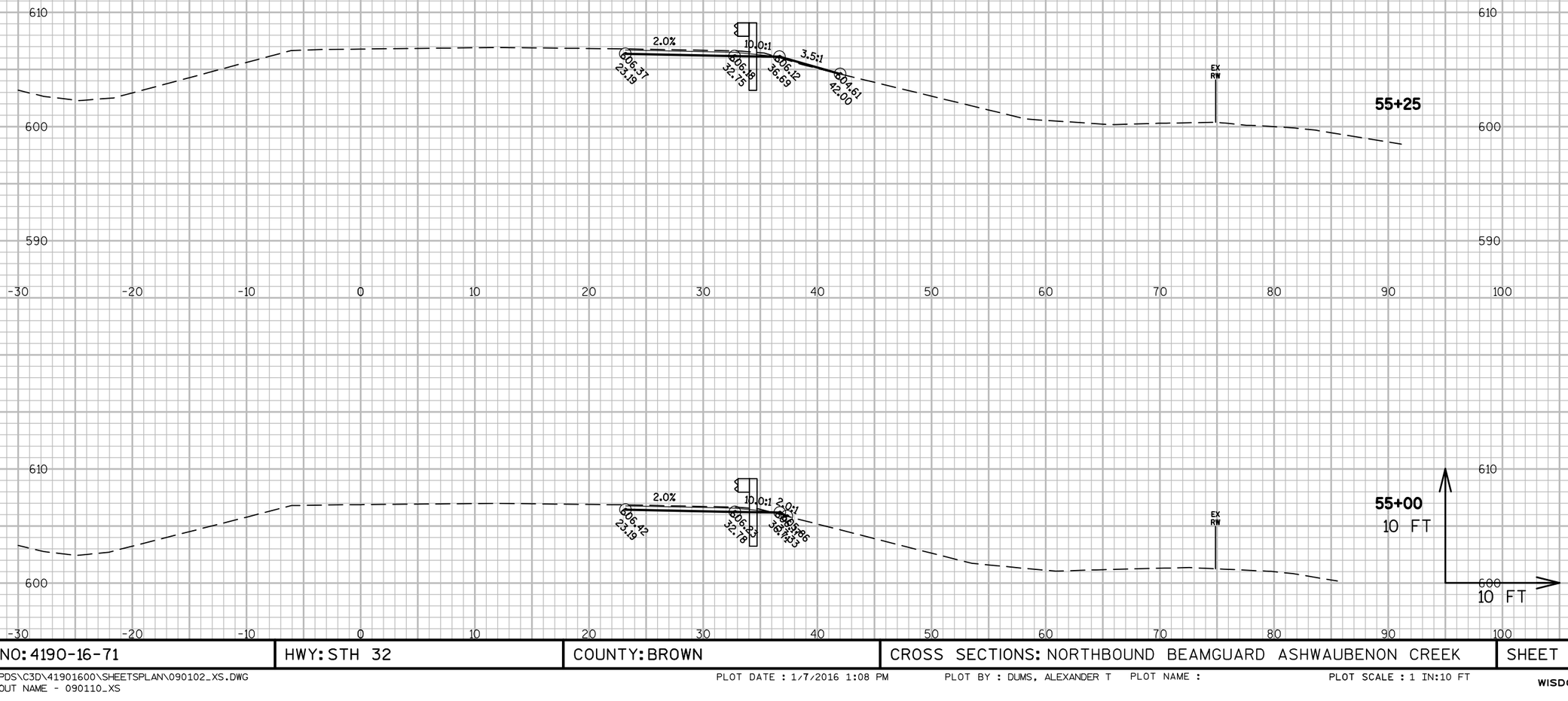
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 343	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090109_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



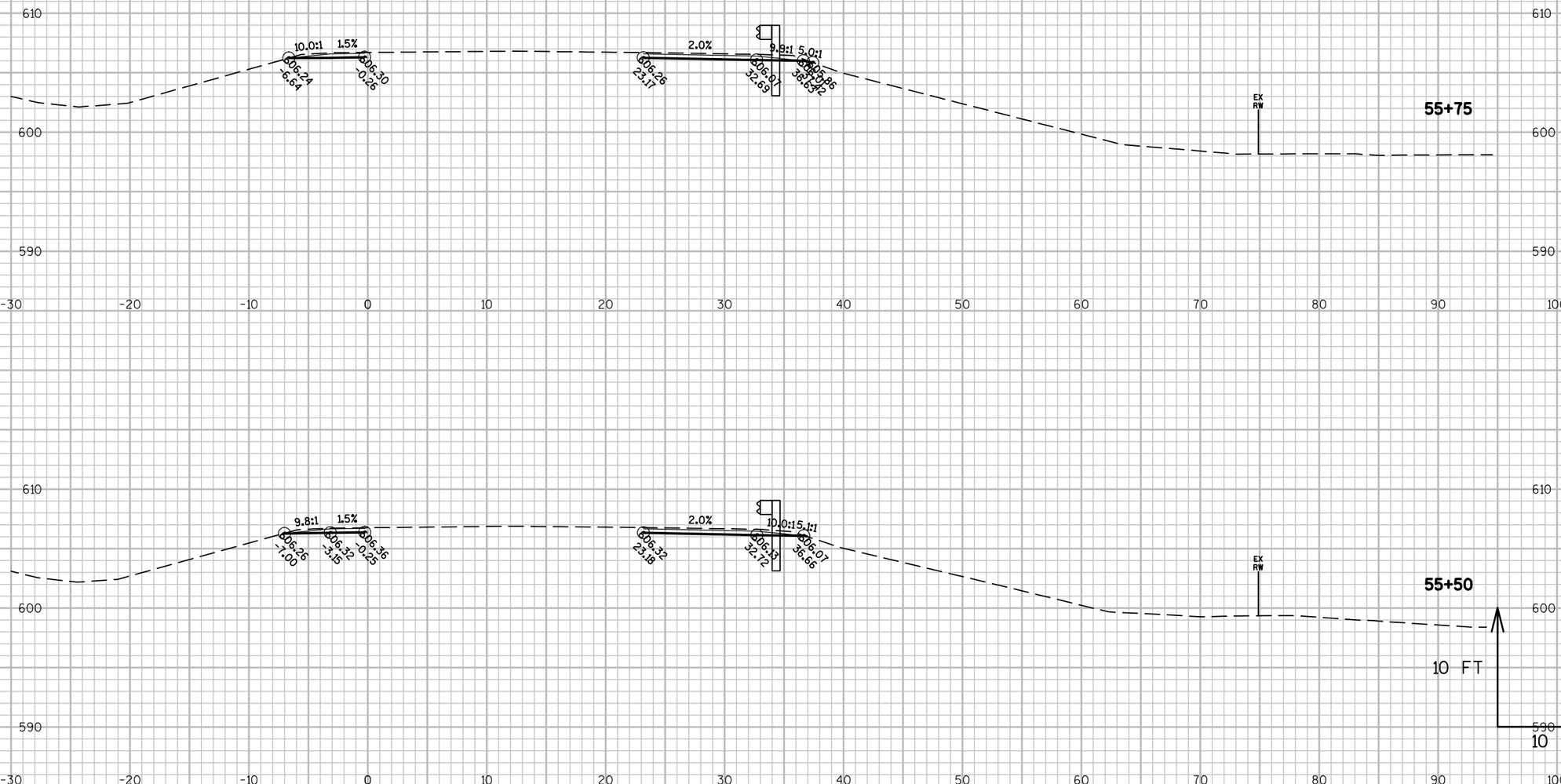
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 344	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090110_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

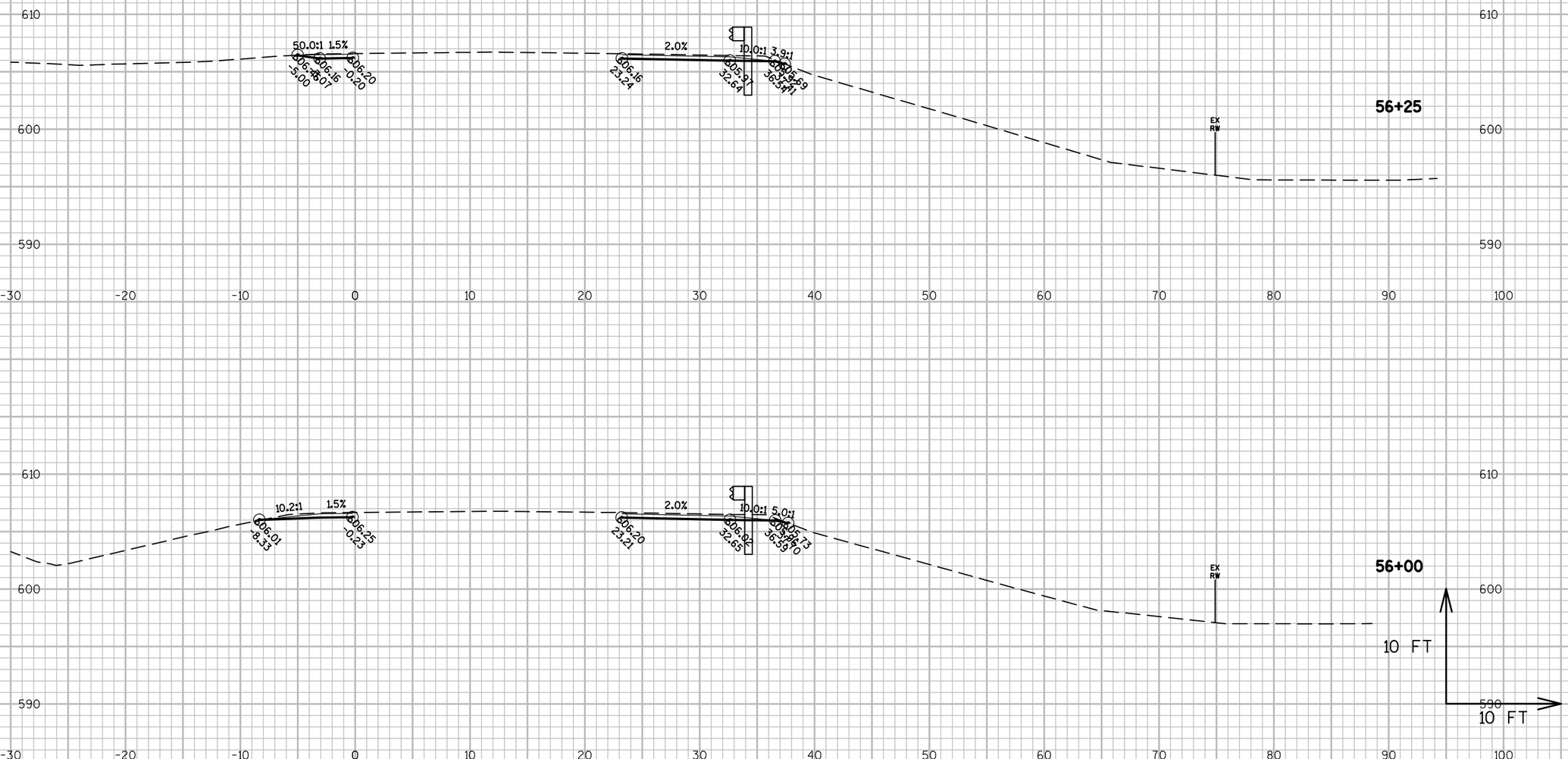
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 345	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090111_XS

PLOT DATE : 1/7/2016 1:08 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

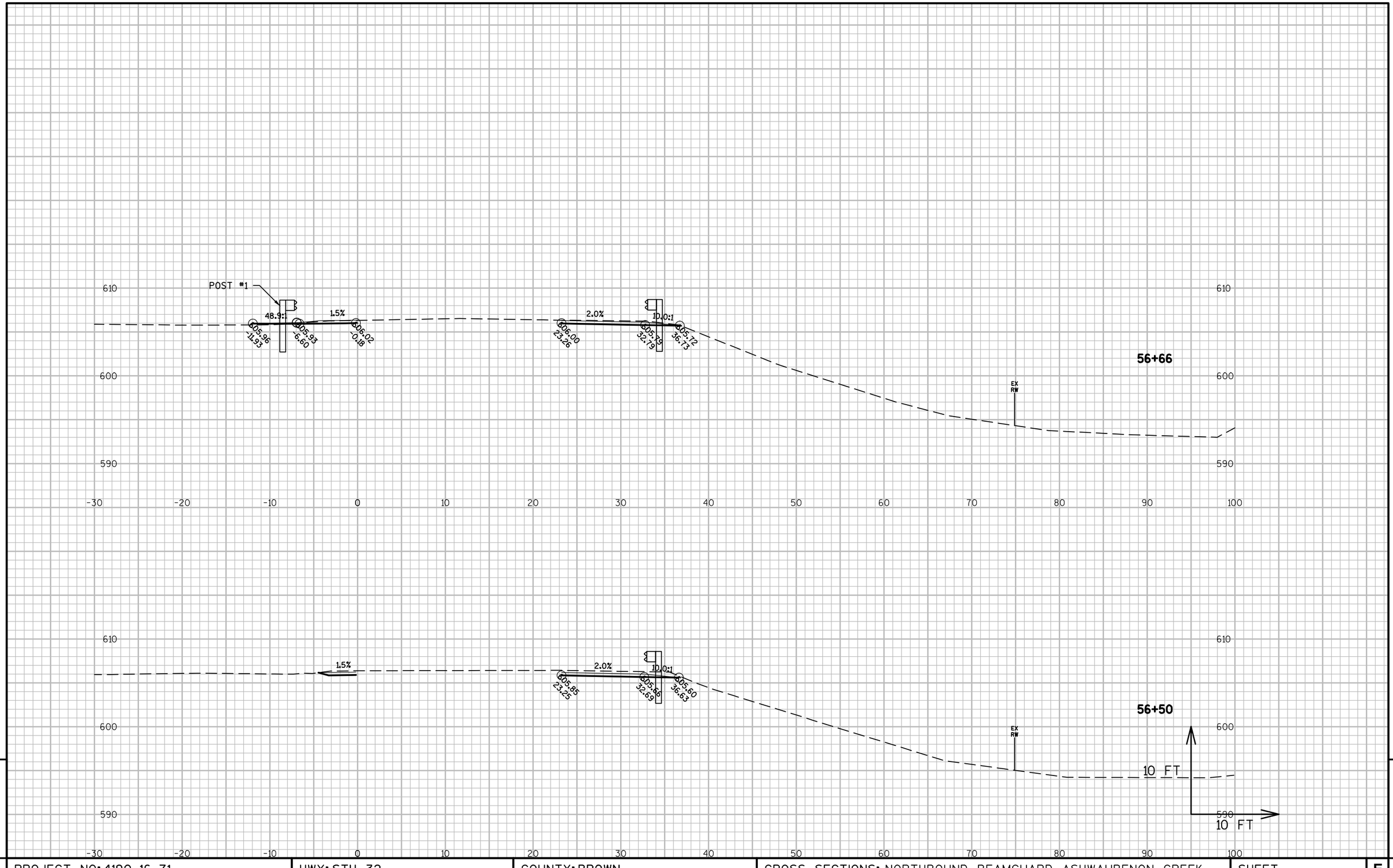
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 346	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090112_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



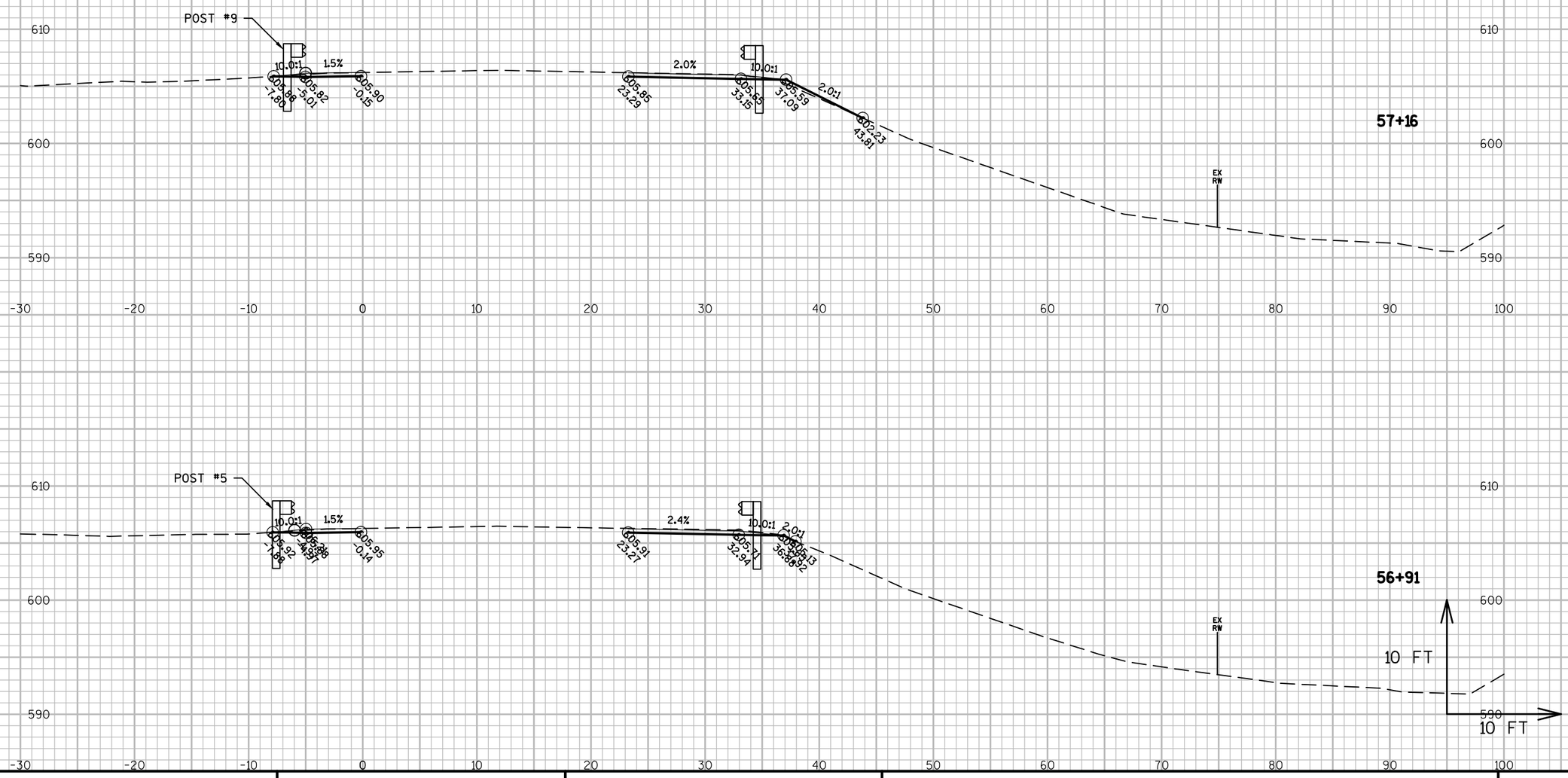
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 347	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090113_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



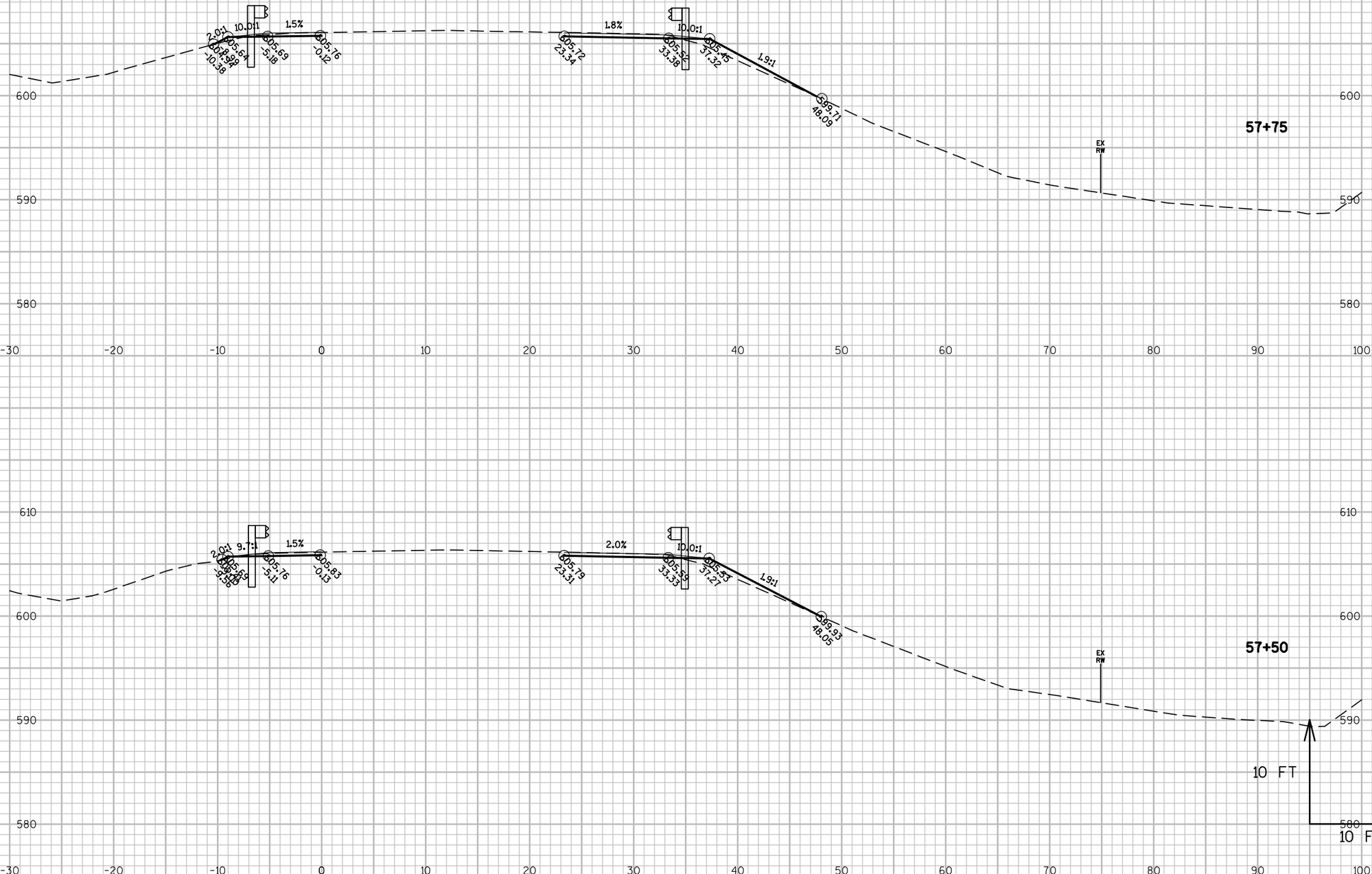
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 348	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090114_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

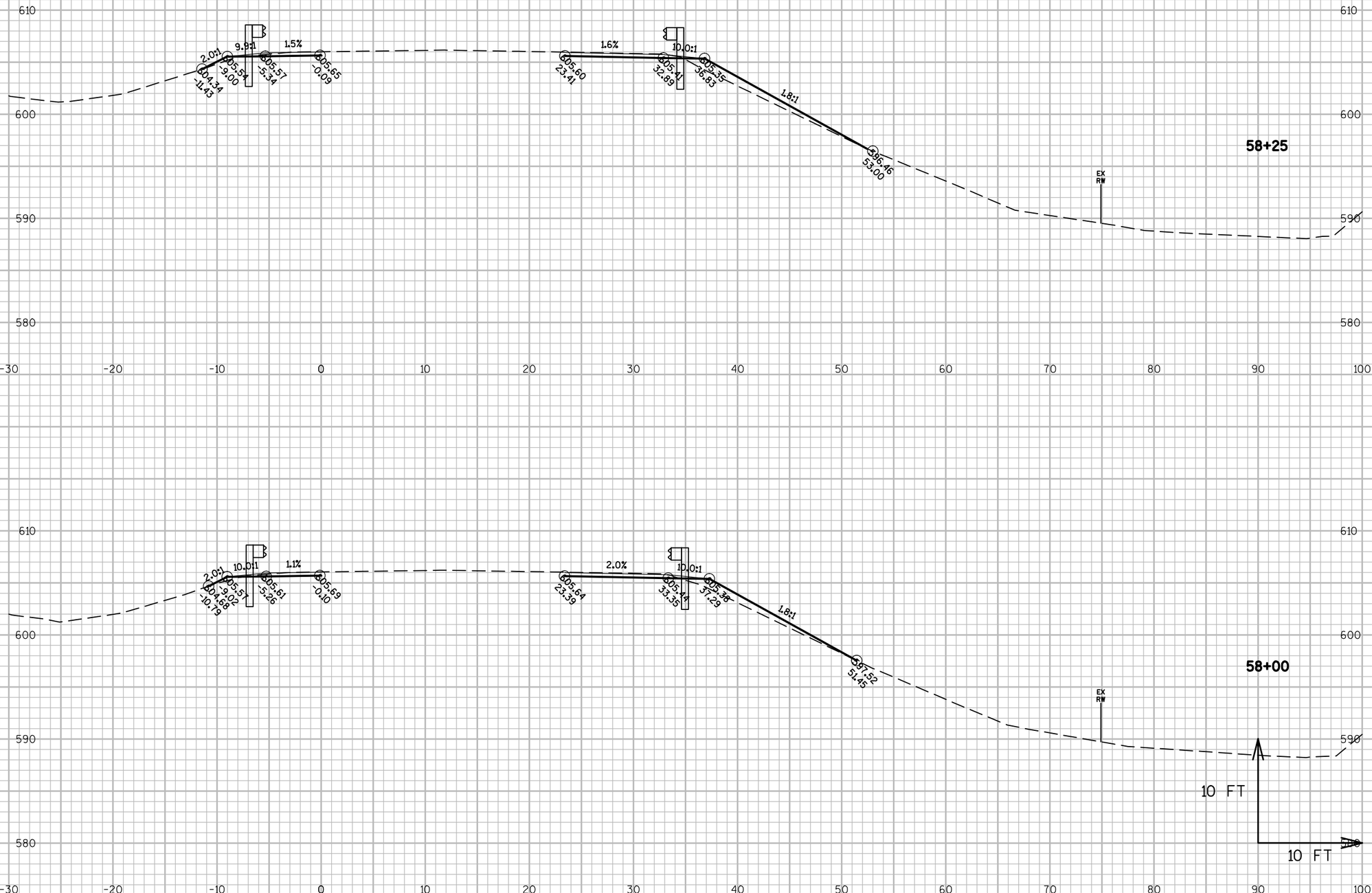
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 349	E

9

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090115_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

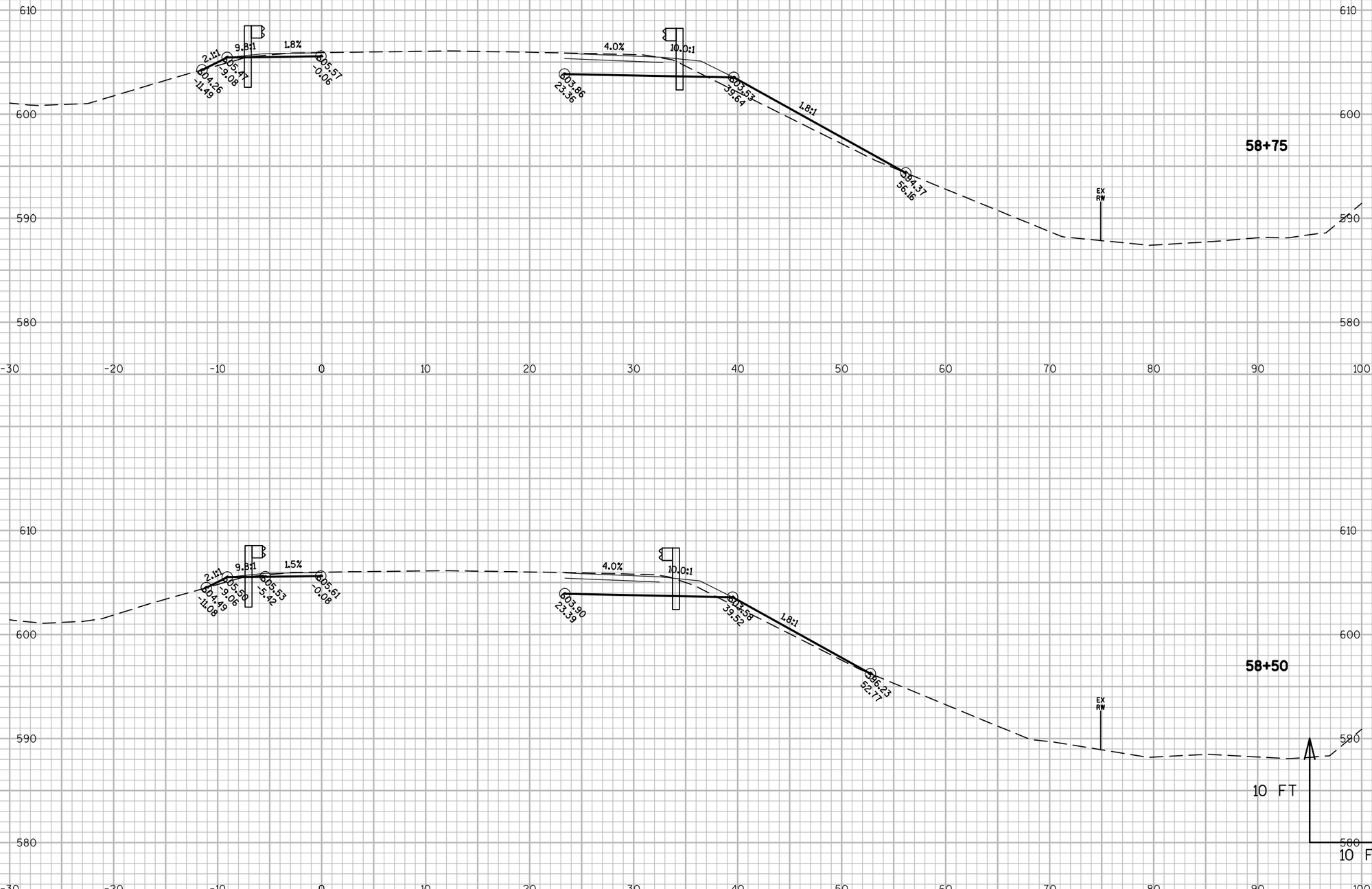
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 350	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090116_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



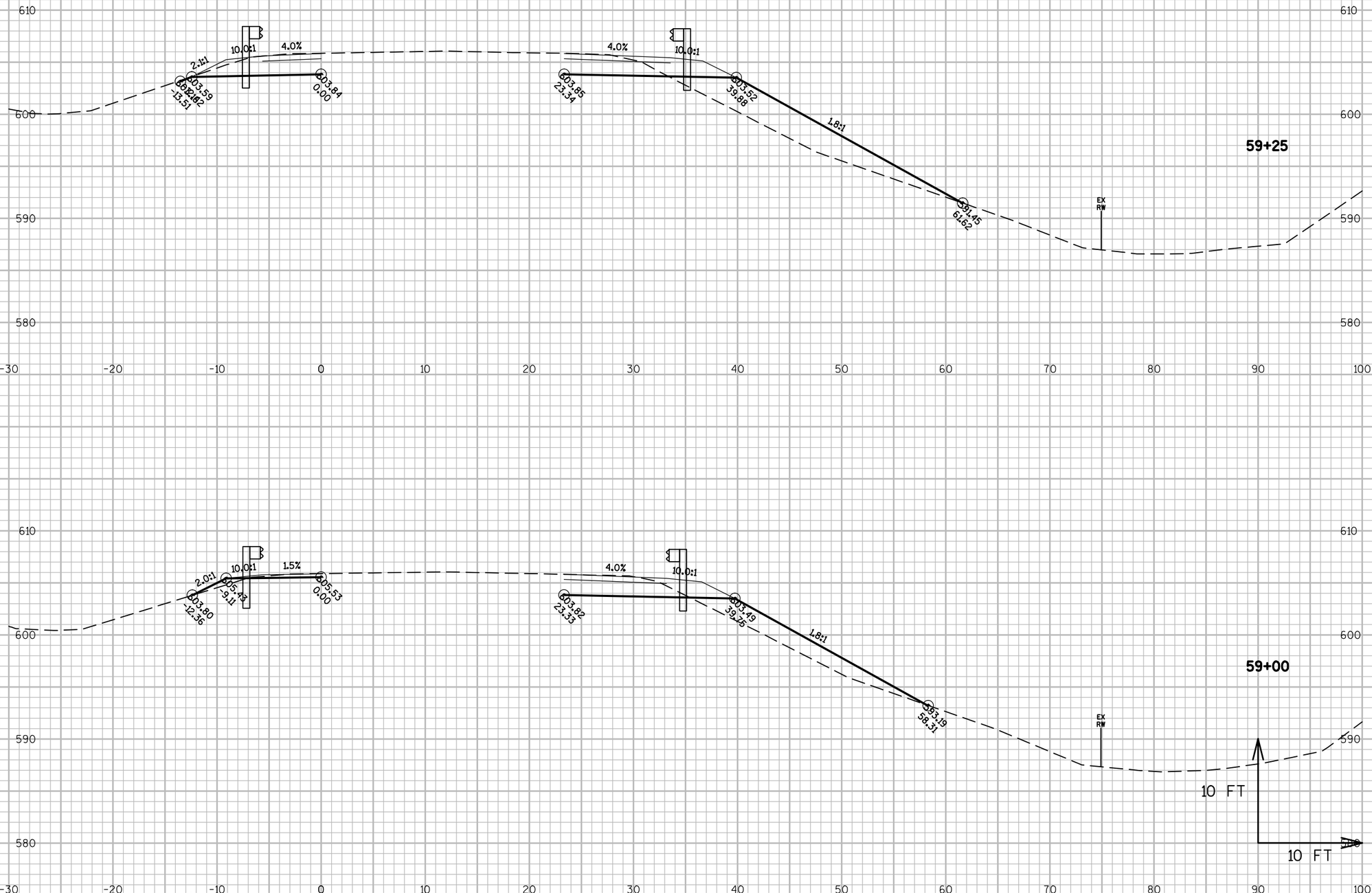
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 351	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090117_XS

PLOT DATE : 1/7/2016 1:09 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

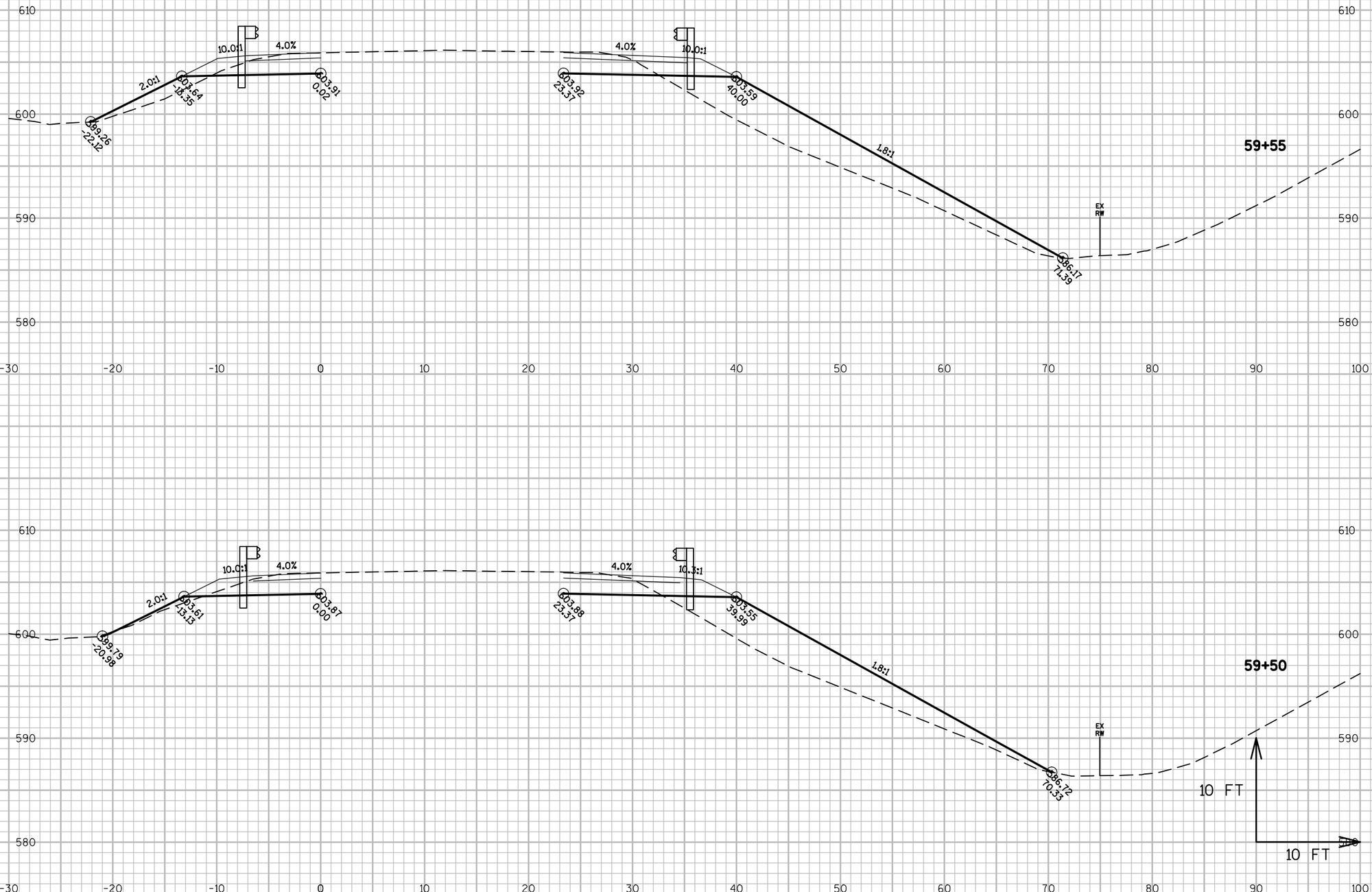
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 352	E



9

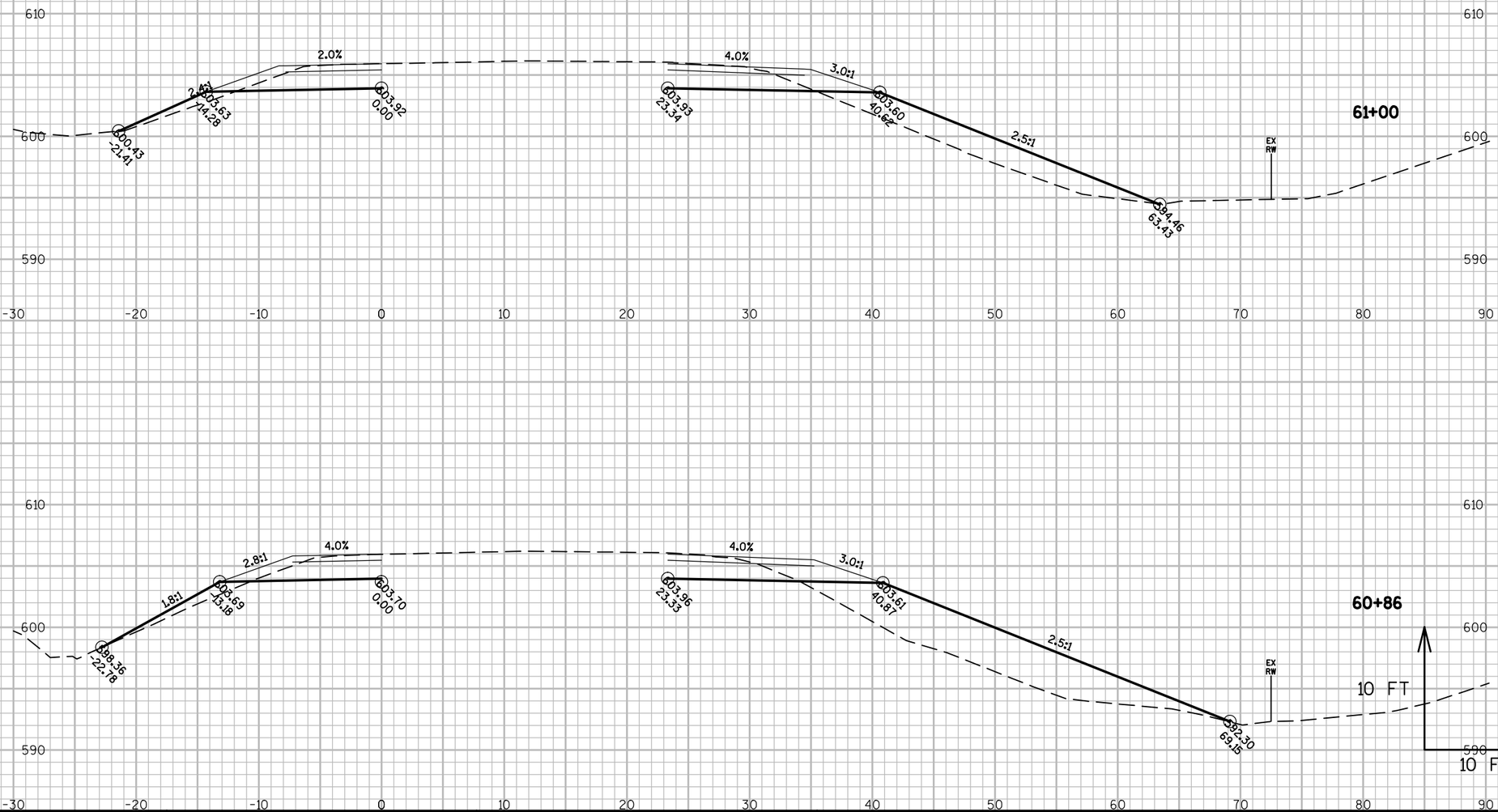
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 353	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090119_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

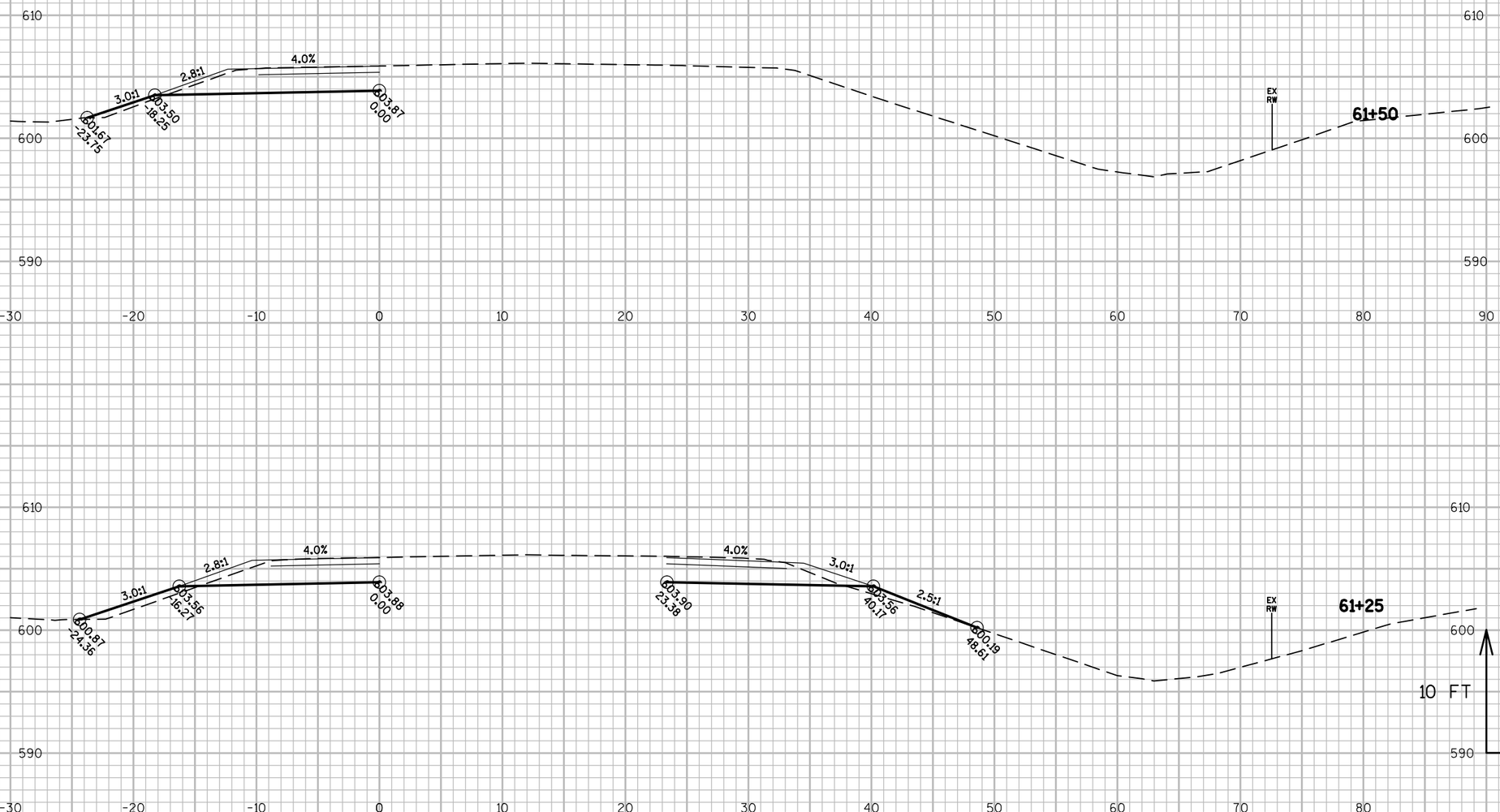
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND ASHWAUBENON CREEK	SHEET 354	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090189_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

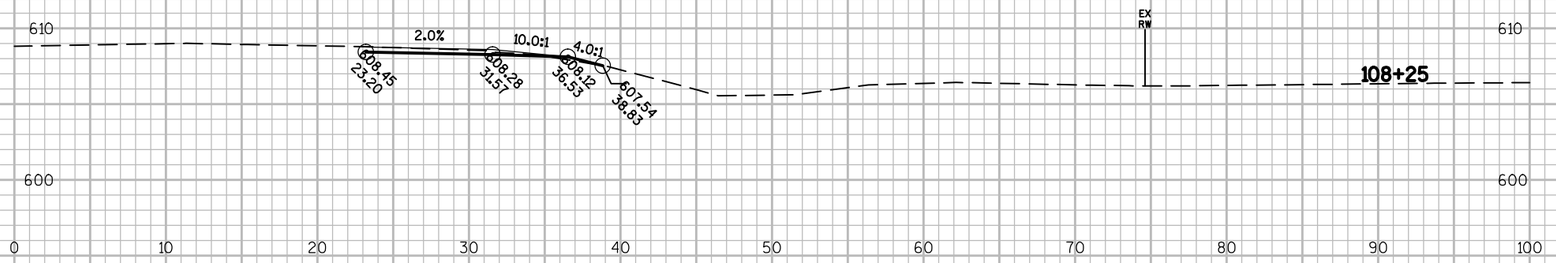
9

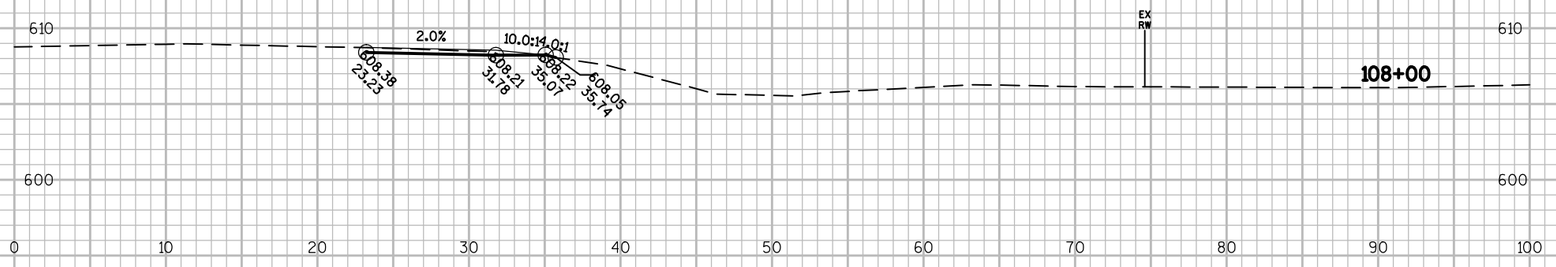
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND ASHWAUBENON CREEK	SHEET 355	E

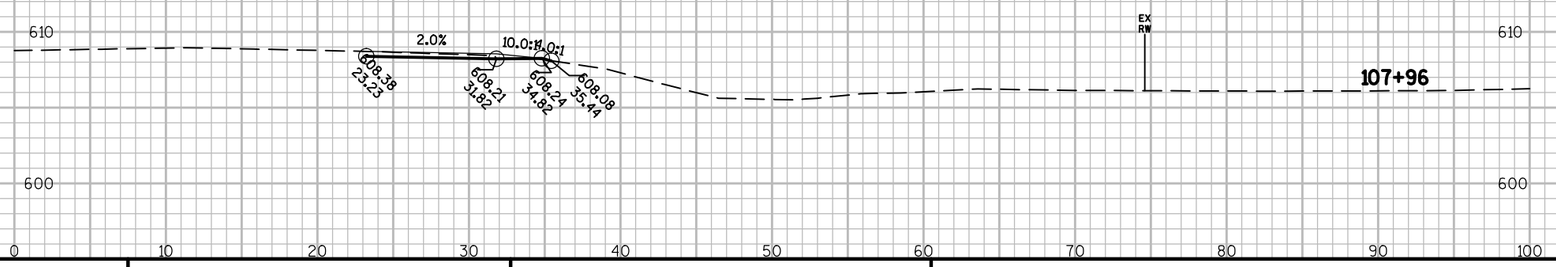
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090190_XS

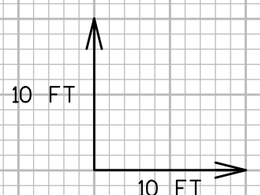
PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49









9

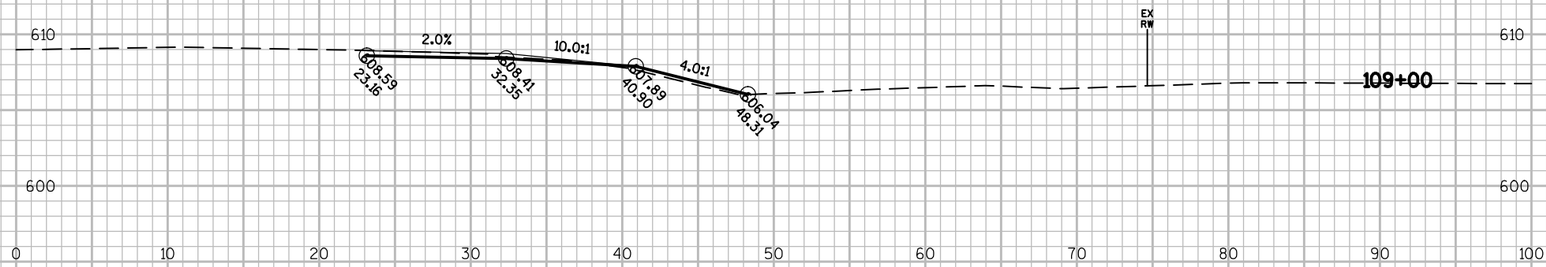
9

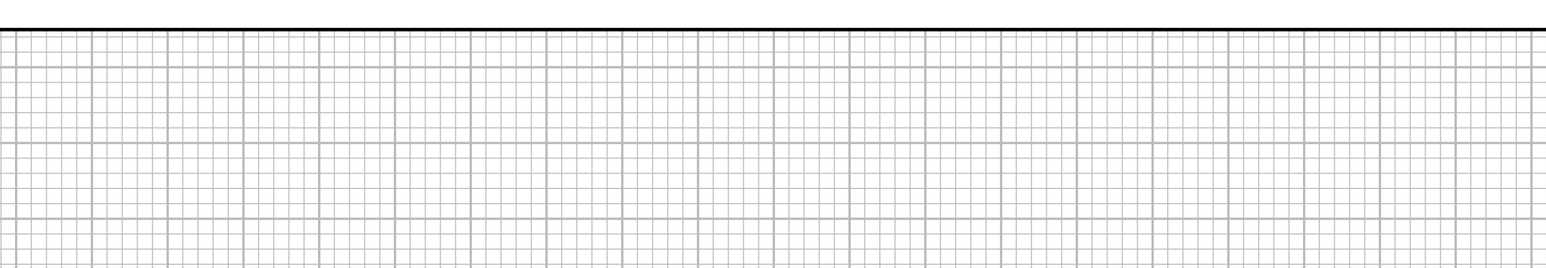
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 356	E

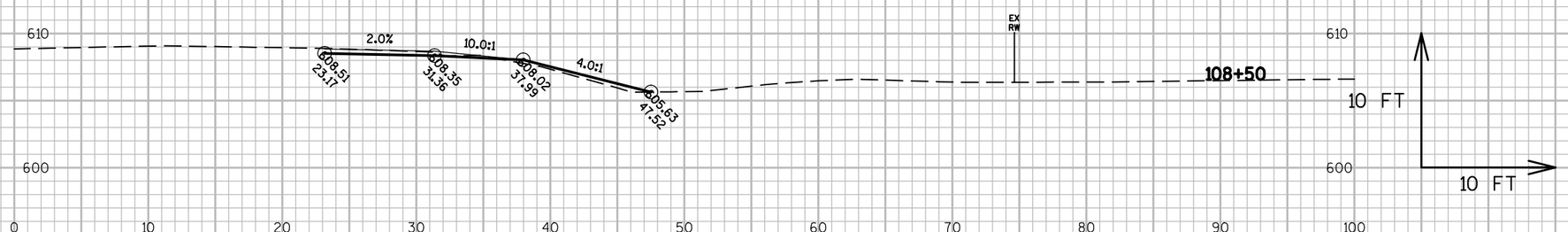
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090123_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49







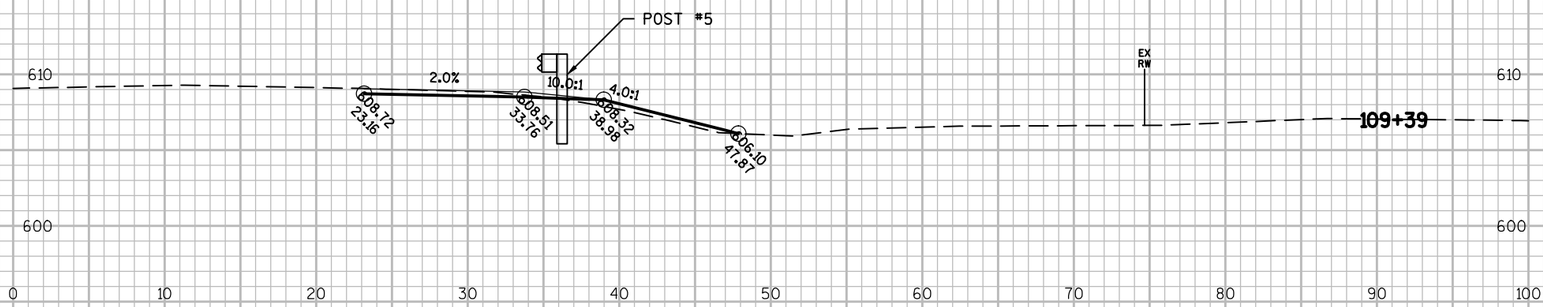
9

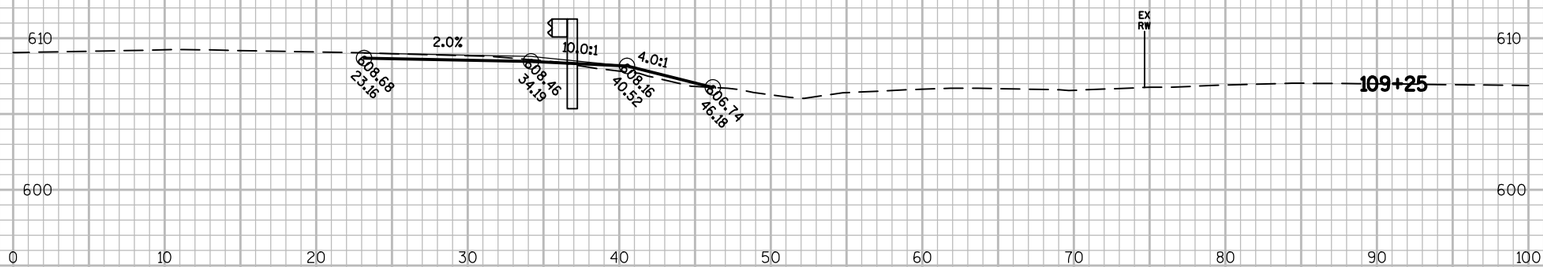
9

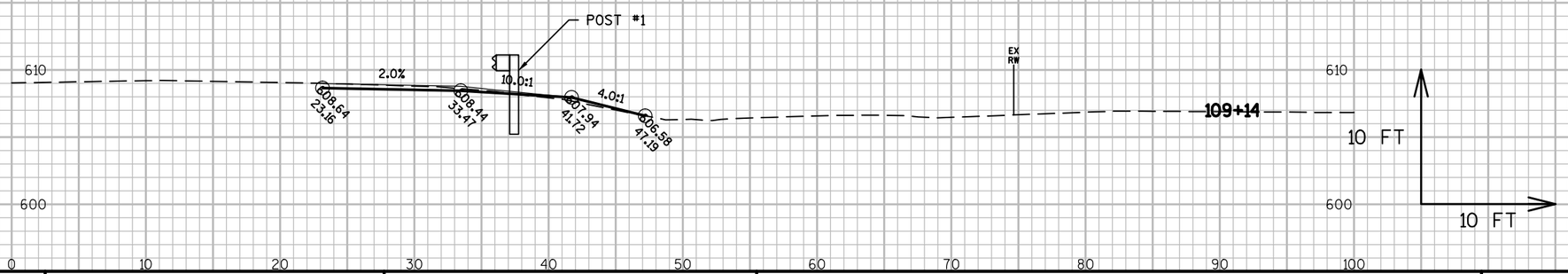
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 357	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090124_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT







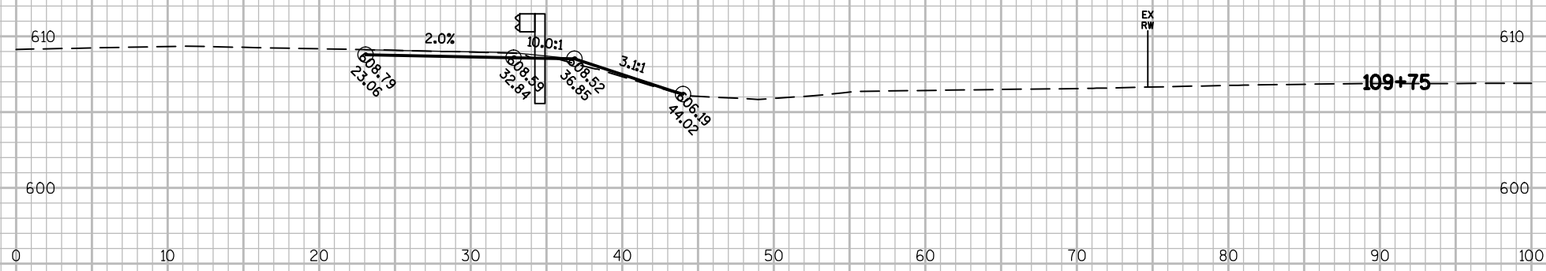
9

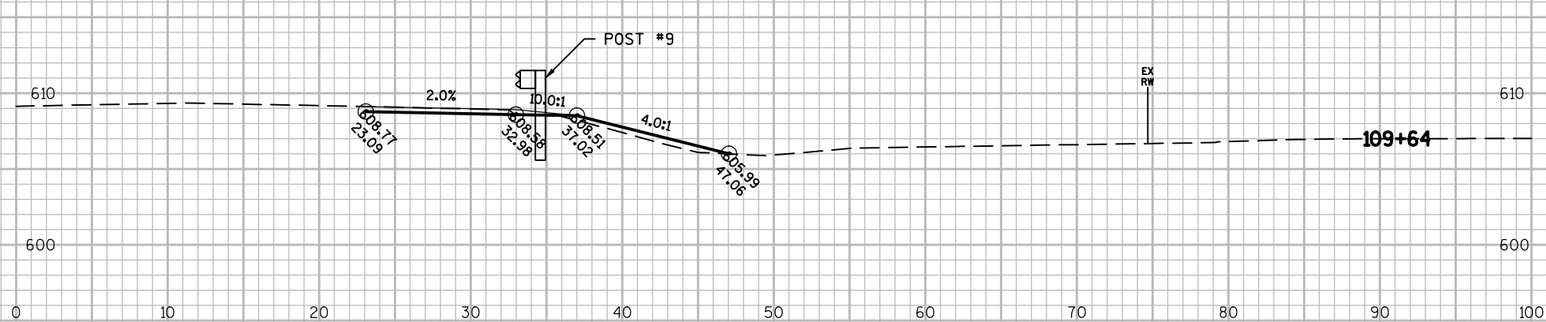
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 358	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090125_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



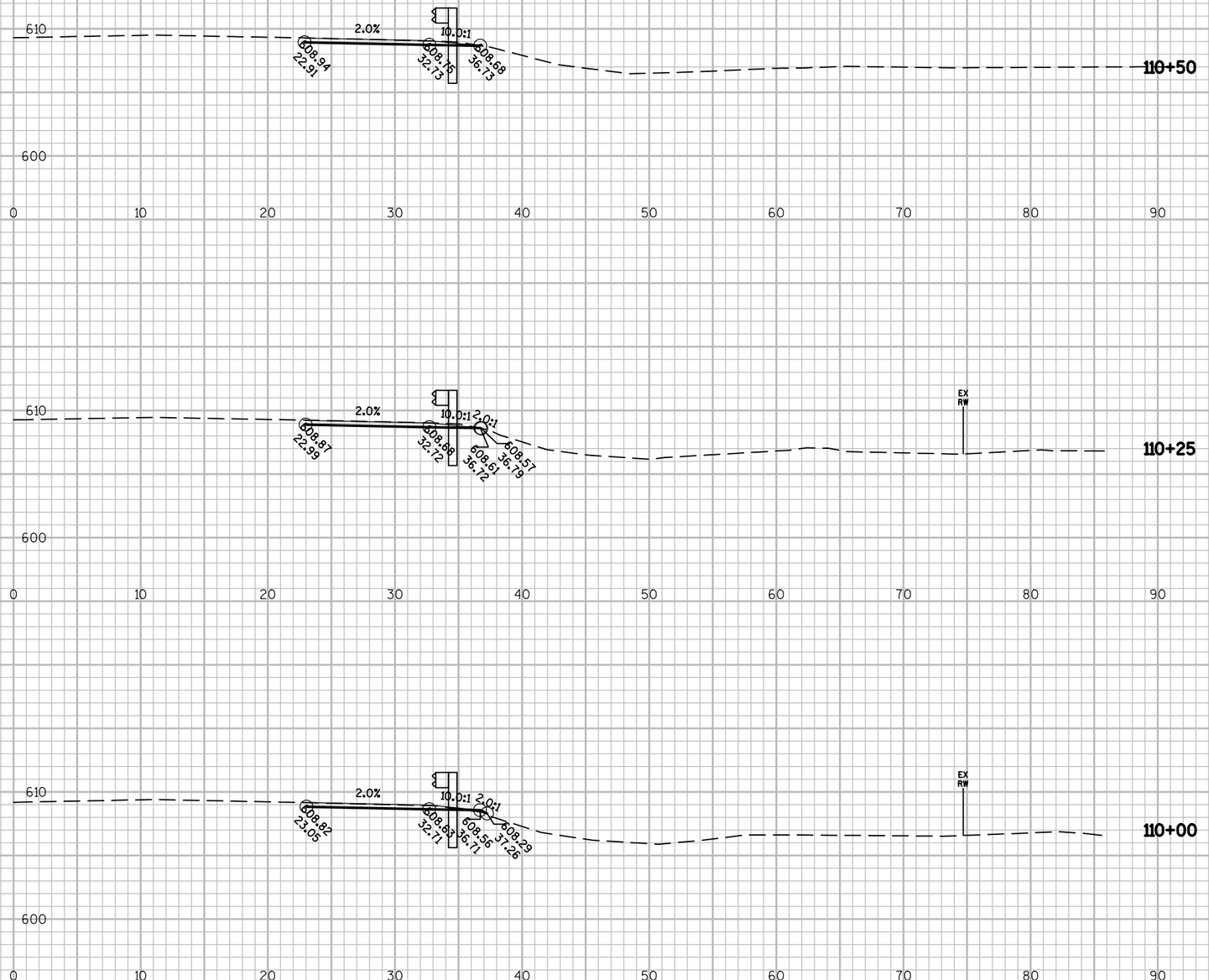


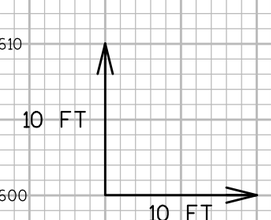


9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 359	E





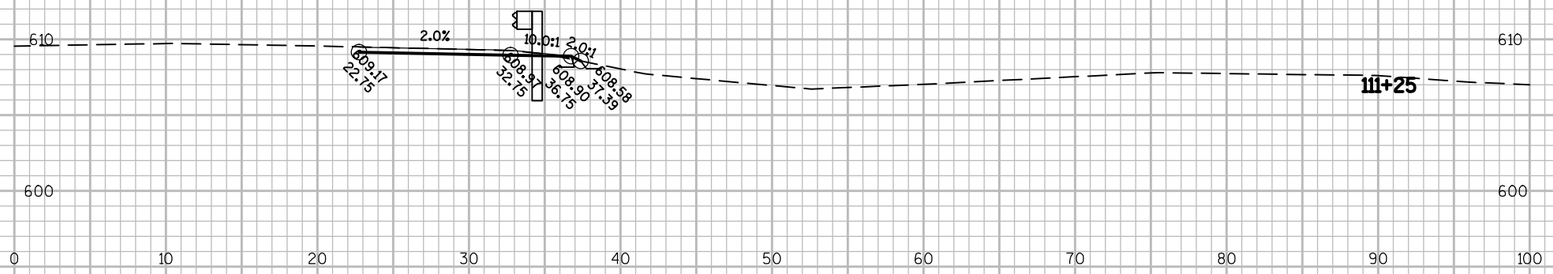
9

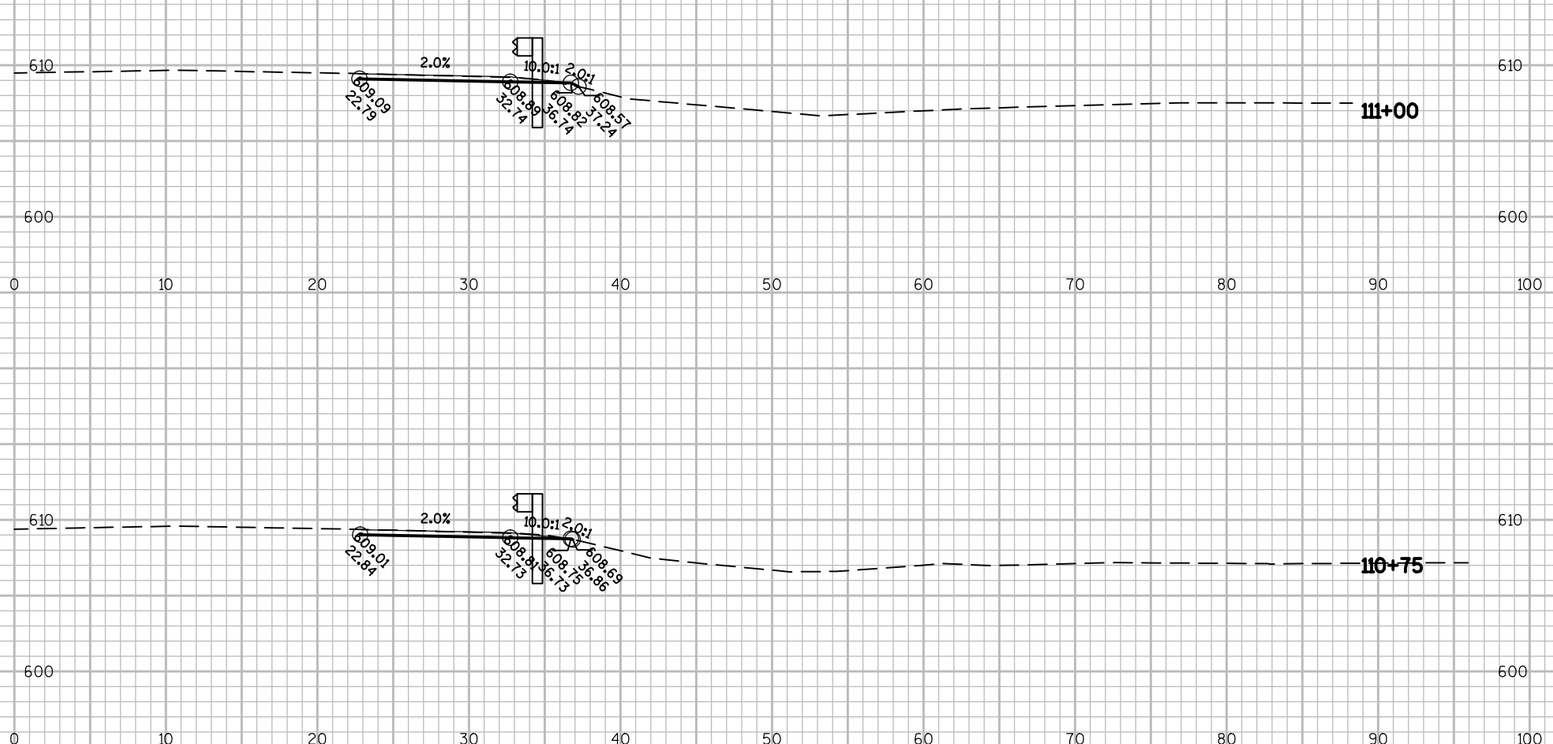
9

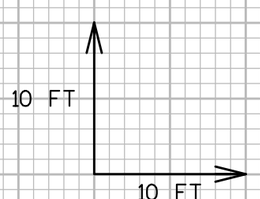
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 360	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090127_XS

PLOT DATE : 1/7/2016 1:10 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT







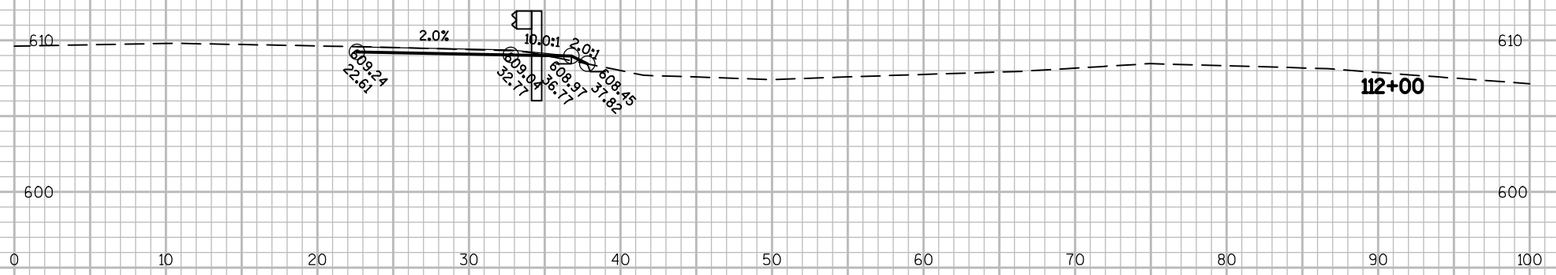
9

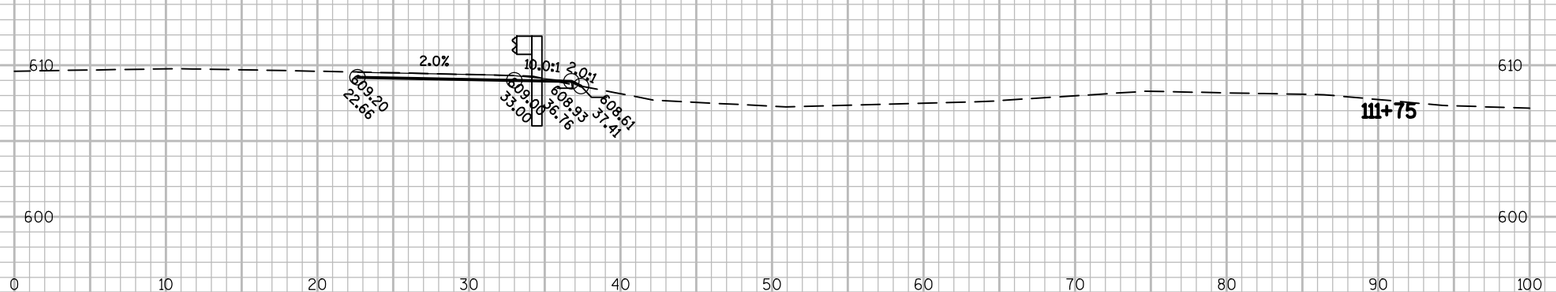
9

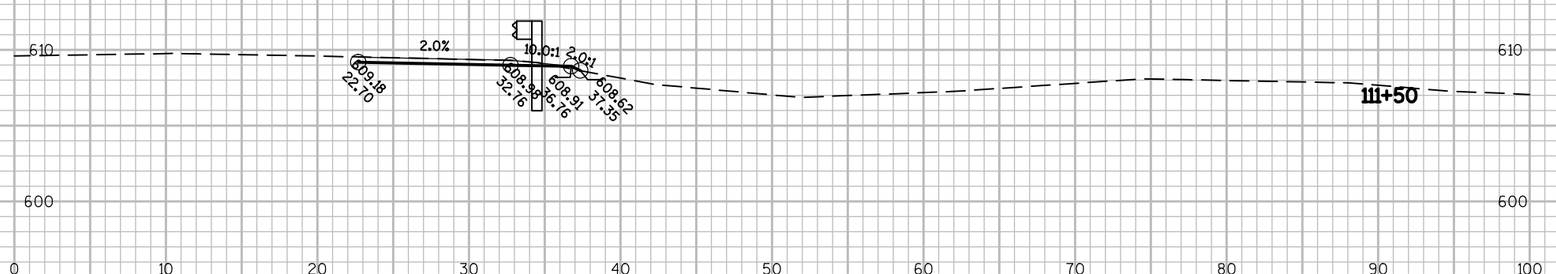
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 361	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090128_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT







9

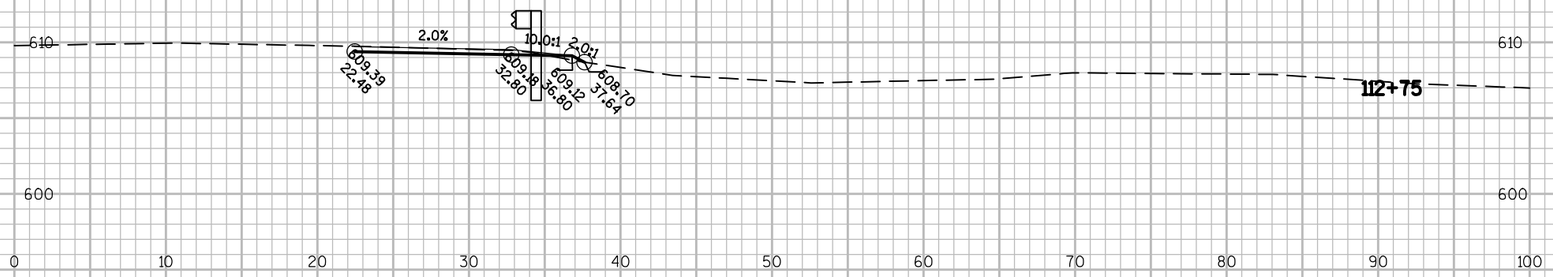
9

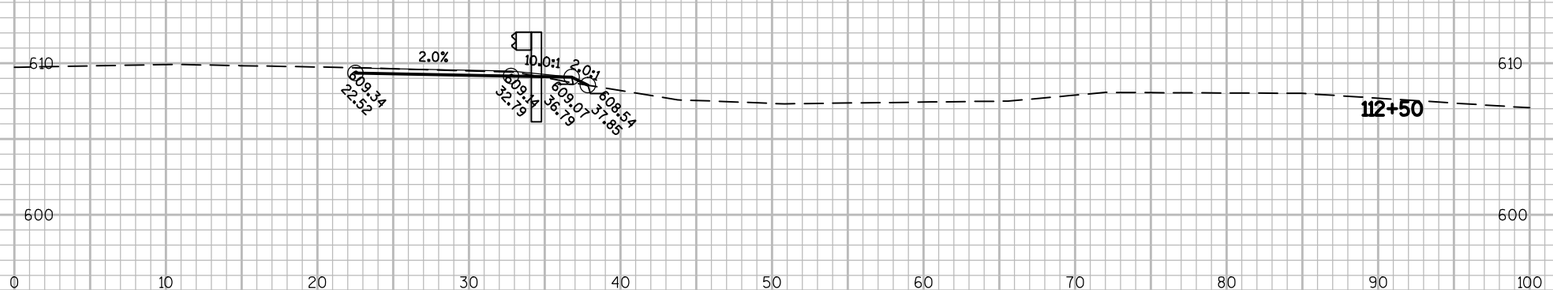
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 362	E

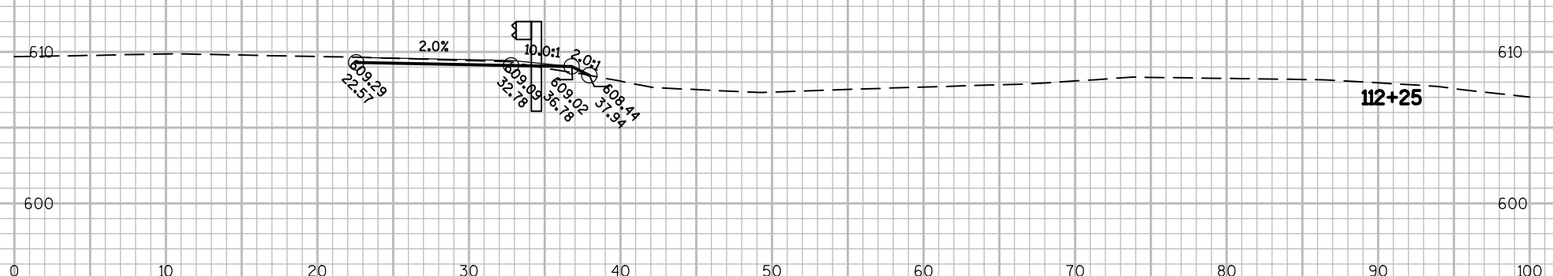
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090129_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49









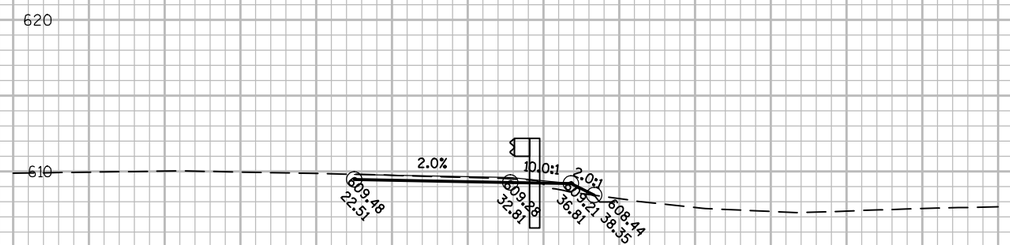
9

9

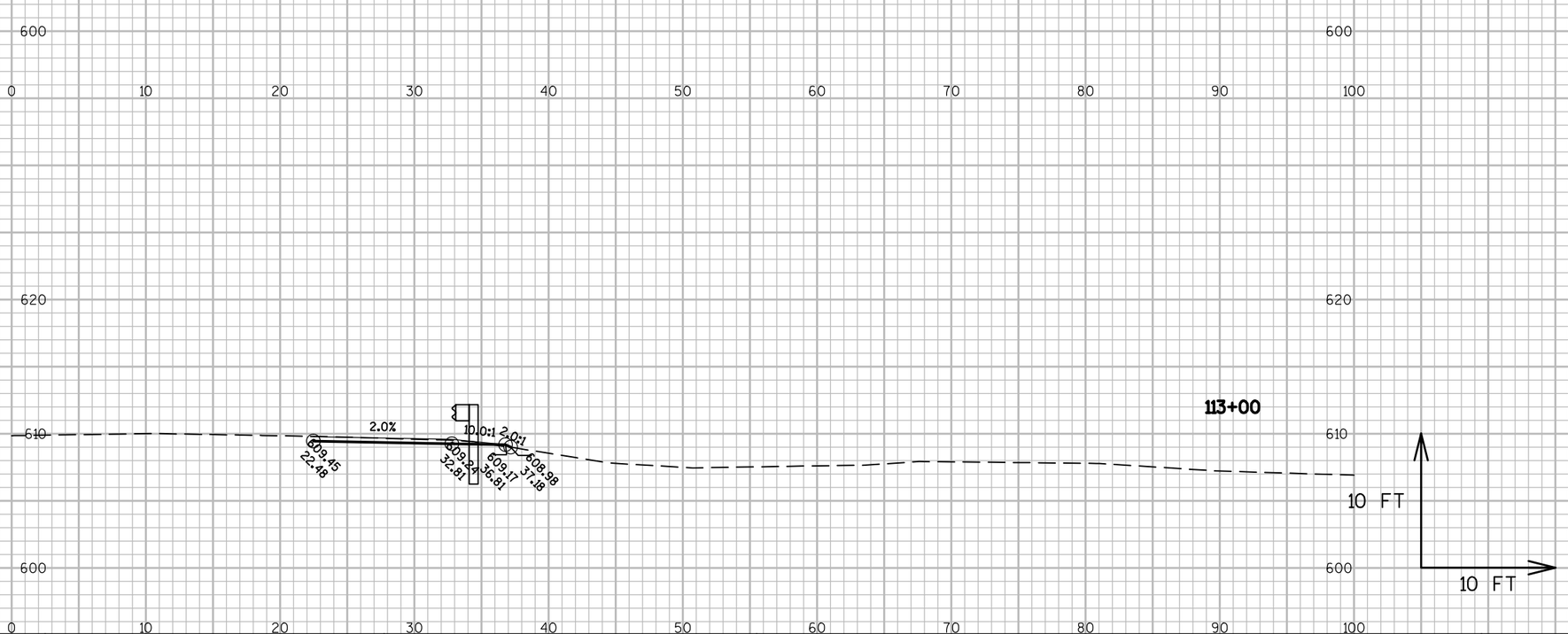
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 363	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090130_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



113+16



113+00

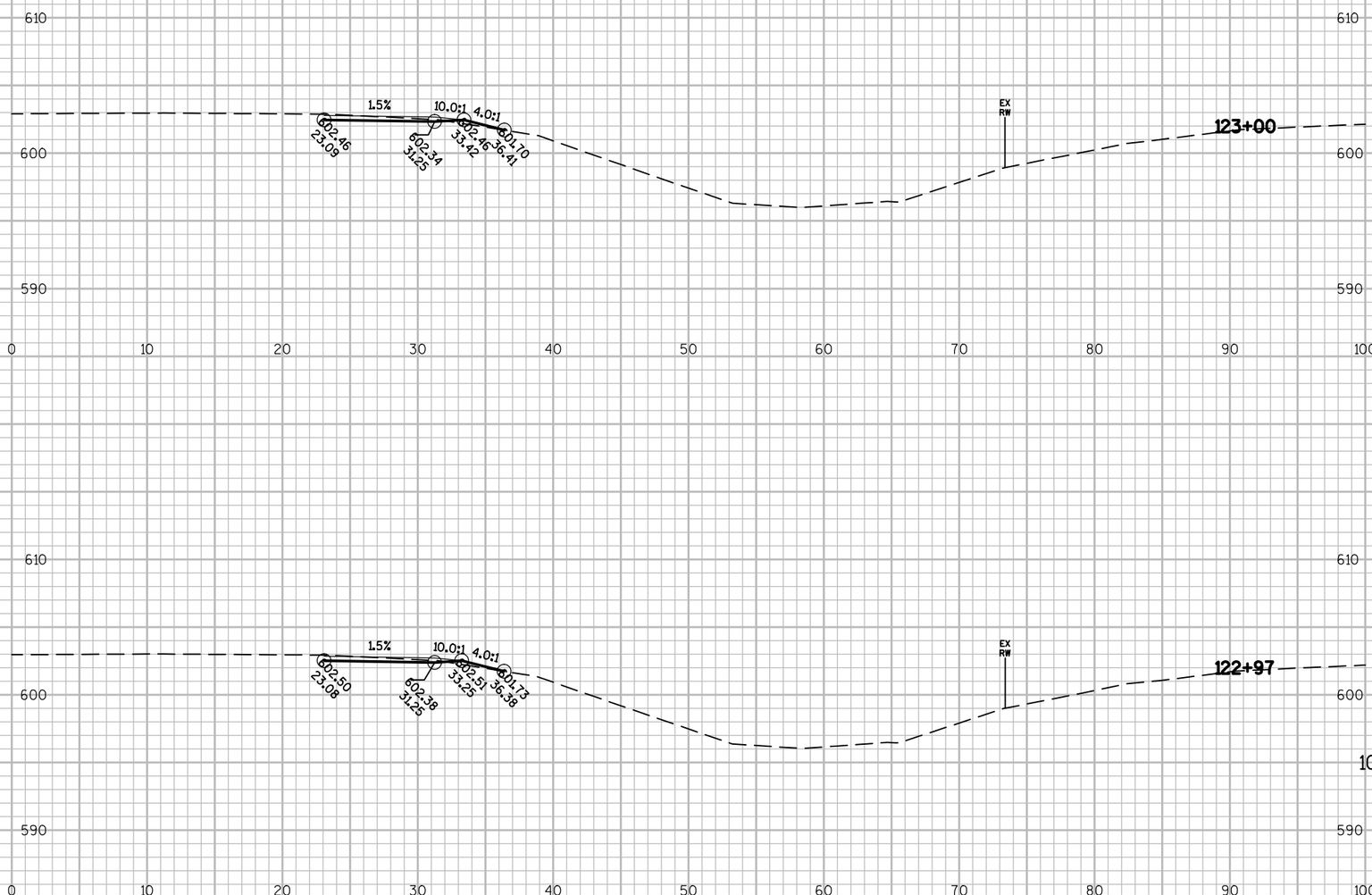
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD STH 172	SHEET 364	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090131_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



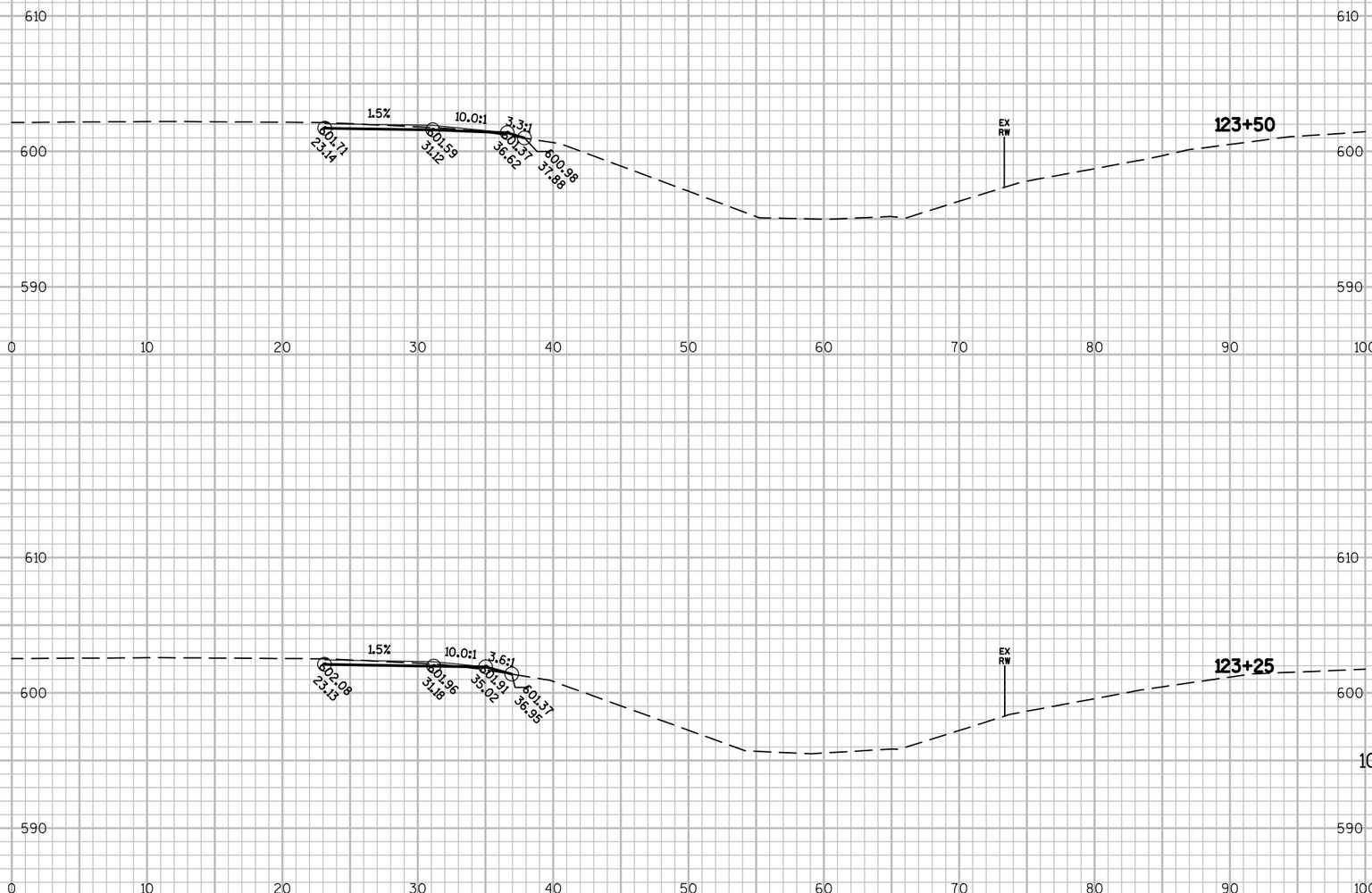
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 365	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090132_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

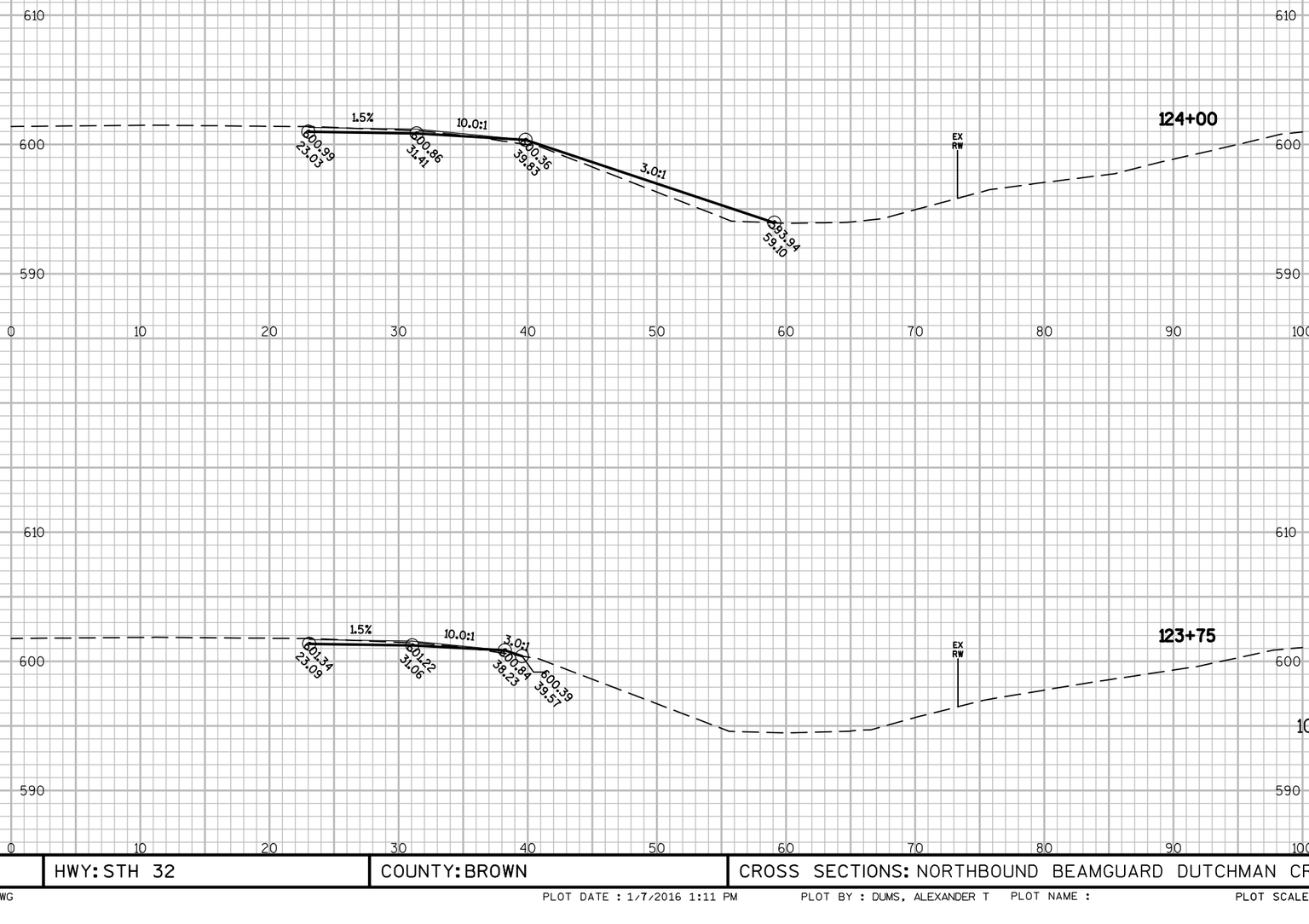
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 366	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090133_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

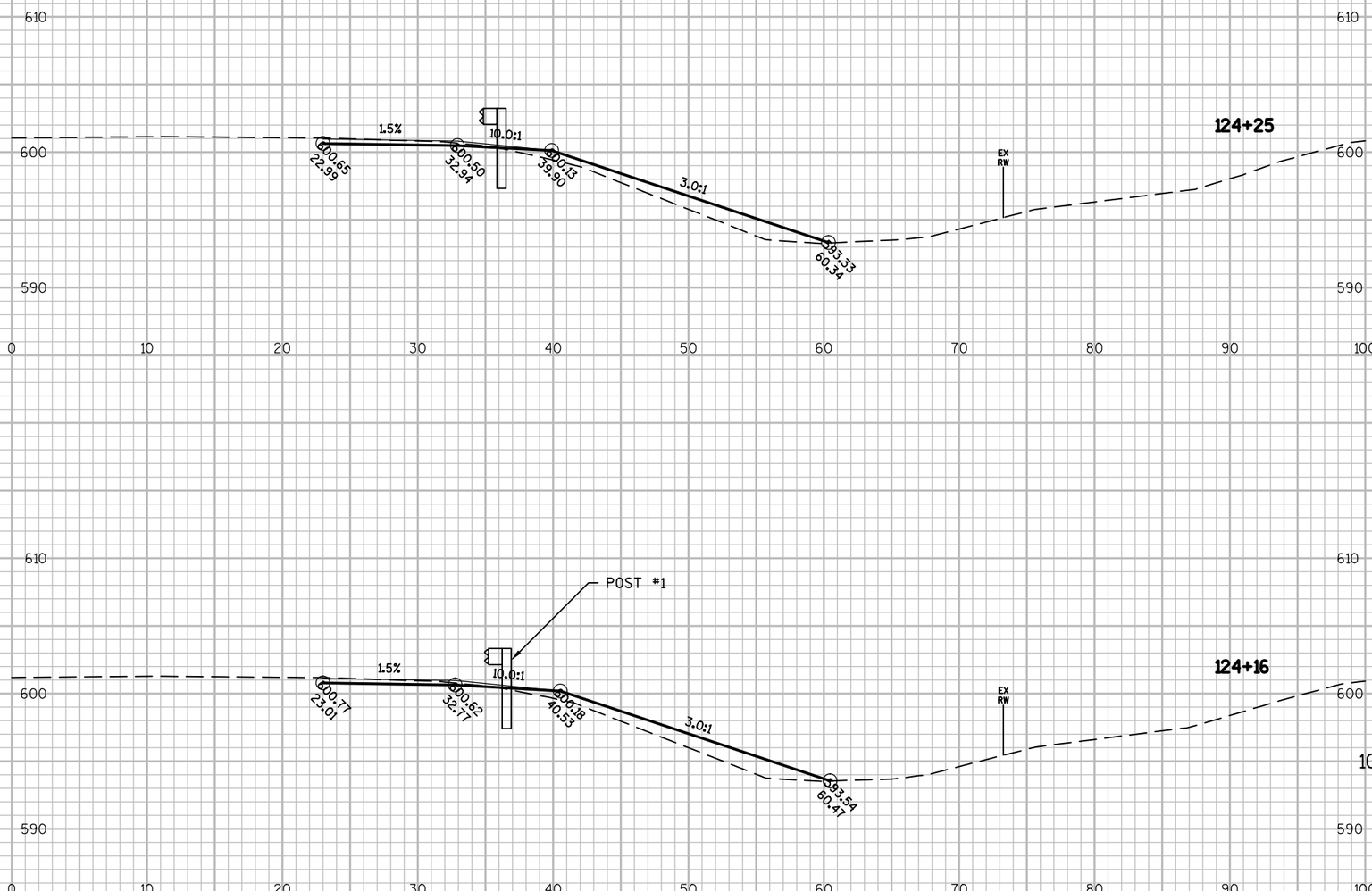
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 367	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090134_XS

PLOT DATE : 1/7/2016 1:11 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

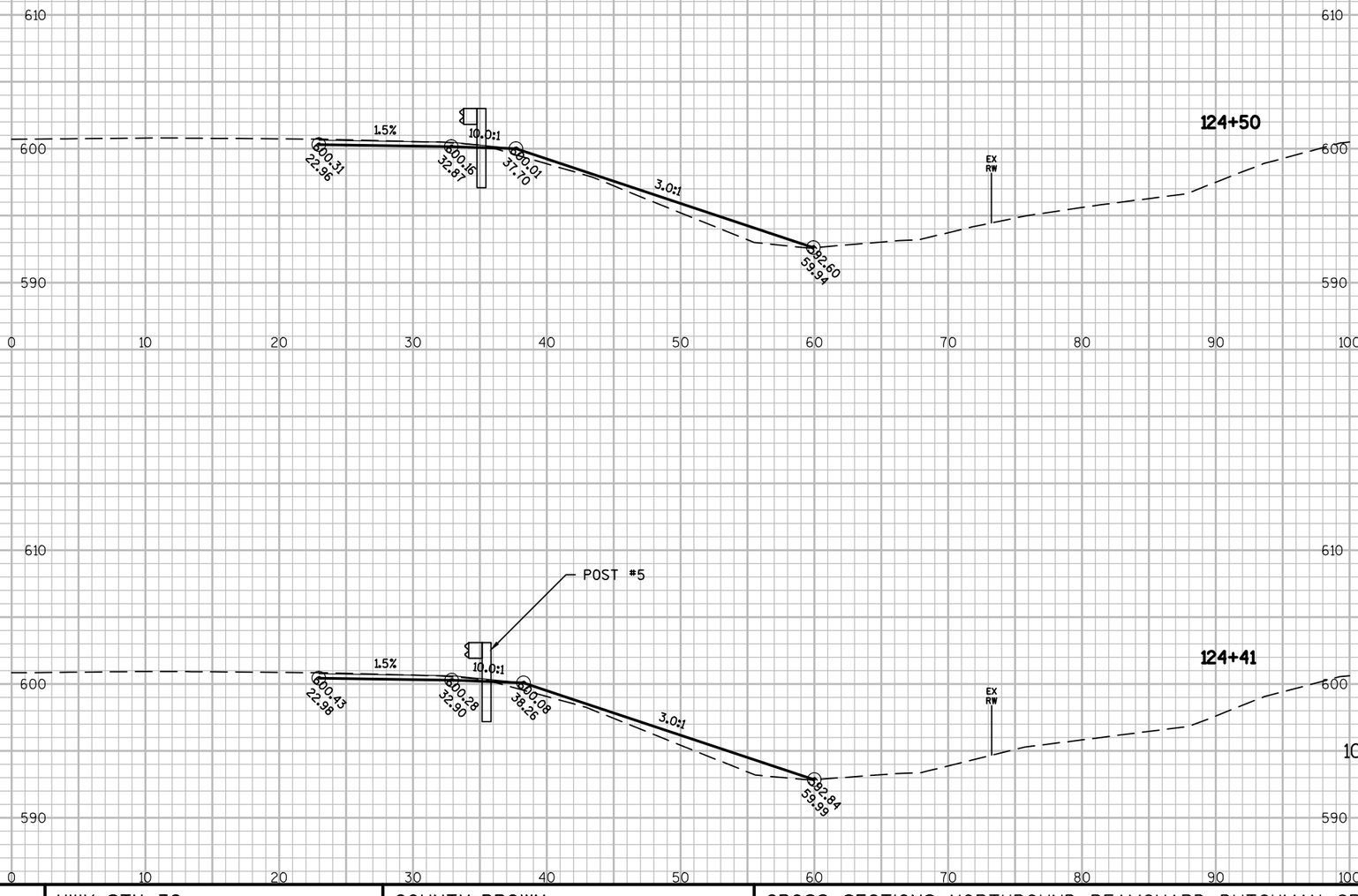
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 368	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090135_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



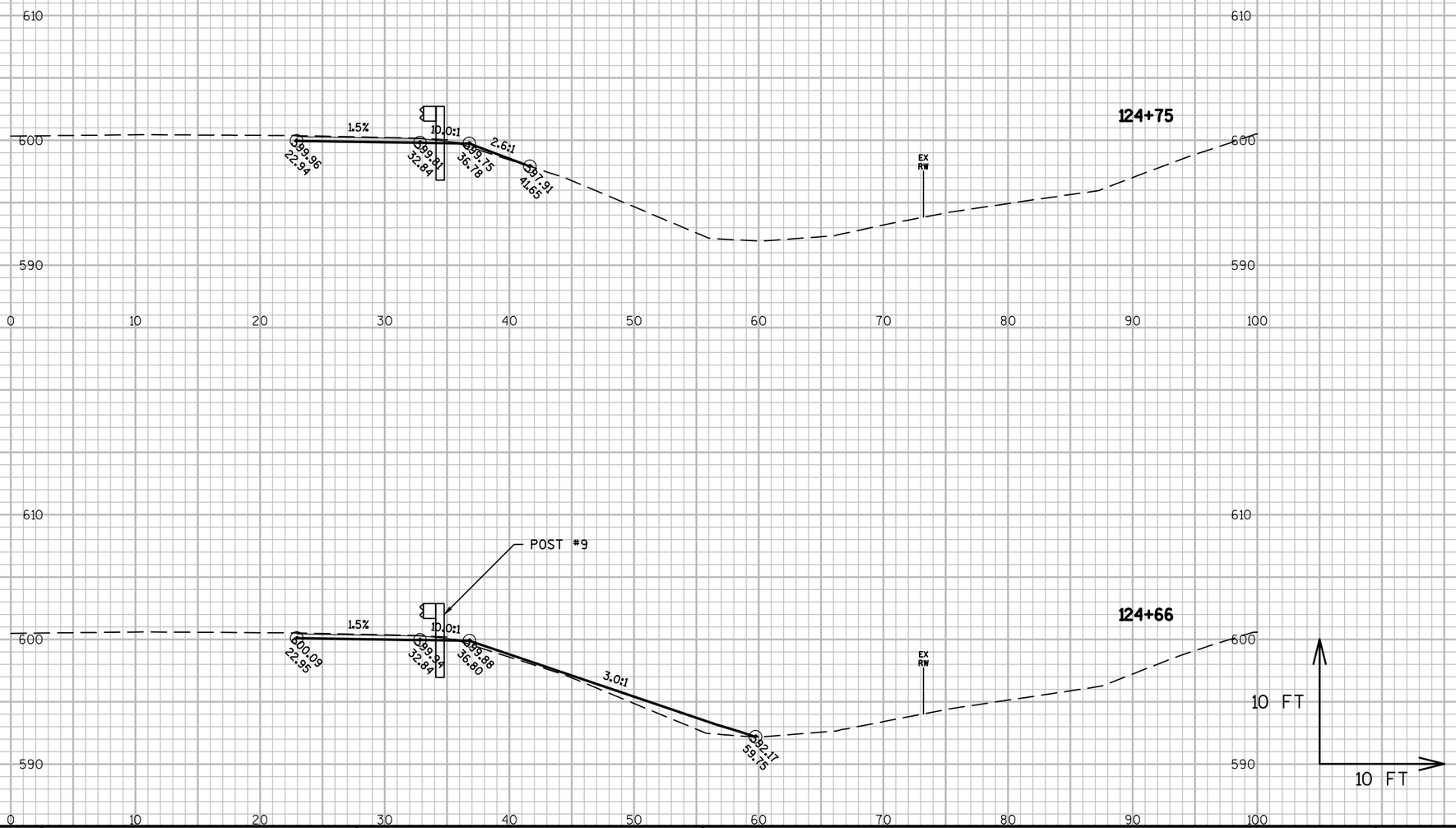
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 369	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090136_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



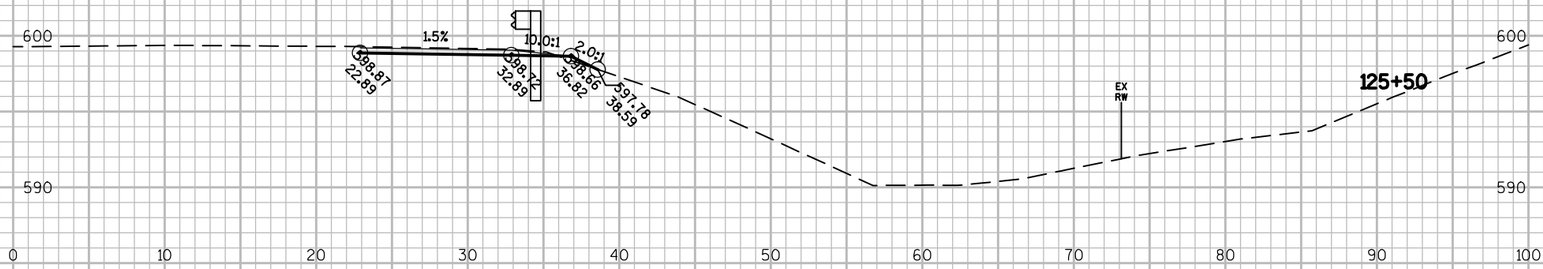
9

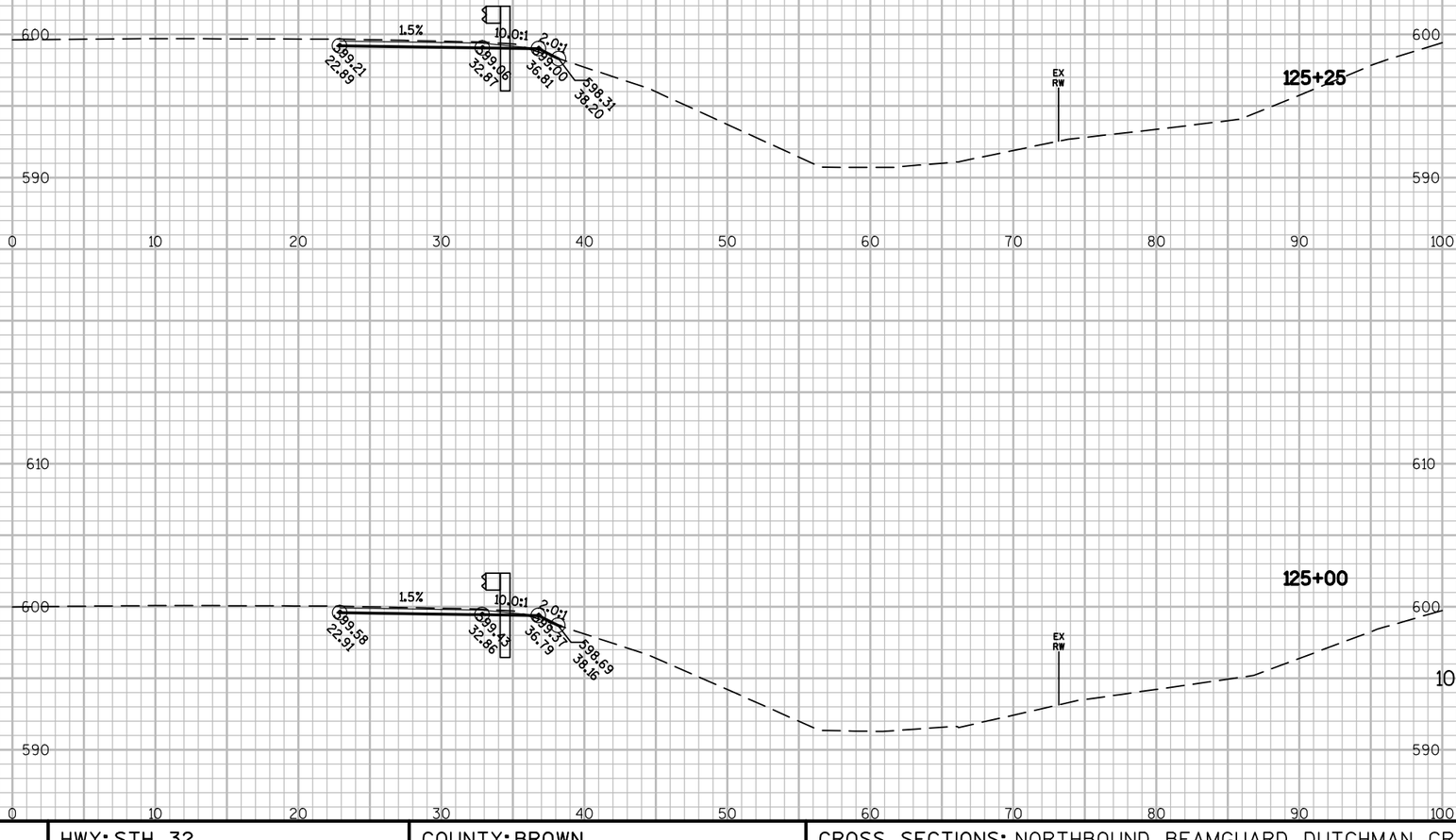
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 370	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090137_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



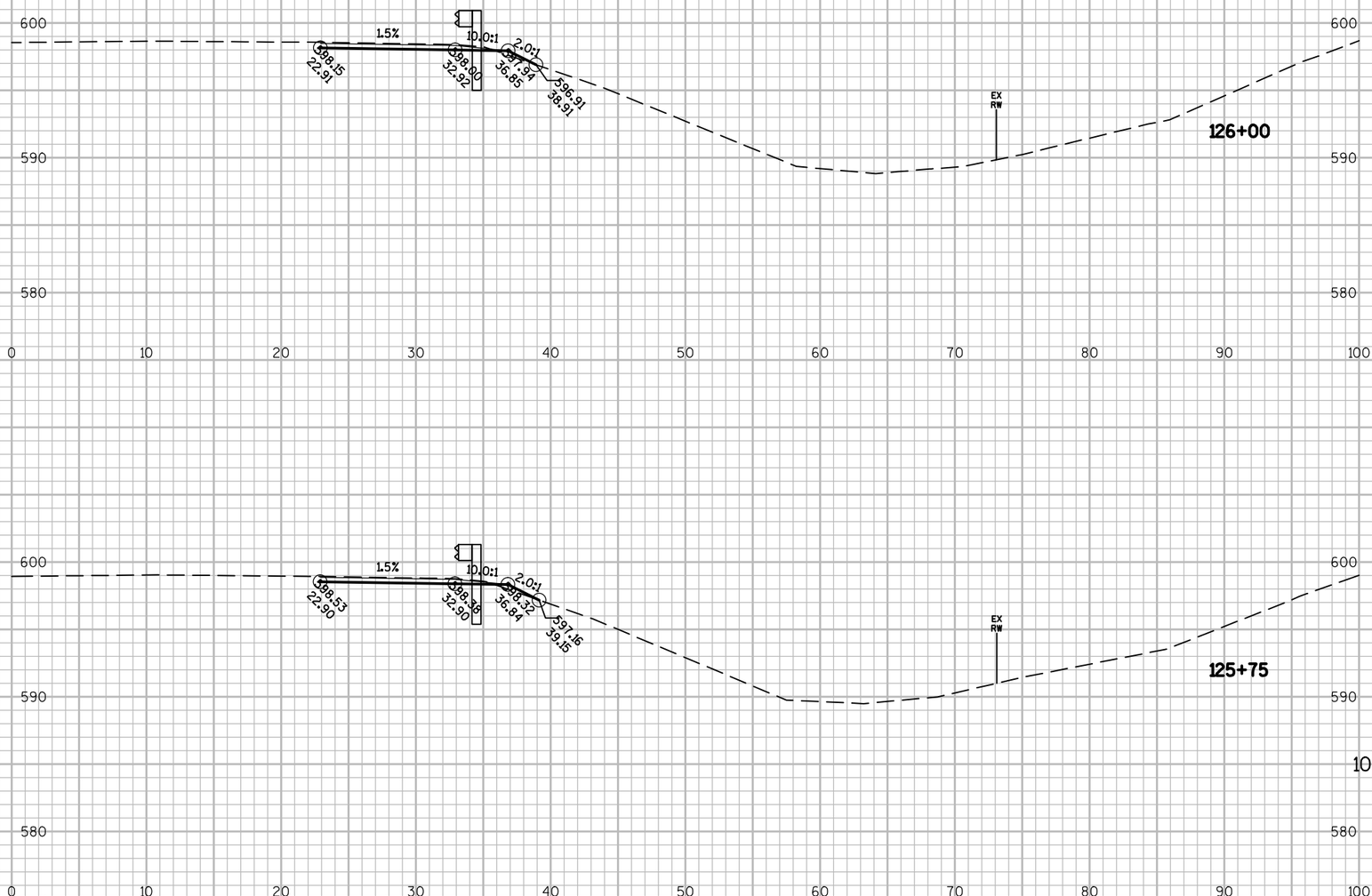


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 371	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090138_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

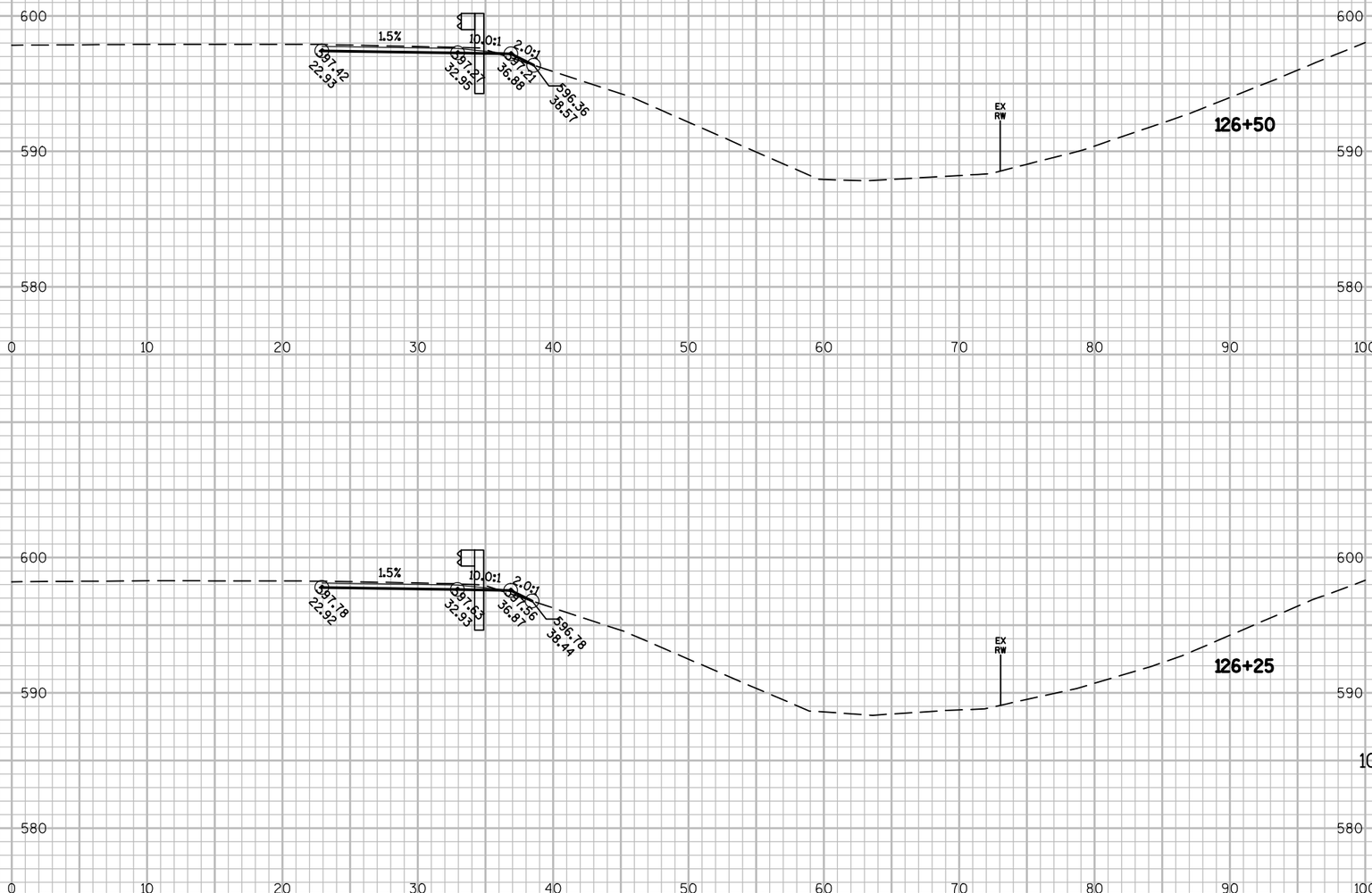


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 372	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090139_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

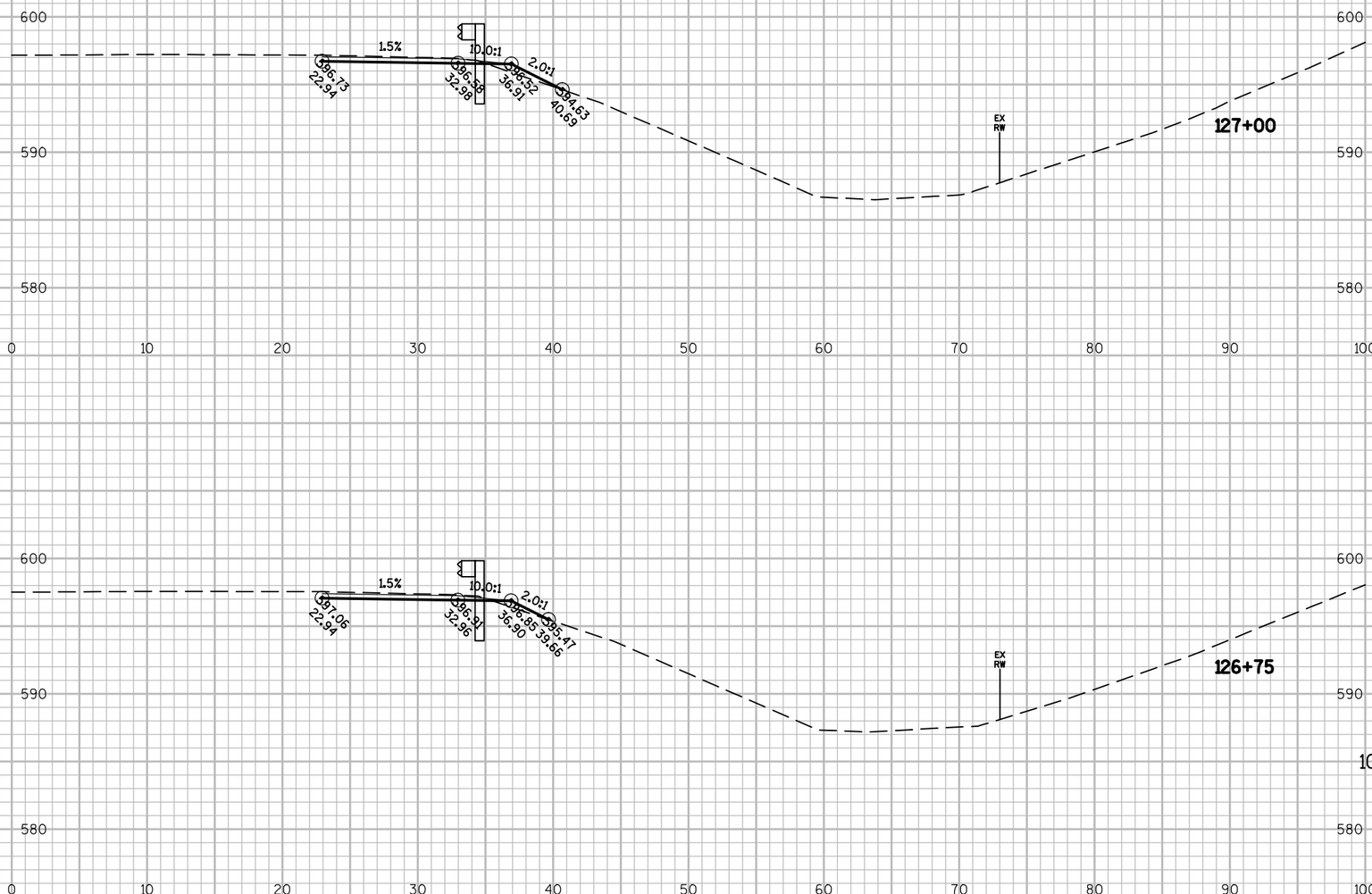
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 373	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090140_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

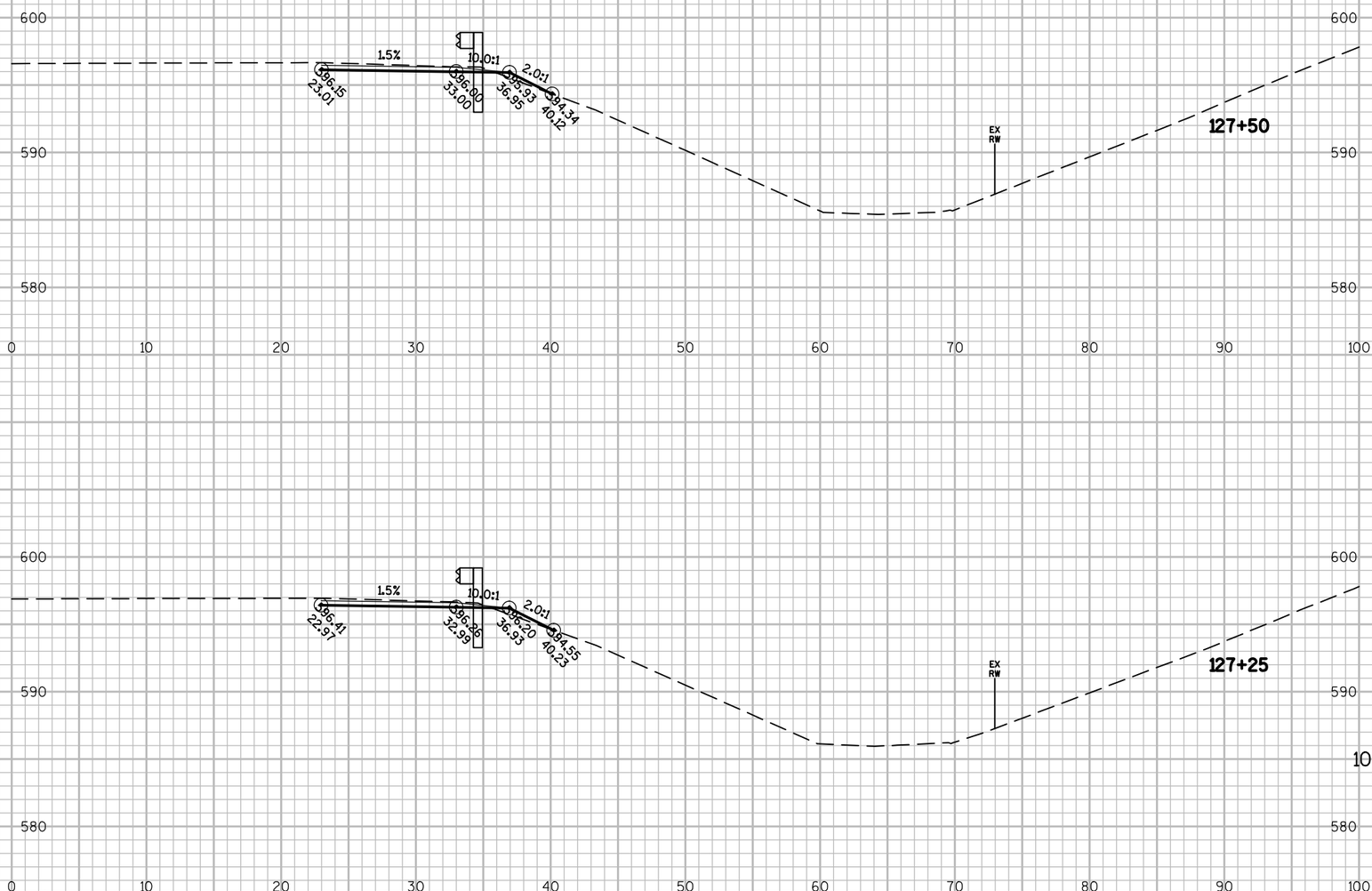
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 374	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090141_XS

PLOT DATE : 1/7/2016 1:12 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

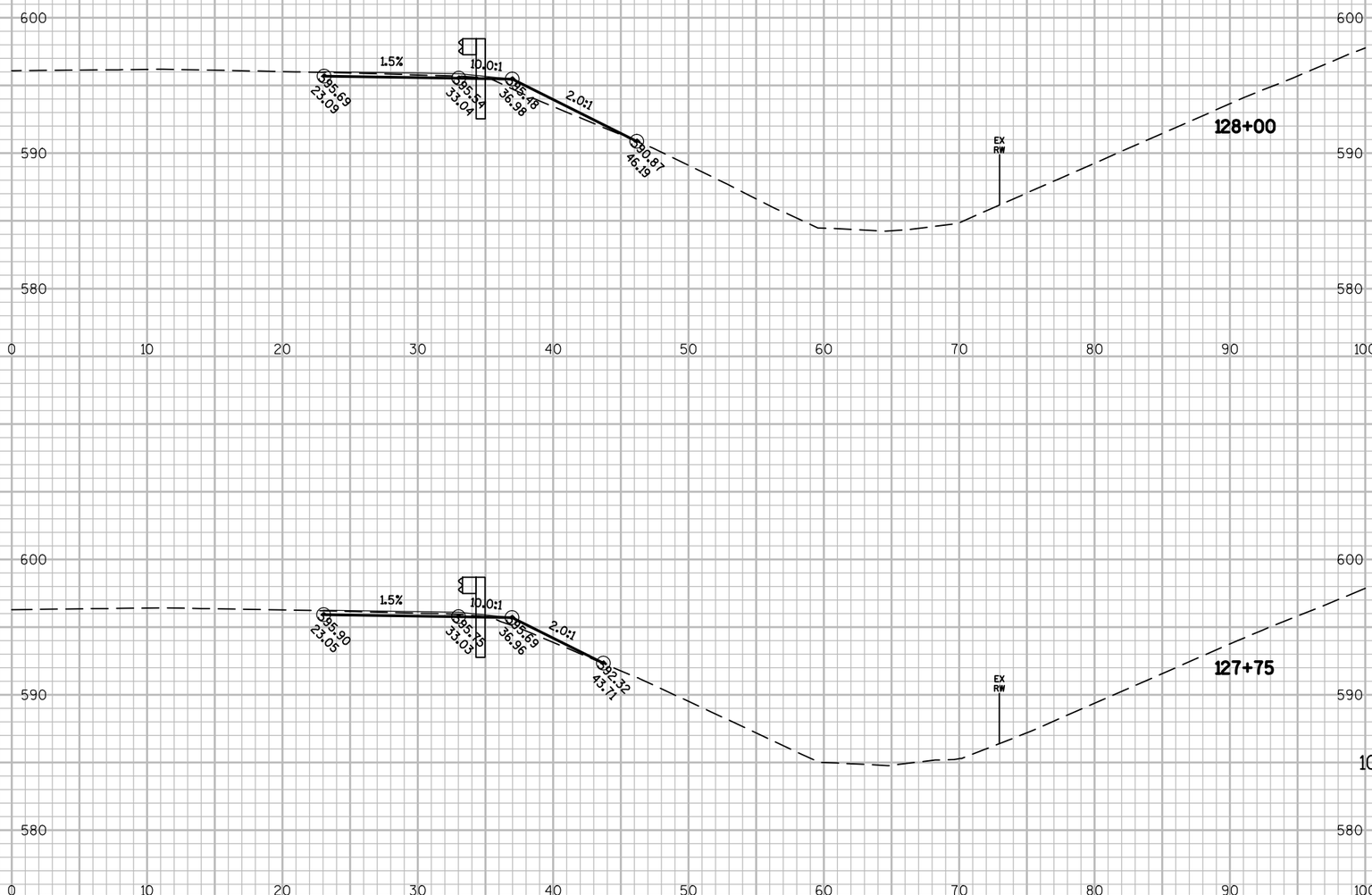
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 375	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090142_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

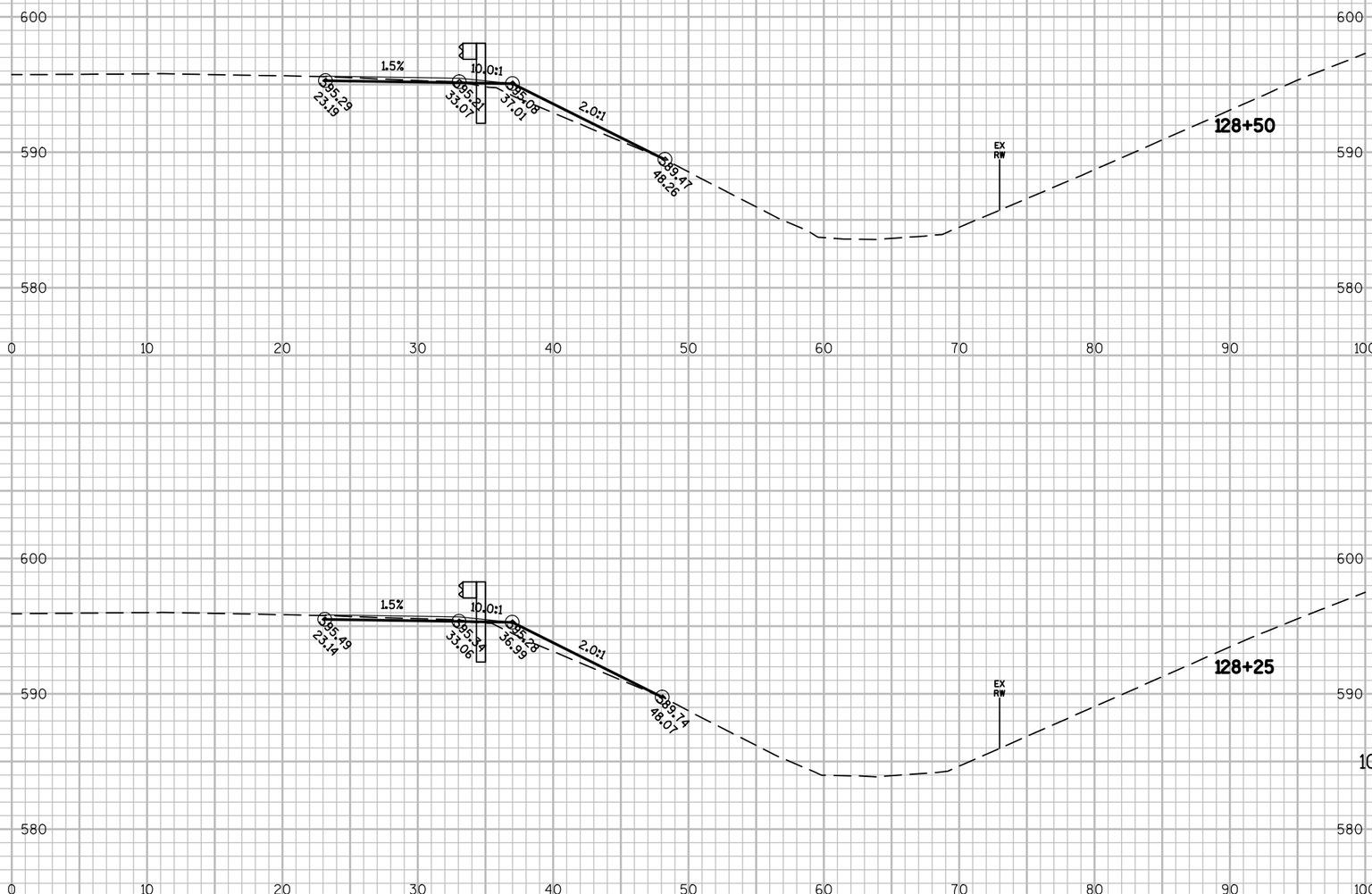
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 376 E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090143_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

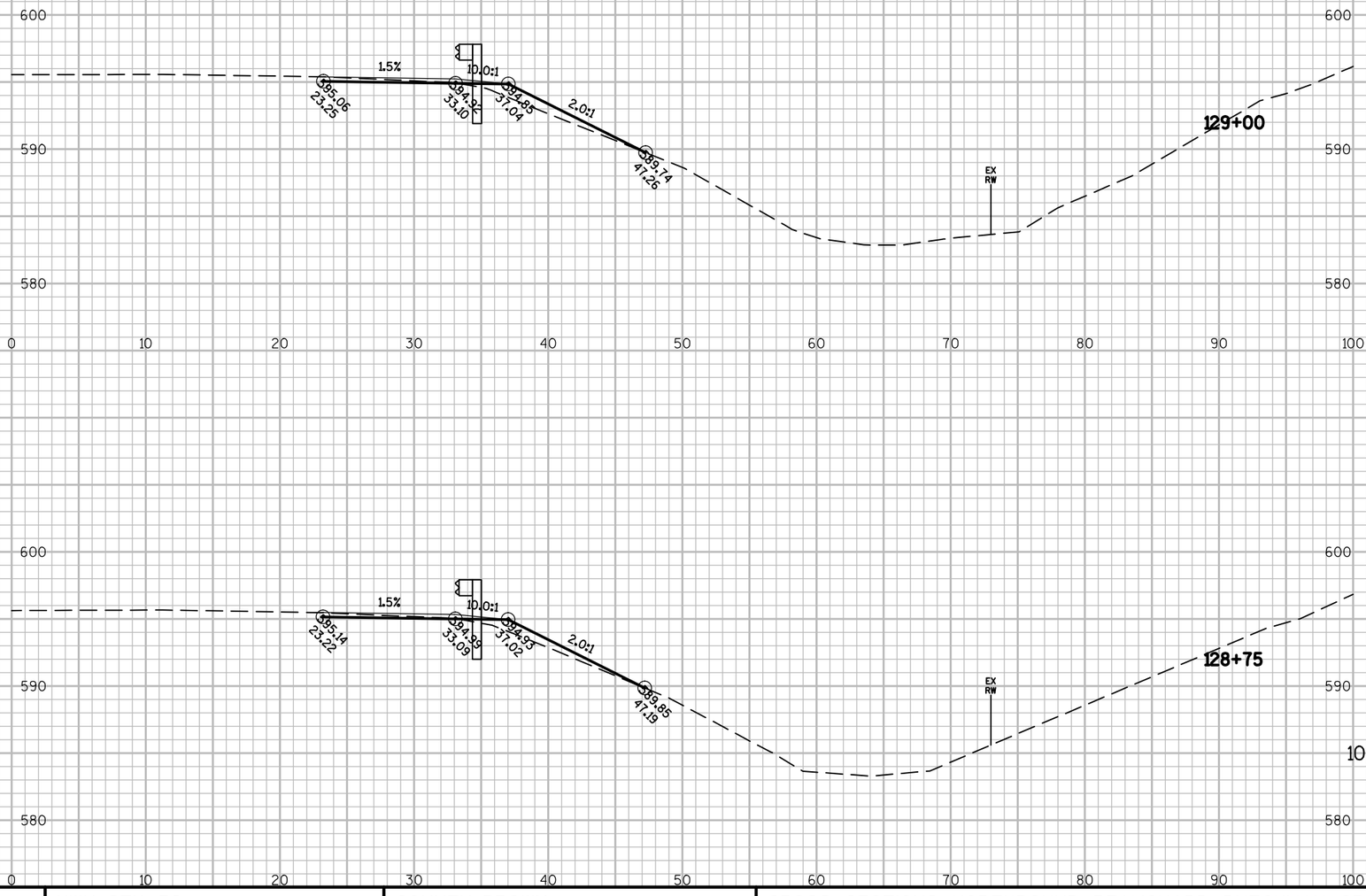
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 377	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090144_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



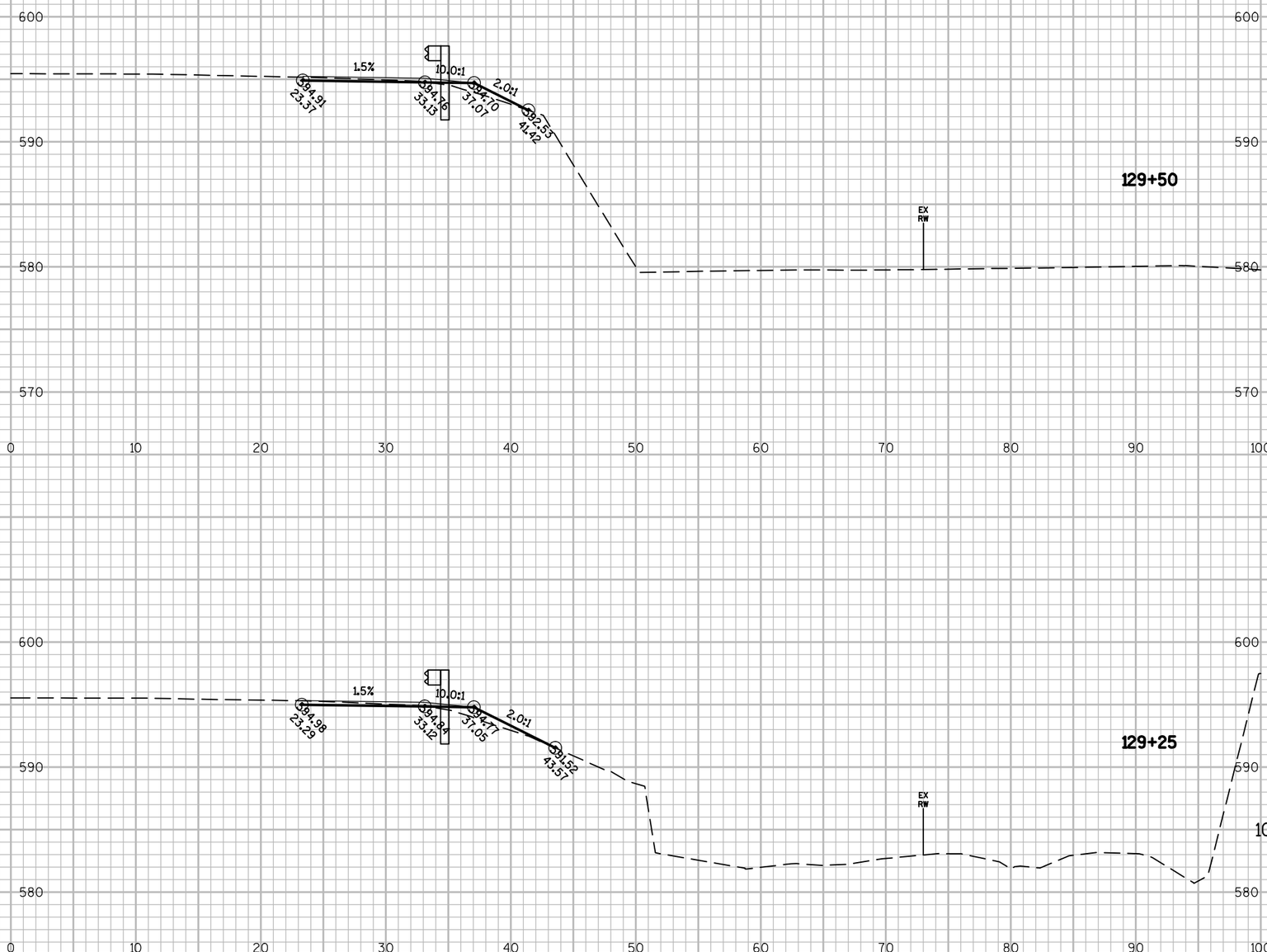
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 378	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090145_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



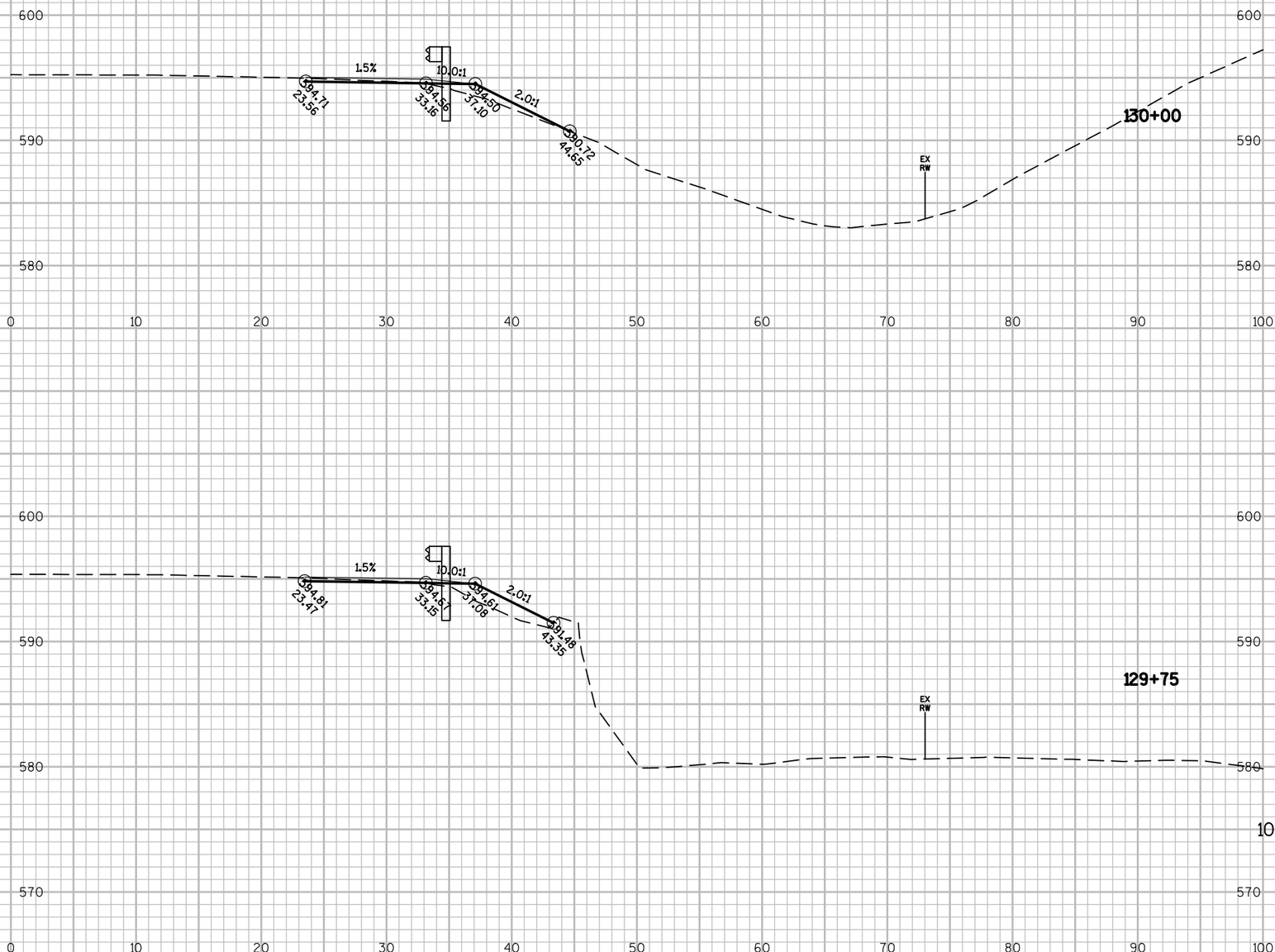
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 379	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090146_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



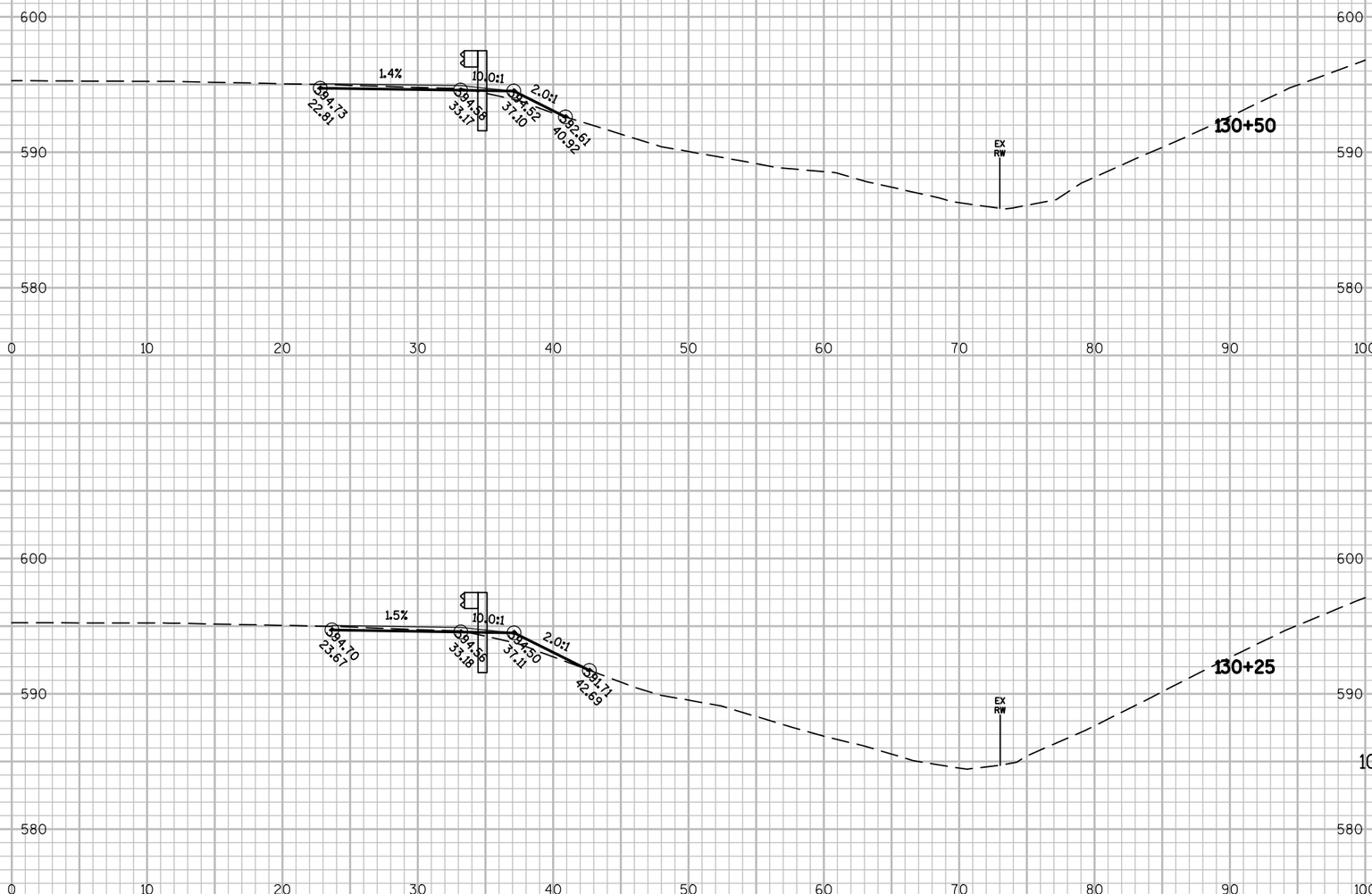
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 380	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090147_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

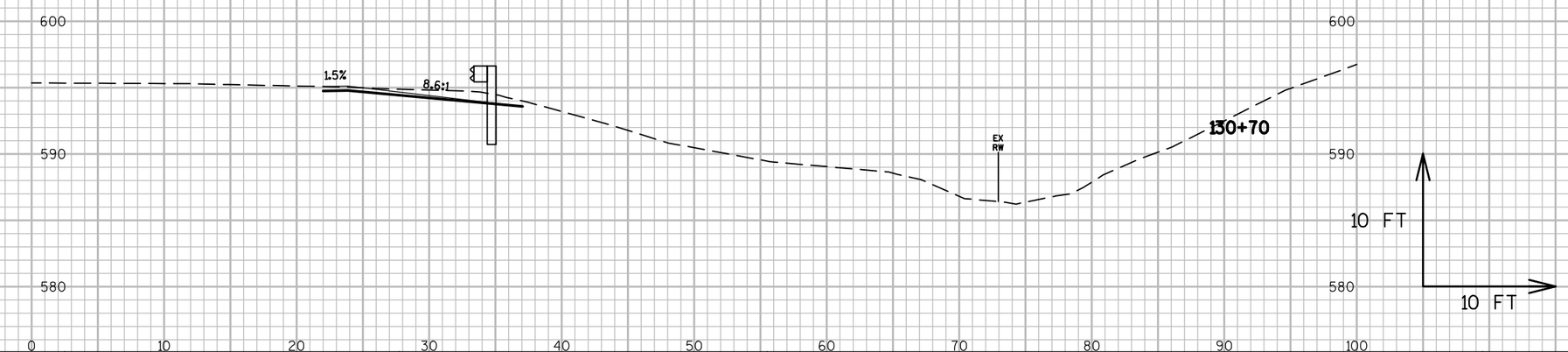


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 381	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090148_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

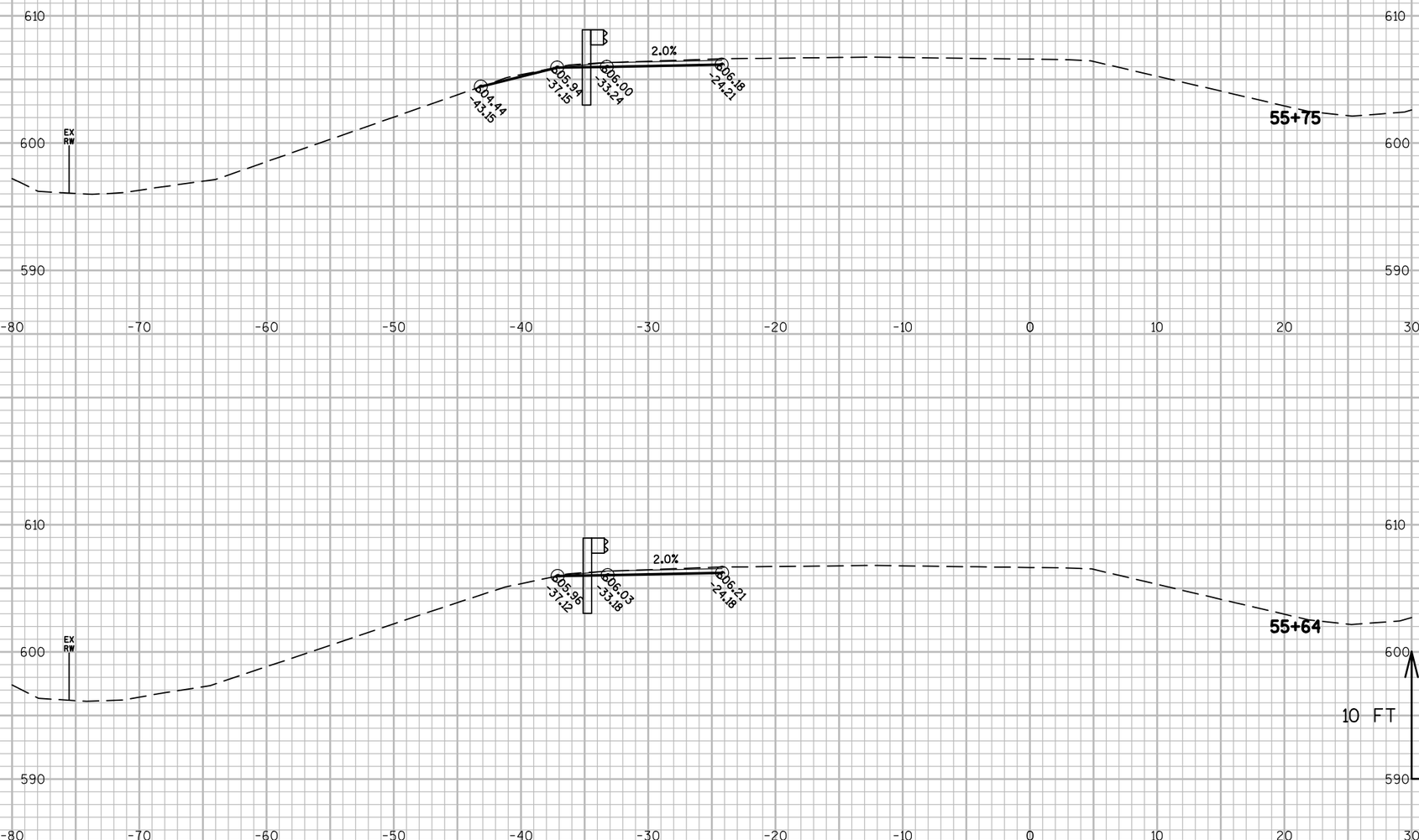
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: NORTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 382	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090149_XS

PLOT DATE : 1/7/2016 1:13 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

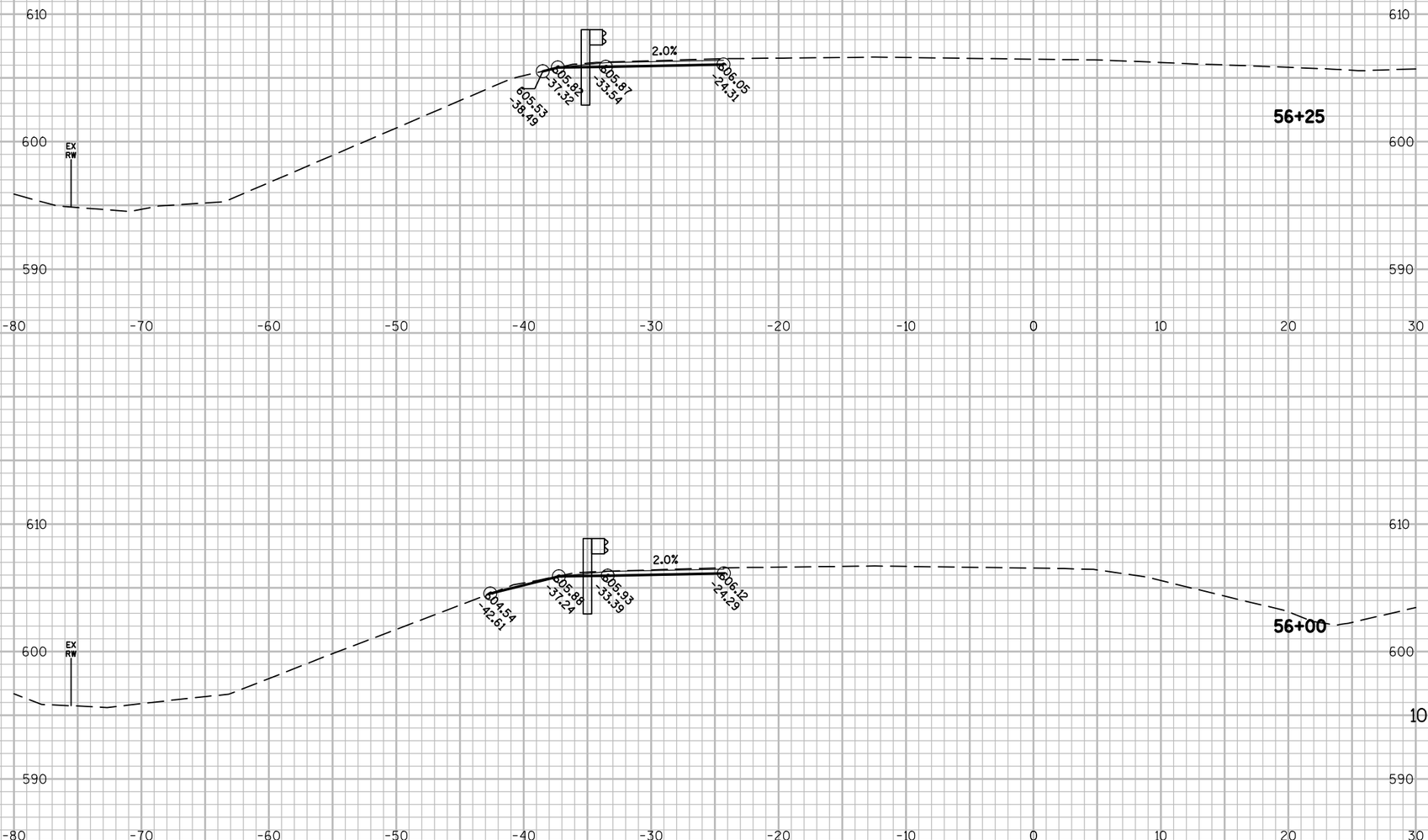
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 383	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090150_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

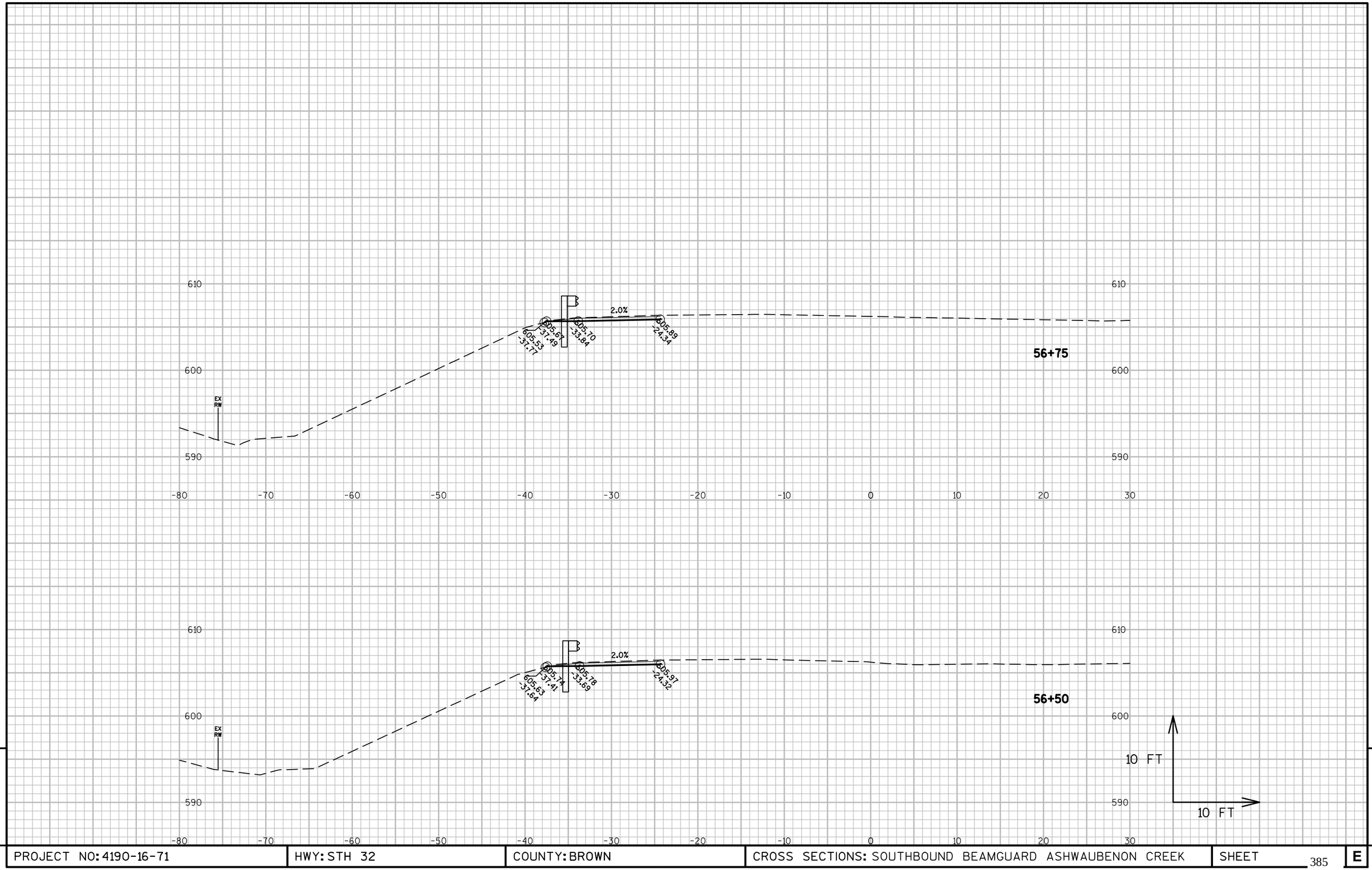
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 384	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090151_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

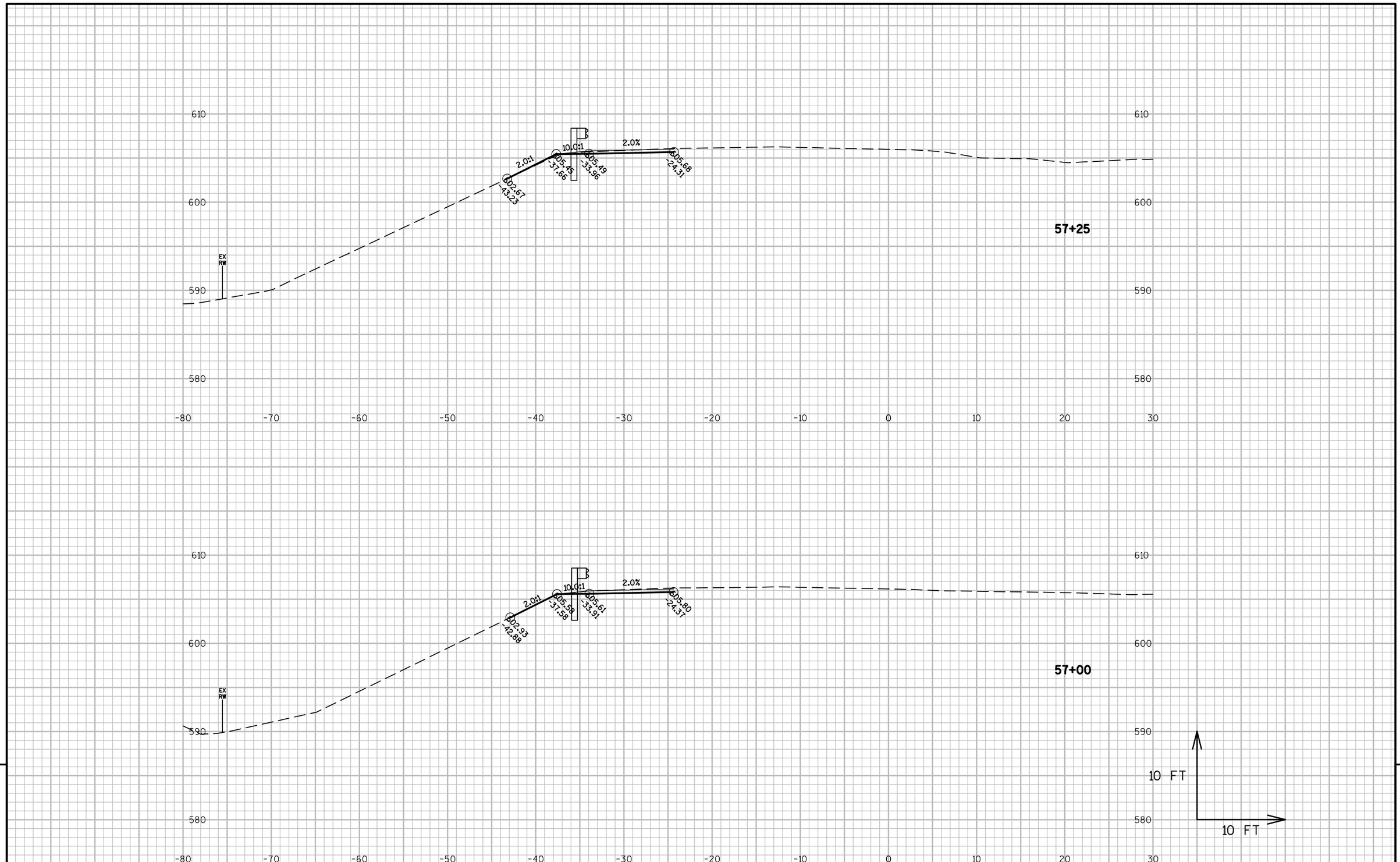
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 385	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090152_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

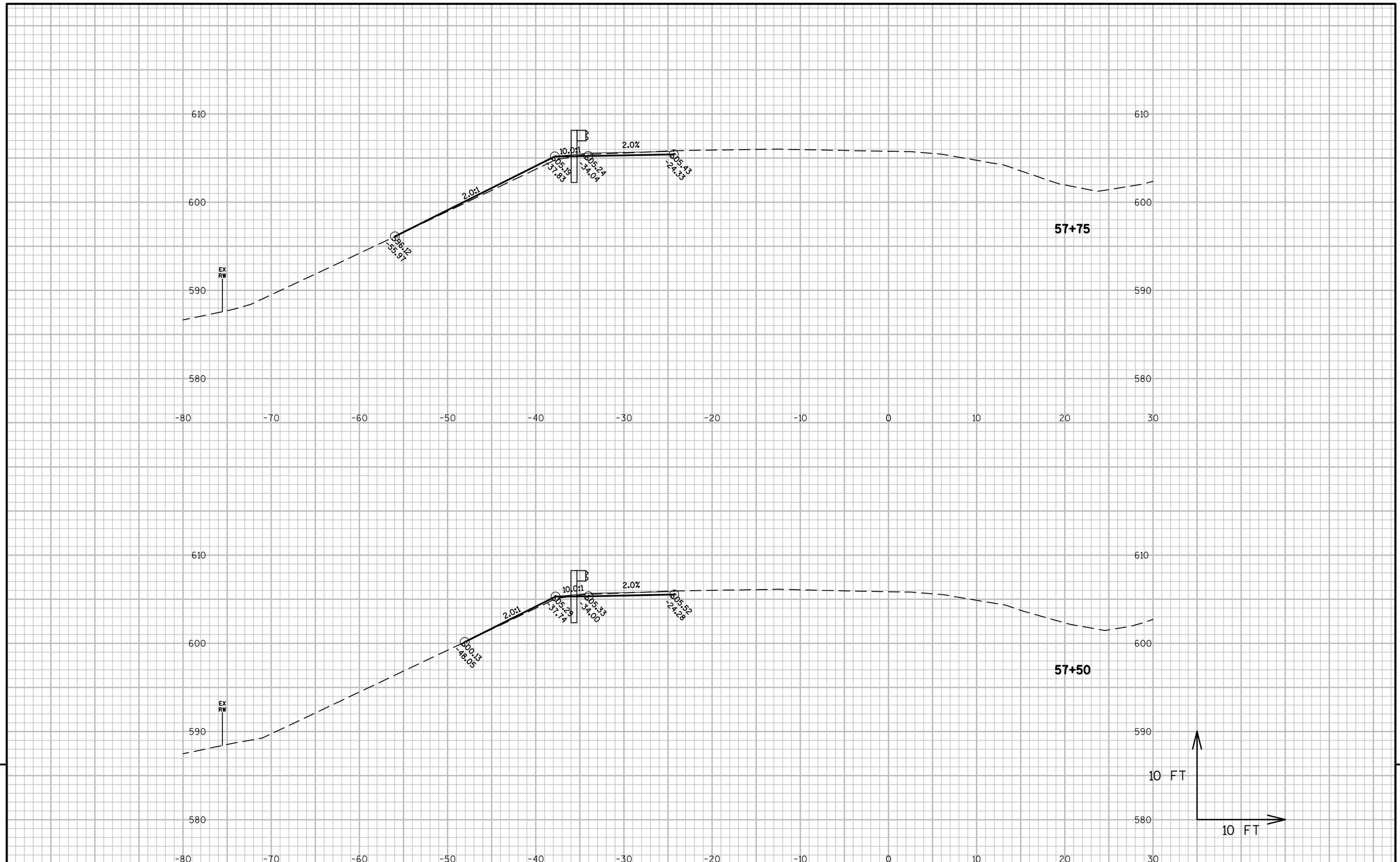
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 386	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090153_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

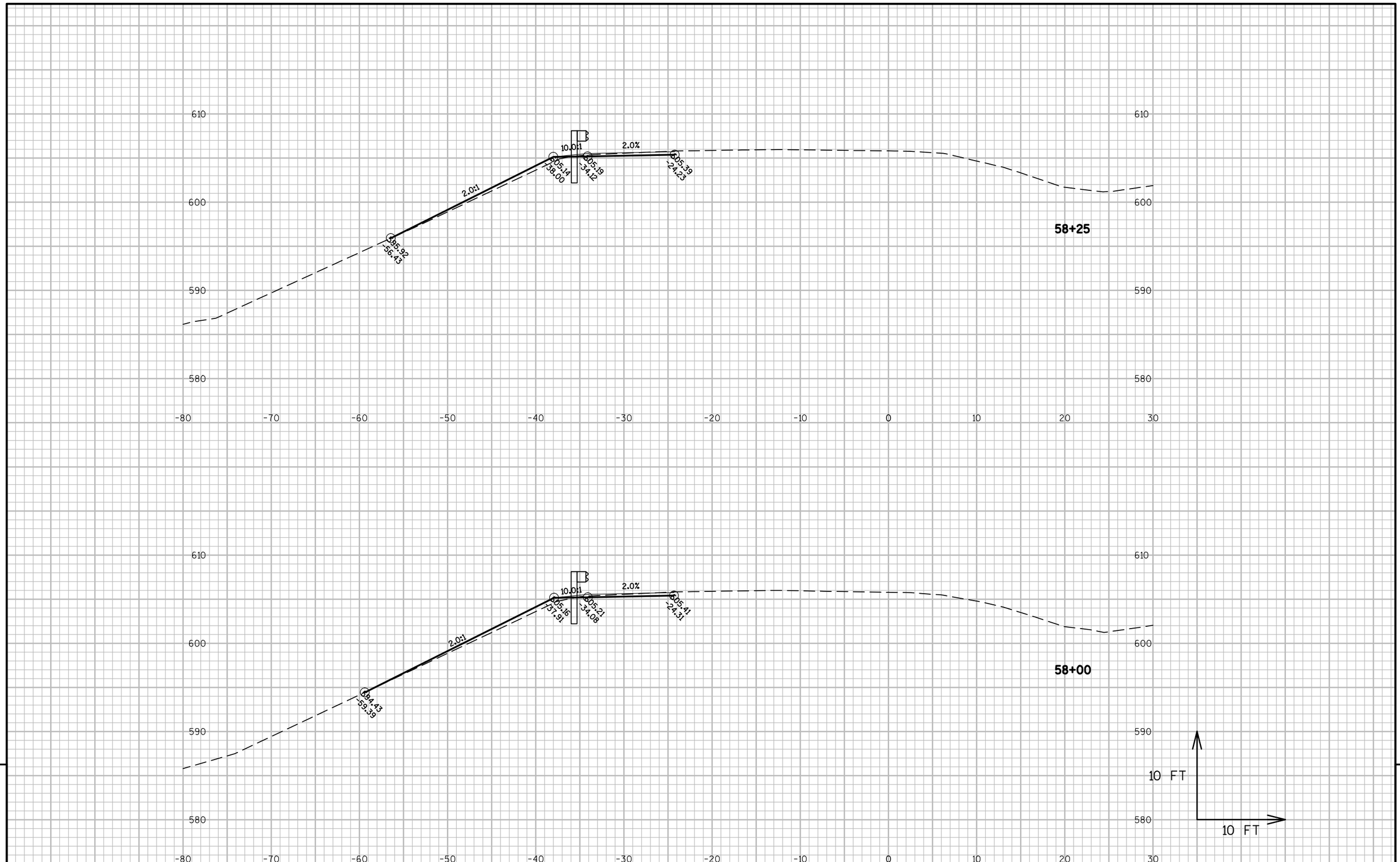


9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 387	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090154_XS
PLOT DATE : 1/7/2016 1:14 PM
PLOT BY : DUMS, ALEXANDER T PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



9

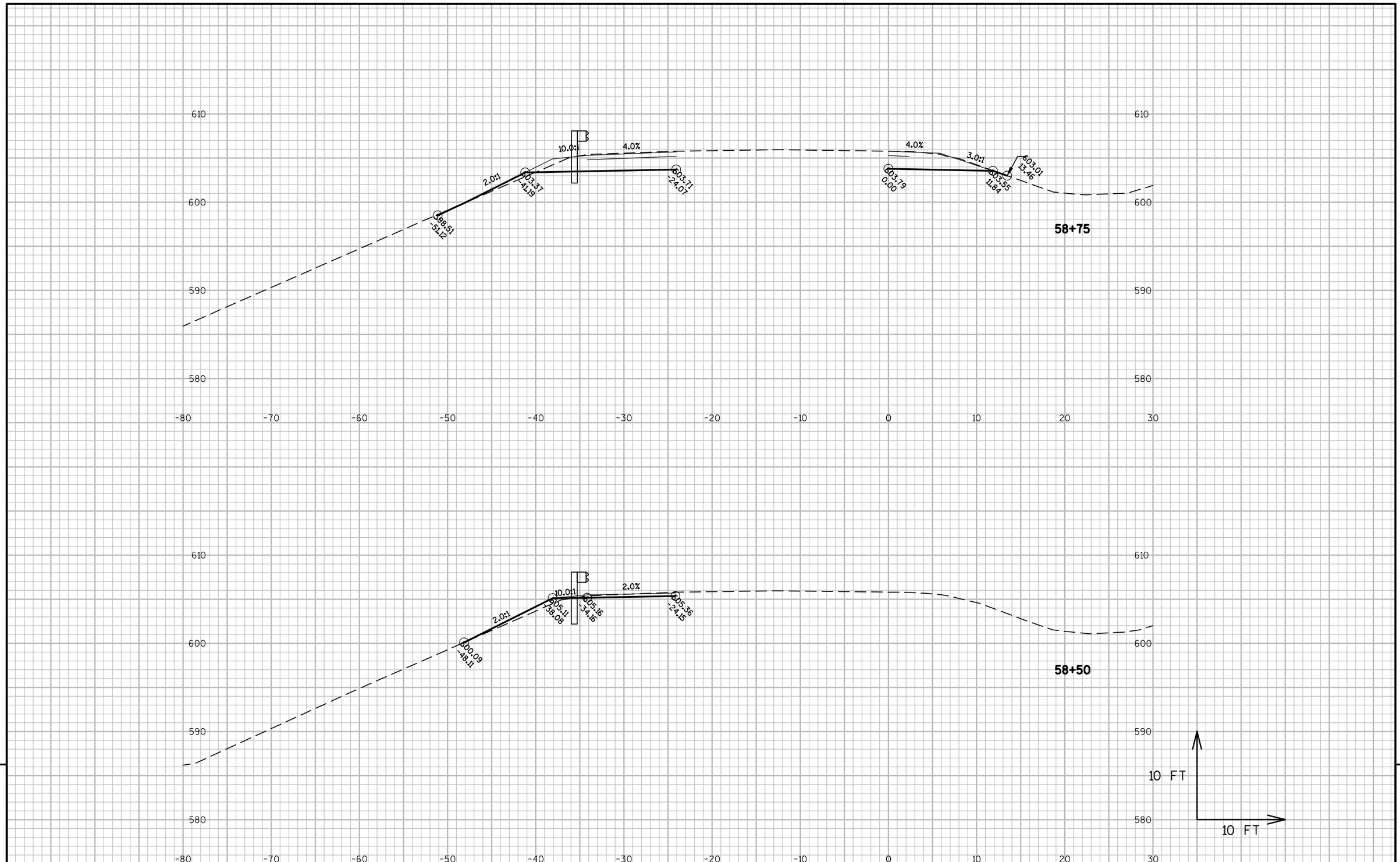
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 388	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090155_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

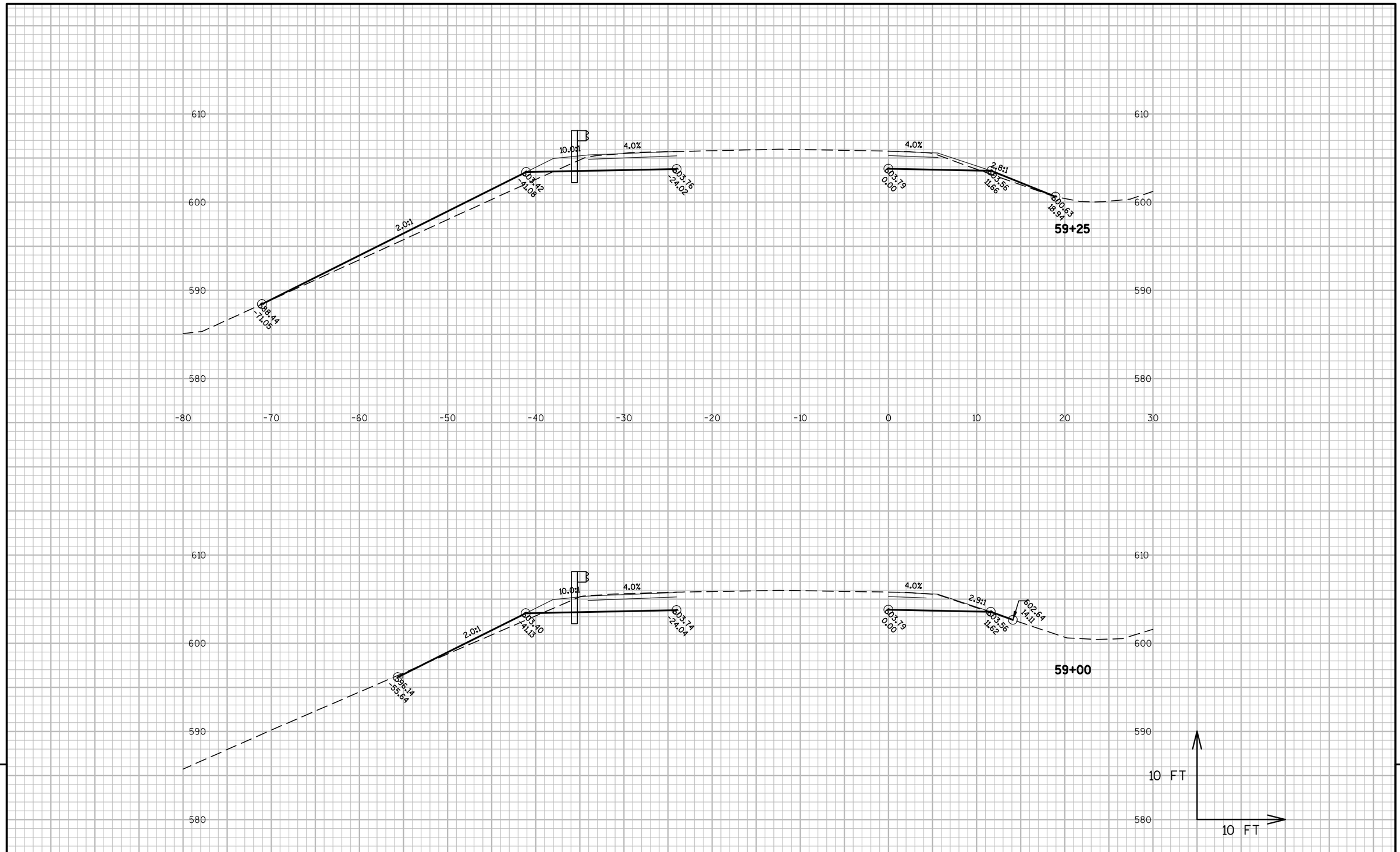
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 389	E

9

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090156_XS

PLOT DATE : 1/7/2016 1:14 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

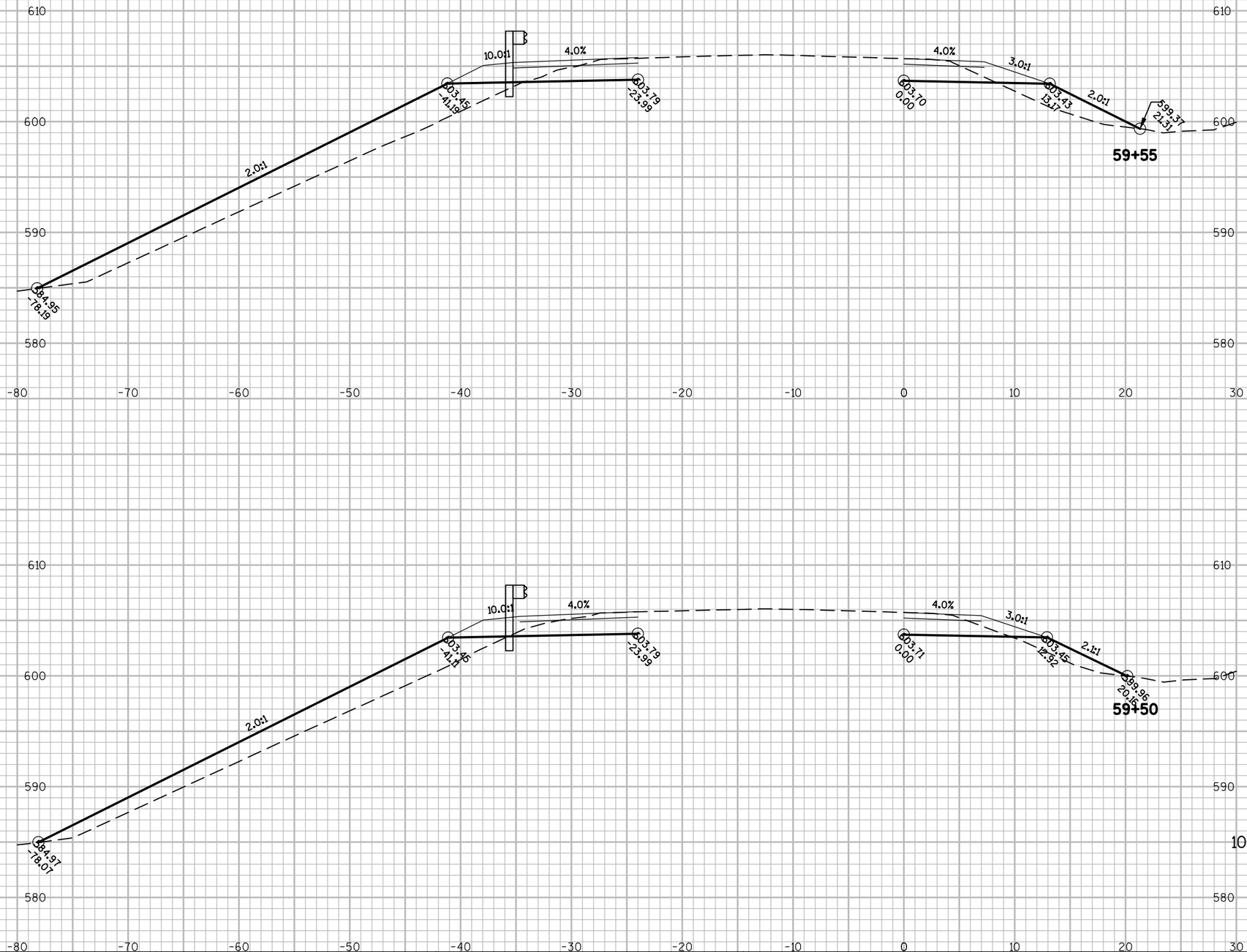
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 390	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090157_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

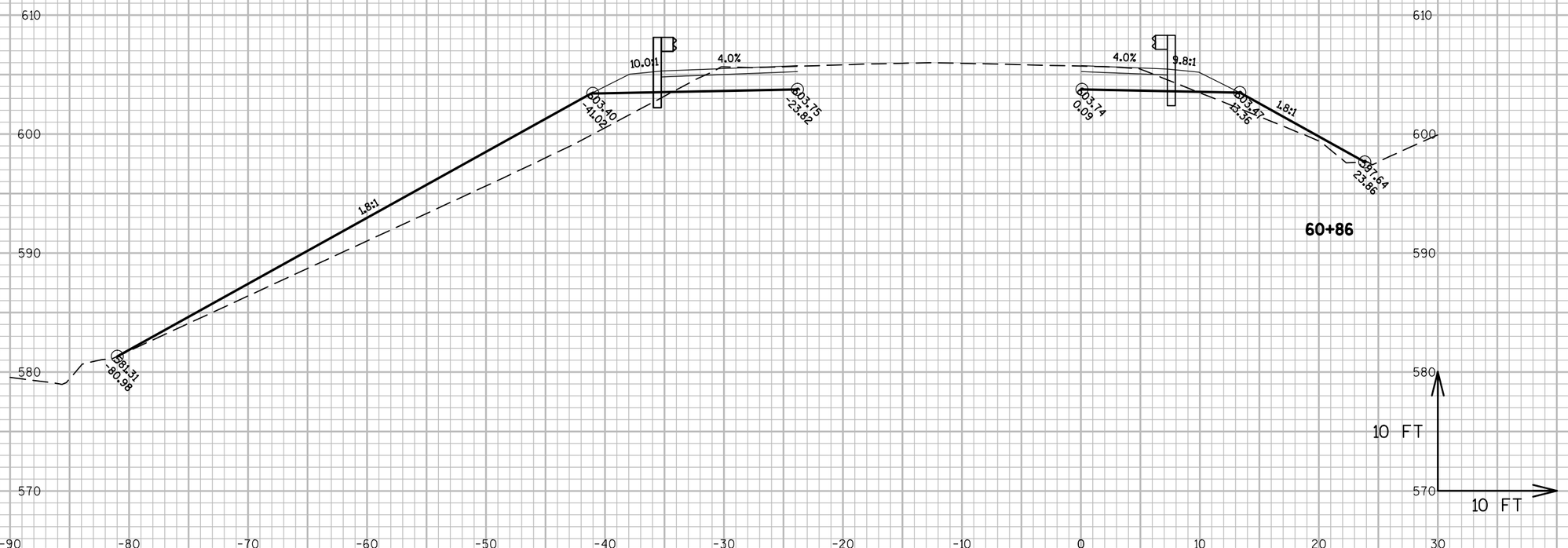
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 391	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090158_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

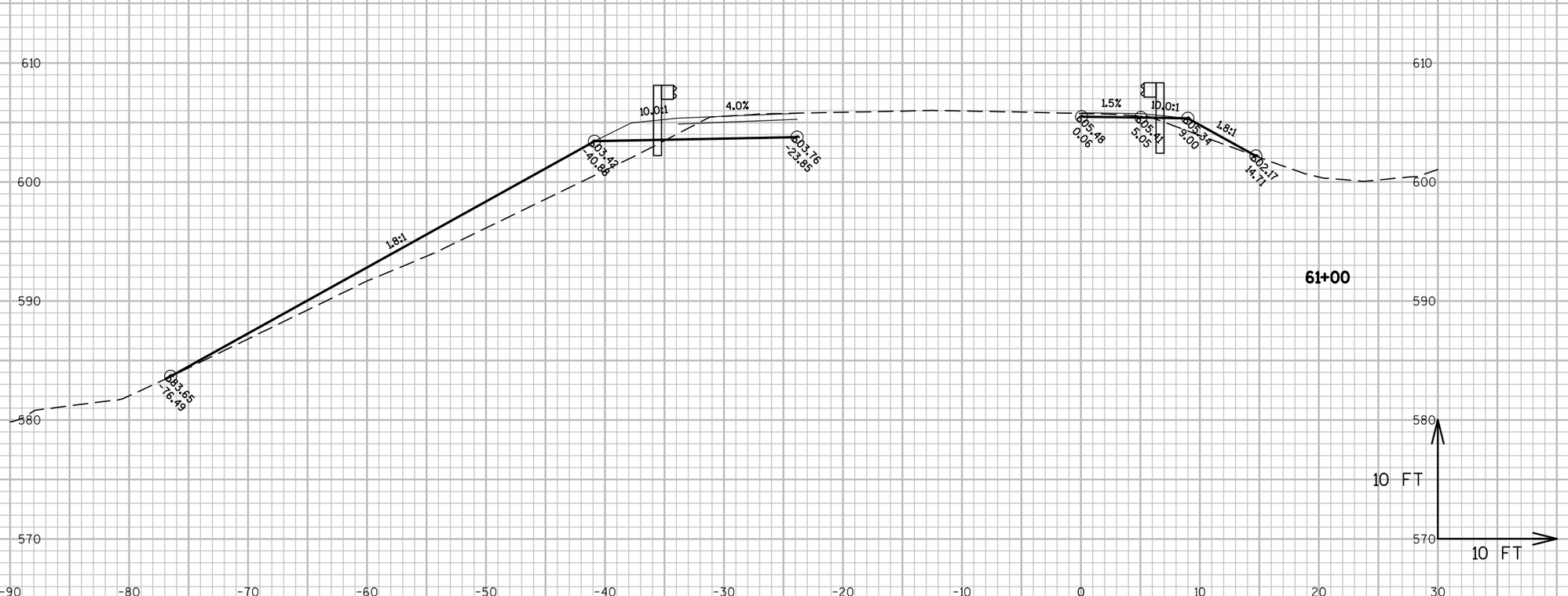
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 392	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090159_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

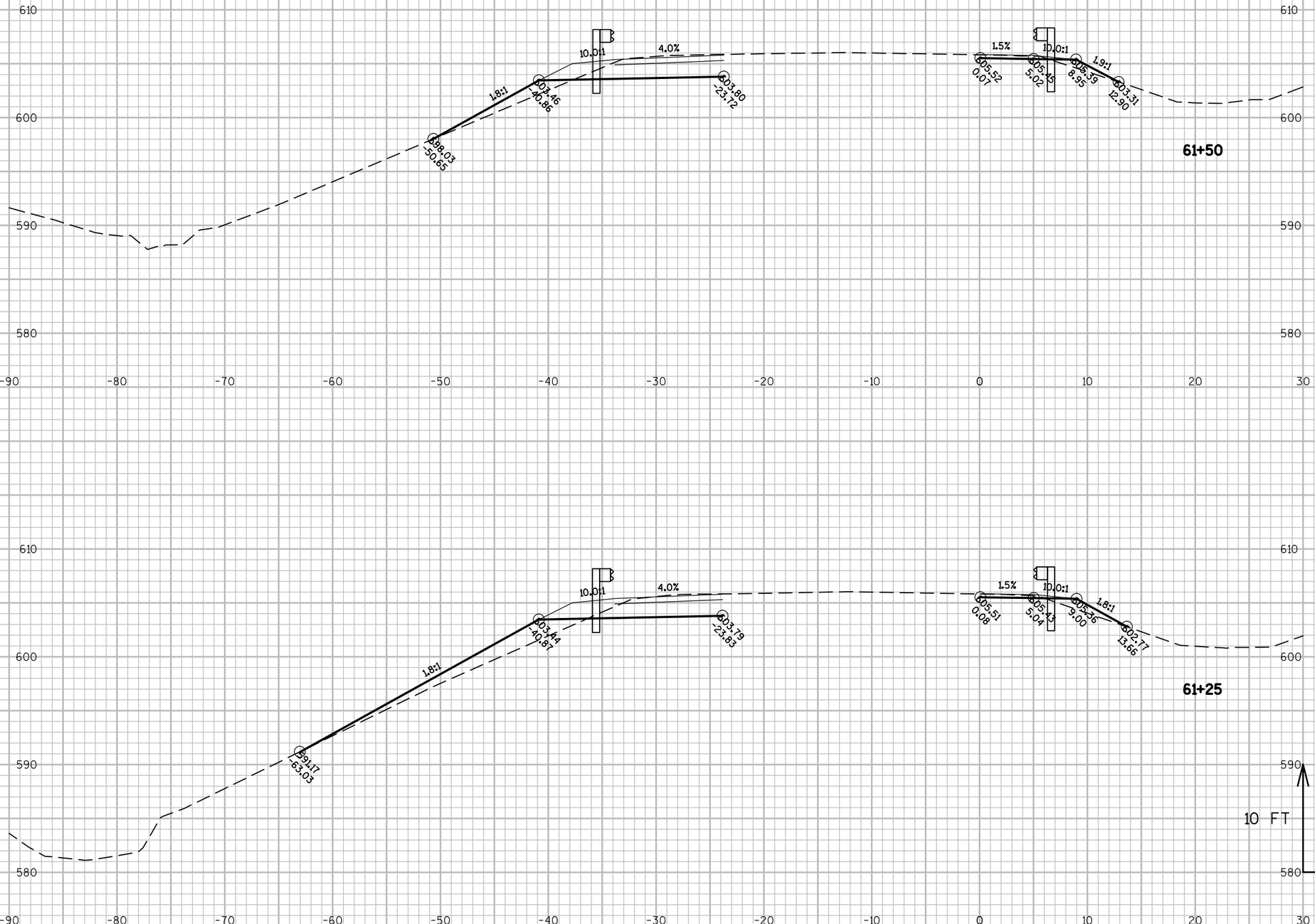
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 393	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090160_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

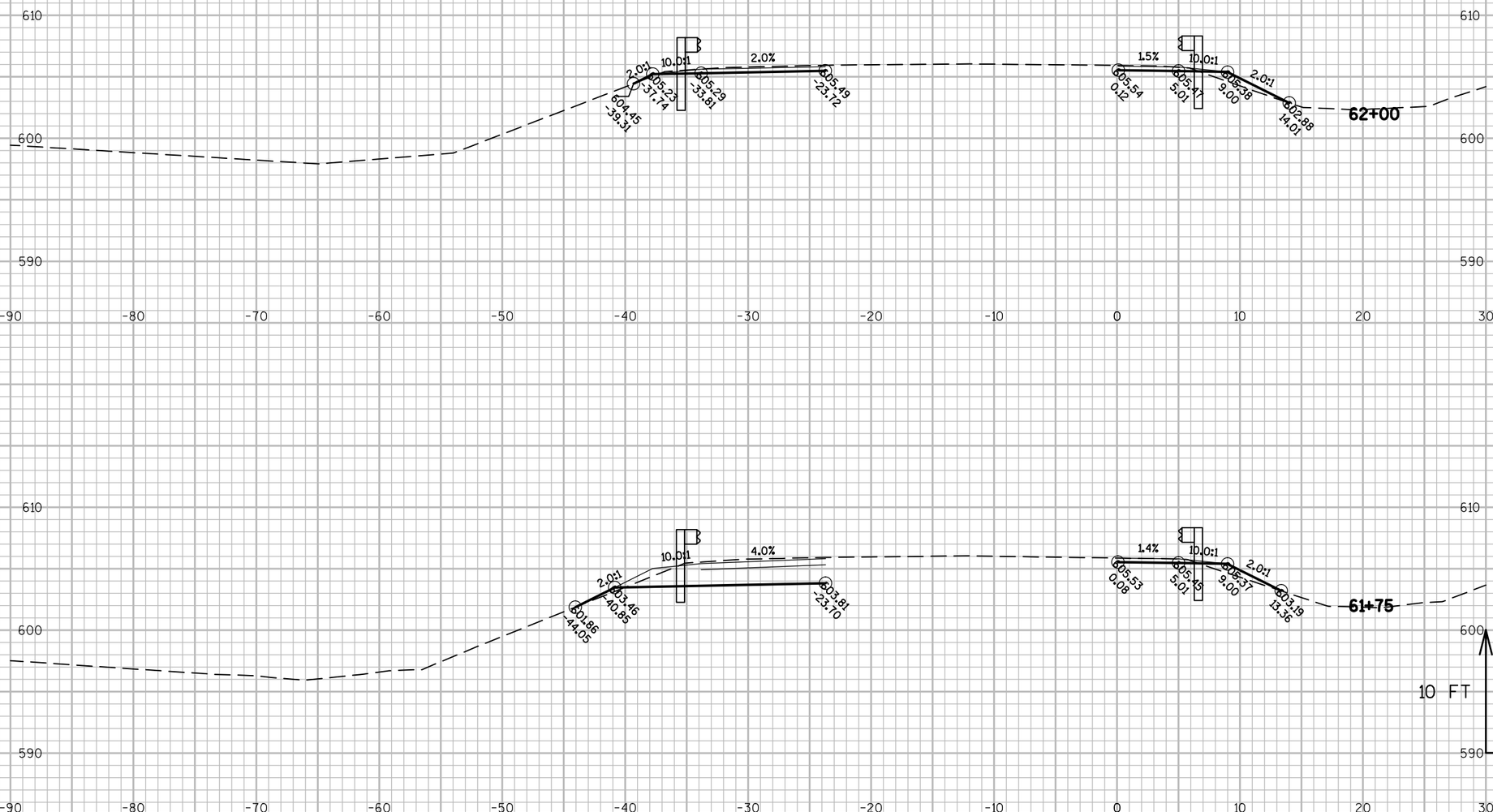
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 394 E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090161_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

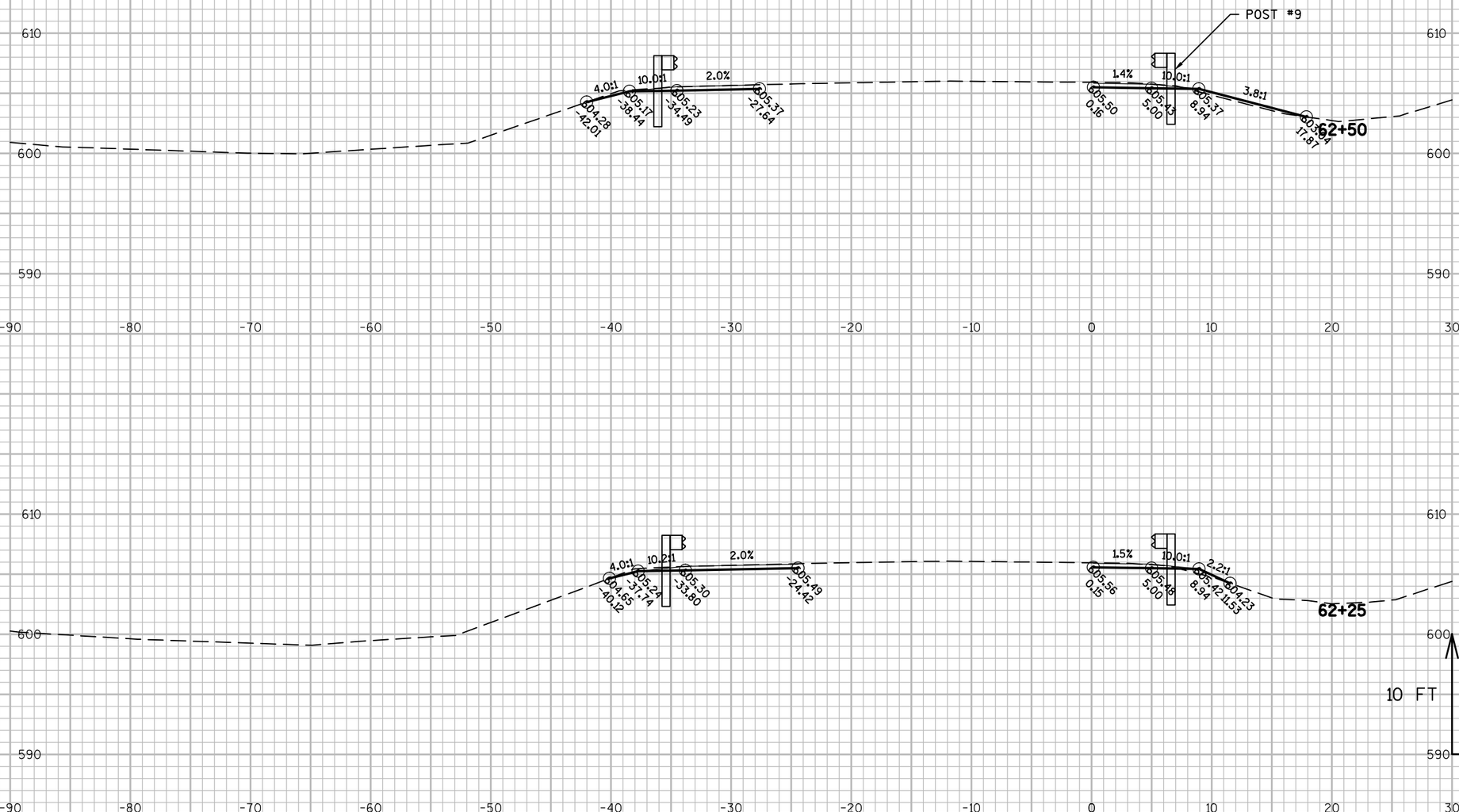


9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 395	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090162_XS
PLOT DATE : 1/7/2016 1:15 PM
PLOT BY : DUMS, ALEXANDER T PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



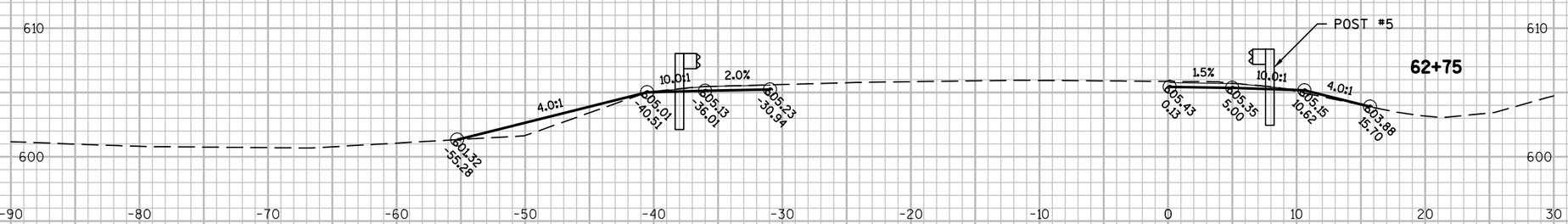
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 396	E

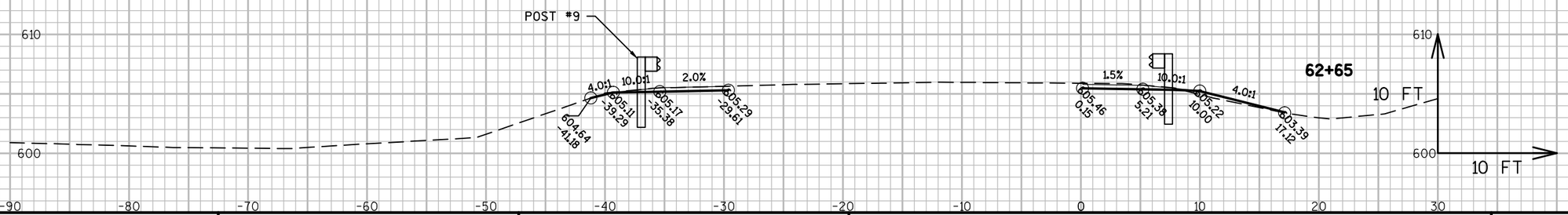
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090163_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49







9

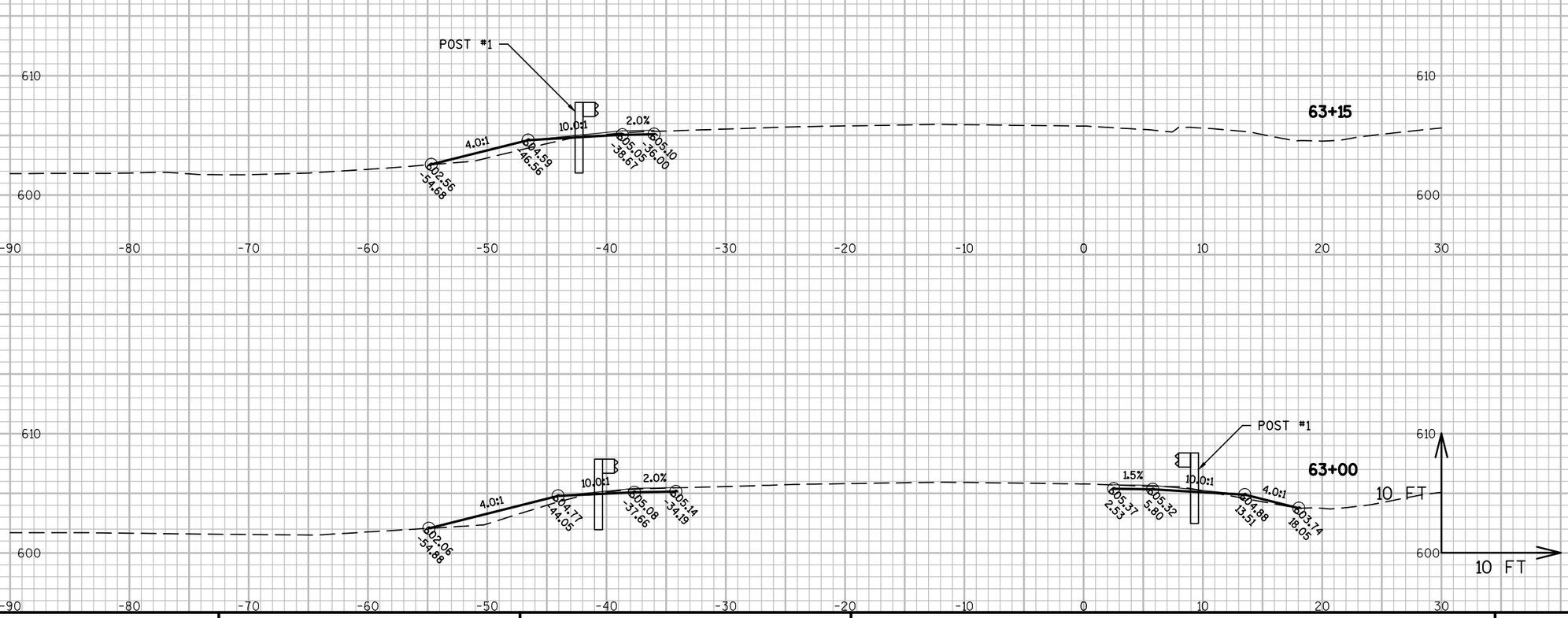
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 397	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090164_XS

PLOT DATE : 1/7/2016 1:15 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



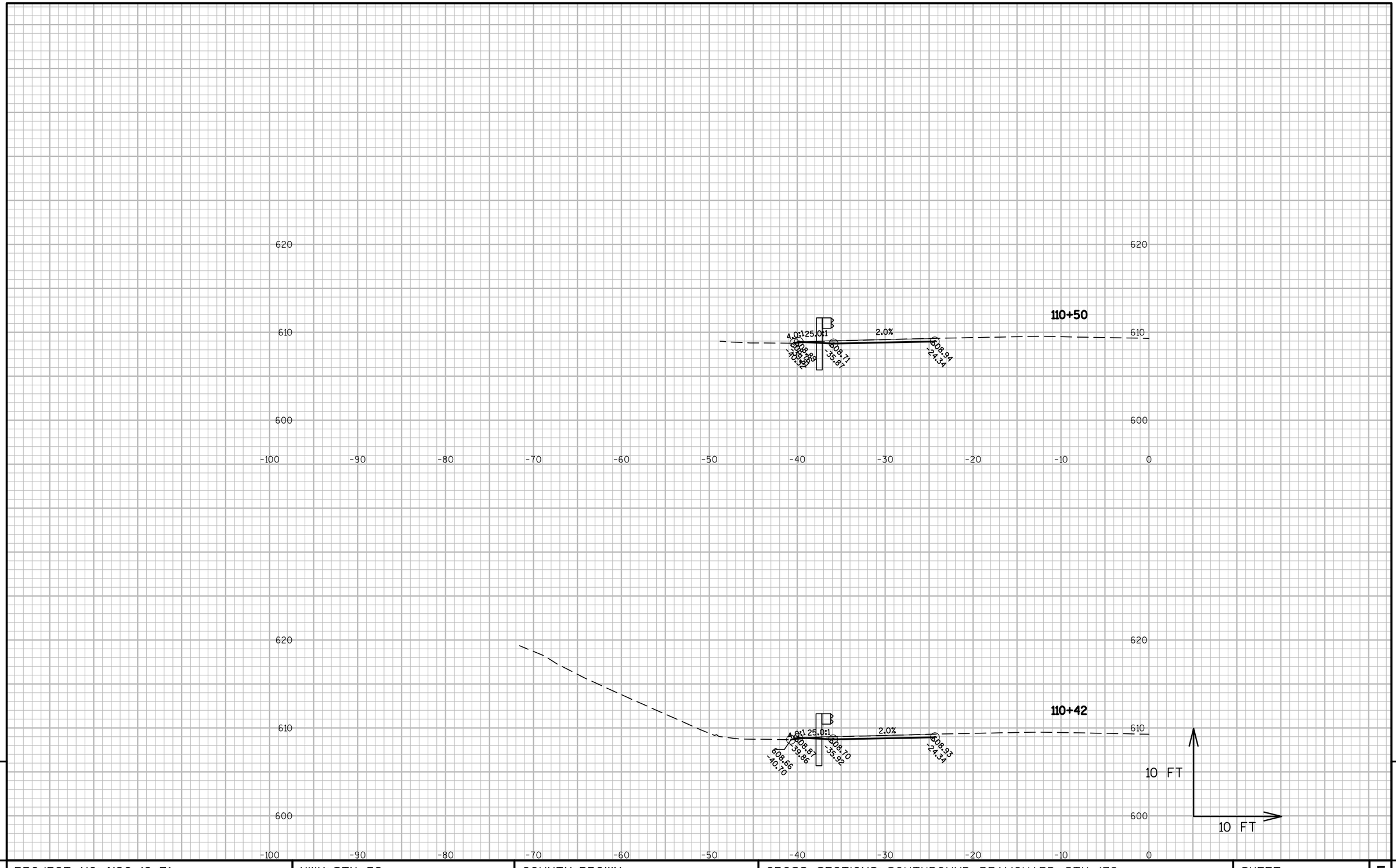
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD ASHWAUBENON CREEK	SHEET 398	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090165_XS

PLOT DATE : 1/7/2016 1:16 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



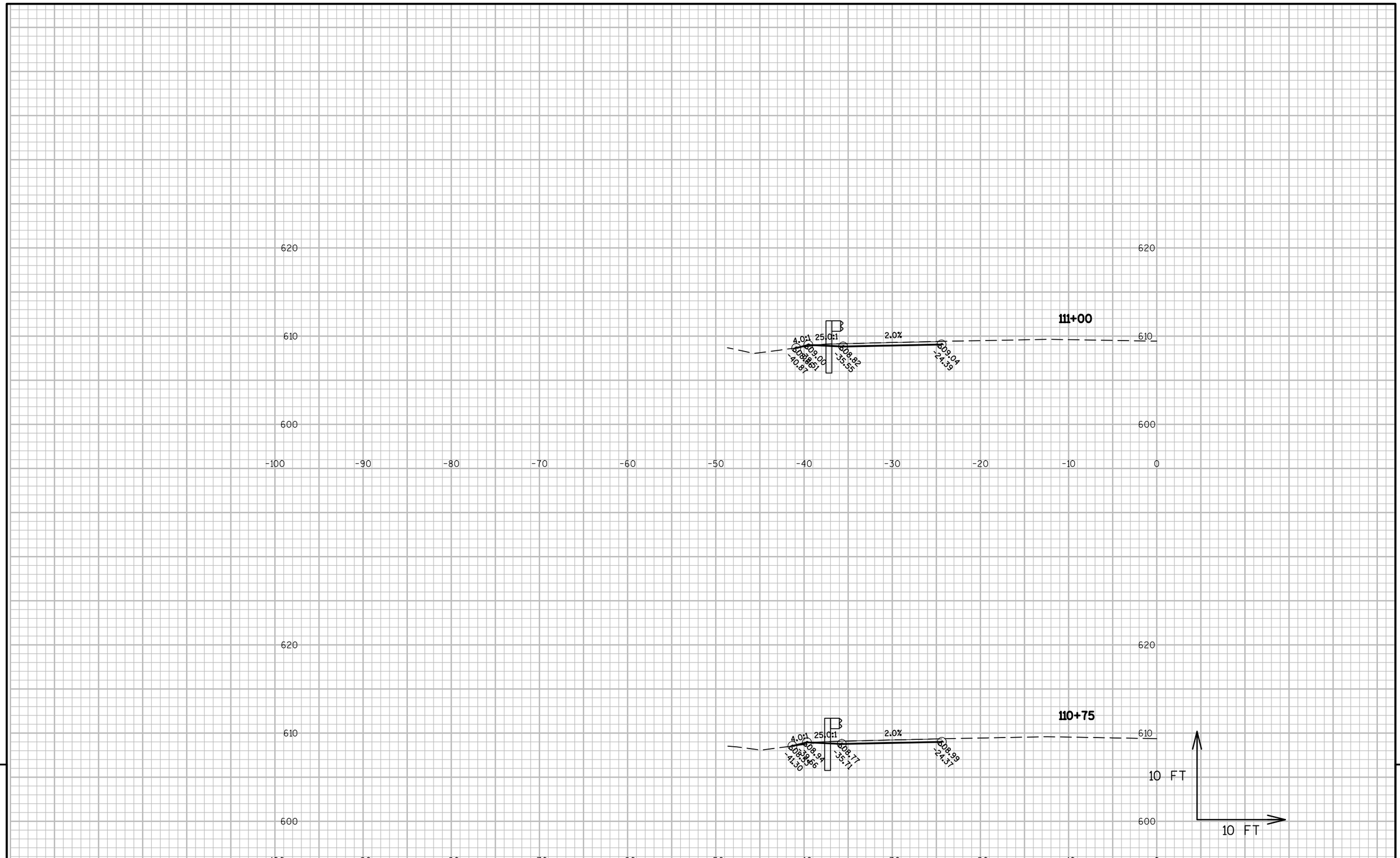
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 399	E

9

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090168_XS

PLOT DATE : 1/7/2016 1:16 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

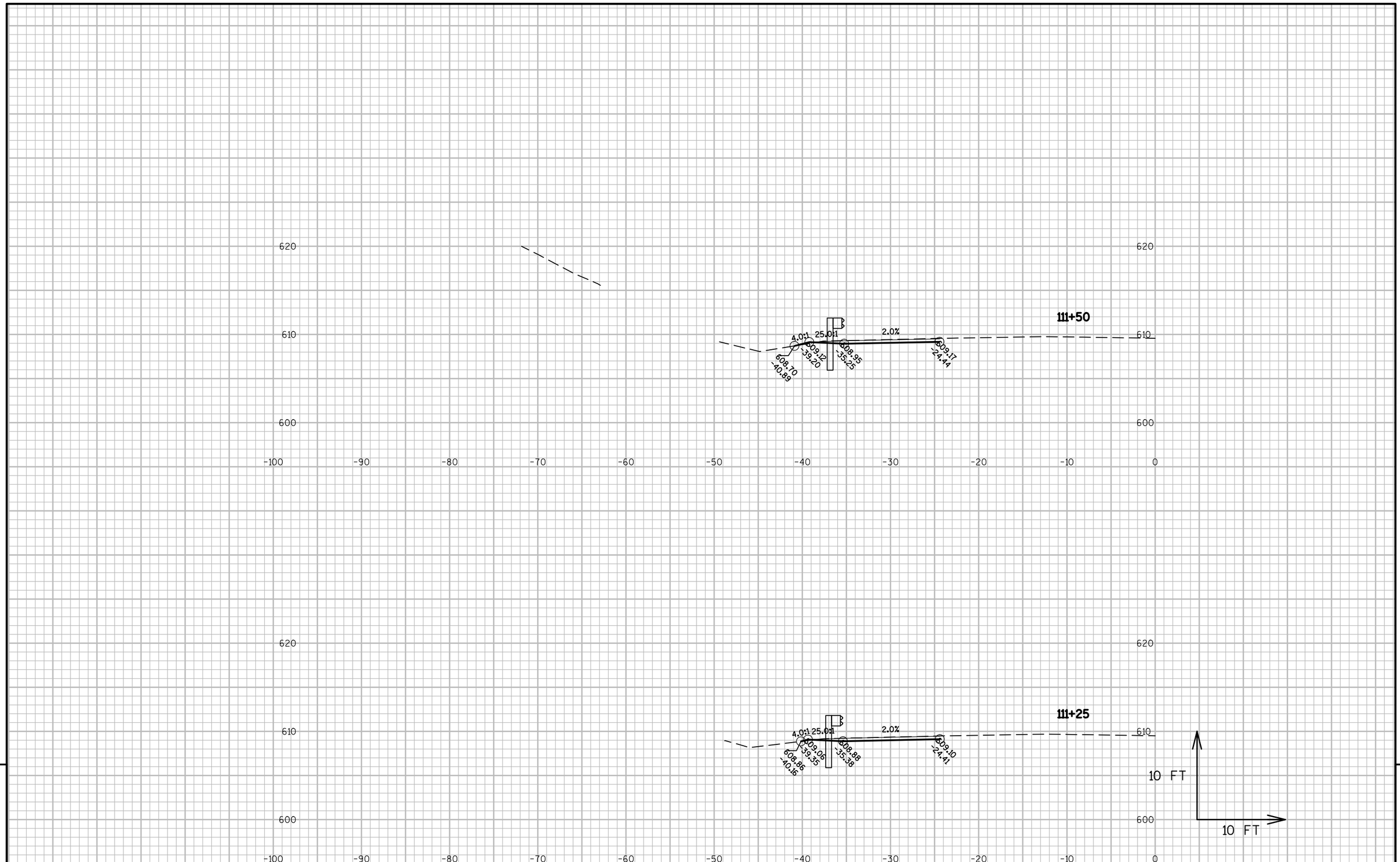
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 400	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090169_XS

PLOT DATE : 1/7/2016 1:16 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



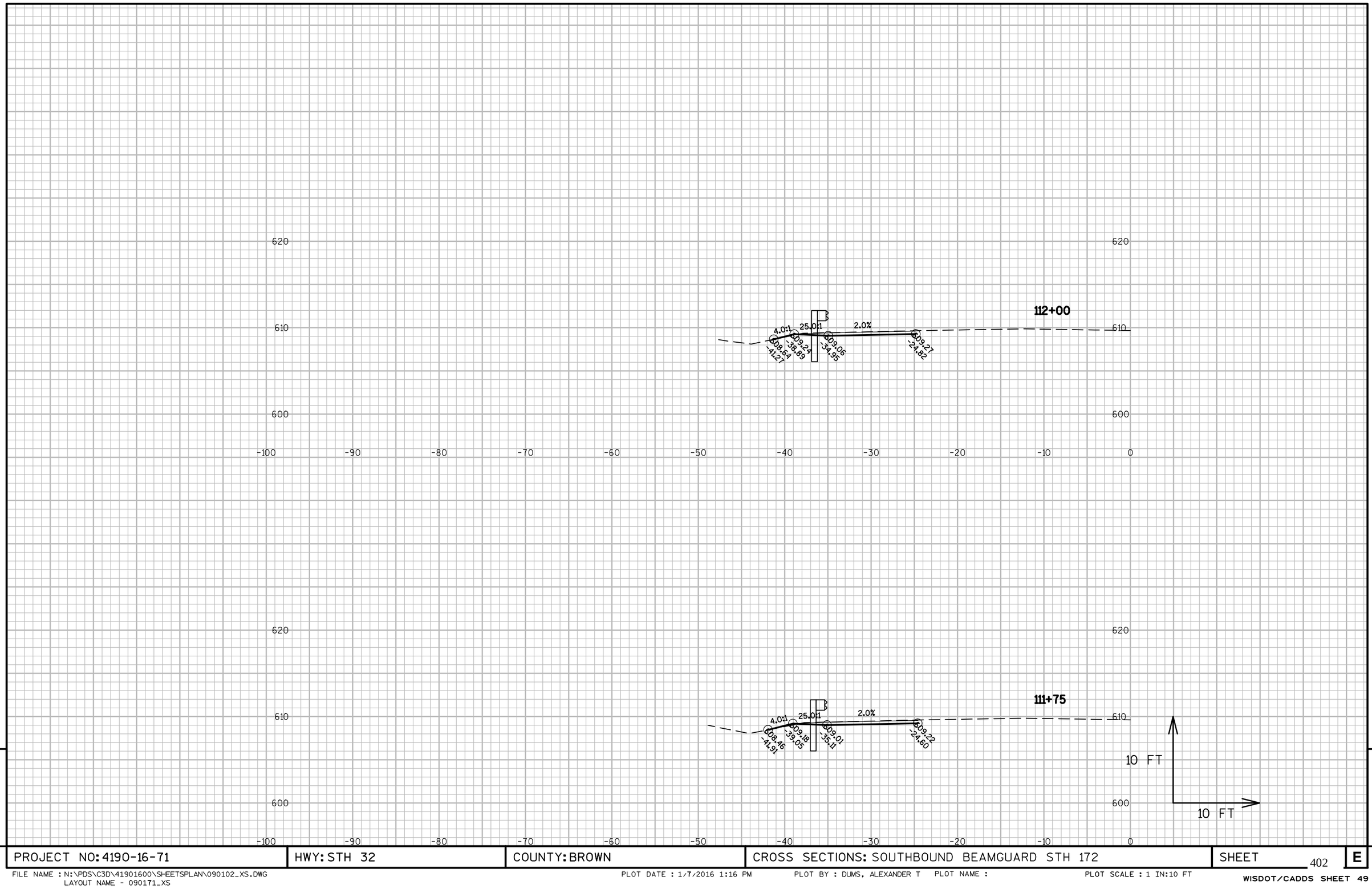
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 401	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090170_XS

PLOT DATE : 1/7/2016 1:16 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

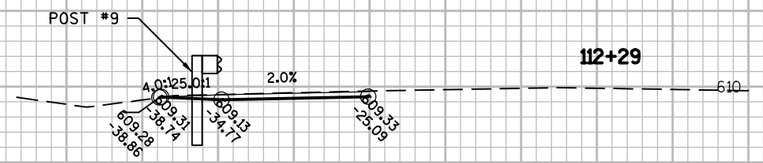
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 402	E

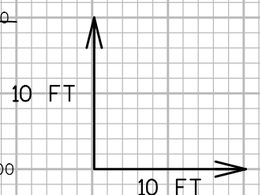
FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090171_XS

PLOT DATE : 1/7/2016 1:16 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49







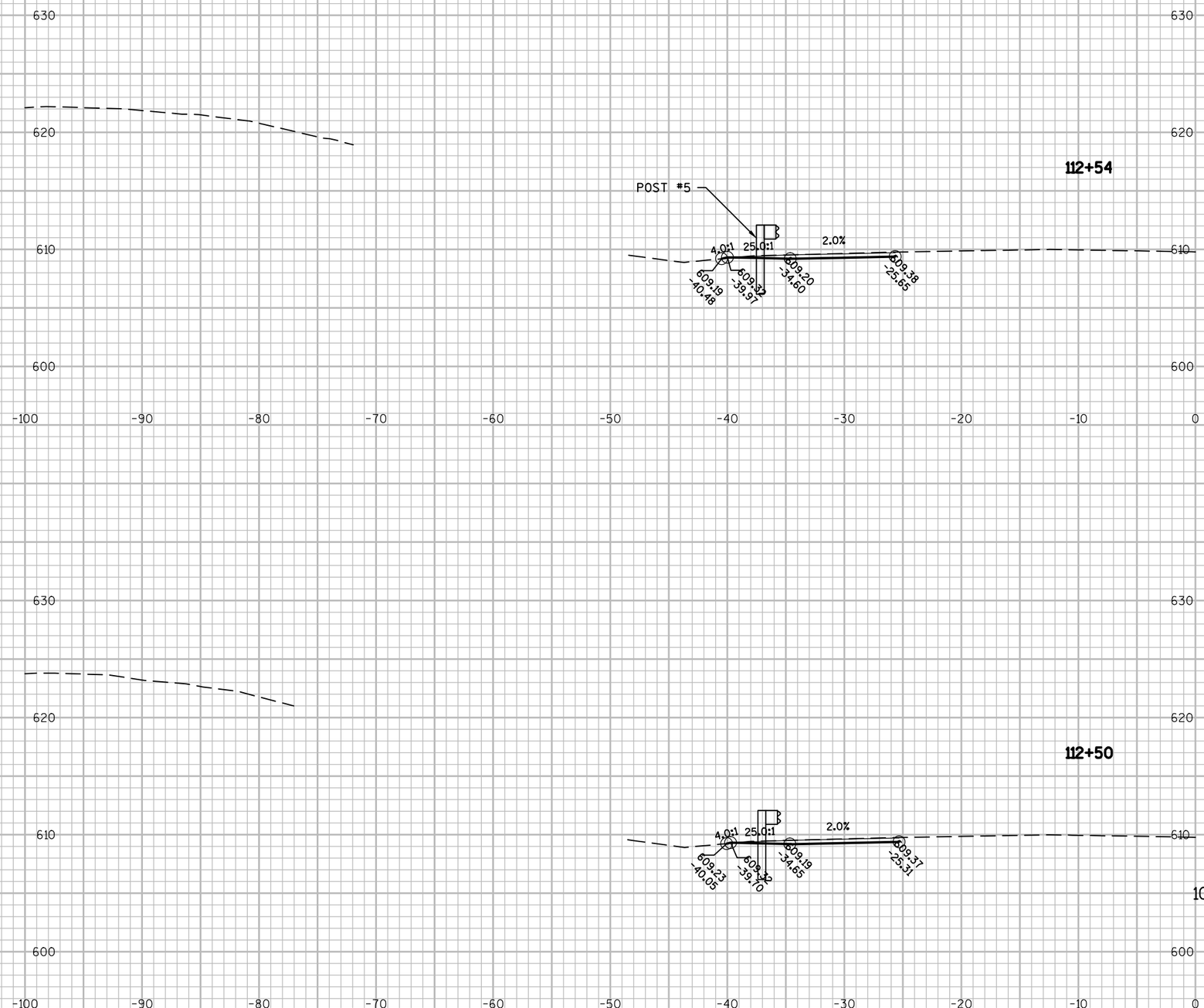
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 403	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090172_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

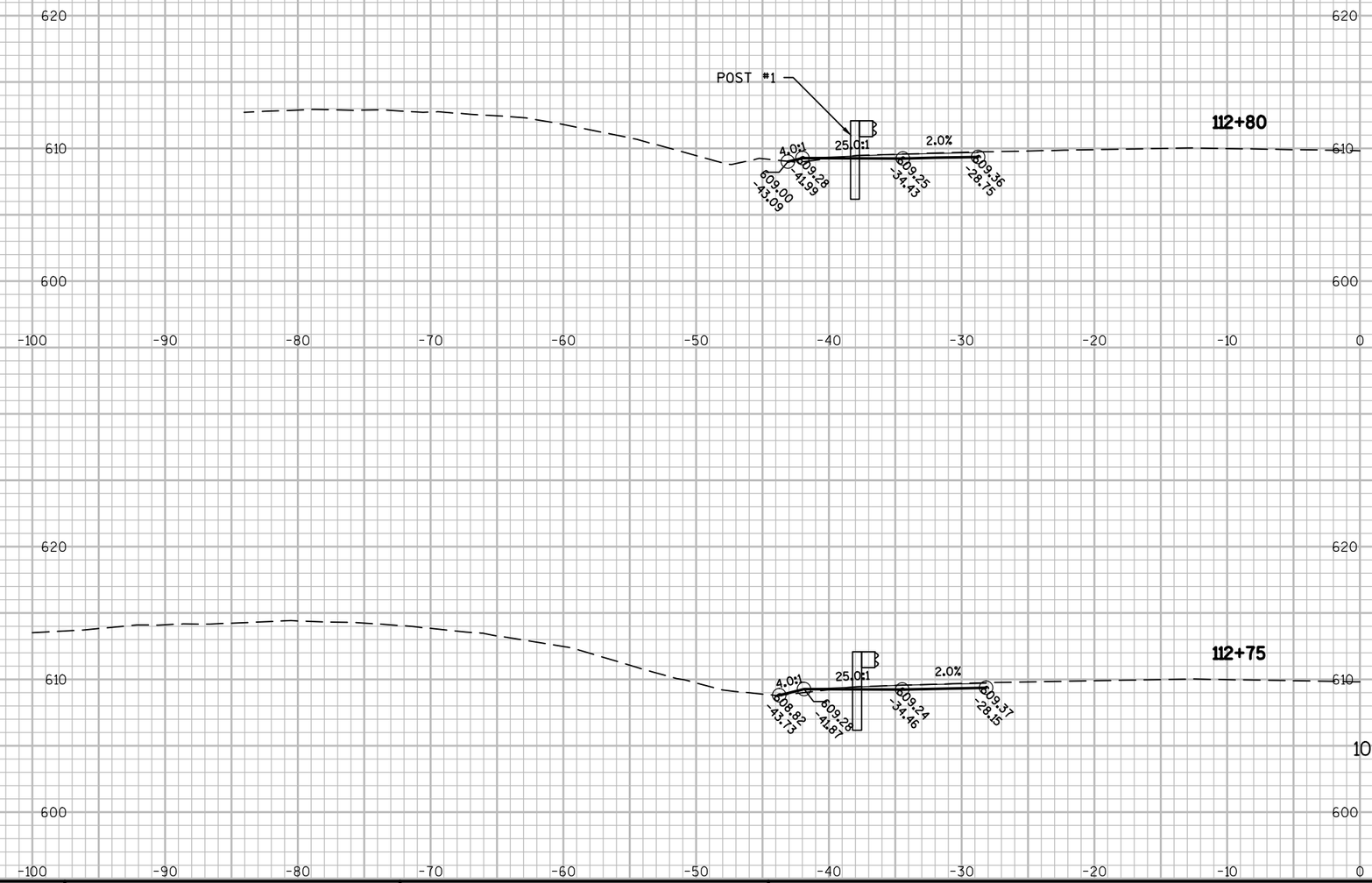
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 404	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090173_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



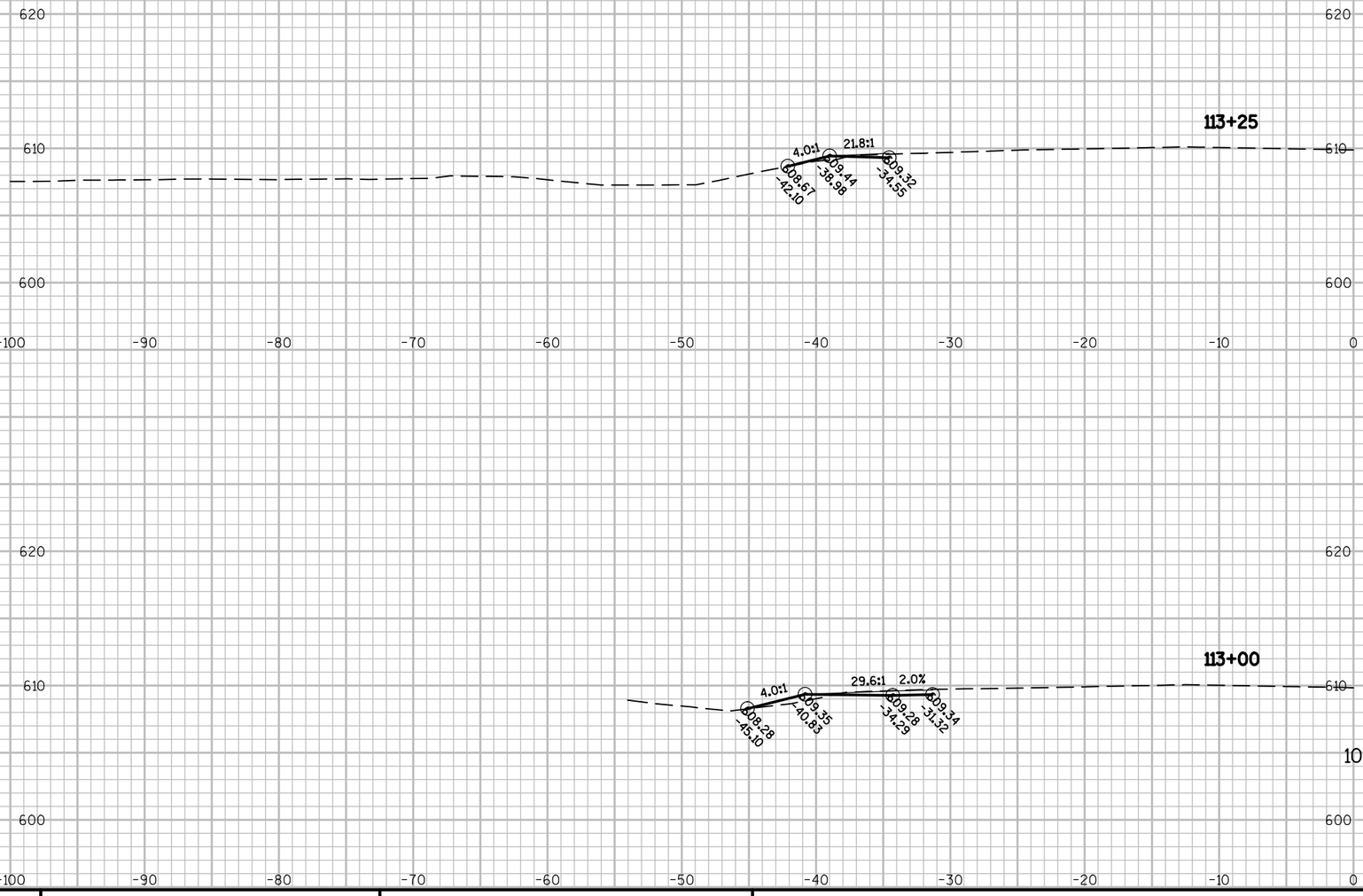
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 405	E

9

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090174_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



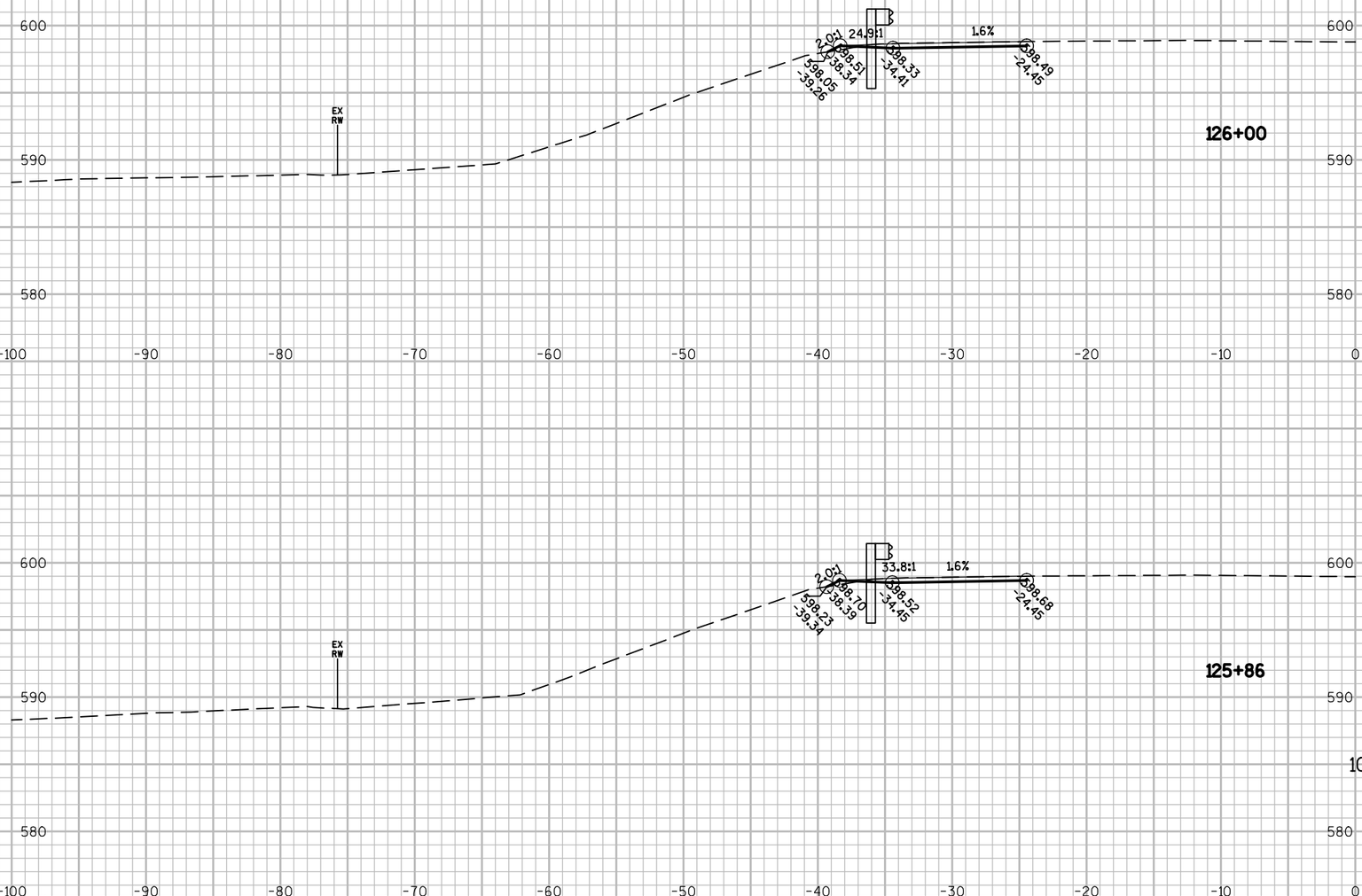
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD STH 172	SHEET 406	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090175_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

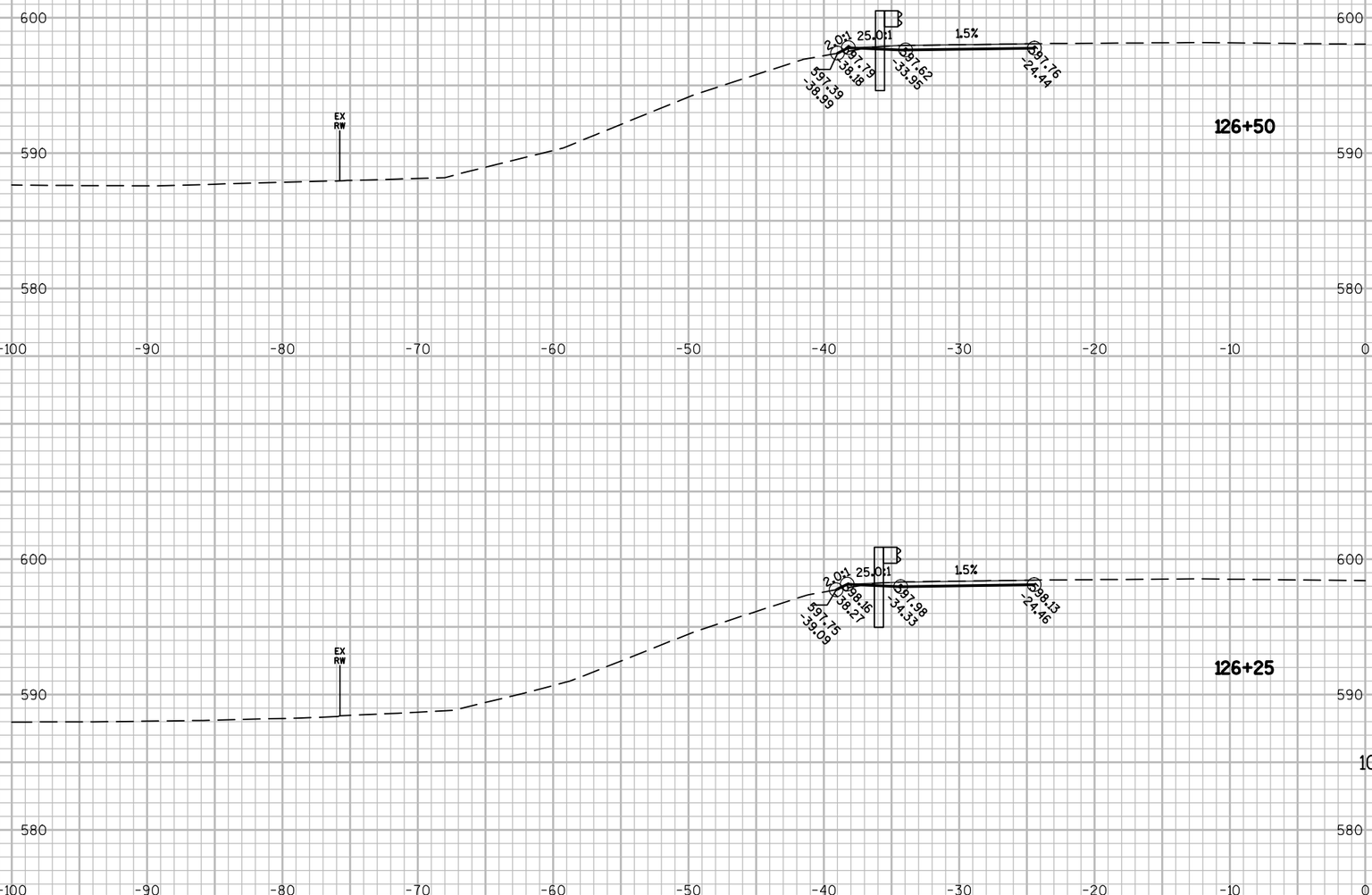
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 407	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090176_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

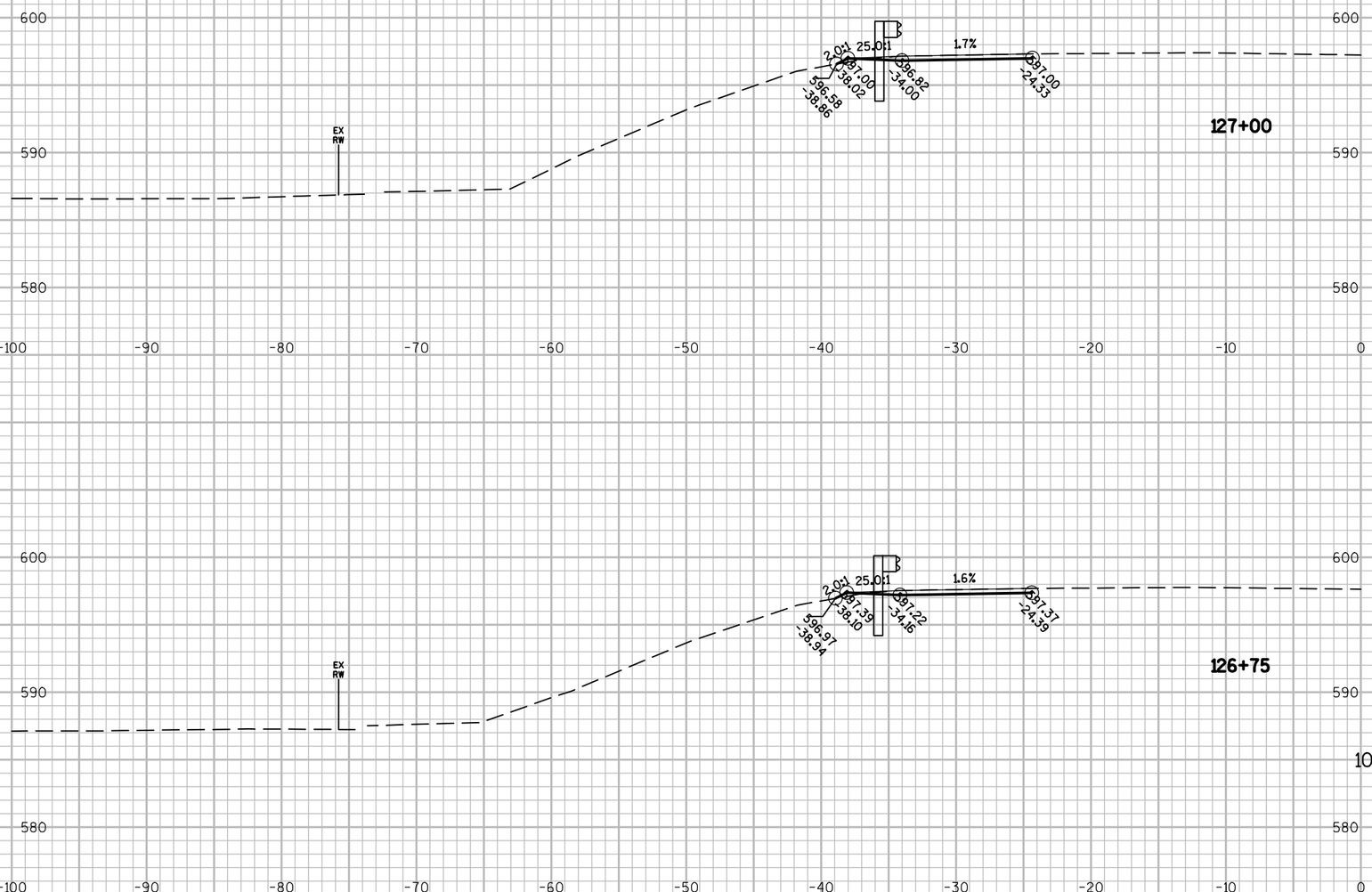
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 408	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090177_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

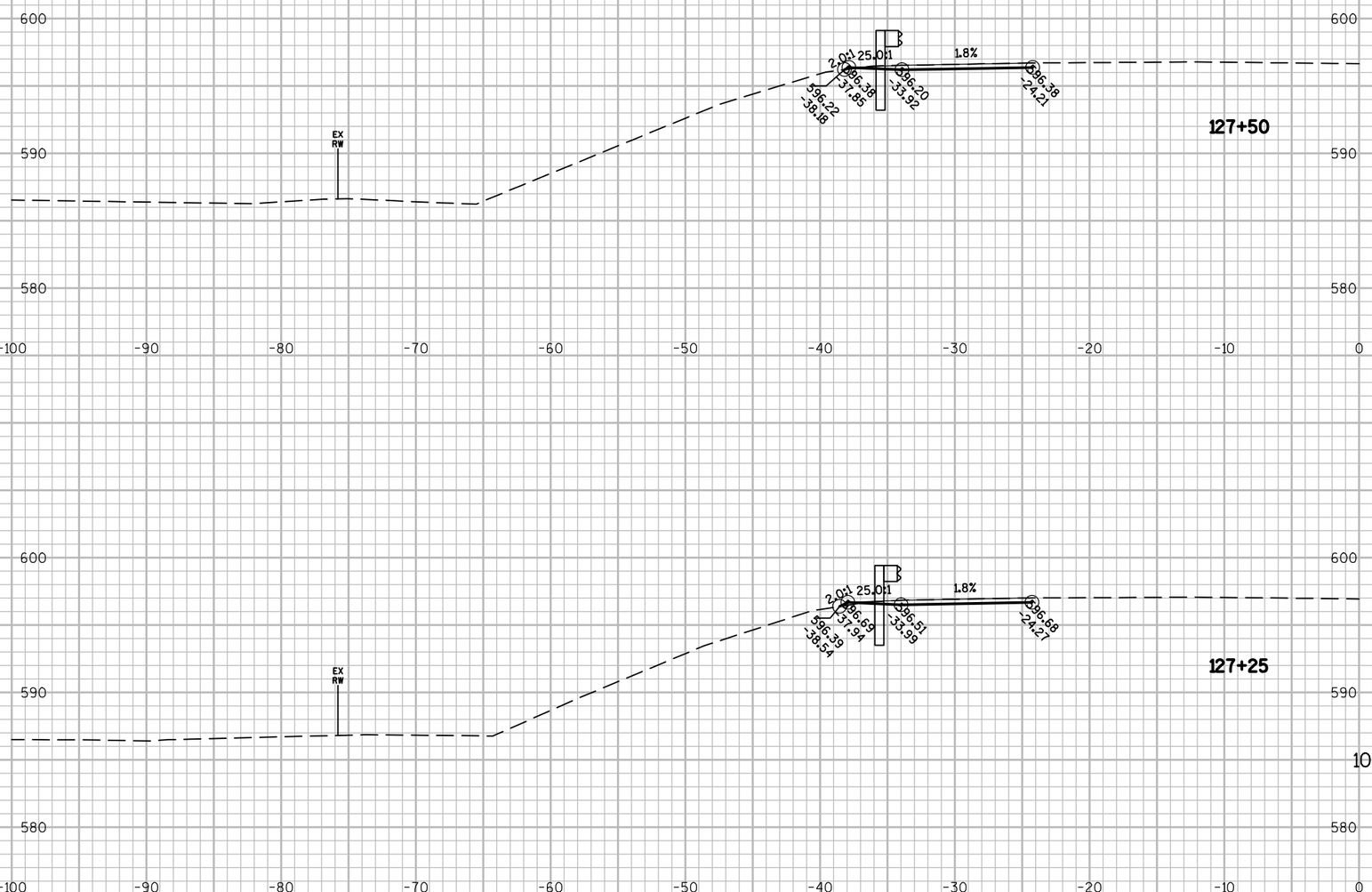


PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 409	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090178_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

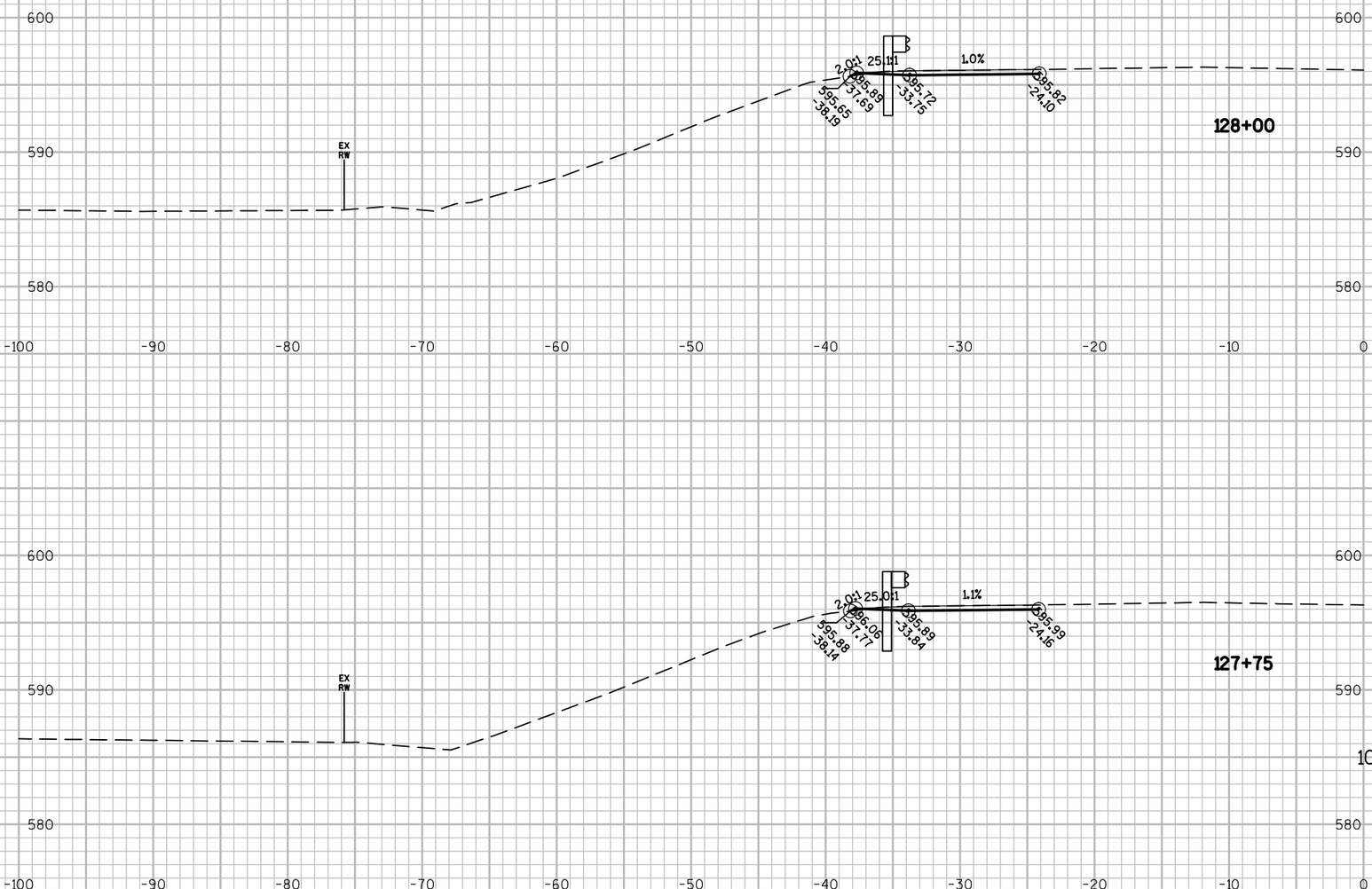
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 410	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090179_XS

PLOT DATE : 1/7/2016 1:17 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

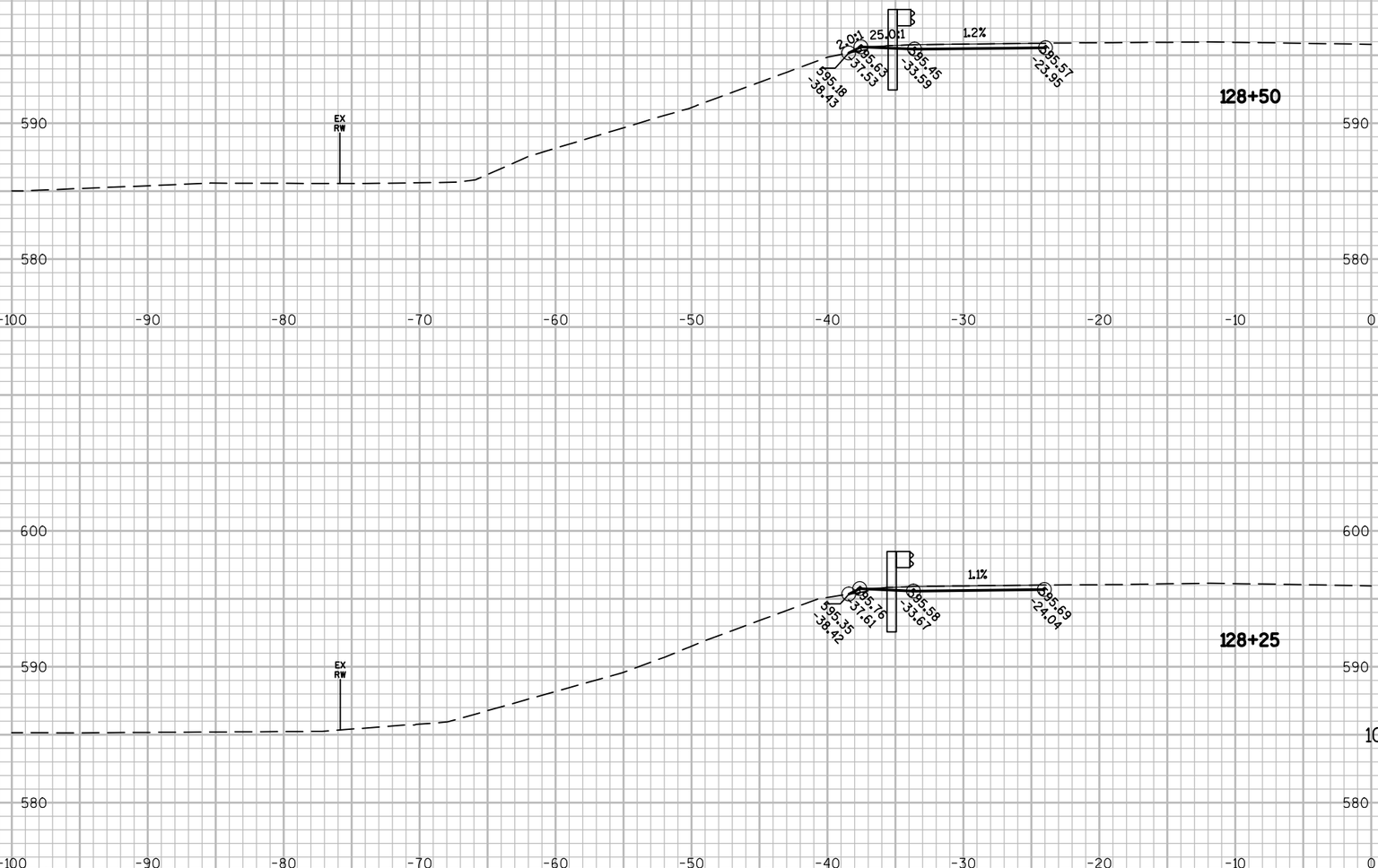
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 411	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090180_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

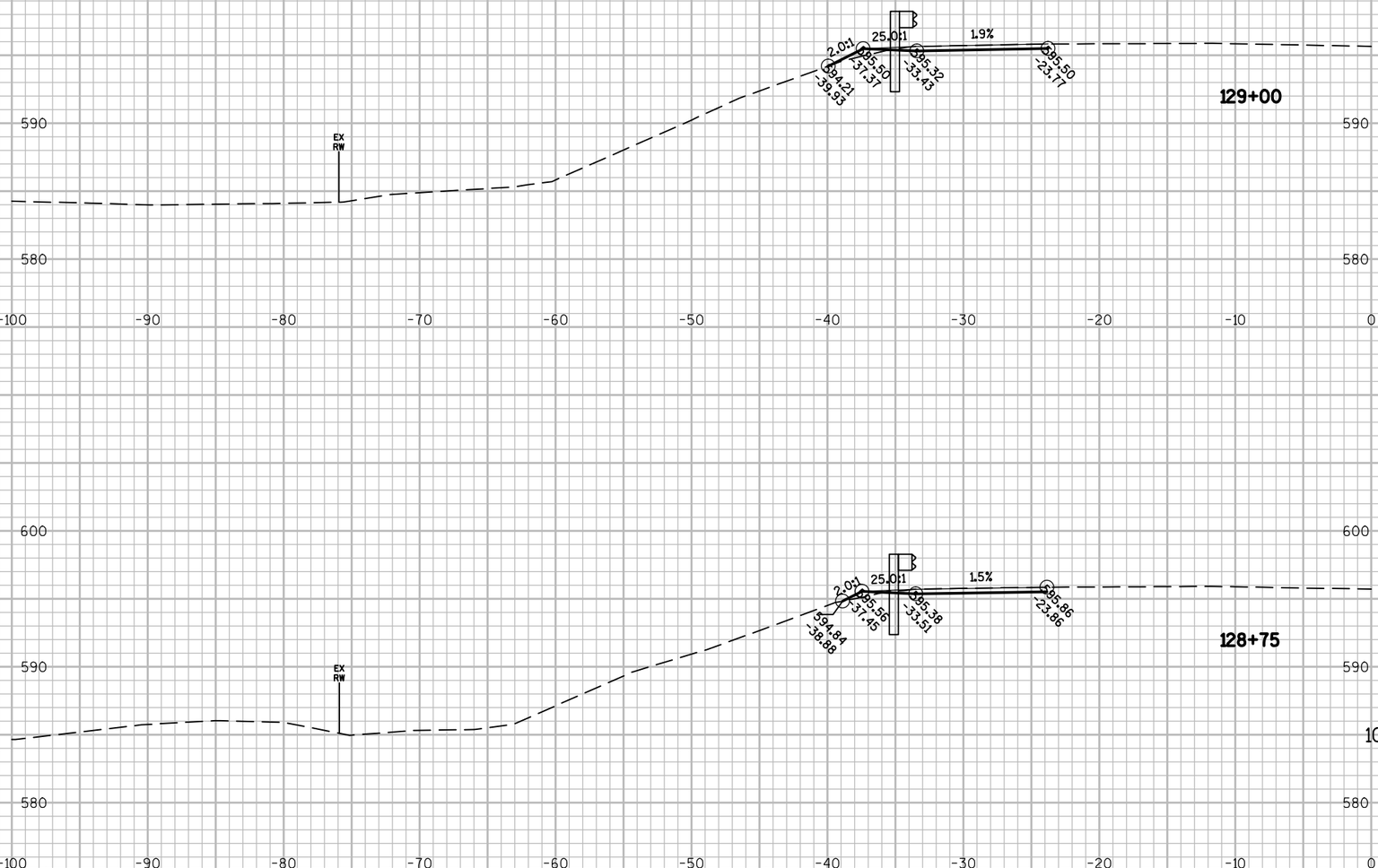
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 412	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090181_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

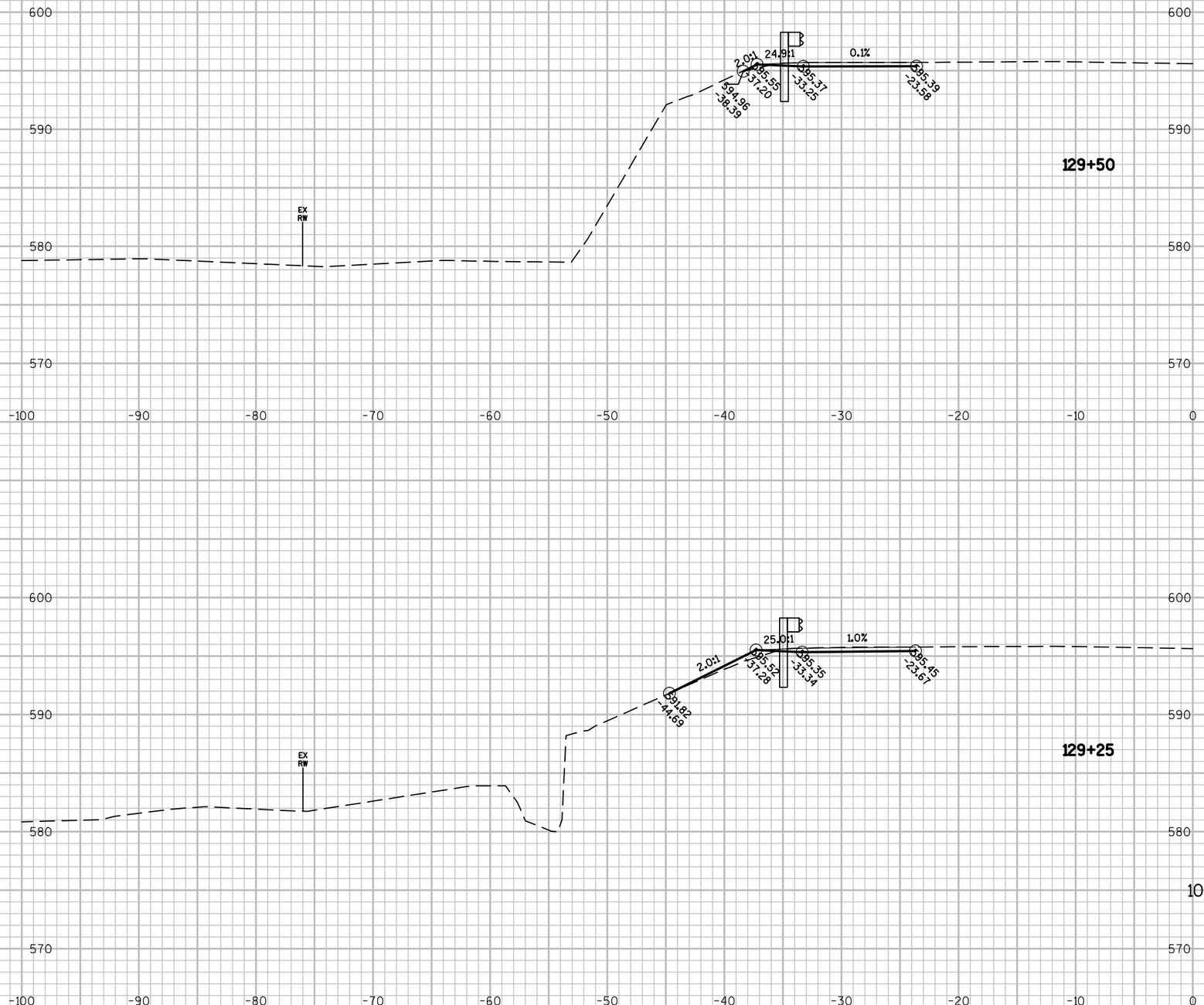
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 413	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090182_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



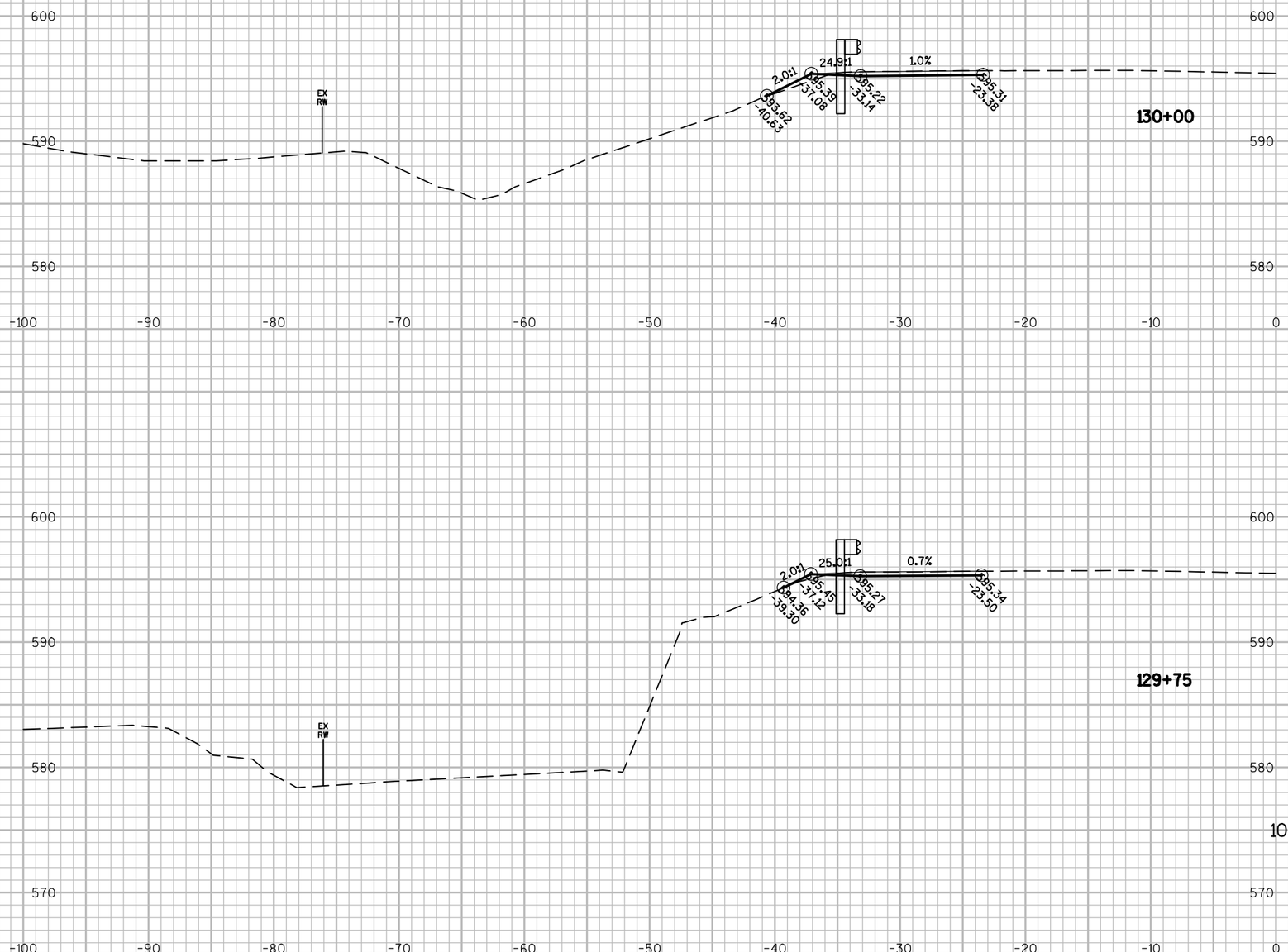
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 414	E

9

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090183_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

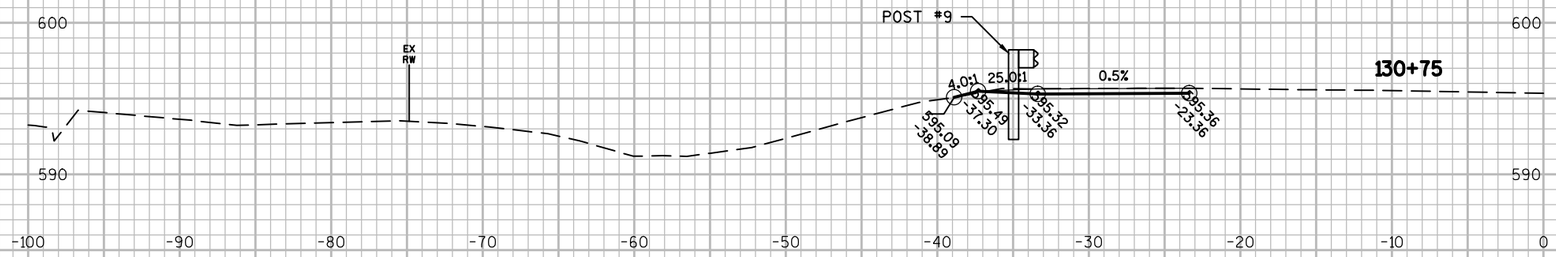
9

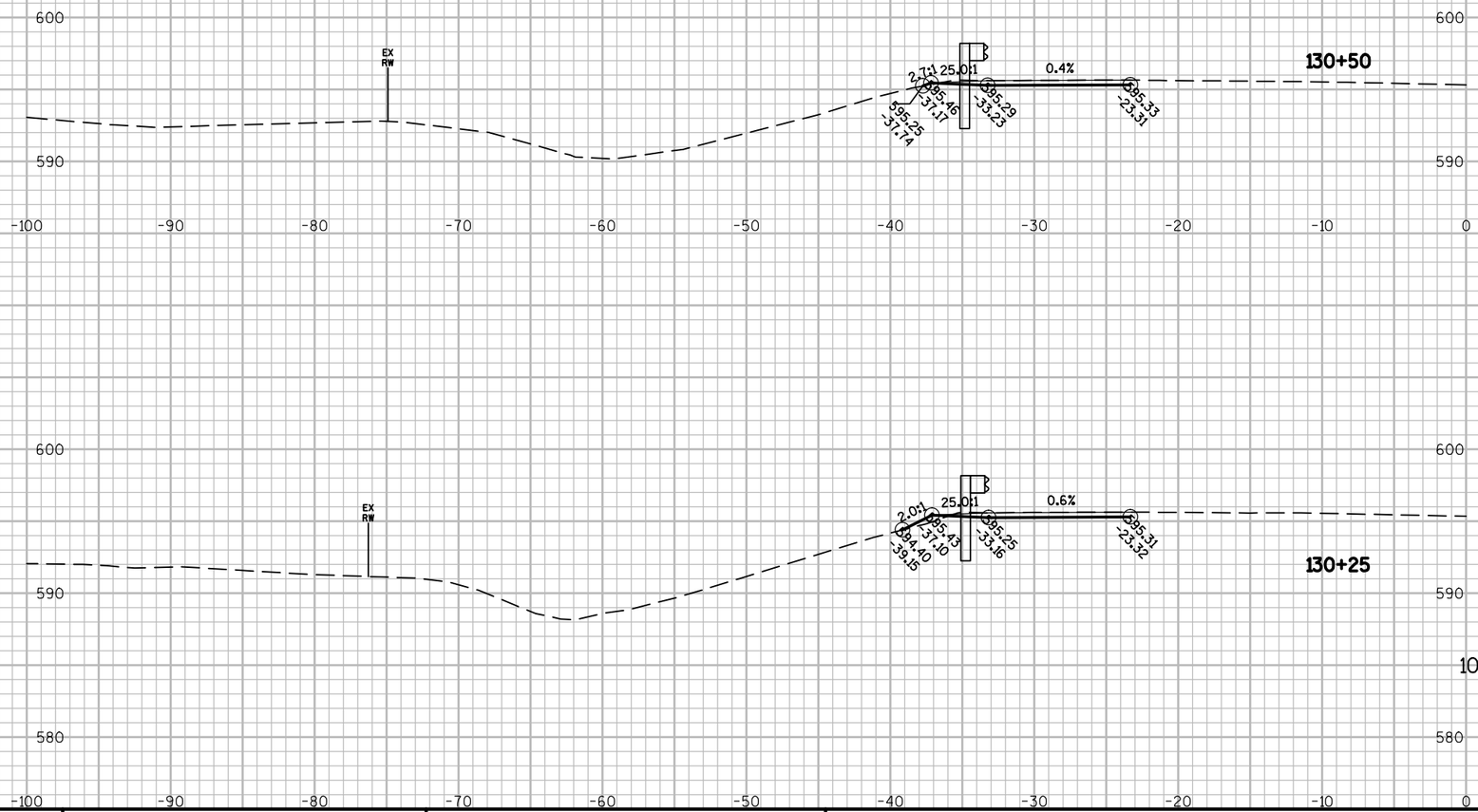
PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 415	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090184_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



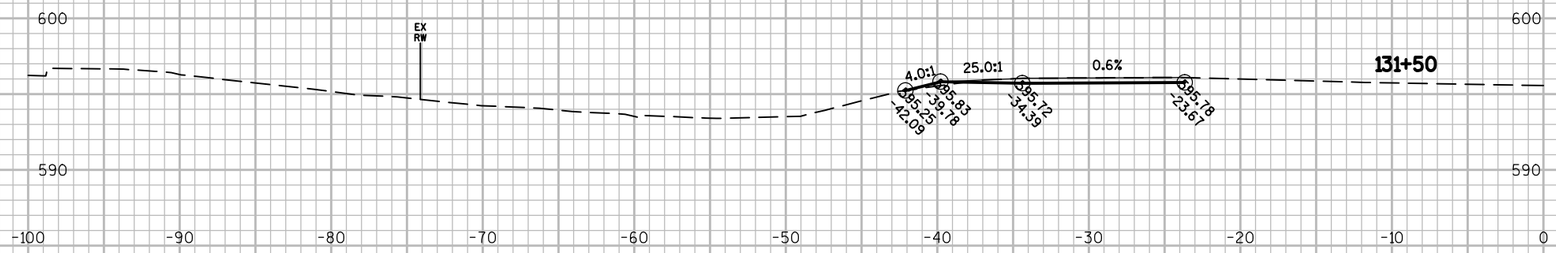


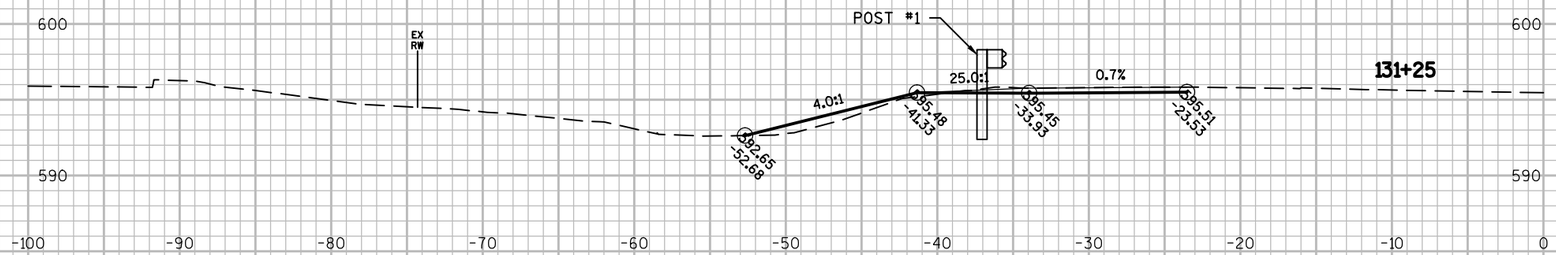
9

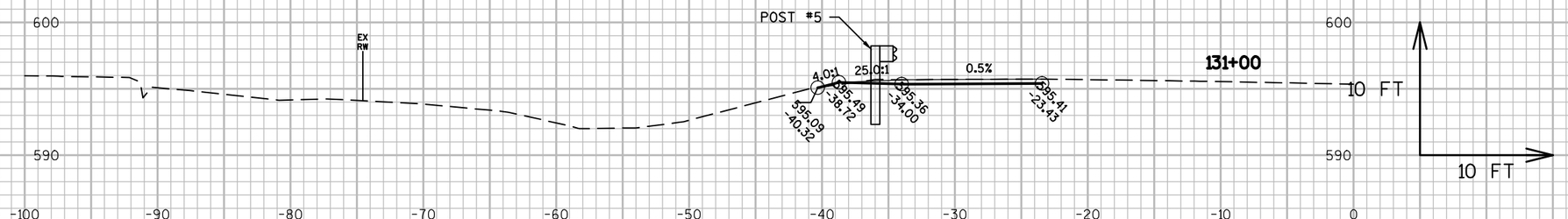
9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 416	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090185_XS
PLOT DATE : 1/7/2016 1:18 PM
PLOT BY : DUMS, ALEXANDER T
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49







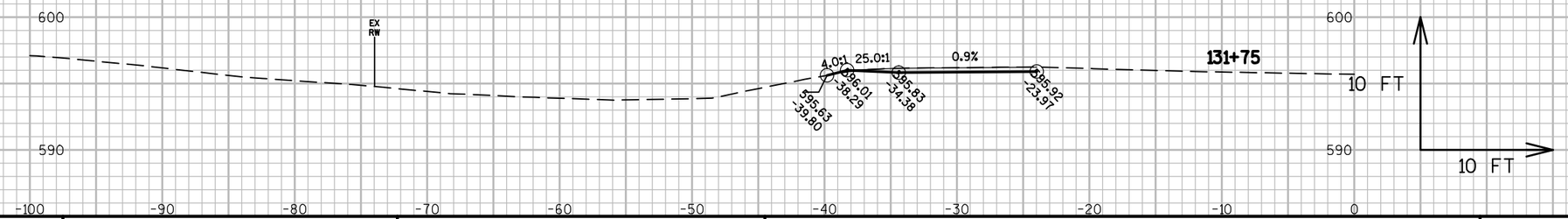
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 417	E







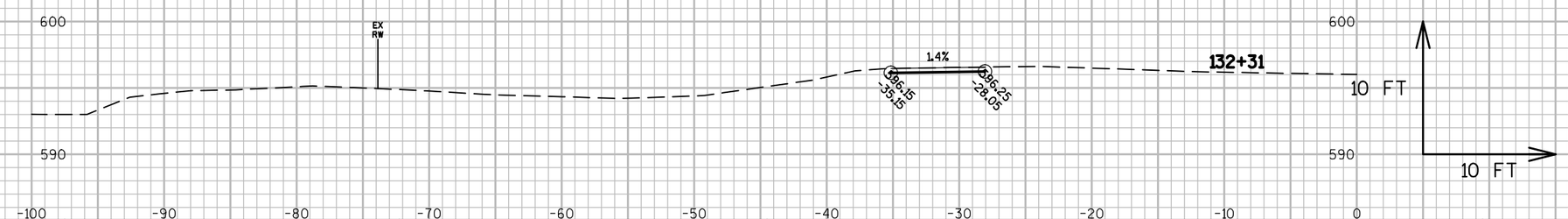
9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 418	E

FILE NAME : N:\PDS\C3D\41901600\SHEETSPLAN\090102_XS.DWG
LAYOUT NAME - 090187_XS

PLOT DATE : 1/7/2016 1:18 PM PLOT BY : DUMS, ALEXANDER T PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

9

PROJECT NO: 4190-16-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: SOUTHBOUND BEAMGUARD DUTCHMAN CREEK	SHEET 419	E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov