

SUP

PROJECT ID: 8160-00-70

WITH: 8160-03-61

COUNTY: BAYFIELD

APRIL 2015

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 = 134



DESIGN DESIGNATION

A.A.D.T.	2018	=	9050
A.A.D.T.	2028	=	10,150
D.H.V.		=	1320
D.D.		=	61/39
T.		=	13
DESIGN SPEED		=	55 MPH
ESALS		=	3,401,800

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	---
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)	---
SPECIAL DITCH	---
GRADE ELEVATION	95.36
CULVERT (Profile View)	---
UTILITIES	
ELECTRIC	E
FIBER OPTIC	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
TELEPHONE	T
WATER	W
UTILITY PEDESTAL	---
POWER POLE	---
TELEPHONE POLE	---

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

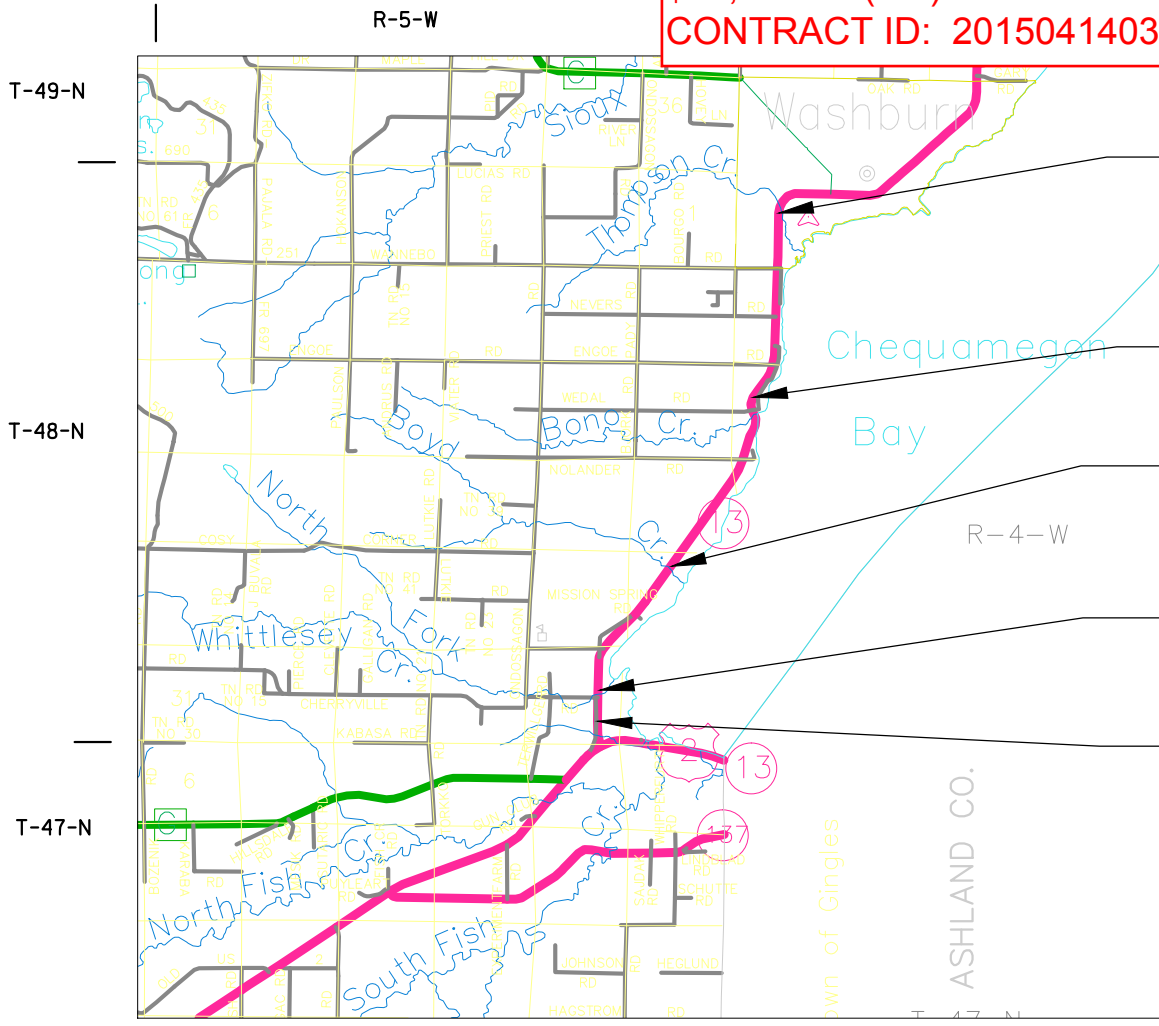
ASHLAND - BAYFIELD

USH 2 - THOMPSON CREEK

STH 13

BAYFIELD

STATE PROJECT NUMBER
8160-00-70



LAYOUT

SCALE 0 1/2 MI

TOTAL NET LENGTH OF CENTERLINE = 6.05 MI

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8160-00-70	WISC 2015198	1

AS-BUILT PLAN

PROJECT LEADER: David Thaler - Coleman Engineering Co.

PRIME CONTRACTOR: Northwoods Paving (A Div. of Mathy Const)

Begin Construction: 5/26/2015

End Construction: 9/30/2015

FINAL CONSTRUCTION COST: ~~\$3,825,311.10~~ \$3,854,547.99 (KG)

CONTRACT MODS: (1) \$37,865.10 (2) \$16,773.71 (3) \$8,757.28 (4) \$0.00 (5) -\$1,290.00 (NET) ~~\$62,106.09~~ (6) \$22,282.09 (NET) \$84,388.18 (KG)

CONTRACT ID: 20150414032

END PROJECT

STA 328+55.6

X 809337.7436

Y 487044.8352

EQ 220+94.27 BK

= 221+98.03 AHD

EXCEPTION TO NET CL LENGTH

STA 112+73 - 112+95

EXCEPTION TO NET CL LENGTH

STA 29+50 - 30+32

BEGIN PROJECT

STA 8+00

X 799716.772

Y 458000.2161

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor NWBE

Designer BARBARA KERBER

Project Manager PHIL KEPPERS

Regional Examiner DAN OJIBWAY

Regional Supervisor DAVE OSTROWSKI

APPROVED FOR THE DEPARTMENT

DATE: 10-29-2014 Philip S. Keppers (Signature)

GENERAL NOTES

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT FOR AREAS WITHIN FINISHED SHOULDER POINT, SHALL BE FERTILIZED SEEDED AND MULCHED.

THE LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

THE LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA.

CULVERT LOCATIONS HAVE BEEN NOTED ON THE PLAN LAYOUT SHEETS FOR INFORMATION PURPOSES ONLY. ANY CULVERT WORK AT THESE LOCATIONS IS NOTED IN THE TIED CULVERT PROJECT, 8160-03-61.

UTILITY CONTACT INFO

Century Link
Communication Lines
PO Box 369
Minong, WI 54859
Alan Nickell
alan.nickell@centurylink.com
715-378-2131 Office
715-566-3879 Mobile

Charter Communications
Communication Lines
2304 South Main Street
Rice Lake, WI 54868
Tom Haase
tom.haase@chartercom.com
715-234-5341 Office
715-370-1601 Mobile

City of Washburn
Municipal Water & Sewer Utility
PO Box 638
119 Washington Avenue
Washburn, WI 54891-0638
Gayla Salmi, Public Works Director
715-373-6171 Office
715-292-1325 Mobile

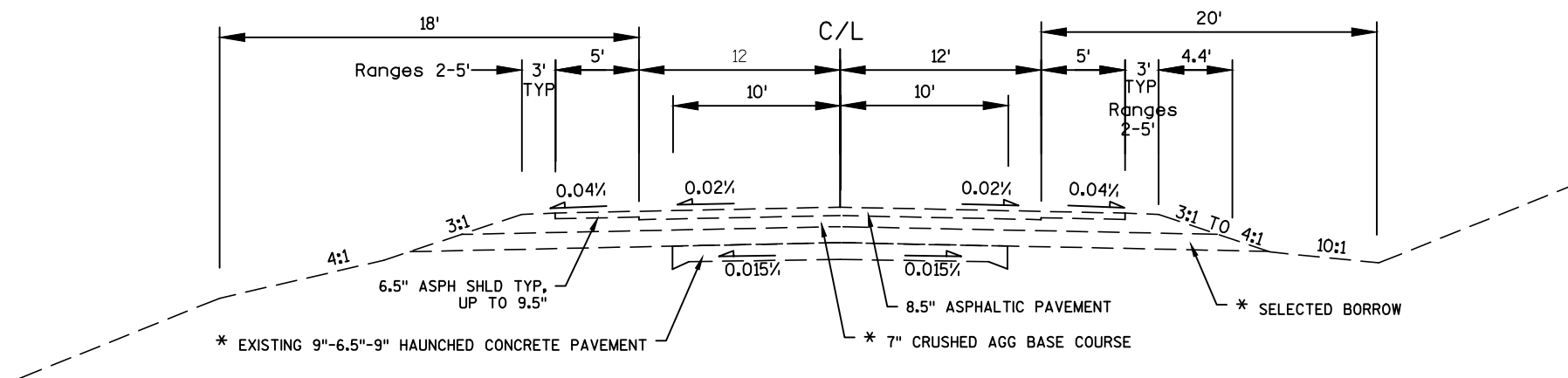
Xcel Energy
Gas/Petro; Electric; Transmission
2400 Farm Road
Ashland, WI 54806
Murray Smerer, Senior Designer
715-682-6928

Norvado
Communication Lines
43750 USH 63
PO Box 67
Cable, WI 54821
Guy Folsom, Field Engineer
gfolson@norvado.com
715-798-7123 Office
715-580-8123 Mobile

Northern Natural Gas
Gas/Petroleum Facilities
1995 Northern Natural Gas Road
Carlton, MN 55719
Jeff Telker
jeff.telker@nngco.com
402-530-3466 Office
218-348-3470 Mobile

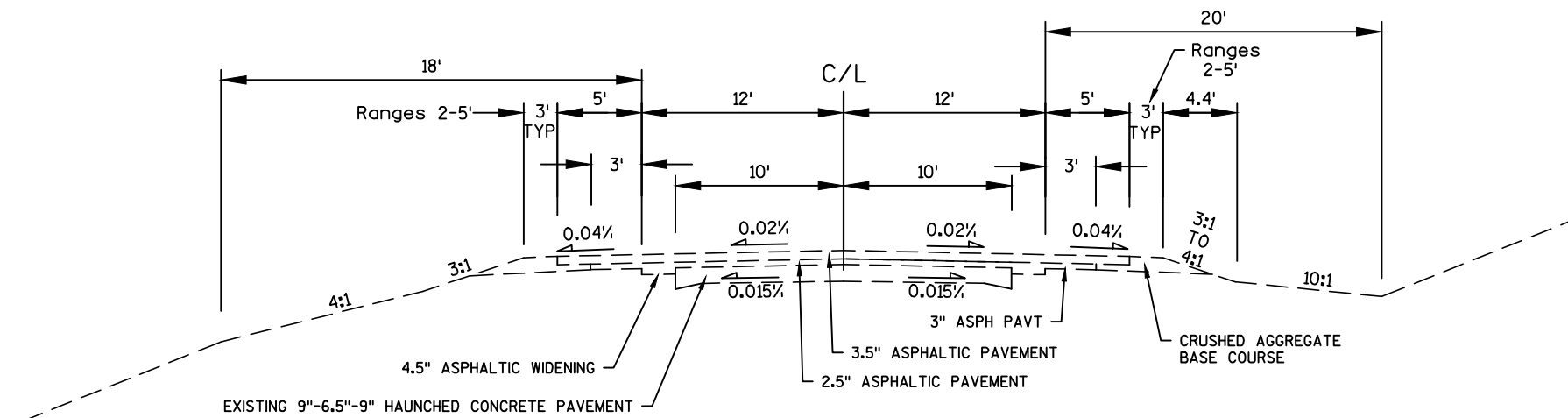
WisDNR
810 West Maple Street
Spooner, WI 54801
Shawn Haseleu, Environmental
Analysis and Review Specilist
shawn.haseleu@wisconsin.gov
715-635-4228

DIGGERSHOTLINE
Dial **811** or (800)242-8511
www.DiggersHotline.com



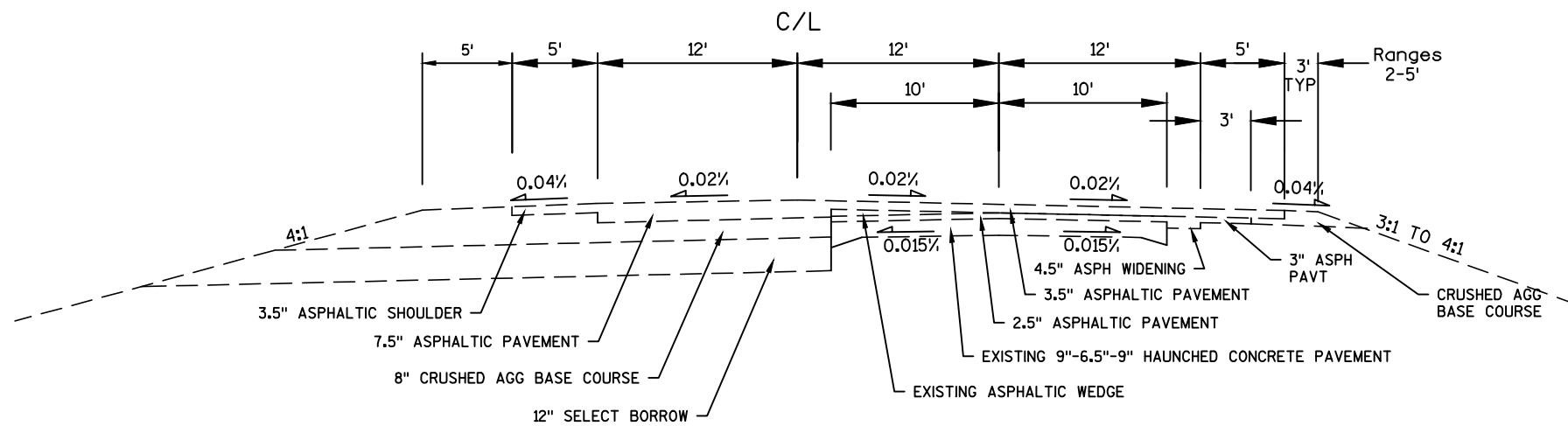
STH 13 TYPICAL EXISTING SECTION

- STA 8+00 TO STA 40+00
- * STA 195+00 TO STA 208+30 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER
 - * STA 216+30 TO STA 223+00 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER
 - * STA 321+00 TO STA 328+00 10" CRUSHED AGG, NO SEL BOR OR CONC LAYER

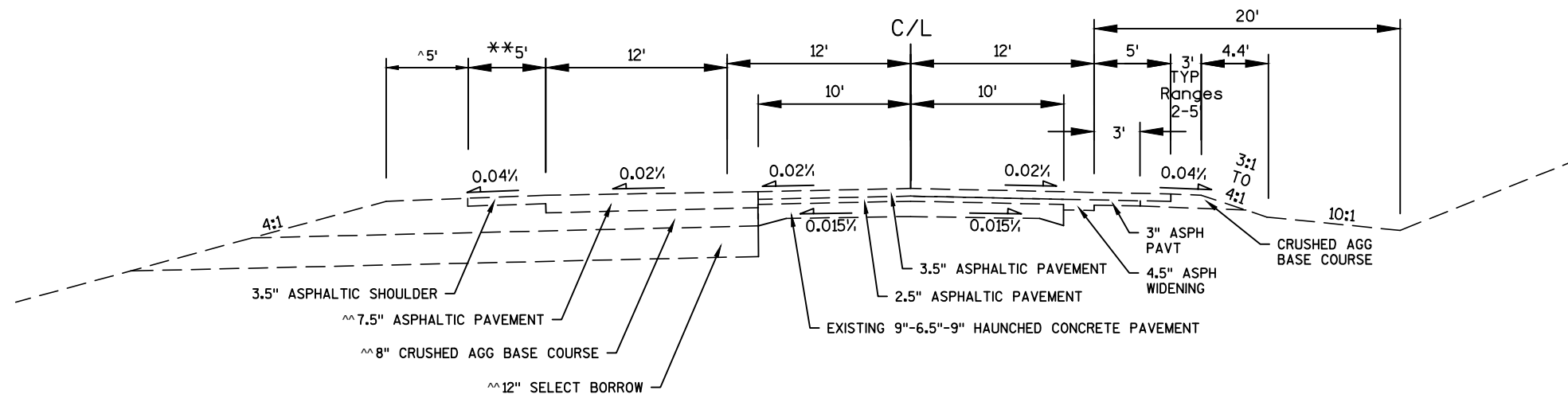


STH 13 TYPICAL EXISTING SECTION

STA 40+00 TO STA 51+00
STA 60+00 TO STA 120+50
STA 182+00 TO STA 185+60
STA 187+60 TO STA 195+00
STA 223+00 TO STA 249+50
STA 251+80 TO STA 264+80
STA 272+40 TO STA 278+70
STA 284+50 TO STA 318+00
STA 320+20 TO STA 321+00

STH 13 TYPICAL EXISTING SECTION
IN PASSING LANE AREA

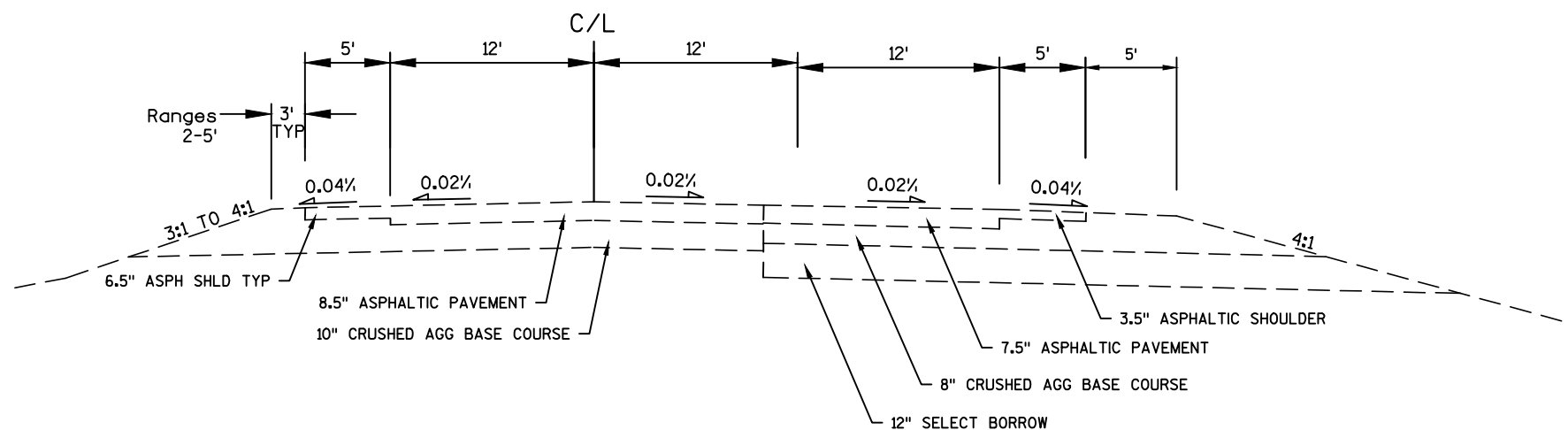
STA 120+50 TO STA 182+00 RT



^ 2' IN BYPASS AND RIGHT TURN LANE LOCATIONS
** 0' IN RIGHT TURN LANE LOCATIONS
^^ 5" ASPH PAVT, 7" CRUSHED AGG, NO SEL BOR

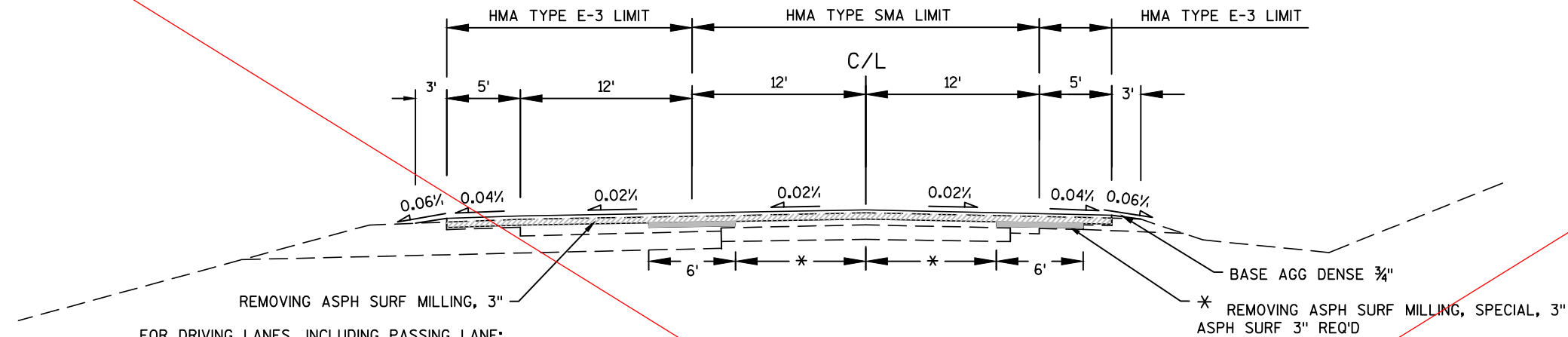
STH 13 TYPICAL EXISTING SECTION
IN BYPASS LANE AND RIGHT TURN LANE AREAS

^^ STA 51+00 TO STA 60+00	BYPASS LANE RT; RIGHT TURN LANE LT
STA 185+60 TO STA 187+60	RIGHT TURN LANE LT
STA 208+30 TO STA 216+30	BYPASS LANE RT
STA 249+50 TO STA 251+80	RIGHT TURN LANE RT
STA 264+80 TO STA 272+40	BYPASS LANE RT
STA 278+70 TO STA 284+50	BYPASS LANE LT
STA 318+00 TO STA 320+20	RIGHT TURN LANE LT



STH 13 TYPICAL EXISTING SECTION
IN BYPASS LANE AREA

STA 208+30 TO STA 216+30 BYPASS LANE RT



FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN & BYPASS LANES AND SHLDS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, PLACED
IN A 1.75" UPPER LAYER) + 2.25" LOWER LAYER

STH 13 TYPICAL FINISHED SECTION

STA 8+00 - 120+50
STA 182+00 - 328+56

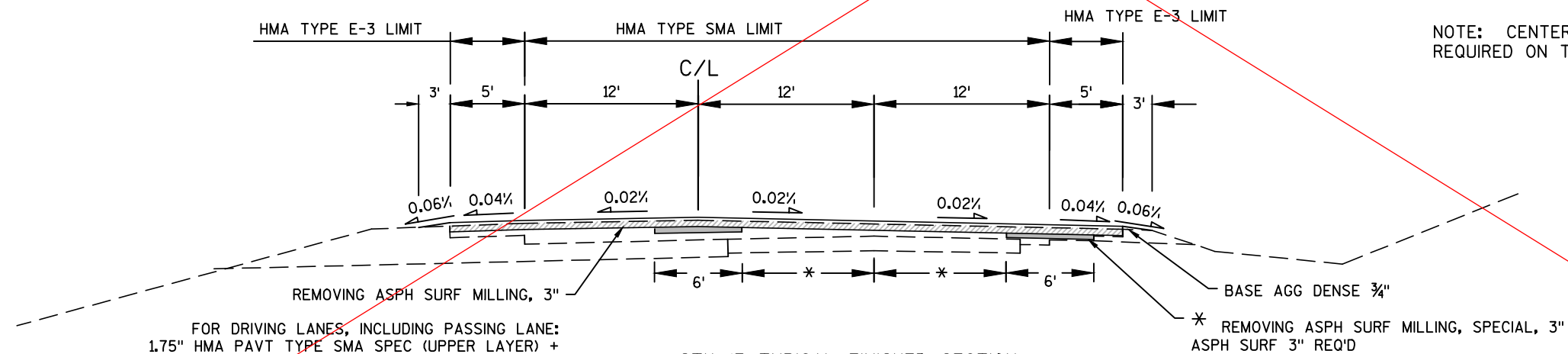
* OFFSET FROM CL AS SPECIFIED BY ENGINEER IN THE FIELD, NORM 7-9'

LENGTHS GIVEN BELOW ARE UNDISTRIBUTED WITHIN THE GIVEN
STATION RANGES

EXACT LOCATIONS TO BE MARKED IN THE FIELD BY ENGINEER

STA 8+00-29+50 AND 30+32-61+62	SB 2350 FT	NB 3500 FT
STA 61+62-112+73 AND 112+95-114+65	SB 3650 FT	NB 2650 FT
STA 114+65-167+45	SB 1875 FT	NB 2000 FT
STA 167+45-220+25	SB 1100 FT	NB 1100 FT
STA 220+25-220+94 AND 221+98-274+09	SB 1350 FT	NB 650 FT
STA 274+09-328+56	SB 675 FT	NB 100 FT

NOTE: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS ARE
REQUIRED ON THE FINISHED SURFACE

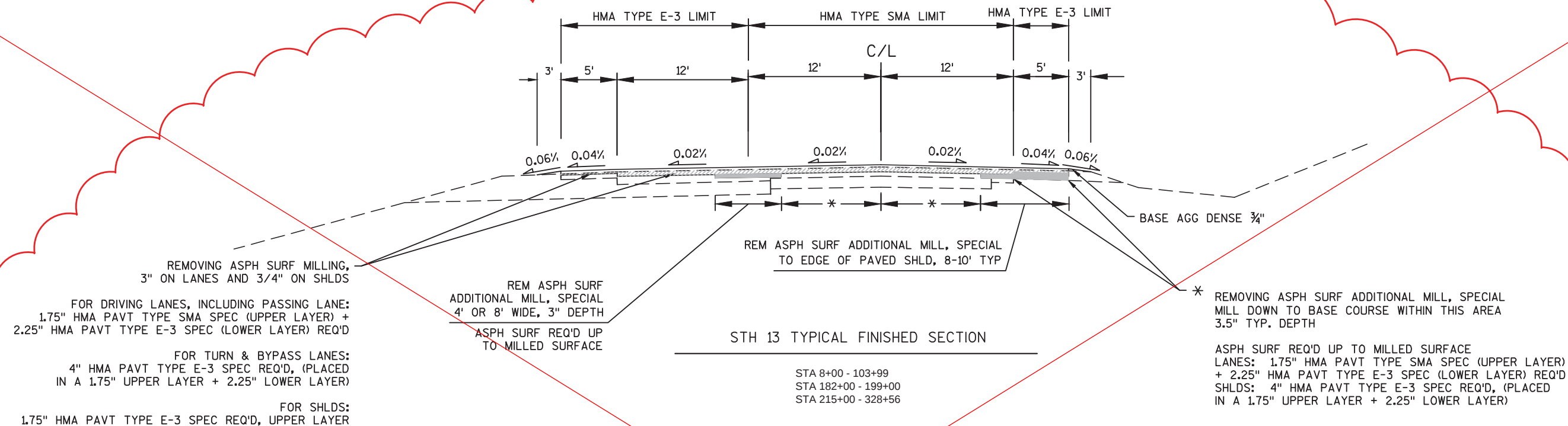


FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN & BYPASS LANES AND SHLDS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, PLACED
IN A 1.75" UPPER LAYER) + 2.25" LOWER LAYER

STH 13 TYPICAL FINISHED SECTION IN PASSING LANE AREA

STA 120+50 - 182+00



* NOTE: REMOVING ASPHALTIC SURFACE ADDITIONAL MILL, SPECIAL OFFSET FROM CL AS SPECIFIED BY ENGINEER IN THE FIELD, NORM 7-9'

LENGTHS GIVEN BELOW ARE UNDISTRIBUTED WITHIN THE GIVEN STATION RANGES

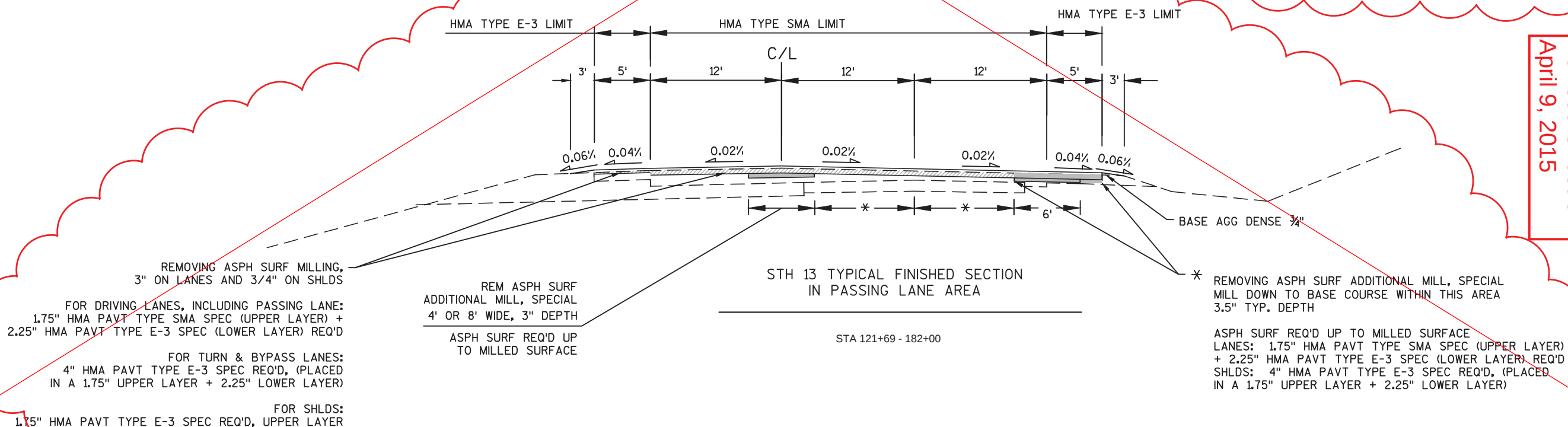
EXACT LOCATIONS TO BE MARKED IN THE FIELD BY ENGINEER

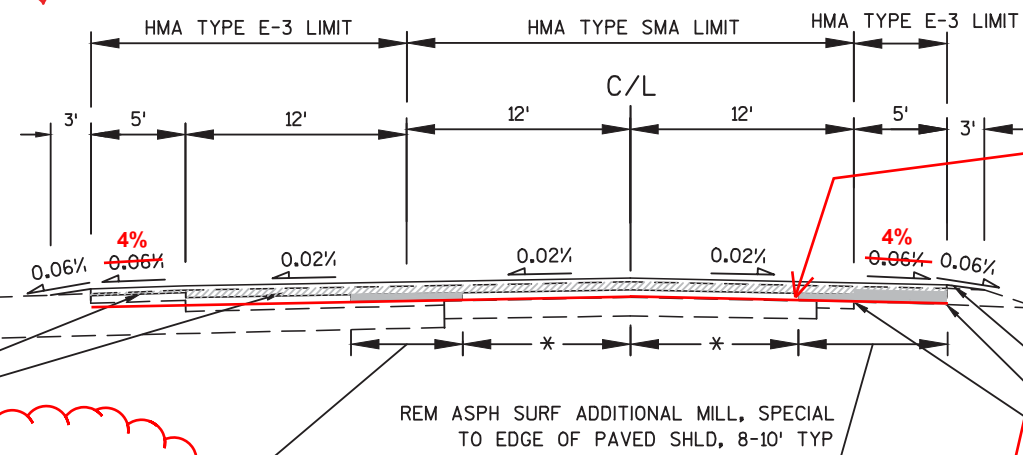
STA 8+00-29+50 AND 30+32-61+62	SB 2350 FT	NB 3500 FT
STA 61+62-112+73 AND 112+95-114+65	SB 3650 FT	NB 2650 FT
STA 114+65-167+45	SB 1875 FT	NB 2000 FT
STA 167+45-220+25	SB 1100 FT	NB 1100 FT
STA 220+25-220+94 AND 221+98-274+09	SB 1350 FT	NB 650 FT
STA 274+09-328+56	SB 675 FT	NB 100 FT

NOTES: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS ARE REQUIRED ON THE FINISHED SURFACE.

BEFORE MILLING OPERATIONS BEGIN ON ANY LANES, TRENCHES OR NOTCHES WILL BE MILLED OUT ACROSS THE SHOULDERS FOR DRAINAGE PURPOSES TO THE WIDTH, DEPTH AND AT LOCATIONS AS SPECIFIED BY THE ENGINEER.

Addendum No. 1
IDS 8160-00-70 &
8160-03-61
Revised Sheet 5
April 9, 2015





STH 13 TYPICAL FINISHED SECTION

STA 8+00 - 103+99
STA 182+00 - 199+00 198+00
STA 215+00 - 328+56 245+00

REMOVING ASPH SURF MILLING 2"
MILL SHOULDER AT ~~6%~~ 2%

FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN LANES, BYPASS LANES & SHOULDERS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, (PLACED
IN A 1.75" UPPER LAYER + 2.25" LOWER LAYER)
UPPER LAYER: 1.75" ASPHALTIC SURFACE TYPE E-3 SPECIAL

REM ASPH SURF
ADDITIONAL MILL, SPECIAL
4' OR 8' WIDE, 3" DEPTH
ASPH SURF REQ'D UP
TO MILLED SURFACE

* REMOVING ASPH SURF ADDITIONAL MILL, SPECIAL
MILL DOWN TO BASE COURSE WITHIN THIS AREA
3.5" TYP. DEPTH

ASPH SURF REQ'D UP TO MILLED SURFACE
LANES: 1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER)
+ 2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D
SHLDS: 4" HMA PAVT TYPE E-3 SPEC REQ'D, (PLACED
IN A 1.75" UPPER LAYER + 2.25" LOWER LAYER)
SHLDS (UPPER LAYER): 1.75" ASPHALTIC SURFACE TYPE E-3 SPECIAL

* NOTE: REMOVING ASPHALTIC SURFACE ADDITIONAL MILL, SPECIAL
OFFSET FROM CL AS SPECIFIED BY ENGINEER IN THE FIELD, NORM 7-9'

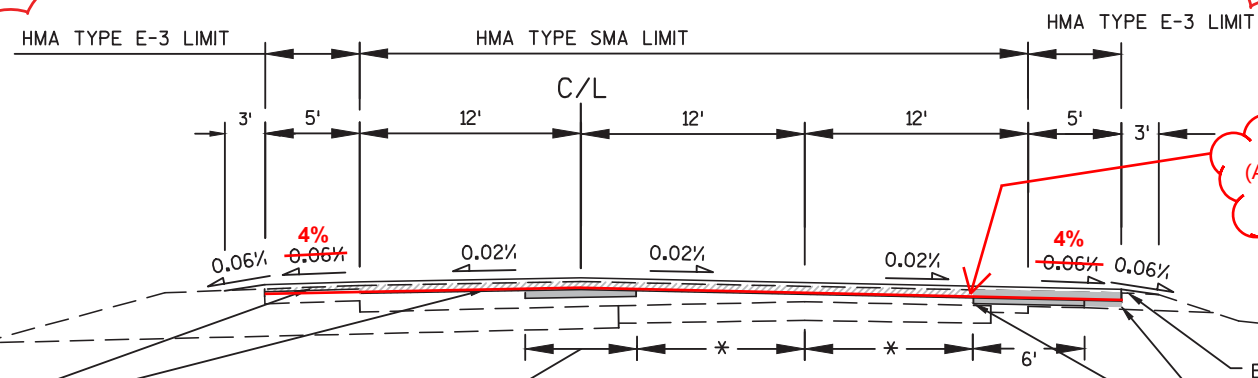
LENGTHS GIVEN BELOW ARE UNDISTRIBUTED WITHIN THE GIVEN STATION RANGES
EXACT LOCATIONS TO BE MARKED IN THE FIELD BY ENGINEER

STA 8+00 - 29+50 AND 30+32 - 61+62	SB 2350 FT	NB 3500 FT
STA 61+62 - 112+73 AND 112+95 - 114+65	SB 3650 FT	NB 2650 FT
STA 114+65 - 167+45	SB 1875 FT	NB 2000 FT
STA 167+45 - 220+25	SB 1100 FT	NB 1100 FT
STA 220+25 - 220+94 AND 221+98 - 274+09	SB 1350 FT	NB 650 FT
STA 274+09 - 328+56	SB 675 FT	NB 100 FT

STA 136+68 - 141+73	SB/NB 505 FT
STA 150+41 - 152+31	SB/NB 190 FT
STA 156+28 - 161+47	SB/NB 519 FT
STA 179+21 - 194+90	SB/NB 1569 FT

**ASPHALTIC SURFACE 19MM
TYPE E-3 SPECIAL

NOTES: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS
ARE REQUIRED ON THE FINISHED SURFACE.

STH 13 TYPICAL FINISHED SECTION
IN PASSING LANE AREA

STA 121+69 - 182+00

REMOVING ASPH SURF MILLING 2",
MILL SHOULDERS AT ~~6%~~ 2%

FOR DRIVING LANES, INCLUDING PASSING LANE:
1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER) +
2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D

FOR TURN LANES, BYPASS LANES AND SHOULDERS:
4" HMA PAVT TYPE E-3 SPEC REQ'D, (PLACED
IN A 1.75" UPPER LAYER + 2.25" LOWER LAYER)
UPPER LAYER: 1.75" ASPHALTIC SURFACE TYPE E-3 SPECIAL

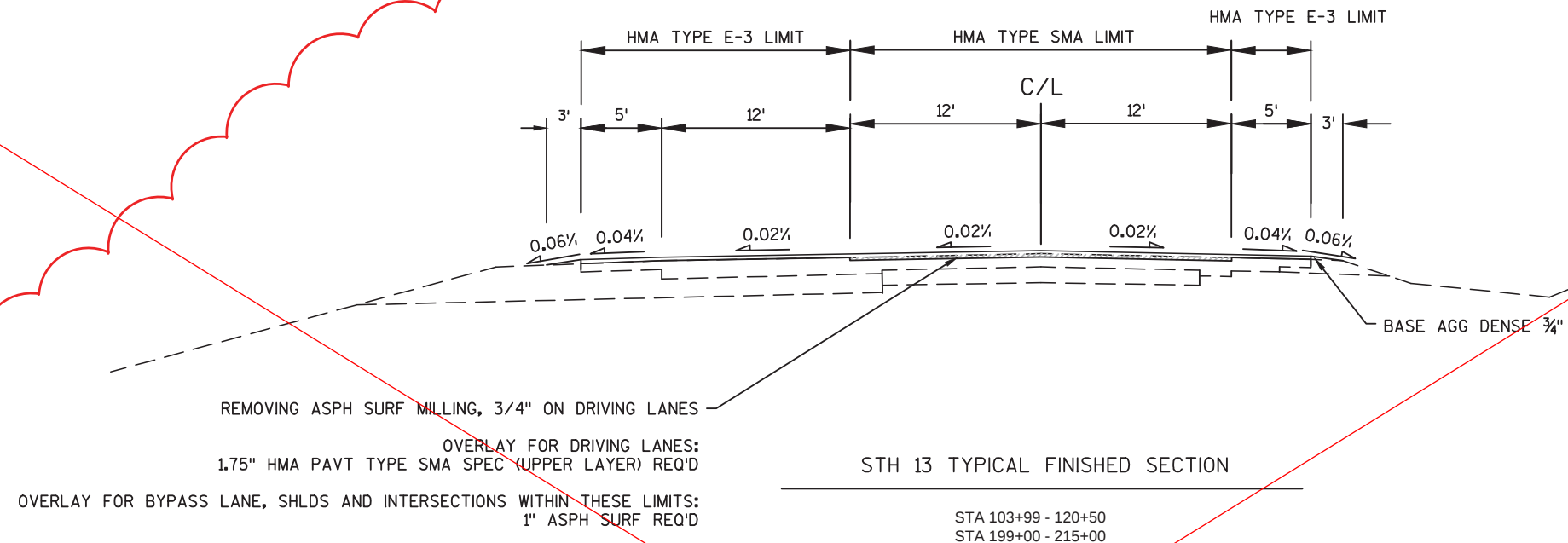
REM ASPH SURF
ADDITIONAL MILL, SPECIAL
4' OR 8' WIDE, 3" DEPTH
ASPH SURF REQ'D UP
TO MILLED SURFACE

1" WEDGE LAYER
(ASPHALTIC SURFACE)**
2% ML, 4% SHLDRS

* REMOVING ASPH SURF ADDITIONAL MILL, SPECIAL
MILL DOWN TO BASE COURSE WITHIN THIS AREA
3.5" TYP. DEPTH

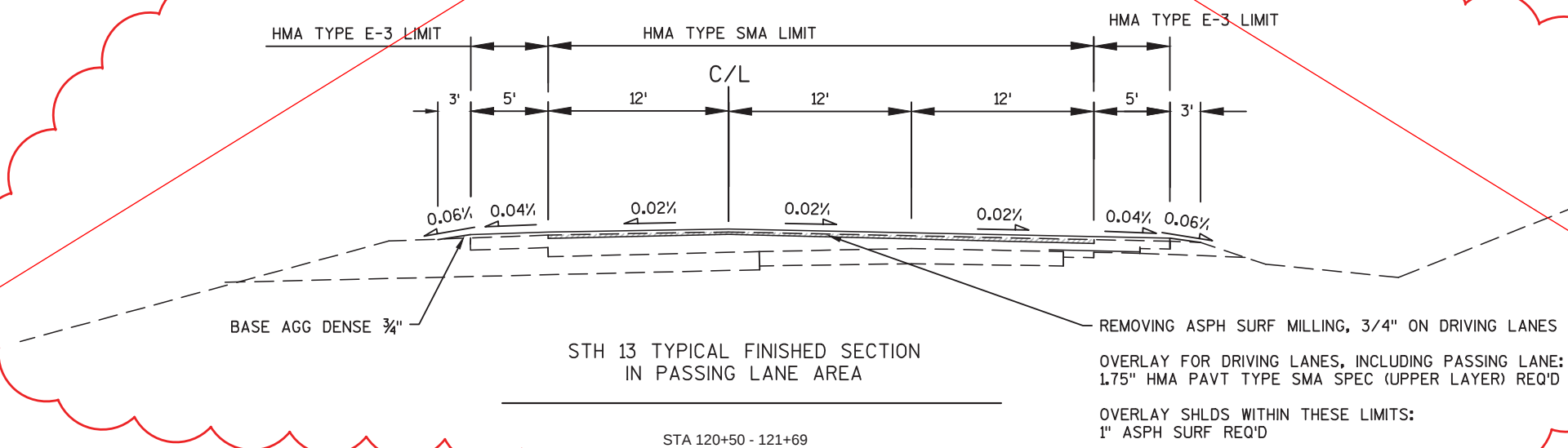
ASPH SURF REQ'D UP TO MILLED SURFACE
LANES: 1.75" HMA PAVT TYPE SMA SPEC (UPPER LAYER)
+ 2.25" HMA PAVT TYPE E-3 SPEC (LOWER LAYER) REQ'D
SHLDS: 4" HMA PAVT TYPE E-3 SPEC REQ'D, (PLACED
IN A 1.75" UPPER LAYER + 2.25" LOWER LAYER)
SHLDS (UPPER LAYER): 1.75" ASPHALTIC SURFACE TYPE E-3 SPECIAL

Addendum No. 2
IDs 8160-00-70 &
8160-03-61
Revised Sheet 5
April 12, 2015

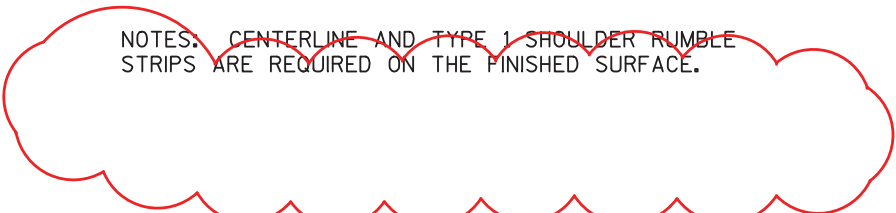


NOTES: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS ARE REQUIRED ON THE FINISHED SURFACE.

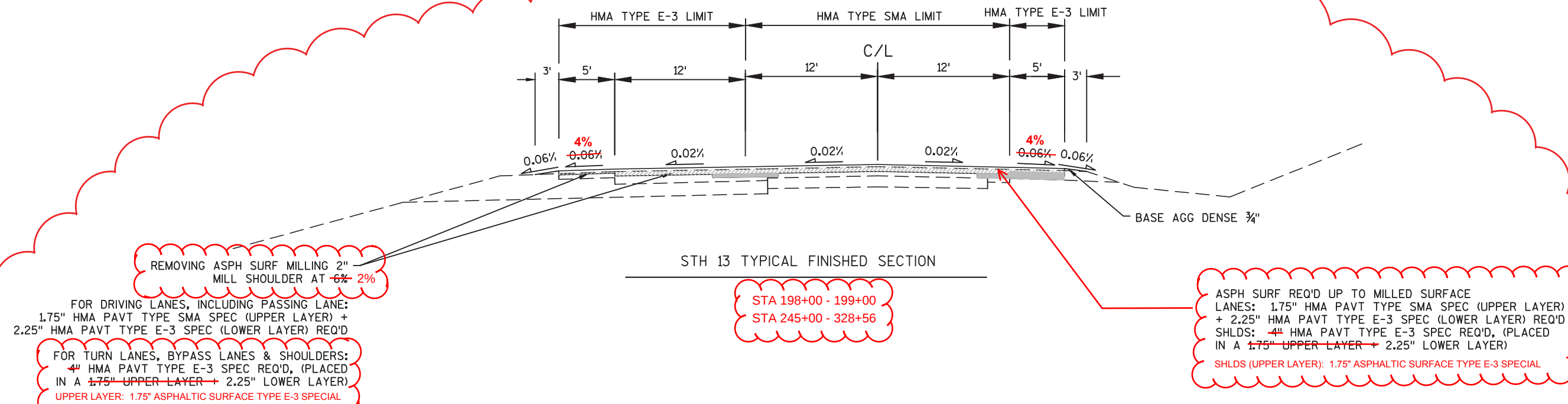
BEFORE MILLING OPERATIONS BEGIN ON ANY LANES, TRENCHES OR NOTCHES WILL BE MILLED OUT ACROSS THE SHOULDERS FOR DRAINAGE PURPOSES TO THE WIDTH, DEPTH AND AT LOCATIONS AS SPECIFIED BY THE ENGINEER.



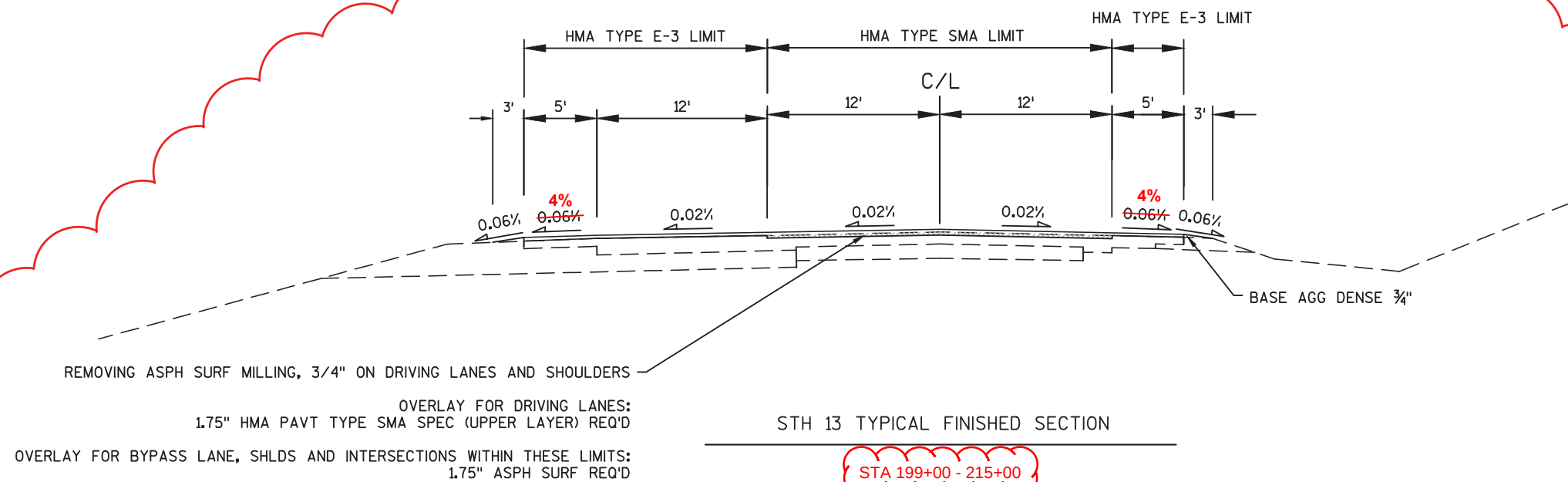
Addendum No. 1
IDs 8160-00-70 &
8160-03-61
Added Sheet 5A
April 9, 2015

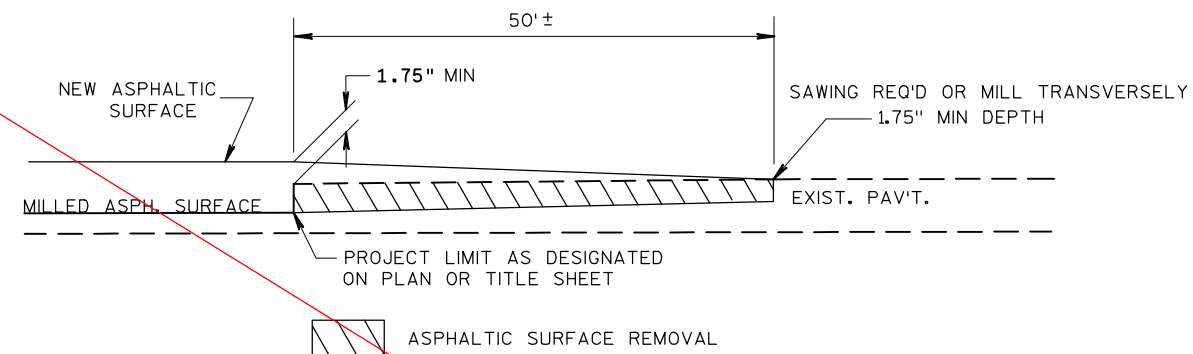


PROJECT NO:8160-00-70	HWY:STH 13	COUNTY:BAYFIELD	TYPICAL SECTIONS	NEW SHEET 5 OF 5	SHEET 5.2-A	E
FILE NAME : N:\PDS\C3D\81600000\SHEETS\OTHER\020301_TS_ADD1X.DWG		PLOT DATE : 4/10/2015 10:04 AM		PLOT BY : PEARSON, MICHAEL R		PLOT NAME :
			PLOT SCALE : 1 IN:10 FT		WISDOT/CADDs SHEET 42	



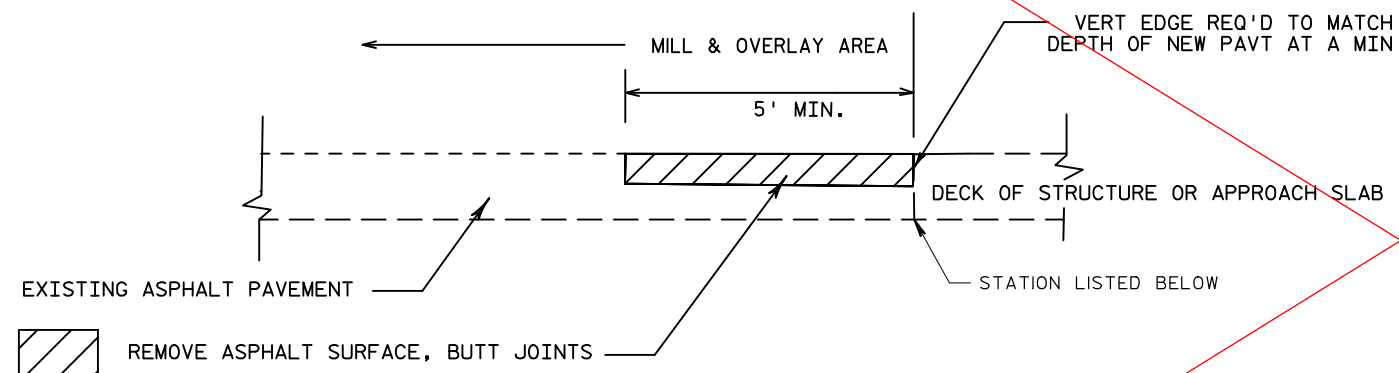
NOTES: CENTERLINE AND TYPE 1 SHOULDER RUMBLE STRIPS
ARE REQUIRED ON THE FINISHED SURFACE.





OVERLAP JOINT, BUTTED DETAIL

STA 8+00



DETAIL FOR BUTT JOINTS AT ENDS OF WORK AREAS AND STRUCTURE LOCATIONS

STA 29+50
STA 112+73
STA 328+36

STA 30+32
STA 112+95

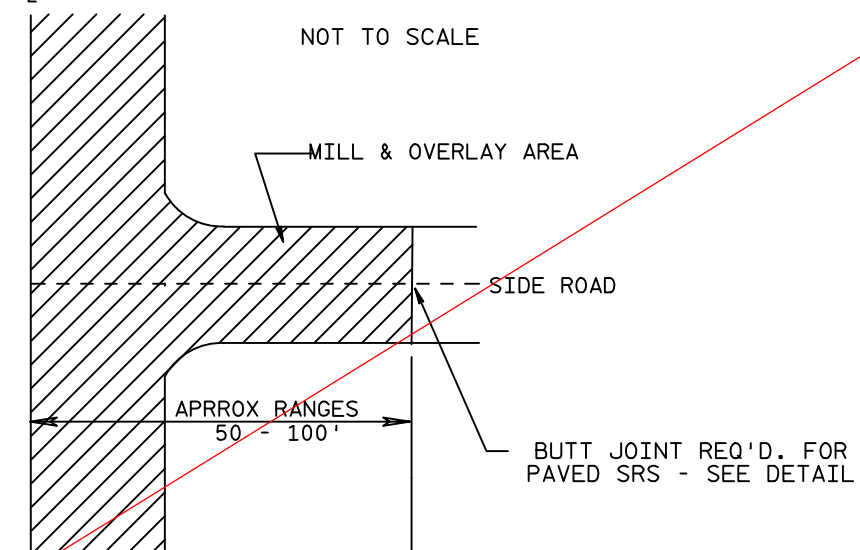
SIDE ROAD LOCATION'S REQUIRING BUTT JOINTS

CHERRYVILLE ROAD STA. 27+54.6 LT	ONDOSAGON ROAD STA. 54+78.8 LT
MISSION SPRINGS RD STA. 78+93.7 RT	BIRCH GROVE ROAD STA. 184+76.8 RT
NOLANDER ROAD STA. 184+83.4 LT	BONO CREEK ROAD STA. 199+75.7 RT
WEDAL ROAD STA. 211+75.7 LT	OLSEN ROAD STA. 222+77.5 RT
LAKE SHORE DRIVE STA. 233+32.2 RT	ENGOE ROAD STA. 242+06.8 LT
LAKE SHORE DRIVE STA. 252+24.5 RT	NEVERS ROAD STA. 268+44.1 LT
LAKE SHORE DRIVE STA. 281+76.9 RT	WANNEBO ROAD STA. 294+90.4 LT
SUMMIT AVENUE STA. 294+99.2 RT	FAULKNER ROAD STA. 305+70.0 LT
THOMPSON ROAD STA. 320+89.6 LT	BIGLOW STREET STA. 320+83.0 RT
FUR FARM ROAD STA. 327+18.8 LT	

STH 13

℄

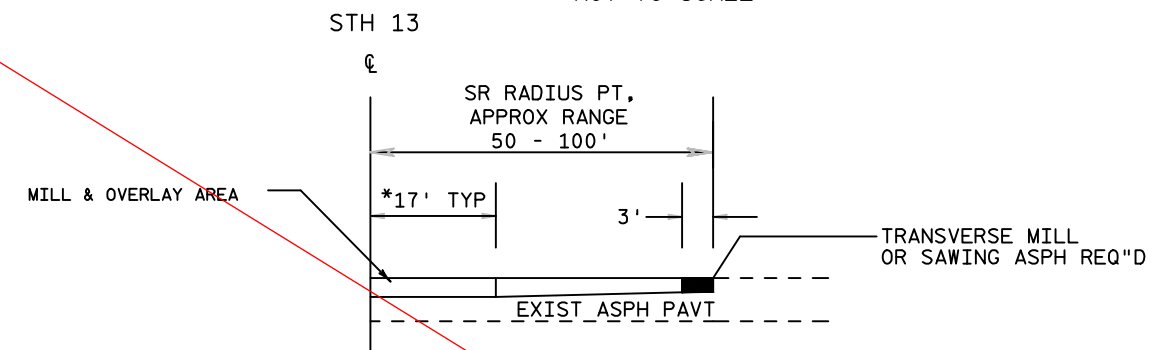
NOT TO SCALE



SIDE ROAD DETAIL - NO CURB & GUTTER

NOTE: IF THE EXISTING SIDEROAD CONSISTS OF A BASE COURSE SURFACE, THE NEW ASPHALT SHALL BE PLACED TO THE END OF THE FARTHER EXISTING SIDEROAD RADIUS.

NOT TO SCALE

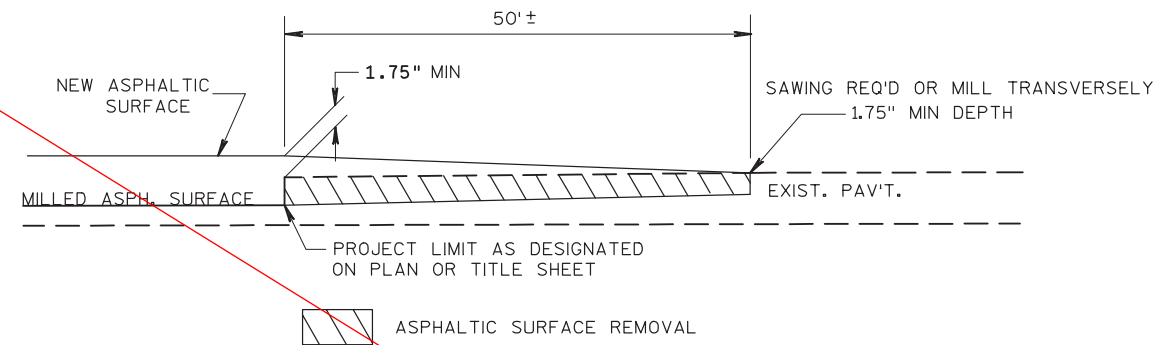


SIDE ROAD BUTT JOINT DETAIL

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

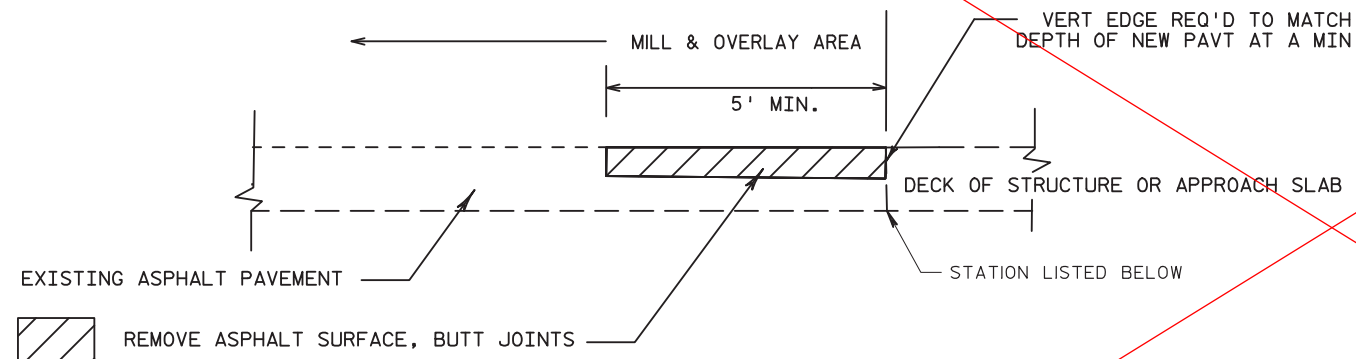
SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT

*EDGE OF PAVED SHOULDER ALONG ML



OVERLAP JOINT, BUTTED DETAIL

STA 8+00

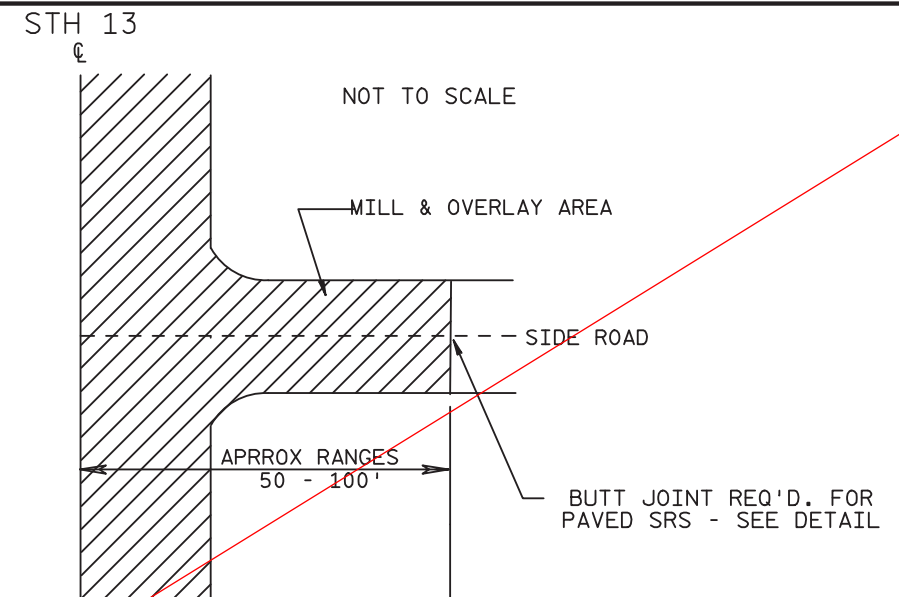


DETAIL FOR BUTT JOINTS AT ENDS OF
WORK AREAS AND STRUCTURE LOCATIONS

STA 29+50 STA 30+32
STA 112+73 STA 112+95
STA 328+36

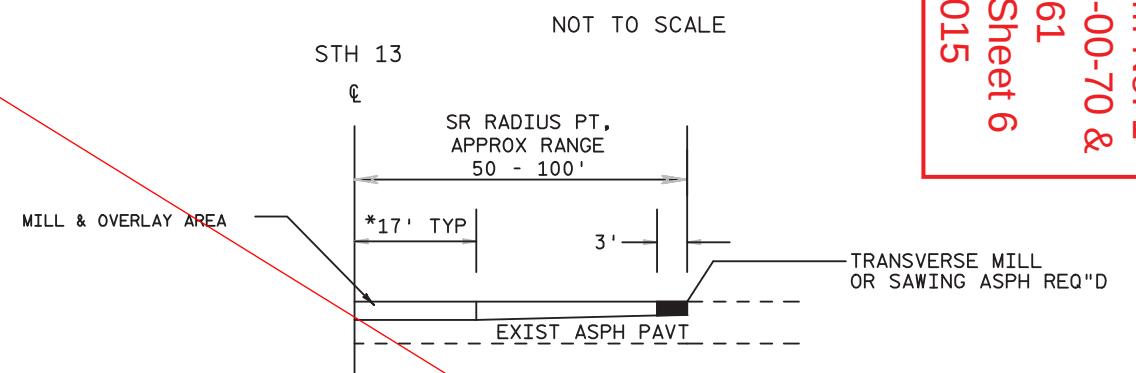
SIDE ROAD LOCATION'S REQUIRING BUTT JOINTS

CHERRYVILLE ROAD STA. 27+54.6 LT	ONDOSSAGON ROAD STA. 54+78.8 LT
MISSION SPRINGS RD STA. 78+93.7 RT	BIRCH GROVE ROAD STA. 184+76.8 RT
NOLANDER ROAD STA. 184+83.4 LT	BONO CREEK ROAD STA. 199+75.7 RT
WEDAL ROAD STA. 211+75.7 LT	OLSEN ROAD STA. 222+77.5 RT
LAKE SHORE DRIVE STA. 233+32.2 RT	ENGOE ROAD STA. 242+06.8 LT
LAKE SHORE DRIVE STA. 252+24.5 RT	NEVERS ROAD STA. 268+44.1 LT
LAKE SHORE DRIVE STA. 281+76.9 RT	WANNEBO ROAD STA. 294+90.4 LT
SUMMIT AVENUE STA. 294+99.2 RT	FAULKNER ROAD STA. 305+70.0 LT
THOMPSON ROAD STA. 320+89.6 LT	BIGLOW STREET STA. 320+83.0 RT
FUR FARM ROAD STA. 327+18.8 LT	



SIDE ROAD DETAIL - NO CURB & GUTTER

NOTE: IF THE EXISTING SIDEROAD
CONSISTS OF A BASE COURSE
SURFACE, THE NEW ASPHALT
SHALL BE PLACED TO THE END
OF THE FARTHER EXISTING
SIDEROAD RADIUS.



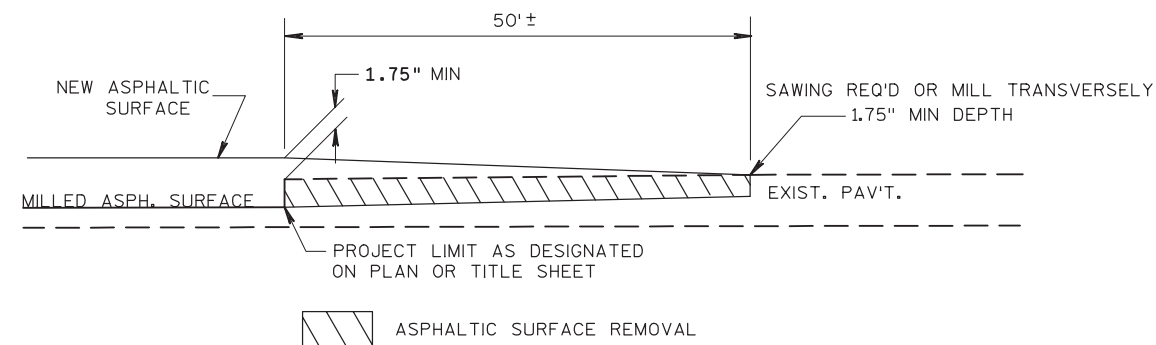
SIDE ROAD BUTT JOINT DETAIL

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

SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT
EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT, EXCEPT AT
BONO CREEK AND WEDAL ROADS WHERE 1" JOINT IS REQ'D

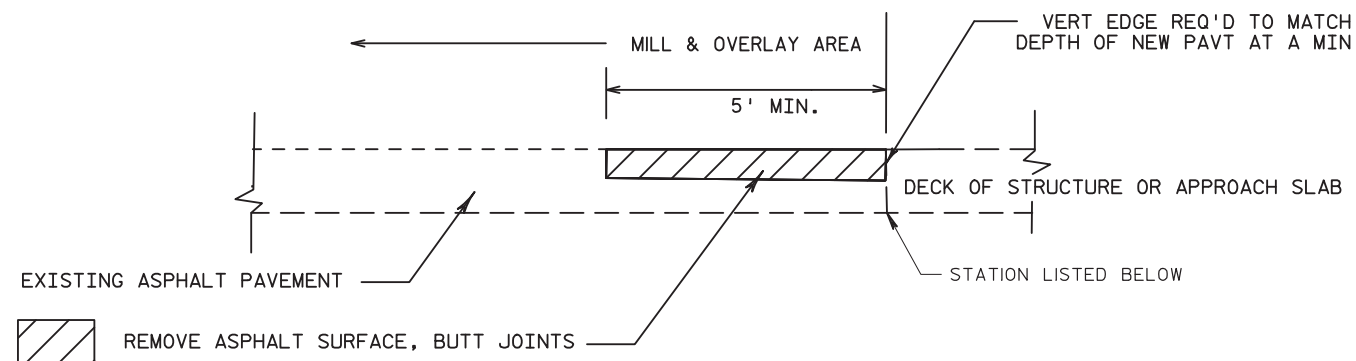
*EDGE OF PAVED SHOULDER ALONG ML

Addendum No. 1
IDs 8160-00-70 &
8160-03-61
Revised Sheet 6
April 9, 2015



OVERLAP JOINT, BUTTED DETAIL

STA 8+00



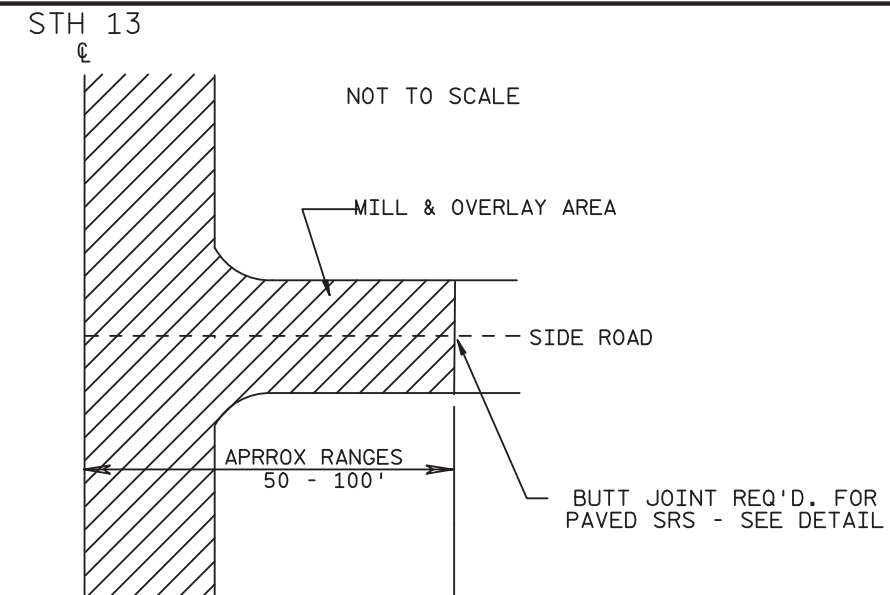
DETAIL FOR BUTT JOINTS AT ENDS OF WORK AREAS AND STRUCTURE LOCATIONS

STA 29+50
STA 112+73
STA 328+36

STA 30+32
STA 112+95

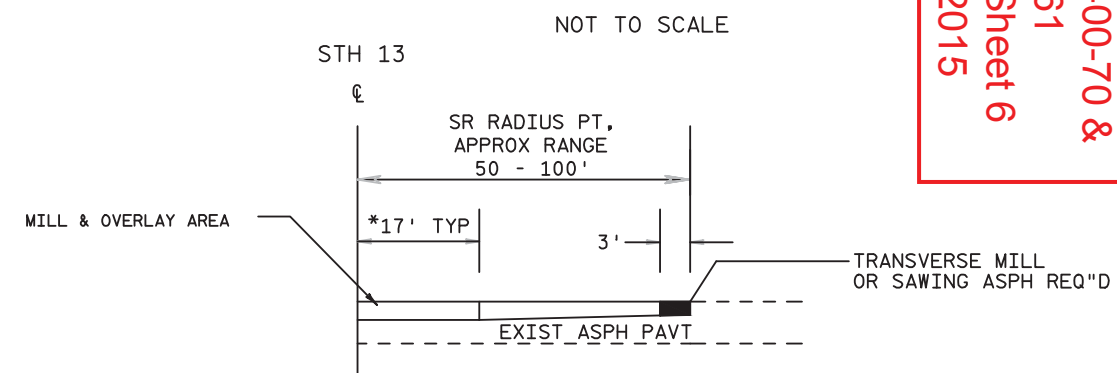
SIDE ROAD LOCATION'S REQUIRING BUTT JOINTS

CHERRYVILLE ROAD STA. 27+54.6 LT	ONDOSSAGON ROAD STA. 54+78.8 LT
MISSION SPRINGS RD STA. 78+93.7 RT	BIRCH GROVE ROAD STA. 184+76.8 RT
NOLANDER ROAD STA. 184+83.4 LT	BONO CREEK ROAD STA. 199+75.7 RT
WEDAL ROAD STA. 211+75.7 LT	OLSEN ROAD STA. 222+77.5 RT
LAKE SHORE DRIVE STA. 233+32.2 RT	ENGOE ROAD STA. 242+06.8 LT
LAKE SHORE DRIVE STA. 252+24.5 RT	NEVERS ROAD STA. 268+44.1 LT
LAKE SHORE DRIVE STA. 281+76.9 RT	WANNEBO ROAD STA. 294+90.4 LT
SUMMIT AVENUE STA. 294+99.2 RT	FAULKNER ROAD STA. 305+70.0 LT
THOMPSON ROAD STA. 320+89.6 LT	BIGLOW STREET STA. 320+83.0 RT
FUR FARM ROAD STA. 327+18.8 LT	



SIDE ROAD DETAIL - NO CURB & GUTTER

NOTE: IF THE EXISTING SIDEROAD CONSISTS OF A BASE COURSE SURFACE, THE NEW ASPHALT SHALL BE PLACED TO THE END OF THE FARTHER EXISTING SIDEROAD RADIUS.

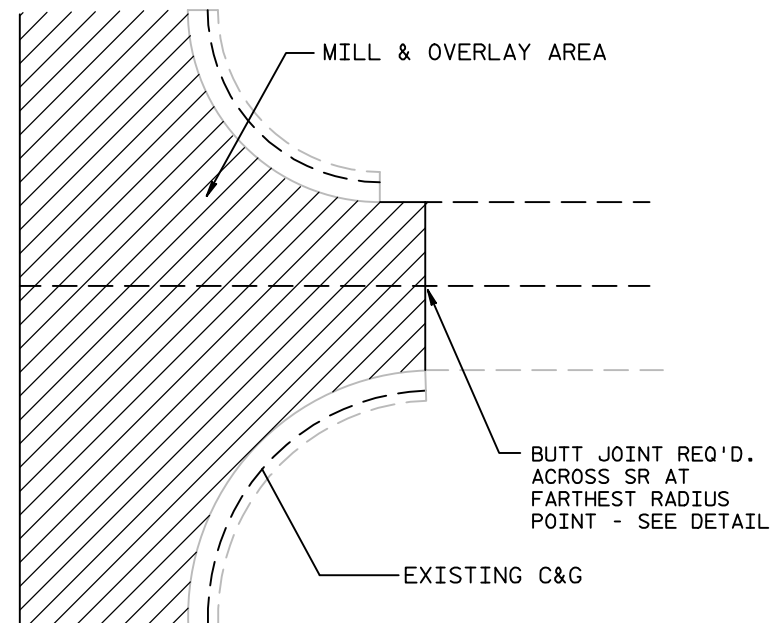


SIDE ROAD BUTT JOINT DETAIL

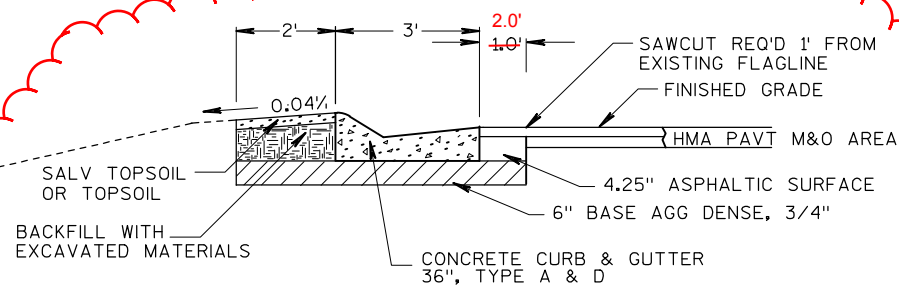
SIDEROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT, EXCEPT AT BONO CREEK AND WEDAL ROADS WHERE 1" JOINT IS REQ'D

*EDGE OF PAVED SHOULDER ALONG ML

Addendum No. 2
IDs 8160-00-70 &
8160-03-61
Revised Sheet 6
April 12, 2015

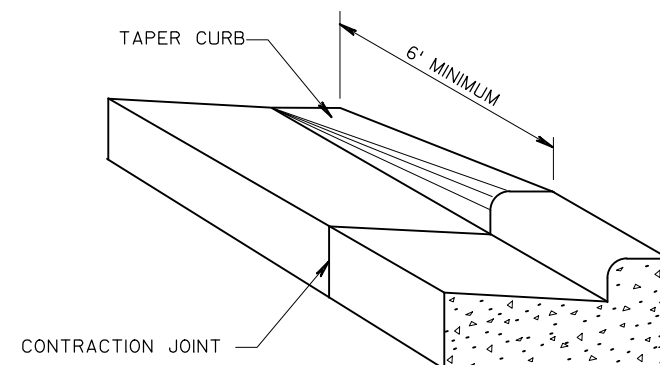
STH 13
CL

SIDEROAD DETAIL, URBAN & RURAL - CURB & GUTTER

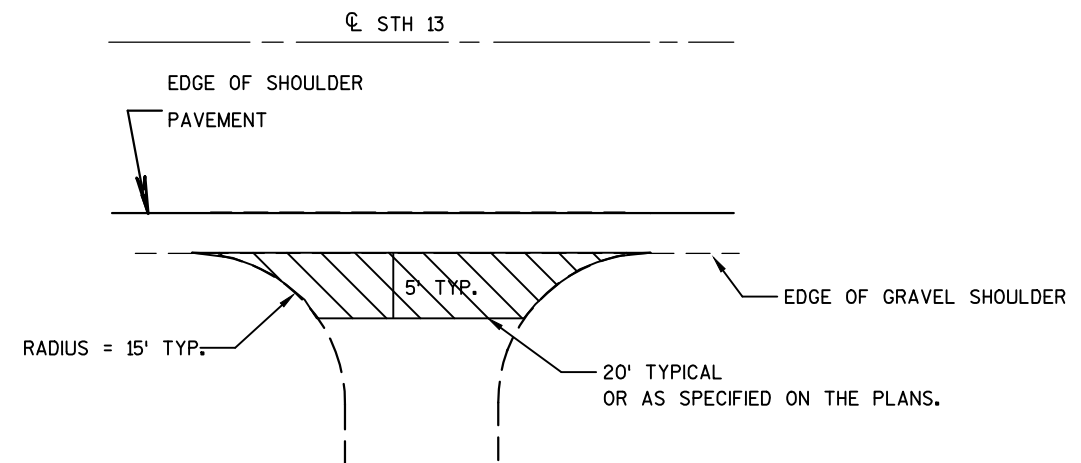


DETAIL FOR CURB & GUTTER REPLACEMENT AREAS

NOTE: EXCAVATION, FILL AND GARDENING ITEMS NECESSARY FOR THIS
WORK ARE INCIDENTAL TO C&G ITEM.



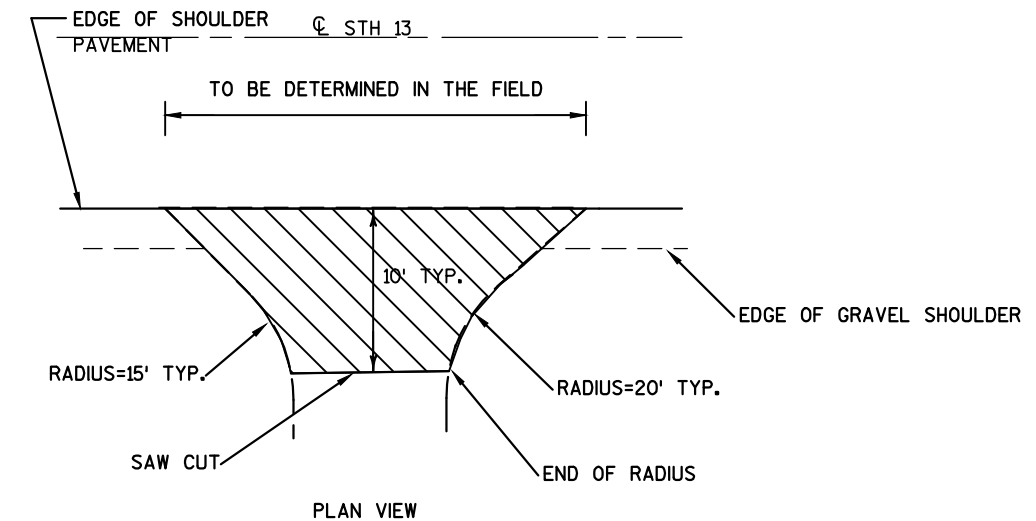
DETAIL OF CURB & GUTTER TERMINI



RURAL AGGREGATE DRIVEWAY DETAIL

EACH ENTRANCE SHALL RECEIVE ADEQUATE 3/4-INCH BASE AGG. DENSE
AFTER MAINLINE PAVING TO BRING ENTRANCE UP TO SHOULDER PAVEMENT GRADE.
MATCH EXISTING DRIVEWAY WIDTHS AND RADII.

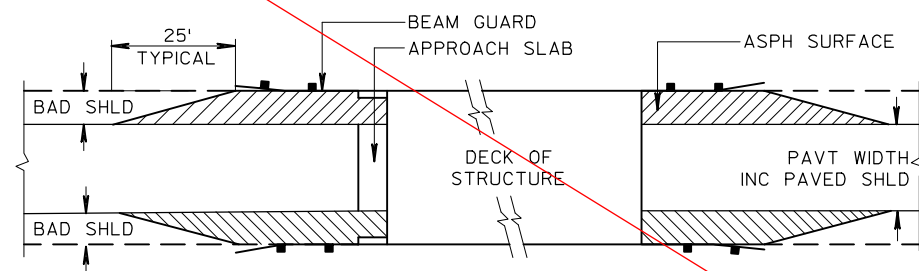
72+85	75+00	79+18	82+44	84+90	86+26	87+20	89+48
103+50	135+25	148+40	152+36	153+58	161+30	168+10	170+05
172+00	191+75	193+45	194+78	196+68	211+22	216+50	219+48
229+60	231+80	278+34	280+08	282+00	284+85	285+52	
296+75	298+25	306+82	323+44				



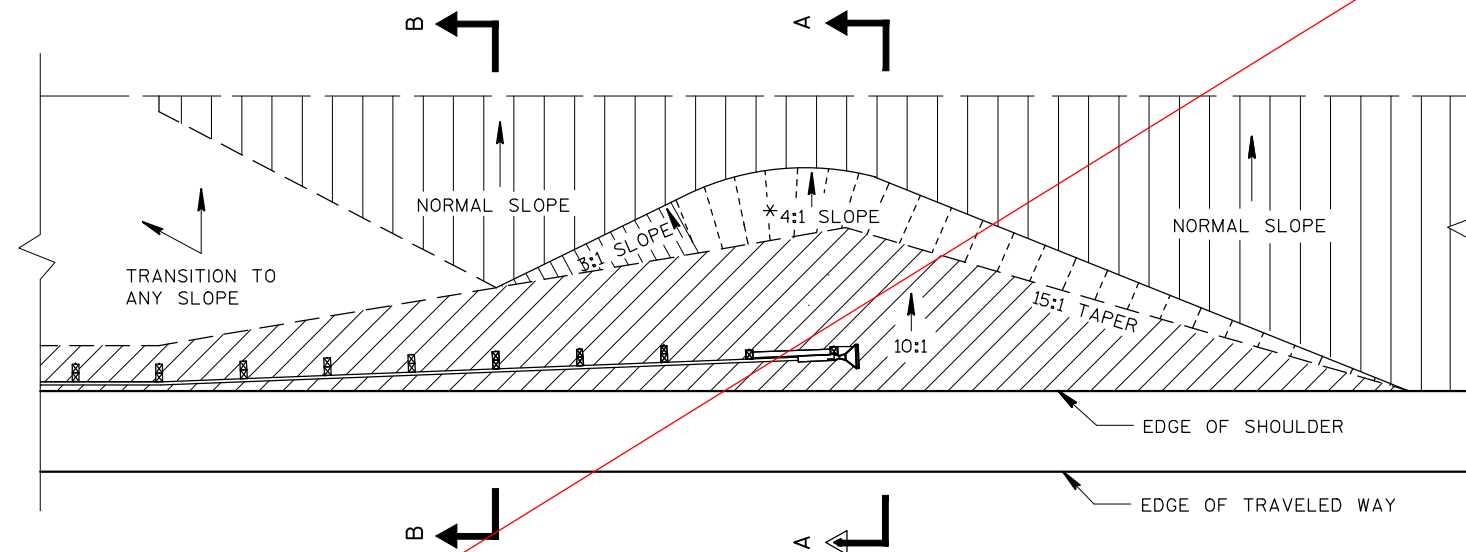
RURAL PAVED DRIVEWAY DETAIL

REMOVE EXISTING ASPHALTIC SURFACE, REPLACE WITH
ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES.
MATCH EXISTING WIDTH AND RADII OF DRIVEWAY.
PREPARE SUBSURFACE FOR PAVING WITH BASE AGG
DENSE 3/4-INCH AS NECESSARY.

SEE MISCELLANEOUS TABLES FOR LIST OF STA/LOC

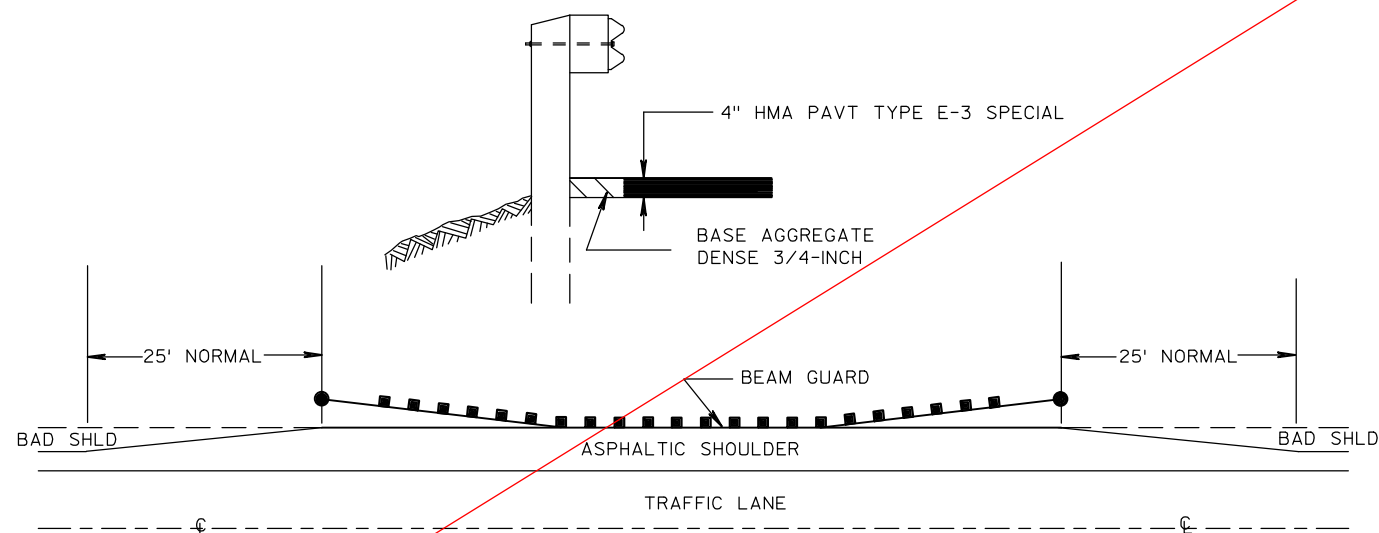


DETAIL FOR ASPHALTIC
SHOULDERS AT STRUCTURES

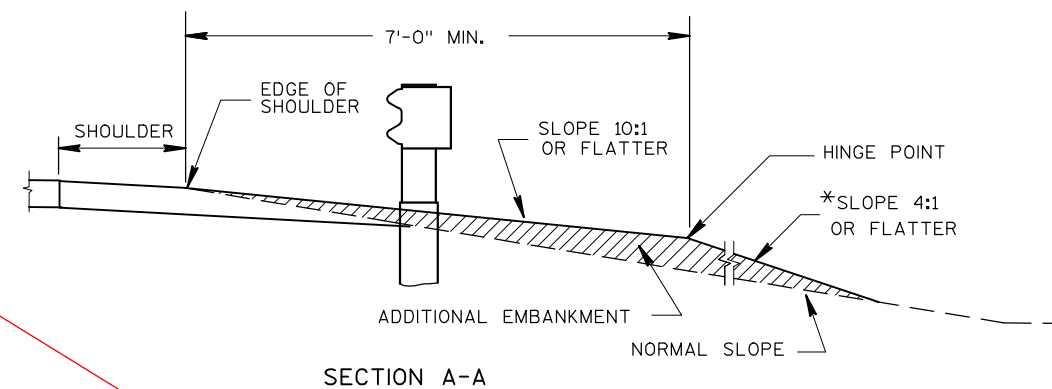


PLAN VIEW

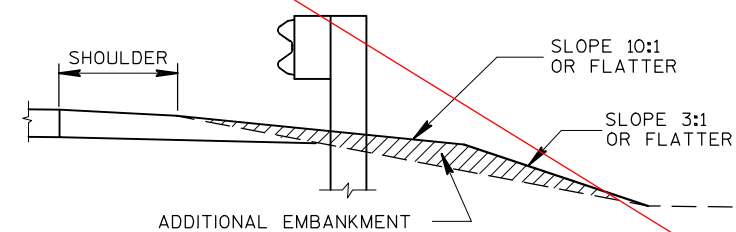
*A 3:1 MAXIMUM SLOPE MAY BE USED FOR
INSTALLATIONS ON EXISTING HIGHWAYS.



DETAIL FOR ASPHALTIC SHOULDER TAPERS AT BEAM GUARD

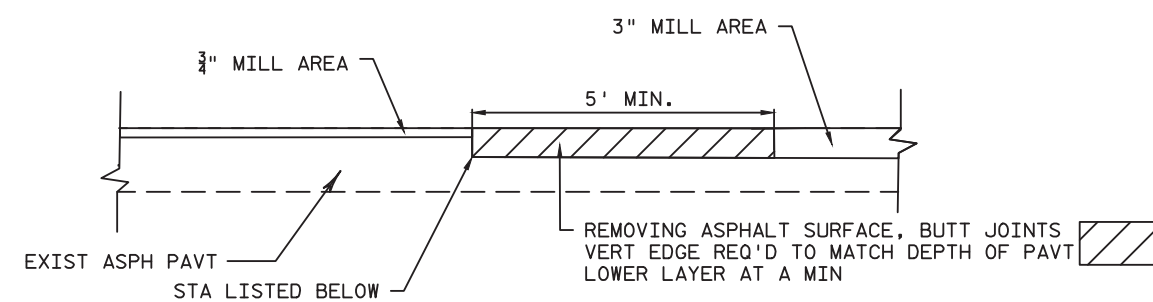


SECTION A-A



SECTION B-B

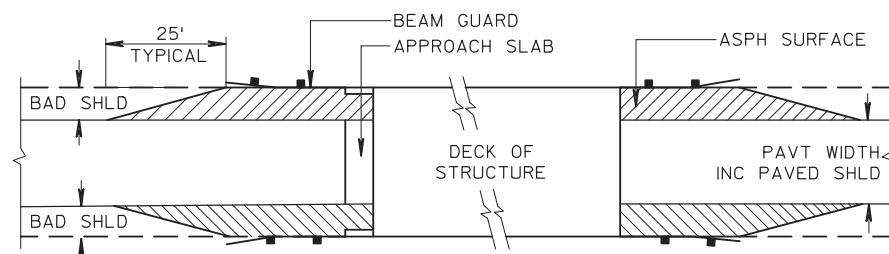
FILL AREA AT BEAM GUARD



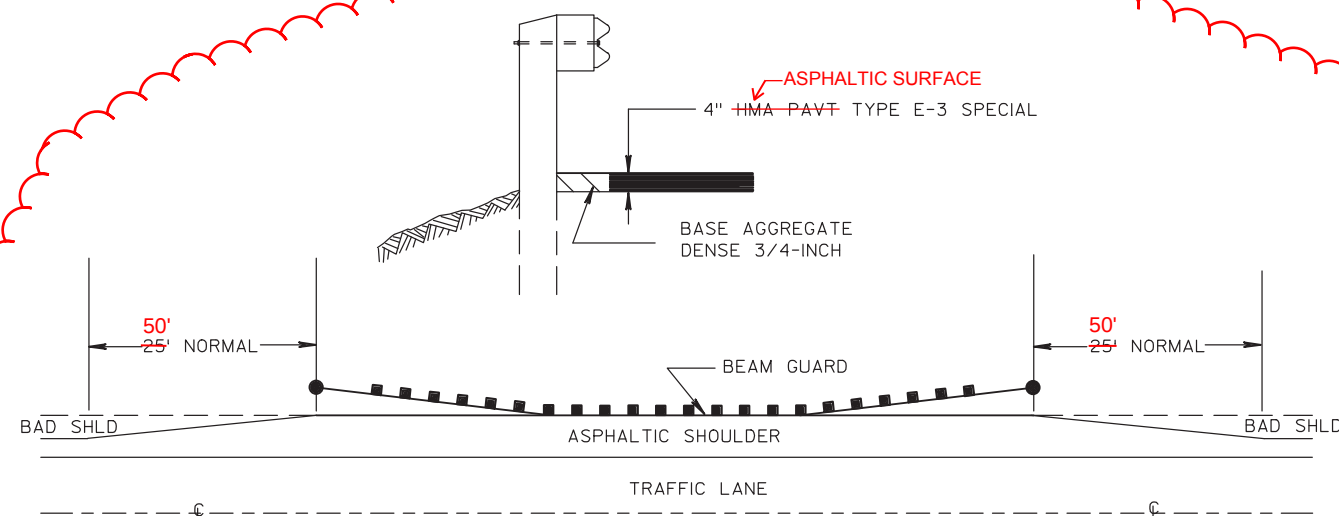
DETAIL FOR BUTT JOINTS AT MILL DEPTH TRANSITIONS

STA 103+99
STA 199+00

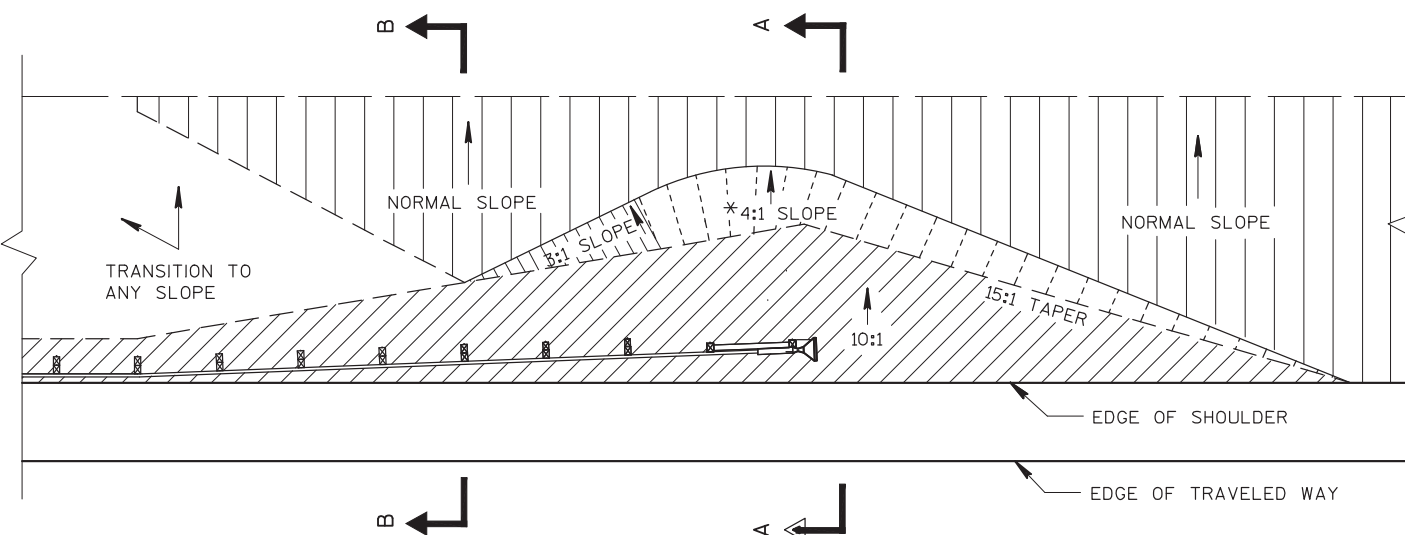
STA 121+69
STA 215+00



DETAIL FOR ASPHALTIC
SHOULDERS AT STRUCTURES

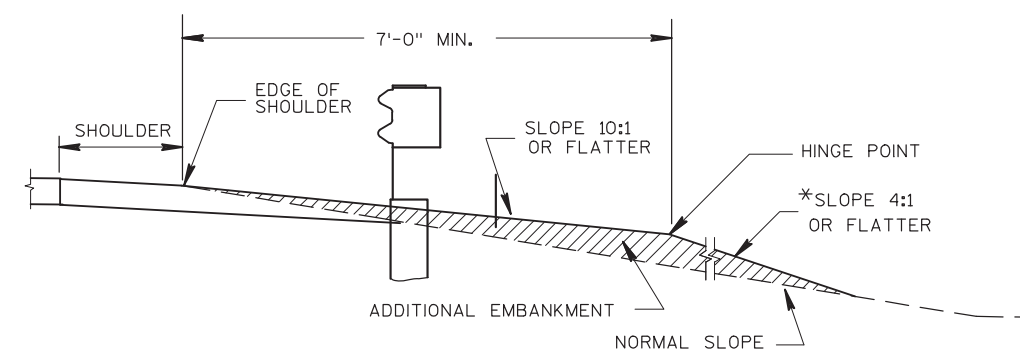


DETAIL FOR ASPHALTIC SHOULDER TAPERS AT BEAM GUARD

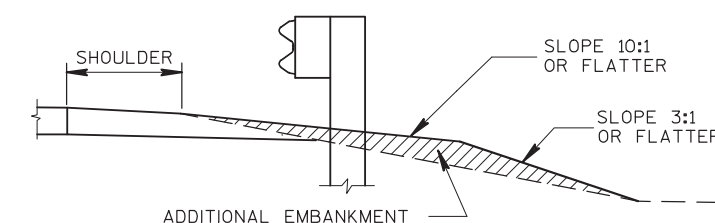


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR
INSTALLATIONS ON EXISTING HIGHWAYS.



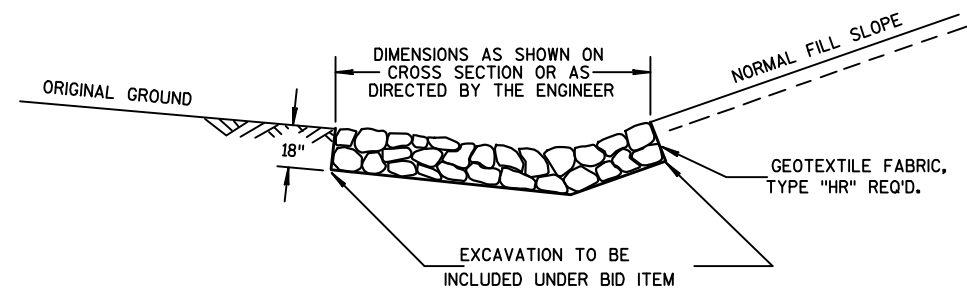
SECTION A-A



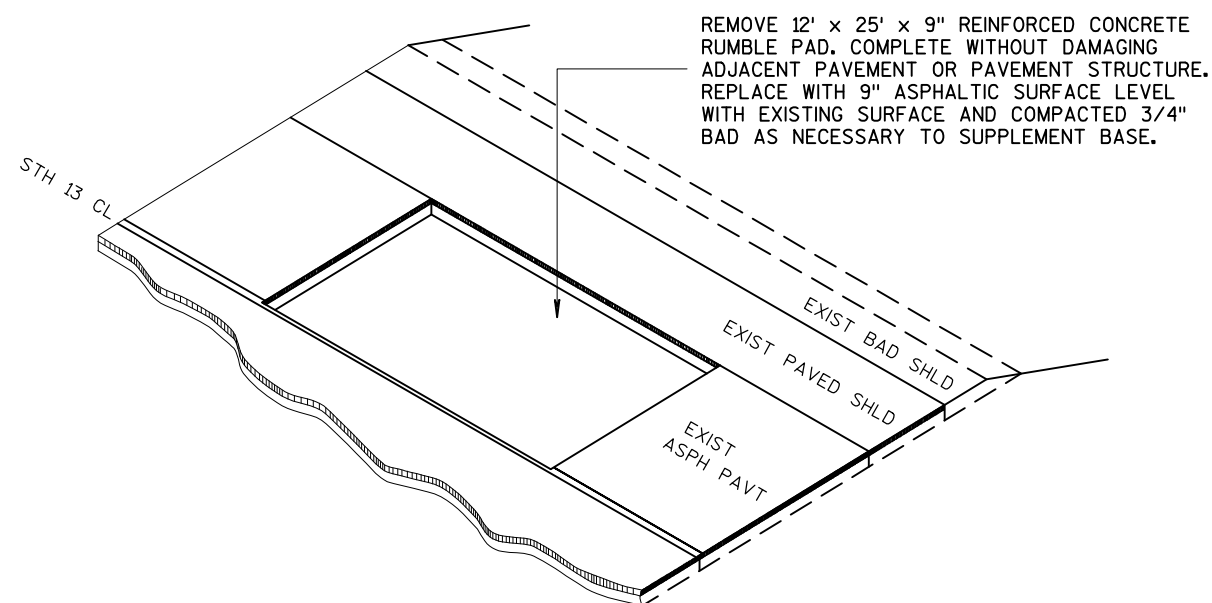
SECTION B-B

FILL AREA AT BEAM GUARD

Addendum No. 1
IDS 8160-00-70 &
8160-03-61
Revised Sheet 8
April 9, 2015



EROSION MAT DETAIL FOR DITCHES

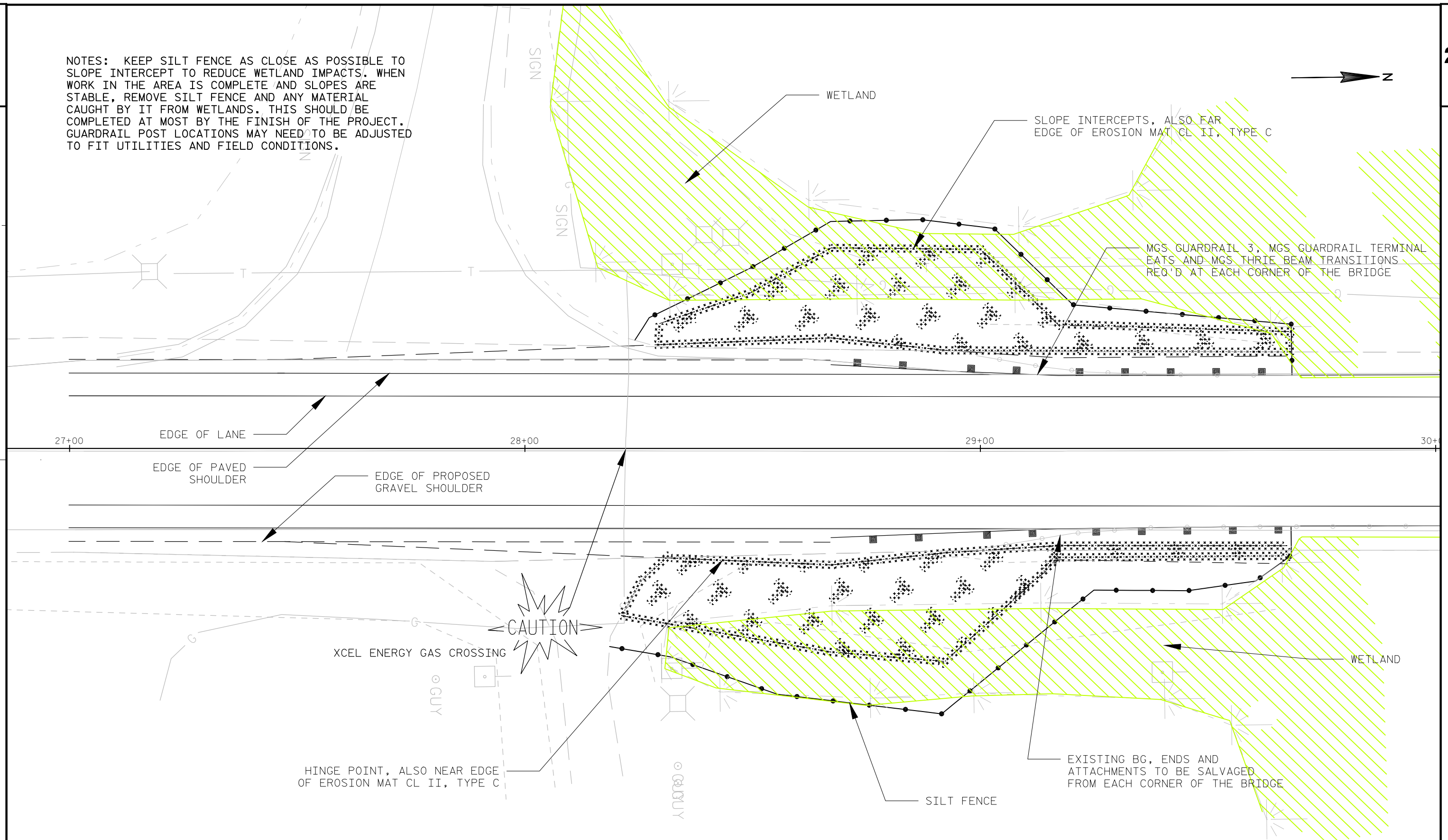


RUNOFF COEFFICIENT TABLE

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

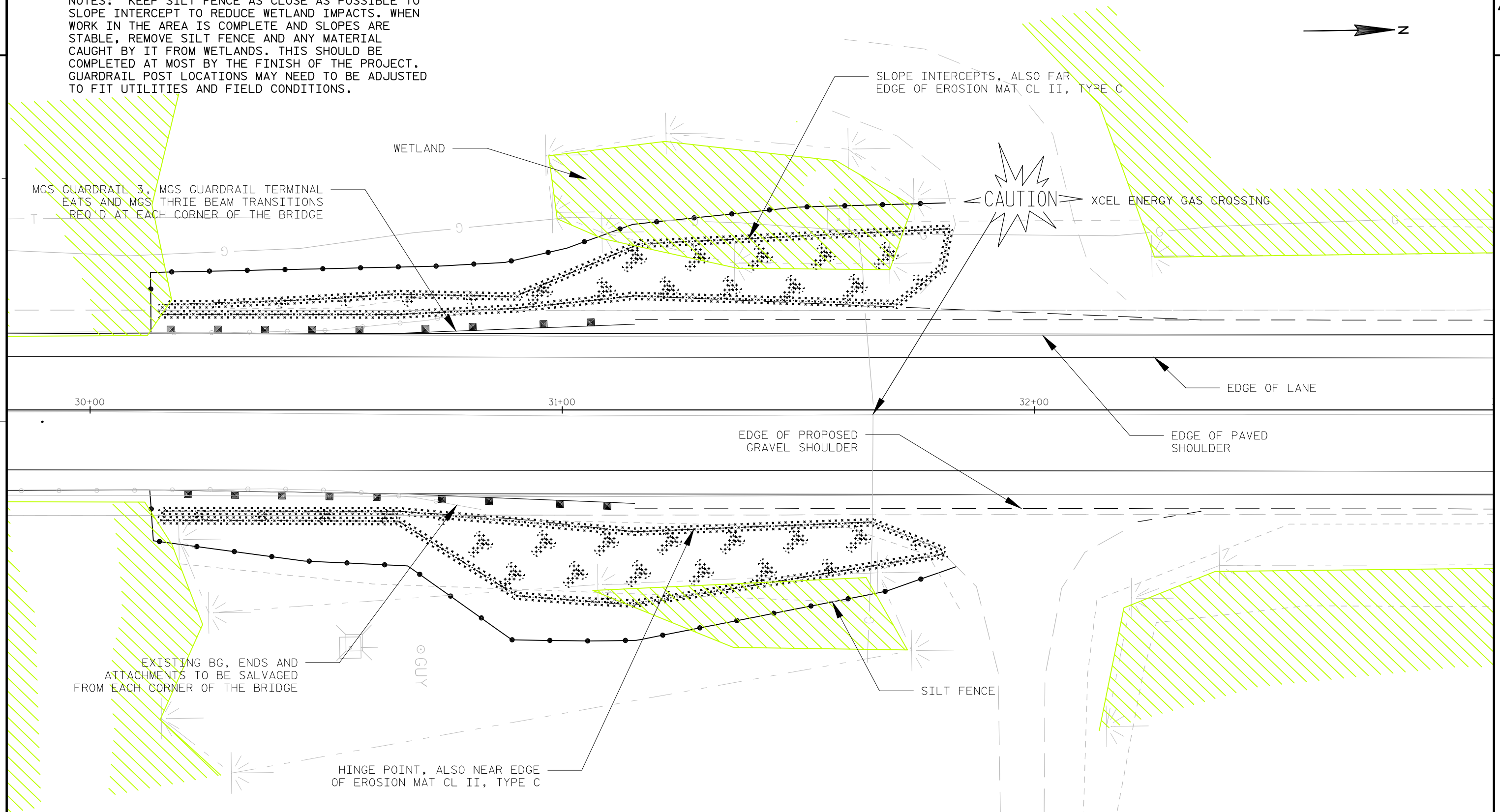
TOTAL PROJECT AREA = 88 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.2 ACRES

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

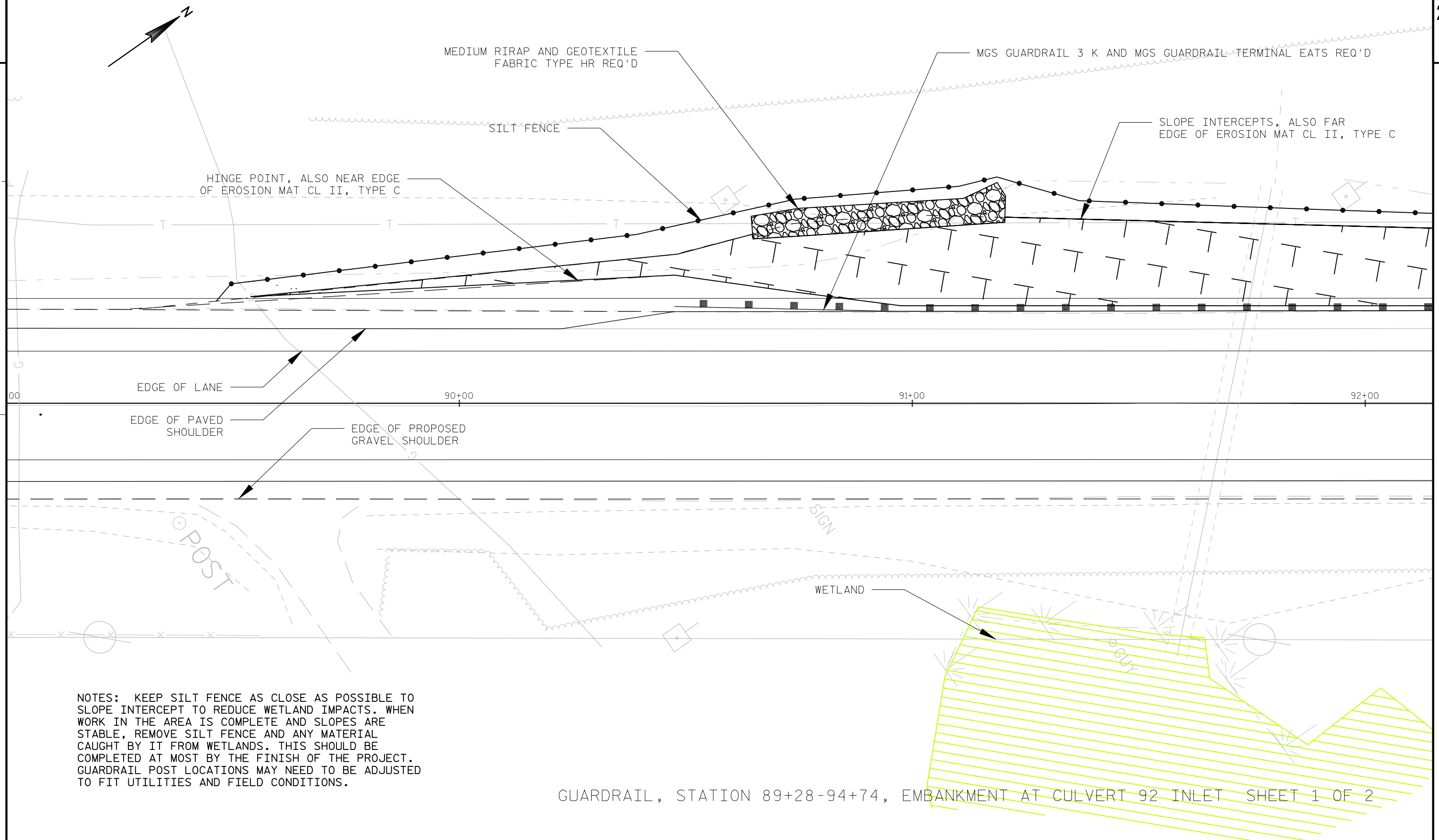


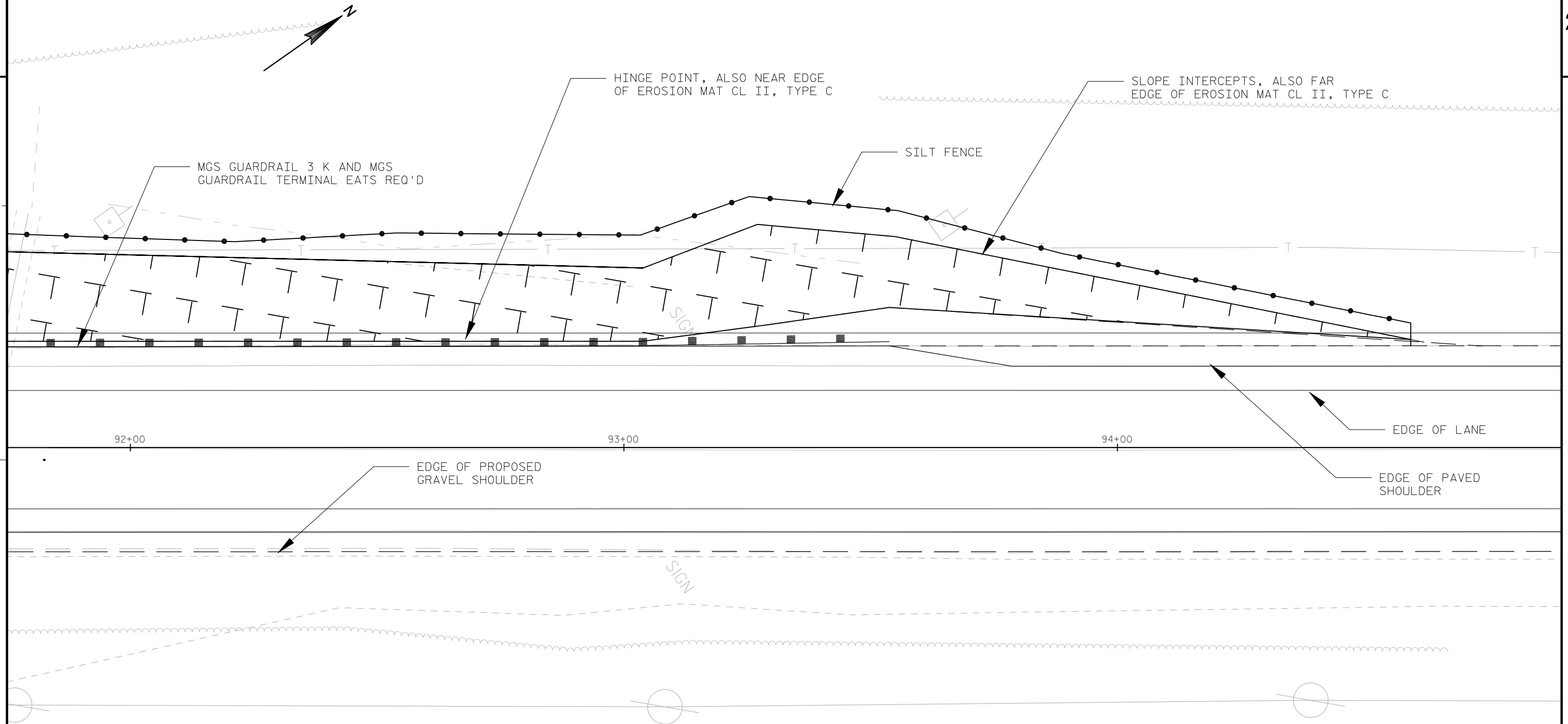
GUARDRAIL, STATION 27+47-32+35, WHITTLESEY CREEK BRIDGE SHEET 1 OF 2

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.



GUARDRAIL, STATION 27+47-32+35, WHITTLESEY CREEK BRIDGE SHEET 2 OF 2



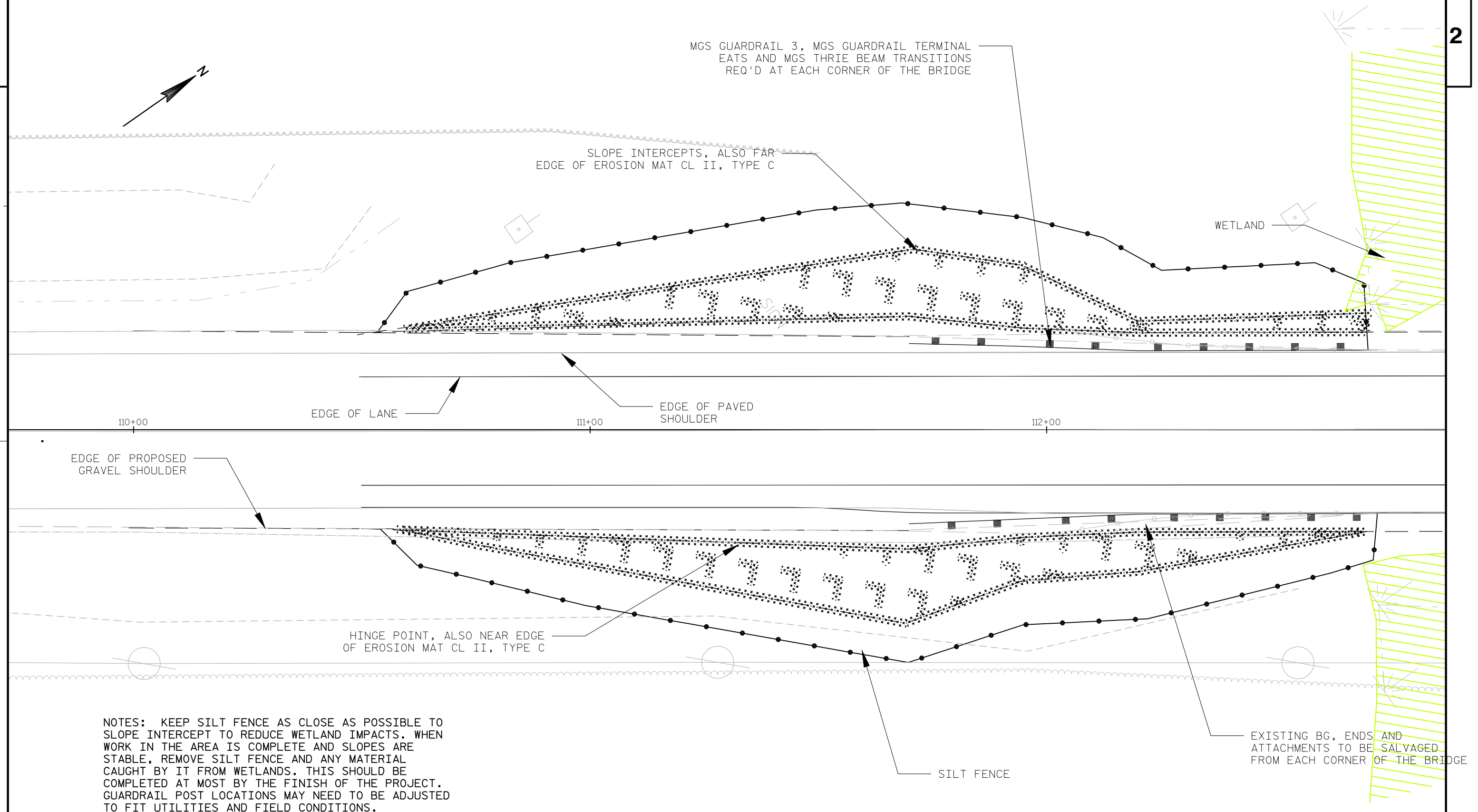


NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

GUARDRAIL, STATION 89+28-94+74, EMBANKMENT AT CULVERT 92 INLET SHEET 2 OF 2

2

2



GUARDRAIL, STATION 110+50-115+18, BOYD CREEK BRIDGE SHEET 1 OF 2

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CONSTRUCTION DETAILS

SHEET

E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

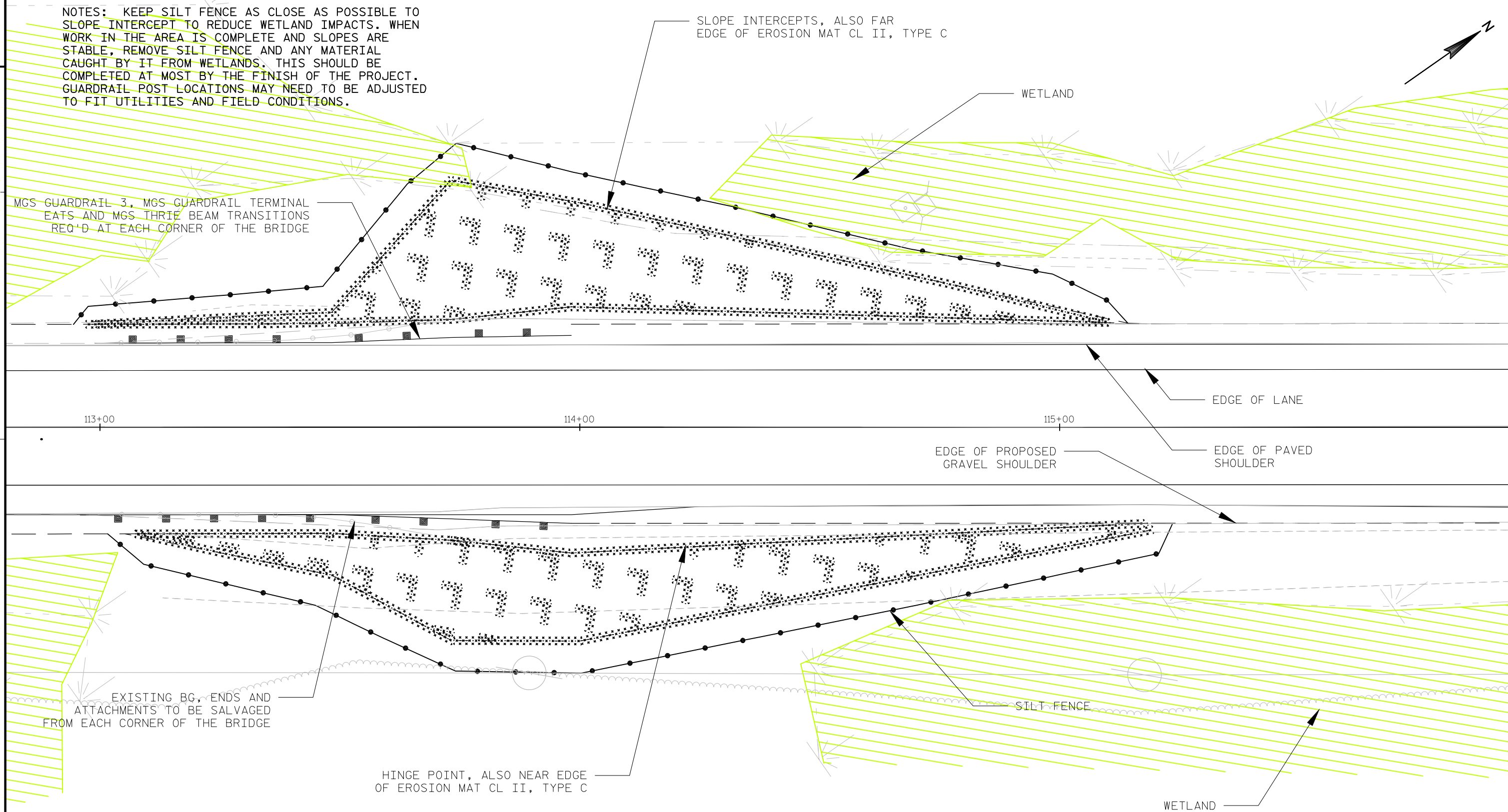
PLOT DATE : 2/17/2015 11:10 AM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1:20-XREF

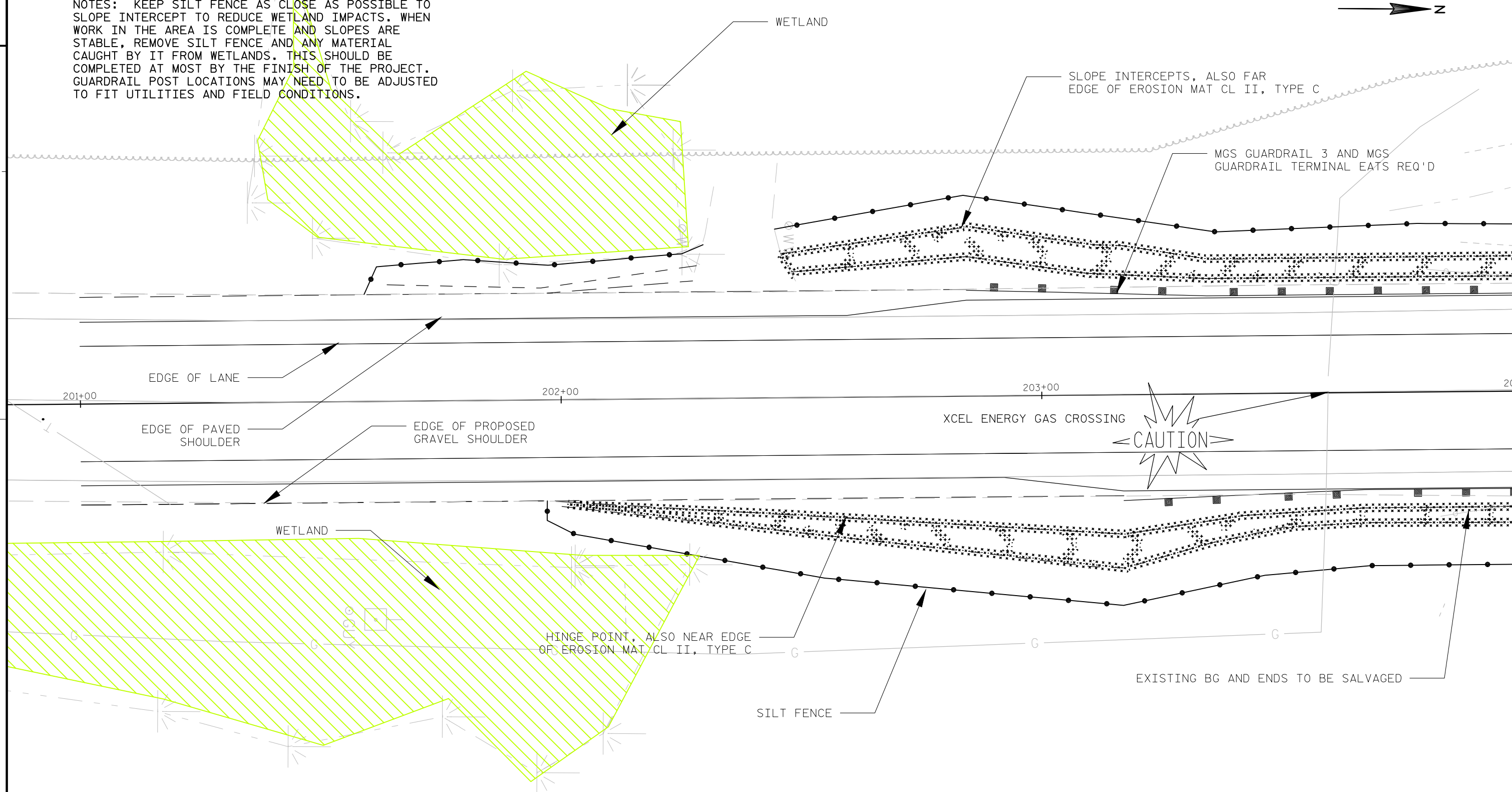
WISDOT/CADDs SHEET 44

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.



GUARDRAIL, STATION 110+50-115+18, BOYD CREEK BRIDGE SHEET 2 OF 2

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.



GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 1 OF 4

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

WETLAND

SLOPE INTERCEPTS, ALSO FAR
EDGE OF EROSION MAT CL II, TYPE CMGS GUARDRAIL 3 REQ'D 203+37.625 - 205+50.125 LT
AND 203+70 - 204+20 RT
MGS GUARDRAIL 3 K REQ'D 204+20 - 209+45 RT
AND 205+50.125 - 209+50.125 LT

EDGE OF LANE

204+00

EDGE OF PAVED
SHOULDER

205+00

206+00

207+00

HINGE POINT, ALSO NEAR EDGE
OF EROSION MAT CL II, TYPE C

SILT FENCE

EXISTING BG TO BE SALVAGED

GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 2 OF 4

2

2

NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN WORK IN THE AREA IS COMPLETE AND SLOPES ARE STABLE, REMOVE SILT FENCE AND ANY MATERIAL CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE COMPLETED AT MOST BY THE FINISH OF THE PROJECT. GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED TO FIT UTILITIES AND FIELD CONDITIONS.

WETLAND

→ Z

SLOPE INTERCEPTS, ALSO FAR
EDGE OF EROSION MAT-CL II, TYPE C

MGS GUARDRAIL 3 REQ'D 209+45 - 210+32.5 RT
AND 209+50.125 - 209 = 75.125;
AND MGS GUARDRAIL TERMINAL ENDS REQ'D

207+00

EDGE OF LANE

208+00

EDGE OF PAVED
SHOULDER

209+00

210+00

HINGE POINT, ALSO NEAR EDGE
OF EROSION MAT CL II, TYPE C

SILT FENCE

EXISTING BG TO BE SALVAGED

GUARDRAIL, STATION 201+64-212+06, BONO CREEK SHEET 3 OF 4

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CONSTRUCTION DETAILS

SHEET

E

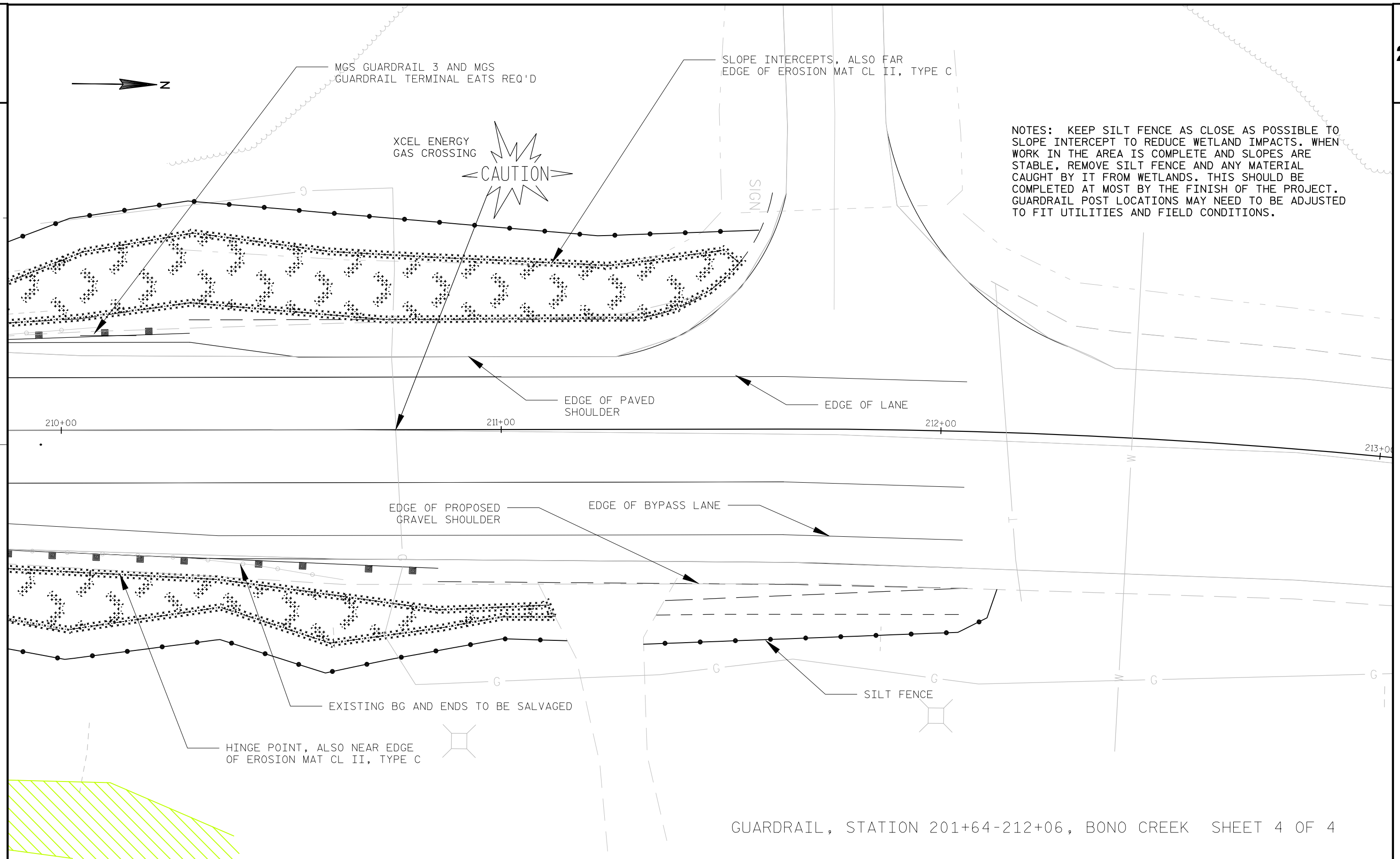
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BG\DESIGN.DWG

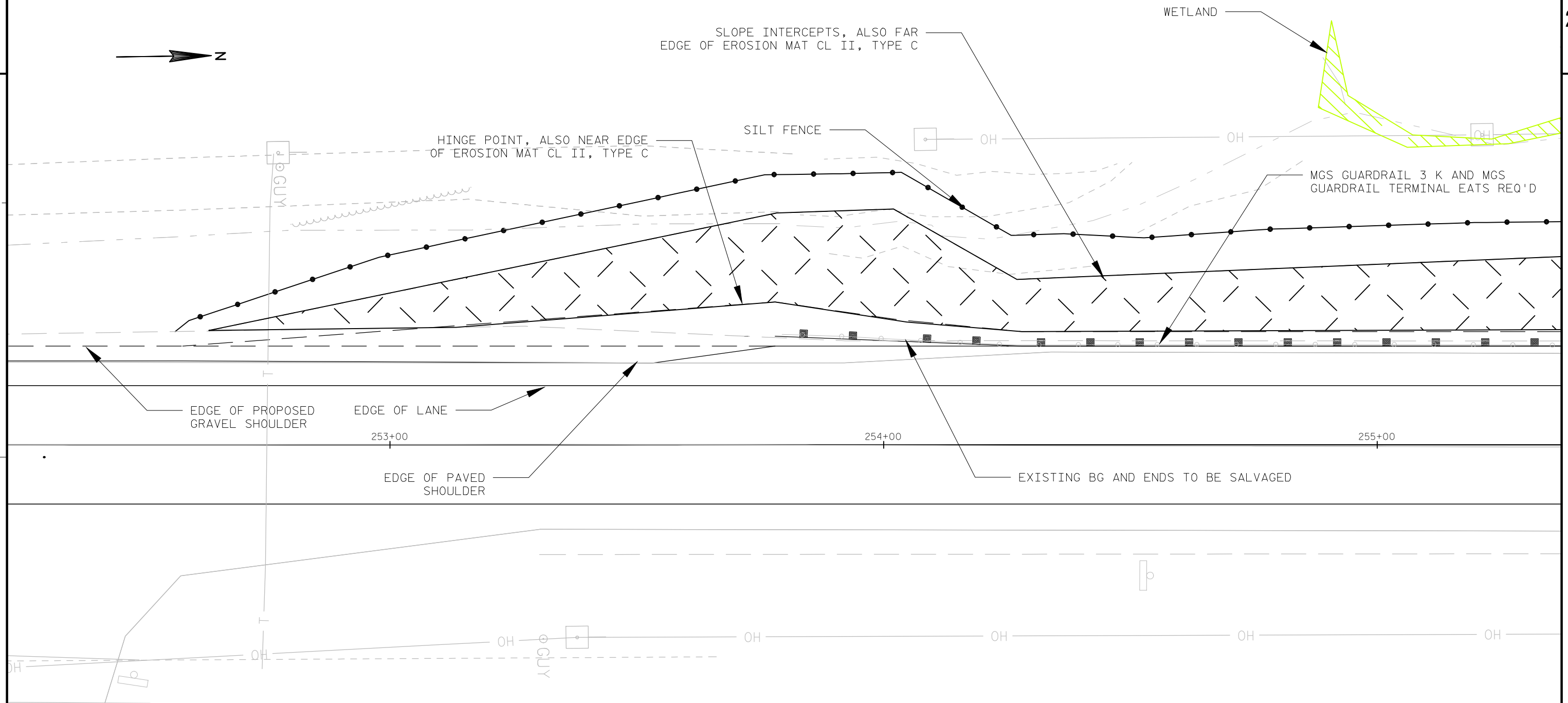
PLOT DATE : 2/17/2015 11:11 AM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1:20-XREF

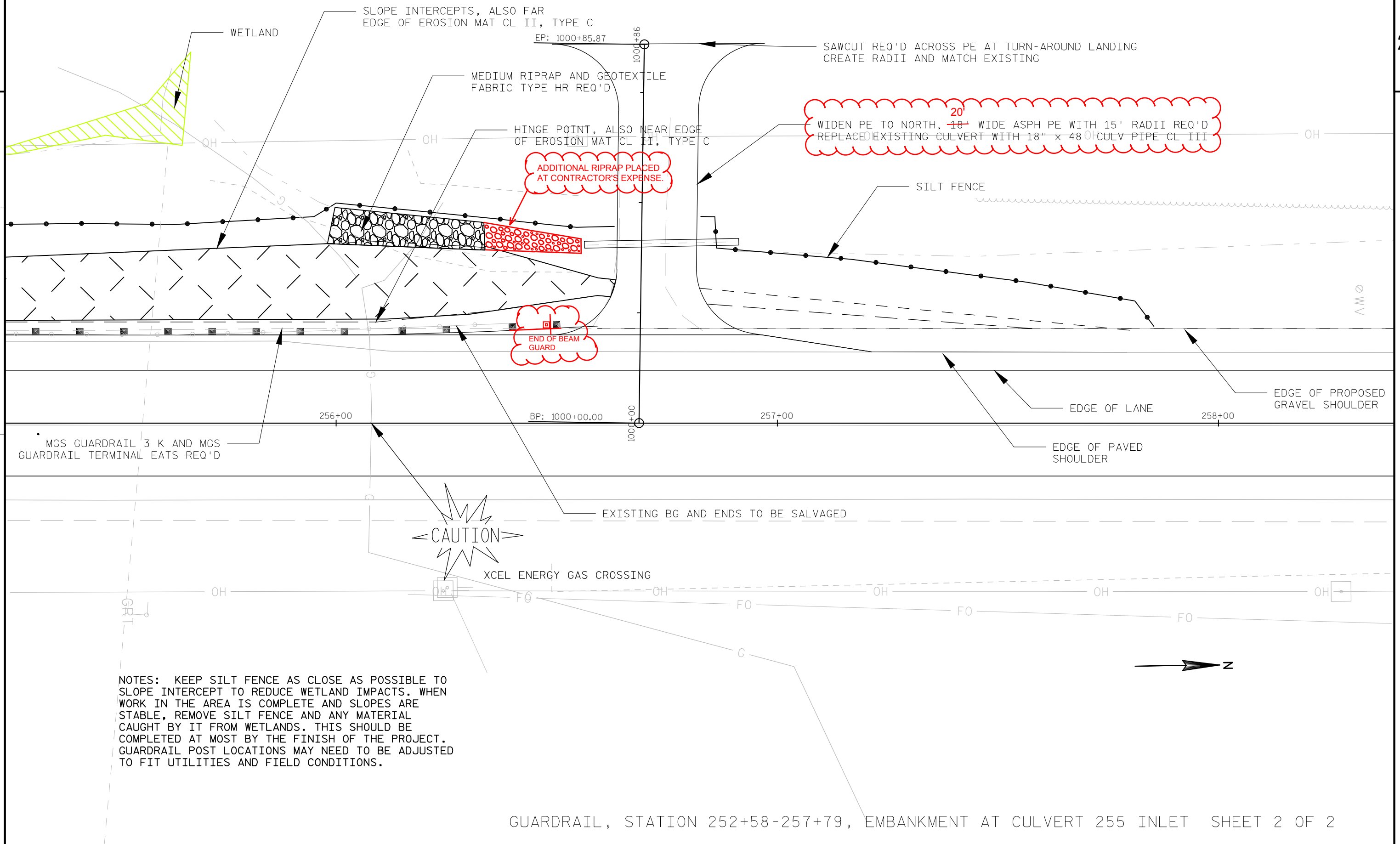
WISDOT/CADDs SHEET 44

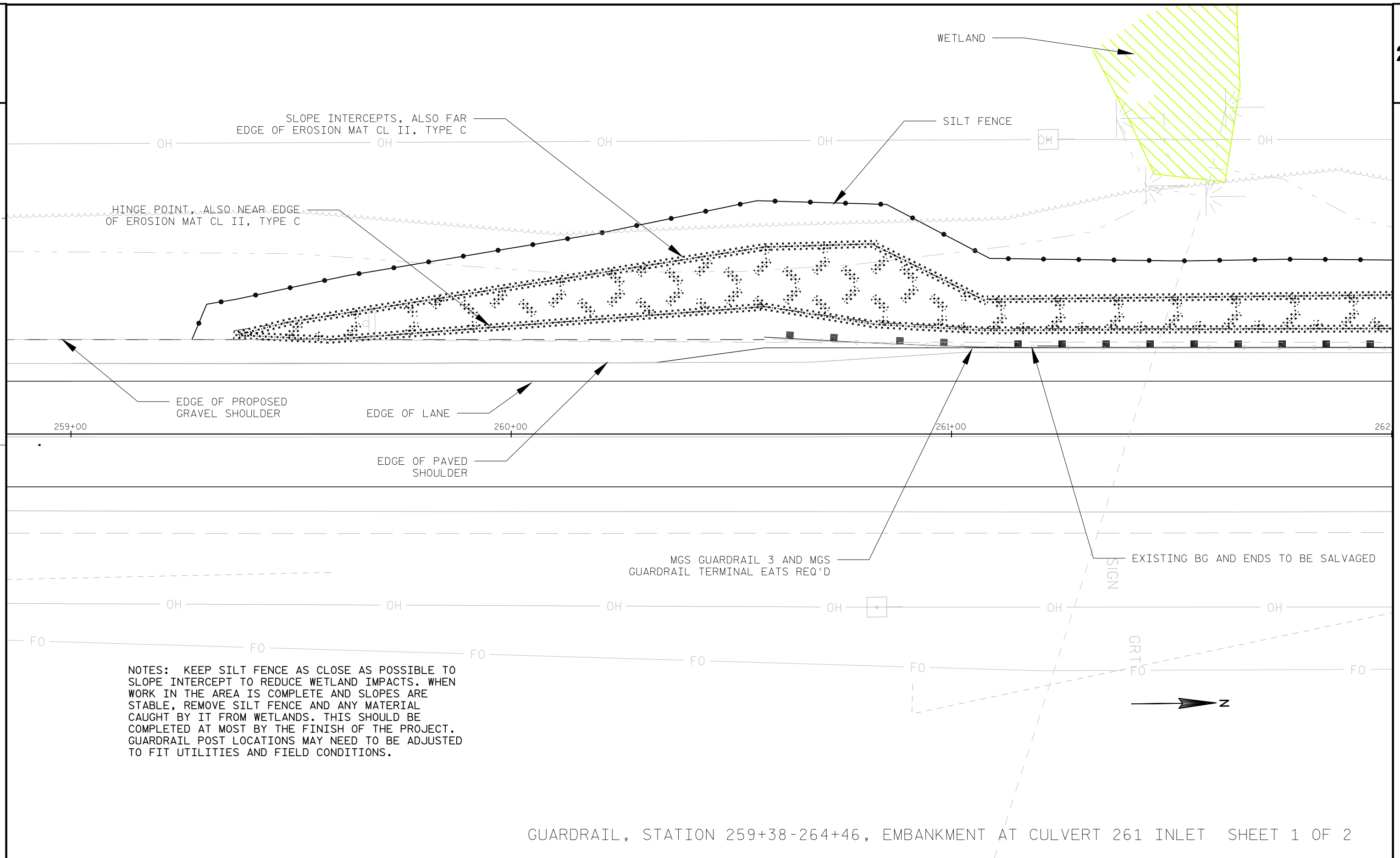


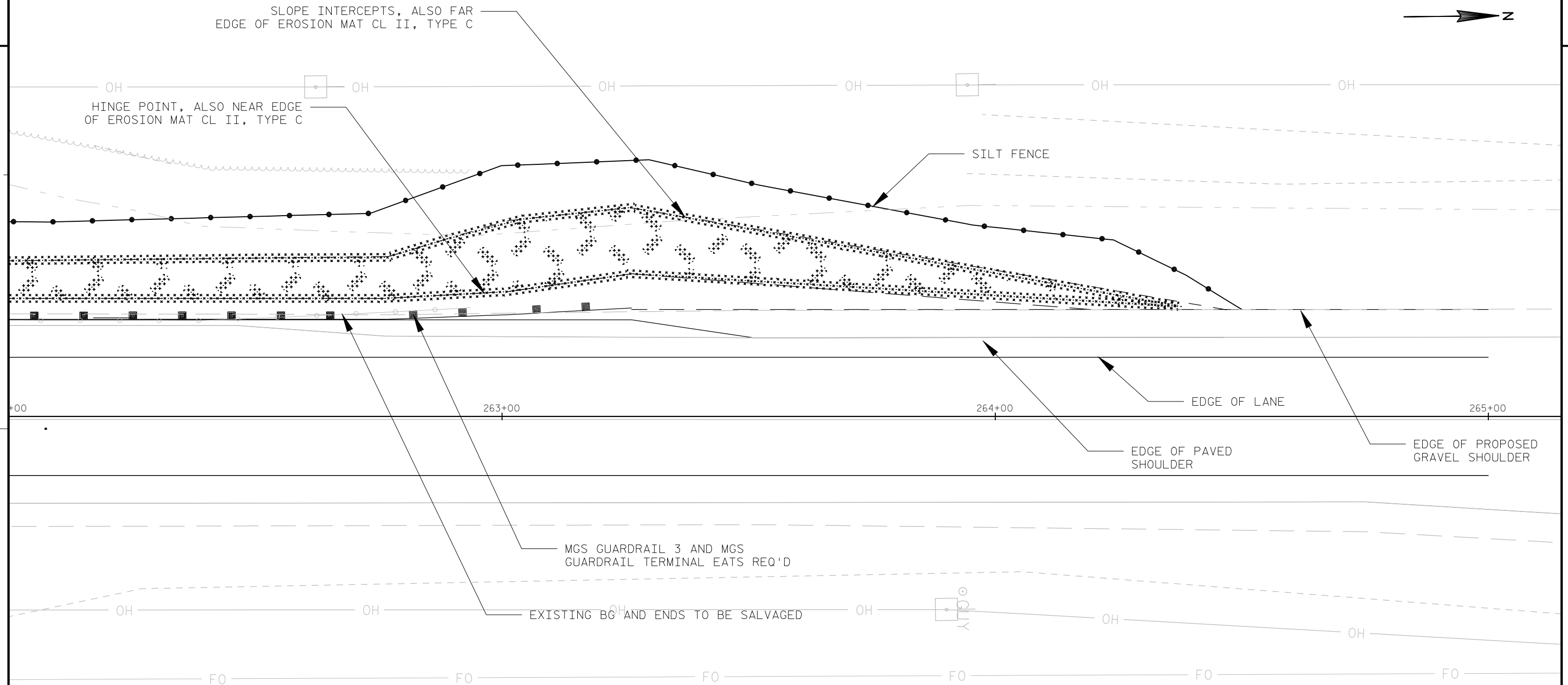


NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO
SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN
WORK IN THE AREA IS COMPLETE AND SLOPES ARE
STABLE, REMOVE SILT FENCE AND ANY MATERIAL
CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE
COMPLETED AT MOST BY THE FINISH OF THE PROJECT.
GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED
TO FIT UTILITIES AND FIELD CONDITIONS.

GUARDRAIL, STATION 252+58-257+79, EMBANKMENT AT CULVERT 255 INLET SHEET 1 OF 2

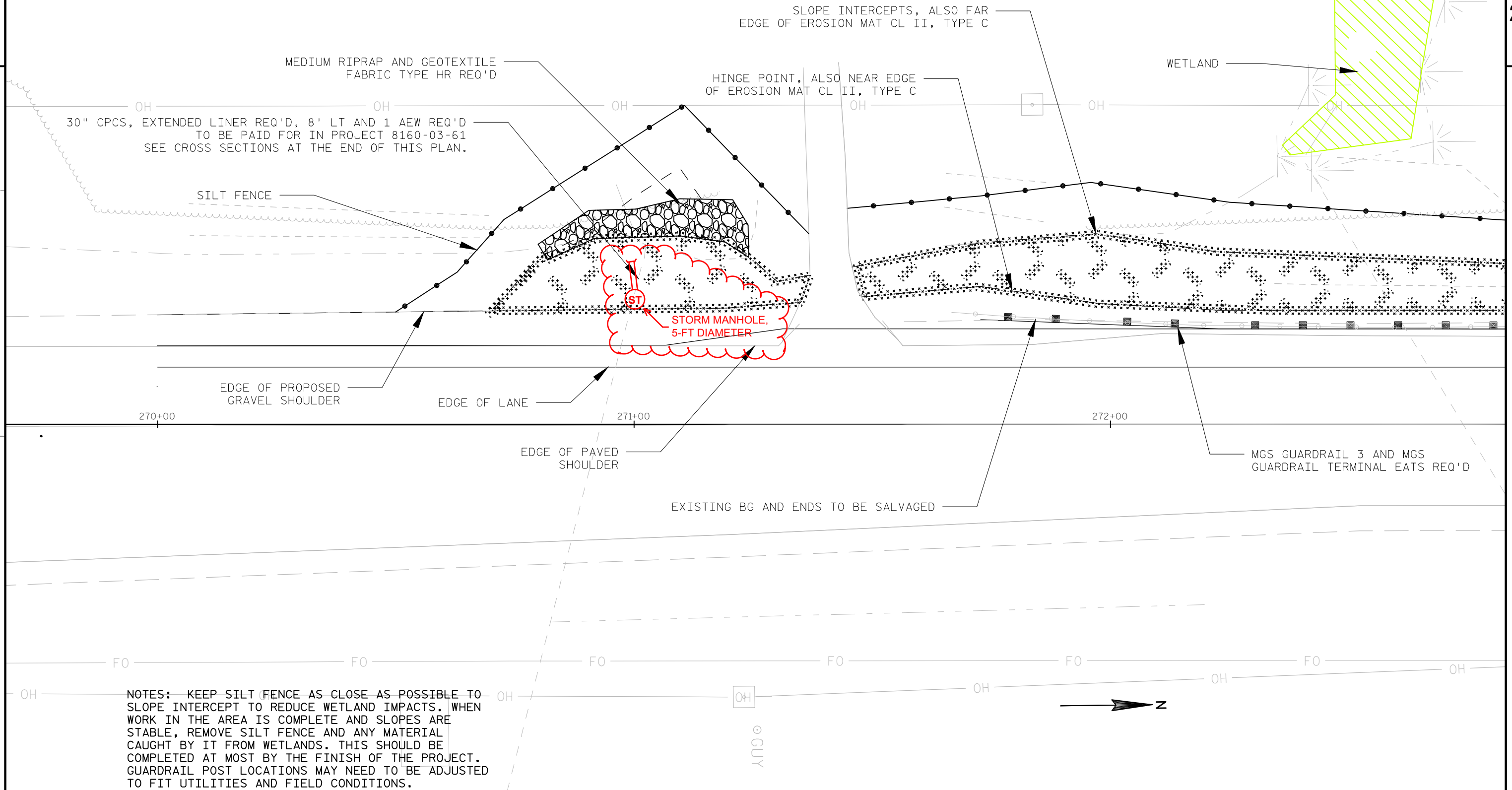






NOTES: KEEP SILT FENCE AS CLOSE AS POSSIBLE TO
SLOPE INTERCEPT TO REDUCE WETLAND IMPACTS. WHEN
WORK IN THE AREA IS COMPLETE AND SLOPES ARE
STABLE, REMOVE SILT FENCE AND ANY MATERIAL
CAUGHT BY IT FROM WETLANDS. THIS SHOULD BE
COMPLETED AT MOST BY THE FINISH OF THE PROJECT.
GUARDRAIL POST LOCATIONS MAY NEED TO BE ADJUSTED
TO FIT UTILITIES AND FIELD CONDITIONS.

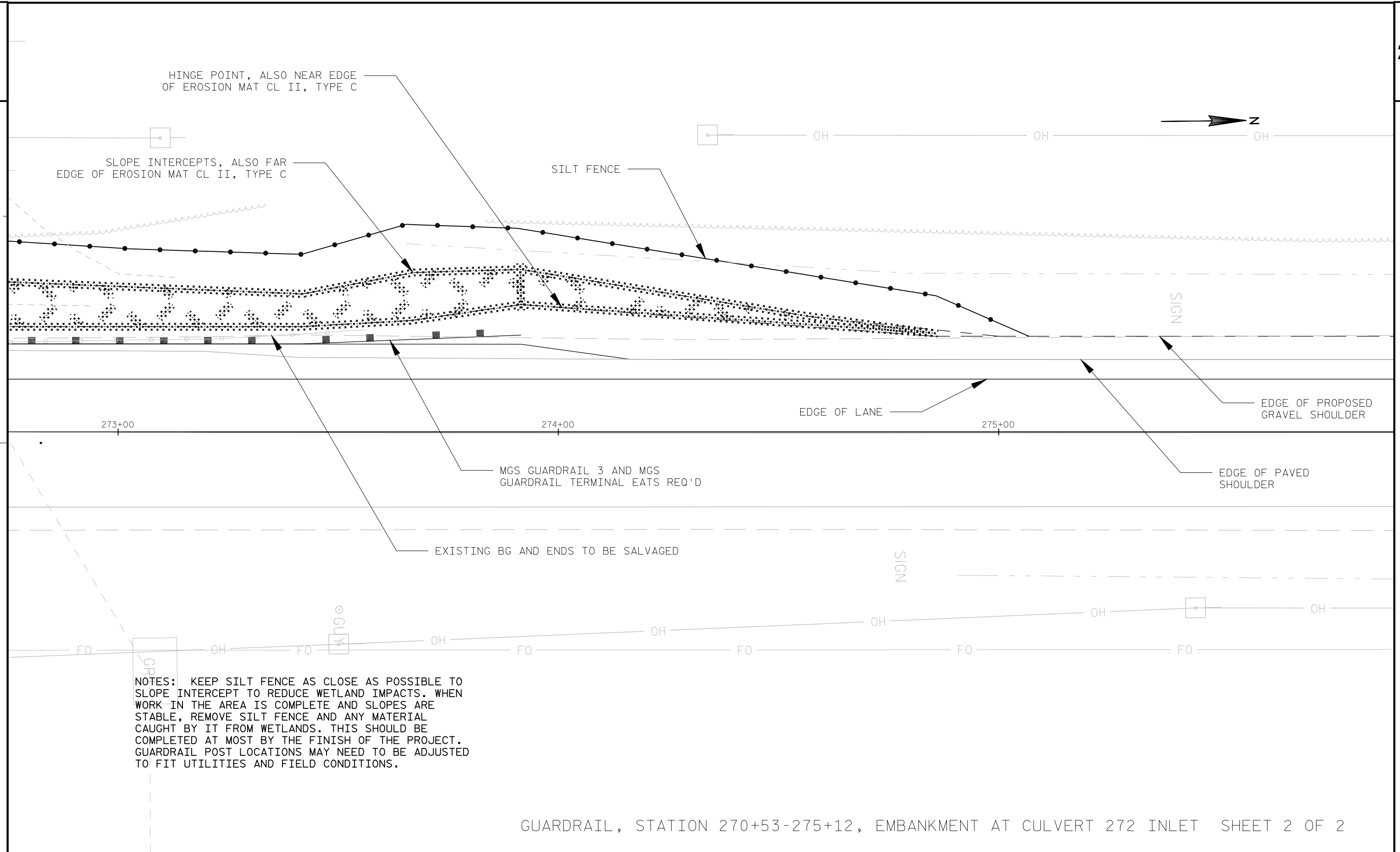
GUARDRAIL, STATION 259+38-264+46, EMBANKMENT AT CULVERT 261 INLET SHEET 2 OF 2



GUARDRAIL, STATION 270+53-275+12, EMBANKMENT AT CULVERT 272 INLET SHEET 1 OF 2

2

2



GUARDRAIL, STATION 270+53-275+12, EMBANKMENT AT CULVERT 272 INLET SHEET 2 OF 2

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CONSTRUCTION DETAILS

SHEET

E

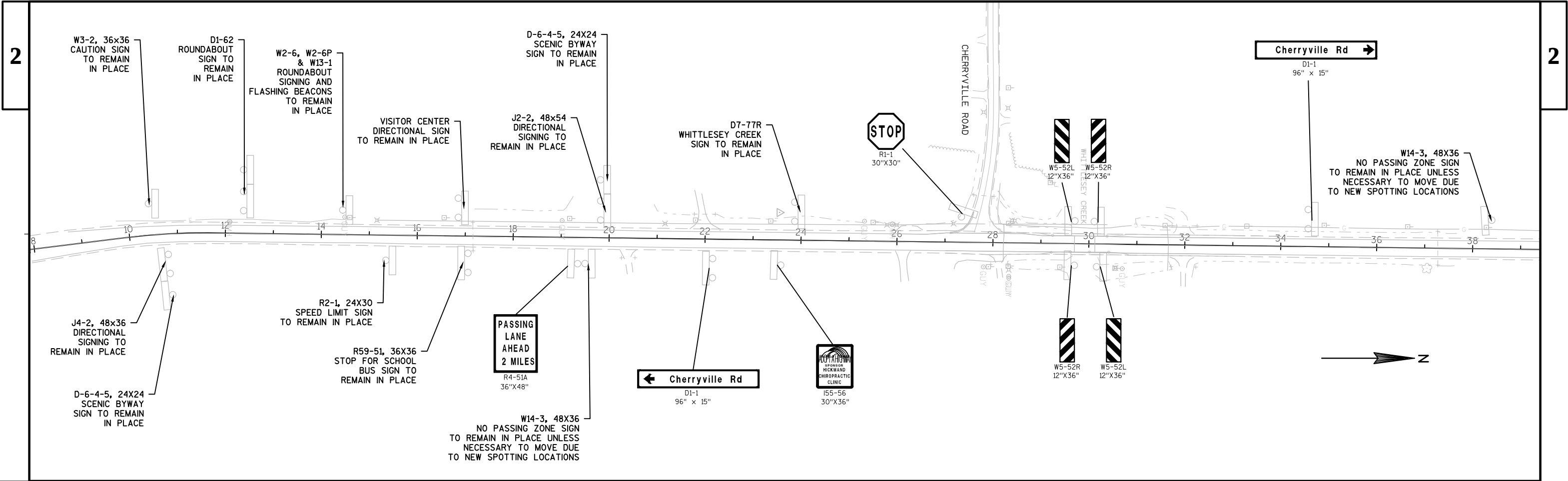
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

PLOT DATE : 2/17/2015 11:12 AM PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME : PLOT SCALE : 1:20_XREF

PLOT SCALE : 1:20_XREF WISDOT: 16AR05 SHEET: 41

WISDOT/CADDS SHEET 44

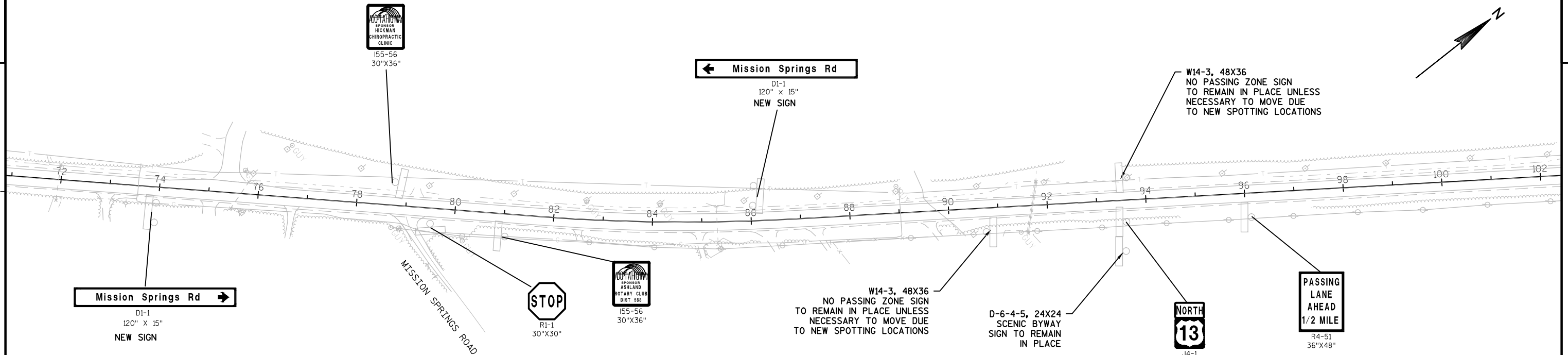


NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO. REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES. SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING. NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".

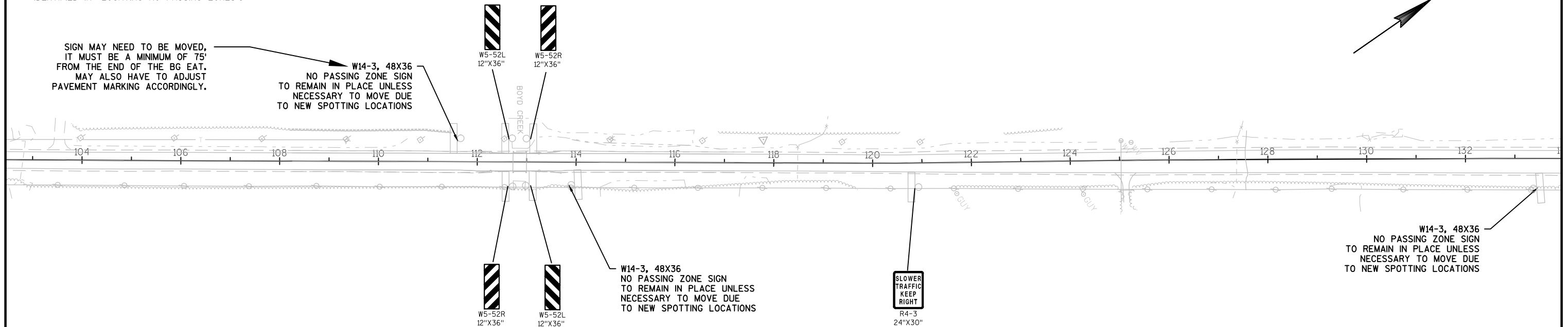


SHEET 1 OF 6

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	CONSTRUCTION DETAILS: PERMANENT SIGNING	SHEET	E
------------------------	-------------	------------------	---	-------	---



NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO. REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES. SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING. NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".



SHEET 2 OF 6

PROJECT NO: 8160-00-70

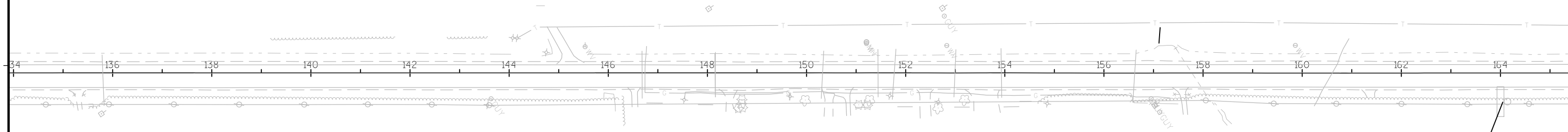
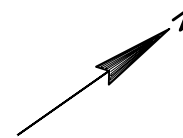
HWY: STH 13

COUNTY: BAYFIELD

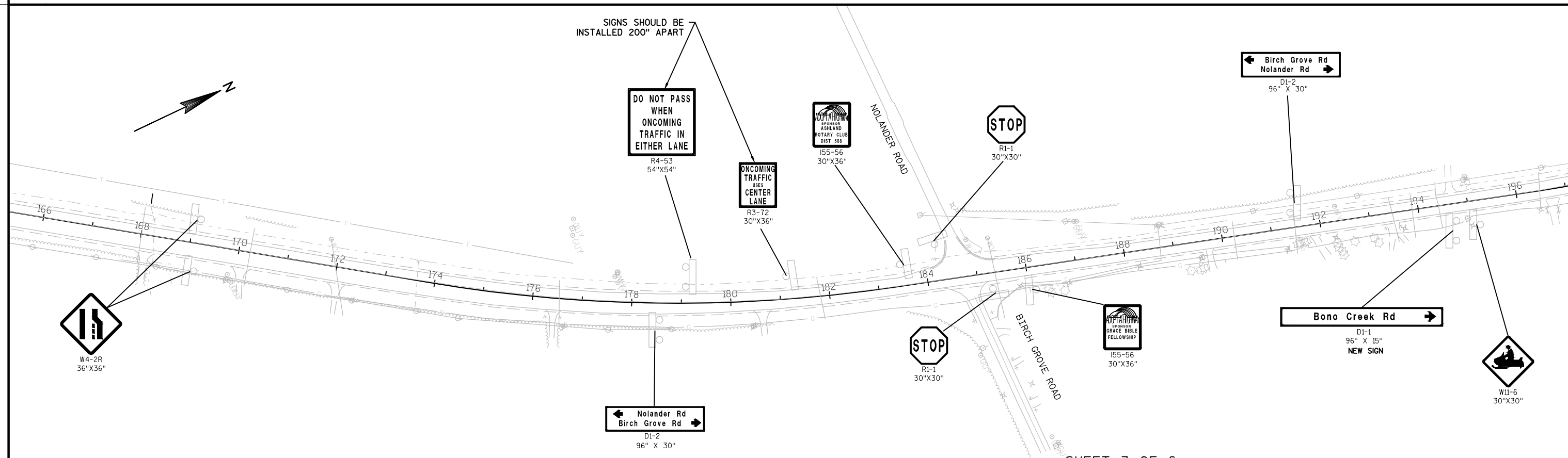
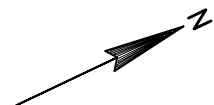
CONSTRUCTION DETAILS: PERMANENT SIGNING

SHEET

E



NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO. REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES. SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING. NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".



SHEET 3 OF 6

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CONSTRUCTION DETAILS: PERMANENT SIGNING

SHEET

E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\SHEETS\OTHER\023201_PS.DWG

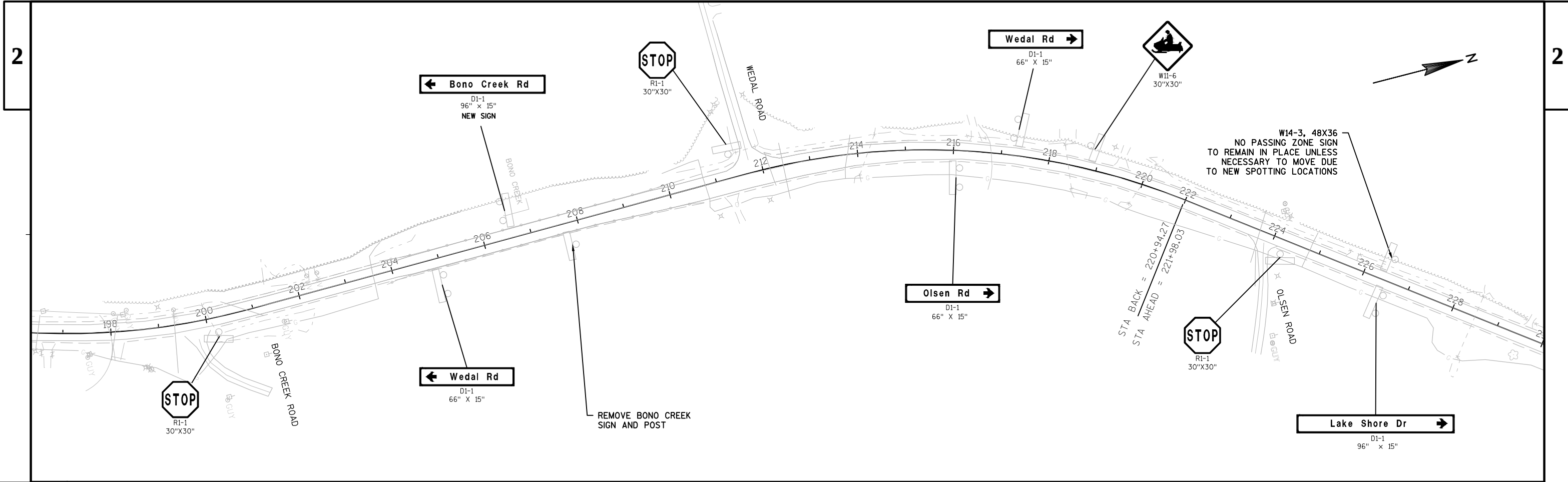
PLOT DATE : 1/27/2015 8:08 AM

PLOT BY : BJKR

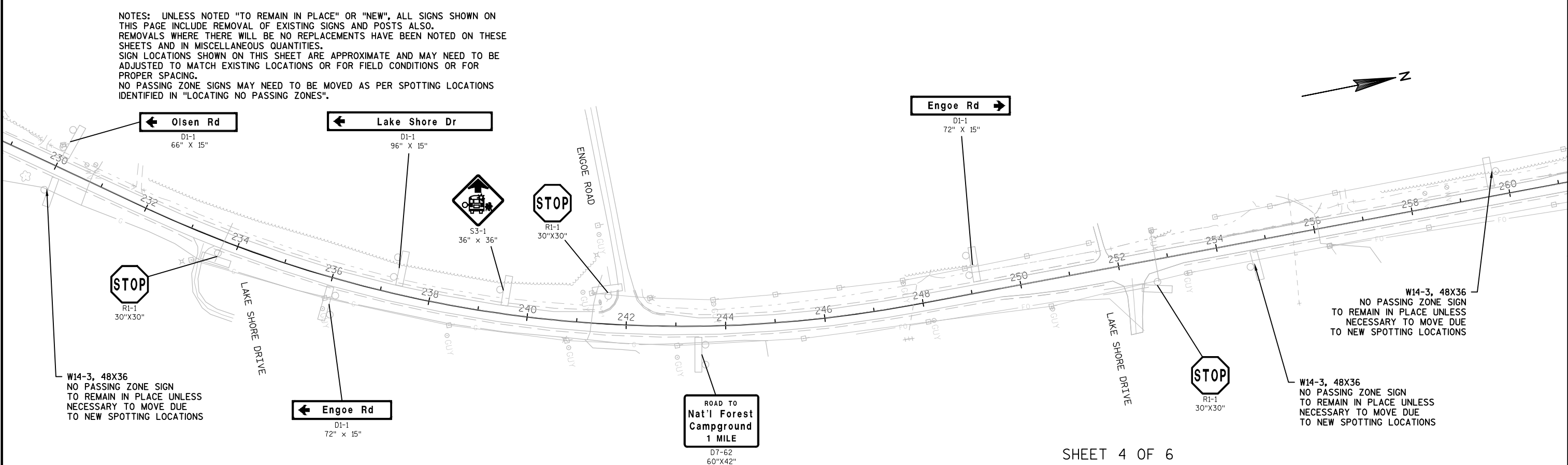
PLOT NAME :

PLOT SCALE : 1" = 200' _XREF

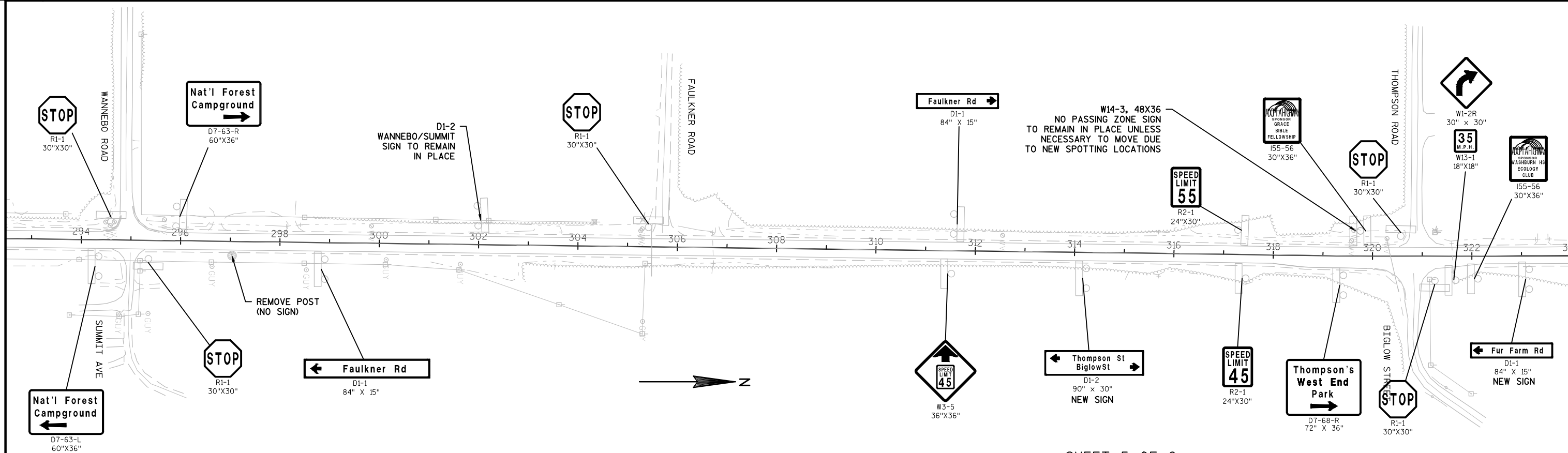
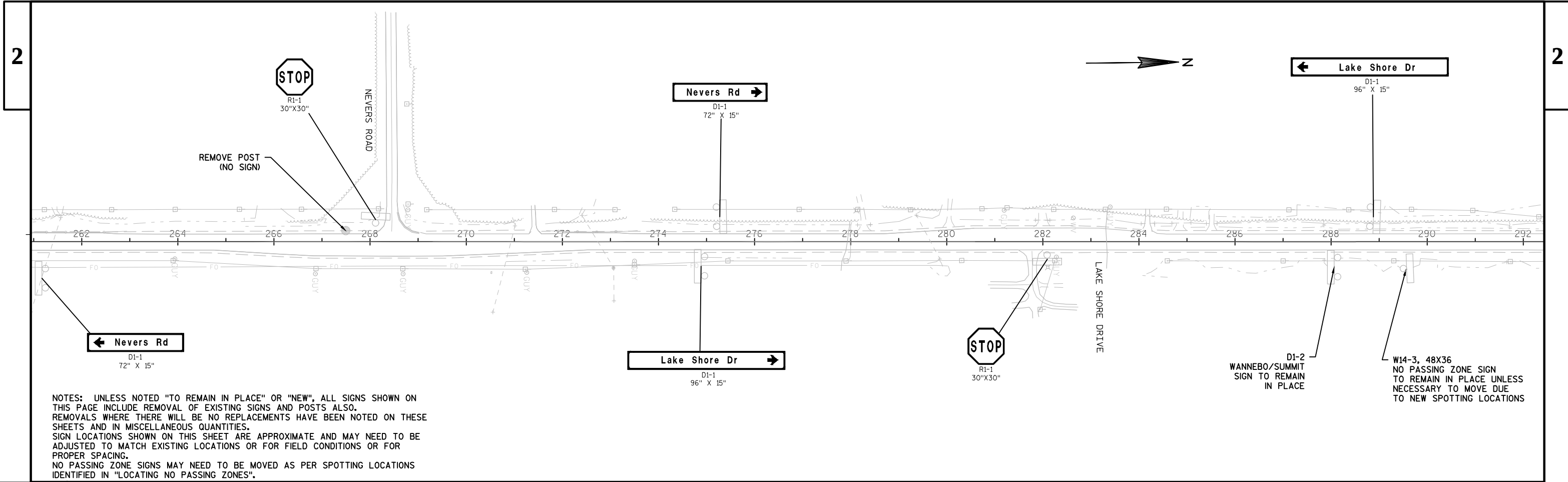
WISDOT/CADDs SHEET 44



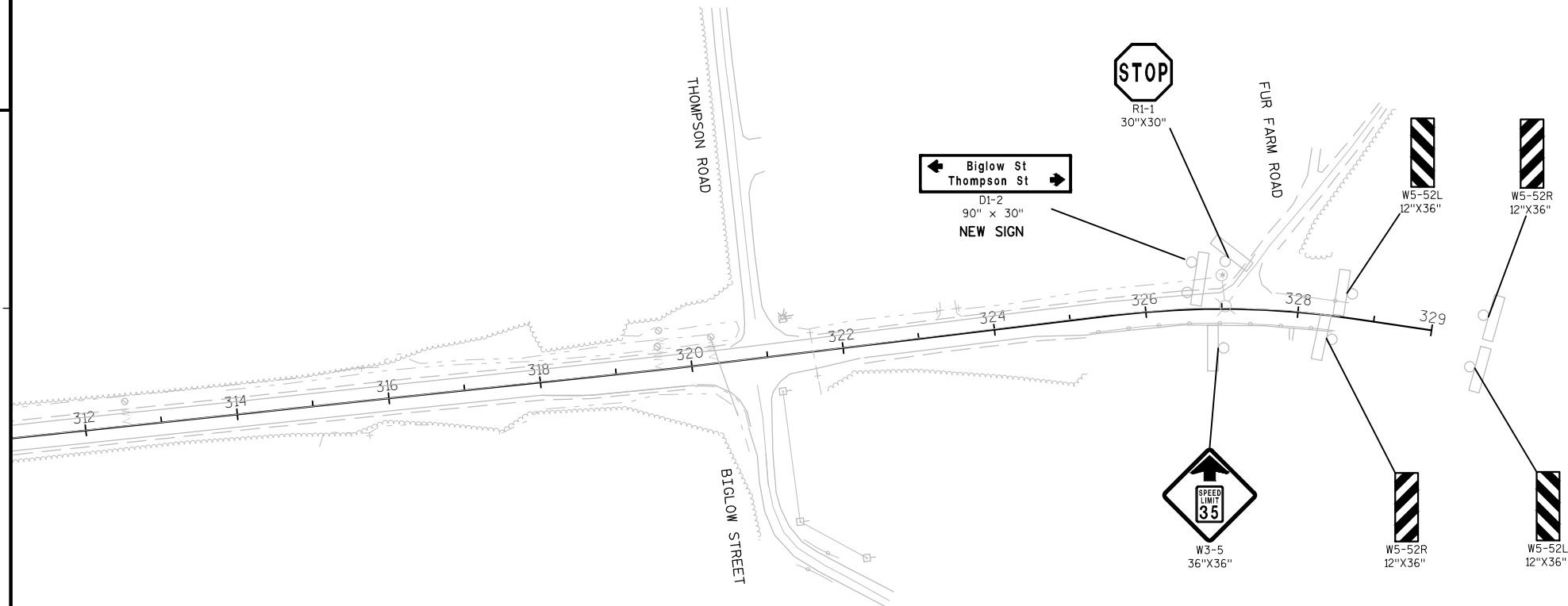
NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO. REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES. SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING. NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".



SHEET 4 OF 6



SHEET 5 OF 6



NOTES: UNLESS NOTED "TO REMAIN IN PLACE" OR "NEW", ALL SIGNS SHOWN ON THIS PAGE INCLUDE REMOVAL OF EXISTING SIGNS AND POSTS ALSO. REMOVALS WHERE THERE WILL BE NO REPLACEMENTS HAVE BEEN NOTED ON THESE SHEETS AND IN MISCELLANEOUS QUANTITIES. SIGN LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED TO MATCH EXISTING LOCATIONS OR FOR FIELD CONDITIONS OR FOR PROPER SPACING. NO PASSING ZONE SIGNS MAY NEED TO BE MOVED AS PER SPOTTING LOCATIONS IDENTIFIED IN "LOCATING NO PASSING ZONES".

SHEET 6 OF 6

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CONSTRUCTION DETAILS: PERMANENT SIGNING

SHEET

E

DATE 18FEB15		E S T I M A T E O F Q U A N T I T I E S			
LINE				8160-00-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0030	202.0105	Roadside Clearing	STA	102.000	102.000
0050	204.0100	Removing Pavement	SY	33.000	33.000
0060	204.0115	Removing Asphaltic Surface Butt Joints	SY	451.000	451.000
0070	204.0120	Removing Asphaltic Surface Milling	SY	140,768.000	140,768.000
0080	204.0150	Removing Curb & Gutter	LF	286.000	286.000
0130	205.9015.S	Grading Shaping and Finishing Intersection (location) 01. PE 256+75 Lt	LS	1.000	1.000
0140	208.0100	Borrow	CY	2,000.000	2,000.000
0160	213.0100	Finishing Roadway (project) 01. 8160-00-70	EACH	1.000	1.000
0180	305.0110	Base Aggregate Dense 3/4-Inch	TON	10,668.000	10,668.000
0200	305.0500	Shaping Shoulders	STA	319.000	319.000
0220	440.4410.S	Incentive IRI Ride	DOL	26,487.000	26,487.000
0230	455.0605	Tack Coat	GAL	16,319.000	16,319.000
0240	465.0105	Asphaltic Surface	TON	2,357.000	2,357.000
0250	465.0110	Asphaltic Surface Patching	TON	1,600.000	1,600.000
0260	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	204.000	204.000
0270	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	58,998.000	58,998.000
0280	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	25,296.000	25,296.000
0290	520.0118	Culvert Pipe Class III 18-Inch	LF	48.000	48.000
0520	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	286.000	286.000
0530	606.0200	Riprap Medium	CY	34.000	34.000
0570	614.0010	Barrier System Grading Shaping Finishing	EACH	20.000	20.000
0580	614.0920	Salvaged Rail	LF	2,554.000	2,554.000
0590	614.2300	MGS Guardrail 3	LF	750.000	750.000
0600	614.2330	MGS Guardrail 3 K	LF	1,300.000	1,300.000
0610	614.2500	MGS Thrie Beam Transition	LF	313.000	313.000
0620	614.2610	MGS Guardrail Terminal EAT	EACH	20.000	20.000
0630	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8160-00-70	EACH	1.000	1.000
0650	619.1000	Mobilization	EACH	0.850	0.850
0680	628.1104	Erosion Bales	EACH	50.000	50.000
0690	628.1504	Silt Fence	LF	5,830.000	5,830.000
0700	628.1520	Silt Fence Maintenance	LF	5,830.000	5,830.000
0710	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0720	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0740	628.2027	Erosion Mat Class II Type C	SY	5,234.000	5,234.000
0820	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	132.000	132.000
0830	637.2210	Signs Type II Reflective H	SF	602.000	602.000
0840	637.2230	Signs Type II Reflective F	SF	111.000	111.000
0850	638.2102	Moving Signs Type II	EACH	14.000	14.000
0860	638.2602	Removing Signs Type II	EACH	78.000	78.000
0870	638.3000	Removing Small Sign Supports	EACH	115.000	115.000
0880	642.5201	Field Office Type C	EACH	1.000	1.000
0890	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 8160-00-70	DAY	48.000	48.000
0910	643.0300	Traffic Control Drums	DAY	200.000	200.000
0920	643.0420	Traffic Control Barricades Type III	DAY	50.000	50.000
0930	643.0715	Traffic Control Warning Lights Type C	DAY	250.000	250.000
0940	643.0900	Traffic Control Signs	DAY	1,056.000	1,056.000
0960	645.0120	Geotextile Fabric Type HR	SY	103.000	103.000

DATE 18FEB15		E S T I M A T E O F Q U A N T I T I E S			
LINE				8160-00-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0980	646.0106	Pavement Marking Epoxy 4-Inch	LF	103,962.000	103,962.000
0990	646.0126	Pavement Marking Epoxy 8-Inch	LF	650.000	650.000
1000	648.0100	Locating No-Passing Zones	MI	6.000	6.000
1010	649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF	109,398.000	109,398.000
1040	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	286.000	286.000
1050	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
1060	650.8000	Construction Staking Resurfacing Reference	LF	32,208.000	32,208.000
1070	650.9910	Construction Staking Supplemental Control (project) 01. 8160-00-70	LS	1.000	1.000
1100	690.0150	Sawing Asphalt	LF	522.000	522.000
1120	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
1130	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	630.000	630.000
1150	SPV.0090	Special 02. Concrete Curb And Gutter Cure And Seal Treatment	LF	286.000	286.000
1160	SPV.0105	Special 01. Milling And Removing Temporary Wedge Joint	LS	1.000	1.000
1170	SPV.0105	Special 02. Prepare Foundation For Asphaltic Paving, Special	LS	1.000	1.000
1180	SPV.0105	Special 03. Material Vehicle Transfer	LS	1.000	1.000
1190	SPV.0170	Special 01. Reheating Hma Pavment Longitudinal Joints Special	STA	319.000	319.000
1200	SPV.0180	Special 01. Removing Asphaltic Surface 6-Foot Milling, Special	SY	14,000.000	14,000.000
1210	SPV.0195	Special 01. Hma Pavement Type E-3 Special	TON	21,606.000	21,606.000
1220	SPV.0195	Special 02. Hma Pavement Type Sma Special	TON	9,067.000	9,067.000
1230	SPV.0195	Special 03. Sma Pavement Compaction Acceptance	TON	9,067.000	9,067.000

ROADSIDE CLEARING

CATEGORY	STATION TO	STATION	LOCATION	202.0105 STA	DIST FROM CL
0010	61+00 -	64+00	LT	3	45'
0010	64+00 -	70+00	LT & RT	6	45'
0010	70+00 -	74+00	LT	4	45'
0010	80+00 -	84+00	RT	4	45'
0010	90+00 -	95+00	RT	5	45'
0010	97+00 -	103+00	RT*	6	45'
0010	117+00 -	120+00	RT	3	45'
0010	155+00 -	157+00	RT	2	45'
0010	158+00 -	159+00	RT	1	45'
0010	214+00 -	230+00	LT	16	55'
0010	247+50 -	249+59	LT	2	60'
0010	252+00 -	253+00	LT	1	60'
0010	257+00 -	263+00	LT	6	65'
0010	266+00 -	267+00	LT	1	65'
0010	270+00 -	274+00	LT	4	65'
0010	274+00 -	278+00	LT	4	45'
0010	283+00 -	294+00	LT	11	65'
0010	299+00 -	303+00	LT	4	45'
0010	302+00 -	309+00	LT & RT	7	45' LT, 55' RT
0010	309+00 -	316+00	LT & RT	7	100' LT, 55' RT
0010	316+00 -	319+00	LT & RT	3	55'
0010	321+50 -	323+50	RT	2	45'
TOTAL 0010				102	

*FOR CULVERT WORK, EXTEND CLEARING LIMITS AT 102+65 - 102+95 RT TO 50'

REMOVING PAVEMENT

CATEGORY	STATION	LOC	204.0100 SY	REMARKS
0010	13+00	LT	33	CONCRETE RUMBLE PAD
TOTAL 0010			33	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	LOCATION	204.0115 SY
0010	8+00	CL	189
0010	27+54.6	SR Lt, Cherryville Rd	8
0010	29+50	CL, Whittlesey Creek	22
0010	30+32	CL, Whittlesey Creek	22
0010	54+78.8	SR Lt, Ondossagon Rd	8
0010	78+93.7	SR Rt, Mission Springs Rd	8
0010	84+76.8	SR Rt, Birch Grove Rd	8
0010	84+83.4	SR Lt, Nolander Rd	8
0010	112+73	CL, Boyd Creek	22
0010	112+95	CL, Boyd Creek	22
0010	199+75.7	SR Rt, Bono Creek Rd	8
0010	211+75.7	SR Lt, Wedal Rd	8
0010	222+77.5	SR Rt, Olsen Rd	8
0010	233+32.2	SR Rt, Lake Shore Drive	8
0010	242+06.8	SR Lt, Engoe Rd	8
0010	252+24.5	SR Rt, Lake Shore Drive	8
0010	268+44.1	Sr Lt, Nevers Rd	8
0010	281+76.9	SR Rt, Lake Shore Drive	8
0010	204+90.4	SR Lt, Wannebo Rd	8
0010	204+99.2	SR Rt, Summit Ave	8
0010	305+70.0	SR Lt, Faulkner Rd	8
0010	320+83.0	SR Rt, Biglow Street	8
0010	320+89.6	SR Lt, Thompson Rd	8
0010	327+18.8	SR Lt, Fur Farm Rd	8
0010	328+36	CL, Thompson Creek	22
TOTAL 0010			451

ROADSIDE CLEARING

CATEGORY	STATION TO	STATION	LOCATION	202.0105 STA	DIST FROM CL
0010	61+00 -	64+00	LT	3	45'
0010	64+00 -	70+00	LT & RT	6	45'
0010	70+00 -	74+00	LT	4	45'
0010	80+00 -	84+00	RT	4	45'
0010	90+00 -	95+00	RT	5	45'
0010	97+00 -	103+00	RT*	6	45'
0010	117+00 -	120+00	RT	3	45'
0010	155+00 -	157+00	RT	2	45'
0010	158+00 -	159+00	RT	1	45'
0010	214+00 -	230+00	LT	16	55'
0010	247+50 -	249+59	LT	2	60'
0010	252+00 -	253+00	LT	1	60'
0010	257+00 -	263+00	LT	6	65'
0010	266+00 -	267+00	LT	1	65'
0010	270+00 -	274+00	LT	4	65'
0010	274+00 -	278+00	LT	4	45'
0010	283+00 -	294+00	LT	11	65'
0010	299+00 -	303+00	LT	4	45'
0010	302+00 -	309+00	LT & RT	7	45' LT, 55' RT
0010	309+00 -	316+00	LT & RT	7	100' LT, 55' RT
0010	316+00 -	319+00	LT & RT	3	55'
0010	321+50 -	323+50	RT	2	45'
TOTAL 0010				102	

*FOR CULVERT WORK, EXTEND CLEARING LIMITS AT 102+65 - 102+95 RT TO 50'

REMOVING PAVEMENT

CATEGORY	STATION	LOC	204.0100 SY	REMARKS
0010	13+00	LT	33	CONCRETE RUMBLE PAD
TOTAL 0010			33	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	LOCATION	204.0115 SY	REMARKS
0010	8+00	CL	189	34'x50'
0010	27+54.6	SR Lt, Cherryville Rd	8	24'x5'
0010	29+50	CL, Whittlesey Creek	22	39'x5'
0010	30+32	CL, Whittlesey Creek	22	39'x5'
0010	54+78.8	SR Lt, Ondossagon Rd	8	24'x5'
0010	78+93.7	SR Rt, Mission Springs Rd	8	24'x5'
0010	84+76.8	SR Rt, Birch Grove Rd	8	24'x5'
0010	84+83.4	SR Lt, Nolander Rd	8	24'x5'
0010	103+99.0	CL, Mill depth change	22	39'x5'
0010	112+73	CL, Boyd Creek	22	39'x5'
0010	112+95	CL, Boyd Creek	22	39'x5'
0010	121+69	CL, Mill depth change	22	39'x5'
0010	199+00	CL, Mill depth change	22	39'x5'
0010	199+75.7	SR Rt, Bono Creek Rd	53	24'x20'
0010	211+75.7	SR Lt, Wedal Rd	53	24'x20'
0010	215+00.0	CL, Mill depth change	22	39'x5'
0010	223+77.5	SR Rt, Olsen Rd	8	24'x5'
0010	233+32.2	SR Rt, Lake Shore Drive	8	24'x5'
0010	242+06.8	SR Lt, Engoe Rd	8	24'x5'
0010	252+24.5	SR Rt, Lake Shore Drive	8	24'x5'
0010	268+44.1	SR Lt, Nevers Rd	8	24'x5'
0010	281+76.9	SR Rt, Lake Shore Drive	8	24'x5'
0010	204+90.4	SR Lt, Wannebo Rd	8	24'x5'
0010	204+99.2	SR Rt, Summit Ave	8	24'x5'
0010	305+70.0	SR Lt, Faulkner Rd	8	24'x5'
0010	320+83.0	SR Rt, Biglow Street	8	24'x5'
0010	320+89.6	SR Lt, Thompson Rd	8	24'x5'
0010	327+18.8	SR Lt, Fur Farm Rd	8	24'x5'
0010	328+36	CL, Thompson Creek	22	39'x5'
TOTAL 0010			629	

Addendum No. 1
IDs 8160-00-70 &
8160-03-61
Revised Sheet 34
April 9, 2015

REMOVING ASPHALTIC SURFACE MILLING

204.0120					
CATEGORY	STATION	TO	STATION	LOC	SY
0010	8+00	-	29+50	ML	8122
0010	27+55			SR	412
0010	30+32	-	51+00	ML	7812
0010	51+00	-	55+00	ML	2044
0010	54+79			SR	325
0010	55+00	-	60+00	ML	2944
0010	60+00	-	112+73	ML	19920
0010	78+94			SR	141
0010	112+95	-	121+00	ML	3041
0010	120+50	-	182+00	ML	31433
0010	182+00	-	185+60	ML	1360
0010	184+77			SR	211
0010	184+83			SR	599
0010	185+60	-	187+60	ML	911
0010	187+60	-	208+30	ML	7820
0010	199+76			SR	223
0010	208+30	-	216+30	ML	4089
0010	211+76			SR	273
0010	216+30	-	220+94	ML	1753
0010	221+98	-	249+50	ML	10396
0010	222+78			SR	388
0010	233+32			SR	61
0010	242+07			SR	372
0010	249+50	-	251+80	ML	1048
0010	251+80	-	264+80	ML	4911
0010	252+24			SR	191
0010	264+80	-	272+40	ML	3884
0010	268+44			SR	258
0010	272+40	-	278+70	ML	2380
0010	278+70	-	284+50	ML	2964
0010	281+77			SR	90
0010	284+50	-	318+00	ML	12656
0010	294+90			SR	240
0010	294+99			SR	120
0010	305+70			SR	163
0010	318+00	-	320+20	ML	1002
0010	320+20	-	328+56	ML	3158
0010	320+83			SR	620
0010	320+90			SR	278
0010	327+19			SR	152
0010	*SHOULDERS			ML	2000
TOTAL 0010					140768

*NOTE: FOR LOCATIONS ON SHOULDERS WHERE REAMINING PAVEMENT IS LESS THAN 2".
EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD

REMOVING CURB & GUTTER

204.0150				
CATEGORY	STATION	LOC	LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
TOTAL 0010			286	

SALVAGED RAIL

614.0920						
CATEGORY	STATION	TO	STATION	LOC	LF	REMARKS
0010	29+00	-	29+70	LT	70	WHITTLESEY CREEK
0010	29+00	-	29+70	RT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	LT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	RT	70	WHITTLESEY CREEK
0010	112+00	-	112+70	LT	70	BOYD CREEK
0010	112+00	-	112+70	RT	70	BOYD CREEK
0010	113+00	-	113+70	LT	70	BOYD CREEK
0010	113+00	-	113+70	RT	70	BOYD CREEK
0010	203+80	-	210+08	LT	628	BONO CREEK
0010	203+84	-	210+66	RT	682	BONO CREEK
0010	253+80	-	256+40	LT	260	GULLEY @ CULV INLET
0010	260+60	-	262+94	LT	234	GULLEY @ CULV INLET
0010	271+66	-	273+56	LT	190	GULLEY @ CULV INLET
TOTAL 0010					2554	

REMOVING ASPHALTIC SURFACE MILLING

						204.0120	REMARKS
CATEGORY	STATION TO	STATION	LOC	SY			
0010	8+00 -	29+50	ML	8122			
0010	27+55		SR	412	Cherryville Road		
0010	30+32 -	51+00	ML	7812			
0010	51+00 -	55+00	ML	2044	Bypass lane inc.		
0010	54+79		SR	325	Ondossagon Road		
0010	55+00 -	60+00	ML	2944	Rt turn and bypass lane inc.		
0010	60+00 -	103+99	ML	16618			
0010	78+94		SR	141	Mission Springs Road		
0010	103+99	112+73	ML	2331	Reduced mill depth, nic shlds		
0010	112+95	121+69	ML	2331	Reduced mill depth, nic shlds		
0010	121+69 -	182+00	ML	30825	Passing lane inc.		
0010	182+00 -	185+60	ML	1360			
0010	184+77		SR	211	Birch Grove Road		
0010	184+83		SR	599	Nolander Road		
0010	185+60 -	187+60	ML	911	Rt turn lane inc.		
0010	187+60 -	199+00	ML	4307			
					Reduced mill depth, nic shlds		
0010	199+00	208+30	ML	2480	& byp lane		
					Reduced mill depth, nic shlds		
0010	208+30 -	215+00	ML	1787	& byp lane		
0010	215+00	216+30	ML	664			
0010	216+30 -	220+94	ML	1753			
0010	221+98 -	249+50	ML	10396			
0010	223+78		SR	388	Olsen Road		
0010	233+32		SR	61	Lake Shore Drive		
0010	242+07		SR	372	Engoe Road		
0010	249+50 -	251+80	ML	1048	Right turn lane inc.		
0010	251+80 -	264+80	ML	4911			
0010	252+24		SR	191	Lake Shore Drive		
0010	264+80 -	272+40	ML	3884	Bypass lane inc.		
0010	268+44		SR	258	Nevers Road		
0010	272+40 -	278+70	ML	2380			
0010	278+70 -	284+50	ML	2964	Bypass lane inc.		
0010	281+77		SR	90	Lake Shore Drive		
0010	284+50 -	318+00	ML	12656			
0010	294+90		SR	240	Wannebo Road		
0010	294+99		SR	120	Summit Avenue		
0010	305+70		SR	163	Faulkner Road		
0010	318+00 -	320+20	ML	1002	Right turn lane inc.		
0010	320+20 -	328+56	ML	3158			
0010	320+83		SR	620	Biglow Street		
0010	320+90		SR	278	Thompson Road		
0010	327+19		SR	152	Fur Farm Road		
TOTAL 0010				133,311			

REMOVING CURB & GUTTER

			204.0150	REMARKS
CATEGORY	STATION	LOC	LF	
0010	54+50	LT	50	
0010	55+00	LT	80	
0010	241+70	LT	70	
0010	242+50	LT	86	
TOTAL 0010			286	

SALVAGED RAIL

					614.0920	
CATEGORY	STATION	TO	STATION	LOC	LF	REMARKS
0010	29+00	-	29+70	LT	70	WHITTLESEY CREEK
0010	29+00	-	29+70	RT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	LT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	RT	70	WHITTLESEY CREEK
0010	112+00	-	112+70	LT	70	BOYD CREEK
0010	112+00	-	112+70	RT	70	BOYD CREEK
0010	113+00	-	113+70	LT	70	BOYD CREEK
0010	113+00	-	113+70	RT	70	BOYD CREEK
0010	203+80	-	210+08	LT	628	BONO CREEK
0010	203+84	-	210+66	RT	682	BONO CREEK
0010	253+80	-	256+40	LT	260	GULLEY @ CULV INLET
0010	260+60	-	262+94	LT	234	GULLEY @ CULV INLET
0010	271+66	-	273+56	LT	190	GULLEY @ CULV INLET
TOTAL 0010					2554	

Addendum No. 1
IDS 8160-00-70 &
8160-03-61
Revised Sheet 35
April 9, 2015

REMOVING ASPHALTIC SURFACE MILLING

204.0120					
CATEGORY	STATION TO	STATION	LOC	SY	REMARKS
0010	8+00 -	29+50	ML	8122	
0010	27+55		SR	412	Cherryville Road
0010	30+32 -	51+00	ML	7812	
0010	51+00 -	55+00	ML	2044	Bypass lane inc.
0010	54+79		SR	325	Ondossagon Road
0010	55+00 -	60+00	ML	2944	Rt turn and bypass lane inc.
0010	60+00 -	112+73	ML	19920	
0010	78+94		SR	141	Mission Springs Road
0010	112+95 -	121+00	ML	3041	
0010	120+50 -	182+00	ML	31433	Passing lane inc.
0010	182+00 -	185+60	ML	1360	
0010	184+77		SR	211	Birch Grove Road
0010	184+83		SR	599	Nolander Road
0010	185+60 -	187+60	ML	911	Rt turn lane inc.
0010	187+60 -	208+30	ML	7820	
0010	199+76		SR	223	Bono Creek Road
0010	208+30 -	216+30	ML	4089	Bypass lane inc.
0010	211+76		SR	273	Wedal Road
0010	216+30 -	220+94	ML	1753	
0010	221+98 -	249+50	ML	10396	
0010	223+78		SR	388	Olsen Road
0010	233+32		SR	61	Lake Shore Drive
0010	242+07		SR	372	Engoe Road
0010	249+50 -	251+80	ML	1048	Right turn lane inc.
0010	251+80 -	264+80	ML	4911	
0010	252+24		SR	191	Lake Shore Drive
0010	264+80 -	272+40	ML	3884	Bypass lane inc.
0010	268+44		SR	258	Nevers Road
0010	272+40 -	278+70	ML	2380	
0010	278+70 -	284+50	ML	2964	Bypass lane inc.
0010	281+77		SR	90	Lake Shore Drive
0010	284+50 -	318+00	ML	12656	
0010	294+90		SR	240	Wannebo Road
0010	294+99		SR	120	Summit Avenue
0010	305+70		SR	163	Faulkner Road
0010	318+00 -	320+20	ML	1002	Right turn lane inc.
0010	320+20 -	328+56	ML	3158	
0010	320+83		SR	620	Biglow Street
0010	320+90		SR	278	Thompson Road
0010	327+19		SR	152	Fur Farm Road
0010	*SHOULDERS		ML	2000	
TOTAL 0010				140,768	

REMOVING CURB & GUTTER

204.0150				
CATEGORY	STATION	LOC	LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
TOTAL 0010			286	

SALVAGED RAIL

614.0920						
CATEGORY	STATION	TO	STATION	LOC	LF	REMARKS
0010	29+00	-	29+70	LT	70	WHITTLESEY CREEK
0010	29+00	-	29+70	RT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	LT	70	WHITTLESEY CREEK
0010	30+10	-	30+80	RT	70	WHITTLESEY CREEK
0010	112+00	-	112+70	LT	70	BOYD CREEK
0010	112+00	-	112+70	RT	70	BOYD CREEK
0010	113+00	-	113+70	LT	70	BOYD CREEK
0010	113+00	-	113+70	RT	70	BOYD CREEK
0010	203+80	-	210+08	LT	628	BONO CREEK
0010	203+84	-	210+66	RT	682	BONO CREEK
0010	253+80	-	256+40	LT	260	GULLEY @ CULV INLET
0010	260+60	-	262+94	LT	234	GULLEY @ CULV INLET
0010	271+66	-	273+56	LT	190	GULLEY @ CULV INLET
TOTAL 0010					2554	

Addendum No. 2
IDs 8160-00-70 &
8160-03-61
Revised Sheet 35
April 12, 2015

3

BARRIER SYSTEM GRADING SHAPING FINISHING									
614.0010									
CAT	STATION	TO	STATION	LOCATION	EACH	REMARKS			
0010	27+47		28+92	LT & RT	2	WHITTLESEY CREEK			
0010	30+90		32+35	LT & RT	2	WHITTLESEY CREEK			
0010	89+48		90+92	LT	1	EMBANKMENT			
0010	92+74		94+18	LT	1	EMBANKMENT			
0010	110+50		111+95	LT & RT	2	BOYD CREEK			
0010	113+73		115+18	LT & RT	2	BOYD CREEK			
0010	201+64		203+10	LT	1	BONO CREEK			
0010	201+97		203+42	RT	1	BONO CREEK			
0010	210+04		211+49	LT	1	BONO CREEK			
0010	210+60		212+06	RT	1	BONO CREEK			
0010	252+58		254+03	LT	1	GULLEY AT CULV INLET			
0010	256+34		257+79	LT	1	GULLEY AT CULV INLET			
0010	259+38		260+82	LT	1	GULLEY AT CULV INLET			
0010	263+01		264+46	LT	1	GULLEY AT CULV INLET			
0010	270+53		271+98	LT	1	GULLEY AT CULV INLET			
0010	273+66		275+12	LT	1	GULLEY AT CULV INLET			
TOTAL 0010					20				
*FERTILIZER *SEED *TOPSOIL *MULCH									
				*FILL	*CUT	TYPE B	NO. 10		
STATION	TO	STATION	LOC	CY	CY	CWT	LB	SY	SY
27+47		28+92	LT & RT	124	0	0.23	5.0	369	400
30+90		32+35	LT & RT	54	0	0.19	4.0	294	350
89+48		94+19	LT	375	0	0.44	9.4	696	700
110+50		111+95	LT & RT	59	0	0.23	5.0	372	400
113+73		115+18	LT & RT	140	0	0.33	7.1	526	550
201+64		212+06	LT & RT	224	0	0.83	17.7	1315	1350
252+58		257+79	LT	198	0	0.37	8.0	591	650
259+38		264+46	LT	238	0	0.31	6.7	495	550
270+53		275+12	LT	100	10	0.28	5.9	438	450
TOTAL				1510	10	3.21	68.8	5097	5400
*NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THE GRADING SHAPING & FINISHING FOR BARRIER TERMINALS BID ITEM.									
BORROW									
208.0100									
CATEGORY		STATION		CY		REMARKS			
0010		Misc Areas		2000		For use in BG, C&G Replacement or Intersection locations where there is insufficient suitable cut material.			
TOTAL 0010				2000					

GRADING SHAPING & FINISHING INTERSECTION (PE STA 256+75 LT)									
205.9015.S									
CATEGORY		STATION LOC		LS		REMARKS			
0010		256+75 LT		1		DRIVEWAY			
TOTAL 0010				1					
		^FILL	^CUT	^FERT	^SEED	^TOPSOIL	^MULCH		
STATION	LOC	CY	CY	TYPE B	NO. 10	OR SALV	TYPE B		
		CWT	CWT	CWT	LB	SY	SY		
256+75	LT	60	12	0.07	1.5	100	110		
^NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THE GRADING SHAPING & FINISHING FOR INTERSECTION (PE STA 256+75 LT)									

BASE AGGREGATE DENSE 3/4-INCH									
305.0110									
CATEGORY		STATION TO		STATION		TON		REMARKS	
0010		8+00 -		328+56		8900		SHLDs	
0010						400		SIDE ROADS	
0010						200		DRIVEWAYS	
0010						1100		BG AREAS	
0010		13+00		LT		4		RUMBLE REMOVAL	
0010		54+50		LT		11		C&G replacement	
0010		55+00		LT		18		C&G replacement	
0010		241+70		LT		16		C&G replacement	
0010		242+50		LT		19		C&G replacement	
TOTAL 0010						10,668			

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	MISCELLANEOUS QUANTITIES	SHEET 3 OF 12	SHEET:	E
------------------------	-------------	------------------	--------------------------	---------------	--------	---

3

SHAPING SHOULDERS					
CATEGORY	STATION TO	STATION	LOCATION	305.0500 STA	
0010	8+00 -	29+70	ML	22	
0010	30+12 -	112+73	ML	83	
0010	112+95 -	220+94	ML	108	
0010	221+98 -	328+56	ML	107	
TOTAL 0010				319	
INCENTIVE IRI RIDE					
CATEGORY	STATION TO	STATION	LOC	440.4410.S DOL	REMARKS
0010	8+00 -	29+70	ML	1643.94	NB & SB LANES
0010	30+12 -	112+73	ML	6258.33	NB & SB LANES
0010	112+95 -	220+94	ML	8181.29	NB & SB LANES
0010	120+50	182+00	ML	2329.55	PASSING LANE
0010	221+98 -	328+56	ML	8074.24	NB & SB LANES
TOTAL 0010				26,487	
ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES					
CATEGORY	STATION	LOC	465.0120 TON	APPROX WIDTH (FT)	
0010	21+96	L	9	12.6	
0010	70+15	R	7	10.7	
0010	75+38	L	24	34.4	
0010	76+66	R	7	10	
0010	125+10	R	8	12	
0010	145+30	L	13	18	
0010	146+48	R	8	11.4	
0010	150+40	R	11	16	
0010	150+76	R	6	8	
0010	157+52	R	7	10	
0010	176+42	R	7	10.5	
0010	180+60	R	9	12.5	
0010	189+70	R	8	12	
0010	198+12	R	10	14	
0010	225+70	L	11	16	
0010	251+75	L	7	10	
0010	256+75	L	40	18	
0010	271+44	L	6	8.2	
0010	284+18	L	6	9.3	
TOTAL 0010			204		

ASPHALTIC SURFACE PATCHING				
CATEGORY	STATION	465.0110 TON	REMARKS	
0010	Misc Areas 1	1500	*SEE NOTE BELOW	
0010	Misc Areas 2	100		
TOTAL 0010		1600		
*NOTE: 1 - Wedging and leveling, spot lane failures and edge reapiers; 2 - minor repairs such as filling pot holes, traffic pop-outs and ramping at butt joints.				

ASPHALTIC SHOULDER RUMBLE STRIP 2-LANE RURAL					
CATEGORY	STATION TO	STATION	LOC	465.0425 LF	
0010	8+00 -	26+00	LT	1800	
0010	8+00 -	29+50	RT	2150	
0010	28+25 -	29+50	LT	125	
0010	30+32 -	53+25	LT	2293	
0010	30+32 -	78+00	RT	4768	
0010	59+50 -	74+00	LT	1450	
0010	76+75 -	112+73	LT	3598	
0010	80+00 -	112+73	RT	3273	
0010	112+95 -	183+00	LT	7005	
0010	112+95 -	184+25	RT	7130	
0010	185+75	199+25	RT	1350	
0010	187+50	210+75	LT	2325	
0010	200+50	223+50	RT	2300	
0010	212+50	240+00	LT	2750	
0010	224+75	233+00	RT	825	
0010	234+00	249+50	RT	1550	
0010	243+50	267+50	LT	2400	
0010	254+00	281+00	RT	2700	
0010	269+25	294+00	LT	2475	
0010	282+50	294+50	RT	1200	
0010	295+75	304+75	LT	900	
0010	295+75	318+00	RT	2225	
0010	306+50	320+00	LT	1350	
0010	321+50	326+25	LT	475	
0010	322+75	328+56	RT	581	
TOTAL 0010				58,998	

3

3

		455.0605		465.0105		SPV.0195.01		SPV.0195.01		SPV.0195.02		SPV.0195.03			
						LOWER LAY; ALL LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL		UPPER LAY; AUX LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL		UPPER LAY; THRU & PASS LANES HMA PAVEMENT TYPE SMA SPECIAL		SMA PAVT COMPACTION ACCEPTANCE			
CATEGORY	STATION TO STATION	LOC	TACK COAT GAL	ASPHALTIC SURFACE TON		TON		TON		TON		TON		REMARKS	
0010	8+00 - 29+50	ML	975			1015		232		557		557			
0010	27+55	SR	37					69						Cherryville Road	
0010	30+32 - 51+00	ML	937			977		223		536		536			
0010	51+00 - 55+00	ML	181			256		95		104		104		Bypass lane inc in E-3	
0010	54+79	SR	29					54						Ondossagon Road	
0010	55+00 - 60+00	ML	227			368		157		130		130		Rt turn & bypass lane inc in E-3	
0010	60+00 - 112+73	ML	2390			2490		570		1367		1367			
0010	78+94	SR	13					34						Mission Springs Road inc tapers	
0010	112+95 - 121+00	ML	365			380		87		209		209			
0010	120+50 - 182+00	ML	2788			3929		664		2392		2392		Passing lane inc in E-3 & SMA	
0010	182+00 - 185+60	ML	163			170		39		93		93			
0010	184+77	SR	19					45						Birch Grove Road inc tapers	
0010	184+83	SR	54					100						Nolander Road	
0010	185+60 - 187+60	ML	91			114		37		52		52		Rt turn lane inc in E-3	
0010	187+60 - 208+30	ML	938			978		224		537		537			
0010	199+76	SR	20					47						Bono Creek Road inc tapers	
0010	208+30 - 216+30	ML	491			511		190		207		207		Bypass lane inc in E-3	
0010	211+76	SR	25					56						Wedal Road inc tapers	
0010	216+30 - 220+94	ML	210			219		50		120		120			
0010	221+98 - 249+50	ML	1248			1300		297		713		713			
0010	223+78	SR	35					75						Olsen Road inc tapers	
0010	233+32	SR	5					20						Lake Shore Drive inc tapers	
0010	242+07	SR	33					62						Engoe Road	
0010	249+50 - 251+80	ML	104			131		42		60		60		Right turn lane inc in E-3	
0010	251+80 - 264+80	ML	589			614		140		337		337			
0010	252+24	SR	17					32						Lake Shore Drive	
0010	264+80 - 272+40	ML	345			486		181		197		197		Bypass lane inc in E-3	
0010	268+44	SR	23					53						Nevers Road inc tapers	
0010	272+40 - 278+70	ML	286			298		68		163		163			
0010	278+70 - 284+50	ML	263			371		138		150		150		Bypass lane inc in E-3	
0010	281+77	SR	8					25						Lake Shore Drive inc tapers	
0010	284+50 - 318+00	ML	1519			1582		362		869		869			
0010	294+90	SR	22					50						Wannebo Road inc tapers	
0010	294+99	SR	11					30						Summit Avenue inc tapers	
0010	305+70	SR	15					37						Faulkner Road inc tapers	
0010	318+00 - 320+20	ML	100			125		40		57		57		Right turn lane inc in E-3	
0010	320+20 - 328+56	ML	379			395		90		217		217			
0010	320+83	SR	56					103						Biglow Street	
0010	320+90	SR	25					56						Thompson Road inc tapers	
0010	327+19	SR	14					25						Fur Farm Road	
0010	8+00 - 328+56	ML	1,269	2333										6' wide mill areas	
0010	54+50	LT		1										C&G replacement-lower layer	
0010	55+00	LT		2										C&G replacement-lower layer	
0010	241+70	LT		2										C&G replacement-lower layer	
0010	242+50	LT		2										C&G replacement-lower layer	
0010	13+00	ML		17										Rumble pad replacement	
TOTAL 0010			16,319	2357	21,606			9067	9067						

		455.0605		465.0105		SPV.0195.01 LOWER LAY; ALL LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL		SPV.0195.01 UPPER LAY; AUX LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL		SPV.0195.02 UPPER LAY; THRU & PASS LANES HMA PAVEMENT TYPE SMA SPECIAL		SPV.0195.03 SMA PAVT COMPACTION ACCEPTANCE		REMARKS
CATEGORY	STATION TO STATION	LOC	TACK COAT GAL	ASPHALTIC SURFACE TON		TON		TON		TON		TON		
0010	8+00 - 29+50	ML	975			717		232		557		557		Cherryville Road
0010	27+55	SR	37					69						
0010	30+32 - 51+00	ML	937			689		223		536		536		
0010	51+00 - 55+00	ML	181			200		95		104		104		
0010	54+79	SR	29					54						
0010	55+00 - 60+00	ML	227			333		157		130		130		Rt turn & bypass lane inc in E-3
0010	60+00 - 103+99	ML	1994			1466		475		1140		1140		
0010	78+94	SR	265					501						Mission Springs Road inc tapers Reduced pavt thick area
0010	103+99 - 112+73	ML	198	54						227		227		
0010	112+95 - 121+69	ML	198	59						227		227		Reduced pavt thick area Passing lane inc in E-3 & SMA
0010	121+69 - 182+00	ML	2734			3016		651		2345		2345		
0010	182+00 - 185+60	ML	163			120		39		93		93		Birch Grove Road inc tapers Nolander Road
0010	184+77	SR	19					45						
0010	184+83	SR	54					100						Rt turn lane inc in E-3
0010	185+60 - 187+60	ML	91			100		37		52		52		
0010	187+60 - 199+00	ML	517			380		123		296		296		Reduced pavt thick area Bono Creek Road inc tapers, reduced pavt thick area
0010	199+00 - 208+30	ML	211	57						241		241		
0010	199+76	SR	20	29										Reduced pavt thick area, bypass lane inc in E-3
0010	208+30 - 215+00	ML	205	91						174		174		
0010	211+76	SR	25	33										Wedal Road inc tapers, reduced pavt thick area
0010	215+00 - 216+30	ML	80			65		31		34		34		
0010	216+30 - 220+94	ML	210			155		50		120		120		Bypass lane inc in E-3
0010	221+98 - 249+50	ML	1248			917		297		713		713		
0010	223+78	SR	35					75						Olsen Road inc tapers
0010	233+32	SR	5					20						
0010	242+07	SR	33					62						Lake Shore Drive inc tapers Engoe Road
0010	249+50 - 251+80	ML	104			115		42		60		60		
0010	251+80 - 264+80	ML	589			433		140		337		337		Right turn lane inc in E-3
0010	252+24	SR	17					32						
0010	264+80 - 272+40	ML	345			380		181		197		197		Lake Shore Drive
0010	268+44	SR	23					53						
0010	272+40 - 278+70	ML	286			210		68		163		163		Bypass lane inc in E-3 Nevers Road inc tapers
0010	278+70 - 284+50	ML	263			290		138		150		150		
0010	281+77	SR	8					25						Lake Shore Drive inc tapers
0010	284+50 - 318+00	ML	1519			1117		362		869		869		

PAVEMENT ITEM QUANTITIES AND TOTALS CONTINUED ON NEXT SHEET.

Addendum No. 1
IDS 8160-00-70 &
8160-03-61
Revised Sheet 38
April 9, 2015

Addendum No. 2
IDs 8160-00-70 &
8160-03-61
Revised Sheet 38
April 12, 2015

3

3

		455.0605		465.0105		SPV.0195.01	SPV.0195.01	SPV.0195.02	SPV.0195.03		
		TACK COAT		ASPHALTIC SURFACE		LOWER LAY; ALL LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL	UPPER LAY; AUX LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL	UPPER LAY; THRU & PASS LANES HMA PAVEMENT TYPE SMA SPECIAL	SMA PAVT COMPACTION ACCEPTANCE		
CATEGORY	STATION TO	STATION	LOC	GAL	TON	TON	TON	TON	TON	REMARKS	
0010	8+00	-	29+50	ML	975	1015	232	557	557	Cherryville Road	
0010	27+55			SR	37		69				
0010	30+32	-	51+00	ML	937	977	223	536	536	Bypass lane inc in E-3 Ondossagon Road	
0010	51+00	-	55+00	ML	181	256	95	104	104		
0010	54+79			SR	29		54			Rt turn & bypass lane inc in E-3	
0010	55+00	-	60+00	ML	227	368	156	130	130		
0010	60+00	-	103+99	ML	1994	2078	475	1140	1140	Mission Springs Road inc tapers Reduced pavt thick area	
0010	78+94			SR	265		501				
0010	103+99		112+73	ML	396	54	94	227	227	Reduced pavt thick area Passing lane inc in E-3 & SMA	
0010	112+95		121+69	ML	396	59	94	227	227		
0010	121+69	-	182+00	ML	2734	3853	651	2345	2345	Birch Grove Road inc tapers Nolander Road	
0010	182+00	-	185+60	ML	163	170	39	93	93		
0010	184+77			SR	19		45			Rt turn lane inc in E-3	
0010	184+83			SR	54		100				
0010	185+60	-	187+60	ML	91	114	37	52	52	Reduced pavt thick area Bono Creek Road inc tapers, reduced pavt thick area	
0010	187+60	-	199+00	ML	517	538	123	296	296		
0010	199+00		208+30	ML	422	57	100	241	241	Reduced pavt thick area, bypass lane inc in E-3	
0010	199+76			SR	20	29					
0010	208+30	-	215+00	ML	411	91	72	174	174	Wedal Road inc tapers, reduced pavt thick area	
0010	211+76			SR	25	33					
0010	215+00		216+30	ML	80	83	31	34	34	Bypass lane inc in E-3	
0010	216+30	-	220+94	ML	210	219	50	120	120		
0010	221+98	-	249+50	ML	1248	1300	297	713	713	Olsen Road inc tapers	
0010	223+78			SR	35		75				
0010	233+32			SR	5		20			Lake Shore Drive inc tapers Engoe Road	
0010	242+07			SR	33		62				
0010	249+50	-	251+80	ML	104	131	42	60	60	Right turn lane inc in E-3	
0010	251+80	-	264+80	ML	589	614	140	337	337		
0010	252+24			SR	17		32			Lake Shore Drive	
0010	264+80	-	272+40	ML	345	486	181	197	197		
0010	268+44			SR	23		53			Bypass lane inc in E-3 Nevers Road inc tapers	
0010	272+40	-	278+70	ML	286	298	68	163	163		
0010	278+70	-	284+50	ML	263	371	138	150	150	Bypass lane inc in E-3 Lake Shore Drive inc tapers	
0010	281+77			SR	8		25				
0010	284+50	-	318+00	ML	1519	1582	362	869	869	Wannebo Road inc tapers Summit Avenue inc tapers	
0010	294+90			SR	22		50				
0010	294+99			SR	11		30			Faulkner Road inc tapers	
0010	305+70			SR	15		37				
0010	318+00	-	320+20	ML	100	125	41	57	57	Right turn lane inc in E-3	

PAVEMENT ITEM QUANTITIES AND TOTALS CONTINUED ON NEXT SHEET.

		455.0605		465.0105		SPV.0195.01		SPV.0195.01		SPV.0195.02		SPV.0195.03			
		TACK COAT		ASPHALTIC SURFACE		LOWER LAY; ALL Lanes & Shlds HMA Pavement Type E-3 Special		UPPER LAY; Aux Lanes & Shlds HMA Pavement Type E-3 Special		UPPER LAY; Thru & Pass Lanes HMA Pavement Type SMA Special		SMA Pavt Compaction Acceptance			
CATEGORY	STATION TO STATION	LOC	GAL	TON	TON	TON	TON	TON	TON	TON	TON	TON	TON	REMARKS	
0010	294+90	SR	22				50							Wannebo Road inc tapers	
0010	294+99	SR	11				30							Summit Avenue inc tapers	
0010	305+70	SR	15				37							Faulkner Road inc tapers	
0010	318+00 - 320+20	ML	100		110	40		57		57				Right turn lane inc in E-3	
0010	320+20 - 328+56	ML	379		279	90		217		217					
0010	320+83	SR	56			103								Biglow Street	
0010	320+90	SR	25			56								Thompson Road inc tapers	
0010	327+19	SR	14			25								Fur Farm Road	
0010	8+00 - 328+56	ML	1,904	4512										Additional mill areas	
0010	54+50	LT		1										C&G replacement-lower layer	
0010	55+00	LT		2										C&G replacement-lower layer	
0010	241+70	LT		2										C&G replacement-lower layer	
0010	242+50	LT		2										C&G replacement-lower layer	
0010	13+00	ML		17										Rumble pad replacement	
TOTAL 0010			16,371	4859	15,902			9039		9039					

MORE PAVEMENT ITEM QUANTITIES ON PREVIOUS SHEET.

Addendum No. 1
IDS 8160-00-70 &
8160-03-61
Added Sheet 38A
April 9, 2015

						455.0605	465.0105	SPV.0195.01 LOWER LAY; ALL LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL	SPV.0195.01 UPPER LAY; AUX LANES & SHLDS HMA PAVEMENT TYPE E-3 SPECIAL	SPV.0195.02 UPPER LAY; THRU & PASS LANES HMA PAVEMENT TYPE SMA SPECIAL	SPV.0195.03 SMA PAVT COMPACTION ACCEPTANCE	REMARKS
CATEGORY	STATION TO	STATION	LOC	TACK COAT GAL	ASPHALTIC SURFACE TON			TON	TON	TON	TON	
0010	320+20	-	328+56	ML	379			395	91	217	217	Biglow Street Thompson Road inc tapers Fur Farm Road Additional mill areas
0010	320+83			SR	56				103			
0010	320+90			SR	25				56			
0010	327+19			SR	14				25			
0010	8+00	-	328+56	ML	1,904	4512						
0010	54+50			LT		1						C&G replacement-lower layer
0010	55+00			LT		2						C&G replacement-lower layer
0010	241+70			LT		2						C&G replacement-lower layer
0010	242+50			LT		2						C&G replacement-lower layer
0010	13+00			ML		17						Rumble pad replacement
TOTAL 0010					17,184	4859		14973	5,170	9039	9039	

Addendum No. 2
IDs 8160-00-70 &
8160-03-61
Added Sheet 38A
April 12, 2015

MORE PAVEMENT ITEM QUANTITIES ON PREVIOUS SHEET.

3

3

ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL						CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D						
465.0475						601.0557						
CATEGORY	STATION TO	STATION	LF	REMARKS		CATEGORY	STATION	LOC	LF	REMARKS		
0010	8+00 -	25+60	1760	SR Lt, Cherryville Rd & Whittlesey Creek Bridge		0010	54+50	LT	50	ONDOSSAGON RD		
0010	30+57 -	52+80	2223	SR Lt, Ondossagon Rd		0010	55+00	LT	80	ONDOSSAGON RD		
0010	56+80 -	74+20	1740	CE Lt		0010	241+70	LT	70	ENGOE ROAD		
0010	76+80 -	77+00	20	SR Rt, Mission Springs Rd		0010	242+50	LT	86	ENGOE ROAD		
0010	81+00 -	112+48	3148	Boyd Creek Bridge		TOTAL 0010		286				
0010	113+20 -	182+80	6960	SR Lt & Rt, Nolander Rd & Birch Grove Rd								
0010	186+80 -	197+90	1110	SR Rt, Bono Creek Rd						*FERT	*SEED	
0010	201+90 -	209+80	790	SR Lt, Wedal Rd						*TOPSOIL	*MULCH	
0010	213+80 -	220+90	710	SR Rt, Olsen Rd				*FILL	TYPE B	NO. 10	OR SALV	
0010	224+90 -	231+25	635	SR Rt, Lake Shore Drive		STATION		LOC	CY	LB	SY	
0010	235+25 -	240+00	475	SR Lt, Engoe Rd								
0010	244+00 -	250+20	620	SR Rt, Lake Shore Drive		54+50		LT	2	0.03	17	
0010	254+20 -	266+40	1220	SR Lt, Nevers Rd		55+00		LT	3	0.04	27	
0010	270+40 -	279+80	940	SR Rt, Lake Shore Drive		241+70		LT	3	0.04	23	
0010	283+80 -	293+00	920	SR Lt & Rt, Wannebo Rd & Summit Ave		242+50		LT	3	0.05	29	
0010	297+00 -	303+80	680	SR Lt, Faulkner Rd						0.16	3.4	
0010	307+80 -	318+90	1110	SR Lt & Rt, Thompson Rd & Biglow St							95	
0010	322+90 -	325+25	235	SR Lt, Fur Farm Rd							254	
TOTAL 0010			25,296			*NOTE: THESE QUANTITIES ARE INCLUDED FOR BIDDING PURPOSES ONLY AND ARE PAID FOR UNDER THIS CONCRETE CURB & GUTTER ITEM						

CULVERT PIPE CLASS III 18-INCH						MGS GUARDRAIL 3						
520.0118						614.2300						
CATEGORY	STATION	LOC	LF	STEEL	ALUMINUM	CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS	
0010	256+75	PE LT	48	0.064	0.060	0010	29+20.32 -	29+32.82	LT & RT	25	Whittlesey Creek	
TOTAL 0010			48			0010	30+49.70 -	30+62.20	LT & RT	25	Whittlesey Creek	
NOTES: SET SOUTH FLOW LINE ELEVATION AT 637.2 AND NORTH AT 636.7; DUE TO CORROSIVE SOILS, IF A STEEL PIPE IS CHOSEN, IT MUST BE ALUMINUM COATED; AN ALUMINUM PIPE IS ALSO AN ALLOWABLE ALTERNATIVE.						0010	112+23.01 -	112+35.51	LT & RT	25	Boyd Creek	
						0010	113+32.61 -	113+45.11	LT & RT	25	Boyd Creek	
						0010	203+37.63 -	205+50.13	LT	212.5	Bono Creek	
						0010	203+70.00 -	204+20.00	RT	50	Bono Creek	
						0010	209+45.00 -	210+32.50	RT	87.5	Bono Creek	
						0010	209+50.13 -	209+75.13	LT	25	Bono Creek	
						0010	261+10.63 -	262+73.13	LT	162.5	Gulley @ culv inlet	
						0010	272+25.88 -	273+38.38	LT	112.5	Gulley @ culv inlet	
TOTAL 0010						TOTAL 0010			750.0			

RIPRAP MEDIUM						MGS GUARDRAIL 3 K						
606.0200						614.2330						
CATEGORY	STATION TO	STATION	LOC	CY	REMARKS	CATEGORY	STATION TO	STATION	LOC	LF	REMARKS	
0010	90+70 -	91+20	LT	13	AVG WIDTH = 4.5'	0010	91+00.63 -	93+00.63	LT	200	EMBANKMENT	
0010	256+00 -	256+34	LT	9	AVG WIDTH = 5'	0010	204+20.00 -	209+45.00	RT	525	BONO CREEK	
0010	270+80 -	271+25	LT	13	AVG WIDTH = 5'	0010	205+50.13 -	209+50.13	LT	400	BONO CREEK	
TOTAL 0010				34		0010	254+31.13 -	256+06.13	LT	175	GULLEY @ CULV INLET	
TOTAL 0010						TOTAL 0010			1300			

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD	MISCELLANEOUS QUANTITIES	SHEET 6 OF 12	SHEET:	E
------------------------	-------------	------------------	--------------------------	---------------	--------	---

3

MGS THRIE BEAM TRANSITION						
CATEGORY	STATION TO	STATION	LOCATION	614.2500 LF	REMARKS	
0010	29+32.82 -	29+71.90	LT & RT	78.17	Whittlesey Creek	
0010	30+10.61 -	30+49.70	LT & RT	78.17	Whittlesey Creek	
0010	112+35.51 -	112+74.60	LT & RT	78.17	Boyd Creek	
0010	112+93.53 -	113+32.61	LT & RT	78.17	Boyd Creek	
TOTAL 0010				313		

MGS GUARDRAIL TERMINAL EAT						
CATEGORY	STATION TO	STATION	LOC	614.2610 EACH	REMARKS	
0010	28+67.19 -	29+20.32	LT & RT	2	Whittlesey Creek	
0010	30+62.20 -	31+15.32	LT & RT	2	Whittlesey Creek	
0010	90+47.50	91+00.63	LT	1	Embankment	
0010	93+00.63	93+53.75	LT	1	Embankment	
0010	111+69.89 -	112+23.01	LT & RT	2	Boyd Creek	
0010	113+45.11 -	113+98.24	LT & RT	2	Boyd Creek	
0010	202+84.50 -	203+37.63	LT	1	Bono Creek	
0010	203+16.88 -	203+70.00	RT	1	Bono Creek	
0010	209+75.13 -	210+28.25	LT	1	Bono Creek	
0010	210+32.50 -	210+85.63	RT	1	Bono Creek	
0010	253+78.00 -	254+31.13	LT	1	Gulley @ culv inlet	
0010	256+06.13 -	256+59.25	LT	1	Gulley @ culv inlet	
0010	260+57.50 -	261+10.63	LT	1	Gulley @ culv inlet	
0010	262+73.13 -	263+26.25	LT	1	Gulley @ culv inlet	
0010	271+72.75 -	272+25.88	LT	1	Gulley @ culv inlet	
0010	273+38.38 -	273+91.50	LT	1	Gulley @ culv inlet	
TOTAL 0010				20		

EROSION BALES			
CATEGORY	LOCATION	628.1104 EACH	
0010	UNDISTRIBUTED	50	
TOTAL 0010		50	

PROJECT NO: 8160-00-70	HWY: STH 13	COUNTY: BAYFIELD
------------------------	-------------	------------------

<u>SILT FENCE</u>					SILT FENCE 628.1504 LF	SILT FENCE MAINT 628.1520 LF
CATEGORY	STATION TO	STATION	LOC		LF	LF
0010	28+28	- 29+68	LT		170	170
0010	28+30	- 29+68	RT		170	170
0010	30+15	- 31+82	LT		180	180
0010	30+15	- 31+82	RT		190	190
0010	89+52	- 94+58	LT		530	530
0010	110+60	- 112+72	LT		240	240
0010	110+60	- 112+72	RT		240	240
0010	113+00	- 115+16	LT		240	240
0010	113+00	- 115+16	RT		240	240
0010	202+00	- 211+10	RT		930	930
0010	202+45	- 211+54	LT		920	920
0010	211+30	- 212+15	RT		90	90
0010	252+64	- 256+60	LT		420	420
0010	259+35	- 264+35	LT		540	540
0010	270+70	- 271+36	LT		110	110
0010	271+46	- 274+84	LT		370	370
0010	UNDISTRIBUTED				250	250
TOTAL 0010					5830	5830

<u>EROSION MAT CLASS II TYPE C</u>					
CATEGORY	STATION TO	STATION	LOC	628.2027 SY	
0010	28+28	- 29+68	LT	180	
0010	28+30	- 29+68	RT	186	
0010	30+15	- 31+82	LT	138	
0010	30+15	- 31+82	RT	153	
0010	89+52	- 94+58	LT	684	
0010	110+60	112+72	LT	171	
0010	110+60	- 112+72	RT	187	
0010	113+00	115+16	LT	260	
0010	113+00	115+16	RT	251	
0010	202+00	211+10	RT	551	
0010	202+45	211+54	LT	729	
0010	252+64	256+60	LT	582	
0010	259+35	264+35	LT	485	
0010	270+70	271+36	LT	113	
0010	271+46	274+84	LT	314	
0010	UNDISTRIBUTED			250	
TOTAL 0010				5234	

MISCELLANEOUS QUANTITIES	SHEET 7 OF 12	SHEET:	E
--------------------------	---------------	--------	---

3

3

MESSAGE													634.0616	637.2210	637.2230	638.2102	638.2602	638.3000		
													POSTS WOOD	SIGNS TYPE	SIGNS TYPE	MOVING	REMOVING	REMOVING		
													4X6-INCH X	II	II	SIGNS TYPE	SIGNS TYPE	SMALL SIGN		
													16-FT	REFLECTIVE	REFLECTIVE	II	II	SUPPORTS		
CAT.	STA.	NB LOC	CODE	CODE DESCRIPTION	LINE 1	LINE 2	LINE 3	SHEETING	W	H			EACH	SF	SF	EACH	EACH	EACH	REMARKS	
0010	19+45	Rt	R4-51-A	Passing Lane Ahead	2 Miles			H	36	48			1	12.00						
0010	22+15	Rt	D1-1	Crossroad Name	[LA] Cherryville Rd			H	96	15			2	10.00			1	2		
0010	23+55	Rt	I55-56	Adopt-A-Highway [Sponsor]	Hickman	Chiropractic	Clinic	H	30	36			1	7.50			1	1		
0010	29+70	Lt	W5-52-L	Clearance Striper Down Right				F	12	36			1		3.00		1	1		
0010	29+70	Rt	W5-52-R	Clearance Striper Down Left				F	12	36			1		3.00		1	1		
0010	38+40	Lt		No Passing Zone									1			1		1		
0010	47+90	Rt	D1-1	Crossroad Name	[LA] East Ondossagon Rd			H	126	15			2	13.13			1	1		
0010	73+90	Rt	D1-1	One Destination (Arrow)	Mission Springs Road [RA]			H	120	15			2	12.50					New sign	
0010	79+55	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	80+95	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Ashland Rotary Club	District 588		H	30	36			1	7.50			1	1		
0010	93+55	Lt		No Passing Zone									1			1		1		
0010	93+55	Rt	J4-1	M1-6 State Route Marker	13			H	24	36			1	6.00			1	1		
0010	93+55	Rt		M3-1 NORTH Cardinal Route Marker				H												
0010	96+00	Rt	R4-51	Passing Lane Ahead	1/2 Mile			H	36	48			1	12.00						
0010	111+60	Lt		No Passing Zone									1			1		1		
0010	112+70	Lt	W5-52-L	Clearance Striper Down Right				F	12	36			1		3.00		1	1		
0010	112+70	Rt	W5-52-R	Clearance Striper Down Left				F	12	36			1		3.00		1	1		
0010	120+85	Rt	R4-3	Slower Traffic Keep Right				H	24	30			1	5.00			1	1		
0010	164+10	Rt	W9-1-R	Right Lane Ends				F	36	36			1		9.00		1	1		
0010	169+10	Lt	W4-2-R	Lane Reduction Transition Symbol - RIGHT				F	36	36			1		9.00		1	1		
0010	169+10	Rt	W4-2-R	Lane Reduction Transition Symbol - RIGHT				F	36	36			1		9.00		1	1		
0010	178+50	Rt	D1-2	Crossroad Name	[LA] Nolander Road	Birch Grove Road [RA]		H	96	30			2	20.00			1	2		
0010	185+30	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	186+10	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Grace	Bible	Fellowship	H	30	36			1	7.50			1	1		
0010	194+65	Rt	D1-1	One Destination (Arrow)	Bono Creek Road [RA]			H	96	15			2	10.00					New sign	
0010	195+20	Rt	W11-6	Snowmobile Crossing Symbol				F	30	30			1		6.25		1	1		
0010	200+25	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	204+95	Rt	D1-1	Crossroad Name	[LA] Wedal Rd			H	66	15			2	6.88			1	1		
0010	207+80	Rt		Lake or River Name - Stencil Message	Bono Creek												1	1		
0010	216+15	Rt	D1-1	Crossroad Name	Olsen Rd [RA]			H	66	15			2	6.88			1	2		
0010	224+25	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	226+50	Lt		No Passing Zone									1			1		1		
0010	226+50	Rt	D1-1	Crossroad Name	Lake Shore Dr [RA]			H	96	15			2	10.00			1	2		
0010	233+70	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	236+10	Rt	D1-1	Crossroad Name	[LA] Engoe Rd			H	72	15			2	7.50			1	2		
0010	243+50	Rt	D7-62	Road To Nat'l Forest Campground [1] Mile				H	60	42			2	17.50			1	2		
0010	252+75	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	259+75	Lt		No Passing Zone									1			1		1		
0010	261+20	Rt	D1-1	Crossroad Name	[LA] Nevers Rd			H	72	15			2	7.50			1	2		
0010	274+90	Rt	D1-1	Crossroad Name	Lakeshore Dr [RA]			H	96	15			2	10.00			1	2		
0010	282+10	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	294+30	Rt	D7-63-L	Nat'l Forest Campground/Arrow Left				H	60	36			2	15.00			1	2		
0010	295+35	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	295+05	Rt																1		
0010	298+80	Rt	D1-1	Crossroad Name	[LA] Faulkner Rd			H	84	15			2	8.75			1	2		
0010	311+50	Rt	W3-5	Speed Limit 45 Ahead [Arrow]				F	36	36			1		9.00		1	1		
0010	314+15	Rt	D1-2	Two Destinations (Arrows)	[LA] Thompson Street	Bigelow Street [RA]		H	90	30			2	18.75					New sign	
0010	317+45	Rt	R2-1	Speed Limit MPH	45			H	24	30			1	5.00			1	1		
0010	319+40	Rt	D7-68-R	[Name County Park]/Arrow Right	Thompsons	West End [RA]	Park	H	72	36			2	18.00			1	2		
0010	319+80	Lt		No Passing Zone									1			1				
0010	321+25	Rt	R1-1	Stop				H	30	30			1	6.25			1	1		
0010	321+70	Rt	W1-2-R	Right Curve				F	36	36			1		9.00		1	1		
0010	321+70	Rt	W13-1	Advisory Speed Plate (Yellow Back)	35			F	18	18					2.25					
0010	322+10	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Washburn HS	Ecology Club		H	30	36			1	7.50			1	1		
0010	323+10	Rt	D1-1	One Destination (Arrow)	[LA] Fur Farm Road			H	84	15			2	8.75					New sign	
0010	327+05	Rt	W3-5	Speed Limit Ahead [Arrow]	35			F	36	36			1		9.00		1	1		
0010	328+50	Lt	W5-52-L	Clearance Striper Down Right				F	12	36			1		3.00		1	1		
0010	328+50	Rt	W5-52-R	Clearance Striper Down Left				F	12	36			1		3.00		1	1		

3

3

																	REMARKS
CAT.	STA.	SB LOC	CODE	CODE DESC	LINE 1	MESSAGE	LINE 2	LINE 3	SHEETING	W	H	634.0616 POSTS WOOD 4X6X16 EACH	637.2210 SIGNS REFL TYPE H SF	637.2230 SIGNS REFL TYPE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REM SIGN TYPE II EACH	
0010	330+	Lt	W5-52-L	Clearance Striper Down Right					F	12	36	1		3.00		1	1
0010	330+	Rt	W5-52-R	Clearance Striper Down Left					F	12	36	1		3.00		1	1
0010	327+05	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	326+55	Rt	D1-2	Two Destinations (Arrows)	[LA] Bigelow Street		Thompson Street [RA]		H	90	30	2	18.75				New sign
0010	320+55	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	319+80	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Grace		Bible	Fellowship	H	30	36	1	7.50			1	1
0010	317+45	Rt	R2-1	Speed Limit _ MPH	55				H	24	30	1	5.00			1	1
0010	311+50	Rt	D1-1	Crossroad Name	Faulkner Rd [RA]				H	84	15	2	8.75			1	2
0010	305+50	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	295+90	Rt	D7-63-R	Nat'l Forest Campground/Arrow Right					H	60	36	2	15.00			1	2
0010	294+50	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	289+55	Lt		No Passing Zone								1			1		1
0010	288+90	Rt	D1-1	Crossroad Name	[LA] Lake Shore Dr				H	96	15	2	10.00			1	2
0010	275+25	Rt	D1-1	Crossroad Name	Nevers Rd [RA]				H	72	15	2	7.50			1	2
0010	268+20	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	267+55	Rt															1
0010	254+60	Lt		No Passing Zone								1			1		1
0010	249+10	Rt	D1-1	Crossroad Name	Engoe Rd [RA]				H	72	15	2	7.50			1	2
0010	241+60	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	239+35	Rt	S3-1	School Bus Stop Ahead					F	36	36	1		9.00		1	1
0010	237+15	Rt	D1-1	Crossroad Name	[LA] Lake Shore Dr				H	96	15	2	10.00			1	2
0010	230+10	Lt		No Passing Zone								1			1		1
0010	230+10	Rt	D1-1	Crossroad Name	[LA] Olsen Rd				H	66	15	2	6.88			1	2
0010	218+80	Rt	W11-6	Snowmobile Crossing Symbol					F	30	30	1		6.25		1	1
0010	217+20	Rt	D1-1	Crossroad Name	Wedal Rd [RA]				H	66	15	2	6.88			1	2
0010	211+35	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	206+50	Rt	D1-1	One Destination (Arrow)	[LA] Bono Creek Rd				H	96	15	2	10.00				New sign
0010	191+55	Rt	D1-1	Crossroad Name	[LA] Birch Grove Rd		Nolander Rd [RA]		H	96	30	2	20.00			1	2
0010	184+30	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	183+55	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Ashland Rotary Club		District 588		H	30	36	1	7.50			1	1
0010	181+50	Rt	R3-72	Oncoming Traffic Uses Center Lane					H	30	36	1	7.50				
0010	179+50	Rt	R4-53	Do Not Pass When Oncoming Traffic in Either Lane					H	54	54	2	20.25			1	2
0010	133+45	Lt		No Passing Zone								1			1		1
0010	113+85	Lt		No Passing Zone								1			1		1
0010	113+00	Lt	W5-52-L	Clearance Striper Down Right					F	12	36	1		3.00		1	1
0010	113+00	Rt	W5-52-R	Clearance Striper Down Left					F	12	36	1		3.00		1	1
0010	90+80	Lt		No Passing Zone								1			1		1
0010	86+10	Rt	D1-1	One Destination (Arrow)	[LA] Mission Springs Road				H	120	15	2	12.50			1	New sign
0010	78+65	Rt	I-55-56	Adopt-A-Highway [Sponsor]	Hickman		Chiropractic	Clinic	H	30	36	1	7.50			1	1
0010	67+20	Lt		No Passing Zone								1			1		1
0010	60+85	Rt	D1-1	Crossroad Name	East Ondossagon Rd [RA]				H	126	15	2	13.13			1	2
0010	54+35	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	34+65	Rt	D1-1	Crossroad Name	Cherryville Rd [RA]				H	96	15	2	10.00			1	2
0010	30+10	Lt	W5-52-L	Clearance Striper Down Right					F	12	36	1		3.00		1	1
0010	30+10	Rt	W5-52-R	Clearance Striper Down Left					F	12	36	1		3.00		1	1
0010	27+35	Rt	R1-1	Stop					H	30	30	1	6.25			1	1
0010	19+45	Lt		No Passing Zone								1			1		1
												132	602	111	14	78	115

3

3

TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 8160-00-70					
CATEGORY		LOCATION	643.0200 DAY		
0010		PROJECT AREA	48		
TOTAL 0010			48		

TRAFFIC CONTROL ITEMS				
		643.0300	643.0420	643.0715
		DRUMS	BARRICADES	WARN LIGHTS
		TYPE III	TYPE C	
CATEGORY	STATION	DAY	DAY	DAY
0010	UNDISTRIBUTED	200	50	250
TOTAL 0010		200	50	250

TRAFFIC CONTROL SIGNS			
		643.0900	
CATEGORY	LOCATION	DAY	REMARKS
0010	Each end of Project on ML	480	10 SIGNS - ADV WARNING*
0010	Cherryville Rd	48	1 SIGN - SR ADV WARNING
0010	E Ondossagon Rd	48	1 SIGN - SR ADV WARNING
0010	Nolander Rd	48	1 SIGN - SR ADV WARNING
0010	Wedal Road	48	1 SIGN - SR ADV WARNING
0010	Engoe Road	48	1 SIGN - SR ADV WARNING
0010	Nevers Rd	48	1 SIGN - SR ADV WARNING
0010	Summit Av	48	1 SIGN - SR ADV WARNING
0010	Wannebo Rd	48	1 SIGN - SR ADV WARNING
0010	Faulkner Road	48	1 SIGN - SR ADV WARNING
0010	Thompson Road	48	1 SIGN - SR ADV WARNING
0010	Biglow Street	48	1 SIGN - SR ADV WARNING
0010	Fur Farm Road	48	1 SIGN - SR ADV WARNING
TOTAL 0010		1056	
*NOTE: Ensure project advanced warning signing is placed to include tied project 8160-03-61 limits also.			

GEOTEXTILE FABRIC TYPE HR					
		645.0120			
CATEGORY	STATION TO	STATION	LOC	SY	REMARKS
0010	90+70 -	91+20	LT	43	AVG WIDTH = 4.5'
0010	256+00 -	256+34	LT	32	AVG WIDTH = 5'
0010	270+90 -	271+20	LT	28	AVG WIDTH = 5'
TOTAL 0010				103	

PAVEMENT MARKING EPOXY 4-INCH									
				646.0106					
				YELLOW	YELLOW	YELLOW	WHITE	WHITE	
				DASHED	DBL SOLID	DASH/SOLID	DASHED	SOLID	
				LF	LF	LF	LF	LF	REMARKS
0010	8+00	-	328+56	LT				30806	EDGE LINE
0010	8+00	-	328+56	RT				31331	EDGE LINE
0010	8+00	-	13+00	CENTERLINE	1000				
0010	13+00	-	20+00	CENTERLINE		875			
0010	19+00	-	37+50	CENTERLINE	462				
0010	37+50	-	47+00	CENTERLINE		1188			
0010	47+00	-	67+00	CENTERLINE		4000			
0010	53+00	-	56+00				75		
0010	67+00	-	75+00	CENTERLINE		1000			
0010	75+00	-	80+00	CENTERLINE		1000			
0010	80+00	-	91+00	CENTERLINE		1375			
0010	91+00	-	93+50	CENTERLINE	63				
0010	93+50	-	103+50	CENTERLINE		1250			
0010	103+50	-	104+50	CENTERLINE	25				
0010	104+50	-	112+00	CENTERLINE		938			
0010	112+00	-	113+50	CENTERLINE		300			
0010	113+50	-	123+00	CENTERLINE		1188			
0010	123+00	-	133+50	CENTERLINE		2100			
0010	126+00	-	175+00				1225		
0010	133+50	-	179+50	CENTERLINE		5750			
0010	179+50	-	218+00	CENTERLINE		7700			
0010	210+50	-	213+00				63		
0010	218+00	-	226+00	CENTERLINE		1000			
0010	226+00	-	230+00	CENTERLINE		800			
0010	230+00	-	237+00	CENTERLINE		875			
0010	237+00	-	244+00	CENTERLINE		1400			
0010	244+00	-	254+50	CENTERLINE		1313			
0010	254+50	-	261+00	CENTERLINE	163				
0010	261+00	-	272+50	CENTERLINE		1438			
0010	267+00	-	271+00				100		
0010	272+50	-	285+00	CENTERLINE	312				
0010	280+50	-	283+00				63		
0010	285+00	-	289+50	CENTERLINE		563			
0010	289+50	-	319+50	CENTERLINE	750				
0010	319+50	-	324+00	CENTERLINE		563			
0010	324+00	-	328+56	CENTERLINE		912			
SUBTOTALS				1775	19212	19313	1525	62137	
TOTAL 0010				103,962					

3

PAVEMENT MARKING EPOXY 8-INCH

646.0126					
CATEGORY	STATION TO	STATION	LOC	LF	REMARKS
0010	55+50	- 58+00	LT	250	RIGHT TURN LANE
0010	185+50	- 186+50	LT	100	RIGHT TURN LANE
0010	250+75	- 251+75	RT	100	RIGHT TURN LANE
0010	318+50	- 320+50	RT	200	RIGHT TURN LANE
TOTAL 0010				650	

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH

NOTE: 1/3 of the quantity given for each location in the table below has been allowed for each surface-- the milled surface, the lower layer and the upper layer.

649.0200						
CATEGORY	STATION TO	STATION	LOCATION	DASHED	YELLOW	YELLOW
				LF	DOUBLE SOLID LF	DASHED/SOLID LF
0010	8+00	- 13+00	CENTERLINE		3000	
0010	13+00	- 20+00	CENTERLINE			2268
0010	19+00	- 37+50	CENTERLINE	444		
0010	37+50	- 47+00	CENTERLINE			3078
0010	47+00	- 67+00	CENTERLINE		12000	
0010	67+00	- 75+00	CENTERLINE			2592
0010	75+00	- 80+00	CENTERLINE		3000	
0010	80+00	- 91+00	CENTERLINE			3564
0010	91+00	- 93+50	CENTERLINE	60		
0010	93+50	- 103+50	CENTERLINE			3240
0010	103+50	- 104+50	CENTERLINE	24		
0010	104+50	- 112+00	CENTERLINE			2430
0010	112+00	- 113+50	CENTERLINE		900	
0010	113+50	- 123+00	CENTERLINE			3078
0010	123+00	- 133+50	CENTERLINE		6300	
0010	133+50	- 179+50	CENTERLINE			14904
0010	179+50	- 218+00	CENTERLINE		23100	
0010	218+00	- 226+00	CENTERLINE			2592
0010	226+00	- 230+00	CENTERLINE		2400	
0010	230+00	- 237+00	CENTERLINE			2268
0010	237+00	- 244+00	CENTERLINE		4200	
0010	244+00	- 254+50	CENTERLINE			3402
0010	254+50	- 261+00	CENTERLINE	156		
0010	261+00	- 272+50	CENTERLINE			3726
0010	272+50	- 285+00	CENTERLINE	300		
0010	285+00	- 289+50	CENTERLINE			1458
0010	289+50	- 319+50	CENTERLINE	720		
0010	319+50	- 324+00	CENTERLINE			1458
0010	324+00	- 328+56	CENTERLINE		2736	
SUBTOTALS				1704	57636	50058
TOTAL 0010					109,398	

LOCATING NO-PASSING ZONES

648.0100				
CATEGORY	STATION TO	STATION	LOCATION	MI
0010	8+00	- 328+56	ML	6
TOTAL 0010				6

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

650.5500				
CATEGORY	STATION	LOC	LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
TOTAL 0010			286	

CONSTRUCTION STAKING PIPE CULVERTS

650.6000			
CATEGORY	STATION	LOC	EACH
0010	256+75	PE LT	1
TOTAL 0010			1

CONSTRUCTION STAKING RESURFACING REFERENCE

650.8000		
CATEGORY	LOCATION	LF
0010	PROJECT AREA	32208
TOTAL 0010		32,208

3

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 8160-00-70

		650.9910
CATEGORY	LOCATION	LS
0010	PROJECT AREA	1
TOTAL 0010		1

SAWING ASPHALT

CATEGORY	STATION	LOC	690.0150 LF	REMARKS
0010	21+96	LT	12.6	PE
0010	54+50	LT	50	C&G
0010	55+00	LT	80	C&G
0010	241+70	LT	70	C&G
0010	242+50	LT	86	C&G
0010	70+15	RT	10.7	PE
0010	75+38	LT	34.4	CE
0010	76+66	RT	10	PE
0010	125+10	RT	12	PE
0010	145+30	LT	18	PE
0010	146+48	RT	11.4	PE
0010	150+40	RT	16	PE
0010	150+76	RT	8	PE
0010	157+52	RT	10	PE
0010	176+42	RT	10.5	PE
0010	180+60	RT	12.5	PE
0010	189+70	RT	12	PE
0010	198+12	RT	14	PE
0010	225+70	LT	16	PE
0010	251+75	LT	10	PE
0010	271+44	LT	8.2	PE
0010	284+18	LT	9.3	PE
TOTAL 0010			522	

CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT

SPV.0090.02				
CATEGORY	STATION	LOC	LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
TOTAL 0010			286	

REHEATING HMA PAVMENT LONGITUDINAL JOINTS SPECIAL

SPV.0170.01					
CATEGORY	STATION TO	STATION	LOC	STA	
0010	8+00 -	29+70	ML	22	
0010	30+12 -	112+73	ML	83	
0010	112+95 -	220+94	ML	108	
0010	221+98 -	328+56	ML	107	
TOTAL 0010				319	

REMOVING ASPHALTIC SURFACE 6-FOOT MILLING, SPECIAL

SPV.0180.01					
CATEGORY	STATION TO	STATION	LOC	SY	REMARKS
0010	8+00 -	328+56	ML	14000	Additional 6' wide mill
TOTAL 0010				14,000	

3

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 8160-00-70

		650.9910
CATEGORY	LOCATION	LS
0010	PROJECT AREA	1
TOTAL 0010		1

SAWING ASPHALT

		690.0150		
CATEGORY	STATION	LOC	LF	REMARKS
0010	21+96	LT	12.6	PE
0010	54+50	LT	50	C&G
0010	55+00	LT	80	C&G
0010	241+70	LT	70	C&G
0010	242+50	LT	86	C&G
0010	70+15	RT	10.7	PE
0010	75+38	LT	34.4	CE
0010	76+66	RT	10	PE
0010	125+10	RT	12	PE
0010	145+30	LT	18	PE
0010	146+48	RT	11.4	PE
0010	150+40	RT	16	PE
0010	150+76	RT	8	PE
0010	157+52	RT	10	PE
0010	176+42	RT	10.5	PE
0010	180+60	RT	12.5	PE
0010	189+70	RT	12	PE
0010	198+12	RT	14	PE
0010	225+70	LT	16	PE
0010	251+75	LT	10	PE
0010	271+44	LT	8.2	PE
0010	284+18	LT	9.3	PE
TOTAL 0010			522	

CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT

		SPV.0090.02		
CATEGORY	STATION	LOC	LF	REMARKS
0010	54+50	LT	50	ONDOSSAGON RD
0010	55+00	LT	80	ONDOSSAGON RD
0010	241+70	LT	70	ENGOE ROAD
0010	242+50	LT	86	ENGOE ROAD
TOTAL 0010			286	

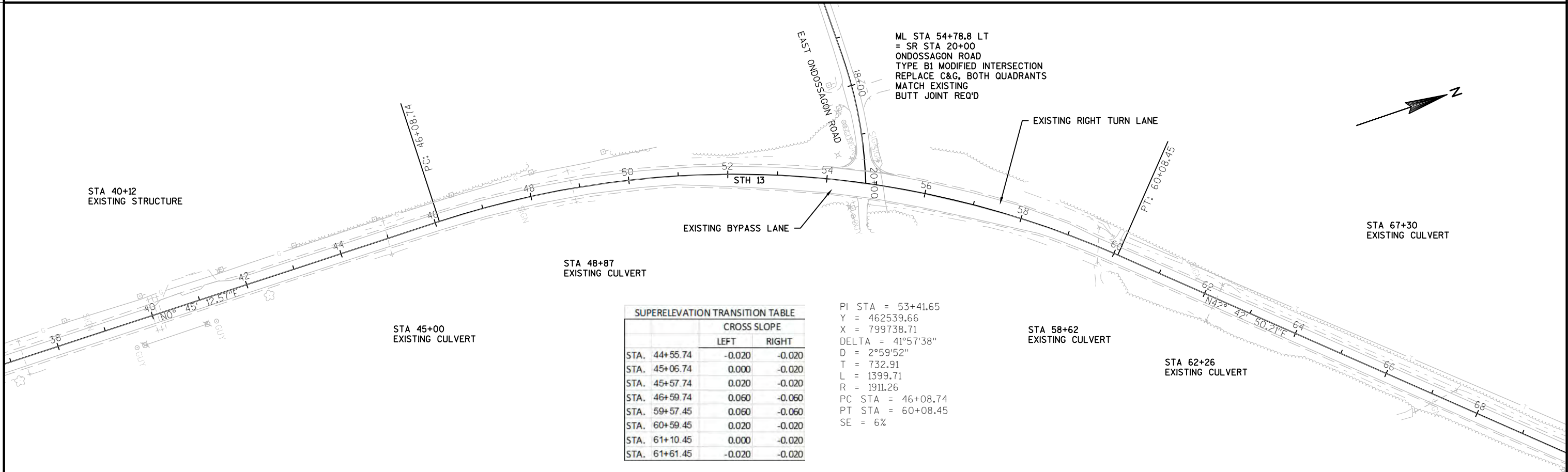
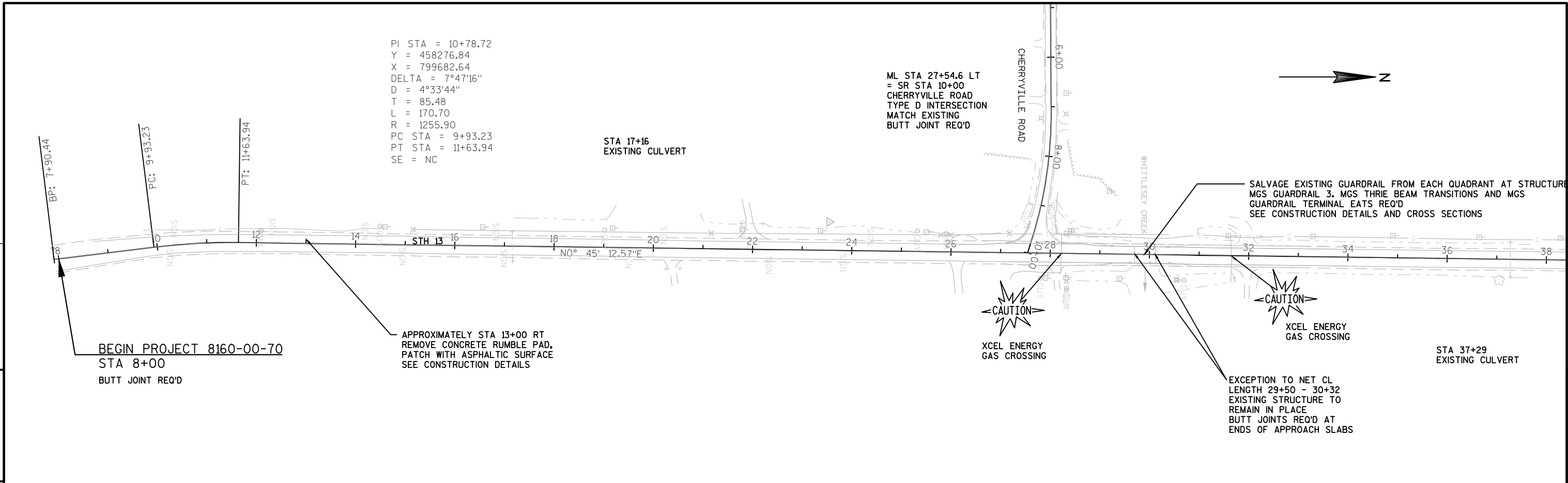
REHEATING HMA PAVMENT LONGITUDINAL JOINTS SPECIAL

				SPV.0170.01	
CATEGORY	STATION TO	STATION	LOC	STA	
0010	8+00 -	29+70	ML	22	
0010	30+12 -	112+73	ML	83	
0010	112+95 -	220+94	ML	108	
0010	221+98 -	328+56	ML	107	
TOTAL 0010				319	

REMOVING ASPHALTIC SURFACE ADDITIONAL MILL, SPECIAL

		SPV.0180.02		
CATEGORY	STATION TO	STATION	LOC	SY
0010	8+00 -	328+56	ML	21000
TOTAL 0010				21,000

Addendum No. 1
IDs 8160-00-70 &
8160-03-61
Revised Sheet 45
April 9, 2015



SUPERELEVATION TRANSITION TABLE			
		CROSS SLOPE	
		LEFT	RIGHT
STA.	80+57.78	-0.020	-0.020
STA.	81+08.89	-0.020	0.000
STA.	81+60.00	-0.020	0.020
STA.	82+00.89	-0.036	0.036
STA.	86+49.43	-0.036	0.036
STA.	86+90.32	-0.020	0.020
STA.	87+41.43	-0.020	0.000
STA.	87+92.54	-0.020	-0.020

PI STA = 84+25.53
Y = 464854.12
X = 801875.47
DELTA = 7°37'29"
D = 1°29'43"
T = 255.32
L = 509.88
R = 3831.45
PC STA = 81+70.22
PT STA = 86+80.10
SE = 3.6%

NORTHERN NATURAL GAS
PIPELINE CROSSING



NEW MGS GUARDRAIL 3 K AND MGS GUARDRAIL TERMINAL EATS REQ'D
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

STA 75+65
EXISTING CULVERT

STA 71+96
EXISTING CULVERT

ML STA 78+93.7 RT = SR STA 30+00
MISSION SPRINGS ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

MISSION SPRINGS ROAD
32+00
33+06

STA 85+17
EXISTING CULVERT

STA 91+70
EXISTING CULVERT

SALVAGE EXISTING GUARDRAIL FROM EACH
QUADRANT OF THE STRUCTURE
MGS GUARDRAIL 3, MGS THRIE BEAM TRANSITIONS
AND MGS GUARDRAIL TERMINAL EATS REQ'D
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

EXCEPTION TO NET CL LENGTH
STA 112+73 - 112+95
EXISTING STRUCTURE TO REMAIN IN PLACE
BUTT JOINTS REQ'D AT ENDS OF DECK

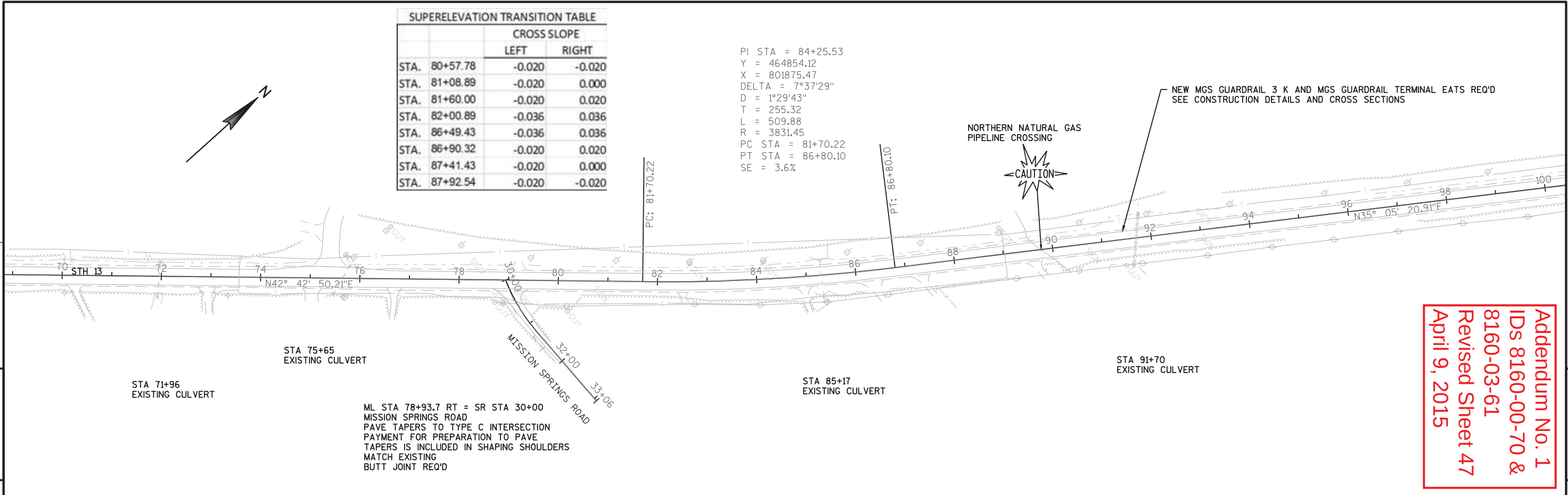
STA 102+77
EXISTING CULVERT

STA 118+27
EXISTING CULVERT

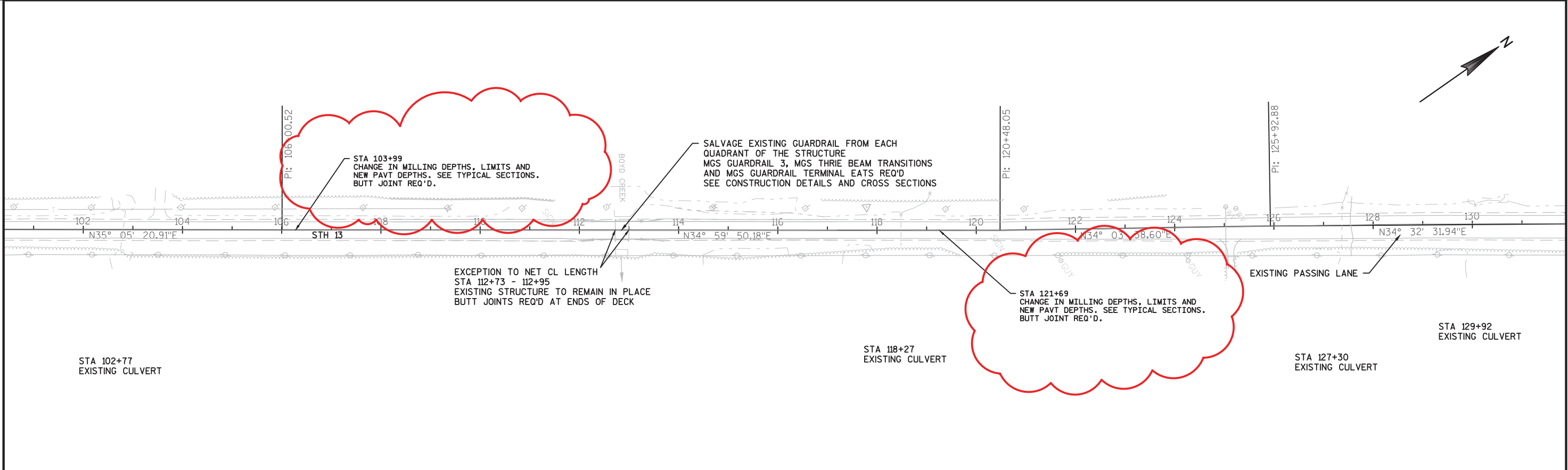
STA 127+30
EXISTING CULVERT

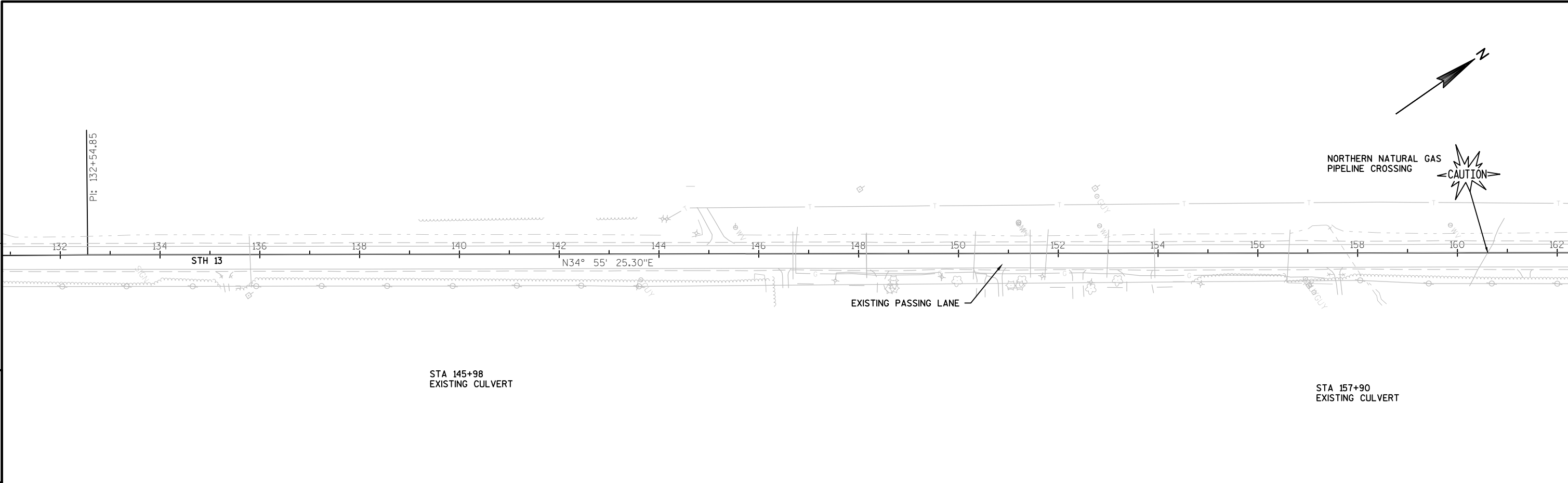
STA 129+92
EXISTING CULVERT

5



5

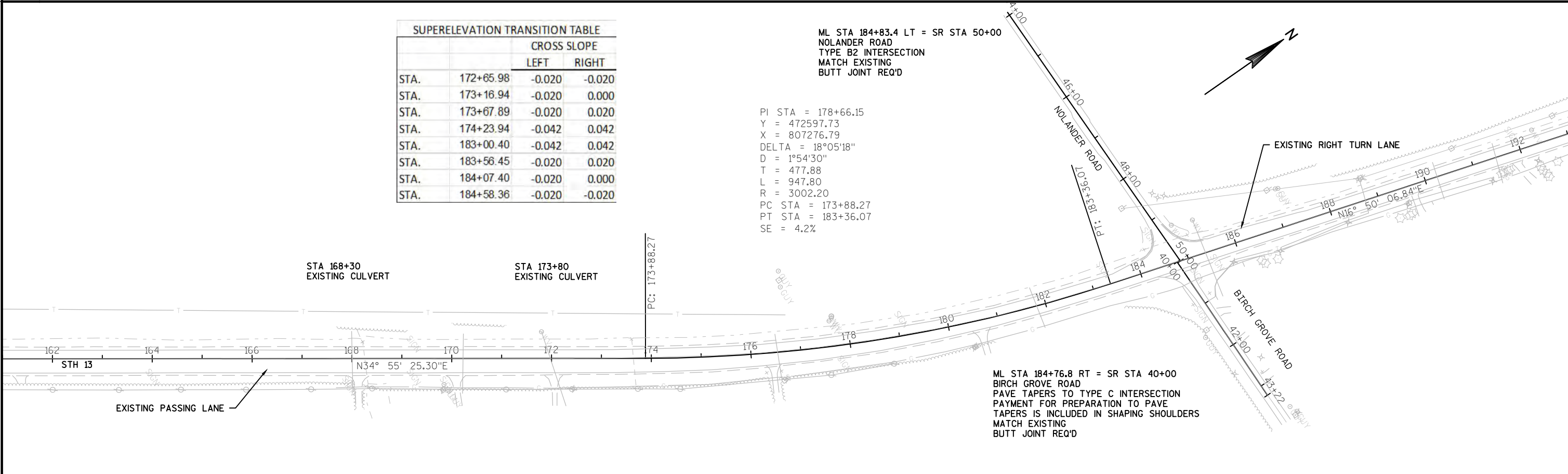


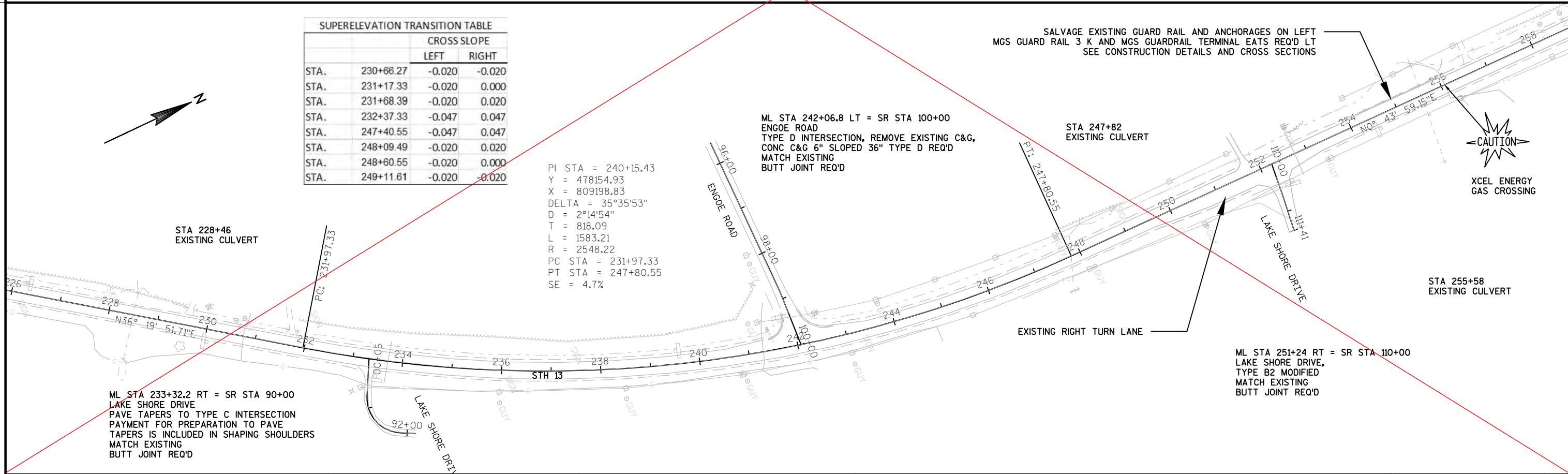
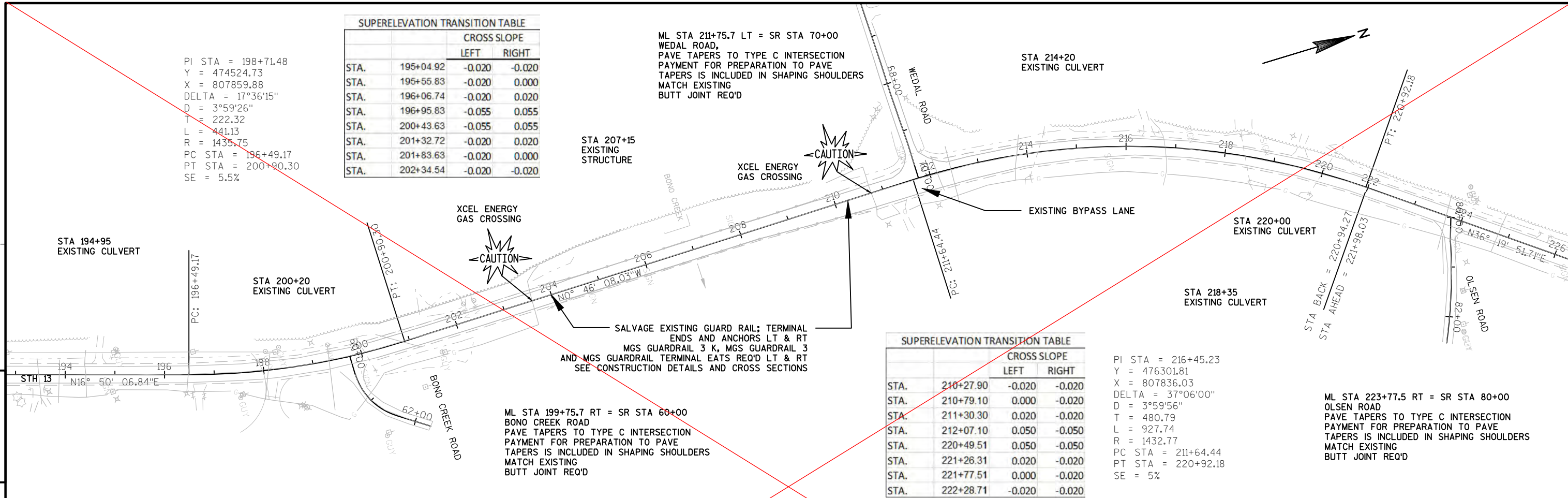


SUPERELEVATION TRANSITION TABLE			
		CROSS SLOPE	
		LEFT	RIGHT
STA.	172+65.98	-0.020	-0.020
STA.	173+16.94	-0.020	0.000
STA.	173+67.89	-0.020	0.020
STA.	174+23.94	-0.042	0.042
STA.	183+00.40	-0.042	0.042
STA.	183+56.45	-0.020	0.020
STA.	184+07.40	-0.020	0.000
STA.	184+58.36	-0.020	-0.020

ML STA 184+83.4 LT = SR STA 50+00
NOLANDER ROAD
TYPE B2 INTERSECTION
MATCH EXISTING
BUTT JOINT REQ'D

PI STA = 178+66.15
Y = 472597.73
X = 807276.79
DELTA = 18°05'18"
D = 1°54'30"
T = 477.88
L = 947.80
R = 3002.20
PC STA = 173+88.27
PT STA = 183+36.07
SE = 4.2%





5

5

PI STA = 198+71.48
Y = 474524.73
X = 807859.88
DELTA = 17°36'15"
D = 3°59'26"
T = 222.32
L = 441.13
R = 1435.75
PC STA = 196+49.17
PT STA = 200+90.30
SE = 5.5%

SUPERELEVATION TRANSITION TABLE			
STA.		CROSS SLOPE	
		LEFT	RIGHT
STA.	195+04.92	-0.020	-0.020
STA.	195+55.83	-0.020	0.000
STA.	196+08.74	-0.020	0.020
STA.	196+95.83	-0.055	0.055
STA.	200+43.63	-0.055	0.055
STA.	201+32.72	-0.020	0.020
STA.	201+83.63	-0.020	0.000
STA.	202+34.54	-0.020	-0.020

ML STA 211+75.7 LT = SR STA 70+00
WEDAL ROAD,
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

STA 207+15
EXISTING
STRUCTURE

STA 214+20
EXISTING CULVERT

STA 215+00
CHANGE IN MILLING DEPTHS, LIMITS AND
NEW PAVT DEPTHS. SEE TYPICAL SECTIONS.
BUTT JOINT REQ'D.

STA 220+00
EXISTING CULVERT

STA 218+35
EXISTING CULVERT

STA 194+95
EXISTING CULVERT

STA 200+20
EXISTING CULVERT

XCEL ENERGY
GAS CROSSING

XCEL ENERGY
GAS CROSSING

EXISTING BYPASS LANE

SALVAGE EXISTING GUARD RAIL; TERMINAL
ENDS AND ANCHORS LT & RT
MGS GUARDRAIL 3 K, MGS GUARDRAIL 3
AND MGS GUARDRAIL TERMINAL EATS REQ'D LT & RT
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

ML STA 199+75.7 RT = SR STA 60+00
BONO CREEK ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

SUPERELEVATION TRANSITION TABLE			
STA.		CROSS SLOPE	
		LEFT	RIGHT
STA.	210+27.90	-0.020	-0.020
STA.	210+79.10	0.000	-0.020
STA.	211+30.30	0.020	-0.020
STA.	212+07.10	0.050	-0.050
STA.	220+49.51	0.050	-0.050
STA.	221+26.31	0.020	-0.020
STA.	221+77.51	0.000	-0.020
STA.	222+28.71	-0.020	-0.020

PI STA = 216+45.23
Y = 476301.81
X = 807836.03
DELTA = 37°06'00"
D = 3°59'56"
T = 480.79
R = 1432.77
PC STA = 211+64.44
PT STA = 220+92.18
SE = 5%

ML STA 223+77.5 RT = SR STA 80+00
OLSEN ROAD
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

SUPERELEVATION TRANSITION TABLE			
STA.		CROSS SLOPE	
		LEFT	RIGHT
STA.	230+66.27	-0.020	-0.020
STA.	231+17.33	-0.020	0.000
STA.	231+68.39	-0.020	0.020
STA.	232+37.33	-0.047	0.047
STA.	247+40.55	-0.047	0.047
STA.	248+09.49	-0.020	0.020
STA.	248+60.55	-0.020	0.000
STA.	249+11.61	-0.020	-0.020

PI STA = 240+15.43
Y = 478154.93
X = 809198.83
DELTA = 35°35'53"
D = 2°14'54"
T = 818.09
L = 1583.21
R = 2548.22
PC STA = 231+97.33
PT STA = 247+80.55
SE = 4.7%

ML STA 242+06.8 LT = SR STA 100+00
ENGOE ROAD
TYPE D INTERSECTION, REMOVE EXISTING C&G,
CONC C&G 6" SLOPED 36" TYPE D REQ'D
MATCH EXISTING
BUTT JOINT REQ'D

SALVAGE EXISTING GUARD RAIL AND ANCHORAGES ON LEFT
MGS GUARD RAIL 3 K AND MGS GUARDRAIL TERMINAL EATS REQ'D LT
SEE CONSTRUCTION DETAILS AND CROSS SECTIONS

STA 247+82
EXISTING CULVERT

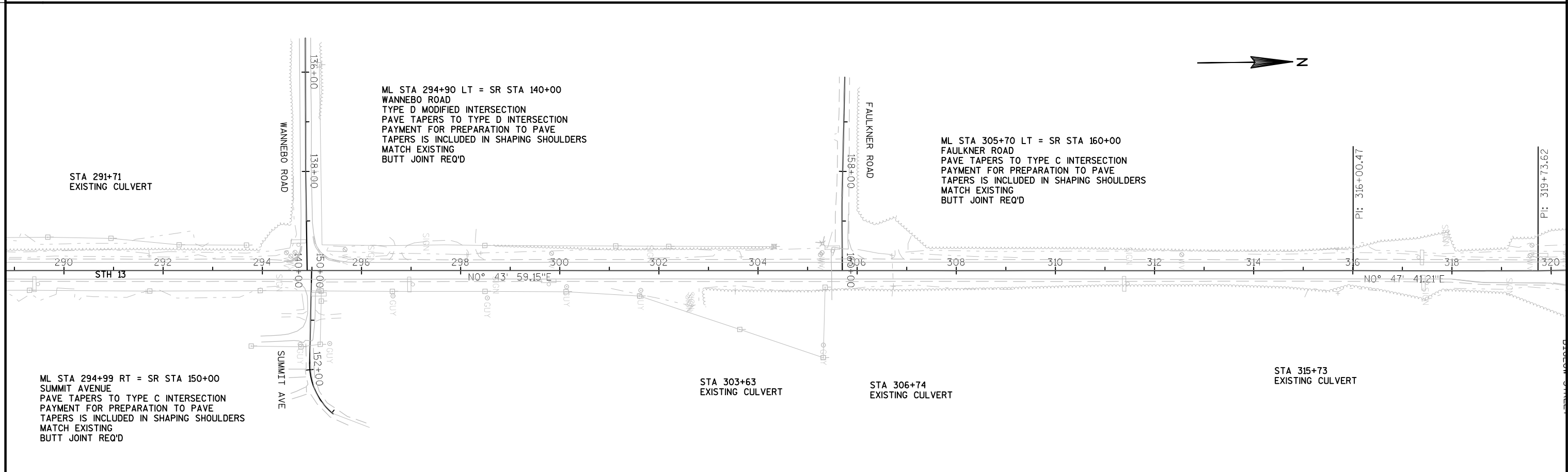
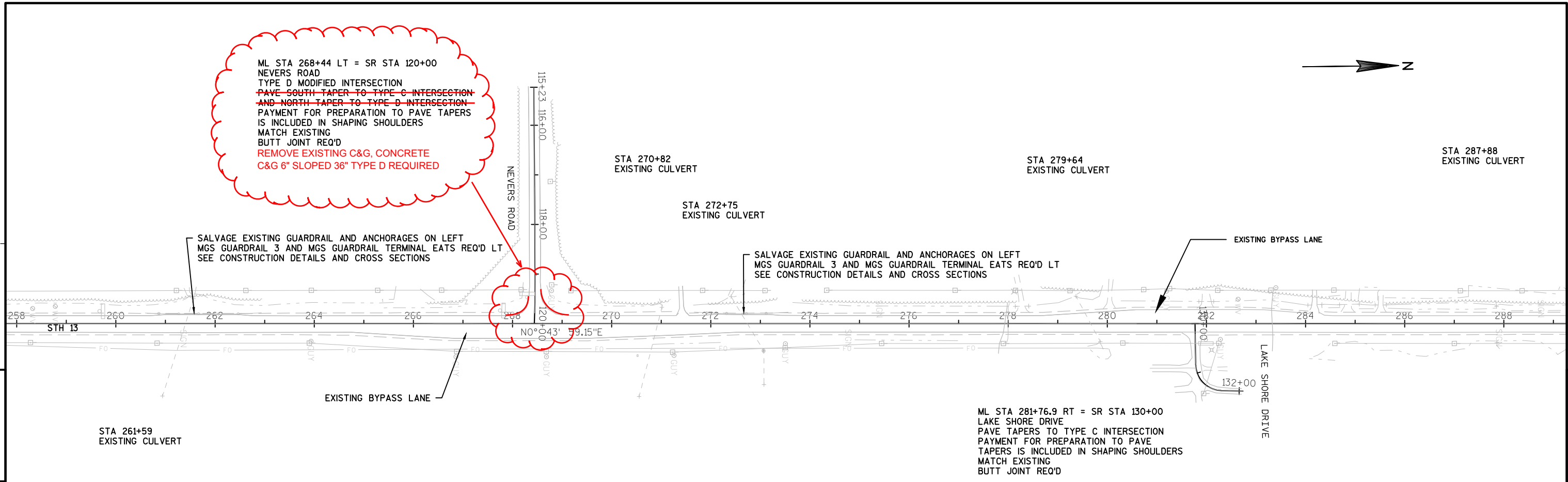
STA 255+58
EXISTING CULVERT

ML STA 251+24 RT = SR STA 110+00
LAKE SHORE DRIVE,
TYPE B2 MODIFIED
MATCH EXISTING
BUTT JOINT REQ'D

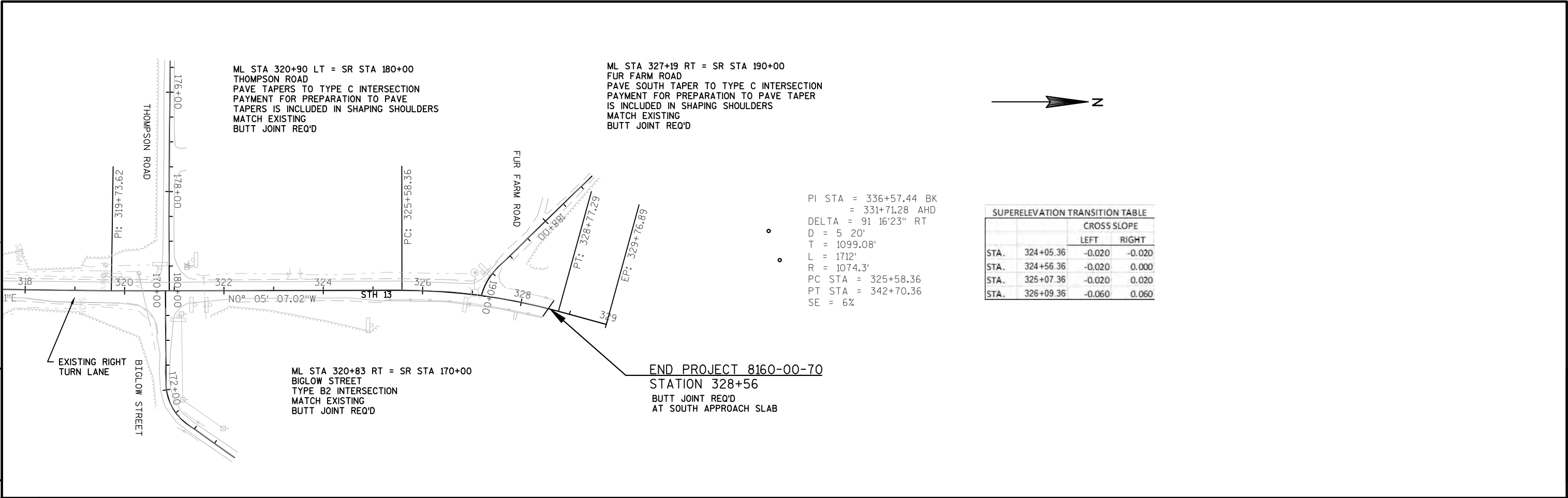
STA 228+46
EXISTING CULVERT

ML STA 233+32.2 RT = SR STA 90+00
LAKE SHORE DRIVE
PAVE TAPERS TO TYPE C INTERSECTION
PAYMENT FOR PREPARATION TO PAVE
TAPERS IS INCLUDED IN SHAPING SHOULDERS
MATCH EXISTING
BUTT JOINT REQ'D

Addendum No. 1
IDs 8160-00-70 &
8160-03-61
Revised Sheet 49
April 9, 2015



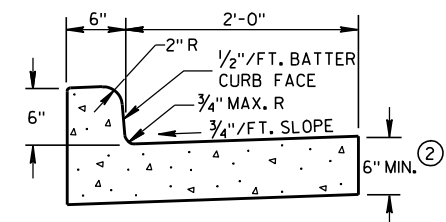
5



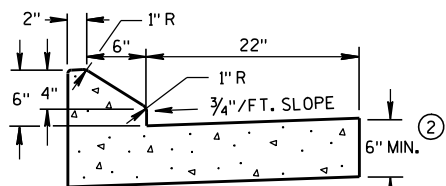
5

Standard Detail Drawing List

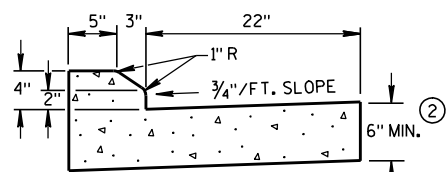
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E09-06	SILT FENCE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
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)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY



TYPES A & D ①

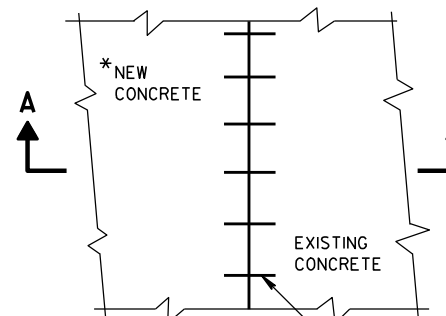


6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

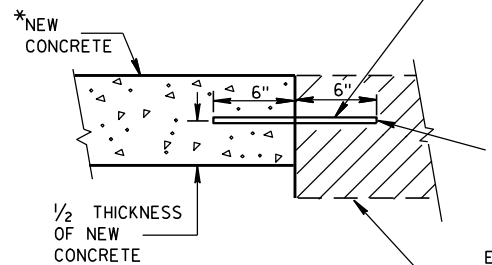
CONCRETE CURB & GUTTER 30"



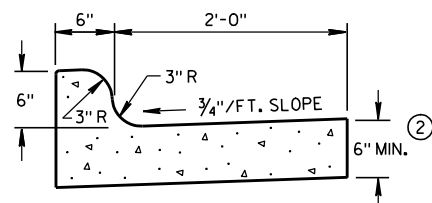
PLAN VIEW

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

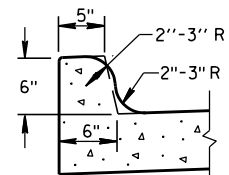
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.



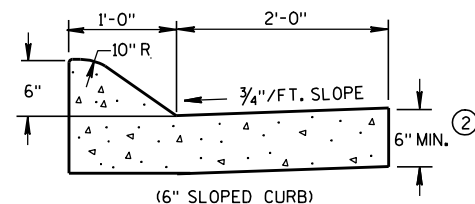
SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT



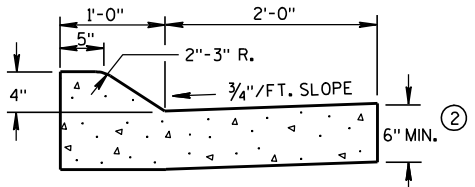
TYPES K & L ①



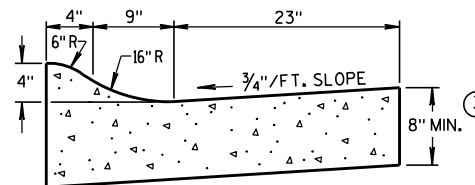
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



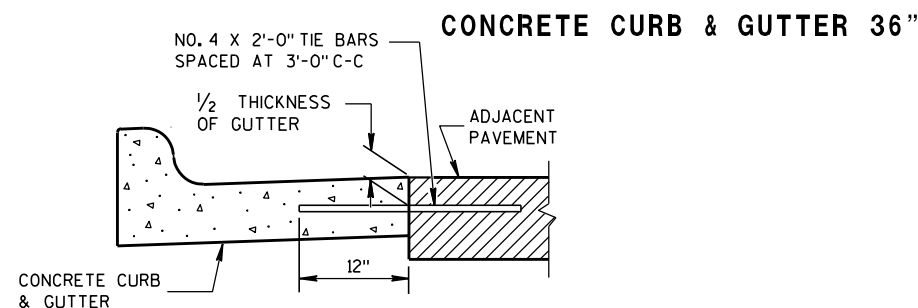
(6" SLOPED CURB)



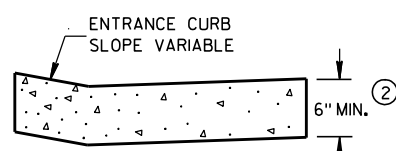
TYPES A & D ①



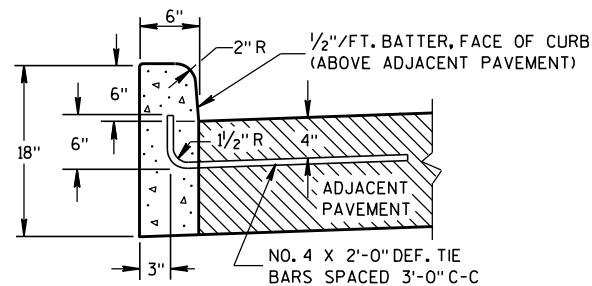
4" SLOPED CURB TYPES R & T ① ④



TYPICAL TIE BAR LOCATION ①

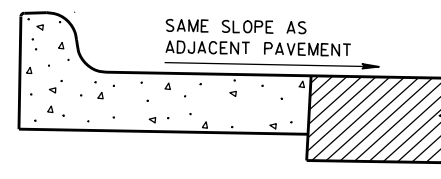


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

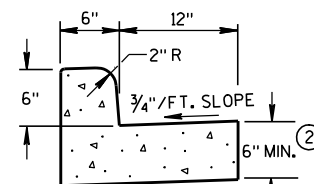


TYPES A & D ①

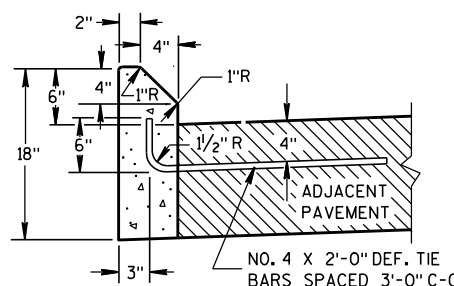
CONCRETE CURB



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



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

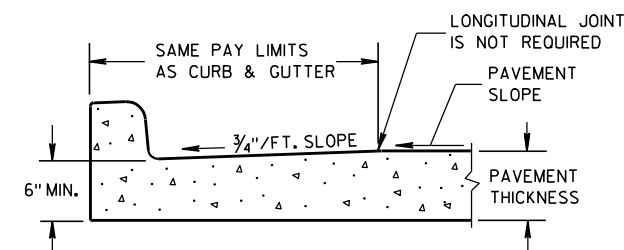
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.

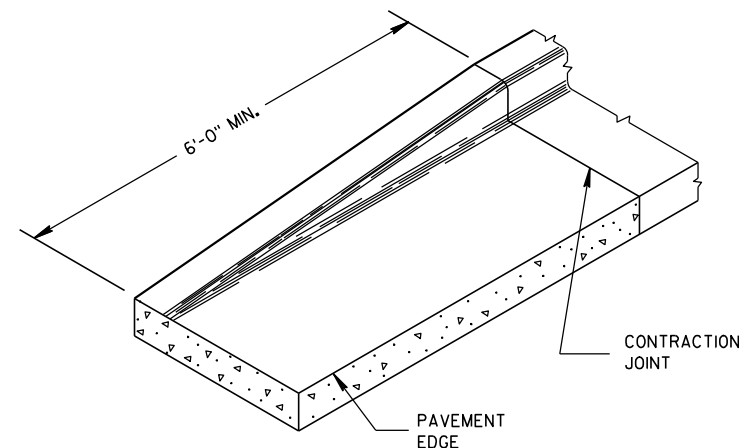
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 AND R.
- 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.



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

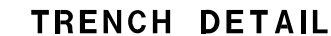
DATE

FHWA

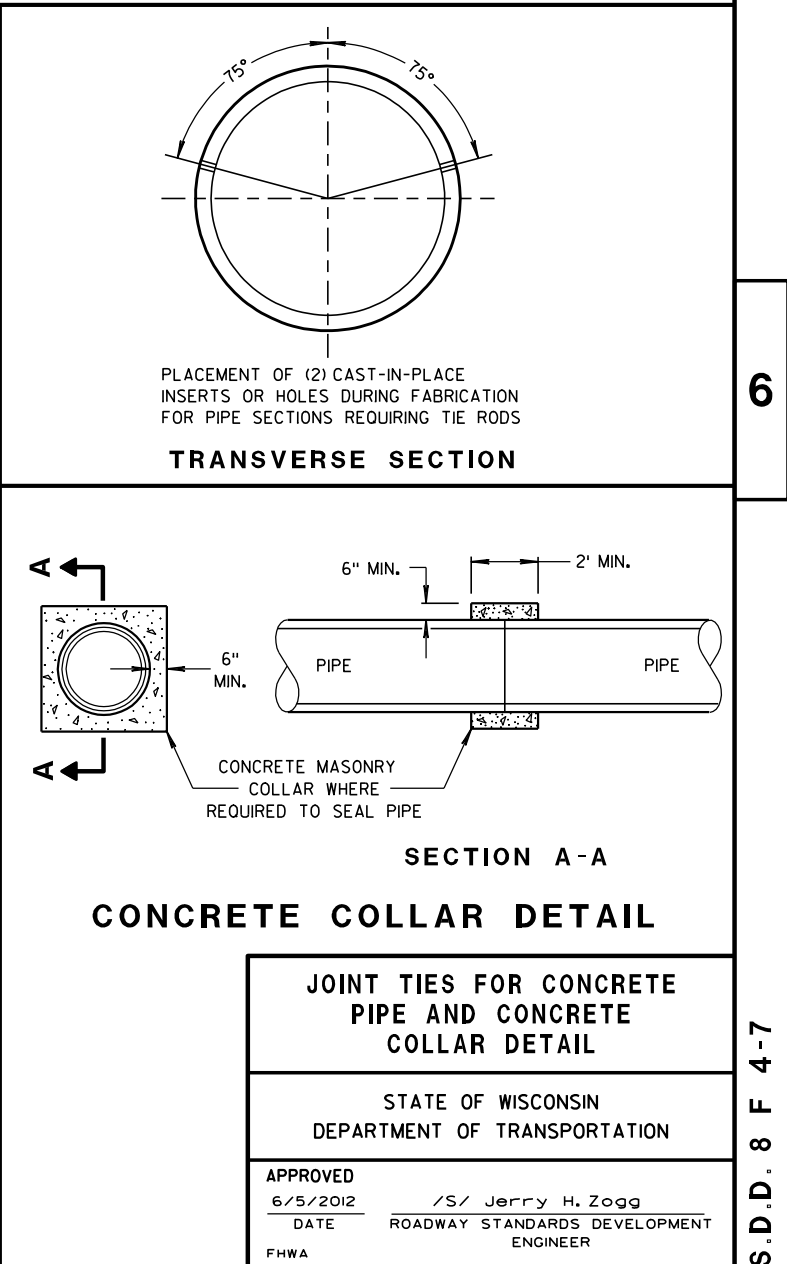
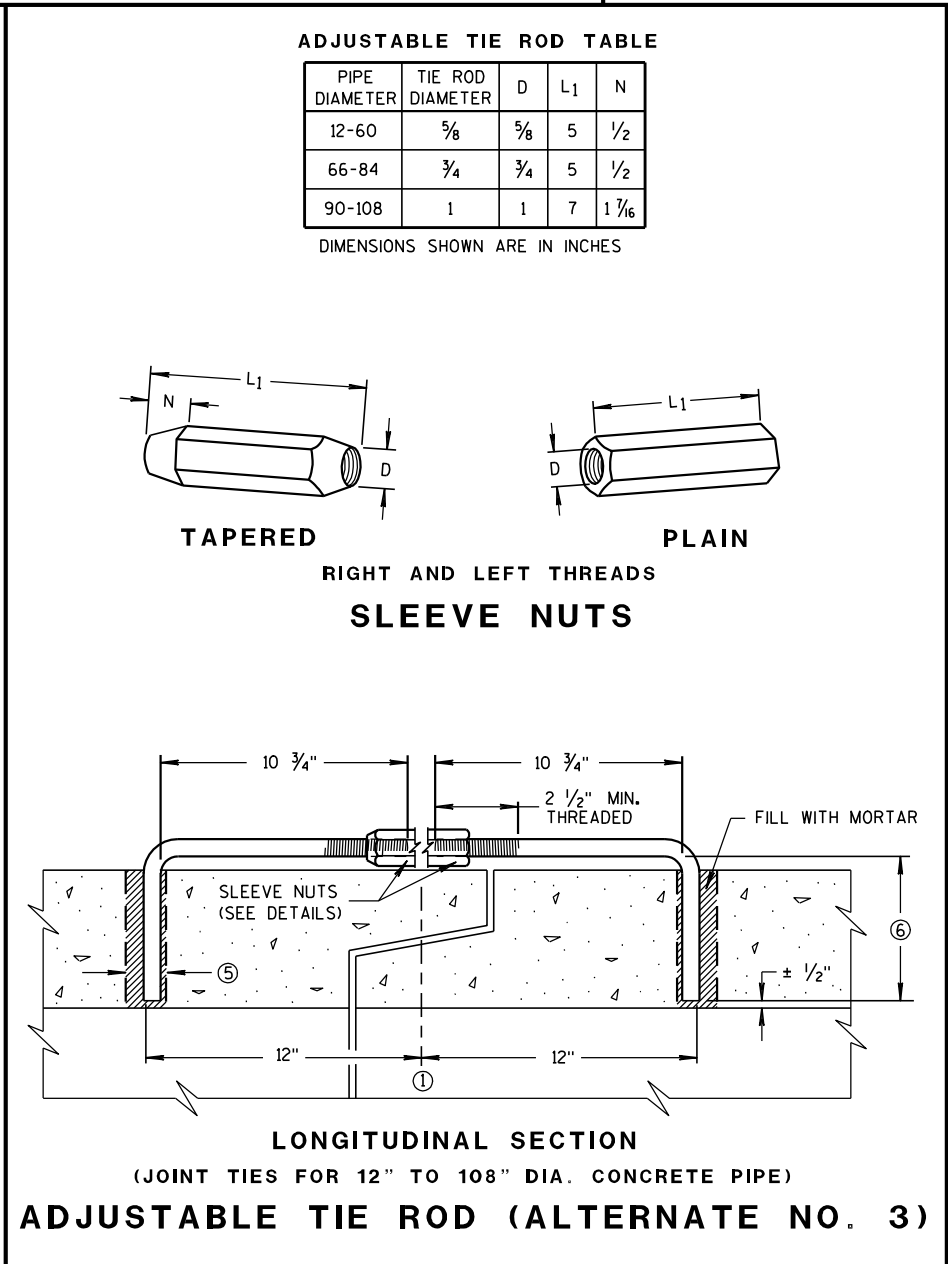
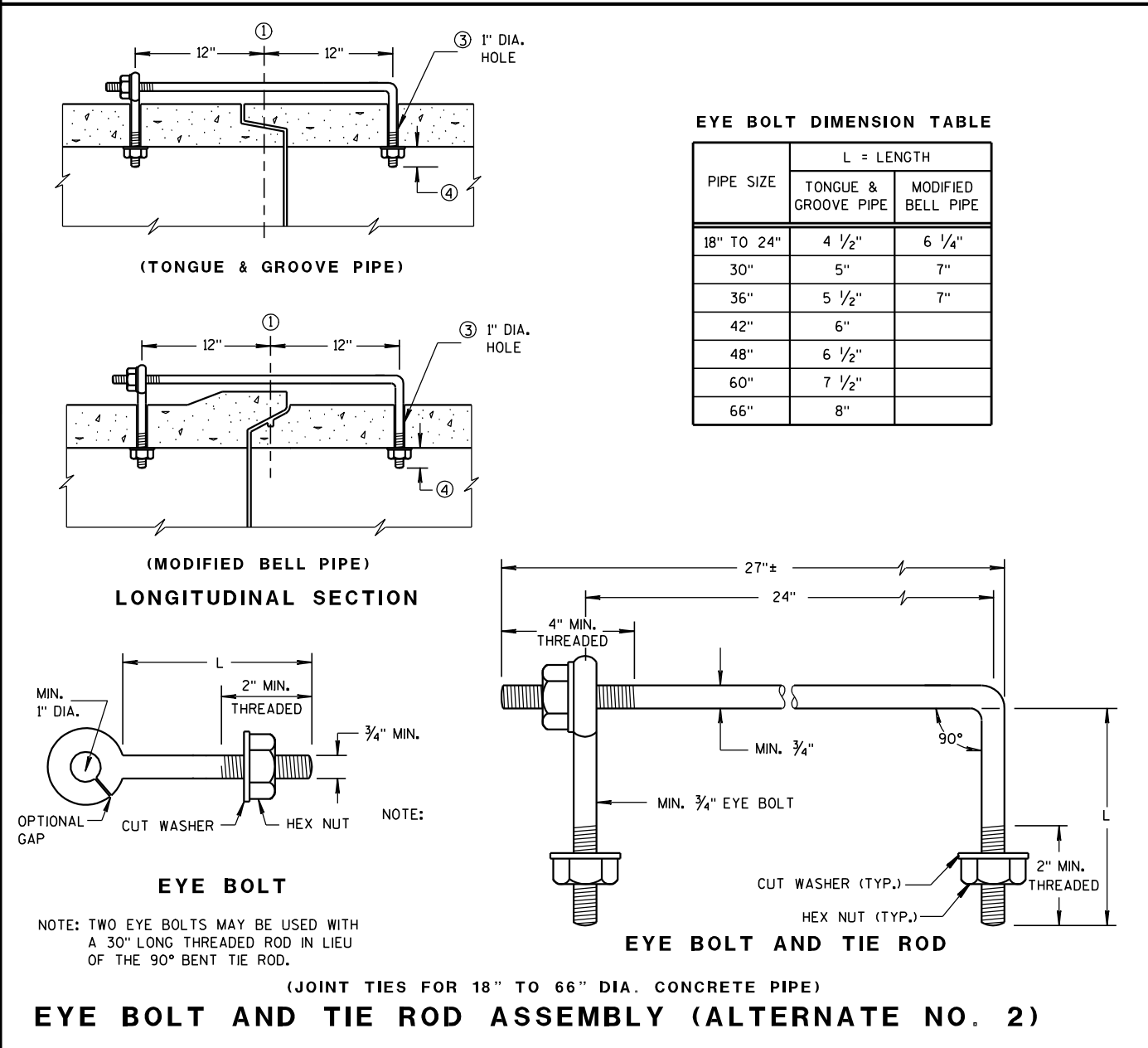
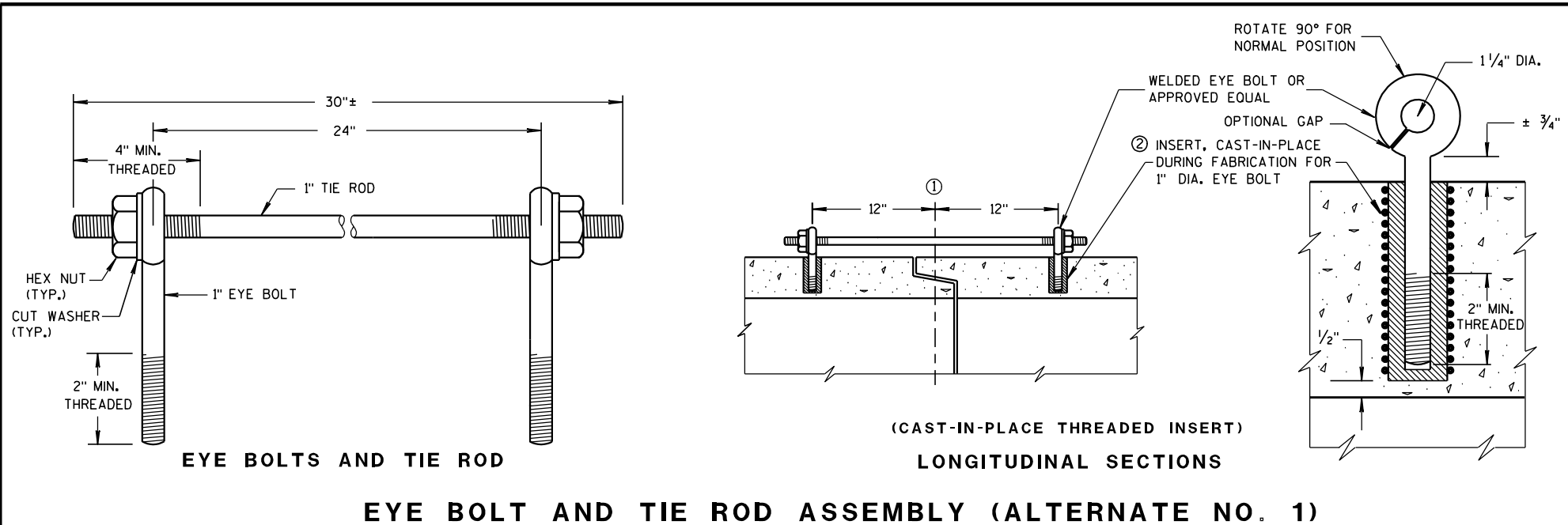
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

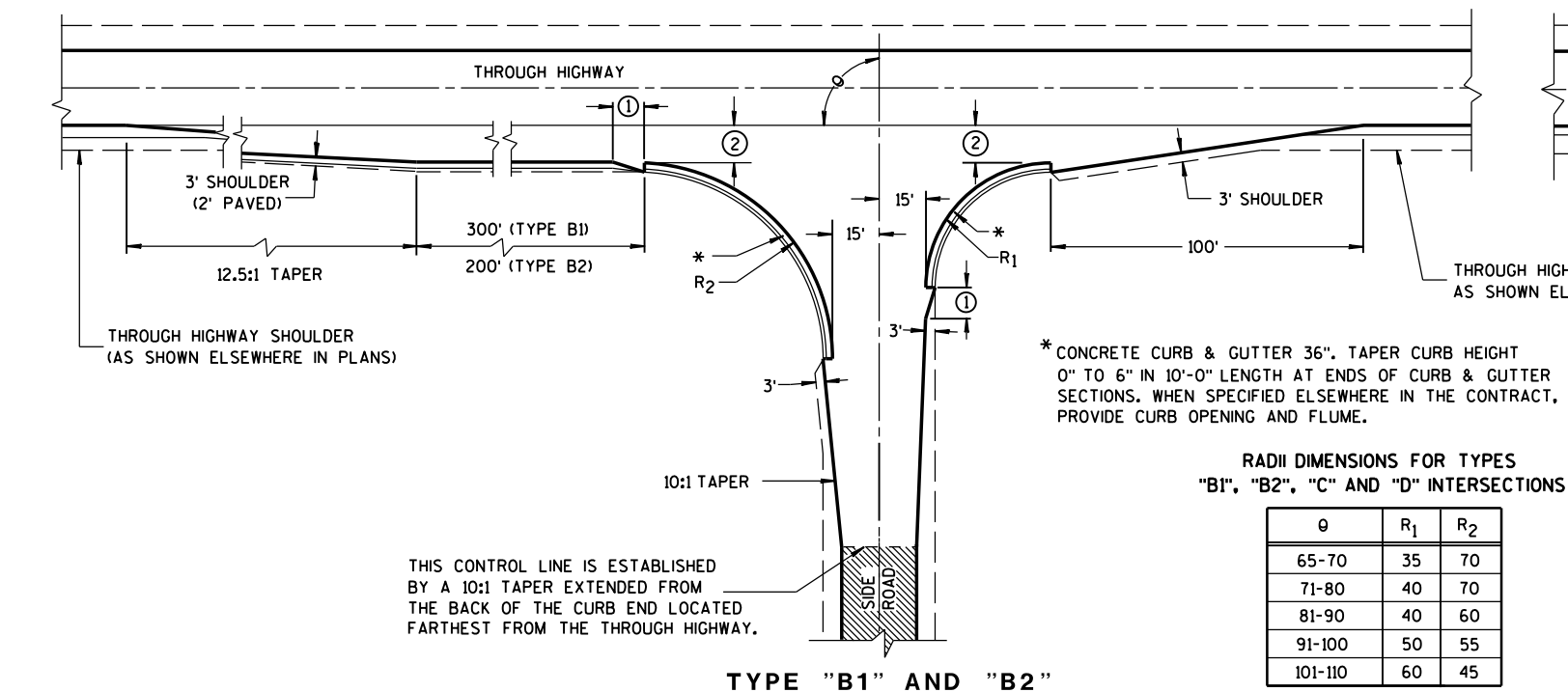


- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> <u>DATE</u>	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER





GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

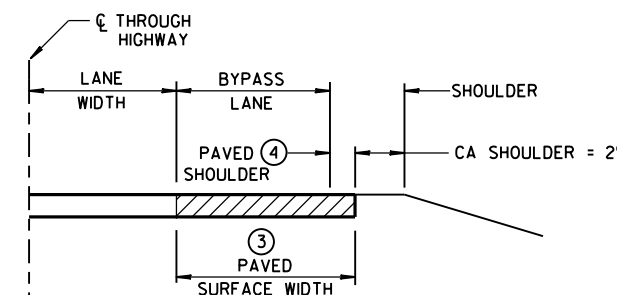
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

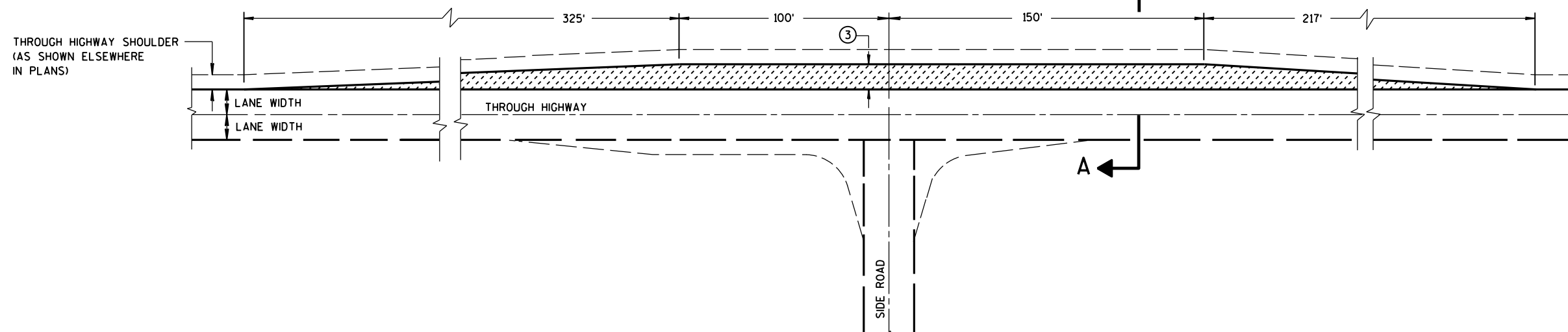
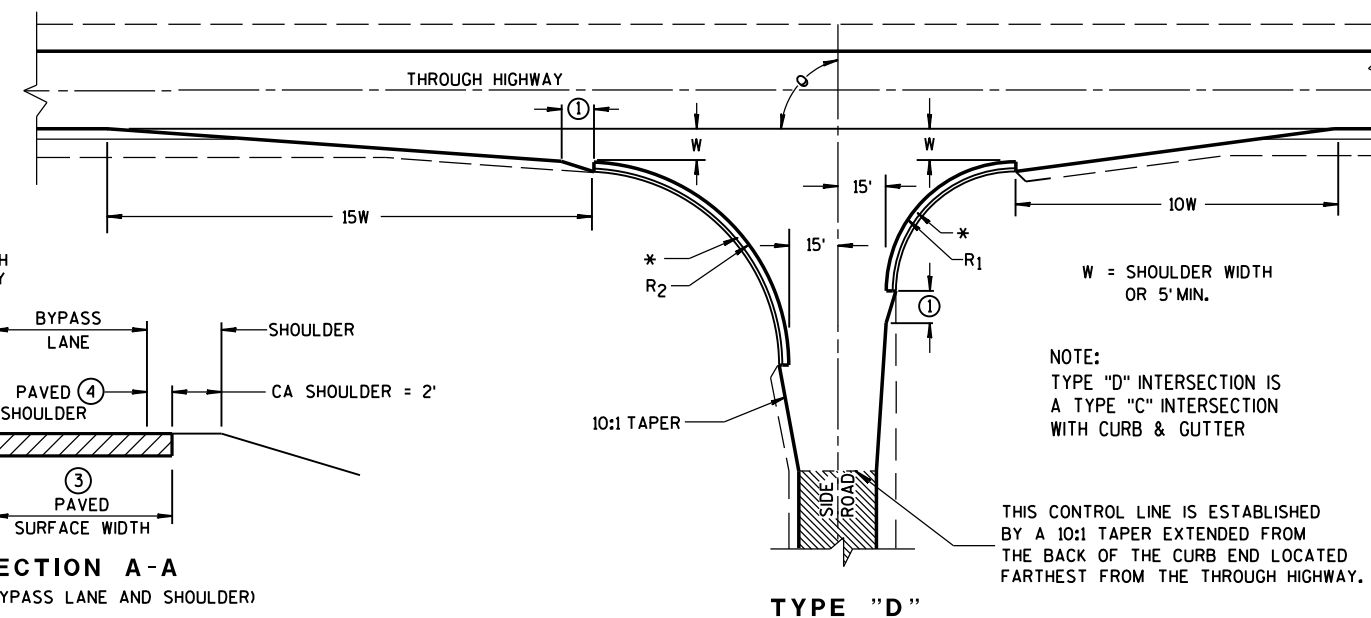
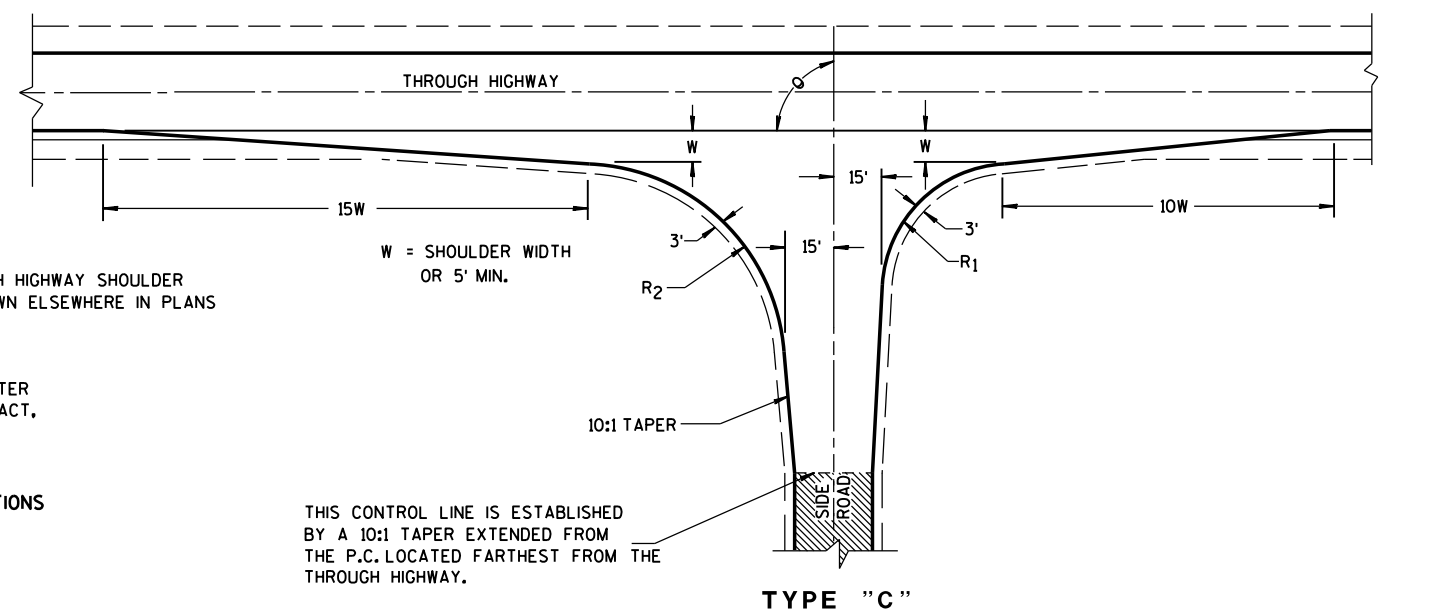
EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



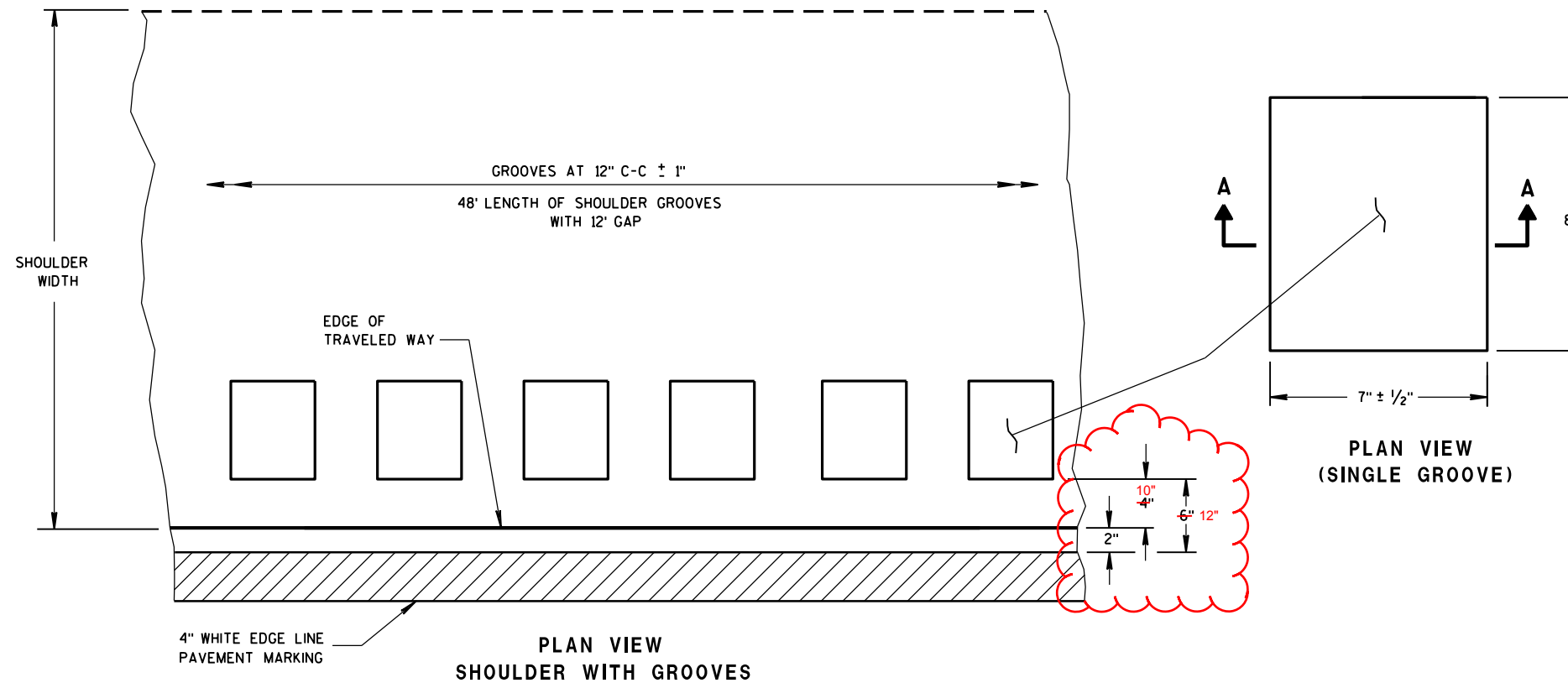
SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

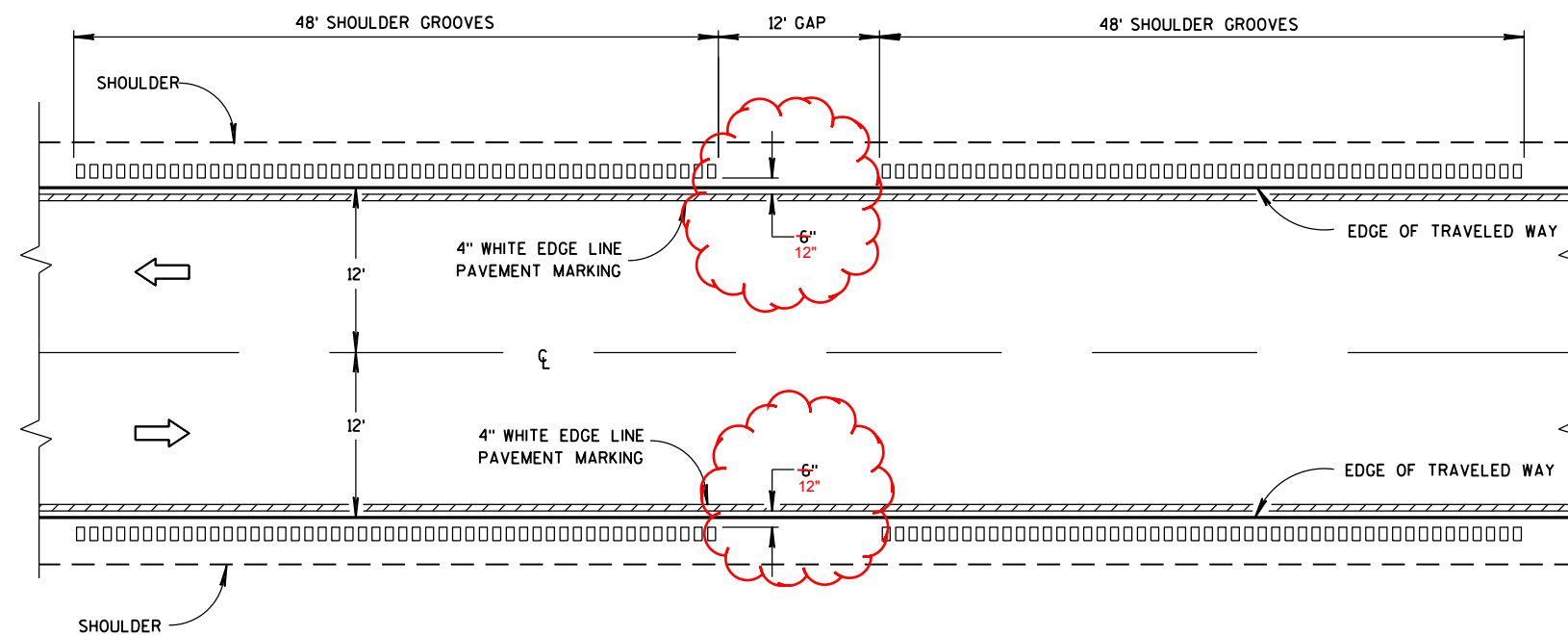
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

6

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



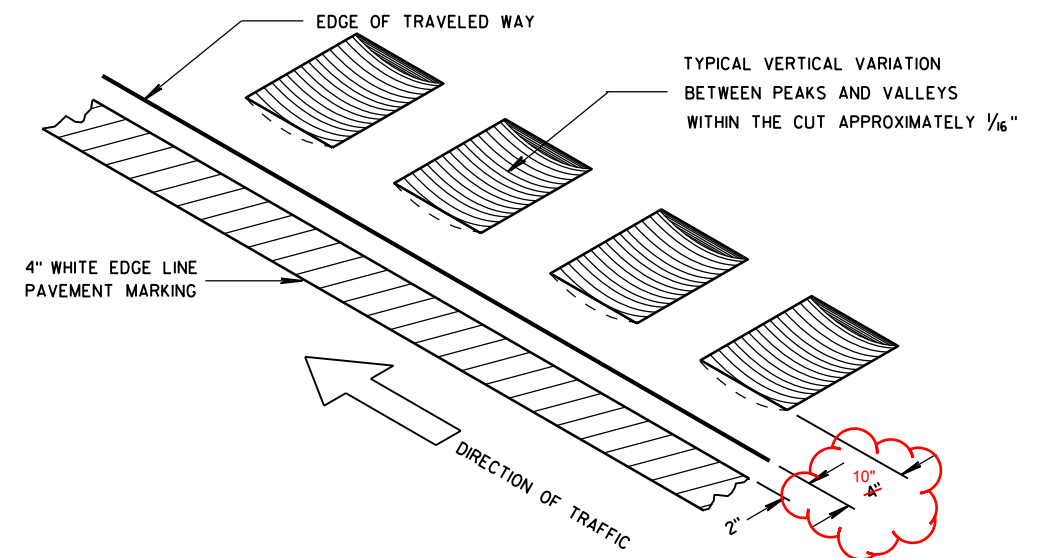
TYPE 1
2-LANE SHOULDER RUMBLE STRIP

GENERAL NOTES

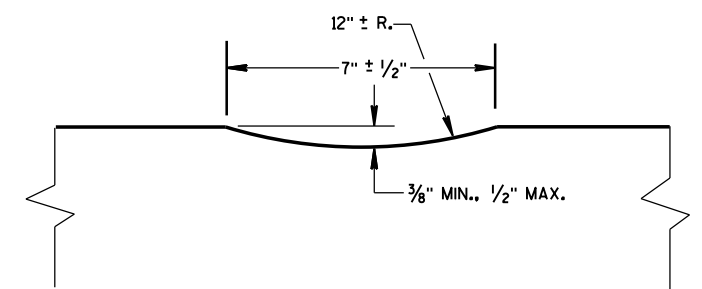
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



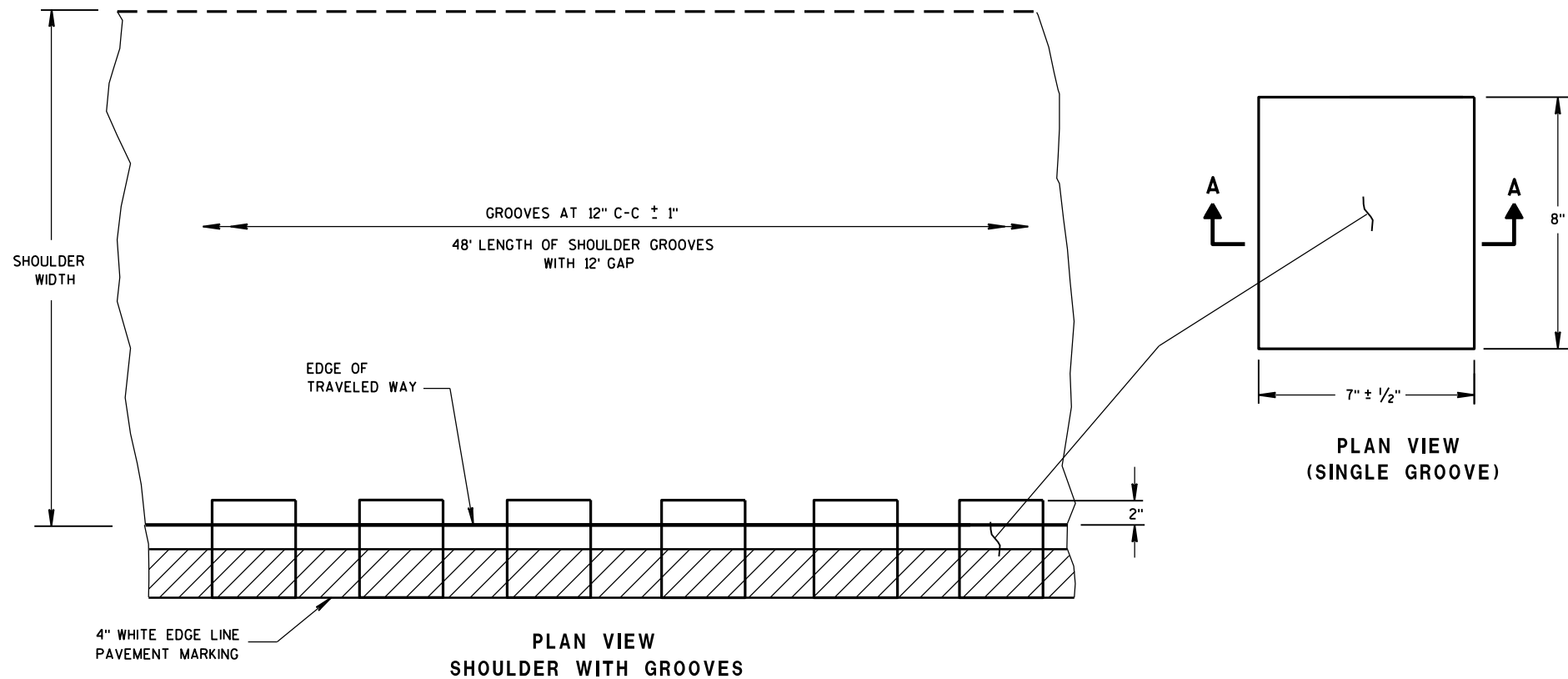
ISOMETRIC



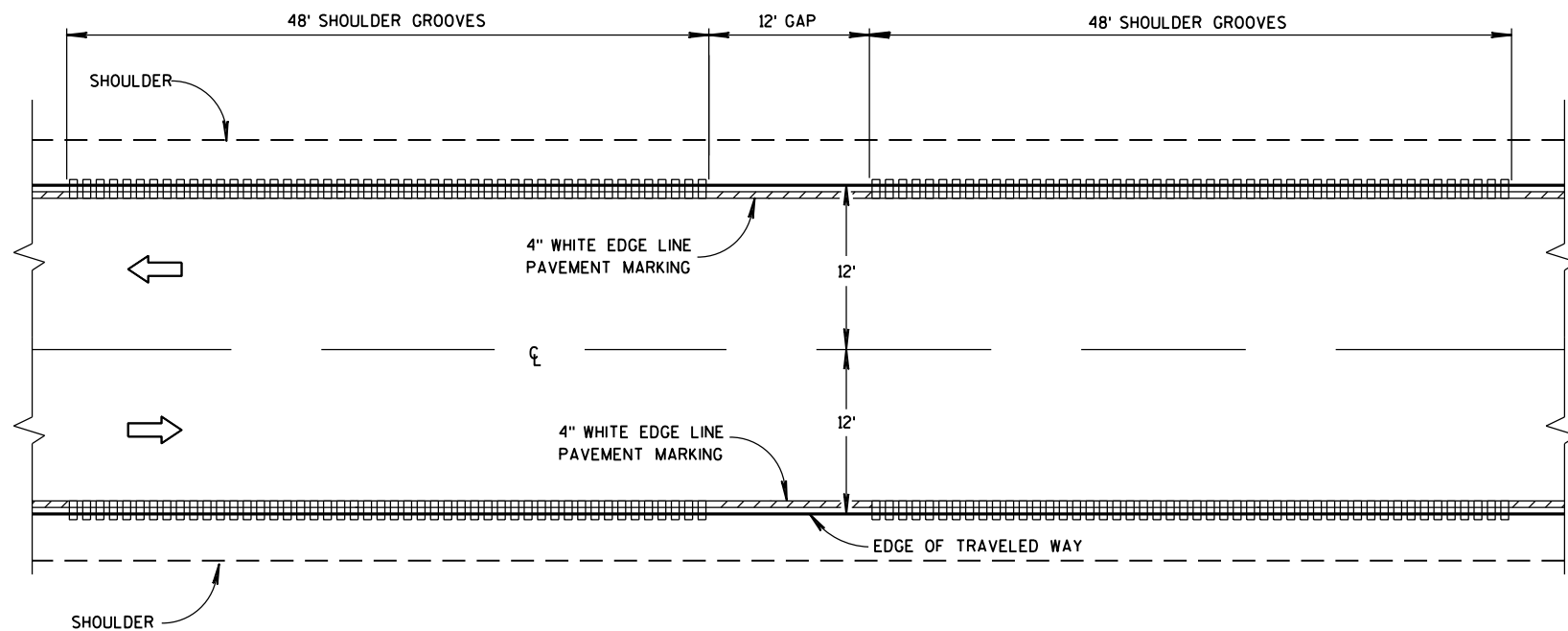
SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6
6
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

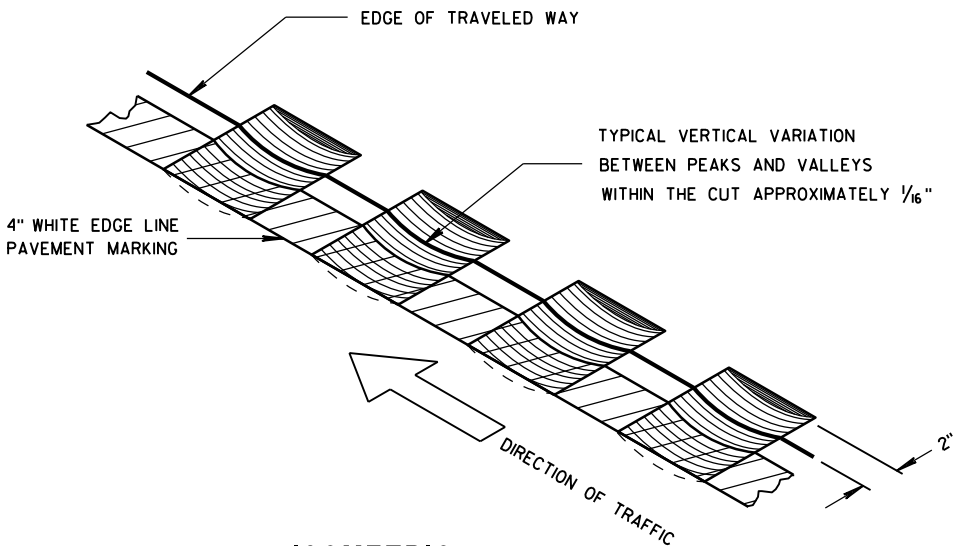


TYPE 2
2-LANE SHOULDER RUMBLE STRIP

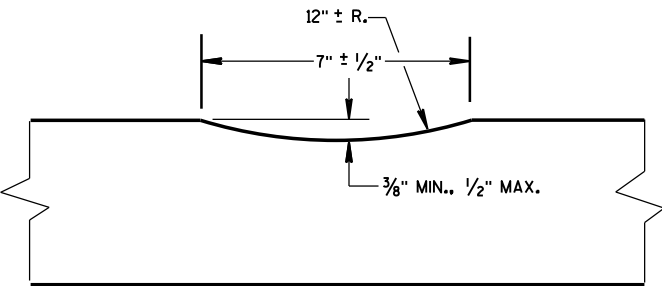
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



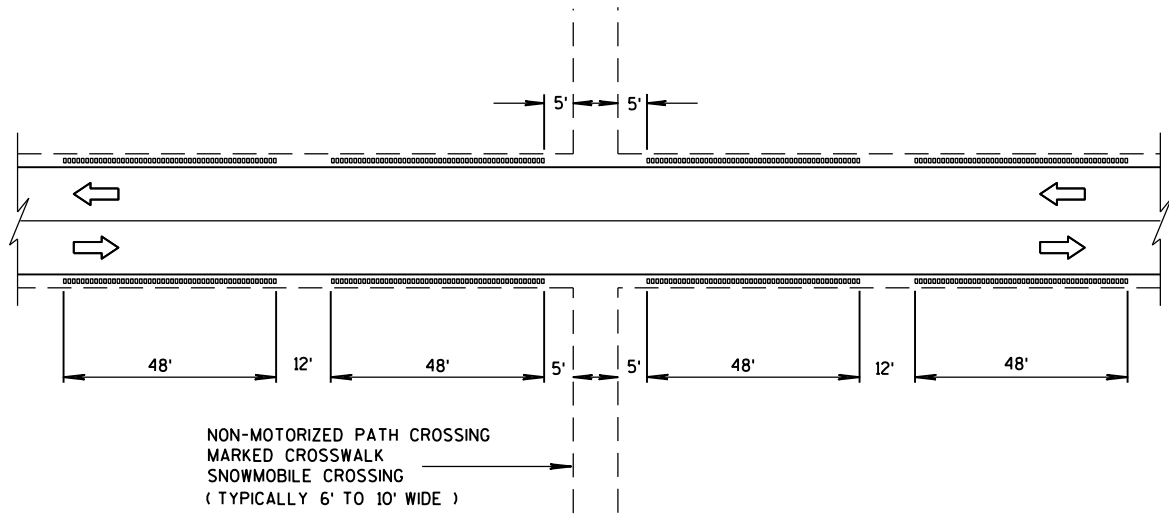
ISOMETRIC



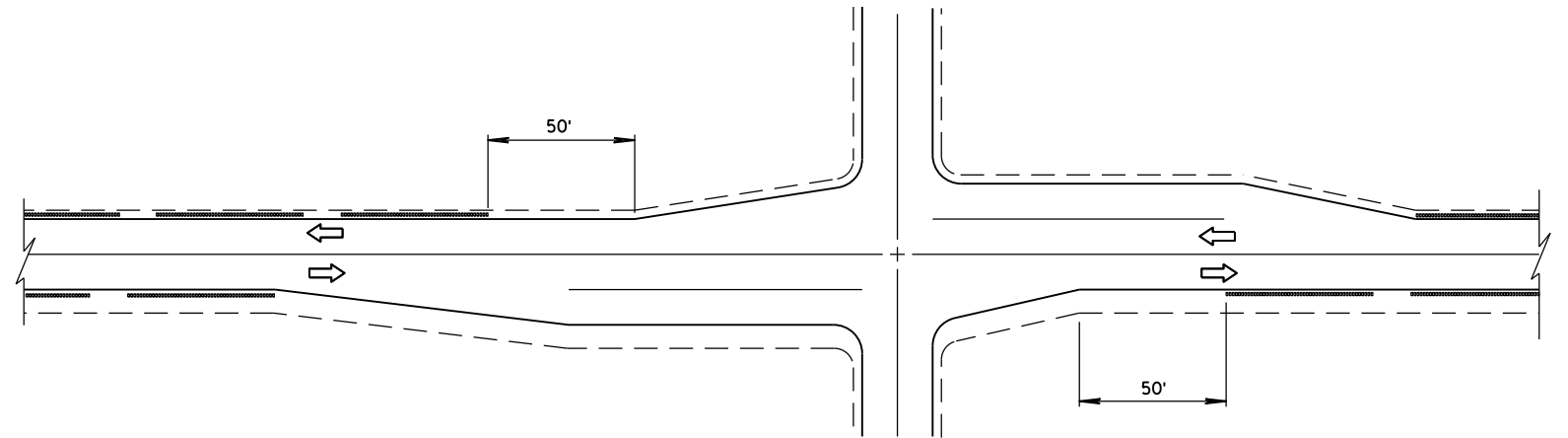
SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

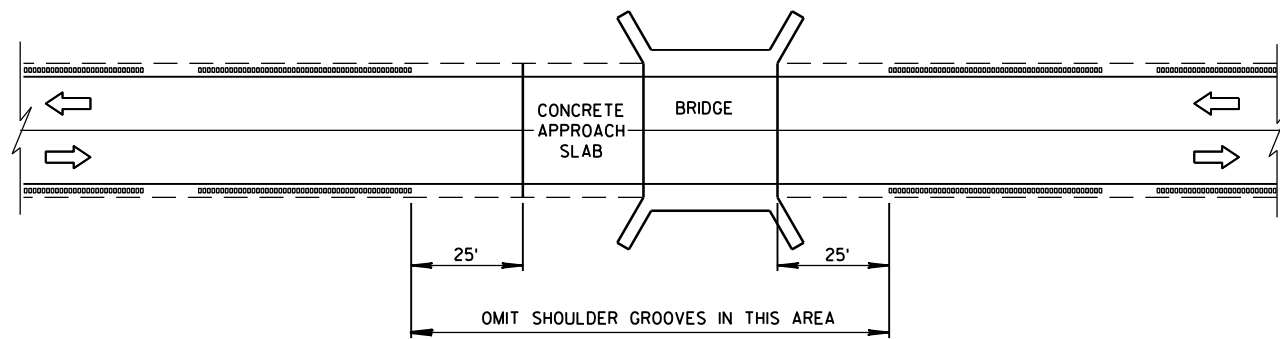
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



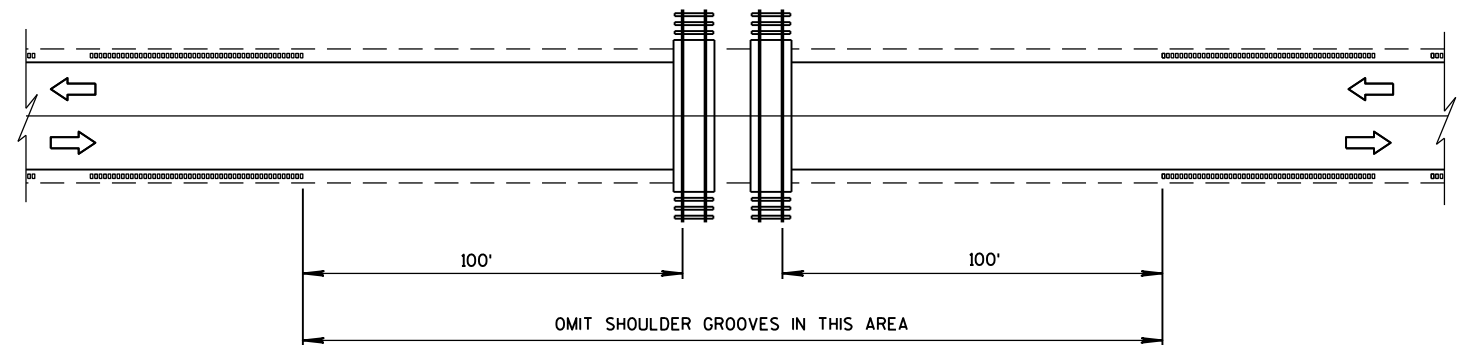
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



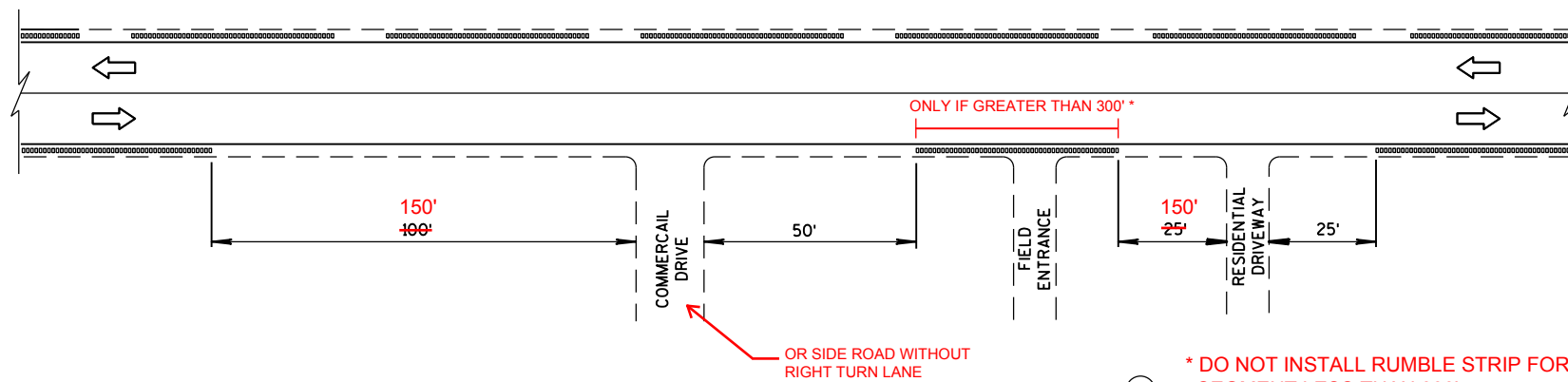
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS

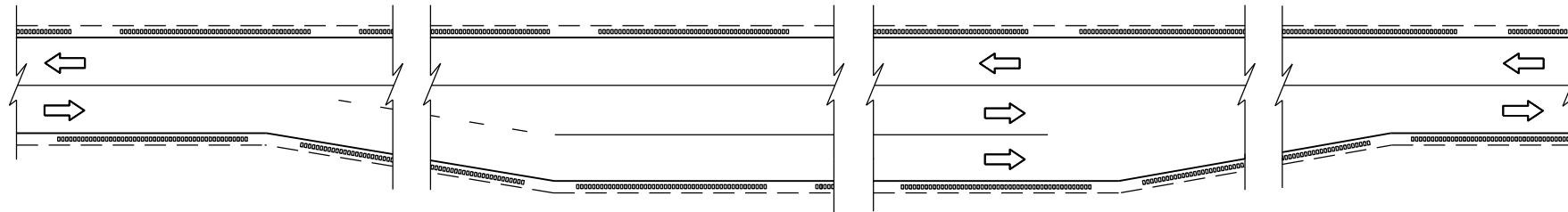


SHOULDER GROOVES AT DRIVEWAYS

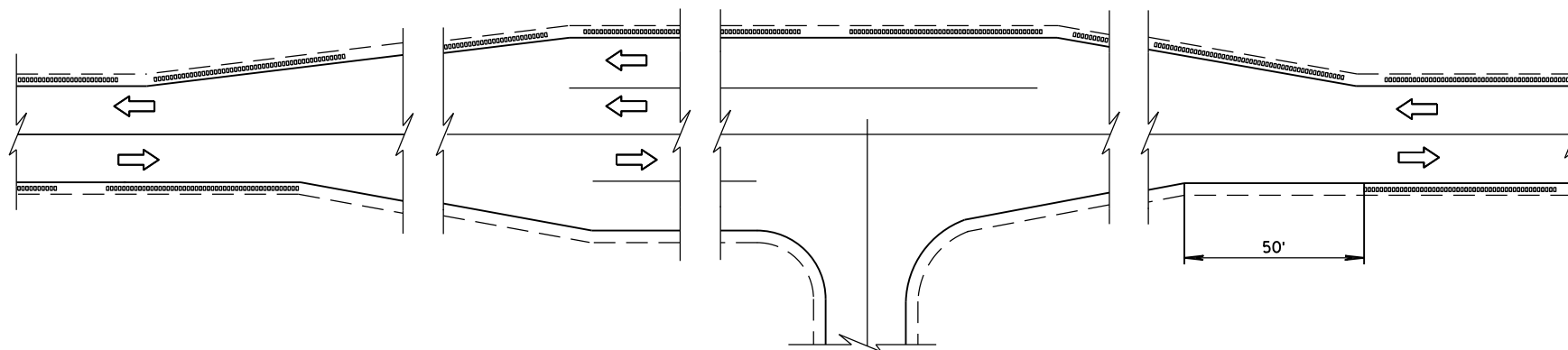
* DO NOT INSTALL RUMBLE STRIP FOR ANY SEGMENT LESS THAN 300'

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

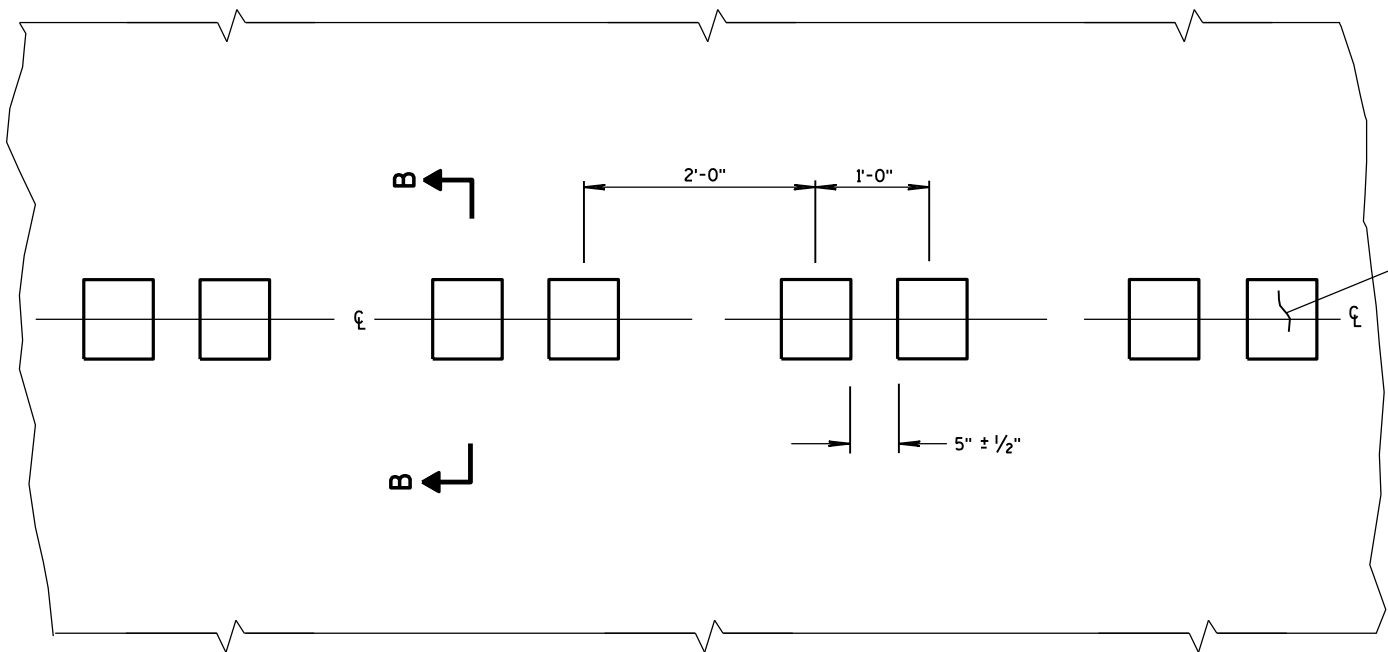
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

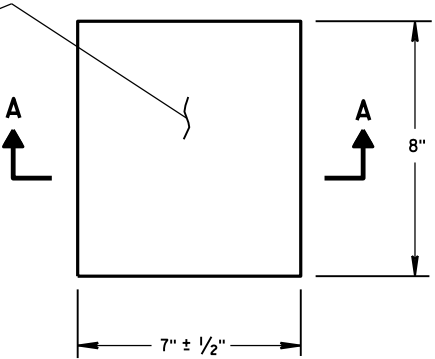
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

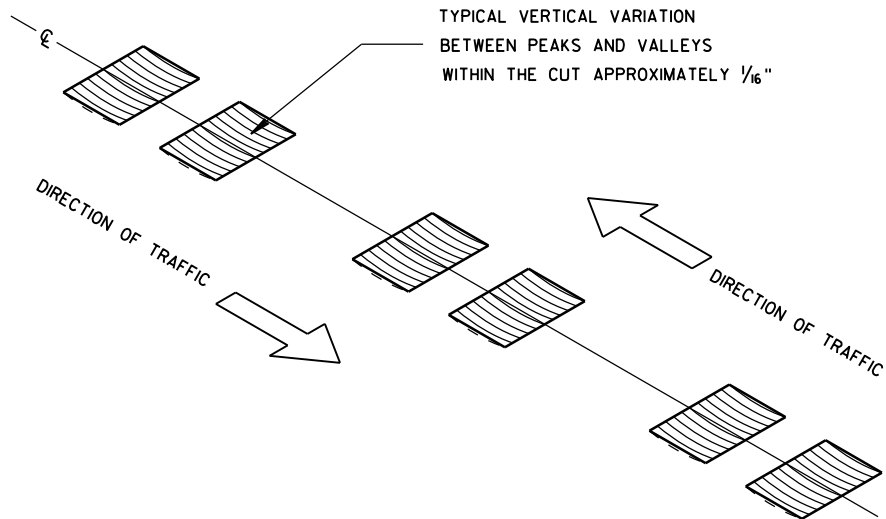
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



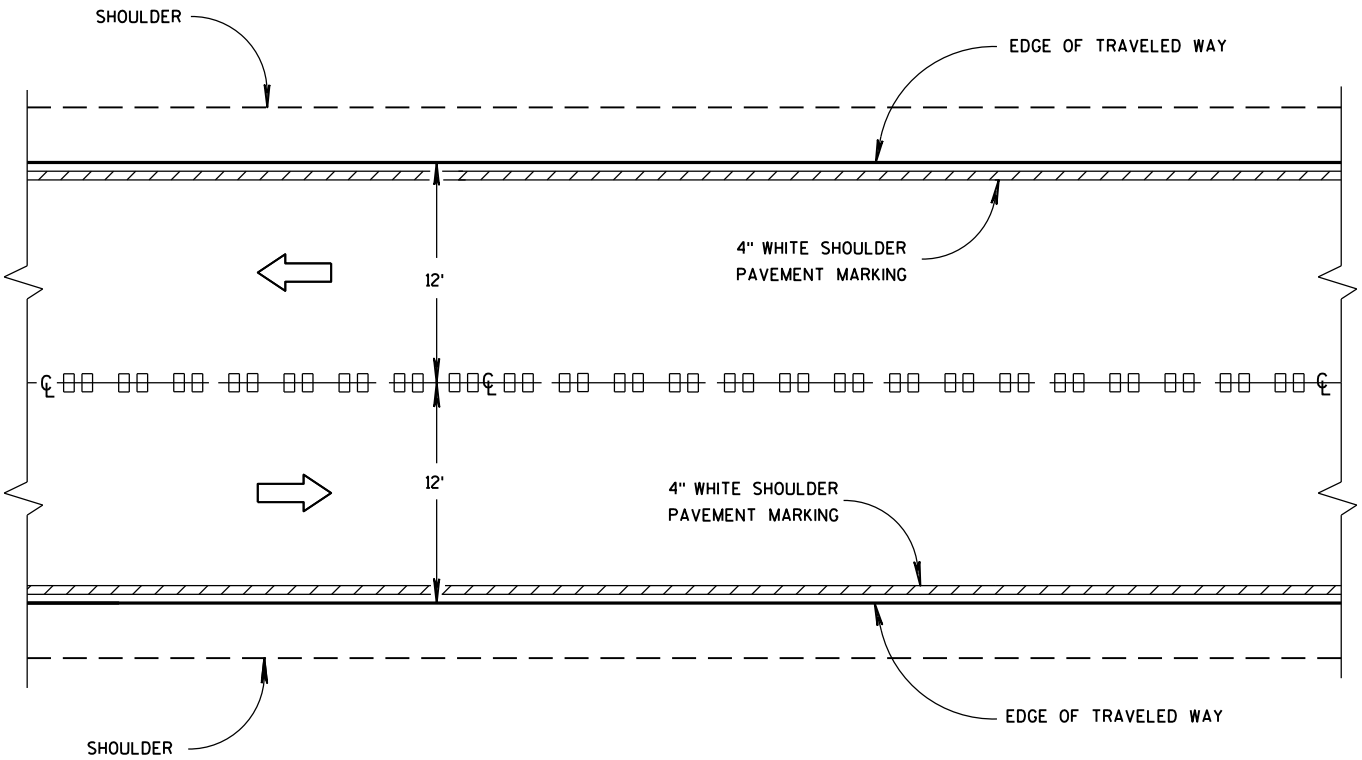
PLAN VIEW
CENTER LINE WITH GROOVES



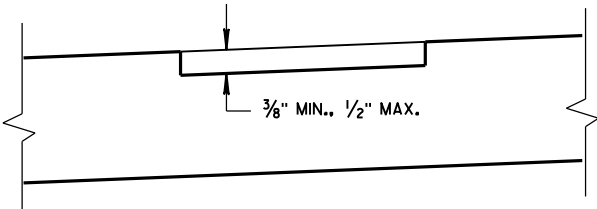
PLAN VIEW
(SINGLE GROOVE)



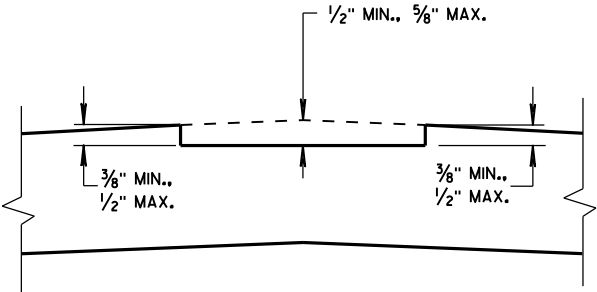
ISOMETRIC



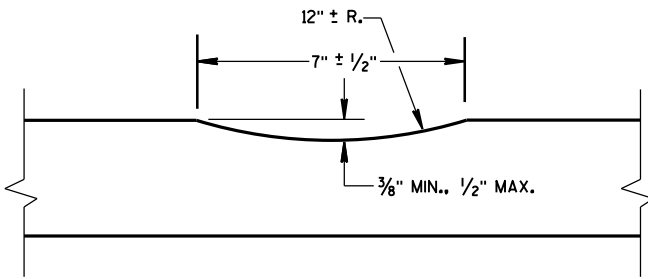
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



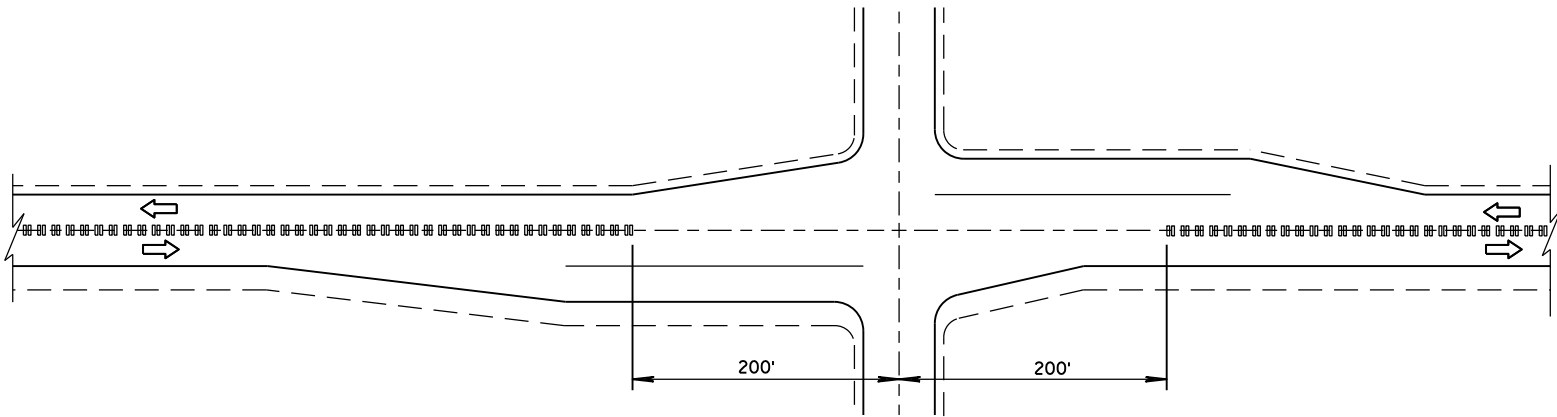
SECTION B-B
CROWNED ROADWAY



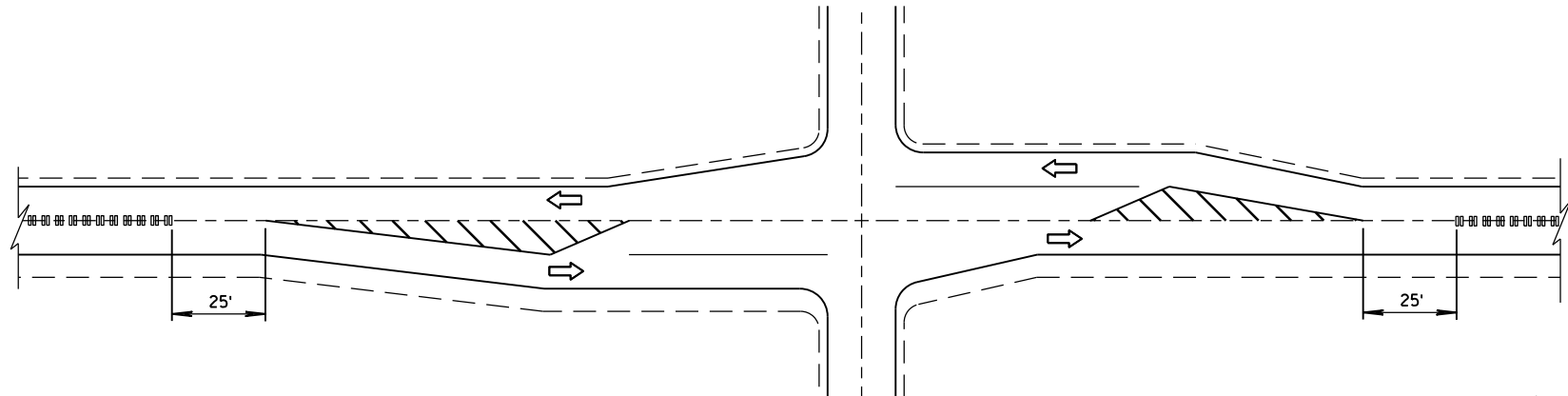
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

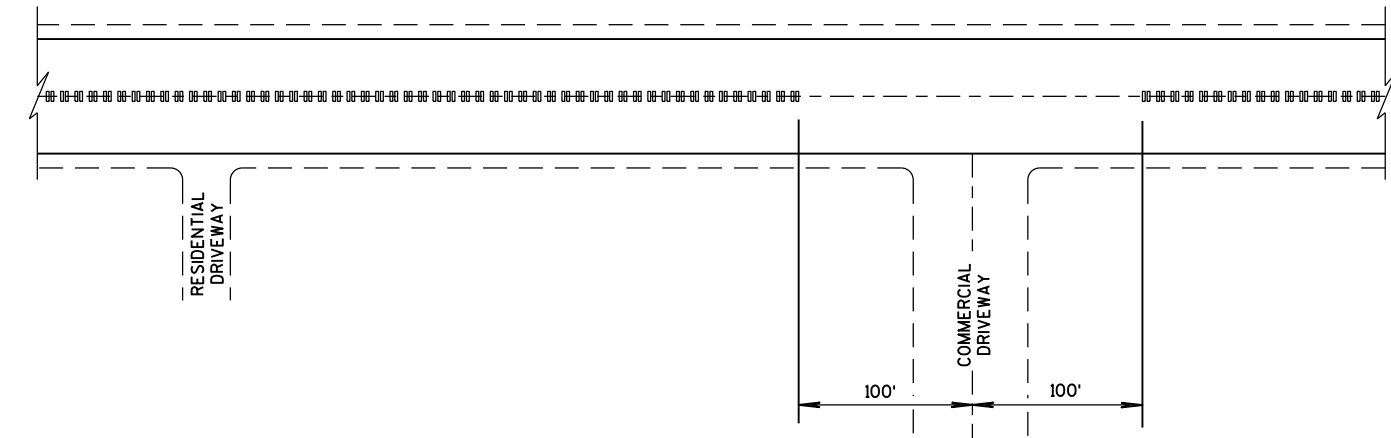
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

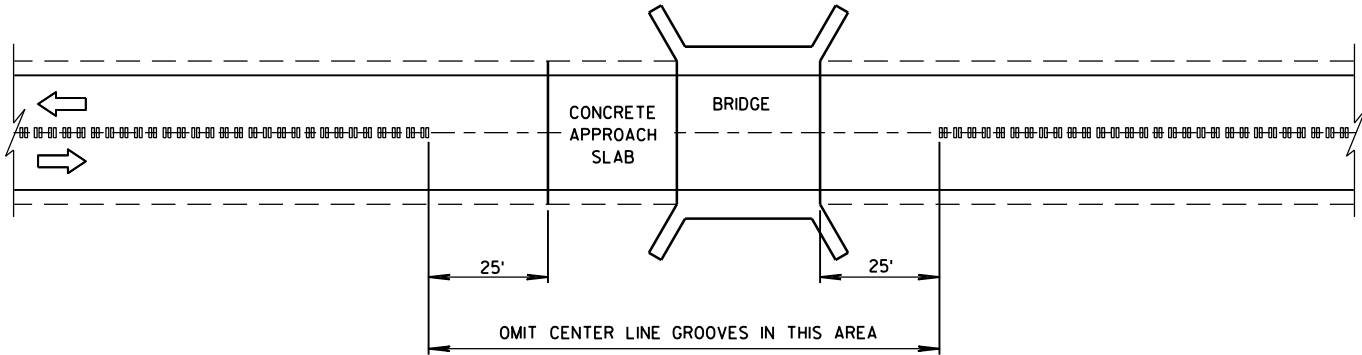


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

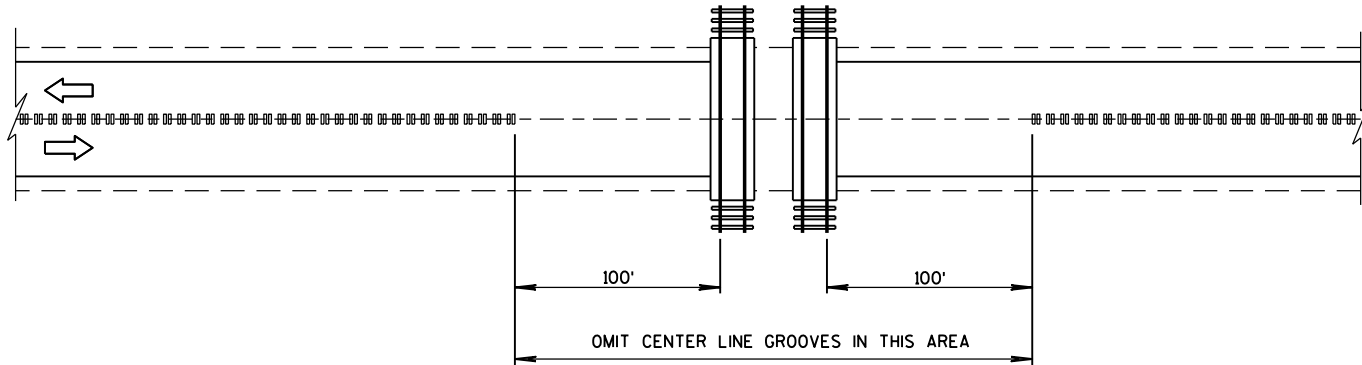


CENTER LINE GROOVES AT DRIVEWAYS^①

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

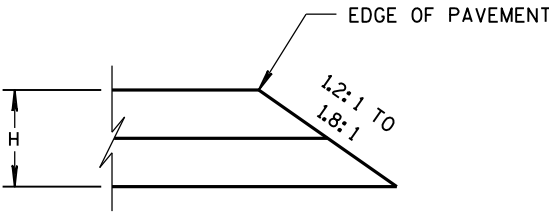


CENTER LINE GROOVES AT BRIDGES

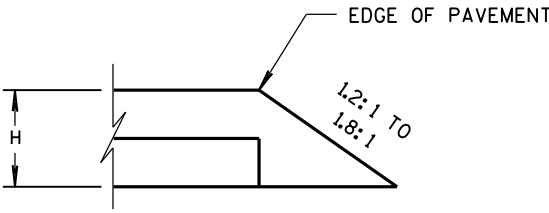


CENTER LINE GROOVES AT RAILROADS

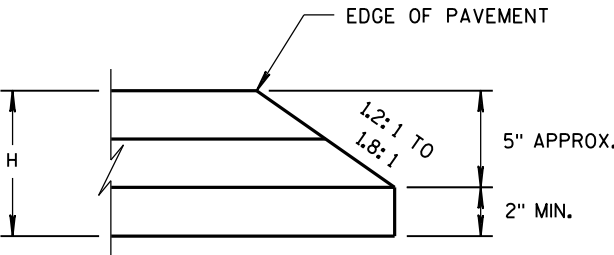
2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 5/15/2013 FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER



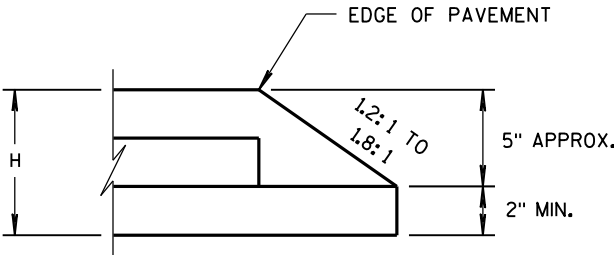
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

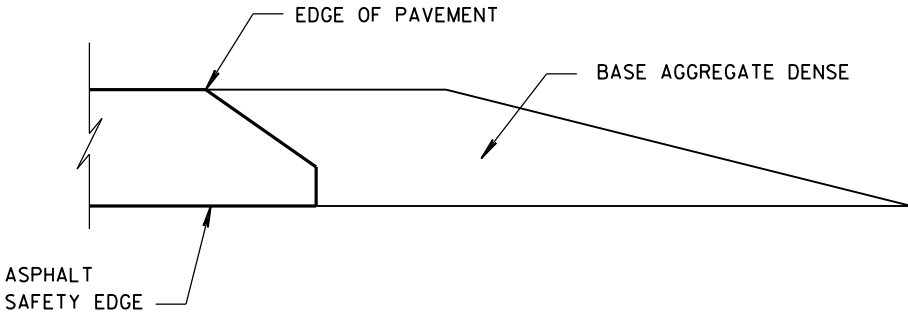


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

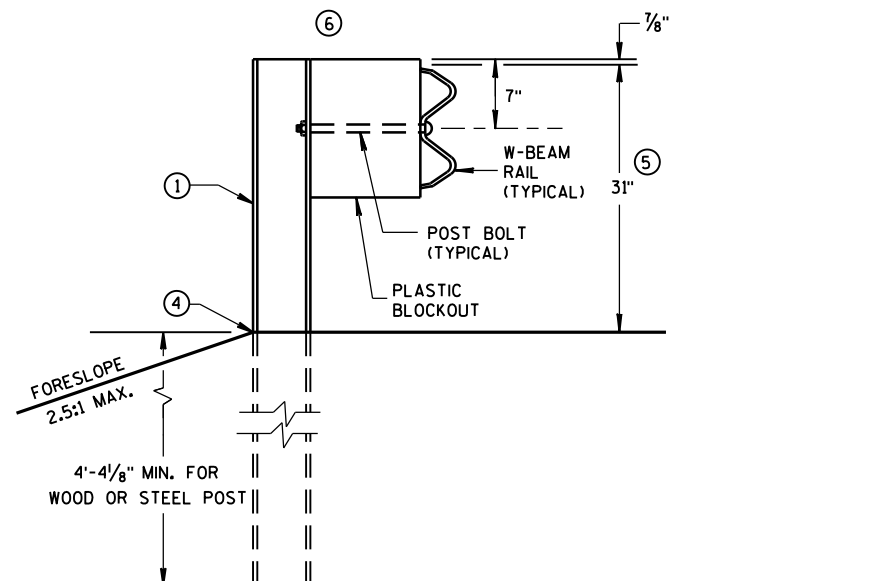
SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

6

- S.D.D. 14 B 42-3a**

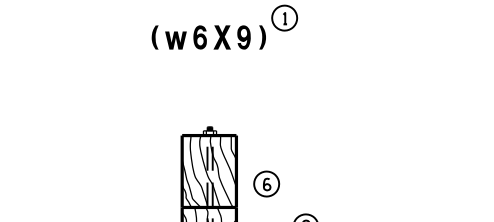


S.D.D. 14 B 42-3a

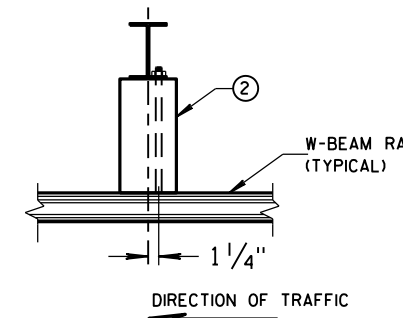


END VIEW

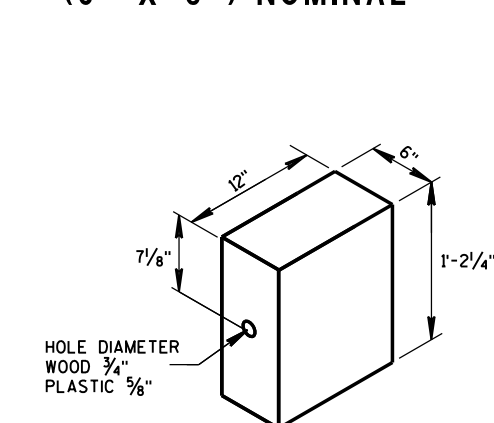
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



**PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM**



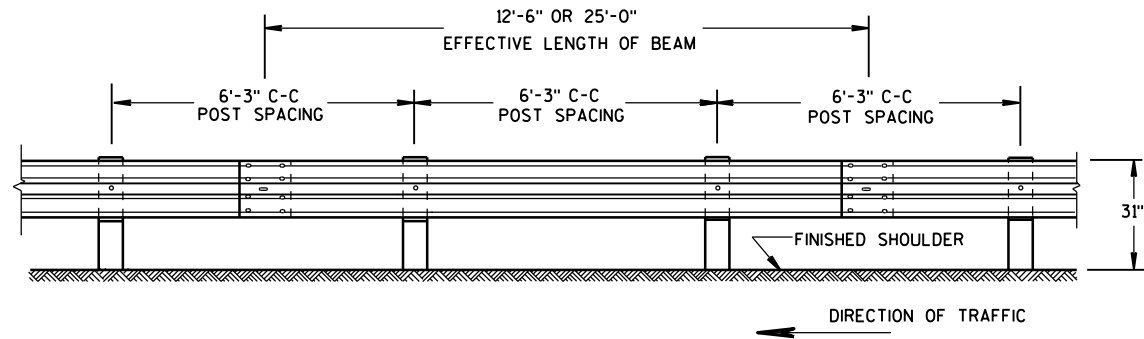
PLAN VIEW
STEEL POST,
ASTIC BLOCKOUT & BEAM



**WOOD OR
PLASTIC BLOCKOUT** ②

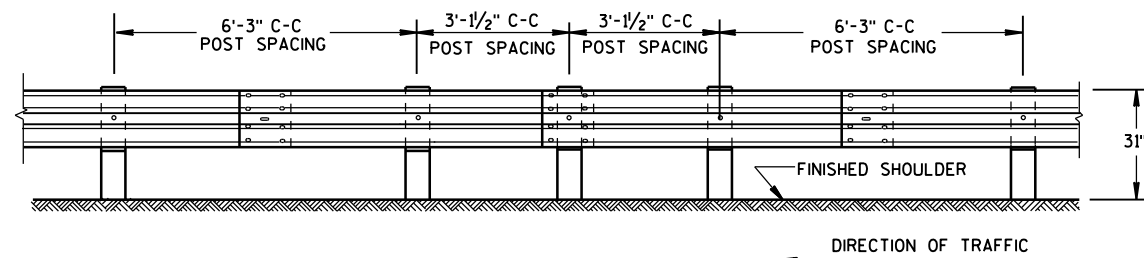
**MIDWEST GUARDRAIL
(MGS) GUARDRAIL**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**



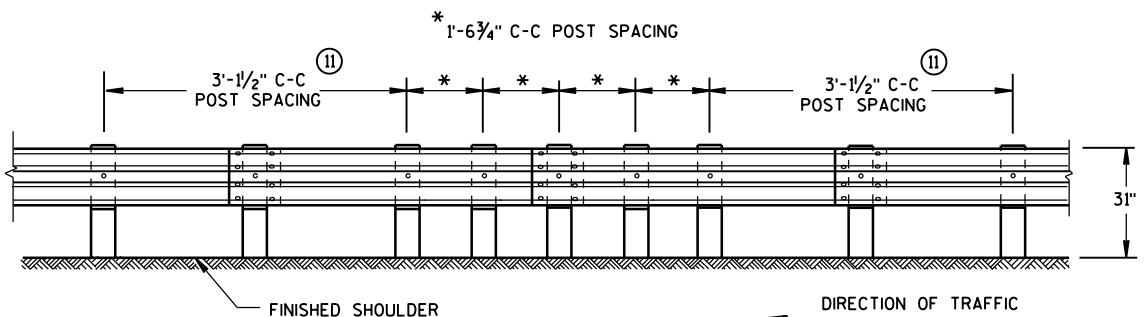
FRONT VIEW

POST SPACING STANDARD INSTALLATION



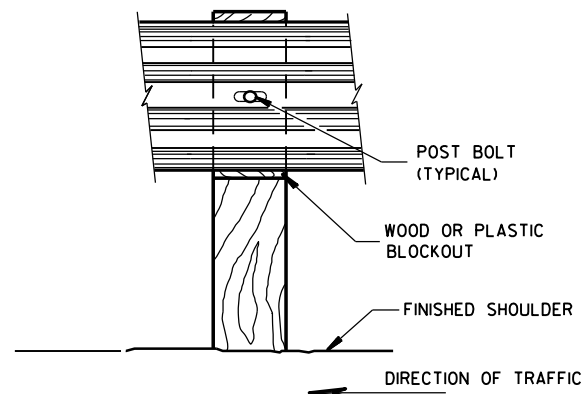
FRONT VIEW

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

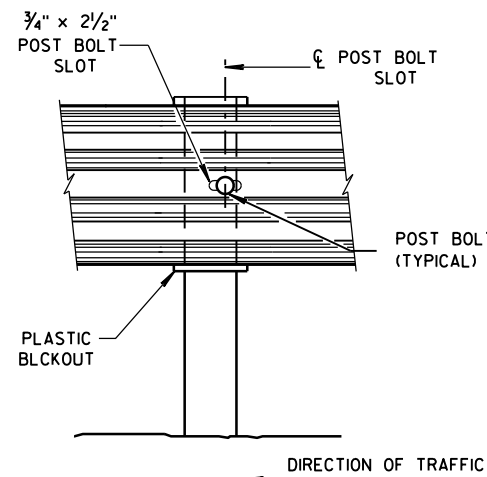


FRONT VIEW

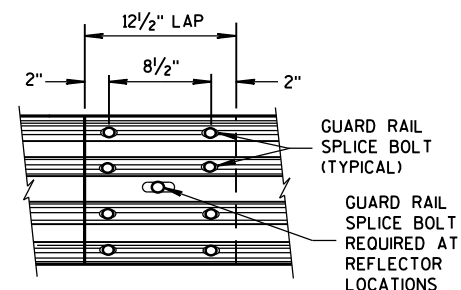
QUARTER POST SPACING (QS)



FRONT VIEW AT WOOD POST

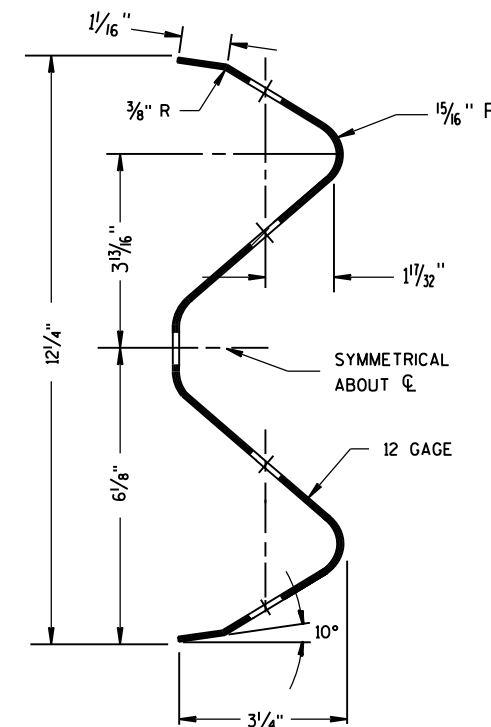


FRONT VIEW AT STEEL POST

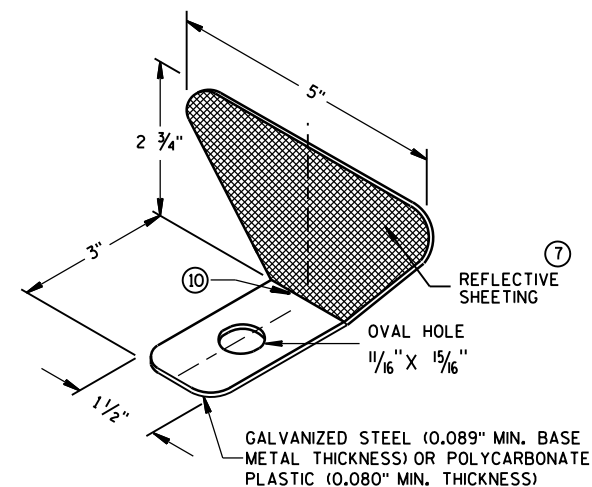
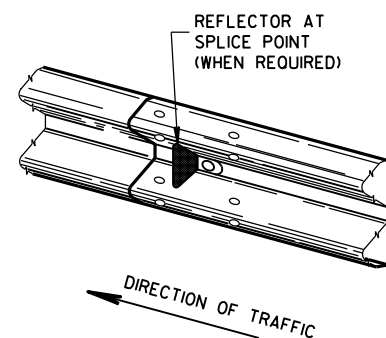


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

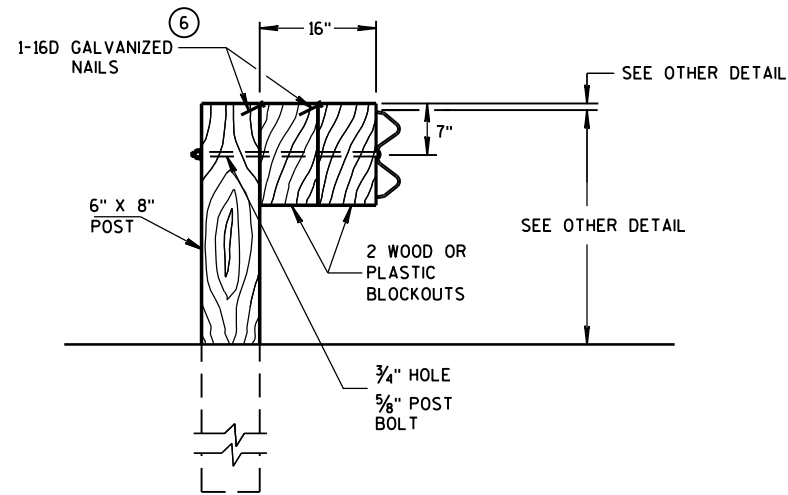
GENERAL NOTES

- 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 $90^\circ \pm 1^\circ$ 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 $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " 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 ^⑩	3
	> 200'	100' C-C	2	

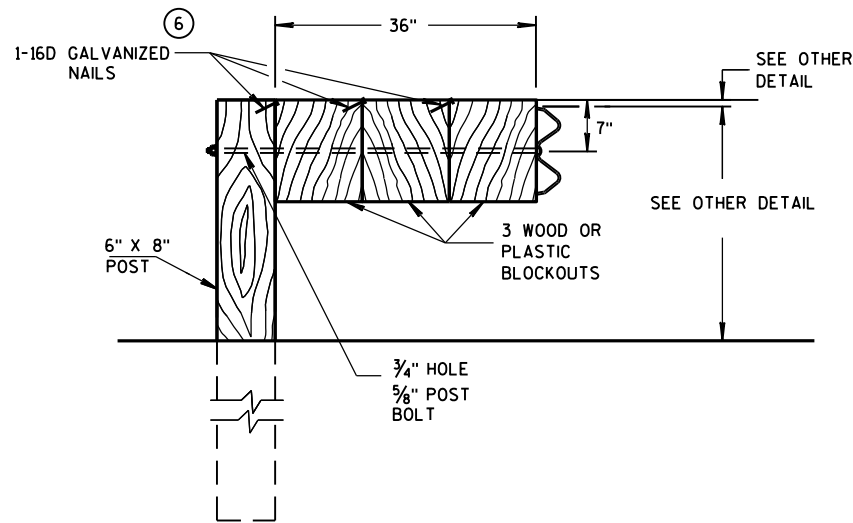
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

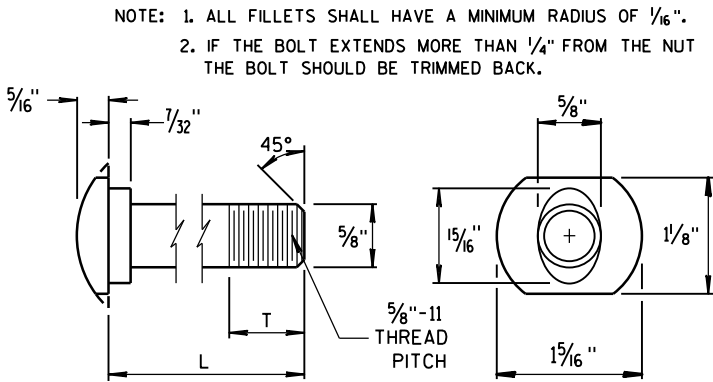
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

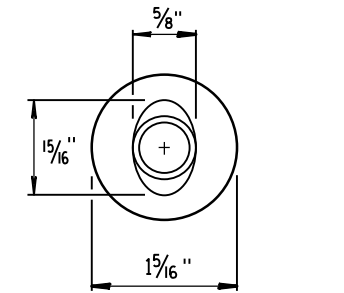
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

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.

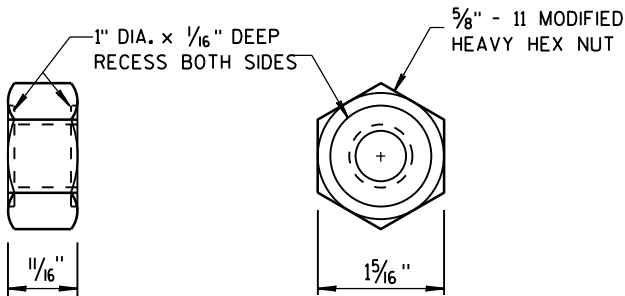


POST BOLT TABLE

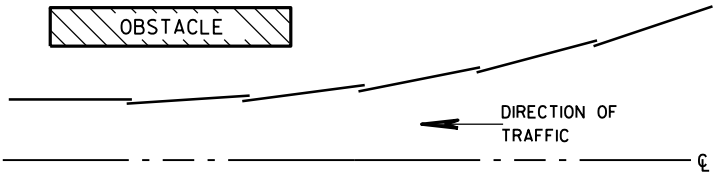
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



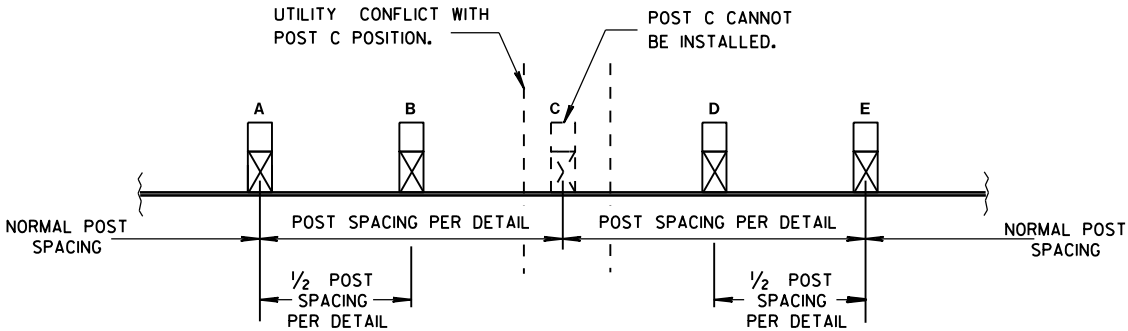
ALTERNATE BOLT HEAD



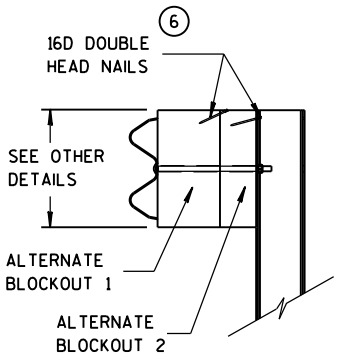
POST BOLT
AND RECESS NUT



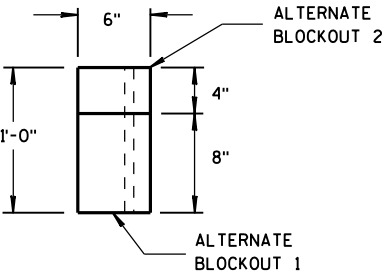
PLAN VIEW
BEAM LAPPING DETAIL



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 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

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.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" 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.

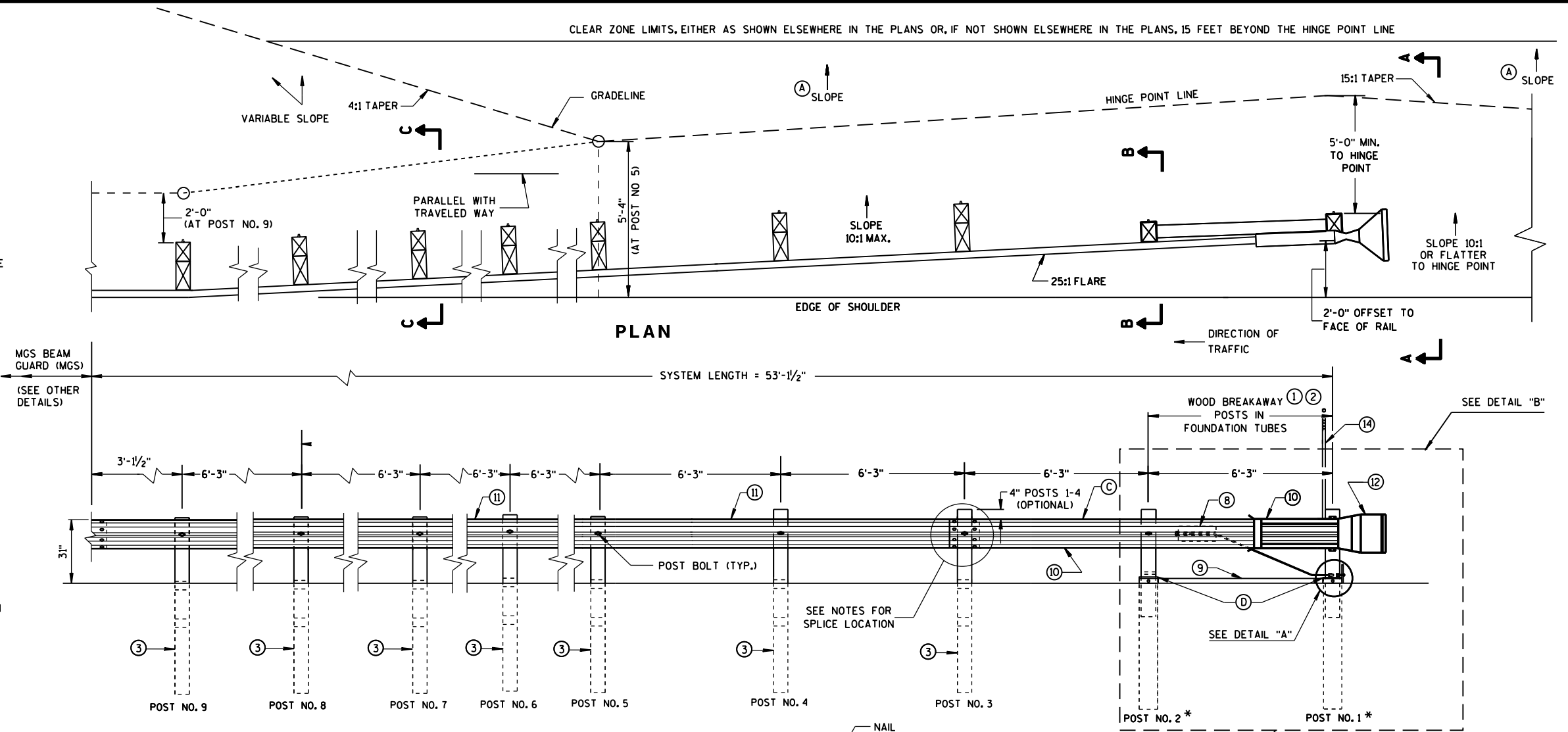
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

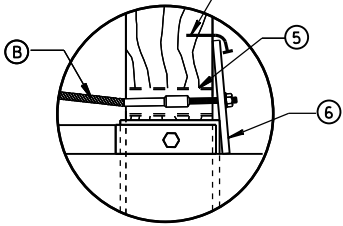
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

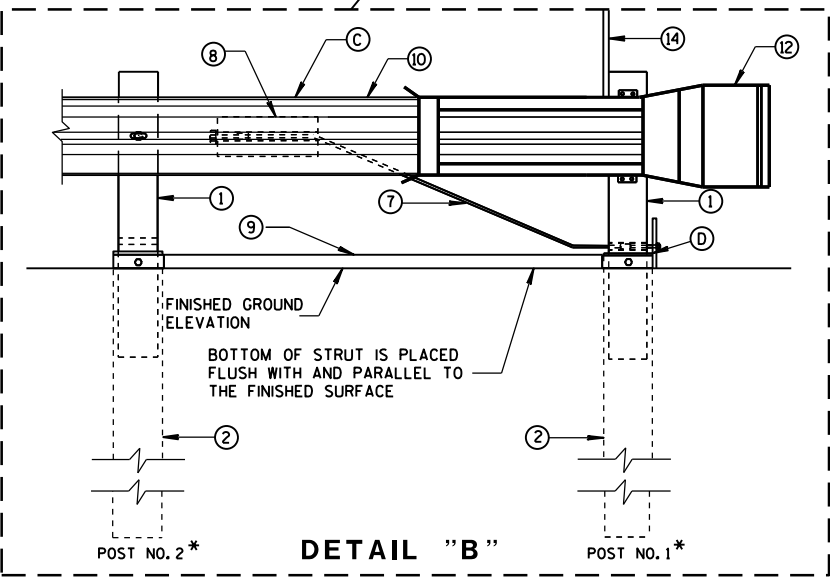
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



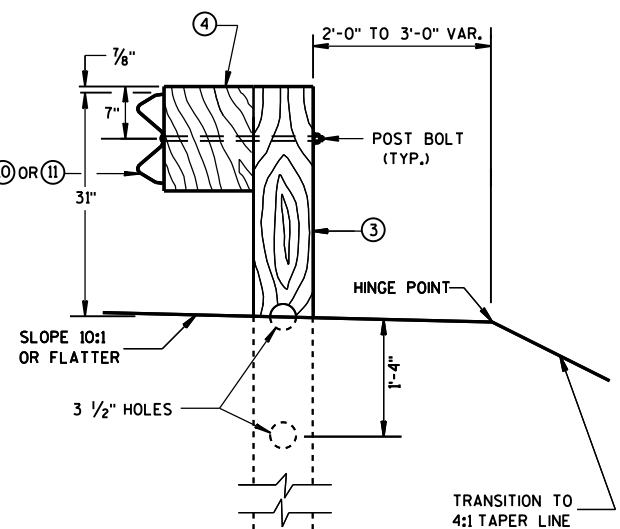
ELEVATION



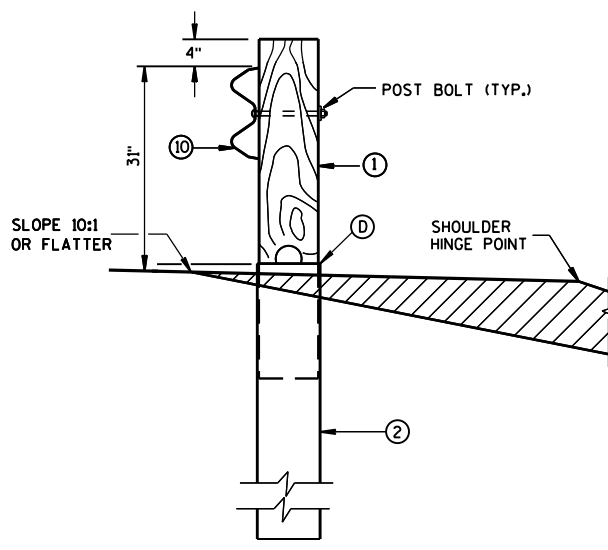
DETAIL "A"



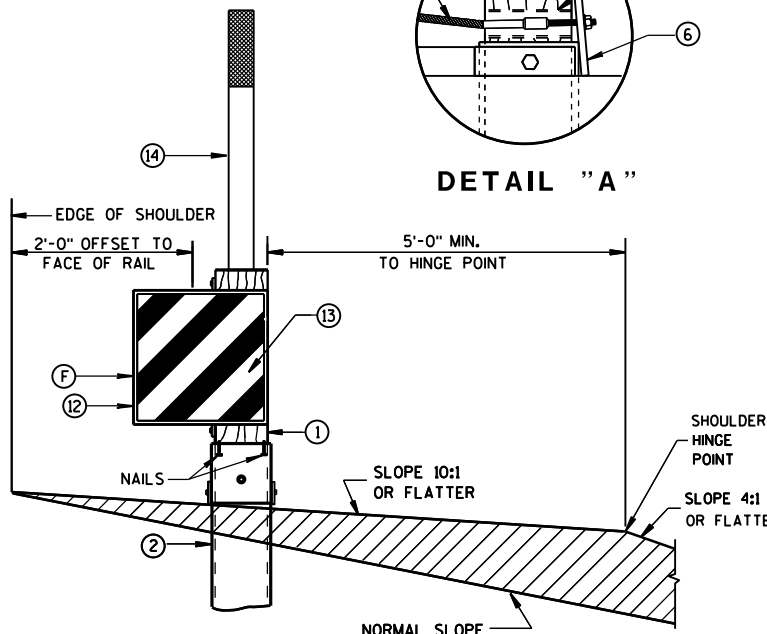
DETAIL "B"



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



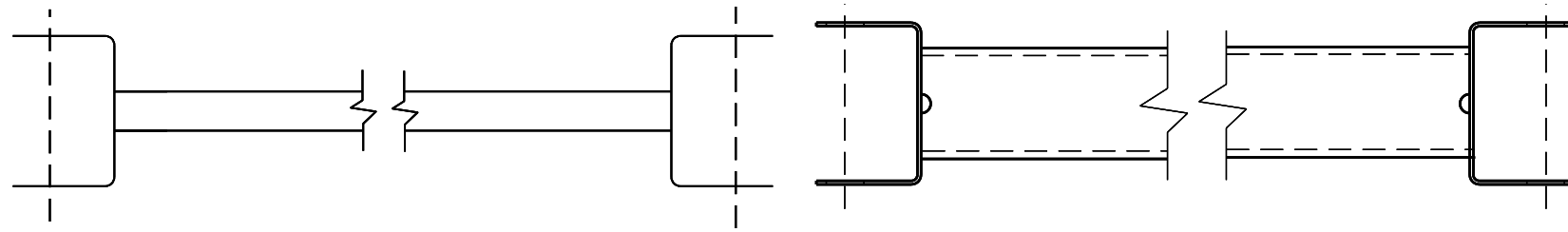
SECTION B-B
TYPICAL AT POST NO. 2*



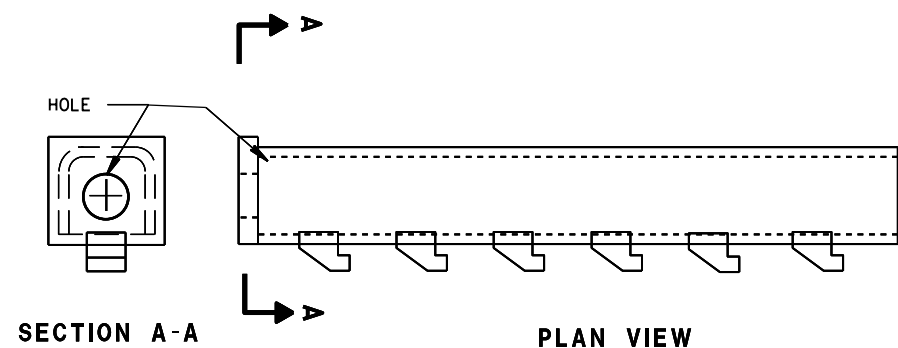
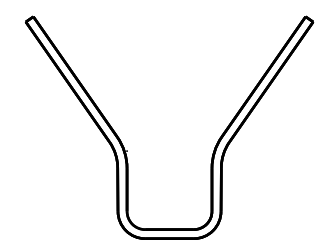
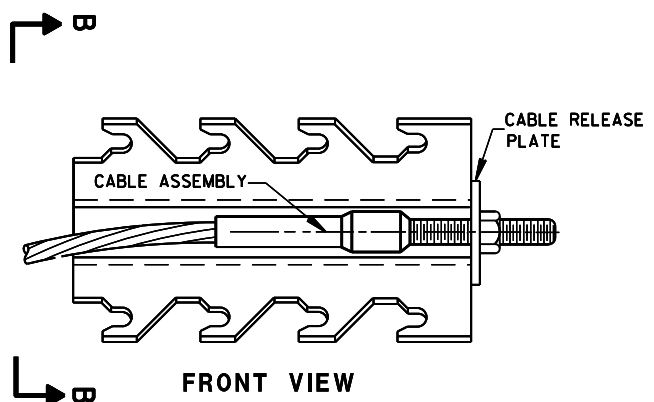
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



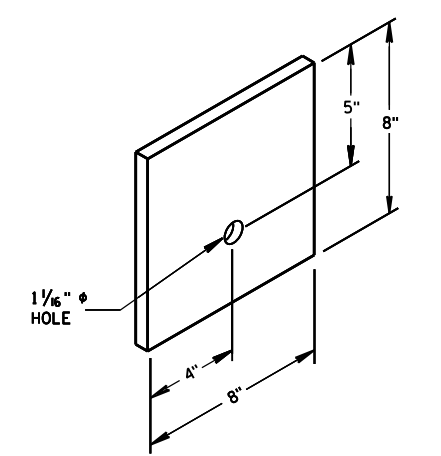
9 H
GENERIC GROUND STRUT



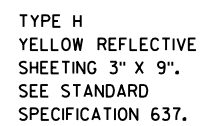
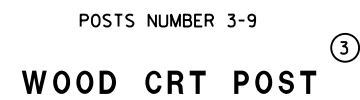
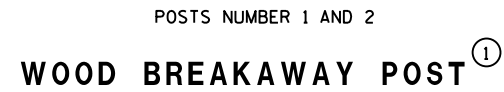
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

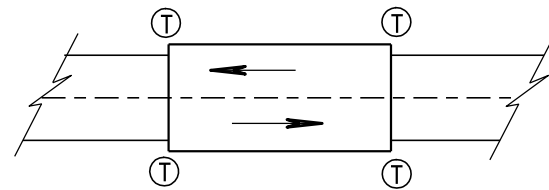
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND 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)



6
BEARING PLATE

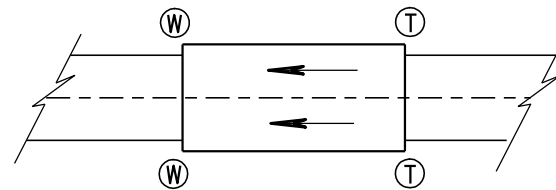


MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

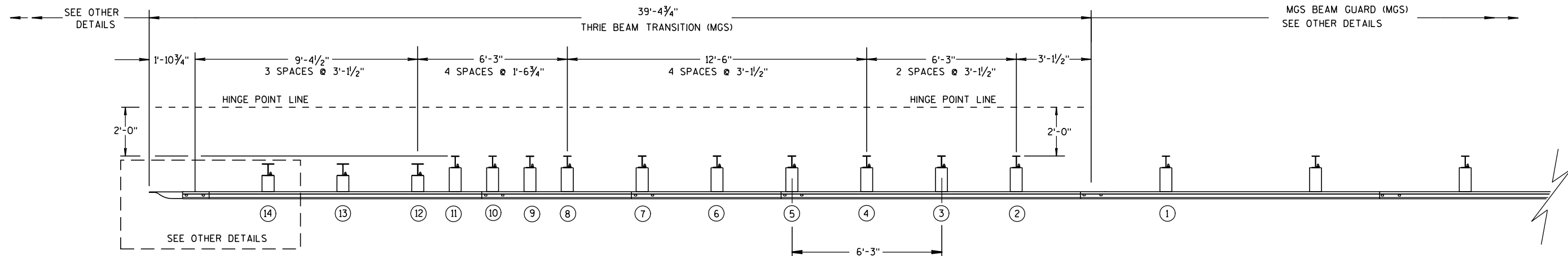
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

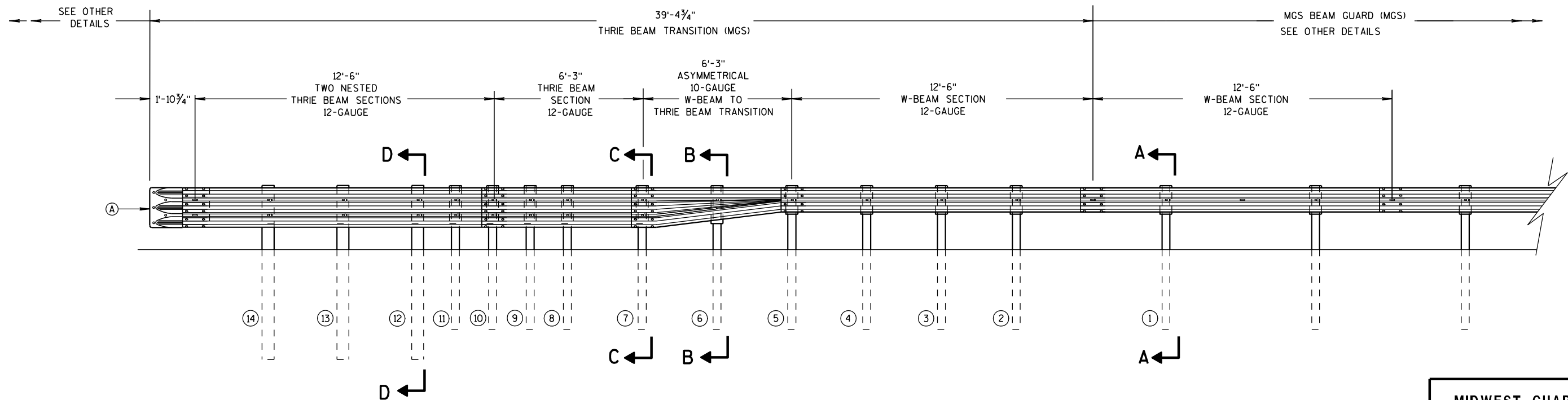
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

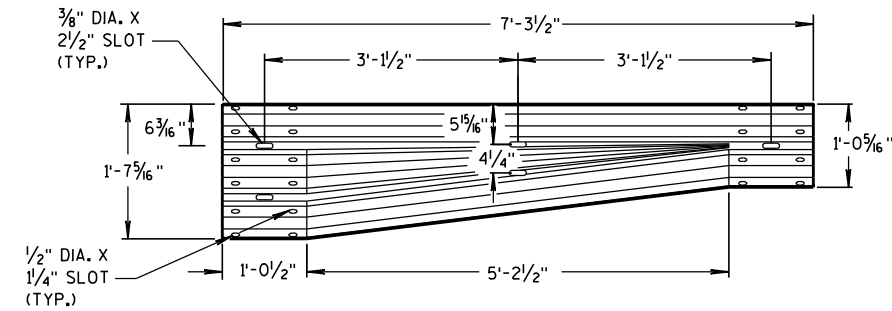
6

S.D.D. 14 B 45-3b

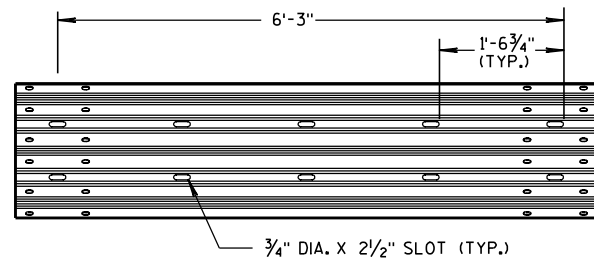


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

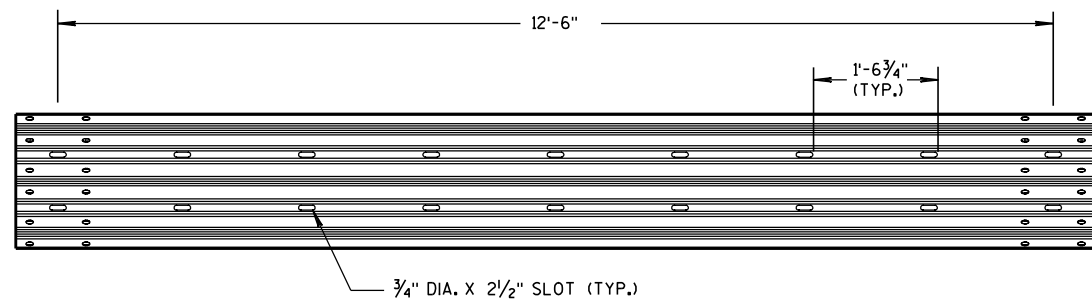
S.D.D. 14 B 45-3b



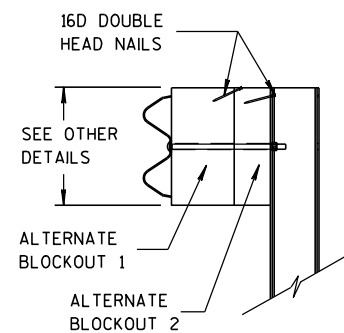
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

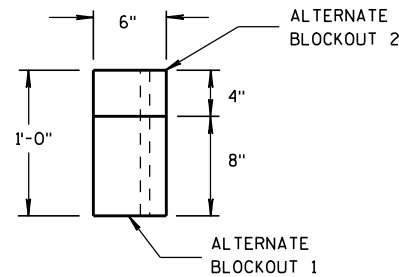


12'-6" THRIE BEAM SECTION

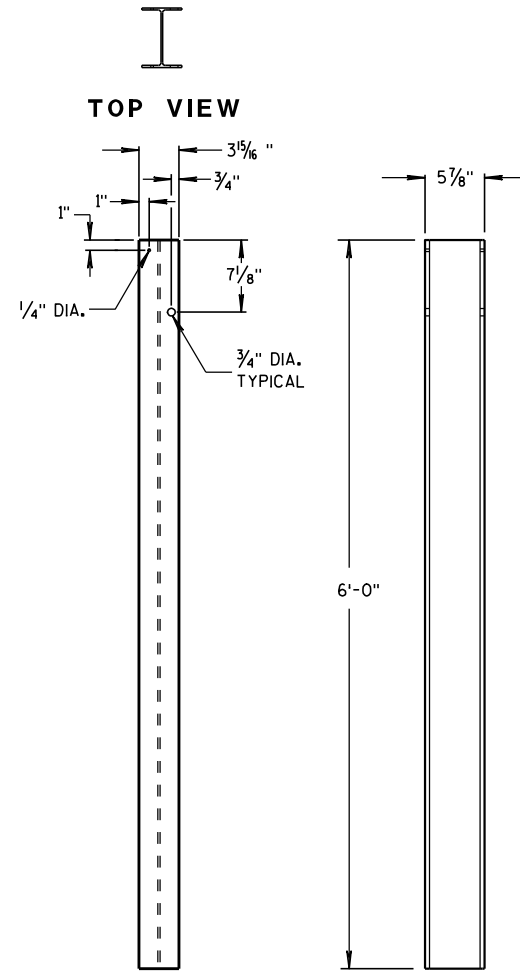


SIDE VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



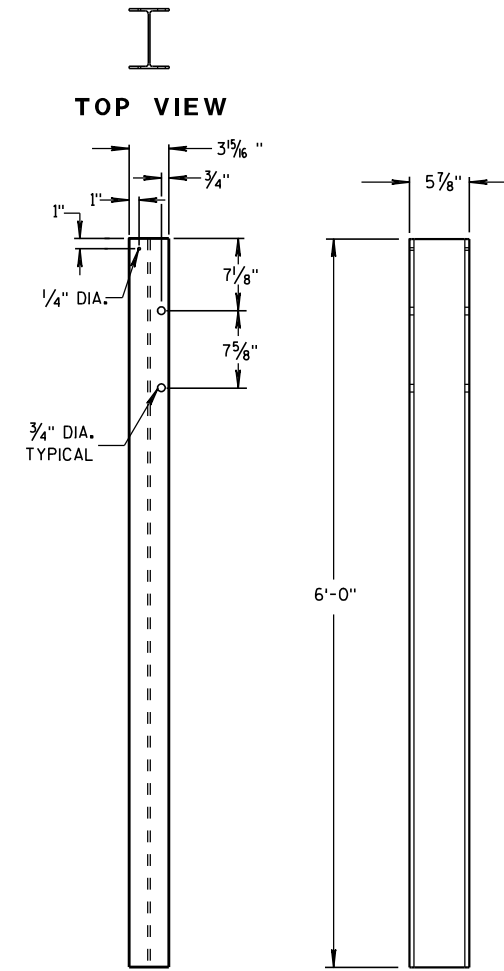
TOP VIEW



FRONT VIEW

SIDE VIEW

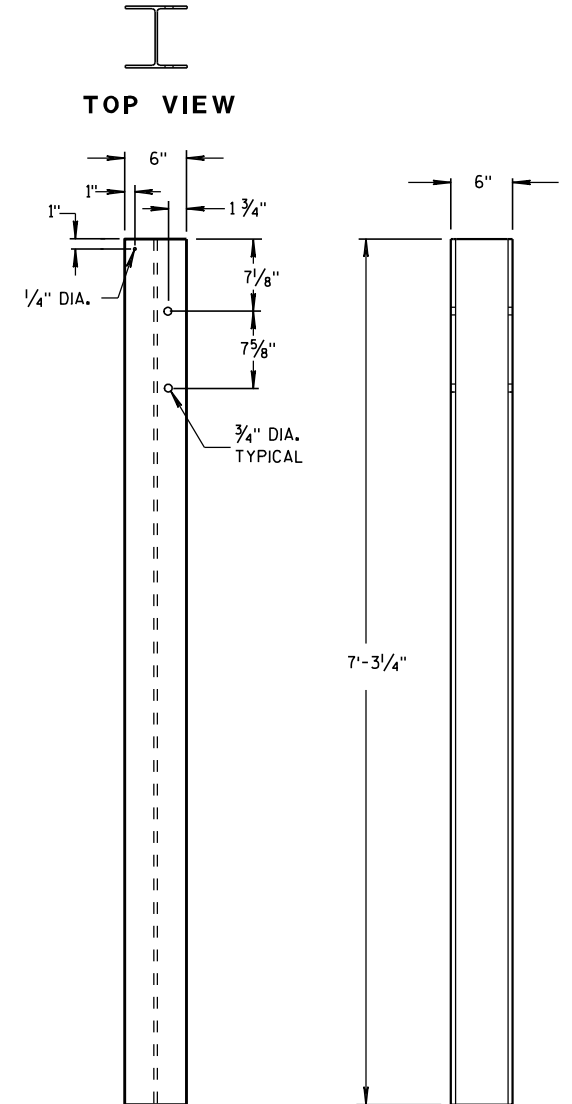
STEEL POSTS 1-5



FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11

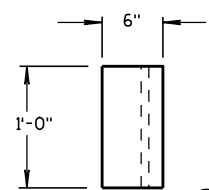


FRONT VIEW

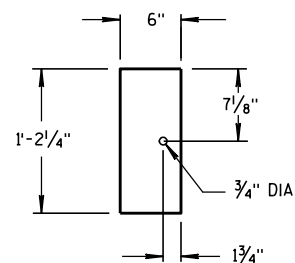
SIDE VIEW

STEEL POSTS 12-14

① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

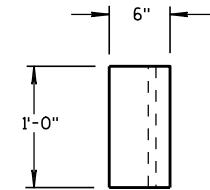


TOP VIEW

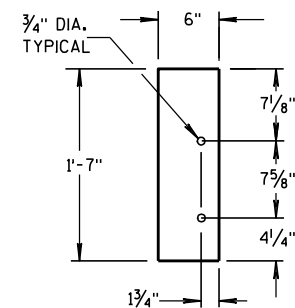


FRONT VIEW

BLOCKOUT POSTS 1-5

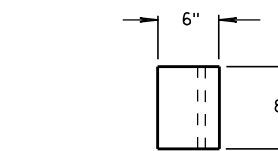


TOP VIEW

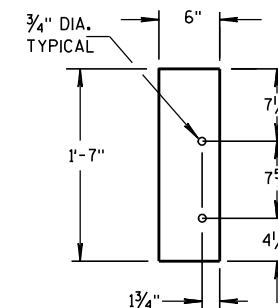


FRONT VIEW

BLOCKOUT POSTS 6-11



TOP VIEW



FRONT VIEW

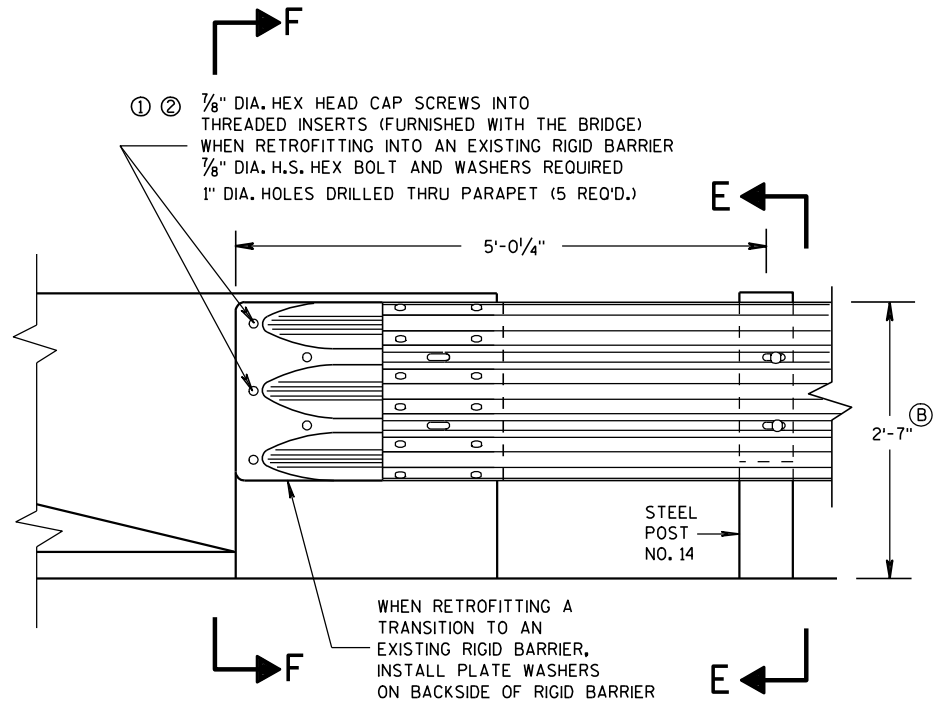
BLOCKOUT POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

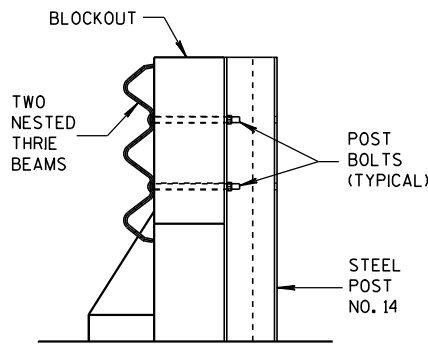
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW

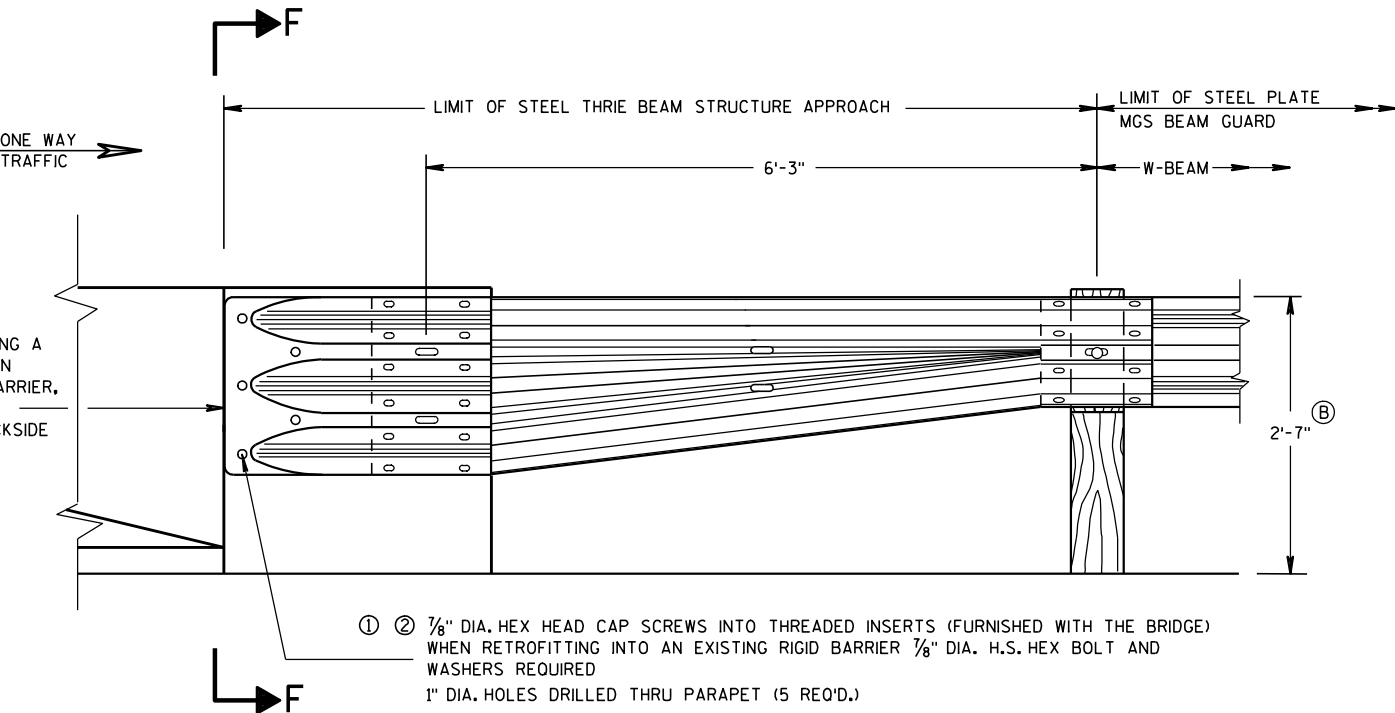
THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



SECTION E-E

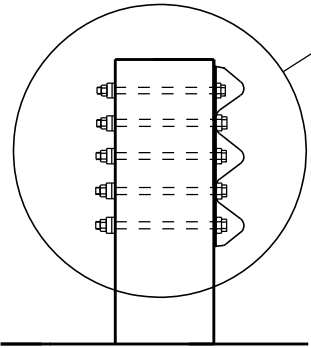
GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
 - ② 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.
 - ③ 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".
- ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

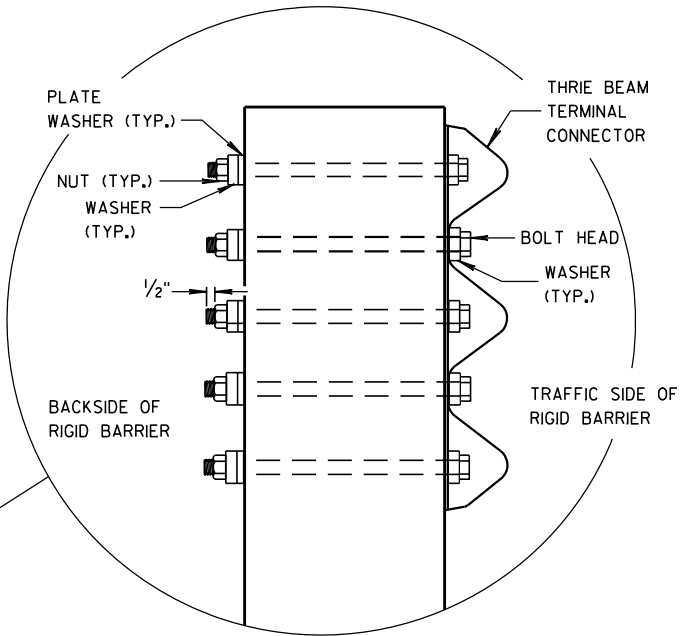


FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION F-F

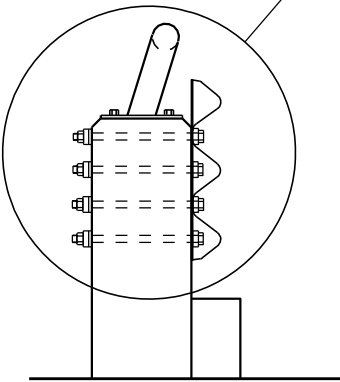
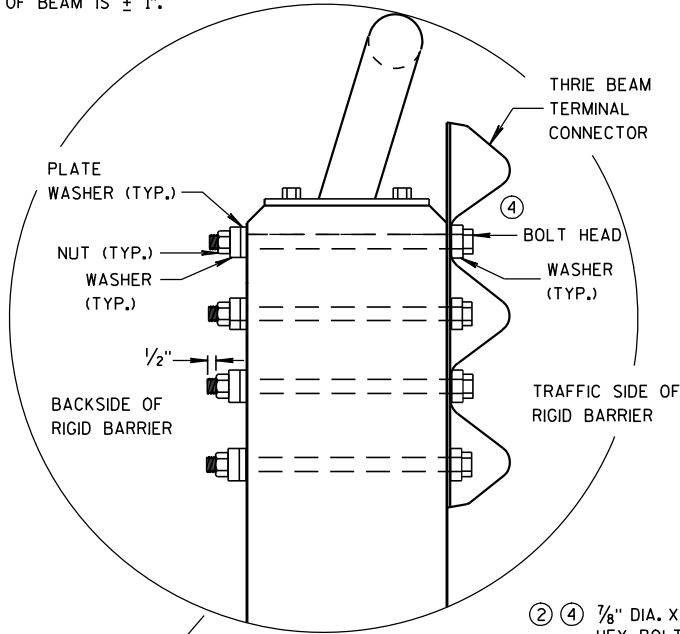


MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

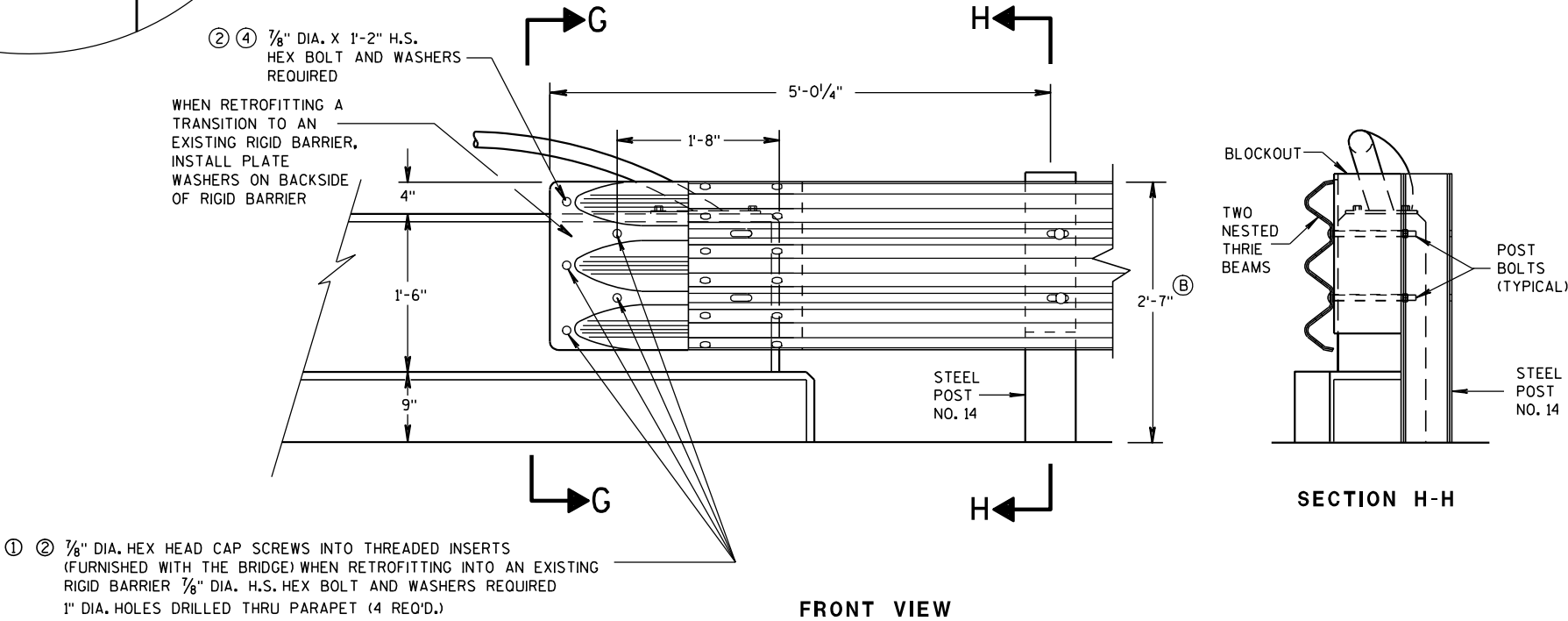
GENERAL NOTES

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

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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 $\frac{5}{8}$ " THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ 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 $\frac{1}{2}$ ". BLOCK IS INCIDENTAL TO THE CONTRACT.
- ④ 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.
- Ⓑ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

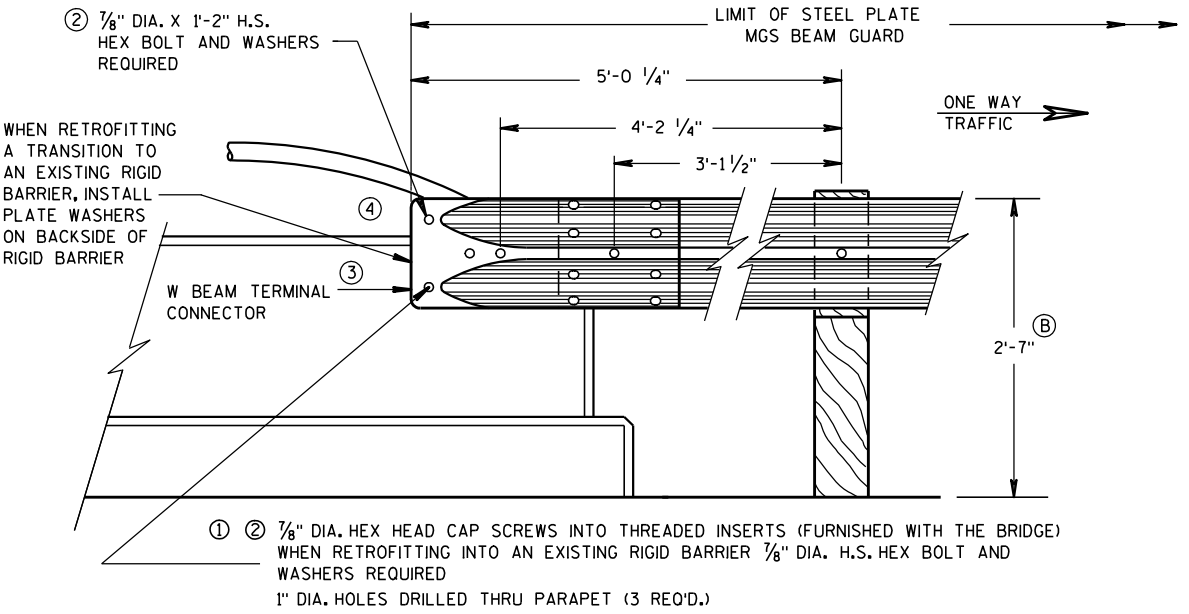


SECTION G-G



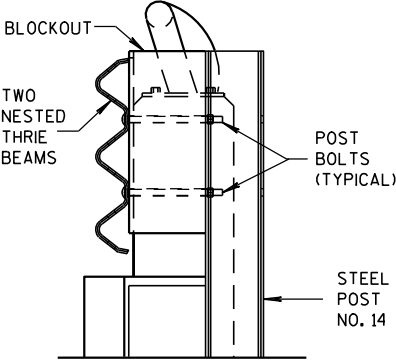
FRONT VIEW

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)

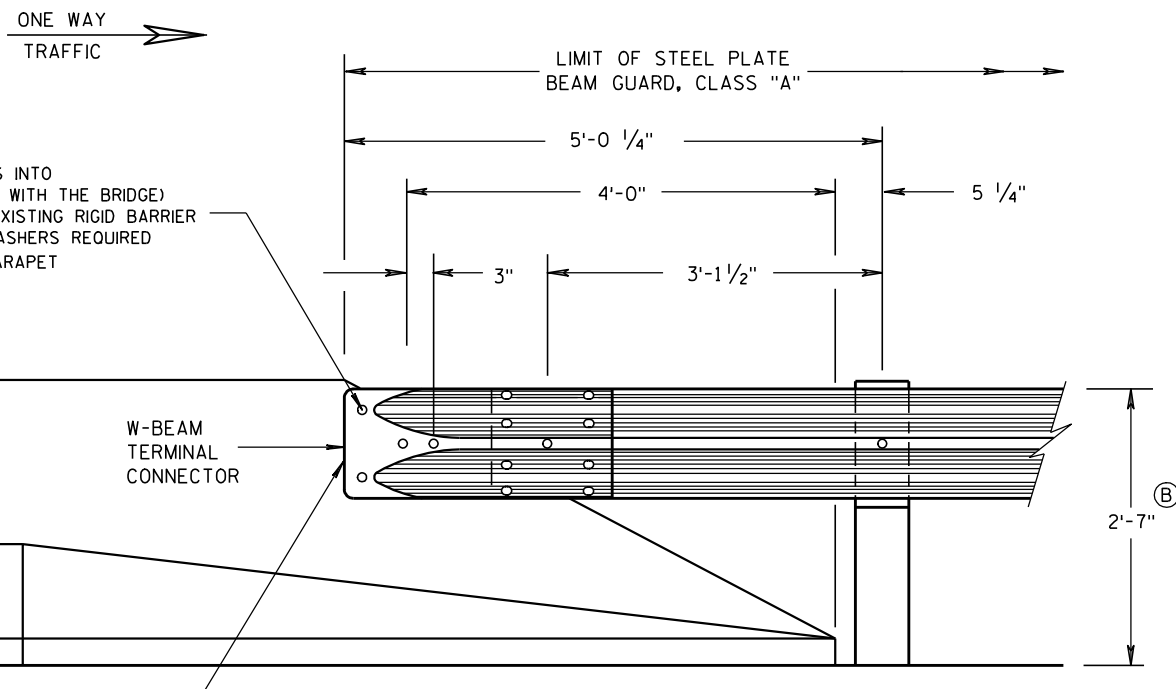


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



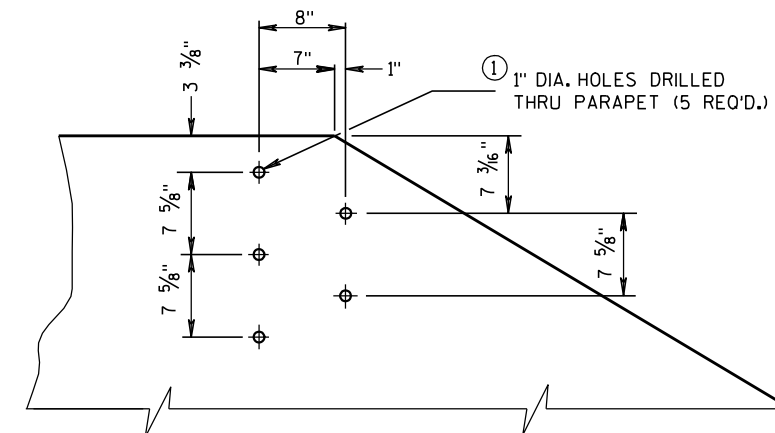
FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

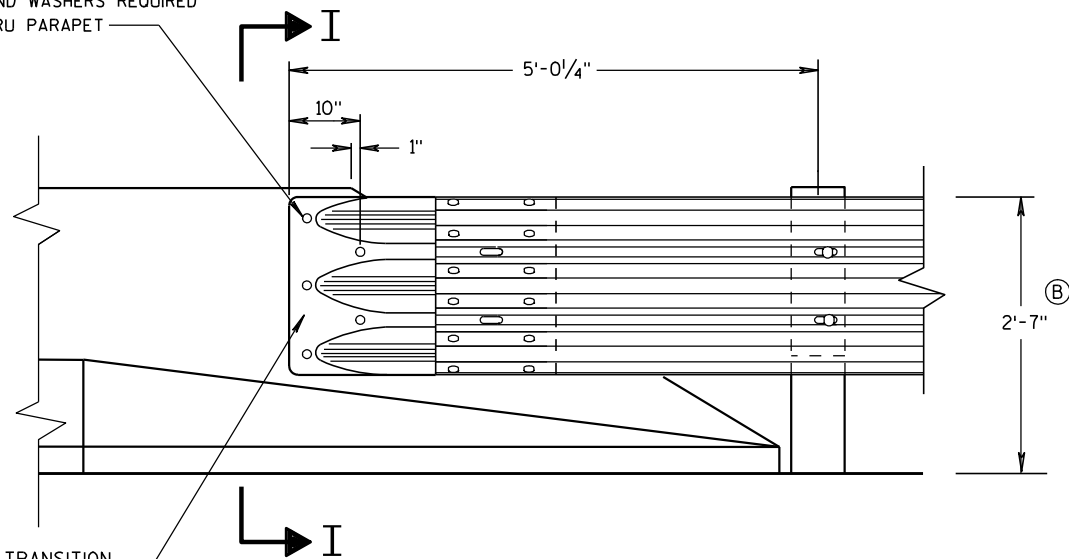
GENERAL NOTES

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② 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.
- ③ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



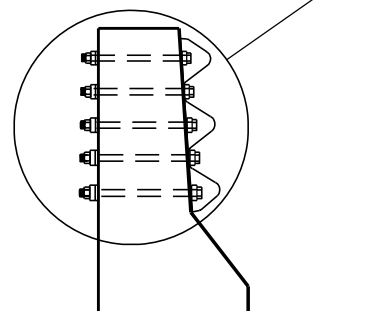
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

- ① ② 1/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
1/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(5 REQ'D.)

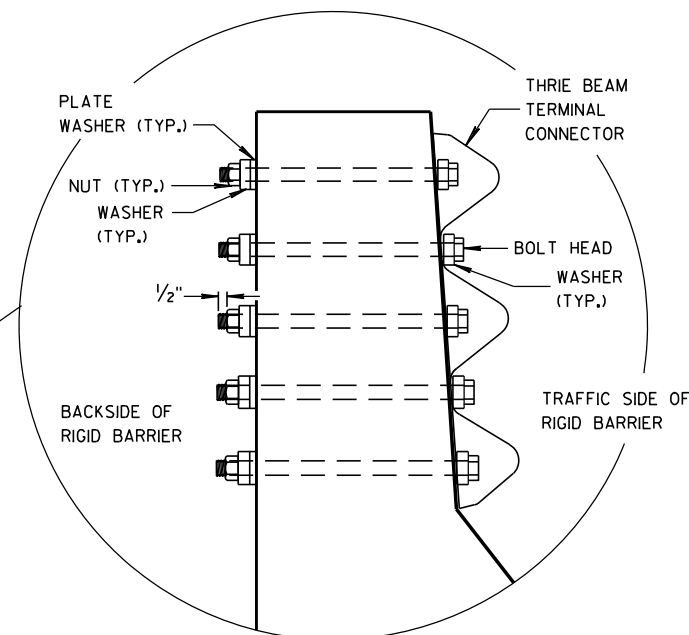


FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS



SECTION I-I

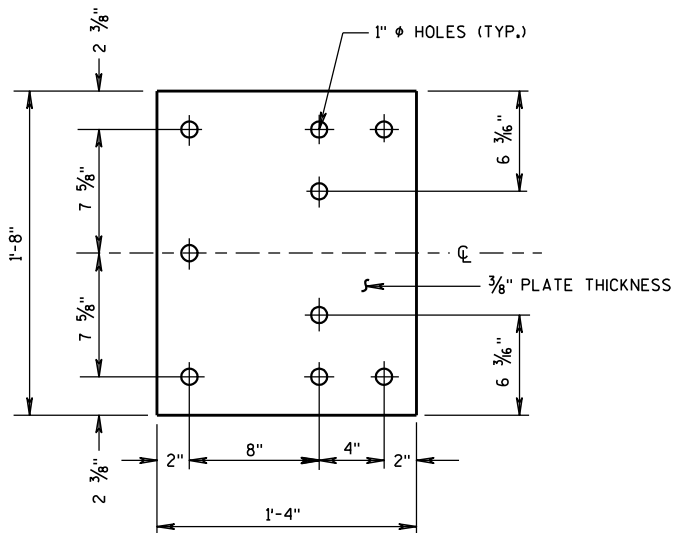


MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

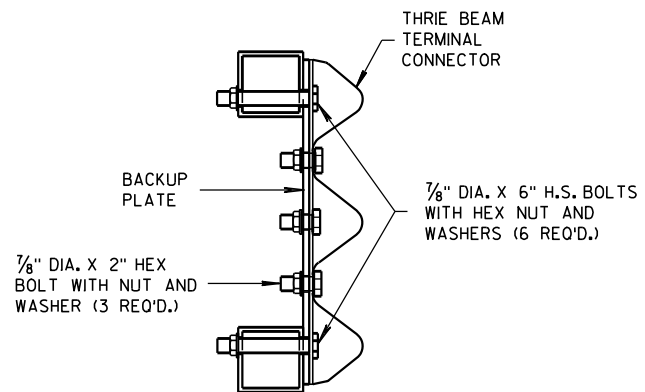
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
FHWA

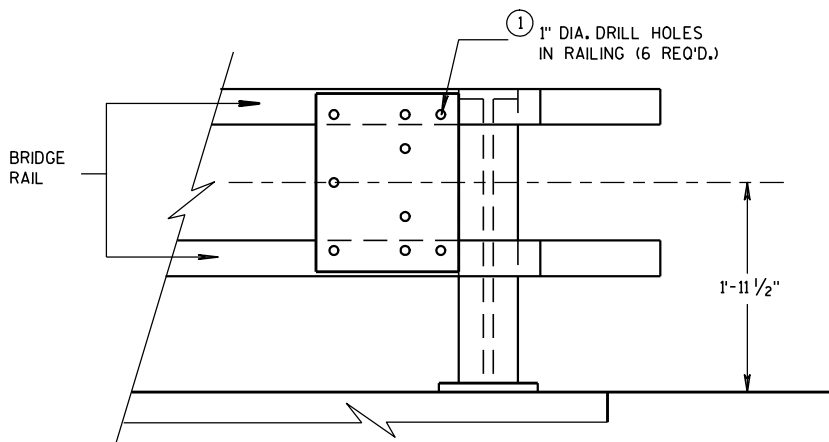
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



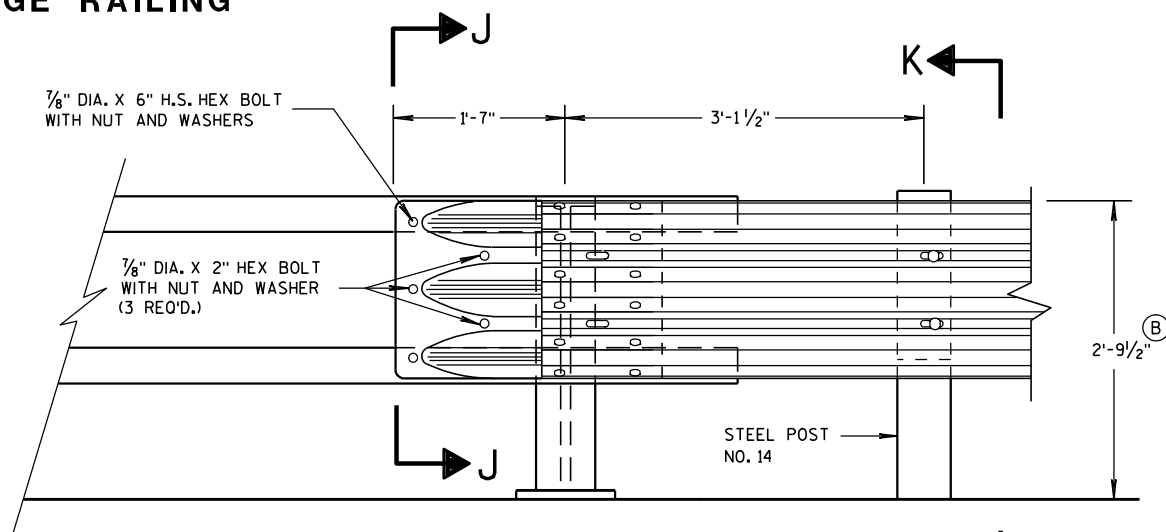
BACK-UP PLATE DETAIL



SECTION J-J



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

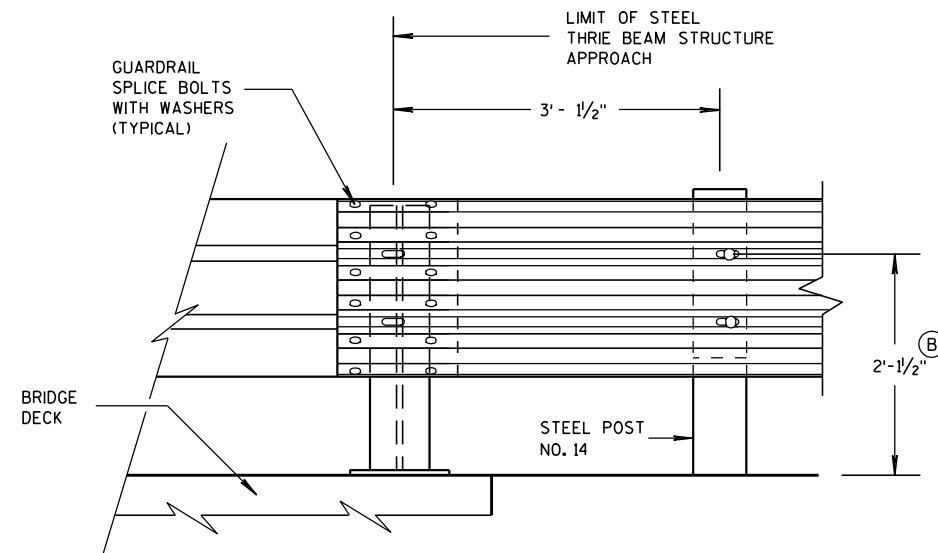


FRONT VIEW

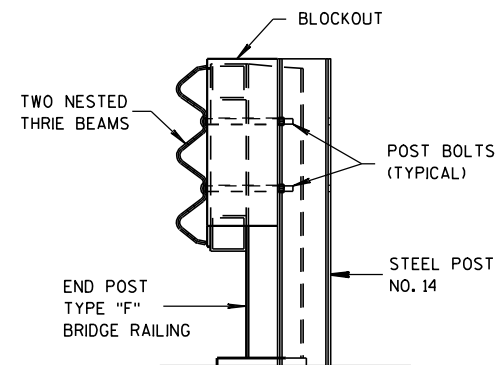
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

GENERAL NOTES

- ① DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



FRONT VIEW
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



SECTION K-K

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

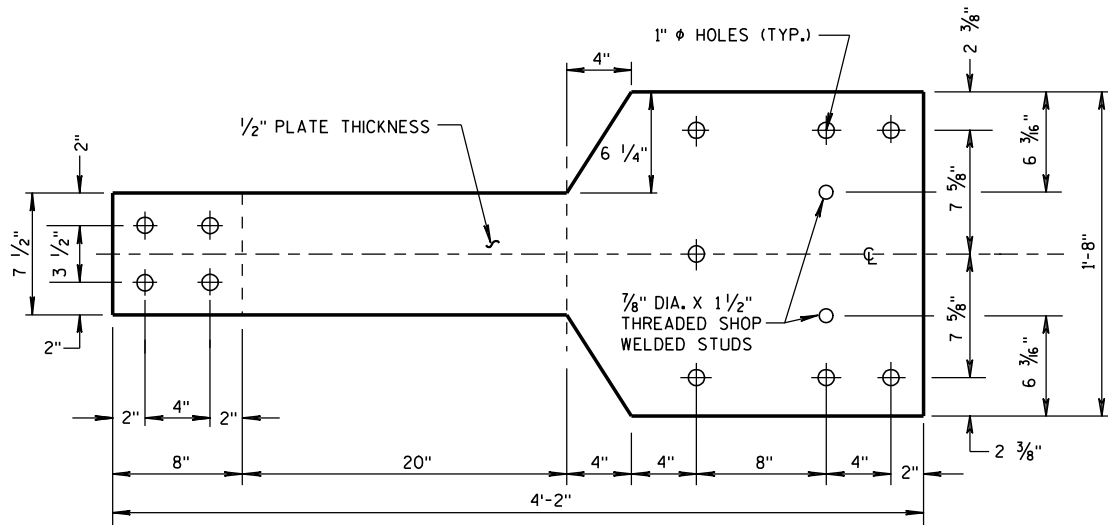
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012
DATE
FHWA

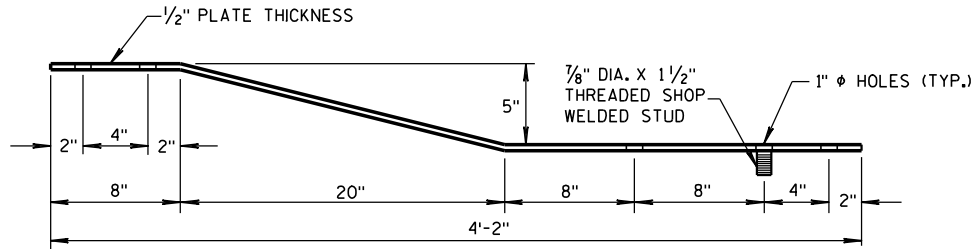
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

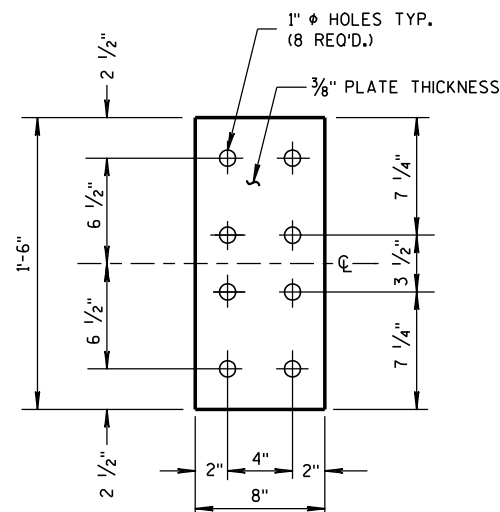
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



FRONT VIEW

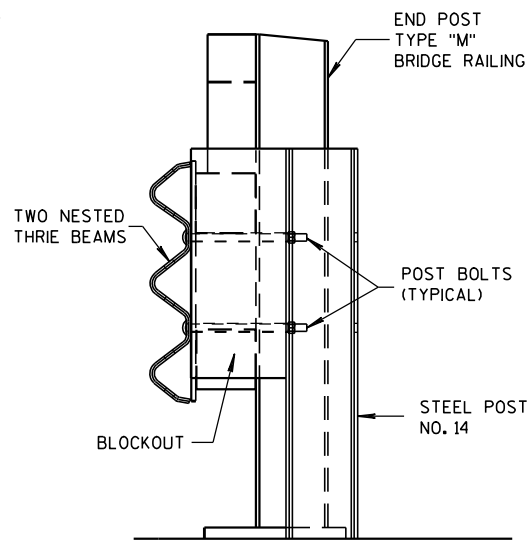


PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"

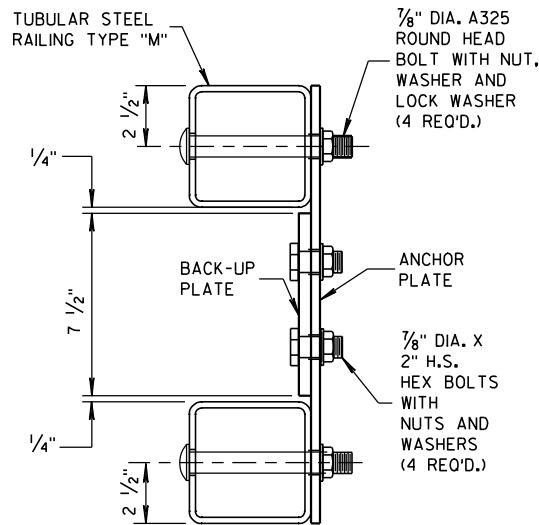


FRONT VIEW

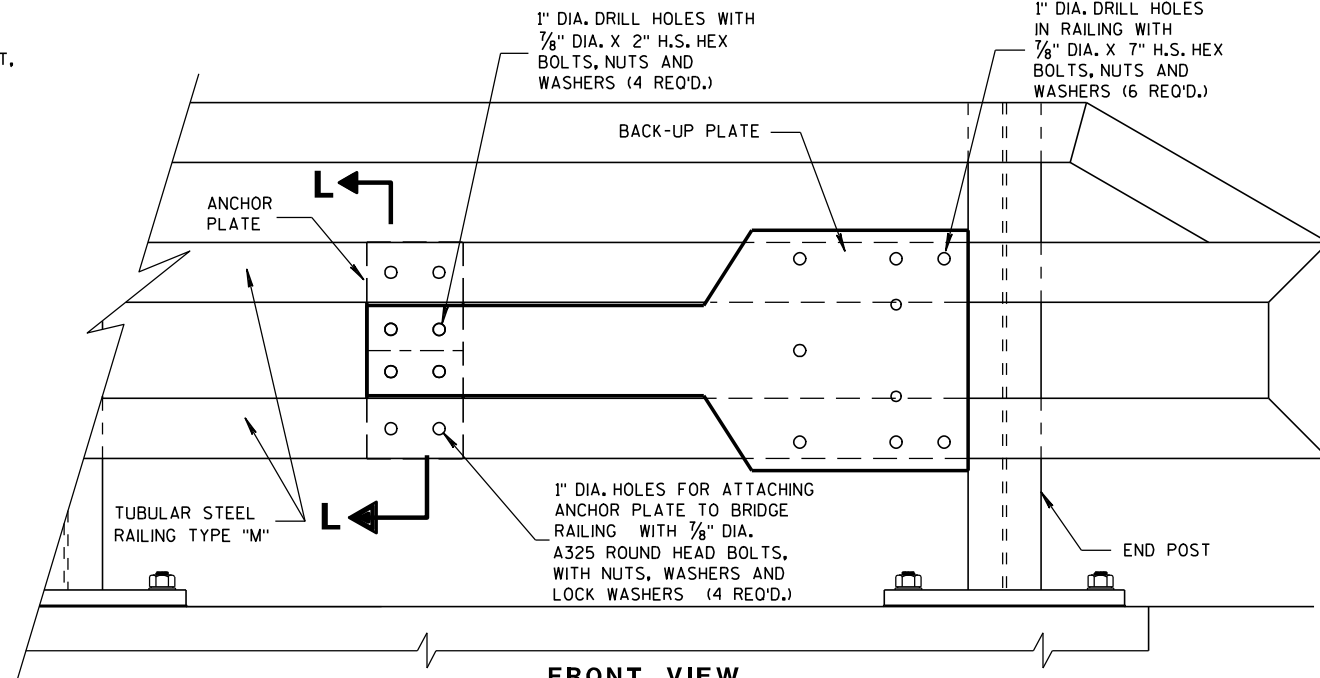
ANCHOR
PLATE DETAIL,
TYPE "M"



SECTION M-M

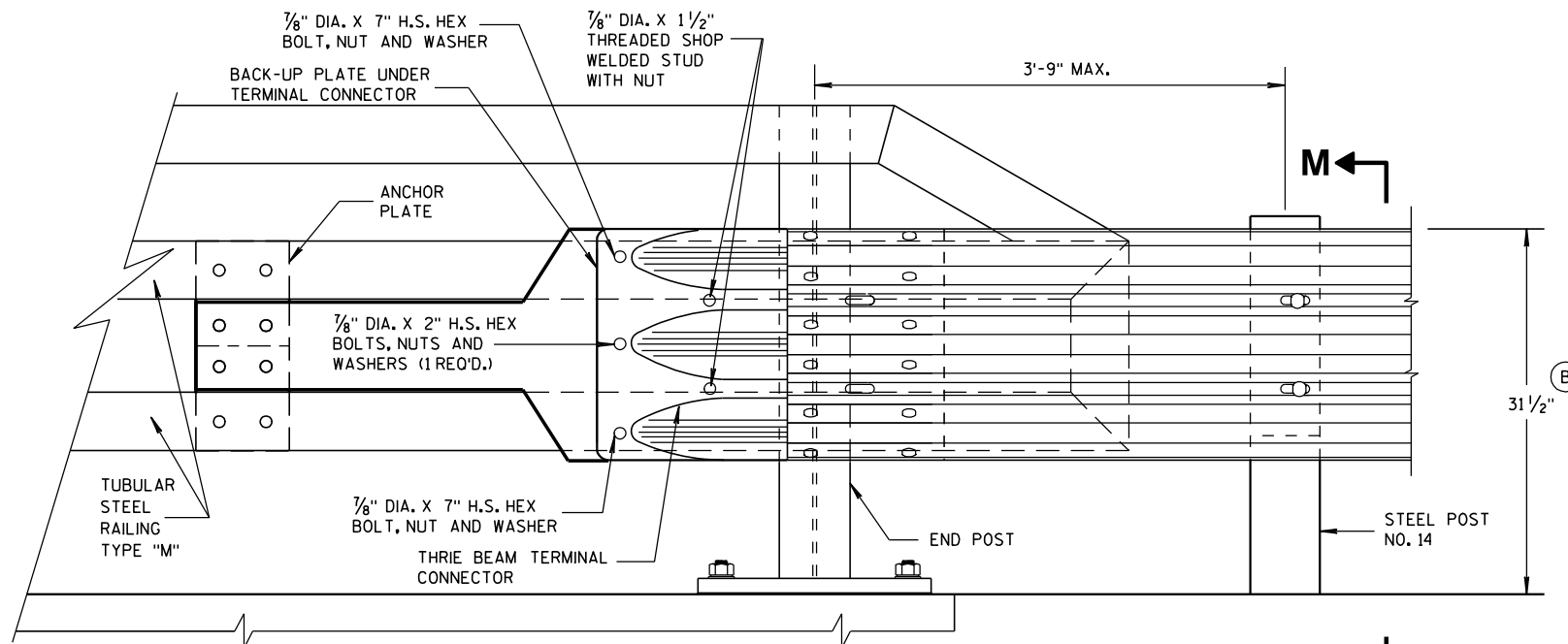


SECTION L-L

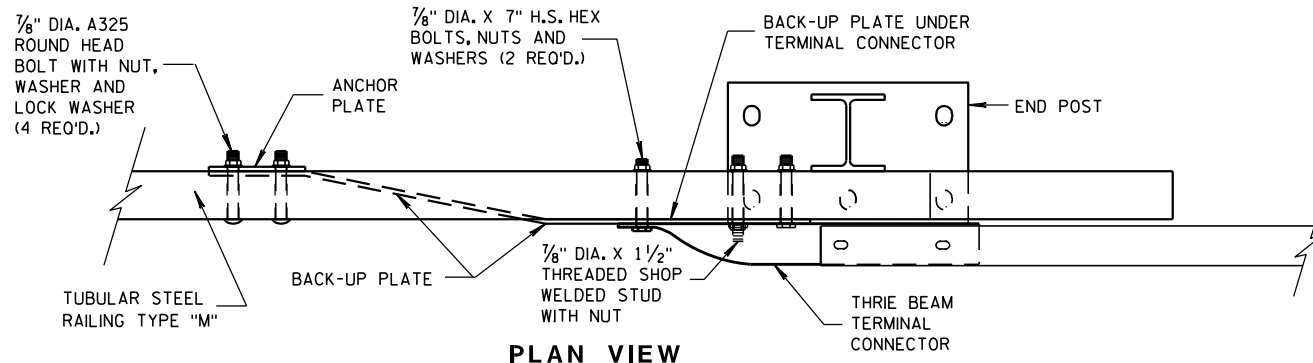


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

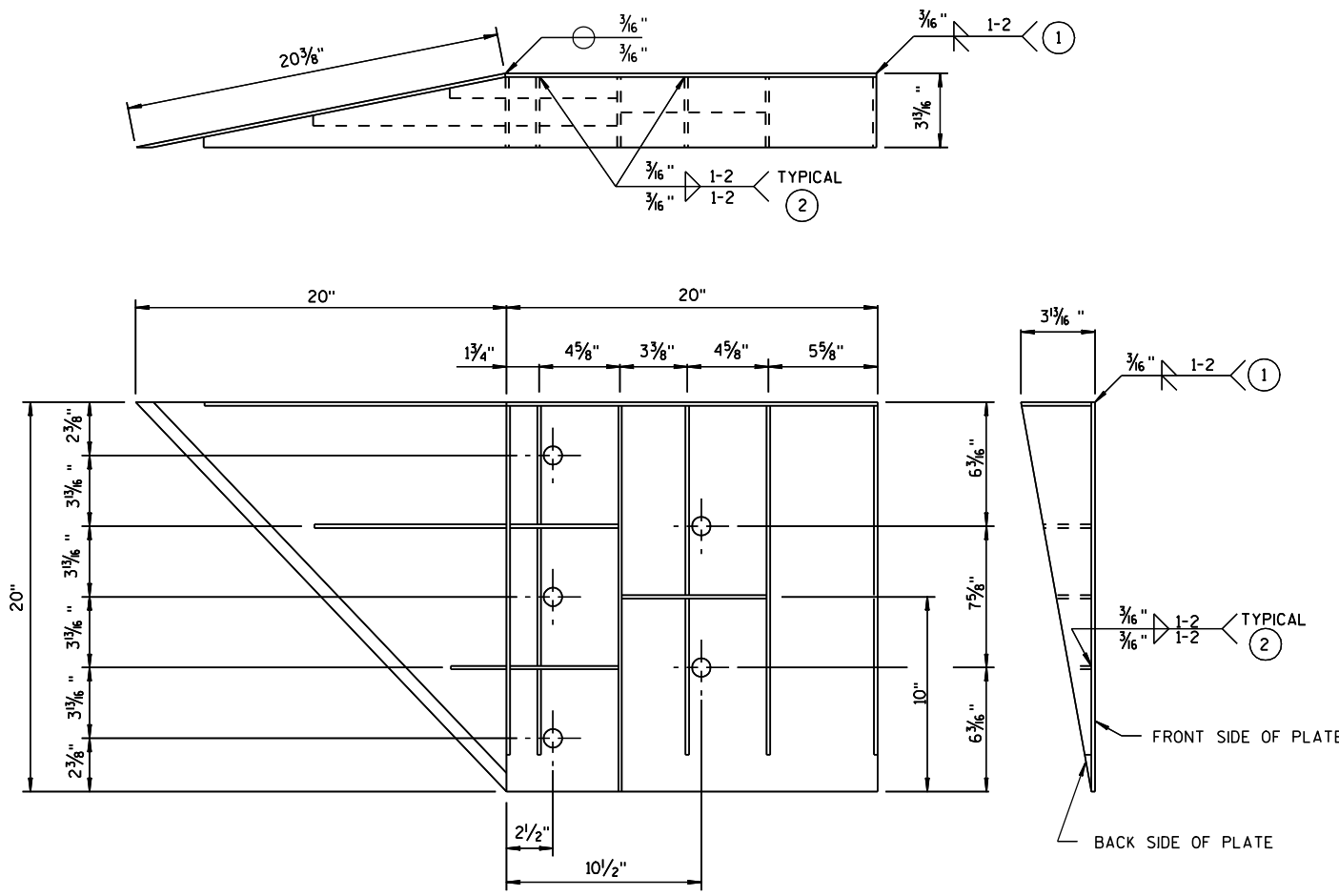
APPROVED

8-31-2012

DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

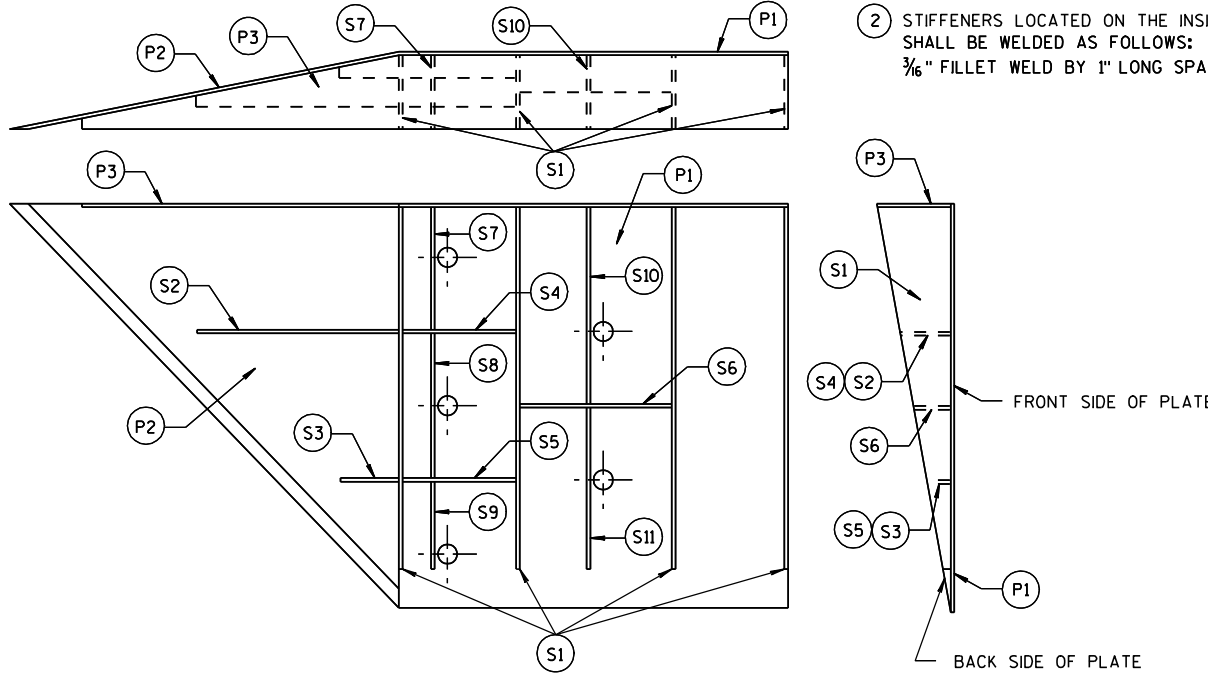


WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

SINGLE SLOPE CONNECTION 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 5/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 1/16"	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 7/32" 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 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 1/16"	1/4"

PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)



GENERAL NOTES

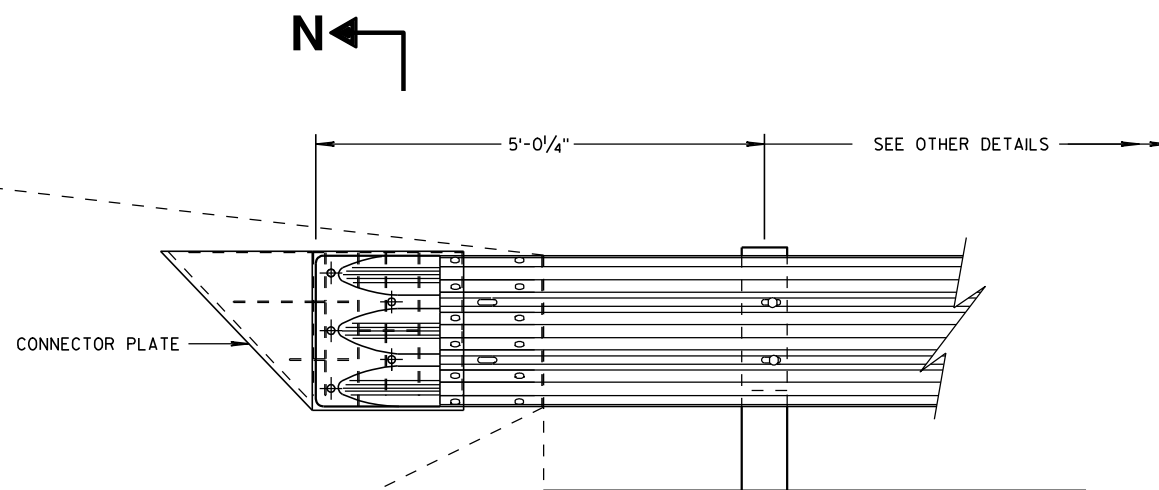
- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

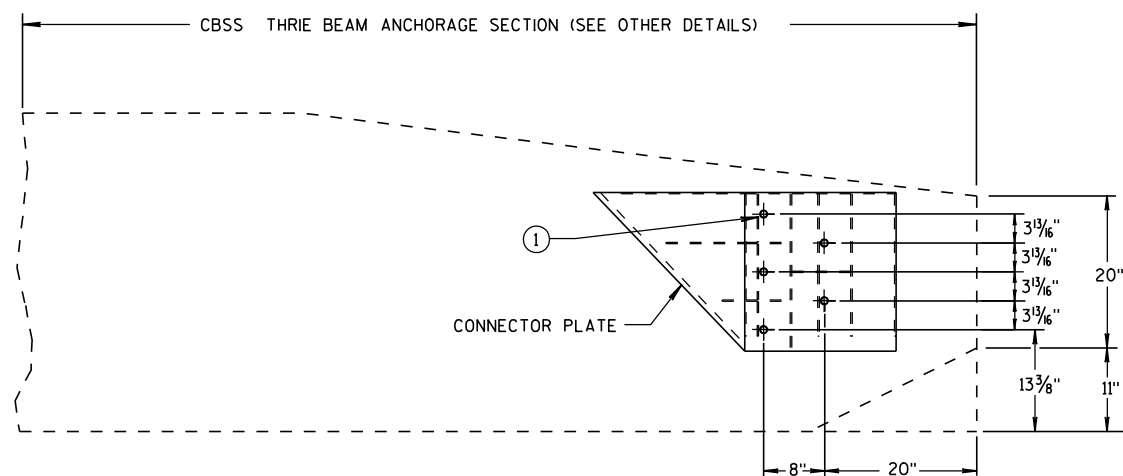
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE /S/ Jerry H. Zogg
FHWA ROADWAY STANDARDS DEVELOPMENT ENGINEER



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

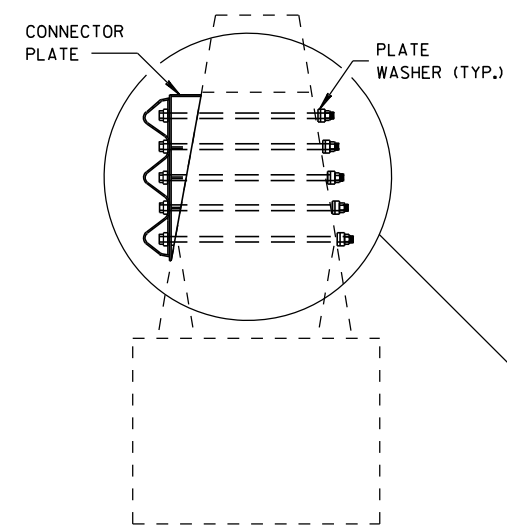


SINGLE SLOPE CONNECTION PLATE PLACEMENT

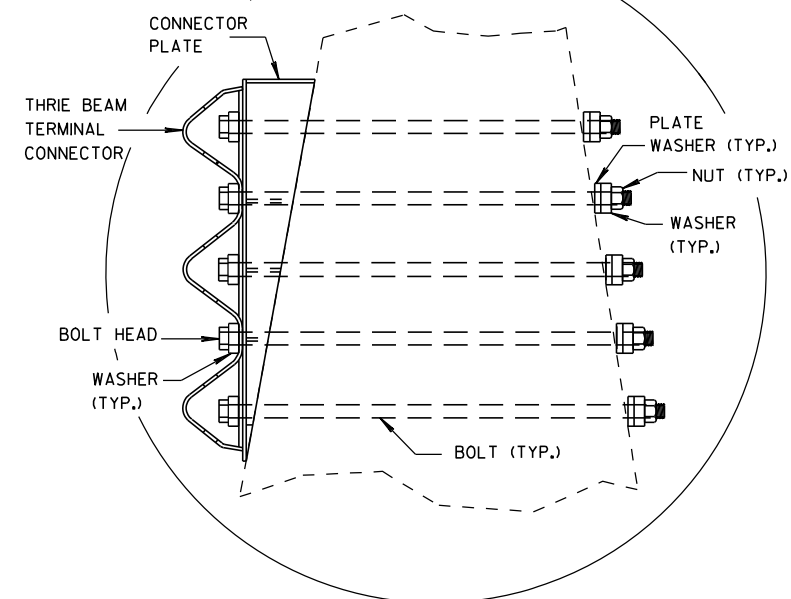
GENERAL NOTES

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

- ① 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)**

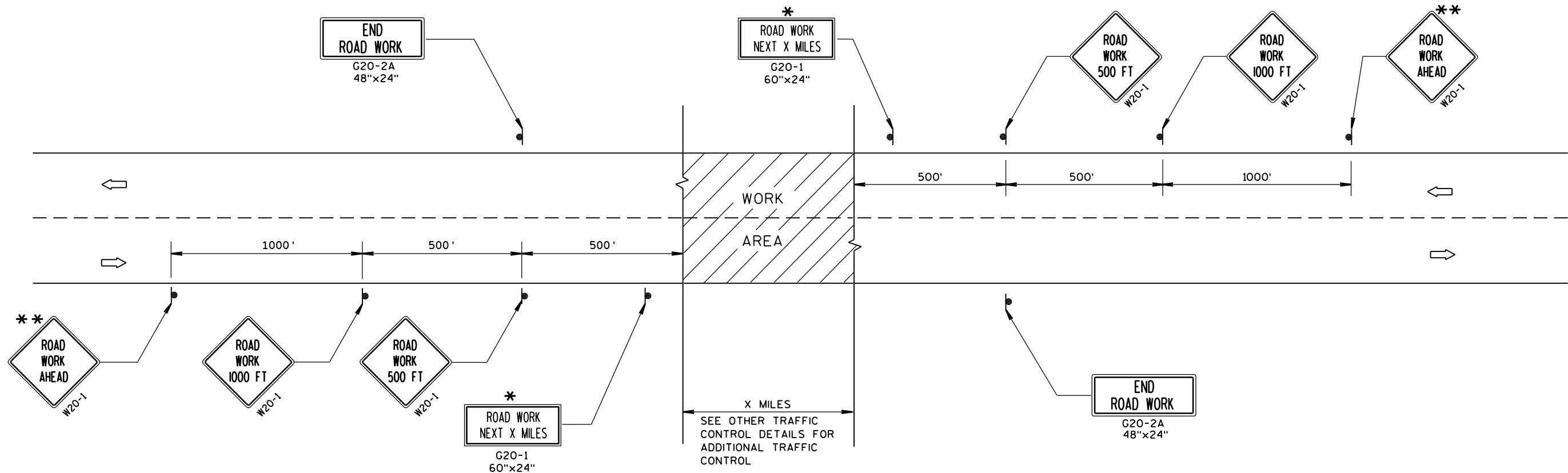
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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.

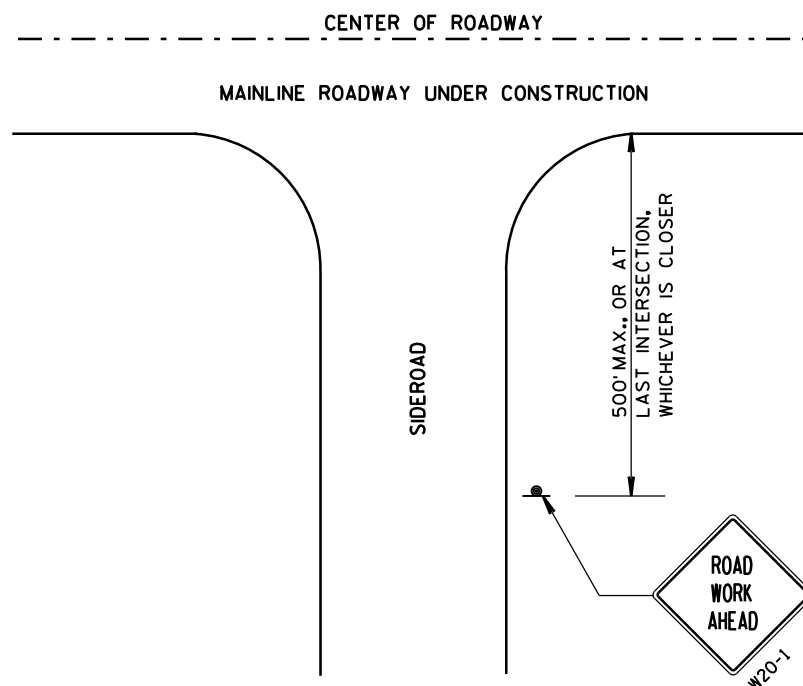
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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.

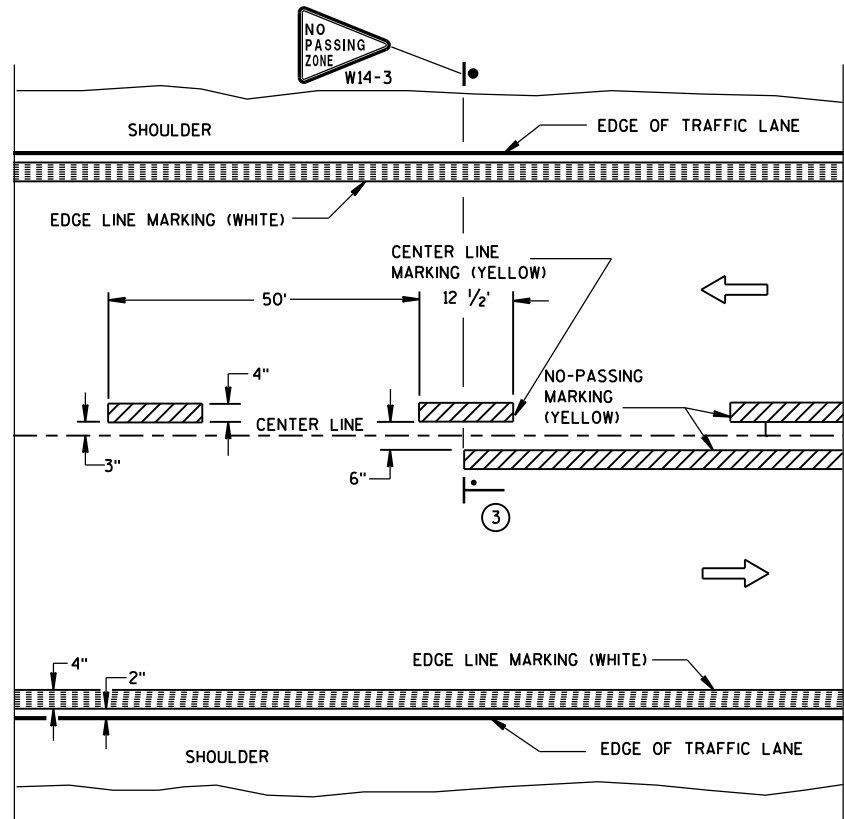
** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



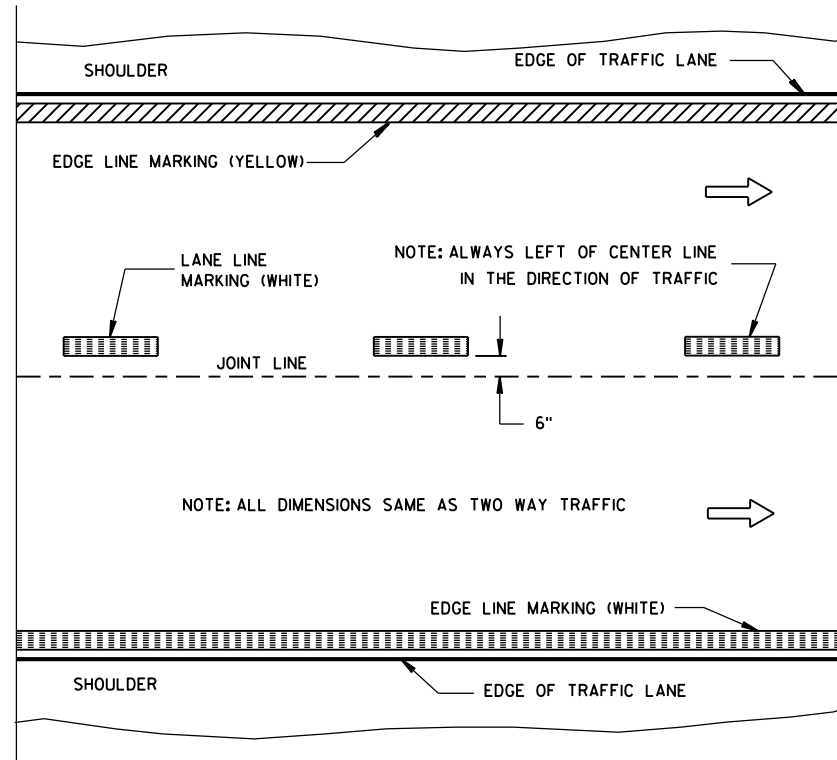
LEGEND

- 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 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

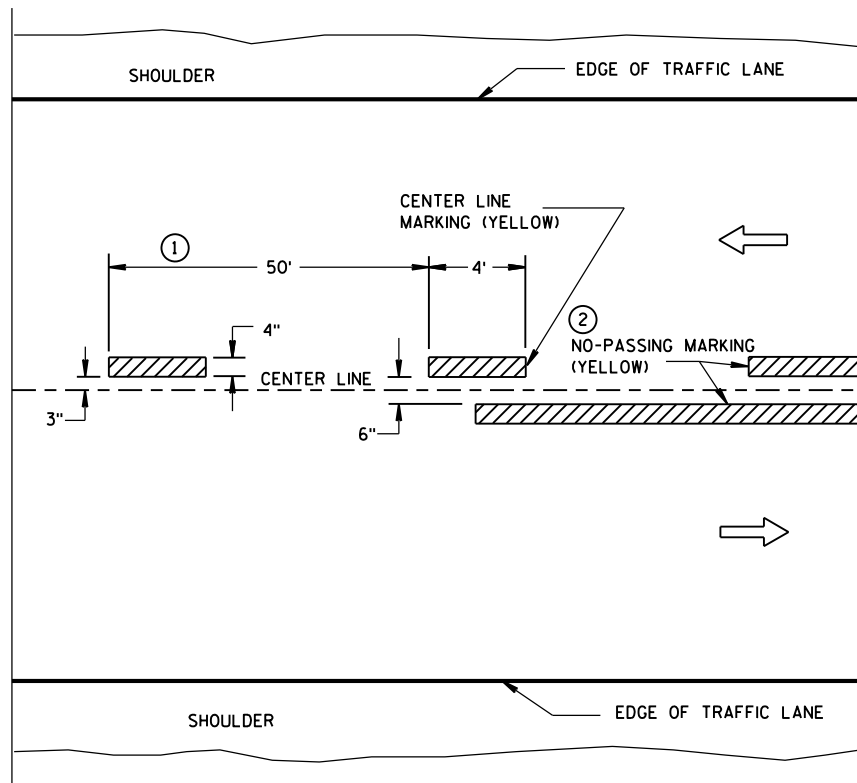


TWO WAY TRAFFIC

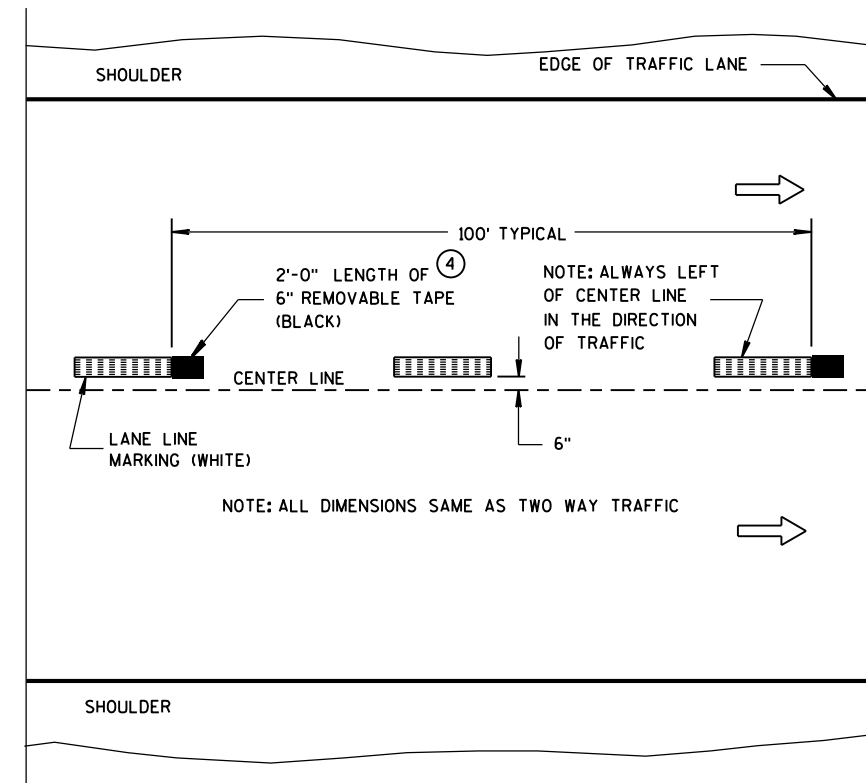


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

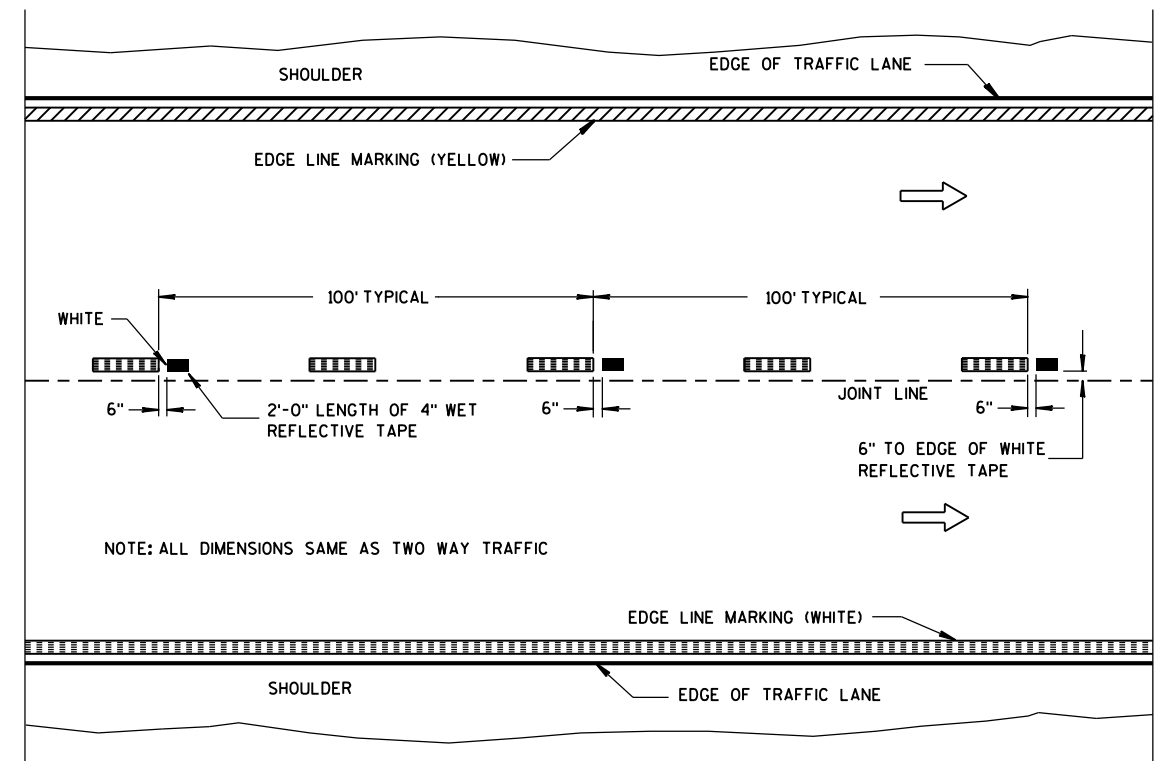
GENERAL NOTES

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

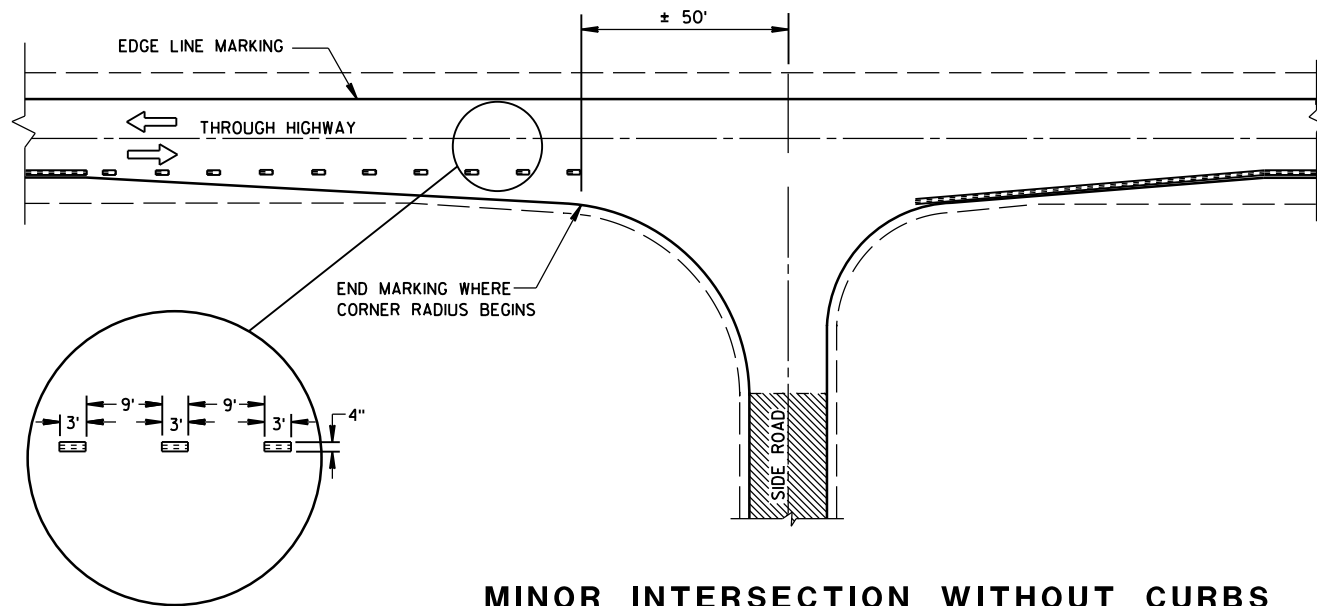
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

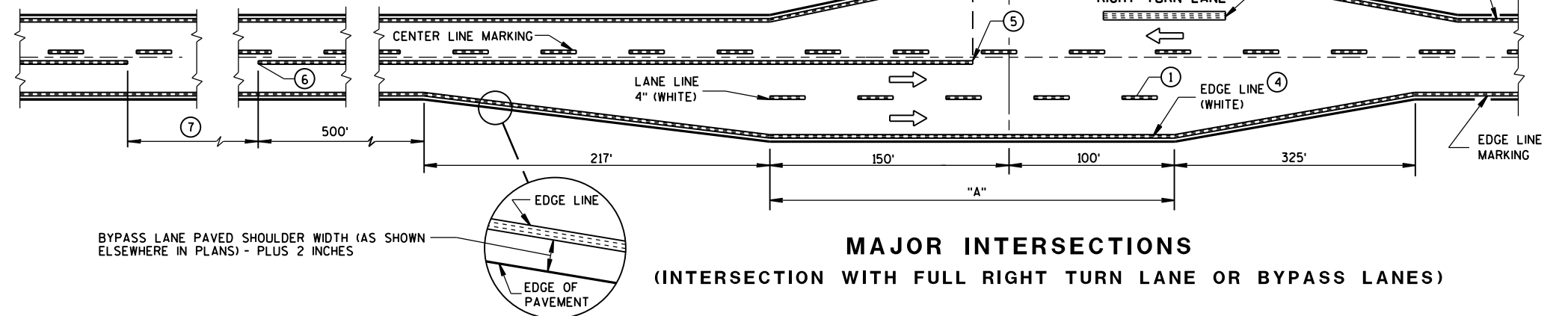
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



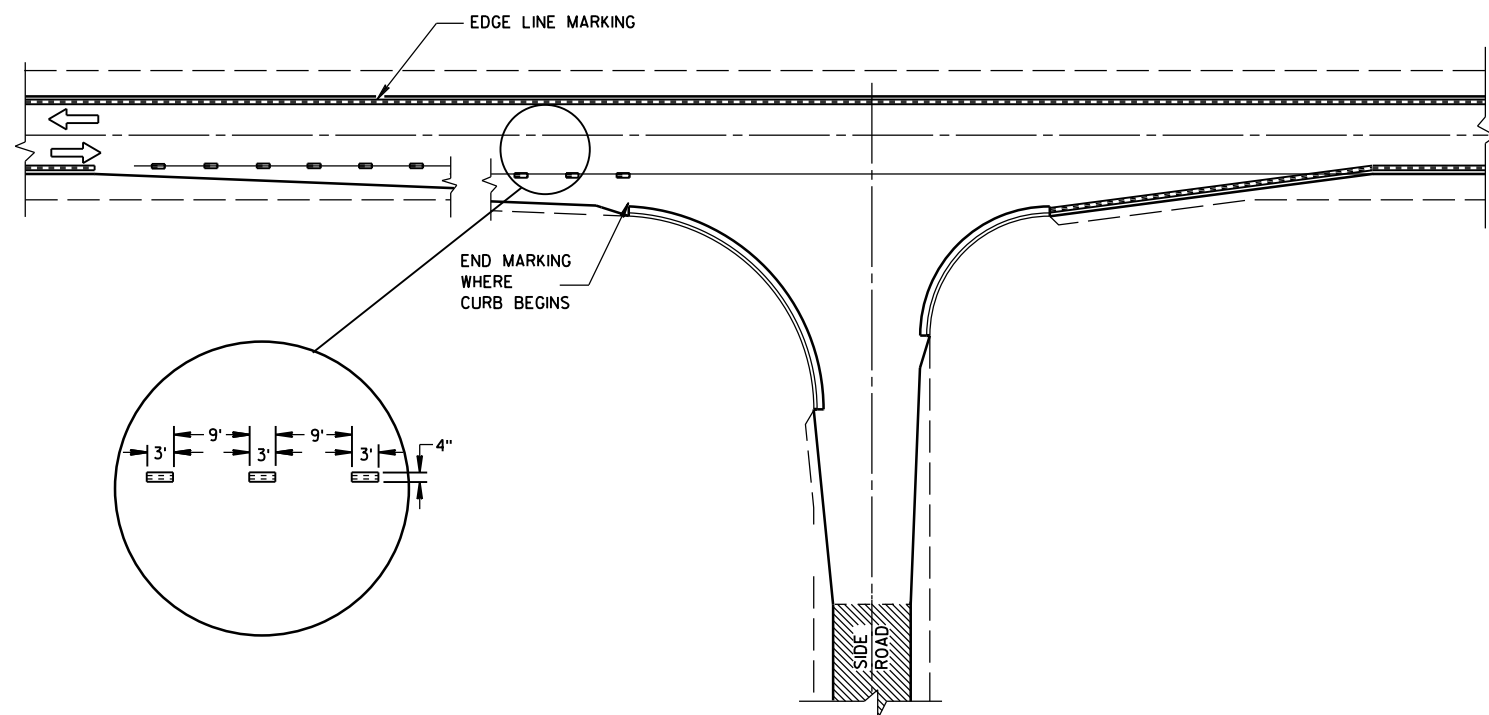
MINOR INTERSECTION WITHOUT CURBS

⑦

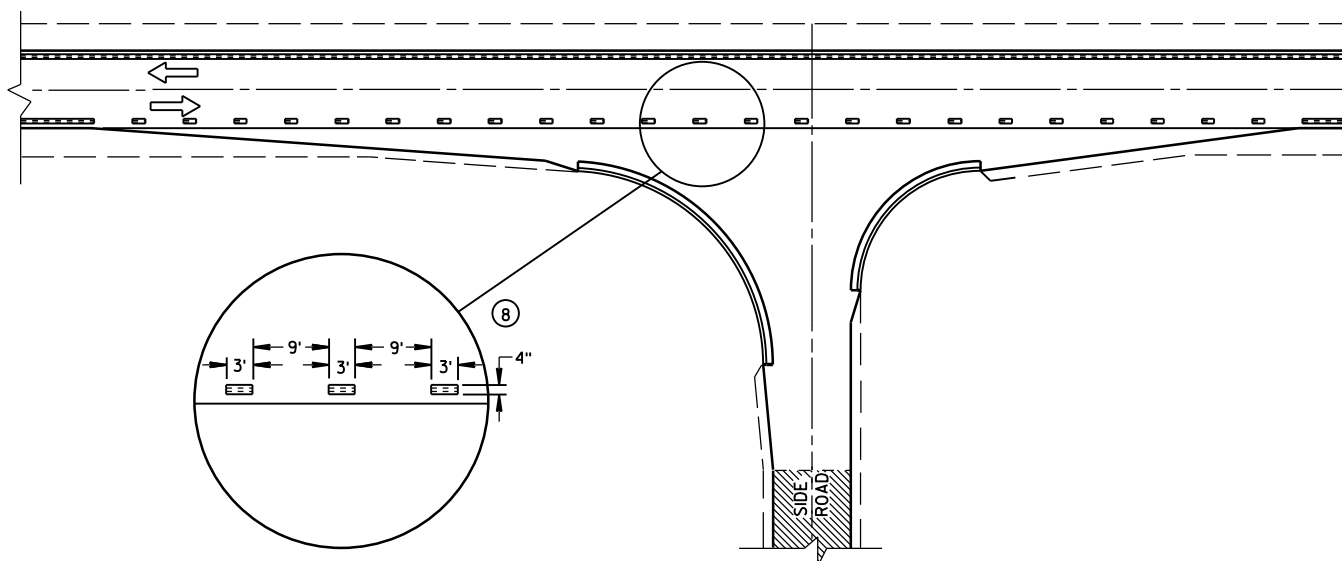
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



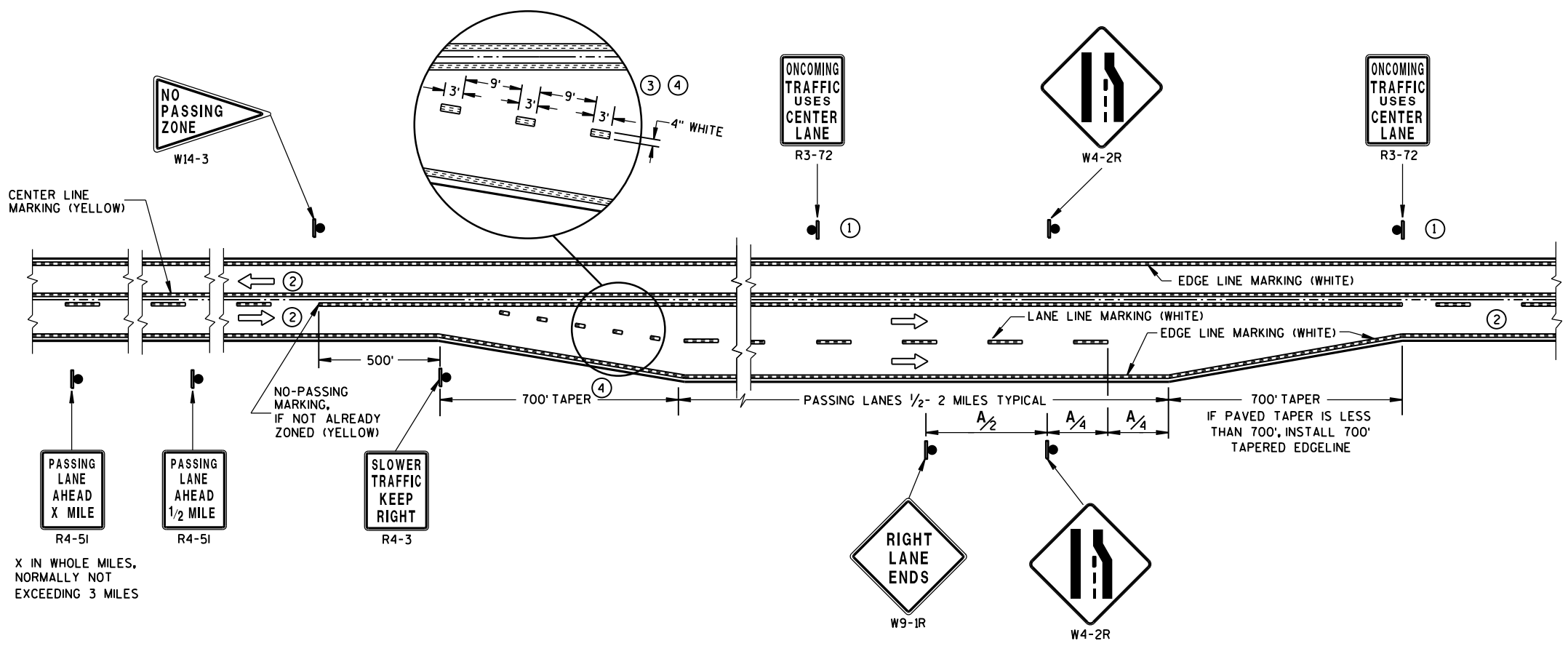
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

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

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

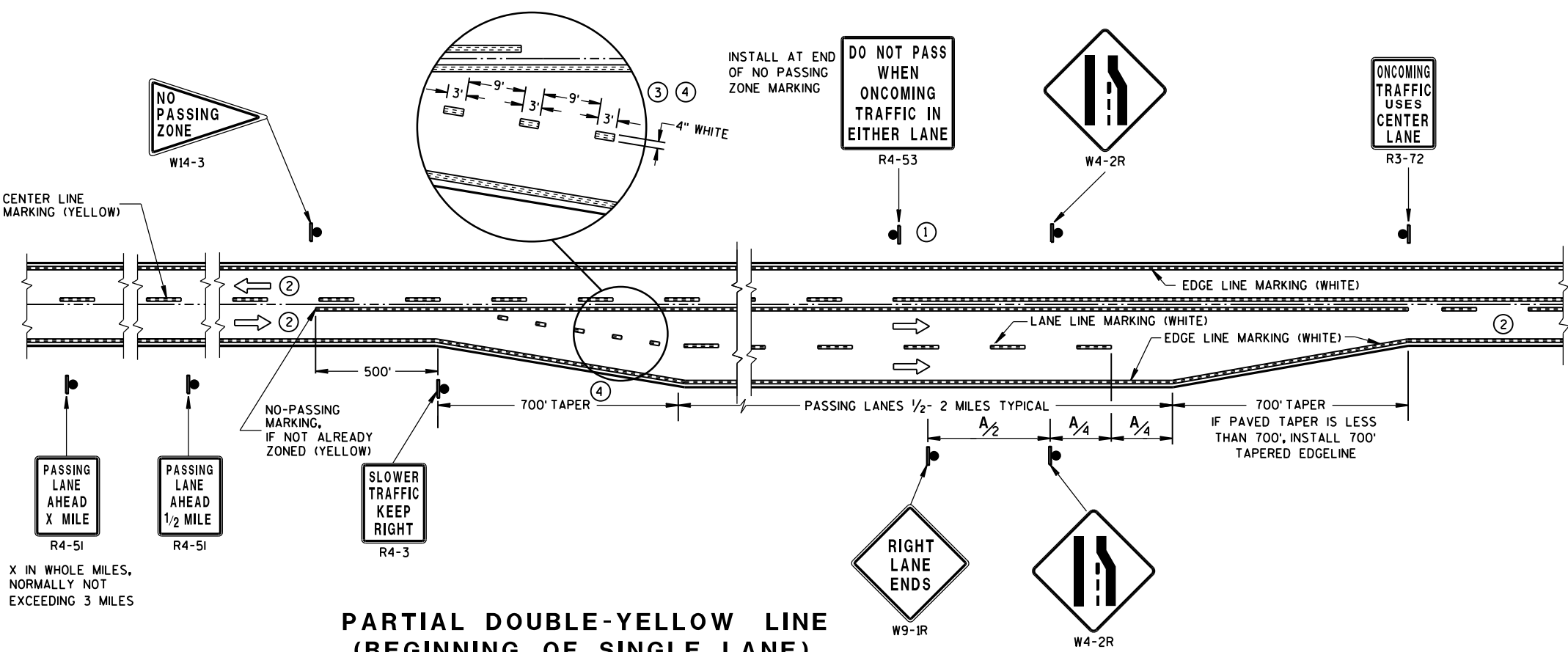
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

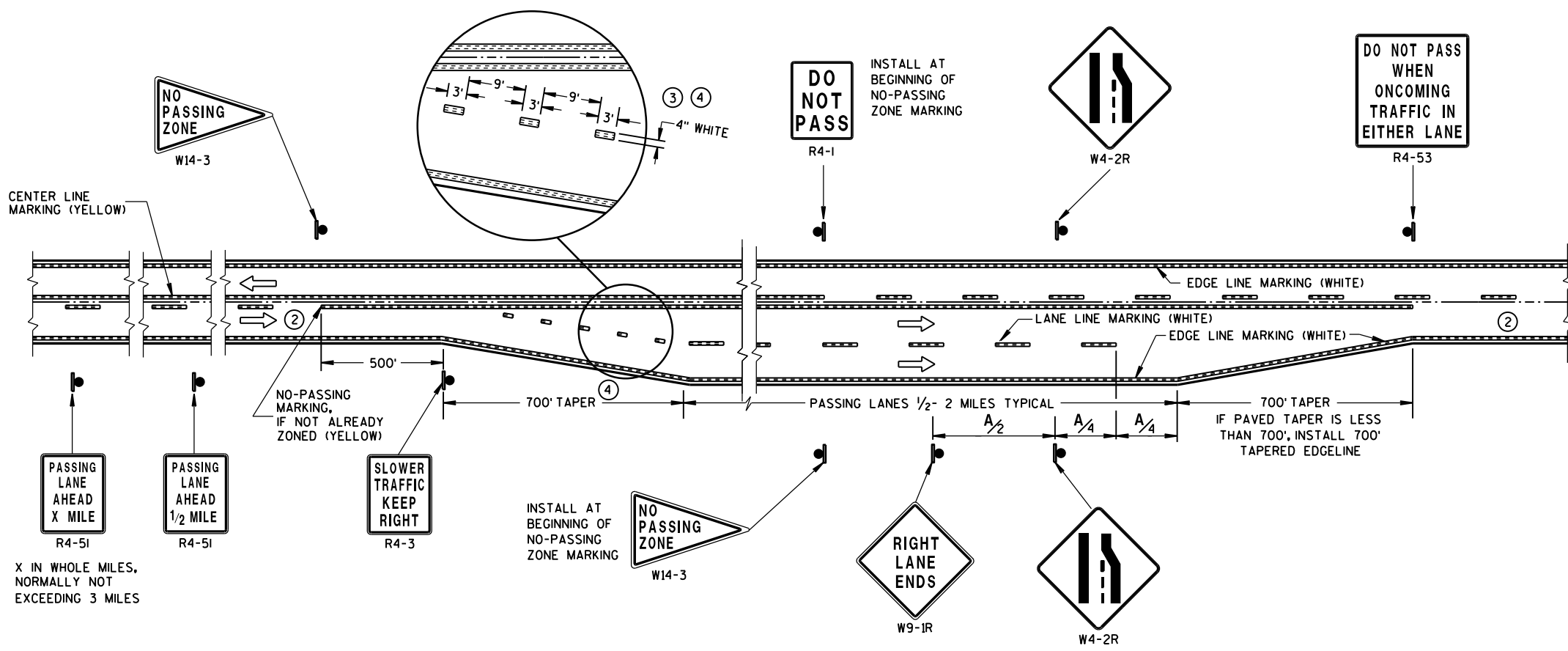
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**

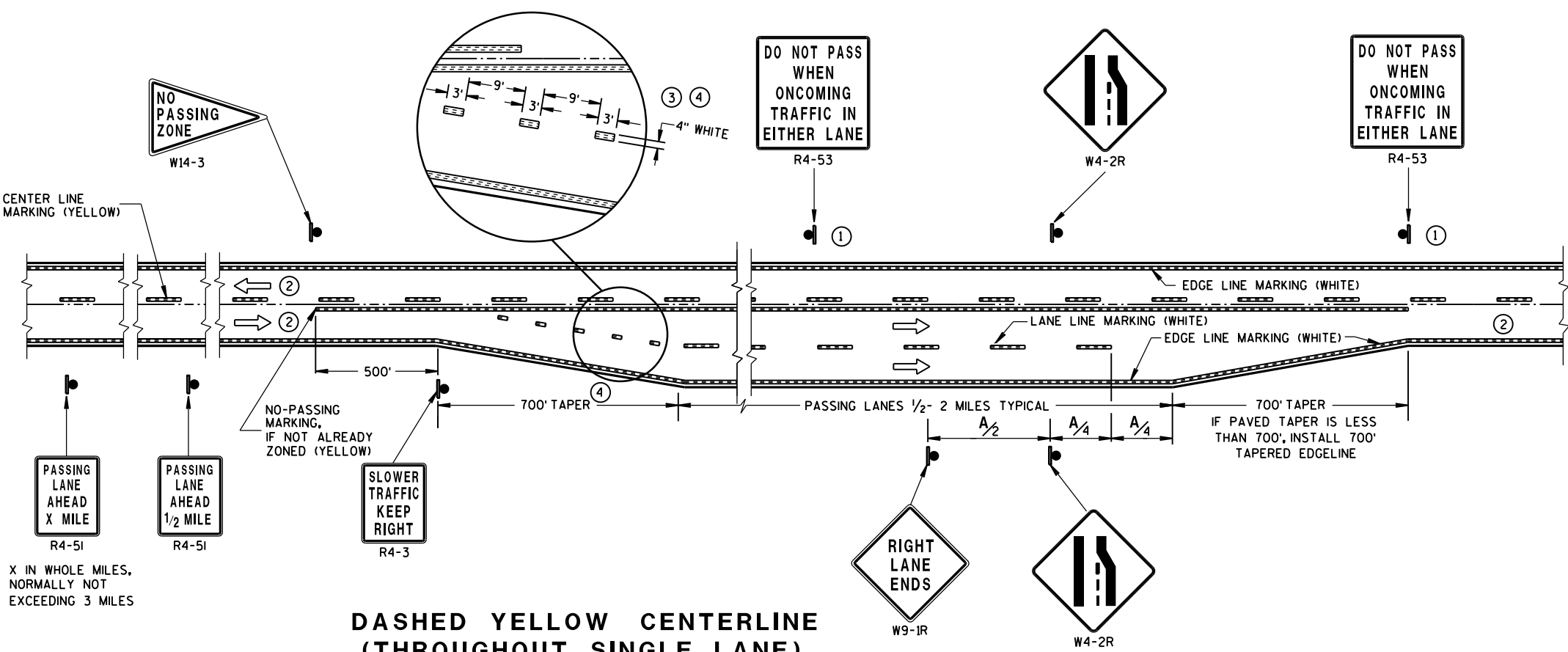
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE &
PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

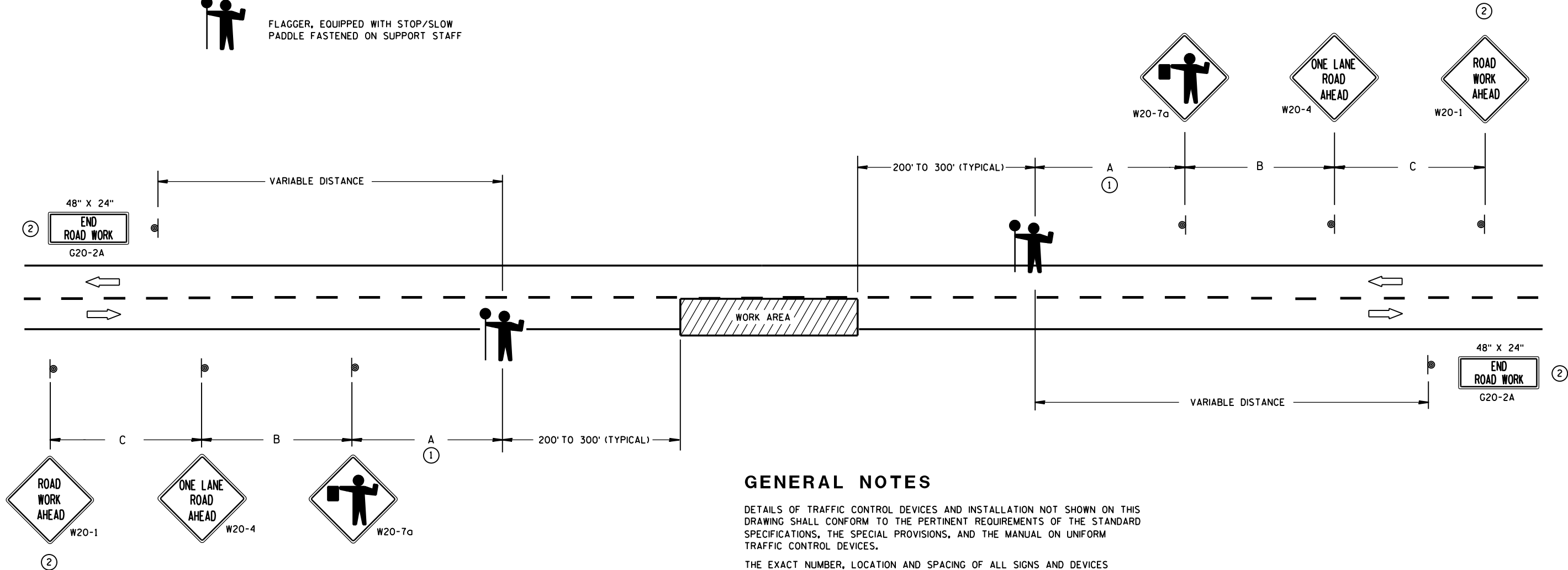
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

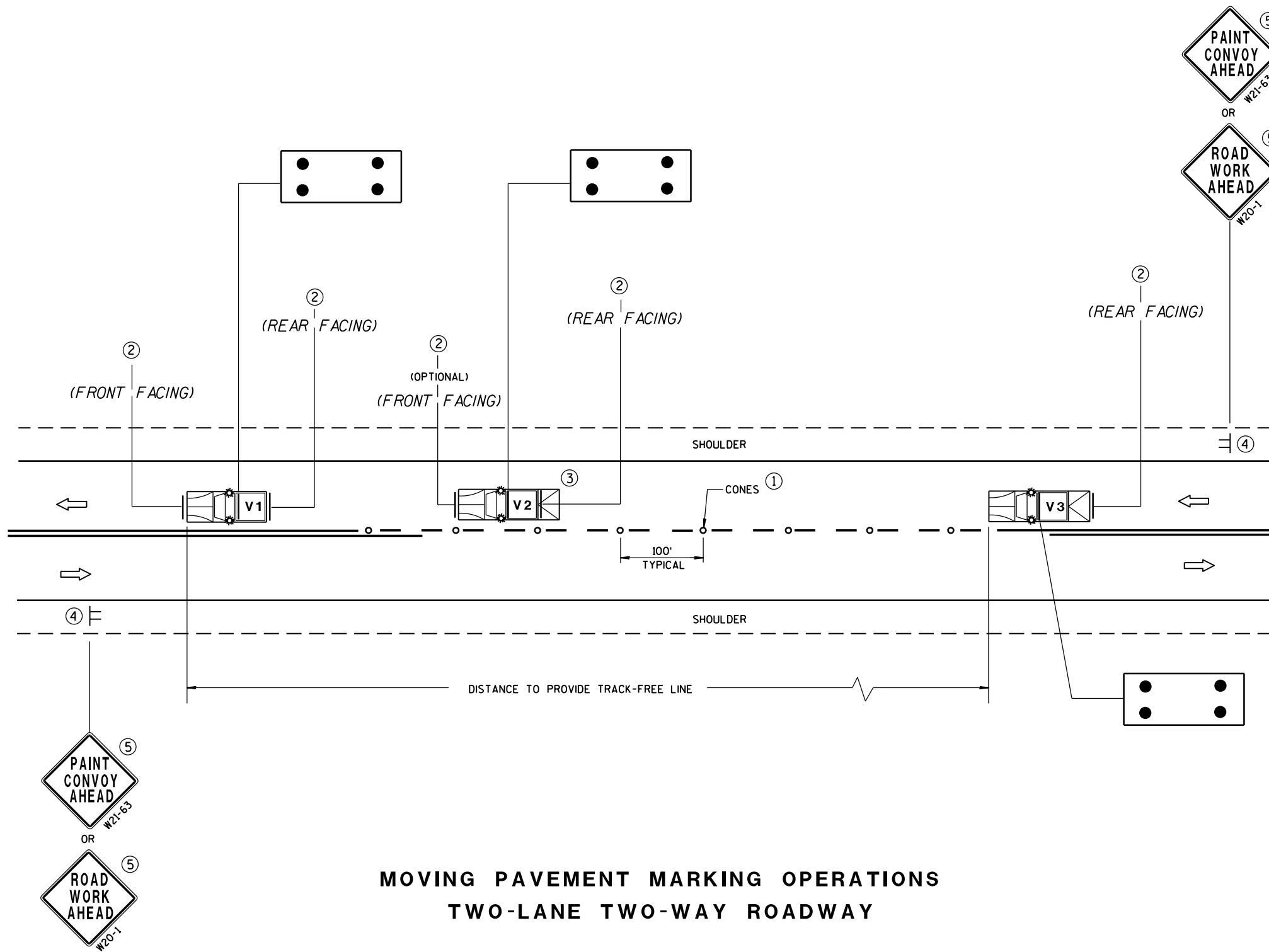
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE
CLOSURE (SUITABLE FOR
MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

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

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

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

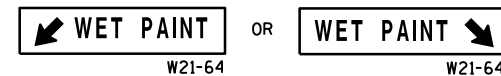
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGE LINE MARKING.

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

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

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

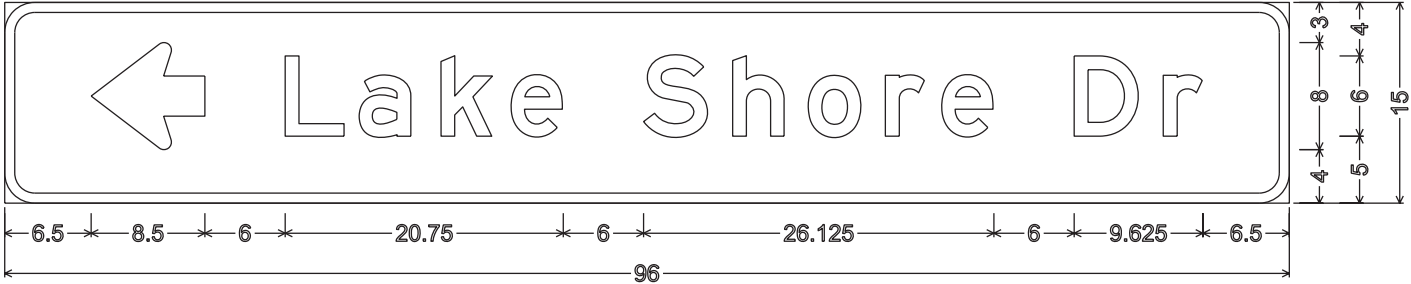
APPROVED

5/3/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

7



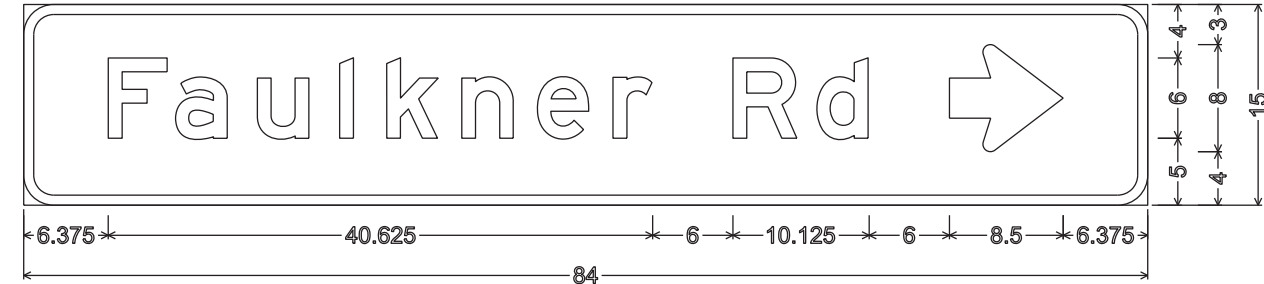
2.250" Radius, 0.750" Border,



2.250" Radius, 0.750" Border,



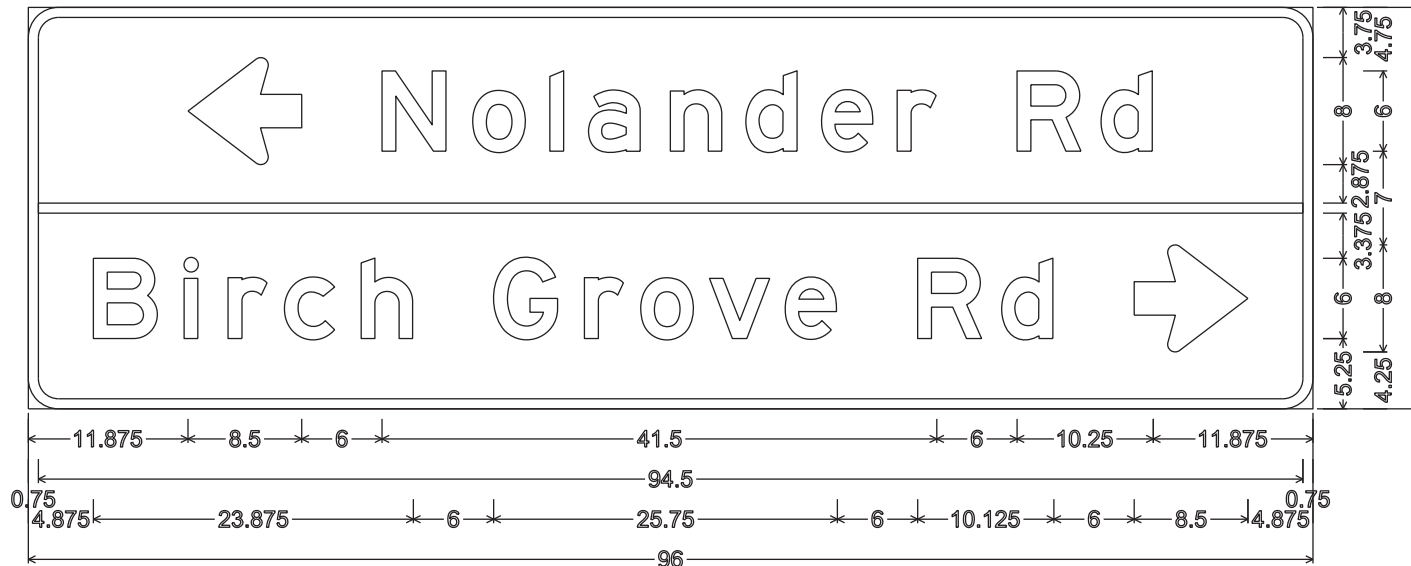
2.250" Radius, 0.750" Border,



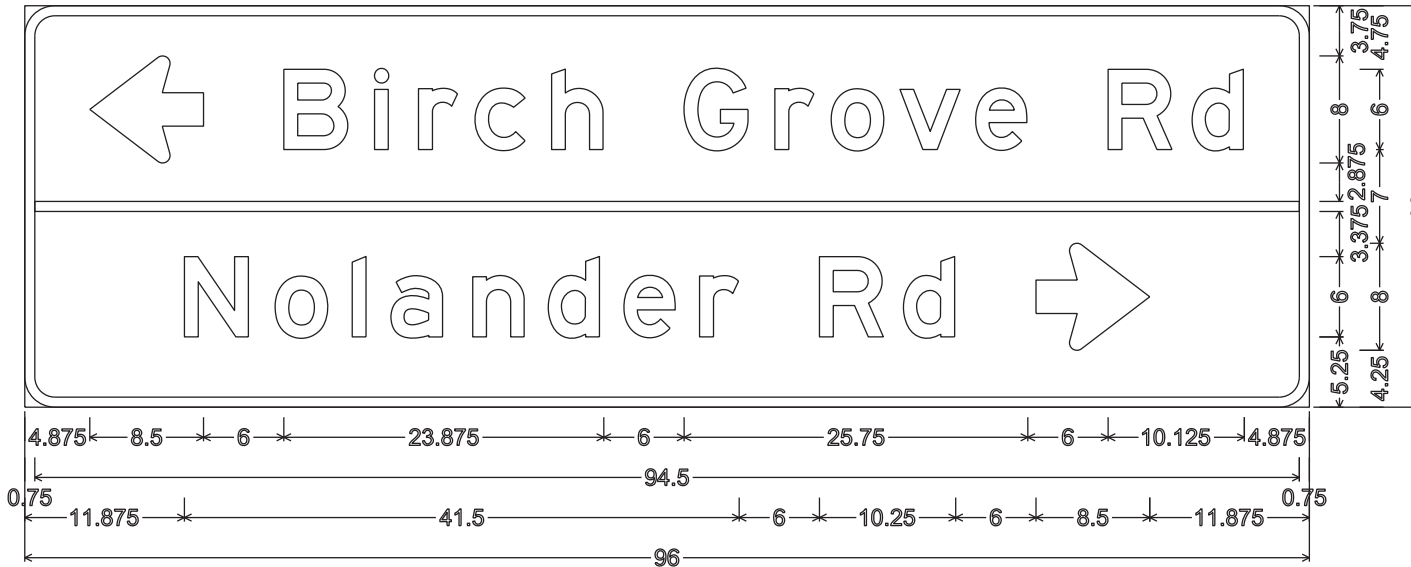
2.250" Radius, 0.750" Border,

NOTES

- 1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Green
Message - White
- 3. Message Series - E



2.250" Radius, 0.750" Border,

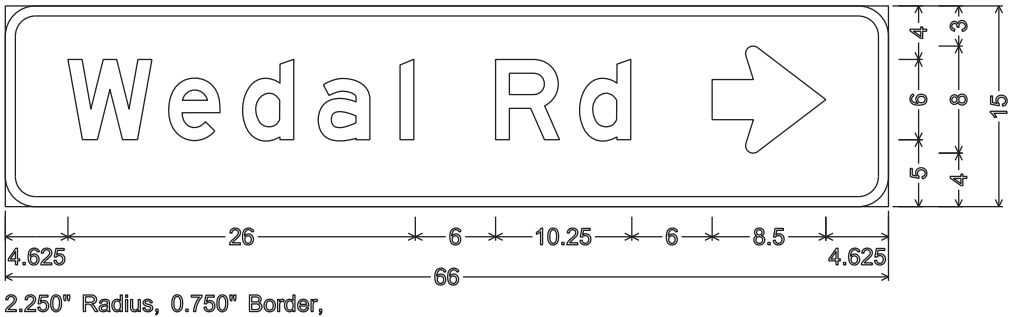
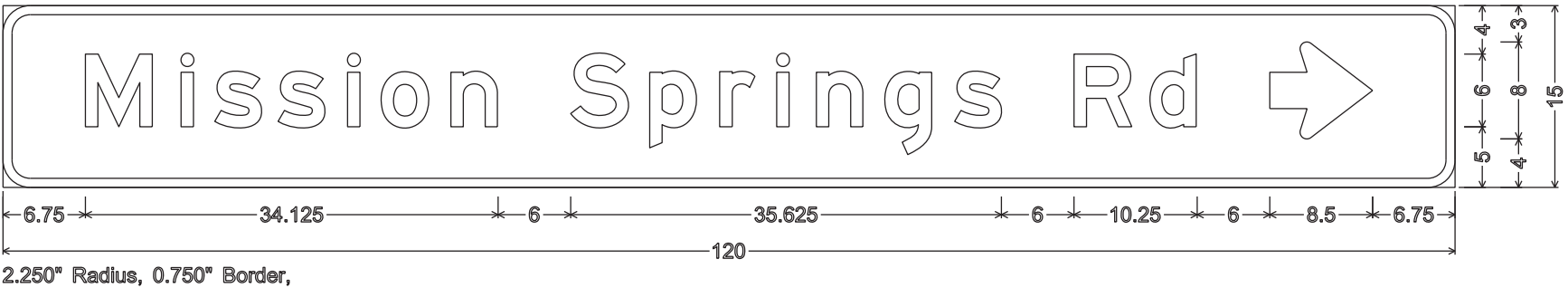
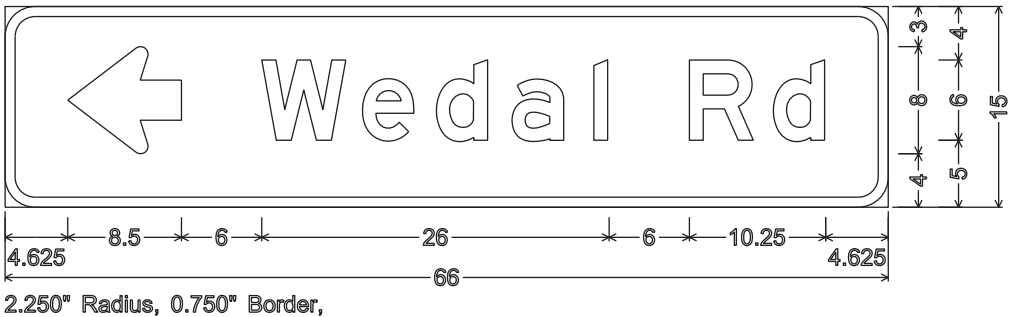
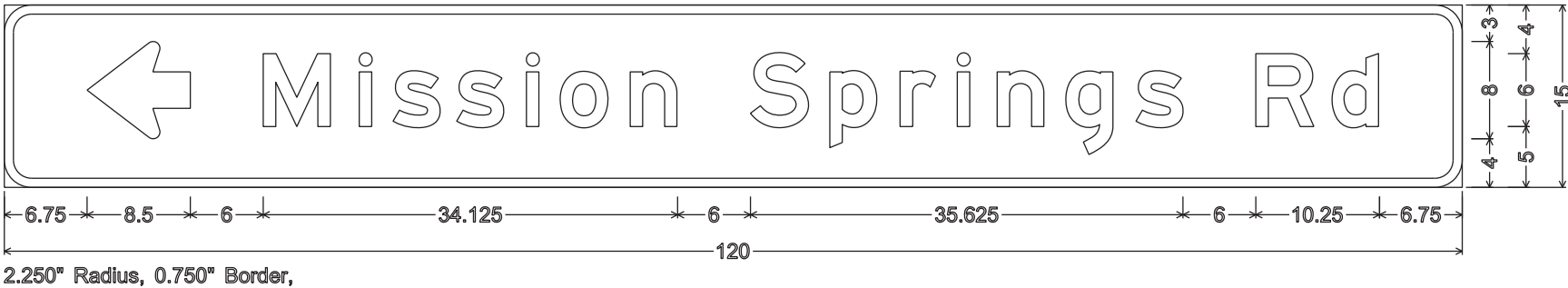
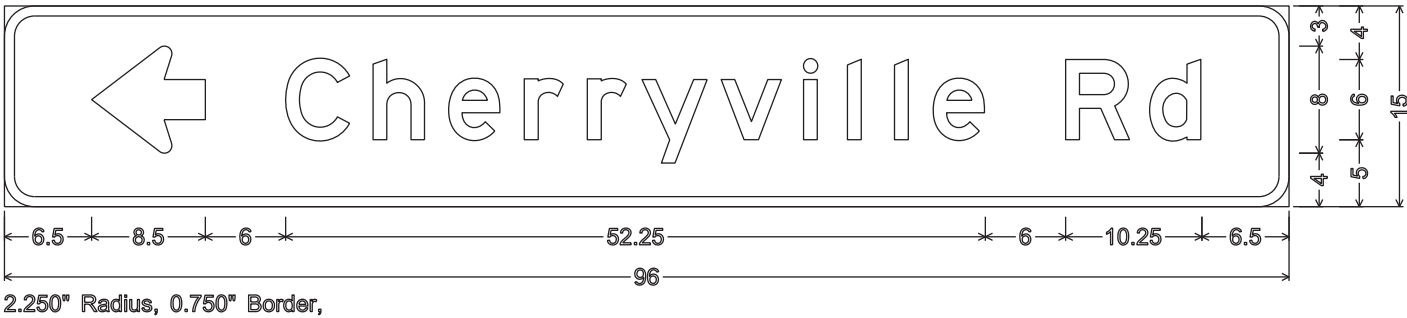
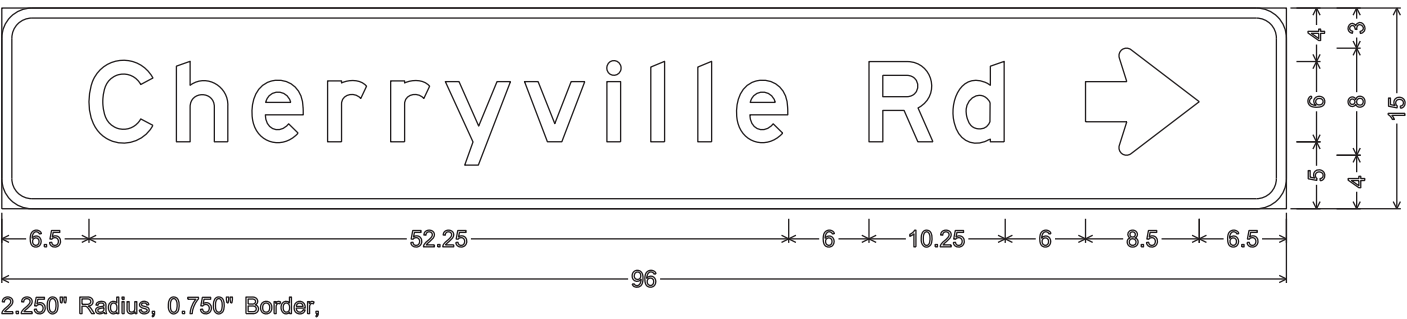
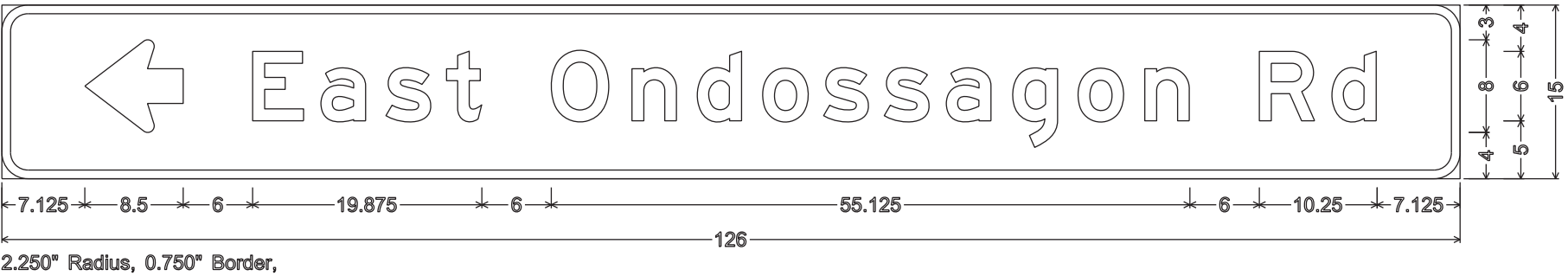
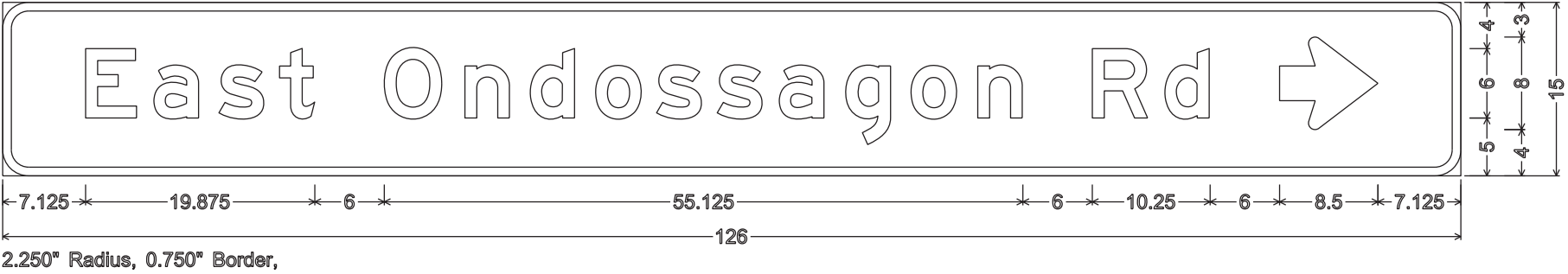


2.250" Radius, 0.750" Border,

7

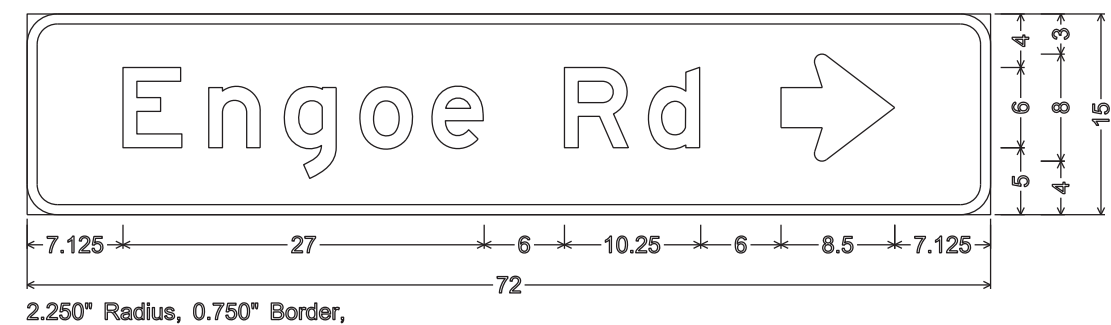
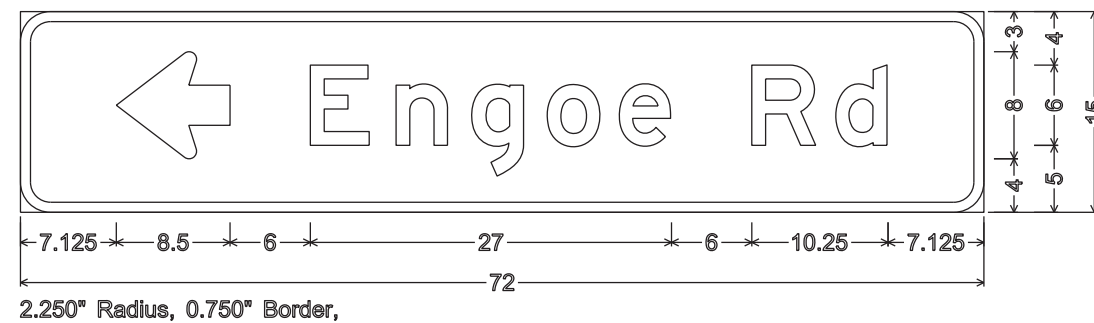
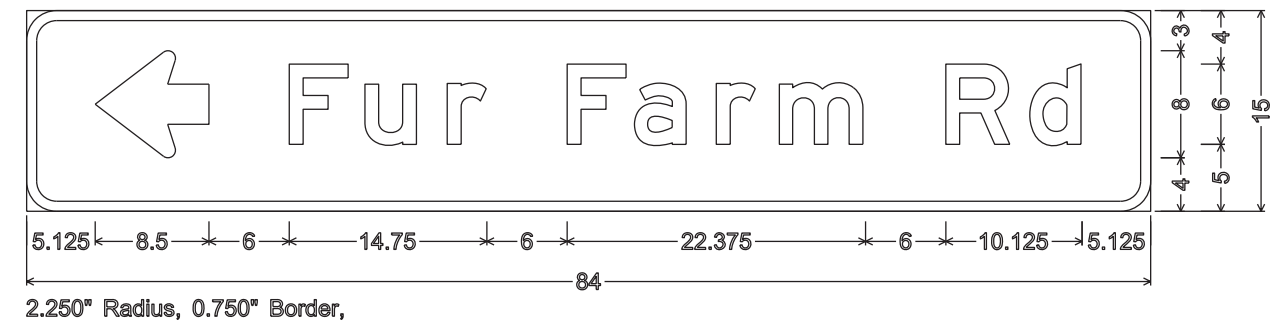
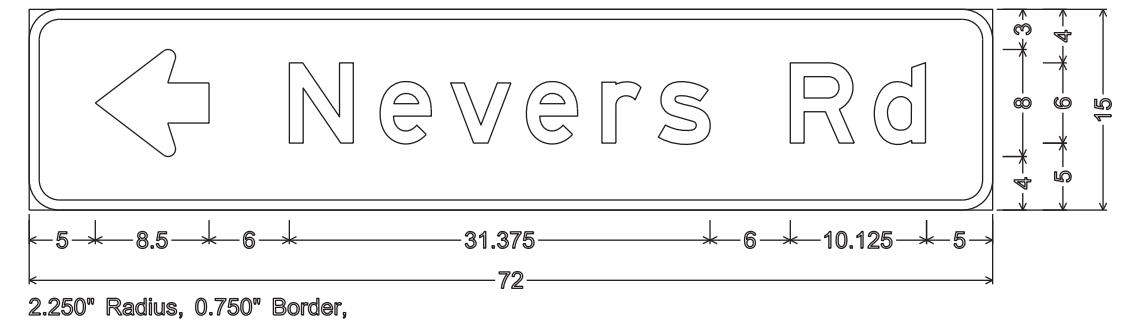
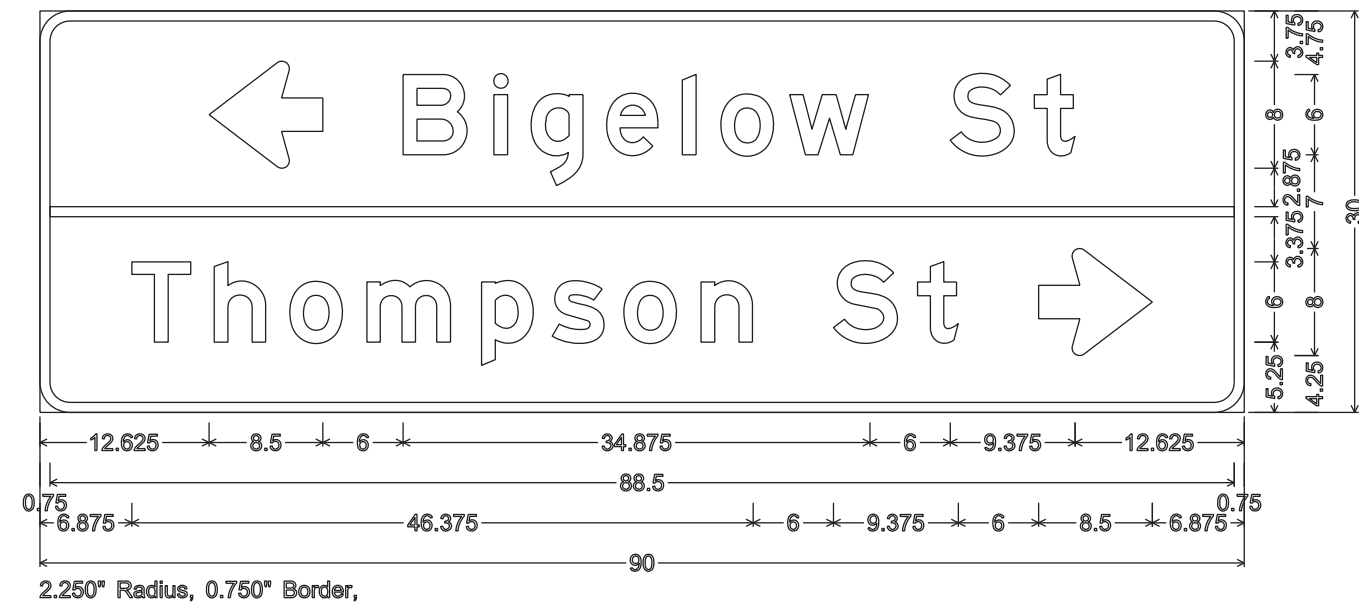
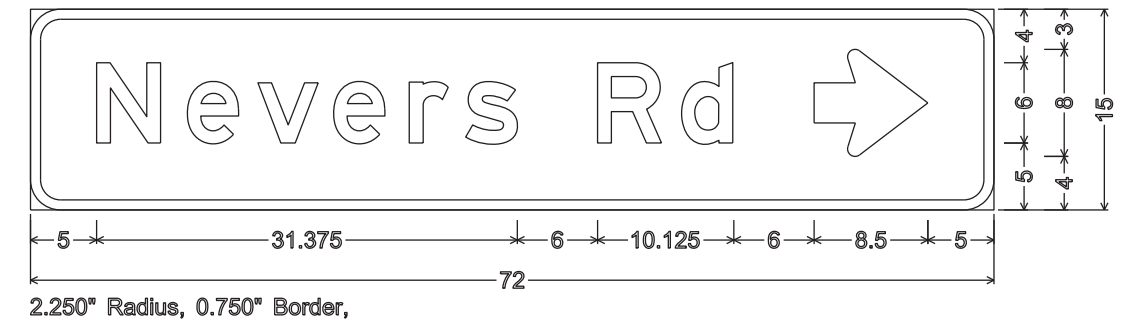
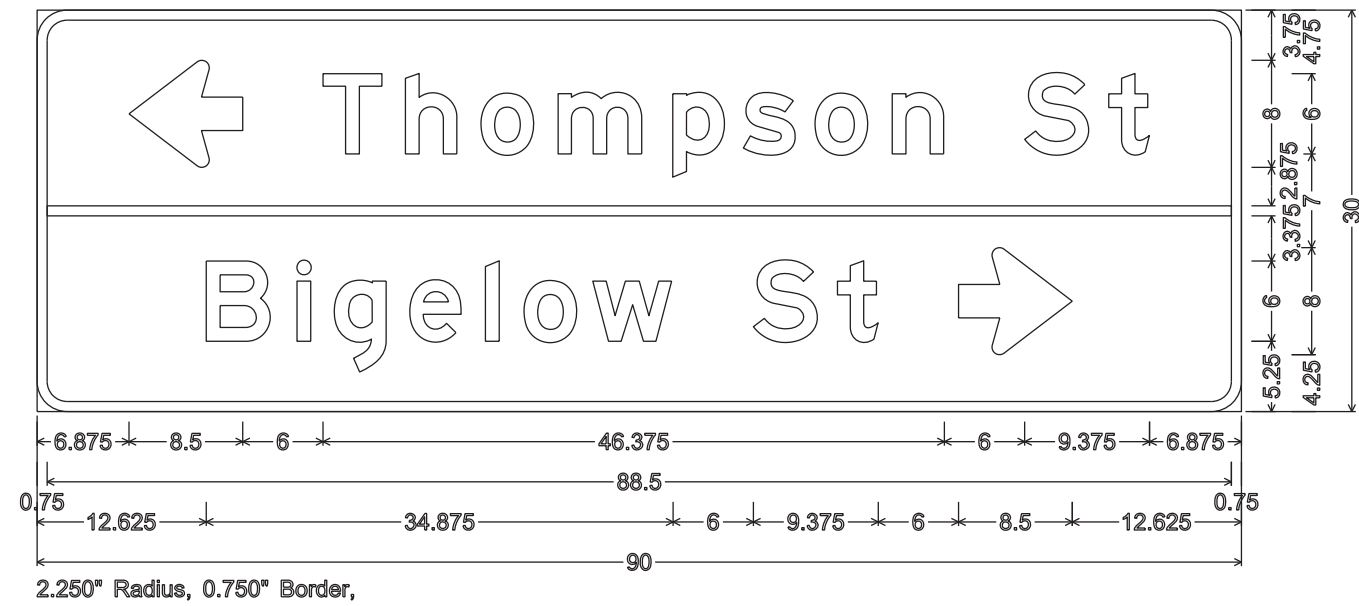
NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E



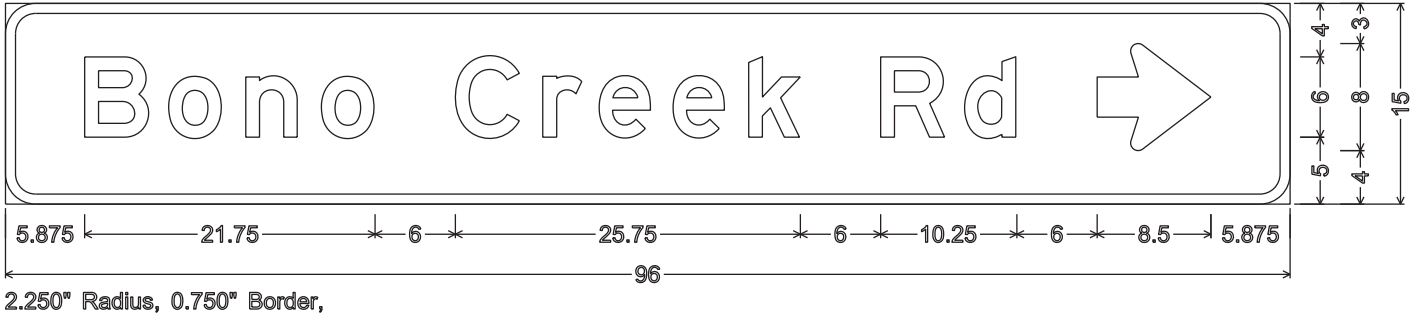
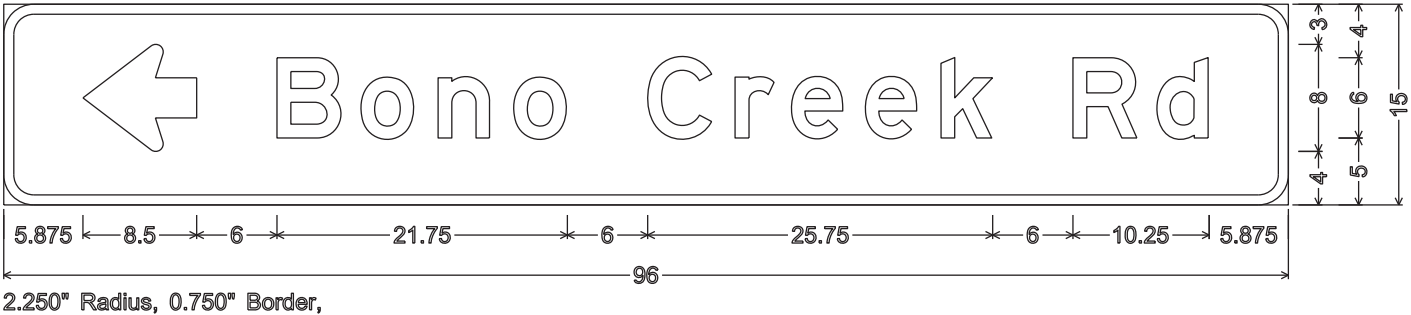
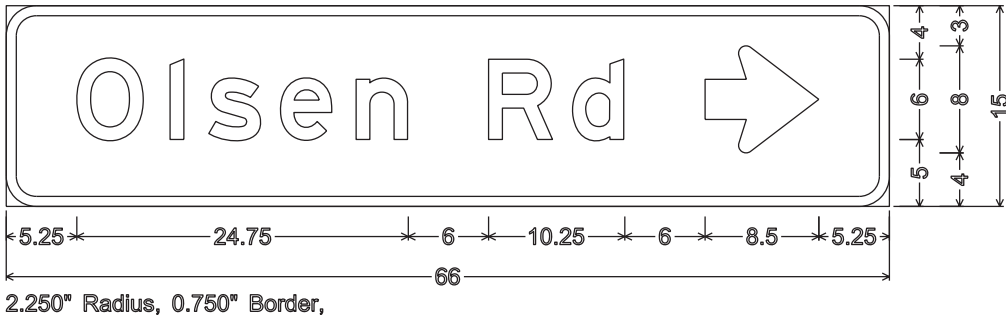
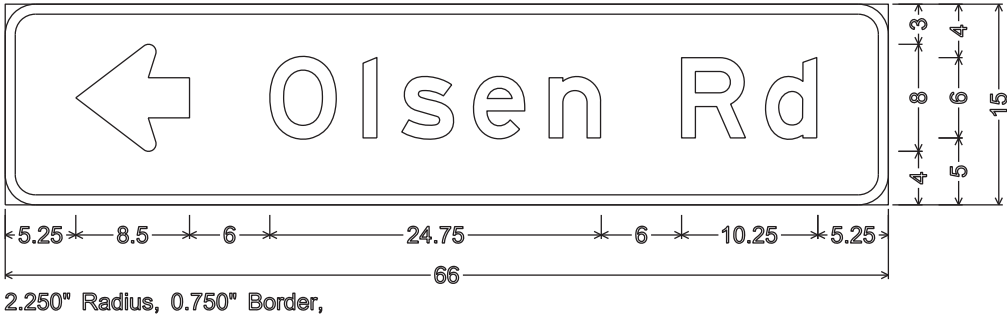
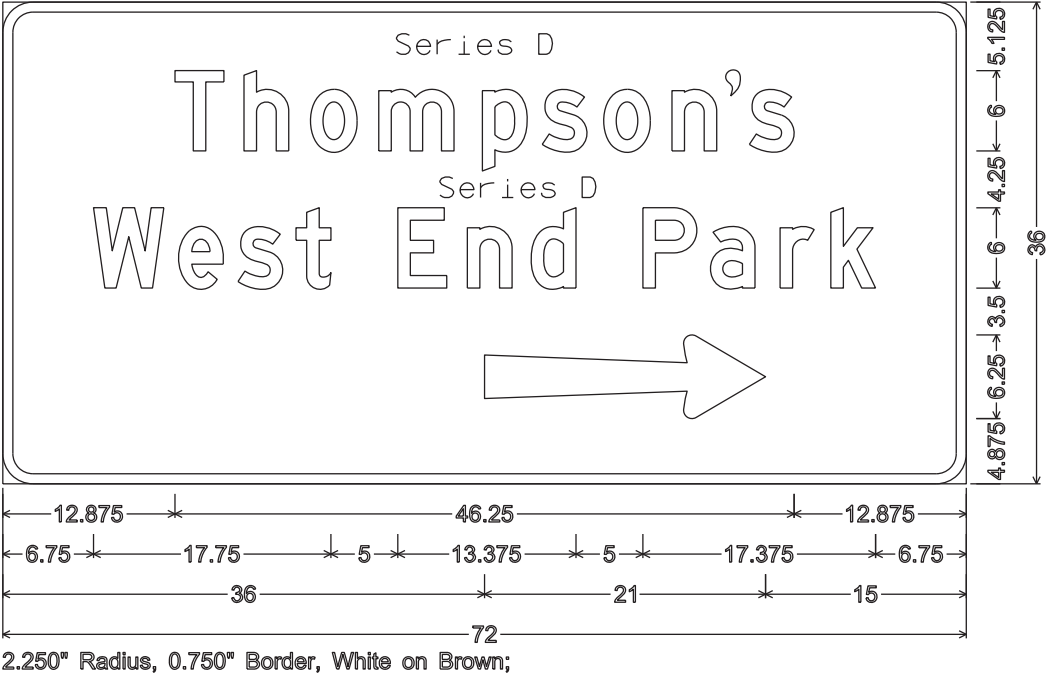
NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E

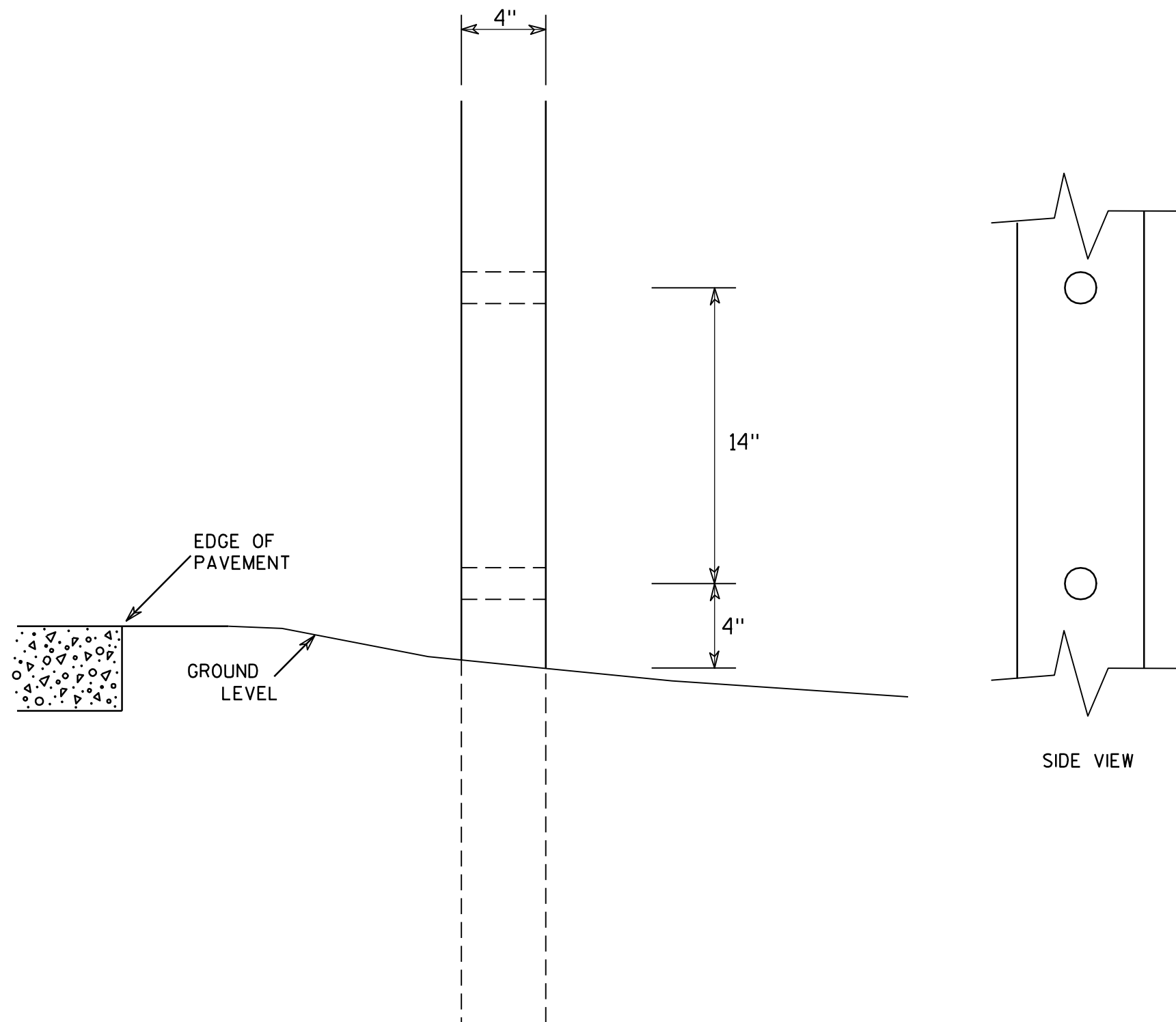


NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green except as noted
Message - White
3. Message Series - E except as noted



7



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

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:

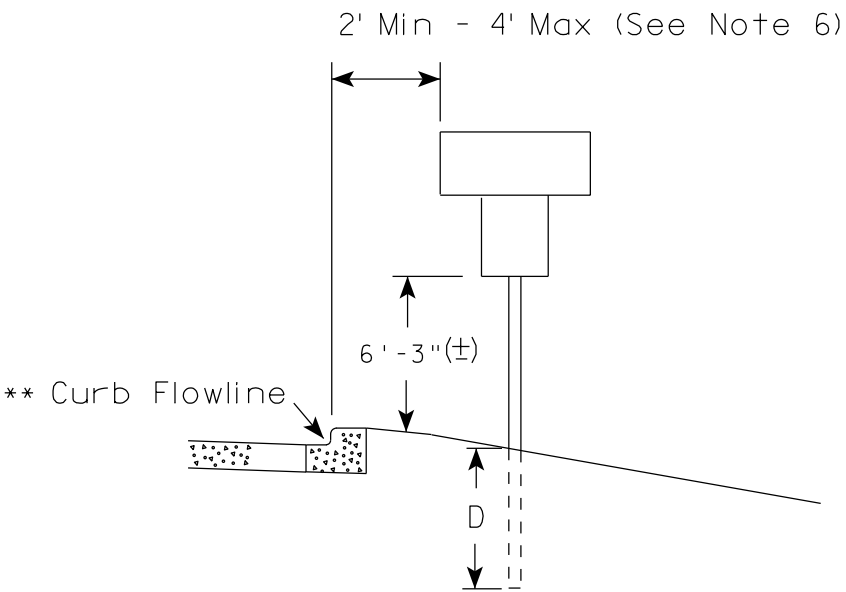
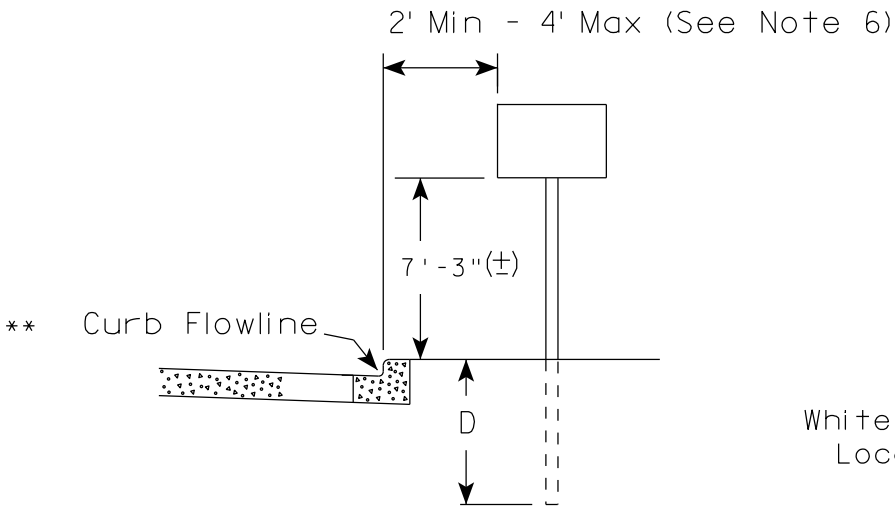
HWY:

COUNTY:

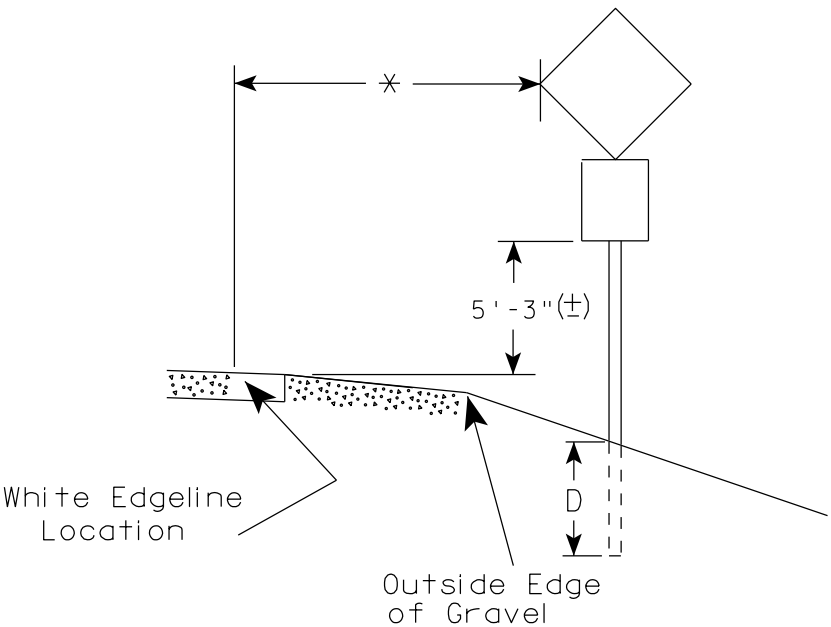
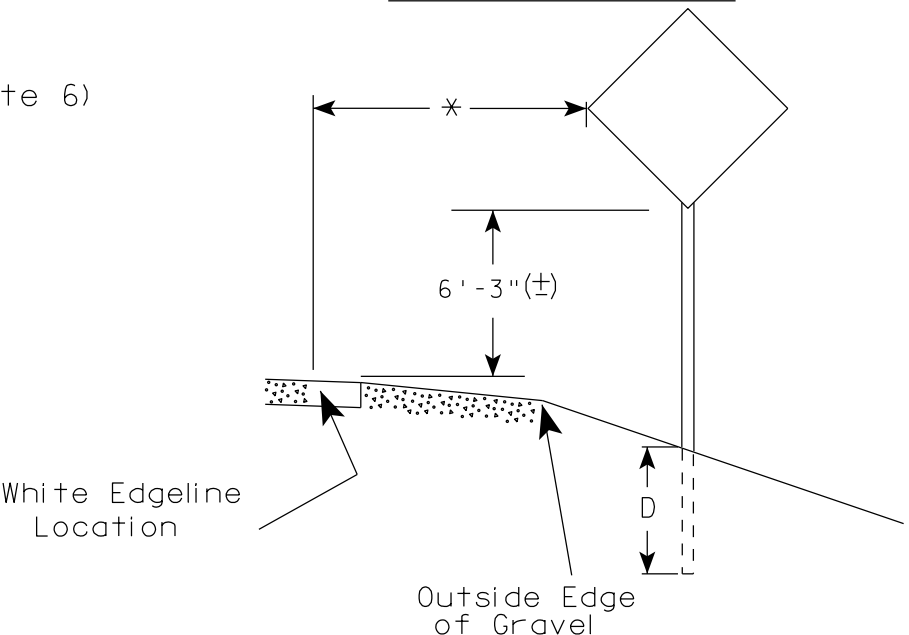
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet, 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 (A4-5) 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

×× 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.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

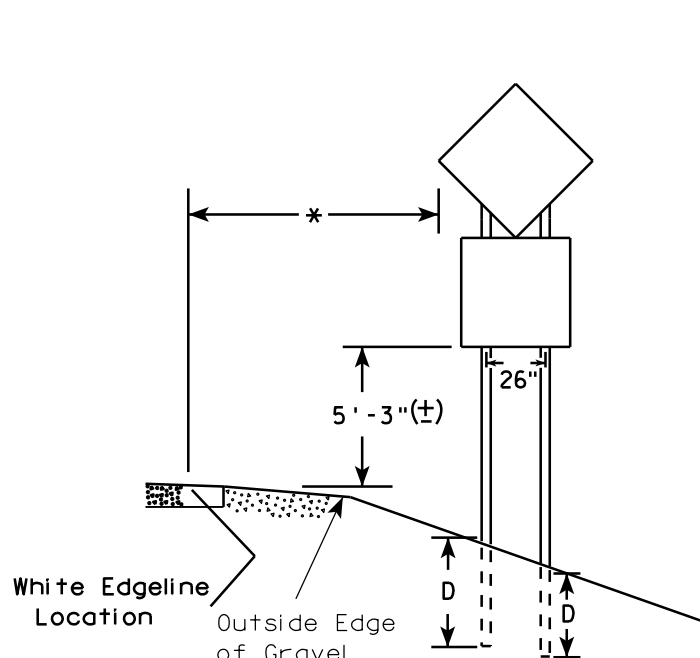
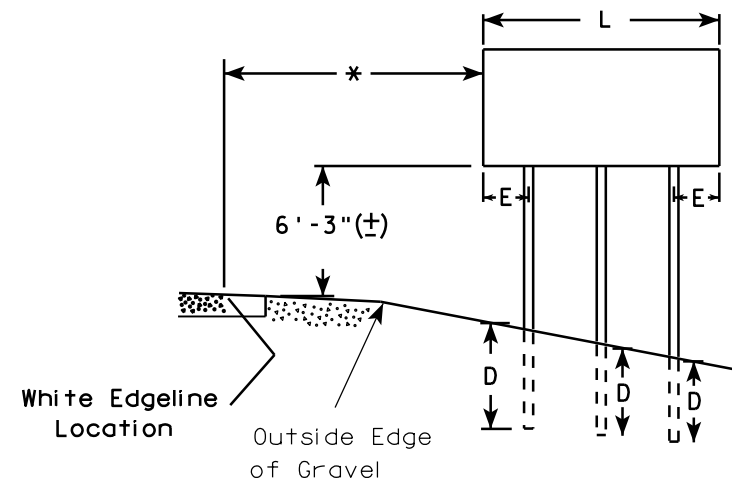
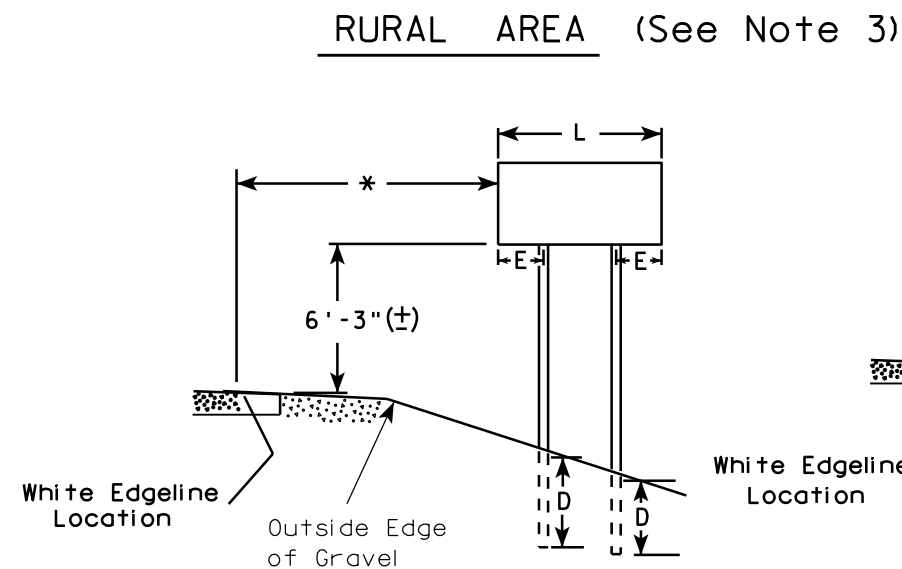
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

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" ($\pm$) or 6'-3" ($\pm$) depending upon existence of sub-sign.
4. The ($\pm$) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" ($\pm$) or 6'-3" ($\pm$) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" ($\pm$) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" ($\pm$). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" ($\pm$).

* * 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 or 20 S.F.
or less in area.



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

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

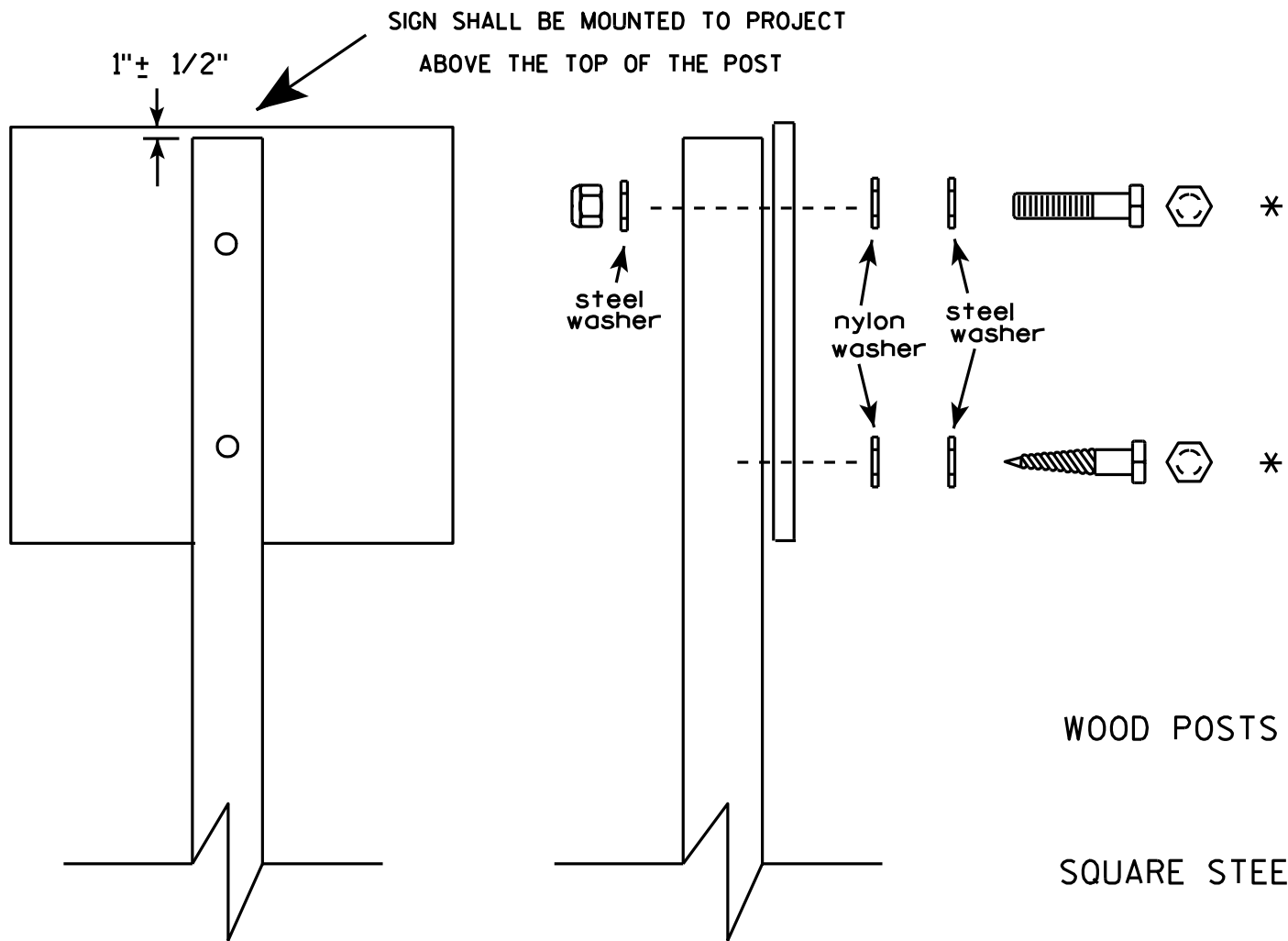
POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4.12

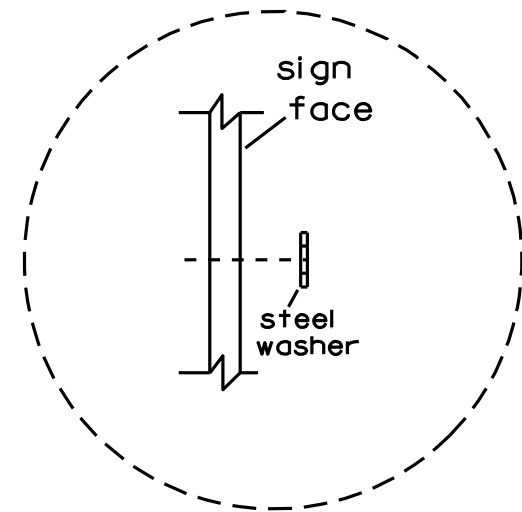


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

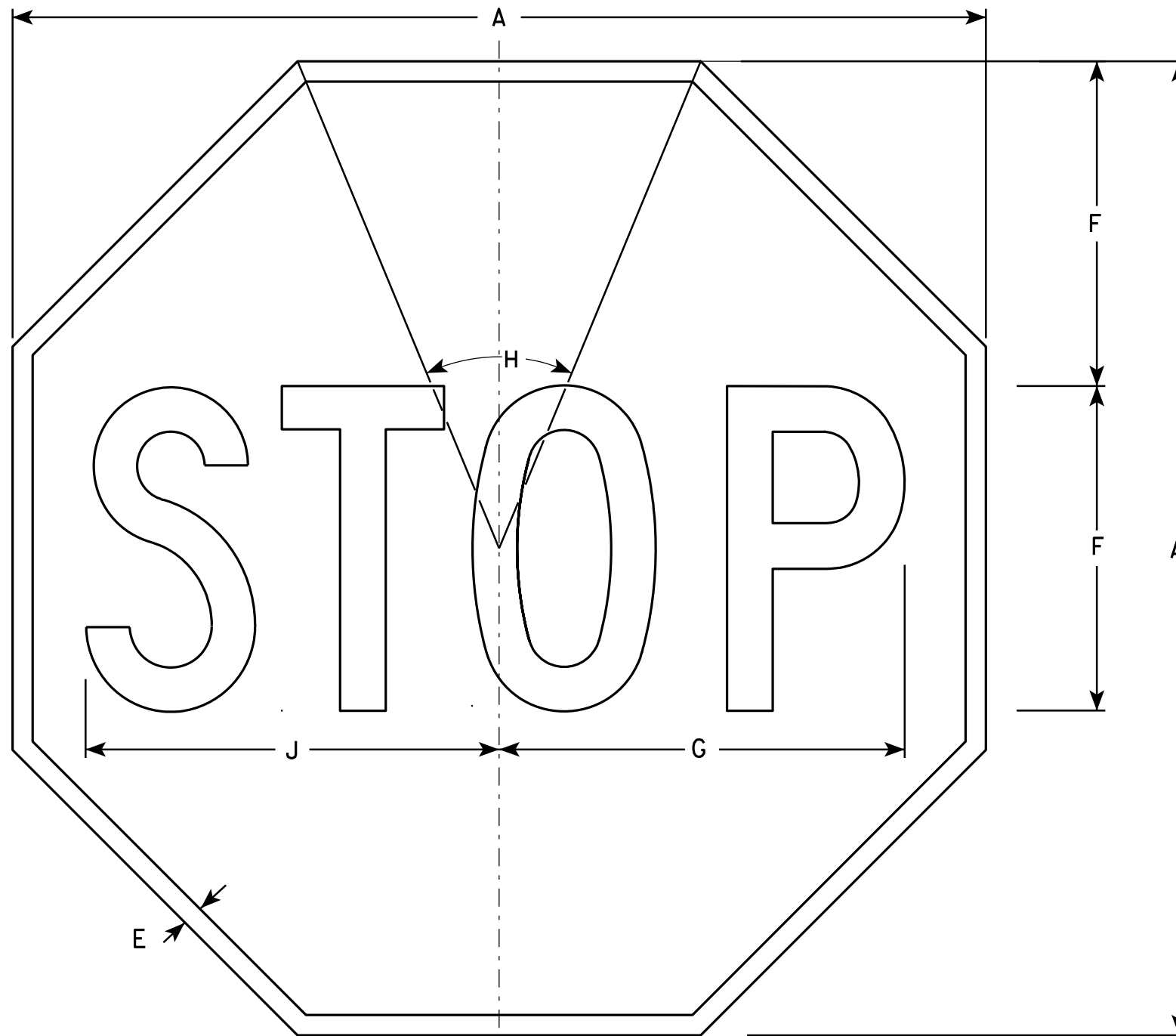
- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7



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

R1-1

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				3/8	8	10	45°		10 1/4																	3.31
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

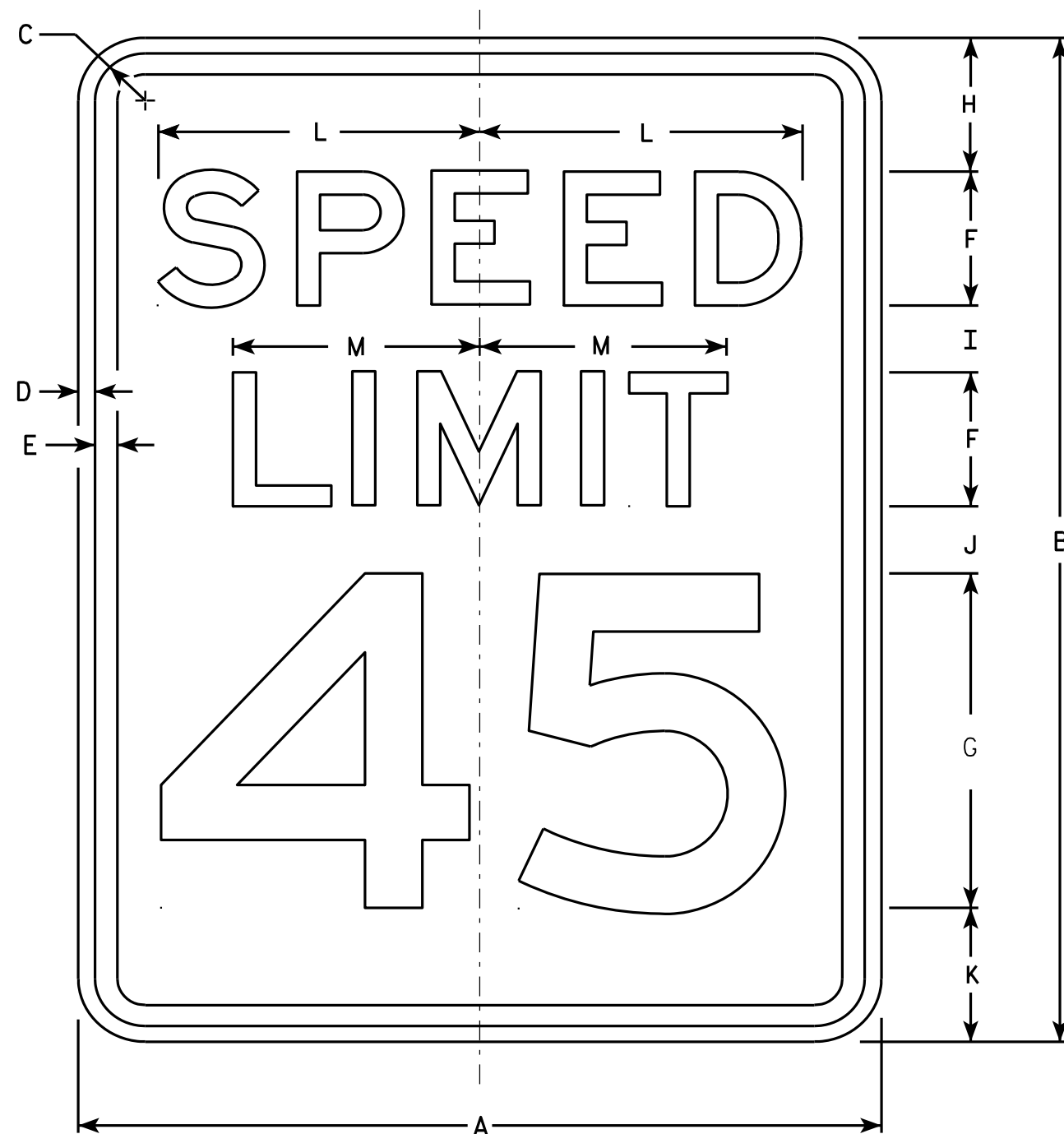
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



R2-1

NOTES

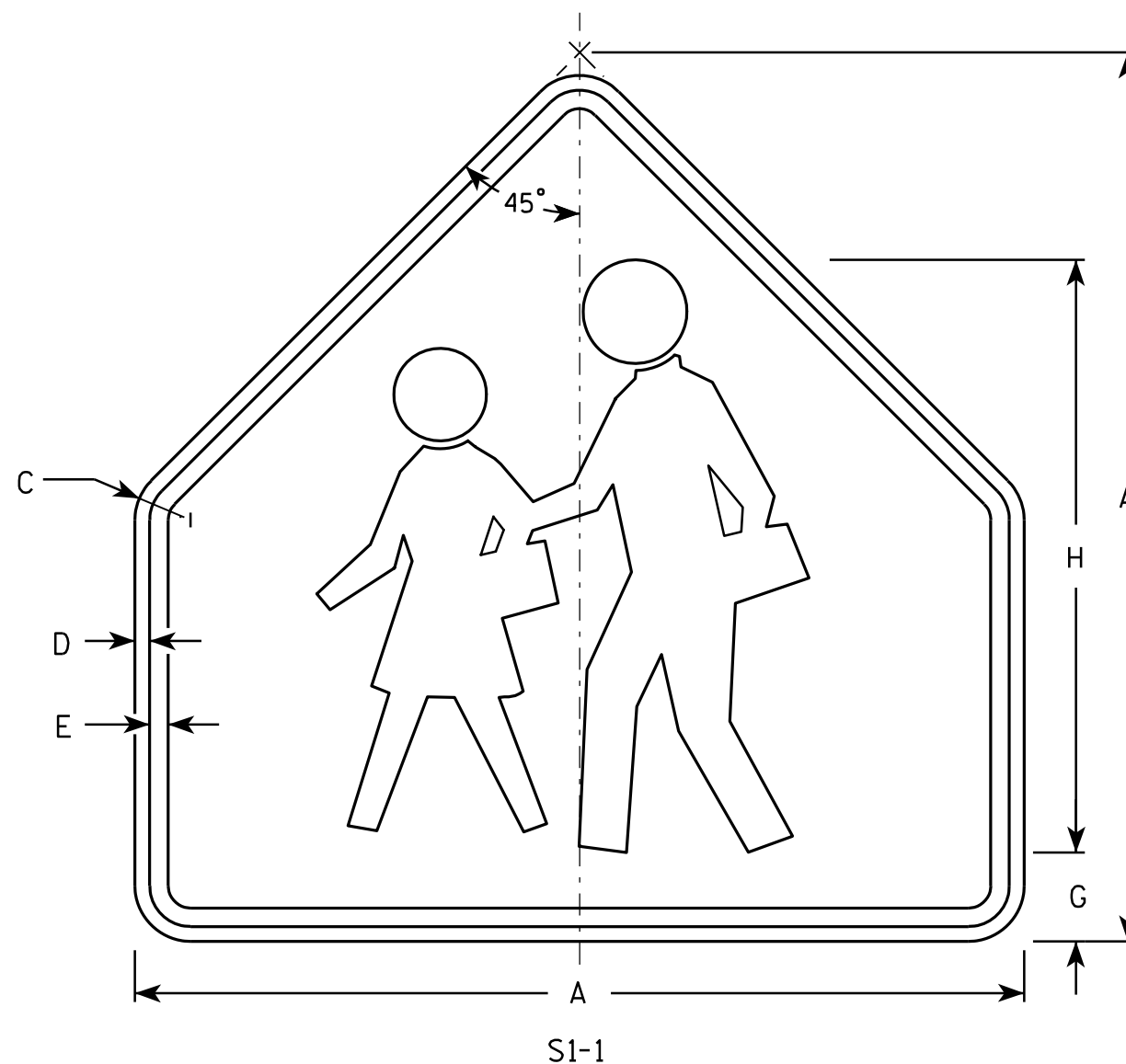
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as 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: 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-Green
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		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

STANDARD SIGN S1-1

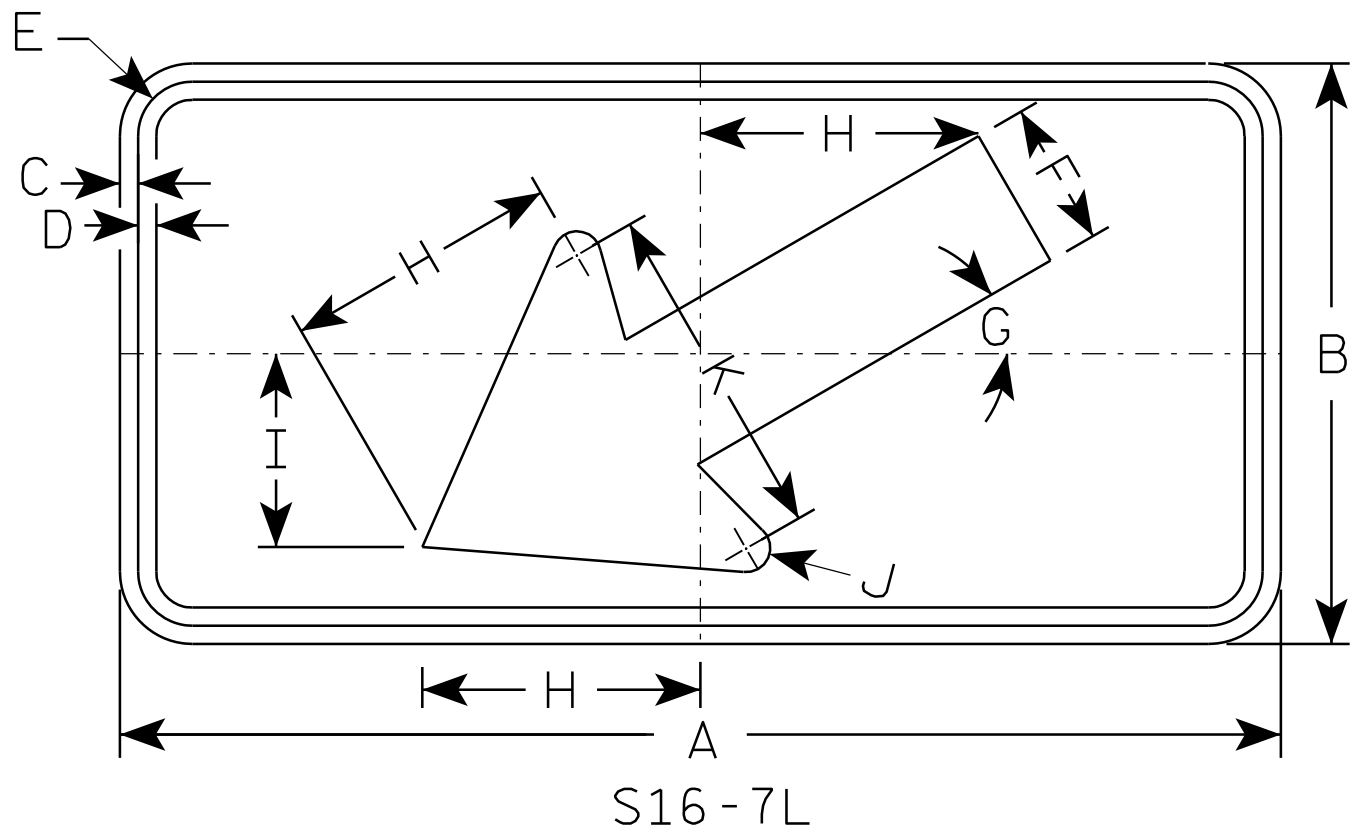
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ 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-Green
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. S16-7R are the same as
S16-7L except the arrow is reversed along
the vertical centerline.

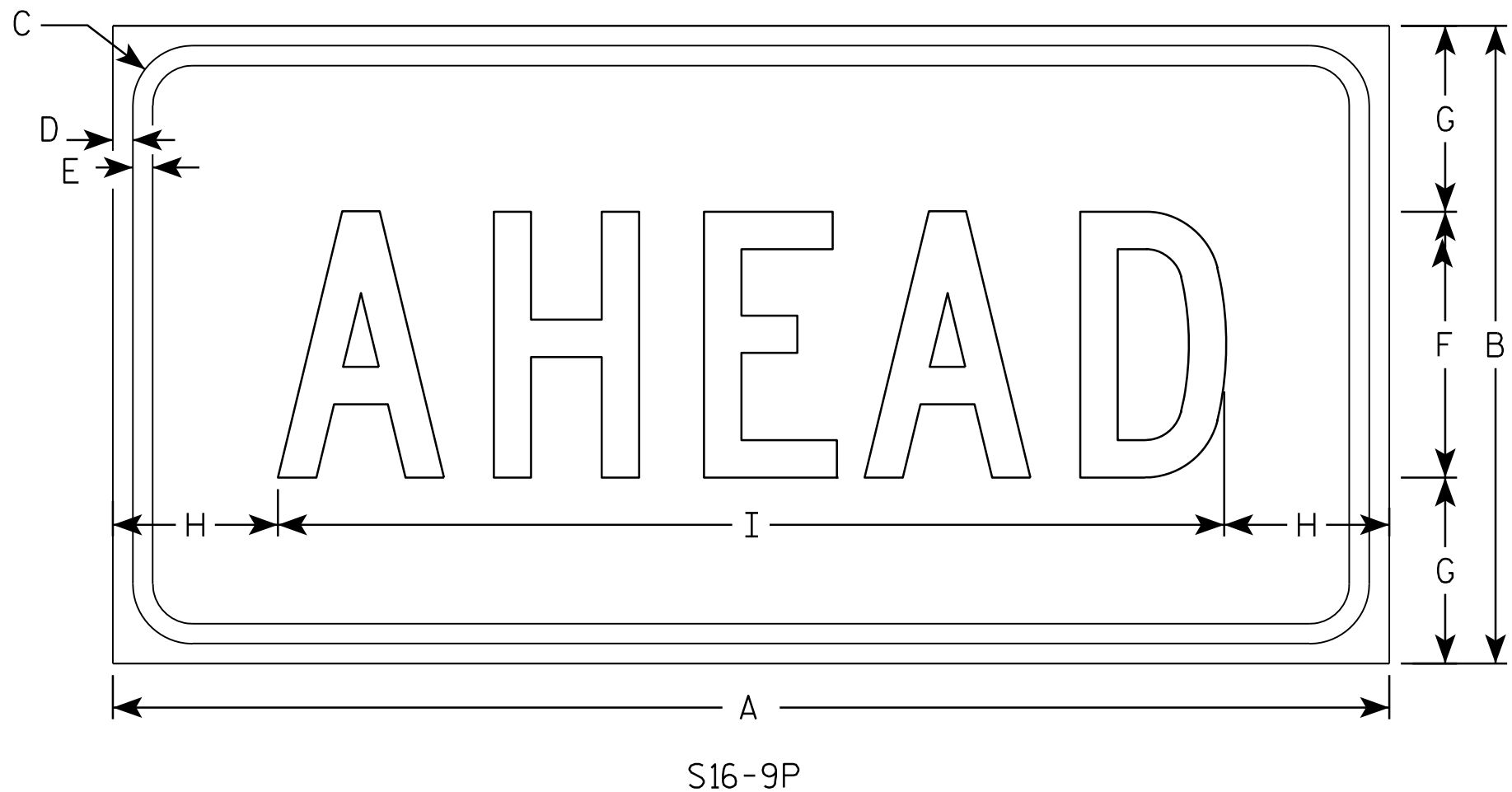


S16 - 7L

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	12	$\frac{3}{8}$	$\frac{3}{8}$	$1 \frac{1}{8}$	3	30°	$5 \frac{3}{4}$	4	$\frac{1}{2}$	7																2.0
2S	30	18	$\frac{3}{8}$	$\frac{1}{2}$	$1 \frac{1}{8}$	$4 \frac{1}{2}$	30°	$8 \frac{1}{2}$	6	$\frac{5}{8}$	$10 \frac{1}{4}$																3.75
2M	30	18	$\frac{3}{8}$	$\frac{1}{2}$	$1 \frac{1}{8}$	$4 \frac{1}{2}$	30°	$8 \frac{1}{2}$	6	$\frac{5}{8}$	$10 \frac{1}{4}$																3.75
3	30	18	$\frac{3}{8}$	$\frac{1}{2}$	$1 \frac{1}{8}$	$4 \frac{1}{2}$	30°	$8 \frac{1}{2}$	6	$\frac{5}{8}$	$10 \frac{1}{4}$																3.75
4	48	24	$\frac{1}{2}$	$\frac{5}{8}$	$1 \frac{3}{8}$	6	30°	$11 \frac{1}{2}$	8	1	14																8.0
5																											

STANDARD SIGN	
S16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/22/13	PLATE NO. S16-7.1

7



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-Green
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.

7

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	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

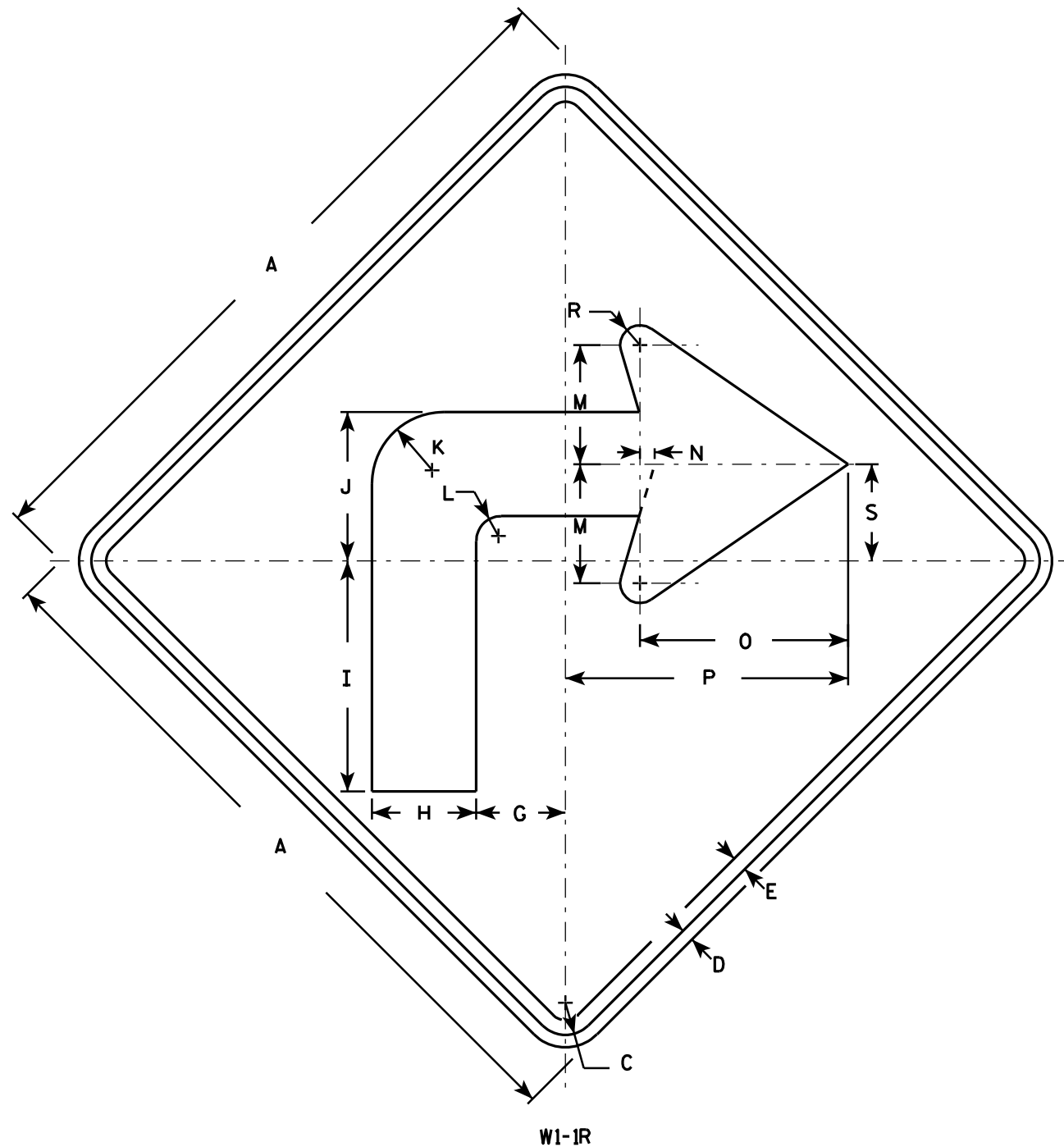
STANDARD SIGN

S16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-9P.1



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- 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.
- W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN

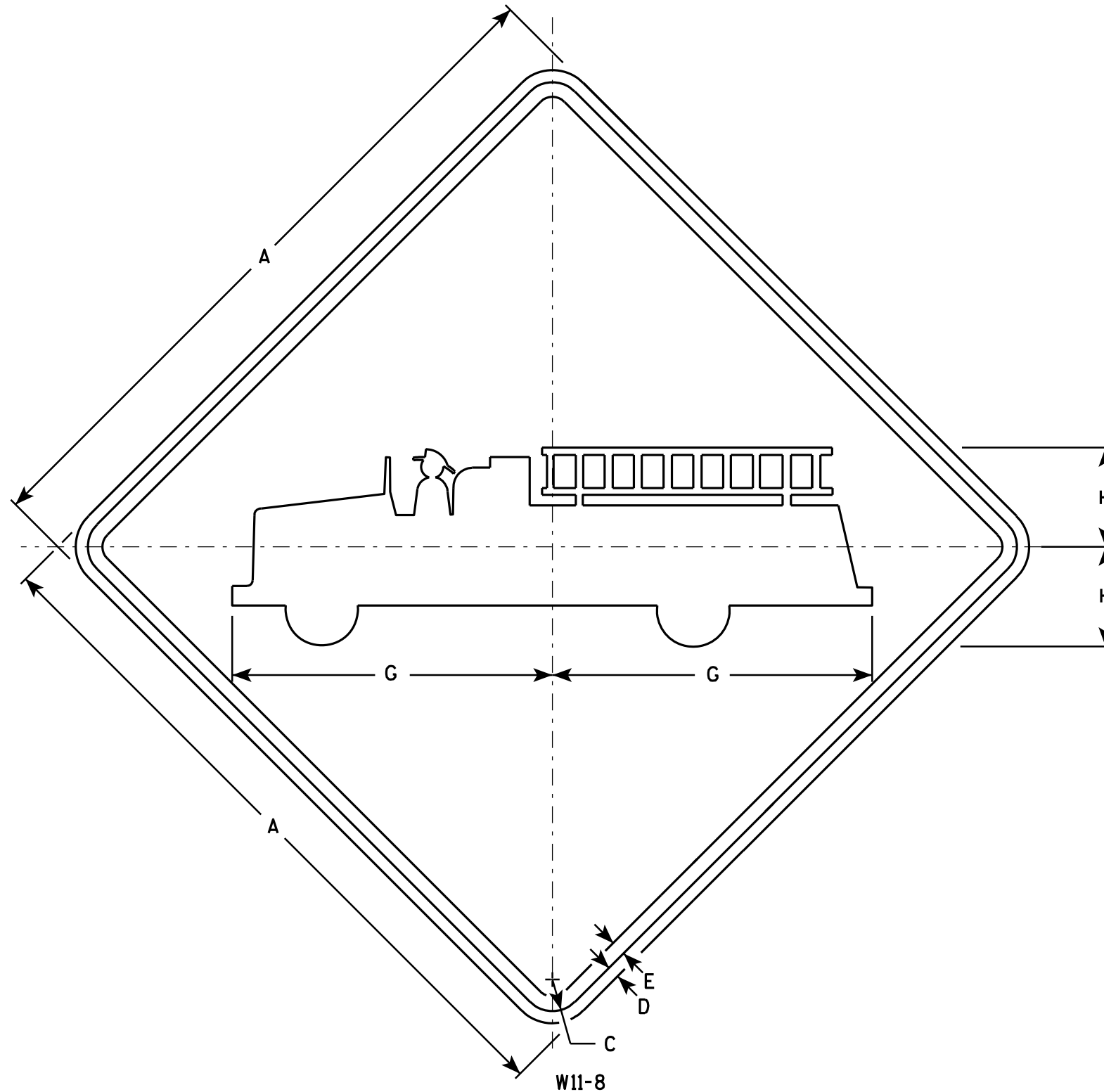
W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

PROJECT NO: HWY: COUNTY: SHEET NO: 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.

W11-8

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		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/13/13 PLATE NO. W11-8.7

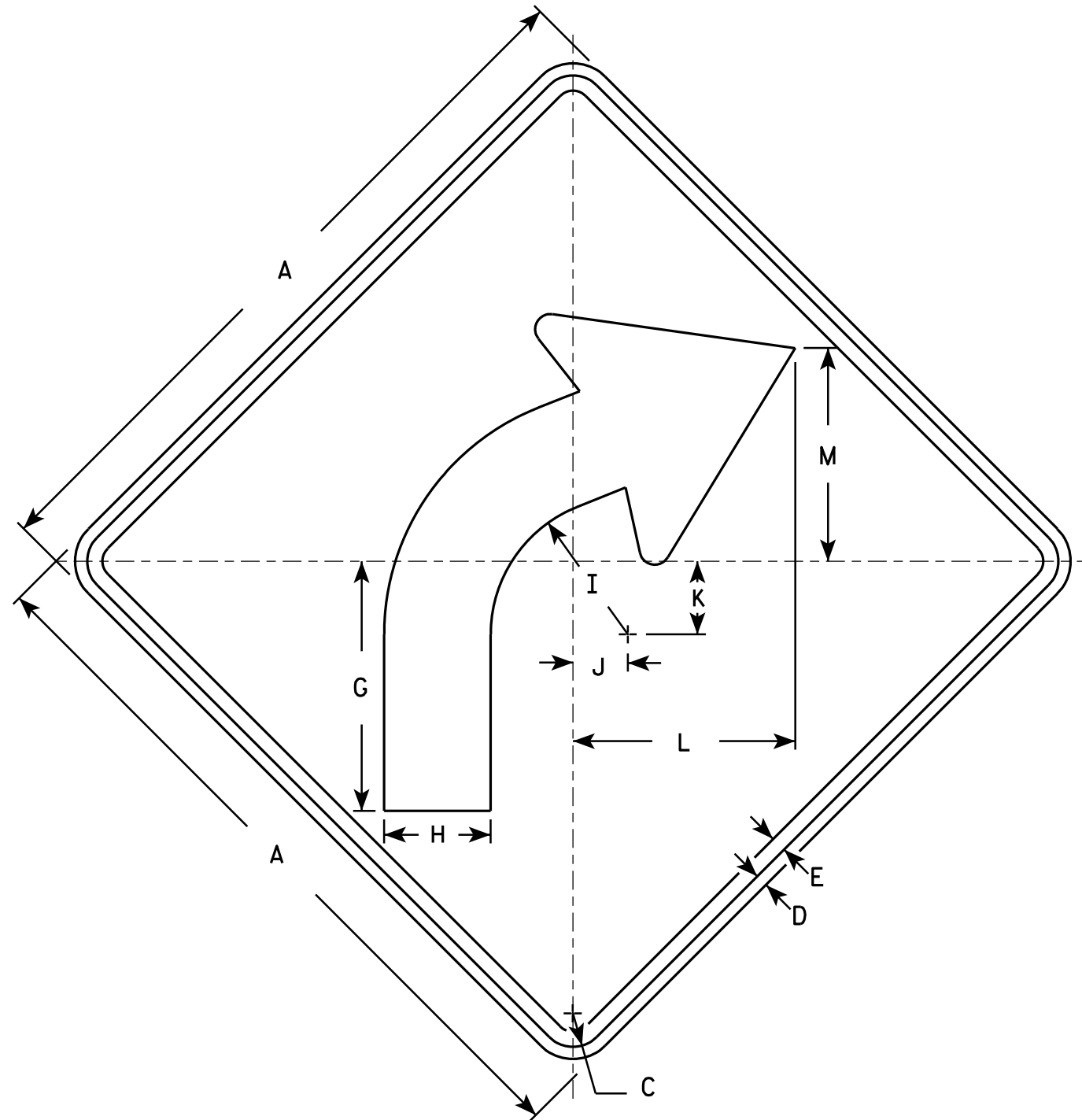
PROJECT NO:

SHEET NO:

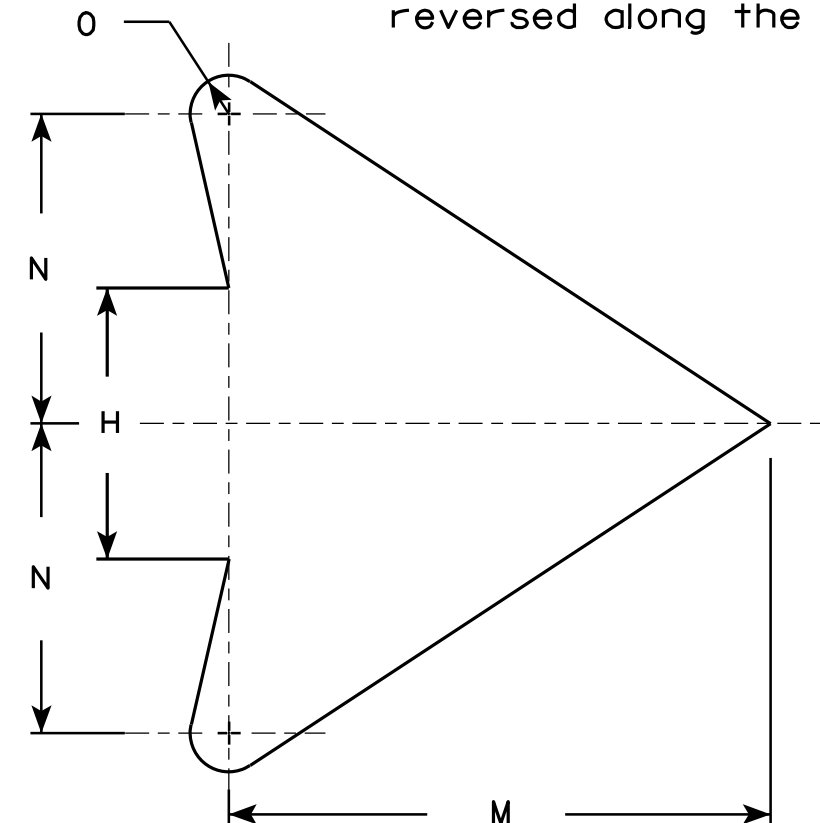
E

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.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



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		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN

W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

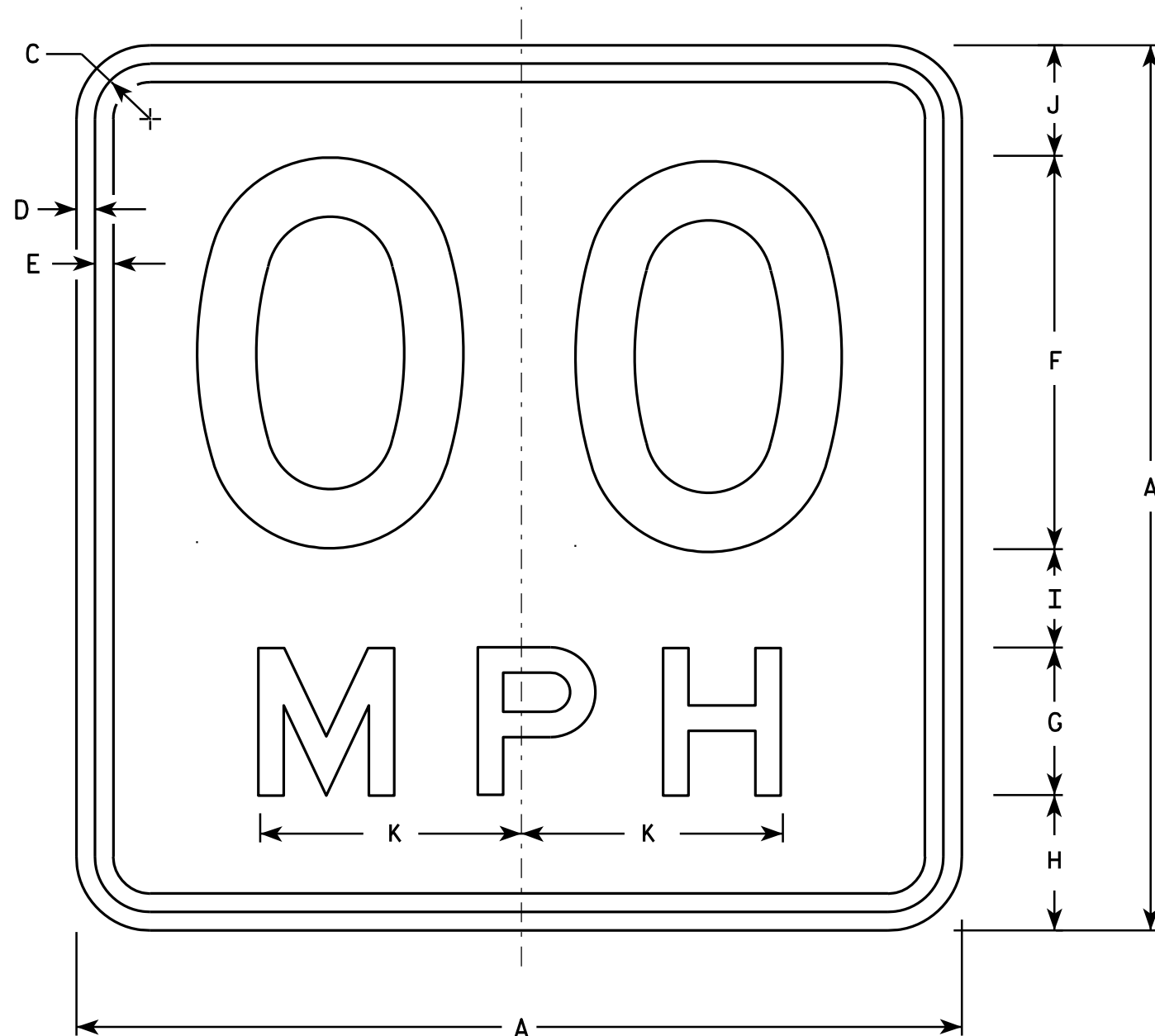
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

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. 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. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

- * For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

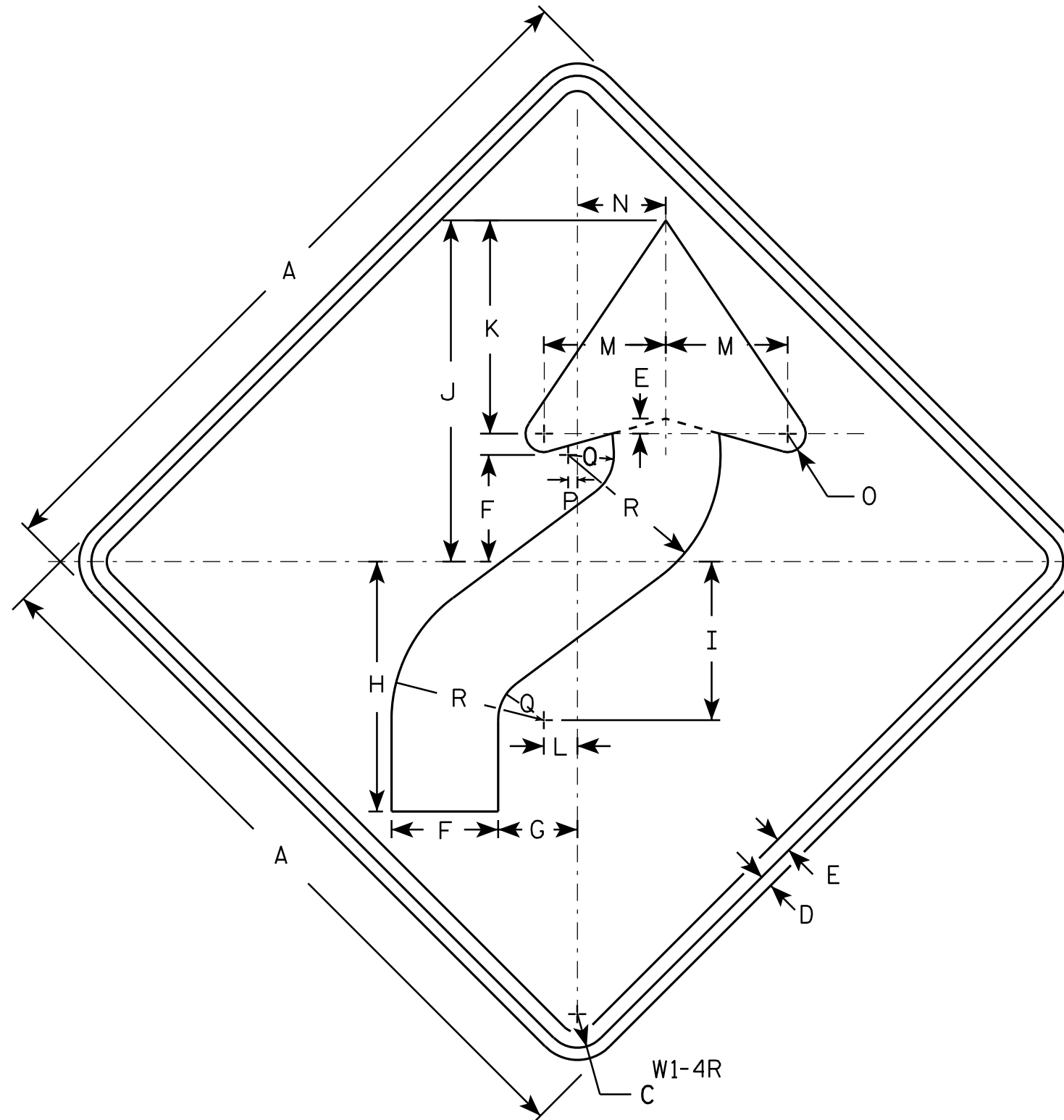
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- 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.
- W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN W1 - 4

WISCONSIN DEPT OF TRANSPORTATION

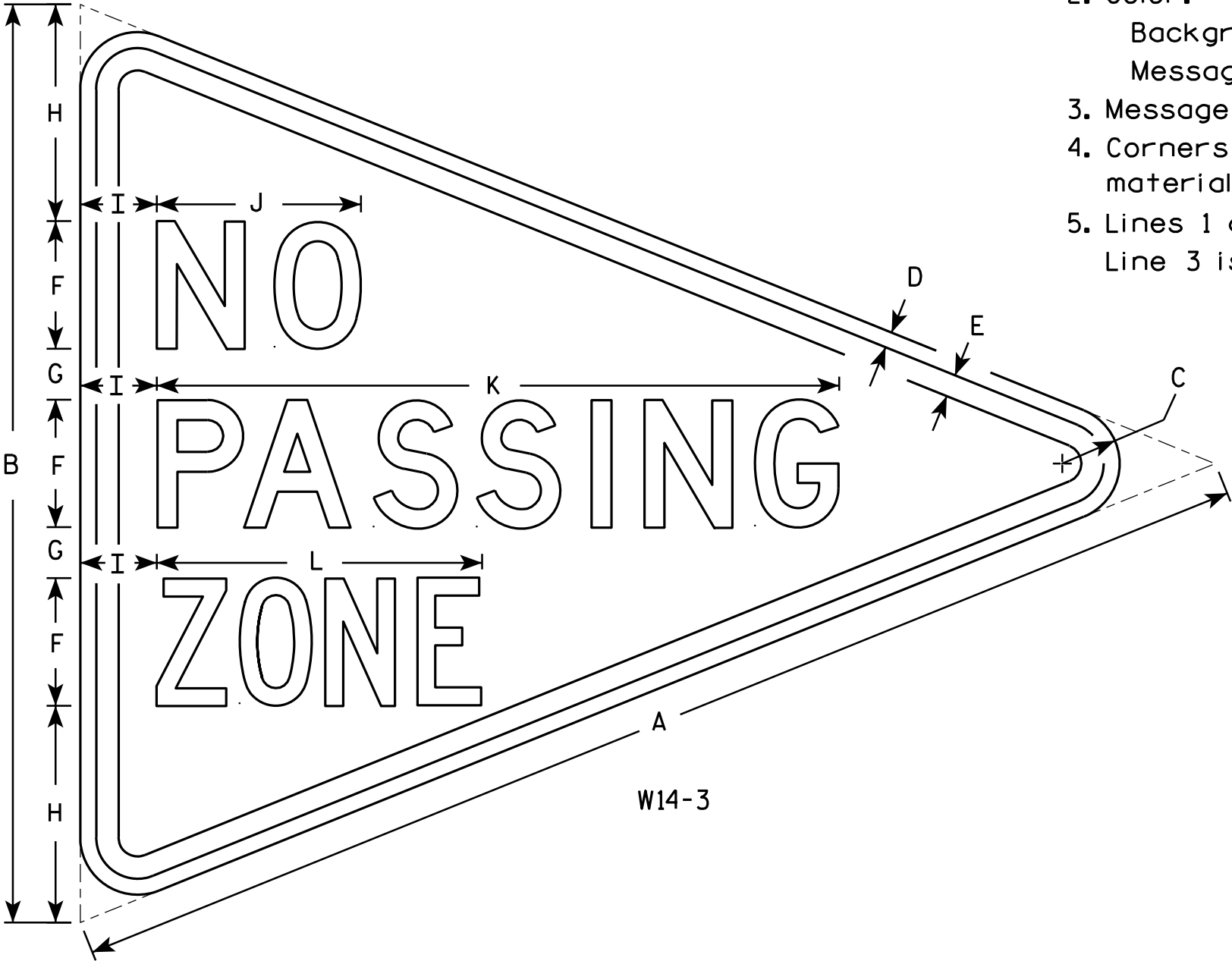
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	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. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

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	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

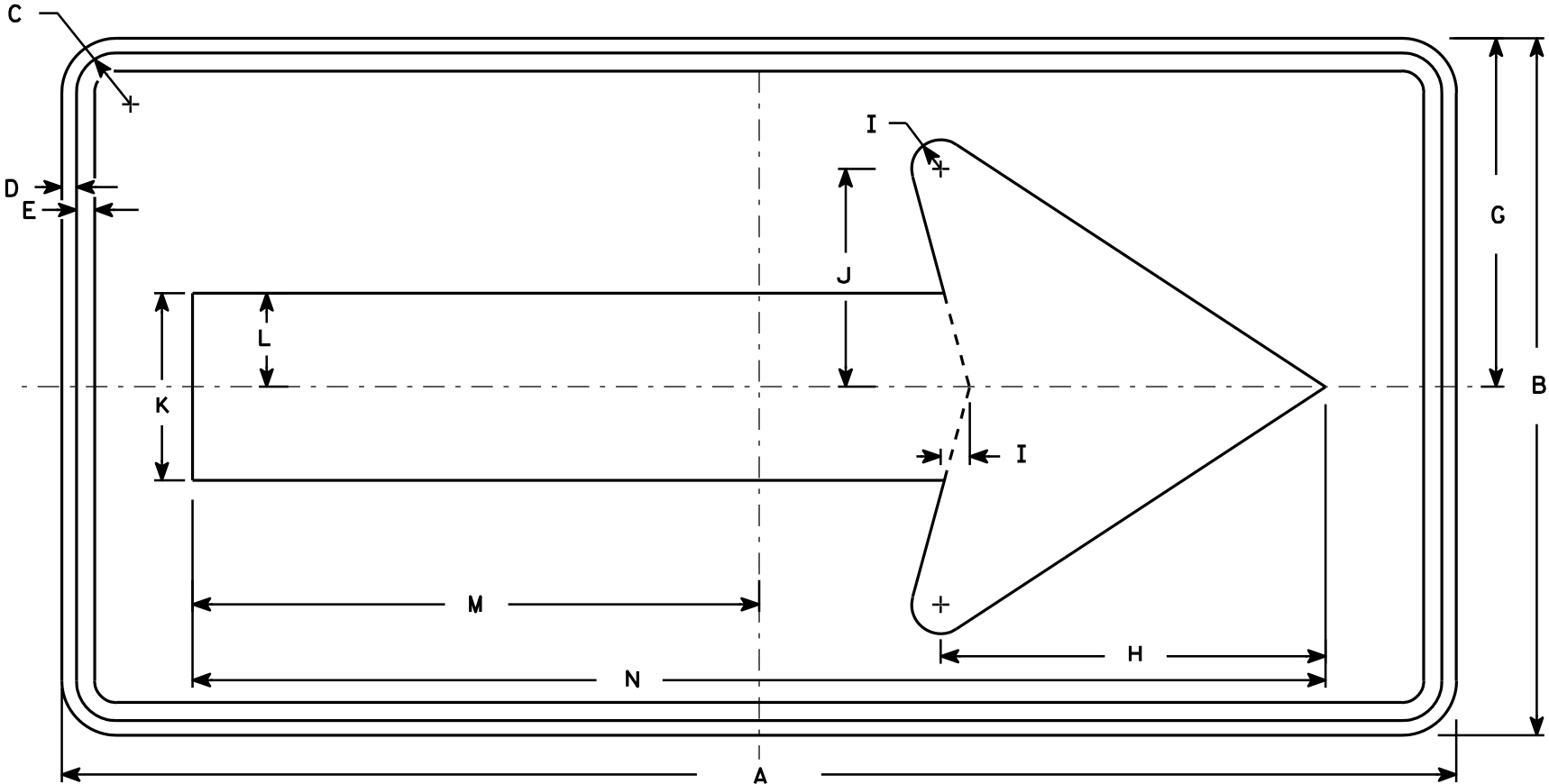
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

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.



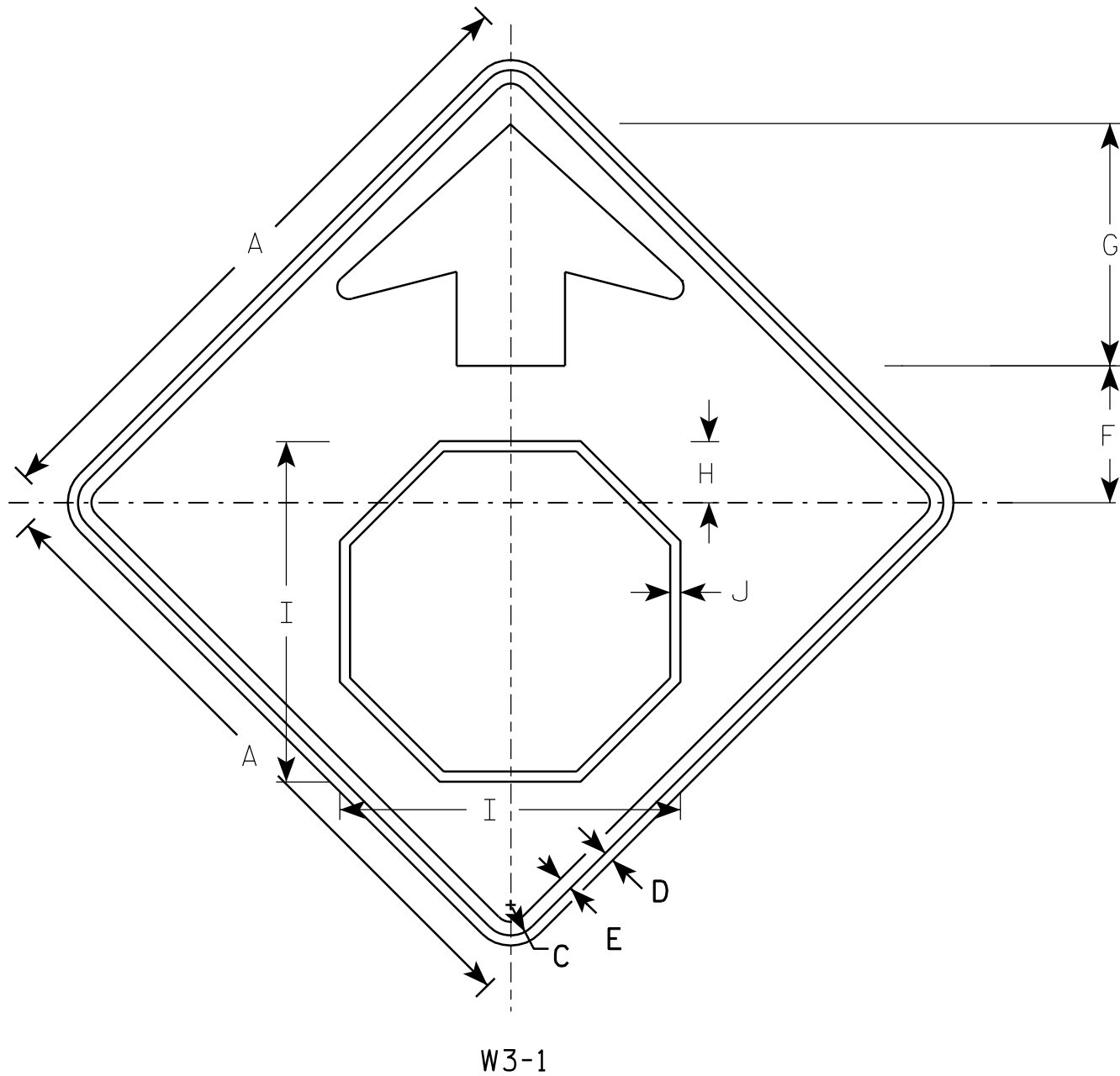
W1-6

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	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN
W1-6

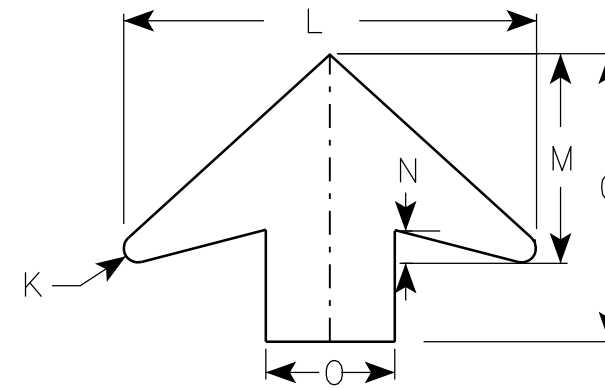
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W1-6.8



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:

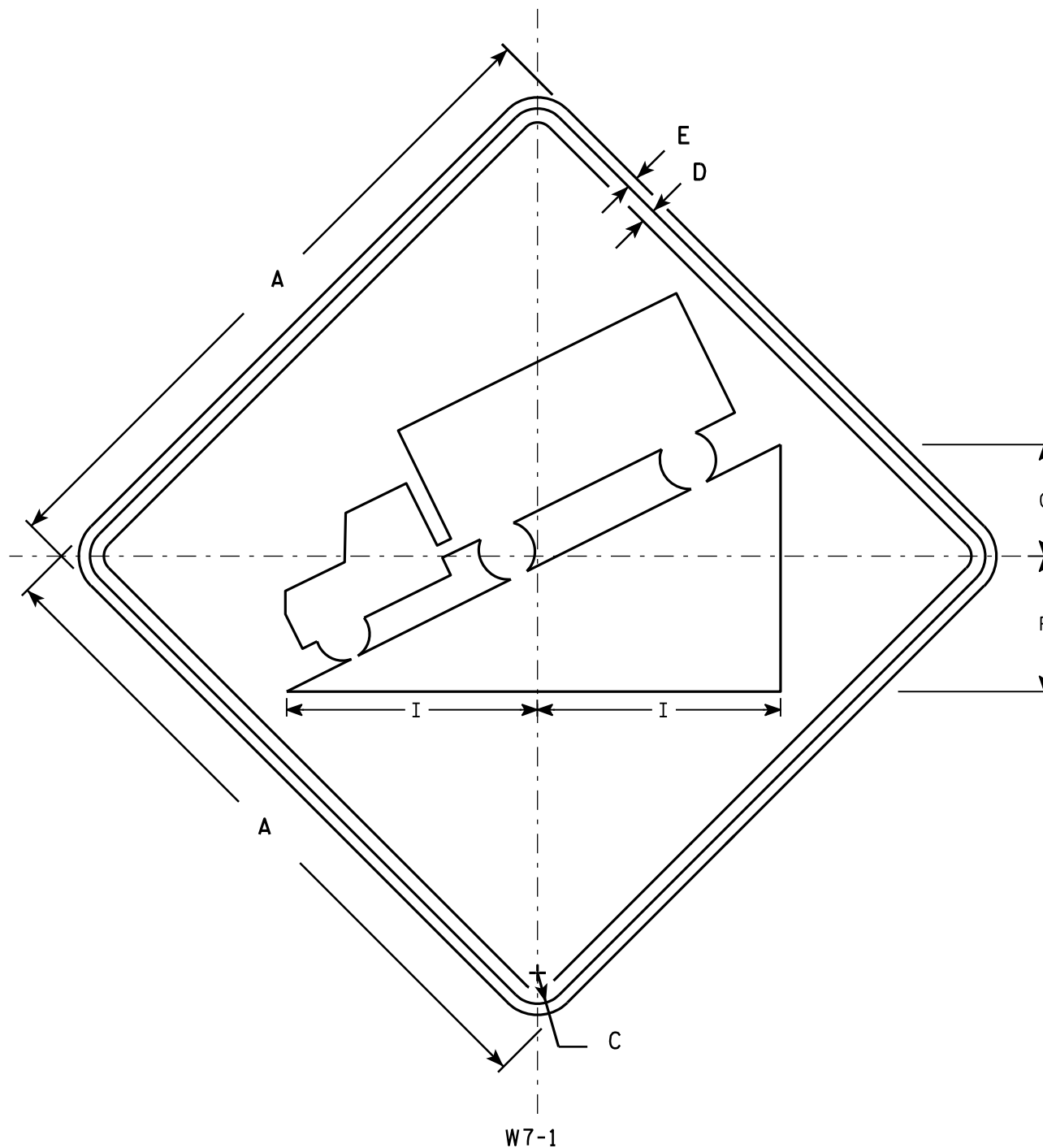
STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

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. 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.

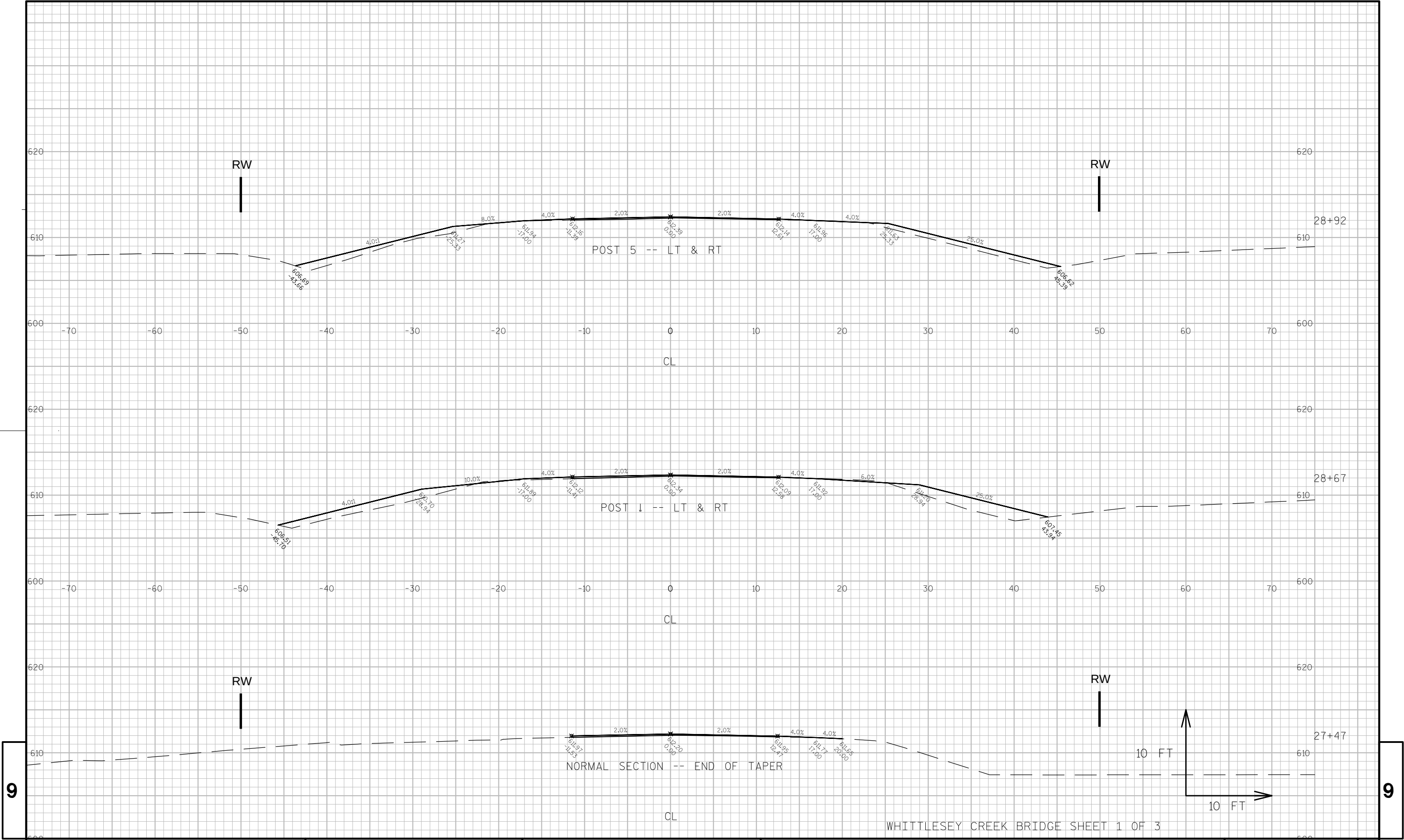
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 3/8	1/2	5/8	6	5		11																		6.25
2M	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		2 1/4	3/4	1	9 3/4	8		17 1/2																		16.0

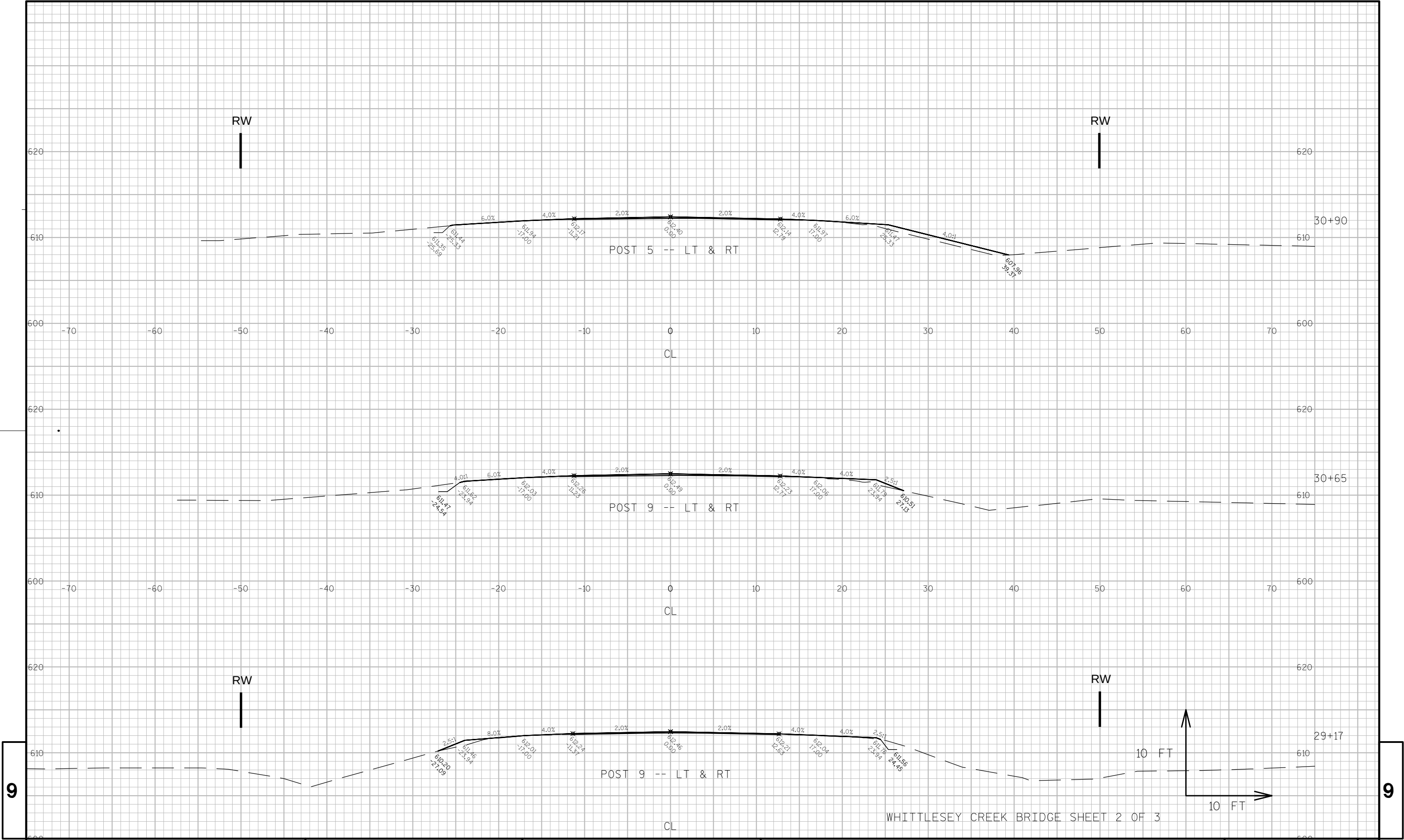
STANDARD SIGN W7-1

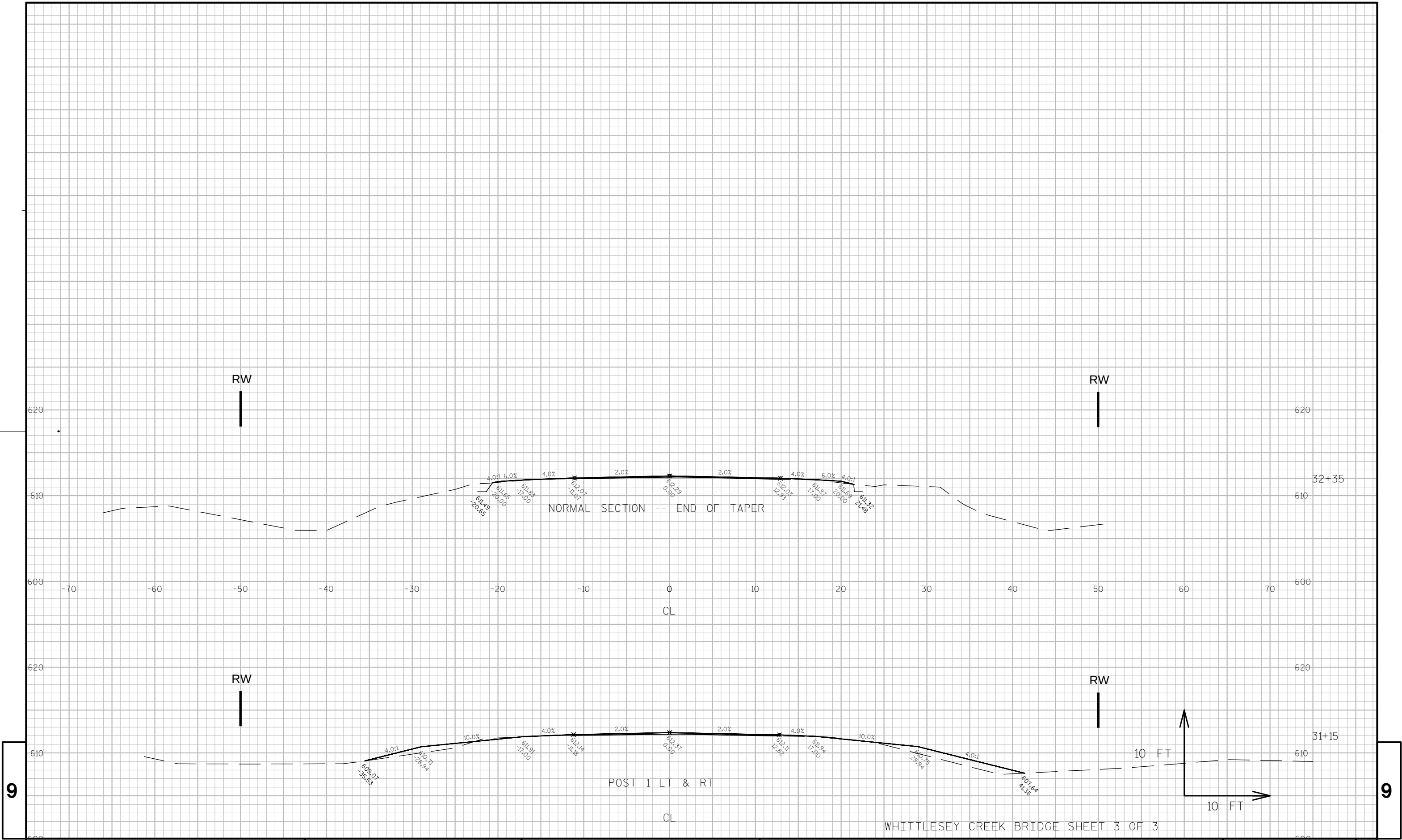
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 03/12/13 PLATE NO. W7-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E







9

9

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

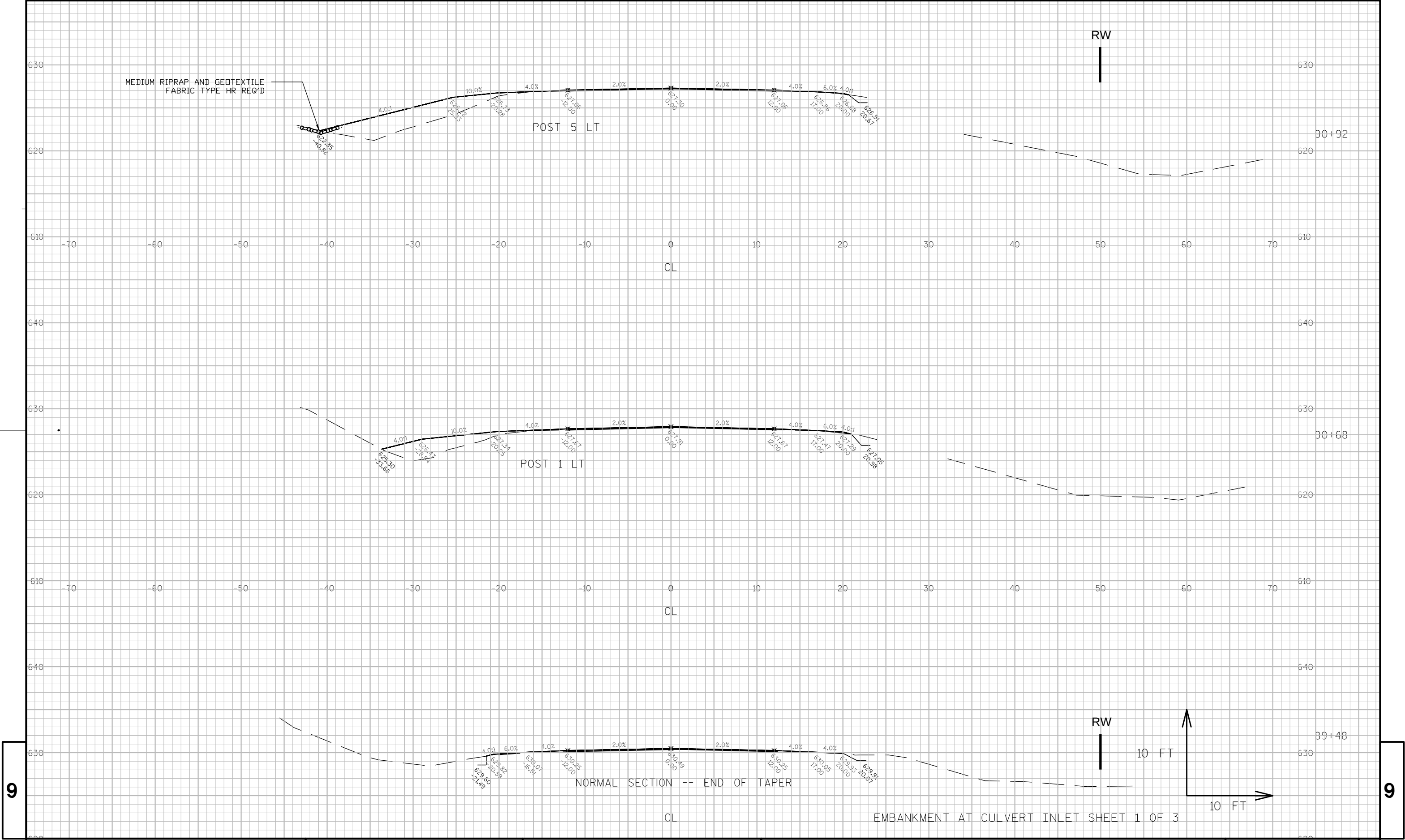
PLOT DATE : 10/9/2014 4:27 PM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1" = 10' _XREF

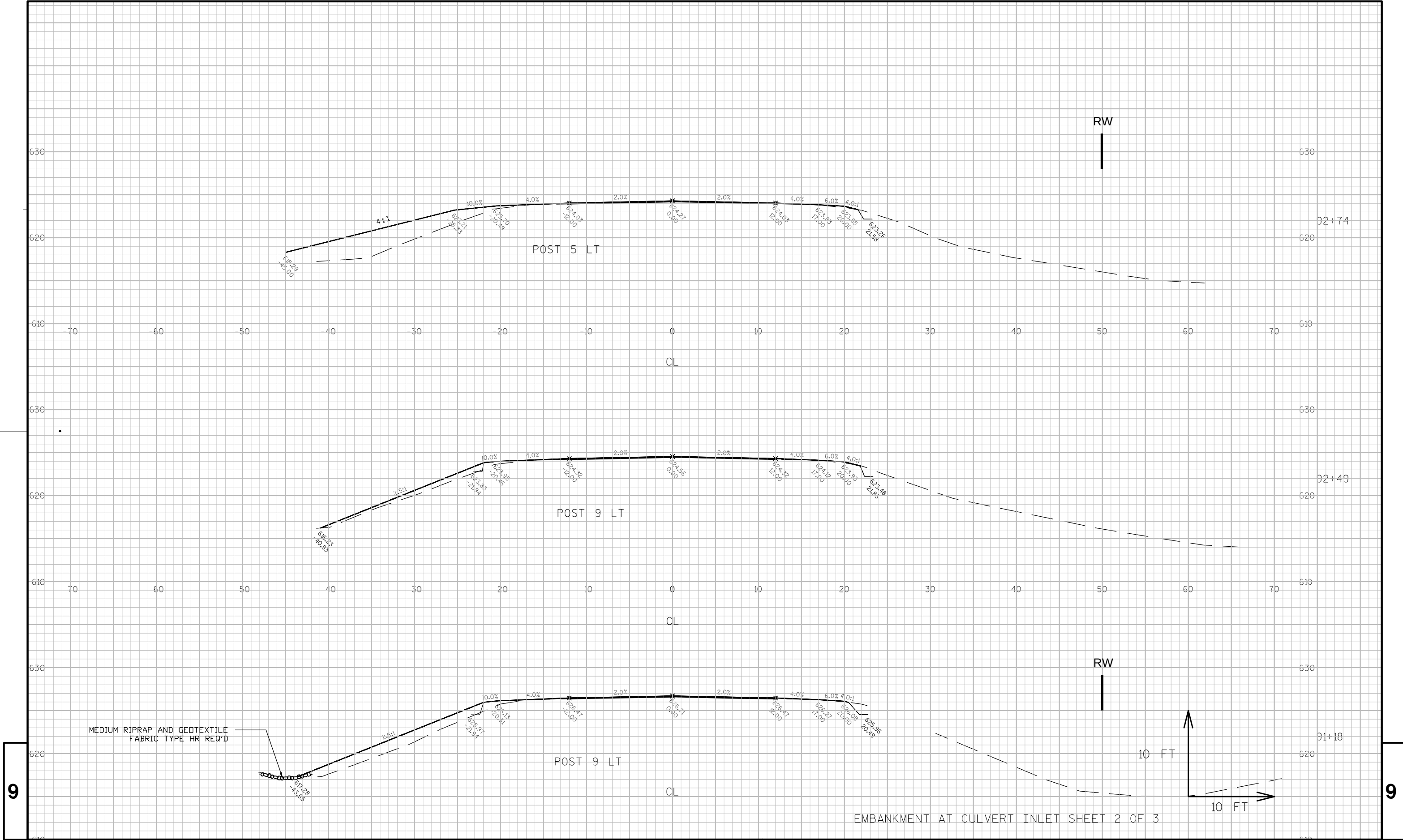
WISDOT/CADDs SHEET 49

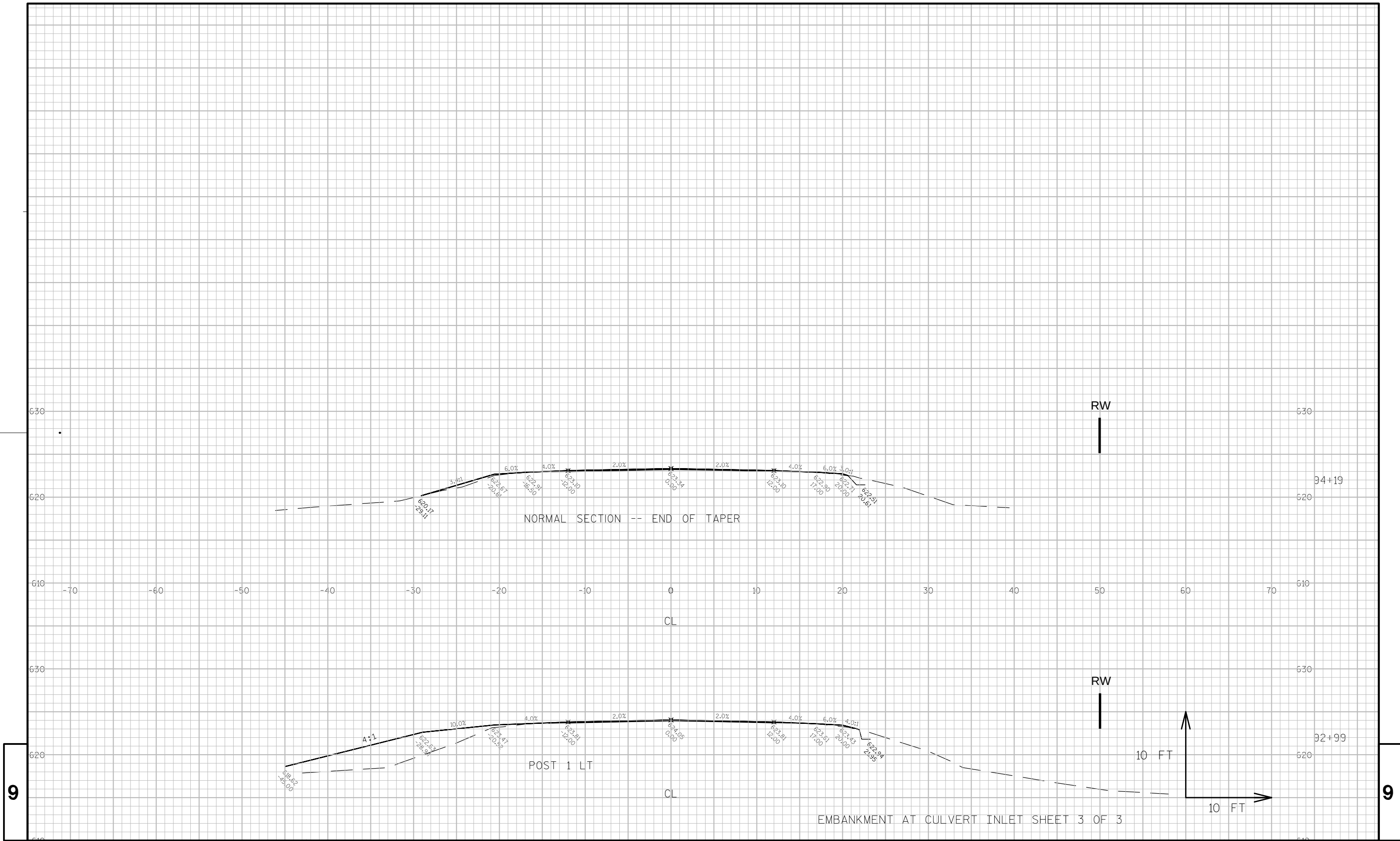
WHITTLESEY CREEK BRIDGE SHEET 3 OF 3

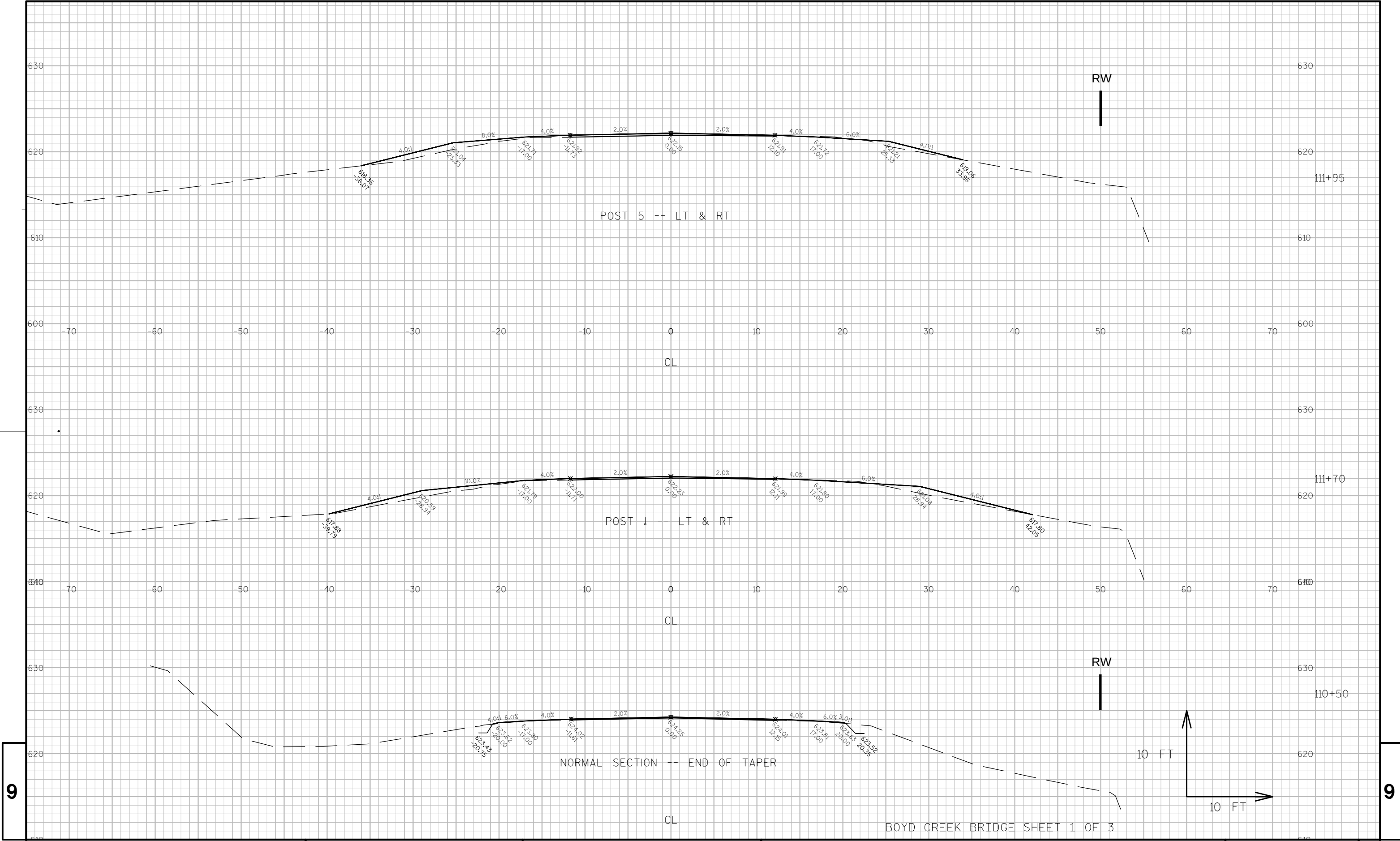


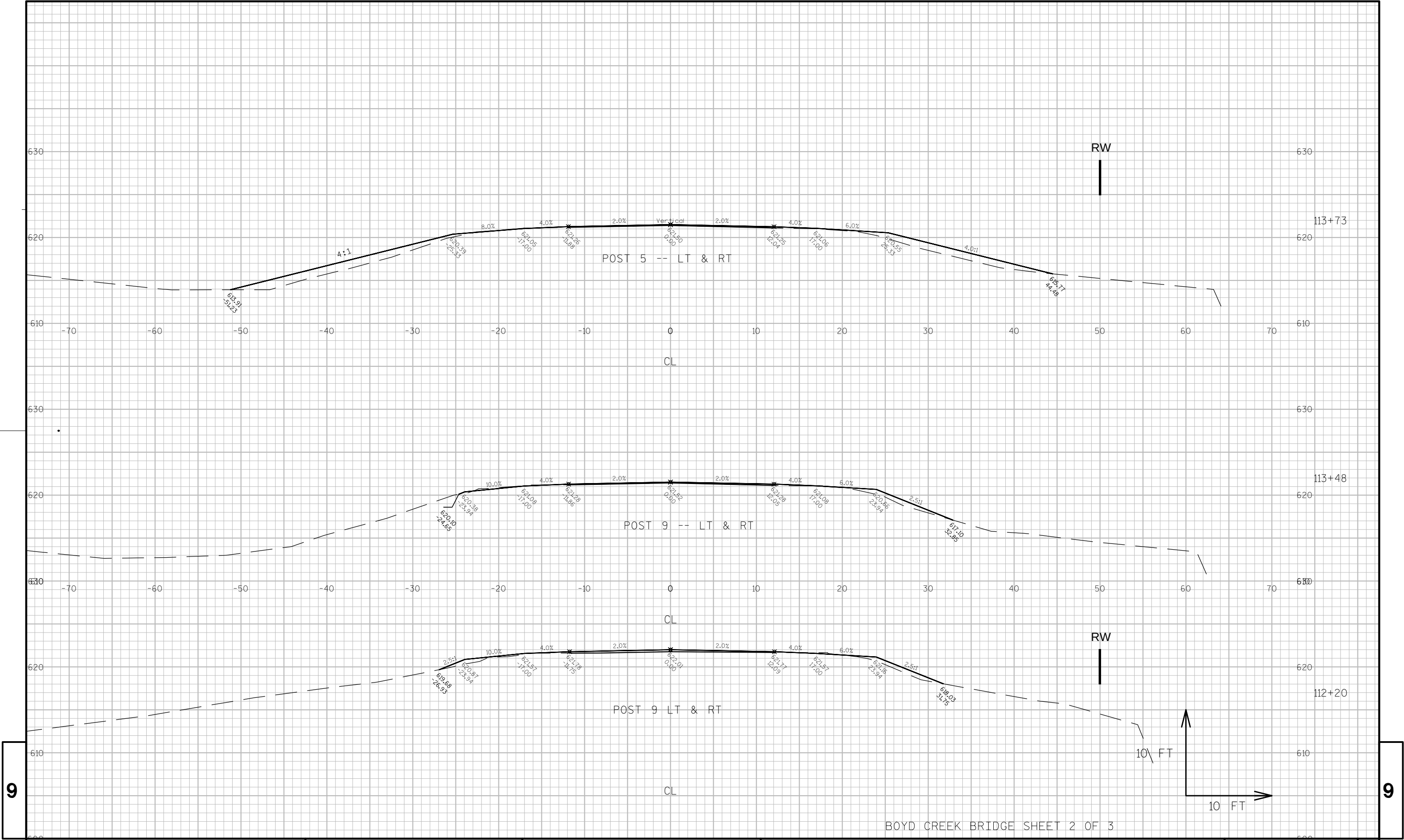
9

9









PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

E

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

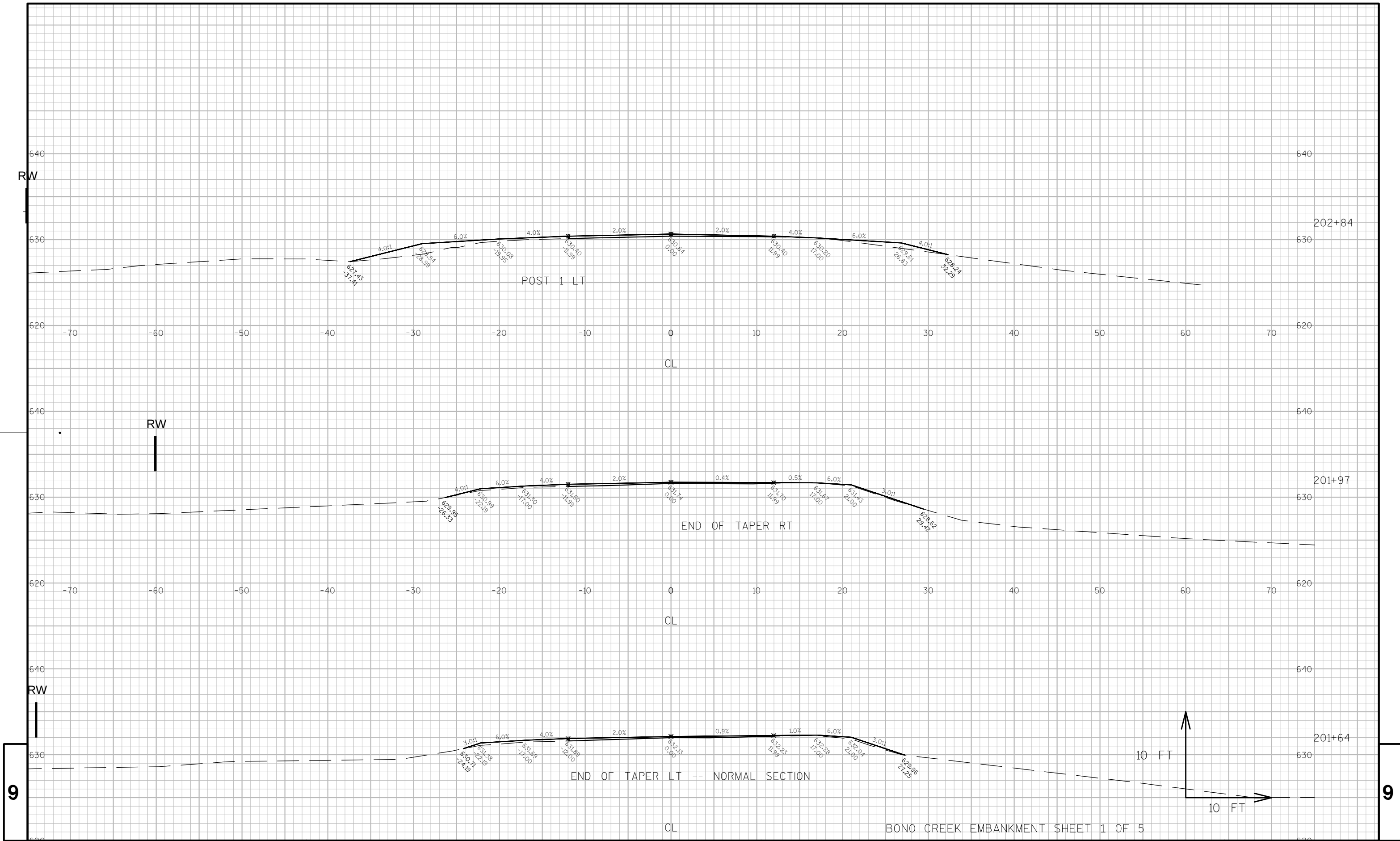
PLOT DATE : 10/9/2014 4:29 PM

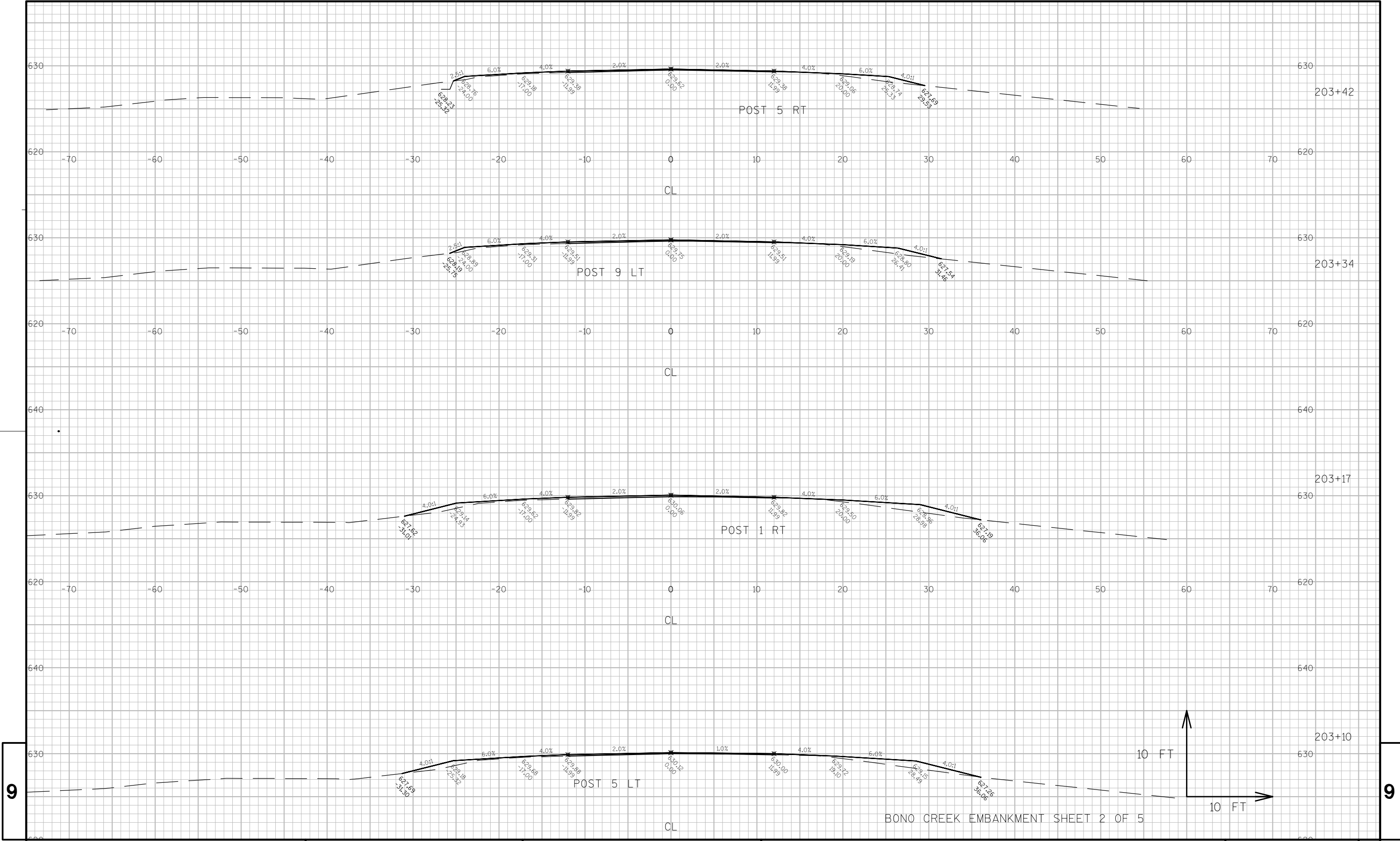
PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

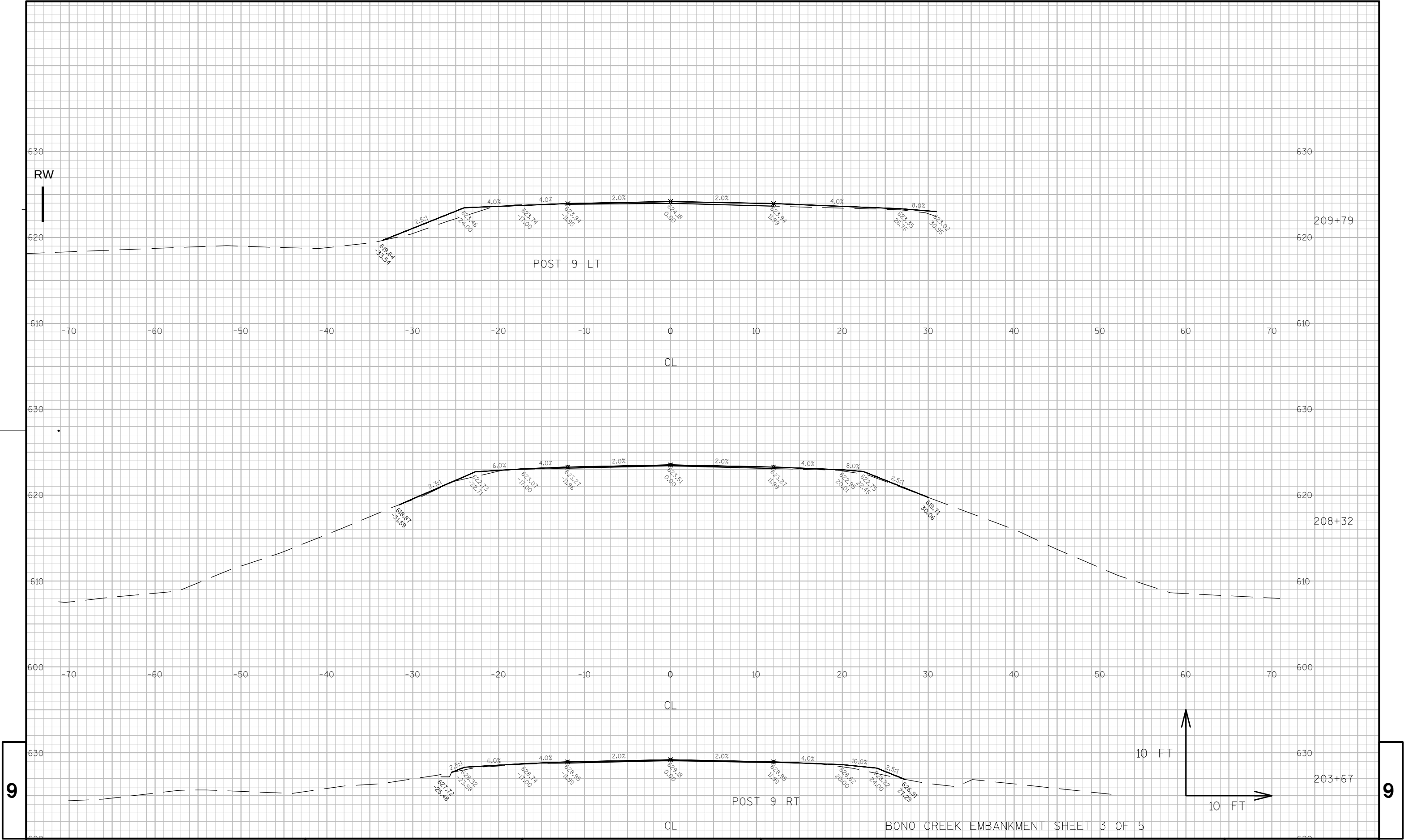
PLOT SCALE : 1" = 10'-XREF

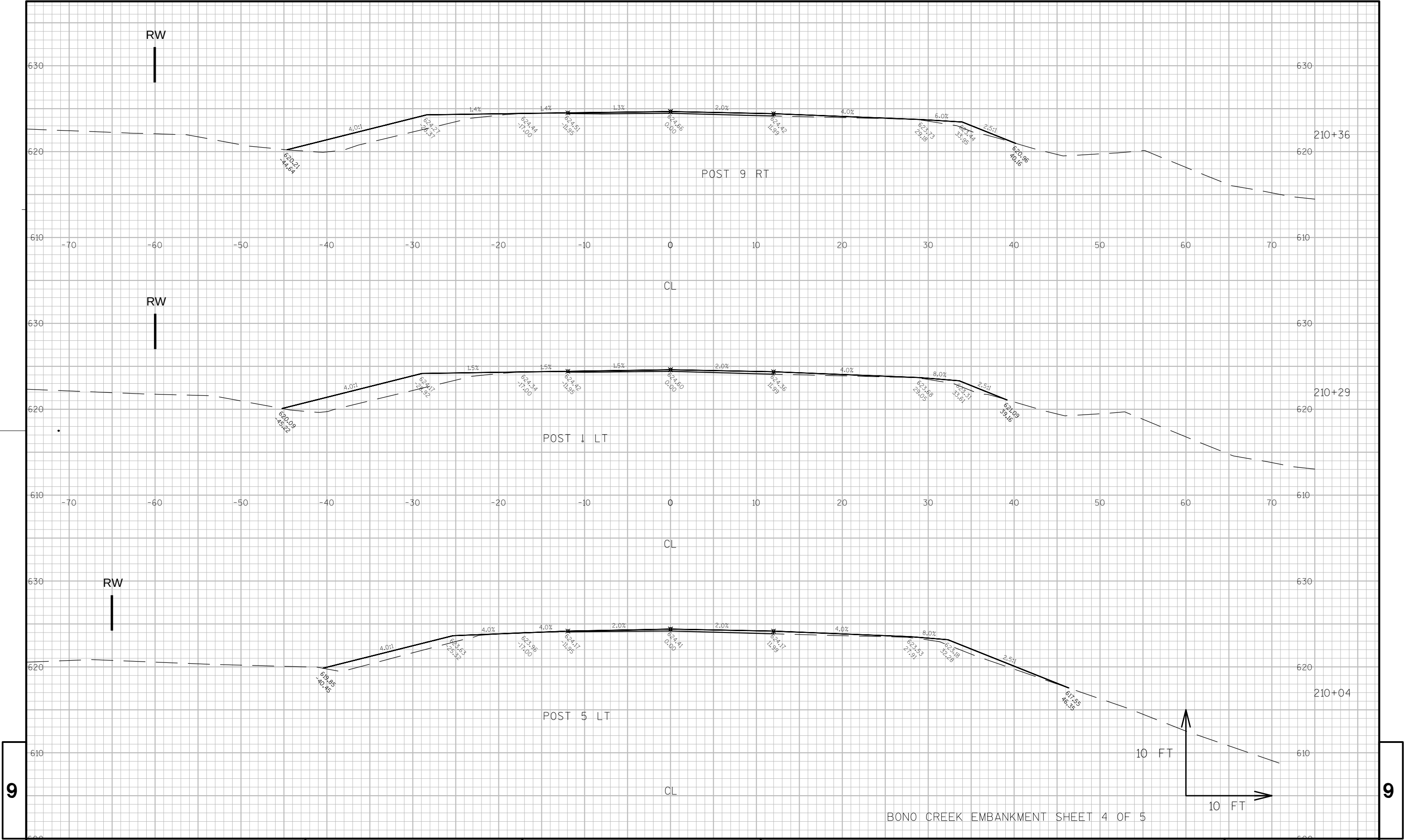
WISDOT/CADDs SHEET 49

BOYD CREEK BRIDGE SHEET 2 OF 3



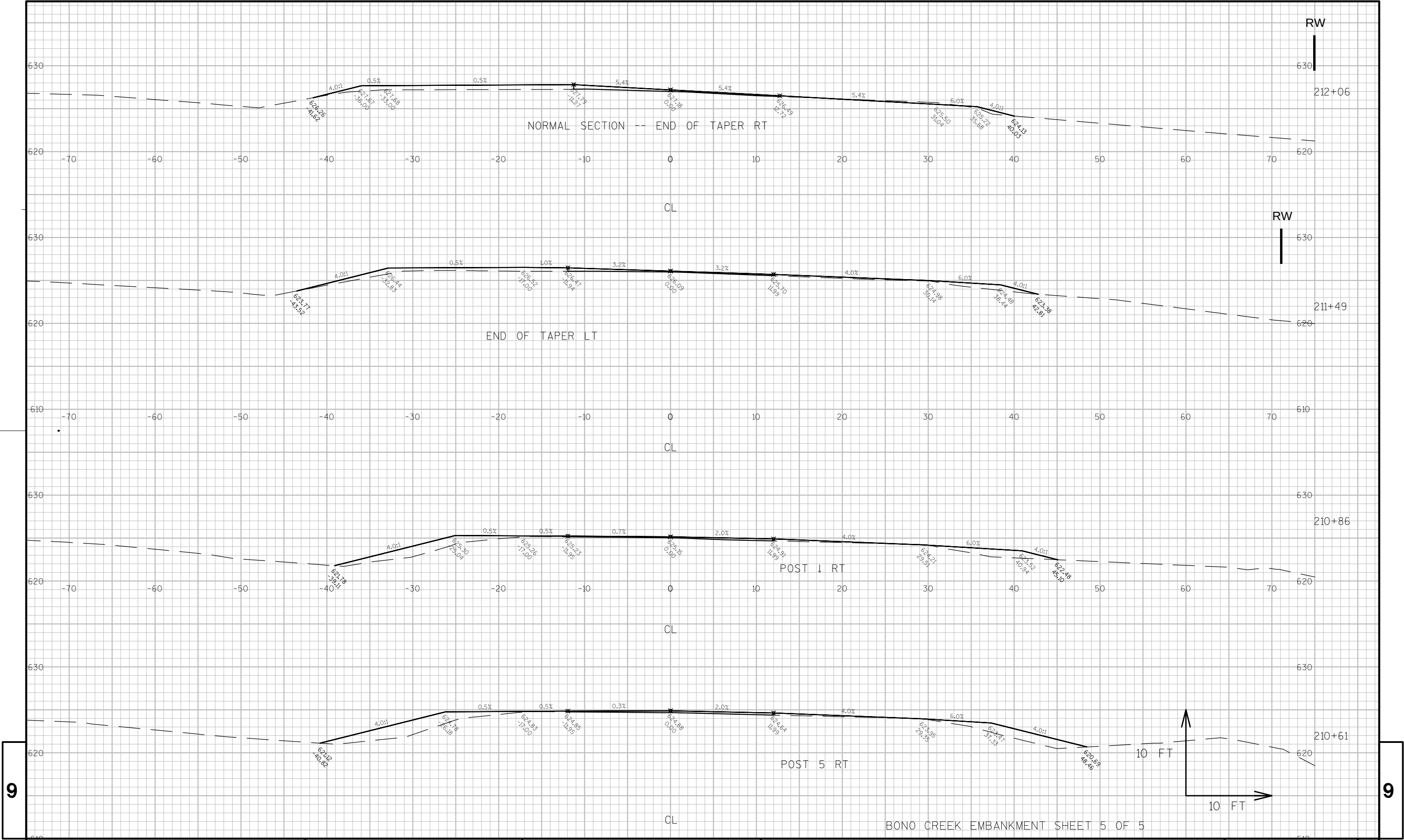


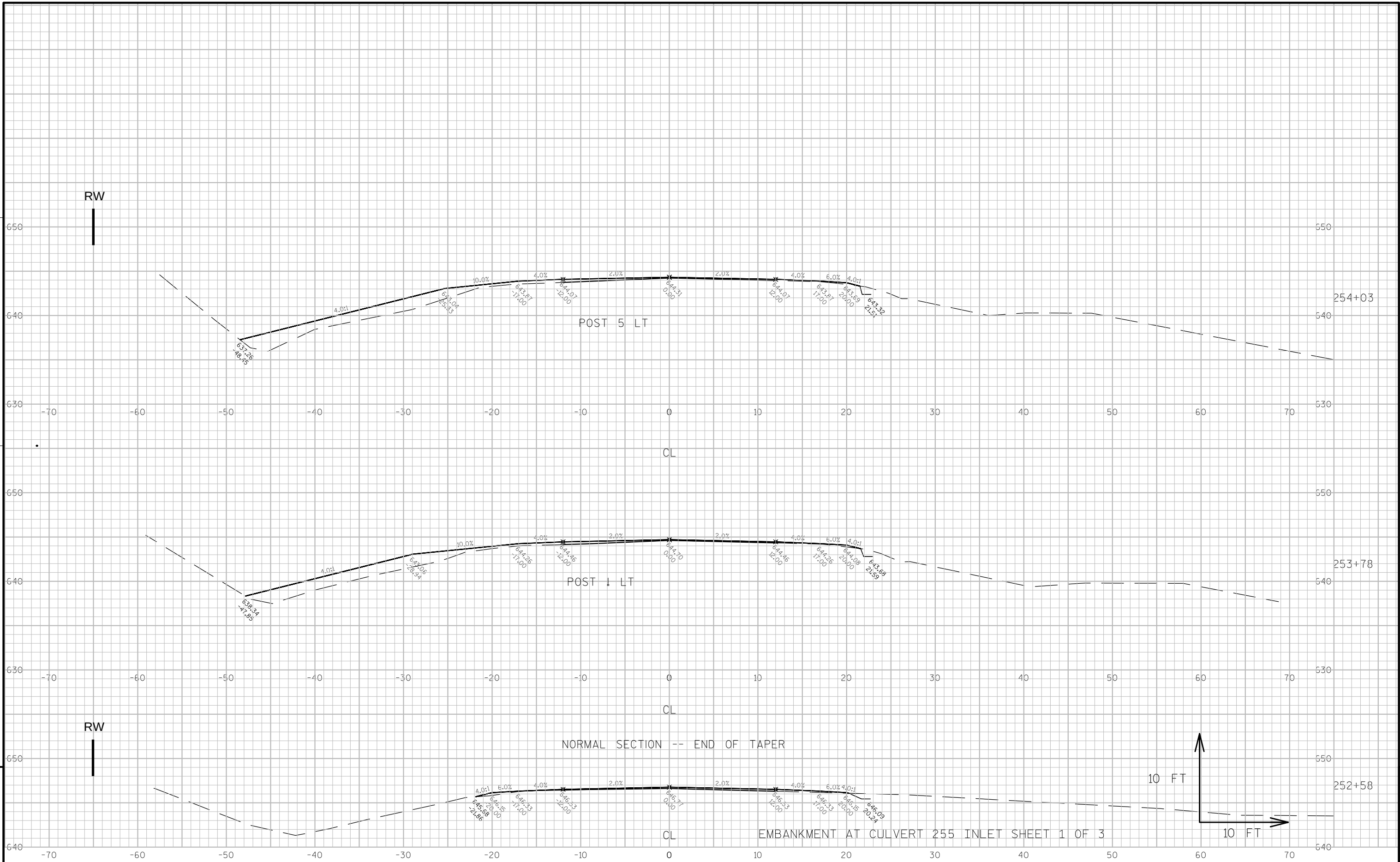


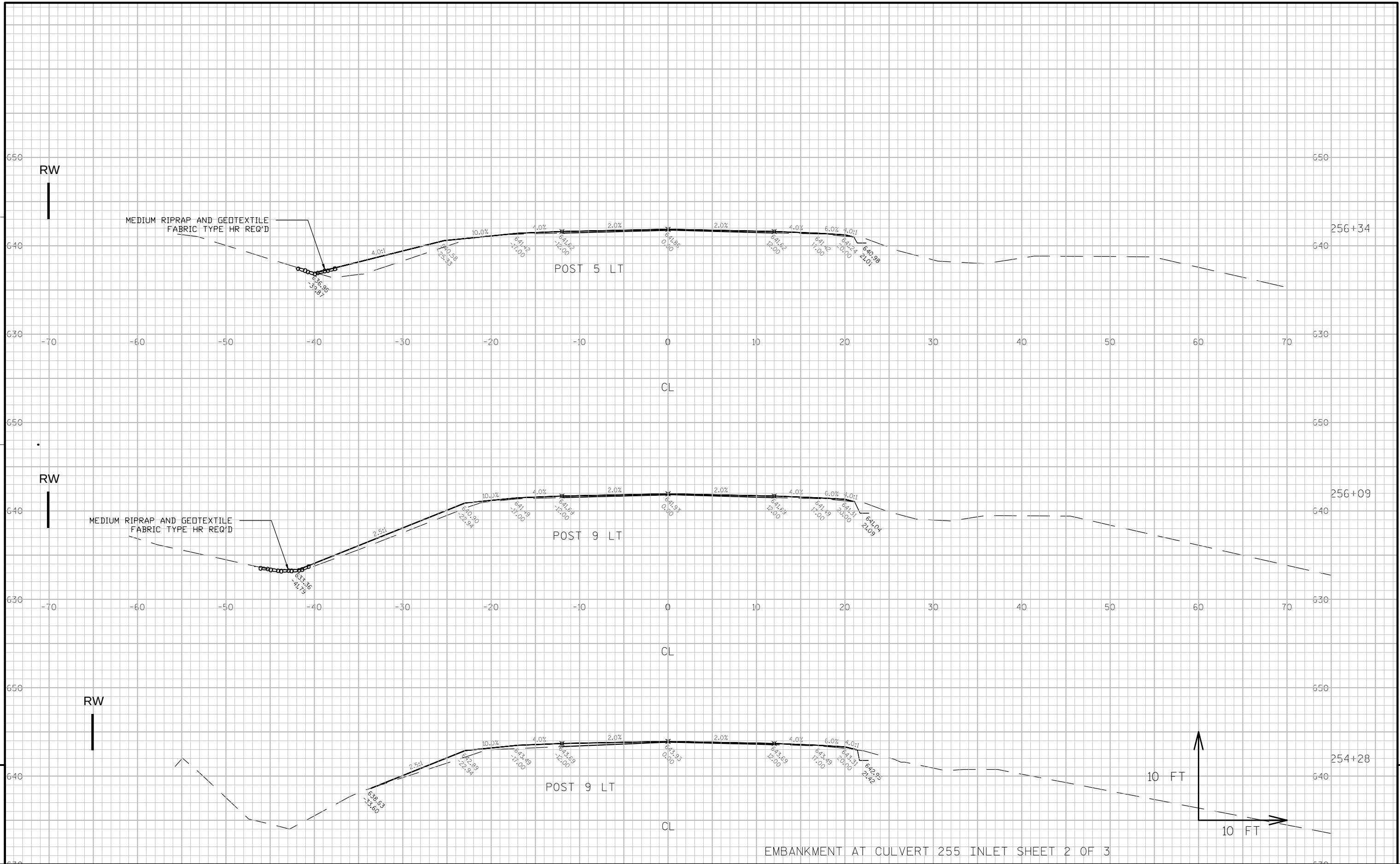


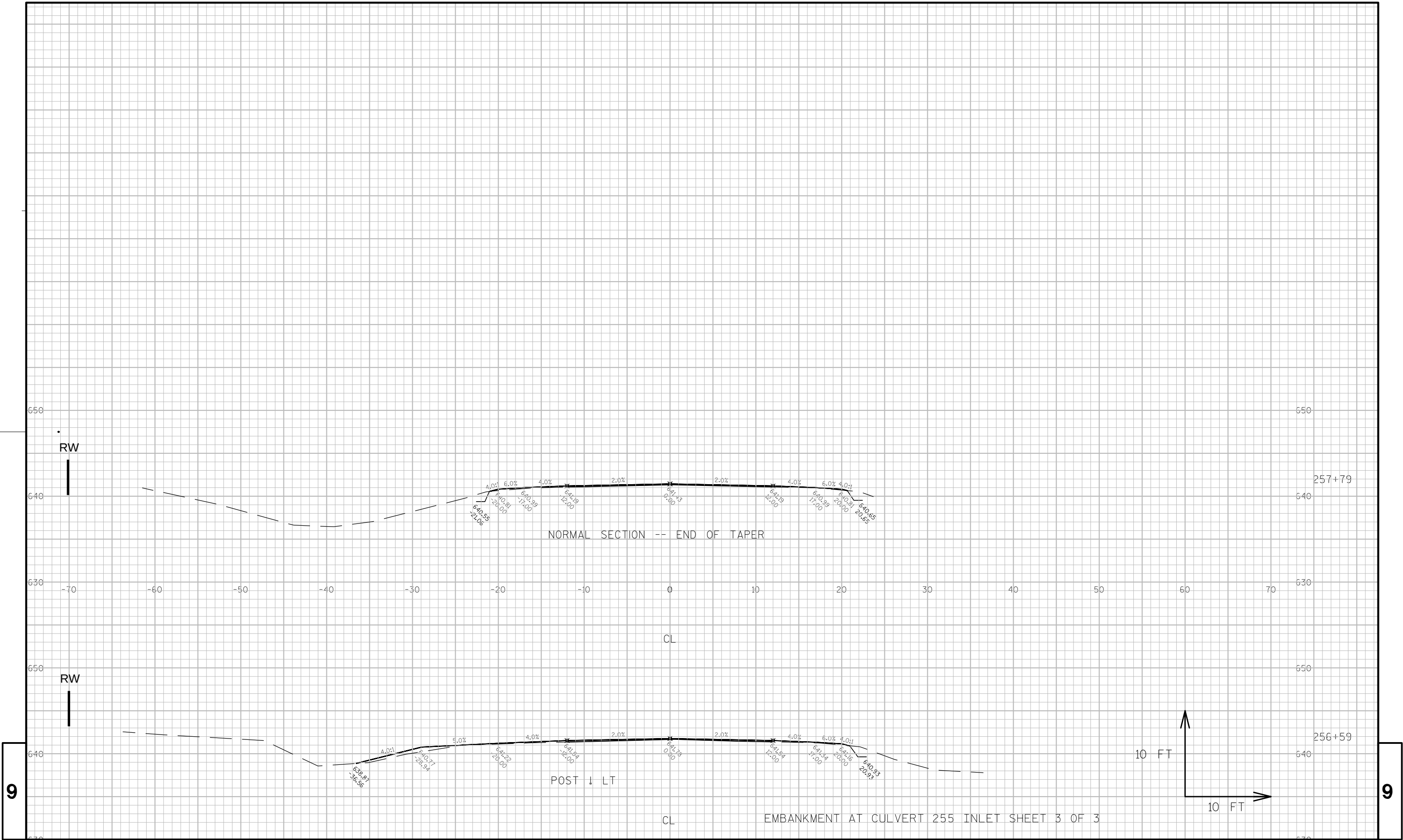
9

9









9

9

PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

E

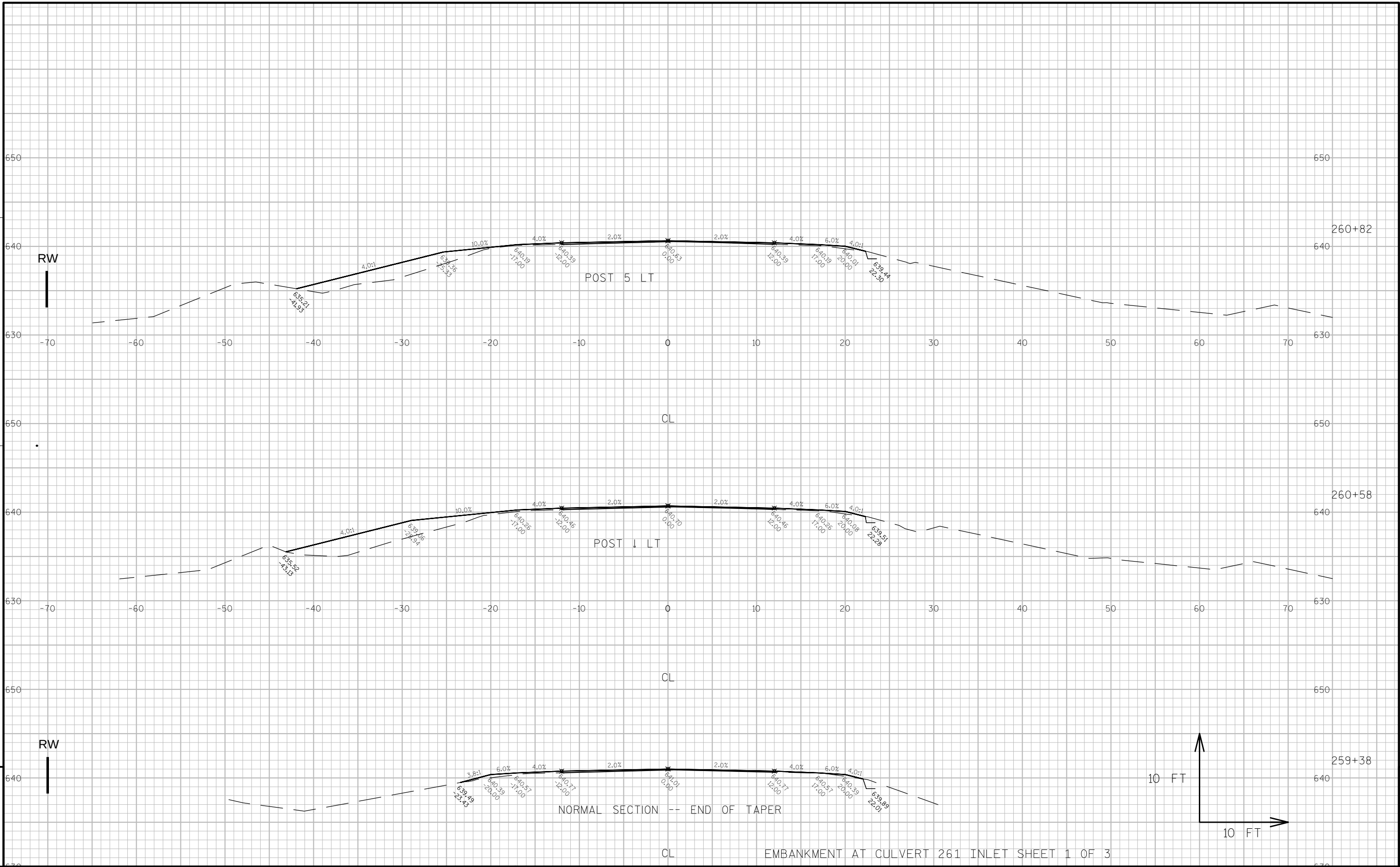
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

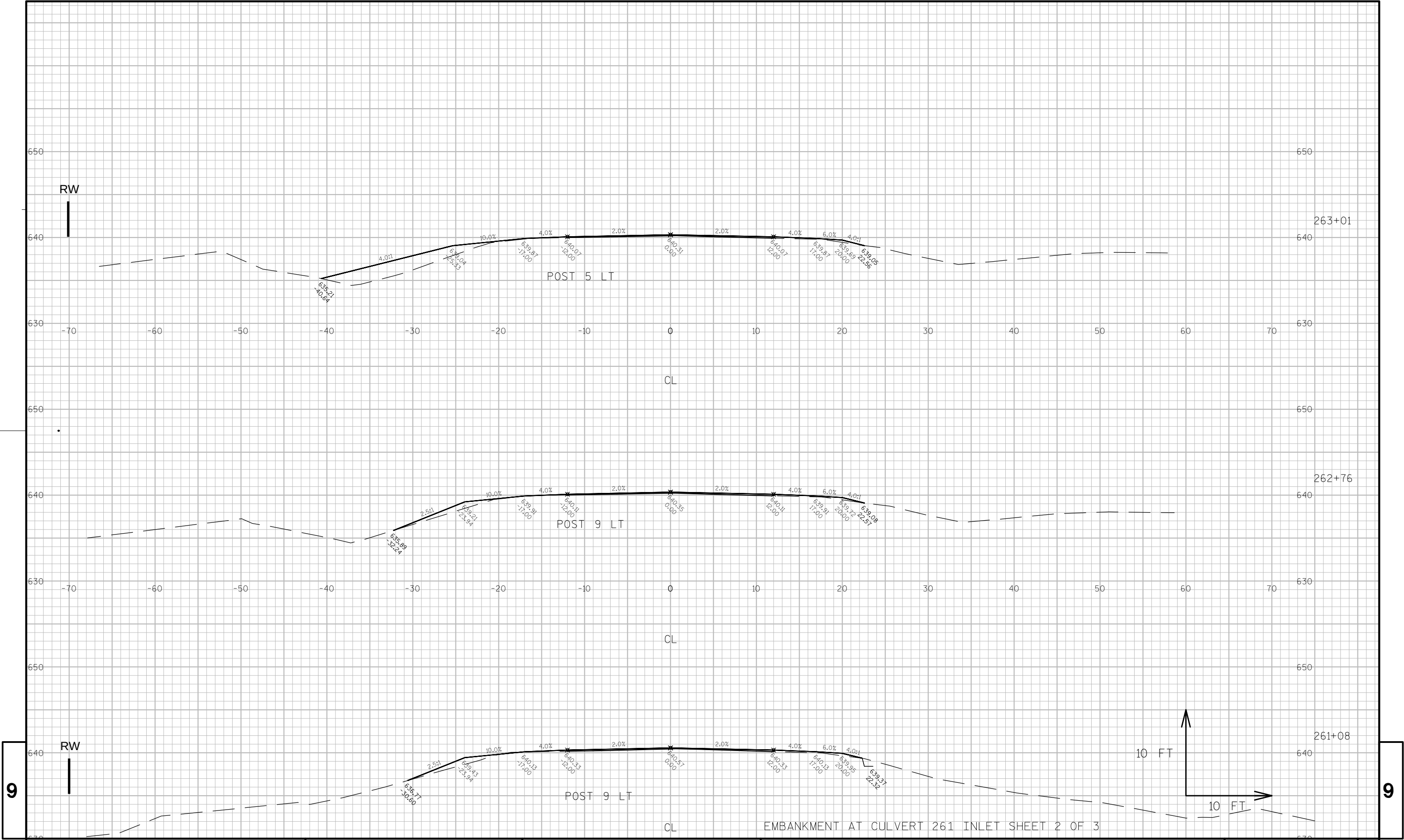
PLOT DATE : 10/9/2014 4:32 PM

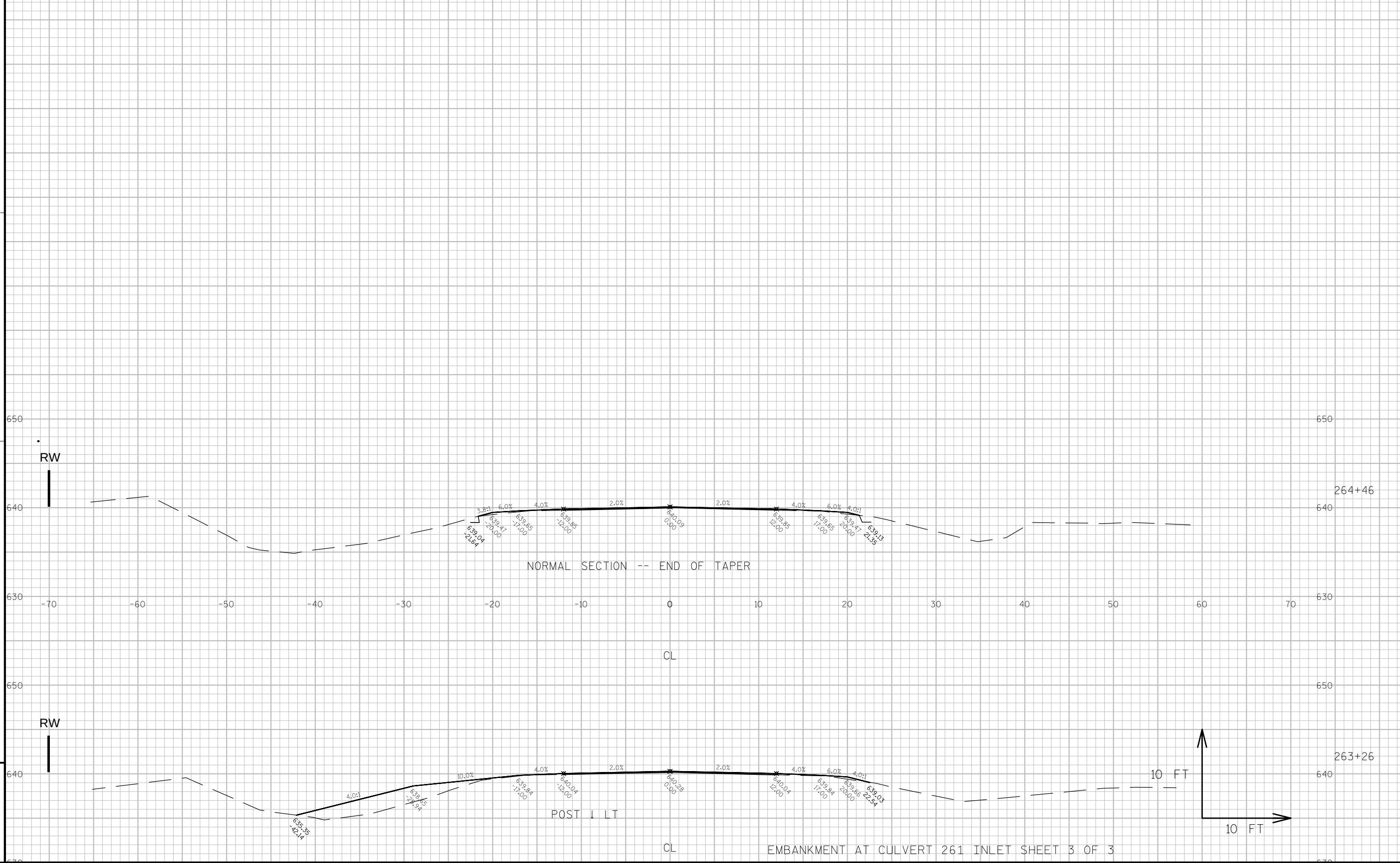
PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

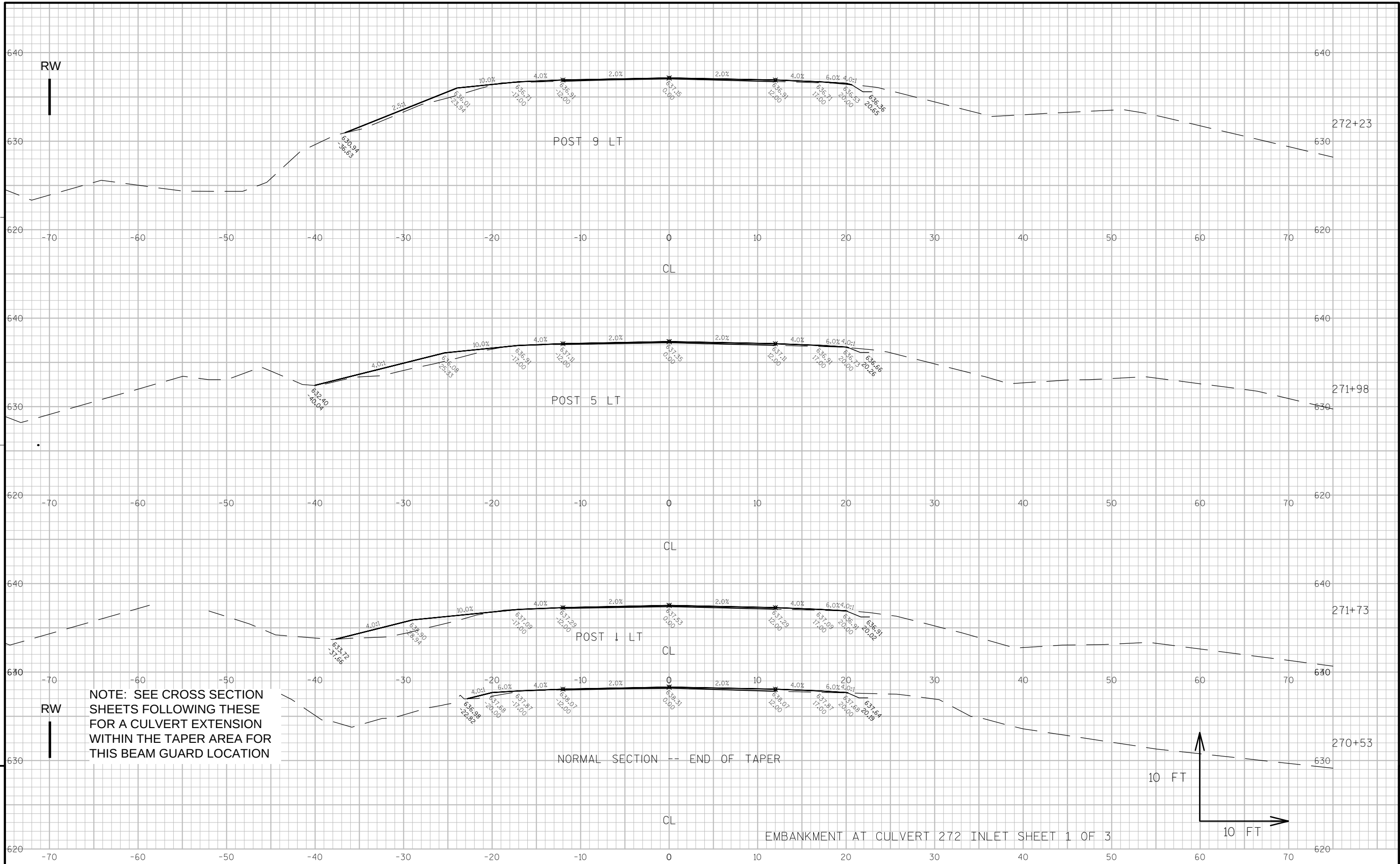
PLOT SCALE : 1" = 10' XREF

WISDOT/CADDs SHEET 49









PROJECT NO: 8160-00-70

HWY: STH13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

E

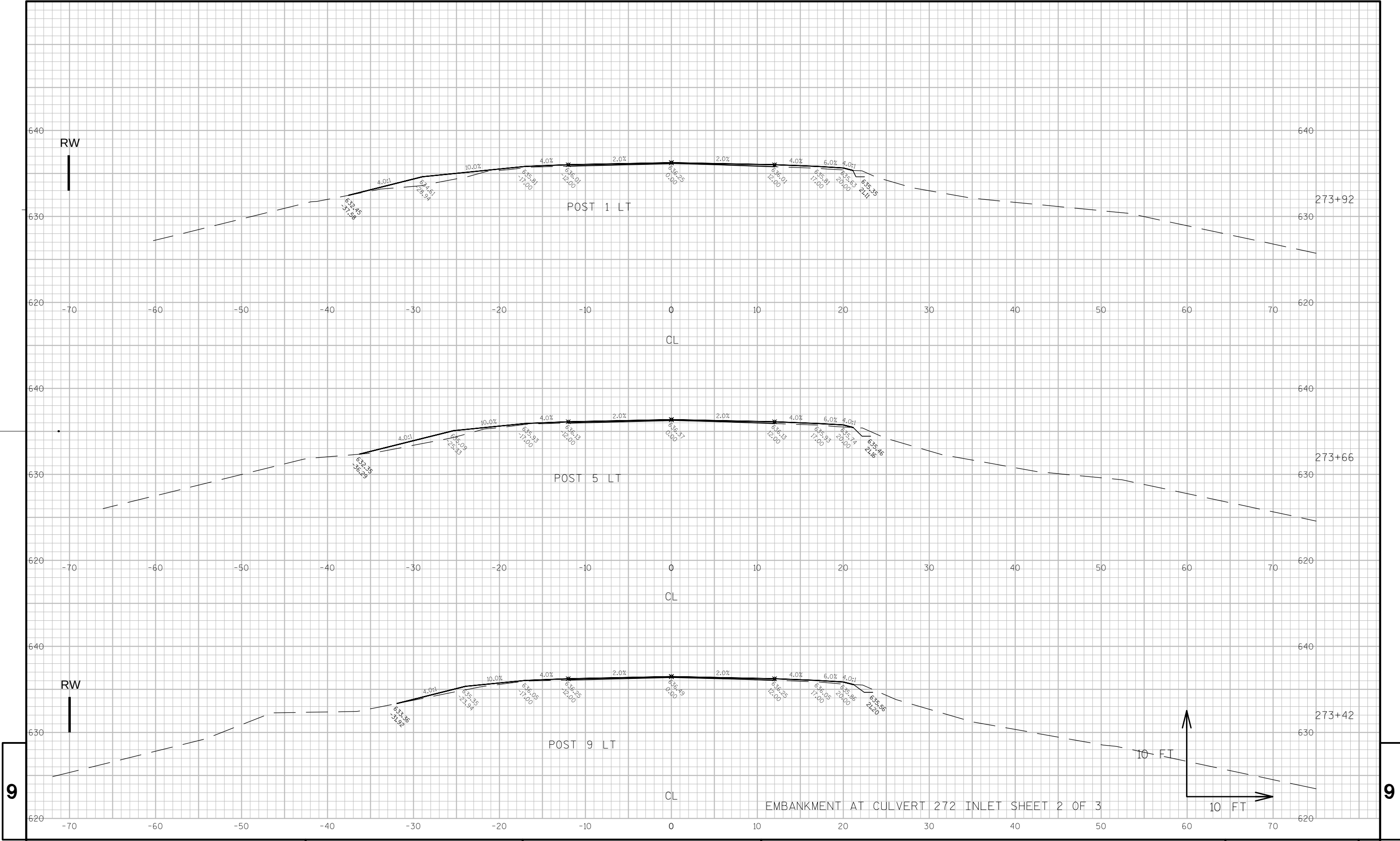
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\CORRIDORS\CORR_BGDESIGN.DWG

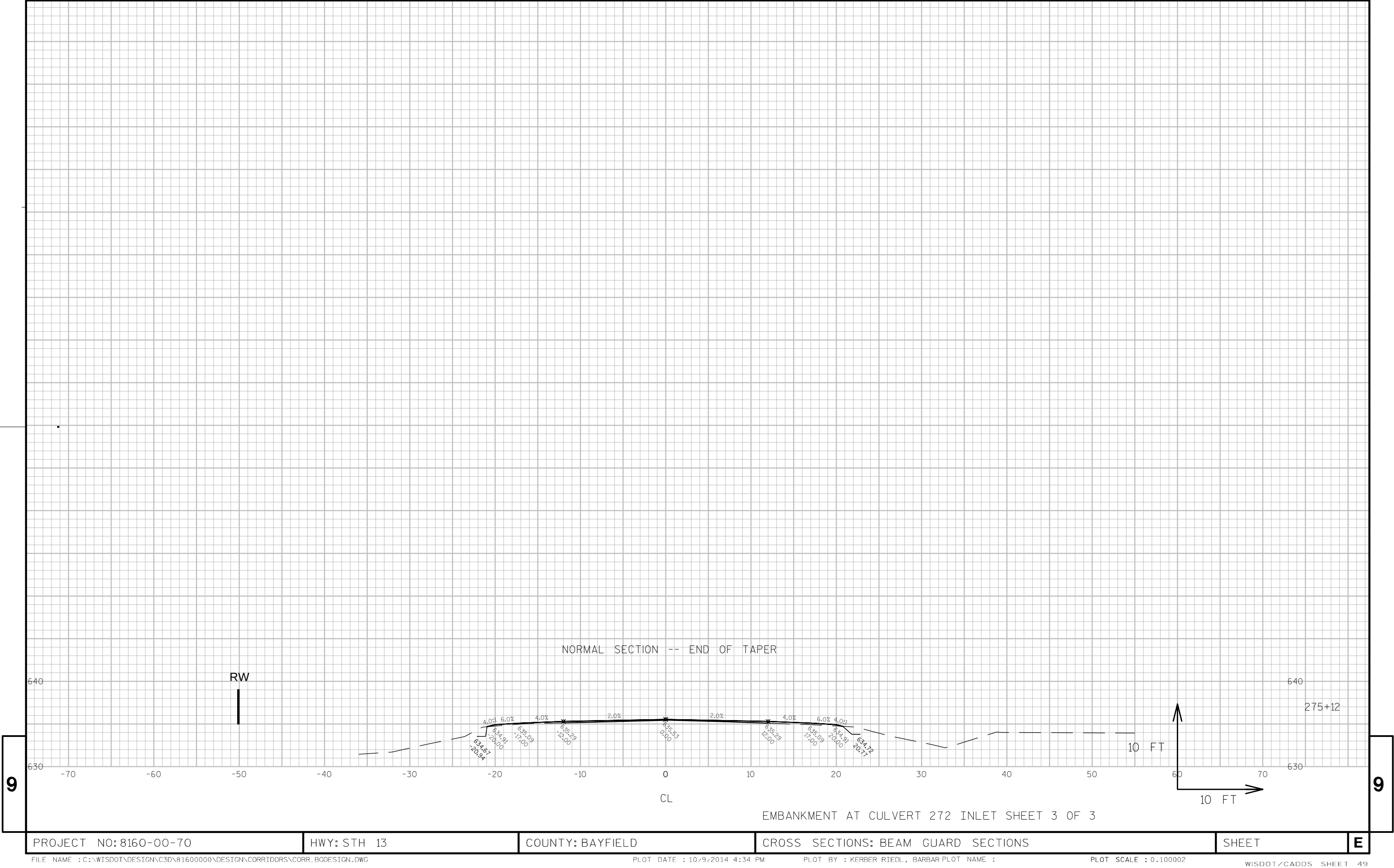
PLOT DATE : 10/9/2014 4:34 PM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1" = 10'-XREF

WISDOT/CADDs SHEET 49

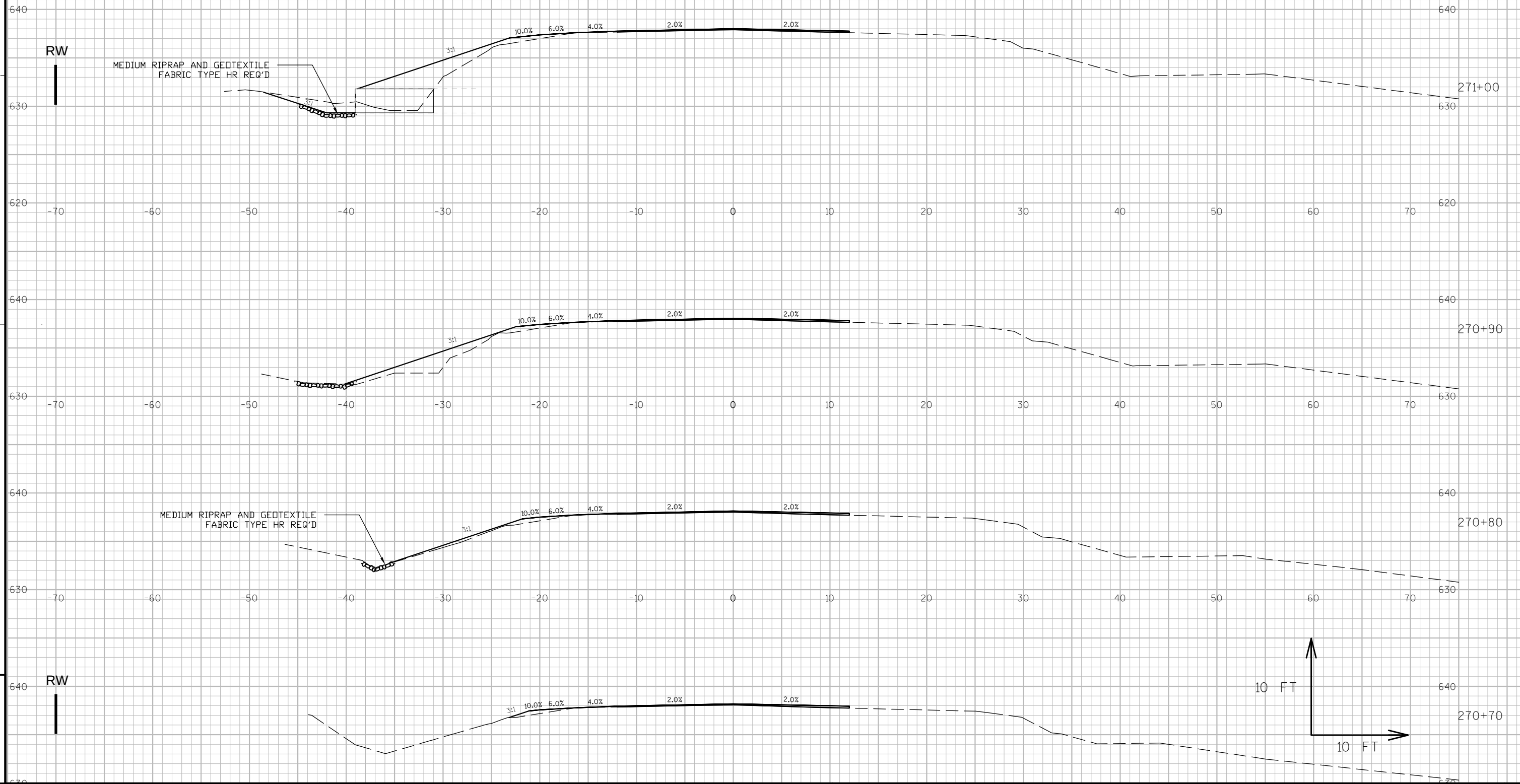




9

9

EMBANKMENT AT CULVERT 272 INLET
EXTENSION FOR CULVERT IN TAPER AREA PAGE 1 OF 2
CULVERT LINER PAID FOR IN PROJECT 8160-03-61



PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

1

FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\BG272_CULVEXT.DWG

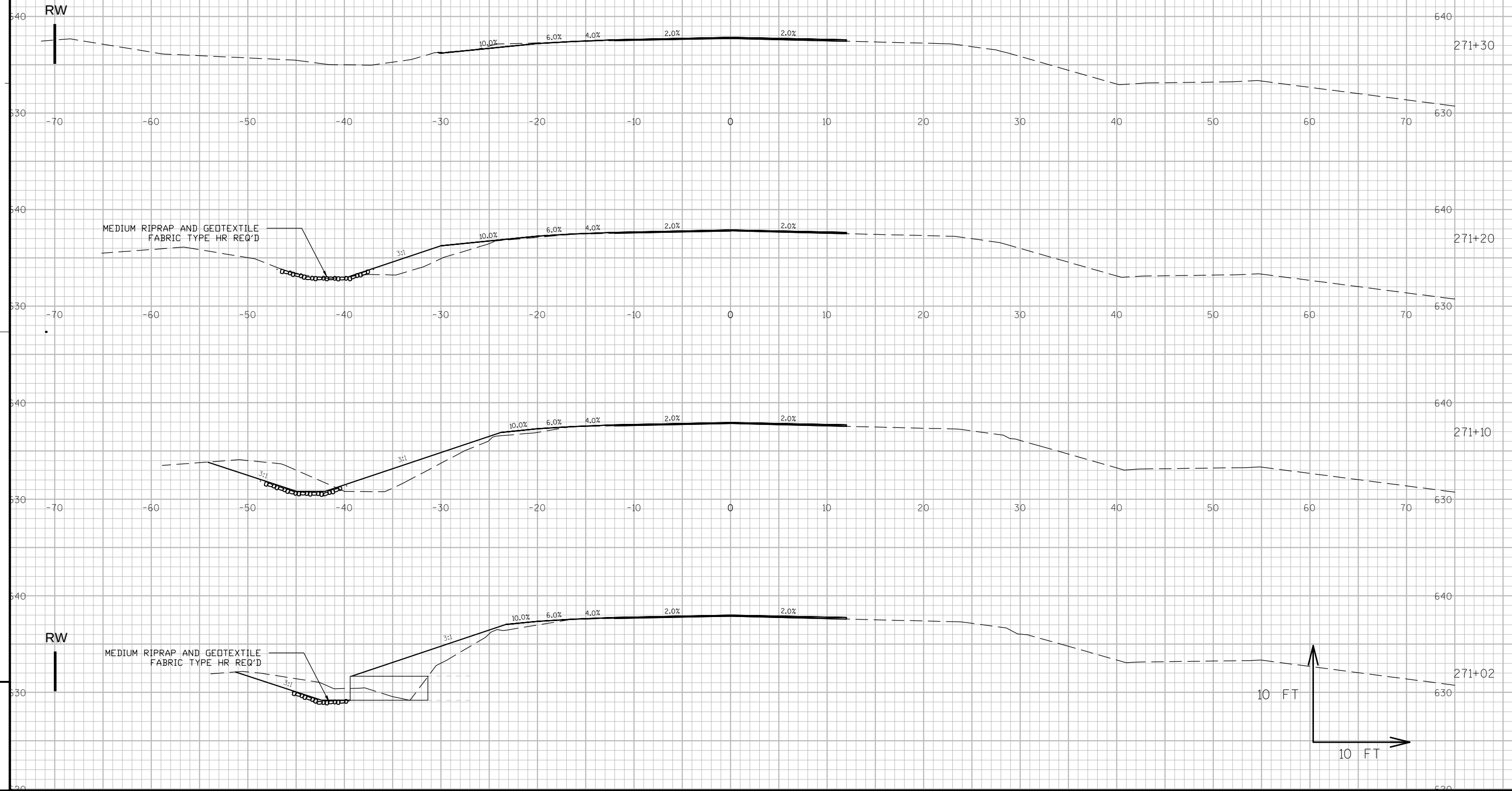
PLOT DATE : 10/16/2014 10:58 AM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1" = 10' _XREF

WISDOT/CADDS SHEET 49

EMBANKMENT AT CULVERT 272 INLET
EXTENSION FOR CULVERT IN TAPER AREA PAGE 2 OF 2
CULVERT LINER PAID FOR IN PROJECT 8160-03-61



PROJECT NO: 8160-00-70

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: BEAM GUARD SECTIONS

SHEET

■

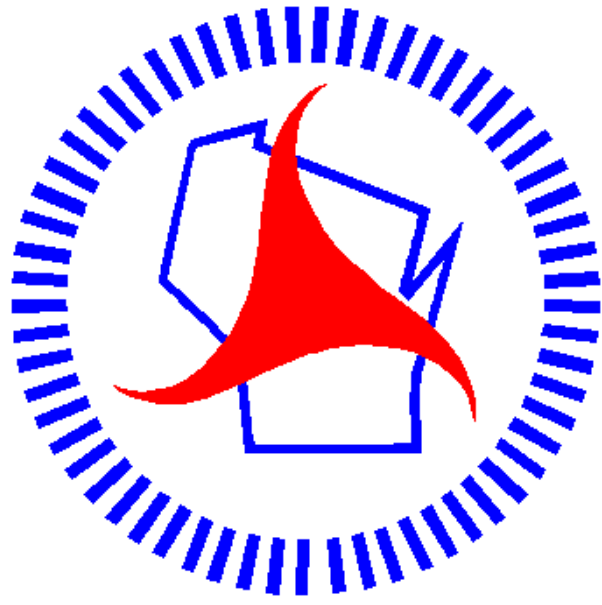
FILE NAME : C:\WISDOT\DESIGN\C3D\81600000\DESIGN\BG272_CULVEXT.DWG

PLOT DATE : 10/16/2014 10:59 AM

PLOT BY : KERBER RIEDL, BARBAR PLOT NAME :

PLOT SCALE : 1" = 10' _XREF

WISDOT/CADDS SHEET 49



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>